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TACTICAL MISSION

REPORT

Field Order No. 5

Mission No. 5

10-11 August 1944

TARGETS ON ISLAND OF SUMATRA, N.E.I.

PLADJOE REFINERY, PALEMBANG

MOESI RIVER

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Prepared by:
Intelligence section
XX Bomber Command

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HEADQUARTERS
XX BOMBER COMMAND
AFO #493

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22 September 1944

SUBJECT: Report of Operations, 10-11 August 1944.

TO : Commanding General, Twentieth Air Force, Washington 25, D. C.

1. UNITS PARTICIPATING:

The 40th, 444th, 462nd and 468th Bombardment Groups of the XX Bomber Command furnished the combat aircraft employed in this mission. The 232nd Group of the R.A.F. provided their base at China Bay, Ceylon, for staging purposes.

2. IDENTIFICATION OF MISSION:

a. Attack Number 5.

b. Targets Planned:

(1) Primary Targets:

(a) The Pladjoe Refinery at Palembang, Sumatra, N.E.I. (Objective Folder No. 94.2-61) at 03° 00'S - 104° 50'E. Assigned to: 14 aircraft of the 40th Group, 14 aircraft of the 444th Group, and 14 aircraft of the 468th Group.

(b) Channel of Moesi River, Sumatra, N.E.I. (Banka Admiralty Chart No. 3471) from approximately 02° 15'S - 104° 56'E to 02° 54' S - 104° 54'E. Assigned to: 14 aircraft of the 462nd Group

(2) Secondary Target: The Pangkelan Branden Refinery at Pangkelanbrandan, Sumatra, N.E.I. (Objective Folder No. 94.1-33) at 04° 01'N - 98° 17'E.

(3) Last Resort Target: The Indarung Cement Plant, Padang, Sumatra, N.E.I. (Objective Folder No. 94.2-67) at 00° 57'S - 100° 29'E.

3. STRATEGY AND PLAN OF OPERATION:

a. Importance of Targets:

(1) Primary Targets:

(a) Pladjoe Refinery:

(I) The Pladjoe Refinery is one of the most important targets in the entire Far East. It has a capacity of 20,460,000 barrels of crude oil per year and is capable of cracking half that amount.

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It is believed that Pladjoe is processing almost to the full extent of its capacity and producing 22 per cent of Japan's total annual fuel-oil requirements and 78 per cent of its total aviation-gasoline requirements. However, due to lack of tankers, it is believed that only 71 per cent of the amount of aviation gasoline needed by Japan can be shipped from Pladjoe, the remainder being either stored or dumped. For the same reason practically all of the motor gas produced must be disposed of on the spot. The production of this excess motor gasoline is a necessary technical concomitant of the production of every possible barrel of fuel. Japan's greatest petroleum need, requirements being 50,960,000 barrels a year with an annual production of only 41,930,000. This deficit is met by withdrawal from stocks estimated to be sufficient to last until 1 May 1945.

(II) The destruction of Pladjoe would either deprive Japan of vast quantities of essential fuel oil and aviation gasoline or force her to ship Sumatran crude oil to Japan for refining and re-ship the finished products back to the southern battle zones. This procedure would require an additional 12 to 15 tankers of 8000 tons or 35 large dry-cargo vessels, a severe strain upon Japan's shipping resources. The additional shipping required would be equivalent to 6 or 7 months' sinkings at the average rate since the war began.

(III) The refinery could not be replaced within a year's time, long before which Japan's stocks of fuel oil (and, to a lesser extent, of aviation gasoline) would be dangerously low. Furthermore, if the Sumatran crude had to be shipped to Japan, the transportation problem would present numerous difficulties due to the stringency of the shipping situation and the insecurity of the sea lanes.

