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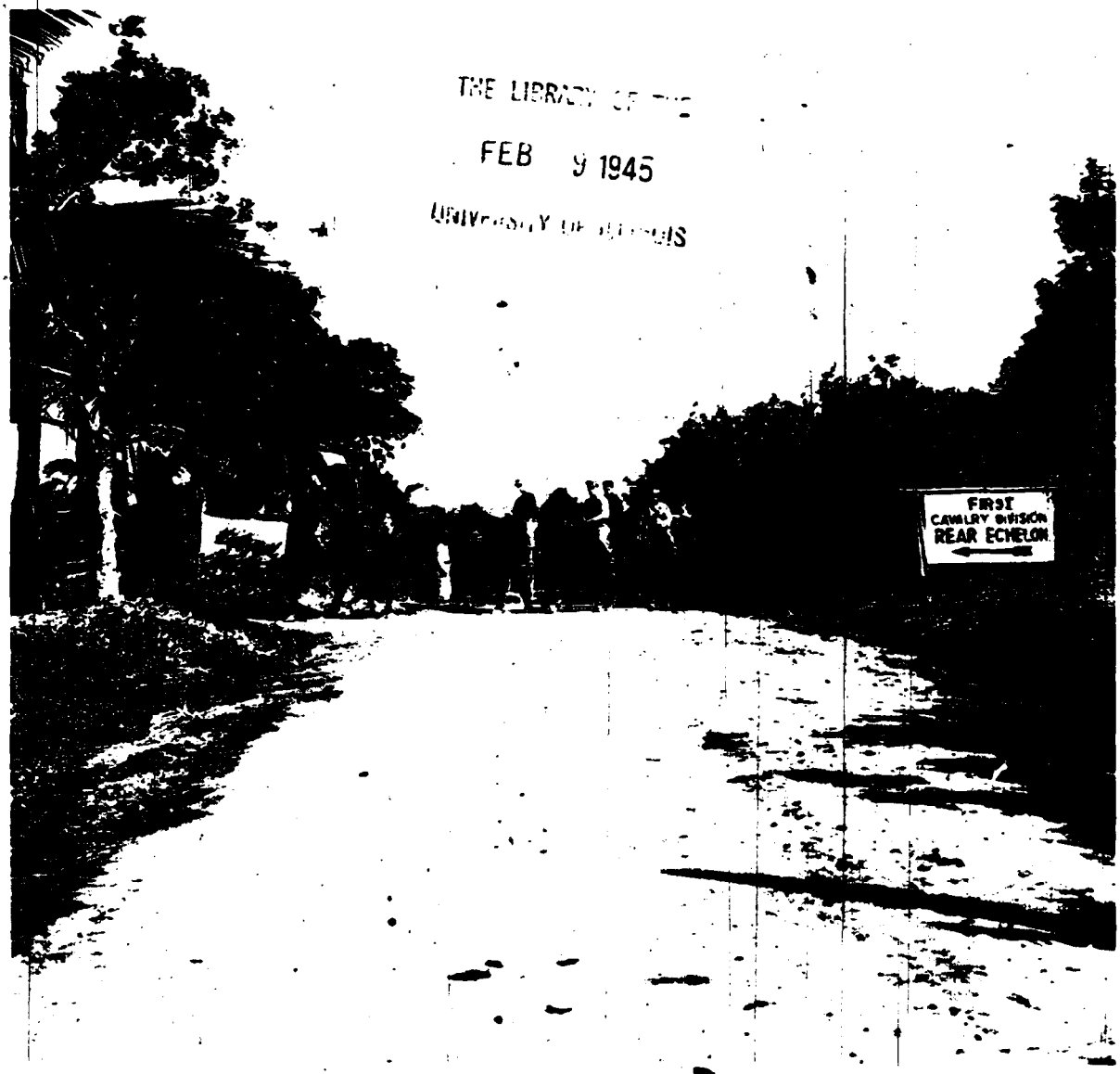
THE CAVALRY JOURNAL



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A squad of the 1st Cavalry Division Provisional Reconnaissance Unit enters the division rear echelon on Leyte, Philippine Islands.

JANUARY-FEBRUARY, 1945

What the Service Journals say of

MODERN RECONNAISSANCE

"This should be a valuable volume for every officer or enlisted man who goes out on reconnaissance or acts on information acquired by reconnaissance—which includes every person within sound of the enemy guns."

—COAST ARTILLERY JOURNAL.

"The book is not in any way limited in interest to cavalry or reconnaissance units. It is of definite interest to all ground and air combat officers and men, and to members of all combat staffs."

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—MARINE CORPS GAZETTE.

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The United States Cavalry Association

Organized November 9, 1885

The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and solidarity of the Cavalry of the Army of the United States.—Article III, Constitution.

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Armor and its Future

THE most famous of all the divisional signs in the British Army is that of the Desert Rat. Three times in this war that division has fought its way backward and forward across the sands of Libya. The fourth time it continued into the mountains of Tunisia, onward through Sicily into the mountains of Italy, thence to Normandy, and thereafter through France and Belgium.

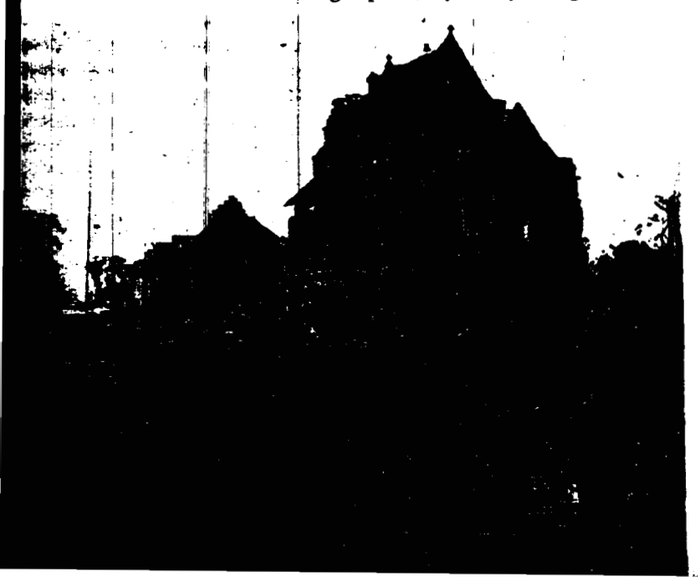
What are the highlights of this formidable sum of practical and highly varied experience in the field? What lessons do they point for the future of tank warfare and of tank design?

It is always dangerous to draw a general conclusion applicable to any and every theater of war, but there is one such conclusion which all exponents of armored warfare must be prepared to accept in the light of general experience. The brightest expectations of the prewar exponents of armored warfare can now hope to be fulfilled only at certain rare moments.

If the unique and essential characteristic of the tank is its power to combine fire with movement, the African desert was the perfect battlefield for tank warfare. It provided unlimited room for maneuver, and natural tank obstacles were virtually non-existent. Only the problem of supply acted as a brake on mobility.

*British Staff Officer.

This scene in the village of Cagny, France, shows tanks knocked out while supporting the infantry during heavy street fighting. The Sherman tank at right has a broken track which is being repaired by a Royal Engineer crew.



The Antitank Gun

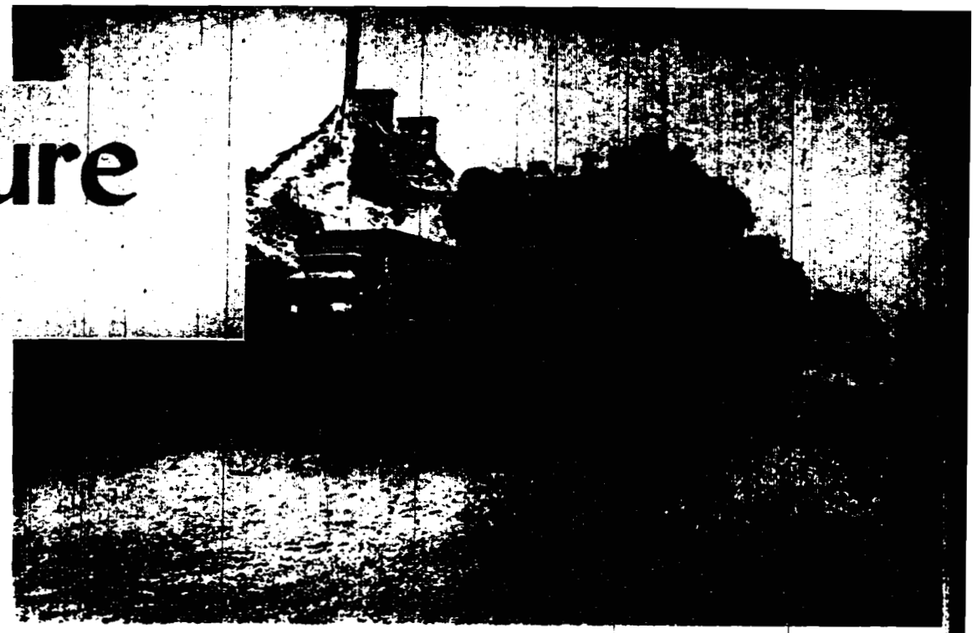
Nevertheless it was in the African desert that the tank met its master in the antitank gun, which might or might not be mounted in another tank. Before the emergence of the antitank gun as the only satisfactory answer to the tank, a succession of tank v. tank battles had been fought from the borders of Egypt to the fringe of Tripolitania—battles that evoked obvious comparisons with naval warfare and were fully deserving of the description of tank battles. The arrival of the modern antitank gun virtually killed the tank as an independent weapon in the spearhead of the attack. Indeed, tank tactics were reduced to the negative form of luring one's opponent on to one's own antitank guns.

Ironically enough, it was that energetic exponent of tank warfare, the late Field Marshal Rommel, who became the victim of these tactics, which, in earlier battles, he had employed successfully against outgunned and out-armored British tanks whose only chance of hitting the enemy had been a quick "dash-out." On August 30, 1942, in a special order of the day, Rommel announced: "The Army is moving into the attack for the final annihilation of the enemy." But it was his own armor that was annihilated—by salvoes from British antitank guns and British tanks, lying in hull-down positions on ground of their own choosing.

The Mine Field

The second answer to the tank proved to be the minefield. It was on its two-thousand mile "march" from Alamein to Tunis that the British Eighth Army had first-hand experience of the dominating contribution of the mine field in the enemy conduct of a long-fought delaying action. The mine, however, is effective less for its destructiveness than for the limitations it imposes on that freedom of maneuver which is vital to the function of the tank as an aggressive weapon. The last humiliation of the tank is to find itself converted into a stationary pillbox.

As already pointed out, the brightest expectations of the prewar exponents of armored warfare can hope to be fulfilled now only at certain rare moments; that is to say, at those times when an armored force is not



This armored vehicle of the Royal Engineers; known as the A.V.R.E., is similar in design to the famed Churchill tank. Its striking external feature is a special mortar mounted in the turret. This mortar, known colloquially as the "Petard," can hurl a charge containing many times the weight of explosive of other projectiles of similar dimension.

Exploit in Tunisia

crippled in its power of movement by the mine and the well-sited antitank gun. One such moment occurred in the Tunisian campaign. In the final battle of that campaign, in the second week of May 1943, as soon as the infantry had cleared a gap in the enemy defenses, three armored divisions were flung into the battle, not to fight enemy tanks, not to kill enemy troops, but to cripple the enemy organization by ripping asunder the whole fabric of his fighting machine. During that battle every available tank was directed on Tunis and beyond; and within the space of a few days a hitherto redoubtable German army had ceased to exist. It will be observed that, as in all the later desert battles, tanks could not become the spearhead of the attack until the infantry and supporting tanks had opened a path for them.

Thus, in face of the development of antitank defensive measures, it must be accepted that the main rôle of armor in Africa had taken the form of exploiting infantry success. Its other rôle—that of infantry support—was to take first place in Normandy and in Holland.

Normandy

Indeed, in the Normandy battles, tanks were used in a rôle which hardly can be said to come within the category of tank warfare. At one time it was axiomatic that tanks could not be expected to engage in street fighting. Nevertheless, in order to assist the infantry attack and to sustain infantry morale, they were called upon to "brass" windows where snipers might be lurking and "spray" village streets with high explosives. Contrary to African desert experience, they had to be used in "penny pockets" in the closely wooded Bocage country, where their view of a winding lane was confined to what could be seen over the adjoining hedges. There the tanks, far from being the spearhead of the attack, required its own infantry support—a fashion thoroughly developed by the Germans, who allotted a section of Panzer grenadiers to accompany each tank on foot and to clear the way for it. The infantry, indeed, may be said to have led their tanks into battle like monster pets, and were "almost constrained to pat them on the nose by way of encouragement!"

Under such conditions of terrain, objectives which used to extend up to 3,000 yards, had to be cut down to 1,000. The only guarantee of success was close personal coöperation between the infantry and tank commanders, based on careful preparation before the battle. If the armor joined up only on the start line, real coöperation was out of the question.

Once the infantry objective was reached, the tank commander was often called upon to stay on it in support of the infantry even at the cost of the almost certain loss of his tank, since it was often impossible to take up a position which was hull-down from all angles. Finally, it should be noted that the majority of the tanks engaged in this style of warfare were of the cruiser type, whose speed and maneuverability could not hope to offset their lack of heavy armor.

Holland

In Holland these same cruiser tanks were called upon to operate under conditions which, although entirely different, were not less difficult. There the raised road embankment silhouetted the tank against the skyline. The road itself was often mined and its canal and river bridges certainly blown. The penalty of getting off the road almost as certainly was to get bogged.

Again the prime function of the tank arm was to sustain infantry morale under appalling conditions of fire and mud and water, and to engage, when possible,

concealed enemy weapons. More often than not these were sited almost at ground level and almost impossible to detect until they had got in the first shot.

These "grey periods" in the story of tanks in this war are illuminated by two of those "rare moments" which justify the faith of those who, in prewar days, preached the gospel of mechanization. The wide encircling drive of the American Third Army is unlikely ever to be excelled as a classic episode in the history of tank warfare. Likewise the drive of the British armored divisions from the Seine to Amiens, Brussels and Antwerp provides an example of what tanks can achieve in the way of dislocating an entire enemy front when that enemy is given neither time nor opportunity to resort to his two prime defensive measures against tank penetration—the minefield and a screen of antitank artillery.

Tank Design

It will be agreed from these observations that more than one type of tank is required under the varying conditions of modern warfare. It will also be agreed that a multiplicity of types is a complication in manufacture and maintenance which should be avoided. It must also be obvious that a dual-purpose tank—that is, a tank suitable for working with infantry and also for operating in an armored division—will permit of its ubiquitous employment. This is a major consideration in the eyes of a commander-in-chief, since he will be allowed greater flexibility in the planning of a battle and will not be compelled to keep a large percentage of his armor unemployed. It is significant that the heavy infantry tanks which did excellent work in the difficult fighting in Normandy could take no part in the pursuit because of their relatively slow speed.

Since there can be no question that a light tank is necessary for reconnaissance and pursuit, and since it is generally agreed that a really good dual-purpose gun (both armor-piercing and high explosive) is essential, the whole question of the future of tank design resolves itself into the simple query, "Must there be two types of the fighting tank—an infantry and a cruiser tank?"

The question arises as to whether or not the contribution of the heavy infantry tank in the Normandy fighting was conspicuously superior to that of the cruiser type. If it was not, its continued existence can hardly be justified, since its usefulness must be confined to the close-quarter fighting that precedes the pursuit.

Weight, armor, and speed must always be matters for compromise, and the compromise here to be effected is the increase in weight of armor on the cruiser type. It may be a compromise which is not likely to have serious repercussions if it should be accepted—as it must be in the light of experience—for a super-heavy slow-moving tank, however effective it may be on occasion, is too unwieldy to be an economic proposition in the long run. It is probably safe to suggest that no tank should exceed 45 tons. On this basis of reckoning the logical procedure for tank designers of the future would be to select the best possible dual-purpose gun, to produce an engine with sufficient horse power to obtain the required speed, and then to fit armor to the agreed maximum weight.

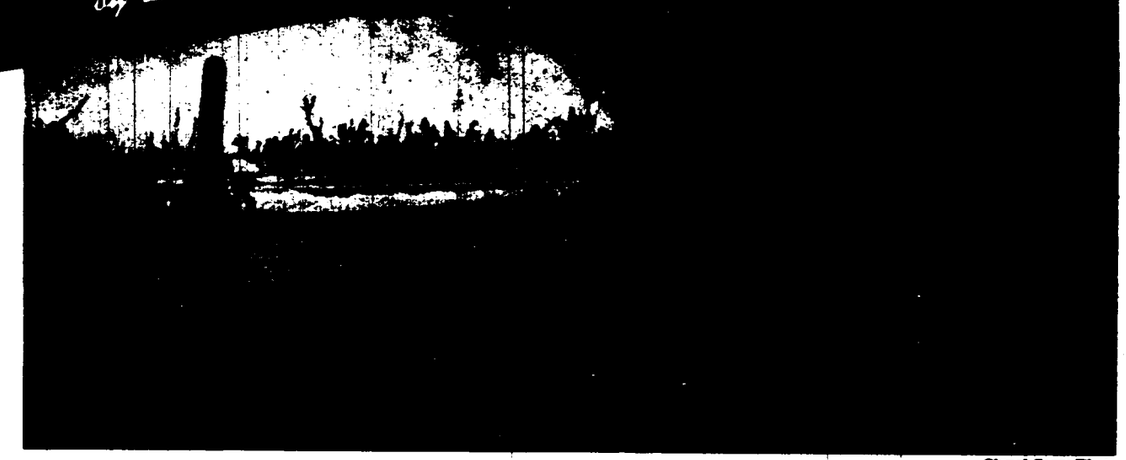
Practical experience in the field has served to throw useful light on the correct positioning of this armor. The side of a tank receives more hits than the front; and, in the average, the hull receives more hits than the turret. If the maximum basic protection is to be obtained for those vulnerable places disclosed by battle experience, care in the angling of the plate is as vital a study as the actual thickness of the armor.

Thus tank design for the future will need to adjust itself to the one cardinal fact that emerges from this survey of tank employment in this war. It is the enemy antitank or self-propelled gun which usually does the damage, and not the enemy tank; and the cardinal fact about these guns themselves is that they rarely, if ever, fire head-on.

The Cromwell tank, which made its debut in Normandy, is one of the latest types of British cruiser tanks. It incorporates a 75mm gun and a high capacity British engine. It proved to be a most reliable and effective addition to British armor on the Normandy front. This picture was taken during a visit of Mr. Churchill to British troops in Britain and shows the Prime Minister inspecting a Cromwell tank.

Command Control of an Armored Amphibian Battalion

by Lieutenant Colonel James L. Rogers*



Signal Corps Photo

Landing forces of the 7th Infantry Division aboard an alligator head for shore at Enubuj Island, Kwajalein Atoll.

PROBABLY the hardest phase of an amphibian operation is maintaining control of the operations of the amphibian unit. The operating of this control does not merely apply at the time of actual combat but also comes during the preparation phase, prior to actual departure for the combat zone. This control hinges upon two factors, namely; proper communication, and adequate disposition of liaison officers with the headquarters with which direct contact is necessary.

It is first necessary to find out the tactical mission of the organization, how it fits into the general plan, and what specific jobs it is to perform. From an analysis of these things the unit commander can readily find out with whom he must have communication, and what type of communication is necessary. An amphibious operation without proper communication is not an operation, but a melee, and the loss of lives through such a melee is tremendous.

It is necessary to determine the following:

(a) What types of radios are necessary, and what types are available.
(b) How many channels are necessary.
(c) What persons should utilize these channels.
(d) Where should the liaison personnel be placed.
(e) What kind of communication should they have.

The normal tractor battalion, usually attached to a regiment for an amphibious operation, has sufficient vehicles to carry ashore two assault battalions. Normally the tractor company is attached and is under tactical control of the commander of the infantry battalion that is carried in by this company. Thefore, initially, the tractor battalion commander and his staff is employed by the regimental commander as a staff for LVT's.

The infantry regimental commander normally sets up his advance command post on the control vessel which is responsible for the landings of personnel and supplies on his beaches. If the tractor battalion commander rides on this control vessel with the infantry regimental commander, then the three branches controlling factors in the landing can be closely coördinated—the naval beach master or control officer, who is responsible for the proper landing and control of all traffic on his beaches; the infantry regimental commander, who is vitally interested in this operation since upon it depends his future operation ashore; and finally, the commanding officer of the amphibian vehicles which are carrying the troops and supplies ashore. With all three of them together, they can decide any unforeseen problems and have a vital effect upon the landing.

*Commander, 708th Amphibian Tank Battalion during Kwajalein and Eniwetok operations and landings on Saipan and Tinian.

If the regimental commander has his command post on the transport rather than on the control boat, it is still desirable to have the tractor battalion commander ride on the control and have his executive officer back on the transport as liaison with his regimental commander.

It is believed advisable to have an officer from the tractor battalion staff ride on the sub-control boat of each beach, which accompanies the first wave into the beach and then, pulling off to the flank, acts as a dispatcher for all types of craft entering and leaving the beach. It is the normal practice for tractor units to rendezvous with this sub-control boat in a position on the flanks of the boat lane, out of range of small-arms fire, when they have unloaded their troops or supplies on the shore.

An amphibian tank battalion will normally be attached to one of the higher headquarters controlling the landing. At Saipan the amphibian tank battalion was attached to the Marine division. The division split the battalion between the two assault regiments, with two tank companies assigned to each. The regiments, in turn, assigned each tank company to support an assault battalion.

In such a case, the tank battalion should furnish a liaison officer to each regimental commander to act as an amphibian advisor on his staff. The tank companies should furnish liaison officers to the assault battalion which they are supporting to act as an amphibian advisor on the battalion commander's staff. Of course, these liaison officers should have radios set up on proper channels so that they are able to contact the persons with whom they are most likely to deal. In the case of the tank company liaison officer, it will be his company commander, the assault battalion commander, and probably the tank Battalion commander. In the case of the regimental liaison officer, it will be the tank companies that are attached to his regiment, the regiment itself, and probably the tank battalion commander.

If LST's are permanently assigned to the battalion, it is also advisable to establish some kind of communication or liaison with the LST group commander. A ship or two may be pulled out leaving part of the amphibian vehicles without a home. I found that by setting up a rear command post on the command ship of the LST Group, and using my executive officer as a liaison officer, I was able to keep up with, and govern the movement of the LST's to fit into the movement and care of the tractors. If radios are available, it is well to have one per LST to set up topside for intra-battalion communication when the battalion is loaded.

It has also been suggested that an LVT representative be placed in the boat of each naval wave guide officer to help him in the handling of the tractor waves. This, in my mind, is not desirable because:

1. Sufficient LVT officers are not available for this duty.
2. The naval wave guide officers are with the wave actually only a short period of time. Hence any officers with them would be lost to the battalion except for this short period of time.
3. If LVT officers are necessary with the naval guide officers, why not just do away with the naval guide officers?

Signal Corps Photo

Carrying men and equipment of the 7th Infantry Division, assault boats and alligators approach the shores of Enubuj Island, at low tide. Mother ships can be seen in the distance. As soon as possible, amphibians become shore-based.

If the Naval Guide Officer knows where to pick up his wave, where its rendezvous area is situated, and where it is to land, the LVT Officer in charge of that wave should be able to do the rest.

As an example, suppose that a tractor battalion is attached to the assault regiment of a division landing in column of regiments. The regiment is landing on two beaches, one battalion on Beach Red 1 and one battalion on Beach Red 2. The tractor battalion commander is with the regimental commander on the senior control boat. The infantry battalion commanders are each riding in a "free tractor" with the commander of the tractor company that is carrying his battalion in. Two LVT officers are riding on the 2 sub-control boats which will flank the first wave on its run to the beach, and then pull off to the flanks of the boat lanes and act as dispatchers and rendezvous points for all craft after they have unloaded on the beach. Initially, the battalion rear CP has been set up on the command ship of the LST group. The time is H minus 90.

The LST's are now in a position approximately 800 yards in rear of the line of departure; the tractors are being launched; and the naval wave guides, flying the "Wave Flag," have picked up their waves, and are guiding them to their proper rendezvous area. The tractor carrying the LVT officer in charge of the wave is also flying the "Wave Flag."

The waves have been formed in their proper position, but the current is carrying them off to the right flank of the boat lanes. The naval control officer contacts the LVT battalion commander and they decide to move the waves back up into position. The naval control officer contacts his naval guide officers by radio and explains the situation to them. The LVT battalion commander does likewise with his company commanders, and the units are moved into their proper positions.

It is approximately time for the first wave to cross the line of departure, so the naval control officer has the "One Flag" run up. This is the signal for the first wave to get its final position and prepare to cross the line of departure. The battalion commander sees that the waves get their proper positions and proper intervals.

The "One Flag" is lowered, and the first wave, flanked by the sub-control boat, moves across the line of departure toward the beach. The following waves close up on the line of departure automatically, or by radio order from the naval control or battalion commander. The "Two Flag" is then hoisted. This procedure will continue till all waves have crossed the line of departure and are on the way to the beach.

When the tractors have unloaded ashore, they return to the rendezvous area to the flanks of the boat lanes, where they are ready for further use. The regimental commander decides to send in his reserve battalion on Red Beach 1. The naval control officer and the battalion commander, after consulting, decide to move the tractor company that has rendezvoused to the flank of Red Beach 2, over to a position flanking Red Beach 1, so that all tractors can be used for the trans-shipment of troops in the minimum of time.

The first wave of 6 LCVP's carrying troops are sent across the line of departure with orders to report to the sub-control of Red Beach 1 for trans-shipment of troops to LVT's. The naval control officer calls the sub-control officer and tells him that 6 LCVP's are on their way for trans-shipment of troops to LVT's, which are to land them on Beach Red 1. The sub-control officer asks his LVT representative to prepare twelve tractors for this trans-shipment of troops. This procedure is carried out until all troops and assault supplies have been delivered to the proper beaches.

If at any time the beach master ashore needs tractors for the evacuation of casualties or for the transportation of supplies to the front line troops, he notifies the senior control officer. The senior control officer will then ask the tractor battalion commander to have them dispatched to the proper place, or he can give his request through his sub-control officer, who can have the LVT representative dispatch them to the proper place.

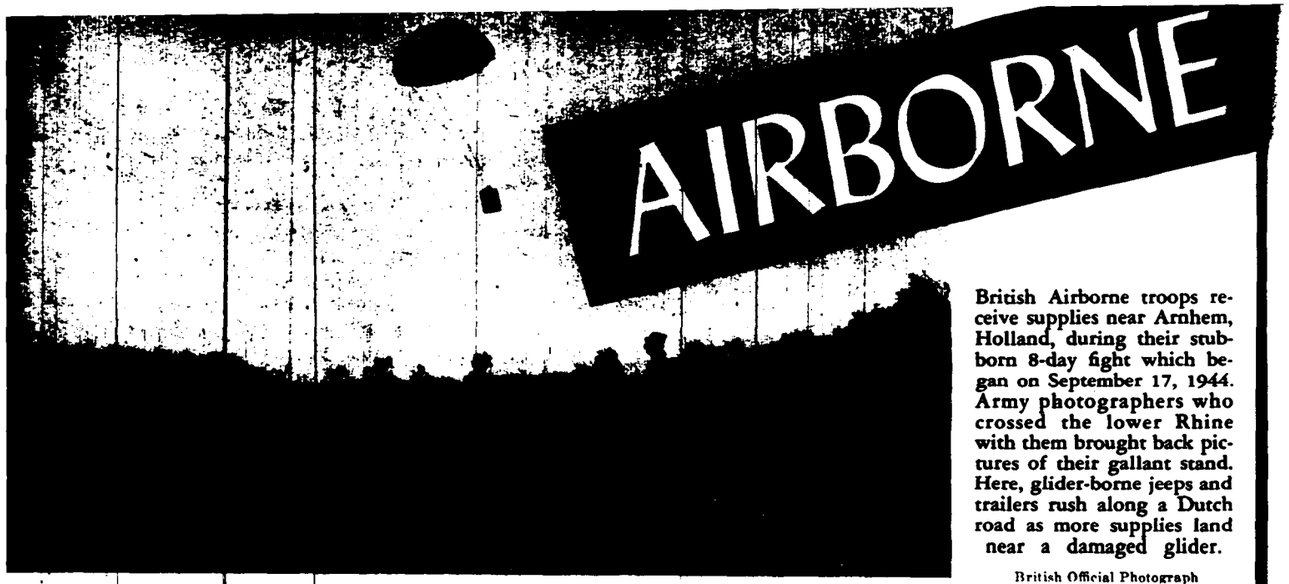
If vehicles are in need of repair, they should contact the battalion commander who, in turn, will have the maintenance LST move in and pick up the vehicle by contacting his executive officer at his rear command post. Again, if a maintenance tractor is available, he can order that tractor to the position of the disabled vehicle.

When it is time for the tractors to load that evening and the battalion commander has obtained a release to load from the regimental commander, he calls his rear CP and asks to have the LST's moved in to pick up the tractors. At this time the executive officer will assume control and when the LST's have moved in he can guide the tractors to their proper LST and help them load. He receives their vehicle and personnel casualty reports, helps them out with maintenance problems, and submits the final report to the LVT battalion commander. By use of the deck radio any order for the following day's operations can be passed out to the companies.

In this exercise the battalion commander has had perfect and absolute control of all his vehicles at all times. He was ready for any emergency, and could pass the proper information on to his personnel in order to change or correct any plans. In his position, he was able to contact, either by his own communication set-up or by the naval control communication set up, anyone whom it might be necessary for him to contact.

After D Day, for the purpose of unloading supplies, it is advisable that all tractors be relieved from units and placed under one control under headquarters controlling the landing. When space is available ashore, it is believed best for all tractor battalions to become shore-based. Then all battalions are readily available and can be parcelled out according to the priority of the unloading that has to be carried out.

AIRBORNE SUPPLY



British Airborne troops receive supplies near Arnhem, Holland, during their stubborn 8-day fight which began on September 17, 1944. Army photographers who crossed the lower Rhine with them brought back pictures of their gallant stand. Here, glider-borne jeeps and trailers rush along a Dutch road as more supplies land near a damaged glider.

British Official Photograph

*by Brigadier E. C. Anstey, D.S.O.**

SUPPLIES have been dropped from the air on many occasions in the present war, and in considerable quantities, but until recently, most of the occasions have been abnormal and under desperate conditions, such as existed at Stalingrad and elsewhere in Russia. Nowhere had the problem of supplying troops by a regular air service been studied until the British and the Americans formed their airborne divisions in the West and began novel airborne operations in the East.

It is perhaps not surprising that this should be so. Civil air transport was certainly making strides when war broke out. In the United States attention was paid chiefly to passengers and mail; Russia claimed to be handling the greatest amount of freight; and Britain was busy establishing her "Empire Air Mail Scheme" designed to carry first class mail to the whole Empire at ordinary rates. The German Lufthansa Junker airliners were carrying 40-42 passengers; the Russians had completed a 65-passenger landplane weighing about 44 tons; the Short flying boats were carrying 74 passengers. These were the civil prototypes of military transport aircraft.

On examination, however, it was found that the military value of air transports was questionable for four major reasons: Air transport was uneconomical, restricted in bulk, dependent on weather, and extremely vulnerable.

The uneconomical aspect of air transport involved not only finances—which counts for little in total war—but also the affect on aircraft production, manpower, and gasoline consumption. Modern military supplies are colossal in amount and often awkward in bulk; their delivery must be punctual; and the size, clumsiness and slow speeds of giant machines make them easy targets. Above all, the primary task of the air forces of the belligerants was the expansion of their fighter and bomber squadrons. This was so markedly the need in the British and Dominion Air Forces that their development of air transport and supply had to be postponed.

*Military correspondent of the *Sunday Times* and *Daily Sketch* (London).

German Development

On the other hand, Germany, with her initial vast air superiority over her victims, found opportunities for the use of transport aircraft in which they were immune from attack. It is believed that in the Polish campaign gasoline was flown to leading Panzer units. Certainly, some light cross-country tractors were landed. In Norway supplies were dropped from the air to German troops temporarily isolated in the Narvik area.

In Crete practically all supply had to be by air. By a single transport fleet of some 700 aircraft, 30,000 men were landed and had to be maintained by air until Britian's fleet withdrew. The success of this operation was due mainly to the 2,000-ton carrying capacity of 480 German transports and 1,440 gliders.* As the daily requirements of a division may be taken as about 100 tons of food and 160 tons of ammunition, the supply of three or four divisions in the absence of any air opposition or strong antiaircraft defense presented no great difficulties.

Nevertheless, the German losses at Crete were so great that they themselves described them as tragic, and it is to be noted that they have never again attempted an airborne operation on a big scale. Since then German fleets of transport planes have been used in exceptional circumstances as a last resort for the supply of isolated troops who could not be reached by any other means. This was done at Staraya Russa and at Halfaya, in Africa, and during the first deep advance into Russia, while railway tracks were being repaired and Russian air opposition was still weak. According to the German press, at that time a single squadron of German Junkers 52's delivered 2,700 tons of war material to the front and evacuated 2,831 wounded with the loss of only three of their 15 aircraft in 7 weeks.

*Major F. O. Miksche in *Paratroops*.

It was a different story in Africa where the Allied air forces had grown in strength. There it became manifest that to make air supply reliable and feasible local command of the air was essential. Thus, as air superiority passed to the Allies, so did the opportunity for the use of air transport.

Methods of Supply

The Germans had developed three methods—dropping by parachute, carriage in transports, and carriage in gliders.

Dropping by parachute is essentially an abnormal method, extravagant in machines and limited in loads. It is used only when landing is impossible, as over jungle or an enemy-infested area.

Air transports can return when empty, can defend themselves to a minor extent, can be converted into ambulance planes for the removal of wounded, and can carry small vehicles and guns. The Italians established a regular supply service to Abyssinia by a southern route over the desert from Libya when they were cut off by all other means and even carried complete dismantled CR 42 Fighters inside their heavy transport machines. But the fuel consumption of transport aircraft is so high as to affect their useful load over a long run. On a 2,400-mile journey a Boeing J. 14, with a fuel reserve of 4½ hours, needs 4,000 gallons—a weight which alone amounts to 29% of the gross load and 73% of the useful load.

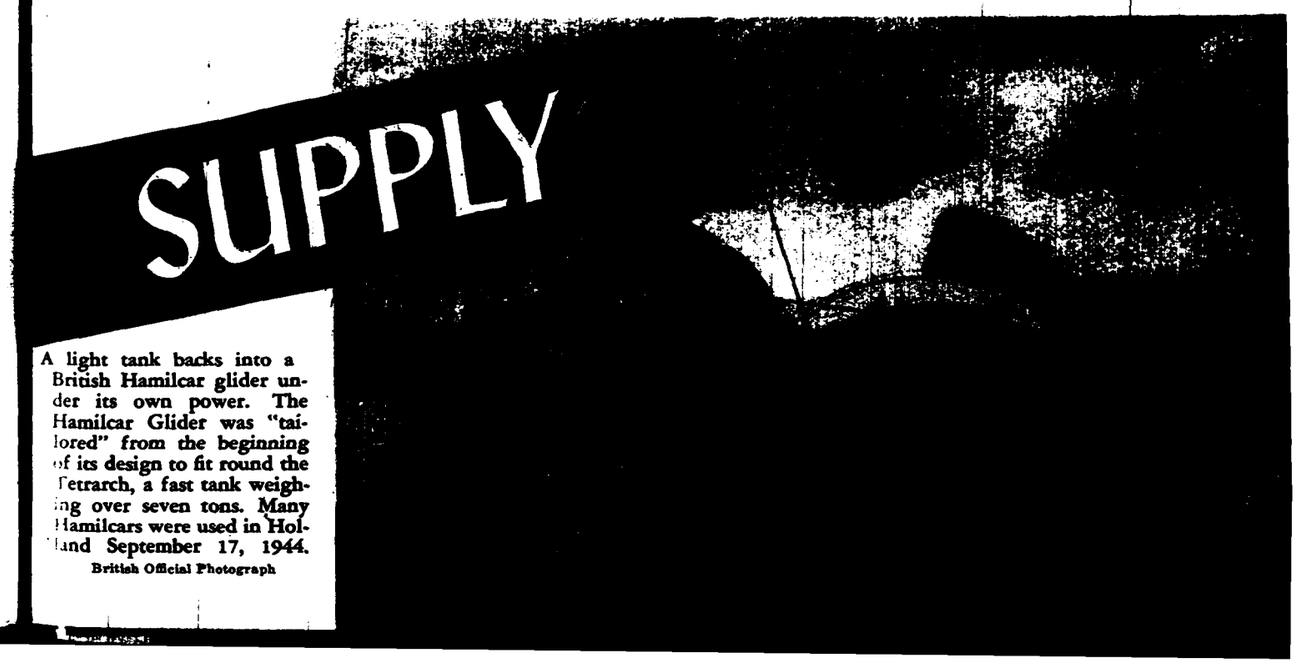
Gliders, on the other hand, are cheap to make, carry heavy and bulky loads, and can be built for end-loading. This greatly increases the speed and ease of both loading and unloading. German Merseburg gliders carry a 5.91" field gun with ammunition but require two or three Ju. 52's to tow them. Under tow, however, gliders have to be handled carefully, and since they reduce the speed of the towing aircraft by not less than 25%, they are dangerously vulnerable to attack. It is clear, therefore, that complete local air command is necessary before gliders can be used.

When the British and Americans were in a position to develop air transport, they had both German and Russian experience to guide them, and their late start was soon counterbalanced by the unequalled opportunities for air supply which occurred in China, the Pacific, and Burma.

Value of Air Supply

Sudden emergencies may arise anywhere at any moment. On the liberation of Paris, for example, an urgent request was received at 6:30 p.m. on a Saturday evening for 500 tons of food to be flown into the city the following day. Not only was the consignment dispatched as requested and delivered safely, but similar loads of medical supplies, vitamins, cocoa, coffee and sugar were flown in daily from England for the next week or ten days.

On the other hand, for some months preceding the invasion the supply of the Maquis in France almost amounted to a regular service. Both the transport aircraft and bombers used landed on secret airfields held by the F.F.I. or dropped containers in prearranged areas. These containers, made of 3-ply wood with a light metal covering, were shaped like a bomb and thus could be carried conveniently in the bomb racks, from which they were dropped by parachute.



A light tank backs into a British Hamilcar glider under its own power. The Hamilcar Glider was "tailored" from the beginning of its design to fit round the Tetrarch, a fast tank weighing over seven tons. Many Hamilcars were used in Holland September 17, 1944.

British Official Photograph

A regular air supply service, however, has been brought to a higher pitch in China, the Pacific and Burma than anywhere else. British and American pilots are flying more material over the Hump into China than was ever carried by the Burma Road. Throughout the year, almost irrespective of weather, they are delivering gasoline, bombs, jeeps, ammunition, artillery, small arms, clothing, aircraft engines, and spare parts.

The Australians could not have cleared New Guinea, as they did so brilliantly, without the supplies they received by air, nor could those supplies have arrived in such volume and with such regularity without the supremacy established by the Allied fighters. Of all the lessons learned in those theaters concerning air supply none has been assimilated more thoroughly than the lesson that airfield construction goes hand in hand with supply and that the airfield construction companies are an integral part of a great service.

Nevertheless, in the Pacific air supply has remained supplementary to seaborne supply. It is only in Burma that the task of maintaining a sizeable force for weeks on end has been shouldered exclusively by the air forces. The astonishing operations inaugurated by the late Major General Wingate had no communication whatever with the base except by air. Of course, the force was not large; it existed on a Sparatan scale of a "luxury drop," and its guerrilla tactics did not demand the heavy ammunition resources of a European battle. Enough was done, however, to prove that Burma is an unusually appropriate theater for air supply, as the difficult and mountainous nature of the country makes ground supply a tremendous problem. The Allies hold air superiority and Japanese antiaircraft defense is poor. Land communications are so long and bad that for operations to wait on their repair or construction would impose intolerable delays and would cramp maneuver.

The freedom conferred by air supply offers the means to surprise the enemy—a moral weapon which is even more effective against the regulation-bound Japanese than against western races. Owing to the weakness of Japanese air forces, gliders can be used with unusual freedom. Experiment in picking up the tow ropes of undamaged or repaired gliders have shown that where gliders have landed in spaces too small for powered aircraft they can still be salvaged and need not be written off as lost.

Finally, the moral effect of an efficient maintenance of troops by air organization is stupendous. The knowledge that casualties will find themselves spared the weary joltings of the old nightmare journeys by stretcher along jungle paths, but instead will fly in comfort direct to modern hospitals in India, heartens men immensely. As Mountbatten's troops approach the heart of Burma and the airfields in their grasp multiply, it is possible that the supply of a whole army by air will overleap hundreds of miles of jungle and mountain and be the main factor in the defeat of the Japanese in Burma and China.

Invasion of Crete

For an hour, it was just a confusion of mad noise and flying steel. The red earth erupted in fountains where the bombs, anything from a hundred to five hundred kilos, exploded. Antiaircraft and concentrated small-arms fire shot down some of the raiders but the German pilots seemed insensible of anything but their objectives. They simply flew through the fire, two abreast, and blitzed gun emplacements and weapon pits.

The thunder of bombing, the crackle of machine gunning died suddenly. The bombers and fighters drew off. And now the air was filled with the drumming of engines, like the beat of great wings. They came in, the Junkers 52s, the old Aunty JUs, flying slowly in formations of three. And with them came ghost planes, planes that made no sound—gliders.

Many of the British antiaircraft gun positions had been silenced in the air blitz, but a few still remained in fighting trim. The Junkers and the gliders were flying low. They were easy targets, as easy as fat pheasants to a crack gunshot, and the gunners let them have it. The men on the ground took at least partial vengeance in those minutes for the battering they had suffered from the Lufftwaffe. Here and there, one of the lumbering aircraft lurched and nosedived into the ground. Some burst into flame, and the Germans they were carrying burned alive if they did not break their necks first. But for every aircraft hit, twenty flew on through the ruddy brown fog of dust stirred up by the bombs that had heralded the invasion. They were like circus horses trained to a routine. . . .

Most of the paratroops dropped from heights of 200 to 300 feet. They fired their tommy guns and hurled hand grenades as they floated down, but their aim was wild as they swung in the cords of their parachutes. They were only a few seconds between aircraft and ground, but in those few seconds they were easy targets for any man who could aim a rifle and press the trigger. Young Germans died in scores above Canea, Maleme, and Galatos that morning. One instant, a man would be alive, firing his tommy gun with one hand, steering his chute with the other. The next, he would jerk, then sag dead in his harness, and his tommy gun would go tumbling to the ground below him. . . .

Gliders were sliding to earth simultaneously with the paratroop landings at the three focal points of the attack. Some were shot up in the air, some as they grounded. A few capsized on the rough surface and broke the necks of the men they carried. But a good proportion, notably of those which crash-landed on the beaches and in the dry bed of the Tavronitis River, west of Maleme, completed their task of getting down and unloading their men. Each glider carried twelve men, armed with mortars, machine guns, tommy guns, and hand grenades. These men were ready to fight the moment they sprang out onto the ground. . . .—*Airborne Invasion,* by John Hetherington. Duell, Sloan, and Pierce, 1944.

Signal Corps Photo

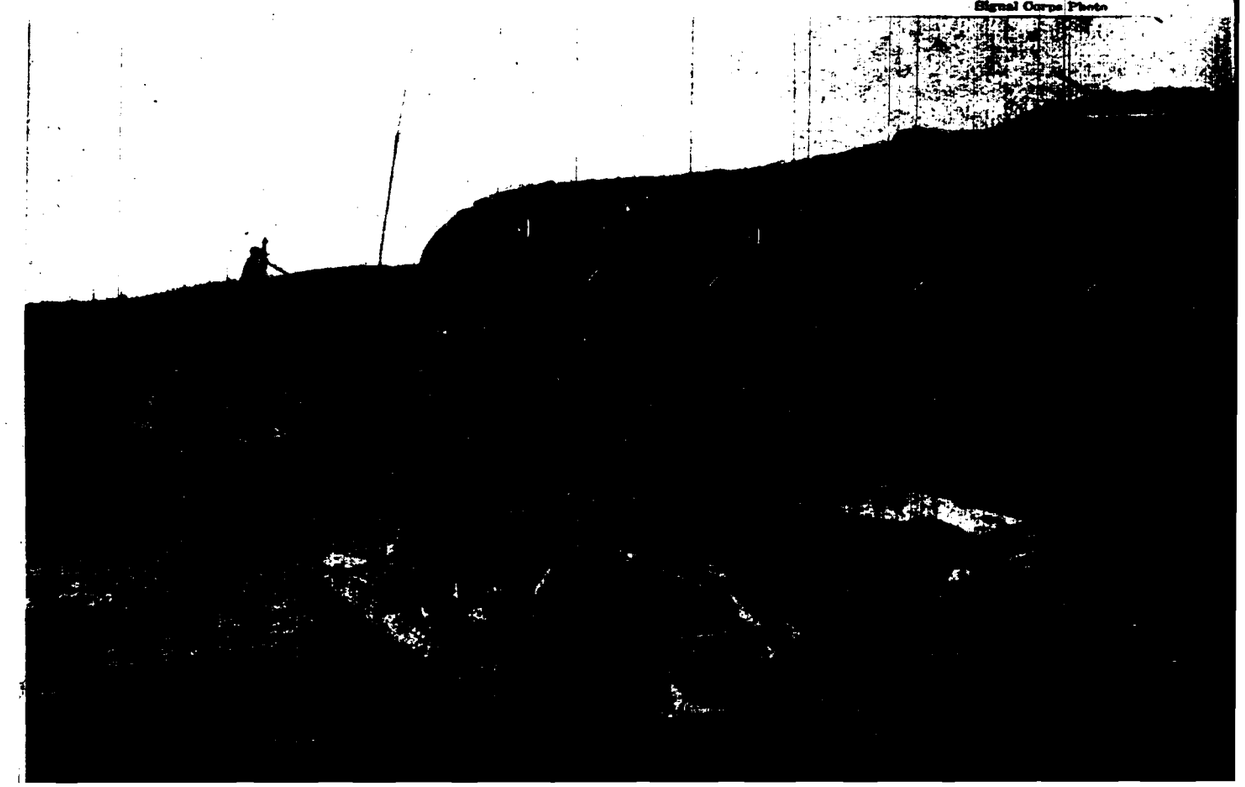
FRANCE

December '44

Above—Snow-covered cars of a cavalry reconnaissance unit with the Seventh Army, France, move down slippery roads lined with snow-covered trees. 11/12/44.

Below—Troops of a cavalry reconnaissance squadron use the scarred, outdated Maginot casemate as a shield from which to observe enemy activity. France, 12/13/44.

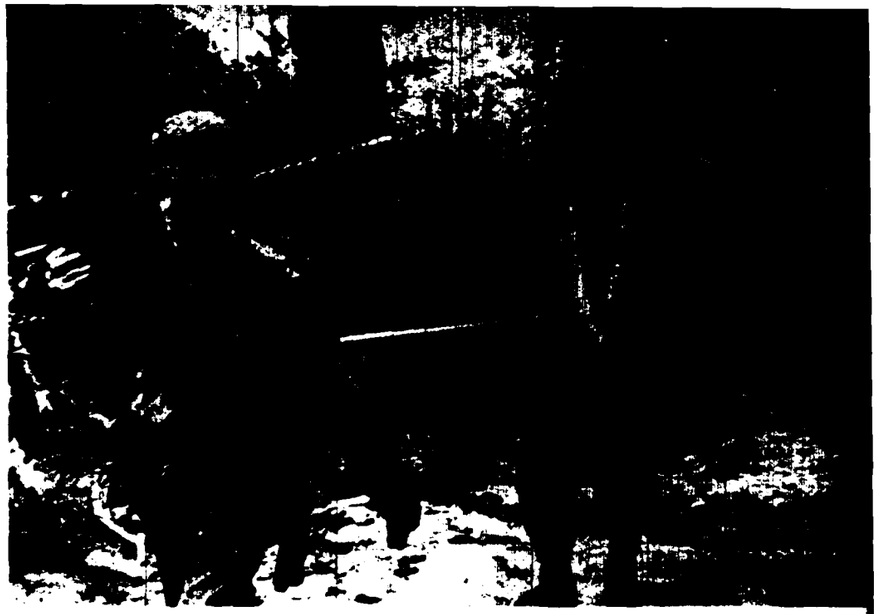
Signal Corps Photo



Reconnaissance in Normandy

—In Support of Airborne Troops

The Story of the 3d Platoon, Troop "B," "Y" Reconnaissance Squadron, from H plus 175 minutes to D plus 3.



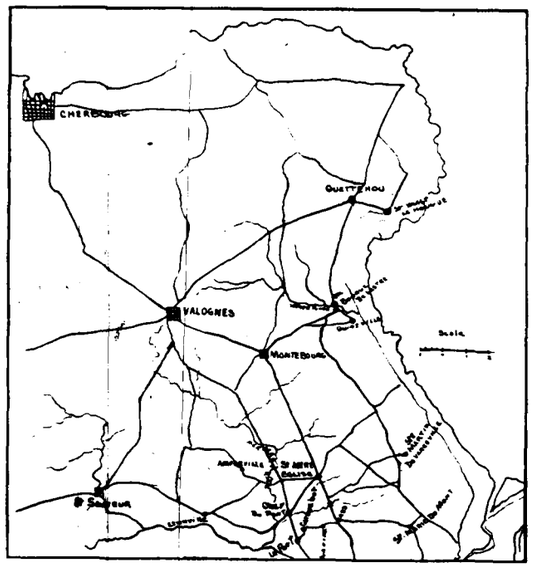
Troops with assault equipment move along a road in Normandy on D plus 3. Machine-gun ammunition strung around the soldier's neck will soon be pouring through weapon carried by man at left.

IN an amphibious operation combining the use of airborne troops, the paratroops and glider-borne infantry have a vital rôle in landing behind the beaches and disrupting communications. They prevent mobile enemy reserves from shoving the beachhead back into the sea; they attack local reserves held for counterattack purposes; and they knock out vital enemy artillery firing against the beaches.

Mechanized reconnaissance troops can serve these airborne forces admirably if they are landed early enough and are able to make their way inland past the beaches. Such cavalry has an important mission in screening for the seaborne elements, acting as liaison between scattered paratroops and glider units, and reconnoitering known enemy installations behind the beaches.

The following record of the 3d Platoon, Troop "B," of "Y" Reconnaissance Squadron (Mecz), which took place in the assault operations on the Normandy beach, is believed to be an account of the first such unit employed as a seaborne element in direct support of an airborne force.* The employment of this platoon, from the time that it landed on the beach at H plus 175 minutes on June 6 until it was joined by the rest of its troop three days later, served to prove that the principles of reconnaissance as laid down in field manuals and training directives are sound, but the small cavalry unit commander must be agile enough at all times to apply these principles in a manner which fits the situation in which he finds himself at any time, or with respect to any type of terrain.

*See last paragraph "Reconnaissance in Normandy—'Y' Cavalry Reconnaissance Squadron," November-December, 1944, CAVALRY JOURNAL.



For this operation the 3d Platoon, commanded by 2d Lieutenant Gerald Penley, was attached to a mobile column consisting of a company of tanks, a company of glider troops and a small infantry force which were the seaborne elements of the 82d Airborne Division. The mission of the platoon was to reconnoiter routes and act as a screening force for the column which was to land on the beach at H plus 175 minutes and proceed to the headquarters of the 82d Airborne Division. This headquarters was to have been dropped by parachute and glider some 6 hours earlier in the vicinity of Ste. Mere Eglise. The platoon disembarked from the LCT on time, but was landed a half mile below the place originally intended. As a result, a small mud flat had to be crossed instead of the firm sandy beach which had been anticipated. Because of this mud flat most of the vehicles of the platoon were drowned out in landing and had to be towed ashore. During the half to three-quarter hour delay, there was considerable congestion and confusion on the beaches, while enemy artillery pounding the shore caused the loss of two ¼-ton trucks and 4 men wounded. These casualties were the only ones suffered by the platoon during its entire 3 day operation.

After all vehicles were ashore the platoon moved to a de-waterproofing area about one mile east of Ste. Martin de Varreville, where it waited for the remainder of the seaborne elements of the 82d. By that time it was approximately 1200 hours. (See map.)

When the rest of the column arrived, the platoon commander was ordered to find a clear route to Ste. Mere Eglise. Having learned that Ste. Marie du Mont was in the possession of the 101st Airborne Division, the lieutenant moved his platoon to this town unopposed. From there he moved west to Crossroad 33. At this point a paratrooper told him of seeing German troops on Hill 20, approximately one mile north toward Ste. Mere Eglise. The paratrooper also reported having received small-arms fire and claimed that only one machine gun with several riflemen were holding the point. Lieutenant Penley was ordered to clean it out. He took his own and one other armored car, plus one medium tank from the column in the order: armored car, tank, armored car. (Against a known enemy position, his jeeps were useless. He was unable to carry forward his light machine guns and mortars in jeeps because of the open terrain. Only small arms had been reported, and against these his armored cars were invulnerable.)

Upon arrival at the south end of the bridge, approximately midway between the crossroad and the hill, the lieutenant's car was fired on by a 7.6cm antitank gun and some small arms fire. Because of swamps and inundation on either side of the road it was impossible to by-pass the position, so the lieutenant was forced to withdraw to his previous position at the crossroads.

The enemy position was then successfully attacked by the tank company, although three tanks were lost.

The platoon made no further attempt that day to reach Ste. Mere Eglise, but was given the mission of acting as "glider rescue squads." Of the numerous gliders landing in the area, some were burning, others badly broken up, and first aid was being given to the troops in the gliders who could not yet be reached by medical personnel.

At 1000 on D plus 1 (June 7), Lieutenant Penley was ordered to move to Chef du Pont, thence northeast to a rendezvous point approximately 1,000 yards southwest of the town of Ste. Mere Eglise. The platoon's move to this point was unopposed except for occasional sniper fire, which caused no casualties. For this move of his platoon the lieutenant adopted an SOP formation in the following order: 2 machine gun jeeps, platoon leader's armored car, section sergeant's armored car, 3 mortar jeeps, platoon sergeant's armored car and the third machine gun jeep. These vehicles moved by bounds within supporting distance of one another.

*S-2—Cavalry Group (Mecz).

*by Major Robert R. Tincher**

(Although the roads had not been swept for mines, the lieutenant was right in leading with his jeeps. As Lt. Colonel Hoy has pointed out in THE CAVALRY JOURNAL, "You cannot waste valuable time in sweeping roads. You have to take chances and apply the principle of 'Economy of Force,'" even with a platoon; therefore, the jeep was used in the point instead of an armored car.)

Upon arrival at Chef du Pont the lieutenant radioed the column that the road was clear to that point. Then he waited for the column to arrive, but when it had not appeared by 1200, he was ordered to the rendezvous point.

On occasions when the platoon received small arms fire it did not halt because it was impossible to determine the direction from which the fire was coming. The road was bounded on both sides by deep ditches backed up by tall hedgerows with very thick foliage and undergrowth, which made it almost impossible to detect any movement, and the platoon commander had quickly learned the lesson, "keep moving." It was very difficult for the snipers, located along the hedgerows and in the trees, to hit a moving vehicle; whereas the minute the vehicle stopped, it presented an excellent target.

As the platoon arrived at the rendezvous point, it started receiving artillery fire so was ordered back to Chef du Pont. There it was learned that the column had arrived earlier and moved to another location by

a different route approximately one mile west of Ste. Mere Eglise. Then a patrol of two machine gun jeeps, sent to contact the column, failed to locate it, but instead found the headquarters of the 82d Airborne Division, located in an orchard north of the Ste. Mere Eglise-St. Sauveur Highway. Because the patrol was unable to contact the lieutenant by its 510 radio, it rejoined the platoon and reported the location of the headquarters. The platoon then moved into a bivouac area near the original rendezvous point and reported to the 82d Airborne Division headquarters at 1930.

During the night artillery was again received in the bivouac area, and the platoon moved under cover of darkness to a new area approximately ⅔ of a mile away. (By experience it has been learned that once the enemy has registered on a target, he often engages it again "just in case." Therefore, if within range of enemy artillery it is well to avoid previously shelled areas if possible.)

At approximately 1130 on D plus 2 a report was received that approximately 50 German troops had been observed in the vicinity of Carquebut. Two companies of parachute infantry were sent to investigate the report, and Lieutenant Penley was ordered to send two armored cars as an advance party. Preceding the infantry, the lieutenant and his platoon sergeant, each in an armored car, set off on a mission to reconnoiter the town and return. Their orders were to make a complete circle of the town with the armored cars and await the arrival of the infantry at a crossroad north of the town.

While making this circle they received only desultory fire from one or two enemy riflemen. As they arrived at the crossroad, however, a French civilian, waving wildly, reported that 150 Germans were in a barracks just south of the town. When the infantry commander arrived, he ordered the lieutenant to attack this force with two armored cars. The only approach to the barracks being down a very narrow trail, the cars approached in column. As he arrived at the building, Sergeant Jensen opened fire on the upper windows with his .50 caliber antiaircraft gun, and immediately 120 men and 5 officers gathered in the courtyard and surrendered.

The road from le Port to Eturville was then patrolled, but no enemy were encountered, and the platoon bivouacked for the night in the vicinity of Carquebut.

During the night of D plus 2 and 3 the infantry succeeded in forming a small bridgehead over the Merderet River west of Ste. Mere Eglise, and at 1100 on D plus 3 the entire platoon was ordered to move to the bridgehead, there to receive further orders. Although both the bridge crossing the river and the causeway over the inundated area flanking the river were both under artillery fire, there was no other way by which the platoon could get across the water, so it was necessary to move the vehicles singly and rapidly over the bridge and causeway.

Across the river without loss, the lieutenant was informed that a truck column had been reported moving northeast from Etienville toward Ste. Mere Eglise, and was ordered to investigate it. He took the platoon's three armored cars and moved out. About one-half mile farther he met a column of approximately 150 Germans, who immediately hit the ditches on both sides of the road. Farther down the road were three antitank guns in position. The lieutenant's 37mm gun engaged the antitank guns with cannister and succeeded in destroying or dispersing the crews of those guns. While the .50 caliber antiaircraft guns on his car and the two other cars swept the ditches. Proceeding down the road in this manner, they destroyed all enemy personnel in the ditches. Meanwhile, 6 German half-track motorcycles turned out of a side road, and they too were destroyed. The lieutenant then turned his armored cars around and proceeded back to the road junction on the west side of the Merderet River.

During this action a report had come in of a battalion of paratroops which had been dropped in the vicinity of Amfreville and were cut off from any friendly forces. The reconnaissance platoon, with two medium tanks attached, was ordered to contact this force. It moved and upon reaching point "X" received heavy antitank fire. No paratroops were found and the platoon returned to the rendezvous point.

About this time it was learned that the infantry, which had succeeded in extending their bridgehead over the Merderet River by about 1,000 yards, were in danger of a counterattack by a strong force. The platoon's armored cars were sent forward to assist the infantry by fire from its 37mm guns. Because of the terrain, however, it was impossible for the armored cars to leave the road and with the high hedges and small fields the gunners were unable to obtain any fields of fire on the enemy. The cars then withdrew to the rendezvous and patrolled the road from the rendezvous southwest to the next principal road junction as a protection to the south flank of the bridgehead forces. This they continued until dark of D plus 3.

On the morning of D plus 4 the remainder of Troop "B" arrived and went into bivouac southwest of Ste. Mere Eglise.

During these three days the platoon destroyed or captured 300 Germans, including 5 officers; knocked out three 7.6cm antitank guns; 6 half track motorcycles and two 2-ton trucks. Its losses were two ¼-ton trucks and 4 men wounded, all due to artillery fire on the beach during the landing period.

Conclusions

1. On a fluid front, vigorous action against an enemy who is defensive minded will usually succeed. You cannot stop and hide when fired upon. Instant return of fire will make the defender duck or surrender unless he is in a fortified position.

2. The .50 caliber antiaircraft gun on the armored car is an excellent antipersonnel weapon, and the German was terrified by it.

3. 37mm cannister is extremely effective against any personnel at close range. Rapid action is essential.

4. The M-8 armored car is impervious to German small arms fire.

5. Terrain encountered in Normandy consisted of narrow, sunken roads lined with mud walls 4 to 5 feet high and thick and covered with dense foliage. Small fields averaging 30 to 40 by 100 yards were similarly lined. Thus observation was restricted and fields of fire limited except along main roads. (Secondary and tertiary roads are narrow, often steep, with sharp, frequent turns.) The terrain was excellent for constructing road blocks, at which the Germans are skilful and cover with antitank fire whenever possible.

—In Capture of Bourge de Lestre

"Y" *Reconnaissance Squadron in Cherbourg Campaign*

DURING the course of the Cherbourg Campaign the many and varied missions given mechanized cavalry reconnaissance squadrons called for all of the resourcefulness of all echelons in meeting new and unexpected situations.

The German defenses extended in depth not only along the coastline of the peninsula, but into the interior as well. As the enemy fell back on Cherbourg he dug in deeper and, although morale in general was low, the German soldiers continued to fight well if their officers were with them.

Thus, reconnaissance had to become more and more aggressive, and strong points had to be reduced instead of merely reported and by-passed. In fact, by-passing would have been impractical, if not impossible, because of the terrain and the extension of enemy installations. The following account of the action of one cavalry reconnaissance squadron illustrates this point.

The Reconnaissance Patrol

On the 16th of June (D plus 10) the "Y" Reconnaissance Squadron (Mecz) relieved the 22d Infantry and established a counterreconnaissance screen along the high ground extending 4,000 yards west from Quineville. During the night of the 17th and 18th it received constant interdiction and harassing fires from enemy artillery and heavy mortars, while enemy patrols attempted to penetrate the screen. (See map, page 12.)

The squadron, on the other hand, was also sending patrols along the Sinope River to report any enemy contact, possible crossings, and conditions of bridges. Incidentally, the only bridge intact was the main highway bridge south of Bourg de Lestre and at no time did the enemy attempt to demolish it.

Troop "C," commanded by Captain Howard C. Bone, was extended along a 1600-1700 yard front with a strong point of two light machine guns and a 60mm mortar near the left flank. On the left, contact was made with the 22d Infantry, and on the right with Troop "A."

Lieutenant Keinath and 6 men were stationed at the main bridge for observation, but the only enemy observed on the 17th and 18th were a few dismounted men; night patrols were driven off by fire.

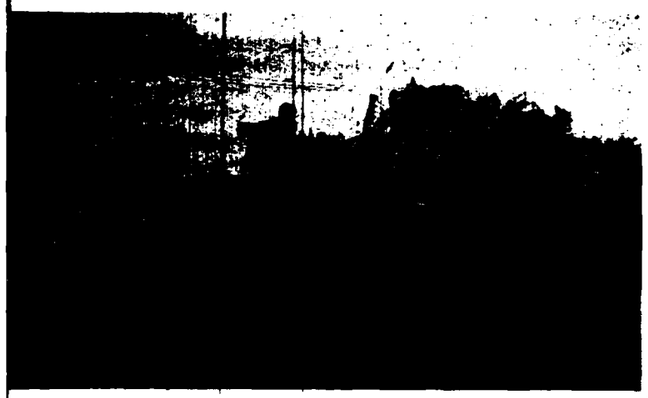
In order for Troop "C" to maintain its position on the high ground it had to drive the enemy from Bourg de Lestre and relieve the pressure of heavy mortar fire on the ridge.

At about 1800 hours on the 18th, Troop "C" was ordered to send a strong patrol across the river to reconnoiter crossroad 21. Assigned this mission, Lieutenant Harry Gardner's 2d Platoon was to leave at 0300 hours. Meanwhile, Lieutenant Keinath and the 6 men at the bridge were to move in advance of Lieutenant Gardner, reconnoiter the crossroad, and remain in observation until the 2d Platoon arrived.

These missions so depleted the Troop "C" line that it was necessary to use headquarters troops for observation. In fact, troop cooks manned an abandoned German OP, sunk into the top of a hill and equipped with a periscope. (Incidentally, the OP was quite luxurious—complete with beds, electricity, a kitchen, and *air conditioning*.)

Lieutenant Gardner and the 20 men of the 2d Platoon who formed his patrol, moved out across country at 0300 and arrived at the bridge. There they picked up a bantam with a SCR 510 for use in contacting troop headquarters and left it under cover at the bend of the road just north of the bridge.

At 0530 the patrol made contact with Lieutenant Keinath and the 6 men at the crossroad. The lieutenant reported that two of his men, in the second floor of a house just north of the crossroad, had excellent observation of the crossroad itself and the road to the north; the other men were in the ditches on both sides of the



M-5 light tanks, used on combat reconnaissance mission, advance along a road in Normandy a few days after D Day.

road south of the crossroad. He also reported that there were sounds of digging and other activity in fields northeast of the crossroad and that he believed there was a machine-gun nest in a house east of the road about 300 yards south of the crossroad.

In the Cherbourg Campaign the German's local security at night was often very poor. Positions were seldom outposted, and patrolling was reduced to a minimum. This trait had enabled the lieutenant and his men to pass within 20 yards of this machine gun without detection.

The 2d Platoon was then disposed to cover all approaches to the crossroad, and the two officers returned to the radio to report to Captain Bone, who meanwhile had left the CP on his way up for a personal reconnaissance. Lieutenant Gardner met him at about 0630 and explained the situation.

Three Germans came out of the house, which had been suspected of having the machine-gun nest, and Sergeant Stater, who had been observing, tossed a hand grenade and destroyed the crew. Immediately, fire started from all directions, and a force of approximately 50 Germans moved toward the crossroad from the field where previous activity had been noted. The German officers called on the patrol to surrender. As another enemy force approached from the west, a sharp fire fight developed, and at about 0930 Captain Bone ordered the patrol to withdraw back across the river.

The two men stationed in the house at the crossroad were captured after expending all of their ammunition. Reports state that by sniping from the windows they accounted for 50 or 60 enemy before their supply was exhausted. These two men were later recaptured in the fall of Cherbourg. *The principle of staying well back in a room to avoid detection really paid off in this case. Both men did this, and created a great deal of confusion among the enemy, who were unable to determine where the fire was coming from until after the ammunition had run out. The men were finally driven into the open by the enemy throwing grenades in all buildings in the area.*

At 1027 the reconnaissance patrol reported to the squadron CO that the crossroad was strongly held by about a reinforced company; that there was some activity in the village, and that no antitank guns were observed in the vicinity of the crossroad. Whereupon, the squadron commander decided to attack the crossroad and town with his tank troop, supported by the fire of the assault gun troop. This attack, if successful, would free the main road north along the coast to Quettehou and St. Vaast la Hogue.

The Tank Attack

On the night of June 16, Company "F" of the cavalry reconnaissance squadron (mecz) had been bivouacked in an orchard just south of the Quineville-Montebourg road on the reverse slope of the ridge. Troop "E" was in battery position near by with an OP on the forward slope of the ridge just west of the north-south road through Bourg de Lestre. Fire direction was by 510 radio.

Early on the morning of the 19th, Company "F" had been alerted for movement to support any sector of the squadron zone and was prepared to move on 10 minutes notice.

At 1400 hours the squadron CO and Company "F" commander, Captain Christianson, were at the OP when the company was ordered to attack. Troop "E" was to support the attack on squadron order.

At 1415 the troop was in column with an interval of 75 yards between tanks, and it was decided that the initial attack be made by one platoon. The rest of the company would be committed as the action dictated. The commander's tank was moved to the vicinity of the OP, and the attack was directed by radio. The head of the column was at the crossroad in rear of the OP.

At 1425 the 2d Platoon, under Lieutenant Sam T. Mitchell, advanced in column. The bridge over the Sinope River was still intact, and the platoon moved rapidly toward the crossroads. Troop "E" opened up with a five-minute preparation with HE and ended with two volleys of WP, laid down on the highway just south of the crossroad.

The lead tank, on breaking through the smoke at the crossroad, saw an antitank gun approximately 100 yards to the front.

The enemy is very agile in the positioning of his antitank guns. He moves them rapidly from position to position and camouflages them expertly. Many times during the Cherbourg Campaign no guns were reported where, in fact, they did exist. Sometimes they escaped detection because of excellent camouflage, and sometimes they were moved in after patrols had returned. A good rule of thumb is to figure that wherever they should be is generally where they are.

Moving tanks up to an attack under a smoke screen is excellent if terrain and wind permit, but such tanks must be prepared to fire upon any target of opportunity that is presented. Jerry does not like our WP and is helpless under a concentration of it.

Three rounds of HE at the antitank gun knocked it apart and the bow machine gun destroyed the crew. (The bow machine gun, used to spray hedges on both sides of a road, leaves the turret guns free to bring fire on more profitable targets.)

The lead tank continued past the crossroad, stopped, and covered the approach from the north. The second tank moved up and covered the first tank. Numbers three and four covered the approaches from the east and west, while the platoon leader's tank covered the rear. At 1435 the platoon leader reported that the platoon, after seizing the crossroad, had sighted but few infantry, but that it was receiving mortar fire.

The squadron commander then ordered a reconnaissance of the railway station, and the 1st Platoon, under Lieutenant Kiffin W. Browning, was ordered to pass through the 2d Platoon and reconnoiter the station. At 1440 the 1st Platoon moved out, and when the lead tank approached the crossroad which, by this time, was clear of smoke, it discovered another antitank gun, which had been under the smoke screen and had thus been by-passed by the 2d Platoon. Meanwhile, the enemy had turned the antitank gun around, facing north, and waited for the smoke to clear to engage the 2d Platoon, which had already passed through. This certainly indicated that the enemy did not suspect the presence of more tanks, and had made a definite tactical blunder in leaving his rear unprotected. The WP also probably confused the enemy into thinking that no more tanks would follow up the smoke.

One round of HE from the lead tank of the 1st Platoon hit the ammunition supply of the gun and the whole thing blew up. The 1st Platoon then passed through the 2d Platoon at the crossroad, and moved on to the railway station, where it surprised and destroyed a force of about 40 Germans.

Sergeant Hartin in the lead tank of the 1st Platoon spotted a cave in the side of a slope behind the station and fired three rounds of HE into it. It was an ammunition dump, and exploded with terrific force. Meanwhile, another tank flushed a small column of infantry, attempting to move toward the town from the northeast, and destroyed it.

By this time, fire from mortars and artillery was falling consistently on the crossroad, so both platoons were ordered to withdraw; the 1st to cover the withdrawal of the 2d, which was to return by way of the town.

Commanders of small tank units must be impressed with the fact that they have a hard hitting, mobile force, but one which becomes extremely vulnerable to heavy mortars and artillery fire if forced to halt for long. Once they have hit their objective they must be reinforced or withdrawn. Tanks invariably draw artillery and heavy mortar fire, and any display of tank strength will cause the enemy to open up with everything he has.

The 2d Platoon withdrew through the town and, after reorganizing at the bridge, moved back to its former position behind Hill 54. The 1st Platoon then withdrew from the highway.

During the entire action the ridge was also being heavily shelled, so that the whole troop had to withdraw to the old bivouac area where it closed at 1530.

The enemy withdrew during the night and it was later learned that the column consisted of about 150 infantry, mostly wounded, two antitank guns, and two field kitchens.

At an OP overlooking Cherbourg, observers report the accuracy of artillery fire on strategic targets. "Y" Reconnaissance Squadron was instrumental in the rapid clearing of the Cherbourg Peninsula and fall of the city that opened a main French port to the Allies.

Normandy to Brest—

29th Cavalry Reconnaissance Troop (MECZ)*

by 1st Lt. Thomas J. Fernley

RECONNAISSANCE on the beachhead was a very difficult proposition. From the moment that the first elements of the assault regiment of the 29th Division hit Omaha Beach on the morning of 6 June 1944 until the capture of St. Lô 42 days later, the division was engaged in close combat with the enemy, and contact was seldom lost. The nature of the terrain in Normandy—high hedgerows bounding the 4 corners of almost every field—made vehicular reconnaissance virtually impossible or at best an extremely costly business.

As a result the 29th Cavalry Reconnaissance Troop (Mecz) was assigned a variety of missions during those bloody days of fighting as the division fought its way south toward the key communications center of St. Lô.

The troop (less the 1st platoon) was originally scheduled to land at 2200 on the night of D Day, but the unexpected heavy enemy resistance put a priority on infantry and artillery, and we had to sweat it out until 1500 on the afternoon of D plus 2 before our LST was called in by the beachmaster.

The 1st Platoon, landing dismounted at H Hour with the 116th Infantry, was equipped with SCR 300 radios in order to report back to division headquarters on the progress of the landings. The platoon was divided into 7 teams, each equipped with one of these radios. This set-up worked out extremely well and for some time provided the only radio communication which division headquarters had with the beachhead forces.

The troop's first mission after landing was to help mop up remnants of enemy resistance around Pointe du Hoe, where the enemy had strong artillery concentrations.

Reaching the 101st Airborne

During all our training in England, which amounted to almost 2 years, no one thought that the troop would be used as an assault force, but on the afternoon of D plus 3 it participated in as novel a form of attack as witnessed in over 5 months of combat. Here was the situation:

The bridge across the Vire River had been at Auville-Sur-le-Vey. Since early morning Company "K" of the 175th Infantry had been fighting to reach the river but had been prevented by heavy enemy fire from the opposite shore.

To solve the problem the Reconnaissance Troop made numerous rafts from bits of odd lumber which were found, then used its M-8's to carry the rafts right up to the river and dump them. The troop then deployed all its firepower—11 M-8's and 9 60mm mortars—and from a range of 600 yards assaulted the town with everything it had—37's, .50 caliber machine guns, and mortars. Under cover of this barrage, Company "K" advanced to the river and, using the rafts as means of transportation, established a successful bridgehead with only minor casualties.

That night Army engineers repaired the bridge, and on D plus 4 the troop pushed reconnaissance to the outskirts of Carentan where it met strong resistance. During the day patrols contacted the 101st Airborne Division, which, for 3 days had been fighting a war of its own on the Cotentin Peninsula. I never saw a group of men as happy as they were to see us that day—completely exhausted and battle-weary though they were.

Assault on St. Lô

One of the finest accomplishments of the troop was the occupation of St. Lô on 18 July 1944.

Early that day it had become apparent that the city could not hold out much longer. The final goal, the prize for which so much blood had been shed, was at last within the division's grasp. A task force was formed consisting of the troop's 3d Platoon and Troop Headquarters, a platoon of tanks, a platoon of engineers and a battalion of the 115th Infantry.

Late on the afternoon of the 18th, Task Force "C" (for Charlie) attacked St. Lô—the reconnaissance troop in the lead, with the tanks in close support. We reached the outskirts of the city before we encountered any real resistance. All along the way we had passed our own wounded, lying in the ditches. The infantry had been unable to evacuate them because of the intense enemy fire—but our orders were to stop for nothing until we had reached our objective.

As the column started up the long hill leading into the city, it came under strong small-arms fire from entrenched infantry at the top. There was nothing to do but go ahead and hope that they didn't have any anti-tank guns. Luckily, they did not, and the M-8's started to grind up the shell-pocked road to their destination. Half a dozen times we stopped and used our .50 caliber machine guns and 37's with devastating effect.

Many times since then we have been thankful that we had those .50 caliber machine guns mounted on the turrets of our M-8's. This was one of them. The Huns really hate those 50's!

Firing all the time, we gradually approached to within 20 yards of the main enemy positions at St. Lô. Then suddenly, the German resistance broke.

We entered the city proper. It was the most thoroughly devastated, ruined city that I have ever seen. As our armored cars pulled into the city square, the infantry came up behind us on either side of the street and proceeded with the always nerve-wracking job of ridding the ruined city of snipers.

It did not matter. We were in St. Lô! And the fact that the Jerries subjected us to a terrific artillery and mortar bombardment from their positions on the hills to the south did little to dampen our enthusiasm.

Reconnaissance with Third Army

The troop's first real chance at reconnaissance occurred 10 days later, shortly after the initial breakthrough by the Third Army. The objective was Vire, and the opposition came not so much from enemy personnel, but from their mines and roadblocks, which for the most part consisted of fallen trees at strategic points.

It was found that the best way to neutralize mines was to attach a long rope to the mine and pull it. About 30% were booby trapped and exploded when pulled. Generally speaking, Teller mines are fairly easy to detect, but the Germans have a habit of varying their technique, which makes taking things for granted a very dangerous proposition. For instance, Jerry's newest trick is to assume that the mine will be pulled and to attach an igniter that will detonate the mine 30 seconds after it leaves the ground.

In the initial stages of the Third Army's breakthrough, the Germans made extensive use of self-propelled guns to make up for their shortage of manpower. Inevitably, the Huns would have the level stretches of road covered with flat trajectory artillery. However, the extreme efficiency of our fighter-bombers—always prowling in front of the division route of advance—knocked out these guns as quickly as they were reported and turned what would have been a nightmare for the reconnaissance patrols into just that for the enemy.

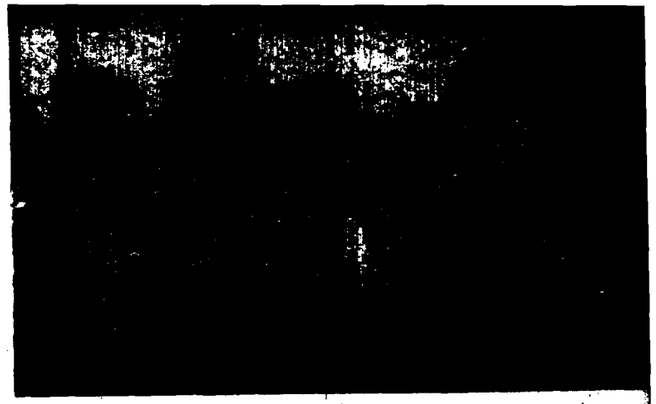
In this phase of the campaign, it was found that the Germans seldom waited for the Americans to arrive. Time after time the 29th Reconnaissance Troop would reach a French village—the first Americans on the scene—only to be told by the overjoyed townspeople that the last Boche had left 8 hours before. The people threw flowers at us, climbed all over our vehicles, gave the men gifts of cognac, eggs and butter, and demonstrated their happiness with fervor for which the French have always been noted.

Consequently, the whole troop felt a tinge of regret when the 29th Division was pulled out of the action on August 16 and shortly thereafter started on the long trip down to the Brest Peninsula.

Storming Brest

The supply situation had become critical and the great Breton port of Brest had to be liberated to allow supplies to flow more freely to the mounting Allied armies and the needy French populace.

We had no idea, at the time, of the bloody battle that was shortly to be waged! Initially the Germans had very few troops in the city of Brest itself. Knowing that the city would be subject to intense aerial bombardment, the German commander, General Ramcke, had deployed his crack 2d Paratroop Division, supported by another infantry division and numerous marine and naval units, in a rough radius of 8 miles from the center of the city proper. It was only after several weeks of bitter fighting that they were driven back to an intricate series of concrete pillboxes, bunkers and forts which protected the city itself. Here they had to be dug out, burned out, or blasted out by the indomitable doughfeet. It was a bloody battle—Brest.



Troops of the 29th Division move through Vire, France.

The troop's initial assignment was a reconnaissance mission on the right flank of the division to determine enemy strength between the infantry units and the sea.

The troop soon found that the enemy was strongly entrenched in a series of massive forts along the rocky seashore. Originally these strongholds were designed for coastal defense, and they were considered invulnerable. We then battered them with what firepower we had, but all to no avail. Division then attached a forward observer to the troop and used the M-8's for communications back to artillery headquarters. The system worked out very well, but the 105's hardly chipped the concrete.

One reconnaissance platoon sergeant laid down his arms, walked up boldly to a Nazi fort and demanded that the Nazis surrender. The reply of the Nazi commander was that he would fight to the last man. The next day a battalion of Rangers stormed the garrison, and the Nazis changed their minds.

As the Americans drew closer to the city, the enemy's intensive use of artillery made vehicular movement impossible, so during the last week of the campaign the troop fought dismounted.

*Ed. Note: Comments from the officers and noncommissioned officers of this reconnaissance unit were printed in the November-December, 1944, Cavalry Journal under the caption, "Comments from Combat—Normandy, Brest, and the Present.—From 'Q' Cavalry Reconnaissance Troop (Mecz)."

Signal Corps Photo

THIRD ARMY RECONNAISSANCE

by Captain
Robert Willoughby Williams*
As Told to
1st Lieutenant Lyman C. Anderson**

HOW a cavalry unit became the eyes and ears of the army commander is part of the saga of the U. S. Third Army and its spectacular dash across France. The unit was the 6th Cavalry Group (Mecz), commanded by Colonel Edward M. Fickett.

With armored divisions spearheading in several directions and other Third Army components literally scattered all over northern France, Lt. General George S. Patton, Jr., was able to maintain a complete and running picture of the progress and situation of all his major combat units.

On a directive from General Patton, the 6th Cavalry Group resolved itself into an Army Information Service. Normal signal communications and command channels were by-passed, and the information was obtained on the spot by patrols in the front lines, then relayed by radio and teletype to Third Army Headquarters. All means of communication were used.

Information—from Battalion to Army

The fundamental unit of strategic maneuver is the army. To control and direct the campaign, to allot major combat elements from corps to corps for the accomplishment of assigned missions, and to employ supporting and reserve troops effectively, *the army commander must have current and continuous information from the front line elements.*

A system that will bring this information with both speed and accuracy is a vital adjunct to a highly fluid and mobile campaign. In Sicily, where such reports were often late and inaccurate, it was found that it was necessary to know the location of all troops at all times.

In position warfare or in a more or less stable situation, normal signal communications are adequate. The battalion commander reports his position and progress in a fairly detailed form to regiment. After this information is analyzed and sifted, it goes on to division G-2 and G-3. After further study and sifting there, it is sent to corps where it is drawn in on the overlay and incorporated in the periodic reports. Finally, army—usually 10 to 12 hours after battalion reported—gets the over-all picture.

Such a procedure has its points in a stable situation, but it will not do in a campaign of quick and sudden movement. In such warfare the army commander must know—and know at once—the position, situation and progress of every major element within his command.

No criticism is meant or implied of the normal system of signal communications or of such information passing through the chain of command. Delay is part and parcel of the system—but for an army with ambitions to go places fast, it simply will not do.

Origin and Training of AIS

While still in the United Kingdom, long before his Third Army became operational, General Patton foresaw the need for a fast and efficient system of information and in a directive to Colonel Fickett assigned him the responsibility of organizing and operating an Army Information Service.

The 6th Cavalry Group, comprising the 6th and 28th Cavalry Squadrons, both mechanized, commanded by Lt. Colonels Tom E. Matlock and Walter E. Day, respectively, was to establish a channel, under Third Army control, to make and report front line G-2 and G-3 information direct to the Army advance command post. The Information Service was to utilize not more than one squadron; the remaining squadron was to be available for Army ground reconnaissance missions and for special Army tasks.

Colonel Fickett, with Major Thomas H. Stewart, III, Group S-3, immediately set to work to comply with the directive. A few days later a plan and a request for additional equipment, including communications items and vehicles, was submitted and approved, and an intensive training period was begun.

As originally planned, the Information Service was to monitor friendly battalion, regiment, division and reconnaissance units operating within the Third Army. After the initial stages of the campaign in France, however, the monitoring was dropped entirely as it proved to have little value. If, through static or other interference, the operator missed an important part or phrase of a message, he was not permitted to break into the radio net to clarify what he had missed.

The extreme flexibility of the Army Information Service, as conceived and set up by Colonel Fickett and Major Stewart, proved to be one of the greatest values of the system. Conditions of the campaign anticipated during the training stages were not always met in the field; on the other hand, problems never thought of arose. One such example was the daily shifting of corps and divisions. But the Army Information Service was molded to fill the current need, and it was done so well that at no time was General Patton or his staff ignorant of the disposition or situation confronting any of his major elements.

Organization of AIS

A troop commander and troop headquarters of the reconnaissance squadron were assigned to each corps, and a lieutenant and a reorganized platoon to each division. Personnel administration remained with the squadron headquarters employed on the mission. Tactical control over the entire AIS system was exercised by the group commander.

As initially planned, the detachments were not organized as standard reconnaissance platoons. Each detachment had two officers and provided a monitoring section and a command and patrol section. When the monitoring was dropped, the monitoring section was merely incorporated as part of the divisional AIS detachment. Later it was found that the detachment was too large and unwieldly, and that two officers, while working satisfactorily together, were a luxury but not a necessity. After a month of operation the divisional AIS detachment finally resolved into a normal reconnaissance platoon.

Another example of how the lightning campaign in France changed the original AIS setup was illustrated in the relaying of front-line information by radio. During the first stages of the operation, the division detachments reported by radio directly to 6th Cavalry Group Headquarters. This traffic became increasingly heavy and by the latter part of August the Group Headquarters was receiving messages from 16 divisional detachments. When it was found that Group could not handle such a large volume of traffic, the

← Members of a cavalry unit with the XV Corps pass wreckage of German equipment near Luneville, France. When strong resistance was met in this sector the unit turned a captured German gun and ammunition on the Nazis.

*6th Cavalry Group.
**Public Relations Section, Twelfth Army Group.

situation became critical and on August 25 the radio setup was changed so that division detachments sent their messages to the troop commanders at corps levels.

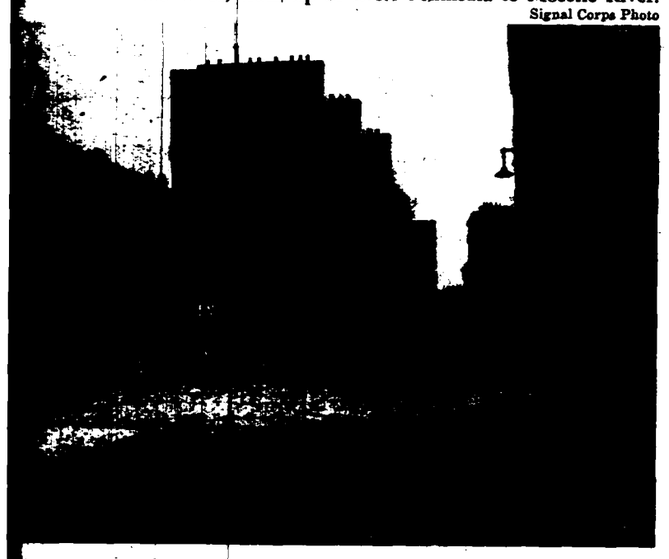
Here the troop commanders assembled the information and relayed it to Group HQ by radio. At the Group HQ the information was received, plotted, evaluated and sent to the AIS liaison section stationed at Army HQ, in close proximity to the operations section. From there the messages and information were distributed to G-2, G-3 and other concerned members of the Army Staff.

As it successfully worked out, one lieutenant and his reconnaissance platoon maintained constant contact with division G-2 and G-3, in addition to patrolling with forward elements, and obtaining and exchanging information with battalion and regimental S-2's and S-3's. A good part of the information obtained was from the patrols' own observations at battalion CP's and OP's and in the midst of actual engagements.

Operations

When a division planned to attack with two regiments, the platoon leader usually placed a patrol consisting of an armored car and one or two ¼-ton trucks with each regiment to follow the attack and report its progress to the lieutenant by radio and sometimes by messenger. Should only one regiment make the attack, the lieutenant might send a larger patrol to cover its front-line activity. Ordinarily, the patrols were commanded by NCO's, sometimes even by privates; in important instances, by the lieutenant himself.

A tank destroyer of the Third Army fires its 75mm gun point-blank at a Nazi pillbox emplacement in Brest, France, September, '44. Third Army lines extended over 500 miles, from tip of Brest Peninsula to Moselle River.
Signal Corps Photo



If these officers and men had not been extensively trained in tactics, movement and nomenclature of troops, military terms, and above all, *map reading*, they would have been hopelessly lost, and the system instead of being of inestimable value, could well have proved catastrophic. Important and far-reaching decisions were made on what Sergeant Richard Roe or Private John Doe saw or heard and reported. The service not only had to be fast, it HAD to be accurate.

These patrols often were involved in the fire fight. Although dog fights with the enemy were to be avoided, it often became necessary for the patrols to fight their way from one point to another.

During the sweep through France, the communications problem was a nightmare, but in one way or another the information was obtained and relayed to Army. Never during the drive from Avranches to Chalons sur Marne was the Third Army CP in one place for more than 5 days. At one time, during the latter part of August, the VIII Corps was in Brittany fighting for Brest and containing enemy forces in Lorient and St. Nazaire, while at the same time it was conducting seiges of St. Malo and Dinard. Meanwhile, other corps of the Army were actively engaged along the Moselle River, from Thionville south to include Nancy. The total distance between VIII Corps elements at Brest and the forward elements of the remainder of the Third Army along the Moselle measured the breadth of France, yet Army Headquarters relied on AIS for information of all elements in the fight.

Communications

To make communications possible between such distant areas as Brest and the Moselle River with the limited radio equipment available, the ingenuity and the ability of all personnel was strained to the utmost.

One important item, the radio personnel were all selected men, picked for their jobs because they generally had 3 to 4 years of radio experience.

Twenty-two of these men had been sent to a training school for a short course in communications. There they learned how to lay wire and operate and maintain switchboards and teleprinters.

Pigeons were also used during the latter period of AIS operations. Conditions were stable at the time and about 40 birds a day were used, or about 740 in a three-week period. This method of communication was fairly successful in a static situation; the losses of messages for the entire time amounted to only 3.06 per cent. Pigeons were of value to distant patrols when the radio blanked out or when radio messages could not be sent.

Messenger and courier service proved to be of great value in keeping communications open during the breakthrough. At this period solo motorcycles were found to be better adapted for this work than ¼-ton trucks. But when the cold, wet weather set in, the going

by motorcycle became extremely precarious and their use was limited.

A Study for Leavenworth

How the AIS came to the rescue in many totally unexpected situations during the highly mobile campaign in August is illustrated by the following account. The action involved the XV Corps, commanded by Major General Wade Haislip, in which an enemy infantry division was all but wiped out.

When the XV Corps was advancing through the Neufchateau region on the south flank of the Allied forces in the west, it encountered one of the strangest situations of the war. The German 16th Infantry Division had been brought from the Bay of Biscay area northeast to halt the advance of elements of the U.S. Third Army, advancing rapidly toward Epinal. The enemy division took up positions on a general southwest-northeast line between Neufchateau and Epinal.

In its rapid advance the XV Corps passed the U.S. 79th Infantry Division along the northernmost of the two main highways between the two cities and the French 2d Armored Division along the southern route, which generally paralleled the other. The average distance between these two roads was approximately 5 miles. In the process of this advance the entire German 16th Division was by-passed in front and rear by the Allied columns. Only when forward elements were within approximately 10 miles of Epinal did the XV Corps realize that the German division was sandwiched between the columns.

General Haislip promptly faced the 79th Division to the south and the French 2d Armored Division to the north, attacked vigorously and proceeded to annihilate almost to a man the trapped German division. The engagement occurred when other elements of the Third Army were already along the Moselle River.

The constant reporting of locations and dispositions of elements of the XV Corps by the AIS in great measure made this maneuver possible.

Conclusion

After the system had been in effect for about a month and a half, the reporting by AIS of intelligence information was abandoned. It was found that corps G-2 could better handle this information, and after its evaluation there, it passed directly to Army G-2. A heavy burden was here lifted from the shoulders of the AIS.

The Army Information Service had accomplished its highly important mission during the fluid stages of the campaign. When the front became relatively stable during the Battle of the Moselle, and later after the fall of Metz, the AIS was suspended.

While it is acknowledged that the use of the 6th Cavalry Group for such a purpose was relatively an expensive employment of combat troops, it is felt that it was more than justified during the period of highly mobile operations. It is difficult to conceive how the Third Army could have made its sweep after the breakthrough at Avranches had not the AIS been functioning.

In retrospect, it can be said that the officers and men of the 6th Cavalry Group really completed their tactical education during the AIS operations. All of them, through their close proximity to the various components and subordinate units of an army, have a clearer picture of the absolute inter-dependence of corps, divisions and even battalions.

Whether or not the AIS will ever be resumed again —after four and one half months' operation—is, of course, not known. In future wars and campaigns provisions should and probably will be made for a service similar to the AIS, but during the Battle of France General Patton had to improvise with the tools at his disposal.

Third Army in Luxembourg
January, 1945

Paris, Jan. 21 (AP).—The United States Third Army was overrunning northern Luxembourg tonight, crumpling the once-powerful south flank of the Germans' "Belgian bulge" with gains of nearly 5 miles and smashing with big guns at the enemy now racing for the haven of the Siegfried Line.

Pacing Allied armies that are attacking along most of the 200-mile Western Front, Lt. General George S. Patton's forces struck from the west and south, bursting into the mountain-bound little duchy from Belgium and fighting to within a mile of one main enemy escape road.

The sweep from the west drove the Germans out of Belgium at a point southeast of Houffalize, and carried a third of the way across Luxembourg's 12-mile-wide northern tip into the village of Lullange, threatening to outflank any enemy positions anchored on Wiltz, 6 miles south.

As he poured tanks and infantry into this 3-mile front, General Patton loosed another drive in the southeast that deepened the Sure River bridgehead to 4 miles and overran Landscheid, a mile south of one main east-west escape route.

The Germans were rushing troops out of their imperiled Ardennes positions over this highway into Vianden, crossroads town at the Reich border, in a storm of American artillery fire.

A dozen or so Belgian and Luxembourg towns fell to the Third Army, most of them to the 6th and 11th Armored Divisions.

The 6th Cavalry Group swung into action on the south flank of these forces and crossed the Wiltz River a mile west of the town of Wiltz, enemy mountain stronghold.

Nowhere did the Germans hold positions more than 10 miles west of the Siegfried Line along the axis of their deepest penetration, which had carried almost 45 miles west toward the Meuse.

Comments from Combat

Berg, France—A Recon Troop in Dismounted Action

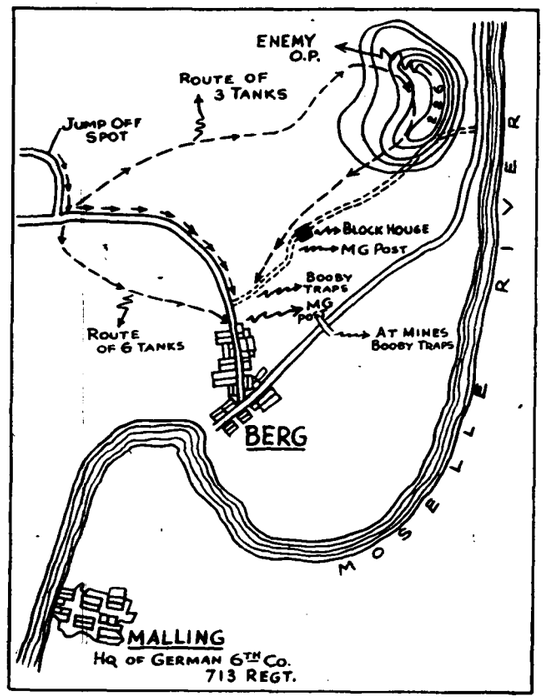
by Captain Richard B. Stolze, Reconnaissance Troop Commander

OPERATIONS for the attack on Berg were carefully planned.

Located comfortably on a high hill, the town furnished remarkable observation over the entire surrounding area (see map). Jerry in command of hill "226" made operations even more difficult. At any event, orders were to bag the town.

It was estimated that there were between 30 and 40 Germans in Berg, and the proposed plan was for the 3d Platoon, dismounted, to advance through existing road mines up the main road, with a platoon of engineers following to clear the road of mines. The 2d Platoon, also dismounted, was to seize the blockhouse, which was expected to be a machine-gun position, and then continue into the town from that direction. The 1st Platoon, mounted in its vehicles was to follow on "clear-ahead" from the engineers. The troops were to move up under cover of darkness; then after a half-hour artillery barrage, were to advance into the town.

The first phase of the plan was carried out smoothly until an engineer accidentally set off a booby trap. Thus alerted, Jerry immediately opened up with well placed machine-gun fire which kept the platoon pinned down and prevented its advance.



Although not yet time for the attack, the platoon signified its readiness for assault, and called for artillery fire. As the barrage opened, the platoon pushed forward, until Jerry opened up with mortar and machine-gun fire and again halted the advance. As dawn broke, enemy fire became more effective, and the platoon finally had to withdraw.

Two tank platoons, held near by in mobile reserve, were then called to spearhead the advance.

The tanks advanced in single file until the first one struck a triple Teller bar mine and blew up, and immediately the remaining tanks withdrew to make a different approach.

Captain DuPree of the tank company and I went into a huddle and mapped out a new plan of attack. He was to get 6 tanks into the town by moving cross-country from the west. After knocking off the enemy machine guns, the tanks were then to outpost that end of the town. Meanwhile three other tanks were assigned to clean out hill 226 and neutralize Jerry's fire from there. Thus covered, the dismounted recon troop was to follow into the town from the road route.

The new plan ironed out smoothly. The tankers got their 6 tanks into the town, knocked out the machine gun outpost on the approach side, and allowed the dismounted troops to move up. Their advance was slowed considerably by heavy mortar fire and a great many booby traps, but the troop pushed ahead. The tanks, however, were a little too fast for the men on foot, and the first unit did not get in as soon as had been planned. The 2d Platoon was the first to reach the town with its dismounted men. Meanwhile, the tanks continued outposting and shooting up anything they could see—neutralizing and pinning down enemy fire while the dismounted forces moved in.

The 2d Platoon immediately set up an outpost on the approach edge of town, and then dispatched 5 men hurriedly to the far end to set up another outpost in order to trap any escaping Germans. The balance of the 2d Platoon, plus the 3d Platoon, proceeded with an extensive house-to-house cleanup.

Although the operation continued to function fairly smoothly, casualties began to mount, and it became imperative that more men be brought in immediately. With mines still impeding progress on the road, the 1st Platoon vehicles were rerouted to approach the town over the cross-country route taken earlier by the tanks. A small detail of engineers was then left to work on the roads, while the balance of the engineer platoon was called into town to hurry operations in the house-to-house fighting.

During the entire operation the combination of artillery, tanks, and dismounted cavalrymen worked in perfect tactical coördination to accomplish their mission.

Conclusions

The complete action at Berg, from the start of the attack by the tanks until the town was cleaned up, covered about two hours. Total results netted 24 German prisoners and 8 killed. The troop's casualties, mostly from booby traps and mortar shrapnel, were 4 killed and 15 injured. Most injuries were not serious, as the majority of those wounded were disabled for only two to three weeks.

Throughout the attack it was of utmost importance that platoon leaders and noncommissioned officers physically lead their men, with the platoon leader leading and a high ranking N.C.O. bringing up the rear. Men will follow if they are led. The job to be done should not be left up to a few men, and the platoon leader and the N.C.O. must see to it that every man does his part. The men will do anything, but they must receive orders. If they are not told what is to be accomplished, the tendency will be toward disorganization rather than toward an organized assault. This difficulty became very apparent during the attack on Berg. Fortunately, how[illegible] enough officers and N.C.O.'s were made available in time to reorganize disorganized groups which had started to "sag in the middle" by the loss of ranking N.C.O.'s.

Mechanized cavalrymen should be trained thoroughly in dismounted action as well as in their more normal rôle of mounted action. As the attack on Germany continues, it is apparent that more and more dismounted action will be necessary.

In an operation of this nature, the best weapons are tommy guns, grease guns (M-3 submachine gun), M-1 rifles, carbines, and plenty of hand grenades.

The 509 radio (dismounted 510) is an excellent radio and the best that the cavalry can employ in the present TO/E. One for each platoon in dismounted action is sufficient. Two men, however, are required to man and carry this radio. It is also imperative that communications be continuous at all times, at all cost, especially during the attacking period. If possible, an established competent man should be assigned to assist with the radio so that if the radio operator is actively engaged elsewhere, the alleged competent radio assistant can give a high light description of the action as it progresses. An absolute necessity is that an officer or N.C.O., if possible, be close to the radio at all times.

It is believed that the attack on Berg would not have been possible without the employment of the tanks which knocked out the hostile machine-gun outposts that were pinning down the dismounted cavalrymen. The tanks also kept Jerry busy ducking their continuous machine-gun and 37mm fire, while a clearing was made for the house-to-house cleaning.

* * *

Berg, France—A Tank Company in Support

by Captain Donald J. DuPree, Company Tank Commander

THE taking of Berg was generally considered as General Patton's last military objective on the west side of the Moselle River, and the mission was given to Company "F" tanks, and Troop "B," of the Reconnaissance Squadron, dismounted.

The commanding ground to the left of Berg had been taken once by a platoon of Troop "A," which later had been forced to withdraw, and the ground retaken by the enemy.

The attacking schedule, set for 5 November, 0600, was to be preceded by a 10-minute barrage on the enemy towns adjoining Berg and a 155mm barrage on the town itself.

Troop "B" moved in at 0600 with an attached platoon of engineers. At 0730 the commander reported that the troop had been pinned to the ground by heavy enemy fire—small arms, mortar and artillery—and could not advance.

It was then that the two tank platoon's and headquarters section of Company "F" were committed to make a breakthrough and get into the town. The tanks moved out with the 1st Platoon to the front, the company commander in the middle, and the 2d Platoon in the rear—more in a column and well dispersed for purposes of immediate control and deployment by the company commander.

The leading tank, assigned to proceed as far as it could while locating any possible antitank guns or mine fields, struck a triple Teller bar mine, which totally destroyed the undercarriage. Three men were wounded.

This casualty, however, enabled the balance of the attacking forces effectively to by-pass this mine field by going cross-country. For deceptive purposes, the

Signal Corps Photo

Tanks advance on Berg, France, December 1944. Approaches to Berg were heavily mined, and the Germans, occupying the high ground overlooking the town, held excellent gun positions from which to direct fire on aproaching troops.

enemy had employed dummy mines in the field adjoining the road.

Against a rain of heavy mortar and small-arms fire the first tank entered the town of Berg at 0800.

The 1st Platoon, used in echelon form as a flanking movement around the mine field, was well dispersed to flank the town and reduce any small-arms fire on the dismounted men. The 2d Platoon on the left flank covered the enemy-held high ground with 37mm HE and machine-gun fire. The action of the 2d Platoon in covering this hill served to reduce the amount of mortar fire by harassing their forward observers. Once the town was entered and secured by the two tank platoons, the dismounted cavalrymen moved forward, encircled, chased, and captured the enemy and in general, conducted mopping up operations.

After taking and handcuffing Berg, it was necessary to detach the 2d Platoon which, with the aid of the dismounted cavalrymen, attacked the high ground coming into the town and successfully drove the enemy from their position.

Two platoon's were then detached from Troop "A" to dig in and hold that high ground—the key terrain to the entire section—and deny Jerry his commanding observation posts.

Conclusions

The surrounding terrain was muddy, with plowed fields adjacent to the roads. Hostile observation remained on three sides of the town. For a time the enemy had been in full possession of the hill and high ground which afforded the commanding observation. This had allowed Jerry excellent gun positions for directing effective fire. Throughout the entire mission, enemy fire—artillery, mortar and small arms—was constant. Visibility and atmospheric conditions were good. Morale was excellent; estimated enemy morale was fair.

Most of the tank casualties were incurred as a result of individual crew members exposing themselves for too long a period in the open turret.

Radio control is a prime necessity and definitely should not be conducted on squadron command channels because of undue traffic which interferes in the employment of the vehicles. Loss or partial disruption of communications reduces maneuverability, especially in small, flexible units.

Inasmuch as cavalrymen have been called upon to do doughboy teamworking, it is certain that combat training should take in the basic fundamentals of all branches of the combat arms—at any event, as much as possible—infantry, cavalry, artillery (fire control from forward positions), etc. Thus the enemy can more easily be outwitted, lives will be saved, and victory will be the dividends.

Another noteworthy fact for anyone's thinking cap is the necessity of inspiring soldiers with the same confidence when they are dismounted that is so noticeable when they are in their vehicles. The more a soldier learns to master his wits without the roof of armor about him, the more effective and producing he will be. Confidence—courage to withstand the rigors of combat under dismounted conditions—makes for cool thinking, assured teamwork, and eventual success in the field.

Time in the Jungles

by 2d Lieutenant Ross S. Hadfield*

"LIEUTENANT, the Exec. wants to see you." With this salutation from one of his men, the platoon leader received his first inkling that something

*81st Cavalry Reconnaissance Troop (Mecz).

was up. He checked his watch and noted that it was 1620—rather late in the afternoon for much preparation as it would be dark by 1830. The platoon had previously been sent on late afternoon patrols, which normally should have required 4 to 6 hours of daylight to perform; so with apprehension the lieutenant looked up the executive officer of his troop.

The orders the executive officer gave him were, "Get your platoon ready to move out. Take 5 machine guns; use 3 of headquarters guns and one unit of fire."

"Where are we going and what are we to do?" asked the platoon leader.

"The captain will give you the dope when he gets back from G-2," the executive officer replied.

With that warning the platoon leader started preparing his platoon to move. The members of the platoon were already in a state of confusion, as they were trying to build shelters to keep their equipment and supplies dry, and so that they, themselves, could get dry after 4 days of continual rain. Some of the men were out in the jungles locating logs for building purposes and had to be called in. The others, under their squad leaders, began getting the platoon's equipment lined up.

About 1635 the troop CO returned, and the platoon leader immediately checked in with him.

The bits of vital information which the platoon leader received in the next 15 minutes were:

1. Where he was to go (approximately).
2. What he was going out to get.
3. What supplies he was to take.
4. What time he was supposed to be there.

Things which were not given him, even after asking, were:

1. The enemy situation.
2. Where friendly forces were located.
3. What units comprised those forces.
4. Any information of the terrain other than the issue map, made from aerial photos.

The platoon was assigned Section Z of the island (see map) to outpost against sea invasion. It was to establish a central CP and 4 outposts, as shown on adjoining map. Each OP was to be equipped with the following:

One LMG.

One unit of fire.

One sound power telephone for communication with CP.

The CP was to have:

One EE8 type telephone to Central Defense Control.

One SCR 510 radio for communication to Central Defense Control.

One SCR 284 radio for communication with troop.

Three SCR 300 radios to be placed by the platoon leader.

The platoon was to use ¼-tons for transportation as far as possible and be in position by 1700.

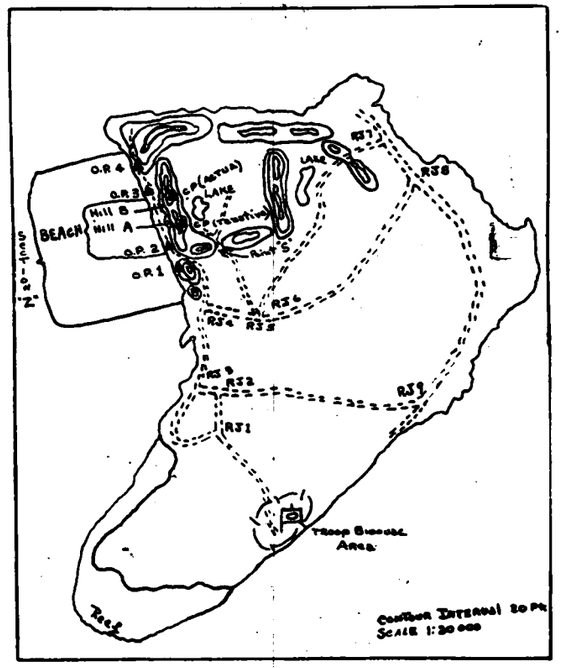
Asked about the enemy situation, the captain could not tell the platoon leader any more than what had been rumored around for several days: The doughboys had some of the Japs holed up in caves (exact location unknown), but snipers were still present in the area. The CO could not tell the platoon leader where the friendly forces were located or exactly what units were on the front lines.

By the time the CO finished issuing the orders, it was 1650. Another 15 minutes were required to get the extra equipment which the CO had ordered to go with the platoon and in checking to see that it was in order. Another 5 minutes passed while waiting for the return of two of the three ¼-tons which the platoon had available.

The platoon was to be in position by 1700, but with a warning order given at 1620 and final orders at 1650, it was an impossible task.

The platoon leader moved his platoon as a unit to RJ No. 4 (see map), where he turned over to the platoon sergeant 8 men, two machine guns, and one SCR 300 radio to set up OP's No. 1 and No. 2. The platoon leader instructed the sergeant to set up the OP's and, if it was not then too late, to join him on Hill "A." He then moved the rest of his platoon around toward the lake by RJ No. 5 with the intention of establishing his CP and, if possible before dark, to push on with his other two OP's.

At point "S" the platoon leader contacted the infantry and found that he could not get up to Hill "A" from that side because of a deep ravine which did not show on the map. In attempting to scale the rock cliffs on



the east side of the ridge, the patrol would be exposed to fire from Jap forces holed up in the area northwest of the lake.

After getting as complete a picture of the situation as possible from the infantry, the platoon leader immediately moved his platoon back to RJ No. 4, then north along the trail as far as a ¼-ton could go. Contacting OP No. 1, he found that the platoon sergeant had pushed on to set up OP No. 2. The platoon leader then moved on north along a dim trail which ran along the coast but was not shown on the map.

By the time that the patrol reached the vicinity where OP No. 2 was supposed to be established, it was quite dark, so the platoon leader decided to hole up for the night. The gravest concern in moving at night was in being fired on by friendly troops, who had already experienced being grenaded by the Japs after challenging. As a result, most troops holed up at dark and fired at anything that moved. Because of the thick jungle and rugged terrain the platoon leader and the men with him failed to contact the platoon sergeant. (Next morning it was found that they were less than 50 yards apart.)

The second day, after a personal reconnaissance by the platoon leader, the patrol set up the CP on Hill "B," because it offered better facilities for a CP than Hill "A." OP's No. 3 and No. 4 were established, and the platoon supplies were all hand carried in and wire strung to all OP's by 1500, when the platoon leader gave orders for all men to prepare their defenses for the night and clean their weapons.

The third day the platoon repaired the wire which was continually being shorted or broken by the infantry, who were packing supplies to their units, or cut by Jap snipers. The wire was placed up in the trees —the men working in pairs or more as protection against snipers. By 1300 communications were established to CDC and all outposts, and the platoon was relieved by another platoon from the troop.

Conclusions

Although the platoon had orders to establish an OP system by 1700 on the first day, it was not really set up until the morning of the third day—about 42 hours late.

Who was responsible for the delay?

With a little more experience the platoon could have set up the system faster. On the other hand, the platoon leader did not receive a warning or orders early enough on the first day to make use of daylight. He did not have time to make a personal reconnaissance, so he could not tell his platoon how or where they would move. He did not get the complete enemy and friendly situation. In fact, he had only rumored information until he found out for himself.

The troop CO did not get his orders from G-2 until late in the afternoon, and then he never received complete enemy and friendly information so that he could pass it on.

If an outpost is to be established in jungle terrain, at least double the normal time is required if there is any movement by foot because of the difficulties of orientation, the heat, and the hardships of hand-carrying all supplies through the jungles.

Orders should be handed down from the top as fast as possible in order to allow the patrol itself the daylight hours in which to work.

Coöperation With the Infantry

by Captain M. M. Cutler*

CLOSE coöperation with infantry is the keynote of all arms, and this fact has never been more noteworthy than in actions involving infantry and cavalry, specifically, the division reconnaissance troop.

Coöperation can best be accomplished on the battlefield when personal contacts have been made prior to battle. Not only should the reconnaissance troop commander know the regimental commanders and their staffs but he should also know the battalion commanders and staffs as well. The best place for making these acquaintances is back in the states, but if it was neglected there, acquaintances should be made as soon as possible wherever the units are.

In a rapidly moving situation, when the infantry cannot maintain contact with the enemy, the reconnaissance troop, logically, can best perform this mission. By riding 8 or 10 infantrymen "pig-a-back," a reconnaissance platoon gives to the following infantry, first hand information whenever it is stopped temporarily by enemy action. By the same token, no time is lost by the infantry main body in becoming disposed for action, because the mounted point has the situation "diagnosed," and reduction of the enemy interference is materially quickened. Usually, the fire power of the reconnaissance platoon is sufficient to reduce local resistence and handling of prisoners by two of the infantrymen allows the platoon to proceed without delay.

In situations of close contact between our infantry and the enemy, the reconnaissance troop is squeezed to a flank for the purpose of maintaining contact with the adjacent unit. In keeping this contact, it has been found desirable to leave an armored car with radio at the battalion headquarters of each flank unit. The purpose is twofold:

1. Platoons operating patrols can readily keep up with moving flanks and thereby never lose contact.

2. Adjacent unit commanders always desire information of the other units situation and position, and there, close at hand, is a continuous source of information.

Coöperation cannot be overstressed. Passing of information both friendly and enemy, to commanders, dispels the fog of the unknown and makes it possible to keep the enemy continuously off balance.

*Commander, Reconnaissance Troop.

Mountain Goat, M-4

by Lieutenant Richard K. Gottschall

1st Armored Division from Grossetto to Volterra, Italy, June 21 to July 10, 1944

THE 70 road-mile attack of the 1st Armored Division from Grossetto to Volterra, Italy, in June and July, 1944, was over the most unsuitable tank country that the division had encountered. Yet the operation was as successful as any in which the division had participated because unit commanders, the staff and the ordinary soldier all adapted themselves and their weapons to the situation.

The terrain was mountainous, laced by streams and deep gorges. The roads, what few there were, were built into the sides of the hills like nightmare shelves. Every mile had its quota of bridges and culverts, which the Germans consistently demolished. The roads twisted as every Italian mountain trail does, and each curve, with its blown bridge or culvert, became an excellent site for a roadblock. Armor is not designed to operate over such terrain, but it did.

The sector of the Fifth Army front assigned to the 1st Armored Division began with the coastal mountains and extended approximately 30 miles inland. On the armor's left an infantry division was attacking up the coastal plain, and on its right elements of the French Expeditionary Corps were attacking through the mountains.

The 1st Armored Division, with enough attachments to make its strength that of an embryo corps, was faced with the problem of covering a 30-mile sector which lacked enough roads and which had no terrain away from the roads that permitted the textbook employment of armor.

Ten Task Forces

The only solution was to cover every available road with a small task force. The sector was divided between the combat commands, each of which operated with three small task forces, but almost as soon as the attack was opened, it was found necessary to commit the division reserve in the center to cover the large gap between the combat commands. Using the staff of the 13th Armored Regiment, this group operated with two small forces and was called Task Force Howze. To protect the flanks of the division, and to keep contact with the adjacent units, reconnaissance battalions operated on the east and west boundaries. Although their mission implied a more or less passive rôle, their activities might be considered as those of a ninth and tenth task force since the neighboring divisions often lagged miles behind.

The task forces varied in composition, both between and within the combat commands. On the left of the division sector, Combat Command B placed a mobile force of a light tank battalion, an armored infantry company and a medium tank company. The center CC "B" force included a medium tank battalion, an armored infantry battalion and a reconnaissance company. On the right CC "B" placed a battalion of armored infantry, a company of light tanks and a platoon of medium tanks.

The reasons for the variation were the superior roads generally available to the center force and the concentration of German armor in the center of the sector. The right and left forces were weaker but more mobile for the same reasons. Common to all three forces, however, were engineers, tank destroyers and reconnaissance elements. A platoon of each was usually assigned to each task force.

In the division center and right, the formations of Task Force Howze and Combat Command A remained generally the same throughout the operation. Enemy armor did not constitute the threat to these groups that it did on the left.

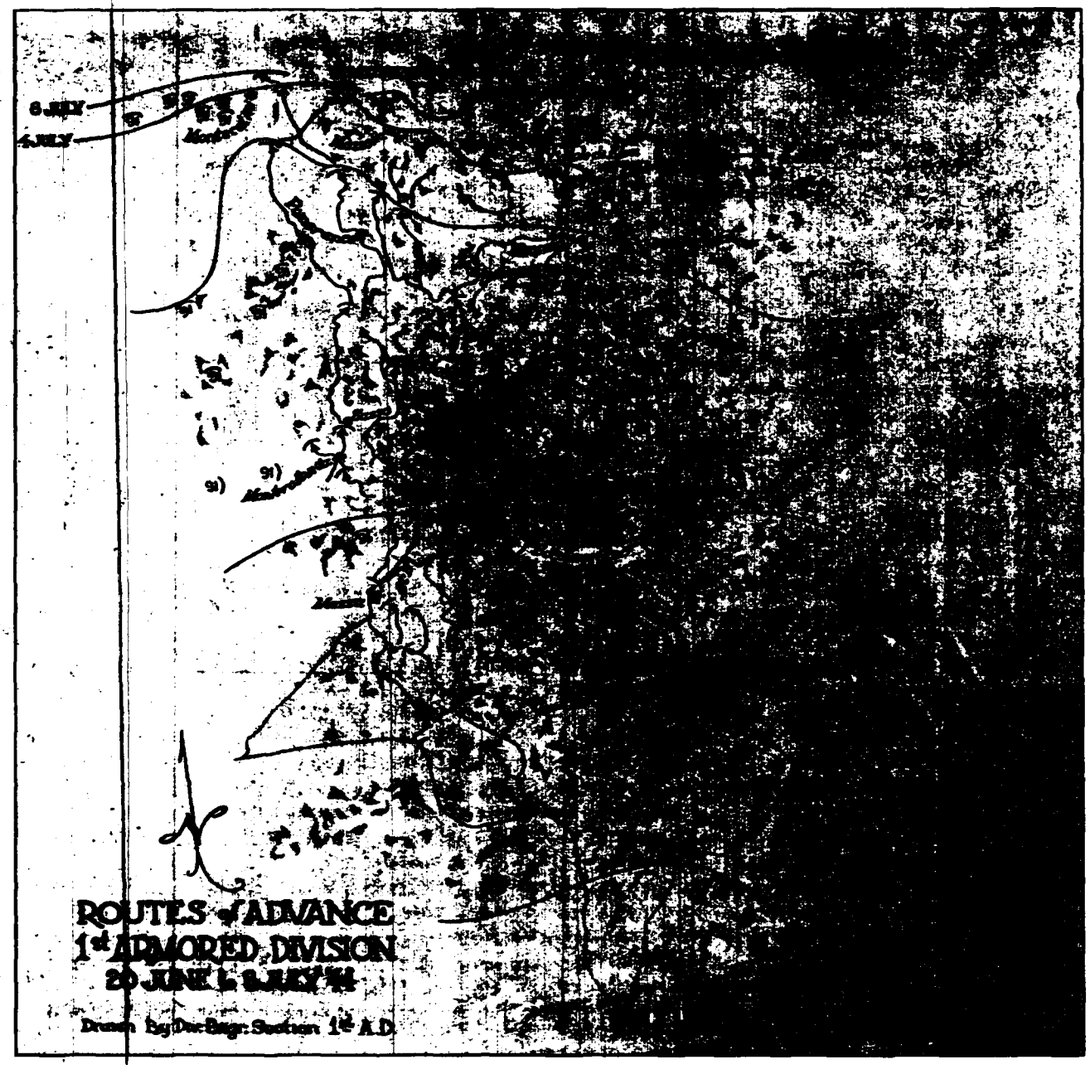
Common to the forces of Task Force Howze and CC "A" were a medium tank company, an infantry company, a reconnaissance platoon, a light tank platoon, an engineer platoon and a tank destroyer platoon.

