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Title: Observer's Report – Southwest Pacific Theater

Author: Headquarters Army Ground Forces, Army War College, Office, Washington, D.C.

Abstract: Historical combat information report by COL Herbert Laux on the 187th Airborne Regimental Combat Team in the Southwest Pacific Theater with enclosures.

Number of pages: 175 p.

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HEADQUARTERS
ARMY GROUND FORCES
Army War College
Washington, D.C.

[redacted]

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Date: 2/18/43

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February 20, 1943

SUBJECT: Observer's Report.

TO: Commanding Generals,
Second and Third Armies,
III, IV, VII, VIII, IX,
X, XI, XII, and XIII Corps,
II, III, and IV Armored Corps,
Airborne Command,
Amphibious Training Center,
Antiaircraft Command,
Desert Training Center,
Mountain Training Center,
Replacement and School Command,
Tank Destroyer Center,
Chief of the Armored Force.

1. The inclosed briefed report of Colonel Herbert B. Laux, Infantry, Observer from Headquarters Army Ground Forces to Southwest Pacific Theater, is furnished for your information.

2. Distribution to divisions has been discontinued by the Commanding General, Army Ground Forces. Reproduction and distribution of observers' reports to subordinate units is not authorized.

3. Changes in training doctrine as enunciated in War Department publications, which are necessary because of the information contained in observers' reports, will be published by the War Department. Changes in training directives of this headquarters, which are necessary because of information contained in observers' reports, will be promulgated by this headquarters.

By command of LT. GEN. McNAIR:

J. R. BRYDEN,
Lt. Col., A.G.D.,
Ass't Ground Adjutant General.

2 Incls:
Incl 1 - Report by Col. Laux,
with 3 inclosures.
Incl 2 - Distribution List.

[redacted]

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[redacted]

NARRATIVE

SECTION I

SOUTH PACIFIC AREA

1. CHRISTMAS. (Appendix 19) CHRISTMAS ISLAND was the best example of camouflage that I observed on my entire trip. It has large and extensive cocoanut palm groves planted in regular rows. None of the military installations among them could be seen from the air and the island gave the impression of being uninhabited. Their air warning system was efficient and active, and we were met by several of their fighter planes about one-half hour out from the island, which apparently was their normal procedure with regard to all approaching planes. The island was well equipped, maintained and organized. Discipline, morale and training were of the highest. This island was outstanding in comparison with any of the other islands visited.

2. CANTON. (Appendix 19) This island is entirely of white coral and all camouflage is dull white. It was, therefore, not well camouflaged and its military installations are quite visible from the air, appearing to be vulnerable from both air and sea. The morale of the officers and men on both CHRISTMAS and CANTON ISLANDS was very high, considering the conditions of their service.

SECTION II

AUSTRALIA

1. 3rd AUSTRALIAN DIVISION, DEMONSTRATION. (Appendix 1) Normal problems involving reinforced battalion in attack and defense. I was greatly impressed by physical condition of the Australian soldier.

2. TIWANTON DEMONSTRATIONS. (Appendices 2 & 18) A squadron of Australian motorized cavalry demonstrated an attack, repulsing an enemy beach landing.

In a demonstration of the 106th Australian Anti-Tank Regiment, gun crews training seemed satisfactory. The regiment consisted of 48 2-pounder guns, - 3 batteries of 16 guns each on porte. These guns can be fired from the porte or from the ground with all around traverse. They have both a slow and fast traverse which seems to be very desirable. Each porte carried in addition to its 2-pounder gun, one Bren rifle, one tommy gun, and three rifles. Their porte method of carrying the 2-pounder is very efficient and permits the firing of the gun from its porte without the delay of unloading (or even stopping) and also permits the placing of the gun in a ground position with a minimum loss of time.

Australian 25-pounder Demonstration. The gun drill was excellent and the crews seemed well trained and efficient. They may have been especially selected crews.

Each gun carried a circular wheel platform under the trail, which permitted the placing and firing of the gun in a very short time. This circular platform had a vertical flange to prevent slippage in the ground and a raised flange in the center to prevent slippage of the wheels.

These guns have but one trail, and the trail spade was equipped with a smooth metal cover or shoe which prevented the spade from burying itself when the gun was fired and allowed rapid traverse by one man on the trail. Recoil was taken care of by a hook-up with gun and platform.

I was especially impressed by the extent of their camouflage and camouflage training and discipline. All guns, trucks, tents, etc., were camouflage-painted, and each vehicle, gun, etc., had its own garnished camouflage net and means of erecting. It was SOP to place this camouflage the minute the stop was made and the crews were just as efficient in the placing of their camouflage as they were in the handling of their guns.

3. II AUSTRALIAN CORPS CPX. Attended a command post exercise of the II Australian Corps at NOOSA HEAD. Though this was a normal CPX, it is to be noted throughout that the Australians were very camouflage-conscious and were well trained and equipped in camouflage. Every piece of their equipment was provided with its proper camouflage, especially fitted to it and camouflage-painted in addition. It appeared that all their garnished camouflage nets were well maintained.

4. GENERAL NOTES ON AUSTRALIAN ORGANIZATION. (Appendix 3) In the CPX use was made of the Australian Civilian Corps. This is a civilian organization, organized and worked in its own familiar home area. They are used for coastal watching to warn of approaching boats or planes. They are also trained for reconnaissance work, to be able to act as guides for any troops taking position within their area. They are armed and equipped to repel small enemy raids and to protect vulnerable points such as bridges, power plants, or water supplies. They are further trained to harass an enemy and delay his advance by guerilla methods, road blocks and booby traps. They are trained in and equipped for necessary demolition and bomb reconnaissance. They are propagandists with a mission of building up and keeping up the civilian morale. There are about 800 full-time members of this organization in QUEENSLAND alone and about 15,000 part-time members. Where possible, ex-soldiers and sailors, unfit for military duty, are used.

The Volunteer Defense Corps is a valuable adjunct to national defense in a country with the size and population of Australia.

These same organizations have a "Battle Board." It is a simple method of keeping and handling the operations map and filing all messages sent and received.

5. U. S. ENGINEER CORPS CAMOUFLAGE PLANT. (Appendix 4) In operation only a short time, but now producing sufficient camouflage material to meet requirements. Principal product is garnished wire and string nets.

6. FIRST AUSTRALIAN ARMY GAS SCHOOL. (Appendix 5) Twenty officers and fourteen enlisted men from different organizations in training to be unit instructors and gas officers on completion of the course.

7. FIRST AUSTRALIAN ARMY JUNIOR STAFF OFFICERS' SCHOOL. Forty-eight attending. Course gave impression of not being well organized or well run.

8. FIRST AUSTRALIAN ARMY WEAPONS SCHOOL. (Appendices 6, 14 & 16) Seventy officers undergoing training in all infantry weapons. Its Battle Course involves a small maneuver over natural and improvised obstacles in which artillery, all infantry weapons and air bombs are used and fired with service ammunition to accustom men to actual battle conditions.

"Wire crushing" is emphasized. It involves the forcing down of wire entanglements by the weight of human bodies so that troops can march over these obstacles without any delay. Normally, wire is covered with fire which would make wire crushing rather hazardous and perhaps impossible, but wire crushing takes away all the natural fear that the average man has of barbed wire, and its effect is greatly one of morale similar to the "Spirit of the Bayonet." It is practical (except as stated above) and it does work.

9. FIRST AUSTRALIAN ARMY FIELD WORKS SCHOOL; JUNIOR OFFICERS' TACTICAL SCHOOL. (Appendix 7) Thirty-eight officers, including four Americans.

10. COMBINED TRAINING SCHOOL, TOORBILL POINT. (Appendix 8) Amphibious, quite thorough training. Preliminary instruction in minor points of boat handling was followed by lectures on proper loading of men and equipment, concluding with a night problem in the final phase, where a battalion effected a landing in a mangrove swamp. 41st Division being sent through this course one battalion at a time.

11. HEADQUARTERS I AMERICAN CORPS. (Appendix 9) Troops under canvas and well dispersed over an extensive area with every terrain facility for thorough training.

12. U. S. OFFICER CANDIDATE SCHOOL. In formative stages only, on December 4, 1942. Small class staff candidates, with first regular class schedules for January 1, 1943. Temporarily housed in Replacement Center, Camp Columbia. On moving to permanent location near IPSWITCH, plans are to commission in eight or nine branches, with emphasis on theory rather than practice.

13. REAR TRAINING AREA, 32nd DIVISION. (Appendix 15) At TAMBORINE. Division Artillery undergoing infantry training.

SECTION III

NEW GUINEA

1. PORT MORESBY AREA. (Appendix 11) .No comment here.

2. NEW GUINEA FORCE TRAINING SCHOOL. (Appendix 10) Thirty miles into mountains toward KOKODA. Several courses taught; most emphasis laid on commando and jungle warfare course.

3. COMBAT ZONE, BUNA AREA. (Appendix 11) Headquarters 32nd Division at EMO MISSION, located on top of hill in native houses.

Convoy of three trawlers, lighter and captured Japanese motor barge, loaded with troops, ammunition, food and equipment of 22nd Portable Field Hospital attacked by 18 Zeros off CAPE SEDEST. All boats sunk except the towed lighter.

Task Force Headquarters located in large cocoanut palm grove of small native village of HIROKI, utilizing abandoned native houses.

3 Incls - Appendices 11, 16 & 17.

END

APPENDIX #11.

New Guinea.

PORT MORESBY is the main supply base on New Guinea. The harbor is excellent, but the dockage for unloading ships was limited to one ship.

The United States Engineers were constructing a causeway from the shore to TATANA ISLAND and a pier on the island to permit the unloading of another ship.

The roads were deep in dust and the dust clouds resulting from motor travel was so dense that many vehicles drove with their lights on in the daytime due to lack of visibility.

Supply dumps were established on favorable locations about PORT MORESBY, some close in and some a considerable distance therefrom. They were mostly without cover or protection of any kind and the supplies were merely stacked and piled on the ground.

There was a great shortage of special service troops and much of the work necessary to the operation and maintenance was being performed by combat troops. They were used in the unloading of ships and the moving of the supplies to the dumps, on the construction and maintenance of roads and airdromes, harbor improvements and the building and maintenance of docks and piers.

There was very little refrigeration and any issue of fresh food required immediate consumption to prevent spoilage and loss.

The Australians do not screen their buildings against pests and depend upon mosquito bars for protection against them during the night. As a result of this the use of quinine or atarbrine was necessary all over New Guinea.

The MILNE BAY area at the southeastern end of New Guinea is the location of the second largest supply base. There are no roads to MILNE BAY and supplies are shipped in by sea and air.

The harbor is excellent, but the dockage was limited to the loading or unloading of one ship at a time.

A large part of the troop area was located in a large cocoanut palm grove. Much of this troop area was low and undrained and efforts had been made to keep the troops on the higher ground. Practically all of the troops were living in tents.

There was a great shortage of special service troops here, even greater than at PORT MORESBY. Practically all of the work of construction and maintenance was being done by combat troops, as well as the work of loading and unloading supplies. General Clowes told me that he was able to do practically no training of his combat troops.

The roads were in terrible condition and in some cases almost impassable. Some effort was being made to improve the roads, but all that was being accomplished was to keep them open and passable. A lack of road building equipment greatly handicapped this work.

Most of the motor vehicles were the Australian organization transportation and of the desert type used in the Middle East, with large sand tires and only two-wheel drive. As a result, much time was spent in keeping them on the road or getting them back on. Four-wheel drive is absolutely necessary in this country.

The American Base Commander told me that he had no motor transportation and was compelled to borrow all his vehicles from the Australians, even the two or three jeeps that he required daily at his headquarters.

I was informed by the Australian Camp Surgeon that there was much sickness among the command due to climatic conditions. There was dengue fever, malaria fever, scrub typhoid fever and several unknown fevers. He informed me that 25 per cent of their command was down with malaria fever. He knew of no preventatives for any of these fevers except malaria. There was also considerable dysentery and diarrhea. He definitely expressed the opinion that white men should not be left in New Guinea over four to six months.

The line of communication and supply extended from MILNE BAY to the BUNA area, with intermediate supply points at landing fields along the north coast. It was vulnerable to attack from the air or sea in small or large parties. I was especially impressed by the fact that a very small party of Japanese could have landed at most any place along the north coast and have cut our supply lines with little or no opposition and could have captured or destroyed the supplies and small groups of men located thereat.

Both MILNE BAY and PORT MORESBY were well protected by antiaircraft weapons, which kept the Japanese planes at sufficient height to prevent accurate bombing. As a result of this, their bombing raids caused very little damage. The Radar and warning system was very efficient, so efficient that it was unnecessary to black out PORT MORESBY and ships were unloaded at night with the use of large floodlights. The warning of the approach was in sufficient time to black out before the arrival of enemy planes. Searchlights were satisfactorily used in the antiaircraft defense and the U. S. searchlights were very satisfactory.

The PORT MORESBY-KOKODA-BUNA TRACK (trail) was the only overland route across New Guinea. It was generally along this track that the Japanese advanced to within about 17 miles of PORT MORESBY. From PORT MORESBY to KOKODA, covered a geographic distance of 58 miles, and by track was about 125 miles, starting at sea level and reaching a height of around 6200 feet at the Pass. The road distance from KOKODA to BUNA was about 60 miles and over a comparatively level country.

The supply problem of the Australian troops who drove the Japanese back out of this area is inconceivable. One spot on this trail was so

steep that there were over 1300 steps cut into the hillside and so steep that it was impossible to use pack animals. Supply here was entirely by native carriers.

Of the 7,000 pounds delivered at the truck head only 350 pounds of supplies were delivered to the combat troops. The balance was used and consumed by the carriers returning wounded and necessary personnel at the stages.

The balance of the supplies was dropped from planes without chutes. The amount recovered from these droppings in the jungle was by native carriers and varied from 40 per cent to 90 per cent recovered. An average day's recovery was around 70 per cent of the total amount dropped and increased amounts had to be dropped to compensate for this loss.

After the Japanese were driven beyond KOKODA, supply was somewhat simplified due to the capture of the landing field at KOKODA.

The troops along the north coast of New Guinea were not supplied over this track.

Supply is the biggest problem in New Guinea. Impassable jungles and precipitous and high mountains prevented the use of all modern and normal means of supply. I believe that the lengthening of the Japanese supply lines, and the difficulties incident thereto, as they approached PORT MORESBY, had more to do with their retreat than the attack by the Australian forces.

As the Australians advanced and their lines of communication lengthened over the PORT MORESBY-BUNA TRAIL and they experienced the same supply problems that the Japanese had experienced, the supply was augmented and aided by air supply and the additional aid of the troop movement along the north coast.

The fighting in the S.W.P.A. is controlled and based almost entirely by landing fields and the fighting areas will advance from airdrome to airdrome. It is a fight to construct or capture and then maintain and hold airfields. The capture of the BUNA area will have to be repeated all the way up the New Guinea coast, as the Japanese establish and supply new air bases and fields of resistance.

The application of tactical principles used in jungle warfare in New Guinea is radically different from those taught in our service schools. There is practically no distribution in depth and little chance for maneuvering except infiltration by patrols. Very small reserves were held out and these were close to the front line.

The fighting in New Guinea is of a primative type that goes back to the days of Indian fighting and the fighting during the Philippine Insurrection, with the addition of modern equipment and air forces. Distances are short and visibility nil. It requires superior junior leaders, down to and including squad leaders. When a regiment, battalion or even a

company is once committed to the fight its commander has lost all control and the outcome depends entirely upon the small units and qualified, determined and highly trained junior leaders. Junior leaders of this standard were much in the minority, showing a great necessity for training these junior leaders prior to their arrival in combat areas.

Air reconnaissance was of little use in jungle warfare and practically all combat information had to be obtained by ground reconnaissance and the use of patrols. This necessitates that much emphasis be placed upon the training of a special unit for this purpose as proposed in another part of this report. Our patrols were not well trained and their selection and organization appeared to be rather haphazard, and resulted in meager and inaccurate information. Jungle reconnaissance is especially difficult and requires highly trained personnel for its success.

There was little depth to formations in this jungle warfare and units were used and placed almost entirely in breadth. Where a small support or reserve element was held out it was kept close to the forward troops, where it was readily available. I observed no reserve held out by the 128th Infantry in New Guinea.

The difficulty of the terrain and the time required for troop movements necessitated this close support. Then these troops were available for their support missions in sufficient time and their close-in location enabled them to take care of any enemy patrols that might infiltrate around the forward elements. Jungle warfare is similar to night fighting in that much dependence is placed upon hearing and less upon sight.

During my stay of over three weeks in New Guinea, but two regiments of the 32nd Division were engaged, the 126th Infantry and the 128th Infantry. The 127th Infantry was still in Australia. At one period the 126th Infantry was attached to the Australian forces, thus leaving only the 128th Infantry in the American forces under the Division Commander and the Task Force Commander.

The organizations were much depleted by losses and there had been no American replacements in Australia since March.

During my observations on New Guinea I was constantly impressed by the lack of camouflage discipline and the lack of appreciation of the necessity of concealment by men and the lack of instruction and correction to improve their conditions.

I saw jeeps driven along the beach within plain view of CAPE ENDAIADERE and the Japanese, and with one of our headquarters located in a native village just back from this beach. I saw men paddling collapsible Australian assault boats in the same area without any military reason, this all in broad daylight and much Japanese air activity, and with the knowledge of their officers and under their observation.

[redacted]

Men were permitted to roam about naked to the waist with their white skins showing plainly. Mess lines were formed in partially open areas about messes, with men naked to the waist and their mess gear reflecting the sunlight. At the approach of an unidentified plane the men would mill about and reveal their positions by movement. Shelter tents in many cases were pitched alongside the track with no attempt at concealment. The suggested method of training to obviate this lack is covered in the appendix on training.

The Japanese were outstanding jungle fighters and past masters in the art of camouflage, and we could well emulate their thoroughness in these things. This gave them an outstanding advantage which we could overcome by training.

Every headquarters I visited on the north shore of New Guinea, including portable hospitals, were located in abandoned native villages and using native houses. This is wrong from a viewpoint of sanitation and health, and wrong tactically as most villages were located in the more open areas and along the beaches, which were very visible from the air, ground and sea.

The Japanese is primarily a night fighter and does much of his reconnaissance under cover of darkness. He will do these things in heavy jungle growth, with many conditions similar to night fighting. This necessitates a perimeter defense with all dependence placed upon sound instead of sight. A perimeter defense avoids the danger of infiltration under cover of darkness and protects the flanks and rear of the unit so disposed.

Our mental attitude was that the jungle was a hazard and an obstacle to be overcome. To the Japanese the jungle was an aid to his warfare. To us a river was an obstruction, to the Japanese the river was a means of crossing and he was instructed psychologically to think this way.

If the Japanese are ever driven out into the open, his fighting abilities will be much inferior.

The preparation of cooked meals in company messes was impossible in the forward area. Men up front subsisted principally on the "C" ration, plus rice, and cooking was individually or in small groups. The "C" ration is satisfactory and the addition of rice is excellent when fires can be built to cook it. The old "individual cooking", as taught years ago, has again become important knowledge.

All equipment and supplies must be light and weight kept to a minimum. For this reason the carbine should be very satisfactory, but it should not entirely replace the heavier M-1 and Springfield rifles.

The necessity of excellent physical condition of men and officers cannot be overstressed. A man in poor physical condition cannot stand up under the rigors of jungle travel and fighting.

END

[redacted]

[redacted]

APPENDIX #16.

[redacted]

Wire Crushing.

Wire Crushing is a method of penetrating barbed wire entanglements without any mechanical aid other than wire cutters. Double apron with screw pickets, double apron with star pickets and triple concertina entanglements can be penetrated by this method.

The Australians teach this as an instantaneous method of passing through wire.

The leading men of the section in a platoon throw their bodies on the wire from a full run and force it to the ground. The balance of the unit walks between the crushers and over the wire thus flattened or crushed. Two men successfully crush double apron wire. It required six men to crush a triple concertina entanglement, three groups of two men each. This entanglement was nine or ten feet high and about 12 or 13 feet across. These men suffered no injuries and very few minor scratches. There were a few tears in their outer clothing. No special clothing or padding was worn, excepting leather work gloves. I was informed by General Savage of the Australian Army that he had seen wire crushed in this manner by soldiers wearing shorts, without any injuries other than a few minor scratches.

In cases where wire is covered with fire this might be impracticable and hazardous, but no more so than it would be to have men halted at the wire. They, at least, would be trying to advance and some would get through.

The Australians state the advantages of fast wire penetration by this method as follows:

a. This particular method of penetration is carried out with the ordinary infantry equipment. No special tools required.

b. The fast penetration will surprise the enemy and he will not have time to hit back, before our troops are at him.

c. Because of surprise, casualties will be lighter than if a slower method of penetration were used.

d. Men, if trained, will know what to do when they run up against wire unexpectedly, and will not be caught unable to move forward or back.

e. It will give our forces a good chance of getting well into the enemy's rear, with the chance of catching an exposed flank and/or cleaning up their headquarters.

f. If it is a full scale attack, the momentum of the attack will be carried through.

[redacted]

[redacted]

The greatest benefit of this training is that it kills the natural fear that most men have of barbed wire. It is a morale factor similar in effect to "The Spirit of the Bayonet".

It is believed that a demonstration of this wire crushing in the replacement and training centers, in the service schools and in large units would be of some benefit. It might be taught as standard training.

Motion pictures taken at the 1st Australian Army Weapons School are on file at the Photo Signal Corps Laboratory at the Army War College and a copy is being sent to the Infantry School at FORT BENNING, GA. I also have requested that a copy of this film be sent to the Australian Weapons School as an expression of appreciation for putting on the demonstration.

END

APPENDIX #17.

Japanese Tactics in Jungle Warfare.

Japanese tactics in general are similar to those of other modern armies. The principles remain the same, but his application of some of these principles is varied and reflects their racial and national characteristics.

His personal characteristics displayed in New Guinea reflected his racial and national attributes.

He was physically tough with much stamina and endurance.

He was cold-blooded and brutal.

Well trained to strict discipline and teamwork.

He had an unbelievable self-control and ability to remain motionless for long periods.

He was painstaking and patient in his noiseless stalking through the jungle.

He could subsist on the most meager rations.

He apparently disregarded death and preferred death to capture.

His methods in New Guinea were similar under like conditions and many of his actions could be anticipated.

On gaining contact along a road or track (trail) in a close jungle country the Japanese action will usuall follow this procedure:

First, he will rapidly advance specially trained and selected troops who correspond to our advance guard.

Next, on gaining contact these forward troops will take up a position astride the road or track and endeavor to pin down his opposition with the support of machine guns and mortar fire.

Next, he will use various ruses and demonstrations in an attempt to scare the enemy into a withdrawal or to reveal the strength, extent and location of his position by premature movement and firing.

Next, he will then endeavor to by-pass the opposition by infiltration around one or both flanks.

He will use all the speed possible in these movements. Their excellent camouflage and junglecraft make them a poor and fleeting target in the thick jungles.

These forward groups can usually be easily disposed of, if our troops withhold their fire until a suitable target presents itself. There are numerous instances when their advance elements were permitted to pass by and the larger rear elements were accounted for by rifle or machine gun fire.

Upon first contact they will sight a machine gun behind cover and fire along the track or road. This gun is usually well protected by riflemen and difficult to dislodge. The primary mission of this group is to protect and aid the advances of their forward group, but they will periodically test the strength and location of their opposition by feints and by deliberate attack.

They will make feints and rapid advances, just fleeting glimpses, to draw the fire of our troops and thus reveal their strength and location. If our troops fire at these fleeting targets, they will immediately draw a heavy return fire by a group which is situated for that purpose.

They will use different ruses to deceive an enemy and many are designed to play upon two natural human traits, fear of the unseen and unknown, and curiosity.

To test the possibility of his further advance, he will send men forward along the track or road covered by fire from rifles, machine guns and mortars. He places much confidence in the effect of sound and apparently does considerable firing for this reason.

He will usually employ outflanking tactics and attempt to by-pass by infiltration around either or both flanks. These movements may be shallow and local or they may be wide and deep flanking movements. He appears to assume that a threat to our flanks and rear will cause us to withdraw and may try to give an impression of encirclement by ruses and noises, such as the firing of a machine gun out on the flank.

There must be depth to our positions to prevent encirclement, and the bold handling of fighting patrols can usually prevent the flanking movement of his patrols. The offensive cannot be overstressed. At night or in very dense jungle perimeter defense may be necessary.

In their attack on prepared positions the Japanese have used a more or less standard procedure. Prior to the attack they will make every effort to determine our strength and location and a "soft spot" by reconnaissance and ruses.

After they have selected their point of attack, they persist in attacking this point in an effort to break through. Should these efforts fail, they may shift the attack to another point, but will usually return to their original point of attack. Thus we should not appreciably weaken our defense in the sector originally attacked, to aid in the defense of some point subsequently attacked, as experience along the Kokoda Trail indicates that he will return to his original point of attack. His changing his point of attack appears to be another of his ruses.

In his attacks along the Kokoda Trail the following points were noted:

He would use no preparatory fire. He would advance by stealth until contact was made and he was held up by our fire, when his advance elements would hit the ground and fire of machine guns and mortars would be directed on our positions. Under cover of this fire he attempted to advance by fire and movements. They used much noise and wild firing apparently for the effect on morale. It may be to bolster his own courage or to lower the enemy morale.

During the above fire and movement they would try to advance other troops unseen through the cover of the jungle growth to positions in advance of their forward elements where they could put down a grenade barrage to further aid the advance of their troops.

During their attacks it was not uncommon for the Japanese to change their forward troops and replace them with fresh troops. This was efficiently done and without confusion.

When the Japanese is held up he will immediately dig in for his protection. There were slit trenches and foxholes all along his line of retreat along the Kokoda Trail.

The success of the Japanese in jungle warfare is largely attributed to his bushcraft. He conceals his movements by excellent camouflage and jungle craft.

He is not restricted by supply difficulties as we are and units work independently of any supply line. They are self-sufficient and live off the country for days at a time.

His equipment is generally lighter than ours.

A few pounds of rice will subsist him for several days and he appears to require no further addition to his ration, excepting the few things he can obtain from the jungle.

As a result, his patrols can move faster and stay out for longer periods and are not tied to a base for their supplies.

He is tricky and will use many ruses to deceive his enemy and thus cause him to reveal his position and strength and perhaps scare him into doing things that are not tactically warranted.

He has used the following ruses:

He dragged a dead man to a position close to our lines and propped him up, expecting that troops would be sent out to bring him in.

He will use captured weapons as bait in the same manner.

He will fire captured weapons to give the impression that our troops are there and firing them.

He has used a cutout circular board over his headdress to imitate our Australian hat.

He will lay quietly for hours to snipe an officer who has shown that he is an officer by his dress or behavior.

He has littered a trail with cast off garments and equipment to give the impression that he has withdrawn in disorder. It was a ruse and an ambuscade.

He will feint being dead and shoot you in the back.

He will call out in English trying to cause our troops to answer.

He will talk loudly and shake bushes to draw nervous fire or movement.

He will fire machine guns on the flank with no other apparent reason than to detract and to give the impression that there is a force on your flank.

He will explode fire crackers to deceive and detract and confuse.

He will violate all rules of land warfare by wearing enemy uniforms and will disguise himself as a native or civilian.

He will advance under a white flag and then treacherously fire on anyone coming out.

To overcome Japanese tactics and characteristics, in addition to Combined Operations Training, our training of troops should insure that:

All troops have training as infantry in addition to their normal training.

Troops are trained in standard operating procedure to insure teamwork, to prevent confusion and error under the stress of combat and to develop speed in execution.

All troops are in the best of physical condition and are able to swim with full equipment.

All troops have been instructed in jungle operations, particularly how to make the jungle their friend, so they can live in the jungle on limited supplies.