(b) Moesi River: Any operation that would add to the difficulty of shipping would increase the total effectiveness of the operation against the Pladjoe Refinery proper. The mining of the Moesi River is such an operation. In addition, the fact that the products of the refinery are neither consumed in any quantity on Sumatra itself nor directly connected with a naval base or refueling point means that virtually the whole of the production must be distributed abroad. The Japanese are still following the pre-war practice of shipping the products in small craft for storage and re-export at deep-water anchorages off Singapore. Large tankers also take on a partial cargo at Palembang and complete loading at these deep anchorages. Thus, the narrow and shallow channel of the Moesi River offers an excellent opportunity for mining.

(2) Secondary Target: The Pangkalan Brandan Refinery, which had a pre-war capacity of 9,600,000 barrels of crude a year, was initially denied to the enemy by damage to its machinery at the time of the Dutch withdrawal. Photographs and other intelligence sources reveal that the refinery is now working, and it is estimated that it is producing 605,000 barrels of aviation gas, 806,000 barrels of fuel oil, and 1,325,000 barrels of motor gas. Due to lack of tankers, Japan has little use for the motor and aviation gasoline, but, for reasons given, fuel oil produced (1.9 per cent of Japan's total supply) is shipped from Pangkalan Brandan. The destruction of this objective would deprive Japan of 16.3 per cent of total requirements of aviation gas and of 1.9 per cent of her fuel oil, unless she could transport 2,880,000 barrels of crude a year to Inner-Zone refineries.

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This would put a further strain upon shipping and would also involve a long voyage over insecure sea lanes.

(3) Last Resort Target: The Indarung Cement Plant produces 200,000 tons of cement a year. It is the only cement works in the Netherlands East Indies and formerly supplied most of their cement requirements. Its product is useful to the Japanese for the construction of fortifications in the Indies.

b. Details of Planning: (See also Annex M, Field Orders):

(1) Even before the XX Bomber Command had left the United States, a mission against the Pladjoe Refinery at Palembang, Sumatra, had been planned with the field at China Bay, Ceylon, as a staging base. Two fields had been originally contemplated but, because of the construction difficulties involved, it soon became apparent that the use of 2 fields was not possible if the mission were to be run within a reasonable time. A substitute plan was devised, therefore, providing for the attack to be made in 2 waves of approximately 56 planes each. Meanwhile, the Commanding General, Twentieth Air Force, was advised that the mission was inadvisable as a maximum-effort mission due to distances involved. However the Commanding General of the XX Bomber Command decided to go ahead with the plans, and Higher Headquarters was notified of the anticipated risk and our limited capabilities.

(2) Due to the necessity for selecting picked crews and to the difficulty of coordinating 2 waves of aircraft from the same staging base, the final plan devolved provided for a single wave of 56 aircraft at the staging base.

(3) On 27 June this Command was directed to attack Palembang with the maximum force that could be staged through China Bay at the earliest date that the field would be ready. It was to be a daylight or dusk attack with a minimum of 50 aircraft. Indications were that the China Bay Airfield would be operational by 25 July; however, it was not ready for our aircraft until 4 August. Since preparation of the mission required coordination with British forces, it was estimated that the mission could not be run satisfactorily until 15 August.

(4) On 5 July it was indicated by Higher Headquarters that single aircraft bombing in daylight from anything less than 25,000 feet was unduly hazardous and that unless certain minimum daylight requirements were met, the mission would, of necessity, have to be run at night. The Command was then directed to explore fully ways and means of accomplishing this raid by daylight visual attack, and, in addition, to consider operations by a small number of aircraft at night to mine the Moesi River below Palembang.

(5) On 10 July, this Command stated that 2 AN-MK 13 or 2 AN-MK 26 aerial mines could be carried in each aircraft so employed and that trained personnel and special tools required would have to be borrowed from the Tenth Air Force or the Navy. It was further stated that the Command had explored ways and means of accomplishing the Palembang Mission by daylight visual attack within the restrictions prescribed and had arrived at the following conclusions:

(a) Based on fuel consumption data accumulated to that date, it was calculated that, of the total aircraft launched against Palembang target: (I) On a daylight mission by formation at 25,000 feet, 48 per cent would exhaust their fuel supply on the return trip prior to reaching China Bay, and (II) On a daylight mission by individual aircraft at, or above 25,000 feet, 14 per cent would exhaust

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their fuel supply on the return trip prior to reaching China Bay.