After the first few days of the attack there was no appreciable division reserve. The nature of the terrain, the width of the sector and the necessity for meeting a thinly spread but solid German defense forced the division into what amounted to a skirmish line.

The Opposition

The Germans probably expected the Fifth Army to employ the 1st Armored Division on the broad coastal plain in an attack aimed at the flank of the German position. The terrain was generally more suitable and the quick capture of seaports was a prize worth considering.

The Germans evidently concentrated their armor to meet such a threat, and were forced to shift it quickly to the east when 1st Armored tanks made their appearance in the coastal mountains. Combat Command B, on the division left, took the brunt of the armored defense at first, but the Germans were forced to shift



their armor still farther to the east as they realized the width of the sector through which American tanks were operating.

For defense against the 1st Armored attack, the Germans employed a battalion of Mark IV tanks and a battalion of about 50 Mark VI (Tiger) tanks. The German 162nd Infantry Division was the main force in the sector, and was reinforced with self-propelled guns.

It also developed early in the attack that the available maps were not satisfactory. Aerial photographs showed better the conditions of small trails and a few of the demolitions. These photographs were used extensively throughout the operation.

No planning was possible any farther ahead than could be seen on the ground, and since the observation was strictly limited, none but local day to day objectives could be chosen. An over-all mission was assigned, of course, but throughout the attack many decisions were perforce left to unit commanders. The best available observation came from the small artillery planes, which were flown almost continuously.

Small engagements were fought repeatedly on the division's routes, but for the most part these skirmishes were simply the orthodox reduction of strong points and roadblocks.

"Impassable Terrain"

The most glaring error the Germans made in their defense was their reliance on apparently impassable

terrain for flank protection. Repeatedly they left a flank unguarded only to discover too late that a company of M-4's was sitting on the "impassable terrain" and shooting up their position.

According to intelligence reports, midway in the operation, the German 162d Division advised subordinate units that since the "opposing armor" was using trails generally considered impassable to tanks, bazooka teams were to be placed to guard all trails, regardless of their condition, which led into or past German positions.

In the capture of Roccastrada, heavily mined hill town in the CC "A" sector, a task force was sent up Highway 73, a two-lane road that confined the column rigidly to a march formation. The small German garrison in the town had no difficulty stopping the armored force, which could employ only a tank or two at a time. However, the CC "A" commander quickly sent a second task force around to the left. A faint trail, which showed on the aerial photographs, led north past Roccastrada and intersected Highway 73 again above the town.

The trail was so narrow, rocky, steep and twisted that the Germans had not even bothered to mine it. The route would have been difficult even for a mule, but the tanks managed to worry their way through and came into Roccastrada from the north and east. The Germans, failing to discover the threat to their flank until the tanks were within range, were forced to evacuate their position with heavy casualties.

On the west, CC "B" had left Route 1 and turned north into the mountains on the road to Massa, chosen as a main axis. Two thousand yards north of the highway, the force had to pass through a narrow saddle. On the far side of the saddle, distributed across a small plain, nine Tiger tanks waited. As the column of CC "B" tanks crossed the rise, the Tigers struck. Although several of the Tigers were destroyed, the Germans retained control of the position.

A force was then sent 10 miles back over Route 1 and around to the right. This force, which was given the mission of making a demonstration northeast of the saddle to relieve pressure on the main column, met few demolitions or mines and only slight resistance until the tanks rolled into position. Then six Tiger and four Mark IV tanks attacked from four directions, and knocked out four M-10's and 12 light tanks. The remaining platoon of light tanks hastily withdrew to a roadblock which the infantry company had organized 2,500 yards to the rear. The German position guarding the saddle had been only slightly affected.

Since a frontal assault was still out of the question, the only alternative open to the CC "B" commander was a flanking maneuver to the left. The photographs showed only a faint trail. It was not a route for armor, but a reconnaissance company, reinforced by a platoon of tank destroyers, was sent over it. Again the Germans had relied on the terrain to protect their flank, and the force, reaching the hills to the left of the saddle, cut the road above by fire.

By morning the reconnaissance group, reinforced by an armored infantry company and a medium tank company, had weakened the German position enough to force a withdrawal.

Artillery in Antitank Rôle

These Mark VI tanks, which repeatedly appeared in the CC "B" sector, were the most serious threat to the division's advance.

The terrain, as has been pointed out, was perfect for roadblocks, which effectively neutralized the 1st Armored Division's numerical superiority by limiting the use of tanks to only the first one or two M-4's in each column.

The bulk of the attached heavy artillery was concentrated in the CC "B" sector. A 155mm howitzer battalion and a 155mm gun battalion were used primarily as indirect fire antitank guns. Every time a Mark VI was discovered on the combat command's route, which was often, the fire of the two attached battalions, and of the organic 105mm battalion, was poured on the tank. It was expensive warfare in regard to ammunition, but it was the only method of destroying the Tiger tank without heavy loss of personnel and equipment.

The method and skill of the German tankers were illustrated shortly after the incident of the "saddle." The reconnaissance elements of the task force on the left passed through a defile into an open area formed by a small river. They investigated the area on foot but discovered no enemy and returned through the defile for their vehicles.

As they prepared to mount, an artillery cub plane buzzed the column and dropped a note. The observer had detected three Mark VI tanks in the open area. They had been so well camouflaged that he had not seen them until they had removed part of the disguise to give them better vision and a field of fire. The artillery destroyed two of the tanks.

Farther north in the attack toward Massa the left column of CC "B" employed the main axis. Of the other two task forces, the right hand column five miles inland had the customary mountain road, but the center column was forced to split into two small forces. One of these was sent over an unimproved, narrow road, while the other, setting off across gullies and streams, made its trail as it went.

The pressure of the four columns, plus the activities of the reconnaissance battalion on the left flank, forced the German garrison to withdraw from Massa. With five forces coming at and past their position, the Germans were unable to fight for the town because of the impending threats to their flanks and rear. They evidently did not have enough troops and armor to defend all five approaches, or enough time to dispose what strength they had.

Tanks Without Infantry

The vulnerability of even Tiger tanks without infantry was illustrated in the Task Force Howze sector during the same period. At Bocchegianno, TFH completely wiped out a German infantry company which had occupied the town. Sixty were captured and the remainder of the company killed.

A few miles farther north, where the narrow shelf road curved sharply to the right to enter a deep gorge, foot reconnaissance discovered two Mark VI tanks. Even though the task force had made no attempt to be quiet in its advance up the road, it was able to occupy a wooded slope above the road with an infantry platoon and fire a round of bazooka at the lead tank before being discovered.

Small-arms fire kept the German armor buttoned up, and a tank destroyer was able to knock out the lead tank. The second retreated and was later found several miles north where it had broken down from a damaged suspension. Throughout the fight, neither German tank was able to fire a shot, either from their 88mm guns or from their machine guns.

The two tanks had posted no lookouts to warn them of the TFH column's advance. They had obviously relied on the Bocchegianno force to fight a delaying action to their position. If even one German had escaped, the tanks would have been warned. Instead, the TFH column approached with complete surprise.

At Bocchegianno, the German infantry had no antitank protection and were no match for the TFH combination of tanks, infantry and artillery. Above Bocchegianno, the German tanks were no match for the column because they were forced to fight without infantry.

Between Massa and Castelnuovo in the CC "B" sector and extending east in a belt across the division sector was a higher range of mountains which limited even more the use of armor. In many cases the demolitions could not be bridged by the engineers under combat conditions and the division's tanks were confined to a very few routes. The infantry had to be dismounted from their halftracks or from the backs of tanks for long periods. Bridgeheads over the demolitions the engineers could repair were fought for bitterly by the retreating Germans.

Ten Miles On Foot

At Massa, CC "B" discovered that the area its left column must cover not only had no roads for the next ten miles but had no passable trails. The hills were occupied and could not be passed by the main column of armor until they had been cleaned out. The threat to the left flank was serious.

The armored infantry was dismounted and proceeded northwest from Massa. Luck and the ability to move fast and aggressively enabled the infantry battalion to surprise a battery of horsedrawn artillery, and capture 45 personnel, the guns and a number of horses. The battalion had been forced to leave even its quarter-ton trucks behind, so had it not been for the captured horses, the column could not have been supplied until it reached Monterotondo about 8 miles north. A western peep driver became the battalion blacksmith during the four-day fight.

In the fight from Monterotondo to Sasso 3,000 yards to the north on June 28 the battalion completely exhausted itself. The sector formed a bottleneck for the CC "B" forces and allowed the Germans to concentrate their defenses in the area. The town could not have been held without armor, but there were no roads or trails, so a force of tanks was sent across the "impassable terrain." Making its own roads, it passed to the left of one 600-meter peak and arrived in Sasso in time.

The Cecina River

Once the high range was passed, the advance was "downhill" to the Cecina River defenses of the Germans. The attack moved rapidly, and by dark on June 30, CC "B" and TFH had established bridgeheads on the north bank of the river. Radicondoli had fallen and Mensano was occupied by CC "A," which had passed to the east of the Cecina River valley. In the 10-mile run of the CC "B" left column on June 30 the troops had again alternated between mule trails and no roads at all to get their tanks to the river.

The advance on the left and center of the 1st Armored Division sector was so rapid that many Germans were trapped and captured before they could prepare their defenses. That night there were still untouched German positions on the south side of the river between the attacking armored columns.

One of the CC "B" columns crossed the river and took up positions straddling Highway 68, key lateral route connecting Volterra and Route 2 with the coast. After dark three Mark IV tanks came east on the highway and reached the outskirts of the American position before they were discovered. A tank destroyer, pumping three-inch AP at the exhaust, knocked out the lead tank, and the second Mark IV pulled off the road to the north and stopped by a haystack. On the other side of the haystack was an M-4. Unable to fire through the haystack because it limited his turret, the M-4 commander pulled his tank forward, pumped two quick shots into the Mark IV and backed up. The German tank exploded and burned. The range of the one-sided battle was seven feet. The third Mark IV tank was burned by its crew which escaped into the hills.

Casole d'Elsa Fiasco

On the division right, CC "A" reached Casole d'Elsa on July 1. The walled town, occupying the key terrain feature in the area, was strongly defended. The only roads toward the town were on ridges within sight and range of the Germans' antitank guns. The terrain prohibited the employment of more than one or two tanks. The only solution was a night infantry attack with medium tanks and M-10's reinforcing the position before dawn. An attached battalion of infantry was ordered to attack.

Shortly before dawn the infantry reported their troops had secured the town, and tanks were sent up. Mines slowed the tank movement, and at dawn the tanks were caught on the ridge road 1,000 yards south of the town. Before they could pull out, six medium tanks, three light tanks, and two tank destroyers were lost. The Germans had thrown off the infantry attack and still occupied the town.

The attack was repeated the next night but again failed. A contributing factor was the forewarning of the defenders. The third night the attack succeeded. A company rushed the northeast gate while a second company scaled the 15-foot town wall.

The town probably would have fallen the first night except for the relative inexperience of the infantry battalion. Whatever the reason for the failure of the attack, or the incorrect report to CC "A" that the town had been taken, the incident illustrates what can happen to a command when communications channels break down.

Cutting Highway 68 to the East

Across the Cecina River, the Task Force Howze attacked Mazzola and secured it on July 2. Out of nine medium tanks used in the attack only one reached the objective that day. One tank was knocked out by enemy fire, two struck mines and five threw tracks from trying to go over unsuitable terrain. The force pushed reconnaissance on to Highway 68 east of Volterra and cut the road by fire.

On the left, CC "B" attacked Montecatini and held the town against heavy German fire. During the operations just north of the river, both CC "B" and TFH were receiving the heaviest artillery, small arms, mortar and direct tank assault gunfire of the past few weeks. Volterra, situated on the very peak of a 500-meter mountain, was the core of a German position held by at least two battalions of infantry with artillery and tank support. The occupation of the hills to the west by CC "B" and the TFH position on the east flank of the Volterra did not materially weaken the German position. Farther east CC "A," in straight infantry attacks, pushed troops to within small arms range of Highway 68. In supporting the infantry, CC "A" sent a company of medium tanks into several lateral wadis to provide indirect fire support, but because of the terrain, only eight tanks were able to work their way into position.

Since Volterra, key to the defenses north of the Cecina, could obviously not be taken by armor alone, and the division did not have enough infantry with which to attack, the 1st Armored was withdrawn from the line July 10. A detachment of tanks and tank destroyers was drawn from TFH to support the infantry division's attack on Volterra.

The Engineers' Rôle

The Grossetto-to-Volterra operation of the 1st Armored Division covered 33 airline miles, but the most direct road between the two points measured 70 miles. Every one of those 70 miles contained a number of bridges and culverts, each of which was destroyed by the retreating Germans. The logical sites for by-passes were mined, sometimes to a depth of several feet so that a bulldozer would be knocked out when it scooped dirt for a fill. The creek beds were mined. Gaps were blown in the shelf roads. Abatis were thrown across roads where no other type of roadblock could be used, and in several instances bridges were blown where the gap could not be repaired under combat conditions. In those cases the task force using the road was forced either to leave its vehicles and fight on foot or else turn back.

The tankdozer proved to be one of the division's most valuable pieces of equipment during the operation. Its armor permitted it to travel with the detachment of engineers which formed part of the advance elements of each task force. Its blade was essential to construct by-passes and fills. Even its 75mm gun could be used if a fire fight developed unexpectedly. The entire operation could not have moved as successfully as it did without the engineer battalion's extraordinary work.

The Box Score

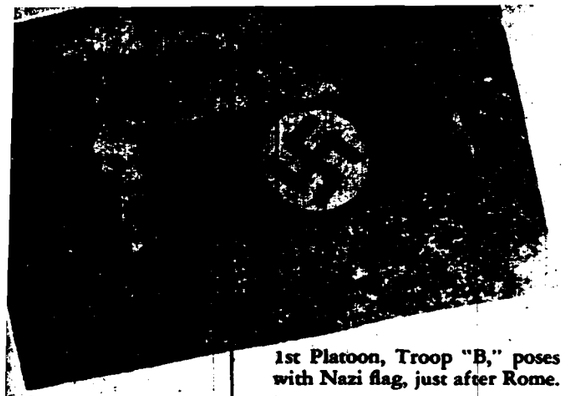
Terrain which would permit as many engineering obstacles as an average two per mile is unsuitable for an armored division. Yet in its attack from Grossetto to Volterra, the 1st Armored Division captured 1,606 prisoners of war, and according to prisoner of war information, the Tiger tank battalion opposing the division lost four-fifths of its effective strength.

Enemy matériel destroyed during the operation included 115 trucks, 58 self-propelled and antitank guns, 48 artillery pieces and 62 tanks, 34 of which were known definitely to be the 60-ton Tigers.

The rapidity with which the operation moved would not have been possible if the Germans had not been harried and pursued by units of the Fifth Army for more than 100 miles. The German divisions had no time for adequate defenses in the mountain sector. If they had had time for preparation and enough troops to man the positions, the story would have been entirely different.

The division's attached infantry battalions were inexperienced and tired. Yet every defended obstacle on the route had to be cleared by infantry before engineers could prepare a passage for the armor. The infantry and engineers were in action continuously. Since it was not possible to employ many tanks at any one time, tank crews were able to rest periodically but briefly.

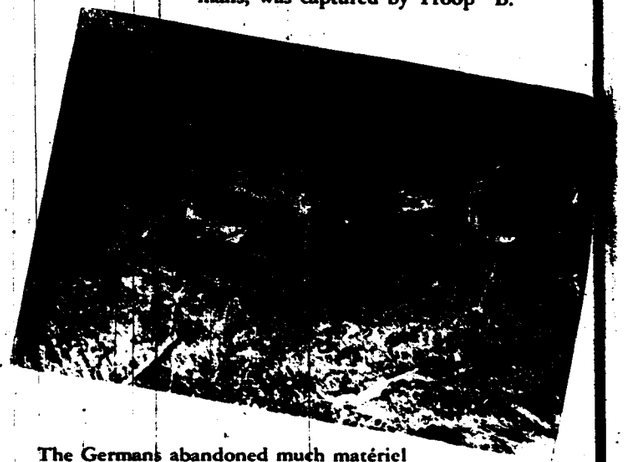
It was necessary during the operation, and after the division had been relieved, to make extensive repairs to tanks, trucks and gun carriages. The terrain had been as hard on the vehicles as on the men of the division.



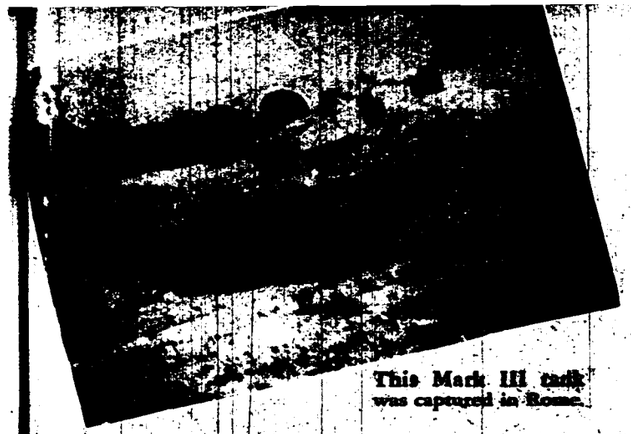
1st Platoon, Troop "B," poses with Nazi flag, just after Rome.

This AT gun, abandoned by Germans, was captured by Troop "B."

A German Ferdinand tank was left by retreating Germans.

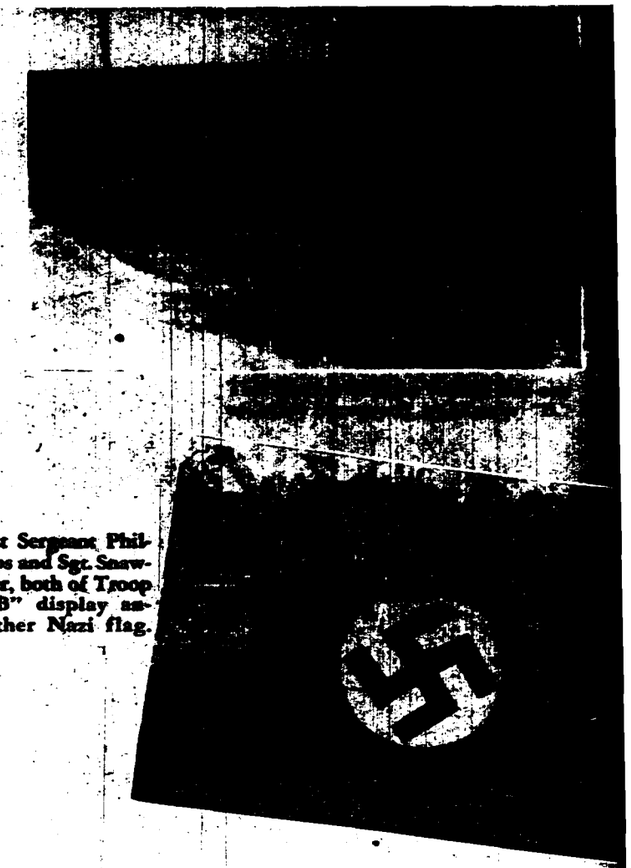


The Germans abandoned much matériel *in their haste. Here two tanks were left.*



This Mark III tank was captured in Rome.

One of the 88's captured by the 81st lies in a field outside Rome.



1st Sergeant Phillips and Sgt. Snawder, both of Troop "B" display another Nazi flag.

The 81st Reconnaissance Squadron Fights Way to Rome

*by Lt. Colonel Michael Popowski, Jr.**

THE 81st Cavalry Reconnaissance Squadron, (Mecz)—formerly the 81st Armored Reconnaissance Battalion—the reconnaissance agent for the 1st Armored Division, has had more combat experience than any other similar cavalry organization in this war. Its record began with the Tunisian Campaign and is still continuing. Prominent in its history are the battles of Sened Station, Sidi Bou Zid, Sbeitla, Kasserine, Maknassy, El Guettar, Mousetrap, Mateur, Cassino, Anzio, Rome, Tuscania, Canino, and innumerable smaller battles not so well known to everyone.

Like all good cavalry, the 81st has fought dismounted, mounted, and in combinations of both. It has made rapid advances. It has fought delaying actions. It has performed security missions of flank and advance guard. It has raided enemy positions in limited objective action and harassing action.

Some of the high lights in the squadron's history are: joining of the British Eighth Army and the American II Corps in Tunisia (the 81st met the 12th British Lancers some 40 miles from Gabes); capturing Mateur, one of the keys in the defense of Tunisia; being the first cavalry unit to employ the M-8 armored car in combat; and being the first Allied formation in Rome.

The squadron has accounted for at least twice its number in enemy dead and many times its number in prisoners of war. It would be very difficult to estimate how many prisoners were captured in Tunisia, for during the last two days of that campaign the squadron did not bother to report prisoners, but just lined thousands of them up on the road without escort and told them to march toward the American lines, where they would be taken into custody.

In Italy, the squadron has easily accounted for at least its numerical strength in enemy dead and also its strength in prisoners.

Of all the interesting days in the squadron's history, one of the most outstanding was that of June 4, 1944—the day it entered Rome. The events leading to this occasion date back to the Anzio beachhead, where the 81st landed on D plus 4 and remained until the breakout.

On May 23, the day that the attack began, which broke the beachhead perimeter, the squadron was split. Troop "A" was attached to Combat Command "B," and the rest of the squadron to Combat Command "A." For the first day the unit was held in reserve, but on the second day and every day from then on, some part of the squadron was in action.

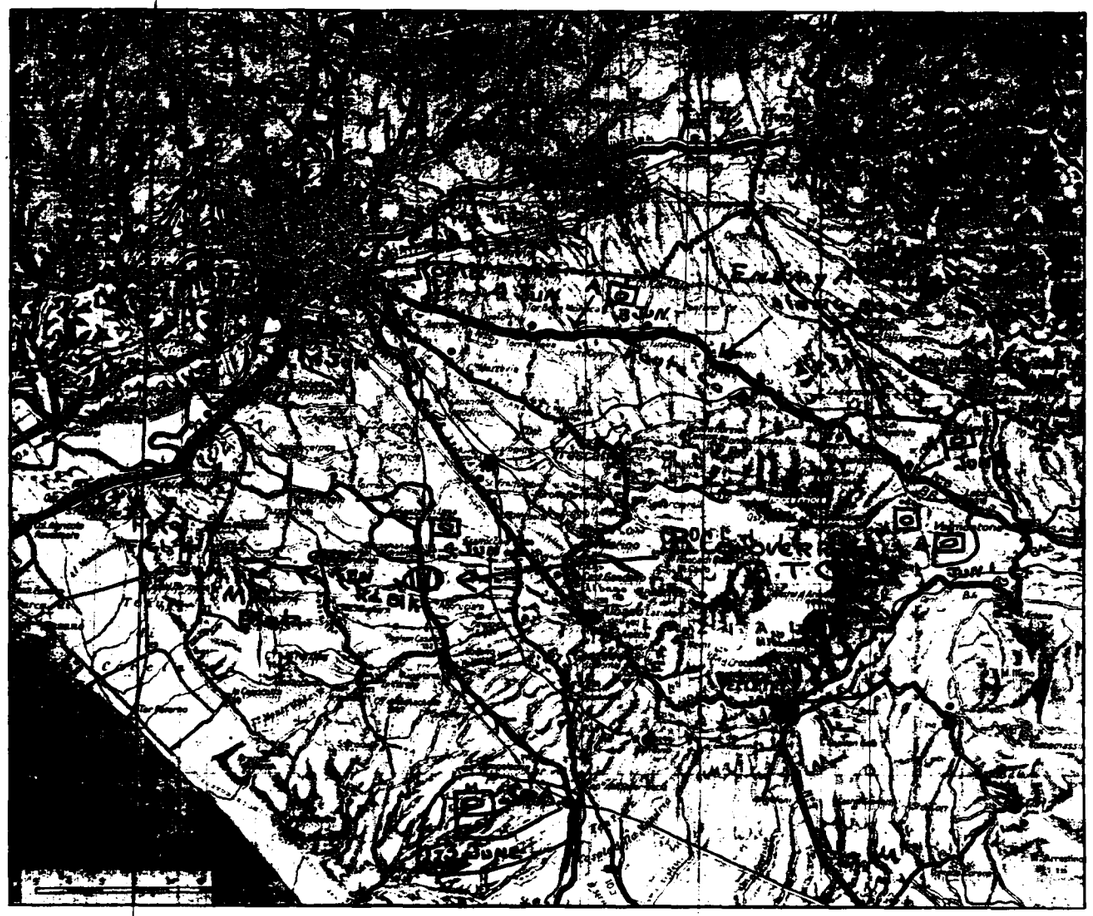
On June 3 Troop "A" was with Task Force Howze, slugging it out on Highway 6 a few miles out of Rome. The remainder of the squadron was in the line serving as infantry in the Campoleone area on the right of the British 1st Infantry Division and on the left of the American 45th Infantry Division. Its mission was to maintain contact with the British and protect the left flank of the 45th Division. During the night of June 3-4, the British assumed responsibility for the sector held by the squadron, and the unit prepared to advance on Rome with the 1st Armored Division on June 4. Its mission was to protect the left flank of the armored division with its main axis on the route shown.

It was not light when the first elements of Troop "B" (Captain Jewett A. Dix, commanding) pulled out an passed through the infantry of the 45th Division. The first obstacle that confronted the troops was a mine field which they immediately by-passed, then continued their rapid advance along the road. Apparently, the main German force had withdrawn during the night. Troop "C," commanded by Captain "Dutch" Karcher, followed, and Troop "D," the light tank company, commanded by Captain Walton Goodwin, III, brought up the tail.

Along the route of advance, Jerry had blown every bridge and culvert and left many craters in the road wherever they would be of most value to him. These were covered by small rear guard detachments, and sometimes mines were sprinkled around the scene.

The forward platoon of Company "B," commanded

*Former Commander, 81st Cavalry Reconnaissance Squadron, Italy.



by Lieutenant Fagan and Lieutenant Farr (the old reconnaissance battalion organization had two officers in each platoon) was advancing so rapidly in the darkness of the early morning that these small enemy rear guard detachments were being scooped up before they knew what had happened to them. The real bottlenecks were the demolitions, and the platoon was forced to take some time to find routes around them. In spite of the demolitions, however, the advance continued at such a pace that Troop "C" and "D" were actually having a road march. It was fun to watch Germans along the route as they came out of the farm houses surprised to see such a formation traveling along the road. They could not understand how it had happened that they were prisoners so quickly. That day even the squadron headquarters took prisoners who had been overlooked by the hurrying troops.

The first resistance encountered was at a point 1,500 yards south of the little village of Falcognana. The morning was still hazy and progress had been so swift and silent that before Lieutenants Fagan and Farr realized it, they had overrun an antitank gun on the side of the road, and the point car was in flames about 100 yards beyond.

In the early confusion of the skirmish it was difficult to make a good estimate of the situation. Tracers were everywhere. Four columns of black smoke spiraled skyward. Later a quick inventory proved that two of the smoke columns were from the squadron's own armored cars and two were from German halftrack personnel carriers, which apparently had been used as prime movers for antitank guns.

The advance unit already had forward momentum, and now it was decided to bring the entire force to bear on the enemy.

Troop "C" was ordered to attack to the left of the road, "B" around the right, and "D" on both sides initially. The scrap lasted about an hour and a half and resulted in the complete overrunning of the enemy position. Four armored cars from Troop "B" were burned and two light tanks from Troop "D" were temporarily disabled. The enemy lost the entire Antitank

(the 14th) Company of the Lehr Regiment attached to the 362d German Infantry Division. About 60 prisoners were counted; the dead were left on the field. Twelve antitank guns, including two 88's, and one American 57 were captured. The smallest gun was a 47mm. In their haste to escape the situation the jerries also abandoned one Mark IV Special Tank at Falcognana. The squadron's personnel losses for this engagement were very light for the advantage gained.

During this skirmish, the squadron became attached to CC "B" and was given the mission of protecting the left of the combat command and seizing and holding the bridge on the Tiber River south of Rome (see map.) Troop "B" had been committed to such an extent that it was out of the question to recall it to put it on the flank of the combat command, so because of the momentum already gathered "B" was to continue on to Rome. "D" was maneuvered on the right flank of CC "B" to protect the exposed flank. "C" was ordered to the bridge south of Rome, and in moving would also protect the combat command's left flank.

Squadron headquarters was leapfrogged in rear of the squadron and finally lit in the Falcognana area where the headquarters personnel enjoyed mopping up and catching the remaining hiding Germans.

At 1815 hours Troop "B" reported that its command post has been set up at the St. Paul's Basilica in Rome. CC "B" was proceeding on "B's" tail into Rome. One platoon of "C" (commanded by Lieutenants Yonkoff and Fellows), which had been thrown out of position during the different engagements of the day, was also in Rome. The platoon was ordered to seize and hold the bridge in Rome just north of Basilica, which it did after a small fire fight, and by 1900 hours both cars and personnel of the platoon had reached the west bank of the Tiber.

Squadron headquarters was then moved to Rome, and the trains were ordered up. Since the area was not entirely clear of Germans, the Tank Troop was given the mission of escorting the trains in. A few Jerry self-propelled guns and antitank guns, which had not been eliminated, were pot-shooting at the traffic on the roads. Under escort of Troop "D", however, the trains pulled into the battalion area at the Basilica about 0200 hours on the morning of June 5.

Troop "B" bore the brunt of the move. Of the 14 armored cars with which it started, only 7 reached Rome. Other losses within the squadron were negligible. When squadron headquarters rolled into Rome, it found Troop "B" guarding some 150-200 PW's that had been picked up on the way. Altogether, the squadron accounted for over 200 prisoners that day—most of them from the German 362d Infantry Division.

The area around the Basilica also became the command post for CC "B". The Chief of Police of Rome shortly appeared on the scene to ask the general's help in event of any trouble in the city that night, and said that to the best of his knowledge there were no other Allied troops in Rome.

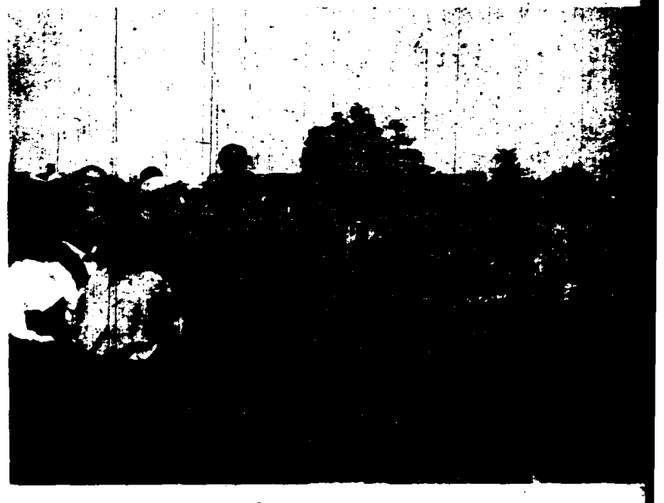
The airline mileage from the squadron's starting point that day to the St. Paul's Basilica was about 20 miles, but the route necessarily followed by the squadron was about 35 miles—a good advance in the face of an enemy.

During all of this time Troop "A" was detached from the squadron. In the beginning it was attached to CC "B"; later to Task Force Howze. Troop "A" had the honor of cutting the Cori-Velletri road at Giulianello on May 25, of capturing Artena on May 26, and of performing splendid reconnaissance for this task force. From Artena to Rome Troop "A" was a part of the armored column which broke the back of German resistance in that area.

Captain Roy Manley, commanding Troop "A", in his report to the squadron tells of Lieutenant Kline and staff Sergeant Matthews leading their platoon into the suburbs of Rome early in the morning of June 4 at approximately 0700 hours. Sergeant Matthews in the point car, first to cross the city line, was followed by medium tanks of TFH. At this point the lead tank was knocked out by waiting German self-propelled guns on the outskirts of the city. This stopped the advance formation for a while, but the reconnaissance platoon by-passed this resistance and guided some M-10 tank destroyers into position to knock out the resisting self-propelled guns. Then the entire force entered Rome, and stayed.

During the early hours of the morning of June 5 the 81st received orders for the next day—to continue the advance to the North. The entire unit then rolled across the Tiber in advance of Combat Command "B", and the pursuit of the Germans continued.

Members of the 81st Reconnaissance Squadron are greeted by cheering Italians as they enter Rome, June 4.



The First Requirement of a Citizen Army

IN the issue of the *Saturday Evening Post* for December 23, 1944, there appears an article written by Brigadier General John McA. Palmer, U.S. Army, entitled "General Marshall Wants a Citizen Army." This article is exceedingly well written and interesting. General Palmer has been well known for many years as a student of American military policy and a writer on the subject.

In the current article, General Palmer has set forth a theory to which he has held for a long time and which he claims General Marshall has approved as published in War Department Circular No. 347, dated 25 August, 1944.

The plan for a postwar military structure as advocated by General Palmer, he states, is the simple plan for a Citizen Army which President Washington submitted to the First Congress in January, 1790, but which was overlooked and forgotten in all of the subsequent plans and projects as expressed in the various studies and proposals through the years until he, General Palmer, dug it up out of the Washington Papers in the Library of Congress shortly after World War I. At that time, it is believed, General Palmer submitted his Washington plan to General Pershing, who approved it. As had always been the case, however, the plan was opposed by certain officers and congressmen who believed in another plan described by General Palmer as the Expansible Regular Army Plan.

In a very interesting way in his brief article, General Palmer describes the two opposing plans—the Citizen Army Plan based on universal service, and the Expansible Regular Army Plan. The first of these plans as proposed by Washington is the plan which General Palmer wants adopted now for the future, and, recommends it in a very convincing way.

My object in writing this article is to recommend the reading of General Palmer's article and to call attention to some problems which would have to be solved if Citizen Army Plan is adopted.

Universal service, including military training of all suitable young men between the ages of 19 and 22, would be approved probably, by the majority of our people at this time. So far, so good. General Palmer says, however, that the army of the future would be composed of a "relatively small regular army," reinforced when necessary from a "great citizen army reserve composed of trained citizen officers and soldiers." He states many times in his article that highly trained professional officers would be necessary in sufficient numbers to leaven the whole when it became necessary to expand the army to moderate or great proportions. It is not explained just how these highly trained professional officers would be obtained in sufficient numbers. What number would be considered sufficient?

A man cannot become a highly trained professional officer simply by going for a few years through the course at a military school. The school is the A B C of his training. After graduation in such a school he needs experience in handling troops. He needs experience in training and leading small units, then larger units, and then great units. Staff officers also need both schooling and practice. The training of a professional officer never ends during his entire active service. He must keep abreast of the changes wrought by new weapons, new inventions and new ideas. And experience through all the grades of rank is desirable if not always possible.

It would be impossible for the regular officer to obtain this training and this experience unless he has many opportunities to serve with troops and in staff work. There must be enough troops in the regular army to afford the necessary training and experience for a "sufficient number of professional officers." If a great proportion of the professional officers spend most of their time in supervising the basic training of groups of the citizen army reserves, they will never become highly trained officers. They need training in leadership of well trained regular units up as high, certainly, as the regiment. They need to participate in many tactical exercises for all these units.

The regular units themselves need to be trained, and to be fully officered and fully manned in order to give regular officers the necessary experience. Otherwise, when regular officers are training the citizen reserves it will be the blind leading the blind.

The size of the regular army must, therefore, be predicated upon the number of troops necessary in the regular army to give this experience-training to a sufficient number of professional officers. First of all, however, an estimate must be made of the number of professional officers needed.

Now, if universal service is established, a great number of regular officers of lower grades—trained in the regular army, not merely in schools—will be necessary to supervise the elementary training of the citizen officers and soldiers. Therefore, many more professional officers will be needed than merely those required to officer fully all the units in the regular army. These regular units must be fully officered at all times. They must not be left to do the best they can with insufficient

officers and men in the units. The units must be kept at war strength. Otherwise, the training of officers and noncommissioned officers in the army will not only be insufficient, but absolutely wrong or false in many respects.

During the years after World War I, and up to World War II, the regular officers were dispersed among the Organized Reserves, the R.O.T.C., and the National Guard, to such an extent that the regular units in the army were pitifully under-officered. The policy was to let them "get along" with far too few officers to carry out properly a tactical exercise of the simplest character. Of course, the army did not have the necessary number of men either. Both were necessary. The result was that many officers got no troop training for periods of ten and fifteen successive years at a time.

If this plan of a citizen army and universal training is to be a success, these problems must be solved or the people will be deceived as to the competence of the professional officer and the correctness of the training he is giving to the citizen soldiers and officers.

Training citizen soldiers in basic courses for the individual will not require the highest order of professional ability and knowledge. But leading those soldiers in collective training and battle is another matter. The professional officer must know far more than how to train recruits individually.

The training of the officers of the citizen army, who are not professional officers, presents still another problem. Our system for training reserve officers during the twenty-odd years after 1918 did not work out too well. The best part of it was found in the R.O.T.C. which provided for military training of young men in colleges and schools. But these schools did not always go about it with enthusiasm. The time devoted to it was much too small, and the number of students so trained was very limited. Military training in all high schools, academies and colleges should be compulsory for all students. The graduates of colleges who have qualified for commissions as officers in the reserve army must also be required to devote several years of their lives to the basic training of the citizen soldiers in local units. If this is not done, too many regular officers will be required for citizen training, and this will interfere too much with their own training in the regular army. As stated before, such was the case in the twenty-year period after World War I, even though the number of reserve officers and soldiers receiving training was many times less than is contemplated in the universal service idea.

Furthermore, the training of students in schools for qualification as reserve officers is not enough. These young men will need the additional training and experience that will be afforded by their assignment to duty as officers of the local units of citizen soldiers. Thus it appears that drastic changes in the training of our citizen officers must be adopted if the universal service plan is put into effect.

It becomes more apparent, therefore, that the universal service idea does not mean that we shall be able to "get along," with a small regular army. It may be true that, as General Palmer says, a *relatively* small regular army may be sufficient. But, as compared with our ideas of the past, the regular army must be very large. A sufficient number of "highly trained professional officers" is not to be obtained by our methods of the last quarter of a century.

One of General Palmer's ideas is that the citizen army plan, based on universal service, will enable us to put a trained army in the field in much less time than ever before. No doubt this is true—but even a comparatively small expeditionary force would require valuable time to organize and be made ready. A sufficiently large regular army from which such a force could be drawn instantly is necessary if such a force is not to be "too little and too late."

Any force of any size, needed in the field at once, must be a trained force. Then while that force is carrying out its mission in the field, a sufficient number of the local units of the citizen army can be concentrated and organized into predetermined large units commanded and staffed mostly by officers drawn from the Regular Army, the National Guard, and the most experienced officers of the Reserve Officer's Corps. With the soldiers already fairly trained, the large units can be made ready for the field in about one-sixth the time it has heretofore taken to activate and train a large army. This, of course, could be done only if equipment earmarked for the contemplated units has been kept up to date in various conveniently located store houses.

Now, the principal difference between this Citizen Army Plan and the Expansible Regular Army Plan is that, in the former plan, there would be universal service and predetermined units into which the citizen soldiers would be placed; and in the latter plan, there would be no universal service and, therefore, no large citizen corps of trained officers and soldiers to call upon for immediate service.

In both plans, a Regular Army larger than we have ever had before is necessary.

And so, by all means, let us have universal service. By all means, let us have General Marshall's citizen army as advocated by General Palmer—if the plan includes a regular army large enough to produce highly trained professional officers in such numbers as may be determined necessary by a careful study of the subject.

Certainly, the futile system used for twenty-odd years after 1918 should not be perpetuated nor duplicated. In that system a number of officers were trained fairly well for staff duty, but very few regular officers had enough service with troops. Even when they were assigned to troop duty they found the ranks so depleted of soldiers that they could not, in most instances, begin to gain the experience and practice in troop leadership

that they sorely needed. To fit an officer for combat leadership, he should have for some years experience in command of small combat units. He should not skip over this training. It is most important if he expects ever to be a competent leader of large combat units. In the past, many officers have attained high rank and have been assigned to command large units—from a regiment up to an army—without having had any really sufficient training in command of a platoon, a company or battalion of combat troops. The results have not been fortunate.

An officer who took the courses in a Special Service School, the so-called Command and General Staff School, and the War College was deemed a trained officer, whether he had had long experience with troops or not. Most of them had not had such experience.

Universal service without a proper system for training professional officers is only a half measure. It is not necessary to have a standing army large enough to fight a serious war by itself. But it is necessary to have an army large enough to train professional officers with full strength units. To have a standing army which is not adequate for that purpose is to waste at least half of the money that supports it.

Commentary on Current Ideas About Missions of Cavalry

A PRESS RELEASE on the subject, "The Cavalry," was given out by the Bureau of Public Relations, War Department, on November 19, 1944. This article was well written and very interesting. It describes the organization and armament of the mechanized cavalry units which have played an important rôle in the campaigns in Africa, Italy and western Europe. It gives examples of the indispensable service which mechanized cavalry units have given.

However, when this release attempts to describe the missions of cavalry it becomes inconsistent. In one place it states, "Primarily, cavalry is reconnaissance." And then, later on, it describes the cavalry missions of pursuit, surprise attacks, harassing the main body of the enemy in retreat, "encircling maneuvers to cut them off," fighting to break through the enemy screen, etc.

Now, these missions certainly require something more than reconnaissance. In our cavalry, it was always maintained that reconnaissance was not the most important duty of cavalry, but only *one* of its important duties.

Later on, this release includes the following statement: "Working in close cooperation with the infantry, artillery, and other ground force elements, the cavalry often is assigned specialized tasks, such as seizing specific important objectives in surprise operations and holding them until other units can arrive. It acts as a mobile reserve. It fights delaying actions when other units meet with reverses. It maintains liaison between larger units. It fills in gaps until regular reserves can arrive. It engages in flanking attacks and maneuvers."

That is a fair statement of the missions of horse cavalry. Although horse trained cavalrymen are often required to act in a mechanized or dismounted capacity, we doubt the capacity of mechanized cavalry to perform all of these missions. Practically all of these missions, as well as the mission of reconnaissance, require cross-country movement. There are no vehicles in existence which can move across all sorts of varied terrain as speedily, as safely, or with the same stealth and effectiveness as a horse.

The mechanized cavalry squadrons are equipped with jeeps and armored cars, light tanks, and self-propelled assault guns. The jeeps have no armor. The armored car (M-8), which is the only real armored vehicle that the mechanized cavalry troop has for its protection while on reconnaissance, is described in this release as having the punch and armored protection of a light tank. But reports from battlefields in Europe say that the armored car (M-8) is definitely *not* an off-the-road car. Its armament, which consists of a 37mm cannon and a .30 caliber machine gun, is wholly insufficient to protect it against fire of light cannon or .50 caliber machine guns in enemy tanks. There are no antitank guns with a troop of mechanized cavalry which would permit it to fight delaying action against enemy tanks, or, in fact, to take over any of the rôles recited in the paragraph just quoted from the release.

The cavalry reconnaissance squadron has three reconnaissance troops, one assault gun troop and one light tank company. The assault guns are 75mm Howitzers, self-propelled. Their mobility is insufficient for cross-country cavalry operations. The result is that these mechanized squadrons of cavalry are often badly shot up or almost completely destroyed when they are required to fight to carry out dangerous missions of reconnaissance, to say nothing of the other missions recited in the release.

Furthermore, one wonders why these other missions are recited at all, since there is no U. S. cavalry in Europe other than these mechanized cavalry reconnaissance squadrons or troops. Mechanized cavalry has certain attributes that make it invaluable, but it does not substitute for horse cavalry. It is not suitable for missions of reconnaissance off of roads or for the many other missions that horse cavalry could, and in the Russian cavalry does, perform with celerity, safety and effectiveness.

Our armored divisions have taken over the rôle of

cavalry, however unsuitable they may be for some missions. The mechanized cavalry reconnaissance squadrons should be used only for reconnaissance and mostly for the security of the forces to which they are attached. When reconnaissance in force is used, it should not be performed by reinforced reconnaissance squadrons but by full powered armored units whose security from surprise is provided by cavalry reconnaissance squadrons.

This release goes on to state that all cavalry units are basically mechanized and, therefore, do not take horses overseas with them. It explains that further reasons for not taking horses overseas are the difficulty of transporting horses in ships and the probability that American horses would get sick in foreign climates such as are found in the tropics. It states that if horses are needed they will be purchased locally where the troops are serving. It states that a provisional squadron of horse cavalry, mounted on horses purchased locally, was organized in Italy, and recites some of its exploits.

One wonders if the necessity for mounting horse cavalry in Italy was not the same necessity which exists everywhere. It is believed that the difficulty of shipping horses overseas could have been overcome had it been understood and believed unreservedly that horse cavalry was needed. Thousands of horses were shipped to the Philippines in 1899, and only a few weeks were required to get them used to the climate. They served splendidly during the entire insurrection.

Really efficient horse cavalry cannot be improvised. Nor can horses purchasable locally in the field of operations be satisfactory. The only way to procure good horses is to establish and maintain home depots at home. And the only way to have both horses and cavalry horsemen properly equipped, trained and conditioned for field service is to do it at home.

To break up our cavalry deliberately by mechanizing it is to suppress horse cavalry completely. To talk about improvising it when and where it is found necessary is foolishness. Such improvisations may be made here and there in very small numbers; but even in small numbers such units cannot be as efficient as they should be. And, in large numbers, which are really needed, such improvisations are impossible.

The use of cavalry reconnaissance units, either mechanized or horse, has been very much curtailed on the Western Front in Europe since the virtual stalemate that occurred after the Germans established their line of resistance along the Siegfried Line in western Germany. Up to that point, however, there was a great demand for these cavalry units. There was need for them in North Africa and in Italy. And there will be great need for them again in Germany and in the Philippines, to say nothing of China. Gallant and efficient as our cavalry personnel has proved itself to be, it has been shown very definitely that in many instances horse cavalry units could have done better work at less cost in casualties.

And, for missions other than reconnaissance, large units of horse cavalry could have given splendid aid to our infantry in every theater of the war. Indeed, the 1st Cavalry Division, trained as a horse cavalry unit, has already distinguished itself in the Southeast Pacific area, although, because of the island hopping nature of the operations it had to be used without its horses. In fact, it has no horses.

Future operations in Europe, in the Philippines, and possibly in China, would be filled with opportunities for the useful employment of large horse cavalry units if there were any such units in our army. However excusable it may be, the absence of such units will be very unfortunate.

Many of our most expert horse cavalry officers are now serving in armored divisions where, together with excellent officers drawn from other branches of the service, they are doing splendid work. These armored divisions are indispensable in modern warfare—but they are not the only useful branch of the service.

Our people have now discovered that infantry still remains fundamentally the basic arm of the service despite the predictions of some pseudo experts before and after the beginning of the World War II. Although armored troops have won and are winning many battles, or have assisted the infantry and other branches in winning, experience has proved that they are not as effective on as many occasions as they were before the advent of the antitank gun and the mine field.

There are situations in battle where armored troops are unsuitable and cannot be used effectively to assist the infantry. Very often it is in such situations that strong horse cavalry forces could be very effective if they were available. Wherever infantry operates in large numbers, cavalry is needed to help it. And very often, as pointed out many times before, cavalry (meaning horse-cavalry) in combination with tanks can be more effective than cavalry alone or armored troops alone. This is what led to the famous tank-cavalry teams in Russia.

As stated before in former *Notes*, there is nothing to be gained by bemoaning the fact that we shall not have an adequate highly trained force of horse cavalry to use in the war. But, perhaps, it may be well to bear in mind for future use the facts and principles that have been repeated so often in these *Notes* and confirmed as substantially in some theaters of this great conflict.

Philippine Islands
14 January 1945

"The U. S. Cavalry Association

"Dear Sirs:

". . . One thing that has been difficult for many to understand is how the cavalry, dismounted, can move so fast. I believe the cavalry, even though dismounted, still thinks in terms of mounted cavalry, which is a fast and mobile force.

"Yours truly,
"_____, Lt. Colonel
Hq. 7th Cavalry."

Know Your Enemy—The Jap

Pearl Harbor and Bataan brought forth a flood of highly imaginative stories about the invincibility of the Japanese soldier. Most of these pictured the Jap as a superman. Then, after Guadalcanal, we became overconfident and tried to make him out a buck-toothed, near-sighted, pint-sized monkey. As usual, the truth lies somewhere between these extremes.

In war, it is always a serious handicap not to know your enemy, yet we Americans are at a loss when we try to understand just what makes the Jap tick—particularly his predilection for *face saving, hara-kiri,* or the *banzai* charge against hopeless odds.

It is now becoming crystal clear that the Jap is a robot-like creature whose thoughts and actions are influenced largely by ancient custom, fanaticism, and thorough basic training. He has proven himself to be uniformly brave, aggressive, and a first-class fighting man. He definitely is no superman; neither is he a pushover.

The Japanese high command probably understands the tactical employment of the combined arms, but deficiencies in armament and equipment have generally prevented their decisive employment. It may be affirmed that in no category do the Japanese possess superiority in fighting equipment over American forces.

In their concept of war the Japanese exploits to the fullest extent the ancient law that the human element is the decisive factor. Hence the infantryman is the heart and soul of Japanese military power. By comparison the Allied armies consider this concept to be sound basically but requiring modification to take advantage of scientific invention and the present industrial age.

The capabilities of the foot soldier constitute the strength, and his deficiencies, the weakness of the Japanese military machine. He is not as adaptable to new situations as is the American soldier. Being a creature of habit he does things best that he has done over and over again. His basic training has been exceptionally thorough. The Jap soldier uses his basic weapons efficiently; in fact, he uses them so well that he is able to accomplish more than might be expected or predicted. His camouflage, concealment, reconnaissance, and the employment of ambushes, patrols, and raiding parties are superior.

The Japanese ability to move sizable forces of foot soldiers through jungle and over rugged terrain is truly remarkable. The explanation is to be found in their system of thorough basic training of the individual, the Japanese soldiers rugged physical condition, and his extremely frugal requirements.

The Japanese is offensive minded. His attacks are daringly planned and executed. His reliance upon the human equation with corresponding deficiencies in matériel often make his attacks weak in fire-power—too weak to overcome the material advantage of the Allies. Nevertheless, the Japanese may attack at anytime, even when they are thoroughly whipped.

The Japanese are masters in the art of terrain appreciation and utilization. The stubborn and sustained defensive powers of small units have been the most difficult single feature of Japanese warfare to deal with and to overcome. The superior defenses of small units have contributed more to the combat effectiveness of the Japanese ground forces than all other tactics combined. It now seems reasonable to assume that the rate of advance of Allied operations will depend primarily upon the rate at which men and supplies can be concentrated for each succeeding operation and relatively small Japanese units at critical points can be annihilated.

A. E. R.

The Value of a Service Journal

What is the value of a Service Journal?

As stated in Article III of the Constitution of the United States Cavalry Association "The aim and purpose of the Association (which publishes The Cavalry Journal) shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions and the solidarity of the cavalry of the Army of the United States." The Cavalry Joural or any other service journal, is not an official publication of the War Department. Contributions appearing therein do not necessarily reflect official thought or indorsement. Articles represent the personal views of the author and are published to "stimulate interest in, provoke thought on and provide a free forum for the decorous discussion of cavalry affairs."

The editorial policy of The Cavalry Journal has been, and will continue to be, one of coördination and coöperation. The Journal endeavors to bring to its readers articles and ideas from any branch, theater or country which are considered of value in promoting professional improvement.

It is not intended that the Service Journals be policy making, nor that any part of any article be construed as substituting for or deviating from information contained in training manuals. Articles which might appear to differ from accepted policies set down in the manuals should be interpreted as representing expediencies pertaining to a particular situation.

Material is intended to promulgate various tactical and technical aspects of fighting which have proved

sound in combat. But each situation confronting the fighting man in battle is bound to be slightly different in one way or another. The final decision, therefore, must rest with the commander. Lessons are learned from experience—sometimes our own, and sometimes that of others.

In a letter to the editor of the Military Review General Marshall wrote:

"Lessons learned in recent campaigns are a valuable contribution to our present training program . . . and will facilitate the revision of our Command and General Staff doctrine in the light of recent battle experience.

"Many commanders and staff officers are having unusual and valuable experiences in battle. Whenever it is possible, it is my hope that these officers will make available to the Service as a whole this important information while it is still fresh in their minds."

What have you learned in combat?

Write it down—100 to 2,000 words.

Tell your own story; tell it your own way.

Write about what to do—what not to do—to save lives, time, weapons—how to outwit and outfight the enemy.

Write what your unit did in battle—what the enemy did—and what lessons were learned.

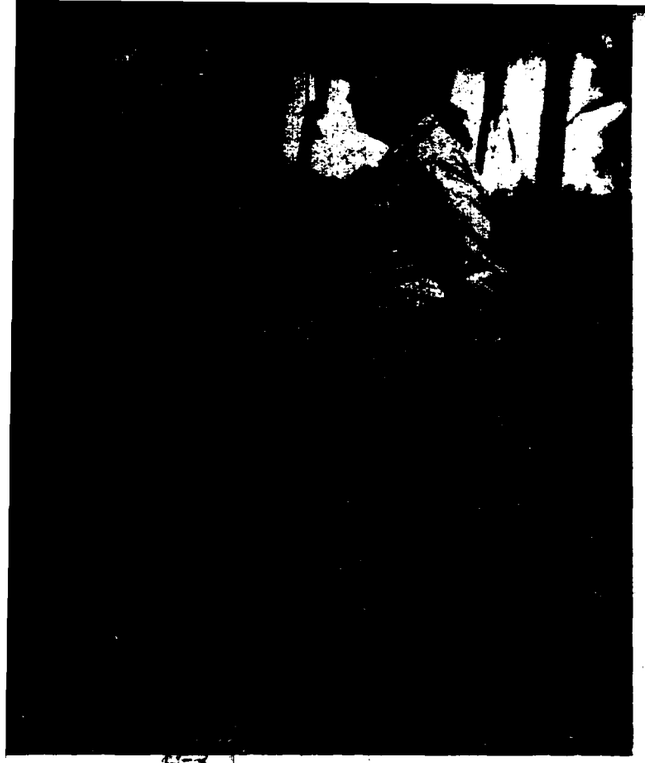
Send your story through your Public Relations Officer for "field clearance." Mark it for The Cavalry Journal, 1719 K Street, N.W., Washington 6, D. C.

Let others benefit from your experience.

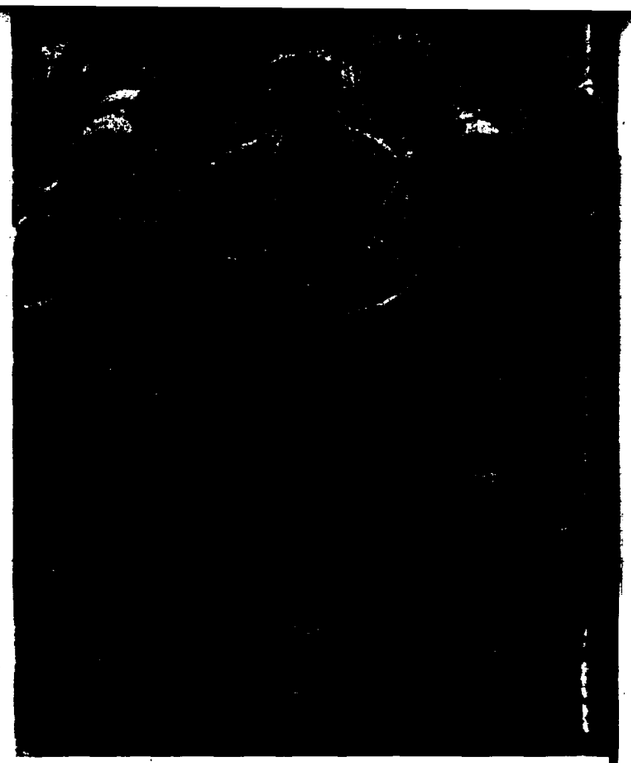
Wrong Addresses

The list of addresses published in the November-December issue of The Cavalry Journal brought in so many letters that we were unable to send our thanks individually, so we should like to express thanks here to all who sent addresses. Your help is greatly appreciated. Can any more of you help locate these subscribers? Is your name here? Send in the correct address, and The Cavalry Journal will be mailed at once.

Abdulah, T/5 Calvin
Akins, Lieut. Ted B.
Andrews, Lieut. Armour J.
Andrews, Lieut. Walter E.
Apparius, S/Sgt. R. C.
Arndt, Pfc. Thomas R.
Arnold, Lieut. Wm. H.
Bahr, Lieut. Andrew P.
Bailey, Lieut. Leon E.
Baker, Lieut. Hugh C.
Barnhart, Lieut. Frank H.
Barrett, Lieut. James F.
Beiswenger, Sgt. Hugo
Bennett, Lieut. Thomas H., Jr.
Bennett, Capt. W. C.
Bensley, Capt. Harry R.
Bielss, Capt. August C.
Birkett, Lieut. Bion B.
Blackford, Pvt. Dayton S.
Braddy, Lieut. Wm. L.
Brady, Lieut. Ben
Brodkhoff, Lieut. Paul C.
Bruce, Lieut. Robert W.
Buckingham, S/Sgt. Robert
Bukowski, Lieut. Bernard V.
Bumbarger, Lieut. John O.
Burns, Lieut. Delno R.
Buser, Capt. George W.
Byrns, Lieut. Wm. C.
Caldwell, Lieut. Tommy
Campbell, Lieut. Virgil L.
Carlson, Lieut. Donald W.
Caton, Lieut. John
Cave, Lieut. R. F.
Chaffee, Lieut. Thomas K.
Chapin, Capt. John S.
Chiolino, Major Frank J.
Clark, Capt. H. L.
Clayton, Lieut. H. D.
Clement, Capt. Wallace L.
Cole, Lieut. Joseph R.
Colman, Lieut. Lee J.
Cotton, WO James
Critchlow, Capt. George C.
Crozier, Lieut. Baalis B.
Cunningham, Capt. Wm. J.
Currier, Capt. J. W.
Cutler, Lieut. Benjamin M.
Dallas, Lieut. Burt E.
Daran, Capt. Patrick B.
Davidson, Lieut. Richard M.
Davisson, Major J. E.
Day, Lt. Col. Walter E.
Dennison, Lieut. V. A.
Duisman, WO Joe
Duncan, Lt. Col. Scott M.
Dunn, Lieut. Kenneth P.
Dunton, Lieut. David P.
Dvoracek, Lieut. George F.
Eckman, Lieut. Alton R.
Elder, Lieut. John E.
Evans, Lieut. Joe M,
Evans, Major Morris H.
Farrell, Lieut. Allan G.
Fenber, Lieut. Louis N.
Fick, Lieut. Henry H.
Field, Capt. James C.
Field, Lieut. Willis E.
Fletcher, Major Louis W.
Fox, Pfc. Gerard
Garfield, Capt. Robert E.
Gardner, S/Sgt. Odell J.
Giesen, Lt. Col. Arthur R.
Goodall, Lieut. Herbert W., Jr.
Goodman, Major R. M.
Graham, Major Chas. H.
Grant, Lieut. James B.
Gravit, Lieut. Martin A.
Gray, Major John E.
Greely, Lt. Col. Brenden McKay
Gubbe, Lieut. Lawrence W.
Hamilton, 1st Sgt. Jefrey
Hamilton, CWO Kenneth D.
Hand, Lieut. Robert J.
Hantke, Lieut. Russell C.
Harman, Lieut. Henry J.
Harper, Major Dale E.
Harris, Lieut. Glen H.
Harris, Lieut. Robert W.
Hawley, Lt. Col. D. C.
Hawley, Lieut. Dan W.
Henderson, Lieut. Leigh W.
Hinton, Lieut. Walter V.
Holderby, Lieut. Benjamin H.
Howze, Col. R. L.
Hughes, Lieut. Carl R.
Hurst, Lieut. Jack
Iseley, Lt. Col. C. M.
Jenkins, Lieut. Hubert J., Jr.
Jochum, Lieut. Clarence C.
Johnson, Lieut. Erik A.
Johnson, M/Sgt. Robert B.
Jones, Lieut. Joseph W.
Justus, Capt. Gordon S.
Kaytis, O-C John A.
Kearney, Lieut. John T.
Keller, Lieut. Elso James
Ling, Lieut. Kenneth
Kinnear, Lieut. Douglas F.
Kirby, Lieut. Frank L.
Kistler, Major W. P.
Koon, Lieut. Billy W.
Lacey, Col. A. T.
Lacey, Lieut. Howard W. T.
Laney, Lieut. Harry M.
Langford, Lieut. John R.
Lawson, Lieut. S. Chapin
Lindblad, Lieut. Ralph L.
Lindloff, Lieut. Roy G.
Lindsay, Lieut. Samuel L.
Lindsey, Lieut. Chester A.
Livingston, Lieut. Willis A.
Logan, Capt. Samuel S.
Long, Lieut. Fred C.
Long, Lieut. William E.
Luckey, Capt. Marion W.
Lumley, Lieut. Charles S.
Mc Allister, Capt. James W.
Mc Clain, Lieut. Wilofard A.
Mc Culloch, Capt. Joseph A.
McCune, Lieut. Gerard F.
Mc Pherson, Lieut. Robert G.
Mc Ternan, Major William R.
Macleod, Major Geo. I.
Magers, Capt. Frederick P.
Martin, Lieut. John E.
Maxwell, Lieut. Jesse N.
Mazur, Pfc. John G.
Means, Lieut. Alfred G.
Merrill, Capt. John E., Jr.
Meyer, Sgt. Earl H.
Modisett, Lieut. S. A.
Moore, T/Sgt. Jack J.
Morrison, Lieut. Herman H.
Morrissey, Lieut. John F.
Murdock, Capt. Warren D.
Neel, Cpl. Robert W.
Nelson, Lieut. Wm. E.
Neuhaus, Lieut. Philip R.
Noll, Lieut. Sherwood
Norton, Lieut. Clifford J.
Norwood, Lieut. Leonard L.
O'Connor, Major Edwin
Pelletier, Lieut. Edmund
Perry, Lieut. Robert P.
Pfeiffer, Lieut. William E.
Pincetl, Capt. M. F.
Poovey, Lieut. Clinton H.
Portwood, Lieut. William P.
Price, Lieut. Cole B.
Price, Lieut. Madison C.
Purcell, Capt. Graham B.
Quinlivan, Lieut. William D.
Raley, Lieut. A. C.
Raymood, Capt. Richard E.
Read, Lieut. Russell F., III
Reed, Lieut. Ted E.
Riede, Lieut. E. P.
Roessler, Lieut. Frederick F.
Rouh, 1st Sgt. Russell H.
Ryan, Capt. Thomas J.
Sarratt, Lieut. Charles S.
Sawyer, Lieut. John J., Jr.
Schmitt, Lieut. Paul J.
Schutt, Lieut. William C.
Secondari, Lieut. Hermes
Seiley, Lieut. Carl A.
Shackelford, Lieut. Paul A., Jr.
Shields, Lieut. Harold A.
Short, Col. J. C.
Shultz, Capt. William G.
Sitzenstock, Lieut. Robert L.
Slovacek, Lieut. Elmer F.
Smallens, Cpl. Alfred M.
Smith, Lieut. Chas. Z.
Souther, Lieut. Howard C.
Spencer, Lieut. Gayle H.
Spratt, Capt. Leonard F.
Stafford, Lieut. G. T.
Stoddard, Lieut. Col. Ralph A.
Stokes, Lieut. Wm. S., Jr.
Storm, Lieut. Arthur A.
Sutherland, Lieut. Wm. A., Jr.
Thomas, Pvt. Edward W.
Thomison, Pvt. Jasper L.
Thompson, Col. F. J.
Thompson, Capt. Lyan G.
Thompson, Capt. Olin W.
Throckmorton, Capt. John M.
Tritsch, Lieut. Arthur A., Jr.
Van Patten, Lieut. Max M.
Wadelton, Lt. Col. W. S.
Waldron, Capt. A. S.
Walker, Lieut. Philip G.
Waring, Lieut. Charles W.
Warner, Lieut. J. W.
Warren, Lieut. James A., Jr.
Watts, Lieut. Thomas C.
Webb, Capt. Richard A.
Wells, Lieut. Claude M.
Wessels, Capt. G. A.
White, Major Gerry L.
White, Lieut. S. E.
Whittenberg, Lieut. P. W.
Willard, Pvt. J. J.
Williams, Lieut. Willard C.
Willis, Lieut. Charles B.
Wright, Lieut. Owen O.
Wright, Sgt. Wilbur
Yeargan Major A. C.
Yow, Major John W.
Zeskey, Lieut. Harry C.



"Somewhere in the Philippines" Major General Verne D. Mudge (left), Commander, 1st Cavalry Division, confers with Major General Innis P. Swift (right), former Commander 1st Cavalry Division. Lt. Colonel Stevens in rear.



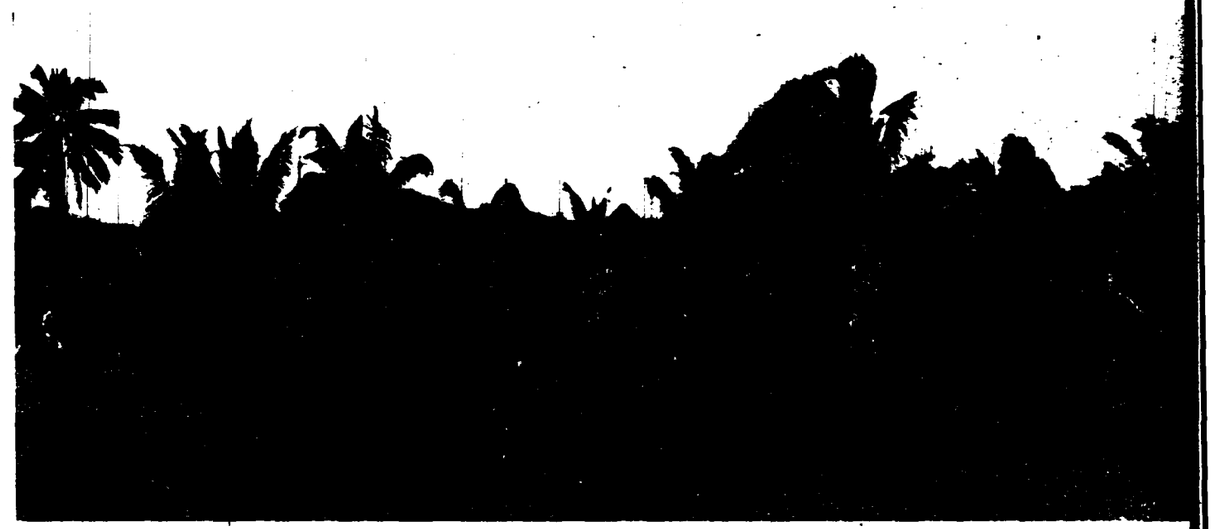
Left to right, Major General Verne D. Mudge, Commander 1st Cavalry Division, General Douglas MacArthur, Lt. General Richard K. Sutherland and Colonel Charles A. Sheldon, Chief of Staff, 1st Cavalry Division.

1st Cavalry Division on Leyte

At Tacloban, Leyte, P. I., Colonel Charles A. Sheldon, Chief of Staff, 1st Cavalry Division, talks with Sergeant Antonio Maningo, former Philippine Scout. Both belonged to Troop "B," 26th Cavalry (P.S.) before the war.

Horses captured on Leyte were quickly rounded up and utilized. Here four cavalrymen pose proudly as they mount to seek out elusive Japs. Cavalry, sent dismounted to the Philippines in 1899, was eventually remounted.

A squad of the 1st Cavalry Division's Provisional Reconnaissance Unit on line. Horses are native Filipino, captured Japanese, and a few re-captured Preston-branded U. S. Cavalry horses, used by the Japs on Leyte during their occupation.



The size of this and other mounted elements of the division has grown considerably since the start of the Philippine Campaign when these photographs were taken. These improvised mounted units have proved an invaluable asset.

Below: Provisional Reconnaissance Unit moves out of the division rear echelon. Horses are being used by 1st Cavalry Division for both reconnaissance and for packing in the rugged mountainous terrain of Leyte Island. (See Cover.)

1st Cavalry Division

In the Admiralty Islands—Part II

AFTER the strategic points on Los Negros had been secured and Seeadler Harbor opened to naval vessels and convoys, the 1st Cavalry Division proceeded with mopping up Jap stragglers and performing various reconnaissance missions to the smaller harbor islands.

Patrols

On March 10 Troop "B" of the 8th Cavalry was the first to be off. Its mission was to clear the entire Mokerang peninsula of the enemy. The troop, pushing forward rapidly, reduced isolated pockets of enemy resistance and by nightfall reached the top of the peninsula.

Meanwhile, the 5th Cavalry, having consolidated their positions and effected resupply of the units, pushed out strong combat patrols in an effort to locate and pinpoint Jap positions in the area west of Papitalai.

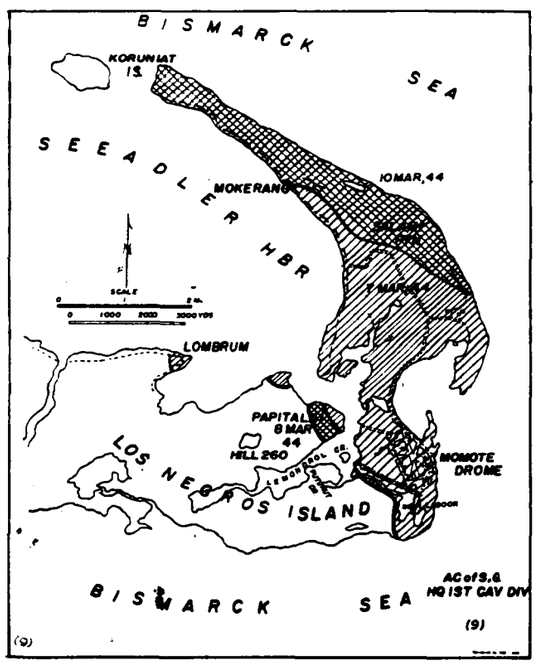
A patrol from Troop "B" 5th Cavalry, which was part of the squadron working its way west along the southern coast of Los Negros, encountered a strong enemy position about 500 yards southeast of the Palapi Hills. The patrol by-passed the enemy and, continuing on its mission, encountered no other Jap positions as far as the Palapi Hills. During its return to the Troop CP the patrol ran on to a group of 5 Japs on a trail 500 yards southwest of the Pitilu Lagoon at what had apparently been a Jap platoon bivouac the night before. As the Japs fled, the patrol followed in hot pursuit, but the Nips unfortunately escaped.

A small patrol from Troop "B," 5th Cavalry led by Lieutenant Ralph E. Hill, who was later killed in action, made a reconnaissance in a native dug-out canoe from the Ihon Lagoon through Porharmenen Creek to the small bay just south of Puthut Point, where they sank one Jap supply barge heavily laden and under way.

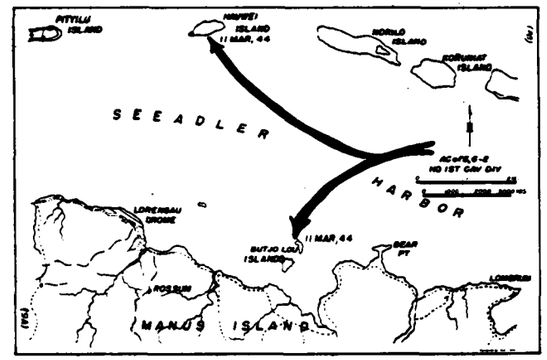
The 5th Cavalry Regimental Reconnaissance Platoon under the command of Lieutenant Tellefson left the "E" Troop bivouac area at 0945, and patrolled to the west as far as the hill that later was to gain much local renown as Hill 260. Unable to advance farther because of the heavy concentration of enemy machine-gun and rifle fire, they called for an artillery concentration. When the concentration lifted, another patrol, led by Lieutenant Hanson, requested permission to penetrate the Jap lines and gain the high ground in the rear. Again the patrol was able to penetrate the lines, but was unable to gain the hill. After suffering a number of casualties, the patrol withdrew.

At last it appeared that the 5th had run the Jap to earth. It was anxious to dig him out and really get at him. By the end of the day, the ranks of the Jap barges were seriously depleted. In addition to one sunk by the patrol, another had been sunk by the Weapons Troop of the 5th Cavalry.

The Troop "B" OP, situated at Porlaka, sighted a barge with 10 to 15 Japs in Lemondrol Creek. A mortar concentration, reinforced by the fire of a 37mm antitank gun, was placed on the target, and the barge sunk. A third barge, sighted in the same area at 1830, succeeded in escaping and the gunners and the mortar crews fell to accusing each other of being rotten shots. A fourth barge was sighted about 30 minutes later, but since it was out of range of the regimental weapons, an artillery concentration was registered. The first salvo flushed two more barges from their hiding places. All three fled to the south; although one was hit, all made good their escape.



Map 1. Checkered area indicates strategic points of Los Negros Island which the cavalry had secured by March 10.



Map 2. Arrows point to two strategic harbor islands reconnoitered in force by elements of 5th Cavalry, March 11. The patrol to Hauwei ran into serious opposition.

The day ended without any serious engagements, but the Japs had been located and the morrow augered well for the cavalrymen.

In addition to patrols on the Mokerang peninsula, the 2d Brigade was busily engaged in clearing the beaches of supplies and equipment. The engineer squadron was performing prodigious tasks. The combination of rain and heavy trucks was too much for the roads. The bottom fairly fell out of them. Even the amphibious tractors became mired, but the engineers somehow kept the roads open and the supplies and equipment moving.

Reconnaissance in Force

On March 11 reconnaissance patrols of the 5th Cavalry located heavy Japanese fortifications about 1,200 yards southwest of Papitalai, and immediately directed a concentration of mortar and artillery fire on the sector. The high ground of this area was occupied by elements of the 5th Cavalry just after noon, following the high-explosive preparation.

The division commander decided that in order to support an operation against Lorengau, forward artillery positions must be located, and directed that immediate steps be taken to select and occupy the positions. The division artillery commander recommended that the three battalions to be used in the operation be located on Hauwei Island, Butjo Lou Island or Bear Point. These places were all in enemy territory, but whether or not they were occupied was not known except that an enemy garrison had been located on Hauwei some time previously. Three reconnaissance teams were formed and one team was assigned to each position. All were given the same instructions: (1) reconnoiter for suitable landing beaches, (2) locate enemy disposition and installations, (3) find out the enemy's strength and (4) determine whether or not the location was suitable for artillery.

The patrol to Butjo Lou encountered no opposition. Its report indicated that there was a suitable landing beach and suitable gun positions for one battalion.

The patrol to Bear Point reported that it was not occupied, that there was no suitable landing beach, and that gun positions for one battalion only were available.

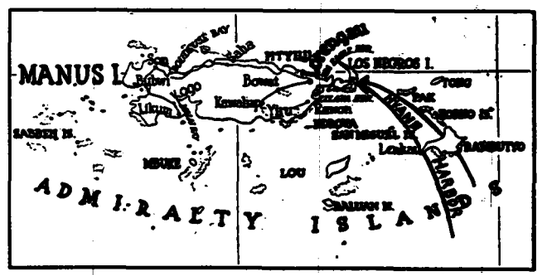
The patrol to Hauwei Island ran into a hornet's nest. After making a thorough search for an approach through the reefs surrounding the island, the patrol discovered a narrow channel near its western end. The channel was treacherous—weaving its way around the western end of the island and coming into a beach on the sea side. While only one boat at a time could pass through the channel, the beach was sufficiently large to accommodate two LCM's.

After landing on the beach the patrol immediately pushed its way inland. The island was a coconut plantation and it showed signs of recent occupation because the underbrush was fairly well cleared.

After moving inland about 100 yards, the patrol was engulfed in a withering cross fire of rifles, machine guns, grenades and mortars. The patrol leader coolly disposed his patrol in the available cover, made a quick visual reconnaissance, and an estimate of the situation. He found that his position was precarious, cut off from the beach and unable to go farther inland. Since he already had the information which he had been detailed to obtain he decided to fight his way back to the beach, reembark, and return to headquarters.

When the patrol had made its way back to the beach, it found that the LCV had backed off when the firing had started. It immediately put back in, however, when the troops reappeared. Some of the members of the patrol had jumped in the water, and the LCV on its way in to the beach picked up these men. About 6 men, and the boat crew were aboard when a mortar shell hit the boat, already damaged by machine-gun fire, and sank it.

As the men saw their only means and hope of escape go down with that boat, undaunted, they took to the water and started to swim to friendly shores 7 miles away. PT boats from Squadron 18 stationed in the harbor rushed to the rescue and picked up most of the survivors. An LCM was later dispatched from Salami Plantation. This boat picked up one man, who had been in the water for over 5 hours.



Map 3. Arrow points to Hyane Harbor, Los Negros, where original landings were made February 29. The larger island of Manus, invaded March 15, lies to the west.

It was an expensive reconnaissance, but the information gathered indicated that two battalions of artillery could be put on Hauwei, and the placing of two artillery battalions on this coveted location saved countless lives in the ensuing operations.

Clearing the Harbor Islands

On the following day the 2d Squadron, 7th Cavalry, moved from its position on Lombrum Plantation and landed in LCV's, LCM's, and Buffaloes on the western tip of Hauwei Island. The attack was preceded by a heavy concentration of artillery from Mokerang Plantation and a naval bombardment from inside Seeadler Harbor. Prior to the assault, Kittyhawks bombed and strafted the landing beach and inland areas of Hauwei. Stern Jap resistance was rapidly overcome, and by nightfall the landing force occupied the western half of the island.

Enemy barge activity during the night appeared to be increasing, but watchfulness of the PT patrol reduced to almost zero the chances of them ever arriving at their destination.

On March 13, the 2d Squadron of the 7th Cavalry on Hauwei Island committed its reserve, which had been waiting patiently on Lombrum Plantation. Continuing their advance eastward, the squadron inflicted heavy casualties on the occupants of the enemy's deeply entrenched positions and the tanks again proved their worth in destroying pillboxes.

Reconnaissance patrols operating southwest of Papitalai Mission encountered a platoon of Japs, which they quickly dispersed after a skirmish which resulted in 6 enemy casualties.

Meanwhile, supporting naval units shelled Pityilu Island, 4 miles west of Hauwei. It appeared that the 1st Cavalry Division intended to make short work of clearing out surrounding islands in the Admiralties.

The western approaches to Lorengau on Manus were bombed and strafed by B-25's, flying as low as 40 feet over the dense jungle. Artillery units on Los Negros registered on enemy troop concentrations on the southwest tip of the island. Antitank guns and PT boats continued to disrupt Jap barge activity between Manus and Los Negros.

The following day, after combat patrols had reconnoitered the occupied enemy entrenchments and determined his front line in the area about 600 yards southwest of Papitalai, the 1st Squadron of the 5th Cavalry attacked with two troops abreast and the third in support. A heavy mortar and artillery barrage, lasting an hour and a half, preceded the attack.

The 5th found a brick wall awaiting the charge, but managed to pierce it in several places, and disposed their own lines at nightfall for pressing the attack immediately upon the arrival of daylight.

Naval fire on Pityilu Island continued throughout the day, while the field artillery loaded up its 105mm guns and proceeded to Hauwei Island.

The 1st Squadron, 5th Cavalry, was ordered to attack enemy positions on Hill 260 west of Papitalai. The advance was made along a narrow ridge covered with dense undergrowth, which limited the front of the advance to about 20 yards. The assault by a platoon of Troop "B," 5th Cavalry reached a point 15 yards in front of the enemy position, when Lieutenant Ralph Hill, the platoon leader, was killed. Lieutenant Swan then came forward and assumed command. After reorganizing the platoon, he continued the attack and neutralized the enemy position.

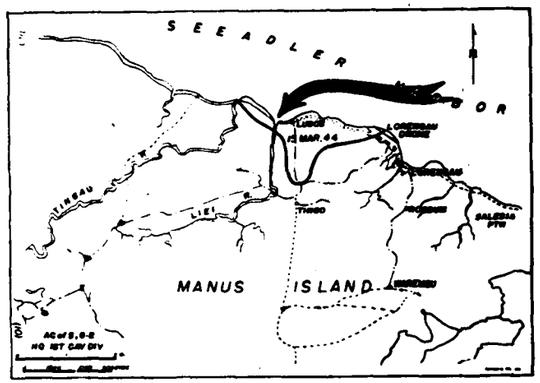
The First Day on Manus

On March 15 the dismounted 2d Cavalry Brigade combat team, under the personal direction of Brigadier General Verne D. Mudge, landed at Lugos Mission on northern Manus Island, in one of the most perfectly coördinated land, sea, and air attacks of the Pacific campaign. The split-second timing demonstrated in this operation steeped further glory on the 1st Cavalry Division, and the two historic regiments involved gained additional laurels. The 7th Cavalry Regiment, made famous under General Custer at the battle of the Little Big Horn, landed with the regiment that boasts more Congressional Medals of Honor than any other single unit in the United States Army, the 8th Cavalry. William Courtenay, London Sunday *Times* Correspondent who made the landing, called the attack west of Lorengau a ". . . brilliantly executed, daringly conceived operation. . . ."

Before dawn ominous clouds hovered over the eastern section of the Admiralties, and impending rains were indicated all around Seeadler Harbor. As the cavalry landing force left its base to move along the southern edge of the harbor in small amphibious craft, the sky began to clear, and by early morning expectant eyes turned skyward in search of our aircraft.

Tension mounted among the troops as they approached the scene of their first battle. Naval guns left the landing beach in shambles and shattered all possible enemy strong points covering the proposed landing sites. As the sun split the remaining clouds, formations of 5th Air Force B-25's, droning into sight from the east, winged their way toward the target. Wave upon wave of Mitchells, skimming up and down the beach and along the roads to Lorengau, dropped eggs and split tracers by the thousand. PT boats on either flank of the assault wave lurched toward the shore at full speed and opened their cannon on the beach.

As the maze of smoke from bombs, bullets, artillery fire and naval shells lifted, the assault wave, made up of the 8th Cavalry, hit the Lugos Mission beach and swarmed ashore. No immediate resistance was encountered. The landing forces quickly dispersed and set out on their advance to the east and Lorengau Airdrome—the only airstrip in the Admiralties in enemy hands.



Map 4. Arrow points to Lugos Mission, point of landings by 7th and 8th Cavalry west of Lorengau, March 15.

As the division commander observed the landing from a PT boat in Seeadler Harbor, he commented, "Our timing was a minute and a half off; we failed to take into account the heavy sea which retarded the landing craft as they turned toward the landing beach. Well, that's not too bad."

On the move eastward on the "No. 3 Road," running along the beach, the 1st Squadron of the 8th Cavalry met stiff opposition from enemy pillboxes, but with support from strafing P-40's and heavy weapons, succeeded in pushing toward its objective—the Lorengau Airdrome and Village. (See map 5.)

The 2d Squadron of the 8th Cavalry landed and moved directly south of Lugos, then east along No. 1 road from the village of Tingo to Lorengau. Temporarily held up by heavy mortar fire, the squadron dug in for the night under enemy fire at the Tingo road junction.

Meanwhile, the 5th Cavalry was entangled in hand-to-hand fighting and thick jungle undergrowth on Los Negros as the Jap staged another frantic counterattack in an effort to smash the 1st Squadron's left flank. Enemy machine guns and rifles were firing at 10 and 15 yard ranges, but the counterattack was easily beaten off—in fact the troops were beginning to relish these attacks. It was an easier way to kill Japs than to dig them out of bunkers.

Back on the Lorengau strip harassing naval gunfire lasted all through the night. The enemy got very little sleep and most certainly did not enjoy his breakfast. Anticipation of death at the hands of the fast-approaching force and the screaming, nerve racking, 5-inch shells pouring into his dugouts at regular intervals were not conducive to his vaunted serenity.

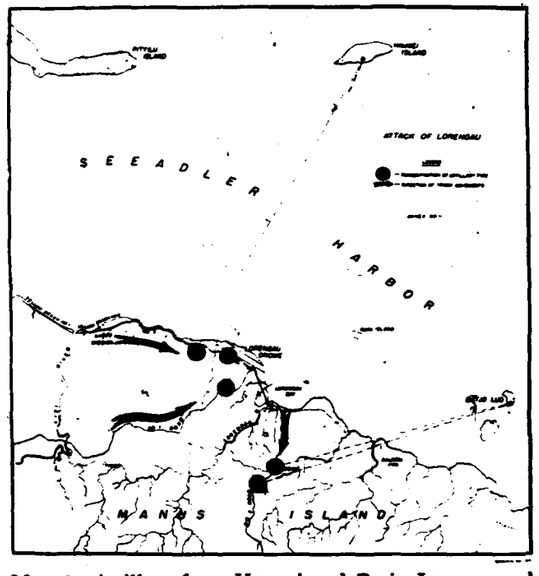
For the second time the Japanese were outsmarted in trying to anticipate what the cavalrymen would do. As the troops advanced east on Manus, it became more and more evident that the enemy had expected a landing in the immediate vicinity of the airdrome, for it was there that he had established his prepared defenses. Too late, he found it necessary to do a left face and reorganize his defensive system to meet the oncoming massacre, and his time was running out.

The use of artillery in the occupation of Manus Island was outstanding in its proper tactical employment. The artillery commander had selected ideal gun positions from which to deliver supporting fire for troops advancing along any of the main roads in the vicinity of Lorengau.

Prearranged targets all along the path of movement and thoroughly covering all possible enemy strong points were pinpointed on maps and given to the ground troops and the artillery. As our attacking forces met resistance from bunkers, a call for fire on the enemy's position merely required a brief "Target No. ——" and in a few seconds a "boom" and a devastating barrage would come down on the target. It was the type of artillery support that one reads about in the field manuals.

Without fear of being trite, it is possible to say that on this day the Nips truly received a large dose of their own medicine. Two valuable pieces of equipment had been captured. One was a pair of the finest type of 20-power binoculars. The other a 5" naval gun emplaced on Hauwei Island together with a goodly supply of ammunition. The division artillery commander set up the binoculars on their stand in Hauwei and from them was able to supplement with great accuracy the sensings of the air and forward ground observers.

Meanwhile, a squad from the field artillery got to work on the naval gun. They soon had the brass ring, through which the barrel moves in recoil and counter-



Map 5. Artillery from Hauwei and Butjo Luo, secured Mar. 13, softened strategic points of Lorengau and Ossum.

recoil, repaired, filled the recoil mechanism with a mixture of light oil, glycerine, and kerosene, tested emplacement and were ready to fire. The gun sight had been damaged beyond repair, so the laying was accomplished. The initial target selected was a reported Japanese dump area on Salesia Plantation. The air observer was alerted and soon over the air came the voice of the battalion commander, "No. 1 on the way, range 2,000 cherry blossoms—watch it when it goes." The cannoneers soon had the gun calibrated, and thereafter it was used in support of the attack on the Lorengau area and Manus Island and against the Japanese installations on Pityilu Island.

Lorengau Airdrome

Just after daybreak on the 16th the reinforced 1st Squadron of the 8th Cavalry attacked the Lorengau Airdrome, heavily defended by pillboxes and machine-gun nests. Having reached their jumping off point the previous night, they had dug in and planned the organized attack in detail.

Preceded by thundering artillery and mortar concentrations and supported by medium and light tanks, the attack was launched. Our forces encountered some of the stiffest opposition yet seen while advancing on the airfield. The Japs had constructed an unbelievable number of bunkers and automatic weapon emplacements for the close-in defense of the drome, and the cavalrymen advancing from the west flank had to reduce each and every one of them in turn. Heroic feats by individual soldiers in the charge on Lorengau seemed to be the order of the day rather than the exception, and through many incidents of personal heroism and sacrifice the squadron was able to advance.

Meanwhile the movement of the 2d Squadron of the 8th Cavalry on Number 1 Road to join forces with its counterpart was temporarily stymied by muggy jungle undergrowth, bad roads, and strong resistance along the track east of Tingo. An air-strike by Allied P-40's, operating from the now functional Momote Airfield on Los Negros, aided in reducing enemy opposition and paved the way for a sizable advance before nightfall.

The cleverly concealed machine-gun emplacements were indeed the work of a cunning and resourceful enemy. In a sense it was a graphic illustration of the well-defended road to Tokyo, but the rapid destruction of this short sector bode ill for the remaining defenders.

The third day following the landings on Manus, the troops moving along the Tingo-Lorengau trail joined elements of the 7th Cavalry, support echelon of the combat team, which took over the 8th Cavalry unit and pressed on toward Lorengau village. Many pillboxes were knocked out along the route, and by nightfall a concentrated attack secured the airdrome.

As the attack gathered momentum, the troops forced a crossing on the Lorengau River near its mouth. Nightfall found the brigade astride the river, but the bridgehead on the east bank was well secured, and the troops dug in.

With the conclusion of the day's fighting, American troops had the one remaining enemy garrison in the Admiralties at their fingertips. The occupation of Lorengau drome shortened supply lines from Los Negros—now practically a "rear-area"—and operations designed to capture the township and destroy the very last Jap could get underway.

During the night of March 17-18 the 2d Squadron of the 8th Cavalry moved into position to deliver the final blow on Lorengau township. They held a commanding view of the town from a high ridge to the northwest.

Lorengau township and its small but excellent harbor are situated in a cup-shaped valley, surrounded by jungle-covered hills which rise to 400 feet. The defenses of the area—the most likely spot for a hostile landing from the Jap point of view—were sited to cover the shore line and its offshore approaches, and three roads entering the settlement from the east, south, and northwest.

The beach itself was heavily planted with naval demolition mines containing 20 pounds of black powder and detonated by a master switch located in a control bunker well up the hillside overlooking the beach. Approximately a hundred yards in rear of the beach a series of rifle pits and gun emplacements were constructed in the side of a dike which paralleled the shore. On the hills surrounding the harbor, beach, and town, approximately 12 heavy Jap bunkers, similar in construction to those previously encountered, were dug in to reinforce the beach defenses and give the position depth. Although very neatly camouflaged, a number of bunkers had been uncovered by our concentrated artillery and naval gunfire. The beach itself was thoroughly mined and covered with barbed wire, giving further evidence that this spot, rather than Lugos Mission, was the expected place for a landing.

The only approach to the township from the west required crossing of the Lorengau River, a low-flowing stream 120 feet wide and from 10 to 20 feet deep. Vigorous combat patrols pressed the enemy back into the hills overlooking the village, and permitted a more rapid advance of the attacking forces.

By afternoon small groups had successfully demolished every Jap bunker in the area and had either killed or driven off all organized enemy resistance. The regiment moved into the township for the night and sent Troop "E" down the road to Rossum, running south, to clear the way for the next attack. Patrols were also sent eastward to Salesia Plantation. Supported by rifles and machine guns, these patrols forced the Japs to abandon 7 bunkers. In their haste the Japs also left behind an antitank rifle and a 20mm machine gun in perfect operating conditions. The vacated bunkers were destroyed by naval demolition bombs, captured during the occupation of Lorengau.

Mounted Attack

In West Bataan—1942

This story was told to me by a Filipino who, as an officer in the Philippine Army had been an aide to the commanding general of the division holding the west flank of the Bataan position. It was his mission to observe the fight in order to report it to his commander. The exact time and place he did not say; however, I believe that this incident happened in the area of Bagac, central West Bataan, in the latter part of January.*—Arthur K. Whitehead, Major, Cavalry.

THE Jap infantry, working down the west coast of Bataan Province, had penetrated the line held by the U. S.-Filipino forces and occupied a barrio or village of nipa huts. This area, as are most other parts of the province, is covered by dense jungle practically impassable. Cutting through this jungle is one road broken here and there by clearings for nipa settlements. The Japs had penetrated one of these clearings.

Three times during the day Philippine Army infantry had tried to retake this barrio, the occupation of which was necessary to secure the holding of the line. Toward afternoon the Japs were receiving reinforcements and digging in. Something had to be done in a hurry. Attached to the Philippine infantry division was a troop of the 26th Cavalry (P.S.). The division commander ordered this cavalry troop to retake the barrio and reëstablish the line.

The officer's description of the position was this:

The highway ran north and south through the barrio. On each side of the highway, and surrounding the barrio clearing, was the jungle. Where the road entered the barrio, on the south side, the Philippine infantry troops had a road block; and, fringing the barrio in a crescent shape on the south side, they had cut paths into points where they had established observation posts and placed snipers. It is assumed that the cavalry commander, knowing that three attacks on foot had failed and seeing that the barrio clearing gave space for horses to move around, decided that it was worthwhile to try a mounted attack. The only practicable place to initiate this was from the point where the road entered the barrio.

The position of observation of the officer who related this story was at one of the sniper's posts overlooking the southern part of the barrio to the left of the road. He said that the first that he heard was the pounding of running horses. Then four horsemen abreast with drawn pistols came into view. They were already disappearing when another wave came in sight, followed by another, and another—until the whole troop had gone past. The Japs had not started firing at first, so he assumed that they were taken by complete surprise. When the Japs became alert, firing came from everywhere—some from positions close to the observer. He said groups of four horsemen, yelling and firing their pistols, would turn off the road and charge into places from which fire was coming. He saw Japs running frantically from the horses. Some of the cavalrymen dismounted, turned their horses loose, and fought on foot.

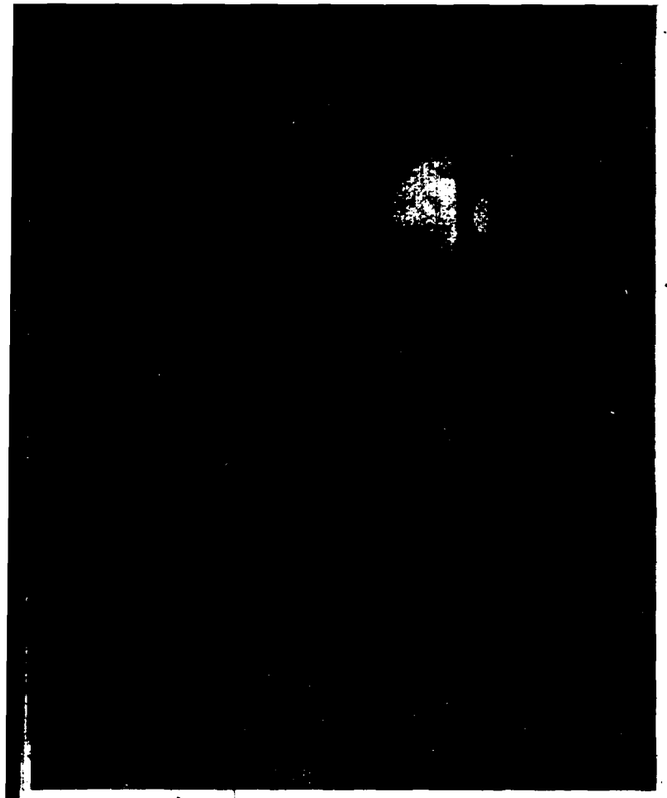
After the cavalry charge, Philippine infantry moved in, and my informant moved up with them. He said here and there were dead Japs and cavalrymen, and a few horses standing bleeding from wounds. When he was able to see the north edge of the barrio, he could discern cavalrymen on the ground, forming something of a line, firing up the road and into the jungle at the retreating Japs, who had been forced to withdraw in the face of the sudden and daring assault.

After the infantry moved in, they put up a road block at the north entrance of the road, dug in, cut fire lanes, and were able to hold the position, taken by the cavalrymen.

*(Editor's Note: A similar story, reported by Captain John Wheeler and published in the March-April, 1943, issue of The Cavalry Journal, describes the Battle of Moron, about January 16th. It is possible that the two accounts are of the same action.

RED ARMY COSSACKS

by Major Robert B. Rigg, Cavalry



The author, Major Rigg, demonstrates the *djigitovka*. He is one of the few Americans who has mastered this game.

Individual Excellence

THE Cossacks place great stress on individual skill at arms and riding. It has been their experience in many wars that when outnumbered, their *individual* excellence has often made up for their numerical deficiency. Thus, much time is devoted to marksmanship training with rifle, tommy and machine gun. Antitank gunnery has received much greater stress since 1941; also trench mortars, which the cavalry adopted during this war; Cavalry units are now armed with both the 50 and 82mm mortars. The Cossacks concentrate on molding individuals into toughened, qualified soldiers by rigorous individual training. The *djigitovka* is an example of how Cossacks emphasize and train for individual skill.

The Djigitovka

A person cannot fully appreciate Cossack daring and aggressiveness until he has seen a *djigitovka*. This swift-moving, neck-risking, training-at-the-gallop is an old Cossack institution designed for individual training. By virtue of its spectacular quality the *djigitovka* is often presented as an exhibition. Originated by the Cossacks, the *djigitovka* is now a part of the training of all Red cavalrymen.

There are two types of *djigitovka*—the "free" and the "military"; the former is optional and is performed without full military equipment. The "free" *djigitovka* includes a great variety of Cossack stunts, whereas the "military" one is a prescribed obstacle course.

The military *djigitovka* is obligatory for all line Cossacks, and the course is normally run with combat equipment, less the rifle for one or two stunts. As a rule Cossacks begin training in the free *djigitovka* as boys, and by the time that they enter military service they are somewhat prepared for the obligatory mounted courses. To qualify in the military *djigitovka* a Cossack must be able to gallop down the field on a horse and pick up certain objects like a pistol, saber, money, etc. He must also be able to pick up a dismounted man, to make his horse lie down, to carry one and two "wounded men" off the field on his mount, and to jump off of his horse when it is at a dead run. The saber course (described later) is one part of the military *djigitovka*.

Unencumbered by full field equipment, the free *djigitovka* is an even rougher and more strenuous undertaking than its military counterpart. The object of this voluntary training (which, incidentally, is very popular among Cossacks) is to foster the competitive spirit and to develop further the Cossack's self confidence and mounted skill. Innumerable hazardous stunts are performed in this *djigitovka*. Jumps are taken by riders who either stand on the saddle or sit facing backwards on the horse. Other stunts involve jumping on and off running horses, changing from one to two and even three galloping horses, crawling down, under the belly and up into the saddle of a fast running mount, etc. Few horsemen can match the Cossacks in stunts such as jumping from side to side over a running animal while carrying a saber in the teeth, or placing a handkerchief on the ground and picking it up with the teeth while riding by at full speed. These and many other stunts require a well developed set of nerves in addition to mounted skill. A rider who miscalculates in attempting to pick up a handkerchief may easily upset his horse or receive a battered face if his judgment or timing is poor. Like our obstacle course, training in the *djigitovka* makes for physical hardening.

Some *djigitovka* stunts were originally created for military purposes. For example, riding standing up in the saddle. Years back this became obligatory for all line Cossacks. On reconnaissance they were not allowed to sit in the saddle and ride over the crest of a hill. Instead the Cossacks trained their scouts to *stand* in the saddle and ride up the crest; the result was that a Cossack only exposed his head as he peered over a hill crest.

Because of the open steppe quality of so much of the Russian terrain Cossacks have always trained their horses to lie down so as to present a minimum target; some Cossacks can perform this stunt without dismounting and they mount while both horse and rider are on the ground before making the animal rise and gallop off. Many a Cossack who has lost his horse in combat has ridden short distances on the stirrups of two of his fellow horsemen riding abreast.

The combat usefulness of many Cossacks stunts is small, but the real value of the *djigitovka* is that it fosters aggressiveness, and creates daring, pugnacious soldiers.

Saber Training

The regular saber course consists of ten fence posts set upright about seven yards apart. Protruding from the top of these posts are fresh branches. The Cossack rides at full gallop down this row of posts and slashes at each one of these saplings. Spacing of these targets is such that the rider just barely has time to lift his arm from one downward stroke before making another one. Slowness, poor timing, or unskilful handling of the horse will cause several misses. First, the rider charges down the left side of the posts while swinging his saber to the right. Reversing this, he gallops down the right side and with the saber still in the right hand he swings to the left. The next time the horseman does the "weave" or "in-and-out ride" between each of the posts. This requires a series of fast, alternating strokes to left and to right—not to mention a deft handling of the horse. The author has witnessed Red cavalry competitions during which the horsemen have had no difficulty in cutting all branches, but the "in-and-out ride" was always the most difficult. In one exhibition a Cossack major demonstrated perfection in the use of the saber when with a blade in his teeth and one in each hand he rode the "weave" course; steering his horse with only his knees and body he succeeded in cleanly cutting every target. He was of course an exceptionally skilled rider.

In addition to the standard course, the Cossacks have a variety of special ones. Some of these are clay dummies for testing and developing the power of one's saber stroke. Sometimes the more skillful Cossacks use another method: A heavy rope is stretched waist high between two trees. The Cossack, rides a *blindfolded* horse straight at the taut rope barrier. As the animal cannot see the rope he will not attempt to jump it. Therefore, the rider must lean forward and cut the barrier with one stroke in time to avoid having the rope upset horse and rider. This sometimes proves to be a rather rough method of perfecting one's skill.

The Saber in World War II

Saber actions normally occur during raids, skirmishes, and small engagements. They are generally small actions involving less than a cavalry regiment. U. S. newspaper "accounts" of such actions are generalized and too often over-exaggerate these small combat incidents.

Saber actions are only successful under circumstances greatly favoring the cavalry. Once such an attack has begun, the shock action of a charging avalanche has a certain psychological effect on the enemy, especially if he is not too stubborn. The present day Cossack saber charge is the *final* demoralizing blow against an enemy already caught off guard and surprised, or disorganized and faltering.

Sabers are sometimes used when cavalry is following its own tanks. In the initial phases of such a charge the Cossacks use the tommy guns which are slung on their chests; they fire these guns until the clips are expended, then, shoving the muzzles down, they push the guns onto their backs and draw sabers.

Confused and disorganized enemy troops have suffered the most casualties from saber wielding Cossacks who are ever anxious to use the *shashka*.[1] By reason of this state of mind the Cossacks have been quick to capitalize on unexpected situations. Once they are at close grips with the enemy their dexterity with horse and saber can create violent manslaughter.

Night raids present opportunities for the use of the saber mounted because the saber does not endanger other cavalry personnel in close combat. Furthermore it is a silent weapon which does not serve to alert adjacent areas immediately. The pattern of night fighting often

[1]Russian for "saber."

***"The object of the* djigitovka *is to develop Cossack boldness, skill and daring. For that reason it is obligatory for every Cossack soldier."*—Old Cossack Military Regulations.**

Part III — Training and Organization

Saber actions normally occur during raids, skirmishes and small engagements. Here Cossacks participate in a charge.

involves attacks on enemy occupied villages which are situated behind the enemy's main lines. By reason of such, these enemy troops will often be less careful in regard to local defense, and the Cossacks have had success in surprising many of these garrisons. Thus, as enemy troops have rushed out of buildings they have been sabered amid their running confusion of trying to organize some opposition to the attack.

In March 1944 on the Third Ukrainian Front the Russians surprised and attacked a German motorized column on a highway near the Ingulets River. The attack was climaxed when a large mass of mounted cavalrymen, with sabers drawn, rode down on the somewhat shot-up German column. A Soviet war correspondent who visited the scene very shortly after the battle said that he counted hundreds of enemy corpses that had been sabered in this battle. As it happened, this situation was favorable to the use of sabers—as against many others where blades could not be used.

Cossack successes with the saber—although they are minor achievements compared with their other accomplishments—have in part been due to the Cossack temperament and their pugnacious combat spirit.

Field Riding

Cossacks maintain that their type saddle is best suited for their purposes; it quite obviously affects their peculiar seat on a horse. The Cossack seat is well forward with considerable weight on the stirrups, and some observers comment that the Cossack saddle is so uncomfortable that one cannot sit any other way! The seat is progressively more forward with each increase of gait. At the gallop the inside of the rider's thighs are well against the thickly padded *pommel*, while the main weight of the body is in the stirrups.

Much as Cossacks dislike walking, they are taught to spare their animals by leading them over rough and snowy terrain where speed is not the dominating factor. Cossack commanders are taught to analyze carefully such difficult footings as vast plowed stretches, swamps, etc., and to modify their gaits, march tables and leading so as to preserve every bit of their animals' strength and endurance. Formerly, the Cossacks were taught to go around fences and to take ditches on an oblique, rather than jump these and other obstacles as U. S. Cavalry does. Cossacks of the old Imperial Army were inept and generally untrained in jumping. This was in marked contrast to their ability to do practically everything else on a horse. Today, however, obstacle jumping is stressed in all Red cavalry units.

Marches

The Red Army command expects a high degree of mobility from its cavalry, and the vastness of Russian terrain demands much in the way of long marches by military horsemen. Russian cavalry and Cossacks have proved that they can endure much in the way of combat-marching, but the Red Army does not try to match horsemen against mechanization, for each has its own rôle, speed and ranges.

Russian cavalry march procedure corresponds in general to that of U. S. cavalry. Their march tables are keyed to so many *versts* instead of *miles* per hour. Russian cavalrymen use the same system as U. S. cavalrymen in respect to alternating the walk and trot, although the Russians use the gallop more frequently. Night marches of 30 to 35 miles cross-country have not been uncommon in this war.

There are some forced marches of 70 miles in 24 hours on record, but where it can, the Russian cavalry chooses to conserve its animal strength. One Red cavalry colonel told the author that when his unit was on the front it made a series of forced marches of from 60 to 80 miles per day by the use of an alternate set of horses. The unit simply rode one group of animals as long as practicable, and then transferred men and equipment to the lead group and continued; the used mounts followed in rear of the unit. This system lessened the fire power of the regiment while on the march due to the additional horseholders, but it was practical for quickly moving the unit to another sector.

Discipline

In observing Red Army units the one item which has impressed the author most has been the discipline. It is not only excellent; it is consistent among all ranks. Other observers concur in this opinion.

Red Army achievements in battle have been due in no small part to this factor. As a part of the Red Army, the Cossacks have had to conform to this hard discipline, and they have been benefited accordingly.

Russian military discipline is achieved by methods common to most armies, but their system has its own peculiarities. The average American soldier would be greatly surprised at the penalties that the Red Army has for violations of orders, regulations and misconduct. A Russian soldier can be executed for a misdemeanor which under the U. S. system would only merit con-

finement. This is not to say that Russian discipline is built on fear, but the Soviets have reduced the number of courtmartial cases by severe penalties. The differences between nationalities, likewise, cause differences between military systems and methods of achieving the same goal. The Russian system differs from the American on this basis.

Red officers appear to be well respected for their professional knowledge and good military conduct.

Officers and Leadership

Strangely enough the Cossacks have never produced any outstanding number of great general officers, either today or in their past history.

Under the Tsars Cossack units were often recruited and officered by men of the same community. There was a certain military disadvantage to this because many officers were relatives or intimate friends of the men under them. The Red Army has corrected this. According to the Russian officers with whom the author has talked, a substantial portion of the officers of present day Cossack units are *non-Cossack* in origin. Cossack soldiers are promoted to officer rank in the field when they can demonstrate their ability in combat for such positions. Thirty years ago this was not a regular practice in the Russian Army. Cossack men, NCOs and others not in combat can also qualify for officer training; in peacetime they were required to have at least a secondary school education in order to go to officer schools.

Cossack Strength

Numerically speaking the Cossacks represent a very small portion of the U.S.S.R.'s population. For their numbers, however, they provide a high ratio of excellent fighting men. Most is heard about the Don and Kuban Cossacks because they are the largest Cossack groups. Based on previous proportions and a nominal amount of present day information, the Don Cossacks furnish about 35% of the *total Cossack* armed strength, while the Kubans provide roughly 20%. The Terek and Orenburg Cossacks contribute about 10% each. The remaining 25% is made up of Ural, Siberian, Amur, Astrakhan and other small Cossack groups.

When the war began, the Red Army had about 40 divisions of cavalry. This has since been increased to an estimated total of about 65 divisions. Details are lacking on the exact total of Red cavalry strength, and the ratio of Cossack units to that total. However, a conservative estimate based on what is known, is that the Cossacks make up 30 to 36% of the total Red cavalry strength—or an equivalent of from 20 to 24 cavalry divisions. Cossack regiments have always been scattered through cavalry divisions in the Russian Armies. This practice is in vogue today, with the result that there are some all-Cossack divisions, but a great many more regular cavalry divisions contain both Cossack and non-Cossack regiments.

By reason of the fact that the regiment is the basic tactical unit of the Cossacks, it is well to examine its structure.

The Soviet Cossack Regiment

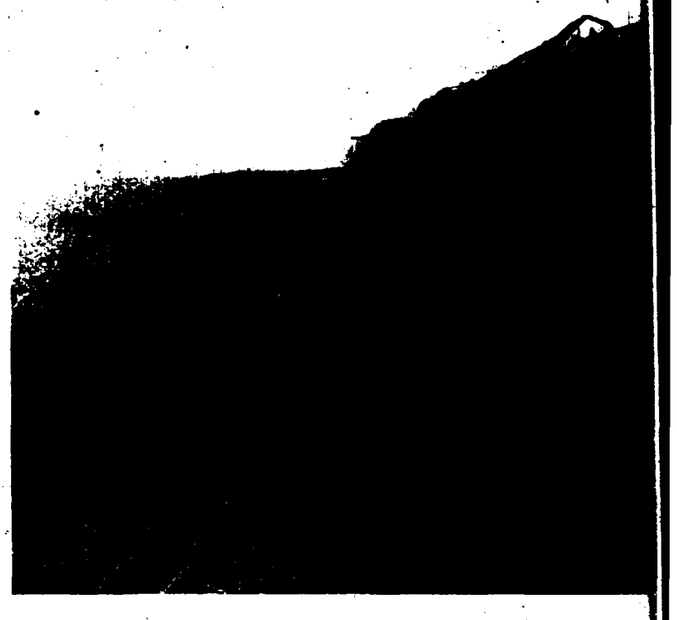
Since the 1940 Tables of Organization were announced the Red Army has, for security reasons, kept details of unit organizations secret. From all indications however, the basic structure of the cavalry regiment has remained essentially the same since 1940, except that the firepower of the regiment has been increased.

The Cossack regiment consists of four saber squadrons and one machine-gun squadron; the latter is made up of platoon of *tachanki*.[2] The Russian squadron is roughly equivalent to the U. S. Army cavalry troop. In addition to the saber (rifle) and machine-gun squadrons there is a battery of 76mm field artillery guns which is attached to regimental headquarters. Since the war the AT fire power of the regiment has been increased to where there is a battery of 45mm AT guns with regimental headquarters. The regiment is completed by an 82mm trench mortar section plus engineer, veterinary, medical, antiaircraft (20mm), signal, and supply troops; the latter vary in size between 15 and 50 men depending on the type of troop.

The Cossack squadron is called *"sotnia,"* a Cossack term which literally means "100 men." Actually, today the Cossack *sotnia* contains about 140 men and 5 officers, and is divided into four troops of four sections each,

[2]Light horse-drawn carriages with MGs.

These Kuban Cossack antitank gunners are using the Soviet 45mm AT gun. This horse-drawn weapon, a standard cavalry AT piece, fires both AP and HE shells.



plus a squadron or *sotnia* headquarters. A captain commands the squadron.

In the Cossack regiment the machine-gun squadron is employed or used in much the same fashion as the U. S. machine-gun troop. The Cossack machine-gun squadron is slightly faster than U. S. cavalry machine-gun units; this is due to the Russian use of the *tachanki* which allows for a faster gallop than pack animals can muster. Soviet machine-gun units may be slightly more aggressive than are U. S. machine-gun units because the Russian machine guns are at all times in a ready-to-fire position.

The Red Cavalry machine gun squadron can operate as one unit, but normally it is broken up to support the rifle squadrons. The same is true of the regimental field artillery and antitank batteries; very often the battery is broken up so as to put a gun with each rifle squadron. When necessary, division artillery supplements regimental artillery.

The total regimental strength in men and officers is about 1200. Horse-drawn vehicles total about 130, while the number of motor vehicles is very small.

With all due respect to a very able correspondent, Mr. Cyrus L. Sulzberger, the author would like to point out that Mr. Sulzberger's statement in the July-August, 1943, CAVALRY JOURNAL to the effect that "The old cavalry, hampered by horse-drawn baggage trains, has been largely eliminated by the gradual introduction of motor transport," is not entirely correct. *Within the regiment*, transport is almost entirely wagons, and the reason for this is that regiments are often obliged to cross terrain not suited for motor transport. Imagine a Cossack regiment held up in rough muddy terrain because its motor vehicles cannot supply it. To avoid such a situation, the Cossack regiment still uses wagons. With division and corps, however, there is a higher proportion of motor transport.

DIVISIONS AND CORPS

In direct contrast with present U. S. cavalry, whose main rôle is reconnaissance, Soviet cavalry is organized into divisions and corps and employed on a mass scale in combat. Russian cavalry successes have in great part been due to the fact that it has been committed *in force*.

Red Cavalry divisions vary between three and four cavalry regiments plus a horse-drawn field artillery regiment which is always a part of the division. The FA regiment is divided into two groups and totals six batteries (76mm guns and 122mm howitzers). In addition to the division headquarters there is a squadron each of engineers and signalmen, plus a troop each of medical, AA, supply, and veterinary personnel. Prior to this war the division contained a mechanized regiment. A major general[8] normally commands the division, although occasionally a colonel is in temporary command.

The corps is the largest permanent cavalry organization in the Red Army. The cavalry corps is formed by three cavalry divisions, plus a minimum of one horse-drawn artillery division and a mechanized unit believed to be a regiment. A lieutenant general commands a corps. In the summer campaigns of 1944 Marshal Joseph Stalin cited no less than ten cavalry corps for outstanding action on the front. This totals about *thirty cavalry divisions*, and there were perhaps one or two other corps in the fighting which were not cited. It is generally conceded that the Red Army employs about 30 to 50% of its total strength on the front at all times, and these unit citations seem to bear this out.

About the largest all-Cossack organization is the division, although in a few corps the Cossacks dominate to the extent that these corps can be appropriately called "Cossack Corps." The following corps come under this latter condition:

Lt. General Issa Pliev's Kuban Cossack Cavalry Corps, which was cited for heroic and outstanding action in 1944 at Odessa (April), Baranovichi (July), Brest-Litovsk (July), Vilieka, Krasny, and Stolbtsy (July), and at Debretsen and near-by points in October.

Lt. General Gorshkov's Don Cossack Cavalry Corps, which received Marshal Stalin's citation in August, 1944, for outstanding action on the Second Ukrainian Front and again in October at Debretsen.

Lt. General Vladimir Kriukov's Cossack Cavalry Corps, which was cited in July, 1944, for conspicuous action in the Minsk area.

Lt. General S. V. Sokolov's Cossack (Kuban and Ural) Cavalry Corps cited by Marshal Stalin for actions at Rovno and Dubno in June, 1944.

Lt. General Baranov's Cossack Cavalry Corps, cited in July, 1944, for successful actions near Brodi Poritsk, Busk, Gorokhov and at other points.

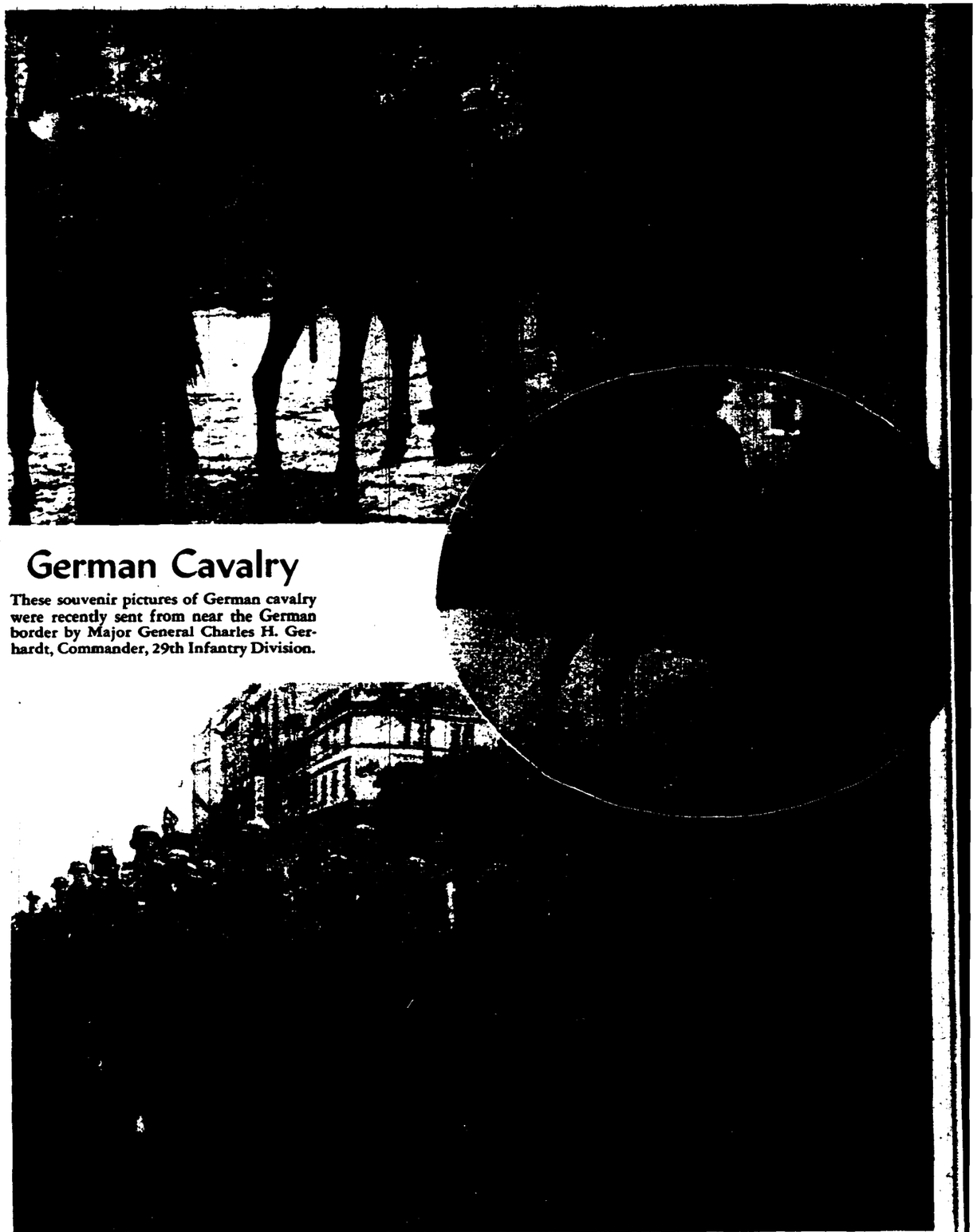
TASK FORCES

In viewing the aforementioned organization of regiments, divisions and corps it should be borne in mind that the Cossacks are not necessarily bound by standard TOs in field operations. There is great flexibility in the Red Army for the creation of varied task forces or combat teams. The organizations previously described simply form the structures around which these teams are built to carry out special tasks. Engineers and other specialists are often attached to the cavalry and, in turn, cavalry is often placed in mutual support of other arms. The most regular combination is the "tank-cavalry combat team." Aircraft is of course a very important factor to military success, and air units are parts of these teams.