[redacted]

Troops are indoctrinated on how to avoid ambushes and how to take cover, particularly at halts.

Troops develop simple methods of unit and individual indentification.

Troops are imbued with the offensive spirit: to close quickly with the enemy, to secure the high ground; and at night, by aggressive patrolling to the front, dominate the low ground.

The Japanese is not a superman. He will fight fanatically and will not surrender or be captured. He must be killed. He can be defeated and is being outfought and defeated in the S.W.P.A.

END

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Sig.	1
Fiscal	1
Chem.	1

WAR DEPARTMENT

C/S	1
OPD	10
G-1	1
G-2	2
G-3	2
G-4	2

AGF UNITS

Second Army	2
Third Army	2
III Corps	2
VII Corps	2
XI Corps	2
XII Corps	2
IV Corps	2
VIII Corps	2
X Corps	2
IX Corps	2
XIII Corps	2
II Armored Corps	2
III Armored Corps	2
IV Armored Corps	2
AA Command	6
Armored Force	4
Amphibious Tng Center	2
R & SC	8
Tank Destroyer Center	2
Mountain Tng Center	2
Airborne Command	3

SOS - 5
AAF - 5

Incl No. 2.

[redacted]

1. Study and report upon the operation of regimental warning service against mechanized and air attack with specific reference to the following:

a. Its integration with similar services of higher units. Alarm systems

b. Communication methods used both within the regiment and between the regiment and similar elements of higher units.

2. Study the use of liaison officers by Infantry regiments with particular reference to any SOP observed in any unit and to the type mission assigned to liaison officers detailed to subordinate units.

3. A full report is desired upon any landing operations which you may have an opportunity to observe, including preparatory training. Specific answers to the following questions are desired:

a. Length of time devoted to preparatory training and major allotments of such time to subjects.

b. Organization of Infantry units prior to leaving the transports before landing, to include steps taken to insure delivery of necessary supplies on shore.

c. Steps taken with regard to supply of the initial landing force to include -

(1) Ammunition
(2) Rations
(3) Water

d. Methods of communication by which landing forces call for fire support from naval and air units. Discuss their effectiveness.

[redacted]

[redacted]

4. Should you have opportunity to witness fighting in jungles or similar close terrain, study and report upon the steps taken to provide effective fire support for foot troops. Also report upon any successful expedients used to keep supporting weapons within supporting distance of foot troops and to control their fire to make such support effective.

5. In joint operations of ground and air forces describe the equipment and methods used to insure the most effective air support of the ground units. What was the smallest unit observed to call for air support? Were calls for air support transmitted through channels to the air support command or direct to air units? Was air support as a rule rendered promptly and at the proper place?

6. Colonel Brink recently expressed the opinion that one of the greatest faults in our attack teaching is a lack of provision for speed in launching the attack. To obviate this he advocated early development of the regiment on a broad front when contact with hostile forces appear probable and a rapid and unhesitating advance by all units of the size of a regiment or less after only hasty and probably incomplete reconnaissance. Ascertain if this policy has been used by any units which have been in combat and if so, indicate the results obtained.

7. Do attacking units provide any organization to deal with infiltrating hostile units and to mop up behind the advancing front line units?

8. Study and report upon the control and operation of antitank guns of all regimental units in the support of an attack. To what extent were antitank mines used by attacking forces and for what principal purpose?

9. Study and report upon methods taken to insure coordination between mechanized units and foot troops in offensive situations.

10. In studying hostile methods of operation comment upon the accuracy of the following reports that have been received:

a. The Japanese have a tendency to "shoot the works" rapidly after gaining contact; that is, they attack with all they have, frequently holding out no reserve.

b. It is also reported that they start the movement of the unit intended to make the decisive attack before the unit which makes first contact has developed the opposing position.

11. Study and report upon the hostile infiltration methods with the following points particularly in mind:

a. To what extent were they successful in fairly open country in daylight?

b. Is there any reason to believe that small infiltrating units have a system or method to facilitate coordinated action after successfully passing through the opposing lines?

c. What types of mission appear to be most in favor for infiltrating units?

d. Do infiltrating units receive air support and if so, how is it called for and directed?

12. Report upon any malfunctioning observed by weapons in use by U.S. forces. Discuss the causes and expedients used in the field to reduce or prevent such malfunctioning.

13. Study and report upon methods adopted by either side to deceive and mislead the enemy as to the location and nature of the main defensive elements.

14. Is an effort made to stop the enemy in front of the MLR or is it regarded rather as a loosely coordinating line on and behind which counterattacks are coordinated?

15. Discuss the various types of field fortification observed, including their effectiveness.

16. What was the smallest unit observed to hold its reserves mobile? Was the regimental reserve usually held mobile or did it initially occupy a prepared position? What were the factors taken into consideration in deciding the initial location of the regimental reserve?

17. Describe any methods which you observed intended to prevent infiltration by hostile groups by day and by night.

18. What steps were taken to detect and give warning of flank movements? Describe the situation with regard to each instance cited.

19. Study and report upon the use of cannon company (or accompanying) weapons.

20. Discuss the most effective types of tank traps and obstacles observed (except antitank mines), to include the length of time required to prepare them.

21. Discuss the use of antitank mines to include the following:

a. Protection of mine fields against hostile forces. Did such protection include antitank weapons?

b. Marking of mine fields or otherwise guarding them to insure against accidental detonation by friendly forces.

c. Supply of mines.

22. Study and report upon the effectiveness of our antitank weapons against various types of hostile tanks to include the range beyond which their effectiveness is doubtful.

23. What methods were used by the enemy to "take out" our antitank guns and what was the usual time required to do so?

24. Were antitank guns as a rule located for frontal or oblique fire?

25. Was local protection (small arms) required for antitank guns? If so, from what units did it come?

26. Is the antitank grenade an effective weapon? If so, beyond what ranges does it cease to be? Is the supply of grenades in units of the rifle regiment adequate?

27. Had any units developed an SOP for the defense of rear areas against parachute or airborne attacks or against infiltrating units? If so, what was its general nature?

28. What steps were taken to insure the local defense of command posts, train bivouacs and similar rear installations? Did such steps, if any, threaten to interfere with the performance of normal duties by the troops within those installations?

29. Report all information obtainable regarding Japanese methods of bayonet fighting. Specific answers to the following questions are desired:

a. Does the individual Japanese seek to make the first thrust against his opponent or wait for the opponent to thrust and seek to kill him with a counter-thrust?

b. Is the report true that when the first thrust by a Japanese bayonet fighter is parried he drops his weapon and seeks to close in for hand-to-hand combat?

c. Are Japanese methods of hand-to-hand combat generally regarded as successful? If so, what reasons are assigned?

d. Are the Japanese regarded by those who have opposed them in close combat as eager for such combat or anxious to avoid it?

30. From your observation are our methods of bayonet training the proper ones for use against our present enemies?

31. Describe any counter-intelligence measures observed in the Infantry regiment or its subordinate units.

32. To what extent were prisoners questioned in battalions? In regiments? Was this questioning conducted by personnel of the Infantry regiment or by personnel sent down from higher units?

33. What steps were taken to insure protection of vehicles engaged in supply operation?

34. Discuss Class I supply to include the following:

a. Number of hot meals furnished per day.

b. Places where hot meals were cooked.

c. Adequacy of containers as to numbers and type.

35. What percentage of motor vehicles of the Infantry regiment may be reasonably expected to be out of action during combat? What methods were employed for immediate replacement? For later permanent replacement?

36. Describe the method of distribution of gasoline and oil to vehicles of the Infantry regiment.

37. What means was provided to assist in the location of command posts and routes thereto.

The following answers are submitted to the questionaire given me prior to my departure for the SWPA. In many cases these questions are answered at length and in detail in my report or in the answers to the questionaire given me by Army Ground Forces.

1. There was no warning service used nor required against mechanized attack in the SWPA. There has been no mechanized warfare in this area and none was indicated in the future.

There has been some air attacks, but little on the mainland of Australia. What there has been has been in the Darwin area at the extreme north.

The critical areas in Australia and New Guinea are well protected by warning systems and the use of the radar,- to such an extent that Port Moresby does not even black out, but continues to unload ships both night and day by means of large flood lights.

Upon the approach of unidentified planes warning is given by means of sirens or other noise makers and a master swtich darkens all lights. The Antiaircraft defense keeps raiding planes so high that these attacks are practically useless and no damage was done while I was there. At a height of over 20,000 feet a hit is a matter of luck. No one takes these bombing serious and very little attention is paid to them. In fact I slept through one of them and never knew that it had taken place. In another case I continues to drive my car and did not even know that it was taking place, as I had been out of range of the warning when it was first given.

Regiments and other units within these areas take up the general warning with improvised noise makers to warn their units. A common form of warning is a bent iron triangle pounded with a hammer,- much like the area fire alarms used in camps, etc.

The general warning is augmented by telephone warning, especially those units which are outlying and who might not have heard the general alarm. All landing fields are immediately notified by phone. The systems differed in different areas and there was no standard system and there was no universal system common to all. Any workable system that was devised and used was considered satisfactory.

In the actual combat area along the northern shore of New Guinea there was no system of alarm for combat units that I observed. It was up to each indivual to look out for himself upon the approach ofplanes. The thickness of the jungles and the looseness of command avoided the necessity of ~~of~~ any warning system. One was constantly on the alert for hostile planes and usually knew the location of ~~of~~ a slit trench to jump into if it became necessary.

2.- I saw no liaison officers assigned to units in the combat areas. Artillery was of practically no use due to the conditions of the terrain, although its use was much desired. Consequently liason officers from the artillery were not neceasary. The fighting in New Guinea was strictly an Infantry and Air Corps show and but eight or nine pieces of artillery were used in and around Buna. With the exception of two 25 pounders, they were light pieces of mountain artillery and were flown in.

3. There were no landing operations in the SWPA in hostile territory or against enemy resistance. The only landings that took place were the result of coast wise movements and were simply troop movements to get troops from the rear areas up toward the front area. These were simply matters of transportation and had nothing of value to learn.

There is a Combined Training School (Amphibious) near Brisbane and another one near Sidney. These schools are very thorough in their course of instruction and start with the most elementary steps of amphibious training and finish up with a problem covering a night landing in a mangrove swamp. This schod is covered in my report.

a. Attached hereto schedule of Combined Training School (Australian) (Appendix 1.)

b. There was no landing of troops from transports that I could observe.

c. Same as b. above.

d. Not observed.

4. Fire support for foot troops in jungle warfare is a difficult and at times and impossible matter. It was very haphazzard in New Guinea. The terrain was such that there was no artillery. The tracks (trails) were in most cases so difficult that it was practically impossible to use the 81 mm. mortar due to its weight and the weight of its ammunition. The heavy machine gun was impracticable for the same reason. The 60 mm. mortar and the light machine gun were the heaviest weapons that could be taken along by the troops. They were kept right up with the foot troops and needed little if any communications to get the support of their fire as they were right at hand.

The jungles were so thick that observation of fire was impossible except in rare cases. The overhead growth of the jungle was so heavy that the firing of mortars was difficult. The shells would detonate upon hitting the overhead growth on their way up or on their way down and ground bursts were rare.

There was a crying need for a small one man mortar with the capability of a low angle of fire making direct fire possible. A weapon of this type can be fired directly at a target without the necessity of its penetrating the jungle growth on its upward and downard flights. The Australians have an ideal 2 inch mortar (The Britsh, 2 inch Mortar. Mk I & II) All this has been written up in my report and the answers to my AGF. Questionaire, and it has also been given in detail to the proper people in Washington.

5. In joint operations of ground and air forces there was no equipment nor methods used to insure effective air support of the ground units. It was impossible for units to call for air support. It could be given to air units at their bases but the location of positions on the ground was practically an impossibility due to terrain conditions. The overhead jungle growth was so dense that the smoke of a fire would not penetrate it sufficiently to give a location to the air. The display of panels could be made only on beaches and in some very rare clearings. A Vary pistol was of no use for the same reasons. The Australians had some success using a smoke shell in a mortar fired vertically. In many places in New Guinea the ground forces found it practically impossible to even designate and show dropping grounds

to planes flying overhead. As a result much equipment and supplies was lost and not received by our troops.

There were quite a few cases of our troops being bombed by our own air. In one case I was told that a bomb had buried 70 American soldiers and killed about 15 of them and wounded many. As a result of this two of our companies "went bush" and had to be rounded up and brought back. They said that they could not fight the Japs and our own air at the same time. This is not given as a criticism of our air or its efficiency. It was merely an unavoidable condition of warfare in this country and shows the difficulty of air and ground communications.

6. There was no opportunity to develop a regiment or larger ~~unit~~ on its front in New Guinea. Speed in attacking is a big factor in jungle warfare at times, while again lieing 'doggo' for hours is the best policy. The warfare in New Guinea goes back to the days of Indian fighting in our oldWest and the fighting in the Philippines with the addition of modern weapons and the air.

7. Yes. The attacking unit can not take care of its flanks and rear to prevent infiltration. This must betaken care of by units in the rear. Bold and active patrolling seemed to be the best answer to the Japs methods of infiltration and fighting. At night or in very dense jungle a perimeter defense may be necessary to protect the flanks and rear as well as the front.

8. There was no opportunity or reason to use the antitank companies in New Guinea, as tanks were not used by the Japs with the exception of the two used at Milne Bay early in the attack. The Antitank company of the 128th Infantry was being used to guard an landing field at Pungani and to load and unload small boats for the supply of troops up forward in the Buna area.

9. Not observed.

10. a. There is some truth in the Japs tendency "to shoot the works" but I saw no evidence of where he failed to hold out a reserve. He always seemed to have sufficient troops to handle his mission and plenty left over to patrol and infiltrate.

b. This may have happened, but I would not put it down as one of their methods or characteristics. It may have been the contact of a large patrol, or a well planned attack that did not wait for the development of his first contact. Again it may have been one of his tricky ruses.

11. a.I know of no case where the Japanese used their infiltration methods in open country in the day light. He is primarily a night fighter and a jungle fighter de luxe. If the Jap is ever driven out into the open, he will loose much of his fighting ability and his defeat will be a much easier matter.

b. No. I believe that his patrols that have infiltrated are strictly on their own and out of contact and control just as ours would be. They know their mission and what they are to do, and I do not believe that they get any instructions until their return to their units. Their patrols that are despatched and separated from their parent organization are self sustaining and can go for days and miles away from their supplies. Our men

would starve and and fail in their mission with the rations that will sustain a Jap. His junglecraft is superior.

c. Infiltration favors a mission of any sort. They are used to outflank and enemy and cause his withdrawal; They may be used merely as a means to cause him to reveal his position and strength by premature fire and thus give the Jap an opportunity to fire on him; they are used as a means of attack; they are used as a part of a war of nerves; they may be used to obtain information of the enemy, as all information is dependent on ground reconnaissance and none can be obtained from the air. In fact I know of no mission that is not favorable to infiltration in jungle warfare.

d. No.

12. This is covered in detail in my report.

13. The main method used to prevent the enemy from knowing the location and nature of the main defensive elements is the utilization of the natural concealment offered by the terrain conditions and the proper handling of the tactical situation with proper disciplining of the troops undertaking the mission. Camouflage discipline is of great importance and our troops are sadly lacking in camouflage discipline. The Jap is a past master in the art of camouflage. He uses many ruses to deceive the enemy as to his position, location and strength. This is all covered in detail in my report.

14. There is really no MLR but a loosely coordinated line.

15. Field fortifications were usually fox holes or slit trenches. There was little real development of field fortifications,- a hole scouped out from under the root of a tree, or something similar was usual.. The Jap digs in the minute he stops. There was much evidence of this along the Kokoda Trail.

Around Buna he was well dug in and prepared as he had been there for some time and was prepared to make a stand. Due to the shallowness of the soil and hitting water level after digging short distances, it was necessary for him to build up instead of dig down. This was the cause of his so called "Bunkers" for his defense. He had slit tranches along side his bunkers to jump in when conditions warranted it. Field fortifications were of the most primitive sort and were never developed.

16. I can not answer this question as there was no apparent policy. I saw platoons with a small unit held out, and if the 128th Infantry held out a reserve I do not know where it was and never saw it. I travelled from their front lines to a distance of thirty or more miles back along their lines of communications and did not see their reserve. The only unit I saw in their rear was their antitank company and it was being used as a special service unit to load and unload small ships.

17. The only methods used to prevent infiltration by day or night was the placing of small groups out on the flanks and to the rear and by bold patrolling. A patrol or group out on the flanks depended more upon hearing then it did upon sight. Visibility was usually nil in the jungles. At night a perimeter defense was necessary and the one used by the Australians, when they used any method at all.

18. Patrols and outpost were located out on the flanks. There was no observation as visibility was nil.

19. None were used. Not observed.

20. None used. Not observed.

21. There was some use of mine fields on the small islands on the way out,- such as Christmas Island and Canton Island. They were used to deny an enemy an approach to that part of the islandthat their defense plan ~~xxxxxx~~ contempleted holding.. In most cases their forces were insufficient to defend the entire island if a landing was attempted. or effected.

I saw some spots around Port Moresby that were marked "MINE FIELD" but believe that these were planted when the Jap was within 17 miles of Port Moresby and were simply left there from those days.

On the small islands coming out antitank weapons were emplaced to cover their mine fields.

b. Mine fields were marked by crude signs and were in some cases so covered with the dust of passing vehicles as to be illegible. I do not believe that these mine fields had been even thought of for many months, and had been absolutley negelected

c. I have no knowledge of the supply of mines.

22. Not observed.

23. Not observed.

24. Not observed.

25. Not observed.

26. Not observed. I do not believe that antitank grenades were issued to troops.

27. There has been no use ofparachute troops nor airborne troops in this area. The rear areas seemed to lack even protection against sea and land attack along the northern coast of New Guinea.

28. Protection, when there was any, was by the unit itself.

29. a. He does not stand for bayonet fighting and appears to have no stomach for this type of fighting. I know of no case where the Jap ever waited long enough to judge his method.

b. There has been no evidence of this in the SWPA.

c. He has done no hand-to-hand fighting in New Guinea.

d..They have been very anxious to avoid it.

30. Yes. Our present methods of bayonet fighting are proper. They give the soldier the spirit and the will that is so necesaary to success. He must have the will and desire to close with the enemy. This is especially true in jungle warfare. He must have confidence in himself and his weapon. Bayonet training and the running of assault courses should be given daily. It might be given in lieu of the period devoted to calesthenics. A solder to be successful in jungle combat must be in the best possible

condition. He must be hard mentally and physically. More of this in my report.

31. The usual counter subservice setups were in operation. It appeared to be the usual inactive organization and nothing much was being done about it.

32. Prisoners were not questioned in the battalions or regiments in the combat areas. The handling of prisoners was by an Allied Committee. More of this in my report.

33. Vehicles were properly dispersed along the roads with watchers and A/A guns ready for use. Protection was furnished by the personnel of the unit. No protection was given in New Guniea. The protection mentioned above was given as a matter of training in Australia.

34. a. Hot meals were served wherever possible. In some cases hot meals were served three times a day. In other areas, where conditions prevented it, none were served. The old style 'individual cooking' has come back into its own. Cooking up in the forward areas was done individually or in small groups. The ration was the "C" ration augmented with rice. Where fires were impossible the "C" ration was eaten cold and the rice was not cooked

Hot meals were cooked and served by organizations wherever conditioned permitted it. This was usually some distance behind the front lines where the lighting of fires caused no hazzard.

c. Containers seemed adequate as to numbers and type. In the extreme forward areas containers were improvised from Australian 'bully beef' cans which were good expedients and could be thrown away after use. There were many objections to the water cans as being too heavy and cumbersome.

35. Not observed. No motore vehicles were used in the combat areas of New Guinea excepting a few jeeps for local use only.

36. The distribution of oil and gasoline for the few vehicles in use in New Guinea was no problem. It was put in by plane or small boat and the vehicles were filled directly from the drums. The vehicles were so few that there was no necessity for a regimental plan.

37. In Australia(out of the combat area) command post were marked at their road entrances in code and never by their organization designation. One had to know the code designation of the unit to locate it.

In New Guinea I saw no designation of command posts.

Lt. Col. U.S.A.

[redacted]

SOUTHWEST PACIFIC

QUESTIONNAIRE - GROUND FISCAL SECTION

The following questions do not especially pertain to Ground Fiscal Section, but are general questions in connection with Finance Service:

Recommend questions be answered from the standpoint of the Commanding Officer rather than the Finance Officer or Finance Officers on duty there.

1. Is the Finance service satisfactory?
   Yes.

2. Does the Commanding Officer have any suggestions to offer with reference to improvement of finance service?
   No.

3. If the finance services are unsatisfactory, is it due to lack of personnel? If so, has the Commanding Officer requisitioned additional personnel:
   (Not answered)

4. What is the rate of exchange on transactions handled thru Finance Officers? What is the rate of exchange on spot transactions with local banks?
   Value Australian Pound $3.228.

5. Are personal checks acceptable in the area?
   On local banks, yes.

6. Are travellers checks acceptable in the area?
   Yes.

7. Has any trouble been encountered in attempting to pass U. S. Treasury Checks?
   Paid on checks of the Commonwealth Bank of Australia.

8. Is U. S. Currency freely accepted?
   Yes.

9. What form of currency should we advise an officer leaving for the area take with him?
   U.S. or Australia. Can make a little on exchanging in the United States.

10. Is the Finance Officer capable and well qualified?
Yes.

11. Are officers and enlisted men attempting to handle transactions that should go thru the Allotment System?
(Not answered).

[redacted]

G-2 QUESTIONNAIRE

1. Combat Intelligence Training.

a. Are present methods of combat intelligence training considered satisfactory?

Present methods of combat training are considered satisfactory.

b. What percentage of training time is devoted to combat intelligence training?

Variable, in different organizations.

c. Are intelligence personnel in units considered adequate to obtain and disseminate combat intelligence? If not, what changes are recommended?

The general opinion was that it was adequate.

d. In combat zones is normal intelligence procedure used to obtain, evaluate and disseminate enemy information? Have any variations from standard practice been developed?

Yes. Combined with allied activities.

[redacted]

[redacted]

2. Disposition of Prisoners of War.

a. Does the handling of prisoners of war follow standard practice as laid down in our manuals?
If not, what variations have been developed?

Prisoners are handled by an Inter-Allied set up. Prisoners are handled normally up to this point. G-2 office stated that 80% of accurate enemy information was received through captured documents, and about 20% from prisoners.

b. Are units furnished with competent interrogators? Are they pooled at the superior headquarters or are they assigned or attached to subordinate command echelons?

Interrogation takes place at an allied pool.

3. Counterintelligence Activities.

a. Do units in the field have established CS systems? Are they working?

Yes.

b. Are CS personnel furnished to units to include the division?

Not observed.

c. Are these personnel adequate to perform their missions?

If not, what changes are recommended?

CS personnel was sufficient and adequate to perform their missions.

d. Is combat counterintelligence emphasized in training and practiced in actual operations; as camouflage, use of cover, concealment, removal of vehicular uniform and equipment markings, etc?

Yes, but training appeared insufficient. Men and junior officers seemed lacking in these respects.

[redacted]

[redacted]

4. Supply and Use of Aerial Photographs.

a. What means are available to furnish aerial photographs to units in training and in combat areas?

Many aerial photographs have been taken of New Guinea areas and furnished units. Maps of New Guinea were few and inaccurate. These are being corrected.

b. Is emphasis placed on the use of aerial photographs for

(1) Training (as map substitutes)? **Yes.**

(2) Operations (as map substitutes)? **Yes.**

(3) Intelligence purposes in determining hostile dispositions?

Yes.

c. Are schools conducted in the Interpretation of Aerial Photographs in units in training?

Yes.

5. Maps.

a. Is the supply of maps in the theater adequate?

Supply appeared adequate.

b. What types of maps are used?

Various.

c. Are they distributed by normal means?

?

[redacted]

Adjutant Gen.

QUESTIONAIRE FROM MISCELLANEOUS BRANCH G-3 AGF.

(In the answering of these questions, indicate whether fact or opinion).

I. GENERAL.

a. Personnel.

Question (1). Are the opportunities to attend officer candidate schools being made available to units in the Southwest Pacific?

Answer. An Officer Candidate School has been authorized in SWPA. First class will begin about Jan. 1, 1943 (fact).

Comment or recommendation.

Question (2). Are graduates of officer candidate schools considered to be qualified in technical and tactical subjects?

Answer. Yes, but there is a faulty general opinion that they lack force and leadership.

Comment or recommendation.

Question (3). Are there any overhead or headquarters functions being manned by personnel withdrawn from tactical units? If so, to what extent and in what manner?

Answer. In Australia few if any individuals assigned to tactical units are now on duty with headquarters or service installations. During the initial organization of the command in this theater (then designated United States Army Forces in Australia) some personnel was withdrawn from tactical and other troop units for headquarters and administrative duties. This was at the time essential, since no other source of personnel was available. Orders are now in force prohibiting the detail of personnel from tactical units except on approval by GHQ and approval is granted only in cases of urgent necessity where no other personnel is available. Such personnel is transferred unless the period of detail is to be short. (Partly fact, partly based on reports of others in the theater before establishment of GHQ, SWPA).

In N.G. combat troops are doing much of the work that should be done by service troops. The work is necessary and service troops inadequate.

Comment or recommendation.

b. Equipment. Is there any item of clothing or equipment which renders training or operations difficult? If so, specify as shown below:

Question(1) Are leggings satisfactory?

Answer. Yes.

Should they be replaced by other footgear?

Answer. No. Our present footgear is satisfactory but should be heavily hob-nailed (non-ferrous) and have non-ferrous metal heel and toe plates. In addition several spikes should be placed in the instep of the shoe of such length that they would not strike when walking on a level surface but would prevent slipping on small logs, etc.

Comment or recommendation.

Question (2). Would a one-piece uniform be desirable?

Answer. General opinion favors the two piece suit.

Comment or recommendation.

Question (3). Would a slipover, buttonless shirt with a low collar be desirable?

Answer. No. This garment is difficult to remove when damp, and it would be damp continuously from rain or perspiration.

Comment or recommendation.

Question (4). Should shirts be square tailed for wear outside of trousers?

Answer. No.

Comment or recommendation.

Question (5). Should helmets be marked for identification?

Answer. No.

Comment or recommendation.

c. Supplies.

Question (1). Are supplies of training ammunition

Answer. No.

If not, in what category are they ins per cent?

Answer. Practically no blank ammuniti ammunition, ball 50%.

Comment or recommendation.

Question (2). Is there a deficiency in any other type of training aids?

Answer. Yes.

If so, list them.

Answer. There is a lack of equipment necessary for the proper training in amphibious operations. The units are handicapped in that they are unable to practice comingashore in small boats. Currently there is a serious deficiency in landing craft for landing operations training; however there is a project now afoot to remedy this in time. Small models of airplanes will be helpful in training in airplane identification. These are being procured locally by GHQ for AA schools and will be distributed to include AA batteries in the near future.

Comment or recommendation.

Question (3). Have any new and different training aids been observed which would be of benefit to troops training in the United States?

Answer. Yes.

If of sufficient importance, describe in detail.

Answer. In order to train the individual soldier in the necessity for quick decisions and actions in the jungle and on the trail, a modification of the Hogan's Alley pistol course devised at Camp Perry has been adopted in the I Corps, U.S.A. It consists of the preparation of trails similar to those encountered in the jungle up which the individual soldier advances. As he proceeds, surprise targets appear from behind trees or in the tops of trees, at the bend in the trail and even dropping down on him from the branches as he passes underneath. It teaches him that he must be constantly on the alert, that his eyes must be in the tree tops as well as along the ground, the need to decide which type weapon he will use on which target. Besides being excellent training, it adds realism and interest to the work.

