

(1) Weight

Complete mask	(1,260 grams) 2,340 grams
Face piece	560 grams
Connecting tube	320 grams
Cannister	1,030 grams (Remarks: the weight and values are great).
Carrying bag	500 grams
Accessories	30 grams

(2) Breathing resistances

(a) Inhaling - at 3 feet per minute, resistance equivalent to 16 mm of water (1mm). By decreasing the size of the air passage, you increase the resistance.

(b) Exhaling - at 3 feet per minute, resistance equivalent to 6 mm of water (3 mm). The measurement is greater than that of our Army in all cases.

(3) Duration of effectiveness

(a) 24 minutes (25 minutes) with a phosgene concentration of 20.5 kg (sic) per cubicmeter.

(b) 25 minutes with prussic gas concentration of 2400 kg (sic) per cubic meter.

(c) 30 minutes with prussic gas concentration of 2400 kg (sic) per cubic meter.

(d) The above measurements are greater than ours.

(4) Smoke filtering capacity - 99.9% (99.9%) when used for some length of time, the chemical gradually loses its effectiveness. Note: Numbers in parenthesis refer to performance of our Army gas mask (Type 99)."

II INTELLIGENCE DERIVED FROM CAPTURED DOCUMENTS

1. The importance attached to the seizure of Allied documents by the Japanese is evidenced by the references set forth below:

a. 51st Division intelligence plans, as translated in ATIS Bulletin 412, state that:

"In reference to the accumulation of abandoned enemy dead and articles immediately after combat, there are articles on abandoned enemy dead and they are to be searched immediately after battle, and the things they possess, particularly documents, diaries and maps which have very great value, are to be collected.

"Although all units have already considered the collection of this profitable material, in general lower units have not yet given it their full consideration. Only abandoned weapons and provisions are being collected, and the collection of the most valuable intelligence material is being sadly neglected. High ranking officers will pay attention to this point, and, if possible, it may be necessary to detail one section of a reserve unit to collect such material.

"Captured ordnance and material, except that having to be used immediately by front line units, must according to regulations be sent back, and although it may not be possible at the time some measures for its preservation are to be planned, so that it may be put to immediate and complete use by the capturing unit in the future.

"The sending back of captured letters, documents and maps will be dealt with in the same manner."

b. An operational order of the South Seas Detached Force, dated 10 August 1942, as quoted in ATIS Current Translations 23, has the following remarks on disposal of captured material:

"Enemy prisoners and enemy dead should be arranged in order, and captured material that is in good order should be handed over to the supply officer without delay."

c. A captured diary, owner and unit unknown, as translated in ATIS Bulletin 420, has this entry for 19 July 1943:

"It is important to take P&W. Upon locating dead body of enemy, immediately investigate and try to collect documentary material."

d. 16th Army Intelligence Service Regulations of 3 December 1941, translated in SOPAC serial 0948, item 539, contain these instructions:

"If code books and other important documents are captured or seized, they will be reported through the quickest available means and will be actively exploited without loss of time."

e. Instructions in the 41st Infantry Regiment Intelligence Report of 17 August 1942, quoted in ATIS Current Translations 24, state:

"In the course of operations captured maps should be used and one copy forwarded to regimental hdq."

2. Illustrations of the type of documents which fell into Japanese hands are set forth below:

a. A captured 51st Division Administrative Section combat report, translated in ATIS Bulletin 330½ contains this entry:

"Road maps of Salamaua area captured from Allies 16 July 1942 at Wells. Attached sketches are copies of captured maps. Terrain, especially road condition, are minutely shown, so utilize these maps for occupation of position, disposition of outposts, disposition of patrols, and to prevent infiltration of enemy."

b. The diary of Toyosaku Yamamoto, dated 8 October-4 November 1942 and translated in ATIS Bulletin 300, held this clipping:

"News about having picked up Australian evacuation plan at Keviang and using it to pursue the enemy."

c. The 51st Division intelligence report of 27 July 1943, translated in ATIS Bulletin 451, says:

"According to a captured sketch the movements of enemy planes are as (shown on) the attached sheet. (TN: sketch shows course of B-25 from Moresby to Buna, Lae, Moresby, Buna, Salamaua, Moresby, Buna and Rabaul)."

d. The 8th Area Army Staff Section intelligence report for the first part of May 1943, quoted in SOPAC serial 01829, item 753, states that:

"The diaries, etc, abandoned by enemy soldiers of the southern group made clear the enemy topography and their plans for infiltrating forces into places not under our control."

e. The 51st Division intelligence report of 11 August 1943½

translated in ATIS Enemy Publications 44, says:

"According to papers found in a Mitchell plane, the enemy has discovered movements of our boats at night in the Dampier Strait area and he is confident of cutting them off."

f. The 51st Division intelligence report for 19 July 1943, translated in ATIS Enemy Publications 43, says:

"On the 14th an officer patrol (an Australian major) was shot and killed when he appeared in front of the Jinno En, 1st Co. The following captured material was obtained: Cipher writing, maps, operational orders and other documents."

g. A special order of 3rd Battalion, 102nd Infantry Regiment, translated in ATIS Enemy Publication 43, says:

"It is considered that the enemy has the intention of attacking with certain strength in the near future according to information gathered from captured sketches and diaries of enemy killed as well as movements of the natives in the battle in the right bank of the Naka River on the 8th last."

h. The 17th Army's headquarters intelligence summary of 19 August 1942, translated in ATIS Enemy Publications 28, states:

"According to a captured map the aerodrome at Bakiwa is about 8 km to the north. There is a good road between."

III INTELLIGENCE DERIVED FROM NATIVES

1. Japanese troops were cautioned with regard to the use of natives as secret agents, in a letter of instructions from Capt Hashimoto to Nassau Garrison Unit commander found in a file of Hashimoto Unit papers dated 1 April-29 June 1943. An extract, quoted in ATIS Current Translations 89, follows:

"Propagandize the natives around Buso and ascertain the activities of the natives and of the enemy around Buso and Kui. Latest plan is to spread propaganda among the natives of Buso and Kui and try to ascertain the enemy's activities. It is very significant from the standpoint of security if the condition of the enemy at Kui in the south can be ascertained by using the natives of Kui and Buso at an opportune time."

"Spread the following propaganda items thoroughly:

"Military discipline must especially be rigid to maintain the honor of the Imperial Army.

"Do not insult the natives.

"Requisitioning of materials will be under the order of the commander.

"Break down the deceiving propaganda and propagate Imperialism.

"Love and protect the unfortunate natives.

"Always fulfill a promise.

"Strict warning against carelessness.

"Ascertaining of enemy conditions (including their propaganda.)

"When dispatching troops, there will be an officer or a noncommissioned officer for leader. About one section (including 1 light machine gun and 1 heavy grenade discharger) will be sent out to the north near Buso to reconnoiter enemy situation, and also to inspect the activities of the natives, (at least once every 10 days. At times the number of men and number of inspections will increase or decrease).

"When the natives and troops are going together, lessen the number of the troops and infiltrate secretly with about two or three soldiers and one or two natives.

"When only natives are going, use them as secret agents.

"Depending on the objective, the above will be used accordingly.

"When sending troops, it is necessary to pay heed to the following -

"Enemy indication - track left after infiltration.

"Terrain (production of a military sketch) road, river, distance - mountain, plain - grassy plain. Cultivated grounds - jungle. Conditions of the beach. Residential area. Suitable area for bivouacking.

"Natives condition. "Do they have a hostile feeling towards us, and will they co-operate with us? "There are some natives taken as hostile by the enemy.

"Condition of materials (existence - variety - quantity)."

2. Natives Used as Secret Agents

a. The following is a report of the Kumaga battle, showing the employment of natives by the Japanese as scouts, spies and secret agents, taken from a booklet entitled "Detailed Report Regarding the Kumaga Battle", dated 18-24 September 1943 and written by Warrant Officer Hanada, MP Detachment. A summary from ATIS Current Translations 110 is reproduced here:

"Chapter I

"(1) Enemy situation: The following information concerning the enemy situation was obtained by reconnaissance and native secret agents between 8-17 September 1943:

The enemy has constructed new hutments in the Bismarck range at Kungaga (about 20 km SW of Atemble). There are about 11 white men and about 20 natives.

Equipment carried: One wireless transmitting radio set, three automatic rifles and many rifles.

They are engaged in espionage against the Japanese Army.

The natives in the area have been informed that although Benabena had temporarily fallen to the Japanese Army, it has already been retaken, and any natives who cooperated with the Japanese Army would be killed.

Information was received from a native spy that a large number of enemy troops advanced to Kungaga in the Bismarck Range.

"(2) Situation of our forces: On 9 September, 8 native scouts were dispatched to establish the authenticity of a report received from a native spy that a large number of enemy troops advanced to Kungaga in the Bismarck Range. The native patrols, being a savage type and unskilled in languages, terrified the mountain tribes because each village speaks a different language, and as a result no information was obtained. The headman of Apunan, however, made contact with three natives at Asaizu (about 15 km NW of Kungaga in the Bismarck Range) and through them was able to make a reconnaissance of the enemy situation and confirm the report given above. It was therefore decided to make a sudden attack at 0500 hours on 18 September and wipe out the enemy espionage organization.

"Chapter II

(Deals with the climatic, topographic, and population factors affecting the fighting).

"Chapter III

Name of officer commanding division and unit numbers of enemy forces. The 6th Division of the Australian Army (regiment unknown), 2/2 bn, 2/2 co, 15-16 men, under command of Lt Schmidt.

"Chapter IV

Summary of each period of fighting, the recon method used and the difficulties of the terrain. Upon arriving at the village of Anarupu the Japanese contacted 2 natives who have been building huts or carrying for American troops in Kungaga and the following information was obtained:

"There are about 11 American soldiers and about 20 natives. Between sunset and dawn two Americans and a number of natives maintain a strict patrol for about 200 meters along the road, which goes from the village of Kungaga to Chibu. During the daytime the Americans take a midday nap. The Americans have a number of huts on the high ground where they have set up a radio. There are 9 American soldiers there, and less than 30 meters to the NE, native soldiers live in a number of native huts.

"To the north there is a belt of forest and a precipitous slope. To the east there is a steep grassy slope for more than 200 centimeters, and to the southwest a belt of high forest ground.

"Acting upon this information the commander of the Hanada Military Police Detachment organized his unit in readiness for action, and issued his instructions. At 0600, with the headman of Anarupu Village and two natives acting as guides, the Japanese left Anarupu for Kungaga. As a result of the previous night's propaganda to the natives, the Japanese found many volunteers to join in the task undertaken by the Hanada Military Detachment. The natives were given the job of surrounding the Americans in the jungles NE of Kungaga and preventing them from escaping. During the attack the natives slunk off into the jungle after being frightened by thunder and rifle fire.

"At dawn one Australian soldier was taken prisoner. After removing the captured equipment from the huts which the Allied soldiers occupied, the huts were burned.

"For our surprise attacks to be completely successful in wiping out these enemy espionage organizations, we must keep secret the objective of our attack even from natives well disposed toward us, with the exceptions of special agents, and take strict measures to ensure that our plans are not discovered by spies.

"It appears that enemy espionage organizations are fairly thickly distributed, and when they suffer losses, these are immediately replaced by air. These enemy organizations have positions on the heights of the Bismarck Ranges and are always watching the coastline with

telescopes. They make reports on the movements of their airplanes and ours, and the weather conditions. The enemy continually keep strict watch for our surprise attacks, and have observation posts on all tracks at suitable intervals.

"They are well equipped with weapons, but on this occasion did not put up the slightest resistance.

"Chapter V

Situation after the battle: Enemy situation -- After our surprise attack the enemy fled to the jungle, leaving their belongings. It is believed that the enemy is heading in the direction of their base at Chindu. Our situation -- Arrived Ateble 24 September while pursuing the enemy, detachment commander took charge of evacuating POWs and captured equipment. Called the village chiefs together and carried out propaganda work. Ordered that they report enemy hide-outs.

Matters for future reference -- a summary of points to be observed in future operations of a similar nature. The enemy and their faults.

"Chapter VI

Other material -- a chart covering period 18-24 September showing POW and equipment captured listing 4 automatic rifles, 3 rifles, 1132 rounds of automatic rifle ammunition, 2076 rounds of rifle ammunition."

3. Information from Other Native Sources

a. The Japanese have granted the cooperation of numerous village chiefs, in some cases through intimidation. From these men information has been obtained concerning names and movements of Allied patrols, the equipment carried by patrols, construction undertaken in different areas, and topographical information as shown in the following extracts from intelligence reports:

"Security: Acting upon native reports of activities of a police unit headed by an Englishman and operating from 20 km south of Hollandia, a force was sent out, and the Englishman was killed and his documents captured." (ATIS Bulletin 1204).

"Capt Yaimas, the head-chief of the 60 villages, gave his oath of cooperation in gathering topographical information and materials. Natives working for Sato

construction unit state that the enemy appears to be constructing an airfield south of Finisterre Range, approximately 30 km south of Nantoht and Pangger." (ATIS Bulletin 831).

"Captured native reveals names of and equipment carried by Allied reconnaissance patrol who left Moresby, 27 February 1943 for Wewak Area." (ATIS Enemy Publication 145).

"We surrounded the chief of Waisha and learned of the enemy situation. He informed us that the enemy was sleeping at the Kenfudei Village. Rushing along on a mountain road, we proceeded to the next village. We crossed at the junction of the Waisha River (presumably Wesa River). We are to attack from the village flank. Upon entering the village, we searched each house. There was no sign of the enemy except for a wireless set, a generator, and various equipment. Tonight's attack finally ended in failure. Reluctantly, we ate our breakfast. After breakfast, many natives from Waisha came to inform us that an American soldier was sleeping in a hut beyond the hill. With a determination not to let him escape this time, we advanced towards the hill." (ATIS Current Translations 93).

"Attitude of the natives to Arzo-Ampas Area. They are well disposed towards the Japanese and are cooperative. This is especially true of the chief of Sekofro Village, who, knowing that there had recently been an American officer patrol in the area, immediately reported this to the Hollandia line of communication headquarters, and thus allowed this headquarters to take appropriate steps.

"Disposition of natives in Aitape-Hollandia Area: In general they are well disposed toward the Imperial Army. This is especially true of those living in the region of a naval construction section station (Lemieng, Takamul, Ulae) who have been co-operative in such matters as billeting, supplies and transport. Recently more than half the native population in the Lemieng, Paup, Yakamul and Ulae Regions were engaged in construction work, during the building of the army airfield 2 kilometers south of Pro Village." (ATIS Bulletin 1258).

IV INTELLIGENCE DERIVED FROM ALLIED BROADCASTS

1. The following is an example of the method used by the Japanese in deducing future Allied intentions by analysis of communications interceptions, as described in a report on Japanese Army Intelligence prepared for USSBS by Lt Gen Arisue, chief of intelligence of the Japanese Army General Headquarters:

"Materials for Estimating American Operational Plans, Based on Special Data Provided by American Communications"

"Summary:

We monitored American ship and air unit radio communications, made a systematic statistical investigation and analysis of these communications data, and compared it with past examples. When we made any estimate, we could turn out a general one concerning the scope and inception of a new American operation about one month before, and concerning the projected operations area about 1 to 2 weeks in advance. Specifically this was tactical (strategical) intelligence effective against American operations.

(1) BAMS (Broadcasting Allied Merchant Ships)

IWO (19 Feb)

The number of ships that turned up daily increased conspicuously between the end of January and the first of February leaving us to infer positive plans for the beginning of a movement.

OKINAWA (1 April)

After the latter part of February the number of ships turning up increased steadily. We inferred that a new operation in the CPA was being initiated, subsequent to the IWO JIMA Operation

Explanation: When we studied the number of ships turning up in each ten-day period statistically and compared any increase or decrease with previous samplings, we were able to estimate the time and scope of a projected American operation about 1 month in advance.

(2) Assembling of ship units

IWO

The number of ships counted at Advance bases in the Marianas and Mar-

OKINAWA

The number of ships counted at Leyte, in the Marianas and Marshalls in-

shells increased pari passu with the increase of ships that turned up in BAMS. Thus we knew previously of the assembling of ships at these bases.

creased pari passu with the increase of ships that turned up by BAMS. We inferred that the Marianas and Philippines were deployment areas for a subsequent operation.

Explanation: Based on the assembly of ships at advance central Pacific Bases the transport situation, and the situation with regard to deployment of forces, we were able to estimate the time, scope and general direction of a new operation 2 to 3 weeks in advance.

(3) Task Force Activity

IWO

We inferred plans for the beginning of a new operation subsequent to the raids on the Japanese Homeland and by task forces on the 9th and 10th of February.

OKINAWA

We inferred plans for beginning a new operation from raids carried out continuously upon Okinawa and the homeland during the early and middle parts of March.

Explanation: On the basis of our experience of the fact that Task Forces became active in the prelude to a new operation, we were able to take it as the sign that an operation was impending and to figure out the operational area from the area of activity.

(4) Location of Commanders

IWO

About the 1st part of January the Submarine Commanders of the Pacific and Nimitz's Headquarters moved to Guam.

OKINAWA

After the latter part of February the movement of Base Air Unit Commanders into Philippine and Marianas bases became more and more common.

Explanation: The displacement of Commanders forward accompanied plans for the inception of a new operation and, according to past experience, inevitably occurred several days to 1 month before the operation.

(5) Base and Air Unit Condition

IWO

OKINAWA

The increase in base air strength in the Marianas between the end of December and the first part of February was striking.

From the latter part of February on, the increase in air strength in the Philippines, especially Luzon, and the Marianas was very striking. We also perceived that you were very interested in the Okinawa area.

Explanation: When positive operational plans were in progress it was usual for there to be a steady movement (of planes) to forward bases 2 to 3 weeks in advance.

(6) Transport and Supply Aircraft.

IWO

After the first part of January, there was a noticeable gathering of transport and supply aircraft from America at the advance Marianas and Philippine bases.