☆ ☆ ☆

The fourth installment of Major Robert B. Rigg's extremely enlightening discourse on Red Army Cossacks, which will appear in the March-April issue of The CAVALRY JOURNAL, *will deal with the Tactics and Technique so successfully employed by Russian Cavalry in this war.*

[8]Major General is the lowest general officer rank in the Red Army.



German Cavalry

These souvenir pictures of German cavalry were recently sent from near the German border by Major General Charles H. Gerhardt, Commander, 29th Infantry Division.

Soviet Cavalry from the German Point of View*

After the first World War, as a result of the lessons learned in it, there followed a general dissolution or motorization of the cavalry in most of the armies. Only the eastern nations, Poland and Soviet Russia, retained relatively powerful cavalry formations. As we know, Poland had forty regiments of cavalry, and Soviet Russia has many corps and divisions.

While, in the campaign of 1939, small German cavalry formations did excellent work in reconnaissance and security service (even enemy batteries were captured in surprise attacks), the Polish Uhlans, true to their traditions, offered themselves up bravely in cavalry attacks, but to no avail. The Polish cavalry lacked heavy weapons, the necessary fire power, and collaboration between horse and motor. Also, there seems to have been no observation or combat aviation assigned to it.

On the basis of the experiences of 1939, the Soviet Russians reorganized and rearmed their cavalry and motorized its supply formations. The men received new "Simonov" automatic rifles and machine pistols. The number of machine guns was considerably increased and some of them mounted on light horse-drawn wagons. Particular attention was given to antitank defense.

In the campaign of 1941, Hungarian, German, and Rumanian cavalry were engaged in the Russian theater of operations, and it was often possible to employ them with success. Their fire power was increased, especially by means of antitank guns and antitank rifles. The latter were transported on pack horses.

The development of the motorized formations and of aviation, as well as the increasing fire power of the artillery and infantry, influenced the tactics of large cavalry formations on both sides. Every cavalry officer who went through the first World War on the eastern front or was for years garrisoned in Eastern Galicia, knows that at certain times and in certain places in the spring and fall and frequently in the winter when there is a great depth of snow, *only a mounted man is capable of getting about at all times.* This fact had also to be learned recently in the eastern theater of operations in the campaigns of 1941-1944; Hungarian cavalry formations, individual squadrons, were able to record fine accomplishments in the retreat battles in the abnormal temperatures of over forty degrees below zero.

Naturally, the cavalry in the east also fights dismounted. The horse serves more or less as a means of locomotion. However, smaller detachments and patrols are able to execute successful surprise attacks on enemy formations, especially in retreat, and break them up.

The Soviet Russians always employ their cavalry in great masses—divisions and corps—for the solution of secondary problems, security, etc.; for according to their view, cavalry formations which are scattered out, when worn down by the enemy, rapidly lose their striking power.

*Translated at the Command and General Staff School from a German article by Emmerich Subay in *Pester Lloyd Abendblatt*, Budapest, Hungary, March 4, 1944.

Mobile Groups with Air in Hungary*

by Colonel N. Denisov, Red Army

MOBILE groups have been widely employed in Soviet offensive operations in Hungary. Such units, comprised of tanks, cavalry, motorized infantry, and light artillery, are supported by IL-2's.

These mobile groups operate far behind enemy lines where team coördination with aircraft is very complicated. It is one thing for air power to deal a concentrated blow at the enemy when pilots can see the battleline clearly and are led to the target by radio locators from the ground, and quite another thing when pilots have to penetrate deep into enemy territory, find their supporting mobile groups—which are ever on the move—and simultaneously locate and attack objectives of most importance to the raiding parties of tanks, cavalry, or motorized infantry.

The situation is further complicated when pilots have to support small forces of these mobile detachments, as they dash forward into enemy defenses. The success of an operation of this kind depends mainly on a well organized system of communication between the commanders of the mobile detachments and the aerodromes located behind the frontlines. Initiative on the part of the pilots is likewise important.

Activities of a certain Stormovik unit operating in Hungary will serve as an illustration of the difficulties involved in this type of operation.

A medium sized mobile detachment, which broke into a populated locality and dislodged the German-Hungarian forces, met with considerable opposition when the enemy brought up lorried infantry and surrounded the locality. The officer commanding the Soviet mobile group was confronted with the problem of either trying to hold the position or fight his way back to the main Russian force. Sizing up his possibilities and reckoning on the support of the airforce, he decided to try to hold.

*By cable to THE CAVALRY JOURNAL from War Department, U.S.S.R., Moscow, November 26, 1944.

Soviet tanks smash enemy defenses on the right bank of the Danube at the approaches to Budapest. In the Red Army horses and armor are used extensively in what the Soviets term their Mobile Forces—the tank-cavalry team.

The bold decision of the officer was radioed to headquarters and received approval of the general, who was struck with the idea of taking advantage of the possibility of routing the whole enemy group. The Germans, having brought their reserves to this particular area, were weakened in other sectors, and it was there that the general decided to strike. Time, however, was needed.

The weather forecast was none too promising. Low, overhanging clouds, heavy rain and mist seriously hampered air operations. The air officers, however, were confident of their crews and promised that they would fulfill the general's assignment. Half an hour later the first Stormovik detachment took to the air, and the lead-pilot led the group directly to the village where the fierce battle was in progress. The mobile group on the ground, surrounded on all sides by the enemy, was fighting back fiercely.

Looking down, the Stormovik leader saw a line of tracer bullets leading toward a woods and knew that the infantry was pointing out the target that it wanted knocked out first. The target, consisting of two field batteries, was attacked immediately. In two runs, the IL-2's released their bombs on the enemy guns, then followed with a strafing attack on the Germany infantry. The cannon and machine-gun fire forced the Germans to the ground and partially dispersed them. As the ammunition ran low, the leading pilot radioed the situation to headquarters and was told that a second group of IL-2's was about to take off. "Hold on, we'll give them hell," the pilot wrote on a slip of paper and threw in a pennant down to the village. Looking down, he saw Red Army soldiers of the surrounded mobile group wave their caps to the pilots.

Horse-drawn artillery, used extensively with Red Army Mobile Forces, takes up new positions near Budapest.

For 4 days thereafter the Stormoviks helped the mobile force repel the German attacks. Not until the fifth day was the task completed. Then Soviet units, headed by the general who had foreseen the advantage in having the mobile group hold out, breached the enemy defenses and encircled the attacking enemy.

The general gave an order for a concerted assault, which was carried out simultaneously from both inside and outside the ring. By evening it was all over. The routed enemy hoisted a white flag. In that populated locality where fierce battles had raged for so many days, the general established his headquarters, while the mobile group, which had so successfully accomplished its task behind the enemy lines, proceeded onward with the main force.

Soviet planes head for an area near Budapest. Aircraft and Mobile Forces have been used in successful combination during the advance through Hungary to Budapest.

Another interesting example of the coöperation between Stormoviks and ground forces occurred during a battle for a railway station in Hungary. A cavalry force sent to attack the station was only a few kilometers away when a reconnaissance flyer reported arrival of enemy troop trains at the station. Troops, tanks, and guns were being unloaded. Immediately the air unit commander concluded that the Germans were undoubtedly determined to hold the station and offer stubborn resistance. He ordered a few Stormovik groups into the air. Running in, they blasted the trains and blew up ammunition stores. Then the cavalrymen, taking advantage of the enemy's confusion, attacked and seized the station.

Artillery Cover for Shipping

by Major P. Danilov

A Soviet gun and crew are silhouetted by an enemy searchlight. Searchlights became prime targets for such crews.

WHEN the front moved to the coast and lines of communication by sea, Soviet coastal artillery was confronted by a number of new and altogether original problems calling for the closest possible collaboration with the fleet. These problems, it can be said, wrought a change in the very nature of this collaboration.

In the main, the Soviet batteries had to wage a struggle against the enemy shore batteries that were shelling Soviet shipping and bases. The counterbattery action of the Soviet artillery was designed to extinguish enemy searchlight installations, smash his pillboxes and disperse his concentrations of troops and equipment —in a word not naval, but land objectives on the given sectors were the main targets of the fighting collaboration of the shore defenses.

This called for the working out of tactics of fire cover for shipping. How this was done is illustrated by the experience of one artillery unit upon which devolved the job of securing navigation for shipping on a route in direct proximity to the enemy's guns.

During the first phase of this action, Soviet gunners pursued purely defensive tactics. They opened up only after the enemy searchlights had gone into action, and after the enemy batteries had fired their first salvos. It was not long before the gun crews became expert at "getting" the enemy searchlights.

By concentrating their fire on the searchlights and batteries, using mainly flare shells, the Soviet gunners prevented the enemy from determining the exact location of vessels. This practice represented the initial tactical methods elaborated by this particular unit.

On one occasion a number of Soviet ships set out from their bases. Toward midnight, when their course lay off the enemy-held coast, with the aid of sound-finders, the Germans determined the approximate location of the convoy, and, thirsting for success, they turned on the searchlights so as to be able to fire from the darkness at brightly illuminated targets. But the Soviet gunners were on the alert. From an observation point the exact location of the enemy searchlights was transmitted to the gunners, who, with two shells, finished them off. The convoy proceeded on its way.

A little later, the Germans succeeded in getting another searchlight station going but had the mortification of seeing it share the same fate as its predecessor.

Seven times the enemy got lights going, and seven times Soviet gunners on land extinguished them. Only once, when the convoy was almost beyond the danger zone were the ships caught in the beams. The German guns opened up on their fast disappearing prey, and immediately the land batteries went into action. The enemy guns were quickly silenced, and for their exemplary conduct in this action, the Soviet gunners were mentioned in dispatches.

The immediate ascertaining of the targets (in this case the searchlights and batteries) and the opening of fire in good time is the basic condition for affording cover to ships on the move.

The tactics of the struggle against enemy batteries shelling coastwise shipping are not fixed and rigid. Changes will be caused by the dispositions of the enemy's guns, by the extent of the observation post network, the locality in which the enemy fire points are located and by the general situation on the front.

If the enemy batteries are within good view of the observation posts, then it is more advantageous to shell them by correcting the fire of each salvo and by shelling at a rate that prevents the enemy from causing damage to the ships. When the range has been found, the best method is to concentrate a massed fire on the target and then, by methodical shooting, to pin the gun crews to their shelters until the ships have passed the danger zone.

In operations designed to secure a safe passage for coastal shipping, the winning of time is a decisive factor. It follows, therefore, that the enemy must not be allowed to fire even a single shell. For this reason, battery commanders are allowed to use their own discretion in opening fire. On the sector on which the unit we have been discussing is operating, two or three special targets are allotted to the gun crews and, at the moment that the ships are passing these points, the guns go into action at the very first signs of enemy activity. Without previous permission from the senior officer, fire is opened against the floating batteries and coastal artillery which the Germans use specially for shelling the narrow parts of the fairway.

In a number of cases, during the 1943 campaign, this particular land battery changed from defensive to active tactics. After close and careful observation of the enemy's fire system, the gunners, prior to the passage of convoys, distributed the targets among themselves and subjected them to a thorough shelling.

Accurate shooting drove the German gun crews to their shelters and kept them there until the ships had got safely out of the danger zone. Reserve forces held in readiness to deal with new enemy fire positions, went into action on the instructions of the senior officer and at the call of the officer in charge of the convoy. Such tactics completely justified themselves.

In May and June of 1943, the men of Captain Shinelev's batteries and others, by this accurate shooting, prevented the enemy from discharging even a single shell at ships passing within a few miles of their positions. The artillery formations covering the sea communications retained the initiative in their hands and not only secured the safe passage of the ships but actually inflicted heavy losses on the enemy.

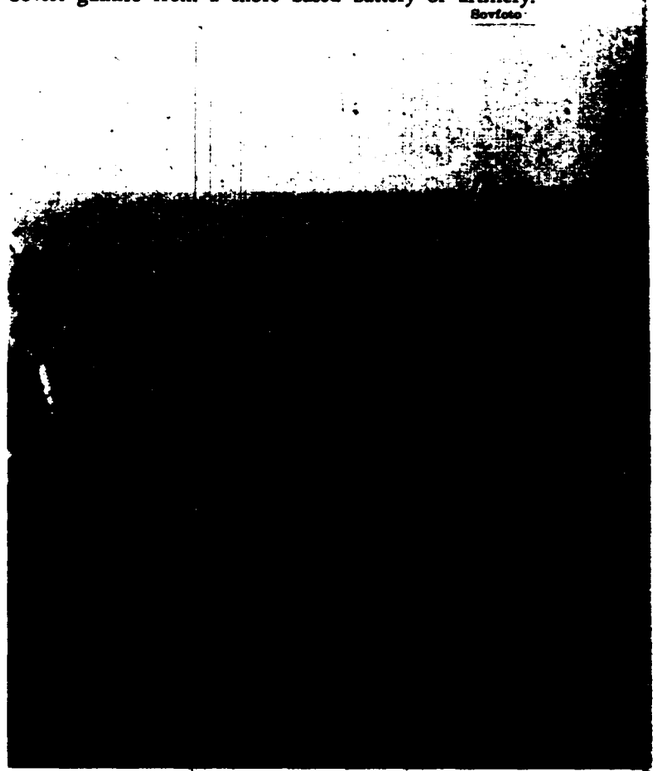
These "cover" operations in which the Soviet gunners held the initiative, demonstrated the effectiveness of offensive tactics. It does not automatically follow, however, that the offensive tactic must always be pursued. "Cover" tactics depend on the requirements of the given convoy, on the situation on any particular sector, relation of forces, on the season, and on the weather.

On moonlight nights when the enemy is bound to observe the ships, the tactics will assuredly be those employed of offense. This, of course, involves a considerable expenditure of ammunition, but it also means dictating your will to the enemy, causing him serious losses and securing a safe passage for the vessels.

When there is poor visibility, and the chances are that the enemy will have considerable difficulty in locating the ships, then it is possible to enjoy the luxury of the defense tactic—only opening fire when the enemy guns show signs of coming to life.

In other circumstances, it pays to combine both methods—to silence in the first place the more active of the enemy batteries shelling the narrow parts of the fairway and its approaches, put the enemy searchlight installations out of commission, and then concentrate only on the enemy guns endeavoring to get the range of the passing vessels. Having firmly mastered the tactics and methods of fire cover for ships and having achieved a high standard of gunnery, the artillery men of the Soviet coastal defenses have done remarkably well in securing free passage for ships and, simultaneously, have caused the enemy huge losses in manpower and equipment.

This German vessel was sunk in the harbor of Odessa by Soviet gunfire from a shore based battery of artillery.
Sovfoto



Maneuver Formations

For the Cavalry Division Artillery

by Colonel H. C. Demuth, FA

MANEUVER is only one of the problems which confronts the artilleryman of the cavalry division and, insofar as it affects the timely delivery of fire, it is most vital. In other days when the artillery occupied direct fire positions, the problem of speed was nonexistent. Fire was delivered by single pieces, platoons, or single batteries against visible targets. The fire of a battalion was seldom used and was never massed as it is now known.

Direct fire positions today are suitable, at times, as against mechanization, but the improvement of methods and equipment makes the habitual occupation of these positions suicidal. Indirect fire positions are, therefore, the rule with the consequently slower, though more effective, methods and techniques. Massed fires with their tremendous effect are essential. They take time to prepare. However, the same necessity for speed still exists. Profitable, then, are devices that will save time before entry into action; since time saved here is spent in the preparation of fire.

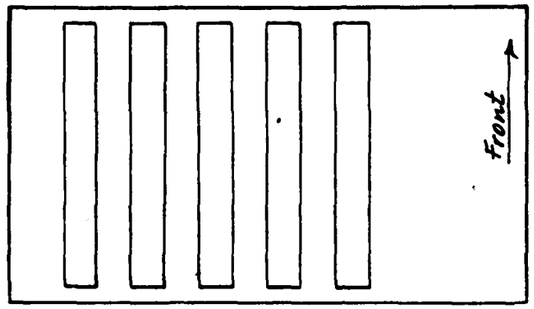
The spirit of General Hawkins' article, "Tactical Exercises and Maneuver Formations for a Cavalry Division," (CAVALRY JOURNAL, July-August 1943) is rapidity of maneuver and entry into action. This applies equally to the artillery of the division. Though not mentioned in artillery field manuals, maneuver formations expanded to include fire plans, both of which must be SOP (Standing Operations Procedure), can save much time which is so all important in preparing fire. Experience dictates their use. A simple code group, in conjunction with close liaison with the supported cavalry, must do initially as orders to the artillery. SOP attaches the horse battalions to their cavalry brigades except for special operations.

BATTALION MANEUVER FORMATIONS

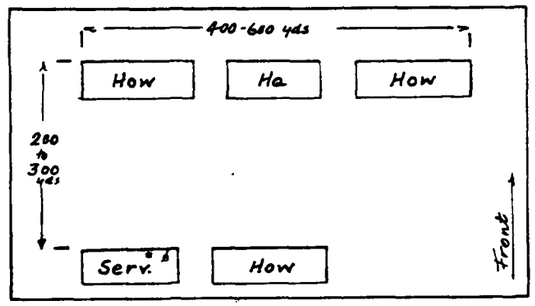
Only one formation is necessary to move a battalion across country in these rapid situations, but this formation must be such that trails can be dropped and fire opened immediately. Formation B (below) satisfies this requirement. However, the battalion commander will, for other purposes, need other formations.

Three maneuver formations, therefore, seem desirable for the artillery battalion. They are diagrammed below.

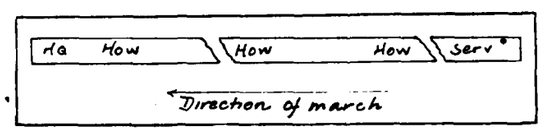
Formation A is used only to mass the battalion outside range of enemy air. Closed interval; order of batteries in line immaterial.



Formation A
The battalion in line. Batteries in section column.



Formation B
Battalion in two lines for cross-country. Batteries in line or double section line. Extended interval between sections.



Formation C
The battalion in section column—appropriate for marching on roads only. Interval decreases effect of air bombing.

Formation B, used for marching across country, lends itself to immediate action and to firing in any direction—necessary at times in modern warfare.

This interval in Formation C is such that if the situation calls for the battalion to drop trails and open fire the parallel sheaf is the open sheaf. While it saves but one simple calculation and one command on the part

of the battery commander, it gains valuable time. It also decreases the effect of air bombing.

These maneuver formations are adapted from those used by the 2d Bn, 82d Field Artillery (Horse), 1st Cavalry Division, during 1938-1940.

Rules for marching and changing from one formation to another are easily devised. Headquarters battery is the base unit, the guide, and leads the column because the battalion executive officer is with it and commands the battalion from there. Other batteries, changing gaits and direction as necessary to conform with headquarters battery, conform as prescribed by the battalion SOP.

These formations are appropriate for all battalions.

MANEUVER FORMATIONS AND FIRE PLANS FOR THE DIVISION ARTILLERY

Maneuver formations for the division artillery as a whole are desirable. By the use of these, the division artillery commander places his artillery in the division formation and rapidly shifts the 105mm battalion by a simple radio group when necessary. His 105mm battalion and either of his horse battalions constitute the bulk of his artillery.

Three formations are necessary. (Different battalions should use different numbers, or letters, and those of the division artillery should be different from the battalions. This is in order to prevent execution if heard by another battalion.)

Formation 1: An order to the 105mm battalion to march, trailing the horse battalion of the first cavalry brigade if the division is in line of brigades, or the first brigade column if the division is in several columns.

Formation 2: An order to march between the rear of the brigades when the division is in line across country, or at the tail of center column if there is one.

Formation 3: The same as 1, except with the second cavalry brigade.

FIRE PLANS

Like maneuver formations, prearranged fire plans save much time in the transmission of orders. They are absolutely necessary, since it is seldom possible for the division artillery commander to see his battalion commanders after the division is set in motion. Visits by staff officers are, likewise, usually impracticable in the limited time prior to action.

Three plans are necessary to direct the fire of the division artillery properly. When any one of these plans is announced, it immediately releases the 105mm battalion from march formation.

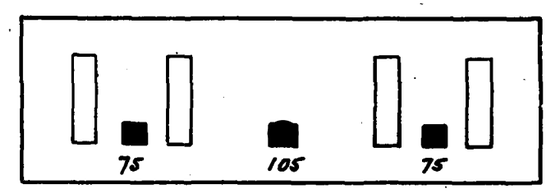
Plan X—The 105mm battalion reinforces the fires of the first (horse) battalion. (First cavalry brigade's horse artillery battalion.)

Plan Y—The 105mm battalion remains in general support of the division.

Plan Z—The 105mm battalion reinforces the fires of the second (horse) battalion. (Second cavalry brigade's horse artillery battalion.)

These plans are orders, and are announced immediately the scheme of maneuver of the division is known. Any one of them is an order to the battalion commanders to prepare for a definite line of action. Although the horse artillery battalion commanders will probably know the general scheme of maneuver by the time that this order is received from division artillery headquarters, it definitely assigns the 105mm battalion a mission. It orders the 105mm battalion into action. It notifies the horse artillery battalion commanders of the disposition of the 105s.

Example 1. The division commander assembles his senior commanders and tells them that he is going to march across country on a reconnaissance to ———. Line of brigades; first cavalry brigade on the right; the division on an extended front. Since the situation is indefinite, the division artillery commander will desire his 105mm battalion centrally located. He orders Formation 2.



Example 1.

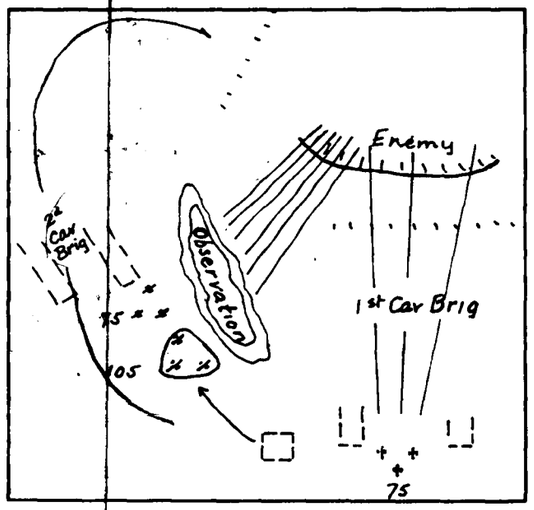
Example 2. When the enemy situation becomes clear and the division commander decides to envelop the enemy right, he orders Formation 3. This moves the 105mm battalion to the vicinity of the horse artillery battalion of the second cavalry brigade. He also orders Plan Z, for firing.

By this movement of the 105mm battalion, *prior to action*, the commander saves time by shortening communications with the reinforced battalion. This facilitates fire direction. He thus supports the main effort with the mass of his fire.

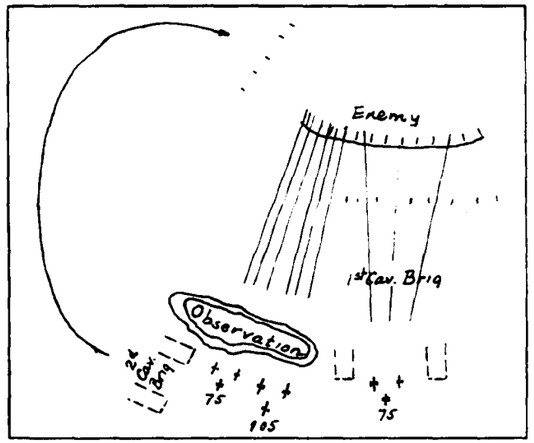
In no sense must the maneuver formation be construed as rigidly fixing the artillery battalions to a particular column or piece of ground once action is imminent. Only by allowing the battalion commanders great latitude and freedom of action, within the frame work of common sense, can cavalry be supported properly.

The preceding and following illustrations show how the battalion commanders may be influenced in choice of positions by terrain.

If the division commander adopts a standard formation for some special purpose such as, "delaying action against strong mechanization," an additional formation, or plan, can be added to announce this situation. All



Example 2-A.



Example 2-B.

in all, the above formations and plans, with the addition possibly of this one, seem adequate to cover all situations.

Artillery officers must have a proper tactical appreciation of and be imbued with the spirit of cavalry action. They must be able to select targets which will do the cavalry action the most good, for there is no time for minute directions from above.

Rapid entry into action and rapid accurate fire support are the ends to be attained. Practice and field exercises should be pointed to these ends. All personnel must be highly trained.

By the use of maneuver formations and plans which, if SOP and understood by all, can be transmitted as a short code groups to the battalions—the division artillery commander in these rapidly moving situations initially employs his artillery to the best advantage of the division.

In other situations, when time and circumstances permit, the more orthodox methods of engaging the artillery are employed.

Tactical Lessons and Maneuver Formations

IN ORDER that the division, and any of its component units, can be handled quickly and with greatest mobility, each unit must have a number of set formations that can be understood by all in a few established words, which become common language to everybody without the necessity of describing them in detail every time an order is issued or reference is made to them in instruction or conversation.

Except when the division, or any smaller unit, is marching in route-order in protected or safe areas (even safe from airplane attack), it does not march on roads. It must be able to move across country in any direction—forward or backward, left, right, or toward any ground feature or point of the compass—merely by the issue of a few simple words of command or brief vocal or written messages. These set formations enable such movements to be started almost instantly.

Aside from route marches, the division has to understand only a few set formations which are named "Maneuver Formations." These Maneuver Formations are practically deployed formations, either as foragers or lines of squads or platoons. No unit larger than a platoon is in close order. They are convenient for cross-country movement, for dispersed defense against air attack, artillery fire or small arms fire, and for quick dispositions of all units for combat.

By utilizing the four Maneuver Formations of the division, the commander can issue quickly, by voice to his commanders, or by message or radio, his brief orders for the direction of march—the Maneuver Formation No. 1, 2, 3 or 4—and the rate of march. Thus, it is like giving drill commands to a small unit. The division can accommodate itself to the terrain, change direction or formation or gait, and immediately be ready for combat of any kind in a very short time.

In daytime, cross-country movement is made easier and safer. At night, the columns must be condensed in the manner of route order marches, although they must be across country.—Brigadier General H. S. Hawkins, THE CAVALRY JOURNAL, July-August, 1943.

Artillery with Reconnaissance

*by Captain James P. Barry**

CAN reconnaissance units use artillery fire? How often does a reconnaissance unit see a juicy enemy installation that it cannot engage without neglecting its mission? Artillery fire may be brought on the enemy installation while the reconnaissance party sits quietly off to one side, unobserved. How often, on the other hand, does a reconnaissance unit have to fight for information? A few well-placed artillery concentrations would be welcome then, too.

Artillery observers may accompany reconnaissance units, but only under unusual conditions. Usually the reconnaissance trooper who needs artillery fire must adjust it himself. The job is simple, once he knows the method.

The target must be within range of friendly artillery. Some prior arrangements must be made for communication, such as having a radio vehicle at the CP of the supporting artillery. Infantry division artillery CPs are normally close enough to division CPs so that the radio vehicle which the reconnaissance troop keeps at division may move to the artillery CP with little delay when artillery fire is wanted, or an additional direct line may be laid from one CP to the other. Reconnaissance units operating with other types of division, or with corps, in which the CPs are some distance apart, are large enough to furnish an additional radio vehicle to their artillery without great difficulty.

When the reconnaissance unit finds something that warrants artillery fire, it sends back a message describing the target and gives the position as accurately as possible, preferably by coördinates, in the following form: "Enemy troop concentration; map coördinates 985.1—345.3; request artillery fire; will adjust." The "will adjust" means that the observer will stay in position to observe and adjust the fire. Such messages are always sent in the clear, as are the sensings which follow them.

The radio operator who is stationed at the artillery CP gives the message to the artillery, and then stands by. The artillery will tell him how many guns are to be fired in adjustment (probably a battery of 4 or 6 guns) and how many battalions will be fired for effect, when the adjustment is complete. He should relay this information to the observer. Just before the guns fire, the operator will be given the message, "On the way." He should send it to the observer immediately, to alert him.

If the position of the target was reported accurately, the first shell bursts should be in sight, or at least in hearing, within a few hundred yards of it, say 400 to the left of it, and 200 over it. In making such sensings, the observer must remember to make them from the viewpoint of the guns. Four hundred left means left of an imaginary line joining guns and target, 200 over means 200 yards beyond the target from the guns.

In artillery firing an effort should be made to get a bracket. About 200 yards should be added to the first sensing for both range and deflection, unless the bursts are very close. That being the method, this sensing would be reported to the artillery as, "600 left, 400 over." If the observer estimated the distances correctly, the next bursts should land 200 right and 200 short.

After those sensings are reported, adjustment should be continued until the bursts are within 50 yards of the target. Adjustment is then complete. The 50 yard sensing should be reported and fire for effect requested. It is necessary that the observer hit the target, though, for when the message is sent back, "50 short; fire for effect," the fires of all available artillery battalions will be brought to bear on it. A 105mm shell costs 18 dollars. That is one twelfth of the ammunition expended when a light battalion fires once, and that is probably the smallest thing that will be shot. That cost, of course, takes no account of the transport and personnel problems involved in getting artillery ammunition, which may make it infinitely more valuable.

When fire is first requested, if for any reason coördinates cannot be used, the position should be given by reference to some obvious landmark: "Water tower in Sened station is 800 left, 200 over; enemy tanks assembling; will adjust." Any system that will definitely indicate the position of the target will do the job; a thrust line can be used if the artillery knows the basis for it.

In a fluid, rapidly moving situation, when there is a great deal of gunfire, or in jungle fighting, it may be very difficult to determine the position of the friendly batteries which are furnishing fire. It may not be possible to decide what is right or left, and what is over or short. In that case, a compass should be used for directions, and such sensings as, "600 north, 200 west, sent back. Sensings, telling where the bursts land in relation to the target should be sent. The observer should not try to tell the guns what direction to shift, as he would with other weapons. If he does, he will get exactly the opposite of what he wants. If he has trouble in adjusting the fire, he should adjust either range or deflection until it is correct, then adjust the other element; at times that simplifies the matter considerably.

In some situations the artillery may furnish time fire, which is extremely effective against personnel, even personnel dug in. If the artillery does, they will say so. If time fire is wanted it should be requested. Though time fire is deadly against personnel, buttoned-up tanks may move through it unhindered; crews of antitank weapons can be destroyed or kept in their holes by it while tanks advance.

*Hq., 881st FA Bn.

Scouting and Patrolling—*Then and Now*

Regulations of Rogers' Rangers—expert scouts of the French and Indian War—present fundamental principles for reconnaissance patrols today, particularly those in the Pacific area.

by Major Rex Applegate

THE old adage that history repeats itself is applicable to principles of warfare. Basic military tenets repeat themselves from one war to another, from one century to the next. Pertinent are the principles of scouting and patrolling which have remained unchanged for centuries—despite revolutionary changes in weapons and techniques of modern warfare.

Amazingly similar parallels can be drawn between present day scouting doctrines and those of military forces fighting centuries ago. An outstanding example of this is the regulations for Rogers' Rangers of the early 18th Century, which closely correspond to the rules laid down for patrols today—the modern American Rangers. In no way do they differ; they only serve to reaffirm basic principles of scouting that will always prevail.

Rogers' Rangers was a force of militia conceived and nurtured in this country by Robert Rogers during the Seven Years War from 1756 to 1763. Made up of frontiersmen, trained to fight the French and Indians, they incurred a large reputation for their successful military accomplishments and indomitable courage and endurance. Adopting Indian tactics, the Rangers were a sort of magnified combat-reconnaissance patrol. They distinguished themselves in campaigns around Lake George, Quebec, Montreal and Detroit. Aside from the fine caliber of leadership and men, the secret of the Rangers was in their training and methods of fighting. Based on sound principles, their methods are the same that scouts and patrols should use today.

"Rogers' Rangers" immortalized in *Northwest Passage* by Kenneth Roberts and a movie by the same name, trained and fought under the following regulations.[1]

Inspections.

"All Rangers are to be subject to the rules and articles of War: to appear at roll call every evening on their own parade, equipped, each with a firelock, sixty rounds of powder and ball, and a hatchet, at which time an officer from each company is to inspect the same, to see they are in order so as to be ready on an emergency to march at a minute's warning; and before they are dismissed, the necessary guards are to be draughted, and scouts for the next day appointed."

Here is typified the emphasis placed on patrol inspection today. Equipment is checked with regard to noisiness, appearance, and suitability. Nothing that will give the patrol away is permitted—loose mess kits, rattling canteens, dog tags, or loose change. Camouflage principles are applied in keeping the equipment and clothing concealed from enemy eyes. Darkening with paint, dirt or grease eliminates the danger of light reflection. Arms—rifles, tommy guns, or automatic rifles are tested. Preparation, as with the Rangers, is still a keynote of all patrolling—preparation in knowing the mission, the terrain and the enemy before starting out on the patrol; preparation in being ready for any emergency that may arise.

Intervals and Distances.

"Whenever you are ordered to the enemies' forts or frontiers for discoveries, if your number be small, march in a single file, keeping at such a distance from each other as to prevent one shot from killing two men, sending one man or more forward, and the like on each side, at a distance of twenty yards from the main body, if the ground you march over will admit of it, to give the signal to the officer of the approach of the enemy, and of their number, etc."

The maintenance of proper intervals cannot be overemphasized. In bivouac, on the march, or on patrol it plays an equally important rôle. In training it must be drummed into the men time and time again, or else in combat it will be learned too late. It is human nature for men to bunch up—at obstacles, etc.—but they must be taught and they must learn to keep at such a distance from each other as to prevent "one shot from killing two men.". Point and flank security must be maintained at all times, the use of a column formation is basic especially in dense woods. The formation must enable complete control.

"Scouts Out."

"Some time before you come to the place you would reconnoiter, make a stand, and send one or two men to whom you can confide, to look out the best ground for making your observation."

Scouts are sent out to reconnoiter dangerous points before the patrol is committed. The principle of "scouts out" is a basic one, and too often neglected. Failure may lead to the whole patrol being ambushed. Before the patrol is committed to a dangerous area, the patrol leader himself usually goes out to reconnoiter, but at all times the use of the scout must be constant.

Security.

"If you march in a large body of 300 or 400, with a design to attack the enemy, divide your party into three columns, each headed by a proper officer, and let those columns march in single files, the columns to the right and left keeping at twenty yards distance or more from that of the center, if the ground will admit, and let proper guards be kept in the front and rear, and suitable flanking parties at a due distance as before directed, with orders to halt on all eminences, to take a view of the surrounding ground, to prevent your being ambushed, and to notify the approach or retreat of the enemy, that proper dispositions may be made for attacking, defending, etc. And if the enemy approach on your front on level ground, form a front of your three columns or main body with the advanced guard, keeping out your flanking parties, as if you were marching under command of trusty officers, to prevent the enemy from pressing hard on either of your wings, or surrounding you, which is the usual method of the savages, if their number will admit of it, and be careful likewise to support and strengthen your rear guard."

Security at all times is another cardinal tenet. Flank and rear guards should guard against surprise both on the march and at the halt. Surprise is a very effective weapon, but security is just as effective a countermeasure. Too often patrols, careful to provide security during the advance, become lax and fail to provide all-round guards when they halt or when they are returning. Rear security is as important as security to the front and to the flanks, since patrols operate in enemy territory and the enemy is likely to appear from any direction.

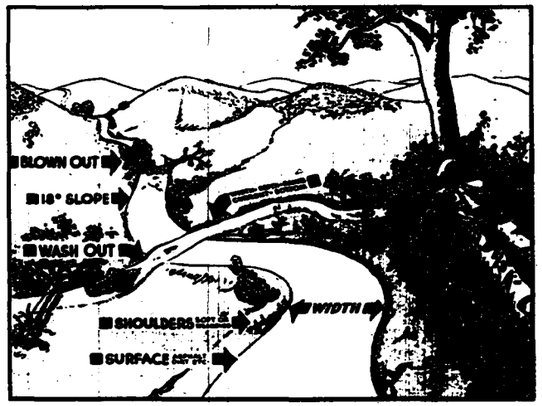
Movement by bounds continues to be a basis of patrol action. Frequent halts to determine the next bound and to listen for enemy sounds is an accepted patrol procedure. Keeping the flank guards well out lessens the chances of ambush or of being surrounded, "which is the usual method of the savages"—both modern and ancient.

Rest.

"When you stop for refreshment choose some spring or rivulet if you can, and dispose your party so as not to be surprised, posting proper guards and sentries at a due distance, and let a small party waylay the path you came in, lest the enemy should be pursuing."

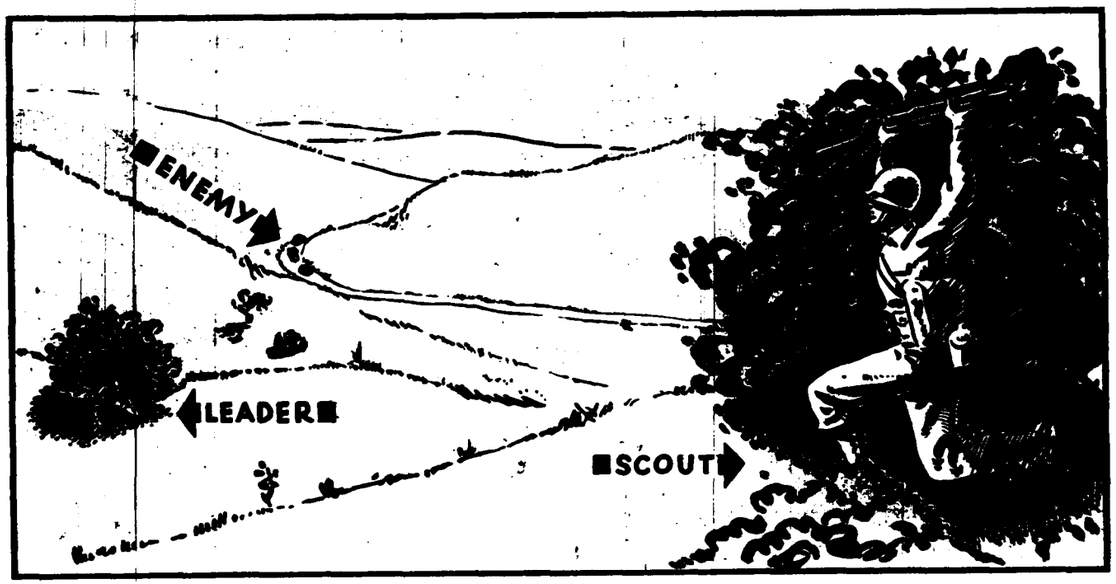
Tracks and Bivouac Security.

"If you march over marshes or soft ground, change your position, and march abreast of each other to



What S2 wants to know about a Road.

[1]Regulations of Rogers' Rangers extracted from "The Bulletin of the Fort Ticonderoga Museum," Volume VI, No. 1.



Enemy sighted—use of scout must be constant.

prevent the enemy from tracking you (as they would do, if you marched in a single file) till you get over such ground, and then resume your former order, and march till it is quite dark before you encamp, which do, if possible, on a piece of ground that may afford your sentries the advantage of seeing or hearing the enemy some considerable distance, keeping one-half of your whole party awake alternately through the night."

Nothing gives away a scout's presence more unnecessarily than his tracks. He may camouflage himself, and he may move silently, but if he leaves footprints or beaten down brush he no longer conceals his presence from the enemy. Moving over sand, the scout should carefully smooth over his tracks, either with a branch or with leaves. Moving over fields, he is careful not to disturb twigs or bushes. Rogers' ruse of many tracks to cover up one is a good one only if a large force and not a patrol is advancing. Often soft ground cannot be avoided, and by marching abreast a force will make it difficult for the enemy to pick up one particular track. "All around" security at a halt must always be maintained by the patrol.

Sentries.

"When you encamp at night, fix your sentries in such a manner not to be relieved from the main body till morning, profound secrecy and silence being often of the greatest importance in these cases. Each sentry therefore, should consist of six men, two of those who must be constantly alert, and when relieved by their fellows, it should be done without noise; and in case those on duty see or hear anything, which alarms them, they are not to speak, but one of them is silently to retreat, and acquaint the commanding officer thereof, that proper dispositions may be made; and all occasional sentries should be fixed in like manner."

Security at night is important, but secrecy and silence often are even more so. Silence is the reconnaissance patrol watchword. A patrol is silent on the move; silent, at the halt. Sneak patrols are formed on the principle of silence. If the enemy cannot hear you, he will not have cause to look for you. Outguards at a halt must be as silent as a patrol on the move. Reliefs must be executed in silence. If sentries sight the enemy, they must continue to remain silent, for although you can see the enemy, he cannot always see you. The use of the Cossack type sentry post is still effective.

Alertness at Dawn.

"At the first dawn of day, wake your whole detachment, that being the time when the savages choose to fall upon their enemies, you should by all means be in readiness to receive them."

Alertness at dawn—that is stressed in all phases of combat. H-hours of today's battles often come at dawn. The enemy can attack at dawn, too. Preparation for an attack at dawn, whether one is expected or not, is required by all units in combat. Laxness at any time of day is inexcusable, but laxness at sundown or in the early daylight hours may be fatal. Patrol actions are often best performed at dawn or sunset.

Night Operations and Rendezvous.

"If you cannot satisfy yourself as to the enemy's number and strength from their fire, etc., conceal your boats at some distance, and ascertain their number by a reconnoitering party when they embark or or march, in the morning, marking the course they steer, etc., when you may pursue, ambush and attack them, or let them pass, as prudence shall direct you. In general, however, that you may not be discovered by the enemy on the lakes and rivers at a great distance, it is safest to lay by, with your boats and party concealed all day, without noise or show, and to pursue your intended route by night; and whether you go by land or water give out parole and countersigns, in order to know one another in the dark, and likewise appoint a station for every man to repair to, in case of any accident that may separate you."

A larger combat patrol is frequently used as a base of operations. Smaller sneak patrols are sent out from it to reconnoiter the enemy.

It is often advisable to lay up during the day and make all movement at night. Modern means of recognition involves the use of challenge, password, and reply so as to provide additional means of recognition.

Assembly points that are progressive as the patrol advances must always be selected.

Travel by Night.

"If you are to embark in canoes, battoes or otherwise, by water, choose the evening for the time of your embarkation, as you will then have the whole night before you to pass undiscovered by any parties of the enemy, on hills or other places, which command a prospect of the lake or river you are upon."

Travel by night when in enemy country. Doing so prevents his observation from being effective. Night patrolling missions are more frequent than day when contact has been established.

Contact.

"In paddling or rowing, give orders that the boat or canoe next the stern must wait for her, and the third for the second, and the fourth for the third, and so on, to prevent separation, and that you may be ready to assist each other in any emergency."

The procedure to maintain control and contact is the same as that used in night patrolling in dense undergrowth. Each man in the column formation can be made responsible for maintaining contact with the men behind him.

Observation.

"Appoint one man in each boat to look out for fires, on the adjacent shores, from the numbers and size of which you may form some judgment of the number that kindled them, and whether you are able to attack them or not."

Know your enemy and his organization so that when his dispositions are observed, his strength can be better determined. Maintain constant observation.

Encirclement.

"If you find the enemy encamped near the banks of a river or lake, which you imagine they will attempt to cross for their security upon being attacked, leave a detachment of your party on the opposite shore to receive them, while, with the remainder, you surprise them, having them between you and the lake or river."

Utilize the element of surprise and natural terrain features. Figure out the enemy's possible lines of action and act accordingly.

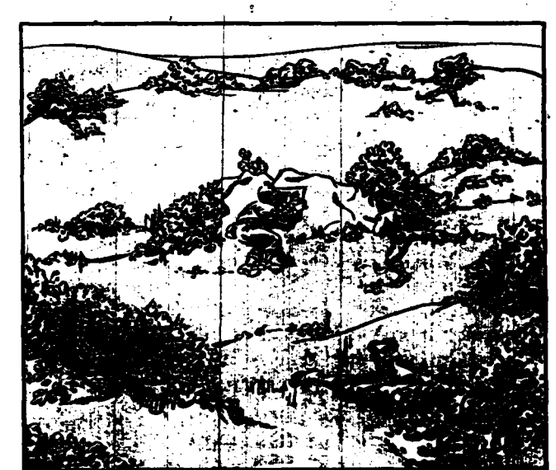
Numerical Deficiencies.

"If the enemy should be discovered by your detachments in the morning, and their numbers are superior to yours, and a victory doubtful, you should not attack them till the evening, as then they will not know your numbers, and if you are repulsed, your retreat will be favored by the darkness of the night."

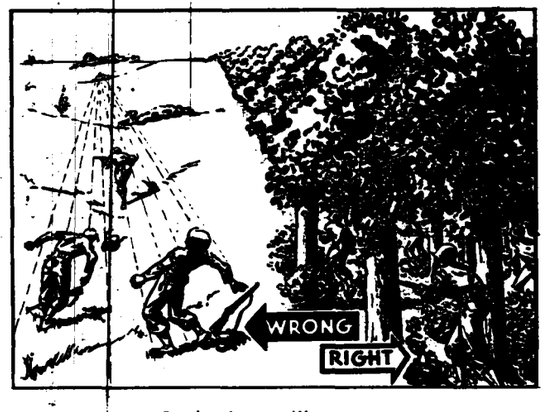
An attack at night, rather than during the day, always is advisable for a force inferior in numbers to the enemy. Night covers up numerical deficiencies and excessive firepower can make up for it. A combat patrol can do considerable damage at night to a large unit despite its smaller size. Should the attack be repulsed, again night favors a more successful withdrawal.

Dispersion.

"If the enemy is so superior that you are in danger of being surrounded by them, let the whole body



Security at the halt—must provide all around protection.



In daytime, utilize cover.

disperse, and every one take a different road to the place of rendezvous appointed for that evening, which must every morning be altered and the whole party, or as many of them as possible get together, after any separation that may happen in the day; but if you should happen to be actually surrounded, form yourselves into a square, or if in the woods, a circle is best, and if possible make a stand till the darkness of the night favors your escape."

Sneak patrol members should be instructed to disperse in the event of ambush. Each man moves away individually, meeting at a prearranged assembly point. Progressive rendezvous points are designated along the route of march to cope with any situation that may arise.

Fire and Movement.

"If you are obliged to receive the enemy's fire, fall, or squat down, till it is over, then rise and discharge at them. If their main body is equal to yours, be careful to support and strengthen your flanking parties to make them equal to theirs, that if possible you may repulse them to their main body, in which case push upon them with the greatest resolution with equal force in each flank and in the center, observing to keep at due distance from each other, and advance from tree to tree, with one-half of the party before the other ten or twelve yards. If the enemy push upon you, let your front fire and fall down, and then let your rear advance through them and do likewise, by which time those who before were in front will be ready to discharge again, and repeat the same alternately as the occasion shall require; by this means you will keep up such a constant fire, that the enemy will not be able easily to break your order, or gain your ground."

Fire and movement still serve as the basis for a tactical advance. Even the smallest units—squads—employ the principle. One squad takes cover and engages the enemy with fire while the other squad maneuvers to the enemy's flank to get enfilade fire or to take the enemy by surprise.

Surprise Attacks.

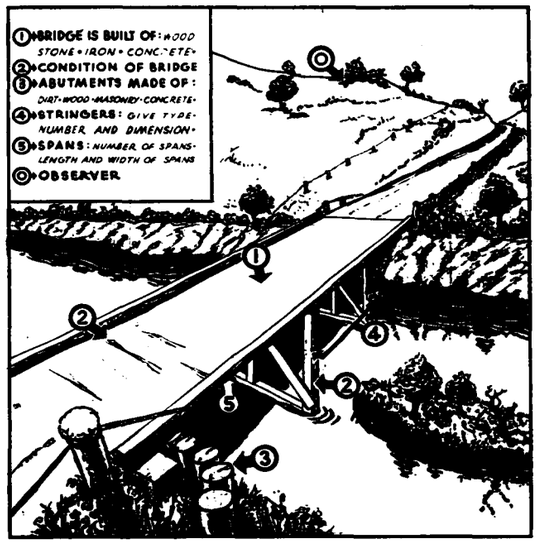
"If your rear is attacked, the main body and flankers must face about to the right and left, as occasion shall require, and form themselves to oppose the enemy as before directed; and the same method must be observed, if attacked in either of your flanks, which means you will always make a rear of one of your flankguards."

This regulation can be interpreted in present-day light to mean that the patrol must be ever on the alert and watch for surprise attacks, patricularly from the rear. Patrols must be mobile and flexible enough to be able to protect themselves from an attack from any direction.

Withholding Fire.

"In general, when pushed upon by the enemy, reserve your fire till they approach very near, which will then put them into the greatest surprise and consternation, and give you an opportunity of rushing upon them with your hatchets and cutlasses to the better advantage."

The practice of withholding fire until the enemy approaches very close is an old one. The command "Don't shoot until you see the whites of their eyes" has echoed through all wars since. This principle is equally applicable today. An enemy patrol is more effectively eliminated and the element of surprise is stronger in an ambush if the enemy is engaged at close quarters.



What a good scout should note about a bridge.

Retreat.

"If you are obliged to retreat, let the front of your whole party fire and fall back, till the rear hath done the same, making for the best ground you can; by this means you will oblige the enemy to pursue you, if they do it at all, in the face of constant fire."

If a retrograde movement is unavoidable, a delaying action should be undertaken. Delay the enemy by smoke, fire, etc., while the main body makes an orderly retreat. "Oblige the enemy to pursue you *in the face of a constant fire.*"

Terrain.

"If you determine to rally after a retreat, in order to make a fresh stand against the enemy, by all means endeavor to do it on the most rising ground you come at, which will give you greatly the advantage in the point of situation, and enable you to repulse superior numbers."

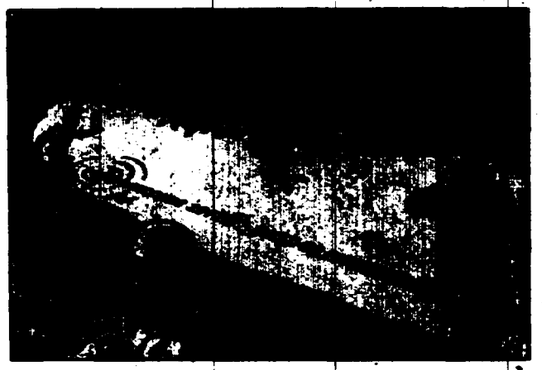
Upon the proper use of terrain depends the success of a patrol. All patrol members must know the terrain and how to use it. The effectiveness of Rogers' Rangers was based on such an understanding. They knew that a force which could locate itself on commanding ground had a superiority, for both firefighting and observation, and they knew how to fit themselves into the terrain in order to achieve such a position. They understood the lessons illustrated at Cassino and elsewhere—namely, that a force, inferior numerically, but well entrenched on a commanding piece of terrain can repulse a larger attacking force.

Enemy Counterattacks.

"If you oblige the enemy to retreat, be careful in your pursuit of them, to keep out your flanking parties, and prevent them from gaining eminences, or rising grounds, in which case they would perhaps be able to rally and repulse you in their turn."

To be ever alert for enemy counterattacks is as much a requisite now as it ever was. Counterattack is the basis of German defensive tactics. The capture of a German stronghold inevitably means a counterattack, and it must be strongly guarded against. Gaining ground from the enemy means only temporary victory unless the attacking forces can throw up a defense as strong at the attack. Combat-reconnaissance patrol must understand such tactics.

Alleviation of the danger can be enhanced by always maintaining contact with the enemy. Just as the Rangers kept contact with the Indians, so patrols today must always maintain contact with the forces of the Germans or the Japs. The enemy must be kept in visual view by forward elements—both in the attack and in the defense—otherwise the patrol is subject to surprise, and less able to anticipate or take precautions.



What S2 wants to know about a stream.

Prisoners and Route of Return.

"If you have the good fortune to take any prisoners, keep them separate, till they are examined, and in your return take a different route from that in which you went out, that you may the better discover any party in your rear and have an opportunity, if their strength be superior to yours, to alter your course, or disperse, as circumstances may require."

Two important principles are mentioned here. Prisoners must immediately be segregated. Interrogation is facilitated by keeping them apart, otherwise the officers and noncoms will tip off the privates as to what and what not to say. Combat-reconnaissance patrols may take prisoners, and no or little information will be forthcoming if prisoners are allowed to mix and talk to one another.

The second principle is that of patrols returning by a different route. Patrol experience has shown that if the enemy once discovers that patrols are in the habit of using the same approach, he will lay an ambush on it. Returning by a different route serves the added purpose of permitting the patrol to seek out other enemy dispositions and to acquire better knowledge of terrain.

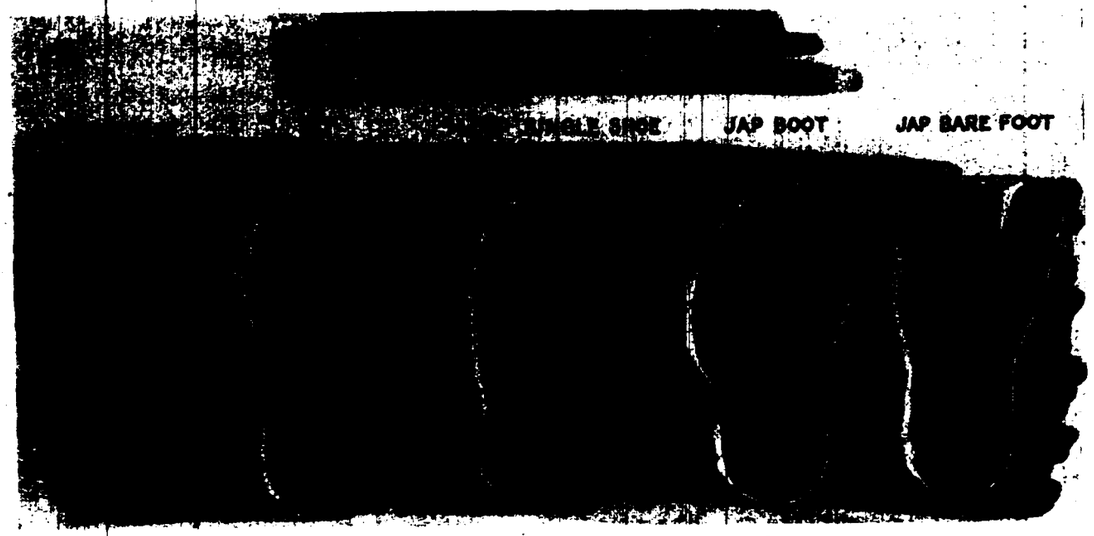
Return.

"When you return from a scout and come near our forts, avoid the usual roads, and avenues thereto, lest the enemy should have headed you, and lay in ambush to receive you, when almost exhausted by fatigue."

Here again is the principle of avoiding traveled routes, and returning by a different route from the route of approach.

Rivers.

"If on your return, you have to cross rivers, avoid the usual fords as much as possible, lest the enemy should have discovered, and be there expecting you."



Reconnoitering a stream before crossing it, and having security out while crossing it is important. A pair of scouts should move upstream and down, looking for a suitable fording place and watching for signs of the enemy. Once a good place is found, one scout crosses the stream first, while the rest of the patrol remains concealed, ready to protect him by fire. The scout reconnoiters the other side, and if it is clear, signals back to the patrol. Patrol members then cross the stream one at a time. Flank and rear security is alert throughout.

Lakes.

"If you have to pass by lakes, keep at some distance from the edge of the water, lest, in case of an ambuscade, or an attack from the enemy when in that situation, your retreat should be cut off."

The principle here involves keeping away from traveled routes and likely points of ambush and enemy attack. Experienced patrols will always keep away from lakes edges, as they will from edges of woods. By keeping away from lakes, chances of being cut off are minimized. By avoiding the edges of woods in the daytime, patrols avoid being seen.

Ambush.

"If the enemy pursue your rear, take a circle till you come to your tracks, and there form an ambush to receive them, and give them the first fire."

Give the enemy a taste of his own medicine. If a patrol suspects it is being trailed, it can make a feint, and attempt to circle around and ambush the enemy itself or it can have part of its members lay in wait for pursuing the enemy.

Pursuit.

"When you pursue any party that has been near our forts or encampments, follow not directly in their tracks, lest you should be discovered by their rear-guards, who, at such a time, would be most alert; but endeavor, by a different route, to head and meet them in some narrow pass, or lay in ambush to receive them when and where they least expect it."

Don't follow the enemy blindly, give him credit for being as smooth as you are. Lay an ambush in a place where he is canalized or pick a place where the element of surprise will be used to its fullest extent.

Judgment and Initiative.

"Such in general are the rules to be observed in the ranging service; there are, however, a thousand occurrences, and circumstances which may happen, that will make it necessary, in some measure to depart from them, and to put other arts and strategems in practice; in which cases every man's reason and judgment must be his guide, according to the particular situation and nature of things; and that he may do this to advantage, he should keep in mind a maxim never to be departed from by a commander, viz: to reserve a firmness and presence of mind on every occasion."

In patrolling nothing is stereotyped. Terrain, enemy and local conditions will always effect the situation. On occasion cardinal principles of patrolling will have to be violated to fulfill the mission. The judgment of the leader and his initiative must be relied upon in these instances. In the last analysis the use of experience, common sense and initiative on the part of the scout or patrol leader will decide the success or failure of the mission.

Conversion of Information to Intelligence*

by Commandant McGeevor, 1st Brigade

THE object of the conversion of information to intelligence is to determine the probable accuracy, significance, and value of information received, so as to provide the commander with a clear cut picture of the enemy situation at any given time.

In order to prepare plans to deal with an enemy, the commander, irrespective of the strength of his command, needs to know the situation regarding his own forces, what he has at his disposal in men and matériel, where disposed, etc. To prepare these plans and to employ his command effectively, he also must know as much as possible about his opponent, the enemy. The more a commander knows about his enemy, the better prepared he will be to deal with him. To know where the enemy is located, the strength, armament, and composition of his force are all very important factors, but to get an idea also of the enemy's plans and capabilities is even more important.

Knowledge of the enemy's plans is not easily procured by combat intelligence. Nevertheless, sooner or later, as a result of movement, disposition, and other indications, the enemy will unmask his intentions. This is really where the most difficult part of the conversion of information to intelligence begins and ends.

It will be understood that in order to convert information properly, the individual responsible for the task must be not only in possession of all available enemy information in front of a particular sub-unit, sector or zone of action, but in front of neighboring sub-units or units. Sub-units, accordingly, not organized with an intelligence staff are not expected to attempt complete evaluation. This is where, during recent maneuvers, some sub-units were inclined to jump to wrong conclusions by evaluating or attempting to evaluate only that part of the enemy information that directly affected their own units, and consequently got a wrong picture of the enemy situation.

The following brief example should illustrate what is meant by the conversion of information to intelligence:

Enemy troops with an estimated strength of one company are located at "X." Another enemy force estimated as a company is at "Y." Another force estimated as at least a company is at "Z." An O. P. reports the movement of D. R.'s between the forces at "X," "Y" and "Z"; the D.R. at "X" goes backward and forward to "Z"; the D.R. at "Y," back and forward to "Z." Even with only this information, it can reasonably be taken that "Z" is a battalion headquarters and that "X" and "Y" are companies of that battalion, and that a reserve is held convenient to battalion headquarters at "Z."

That is Military Intelligence and, accordingly, is much more useful as such than the knowledge that isolated enemy groups were located at "X," "Y" and "Z." With the capture of prisoners or by some other means, it may be established that the enemy battalion is the Nth Battalion. With some further information, it may be possible to state that this enemy battalion's objective is the capture of such and such a place or the defense of such and such a sector.

Methods Employed

All information received is subject to a critical examination by the I.O. Such information must be examined in conjunction with the related items at hand. This is important for the reason already mentioned that if each item is examined separately without any relation to other items, the result will always be a wrong picture of the enemy situation.

The comparison of each item of information to a part of a jig-saw puzzle is a very appropriate analogy. Each item is only part of a whole—each item of information, like the parts of a jig-saw puzzle, having some relation to some other item.

To facilitate intelligence personnel in the solving of this puzzle, combat units should *ensure that wrong or misleading information is not presented.* Such wrong or misleading items of information are bound to do harm. It should be understood that very often intelligence personnel have no independent means of verifying the accuracy of information received from combat units. So long as combat units are allowed to send in wrong or misleading information the I.O. will have endless difficulty in forming a clear-cut picture of the enemy situation, and consequently commanders will be at a serious disadvantage in preparing plans to cope with the enemy opposing them.

Stale information is also misleading. Information, of course, should hardly ever be allowed to get stale. This would not happen if a "tag" were kept on the enemy observed. The longer you are acquainted with a person the better you will know that person. The same is true of the enemy—the longer you keep him under observation, the more you will know about him. You cannot know too much about the enemy. It should be appre-

**An Causeur.*

ciated, of course, that first impressions sometimes are unreliable.

Exaggerated reports from combat units are common faults that should be guarded against. Combat units are always inclined to overestimate the enemy strength. The eradication of this fault should be effected by more practical training in the units, and by giving all ranks a good general idea of the value and functions of combat intelligence. Until this is done, satisfactory intelligence work by brigade and battalion I.O.'s will be very difficult.

The good I.O., like the good detective, is ever suspicious of everything in the field. At the same time, while always eager to hear something about the enemy, he should not be prepared to take everything he hears as gospel truth. This should be the case with all officers. Much damage can be caused by an over-credulous officer broadcasting unreliable information. Unfortunately, over-credulous people are also inclined to supply their own verification, with the result that it is very difficult at times to disprove doubtful information before the harm is done.

It is the duty of all ranks to collect and transmit all classes of enemy information. It is also their duty to help in the conversion of information to intelligence by ensuring that only accurate information is transmitted. It is the responsibility of officers to ensure that all information collected by their subordinates is properly verified, if at all practicable, before its submission to their respective C.P.'s—and this, without having to be instructed to do so by higher authority.

Deductions

In converting information to intelligence, one must concentrate on everything that helps to give a mental picture of the enemy situation. This can be done only if one has kept an open mind throughout the process of evaluation. Only acts that have been verified and evaluated should be considered. Unwarranted conclusions are dangerous and must be avoided. The mind should also be kept free from unnecessary detail, and the approach to the solving of the "puzzle" should be on a broad basis already prepared by the building up of small detailed but reliable reports.

Concentrate for example, on the enemy strength, weakness, reserves, protective elements, flanks, artillery, etc.

Enemy strength, which is always located much the same with relation to other elements of enemy force, is the most dangerous factor and consequently should receive more attention.

While *enemy weakness* is not so dangerous as his strength, it is nevertheless important and should be located.

Enemy protective elements generally fan out from the center of a main effort in attack, and from the center of resistance in defense, and decrease in strength as they deploy outwards.

Enemy reserves are usually concentrated in the most suitable location from which to support the main effort.

Don't concentrate on scouts here, scouts there, scouts everywhere; concentrate instead on what is behind the scouts, his protective elements, strength, and reserves.

Distribution

To all whom it may concern—to higher formations, subordinate units, neighboring units, sub-units, or individuals—information *must be prompt to be of value,* and is useless unless it reaches the individuals or units concerned in time to serve their purpose. Accordingly, it is very important that all items of information are transmitted promptly from the combat units in touch with the enemy.

Classification for Distribution

There are two classes of information for distribution—first, that which should be placed immediately in the hands of the commander and staff and higher, lower, and adjacent units; second, that which can be held for inclusion in the unit periodic report. It is impossible to state definitely what intelligence belongs to each category. The best guide is the I.O.'s knowledge of the situation in other units and their requirements. If in doubt as to what action to take distribute immediately. In the periodic summary or report, it is desirable to include intelligence of the first class already reported. This is to avoid having a wrong picture painted through the omission of some information of importance, which at the time may be overlooked by the recipient of the information.

Methods of Distribution

1. Personal conference.
2. Map.
3. Memoranda.

Intelligence requiring immediate distribution is usually distributed by telephone, telegram, radio messages, map overlay, or personal visit.

Personal conference is the most effective for staff, as it allows for exchange of intelligence between different sections of a headquarters.

In addition, it will be necessary to adopt any of the following methods:

1. Summary.
2. Intelligence report.
3. Intelligence estimate.

The summary is the most important from the point of view of the squadron, battalion, and brigade. To be effective this summary must avoid unnecessary detail and yet give as clear a picture as possible of the enemy situation. Unlike the estimate, because of lack of information, it may not always be possible to give in it definite conclusions. The fact that this cannot be given, however, need not prevent the submission of the summary.

Good summaries are very helpful in orienting others quickly on the uptodate enemy situation. This can be appreciated when it is realized how various items of enemy information arrive at C.P. A mass of disconnected items arrive, and if one cannot arrange these in an orderly manner for presentation to others, very often the "wood cannot be seen for the trees." A mass of items of detail completely cloud one's brain, and with this cluttering up, the major points cannot be grasped properly. Attention to detail itself is important and must not be overlooked, but it must be treated as detail and not allowed to influence unduly one's opinion on isolated instances, nor kept so much in the foreground that it prevents one from forming a good general picture of the situation as a whole.

Conclusion

To overcome the enemy in battle, the commander must have as good a knowledge as possible of the enemy situation. In order to ensure this, he must be presented with a sound estimate, which can be done only if the person preparing the estimate, in turn, has been presented with all available enemy information. This is possible only if combat units in contact with the enemy submit prompt and accurate information.

Unfortunately, heretofore, we have been inclined to take it for granted that this information was always forthcoming without any effort on our part. We got it in general and special situations—"on a plate" so to speak. On maneuvers, we seldom got or expected to get more than that the enemy was approaching, or located in a certain field.

Nowadays, we can never expect to find our enemy accommodated in one or two fields. We must expect him over the whole countryside. An enemy now moves faster and oftener; he seldom sits for long anywhere unless he is forcibly prevented from moving. The ordinary rank and file must be trained in the collecting and passing on of accurate enemy information. It must be organized within the section, platoon, troop, company, squadron and battalion—all along the chain of command. It must be considered as an important military function and not as a semi-police activity. Military intelligence must be encouraged and bolstered up everywhere in the army.

Surprise is worth a great deal, especially to weak forces. It was achieved before in this country through *good intelligence* by *comparatively weak forces,* not so well armed or trained as we are. It can be achieved again with little effort on our part. The will to do, and some practical training, is all that is required. This training is simple, but nevertheless important and necessary. Even messages containing enemy information require practice and thought for their construction and writing.

Think harder and oftener. As one can see without observing, he can also think without doing any worthwhile thinking. That is thinking without reasoning.

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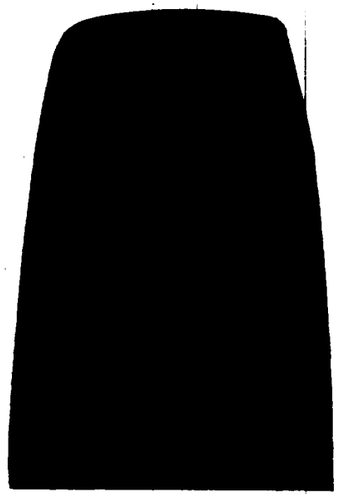
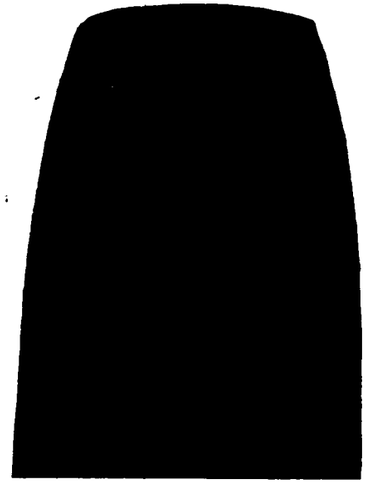
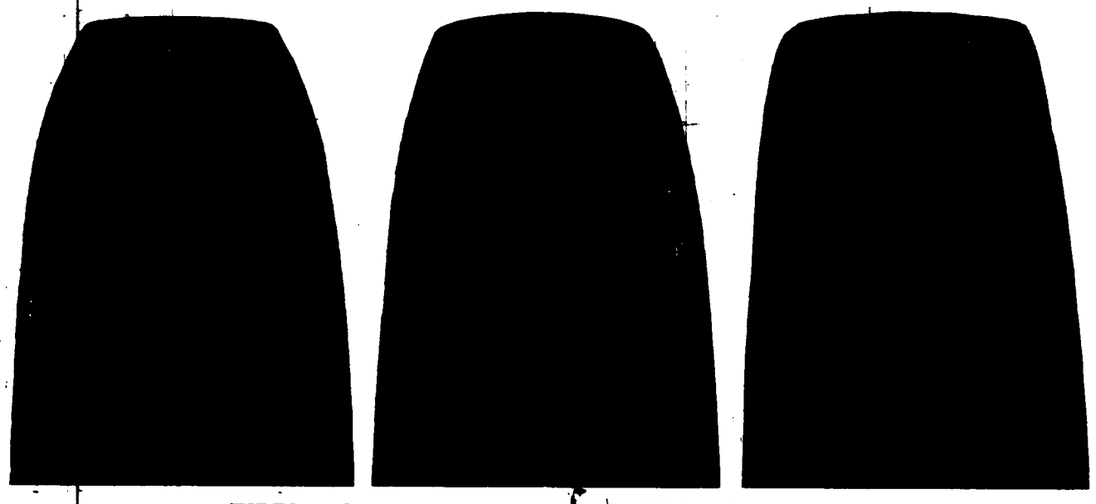
YOU can help stretch our tire supply by removing tires at exactly the right time for reconditioning.



TOO SOON — Tread is raised near center. Run tire farther before you remove for reconditioning.



TOO LATE—This is gross negligence. Tire is worn beyond repair. Instructions in TM 31-200 ignored.



TIRES WORN JUST RIGHT FOR RECONDITIONING

Note how the tread designs are worn down smoothly in the center and are just beginning to disappear. This is exactly the right time to remove these tires to have new treads put on. If a tire is removed too soon, it has to be returned to service for additional wear before it can be reconditioned. This wastes time. If a tire is removed too late, it is ruined. This wastes tires. Retire at the *right time.*

THE SECRET HISTORY OF THE WAR. By Waverley Root. 2 volumes. Charles Scribner's Sons. $10.00 set.

This book is the result of the careful compilation of all available information on the propaganda and political aspects of this war. Faithfully adherent to the canons of his profession, the author's statements are clear and unequivocal, his facts substantiated, his opinions stated as such with proper qualifications, and his deductions pursued with a thoroughness that would be an affront to the reader were it not essential to the peace of the world that these deductions be acknowledged in the light of cold reasoning.

In the first volume the various countries of Europe invaded by Germany are studied as separate entities in order of their conquest. The preinvasion propaganda is fully described, the method of the military conquest is reviewed for its political influence rather than its tactical importance, and the "New Order" is presented as completely as present information permits.

While the author makes no effort to pose as a tactical critic or amateur military strategist, he has inevitably included much of the military picture. Among the items of especial interest is the résumé by a high German staff officer after he had studied the first reports from the Russian front.

"1. We gravely underestimated the technical and scientific capacity of the Russian High Command.

"2. We underestimated the combative qualities of the Russian soldier.

"3. We underestimated the qualities of the Russian officers and noncommissioned officers.

"4. We underestimated the value of Russian equipment, particularly as regards planes and tanks." (This was in 1941.)

"5. We underestimated to an incomprehensible extent the will to resist of the Russian people, on the basis of the theory that Communist ideology had failed to take root in the country. . . ."

Mr. Root also confirms the well-known Russian use of cavalry in this war, and states that in preparation for offensive action in the Ukraine the reserves consisted of 120 divisions, 72 infantry, 24 motorized and 24 cavalry. An interesting ratio.

Under "Peace Offensives" Mr. Root reviews the most discussed mystery of this war, the ever intriguing story of Hess, with some new twists and a more logical explanation than is generally offered for the unceremonious arrival of this friend of the Fuehrer's. An unfortunate editorial slip in this passage is the author's confusion of the so-called "Oxford" Group, started by Frank Buckman, and the Oxford Movement. This should be corrected in future editions.

In the second volume the author deals with Germany's "New Order" in general, the internal fronts, the influence of the neutral nations, the war in Asia, and the political and military aspects of the American foreign policy and the North African Invasion. It is to be lamented that the latter portion, comprising some 500 pages of the second volume, is not printed in a separate book. It will be most unfortunate if the important facts coördinated here are overlooked by having been included in so vast a work.

The weaknesses apparent in this history have been analyzed by the author with considerable accuracy. He writes, "It is uneven in quality. . . . Its various sections are not always developed in true proportion. . . . It started out to be anecdotal, and developed, as it matured, more serious purposes."

It will be some time before an adequate military history of the tactics and strategy of this war can be written, but it is not too early to begin to review the important political and propaganda developments and their effects on the European countries. Mr. Root's book is a mine of information which will serve as a reference for years to come. It is to be hoped that those who read it will "mark, learn, and inwardly digest" the material contained therein.

MILITARY INSTITUTIONS OF THE ROMANS. By Flavius Vegetius Renatus. Military Service. $1.00.

Around 1000 A.D. Vegetius was the favorite author of Foulques the Black, able and ferocious Count of Anjou. From that time until the 19th Century his *De Re Militari* remained one of the most influential military treatise in the western world. It was translated into English before the invention of printing, and was first published by Caxton in 1489.

Military Service Publishing Company has selected the translation made by Lt. John Clarke, published in 1767, as the best version of this work to be added to their Military Classics. The text has been edited only to the extent necessary to conform to modern usage. Subheadings have been inserted to add readibility and diagrams and sketches help to clarify the material.

THE STORY OF A SECRET STATE. By Jan Karski. Houghton Mifflin Co. $3.00.

Democracy was reborn in the underground of Poland, as it has been in all of the conquered countries of Europe. Jan Karski tells the story of this rebirth through his own experiences with the four separate political parties that coöperated with the underground movement.

As a Polish officer Jan Karski suffered capture and imprisonment by the Russians. Disguised as a peasant he was exchanged in a group of prisoners being sent to Germany. He was initiated into the underground, served as a liaison between different groups in Poland, between the Army and the state, and the government in Poland and the outside world. During his activities he was captured and tortured by the Gestapo, from whom he was rescued by men who were instructed to rescue him if possible, to kill him if they were not successful.

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Much of interest is brought out in this personal history—the caliber of people comprising the underground, the advanced political planning mapped out by the leaders, not only for the war, but in the postwar period as well, the amalgamation of otherwise alien groups to fight the one great enemy. All of these factors are important to a comprehensive picture of what has been happening in the years of Europe's second dark age, and what is likely to arise out of this darkness.

WHERE AWAY. By George Sessions Perry and Isabel Leighton. Whittlesey House. $2.75.

The story of the USS *Marblehead* from December 7, 1941, to the day that she wearily dropped anchor in New York harbor, is a saga worthy of the U. S. Navy. George Perry and Isabel Leighton have written a splendid account of the ship and her crew, during bitter and trying weeks of battle and salvage. They have succeeded in avoiding sentiment without being callous. In fact, their book has so well paid a tribute to the men of the *Marblehead* that it seems only just to remind readers that there were other ships and other crews as dogged and as valiant, lacking only a Boswell.

MILITARY JUSTICE FOR THE FIELD SOLDIER. By Lt. Col. Frederick Bernays Wiener. Infantry Journal. $1.00.

This is the second and revised edition of Colonel Wiener's book of advice on the legal aspects of military discipline. Written in simple, nonlegal terminology, it is intended as an adjunct to, not a substitute for, the *Manual For Courts-Martial*.

BELLE BOYD. By Louis A. Sigaud. Dietz Press. $3.00.

The author's own history adds materially to the interest of this biography of the famous Confederate woman spy. Colonel Sigaud was decorated by both the United States and the French governments for his services as intelligence officer in World War I. Since the war he has contributed several articles to magazines and published *Douhet and Aerial Warfare*. His familiarity with Fräulein Doktor, Mata Hari and other women involved in espionage led him to seek documentary proof of the true story of the legendary Belle Boyd.

Women of the 1850's were not supposed to undertake the dangerous and daring work of spying on military enemies, certainly not at 17. Many comments from diaries and books published by her contemporaries indicate that this Virginia girl received the usual treatment accorded women who dared to defy the accepted traditions of the day. Her later career was certainly not made easier by the jealousy of compatriots and the hatred of the enemies she so skilfully fleeced of information.

Colonel Sigaud has done a great deal of research to secure adequate support for his statements in refute of previous publications. The product of his work is of considerable interest and will be read with delight not only by those who have been raised to look on Belle Boyd as a romantic figure of her time, but by those interested in espionage in the Confederate Army as well.

FIGHTING GENERALS. By Lt. General Robert Lee Bullard. J. W. Edwards. $5.00.

General Bullard, author of *Personalities and Reminiscences of the War* and *American Soldiers Also Fought*, commanded the famed 1st Division during the summer of 1918 and later the American Second Army. The 7 generals, Joseph T. Dickman, Hanson E. Ely, Henry T. Allen, Ulyses G. McAlexander, Preston Brown, William G. Haan, and John F. O'Ryan, whose stories he relates, served either under or with the author in World War I.

The simple, direct biographical sketches, in spite of their brevity, give remarkably clear pictures of the personalities described. Excellent photographs and a few very good sketches enhance the attractiveness of an exceptionally fine format.

THE BOLINVARS. By Marguerite F. Bayliss. Henry Holt and Company. $3.00.

Originally printed in a limited quantity by Derrydale Press at $15.00 the copy, this exciting mystery novel, steeped in the hunting and racing traditions of a gay era on two continents, sold out completely. It has become such a collectors' item, and literary legend, that it warranted reprinting in a more popular edition.

The author exhibits a thorough knowledge of horsemanship and a keen sympathy and understanding of the historical background of the 19th Century.

The mystery of an involved family entanglement is somewhat overshadowed by the hunting field and does not command the intense interest that it might have created in more subdued company. However, the novel is well written, and its sustained action certainly does not permit the reader's attention to lag.

Author's Choices

DOUGLAS SOUTHALL FREEMAN: *The World of Washington Irving*, by Van Wyck Brooks; *Samuel Johnson*, by Joseph Wood Krutch; *"First With the Most" Forrest*, by Robert Selph Henry.

BERNARD DE VOTO: *Strange Fruit*, by Lillian Smith; *Lee's Lieutenants*, by Douglas Southall Freeman; *When Johnny Comes Marching Home*, by Dixon Wecter.

JOHN MASON BROWN: *Darkness at Noon*, by Arthur Koestler; *A Bell for Adano*, by John Hersey; *Where Away*, by George Sessions Perry and Isabel Leighton.

FRANKLIN P. ADAMS: *The World of Washington Irving*, by Van Wyck Brooks; *Strange Fruit*, by Lillian Smith; *The Use of Presidential Power*, by George Fort Milton.

CARL VAN VECHTEN: *An American Dilemma*, by Gunnar Myrdal; *Flame From the Rock*, by Tan Yun; *The Razor's Edge*, by W. Somerset Maugham.

OGDEN NASH: *A Bell for Adano*, by John Hersey; *The History of Rome Hanks*, by Joseph Stanley Pennell; *Pastoral*, by Nevil Shute.

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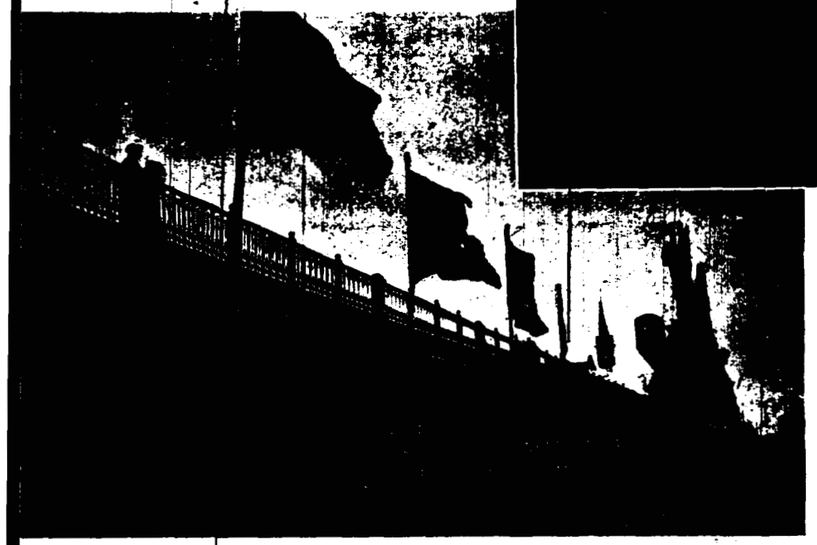
The Prize of Antwerp

*by Captain Ernest Watkins**

The Nazis' Ardennes gamble—which cost them 90,000 men—was aimed at the great port ——→



Above: **Before the first Allied convoy could dock at the great port of Antwerp, 70 miles of Scheldt shipping lanes had to be cleared of enemy mines. Minesweepers of the Royal Navy began the hazardous operation of sweeping the Scheldt estuary even before the German guns on Walcheren Island were silenced. Picture shows mine exploding between ship and shore.**

Above: **Flags of Britain, America and Belgium fly on the quayside of Antwerp during the opening ceremony, November 30. The port is barely 60 miles from the German frontier, has nearly 30 miles of berths, 16 dry docks for ocean-going vessels and quays which extend for at least three miles. Antwerp is the third greatest port in Europe.**

ON the afternoon of September 4, 1944, leading elements of the British 11th Armored Division reached the outskirts of Antwerp. They swept down the Avenue de Jan Rijkswijk, the southern road into the city, with only spasmodic firing from the surprised German posts. The Belgians were hardly less surprised than the Germans but reacted with speed. Men of the Resistance Movement appeared from nowhere, to guide the tanks by back streets around the road barriers and fortified buildings manned by the Germans. The tanks reached the quays so quickly that they are reputed to have fired on and sunk a German barge at work on some belated mine-laying in the river. By the end of the day the Germans had retreated north of the Albert Canal and into the suburb of Merxem. They were only 1,000 yards from the center of the town, but they had lost Antwerp and its docks.

Slightly more than three months later, on the morning of December 17, the German Army launched an assault on the Allied positions in the Ardennes. Twenty or more divisions under General von Rundstedt tried to split the British and U. S. Armies in two (and so enable Rundstedt to repeat his 1940 success) and drive the Allies from Belgium and the port of Antwerp. The Germans spent approximately 90,000 men (killed and captured) and thousands of tons of precious fuel on the attempt. It failed.

Why was Antwerp so important a prize? Why was its loss as an intact port in September such a disaster to the Germans?

A Question of Supply

The answer is that the defeat of Germany in the west is a question of supply, and that supply is a question of ports. The Allies have men, munitions, ships and trucks. All that they needed, in the autumn of 1944, was a place at which to unload them into France and the Low Countries.

They had the prefabricated port at Arromanches, but it was not sufficient for the enormous task. It had never been intended to be sufficient. It was intended to be one of a pair, but the other one was destroyed in the June gales. The Allies had Cherbourg, which had been partially restored as an anchorage, but not restored in its port machinery. In any case, Cherbourg had only poor road and rail exits.

The Allies had Dieppe, Boulogne and Ostende, but none of them could accommodate an ocean-going freighter. Rouen, le Havre and Brest were still shattered. The other ports on Europe's western Atlantic seaboard were still under German domination. There was only Antwerp—a port which alone could handle 60,000 tons of freight a day, more than enough for all the Allied Armies.

Antwerp, before the war one of the major ports of Europe, lies 38 miles up the Scheldt from the seaward entrance of the estuary. Its docks are in two sections: (1) the river quays and the older basins around the western entrance to the Albert Canal, and (2) the modern dock system farther to the north—a series of deep water basins, with two entrances to the river and a total area of over 12 square miles. The entrance locks will take vessels up to 450 feet in length and 30 feet in draught.

Inside the basins are berths for 210 sea-going vessels, 600 acres of storage sheds (the largest, Entrepot Royale, holding 110,000 tons), granaries capable of storing 600,000 hectoliters of grain, refrigeration plant capable of taking 21,000 cubic meters of frozen meat, and coal hoists that can load 300 tons of coal into a ship in an hour. The whole port is electrically operated, the dock area has 500 miles of railway track, and there are 602 cranes of various sizes. South of the port itself is an extensive oil and gasoline storage installation.

Not only could the port equipment handle 60,000 tons a day, but the marshalling yards could sort and dispatch 6,000 railway wagons a day. Before the war over 40,000 tons a day could be sent forward by barge, along the Albert and Escaut Canals to the German waterways, or south by a network of canals to Belgium and France.

All these installations and equipment were left undamaged. This was the situation in September. The blow at Arnhem failed, so it meant a winter campaign, and that meant Antwerp must be put in use if a winter offensive was to be mounted.

Germans Ready to Fight

But the port was still without access to the sea and was useless without that. By the time the French Channel ports were captured or cut off, the Germans had reorganized their forces there and were ready to fight for the positions they held on either side of the Scheldt River between Antwerp and the sea—so the Scheldt operations began at the end of September.

The Germans south of the river had withdrawn into the island made by the Leopold Canal to their south, and the Scheldt to their north. Most of the country was Dutch Flanders—flat, empty country, waterlogged around the length of the canal, mine-strewn, crossed by innumerable causeways and drainage ditches, and, in late autumn, cold and inhospitable in the extreme. To the north of the river is the peninsula of South Beveland and the island of Walcheren and North Beveland. South Beveland is connected to the mainland by a narrow neck of land and Walcheren to South Beveland by an even narrower causeway carrying the road and railway to Flushing and wide enough for little else. (See Map.)

The operations on both sides of the estuary had to be coördinated and follow the same pattern. The plan was for a direct assault to be followed by a seaborne landing on the enemy's flank or rear.

On the south, the first assault was made by Canadians on the center of the enemy's southern line. It started on October 6 with two crossings of the Leopold Canal. Opposition was intense but the enemy's counterattacks were beaten off, more men passed over the temporary bridges, and gradually the bridgeheads were

Approximate Allied positions September 9, 1944—just after the capture of Antwerp and prior to operations along the Scheldt, which opened the harbor to Allied shipping.

*Britian's Army Bureau of Current Affairs, who has recently returned from the front in Holland.

linked together. On October 9 the seaborne assault was launched down the Scheldt on the eastern tip of the enemy's island of resistance between the Scheldt River and the Allied bridgeheads north of the Leopold Canal. Again the attack made by the Canadian troops achieved tactical surprise, and the assaulting waves were on their first objectives before the German fire (some of it from Flushing across the Scheldt) became serious.

From there on, it was a hard battle to break the enemy's defense lines. Breskens and Fort Frederik were liberated by October 25. Resistance in Knocke on the coast, the last point held by the Germans, ceased on November 2.

Meanwhile, north of the Scheldt River above Antwerp the first stage was to carry the approaches to the South Beveland peninsula. A Canadian division on the left made the direct attack, supported by the Canadian armored division on their right. Progress was slow. The mainland from Antwerp north is almost flat, but broken by clumps of firs and stretches of sandy heath, admirable for defense. It was not until October 16 that the neck of the South Beveland Peninsula was reached. Here again the land is flat and featureless—miles of wet marsh or boggy fields commanded by the few roads on elevated embankments.

Walcheren Hardest Nut of All

Resistance in Beveland was finally broken by the end of October after another seaborne landing made by British troops of the 52d Division on the southern shore. There only remained Walcheren, perhaps the hardest nut of all.

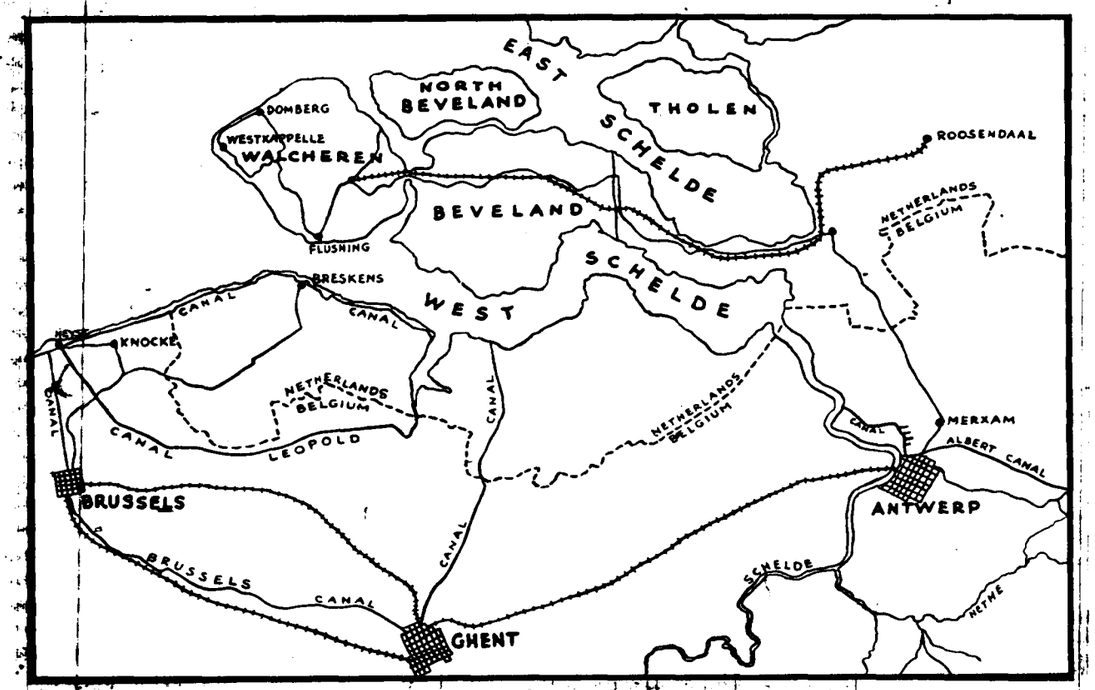
Time was pressing, and it was decided to make a three-pronged simultaneous attack on Walcheren Island—one on the east along the causeway from Beveland, one from the estuary against Flushing in the south, and one from the sea against Westkappelle on the west coast.

All were difficult. From the east it meant an attack over open ground against strong and well-sited positions backed by mortar and artillery fire. From the south and west it was a seaborne assault against fortifications and coast batteries that the Germans had spent years in completing.

The attack was rendered possible by the R.A.F.'s work in breaking the island's surrounding dykes at four points, so flooding the interior. The effect was to isolate the Germans where they stood, deny them any power of maneuver, and thus prevent any plans for defense in depth. It is grim, now, to see the fertile fields under water and ruined for years, but as a Dutchman said to me, "Better water than blood."

The attack on the causeway by the 52d Division entailed dogged fighting. The landing at Flushing achieved some measure of surprise, and the Special Service troops were able to sail over flooded ground to land in the town on the flank and rear.

At Westkappelle the attack was a plain frontal assault, in daylight, straight into the teeth of the enemy's fire. It was there that the naval support craft showed their endurance and heroism. They took most of the fire. Out of 26 craft, 17 were sunk or damaged, and their casualties were proportionately high—but they put the assault troops ashore without too heavy a loss.



Minesweepers Moved In

In four days of fighting the two commandos that worked south from Westkappelle had taken all the massive, mostly underground batteries along the stretch of sand dunes. Those advancing north and east from Westkappelle moved more quickly. In two days they had captured the major battery at Domburg and pushed on for over a mile beyond it. But Walcheren really fell when Flushing fell, on November 2, after bitter fighting in the western half of the town, and on that day the minesweepers moved in to the Scheldt Estuary.

Some day it will be possible to tell the full story of the minesweepers and how they deal with contact, acoustic and magnetic mines. Each type has its special risks. With all of them, there is no guarantee that it will not be the sweeper that explodes as well as the mine. A special tribute is due, too, to the Royal Navy and Royal Marine divers who must disarm under water those mines, that, because of their position (such as close to a dock) cannot be exploded. They work in ice-cold, muddy water, sometimes up to their necks in four years accumulation of silt.

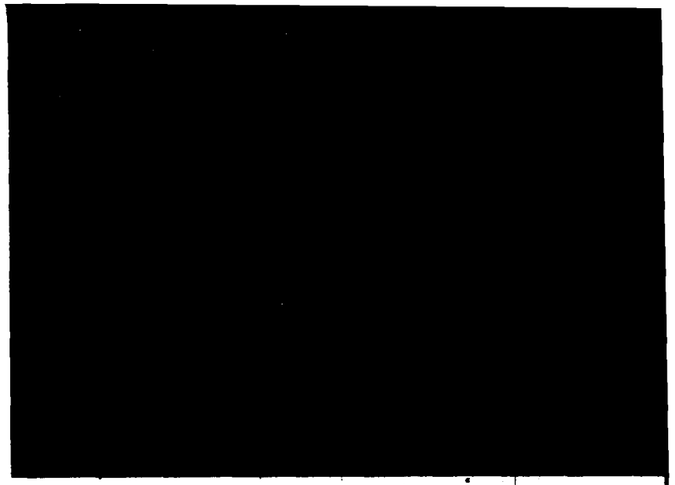
With the minesweepers came the hydrographers, to map out the channel in the estuary and see how much it had changed in the four years since last an Allied craft had sailed in it.

While operations proceeded, in Antwerp itself preparations were being made to get the port ready for use. The Germans had used it for canal traffic, but the majority of equipment for ocean-going ships had been lying idle for 4½ years; and Antwerp's dock workers (9,000 skilled stevedores and 12,000 unskilled dock laborers) had had the same length of experience—not so much of idleness as of German occupation with its forced labor in Germany or undernourishment at home. Could the port work again efficiently?

The Sea Transport officials had arrived in Antwerp on September 5—the day after liberation—while the windows of the port buildings on the quay were still being sniped by Germans across the river. Their first task had been to see what the civil authorities, who owned the port, could do. The Burgomaster found the men to check over and repair all the electrical equipment. He also opened a register for former dock workers and the response was very gratifying. Finally, the Belgian Government agreed to defray all the costs of operating Antwerp as a port, including the total wages bill.

One American, One British

Antwerp is both an American and a British port. The main dock area is divided into two sections, just as the road routes out of Antwerp are allocated between the British and the U. S. Armies. The joint operation is closely dovetailed, both at the top, on the Port Executive Committee, and at the bottom, in the posting of sentries and antiaircraft defense points. On one dock the sentry at one entrance barrier is American; at the other, British. Their patrol between is joint.



Ducks and amphibious tanks head for the beach at Walcheren from landing craft. Twenty out of every twenty-five ships assisting in the British landings were sunk or damaged beyond repair—but the Royal Marine Commandos were landed and the big guns which threatened Scheldt shipping were silenced. The Allies secured a great port.

A port is a transhipment area, not a storage area, and it is just as essential to see to the clearance of goods as it is to see to its unloading. As the bridges and tracks were brought into commission, roads and railways raised no unusual operating problems, but canal traffic did. Britain does not use barges of continental size, which range up to 150 feet in length and carry 2,000 tons. The Germans had left behind over 500 of these barges. Many are now in work again, manned by Belgians, their movements controlled by the Allied Inland Water Transport units.

When the port was officially opened the Burgomaster wanted a ceremony, so one was arranged. To the delighted surprise of her crew the first Liberty ship drew alongside, opposite a dais on which the Town Council as well as the Allied Naval and Military Chiefs were well represented. And there was a band.

It was not an empty gesture. A port for ocean craft has a life of its own. So many of the town's inhabitants, from dock laborer to average adjuster, have an interest in the sea. For 4½ years Antwerp had been dead. For 4½ years the Belgians had wondered if it would ever come alive again. And now it had. Life was flowing in up the Scheldt from the sea.

Antwerp was very much a combined operation, from Belgians who held the docks in September to the Canadians who fought at Breskens, and from the British who landed at Flushing to the Belgian and Dutch river pilots who reappeared, most of them from the Royal Navy in which they had enlisted in 1940 rather than accept the occupation. From Cherbourg to Brussels is 315 miles; from Antwerp to Brussels 25 miles. Those figures represent how essential Antwerp was to the Allies, and the disaster its loss has been to the Germans.

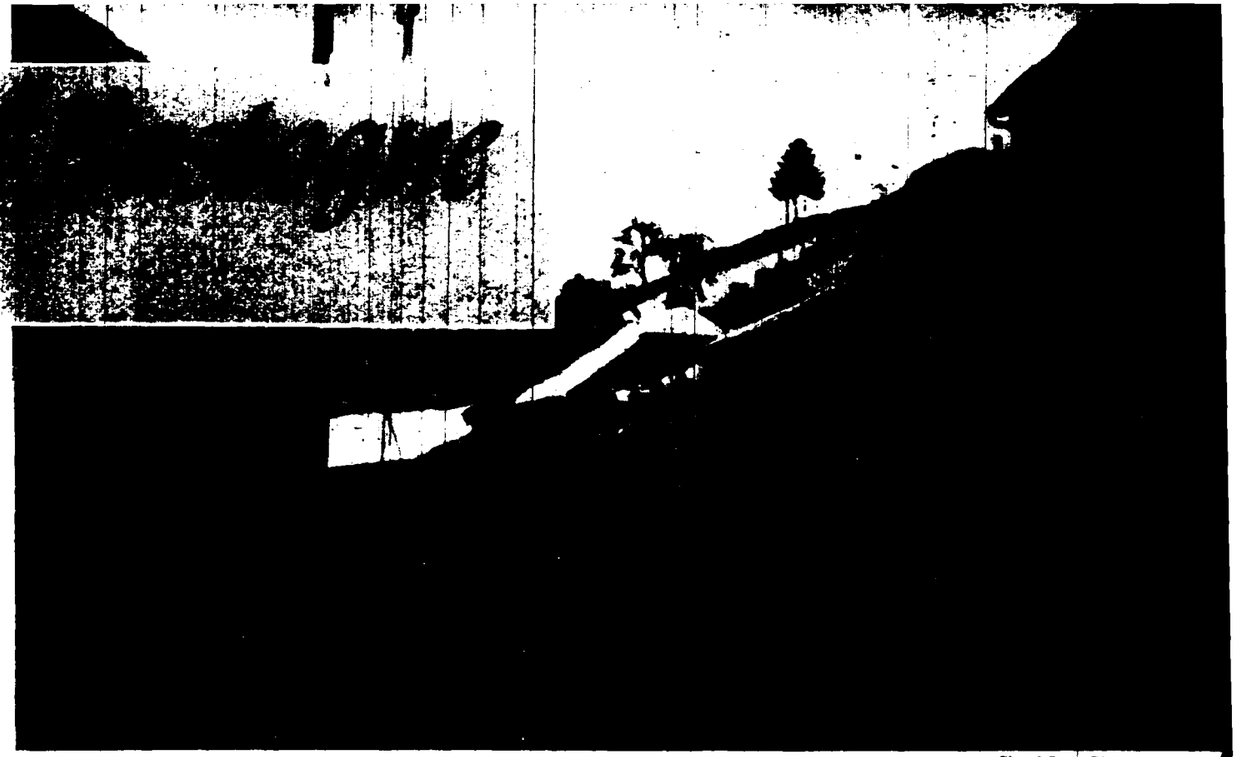
[illegible]

SOUTHERN BELGIUM in the winter is one of the coldest, most barren regions in the Eastern Hemisphere—especially around the middle of January when the thermometer has hibernated into its bulb for an indefinite period and there is a different wind in each valley and the armored cars glide down one side of a hill and spend twice as long getting up the opposite slope.

If the Germans had not launched a winter offensive in the Eifel region, which enjoyed overwhelming initial successes, the 6th Cavalry Group (Mecz) might still be engaged in dismounted fighting in the Saarbrucken area. To describe it lightly, the entire sector was studded with pillboxes and block-houses and the various other assorted prepared defenses which make a cavalryman's life a hectic one. It took the German winter offensive plus the need for cavalry in the north to shake the Unicorn loose from its dug-in positions along the Roselle River in the Forbach-Saarbrucken area, and send it hurrying northward into Belgium to assist corps in halting the rapid advance of the Germans to the west.

The sequence of events leading up to this committal are interesting and at the same time typical of what any cavalry unit might expect to encounter under similar conditions. On December 19 the corps headquarters, which was to have controlled the Saarbrucken campaign, was suddenly moved north into Belgium, to take control of troops in the Arlon sector opposing the left flank of the German salient. Effective at once, the 6th Cavalry passed to control of the corps in that area, the following day was transferred to another corps (moved in to replace the first) and on December 21 became attached in place to the 6th Armored Division. On December 24 all elements of the 6th Cavalry were relieved in place by another cavalry group, and at 0930 the first serials began movement to the northwest.

Map No. 1. The advance to initial contact was made early on the morning of December 25 from a line of departure generally northwest-southeast through Libramont. Nothing was known of the disposition of enemy forces to the north.



Signal Corps Photo

Members of the 6th Cavalry Reconnaissance Group roll through the streets of Weltz, Luxembourg, January 23, 1945 —less than a month after the action "West of Bastogne." By then the "Belgian Bulge" had been rolled back and the way opened for the later drive to and beyond the Rhine. Germans lost an estimated 90,000 men in Ardennes offensive.

Mobility? Yes . . . by 1700 December 24 all elements closed in the vicinity of Habay-La-Neuve, Belgium, after completing a march of 90 miles, through 4 countries—Germany, France, Luxembourg and Belgium—on roads congested by heavy traffic pouring northward to halt the advancing enemy. It was one of the most difficult marches ever made by the Unicorn—famous since 1861 for being able to move quickly from point A to point B and fight like hell when it got there.

Situation

When the 6th Cavalry reached its assembly area in Belgium, the weirdest tactical situation since the Normandy breakthrough existed. Bastogne was surrounded by the enemy. There was no definite line of contact south or west of the city. Radio reports stated that the Germans were as far south as Neufchateau and as far west as Rochefort. Operations maps of higher headquarters showed information up to 72 hours old, which obviously could not be relied upon. There were virtually no troops west of Bastogne only the scattered remnants of the previously over-run 28th Infantry Division which were dug-in in the Neufchateau area and had no contact with the enemy. Thus the left flank of the corps in that area was left dangerously exposed. Especially was this flank a critical consideration, for the corps had been ordered to attack on the northeast and relieve the 101st Airborne Division and two armored combat commands cut off in the Bastogne pocket.

The 4th Armored Division, then the only armored division assigned to the corps, was given the mission of breaking through. With the open left flank, however, the drive could have turned into a military defeat had the Germans reacted to the armored thrust and counterattacked from the west. To secure this flank, the 6th Cavalry was to seize the three critical road centers of Libramont, Pironpre and Bercheux (see map No. 1), destroy all enemy encountered and by aggressive cavalry action give maximum assistance to the attack of the 4th Armored Division on the right.

As there were no friendly troops in contact with the enemy west of Bastogne, no front-line briefing could be given the troops prior to committal. It was one of those story-book situations which necessitates an advance into the unknown to gain ultimate contact and develop the contours of the enemy's OPLR (outpost line of resistance), main defensive line, and location of reserves, artillery and supporting troops.

Task Force Committed

Late in the night of December 24 the 6th Cavalry Squadron was temporarily detached from group control and attached to corps command for the purpose of filling a gap between the right flank of the 4th Armored Division and the 26th Infantry Division. With

Signal Corps Photo

The 11th Armored Division advances over wide plains near Longchamp, Belgium, en route to the Bastogne area during the latter part of December. Note snow-covered tanks scattered far across the area and silhouetted against the horizon.

this loss, the task force was committed early on Christmas day with the following lineup:

Hq. and Hq. Tr., 6th Cav. Gp.
28th Cav. Rcn. Sq.
Co. C, TD Bn.
Co. B, Engr. (C) Bn.
Btry. C, Armd FA Bn.

The line of departure for the operation ran generally northwest-southeast through Libramont, first of the three immediate objectives assigned the task force, known by this time as TF Fickett.

In a rather amusing way, one ¼-ton vehicle secured the line in the vicinity of Libramont. Major Thomas H. Stewart, III, the group S-3, rode recklessly into the town early Christmas morning to see exactly what was going on. To his surprise, the town was clear of enemy and the Belgian peasants were proceeding with their daily chores as though war were 1,000 miles away. Acting quickly, the command post of the 6th Cavalry Group moved into Libramont, closely followed by the reconnaissance elements of the 28th Cavalry Squadron.

Initially, the 28th Cavalry Squadron employed Troops A and C abreast, while holding Troop B and support troops in reserve. To each committed reconnaissance troop there was attached a platoon of engineers and a platoon of TD's. Troop A was directed toward St. Hubert and Moircy, while Troop C was directed generally along the axis Bercheux-Morhet, with the added mission of maintaining contact with CC "B" of the 4th Armored Division on the right.

Contact with the enemy was not gained until early in the day of December 26, when almost simultaneously reconnaissance patrols across the entire zone reported engagements with the enemy. The Germans, reacting strongly to our advance up the main Libramont-St. Hubert road forced forward elements of Troop A to halt just below the line Hatrival-Vesqueville. Heavy small arms and some antitank fire was encountered. The remainder of Troop A advanced northeast to the outskirts of Moircy, where it was engaged by dug-in troops employing small arms, mortar, and assault gun fire. The presence of assault guns in this area was of immediate interest to all commanders.

On the right, Troop C reported only scattered contact, until late in the day, when it was halted before Morhet by a pocket of organized resistance. Earlier in the day, Bercheux, second objective of the task force, had been found unoccupied by the enemy.

Already the picture of the enemy was forming. But, *what* was facing the 28th Squadron? Identifications were needed and needed badly.

S-2

It is interesting to look back upon this particular operation from an Intelligence point of view and see the tremendous part that the S-2 of a cavalry group can play in the conduct of operations. To those who wonder why the S-2 job is handled by a major rather than a captain, and why he needs an assistant, it might be stated that a cavalry reconnaissance unit, in spite of the many varying missions assigned it from time to time, is still, fundamentally, an Intelligence organization.

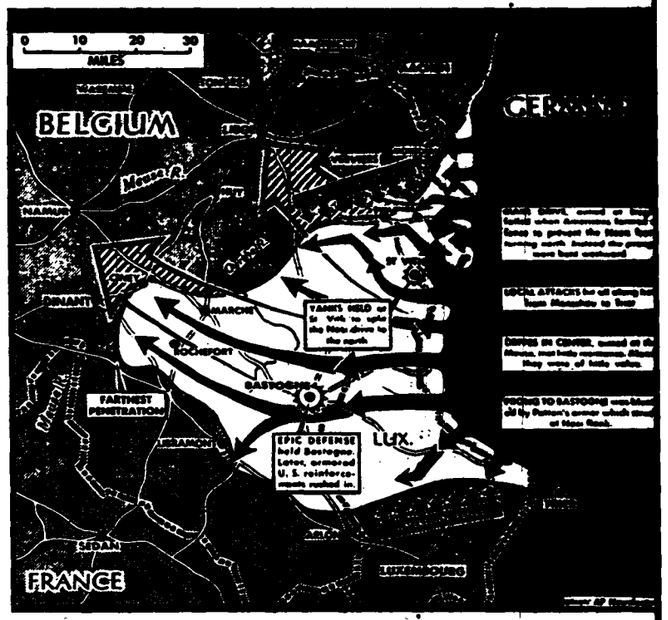
Intelligence within the group headquarters—which for obvious reasons cannot be handled on too large a scale—should be handled on a plane of thought comparable to that of the G-2 section of a division. Knowledge of the enemy and his capabilities forms the skeleton about which the cavalry commander plans his moves and directs his search for information.

To those cavalry groups and squadrons not yet committed on the Western Front, it should be said, "Stress Intelligence! Follow the trends in enemy organization. Study especially the German Volksgrenadier Divisions and the techniques of German small-scale counterattacks—these to mention only a few. Further, plan to operate with other Intelligence teams. Otherwise, the organization is sorely handicapped. A photo-interpretation team is also a valuable asset to the headquarters."

To return to the story—identifications were badly needed in the St. Hubert-Morhet area. Corps had only vague reports as to enemy forces there. St. Hubert remained a large question mark, unsolved by tactical air reconnaissance, which for the following week continued to report no movement about the city. Higher headquarters, on the other hand, continued to report indications from many sources that a large enemy force was concentrated just north of the city. What other forces were in the area, however, remained the mystery of the moment (see map No. 2).

Information

On the second day of the operation, Troop C attacked and cleared Morhet, with no determined resistance encountered. The town was obviously not a part of the enemy's OPLR. No identifications were obtained in this operation. To the west, resistance stiffened at Moircy and Remagne. Fire from 88mm and 20mm AA/AT guns halted all vehicular movement. Late in the day a patrol from a GHQ Flak (AA) battalion was encountered just south of Moircy. It was later learned that the battalion had been attached for some time to a German division not previously contacted in that area, but there were still no evidences of enemy infantry. The nature of the resistance at both Moircy and Remagne appeared heavy in large weapons but light in personnel.



Map No. 2. **Approximate boundary of the farthest German penetration in "Battle of the Breakthrough," December 17-January 3. When the 106th Cavalry reached Libramont December 25 to reconnoiter the area for corps, neither disposition nor strength of the enemy was known.**

The 4th Armored Division, which broke into Bastogne and rescued the harassed garrison January 3, is shown here moving toward that area from the south December 27.

Signal Corps Photo

Still farther to the west, the enemy displayed decided aggressiveness in screening along the general line Hatrival-Vesqueville. Artillery fire was encountered here as well as small arms, antitank and mortar fire. The situation below St. Hubert remained virtually unchanged throughout the remainder of the operation. Patrols were unable to pierce the enemy counterreconnaissance screen there.

The appearance of mine fields, road blocks and demolitions during the second day of operation along the entire front indicated that the enemy, for the moment at least, did not plan an offensive in this area. The enemy's attitude and the nature of resistance encountered combined to corroborate this observation.

On the third day of the operation, Troop B, committed in the Moircy-Remagne area, relieved the bulk

of Troop A, which then directed its attention solely to St. Hubert and the wide-open left flank west of the city. An attack on the enemy in Moircy during the day was repulsed, as was a similar attack on Remagne. It was obvious that he was serious about these towns.

On December 25 a GHQ AT battalion was reported en route to St. Hubert. The battalion was discovered to contain a company of 12 *jagdpanthers* (88mm PAK 43 on Mk V chassis) and two companies of 75mm assault guns on Mk IV chassis. The fact that assault guns had been reported continuously in the St. Hubert-Moircy area tied in perfectly with this information.

At the conclusion of the third day of operations, the general picture of the front ran something like this: The enemy, employing obstacles combined with fire principally from heavy, special purpose weapons, was screening vigorously along the line Hatrival-Vesqueville-Moircy-Remagne—and these troops evidently expected infantry to arrive at any moment to relieve or reinforce them. West of Remagne, no resistance had been encountered by Troop C until it reached the outskirts of Lavaselle. Here, for the first time, this troop came under well-directed artillery fire and opposition from dug-in positions. As yet no enemy identification had been made in this area.

On the fourth day of the operation, the 6th Cavalry Squadron was relieved of its job as contact squadron between the 4th Armored Division and the 26th Infantry Division and, rejoining the command, immediately took over the St. Hubert area east to, but exclusive of, the main Libramont-Moircy road (see map No. 3). Troop A, 28th Cavalry Squadron then moved east to a position in squadron reserve.

Completing the Picture

On December 29 several interesting developments took place. Troop C, 28th Cavalry Squadron combined with elements of CC "A" 9th Armored Division (then employed in an attack to the north between our right flank and the left flank of the 4th Armored Division), made an assault on Lavaselle, which did not succeed. Surprisingly heavy resistance was encountered here from all types of weapons including tanks. Again a puzzle. What were tanks doing in this area? There had also been previous reports of tanks in the vicinity of Remagne. To what did these reports add up?

The squadron verified the presence of an enemy task force made up of two battalions of panzer grenadiers and one tank battalion. The latter was being used in small groups as local reserves along the front from Remagne to Lavaselle. For the moment, the picture in this area was clear, but to the west new developments were taking place.

Elements of a panzer grenadier regiment of a panzer

Map No. 3. Map shows situation at end of day December 28, 1944. 6th Cavalry Squadron had taken over St. Hubert zone east to, but exclusive of, the Moircy-Libramont highway. The enemy picture was beginning to clear, although only the two indicated GHQ special purpose units had been positively identified at that time. Reconnaissance continued.

Map No. 4. At the end of the fifth day of the operation the enemy picture suddenly became clear. Unit identifications, PW statements and physical contact combined to give a true picture of the enemy's strength, location, disposition, and the contours of his OPLR and main defensive belt. On December 30, the 6th Cavalry was drawn from the line.

division, not previously identified since the outset of the operation, had been contacted near Moircy. It was learned that the entire regiment had moved into the St. Hubert area December 27-28, and one battalion had been sent to the Moircy-Remagne area to bolster the line there. One battalion of the regiment had remained in St. Hubert, while the third battalion was dug in along the main east-west road north of Moircy vic Pironpre. This regiment furnished the infantry replacements intended for the GHQ AA and AT battalions identified south of Moircy and at St. Hubert. There was no information to indicate that elements of the panzer division, other than this regiment, were in the area. From a patrol along the Pironpre-St. Hubert highway it was learned that the regimental CP was either in St. Hubert or in the close proximity of it, and that a minimum of one battalion was in the Moircy-Remagne area.

Now a complete picture of the front was forming. The bits and scraps of information which had been gathered together for 5 days had begun to take shape. It had taken lives and equipment, but the picture was there for the asking. At the conclusion of the 5th day of operation, a commander could have launched a well-planned attack by basing his scheme of maneuver on the information which had been pieced together up to that time.

Briefly, the conclusions were these: a strong outpost line ran from Hatrival to Vesqueville to Moircy-Remagne, thence northeast to Lavaselle. Behind this outpost line the main defensive belt ran generally St. Hubert-Pironpre (the vital road center here being of paramount importance), thence east and northeast to the high ground north of Lavaselle. (See map No. 4.) The OPLR was made up chiefly of a system of strong points built around the east-west line of towns mentioned above. Space between these strong points was defended by artificial obstacles, covered both by direct and indirect fire, which employed a minimum of personnel. It was the same old Jerry plan of defense . . . but Jerry's defense is tough if you don't know just where he is and what he is up to.

December 30 found the situation generally unchanged across the entire front. Two subsequent attacks on Remagne failed. The 6th Cavalry Squadron, commanded by Lt. Colonel Samuel McC. Goodwin, was attempting to by-pass St. Hubert to the west, and was making encouraging progress. Then the order came that the job was over. Corps had received sufficient troops to take over the area and attack to the north and northeast. All elements of the 6th Cavalry Group in the zone were relieved, and on December 31 the forward elements of the group were passed through by fresh troops attached to Corps.

FROM PARIS TO BELGIUM—

125th Reconnaissance Squadron In Pursuit of Route Germans

ON September 1, 1944, the 125th Cavalry Reconnaissance Squadron (Mecz), commanded by Lieutenant Colonel Anthony F. Kleitz, assembled in a chateau courtyard in the vicinity of Villers-Sous-St. Leu, northeast of Paris, where at approximately 1300 hours it was given the following briefing:

"The Germans are known to be retreating to the north and northeast. Their strength, composition and present location is not known.

"In the XIX Corps zone, the 30th Division (motorized) is to move to the northeast and assemble in the vicinity of St. Amand—Maulde, France. The 2d Armored Division will be on the left and the 28th Division of the V Corps on the right. Task Force Harrison, composed tanks from the 743d Tank Battalion and one battalion of infantry from the 30th Division, is to advance to assembly area at St. Amand, France—Maulde, Belgium.

"Squadron mission is to make an aggressive reconnaissance in front of Task Force Harrison and secure the 30th Division assembly area near St. Amand—Maulde, France, a distance of approximately 110 miles.

"The axis of advance will be as follows: Nogent, Les Ageus, Gournay-Sur—Aronde, Roye, Marchelepot, Peronne, Cambrai, West of Valenciennes, St. Amand to assembly area vicinity Maulde, Belgium.

"Troop C will be on right of the squadron sector, Troop A on the left. Main axis is inclusive to C to Roye then it becomes inclusive to A. (The right and left boundaries were pointed out.)

"Supplies will follow on main axis. Squadron CP will be on main axis and follow by bounds. Initially, the squadron CO will be with CP.

"Troop C will move out as soon as ready."

Troop C

*by Captain Reuben F. Trant, Jr.**

THE previous mission of Troop C had shown that troop headquarters could not be set up even temporarily: movement was so fast that communication failed rapidly. With this in mind, the 3d Platoon was ordered to advance on the main axis followed by Troop Headquarters, the attached Assault Gun Platoon of Troop E, then the 2d Platoon. The 1st Platoon was to protect the right flank by advancing on the secondary roads on the right and abreast of the 3d Platoon on the main axis.

Troop C cleared the assembly area at 1330 hours and began its mission. On the main axis no resistance was encountered until the troop entered Roye. To the right, the 1st Platoon met slight resistance in the form of light small-arms fire but was hardly slowed in its advance.

In Roye a considerable amount of small-arms fire was received, and French civilians warned that a large number of Germans were a short distance out of town to the northeast and said that they had tanks.

The 3d Platoon advanced approximately one mile toward Carrepuis when the point was fired on by small-arms fire. The point could see a column of German half-tracks and some dismounted men on the Roye-Marchelepot road. Lieutenant James D. Neuman, commanding the 3d Platoon, called for the Assault Gun Platoon, which went forward and fired about 6 rounds of cannister on the opposition and a few rounds of HE on the German column on the other road. The German column was soon out of sight over a ridge line.