The Australian Schools teach "wiring crushing". They force the wire obstacles to ground by the weight of the bodies of a few soldiers and the rest of the organization walks across the wire. Normally wire would be covered by fire making this impractical, but it does take all fear of wire obstacles from troops and is a great morale factor, much like the so called "spirit of the bayonet".

Comment or recommendation.

[redacted]

~~Question (3). Upon arrival of troops (tactical units and service units, including attached medical detachments) what deficiencies have been most noted in:~~

d. Training.

~~(a). Individual training.~~

~~Answer. Inadequate.~~

Question (1). ~~Are present War Department~~ regulations hindering or retarding adequate and proper training?

~~Comment or recommendation.~~

Answer. No.

Comment or recommendation.

Question (2). Are any local directives hindering or retarding adequate and proper training?

Answer. No.

Comment or recommendation.

Question (3). Upon arrival of troops (tactical units and service units, including attached medical detachments) what deficiencies have been most noted in:

(a). Individual training.

Answer. Inadequate.

Comment or recommendation.

[redacted]

Question (3). (b). Unit Training.

Answer. Inadequate.

Comment or recommendation.

Question (3). (c). Combined Training.

Answer. Entirely inadequate.

Comment or recommendation.

Question (4). What changes, if any, should be made in the training program of troops in this country?

Answer. A soldier should be trained to care for himself in any and all types of terrain, but particularly in the type of terrain in which he will operate. Responsibility of the noncommissioned officers and junior officers should be stressed. Troops going to jungle country should be trained so as to avoid "jungle bewilderment" which has been one of the deficiencies in the training of troops in New Guinea.

Greater stress should be placed upon discipline and elementary training, personal hygiene, camouflage discipline, training of junior leaders in force of leadership, physical conditioning, etc.

Comment or recommendation.

Question (5). In general, what types of training should be stressed?

Answer. Small unit training must be stressed as well as the operation of the chain of command. Where it is possible to do it, a unit should be trained so as to acclimatize it to the type of country and operations in that country to which it is expected it will be sent. (See above).

Comment or recommendation.

Question (6). What training program is set up in the Southwest Pacific Area?

Answer. Training designed to fit the troops of the I Corps, U.S.A. for the offensive mission assigned it by General Headquarters. Programs in general were laid out by the Division.

Comment or recommendation.

Question (7). If the training results under the MTP's are not satisfactory, what specific changes are recommended in subjects and hours?

Answer. The MTP's have proven very satisfactory.

Comment or recommendation.

Question (8). Comments requested as to relative value of M-1 rifle, carbine and submachine gun.

Answer. All three have a place in units engaged in jungle fighting. None of them can replace the other two types. Only one carbine in the SWPA.

Comment or recommendation.

[redacted]

II. INFANTRY.

Question 1. What changes in the organization of the infantry regiment do you consider desirable for the type of fighting which is probable in the Southwest Pacific Area?

Answer. The desirable organization for an infantry regiment will change in accordance with the area of operations. In the interior of New Guinea, all heavy equipment and heavy weapons would be left behind. For defense against landings, heavier artillery would be proved. For operations on the mainland of Australia, all the present equipment is desirable. In offensive operations on some of the islands limited quantities of heavy weapons could be used. In view of the changing picture, no changes in standard T/O's of infantry regiment are recommended at the present time. Provisional tables must be set up from time to time in the Southwest Pacific Area to meet projected operations.

Comment or recommendation.

III CAVALRY.

Question 1. Specifically, does the present organization of mechanized cavalry elements insure satisfactory degree of flexibility?

Answer. Yes.

Recommended changes:

This answer applies to the reconnaissance troop of the infantry division. No other cavalry units are in the Corps.

Present T/O and T/BA are suitable for use in Australia. For jungle warfare, or operations in mountainous country the reconnaissance troop should be provisionally reorganized into a very small headquarters and three equal platoons capable of being attached to each of the regimental combat teams to be employed on dismounted missions, and especially trained in patrolling and G-2 work, such as the obtaining of captured enemy material, documents, equipment, etc.

Comment or recommendation.

Question 2. Are the present communication facilities available to mechanized cavalry sufficient and adequate? If not, list specifically the deficiencies:

Answer. The present communication facilities are adequate for use on the continent of Australia. For jungle or mountainous operations the sets are too heavy for dismounted employment. In general, Bantam installed SCR-193 sets, SCR-284 and SCR-511 sets would be better for platoon headquarters; SCR-184 and SCR-511 sets for use in section headquarters; and SCR-511 sets to be used in squads.

IV FIELD ARTILLERY.

Question 1. Are the field artillery weapons of the division artillery suitable and adequate? If not, what changes are recommended in types and calibers?

Answer. The 155mm howitzer can be used in Australia, but not in the islands to the north. 81mm mortars, 75mm pack, 75mm jeep-drawn, and 105mm howitzer battalions should be provided in proportion to meet a given situation.

Comment or recommendation.

Question 2. What types and calibers of other supporting artillery are recommended for this theater?

Answer. As recommended above, the 75mm pack howitzer is recommended, and the 155mm gun for use on the continent of Australia.

The 155 was a life-saver in P.I.

Comment or recommendation.

Question 3. Are present authorized prime movers suitable?

Answer. The present prime mover for the 105mm howitzer appears to be satisfactory. The use of the ¼ ton 4x4, or pack animals for the provisional 75mm pack howitzer units is contemplated.

Comment or recommendation.

[redacted]

Question 4. Are communication facilities adequate and suitable?

Answer. No. No 600 series radios have been received in this area to date.

Comment or recommendation.

Question 7. In defending an airport what disposition of the field artillery is recommended.

Answer. It should be disposed to as to be able to mass its fire on targets of opportunity on most likely avenues of approach, and on the airfield itself.

Comment or recommendation.

Question 8. Are security detachments assigned for local defense of artillery in position, or must it furnish its own local security?

Answer. It must furnish its own local security.

Comment or recommendation.

Question 9. In jungle operations, what type of local security is assigned for local defense of artillery?

Answer. It must furnish its own local security.

Comment or recommendation.

Question 10. Are ordnance companies satisfactorily handling repairs?

Answer. Yes.

Comment or recommendation.

[redacted]

V. ANTIAIRCRAFT.

Question 1. What procedure is followed to insure that friendly airplanes are not fired on by our own AA?

Answer. (1) Schooling in aircraft identification in all branches.
(2) Air intelligence to the AA units concerning friendly flights or planes in the air (Difficult to accomplish).
(3) Air-ground "color of the day" acknowledgment signals.
(4) Constant vigilence of all echelons in communicating all information of friendly or enemy planes to all firing units.

Comment or recommendation.

Question 2. For their own protection against friendly antiaircraft fire, to what extent has it been necessary to channelize flights of friendly airplanes?

Answer. This is done consistently in Australia. On several occasions the Jap planes have imitated the approved "approach procedure" and have thereby been aided in night bombardment of fields to a limited degree. It is difficult to vary this procedure sufficiently to make it 100 per cent effective. The procedure can be said to be effective to a satisfactory degree.

Comment or recommendation.

Question 3. When employed as a means for the detection of the enemy aircraft are SCR-268s effective in giving antiaircraft units sufficient warning to man their guns before the target arrives within range?

Answer. With crews on the alert—which is the normal status in the combat zones—the answer is yes. When used in conjunction with AWS warnings this is especially true. The ability of the 268 to give slant range AND altitude makes it a very useful fire control instrument when properly calibrated and adjusted. Although the searchlights in this area do not have their full quota of SCR-268 sets, pickups have been remarkably effective and rapid using of the few sets available (1 per platoon).

Comment or recommendation.

Question 4. With respect to training of troops in identification of aircraft, are there any recommendations as to the type of training to be given in training centers in the United States and prior to arrival in specific combat zones?

Answer. There is a complete school course outlined to include the use of models, shadow-box and texts. The USA loose leaf texts are excellent. The use of code names "Dave", "Pete", "Kate", "Mavis", etc. is not proving entirely satisfactory. The identification of the name and ship is purely a memory matter. Enlisted men respond to the literal identification "B-25", "B-26", etc., "PBY", etc., "A-20-A", etc., and the "O" types.

Comment or recommendation.

[redacted]

Question5. Anti-mechanized defense.

AA weapons are adaptable for use in anti-mechanized defense. However, since the directors on hand have to be reoriented after firing at horizontal ranges instructions are issued that AA will remain on its primary mission with planes in the vicinity.

a. What is considered SOP for use of antiaircraft artillery in anti-mechanized defense?

Answer. Fire at AA targets if any are in the air and are accompanying the mechanized attack. Use director fire with 3 inch guns in anti-mechanized defense if there is no chance of an air attack. Use AA machine guns against scout card or light tanks when not employed against aircraft. No 40mm AP has been available for this use.

Comment or recommendation.

Question 5. b. What system of intelligence is used for alerting antiaircraft units for anti-mechanized purposes?

Answer. Direct orders from the land force commander, normally by organic means of communication. No special "alerts" have been devised thus far. No mechanized threats have been impending.

Comment or recommendation.

Question 5. c. Is any continuous training being given in armored vehicle identification?

Answer. See b. above.

Comment or recommendation.

Equipment.

Question 1. Are shields considered necessary for antiaircraft machine guns on M-2 mounts, for 37mm?

Answer. Yes.

40mm guns?

Answer. Yes.

90mm guns?

Answer. Yes.

3" guns?

Answer. Yes.

If so, would shields which are detachable for traveling be acceptable?

Answer. Yes.

Experience in the Philippines campaign indicates a definite necessity for shields on AA weapons. The types of gun carriage used place the men high up and they are vulnerable to machine gun fire and fragmentation bombs. Shields are a great morale factor.

Comment or recommendation.

Question 2. With what outside headquarters should the following antiaircraft units be able to communicate by radio:

a. Antiaircraft regiments?

Answer. Tactical and administrative chain.
Supported elements or xestablishments.
Adjacent AA. All intelligence centers.

Comment or recommendation.

[redacted]

Question 2. b. Antiaircraft groups or groupments, if formed?

Answer. Same as regiments.

Comment or recommendation.

Question 2. c. Antiaircraft brigades?

Answer. Unit to which operationally assigned.
Administrative channels.
Intelligence channels of higher echelons.

Comment or recommendation.

Question 3. Any troubles with materiel that have not been previously reported?

Answer. None. There is a definite need for consideration of proper lifting lugs on all materiel and equipment to facilitate lifting by ships cranes without damage due to affixing of rope slings around equilabrators, etc.

Comment or recommendation.

Question 4. Are adequate provisions made for maintenance of equipment by Ordnance, Signal Corps, and Quartermaster agencies? If not, what changes are suggested?

Answer. Prodigious efforts have been exerted to keep maintenance at high levels. Deficiencies in available transport of lack of available supplies occasioned in this theatre have been due to unavoidable circumstances and not to any neglect or systematic deficiency in the service branch concerned.

Comment or recommendation.

VI. ANTI-TANK.

Question 1. Should anti-tank guns be towed or mounted on self-propelled mounts in this theatre?

Answer. In theatre immediately north of the mainland of Australia, AT guns must be transported by carrier (native), by air or by water. In view of the above, towed guns are, in general, necessary.

Comment or Recommendation.

G-3 OPERATIONS

Question 1. CAVALRY REGIMENT - Type of duty now being accomplished, present mission and recommendation as to further detail of similar troops for service in this area.

Answer. Only cavalry in SWPA is a regiment and one troop (Australian) which is located in the inactive western portion of the continent.

Comment or recommendation.

Question 2. MECHANIZED RECONNAISSANCE SQUADRON - Information similar to 1 above.

Answer. No comparable unit in the operational area.

Comment or recommendation.

Question 3. FIELD ARTILLERY PACK UNIT - Information similar to 1 above. Also adequacy of present personnel, materiel, animals, etc. Information has been received that domestic horses are unsatisfactory and that United States animals are preferred.

Answer. Some standard field artillery battalions are being provisionally converted into field artillery pack units. The Australian army is contemplating the activation of pack howitzer units. Domestic horses have been used as pack animals in the operational area.

Comment or recommendation.

[redacted]

Questionnaire G-3 - AGF

Question. 1. What training is being conducted to insure prompt air support for ground units?

Answer. The 32d and 41st Divisions have conducted some training in this subject. Recently a flight of the Fifth Air Force has been assigned to the I Corps U.S.A. by the 1st Australian Army for extensive use in air ground liaison and support as well as in Field Artillery observation. The Chief Signal Officer has initiated training along these lines in New Guinea and has proposed similar training for forces on the mainland.

Comment or recommendation.

Question. 2. Enumerate all features of air ground training that you observe with a view toward perfecting that coordination which is necessary to success.

Answer. From experience gained in demonstrations of landing operations at the Joint Overseas Operational Training School, using RAAF Whirraways and one battalion of US infantry, the following facts were determined.

1. Continuous and direct voice communication is necessary between ground forces and supporting aircraft. Portable sets SCR 288 can be used in landing boats. Walkie-talkie sets SCR 536 have been used with success under all conditions up to 15 miles, for two-way communication, ground to air except under some jungle conditions. This type set, with an operational radius of 50 miles would be of great value.

2. Ground signal panels should be simple. Their use is not practical in heavily wooded country and practically impossible in jungles of N.G.

3. Before the operation, if at all possible, a "Bomb line" should be established to prevent casualties to own ground troops.

[redacted]

4. Airplane pilots doing the air support work should have a general knowledge of the land operations.

Comment or recommendation.

Question. 3. What organic or attached antiaircraft weapons (automatic weapons) are required for Divisions and separate tactical units?

Answer. I was informed that the present organic AA weapons will be satisfactory in most cases. The attachment of AA units will depend upon the mission and the organization of the special task forces. Heavy AA weapons are not suitable in jungles, nor can they be utilized in landing operations. There is a lack of a suitable mount for the .50 cal MG now assigned to the Service Co of the Infantry Regiments. It is desirable to have a ground mount for .50 cal MG for AA use of the Service Cos, Inf regts and the divisional artillery units. The CA (AA) have such a mount, which is satisfactory for the purpose. However, the weight (392 lb) and bulkiness of this mount preclude its use by the aforementioned units due to restriction of cargo space in the vehicle in which it would have to be transported.

Comment or recommendation.

Question. 4. How are these weapons employed?

a. In movement?
b. In offense?
c. In defense?

Answer. The normal employment follows the teaching of our combat principles. No indications from the combat area tend to prove that they are not the correct principles. Antiaircraft defensive armament should be so mounted as to be ready for employment at any time and under any conditions. Air forces strike hard and fast and the defense, consequently, must be continuous from the entry of the unit into the combat area.

Comment or recommendation.

Question. 5. What means of communication is used when radio fails, or to supplement radio?

Answer. Visual, wire and courier, both mounted and dismounted.

Comment or recommendation.

Question. 6. Is there a need for field artillery observation battalions in Australia?

Answer. For operations in Australia, there is a definite need for observation battalions. In the areas immediately north of Australia, it is not felt that there would be any need for such a unit. Should future offensive action extend to larger islands or to the Asiatic mainland this type unit will be required.

Comment or recommendation.

[redacted]

Questionnaire by G-4-a97

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HEADQUARTERS
ARMY GROUND FORCES
Army War College
Washington, D.C.

January 12, 1943.

Questions and Answers to G-4 part of Questionnaire on Southwest Pacific

1. What is the particular type of equipment needed in theater? Particularly with reference to:

a. Arms.

(1) Are existing caliber and type of smoke weapons satisfactory?

Up to the present time no tactical use of smoke weapons has been reported in this theater. Available equipment includes artillery ammunition and airplane projection equipment.

(2) Could effective use be made of anti-tank rockets and Projectors?

It is believed that effective use could be made of anti-tank rockets and projectors and they were much desired wherever mentioned, even on the small islands visited enroute.

(3) Should ground elements be provided with grenade type incendiaries?

Incendiary grenades, as well as other types of grenades should be available in this theater for issue to troops as necessary.

b. Signal Equipment

General: New items of T/BA Radio Equipment such as SCR-284, 504, 408, 533, 608, 610, 808 and 838 have not been either received at all, or in sufficient quantities for issue to troops in the combat areas to have any comparative tactical value as to transportability, operation, or maintenance, under tropical service conditions.

AW Equipment: Requirements for a portable light weight medium powered Aircraft Warning set are urgent inasmuch as present SCR-268 and 616 sets are unsatisfactory for following reasons:

(1) Sets require heavy cranes for loading and unloading.

(2) Small vessels such as trawlers cannot handle the weight or bulk.

(3) Docking facilities are meager and landings on beaches cannot be made with this equipment without special lighter facilities.

(4) Road and bridge facilities in some areas cannot handle this weight and bulk with either speed or certainty.

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(5) Air-craft transportation is only means of reaching certain areas and this type of transportation is impractical for present SCR-268 and 516.

Radio Sets

(1) Medium power radio equipment should not exceed the size or weight of the SCR-299 in order to comply with the water or air transport landing difficulties, and jungle road facilities.

(2) A light weight transmitter-receiver combination having smaller weight than SCR-194 and greater range than SCR-536 is needed to operate on medium frequencies.

(3) A directional Radio Transmitter-Receiver combination being highly portable with microwave operating range could be used to great advantage in guiding small boats to definite night landing points on beaches after debarkation of troops from normal transports.

(4) Crystal microphones and earpieces in SCR-536 (BC-611-A) sets should be replaced with a sealed magnetic type as deterioration rate of these particular component items is fairly high under tropical conditions.

(5) Radio Receivers operating on alternating current should have power requirements designed for 25 cycle operation as local and island power equipment varies from 40 - 65 cycles; 50 cycle being standard in this area.

(6) The particular type of radio equipment for fixed stations needed in this theater should be constructed and treated for tropical use and particular attention should be given for employing such equipment in highly humid territories.

(7) Consideration should also be given for providing light weight equipment in order to afford a high degree of mobility and ease of handling.

(8) There is a great need for a wide variety of battery operated transmitters and receivers all wave frequencies, MO and/or crystal controlled, for use in jungle areas.

Wire

(1) For operations in this theater, permanent and semi-permanent pole line construction materials not covered by T/BA can be procured in Australia.

(2) Items of equipment on T/BA are considered satisfactory - switchboards, telephones and teletypewriters. Maintenance parts for teletype machines are especially critical, as no local supply is available.

(3) Due to length and limited number of basic telephone lines, telephone and telegraph carrier systems for commercial telephone system are necessary to meet military requirements.

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Power Units

(1) Power units, preferably Diesels, ranging from 10 KW up to and including 75 KW are needed for fixed station installations.

(2) A substitute power unit for PE-75 (-) is imperative as this unit is totally unsuitable for continuous tropical service.

(3) Power units designated for the tropics should generally be designed for slow speed, be water-cooled, and of the Diesel type. Failures on power units have been excessive and have been due to the following:

(a) Engines rotate at too high speed.

(b) Air cooled designed engines are overheating and parts failure increases accordingly.

(c) Two cylinder engines cannot be regulated effectively, resulting in power surges and damage to electrical equipment such as power packs and tubes.

(d) Difference in gasoline standards causes damage to pistons and rings resulting in high maintenance rate whereas use of Diesel engines would eliminate this trouble.

c. Motor and Transportation Equipment

The standard equipment is in general proving satisfactory. For operation of long convoy routes on the mainland of Australia, 7-10 ton trailers and tractors are being procured locally in order to release smaller tactical vehicles. There is a need for mobile refrigerating units, and this is being met by local procurement as well as shipments now being made from the United States. For transportation in jungle areas, pack equipment, light carts, tractors and track trailers are on order from the United States.

d. Engineer (Boats, Pontoons, Bridging, etc.)

Australian type pontoons and bridging equipment are not proving satisfactory, while sectional barges, pile drivers and heavier pontoons for landing stages are being developed and constructed locally. Australian Steele Bridges and the S.B.G. Bridges have definite limitations which render them inferior to our M-2O Bridge.

e. Medical Equipment. (For Station and Evacuation Hospitals - Attached Medical - Special Equipment for type operations, etc.)

In this theater there is needed light, mobile, portable Medical equipment of all kinds, especially designed for following troops into jungle country where motor transportation is impracticable. This requires light-weight containers including packs, poles, and wheeled litters. Equipment of this nature is being utilized by the 25-bed portable hospitals which have been activated in this theater. Evacuation and Surgical Hospitals in this theater should be reorganized and re-equipped into smaller, self-sustaining units with equipment especially designed for mobility and portability, and with their own organic motor vehicles.

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f. Quartermaster Equipment. (General)

The following comments, while particularly applicalbe to general Quartermaster equipment likewise concern equipment issued by other services. In designing equipment for use in this theater and in drawing up T/BA governing the allotment thereof, consideration should be given to the frequent necessity of separating small groups from parent units for independent operation, often at widely separated locations. This in turn involves the dispersal of the parent unit's organizational equipment which must therefore be sufficiently flexible both in design and in basis of allotment.

2. What type units of the service elements should be trained and organized for operating within this theater for:

Medical Section
Ordnance Section
Quartermaster Section
Engineer Section
Signal Section
Chemical Warfare Section

The type of service units of all branches desired for this theater and the desired priority of receipt thereof have been indicated in the following GHQ, SWPA radiograms addressed to AGWAR, and in previous communications referred to therein:

C-71, dated July 10, 1942
C-470, dated September 11, 1942
C-647, dated October 6, 1942

The requirements outlined in reference communications are those indicated by the present tactical situation, and will probably require additions, depending upon tactical developments.

3. What is type of operation in use or anticipated? What depth into country will action probably go?

Continental warfare on the mainland of Australia and to a large extent on the larger islands to the north and west of the Australian Mandate; amphibian-jungle operation on the islands immediately north of Australia.

4. What type and quantity of clothing is recommended for use in this theater?

Standard T/BA types and allowances of clothing have so far in general proved satisfactory for communications zone operations. For combat operations in the equatorial regions of this theater, special jungle clothing is being supplied by dyeing fatigue clothing.

5. What type and quantity of supplies and equipment is recommended for use of the individual soldier in this theater?

Standard T/BA types and allowances of individual equipment have so far in general proved satisfactory for communications zone operations. Special equipment is now being procured for warfare in jungle terrain, such as individual medical kit, special hammock, modified pack, waterproof food and clothing bags, helmet camouflage nets, machetes, etc.

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6. What special type of training should be given the service elements prior to their arrival in the theater?

Operations in this theater to date have frequently necessitated splitting the larger service units into smaller, self-sustaining units. The proper technical and administrative functioning of such smaller units has placed high demands on the initiative resourcefulness and versatility of all grades of personnel, and this should be borne in mind in the selection and training of personnel for this theater.

7. What is the desired order of receipt of the service units, particularly the Engineers?

See answers to Question No. 2 above, with high priority on initial shipment of Engineer Amphibian Units.

8. What equipment, power, material and supplies are locally available?

The development of local resources has been a major function of United States Army Services of Supply, Southwest Pacific Area. The office of the General Purchasing Agent was established on March 16, 1942, as a special Staff Section of Headquarters, United States Army Services of Supply, with the responsibility for the coordination and control of all procurement in Australia by the United States Army. This hasinvolved the correlation of local procurement objectives of that Command with the industrial program of a country already operatin under wartime conditions. Available local resources are as follows:

a. By Classes.

(1) Class I supplies: All forage and all subsistence items are procurable locally except coffee, and except canned fish, corn, tomatoes and green beans; the last three canned items mentioned are expected to be procurable at an early date. Practically all Class I medical supplies must be imported.

(2) Class II supplies: Generally speaking, the following items are available locally: articles of woolen uniform (but no articles of cotton uniform); leather goods and shoes; individual mess equipment; smaller items of organizational mess equipment; small hand tools not requiring case hardened steel; automobile batteries (and a small number of more specialized batteries); a limited selection of automobile accessories; general purpose motor vehicle tires and tubes (pending arrangements for the importation of crude rubber); a limited number of items of signal equipment.

(3) Class II and IV supplies: Generally speaking, the following items are available locally: bodies and cabs for non-tactical motor vehicles; trailer chassis and boddes; and office furniture.

(4) Class III supplies: All petroleum products must be imported.

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(5) Class IV supplies: Except as above noted, items procurable locally are limited to certain hardwood timber; cement; paints; structural steel; certain classes of wire; certain camouflage materials; glass; and a limited selection of construction machinery.

(6) Class V supplies: All ammunition must be imported.

b. A program has been initiated for the construction and acquisition of approximately 1,000 small water craft, including lighters, barges, surf boats, tow boats, and high-speed, ocean going supply boats, of which some 45 barges and lighters have been delivered.

c. The Australian States railways systems and commercial airlines have been utilized to the extent that existing conditions and equipment have permitted.

9. What are the operating reserves now in units of fire? Is it excessive or inadequate?

The present authorized ammunition level for ground forces is 10 units of fire. This level is considered to be satisfactory in the case of artillery ammunition. However, it is believed that experience will indicate the advisability of maintaining a minimum level of 15 units of fire for small arms and mortar ammunition in this area.

10. What method is recommended for the handling of Class I and Class III supplies?

Experience has proved that the present method of handling Class I supplies through existing allied (Australian Army) facilities is not entirely satisfactory, due to differences in the ration scale and in the components of the ration. It is believed that distribution through U.S. Army agencies will be preferable, and this method has been adopted in certain areas. This problem is receiving constant study. For the present it is recommended that no change be made in the present method of drawing Class III supplies through the Australian Army.

11. Is present type of ambulance suitable?

Where adequate roads exist, the present type of ambulance is suitable.

12. Is armored ambulance desired for front line evacuation?

Wherever motor transportation is feasible, it is believed the armored ambulance would be desirable for front line evacuation. Ambulance evacuation in New Guinea is not possible.

13. Is method of water purification satisfactory, particularly for small groups?

Yes, except where water with high alluvial content is encountered, requiring additional filter capacity or extra settling tank for preliminary treatment with Aluminum Sulphite. Smaller, 1 gallon per minute, units are being developed. The small individual water purification elements have not been issued in the SWPA.

[redacted]

[redacted]

14. Give a breakdown of type of engineer units in the theater.

4 Engineer Regiments (General Service)
1 Engineer Battalion (Aviation)
2 Engineer Companies (Dump Truck)
1 Engineer Company (Depot)
2 Engineer Battalions (Combat)
1 Engineer Battalion (Topo) (Army)
1 Engineer Company (Topo) (Corps)

Approved for this theater:

1 Engineer Brigade, Amphibian (Dec.)
1 Engineer Battalion (Base Shop) (Dec.)
2 Engineer Battalions (Airborne) (Feb.)
1 Engineer Regiment (General Service) (Feb.)
2 Engineer Battalions (Aviation) (Feb. & Mar.)
2 Engineer Companies (Dump Truck) (Feb. & Mar.)
1 Engineer Company, Maintenance)
½ Engineer Headquarters, C.Z.) Dates not yet
4 Engineer Sec., C.Z. Headquarters) indicated
1 Engineer Company, Depot)
2 Engineer Companies, Depot (Aviation))

15. Is the Combat Engineer Battalion satisfactory? Would it be improved by the addition of a reconnaissance platoon? If this were added, could it replace the motorized engineer battalion?

The standard Combat Engineer Battalion, while satisfactory for continental warfare, is not suitable for amphibian-jungle operations.

16. Is the system of motor maintenance as prescribed in FM 25-10 and WD Circular No. 250, 1942? Are there deviations? Why?

The system of motor maintenance as prescribed in FM 25-10 and War Department Circular No. 250 dated July 29, 1942, is being followed basically. Deviations from these systems consist of the following:

a. Fourth Echelon repairs are being accomplished in Third Echelon shops insofar as availability of equipment permits. This is due primarily to the lack of communications and vast distances involved.

b. Isolation of units necessitates accomplishment of repairs as near as possible to the location where such repairs are required.

c. Commercial facilities in cities where ports are located including the large American motor manufacturers' assembly plants, i.e., General Motors, Ford Motor Co. and Chrysler-Dodge, are being utilized extensively for third and fourth echelon work with considerable success.