(b) If a minimum of 25,000 feet over the target area were to be maintained, predicted weather conditions would probably necessitate radar bombing, even in daylight.

(6) Therefore, since the Command was unable to meet minimum daylight requirements without prohibitive operational losses, it was planned to accomplish the mission at night.

(7) On 11 July our directive was restated and this Command was instructed to perform the Palembang mission before 15 August as a night radar attack, combined with mining operations in the Palembang River.

c. Determination of Bomb Load.

(1) Selection of AN-M-64 (Composition B) 500# GP Bombs:

(a) The selection of the AN-M-64 (Composition-B filled) 500-pound General Purpose bomb as the high-explosive weapon to be used against this target was occasioned by the belief that it was the smallest bomb that could reasonably be expected to destroy a vital installation as a result of a direct hit. None of the more important installations in an oil refinery is particularly susceptible to the blast damage or fragmentation effect of bombs that are not direct hits. If maximum destruction is to be achieved, the structural strength of these units and the resistive qualities of the materials of which they are made require that adequate penetration take place before the bomb is detonated. Careful analysis indicated that the bomb selected should be fuzed 0.1 second nose and .025 seconds tail delay.

(b) The most effective bombardment method of destroying an oil tank is to cause its general collapse. This can best be achieved by a fuzing that permits the bomb to enter the roof or side wall of a tank, pass through the interior, and detonate at or near the bottom. It was calculated that the bomb fuzing selected for the vital installations would be equally satisfactory in causing the rupture of tanks, and probable ignition of petroleum products should incidental hits be obtained on tank storage units.

(c) Similarly, in estimating incidental destruction and damage to intricate underground oil-transfer systems as well as delicate control equipment, it was quite apparent that the selected fuzing would maximize damage from bombs that missed the surface installations by producing ground shock and deep craters of large diameter. In addition, this fuzing would permit bombs, which otherwise might be wasted, to disrupt the drainage and dyking system, render ineffective the control of escaping oil, and thus contribute to a situation favorable to general conflagration.

(2) Selection of M-18 Aimable Clusters of M-50 Incendiary Bombs: Although high-explosive bombs are capable of producing fires in a highly inflammable area, it was decided to cover the general-purpose bomb attack with incendiary bombs in order to reduce the probability of released oil remaining unignited. As a result of target analysis, the M-18 Aimable Cluster of M-50 Incendiary Bombs was selected because of the aimability of the cluster, the increased probability of hits, and the intense heat-creating and penetrative action of the individual bomb. Since the bomb load, as well as the number of available bomb stations in the bomb bay, is limited when operating at this tactical radius, the number of incendiary clusters carried was considered large enough to provide a reasonable assurance that oil would be ignited without

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significantly reducing the number of 500-pound bombs that could be carried.

(3) Selection of M-26 Parachute Flares: M-26 Parachute Flares were carried in an attempt to illuminate the target so that the first bombardiers, brought into the target by radar, could make a visual release with the Norden sight.

(4) Selection of M-46 Photo-flash Bombs: M-46 Photo-flash bombs were carried in order to make possible night photography.

(5) Selection of AN-MK 26 Mod. 1 Aerial Mines: Because of the limitations of the other types of mines available in the Theater (M-12 and M-13), they were discarded in favor of the M-26, which, because of a parachute attachment, may be released at air speeds up to 250 mph and from any altitude consistent with accuracy. This mine weighs approximately 1000 pounds and may be suspended from a standard 1000-pound bomb shackle. The other factors in favor of the M-26 were its suitability for relatively shallow water and its threat to all ships of greater than 1000 tons. It was not recommended that any ship-count mechanisms (PDM's) be set to more than one-ship count, for it was believed that the inherent difficulties in sweeping a river would provide sufficient minesweeping handicap to the enemy and that it was more important that the maximum initial danger be prescribed by having all mines alive and ready to fire at the first opportunity. Considering the depth and contours of the Moesi River channel, it was the opinion of the Naval specialists that 30 such mines were sufficient to accomplish the desired results. Because of the range at which the operation was to be conducted and because the forward bomb bays were filled with auxiliary fuel tanks, the maximum was established at 2 mines per aircraft. Considering the experimental nature of the mission and the limitations of the staging area, it was not deemed advisable to assign this task to more than 15 aircraft.