OKINAWA

After the Iwo Jima operation the assemblage of supply and transport craft at advanced Marianas and Philippine bases was increasingly obvious.

Explanation: It was customary for such aircraft to become very active 1 to 2 weeks before a new operation, though, of course, this varied with the Army and Navy aircraft stationed in these areas.

(7) Changes in Weather Communications

IWO

Weather broadcasts of Marianas base air units on Iwo Jima, Okinawa and the Japanese homeland increased markedly after January.

OKINAWA

Weather broadcasts of Marianas and Philippines base air units, especially B-29s on Okinawa and the Homeland increased markedly.

Explanation: We were able, by a statistical analysis of weather communications, to determine their focal point and the objective of an operation positively.

(8) Changes in Communications Originators

IWO

In the first part of January, the call signs of aircraft and bases were to-

OKINAWA

In the first part of March, some of the ship and air unit calls signs

tally changed in the Central Pacific Area only. were changed.

Explanation: There were many instances when the change in communication originators clearly showed a new, definite plan for an operation, such changes coming generally about 1 month before.

(9) Communications Handling

IWO

The frequency of operational broadcasts from Honolulu and the Admiralties decreased markedly after the Philippine operation and communications handled in the Central Pacific Area increased greatly.

OKINAWA

As in the case of the Iwo Jima operation, the mere handling of communications centering around the Central Pacific Area increased markedly, especially in the Marianas and Leyte areas.

Explanation: We were able to judge the area in which the American Army was interested from the handling of communications; subsequently we could estimate the definite operational objective.

(10) Appearance of Special Unit Code names (Telephone or RV Channels)

IWO

In February telegraphic handling with special unit code names became noticeable. There was a great increase in new unit code names.

OKINAWA

After the first part of March, special unit code names that had not been used after the Iwo Jima operation came again into frequent use. It suggested the beginning of a definite new movement.

Explanation: We were able to determine the general outline and scope of an operation from the increase or decrease of use of main unit code names, for these materials were useful for inferring the beginning of a definite new operation.

(11) Activity of Scouting Aircraft

IWO

Search and reconnaissance of search aircraft

OKINAWA

Reconnaissance of Okinawa and the Homeland by

units from Marianas bases of search aircraft based on Iwo Jima and the Homeland in Luzon and Marianas, increased. B-29s led reconnaissance especially just before the operation suggested the objective.

search aircraft based on Luzon and Marianas, especially by B-29s became very active. The focal point especially of Marianas air unit searches suggested the Okinawa area as the objective.

Explanation: By analyzing search aircraft search sector units statistically and determining their focal points, we could determine the direction of a subsequent operation, frequently several days to a week before the landing.

(12) Submarine Activity

IWO

Submarine activity around Iwo Jima was marked from the end of December into January. After the latter part of January it fell off.

OKINAWA

At this time, the scope of submarine activity was gradually being concentrated in the seas off our homeland, pari passu with the loss of our dependencies. Though it was difficult to estimate the subsequent operational objective, submarines had been concentrated in the Okinawa area since the first of this year.

Explanation: According to past example, submarine concentrations occurred against the landing point 1 month prior to the landing and activity falls off relatively just before the landing.

Conclusions Reached:

Iwo Jima

(1) Time of operation: From consideration of points 1 to 12, especially 1 to 8, it was determined around the end of the 3rd week in January that operations would begin after the middle of February.

(2) Scope of operation: Comparing examples since the Attu Campaign under point 1, forces to be used estimated around the first part of January at 2 to 3 divisions.

(3) Operational area: From raids of task forces and activity of our search aircraft and submarines, estimated around the end of the third week in January to be Iwo Jima.

Okinawa

(1) Time of operation: From points 1 to 12, especially 1, estimated in the early part of February to begin after late March.

(2) Scope of operation: Estimated in early part of February, from point 1, that forces used initially would be about 3 divisions. In the early part of April estimated that subsequently the total would be increased to 6 divisions.

(3) Operational area: About the middle of March estimated it would be Okinawa, from the deployment and assembling of forces, from raids of task forces, and from search aircraft and submarine activity."

2. The following are examples of information obtained by monitoring Allied broadcasts. While some information is obtained, deductions are not invariably correct:

a. Handwritten letter dated 2 July, presumably 1944, from Second Lieutenant Fukunaga, of 2nd Army Intelligence Section, to Captain Fukemizu. A full translation from ATIS Bulletin 1456 is given below:

"I am carrying on my daily duties at 2nd Army Intelligence Section. I have taken over the interception of enemy overseas broadcasts with 5 civilian employees. Each night I listen to enemy propaganda and feel depressed.

"I sent a few letters to China, but I do not know if they reached their destination. It appears that our transports and freighters are being sunk right and left. Shipping has been completely lacking in Hanokwari recently. It is even dangerous for barges to navigate at night."

b. Intelligence Report 12, issued by 8th Area Army operations section on 15 February 1943, translated in ATIS Bulletin 453:

"According to Secretary of War Stimson, the United States Force which accomplished the occupation of Guadalcanal is the division which was selected from all divisions

in United States Army and organized at New Caledonia. According to the above, we can estimate the existence of 128th Regiment belonging to 33rd Division."

c. 18th Army rear echelon headquarters intelligence report 39, 30 January 1944, translated in ATIS Bulletin 1170:

"According to MacArthur's headquarters report, the units that landed at Merkus, Taurubu, and Sailor used rocket guns that had longer range than heavy artillery prior to their landings. These guns were mounted on ships and boats and even on landing craft transports."

d. Intelligence report 98, issued by 18th Army Staff Headquarters, dated 16 May 1943 and translated in ATIS Enemy Publications 145:

"The enemy made a broadcast on the 11th and 12th about the battle in the Mubo region as follows: 'Our ground forces completely repulsed an enemy attack at dawn on their positions in the Mubo area of New Guinea. Our positions are located to the south of Green Hill. On the 11th, our forces were encircled from both flanks by the enemy, but barely escaped'."

e. Intelligence report 98, 16 May, possibly 1944, issued by 18th Army Staff Headquarters, covering the Newak Area, translated in ATIS Enemy Publications 145:

"Enemy communications are in touch with Captain Taylor on the upper courses of the Sepik River via Benabena. There are no enemy troops in the vicinity of Marui (8th Area Army Report)."

f. Excerpts from 17th Army Headquarters intelligence summaries in August and September 1942, as translated in ATIS Enemy Publications 28:

"It is thought that there is a poor motor road between Kokoda and Moresby. For instance, according to foreign radio, the enemy commander in chief, referring to this road, stated that the supply of military materials to Kokoda had to be by way of trucks over the whole route, but that the drivers of the said trucks were all using tow ropes and making very slow progress."

"Information from foreign sources: According to information received by radio the 12th, 75th and 76th Air

Fleets are in the Northeastern war area. The Northeastern war area headquarters and the 76th Air Fleet are at Townsville. It appears the enemy air force headquarters has moved forward from Noumea to the New Hebrides. It appears that the Allied air force headquarters have been moved to Brisbane."

"San Francisco broadcast: According to an announcement by the U S Navy Department, America now holds 6 bases in the Solomons. In the fighting in the Solomons our Navy has lost 2 cruisers, 3 destroyers and 1 merchantman."

"Australian broadcast: The English government will send a new cruiser to Australia. The name of the vessel is the Churchill, 9830 tons, crew of 650 men, 6x8-inch guns and 8x4-inch guns, 8 torpedo tubes, and one seaplane slip."

"San Francisco broadcast: The destroyer Euru (TN: Blue) of 1500 tons and (TN: undecipherable, Kerehon) of 1060 tons were sunk in the Pacific by the Japanese Navy (6 September). According to an announcement by the Navy Department it is likely that the keels of 200 (TN: rest of figures undecipherable) merchant ships and warships will be laid towards the end of this month (7 September)."

"Condition of air force in August -- broadcast from America: From American west coast to Hawaii, air transport Army bombers B-17, B-26, B-25, 10 formations of more than 27 planes; flying boats PB15A, PB2Y, 2 formations of more than 6 planes. From Hawaii to Fiji, New Caledonia and Australia, air transport (by way of AF, AC) B-17, 7 formations of more than 21 planes; B-25 and B-26, 3 formations of more than 9 planes; flying boats PB15A, PB2Y, 2 formations of more than 6 planes. From Fiji to New Caledonia, air transport by B-17, 22 planes. Within the present strength of 72nd squadron (sic) of 48 planes each, it is assumed that there are 2 squadrons of 4-engine seaplane units."

V GERMAN INTELLIGENCE

1. An example of information received by the Japanese from their Axis partner is seen in the 17th Army intelligence report of 12 September 1942, as translated in ATIS Enemy Publications 28:

"According to German intelligence there are 2 to 3

American air divisions in Australia. These are the 32nd, 37th and 42nd air divisions. Furthermore, the 32nd division and 37th division were removed to some place in the Pacific."

2. A statement of the Japanese evaluation of information from Germany was made by Comdr Ozawa of the communications department of the Naval General Staff, in USSBS interrogation 208:

"The only information of value to the special section (radio intelligence) supplied us by the Germans was the BAMS (Broadcasting Allied Merchant Ships) base code. By using this code, we were able to break about 50 per cent of the messages transmitted from shore stations to Allied merchant ships."

VI NEUTRAL INTELLIGENCE

1. Evidence that the Japanese obtained information from neutral sources is contained in the 17th Army Intelligence Summary of 19 August 1942, translated in ATIS Enemy Publications 28:

"According to information from foreign sources -- telephone from a Chilean military officer -- the landing on the Solomons of American and British Allied forces has as its object the controlling of the rear of our forces in that area. There are reports that they are intensifying their bombing attacks on Timor Island and are preparing to make a landing there. They are stressing the importance of Timor Island."

VII DEDUCTIONS FROM ALLIED AIR ACTIVITY

1. A source of Japanese information was their study of Allied air activity, from which deductions as to movement and strength were made. Examples are shown below:

a. From the 51st Division tactical plan for the Lae-Salamua area issued 22 April 1943 and translated in ATIS Enemy Publication 53:

"The movements of enemy airplanes have a close relationship with the enemy's new plans. Thus their appearance and condition should be reported and analyzed daily. This information should be reported at all times to the affiliated authorities (forces). At the same time over-all activity and movements should be expressed. A judgment of the enemy's condition may be based on such materials."

b. From the 51st Division war situation special edition, dated 17 June 1943 and translated in ATIS Enemy Publications 487:

"Estimate of enemy first line strength in vicinity of Waipali (Guadalcanal) and Missin inferred only from goods and materials dropped by enemy planes:

"Finding: Strength of enemy in both sectors is not less than 700 in each at least (however when added to reports from other sources there is not much scope for investigation).

"Basis of computation: The transport planes appearing in both sectors during or after the latter part of May are estimated at less than 4 planes daily. (Compute it at less than 4 planes).

"As the transport planes are a medium type, their capacity weight will not exceed the maximum limit of 1 ton. However, the articles carried being great in volume as compared to their weight, the goods dropped by one plane will not exceed approximately 800 kilograms.

"Transport poundage total $800 \times 4 = 3200$ kilograms. According to the native reports, the goods dropped are rations, weapons, ammunition, clothing and requisitioned articles. (In the observed parachutes there were separate colors, red, white, green etc. This proves that not only rations were dropped). If you take the rations as $\frac{2}{3}$ of the whole quantity: Total rations dropped $3200 \times \frac{2}{3} = 2150$ kilograms. Taking off 15% for damages, losses and the weight of packing material at the time of dropping, approximately 1800 kilograms.

"Based on the various fixed quantities of supply, rations per soldier:

- A. In case of 1.5 kilograms per person
 $1800 \div 1.5 = 1200$ persons
- B. In case of 2.0 kilograms per person
 $1800 \div 2.0 = 900$ persons
- C. In case of 2.5 kilograms per person
 $1800 \div 2.5 = 720$ persons

"Supplementary: According to the natives, there are relevant items of information such as the following:

- | | | |
|---|---|-------------------------------|
| A. They are establishing warehouses and planning the accumulation of moderate quantities. |) | Number of soldiers decreases. |
| B. Amount of ration is abundant. |) | |
| C. They are also using the method of supplying by land utilizing natives. |) | Number of soldiers increases. |

VIII AERIAL RECONNAISSANCE FROM SUBMARINES

1. The Japanese made a determined effort to utilize submarine-borne aircraft at strategic times as a source of intelligence. A listing of flights made by such aircraft from 30 November 1941 through 11 November 1942, contained in a Japanese document translated as CinPac-CinCPoa item 12,212, is reproduced here to show how the Japanese attempted to utilize this method.

a. The first listed flight, flown 8 days before the attack on Pearl Harbor, was a night sortie over Suva Bay. The Japanese document states succinctly that the plane "did not return." Also noted are flights over Pearl Harbor on 17 December 1941, 5 January 1942, and 24 February 1942; and over the Oregon coast on the nights of 9 and 29 August 1942.

b. The complete list:

<u>Date</u>	<u>Sub</u>	<u>Place</u>	<u>Time</u>
30 Nov 41	I-10	Suva Bay	Night
17 Dec 41	I-7	Pearl Harbor	Dawn
5 Jan 41	I-19	Pearl Harbor	Night
7 Feb 42	I-25	Sydney	Dawn
24 Feb 42	I-9	Pearl Harbor	Night
26 Feb 42	I-25	Melbourne	Dawn
1 Mar 42	I-25	Hobart	Day
8 Mar 42	I-25	Wellington	Pre-dawn
13 Mar 42	I-25	Auckland	Pre-dawn
19 Mar 42	I-25	Suva	Dawn
Not known	I-10	Daban (Comment: There is a Dabanu on Good-lark or Murua between Eastern New Guinea and New Georgia islands.	
7 May 42	I-30	Aden	Dawn
8 May 42	I-30	Jibouti	Dawn
19 May 42	I-30	Zanzibar	Dawn
19 May 42	I-30	Dar-Es-Salaam	Dawn
19 May 42	I-21	Suva Bay	Dawn

23 May 42	I-29	Sydney	Dawn
24 May 42	I-21	Auckland	Dawn
25 May 42	I-9	Kiska, Amchitka	----
26 May 42	I-9	Kiska	----
27 May 42	I-19	"While making preparations for a night flight on the Northern side of Bogorlof Island (Comment: Probably Bogoslof Is. in the Aleutians) an enemy destroyer was recognized and we submerged, badly damaging our plane."	
27 May 42	I-25	Kodiak	Day
29 May 42	I-21	Sydney	Dawn
30 May 42	I-10	Diego Suarez	Night
31 May 42	I-10	Diego Suarez	----
1 Jun 42	I-10	Plane search off coast of Diego Suarez	Night
9 Aug 42	I-25	Oregon (state)	Night
19 Aug 42			
29 Aug 42	I-29	Seychelles Island (Seiseru Shoto)	Day
30 Aug 42	I-19	Sudeko	----
13 Oct 42	I-7	Espiritu Santo	Dawn
19 Oct 42	I-19	Noumea	----
30 Oct 42	I-9	Noumea	Dawn
2 Nov 42	I-8	Efate I	"Noon- from 0000 to 0030"
4 Nov 42	I-31	Suva	0100
4 Nov 42	I-9	Noumea	Dawn
11 Nov 42	I-7	Vanikoro I	Dawn
11 Nov 42	I-21	Noumea	Dawn
11 Nov 42	I-9	Espiritu Santo	Dusk

Comment: No mention was made in the document of the I-17. When sunk off New Caledonia in August 1943, prisoners from this sub claimed that it had reconnoitered west coast areas by plane in February 1942.

IX MISCELLANEOUS SOURCES OF INTELLIGENCE

1. A 17th Army HQ intelligence report of 23 September 1942 contains the following statement, translated in ATIS Enemy Publications 28:

"The Resident Attache for Chungking in Australia made the following report on the 17th:

On Guadalcanal there are 11,000 and in Tulagi over 7,000 American Marines. At Moresby they increased the

Australian Army by 2,500; 2000 natives are doing transport work in the mountainous region. The Australian Kurashichirei, commanding the naval forces, is safeguarding the difficult task of supply by transport in Milne Bay."

2. A 51st Division intelligence report of 25 July 1943, translated in ATIS Enemy Publications 44, says:

"Markham Area: Although the left coast was generally quiet, there were signs of some excitement among the natives due to the enemy propoganda which said the attack on Lae was near."

3. A 51st Division bulletin of 11 March 1943, translated in ATIS Bulletin 490, states:

"Enemy observation post opposite Nadzab seems to be afraid of natives crossing river. No enemy can be seen but they seem to be planning something. Only way to attack by land is by way of Nadzab, so . . . (TN: illegible)."

EXHIBIT BJAPANESE INTELLIGENCE AND OPERATIONS REPORTS

1. Because of the interlinking relationship between intelligence and action reports, examples of both are included.
2. The following are representative of the type of reports prepared by various command echelons of the Japanese Army and Navy.

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A. 14TH DIVISION INTELLIGENCE REPORT B 8

Military - Very Secret; Staff Dept, Teru Group (TN: 14th Div.); reprinted by Peleliu Sector Unit 10 July 1944.

I Gist

In the group sector, the air attacks on Yap and Peleliu are still continuing persistently.

Enemy daylight fighter reconnaissance on the 3rd over Koror and Babelthuap, and the increased damage done to our shipping near Falsu by recent enemy submarine attacks, may be considered as signs that the enemy has already begun his preliminary activity preparatory to an attack on our group. An opportunity to destroy the American rascals is gradually presenting itself.

At Saipan our forces and the enemy seem to be locked in a confused struggle, and the garrison unit appears to be fighting like lions with extreme resolution. Enemy warship and plane bombardment of Tinian and Guam is unrelenting.

In the western New Guinea sector, the enemy landed on Noemfor Island on the 2nd and is gradually bolstering his air bases.

II Intelligence Received

Peleliu is still receiving regular night attacks by small enemy formations. Although his principal target is airfield attack, the attacks seem also to be an attempt to carry on a war of nerves. On the 9th, the enemy for the first time bombed Ngesebus airfield.