17. Are facilities available for training of motor mechanics in all echelons? What are they? Are they used to full extent?

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Established facilities are not available for training motor mechanics in all Echelons, inasmuch as motor mechanics are selected upon entrance into the Army and receive their training prior to field service. It has been found that the U. S. Army Maintenance Companies now in Australia consist of excellently qualified technicians and as such do not require additional technical training. Up-grading is standard practice in all organizations.

18. What is the general condition of motor vehicle operation and maintenance? How is this effected by the training of personnel, the motor supply system, and motor maintenance shops and schools? Are drivers trained in accordance with FM 25-10?

The general condition of motor vehicle operation and maintenance is satisfactory but there still exists need for further effort in execution of first and second Echelon or preventive maintenance. The general condition of vehicles, from an over-all point of view, is satisfactory, but there is a lack of spare parts and a lack of maintenance facilities. Insofar as possible and practicable, drivers are being trained in accordance with FM 25-10.

19. Is there an adequate stock of spare parts and supplies based on prescribed allowances? Are these allowances proper or do local considerations make advisable the modification of such allowances?

The prescribed allowance of motor parts is unknown and therefore no suggested modifications can be offered. Shipments of parts received to date have been inadequate. Requests for lists covering prescribed allowances have been submitted but no information has been received to date.

20. What level of supply for motor parts is maintained? Have acute shortages in any particular item or motor supply been developed? If so, what are they and why?

The present total prescribed level of supply of motor parts is 180 days. Present motor parts inventories are incomplete and it is not yet possible to calculate what level of supply is actually on hand. Nearly all acute shortages in items of motor supply have been alleviated by local procurement and in a few cases by salvaging of parts from vehicles already on dead-line.

21. Are motor vehicle replacement pools available?

Motor vehicle replacement pools are available and are functioning in all active Base Sections, however, there are not yet sufficient vehicles in this theater to fill all T/BA requirements and provide the necessary replacement pool for tactical vehicles.

22. Has necessity for additional tools or modification of existing tool kits occurred? If so, what are they? and
23. Have any desired modifications or substitutions for existing tool kits occurred? If so, what are they?

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[redacted]

The necessity for additional tools has arisen. This has been recognized and appropriate requisitions have been submitted to U.S.A. for supply of such tools. Tools consist of the various echelon sets of maintenance equipment. Modification of the existing tool kits has occurred, inasmuch as it has been found that present echelon sets do not include certain tools required for complete repairs to various units and assemblies. The fact is recognized that operating in Australia, there must be sufficient equipment available to a maintenance organization to cover not only tools as set out in Circular No. 350, but also to provide additional tools required to complete the assembly without necessitating the evacuation to a higher echelon of maintenance. Present sets are being modified to include additional tools for independent repairs without need for evacuation.

24. Are there any suggestions for improving maintenance, personnel, motor supply, or maintenance equipment? It should be remembered that everything must be kept to the essential minimum.

The allowance to all units of First and Second Echelon maintenance equipment is believed to be insufficient. Due to tactical employment of small combat units and lack of communications, a reserve of maintenance equipment for all Echelons should be provided, so that isolated units can be issued additional First and Second Echelon equipment and so that light vehicles equipped with units of Third and Fourth Echelon equipment can be sent out with small maintenance contact parties. Further specific plans regarding this problem will be presented from time to time as required.

[redacted]

QUESTIONS FOR OBSERVERS
SUBMITTED BY TECHNICAL INFORMATION SECTION
AND
ANSWERS BY COL. LE GRAND DILLER, INFANTRY
Aide to General MacArthur (P.R.O. and censoring)

Q. 1. Do Task Force and Theater Public Relations Officers believe that War Correspondents could be instructed by the Army in continental U.S. before departure in any manner that would be of assistance both to the correspondent and the PRO?

A. 1. Many War Correspondents have been sports writers. About 1/3 of the War Correspondents have had overseas experience and are experienced. The other 1/3 are of high type but without experience. This latter 1/3 have had no experience especially in government dealings and no knowledge of anything pertaining to the military.

They should be trained in the organization of armies, army terminology, a little army tactics and principles, operations in general and supplies.

PRO, SWPA intends starting a school in the near future on these things.

A war correspondent should be taught to take care of himself in the field - individual field training. This is as important as their background.

A knowledge of fundamentals will help the reporting and the reporter.

War Correspondents should be given a short course on conditions in the area and general military information before they come out. Some of them don't even know how to read a map.

Suggest a course of fundaments for War Correspondents (perhaps at the Inf. Sch.)

Q. 2 What are the U.S. correspondents' reactions to censorship? Is there a central clearing house for censorship or does a correspondent have to go to several different offices to clear stories?

A. 2. Censorship is handled here by GHQ and the Austrailians. There must be a central office with final authority. Articles should be censored first in the field for local censorship and then rechecked by GHQ for the bigger picture, including politics etc. (Local example:- Labor party now in power and is opposed by the money party. This condition is not permitted to get out of the country.)

GHQ runs their censorship on policy and common sense. Australia is run by fixed rules and regulations. Some news may be released by the local censor and not released by GHQ for overseas.

War Correspondents are not kicking on military censorship. They see the urgent necessity for it.

They kicked on local censorship. The U.S. War Correspondent's attitude is one of understanding tempered with the natural opposition of any newspaper man. They understand its necessity and play ball.

There are 12 officers in GHQ censorship and are scattered about on their official duties.

Attached pamphlet has the information on the setup. (1)

Q. 3. Are Task Force and Theater PRO's making any advance preparations to care for correspondents in combat areas? Is there a definite plan or is the attitude generally that of "not crossing bridges until we come to them".

A. 3. Yes. GHQ furnishes transportation, tentage, hut tents, cooks to run their own mess (forces supply personnel). They are practically self contained.

They are sent out and report to the Press Relations Officer in the field. Australian PRO's are subordinated to GHQ.

There is a definite plan and Press Relations setup down to and including the division.

Mr. Knox, civilian, is the director of Public Relations for the Australian forces.

Q. 4. Generally, do the PRO's have the respect and confidence of the correspondents, and vice-versa?

A. 4. Definitely yes. Mutual confidence all throughout the outfit.

Q. 5. Do the PRO's do much in the way of preparation of handouts for the press or does the press get most of its information from conducted tours, interviews and press conferences?

5. They are never given a prepared story. They are given a daily communique which is elaborated upon at a daily press conference.

War Correspondents get lots of dope from interview of men who have been at the front and by personal observation.

Conducted tours are not practical. Some time is spent in censorship and organisation. All War Correspondents must be in uniform.

In censoring it is desireable to write in after cut outs to make sense to sentences.

There must be a network setup to block releases to all papers and sources of publicity.

PRO is not part of G-2 here.

F.M. 30-26 (Regs. for War Correspondents is issued to each War Correspondent.)

C
O
P
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GENERAL HEADQUARTERS
Southwest Pacific Area

July 16, 1942

PRESS CENSORSHIP SYSTEM SOUTHWEST PACIFIC AREA

The Press Relations and Press Censorship situation in this area is peculiar in many ways. First, although this is an allied command, there still exist certain departments which are not included in the allied command, e.g. R.A.N., R.A.A.F. Second, being an allied command naturally the established Australian agencies which are included in the allied command are interested in what news is released. Third, a complete civil censorship for internal Australia and external transmission was in effect prior to the establishment of this headquarters.

The question of press censorship is divided into two distinct categories: copy which is transmitted overseas, particularly America, and copy which is published in the local press of Australia. The explanation of the press censorship system will be discussed in two parts, namely foreign and internal.

GENERAL:

In this headquarters Press Relations is a separate section of the staff as it is in the War Department and is not a subdivision of G-2. The reason for this is twofold: direct control by the C-in-C and prompt access by the Press Relations Section to him. Press Relations includes the release of news as well as press censorship.

Two methods of censorship are in practice: (1) at the source known as field press censorship and, (2) at the transmission points for overseas dispatches.

Section 1.

Foreign. A large number of English and American correspondents are accredited to this headquarters. Many of them are located at GHQ and a considerable number are in the field reporting from operational bases, etc. The funnel through which all copy going overseas must pass is the communications center of radio and cable. In Australia these are located in Melbourne and Sydney. A military press censor's office (a branch of Public Relations GHQ) is maintained in those two cities. The radio and cable companies will not transmit press copy unless it is stamped "passed by military censor". All dispatches, whether originating in the city from which transmitted overseas or telegraphed in from outlying points pass through the censor's office. Sufficient officers are detailed to this duty so that twenty-four hour service is afforded the correspondents. One officer in the Press Relations Office of GHQ acts as the Chief Military Censor. Questionable matters which cannot be decided by the local military censors are referred to him for decision. GHQ, Melbourne and Sydney are the only points at which military censors who are assigned to GHQ are maintained.

Field Press censorship is performed on the spot by agencies of the subordinate forces. Since the land force commander in any area is both a troop and area commander, in the absence of centralized command, the allied

land force cooperating with GHQ operates the field censorship. He maintains offices in the logical news centers of the outlying districts. For example, in the Northeastern military area a field press censorship office is located in Townsville. All copy originating in that area must be passed by the field press censor before it can be transmitted to the radio and cable terminals either by mail or by telegraph. The field press censor consults representatives of the other services such as Air and Navy when copy is written concerning those act vities. The field press censor has a dual duty— he assists the correspondents in the collection of news and censors the copy as indicated. Copy which is transmitted from the field press censor to, for instance, Sydney, is again referred to the military censor at that city for final review. If passed, it is suitable for transmission to either England or the United States.

The civil censorship set-up which was in operation in Australia prior to the establishment of military censorship has not been replaced but rather augmented. The Chief Military Censor deals directly with the Chief Publicity Censor and the officers in Sydney and Melbourne deal directly with the State Publicity Censors who are subsidiaries of the Chief Publicity Censor. When the military field press censor has passed copy it is referred to the State Publicity Censor who is located adjacent, for passage from the civil standpoint prior to transmission to the radio terminal. Both in the field and at the radio terminals copy is referred to the State Publicty Censor's office after passage by the military censor. It was feared originally that this would cause considerable delay. However, practice has revealed that there is little delay incurred and considerable added security is gained. By mutual understanding, the civil censors do not reinstate anything deleted by the military censor but do delete in additon anything which may have been inadvertently passed by the military censor and also matters pertaining to civil policy.

Section 2.

Local Press. Censorship of local press in Australia is voluntary. However, considerable pressure can be brought to bear upon the local press by disaccreditation of their war correspondents and by denying any newspaper at fault, access to information which is released from the various headquarters. Only accredited representatives of the local press are admitted to headquarters and other military camps and establishments. The local press has cooperated most heartily. Conferences with editors from time to time have pointed out to their satisfaction the reasons for withholding certain military information from publication. Although this censorship is voluntary a certain amount of direct control is maintained. The local press either by grouping or individually maintains a number of correspondents in the field. Their copy is censored by the field press censors both military and civil, prior to dispatch to their newspapers. No final review at the city in which the newspaper is published is required. However, any newspaper which receives copy which appears to be doubtful, voluntarily refers that copy to the local military and civil censors. With such a system, minor breaches of security occur due to misunderstandings or inadvertence. However, the system has worked quite satisfactorily to date and is expected to continue. The Public Relations Section, GHQ, and its subdivisions are able to assist the local press in many ways. Certain training,

activities, demonstrations and maneuvers which do not violate security are announced to the press and their representatives invited to photograph and report the activity. All such material is censored prior to publication and is appreciated by the newspapers. Such cooperation has established a mutual understanding to such an extent that difficulties with the local press in their eagerness to print news have been materially reduced.

Censorship policy is controlled by close liaison with the Chief Publicity Censor. All requests for curtailing or withholding of news (for example — shelling of the coast by a submarine) are routed through GHQ, where they are coordinated, to the Chief Publicity Censor. The Chief Publicity Censor telegraphs the directions to all State Publicity Censors and all newspapers. Thus the civil censors, military censors and editors are notified simultaneously.

No news of military operations including enemy raids may be published or transmitted until announced by communique or press release. (The term military includes ground, air and naval activities.) The facts of military information included in the communique or press release cannot be exceeded in the news stories. For example, if two of our planes are shot down in contact with the enemy and two more fail to return, the communique will announce two planes missing. All censors use the communique as a guide to the amount of military information which can be published. The communique is transmitted to all censors and press relations offices by teletype and telegraph.

Summary. The following salient principles are considered essential to successful censorship.

1. Only accredited correspondents should be admitted to military establishments and operational areas.

2. The communique or press release should establish the limit of military information which is publishable.

3. Subordinate intelligence or press relations agencies should be coordinated into a censorship net.

4. All copy should be referred to the activity to which it pertains for censorship decision.

[redacted]

Questionaire prepared by Infantry Branch Development Section, Army Ground Forces.

1. Weapons:

Light Machine Gun vs Heavy: Shoulder-operated Light Machine Gun vs Tripod mounted.

For operations on the continent of Australia, the heavy machine gun is a better weapon, due to its ability to fire overhead fire and the fact that it is capable of sustained fire. In jungle country, such as is found to the north, the added weight of weapon and ammunition make the light gun more desirable. A tree mount for the light gun when used in wooded or jungle terrain is under test. The ability to lay on a FPL is most desirable in jungle warfare.

60-mm Mortar vs 81-mm for light troops.

The 60-mm mortar is a very desirable weapon for the light troops. The 81-mm has had to be left behind in some exercises in mountainous country due to its weight. But it is felt that some 81-mm mortars should be retained, because of their greater effective range and larger bursting area. There will be places in the jungle where this weapon will be invaluable in dislodging the enemy. It would be an excellent substitute for artillery in the operations contemplated to the north of the continent of Australia.

37-mm AT vs heavier - or balance of both.

There have been no indications that the present 37-mm AT gun will not stop mechanized vehicles in this area. Again the weight problem enters into the picture. In some cases even this gun cannot be transported, and would have to be eliminated except for beach defense. A heavier gun might well be used on the continent of Australia, in which case a balance of light and heavy guns would appear to be desirable.

At what ranges will majority of AT Guns engage hostile tanks under various terrain conditions? Is the need for concealment paramount?

It is not thought that tanks could be successfully engaged at ranges in excess of 500 yards in most terrain. In jungle this would be considerably lessened, even to point blank range.

Grenade launchers, anti-personnel - need for.

Where there is a lack of artillery fire support, as there will be in close jungle country, the addition of grenade launchers appears to be highly desirable in blasting the enemy out of prepared positions that cannot be reached by small arms fire. While the 60-mm mortar is an excellent weapon for this purpose, it should be supplemented by these lighter weapons.

[redacted]

"Invisible mines" and flares to prevent surprise and infiltration need for.

These weapons would be highly desirable in the type of combat that might be expected to the north of Australia. The reports that have come back as to the methods of infiltration at night by the Japanese indicate a decided need for just such a weapon to be used in the jungles at night.

Idea of one type of light Infantry for all special purposes.

For practical purposes it is felt that the standard unit, with local provisional changes in organization and equipment to meet specific and varying conditions, must be resorted to.

Carbines as replacement for M1 in jungle warfare.

The limited test given to the one carbine in Australia indicates that it is a most desirable weapon for jungle fighting. The M1 rifle and Thompson SMG also have a place in jungle warfare. The weight of the carbine and its ammunition is of definite advantage.

Knives vs bayonets - which preferable in jungle.

Knives in general should be issued to man not equipped with bayonets for jungle combat. The bayonet should also be issued to all men who are armed with the M1 or M1903 rifle. A combination bayonet and jungle knife (all purpose) would be very desirable for jungle use.

2. Transportation:

Small, light vehicles as MG carriers, in jungle, etc.

Some terrain does not permit the use of any type of transport. But where it can be used at all, a light vehicle is most desirable. Any means, capable of assisting the soldier forward with essential combat equipment is highly desirable.

Is present W.C. suitable as to size and silhouette?

The silhouette of the present weapons carrier is too high. A low silhouette is desirable, not only from a concealment standpoint, but also in negotiating wooded or jungle country where roads are non-existent or inadequate. At the present time in New Guinea, ¼-ton trucks are in general being used as substitute vehicles.

Use of trailers for tactical vehicles.

Where the terrain is not too rough, the use of trailers is practicable. For operations on the continent of Australia, the trailers have a definite place to increase the cargo carrying capacity.

[redacted]

Fuel supply under battle conditions.

Fuel supply in New Guinea is mostly by air and native carriers. Indications are that some supplies may be carried by small coast wise boats.

Maintenance -- Spare parts and training of mechanics.

The spare part supply is not adequate. The mechanics appear to be well trained and if given the parts could accomplish the maintenance required of them. Schools are operated in the Divisions.

Ammunition Supply Vehicles - how used?

None have been used in combat as yet.

Are present arrangements for the supply of drinking water adequate? What should be a day of supply per individual?

The situation as to the supply of drinking water for the units in bivouac in Australia is being rapidly corrected. All water is treated prior to use and has been found to be satisfactory. At least two gallons of water for drinking purposes should be provided, and in very hot weather this should be increased to three gallons. Light weight water containers should be provided as the present containers are far too heavy to be handled on the trail. In New Guinea water is available at all places and merely requires treatment. It was the general opinion that the present rubberized Lester bag was not satisfactory and that the old type that permitted cooling by evaporation was more desirable.

3. Signal Communications:

Light wire W-130 and equipment for handling.

Light wire W-130 and equipment is satisfactory for the purpose intended, but it is believed a single conductor wire of the W-130 type to be used with CE-11 reel equipment would be valuable for fast moving situations in the jungle. Good grounds are readily available and one man would be capable of carrying wire sufficient to cover twice the distance. As situations are fast moving the lack of security would not be a vital factor compared with the increased portability.

Necessity for recovery in field operations.

Recovery is essential in jungle operations as transportation of new equipment is too difficult a problem.

Telephone: Sound power vs battery phones.

Insufficient experience with sound powered equipment in field to comment.

Use of CE-11.

No answer.

Radio: Portability (Size and Weight)

Radio set SCR-284 is too heavy for use in jungle as largest single unit of set weighs 47 pounds.

Radio maintenance in the field.

In the main, radio maintenance should be accomplished by replacement. Using troops should only be concerned with minor adjustments susceptable of being made quickly.

[redacted]

[redacted]

Battery - life and battery supply.

Battery life and supply is in most cases adequate. However, due to loads involved, commanders will necessarily have to use more scheduled operation of battery operated sets rather than 24-hour watches.

Flexibility of one-channel sets.

Due to lack of experience with one-channel sets in combat no comment is possible at present.

Range required for Bn sets. Interference.

The range of radio sets is always a problem. Present sets, however, are believed to represent a good balance of weight to range. It is believed that every effort should be made to increase range in future designs if this can be accomplished without appreciable addition of weight in either the set or power supply.

Radio receivers vs two-way in platoons.

It is believed that some super light weight receivers for use in platoons would be of definite value to work with SCR-536 and 284.

Visual signalling:

Training in, for small units, use of flags and SE-11.

Troops are being trained in visual signalling means.

Are troops given any training in simple wig-wag and code with flag set M-133 or lamp SE-11?

Troops are being trained in visual signalling means. Pigeons (Comment added by I Corps). It is believed that pigeons would be of definite value in jungle work as they could be dropped by airplane to advance units for communication with the rear. Also they are light enough to be carried forward when required.

4. Individual Equipment:

Complete garments vs shorts and short sleeves for field operations.

Complete garments are a necessity in operations conducted in jungle country. Underbrush and insects preclude the use of any clothing that does not completely cover the body. For work in the rear areas or in the rest areas, shorts and shirts with short sleeves might well be provided for the comfort of the personnel in tropical countries.

Advisability of highly specialized individual equipment. Can all-purpose battle dress, with various types of additions to meet special situations, serve the purpose?

Specialized equipment for certain types of operations is most desirable. Parachute equipment is an excellent example of specialized equipment.

Foot wear. Are leather shoes generally satisfactory for varying conditions encountered in an operation.

The leather shoe, modified by the addition of cleats in the form of brass screws, would appear to be generally satisfactory. Conditions of weather and terrain, where

[redacted]

troops are required to operate in continual dampness or in stream beds, are such that the leather uppers will rot away quite quickly unless properly cared for. The present hobnail is unsatisfactory except as an expedient, since the iron rusts out, leaving holes in the sole of the shoe. Reports from civilians familiar with the islands to the north of Australia indicate that a rubber sole is unsatisfactory as well as dangerous. The rubber slips on rocks, steep slopes that are damp or covered with grass, or in stream beds. A form of cleat is absolutely necessary for such operations.

The Australian service shoe seems to be the most desirable shoe for jungle service. It is of leather with hob nails (non favored) and a toe and heel plate. The addition of spikes in the instep of the shoe would prevent slipping on wet logs, etc.

The leather top and rubber soled shoe, as used by the Japanese, is unsatisfactory except for a special purpose shoe. The feet of captured and dead Japanese were all in bad shape from wearing this type of shoe.

Uniform - Protection against insects.

This is highly desirable. All openings should be closed by snaps or buttons, and the sleeves and trouser legs should be closed at the open ends to prevent insects from entering. The present jungle suit appears to fit the situation to an excellent degree.

Zippers are satisfactory when they work, but become unusable from the slightest injury or damage. Buttons can be replaced and metal slides or snaps will usually outwear a garment.

5. General:

Small cooking units for small, isolated groups and individuals and for vehicular use, as against central cooking. Should small units be in addition to, or in partial replacement of the Range M-37? Assuming that one small burner per 4 to 5 men of isolated units is adequate, what should be minimum basis of issue for the infantry as a whole? (For instance, one for each (10 men?),(12 men?), (15 men), (20 men?).

In view of the desirability of providing personnel with a balanced, well-cooked diet whenever possible, it is felt that the M-37 range should be available in the quantities now provided. The issue of small burners for use by isolated groups and for vehicular cooking is highly desirable, particularly in amphibian jungle operations. The minimum basis of issue should be one to the infantry squad, or on the basis of one burner per 12 men.

6. Individual cooking expedients, such as wood fires, gasoline poured on sand in empty cans, pits, etc. have been suggested for use by individuals and small detachments separated for considerable periods from the central mess. Are such expedients reliable under all conditions from the viewpoint of adequacy, concealment, etc., assuming that pre-cooked rations are not available?

There will be times and conditions when none of the above-mentioned expedients can be relied on. Wet weather might prohibit the use of wood, or the necessity for

concealment might preclude the use of a fire of any sort. It is strongly recommended that the units operating in this theater be given an issue of canned heat in order to insure that, under any and all conditions, there will be means available to cook such rations as may not be pre-cooked. Conditions in New Guinea are such that much individual cooking is being done with fuel gathered in the jungles. Canned heat would be very desirable where conditions permitted its use. When troops are being supplied by native carriers, canned heat would be another large problem of supply. The old individual cooking methods are working out quite satisfactorily under the existing conditions. When it is too wet to build a fire or the location is too close to the enemy the rations are being consumed cold until relief.

7. Camouflage:

Is special equipment for camouflage of the individual necessary and practicable in view of varying terrain conditions?

Detachable helmet covers should be available. The present net is adequate to place grass or twigs on the helmet. But experience indicates that it is not sufficient to operate as a noise deadener, something that is essential in the present type warfare against the Japanese. Troops now serving in New Guinea have used burlap covers, and apparently this is satisfactory. Clothing and equipment should be pre-dyed or camouflaged prior to issue in any particular theater.

8. Maps and Aerial Photographs:

Are they available in sufficient quantity? Are troops trained in their interpretation? Are present types of stereoscopic equipment furnished to the infantry suitable.

Maps are available to the troops, and the use of map substitutes is a part of training. No aerial photographs are available to the troops in this area. The maps of the areas to the north are not complete as to details in the interior. The scale is 1 inch to 4 miles. Stereoscopic equipment is reported as being satisfactory.

9. Intrenching and Pioneer Equipment:

Is the present allowance of individual intrenching tools adequate? Is the Squad Pioneer Set furnished the pioneer and ammunition sections of the infantry battalion suitable?

This equipment appears to be satisfactory as to allowances. The addition of two crowbars is desirable.

What use is made of the Infantry Set of intrenching equipment provided for the infantry regiment?

~~No reports as to the use made of the intrenching equipment is available except from units training on the continent of Australia. It is used for digging individual trenches in all exercises in the field.~~

This equipment was too heavy for use on the new Guinea jungles. Only the individual entrenching tools were used.

10. Air-Ground Identification and Recognition:

Panels are the main items used for identification and recognition signals. Their use is satisfactory in open country, but in the jungle terrain to the north of Australia the trees and undergrowth prevent the airplanes from observing these small panels, except at the panel grounds of the message center.

Air-Ground Identification has been a big problem in New Guinea due to the thickness of the overhead jungle growth. At times it has been almost impossible for the air to locate front line troop and dropping areas for supply. The Australians have used a mortar with smoke shell with some success.

SAMPLE DAILY RELEASE

Released to the Press at 12:00 Noon, 5th October, 1942

COL. LLOYD LEHBRAS

FOR L. A. DILLER
Colonel, Press Relations

G.H.Q. SOUTHWEST PACIFIC AREA
COMMUNIQUE NO. 176 OCTOBER 5, 1942

NORTHWESTERN SECTOR

Reconnaissance activity only.

NORTHEASTERN SECTOR

Owen Stanley Area:

Our ground forces have pushed beyond Efogi and are continuing the advance. Allied fighters strafed and harried key points on the enemy's line of retreat.

BUKA:

Allied medium bombers raided the airdrome at night, causing fires and explosions near the runway and in dispersal areas, destroying at least one enemy plane on the ground. There was no attempt at interception and all our planes returned safely.

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[redacted] Translation

Questionnaire Answers
by Colonel Laux

REQUIREMENTS SECTION
(Organization Division)

1. Q. How are 81-mm mortar units organized when mortars are substituted for artillery?

   A. Organization studies are in progress. Present plans provide for equipping one light artillery battalion in each division with 81-mm mortars, 8 mortars per battery.

2. Q. What additional equipment do such units have?

   A. See 1, above.

3. Q. Are there any reports on the effectiveness of mortars in jungle terrain?

   A. Mortars are effective in jungle warfare and under many conditions of terrain in New Guinea must be used in place of artillery. Due to thickness of overhead jungle there is always a possibility of the mortar shell detonating on the overhead jungle on its upward flight or on its fall.

4. Q. Could 60-mm mortars be used as a substitute for 81-mm mortars in jungle units?

   A. Yes, in infantry HW companies and the infantry cannon companies. However, it would be desirable to retain a portion of the 81-mm mortars for their greater range destructive power and for use along the coastal areas. The Australian 2-inch (one man) mortar is an effective weapon for jungle warfare and there is a distinct need for this weapon in New Guinea.

5. Q. The substitution of carbines for M-1 rifles for troops operating in jungle has been considered. What is the consensus of opinion concerning the advisability of such a substitution?

   A. Units have had no experience with the carbines as only one is present in this area, but they seem to feel that some M1 rifles should be left with squads for use in open places, as well as in bayonet fighting, for their penetration.

6. Q. In general, what should be the proportion of rifles, automatic rifles, submachine guns and carbines in an infantry rifle company with 200 hand weapons?