d. Formation to be Flown: Because of the long range to be flown, no formation flying was to be done either en route to the target or on the route back to base.

e. Bombing Data:

(1) Pladjoe Refinery: The method of bombing for the 3 groups attacking the Pladjoe Refinery was by individual aircraft. The aircraft of the 40th Group were to bomb at an odd thousand-foot altitude above 8000 feet true, while the aircraft of the 444th and 468th Groups were to bomb at an even thousand-foot altitude not less than 8000 feet true. All intervalometer settings were to be 200 feet. The 40th Group was to use a planned axis of attack of 198° true, whereas the 444th and 468th Groups were to use 172° true. In addition, a stripped tanker was to release 8 M-26 parachute flares at a "thousand plus 500 feet" level not less than 8500 feet true.

(2) Moesi River: The aircraft of the 462nd Group were to mine the Moesi River channel by individual aircraft from altitudes not above 1000 feet. The mines were to be placed at least 400 feet apart to prevent sympathetic mining. Aircraft were to turn either north or south after the Initial Point according to plan and drop their mines at predetermined locations in the channel. (See Annex 6, Field Order #6)

f. Route to be Flown: The route out for all groups was to be the same except for the Initial Point, and, in the case of the 462nd Group, the target. The 40th Group was to use Kelian Point (02° 05'S - 105° 08'E) for an Initial Point and the flare plane (40th Group) was to use the same Initial Point as the 444th and 468th Groups, i.e.,

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Kepi Point, (02° 21'S - 104° 45'E). Pajoeng Island (02° 22'S - 104° 55'E) was designated as the Initial Point for the aircraft of the 462nd Group. The route back was to be the same for all groups.

g. Photo-equipped Aircraft: Nine of the aircraft attacking the Pladjoe Refinery (3 each from the 40th, 444th, and 468th Groups) were to be equipped to take night photographs.

h. Aircraft Loading: In addition to the bomb load already mentioned, each aircraft taking off from the rear bases was to carry 4 auxiliary fuel tanks. Furthermore, each aircraft at the time of departure from the rear bases was to be loaded with 200 rounds of .50-cal. ammunition per gun (except the tail turret which was to be fully loaded) and with all supplies of oxygen with which the aircraft was to depart from the staging area for the mission. All servicing with fuel and oil was to be done at the staging area.

i. Fighter Cover: Arrangements were made with the 222nd R.A.F. Group to provide fighter protection for the Ceylon bases.

j. Miscellaneous:

(1) All fuel was to be transferred from auxiliary tanks prior to reaching a point of no-return on fuel remaining in wing tanks at any time.

(2) Combat crews were to be given a general briefing at the rear bases by Group personnel and a special briefing in the staging area by Group and Command Staff personnel. All aids to general briefing at China Bay were to be provided by Command Headquarters.

(3) The post-mission interrogation was to be accomplished at China Bay by Group personnel.

(4) The XX Bomber Command Photographic Officer was to process the film at China Bay.

(5) No more than 1 staff observer was to be carried in an aircraft during the mission.

4. MOVEMENT FROM RLAR TO STAGING AREA (See Annex A):

a. The entire movement of aircraft from bases in India to the staging area at China Bay was accomplished on D-Day minus 1 (9 August).

b. In the movement to the staging area from the rear bases, 56 aircraft were airborne, 14 from each of the 4 groups. Of these aircraft, 3 were forced to return to XX Bomber Command bases because of mechanical difficulties. Later in the day 3 replacements were sent, all of which arrived without incident.

c. All aircraft departed from their India bases with the same loadings of oxygen, ammunition, 500-pound bombs, incendiary clusters, photo-flash bombs, and aerial mines with which they were to depart from the staging area on the mission. The servicing with fuel and oil was done at China Bay.