The 3d Platoon then resumed its march for about ¼ mile when the point was again fired upon by small arms. A patrol, sent to the right flank, discovered a Mark III tank with crew in position approximately 500 yards to the front. The assault guns, directed by Lieutenant Kenneth Scott, Troop E, again went into action and with two rounds of HE set the tank on fire. Two or three rounds of cannister fired in the direction of the small-arms fire ended further resistance there. Almost invariably two or three rounds of cannister from an assault gun would clean out any small-arms fire.

The platoon had just mounted up when a German staff car traveling at a high rate of speed, approached the column from the front. Seeing our vehicles the occupants tried to stop, turn around, and escape, but the .50 caliber on the lead armored car knocked it out. Two wounded German officers, the driver, and two brief-cases containing official papers and maps were captured and sent back to 30th Division Headquarters.

In the meantime on the right flank the 1st Platoon was encountering much the same type of opposition but was keeping abreast of the 3d Platoon. It also reported that all bridges so far seen across the Somme Canal had been destroyed.

On entering Carrepuis the 3d Platoon was again fired on by small arms. In a battle that lasted about 45 minutes the platoon captured 13 Germans, killed 8, and destroyed one auto in which several of the enemy had tried to escape. The platoon suffered no casualties.

These small-scale battles continued throughout the day. Every town was defended by a small number of Germans, most of whom were either killed or captured. The American forces were moving so fast that as many Germans were by-passed as were met. After the first attempt to send prisoners to the rear, which nearly resulted in the capture of the escort party, all prisoners were delivered to FFI forces (French Forces of the Interior), who were armed with the weapons captured with the Germans. The casualties inflicted on the Germans is not known, as the dead and wounded were not counted and prisoners were handed over to the French in bunches. Many times, after delivering captured arms to the French, the troop moved forward while the French were left to mop up the remaining Germans. It is estimated that at least 60 prisoners were taken and approximately 25 killed and wounded, during the days activities.

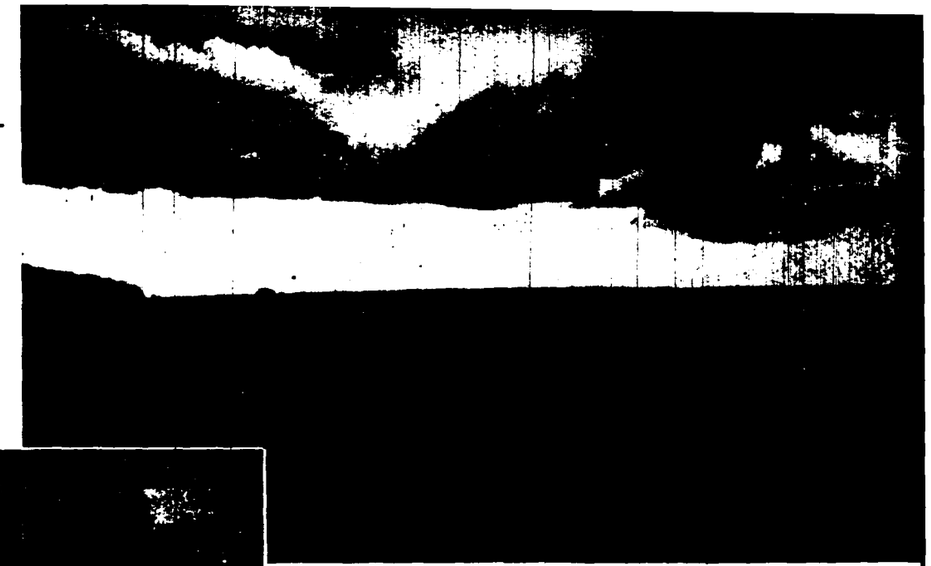
Troop C continued to move along secondary roads about one mile east of the main axis of the task force advance. The 1st Platoon reported all bridges out north to Peronne, along the Somme Canal. Troop A had crossed the river at Peronne.

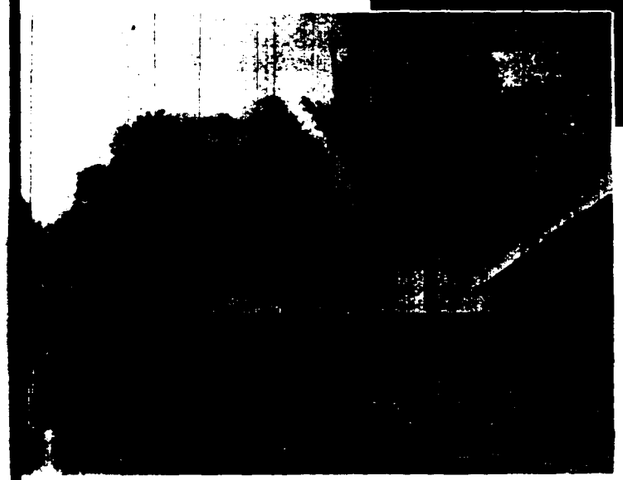
In the meantime, the 82d Reconnaissance Battalion, which had jumped off earlier than the 125th Squadron, had reached the Somme River to its front and found all the bridges in its zone blown. While the 2d Armored Division rapidly established a bridgehead and built a bridge, its reconnaissance elements spread out. One of the elements of the 82d, moving to the east, reached the bridge at Peronne, attacked a sizable bridge guard, and prevented them from blowing the bridge. With no waste of time, the 82d patrol continued on reconnaissance to the northwest.

About 30 minutes later, Troop A of the 125th reached and cleared the bridge at Peronne. It was then decided that Troop C return to the main axis and cross at Peronne. The troop moved into Peronne at dark and since some vehicles needed gas the troop bivouacked in the town square. During the night enough gas to keep the assault guns rolling was borrowed from a few casual vehicles and the troop prepared to move out at daylight.

The advance on the main axis had been faster than that of Troop C and Task Force Harrison was following Troop A with no interval. During the night Troop C received orders to use the main axis until the head of the column was reached, then to move back out on the right flank.

At daylight September 2 Troop C left Peronne and overtook Troop A at Masnieres, where a fire fight was slowing the advance. The 1st Platoon under Lieutenant Leslie Springs, was again sent to the right flank. The rest of the troop cooked fresh eggs given by the French on the way. During the breakfast, artillery began falling in and near the main column which was two and three vehicles abreast. Impossible to move the ve-



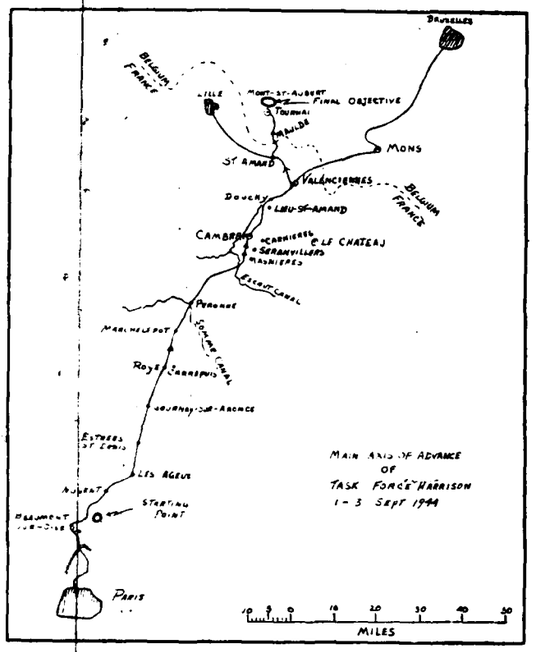


Above: **Tanks of an armored division (unit not identified) roll across Flanders. German units withdrew so fast that it was often difficult for the Americans to maintain contact.**

Left: **A jeep crosses the Belgian border September 8, several days after the 125th reached Belgian soil. Note traffic beyond gate. Roads were jammed with vehicles of all types.**

Signal Corps Photos

*Commander, Troop C



Map 1. Main axis of advance of Task Force Harrison.

hicles, the men took cover. Fortunately, the troop suffered no casualties or damage.

The 1st Platoon reported reaching Seranvillers with no opposition. The rest of Troop C then moved out to the flank, with the 2d Platoon under Lieutenant Harry Harmon in the lead. On reaching Seranvillers the troop moved toward Carnieres with the intention of paralleling the Cambrai-Valenciennes road.

At the road junction one mile southeast of Carnieres the head of the column was at the main road Cambrai—Le Cateau when a truck towing a 5-barreled Nebelwerfer approached from the west. Practically everyone watched it stop, watched the Germans unhook the gun, turn the car around and start back. Then every gun in column, including 37's on the armored cars, opened fire. A patrol was sent to find out the results. It returned with the Nebelwerfer and one wounded German who had jumped out of the car. The car escaped. The fact that the German stated that all the passengers except the driver were wounded did not make anyone feel better about the display of bad marksmanship.

From that meeting till the town of Lieu-St.-Amand was reached, the pattern of fighting was much the same as that of the previous day. Whether the Germans planned the small rear guard actions or were forced into them is not known. It was known, however, that their intention was to leave France. The evidence of this was along the road and in all the towns. Every town had marks along the walls and store windows left by machine gun bullets. Either for amusement or through fear of the civilians and to keep them off the streets, the Germans had sprayed the towns with fire as they retreated through.

At this time, all troop vehicles were nearly out of gas and several armored cars had flat tires. When squadron headquarters was notified of this the troop was ordered back to the main axis and given a rendezvous point to meet the gas truck. Returning to the main axis at a point ¾ mile north of Lieu-St.-Amand, the troop was amazed to find vehicles moving northeast at about 50 miles per hour. Anywhere to the right or left of the main road it was necessary to fight through practically all towns.

About one mile northeast of Douchy the troop gassed up and repairs were made on all tires that required them. At this time the troop learned that the objective had been changed to the area north of Tournai, Belgium and that it was to use main axis and proceed with least possible delay to that point.

With that order Troop C's reconnaissance was ended for the day. Knowing the objective, the troop (less 1st Platoon, with which it had lost communication) followed the traffic and tried to keep from being run off the road. At Maulde on the French-Belgian border (the last town on the maps) Lieutenant Colonel Kleitz appeared from the side of the road and handed up maps marked with the new assembly areas near Tournai. Reaching its assembly area at dark, Troop C (less 1st Platoon) received orders from the squadron commander to outpost the main road junction in Tournai and send patrols to the west in an effort to contact the 2d Armored Division, which was believed to be about two miles to the southwest of Tournai.

During the night the outposts received a considerable amount of 20mm and artillery fire. Several enemy patrols or groups of stragglers walked into the outposts and were captured. Booty included two 20mm's complete with horses and ammunition. There were enemy casualties and two troop casualties. The 2d Armored Division was not contacted.

Early the next morning Lieutenant Colonel Kleitz received orders to seize the high ground known as Mont-St-Aubert, about three miles north of Tournai, which dominated the 30th Division concentration area. Troop A, with assault guns attached, was given the mission of taking this ground by approaching it from the southwest. Troop C was to approach the objective from the southeast, prepared to support Troop A on call.

Troop A reached the objective without opposition, and Troop C followed to go into bivouac of the objective.

Later, the next day, the 1st Platoon which had finally come within range of the troop "506" radio, was directed to the bivouac area. It had reached the original objective and, not knowing of the change, had waited there until notified by friendly units of the squadron location.

The first day the troop traveled 83 miles, the second day 66 miles, and the third day 9 miles. It had only two battle casualties and no vehicle casualties, while it had inflicted an estimated 125 enemy casualties, destroyed one Nebelwerfer, one tank (Mark III), three staff cars, and captured two 20mm guns complete.

One of the features of this rapid advance was the solution of the squadron's supply problem. The established policy was to carry as little as possible on the outside of the vehicles in order to reduce the chances of vehicles burning if hit by artillery or tracer small arms. Consequently, when the orders were received for this mission the troop had no gas reserve and less than three days rations. To counter this disadvantage, the squadron commander ordered a 6 x 6 gas truck and a 6 x 6 water truck to travel with the forward CP. When the troops needed gas, it was only necessary to contact squadron forward echelon to get it. After reaching the new assembly area, Captain John H. Brackbill, squadron S-4, went back to a point 30 miles southwest of Paris for gas and the rest of the service crew, and within 8 hours after the arrival of the forward elements at the new area, supplies of all kinds were available.

Most principles of tactics were overlooked in the mass rout and retreat of the Germans. The troops often traveled in one group, as if making a road march in the states. The one thought in everyone's mind was to get there before the Germans reorganized. In that respect, as in all others, the mission of the 125th Squadron was completed as directed.

Troop A

by Captain Dale D. Stithem, Commanding

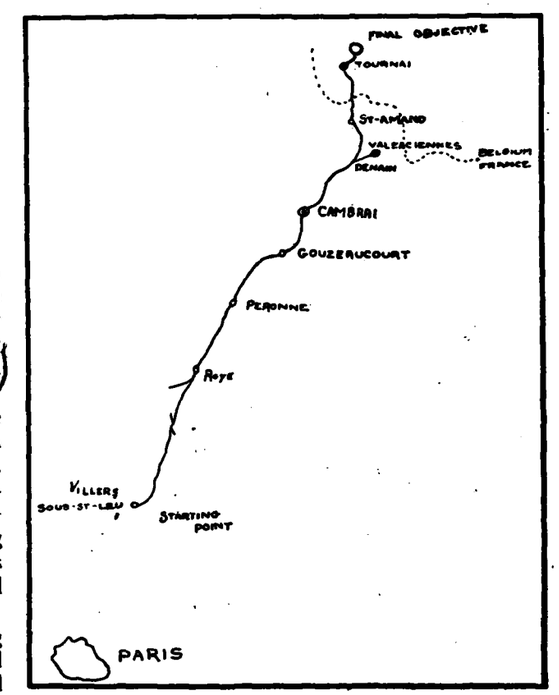
As Task Force Harrison moved out, it was flanked on the right by the 28th Infantry Division, and on the left by the 113th Cavalry Group with the 113th Cavalry Reconnaissance Squadron preceding the 79th Infantry Division. To the left of the 79th was the 2d Armored Division.

The pursuit was definitely under way and little time was available for orientation. The axis given Troop A went north and northeast through Roye, Pétronne, Cambrai, and St. Aumand, and across the French-Belgian border into Tournai, Belgium. Orders were to bypass all opposition of great strength and, continuing en route, report conditions of roads, bridges, by-passes taken, and the location of enemy positions by-passed or overrun.

The advance proceeded with light opposition. During the first 60 miles a number of road blocks, manned only by machine guns and riflemen, were encountered and knocked out. By 2130 hours, September 1, the troop, having reached a point approximately 8 miles south of Cambrai, received orders to stop along the side of the road and wait for the gas truck. There was still enough gas in each vehicle for at least 30 miles, but having the opportunity to refuel, the troop took normal security precautions and halted.

The gas truck, however, did not catch up and at 2300 hours orders were received from Lieutenant Colonel Kleitz to move out and continue on mission. Gas had not arrived for anybody in the task force but it was believed that it would soon catch up. The 3d Platoon, under Lieutenant Robert O. Bradley, led out, followed by the 2d Platoon under Lieutenant Jeremiah J. O'Donnell, then Troop Headquarters, and finally the 1st Platoon, under Lieutenant Henry C. Lyman, as mobile reserve.

After moving ahead approximately ¾ mile, Sergeant William E. Proctor, Jr., 3d Platoon, riding in the point peep, caught up with the tail of a German column of horse-drawn carts carrying supplies north along the same route. Sergeant Proctor reported the situation to Lieutenant Bradley who quickly spread his three machine gun peeps (each equipped with an SCR 510 radio and a .30 caliber machine gun) across the road and shoulders and placed an M8 armored car on each side of the center peep. (M8 armored cars mount a 37mm antitank gun with a .30 caliber machine gun on a ring-mount above the turret.) By radio Lieutenant



Map 2. Route of Troop A from Paris to Belgian border.

Bradley ordered all 5 vehicles to move forward, firing all weapons as they advanced. This action soon eliminated the enemy column; all carts and horses were destroyed.

The column then proceeded to the Escout River just south of Masnieres, France. About 200 yards up the road the leading section of the 3d Platoon, under Sergeant Proctor, got pinned down before it could cross the bridge over the Canal de St. Quentin. The approach to this bridge was partially blocked by a burning German half-track whose 20mm ammunition was exploding in all directions, and on several occasions small artillery shells or similar explosives blew up.

As the 3d Platoon reconnoitered for a by-pass 4 medium tanks from the 743d Tank Battalion moved forward and quickly overran the troublesome antitank guns on the north side of the canal. One tank hit an enemy mine near the bridge and lost a track—the only loss of any type so far on the march.

At this point Lieutenant Lyman's 1st Platoon was ordered to reconnoiter the bridge across the canal and prepare to take the lead, leaving the 3d Platoon, which had led the column up to this point, to revert to mobile reserve. After taking a peep across the bridge and returning without being fired upon, Lieutenant Lyman reported by radio that he was moving his platoon across the canal. The remainder of the troop was then alerted to move out. This was at approximately 0400, September 2—just an hour after Sergeant Proctor's section of the 3d Platoon had first run into trouble.

Troop A proceeded across the bridge, through the town of Masnieres, and approached the southern edge of Rumilly, about one mile to the north of Masnieres. Once again the leading elements met a hail of 20mm antitank fire which knocked out the two leading M8 armored cars. This occurred when the 20mm fire concentrated on the point where the front wheels join the axle. Brigadier General Harrison, in command of the task forces, was near the front of the column at this time and was wounded by 20mm fire.

The enemy appeared to be withdrawing his antitank weapons shortly after each encounter and setting them up again either on the road leading into the next town, or just on the far side of town. Troop A was pulled off the road along the railroad tracks just north of Rumilly, and the medium tanks were again brought up to overrun the guns.

In a few minutes Major General Hobbs, commander of the 30th Infantry Division, arrived and assumed command of the task force. After a swift check of the situation, he ordered the tanks to attack from the hill and, if no opposition was encountered, to move on into the town of Cambrai just 4 miles ahead. Using fire and movement, two companies of tanks lined up on the crest of the hill and delivered fire while another tank company moved up and into Cambrai from the left flank. This attack came off at 1000.

Meanwhile, Lieutenant O'Donnell's 2d Platoon reconnoitered to the right in search of a by-pass around the town of Cambrai in case the enemy had a strong enough force in the town to prevent the tanks from breaking through.

Sergeant Proctor had been sent ahead to contact the tanks, get the situation, and see if it was possible for the troop to resume the lead, returned about 1100 and reported that the tanks had overrun the enemy guns and that the town was clear of enemy.

Resuming the lead, Troop A moved through Cambrai shortly before noon and proceeded toward Iwuy 5 miles to the northeast. The 3d Platoon was again in the lead, followed by the 1st Platoon and Troop Headquarters, with the 2d Platoon, which was radioed to rejoin the troop on the main route, acting as mobile reserve. No enemy were encountered, but on the outskirts of Iwuy, orders were received to hold up the advance until further notice, while the infantry of the task force cleaned out the enemy in Cambrai.

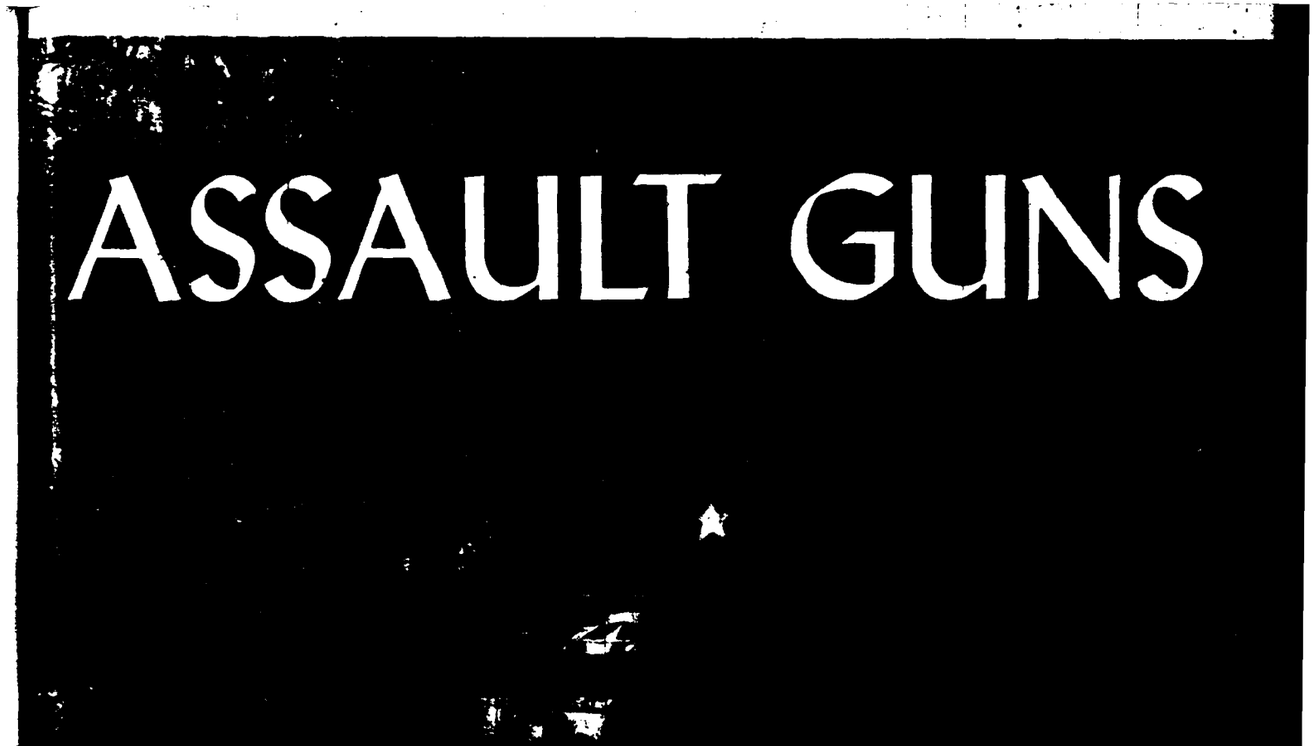
The 3d Platoon was ordered into Iwuy with instructions to block all roads leading out of town to the north, northeast and northwest. Lieutenant Lyman was instructed to establish a road block south of the bridge across the canal on the south edge of town. Troop Headquarters and the reserve platoon were held along the highway between Lieutenant Lyman's road block and a group of buildings about a mile to the rear.

Lieutenant O'Donnell, who had just returned with the 2d Platoon, reported that while looking for a by-pass, his platoon had destroyed an enemy truck and trailer loaded with men and machine guns, killed two Germans, and brought back 6 prisoners. Lieutenant O'Donnell established a road block in the vicinity of the troop CP covering the right and left.

Shortly after 1200 Lieutenant Bradley, from his position in Iwuy, radioed that at least 6 enemy armored cars were moving up toward Iwuy along a sunken road from the southeast. Lieutenant Lyman intercepted this message about the same time that his gunners also spotted the vehicles. These 6 vehicles were knocked out by 37mm fire from the M8 armored cars of the 1st Platoon at their road block near the canal bridge. At the same time another enemy vehicle, which appeared farther down the road to the southeast out of range of the 1st Platoon's guns, was disposed of by 37mm fire from an armored car in Troop Headquarters at a range of about 800 yards. The troop had no losses during this action.

The entire course of the march, which covered nearly 120 miles in slightly over 40 hours, ended on the outskirts of Tournai at 2000 September 2, 1944. One point is outstanding. Along the entire route the enemy did not once attempt to defend or delay in a town. All road blocks and other defensive positions encountered were either on the approaches to towns or on the far side of the towns. (It was noted that this general position of road blocks continued to the Siegfried Line.)

ASSAULT GUNS



As Attachments and in Battery

*by Captain S. A. Lindsay**

Signal Corps Photo

Assault guns support a reconnaissance unit on patrol near Blair, France, in the Lorient sector. Unit is not identified.

As Attachments

On the morning of September 16 the 125th Cavalry Reconnaissance Squadron (Mecz) was detached from the 113th Cavalry Group, and again attached to the 30th Infantry Division. It was to protect the division right flank and at the same time maintain contact with the 1st Infantry Division on its right.

One platoon of assault guns from Troop E was to be attached to each reconnaissance troop. Meanwhile, the reserve assault gun platoon and one platoon of light tanks attached to the squadron were to precede the advance of squadron headquarters. As the squadron zone was quite narrow, the commander felt that if either of the reconnaissance troops ran into much trouble, this reserve force could be dispatched to their aid in an expeditious manner.

On September 17, it became evident that Troop A could use more support, so the reserve platoon of assault guns was sent to them, and only the light tanks were retained at squadron headquarters for security. By that time the entire troop was committed but each platoon was used in a different manner.

The 1st Platoon of assault guns, under 1st Lieutenant John F. Morrissey, was to support the advance of the 2d Platoon, Troop A, which had as its objective the seizing and holding of the village of Orsbach, Germany. The two platoons pushed off and immediately after putting foot on "holy German soil," ran into small-arms fire.

The reconnaissance platoon, under Lieutenant J. J. O'Donnell, quickly dispersed the enemy force but came under German artillery fire. Lieutenant O'Donnell then withdrew his platoon to a covered position and discussed the situation with the assault gun commander. It was decided that the reconnaissance platoon would renew its advance, while the assault guns would place counter fire on the enemy gun, correctly estimated to be

*Commanding Troop E, 125th Cavalry Reconnaissance Squadron (Mecz).

a self-propelled 75mm. As soon as the reconnaissance platoon started its forward movement it again came under fire of the enemy 75mm. The assault guns immediately opened up from a well defiladed position and, with a good idea of the enemy position derived from azimuth readings, fired 8 rounds each. Fire from the enemy ceased, and the entry into the town from that point forward was uneventful.

On reaching the village, the troops saw 9 Germans entering a house, so the assault guns were placed in a direct firing position, which changed the "Heinies" idea of putting up a fight. Before a round could be fired the enemy vacated the position and, altogether, over 20 Germans surrendered. The obvious presence of the assault guns perhaps helped them to make up their minds.

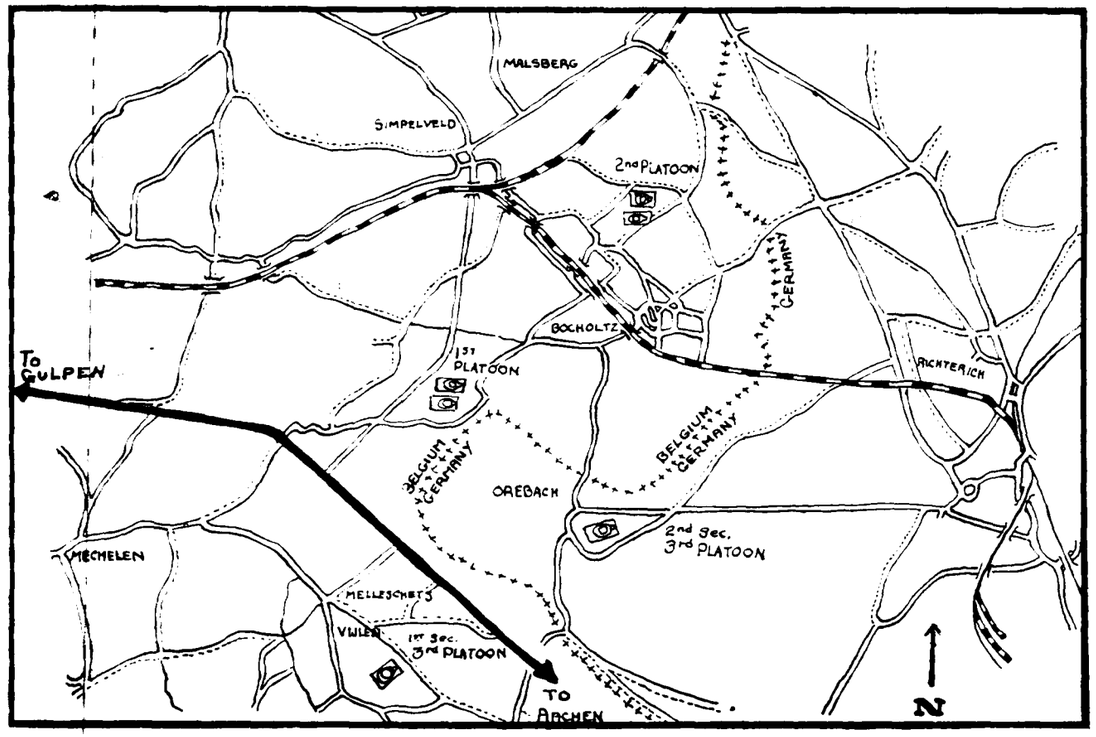
After this action the 1st Platoon assault guns were assigned two outposts on the west side of Orsbach, which they maintained until relieved by the 1st Platoon, Troop A and its assault gun attachment. The 1st Platoon assault guns then moved to Bocholtz and set up a defensive position opposite the Siegfried Line. Only one fire mission was fired by the platoon from this position and the results were successful.

The 3d Platoon assault guns, under Lieutenant M. E. Nichol, was also attached to Troop A. After firing approximately 200 rounds from the high ground at Vijlen, Holland, on Orsbach in support of 2d Platoon, Troop A, the assault guns were split and Sergeant G. L. Lynch with the second section was then attached to the 1st Platoon, Troop A, with the mission of taking over Orsbach from the 2d Platoon. Shortly after the change was made, enemy small-arms fire was received from the village church. Sergeant Lynch then maneuvered his assault gun into position and fired two rounds point blank into the church. Results were two enemy dead and two prisoners. This section was then used strictly as a road block because the 1st Platoon assault guns were in a position to deliver supporting fire from Bocholtz.

The first section of the 3d Platoon remained in position on the high ground at Vijlen and from its advantageous point was able to cover all movements of the reconnaissance platoon to which it was attached.

The 2d Platoon, attached to Troop C, initially was to establish road blocks as security for the troop CP, provide indirect fire support for the forward platoons, and be ready to move on a moments notice to either platoon for direct support.

On September 18, Captain Reuben F. Trant, Jr., Troop C commander, ordered the assault guns under Lieutenant Kenneth Scott, to take a firing position



Sketch 1.

along the high ground directly in the rear of the towns Horbach and Bocholz. The position selected not only offered support of the two platoons on the line but allowed the guns to cover a blind spot between them. (See Sketch 1.)

A number of missions were fired by the platoon and the Germans replied with counterbattery fire, but Lieutenant Scott had picked his position well and no casualties resulted. The platoon was credited with destroying one enemy armored car and many enemy soldiers.

Radio contact was maintained between the two reconnaissance platoons of Troop C and the assault gun platoon. Fire adjusted on targets by this method from forward observers with the reconnaissance platoons, obtained good results.

The Troop in Battery

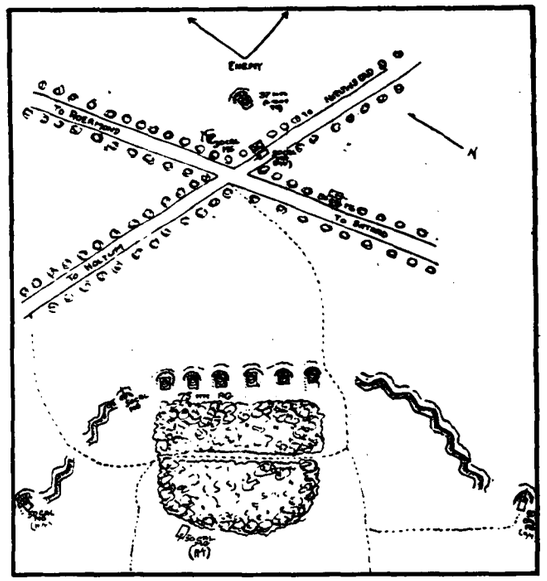
October 1—November 3, 1944

The 125th Squadron was detached from the 30th Infantry Division on September 30, and, again under the 113th Cavalry Group was to hold a defensive line from Millen, Germany to Roosteren, Holland. On the squadron's right was the 744th Light Tank Battalion and to the battalion's right the 113th Cavalry Reconnaissance Squadron—all on the line and all under the 113th Cavalry Group. The plan was to hold the line with two reconnaissance troops and their attached assault guns, but after the first day Lieutenant Colonel Kleitz decided to use the guns as a unit. This plan was enthusiastically received because, except for one brief fire mission during its first action, the assault gun troop had not been used as a unit since it landed in France. There was much interest in what it could do as a battery.

The Troop E platoons were informed of the change and told to assemble in the troop area. While this move was taking place 1st Sergeant C. T. Kalaher and I made a personal reconnaissance to select a position that would permit the guns to cover the entire front held by the reconnaissance troops. The following 5 points had to be considered:

1. The position must be as close to the center of the sector as possible.
2. Forward observation points were required to allow as much observation of enemy-held ground as possible.
3. Concealment for the firing position was necessary as guns were to be placed well forward.
4. Routes of communication, accessible for ammunition and all supplies, had to be found. Two or more routes to and from the area were desired.
5. Alternate positions needed to be selected and prepared for immediate use.

The desired position was soon found about ½ mile west of the town of Neiuwstad, Holland. The troop was then contacted and ordered to move to the location by platoons, with a 20-minute interval between platoons



Sketch 2.

in order to hold movement to a minimum while reaching the position. As the guns were brought up they were placed in front of a small patch of woods with only 20-yard intervals to allow all guns the protection of concealment which the trees afforded as a background. (see Sketch 2.) Later the guns were dug in by the use of a bulldozer. This increased the value of their positions since their type of military target could not be determined even from very short ranges. Two alternate positions were selected and gun pits also dug not far from the main position.

Defense of Area

Since the extensive squadron front had only two reconnaissance troops and one light tank company to cover it, stringent measures had to be taken for the local defense of the assault gun area. Trenches for dismounted personnel were dug to provide for all-around defense. Three half-tracks mounting .50 caliber machine guns were placed to protect the flanks and rear. An outpost, consisting of a light tank and two half-tracks, was put in position 300 yards out in front of the troop. Its purpose was twofold: to complete the defense scheme of the troop, and to cover a blind spot in the squadron sector.

Communications

Because of previous missions in which the radio had not always been reliable, telephone communications were set up from the troop fire direction center to the forward observation, outpost, and to the guns. Two separate wires were run to the FO so that if one was

knocked out the other could be used. A 510 radio was also maintained at the FO to be used if both wires were knocked out. This plan proved its worth during the 34-day stay in this position and only once was it necessary to switch to radio communications with the troop FO.

October 11, Lieutenant G. R. Murphy, (then Sergeant), of Troop C, observed enemy digging in around a bridge and requested fire on the area. Results were very good, and enemy activity in the area was not resumed. This incident indicated the observer's proficiency in directing fire, for after three rounds the order, "Fire for effect," was heard.

Coördination with Supporting Artillery

During most of this period the 283d Field Artillery Battalion was in direct support of the 125th Squadron. Because of the necessary rationing of ammunition the assault guns coördinated their efforts with the battalion and assumed much of the artillery's night harassing fire. Another means of conserving ammunition was effected by close coördination between the assault gun observer and the artillery observer, who occupied the same OP with fire on the same base point. Once the assault guns were registered, the data was passed to the artillery battalion's fire direction center. The artillery battalion also surveyed in the assault guns with the obvious advantage that the artillery observers were able to fire the assault guns through their fire direction center, which they frequently did with excellent results. Through the joint use of the artillery's fire direction center for firing both artillery and assault guns, more effective fires were delivered. In addition, a close coördination developed among the FO's with a resultant general saving of ammunition.

Combat Tips

During the squadron's lengthy stay in this area, the enemy at no time located the assault gun position. This is believed due to the following reasons:

1. The guns close proximity to the enemy lines (many missions fired at 1,200 yards with reduced charges) seemed to mislead the enemy a sto exact location.
2. Careful use and continual checking of camouflage.
3. Immediate destruction of all likely enemy OP's, such as the church steeple in Havert, Germany, which was held by enemy forces.

In similar missions since, the same tactics have produced the same excellent results.

In preparing cavalry units for combat, more emphasis should be placed on closer coördination between reconnaissance platoons or smaller elements and the assault guns. Each reconnaissance section should have at least one man experienced in adjusting indirect assault gunfire. Squadron adjustment should be standardized by "sensing" or by calling corrections, whichever is preferred by the CO of the assault gun troop. Time is saved and confusion is eliminated by this practice.

A Raid
by 3d Platoon, 104th Reconnaissance Troop (Mecz.)

*by Captain Arthur S. Laundon**

On January 16, 104th Reconnaissance Troop was given a mission on the southern boundary of the division zone. The troop was allowed one week to prepare for the raid and was to be permitted to make the raid any time during that period. The raid was to be of platoon size conducted by the 3d Platoon under 2d Lieutenant Charles J. O'Gara. There were 4 steps involved in the raid: (1) Prior reconnaissance. (2) The plan. (3) Preparation. (4) Execution.

Prior Reconnaissance

On January 17, Captain Laundon, commander of the 104th Reconnaissance Troop, and Lieutenant O'Gara went to the OP at Birgel to select the most suitable crossing.

From observation, the southern edge of Lendersdorf-Krauthausen appeared most favorable for a crossing. Lieutenant O'Gara then moved his platoon to the vicinity of Birgel and selected a good OP which covered the area of operations in the southern end of the town. On the night of January 19, his platoon was moved into town where continuous observation of the area was available.

During this period all available information on the terrain and enemy in that vicinity was gathered and checked. Twice Lieutenant O'Gara, accompanying reconnaissance patrols of an infantry battalion, reconnoitered the area where the patrol intended to operate. On one occasion he observed small-arms fire in the vicinity of the object and on another occasion there was reported machine-gun fire in the same area. On the day of January 22 considerable activity was observed in the trenches near and around the objective. The activity continued throughout the day and into the night. It was then that the area in question was definitely decided upon as the objective of the raid.

During this period of reconnaissance every member of the patrol was completely oriented and given ample opportunity to observe the objective and the routes over the terrain through the river to the objective. The ground also was studied minutely in conjunction with vertical and oblique aerial photographs.

The Plan

The patrol was to be broken up into three groups of 6 men each. One group was to be the base of fire and the other two groups, the maneuvering party. The base of fire was to move from the IP (initial point) (see sketch) to a railroad embankment near the river from which fire could be brought on any target across the river.

Corporal Capone, leader of the base of fire, carried a 536 radio. The two maneuvering parties were to continue across the river in a continuous line of skirmishers which was formed as they left the railroad track on the west bank of the Roer. They were to continue as rapidly as possible across the river, up the east bank of the river and into the trenches covering approximately a 50-yard front. At the completion of the mission or at the end of a 30-minute period the patrol was to return upon a voice command from Lieutenant O'Gara; while returning the patrol would use the north route.

One man was to be left in the OP with the artillery forward observer. This man would be in communication with the 536 radio carried by the base of fire as well as with the battalion CP by sound power telephone. The field officer, Lieutenant Strasser, was also in communication with the battalion CP by radio and by telephone. In addition, there was to be an open wire from the battalion CP to the fire direction center of the artillery battalion; also, a sound power telephone communication to the heavy weapons company operating the heavy machine gun and to the 81mm mortars. The 60mm mortar squad would operate from this same line.

Fire Plan:

"X" F.A. Battalion, 105mm howitzers.
- Group A: H-3 minutes to H Battalion, 2 rounds per minute per gun.
- Group B: H to lift on call. Two batteries, 2 rounds per minute per gun.
- Group D: H to lift on call. One battery, 2 rounds per minute per gun.

"Y" F.A. Battalion, 1 battery, 155mm howitzers.
- Group C: H to lift on call. One battery 2 rounds per minute per gun.

81mm mortars: H-3 minutes to lift on call or when 100 rounds were expended.

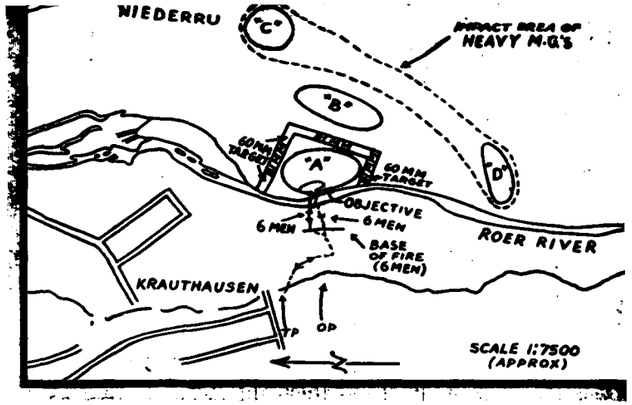
60mm mortars: H-3 minutes to lift on call.

Heavy machine gun: H-3 minutes to lift on call.

Preparation

Each man of the patrol was given minute instructions regarding his duties, his route, and his individual and coöperative part in the plan. From January 20-24 every man made a continuous study, both from the OP and from the aerial photos, of the ground over which he was to travel. On the afternoon of the 23d, Lieutenant O'Gara personally adjusted the artillery and mortar fire so that he would know exactly where it was to fall. The FO was present with Lieutenant O'Gara so that he too would know where the artillery was to fall and if necessary make adjustments during the raid.

Except for Tommy guns and the amount of ammunition and grenades to be carried, the choice of equipment was left to individuals. Nine Tommy guns and three carbines were to be carried by the maneuvering force, while the base of fire would carry M1 rifles.



Up to the last minute all plans were checked and rechecked; all communications were checked as late as 14 minutes before H hour. Sixteen men wore snow suits and two men wore regular uniforms. All wore steel helmets, but no web equipment was carried. The Tommy gunners carried 90 rounds; carbine gunners, 75 rounds; and riflemen, 88 rounds of ammunition.

Execution

H hour was set for 2000 January 24. All watches were synchronized and fire plans went off as scheduled. Given the "all clear" signal Lieutenant O'Gara started from the IP; the base-of-fire party moved to position as planned; and immediately after the two maneuver groups moved along the selected routes to the east bank of the Roer River. Except for one friendly trip flare, set off by a member of the base-of-fire party, no unexpected obstacles were encountered. All men of the maneuvering party reached the trench system on the opposite bank at the same time. Staff Sergeant Hahn and T/5 Gilchrist found an enemy machine gun and its crew of 3 men lying in the trench with the machine gun unmanned. After being kicked, two of the enemy raised their hands and surrendered. The 3d man started to commit a hostile act and was disposed of. Meanwhile, Lieutenant O'Gara and Sergeant Simmons found another enemy lying in the trench and pulled him out. When the command was given to return to the IP, all members of the patrol returned safely and were reported back by 2016. About 2040 the enemy reacted with light harassing mortar fire. The patrol received no hostile fire during the entire period.

Conclusion

Success of the patrol was due to thorough prior reconnaissance, complete planning, excellent leadership, and bold aggressive action by every member of the patrol. Because of the moonlight every man was able to see to move quickly and surely. From observation it was noticed that the camouflage suits had little advantage over the regular uniform, as all men were silhouetted against the white background of snow.

*Commander, 104th Cavalry Reconnaissance Troop.

Comments from Combat

Ammunition Supply During Rapid Movement in Combat

*by Lieutenant Colonel Herbert F. Krucker, Cavalry**

A RECENT article in THE CAVALRY JOURNAL described the fighting march or "blitz across France" by the 4th Armored Division.

It is felt that a description of the system of ammunition resupply within the division in an operation of this length and distance might be of interest.

Prior to departure from the camps in England for the marshalling area, the entire basic load of ammunition was drawn. This was the combat load covering the total amount of ammunition that the division could carry and was broken down to that carried by the individual and that carried on each and every vehicle within the division. The basic load was full and complete and had been worked out to allow the maximum that could be carried. The ammunition was issued to each individual, and the vehicular load to each driver upon departure for the marshalling area.

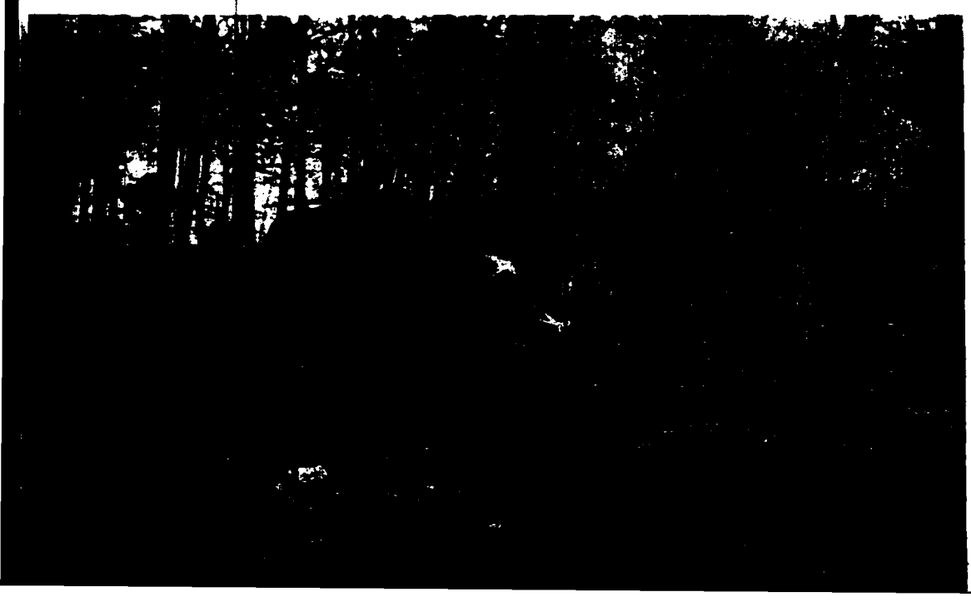
The principal of resupply was very simple in statement, to wit: Keep a full basic load at all times. This was not hard in Normandy when the line was relatively stable and the class V dump was close by, but it was obvious that when a breakthrough occurred or any extended move forward was made the problem of resupply would put a terrific burden on the battalion ammunition sections.

To eliminate this problem an attached quartermaster truck company was assigned to the division ammunition officer. The truck company was loaded with a representative load based on experience, and a division ammunition dump was established. This dump or resupply point was placed well forward and kept mobile at all times. Elements of the Division would send their trucks the short trip to this dump and secure refill without delay. Empty trucks were dispatched at once to the Army dump for immediate resupply, so the load was kept constant.

During rapid forward movement army class V dumps were often as far as 40 to 80 miles in rear of the division. The relief afforded to the battalion ammunition train can be seen at once. One instance is recalled where the ammunition trucks returned to a dump 80 miles in the rear only to find the type of ammunition required was still back at the next dump and the trucks went on back another 60 miles—a round trip of 280 miles.

Occasionally, a task force or combat team would be assigned a special or isolated mission which would take it some distance away from the remainder of the division. At such times, trucks attached directly to the task force furnished it with a reserve of all types of ammunition needed. The trucks would be returned when empty or when the task was completed.

Through this system ammunition was made available at all times without undue burden on the battalion ammunition sections; further, it was possible to assist in the ammunition supply of all attached units including 155mm artillery battalions which were often with the division.



An assault gun (75mm Howitzer, M-8) shells enemy positions in Geislautern, Germany, February 8, 1945. This gun belongs to Troop F, 106th Cavalry Reconnaissance Squadron, which crossed France with General Patton's Third Army. Note quantity of empty shell cases at side-front.

Signal Corps Photo

The system was particularly helpful to the attached antiaircraft battalion. Its batteries were divided among various elements of the division scattered over a wide area, and without a division dump, ammunition supply to this unit would have been particularly troublesome.

The amount of ammunition available at the resupply point was greatly increased by overloading the trucks and trailers used. One hundred percent overloading was normal, but the boys usually stacked on a few "extras," and while some might not agree with this principle of overloading, it got the job done. It might be related that during the entire battle of France, no ill effects from overloading trucks were noted by the writer.

Operation of the resupply point was in no way complicated. The batalion ammunition officer with the battalion trucks stopped at the DAO and requested all ammunition needed to bring the basic load up to normal or "full." Notations were made and issue slips or ammunition orders issued and the drivers directed to the trucks containing that type. In a very short time the trucks were reloaded and on their way to the front, and any empty trucks in the ammunition section were dispatched to the rear to secure needed types.

Extended advances made by an armored division could not be supported without the attachment of quartermaster truck companies to the present type armored division.

* * *

Forward Observation Training

--Notes from 106th Cavalry

The importance of artillery in present day warfare cannot be underestimated. A bulk of the casualties are caused by artillery.

Since reconnaissance units are well forward of the main body of troops, with the best available OP's, they often find targets for artillery that many times cannot be reached by the organic direct fire weapons of the cavalry. Lessons learned in combat prove that a closer liaison between cavalry and artillery, similar to that of the infantry-artillery team, is needed.

Frequently a field artillery battalion or group is attached to a cavalry group for direct support. Although in this arrangement, FO's are included, there are not enough FO's available to cover the wide sectors assigned to the cavalry. In addition, local actions encountered by isolated platoons cannot be covered by the field artillery forward observers.

Communications by use of the organic cavalry radios is adequate. The assault guns can furnish accurate, effective indirect fire. The "weak link" in the chain, is often the forward observer. Cavalry reconnaissance troops, therefore, can well afford to spend time in *teaching forward observation by artillery methods.*

Men must be trained to adjust the fire onto the target, trained to know *how* to do the most damage to the enemy with a minimum expenditure of ammunition, trained to know *what* targets require which type of fire, and *when* surprise fire is most effective.

In a situation where the cavalry sections are spread out, it is not always possible for the platoon officer to call the artillery fire. Consequently, enlisted men should have the same amount of training as officers: every man in a reconnaissance platoon should be able to call for and adjust quick, accurate artillery fire on targets of opportunity. To be practical, this training should include a knowledge of the principles of forward observation as laid down in FM 6-135, and a thorough practical experience with the use of the Troop E assault guns.

Specific instances of the need of this training were often encountered by the 106th Cavalry during operations in Normandy, northern France, and Germany.

August, 1944:

"On the fast-moving drive after the breakout of Normandy, cavalry troops advancing ahead of the main body of General Patton's Third Army met small delaying enemy forces on all routes to Paris. Normally, these consisted of an 88mm antitank gun augmented by a 20mm Flak gun and a force of possibly 50-100 infantry for close-in security. These routes had to be cleared for the advance. The enemy antitank gun was normally positioned with at least a 2,000-yard range. The cavalry assault guns, leap-frogging forward in pairs in support of a reconnaissance troop, proved invaluable as indirect fire artillery. High ground, high buildings, and occasionally second-story windows were used for observation posts, while dismounted men moved forward to reduce the delaying force."

November, 1944:

"In the Foret de Parroy, when the cavalry group dismounted and fought as infantry, the assault guns again proved their worth as artillery. Observation was normally limited to not more than 200 yards. Observation patrols equipped with SCR 510s moved in close to the enemy positions and called artillery fire—an invaluable aid in the slow, grim job of grinding down a well dug-in enemy."

December, 1944:

"In one instance near Drulingen, France, a reconnaissance platoon leader and section sergeant at an advance cavalry observation post performed forward observation for corps artillery. Their proficiency in calling quick effective artillery fire was instrumental in the destruction of an enemy tank-infantry column threatening the corps flank."

January, 1945:

"When the Seventh Army was fighting near the Saar River, cavalry sections on outpost duty bore the brunt of the forward observation for two field artillery battalions plus a 4.2 chemical mortar battalion, attached to the cavalry group. In many instances casualties were inflicted on enemy long-range targets which could not have been reached by direct fire."

Smoke, dust, and dirt rise over enemy town of Wehrden as American artillery barrage sends fury of steel and fire into Nazi positions. Thirty rounds of 155mm shells were poured on target in given period of time. Note shellhole in foreground building from earlier shelling. This picture was made with Troop B, 106th Cavalry Reconnaissance Squadron, 106th Cavalry Group, December 29, 1944.
Signal Corps Photo

The Enlisted Man In Operations Section

*by Technical Sergeant J. C. Radanovich**

WHEN we began operations in France in the early part of August, I fully expected grave problems and new situations to beset us. Truthfully, in that zero hour before the first enemy engagement, I had seemingly forgotten everything that I knew and wondered whether I had ever known anything.

However, with that first mission and the first reports of enemy encounter coming in over the ether, my confidence began its slow but steady return, and old situations and solutions, proven on maneuvers and in the book, took their proper place in the scheme of things.

To reiterate only what countless others have said before: *Maneuvers are the culmination of the training of the present-day soldier, and of the utmost necessity to a well balanced and rounded-out program. Maneuvers can well be classed as the entrance examinations to the college of actual war.*

The enlisted personnel of any operations section, be it battalion or squadron, regiment or division, must be trained with rigid adherence to eventual battle participation. In fact, the best average of common intelligence and knowledge (rated not so much for schooling as for plenty of common horse sense) is essential to a well balanced, smoothly functioning operations section. I speak purely from the standpoint of the enlisted man.

The entire section should be so balanced as to be able to operate on a mental level with the staff officers in the unit. In other words, the ideal operations section should be able to grasp situations quickly and, in that moment of decision, be able to correlate actions along that same chain of events in such a manner as to necessitate a minimum of time to direct labor into the proper channels.

Now we're set up for business. At this point maneuvers are far behind, and we are engaged in actual conflict with the enemy. Maneuvers, however, play an important rôle in the molding of the operations section. Suffice it to say that a unit is almost bound unto itself to go into combat with the same operations section as was used on maneuvers. The men should know each other well, know each others faults and weaknesses, the strong points and the idiosyncrasies of the staff officers.

Neither personnel nor procedure in the operations section should be changed *after* maneuvers and prior to battle, *unless* the substitutes have already proven their ability on maneuvers. If a change must be made the new personnel should be given a chance to get acquainted, to learn about the organization, to know the staff officers. It will pay dividends later.

Normally, the operations section must, of necessity, be considered a separate entity—not to be tampered with by the troop commander, or the 1st sergeant. It is strictly the unit CO's and the S-3's "baby."

The operations personnel must have loyalty to the S-3 and the commanding officer. This is doubly important because of the secret, potential dynamite packed into the small files and on the maps in the section. Secondly, from the very first day of operations, be it in combat or the pseudo-war of maneuvers, the attachment is almost as close together as a family. The men work and live and must be together continually. They share the same vehicle, the same blackout tent, the same dugout. Sometimes they work on the same map or overlay at the same time—even share the same C or K rations.

Ability to handle routine functions in the rare absence of the S-3, the Ex O, and the CO is desired. It is an unusual occurrence when all three of these officers are away from the CP, but the occasion can arise—and does—and a thorough acquaintanceship with the policies and desires of these three staff officers is an added advantage. Ability to write a clear and straightforward message, and a working knowledge of the message center is necessary.

A fundamental knowledge of map reading and sketch-making is imperative. The present methods of teaching map reading to the enlisted man leaves much to be desired. In usual instances the average soldier garners nothing more than the ability to read coördinates, pick out streams and hills on a map, and read the scale. The average soldier should be able to tell at a glance, for example, the exact height of a hill on his map, picture it in his mind, see the angle of slope and readily be able to put the hill on paper without "sweating." It is hoped that a thorough map reading course will be devised and included in future training.

As long as the operations section does not usually see the area of battle while it is in progress, a better-than-rudimentary map reading ability is necessary.

To be a capable operations sergeant or assistant in the S-3 section a knowledge of maps and map reading are not the only prerequisites. Fundamentally, the enlisted man in the operations section should be able to read a map, know the symbols, and know how to make a neat overlay. He must be able to keep a journal of events, of incoming and outgoing messages. He must be able to write a clear, concise message with ease and speed, and should be able to write a distinct, correct periodic report; typing ability is an asset. He must be able to keep his wits, maintain his sense of humor, and have an endless supply of patience.

The normal business of the CP in a cavalry reconnaissance squadron results in long, tiresome hours for the S-3 and his aides. But the smart squadron S-3 will incorporate the S-2 and S-3 sections into one "operations" section. The S-2 then becomes an assistant S-3, the S-2 sergeant becomes a second operations sergeant, and the operations clerk will also be developed into an embryo operations sergeant.

The S-3 will then have at his disposal three operations sergeants and a clerk draftsman. In no time at all the combination will result in a smooth, efficient, fluid operating section where each enlisted man can do the work of the others. Tours of duty can be staggered, too, for the simple, but important matter of rest.

This is how this particular section operates: Numbering the three sergeants 1, 2 and 3, the schedule begins from scratch. Number 1 comes on duty at 0800 and works straight through to 1800. Then Number 2 comes in and works until 2400. He is relieved by Number 1 then, who works until 0800 the following morning. At 0800 Number 3 comes on until he is relieved by Number 1 at 1800. Number 1 is relieved at 2400 by Number 3 who works until relieved by Number 2 at 0800. This circle continues without strain on anyone of the group, and the men in the organization are sold on the plan.

At mealtimes, the draftsman eats early and is always present in the CP while the operations sergeant is eating. Under this system it is a practice never to have the draftsman work during the night, if it can be avoided. His tour of active duty is from breakfast to supper each day.

Summary: In actual combat the operations section must have in its possession the proper map or maps, grease pencils, overlay paper, lead pencils, a map scale, a map measurer, a protractor, reading glass, message books, journal forms, sufficient paper and carbon paper for reports, a typewriter, plus any few assorted oddments which are specially favored. Enlisted personnel should know the officers with whom they are working and fall in step with them. It must be remembered that liaison is maintained by the lower unit to the higher. Lastly, men must *keep their wits and their sense of humor*.

As was true in the case of many units during the summer campaign through France, most of the "operating" of this section was done from inside the ring-mount of its half-track. Stops were made only at night, and the furious pace of incoming or outgoing messages, and changing positions on the map, went on endlessly in the blackout tent throughout the night.

On occasion, the operations section will have to fight its way through an enemy-held town or sector. Until mid-September, when this unit went into a static position on the line in assigned sectors, its work was done on the run, but without missing a single journal entry, without missing a single daily periodic report, with no loss of personnel in the section during brushes with the enemy or from artillery barrages. Through every type of enemy action engaged in by the unit, in all kinds of

*3d Cavalry Reconnaissance Squadron (Mecz.).

weather (which in France was mostly rain in September, October and November) the section, under the setup outlined here, was as efficient and smoothly run as though it were factory-made and labeled "Operations Section, Grade AAA."

Cavalry Communications in Combat

*by Sergeant Robert F. McCarthy**

AS a whole the communications training received in States, and equipment authorized for this branch have been very efficient. However, 7 continuous months of front line combat operations have demonstrated in practical experience many things inadvertently omitted during the training period. These criticisms, intended only to be constructive, are presented for the benefit of other units.

Radio Operators

The foremost barriers that operators had to contend with in the drive across France and into Germany were terrific interference and enemy jamming. Yet, in the communications schools in the United States, only a comparatively short period was devoted to taking code through heavy interference and simulated battle noises. Much more training should be given radio operators under these undesirable conditions. It is absolutely necessary that operators be able to read their own stations weak signal in the background and *to copy swiftly and accurately the first time.*

Quite justifiably, stress has been placed on the tuning of AM sets by the operators. However, they should be equally capable of manually tuning FM sets. Too much emphasis cannot be placed on this phase of an operators' training.

To summarize:

1. *More stress must be given to the training of radio operators under simulated battle conditions.*

2. *Each operator must be taught to tune his FM set manually as well as his AM.*

Message Center

This unit has found it advantageous to have, as one of its message center clerks, a former radio operator who understands the Morse Code. It is easy for the receiving operator to mistake an S for an H, a W for a J, a C for a Y, etc., and the clerk's knowledge will enable him to interpret these errors when the decoded message fails to make sense. This oftentimes eliminates the necessity of a repeat on the message. A clerk who understands the Morse Code is invaluable.

*Radio Operator, 34 Cavalry Reconnaissance Squadron

Many times, the message center personnel is called upon to operate the telephone switchboard which has been installed in the message center. At least a week's switchboard training should be given to message center personnel before embarking overseas.

To summarize:

1. *A clerk who understands the Morse Code is invaluable in expediting the handling of messages.*

2. *Message Center personnel should know how to operate a switchboard.*

Messengers

The ability to read maps is a prime requisite of a mounted messenger. In combat the individual troops are invariably separated, and it is imperative that a messenger be able to read a map correctly in order to maintain contact with these units.

Before leaving the States the communication officer should know which messengers can drive at night and which cannot. It has been definitely established in this squadron that some men cannot drive at night no matter how many vitamin pills or how much carrot juice they consume. More attention should be paid to this phase of driver examination.

Mounted messengers frequently run into difficulty, and their vehicles should be equipped with a 510 radio so as to maintain communications with their units.

To summarize:

1. *Mounted messengers should receive more training in map reading.*

2. *Training now given in blackout driving is not sufficient; it must be increased.*

3. *Each messenger vehicle should have a 510 radio.*

Tables of Organization and Maintenance

All of these measures would be meaningless without the proper maintenance of communications equipment and unfortunately the T/O of a cavalry squadron does not fulfill the demands placed upon the communications section. In spite of the huge number of authorized radios in a cavalry squadron and the prodigious job of maintenance on these sets, a cavalry squadron is not authorized a specially equipped maintenance vehicle. Were it not for the fact that radio technicians in this squadron constructed a portable shop of their own in a 2½-ton truck, the communication system would never have operated so efficiently. With this arrangement it has been possible for the unit to repair a majority of its own sets in the self-constructed shop-truck, and few occasions have arisen when it was necessary to send damaged sets to a signal depot for repair. Thus valuable hours have been saved, and communications have been disrupted for a minimum length of time only.

The radio maintenance vehicle is kept at all times in the forward echelon of squadron headquarters. This

makes it easily available to all troops which must use its facilities.

All authorized radios are constantly in use and not one is classed as a spare. One extra radio of every type used within the squadron should be authorized and carried in reserve. Then when a set came in for repair, the reserve radio could be issued in its place, communications immediately reëstablished and the inoperative set repaired without loss of efficiency.

All too frequently delays have been suffered in the repair of equipment because the necessary spare parts have not been issued. This has resulted in trips to the signal depot far in the rear. If sufficient repair parts were issued to a cavalry squadron, squadron technicians could do fourth echelon maintenance and valuable time would thus be saved.

It was found necessary to install 528 series radios in the bantams of the squadron CO and troop commanders. To accomplish this the vehicles' electrical system had to be changed from 6 to 12 volts. There would be a distinct advantage in having a 12-volt system originally in all bantams designated for unit commanders' use.

Quite frequently, a cavalry squadron has an artillery unit attached. Because of this, the squadron should be issued a 608 series radio for contact with the artillery. The 608 radio, which this squadron fortunately procured, has been a valuable addition in this respect.

The 536 walkie-talkie radio is invaluable for patrol work, although it still is not authorized to a cavalry squadron. At least 12 of this series should be allotted.

During the lightning-like drive across France, radio was the sole means of communication. Now that this unit is in Germany (incidentally, the 3d Cavalry was the first unit of the Third Army to cross into Germany) positions are comparatively stable, and telephones are used as a dual means of communications.

The wire equipment now used by this unit represents an international collection. There are three French, two Polish, one German and one American BD 72 switchboards. Telephones are of the same variety as the boards and, since wire is not authorized to a cavalry squadron, it is obtained by any means possible. Because of this captured equipment the communication system is considered unique; nevertheless, it has produced almost constant and perfect communications.

Each cavalry squadron should be issued one BD 72 switchboard for squadron headquarters, plus one BD 71 for each of the troop headquarters. Naturally, a sufficient number of phones and an ample supply of wire should be included. Consistent with this, designated men should be trained to operate efficiently the various switchboards, and others trained as wire crews to repair broken lines. Wire maintenance requires special equipment, and experience has shown that one PL 31 should be issued per troop to handle a mile of wire on a DR 5, and an RL 27 hand axle to facilitate the laying of ½ mile of wire on a DR 4.

A German portable electrical power unit has been used extensively to furnish a lighting system. It has also enabled the unit to use several civilian type radios, which increase the morale of the men immeasurably. It is recommended that a cavalry squadron be issued a 110 watt 60 cycle AC power plant, as it is one of the most valuable of assets.

To summarize:

1. *A specially fitted radio maintenance truck, preferably on M-7 small-arms truck, should be an authorized item of a cavalry squadron.*

2. *Radio maintenance vehicle should be kept in the forward echelon.*

3. *One reserve radio of each type used in the squadron should be issued and carried in the maintenance vehicle.*

4. *Sufficient spare parts should be issued to allow damaged sets to be repaired on the spot by the squadron technicians.*

5. *If practical, each unit commander's bantam should be equipped with a 12-volt system and have a 528 radio installed.*

6. *One 608 radio is necessary for communication with attached artillery units.*

7. *At least 12 walkie-talkie sets (536) could be used for patrol work.*

8. *One BD 72 switchboard, plus necessary phones and wire, would be desirable for squadron headquarters.*

9. *Designated men should be trained to operate switchboards and to act as wire crews.*

10. *One RL 31, as well as one RL 27, should be authorized for each troop for wire work.*

11. *A 110 volt 60 cycle AC power plant would be a valuable asset.*

What Have You Learned In Combat?

Write it down—100 to 2,000 words.

Tell your own story; tell it your own way.

Write about what to do—what not to do—to save lives, time, weapons—how to outwit and outfight the enemy.

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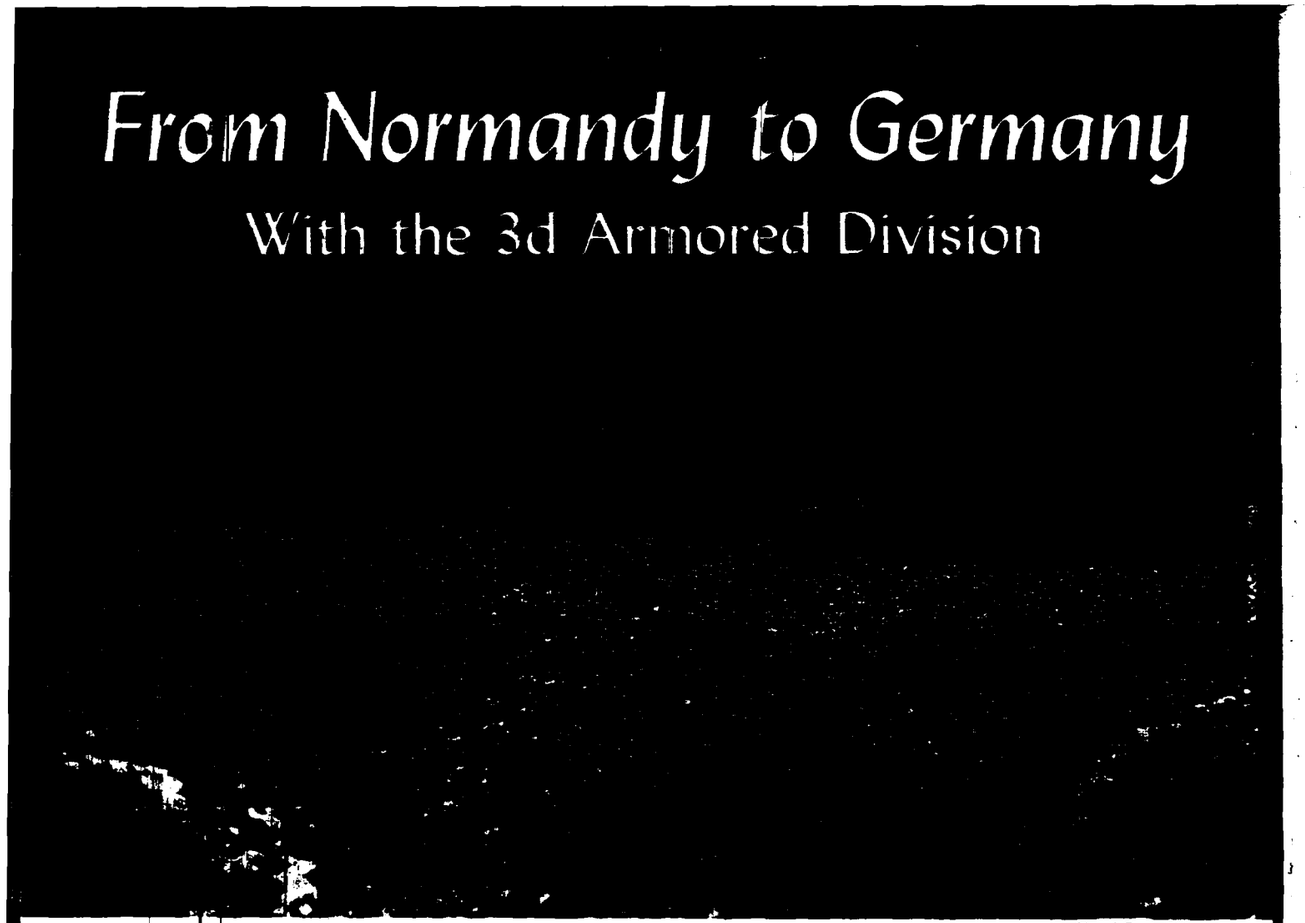
Let others benefit from your experience.

From Normandy to Germany

With the 3d Armored Division



Signal Corps Photo

Tanks of the 3d Armored Division fire at German positions in Belgium. Note mountain in background; also snow.

Bocage Country Fighting

THE 3d Armored Division's initial action was in the hedge-bound Norman countryside before St. Lô—country not ideal for armored operations. Although apparently the last place in the world for tanks, the 3d was called upon to help reduce a salient east of the Vire River protecting Villiers Fossard.

To Brigadier General Doyle O. Hickey's Combat Command A was given the assignment of clearing the pocket held largely by the German Fusilier Battalion, 353d Infantry Division. To accomplish this mission, CC Hickey was given the 32d Armored Regiment, the 36th Armored Infantry Regiment, the 54th Armored Field Artillery Battalion, supporting engineers, medics and maintenance elements.

Three task forces were formed—X under Colonel (now Brigadier General) Truman E. Boudinot, Y commanded by Colonel Graeme G. Parks, and Z commanded by Lieutenant Colonel Walter Abney. In this and subsequent actions, two task forces mounted the attack, and a third (in this case that of Lieutenant Colonel Abney) remained principally in reserve. Later, when the division began to shake down to a more perfectly coördinated fighting machine, multiple spearheads of task forces were used in the division's assault.

The attack from Normandy jumped off at 0900 on June 29, and by 1130, Task Force Boudinot had reached LaFarge-Bois de Bretel, where it was ordered to remain. Enemy resistance was stiff; the terrain favored the German bazooka teams. Task Force Parks, reaching a stream north of Villiers Fossard and the right flank of the force, was held up by difficult terrain and frantic enemy resistance.

On the following day both task forces pressed on, stabilized the line, and turned it over to the 29th Infantry Division. The Villiers Fossard bulge was dented, but the 3d Armored Division had suffered relatively heavy casualties.

Bocage country fighting was bitter; each hedge had to be breached before armor could pass. Because it was impossible to requisition enough versatile tank-dozers, division engineers designed their own. The Maintenance Battalion constructed an arrangement which

Compiled from a pamphlet, "Call Me Spearhead," issued by *Stars and Stripes*, a publication of the Information and Education Division, Special and Information Services.

could be fitted on light or medium tanks. Battle experience and ingenuity welded the division into a crack fighting unit.

CC Hickey was ordered to an area north of the Foret de Cerisy, prepared to counter any penetration on the V Corps front. It was never committed, and on July 7 it was ordered to move across the Vire River at Airel to occupy a bridgehead secured by the 30th Infantry Division, then to advance southward toward St. Giles. That night troops of CC B (Brigadier General John J. Bohn) raced across the Airel bridge under a hell of German artillery fire. Division MP's, disregarding the vicious barrage, clung to their posts directing traffic over the hastily reconstructed bridge.

Across the Vire

Fanning out across the Vire, CC Bohn was attached to the 30th Infantry Division, while CC Hickey on the corps right flank, was to attack in the direction of Les Lendes and Le Perry. At midnight of the 8th this combat command was attached to the 9th Infantry Division—a combination that happily was to continue throughout much of the campaign in the west.

On July 15, Colonel Truman E. Boudinot assumed command of CC B, which was to take a hill called Haute Vents. Colonel Dorrance Roysdon, commander of the 33d Armored Regiment, delegated the mission to Lieutenant Colonel Rosewell H. King. Because of heavy losses in previous action, Lieutenant Colonel King was able to muster only two light and 6 medium tanks. With his radio shot out and his infantrymen unable to maintain the rapid advance, Colonel King nevertheless proceeded to Hill 91, or Haute Vents, and the next morning returned to his lines for infantry support. Under heavy enemy shelling CC Boudinot held out for three days until finally contacted by advance elements of the 30th Infantry Division. Colonel Roysdon and his small band held Haute Vents and defeated the abortive attempt of the German 130th Panzer Lehr Division's powerful drive toward Isigny in its effort to cut off Allied forces on the new beachhead. The German division, in spite of its reputedly magnificent equippage, took a terrible beating in the Haute Vents, Pont Hebert, and Belle Lande sectors.

The Breakthrough

The great armored breakthrough from Normandy into France was the first true showing of American ground power in battle. In the morning hours of July 26, wave after wave of Fortresses and Liberators made the initial assault. There were probably more planes in the air at one time than ever before in the history of air-ground operations. They came endlessly over the horizon, dropped their bombs, and winged away. It seemed impossible for any living thing to survive that raging torrent of explosives. No one could guess the extent of the proposed breakthrough, but orders were given, and teams moved out—multiple columns of armor leading.

In the initial stages of the breakthrough west of St. Lô, CC Boudinot spearheaded the attack of the 1st Infantry Division at Marigny, then made a right turn and drove for the high ground around Montuchon, northeast of Coutances and behind enemy lines. After taking its initial objective, it clattered to within sight of Coutances, but at that time an order was received to turn back and aid the 1st Division to reduce a strong point.

When the combat command had turned west of Marigny, B Battery of the 391st Armored Field Artillery Battalion was firing support. When the 4th Cavalry Squadron ran into serious trouble with the enemy a few hundred yards away, command of the battery was turned over to a single noncom, and all available personnel was used as infantry against the Germans. Five of the battery's six guns were used for support while the sixth was fired point-blank at the hemmed-in Germans.

Activity encountered by units normally in rear areas is described in the annals of the 486th Antiaircraft Battalion, an attached unit: "From 0030 to 0105 hours the area around the division CP was heavily attacked by enemy aircraft. Flares were dropped directly over the CP and bombs fell throughout the area. No damage or casualties. During this night the battery commander, Captain Phillip Shaw, with 4 or 5 enlisted men destroyed an enemy tank, several half-tracks, volkswagons, and numerous ammunition and gasoline trucks, killed two enemy soldiers and captured 9. One of the enemy,

Viewing their conquest from the rubble littered steps of Cologne Cathedral, Germany, are Major General Maurice Rose, commander, 3d Armored Division, and Brigadier Generals Doyle O. Hickey and Truman E. Boudinot, who led their Combat Commands across France. March 15.

attacked by an American soldier wielding a hatchet, shouted 'Heil Hitler' and shot himself to death."

In the meantime, CC Hickey had been given the mission of taking Cerisy la Salle, Montpinchon, and the high ground to the east and southeast of Coutances.

Because the enemy had expected such an attack, CC Hickey encountered more opposition than had Boudinot but, with the help of other armored columns to the east and west, forced German armor beyond Roncey.

At this point the 2d Armored Division cut the escape gap at St. Denis le Gast while the air forces pummelled the road-bound Nazi vehicles.

From an operational standpoint, it was a combat command "show." This was illustrated by the action of CC Hickey, which, on July 29, was ordered to turn south and seize a crossing of the Seine River at Gavray. Lieutenant Colonel L. L. Doan led his troops across the stream on foot under fire to secure a bridgehead. So fast was the advance that at Brecey, the speeding combat command caught German troops lolling under the trees, drinking wine!

CC Boudinot, attached to the 4th Infantry Division, attacked on August 1 to take the high ground east of Villedieu les Poeles. It received strong opposition and was ordered to cross the See River and move south and east to hold a crossroad at Le Mesnil Adelee. The objective was reached on August 4 after encounters with the 116th Panzer Division, the 363d Infantry Division and other forces.

German Counterattack at Avranches

On August 6, weary of combat and in need of rest, maintenance and rehabilitation, CC Boudinot was ordered to a rest area. On the 7th, however, the combat command was attached to the 30th Division to repel the German breakthrough attempt at Avranches. Heavy fighting took place around Le Mesnil Adelee and Le Mesnil Tove. The command was shelled, bombed and attacked by infantry and tanks for 5 consecutive days.

Official report for August 9 described this fury: "At 1145 Task Force 1 (Colonel Roysdon) was bracketed. Expected enemy fire began falling around noon. Lieutenant Colonel King's command half-track exploded. Attempt was made to move Colonel Roysdon's CP. A shell struck the half-track, wounded an officer and cut through the sides of the vehicle so that it looked like a sieve. There was a tree burst; then a round landed by the front sprocket. Colonel Roysdon and his staff were underneath the tank. No one was injured. Heavy shelling continued until 1600."

Meanwhile, CC Hickey had cut even deeper into German positions and had received its full share of the attack toward Avranches. On August 1 Lieutenant Colonel L. L. Doan's task force was ordered to advance and to seize the high ground in the vicinity of Belle Fontaine, northwest of Mortain. Task Force Z, commanded by Lieutenant Colonel John Daniels of the 1st Infantry Division was to advance via Reffuevielle to seize the high ground near Romagny, to the southwest. The command was given the 3d Battalion, 18th Infantry for further support.

During the night of August 2, the advance was held up by a road block, but at dawn Juvigny le Tertre was taken after a severe fight.

Further advance was made on August 5 when Task Force X under Colonel Doan set out for Le Teilleul. A smaller force, sent to hold Barenton, did not rejoin the command until August 12-13.

On August 6, Task Force Doan set out for Ambriers le Grand on the Mayenne River and arrived there at 0830 hours. Considerable fighting was necessary but the bridge was seized quickly, and the 1st Infantry Division pushed across to establish a bridgehead on the east side of the Varenne River. The following day, Colonel Walter Richardson's task force moved to positions around St. Mars sur Colmont. Except for an outposting operation at Gorron, this maneuver practically completed CC Hickey activities west of the Mayenne.

The 3d Armored Division rested and licked its wounds. Major General Maurice Rose (then Brigadier General) had assumed command, and now he reviewed the elements which were to go with him into further battle.

Since D plus 18, when the division had landed in Normandy on Omaha Beach, the men of the 3d had become seasoned soldiers, weathered and squint-eyed. They had been introduced to war. They had plunged into action green but confident. They had tasted the bitterness of death, and fear, and near defeat. They had gone to war with the good-natured confidence of American sportsmen, and had learned to play for keeps—to hate the enemy. These men had arrived in the arena of war, hard and ready, and by that token they had survived.

The division was no longer a collection of separate elements: the "Spearhead" was a team! Proof was soon forthcoming.

The Falaise-Argentan Pocket

The British Army, driving south from Caen, and the U. S. First, smashing east, had trapped a sizeable part of Field Marshal von Kluge's Seventh Army in the Falaise-Argentan pocket. The 3d Armored was ordered to close the escape gap.

On August 13, CC Hickey, moving out in two columns, led the division attack. The axis of advance was Mayennes—Pré en Pail—Carrouges—Ranes—Fromental. With Task Force Doan to the south, and Task Force Richardson to the north, the combat command moved through Couptrain and Javron, cleared these towns of the 728th German Infantry Regiment, and halted its first day's drive with more than 50 miles of ground covered! In comparison with this day's action

the German blitzkrieg of 1941 looked like a midget auto race in slow motion.

Heavy fighting broke out beyond Pré en Pail. In the late afternoon of August 14, Carrouges was a picture of war at its grim height. German vehicles by the score testified to the effectiveness of the Spearhead. Along the Carrouges-Ranes road, armor of both sides had suffered. Panthers and Shermans alike were left on that bitter boulevard, wrecked and burning. French houses burned sullenly, and aircraft dropped flares above the column.

That night, Task Force Richardson reached the outskirts of Ranes. There was a minimum of shell fire. On the left flank, Task Force Doan, coiling at Joue du Bois, engaged dismounted German troops throughout the night and in the morning moved up to seize Ranes. The balance of CC Hickey with a battalion from the 60th Infantry Regiment, engaged in mopping-up activities. Counterattacks by the German 1st and 9th SS Panzer Divisions were repulsed with severe losses to the enemy.

The 3d Armored Division moved forward and took Fromental on August 17, lost it the same day, then in a third burst of fury smashed back again. That day, an estimated 1,200 enemy vehicles passed across the front of the division—receiving deadly artillery fire and direct attack from the air. The Battle of the Argentan-Falaise gap was nearly over, but it had not yet entirely spent its fury. Many military observers agreed that this action was the true "Battle for France," for after Field Marshal von Kluge's elite elements were crushed to bits here, the Wehrmacht never again attempted to slug it out with Allied forces in France.

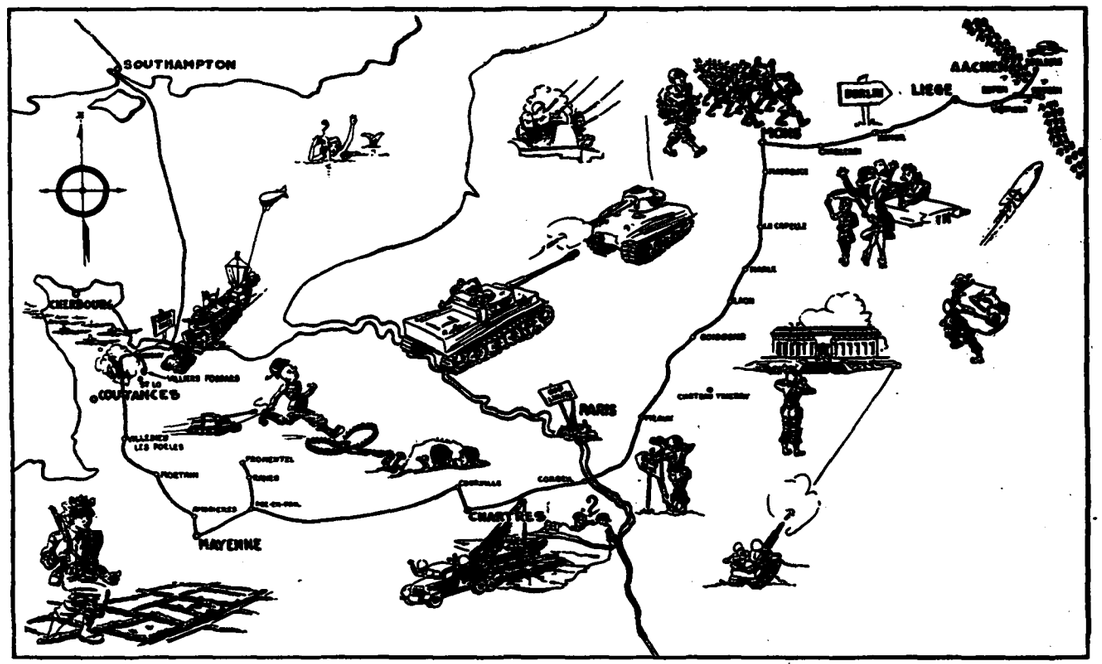
Individual performances were faultless. Tank commanders drew straws—the winner leading the attack. Fighting was often at 70 to 100 yards. One TD neutralized two Panther tanks at the negligible range of 25 yards. Two shots pierced the thick frontal armor of the vaunted Mark Vs. The TD commander himself was killed when he dismounted from his vehicle to aid the enemy wounded. Tank Destroyers of the 703d TD Battalion proved extremely valuable on road block positions where they helped smash German armored counterattacks.

On the afternoon of August 18, the Spearhead Division, represented by tanker Sergeant Donald Ekdahl of the 33d Armored Regiment met advance elements of British armor on the road near Putanges. The trap at last was closed, and for the 3d Armored Division the heaviest fighting was over.

After the Battle of the Argentan-Falaise Gap the division moved overland to the vicinity of Courville and Chateauneuf, between Dreux and Chartres, and on August 24 rolled again—this time to Corbeil and Melun. Preparations were made for the Seine crossing. From this point on the pursuit became a mad dash.

Across the Seine

The march through northern France was a nightmare without benefit of sleep. The entire pursuit of dis-



organized remnants of a Nazi army was a test to determine which had more stamina—men or machines. Spearhead men, trained to care for their machines first, served the iron monsters with the deference due to pagan gods. In the headlong dash, supply trains accomplished marvels of movement. Often these "rear echelon" troops were forced to fight a path through enemy held territory to deliver their important cargoes of gas, ammo and rations. At one time, the trucks were hauling gas 200 miles overland.

By the time the Argentan-Falaise gap was closed the 143d Armored Signal Company alone had strung 1,200 miles of wire. In the sweep across France an average of 1,000 radio and personal dispatches per day were handled. The mileage of the signal men was 8 and 10 times the total distance covered by the division in attack.

Throughout the entire operation north of the Seine, the division was inspired by the thought that it was the spearhead of the U. S. First Army, and the phrase: "Call me Spearhead" became popular.

Crossing of the Seine was begun on the evening of August 25 by leading elements of CC Boudinot and was completed before darkness of the following day. In addition to a bridge built earlier, a 540-foot steel treadway, put up by the 23d Armored Engineer Battalion south of Corbeil, was ready for use by daybreak of the 26th.

After crossing the Seine, CC Hickey led the advance, with Boudinot on the left. Moving to Chausse en Brie, in two columns, the command drove through the 48th German Infantry Division, and closely pursuing the retreating enemy and overrunning several rearguards, on the following day passed through Coulommiers and crossed the Marne.

Beyond the Marne

By midafternoon of the 28th, CC Boudinot had advanced across the Marne and, in an enveloping movement from the west, captured Meaux, farthest point of the German advance in World War I. After routing the German 9th Panzer Division, 48th Infantry Division, and security battalions, the combat command plunged on toward Soissons. So rapid was the advance that in many cases the enemy front line became only the width of the road. German units, closing in behind each advancing column, were doomed to destruction. Result, however, was that every element of the division, including even the trains, became a combat unit. Soissons, taken later that night, suffered an attack by 20 ME 109s.

Meanwhile, CC Hickey went on to take objectives beyond the Aisne River.

During this time all had not been peaceful at the division CP. On August 26, after crossing the Seine, it reached Quincy, but not before withdrawing Germans were encountered. The following day the CP caught up with a German supply column at Brie Compte Robert, took part in a fight, and moved to Mangy le Hongre. At dawn the CP awoke to the familiar rattle of German machine-gun fire. An enemy convoy attempting to drive through the area was destroyed.

The shooting-up of three trains in the vicinity of Braisne and Soissons on August 28 was a division highlight. By coincidence both combat commands participated. B Battery of the 486th Antiaircraft Battalion, attached to the 67th Field Artillery Battalion, fired on the engine of one 42-car train at Braisne and stopped it after putting a 37mm shell through the engine boiler and raking the cars with .50 caliber machine-gun fire. At about 2000 hours, elements of the 32d Armored Regiment of CC Hickey stopped another train at Braisne and engaged Mark VI Tiger tanks loaded on flat cars. Meanwhile, Task Force I (Lovelady) of CC Boudinot took part in a third episode and destroyed a freight just outside of Soissons.

Villiers Cottrets, which CC Boudinot had passed, was reoccupied by the Germans on August 29. This move by the enemy impeded the division advance and resulted in the heaviest action on the corps front that day. By nightfall, however, the CP was located outside Soissons. A German ammunition dump estimated at 4,000 truckloads, was taken at Villiers Cottrets.

That same day the crossings of the Aisne River were secured, and both combat commands advanced to take high ground to the northeast of the river. Chief enemy resistance on the 20th was reported in the vicinity of Montcornet and Rozoy, with the 4th Cavalry Group, active in reconnoitering these areas.

New Direction: North to Mons

Given the mission of taking Sedan and Charleville on August 31, the combat commands moved out, Hickey on the right, Boudinot on the left, division reserves in the center. At 1315 hours word came from the commanding general of the VII Corps—The direction of the advance had been completely changed from due east to north!

"You could hear the brakes squeal when we radio'd the order to halt!" one staff officer said. Some of the elements already had driven 30 miles east before the new command was received; two of the 6 columns already had engaged the enemy. The entire change in plan was accomplished by voice and radio without the writing of a word other than entries into journals.

Mons was the new objective. CC Boudinot was to advance to Vervins; Hickey to Seraincourt and Rozy sur Serre. The next day a 6-pronged drive was launched toward Mons with combat commands on a broad front, from left to right, Boudinot, Hickey, and a separate command to the right, which centered around the 36th Armored Infantry Regiment.

CC Hickey pushed on to Avesnes, while Boudinot pounded through Vervins, passed LaCapelle, and by nightfall was due west of Avesnes. Several river crossings were made during the day, and air support was

called to bomb a number of enemy columns. Elements of the 36th Infantry's combat command had been delayed, but late in the day reached Hirson.

In the early hours of September 2, the first flying bombs passed over the heads of division troops. They were not the last.

That afternoon the first elements of the 3d Armored Division crossed the Belgian border. At Maubeuge, when the task force commander had been asked via radio whether the enemy was there, he had replied that there were so many joyous civilians on the streets that there wasn't room for Germans!

The second great battle for Mons was not anticipated by either the Wehrmacht or the American First Army, and yet it probably decided the outcome of future battles more profoundly than had any other action in which this division had engaged. The estimated 40,000 German troops, cut off at Mons by this division and further mauled and rounded up by the ensuing 1st Infantry Division, were attempting to retreat to the Siegfried Line. Their organization shattered, and without communication, the vanguard of this huge force ran into road blocks of the 3d Armored Division on September 3. The debacle that followed was complete.

The 3d Armored Division captured nearly 8,000 troops at Mons, killed many more. The 1st Infantry Division, supporting the armor, captured 17,000 more. One platoon of Company A, 703d TD Battalion, destroyed 20 enemy armored vehicles in 6 hours on a single road block!

Three German general officers were captured by the division in this battle—Lieutenant General Rudiger von Heyking, of the 6th Luftwaffe Field Division, who said that he had been "completely surprised" because he had been advised that there was a "15 mile escape gap" south of Mons; Major General Hubertus von Aulock, ex-commander of a *kampfgruppe* which was supposed to defend Paris; and General Karl Wahle, once garrison commander of the city of Hamburg.

Prisoners constituted a vexing problem. Major Charles Kapes, Provost Marshal, set up a prisoner of war enclosure in an old sugar factory close to the fighting area. With prisoners pouring in by the hundreds, and nearly 4,000 already confined, Major Kapes and a force of 16 division MPs and 27 infantrymen from the 1st Division waged a pitched battle against attacking German soldiers. They not only turned back the attack but captured 300 more of the befuddled supermen!

On to Germany!

By noon of September 4 the situation around Mons had become somewhat stabilized, and the division pushed on to Namur: CC Boudinot on the right, Hickey on the left.

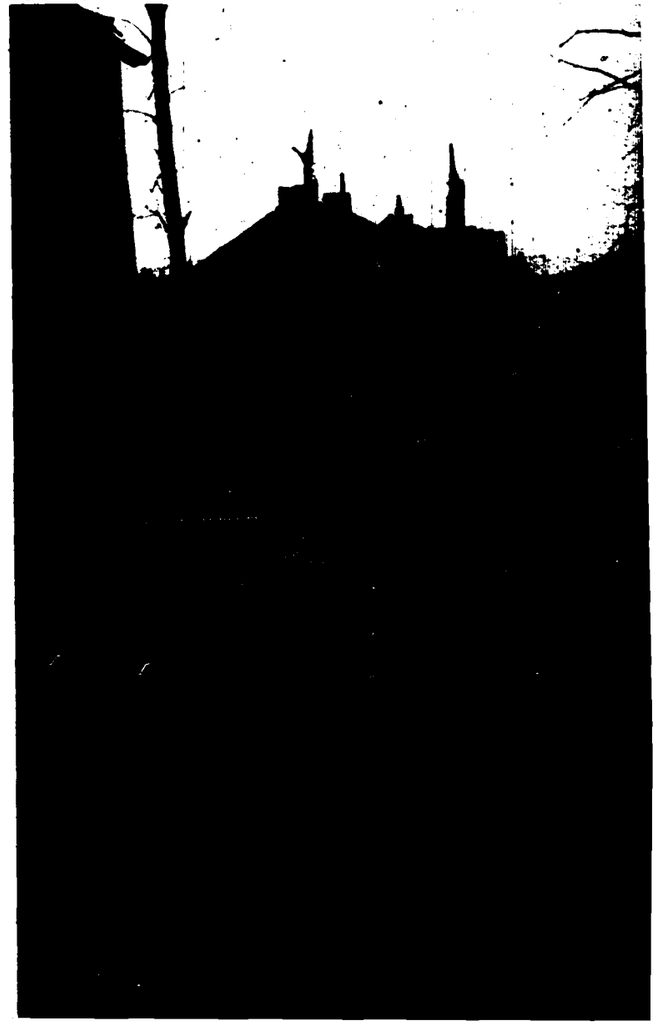
Task Force Mills (Major Herbert Mills) of CC Boudinot reached Namur that day. CC Hickey bivouacked that night east of Charleroi, and CC Boudinot, which had alotted 45 minutes for passage through the city, took two hours and 45 minutes. Advance was delayed by the tumultuous welcome of the citizens.

The next night, with all elements of the division in the vicinity of Namur, engineers pushed two bridges across the Sambre and Meuse rivers. The first bridge measured 120 feet long; the second, constructed in 7 hours and 20 minutes, was built under the cover of darkness. CC Boudinot's Task Force King was detached to aid the 9th Division at Dinant.

Terrain east of Mons was a far cry from the wide plains of northern France. In Belgium narrow valleys with swift running streams split precipitous wooded hills. Densely populated and highly industrial, the valleys were capable—if properly manned—of easy defense.

Liege was the new objective. By nightfall, Huy, with the Meuse bridges intact, was in our hands; CC Hickey was within quick calling distance at Antheit, and Boudinot's leading elements were already beyond the

Tanks of 3d Armored Division pause in Huchin, Germany, November 25. Units of the 3d were first in Germany.
Signal Corps Photo



town. Meanwhile, Task Force Hoban encountered stiff resistance from by-passed troops.

While the Germans were preparing hasty defenses along the river route, CC Boudinot, on the south side of the river, turned to the right and the high ground, and by nightfall Lieutenant Colonel Lovelady's task force was on its objective, the southeast side of Liege. So surprised was the enemy by the flanking move that their guns were pointed the wrong way.

The night of September 7 General Konrad Heinrich, commander of the German 89th Infantry Division, was killed as he attempted to drive through a roadblock near Liege in a sporty convertible coupelet. He was the 4th German general for whom the division had accounted.

On the 8th Lieutenant Colonel Hogon's force with supporting infantry cleared Liege of the enemy, while the engineers constructed 510 feet of treadway bridge across the river in darkness. Meanwhile, CC Hickey mopped up on the north side of the river. That same day General Bock von Wulfingen, a 5th German general, was captured.

Setting out at 1100 hours on the 9th, with Verviers as the objective, CC Boudinot met organized opposition for the first time in days. Meanwhile, CC Hickey crossed to the east of the Meuse and advanced to the high ground north of Dison—also against opposition. Allied air attacked German columns stretching from Louveigne to Limbourg, and by that night leading elements of the 33d Armored Regiment were in Pepinster.

The following day CC Hickey reached Limbourg, where it was temporarily stopped. Boudinot ran into many felled trees beyond Theux but continued his advance and took Verviers. At Theux a German military warehouse, filled with foodstuffs and tobacco, provided 3d Armored Division men with cigars. That day the division CP moved to Verviers.

Eupen, falling to CC Boudinot on the 11th, was occupied by the infantry. CC Hickey knifed through Lohirville and Welkenraedt against constant pressure to an objective northwest of Eupen. The 83d Armored Reconnaissance Battalion screened the division's movement and air cover was provided.

As the division neared Germany V-for-Victory signs, flowers and "vive L'Amerique" declarations disappeared. Eupen was a sullen, paradoxical town. A few Belgian flags hung from the windows; the white banner of surrender trailed in others. This was border country, a place of conflicting emotions, bitter hatred—and suspense. Last stop in Belgium. The somber-eyed German civilians of Eupen glanced furtively at the triumphant armor of America and wondered whether the vaunted West Wall could possibly halt the avalanche.

Immediately, General Rose ordered reconnaissance to patrol the routes toward the Siegfried Line, reconnoiter for crossing points, and determine the strength of the enemy.

Recon elements of CC Boudinot set out at 0800 on September 12. Several routes were surveyed, and one finally chosen. The advance was barred by road blocks of imbedded steel rails and gates of heavy cables strung across the road. The obstacles were covered by fire from heavy pillboxes on the flanks. Excellent coördination between tanks, infantry, engineers and artillery, quickly reduced these strong points. While artillery and tanks maintained heavy fire, engineers attached to the task force moved forward to remove the blocks. Tanks rumbled through the gap and at 1451 hours leading elements of Colonel Lovelady's task force were on German soil. It was the first invasion of Germany in force since Napoleon. Resistance in Roetgen was light. The 83d Reconnaissance Battalion occupied the town, and outposted it immediately.

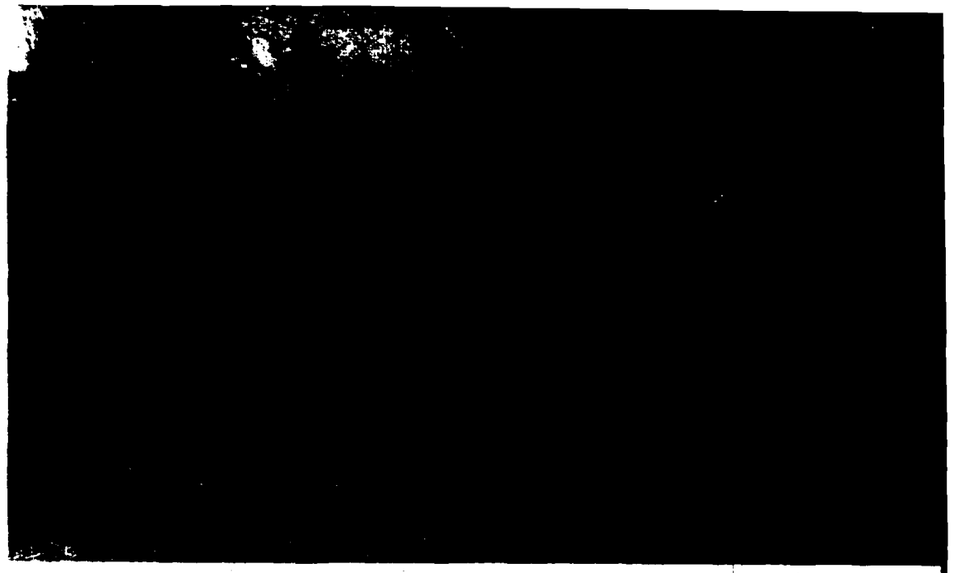
Inside Hitler's Reich

Meanwhile, CC Hickey also had plunged into Germany proper, and on the night of September 12-13 assembled in the concealment of the Aachen-Eynatten Wald. After patrols reconnoitered the dragon's teeth of the line during the night, the attack jumped off at 1000 hours under the direct supervision of Colonel Doan. Infantry lunged forward through the dragon's teeth, followed by engineers and tanks. Their combined efforts breached the first line and led to a heavy exchange of fire. A number of 3d Armored Division tanks were knocked out and, for a time, the attack faltered, but soon the task force rallied and stabilized its gains. September 14 was spent in mopping up the area and in reconnoitering the second line of defenses.

On September 15 the second line of the Siegfried was breached and the town of Busbach cleared. Opposition was extremely heavy. Artillery and mortar fire became intense, but the command moved forward. Fresh enemy troops were encountered for the first time. Fortunately the rapid advance, plus the destruction of the large German force at Mons, combined to prevent the enemy from properly manning the West Wall.

CC Boudinot also had attacked the outer defenses of the line on September 13 with similar success. Division engineers, invaluable in the breaching of the line said that the Siegfried defenses were not a particularly intricate engineering problem. "With proper covering fire," said Colonel L. G. Foster, "we could crack the Siegfried any Thursday afternoon, and have time to knock off for tea."

The 3d Armored Division had wound up one of the most amazing armored force operations in the history of warfare. Eighteen days from the Seine to the Siegfried! And now, in a final, powerful burst of effort the division had smashed completely through that storied West Wall into the confines of greater Germany. With the 1st, the 4th, and the 9th Infantry Divisions, these men who had first grappled with the enemy only two months before, had now become part of the "First Team of the First Army."



Medics load a casualty on stretcher-carrying jeep, Tettingen, Germany, Jan. 15, 1945.

Medical Evacuation

With a Reconnaissance Squadron

Training

THE nature of work performed by a medical detachment of a reconnaissance unit in actual combat presents problems of evacuation and medical care under fluid conditions that are not covered by any standard procedure or field manual.

The tactical situation of a reconnaissance unit, in which troops work great distances apart, necessitates an individual training program for the medical detachment; so to facilitate prompt medical aid for individual casualties, a special training program was set up for the Medical Detachment, 125th Cavalry Squadron. Among other things the program called for one half-track ambulance and two aid men to accompany each troop on its mission. This plan enabled the ambulance to retrace its route when returning to the aid station (which would either be with or close to squadron headquarters) instead of being dispatched from there to go forward and locate a troop and its casualties. Another advantage derived from this practice was the reduction in the time lag between infliction of the wound and receipt of medical aid.

The plan to have an ambulance accompany each troop necessitated intense training in map reading, evacuation under the various tactical situations, and the development of individual initiative and self-reliance in all medical matters. To do this, the enlisted men were not only trained in the care and treatment of the wounded but were instructed in the diagnosis and treatment of various common illnesses which occur whether in garrison or in the field. In addition to lectures, training consisted in having medical aid men, under the supervision and correction of the medical officers, diagnose and treat patients.

Great stress was laid on the tactical employment of a reconnaissance unit. It was felt that if the aid men understood the tactics involved, they would be able to make a more competent decision on the care and evacuation of patients. Besides training by lectures, demonstrations, and dispensary applications, actual field problems were worked out so that even on a routine march by the squadron to a firing area, the medical detachment practiced this chain of evacuation.

Every reconnaissance soldier should be well equipped to give himself or his comrade first aid. In order to achieve this, the training program was extended to include demonstrations and county fair exhibits for all members of the squadron.

Mobility of the aid station was deemed very important. An attempt was made to arrange equipment in

*Commanding, Medical Detachment, 125th Cavalry Reconnaissance Squadron (Mecz).

by Captain Lawrence Loewinthan, M. C.

the half-track ambulances and the one-ton trailer in such a manner as to make it unnecessary to remove anything from the vehicles. One could work directly in and from them. Both the one-ton trailer and the aid station half-track ambulance could go into action in 30 seconds, and the ambulance could even be used as an examining and treatment room on the move.

Procedure

When the 125th Squadron arrived at the assembly area, one mile south of Vouilly, July 1, 1944, it was assigned a defensive mission along the Vire Canal. Immediately the medical detachment put into operation its preconceived plan and sent one ambulance with each reconnaissance troop. This mission lasted only two days, and there were no casualties.

On July 7, the squadron was attached to the 30th Infantry Division and went into action across the Vire Canal in the vicinity of St. Jean de Daye and Goucherie. This was an assault mission, on which the squadron encountered well established antitank weapons and well dug-in infantry positions, protected by high hedgerows. Although casualties were high, the evacuation system worked very satisfactorily. The armor protection of the half-track ambulances saved the aid men on numerous occasions when small-arms fire hit the ambulances. (One ambulance had its flag shot away and its water can on the side destroyed.) The ambulances found the aid station quickly and easily. Patients were received, treated, and forwarded in fast time and good condition.

The squadron's next assignment was a holding mission in St. Lô, with foot reconnaissance of the high ground to the east. On July 21 the aid station, a half-mile south of Couvains, received a concentrated artillery barrage; 8 men were killed outright and 32 wounded. With the medical detachment thus suddenly over-taxed, it was necessary for every aid man to work individually and as rapidly as possible in an effort to treat and evacuate the casualties before any more artillery fell, and their training in individual resourcefulness paid dividends. Within 30 minutes every patient had been treated and evacuated, and all dead collected and turned over to the GRO and the chaplains. Had it not been for the stress placed on the training in individual initiative the results achieved could never have been attained. The aid station site had been picked between two very high hedgerows, which were parallel to each other and about 12 feet apart. One hedgerow was over 6 feet high and the other 5 feet. It is believed that this location, plus deep, well covered foxholes, prevented injuries to the medical detachment, although artillery fell all around.

On August 14 the squadron was ordered to reconnoiter ahead of the 30th Infantry Division in the vicinity of Domfront and assault Hill 228 and the region of Dompierre. Because the medical detachment lacked sufficient personnel to allow one aid man per platoon, as does the infantry, and because the T/O calls for no litter bearers, the medical situation on this occasion was made extremely difficult.

On August 19 the squadron was given the mission of preceding the 30th Infantry Division and 2d Armored Division on a wide sweep from Dompierre to Senonches. This was a typical cavalry reconnaissance mission, with extreme mobility and fluidity. As a result of the grit and dust there developed a tremendous number of cases of conjunctivitis which at each halt were treated in the specially constructed one-ton trailer without holding up the column or the tactical situation. Altogether, almost 300 cases were treated.

On August 22 the squadron was ordered to attack due north through Breteuil, Verneuil, and Conches. On the left flank of the 2d Armored Division, the reconnaissance troops were cleaning up enemy units that had managed to pull out through the Falaise Gap. It was on this mission that one of the medical detachment's half-track ambulances hit a land mine but, although the front end of the vehicle was destroyed, neither the driver nor the assistant driver was injured.

Beginning September 1 the squadron drove north through Peronne, Mouricourt, Valences, and into Belgium just south of Tournai.* Because of the speed of the advance there was never time to set up an aid station; patients were examined and treated in one of the half-track ambulances, redesignated into a mobile aid station. This method worked very well. Despite the fact that the second echelon of evacuation was at times 95 miles behind, the three collecting company ambulances kept the flow of casualties running smoothly. The system of having half-track ambulances out with the troops once again proved successful in finding the casualties quickly and returning them to the mobile aid station without delay.

During the 4 days that it took the squadron to advance from the Seine into Belgium, the aid men ate, slept, treated patients, and evacuated them on the road and on the move. During this time three factors kept the medical situation from breaking down. They were:

1. The mobile half-track ambulance, which had been converted into a mobile aid station.
2. The one-ton trailer that became a mobile dispensary by raising the sides.
3. The collecting company ambulances attached to the aid station for second echelon, which kept flowing back and forth under tremendous hardships of distances and ever-changing situations.

September 30 the squadron once once again went into a defensive position, this time on the left flank of the XIX Corps. For the first time since the squadron was committed to action, the medical detachment moved its aid station indoors—in a factory north of Sittard. Winter was setting in, and with it, many cases of upper respiratory diseases. The squadron unit had been in

*See "From Paris to Belgium With the 125th" Page 12.

constant action for a tremendously long period of time, and the reaction began to appear in the form of nervous disorders and combat fatigues. The replacement situation was quite difficult, especially for trained cavalrymen, so a 10-bed infirmary was set up in the factory for slightly sick and wounded cases which were treated on the spot and returned to duty.

While attached to the 84th Division on November 26 the squadron was given a dismounted holding mission at Prummern and Beeck, Germany. The medical men went dismounted and once again the lack of sufficient personnel and litter bearers caused the treatment and evacuation of the wounded to be extremely difficult. This mission further proved that a half-track ambulance with its two aid men works well for all types of *cavalry missions*, but if the aid men are dismounted, the personnel is insufficient. Platoon aid men plus litter bearers should be attached for this type of operation.

Improvisations

The detachment found no reason to improvise its technique or procedure, but it did often need to improvise equipment.

1. The three half-track ambulances assigned to the reconnaissance troops were reconstructed in the following manner:

The top inserts for carrying litters were moved as far as possible to the sides to make room for an aid man to move between the litters when necessary. This arrangement facilitated the loading of the ambulance, which, with the original setup, had been extremely difficult. A step was found necessary for the loading of the ambulances. The last improvised item was a sick call box, where small quantities of the various medicines used on sick call were carried. Throughout the campaign this proved of tremendous value, as troops were often scattered over a radius of 30 miles, and the usual small sick call cases, such as colds, athletes foot, gastritis, constipation, and mild diarrhea, were handled in the field by enlisted personnel.

2. The fourth half-track ambulance was changed into an improvised aid station. On one side the litter attachments were moved as far to the side as possible (as in ambulances). On the other side a work table and storage cabinets for medical supplies were built. With this arrangement the material could be taken off the shelves, placed on the work table within easy reach of the surgeon working on the patient lying directly opposite. An improvised lighting system consisted of two ¼-ton headlights (working off the half-track battery) which were freely moveable in all directions and could be brought to concentrate on any portion of the litter. A step was also necessary on this ambulance. To allow the surgeon to stand up, the roof of the half-track was raised to a height of almost 6 feet.

3. The one-ton trailer was completely redesigned so that by raising the sides, it would become a mobile dispensary. The sides were removed and hinged at the top to permit them to be raised in a manner similar to a "hot dog" stand. A second floor was built high enough above the first for the No's. 1, 2, 4, and GC chests to be pushed between them from the rear. The upper portion of the trailer was divided in half by a partition running from front to back, and on each side of the partition was a shelf. When the side of the trailer was raised, there in full view were all medical supplies available. The two halves of the trailer were identical, so that it was possible for two separate teams to work, one on each side, at the same time. On both sides were litter inserts from which the litters stretched to one of the chests with its litter support.

To set up the aid station, therefore, only the following steps were necessary.

1. The sides of the trailer were raised.
2. The chests were pulled out and set in position away from the trailer.
3. The litter rest was placed on the chests. The time to set up all 4 chests, allowing for 4 separate treatment stations, was less than 5 minutes. Litter racks were built on the ¼-ton trailer.

Evacuation

The system of evacuation of a reconnaissance outfit must be simple and yet very flexible, as the tactical situation may change without any notice. The system for this detachment was based on the following assumptions:

1. The platoon would always know where the troop headquarters was located; therefore, they would send the patient back to the troop headquarters, where an ambulance and medical aid was always available.
2. The troop would always know where squadron was; therefore, the half-track ambulance would bring the patient back to the squadron headquarters, where the aid station was located.
3. The collecting company ambulance, which traveled with the squadron aid station, could always go back and find a collecting company.

This system, used during all types of missions in France, Belgium and Germany, was uniformly successful throughout, even during the push north through France, when the squadron was receiving orders while on the move. At no time did the evacuation system fail to work smoothly and efficiently.

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Spearheads

Out of this war U. S. armor has emerged as a powerful arm of opportunity. Using cavalry tactics, armor has exploited the breakthroughs made in German lines, plunged forward to disrupt rear echelons, prevent the enemy from reorganizing, cut off his supplies and communications, and spearheaded phenomenal drives into enemy-held territory.

The first decisive breakthrough in which American armor played a significant rôle occurred during the final days in Tunisia. On May 3, 1943, elements of the 1st Armored Division, commanded by Major General Ernest N. Harmon, broke into Mateur, then quickly fanned out toward Tunis and Bizerte to cut up and surround remnants of the once powerful German Afrika Korps.

In the 38-day Sicilian Campaign in 1943 the 2d Armored Division, commanded by Major General Hugh J. Gaffey, spearheaded the 72-mile dash from Agrigento to Palermo in which Major General Geoffrey Keyes' II Corps of the Seventh Army (then commanded by Lt. General George S. Patton) reached the Tyrrhenian Sea on July 22, neutralized thousands of German and Italian troops, and prevented any organized resistance on the western third of the island.

In Italy on June 3, 1944, elements of the 1st Armored Division, still commanded by General Harmon, broke out of the Anzio beachhead and spearheaded the advance of the VI Corps, under Lt. General Lucien K. Truscott, through Rome. With Task Force Howze in the lead, the 1st Armored Division then pursued the enemy north until the division was drawn from the line at Volterra on July 10.

As American troops broke out of the Normandy Peninsula in July 1944, the 3d Armored Division (Major General Maurice Rose, commanding) and the 4th Armored Division (Major General John S. Wood, commanding) spearheaded the phenomenal drives of the First and Third Armies across France to the Siegfried Line.

Now, in March, 1945, as new breaks are being made in German defenses—through the Siegfried Line and across the Rhine—armored spearheads are again out front, pursuing, harassing and surrounding a surprised and stunned enemy. To the veteran 3d and 4th Armored Divisions have been added new armored spearheads—notably, in recent actions, the 6th, 9th, and 11th, commanded respectively by Major General Robert W. Grow, Major General John W. Leonard, and Brigadier General Charles S. Kilburn. The 9th recently led the First Army across the Rhine River into the heart of Germany. The 11th, with the Third Army, spearheaded the drive north along the west bank of the Rhine to join units of the First Army south of Remagen and cut off some 50,000 Germans in the Eifel region. On March 20, the 6th Armored Division, with the Seventh Army, linked up with units of the Third in the Saar region and sealed off another 80,000 Germans doomed to inevitable death or capture.

It is interesting to note that cavalry-trained officers are predominant in these spectacular actions. Of the generals listed above, those who came up through the cavalry are Generals Patton, Truscott, Keyes, Harmon, Rose, Grow, and Kilburn.

What Victory Means to Me

The following essay, written by Private Isadore Rubin, won first prize ($500 war bond) in a contest conducted in the Mediterranean Theater of Operations. It is reprinted here because of its outstanding merit.

At the moment, it's difficult to think of victory as meaning anything but an end to fear, to loneliness and death, and a chance to go back to pick up the strands of interrupted lives.

Henceforth, each simple pleasure, each right we always took so lightly will take on rich meaning. We know what it cost to keep them, and we know too that we've really earned a share in them.

But victory means much more.

With victory, we stand on the threshold of limitless inventions and comforts. We possess the resources to extend our horizons in every field of endeavor and every aspect of human relations.

However, ancient and stubborn enemies are still to be conquered. Enemies which must be overcome not by armies, but by minds and hearts and talents set wholly free. Such enemies are poverty, insecurity, prejudice, disunity.

These too shall be conquered. For we have begun to think more deeply and more dynamically. And if we can sweep aside untold obstacles to smash the most ruthlessly efficient machine of destruction ever devised, surely we possess the vision and the practical genius to organize for peace, security, and a world designed for living.

Till now, many have ruled because of accident of birth or power of wealth. But throughout the world, the unfit, the weaklings and the traitors are falling by the wayside. New leaders are rising from the people those who never sold their heritage of courage, faith, and simple human dignity.

With victory, we shall have destroyed those who

would have enslaved the world. Our sacrifices have been great, but we have won the opportunity to emerge from the animal kingdom and enter the kingdom of man.

I look forward to living in such a world.

Across the Rhine in 1918

9 March 1945

Editor, The Cavalry Journal:

The recent press accounts of the brilliant advances of the First and Third United States Armies to and across the Rhine have recalled vividly to my mind my own experiences in the last war as commanding officer of the first troop unit to reach and cross the Rhine River. That unit was Troop I, 2d Cavalry. I thought perhaps a brief recital of our experiences at that time would prove interesting to your readers of today. Troop I, 2d Cavalry, was a horse unit, of course, and not mechanized and motorized as the advanced units of today are.

It was shortly after dusk on the evening of 6 December 1918, probably about seven o'clock, in the town of Insull, Germany, that I received orders to move on to the Rhine River.

Troop I had been acting as advance cavalry for the U. S. III Corps during the march through Belgium, Luxembourg, and into Germany. We had just finished supper when a motorcycle orderly found my billet and directed me to go to the nearest telephone, which was in a small town some three miles to the west, and call the G-3 of the III Corps, Colonel Adna R. Chaffee.

When I called Colonel Chaffee, he directed me to complete the remaining scheduled two-day march to the Rhine River on the following day. This we did, arriving about 2 P.M. at the town of Remagen, the very spot where General Hodges' troops are reported to have crossed the Rhine River on 7 March.

We had been informed that we would remain on the west bank of the Rhine River for about five days before crossing. A reconnaissance was accordingly made of Remagen and the surrounding area to select a suitable billet for the troop. A five hundred acre estate known as "Haus Calmuth," which served as a hunting preserve and country estate for a man who lived in Cologne, was selected. I have no doubt but what this beautiful, modern house and grounds are being utilized today as a headquarters for some of our larger units.

After five days at Haus Calmuth, the troop crossed the Rhine on the Ludendorff Bridge, which apparently is still undamaged, and reconnoitered the perimeter of what was to become the American bridgehead at Coblenz. We spent the night at a small town, Altwied, and the following day completed our reconnaissance, arriving at Neuwied, which was to become III Corps

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Headquarters. The experiences of Troop I are set forth in more detail in an article published in The CAVALRY JOURNAL in March 1923.

I thrill at accounts of the exploits of the cavalry units of today. I am sure the glamor of the cavalry and the *esprit de corps* that has always characterized it have not changed.

Sincerely yours,
S. H. SHERRILL,
Brigadier General, U. S. Army.

* * *

Men In Battle

How much of a battle can a soldier witness? If a man is swimming for his life, how much of the ocean does he see? Half a dozen perilous yards in front of him, a few menacing feet to the right and the left of him, perhaps; while as for what lies behind him, he knows nothing and has no time to guess. He is straining every muscle and nerve in order to keep alive. If anger, or fear, or the excitement of combat have not crowded out all other emotions, he may occasionally feel a certain astonishment at not being dead. Mr. Mann has always believed that the peculiar dull silence of old, scarred warriors is not the silence of sick horror but the silence of vague emptiness—the half-shamefaced silence of men who cannot think of anything to say. A soldier can only speak of what he alone has done, and this may be told in a few seconds, because there is not very much for one man to do. When the moment comes, the fierce moment of bloody contact, every man is alone in his own red mist with his own desperate enemy. The beautifully coördinated army breaks up for a little while into the atoms of which it is composed—into tiny, lonely life-histories.—GERALD KERSH, in *Faces in a Dusty Picture*. (Whittlesey House.)

* * *

Motor Maintenance

From the South Pacific comes this statement of a high-ranking officer who knows what he's talking about: "With twenty-four-hour operation, a normal shortage of trucks, overworked drivers, night-driving, poor roads, and the usual lack of responsibility for the protection of government property which bedevils forward areas, motor maintenance—especially first echelon—must receive the constant attention of all commanders if the deadline is to be kept below an excessive proportion of vehicles assigned. The prescribed periodic checks, monthly and semiannually, must be halved, at least. Motor maintenance is most important and requires constant and unremitting attention."