On the 2nd and 3rd, 2 P-38s flying at high altitude came over Koror and Babelthuap for the first time. These planes appeared to come from the Biak area and were presumed to have carried out photo reconnaissance.

Attacks against Yap continue unabated. The most recent attacks have been directed against headquarters, AA positions, and Yap town. According to intelligence received on the 7th the city has been for the most part destroyed.

There were raids on successive days against the St Andrews Islands, Sonsorol, and Tokobe, by one B-24, except for the 3rd and the 7th. Although the chief activity was strafing, on the 1st at Sonsorol, and on the 4th at Tokobe heavy bombs were dropped.

III Marianas Area

Saipan Island

On 1 July the enemy was still concentrating on Mt Tapotchau and the high ground to the north of Tapotchau, where he advanced 5-600 meters. He was still holding the high ground west of Donny. The enemy turned gradually to the northwest, and a part of his force advanced on the front of hill 225. The same day the Garapan sector

battle line appears to have remained largely unchanged. The garrison unit planned to retreat from the existing line on the night of the first, and assemble on a line to the north of Tanspag and Talafofo for a final stand.

The night of the 2nd, our forces withdrew as scheduled and occupied a line from the north side of Tanspag to the northern area of hill 221 to the hill on the southwest of Karabera where they prepared for the final battle.

We learned by reconnaissance on the 3rd that the enemy was preparing 3 cranes at Charan Kanoa, and is working day and night to enlarge Aslito airfield. The number of planes landing reached 73 and already there are a small number of large type planes.

After the 5th, although the situation was not clear, it can be assumed that a heroic battle was in progress, and that the honor of the Imperial Army was made manifest.

Rota Island

There were raids by enemy planes on the 1st, 2nd, 4th and 6th, and in the raids on the 6th the airfield and town were bombed.

IV New Guinea Area

The number of vessels assessed to be in the New Guinea area on the 5th was 56, a reduction of 46 ships as compared to the 3rd, and of 16 ships as compared to the 4th. The vessels assessed to be at the principal bases were as follows:

Moresby -- 37 ships (increase of 17 over the 4th)

Goodenough -- 15 ships (increase of 12 over the 4th)

Admiralty -- 11 ships (decrease of 8 from the 4th)

Further it is necessary to pay heed to the fact that there have been urgent messages all day between Moresby and Admiralty, and that the vessels at Admiralty are being gradually reduced in number.

Newak Region

According to intelligence reports from the Southern Area Army on the 5th, the Moto Army Group is in the midst of preparation for holding the strategic points of the Newak region and the Sepik river, and of fighting the Australian Army forces which are advancing from the Hansa region. The Asa Army Group and the Kawa Army Group are assembling their military strength in the sector northeast of Aitape and are in the midst of preparations to attack Aitape.

Sarmi Region

Enemy military strength in the Sarmi region is estimated at a total of a division and a half. The Yuki Army Group is arranging its main strength on the left bank of the Tor river and making preparations for attack.

Biak Island Region

The enemy carried out a diversionary bombardment of the southern part of Noemfoor Island with 4 cruisers and 4 destroyers at 0540 on the 2nd. Under the cover of a bombing and the shelling of 38 cruisers and destroyers, the enemy began landing in the vicinity of the Kamira piers on the northern tip of the island. The forces which had landed by the evening of the 2nd were estimated to number about 2000 accompanied by tanks. The main strength of the Noemfoor detachment moved up to the northern Kamira sector and are presently attacking, anticipating the annihilation of the enemy. Further, according to a New Delhi broadcast, the aforementioned landing force is said to be made up of American Marines and infantry.

Although the enemy has seized control of all the first three airfields on Biak, the Biak detachment is carrying out organized guerrilla warfare in cooperation with the naval forces for the sake of the Empire (TN: literally "making the colors their center"), and are doing their best to interfere with the establishment of a base. Our air forces are also attacking. Reconnaissance has disclosed that the 3rd airfield is already beginning to be put to use. On the 25th one large type and 26 small type planes were spotted, while on the 28th, 3 large type and 8 small type planes were identified. In addition, the enemy is establishing himself on Orai Island to the south and has already completed an airfield there. On the 29th one large type plane, 5 P-38s and 9 small type planes were spotted.

Condition of Enemy Air Bases in New Guinea Area

The airfields used by the enemy at present are 7 in number, 4 at Hollandia, 1 on Wakde, and 2 on Biak. If two more are added on Biak they will have a total of 9. If we assume a maximum of 100 planes to an airfield they will soon have a maximum landbased air strength of about 700 planes which they can use, and against which we must be on our guard.

V Ogikawaras Area

An enemy striking force made an air attack on Iwo Jima on the 3rd, and on the morning of the 4th they once again made air attacks on both Iwo Jima and Chichi Jima. Our forces stationed at these places struck hard at the enemy; but although we succeeded in shooting down over 74 planes, we lost 30 planes and 5 ships. We questioned a prisoner (Lt (jg) "X" attached to the Hornet, flagship of the 5th Fleet) at Chichi Jima and he made the following statements:

1. The organization of the 5th Fleet:

Four large carriers -- Hornet, Yorktown, Franklin, and Kusuta (TN: phonetic, unable to identify) Barenton, and three others.

Cruisers -- 25

Destroyers -- not known

2. The plane-carrying capacity of the large carriers is 110 planes, being made up of 40 bombers, 40 fighters, and 30 torpedo bombers. The capacity of the medium and small carriers is 70 planes.
3. The combined plane-carrying capacity of the 3rd and 5th Fleets is approximately 1400 planes.

B. EXTRACTS, 20TH DIVISION HEADQUARTERS INTELLIGENCE REPORT 9

Dated 30 April 1943; translated in ATIS enemy publication 145, part 1, page 6.

In March an enemy convoy arrived in the South Pacific. Its total tonnage was about 1,050,000 tons. It is thought to have carried troops to the extent of about 1 division (it is almost certain that it contained the South Pacific Expeditionary Force, the Australian 9th Division) and about 5,000 United States Army replacement troops together with at least 380,000 tons of munitions.

C. EXCERPT FROM UNDATED DOCUMENT CAPTURED 9 JULY 1944

Subject document, captured on Noemfoor and described in ATIS Bulletin 1326, page 8, included a mimeographed sketch of the Southwest Pacific and South Pacific areas, giving dispositions of Allied strength including submarine sightings up to the end of January 1944. One notation shows the Japanese expected a landing on Emirau Island in the latter part of January 1944. The landing took place 20 March 1944.

D. ISHI DIVISION STAFF INTELLIGENCE REPORT 24

Very Secret; Issued by Ishi 1882 Butai (TN: 62nd Div Hdq) and dated 27 September 1944; captured on Okinawa; translated in CinCPac-CinCPoc Bulletin 198-45 of 15 August 1945.

Battle Lesson Intelligence Report
Concerning the 5th Demolition Unit (TN: Bekuhatai)
of the U.S. Navy.

Note: This material is based on POE intelligence of the Teru Sho Butai (TN: 14th Division). It is still incomplete and therefore does not present a comprehensive picture. Although further investigation is necessary, this has been printed and distributed for immediate reference.

I The 5th Demolition Unit (TN: Bakugeki Tai; Bakuhatai is used in the title) of the United States

According to a POW captured by our forces on 20 August after he had carried out advance reconnaissance of reef zones at Yap Island by swimming in from a submarine, it is clear that the Navy 5th Demolition Unit is a special duty unit (butai) whose duty it is to open channels by demolition and to reconnoiter reef zones in preparation for landing operations by the U S Navy.

Information from the POW regarding the aforementioned unit is as follows:

Mission: To reconnoiter reefs around landing coasts, to ascertain the condition of underwater obstacles, and to carry out their demolition in preparation for landing operations.

Home Base of Unit: Maui Island of the Hawaiian Group. (It is not known whether or not there are other units of the same type.)

Organization: The unit consists of 500 especially trained Naval personnel who can swim more than 10 miles and more than 40 feet under water. It is organized into several demolition squads (each squad has 4 LVPs (TN: alligators)).

How Mission is Accomplished: Demolition squads are dispatched from Maui as they are needed. They approach their objective in LVPs (special boats for demolition purposes) and carry out advance reconnaissance of important positions, by using their special skill in surface and under water swimming. They also carry out demolition operations from aboard the LVPs.

Organization of Squads and Techniques:

Personnel -- 4 LVPs with 16 men each: 8 swimmers, 3 conning crew, 5 boat crew, total 64 men.

Equipment -- 2 anchors, 1 magnetic detonator, 28 feet of netting, dynamite, steel wire, hand grenades (it is inferred that this is the equipment for one LVP).

Technique -- the dynamite needed is connected with steel wire and placed on the reef; the channels are blasted open by a charge which is detonated from the detonator in the boat; it usually takes 15 minutes to demolish a reef 50 feet long, 10 feet wide and 8 feet deep.

Past Battle Record: This unit was in charge of demolition of reefs on Saipan and Guam.

There is as yet no information concerning the LVPs, but according to radio reports of local forces before the landings on Saipan and Tinian, small boats were used to examine passages through the reef.

II Essentials of Reconnaissance

(TN: All of this part is missing with the exception of the following paragraph):

Equipped with knives, small-type hand grenades, underwater goggles, swim fins (rubber devices worn on the feet), the swimmers swam to the reef zones, ascertained the depth of the water by underwater swimming, carried out other ordered reconnaissance. They did not carry out demolition operations.

III Observations

The enemy is taking us unaware more and more, and in addition to selecting landing points at sites which make it necessary for us to revise our views regarding military geography, they are carrying out detailed reconnaissance of other areas and leave no stone unturned in overcoming obstacles. We cannot ignore the thorough manner in which they carry out advance preparations.

Considering POWs duty and the essentials of his activity, we must be more and more alert concerning enemy reconnaissance activity and plans to infiltrate spies under water.

Recent operations of American troops have become quite daring. We can get a general idea of this fact from the above examples; it indicates the enemy's morale and vigor.

E. ISHI SUBMARINE INTELLIGENCE REPORTS 1 AND 2

Report 1; Very Secret; issued by 62nd Division Headquarters
6 October 1944; CinCPac-CinCPos translation item B-16, 461-O.

I Although enemy submarine activity in the Nansei Shoto has decreased somewhat during September as compared to August, activity is still significant in other areas, especially in the waters east and south of Taiwan. We must be cognizant of the enemy's intentions and decisions. For example, through a study of the enemy's former practises, tactics, and air activities we may conclude that he plans the isolation of the Philippines by cutting off our surface transportation in that area. Thus his future plans are obvious.

II The enemy submarine situation in September was as shown on the annexed chart (not available).

Note: Hitherto, intelligence reports concerned with enemy submarines were included in general intelligence reports. Henceforth, they shall be handled separately as submarine intelligence.

Report 2: Very Secret; issued by 62nd Division Headquarters
8 November 1944; translated as CinCPac-CinCPos item B-16 461-K

I Enemy submarine sightings have increased considerably since the 20th, particularly around Okinawa and Amami Oshima and south of

Taiwan. For the purpose of inflicting as many losses as possible on the enemy off the Philippines and Taiwan and in order to protect shipping, it is extremely important to devise quickly, highly strategic plans against the enemy submarines and destroyers.

II At the time of the air attack on the 10th, a number of enemy submarines were sighted on the eastern seaboard of Okinawa. They were apparently responsible for contact with the rescue of the crews of enemy planes which were barely afloat.

III Enemy Submarine Sightings

Eleven sighted in the Nansai Shotos (4 unconfirmed).

The positions of the sightings are as shown in the annex (not copied).

IV Battle Lessons Concerning Anti-Submarine Warfare (halmahera Area)

Positions: Enemy submarines are sighted frequently, not only along convoy routes and near other important places, but also approaching convoys, coastal areas and islands. Sightings more than 100 kilometers distant from the above mentioned places were very rare. This fact is important from the standpoint of patrols against enemy submarines.

Time: The best times for sighting enemy submarines are just before dawn, when they are preparing to submerge for daytime navigation, and at dusk when they surface for cruising during the night. Procedures taking cognizance of these facts are to be followed. Although we have not neglected such opportunities, recent experiences have shown that subs have been sighted cruising on the surface after dawn and before dusk. Such instances are rare, however. At 0630 on 7 May a certain sentai sighted a surfaced enemy sub 100 kilometers north of Doi Island, and attacked and sank it quickly. A certain independent company sighted a surfaced enemy sub east of Morotai Island during a squall on 30 May at 1743 and attacked and sank it. These are two examples. Not only can such actual cases be cited, but several others can be mentioned in which sightings took place between 0700 and 1000 and between 1200 and 1500.

Weather: Although our research on the comparison between good and bad weather has not yet been completed, it can be stated that when the weather is bad (this refers to rainy weather or poor visibility and doesn't include cases of wind or rain), especially during squalls, enemy subs often cruise on the surface and present good opportunities for sighting and contact.

Battery Torpedoes: Recently, difficulties in spotting torpedo

wakes have been encountered, and it is suspected that the enemy is using battery torpedoes. The results of investigations by the Navy of torpedoes washed up on the coast of Miwa, Kumano Nada, Wakayama Ken on 3 September indicate that they were set for a depth of 6 feet. This suggest that they were battery torpedoes.

F. ACTION REPORT, 53RD BASE UNIT, YOKOSUKA NAVAL AIR UNIT

Very Secret; prepared by 53rd Base Unit (location not stated) and addressed to "Head of Navy Merit Investigation Department; covers 23 March-31 June 1943; document found in Japan and translated by USSBS.

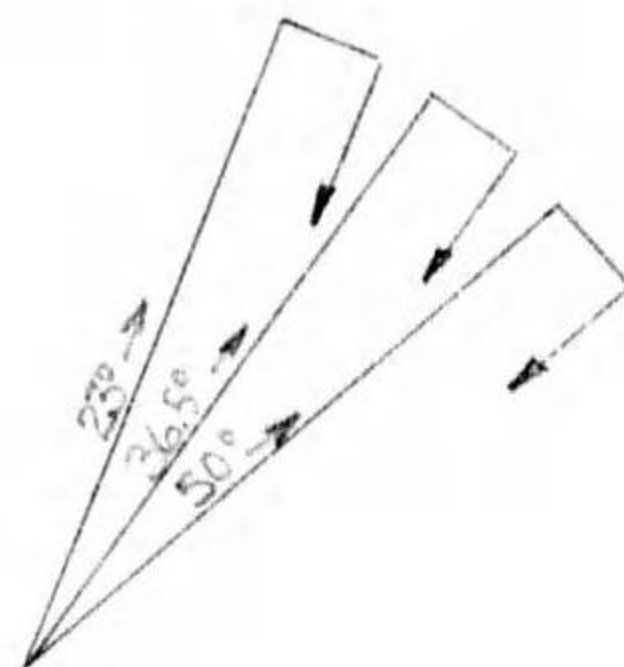
1. Situation

From the information below, it appeared that from 5 April the United States, while continuing its raids on Wake and Marcus Islands, planned to strike by air at the Japanese mainland and to bomb important bases of operations and vital factory zones.

- (1) Enemy aircraft carriers appeared in the Solomons area from the end of February.
- (2) On 20 March one of our picket boats was attacked by an enemy submarine (about 32 degrees 50 minutes N lat, 152 degrees E long).
- (3) There was an increase in the number of patrol planes at Hawaii and Midway on 12 and 13 March, and the number of patrol planes in the Midway area also grew larger on 15 and 16 March; enemy submarine communications in the waters east of Japan increased on 13, 16 and 18 March; it was judged that there were enemy carriers at Hawaii from an analysis of communications traffic on the 16th.

2. Plans

- (1) Orders received:
Yokosuka Naval Base Top Secret Operation Order 186.
Marcus Island Force Top Secret Operation Orders 1 and 2.
- (2) Duties:
Chart of search plan, 24-29 March (TN: reproduced from chart attached to document):



Search radius: 570 nautical miles.
 Lateral distance: right, 65 nautical miles.
 Search planes: 2.

3. Progress

24 March: 3 shotai (TN: 4 aircraft).

0440-0441 -- 3 planes took off. Plane in the third sector returned because of bad weather. The enemy was not sighted on any of the lines over a search radius of 490 miles.

1230-1240 -- All planes returned to base.

Weather: Going and returning --half clear; cloud density-6; height of clouds --600-800 meters; visibility--40km; visibility near end of 3rd line--less than 1 km.

25 March: 1 shotai.

0444-0445 -- 3 planes took off. Plane on second search line turned back because of bad weather. Search radius 550 nautical miles.

0900 -- At a point 43 degrees 460 nautical miles from Base 53 an enemy surfaced submarine was sighted (course 100 degrees, speed 14 knots) and was immediately attacked. The plane dropped 3x60 kg Mk 2 bombs (achieved a near miss) in its first attack, and immediately turned. In the second attack, 1x60 kg Mk 2 bomb was dropped at the point at which the submarine had submerged. No results were visible on the surface, and at 0925 the plane turned back. The plane on the third line turned back because of bad weather. Search radius 450 nautical miles. Enemy not sighted on first and third search lines.

1320-1330 -- All planes returned to base.

Weather: At extreme end of course --rain; visibility, 1 km; elsewhere, half-cloudy; cloud density--5; height of clouds-200-400 meters; visibility--40-50 km.

25 March: 3 shotai, anti-submarine search.

1125-1140 -- 3 planes took off; enemy not sighted on any of the search lines.

1340-1345 -- All planes returned.

Weather: Clear on all search lines; visibility--more than 50 km.

26 March: 3 shotai.

0440-0445 -- 3 planes took off. Plane on first line sight-

ed one picket boat at 56 degrees 325 nautical miles from the base. Plane on second line turned back because of bad weather. Search radius 330 nautical miles. Same for plane on third line. Search radius 390 nautical miles.

0940 -- plane on second line returned.
 0945 -- plane on third line returned.
 1215 -- plane of first line returned. Enemy not sighted on any of the search lines.