5. EXECUTION OF THE MISSION (See Annex B):

a. Take-off:

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(1) Pursuant to XX Bomber Command Field Order Number 5, 55 of the 53 aircraft at China Bay were assigned to take-off from China Bay. (One aircraft was not assigned to take off because of mechanical difficulty.) The details by Groups are as follows:

<u>Group</u>	<u>Target</u>	<u>No. of A/C assigned to take-off</u>	<u>No. of A/C Airborne</u>	<u>First A/C off</u>	<u>Last A/C off</u>	<u>Elapsed time last A/C from 0945 Z</u>
40th	Palembang	14	14	1001Z	1107Z*	82 minutes
444th	Palembang	14	13	0957Z	1044Z	59 minutes
462nd	Moesti R.	14	14	0945Z	1015Z	30 minutes
468th	Palembang	<u>13</u>	<u>13</u>	<u>1008Z</u>	<u>1109Z</u>	<u>84 minutes</u>
	Total	55	54	0945Z	1109Z*	84 minutes

* Aircraft number 222 returned due to oil leak in #2 engine and made a second take-off at 1331Z.

(2) Of the 54 aircraft airborne, 8 returned without bombing the primary target because of mechanical failures. Seven other aircraft also failed to bomb their primary targets because of the following reasons: 3 were unable to locate the target and were forced to return because of a diminishing gas supply; 2 bombed the secondary target because of low gas supply; 1 had a bomb-rack malfunction; and 1 was forced to return because of a combination of weather and mechanical difficulties.

(3) The 222nd R.A.F. Group maintained fighters on the alert during the take-off, but the absence of enemy air activity made scrambling unnecessary.

b. Route Cut: Thirty-nine of the 54 aircraft airborne reached their primary targets, 8 mining the Moesti River and 31 bombing the Pladjoe Refinery.

(1) The aircraft assigned to the target at Palembang flew a direct track from China Bay to a point at 01° 47'S - 99° 14'E where a change of course was made to a point at 02° 02'S - 104° 41'E. From this point, the aircraft of the 40th Group proceeded to their I.P. at Kelian Point and the aircraft of the 444th and 468th Groups proceeded to theirs at Kepi Point. From these I. P.'s, the aircraft from the 3 groups proceeded to the target (03° 00'S - 104° 50'E).

(2) The one aircraft of the 40th Group assigned the mission of illuminating the target with parachute flares was forced to return before accomplishing its mission because of engine trouble.

(3) The aircraft of the 462nd Group assigned the mission of mining the Moesti River followed the same route from China Bay as the other aircraft with the exception of the I. P., Pajoeng Island. From this point, which lies in the Moesti River, some aircraft turned north and some south to follow the channel and lay their mines.

c. The Primary Targets:

(1) Blackout conditions along the Moesti River and at the Palembang area were excellent. In crossing the Island of Sumatra several lights were noted, but only one large concentration was observed. RCM observers intercepted several early warning signals, but it is undeter-

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mined whether the blackout resulted from these signals or was a standard procedure.

(2) Pladjoe Refinery, Palembang:

(a) The first aircraft over the Palembang target released its bombs at 101823Z and the last at 102210Z. During this interval of 3 hours and 47 minutes, 31 aircraft released on the target area a total of 104 500-pound bombs, 40 52-pound Photo-flash bombs, and 17 M-17 Incendiary Clusters. Altitudes of release varied from 8000 feet to 18,000 feet.

(b) An effective blackout combined with an undercast of 7/10 to 9/10 at 8000 feet and a 2/10 patchy stratocumulus layer at 2000 feet made bombing difficult. Fifteen of the 31 releases were made by radar and the other 16 were visual. In addition, the poor weather conditions over the target prevented detailed observations of bomb damage by the crews and limited the number of usable photographs to 5 poor-quality strike photographs. However, through breaks in the clouds, several crews were able to make fleeting observations. From these reported observations, it is indicated that there were 2 large fires in the approximate vicinity of the cracking plant, that 6 large tanks just off the southwest edge of the cracking plant were on fire, that there were large fires in the dock area on the Komering River adjacent to the target area, and that there was an "L"-shaped fire around the tank area. One aircraft saw an explosion 25 minutes after leaving the target area, followed by a fire that could be seen 100 miles away. Most all of the crews reported seeing through the undercast a glow from the fires below.