* * *

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Hutler, Lt. Benjamin M.
Dallas, Lt. Burt E.
Daran, Capt. Patrick B.
Davisson, Major J. E.
Deegan, Lt. Paul A.
Dennison, Lt. V. A.
Dodson, Lt. Leonard E.
Doetterl, Capt. F. A.
Dolan, Lt. John W.
Drosselmeier, Cpl. Francis J.
Duisman, WO Joe
Duncan, Lt. Col. Scott M.
Dunlap, Lt. John M.
Dunton, Lt. David P.
Dvoracek, Lt. George F.
Early, Capt. Douglas C.
Eberhart, Captain Wilson C.
Eckard, Lt. Chester R.
Eicher, Capt. R. A.
Etzler, Lt. Frank H.
Evans, Lt. Joe M.
Evans, Major Morris H.
Falconer, Lt. Ian
Fenner, Lt. Louis N.
Field, Lt. Willis E.
Fletcher, Major Louis W.
Fonda, Major Edward S.
Fox, Pfc. Gerard
Freeman, Capt. Robert L.
Fuller, Capt. Andrew P.
Gardner, Lt. George T.
Giesen, Lt. Col. Arthur R.
Gipson, Lt. Charles E.
Gleason, Lt. Cloyes T.
Goodman, Major R. M.
Gouger, Lt. Thomas M.

Gray, Major John E.
Gray, Lt. W. Ashley
Haggard, Major Edwin C.
Hamilton, CWO Kenneth D.
Hamner, Capt. Charles D.
Hand, Lt. Robert J.
Haneman, Lt. Henry W.
Hanson, Col. Thomas G.
Hantke, Lt. Russell C.
Harney, Lt. Robert G.
Harrell, Lt. Wesley B.
Harris, Lt. Glen H.
Harris, Lt. Robert W.
Hawley, Lt. Col. D. C.
Hawley, Lt. Dan W.
Heatherington, Capt. Fred R.
Heatherly, Lt. Edward S.
Hellman, Lt. Leo
Hicks, Capt. Grady L.
Hinton, Lt. Walter V.
Holsapple, Lt. Earle T.
Hope, Lt. Col. Wm. B.
Howland, Lt. John S.
Howze, Col. R. L.
Hughes, Lt. Carl R.
Hughes, Capt. William R.
Hurst, Lt. Jack
Iseley, Lt. Col. C. M.
Jenkins, Lt. Hubert J.
Jochum, Lt. Clarence C.
Johnson, Lt. Col. Albert S.
Jones, Lt. Joseph W.
Kearney, Lt. John T.
Kearns, Lt. John A.
King, Major Charles G.
Kirby, Lt. Thurman A.
Koon, Lt. Billy W.
Laney, Lt. Harry M.
Langford, Lt. John R.
Lawson, Lt. Clyde D.
Len, T/5 Nikolas
Lieb, Pvt. William R.
Lindblad, Lt. Ralph L.
Lindsey, Lt. Chester A., Jr.
Lippincott, Major Louis D.
Liscomb, Lt. John M.
Logan, Capt. Samuel S.
Long, Lt. William E.
Luca, Sgt. S. A.
Luckey, Capt. Marion W.
Ludwikoski, Lt. John E.
Lyons, Lt. Lushion L.
McAllister, Capt. James W.
McClain, Lt. James L.
McClain, Lt. Wilofard A.
McCulloch, Capt. Joseph A.
McGhee, Lt. Robert B.
Macarthur, Capt. D. B.
Macleod, Major George I.
Martin, Lt. John E.
Martin, Pvt. Nathan L.
Maust, Major Robert
Maxwell, Lt. Jesse N.
Means, Lt. Alfred G.
Meyer, Sgt. Earl H.
Miller, Lt. Francis Morris
Miller, Lt. Thomas E.
Minihan, Lt. William J.
Mitchell, Lt. William G.
Mohr, Lt. Gordon D.
Moore, T/Sgt. Jack J.
Morris, Lt. Weldon B.
Morse, Lt. George B.
Murdock, Capt. Warren D.
Murphy, Lt. Joe H., Jr.
Neel, Cpl. Robert W.
Neiman, Lt. J. F.
Nelson, Capt. Harold A.
Neuhaus, Lt. Philip R.
Noll, Lt. Sherwood
Norton, Lt. Clifford J.
O'Hara, Lt. Joseph P.
Oliver, Lt. Elery W.
Pearson, Lt. H. Brice
Peckham, Lt. Vassar C.
Pelletier, Lt. Edmund
Perry, Lt. Robert P.
Poppic, Lt. George T.
Powell, Capt. Joseph W.
Pressman, Lt. Lawrence
Price, Lt. Cole B., Jr.
Price, Lt. Madison C.
Purcell, Capt. Graham B.
Quinlivan, Lt. William D.
Rader, Major Dale
Raley, Lt. A. C.
Read, Lt. Russell F., III
Rasmussen, Lt. Lawrence T.
Reed, Capt. Francis D.
Reed, Lt. Ted E.
Reidenbach, Lt. Richard C.
Roessler, Lt. Frederick F.
Rottman, Lt. Charles C.
Russow, Lt. Lanny
Ryan, Capt. Thomas J.
Sarratt, Lt. Charles S.
Schiffman, Lt. Robert D.
Schurkman, Lt. Seymour
Schutt, Lt. Wm. C.
Seiley, Lt. Carl A.
Shackelford, Lt. Paul A., Jr.
Shappee, Lt. Jonathan
Shaver, Lt. Howard D.
Shelton, Lt. Orville E.
Shields, Lt. Harold A.
Shorr, Pfc. Stanley
Short, Col. J. C.
Shultz, Capt. Wm. G.
Siegfried, Major Jack S.
Silance, Capt. Wm. H.
Sitzenstock, Lt. Robert L.
Slovacek, Lt. Elmer F.
Smallens, Cpl. Alfred M.
Smith, Lt. Chas. Z., Jr.
Smith, Lt. Ralph C. J.
Spencer, Lt. Gayle H.
Staker, Capt. Lowell G.
Stapleton, Lt. Joseph I.
Stephens, Lt. Marquis D. L.
Stoddard, Lt. Col. Ralph H.
Stokes, Lt. Wm. S., Jr.
Sweet, Major Murray F.
Taylor, Capt. G. P.
Taylor, Lt. Col. Harvey D.
Thomas, Pvt. Edward W.
Thompson, Col. F. J.
Thompson, Lt. Homer E.
Thompson, Capt. Lynn G.
Tornace, Lt. Hugh F.
Tracy, Lt. Col. L. S.
Tucker, Lt. Lee E.
Tully, Lt. Howard B.
Van Holsbeke, Lt. Leon A.
Van Milligan, Lt. Alfred C.
Waldron, Capt. A. S.
Waldrop, Lt. Tom G.
Walker, Lt. Philip G.
Walker, CWO William E.
Wanke, Capt. Willard S.
Waring, Lieut. Charles W.
Warner, Lt. J. W.
Wassell, Capt. Harold
Wayman, Lt. Col. L. A.
Webb, Capt. Richard A.
Wells, Lt. Claude M.
White, Major Gerry L.
Willard, Pvt. J. J.
Williams, Lt. Jack A.
Williams, Pfc. James D.
Williams, Lt. Willard C.
Willis, Lt. Col. Arthur N.
Willoughby, Col. R. E.
Wilson, Lt. George W.
Wingfield, Lt. Jim K.
Winslow, Capt. John M.
Withers, Lt. Louis A.
Witten, Lt. Wm. L.
Woolworth, Lt. Duane
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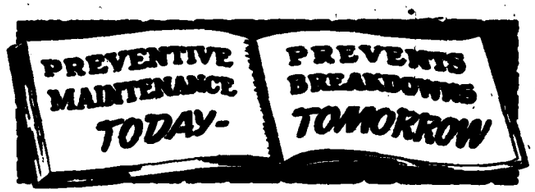
Wright, Lt. Col. Robert O.
Young, Lt. Charles E.
Zeskey, Lt. Harry C.
Zweible, Major D. T.



Keep Bearings Wrapped*–

Bearings are still among "the chosen few" at the top of the list of critical items used by the Army. Therefore, constant attention to maintenance practices in the use and handling of bearings is one of the important duties of Army personnel whose responsibilities involve operation and maintenance of mechanical equipment on which they are used. And no less important than their proper use in service is their handling before installation.

A common failing in this phase of operation is the tendency to take bearings out of the wrappers before they are ready for installation, or to fail to wrap them when they are being stored.

An unwrapped bearing is like a soldier without a foxhole. It hasn't a chance against its mortal enemies—sand, grit, rust, and breakage—for it takes only a couple of grains of sand to score a bearing and turn it into a piece of scrap. A bearing stored in a bin without wrapping is subject to a constant shower of particles of sand and grit sifting down from items thrown in on top of it. A bearing placed on the running board of a vehicle or on a dirty workbench can pick up enough grit in one instant to ruin it in short order. Moisture from the hands will cause rusting as surely as if the bearing were dipped in a pail of water.

There are, of course, numerous other danger points in handling bearings which are equally vital. They must always be cleaned and lubricated properly, and in this regard it is essential that dry-cleaning solvents and lubricants be *clean*. Lubricant containers, therefore, should be kept covered as much as possible, to prevent dust and grit from settling and blowing into them. Hands, benches, rags, tools—everything that touches the bearing—must be kept *clean*.

Lubrication orders and instructions in technical manuals must be followed to the letter, so that bearings are installed and lubricated properly.

Bearings are scarce—they *must* be protected. And the wrapping is one of the most important forms of protection. A bearing that is unwrapped for any reason should be wrapped again before storing. A bearing should never be issued unwrapped. Anyone who receives an unwrapped bearing should wrap it before storing. Bearings must be kept wrapped *at all times*—right up until the time they are installed.

*Maintenance Division, Headquarters, Army Service Forces.

Horse-Armor for U. S. Army?

THE United States is the leading mechanical nation in the world. Its amazing mechanical developments, especially in transportation, have led our people to think in terms of mechanics about all military movements. Everyone knows how to drive a motor vehicle, and almost everyone knows something of its care and maintenance. Paralleling this trend, on the battlefield, armored forces have taken over the rôle of cavalry and are regarded in most circles as competent for that rôle.

Although at the beginning of this war infantry, like cavalry, was disparaged in the eyes of many as obsolete, it has now regained its rightful recognition as the basic arm. Despite the wonderful successes of Russian cavalry, the American public remains oblivious to cavalry operations and displays no interest in whether American cavalry could have done as well or whether the lack of cavalry in the U. S. Army is a self-imposed disadvantage that may have handicapped operations in some theaters of the war.

Cavalry is mentioned often in dispatches from the various fronts. But these dispatches refer to mechanized cavalry reconnaissance units, which have served with such distinction in the European Theater, or to the 1st Cavalry Division which, without its horses, is serving in the Pacific Theater. This division is partly armored and partly motorized and, operating as a special type of light infantry, is taking on both infantry and cavalry rôles. As such, it has become famous. All of these units have retained their cavalry celerity of movement and many of the principles of cavalry action. This discourse, however, is concerned solely with the value of horse cavalry, the combination of horse and mechanized cavalry, and employment of horse cavalry with armored forces.

The only positive examples of the value of horse cavalry in this war are found in the successful exploits of the Russian Army. Would not horse cavalry have been just as valuable to the U. S. Army? One can only surmise what might have been done if cavalry had been available, but certainly an opportunity to surmise correctly is afforded by a study of the different campaigns, combined with a knowledge of the capabilities of modern cavalry—with its horses, its trucks, its armored vehicles, its pack horses bearing supporting weapons such as machine guns, bazookas, 80mm mortars, and its great cross-country mobility.

From all sources of information gained from newspaper accounts, reports, communiques, letters and personal conversations with officers returned from various battlegrounds, it appears that there have been plenty of opportunities for the useful employment of cavalry. It is not only that opportunities have occurred. Crucial needs have occured. The absence of cavalry has caused loss of men, loss of time, and actual frustration of effort.

In previous Notes published in The CAVALRY JOURNAL, attention has been called to the fact that mechanized cavalry reconnaissance units—as important and successful as they have been—could have been even more useful at less cost in men if they had been supported by or combined with squadrons of horse cavalry. It has also been stated that cavalry, combined with armored forces, would be far more effective for almost all cavalry rôles—offensive or defensive—than armored forces alone.

The importance of delaying actions has been illustrated particularly in the recent struggle in the "Belgian bulge," where for a time it seemed impossible to check or delay the swiftly moving German columns. Troops attempting to fight delaying actions were speedily enveloped, isolated and surrounded. Time was not gained to bring up other troops to resist the onslaught until the Germans had penetrated so far into our lines as to create a dangerous and an alarming situation.

A cavalry corps in each army, or several cavalry corps in general reserve, heavily armed with bazookas and 80mm mortars, as well as their other arms, could have fought delaying action without being completely engulfed and put out of action as were so many units of our army which were completely sacrificed. There are no troops so well suited for delaying and harassing actions as cavalry. Fighting in combination with our armored troops, these cavalry units would have been invaluable. With the time thus gained, our army commanders would have been able to bring forces to bear that would have limited the depth of the German success very materially.

When it became possible to organize our counterattack, these cavalry corps would have enabled our armies to inflict far greater losses upon the Germans. As it was, our troops, both armored and motorized, were too much bound to the roads. Of course, there were cross-country movements. But they were too slow. The repulsed Germn troops were able to escape in almost every instance.

Troops on roads can move fast when there is scarcely any opposition, as was the case in France after the breakthrough in Normandy. But when serious opposition is offered, only cross-country maneuver can speed up our advance and threaten the destruction of important forces of the enemy. In most countries there is much terrain where neither tanks nor motorized troops can move rapidly.

When moving by roads from long distances in the rear, motorized infantry and armored forces can move much faster and farther in a day than cavalry could. But when cavalry is kept fairly close to the forward lines so as to be available when needed, it can move as fast and as far as armored troops under the same circumstances. It then becomes available for cross-country movements.

In the first part of the Italian Campaign, cavalry could have been extremely useful, and later in the pursuit of the Germans from the Anzio beachhead to the Arno River, the need for cavalry was almost tragic. The following details concerning this operation are particularly significant:

"The attacks in May seriously damaged the German forces. They lost heavily in men and equipment. They gave every indication of confusion and disruption. They gave up all pretense of security; sent all radio messages in clear text. Our troops encountered mixed units, pieced together hurriedly to fill gaps. Considerable advances were made against no opposition because German troops were mishandled. Many civilians described the picture of the retreat through Rome—men looking very tired and dirty, on overloaded trucks, on donkeys, Italian carts, straggling afoot. We took heavy antiaircraft batteries intact. Every vehicle that broke down even in a minor way was set afire and abandoned; the roads in some places were choked with them. We captured small groups with written instructions, 'Get back to Florence in any manner possible!' All of these details add up to a picture of a beaten army on the verge of disaster—*But disaster never overcame it.*"

My informant goes on to say that a corps of two horse cavalry divisions could, in his opinion, have enabled us to destroy utterly the German Fourteenth Army. Our army could have marched to the Brenner Pass with little opposition. He says that even smaller cavalry units could have doubled the Fifth Army's take of prisoners. This could have been done, of course, only if the high command had held the cavalry for strictly cavalry operations and resisted the temptation to send the cavalry, dismounted, into the mountains during the previous winter to relieve the weary doughboys.

From the beachhead to the Arno, a distance of about 350 miles, the country is low but hilly (except on the very coast where it is mountainous). All of the country is well watered. The varied country affords cover and at the same time good observation points. Fields are separated by hedges or low stone walls—no fences or other obstacles to impede horse cavalry maneuver.

Our 1st Armored Division led the advance through this country. It had plenty of strength in tanks, infantry and artillery, paratroops, tank destroyers, etc. When the Germans stopped to give battle in force, all of these troops were used. But there were no troops who could maneuver across the terrain with speed—not even the tanks.

Most of the time there were endless miles of our troops on the roads with only one platoon in front doing the fighting. There was no cross-country mobility. Even country that appeared from a distance as good tank country was so cut up with ditches and canals, or ravines in the low hills, that tanks could not maneuver far off the roads.

The problem for the enemy rear guards was made easy because all they had to do was to defend direct advances along the roads. They would post a few guns in good positions to fire down the roads, and the head of the pursuing tank column had to take it without support from the troops or guns immediately in rear. This was hard on the morale of the small unit in front. To outflank these positions, the tired infantry had to move across-country with great fatigue and little speed.

Our artillery, well back in the column, had to pound these enemy positions well before any advance could be resumed. Long, powerful columns were delayed for hours. A sense of frustration and impotency often overtook the leading column commanders. Usually, the enemy delaying forces had no supporting troops behind them. A single squadron of horse cavalry could have maneuvered to get behind these small German forces and force them either to move back quickly or be captured by combined forces in their front and rear. In many cases, even a single squadron of cavalry would have doubled the speed of the long leading columns on the road. The enemy delaying force was invariably composed of a few tanks, antitank guns, and half-track mounted infantry. Cavalry, well equipped with bazookas, would have gobbled them all up unless they moved back so quickly that they could effect little delay on our road columns.

Thus, with cavalry squadrons at the head of all advancing armored troops on the roads, and with a few cavalry divisions maneuvering independently between our advancing road columns, the results would have been stupendous. The German Fourteenth Army would have been totally destroyed, not because our cavalry alone could have destroyed it, but because our cavalry would have enabled our pursuing tanks and other troops to have advanced at double or perhaps more than double, the speed they actually attained under the circumstances.

This is only one of the examples that might be used to illustrate how cavalry would enhance the value of armored troops and mechanized cavalry squadrons. In fact, as often stated before, the combination of tanks or armored forces and cavalry could accomplish successes that are as yet unheard of in our army. Months of campaigning, thousands of lives, much equipment, frequently could be saved just by having our army fully completed instead of lacking in the one essential element it still needs—the cavalry.

Men of the 1st Cavalry Division move past a dead Jap in the Estera De Gallina sector of the Paco section of Manila, February, 1945. Their surprise entry of the city from the southeast on February 3 made possible the release of more than 3,000 internees from Santo Tomas Camp.

Signal Corps Photos

Cavalrymen Re-enter Manila

Major General Verne D. Mudge, Commander, 1st Cavalry Division, holds an informal but urgent conference on a road just behind the front in the Paco section of Manila.

Manila, Feb. 3 (INS).—Gaunt, unshaven troopers of the 8th Cavalry swept into Manila at 6:50 p.m. . . .

This military coup, the most daring and dramatic in the Pacific war, was made by less than 800 cavalrymen who, after three days of ceaseless advance, sped into this surprised city without any advance knowledge of the Japanese strength here.

Flying mechanized columns, which advanced more than a hundred miles in three days, outdistanced all rivals to gain high honors of being the first to enter Manila.

It was fitting that this honor should go to a unit of Major General Verne Mudge's 1st Cavalry Division, led by 28-year-old Lieutenant Colonel Haskett Conner. His squadron has spearheaded the cavalry attack since the push began three days ago.

On that day the cavalrymen were 50 miles behind the most advanced outposts, and they had to travel through unoccupied territory of the eastern Luzon plain.

Luzon, Feb. 5 (AP).—American troops reached the heart of Manila on February 4.

Yanks of the hard-hitting dismounted 1st Cavalry Division, in a wide encircling move by dark, entered the city Saturday night against harassing sniper fire and quickly captured Malacanan Palace and the large Santo Tomas concentration camp, where . . . 3,000 Santo Tomas internees were liberated. They were mostly American women and children interned there since May 1, 1942.

The northern half of Manila, Pearl of the Orient, was in American hands as elements of the 1st Cavalry Division and 37th Infantry Division (the latter entering from the north) pressed for the knockout.

1st Cavalry Division

In the Admiralty Islands—Part III

THREE days after the first landings on Manus Island (March 15, 1944) the 8th Cavalry moved into Lorengau township and sent patrols out on the roads to Rossum and Salesia Plantation.

Road to Rossum

Moving toward Rossum, Troop "A," 8th Cavalry, ran into stiff fire from several bunkers just outside the regimental outpost line. Quickly bringing forward their heavy weapons, they rapidly made a shamble of each of the bunkers and killed all defenders. A perimeter was established for the night about 500 yards beyond the old outpost line.

Continuing the advance toward Rossum the next day the 7th Cavalry met about 150 more Japs and dropped back to permit artillery to register on the enemy position. As artillery and RAAF (Royal Australian Air Force) P-40's rained high explosives, reinforcements were sent down No. 2 Road to establish a new position from which to attack.

On the 22d the 7th Cavalry established a perimeter on the northern edge of the town preparatory to an attack in force. The advance south from Lorengau had been confined mainly to a track, flanked on both sides by precipitous banks, descending into deep, swampy jungle ravines, and it was necessary to build a road for the supply route in order to advance combat elements. The attack, launched by the 1st Squadron, accompanied by two medium tanks, each with its now inseparable bulldozer clearing the way, moved forward on the heels of artillery and mortar fire from supporting units in the rear.

During the day, 21 bunkers were destroyed on the road to Rossum in addition to many more which had been barely visible on the enemy's well selected defensive position on the hills to the south.

Papitalai Mission

Meanwhile, back on Los Negros, forces of the 12th and 5th Cavalry had joined south of Papitalai Mission and practically doubled the size of their perimeter.

Patrols still working the area beyond the lines on Los Negros reported that the Japs' ammunition was getting very low and that there was a severe shortage of medical supplies; also, the enemy's hope for air support reinforcements appeared to be waning.

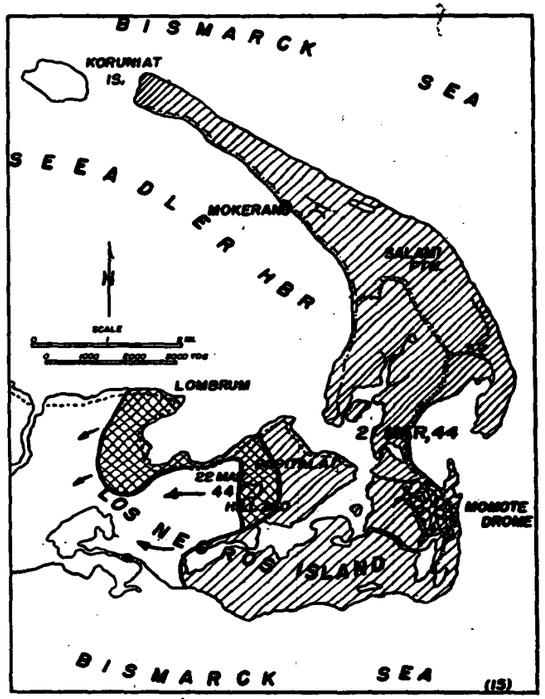
On the 22d, combined elements of the 5th and 12th Cavalry (two squadrons) launched an organized attack against the elevated enemy positions west of Papitalai Mission. (See Map 1.)

Although the enemy made full use of his mortars, machine guns and rifles, the assault progressed rapidly. The terrain, consisting of razor-back ridges and deep ravines, thickly matted with an almost impenetrable growth of matted vines, proved a more difficult obstacle than the enemy. The success of this attack left all known enemy forces on Los Negros bottled up; the remaining Japanese had no course but certain annihilation or self-destruction. Their continued pestiforous but ineffectual counterattacks gained nothing but an ever-increasing roll of Sons of Heaven killed in action.

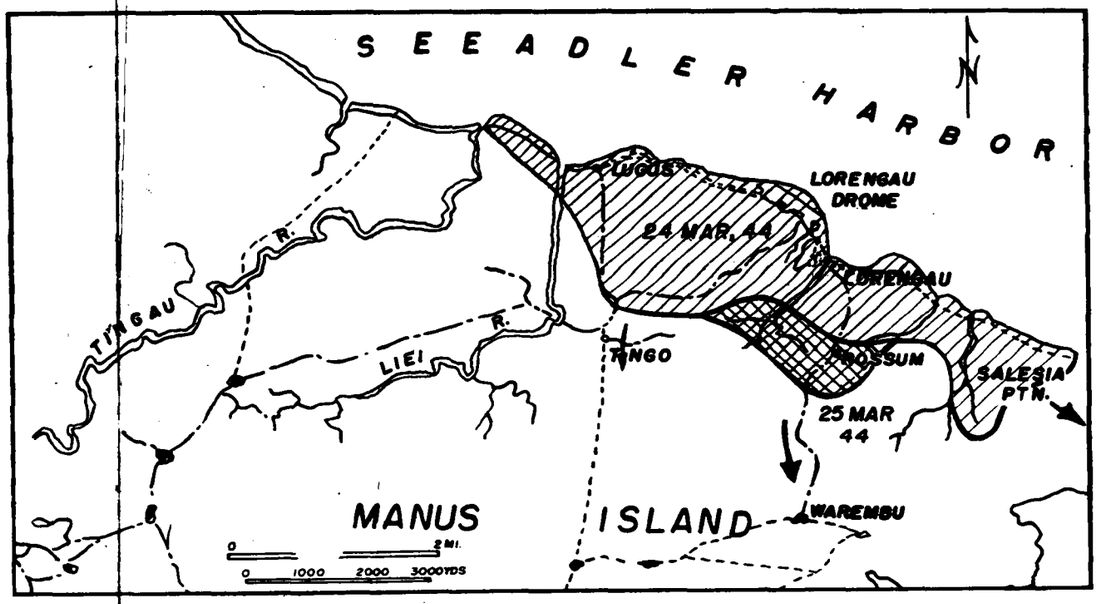
Attack on Rossum

Over on Manus Island the Lorengau garrison made no counterattacks, except of the suicidal variety when a squad would attack one of our platoons. For the most part, the enemy deployed his forces in depth on well-selected positions, replete with weapons, squad and individual emplacements, all mutually supporting.

The enemy did not retreat. He appeared determined



Map 1



Map 2

to hold his position no matter what the cost. But for the vigor and resourcefulness with which our troops pressed the attack, the entire battle would have rapidly degenerated into a slow, costly siege operation.

While maintaining its position on the outer edge of Rossum, the 7th Cavalry continued destroying pillboxes, killing snipers and in general clearing out remnants of enemy defenses all along its perimeter. (See Map 2.)

By the 24th the 1st Squadron of the 7th resumed its assault against the heavily defended township and, after some of the fiercest and most difficult fighting in the Manus campaign, managed to get 200 yards south of the village. The thickly mined track delayed the advance of supporting medium tanks and consequently slowed down the progress of the ground troops.

As late afternoon approached, the 7th Cavalry fell back again to permit an air strike by P-40's on enemy positions, but the jungle with its tangled mat of rain forest rendered difficult the pinpointing of enemy positions for an air strike. Several methods were tried. All of them were successful to some extent. But for each scheme our troops devised, the Japs would quickly introduce a countermeasure. For example, when the enemy position was marked by an artillery or mortar smoke shell, the Japs would quickly fire one or two smoke shells into the cavalry lines. When the front line of the troops was marked by smoke, the Japs immediately marked their own front line of the troops. However, the Jap was not successful in his use of counter-ruses and strategems. The troops of the 1st Cavalry Division were more resourceful, more clever, more ingenious than the Japs. They would devise useful, workable means far more rapidly than the Jap could counter.

In all air support missions, the air liaison parties proved a valuable and indispensable part of the team. Their position was normally on or in front of the front line of the troops. They willingly and cheerfully took every risk of combat in order to insure properly directed air support. These groups stand out among the many unsung heroes of any battle.

The final assault against Japanese positions around Rossum was made the next day by the 1st Squadron of the 8th Cavalry, the veterans of the attack on Lorengau airdrome.

At 0800 the first flight of P-40's supporting the attack appeared over the target and dropped bombs and fired thousands of rounds of ammunition. As the last element completed its attack, field artillery battalions sprayed the Jap lines with shells. Then as the artillery fire lifted, the 8th Cavalry moved southward. The approach through the jungle growth was slow, continuously impeded by a series of densely laid land mines. As the attack jumped off, it was met by a hail of automatic weapons fire and knee mortars from the bunkers left in the way, but the attackers swept forward as though driven by some dervish, and by 1700 all enemy resistance had been obliterated.

All organized resistance on Manus Island was broken by this engagement. The work of the mortars received praise from all witnesses. The mortar crew established themselves well ahead of the combat elements in the attack and brought the fire of mortars within 30 yards of their position. On the final preparation, mortars were adjusted to the end that the entire barrage was

delivered on the crest of the hill to the front in an area not more than 100 yards by 50. The effect of this devastating fire was chiefly responsible for the low casualties suffered by the attacking force.

Coincidental with the 1st Squadron attack on Rossum, the 2d Squadron of the 8th Cavalry 300 yards west of Poiho Inlet inflicted approximately 30 casualties on an enemy platoon located in that area. A patrol from Troop "F" fought a meeting engagement with an enemy force of comparable size along the track leading south from its bivouac area, and killed 15 Japs before joining its troop in its perimeter. The enemy followed the withdrawal of the platoon until they approached the troop perimeter, then halted on the outskirt of the position under cover of the jungle. There they began their "Banzai" chant prior to assaulting the troop, but a well directed mortar barrage broke up the attack amid a chorus of shrieks and blood-curdling yells. Twelve dead Japs were buried and the odor of the neighborhood for days afterward indicated that many had escaped detection.

Patrols

For the next several days widespread, vigorous, meticulous patrolling characterized the action on the part of all forces of the 1st Cavalry Division.

From bases on Ndrova and Amo Islands south of Manus, patrols and detachments were sent out to seek enemy locations and prevent the escape of the remnants of the Jap forces from the eastern sector of Manus, the largest island in the Admiralty group.

Patrols of the 12th and 5th Cavalry swept the western side of Los Negros Island as far as Loniu Passage, the dividing line between the 2d Brigade on Manus Island and the 1st Brigade on Los Negros.

Previous information indicated the presence of Japanese on Tong Island, northeast of Seeadler Harbor, so a 6-man patrol with native police boys was sent to search the island and locate inhabitants who might be of assistance in determining Jap positions. An entire squad of Japs was captured.

Small combat patrols continued to sweep the jungle by day and return to their bivouac by night, but by March 29 the almost complete absence of any Japanese strength in the Admiralties caused organized operations on the part of American forces to cease.

Much to the chagrin of the constantly alert antiaircraft and shore batteries, absolutely no naval or air reaction occurred and only slight harassing fire from an occasional sniper broke the stillness of the tropical nights.

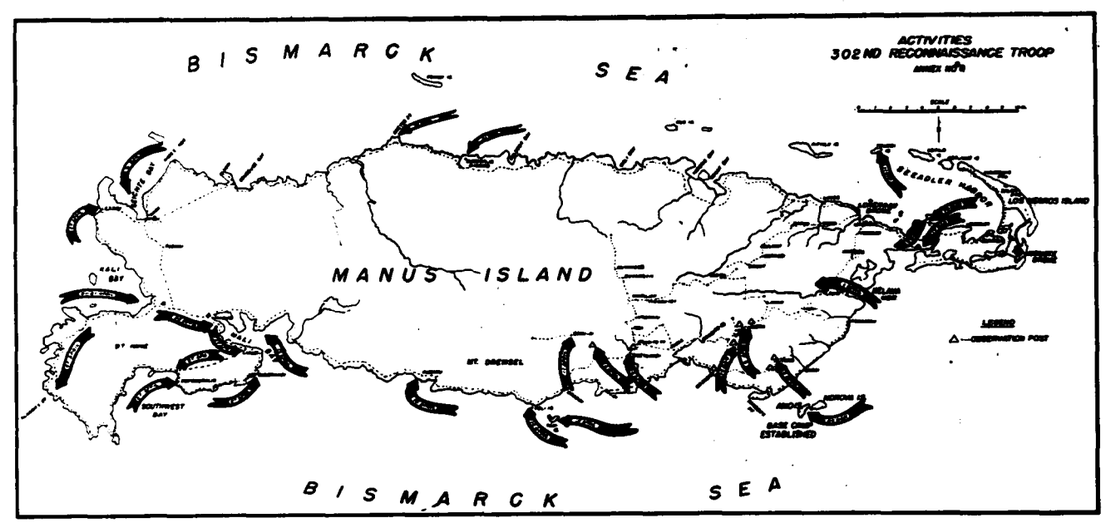
A Jap wandering west from Papitalai offered a good example of the enemy's spirit at that stage. One of the few stragglers left alive on Los Negros was vainly struggling to get to Lorengau, not knowing the fate of his comrades there. He had thrown away his weapon, and wore only a few grenades and tattered clothing.

Pityilu Island

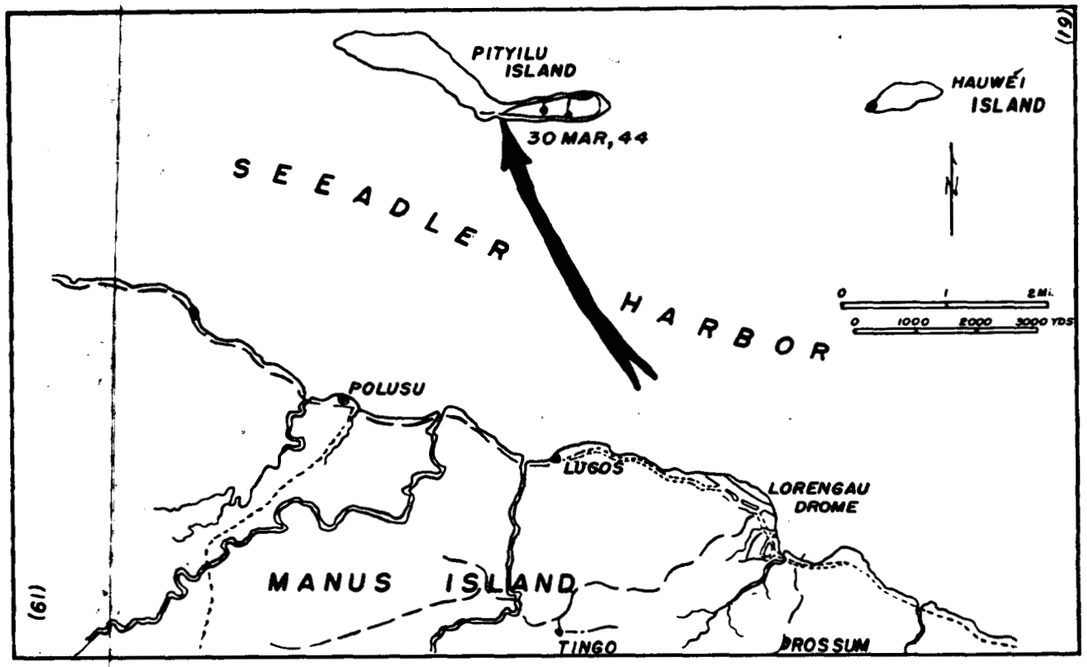
While operations were still in progress on Los Negros and Manus Islands, P-40's had struck at Pityilu Island, the fourth in a chain running west from the northern tip of Los Negros.

On March 24 enemy positions on Pityilu, spotted by artillery liaison planes, had been bombarded by destroyers. Several houses, three barges, two outpost emplacements and a gasoline dump, which burned for two hours, were demolished during the raid.

Pityilu Island was the last of the Los Negros archipelago known to have organized resistance. So at dawn on March 30, the curtain was raised on the 1st Cav-



Map 3



Map 4

alry Division's sixth amphibious landing in the Admiralties Campaign.

Following heavy shelling by warships, P-40's and Spitfires which blasted the landing beach for 20 minutes, the field artillery, firing over water from Lorengau, commenced its powerful bombardment.

The landing on the island's southern coast was made by elements of the 7th Cavalry Regiment. After beaching without opposition, the 7th Cavalry sent patrols west through the wide coconut plantation and moved its main force east through a dense forest.

No contact was made by the patrol to the west, but the main force to the east contacted Japs in the middle of the forenoon and immediately attacked their position. Although the forward movement of the troops was spearheaded by two tanks, the opposition was so determined that the troops withdrew about 100 yards at noon in order to allow an artillery concentration to be placed on the enemy positions.

Immediately after the artillery barrage, the advance was renewed and by nightfall 46 Japanese had been killed and the greater portion of the island occupied. The following day occupation was completed.

Outlying Islands

A casual observer watching operations from the tip of Mopenang Peninsula on April 1 would have thought that the Americans were taking the first of April too literally. In the early morning the "first amphibious operation of its kind" commenced when units of the 12th Cavalry embarked in 18 native canoes, 4 Japanese collapsible boats (captured at Lombrun Point by this same force), and 16 engineer half boats, set out from Los Negros for a landing on Koruniat Island, 500 yards across a shallow reef-strewn passage.

As the first wave prepared to move out from Los Negros the "skipper" of the "fleet"—a squat, muscular native boy standing up in his outrigger canoe—gave the dismounted cavalrymen a touch of nostalgia with his signals. When all 18 canoes were lined up ready to go, this sturdy, coal-black negro raised his arm and lowering it slowly to his side, called at the top of his voice, "Forward . . . hoooooooooo!" in true cavalry style.

The coördinated support of land, sea, and air units, which was typical of every landing in the Admiralties, was carried out as usual prior to the landing. The troops landed unopposed and by noon had secured the entire island. Immediately after noon, the embarkation in small boats was repeated, this time from the western end of Koruniat. Paddling across the shallow coral reef, our forces landed unopposed on Ndrilo Island and had the last of the Los Negros chain occupied by nightfall.

This process of securing outlying islands in the Admiralties continued. At 1200 the next day the 2d Squadron of the 12th Cavalry landed on Rambutyo Island, southeast of Los Negros. Preparatory to the landing two squadrons of P-40's bombed and strafed the beach, and three small craft laid down a rocket barrage. The troops had difficulty in landing because of reefs surrounding the coast. The landing craft could not be beached and the troops, plunging in chest-

high water, made their way to the shore through 200 feet of medium surf and over jagged, treacherous coral bottom. By early afternoon the squadron and all its supplies had been put ashore in spite of the back-breaking labor of carrying supplies through the surf.

Air and Navy

Of these days in the Admiralties, this military record gives only bare, stark, unlifelike facts. A gifted pen would be required to portray honestly, vividly the actions and reactions of men in battle.

When life is reduced to a common denominator by just the whir of a hostile bullet, man is singularly unimpressed, unmoved by words or promises. He demands something more—something solid, something concrete; a knowledge that the power and might of a great nation are behind his every move. Realism, a discernible manifestation of power, is made by the supporting services—the Air and the Navy. That was 50 per cent of the reason that in every operation during the Admiralty Campaign both of these services were used to the maximum; the other 50 per cent, of course, was the great destructive power of these most valuable weapons.

The bald statement, "The naval forces supported the action," appearing in the chronology, is indeed a masterpiece of understatement. When asked regarding the effect of naval gunfire support, the commanding general of one brigade made the laconic reply, "The Navy didn't support us. They *saved* our necks." All commanders firmly believe that especially during the initial phases, the balance of war was tipped in our favor by the superb support rendered by the naval forces. There was no risk that the Navy would not take.

During the initial landing on Los Negros, a hostile 20mm gun commanding the entrance to the harbor was placing particularly devastating fire on the landing craft passing through the narrows. The gun, so well concealed and camouflaged, could not be located accurately. Admiral Fechiteler, in command of the naval task force, quickly gave orders to two destroyers, "Blow that gun out. Take your ships into the shore. I will be responsible for them." The ships went in and the gun went out.

Several days later, the bulk of the naval force was moved to the south. From these positions they laid a heavy barrage on the enemy. So cleverly was this barrage placed and so devastating its effect, that the Japs were forced out of their position right into the waiting hands of automatic fire of the dismounted cavalrymen. And the reports state, "The naval forces supported the action."

Until the commanding general informed higher headquarters that naval support was no longer necessary, destroyers and cruisers were employed constantly. Many of these ships took part in more than one mission daily, some as many as 4.

In addition to destroyers and cruisers, the gunfire of large supply ships, small supply ships, tenders and LST's were used in emergencies. Squadrons of motor torpedo patrol boats—the famed "PT" boats—shepherding the landing craft like a mother duck her ducklings, made swift flashing stabs right into enemy shore positions, reduced to zero enemy barge traffic, and performed many missions of mercy. They removed wounded, and rushed urgently needed supplies, ammunition, and food to heavily engaged patrols working far from their base. And the reports state, "The Navy supported the action."

The Army Air Force gave all the means at its disposal to the support of the campaign. The difficulties and obstacles placed in their path fazed them not at all. The objective area was out of range of their fighter escorts. The weather in the objective often made it impossible to get any aircraft within sight. But they did the impossible. They adapted a few fighters as long range fighter escort. Keeping these fighters in the air continuously, the Air Force convoyed shipping and intercepted enemy aircraft bent on the destruction of small ground forces. On one occasion they intercepted 18 enemy bombers with fighter escort, shot down 11 of them and prevented even a single enemy plane from getting to its target. Of all requests made upon them, only one was cancelled or refused and that because at the last minute a higher headquarters had ordered all

"You would have enjoyed the sight of one of our troops returning from patrol today. I had last seen this troop three weeks ago, after it had been out for two days. On that occasion the jungle was thick, it was raining in buckets, and the mud was knee deep. The troopers were carrying 4 days' rations and their ammunition. They had nothing but a poncho, wool-knit sweater, and toilet articles with them in the way of comforts—but, their morale was high, and there wasn't a sour face nor a grumble in the entire outfit.

"Yesterday they came off the south end of Manus Island at the end of their three weeks' patrol.

"The first glimpse I got of the troop, it was coming down the Lukuli River in native canoes. Never in the world was there a more picturesque sight. Of all the rough, tough, muddy, ragged troops you ever saw, they were it. Yet you have never seen a more cheerful, enthusiastic, happy bunch of men anywhere. Nor was there a set of whiskers among them; nor a rusty weapon. They were as happy as though they were headed for Coney Island. Every one of them had a grin on his face. Anyone seeing them could not fail to notice that each man had achieved one of the most valuable of military qualities—pride in himself and his troop."

—Commanding General,
2d Cavalry Brigade.

aircraft concentrated on a particularly lucrative target of opportunity.

By the end of the campaign, the principle of coördination propounded by all great commanders was brought forcibly to the foreground. As the division commander remarked, "Now we can say that we are truly a team. We have solved the complexities of integration to a nicety. Without either or both the Air and the Navy we would be as much use here as a mute would be to the Brooklyn Dodgers. Down deep, each man knows the value of the support we received. My hat's off to these two services who give you not what you ask but everything they have."

Mopping Up On Manus

Remnants of the enemy left on Manus Island were pursued relentlessly. The collapse of organized enemy resistance left somewhere between 1,000 and 2,000 Japs on the island. Of this number an estimated 200 were fit for combat. Few retained their weapons, many were wounded, all were starving, and none exhibited an offensive spirit. These stragglers formed, however, a menace to the native population, whose food they stole, and a potential source of harassment to contemplated naval installations. It was imperative that they be assisted to their imperial destiny—to die in combat for their Emperor.

The chase was assigned to the 2d Cavalry Brigade. Vigorous combat patrols from its garrison at Lorengau combed the jungles in the area of Lorengau, and despite the lack of a major contact exacted a terrific toll from isolated groups operating off trails and at night. Systematic extermination became a task predicated first of all on locating the enemy and then rooting him out.

This task was assigned the 302d Reconnaissance Troop, ideally located for the job. Its base was on the flank and front of the enemy's retreat; and so situated, it was able to insert observation posts and patrols all across the Japs' line of flight. Small patrols of the "sneak and peek" variety were used to instill in the Jap a false sense of security. The remnants of the enemy started to reassemble under our direct observation. The resulting reconnaissance and combat patrolling exhibited the finest type of team play between the cavalry and the reconnaissance troop. The reconnaissance troop was the eye, the cavalry was the saber. Coördination between eye and sword was swift and deadly.

Small patrols and observation posts made preliminary contact with the enemy and maintained the contact despite active reconnaissance screens established by the enemy. Even after the patrol's presence became known to the enemy, it was able by the staunch assistance of its native guides to remain in the area and collect information, and then withdraw through the maze of unknown swamps characteristic of the area.

The information from these patrols was relayed immediately to the cavalry and instantaneously put to use. In all this area of central Manus the jungle vegetation is extremely heavy, with observation often limited to a distance of 5 to 10 yards. Time after time the patrols took advantage of this situation to creep in close to the enemy and catch him unaware. Attempts of the enemy to regroup were constantly thwarted.

This coördinated action soon cleared the zone initially assigned the troop for reconnaissance and additional zones were designated. Meanwhile, it became apparent that the groups of enemy trapped and killed in the original zone of operations had been the van of the enemy's withdrawal and that no substantial number of the enemy had penetrated the perimeter of the original zone assigned the reconnaissance troop. The absence of good roads and paucity of developed trails, the broken nature of the terrain and the dense foliage provided innumerable hideouts in the interior. Existing maps at best were incomplete.

Early in May patrols were again sent into the zone first assigned the reconnaissance troop to confirm native reports that the enemy's remnants had indeed begun to group again in this sector. An ambush was immediately established, and contacts made with small enemy groups quickly discouraged any reorganization by the enemy in the area. Natives actively participated in the chase and ambushed many a weary Jap. During this period stalking Japs on the run became a sporting proposition. Patrols of the cavalry brigade seemed to relish the game they were playing. On one occasion a native reported to a cavalry patrol that three unarmed Japs were in a native hut to their front. Rather than take unfair advantage of the defenseless enemy, three members of the patrol dropped their arms, moved into the hut with drawn knives, and in hand-to-hand combat killed the three enemy. This second phase of closely coördinated reconnaissance and combat patrolling had again smashed every attempt of the enemy to reassemble his forces.

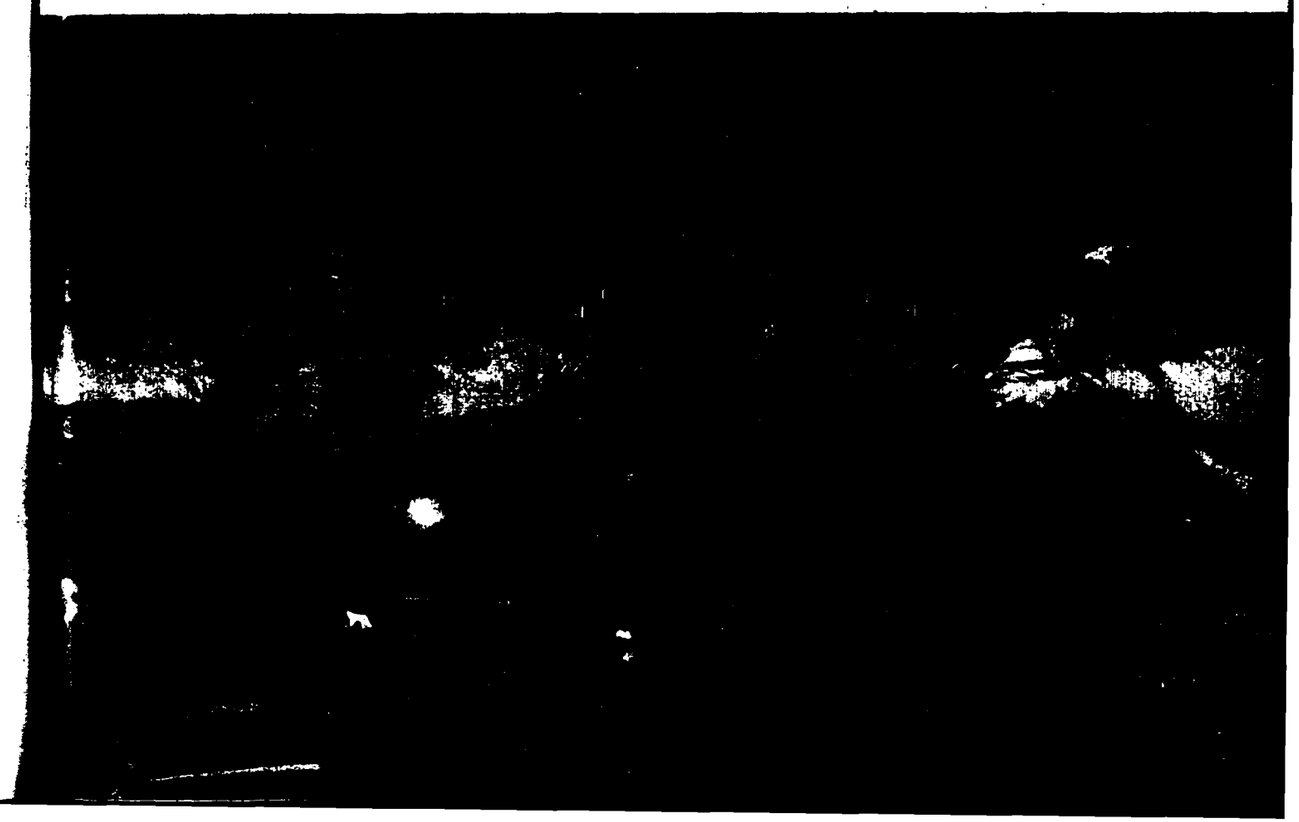
After the Admiralties Campaign had "officially" ended, there remained several hundred enemy stragglers to be disposed of. Information indicated that the enemy was again planning to assemble and had in fact started to drift to the area selected. Probably no units have ever had more realistic and extensive training in scouting and patrolling against the enemy in jungle terrain than was afforded the newly arrived replacements of the 2d Cavalry Brigade on Manus Island.

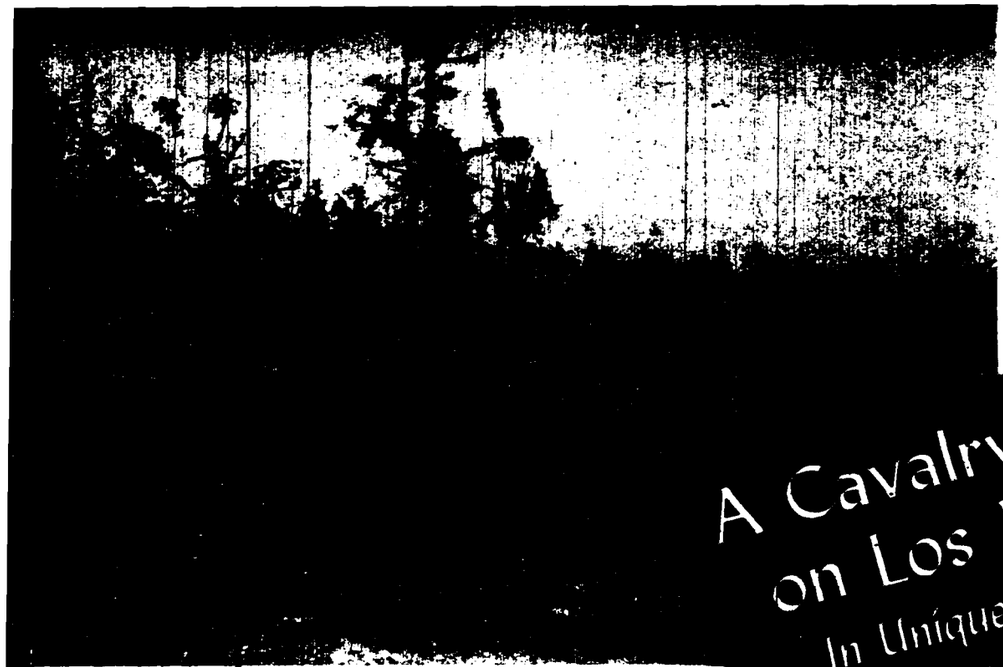
During this period of mopping-up operations particular attention was given to stealth, observation, terrain appreciation, reporting of information, and the development of physical fitness by a series of extended patrols with a minimum of equipment.

Opportunities for training under realistic circumstances were exploited, and when the replacements were withdrawn to their garrisons, they were no longer green, inexperienced troops but troops hardened in the field, trained by veterans, and confident of their ability to stand up to the enemy in any circumstances on any field to which the division might next be called.

"THE NAVY DIDN'T *SUPPORT* US. THEY SAVED OUR NECKS," said one cavalry brigade commander in the Admiralties. Above, men of the 1st Cavalry Division watch naval aircraft overhead as they speed toward the beaches of Leyte Island in the Philippines. Below, troops watch Navy planes and ships' guns blast "path" for Leyte landings.

Official U. S. Coast Guard Photos





Members of the 8th Cavalry wade into the water off Manus Island in operation similar to that described here.

A Cavalry Troop on Los Negros In Unique Operation

by Colonel Marion Carson

DURING landings on Los Negros a troop of cavalry successfully reduced an enemy position of three bunkers by making envelopment through shallow water along the shore.

General Situation

Between the south shore of Los Negros Island and Lemondrol Creek 500 yards to the north, the Japs were fighting a delaying action by use of small groups in bunkers, with snipers operating between the bunker positions.

A squadron of cavalry, engaged in clearing the enemy from this area was disposed as follows:

One troop in support of the advance west was approximately 200 yards in rear of the leading elements. Another troop was clearing the enemy from the high ground just west of the swamp. A third troop was advancing west along the south coast with its left flank on the shore line. The squadron's weapons troop had a dual mission. It was to support the advance to the west and at the same time be prepared, upon call, to assist the troop to the north.

As the third troop advanced west along the south shore, the leading scouts suddenly received fire from a position to their front (see sketch). The advance was halted and a reconnaissance promptly made.

Terrain and Fortifications

The reconnaissance revealed the following information:

1. To the front there was a swamp 30-60 yards inland from the shore and roughly paralleling the coast.

2. The dense vegetation along the coast was such as to permit the approach of individuals especially adept at traversing dense growth, but it was doubtful if a platoon, or even a squad, could get through it without detection.

3. A protective reef off-shore made the water along the beach quite smooth, and the beach sloped off gradually to shoulder depth about 10 yards out.

4. Three enemy bunkers were located in the area—the southernmost, about 15 yards inland from the shore. To provide passage for Jap forces, considerable underbrush had been cleared away from the area starting about 5 yards inland and running to within a few yards of the swamp.

5. The bunkers, which were old and well concealed by growing vegetation, were covered with one thickness of coconut logs and from one to 3½ feet of dirt. With slits on the east and west sides only, they would make a frontal attack a costly operation.

6. It would be impossible to negotiate quietly the swamp to the north of the bunkers, and to send an enveloping force by way of the ridge to the north would require more time than remained before dark.

Envelopment

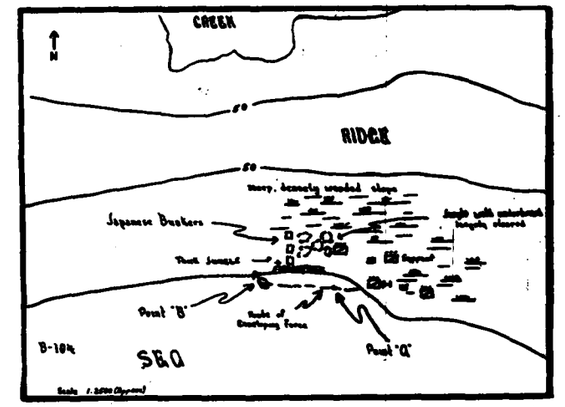
The troop commander decided to use one platoon in a holding attack in front of the bunkers, send one platoon of two full-strength squads through the water along the beach to a position in rear of the bunkers, and use the third rifle platoon in support of the right flank. Initially, the 60mm mortars and the LMG platoon would assist the holding attack. The mortar units, which were to be prepared to support the en-

veloping force, carried a sound-powered telephone with wire paid out from shore at the point where the platoon entered the water. An observer from the squadron weapons troop also accompanied the force.

The enveloping force waded out into the water until only their heads and shoulders were exposed. Whenever practicable, weapons and ammunition were held above the water, but all were immersed at some time during the operation.

In the water, with their helmets and weapons, the members of the platoon presented very small unprotected targets. As they advanced they received small-arms fire from at least the southernmost bunker while passing the point marked "A" (see sketch). Unless the enemy withdrew from the protection of their bunkers, however—and this they did not do—their field of fire was limited to a very small area. Through the fire-swept zone, the soldiers kept their heads under water. Individuals reported that they could see some of the bullets hit the water, slow down and drop to the bottom.

When the platoon reached the point marked "B," the Japs started withdrawing from the bunkers and moved west along the coast within view of the mortar observers. The observers called immediately for mortar fire in front of the retreating enemy. When it fell several of the enemy were seen to stop and start back toward the enveloping force. The observers then shortened the range and placed a salvo in the midst of the group. Some survivors again started west. Then the range was increased, and again the salvo fell among the panic-stricken defenders. The area was later searched and a dozen of the enemy was found dead.

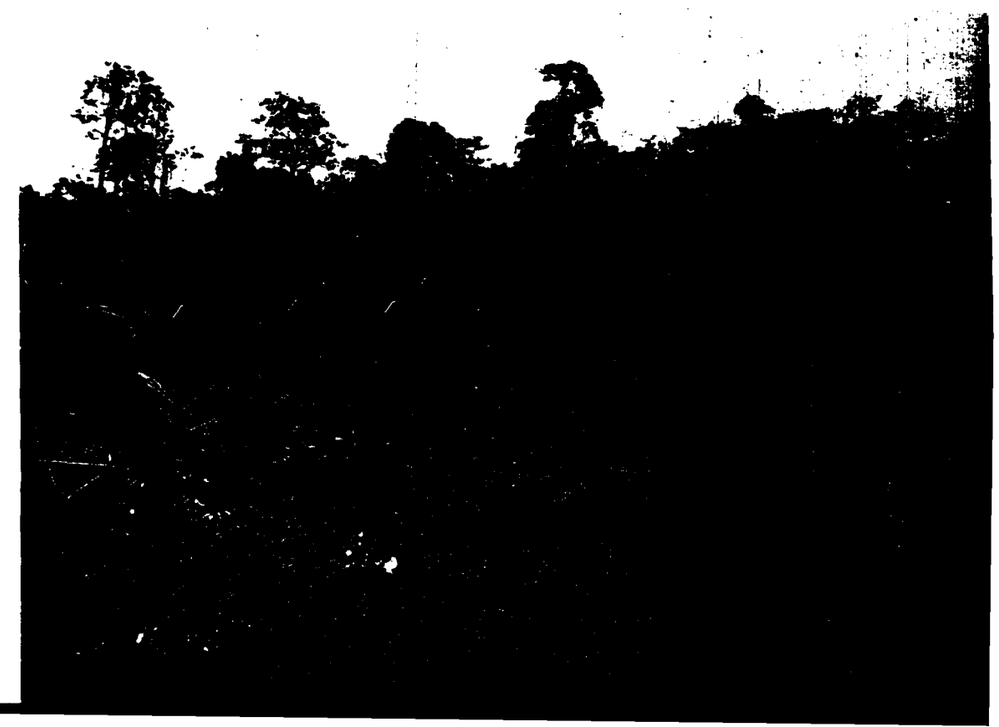


Situation

The troop suffered no casualties during the operation.

Conclusion

This operation demonstrated the necessity for initiative in taking advantage of favorable factors and overcoming those less conducive to success in jungle maneuvers. The dense vegetation along the shore permitted excellent reconnaissance to be made, and largely screened the movement of the enveloping force through the water. Surprise would no doubt have been lost in attempting a land envelopment to the north and would have had to be delayed until the next day. The plan which was adopted was the only one which had a reasonable chance of prompt success with a minimum number of casualties.



Troop G, 8th Cavalry, 100 yards from Jap positions near Lorengau village. March 18.

ON a hot April day in 1942 a Japanese messenger made contact with the guerrilla forces deep in the steamy jungle of Timor. His purpose was to deliver the following letter to Lt. Colonel N. L. W. van Straten, Commander of the Dutch, Indonesian and Australian guerrilla fighters on the wild East Indian island.

"Japanese Army
Atemboea: April 12th, 1942

"Dear Leut-Kolonel, Kapiten and officers of
Dutch Army:

"Now as you all know, the war of Nederland East Indies finished. Leut-Kolonel Detiger and his men were willing to receive the treatment of Japanese Army. You must be short of food now, you have to sleep in the fields or among the mountains. All of Dutch men except you and the Indonesia in N.E.I. think, for the Dutch and Australian soldiers to surrender is rather better than to hide among the mountains. Do you think it is able for you to resist longer till the hopeless help comes? Are you waiting for it?

"The soldiers' lives are not only of officers own but must be also of their families who are very, very anxious for them. If you and your men surrender, all can see the family again when the time comes. But if not, sorry we must fight and destroy, it's our armys work advanced here, nothing else.

"You are heavy burdened. You must contemplate all the conditions of the present N.E.I. and decide how to do, what to do. Now you have the position to decide the destiny of all your men.

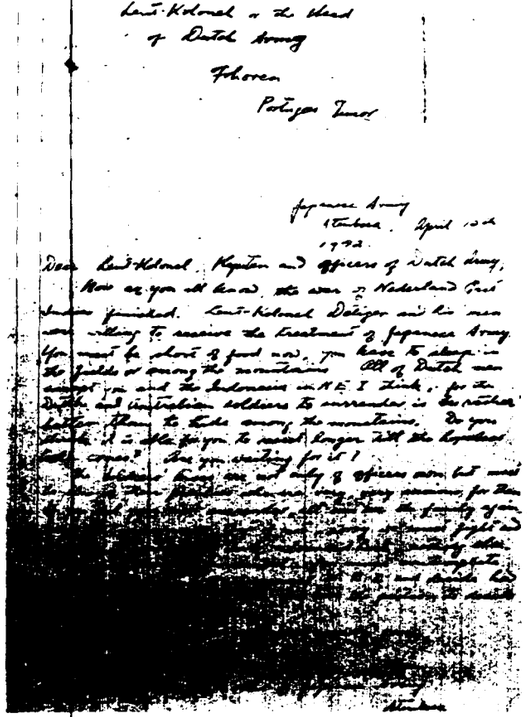
"Hoping to get you good answer soon,
Yours sincerely,
JUNZT KINOSHITA,
Head of Japanese Army,
Atemboea.

Men of the Royal Netherlands Indies Army in Dutch New Guinea prepare to enjoy a wild pig. After the huge Japanese force landed in the Indies in February, 1942, remnants of the Dutch and Indonesian forces took to the hills. As a result of wounds, malaria, lack of medical care and inadequate food half of the guerrillas died during the first year.

Official Netherlands Photo

GUERRILLAS OF THE INDIES

*by Selden Menefee**



LT. COLONEL VAN STRATEN studied the curious missive, then showed it to the members of his staff. They talked awhile, laughed grimly, then answered General Kinoshita by blowing up a convoy of Japanese military vehicles with land mines.

The guerrillas' position was quite hopeless, and they knew it. The Japanese had come early to Timor—had landed there 30,000 strong in February, 1942. This was part of the Jap move to encircle and cut off the main Allied forces in the Indies—a move that succeeded by making it impossible to fly into Java the fighter plane reinforcements assembled in Australia.

One by one the Japs seized the main air bases around strategic Java—Amboina (which fell after three weeks of fighting), Timor, Bali, and Southern Sumatra. The Netherlands Indies Air Force had been expended recklessly in the defense of Singapore and Macassar Strait, and only a few old flying fortresses without fighter cover were left to defend Java. When, in the Battle of the Java Sea, the heroic but outnumbered Dutch and American vessels were crippled or sunk by the much larger Japanese forces, the way to the heart of the Indies was clear, and Java fell to the Japs on March 8, 1942.

But as Americans and Filipinos continued resistance in the Philippines, so on every major island in the Indies remnants of the Dutch and Indonesian forces continued the fight. On Timor the resistance lasted almost a year. Before the Japanese came, several hundred Indies soldiers had landed on the Dutch half of the island (the southern and western end), and several hundred Australian Commandos had taken over the defenses of Portuguese Timor, to the northeast.

When the huge Japanese force landed, these two groups took to the hills. The Japanese gradually drove them back farther and farther into the interior, in two narrowing circles, until the Dutch and Australian forces finally came together and set up stationary bases. From their hidden lairs they frequently swooped down on Japanese patrols by day and harassed local garrisons by night. Twice they were completely scattered by heavy Japanese attack, but both times they came together and resumed the fight.

As a result of wounds, malaria, lack of medical care, and inadequate food, half of the guerrillas died in the year of fighting. The wonder is that they survived as well as they did. The Australians were specially trained jungle fighters. About 60 per cent of the Netherlands Indies men were trained soldiers; of the remainder many had been recruited into the N.E.I. militia for "limited service" only.

The Japanese employed every possible device to trap the jungle fighters or weaken their morale. They appeared in Dutch uniforms pillaged from an Army store in Kupang (the capital of Dutch Timor), or decked out in the most fantastic native disguises, but without success. The little band fought all the harder. With the aid of the loyal Timorese natives, whom the Japanese had antagonized by cruel treatment, the guerrillas held out.

The Japanese had one advantage over the guerrillas, however. They had modern equipment, and they used it. In one of the fiercest battles ever fought on Dutch Timor, the Japs had to bring up tanks and armored cars in order to win. As one Dutch lieutenant said later, "We had no tanks—no chance."

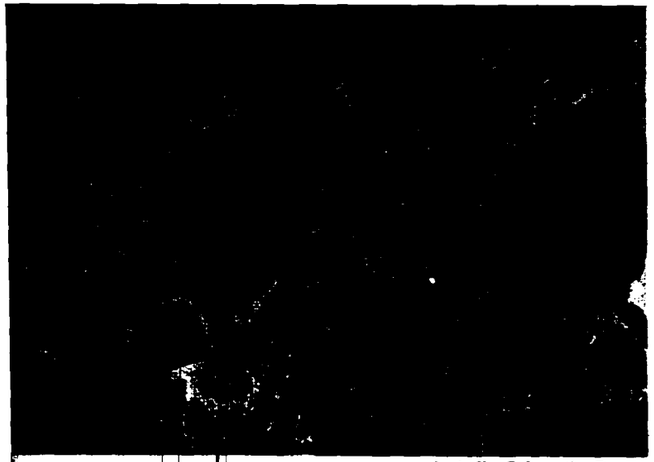
For 69 days after the Japanese invasion of Timor the guerrillas were completely out of touch with the outside world, and were given up for lost. Then the Australians managed to rig up an emergency radio transmitter out of part of an old radio set they had discovered in the jungle, scraps of wire, and kerosene tins. They had no power, so they went out at night and stole the generators from two Japanese trucks. They fashioned a hand crank to operate the generators, and were able to store up enough current to operate the transmitter for 2½ minutes every 12 hours. The weird contraption was named "Winnie the War Winner" by the Australians, who brought it home with them later on.

Thus it was that a weak signal was eventually heard in Australia, 400 miles away. But the guerrillas had no receiving set with which to check whether or not they were being heard, so they stole a portable receiver from the Japanese. After contact had been established, the guerrilla radio engineer sent this thrilling message in Morse code: "Force intact. Still fighting. Badly need boots, money, quinine, tommy gun ammunition."

After a few days the guerrilla radio man got a reply, asking that the force identify itself. After all, how was Australia to know that the radio message was not just a Japanese ruse? The impatient men on Timor forthwith supplied plenty of proof of their identity, principally in the form of middle names, street addresses, and names of sweethearts in Australia—things the Japanese could not possibly have known. An Australian destroyer then set out to rescue the party, but was lost. It was stranded on a rock on the unlighted coast of Timor during a very tricky night operation. The Japanese were thus put on their guard.

Then began a battle of wits, with both sides playing for time. A few guerrilla replacements were brought in by small boats, which were always heavily bombed by the Japanese on their return trip to Australia, part of

*Director, Washington Office, Netherlands Information Bureau.



Australian Information Bureau

With the arrival of Allied troops in Hollandia. A group of two hundred Indonesians was brought through the jungles of Japanese occupied territory to the safety of liberated territory by Dutch New Guinea police. Photo shows some members of the Dutch New Guinea police force. Long swords, shown here, are their favorite weapon.

which had to be made by daylight. Supplies, including drugs, clothing, and shoes, were also smuggled in from Australia. The shoes were found unsatisfactory for jungle wear. The broad-footed Indonesians especially had trouble: they had to wear size nines in place of the wider size fives and sixes to which they were accustomed. Even so, the city-style shoes lasted less than a month in the jungle.

There were two medical officers with the force, but they had lost all their equipment. When new supplies from Australia were dropped by parachutes, Japanese observers located the assembly spot and sent bombers to destroy the thousands of dollars' worth of much needed equipment, while Dutch and Australian officers looked on helplessly from the surrounding hills. Despite this disappointment and the ravages of malaria and dysentery, however, the guerrillas somehow managed to keep going. One Indonesian sergeant carried a machine gun bullet for three months, until he reached an Australian hospital, and survived to disprove all predictions of his early demise.

Finally, after one boatload with about 25 replacements for the beleaguered guerrillas was sunk and all hands lost, it was decided that the troop must be evacuated. The Dutch destroyer *Tjerk Hiddes* set off under cover of an umbrella of Australian Kittyhawks and Beaufighters. She arrived off Timor on a rainy night. The shore was not visible but soundings indicated that land was near. According to previous arrangements made by radio, the Dutch captain started looking for a wood fire on the beach. When no fire was seen, the ship briefly flashed a blinker toward shore and discovered that it was less than 500 feet away!

After a short wait, the guerrillas began to come aboard, and before the night was over the destroyer's rubber boats had taken 200 Dutch and 100 Australian soldiers (of which 51 were sick or wounded) and 30 Portuguese women and children off the island. The evacuees said that all attempts to build beach fires had failed, and anyhow, Japanese patrols were only 4 miles away. Fortunately, the Japs had not seen the blinker.

The *Tjerk Hiddes* left provisions for those still on the island, and later two more trips were made to rescue remnants of the guerrilla band, Portuguese civilians and friendly native Timorese whose lives were in danger from the Japanese. Needless to say, the guerrillas were feted royally in Australia, and after a period of recuperation, they set about giving training in jungle fighting to new Dutch forces formed to help liberate the Indies. The former guerrilla chieftain, now Major General van Straten, was awarded the Military Order of William from Queen Wilhelmina—a decoration roughly equivalent to the U. S. Congressional Medal of Honor—for his defense of a strategic airport on the north coast of Timor against heavy odds when the Japanese first came, and for his subsequent leadership of the jungle fighters. He is today Chief of Staff to the Commander in Chief of the Netherlands Indies Army. At this writing he is in liberated Holland, recruiting men with previous military training for the fight against Japan. The new recruits will be sent to Australia for a physical build-up, jungle training and acclimatization. Already units of the new Dutch fighting forces have served well in New Guinea as military scouts and guides with the Netherlands Indies Civil Administration, under General MacArthur's command.

As the liberation campaign has proceeded, contact has been made with other bands of guerrillas. In New Guinea last September Allied forces rescued 25 men and a girl who had fought a bitter guerrilla campaign against the Japanese on the Vogelkop Peninsula for 2½ years. They were the survivors of a band of 53 who fled from Manokwari when the Japanese landed there in April, 1942. In the original party were 51 Dutchmen and Indonesians, most of them members of the Netherlands Indies Army, and the wife and the 16-year-old niece of one of the Indonesian officers.

Indonesian soldiers of the Free Netherlands East Indies train in Australia. Many native Indonesians have made valuable guides for Allied scouting parties and patrols.

Australian Information Bureau

Patrols of officers and men of the Royal Netherlands Indies Army explore the untrodden jungle interior of Dutch New Guinea and prepare for attacks on the Japanese. It is rough going in New Guinea's jungles; the "roads" are not well paved.

Official Netherlands Photo

This group had fled southward into the mountains, then west to the Amber Baken coastal area 60 miles west of Manokwari, where they found friendly natives. Here they were joined by three Americans and several Filipinos who had escaped from Mindanao, 600 miles away, in a sailing canoe. The little troop, though ravaged by illness, waged an aggressive guerrilla campaign throughout 1943. They killed about 40 Japanese and blew up installations on a number of Japanese bases. The biggest raids were on the big Japanese base at Sorong, in March 1943, and on the ship *Daiti Maru*, which was anchored off Manokwari at the time.

Disaster overtook the party last May when an unfriendly native guided the Japanese to the camp. The guerrilla leader, the elder of the two women, the two surviving Americans, and others were killed. Thereafter the remnants of the force eluded the Japanese by forced marches and by hiding in the jungle. When American forces arrived at Sansapor last August the leader of this guerrilla band, Sergeant Kollilink, sent a message to the masking, not for rescue, but for supplies. "Two of my soldiers have malaria," he wrote, "and we have no quinine or aspirin. We also need tobacco." He offered his men as guides, and suggested that with the aid of 100 well-armed Americans they could "mop up" a great number of Japs. But instead, the party was evacuated to a Dutch hospital in liberated New Guinea.

It is known that guerrilla activity has persisted to this day on other islands of the Indies. Although detailed information must wait upon liberation, the Japanese radio itself has made some revealing statements. In November 1943 it told how defenses were being erected against the guerrillas in southern Borneo. In February, 1944, it claimed that 1800 Dutch and Indonesian guerrillas had been arrested in the mountains of Sumatra—an admission of large-scale fighting. Three months later, on May 5, a broadcast from Padang, Sumatra, said that the Achinese people, on the northern tip of Sumatra, were being trained to resist the attacks of Dutch guerrillas. The native speaker told how the Japanese had play-acted the part of guerrillas, but the Achinese with their swords and bamboo spears attacked them so fiercely that "the practice had to be called off."

Dutch air, sea and ground forces are all being groomed today for active participation in the war against Japan. The Netherlands Indies Army Air Force, operating out of bases in northwestern Australia, has pounded Japanese bases in the occupied Indies almost unceasingly for the past two years. Dutch, Negro and Javanese troops from Surinam (Dutch Guiana) have recently arrived in Australia, where they will soon be joined by Dutch officers trained in U. S. Army and Marine camps, and men from liberated Holland, to receive final training from the veterans of guerrilla warfare in the Indies.

Last but not least, Indonesians in the liberated areas are flocking in to join the fight against the Japanese. Angered by starvation and brutality; even the kindly, peace-loving Javanese want to fight their oppressors wherever they have been liberated. Already Papuan natives in New Guinea have served well in capturing stranded Japanese soldiers and killing enemy stragglers who tried to loot native villages in New Guinea. As the Indies campaign proceeds, more and more help will be received from the Indonesians.

Because of the accident of geographical position, it so happens that the most warlike peoples will be liberated first, to join the fight in areas still occupied. If Mountbatten lands in western Sumatra he will find fighting allies there; and in the east, the forces under General MacArthur are likely to come first to the Ambonese and Manadonese—the very groups who were the backbone of the Indonesian armed forces before the war.

Thus Allied forces in the southeastern Asiatic theater will probably gain increasing speed as they roll the Japanese back toward Java, key to the resources of the Indies. Judging from the experience in New Guinea, however, the final cleanup will be long and painful; but Dutch and Indonesian armed forces will be in a position to bear more and more of the weight of this campaign as liberation of Holland and the Indies proceeds.

Jap Doctrine of Armor

by

Captain Arthur L. Paddock, Jr., Infantry

A rear view of the Jap model 97 (1937) medium tank. This tank is armed with a low-powered 57mm gun. Newer M97's mount the high velocity M2 (1941) 47mm AT gun.

ALLIED troops engaged with Nipponese forces in the Southwest Pacific Theater have infrequently met with Japanese armored forces. It is believed, however, that, as a whole, Hirohito's tankers use their armor to improve the position and effect of Japanese infantry, at the expense of independent tactical rôles.

The Nips are using at the present time a light armored vehicle weighing from three to four tons, a light tank scaling 10-12 tons, and a medium tank of from 15-18 tons. These are organized into companies and battalions and often into regiments. The regiment is triangular, three battalions of three companies each, with four platoons to the company. Each company has three medium platoons and one light platoon. The company, battalion, and regimental headquarters have three tanks each, one medium and two light. The totals for the regiment are 53 light tanks and 94 mediums. In some infantry divisions, the Japs may also have a single tank company.

Tank-infantry coöperation among Japanese troops, while comparatively uncommon, reflects careful study and seemingly sound doctrine. Tanks with an infantry division of the Nip army are normally used as accompanying tanks attached to infantry units which make the principal attack. They are brought secretly to assembly positions about three miles from the line of departure, where final reconnaissance and attack preparations are completed.

The tank commander confers with infantry and artillery commanders relative to: tank jump-off positions, tank objectives and hour of attack, routes to jump-off positions and subsequent zones of advance, type and size of artillery support and its coördination with the tank attack, plans for meeting enemy armored counterattack, and signal communications among tankers, artillerymen and infantrymen. On the night before the attack, while the tanks are moving to the jump-off position, the noise of artillery fire and *aircraft flying at low altitudes* conceal the noise of the tanks.

Attack formations aim at obtaining the effect of mass by disposing tanks in several waves across the infantry front. Tanks move forward followed closely at little or no distance by infantry. Artillery supports by fire. It neutralizes enemy antitank guns by fire and smoke.

Use of Jap tanks in China has been just a bit different from what the Jap strategists initially expected, principally because of the peculiar local conditions there. Walled villages are the rule; to attack them, the Jap tank-infantry team sends tanks out ahead to clean up the town's outer defenses, and while infantry closes in to assault range the tanks stand to within machine-gun range and attack exposed defenders on the ramparts. When infantry has entered the town, tanks pass through infantry and again lead the assault. This technique can be used only when there is an absence of antitank weapons.

So far as is known, Jap tanks have never been used on an independent tactical mission. They have been the main force in a frontal holding attack while the remainder of the division envelops a flank, and they have blocked the escape of fugitives through the rear gates of walled towns. It is clear the Nips use their tanks primarily for their armor protection, not for their mobility.

In some cases, notably against the Chinese, Jap tanks have been particularly successful. Witness the attack on Sychowfu in 1938, when Jap tanks executed a wide encircling move and cut rail lines 40 miles from the city.

When Japanese armor is employed in an attack on a walled town, the attacking force is divided into four columns. One column smashes against the front wall, and two columns attack the adjacent sides. The rear wall is purposely left free of attack. Artillery blows holes in the two near corners and infantry enters through these breaches, joins, and, moving through the town, drives the enemy out by the rear. The fourth column, frequently composed of tanks, waits until the enemy is well into the open, sweeps from the flank or waits in ambush and cuts him down with fiendish glee.

Japanese tank platoons have been known to fire smoke missions to cover the deployment of infantry. When the meeting engagement takes place and the enemy has been forced to retreat, tanks push forward, frequently outdistancing the infantry which they had been supporting, to destroy the withdrawing or retreating enemy.

The many cases, however, when Japanese armor has not been successful tip the Nip scales. The Jap has two favorite maneuvers. The first, and least favored, is an envelopment over "impassable" terrain by which he hopes to force a withdrawal because one or both flanks are threatened. The second is what has been called a "filetting" attack. The Jap maneuvers much as one attacks a fish—removing the backbone and the rest falls to pieces. In this, he rushes down an arterial supply route with tanks, closely followed by infantry, on the assumption that by holding the supply route alone he will force the enemy withdrawal. If he gains this end without a fight, he is at a definite advantage. But if he has to fight for it, he has no advantage. He lays himself open to artillery fire, since the dense mass of tanks and infantry in depth with no room for maneuver favors the defender. If the defender is up to it, he may launch a single or double envelopment to destroy the Jap.

Examples of such an attack and how to foil it are numerous. Consider the operations in Kuala Dipang, Malaya, in 1942, against the famous 93d Highlanders; the battle at Slim, Malaya, same year; and the scrap at Matanikau River, Guadalcanal.

The 93d Highlanders lay in the jungles while the Jap tanks drove straight down the road. Then joined with units of a Punjab regiment, the Highlanders successfully attacked the Jap infantry which followed and inflicted losses of seven or eight to one.

At Slim, the Japs were equally unsuccessful, although their tanks pounded straight down the road to a depth of 20 miles.

On Guadalcanal, the arterial highway is the coastal road which was flanked by the sea to the north and the jungle to the south. Twelve Jap tanks, closely followed by an infantry regiment on foot, started down this road. Near Point Cruz, where American troops held important positions, the road goes out across a sand bar a few yards off shore. Only one tank, of the nine that started across this stretch, ever got beyond the sand bar. A single emplaced 37mm gun, later reinforced by three 75mm self-propelled guns mounted in half-tracks, completely destroyed eight tanks as they stopped in close column behind the second tank, which was the first to be hit. The first tank, which got beyond the sand bar, passed the 37mm gun, but it was blown into the sea by one of the 75's which chased it down the beach.

In an attack across a front of about 3,500 yards the Japs may employ three battalions against hostile positions. The tanks are organized on a triangular basis: three platoons per company, three companies per battalion, a total of 45 tanks (probably light) to a battalion.

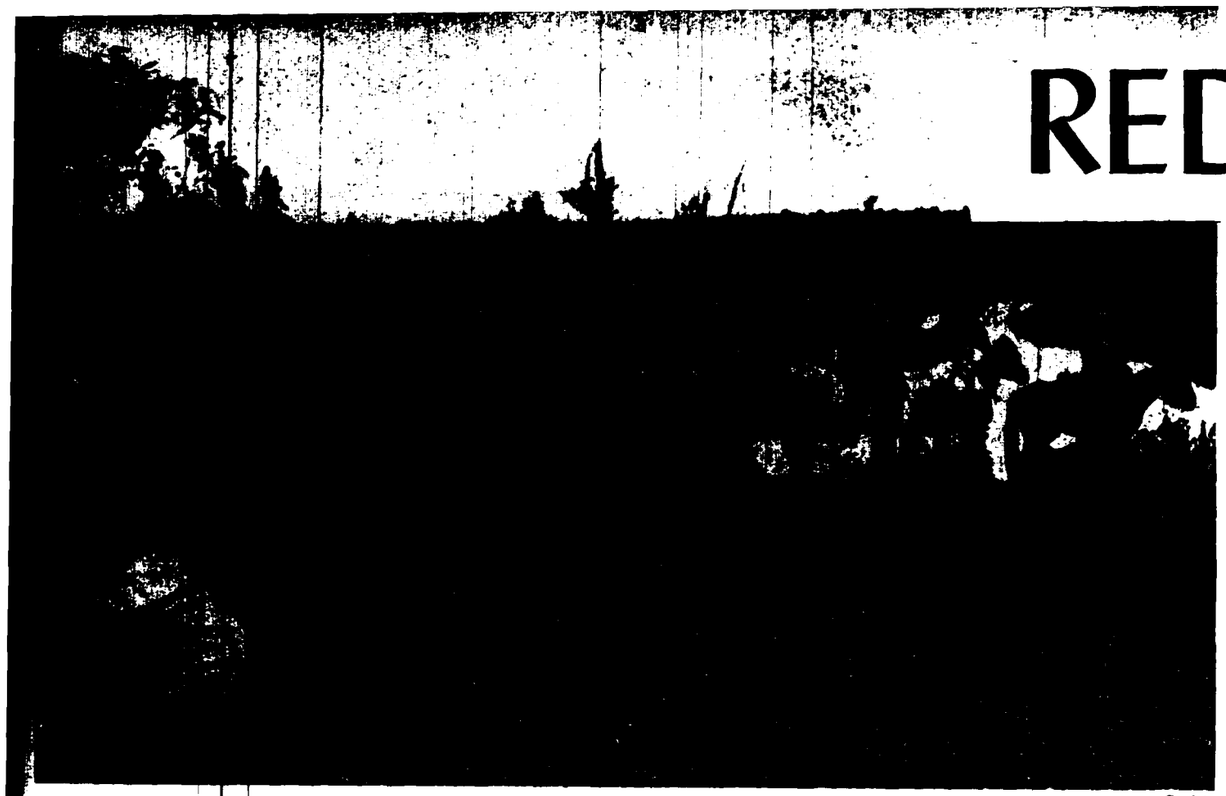
This organization greatly increases the size of the small Jap unit, generally following German and American principles. Although the Japs are believed to have more than one armored division, it is thought that they will confine their tank operations to support of infantry.

In days to come we may see more of Japanese armor. It is well to know how they are likely to operate, and also that Japanese armor, being greatly inferior to our own, can be stopped by 37, 75, 76 and 105mm shells.

This Jap Model 95 (1935) tank was knocked out of commission by American Sherman tanks during heavy fighting.

RED ARMY COSSACKS

by Major Robert B. Rigg, Cavalry



Soviet cavalry moves cross-country, over rivers and swamps, through woods and appears suddenly in the enemy's rear or flank. Men are armed with tommy guns, automatic rifles and pistols. Cavalry has led many rapid advances. Sovfoto

Part IV – Tactics and Technique

Cavalry Doctrine—Prescribed by U. S.; Applied by Russia

IT is difficult today to separate the Cossacks from other Red cavalry elements in many respects, but particularly in regard to employment.

Throughout history the Cossacks have influenced Russian cavalry trends. Since 1920, however, the shoe has been on the other foot. The Soviet Government has taken the Cossacks into the Red Army, but unlike the past, the Cossacks are treated just the same as all other Red Army elements. Thus, the organization, equipment and doctrines of employment of the Cossacks are in general those of all the rest of the Red cavalry.

An analysis of the known Russian cavalry battles in this war demonstrates the soundness of prescribed U. S. doctrines for the employment of cavalry. For example:

"It's (cavalry's) mobility permits it to extend the scope of operation of less mobile ground troops and secure freedom of action for them." FM 2-15 (Employment of Cavalry), Chapt. 1, par. 5a.

At Taganrog in 1943, the Ingulets River in 1944, and the capture of Focsan in 1944 we have excellent examples of the application of this axiom. Would space permit, many others could be cited. (See Fig. 1.)

One of the soundest and most authoritative articles on Red Army cavalry was writen by Colonel General Gorodovikov in the July-August 1943 CAVALRY JOURNAL. General Gorodovikov's article was based on an intimate knowledge of the employment and combat experience of Red cavalry. Much has been written on Russian cavalry successes, but too few authors have been able to include data on its mistakes. General Gorodovikov presents both sides, and from what he mentions, Russian combat experience confirms the soundness of U. S. cavalry doctrines. Compare these quotations from his article with one from U. S. Field Manual 2-15:

"Sometimes (separate cavalry) divisions were given to army corps or to army commanders to carry out assignments of secondary importance. . . . This method of using cavalry seldom if ever brought positive results. Scattered cavalry quickly lost its hitting and staying power."

". . . and thus its (Gen. Kriuchenkin's corps at Eletz) mission in the first stage of the operation was successfully filled. At the next stage the cavalry became engaged in . . . area where numerous inhabited points were solidly fortified and held by substantial hostile forces. The corps became involved in a series of indecisive actions and was tied down to the same area for several days."—General Gorodovikov.

"Its (cavalry's) main strength must not be dissipated through indiscriminate detachments nor sacrificed through prolonged performance of missions which belong more properly to other arms." FM 2-15, Chapt. 1, par. 5a.

If the American officer finds the study of FM 2-15 a little dull, let him turn to the more authoritative accounts of Red cavalry battles and compare the lessons learned in them with prescribed principles of employment of cavalry. In Russian battles he will find more than enough evidence to document, with modern combat experience, the pages of FM 2-15. (See Figure 2.)

AGGRESSIVE ACTION

"Cavalry seeks decisive results through rapidity of maneuver and powerful surprise attacks upon weak points of hostile dispositions. It must be imbued with the spirit of the offensive." FM 2-15, Chapt. 2, par. 6a.

In the briefest terms, the Cossack combat technique is no more than the application of the above. They place great emphasis on offensive tactics, and they train for aggressive action. This is particularly noticeable in the squadron and regiment, where these tactical subjects are considered most important: knowledge and use of terrain; reconnaissance; small battle technique; damaging and destroying railways, roads, bridges, and artillery pieces; damaging and repairing telegraph and telephone lines; communications, duties of mounted messengers and messenger relay system; attacking enemy columns; night raiding; surprise attacks and ambushes; and the *lava* tactics.

Cossacks are simply *good* cavalrymen who fight with offensive and opportunistic spirit. Their aggressiveness and tenacity, guided by able leadership, produces successful cavalry.

RECONNAISSANCE

Cossack cavalry is not employed as a reconnaissance force, as is the case with present U. S. cavalry. Their reconnaissance is strictly for themselves, although they often perform the scouting when they are organized in the tank-cavalry combat team.

Cossack audacity is usually an asset for missions they

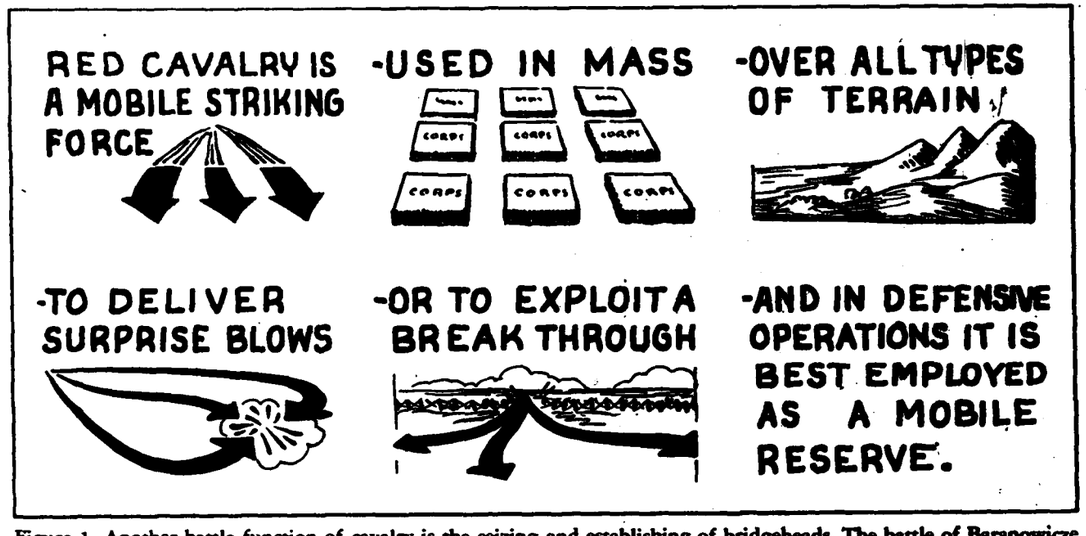


Figure 1. Another battle function of cavalry is the seizing and establishing of bridgeheads. The battle of Baranowicze (July 1944) is a good example of such an action. General Pliev's Kuban Cossack corps fought its way for 60 miles in a period of less than two days to outflank the enemy and establish an important bridgehead over the Nyeman River.

> "In defense, the heavy machine guns, together with submachine guns and antitank weapons, are the basis of cavalry dismounted action."
> —*Red Army Combat Regulations for Cavalry*, Chapt. I, par. 10.

receive, but sometimes they let their overenthusiasm and daring carry them away. General Gorodovikov also cited this and it has been a recognized Cossack weakness. Cossacks, seeking to gain surprise, have sometimes attacked too hurriedly, only to be later surprised themselves. In most cases such failures are the result of a lack of reconnaissance, and for that reason the Red Army is continually emphasizing its importance.

Cossack Lava

As already described by Mr. Nicholas Corotneff in his article, "The Tank-Cavalry Team,"[1] "*Lava* does not represent a formation but a tactical action of cavalry." The author can add little to Mr. Corotneff's already complete treatment of the subject, but the essence of Cossack Lava tactics are embodied in the following paragraph from an old Cossack field manual:

"Lava consists of different maneuvers against the enemy for the purpose of, harassing him from the front, flanks and rear, either forcing the enemy to conduct a series of separate battles, luring him into making tactical mistakes, or drawing him out so as to subject his troops to attack by other units."

By the *lava* the Cossacks endeavor to seize the initiative immediately and place the enemy in a disadvantageous position. *Lava* as practiced by the Cossacks has the immediate effect of confusing the battle issue to the enemy. Cossack units have often used their full strength against the hostile force; then withdrawing part of this force so as to "draw out" the enemy, have shifted their strength to the enemy's flanks and weaker points. In this fashion the Cossacks dominate the action, for they lead the enemy into maneuvering to suit them. The climax is usually an attack by the Cossacks (or non-cavalry units as well) on the weaker elements or flanks of the hostile unit.

[1]January-February, 1944, Cavalry Journal.

Raiding

Although the Russians adopted the word "raid" from the Americans, they have given it a broader meaning than the U. S. official definition, which is "*sudden attack usually by a small force having no intention of holding the territory invaded.*" The author has been told by Red cavalry general officers that they apply the term "raid" to: operations of all types in enemy rear areas[2] and long outflanking cavalry maneuvers which end up in the hostile rear or extreme flanks. They go on to state that Russian cavalry raids are very often for the purpose of *holding* the territory invaded. For example, in seizing an enemy strong point or town, cavalry will often outflank the frontal defenses and strike to the rear; this calls for infantry and other arms bearing the frontal assault. Cavalry's role in such an operation, if it strikes in rear of the strong point, is called raiding by the Russians. Most tank-cavalry team maneuvers are also termed raiding. From a military standpoint Cossack raids can be divided into two general categories, as follows:

[2]The Russian front should not be erroneously regarded as a single line. More than often it is a series of scattered units and strong points organized between terrain features; this makes for maneuverability by both sides.

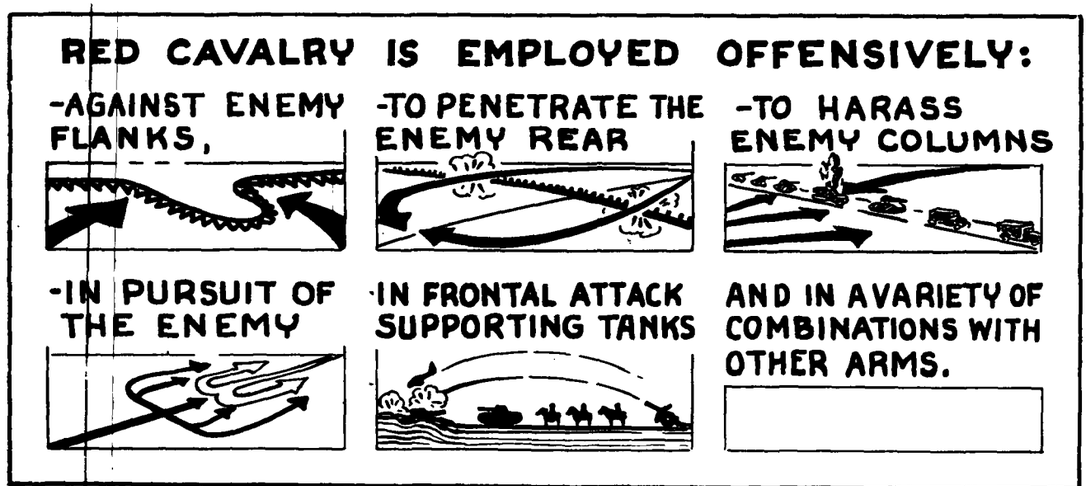


Figure 2. Red Cavalry is regarded primarily as an offensive arm. It is a highly mobile force, equipped with modern arms.

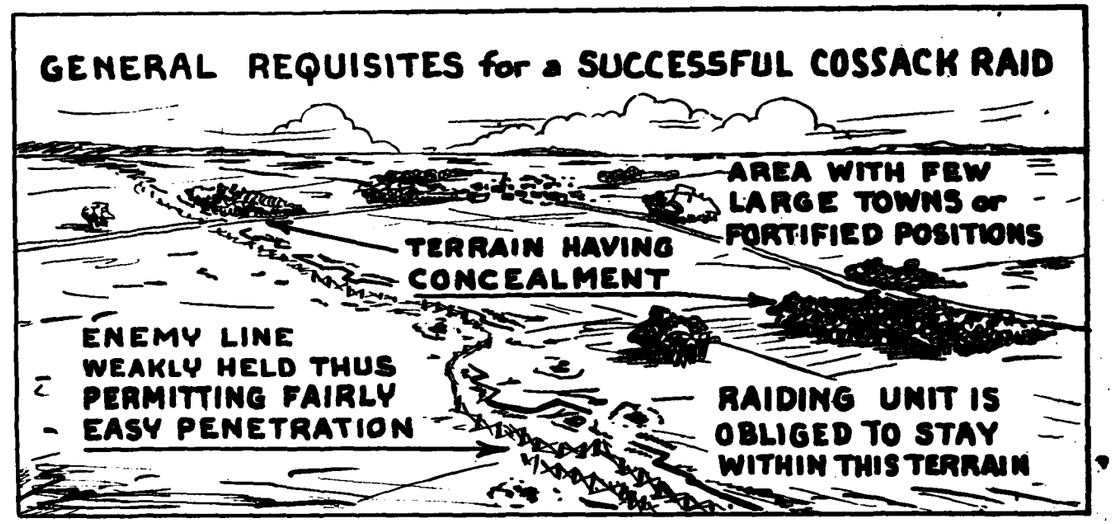


Figure 3. The raiding plan must include a preliminary air reconnaissance and map study to determine these requisites.

SIZE	OBJECTIVES	SCOPE
1. Regiment[3] or less	Local enemy CPs; artillery or AT batteries; small relatively undefended garrisons in enemy rear, and the capturing of prisoners.	Local, generally limited to about 15 miles in depth and lasting 1 to 3 days. Many are night raids only.
2. Corps[4]	Retreating enemy columns; large CPs; supply or signal installations; lines of communication; garrisons or enemy strongpoints in rear of MLR, plus targets of opportunity.	Usually limited to 30 miles in depth with duration of from 3 to 14 days.[5]

At best, raids by smaller units only supplement local actions, and one of their main values is their temporary effect on enemy morale. In all their raiding the Cossacks count heavily on creating panic and confusion behind the lines and they maneuver with this in mind. It is very easy to overestimate the value of small raids. The logistics of supply restrict all raiding, for even the smallest raiding units must carry their own forage, ammunition, etc.

The chart (see Fig. 3) lists the requisites for a successful raid. The ideal area is one where there are few roads, although an area with an extensive road net can be very suitable for Cossack raiding under conditions of mud or snow which handicap enemy armored units. In enemy rear areas lacking in heavy or well-organized defenses, very often the Cossack raiding procedure is to go right into an attack from the approach march. There is an element of risk to this, but the Cossacks feel that the advantage of surprise by very sudden and unexpected attack far outweighs the advantage gained by a thorough, local reconnaissance which would probably alert the enemy. It does happen, therefore, that Cossack units, particularly the smaller ones, will attack limited objectives without much preliminary scouting if their previous information has indicated that the area is not too well defended or organized. This only applies to actions in *rear* areas.

Red cavalry raiding, as performed today, is no longer an insignificant practice, and even within the space of this war Soviet raids have increased in size and scope. Compare the very famous and successful raid made by General Dovator's Cossack Corps in 1941 with that of Lt. General Pliev's Cossack Corps in 1943 wherein his unit killed, wounded or captured 5,000 German soldiers, destroyed 18 tanks, 36 pieces of artillery and 511 motor vehicles in addition to taking 18 artillery pieces, 1,000 vehicles and miscellaneous other equipment. This raid was carried out on the Dniester Steppe and was very widely publicized in the U.S.S.R.

One unit of Lt. General Sokolov's VI Guard Cossack Cavalry Corps was on a 135 day raid and fought behind the enemy lines most of that time. Elements of this corps, containing both Kuban and Ural Cossacks, have participated in a great many other raids, an outstanding one of which was in the Rovna-Dubno region in June, 1944.

[3]Such raiding units rarely include tank support.

[4]Either W/ or W/O mechanized units attached, depending on the season, terrain and objectives.

[5]Raids lasting longer must rely on established lines of supply and thereby begin to go beyond the realm of true raiding.

As a normal thing raiding is and should be limited in depth, but one Cossack unit fought a battle at Valiuka (1943) when they were 150 miles behind the enemy's (MLR) main line of resistance.

In January, 1944, small Soviet cavalry raiding parties infiltrated well into German rear areas and assembled at a prearranged point. After organizing they attacked a local enemy garrison, and later cut the highways leading south and southwest from Mosyr and Kalinkovichi.

An example of a very successful tank-cavalry raid occurred near Perekop and Aksinia Nova. Red Army units operating from Meritopol did much to divert enemy efforts behind the lines and Soviet cavalry action. There greatly assisted the Russians in clearing the enemy out of the whole of North Crimea.

Mounted Attacks

The Cossacks regard themselves more as cavalry than as mounted infantry, and they think in terms of *cavalry* tactics. This state of mind has led them to apply mounted attacks wherever possible.* The relative frequency (for this age) of Cossack mounted attacks has in part been due to the fact that their commanders are quick in recognizing situations and opportunities which lend themselves to attack mounted.

The tenor of the present day Russian cavalry approach to modern battle is well illustrated by their regulations covered in Chapter I, *The General Basis of Military Operations*.

> "Owing to the strength of modern fire power, cavalry is often obliged to go into action in dismounted formations. In cavalry tactics the dismounted formations must contain and disorganize the enemy's resistance, and prepare the way for his defeat by mounted attack.
>
> "If the enemy is unprepared to offer organized resistance, or if his fire system is disorganized, the cavalry must endeavor to surprise him by attacking in mounted formations. The fundamental rôle of cavalry in combat is to combine mounted and dismounted action — quickly changing from dismounted formation to mounted, and vice versa."
>
> —from Chapter I, *Red Army Cavalry Combat Regulations for Regiment and Squadron.*

Today there are no suicidal charges against machine-gun nests or organized enemy positions. When mounted attacks are conducted, they are made against very limited objectives known to be weak or not well organized, and these are usually attacked from flanks or rear.

Russian experience proves that today these attacks can only be accomplished successfully where the general situation greatly favors the attacker. For example, a retreating enemy column is considered a fairly good target. The Cossacks have found that one or more of the following circumstances *must* exist to permit an attack mounted:

1 Very poor or weak enemy defenses or an unorganized fire system.
2 Enemy ignorance of the presence of cavalry.
3 Terrain favoring cavalry approach so as to provide surprise.

Possessing one or more of these requisites the cavalry must insure its success by:

1 Thorough reconnaissance of enemy.
2 A preparatory mortar and artillery barrage.
3 Fire support by dismounted cavalry elements.
4 Correct timing and swift delivery of attack.
5 A quick consolidation by mounted and dismounted elements after the attack.
6 Thorough preparation for alternative action (dismounted) if enemy opposition proves too strong.

Not all Russian mounted attacks have proved successful, and in many cases Soviet horsemen have had to dismount in the face of enemy fire and battle their way forward on foot. Russian sources admit that in such circumstances poor reconnaissance is usually to blame.

Cossacks vs. German Delaying Tactics

In 1943 when the Germans were withdrawing in the face of Russian pressure they were using every fortification, inhabited point and terrain feature to delay the Red troops. During this period the enemy on one front considered it more important to keep his forces intact than to retain any section of terrain. The defense of a particular position, therefore, lasted until the German forces were threatened with being surrounded. In playing for time the Germans held a position until it began to be untenable, and then they quickly withdrew to other points. When the Cossacks were put in the vanguard of the Russian offensive, they noticed that the Germans were quite accustomed to the speed with which Red infantry could threaten their flanks and drive them out. There was a distinct pattern to the timing of enemy actions, but against cavalry this proved a fatal weakness.

Cossack regimental commanders would engage the enemy frontally with about one-half of the regimental strength. Dismounted, this force would concentrate on finding and attacking weakpoints or small flanks in the enemy's defenses. The remaining cavalry squadrons would prepare for mounted attack. Once the dismounted elements attacked a point with any success at all the mounted Cossacks were ordered to join the assault. Situations varied, but as a general rule the Cossacks succeeded in severing the enemy's defense, and when they did, the mounted elements hurriedly surrounded the main strong points of the enemy. The usual result was that the Germans were outflanked or surrounded *before* they expected such a threat to occur. The cavalry reached and attacked new flanks much faster than the Germans had experienced from Red infantry. If the enemy was not completely surrounded, but tried to withdraw on seeing the Cossack threat, the cavalry attacked mounted upon seeing them withdraw. For a while the cavalry achieved a series of minor successes by these mounted attacks.

By virtue of their individual agility and skill, Cossack units can mount or dismount with surprising speed. In all the Red cavalry, speed is demanded in going from horse to dismounted formation, and vice versa. Horse holders retain no little importance, and they are taught to move their animals with dispatch. Officers are taught to keep their led horses constantly in mind and to provide prearranged signals for bringing them forward immediately if the situation changes. Thus mobility is retained.

The Cossacks in Winter Fighting

Like other components of the Red Army, the Cossacks have displayed consistent ability to wage war in wintertime. In the three years of war the Cossacks have fought in all the Red Army's winter operations.

Contrary to the ideas expressed by some American newspapers, the winter snows in Russia do not necessarily increase the maneuverability of Soviet cavalry units. Like all other arms, the cavalry is inhibited to a certain degree by the snows—but under some circumstances, the cavalry is hindered to a lesser degree. Actually, cavalry has a greater advantage over mechanized troops during the muddy spring than it has in winter.

Deep snows have actually taken some Cossack units off their horses and forced them to operate on skis. Red Army officers admit that many times during the Russian winter the cavalry is limited to roads only. Mounted patrols are not necessarily the best for reconnaissance, and there is evidence that small ski patrols take their place quite consistently. This is especially true in the open country where the horseman is more conspicuous in wintertime. In some localities extreme winter conditions have put the cavalry on a par with the infantry as respects mobility. It is true, however, that such conditions do not prevail all along the front, nor all of the time, but the Cossacks and other cavalry have often been severely restricted by winter elements.

On the other hand, areas covered with deep snow provide protective flanks which can often benefit cavalry regimental maneuvering. Snow and ice serve to open up certain swamps and rivers which are serious barriers in summer.

Where the snows are not too deep, Soviet cavalry offensives are conducted, mounted or dismounted, with the support of tanks. In areas where the snow is very deep, the cavalry operates without tank support and very often with the assistance of ski troops.

Where possible the Russian cavalry trys to conduct its offensive operations in terrain not too heavily covered with snow, so that other troops (armor and infantry) can support the cavalry. During the 1943-44 winter the Soviet German Front traversed many swamps and woods—terrain of great help to the Russian cavalry.

*As discussed here, mounted attacks do not include those made with tanks.

Employment of Regimental and Divisional Artillery

by Major Robert B. Rigg, Cavalry

LIKE the horsemen they accompany, the Cossack artillerymen are aggressive and bold. They are accustomed to going into acton quickly. Very often these gun crews must unlimber their guns from the march and fire from open places.

Regimental artillery is employed more or less at the discretion of the regimental commander. He may keep it together, although in most instances he will attach it by platoon or gun to the squadrons (U.S. "troops") in which case the weapons will be under the control of the squadron commander. Regimental artillery is effective against enemy mechanization up to 1,600 yards.

Divisional artillery is employed under centralized or decentralized control depending on the combat requirements. This artillery is centralized for offensive action, or occasionally for the defense of a narrow front. Under decentralized control the divisional artillery is attached to regiments by battalions or batteries. In this manner they supplement the guns within the lower units.

Counterbattery fire is normally the work of divisional artillery when there is no necessity of engaging the smaller ground targets. The primary mission of divisional artillery is the neutralization of enemy AT guns, personnel, MG positions, and similar ground targets. This artillery also lays barrages on defiles, road junctions, etc. Divisional guns provide rolling barrages for the support of attacking cavalry and tanks. Red cavalry combat regulations give 220 yards as the closest that cavalry should come to an artillery target under fire, but tanks are permitted to follow a rolling barrage a little closer.

Sometimes cavalry's artillery must clear away obstacles so as to permit cavalry penetrations and freedom of maneuver. Of some interest in this respect is an official Red cavalry table designed to guide cavalry commanders in requesting artillery assistance. Only one item from the table is listed here, but this example typifies it:

> MISSION: Given good artillery observation, clear a 20 to 25 foot path through enemy wire entanglements (up to a depth of 65 feet).
>
> ARTILLERY: This can be accomplished up to a range of about 1.8 miles, and it is regarded as a two-hour job for one gun. The 122mm weapon would normally require about 85 shells; the 76mm, 200 shells.

The present Russian field manuals for cavalry place much emphasis on the use of artillery with cavalry, whereas the U. S. FM 2-15 hardly mentions the subject. In general, this is due to the difference between the U. S. and Russian cavalry tables of organization.

Tactics of Red Army's Mobile Team

Zhukov's Successes

"In a rare press interview on January 25, 1942, Zhukov outlined a few reasons for the German shambles at Moscow. 'They were used to easy victories,' he said. 'For them war was merely maneuvers. They have neither cavalry nor skiers; their tanks cannot pass over the snow.'" —Life, *February 12.*

Moscow, Feb. 28. By Wireless to the New York Times, by Leigh White—Spring has come to Eastern Pomerania, the army paper Red Star says. The sun has melted most of the snow and rivers have overflown their banks, converting much of the countryside into marshes. Armor has therefore proved of limited usefulness, and the Cossack cavalry has again been used to encircle and harass an enemy who forgot that horses still have their place in an age of mechanized warfare.

London, March 1. Russian Wednesday midnight supplementary communique broadcast from Moscow—Troops of the Second White Russian Front continued to develop their offensive. Soviet infantrymen, tankmen and cavalrymen inflicted heavy blows on the enemy and, with the support of the artillery and air force, routed him from resistance points. Advance units of a guards cavalry detachment reached the approaches of Neustettin. The detachment attacked the Germans who had intrenched on the southwest edge of the town and attracted to themselves the main basic forces of the enemy garrison. During this time, others of our units carried out an outflanking move and broke into town from the north. Pressed from two sides, the enemy garrison was routed and the town of Neustettin—an important stronghold of German defense, a junction of 5 railways and several highways—was captured.

London. March 9. United Press. A dispatch to the official Soviet newspaper, Pravda, *said Soviet members in 'round-the-clock attacks were joining with massed artillery in pulverizing the river crossings in the Stettin area, jammed with broken-up German columns trying to escape through Stettin. "The Estuary of the Oder and Stettin Lagoon are clogged with sunken enemy ferry boats, carrying trainloads of tanks, motor vehicles and men," the dispatch said. Cossack cavalry, sweeping the east bank of the estuary rounded up 8,000 Germans who had not been able to find passage. They also collected 2,000 carloads of equipment and scores of locomotives. Zhukov and Rokossovsky between them now had conquered nine-tenths of German Pomerania and were rapidly liquidating the rest of that province which is east of the Oder.*

SOVIET cavalry, reinforced by tanks and motorized units, played a considerable rôle in many Red Army victories. This close coöperation of all mobile arms of the service—tanks, motorized infantry and cavalry—based on surprise and determined action on a bold and daring maneuver, constituted one of the distinctive features of the victorious Soviet summer offensive.

The tanks form a steel shield for the cavalry and the motorized formations; in turn, the advance of the tanks is secured by the firepower and the continuous movement of the cavalry squardons and the motorized units. Their closely coördinated actions are effectively supported by powerful blows dealt by offensive air power.

The cavalry-mechanized teams develop swiftly and deepen the breakthrough made in the enemy defense line by the infantry-artillery team. They drive deep wedges into the enemy defense zone, split it up and penetrate into the operational depth. They destroy the enemy reserves coming up to the threatened sector, seize important centers and straddle the enemy's communication lines, cut off his lines of retreat and, in coöperation with the forces advancing frontally, cut off and annihilate the main grouping of the enemy.

Combined actions of mobile arms must be skilfully organized and should be conducted by the senior field commanders with a firm understanding of the situation at all times. Aimed at the vital spots of the enemy's defense the action consists of a succession of bold flanking and turning movements. If the cavalrymen and the tankers move rapidly and without looking back (*i.e.*, disregarding their rear) the operation is bound to succeed.

During the drive against Minsk, the Kuban Guard Cossacks of Lt. General Plieff, in a swift and dashing operation with tanks and mechanized formations, seized the important enemy communication center of Stolbtzy-Nesvizh. After cutting the German communication lines, Plieff's squadrons forced the rivers Ptich and Sluch, and in a deep flanking movement decisively smashed the main enemy grouping. Together with infantry divisions advancing frontally, they occupied Minsk.

In the next stage of the operation, still in close coördination with tanks and infantry, the Cossacks swept across the German lines of retreat, occupied Barqnovitchi and Slonim, and thus opened the road to Brest-Warsaw. This brilliant action of cavalry is by no means an isolated example. There were many similar ones during the 1944 Soviet summer offensive.

Soviet experience in this war conclusively shows that in combined operations of mobile arms the most dangerous factor—and one that can blight the whole operation—is that of routine thinking. A thorough and balanced appreciation of the situation must be the basis of a creative and imaginative effort directed toward finding new ways and means of fighting. Constant striving for surprise and unflagging determination are the prerequisites for victory.

The first and basic factor of successful coördination of cavalry and tanks is the principle of using them in massed formations and throwing them into the flank and rear of the main enemy grouping. The second guiding principle is the necessity for ceaseless and closely knit interaction and mutual support at all times and in all situations. The third principle is an unremitting support of the advancing tanks and cavalry by all available firepower and massed blows from the air.

It goes without saying that a well organized rear service is of prime importance. No matter how far the mobile units are advanced, their supplies must reach them without interruption. This must be the main concern of the higher commanders and their staffs. Tanks and motorized units assigned to the cavalry in offensive operations, as a rule, are used (1) along the axis of the main blow, (2) on sectors threatened by an enemy counterattack, (3) on the flanks, and (4) out in front of the main cavalry group. When focal points of the enemy's defense system are seized, the motorized formations consolidate the gains and hold the important areas until infantry masses are brought up. Meanwhile, the tank-cavalry team develops and further exploits the success by annihilating the retreating enemy and smashing any reinforcements on their way to the front line. The mobile team strives to achieve the complete debacle of the enemy's main grouping.

Experiences of World War II show that to inflict a decisive defeat on the enemy it is necessary to maneuver on a wide scale, and execute the mission with boldness, skill and utmost coördination between tank and cavalry formations.

During the summer of 1944 the horse guards of General Oslikovsky, in a sweeping flanking maneuver closely supported by tanks, forced the Beresina River straight from the march and seized the town of Borisov. Without letting the enemy rest, the Guards struck immediately at the important German communication center of Molodechno, and then at Lida. After capturing both towns, Oslikovsky's cavalrymen continued their relentless pursuit of the retreating enemy, inflicting heavy casualties, and then, in coöperation with tanks and infantry, took Grodno.

It is necessary to pursue the enemy with all arms of the offensive team—cavalry, tanks and motorized infantry. During such a pursuit the main object is to give the enemy no chance to recover, regroup and reorganize his shattered defense system. His battle orders must be broken up into fragments by swift, daring blows, his main centers of resistance turned and out-flanked, and the whole depth of his defense zone penetrated. The best results are achieved by parallel pursuit along several routes, with mobile groups swinging across the enemy's rear lines and encircling his main groupings.

It must be borne in mind that "the offensive impetus does not bear interruption," therefore, the pursuit must be continuous and relentless—the endurance of men and horses being taxed to the limit. The dash and elan of the pursuit, however, should not dislocate a firm and flexible direction of the operation. It is necessary to appraise realistically the maximum strain to which the cavalry can be subjected without impairing its fighting strength.

Close attention must be paid to the complex matter of coördination between the mobile arms and aviation. Airpower must provide a stout protection to the cavalry-tank-motorized infantry team at all stages of the operation. If the enemy attempts to strike a blow from the air, the fulfillment of the task entrusted to the mobile team should not be interrupted. While parrying the attack by use of every man and weapon available, the combat team must continue to move forward with even more determination in order to deepen the wedges driven into the enemy's disposition. This is the best way to paralyze the offensive moves of the enemy's air force, which then faces the risk of hitting its own troops.

Such offensive tactics, inherent to every one of the Red Army's offensives, require boldness and initiative on the part of every cavalry commander.

The great maneuvering capacity of mobile groups and the quick tempo of the offensive operations require that cavalry and tank commanders have a great deal of flexibility. They must be able to judge a situation quickly and, while making bold decisions, still see that the controlling apparatus functions properly in all stages of the combat. There is no place for routine. Every operation presents its own peculiarities, which must be evaluated correctly. A commander who is inclined to a passive attitude, procrastination, or a tendency to wait for directives from above instead of reacting instantly to every change in the situation is doomed to failure.

Translated by Nicholas Corotneff **from an editorial in *Red Star*, August 2, 1944**

DURING the difficult mountain warfare in Sicily and Italy, the 3d Infantry Division, at that time commanded by Lt. General (then Major General) Lucien K. Truscott, created a mounted horse unit, designated as the Provisional Mounted Squadron. This improvised unit, evolved from the exigencies of war, consisted of two highly valuable sections—a horse troop for cross-country reconnaissance, and a pack troop for transporting supplies to hazardous mountain positions.

Personnel

In the creation of the mounted squadron the original cadre included men from all division units. Every effort was made to utilize all personnel—other than key men of the various organizations—who had previous experience with horse or pack units. Although most of these men lacked extensive experience with animals, they were not entirely green. During the 59 days of combat in Italy, however, the organization suffered some casualties, and only a few of the replacements received from the pools were trained mounted or pack personnel.

Before the unit was withdrawn, Fifth Army initiated a program of training personnel for mounted units in their replacement depots, but the number of qualified men available was not great enough to meet the demands of the several divisions which by that time had animal units of some type and size.

There was a definite need for such specialists as horseshoers, packmasters, saddlers, and officers with horse cavalry or pack-train experience.

Procurement and Supply

Initially, the supply of animals and equipment was made available from previously liberated territory. Later, animals were either requisitioned from civilians or obtained by purchase. The division detailed one of its quartermaster officers to handle and supply the necessary replacement animals and, through purchase, to obtain necessary special supplies and equipment not available through normal supply agencies. Such items included saddles, harness, packs, spurs, leather riding gloves, horseshoes, horseshoe nails, forges, curry combs, horse brushes and many other special items. Grain was a problem until shipments arrived from adjacent countries. Long forage was secured locally.

Tactical Employment

Typical missions assigned the mounted reconnaissance troops were as follows:

Reconnaissance to the flanks and to the rear of enemy positions. Immediately upon landing in Italy in September, 1943, the horse troop was sent into action on the right flank of the 3d Division. The only road in the sector ran through the mountains directly under the observation of the enemy. This road was to be the axis of movement for the division.

The horse troop passed through the leading infantry regiment and, moving cross-country, was able to locate some of the enemy forces. This information enabled the division commander to so plan the movement of his infantry troops that the first objective attacked was taken.

From its new location the mounted troop, continuing its operation to the flank and about 5 miles to the right front determined that the enemy had not withdrawn in that direction, as had been thought possible, and again the division commander had the necessary information to assist him in the most strategic employment of his infantry. This action took place in very rugged mountains passable only to foot soldiers and animals.

During this reconnaissance route information gained by the troop indicated certain trails (not shown on the maps) which could be used by the infantry in reaching their objectives, and furnished commanders with information of the terrain ahead in which they would have to operate.