Weather: Entire course on first line--cloudy; cloud density-10; height of clouds--1000 meters; visibility about 30 km. On second line--rain from about 300 nautical miles from base; height of clouds--70-100 meters; visibility--2 km; on rest of course--cloudy; visibility--30-40 km. On third line--cloudy or half cloudy to about 300 nautical miles from base; visibility more than 30 km; rest of course--rain; visibility less than 3 km.

28 March: 1 shotai.

0440-0445 -- 3 planes took off. Enemy not sighted on any of the search lines.

1310-1405 -- All planes returned.

Weather: Cloudy to half cloudy on all course; cloud density-7; height of clouds--600-800 meters; visibility--30-40 km; at the very end of the first line--clear; visibility--more than 40 km.

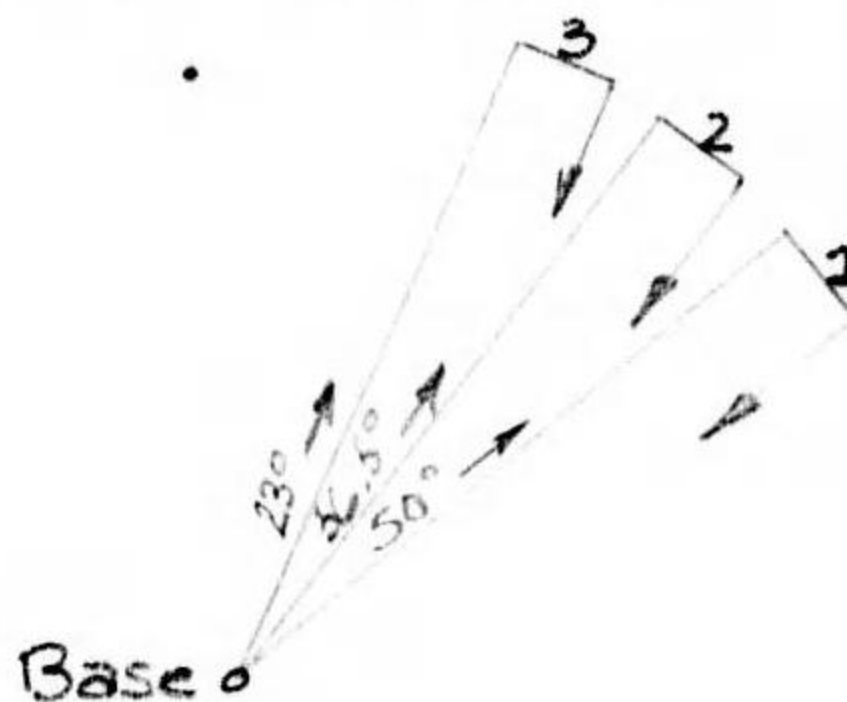
29 March: 2 shotai.

0445-0447 -- 3 planes took off. Enemy not sighted on any of the search lines.

1235-1320 -- All planes returned.

Weather: Outward--cloudy to clear; cloud density--5 to 8; height of clouds--800 meters; visibility--30 km. Return--clear; visibility--more than 40 km.

Chart of search plan. 30 March-22 April (TN: reproduced from chart attached to document).



Search radius: 570 nautical miles.
 Lateral distance: right, 65 nautical miles.
 Search planes: 2.

30 March: 3 shotai.

0500-0505 -- 3 planes took off. Plane on first line turned back because of bad weather. Search radius 460 miles. Plane on second line same as above, search radius 460 nautical miles. Plane on third line same as above, search radius 250 nautical miles. Enemy not sighted by any of the planes.

1030 -- Plane on third line returned.
 1145 -- Plane on second line returned.
 1150 -- Plane on first line returned.

Weather: On first and second lines--rain from about 350 nautical miles from base; height of clouds--100-200 meters; visibility--2 km; rest of course--cloudy; visibility--20-30 km. On third line--rain from about 200 nautical miles from base; height of clouds--less than 100 meters; visibility--1-2 km; rest of course--cloudy; visibility--less than 20 km.

1 April: 2 shotai.

0446-0449 -- 3 planes took off. Plane on first line turned back because of bad weather. Search radius, 420 nautical miles. Plane on second line, same as above. Plane on third line, same as above. Search radius, 70 nautical miles. Enemy not sighted on any of the search lines.

(TN: Remainder of section labelled "progress" not reproduced due similarity to material reproduced above; other sections give list of names of members of the unit and a series of charts was appended, of which representative search plans are included in the text above).

G. EXCERPTS FROM JAP SUMMARY OF U S ASSAULT ON THE GILBERTS

Very Secret; issued by Headquarters, Kobayashi Unit, Japanese Army, dated January 1944; translated as CinCPac-CinCPoa item 10,018. This document is a detailed action report on the U S attack on Tarawa listing chronologically the events prior to, during, and following the actual landings. The completed document covers the period 14-27 November 1943; this excerpt covers the section of the report for the period 14-21 November inclusive.

Frequent mention is made, in the document, of intercepting and using U S radio reports to supplement Japanese disrupted communications. From these messages the Japanese learned of intended reinforcements and of the damage received by some of our ships. The document also contains highly exaggerated reports of U S

shipping losses; it claims the sinking of 1 large carrier, 4 medium carriers, 3 cruisers and 1 destroyer, damage to 4 carriers, 1 BB, 3 CA and 1 transport, and the destruction of 100 planes. The excerpt follows:

Summary of the American Army Counter-Attack
in the Gilbert Area of November 1943

An isolated and helpless body of troops courageously faced superior American forces on hot and solitary islands just below the equator. After 5 days they finally died in honor, examples to all members of the armed forces. They, with the heroes of Attu in the north, are the flowers of the Great East Asia War. We cannot help but urge that our people be inspired by such remarkable diligence and energy. We, who in the footsteps of the brave men of the Tarawa and Makin garrison units stand face to face with the enemy in garrisoning these islands, can have nothing but the greatest respect for the heroic deeds of these men dead in battle. At the same time we hope this will serve as a valuable lesson for future island defense, although in the last analysis, lack of men made the situation inevitable. For this we have mainly the collection of messages dispatched by the Tarawa garrison unit, and to it we have added, as a part of it, the situation of the unit concerned. We hope that these will serve as training materials. What we ask is that you understand and appreciate the fervor of these men, and that they are not allowed to die in vain.

Reference Materials on Defenses of Tarawa
and Vicinity

1. General sketch of Tarawa: Annex 1 (not reproduced).

2. Strength of garrison:

a. In Tarawa garrison unit (TW: Naval, shubitai).

Military

3rd Special Base Force - - - - -	1000
Sasebo SNLF - - - - -	<u>1700</u>
	2700 men

Civilian

4th Civil Eng Dept Personnel Workers - - - - -	950
Construction Bn Personnel - - - - -	<u>1050</u>
	2000 men

RDF station personnel

(on East Island, east of Tarawa) - - - - -	15 men
--	--------

b. In Makin garrison unit

Military

3rd Special Base Force - - - - -	260
----------------------------------	-----

Civilian

4th Civil Eng Dept Personnel - - - - - 540
800 men

c. Lookouts on Apamama

3. Number of weapons of garrison units.
4. Situation of garrison positions on Tarawa and Makin.
5. Weather conditions (determined from general weather statistics on the Gilberts and vicinity:
 - a. Tidal conditions around Tarawa -- generally high tide about 0430 on 21 November.
 - b. Wind direction in the vicinity of Tarawa during November-- generally east, veering slightly north.

Part 1
Situation Prior to 18 November

<u>Date/Time</u>	<u>Situation on Tarawa</u>	<u>On Surrounding Sectors</u>
14 1430	9 B-24s attacked and dropped 48 bombs (20 on island). No change in ordnance or personnel. 5 warehouses & barracks somewhat damaged.	
1530	Attack by 8 B-24s, small bombs dropped; 1 injured seriously, 1 slightly.	
15 1040	Attack by 9 B-24s.	1235 Mili attacked by 9 B-24s, 6 killed, 39 injured (army-navy).
1432	Attack by 9 planes.	
1528	Attack by 9 planes (bombs fell into ocean).	
16		1531 Mili attacked by 5 planes. 1603 Makin attacked by 3 planes. 1139 Jaluit attacked by 7 planes, 8 seriously wounded. 1142 Emidji attacked by 6 planes.
17 0950	Attack and MC strafing by 2 B-24s.	0725 Jaluit, 15 B-24s. 0810 Makin, 1 plane.
1025	Very careful recon of the stoll by 17 B-24s.	0810 Roi, 1 large plane. 0950 Roi, 1 large plane. 1041 Makin, 1 plane. 1216 Maloelap, 3 planes. 1216 Mili, 9 large planes. 0828 Maloelap, 2 B-24s.

18 1033 Attack by 3 B-24s dropped 1430 Maloelap, 8 B-24s.
about 30 bombs (at the time
there were thought to be 7).

Ammo expended: DP, 40 rds;
AA, 31, 13mm MG, 748.
Damage: Slight damage to air
strip, repair completed al-
most at 1421.

Part 2

Situation of 19 and 20 December
(TN: Probably meant November)

Action summary of units (butai) in the Inner South Seas Area
(0500 21 November) Headquarters, Kobayashi Unit:

1. At dawn on the 19th the first enemy task force (3 CVs, 1 BB, 5 cruisers and 3 DDs) was approaching 130 nautical miles SE of Tarawa; the second task force (1 CV, 1 BB, 1 cruiser and 2 DDs) was approaching 60 nautical miles S of Nauru. In joint action they attacked Tarawa and Nauru respectively by air all day long. At the same time 20 B-24s attacked Mili. Furthermore we found that a transport convoy (1 DD, 3 transports) coming to attack the Gilberts was 150 nautical miles SE of Tarawa. Our air force, defying the bad weather which prevailed throughout the Marshalls area all day, at 1700 on the 19th sank (confirmed) a medium carrier of the first task force 130 nautical miles from Tarawa at 217 degrees.

2. At 0250 on the 20th a task force composed of 2 carriers, 2 cruisers and 2 DDs was discovered 90 nautical miles south of Tarawa. From the appearance of the ships and an attack by enemy planes on Mili it was deduced that a task force of 1 carrier and 3 cruisers was SE of Mili. However, because of heavy rain extending generally over the Marshalls area, it proved impossible to attack the latter, and it was deemed feasible to attack the former.

3. Results of battles (total for both days): 1 medium carrier sunk; 59 small model planes shot down; 20 small model planes possibly shot down; 8 large model planes shot down; 2 large model planes possibly shot down.

4. Important damage (total for both days: this, however, is no obstacle to battle); 2x20 cm guns; 3 radar (Tarawa); 3 tanks; 5 search lights; 4 land attack planes; 1 fighter plane; 1 Zero observation plane; others being investigated.

5. The enemy is continuing air attacks relentlessly and it is plain that occupation of the Gilberts area is planned. The full strength of the forces in the Inner South Seas area is being expended,

and the invasion will be repulsed.

<u>Date/Time</u>	<u>Situation on Tarsza</u>	<u>On Surrounding Sectors</u>
18 0228	First enemy air attack lasted to 0445; about 150 planes in combined waves of 40 fighters and bombers. From the direction of the approach there seemed to be 2 carriers.	0215 Nauru; lasted to 0405; 80 planes. 0740 Nauru; lasted to 0830; 40 planes. 0740 Mili; lasted to 0755; 19 large planes. 0800 Makin; 1 B-24 sighted.
19 0500	Second enemy attack lasted to 0630; about 80 planes.	1235 Nauru; lasted to 1245-50 planes.
0725	Third enemy attack lasted to 0815; about 80 planes. Results of battle: 1st-3rd attack shot down 16; possibly shot down 5.	Makin 0310-0330 1st attack about 300 planes. 0345-0515 2nd attack. 0740-0830 3rd attack; 94 planes. 1105-1201 4th attack; 58 planes. 1228-1305 5th attack; 40 planes.
1010	Fourth enemy attack lasted to 1050- about 80 planes or more. Ammo expended: DP Guns, 263; AA Guns-463; 13 mm MG, 23,000 (1/3 of total supply). Results of battle: shot down, 7 (total 23); Possibles, 3 (total 8). Damage: 9 dead (including 1 Co comdr); serious and slightly wounded, 116 (excepting the 4th Construction Dept); many bldgs destroyed.	
0255	1st attack, 16 fighters lasted to 0328, about 70 planes.	1350 6th attack, 17 carrier bombers.
0440	2nd attack continued persistently to 0600; about 120 planes.	1435 7th attack, 17 carriers bombers

Ammo expended: DP guns, 255;
AA guns, 159; 13 mm MG,
9580.

Battle results: shot down,
18; possible, 5; damage, 5
dead, 12 wounded; 3 ldg
barges fired; 3 tanks; 1x13
mm MG (twin) & equipment; 1
multi mount gun; 5 S/L des-
troyed; barracks & ware-
house almost destroyed; half
of bombs were incendiary;
150-dram incendiary 20mm
shell buried.

22 0000 3 CAS & 5 DDs seen at 330
degrees of Tarawa; 8 direct
escort A/C headed north at
110 knots.

0815 Enemy ships opened fire.
1325 Attack by 210 B-24s until
1425; low altitude bombing
(many time bombs) and
strafing.

Battle results: 2 A/C
spitting black smoke, but
result unknown. Damage:
airstrip hit, cannot be
used today. Killed & wound-
ed for 2 days (19th & 20th):
26 killed (1 Co comdr).
serious & slightly wounded,
53 (incl 2 WOs or above).

Mili

0309-0350 1st attack,
more than 50 A/C.

0400-0430 2nd attack,
more than 50 A/C.

0450-0555 3rd attack,
more than 40 A/C.

0715-0800 4th attack,
more than 10 A/C.

0905-1015 5th attack,
more than 50 A/C.

1055-1130 6th attack,
30 A/C.

1258 3 ships resembling
cruisers approached at
180 degrees to 30,000
meters, and fled again.

Ammo expended: DP guns,
794; 25mm MG, 521; 13mm
MG, 20,300; 7.7mm MG,
33,000. Battle results:
shot down 8, possible 2;
damage, 1 dead, 2 slight-
ly wounded; most of sig-
nal equipment in houses
destroyed.

Jaluit

0305-0400 Formations of 2 to
6 A/C bombed us twice;
a total of 52 A/C. At
0500 the Kokayashi comdr
left for Truk to direct
operations.

Action summary of Gilberts (butai). 20 November, 1942:

1. At 0600, after enemy cruiser-based planes withdrew, 3 large cruisers and 2 DDs were approaching this island from 300 degrees, and from 1814-1022 proceeded to a point 1500 meters of the NW shore. They shelled us fiercely with 186 salvos (number of rounds from the leading cruiser; we concluded that they exhausted most of their ammunition). Direction of escape, 240 degrees; course, 280 degrees; speed, unknown.
2. Results of battle: no direct hits, results unknown. Ammo expended: 20 cm gun, 46; 14 cm gun, 104.
3. Damage:
 - a. One 20 cm gun destroyed (total of 2, 1 destroyed at time of air attack); 1 field AA gun destroyed; no other damage to ordnance; AA fire and CD fire possible.
 - b. Barracks and other buildings damaged during air attack; further heavy damage. There is no other damage to add to the previous message.
4. Impressions:
 - a. It is thought that the enemy has many AA guns on ships. He is using time bombs.
 - b. Enemy ships guns are very destructive, but damage is small compared to that by air attacks. Smoke screens seem to be effective.
 - c. We must equip our flat trajectory guns with an ejecting device to increase the firing speed.
5. At 1700 we consumed a great deal of ammo maintaining heavy AA fire all day. It is desirable to arrange for urgent replenishments. Present amount of ammo on hand (expended):
 - a. Tarawa -- 13.7 cm DP gun, 12190 (1439); 7 cm field AA gun, 1345 (1312).
 - b. Makin -- 13 mm MG, 14903 (51160); 13 mm MG, 2400 (9100).
 - c. We must quickly replenish ammo for the 13 mm MGs on both Tarawa and Makin.

Date/Time	Situation on Tarawa	On Surrounding Sectors
20 2249	It is apparent, from the appearance of the enemy at the moment, that he intends to attack both Makin and Tarawa concurrently tonight. Lookouts are to maintain strict watch in each place.	
2252	We maintained communications by means of light telegraph set, but by the evening of the 20th, the battery which was the source of the power was used up. Unless brought by air, there will be no means of communication except reconnaissance.	

Part 3
Situation on 21 November

Action summary of units (butai) in the Inner South Seas area, Kobayashi Unit, 22 November, 1952.

1. a. At 0100, under cover of an enemy task force (1 carrier, 2 BBs or cruisers and 2 DDs) 10 transports approached Tarawa. While the island was being attacked by naval bombardment and bombing and strafing from the air they, at 0259, entered the lagoon and began landing operations. Our garrison of about 4700 (including workers) ambushed them and are now driving them back to the beaches (0200 on the 22nd).

b. At 0305, 3 transports and 1DD began landing operations on Makin; after 0330 communications were severed (about 700 garrison troops).

c. At 1125 an attack was made on Jaluit by 10 fighter-bombers.

d. At 0830 an attack was made on Nauru by 32 planes.

e. At 1230 70 fighter-bombers attacked Mili.

f. The air attack unit (2 tracking planes equipped with torpedoes, 14 attack planes). braving foul weather, attacked the enemy task force west of Tarawa twice, at dusk and during the night.

2. Results of the battle up to 0800 on the 22nd (not including Tarawa and Nauru: An aircraft carrier listing badly (believed sunk); direct torpedo hit 1 carrier (for second time); 1 BB (or cruiser) and 1 transport burned up; 1 DD sunk; 32 carrier-based planes shot down on ships; 2 possibles.

3. Damage (as ascertained): Induced explosions in 33 land-attack planes; 6 planes still missing; 2 Zero seaplanes and 1 Zero observation plane seriously damaged; Tarawa flat trajectory AA guns almost useless.