(3) Moesi River:

(a) Eight of the 14 aircraft from the 462nd Group were successful in their mission of mining the Moesi River channel. The first mine was released at 101825Z and the last at 101931Z. During this interval of 1 hour and 6 minutes, the 8 aircraft laid 16 mines with good distribution and excellent results from Borang Island to a point approximately $3\frac{1}{2}$ miles north of Alangan Point. (See chart in Annex B.) The mines were released from altitudes of 350 feet to 1000 feet.

(b) The weather varied from CAVU below 1000 feet to 5/10 coverage with a cloud base at 1000 feet to 3000 feet. The moon, which was bright and approximately 30 degrees above the horizon, was of material aid in these mine-laying operations.

d. Secondary Target: The secondary target (the refinery at Pangkalanbredan) was attacked by 2 aircraft of the 40th Group because of insufficient fuel to reach the assigned primary target and return. These 2 aircraft released by radar from 15,000 feet a total of 8 500-pound bombs on the target area, the first release being at 101804Z and the second at 101850Z. The weather, which was reported as from 8/10 to 10/10 undercast, prevented accurate observations of results, although both crews report seeing their bombs explode.

e. Target of Opportunity: One aircraft of the 468th Group assigned the target at Palembang bombed the Djambi Airdrome ($01^{\circ} 38'S - 103^{\circ} 38'E$) with 4 500-pound bombs, released by radar from 23,400 feet true altitude at 101923Z. They were observed to have fallen across a runway. Poor weather, uncertainty as to location, and a diminishing gas supply caused the Aircraft Commander to choose this target of opportunity north of the Initial Point.

f. Route Back:

(1) The 42 aircraft engaged in these operations all returned

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safely with the exception of aircraft 420 which was forced to ditch approximately 90 miles from base. (See Annex J, Part III.) The first of the aircraft returning safely landed at 110114Z and the last at 110715Z.

(2) One aircraft of the 40th Group lost most of the oil in its number 1 engine just before reaching the Initial Point, but the propeller would not feather. The aircraft then proceeded to bomb the primary target and returned to base with the propeller windmilling. However, 40 minutes before reaching base, number 4 engine quit due to lack of gas and all loose equipment was jettisoned.

(3) No enemy air activity occurred within range of the fighter aircraft of the 222nd R.A.F. Group.

g. Operational Results of the Mission: In view of the large fires observed in the area of the primary target, it seems certain that some damage has been dealt to the installations associated with the Pladjoe Refinery, and possibly to a part of the refinery itself. Unfortunately, cloud cover prevented the night cameras from obtaining photographs with sufficient detail to permit accurate damage assessment, and there has been as yet no photo reconnaissance flown. Radar contributed materially to the navigational results of the mission and was heavily relied upon for identifying and bombing the target. The radar-scope pictures obtained, two sets of which are excellent, will be of value in future training.

6. ENEMY OPPOSITION (See Annex C):

a. Enemy antiaircraft and Ground Defenses:

(1) Heavy Antiaircraft: Heavy antiaircraft fire was encountered by B-29 aircraft at the following locations: over the Palembang area; at Kepi Point; five miles south of Djoedjoen; three miles north of Soepat; and at Sarolancoen Airfield. In general the fire was meager and inaccurate. The two exceptions were at Palembang, where the fire, although meager, ranged from inaccurate to accurate, and Kepi Point, where fire, although inaccurate, was reported as intense.