Reconnaissance and Counterreconnaissance Screen. On one occasion in October, when a wedge had been driven into the enemy position, our left flank was exposed to the enemy opposing British forces on our left. The horse troop, working in conjunction with the mechanized reconnaissance troop, covered this exposed flank. The mechanized troop covered the road net and pushed reconnaissance toward the enemy positions. Meanwhile, the horse troop, moving cross-country through heavy brush and streams impassable to vehicles, discovered the enemy flank and destroyed an enemy foot patrol and an outpost of 4 men.

Shortly after this encounter the enemy, not knowing our dispositions and apparently afraid of an attack from that flank, pulled his outposts back about two miles. With the knowledge of the enemy location, the infantry was able to outflank the position and helped the neighboring British forces reach their objective from the south.

Flank Contact with Neighboring Units in the Mountains. Early in November a division on our right was attempting to turn the flank of the enemy opposing our forces. A Ranger battalion was employed between the two divisions to secure a certain commanding hill mass. The division commander, desiring physical contact for his right flank with the Ranger battalion, sent the horse troop into the mountains to establish this contact and to reconnoiter the area in front of our right flank battalion. Contact was made and the exact position of the Rangers reported by radio.

The troop continued its reconnaissance and at dark was directed to halt for the night and to return in the morning. At daylight the troop found itself in the middle of an enemy position with Germans on three sides. This was reported to the division, and, acting aggressively, the troop attacked the Germans, surprised them, and succeeded in driving them from their position. During this encounter the troop killed about 30 of the enemy and captured about 20 more, while it suffered a loss of only one man and one animal!

Summary

1. *The Horse Troop.* All missions of the provisional horse troop were of a reconnaissance nature. It was used in terrain where the division's mechanized reconnaissance troop could not take their vehicles. The horse troop, executing these missions with speed and daring, was invaluable to the division commander. The troop's success was due largely to its ability to move cross-country in mountains—either day or night—with a minimum of noise and cover ground accessible only to animals or foot troops.

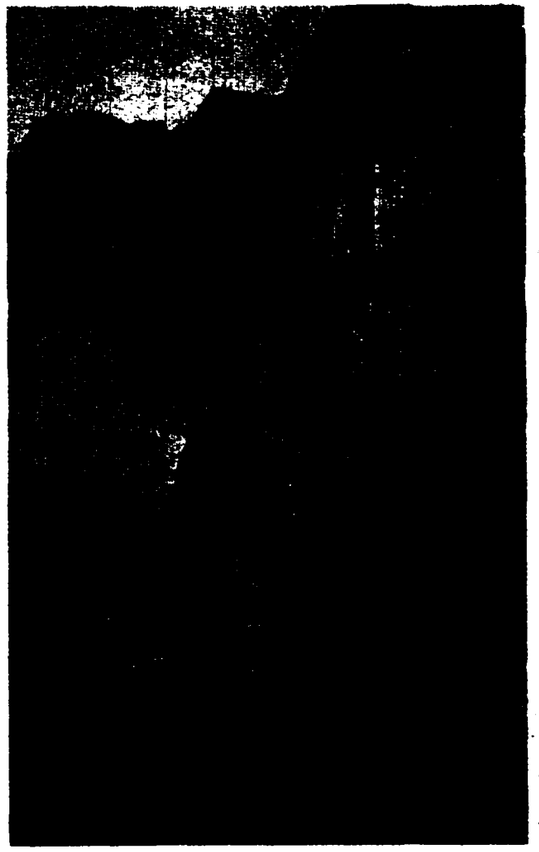
2. *Pack Battery.* The pack battery was constantly used by infantry troops in the mountains and was successful in bringing artillery fire on enemy positions from the flanks. This unit offered immediate direct artillery support to infantry troops in cross-country attacks where normal artillery fire was not always possible.

3. *Pack Train.* The primary purpose of the pack train was to deliver supplies of ammunition, water and food, to those troops in forward positions where vehicles were forced to stop because of the terrain or the tactical situation. The pack train was used every day during combat. Experiments had been conducted and plans made to utilize the mules for evacuation of wounded personnel and to pack hot meals in containers up to the combat troops.

4. *Communication.* The wire-laying platoon was used to keep the combat telephone lines laid to the front-line infantry units. Normally a part of this platoon would be attached to the infantry regiments under the supervision of the regimental communications officer. Special packs for carrying reels of wire allowed lines to be laid as the troops moved forward, and by using mules several additional miles of wire could be carried with the combat elements. One infantry battalion moved cross-country about 7 miles to reach an objective. Wire carried by mules furnished telephone communication in this unit. The heavy field wire which was laid stood up well in spite of heavy shelling, and communications were maintained.

5. *Portée.* The continuous operations in mountains compelled the use of animals. Whenever open terrain was encountered, the mechanized reconnaissance and supply units were utilized, and the animals were moved forward in trucks, so that continuous operation was assured.

A mounted unit moves through a wrecked town in southern Italy. Horses and men were often portéed to the front.



*Commander 3d Reconnaissance Troop (Mecz) in Sicily and Italy from May through December 1943.

MIXED CAVALRY REGIMENTS*

The Spanish conflict, '37-39, became a laboratory for modern warfare—Russia, Germany, Italy tried out new weapons, developed new tactics. Since then, many Spanish officers have had access to German military schools. Here one describes a horse-mechanized regiment and its place in the present and future.

by De Sotto

THE German army, which constantly amazes us with its large armored and motorized units, has not discarded its units of corps cavalry, in spite of the fact that its theaters of operations, generally speaking, have been plains, well suited to the use of large armored units. It is from such cavalry units that the Germans pick the reconnaissance groups for their divisions. These reconnaissance groups were certainly much used during the past (1942-43) Russian winter—that implacable enemy of the internal combustion motor.

In our country (Spain), where the temperatures will never be low enough to interfere with armored or motorized equipment, the topography of the terrain, on the other hand, will present large inaccessible areas, and other areas only slightly more favorable, in which the most suitable and rapid means of transportation will not be the machine, but the horse.

Whatever the nature of the zone of operations, however, the need for reconnaissance for the security of officers and men and for the exploitation of victory will always be the same.

Rapid and easily maneuverable units made up partly of squadrons of horse cavalry and capable of giving corps commanders information with a sufficient margin of time and space, are an absolute necessity.

Corps Reconnaissance

Let us see whether or not the present corps regiment is in possession of the equipment and elements giving the proper balance between missions and the zones where they must be carried out.

It cannot be conceived that a cavalry commander, when on a reconnaissance mission or when providing security for troops marching confidently behind him, would limit himself merely to announcing to the command: "Here they are! The enemy's forces are strong (or weak)," etc. If he is to fulfill his mission, the commander must provide security for himself and the army corps in all directions (security in force in the most dangerous directions) besides engaging the enemy in either offensive or defensive action over a really considerable area. It is certain that he will make use of his great maneuvering ability, which we cannot anticipate as being superior to that of the enemy.

Naturally, this will not be over the entire zone that he is to explore, but only over a small part of it, or at some definite point. Also, he is always exposed to deception or attack by enemy detachments attempting to slip past his patrols. What these detachments are trying to do is to make progress difficult for the divisions moving up to the front, for they are the ones that are a source of danger to the enemy command.

Generally, large enemy detachments will not slip by unnoticed, but will be found and repulsed about the time that they are signalling back to their own command that contact is about to be established. From this moment on, difficulties increase for the mixed cavalry regiment that is obliged to maintain itself over the broad fronts mentioned in all the regulations. These fronts are not continuous, but depend on where the enemy is attacking and maneuvering at a given moment; for the enemy will be just as much in a hurry to learn, and will need to learn just as much as we, what is on the other side of that curtain of fire. While they are still talking of the approach march in the main body of the corps, a whole day will have been spent talking of combat—combat on a small scale, yet normal for the small forces involved in such detachments.

It is because of these factors, and many others still unforeseen that in all regulations and tactical studies, the need of reinforcements in the regiment of mixed cavalry is emphasized. This need is certain, although it is equally inconceivable that these regiments should be enlarged to the point where the means at the disposal of the regiment becomes incapable of handling the augmented forces.

Composition

Now, it is believed that such reinforcements normally should be made up of troops which, with a high degree of maneuverability, have the ultimate mission of supporting the regiment of mixed cavalry, and another normal mission benefiting the infantry division advancing into the front lines. This means that the present regiments of mixed cavalry should be apportioned ample reconnaissance zones which will leave gaps in the terrain to be filled by the above mentioned reinforcements, whose strength should not be less than a group of three squadrons (with antitank and antiaircraft guns) per infantry division.

If such a plan were accepted, it is believed further that it would be necessary to consider substituting, in place of the mounted group, used by mixed cavalry regiments at the present time and limiting the latter so much in their movements, another group of squadrons, also mechanized, which would constitute the true combat group.

Besides a nucleus of motorcycle troops, the mixed cavalry regiment should also possess other powerful offensive elements which might very well be units of motor vehicles mounting guns.

Under these circumstances, it is conceivable that the corps cavalry service could be organized as follows: One group of fast, mechanized squadrons with powerful means for the transmission of messages to be used for seeking information at convenient distances (15 to 20 miles) by penetrating into the enemy's areas and main highways, and for seizing possession of points of strategic or tactical importance indicated by the command. That is, their service would be performed for the benefit of the corps command. There should also be a powerful, rapid, highly maneuverable group, also mechanized, which should constitute the second group of squadrons of the army corps and should be used as a powerful supporter of parties sent out by the first group.

Missions With the Division

From the broad field of the army corps command, attention is diverted to the division. Here are found groups of mounted squadrons employing horses and a certain proportion of motorcycle troops which should not exceed a third of the total force in the zones of action of these large units. Missions are identical with those of the mixed cavalry regiments but in this case, they fulfill them as detachments of the divisions, which they secure and which are always ready to reinforce the regiment of mixed cavalry within the normal zone of activity of these large units.

With this solution of the problem, the regiment of mixed cavalry does not need to have a mixed composition (motor and horse) for the transportation of its squadrons and for their use in combat as is the case at the present time. Nevertheless, the thing aimed at with such a mixed system—the maneuverability of the mixed cavalry regiment in any sort of terrain, and which truly is variable enough in our country—is really attained. This is due to the fact that in groups of horse-mechanized cavalry, the interchange of missions may be amplified greatly by the use of the horse cavalry provided for the security of the divisions when the need arises.

This does not mean that the service of the valiant mechanized units is not needed. Regardless of how difficult the terrain may be to armored and motorized elements, there are always some roads whose military value is in inverse ratio to the frequency to which they are encountered. Such roads can be given over to mechanized troops for reconnaissance and the guarding of vital points, while their brothers on horseback advance more slowly yet at all times, furnish protection for the army corps against surprise and other untoward events.

Last of all, among the offensive missions of the mixed cavalry regiments there is the task of providing security. With the small forces, as reflected in the staffs, and even with a great reduction in the personnel charged with the custody of stock and equipment, no matter how little the front to be covered is extended, the regimental commander will have his reserves so reduced that he is likely to find it impossible to fulfill such a mission properly.

In Defense

Although the cavalry was never a defensive arm, its troops must always be ready to make their best effort in a defensive mission, which is less glorious but at times just as valuable. It is for this reason that the regiments of mixed cavalry must be so organized as to do their part, not only in performing their normal missions—coöperating in counterattacks, reëstablishing the situation, promptly closing the breach produced in the defensive position, and carrying on delaying action—but other less frequent tasks, such as occupying one of the zones of the defensive system. In its organization, however—and this is believed perfectly adequate—the idea of offense has existed more than the idea of defense, and it is to this end that the present mixed cavalry regiment is geared.

The mixed cavalry regiment cannot be looked upon as merely a function of the number of its vehicles and horses, in which respect its effectiveness is similar to that of a line battalion when occupying a center of resistance—a mission which to a certain degree is foreign to and outside the field of the tactical characteristics of cavalry and whose employment as such will be recommended only in unusual circumstances.

Final Considerations

Army corps cavalry should exist in greater force, with a certain degree of separation worked out and established between horse and mechanized units in accordance with the normal missions for which they are to be used. In an effort toward *specialization*, without attempting to create regiments to be used for every purpose, it is possible to be led unavoidably to organize units that carry out their special tasks in a mediocre manner. Certain means that from the theoretical point of view appear entirely proper, may prove to be only beautiful aspirations during the actual campaign.

*(Translated at the Command and General Staff School from a Spanish article by De Sotto in *Ejercito*, January, 1943.)

Cavalry is an arm costly to organize and maintain. Under certain circumstances, which must be avoided as much as possible, it wears out rapidly. Although vulnerable to aviation as some claim, in this respect, it is much like other arms less discussed.

It is an error to believe that these troops alone are fit for violent and decisive action, capable of such victories as to make us forget the financial sacrifices entailed by their organization and maintenance. It is true that such action is the pride of such organizations and their most outstanding characteristic. But during a campaign that offers little or no opportunity for them to operate, the horse cavalry and motorcycle troops do not rest on their past laurels while others labor. The protection of advancing or retreating troops, the security of the lines of communication with the rear guard, filling a breach in a sector, participating in counterattacks—including infiltration into the ranks of the infantry so as to increase or reëstablish the continuity of the defense—were never missions foreign to cavalry, which has not hesitated to carry them out with the same enthusiasm and spirit of abnegation that has been shown by cavalry troops of all time.

When persons of relative authority are heard to say that the age of horse cavalry is past and that the formula of victory is to be found in total mechanization and motorization, one is reminded of those faulty theories (as subsequent events proved) that were maintained at the time of the war of 1914-1918. Then the belligerents were prompted to dismount their squadrons and transform what at that time was excellent cavalry into mediocre infantry with no hope of the reverse change at any given moment—which moment with certainty appeared.

It is a source of surprise how little attention some pay to the many events of the recent battles on the Eastern Front where, certainly, the horse has not become discredited. The rigors of the Russian winter, as well as the recent operations of the Rumanian cavalry in the zone of the armies of General von Bock, have both served to demonstrate to the German command the qualities and aptitudes of cavalry to such an extent that the increase in the number of horses in the German army is a manifest fact.

The persons who certainly are in danger of being mistaken are those who seek victory by means of radical solutions without stopping to think of the resources necessary to take care of the needs of a campaign at all moments—tradition and a martial spirit and, lastly, the probable theaters of operation which have so much to do with the decisions of the command.

It is well that our (Spanish) army possesses powerful armored units that are fast and motorized. But these units are maintained in a proper proportion without forgetting that other arms have a place in the battle—a place that must not remain vacant if the army is to possess the flexibility and maneuverability necessary and indispensable in present *blitzkrieg* warfare.

U. S Experiment in the Horse-Mechanized Regiment—1941

The Horse and Mechanized Regiment in effect is a task force. Its animal and mechanized strength in reconnaissance troops, its roving capabilities and fire power, its communication, pioneer and antitank sections with its self-maintained service section—all fit it for all purposes of reconnaissance, security and limited combat.

The capabilities of this type regiment were admirably demonstrated by the action of the U. S. 4th Cavalry (H & M) in the GHQ. Maneuvers of 1941.

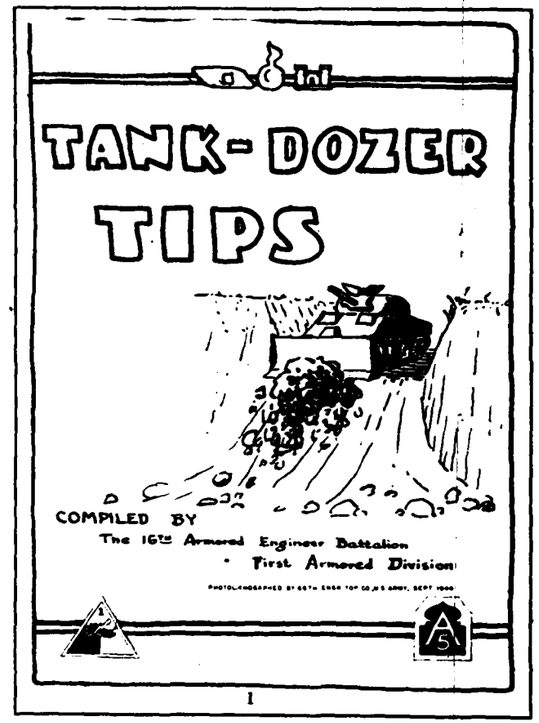
In order to meet the threat of the armored force, which was endeavoring to encircle Shreveport from the north, the 4th Cavalry, less the detachments on the west flank, was assembled at Logansport, entrucked, and moved to Greenwood, 25 miles distant and a few miles west of Shreveport. There it held off the reconnaissance of the armored force until the arrival of the 6th Infantry Division. Then, with Army approval, it entrucked and moved to the vicinity of Marshall, from which point it was to gain contact with the enemy, fill the gap between the 2d Cavalry Division and the 6th Infantry Division, and cover lines of supply.

Later the same afternoon, when enemy forces crossed the river in the Logansport area and outflanked the 2d Cavalry Division, it became necessary to commit division reserves and shift most of the 3d Brigade to forestall the 1st Cavalry Division and prevent the 2d Infantry Division from gaining a foothold. As the pressure increased it became evident that the 2d Cavalry Division would be forced still farther back.

At 4:05 P.M. the 4th Cavalry (less one SC troop) was ordered to assemble near the division command post at DeBerry as a new reserve. At the time of the order the 4th Cavalry was about 25 miles away. One scout car troop was left at Marshall to patrol that vicinity. Within 45 minutes the leading troop of the Horse Squadron arrived, and by 5:15 the entire 1st Squadron had arrived, detrucked and was ready for action. By 5:30 the remainder of the regiment which had been out on patrol had assembled and reached the CP. This furnished an adequate reserve to meet both the penetration and the flanking maneuver of the "Blues" and to reëstablish lines as directed by Second Army.

During a 48 hour period, the 4th Cavalry engaged in all the actions mentioned, traveled approximately 120 miles, and was fresh and ready for action when the maneuver was called off. The 4th Cavalry, as a horse and mechanized regiment, proved to be a most capable task force for reconnaissance and security and for combat when given appropriate missions.

—Extracts from letter of Commanding General, 2d Cavalry Division, October 4, 1941.



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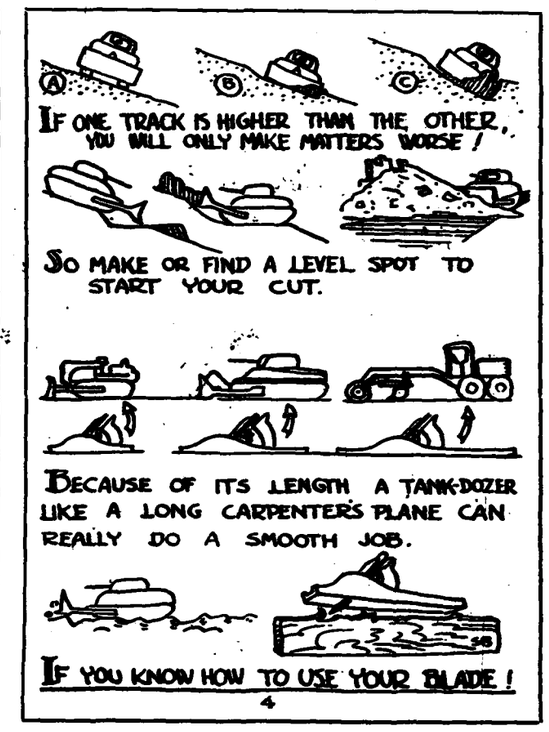

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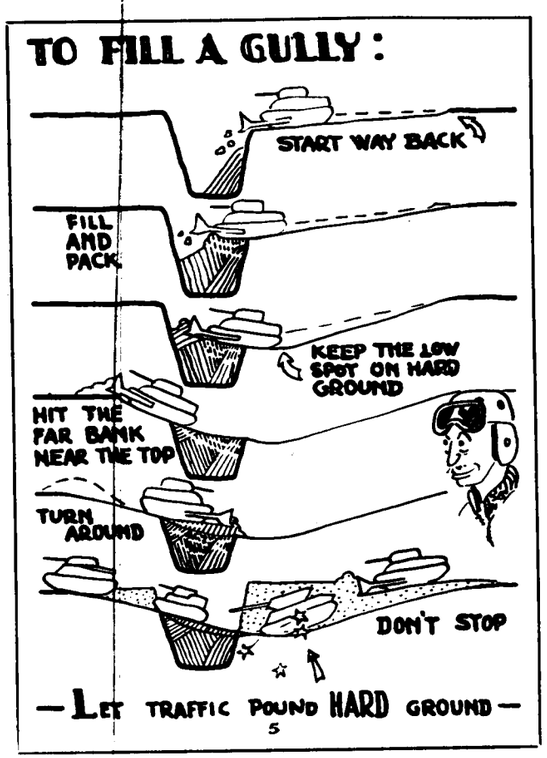
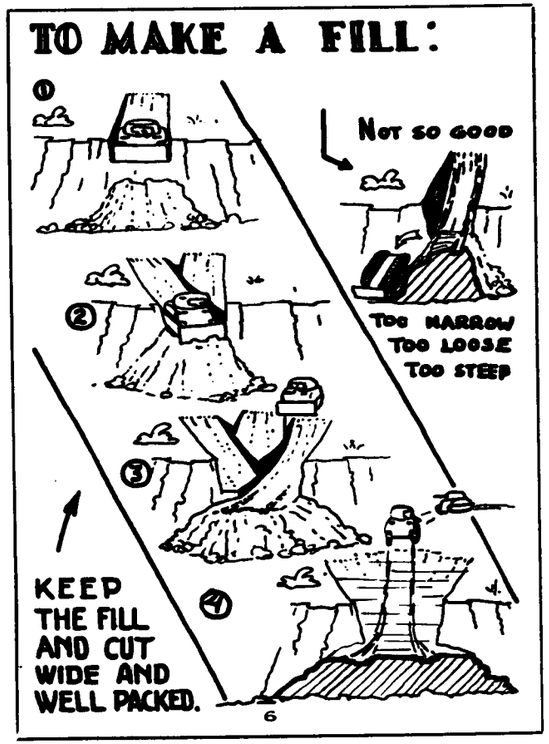

TO FILL A GULLY:
START WAY BACK
FILL AND PACK
KEEP THE LOW SPOT ON HARD GROUND
HIT THE FAR BANK NEAR THE TOP
TURN AROUND
DON'T STOP
—LET TRAFFIC POUND HARD GROUND—
5


TO MAKE A FILL:
1
2
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NOT SO GOOD
TOO NARROW
TOO LOOSE
TOO STEEP
KEEP THE FILL AND CUT WIDE AND WELL PACKED.
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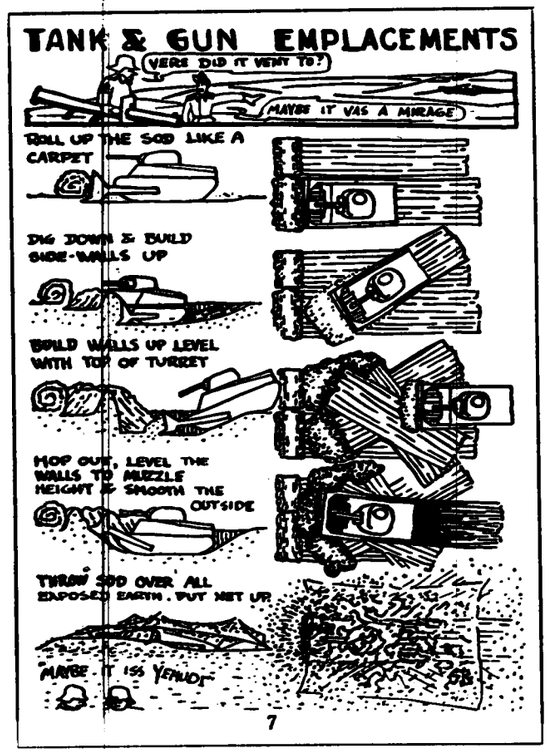
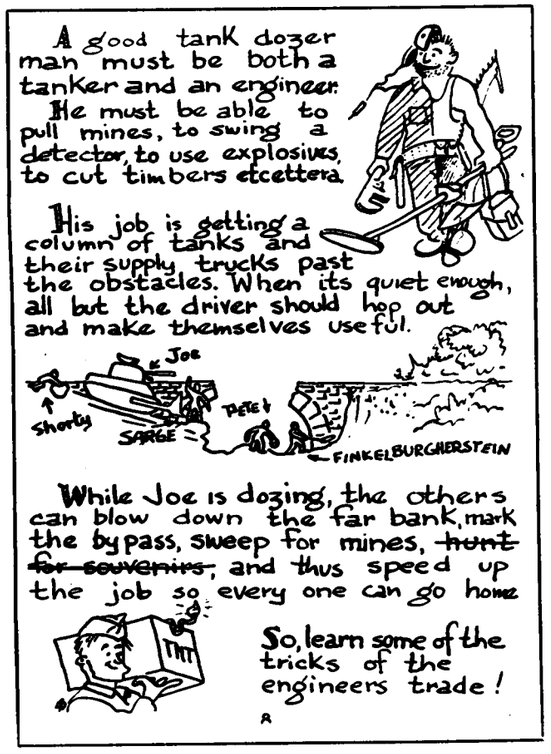
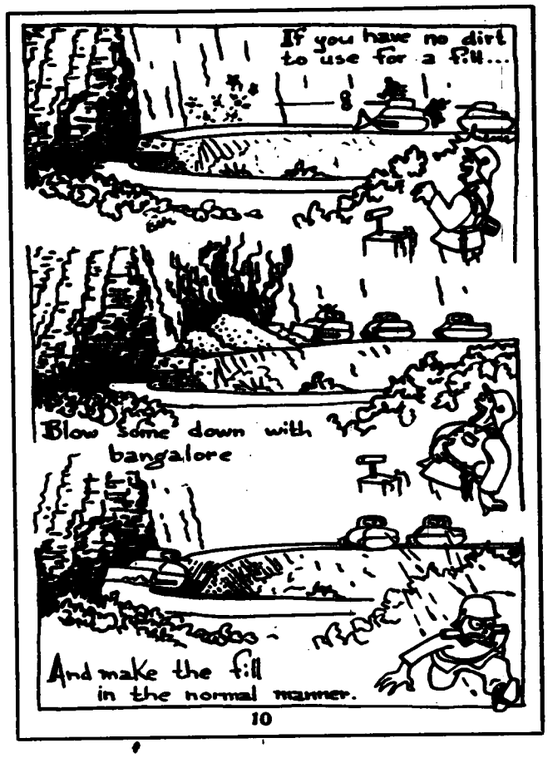
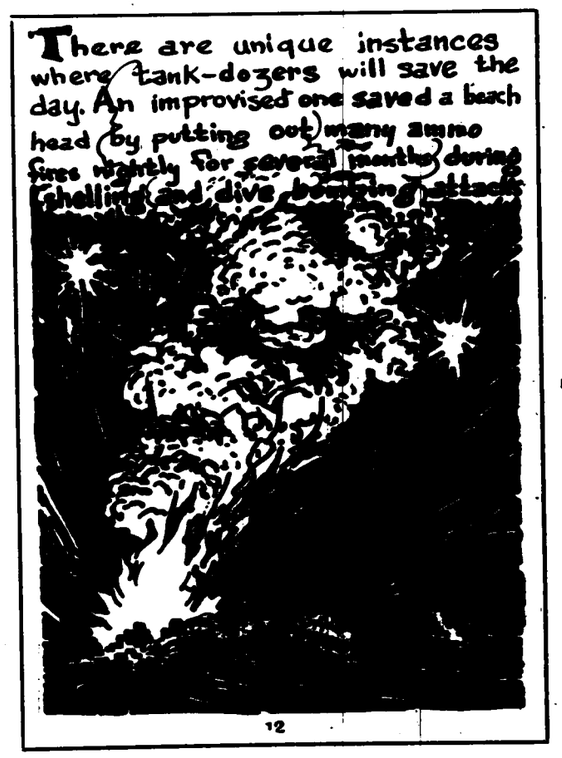

TANK & GUN EMPLACEMENTS
VERE DID IT VENT TO?
MAYBE IT VAS A MIRAGE
ROLL UP THE SOD LIKE A CARPET
DIG DOWN & BUILD SIDE-WALLS UP
BUILD WALLS UP LEVEL WITH TOP OF TURRET
HOP OUT, LEVEL THE WALLS TO MUZZLE HEIGHT & SMOOTH THE OUTSIDE
THROW SOD OVER ALL EXPOSED EARTH, PUT NET UP
MAYBE IT ISS YENUF
7


A good tank dozer man must be both a tanker and an engineer.
He must be able to pull mines, to swing a detector, to use explosives, to cut timbers etcettera.
His job is getting a column of tanks and their supply trucks past the obstacles. When its quiet enough, all but the driver should hop out and make themselves useful.
Joe
Shorty
SARGE
PETE
FINKELBURGHERSTEIN
While Joe is dozing, the others can blow down the far bank, mark the by pass, sweep for mines, ~~hunt for souvenirs~~, and thus speed up the job so every one can go home
TNT
So, learn some of the tricks of the engineers trade!
8

Pump a few rounds of A.P. into a big bank.....
Stick a bangalore in each hole...
Blow them...
And you will have less dozing to do.
You can also use teller mines or U.S. prepared Knapsack charges
9


If you have no dirt to use for a fill...
Blow some down with bangalore
And make the fill in the normal manner.
10

TO CUT ROCK OR A HARD ROAD:
YOU CAN USE TNT, COMPOSITION "C", BANGALORES, KNAPSACK CHARGES, OR ANY OTHER AVAILABLE EXPLOSIVES.
COVER WITH SOIL TO INCREASE EFFECT.
ANOTHER TIP: WORK IN PAIRS WHENEVER YOU CAN DO SO.
11


There are unique instances where tank-dozers will save the day. An improvised one saved a beach head (by putting out many ammo fires nightly for several months during shelling and dive bombing attack)
12

AXIS RULE IN OCCUPIED EUROPE. By Raphael Lemkin. Carnegie Endowment for International Peace. Columbia University Press. $7.50.

The preface of this book might well stand on its own merits as an excellent essay on German technique of occupation. Mr. Lemkin explains the conception of his books as follows:

"The present book grew out of a desire to give an analysis, based upon objective information and evidence, of the rule imposed upon the occupied countries of Europe by the Axis Powers—Germany, Italy, Hungary, Bulgaria, and Rumania. This régime is totalitarian in its method and spirit. Every phase of life, even the most intimate, is covered by a network of laws and regulations which create the instrumentalities of a most complete administrative control and coercion. Therefore these laws of occupation are an extremely valuable source of information regarding such government and its practices. For the outside world they provide undeniable and objective evidence regarding the treatment of the subjugated peoples of Europe by the Axis Powers. The author feels that such evidence is especially necessary for the Anglo-Saxon reader, who, with his innate respect for human rights and human personality, may be inclined to believe that the Axis régime could not possibly be as cruel and ruthless as it has been hitherto described."

By the efforts to legalize their violations of international law the Germans have left in the various conquered countries a network of the statutes enacted, to serve as indisputable evidence of Axis cupidity and brutality.

Mr. Lemkin gives an outline of the processes used in each country to subjugate the people, and quotes the laws passed. In order to facilitate a parallel between Axis edicts and code violations, he closes the book with a reprint of that portion of the Hague Agreement covering the laws and customs of war on land. Subdivisions and section headings are arranged in a logical manner to assist the selective reader.

A need for this book has been manifest for some time and it will be welcomed not only by men dealing with military government—to whom it should prove essential—but by all workers, military or social, who must have an understanding of the conditions of occupied countries before working in them.

IN THE MARGINS OF CHAOS. By Francesca M. Wilson. Macmillan. $3.00.

Since 1919 Miss Wilson has been doing relief work, usually with the Society of Friends, all over Europe and in Russia and Africa. She was with wounded Serbs in Corsica and Bizerta, from whence she went to Serbia, and on to Russia in the famine of 1922. The Spanish Civil War made a fresh call upon her, and in 1939 she went to Rumania and Hungary to help Polish refugees. Possessed of a deep feeling for human beings, and an insatiable intellectual curiosity, doubtless abetted by the clarity of vision typical of the Quaker spirit, the author has written a rich and vivid record of the peoples she has encountered.

Of particular interest is her account of Russia in the early days of the revolution. She contrasts the aims and policies of the leaders with the established life of her own English society, and contradicts much of the then current propaganda set forth by anti-revolutionary forces.

The relief workers of this war will be interested particularly in the *Appendix* containing many suggestions for organization and reconstruction gleaned from personal experience.

WHEN THE FRENCH WERE HERE. By Stephen Bonsal. Doubleday, Doran. $3.00.

The frontispiece states that this is "A narrative of the sojourn of the French Forces in America, and their contribution to the Yorktown Campaign, drawn from unpublished reports and letters of participants in the National Archives of France and the Manuscript Division of the Library of Congress."

This story of the little publicized Revolutionary Campaign of the French Auxiliaries from Narragansett Bay to the Virginia Capes is the result of a "peace pact" between the author and Premier Clemenceau. While visiting this country in 1922 the Tiger of France observed that the line of march of our French Allies in the Revolutionary War was unmarked. He and his friend, Colonel Bonsal, signed a pact to the effect that at the first opportune moment they would follow in the footsteps of the indispensable French "auxiliaries." The Premier died before he could fulfill the pact, but this delightful book upholds Colonel Bonsal's part in the agreement and fills a sadly neglected page in our history books.

To those familiar with Gloucester and Yorktown it will enrich the already glamorous history of tidewater Virginia.

WHAT TO DO WITH JAPAN. By Wilfrid Fleisher. Doubleday, Doran. $2.00.

Mr. Fleisher was managing editor of Japan *Advertiser* until its forced abandonment in 1940. His book is not so valuable for its actual suggestions of "What To Do With Japan" as for its intelligible explanation of the social, economic and political tenets of the Japanese.

Many readers will disagree with Mr. Fleisher's suggestions for handling a conquered Japan. It is believed that few men who have fought in the Pacific will be in accord with the idea of retaining an Emperor in the hope that he will prove a foil for good as he has for evil. The boogie of Communism, waved again in these pages, has, like the "Wolf" boy in Aesop, lost its fearsomeness from overuse.

REPORT FROM RED CHINA. By Harrison Forman. Henry Holt. $3.00.

In his review of *Report From Red China* in the *New York Times* Book Review Mr. Edgar Snow, author of *People on Our Side* says:

"Harrison Forman's *Report From Red China*, with its fresh, vivid and comprehensive account of the battle for life and freedom under China's partisans, is an extraordinarily timely book, and of considerable historic as well as contemporary value. . . .

"Forman reports enthusiastically on the ways in which the Communists have organized the people, promoted literacy, established local self-government, aroused patriotism and the martial spirit by widespread use of drama groups and recognition and glorification of "labor heroes"; how they have reformed loafers, eliminated prostitution, emancipated women and mobilized the population to achieve economic self-sufficiency, without outside help. He quotes partisan leaders as declaring that China alone, if her population and resources had been properly organized for resistance, could have driven the invader from most of his key positions. . . .

"The author has been an accredited foreign correspondent in China throughout most of the nation's eight-year ordeal. Writing against a long background of experience in Kuomintang China, his comparison of partisan leadership as he saw it working to mobilize the 80 to 90 million peasants liberated from Japanese control makes richly instructive reading which no intelligent American can afford to ignore."

This is the first information in book form to come out of the great interior of China for some years. This fact, added to the increasing activity in the Burma Theater, makes this a book of particular timeliness.

GREEN ARMOR. By Osmar White. W. W. Norton. $3.00.

Mr. White, a new Zealander, was familiar with the islands of the Pacific before the war. Accredited as a correspondent at the outbreak of war, he was detailed to New Guinea. Invalided from there, he was later accredited to the U. S. Pacific Fleet, and then to the U. S. Army for the New Georgia invasion, where he was badly wounded. He is now a reporter on the Western Front in Europe.

In *Green Armor* the author endeavors to emphasize the importance and difficulties of the jungle in Pacific warfare. It would appear from these pages that a lack of knowledge of the insidious animosity of nature and the peculiarities of jungle fighting was our greatest weakness in the early days of the war. A heavy price was paid to learn that carefully adapted training and special tactics were essential to wage a successful campaign in these islands. How well these lessons were learned has been amply proven.

This book does not in anyway duplicate material already published by other correspondents who have written on action in the Pacific Theater.

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ANYTHING CAN HAPPEN, by G. Papashvily 2.00

HEADS UP—HEELS DOWN. By C. W. Anderson. Macmillan. $2.50.

Mr. Anderson states in his "Author's Note"—"If your riding and handling of horses begins and ends at the mounting block you may become a rider, but never a horseman." It is in an effort to educate more horsemen that the author has written this excellent book. His style is delightfully cryptic in spots, with considerably more reader-interest than the average instructor's manual.

Artist as well as author, Mr. Anderson has illustrated his points with fine drawings that add to the clarity of the reading matter and the pleasing format of the book. It is indeed a welcome addition to the limited supply of really good books on horsemanship.

EQUITATION. By Virginia Draper Robinson. Hobson Book Press. $2.50.

Doubtless, as her publishers state, Miss Robinson is an excellent and knowledgeable horsewoman. Perhaps she is capable of imparting her knowledge to her students, but she has over-reached her abilities in attempting to enter the literary field. In fact, *Equitation* is so badly written as to verge on the illiterate and the material offered in no way compares with *School for Riding*, by Kournakoff or *Horses*, by Self—both in publication for some time. Even the paper and printing of this book are of an exceptionally poor quality.

DOWN THE STRETCH. The Story of Colonel Matt J. Winn as Told to Frank G. Menke. Smith & Durrell. $3.50.

Down the Stretch is the history of a horse race and a man. Colonel Matt Winn purchased Churchill Downs when it was about to be closed in 1902, and succeeded in making the Kentucky Derby the most famous race in America.

For the horseman interested in racers this book holds much. Several charts condensing the history of the Derby from 1875 to 1944, list the date, winner, length won by, jockey, weight second, third, subscribers, starters, net to winner, time and track, sire, breeder, owner, trainer, favorite, and odds on the winner.

The book is profusely illustrated and filled with salient comments on the different entries. Some of these comments, particularly Colonel Winn's choice of the "best" horse, may start arguments wherever horsemen gather.

McNAIR, EDUCATOR OF AN ARMY. By Chief Warrant Officer E. J. Kahn, Jr., Infantry Journal. $2.00.

This book was received too late for formal review. Most of the material contained therein was published originally in the *New Yorker*. It contains a brief record of the life of Lieutenant General Lesley James McNair.

THE COMING AIR AGE. By Reginald M. Cleveland and Leslie E. Neville. Whittlesey House. $2.75.

To those interested in the postwar rôle of aviation, this blueprint of the future will prove of immense interest. The chapters cover a variety of problems to be met and solved in the Air Age—commercial flying equipment, aircraft and economics of private flying, future airports, air-traffic control and Air Age education. It is probable that the changes in our thought and parlance as a result of our acceptance of air in daily life will be exhibited most keenly in the rewriting of textbooks for school use.

The pages dealing with reconversion of factories after the war have a slight whining note with undue emphasis on the patriotism exhibited by those who pay large excess profits taxes. This, however, represents a comparatively small portion of the book, and in no way detracts from the interesting comments on the future possibilities of the Air Age.

GENERALS IN THE WHITE HOUSE. By Dorothy B. Goebel and Julius Goebel, Jr. Doubleday, Doran. $2.75.

The Goebels have presented a readable and logical outline of the men who have gone to the White House from the army. It is certainly an excellent time for the attention of the nation to be called to past records—the only yardstick by which the public can gauge the effect of an army man who tries to cap his military career with a political high hat. The deductions to be drawn are not encouraging but they need reiteration at this time, when dominant military personalities might conceivably be carried into administrative power on the strength of their military accomplishments and the publics general acclaim.

VETERAN'S RIGHTS AND BENEFITS. By Colonel Eraña and Lieutenant Colonel Symons. Military Service. $1.00.

PSYCHOLOGY FOR THE RETURNING SERVICE MAN. By a Committee of The National Research Council. Infantry Journal, Penguin. $.25.

When men are mustered out of the army as veterans of World War II, they have certain rights. These have been earned, and are in no sense of the word largess.

In *Veteran's Rights and Benefits* Colonels Eraña and Symons have carefully translated the obtuse legal phraseology of the laws dealing with the service man's benefits into simple, understandable language. Much of the information will be of immediate assistance, some will be of future value, and still more will be of aid to the veteran's family.

Psychology for the Returning Service Man has been compiled by a variety of collaborators in an effort to meet the psychological needs of the returning veteran. It is a comprehensive coverage of most of the problems that the service man will face on his reversion to civilian status. The excellent material contained in this book would probably have had more appeal had it been couched in less personal language. The constant reiteration of the personal pronoun "you" tends to weaken the psychological appeal of a book.

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Men of the RAF evacuate their flooded tent on an advanced airfield in Holland sometime in late 1944.

British Official Photo

German Bastion—[illegible]

What reas[illegible]ere behind the winter months of waiting [illegible] the Weste[illegible]ont? The answers were there all the time [illegible] by any ina[illegible]acy in Allied strength or war direction; [illegible]

*by Major John North**

FOR the British and Canadian Armies fighting in northwest Europe throughout last winter, the basic operational problem concerned not men, tanks, and guns—or even river crossings—but water. German opposition was of far less consequence than the behavior of what the flood control specialists at 21st Army Group headquarters called the "Nijmegen gauge." The movement and the height of water over the whole vast area of operations west and northwest of Cologne was directly related to that gauge.

The Rhine Front

During the winter, these British and Canadian armies, alongside the U. S. First and Ninth Armies immediately south of this area, confronted Germany's West Wall in its most critical sector. The upper Rhine gave no access to any strategic objective. The Saar valley was expected to be hardly less remote from the vitals of Germany. The northern Ardennes, while vulnerable to penetration from the west, did not form a good jumping-off ground for operations to the east. Thus, although the Rhine frontier, between Basle and Arnhem, covers nearly 500 miles, the most direct strategical approach to Germany was to be found within that 100-mile stretch lying between Aachen and Arnhem.

In turn, this 100-mile stretch may be sub-divided into two areas. The northern area between the Waal and lower Rhine (that is, between Nijmegen and Arnhem) offered a direct access to the north German plain. Any crossing at Arnhem would not only have taken an invading army across the Rhine but would have outflanked the Siegfried defense zone at its northern extremity and offered an opportunity to fan out north of the Ruhr. The second area is the Aachen area, gateway to the Cologne plain. Any advance across this plain would bring the Allied armies to the left bank of the Rhine, and the Ruhr industrial towns behind it would at once come into the firing line (as happened when the U. S. First Army broke through from Aachen to Cologne in early March). Thus, of these two gateways to Germany, Aachen was the more promising area of operations. This significance was not lost to the enemy, who closed them both, not by force of arms, but by flooding or by the threat of flooding.

When, in February of this year, after the close of the Ardennes battle, Allied operations were resumed on the Western Front, British and Canadian troops opened the attack on the only piece of land front they possessed—the Reichswald Forest area southeast of Nijmegen, situated in the 14-mile stretch of country lying between the Maas and the Rhine. The rest was water. Such "land" operations as were conducted outside it among the broken dykes were water-borne.

The whole area, indeed, is no more than the underground delta of the Rhine. Although the ground has a clay surface, it rests on a porous bed which is likely to be saturated at all seasons of the year with water from the Rhine itself. East of the forest runs the northern extension of the Siegfried defense zone. Thus a successful attack south between the two rivers (Maas and Rhine) might afford an opportunity of outflanking it. Let us, therefore, examine this problem of water on the Western Front as it looked to the specialist at the time these operations were inaugurated.

Gateways to the Rhine

How did flooding effectively block these two possible gateways to Germany? The blocking of the first of these gateways (Arnhem-Nijmegen) presented no problem at all to the German command in Holland. Last November the dykes of the lower Rhine were blown, and the area between Arnhem and Nijmegen —some 10 miles across and already known as "the island"—turned itself into a lake almost overnight. Even in September, when British tanks attempted to cover these same 10 miles in an endeavor to aid the British airborne troops on the far side of the Arnhem bridge, they were unable to get off the high causeway road because of the boggy nature of the ground on either side of it. Moreover, the abnormally high river levels of November and December permitted the Germans to make a further water barrier along the course of the Ijssel, joining the Rhine to the Zuyder Zee. This presented a still further and not less awkward problem to any army which might make the attempt to make the Arnhem crossing.

Thus, when the Germans flooded this countryside they were aware that, under these abnormal conditions, the ground would take even longer than usual to dry out. Moreover, they realized that such roads as existed would be impassable as a result of their prolonged submersion. The only danger the enemy incurred was the possibility of an ice-crossing by the British and Canadian troops in that sector. This, however, was a danger they could afford to discount, since an ice-crossing, feasible on one day, might easily be a death trap the next. Temperatures in that area can vary between 16° and 1° below freezing within the space of 24 hours.

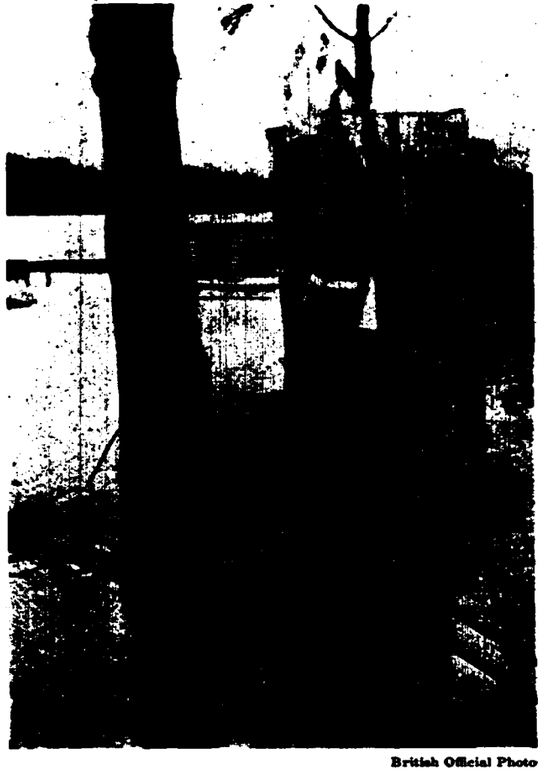
So much for the Arnhem gateway.

Let us now examine the second gateway—that in the Aachen area. Here the obvious barrier to the strategical objective of the Ruhr industrial area was the Rhine River. For many months, the world awaited the opening of what was expected to be the Battle of the Rhine. But the Rhine was not the only water-barrier to the Ruhr. There was also another river, tributary of the Maas, which it joins at Roermond—the Roer. During last winter, formations of three Allied armies fought their way, not to the Rhine, but to that stretch of the Roer River that lies between Dueren and Roermond; and on reaching it they had to pause. This river—defensive outpost to the Cologne plain—presented, indeed, a unique problem in the way of river crossings.

Battle for the Dams

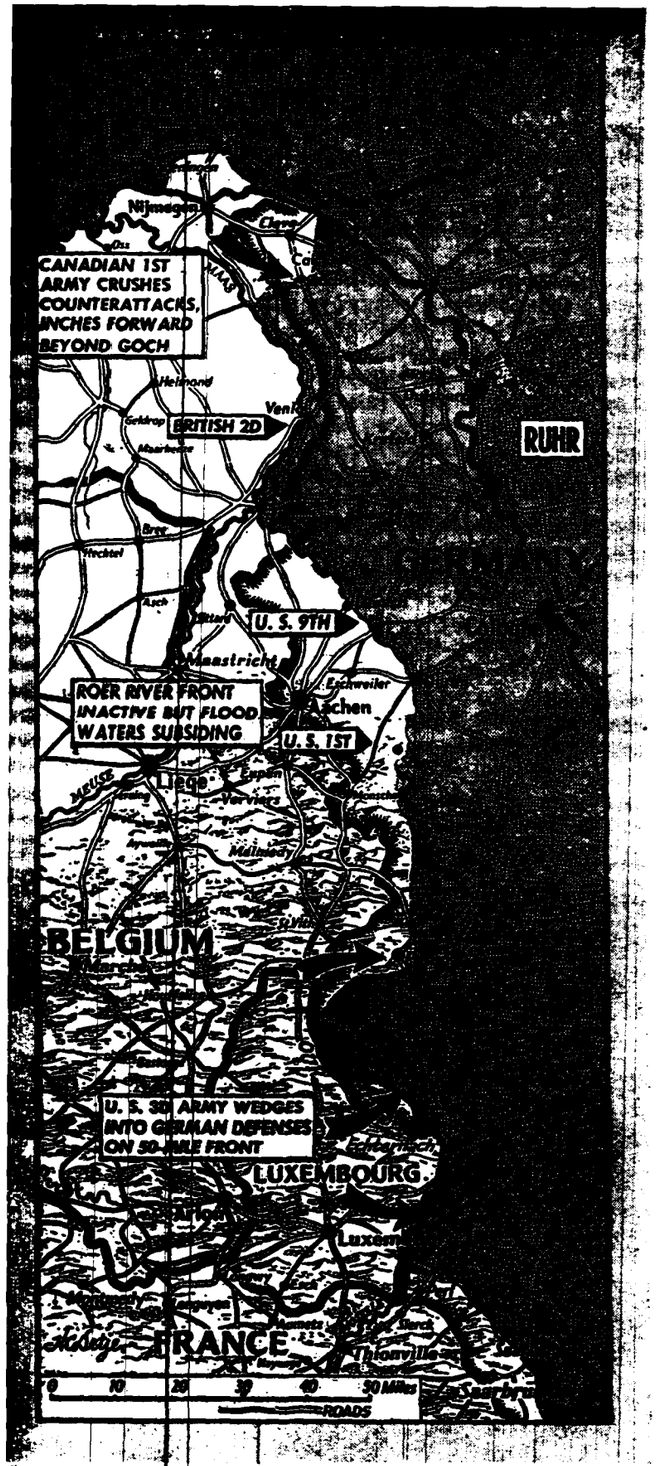
Before it could be crossed safely, the dams at its head, 10 miles south of Dueren, had to be captured. Five dams controlled the flow of 160,000,000 cubic meters of water. The two largest supplied water-power for the huge hydroelectric plant at Heimbach, which provided current for large areas of the Rhineland.

Because of incessant rainfalls during November, the River Maas flooded its banks near Maeseyk. Here a British M.P. directs traffic from his sentry box surrounded by water. Floods hampered operations, delayed Allied offensive.



British Official Photo

*British Staff Officer.



Approximate Allied positions February 23, as the long static winter front began to move eastward. Except for the German breakthrough into the Ardennes in December, the front had changed but slightly since November, 1944.

As early as November of last year the U. S. First Army began an advance ostensibly toward the Rhine, but in actual fact, to the Roer, edging toward these dams by way of Stolberg and Eschweiller. Troops of the British Second Army and of the U. S. Ninth Army fought their way to Geilenkirchen and Roermond, while U. S. First Army troops began a battle for the Hurtgen Forest in an effort to reach the dams on foot. As a result, formations belonging to two American armies and one British army reached the Roer—and there had to halt. There, on the direct road to Cologne and the Ruhr industrial area, the Roer River proved to be a trickier proposition than the Rhine itself.

The battle of the dams was expected to last for nearly three months and it did. Not until the second week in February was the last German soldier cleared from the left bank of the Roer River, and the largest of the dams, the Schwammenauel, reached. This dam, 1,080 feet long and 980 feet above the river bed, formed a lake covering 590 acres; its banks had successfully resisted heavy bomber attack throughout the winter. The first patrols to reach it found the floodgates open and the controls blown up. Beyond it, on the right bank of the river, lay the reservoir area, which was filled by the dams. Sluices in the conduits between these reservoirs had also been demolished. Within a little more than 24 hours the width of the river at Dueren had increased from 125 to 400 yards.

The German command had a choice of two methods of making use of this huge volume of water as a weapon of war. By doing a thorough demolition job they were in a position to release what has been described as a calamitous flood, cascading into the narrow ravine-confined Roer down to Dueren. The narrower the channel, it may be noted, the greater is the effect of flooding. Between Dueren and Roermond it would then spread out and inundate miles of low-lying ground. From Roermond, where the river joins the Maas, the floods could be expected to reach as far north as Nijmegen "island," and extend from there to 6 miles wide. It was in this fashion that the blowing of the dams would create a complete water-barrier along the front covering the approaches to the Cologne plain.

Any such large-scale inundations must inevitably have destroyed the German towns and industries that lay in its path, and it was to be expected that the military command would not lightly release these millions of gallons of water. But an alternative method was open to them, and one which would not seriously inconvenience their own people, while effectively preventing any attempt by the Allied forces to cross the river when they reached it. At, say, 6-hour intervals, they could have released a miniature tidal wave which would have swept away, in the space of seconds, every ponton bridge that lay in its path. Better still, from their point of view, they could have allowed a not-too-considerable force of Allied troops to cross the river with comparative impunity, and then proceeded to destroy the bridges by which they had crossed; and to have con-

tinued with these tactics for as long as they controlled the headwater of the river.

The work of bridging, it should be remembered, however speedy the operation may be in itself, requires also considerable work on the approaches. Any roads built for this purpose would have been destroyed under the impacts of these tidal waves. Again, under icing conditions, great quantities of floating ice would have expedited the destruction of the bridges themselves.

Water

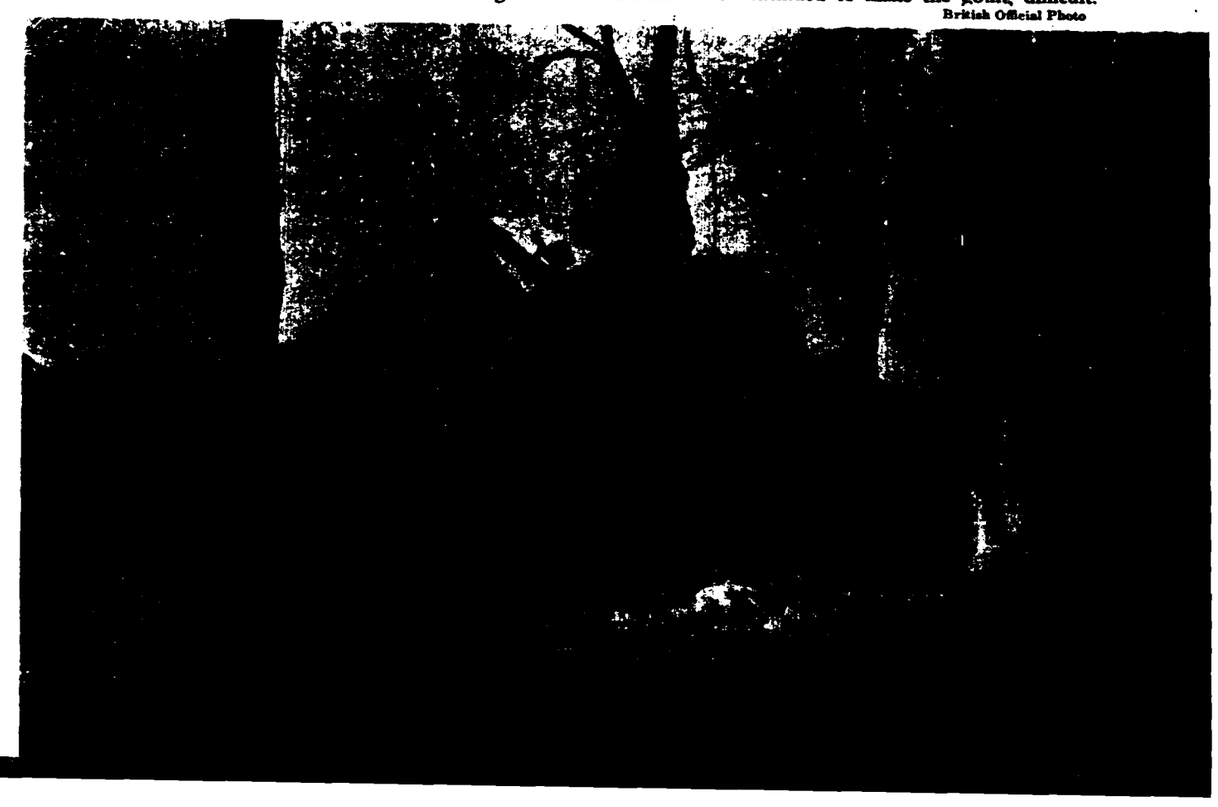
From these observations it should be apparent why water proved a very good friend to Germany during the winter months. In actual fact, the blowing of the dams synchronized with abnormally high flood level of the Maas, which helped to form additional flooding as far north as Gennep, where the battlefront crossed the Maas. It should be equally apparent why an "advance to the Rhine" was not undertaken as a straightforward military operation until a crossing of this water bastion to the Cologne plain could be embarked on without the certainty of disaster.

In their canal systems, it may be further noted, the Germans have been able to exploit the use of water to some purpose at a time when air attack—particularly on locomotives—rendered rail transportation uncertain. A single 2,000-ton barge carries a load equivalent to that of four trains; and Germany took the precaution of providing herself with vast quantities of the "huge brutes."

Finally, from the point of view of bridging engineers, it is a further indication of German foresight that the latest cross-sections of the Rhine to appear in print are dated 1873! However, no information on this particular topic very easily have been up to date since the river bed has changed even during the course of the present war. The Rhine, indeed, afforded a considerable contribution to its own defense. The sand and gravel from its river bed, already clean and graded by nature, supplied the "aggregate" for the concrete fortifications of the Siegfried defense zone at a minimum cost in terms of labor and transportation.

". . . Hampered by many waterways which criss-crossed the terrain, the 21st Army Group ponderously but surely battered northward in a series of cutoff movements. The Canadian First Army entered and swiftly seized control of Arnhem, site of the ill-fated airborne landing last fall. Farther north the Canadians gradually edged toward the Ijsselmeer near Apeldoorn while other spearheads bypassed Groningen and reached the North Sea—cutting the last escape route from Holland for an estimated 100,000 Nazis."*—Newsweek, *April 23, 1945.

Sherman tanks, supporting the Canadian and British drive toward the Rhine in February, move over a flooded road in the Reichswald Forest area. On February 19 the troops captured the fortress town of Goeh, about one mile from Calcar, important road hub in the heart of the Siegfried Line. Floods have continued to make the going difficult.
British Official Photo



V-3 Launching Sites*

by Douglas Williams

AT Mimoyecques, near Calais, amid desolate chalk hills 6 miles from the channel coast in an area of thickly pitted, yawning bombholes, I visited the site of Germany's third secret weapon, V-3.

With this the enemy had planned to fire a continuous barrage of rocket shells from giant cannon into London. Fortunately, the work was detected in the early stages of September 1943. So successful were the incessant RAF raids made on it that construction was seriously delayed until finally it had to be abandoned in the summer of 1944, after the Normandy landings.

Had the enemy been able to complete the vast work unimpeded, the installation would have come into operation at the end of last year with devastating effect. The site was designed to accommodate 50 gun tubes, each 400 feet long, sunk to a depth of 350 feet below the ground, and protected by a solid 18-foot thick concrete apron.

It is estimated that the monster weapons would have had a combined rate of fire of at least 10 rounds per minute, with the shells landing on London, 95 miles away across the channel. The guns were apparently to have been arranged in twin batteries of 25 and designed to fire on a fixed line at a high rate of fire with medium caliber shells, weighing 120 pounds and carrying an explosive charge of 40 pounds. Being of a smooth bore, i.e., without rifling, they would have had the life of many thousands of rounds. Fired from a fixed bearing on a set elevation, they were presumably intended to maintain a more or less continuous barrage on London day and night.

Apparently it was hoped that with civilian defense services already occupied with V-bombs and ordinary rockets, the V-3 would create such havoc as to compel the evacuation of London with all the administrative complications and damage to British morale that such a step would have involved.

Each section of the guns could fire at least 5 rounds per minute. Once the site had been finished the thickness of the concrete cover and the depth at which the pieces were embedded would have made it invulnerable to air attack, no matter how heavy the bombs employed. The guns would have been fired at a high velocity, probably exceeding 5,000 feet per second and at a high elevation. From the direction at which the 5 outlets emerge on the crest of the hill, there is no doubt that London was the only target in mind.

Thousands of workmen—all slave press gangs of the Todt Organization—labored day and night for nearly a year. Despite heavy bombing, the stage of completion to which the work had been advanced pays tribute to the enemy's determination at all costs to finish what was obviously a job of the highest order of priority.

No trace has been found of either guns or ammunition. I am informed that some were actually delivered on the site, but were apparently removed by the Germans when they left, either because they desired to conceal the secret of the new weapons, or possibly hoped to use them later on another site.

The guns, set in deep, inclined shafts at an angle of about 55 degrees, rose from a crescent-shaped chalk hill west of the main Boulogne-Calais road. A standard gauge railway, completed, but never used, leads to the site. At the side of the hill it disappears into a vault-like tunnel of solid concrete of impressive proportions, some 700 yards long, 30 feet high and 25 feet broad. An unloading platform, giving access to the chambers and galleries opening off the tunnel into the hillside, runs its entire length.

Below this main tunnel at lower levels are two other smaller tunnels. The entire workings are buried underground, some penetrating to 350 feet. Super-imposed over all, covering an area of several acres, is a slab of concrete up to 18 feet thick and in places pierced with a number of square exits.

At the entrance to the tunnel is another large concrete building, housing a large electric generator to produce the 4,000 kilowatts of power which the enemy would need to operate this colossal engine of destruction.

Among the huge dump of steel girders and unassembled spare parts abandoned in the hurry of departure there was found technical machinery indicating the intention to construct a complicated lift system, presumably to handle ammunition from the lower levels.

Today Mimoyecques site is an abandoned wilderness, devastated and churned up by heavy bombs which have left craters 30 to 50 feet deep. Here and there emerge broken slabs of concrete and portions of huge timber tossed into the air. Less than a year ago, however, the area was a teaming ant-hill of action as the German engineers pitilessly drove conscript labor to complete the last refinement in secret weapons which they hoped would finally bring England to her knees.

Mimoyecques was only one of 7 of the so-called heavy sites which the Germans had started to build along the channel coast. These were interspersed at strategic localities in a carefully designed plan to maintain long-range aggressive action against England with various types of secret weapons. With the heavy multiplicity of these sites, the Germans evidently hoped that if one was temporarily knocked out, another would continue in its place. Other installations were situated at Wizernes, Watten, Lottinghem, Siracourt, Sottevaast, Martinvaast and in the Cherbourg Peninsula. All were primarily aimed at the south coast of England.

Wizernes, in the Calais area, was some form of rocket battery; Watten was chiefly a chemical or an ordnance factory; Lottinghem and Siracourt were flying bomb sites designed to attack London and southern England. None had been completed, thanks to Allied air interference. But little imagination is needed to picture the tremendous havoc that the 7 installations of such tremendous potentialities for destruction could have wrought in thickly populated areas, had the enemy been permitted to operate them.

Wizernes site, about 118 miles from London, was originally spotted by the Royal Air Force late in the summer of 1943. Shortly afterwards air photographs showed a large dome beginning to take shape. Work on this site was finally abandoned July 1944, about the time that the Germans left Mimoyecques. The purpose of the Wizernes installation has not yet been clearly established though it is obvious that the site was designed to fire some large form of projectile to England. Experts, who visited the site, do not outrule the possibility that it might have been intended to house some other type of secret weapon even more deadly than those already encountered.

The most interesting feature of Wizernes is the octagonal chamber over 100 feet in diameter and built under a dome with concrete walls up to 40 feet thick. The enormous bombproof doors had been constructed over 50 feet high and 15 feet wide. It is believed that through these giant doors some form of rocket was to have been fired after various sections had been brought up from storage rooms below ground, and assembled into firing form in the octagon.

*Courtesy, *London Daily Telegraph*.

The German secret weapon, V-2, predecessor of V-3, is reported to be 46 feet long and about 6 feet in diameter at its base. It tapers to about 4 feet at the tip and weighs 15 tons. The propellant materials are liquid air and hydrogen peroxide which, by the reaction of one on the other, produce a highly explosive mixture of oxygen and hydrogen. It travels faster than sound 30 to 60 miles above the earth. Pictured below is a jet unit. RAF airmen at right are lifting a peroxide tank. This picture was issued November, 1944 while V-2 missiles were falling on Southern England. V-3 launching sites have been found since.

British Official Photo

British Official Photo

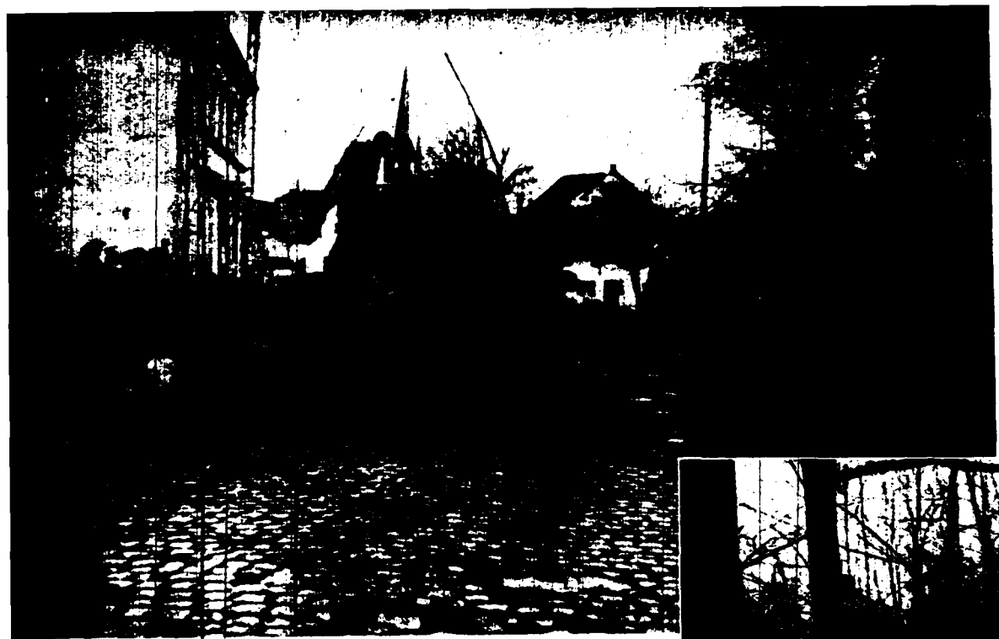
Raids, controlled by the RAF master bomber, delayed the launching of V-2 attacks against England for a year. This V-2 rocket experimental area at Peenemunde in northern Germany was photographed in June, 1944, by RAF reconnaissance planes. Picture shows (A) light flak positions, (B) cradles for transporting rockets, (C) two rockets.

Last of V-Series Geared to Fly Mile Per Second

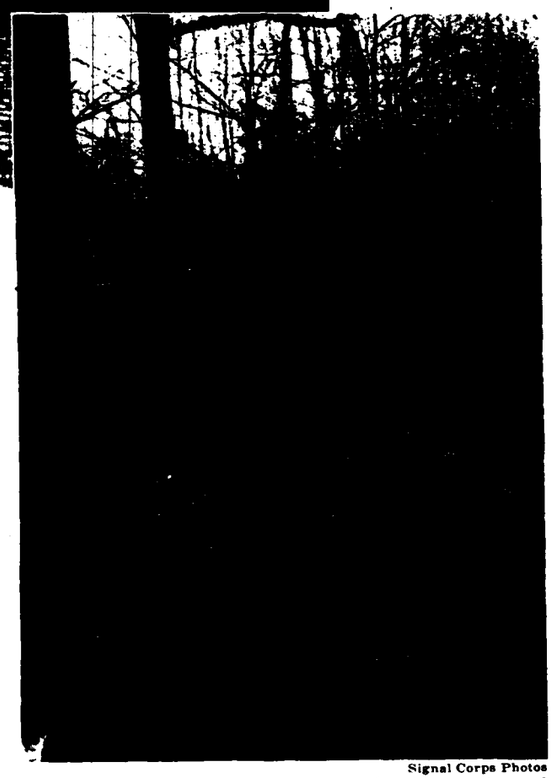
London, April 18—A Paris dispatch to the *Daily Express* said today that Frenchmen released from the Buchenwald concentration camp had given General Charles DeGaulle details of a German V-4 flying bomb, believed the last of the V series.

The Frenchmen were said to have described the V-4 as 64 feet long, radio controlled and geared to fly 63 miles a minute. The Germans were reported to have been working against time in huge underground factories near Erfurt to get the V-4 in production but were overrun.—Reprinted from *The Washington Daily News*.

4th Cavalry in Diverse Roles



Members of the 4th Cavalry Group pass through Bedbrug, Germany, March 2, 1945. The unit had been in continual action since D Day on Normandy beaches.



Signal Corps Photos

A dismounted patrol of 4th Cavalry makes its way through woods near French-German border in late fall, 1944, prior to German breakthrough into Ardennes. Five dead Germans lie in foreground. Three are under tarpaulins.

*by 2nd Lieutenant Pierre V. Maltby**

FROM D Day in Normandy throughout the campaign across France and the months of static warfare along the Siegfried Line, the 4th Cavalry Group[1] under Colonel (now Brigadier General) Joseph M. Tully, was given approximately a dozen different types of missions, each requiring a different tactical grouping and a different manner of execution. The first of these missions, assigned the 4th Cavalry some 10 days prior to June 6, was to precede the actual landings on the mainland by several hours.

Landing Missions

The Ste. Marcouf Isles, consisting of the Ile de Terre and the Ile de Large, lay in the path of any invasion force attempting to make a landing at the point now known as Utah beach. If the enemy had armed these islands, they would be able to play havoc with invasion craft, so the islands had to be reduced before the invasion could be carried out with any degree of security.[2]

The job of taking these islands was given to 6 officers and 126 men of the 4th Cavalry, who immediately went into training with the Navy—training which included such items as assault boats, scaling ladders and grappling hooks. Commanded by Lt. Colonel Edward C. Dunn, the group was split into two units, one to take each of the islands.

The two units departed from the United Kingdom in LSTs, and when only a few miles from their objectives at H minus 2 hours, loaded into LSVPs. Within a mile of their respective targets, two men from each group went over the side in rubber assault boats, rowed to within a few hundred yards of the islands, sank their craft, and swam the rest of the way to shore. Corporal Harry S. Olsen, and Private Thomas C. Killoran, reached the Ile de Terre, while Sergeant John W. Zander and Corporal Melvin F. Kinzie waded ashore on the Ile de Large.

The 4 cavalrymen marked off sections of the islands, and then sent the beams of their flashlights out to sea to mark the selected boundaries of the shoreline for the landing craft. The entire operation was boldly executed, and it was not until the men had all landed that it was discovered that, though the islands were heavily mined and booby-trapped, they were devoid of enemy personnel. Later the same day, however, both places were heavily shelled from the mainland, but the group held out until it was finally relieved by an antiaircraft unit on June 8.

Meanwhile, at H plus 150 minutes, Lieutenant Gerald Penley landed with the 3d Platoon, Troop B, of the 4th Cavalry Reconnaissance Squadron (mecz) on the Normandy coast to carry out a reconnaissance mission for the seaborne units of the 82d Airborne Division.[3] He was to lay a route for the airborne men from the beach to Ste. Mere Eglise, where he was to join with that part of the division which had already landed by parachute.

The platoon accomplished its mission with a loss of only 4 killed, while it killed an undetermined number of the enemy and captured 50. On June 8 Lieutenant Penley returned to the beach to lead the last section of the airborne elements to Ste. Mere Eglise, and on his way back ran into a column of enemy vehicles. He ordered the platoon to run its vehicles down the road firing every available gun; and at the cost of one man slightly wounded, the lieutenant and his platoon accounted for 200 enemy dead and 150 captured. He then completed his mission by returning to the beach, and leading the balance of the airborne division to its destination.

The remainder of Troop B landed on June 10. The 2d Platoon ran into such heavy enemy fire shortly after landing, that the entire unit was either killed, wounded, or captured. The 1st Platoon fought like wild men for Bautpe, its objective, and finally succeeded in taking it after having killed many of the defenders and capturing 120 of them.

The mission assigned the 4th Cavalry Group had been accomplished—a mission which had involved operations by the navy, the airborne, and the infantry as well as the cavalry.

Holding Along the Siegfried

During the ensuing months various other missions were to be executed by this cavalry unit. Perhaps the best example of a very different rôle is represented by action engaged in by the group in mid-September, when it entered Germany with the VII Corps. The corps was massing its units for an assault on Aachen, and the 4th Cavalry was given the mission of protecting the right flank of the corps, a sector of 25 miles.

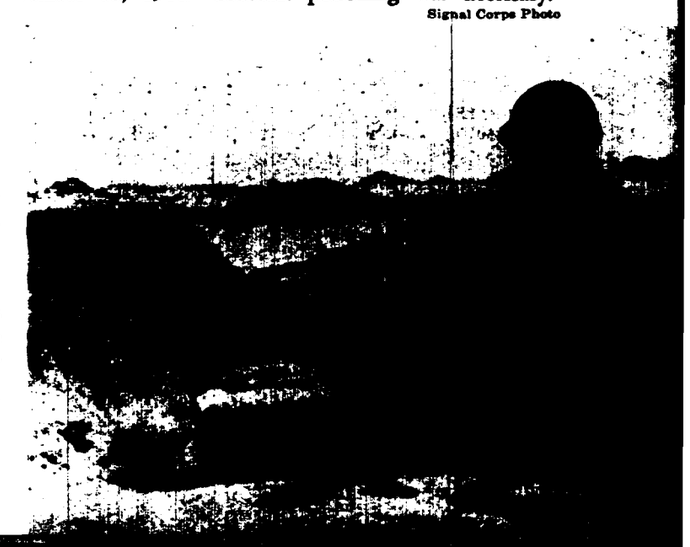
At this time the group, aside from its regular units, the 4th and 24th Squadrons, had attached the 759th Tank Battalion (light), the 635th Tank Destroyer Battalion (towed), the 87th Armored Field Artillery Battalion, and two companies of engineers. The plan for the defense of the sector consisted of setting up a string of platoon strong points. Several of the Siegfried Line pillboxes were used for this purpose and the points were so located that they covered all the avenues of possible enemy approach. Mine fields were strategically laid, wire concentrations were strung at more vulnerable spots, and booby traps were set by the engineers.

The assault guns of the 4th and 24th Squadrons, the guns of the tank battalion, and the 3-inch guns of one company of the tank destroyer battalion were set up in artillery positions and coördinated with the fire direction center of the field artillery battalion. This arrangement provided the group with adequate heavy artillery fire power.

By engaging in extremely active patrolling, the cavalry units managed to convey the impression of possessing a much larger force than the group actually had. The same men were out on patrol all hours of the day and night, and they were supported by roving patrols of the tank and TD battalions which were constantly on the alert to pick up any enemy infiltrations. The grand effect was one of such power, that prisoners of war stated that their units thought they were being faced by a "reinforced panzer division."

Sergeant Sam C. McNeely, 24th Reconnaissance Squadron, 4th Cavalry Group, stands watch by his machine gun during the first snowfall near Monschau, Germany, November 10, 1944. Constant patrolling was necessary.

Signal Corps Photo



*Headquarters, Twelfth Army Group.

[1]Two previous articles on reconnaissance in Normandy, which appeared in the November-December and January-February issues of The Cavalry Journal refer to the 4th Cavalry Reconnaissance Squadron of the 4th Cavalry Group (mecz) as "Y" Reconnaissance Squadron.

[2]See "Y" Reconnaissance Squadron June 6-July 1," November-December Cavalry Journal.

[3]See "In Support of Airborne Troops," January-February Cavalry Journal.

The enemy attacked often in groups of about 100 infantry concentrated on a single point, but the platoon strong points, hastily supported by the roving tanks and TDs, repulsed all attacks made.

On a typical occasion, Troop A of the 4th Squadron, led by Captain William S. Goddard, made contact with heavily defended enemy roadblocks near Rocherath. The troops attacked, drove off the enemy, and took up positions east of the roadblocks. From this position they controlled, with artillery support, an important road running laterally with the Siegfried Line—a road which the Germans needed to supply the pillboxes still in their possession.

The Germans, in an attempt to retake their lost position, attacked the troop with 100 infantry. The cavalrymen withdrew, called the fire of their supporting artillery upon the spot they had just vacated, and when it had lifted, counterattacked and wiped out all enemy troops not already killed in the barrage. The troop thus regained its position with a loss of two men wounded, one of whom returned to the line immediately.

When the group was finally relieved of its holding mission, its sector was taken over by the entire V Corps.

Attack During Rapid Advance Through France

There was, however, one typical cavalry action fought by the group during the dash across France. It was balm for the hearts of these cavalrymen to engage in an action involving principles which they had been taught, and which they had studied in classrooms and on maneuvers. This engagement took place at Villedieu Les Poeles during the rapid movement made by the VII Corps across France.

On August 1 the armored combat command leading the corps was halted at the town which had been made into a powerful strongpoint by the Germans. They had mounted great numbers of artillery on the high ground around the outskirts of the town, and all avenues through the town were zeroed in.

When the armor halted, Lt. Colonel John F. Rhodes', 4th Squadron, was given the mission of clearing the town. Troop A dismounted and pushed toward the town from the south. Troop B, led by Captain William F. Larned, mounted and swung to the north, closely followed by the remainder of the squadron. While Troop A held at the south, Troop B attacked, and entered the enemy strongpoint. The balance of the squadron sealed off all the avenues of egress, and the attack was pushed to the point where all the enemy who were not killed, wounded or captured, were driven out of the town to the northeast, within an hour after the leading elements of Troop B had first attacked.

The cavalry secured the town, and the VII Corps advance continued with just the shortest of halts. The town, however, was considered very important by the Germans, and heavy counterattacks were encountered by the cavalry from the enemy positions to the northeast, all of which were successfully repulsed.

Just how important this strongpoint was considered by the enemy high command may be gleaned from conversations between Field Marshal von Kluge and generals under his command.

At 0920 on the morning of the attack, von Kluge spoke to Lt. General Speidel:

". . . Villedieu is the springboard for the east and the south as well as Avranches, the anchor point to Brittany. It must be held at all costs, or recaptured." (Hence the vicious counterattacks.)

At 0935, he stated to another general:

". . . the greatest worry of the Field Marshal is Villedieu as a key point for enemy operations to the east and to the south."

At 1045, speaking to General Warlimont, Hitler's representative:

"The enemy is in Avranches, and may also be in Villedieu. These key positions for future operations must be held at all costs."

Villedieu was held, true enough—but by the 4th Cavalry Reconnaissance Squadron. The unit was eventually relieved of its holding positions by an infantry battalion, after which it rolled ahead once again with the Allied advance.

Infantry Rôle at Cherbourg

This true cavalry action was in major contrast to the action fought by the group shortly after it had completed its original mission following the landings in Normandy. The plan was for the 9th Infantry Division to move up the Cherbourg Peninsula to capture the great port at the northern tip. The 4th Cavalry Group, dismounted, was to protect the left flank of the division by moving up with it and keeping the flank free from any enemy attack, from the direction of the western coast of the peninsula.

To complete this mission, it was necessary for the cavalry to capture 15 successive objectives on the route to the north, and ultimately, to cut off the Cap de la Hague Peninsula, a tiny piece of land jutting out of the northwest corner of the Cherbourg Peninsula.[4]

In contact at all times with the left flank of the 9th, the 4th Squadron, which had been assigned the mission by the group, moved up as infantrymen and captured all the objectives assigned. By the time it had taken the first three objectives, the 4th Squadron had captured more than 300 prisoners and killed an undetermined number of enemy troops. By the time the 4th Squadron had cleared its last objective, the 9th had already done its work in taking Cherbourg. Then the two units joined forces for a drive into the Cap de la Hague Peninsula, which contained several thousand of the enemy, all of whom were killed, wounded or captured.

Through this entire section, the 4th Squadron never once mounted its vehicles; it moved up alongside an infantry division; it fought as infantry and lived as infantry, and even the squadron 75s, designed primarily as direct fire weapons, were used as artillery just as the regular infantry uses these pieces. This type of dismounted action was the rule rather than the exception in most of the fighting, and the cavalrymen did the job as though they had been trained at Fort Benning rather than at Fort Riley. The cavalry had always trained its men in dismounted reconnaissance, even when not expected to act as anything but cavalrymen. This training, with a few changes, turned out to be excellent background when they took up the duties of infantrymen. The action near Cherbourg is probably one of the finest illustrations of this point. Never once, in the entire movement up the peninsula, did the enemy succeed in breaking through in sufficient numbers to create any annoyance to the left flank of the infantry division.

[4]See "'Y' Reconnaissance Squadron," November-December CAVALRY JOURNAL.

Another noteworthy example of the ability of the cavalry to fight as infantry occurred in mid-July near Tribhou. The 330th Regiment of the 83d Infantry Division was to jump off and attack to the west, while the 60th Regiment of the 9th Infantry Division was to concert its efforts in a movement south. The 24th Squadron, commanded by Lt. Colonel Fred F. Gaston, Jr., was assigned the mission of filling the gap between the two divisions as they pressed their attacks to drive the enemy across the Lozon River.

At the beginning it was very simple. One troop was sufficient to accomplish the purpose, and to keep contact with the advancing regiments on either side. As the attack progressed, however, the gap widened. A second and then a third troop was sent up on a single line to fill the gap, and eventually, everything the squadron had was in the line. It began to look as if the cavalry line might be stretched so thin before the Germans were pushed across the river that an enemy attack on almost any point would be able to break through. The squadron indeed was greatly overextended, and numerous enemy attacks were launched, but by constant, vigorous patrolling, there always seemed to be enough of the cavalry when they were needed at a certain point, and eventually the enemy was pushed across the Lozon.

Dismounted Attack Along the Kall

No account of the dismounted action participated in by the 4th Cavalry Group would be complete without citing the wild attack in the area of Simmerath near the Kall River—a tributary of the Roer. The 4th Squadron was holding a line, which extended for some 3,000 yards near the west bank of the river, while only 200 yards to the east were enemy positions on high ground, which gave the Germans excellent observation of the 4th's activities. The 9th Infantry Division was making the main effort, and the duty of the cavalry was to make a reconnaissance in force to divert the troops facing them from swinging over to attack the 9th.

The 4th had to be supplied at night and by foot for fear of enemy observation. To come out of their positions was to invite death, as the ground between the enemy and themselves was entirely without cover. Nevertheless, Troops A and B were ordered to attack the 4 tiny villages which the enemy had converted into strongpoints facing the cavalry.

An artillery barrage was called for, and came down upon the Germans. Then as the barrage started to lift, the troops came out of their positions, and went for the enemy line at a dead run. So closely did they follow the lifting barrage, that they were in the villages before the enemy was able to fire a single round of opposing fire.

When Troop A reached its objective, it discovered that part of the enemy force had withdrawn into a field some 50 yards east of the village and set up 6 machine-gun nests. Sergeant Richard C. Johnson decided to eliminate them, and before the surprised enemy could concentrate its fire on him, he had wiped out three of the emplacements with hand grenades. He was forced to seek cover, and artillery disposed of the three remaining positions. The entire operation was over in a matter of minutes.

Tactical Maneuver in Ardennes Defense

In December the 4th Cavalry, attached to the 5th Armored Division while that unit was engaged in operations headed for the Roer River, was given the mission of taking Bogheim and Obermaubach. The 4th Squadron engaged the enemy at Bogheim, and the fighting was the most vicious it had seen in all its days in the European Theater of Operations. Before the town fell, 4 troop commanders and 3 troop executive officers had been killed.

Before the group could reorganize, and while still in contact with the enemy, it was ordered to disengage itself from contact, and to proceed to the west where von Runstedt's offensive had penetrated almost to the Meuse River near Dinant. An infantry unit came in to relieve the cavalrymen, and the relief was made under fire. The group thereupon mounted its vehicles, skimmed the northern flank of the enemy penetration until it reached the farthest tip of the salient just a short distance from the Meuse. Within a period of 24 hours after having received its orders, the group had disengaged itself from the enemy, mounted, marched 80 miles, often through enemy-held territory, and had reengaged the enemy at Haversin, a town first liberated by that same unit in September.

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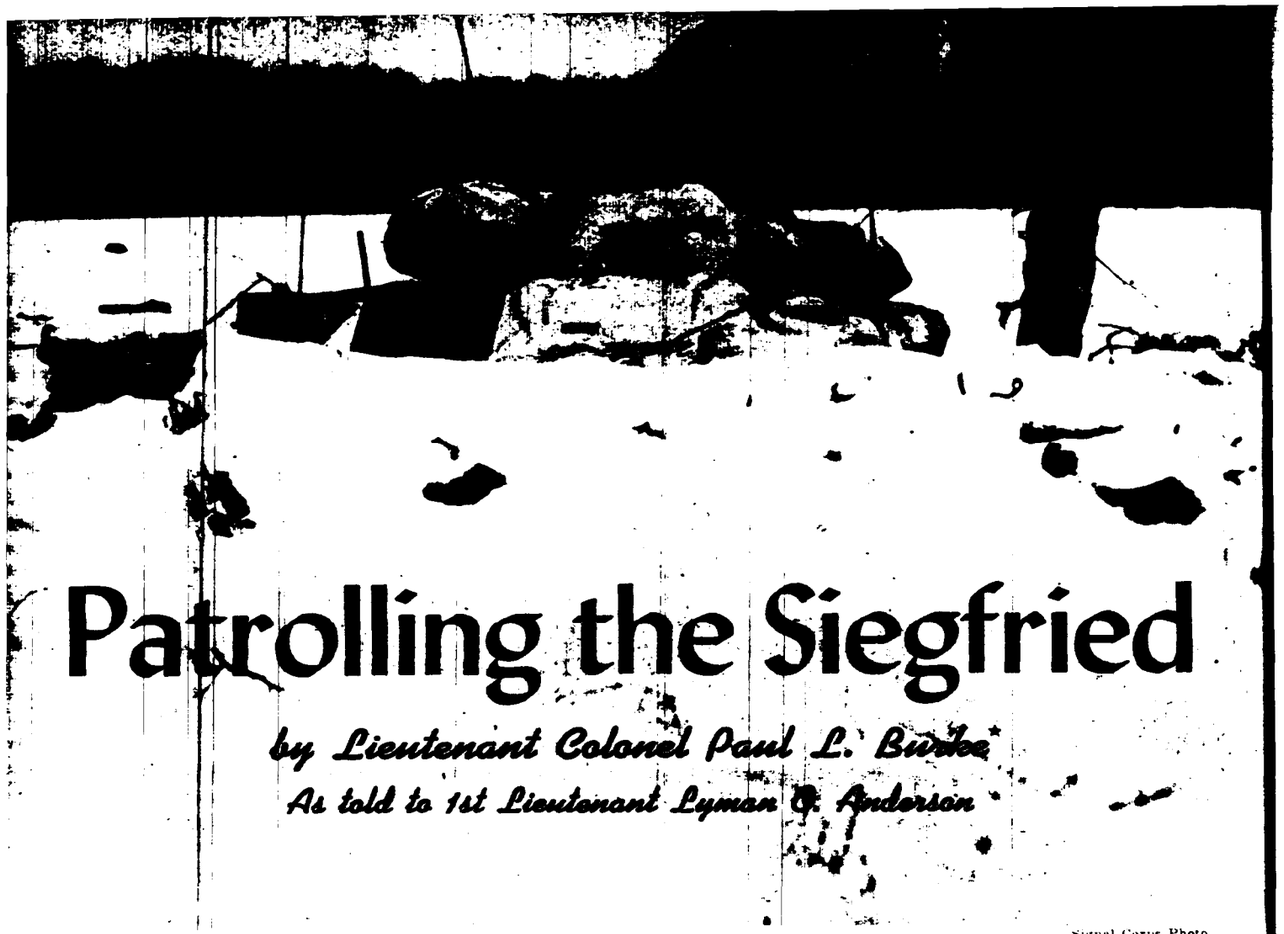


Patrolling the Siegfried

*by Lieutenant Colonel Paul L. Burke**

As told to 1st Lieutenant Lyman G. Anderson

Signal Corps Photo

A dug-in tank and crew overlook German positions along the Siegfried, January, 1945. This picture of 121st Reconnaissance Squadron, 106th Cavalry Group is descriptive of the static condition which confronted the 102d Cavalry during the long snow-bound winter along the Western Front. The 102d covered a 14,000-yard front with little or no depth.

IT was much more interesting racing across France and Belgium than taking up defensive positions on the fringes of the Siegfried Line, but action on the static winter front turned out to be more exacting and just as exciting. Night and day—particularly nights—there was the constant patrolling. It was hard, grueling work with no rest and little sleep, month after weary month, but the 102d Cavalry Group (Mecz), commanded by Colonel Cyrus A. Dolph, III, variously reinforced, knuckled down to it and did a bang-up job.

From the middle of September through the winter the 102d Cavalry, elements of which were the first U. S. troops in Paris, held the line on 5 different sectors in the vicinity of the German-Belgian and Luxembourg borders. On the last sector they covered a 14,000-yard front with little or no depth.

To hold the sectors in the rugged terrain covered by thick fir forests, it was necessary to dismount the two squadrons. The cavalry's mission was to prevent infiltration by the enemy and to hold the ground already won.

From time to time the group was reinforced with various detachments including an infantry battalion, an armored field artillery battalion and a regular FA battalion (both 105mm howitzers) a company of combat engineers, two TD companies (one self-propelled and one towed) a medical collecting company, and a couple of wire teams.

Parenthetically, it should be stated that the wire teams were absolutely indispensable. It was the old story of communications. Without them operations would have been crippled and gravely endangered. Keeping open communications may be a decidedly unglamorous task, but it is one of the most essential of a battle or campaign.

The maximum number of units, including portions of the tank crews from the light tank companies and the squadrons, were dismounted. This enabled the establishment of a long, thin line, but without any depth. There were many gaps, which were covered in

*Executive Officer, 102d Cavalry Group.

*A story of the 102d Cavalry, "Employment of Cavalry Assault Guns," which appeared in the November-December CAVALRY JOURNAL referred to the 102d as "X" Cavalry Group.

some instances with small-arms and automatic fire, but in every case with artillery and mortars. Wire, mines and booby traps were also used extensively.

Concertinas and tactical wire were installed, both by the attached engineers and the cavalry. In the case of mines, however, it was found desirable to have the engineers install them, but because of the large frontage, it was necessary for the cavalry to assist, generally under engineer supervision. Where it was obvious that a tank or vehicle could not come through, antipersonnel mines were used. But in general, both antipersonnel and antitank mines were laid, depending upon the terrain.

Patrols

The importance of patrols cannot be overemphasized. It is the one and only way that intelligence of the enemy can be gained. Close to the best defense was patrolling, which never ceased day or night. Although the Jerries were entrenched in their fortified positions within the Siegfried Line, they also patrolled constantly.

The 102d patrols, both reconnaissance and combat, varied in size from 4 to 5 men to a platoon. This constant patrolling kept the Germans on edge and, incidentally, caused them a lot of casualties and damage. The communications system which was developed and used, enabled the patrols to call for artillery fire to be delivered almost instantaneously in the desired area. In addition, when the weather permitted, dawn-to-dark aerial OPs in Piper Cubs attached to the FA battalions made it possible to inflict additional damage on the enemy.

Prisoner information confirmed the belief that the enemy not only had a lot of respect but a great fear of our artillery. Water points, kitchens, CPs and other enemy concentrations were used as targets. A few rounds on a Kraut chow line usually eliminated that many Krauts.

Communications

The whole defensive system revolved around a communications system built up principally by telephone and wire. The organic telephone systems of the attached artillery and infantry battalions were augmented by improvised systems to fit the situation. As the cavalry has no authorized telephone equipment, higher headquarters (V Corps) made it available upon request and attached at different times two of its wire teams to the reconnaissance group.

The cavalry squadrons organized their own wire teams and installed and maintained wire communications to all front-line critical points, OPs and CPs. The switchboard at Group HQ had 24 drops, all of which were used.

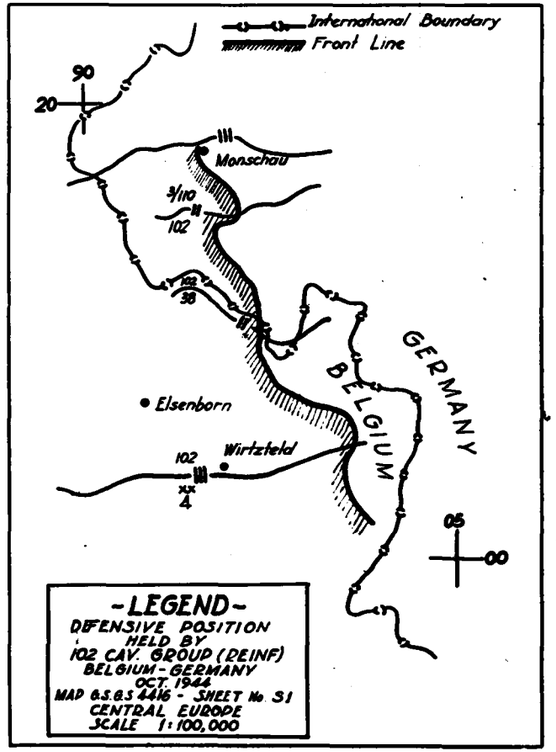
Communications were established and maintained with Corps HQ, corps artillery, attached artillery and adjacent infantry divisions. Organic cavalry radio nets were kept open as supplementary means of communications in the event wire lines were shot out or sabotaged. The nets were monitored and always ready for instant use.

The artillery was controlled through a fire direction center established at the headquarters of one of the attached battalions. An artillery officer was assigned to Group HQ in the capacity of a group staff officer. The fire direction center had communication with all battalions in adjacent divisions and with the corps artillery. Whether a worth-while target was discovered, a TOT (time on target) was arranged and Jerry got plastered.

The artillery provided a comprehensive fire plan. The group could call for prearranged fires on all critical points and possible avenues of approach in the event of an enemy demonstration or attack in force. No fire lines were established beyond which the artillery could fire at any time; because of the operations of patrols, clearance had to be obtained before fire could be laid down.

Prearranged Plans

The system of patrols was developed to a very high point. The group commanding officer retained approval for all patrols. Squadron commanders assigned patrol missions at least 36 hours before the patrol was



to be sent out. The mission was given to the troop commanders on a mission form. The troop commanders, after selecting patrol leaders and patrols, gave orders to the patrol leader at least 24 hours prior to time of departure. The patrol leader was required to brief his patrol 18 hours before the scheduled taking off time. His final plan, written out by him after map study and as much personal reconnaissance of the terrain as possible, was submitted for approval in turn to the troop commander, the squadron commander, and the group commander, and reached the last named at least 6 hours prior to departure time. The group commander then gave final approval or disapproval.

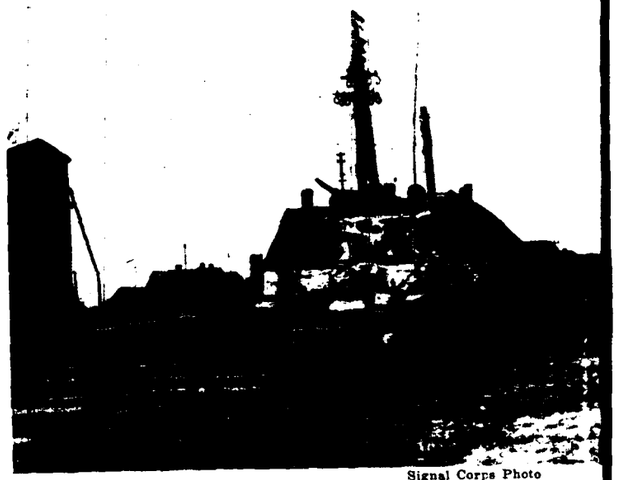
Upon return of the patrol, all members were interrogated at squadron headquarters, either by the squadron S-2 or a staff officer especially assigned to patrol work. Complete detailed reports of findings were prepared and submitted to Group HQ.

One of the interesting factors of all patrols was the communication system which involved SCR-300 and borrowed sound-powered telephones and visual signals, both of a prescribed but impromptu nature.

It was also learned that the patrols had a great fondness for having at least one BAR among its weapons; occasionally a 60mm mortar was carried and used. In view of the fact that the Germans were constantly patrolling, it became habitual to establish tramps and ambushes.

One instance of a 20-man German patrol, which walked into a trap and was completely annihilated, occured in the following manner:

A squadron patrol was proceeding on its mission and the scout—alert and watchful, as he should be—saw



Signal Corps Photo

Members of the 117th Reconnaissance Squadron outpost a road north of Strasburg, February 1, 1945. Vehicles are still camouflaged for winter warfare; snow not yet melted.

Jerries coming toward him. Under a prearranged plan the patrol took up firing positions very quickly and quietly and held fire until the patrol leader signaled by firing his own weapon. The incident occurred in a very thick pine forest where visibility was limited to both sides.

It was the prearranged plan which provided the satisfactory result. To prevent being taken by surprise, a unit must anticipate every eventuality. Nothing must be left to chance or happenstance.

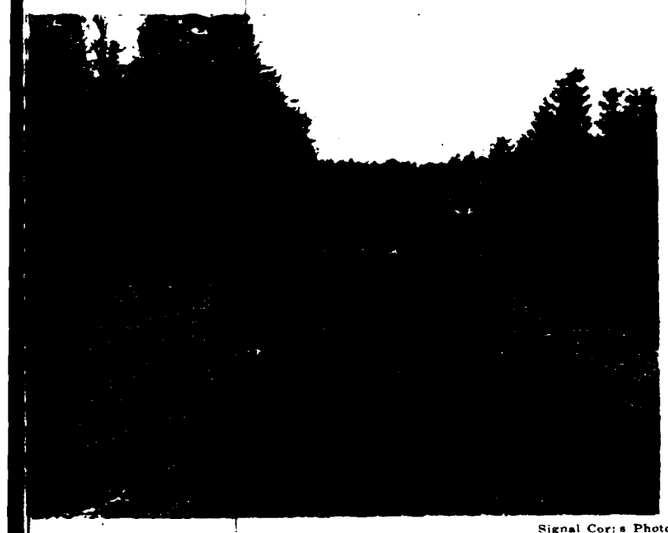
Battlewise

The cavalry troops remained in the same positions from the middle of September through the winter; the detachments changed from time to time. As the weeks passed, autumn turned into deep winter, with its added discomfort. During this period many ideas were put into practice to provide as much comfort as possible under the circumstances. On some of the terrain, which was often marshy, it was impossible to dig deep foxholes. For protection from enemy fire, digging is the first requirement, with overhead protection a close second. Jerry continually threw over large amounts of artillery and mortar fire, and in wooded areas tree bursts were usual.

Troops became quite expert in constructing foxholes and dugouts with drainage systems, floors and roofs of logs, with sandbags, dirt and local camouflage materials to provide the maximum of security.

In the three and one-half months of such warfare, the troops grew battlewise and learned instinctively to appreciate the need for self-protection, particularly in constructing overhead cover. Because of this education in the hard school of experience, the casualties were relatively small, although the troops inflicted a large

A unit of the 102d Reconnaissance Squadron approaches Heimbach, Germany in the late winter. As the snows melted and the Germans were driven from the Ardennes, the winter front was pushed eastward with increasing momentum. Static warfare gave way to a war of movement.



Signal Corps Photo

number on the Germans. Battle experience showed that the T/A and E (table of administration and equipment) was not the last word. Like everything else in the Army it had to be put to the test. Recommendations for changes were made in detail to higher headquarters.

The major recommendations for changes included making available a greater number of men for dismounted work; increasing mortar fire power by changing from the 60mm to the 81; arming a larger number of men with the M1 rifle instead of the carbine; increasing self-propelled howitzers to 105mm from the 75; the need for wire and telephone equipment, and last but not least, authorizing additional personnel in Group Headquarters to enable the staff to handle the never-ending stream of administrative work and to function efficiently 24 hours a day.

Morale and Health

Although the men had been in the line constantly since D plus 2 and had had little or no rest, the morale of the group remained high. Only a small percentage could be spared for 48-hour passes to the corps rest center and a still smaller percentage could be given a 6-day pass to Paris. The relatively small number of troops, coupled with the large area they were assigned to cover, precluded the granting of many such passes.

Under the rigorous conditions of living in the open fields and forests for months, improvising what shelter was possible, it was to be expected that trench foot would make some inroads, but because the possibility was anticipated, it never really made any headway. All prescribed preventive methods were used under the supervision of the squadron medical officers. Troop commanders, platoon leaders and section sergeants checked every individual man constantly and instituted preventive measures.

It was found that respiratory diseases were very small in number during the out-of-door living. Those afflictions were prevalent when the troops were billeted indoors.

Hot meals ranked high among morale factors. In most instances the men were furnished with two hot meals a day—breakfast and supper. When conditions permitted, the hot meals were sent up to the men in the line in containers; when that was impossible men infiltrated back in rotation to where the hot food containers were assembled.

The 102d Cavalry also established a rest center in the vicinity immediately back of the line. While it was not far back, at least it was not right in the line. A small number of men were brought there from time to time and permitted to sleep, read, write, shave—or not shave—in other words, to relax completely and do as they damned well please for 48 hours.

That is the story. Cavalry in a defensive rôle performs a hard and arduous task. The task was done and done well by the 102d.

14th Cavalry at Remagen Bridgehead

THE 14th Cavalry Group, comprising the 18th and 32d Squadrons, helped turn the crossing of the Rhine at Remagen into an offensive which carried to the very heart of Germany.

Commanded by Colonel Lawrence G. Smith, these veterans of the Ardennes and the drive across the Ruhr rolled over the famed Ludendorf Bridge spanning the Rhine River on the fourth day after its capture. On the eastern bank of the Rhine, they helped establish the first defenses in an intricate network of defense and traffic control to assure complete ground, water, and air security for the now historic Remagen bridgehead.

During this action in which the 18th Squadron captured over 250 Nazi prisoners of war and secured the towns of Rheinbrohl and Hammerstein armor and mechanized cavalry caught the defending Nazis totally unprepared. As Troop A, commanded by Captain Edward L. Schnee, rode into the battle mounted on the squadron's new M24 light tanks and attached tank destroyers, the Germans were caught completely unprepared. The new M24 light tanks used by Company F and led by Lieutenant Kenneth O. West could not be matched by the poor German antitank defenses, and tanks of the 1st Platoon moved with complete freedom as they advanced through Rheinbrohl and Hammerstein.

The vital defense of the Remagen bridgehead was the responsibility of a task force under Captain Lee O. Alkire, organized from Troop A of the 32d Squadron, tank destroyers, engineers, signal corps, and Royal naval personnel and supplied with many secret weapons.

Under protection of fog and darkness trained Nazi suicide teams of saboteurs had continually attempted to demolish both the Ludendorf dual-purpose bridge and the various ponton river crossings, but as searchlights disclosed the Nazi suicide teams Lieutenant Kingston L. Stemble's alert patrols and guards always captured the German saboteurs before their mission could be accomplished.

Security patrols of the 32d Squadron, which were defending the Ludendorf Bridge at the time that it crashed wearily into the Rhine River, gave eyewitness reports as proof that the bridge was not destroyed by the enemy. Sergeant Alfred W. Enlow, in command of a 30-man platoon guarding the bridge against acts of sabotage, said: "At the time the bridge started to collapse I was looking at it, and right in the midst of shaving. I never saw such a sensational sight in my life. There was no shell fire nor were there any explosions. The bridge just trembled and shook and in a mighty cloud of dust fell into the river."

Screen for Infantry

*by Major William G. Reynolds, Cavalry**

AT 1630 August 13 the 113th (Red Horse) Cavalry Group,[1] commanded by Colonel William S. Biddle, then in assembly area south of Mortain with mission of protecting the south flank of XIX Corps and of establishing contact with the north flank of VII Corps, was attached to the 30th Infantry Division from which it received the following mission:

> "To execute reconnaissance to the east in the Division zone without delay, maintaining contact with the VII Corps on the right and with the 2d Armored Division on the left, and screening the motorized advance of the 30th Infantry Division, scheduled to begin at 0700 on 14 August."

The division commander added verbally that, since he wished to move his division as far forward as possible before detrucking, he desired the advance to be fast and bold until contact should be made with the enemy.

Accordingly, the 113th Cavalry Group moved out before 2130, and by midnight August 13-14 had established a counterreconnaissance screen across the division front on a north-south line generally along La Varenne River, west of Domfront, with the 125th Squadron, commanded by Lt. Colonel Jeff F. Hollis, on right and the 113th Squadron on the left.

At 0700 August 14 the advance was resumed. The 113th Squadron, though faced with considerable opposition, especially on its left, made steady progress throughout the day and by dark had reached the western edge of the high ground generally northwest of Domfront. The 125th Squadron, on the other hand, met stiff opposition before the town of Domfront, where, by direct pressure and enveloping action, it assisted a task force of the 2d Armored Division in capturing the town by 2100.

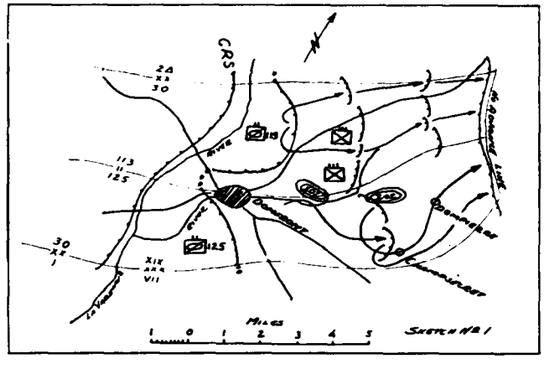
Meanwhile, elements of the 30th Infantry Division had detrucked and under cover of the cavalry screen had progressed well forward in the zone, especially on the left. There, however, a serious gap had developed between two regiments—the 120th Infantry and the 119th Infantry; and at 2000 the CO of the 113th Cavalry Group was ordered to fill it. He, in turn assigned the mission to the 113th Squadron, which effectively filled the gap at the same time that it continued to advance and maintain contact with the 2d Armored Division on is left.

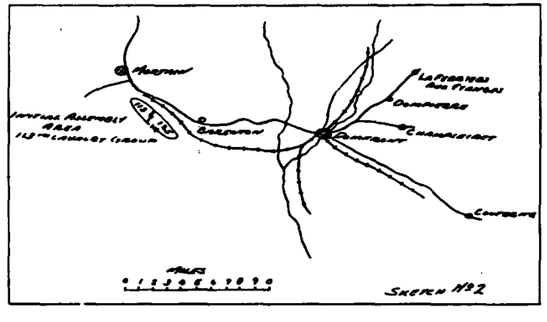
At 0600 on August 15 the 125th Squadron resumed the advance in its zone and at 1420 captured Hill 202 (approximately 3 kilometers northeast of Domfront), after a sharp dismounted action. The 125th then encountered enemy forces strongly holding Hill 242 (2 kilometers east of Hill 202), which resisted capture until early the following morning when attacked by a battalion of 117th Infantry, reinforced by 2 platoons of light tanks from the squadron.

At the same time, the bulk of the 125th, bypassing Hill 242 to the south, captured the town of Champsecret and continued on to take Dompierre and the high ground to the east, which constituted the southern half of the division and corps objective. Finally, the squadron pushed on to take the town of La Ferriere-Aux-Etanges, from where it gained contact with elements of the 1st Infantry Division to the south.

By 1030 on August 16, therefore, the entire group had reached the "no advance line" which had been prescribed in orders; and at 1200 instructions were received to assemble on the right flank when relieved by friendly troops.

For its performance of this mission, the 113th Cavalry was commended by division and corps commanders.

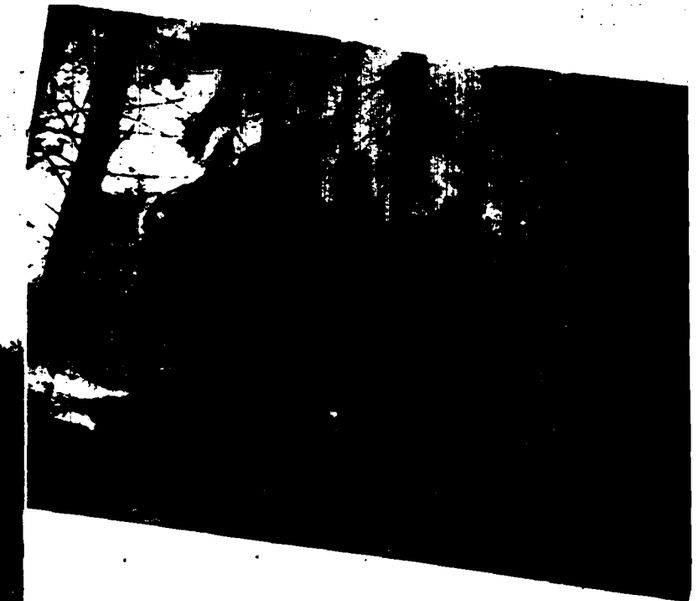




*S-3, 113th Cavalry Group (Mecz).

[1]An article on the 113th Reconnaissance Squadron of the 113th Cavalry Group appeared in the November-December CAVALRY JOURNAL under the title, "'Z' Cavalry Reconnaissance Squadron (Mecz) July 7-10."

75mm assault guns, in position overlooking Equelsharat, fire a devastating barrage into the enemy-held village.



Combat patrol moves toward its objective. Mission is to establish a machine gun position overlooking the town.

A Patrol— 106th Cavalry in Dismounted Action

Equelsharat, France, December 19, 1944

Signal Corps Photos

Colonel Vennard Wilson (right), at forward position along patrol's route, watches progress and listens to radio directing artillery fire.

Left: White phosphorus shells from radio-directed howitzers burst near enemy machine gun position. Smoke screens the patrol.

Battle Reconnaissance

The aggressive and continuous reconnaissance by the 106th Cavalry Group (Mecz) between the Marne and the Moselle Rivers—where the German 16th Infantry Division was destroyed—furnishes an excellent battle illustration of speed in decision and mobility in action by cavalry in gaining contact with a hostile force and establishing its identity, composition, disposition and flanks.

by Captain James W. Cocke, Cavalry

The Situation, September 10-11

The XV Corps, consisting of the 106th Cavalry Group (Mecz), the 79th Infantry Division and the French 2d Armored Division was engaged in the mission of protecting the right south flank of the Third Army.*

Late in the evening, September 10, instructions were issued by the Third Army for the XV Corps to continue its mission of covering the right, south flank from Montargis to the Moselle River. The XV Corps, then west of the Marne River, was to advance to the east from the Marne to secure the west bank of the Moselle River between Epinal and Charmes (both inclusive). The advance was to begin on the morning of September 11 at about 0800 hours.

At about 1700 hours on September 10 the 106th Cavalry, protecting the right flank of the corps along a 90-mile front from Auxerre to Liffol le Grand, received the order to cover the advance of the Corps within the corps zone—*i.e.*, execute special mission Vittel. Upon arrival on the west bank of the Moselle River the 106th was to be prepared to move to positions indicated on the south flank of the corps and from there be ready for possible farther advance to the east and northeast.

The XV Corps was to advance (see Map 1) in two columns—the 79th Infantry Division on the left and the French 2d Armored Division on the right. At the same time, the 79th Infantry Division would also advance in two columns: Combat Team 4 (Motorized) would follow the 106th Cavalry along the northern route and the axis of the 106th Squadron, while Combat Team 5 would move by foot along the route Neufchateau—Chatenois—Mirecourt—Charmes.

Immediately upon receipt of instructions from the 106th Cavalry, the 106th Squadron began its assembly and moved to the vicinity of Gondrecourt. At about 2200 hours that evening verbal orders were issued for the advance of 106th Group. The movement to the assembly area was completed with the 106th Squadron closing in the assembly area at about 0300 hours, September 11. Elements of the French 2d Armored Division, moving across the 106th zone to the east, became responsible for the security of the XV Corps right flank.

Meanwhile, the 121st Squadron began to break contact in its zone temporarily along the general line Liffol le Grand—St. Blien—Andelot for assembly in the vicinity Chermisey. In the midst of this operation, however, it was determined that the corps would advance through the 121st Squadron zone, September 11. Instructions were then issued by the 106th Cavalry to the 121st Squadron to regain contact with one troop in the zone Andelot—Liffol le Grand and at the same time employ another troop to outpost the road from Liffol le Grand to Neufchateau. The remainder of the squadron was to assemble in the vicinity of Chermisey as planned (see Map 2). Troop "A" was to reëstablish contact in the zone just vacated. The outpost was given to Troop "B."

The Jump Off

At 0700 on the morning of September 11, the advance jumped off, squadrons abreast, with the 106th Squadron on the left (N) and the 121st Squadron on the right (S). The 106th Squadron was to move on the axis (see Map 2) and the 121st Squadron along the route (also shown on map). Group axis of advance was to be in the zone of the 121st Squadron. The motorized CT4 of the 79th Division was to take the northern route behind the 106th Squadron.

The 121st Squadron, less Troop "A", began its advance to the east.

Troop "A" had been assigned the mission of holding the line Andelot—Liffol le Grand until passed through

*See paragraph, "Study for Leavenworth" in "Third Army Reconnaissance System," January-February issue.

and relieved by the French 2d Armored Division. Troop "A" was also given the additional mission of maintaining liaison with the French 2d Armored Division.

Troop "C", in the lead, followed by Troop "B", moving to the northeast, by-passed the town of Neufchateau, then moved southeast in the direction of Dommartin sur Vraine.

The 106th Squadron on the north axis moved out with Troop "A" in the lead, followed by Troops "C", "B" and the remainder of the squadron in that order.

The 121st Squadron reached the town of Coussay, while the 106th Squadron reached Greaux at about 0800 hours.

The 79th Division moved out at 0800 hours in two columns. CT4 (motorized) was to seize the west bank of the Moselle River; CT5, the foot column, was to clear the route Neufchateau, east to Chatenois, Mirecourt, Charmes. Combat Command "L" of the French 2d Armored Division advanced in two columns to secure the west bank of the Moselle River in the vicinity of Epinal.

Contact

The 106th Cavalry Group, advancing to the east, was coördinated by the group commander from his ¼-ton radio vehicle. Moving about at will, he personally directed the operation.

At 1125 hours Troop C, 121st Squadron encountered resistance in the form of a road block defended by 30 men in the vicinity of Attigneville (see Map 2). The road block was reduced and after a short engagement the enemy withdrew into the woods. Troop "C" reorganized and moved forward until it again met with strong resistance in the vicinity of Dommartin sur Vraine.

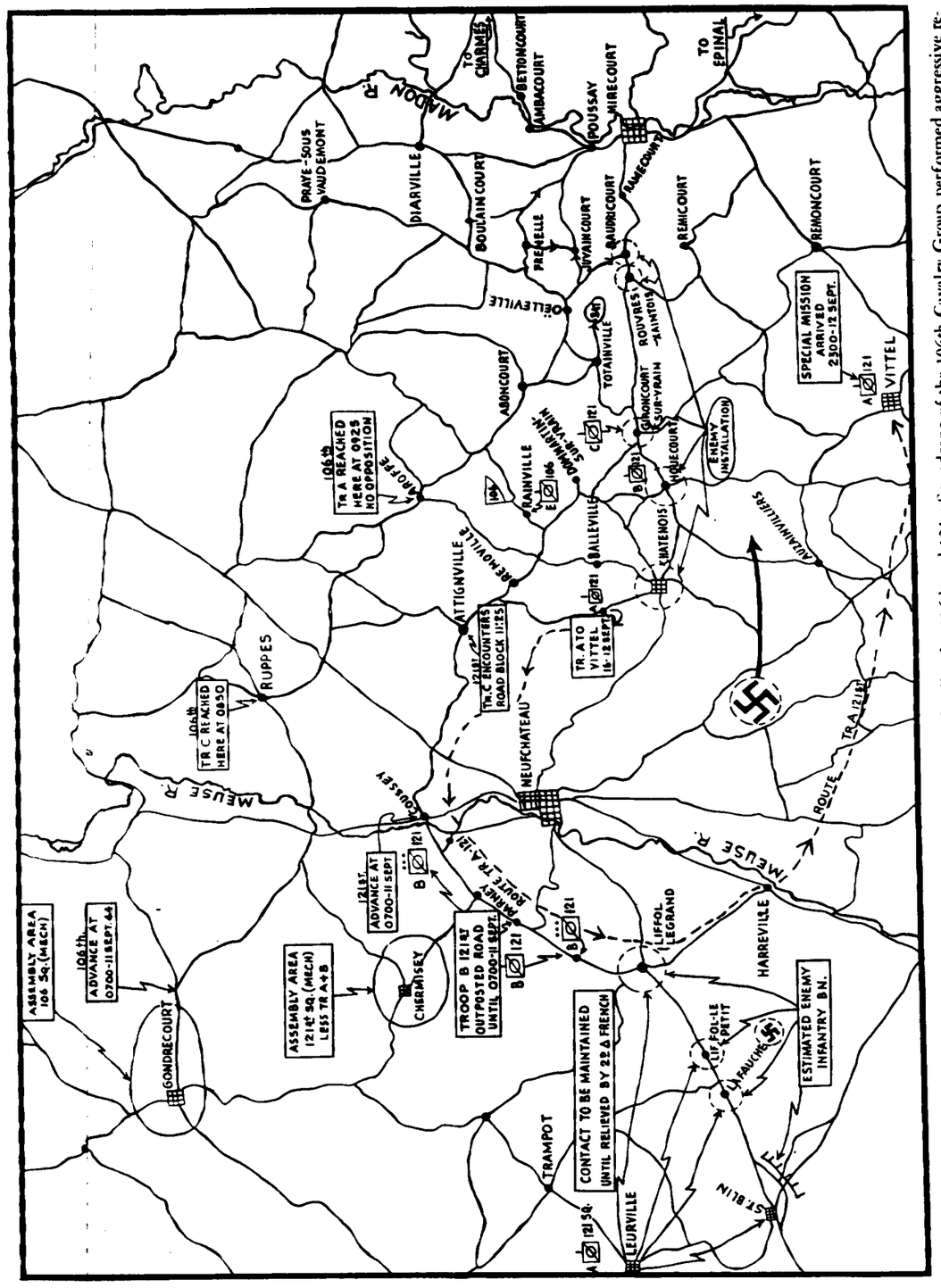
Meanwhile, the leading elements of the 106th Squadron had reached Aroffe by 0925 hours, while the command group and the main body had reached the road junction about 2 kilometers northwest of Dommartin. The resistance just south of Dommartin had proved too strong for the squadron to push through without considerable delay, at best. Troop "C", 121st Squadron, was dropped off to contain the enemy just south of Dommartin, and at the same time Troop "B" was sent in the direction of Houecourt—Chatenois, but it, too, met strong resistance in the vicinity of Balieville. The group commander then decided to leave both troops in contact until the infantry was able to come up and take over.