4. Our remaining air strength (11 land-attack planes, 38 fighter planes, 10 recon seaplanes) is counter-attacking the enemy occupation forces on Tarawa and Makin, protecting our army units (butai). We expect to destroy the enemy. Although the weather in the Marshalls area has been bad all day, clear weather is expected after the 22nd.

<u>Date/Time</u>	<u>Situation on Tarawa</u>	<u>On Surrounding Sectors</u>
22 0010	2 enemy cruisers (or large DDs) & 20 transports are cruising at 18,000 meters, 320 degrees. Main airstrip has been completely repaired and can be used.	
0035	(1) 3 enemy cruisers are about 20 km NW of Tarawa. They seem to have planned an attack on Tarawa so patrol carefully	

<u>Date/Time</u>	<u>Situation on Tarawa</u>	<u>On Surrounding Sectors</u>
22 0035	everywhere. (2) Make preparations for burning documents. We must lose no opportunity to take advantage of the situation.	
0100	Afterwards the enemy strength was found to be as follows: 2 BBs or cruisers, 2 DBs, more than 10 transports.	
0130	Add 1 carrier to the above.	
0200	We opened fire on transport convoy. Now only observation planes are in the air. Weather is clear, airstrip can be used.	
0215	Attack by enemy planes; bombardment by enemy ships guns began.	
0227	Enemy transport convoy located 15 kilometers off Tarawa 270 degrees cruising at average speed; 5 large, 7 medium size; a total of 10 ships, 1 BB, 3 cruisers & 6 DBs are cruising 20 kilometers off Tarawa at 200 degrees.	
0247	No enemy patrol planes in the sky; weather is clear.	
0258	Enemy seems to be heading mainly for the pier from northwest.	
0259	Enemy has begun to land. Most of the important documents have been disposed of.	
0306	1 enemy BB is emitting black smoke and listed; at 0314 the listing ship sank.	
0310	Attack by enemy carrier planes.	
0325	Enemy capital ship 8000 to 10,000 tons is bombarding.	
0335	Enemy fighter-bombing and ships bombardment are severe, but officers and men alike are defending vigorously.	
0338	Burning coded documents & tables except TO 2, REI 20 & TA 14.	
0410	Enemy is beginning to land on the northern island. Coded documents except TO still being burned.	
0425	Enemy is still carrying out a terrific bombardment from ships. Groups of boats are sweeping the	
		0340 According to enemy radio telephone the Concord is afire (Omaha class); signal unit dispatch.
		0400 Makin detachment is to fight to

Date/Time	Situation on Tarawa	On Surrounding Sectors
22 0425	entrance to the bay. About 200 have approached to 300 meters. Enemy's strength: 1 cruiser, 2 DDs, 3 transports, and more than 200 small craft.	0400 the last man.
0430	Enemy's strength: 1 carrier, 1 BB, 3 cruisers, 6 DDs.	Makin 0512 Enemy landing begun.
0520	Front enemy strength visible as follows: 1 cruiser, 2 DDs, 3 transports, more than 200 landing boats.	
0530	There are 20 enemy fighter A/C in the air over the landing point.	
0635	Enemy has more than 100 amphibious tanks in sight. They are generally approaching the pier in the lagoon on the north bank. Behind them more than 100 landing craft are sighted. Enemy is entering the lagoon under protective fire of 2 large DDs (or cruisers) and more than 4 DDs (or minesweepers). Other boats are outside the lagoon but because of poor visibility their movements are unknown. In the air are 10 carrier A/C and seaplanes. They are under AA fire. Fighting spirit of all troops is vigorous.	
0758	Enemy BBs approaching at 2000 meters.	0815 Tarawa BDF station Burn secret charts.
1200	Tarawa rush battle announcement: Enemy is attacking chiefly in the direction of the large pier. Up to now about 5000 men have landed. It seems to be a third of all their troops. The enemy are centered around the big pier, and we have encircled them confronting them with a bombardment on 3 sides, east, south and west. We are using the opportunity to drive them back to the entrance of the lagoon. Everyone has high morale. The enemy's rear units are hesitating to land because of our heavy attack. Our damage	Ocean 1045 Attack by 1 B-24. Jaluit 1125-1210 In formations of 2-8 A/C, fighters & bombers combined, 25 times; a total of about 100 A/C.

Date/Time	Situation on Tarawa	On Surrounding Sectors
22 1200	(losses): about half our troops annihilated; all our flat trajectory & AA guns, most of our action guns, tanks & 13 mm MGs are useless. Attacks have been repeated for 3 days. Today it is desirable to attack the rear units to the last. At present they are continuously entering the bay. There are now 1 cruiser, 2 subchasers, 5 transports in the bay, and also many transports outside. Send by code to TO only.	1216-1303 A total of 70 fighters & bombers.
1245	About 15 enemy carrier A/C attacked for 2 hours. During the present bombing and strafing we are at the hq of the operations officer of the 755th air group.	Signal Unit Dispatch 1435 According to enemy letters and radio telephone, the CO of forces landing on Tarawa seems to anticipate reinforcements; he is ordering them to continue landing.
1400	Attacks by enemy carrier A/C are at intervals of 30 minutes. An enemy carrier is discovered approaching.	1603 According to radio telephone at 1545 a part of the landing force (seems to be a part of the 3rd unit) seems to be in a desperate battle (deadlock).
2030	They are not progressing as if intending to attack. They are now fighting in the east on the line which runs from the 3 corners of the airfield to the garrison unit pier, and SW on the line which runs from SE DP battery to the radar position on the west coast. Tomorrow morning we are to attack the enemy as follows: from the southern line, passing through large pier, attack the west pier and vicinity and especially the barracks area, the air unit control station area, and the cruisers and destroyers that are inside the harbor.	

EXHIBIT CEXCERPTS FROM JAPANESE TRAINING MANUALSCHAPTERS RELATING TO INTELLIGENCE

1. No schools for the training of intelligence officers existed in either the Japanese Army or Navy. The curriculum of the Naval Staff College did not include an intelligence course. The curriculum of the War College called for instruction in combat intelligence, codes and counter espionage as a part of the general training of officers for staff duty. A total of 6 classes was allotted for these intelligence subjects.

2. Courses of limited scope on the fundamentals of combat intelligence were included in the general training of Army air officers and aviators. As indicated by the chapters on intelligence translated from Japanese training manuals and reproduced in this exhibit, this training was of a very superficial nature.

TABLE OF CONTENTS

Translation, Part VI - Intelligence, Japanese Army Air Officers' School Air Tactics Training Manual, dated August 1944.

Translation, Chapter III - Intelligence, Japanese Army Aviator's Handbook, dated March 1944.

(Similar training documents for the Japanese Navy are not available.)

Translation of Part VI -- Intelligence -- of Japanese Army Air Officers' School Air Tactics Training Manual, dated August 1944.

I GENERAL INTRODUCTION TO INTELLIGENCE DUTIES

1. A summary of general liaison in air force intelligence is shown on the following page (chart 1).

2. Intelligence Duty Regulations

Senior air officers must devise regulations for the control of all intelligence duties (see Sakko 74-134).

3. Need for Intelligence Duties in Combat

Combat air units must gather pertinent intelligence concerning enemy positions, weather, tactics, etc; such information is necessary for combat commands. Thus, there must be a continuous and systematic gathering of intelligence; information and materials must be relayed to combat commands without delay. Proper use of such intelligence is vitally important. This applies particularly to intelligence concerning sudden changes in the enemy air situation.

4. Chief Methods of Gathering Intelligence

The chief methods of gathering intelligence are search, enemy lookouts, weather, and combat intelligence duties. In the gathering of related intelligence, peculiar features must be considered with a view to balancing the relative merits of the various sources. Complete intelligence is essential.

The use of scientific means is very important in the collection of intelligence.

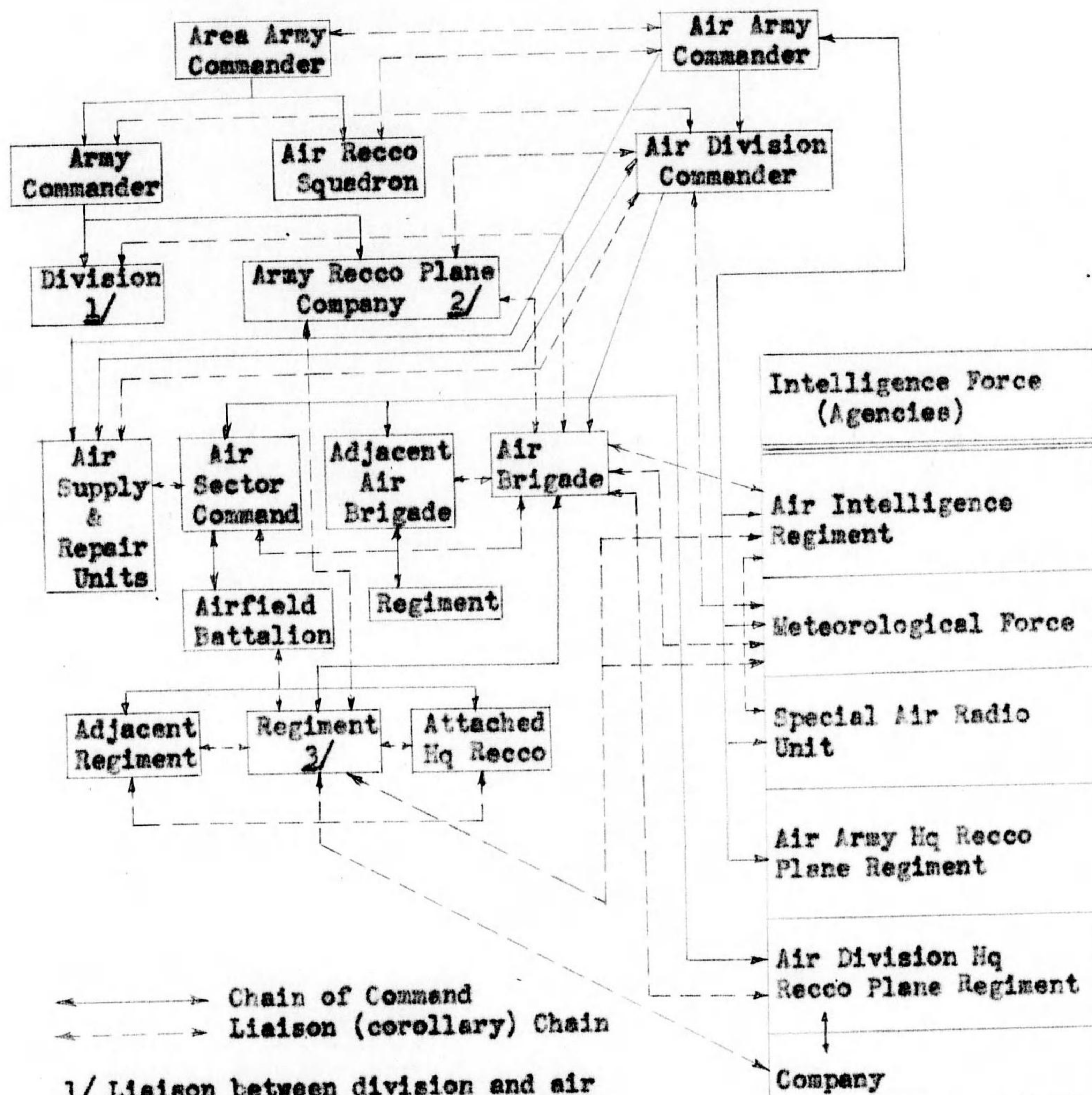
It is necessary to make practical use of intelligence concerning enemy positions, weather, etc, as gathered by each combat unit, in addition to that collected by combat agencies.

Relative merits to be noted in considering the peculiar features of various means of gathering intelligence:

Search - Detection of enemy positions, strength, movement, equipment, etc; supplements and confirms results obtained through combat intelligence; provides a lead for further search.

Look-outs - Fills gaps in search system; together with search, makes possible detection of signs of the slightest changes in enemy positions so that the

GENERAL LIAISON IN (JAPANESE) AIR FORCE INTELLIGENCE



————— Chain of Command
 - - - - - Liaison (corollary) Chain

- 1/ Liaison between division and air brigade when in direct cooperation.
- 2/ Liaison between recco plane company and air brigade when in direct cooperation.
- 3/ Liaison between regiment and airfield battalion at airfield where regiment stationed; between regiment and company when cooperating; between regiment and meteorological force and air intelligence regiment in cases of direct cooperation in land combat.

Chart 1

enemy situation may be clarified.

5. Intelligence Reports and Dispatches

In deciding whether to make separate intelligence reports or to report results of an analysis of several reports, the following must be considered: the type of intelligence to be reported, the war situation, communication facilities, etc.

Whenever a decision is made to seize a tactical advantage, a concise report must be made, giving the reasons for such an action. It is most important that every means of communication and transmission be used: signal equipment as well as photographs and other scientific means, so that the speedy and accurate transmission of intelligence reports may be assured.

6. Analysis of Intelligence

In making use of intelligence one must always know its source, time, and manner in which it was gathered. For accurate analysis one must weigh it as to reliability and significance. Furthermore in addition to scientific considerations, great care must be taken with what may appear to be a trivial item, for this might lead to intelligence of the highest importance.

When analyzing intelligence, you must avoid preconceptions, conjecture and inadequate proof of accuracy. Very important information can be obtained by considering even the most trivial facts from a general viewpoint or by comparing them with other bits of intelligence. Care must be taken so as to avoid partial judgment and errors caused by enemy deception or propaganda, etc.

7. Intelligence Records

When making intelligence records, one must make sure that the arrangement, use and transmission of analyzed intelligence is convenient for high echelon commands because it is customary to use intelligence records when making intelligence plans. Other commands and headquarters also use intelligence plans in this same manner.

II RECONNAISSANCE

Reconnaissance procedures for senior air officers will be found under "Sakko".

Reconnaissance procedures for army air reconnaissance squadrons is under land instruction procedures.

1. General Rules

a. Establishment of reconnaissance teams and reconnaissance methods.

Reconnaissance should be undertaken not only by those appointed to reconnaissance teams; rather, every unit should make investigations which are important for combat situations. Such investigations may be carried out by inspection, the use of photographs and radio equipment, etc. The object of combat reconnaissance is to get information about the war situation, particularly activities of enemy fighter planes. This can be accomplished through the use of fighters and bombers in close cooperation with principal combat units.

Observation is the most important means of aerial reconnaissance. It is best achieved by making broad reconnaissance sweeps. Commanders and their staffs will find it advantageous to use their own planes for observation of topographical features and other aspects of the war situation.

Aerial photographs are not only valuable for securing of details, but they may also be used in place of or for making maps. However, aerial photographing of an extensive area is generally rather difficult.

Radio equipment can best be used at night and at times when there are no unfavorable atmospheric conditions.

b. Reconnaissance Summary

Among the objects of reconnaissance is the gathering of pertinent facts concerning time and manner of projected actions. It is vital that this be accomplished speedily and unbeknown to the enemy. However, if the situation demands it, one must be prepared to carry out reconnaissance in the face of determined resistance by the enemy.

In reconnaissance work it is necessary to make an extensive comparison of the present and past situations, being particularly careful to detect any changes that may have occurred.

c. Night Reconnaissance

Although it is difficult to obtain details by night reconnaissance, it is most important that this means be used in connection with daylight reconnaissance, so that any changes in the enemy moves during the night may become clear. In this manner you can see through the enemy plans.

For night reconnaissance you must make thorough preparations and you should use radio equipment. Furthermore, you must take every precaution against being deceived by the enemy.

Thorough preparations must be made; each of the crew members must be assigned one particular duty; and the new members, maintenance and signal men, etc, must be informed of the plans of operations as quickly as possible. Furthermore, there must be close contact between navigation and weather units.

2. Reconnaissance Troops Investigation.

a. Regiment

The regimental commander must make plans in accordance with his duties for the gathering of intelligence during combat. Systematic planning is necessary for the diligent execution of the regiment's duties. On such occasions, it is necessary that the plans concur with those of air divisions for the gathering of intelligence.

The regimental commander in accordance with his duties must indicate to each air squadron the purpose of the reconnaissance, the time and the area of its reconnaissance and observation. He must see to it that adequate reconnaissance and observation is carried out. As the situation requires, he must designate supporting units and assign reconnaissance crews to each of them.

When the regimental commander orders the air squadrons to reconnoiter and observe, etc, he must inform them accurately as to signals, time and manner of making reports and other important matters. According to the situation, he must inform them as to the method of reconnoitering and the number of planes to be used, etc.

b. Air Squadron

The squadron commander must inform flight captains of long range flight plans, and he must provide the following information for each sortie: number of planes to be used, equipment, flight procedure, time of the sortie, method of reconnaissance, point of control with supporting units, methods of communication, etc.

When deciding upon the preparations and the number of planes to participate, the squadron leader, on each occasion, shall give due consideration to changes in the battle situation, to flight personnel and to the condition of available planes so as to achieve complete success in fulfilling the squadron duties. Moreover, when deciding on the number of planes to be sent out for rather easy

Flights care must be taken that the squadron's equipment and engines of the plane are made suitable for the sortie and the time of use. When deciding on the number of planes for daily operation, the decision should be made after giving thought to relative difficulty of accomplishing the mission, the condition of the personnel, equipment, etc. Moreover, regardless of the occasion, some of the planes should always be kept in reserve and care must be taken that there be no obstruction to activity on emergency occasions.

The squadron leader, when deciding upon the procedure for reconnaissance, shall decide upon the suitable time, methods, planes, and formation, in accordance with the objective, the area limits, and the strategic points for reconnaissance and following the articles on reconnaissance, so that he may be able to receive the most timely and accurate report.

When the assignments have been decided on, the plane crews should be informed of the objective of the reconnaissance and the plans of the squadron leader insofar as it is possible, and also it is necessary to complete the preparations of the crew by instructing them in the general battle conditions, the condition of the enemy, weather and other necessary matters.