[redacted]

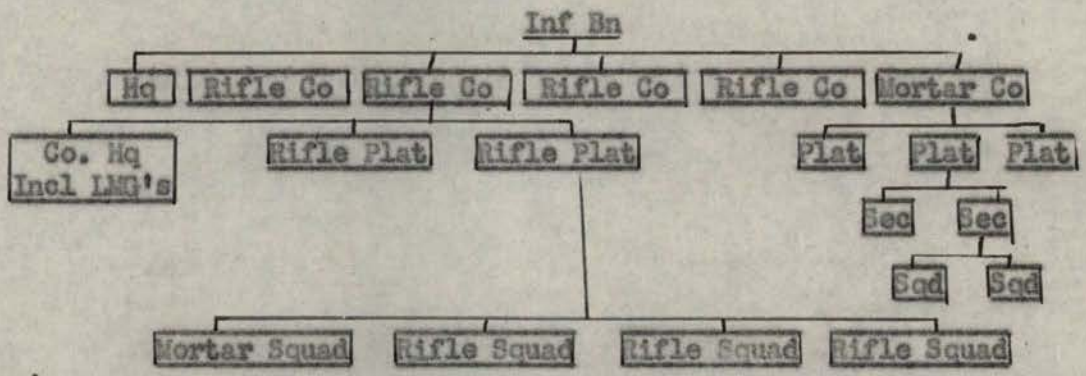
[redacted]

6. A. Approximate: 55% carbine
20% submachine gun
20% M1 rifle
5% BAR
This estimate was given by G-3, GHQ, SWPA.

7. Q. What information, if any, is available concerning the effectiveness of antitank rifle grenades?

A. To date none have been used by U. S. troops against armored vehicles.

8. Q. To increase control and to provide depth and consequent security to an infantry battalion operating offensive in jungle terrain against Japanese the following battalion organization has been proposed. An opinion as to its merit is desired.



A. The above organization permits a greater depth in the battalion formation, but decreases the fire power of the company. The removal of the heavier infantry weapons from the battalion is desirable to enable the infantry soldier to advance in terrain unsuitable for motors. However all 60-mm mortars have been removed from the Rifle Company. For close jungle fighting it is believed that mortars will of necessity have to be employed by forward units. For this reason, the removal of all of these weapons from the rifle company is not recommended. The advantage of decreasing the number of platoons in the rifle company and increasing the number of rifle squads per platoon is not apparent. No particular advantage of this square or rectangular organization over a triangular organization other than the greater depth can be seen.

9. Q. Would a centralized mess, preferably under regimental control be desirable for units which are to operate primarily in jungles? Such a mess would operate only in training areas and in rear areas. During combat individuals would prepare their own food.

[redacted]

[redacted]

9. A. The idea of a centralized mess, under regimental control, is not feasible. Battalions and even companies might be separated from the regiment in training areas. Likewise, even in jungle combat, individuals should be given food prepared by cooks in a kitchen when possible. Only isolated men should be required to prepare their own food. In New Guinea feeding from even a company mess is in many cases impossible. The only means possible is individual cooking and in most cases this consists of the C ration augmented by rice and in some cases the D ration.

10. Q. To what extent can pack transportation be provided using animals now in our area?

A. There are horses available in Australia but no mules. These would have to be trained as pack animals, and equipment secured for their use. Authoritative reports of government officials indicate that in some areas north of Australia pack animals have never been used due to condition of terrain and lack of forage. However, pack animals should facilitate movement in some parts of this area, but would be unusable in others. They were used by the Japanese on the northern half of New Guinea.

11. Q. Have any means for hand carrying of heavy loads (mortars, ammunition, radios, etc.) been developed? If none have been would hand carts be desirable?

A. Ammunition bags were provided for the units that went to New Guinea for the purpose of carrying ammunition and other supplies. No means have been developed to carry weapons except by hand or native carrier. A hand cart would be desirable, as their use is visualised in some types of terrain to be encountered. In other terrain the use of hand carts would be impossible.

12. Q. Can some maps or preferably mosaics be obtained of typical areas in which American troops are likely to operate?

A. No mosaics are available. The Engineers have some maps of the territory north of Australia, but they are none too accurate as to detail. Maps of Australia exist, the scale being 4 miles to 1 inch, generally.

13. Q. Are twenty-four heavy machine guns needed by an infantry regiment operating in jungle? Could light machine guns be substituted for heavy machine guns on a one for one basis?

[redacted]

[redacted]

13. A. Some heavy machine guns might be needed in an infantry regiment to furnish close, sustained fire. But in jungle country it is believed that the number might be reduced, substituting the light machine gun with the result of cutting down the weight of weapon and ammunition to be carried. The light machine gun is better for jungle warfare and the range is such that the heavy machine gun is seldom if ever required except for sustained fire of F.P.L. It is believed that the light machine gun could be used for this purpose and the heavy machine gun could be used along the coastal areas only.

14. Q. Would a light infantry brigade (consisting of a headquarters, service, and communications unit; three light infantry battalions; and a pack artillery battalion) be preferable to our present divisional organizations, with its organic auxiliary arms and services, for troops operating in the Far East?

A. For service in Australia the present triangular division organization is satisfactory with a substitution of 75-mm pack howitzers in some light artillery battalions. The organization of each task force must be decided on the merits of the individual situation. It is not believed that the organization should be changed at the present time to the brigade function outlined above.

15. Q. How have 81-mm mortars compared with pack howitzer (or comparable light artillery) in jungle warfare?

A. See previous answers.

16. Q. Would a truck, 1/4-ton, 4x6 or 6x6, appear to have possibilities in jungle?

A. Personal experience in traveling over such terrain in New Guinea and from reports by the Australians of their use of these trucks indicate that there are some areas where they have possibilities. In other parts of the area, nothing but manual carry is possible. Generally speaking, the answer is in the affirmative.

17. Q. Would a trailer, 1/4-ton, 2-wheel, decrease seriously the mobility of the 1/4-ton truck under jungle conditions?

A. Again the answer will depend on the terrain. The 1/4-ton truck can be used alone where a trailer could not be used.

18. Q. The following questions apply to AA Artillery:

a. Are units organized under Table of Organization, April 1, 1942?

A. Yes. All units are organized under these tables.

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18. b. Comments on suitability of the Tables of Organization. Are there any excess personnel? Are any of the personnel misplaced in the tables?

A. Tables have not been effective for sufficient time to permit thorough test. In general the organization of the searchlight battalion appears to be superfluous. It is believed that, since the searchlight platoon is the operating unit, the battery headquarters furnishes sufficient overhead for supply and administration. Superimposing a battalion headquarters, except for control of a large city defense, provides too great an overhead proportion. It is believed that if reorganization is attempted separate batteries should be formed and all-purpose antiaircraft battalion and regimental headquarters furnished as required or on a basis of so many battery units. This system will permit the formation of gun battalions, AW battalions, searchlight battalions, or composite battalions as required. Regimental and battalion headquarters in controlled proportion are definitely required and no attempt should be made to organize separate batteries only (Opinion of G-3, GHQ, SWPA).

c. Do the Tables of Organization provide sufficient personnel to man the guns, searchlights, and detectors?

A. Normally yes. The only questionable point is the SCR 268 crew. If all members of the assigned crew were trained as expert operators and truck drivers, clerks or basics used for relief duty, the crew is sufficiently large. A slight increase may be advisable.

d. Recommendations for changes in equipment, especially the deletion of little used items or those which may be improvised locally.

A. It is understood that new equipment has been developed which has not been issued to this theater as yet. Periodic reports are being submitted on the equipment now being used. In general the development of radio range finding equipment and the elimination of instruments requiring too highly specialized training is desirable. Equipment has, in general, held up reasonably well in combat.

e. Is the transportation provided adequate to meet requirements?

A. In general, yes. It is desirable to restrict the number of different types of vehicles, standardizing on multi-axle drives and "jeep" and "peep" types. Some tractor tread vehicles are required as organic equipment. For amphibious movements high-speed prime movers require too much ship space. They are also unadaptable for use in jungles and over unimproved roads.

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19. Q. What is the heaviest weapon and truck that can be used in the jungle and still be practical to transport and supply?

A. It is more a matter of weight distribution than dead weight. A ten ton tractor is adaptable for jungle use because it can clear out light brush and pull itself out of difficulties. A 7 ton prime mover, on the other hand, requires a winch or capstan to extricate it from difficulties. A tractor can pivot around road obstructions while a long truck body wedges itself between trees. In general powerful, small vehicles are preferable to proportionately powerful large ones. It is believed that the correct answer to this question can be obtained only if the heaviest weapon or truck for each basic use were to be considered. Studies would indicate that the 75-mm pack howitzer is the heaviest weapon that can be transported and supplied, as a general rule. The 105-mm howitzer might be used for beach defense. Similarly, it is indicated that the 1/4-ton and 2½-ton are the most useful vehicles. Terrain would limit the use of trucks. In some places all types of trucks might be used; in others, no motor transport is possible.

20. Q. What sub-units need additional personnel for 24-hour service, such as radio?

A. Communications Platoon, Transportation Platoon, Radio Intelligence sections.
Overmanning should be avoided for combat units. Men in combat who are assigned as truck drivers, clerks, etc., should be given dual assignments on equipment located near their places of employment. Unoccupied men in combat crack first. The present SCR sets actually require an increase in operating personnel if they are to be operated continuously but in view of the fact that they are used only intermittently relief crews can be obtained from the battery, except for technical specialists. Higher authority, however, may consider it advisable either to reduce the size of the radio detector and its operating crew (preferable) or assign more men to it in tables. These statements are not to be construed as indicating that adequate replacements should not be made available.

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QUESTIONNAIRE PREPARED BY TANK DESTROYER BRANCH, DEVELOPMENT DIVISION, REQUIREMENTS SECTION, ARMY GROUND FORCES.

1. What use is being made of armored equipment by the Japanese?

JAPANESE TANK TACTICS

Enemy tank tactics at night combined mutual support by the tanks and by infantry. In attacking a perimeter camp, the tanks endeavour to penetrate. Supporting one another, they advance two forward and one in reserve while enemy infantry attempt to follow up immediately behind the tanks.

Our fire positions were located by the forward tank lying "dogo", switching off its engine, listening and observing. On locating the fire position, the tank fired tracers at it, indicating it to the second tank, which then moved to the area and heavily engaged the position with LMG fire and hand grenades. Fire from light mortars also fell, but whether from within the tank or from supporting infantry is not certain. Headlamps and spotlights on the tanks were used successfully in assisting to locate these and other positions.

At a later stage, when attempting to exploit along the track, the enemy made use of his tanks to carry infantry armed with LMG's, covering them by fire while they occupied fire positions, apparently for the purpose of covering further advance or preventing any counter-attack.

Infantry in attempting to follow the tanks, moved forward in several waves by bounds believing at this stage that their tanks had destroyed our positions. These infantry were dealt with effectively.

Although it was felt at the time of the tank attack that the tanks were not vulnerable to A/Tk rifle fire or to ST grenades, subsequent experiment has put it beyond all doubt that even the turret of the captured Jap tanks can be penetrated by the Boys .55 A/Tk rifle. In a test on the abandoned JAP tanks, the .55" bullet fired from 30 yards penetrated the armor in any part of the tank, including the driver's shield and the turret. It pierced the track without damaging it. Fire at this type of tank should be directed first at the driver's seat, low down on the right hand side. Whenever, therefore, tanks may possibly be encountered, units should move with all avail- A/Tk weapons while all ranks should be informed of the positive results of recent experiment with the A/Tk rifle on Jap tanks.

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QUESTIONNAIRE PREPARED BY TANK DESTROYER BRANCH, DEVELOPMENT DIVISION, REQUIREMENTS SECTION, ARMY GROUND FORCES

1. What use is being made of armored equipment by the Japanese?
In the Southwest Pacific Area, very little, Japanese tanks were encountered in undisclosed numbers in Malaya, Burma, and the Philippines. They were also landed at Guam. Their latest appearance was at Milne Bay (Papua), where two tanks were landed. It is known, however, that the Japanese have Tank Regiment stationed in each of the following:- Burma, Malaya, Thailand, Java, and the Philippines.

2. How is the equipment being used, i.e., along roads or across country?
The Japanesehave employed both methods. In the Southwest Pacific they have been more or less forced to confine their tank movements to roads or well-defined tracks.

3. Has there been any use of massed armored attack?
No. The largest number reported at one time in Malaya was 12 light tanks in line ahead.

4. What are the characteristics of the Armored vehicles in use, i.e., thickness of armor and speed?
The Japanese have 19 known types of tanks and three types of armored cars. In the Southwest Pacific Area only one type of tank has been met. This was the "New Light or Medium Type " which was used in Malaya. Two of these tanks were put out of action and captured at Milne Bay on 28 Aug., 1942. Details of this tank are:-

Weight:	8-10 tons approx.	Armor:	Front ½(half)"
Length:	14 feet.	Armor:	Top ¼ (quarter)"
Width:	8 feet.	Armor:	Other surfaces 5/16
Height:	8 feet.	Armament:	One 37mm gun: two LMG's.,one in hull.
Clearance:	17 inches.		
Width of Track:	10 inches.		
Speed:	Not known, but engine 6-cyl. diesel.		

In Malaya two of the "Tankettes" were also used. These were the M2592 and M2588. Both are 3-tons, with a speed of 30 m.p.h., and with armor of 14mm maximum. Another tank reported in Malaya was the M2595 Medium (1935-37), which is 20 tons, maximum speed 21 m.p.h., and has armor 50 mm thick in front and turret and 25mm on sides. In Burma similar tanks to those encountered in Malaya were in use. No details of Japanese tanks landed in the Philippines or on Guam have been received.

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5. What has been the most effective weapons against these vehicles?

All vehicles encountered so far have proved vulnerable to the 2-pounder anti-tank gun. From Burma it was reported that the New Type Light (details above) was "highly vulnerable" to the British 37mm A/T gun. The same tank was put out of action by Australian .55 inch A/T rifles sited in depth in Milne Bay.

Latest information on vulnerability of Japanese Tanks is summed up by War Office, London, as follows:-

(a) Tankettes and Light Tanks: Vulnerable to Bren S.A.A.; the .55 A/T rifle; the 2-pounder A/T gun.
(b) Medium Tank: Vulnerable at 880 yds to 20mm, 37mm, and 40mm A/T guns; considered to be vulnerable to 2 pdr. A/T gun.
(c) Medium Tanks (early models): Considered vulnerable to 2-pdr. A/T gun.
(d) Heavy Tanks: Not yet reported in action.
(~~Also see Incl. 1, Appendix "B"~~)

6. Are there any instances of self-propelled equipment being used against them?

No.

7. Have there been any instances of hand grenades being used? (i.e., explosive, thermite, incendiary)

Hand grenades have been used by Australians against the Japanese tanks with good effect in Malaya (See Incl. 1, Appendix "B"). Use of hand-grenades by infantry is normal Australian tactics. At Milne Bay it was noticed that the Japanese covered their tanks with grease to prevent hand-thrown "sticky bombs" being used against them.

8. Have any Tank Destroyer units of our Army been in operation against the Japanese? If so, what have been their experiences with regard to equipment and tactics.

Australian Anti-tank Regiments using 2-pdr guns served in Malaya. (~~See Incl. 1, Appendix "B"~~). The tanks put out of action at Milne Bay were dealt with by an infantry platoon. (~~See Incl. 1, Appendix "A"~~). No other information is available.

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Appendix A & B

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2. How is the equipment being used, i. e., along roads or across country?
The nature of the terrain on the north shore of Milne Bay confined the three enemy tanks to the road, except in coconut plantation areas. The tanks bogged down in the mud and were abandoned by the enemy.

3. Has there been any use of massed armored attack?
See 1, above.

4. What are the characteristics of the armored vehicles in use, i.e., thickness of armor and speed?

JAPANESE TANKS LANDED AT MILNE BAY
(Preliminary Report)

Type: New light tank as used in MALAYA

Dimensions:

Weight-	8 to 10 tons approx.
Length-	14 ft
Width-	8 ft
Height-	8 ft
Belly Clearance-	17 inches
Width of Track-	10 inches
Width between Tracts-	3 ft 3 inches

Armor:

All frontal surfaces-	½"
Top-	¼"
Other surfaces-	5/16"

Armament:
One 37-mm gun
One LMG 'ball' mounted)
allowing approx 50° are) in turret with 360° traverse
One fixed LMG(probably ball-mounted forward in 'hull').

Engine:
6 cylinder, air cooled, high speed DIESEL.

Speed: No information.

Interior of Tank:
Tank is divided into fore and rear compartments, with small connecting door. Rear compartment contains batteries, etc., and has small hatch opening upward. Ammunition racks, for cannon shells, are provided at rear of driver. Shutters and rubber pads bear against detonator caps.

General:
Tests have proved that tank can be penetrated by bullets from our A/Tk rifle.

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NOTE

APPENDIX "A"

This information is taken from "Lessons from Operations No. 2. Operations Milne Bay 24 August - 8 September 1942" published by ADvanced L.H.Q., Allied Land Forces in Southwest Pacific Area on 18 October, 1942.

"Japanese Tactics - Infantry Co-operation with tanks -
At least two light tanks were used by the Japs in this operation. Some machine-gunners rode on the tanks or followed close behind. The glare of the headlamps prevented our troops from seeing them. Other infantry parties preceded the tanks in defiles to deal with A/T guns lying in ambush.

Our Counter to Jap Methods and Tactics - Infantry Co-operation with Tanks - When a Jap tank led the advance down a road and drew fire, the tank engaged our troops from the road while the infantry worked around to the flank. The counter to this is to allow the tank to pass through and ambush the following infantry. The tank is then engaged by our A/T weapons sited in depth.

Sometimes tanks were both preceded and followed by infantry. If the leading troops were fired upon, the tanks rushed to their support, while the following infantry moved around the flank. In this case our infantry must be disposed in depth down the road. The leading infantry and tanks are allowed to pass through into a tank trap or mine field, before engaging the front and rear infantry simultaneously.

A/T weapons must be well-concealed, so as to avoid being over-run or blinded by tank headlights.

A/T mines are of great value where the advance of tanks is limited to narrow roads through the jungle.

APPENDIX "B"

The following information is taken from "Australian Training Memorandum No. 10" published in May, 42. This Memorandum was written by Lt. General H. Gordon Bennett, was G.O.C. Australian Imperial Force in Malaya.

Japanese Tank Types and Attack Methods

In Malaya the Japanese used both the medium and light tank - the latter in the greater numbers.

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The medium weighed approximately 25 tons, had a speed of 25 m.p.h., was armed with one 57mm turret gun and 2 machine guns, and had a crew of 5. The light tank weighed approximately 10 tons, had a speed of 25 m.p.h., was armed with one 37mm anti-tank gun and 2 machine guns, and had a crew of 4. Our 2-pounder anti-tank guns and Molotov cocktails could and did destroy these types. It was found that they were well armored in front, the Boyes anti-tank rifle failing to penetrate. The anti-tank rifle successfully penetrated sides and bottom, and Mills grenades effectively penetrated the bottom.

Whenever the Japanese were held up in Malaya, they brought tanks in support of the attack. These tanks were always close to hand. Notwithstanding demolitions, many of which seemed sufficiently effective to stop or delay tanks, these A.F.V.'s appeared an hour or so later. Their ability to cross wide rivers shows that the enemy had some means of ferrying tanks across these streams. In one place, a gap of 50 feet was blown in a bridge over a fast flowing stream quite 50 yards wide and up to 20 feet deep. The demolition took place at 1615 hours. Yet an attack was launched early next morning, in which several light tanks were used. The enemy apparently had a float, carried on a truck, capable of floating the tanks across the stream. Frequently armored landing craft were used on the coast to transport tanks. Over the smaller streams destroyer bridges were quickly repaired or made passable for tanks.

It can be safely assumed that no undefended obstacle will stop Japanese tanks.

The Japanese always attempted to force their tanks through frontally, and in those cases where he was successful, either owing to the absence of anti-tank guns or to irresoluteness of the gunners, he broke in among the troops on both sides of the road, causing panic and havoc. He seldom penetrated far, a couple of miles being his limit. When held up frontally, he invariably brought his tanks in on a flank, inflicting heavy casualties and forcing a withdrawal if the flanks were unguarded.

HOW TO DESTROY TANKS

Stopping tanks by means of obstacles, even if possible, is not sufficient, for it only diverts the tanks to another part of the front. Tanks must be destroyed. This can be effected by anti-tank guns, anti-tank mines, or Molotov cocktails. In mobile warfare the laying of anti-tank mines is frequently impracticable. Mines are a danger to our own

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tanks and vehicles. In a fixed position, they can be used to the best advantage, but in mobile warfare their use should be limited to the rapid creation of road blocks, for which purpose they are admirably suited. It is best to bring forward an anti-tank weapon to destroy the tanks.

The Jap crews were very nervous of our anti-tank guns and quickly shied clear whenever fired on. It is essential, therefore, that our anti-tank guns hold their fire until the tanks are so close that they cannot withdraw. On the first occasion that the Australians met Japanese tanks, the gunners opened fire too soon - 500 yards - they missed, and the tanks swerved quickly into a rubber plantation out of sight.

Soon another lot came forward. Holding their fire until the tanks were within 200 yards, our anti-tank gunners destroyed five tanks in the first bout. On another occasion fire was held until the tanks were only 25 yards away, then the leading and rear tanks on the road were destroyed, the middle ones, being in a dip in the road and out of sight of the gunners, were dealt with by Molotov cocktails. In this bout 10 tanks were destroyed. In no cases did the tanks succeed in breaking through when the anti-tank gunners stood resolutely to their task.

It is essential that anti-tank defence should be strong on the flanks. This flank protection can frequently be given by field artillery, which is more effective against tanks than 2-pounders. On one occasion a 25-pounder firing at short range against a light tank lifted it off the ground and sent it reeling backwards for some 30 yards.

Anti-tank guns must be well forward, sufficiently far forward to prevent the tanks from overrunning the infantry, otherwise serious losses will be inflicted before the tanks can be stopped. The problem of taking anti-tank guns into position, of changing their position, and of withdrawing them becomes difficult when in close contact with the enemy. It is frequently impossible to take motor trucks or lorries right into the forward position, owing to enemy rifle and machine-gun fire. The terrain is often too rough to permit those vehicles from operating. The difficulty can best be overcome by using Bren carriers to draw the gun to and from forward positions. The supply of ammunition can be effected in the same way.

Anti-tank guns must be well concealed, otherwise the gun and the crew will be destroyed by mortar, machine-gun or rifle fire, or by aerial bomb, prior to the tank attack. For this reason, guns must be disposed in depth so that any tanks that overrun the forward defences will be dealt with by guns in rear positions.

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Anti-tank guns must always be provided with infantry protection. This can generally be done by placing the guns just behind or in infantry posts. The infantry must realize their responsibility to protect the crew of the anti-tank guns which are protecting them. On one occasion on Singapore Island, fearing that the exhausted troops might not be able to stand if attacked, the anti-tank gun commander placed his guns some hundreds of yards in rear of the forward troops. As expected, the forward troops withdrew under pressure of enemy tanks. They went past the anti-tank guns which stopped the tanks. Before tractors could be brought forward to withdraw the guns, the enemy infantry came forward and killed off the gun crews and captured the guns. Had the guns been forward with the infantry, the infantry would probably have stood firm, and, if they had withdrawn, arrangements could have been made to provide protection for the guns until they were out of danger.

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QUESTIONNAIRE PREPARED BY COAST ARTILLERY BRANCH,
DEVELOPMENT DIVISION, GROUND REQUIREMENTS SECTION,
ARMY GROUND FORCES

1. Q. At what altitudes are hostile day air attacks being delivered?

   A. In this theatre, air attacks have been delivered normally between 22,000 and 24,000 feet altitude when full bomb loads are carried by the enemy and when antiaircraft fire is encountered. With reduced bomb loads, enemy bombers sometime get to 25,000 or 26,000 feet altitude but normally they are not able to fly higher than 24,000 feet.

2. Q. Have any night attacks been made by hostile aircraft? If so, have searchlights succeeded in illuminating the attackers? At what altitudes were these attacks made?

   A. Night attacks have been made by hostile aircraft. In most cases where U. S. Army equipment has been employed, high altitude targets have been illuminated. Night activities of enemy aircraft have been illuminated as high as 25,000 feet. On several occasions, hostile seaplane aviation has made attacks as low as 3,000 to 4,000 feet altitude.

3. Q. What is average range at which casualties have been inflicted on enemy aircraft with:
   a. Antiaircraft machine guns
   b. 37-mm or 40-mm guns
   c. 90-mm and 3" guns?

   A. a. 200 to 800 yards
   b. 500 to 1,000 yards
   c. There is no average range which can be given in reply to this question. In the case of 3" or 90-mm gun fire properly adjusted, bursts cause enemy airplane casualties at practically all fuze ranges. The chief limiting factor in these cases is the inability of the equipment to track evenly when planes are flying at low altitude, due to the great angular travel.

4. Q. What is the usual length of time of a low-flying attack? How long are enemy ships within firing range?

   A. Low altitude attacks usually are made in series of quick thrusts. The length of time during which hostile aviation may be within gun fire will depend entirely upon thealtitude of the plane at the time and the angle from which the attack is made with respect to the location

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of the gun. An airplane attacking at 300 yards from the defending machine gun and approaching the target at an acute angle with respect to the gun, will present an unfavorable target both with respect to the probability of hitting and the time during which the plane is within effective machine gun range. An airplane flying directly across the field of fire of the defending machine guns, will present a target for the greatest length of time. From 10 to 15 seconds may be used as a reasonable normal firing period during which antiaircraft machine guns may be expected to engage a single enemy airplane on any one given course.

5. Q. Have any gun positions been the object of specific attack by enemy aircraft?

   A. No gun positions have been attacked directly by low flying aviation in this theatre. In the Philippines campaign, however, this was frequently done.

6. Q. Have heavy antiaircraft weapons (90-mm and 3") engaged any enemy aircraft making dive bombing attacks?

   A. There have been no dive bombing attacks against heavy antiaircraft weapons in this theatre.

7. Q. If so, at what range and what sort of fire control device or expedient was used?

   A. As a matter of training, organizations are taught to use director control against diving targets wherever possible. Precut fuzes (1½ seconds, 2 seconds and 3 seconds) are available at all batteries for use under such circumstances.

8. Q. Can automatic weapons traverse rapidly enough to keep on a low-altitude horizontal target?

   A. This question is rather general. Automatic weapons can keep traverse rapidly enough to remain on low flying targets if the slant range to the target is sufficiently great so that the angular travel does not become excessive. When enemy aviation flies close to the defending gun of 40-mm or 37-mm caliber, it is most difficult to maintain a steady and accurate horizontal tracking rate. The .50 caliber machine gun on the M2 mount is best suited for this type of defense but against aviation operating close to the guns at low altitudes, the results are not unusually satisfactory.

9. Q. Does normal action permit any spotting or adjustment of fire during action time?

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A. No fire adjustments have thus far been put into directors in this theatre after opening fire. In general, adjustment of fire is engaged in when there is a reasonable chance that the target will remain within the field of fire for sufficient time to permit the guns to fire.

10. Q. If adjustment has been possible, what is principal method used?

A. Magnitude adjustment is preferred when flank spotting OP's can be put in. Due to the difficulty of accomplishing this, however, most of the spotting or adjustment corrections have been introduced by the battery commander as a result of stereoscopic deviations.

11. Q. Has any rapid method been developed for re-orienting and re-synchronizing after anti-mechanized employment of AA guns?

A. No special steps, other than using greatest speed possible, have been accomplished in connection with re-orienting and synchronizing antiaircraft weapons during or after an attack.

12. Q. How is meteorological data for firing obtained? Is meteorological detail as set up in Tables of Organization adequate?

A. These meteorological data are obtained from the regimental meteorological section when it is possible. When it is not possible, such data is obtained from airdromes which are being protected - civilian stations or other recognized sources. When the Australian meteorological message is used, it is necessary to modify the form to conform to the American message by use of numerous conversion factors.

13. Q. Have any targets been engaged during conditions of visibility at night requiring methods of fire at unseen targets?