The group commander called on the 106th Squadron, then moving on a parallel west-east route, to send one platoon to pick up the command group at the road junction just south of Rainville. The platoon arrived very shortly and guided the column to the northern route, where it was picked up by the 106th column.

The 121st Squadron, less Troop "A", moved into bivouac in the vicinity of Removille. Troop "C" was now one kilometer northwest of Dommartin. Troop "E" had moved to a point one kilometer north of the same town at about 2115 hours.

The 106th Squadron, with Troop "A" in the lead, was advancing along the route through Juvaincourt, while Troop "C" was sent through Totainville to close the gap between the two squadrons and also determine

The U. S. 79th Infantry Division on the north and the French 2d Armored Division on the south cut the retreat of the German 16th Division en route from Harreville to Epinal in an epic operation that annihilated the entire enemy unit.



During the Third Army's rapid advance between the Marne and the Moselle, the 106th and 121st Squadrons of the 106th Cavalry Group performed aggressive reconnaissance for both divisions of the XV Corps. Above map indicates routes and disposition of the reconnaissance units during the five-day battle September 10-15.

whether or not the main route through Baudincourt and Ramecourt was open. Troop "A" encountered resistance in the vicinity of Juvaincourt, while Troop "C" met resistance almost simultaneously between Totainville and Rouvres en Xaintois. Troop "B" was then sent to reconnoiter a more northern route through Oellville—Frenelle la Petite—Roulaincourt—Diarville—Avrainville—Soucourt—Charmes. The squadron CP went into bivouac in the vicinity of Boulaincourt.

Troop "A", 121st Squadron, relieved by the French 2d Armored Division on the line Andelot-Liffol le Grand, proceeded to the squadron CP in the vicinity of Removille, where it was ordered to proceed to Vittel by way of Chatenois. Meeting strong resistance about 4 kilometers north of Chatenois, the troop maintained contact until the French 2d Armored Division had cleared the town of Vittel. When the French reached Vittel in their advance to the east, Troop "A" was withdrawn and sent to Vittel by a route skirting around Neufchateau. Upon arrival at Vittel, Troop "A" immediately outposted the town and remained there until released by the corps.

CT3 of the 79th Infantry Division arrived rather unexpectedly in the vicinity of Juvaincourt, after hitchhiking on corps artillery and every other available means of motor transportation, and was assigned the mission of cleaning up the area Frenelle la Petite, Poussay, Ambracourt and Mirecourt, with the attack scheduled for early morning, September 12.

Troop "B", 106th Squadron, reached Soucourt, about three kilometers north of Charmes, where its progress was impeded by the enemy who was occupying the town. When the troop encountered resistance, CT3, moving closely behind, detrucked immediately to attack Soucourt. The 1st Battalion advanced to take the heights commanding the town, while the 2d Battalion, followed by the 3d, moved into the town itself. The town fell after stubborn resistance—allowing the advance to continue in the direction of Charmes.

Communications between the 106th Cavalry and the infantry columns was maintained by having one radio vehicle from the 79th Reconnaissance Troop, accompanying each combat team. The radios, tuned to the command net of the 106th Cavalry Group, enabled each unit to know exactly what the other was doing. Group maintained liaison officers with the XV Corps, 79th Infantry Division and the French 2d Armored Division.

Late in the afternoon of September 11 it was learned that headquarters of the German 223d Infantry Regiment, 16th Division, was en route east on a line from Harreville to Epinal, while other elements of the 223d, supposedly in the vicinity of Combeaufontaine, were withdrawing to Epinal (probably through Jussey, Corre, Vauvilliers, Bain les Bains) under orders to cross to the east bank of the Moselle no matter how great the hardships or sacrifices might be (see Map 1). Although the German 16th Division had been reported moving in this area from southern France about 10 days earlier, this was the first information of recent movements.

The capture of prisoners on September 11 verified the presence of these units.

The French 2d Armored Division, advancing to the east, had elements in Auzainvillers on the south, while on the north the enemy was dropping sporadic artillery at Dommartin.

Troop "A", en route to Vittel on the special mission assigned to the 121st Squadron, encountered stiff opposition at Chatenois and became involved in a firefight. The troop commander, realizing his situation, began working west to by-pass Chatenois. The 121st Squadron, continuing to probe the enemy line Chatenois—Basincourt, met determined resistance from small-arms and some artillery fire.

The towns of Chatenois, Houecourt and Gironcourt were found to be strongly held by enemy infantry estimated to be at company and battalion strength. Reports indicated that elements of the German 16th Infantry Division were defending the east-west route from Neufchateau to Charmes—supposedly holding open the escape routes to Germany from southern France.

The Situation, September 12

During the morning of September 12 the XV Corps continued on its mission toward the objective Charmes—Epinal. The 79th Infantry Division was clearing enemy resistance from the east-west routes to Charmes; CT3 was attacking east through Frennelle la Petite and thence to Bettoncourt—Charmes; CT4 was attacking Charmes; and CT5, east through Neufchateau to Chatenois and Mirecourt. The French 2d Armored Division continued the attack east through Goncourt and Vrecourt toward the objective Epinal (see Map 1).

The 106th Cavalry commander, who had now located the command post in the vicinity of Auginville, issued instructions for continued reconnaissance to the east and southeast in the direction of Epinal with a special mission of securing Vittel and the probable mission of protecting the right, south flank of the XV Corps after the French 2d Armored Division reached its objective. The probable axis of signal communication for the 106th Group was to be: Frennelle la Petite—Mirecourt—Begnecourt.

The 106th Squadron, less Troop "B", charged with the close coördination of its movement with the 313th Infantry Regiment and the 121st Squadron was to push southeast from Aboncourt and Frennelle la Petite to the objective Lorrain and Le Menil.

Troop "B" would remain assembled in the area west of Charmes, prepared to cross the river to reconnoiter in advance of the 314th Infantry in the event they crossed the Moselle River that day.

The 121st Squadron, charged with the close coördination of its movement with the French 2d Armored

Division and the 313th Infantry Regiment, would push southeast from Chatenois—Gironcourt sur Vraine to the objective Vittel and Remoncourt.

CT5, working east through Neufchateau against stiff enemy resistance, employed this general plan of attack. The regiment would attack at 1500 hours, with the 1st Battalion working through the town, the 2d Battalion moving to the south to cut the road leading from the town, and the 3d Battalion passing through the town and continuing the advance in the direction of Chatenois.

The situation in front of the 121st Squadron looked about like this at 1600 hours on September 12:

Troop "A" was unable to enter Chatenois or by-pass to the west. Patrols from the 121st squadron made strong enemy contacts which were supported by artillery and mortars on the east and west of Chatenois. Two well defended road blocks were discovered on the main road between Chatenois and Neufchateau. Troop "B" was unable to reach Houecourt or by-pass to the east or west of that town. Patrols, contacting enemy outposts about ½ kilometer north of Houecourt, were fired on by small arms, mortar and some artillery. Troop "C" was unable to reach Gironcourt sur Vraine for the same reason. The enemy line Chatenois—Gironcourt was strongly held and supported by artillery fire.

The 106th Squadron command post moved to Boulaincourt at 1520 hours on September 12. Troop B was attached to the 314th Infantry at about 1500 hours, and the remainder of the squadron was employed with Troop A in the vicinity of Aurainville with patrols operating in the vicinity of Poussay. Troop C, located in the vicinity of Juvaincourt, had patrols working south and west to contact the 121st Squadron. Troop A, moved to the east side of the Moselle River by way of Rouville, was assigned the mission of reconnaissance in advance of the bridgehead east of Charmes. Although the 315th Infantry had not cleared the town of Neufchateau by 1720 hours, corps moved its command post to the vicinity Auginville. At about 1830 hours the French 2nd Armored Division, in the vicinity of Auzainvillers and Remoncourt, was pushing advance elements east into the outskirts of Dompaire.

Troop A of the 121st Squadron, on the special mission, reached Vittel about 2300 hours. The situation quieted during the night as the 315th Infantry prepared to continue the advance to the east toward Chatenois. Early on the morning of September 13, Troop A, 121st Squadron, reported its mission accomplished and the town of Vittel secured.

Drawing the Pincers

At about 0720 hours Troop A of the 106th Squadron crossed the river at Roville to the east and continued its mission east of Charmes.

Troop C, 121st Squadron was moving into position to cut the road between Rouvres en Xaintois and Dombasle en Xaintois. Troop B, 106th Squadron, was withdrawn at 1030 hours to permit firing in the area south of Savigny.

The enemy began to show a more determined stand by digging in on the high ground north of Baulaincourt. CT3 was reported to have taken Bettoncourt at 1530 hours and was now fighting for the town of Poussay. The enemy in front of Houecourt brought up reinforcements at noon (probably troops withdrawing from the Andelot area), while the 315th Infantry on the west was meeting resistance of a stubborn nature at the road blocks 4 kilometers west of Chatenois. The attack continued, with one element of CT5 moving to the north through Dolaincourt, the other attacking from the west.

Enemy traffic, to the east, increased under pressure from the west by CT5 and from the south by the French 2d Armored Division, which was now in Dompaire, almost completing the encirclement of the enemy along the east-west road.

The 106th Squadron reported very little change on that front during the period. Darkness found the two squadrons in about the same positions as the night before, except that Troop "A" of the 106th Squadron was on the east side of the Moselle River, and Troop "A" of the 121st Squadron was at Vittel. The night was fairly quiet other than a few attempts by the enemy to withdraw a part of his forces. An enemy battalion, consisting of 13 officers, 130 NCO's and 420 enlisted men, surrendered as a unit to the 315th Infantry on the morning of September 14.

The assault guns of Troop E interdicted the escape routes to the east from Chatenois. At about 1800 hours Mirecourt was reported in the hands of the 313th Infantry, and about the same time the French 2d Armored Division began moving one of its units to the north in the direction of Houecourt. The 315th Infantry, advancing to the east, reached La Neuville about 1930 hours.

The situation in front of the 121st Squadron at 2130 hours had the enemy occupying the towns of Houecourt—Gironcourt—Rouvres en Xaintois. The roads leading into these towns were heavily mined or blocked by obstacles defended by antitank guns and supported by artillery.

The 121st Squadron was disposed, with Troop A at Vittel, Troop B in the vicinity of St. Paul (with OP's at one kilometer and another at two kilometers north of Houecourt), and Troop C one kilometer northwest of Dommartin with units 1½ kilometers northwest in the vicinity of Morelmason.

Troop B, 121st Squadron, assigned a mission of reconnaissance in the zone Charmes, south to Nomexy (exclusive) west to Mirecourt along the east road, north and east through Ambacourt, Bethancourt and Charmes, reported at 1630 hours that the mission was completed and the area clear of the enemy.

A patrol from Troop C, 106th Squadron was sent south through Mirecourt for the purpose of contacting a patrol coming north from the French 2d Armored Division. Contact with the French was made in the vicinity of Mattincourt about 1700 hours.

An enemy withdrawal to the east was indicated by the fact that considerable traffic was observed and a number of vehicles were destroyed by Troop A of the 106th Squadron, operating on the east side of the Moselle River.

Closing the Trap

On September 15, elements of the French 2d Armored Division were disposed in the vicinity of Nomexy, Mirecourt, Dompaire, prepared to attack Epinal on corps order.

The 315th Infantry reached La Neuville about 0930 hours, proceeded east, and about an hour later arrived at Houecourt in its move on Gironcourt.

About 1300 hours CT5, advanced east across the 121st Squadron zone and cleared the area on the squadron front.

Meanwhile, between 0600 and 0730 on September 15 German infantry, tanks and artillery had counterattacked the French 2d Armored Division from the northwest in an attempt to break out of the trap in the vicinity of Dompaire. The French, counterattacking southeast from the direction of Mirecourt at about 1030 hours, broke up the threat from the northwest.

Troops B and C of the 121st Squadron, continuing to clear the area of small pockets of resistance, were directed to assemble upon completion of the mission in troop areas. Troop A reported the area south of Houecourt clear of enemy resistance at about 1400 hours. Troop "C" reported the area south, north and northwest of Dommartin—Chatenois clear at 1530 hours.

The 106th Squadron was engaged in route reconnaissance with one troop on the route Mirecourt—Charmes. The remainder of the squadron was employed in the area Baudricourt and Rouvres en Xaintois with patrols as far south as Dompaire during the morning. In the afternoon it reported the area clear of enemy resistance.

CT3 and CT5, moving east from Chatenois and west from Mirecourt, made physical contact in the early afternoon. By this time the French 2d Armored had reached Nomexy with a large portion of its command.

This combined mechanized cavalry-infantry-armored action resulted in the complete destruction of the German 16th Infantry Division in 6 days.

The 121st Squadron assembled and moved to the vicinity of Praye sous Vaudemont, and prepared for farther advance to the east, while the 106th Squadron moved to the vicinity of Roville in position to cross the Moselle River and continue the advance to the east on order.

The Nazis Go Underground

The Nazis Go Underground, ***by Curt Riess, was published in the autumn of 1944. As a warning of the underground movement already organized by the Nazis, it leaps into importance with the fall of Germany.***

After Stalingrad it was evident to many high-ranking Nazis that they were likely to follow the blueprint for defeat.

The amazing accuracy of the following predictions made by Mr. Riess in **The Nazis Go Underground** ***in 1944 are of interest in the light of recent events.***

"A great deal has been written lately about certain Nazis who have fallen out with Hitler . . . in many cases all they wanted was to create such an impression. . . . The only explanation, then, is that their dismissal has been arranged in order to give them an alibi for the future. . . .

"And what are the chances for survival of the Nazis of the first order—Hitler, Himmler, Goering, Goebbels, and the others? . . .

"Most people feel that Dr. Goebbels is a coward who will try to save his skin. I believe that Goebbels is, above all, a cynic . . . Goebbels will be a cynic to the very end. He will decide that he has seen and done and had everything—and will shoot his brains out. . . .

"Goering, on the other hand, may try to save himself. He enjoys life and, because he wants to continue to live pleasantly, he will run away. . . .

"Foreign Minister Joachim von Ribbentrop, though a full-fledged Nazi, can go on living even after the party is overthrown. . . .

"As to Martin Bormann and Generals Heissmeyer and Kaltenbrunner, it is not likely that they will be able to get out alive. . . .

"Himmler himself is said to be resigned to dying inside Germany. . . .

"People who know Hitler personally, or who know enough about him to judge what his final reactions may be, are unanimous in their belief that he will fight to the last. . . . But even if Hitler should decide differently he will have no choice. He will not survive the downfall of his regime. He must die. And if he does not commit suicide, the leaders of the Nazi underground themselves will see to it that he perishes. True, they need the Fuhrer for the future Nazi underground. But the Fuhrer they need for that future is a dead Fuhrer." **—The Nazis Go Underground,** ***by Curt Riess. Doubleday, Doran.***

Von Rundstedt on German Defeat

by Louis P. Lochner

WITH U. S. Seventh Army, May 4 (AP)—Field Marshal Karl Gerd von Rundstedt, admitting complete German defeat, said today he regarded air power as the most decisive factor in the Reich's military failure.

Wearing his marshal's uniform with the Knight's Cross of the Iron Cross and other decorations, the defeated former German commander in the West received correspondents in a chateau where he is held prisoner.

Von Rundstedt said these were the other factors in Germany's defeat, in order:

1. Lack of fuel, both oil and gasoline.
2. Destruction of the railway system.
3. Germany's loss of raw material areas such as Romania.
4. Smashing of the home industrial sections such as Silesia and Saxony by air attacks.

Bowing stiffly to the correspondents, von Rundstedt seated himself on a big sofa and replied to every question put. He said in his opinion Hitler is dead, but not by suicide. He expressed belief the Fuehrer might have died in Berlin. Nervously puffing at an unlighted cigarette he then said:

1. American generals are surprisingly good, as is Marshal Montgomery of the British Army. They have learned much since the First World War.

2. The D Day invasion came as a surprise, both regarding the exact time and locality, although the locality chosen had figured among German calculations.

3. The Western Allied armies made as successful a war of movement on Germany as the Reich made on France in 1940.

4. The so-called von Rundstedt counteroffensive in the Ardennes last December was ordered by Hitler, with the field marshal the scapegoat. It was Germany's last and only chance to avert disaster. It would have succeeded if supplies and reserves could have been brought up as quickly as General Patton could move up from the south.

5. Germany fights on solely because all utterances, both in the east and west, indicate that it is a fight for existence.

6. Germany would have won in 1940 except for British certainty that the United States would help.

7. However, no serious attempts was made in 1940 to invade England since experimental jabs showed the German water transport and fleet protection were inadequate.

After answering the first question regarding Hitler, von Rundstedt commented: "Before I say anything else I must begin with a personal remark. I'm not a prisoner by choice. I was taken by force of arms from a military hospital. I should never have yielded myself voluntarily. That would have been the most despicable thing an officer could do. I would have resisted, weapon in hand."

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"I feel satisfied, however, that the Fuehrer is dead. Either he was wounded and died as a result of these wounds and possibly even fell fighting, or he died under the impact of the pressure of events upon his soul. Never, never will I believe he put an end to his own life. That was not in accordance with his nature."

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"Impossible. That would not be according to his character as I know it. Anyway, where would he go?"

When asked why Hitler did not make a last stand in the Berchtesgaden area, the marshal said:

"The most menacing threat to the Reich always has been Bolshevism. The Fuehrer therefore went to the point of greatest danger, namely Berlin. The effect of that fact on Berliners must not be underestimated. He might have conducted Berlin's defense and the war generally by radio and telephone from Berchtesgaden but he was a brave man who never thought of his own security."

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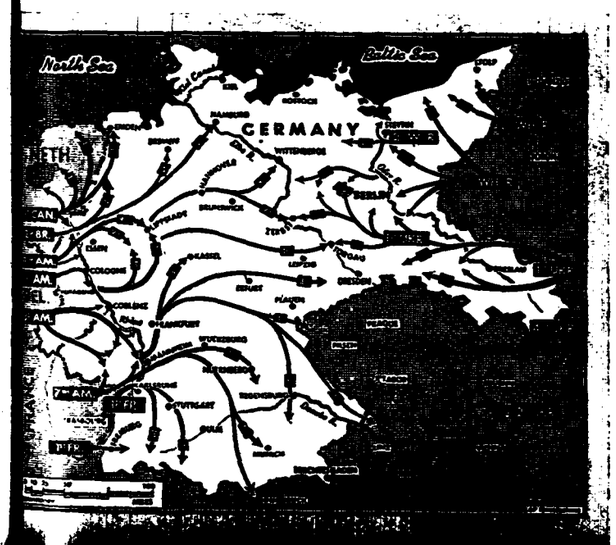

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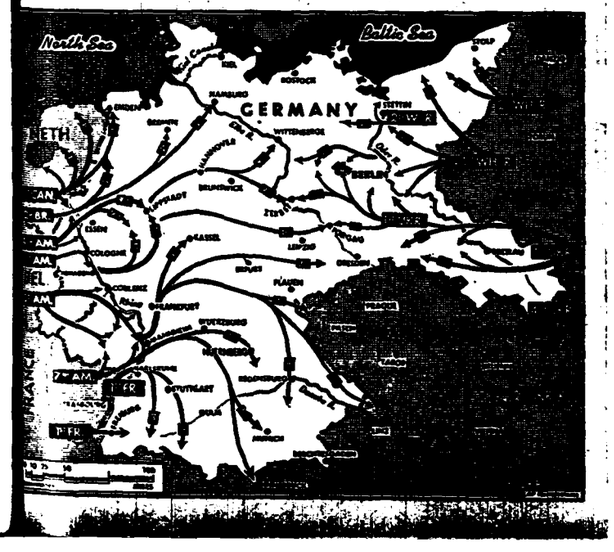

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Comments from Combat

Incident on the Rhine

by Captain Carleton P. Jones, Jr., Cavalry

Enemy Infiltration

ON the particularly dark night of March 11-12 a platoon of German soldiers, under an officer, crossed to the west bank of the Rhine in assault boats and dug in a toe-hold on the tip of a peninsula formed by a horse-shoe bend in the river. The Germans then established themselves in the vicinity of a chateau and 6 adjacent buildings and waited for reinforcements.

The enemy toe-hold thus established was in the defensive sector of the 113th Cavalry Reconnaissance squadron (Mecz), an organic unit of the 113th ("Red Horse") Cavalry Group. The squadron zone included 18 kilometers of Rhine River front a line which was, of necessity, a little thin.

From the outset the peninsula had presented something of a tactical problem. Terrain was decidedly flat, and in parts, scrubbily wooded. Enemy-held high ground, which dominated this flat bulge of land on three sides made daylight movement in this area hazardous. It had been decided, therefore, to hold the peninsula firmly at its base and to establish listening posts forward to the river to be tied-in by roving patrols.

These instructions were fully carried out by Troop C in which sector the peninsula lay; but the night that the enemy chose to cross was dark with no moon, and neither listening posts nor roving patrols managed to discover the enemy crossing. The knowledge that the enemy had moved in on Troop C came the following morning from a civilian.

Information and Reconnaissance

The civilian, a Pole who had tired of his enforced labor for the Reich, had also decided to cross the Rhine, and did so shortly after the German soldiers and in the same locality. Upon reaching the west bank, to his dismay, he found himself again in the hands of his captors, and he was taken to the German officer in charge. A long conversation followed, the gist of which was never made quite clear by the interpreters: but suffice it to say, he finally managed to get away and stumble into Troop C, 1st Platoon outpost. From this outpost he was evacuated to that command post for interrogation.

Troop C commander, 1st Lieutenant Albert V. Cullen, at once initiated a 4-man patrol to investigate the civilian's information. Staff Sergeant Frederick Eastwood, one of the squadron's most able patrol leaders, was designated to lead the patrol. At 1400 hours Sergeant Eastwood moved out with his patrol and worked, dismounted, toward the tip of the peninsula along a low dike bordering on the Rhine.

After a painstaking hour of stealthful advance, the patrol reached the vicinity of the German-held chateau and took post for observation. The civilian's report was soon confirmed by the appearance of two German soldiers who emerged from one building and entered another. Four other German soldiers next were observed occupied in digging bunkers in the vicinity of the chateau. Eastwood then turned his patrol over to his second in command and instructed him to remain in observation until his return. Then Sergeant Eastwood withdrew to make his report by telephone to Troop C outpost 300 yards to the rear.

Plan of Attack

At 1500 hours, the squadron commander, Lt. Colonel Allen D. Hulse, received the message from Troop C that the enemy occupied the tip of the peninsula, as reported by the Polish civilian. Colonel Hulse immediately decided aggressive counter-measures were in order and went forward to Troop C to place himself in close touch with the situation. Upon arrival, the squadron commander attached the 3d Platoon of Troop B and the 1st Tank Platoon of Company F to Troop C. With these attachments Lieutenant Cullen formulated his plan of action.

The execution of the plan was set for dusk. The 1st and 3d Platoons of Troop C would move, dismounted, by the route indicated (see map diagram) to the point "X." Here the 3d Platoon would set up a base of fire, while the 1st Platoon would maneuver to the left to launch the assault from that flank. The light tank platoon would remain in reserve prepared to move forward to support the attack should the going become difficult. In this event, and if the need warranted, the attached platoon from Troop B would be mounted on the tanks as an additional striking force. The 3d Platoon, Troop C had been in troop reserve, and 1st Platoon Troop C would be relieved in their present defensive sector by the attached platoon from Troop B. Lieutenant Cullen designated a detachment of 8 men from troop headquarters to accompany him to set up an advance command post with the attacking platoons.

Artillery support would be furnished by the 2d Armored Division's 14th Armored Artillery Battalion, whose forward observer previously had been attached to Troop C. Lieutenant Cullen planned to advance the attacking platoons as far as possible without artillery support, and when detected by the enemy, he would call for battalion concentration on the objective. The fire was to be lifted on call just prior to the final assault. Troop E's assault guns would perform the same fire mission.

Operation

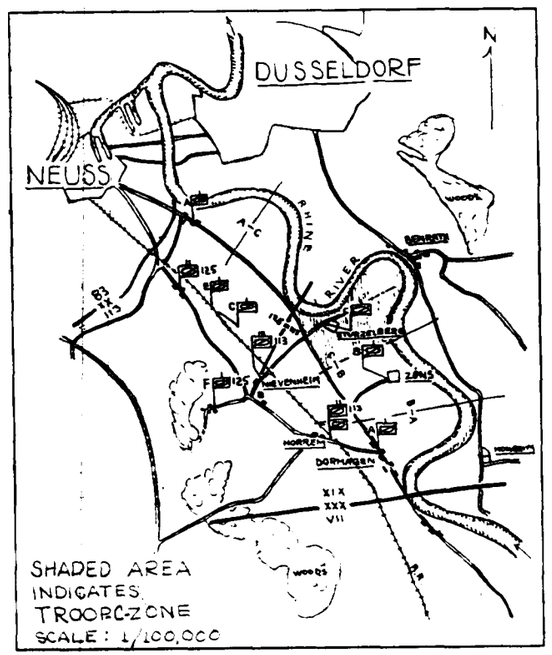
At 1700 hours Lieutenant Cullen gave the order to move out. By 1900 hours the 3d Platoon's leading elements in the vicinity of the chateau had drawn fire from a German outpost. The 3d Platoon closed up and went into position as planned. Lieutenant Donald C. Reich, the 3d Platoon commander, then radioed Lieutenant Cullen that he was ready, and the latter called for artillery on the objective. The battalion concentrations slammed in. During the artillery preparation, Lieutenant Issac G. Gwin, commander of the 1st Platoon, who come forward for final instructions, was oriented on the ground as far as the darkness would allow and assigned the chateau as his objective. When the chateau was taken, Lieutenant Cullen would move the 3d Platoon forward to mop up the surrounding buildings. Gwin then moved out with his platoon.

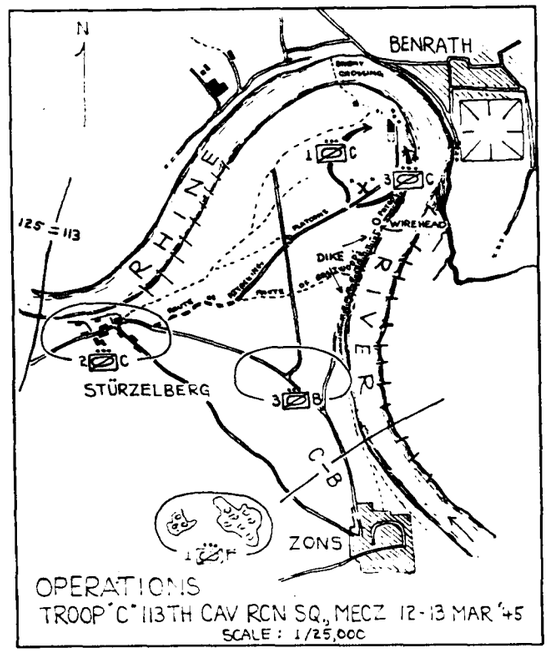
Leading his platoon wide to the left flank, Lieutenant Gwin deployed it in line of skirmishers and radioed that he was ready. When the artillery lifted, Lieutenant Gwin received the order to jump off and moved in fast with his platoon. The timing was good, and after a brief scramble and a few preliminary grenades, Lieutenant Gwin was in possession of the chateau and 16 prisoners. The 3d Platoon then was ordered forward to mop up the adjacent buildings. Because of the excessive darkness and resulting difficulty of control, this operation was accomplished with some difficulty.

That the Germans had been taken by surprise was evident. Only scattered resistance had been encountered, and there had been no enemy artillery reaction. It was learned later that the Germans had had an artillery FO with them; but that he had been unable to contact FDC by radio. The radio was later found. It was a small portable type with a range of two to four kilometers. One German soldier had been interrupted in his bath and had not had time to dress before the attack was underway.

Mop-Up

The position was reorganized for the night, and it was decided to stop further operations until daylight. All





organized resistance had been overcome; but a dozen or more Germans were still wandering around disorganized in the darkness. Lieutenant Cullen left Lieutenant Reich in command and returned to his command post to make a full report of the operation.

In the morning, the mopping-up was completed and the prisoner count was swelled to 30. Four enemy were found dead, and one had been shot attempting to swim the Rhine. Interrogation revealed that there had been 36 in all, which left one unaccounted for. The missing Jerry, as usual, turned out to be the officer who had escaped back across the Rhine in a small boat that he had reserved for that purpose. The prisoners talked freely, but knew little of their mission except that it involved their entire battalion which had been due to reinforce them on the night of Troop C's attack. One PW claimed that he had received the mission of spreading propaganda leaflets among the Americans and produced a wad of them. Among the leaflets was found an Allied safe conduct pass.

As the mop-up neared completion, the enemy reacted strongly with artillery. Three cavalrymen, slightly wounded, were the only casualties.

Comments

During this action, communications between the attacking platoons and the forward command post was accomplished by SCR 511 radio. An outpost, 300 yards to the rear of the jump-off point furnished an advanced wire-head and an SCR 510 radio, which was netted in the troop command net as an alternate means of communication. The standard infantry set, the SCR 300, would have been more desirable for this type of dismounted action. The chief difficulties encountered in the SCR 511 set, aside from the temperamental qualities, was the vast amount of interference encountered in this theater, on all AM frequencies. For this reason the range of the SCR 511 radio was sometimes cut down as low as 500 yards or less. The SCR 300 employs frequency modulation and is an all-round better set for dismounted operations.

Aside from radio limitations, the cavalry reconnaissance troop, dismounted, suffers greatly from the non-flexible and inadequate nature of the present T/O and E which was primarily designed for mounted reconnaissance. Since the days of Normandy, this squadron has been assigned and has executed every conceivable type of mission, both mounted and dismounted and in combination thereof. Therefore, at an early date it was necessary to develop improvisations, and to obtain special authorization for additional equipment. In a few instances it has even been necessary literally to comb the battlefield for discarded items of infantry equipment. Major items of need have been the BAR and the M1 rifle. With this additional and substitute equipment this squadron has been able to evolve a workable solution.

For line action, Lieutenant Cullen's assault platoons each dismount 29 men and one officer. The platoon combat team, dismounted, consists of five mutually supporting elements: The light machine gun team, employed to cover gaps and to protect an open flank; the BAR team, employed to augment the assault-fire of the platoon; the Bazooka team, utilized against enemy bunkers, machine guns, and mechanization; the rifle-grenade team, composed of three men equipped with rifle grenades and launchers; and finally, the basic element, the riflemen equipped with M1 rifles as far as possible, the remainder carrying carbines.

For special situations and in defensive missions the available manpower of the platoon is sapped by wire teams with W-130 (battle wire) and sound-power phones, and a radio team which carries and operates the bulky SCR 510 radio. In addition, the platoon sometimes packs its three organic 60mm mortars. Usually the troop mortars are fired in battery by troop headquarters personnel, or entirely dispensed with to conserve manpower for the line. These special teams were not used in this particular operation.

Demolition Obstacles to Reconnaissance

by

*Lieutenant Colonel Charles A. Ellis**

UPON numerous reconnaissance missions during the Sicilian, also the Naples-Foggia (Italy) campaigns the 91st Cavalry Reconnaissance Squadron was confronted with considerable "pioneer and demolitions" obstacles. These situations further occurred during the more recent Rome-Arno campaign. The enemy not only progressively increased his demolition practices but became more skilful in selection of sites, particularly creating serious road-craters on *canalized* roads in the upper northern regions of the Appenines Mountains. The carefully planned *craters* resulted in serious landslides at precipitous locations; also at carefully selected railway tunnels, bridge and culvert locations. Organic engineer battalions were severely overtaxed for these essential repairs. In numerous small villages, where the axis of advance compelled travel through the main or single thoroughfare, the street-axis' was narrow (canalized). There the enemy would demolish houses, and thus create considerable debris.

Such destruction is to be expected in withdrawal action by the enemy, but the extent and other exigencies did not always afford a complete and predetermined estimate of engineer needs for personnel and equipment. These excessive burdens upon the engineer units were masterfully overcome, and great credit is due to their superior skill, arduous long hours and required hand labor, as well as to the excellence of their equipment. It is appropriate that full and proper tribute be paid to our efficient engineers, exceeded nor equalled by none.

*91st Cavalry Reconnaissance Squadron.

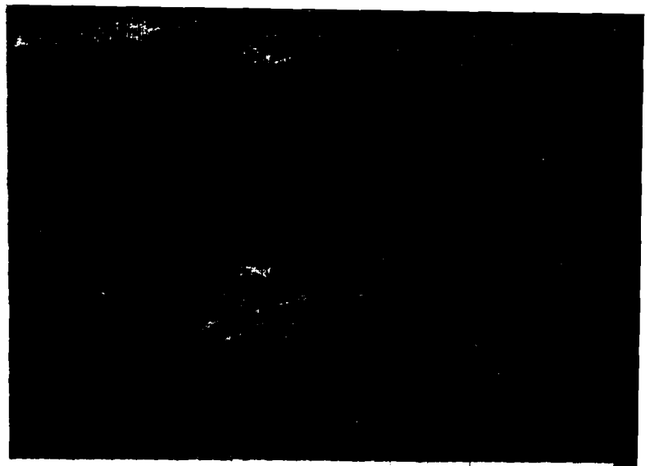
The surmountable problems confronting the engineers was of particular concern to mechanized cavalry reconnaissance units. To maintain enemy contact reconnaissance must be aggressive, and progressive advance continuous. Obviously, progress was impeded by these voluminous obstacles. Each phase of operations, including anticipated engineer requirements, was carefully planned. In spite of this, however, there was need for more engineer units and in the absence of sufficient personnel and equipment, advanced reconnaissance elements of the squadron were often delayed or held up pending arrival of equipment and men. Such delays, while temporary, from a few hours to more than a day, frequently caused loss of contact with enemy elements. Not only the reconnaissance elements but the main body of troops was affected. The impeded progress on several occasions placed reconnaissance platoons in jeopardy, especially under varying adverse terrain and on canalized roads.

In open terrain under mud or marsh conditions, the reconnaissance elements came under severe enemy artillery and mortar concentrations canalizing mechanized equipment until trails or other by-passes could be accomplished. In canalized valleys of the more rugged mountainous regions, "point" elements had to be extended in depth for advanced reconnaissance to reduce such jeopardy and casualties to the minimum. This proved successful but did not entirely eliminate the hazards caused by demolition obstacles which could not be predetermined from ground reconnaissance. Air reconnaissance ("Cub" plane) would have materially aided but not completely overcome these serious obstacles and casualty hazards. Usually such obstacles can be estimated in severity only by direct observation on the spot.

Following experiences of this nature in the Sicilian campaign, similar obstacles and pioneer problems were anticipated in the enemy's continued withdrawal action.

During the interim between the Sicilian campaign and resumption of missions in the Italian campaign, the squadron obtained some engineer equipment, including an R-4 angle-dozer, by special authority from the army commander. This, plus a compressor, motor-driven saws, Barco hammer and several hand tools, facilitated a fair amount of equipment with which to work.

The squadron then obtained authority for (approximately 15%) personnel "over-strength for expected casualties." The latter overstrength facilitated a temporary readjustment and the creation of an experimental "reconnaissance engineer platoon." By careful selection of construction, experienced personnel, and a very short but intensive training course of one week, this "experimental" platoon showed unusual progress and



Signal Corps Photo

Fifth Army assault guns cross a stream under a blown-out bridge in the Veiano area, Italy, June 8, 1944. German demolitions and road blocks seriously hampered the progress of Allied armor throughout the Italian campaign.

adaptability for constructive pioneer work. It constructed emergency "fords" for light reconnaissance vehicles, including M-8 armored cars; also, a Class 20 bridge, which was completed in less than 8 hours, sufficient to transport a light tank (M-5). This demonstrative and practicable training accomplished excellent results in a surprisingly short time. The objective was to effect lightly constructed bridges and fordable by-passes over streams, irrigation ditches and anticipated antitank ditches; also, by-passes over or around road-craters, bridges, etc. Such work is the normal light or preliminary construction performed by organic engineer platoons.

Unfortunately, during April 1944 it was necessary for the squadron to turn in all equipment in excess of the new T/O and E, and the rapidly, successfully trained experimental engineer platoon was dissolved and its equipment turned into a depot.

Such tactical exigencies are not attributed to simple local field, terrain, or seasonal conditions. Forceful and aggressive offensive tactics naturally result in greater enemy technique for increased impedimenta. Minefields and a highly developed technique in road demolitions have been ably established by the present century-old enemy (Germans). We have the equipment and ability and must learn to overcome this significant problem by utilizing both to utmost advantage.

The necessity for reconnaissance is unquestionable. To avoid loss of contact with the enemy, reconnaissance elements need every facility available.

To accomplish successful mechanized reconnaissance, such elements must maintain contact with the enemy unimpeded by delays in acquiring essential equipment to overcome natural and enemy-created (demolitions) obstacles. A cavalry reconnaissance squadron, especially the "separate" squadron, frequently changes sectors and is subject to attachment to various divisions and corps (operational control), and it cannot always depend upon such division or corps for complete engineer duty

in the foremost forward combat zone. In my opinion each separate squadron, should contain some type of reconnaissance engineer unit, as an organic element of its Headquarters and Service Troop.

Amtanks at Saipan

by Lieutenant Harry H. Semmes

On an LST – Invasion Bound

APPROXIMATELY June 1, 1944, "X" Battalion boarded LST's at a naval base in the Central Pacific Area. Each LST was a crowded ship, carrying almost all branches of the armed forces—Army, Navy, and Marines. After the men were settled, orders were opened and read. The platoon, which was to be part of the first wave, would lead one of the assault infantry divisions onto the shores of Saipan, then would partially support the initial advance of the troops inland.

On shipboard the men were given a schedule by which to work. Two hours each day were spent going over combat orders, maps, and aerial photos; 15 minutes, in warming up the tank engines. After learning from experience in the Marshalls of the injurious effects of salt water on weapons, we coated the guns liberally and wrapped them in oil-soaked rags at the start of the trip. As a result we never had to bother with them again until they were prepared for combat.

"Swimming"

At 0230 D Day the men were awakened. Chow was served and a final check made to see if everyone was ready to go. At 0600 the crew of the amtanks and amtracs went below to the tank deck to warm up the engines. From past experience it had been found that for morale purposes it was better to have the engines warmed before the infantry loaded on. At 0630 the vehicles, with infantry aboard, moved off the ship toward a designated rendezvous point. It was relatively easy to find the other platoons of the company simply by locating the same colored navy signal flag flying from the platoon leaders' antenna. The naval officer guide in an LCOP met the company and led it in column to the LD (line of departure). Each flank was marked by an LCS (landing craft support). Because of the lack of maneuverability of the LVTs it was difficult for the platoons to keep their positions on the LD. Soon a flag was lowered on one of the LCSs, and the company commander shouted over the radio, "The flag is down. Move out." At once every tank commander began talking on his radio, and it became more and more difficult for platoon leaders to get orders down to the men because of the jammed condition of the air lanes.

As the company passed the LD it became increasingly difficult for lieutenants to exercise control over their platoons. In the excitement men paid too little attention to the position of their vehicles with respect to the rest of the wave. At a reef about 1,500 yards from shore, the irregularity in the formation of the leading wave became openly noticeable. Some tanks were half-way across this reef of about 150 yards before other tanks had even reached it.

As soon as the bulk of the company was on the reef the Japs began firing artillery and mortars. Luckily, none of the tanks were hit then, but as they crossed the reef and continued onward, the Japs dispositioned fire to stay on the reef to catch oncoming waves and used other fire power to follow the leading waves to the beach.

Beachhead

Upon hitting the beach the attackers saw nothing but a pall of smoke and dust. Observation was limited to about 15 yards, and it is a frightening thing to go into something you cannot see, so the tanks stopped momentarily. The beach, however, was receiving a lot of shell fire, and it was urgent that the tanks move inland. The platoon started ahead 10 yards at a time, halted, fired a few rounds and then moved another 10 yards. This gave the men a little confidence and slowly the tanks began to move off the beach.

There was little sign of the fleeing Jap near the beach, but several dead were found in spider trenches about 100 yards inland. The greatest obstacle was a patch of woods about 200 or 250 yards deep consisting of nothing but a mass of trees, twisted or splintered by shell, and hastily constructed tank traps. These hindrances slowed the tanks' advance materially. The LVTs bogged down amid logs lying around in every position and tanks had to be pulled out by other tanks.

Mortar and artillery fire was still quite heavy. As yet it had not damaged too many of the vehicles, but it was taking a heavy toll of Marines who were fighting on the ground beside the tanks.

Because of limited vision through the woods it was difficult to find good targets. Nevertheless, the tanks had to move ahead and they did so—firing at almost anything ahead of them.

Hitting an enemy-held beach in the leading waves might best be described by the single word, "confusion." Men are keyed up and controlling them is difficult. Added to the confusion on this particular beach was the slow movement through the woods. The control line well inland was reached much later than had been planned.

During the move inland the platoons did little fighting as a unit. Each tank commander would check periodically to see that his tank was in the proper position of the platoon, but most of his firing was done on his own volition or when the foot troops called for it. The platoon leader could not direct all of the firing of his platoon when the unit was fighting in such tight, close situations. Many unexpected targets and situations would arise in which the lieutenant trusted his tank commanders to do the right thing.

Lessons of a Platoon Leader

From my limited stay on Saipan I learned several things.

Control: The most critical stage of an island operation for amphibian tanks is on arrival at the beach. Vehicles must be controlled so well that they can push in off the beach immediately and fight effectively by supporting the infantry's advance. On moving toward the beach, platoon leaders must be able to control the formation of their vehicles at all times. One of the most important prerequisites for vehicular control is discipline. It was SOP to dress left in order to maintain a line on the water approach to the beach. If the tank commander was not disciplined sufficiently he would not give enough attention to the SOP.

Signals: Vehicular control is maintained by the platoon leader through radio and hand signals. Leaders should emphasize hand signals a great deal more. Reason one, if hand signals are used as often as possible, the radio channels are kept relatively clear. Reason two, if a tank radio goes out, the tank commander need not feel that he is completely lost and isolated from the surroundings about him. Frequent use and complete understanding of hand signals will certainly help the commander to have some communication with the rest of the platoon.

Radio: During the landing at Saipan radios were used altogether more than necessary. Men should be disciplined to keep off the radio whenever possible. Jamming of the ether makes it at times impossible to transmit orders to the platoon.

Fire Control: It was also SOP in the operation that no vehicle would open fire before hitting the beach except the first wave of amtanks and then only 500 yards out from land. Yet the company lost one tank because the vehicle's engine was shot up by some machine gunner in an amtrac behind in the water. Fire control should be so well ingrained into the men that even while excited, as they are upon landing, they will instinctively conserve their ammunition until they spot a worthwhile target. Too much ammunition is wasted at or near the beach by gunners who wildly fire at things they cannot see and they are not sure are there.

First Aid: Each crew member must be so well versed in first aid that the crew does not have to go looking for an aid man on the ground somewhere every time a man in the tank is wounded. The tank commander's job is to keep that tank in the front lines fighting all the time it is needed. The crew must be independent to a certain degree and be able to take care of themselves. They cannot afford to waste time looking for someone else to handle their wounded, for they are there to help the infantry.

Preventive Maintenance: Maintenance cannot be overstressed. From the Maintenance Platoon to the individual tank drivers men must all be aware of the value of preventive maintenance. The men worked like beavers on the upkeep of their vehicles and as a result the LVT worked quite satisfactorily.

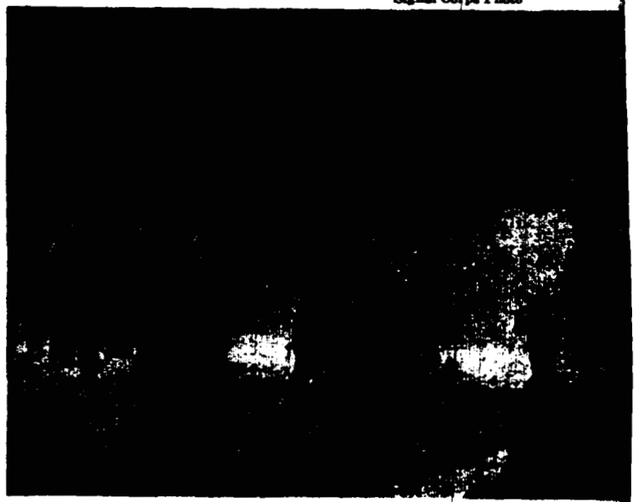
Physical Condition: It behooves every troop commander to have his men in the best possible physical condition before going to combat. The more physically rugged an outfit is the more it can take. The more it can take the better and longer it can fight. In addition, it is known that a wounded man in excellent physical condition has a better chance of recovering than a casualty in poorer condition.

Pacific: Tankers who are to fight in the Pacific should realize that they will not do all of their work sitting in a tank. At Saipan I spent most of the time on the ground. Furthermore, fighting in the Pacific climate quickly saps one's strength, the tanker should keep himself in as good condition as the infantryman fighting beside him.

The mission of an amphibian tank platoon leader is to fight his platoon effectively on the enemy-held beachhead. To accomplish this mission he must have control of his vehicles at all times. He must have his men well trained in fire control—so well that they instinctively fire at targets of opportunity only. His men must know first aid to such a degree that they can usually keep that tank in the front lines by caring for themselves. The vehicles must always be operative, which they will not be unless the platoon is maintenance-conscious and well drilled in echelon procedures. In addition to being well versed in the above, the men must have the physical conditioning necessary for combat.

Army reinforcements disembark from LST's and proceed across a coral reef toward the beach on Saipan, June 17, 1944. Amtrac is in foreground. Other amphibian vehicles can be seen in distance. Saipan is now used as a B-29 base.

Signal Corps Photo



Warfare in Western Europe

AT this writing the surrender of nearly a million German soldiers to the Allied armies in Italy has just taken place. Those were nearly all the German soldiers left in Italy and Austria. Berlin is taken, and Hitler is reported dead. Germany has surrendered.

Allied invasion of western Europe started on June 6, 1944. In 11 months that campaign has come to a successful termination. This success is due in large measure to the great Russian army which drove the Germans out of Russia, out of Poland, out of Rumania, Bulgaria, Hungary, part of Czechoslovakia, parts of Yugoslavia and the Baltic states.

The campaign of the American and British armies in western Europe can be divided into 7 phases.

1st Phase: The bloody attack on the coast of Normandy and the establishment of beachheads.

2nd Phase: The breakthrough at St. Lô and Avranches, and the capture of Cherbourg.

3rd Phase: The rapid and almost unopposed advance through northern France, the liberation of Paris, the crossing of the Seine and the advance into and liberation of Belgium. Almost simultaneously the U. S. Seventh Army landed on the southern coast of France and advanced northward.

4th Phase: The crossing of the Meuse River and attacks against the German Siegfried Line; also the British and Canadian attacks against the Germans in Holland.

5th Phase: The great German counterattack and breakthrough in the Ardennes, which commenced December 16, 1944 and resulted in a deep penetration almost as far back as the Meuse. This penetration has become known as "The Belgium Bulge." This phase also includes the subsequent repulse of the German attacks and American counterattack which drove the Germans out of the "Bulge" and back to the Siegfried Line.

6th Phase: The Allied breakthrough the Siegfried Line west of the Rhine and its subsequent crossing.

7th Phase: The advance against retreating German armies in Germany east of the Rhine, and the surrounding and capture of the German troops which remained in the valley of the Ruhr River; also the clearing of northern Holland by the Canadian First Army.

This phase continued with weakening resistance by the enemy and rapid advances by Allied troops, which duplicated the feats of the armored troops racing through France in the summer and autumn of 1944.

It was pointed out in my Notes for THE CAVALRY JOURNAL, issue for March-April, that cavalry could have been very useful in the Belgium Bulge as well as in the advance in Italy from Salerno to the Arno River. In previous Notes the same point has been made regarding the 3rd Phase of the operations; the same thing could be said of the 7th Phase.

It is interesting now to note the tactics used by task forces in the armored divisions during the rapid advances they made in the 5th and 7th Phases. The amazing roads that exist in France, Belgium and Germany, made it possible for armored forces to use roads in all of this advance to the exclusion of cross-country movements. Furthermore, the Germans in their retreats, seemed satisfied to occupy defensively the small towns and villages along these roads. They did not entrench themselves out in the open spaces, but merely occupied the towns and villages along the routes of Allied advance. In former wars, troops on the defensive occupied the fields, hills and woods, and any enemy advancing along roads would be taken by flank fire until they deployed out in the fields and got off the roads. But the Germans in retreat in this war clung to roads and their neighboring towns. The fact that this caused the destruction of all towns along the routes of allied advance never seemed to bother the Germans.

Thus, both the retreating Germans and the advancing American armored troops were exceedingly road-bound. When the advance guard of one of the task forces encountered resistance from a town situated on the road, several battalions of artillery were immediately put into action from positions near the road. They speedily demolished the town or village and the tanks went charging in. There were no German troops maneuvering from the flanks against American tanks and so, after charging through the town, the tanks went boiling down the road for a good many miles before encountering similar resistance at another town. No wonder they went so fast! Of course, had the German air force been on equal terms with the Allied air force, the advancing tank columns could not have used the roads so recklessly.

Whenever the Germans held a town with considerable force, Allied tanks were forced to leave the roads for short distances so as to outflank the towns or get in rear of them. This slowed down the tanks considerably. And, had the Germans been less road-bound and more given to cross-country operations they could have delayed the tank columns very seriously. Then the Allied armies would have needed cavalry for cross-country maneuvers to turn the German rear guards out of their positions. This need would have been very manifest. But the Germans, who had no cavalry themselves for defensive maneuvers between roads, and who were dependent upon mechanized forces, had need to cling to roads and to disregard the destruction of their towns and villages. This played right into Allied hands. Had the Americans or British been opposed by the Russians with their numerous cavalry, it would have been an entirely different story.

On the other hand, in Italy during the advance from Salerno to the Arno River, American troops were confined so closely to the roads, because of the nature of the ground, that tanks could not deploy, even near the roads, and artillery had difficulty in opening out and establishing firing positions. So, in that case, the German road tactics worked very well—especially in the absence of any U. S. cavalry.

Mechanized cavalry, also more or less bound to roads, has been used as advance guards or covering forces for advancing columns. As such, these mechanized cavalry units have suffered very severely. They would come under fire of heavier armament in the hands of the enemy. They had too little maneuvering ability across country, too little stealth, too little ability to use cover. They were thus too much exposed, too vulnerable to fire from heavier guns in more heavily armored vehicles. They were sent too far forward beyond the support of the artillery and antitank guns. They were given missions suitable only for horse cavalry which can maneuver across country, utilize cover and stealth, avoid so much exposure, keep off of roads, attack with machine guns and bazookas, or vanish to the rear and flanks if too heavily opposed and, at the same time, keep stealthy patrols in contact with the enemy. As often said before, horse cavalry units detached on reconnaissance, are more effective and less vulnerable to heavy losses than mechanized reconnaissance units.

When it comes to seizing and holding positions temporarily or delaying action with strong forces, there is nothing like horse cavalry armed with modern weapons.

A newspaper account dated May 4, 1945, told of the amazement of American troops on the western bank of the Elbe River seeing Russian tanks and cavalry together sweeping along the east bank of the river driving Germans before them in panic. They would have been still more amazed had it been vouchsafed to them to see U. S. cavalry helping them out of many tight situations during the past campaigns in Europe.

U. S. armies in Europe are much beholden to the great Russian armies which were operating in the eastern theaters of the European war. Indirectly, therefore, U. S. and British owe much to the numerous Russian cavalry which was so indispensable in the rapid advances of the Russian army.

It is interesting to note the changes in tactics due to changes in weapons, and to observe that the value of cavalry has been increased rather than diminished by these changes. The advent of the machine gun caused changes in the formations of troops in attack. The machine gun necessitated greater intervals between men and vehicles in deployment. In order to have sufficient strength to cope with the enemy at close quarters, deployment in depth became necessary, and a unit in attack began to present the spectacle of a series of waves following each other at supporting distances. Since machine guns were most effective in defense, the attacking force was forced to use more artillery to knock out the enemy machine guns. But machine guns are now used offensively almost as much as defensively. Armored vehicles and airplanes are equipped with them. The use of cover has become much more important.

With the development of high explosives, artillery—always important since the invention of gunpowder—has become more important. Troops cannot afford to be caught by artillery fire when massed in marching formations on roads. Night marching is, therefore, used more than formerly. Artillery, in one form or another, is the greatest enemy of tanks. Artillery is the most important weapon for use against an enemy occupying a town.

The airplane, using high explosive bombs, is also deadly against towns and villages unless the occupying troops have burrowed deeply under stone buildings. Troops, tanks and transport caught on roads by hostile air attack are generally demolished.

Infantry and tanks must still be used to engage the enemy at close quarters. And the artillery and air attack must cease in order to permit infantry and tanks to fight when this close contact has been gained.

Both the infantry and the tanks must get off of roads when attacked by airplanes or by artillery. When these arms get off roads, their speed of march is diminished.

Now, when the effect of these changes on the cavalry is considered, it is astonishing to find that this arm is less adversely affected than any of the other older arms.

Machine guns have caused cavalry to deploy widely as in the case of infantry—but cavalry equipped with machine guns is more effective than infantry. Cavalry can also carry mortars and antitank guns to deal with enemy tanks. The mobility of cavalry across country is as great as when moving on roads, and sometimes greater. Under air attack, cavalry can disperse quicker than any other arm. Cavalry is not road-bound under conditions that cause other arms to be completely so.

Hostile tanks are less dangerous to cavalry than to infantry because of the former's ability to scatter and vanish from the scene if not equipped to deal with enemy tanks. Tanks, used with cavalry, add much to its effectiveness, while airplanes combined with cavalry can increase its usefulness very materially. All in all, the advent of new weapons and mechanical devices has more advantages than disadvantages for cavalry.

With some notable exceptions, the distances travelled by armored forces in a single day during the seven phases of the European campaign—when armored forces were literally running wild—was not greater than similar units of cavalry could have accomplished.

According to Marshal Zukov, Russian Army commander, the greatest defect in the fighting power of the German army has been its lack of cavalry.

Christine Harbour

As this issue of THE CAVALRY JOURNAL goes to press, the present Associate Editor, Miss Christine Harbour, resigns her post to accept a position with the American Red Cross overseas. She has been with the JOURNAL since 1937, and for the last three years has served as Associate Editor. To her should go the credit for assembling, editing, and producing a military magazine of the high standard attained by THE CAVALRY JOURNAL. Her untiring efforts and wise judgment, combined with her journalistic ability, will be a distinct loss to The Cavalry Association.

The President and Executive Council and all of our readers join the members of the staff in extending our thanks for the swell job she did for the JOURNAL, and our appreciation for her loyalty and devotion during her "tour of duty."

It is difficult to express adequately in words how we all feel on your leaving, Christine Harbour, but we wish you, in all sincerity—Good Luck, Godspeed, and continued success, in your new venture.

Looking Ahead From 1941

The following editorial was written by Miss Harbour *November 16th, 1941* for the JOURNAL, but due to the international situation at that time it was deemed inadvisable to publish it.

In view of the developments of the past few weeks (May 1945) we feel that its publication in this issue is very significant.

TOMORROW'S PEACE

If a mural is viewed with our eyes a mere two inches from the wall, we see only a small segment of the whole—perhaps a portion of a red coat, the point of a single sword. Not until viewed from a distance does the pattern acquire full meaning. In like manner, during the course of its unfoldment, the story of human progress is often difficult to discern. The horrors of today's war and its accompanying famine, tyranny, and destruction, arouse our natural emotional reactions—our sympathies and prejudices. Only by projecting ourselves into the future and looking back at the events of today from an isolated mental attitude can we hope to place the segment of the present into the picture of the whole.

The American Revolution. The French Revolution. The Russian Revolution. Each more terrible than its predecessor! Each bursting forth from accumulated oppression and injustice! Each an expression of man's arduous struggle toward greater freedom and a recognition of human rights.

In 1776 this nation fought for its own independence—its own freedom to govern itself by its own elected representatives.

In 1861 it fought to establish and maintain the freedom of all men within its borders—regardless of "race, creed, or previous state of servitude."

Now in 1941 it is confronted with a second great world war in which the opposing forces of tyranny and freedom are battling to the death. The issue is whether or not man is to continue his slow and laborious climb toward greater freedom. This struggle toward freedom is not America's alone; nor can America isolate herself from other sections of the world wherein the struggle has arisen. The issue today is world-wide.

This is the background against which we must project a just and permanent peace to come out of the Second World War.

In considering the problems involved, it is imperative for us to realize that first the war must be fought and won; that the hardest and bitterest years of fighting, bloodshed, privation, and readjustment lie still ahead; and that when a permanent peace is finally established

it will be based, not upon the social and economic order of the past, but rather upon broader concepts of freedom for mankind that will lay the foundations of a new age in human history.

This peace, unfortunately, is still (1941) a long way off. If the war should end in the near future, peace could be at best a temporary surcease from fighting. Any peace that would give the victory to the Axis would not only obliterate the pursuit of freedom from a big portion of the world, but would undoubtedly lead to a succession of revolutions and rebellions by conquered peoples unwilling to be permanently suppressed in virtual slavery. From the point of view of the world democracies, therefore, any desirable peace must be one wherein the Axis Powers are indisputably defeated. It is for this reason that America today is furnishing all possible aid to Britain and Russia in order that the tide of war may be turned in their favor.

It must be remembered, however, that in itself an Allied victory, either with or without American participation, unfortunately, is not likely to bring the final peace. The new order in Europe, the new order of the world the new age into which we are entering will have no more in common with the empires, boundaries, and privileged groups that preceded the present war than with the dictatorships that sponsored it.

To be specific at this stage of the war in the details of a peace to come, to determine desirable new boundaries or predict forms of future governments, would necessitate a short range view that undoubtedly would be far from adequate when the time comes.

Of the desired peace, only broad aspects, almost nebulous in their imagery, can be conceived here in the fall of 1941. When a just and permanent peace is finally secured it must certainly be founded upon the rights of all men to the 4 basic freedoms suggested by President Roosevelt—freedom of speech, freedom of religion, freedom from want, and freedom from fear. These, in turn, must be based upon the economic needs of nations, great or small—the responsibility of the strong being to protect and develop rather than to exploit the weak.

Death and birth come only with pain, and within this present we are no doubt living through the death throes of an old social order and the birth pangs of a new. No economic readjustment between nations can be satisfactory until the social readjustment within nations has first been recognized, for it is not the common people of one nation who exploit those of another. It is the economic hierarchy within nations that have made such exploitations possible.

America's entry into the Second World War, which will probably occur by the spring of 1942, may be much that of a Declaration of Independence for Mankind. Many among our own people may not understand or approve the country's actions, but many American colonists did not understand or approve the Declaration of Independence from England in 1776. We at that time established a new declaration of man's rights and a new pattern for national government. In 1942 we may step forth in our new maturity and, extending our declaration of man's rights, eventually lead a new order in international justice.

When the final peace comes, Europe will be at best a broken and bleeding continent, and the fairness and durabilty of any peace must depend largely upon America's willingness to assume and carry the heavy responsibilty of world leadership. Between now and such a peace, it cannot be emphasized too strongly, our own internal problems—social, economic, and political—must be put in order, and a *bitter* war must be fought and *won!*

* * *

When Americans and Russians Met in Germany

United States Twelfth Army Group Headquarters, April 27 (UP). Text of General Omar N. Bradley's order of the day:

At 1640 hours, April 25, 1945, in the 29th month of our war against the German government American troops of the Twelfth Army Group joined forces with the Soviet elements of Marshal Konev's First Ukrainian Army group.

These armies have come to you from ruins of Stalingrad and Sevastopol—across the scorched cities of the Ukraine. In two years they have smashed 1,400 miles through German armies to drive the enemy from Russia and pursue him to the Elbe. Their achievements—and they have given immortality to a people that would not be conquered—are made more meaningful by your own deeds.

Across 3,800 miles of an ocean supply line you forced a coast the enemy had been years preparing against you. Within 4 months after landing you destroyed whole armies—to take Paris, free France and give the world a symbol of freedom.

When the enemy raised a new army and threw it into the winter battle of the Ardennes you smashed it and flung its remnants back. You have beaten and broken down his mighty Siegfried Line. You crossed the Rhine in your stride, encircled and reduced the Ruhr.

While demonstrating new lessons in mobile warfare you have annihilated whole groups of German armies in the west on their own German soil. In 10 months you have fought your way 700 miles from the beaches. These accomplishments were secured by your courage, your resourcefulness and by your comrades who died to achieve them.

You have shared in the liberation of 4 nations, given hope to others and conquered half of Germany. The people of America who armed you have had great faith in you. You have justified that faith as you will in the battles that follow.—*The Washington Post*, April 28, 1945.

Text of Surrender Articles Subscribed to by Germans

Supreme Headquarters, Allied Expeditionary Force, May 8.—(UP). Text of the military surrender:

1. We, the undersigned, acting by authority of the German high command, hereby surrender unconditionally to the Supreme Commander of the Allied Expeditionary Force and simultaneously to the Soviet high command all forces on land, sea and in the air who are at this date under German control.

2. The German high command will at once issue orders to all German military, naval and air authorities and to all forces under German control to cease active coöperation at 2301 hours, Central European Time, on May 8 and to remain in the positions occupied at that time. No ship, vessel or aircraft is to be scuttled or any damage done to their hull, machinery or equipment.

3. The German high command will at once issue to appropriate commanders and insure the carrying out of any further orders issued by the Supreme Commander of the Allied Expeditionary Force and by the Soviet high command.

4. This act of military surrender is without prejudice to and will be superseded by any general instrument of surrender imposed by or on behalf of the United Nations and applicable to Germany and the German armed forces as a whole.

5. In the event of the German high command or any of the forces under their control failing to act in accordance with this act of surrender, the Supreme Commander of the Allied Expeditionary Force and the Soviet high command will take such punitive or other action as they deem appropriate.

Signed at Reims, France, at 0241 hours, the 7th day of May, 1945.

On behalf of the German high command: Jodl.

In the presence of or on the behalf of the Supreme Commander of the Allied Expeditionary Force: W. B. Smith.

On behalf of the Soviet high command: Ivan Susloparoff.

On behalf of the French high command: F. Sevez.

Lest We Forget—Japan

The following essay by T-5 Tom Batman was unanimously selected by the judges for first prize in the "Why We Fight" contest held at Fort Belvoir, Va. by the Engineer Corps local newspaper, *Belvoir Castle*.

The article, written before the surrender of Germany, May 7, 1945, should be a reminder of the complex problems confronting occupational troops, and to other troops that—Japan still stands.

Anyone who has a memory knows why we fight.

He who remembers Hitler's death march into Poland knows that destruction and desecration lie in the wake of the Nazis.

He who remembers the fall of modern Greece knows that starvation and Nazis are bedfellows.

He who remembers Pearl Harbor knows that treachery, infamy and Japanese are blood-brothers.

Anyone who has eyes knows why we fight.

He who has seen Hitler's fanatic face knows we are fighting against distorted and inflamed minds.

He who has seen the stupid, uncomprehending look on Japanese faces knows that their ideals are inconsistent with ours, and can end only in death to theirs . . . or to ours.

He who has seen flames over Warsaw, London, Stalingrad and Manila understands well the enemy ideology.

Anyone who has a heart knows why we fight.

He who has read of the Lublin trials does not need an explanation of Nazi law and justice.

He who has witnessed Jewish persecution does not need to be told about the worth of the Four Freedoms.

He who has watched Stukas dive-bombing fugitive women and children does not have to be told why we fight for democracy.

Anyone who has a brain knows why we fight.

He who has seen the gaunt spectres of what were once human beings in conquered countries . . . who remembers the frenzied beer hall Putsch . . . the bonfire at Berlin . . . the dead bodies of American soldiers at Tarawa and Iwo Jima . . . the emaciated skeletons of prisoners captured by the Japanese . . . who has read about the human booby traps in Germany, the beheaded aviators of Tokyo . . . who has heard Hitler's excited, half-crazed voice over the radio . . . or has heard the unearthly scream of "Banzai" in the night—knows why we fight.

We fight because we must!

It's as simple as that. We must fight—or descend into barbarism. We must fight—or sink into living death. We must fight—or never draw breath in a free and decent world again!

Addresses Please! ! !

The following names have been suspended from THE CAVALRY JOURNAL mailing list for lack of a correct address.

Is your name in this list?

Do you know the address or unit of any of these men? If so, please use the inserted card to tell us! Your help will be appreciated.

Abdulah, T-5 Calvin
Akins, Lt. Ted B.
Albritton, Lt. Joe C.
Aldred, Lt. John R.
Allen, Maj. Gen. R. R.
Anderson, Lt. Zane L.
Aderson, Lt. Zane L.
Andrews, Lt. Armour J.
Andrews, Lt. Walter E
Apparius, S/Sgt. R. C.
Arnold, Capt. E. T.
Arnold, Lt. Robert L.
Asay, Lt. Edward O.
Bailey, Lt. Leon E.
Barlow, Lt. Bowman O
Barr, Lt. William H.
Bartels, Lt. Chester F.
Bennett, Lt. Thomas H., Jr.
Bennett, Capt. W. C.
Bensley, Capt. Harry R.
Bevan, Lt. Joseph
Beziat, Lt. Robert L.

Birkett, Lt. Bion B.
Black, Lt. William H., Jr.
Boettner, Lt. Wm. D.
Borke, Lt. Rudolph F., Jr.
Bowden, Major John D.
Bowden, Lt. W. K., USNR
Boye, Col. F. W.
Boyle, Maj. Russell T.
Brady, Lt. Ben
Brewster, Capt. James E., III
Bright, Lt. Claxton W.
Brown, Lt. Col. M. M.
Bruce, Lt. Robert W.
Bryan, Lt. Albert H., Jr.
Bryant, Lt. Welch C.
Bukowski, Lt. Bernard V.
Burgess, Lt. Albert F., Jr.
Burnett, Lt. Edwin M., Jr.
Burton, Capt. Howard B.
Buser, Capt. George W.
Byrns, Lt. William C.
Caldwell, Lt. Tommy
Campbell, Lt. Virgil L.
Carlson, Lt. Donald W.
Carter, T-5 H. A.
Carter, Lt. William H.
Cason, Capt. Duane S.
Caton, Lt. John
Cave, Lt. R. F.
Chaffee, Lt. Thomas K., Jr.
Champlin, Maj. Paul W.
Chapin, Capt. John S.
Chiolino, Maj. Frank J.
Cicak, Lt. Robert R.
Clark, Lt. Charles T.
Clayton, Lt. H. D.
Coan, Lt. Kenneth A.
Coffman, Lt. Earl R.
Cohen, Sgt. Raphael
Coles, Maj. A. P.
Colman, Lt. Lee J.
Columella, Lt. Vincent B.
Compton, Lt. John R.
Connors, Lt. R. W.
Cooper, Capt. James W.
Coston, Lt. Walter R.
Cotton, WO James
Cotton, Lt. Wm. E.
Crain, Cpl. J. A.
Crozier, Lt. Baalis B.
Crump, Lt. R. W.
Cunningham, Lt. Francis J.
Curtis, Col. R. W.
Curtz, Pvt. Thad B.
Cutler, Lt. Beniamin M.
Dallas, Lt. Burt E.
Daran, Capt. Patrick B.
Davis, Lt. Col. Chas. K.
Davis, Lt. Col. Kelton S.
Deegan, Lt. Paul A.
Dennison, Lt. V. A.
Dews, Maj. Jack.
Dodson, Lt. Leonard E.
Dolan, Lt. John W.
Dolibois, Lt. John E.
Doty, Lt. Jack H.
Driscoll, Lt. Victor W.
Drosselmeier, Cpl. Francis J.
Dudley, S/Sgt. Henry M.
Duisman, WO Joe
Duncan, Lt. Col. Scott M.
Dunlap, Lt. John M.
Dunton, Lt. David P.
Dvoracek, Lt. George F.
Earley, Capt. Douglas C.
Eckard, Lt. Chester R.
Eipper, Lt. George A.
Etzler, Lt. Frank H.
Evans, Lt. Joe M., Jr.
Evans, Maj. Morris H.
Everett, Sgt. Rex M.
Everhart, Capt. Wilson C.
Falconer, Lt. Ian
Fargo, Maj. James C.
Fenner, Lt. Louis N.
Ferrell, Lt. Ralph R.
Fetzer, Lt. Willard R.
Field, Lt. Willis E.
Fischer, Lt. George A.
Fletcher, Maj. Louis W.
Fonda, Maj. Edward S.
Fox, Pfc. Gerard
Freeman, Capt. Robert L., Jr.
Fuller, Capt. Andrew P.
Gaines, Lt. Alfred E., Jr.
Gaines, Capt. Harold W.
Gardner, Lt. George T.
Gentile, Pvt. Flavio D.
Gilbert, Lt. Thomas H., Jr.
Gilman, Capt. James W.
Gipson, Lt. Charles E.
Gleason, Lt. Cloyes T.
Glynn, Capt. Michael J.
Goldstein, Lt. Joseph A.
Goodman, Maj. R. M.
Goodson, Lt. Paul G.
Gouger, Lt. Thomas M.
Gray, Lt. W. Ashley
Greenup, Maj. Chas. N.
Gubbe, Lt. Lawrence W.
Guenther, Maj. Edgar T.
Hagedorn, Capt. K. F.
Haggard, Maj. Edwin C.
Hamilton, CWO Kenneth D.
Hammer, Capt. Chas. D.
Hand, Lt. Robert J.
Haneman, Lt. Henry W.
Hansen, Lt. Albert C.
Hanson, Col. Thomas G., Jr.
Hantke, Lt. Russell C.
Harney, Lt. Robert G.
Harrell, Lt. Wesley B.
Harris, Lt. Glen H.
Harris, Lt. Robert W.
Hart, Lt. Donald P.
Hawley, Lt. Col. D. C.
Hawley, Lt. Dan W.
Heatherington, Capt. Fred R.
Heatherly, Lt. Edward S.
Hellman, Lt. Leo
Herrmann, Lt. W. H.
Hicks, Capt. Grady L.
Himes, Lt. Col. Cecil
Hinton, Lt. Walter V.
Holder, Maj. John C.
Holsapple, Lt. Earle T., Jr.
Holt, Lt. Lowell C.
Hope, Lt. Col. Wm. B.
Howell, Maj. Thomas W.
Howland, Lt. John S.
Howley, Lt. Col. F. L.
Howze, Col. R. L.
Huffman, Lt. Maxwell
Hughes, Lt. Carl R.
Hughes, Capt. William R.
Humphrey, Lt. Muir B.
Hurst, Lt. Jack
Irby, Maj. Richard L.
Jaudon, Lt. Mayson
Jenkins, Lt. Hubert J., Jr.
Johnson, Lt. Col. Albert S.
Jones, Lt. Joseph W.
Kearney, Lt. John T.
Kearns, Lt. John A.
Kelley, Capt. Ward W.
Kirby, Lt. Thurman A.
Klabunde, Lt. Karl A.
Klingmeyer, Lt. Wilbert A.
Knackstedt, Lt. Henry A.
Koon, Lt. Billy W.
Laney, Lt. Harry M.
Langford, Lt. John R.
Larson, WO Donald
La Rue, Lt. William T.
Laws, Lt. L.
Lawson, Lt. Clyde D.
Len, T-5 Nikolas
Leustig, Lt. Frederick F.
Lever, Lt. Robert C.
Lex, Lt. Henry J.
Lieb, Pvt. William R.
Lindblad, Lt. Ralph L.
Lindsey, Lt. Chester A., Jr.
Lippincott, Maj. Louis D.
Liscomb, Lt. John M.
Logan, Capt. Samuel S., Jr.
Long, Lt. William E.
Lowman, Capt. Harry G.
Luckey, Capt. Marion W.
Ludwikoski, Lt. John E.
Lyons, Lt. Lushion L.
McAllister, Capt. James W.
McCann, Lt. Louis V.
McCarroll, Capt. Walter J.
McClain, Lt. Wilofard A.
McCulloch, Capt. Joseph A.
McKiernan, Lt. Frederick A.
McMullan, Lt. Col. T. G.
McNeil, Lt. Ray J.
MacArthur, Capt. D. B.
MacLeod, Maj. Geo. I.
Marshall, Lt. David J.
Martin, Lt. John E.
Matteson, Capt. Floyd A.
Maust, Maj. Robert
Maxwell, Lt. Jesse N.
Means, Lt. Alfred G.
Mellin, Lt. Gilbert M.
Meyer, Sgt. Earl H.
Meyer, Lt. Kenneth J.
Miller, Lt. Duncan R.
Miller, Lt. Francis Morris, Jr.
Miller, Lt. Thomas E.
Minihan, Lt. William J.
Mitchell, Lt. William G.
Mohr, Lt. Gordon D.
Moore, T/Sgt. Jack J.
Morris, Lt. Weldon B.
Morse, Lt. George B.
Mosley, Sgt. Edgar A.
Moss, Lt. Spencer G.
Mulligan, Lt. James R.
Munzell, Lt. Peter C.
Murdock, Capt. Warren D.
Murphy, Lt. Joe H., Jr.
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Nelson, Capt. Harold A., Jr.
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Noll, Lt. Sherwood
Norton, Lt. Clifford J.
O'Hara, Lt. Joseph P.
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Parker, Capt. Jackson E.
Pearson, Lt. H. Brice
Peckham, Lt. Vassar C.
Pelletier, Lt. Edmund
Pendleton, Col. H. McC.
Perow, Maj. Robert H.
Perry, Lt. Robert P.
Pickard, Lt. Albert E.
Poppic, Lt. George T.
Powell, Capt. Joseph W.
Pressman, Lt. Lawrence
Price, Lt. Cole B., Jr.
Price, Lt. Madison C.
Purcell, Capt. Graham B., Jr.
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Ramsey, Lt. Charles E.
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Reed, Lt. Ted E.
Reidenbach, Lt. Richard C.
Rice, Lt. Col. Allen F.
Riske, Lt. Herbert R.
Robinson, Lt. Robert A.
Robinson, Lt. Robert E.
Robison, Maj. James K.
Roessler, Lt. Frederick F.
Rogers, Capt. E. L.
Rosenberg, Lt. Harold
Rottman, Lt. Charles C.
Rubenson, Capt. Bernard
Rubin, Lt. Walter
Russow, Lt. Lanny J.
Samolin, Capt. William
Sarratt, Lt. Charles S.
Sauerbrey, Lt. Karl M.
Schutt, Lt. William C.
Schwartz, Lt. Lelloy
Secondari, Lt. Hermes
Seever, Lt. Dale L.
Seiley, Lt. Carl A.
Shackleford, Lt. Paul A., Jr.
Shappee, Lt. Jonathan
Shaver, Lt. Howard D.
Shelton, Lt. Orville E.
Sher, Lt. Leo
Shields, Lt. Harold A.
Shultz, Capt. Wm. G.
Shorr, Pfc. Stanley
Short, Col. J. C.
Shultz, Capt. Wm. G.
Siegfried, Maj. Jack S.
Silance, Capt. Wm. H.
Sitzenstock, Lt. Robert L.
Slayton, Lt. Richard N.
Slovacek, Lt. Elmer F.
Smallens, Cpl. Alfred M.
Smith, Lt. Chas. Z., Jr.
Smith, Lt. Edward C.
Smith, Lt. Ralph C. J.
Sparrow, Lt. James D.
Spaulding, Maj. John D.
Spencer, Lt. Gayle H.
Staker, Capt. Lowell G.
Stapleton, Lt. Joseph I.
Steffen, Maj. Edwin F.
Stephens, Lt. Marquis D. L.
Stewart, Lt. Enos R.
Stewart, Lt. Lawrence F.
Stewart, WO Milton J.
Stoddard, Lt. Col. Ralph H.
Stokes, Lt. D. C.
Stokes, Lt. Samuel D.
Stokes, Lt. Wm. S., Jr.
Sullivan, Lt. Col. Mortimer F.
Sweet, Maj. Murray F.
Taylor, Capt. G. P.
Taylor, Lt. Col. Harvey D.
Thomas, Pvt. Edward W.
Thompson, Col. F. J.
Thompson, Capt. Lynn G.
Thompson, Lt. Robert D.
Torrance, Lt. Hugh F.
Townsley, Maj. Floyd W.
Tucker, Lt. Lee E.
Tully, Lt. Howard B.
van Milligen, Lt. Alfred C.
Verderame, Lt. S. J.
Waitt, Lt. Claude B.
Waldron, Capt. A. S.
Walker, Lt. Philip G.
Wanke, Capt. Willard S.
Waring, Lt. Charles W.
Warner, Lt. J. W.
Wassell, Capt. Harold
Webb, Capt. Richard A.
Weil, Capt. B. A.
Weiss, Lt. Thomas H.
Wells, Lt. Claude M.
White, Lt. S. E.
Whittick, Capt. John R.
Williams, Lt. Dan
Williams, Lt. Jack A.
Williams, Pfc. James D., Sr.
Williams, Lt. Willard C.
Willoughby, Col. R. E.
Wilson, Lt. George W.
Wingfield, Lt. Jim K.
Winslow, Capt. John M.
Wirtz, Maj. Wm. O.
Withers, Lt. Louis A.
Witten, Lt. Wm. L.
Woitas, Lt. Richard J.
Wolper, Lt. Marshall I.
Woolworth, Lt. Duane
Wright, Lt. Owen O.
Wright, Lt. Col. Robert O.
Yenny, Lt. Donald R.
Young, Lt. Charles E.
Zeskey, Lt. Harry C.
Zweible, Maj. D. T.

[redacted] Leyte Operation

[redacted] T. Collier, Cavalry

THE tactics came from the cavalry and artillery; the sea-going equipment was contributed by the Navy; and the weapon came off the back of a pack mule. Very briefly, this description fits the Army's amphibian tank battalion which was derived from a proud and historic cavalry regiment, and which—like Topsy—"just growed" into a combat force not yet in the books.

Development

Officially, the unit's history began in 1943, when as a land tank battalion it received most of its personnel from the 2d Armored Regiment. That regiment, just 15 months earlier, had been built from the 2d Cavalry. Many of the officers and men who have helped the battalion write its history were present on that July day in 1942 when Colonel John Tupper Cole, addressing his men at a farewell mounted review, enjoined them "to be the best of whatever you may become. . . ." Lt. Colonel O'Neill K. Kane, who had spent most of his service in cavalry regiments, joined the battalion when it was activated. The originator of employment of the amphibian tank in cavalry and field artillery rôles, Colonel Kane still commands the battalion.

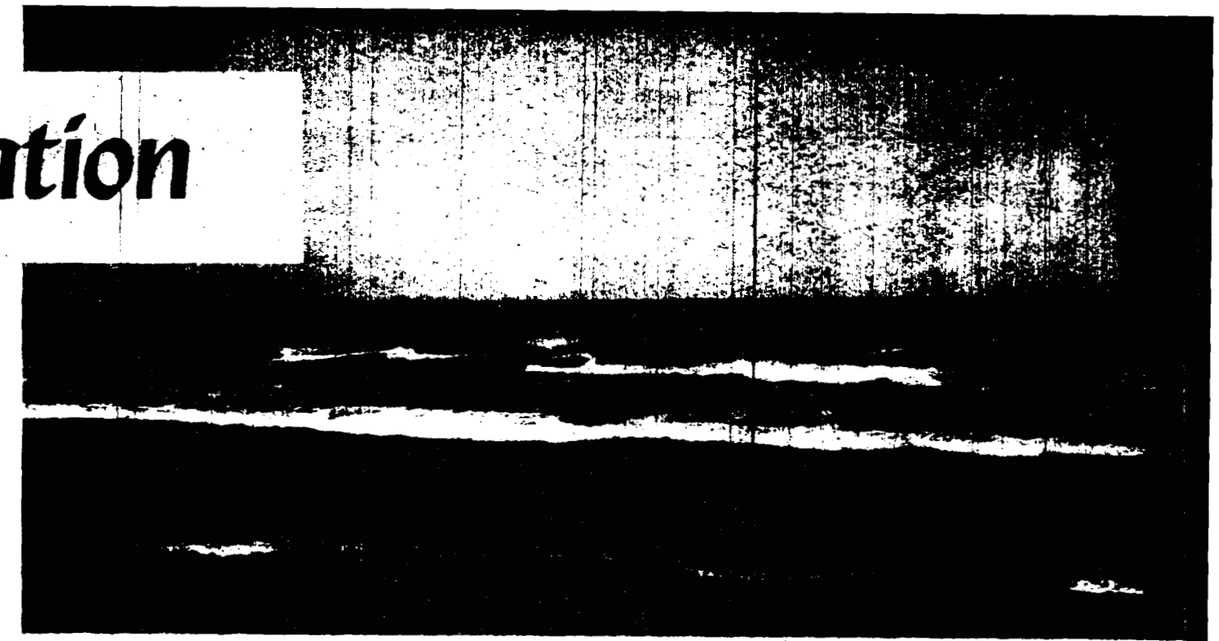
First artillery available in the early stages of a beachhead, the amphibian howitzers usually begin indirect fire support, illustrated here, within half an hour of the assault landing. Forward observation is by division artillery liaison parties. Ammunition is carried forward by amtracs.

The amphibian tank was not new to combat when the unit went overseas. Many times, in the South Pacific, the Marines had landed with the help of amtanks. The amtank (not to be confused with its cargo-carrying counterpart, the amphibian tractor or amtrac) has climbed over coral reefs and lumbered out of the water to spearhead the assault of soldiers and Marines on many Jap-held islands. A fighting vehicle, it was in a familiar rôle as a landing craft and, to a limited extent, even as a light tank. But it remained for this battalion with the cavalry background to use their strange mounts for unsupported raids deep behind enemy lines, long "marches" across open sea, and as actual field artillery firing all types of missions for the doughboys before their divisional artillery could get ashore.

In June 1944 when the battalion was in Hawaii, it received some of the new LVT MkIV A4s—amtanks equipped with M8 turrets mounting 75mm howitzers instead of the 37mm guns which armed the earlier models. A few of these vehicles had been used on Saipan, but this unit was the first battalion to receive comprehensive training with this equipment and to perfect its use with field artillery methods. Although still organized like a tank battalion, the unit received intensive training from the 7th Division's artillery in Hawaii and was prepared to give all types of fire support to the infantry as soon as the latter hit the beaches and moved forward of amtank positions. Fire direction centers had to be organized with personnel which could be spared from other jobs within the battalion, and this required taking considerable liberties with the T. O.

Leyte Landings

When the veterans of the 7th Infantry Division stormed the flaming beaches of Leyte, their assault waves were led by these amtanks, which bombarded the beaches with accurate area fire delivered from the water (the knack of which is a "trade secret" developed by the battalion). Succeeding waves of infantrymen had the battalion's artillery support when they needed it—and that support was delivered from as many guns as there are in the entire division artillery. Forward observers and liaison officers of the division artillery fired the amtank batteries with great effect, and one of the early fire missions helped break up an enemy preparation for a counterattack. The artillery support was, in itself, an important innovation in amphibious warfare. But still more spectacular uses were yet to be devised under the pressure of tactical necessity and leadership ready to capitalize to the fullest extent on surprise and mobility.



Signal Corps Photo

Machine-gun fire from two air-cooled .30 calibers, supplements the 75mm fire as the amphibians begin the move inland in close coördination with following waves of infantry. After the amphibians reach land, a platoon becomes a battery and, in guns if not in caliber, one company of amtanks equals a battalion of artillery; a battalion is the equivalent of the entire division's organic artillery. In Leyte operation some amtanks covered a total of 275 miles in water marches.

Movement of mechanized equipment cross-country in this part of the Philippines is severely limited by swampy terrain and mountains; the road net is inadequate, and even the best roads would not stand up under track-laying vehicles. So when the 7th Division had moved beyond the ranges of amtank howitzers, the battalion found itself on beach defense—its only action the occasional knocking down of Jap planes with .30 and .50 caliber MG fire. But it did not take long to find a way to get the amtanks back into the war.

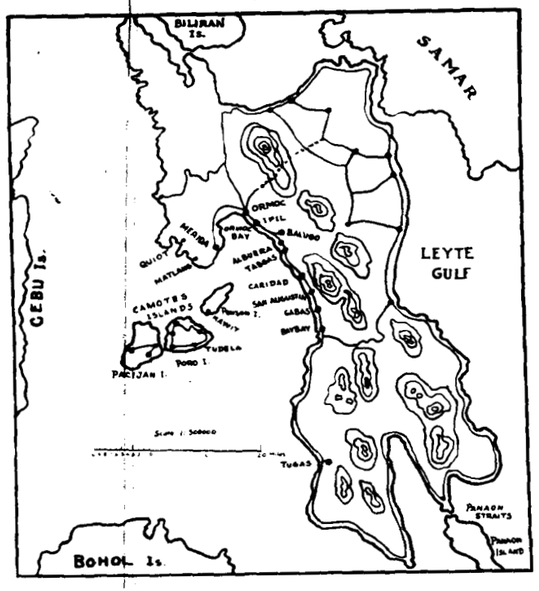
Provisional Battalion

The 7th Division had crossed the mountains to the west coast, and was having a tough fight through the rugged hills and up the narrow coastal plain toward Ormoc. They could use some more artillery, but getting any kind of artillery over the difficult terrain was at best a tough proposition. Moreover, Jap warships, still operating off the west coast of Leyte, discouraged the thought of water transportation without powerful naval escort. In the face of this situation permission was given by the 7th Division commander to move an amtank force around by sea, on what was to be by far the longest march over land or water ever attempted by LVTs traveling under their own power.

Only the A4s, mounting the howitzers (together with sufficient amphibian tractors for supply and maintenance) were taken on this mission. The miniature task force of amtanks and amtracs was carried in LSMs, under cover of darkness, as far as the southern tip of Leyte—about 50 miles. From the Panoan Straits the amtanks made a continuous water march (bivouacking ashore at nights) of 97 miles, and traveled a total of 116 miles including the tactical missions performed immediately upon reaching the objective. "Swimming" at 5 miles an hour, the amtanks traveled for three days before reaching the 7th Division's zone a dozen miles north of Baybay. The force arrived without loss of a single vehicle—in itself a remarkable feat of operation and maintenance. (In the past this equipment had been used on water movements of only several miles, and a high incidence of loss for mechanical causes was to be expected—but the battalion did not lose a single vehicle in the entire Leyte campaign.)

Raids

The actions up the west coast of Leyte were cut to order for the amtanks to make water envelopments that would land the fighters behind Jap lines, without friendly infantry. Cutting loose with thousands of rounds of 75mm HE and WP, they blasted supply dumps and troop concentrations on reverse slopes which could not be reached by our artillery. Unable to hold ground for long, the amtanks would do their damage and dash away—usually pulling out to sea under ineffective Jap mortar and gunfire—leaving the enemy too demoralized to pursue, even if he had any means of pursuit. The mobility and fire power of the amtanks



were exploited to the fullest extent in gaining surprise. Machine guns as well as the howitzers were used with telling effect.

The first amtank strike against the enemy rear was made on December 5 when combat elements of the battalion slipped around the enemy's lines by water for a dawn attack. At Balogo a feint was made in which the amtanks moved toward shore shelling the town with howitzers and raking Jap positions with machine-gun fire. Two hundred yards offshore the line of amtanks wheeled back into a column formation moving north, and continued the shelling of Balogo and Tabgas. The real landing was made at the mouth of the Tabgas River north of Balogo, where demoralized Japs fled from their beach positions. Deadly fire from the howitzers tore into enemy positions near the coast and on the hills inland.

On December 7 the battalion marked Pearl Harbor Day by shelling the town of Albuera from the water with half of its force, while the other half launched from LSTs to support the 77th Division in its landing and operations against Ormoc. Again the next day the amtanks maneuvering with the 7th Division struck Albuera to soften up its defenses during the infantry assault overland. This time the amtanks landed at the town and wrought great destruction on enemy supply installations by point-blank shelling.

The raids and envelopments up the west coast of Leyte are applications of cavalry tactics, executed with new techniques of water mobilty and heavy fire power. The tactical results of these operations were disruption of enemy communications and diversion of his defensive effort against the 7th Division's overland attack. The operation against Albuera was actually a "pivotal maneuver," in which the maneuvering force made its envelopment by sea.

Meanwhile, the amtanks with the 77th Division not only functioned in their new rôle as artillery, but led the drive into Ormoc to be the first American troops to enter that city. There the amtanks' assignment to beach defense paid off. On their first night the fire of their howitzers disabled and set fire to a Jap transport making a desperate attempt to land reinforcements.

On Christmas Eve a task force from the 77th Division embarked in amtracs, escorted by amtanks, for a water movement across Ormoc Bay to Palompon. This was the longest movement across open sea ever attempted by LVTs—a hop of 40 miles. At dawn on Christmas the force landed in the Jap rear to stay—and the last Jap escape port on Leyte was occupied by the 77th Division. On this operation the amtanks furnished the only artillery support (except that of mortars).

The 7th Division turned its attention to the west, and constituted a task force to liberate the Camotes Islands (a group of three small islands off the west coast of Leyte and part of the Province of Cebu). Following the pattern of the Palompon operation, this force moved by LVTs and relied upon the amtanks for its artillery support. On Poro Island the infantry-amtank team, with the amtanks firing close support, forced Jap combat engineer troops from strong cave positions. Annihilation of the enemy was accomplished when he made concurrent suicidal night attacks against an isolated amtank battery position and an infantry perimeter a half-mile away. Members of the amtank platoon (reinforced by members of the attacked amtrac platoon) killed 19 Japs within the platoon position with a loss of but two of their own men: The attacking Japs were armed with automatic weapons, grenades, and demolitions.

Conclusion

During the Leyte campaign some amtank platoons of this battalion moved a total of 275 miles in water marches, at a normal daily rate of 30 miles. The operations of the battalion have established the capabilities of its equipment for making long water marches, and they have confirmed the possibility of greatly expanded employment in reconnaissance, envelopments, and fire support. Such employment, however, demands long and careful training and the highest standards of maintenance, gunnery, and subordinate leadership down to amtank commanders. Because of the degree of teamwork required for success in such operations, tactical integrity of elements which have trained together is imperative.

Experience with the 7th and 77th Divisions has demonstrated that amtank units should be placed in support of infantry units like any other artillery, and not broken up into small segments for direct attachments like tanks. The amtank is actually an amphibious self-propelled artillery piece—it is not a tank.

Amtracs

Preparation

THE warning order gave only two days for preparation. "Alert one platoon for a water movement, reinforce it with sufficient maintenance, supply and medical personnel for a detached and independent mission."

Two days! Since the successful landing on Leyte, the bulk of the amphibian tractor crews had been at dismounted outposts or on patrol. Those left had been using the tractors constantly on details unloading ships, acting as ferries at swollen streams, and hauling supplies. Opportunities for maintenance beyond the minimum essential had been very sketchy. The battalion vehiculars could have stood additional repair but the orders said, "Two days."

In those two days of frantic preparation, sweating crews and maintenance personnel worked feverishly on the 18 vehicles selected for the mission. In addition to very detailed 1st echelon maintenance, a 50-hour check was made on each vehicle—checks that replaced the spark plugs, cleaned the oil filters and coolers, cleaned all the oil screens in transmissions and engines.

Magnetos were checked and points replaced. Four rear idlers and one clutch had to be replaced.

The communications sergeant and his repair crew went to work checking all the sets for proper operation. Frequencies were realigned on designated channels. Crews were familiarized with a new SOI. Some transmitters were replaced.

Armorers worked with the crews on vehicular and personal weapons. Additional units of fire were drawn and stowed. Antiaircraft machine-gun mounts were placed on each tractor.

Battalion maintenance was begging, borrowing, and requisitioning spare parts.

Orders in more detail came down. "You will support an amphibian operation and carry enough fuel and lubs to make a 115-mile water march." In addition to a three-day supply of rations, 240 55-gallon drums of gasoline and 18 55-gallon drums of oil were delivered on the day of departure to be stowed on the LVTs.

The orders became more detailed. The detachment was to be carried part way on LSMs and would be attached to a provisional amphibian battalion, assigned the mission of moving to the west side of Leyte for continued operations against the enemy. The platoon's rôle primarily would be to haul the necessary fuel for all the amtanks and amtracs in the flotilla. Officers accompanying the platoon were Captain E. E. McAlister, in command; the author, second in command; and 1st Lieutenant R. A. Graham in charge of all maintenance crews.

En Route

Under the cover of darkness, the Navy craft, with the amtracs aboard, moved to the southern tip of Leyte in the vicinity of the Panoan Straits, where the vehicles disembarked about a mile offshore at 0230, November 28. The Provisional Battalion assembled on the shore of the Island of Panoan at the mouth of the narrow straits between Panoan and Leyte and serviced vehicles until time to move out on its long run.

The beach was strewn with large boulders, and several tracks needed repairs before they could be moved out. On the majority of the amtracs grousers were torn loose and had to be removed and replaced. Cap screws on the tracks had to be tightened, and a complete 1st echelon check made by the crews, who made necessary adjustments and replenished the oil supply if required. (This was all accomplished during the hours of darkness under blackout conditions as the tactical situation from the standpoint of enemy activities was none too clear.)

At 0700 orders were received to move out and, after some difficulty, the vehicles began threading their way through the narrow, swift-flowing straits. In getting all vehicles under way, it was necessary for the maintenance vehicle to hook on to one tractor which had a dead battery and tow it off the beach to get it started. One tractor with an over-heated engine beached at the mouth of the straits, after having traveled only a few

An amtrac churns its way up a river in northern Leyte. These amphibian tractors hauled ammunition, gasoline, men and supplies from beachheads to critical points of defense perimeter. Maintenance was performed at all times under most difficult conditions—often during blackouts.

Signal Corps Photo

hundred yards, and a mechanic was transferred aboard to determine the cause of the engine failure.

The crew commander was instructed to continue on through the straits, and as the vehicle proceeded, the mechanic discovered that the engine failure was due to a faulty oil cooler. Having cleared the swift current of the straits, the maintenance LCM was radioed to take the disabled vehicle in tow and, under the pre-arranged plan of march—maintenance, while the vehicle was being towed the mechanic signalled the maintenance amtrac for the necessary part and replaced the faulty oil-cooler. This plan was evolved to prevent any disabled vehicles from falling too far to the rear of the main body.

With all vehicles cleared, the Provisional Battalion took up its march formation. One LCM, as the control boat, led the 20 amtanks in three columns. These were followed by the amtracs, with column of sections in line, and one LCM tailing the column to assist maintenance in helping any disabled vehicle.

By noon the formation had passed the southwestern tip of the island and beached for a half-hour maintenance period. Superior maintenance by the maintenance crews, coupled with helpful cooperation on the part of all crewmen, put the unit back in the water at the designated time, and once again it was under way. The ever-droning roar of the radial engines purring and the sound of the tracks churning the water were constant reminders that the battalion was moving onward.

That night the troops once again beached. Vehicles were maintenanced and refueled, meals prepared by the individual crews, and a perimeter defense established—the amtanks on the inner line, the amtracs covering the beach. The Japs still had aircraft patrolling over that sector but they evidently did not observe the bivouac, and fire was withheld to keep from disclosing the location. Maintenance crews worked all night repairing two sheared sprockets.

Daylight again! The amphibians "hit the water" in one sweep and, quickly taking up formation, continued on their mission. It became a series of 3 to 4-hour runs—beaching at noon to service vehicles, beaching again at night to service and refuel and bivouac. No air cover was provided during the trip, and there were moments of tenseness when enemy aircraft occasionally were spotted.

When at 1530 of the third day (November 30) the battalion was signalled to beach at St. Augustin, it moved in and set up a perimeter defense. The amtanks moved up to a point just south of Balogo, where they beached to service their vehicles preparatory to making unsupported "strikes on enemy-held positions with their howitzer fire."

Beach Defense

Their primary mission completed, the amtracs assumed a new rôle. Tying in with other units as a beach defense against possible Jap landings, they hauled ammo and supplies up to the amtanks, and remained ever ready to transport troops to any point along the western coast between Baybay and Ormoc in the event of a Jap landing.

December 6, 10 amtracs were moved to Tougas, where the situation required a series of strong points and the amtracs were to be used as the nucleus of the beach defense. As soon as the amtracs beached, orders were received to send 4 to Caridad to pick up capacity loads of 75mm howitzer ammo and haul it up to the amtanks, which were making a strike on Balogo at dawn. The tracs moved out at 1700, and it was well after dark before they were loaded, so it was around midnight before they joined the tanks. These 4 amtracs, under the command of Sergeant Thompson, remained attached to the amtank unit until January 5.

On the morning of December 7 orders were received to send 5 amtracs back to Gabas (their second trip) and Sergeant Castleberry was put in command of this detachment. The distribution of strength at this time was 5 amtracs at Gabas, 5 amtracs at St. Augustin, 6 amtracs at Tougas and 4 at Balogo with the amtanks. Of necessity, the amtracs were required to haul their own rations and water at times and the tracks of the vehicles took quite a beating, as the beach along that sector was very rocky.

The morning of December 7 was an eventful one and the amtracs were privileged to a ringside seat at the show. A sizeable American convoy of naval and amphibious craft, which had effected a landing behind the Jap lines at Ormoc, were on their way out of Ormoc Bay when they were met by a Jap convoy trying to land reinforcements. All Jap ships were sunk and an estimated 30,000 troops went down to a watery grave. Sixty-two Japanese aircraft were downed that day, and the detachment of amtracs at Tougas was credited with driving off (with antiaircraft fire) 2 Zeros which were attacking small naval craft. A few enemy bombs were dropped near the amtrac positions but fell harmlessly in the water off shore; however, one, that turned out to be a dud, landed in a rice paddy just to the rear.

On December 10 the detachment of amtracs at Tougas was ordered to Tabgas to set up a strong point in the beach defense there. A considerable number of Japs were still in the mountains about three miles to the rear, and occasionally small groups of them would wander down toward the beach to forage for food or try getting into native outriggers to evacuate to Ponson Island.

Patrols

From time to time natives brought word of the presence of Japs (usually the number was greatly exaggerated) in "such and such" coconut grove or native shack, and each time a patrol was organized and promptly dispatched to ferret them out. One such patrol, under the command of Staff Sergeant Jeffries, netted one Jap killed and one Jap wounded with no casualties to the patrol. On another occasion a patrol of 11 men was being led to the Japs' position by a native guide when, just 100 yards away from the Japs, it heard the M-1 fire of a hereto unknown infantry patrol.

On December 18 orders were received to move 10 amtracs to Albuerra to carry a reinforced infantry company across Ormoc Bay on a reconnaissance mission of the tip of that part of Leyte Island nearest Cebu. The 5 amtracs posted on beach defense at Gabas and the 5 troop-carrying tracs at Tabgas were selected for the mission, but on the trip northward to the assembly point at Albuerra a transmission "went out" on one of these tracs and it was replaced by one of the amtracs from the detachment at Balogo.

Assembly of all vehicles was effected by 2200 that night and at 0600 the next morning the amtracs moved out with the infantry aboard, bound for Merida on the west coast of Ormoc Bay. The first wave of amtracs landed at 1000, followed closely by the succeeding waves. No opposition was received, and the infantry was dispatched on patrol missions, while the amtracs were given the mission of securing the town of Merida and the coastal area in front of it from possible Jap infiltrations and landings from the sea.

At 0730 on the 20th the amtracs moved still farther around the tip of the island and after a 12-mile run, beached at Quiot at 1030. En route, they were signalled by two large native sail boats, pleading for medical aid. The convoy was halted and the medical captain and his aid men were transferred to the native craft, only to behold a gruesome sight. Several natives, 5 of them less than 6 years old, had been bayoneted and horribly mutilated by the Japs on Ponson Island, and had been evacuated seeking medical aid. One child was already dead, but all others were treated.

At Quiot the amtracs were again called upon to establish a beach defense and haul details carrying water and rations to the various units. On landing one vehicle was dispatched back to Matlang to pick up an infantry patrol which had come across the mountains from Merida and two other amtracs were sent with another infantry patrol farther around the Island of Bosloton, from whence they patrolled back to Quiot.

Maintenance

Amphibian tractor personnel, needless to say, are very maintenance minded, and although it might seem that the amtracs were not all on detail all the time, every minute of daylight hours was spent working on maintenance. Only because of superior supervision by the maintenance crews and a lot of "grease-monkey" duties of the crewmen was it possible for the amtracs to render the much-needed service to the arms to which they were attached. The running hours on all engines were well above the 100-hour mark; a few were over 200 hours, and it was impossible to keep them in one place long enough to give the necessary 100-hour checks.

The infantry completed its reconnaissance mission at Quiot, and on December 21 the amtracs were again moved. This time they landed at Albuera at 1830 after a 28-mile run. Infantry troops were discharged, and the amtracs were moved back to their former positions at Tabgas and Gabas, where they resumed their normal duties of beach defense while the crews continued their ceaseless maintenance.

On January 5 all of the tractors assembled at Tabgas, and rumors (which eventually turned out to be true) started that they were to make assault landings in the Camotes group of islands sometime around the middle of January. Maintenance efforts were redoubled, and a few 100-hour checks were accomplished with an improvised chain fall constructed of coconut logs slung between coconut trees.

Finally official notification was received to assemble at Ipil on the 14th. The platoon was reinforced with three more amtracs from a detachment of the battalion operating around Palompon and an additional 15 amtracs from an amphibian tractor battalion.

The additional three amtracs from battalion were in a bad way. They had all been "cannibalized" of parts to keep other vehicles in running condition. At that time LVT parts were critical, and to wait on a requisition to be filled for replacements on worn-out parts was entirely out of the question. The outfit was faced with the alternative of cannibalizing one vehicle or dead-lining two of them.

This situation confronted the maintenance officer just 36 hours before the amtracs were to "jump off" on their mission. Transmissions were hauled from ordnance at Baybay and installed in two of the amtracs. One set of tracks was completely rebuilt, and a total of 7 bogie wheels replaced on the three tractors. All the parts that had been stripped had to be replaced. Once again, the foresightedness of the maintenance section was demonstrated in their selection of spare parts back there before the platoon had left the battalion for its first mission on the west side of Leyte. With the knowledge that the 15 vehicles from the other organization would be in good running condition when they arrived, a feeling of security appeared justified, but all does not work out as planned, and often the best laid plans of amphibian commanders go awry. A detailed last-minute check revealed that the driving sprockets on three of these 15 vehicles had sheared studs, so once again the mechanics wearily dragged out their tool kits and went to work. Steering bands were badly worn in some cases, and adjustments were necessary to insure even steering during the coming trip.

Ponson Island

A reinforced infantry battalion under the command of Major Bullock, was selected for the mission of clearing the Camotes group of islands of any Japs there, and the task force, appropriately named "Sweet Potato" was organized with Lt. Colonel Walker in command.

Assembly of all 38 amtracs and 20 amtanks was completed by 1000 January 14, and necessary maintenance

finished by late evening. Infantry personnel loaded on at 2330, and at 0005 of the morning of January 15 orders were received to move out for a daylight assault-landing on the southern tip of Ponson Island at the town of Kawit on Nauangan Point. It was a dark, dreary night with no moonlight, and just after the launching it started to rain.

The formation consisted of a "screen" of 10 amtanks in the lead, 5 amtanks on either flank with the 38 amtracs in the center of the formation of 6 waves. Driving blackout all the way, with just the tail lights of the vehicle ahead for a guide, was very exhausting for the drivers, who were changed every one and a half to two hours. The force held to a perfect formation, however, and at about 0430 a half-hour maintenance halt was called. Crews checked their tracks, engines, and added oil and, after a brief moment in which to relax, the task force was once again under way.

The transmission went out on one amtrac and, upon signal from the maintenance officer, was immediately taken in tow by an LCM. Later, just as the column swung beachward, a track broke on another and a maintenance vehicle towed it into the beach in order that the infantrymen might be discharged for their mission.

After a preparatory bombardment of shell fire from engineer rocket boats and PT boats, the first wave of amtracs landed their troops at 0720 on a coral-infested beach. Enemy resistance was nil, and no casualties—personnel or vehicular—were incurred.

Having rendezvoused 1,000 yards offshore, all amtracs were signalled to beach once again and assume the mission of defending the whole southern tip of the island—some 2,000 yards of coastal area. It was not so easy, however, to go into position and resume maintenance, as a total of 32 of the 38 amtracs were called upon for various details. Immediately upon landing, the detachment sent 6 tractors to unload LCMs another 6 to carry an infantry company by water around to Lanao, and still another 6 to carry troops by water around the eastern side of the Island to Pilar. Other vehicles hauled rations and ammo from the beach inland to the supply dumps (most of which had to be hauled back and reloaded onto those same LCMs the very next evening) and some carried ammo up to the troops at the front lines.

Crews returning from their details immediately serviced their vehicles and checked with the maintenance officer on any major difficulties. Some crews were still working on their amtracs till dark. Captain McAlister was charged with the responsibility of setting up the task force bivouac area, and also with its defense and all the normal duties of an amphibian tractor platoon leader fell upon the shoulders of Staff Sergeant DiNola, the platoon sergeant. He personally commanded two of the convoys which carried troops by water around the island to various points during the three-day period on the island.

On one of these trips, the men came upon a ghastly sight while waiting for the infantry patrols to return. Seemingly, the whole population of a small barrio had felt the vicious barbarisms of which the Japs are capable. At least 60 mutilated and charred native bodies were counted in several heaps. One family had gotten away with only lacerations and bayonet wounds inflicted and came out of hiding when they discovered Yanks patrolling the area. The infantrymen brought an 8-year-old girl and her brother with them and they were transported back to the aid station for medical attention.

During those three days the amtracs were called upon continually for normal supply-hauling details, but they remained in fine condition, despite their constant usage.

The vehicle with the bad transmission was still disabled, and the unit was really "sweating out" the delivery of a replacement. Finally, the anticipated transmission arrived by LCM from ordnance at Baybay on Leyte at 1630 January 17, and the mechanics worked all night to get the vehicle running again, so that it would be ready to move out at 0600 the following morning on another assault landing. The maintenance officer breathed a sigh of relief when he once again heard the pleasant drone of the vehicle as it was water-tested at 0300.

Poro Island

With no opposition encountered on Ponson, the task force moved out at 0600 January 18 and after a 13-mile trip, made an assault-landing at Tudela on Poro Island at 0830. The preparatory bombardment was very effective, and this landing was also effected without any casualties; however, the coral was tough to get through, and three amtanks were "hung up" on the way in. Because of mechanical difficulties one amtrac of the first wave fell out of formation just before it moved beachward, but the maintenance crew got it running quickly and, by cutting diagonally across the formation, it rejoined the force just as the other amtracs hit the beach.

The same normal details were encountered on this landing as on the other and the amtracs were kept busy from morning till night for the next several days. Again tracs and personnel furnished beach defense and security outposts for the task force headquarters bivouac area. No less than 6 tractors were used at various strategic points around the town of Tudela, and 4 more were used to throw a protective ring around the supply and ammo dumps. After making a long trip in their vehicles, tractor men normally experience that old bug-a-boo, fatigue, and, with the added strain of an assault landing, need a bit of rest. At Tudela, however, after meeting all the requirements of their additional supply-hauling details, the crews pitched in to help extinguish fires, started in the village by the preparatory shelling and still glowing late in the afternoon. Since the men were bivouacked in and around the town, it was expedient for purposes of security to get these fires out before darkness set in.

The mission completed, everyone was ready to relax, and only those on watch stayed on the alert. Rest was

rudely interrupted at dusk, however, when two Jap aircraft spotted the bivouac area and flew over for a strafing and bombing attack. The bombs fell short of their targets, but their strafing inflicted a few casualties, and foxholes appeared as if by magic.

The Nips returned again at dawn, but the amtrac crews were ready for them (the amtracs were the only troops capable of putting up AA fire) and under the orders of Sergeant DiNola, the senior ranking man present at the amtrac positions, they brought such effective fire to bear upon the attacking aircraft that the Japs were driven off after one strafing run. A slender trail of smoke was observed streaming from the fuselage of one plane as it circled away behind the protection of the high cliff at the eastern end of the town, and the next day an infantry patrol reported seeing a Zero in the shallow waters about a mile down the beach.

Early on the morning of January 19 Captain McAlister was evacuated because of illness, and the author assumed command of the amtracs, while Sergeant DiNola took over the duties of platoon leader. Task force headquarters was moved out of the town of Tudela, and a new bivouac area established at a point along the beach about 1,000 yards west of the town. The amtracs were charged with setting up a defense whereby any attempted landings by the Japs could be forestalled and at the same time the rear could be defended.

Every crew was assigned guard duty, and at least one member of every crew was on constant vigil at all times. For the rest of the stay on Poro Island, the amtracs were used for unloading supplies off the naval craft and hauling supplies and ammo to the amtank artillery positions up in the forward areas.

It was still necessary for the unit to furnish 4 tracs and crews to guard the supply dumps and one crew for a 24-hour security outpost on the hill above and about 200 yards to the rear. Each morning at daybreak, an 8-man detail acted as a "covering force" to protect the engineer crews who checked the road from Tudela to Poro for land mines that might have been sneaked in during the night. For several nights three 4-man crews acted as dismounted security outposts for the battery of amtanks in the vicinty of Poro, and on the morning of January 31 the 12-man detail on this duty caught the brunt of a 35- to 40-man Japanese "banzai" attack initiated at about 0200.

The fire fight lasted till dawn. After the wounded had been gathered in and first aid rendered, 19 dead Japs were counted piled up at the outpost positions and about a dozen few yards farther away. Two got away wounded only to be tracked down later and polished off. Of the 12 men who withstood the attack, one was killed and 5 wounded.

One Jap, who got through the line with his satchel charge, succeeded in blowing up an amtank, but he never lived to tell his Emperor about it.

On February 2 a maintenance crew was sent to the battery position to repair the disabled tank, and a 12-man security detail under Sergeant Hill was sent along to protect them while they worked. In the process of establishing a position, Corporal Cignarella discovered a Jap (it is thought he was one of the few survivors of the banzai attack) hiding in a wrecked Jap barge and killed him with his carbine.

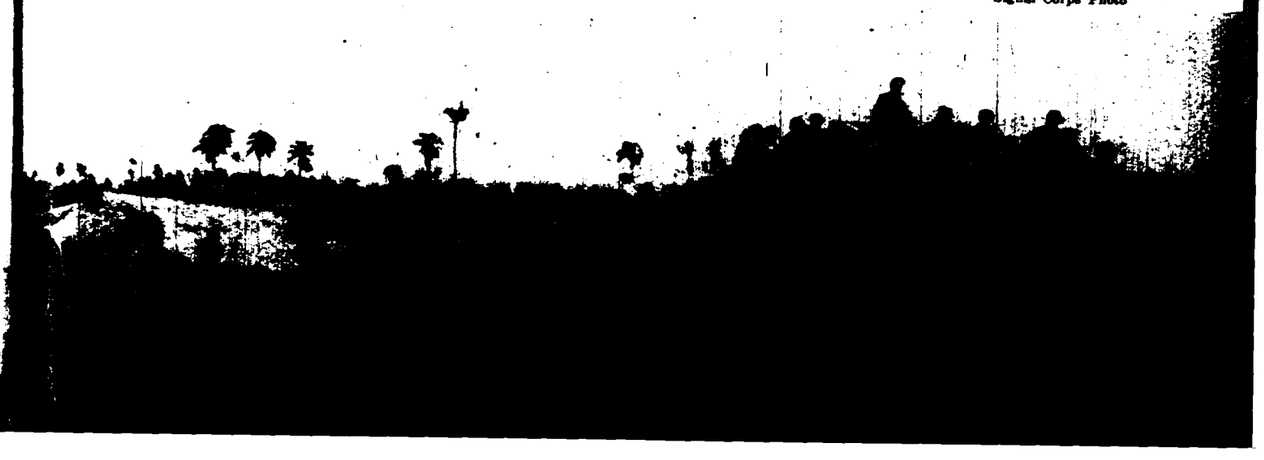
Return to Battalion

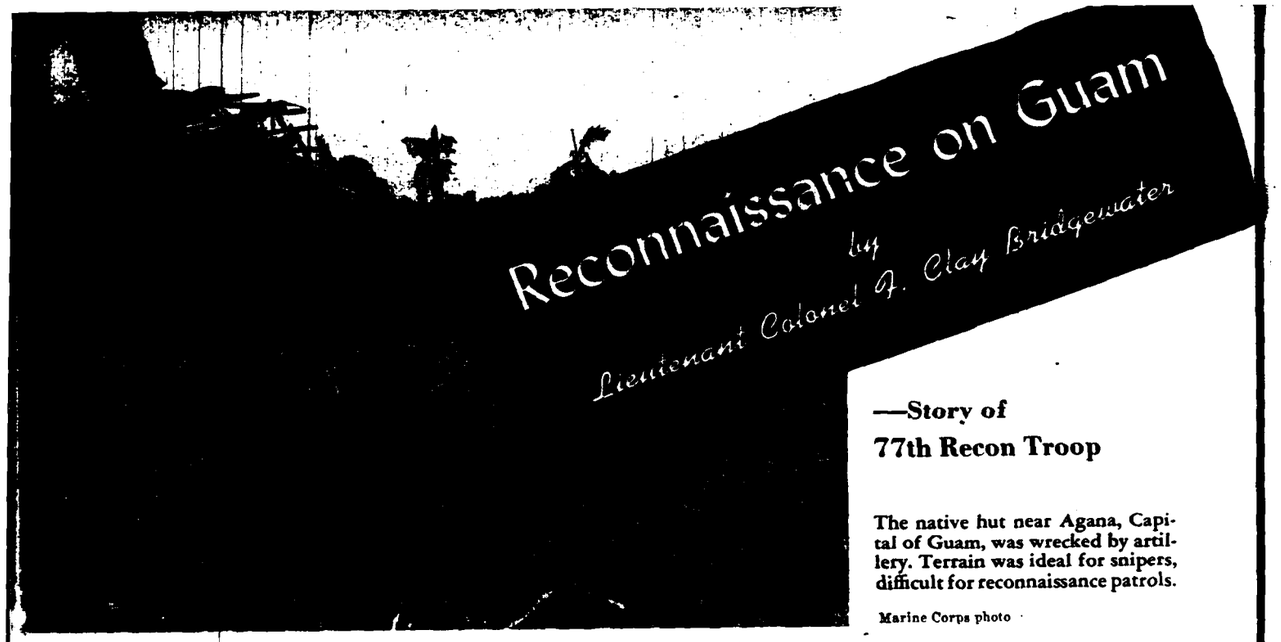
On January 29 the 15 borrowed amtracs were evacuated to the east coast of Leyte for rehabilitation and on February 2 three others were sent to Ipil.

With the mission of the Sweet Potato Task Force accomplished (488 Japs counted dead) the entire group of remaining 20 amtracs and 4 amtanks moved out at 1000 February 4 and after a 36-mile run landed at Ipil at 1630. Very few mechanical difficulties were experienced on the way.

At Ipil the amtracs loaded to capacity with ammo the following morning boarded LSMs bound for Tarragona on the east coast of Leyte. There they disembarked at about 0130 February 6 and immediately unloaded at the ammo dump. Then after rendering one more service—a ship-to-shore unloading detail of 40 tractor loads of supplies from an LSM—the platoon returned to battalion headquarters, after having been gone for nearly 10 weeks.

This native Philippine water buffalo eyes a namesake—the amtrac, nicknamed the "buffalo"—in a field on Leyte.
Signal Corps Photo





Reconnaissance on Guam

by Lieutenant Colonel J. Clay Bridgewater

—Story of 77th Recon Troop

The native hut near Agana, Capital of Guam, was wrecked by artillery. Terrain was ideal for snipers, difficult for reconnaissance patrols.

Marine Corps photo

THE employment of cavalry units in the jungle-clad islands and atolls of the Pacific have digressed many tactical furlongs from the horse-mechanized conceptions of the early 1940's.

When the 77th Division was alerted for the Guam operation, it had already completed special training, and plans for the employment of the 77th Reconnaissance Troop were based on experiences learned by our predecessors in the Central Pacific and in the Southwest Pacific.

It had already been foreseen that the division would probably be employed on islands where restrictions imposed by terrain would make vehicular reconnaissance impracticable. From the beginning, therefore, it was decided to streamline the troop by completely dismounting it, and thus relieve it of much of the equipment with which it was burdened. Then with minor changes in organization, the troop, ready to go ashore on any island that might come up, was prepared to handle the old basic mission of getting the information and getting it back.

Equipment

All vehicles except two 2½-ton and six ¼-ton trucks were eliminated. Along with vehicles went all the .50 caliber machine guns, a number of light machine guns, mortars, bazookas, and all the T/E radios. M-1's replaced carbines. Added to equipment were 7-man and 10-man rubber boats. Radios were mounted in the 6 jeeps, and 15 of the infantry's radios were hand-carried. Personnel were equipped with the infantry combat pack in lieu of the field bag, with sneakers, mechanic's caps, trench knives, grenade carriers, bayonets, and extra canteens.

Radios were so distributed as to permit each platoon to have one net, the troop to have two nets, and the liaison officer two.

At the same time, the troop's T/O had undergone tentative changes. The headquarters platoon was reduced, and the surplus personnel assigned equally to each reconnaissance platoon. The defense squad, armed with submachine guns, light machine guns, and M-1 rifle, was added to the headquarters for the defense of the troop CP. Reconnaissance squads carried a light machine gun and the platoon headquarters carried a 60mm mortar. Some obvious headaches accompanied these tentative changes. The mechanics realized however, that some day they would have their armored cars again, and the radio operators knew that eventually their job again would be more technical than transporting by back a set that any man could operate.

All T/E equipment not required for the operation was turned over to the rear echelon which remained behind. Everything that the troop now had could be hand-carried except their field ranges and their heavier radios. These were placed on second priority for loading, and even they could be left behind or brought up later if it became necessary.

Training

Thus organized and equipped, the troop conducted extensive tactical exercises in amphibious reconnaissance and island patrols. The former training stressed swimming with equipment, handling small boats, estimating tides and currents, and studying hydrographic conditions and beach features. Small boat landings were made from destroyers at night, and rock landings were practiced until the treachery of coralhead and volcanic rock were no longer considered hazardous. Scouts swam ashore on lonely strips of beach. Inland patrolling through mountains and jungle, against positions established by our own infantry regiments, built up stamina, technique, and courage.