Special instructions shall be given for long distance and night reconnaissance.

The duties which should be explained to the crew should be made as simple as possible although they may differ with the objective of the reconnaissance, the relative difficulty of accomplishing the mission, and the technical work of the members of the crew.

Special instructions shall be given for long distance reconnaissance and night reconnaissance, and at times when they are going into an area where enemy fighters prevail.

When it would be difficult for the squadron leader to grasp the true picture by means of one reconnaissance - for example, when it is necessary to repeat a reconnaissance of the identical object, or when it is necessary to carry out reconnaissance by several methods and different planes at the same time, or when it is necessary to determine whether conditions have changed with the passing of time - he shall carry out intermittent reconnaissance depending on the abilities of the crew and the relative difficulty of accomplishing the mission. These reconnaissances shall always be appropriate to the existing conditions. Moreover, if necessity demands, the squadron leader himself shall go on the mission and perform the important duties, or he shall look over the entire picture and give precise instructions to the squadron.

When on a mission, the squadron leader shall get a grasp on the whole situation and shall give consideration so that there will be no hesitancy in giving his orders to the squadron at crucial moments.

Orders

When the squadron commander assigns duties to the squadron members, he shall issue the appropriate orders from among the following items:

Enemy's situation, our situation, and the plans of the regiment commander.

Plans of the squadron commander.

Objective which the crew should attain.

Boarding classifications (TN: order of boarding?) and planes to be used.

Methods of carrying out duties.

Time of take-off, time of arrival at objective, points passed over and time of passing.

Relations and cooperation with other sections of the air force.

Reports, dispatches, communications, etc.

Photography

At times when orders are given for special photographing of a certain area or target, the squadron commander, following the plan of the regular regiment commander, and giving consideration to the conditions and activity of our own and enemy fighter units, condition of anti-aircraft fire, climate, weather, etc, shall decide on the suitable time for photography and shall make the assignments so as to accomplish the mission in the shortest possible time.

When the squadron commander is to have photographing done of special area or targets, he shall issue the necessary orders on the appropriate items of the following list:

Objective: Area for photography; that is, the principal points and the order of photographing.

Rules of Photography: Scale (teishaku); (in case of oblique photography altitude at which photograph is taken, angle and direction); kind of camera to be used; vertical and horizontal depth; time of photographing; kind of film, etc.

3. Investigation of Flight Situation

Upon investigating the situation of enemy flights it is necessary to effect especially systematic investigations not only by concentrating on the area wherein the enemy's presence is expected, in view of their speedy mobile movements, but also by investigating at the same time the whole range concerned, or repeating timely investigations against the enemy in a certain area; it is likewise necessary to promptly attain the objective by endeavoring to baffle enemy's expectations.

It is therefore essential to select properly the time of departure, course, altitude, etc, so as to be able to reach the target or the air over the objective, keeping our plan in complete secrecy, and taking into consideration weather, activities of enemy fighters, disposition of the enemy airfield, situation of radar, lookouts and air defense organization, topography, etc.

The more limited the time during combat for reconnaissance and the more limited the area to be investigated, the more worthwhile it is to carry out investigations in force, especially in the case when aerial supremacy combat does not develop as expected. This is the reason why every effort should be made with strong will and proper disposition in order to obtain intelligence.

a. Reconnaissance of Enemy Aerodromes Prior to Attack by Air Units

In reconnoitering an enemy aerodrome before attacking it, it is necessary to ascertain the types, number, disposition, and activity of the planes, aerial defense facilities, weather conditions and so on of the aerodrome. It is of the utmost importance that our plans should not be disclosed prior to the attack either by these reconnaissance activities or by communications.

b. Reconnaissance of Secret Airfields

In reconnoitering secret airfields, it is necessary to seize the initiative, taking advantage of favorable opportunities and carrying out continuous reconnaissance of areas suspected because of the conditions of enemy plane activity, the direction from which planes leave and return, general topography, the situation of communications network, the movement of transport vehicles. Also care shall be taken to tail the enemy planes at this time, to

reconnoiter the places where they land, and to carry out aerial reconnaissance of suspected areas.

c. Reconnaissance of Enemy Air Forces in the Rear

In reconnoitering enemy air forces in rear areas, it is essential to maintain surveillance over airfields, while either carrying out repeated and systematic reconnaissance against areas suspected of being used by him, or verifying their location. It is necessary to ascertain the location of enemy planes by endeavoring at this time to discover particularly airfields which the enemy has concealed.

d. Reconnaissance of the Status of Restoration of Enemy Air Strength

In reconnoitering the status of restoration of enemy air strength, it is essential to make wide reconnaissance of airfields and to make such dispositions that the time and methods of our reconnaissance are unsystematized. It is necessary to ascertain at this time the status of repairs to airfields, of changes in number and kind of planes (particularly whether or not there are new models of planes), of the collecting of various kinds of materials, the strengthening of installations, and of activities of air defense forces.

e. Reconnaissance of Night Airfields

In reconnoitering night airfields it is necessary to ascertain whether or not there are enemy air forces at these fields and endeavor to perceive the indications of their transfer. For these reasons it is essential to suit the time of reconnaissance particularly to the objective.

f. Reconnaissance for the Purpose of Interception or Pursuit Attack

The squadron commander will determine the essentials concerning the items listed below for interception or pursuit attack in accordance with the plan of the air division commander, and will pass on this as well as the interception and pursuit attack plans of related forces to the forces under air command:

The essentials of the reconnaissance and patrol limits of each Chutai.

The essentials of the cooperation of each air brigade.

The essentials of the collection and transmission of

intelligence.

The essentials of the degree of preparation and duties.

Arrangements for signals.

All other items of importance.

In the case of enemy attacks the squadron commander will immediately pursue the main enemy force and he will have reconnaissance carried out of the field to which the enemy is expected to return to clarify the condition of the enemy's return. The pre-battle limits of reconnaissance will be as ordered by the air division commander.

4. Reconnaissance of Land Conditions

In the reconnaissance of land conditions it is essential to have the time of attack, place and orders fit the condition of the target, the adjacent topography, the status of AA installations, the weather situation, etc, and to have close liaison with the attacking force.

When reconnoitering an enemy mechanized force, early discovery is essential, and fitting the time, place and orders for attack in with the adjacent topography and the weather is paramount.

In reconnoitering any type of communication line, troops in movement or agencies of transportation, if a fit time and place for interception or attack should be determined, it is absolutely necessary to use caution in the method of attack.

When cooperating in the operations of an airborne raiding party, it is customary to perform the following duties:

While preparing for the engagement survey the occupancy of the target, jumping and landing areas, condition of the enemy, especially his air force, AA equipment, topography, weather conditions, etc.

While operating in the engagement, reconnoiter the enemy's situation and weather conditions immediately beforehand and, on occasion, act as guides for the raiding party.

After the jump and the landing, survey the jump situation and reconnoiter the enemy's local lookout precautions and the activity of his mechanized forces in the target area, etc.

During the return of the first section of the raiding party and during the activity of the second and subsequent sections, survey the weather and the status of enemy planes in the operating areas of those forces.

5. Reconnaissance of Landing Points and Surface Targets

In the reconnaissance of landing points it is usual to rely on photographs, not only for landing points on the coast but also when considering engagements after the landing. It is also necessary to survey such things as the width and contours of the landing point, especially whether or not the topography is suitable for cover, and the possibilities for a communication net. At this time the occasion and methods for the reconnaissance should be formulated.

Secrecy of plans must be maintained and because of this, if more than one flight is required, it is essential to complete the contact after a lapse of a few days.

Essentials of general reconnaissance of surface targets or extensive land areas take into consideration the purpose of the reconnaissance, the type of target, the weather, the formation of the coastline, the position of existing airstrips, etc. Lay plans thoroughly with reference to the applicable items among the following points and allocate flight personnel on the basis of them:

Reconnaissance limits and occasion.

Reconnaissance methods, altitude and number of planes.

Basic points of the reconnaissance.

Utilization of all fundamentals of navigation.

Essentials of operation after target discovery.

Various points related to navigational aids.

In the selection of the method of reconnaissance of surface targets or extensive land areas, consider the type of target, the topography, the formation of the coastline, the position and number of the island's basic points, the weather, etc. Use precaution so that there are no gaps in the reconnaissance and extend its scope by facilitating navigation.

In the reconnaissance of surface targets or extensive land areas, consider the general situation and the degree of light or darkness. Pick an opportune hour for the reconnaissance. In the

reconnaissance of active (i.e. moving) targets, attention to any and all movement within the area is necessary. Because of this, it is necessary first to try to perceive the situation as to the enemy's first and last night patrols and judge their direction before landing.

When reconnoitering surface targets, try to locate the enemy warships in the daytime. The need of maintaining secrecy in your approach, moreover, is absolutely essential so as not to drive him away. Because of this, always insure liaison with aircraft in the area. By readying shadowing planes as required you will lose no opportunity. Have relief planes in the air, or calculate the enemy's position for the following dawn by determining his course and speed at sunset, or transfer the shadowing to a related air force.

6. Reconnaissance of Strategic Areas from the Standpoint of Rear Communications Lines and Political (Military) Expediency

In the reconnaissance of strategic areas from the standpoint of rear communications lines and political (military) expediency, it is essential to reconnoiter such installations as railroad bridges, railroad stations, post and bay communications installations, important communication points, connecting airfields, and government and manufacturing establishments, and all other weak points easy to attack. All of these should be considered in connection with the state of the enemy air arm and the existence or non-existence of fighter planes, the arrangements and status of AA installations and weather conditions. Take care that all of these contribute to the time of attack and to the decisions on the methods.

In the reconnaissance of strategic areas which are distant, the squadron leader will make the duties especially simple, and, taking the weather situation into consideration, will decide the time and operation of the reconnaissance.

7. The Essentials of Intelligence Reports

Squadron leaders will examine intelligence reports immediately upon receipt thereof and, losing no opportunity, will report and pass them on to the interested commander. In the examination of intelligence reports, the squadron commander will take into consideration the occasion and method of reconnaissance and will judge on the validity and worth of the report. He will study and compare old and new intelligence data and make certain of the accuracy of the intelligence. On the occasions when the expected objective cannot be met through intelligence at hand, it is essential to attempt to grasp the real situation by means of further reconnaissance.

In regiments, such things as battle results and results of reconnaissance of enemy air strength, things which are essential to battle strategy immediately afterward will be reported in succession without waiting to complete an examination or make a full report. Make a complete report on this and attach it to intelligence gathered over a certain period of time.

Despite the fact that reports and dispatches are made from planes, immediately upon landing a checked report will be made, to which will be appended a summary.

There is important value in hearing the actual accounts of the flight personnel, and for this reason the squadron commander will dispatch the flight personnel to the related commander, according to circumstances, where they can make a direct report.

In order to examine intelligence reports, the squadron commander will consider the time of the intelligence and method of the intelligence obtained by each squadron, or will listen to direct reports of flight personnel, or will examine aerial photographs and will judge the degree of reliability. Secondly, he will collect and compare these and the intelligence of related persons and judge it all together.

III Surveillance of Enemy Intelligence

1. Introduction

The aim of the surveillance of enemy intelligence is the surveying and searching out of enemy activity. Together with utilizing the results of every force, and especially the air force, to the best opportunity, we can use the assistance of reconnaissance and guarding. The searching out (TM: saku/nawa shutsu/deru) of enemy movements is the designation for the surveillance of enemy intelligence by use of electric warning devices.

Surveillance of enemy intelligence depends on AA observation, search by radar, patrols, and air-borne observation, etc. AA observation is entrusted to the air intelligence regiment observation squadron, and to the air sector force. Search by radar is entrusted to intelligence regiment search radar squadron. Patrols are divided into certain air areas or sea areas and have the meaning of "looking out" for the appearance of aircraft or vessels.

Airborne observation is principally carried out over enemy airfields and is the designation of action which surveys the movements of enemy planes and is always the responsibility of the air reconnaissance squadron bomber command.

In the surveillance of enemy intelligence it is absolutely necessary to consider the special characteristics of AA observation, search by radar, patrols, etc, and all manner of preparation is essential so that these characteristics cause no hindrance.

When observing enemy intelligence, difficulties of identification on our part are usual and, because of this, the rules concerning actual flying and identification by air force commanders and below and identification of planes must be strictly observed and information on all movements must be passed on to related intelligence agencies.

Because patrols and airborne observation consume a large part of our fighting strength, we must guard against abuse of them. Moreover, we must pay strict attention to the secrecy of our plans.

Upon the discovery of the enemy, aircraft responsible for patrol or aerial observation will, in the absence of specific orders, approach the enemy and ascertain clearly his activity.

2. AA Observation

AA observation is carried out by a network of systematic observation built on the air intelligence regiment, intelligence squadron, and AA observation agencies for national defense, and is performed locally by air sector forces and air defense forces.

The principal methods are by lookouts and listening posts.

Identification of aircraft is in the main quite difficult, but in practice it is necessary to inform AA observation agencies of activity by any air force in accordance with the rules for intelligence duties as determined by the senior commander. On the other hand, because of the secrecy of plans this cannot be passed on to the most distant observation posts.

The AA observation net accompanies changes in operations, losing no opportunity. Its advance and disposition are revised so as to respond to any situation immediately. Operational changes, then, must be taken into consideration, and it is essential to have fluid preparations.

It is usual for AA observation agencies to inform or report collected intelligence as quickly as possible to the interested or related commanders and, except for cases where there are special orders, detailed examination is not performed.

Intelligence collected by AA observation agencies often result in a jumble of activity by air forces, and so, in order to

use this information to advantage, it is necessary for a reliable examination to be made by the senior air commander or the utilizing force.

When assembling intelligence taken by surface AA observation agencies over a certain period of time, you can utilize the intelligence which has value pertaining to enemy activity.

In order to plan the quick delivery of intelligence it is necessary to use precaution when depending on liaison other than intelligence liaison or methods other than communication intelligence, and when using these, be careful when utilizing night periods or periods of communication quiet.

3. Search by Radar

The important points, in general, are the same as in AA observation.

Search by radar is conducted by the air intelligence regiment security squadron.

The security squadron comprises the backbone of the intelligence net of the air intelligence regiment, and while it is responsible for the surveillance of enemy intelligence by means of search radar, it cooperates directly in the engagements of the air force with required personnel as the occasion demands. When necessary it leads the air force.

Search radar makes possible the picking up of the enemy with certainty at great distances as well as the ability to judge his direction and distance. Also it is little affected by weather phenomena. Even though there are points of advantage because of dead spaces, fixed reflection, and initial impulse reflection, there are areas where search is impossible or difficult. Damage to mechanical equipment is easily inflicted by enemy attacks. Moreover, there is the disadvantage of being unable to fix accurately the enemy's altitude and strength, etc.

AA observations by radar search receiver demonstrates its ability to pass on intelligence with utmost rapidity. For that reason, commanders will decide on a method and will perfect communication liaison appropriate to the conditions of actual intelligence communications. Especially is it necessary that no time be lost. On this occasion, together with the utilization of electric waves, there is the ability to pass on intelligence with utmost speed by means of extraordinary intelligence arrangements.

The examination of intelligence and the transmission of it in radar intelligence duties are carried on simultaneously. It is necessary to guard against delays in transmission due to examination. Squadron intelligence results should be transmitted immediately.

4. Patrols

Patrols, in the main, are conducted against enemy planes and ships which are operationally in ambush or adjacent waters, and reconnaissance units and heavy bomber units are usually responsible for them. When occasion demands, other forces also join in.

The squadron commanders will consider the entire situation on the basis of previously obtained intelligence when carrying out patrols against enemy aircraft and, judging the attitude and course of the enemy planes expected, they can determine the essentials and time of the patrol, especially the patrol limits, and course, standard altitude, time of return and time and gist of reports and dispatches. In patrolling, patrol planes will maintain the secrecy of communication liaison between the air field and the patrol plane, the related forces, the defense forces and the navigation aid force. Information obtained from related forces will be passed on at a suitable time. All of these things are necessary to facilitate the carrying out of patrols.

Patrols against enemy vessels are the same as reconnaissance of surface targets.

When shadowing an enemy force which is in progress, it is simple to observe him and, moreover, you can maintain the secrecy of the presence of your own plane, but along with the selection of your position you must judge the enemy's position, strength, movement and especially the importance of the force. And never forget the important points of reconnaissance. Be careful not to be taken in by the enemy's deceptive movements. Keep a particularly strict patrol during these operations and plot the positions of your own plane.

When shadowing an enemy force immediately after discovery take as a basis the enemy's course and speed and judge his anticipated position after a lapse of time. It is usual to sortie against this intermittently. At this time plot the enemy's course and speed precisely, and move in such a way as not to disclose your own shadowing plans. Consider such things as the weather conditions of the moment, especially the degree of visibility, the direction and height of the sun and your operational limits. It is essential to shadow from a great distance and a high altitude. This is especially important against an enemy striking force which is using planes.

5. Airborne Observation

General essentials are the same as in paragraph 4 (above).

In order to carry out aerial observation, the reconnaissance unit commander must consider the purpose involved and will usually indicate the airfield to be surveyed, and either the time or time period for the reconnaissance, and will leave the necessary squadron charged with the responsibility.

In cases where airfields are to be surveyed, he must consider the object of the reconnaissance and the status of the activity of fighter planes in the vicinity of the airfield as well as the general situation of the enemy. And it is essential for him to decide upon the target, the essentials of the operation, the time and method of reporting, and reports.

IV WEATHER

1. Introduction

There is a very close relation between the weather and the activities of aerial navigation and air forces, and this, taking advantage of an advantageous situation, is the foundation for the display of the strength of air forces.

For this reason, commanders, and more especially air force commanders, will be completely equipped as far as weather is concerned, and they will insure close liaison with weather units which are located in their vicinity. Weather units will cooperate positively with air forces so that no possible advantage will be lost.