A. No targets have been so engaged.

14. Q. Do automatic weapons fire on unilluminated targets at night?

A. Automatic weapons on illuminated targets at night whenever it is possible to identify it as a hostile target. For most of the low flying targets searchlight illumination is not available. Actually, however, limited firing under both conditions has been accomplished here.

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15. Q. What use is being made of AA searchlights? Are they effective? Are they required when automatic weapons (.50 Cal. M.G., 37-mm or 40-mm) only are allotted to the defense of an area.

A. Antiaircraft searchlights are used to provide illumination of high and medium flying targets so that they may be engaged by antiaircraft guns or interceptor airplanes which may be in the vicinity. The U. S. searchlights have been found to be very effective, even beyond normal expectancy. Normally, searchlights are not disposed specifically for the purpose of providing illumination for installations of automatic weapons batteries. In some cases, illumination for defensive areas protected only by automatic weapons are provided with illumination incidentally. It is recognized, of course, that there are serious difficulties encountered when attempting to carry very low flying airplanes in searchlight beams.

16. Q. Do searchlight units move to a bivouac area during daytime? If so, do they obtain sufficient rest?

A. Searchlights are moved under cover during the day time but not necessarily to bivouac areas. Frequently platoons operating independently bivouac in the vicinity of searchlight positions, mess with protected troops and move their lights during hours of day light to the nearest protective cover. In general, searchlight crews obtain sufficient rest. Actually, there has been very little night searchlight work as the Japanese do not engage extensively in this type of flying. To date, searchlight batteries have been the least worked of any antiaircraft organizations.

17. Q. Are sound locators of any value to the searchlight battery equipped with at least one 268 set per five searchlights?

A. Sound locators are considered indispensable for searchlights other than those equipped with SCR-268 sets. These locators, when properly used, are reasonably satisfactory within the limits of error of the medium of detection.

18. Q. What is the minimum number of men required on a continuous watch with each type of antiaircraft weapon in an active theatre of operation?

A. The minimum number of men on continuous alert in general is:

Machine gun - 2 men
Bofors - 3 or 4 men
3" Gun - 5 or 6 men

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19. Q. Are units kept on a continuous alert?

A. Firing units in this area are considered to be on continuous semi-alert. In the active combat zones, the men bivouac very close to their guns, and are able to reach the weapons quickly upon sounding of the alarm. The so-called "alert" details are men who check the orientation of the data computing instruments and begin immediately to search for target and to prepare ammunition for firing if it is not already in that condition.

20. Q. Has extensive use been made of radio detectors?

A. Extensive use has been made of radio detectors that have proved, in general, highly satisfactory. Their efficiency in general is directly proportional to the efficiency of the operating crews. When checked and oriented frequently, particularly as to vertical angle readings, the instruments have proved reasonably dependable. A 268 instrument, for use in fire direction on antiaircraft weapons which is less bulky in actual size but with more restrictive operation limits, would be highly satisfactory.

21. Q. What results have been obtained with detectors used with:
a. Searchlights
b. Guns

A. Reasonable accurate results have been obtained with detectors when used with both searchlights and guns.

22. Q. What is the average number of hours of operation per detector per day?

A. Employment of radio detector equipment for intelligence purposes, is discouraged unless the situation especially requires it. Normally 268's are operated well over 8 hours per day. In actual campaign, however, periods of extended operation are possible at any time.

23. Q. When employed as a means for the detection of enemy aircraft, are SCR-268's effective in giving antiaircraft units sufficient warning to man their guns before the target arrives within range?

A. Except under conditions where SCR-268 sets have certain dead areas in their fields of operation, plenty of time is available for the instruments to get on the target after the original track has been started.

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24. Q. Is the system provided for the maintenance of detector equipment satisfactory?

A. No definite system of maintenance for detector equipment has been tried out in this area up to the present time, other than direct calls upon Signal Depot personnel for repair and maintenance. The introduction of the mobile maintenance teams is expected to prove highly efficient.

25. Q. Is the SCR-268 crew (11 men) sufficient to stand the "gaff" over long periods?

A. Under campaign conditions it is not necessary to have excess operating crews for the SCR sets. There is little opportunity in most areas for leave or recreational activities and the men are seldom employed continuously. Efforts are being made to train as high a percentage as possible of the organic crew as technical specialists. These remarks, of course, should not be taken to indicate that filler replacements to compensate for battle losses should be neglected.

26. Q. Do AAA units operate administratively as provided in present tables of organization? If not, please explain. Are gun, searchlight and automatic weapons units grouped separately for tactical control?

A. The normal tactical grouping for AA units in this operational area is: 1 battalion headquarters, two gun batteries, two automatic weapons batteries and one searchlight platoon. Sometimes a regimental area will contain one of the above provisional groupments and two others with one gun battery, one automatic weapons and one searchlight platoon, controlled by a battalion headquarters.

27. Q. Do AAA units maintain their regimental and brigade organization?

A. Regimental headquarters handle administration as usual, the groupings in 26 being for operational control only. Brigades are used to coordinate all AA defense in a territorial section (U.S. and Australian) and for AA advisory and operational purposes, on staffs of subordinate Air Corps commands.

28. Q. Are battalion and regimental headquarters batteries under-staffed or over-staffed?

A. Slightly over-staffed for regimental. About correct for battalion.

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29. Q. How and by whom are the tactical dispositions of AAA units controlled?

A. The normal operation of so-called "operational control" is as follows;
The Air Force Commander indicates where he desires antiaircraft protection and the priorities required in installing antiaircraft weapons at various localities. The appropriate antiaircraft commander then makes recommendations as to the amount of antiaircraft required and the actual dispositions on the ground. If this amount of antiaircraft materiel is available, it is emplaced immediately under direction of the antiaircraft commander. If not, the antiaircraft commander acts in advisory capacity to the Air Force commander in the preparation of an approved plan of antiaircraft employment based upon the utilization of whatever amounts of equipments have been made available. Movement orders normally are prepared by the headquarters maintaining operational control. Namely, in this case, the Air Forces.

30. Q. Is liaison established between AAA, adjoining units of other arms and Air Force? How accomplished?

A. Liaison indicated is established by the AAA and other units. Antiaircraft observers are stationed at each Fighter Sector Operations Room. Liaison Officers or enlisted men, when available, are detailed at headquarters requiring antiaircraft cooperation. All forms of communications are used - radio, telephone, panels, for ground-air communication and in some cases, visual signaling.

31. Q. What antiaircraft intelligence service is provided within antiaircraft units for detection of enemy aircraft?

A. Intelligence service as authorized for AAAIS. Advantage is taken of all existing warning systems and of information procureable from air and land force intelligence sections.

32. Q. Where an aircraft warning service is set up, do antiaircraft units in the same geographic area operate an independent AAAIS?

A. In general, independent AAAIS operations are carried out in all areas. Where air warning operations are extensive, the AAAIS is reduced to a minimum. It is considered that the AAAIS has a definite function in antiaircraft technical operation, therefore, cannot be neglected entirely, unless under exceptional circumstances. In this area excellent coordination between the efforts of the AWS operated by the Signal Corps and the AAAIS has been obtained.

[redacted]

[redacted]

33. Q. Does the aircraft warning service provide adequate warning of the approach of hostile planes?

A. Where AWS observation posts are installed and properly operated, they give ample warning of the approach of hostile airplanes. Sometimes graphical limitations prevent this. The AWS, in general, is efficient and an indispensable aid to antiaircraft defense forces.

34. Q. What system of intelligence is used for alerting antiaircraft units for anti-mechanized purposes?

A. SOP indicates the type of alarm to be used in different places. At present, telephonic alarms are most frequently employed.

35. Q. Are searchlight 268's used for AAAIS purposes?

A. Searchlight 268's are used for AAAIS purposes in special instances only. The ability of these instruments to determine altitude line-an element not obtainable from the 270 and 271 sets, makes it advisable in certain situations to employ searchlight 268 sets for AAAIS purposes. They are not generally so employed.

36. Q. Does the antiaircraft unit commander attempt to control all weapons of his units from a gun operations room similar to that set up for an interceptor command?

A. For the Gun battery, the answer is yes. For the automatic weapons battalion, where possible but usually no. For automatic weapons batteries, operations are normally by platoon and centralizing of all weapons is not possible.

37. Q. Are fire unit commanders permitted to operate independently?

A. Yes, under certain conditions. Some units are located in isolated positions. All are instructed to engage in independent operation when communications are interrupted. Every effort is made to coordinate any permitted independent action by antiaircraft unit commander with Air Force activities in his vicinity.

38. Q. What controls are employed to prevent antiaircraft artillery from firing on unidentified friendly aircraft?

A. (1) Intensive instruction in aircraft identification.
(2) AAAIS
(3) Liaison with Air Force. Through "approach procedure", "color of the day" and other means.

[redacted]

[redacted]

39. Q. What means are employed to train troops in the identification of aircraft?

A. Well planned schooling. Both brigades have been furnished models, shadow boxes and instructions for courses in the identification of aircraft.

40. Q. What particular types and kinds of enemy planes should be given priority in the training of troops in the identification of aircraft?

A. (1) Jap
(2) Friendly
(3) Other Axis types.

41. Q. a. When an antiaircraft units is displacing, are convoys made up by batteries, battalion, or regiment?
b. What organic antiaircraft protection has been most effective on the march?

A. a. Normally by batteries or battalions. Amphibious operations in this area largely govern the matter of the displacement of antiaircraft batteries. Infrequently indeed, are regiments or even full battalions moved to a general locality. The normal procedure in combat zones is to throw in antiaircraft separate units for initial protection and build up into complete batteries and battalion area defenses subsequently.
b. .50 caliber machine gun.

42. Q. What has been the most efficient size unit to handle from the standpoint of tactical employment: fire unit, battalion, regiment, or brigade?

A. The composite battalion has proved to be the most efficient unit to handle tactical employment.

43. Q. What protection is normally afforded antiaircraft batteries (mobile - semi-mobile - fixed) against enemy fire?

A. a. Field fortification.
b. Local machine guns.
c. Warning services.

44. Q. Are field fortification works effective for antiaircraft positions?

A. Field fortification works are highly effective for protection of antiaircraft positions.

[redacted]

[redacted]

45. Q. How much field fortification is required and how is it accomplished? Time allowed for field fortifying?

A. Full field fortifications are required. These are initiated by constructing trenches and building up protected gun pits initially and later extending and improving the operation until a complete field fortification has been installed with camouflage. No definite time limit for construction of field works has been prescribed. It has been prescribed however, that full attention be given to this phase.

46. Q. Is camouflage used and is it successful? Is it believed that there should be a camouflage officer in each regiment? What is best means of camouflage?

A. a. Yes
b. Yes
c. Camouflage has been employed to the fullest extent possible. On 3-inch guns both the retractable net and the umbrella type camouflage has been used. One gun battery is located on the top of a flat hill slightly too small for proper disposition of the equipment. To compensate for the congestion of material, the entire top of the hill has been raised to an artificial level of gun trunnion height by camouflage. Several ingenious types of top cover for automatic weapons camouflage are being used. No attempt is made to standardize the form of camouflage so long as the type used is effective. Interchange of ideas, however, is encouraged. Searchlights are withdrawn from position, SCR 268 sets are hardest to camouflage but reasonably effective attempts have been made to disguise them as tree groups.

47. Q. Should slit trenches or other personnel shelter be provided at anti-aircraft gun positions?

A. Yes.. Open type trenches are preferable.

48. Q. What provision is made for destruction of primary weapons to avoid capture? Who is charged with the responsibility for the destruction of primary weapons?

A. Battery commanders are charged with responsibility for destroying equipment when capture is imminent. It is possible at times, to drain recuperator or equilibrator cylinders and fire the guns. At other times, special methods of destruction must be engaged in. Thermite bombs are effective but have not been made available as yet, in large quantities.

[redacted]

[redacted]

49. Q. Do antiaircraft searchlight batteries run separate messes for each platoon or each searchlight section, or do they have on central mess?

A. According to the situation. Where batteries are engaged in an area defense it is possible to operate a central mess and send hot meals to the troops during the day time and lunches at night. For mild purposes a central mess is advisable. Platoon messes are established where platoons operate separately at great distances. In some instances searchlight personnel is attached to the nearest Air Force or other field force mess.

50. Q. Do automatic weapons platoons operate their own messes or do they have one central battery mess?

A. The answer is substantially the same as that in 49.

51. Q. Are 3-inch and 90-mm guns sufficiently mobile to meet tactical requirements in your area?

A. No 90mm's have been received hereto date. The 3-inch antiaircraft gun of the U.S. Army meets technical requirements for mobility reasonably well.

52. Q. Do 37-mm carriages stand up under cross country travel?

A. 37-mm. No 37-mm's are used in this area.

53. Q. What sustained rate of fire will barrels on 37-mm cannons stand?

A. Same as 52.

54. Q. Do searchlight trucks with their trailed loads have sufficient mobility?

A. The answer to this question depends upon a categorical definition of the word "sufficient". Searchlight trucks and trailers as designed are excellently adapted for the protection and operations of organic loads. Their respective weights introduce certain restriction as to mobility but in general it might be said that they are sufficiently mobile. Any efforts to cut down the technical efficiency of the units in order to increase mobility would be a step in the wrong direction. Searchlights and power units have been used without trucks and trailers for certain types of operations where no mobility is required.

[redacted]

55. Q. From the experience of units of your area, are present ammunition allowances in T/BA sufficient for mobile warfare? For semi-static situations? If not, what changes in these allowances are recommended?

A. Ammunition allowances appear to be satisfactory. However, due to numerous modifications of tabular allowances there has been no opportunity to test the adequacy of these in detail. Influence of the geographical situation and a shortage of supply has caused the AA brigades to distribute greater ammunition allowances in the more active combat sectors and curtail the other sectors in proportion. The latest revision of the proportion of tracer ammunition for .50 caliber machine gun ammunition from 1 in 5 to 1 in 9 is considered to have reduced the tracer component below an effective minimum. It is believed that a machine gunner cannot accurately manipulate his tracer stream with only one tracer in nine rounds. Much of the ammunition comes packed in this proportion which precludes the possibility of making a readjustment of .50 caliber tracer ammunition to give a greater percentage to the more active combat areas. Stockage levels are prescribed by GHQ in this theatre which appear to be quite satisfactory.

56. Q. How much ammunition should be kept at the gun positions ready for instant use?

A. In general only sufficient to guarantee that the guns can keep firing until the ammunition detail can unpack additional rounds. In tropical climates corrosion makes it necessary to give constant attention to ammunition. In the case of machine gun ammunition, an improvised rack has been developed in this theatre which makes it necessary to keep only one box of ammunition per gun actually open. Also a special feed device for 40 millimeter ammunition has been developed. Details of these are being sent to the Development Division, Army Ground Forces.

The amounts normally kept at each gun in this area are:

3 Inch	150 rounds	- in recess pits not all opened
40 mm	350 rounds	- only about 50 containers opened
.50 cal.	1 box	- others unopened in ammunition pits

57. Q. In what percentage of the situations is it practicable to utilize field wire for communication purposes?

A. The word "percentage" may be misleading. In this theatre there are certain positions where field wire is used extensively. In other positions - where AA defense is installed on an isolated island- radio communications predominates, In the noraml instance, both are used, together with visual signals in isolated cases. In this theatre the conditions under which the various organizations function vary so greatly that any "average" figure is not representative. Wire communication is used extensively and is first priority in importance. Radio is

[redacted]

second and highly important - especially in maintaining contact between isolated units and the headquarters batteries. Alert signals are used and in certain cases, lookouts on high points use flash signals.

58. Q. What changes, if any, are desirable in standard antiaircraft equipment to meet field conditions in your area?

A. This question is one which should be presented as a complete study and not as a single answer in a "questionnaire". There are so many phases to the answer that any generalization would not give the War Department the information desired. In compliance with WD letter AG 475 (4-18-42) MS-E-M subject "Improvement of Equipment and Organization, U. S. Army" periodic reports will be forwarded from GHQ, SWPA. It is suggested that, if required, a special request be forwarded for a full report on this subject.

59. Q. Is adequate maintenance service being provided by the Engineers? By the Ordnance Department? By the Signal Corps? By the Quartermaster Corps?

A. Adequate maintenance service for antiaircraft equipment is being provided by the Engineers, Ordnance, Signal Corps and Quartermaster. This is accomplished in many cases under serious handicaps. Prodigious efforts on the part of field maintenance and forward depot personnel have produced fine results. The mobile maintenance shops of the Signal Copps for keeping SCR-268 sets in condition will prove highly sucessful in this theatre, it is believed. In the Philippines the Ordnance Field Service was outstanding. There are deficiencies in field maintenance, of course, but these are not due to neglect or to failure of the services to appreciate the problems being encountered.

60. Q. Are authorized transportation allowances for antiaircraft mobile and semi-mbbile units sufficient for their needs?

A. In general yes. Here again a detailed study is required. In this theatre there is a great need for more "Peep" and"Jeep" type vehicles and for 6 x 6 trucks. The ordinary single axle drive truck is not efficient in the types of terrain where cross country and jungle trail travel predominates. Effort should be made to reduce the number of special body vehicles. In amphibious movements where combat operations are conducted at or near the bridgehead supply bases, short hauls are possible and small, durable vehicles making many trips are superior to large capacity vehicles making few trips.

[redacted]

[redacted]

61. Q. Could any reduction in these allowances be made without affecting the tactical efficiency of the organization? Explain in detail.

A. Reductions in allowances can be made without affecting tactical efficiency in some types of activity and not in others. For the AA units in this theatre the number of vehicles used by any combat organization is determined by the tactical requirement - the remaining vehicles of the organization being retained in a battalion, regimental of brigade pool as the case may be. For certain amphibious movements where installations are near the beach and no roads exist, tractors are substituted for prime movers for gun batteries and jeeps are substituted for larger cargo trucks. Where water transport cargo space is at a premium the SCR sets are left behind and the stereoscopic range finder is taken. The latter operation requires that the special body truck for the height finder be taken and this is used for general cargo after the instrument is emplaced. Later on in the operation, when the bridgehead has been secured and extended, the remainder of the battery transportation is brought up. The prime movers are proving exceptionally cumbersome for amphibious operations because of the shortage of ship space. However, when long runs are again necessary, they will be valuable. Medium tractors which can carry bulldozer attachments are especially valuable in the type of warfare where it becomes necessary to land from a barge and then scrape a trail over which the heavier equipment must be transported.

Most of the considerations mentioned herein are matters of local consideration and no assumption is made that Tables of Allowances should be changed to meet only the specific problems encountered here. The general application can be stated as:

1. Provide medium tractors with ALL gun batteries and light tractors for other batteries.
2. Reduce special body types to a minimum.
3. Increase the "jeep" and "peep" types and the 6 x 6 types for overseas operation, especially in the tropics.
4. Retain wreckers, mobile repair units and "bulldozers" equipment where possible.

SEACOAST ARTILLERY (AUSTRALIA)

1. Q. What calibers and types of weapons are emplaced?

A. Types:

USA Seacoast	Australian
155mm guns Panama Mounts	9.2" British Seacoast
4 inch Naval guns	6" " "
Improvised Mts.	4.7" " "
	4 " " "
	6 Pounder, British Design

[redacted]

[redacted]

2. Q. Description of modern emplacements, if any.

A. The 9.2 inch British design gun is emplaced in concrete, with armored protection for gun crews, electric traverse, compressed air ramming and tube blowing, water sprays for powder chambers, radar range finders, plotting and fire direction rooms 30 feet under ground, power plants, etc. The installation is most elaborate. The other type batteries, on the other hand, are not so elaborately emplaced and operated.

3. Q. To what extent is mobile artillery used in S.C. defense?

A. The Australians use 18 pounders and 25 pounders for this purpose. they are also developing an "anti-boat gun" of about 75-mm caliber but have not made any as yet.

The US Army 155mm gun on Panama Mount is being used in critical port and important operational base areas for providing seacoast defense or for augmenting an existing defense. Australian troops man these guns which are installed in two-gun batteries. The US Army supervised installation and instructs personnel in the operation of US types of fire direction and fire control instruments.

4. Q. What system of fire control is used for:
a. Major caliber?
b. Minor caliber?
c. Is radar employed in position finding. If so, to what extent?

A. a. Fortress command system (British). Fortress control station, using radar or visual instruments, locate targets in rectangular coordinates. Each battery in the fortress has its plotting room which converts the rectangular coordinates to polar coordinates and, by means of selsyn transmitters, sends range and bearing to the "Table Fire Direction". From this table corrected data are sent to the guns. Spotting corrections by battery commanders are introduced at the TFD. Some major caliber batteries use modifications of this system. Only one Harbor Defense has radar range finding equipment at present but others are being modernized.
b. Direct laying and bracketing adjustment or magnitude adjustment if proper stations can be installed.
c. See answer to a.

5. Q. What type of searchlight is in use?

A. The British 90 cm and 150 cm
US 60-inch antiaircraft searchlights, procured on lend-lease, are being installed at various coastal defense areas.

[redacted]

[redacted]

6. Q. What means of local defense of harbor defense elements are employed against
   a. Aircraft
   b. Ground Forces.

   A. a. Area antiaircraft defenses cover most of the important seacoast defense installations. The .303 machine gun and Bofors 40mm are used for defense against low flying aircraft.

   b. Infantry ground forces, under the Line of Communications Command, provide ground defense. These vary in size and composition in accordance with the location and importance of the seacoast defense installation.

7. Q. Is local defense (6 above) furnished by units manning seacoast artillery or other forces?

   A. See answer to 6 above.

8. Q. What is system used for maintaining continuous operation of defended areas?

   A. This question is ambiguous. "Continuous operation of defensedareas" is provided by keeping all military elements available for immediate "alerting" and operation. Steps are being taken to reactivate combined headquarters for employment of local defense elements.

9. Q. To what extent and by what means is coordination effected between air, naval and seacoast artillery elements?

   A. As indicated in 8, Combined Defense Headquarters are provided for in Australian GHQ regulations which prescribe, in general, for the employment of land, sea and air forces in a given locality under one commander until the Land Force, charged with operations in that particular sector, can move in and assume command. These headquarters have not been functioning but recently, at the instigation of the C-in-C, SWPA, action has been taken to motivate them. The CDH includes participation by the National Emergency Administration, the civilian defense element. Complete details on these can be produced if desired by theWAr Department.

10. Q. What means are employed for defense against motor torpedo boats?
    a. Tactical employment

[redacted]

[redacted]

b. Organization
d. Caliber and types of guns
d. Searchlights
e. Fire Control

A. a. "Boat gun" installations; actual "anti-boat booms" in shallow water; mines and counter patrols are used against motor torpedo boats. IN the most exposed coastline area — the northeastern — the Barrier Reef provides protection for close-in navigation. This reef has a series of passages through which boats can come from deep water into the inner-reef waters. Defenses are concentrated, wherever possible at or near these passages entrances at important localities. Reefs play an important part in all coast and inshore boat defense activities in the Southwest Pacific Area.
b. Normally special units are built up for the locality where the defense is demanded. Separate gun crews are the normal method of operating anti-boat and beach defense weapons — 18 pounder or 25 pounder. They function as independent patrols, coordinated with the general defense through telephone communication.
c. 18 pounder — for which plenty of ammunition is available. They have a range of about 7,000 yards and fire rapidly. The 25 pounder is more efficient, ranging about 14,000 yards, maximum, but there is less ammunition for these.
d. Searchlights are provided where procurable. 60-inch US light is preferred. At some places the 18-inch or 24-inch beach defense searchlight is used in addition.
e. Fire control is normally Case I firing — both range and direction being given by sight. Where possible, self-contained range finders are provided.

11. Q. In case Coast Artillery personnel from Philippines have not already rendered reports on Coast Artillery (harbor Defense) matters, reports in as much detail as may be practicable should be sought.

A. A report on the Coast Defense operations in the Philippines has been forwarded to the War Department from this Headquarters.

SUBMARINE MINES (CORREGIDOR)

1. Q. What percentage of mines become inoperative due to mechanical fault or weather?

A. Very small loss. Excellent maintenance even under enemy fire, kept maintenance at a high standard.

[redacted]

[redacted]

2. Q. Did mines arm from wave action?

   A. None of the CA controlled mine type. Some loss of the Navy contact type was occasioned by wave action.

3. Q. Was it possible to maintain the mine field properly?

   A. The mine field was maintained until Bataan fell, late in March. The North Channel was protected by controlled mines, Army and the South Channel by contact mines, Navy. The Coast Artillery did a fine job of maintaining the fields, using small boats when enemy action prevented the mine planter Harrison from functioning.

4. Q. Were any enemy vessels damaged by our mines? If so, was the firing done by contact or observation?

   A. On one occasion the SS Corregidor hit a mine on "contact" and was destroyed. It was leaving Manila with supplies for the Visayan Theatre and a number of civilians. The Captain refused, it is alleged, to check in with the Navy escort which would have provided safe passage. On another occasion a mine was detonated from the casemate when there was a definite indication of an underwater craft in the field. An oil slick was reported but the water in North Channel is so deep that no verification could be obtained of an underwater craft being actually sunk.

5. Q. What mechanical defects were discovered?

   A. The normal defects reported in annual reports.

6. Q. What mine sweeping was attempted? How successful was it?

   A. No mine sweeping was attempted by US forces. At Subic Bay the entrance was blocked by contact mines. The Japanese swept a channel through this field and presumably used the remainder of the mine field for their own protection while they were using Fort Wint and Olongapo. Enemy vessels entered the harbor singly or in column, led by a small pilot vessel. At the time the mine sweeping activities in this area were indulged in by the Japs there was no US opposition, hence the operation may be assumed to have been "successful".

[redacted]

ARMORED FORCE

Question 1. What is the present organization of the Australian Armored Division relative to the following points?

a. Number of tanks.

Answer. There are 48 light and 108 medium tanks in the Australian Armored Division.

Comment or recommendation.

Question 1. b. Number of tank Bns and regiments.

Answer. The Division is organized into:

(a) Division Hq and Divisional troops
(b) Armored Brigade group
    1. 3 armored regiments.
    2. AA, Signal, Medical, Ordnance, AA Workshop Section and air support control.
(c) Motor Brigade group.
    1. 3 motorized regiments.
    2. AT, AA, Signal, Air Support Co, Medical, Ordnance and Service.

The Armored Regiment is organized into a Hq Sq, a Light Tank Sq and 2 Medium Tank Sqs.

1. Light Tank Sq; Hq 4 Light tanks, 4 Troops, 3 tanks each (crew 4).
2. Medium Tank Sq; Hq 4 Medium tanks, 4 Troops, 3 tanks each (crew 5).

Regtl Hq has 4 Medium M-3 tanks.

Comment or recommendation.

[redacted]

Question 1. c. Number of tanks in battalion and regiment.

Answer. There are 16 light tanks in the Light Tank Sq and 16 medium tanks in the Medium Tank Sq. There are 16 light and 36 medium tanks in the regiment.

Comment or recommendation.

Question 2. d. Type of tanks employed in division.

Answer. Light and medium.

Comment or recommendation.

Question 1. e. Number of Infantry battalions and regiments.

Answer. There are 3 motorized regiments and an armored car regiment in the division.

The armored car regiment has a Hq Sq and 3 Combat Sqs. Each combat squadron has 15 armored cars. Personnel Regt, each 41 officers and 547 E.M.

The motor regiment has a Hq Sq and 3 Motor Sqs. The Combat Sq has a Hq Troop, an AT Troop and 3 Motor Troops of 5 weapons carriers (15cwt) and 1 "jeep" each. The Hq of the Sq has 9 carriers. Personnel Regt, each 35 officers and 680 E.M.

Comment orrecommendation.

Question 1. f. Strength of Infantry Battalions and regiments.

Answer. (See e. above)
Battalion, motorized, 7 Off and 165 E.M.
Battalion, armored car, 9 Off and 122 E.M.
Battalion, tank, light, 7 Off and 136 E.M.
Battalion, tank, medium, 7 Off and 182 E.M.