By hard work, these men learned that they could land from a surface ship at night in rubber boats, climb over a mountain range, patrol through a jungle, and after several days, return to their ship with the information they had been sent to get. Lessons learned at various amphibious centers and the Jungle Training Center at Hawaii helped these men master hazardous reefs and the problems of living and fighting in the jungle.

With this background, the troop felt itself ready for a dawn landing on any man's island, particularly one of Mr. Hirohito's, and on July 24, when it came ashore behind infantry elements of the division, the 77th Reconnaissance Troop was a hardened, well-trained outfit, anxious to find Japs, and to see what the rest of Guam looked like.

Throughout the entire campaign, which lasted for twenty-one days before organized Jap resistance ceased, the troop conducted continuous reconnaissance and operated division OP's.

The Situation

During the beachhead phase of the operation, the division was interested in determining the enemy's strength in the south and central part of the island—not only because it was desirable to know where the Japanese troops were forming for counterattacks, but also because future plans called for the division to swing east and northeast across the island on the right of the corps and clean up the north end of the island. This maneuver would not only meet head-on any resistance in the central mountain area, but it would also expose the right flank and rear of the division to any Jap forces that might be in the southern half of the island.

Although it was believed that the Japs would withdraw to the high ground northeast of Agana, there were indications as late as July 26 that strong forces were still present in the Facpi Point—Mt. Lamlam—Harmon Road areas. If these Japs were in strength and intended to stay in this area and fight, division headquarters wanted to know it. On the 27th, the Reconnaissance Troop was given the job of finding out.

Patrols

This was to be the troop's first contact with the enemy. Until then not even patrols of the infantry regiments had penetrated more than 1,000 to 1,500 yards beyond our forward battle line. Critical points along the southeast and southwest coast were selected and routes thereto covering critical areas in the interior were designated. On the morning of the 27th two patrols set out across the island for objectives on the east coast, two to the southeast, and one down the southwest coast. Several days later another patrol was dispatched to reconnoiter to the east coast along the route tentatively chosen for the advance of the division. On July 30 another patrol was dispatched to the south-east coast through Talofofo to Port Inarajan. The hidden dangers of the island interior, a chance of being ambushed or cut off by the Japs, and the very newness of the terrain itself combined to make these missions hazardous.

Lt. Simpson's patrol, which headed east for Ylig and Pago Bay Areas, was forced to turn back when the second in command became dangerously ill with dengue and required medical aid. It had gotten half way to its objective. Although the patrol traveled 8,000 yards, it encountered no Jap forces.

Lt. Miller's patrol headed east for Talofofo and Ylig Bay. Traveling through the back-breaking canebrakes and jungles of the lowlands, with climbs to the high ground for observation, this patrol successfully evaded the small, nomadic enemy patrols and from their movements and the reports from natives determined that there had been a recent general exodus of all organized units of the enemy to the north. This patrol traveled 24,000 yards and returned on the third day.

The two patrols sent into the thicknesses and cave-pocketed slopes of Mt. Alifan and Mt. Almagosa had rough sledding from the time they left the division until they returned three days later. The slopes of Mt. Almagosa were ripe with snipers. These patrols were unable to follow their prescribed routes and had considerable difficulty in maintaining communication with the troop. After traveling approximately 18,000 yards they returned with information concerning ammunition dumps, Japs in caves, and deserted bivouac areas. Although they encountered some Japs, their information indicated no organized enemy in strength.

The patrol sent south along the west coast to Umatac ran into similar difficulties of communication. After a three-day silence, it returned with about 75 extremely grateful natives but had encountered no enemy. It covered about 21,000 yards in 39 hours.

The patrol reconnoitering the route of advance of the division made the cross-island trek to Pago Bay in about one day. An engineer reconnaissance party accompanied this patrol, which successfully evaded the enemy except for one brief encounter which yielded two dead Japs. It covered a total of 13,000 yards, located Jap troops moving north along the east coast near Pago Bay and gained valuable information of both the terrain and the enemy.

Information

All of these patrol reports confirmed the estimate that the bulk of the Jap troops known originally to be in the south half of the island had already moved out to the north. This information enabled the division to shift its strength to the left, take Mt. Tenjo, and drive straight across the island to the east coast, in record time in hot pursuit of the withdrawing Japs, without too much concern over the vulnerability of an exposed flank.

During the division's attack across the island, the Reconnaissance Troop continued to patrol on the south flank of the division, and when the advance to the north end of the island commenced, the troop had the mission of patrolling from the right flank of the division to the east coast.

While still on the south flank the troop was ordered to reconnoiter straight across country to Port Inarajan. Lt. Stringer, with part of his platoon, carried out this mission. They killed two Japs en route and returned in three days after covering 28,000 yards in enemy territory. This patrol covered the areas where our OP's had seen most of the Jap activity in front of our FBL. The information it gained, both from observation and natives, definitely proved that the Japs had withdrawn from this area to the north.

All of these patrols—the one to Inarajan in particular—contacted many native Chamorros, most of whom were not aware that the Americans had already landed. The excitement and gratification displayed by these natives as the American troopers—the first white men they had seen since the Japs moved in on December 10, 1941—emerged from the jungles into the edges of the native clearings, was a moving experience for the men of the patrols. They were showered with what gifts of value which had been left them by the Japs.

The leaders of patrols were looked upon as direct emissaries of the government, and the local leader of the native-type underground immediately offered the services of his people for whatever collaboration might be expected. Life and death decisions concerning the people among the villagers accused of traffic with the Japs were asked of men of the troop sometimes carrying no more than two stripes. The men and women of the villages asked first for arms and organization; then for a chance to even the score with those who had made them bow twice daily to an oppressive, mythical Emperor.

Friendly native guides, familiar with the terrain, accompanied all of these patrols.

Fire Support

One main problem encountered was that of coördinating these distant patrols with artillery, air and naval gunfire support. In order not to jeopardize the patrols, it was necessary to have them make periodic reports of their exact positions by radio so that each fire support mission called for could be checked with the location of the patrol before it could be fired. On the other hand, patrols could not be allowed to interfere with defensive fires, particularly those at night in support of front line troops. In no case, however, did a fire support request have to be refused on account of these patrols, and in one instance a patrol itself was able to direct artillery fire by radio on a small concentration of Jap troops.

Combat Reconnaissance

During the advance to the north, elements of the troop reconnoitered the area near Yigo where natives reported that the Japs had built a considerable number of concrete tunnels. One platoon, which surprised ten of the enemy, killed four as the rest took to their heels into the jungle. Another mile up the trail, the patrol discovered installations, living quarters in caves, CP's that had been thoroughly pounded with artillery fire, an elaborate system of wire communication, and an aid station. One live Jap, lying in the filth and stench of a dozen of his dead comrades, still showed enough fight to necessitate his elimination. There were all the familiar manifestations of what undoubtedly had been the nerve center of a contemplated defensive line.

Proceeding on its mission, the point proved its worth by spotting a machine gun and crew of four located ten yards off the trail waiting in anticipation for the main body of the patrol. Quick action by the point and a platoon leader accounted for all four of those Japs. Snipers then opened up from the other side of the trail.

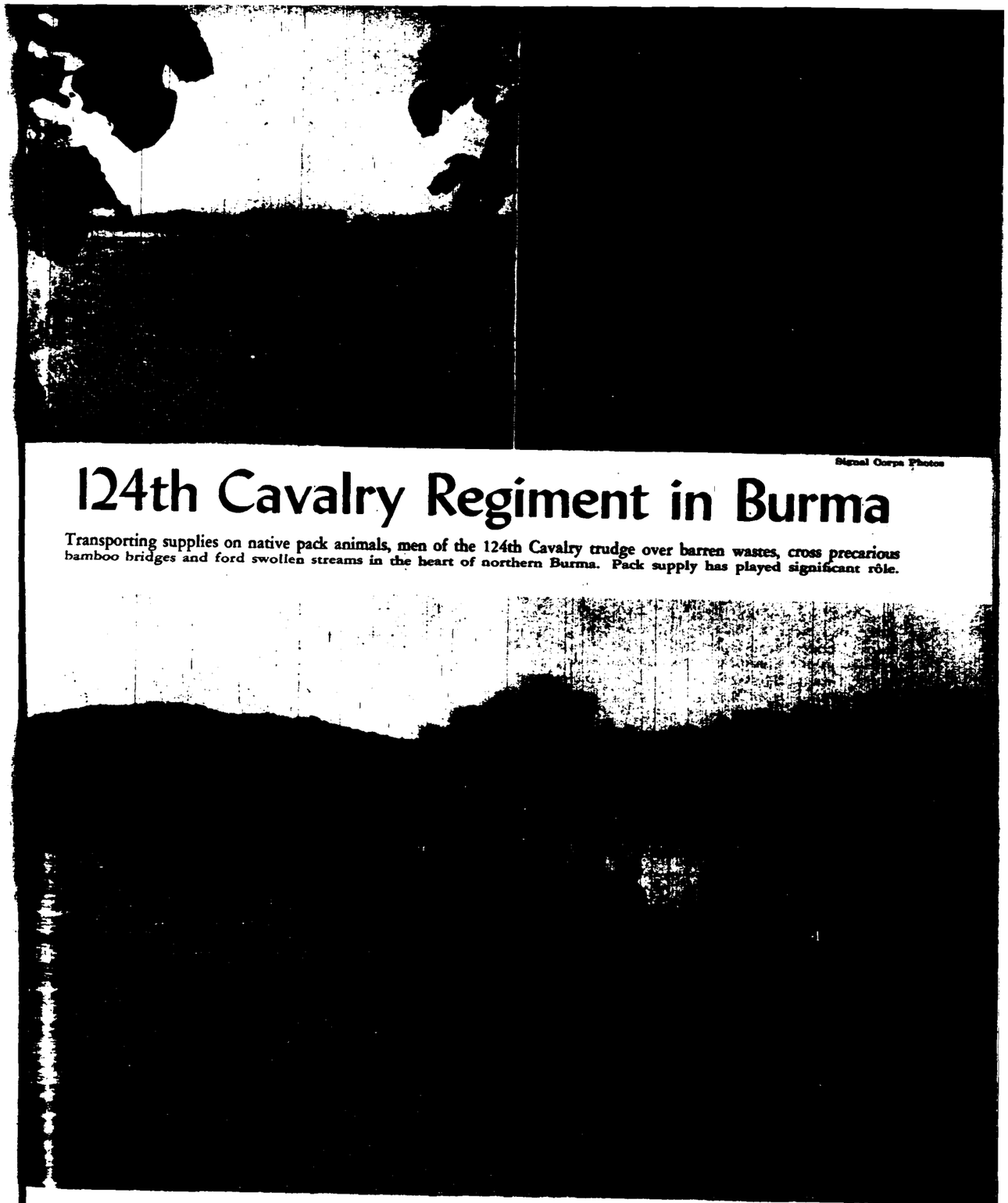
Sergeant Johns, one of the platoon sergeants, was carrying a Japanese-English dictionary and a bottle of Scat in the right hand pocket of his fatigue jacket. A sniper found his mark; Johns grunted, was whirled by the impact and hit the ground. With Scat running down his belly, and the corner of the dictionary torn to shreds, he was relieved to discover that the round, deflected by the book, had passed through a loose fold in his fatigues without leaving a scratch.

When knee mortars started landing up and down the trails, the troop decided that it had found something big that called for something bigger. An infantry battalion then followed the Reconnaissance Troop into this area and in three days killed some 350 Japs.

Up to this point, the troop had suffered no battle casualties; however, on August 7 a patrol was ambushed along the northeast coast of the island. Its leader, Sergeant Hall, was lost in attempting to outflank and determine the enemy resistance, and a member of the patrol was wounded.

Mt. Santa Rosa was secured August 9 and with that came the cessation of all organized enemy resistance in our sector. The right kind of a flag was raised over the entire island of Guam on August 10. Shortly thereafter the troop returned to the rear with the congratulations of Major General A. D. Bruce to bolster a C-ration morale, and with the right to wear thirteen Bronze Stars written into the records of its members.

This campaign reëmphasized the importance of reconnaissance personnel being thoroughly schooled in the fundamentals of basic training with primary attention to physical conditioning, scouting and patrolling, keen observing and accurate reporting. As one trooper told me a few days after the operation, "It was the things I learned during our first seventeen weeks of basic training that got me through this fight."



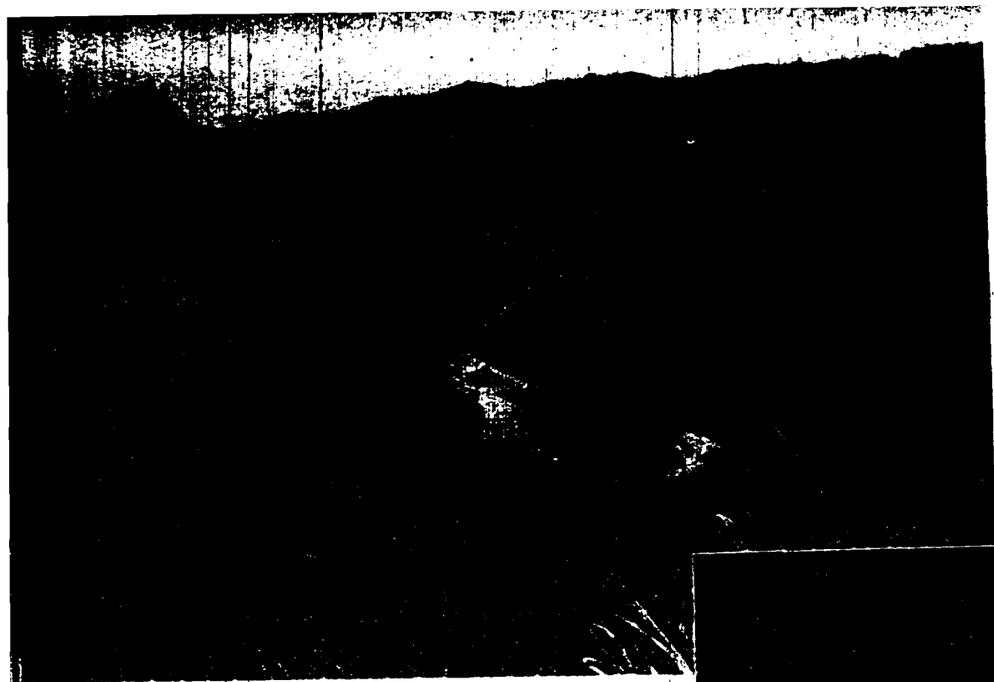
Signal Corps Photos

124th Cavalry Regiment in Burma

Transporting supplies on native pack animals, men of the 124th Cavalry trudge over barren wastes, cross precarious bamboo bridges and ford swollen streams in the heart of northern Burma. Pack supply has played significant rôle.

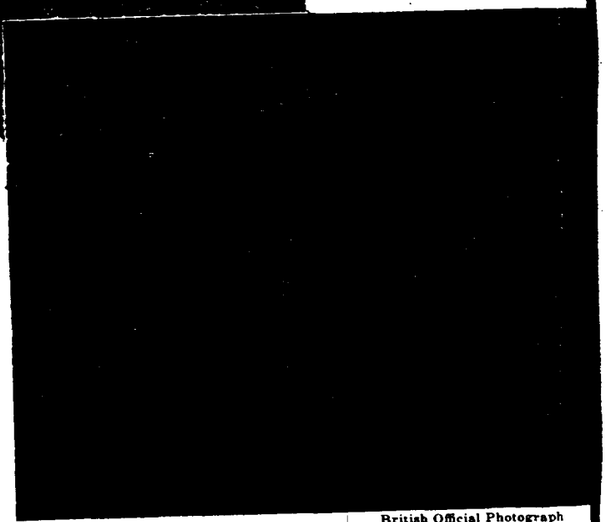
"Box" Strategy in Burma—

How the Japanese Gamble in India was Turned Into a Disastrous Defeat



Left. An Allied tank moves up along the twisting, precipitous Imphal-Ukhrul Road to reinforce Fourteenth Army troops during their steady advance toward beleaguered Kohima.

Indian Official Photo



British Official Photograph

These pictures illustrate the action which led to the relief of the 7th Indian Division, under General Messervy, which, with part of the 5th Division, and an echelon of cooks, muleteers and other noncombatants in the Ngakyedauk Pass, were cut off from all land supplies. They resisted all attacks by the Japs and were kept going for a month by supplies dropped from the air. Finally another division of the Fourteenth Army broke through and relieved General Messervy. At right, a Tommy and an Indian, spot Japs in "Bloody Nullan." The fierce action that developed here gave the gully its descriptive name.

*by Arthur Moore**

THE still unfinished Burma campaign of 1944, which began in an atmosphere of criticism and foreboding, is now recognized as a resounding Allied success—and this, in spite of the fact that the path of American and British coöperation in this theater has been full of booby traps. The Burma campaign, with India as its great supply base, and the freeing of communications with China as its objective, could have been only a joint Anglo-American enterprise.

Yet, because of all the countries involved, clouds of suspicion overhung the project. And national jealousies and sensitiveness are realities that have to be reckoned with—as booby traps have to be reckoned with. But neither the smoke nor the fire of suspicion succeeded in preventing the combined Allied effort from inflicting a great military defeat on the Japanese. In that defeat British and Indian troops played far more than a token part. Some 50,000 Japanese, fighting in bunkered hill positions or thick jungles, cannot be killed by token forces, nor can it be done without incurring heavy casualties in killed, wounded, and sick.

Arakan

Throughout the autumn and winter of 1943-44, the Japanese radio had been announcing the imminent invasion of India. Nothing happened until the beginning of February when the Japanese counterattacked in Arakan, where the Mayu Hills in Burma run up the coastal strip toward the frontier of India and the Province of Bengal. In January, as the 7th Indian Division was advancing south on the eastern side of the range, the Japanese began infiltrating in force behind them in an effort to cut their communications with the western side of the range at the Ngakyedauk Pass, generally known to the troops as the "Okeydoke" Pass.

West of the range was the 5th Indian Division, and the Japanese in their first rush also got behind those troops and cut the main Chittagong-Maungdaw Road.

Having cut off these two divisions from their base and from each other, the Japs then attacked the 7th Division with great fury, both frontally and from the rear. The position of the 7th was thus grim, and the Japanese took its annihilation for granted. But Major General Messervy, who commanded the division, had no thought of retreat. He had good troops of English county regiments, and a battalion of the King's Own Scottish Borderers. And he had big, tall Punjabs and small, short Gurkhas, who were not the men to give in.

An Indian division is normally composed of three mixed brigades, and a mixed brigade generally consists of two Indian battalion and one British battalion. In time of war there are occasional departures from this practice; for example, apart from the purely British divisions, the proportion of British troops in Indian divisions fighting in Burma is approximately 40 per cent. In an Indian battalion the troops are Indian, and the officers may be either British or Indian.

On February 5th, when the Japanese took the "Okeydoke" Pass, the 7th Division had only two days' rations. The pass, however, remained closed for three weeks, and hard and heavy fighting was necessary to get it back.

Meanwhile, farther to the rear, the divisional headquarters had been overrun and the administrative area in rear of the front line had become a battleground. General Messervy with his staff officers and clerks fought their way out in a hand-to-hand struggle, and, by wading down a river which was shoulder high, they slipped through the Japanese net and opened up a new headquarters. Here they formed a "box" and withstood all the attacks which four Japanese battalions hurled upon them.

The Japanese had assigned a large special task force for the whole operation, and their plan was first to wipe out the 7th Division east of the Mayu Range, and then the 5th on the other side. But the plan failed because, in the first phase, the 7th refused to give ground, and fought their enemy to a standstill. Secondly, the Japanese were quickly driven off the Chittagong-Maungdaw Road. After that they still interfered with supplies for the 5th Division but they could neither stop them, nor prevent reinforcements from arriving. Finally, although the Japanese at this period were still competing for air supremacy, they were heavily defeated in the air battles, and were unable to prevent the big transport planes from dropping supplies to the hard-pressed 7th.

The first fierce rush of the Japanese was quickly checked. Messervy's troops east of the range formed a "hedgehog," or rather a family of "Hedgehogs." This was a series of "boxes" and all the boxes were getting ammunition, food and gasoline dropped from the sky.

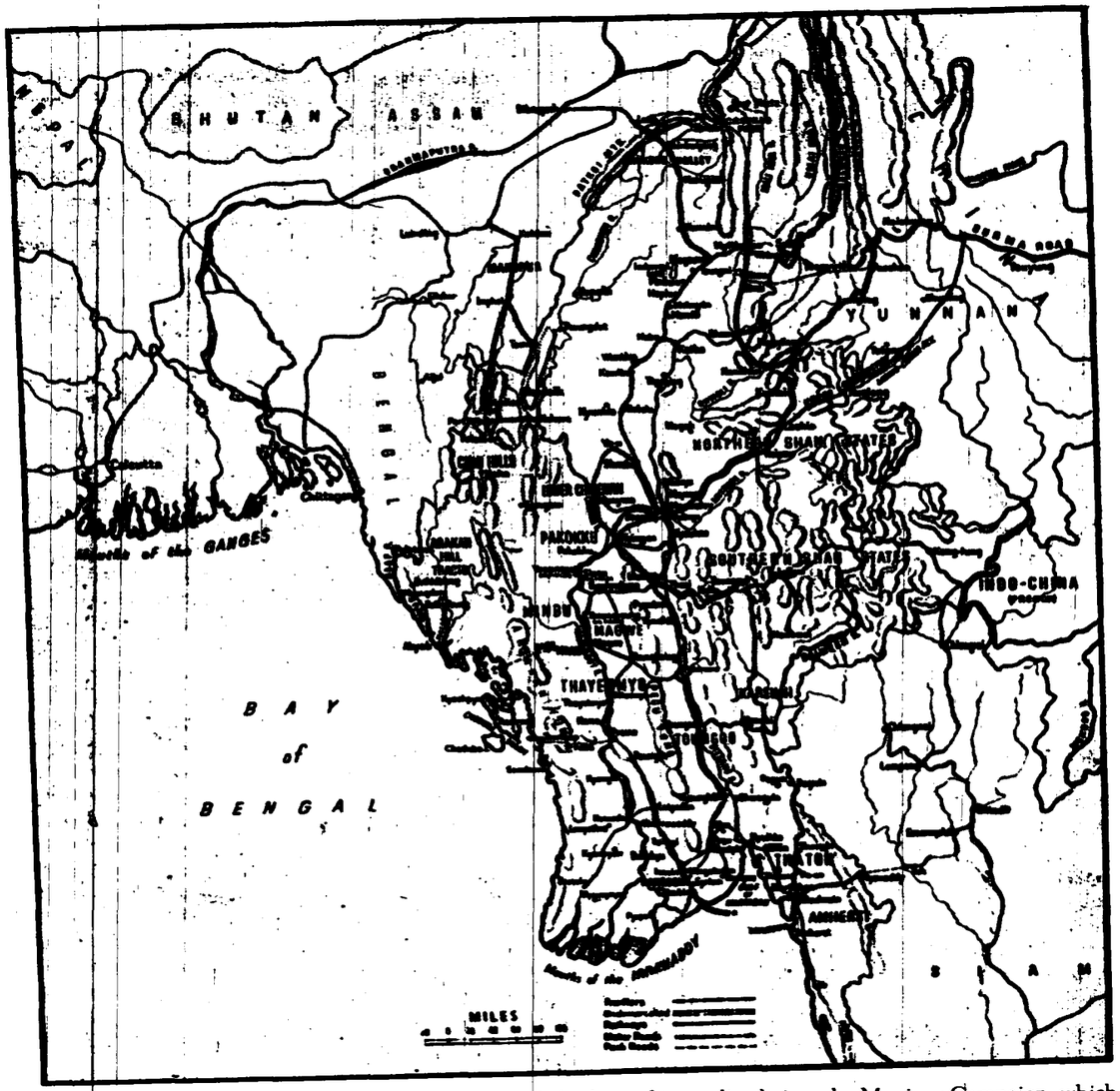
Soon the Japanese hounds became the hares. They were seriously weakened by the repeated attacks of the Scottish Borderers, the Punjabs and the Gurkhas supported by the 25th Dragoons, who manned the tanks. The Dragoons, British mechanized cavalry, also ferried gasoline from one "box" to another and kept the "party" going. Inside the administrative "box" of the headquarters area more Borderers and the West Yorkshires were soon counterattacking. Reinforced on the west of the range by fresh British troops from the north, the Lincolnshires swept straight up to within 150 yards of the crest.

The Japanese were caught in their own trap. Now it was they who were cut off from their lines of communication—but for them the sky rained neither food nor ammunition. Instead, it rained bombs. The Japs split into groups and shut themselves in bunkers, but the British and Indian troops encircled and systematically exterminated them. From east and west the drive to reopen the pass went on and, by February 24th, it was cleared.

Thus the Japanese offensive in the Arakan, the first half of their much advertised program for the invasion of India, lasted less than three weeks. Only remnants of the special task force got back to the original Japanese lines farther south.

There is little doubt that the Japanese command had calculated that in three weeks they would have at least captured the port of Chittagong in Bengal. They even announced its fall, though they were not within a hundred miles of it. The whole Jap scheme had been wrecked by the grim determination of British and Indian troops, the resourcefulness of their commanders, and Allied mastery of the air. This Allied air supremacy made Japanese ground infiltration tactics not only useless but dangerous to themselves. The Japanese had cut the British troops from their base, but the British had refused to surrender or to seek escape. Meanwhile, the air force had kept them supplied, while no air force supplied the Japanese who had gotten around in their rear; the Japs in turn were caught between two fires.

*Former editor of *The Statesman* (Calcutta); now press adviser to the Supreme Allied Command, Southeast Asia.



The American Brigadier General Old commanded the Dakotas, a mixed U. S. and British air force, which, for three weeks, kept the 7th Indian Division—infantry, artillery and tanks—supplied, and dropped over 1,500 tons of stores. The Royal Air Force and the Indian Air Force in Spitfires and Hurricanes escorted the Dakotas and saw to it that they got through safely; only one was lost in the whole three weeks, and that after it had dropped its supplies on the target. The reinforced Japanese Air Force was completely outfought, and since then there has been no serious challenge to Allied air supremacy anywhere on the Burma fronts. All this triumph of air supply was later repeated on a larger scale and for a longer period at Imphal.

Manipur

Although the Arakan Campaign had failed, the Japs lunged immediately into the Manipur Campaign, which they had originally planned as their second move in the program for the invasion of India, having counted on establishing a southern base in Bengal, before attacking farther north.

In Arakan the Japs had been flung back by British and Indian troops of the XV Corps. Now they attacked what was then the only other corps in General Slim's Fourteenth Army, the IV Corps, commanded by Lieutenant General Scoones. Like the XV Corps, it consisted of both British and Indian troops.

The Japanese objectives were the capture of Imphal and the Imphal plain; then by cutting the Bengal-Assam railway at Dimapur they expected to isolate General Stilwell's forces in the Hukawng Valley. General Stilwell's Ledo Road project depended on the success of the British and Indian troops of the Fourteenth Army

in preventing the Japanese from reaching their objectives.

From the south the Japanese thrust rapidly up the Tiddim Road and the Kabaw Valley against Imphal. Farther north they flung two fresh divisions across the Chindwin to blockade Imphal from the east and north and to cut the only road between Imphal and the railway at Dimapur. Advancing over fair-weather tracks, with less than three months between them and the monsoon, the Japs were taking great risks, and they knew it. Nowhere have they attacked with more suicidal determination and reckless disregard of losses.

In the south, the 17th Light Indian Division was ordered to withdraw northward from the Tiddim area to cover Imphal from the south. The Japanese were already in strong positions on the only road—a single, winding mountain road—between the division and Imphal. The Japs announced that the Indian division was trapped; then that it was annihilated. Both claims were false. The division took a month to blast its way through the Japanese lines to the Bishenpur area, south of Imphal, but it got through and killed Japanese by the hundreds, all the way. The R.A.F. fed and supplied the troops from the air, and the division's ground transport, which could not leave the only road, got more than 80 per cent of its cargo safely through.

Even more desperate fighting occurred farther north. Early in April the Japs poured through lightly guarded gaps and seized a long stretch of the Imphal-Dimapur road between Imphal and Kohima. They got possession of part of Kohima and, on the north side of the town, cut the road and isolated it from Dimapur.

Kohima, a lovely hill village in Assam, close to the border of Manipur State, was a convalescent camp and had but a small able-bodied garrison. Convalescents and able-bodied, they fought like tigers, against terrific odds, and with their main water supply cut off.

The transport planes flew over and kept them supplied; the garrison knew that reinforcements were on the way. Relief troops marched up from Dimapur and broke in to their aid, but the fight for Kohima continued. Reinforcements were also rushed up for Imphal by air. The big Dakotas flew into Imphal the whole of the 5th Indian Division which, a month earlier, had been fighting in Arakan. Soon there was another British and Indian Corps, the XXXIII, working from the Kohima end. The Japs, thrusting desperately and yet more desperately, raced against time and the breaking of the rains. But their efforts were of no avail against the unbreakable resolution on the ground, fortified by the steady supply from the air.

Jap Retreat from India

By the beginning of May the Japanese gamble had failed. The tide turned, and their slow and dogged retreat began. The rains were coming, and the roads were going. The British Fourteenth Army turned fiercely upon its enemy and, driving the Japs from foxhole to foxhole and bunker to bunker, killed them by the score.

By this time the XXXIII Corps from Kohima was thrusting down the road to Imphal, and the IV Corps from Imphal was driving up to meet them. As they met on the 22nd of June, the last threat to the railway and the Ledo Road disappeared.

Thenceforward it was merely a case of finding and killing Japs. Both sides had to struggle with thick jungle, blinding rain, rivers in flood, roads and tracks that were a series of ponds connected by mud. East and south toward the Chindwin Valley fled the starving remnants of two Japanese divisions. In mid-July the Jap division south of Imphal also broke and turned south. Hacking at its heels, British and Indian comrades in arms drove it back on its track down the full length of the Tiddim Road and in mid-October captured Tiddim itself. On the whole front, from Arakan to Manipur, approximately 30,000 Japanese were killed up to mid-September. That is but a fraction of the total wastage in the equivalent of 5 Japanese divisions deployed in Arakan and Manipur.

Indian Official Photo

By wading through mud and water, penetrating thick jungles, rebuilding blown up bridges or putting up new ones, men of the Fourteenth Army pushed the Japs back into Burma. In the north they crossed the India-Burma border on August 20. Indian soldiers of the Fourteenth Army round up supplies dropped to them by planes of the Southeast Asia Carrier Command. Parachutes carrying supplies often get entangled in trees, bushes and telephone wires.

Packing Along Salween Trails

The history of operations along the Salween River is a story of both men and animals—a saga of the successful solution of what, many times, seemed to be unsolvable problems.

by Lieutenant Colonel Reginald L. Hatt, Cavalry

Signal Corps Photos

Figure 1. Terrain was difficult; the going hazardous—"Even the sure-footed pack-animals sometimes slipped from the trail and fell to the valley below." Above, Americans and Chinese use ropes to assist animals down defile.

Author's Note

This brief article will give the reader some idea of the terrain over which we are operating, the magnitude of the problems which have been and are being faced by the members of the American-Chinese team (over in the CBI). It will also give an idea of the types of animals, their training and conditioning, their capabilities and limitations, and their handling.

I have the utmost respect and admiration for the men who operate in this combat area. They must wage an unceasing war against not only the enemy, but also the weather, disease and the terrain. I have, also, the utmost respect for the rugged little animals, without which the operations would have fallen short of the efficiency expected.

Ours is a rugged battle ground. Insects, disease and weather interfere with operations. Problems, met no other place in the world, arise. But, no problems have arisen which have not been solved.—Reginald L. Hatt, Lt. Colonel, Cavalry.

"THE Salween River area is the highest battle ground in the world." This statement is verified by just one trip over the trails which traverse the theater of operations. On this terrain, war was waged under the most primitive, realistic and terrible conditions imaginable. There were many difficulties, but here, as in any other operational area, the action had to be supported if it was to be successful. Supplies had to be pushed up to the using troops.

Terrain

Elevations of some of the key points tell their own story. At Myitkyina on the Irrawaddy, the elevation is 467 feet; Tengchung is at 6,435 feet. In between these points ranges rise to elevations of from 8,412 to 11,167 feet. From Tengchung to Paoshan across the Salween is only 70 kilometers by airline but about 100 miles by road. Paoshan's altitude is 5,600 feet. In between Tengchung and Paoshan two ranges rise to more than 7,500 feet, while the valley of the river is only 2,500 feet. This gives an idea of the terrain which presented nightmarish problems in the operations. Supplies had to reach the front in spite of problems of transport.

The transportation problem was aggravated by several conditions. The Burma Road had been destroyed over much of its length by the contesting armies. The former bridge over the Salween had been replaced by a substitute affair, not too substantial, but usable. Too, there was a scarcity of trucks.

Trucks *did* move along the portion of the Burma Road left in a usable condition. But, they were few in number. Most were of the 1½-ton variety, though they were usually overloaded. There were a few weapons carriers and jeeps. All vehicles were in urgent need of repairs, and spare parts were practically non-existent.

Pack animals took up the burden of supply from the point beyond which the trucks could not go and, in some cases, were used to augment the carrying capacity of the trucks in the rear areas. After the fall of Tengchung, pack animals could make the trip from Paoshan to Tengchung in from 5 to 6 days, depending upon the weather and the condition of the animals. Supplementing the pack animals and, at times, replacing them, were the human carriers—the coolies.

It is almost impossible to describe the terrain over which the supplies had to be moved. The trails crawled up slopes which not even the pack animals could make under load. In such cases, the packs were removed and were carried up by men. Frequently, the trails followed the stream courses. Then, the going was still more difficult and hazardous. Even the sure-footed pack animals sometimes slipped from the trail and fell to the valley below! Trails were especially difficult when wet and slippery from the rains of the "monsoon," and travel was slow and dangerous. Men and animals wading through torrential streams, often slipped and fell on slippery rocks just beneath the waters.

Only men filled with sheer intestinal fortitude could deliver the supreme amount of effort required. The animals, too, must have been imbued with some of the same quality, judging by the wonderful work they performed. Figures 1 and 2 illustrate some of the terrain difficulties met hourly along the trails in the operational area. Both men and animals *had* to be—and were good!

Animals

Now for the pack animals. They range in age from 3 to 8 years. They are, in most cases, stallions. Their weight will vary from 350 to 500 pounds and they will average from 10 to 12 hands high. Their general conformation is good—narrow in the rump, stocky, short barreled, usually with good legs. Their temperament is, initially, not good at all, but they react favorably to kind treatment and careful handling.

These shaggy little animals are bought in the local markets. I visited one of these markets just to see what we were getting for the money expended. Each animal costs, approximately, $600.00 (gold)! So each represents quite an investment. The work of the pack horse has been so very valuable, however, that I am of the opinion that the excessive cost has been justified. The campaign along the Salween River would surely have "bogged down" had it not been for these sure-footed allies!

During the Salween Campaign, the loads carried by the pack animals varied in direct ratio to the amount of forage available. If there was sufficient forage, the load was about 120 pounds. But most of the time, the loads had to be pared down to about 80 pounds.

There are, as may well be imagined, many veterinary problems in connection with these animals. After purchase, the animals are neck-branded and are all re-shod. The feet are usually in rather poor condition as a result of the Chinese habit of using excessive nailing in the toe. The walls of the hoof, in many cases are split badly. Corrective shoeing, in some cases, must be used.

Figure 2. "Trails were especially difficult when wet and slippery from the rains of the monsoon, and travel was slow and dangerous." At right Americans and Chinese pull two animals from a mud bog into which they have floundered.

Figure 3. Chinese packsaddle used along Salween is of ancient design; consists of saddle pad, saddle and pack carrier. In use by the Chinese for centuries, its style still meets demands of terrain and weather in northern Burma.

Following the application of the shoes, the animals are given the test for glanders. About 10% react to this test. All of the animals are also given the vaccine against anthrax. They are put on regular feed—twice daily—at 0730 and 1630. The ration used in the Kunming area consists almost solely of a variety of bean, slightly smaller than the lima bean, 8- to 10-pound amounts daily. To this is added a tablespoon of salt, daily. Small amounts of padi straw complete the ration. The ration is supplemented by grazing where possible.

Regular grooming is initiated immediately upon receipt of the animal. This is usually done by men detailed from the units to which the animals are assigned.

The combination of veterinary attention, regularity of feeding and grooming, and the careful, kind handling soon transform these shaggy little outlaws into good military pack animals. They soon are ready for the trials and tribulations of the trails they are to traverse.

Conditions out in the field are, of course, quite different from those at the rear bases. The forage is much different. Along the Salween, beans are not available off the Burma Road. The ration, in such cases, consists of unhulled rice, rice straw and grass (when available). There is usually no salt for the men, much less the animals. About 6 pounds of rice is the daily allowance for each animal and very frequently even that small amount is not available. Grazing is not possible much of the time, either because of the absence of grass or the exigencies of the tactical situation. Grooming of the animals is not too well observed except in artillery units and in the American Liaison teams, serving with the Chinese.

Chinese Packsaddle

The packsaddle is a far-cry from the Phillips. Though the artillery units do have the Phillips, most supplies were carried on the Chinese packsaddle.

Since readers of The Cavalry Journal are familiar with the Phillips, its construction and its efficiency, I shall not devote space to it. I shall, however, try to describe the Chinese packsaddle in such a manner that it can be visualized and appreciated.

The design of this saddle is an old native one and has been used all over China for many, many years. It still is working out very efficiently. It is composed of three major parts. These are the saddle pad, the saddle itself, and the pack carrier. (See Figure 4.) The saddle

Figure 4. Two men place load on saddle. In an emergency this can be handled by a single individual. Note breast strap and crupper. Pack carrier is easily removed at halts.

pad is about three-fourths inch in thickness, made of padi straw covered with canvas or heavy cloth. The saddle is a small wooden affair, more like a rack than a saddle. It is fitted to the animal's back as soon after the receipt of the animal as possible. The pack carrier, which has long wooden legs, fits on the saddle securely. It is easily and quickly removed by two men, but can be handled by one man in an emergency.

Usually the pack is placed on the carrier before it is put on the animal. Figure 3 shows the usual method of lashing used. The pack, of course, must be balanced carefully, but the packers get to be experts at this. After packing and lashing are completed, the load is placed

on the animal's back as shown in Figure 4. Figure 5 shows the pack animal completely loaded and ready for the trail.

This saddle has demonstrated its efficiency for our supply purposes. Over the terrain along the Salween, it has worked out better than any other type. In case the animal slips and falls, the load is usually thrown free, and can sometimes be recovered, even though the animal cannot be. As shown in Figure 2, the design facilitates quick removal in emergencies. It also facilitates the removal when the opportunity presents itself for a brief rest along the trail. Because of the steepness of the slopes, these rests are necessarily very frequent. At such halts, the major portions of the loads are removed easily and quickly by raising the pack carrier and load from the saddle. At night halts, only such portions of the baggage needed are unpacked from the carrier.

On the Trail

The operation of a pack train is interesting. Early in the morning the packers make their preparations for the trail. Figure 6 shows these preparations, but it cannot show the hectic nature, the seeming confusion, and the noise attendant upon such preparations. But, if permitted to do things as they have done them for years, these Chinese pack train drivers will do an excellent and workmanlike job. They cannot and will not be hurried or harried. But, the train *will* eventually get on

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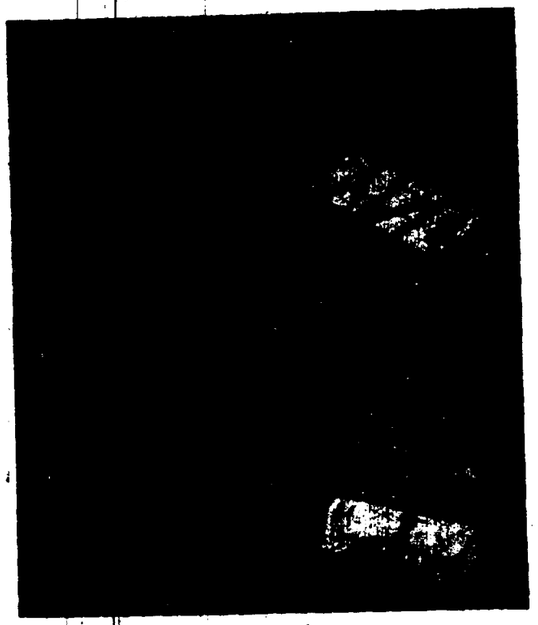
One must really see the pack animals in action to appreciate their amazing strength, stamina and efficiency. Each is an individual. Each has his own idea of what he wants to do and how he wants to do it. Some placidly follow the leader, but others must be continuously led or driven. Some are quarrelsome, and bite the animals ahead or behind them if they get too close; others seemingly do not care about anything except getting to the end of the march. For a newly arrived American soldier, all present a major problem in animal psychology. The animals have, seemingly, accumulated a large dose of the traditional Chinese patience. They cannot be forced unduly, but will go forward steadily. They plod upward along the trail, surmounting all difficulties, side by side with their American or Chinese masters.

Distribution of loads throughout the train has been learned from experience. Caution must be exercised so that the loss of one pack will not be too badly felt. This is particularly true when carrying valuable medical supplies, which are hard to get and very difficult to handle in this type of packing. Much of the supplies arriving from the States must be repacked completely in order to provide suitable loads for both animal and coolie transport. The packages must balance to avoid sore backs on the animal or to avoid the overbalancing of the animal when it is negotiating some of the turns on the mountain ledges. If supplies are not distributed correctly throughout the pack train, there may be excessive losses of some types of badly needed supplies. If the loads are not distributed correctly on the animal, there may arise accidents which will cause the loss of the supplies *and* the loss of the animal.



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RED ARMY COSSACKS

by Major Robert B. Rigg, Cavalry

PART V—CAVALRY, AIR AND ARMOR

"Determined surprise attacks in close cooperation with fire support and mechanized forces will secure the greatest cavalry success."

—Red Army Combat Regulations for Cavalry
Chapt. I, Par. 4

Mobility

"THE idea that cavalry cannot keep up with armored forces is refuted by the frequent combinations of cavalry and armored forces in Russia. When in contact or near contact with the enemy no tanks or armored vehicles of any kind are going to travel on roads at thirty or forty miles an hour in the direction of the enemy. In wide encircling movements, cavalry can often be assembled beforehand in a convenient adjacent area or moved on interior lines across country. When cavalry and armored forces cannot be kept close together the cavalry can be given a separate mission and moved on interior lines to connect the large infantry formations with the armored forces, thus acting as a link."

Brigadier General H. S. Hawkins.

These words of General Hawkins from a previous issue of The Cavalry Journal bear repeating, for they not only contribute important truths under this heading, but they also typify the kind of logic and replies that one receives when talking to Red Army officers on the subject. Red Army officers of all arms display a great deal of enthusiasm for their cavalry, and they appear to be well informed on the capabilities of the arm. Having seen Red cavalry in action on the front, or having been close to the actual demonstration of cavalry usefulness, the Russian officers' approach to the subject is far different from that of many American officers who have only read of horse cavalry in action.

The average Soviet officer will wonder *why* arguments are sought to support the cavalry arm, or *why* the question is asked, "Can cavalry keep up with armored vehicles?" The usual Russian answer to such a query will be, "Not in a race but, properly employed and coördinated, the cavalry fits well into the combat picture, and many times it plays a rôle that other arms cannot."

Vulnerability to Air Attack

Armed as they are now, the Cossacks are no more vulnerable to air attack than is the infantry. Like most troops, when in close combat, Cossacks do the greater part of their moving at night so as to avoid aerial observation and to insure tactical surprise. On the march cavalry can disperse easier and faster than infantry. The Cossacks have seen tankmen "dig their vehicles in" and camouflage them. Some instances are on record where, in open country, the Cossacks have done the same for their horses. They have dug long trenches concealing squads, and, on occasions have utilized former infantry trenches; tops of the trenches were then covered. In general, the Russian cavalry relies on its mobility to protect it from heavy air attack.

Red cavalry field manuals describe regimental AA defense as composed of: The VNOS (Air observation, liaison and report) Service, AA weapons, march procedure, and concealment. The VNOS is equivalent to the U. S. "air scout system." It consists of an outpost system, scouts, patrols, etc., whose duty is to watch for and warn the unit of enemy air threats. In addition to the VNOS each squadron has its own scouts for general security purposes. Both are obliged to coöperate closely with each other.

There are several 20mm AA guns with the Cossack sotnia, although the range of this weapon is limited. The Maxim machine guns on the *tachanki* are mounted so that they can be elevated for AA fire. They are effective up to a range of 1,650 yards. The guns must also have the AA sight, which differs from the sight used for ground targets. The long-barreled AT rifle (also used by the infantry for the same AA purpose) on the pack horse is so mounted that it can be unhinged and fired AA with the animal providing the mount.

One of the severest aerial attacks known to have been made on a Cossack corps occurred during the battles in and around Taganrog. The enemy air attack came after Lt. Gen. Kirichenko's Kuban Cossack Corps was well on its way to success in German rear areas. So serious was the Cossack threat that evidently a high German command ordered a bomber force to wipe out the cavalry. According to the Soviet account, the enemy divided the cavalry corps sector into squares, and then conducted a thorough bombing (at a height beyond range of the cavalry's AA guns) of each square. The Cossacks suffered heavy losses in men and animals, but they did manage to complete their missions successfully, as evidenced by the citation they later received.

Cavalry vs. German Armor

Today the Cossack division is well equipped to protect itself against enemy armored attacks, although the staying power of cavalry under such circumstances is limited. The .50 caliber long-barreled AT rifle carried by pack horse provides the AT protection within the Cossack squadron. The horse-drawn 45mm gun is the regimental AT weapon, while the 76mm field artillery pieces are brought into play where necessary. There is recent information to the effect that the cavalry has a new model 45mm AT gun.

In 1941 and early 1942 the Cossacks and Red cavalry managed to survive a very critical period during which they were inadequately equipped with AT weapons. These circumstances caused them to resort to some rather unorthodox AT measures, and to the author's knowledge the Cossacks were the first cavalrymen to use "Molotov Cocktails" successfully against tanks. The tactical merit of such procedure was short-lived, however.

Soviet reports quite frequently mention cavalry units repulsing enemy armored attacks, but they never give details of the exact rôle of Soviet supporting units which are no doubt required.

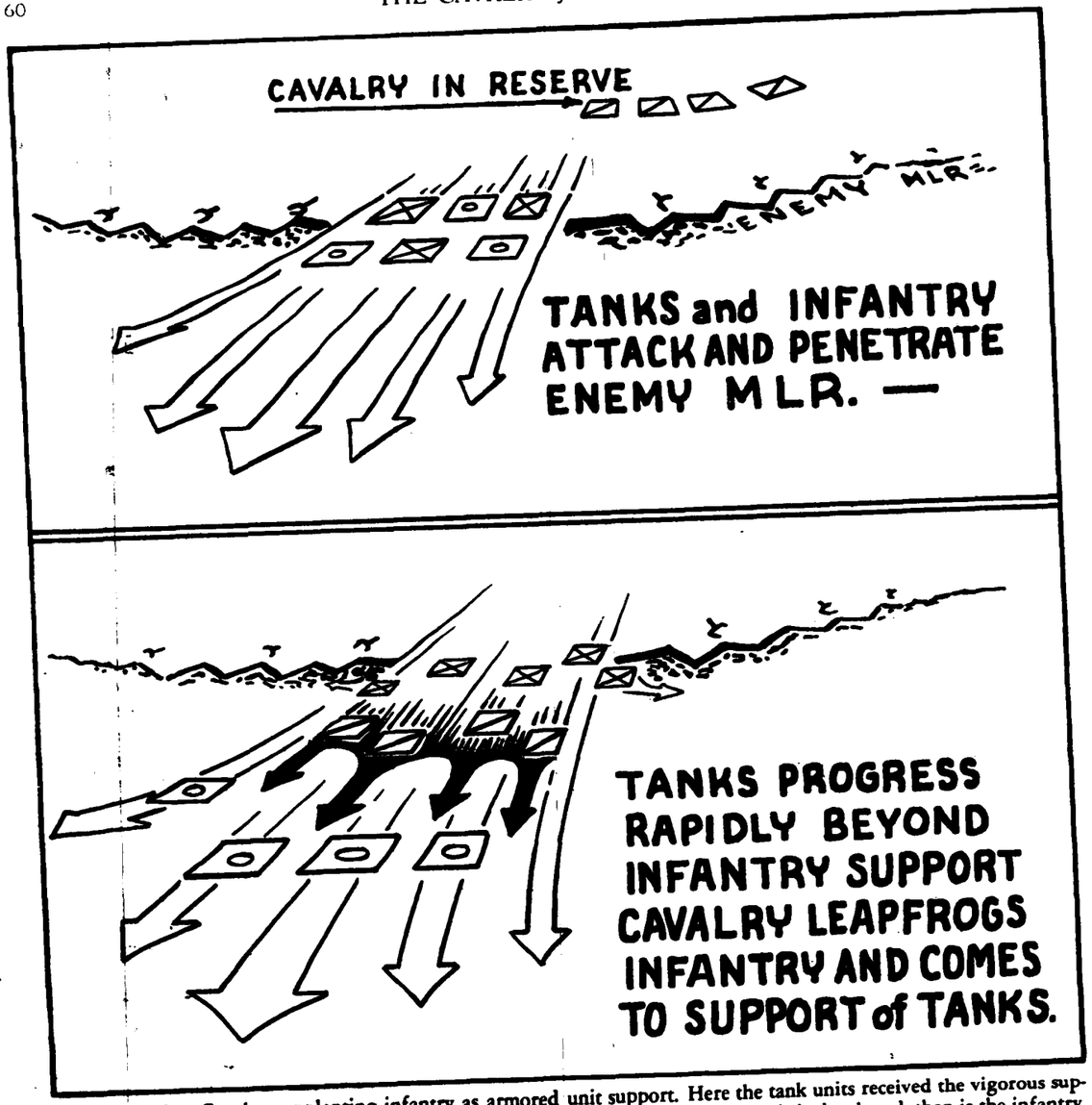
Red Army combat regulations stress continual observation on the part of cavalry units for mechanized threats. These regulations state, "By virtue of the ability of tanks to strike in depth through troop dispositions, cavalry is obligated at all times to be prepared to repulse tank attacks."

As outlined in a present Russian cavalry field manual, tank attacks must be repulsed by:

1. Quickly utilizing all artillery at the moment of attack.
2. Pushing antitank observation forces forward to the threatened points. (In a regiment this would be a platoon reinforced by guns from the regimental artillery, heavy machine guns, sappers with AT mines, and the AT guns.)

On the second Baltic front in August, 1944 Soviet self-propelled guns, overcoming natural and artificial obstructions, make their way through a forest. This 42-ton KV chassis mounts a 152mm M1937 howitzer. Gun is used both as assault gun and as field artillery; supports cavalry.

Sovfoto



Figures 4 and 5. Cavalry supplanting infantry as armored unit support. Here the tank units received the vigorous support of cavalry whose mobility is more in key with the armored tempo, if a pursuit is developed, than is the infantry.

3. Augmenting the squadrons with guns of the regimental artillery.
4. Utilizing the cavalry's own tanks for counterattack.
5. Organizing ambushes with groups of selected men armed with grenades, armor-piercing bullets, etc. (Where they can, these men are also obliged to construct obstacles.)
6. Using smoke for protecting cavalry units, and for screening any of their countermoves or maneuvers.
7. Placing the led horses in areas where the tanks cannot penetrate.

The Horse-Armor Combination

In July, 1944, the Soviet press announced that a Kuban Cossack tank regiment commanded by a Lt. Colonel Shapor was in action as a part of a larger Kuban Cossack formation containing horse cavalry. Late in August a Don Cossack tank unit was fighting in General Gorshkov's Don Cossack-Cavalry Corps in Romania.

Prior to this war, each cavalry division included an independent mechanized regiment. In view of the successful combat achievements of the tank-cavalry team it is possible that the Red Army is again incorporating a mechanized regiment in the cavalry division. Information is difficult to secure, however, and nothing has been discovered which will confirm this fact. During the greater part of this war, the tank-cavalry teams have been made up by *attaching* armored elements to horse cavalry units, or vice versa.

Supplanting Infantry with Cavalry

Early in the war the Red Army saw that its tank attacks could be accelerated by substituting horsemen for infantrymen. Heretofore a tank attack had been more or less keyed to the marching rate of infantry, or approximately 2½ miles per hour. By the use of cavalry the tempo of attack was increased to about 5 mph. This was one factor which influenced the creation of the now famous tank-cavalry team. It should be noted that the Red Army has given *much attention* to the matter of *tank support*. For example, the Russian Army initiated the practice of carrying infantrymen on tanks, and during the past year accounts have been heard of armored vehicles towing special trailers loaded with infantry.

As illustrated in Fig. 5, Cossacks or other cavalry units are used to supplant infantry when the latter cannot keep up with a tank attack or pursuit. For example, in an attack against a well fortified line, infantry is the proper and usual supporting element of armor. When the attack is successful, the tank units continue their thrusts and pursuit. The infantry, worn down by the initial attack, may be unfit or too occupied with a mopping up action to continue far in support of the tanks. The Red Army generally solves this problem in one of two ways.

One is to have the infantry remount the tanks as fresh infantry units arrive to occupy and consolidate the territory worn by the initial group. If the initial infantry units are badly decimated or disorganized, there is some risk to this procedure.

The second method is to dispatch cavalry to the support of the progressing tanks, as shown in Fig. 5. An example of this type of employment occurred at Korsun-Shevchenkovsky in March, 1944, when the infantry was unable to keep up with a highly successful tank pursuit and cavalry supplanted the slower moving foot soldiers.

Flank Attack

Another combat combination of the tank-cavalry team is illustrated by the diagram in Fig. 6. Here cavalry follows close in wake of an infantry-tank attack, and as soon as the enemy lines have been breached the cavalry extends the flanks of the breakthrough neck.

This is one aspect of cavalry's rôle in finishing the breaching of a position. The value of cavalry over infantry here is that the former, possessing great speed and mobility, can pursue the enemy remnants reeling back from the main assault and prevent them from having time to fortify and create new positions.

Cavalry's speed also insures greater surprise in attacking other enemy positions from the flank. An example of such employment occurred at the Ingulets River (March 1944) when cavalry was poured into a breach, and it crossed very muddy terrain to take many enemy positions and several fortified towns in rear of the hostile main line of resistance.

During the highly successful summer offensives in

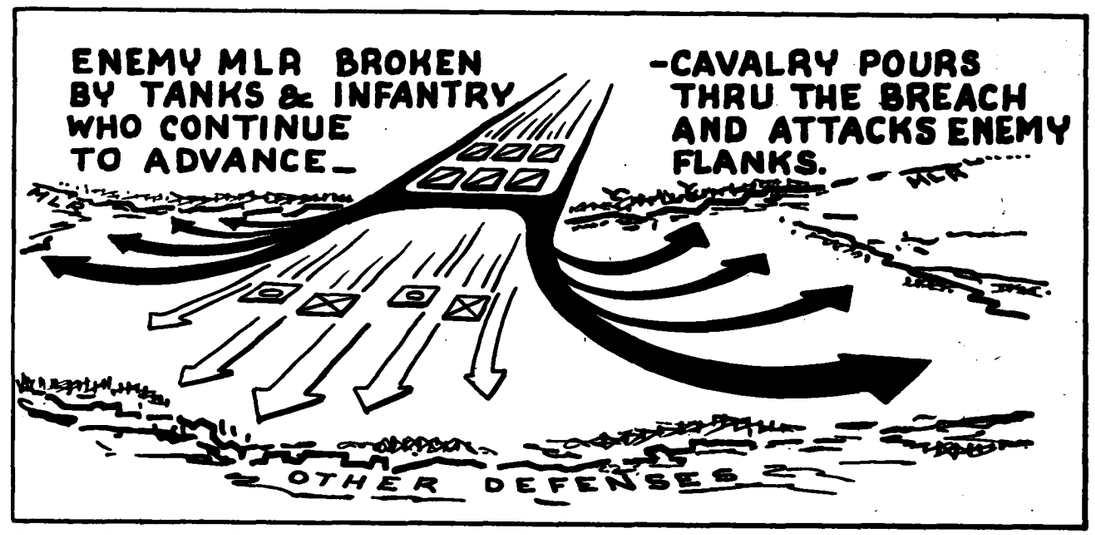


Figure 6. Cavalry extends the flanks of a tank-infantry breakthrough, while tanks and infantry continue the advance.

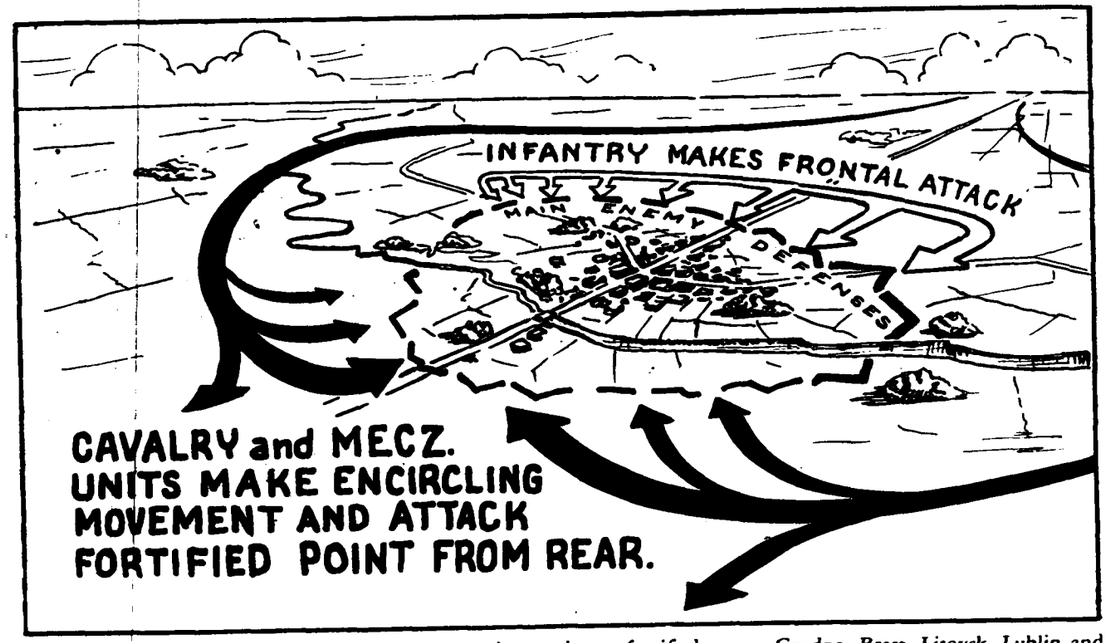


Figure 7. The tank-cavalry-infantry team in operation against a fortified town. Grodno, Brest, Litovsk, Lublin and other cities were taken by this combination of arms and encircling maneuver during the Russian offensives of 1944.

1944, the Red Army captured a great many strongly fortified cities and towns in minimum periods of time. Its tactics were not new, but *skilful use* was made of the tank-cavalry combination. While the infantry pressed forward and occupied the main enemy strength of a fortified town, cavalry and tank units swung wide around to the flank. Usually, the flanks, being weaker, were attacked and cut. Thus the armor-horse teams swung in toward the rear of the fortified point, and not only attacked the strong point from its weakest line of defense, but also cut off its communications and probable line of retreat. The Skala pocket in April 1944, Minsk in 1944, Roman, Bacau, Focsan and Barlad of August 1944 are some of the many fortified positions taken by this procedure.

Attack Technique

From the cavalry's standpoint a mounted charge in conjunction with tanks is the most successful type of *strictly mounted* action in which horsemen today can participate. (Space does not permit the very deserving mention that should be made of the artillery and air rôle in providing the barrages which always precede these attacks.)

When attacking strong enemy defenses, the first wave of an armor-horse assault is composed entirely of tanks. Once the attack is launched, the horsemen follow their armor at a fairly close interval. Russian cavalry and tank officers agree that the interval between tank and horse echelons must not be too great; otherwise, the enemy may have a chance to cut the cavalry element off from its armor.

Where the objective is *not* a well-organized defense, cavalrymen are mixed with the initial tank echelon. The latter is followed by at least one other echelon similarly organized. Care is taken to place extra armored vehicles on the flank so as to protect the more vulnerable horsemen from flanking fire.

In the assault, the tank fire power is mainly directed at the larger targets, while the mounted cavalry makes enemy personnel its objective. Horse units must, and do, dismount to fight on foot during these assaults.

Secondary missions of cavalry vary with the success of the attacks. Where only limited gains can be made, the cavalry consolidates the forward ground won and holds the area until relieved by infantry. Where complete breakthroughs are accomplished the horsemen proceed forward with the mechanized units.

Where an attack is slowed down or stopped, the cavalry seeks soft spots or takes to the more difficult terrain in an effort to penetrate in and around the enemy resistance. In instances where cavalry and other arms are successful against hostile forces, the cavalry attempts to cut the enemy's way of retreat. The cavalry's cross-country mobility is an asset in pursuing opposing dismounted forces who may take to swamps, ravines and other difficult terrain. The Russian cavalry commander's choice is always to strike from the flanks rather than frontally.

It is always important to visualize cavalry in terms of

divisions and corps—with all its components, AT weapons, mortars and artillery, which balance the present day cavalry team.

The Small Mobile Teams

The flexibility of the armor-horse combat combination is well demonstrated by a method employed on the Third Ukrainian Front in the first two months of 1944. Special teams were organized to pursue the retreating Germans. General Malinovsky's commanders created a *mass* of many small combat groups designed to cut up the German units in and about the Bug and Ingulets Rivers. These groups consisted of two tanks (or self-propelled guns) carrying tommy gunners, plus mounted cavalrymen. Some of the latter included cavalry trench mortar crews and machine gunners in their *tachanki*. The combination proved successful by reason of the combined mobility. They were employed in a mass push, and while not all teams were able to penetrate the enemy defenses, a great many did.

Once the situation was fluid, these mobile combat groups proceeded to wreak havoc on the enemy, and they capitalized on the confusion which they created in the enemy ranks. In one area a group of these teams attacked a German motorized column on the road. Striking at this winding train of retreating enemy vehicles a group of these small tank-cavalry teams broke up the column into a series of isolated and surrounded islands of resistance, which were then attacked by other troops and annihilated.

Summary

During the year of 1944 the tank-cavalry team participated in the liberation of Razdelnaya, Odessa, Kamenets, Podolsk, Lublin, Minsk, Slonim, Grodno, Zolochev, Brodi, Krasny, Brest-Litovsk, Focsan, Roman, Barlad Debretsen, and many additional small places —not to mention the defeats inflicted on the enemy in the course of this fighting. It is interesting to note, that at Debretsen in October 1944 no less than ten cavalry divisional commanders were cited by Marshal Stalin, and most of these were commanders of Cossack units. More cavalry units participated in this battle than were ever announced before.

The story of the Cossacks' combat achievements in World War II is still unfinished. Furthermore, details are lacking on what Russian cavalry has already performed in battle. But, when military historians begin to write the account of this war, the Cossacks and Red cavalry will have provided more than enough documentation to prove cavalry's usefulness in the "so-called" machine war.

> **"Tanks and armored cars, while crushing and destroying enemy personnel and fire power, make a way (for) and provide direct support for the cavalry. In separate circumstances cavalry can be employed on independent missions such as reconnaissance, attacking lone enemy groups, etc. The greatest success in battle is attained by concentrated attacks of tanks and armored cars. The limit of division of tanks is the squadron (U. S. troop), but separate tank and armored car platoons can be attached to cavalry units and detachments which are to carry out independent missions."**
>
> —*Red Army Combat Regulations for the Cavalry Squadron and Regiment*, Chapt. I, par. 14.

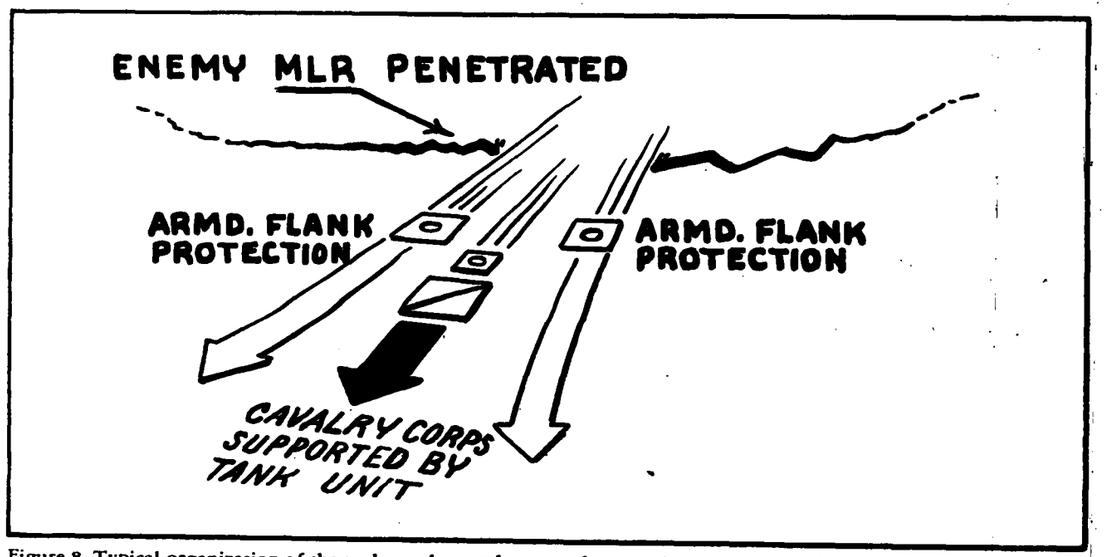


Figure 8. Typical organization of the tank-cavalry combat team for pursuit of enemy combines armor with cavalry corps.

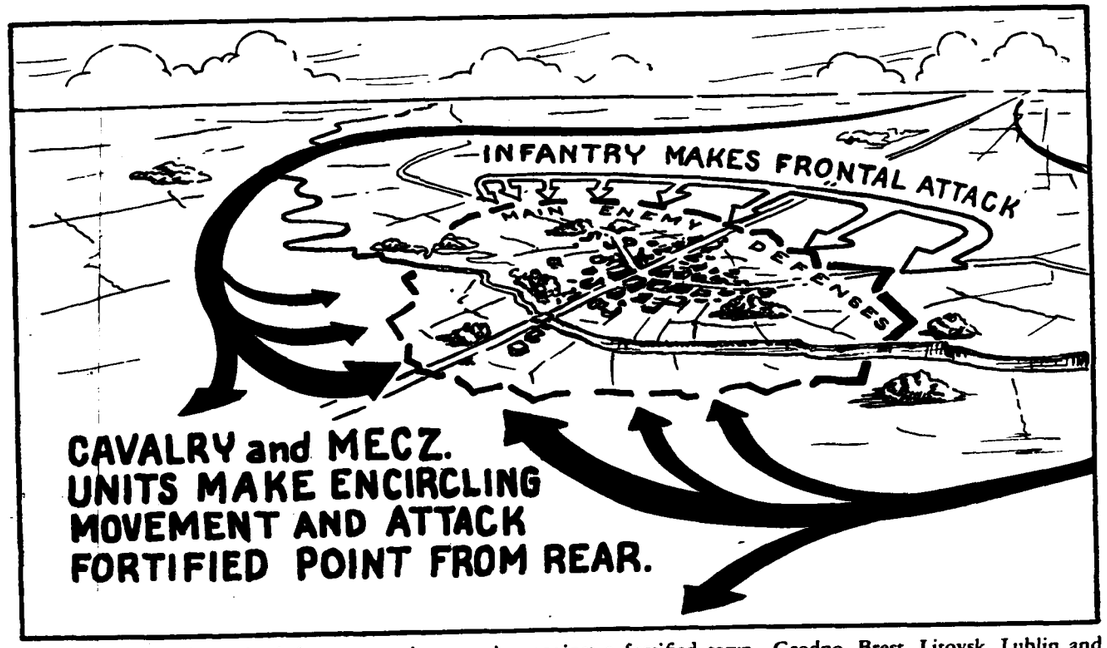


Figure 7. The tank-cavalry-infantry team in operation against a fortified town. Grodno, Brest, Litovsk, Lublin and other cities were taken by this combination of arms and encircling maneuver during the Russian offensives of 1944.

1944, the Red Army captured a great many strongly fortified cities and towns in minimum periods of time. Its tactics were not new, but *skilful use* was made of the tank-cavalry combination. While the infantry pressed forward and occupied the main enemy strength of a fortified town, cavalry and tank units swung wide around to the flank. Usually, the flanks, being weaker, were attacked and cut. Thus the armor-horse teams swung in toward the rear of the fortified point, and not only attacked the strong point from its weakest line of defense, but also cut off its communications and probable line of retreat. The Skala pocket in April 1944, Minsk in 1944, Roman, Bacau, Focsan and Barlad of August 1944 are some of the many fortified positions taken by this procedure.

Attack Technique

From the cavalry's standpoint a mounted charge in conjunction with tanks is the most successful type of *strictly mounted* action in which horsemen today can participate. (Space does not permit the very deserving mention that should be made of the artillery and air rôle in providing the barrages which always precede these attacks.)

When attacking strong enemy defenses, the first wave of an armor-horse assault is composed entirely of tanks. Once the attack is launched, the horsemen follow their armor at a fairly close interval. Russian cavalry and tank officers agree that the interval between tank and horse echelons must not be too great; otherwise, the enemy may have a chance to cut the cavalry element off from its armor.

Where the objective is *not* a well-organized defense, cavalrymen are mixed with the initial tank echelon. The latter is followed by at least one other echelon similarly organized. Care is taken to place extra armored vehicles on the flank so as to protect the more vulnerable horsemen from flanking fire.

In the assault, the tank fire power is mainly directed at the larger targets, while the mounted cavalry makes enemy personnel its objective. Horse units must, and do, dismount to fight on foot during these assaults.

Secondary missions of cavalry vary with the success of the attacks. Where only limited gains can be made, the cavalry consolidates the forward ground won and holds the area until relieved by infantry. Where complete breakthroughs are accomplished the horsemen proceed forward with the mechanized units.

Where an attack is slowed down or stopped, the cavalry seeks soft spots or takes to the more difficult terrain in an effort to penetrate in and around the enemy resistance. In instances where cavalry and other arms are successful against hostile forces, the cavalry attempts to cut the enemy's way of retreat. The cavalry's cross-country mobility is an asset in pursuing opposing dismounted forces who may take to swamps, ravines and other difficult terrain. The Russian cavalry commander's choice is always to strike from the flanks rather than frontally.

It is always important to visualize cavalry in terms of

divisions and corps—with all its components, AT weapons, mortars and artillery, which balance the present day cavalry team.

The Small Mobile Teams

The flexibility of the armor-horse combat combination is well demonstrated by a method employed on the Third Ukrainian Front in the first two months of 1944. Special teams were organized to pursue the retreating Germans. General Malinovsky's commanders created a *mass* of many small combat groups designed to cut up the German units in and about the Bug and Ingulets Rivers. These groups consisted of two tanks (or self-propelled guns) carrying tommy gunners, plus mounted cavalrymen. Some of the latter included cavalry trench mortar crews and machine gunners in their *tachanki*. The combination proved successful by reason of the combined mobility. They were employed in a mass push, and while not all teams were able to penetrate the enemy defenses, a great many did.

Once the situation was fluid, these mobile combat groups proceeded to wreak havoc on the enemy, and they capitalized on the confusion which they created in the enemy ranks. In one area a group of these teams attacked a German motorized column on the road. Striking at this winding train of retreating enemy vehicles a group of these small tank-cavalry teams broke up the column into a series of isolated and surrounded islands of resistance, which were then attacked by other troops and annihilated.

Summary

During the year of 1944 the tank-cavalry team participated in the liberation of Razdelnaya, Odessa, Kamenets, Podolsk, Lublin, Minsk, Slonim, Grodno, Zolochev, Brodi, Krasny, Brest-Litovsk, Focsan, Roman, Barlad Debretsen, and many additional small places—not to mention the defeats inflicted on the enemy in the course of this fighting. It is interesting to note, that at Debretsen in October 1944 no less than ten cavalry divisional commanders were cited by Marshal Stalin, and most of these were commanders of Cossack units. More cavalry units participated in this battle than were ever announced before.

The story of the Cossacks' combat achievements in World War II is still unfinished. Furthermore, details are lacking on what Russian cavalry has already performed in battle. But, when military historians begin to write the account of this war, the Cossacks and Red cavalry will have provided more than enough documentation to prove cavalry's usefulness in the "so-called" machine war.

> **"Tanks and armored cars, while crushing and destroying enemy personnel and fire power, make a way (for) and provide direct support for the cavalry. In separate circumstances cavalry can be employed on independent missions such as reconnaissance, attacking lone enemy groups, etc. The greatest success in battle is attained by concentrated attacks of tanks and armored cars. The limit of division of tanks is the squadron (U. S. troop), but separate tank and armored car platoons can be attached to cavalry units and detachments which are to carry out independent missions."**
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> **—*Red Army Combat Regulations for the Cavalry Squadron and Regiment*, Chapt. I, par. 14.**

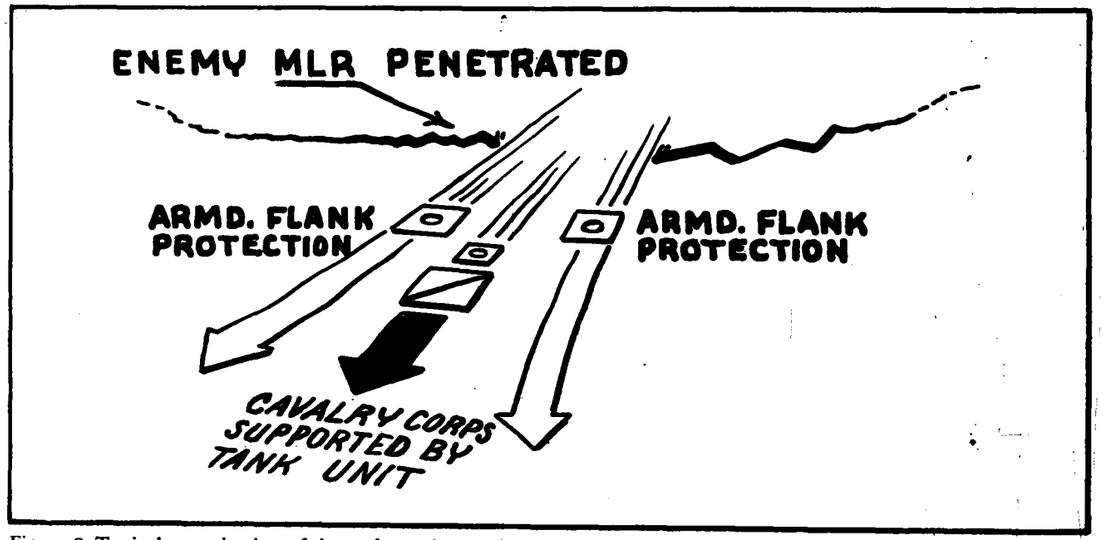


Figure 8. Typical organization of the tank-cavalry combat team for pursuit of enemy combines armor with cavalry corps.

Soviet Night Attacks

Cavalry — 1945*

by Major Nicolai Kostrov, Red Army

DURING the 1945 January-February offensive on the Russian Front, Soviet cavalry sliced up many enemy groups, dealt blows on the German flanks and rears, and cut their communication lines. Making good use of its mobility and striking power, the cavalry, in co-operation with other arms, captured the cities of Allenstein, Bromber, Beuthen, Lodz, Tomaszov and Kalisz; penetrated to Brandenburg, and seized Neudorf and Meseritz.

Thus throughout recent campaigns Soviet cavalry has remained true to its past glorious traditions.

What is the distinguishing feature of Soviet cavalry in the fighting of today?

A horseman presents a good target. Even a bad shot can hit the horse and put it out of action. For this reason, Soviet troopers as a rule operate at night. Maneuvering in secrecy, they circle the enemy positions and launch surprise raids on the enemy rear and reserves on their way to the front. The execution of such assignments is invariably connected with various difficulties. The troopers have to surmount woodlands and marshes, swim across rivers, and then go into action without respite. One must possess unfailing will and stubbornness to stand the strain.

Here is a story of a recent battle on the southern sector of Pomerania, as described by a squadron commander, Senior Lieutenant Voloshko:

"My squadron screened the flank of a unit that was to emerge on a vital inhabited locality and capture it. The night was dark, and a cold wind was blowing. But confronting us were even greater difficulties—the forcing of a river which had only recently thawed. It was past midnight when a runner from a forward detachment returned to report that the party had reached the river bank and had seen no sign of the enemy.

"We dismounted and watered the horses to cool them a bit. Then came sleet, which was fine, because it concealed our movement. Soon we reached the cold, broad waters of the river. In accord with previous arrangements, the troopers approached the river with as little noise as possible and, leading their ponies, swam across in pairs. It requires nerve to plunge into the ice-cold water with a horse to follow, but before long the squadron was assembled on the opposite bank. There was no time to dry, and the cavalrymen proceeded on foot in order to warm their numb limbs.

"Within a half-hour a runner came to report that a German infantry column, evidently with artillery, was moving on the road across our path.

"Not knowing the strength of the enemy, I hesitated, but after a moment's reflection decided to attack the column. Posting a dismounted cavalryman on the road and, after despatching three troopers armed with machine guns, I assembled the rest of my force in the shrubbery with the object of attacking the center of the column from the flank. The attack of the squadron and the action of the three machine gunners were timed to coincide with the fire of the dismounted trooper in front. The operation was a remarkable success.

"No sooner had the dismounted cavalrymen opened up than the machine guns began to rattle in the rear. The Germans scattered in confusion. Just then the squadron rushed at the column, dimly visible in the murk.

"The Germans fired at random. The Nazi officers were heard calling their men to action. But it was already too late. Slashing the frightened Nazis with their sabers, the cavalrymen penetrated to the very midst of the column. The battle lasted one-half hour; then quiet set in again. We took 24 guns, several machine guns and a large supply of ammunition."

This officer's story presents a typical example of successful cavalry operations founded on sudden action.

Surprise raids, as a method, are not only employed by small detachments, but by strong cavalry units as well. That, for example, is how Allenstein was captured by the units of Lt. General Oslikovsky. This skilfully handled operation will go down in history as a model cavalry attack. When the cavalrymen rushed the edge of the town, the population in the center had no idea of the impending catastrophy. At the railway station troops found the station master calmly issuing orders, totally unaware of the peril. Even after Soviet units had captured the area adjoining the station, trains arrived with vital cargo from the Baltic port of Koenigsberg.

The episodes described show what a significant part Soviet cavalry has played in recent campaigns and how well the cavalry copes with its assignments.

*By cable from Moscow.

Protected by a smoke screen, Soviet cavalry makes a mounted attack in East Prussia. Tops of trees show at right.

Sovfoto Radiophoto

Tanks*

by Colonel Peter Ribakov, Red Army

NIGHT fighting is a complicated affair, particularly for tanks which find themselves hampered by poor visibility, difficulty in taking bearings for conducting fire, and controlling operations. Yet it is quite possible to wage successful night battles provided they are carefully planned. This has been proved by combat experience.

Night battles by Soviet tanks are a common occurrence, especially during the winter season when the day is too short to accomplish major operations. Such night attacks are carried out on a wide scale during offensive operations and raids in German rear areas.

Combat experience shows that it is the best strategy to breach a strong German defense zone in daytime and complete the operation during the night. Soviet tank units, in coöperation with the infantry, were ordered to force a passage in the German defense positions and, after cutting the highway in the rear, prepare the way for a Soviet rifle unit to reach the road. In the area of the German defense line there were three ravines (impassable for tanks) which stretched perpendicular to the front of the breakthrough and parallel to one another.

Preparation for execution of the assignment was conducted in the following manner:

Columns of infantry and light machine gun sections were attached to tanks, and after two night trial operations, each man knew his tank and crew. Landmarks in enemy territory were picked, and arrangements made to illuminate them. Special parties were formed to move on the tank flank and mark steep banks of ravines with tracer bullets.

To make it easier for the tanks to locate the infantry in the darkness, and *vice versa*, special combat men signalled their whereabouts with electric torches. In the course of two nights, sappers prepared enemy minefields for destruction and during the day gunners trained their guns on the chosen landmarks, which had to be set on fire.

In the dead of the night the infantry and tanks assembled at prearranged points, and when gunners illuminated the landmarks, tanks, with infantry in their wake, infiltrated through the gap.

Another example of tank night operation was presented in another section. In the course of a large-scale daylight offensive, Soviet rifle units had considerably reduced a German defense zone. That night tanks were ordered to complete the breakthrough, penetrate to the rear, and cut off the enemy's escape route to the west.

*By cable from Moscow.

Soviet Press Photo

Tanks drive on German positions during action on the Third Byelo-Russian front in East Prussia, early 1945.

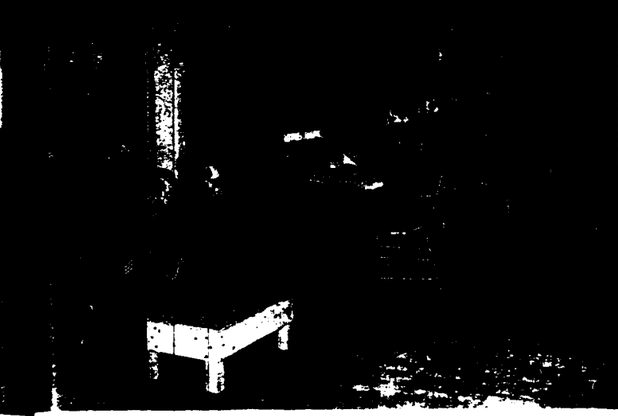
Before the tanks were introduced into the gap, all necessary preparations were made. Each tank carried a party of Tommy gunners, while the leading tank carried sappers and guides. Points were established from where signal flares were to be fired. In front of the column were scouts, then an advance guard, followed by the main tank force.

When the infantry had assembled for action, the tanks assumed battle formation and attacked the German positions. The enemy was so stunned by the night attack that he failed to put up any serious resistance, but retreated toward the town to the north. Tank units, continuing the pursuit, advanced through a woodland, and with headlights blazing, swept the forest with cannon and machine-gun fire, which had a devastating effect on enemy morale. Then, racing into town at top speed with lights still flashing and cannon and machine guns firing, the tankmen accomplished their mission by morning.

During the pursuit, motorized infantry followed in trucks also with lights on. Experience shows that headlights and rockets are effective only in cases where swift movement is possible. When for various reasons tanks have to make frequent stops, headlights and rockets permit the enemy to conduct precision fire.

On another occasion a tank unit, under Colonel Derbinian, approached a river bank but was unable to force the waterway during the day because the Germans were well established on the opposite side. Thereupon, Colonel Derbinian decided to cross during the night. As darkness set in, he assembled the tanks near the river. The fact that the Soviet units had ceased active operations in daytime had led the Germans to believe that the Russians had postponed the attack until morning, and the lull during the period of preparations had strengthened this conviction. When it was dark tanks, artillery and mortars began pounding the German positions, while under this cover of fire motorized infantry landed on the opposite bank and immediately went into action. Sappers soon spanned the river, and the tanks were taken across.

Developing this initial success the tank units made good progress and by morning were continuing their pursuit.



The Cavalry School—1945

An Important Cog in the Army's Training System

Photos from Cavalry School

1. On the way! Self-propelled 75mm in action. Loader (left) has just pulled firing lever and tube is still in full recoil. Panoramic and telescopic sights provide for both direct and defilade firing positions. Weapon highly praised.

2. Artillery OP. Directing fire of a 75mm howitzer Platoon. Platoon leader (with aiming circle) announces readings to computer (prone, with back to camera) who converts data to commands which are radioed to gun position.

3. Grenade instruction. Students practice firing fragmentation grenade from M1 rifle. Adapter devices enable use of hand grenades at greater ranges; can be used with carbine.

4. Mortar demonstration. Enlisted instructor crew demonstrates method of firing 4.2-inch mortar. Gunner (left) checks sight adjustment while loader (center) stands ready to fire second round. Burst of first shell can be seen.

5. Night firing. LMG crew in action during night exercise. Interlocking bands of grazing fire outline the final protective line of a defensive position. Weapons instruction seeks to prepare students for problems met in combat.

6. Instructor training. Enlisted assistant instructors are oriented for a period on operation of tank gun sights for indirect fire. Continuous refresher training is essential.

7. Fire control rehearsal. Enlisted instructors rehearse artillery-type fire control. Set-up includes all echelons of command and control required in field firing periods. Accuracy of work is checked by firing steel balls from compressed air guns. Training has proved valuable in combat.

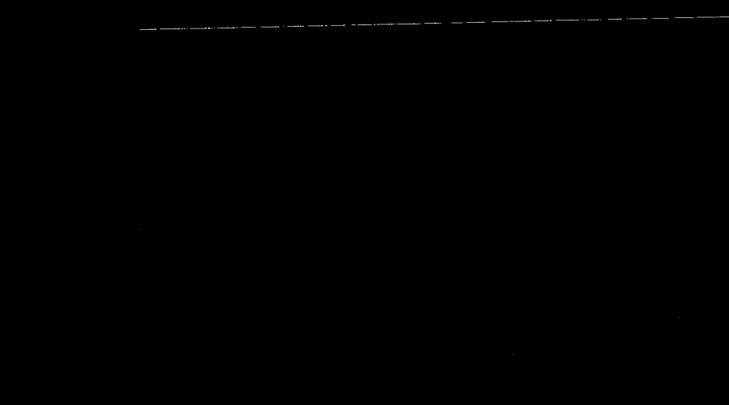
8. Artillery terrain board. Operator fires a round with smoke "gun." Puff of chemical smoke blown through the screen appears as actual shell burst. Accuracy and realism of this device facilitate training in artillery control technique preliminary to field firing periods of students.

9. Live power train. M5A1 light tank, complete from cooling fans to driving hubs, facilitates preliminary study, as well as operation, maintenance, and trouble shooting.

10. Working in 4-man teams on M24 light tank. ETMC students perform 100-hour preventive maintenance service. Removing engine is not ordinarily part of 100-hour service but is included for student instructional purposes.

11. EMC students study operating conditions. Engine is equipped with temperature, vacuum, and pressure gages. Through windows, the flow of coolant may be observed.

12. "Striking an arc." Demonstration for EMC students.



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FOREWORD

WHILE its historic background and traditions provide stability, The Cavalry School is modern and progressive, and has accepted the edicts of the times. Its important rôle and mission are synchronized to current needs as outline by Army Ground Forces and the War Department.

All cavalry units have cleared continental United States. Each is going strong in some theater of operations. Some have been cited for battle honors.

In the Mediterranean and European Theaters, mechanized cavalry reconnaissance echelons—groups, regiments, squadrons, and troops—without exception, have rendered conspicuously outstanding service in spearheading advances and providing fast streamlined reconnaissance. Mechanized cavalry has demonstrated its combat value and efficiency. The 1st Cavalry Division and two separate cavalry regiments are operating dismounted, with great gallantry and success in the Pacific Theaters.

The Cavalry School has a job to do. It is getting that job done with spirit and energy. The employment of mechanized cavalry demands the overwhelmingly major portion of its instructional time. Every single hour of training is approached, planned, and conducted realistically, geared as it must be to theater requirements. Battle realism is the goal. In all training the transition from the classroom and maneuver area to the battlefield is not abrupt.— W. M. Grimes, Major General, U.S.A., Commandant, The Cavalry School.

Current Emphasis

The Cavalry School now has such courses as: Jungle Operations, Forward Observer Methods, Land Navigation by Odograph, Battle Drill for the mechanized cavalry team (squad) and platoon, Mule Pack Transportation, and 4-day field problems involving air-ground liaison, combined operations, minefield gapping, battlefield recovery of vehicles, and combat firing.

The school is using howitzers on M8 motor carriages, liaison-type planes, 5 man rubber reconnaissance boats, and standard and test models of combat vehicles.

For small unit tactics and technique, there has been an almost enmass movement out of the classroom into the field.

A technique or procedure which cannot be worked out on the ground is not worth discussing, so approximately 70% of the tactical training is done in the field. The remaining 30% includes preliminary and technical phases. The comparatively few classroom periods are essentially conferences on principles and logistics, sand table exercises, and experience seminars.

The Cavalry School is in a transition period. Each sub-course is being subjected to the critical scrutiny of combat-seasoned officers and men. The school is taking maximum advantage of what mechanized cavalry units have accomplished and learned in combat.

Among others, the Director of Training, the Chief, Department of Tactics, and members of the latter's Employment, Doctrine, and Training Committees are experienced mechanized cavalry and armored commanders. Instructors in staff work and logistics all have successfully performed duties of S-3 and S-4 in actual operations. Instructors in small unit tactics have led mechanized troops and platoons.

All concerned are currently assisting in the preparation of a new field manual on the employment of mechanized cavalry, which will incorporate the lessons learned in battle and reflect to an appropriate extent each specific type of mission accomplished successfully by a mechanized cavalry unit in the several theaters of operation.

Primary Interest and Mission

The Cavalry School's primary interest is the progress and welfare of its officer and enlisted students. Its mission includes:

1. Teaching officers the tactics and technique of cavalry and familiarizing them with the missions and methods of associated arms.

2. Training enlisted men as specialists in single fields such as communications, motors, tank maintenance, saddlery, horseshoeing, radio repair, and odograph operation.

3. Conducting courses through which selected officers and enlisted men of different branches of the service are qualified as specialists in animal pack transportation.

4. Assisting in the development and perfection

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13. On target! Seated in an M10 trainer, instructor demonstrates how gyro stabilizer helps gunner keep on target.

14. Field expedient demonstration using Spanish windlass, an EMC student pulls a vehicle from hole.

15. SCR 399, Cavalry's most powerful set. Student tunes and operates set removed from its shelter HO17. Student also works on SCR's 506, 193, 694, 508, and 510 sets.

16. Combat communications include visual signals. Using Morse Code, students signal with flags and Lamp SE 11.

17. "Pick-up" method in air-ground communications. Note message sack. Use of radio between air and ground elements is also a feature of TCS field problems and exercises.

18. Trouble-shooting. Second phase of radio repairman's course. Student learns circuit and repair procedures for all cavalry radio equipment. Sets are SCR's 510 and 508.

19. Final phase. Radio Repairman Course sends students into field. Here students, equipped with only those tools available on unit T/O & E, make repairs on an SCR 506.

20. Land navigation. Instructor orients students in the operation of land model odograph prior to first field problem. Students come from all arms; also Navy Seabees.

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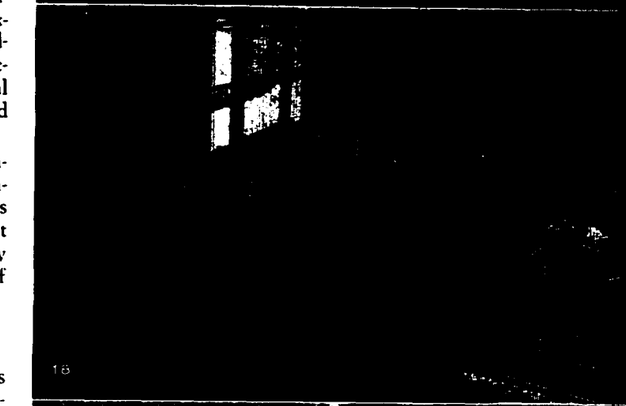

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of cavalry tactics and technique, and preparing manuscripts on training literature projects.

Overseas Returnees

During recent months, The Cavalry School has been concerned with the overseas returnee problem from several angles: administration, utilization, and morale. First, the school is receiving an increasing number of returnees as students; second, the school is replacing key instructor, staff, and instructional department overhead personnel with qualified returnees; and third, special training is being conducted to qualify selected returnees as replacements in the several departments. Students who have had overseas service are recognized, welcomed, and urged to contribute sincere, constructive comment at appropriate times throughout their respective courses.

If an instructor has had overseas service, he is urged:

1. To analyze his combat experience and use it to vitalize instruction for which he subsequently is made responsible.

2. To participate actively in planning conferences with his department chief and express his ideas freely.

3. To examine official training literature and instructional material with a view to recommending essential changes.

4. To prepare a factual narrative of combat incidents of which he has personal knowledge and which, in his opinion, have training and intelligence value.

Overseas returnees with combat experience attend assemblies and are invited to participate actively on a "disregard rank" basis. Outspoken comments are solicited, evaluated, and discussed. Realism in field problems and exercises is essential. Overseas returnees in key positions do much by attitude and action to assure it.

Returnees who are married and whose families accompany them are permitted to live off the post while students at The Cavalry School as long as they maintain a satisfactory academic standing.

If an otherwise qualified returnee needs some special training prior to assignment as an assistant instructor, he gets it, either as a member of one of the specialist classes or individually under the members of the instructional group to which he will be assigned.

In each sub-course of instruction a seminar is scheduled for the purpose of giving students an opportunity to present their combat experiences.

The situation in the Department of Horsemanship is particularly interesting. There are 20 enlisted overseas returnees performing duties as assistant instructors in the pack section, and all have had packing and animal management experience with horse cavalry units. Twelve are former members of the 112th Cavalry, a horse regiment which was dismounted for combat service in this war. All of these men like their jobs and appear to be especially happy at having the opportunity of serving in an animal activity.

Special-purpose training detachments have replaced T/O Units as school troops for the presentation of perfected tactical demonstrations for instructional purposes. All enlisted personnel are Classed D and X. Seasoned men from Africa, Italy, Sicily, Pacific, Aleutians, and Europe are contributing to the effectiveness of current training. School troops test new equipment and techniques.

A War Dog Platoon will soon be added to school troops. Handlers will be picked men with war dog experience in New Guinea, New Britain, and other islands of the South Pacific. Employment will augment current reconnaissance instruction. Battle reports indicate uniformly successful use of war dogs on patrol missions.

The III Tactical Air Command's 2d Composite Squadron is stationed at Marshall Field, Fort Riley. It performs air-ground missions and provides demonstrations. This splendid coöperation has assisted in modernizing the school's field instruction to a marked degree.

Current Courses

Courses now given at The Cavalry School include:

Officers' Refresher Course (Mechanized)—Includes mounted and dismounted reconnaissance and combat patrolling, jungle operations, and the operation of OP's under fire.

Officers' and Enlisted Pack Courses—To qualify selected officers and enlisted men for service with overseas pack units or combat units which utilize pack animals for the transportation of weapons and other organic loads.

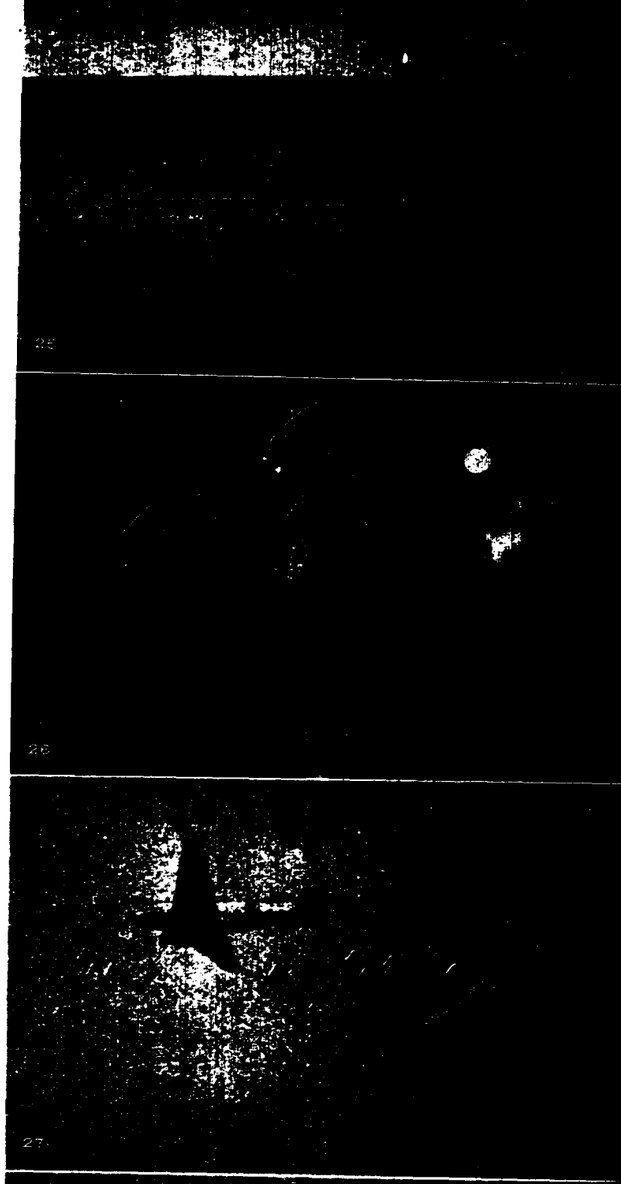
Officer and Enlisted Communication Course (For officers, duties of a communications officer; for enlisted

21. Field shoeing. Students are required to operate with T/O tools. In Burma and China, forges were air-dropped.

22. Repairing pack equipment. ESC students in training work on packer's saddle and Phillips cargo packsaddle.

23. Herded train. Officers' pack class clears the post at the start of a road march. Note lashed loads on "jug-heads."

24. Zero hour. Breaking camp on the 6-day march and bivouac. Student officer packers "hobble off" a basket hitch on boxed 105mm ammunition. Note stacks at right.

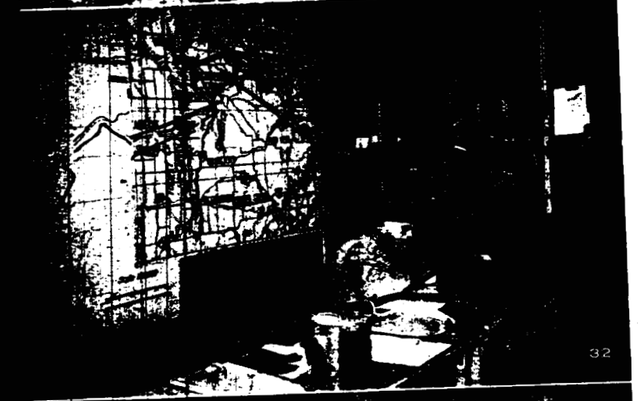


25. Stream crossing. The Guide's boat is improvised with cargo packsaddles, ropes, and rigging covers.

26. Technique and speed. A 2-man team balances load.

27. Resupply by air-drop. A C-47 transport plane drops ammunition to Officers' pack class during field problem. TCS and the 1st Troop Carrier Command coöperate. In Burma campaign, a small but valorous air unit supplied approximately 17 divisions in combat for a month.

28. Rain or grain. Sacked oats in a free-fall from C-47.



men, code practice and basic communication procedures)—To qualify officers and men as communication specialists with specific MOS for T/O positions; includes radio theory, tuning, maintenance and repair, and cryptography.

Officers' Special Basic Course—To train troop-grade officers of other branches to lead mechanized cavalry platoons and troops; includes tactics and technique employed by small mechanized cavalry units in performing their primary mission, reconnaissance, as well as land navigation, reconnaissance in jungle operations, night combat patrols, and OP operation.

Land Model Odograph—To train selected personnel in the employment and maintenance of the land model recording odograph; includes day and night field operation of the odograph over all types of terrain as well as magnetism, compass theory, and compass compensation. Officers and enlisted men of all branches of the service undergo training as 2-man teams, each consisting of one officer and one enlisted man. Students selected to attend this course must be well grounded in the use of maps and aerial photographs, radio communications, and vehicle maintenance.

Officer and Enlisted Motors Course—To train officers to supervise intelligently 1st and 2d echelon maintenance on cavalry vehicles and to qualify enlisted students as 2d echelon mechanics; includes small group shop and field maintenance instruction, road and cross-

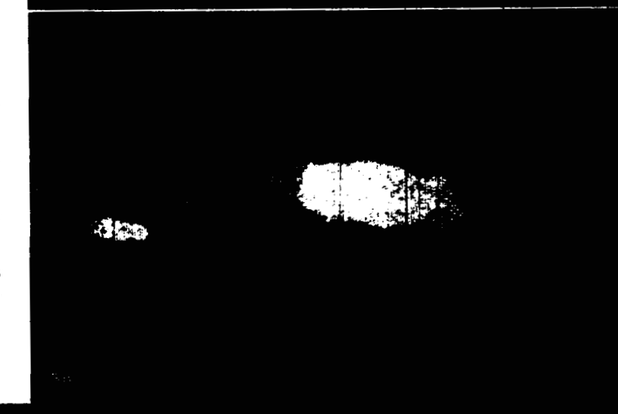
29. Packing up air-drop cargo. Note special clothing.

30. Mechanized cavalry team (squad). Under current T/O & E, mechanized platoon has 3 such teams. Each consists of 2¼-ton trucks mounting a LMG and a 60mm mortar respectively and an M8 armored car mounting a 37mm gun. This basic unit is now subject of critical study.

31. Patrol leader issues order. Note reconnaissance patrol's improvised "snow suits" and SCR 511.

32. Director orients staff during 3-day field maneuever of Officers' Refresher Class and TCS school troops.

33. Flame thrower in action—a phase of CWS training.



country marches over varied terrain, all-weather operation, and field expedients. Spanish windlass instruction is particularly interesting and effective.

Enlisted Saddlers' Course—To qualify selected men for duty as saddlers in cavalry, field artillery, and quartermaster units. Most of the graduates currently are being assigned to overseas pack units.

Enlisted Horseshoers' Course—To qualify selected men for duty as horseshoers in cavalry, field artillery, and quartermaster units. Most of the graduates currently are being assigned to overseas pack units.

Enlisted Tank Maintenance Course—To develop and qualify men as 2d echelon mechanics on the motor carriage M8 and the M5A1 and M24 light tanks; includes trouble shooting and repair as well as parts replacement and field maintenance. Prerequisite for this course is graduation from a service school motors course or appropriate practical experience as a mechanic in lieu thereof.

Enlisted Radio Repairman Course—To qualify selected enlisted men for MOS 648, radio repairman; includes trouble shooting, repair, and cannibalization. Prerequisite is graduation from a service school communication course or appropriate practical experience as an operator in lieu thereof.

Enlisted Armorers' Course—To train and develop armorers for service with cavalry units; includes adjustment and repair of all types of cavalry weapons, individual and crew-served.

34. Contact! L-5 liaison plane lands on secondary road and gives mechanized cavalry element some information.

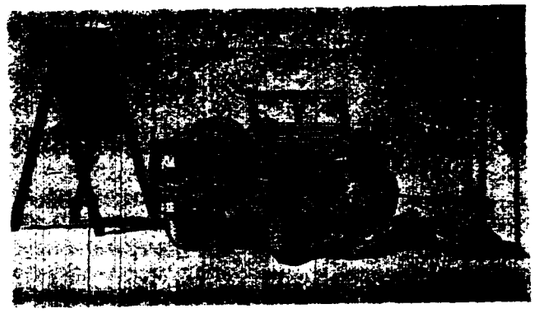
35. Sand table problem arouses interest. Such exercises are always preliminary to field work with school troops.

36. Attack on fortifications. Student practices individual demolition technique.

37. Reconnaissance boat. Equipment is organic in the mechanized cavalry troop. Students learn to navigate craft.

38. 75mm howitzers blaze away during field problems which bring together students and training personnel.

Know Your Fuels and Lubricants



Sugar and salt look alike. So do many petroleum products. But if you can imagine sugar on steak or salt in coffee you get some idea of what happens to cavalry equipment when the wrong fuels or lubricants are used. War Department Lubrication Orders (WDLO's) and Technical Manuals prescribe the right fuels and lubricants for cavalry equipment. They should be followed at all times, and the following facts should be kept in mind:

The Product	What You Should Know About It
GASOLINE (Unleaded and undyed) (USA 2-116)	It's an unleaded gas for use in lanterns, stoves and the like. Don't use it in vehicles except when preparing them for storage or shipment.
MOTOR FUEL (All purpose) (USA 2-103B)	This is a high quality gas with an octane rating of 80. It is for use in all vehicles in the combat zone and all combat vehicles in the zone of interior.
MOTOR FUEL—72 Octane (USA 2-114A)	This is a good quality gas for use in all noncombat vehicles in the zone of interior. It is issued to conserve the supply of 80 octane gas which is urgently needed for combat.
GUM-PREVENTIVE COMPOUND (Fed. Stock No. 51-C-1586 225)	This compound is for use in gasoline-powered equipment which is to remain idle for 30 days or more. It prevents the gum in gasoline from clogging fuel lines, pumps, filters, and carburetors. See TB ORD 75, 10 April 1944 for detailed instructions.
OIL, ENGINE (USA 2-104B) SAE 10, 30 and 50	It is used for lubricating certain artillery equipment and all internal combustion engines except aircraft. This oil has a peculiarity which cavalry officers and enlisted men should understand. The oil is designed to clean as well as lubricate. Due to its cleaning action, the oil holds carbon in suspension which would normally collect on pistons, rings, and other internal parts of an engine. This causes the oil to turn black quickly, and many individuals are inclined to drain it out and throw it away. A black color is normal for this oil. It should be changed on a mileage or hourly basis only—never on a basis of color.
LUBRICANT; GEAR, UNIVERSAL (Hypoid and other types) (USA 2-105A)	This is the only type available for lubricating automotive gear units such as differentials, steering gears and the like. Comes in three grades: SAE 75, 80 and 90. If it leaks, don't ask for heavier grease as none is available or necessary. Replace your oil seals.
GREASE, GENERAL PURPOSE No. 0 (USA 2-106, Amend. 2)	It is for winter lubrication of vehicle chassis and other equipment where specified.
GREASE, GENERAL PURPOSE No. 1 (USA 2-107, Amend. 2)	It is for summer lubrication of vehicle chassis and other equipment where specified.
GREASE, GENERAL PURPOSE No. 2	It is for lubricating wheel bearings at all temperatures. Don't use any other grease or grade.

NOTE: See the new SB 10-139, 11 October 1944, for complete information and list of fuels, lubricants, preservatives, and other petroleum products.

THE MORAL CONQUEST OF GERMANY. By Emil Ludwig. Doubleday, Doran. $2.00.

For many years the world has read with keen interest and delight the penetrating psychological biographies of the great by Emil Ludwig. As the country of his birth is being overrun by the nation of his adoption and its Allies, this eminent psychological writer utilizes his gifts to present the conquerors with an invaluable analytical text on the German character.

This study shows the German people as the antithesis of the Americans. They accept with slavish adoration the authoritative manner that Americans instinctively reject. The Germans worship war and exalt its accoutrements, while Americans long for the day when peace will be declared and uniforms will be seen only on state occasions or army posts. In the summation of the nature of the Germans, emphasis is placed on the historical importance of their leaders in the building of national ideals, and the susceptibility of the citizenry to the influence of forceful, warlike overlords.

Dr. Ludwig climaxes his specific information with 15 rules of behavior for occupying forces in Germany:

MUCH depends on the first attitude of the occupying forces. . . . Germans are used to overlordship; any attempt to approach them according to the Anglo-Saxon concept of fair play would have undesirable consequences. . . .

1. You are entering Germany, not as a liberator but as a victor. You are supposed to govern the country, and you will not be regarded as a master unless you are strict and reserved.

2. Never give way. Anything that is granted as a favor will be regarded by the German as his right, and he will subsequently demand twice as much. He considers fair play cowardice.

3. Always speak English when dealing with the Germans. Many Germans understand English, others will easily find friends who do. As soon as you speak German you will be regarded as a man without self-assurance, who is seeking favor.

4. Do not keep smiling. Never shake hands with a German visitor. Never offer a cigarette to a visitor unless you know him well. To the Germans you are the successor of Hitler and Himmler; they never shook hands. The firmer your manner of speaking, the greater will be your authority.

5. Always wear a uniform. A uniform is the symbol of authority to the Germans who for three hundred years have been governed by soldiers. In hotels, restaurants, and theaters always insist on having the best rooms or seats. Pay the full price, but refuse to accept anything but the best. The more often Germans have to give up their places to you, the more their respect for you will grow.

6. The authorities of occupation should publish their restrictive orders along with a reprint of the corresponding orders which the Germans themselves had earlier imposed on subjugated nations. Surely the Allies will imitate none of the German atrocities in occupied countries; but, on the other hand, they should by all means adopt some of the restrictive measures introduced by the Nazis. The German children, who have never heard of these things, as well as the many German civilians who lived through those years without adequate information will thus be reminded that their present restrictions are but the consequences of German crimes.

It is not enough for the Germans to know that they have lost the war. They also must realize that they deserve to lose it. And only such a reëxamination of moral values can make them search their hearts.

7. Be polite to German women, but never be cordial as you are in your own country. If you offer your place in a trolley car to a woman, other Germans will consider you an arrogant foreigner trying to teach them manners. Under no circumstances flirt with German women; they would think it their duty to betray you.

8. Give conspicuous preference to any German who has been in a concentration camp or who in any way opposed the Nazis and suffered under them. To him you may offer a cigarette, especially in the presence of a German of the other type—a former Nazi or a German who has not been in a concentration camp.

9. Give open preference to workers. You may even talk German with them. They will be surprised by and grateful for any sign of friendliness.

10. If you are in need of something—a new lamp, a car, or a plane reservation—and you are told there is none to be had, reply with an icy look and the comment: "It must be here by six o'clock." It will be there in time, and you will have gained in authority.

11. Make everyone entering your service give you an account of his doings under the Nazis and of his actions under the republic. Even in republican days most Germans, including Socialists, were in favor of rearmament and revenge. Only those who can prove their leanings during the past twenty years toward a spirit of European coöperation should be employed by the occupation forces.

12. Be on your guard against German professors who quote English or American literature and history, especially if they do so in English. Many such men have been teaching racial theories for ten years or more—but even that is not so criminal as the sermons of

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revenge they preached in the days of the republic. Professors and "scholars" form the most dangerous group in Germany, for they feign interest in a new Germany, yet still mean to promote restoration of the old. Besides, a learned German always considers you an inferior—you will recognize that attitude in the amused smile which promptly appears at every tiny slip of your tongue.

13. Try to learn by heart a dozen or so humane maxims and verses from Goethe and Schiller—preferably containing some critical remark on the Germans—and make use of them in conversation, quoting in German. The German sees in you a strong barbarian; he will be surprised at that bit of German erudition.

14. Forget the American habit of meeting everyone in an open way. Distrust everyone, no matter what rank he holds, who has given no valid proof of his honesty. Then, after some time, the Germans will realize that under your government personality and character count higher than military grades.

15. Never forget that you are in enemy country—even when all arms have been destroyed. Hate and the will for revenge will live on in the hearts of Germans for many years to come. The only way to get along with the Germans is to make them respect you; and they respect nothing short of the strong hand of the master.

It is fortunate that the publisher has wisely bound this important little volume (183 pages) so that it will fit into a pocket and can be tucked easily into any corner of luggage without adding more than 9 ounces to the weight.

SURRENDER ON DEMAND. By Varian Fry. Random House. $3.00.

Mr. Fry is not only an excellent and ingenious organizer of a refugee underground railroad from occupied France to Spain, but he is also an interesting reconteur of his activities.

Under the auspices of the Emergency Rescue Committee, an effort was made to get as many Gestapo-hunted anti-Nazis out of occupied France as possible. This had to be done with the help of forged passports, and frequent reliance on gangster elements. Many of the smaller countries assisted by giving visas—with the assurance that they would not be used in the country of source. The dangers were manifold, particularly for the unprotected and hunted members of Mr. Fry's staff, who worked indefatigably despite their personal danger.

In the 13 months of his stay in France the author was shadowed, searched, interrogated, and arrested. He was given little support from several sources to which he should have been able to turn, and was eventually seized and deported. The satisfying result of his work was the safe transport to America of such men as Konrad Heiden, Franz Werfel, Heinrich Mann, Lion Feuchtwanger, Marc Chagall, and many others who were smuggled across the Spanish border and on to Portugal, to contribute to the future culture of America and the world.

THE GENTLEMEN TALK OF PEACE. By William Ziff. Macmillan. $3.00.

In *The Gentlemen Talk of Peace* Mr. Ziff views the present world crisis with harsh realism and few illusions about the nature of men, nations or war. While brutally cynical at times, Mr. Ziff refuses to temporize with obvious trends an attitude which makes this work as important as his earlier best seller, *The Coming Battle of Germany*.

The problems of the individual nations, as well as the difficulties that beset them all, are faced with the same clear, incisive analysis. As the author makes plain in the early pages of his book:

"It should be accepted as axiomatic that there are no problems on earth which cannot be solved if the proper willingness and skill are applied to them. The key to their solution lies in an exact understanding of the nature of the problem, plus a willingness to regroup the facts of today in those known terms toward which the future is driving."

It is to the end that these problems may be solved to the best possible advantage that Mr. Ziff endeavors to strip aside many comfortable illusions that tragically obscure the vision of present world affairs.

Although many statements will unquestionably engender controversy, the reader interested in world affairs will find much concrete information and material for serious thought in this latest addition to the library devoted to the political and economic ills of mankind.

TAKING YOUR PLACE AT THE PEACE TABLE. By Edward L. Bernays. Duell, Sloan and Pearce. $1.00.

Mr. Bernays has dealt with problems of public relations in official and unofficial capacities with the U. S. Government in two world wars. In this book he endeavors to show how public opinion can be guided by the average citizen, whose responsibility the peace should be.

There is a brief outline of the Dumbarton Oaks proposals and other information vital to one seeking an understanding of international problems. Most of the book, however, is given over to a description of the best methods of channeling individual ideas so as to influence the greatest number of people. Some methods of dissemination will not be immediately available to many, but other suggestions will be within the reach of all men.

In the appendix Mr. Bernays has very briefly outlined our previous peace making and listed supplementary reading available in book and pamphlet form, some publications are free on request, others range in price from 5c to $5.00.

ONE AMERICA. Edited by Francis J. Brown and Joseph S. Roucek. Prentice-Hall. $5.00.

One America is a complete revision of *Our Racial and National Minorities*, published in 1937. Some of the early chapters have been omitted, new ones added, and all material has been brought up to date. Thirty-three contributors have combined their efforts to make this one of the most comprehensive and eminently readable books on minorities and the racial, cultural, and educational conflicts that must

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inevitably result in the process of amalgamating so many widely different national groups.

Part I introduces the subject of the meaning and status of minorities and the background of America's heterogeneity. Part II contains much important information drawn from the earliest days on immigration statistics, localities of settlement, cultural habits and adaptability of each group. Part III explains some of the activities engaged in by the press, broadcasting stations, fraternal and political organizations. Racial and cultural conflicts and education are frankly and fearlessly covered in Part IV, while Part V indicates the important trends toward cultural democracy being made in relation to the minorities by the nation as a whole. Comparative tables for the substantiation of statistics, an exceptionally full bibliography, and index complete the book and offer an advantage to the serious student.

The material in this volume has been carefully and thoughtfully compiled and skilfully edited to the end that the reader may realize that "The culture of the American people is a composite of the cultures of all America's groups. . . . Each group will recognize and understand its own culture, but not for itself, per se. Rather it will seek to understand the ways it has blended with, and thereby contributed to, the total and kaleidoscopic pattern of American culture."

FREEDOM IS MORE THAN A WORD. By Marshall Field III. University of Chicago Press. $2.50.

Freedom Is More Than a Word is primarily of interest as the verbal expression of the ideology of one of America's great liberals. Marshall Field III, grandson of the man who helped build Chicago, and a product of great wealth plus the educational systems of Eton and Cambridge, has given concrete proof of his beliefs in the support of *PM* and the Chicago *Sun*.

Mr. Field tells the story of both of these newspapers and describes their editorial policies. He also gives considerable space to monopolies in the field of news services, a subject of interest to the public at large.

TANKS AND ARMORED VEHICLES. By Lt. Colonel Robert J. Icks. Duell, Sloan and Pearce. $4.75.

Colonel Icks, Ordnance Department A.S.F., has compiled one of the most valuable books on tanks and armored vehicles yet to make its appearance on the market. Its profuse and exceptionally good illustrations of a wide variety of models will be an invaluable asset to anyone with identification problems.

The first chapter of this book gives a general history of the use of armor prior to World War I, with illustrative photographs and drawings. After a chapter on elements of design and construction, succeeding chapters contain brief, but adequate, histories of the developments of armor in the United States, Great Britain, U.S.S.R., France, Germany, Japan and some of the smaller countries. The models are described, and illustrations show the changes through the years since the last war.

While this book will undoubtedly be appreciated by

adults who will find it of interest as a source of information for many years to come, its appropriateness as a gift for any boy over twelve years old should not be overlooked. It is one of the few books that can be relied on to appeal to the youngster and be of value to the man.

ROCKETS AND JETS. By Herbert S. Zim. Harcourt, Brace. $3.00.

The first chapters of this volume deal with the origin and development of the rocket. Later pages go on to describe the construction and operation of battle rockets from the bazooka to the V-1 and V-2 and rockets for meteorological use. The practical and peacetime use of the rocket are anticipated. All of this information is couched in clear, understandable terms. Forty-one drawings and diagrams, and 52 photographs illustrate the various models and their use.

SCARNE ON DICE. By John Scarne with Clayton Rawson. Military Service. $2.00.

John Scarne, gambling authority, magician, expert dice and card manipulator, is the man who "cleaned up gambling in the army." Here he tells how he did it, and reveals some of the most guarded secrets of professional gamblers, which should be known to servicemen, defense workers, and everyone who, in the greatest gambling boom of history, plays any game with dice for money. He formulates for the first time the official rules for Craps, Klondike, Hazard, Four-Five-Six, Twenty-six, Indian Dice, Drop Dead, Hooligan, Chicago, Pig, Crown and Anchor, and explains the mysteries of percentages.

This book is a standard authority on dice and dice games.

DOUBLE TEN. By Carl Glick. Whittlesey House. $2.50.

This book is the story of Captain O'Banion's experiences with the fabulous Homer Lea, General in the Chinese Army, and organizer of American-Chinese support for the 1911 revolution, which brought Dr. Sun Yat-sen into the foreground of China's development.

Told in the first person, the story is limited to incidents involving the author, who was a former American sergeant, and the Chinese troops whom he was secretly training. While this builds up to an adventure story of more than usual interest, the more serious reader is tantalized by too little about the intriguing figure of Homer Lea and a dirth of information about Dr. Sun and his idealogy, and influence in the new Republic of China.

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By CURT RIESS

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