It is essential that air forces and related weather units be coordinated and the special characteristics of the weather in general at the operational area be made clear rapidly, based on study of weather statistics. Required weather information should be assembled in order to carry out planned engagements (duties), and so that no opportunity will be missed.

In utilizing weather intelligence, air force commanders must consider the status of their force with its duties as a foundation, and judge the weather accordingly. Because of this, he must survey the weather conditions in the vicinity of the objective as well as along the necessary route in order to carry out a raid. It follows that even in cases where the weather is bad he can turn to advantage a good forecast of change or use advantageously the local weather.

In weather estimates of air force commanders you must add to the expert judgment of weather agencies your own duties, the

enemy situation, condition of forces under your command, etc, for there is naturally a difference in forecasts by weather agencies.

Air forces (planes) will announce weather conditions while operating unless there are special orders, and will pass weather information on to related air forces.

2. Weather duties

Concerning weather duties, see the Weather Training Manual, in addition to this section.

The essentials of weather duties are the assembling and putting in order of data on the actual weather conditions in the desired area in as short a time as possible, depending on accurate weather observations and accurate and rapid reporting. The results of uninterrupted study and observation over a long period are best. Actual weather forecasts over a long period are a great assistance in operations to senior air commanders and so, on behalf of the air forces, offer weather information which is concrete, accurate and necessary so that the fighting strength can be manifest without hindrance.

Weather duties consist of observation, forecasting, examination and reporting and the purpose of these duties is to do them in such a way and at such a time as to make possible the utilization of their results by all forces.

The essentials of observation are the accurate, well-timed observation of weather in the upper air and directly over the surface, and the rapid putting into order and announcing the result thereof.

The essentials of forecasting are the collecting of information on varied types of weather, and having its conditions and movements made clear, and the accurate and timely judging of the weather according to the various types. The essentials of examination are the collection of data on all types of weather, and with these statistics in mind, to grasp the special characteristics of the weather and judge the various types.

The essentials of reporting are to establish a communication chain with each force and to carry out the accurate and rapid passing on of information as well as to conduct the transmission of time and weather reports accurately and at the proper time.

In assembling weather intelligence, besides depending on weather observation, weather reports of adjacent weather agencies, weather reconnaissance and spy reports, etc, assemble it by examina-

tion and utilization of weather statistics. For this reason, besides relying on weather agencies (weather units and special weather agencies) and air intelligence forces, if the occasion demands, have the weather situation over the enemy area surveyed by reconnaissance units. Assemble and put in order current weather data collected by the air forces and put it to practical use. It is essential to put weather data of the enemy area to practical use, and with a chart of the actual weather situation at the time of advance and a survey of the condition in the enemy area as a basis, judge the situation carefully and be careful not to be deceived by the enemy.

Weather intelligence is transmitted mainly by weather reports or weather charts and weather charts of particular areas. Weather reports are divided into reports of actual weather conditions and weather forecasts. Reports of actual weather conditions are divided into announcements of the situation in a particular place at a particular time, and reports of conditions in general -- of air currents, the upper air, navigation, etc -- to aid in making plans.

General weather reports are divided into flashes and complete reports according to the purpose of use, and into overland and overseas, according to contents. They assist in the judging of weather and in the construction of weather charts.

Navigational weather reports are frequent flashes of actual weather conditions in the necessary area and principally they are helpful to the activities of air forces.

Reports of weather conditions in the upper stratum report the atmospheric pressure, the temperature (atmospheric) and the temperature, etc, and reports of the condition of weather currents report the wind direction and speed respectively at particular altitudes. Besides being quite helpful to the actions of air forces, these reports are especially helpful in judging the weather generally. Weather forecasts are divided according to the length of the desired space of time, short-term forecasts (one day for example), or long-term forecasts (several days) and warning forecasts.

In short-term forecasts, needs from a strategic point of view must be considered, and usually the area required is divided into appropriate limits. Report clearly in accordance with the appropriate items of the following list and with a view to subsequent changes: weather, temperature, wind speed, visibility, clouds, fog, rain, electric storms, dust, dust storms, icing, etc, at the suitable time, as morning, afternoon, evening (and evening divided into PM and AM) dawn, dusk, etc.

In long-term forecasts report as in the foregoing and judge the general trend of weather changes for each of the several days, and where possible, judge the changes for that week.

In cases where you must judge the origin of phenomena which have an important influence on strategic operations, such as gales, snow storms, river floods, freezing of planes, dense fog, electric storms, dust, and the like, send out warnings to every unit in ample time. In weather broadcasts, plan speed and simplicity in communications with a fixed type of code as the basis. Consider enemy intercept and change the code in use from time to time and devise arrangements which will deceive the enemy.

Time dispatches are broadcast according to a fixed method giving correct time at fixed intervals each day.

Weather duties are the responsibility of required and established weather agencies beside such units as air intelligence units, air forces and weather units under the control of the supreme air commander. The general setup of weather units is decided by the supreme air force commander, taking into consideration the setup and liaison of adjacent weather agencies. In cases where the location of weather agencies of various weather units is the same as an airfield, it is essential that the senior officer present plan correlating weather duties by coordinating the various weather agencies as occasion demands.

3. Weather Reconnaissance (Headquarters Regulations)

Air force commanders make a study of the weather situation which is necessary for frequent attacks, and for this study headquarters reconnaissance planes are often used. On these occasions, it is necessary to make up methods which will facilitate the progress of the reconnaissance plane and to ensure communications liaison.

As for reconnaissance of weather conditions before carrying out an air attack, an understanding of probable changes based on the current weather conditions is essential. For this reason, with a judgment of the weather in general as a basis, you should determine the course of reconnaissance and the points of importance as far as possible, the altitude, the time of reporting and the essentials. According to conditions at this time, several planes should be sent out in all directions.

In reconnaissance of weather conditions at night, fix especially the points to be searched and make clear the weather conditions at these points. It is necessary on such occasions to thoroughly study such things as the special characteristics of the weather and the contour of the land area.

V ESPIONAGE AND COUNTER-ESPIONAGE

1. The Purpose of Espionage and Agencies Charged with Responsibilities.

Even though systematic agencies of a special nature are usually relied upon for espionage duties, each force, also, should exhaust all obvious methods in seizing every opportunity and should do their utmost to acquire intelligence data. On behalf of air strategy, besides learning especially of the movements of enemy air forces, it is essential to know the status of air establishments and their reserves as well as the status of the enemy's rear communications lines and his important points from the standpoint of assault, the status of air bases, the weather, etc. The seizing of technical data is of special importance.

2. Important Matters from Standpoint of Espionage Duties

Espionage duties should be planned so as to be adaptable to the national characteristics of the enemy, to the characteristics of people in operational areas, and to the progress of the fighting. It is necessary again to make known and clear the true status where enemy propaganda is concerned. The sentiment of the people is greatly affected by espionage activities, and so take care to utilize their institutions and attitudes in your espionage work.

3. Espionage Methods

By intercepting radio broadcasts and listening in on wire communications, it is possible to obtain important information. The learning of the status of enemy air forces radio communications and the contents of these communications is the most important data from the standpoint of judging the enemy's plans, his strength, his dispositions, the status of his movements, and the like. On gaining secret information or seizing enemy military codes, rules concerning communication, or abbreviated language (TM: lists), it should be passed on to the highest commander immediately.

Since such things as the words of prisoners, documents either carried or deserted, maps, ordnance, materiel and especially aircraft, materials for chemical warfare, enemy bombs (shells) fragments, etc, are important intelligence materials, it is essential to collect and utilize them.

In cases where enemy airfields are occupied or air establishments are occupied or enemy planes are seized, you should take all types of intelligence materials and utilize them so as to establish the relation between ground groups and the air force.

Listen to the inhabitants and seize documents and correspondence from newspapers, communication papers, radio stations and post offices, communication stations, public officials, hotels, etc. Besides this, when judging signs of any type you should be able to search out important items. Besides the necessity of reconnaissance forces and patrols seeking such data, all forces should also try to collect them. In some cases it is difficult to read documents, and here it is necessary to be careful to examine them and record them as instructed.

When a prisoner is taken, seize any documents he may be carrying and if necessary question him on the important items. Send the documents and any answer to the senior commander, remembering to make clear the time and date and place of the capture. Use a different place for the questioning of different prisoners and judge the validity of the situation by the unity of what they declare. The items most important in questioning prisoners are as follows:

Force to which assigned, its duties, airfields, organization, equipment, fighting methods, newly supplied material, latest orders, his unit, connection with other forces, name and location of senior commander, fighting fitness, special training performed, status of supplies, height of morale, quality of the organization and the topography of the area in its operational limits, as any or all of these fit the situation of the moment. In cases where there is little time to spare, it is essential to ascertain his unit and its position. If you use information previously obtained when questioning a prisoner you should be able to obtain a much greater result.

When observing the details of the inclinations and attitudes of residents, the establishments of enemy airfields, the conditions of his concentrations, his encampments, traces of stop-overs, communications, methods of arranging communication agency, rules or methods of destruction, etc, you should be able to obtain proof of the enemy's intentions, so turn the observations to advantage.

Spies should be able to obtain great results when used properly. Careful attention to prudence is essential in thus employing. Make clear to them what we wish to know, but never inform them of our objectives.

Make duties given to spies as simple as possible. It is best to send more than two people, who have been given various duties for the same objective, separately.

Our spies who come from the enemy's direction will not be

questioned, but will be taken under guard to the headquarters which dispatched them. The treatment of persons suspected of being enemy spies will be exactly the same.

4. Counter Espionage

Since the enemy is also carrying on ceaseless espionage, all classes of officers will always be on strict guard and will anticipate the enemy with counter-espionage. In order to prevent enemy espionage and to avoid leaks in military secrecy, the highest ranking officer will establish regulations for important matters, and it is essential that these be strictly observed.

There are many leaks in private communications of military secrets and for this reason it is essential that no person record our military plans, situation, force symbols or points, nor the time and day, in private communications. Because of this, each force commander will inspect the private communications of all under air command. In operational areas, residents also will frequently use pre-arranged signals, radio communications and carrier pigeons to carry on espionage activities. For this reason superintendence of their activities by careful attention to details is essential. They must be controlled strictly.

Since instructions, etc, are given to persons boarding planes, to prevent such information from falling into enemy hands either give the instructions orally, or avoid any recording of items having to do with our objectives or activities, or have the person burn the orders as soon as they are understood.

Flight duty personnel will pay especially careful attention to the maintenance of secrecy and will strictly observe the various rules. In the event of accident they will be extremely careful in the disposition of secret equipment and documents.

Translation of Chapter III (Intelligence) of the Japanese Army Aviator's Handbook, dated March 1944.

III INTELLIGENCE

A. Introduction

25. Air Force during combat will collect pertinent intelligence concerning enemy situation, weather, technique, etc, necessary for the prosecution of the war. Intelligence must be distributed quickly so as to be of use. Collection of intelligence is especially useful concerning changes in enemy air forces situation.

26. Main methods of collecting intelligence are: reconnaissance, observation of enemy situation, weather data, and spy reports. Since these are closely related, cooperation is essential. It is especially important to use scientific methods.
27. Intelligence concerning enemy situation, weather, etc, collected by individual units in combat will be used in addition to that collected by regular intelligence agencies.
28. As soon as an intelligence report is disseminated, or as soon as several reports are examined together, such details as various intelligence items, war situation, and feasibility of communication are considered and decided upon.
29. In order to make a quick and accurate intelligence dispatch, it is important to maintain and to put into operation the communication facilities, and also utilize all communication measures. Moreover, it is important to utilize photography and other scientific measures.
30. On utilizing intelligence, the origin, the period of data and the method of assembling information must be made clear. It is essential to determine the truth and the value of the intelligence. While one must be careful to consider this information scientifically, he must, at the same time, observe minutely the small matters because this is the key to intelligence.

Article 1

31. The duty of reconnaissance is principally that of the reconnaissance unit. However, each unit must carry out its own reconnaissance necessary for battle. Reconnaissance depends on inspection, photography, and radio equipment, etc, or the utilization of all these means.
32. In reconnaissance, one must consider the purpose, kind of target, and the progress of the battle, thereby taking advantage of the time and the method. It is important to take the enemy by surprise as much as possible and to achieve quickly the purpose. However, depending on the situation, it is important to plan the removal of enemy defense and to carry out

the reconnaissance.

33. In reconnaissance, it is extremely important to endeavor to compare the past situation with the present and especially to make clear any such changes.
34. Detailed reconnaissance at night is very difficult. However, by utilizing the information obtained in the daytime, one can carry out reconnaissance at night. It is vital to note the changes in the enemy situation and endeavor to learn the enemy plan. In night reconnaissance, it is important to make minute preparations, to utilize radio equipment, and to not be caught off guard by the enemy.

Article 2 - Observation of Enemy Situation

35. The purpose of observing the enemy is principally to observe the enemy movements and to search out their actions. Every unit, especially the air unit, must not lose the opportunity and use the resulting information, while at the same time make provisions for reconnaissance and defense.
36. Enemy situation observation depends on lookouts or spotters, radar, air reconnaissance, balloon lookouts, etc.
37. In observing the enemy situation, it is very difficult to differentiate between friend and foe, and because of this reason, it is important that all air unit commanders and under must obey all regulations on plane recognition, air operations, etc. At the same time, it is important to report movements at that time to related intelligence units.
38. Air reconnaissance and balloon lookouts decrease the battle strength, so one must endeavor not to utilize these means unless necessary, and be careful of the reconnaissance plan's secrecy.
39. When the reconnaissance planes and balloon lookouts discover an enemy, they will, without any special order, make the movements of the enemy clear by approaching him.

Article 3 - Meteorology

40. Meteorology possesses a vital relationship to the

operations of the flying unit in the air corps and the detailed study and its utilization is fundamental to the demonstrative achievement of the air corps. The commanders in the air unit will possess sufficient knowledge of meteorology and guarantee liaison with meteorological units established in the vicinity. It is necessary for the meteorological units to cooperate positively with the air units so that there will be no regrets in the use and in the detailed study of meteorology.

41. The air corps will communicate with the related meteorological units and it will speedily make clear any special characteristics related to meteorological statistical data as a basis. It is necessary to assemble the meteorological data essential to the immediate battle operation (duty-training) and to carry out the battle operation without any regret.
42. In utilizing the meteorological intelligence, it is necessary for the air corps unit commander to make duty the fundamental basis, to consider the unit situation and to execute the appropriate meteorological judgment. When it is necessary, he must reconnoiter the meteorological condition of the air routes and of the target vicinity needed in order to attack. Accordingly, it is necessary to forecast carefully the change in the event the meteorological situation is not satisfactory and to utilize advantageously the meteorology of the place.
43. The air corps (planes) will report even without order the meteorological situation observed during flight and notify the related meteorological units.

EXHIBIT D

U S STRATEGIC BOMBING SURVEY
G-2, Japanese Intelligence Section
Tokyo, Japan

28 November 1945

SPECIAL REPORT

JAPANESE PHOTOGRAPHIC INTELLIGENCE

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Lt Comdr Ezaki, senior Navy PI officer.

Introduction

1. This report has been prepared by the Photographic Intelligence Section, G-2, USSBS, in collaboration with the Japanese Intelligence Section, G-2, USSBS. It is based upon information supplied by Japanese officials available for interrogation in Tokyo, documents furnished by them, and upon information exchanged with the Air Technical Intelligence Group, and Naval Technical Mission, Japan.

Summary

2. Judged by American standards, the Japanese use of aerial photography as a source of intelligence was still in its infancy at the end of the war. Japanese Army and Navy officers did not consider photography to be useful operationally beyond the immediate tactical phase, and apparently no effort was made to utilize photographs in planning or anticipating new offensives. The few officers who did realize the possibilities of photographic intelligence met with only small successes in their efforts to convince doubting superiors.

3. Altogether a total of 18 Army officers, of which 6 were considered competent, were trained in PI techniques, and only 30-38 Navy officers were actually assigned PI duties. Emphasis in training was placed upon the identification of installations and defenses, the study of Allied base construction, and the recognition of aircraft and shipping.

4. Both Army and Navy photo intelligence officers were attached primarily to air groups where they were concerned for the most part with airfield interpretation. Reports were meager and haphazard, coordination between air groups was nil, and liaison between the Army and Navy was lacking.

5. The fall of Saipan marked a slight improvement in Japanese photo intelligence, for after that there was increased interest in the taking of photographs for the purpose of watching Allied ship concentrations and Allied base development. This increased interest was augmented by the fact that in the later stages of the war, photographs were one of the few sources of available intelligence concerning Allied operations.

6. Yet even this increased recognition did not result in any rapid advance of PI, for though the Jap photo planes Myrt and Dinah were good, they were limited in number and trained pilots were lacking. The extreme shortage of photos taken at this time is best illustrated by the fact that only 4 sorties were sent over Saipan and only 10 over Okinawa.

Photo Intelligence Organization

7. Army. The use of photography as an aid to intelligence was initially developed in Japan by the Army. Nevertheless, it was not until nearly the end of the war that the Army began to realize how important photography really was as an intelligence source. Until this time the few available Army photo interpretation officers had been scattered among widely separated air groups, with one or two men at each. These officers worked completely under the supervision of the group command and devoted most of their efforts to a study of the development of Allied air bases and to Allied plane identification. Little coordination of work was effected between the different air groups; no attempt was made to standardize reporting or to improve distribution methods; no central research organization was established for special studies on defense analysis or other specialized fields; and no central files were kept for reports and photographs.

8. After the Saipan, Iwo Jima, and Okinawa campaigns (in July 1945) when the use of photographs for intelligence purposes became more fully appreciated, an attempt was made to provide greater centralization to Army photo intelligence activities by setting up the First Photographic Operations Unit (Dai Ichi Sashin Sagyotai) under Air GHQ, Japanese Army. This unit, of company status, was to act as a center, but actually it performed virtually no operational function because of an acute lack of photographs at the end of the war. Organization chart of the First Photographic Operations Unit is attached as enclosure 1.