Comment or recommendation.

Question 1. g. Type of personnel carrier used by Infantry.

Answer. The mortar and 2 pounder crews are transported in tracked carriers in Hq sections and the 3" mortar in Troops is carried in a 15 cwt truck as are all personnel.

Comment or recommendation.

Question 1. h. Type and number of Infantry weapons.

Answer. (a) Motor Regiment: 170 .38 cal. pistols, 480 .303 rifles, 60 SMGs, 35 LMGs, 27 VMGs, 9 2 pounders and 13 3" mortars.

(b) Armored Car Regiment: 333 .38 pistols, 166 .303 rifles, 84 SMGs and 33 LMGs.

(c) Armored Regiment: 353 .38 pistols, 220 .303 rifles, 104 SMGs, 66 LMGs (cal .303), 120 LMGs (cal .30), 52 37mm and 36 75mm guns.

Comment or recommendation.

Question 1. i. Number of Artillery battalions and regiments.

Answer. None

Comment or recommendation.

Question 1. j. Number and type of artillery weapons.

Answer. (See i. above)

Comment or recommendation.

Question 1. k. Strength, composition, type of weapons, and type of vehicles of reconnaissance agencies.

Answer. The Australian Armored Force was undergoing a reorganization and much information was unobtainable.

Comment or recommendation.

Question 1. n. TD Support -
Organic - Strength - Type of Weapon

Answer. Organic - AT troop in squadron, btry in regiment.
Strength - AT troop in squadron, 21; Btry 7 Off and 163 E.M.
Type of weapon - 2 pounder in Troop

Comment or recommendation.

Question 1. o. AA Support -
Organic - Strength - Type of Weapon

Answer. Organic - Btry in Brigade
Strength - 9 Off and 300 E.M.
Type of Weapon - 18 40mm

Comment or recommendation.

Question 2. State briefly Australian doctrine covering Armored Division employment.

Answer. Training is proceeding to insure that:
(a) Anyone Armored Division can be employed in its entirety, and
(b) is capable of sub-division into Regtl Groups.

Comment or recommendation.

Question 4. State briefly the tactical doctrinefor the employment of Australian separate tank battalion and regiments.

Answer. See paragraph 9, below.

Question 5. What training is being carried on by U. S. and Australian troops in the close support of infantry divisions by separate tank battalions and regiments.

Answer. These units are finishing their organizational and basic training stages. Training in the role of close supporting infantry is being considered for the near future.

Comment or recommendation.

Question 6. Do tanks in support of infantry divisions normally precede, accompany, or follow infantry troops in the attack? If circumstances warrant, enumerate cases under the category.

Answer. When considering close co-operation of tanks, infantry and artillery in the attack there is nothing normal. The disposition of tanks and the infantry will depend upon the following:

(a) The task and what one is up against.
(b) Whether the objective is a well prepared defensive position or one that has been hastily organized.
(c) Has one or more minefields to be negotiated.
(d) What amount of artillery support is available.
(e) The ground over which the attack is to be launched; also the approaches to the start line. (The ground often "dictates" what is to be done)

There are many other considerations.

It may, at times, be advisable to push forward a leading echelon of tanks at tank speed to the first objective followed by a second echelon of tanks going at infantry speed.

Question 6 (Continued)

Again the artillery support comes into the picture. Is it to be a barrage or concentrations; is the support to commence with a barrage along a wide front for deception purposes and then switch to concentrations near the point of penetration.

Comment or recommendation.

Question 7. Are suitable training areas available for armored divisions, joint infantry tank training, and tank gunnery?

Answer. Yes.

Comment or recommendation.

Question 8. What means of communication is used between tanks and supported infantry to include tank platoon and rifle platoon and company.

Answer. An Army Tank Bn always has a Liaison Officer working with the infantry formation H.Q. and is in touch with the Tank Bn H.Q. by wireless telegraph. Should a tank squadron be working independently with infantry, the squadron would send a Liaison Officer to the supported infantry H.Q. The Liaison Officer is in wireless touch with his own H.Q. All other communication between tanks and infantry is done by arm and flag signal, runner, etc.

On the rear end of the Matilda tank there is apress button which rings a bell inside the tank to call the attention of the crew.

Is it suggested that as training proceeds the use of the "Walkie-Talkie" wireless telegraph set should be investigated.

Comment or recommendation.

[redacted]

Comment or recommendation on Question 8.

Question 9. To whom is the separate tank battalion normally attached?

Answer. It can be assumed that the largest formation to be supported by an Army Tank Bn would be an infantry regiment.

With the infantry regiment deployed in the attack with two battalions forward and one in reserve each infantry battalion might have one tank squadron co-operating.

The smallest infantry formation to which an Army Tank Bn would be attached (or vice versa) would be an infantry battalion. This would occur only when an infantry regiment was being supported by an Army Tank Bde which is ideal.

Comment or recommendation.

Question 10. What lessons, of armored note, have been learned by the Military in the theatre?

Answer. Armored units have not been used in combat in this theatre.

At Milne Bay the Japs landed two light tanks and lost both of them.

In the Solomons the U. S. Marine Corps discovered that M-3 Light Tanks were vulnerable to the Jap 47-mm A/Tk gun. No information is available about the Philippines, Guam or Burma.

Comment or recommendation.

Question 11. What methods are used in tank gunnery instructions?

Answer. Instruction is progressive. Every type of gun and M.G. is taught at the Armored Fighting Vehicle School.

Firing is conducted in the following stages:-

(a) Pellet Range.
(b) 30 yard range for M.G.
(c) Open Range practices which include firing from stationary tank in hull-down position, firing from moving tank at both stationary and moving targets. Ranges vary from 200 to 1000 yards.
(d) Battle practice up to troop exercise.

Comment or recommendation.

Question 12. What type of ammunition is carried for the several tank weapons?

Answer.

	In Tank	In Regt Reserve	In 2nd Line	In 3 rd Line	Total
M-3 LIGHT (MODIFIED)					
Cartridges, QF 37mm	83	42	83	83	291
" SA .30mm	5435	2718	5435	5435	18023
" SA .45mm	370	185	370	370	1295
" Signal	12	6	12	12	42
Generators smoke 4"	8	4	8	8	28
M-3 MEDIUM - GENERAL GRANT & LEE					
Cartridges QF 75-mm	65	33	65	65	228
" QF 37mm	139(a)	70	139	139	487
" SA .30mm	4000	2000	4000	4000	14000
" SA .45mm	640	320	640	640	2240
" Signal	12	6	12	12	42
(a) General Lee 128 only					
TANKS, MATILDA Medium 27 tons (British)					
Cartridges QF 2 pr) altern-	93	47	93	93	326
" 3" how) ative.	52(b)	26	52	52	182
" 7.92' Besa	2925	2463	2925	2925	10238
" .303"L.M.G.	600	300	600	600	2100
" Signal	12	6	12	12	42
Grenades No. 36	6	3	6	6	21
Generators Smoke	10	5	10	10	35

(a) Requirements for generators smoke subject to investigation.
(b) English Scale is 36 smoke 16 H.E.

Comment or recommendation.

Question 13. What means are used to identify friendly tanks to:

a. Air Units.

Answer. Experiment in advanced stage. Briefly as follows:

The tank uses the U.H.F. (?) of No. 19 wireless telegraph set. The plane is to be fitted with a special U.H.F. (?) set.

Test on 24 Oct. 1942, with stationary tank gave following results:

Height	Distance	Strength of Signal
3400	overhead	9
4400	overhead to 8 miles	9 - 7
6000	overhead to 4 miles	7
7000	overhead to 3 miles	9 - 7

Test on 2 Nov. 1942, with moving tank gave the following results: (the aeroplane fitted with aerial under the plane)

Height	Distance	Strength
1500	5½ miles Thinly wooded country	7 - 9
1500	4½ miles	7 - 9

Other method.

"T" panel code.

Comment or recommendation.

Question 13. b. Ground Units.

Answer. A pocket size publication is now being printed dealing with recognition of all armored fighting vehicles used by our own forces. The book will be given a wide distribution including the R.A.A.F.

The policy is to know your own tanks and then one that is not recognized will be tested with great suspicion and dealt with accordingly.

Comment or recommendation.

[redacted]

Question 12. Is the theater suited to the use of horse cavalry?

Answer. See answer to #8 above.

Comment or recommendation.

Question 16. Were any methods of training observed that were superior to American methods?

Answer. No, to date no methods of training used by our allies have been found that are superior to the American methods.

Comment or recommendation.

NOTE: It is pointed out that there is only one regiment and one troop of Cavalry in the Australian Army, practically all of which are in Western Australia, a non-operational area.

CAVALRY

Questions 1 to 3, inclusive - no answer.

4. What proportion of Cavalry is being employed by our allies? Enemies?

No reports of enemy cavalry operations have been received. An unconfirmed report states that the Japanese landed 400 horses at Rabaul shortly after their initial landing there. Another report (by an escaped Rabaul native) states that "Japanese horse cavalry is stationed at Wunawuturig (Rabaul)". A few horses were brought from Rabaul to Buna and used as pack animals on the Kokoda trail, to haul mountain artillery and supplies.

An unconfirmed report stated enemy cavalry was at Mubo, about 12 miles S. of Salamaua. If true, the animals were undoubtedly used to pack supplies, and not for cavalry purposes. The terrain is suitable for animals only a short distance beyond Mubo.

In Timor a party of 700 Japs with 200 horses was reported near Maobisse, which may indicate the use of mounted patrols.

Questions 5 to 16, inclusive - no answer.

It is pointed out that there is only one regiment and one troop of Cavalry in the Australian Army, practically all of which are in Western Australia, a non-operational area.

16. Were any methods of training observed that were superior to American methods?

No, to date no methods of training used by our allies have been found that are superior to the American methods.

CAVALRY

Question 4. What proportion of Cavalry is being employed by our allies? Enemies?

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In Timor a party of 700 Japs with 200 horses was reported near Maobisse, which may indicate the use of mounted patrols.

Comment or recommendation.

Question 8. Should our Cavalry units be trained in the use of any special equipment for use in a particular theater?

Answer. Horse cavalry would be very desirable if the enemy effected a landing on Australia. Cavalry could be utilized as pack outfits if so trained and equipped in the N. G. area.

Comment or recommendation.

Held not checked

QUESTIONNAIRE PREPARED BY ARMORED FORCE BRANCH,
DEVELOPMENT DIVISION, REQUIREMENTS SECTION, ARMY GROUND FORCES

1. What terrain is suitable for the operation of armored forces in the various islands of the Pacific and Australia?

   Briefly, there is some terrain in Australia and in the islands to the north thereof suitable for the employment of tanks.

2. What type of materiel, light, medium or heavy, could be employed in various locations?

   In general the lighter types are more suitable.

3. What local supply is there of 80 octane gasoline, engine oil, and other lubricants?

   (a) 80 Octane Petrol - can be made available anywhere in S.W.P.A.

   (b) Engine Oil. Adequate stocks of SAE 30 and 60 grades are available throughout S.W.P.A. There is an immediate shortage of special diesel lubricating oil, but this is being corrected.

   (c) Other Lubricants - Special lubricants supplied to Armored Fighting Division include fibre grease, high melting point grease and graphite grease and hycon brake fluids Nos. 1 and 2. These grades are all supplied by local manufacturers to specification and are available to meet all existing demands. No supply difficulties are anticipated.

4. What special equipment should be taken? Included in this should be personal equipment as well as equipment included in the tanks to overcome the heat and other special conditions to be met.

   No comments.

5. Considering the difficulty of landing armored equipment, is it feasible to land on the smaller islands or should such landings be confined to locations that have landing facilities? In this connection special types of landing craft might be considered.

   Landings can, in general, be made in the vicinity of likely employment; tank landing craft would eliminate the necessity of utilising dock facilities.

6. What tanks and other armored force vehicles are employed by the enemy? What is the weight, speed, armor and armament of each type of vehicle? Are vehicles employed in mass or dispersed?

~~There are two answers to this question:-~~

~~(a) For all known information of Japanese Armored Fighting Vehicles see Incl. 1, Appendix "C".~~

(~~b~~) The Japanese have 19 known types of tanks and three types of armored cars. In the Southwest Pacific Area only one type of tank has been met. This was the "New Light or Medium Type" which was used in Malaya. Two of these tanks were put out of action and captured at Milne Bay on August 26, 1942. Details of this tank are:

Weight:	8-10 tons approx.	Armor:	Front ½ (half)"
Length:	14 feet	Armor:	Top ¼ (quarter)"
Width:	8 feet	Armor:	Other surfaces 5/16"
Height:	8 feet	Armament:	One 37-mm gun; two LMG's, one in hull.
Clearance:	17 inches		
Width of Track:	10 inches		
Speed:	Not known, but engine 6-cyl. diesel.		

In Malaya two of the "Tankettes" were also used. These were the M2592 and M2588. Both are 3-tons, with a speed of 30 m.p.h., and with armor of 14mm maximum. Another tank reported in Malaya was the M2592 Medium (1935-37), which is 20 tons, maximum speed, 21 m.p.h., and had armor 50mm thick in front and turret and 25mm on sides. In Burma similar tanks to those encountered in Malaya were in use. No details of Japanese tanks landed in the Philippines or on Guam have been received.

(c) Since December 7, 1941, there has beenm massed armored attack. The largest group reported from Malaya consisted of 12 tanks.

7. What special measures must be taken to protect armored force vehicles from sea water enroute and from climatic conditions in the various localities?

Final Check-up.

(a) Each tank shall be tested for mechanical and electrical efficiency.
(b) Gun mountings and operating mechanism shall be correct.
(c) To prevent damage, no cases shall be stored within the tank. It is permissible to store the towing cable in the pit (Loader's Platform) to rear of the 75-mm gun, as well as the two 12'x12' tarpaulins.

(d) All accessories must have passed the inspection tests.
(e) The equipment, according to the latest schedule, shall be complete and in serviceable condition.

Preparation for Export.

(a) Precautions must be taken against sabotage, rust and corrosion, fire, rain, frost, sea mist and sea water, hot sun, rough treatment and movement in transit.
(b) Preparation of tank should not be attempted until all final adjustments have been made, all parts cleaned and final coat of paint is dry.
(c) Materials needed for preparing tanks and boxes for overseas shipment are as follows:-

1. Oil and grease
2. Squirt gun for spraying motor with oil.
3. Plywood plates for muzzles of 37 and 75mm guns.
4. Canvas curtains with snap-ons, for rotor.
5. Canvas muzzle covers for 37 and 75mm guns.
6. Canvas breech covers for 37 and 75mm guns.
7. Adhesive tape 4" wide.
8. Paint, for cases etc.
9. Bailing wire.
10. Boxes.
11. Stencils.
12. Lead seals and punch
13. Protek-sorb

(d) The tank shall be treated as follows:

(If the tank has to be driven onto the railcar, many of the following steps cannot be carried out until the tank is in its final shipping position).

1. Replace engine oil with new oil. Check that oil is up to proper level. Open rear doors of engine compartment and loosen clamps on each lower hose connection of carburetor air intake. Start engine and operate at 50% maximum speed for approximately two minutes. At the end of this time the fuel feed line should be closed off at the supply tank. While the engine is running on residue fuel in carburetor aspirate EGU 17A (shell) oil by means of spray gun into both air intakes until engine stops. It is not necessary to remove any of this oil from the combustion chamber of the engine before placing it in service.

After engine stops, insert one one-pound bag of Protek-sorb with warning tag attached in each carburetor intake, allowing the tag to remain outside of the intake. Replace hose and clamps.

Fill all door openings, pistol ports and escape hatches and all seams with Shell RB ball bearing grease. Clean the metal surfaces adjacent to these sealing areas with a cloth dampened with gasoline or a similar solvent. Thoroughly remove all the grease, dirt and loose paint. Apply the Sisalkraft paper (or equivalent) over the area to be sealed and hold it in place with one 1" wide adhesive tape. Then completely cover the Sisalkraft paper with 4" wide adhesive tape over-lapping each layer by approximately one and one-half inches. This tape should extend beyond the edges of the Sisalkraft paper. Seal the extreme edges with 2" adhesive plaster pressing it firmly into place. This part of the overall operation is extremely important as the anchorage of the tape at these points is paramount.

(c) Engine compartment and guns.

All Protek-sorb bags inserted in air intakes must have a red tag affixed with safety wire which reads "Warning-this bag of Protek-sorb must be removed before starting engine". This tag is left hanging outside the intake. A placard which reads "Warning - remove Protek-sorb bags from the carburetor air intakes before starting the engine," should be placed on the outside of rear engine compartment doors. Also on ignition switch at tank driver's station a red warning tab should be attached to read "Warning - do not start engine before removing Protek-sorb bags from carburetor air intake.

Replace oil of gear boxes, transmission, etc. with new oil and check that they are up to the full level.

Lubricate all grease cups and Tecalemite fittings.

Battery master switch to be opened and battery terminals to be disconnected greased and covered with adhesive tape. Battery remains "Wet charged".

Drain the radiator, cylinder blocks and all water tanks. Seal the filler caps.

Drain the fuel tank and allow residual gas to evaporate by leaving off cap and leaving drain cock open. Then close drain cock and seal filler caps.

Coat all unpainted steel, brass and aluminum (except in the engine compartment) with new S.A.E. No. 60 lubricating oil to avoid moisture and corrosion.

The track and suspension should be sprayed with grease or considerable rust will result when the tanks are shipped as deck cargo.

Remove all protective compounds from bore and breech mechanism of guns.

Oil all guns and sweep out barrels with G.P.D. 308 or new S.A.E. No. 60 lubricating oil. Spray breech mechanism with G.P.D. 308. Insert 2 2oz. bags of Protek-sorb in each 37-mm barrel and 4 2 oz. bags of Protek-sorb in each 75-mm barrel; lock the breech and tape over the muzzle a sheet of prelaminated pliofilm. A plywood plate should then be taped over the muzzle.

Alternate. Check the corrosion preventative compound to see that it completely covers all surfaces of guns. Insert 2 2 oz. bags of Protek-sorb in each 37mm gun barrel and 4 2 oz bags in each 75mm barrel. Immediately after placement of the Protek-sorb, lock the breech and tape over the muzzle a sheet of prelaminated pliofilm. A plywood plate should then be taped over the muzzle. Cover the 37mm and 75mm guns with canvas muzzle covers securely fastened, after securing curtains on rotor housing.

Test all observation slides and ports, coat operating mechanism with new S.A.E. No. 60 lubricating oil and lock in the closed position.

Lock the turret, guns and other mechanism that may vibrate or swing out of position. Gun position 37mm gun center forward fully depressed; 75mm center forward fully depressed to left.

General Points Requiring Attention.

Remove from outside of tanks all equipment lamps and stowage brackets which can easily be damaged or stolen. Pack them in boxes.

Check that all items of equipment are well protected against rust and corrosion and are safely stowed.

Brake shall be left "full on" and the gear lever in neutral. The starting handle must be wired to the gear lever.

The log book comprising packing lists, instruction book and spare parts book, control and maintenance hints should be sealed in a large heavy envelope which is in turn wired to the steering gear lever.

Gun books 37mm and 75mm shall be secured with wire ties to their respective gun with record of proof of guns and mounts.

Place the towing cable, after painting in the pit, (loader's platform) to rear of 75mm gun on top of which place the 2 12' x 12' tarpaulins

Lock from inside of tank, all doors and flaps, with exception of right side door. Before closing right side door secure the inside locking device by wiring handle, handle of same to handle of adjacent pistol port to prevent door from accidentally locking, as this door is only means of ingress to tank. Place suitable bolt in hasp end.

Wire seal the right hand door in closed position.

See Chapter 1. All doors, small apertures, cracks, engine air outlets and intakes and armament are to be protected to prevent entry of moisture, rain and sea water. The following procedure is to be carried out in preparing all tanks.

(a) Grease (RB ball bearing) is pressed into all cracks around the doors and pistol ports. All surplus grease must be wiped off the surface of the tank with solvent before the adhesive tape is applied.

(b) A piece of prelaminated Pliofilm is then placed over the opening and tacked down with adhesive tape.

(c) The next step in preparation is to place the adhesive tape over the Pilofilm. This tape must be drawn tight, applied horizontally and singled, to prevent ballooning and air pockets between the tank and Pliofilm. The tape is laid in strips each strip overlapping the previous one by approximately 1½".

(d) After this step has been completed the taped portion is painted with shellac and allowed to dry.

(e) Note. Before the last door is sealed the equipment inside should be checked and all unpainted parts should be coated with new S.A.E. No. 60 lubricating oil. Seven one pound bags of Protek-sorb are to be well distributed in the engine compartment and 20 one pound bags are to be distributed in the crew compartment. Immediately thereafter the door is closed and sealed. Care must be taken to insure that when strips of tape are being placed on the tank the higher strips over-lap the lower, in order to prevent the percolation of water between the strips.

Extreme care must be taken to insure that when spray painting the inside of the tank, the spray is not allowed to get on to the protectoscope prisms to avoid damage while cleaning them at the destination.

(f) At the point where the axles or drive shafts emerge from the tank, seal cover plates and all openings with hand-applied RB ball bearing grease.

Vehicle Tool and Equipment

All loose parts that could be damaged and all tools must be packed in separate boxes.

Boxes should be suitably marked so that they accompany and can be identified with the proper tank, see paragraph 8.

Where two or more tanks go in one consignment to a common destination it is necessary to treat such components as (say) radios as vehicle equipment, if such components cannot be actually fitted to their tanks.

All unpainted steel, brass and aluminium parts, machine guns and barrels etc. must be thoroughly greased.

All boxes shall be lined with reinforced tar paper on all inside faces and all parts requiring protection shall be enclosed in properly closed prefabricated Pliofilm bags. Protek-sorb shall be included in each of these bags in the amount of not less than one pound per 5 cubic feet of maximum gross content of the bag and in no event shall less than 4 ozs. of Protek-sorb be used in each bag.

Delicate parts should not be packed with heavier parts. Each part should be secured within the case to prevent damage to other parts from "drifting". Care must be observed that the Pliofilm bags are not damaged. All space inside of boxes must be tightly filled or padded with excelsior or other suitable material be enclosed within the pliofilm bags.

Cases of vehicle tools and equipment which are complementary to each tank must be shipped with the tank. Such boxes containing vehicle tools and equipment will be linked to the tank to which they belong by the registered number of the tank. Each tank therefore, will be plainly marked in red link No..... The tank itself will always be regarded as a package serial No. This No., together with the total number of packages involved, will be marked on the equipment.

TANK. LINK T12345

1 OF 21

Similary, the serial number of the case and the total number of cases will be marked on the cases, as follows:

LINK T12345

2 OF 21

This instruction does not apply to maintenance spares.

8. What chemical warfare equipment has been used against tanks and other armored vehicles?

The Japanese are not reported to have used any such equipment to date. At Milne Bay, Papua, in August this year, a portable flame-thrower was captured. It had not been used. Whether it was intended for use against infantry, gun positions, or tanks is not known.

JUNGLE OPERATIONS - SWPA

Question 1. What is the general nature of the terrain with regard to infantry operations?

Answer. The terrain from Port Moresby to Buna in Papua is fairly characteristic of conditions to be met in tropical jungles and is described in general terms below. More detailed information of specific localities is contained in Terrain Studies by the Allied Geographical Section, copies of which are sent to MIS Washington when completed.

The Port Moresby locality is fairly dry and the terrain in its immediate vicinity is characterized by rolling hills, covered with sparse bush over which Bren gun carriers and light tanks can operate. From Uberi to Myola, there is a rugged series of knife edged ridges and razor backs. Valleys are steep sided, but not precipitous, except at main stream crossings; gorges are deeper, but not so frequent as on the northern side of the range. The country is clothed in poor quality rainforest, except in the foothills to the range, where the forest is heavier and the undergrowth more dense, mainly in the deeper valleys at Monari-Nauro and between Ioribaiwa and Uberi. In the Brown River area, there are patches of dense lowland rainforest and real jungle, almost to the valley of the Laloki River. In general, in the main range along this route slopes become more precipitous; peaks rise to 9,000 feet, valleys about 1,000 feet deep, and valley slopes average about 60 percent. Undergrowth is not very heavy, but provides effective concealment. The ridge and spur system is complicated. The soil is heavy humus and leaf mold, tracks forming rivers of mud after passage of a few hundred troops or carriers. Creek and river crossings are rough, but not very difficult; there are no bridges. Native tracks usually run along crests of spurs and ridges. Rainfall around 3,000 feet level, between 200 and 300 inches per year. The northeastern side of the range from Myola to Deniki is of the same character, but extremely rugged. Some open grass patches exist. Kokoda is on a plateau at about 1500 feet. Beyond the Kumusi River, the country is undulating medium forest, opening into the fertile coastal area near Buna, which is traversed by a motor road and is characterized by medium forests, plantations and areas of grassland.

Comment or recommendation.

Question 2. Can motors be utilized at all?

Answer. In flat country in the coastal belts, tracks can generally be improved for use by "jeeps". These vehicles are used in vicinity of Port Moresby, and along the coast to Kigo. Across the Owen Stanley Range, the Japanese used motor transport in the Buna area, possibly as far as Wairopi on the Kumusi River.

Motors can be used along the coast line in dry weather, and over some trails where the slope is not too steep. It has been possible to construct trails for the operation of ¼ ton 4x4 trucks in New Guinea, and to utilize them for cargo vehicles ad well as transporting the wounded down the trails.

Comment or recommendation.

Question 3. Can pack mules be utilized?

Answer. Both the Australians and the Japanese used pack horses and mules on the Kokoda trail. In some places the paths follow river beds, in others are nothing but tracks along the ridges, usable by native carriers exclusively. There are places where pack animals are very desirable, and they should be available when needed.

Comment or recommendation.

Question 4. What type of animals are available as pack animals in the area?

Answer. There are sufficient pack horses available in Australia to meet the current estimated needs of this command. There are no mules available in Australia.

Comment or recommendation.

Question 5. How far inland, that is, away from supply by boat, are operations contemplated?

Answer. Approximately 0 to 40 miles in the immediate operational area.
In this connection, attention is invited to the increasing importance of air-borne supplies.

Comment or recommendation.

Question 6. Would the organic infantry transport (pack) be sufficient or would quartermaster pack units be necessary between the boatheads and the front lines?

Answer. Study of proposed jungle operations indicates that the movement of supplies from sub-bases to troops as they proceed is largely contingent upon an adequate supply of native carriers. To use troops for this arrangement has the disadvantage that otherwise capable troops are engaged in portage. Reports indicate that QM Pack Units are necessary to operate between boat heads and front lines except in those instances where trails are inaccessable to pack animals in which case transport of supplies would be dependent upon native carriers or by means of air dropping. If pack transportation is resorted to, it would be necessary to utilize both types in order to secure sufficient supplies for the using troops.

Comment or recommendation.

AIRBORNE # FAR EAST

Question 1. Location of air fields, dimensions and facilities of each.

Answer. Numerous and constantly changing.

Comment or recommendation.

Question 2. Location of suitable beaches for airborne landing on water's edge.

Answer. Most Australian beaches would be suitable.

Comment or recommendation.

Question 3. Have Japanese parachutists been used against U. S. forces? If so, all details of their employment.

Answer. No Japanese parachutists have been used against U. S. forces in the SWPA to date.

Comment or recommendation.

Question 4. Have Marines utilized parachute troops? If so, all details of their operation and experience.

Answer. No U.S. Marines parachutists have been used in SWPA.

Comment or recommendation.

Question 5. Have the Japanese transported troops by air?

Answer. There is no evidence of Japanese troops being transported by air in SWPA.

Comment or recommendation.

Question 6. Are there any evidences of the use of gliders by the Japanese or the preparation for the use of gliders?

Answer. There are no evidences of the use of or preparation for use of gliders by the Japanese in SWPA.