9. Navy. Naval efforts in photographic intelligence for the most part paralleled Army experiences. Individual interpreters were assigned to air group or fleet command where they worked under the orders of superiors who seldom appreciated the value of photo intelligence units. During the early summer of 1945, it was decided to place trained photo interpreters down to squadron level; one hundred were being trained for this purpose at the end of the war.

10. Liaison. Except for the initial training of Navy leaders at the Army PI school, no coordination of operational activities was maintained between Army and Navy photo intelligence units. Also, photo interpretation officers apparently worked most of the time in ignorance of their own group operational intelligence.

Training of Photo Interpreters

11. Army. A total of 18 Japanese Army officers were trained in photographic intelligence in 2 groups - the first class lasting from August to September 1940, and a second class finishing in June 1945.

An additional 30 officers were given some photo intelligence training but were primarily photographic technicians. Emphasis during the first class was placed exclusively on the study of air installations and air defenses, but during the second class the program was broadened to include the recognition of airfields, aircraft and shipping. No manual was used for teaching, and no mapping or other special uses of photography were included in the curriculum. Officer students were chosen because of previous interest in photography.

12. In the opinion of Major Shimada, CO of the First Photographic Operations Unit, only 6 of the 18 officers trained in PI were really competent in their job. These men were regular Army officers who (according to the Major) were fully qualified to assess military, naval, and air developments seen in photos. Because the other 12 lacked a similar knowledge of technical military matters, they were considered to be less useful.

13. Navy The pioneer work for Naval photo intelligence was begun by Lt Comdr Ezaki, senior photo intelligence officer, Japanese Navy, at Yokosuka Naval Air Group in 1940 when he studied cameras and photographic techniques under civilian experts. Following a further study of PI techniques with the Army, Ezaki and 10 others established a photo intelligence school at Yokosuka. Ezaki developed the course, its curriculum, and wrote the teaching manual used. The course (enclosure 2) included a limited study of terrain feature recognition, a brief survey of defenses, a small amount of aircraft and shipping identification, and just enough photography to provide familiarity with the problems of the photographer. Techniques used for plane and ship recognition consisted of the comparison of scaled measurements and proportions with published recognition data. Student candidates were selected and commissioned on the basis of a university degree. In addition to officer personnel, a number of enlisted men also worked with photo intelligence and in some cases became fairly proficient in interpretation techniques. As a rule, however, these men were not assigned PI duties.

14. Out of the first Navy PI class (which finished in late 1942) 5 or 6 officers went to Rabaul, 3 stayed at Yokosuka to teach, and the rest went to operational air groups. The entire second class of 20-25 members was sent to Tateyama Air Group. Although the third and final class of 30 members finished early in 1944, because there were few photos available at the time, the whole group was assigned other duties. Thus the entire PI officer complement of the Navy consisted of from 33 to 38 men.

Taking of Photographs

15. In both the Army and Navy, since there were no special photographic squadrons, photos were taken as one of the duties of reconnaissance squadrons. Photos taken by Navy air flotillas, after only a casual examination at flotilla headquarters, were delivered directly to air group or fleet command for interpretation by PI officers. Similarly in the Army, photographs went directly to group headquarters for interpretation. All photography was flown at the order of higher echelons where the men responsible were generally unfamiliar with both photography and PI; at no time were photo intelligence officers permitted to make their own requests for coverage. Although it is true that after Saipan the use of photographs for intelligence purposes became more fully appreciated, and as a result requests for coverage became more numerous and more intelligent, even then the small numbers of trained pilots and available photo planes limited the photos actually taken to practically nothing. Thus, there were only 4 sorties of Saipan flown from Iwo Jima between the fall of Saipan and the attack on Iwo, and there were only 10 sorties flown over Okinawa.

16. Photo reconnaissance planes used included Saiun or Myrt (Navy type O2), employed by both the Army and Navy, and Dinah, employed by the Army alone. Altitudes flown were generally 10,000 meters, which with a 25cm camera gave a photo scale of 1:40,000 and with a 50cm camera, scale of 1:20,000 -- both too small for accurate work by U S standards. A few sorties were flown with scales as large as 1:8,000, but these were the exceptions. Wherever possible, vertical photographs took priority. In the later stages of the Okinawa campaign, however, it was often necessary to take obliques at some distance from the target because of the increase in American AA activity, especially from ships.

17. In the Southwest Pacific, Navy planes from Rabaul flew sorties as far south as Munda and Port Moresby, but Allied bases beyond these places were covered only by submarine aircraft which took small oblique shots from hand-held cameras. In most instances, submarine photos were used by the submarines themselves for purposes of target selection and target approach.

Operational Duties of Photo Interpreters

18. The first use of aerial photography by the Japanese was made, to a limited extent, as far back as 1937 during the "China Incident." In spite of this early beginning, however, even at the end of the war in 1945 Japanese aerial photography and photographic intelligence, judged by American standards, was just getting started. The fact that the Japanese have at no time considered photography to be a source of intelligence beyond the obvious

immediate tactical phase is an excellent illustration of this arrested development. Apparently no effort was made to make photography useful in planning or anticipating operations.

19. Early Stages of War Photo intelligence officers were in limited use at Guadalcanal, with the emphasis of their work placed upon the study of U S construction and development activity and lesser attention given to studying vegetation, terrain, and defenses. Although these studies were hardly out of the experimental stage, an attempt was made, using periodic cover, to study the progress and changes in U S positions, especially airfields. These efforts were greatly curtailed, however, by insufficient photographs and insufficient understanding on the part of Japanese leaders.

20. Photo interpreters attached to Navy headquarters in Java (1943) were similarly concerned with watching Allied construction activity, particularly the development of airfields in Australia. Some work was done in the use of aerial photographs on a strictly sketch basis for mapping and plotting hydrographic information. All of this data was sent either verbally or by memo to headquarters, but no specific work was requested from headquarters nor was any information in regard to operations and plans passed out to the PI section.

21. As was the experience of Navy interpreters at Guadalcanal and Java, Army photo intelligence officers had their work limited throughout most of the war in reporting on airfield progress, AA defenses, and general development activity at Allied bases for strictly air group purposes. Little target work was done, and reports often consisted merely of mosaics annotated by the interpreter and sent to the appropriate air group section. In the opinion of Major Shimada, there was no work done by the Japanese Army prior to the loss of Saipan that could really be called photographic intelligence.

22. After Saipan, interest in photo intelligence became more marked, for (according to Major Shimada) from this time until the end of the war, photographs were practically the only source of information available concerning Allied developments. A similar change in interest and activity took place at the same time in Navy photographic intelligence.

23. During the Iwo Jima and Okinawa campaigns, both Army and Navy photo interpreters placed greater importance on the recognition of ships and aircraft. Ships were identified by name and type whenever possible, with carriers being considered of first importance, BB, CA, CL, DD, and DEs second, and landing craft third. No attempt was made to keep a record of ship movements, nor was any other work done in regard to shipping.

24. Occasionally during this period of increased activity, efforts were made to estimate personnel complements at Allied bases. As an example, one Army unit estimated that at Saipan, after the beginning of B-29 operations, an equivalent of 12 companies was concerned with all aircraft activities.

25. Interpretation of Defenses Camouflage of Allied installations was not considered to be a hindrance in identification except in the case of dispersed aircraft early in the war and of AA defenses at Okinawa. Lt Comdr Ezaki, senior naval PI officer, felt that his men had been able to pick up AA defenses and in most cases to identify them relatively accurately. The same feeling was not true of ground defenses, however. Also, although both the Army and Navy often tried, neither was able to pick up electronics installations at the scale of photography available. Command centers were sometimes located by deduction from track activity.

26. Reporting Methods in both the Army and Navy apparently varied with each unit. As previously mentioned, some reports were verbal, some were by memo, and some merely consisted of annotated photographs. Sometimes PI information was used verbally during pilot briefing, and in a few instances photo copies were sent along with the pilot on sorties.

27. Distribution of written reports was usually limited to the chain of command in the air group in which they were prepared, and there seems to have been no general effort to improve this technique of dissemination or to effect liaison between air groups and higher commands for either reports or photography. Some improvements were made in Army reports after Saipan, when about 50 copies were made and sent to operations at Air GHQ for further distribution. Also at this time a weekly intelligence summary was circulated among Army PI officers, to make them more aware of their relation to both specific operations and the general war picture.

28. U S Fields of PI not Entered by the Japanese: Ezaki and a few others in the Navy recognized the possibilities and desirability of research in such phases of PI as accurate terrain appreciation and water depth determination, but had not been able to do any actual work along these lines. Similarly, target selection work and damage assessment were not attempted, principally because of the lack of regular photography. Only on infrequent occasions were POW reports checked by means of photographs.

29. No serious efforts at mapping from aerial photographs were made, except for a few attempts in the South Pacific area done largely by the Dai Nippon Development Company, using Army planes and equipment.

Photography

30. Cameras most widely used in Japanese photo planes were 25cm and 50cm focal length copies of the U S Fairchild K-8, which had been developed by commercial concerns and accepted by both services. The standard photo plane, Myrt, carried fixed mounts for automatic operations and could take 110 exposures per magazine. No provision was made, however, for variable angle mounts or for oblique photography, except by hand held cameras.

31. Although Japanese photography was technically good, photographic supplies, especially film, became critical as the war progressed and added another factor to the curtailment of photos taken.

32. No effort was made to manufacture special mobile photo labs for Naval shore-based units. In fact, the few labs used were located in tents or other available housing, and supplied with only small developing tanks, and other limited equipment. Ships, especially carriers, possessed photographic laboratories, but as far as is known, none was used for reconnaissance purposes.

33. Although a little color work was done near the end of the war, Japanese color photography was still in the experimental stage and was not seriously considered operationally.

Bibliography

34. The following interrogations of Japanese officials by USSBS have been used as reference material in the preparation of this report:

Lt Comdr Ezaki, IJN, Senior Photographic Interpretation Officer.

Major Shimada, IJA, Commanding Officer, 1st Photographic Operations Unit, IJA.

Mr Hotta, Optical Physicist, Optical Section, Branch Arsenal of 1st Naval Arsenal, Yokosuka.

Captain Shibata, Bunzo, IJN, Operations Officer of the 21st Air Fleet under the 11th Air Fleet at Rabaul.

General Kawabe, Commanding General, Air GHQ, JAAF.

Lt Gen Arisue, G-2, Army General Staff.

Rear Admiral Tomioka, IJN, Naval General Staff.

Col Miyashi, JAAF, Operations Officer, Air General Staff.

Captain Ohase, Chief, 1st Section, 1st Dept, Naval General Staff.

Lt Col Matsumura, JAAF, 10th Air Division.

Comdr Okuniya, IJN, Naval General Staff.

Comdr Nakajima, IJN, Staff Intelligence Officer, Hq, Combined Naval Forces.

Comdr Terai, IJN, Naval General Staff.

Comdr Yokura, IJN, 5th Section, Naval General Staff.

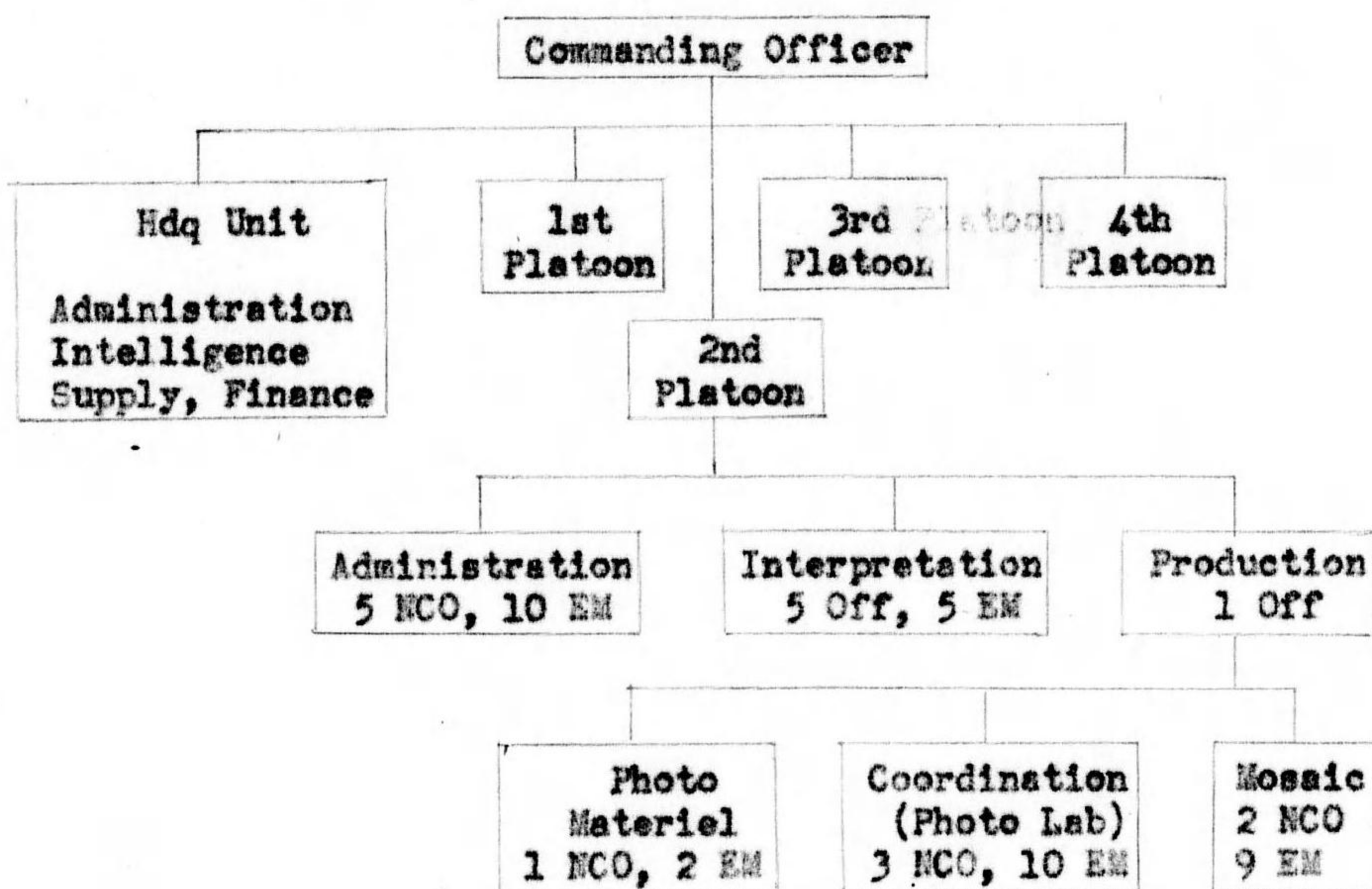
Comdr Imai, IJN, 5th Section, Naval General Staff.

Comdr Yanaguchi, IJN, 1st Air Technical Research Arsenal.

Major Toga, JAAF, 10th Air Division.

Enclosure 1
Special Report, Japanese Photo Intelligence

ORGANIZATION CHART of
FIRST PHOTOGRAPHIC OPERATIONS UNIT (DAI ICHI SHASHIN SAGYOTAI)
JAPANESE ARMY



Total complement: 22 officers, 13 NCOs, 175 EM.

Note: Organization of the 1st, 3rd and 4th platoons was to have been identical with that shown above for the 2nd platoon, but this was never achieved.

Enclosure 2
Special Report, Japanese Photo Intelligence

SUMMARY OF INSTRUCTION GIVEN IN FIRST JAPANESE NAVY
AERIAL PHOTO INTELLIGENCE COURSE

(Prepared for USSBS by Lt Comdr Ezaki, senior Japanese
Navy photo intelligence officer).

OUTLINE AND TABLE OF CONTENTS OF PREPARATORY API SYLLABUS

1. Navy cameras at present in use: types, purposes, capabilities--discussion of.
2. Various methods of taking photographs: respective capabilities and characteristics.
3. Definition of API: the ideal is not merely that of distinguishing objects but also that of making factual and capable interpretations.
 - a. Recognition.
 - b. Decision.
 - c. Inference.
 - d. Interpretation from form.
4. Capabilities of API:
 - a. Principles of interpreting form. How to use the stereoscope.
 - b. Details and capabilities (of methods) for distinguishing height and distance.
 - c. Ability to distinguish objects on air photos. Limits of enlargement.
 - d. Base depth and length of objects on photos.
5. How to make charts showing results of interpretation (various types).
6. How to use charts for determining scale of small objects.

How to use small differences in scale and to judge size of objects by direct interpretation with the stereoscope.
7. Putting together graphs using stereo comparative height finders.

8. Necessity for defining the degree of accuracy of interpretation.
9. Main points about the various types of interpretation.
 - a. Interpretation of air bases.
Method of defining plane types.
Method of defining types of bases.
General points necessary for interpretation.
 - b. Naval vessel interpretation: guide to identification of merchant vessels, landing craft, DDs, cruisers, BBs, CVs.
 - c. Terrain interpretation: mountains, rivers, roads, communications, cover, beaches, geology.
 - d. Military positions: AA positions, CD positions, Earthworks.
 - e. Military construction.
 - f. Obstacles, in and under water.
 - g. Interpretation of destruction.
10. How to interpret negatives.
11. Infra red photo interpretation: Research, comparing infra red and panchromatic photos.
12. Instructions for API officers in combat:
Making hasty reports from inspection.
Making weekly and monthly reports based on detailed interpretation.
Relations between radio intelligence, PW intelligence, and AP.
How to handle, assemble, and utilize rapidly reconnaissance photos.
13. Instructions on training in API methods:
Training in ability to make theoretical studies, in reasoning and in decision.
How to express results of API.

Importance of investigating actual objects after interpreting them.

Importance of making pertinent assumptions when doing an interpretive problem.

Value of recent reconnaissance photos from the field as training materials.

Importance of training in night interpretation in view of importance in front line duties.

Importance of collecting photo material for use in API training.

Emphasis on importance of avoiding intuitive interpretations and on ability to make logically reasoned decisions.