Comment or recommendation.

Question 7. What is the distance between the main islands; i.e. are the probable objectives close enough for airborne operations?

Answer. In general, by means of "stepping stone" tactics airborne operations are feasible, as distances will seldom exceed 500 miles and will probably average close to 400 miles.

Comment or Recommendation.

Question 8. What is the general characteristics of the possible objectives with respect to successful parachute landing; i.e. are there many open areas other than air fields where parachutists and/or gliders could be utilized?

Answer. There are many open areas in Australia and N.G. where parachutists and gliders could be utilized; beaches, reefs, open areas, etc.

Comment or recommendation.

Question 9. Location of supply bases.

Answer. There are bases at Port Moresby and Milne Bay.

Comment or recommendation.

Question 10. Radio communication - beacons for night, etc.

Answer. There are no airway beacons. Searchlights at fields are used for this purpose when necessary.

Comment or recommendation.

Question 11. Gasoline storage facilities.

Answer. Generally stored in drums on the ground and dumps dispersed.

Comment or recommendation.

FIELD ARTILLERY

Question 1. Weapons.

a. Are our standard division artillery pieces suitable for use in the various types of terrain in the theater of operations?

Answer. The 155mm howitzer can be used in Australia, but in the islands to the north, where the terrain is more difficult and where there is a strong possibility that operations may be undertaken, it is felt that this weapon is too heavy and unwieldy. A limited use for the 105mm howitzer can be forseen in some types of terrain. It would be invaluable in the defense of beaches. Two of the divisional artillery battalions are being equipped with 75mm pack howitzers and one with 81mm mortars.

Comment or recommendation.

Question 1. b. Do weapons using high angle fire (elevations over 45 degrees) have any advantage in the jungle?

Answer. Due to the dense undergrowth and wooded areas, a weapon possessing high angle fire capabilities has a decided advantage in jungle operations. The flat trajectory weapon is handicapped because of the obstacles in front of it, rendering its fire less effective.

Comment or recommendation.

Question 1. c. What proportion of time shell to percussion fused shell should be authorized?

Answer. The type of mission would determine the proportion of time to percussion fused shell. Against landing parties it would be desirable to have a large percentage of time shell, whereas in jungle fighting most of the shell would be percussion fused. Smoke shells should be added to assist in adjustment in heavily wooded terrain as well as for tactical use.

Comment or recommendation.

Question 1. d. Is there need for weapons of caliber greater than 240mm?

Answer. The difficulties of transporting a weapon of larger caliber than 240mm, even in Australia, indicate that there is no need for a larger weapon.

Comment or recommendation.

Question 1. e. Is the carbine more suitable for close defense than the Tommy Gun?

Answer. One carbine only has been received in this area. Its weight recommends it over the Thompson Submachine gun. However, there is a definite requirement for both type weapons.

Comment or recommendation.

Question 1. f. For antiaircraft defense, is the .50 cal MG suitable or is there a requirement for an AA weapon which fires an explosive shell (20-mm or 40-mm)?

Answer. The .50 caliber ammunition is highly effective against Japanese aircraft within its limiting ranges. A proper distribution of tracer, armor piercing and bluenose (explosive) .50 caliber ammunition is desirable. Armor piercing and explosive .50 caliber ammunition is effective against lightly armored landing boats and light tanks as well, especially the former.

Dual mounts for .50 caliber guns (AA) should be provided wherever possible.

20mm AA guns should be used WITH but not to substitute for .50 caliber weapons.

Comment or recommendation.

Question 2. Transport.

a. Are trucks satisfactory or are tractors required?

Answer. Trucks are satisfactory in Australia. In jungle warfare, the ¼ ton truck is the most satisfactory. The type of transport to include tractors and 2½-T 6x6's will depend on where the operation is to be conducted. Motor transportation should, as a general rule, be kept to a minimum. In certain parts of New Guinea, it is not possible to use even pack animals.

Comment or recommendation.

[redacted]

Question 2. b. Is pack artillery essential?

Answer. Yes, pack artillery should be made available for use in jungle warfare, as the situation permits. In some types of terrain it is the only method of transport, while in others not even that can be used. But it should be available to the commander for use when desired.

Comment or recommendation.

Question 2. c. Pack Signal Companies?

Answer. Means must be provided for transporting essential communication equipment beyond the limiting line of motor movement.

Comment or recommendation.

Question 2. d. Is our system and method of maintenance correct?

Answer. Yes.

Comment or recommendation.

Question 3. Communication equipment:

a. Is our standard wire and radio equipment satisfactory or is there need, due to special climatic conditions, of modifications or of new types?

Answer. Necessary pack wire and radio equipment should be provided for ground force units. American equipment is satisfactory. Australian equipment is not, but is now being improved. From the viewpoint of special climatic conditions alone both the standard wire and radio equipment are satisfactory. The 600 series radio has not been received as yet by the units in this theater of operations.

Comment or recommendation.

Question 3. b. Is visual communication practicable?

Answer. Yes, in many places, but small radio sets are preferable. In amphibian or mountain operations, visual communication is practicable; in close country, it is impracticable.

Comment or recommendation.

Question 4. Fire Direction and Control.

a. Are our methods of fire direction satisfactory?

Answer. Yes.

Comment or recommendation.

Question 4. b. Do we need fire control instruments in the number and types now provided?

Answer. Yes.

Comment or recommendation.

Question 5. Air Ground.

What means and methods are used to identify friendly and enemy aircraft?

Answer. Charts and diagrams of enemy aircraft, Identification Friend or Foe, Anti Surface Vessel, RADAR, identification procedure and methods of approach.

Instruction of all personnel in the markings and design of each type. (It is recommended that small scale models be made available for study as well as pictures).

Comment or recommendation.

Question 6. What personnel and equipment should be eliminated from current T/BA and T/O for operations in the Theatre of Operations?

Answer. The personnel and equipment used in any particular type of operations will vary according to the terrain and the method of transportation to the theater of operation. For example, if one goes over a mountain trail, equipment will be different from that used if a landing is to be made by boat. In a march over any trail in Papuan New Guinea, little or no artillery (except pack) can be taken; in a landing operation where it is expected that a base will be captured and held, some artillery would undoubtedly be taken. Insofar as service on the continent of Australia is concerned, the present organization and equipment is satisfactory. Requirements for pack, jeep-drawn and truck-drawn artillery will vary according to the situation and terrain.

Comment or recommendation.

INFANTRY

Question 1. In which specific subjects do our troops show a marked lack of training?

Answer. Amphibious training, jungle warfare, mountain warfare, camouflage, small unit training, and training in the use of the chain of command. Personal hygiene, field expedients, discipline, camouflage and camouflage discipline.

Comment or recommendation.

Question 2. Can we afford to reduce the training time devoted to any specific subject?

Answer. No.

Comment or recommendation.

Question 3. Is training needed in any subjects not now covered?

Answer. Yes. (See answer to 1 above). Sniper courses should be developed similar to the obstacle courses. Terrain appreciation should be stressed, camouflage discipline and camouflage.

Comment or recommendation.

Question 4. Is additional training in marksmanship needed?

Answer. Only in combat firing or sniper courses.

Comment or recommendation.

[redacted]

Question 5. Are specialists, particularly communication and maintenance personnel, thoroughly capable?

Answer. Yes.

Comment or recommendation.

Question 6. Do officers and enlisted men possess the necessary stamina and physical endurance?

Answer. Yes, it is stressed in all units.

Comment or recommendation.

Question 7. Is additional physical conditioning necessary?

Answer. It should be continuous and strenuous.

Comment or recommendation.

[redacted]

Question 8. What measures are taken to prepare individuals mentally for the shock of combat?

a. By our troops?

Answer. Combat ranges, sniper courses, use of land mines to represent artillery fire.

Comment or recommendation.

Question 8. b. By our allies?

Answer. Same plus battle courses using combined arms and service ammunition.

Comment or recommendation.

Question 9. Among the troops you observed, in which subjects was training being stressed?

Answer. Small unit training in jungle warfare.

Comment or recommendation.

[redacted]

Question 10. Have service elements received sufficient training in their duties to function smoothly and effectively in combat?

Answer. The training of service units in training areas seemed sufficient for smooth functioning under normal combat conditions.
In view of the difficult supply conditions in New Guinea, practical training in Australia was not possible. Supply in New Guinea involves the use of large boats, air, small boats, truck, jeeps, native carriers and dropping.

Comment or recommendation.

Question 11. What flaws did you observe in our system of Class I, Class III, and Class V supply from railhead to troops?

Answer. None. Unusual conditions in New Guinea complicated supply but the system is adequate.

Comment or recommendation.

Question 11. a. What simplifications or improvements can be made?

Answer. Non comments.

Comment or recommendation.

Question 12. What changes in the present T/O for infantry are needed to increase combat efficiency?

Answer. The desirable organization for the infantry regiment will vary with the type terrain over which operations are to occur. For example, in an advance over the Owen Stanley Range on the Kokoda trail, no AT guns can be taken and very few heavy machine guns. On the other hand, if the advance is made on Buna by sea, all weapons would be taken to assist the infantry in protecting itself against possible counter landing. Based on above, no changes in the T/O for Infantry Regiment are recommended at this time. Equipment would vary according to the theatre of operation.

Comment or recommendation.

Question 13. Are the infantry weapons now in the hands of troops satisfactory?

Answer. Yes, except as qualified below.

Comment or recommendation.

Question 13. a. Do the using troops desire any change, either in type or distribution of weapons?

Answer. It is desired that the carbine be issued as soon as possible to replace some of the M 1 rifles. Also the issue of bolos and knives for the jungle.

Comment or recommendation.

Question 13. b. Do our allies have any weapons superior to our own?

Answer. Yes, Australian 2" mortar.

Comment or recommendation.

Question 13. c. Our enemies?

Answer. Reports and captured weapons do not so indicate.

Comment or recommendation.

Question 14. Have the using troops devised any modifications, improvements, or new uses of their weapons? If so, please describe and indicate the advantages.

Answer. It has been noted that in the loading of the M-1 rifle a small indentation appears on the primer of the cartridge. This is caused by the firing pin coming forward as the bolt moves forcibly into the locked position. This condition has been noted to exist with various lots of ammunition manufactured by various arsenals and also it seems to exist whether or not the gun has been recently issued or has been in the hands of troops over a long period of time.

For the past six months considerable difficulty resulted from looseness that has developed in the bipod of 60mm mortars. However, this cannot be classed as a malfunction, because it has been due to worn parts, and new parts have not been available. The condition can be partially corrected by shimming various parts of the bipod, but this method of correction is very temporary. (Fact).

A "tree" mount which has been devised by modifying the M-24 mount is under test. This mount as modified will mount on any tree or stump from 10 to 16 inches in diameter, and by a very simple further modification the mount could be made adjustable to trees up to threefeet in diameter. I saw caliber 50 and 30 m.g. and the BAR fired satisfactorily from this mount. The mount was designed to provide some type of mount for the caliber .50 heavy barrel machine gun which would be portable and which would permit the gun to be used as an anti-aircraft weapon. Without a mount of this type, troops are solely dependent upon truck mounts for anti-aircraft fire. The mount weighs approximately 35 pounds. This weight could be greatly reduced by proper design and manufacture. The mount uses the pintle, pintle bushing and 12 inches of the pedestal of the M-24 truck pedestal mount. The pedestal is attached to the convex side of the main plate (shaped to fit the contour of a tree) by means of four steel flats, 1½"x1/4"x12". On the concave side of the plate are welded four spikes approximately 1 inch long. On one edge of the plate two chains 18 inches long are welded and the other edge of the chains are welded to a smaller back plate. In the center of the back plate is a pressure plate with a forcing screw. A single chain 2 feet long is welded on the other edge of the back plate. This chain hooks onto a hook on the main plate.

To set up the mount the main plate is placed against the tree approximately 4½ feet from the ground and the spikes are forced into the tree. The chains and back plate are placed around the tree hooking the free end of the chain over the hook of the main plate as tightly as possible. The forcing screw is then turned forcing the pressure plate against the tree and makes the mount stable. The gun is then mounted on the pintle of the mount. Photos attached.

Two sets of ropes have been placed on the 37mm gun to speed the time of going into position and to permit releasing the wheel segments and lowering the apron without exposing the men to enemy fire. They decrease time necessary to prepare for action. One rope is attached to the lever on the traversing lock. On pulling the rope the traversing lock is released, allowing the gun to be traversed. The other rope is attached to the apron locking mechanism levers and to the segment locking plunger handles. On pulling the rope the wheel segments and the apron are released and are allowed to swing into firing position.

A slight change in the towing hook on the back of a jeep greatly reduces the time of getting the gun into action. A pull on the improvised release drops the gun without stopping the towing vehicle. I saw a demonstration squad go into action in 11 seconds after the command "Action" was given with the vehicle traveling at 30 to 35 miles per hour. Photos.

Difficulty has been experienced in firing the 37mm gun at a moving target with the firing plunger. In order to simplify firing on a moving target an arm rest has been devided which bolts on to the shoulder guard support with the same bolts that hold the shoulder guard. On the front arm rest is a pistol grip and trigger. The trigger is connected to the firing mechanism lever. The traversing clutch is permanently released allowing free traverse. The gun is then aimed and fired with the left hand adjusting the elevation, the right forearm adjusting the traverse and the right ~~forearm~~ hand firing the piece with the trigger mechanism. Troops using this method on moving anti-tank ranges have secured far better results than with the conventional method. Further tests are being made of this method. (Fact).

With little effort jeeps were fitted with 2 or 3 litters and seemed efficient.

Comment or recommendation.

[redacted]

Question 15. Are the types and quantities of vehicles issued to troops satisfactory?

Answer. At the present time they appear to be satisfactory for service on the continent of Australia. But for operations in close or mountainous country, the quantity should be reduced.

Experiments indicate that the ¼ ton 4x4 and 2½ ton 6x6 are the most satisfactory vehicles for operations in the above-mentioned terrain. Upon receipt of the 3/4 ton truck, this opinion may have to be revised.

Comment or recommendation.

Question 16. Is the type and quantity of communications equipment adequate?

Answer. Generally so on the continent of Australia. More radios, such as the SCR 536 are needed for jungle combat.

Additional radio equipment necessary to suit the theatre of operations for coastal watching setups, etc.

Comment or recommendation.

Question 16. a. What changes will increase efficiency?

Answer. More portable radios should be furnished to the lower units. Spare parts should be increased. Pack and jeep transported radio is essential.

Comment or recommendation.

Question 17. Do regiments have organically assigned liaison officers? If so, with what units were they most frequently detailed and with what transportation and communication facilities were they provided?

Answer. Yes, assigned to higher and adjacent units. No organic transportation or communication facilities available. Improvisation must be resorted to or equipment taken from some unit.

Comment or recommendation.

Question 18. What personnel or weapons are employed for the protection of Command Posts?

Answer. The personnel and organic weapons of reserve units must be relied upon for the defense of command posts. This is supplemented by the weapons and personnel of the command post itself. No unit, except the Infantry Division Headquarters company has any organic organization for this purpose.

Comment or recommendation.

Question 19. What system is used for close-in defense of train bivouacs?

Answer. Personnel, weapons of service company & chauffeurs.

Comment or recommendation.

20. What communication facilities are provided for AT & AA warning?

Radio & wire, sound & pyrotechnics, Radar and ground observers.

Comment and Recommendation:

21. What means are used to identify ground forces to friendly planes?

a. By our troops?

Radios, panels, flares.

Comment and Recommendation:

b. By our allies:

Radios, panels, flares, mortar smoke shells.

Comment and Recommendation.

Question 21. b. By our enemies?

Answer. Reports indicate the Rising Sun flag as well as painting helmets red.

Comment or recommendation.

Question 22. What means are used by infantry to identify targets for air attack?

a. By our troops?

Answer. Radio and visual signals.

Comment or recommendation.

Question 22. b. By our allies?

Answer. Radio and visual signals.

Comment or recommendation.

c. By our enemies?

No information. (See Inclosure #1 below)

Inclosure #1.

- JAPANESE TACTICS -
Air Ground Liaison

A high state of co-operation exists between ground and air forces during the forward movements of the infantry. Inter-communication is maintained by means of portable W:T sets, with a range of fifty miles, which are carried strapped to the chest, the wearer using the earphones and a hand microphone. Air-craft notify the companies when they should advance and the officer commanding waves a flag when the company moves forward. This method is also used at the halt. In addition, each section carries a silk flag (2' 6" x 3') with national markings, which is spread out on the ground to indicate th the air-craft the position of their own troops. (From AHQ Intelligence Summary No. 167).

Bomber crews in this area tell of a new phenomenon which has been described as a "chandelier" flare. These have been of a most conflicting nature and the following interim description has been produced in the hope that aircrews may be able to confirm it or to provide a more accurate picture.

"The phenomenon is probably produced by a rocket projectile fired from the ground and detonated by a time fuse. The resultant burst is reported to look like a "brilliant orange or red pumpkin-shaped mass about 12' in diameter and hollow in the center like a smoke-ring". Most reports suggest that this mass continues burning for about five minutes, the assumption, therefore, being that it is suspended by a parachute. It is possible that both have been observed and that they are in fact the same phenomenon, in the latter case the mass having failed to ignite completely".

"All reports agree that a shower of small objects is emitted from the initial burst; these fall over an area of about 60' in diameter and resemble burning streamers. The objects burn for about 10 seconds, when they either go out or self-destroy with a small puff of smoke like a light A/A Shell."

"Until a clearer picture is obtained, the purpose of this device cannot be envisaged. Any one of the following three explanations seems possible:

Japanese Tactics (Air Ground Liaison) - Continued.

(a) That it is distinctive signal either to night fighters for identifications or to ground defences.
(b) That the objects falling from it may be lethal.
(c) That it is employed for its deterrent effect".

The use of a scarlet cover for the helmets of first landing forces which is assumed to be used for purposes of identifications for A/C. (D. of I., Hq. AAF, SWPA)

Targets in the forward areas are indicated by means of W/T, and probably by means of signals formed by strips, similar to the German method. In back areas, troops which have adopted native guise and infiltrated through our lines, together with resident 'Fifth Columnists', signal by means of seemingly harmless pre-arranged signs, as e.g. (a) use of shielded lights or rockets as guides; (b) use of scarecrows in rice fields, covered with red cloth and arms pointing to our lines; (c) arrows trampled in rice fields or cut by grass cutters (visible only from above) in direction of targets; (d) Banana leaves, washing or planks have been laid to indicate MT parks or Hq; (e) rubber plantations used as MT parks had corners indicated by lopping branches; and (f) flour or rice spilt on the roadway indicated HQ's in the vicinity. (From AHQ Intelligence Summary No. 167)

Some types of panels used by Japanese Navy (From Hq. AAF, SWPA, D. of I. Captured Document Report No. 14)

a) Signals with plane:
Release report Balloon

Dive several times and release smoke cylinder - Enemy is below smoke

Bank several times - Understood signal

Continuous circling - Indicate front line

b) Panels or flags:

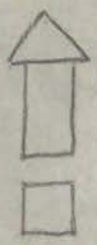
Big and small Naval flag - 2 pieces - Hq of landing party.

Naval flag (National Flag) - 1 piece - Place of landing party (Army Hq.)

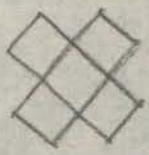
[redacted]

Indication of Direction of Advance

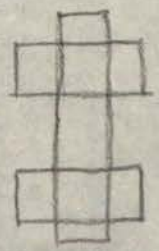
Report Retreating Enemy's Condition



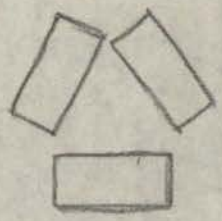
Enemy 500 metres ahead of arrow. Attack.



Stop Attack



Report Balloon Received Understood



Request Standby in Air

White Cloth

One piece 200 metres
Two pieces 300 metres

One piece 500 metres
Two pieces 1000 metres

Pre-arranged signals may be variations of standard signals. From a note book captured with documents on a raid at Salamaua 28/29/6 reference was made by rough pencil of the following, which appear to be variations in some cases of the standard signals:

Agreed Signals and Marks:

Signal Significance:

Have succeeded in landing	-	Green, 2 stars. Fire signal (burn a house)
Completion of bombing by plane (from) plane	-	Yellow Dragon.
Attack by enemy tanks	-	Black Dragon.
Request ships' guns open fire	-	Green hanging star.
Request ships' guns cease fire	-	Red hanging star.

Mark

Rescue ship and relief ship	-	Red Cross Flag.
Mark of landing spot - night	-	Red-Green light.
day	-	Yellow flag.
Water route	-	Green light or green flage.
Reef	-	Red light or red flag.

Comment: The Japanese often use the same word for green and blue. Where, therefore, the translation refers to a green light, it may be that a blue light is meant. The more probable translation has been adopted in each case.

[redacted]

Question 23. Describe any training methods used by our allies which are superior to our own.

Answer. To date no methods of training used by our allies have been found that are superior to the American methods. However, it is pointed out that the enemy uses more realistic and dangerous placement of simulated fire, placing the lines of fire of automatic weapons in close proximity to advancing troops.

Comment or recommendation.

Question 24. a. Remarks in amplification of answers to above questions, if desired.
b. Comments of general or specific interest to training troops for duty in the theater you observed.

Answer. The general opinion was that junior officers were well trained but lacked force and leadership. We believed that these things should be stressed in our schools and more care might be exercised in selecting O.C.'s.

There was an apparent lack of training in camouflage and camouflage discipline, personal hygiene, field expedients, field hygiene and elementary training that makes a good soldier. Junior officers seemed to lack the appreciation of the necessity of these things and did little if anything to improve this condition.

QUESTIONNAIRE PREPARED BY FIELD ARTILLERY BRANCH, DEVELOPMENT DIVISION, REQUIREMENTS SECTION, ARMY GROUND FORCES.

1. Adequacy of current F.A. T/O's.
   a. Number of officers.
      (a) It is believed that present officer complement is adequate.
   b. Number of enlisted.
      (b) It is believed that present enlisted complement in present T/O's is adequate.
   c. Technicians.
      (c) It is recommended that no change in these categories be made at this time.

2. Adequacy of current F.A. T/BA's.
   a. Any superfluous or unsuitable articles.
      Equipment is in general suitable for operation on the Australian continent. On the other hand, units operating in New Guinea and the islands to the north will require special type equipment, dictated by transport and terrain. Much of the standard equipment is unsuitable, especially heavy weapons which cannot be transported by hand. Examples of such equipment are the standard gasoline field range, 10-gallon water cans, and vehicular radio sets. Only a small amount of motor transportation can be used and that only along the few miles of semi-improved roads along the coast.
   b. Is additional equipment needed? Why?
      Special equipment is required for operation in the mountains and jungles of New Guinea and islands to the north. Individual hunting knives, compasses, medical kits, waterproof pouches, and special light weight rations are specific items required. The substitution of pack artillery and infantry mortars for the organic division artillery is indicated. The division artillery is being provided with substitutive weapons to permit the organization of one 81mm mortar battalion having 8 mortars per battery, and two 75mm pack battalions. This additional equipment is needed because the operations will involve overseas shipments generally in small watercraft, landings on hostile shores, and subsequent operations in jungle and mountainous country devoid of communication facilities.
   c. Do atmospheric conditions prevent full use of radio equipment? If so, what corrective measures should be taken?
      It is believed that continuous wet conditions encountered in jungle warfare may necessitate special provisions for waterproofing electrical equipment.
   d. Decentralized messing equipment advantageous?
      Decentralized messing is highly desirable in operations in close or mountainous country. The distinct possibility of the seperation of units due to terrain factors makes it desirable to eliminate any centralized messing above the battery.

e. Camouflage equipment satisfactory?

In general it appears that the camouflage equipment is satisfactory. The use of camouflaged clothing and equipment should be provided in all artillery units.

3. What type and caliber of F.A. weapons are being used?

On the mainland of Australia substitutive equipment is being provided to permit conversion of some F.A. battalions into 75mm Pack and 81mm mortar battalions.

a. Is the field artillery adequate in amount for offensive action?

Yes, insofar as it can be forseen at this time.

b. Is it properly proportioned as to caliber?

For the mainland of Australia, yes, for the islands north of Australia, no.

4. Training.

a. Are maps or map substitutes available? Scale?

Maps are available in Australia. Generally speaking, the scale is 4 miles to the inch. The maps that are available of the area to the north are not accurate as to details of the interior. No map substitutes can be considered as available at this time.

b. Is standard topographical equipment suitable?

Yes.

c. Are training methods in the U.S. correct for service in this theater?

Basically the training methods are satisfactory. However all the artillery battalions as well as other divisional units such as the signal company need individual training in jungle warfare, individual cooking, and the like.

5. Motor transport.

a. Adequacy.

The use of the transportation in Australia indicates that it is adequate. In jungle country, it is too heavy and in too great quantities.

b. Characteristic failures?

None have been reported. Some drive shafts are thought to be faulty, but no definite information has been received.

c. Suitability.

For operations in Australia the transportation is suitable for its purpose. However for operations in the jungle and in the islands to the north, the use of motor transportation is limited. Of the transportation of the division artillery the 1/4 ton 4 x 4 truck has been used most successfully. The 2½ ton 6 x 6 truck has had some use on the semi-improved roads in the coastal areas.

6. Ammunition.

Are replenishment facilities adequate?

No combat experience. The supply is necessarily limited due to shipping conditions.

7. Are there any handicaps to affect battle efficiency?

In Australia the present equipment may be found adequate in combat although there are many areas in which the 75mm pack howitzer could be used. In the jungles to the north the 105mm howitzer will probably be used only to protect bases. The 75 mm pack howitzer and the 81mm mortar would be most useful. The Japanese have used these weapons in Papua. It is evident that the absence of these light weapons will affect battle efficiency in these areas.

[redacted]

[redacted]

QUESTIONNAIRE PREPARED BY PUBLICATIONS DIVISION, REQUIREMENT SECTION
ARMY GROUND FORCES

1. Are copies of FM 21-6 and Training Circular No. 33 available in the company? What steps are taken to secure training literature?

   1. Copies of FM 21-6 are available in all companies.
   2. Copies of Circular 33 are available at least to all Bns.
   3. Units of the Corps requisition to the Corps for such pamphlets as are desired. In turn Corps requisitions on USASOS.

2. Is the present distribution of pertinent field and technical manuals adequate to place a sufficient number of each in the hands of each interested company or battery? If not, what change is recommended?

   Present distribution is adequate. Only change is that recommended in 3 below.

3. Should full distribution listed in FM 21-6 be made to units in this theater?

   No. One copy of all publications listed should be available to the divisions and separate corps units for reference. Additional copies should be furnished in such quantities as are requested by interested units.

4. Do the texts of manuals which have been received provide the desired instructional material to fit local training problems? If not, what changes in present manuals or additional material is needed?

   Texts are adequate. In addition, all available information of specialized operations should be furnished to all subordinate units.

5. Is projection equipment for training films and film strips adequate and mechanically satisfactory under local conditions?

   Yes

6. Should distribution of projection equipment and training films to this theater be continued?

   Yes

7. Are appropriate training films and film strips obtainable in sufficient quantity and adequately distributed?

   Yes

8. Are visual training aids, other than training films and film strips, pertinent, adequate, and obtainable in sufficient quantities?

   In general the answer is "yes." Those (except for model planes) that are not available for issue are improvised by units as needed.

9. Should any additional visual training aid be prepared to fit local needs?

   Satisfactory model planes are being manufactured locally and distributed to AA schools with ultimate distribution to include AA batteries. However procurement is slow and additional models for all units are desireable.

10. With reference to the following, are they adequate or correct?

    FM 31-5, Landing on Hostile Shores
    FM 31-20, Jungle Warfare.

    Should be brought up to date.

[redacted]