(2) Automatic Weapons: Fire from automatic weapons was encountered in the following locations: in the area of Palembang; the west coast of Siberoot Island; Mocarasinatolon; Cape Tendjoeing; Indrapoera; Tandioengmedan; and along the shore of the Moezi River east of Borang Island. Automatic weapons fire was also reported as possibly coming from a ship in the area of 01° 29'S - 98° 34'E. At 4 of the locations the fire was reported as intense and at 2 as meager and inaccurate. At the remaining 2 locations no indication of the intensity of the fire was given.

(3) Ground-to-Air Rocket Fire: In the Palembang area and the area to the west, 4 observations were made of rocket fire. This fire appeared with a Roman-candle effect and consisted of a series of balls approximately 500 feet apart, climaxing with a red burst some 25 to 30 feet in diameter.

(4) Air-to-Air Rocket Fire: Rocket fire was encountered after leaving the target area and continued out over Siberoot Island. Because of distances, times encountered, and various flight characteristics, this fire was identified as air-to-air rockets. (See Annex C, Part II, B.)

(5) Searchlights: Searchlights were reported as follows: approximately 12 at Palembang; 3 at Kepi Point; 3 at a point 3 miles north of Soepat; 1 at Padang; and 3 on Siberoot Island. They were generally ineffective and none comed or tracked the aircraft.

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(6) Evasive Action: The evasive action taken consisted of by-passing areas in which fire was being delivered.

(7) Damage from Antiaircraft Fire: There was no damage resulting from antiaircraft fire.

(8) Blackouts: Blackout conditions were reported as being excellent at Palembang and Pangkalanbrandan. With the exception of 1 town, no large concentration of lights was noted on Sumatra.

(9) Smoke Screens and Barrage Balloons: No smoke screens were reported, but an indefinite number of barrage balloons was observed at Palembang.

(10) Warning Nets: RCM intercepts indicate that an early warning net is in existence on Sumatra or the islands off its west coast.

b. Enemy Aircraft:

(1) Enemy air opposition was weak to moderate in strength but failed to cause damage to any of our aircraft. Thirty-seven Japanese fighters, described as 1 Nick, 1 Tony, 18 Single-Engine, 12 Twin-Engine, and 5 unidentified, made 26 single and coordinated passes and attacks against 8 B-29's. Twenty-two of the attacks resulted in enemy gun fire. Our aircraft were under intermittent attack for a period of 2 hours and 48 minutes, beginning at 1837Z and terminating at 2125Z. No attacks occurred before the primary target was reached, 4 were encountered at the target, and the remaining 22 for a distance of 350 miles along the route back.

(2) In general the Japanese pilots were not aggressive, since 69 per cent of the attacks with distances reported were broken off between 500 and 1000 yards. No enemy plane approached closer than 200 yards. Attacks originated from around the clock with slight preferences being shown for right side and stern approaches; low and level approaches predominated. The majority of breakaways were low, and went out to the right and rear.

(3) Two coordinated attacks were reported, one of which was particularly well executed. Six enemy fighters attacked a single B-29 in train and in rapid succession from 1 o'clock low. Fire was opened at 1000 yards and the attacks were pressed to 300 yards.

(4) B-29's returned fire in 16 of the 26 encounters, and, although no official claims have been filed, crews believe that several enemy aircraft were at least damaged.

(5) One crew reported a twin-engine enemy fighter that seemed to fire rocket projectiles. The plane was operating at great distance making detailed observation difficult, but the projectiles were described as about one yard long and dark red in color. They appeared to be released in pairs. No trail or "comet's tail" was observed. The projectiles could be followed for a distance of 400 or 500 yards after release, at which time they appeared to break apart, drop, and then die out. No bursts were observed.

(6) A new weapon, probably of the rocket type, was reported by 3 crews. Reddish-orange balls about the size of baseballs appeared momentarily and then burst into fragments which scattered in all directions. One aircraft was under continuous attack for 1 hour and 10 minutes shortly after leaving the target area, and the crew estimates that they saw 250 to 300 separate bursts during this period. Bursts were always off the right wing, never closer than 400 yards, never farther away than 700 yards, and

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always accurate as to altitude. The B-29 was not damaged. It is believed that the projectiles were aerially released, despite the fact that no enemy aircraft were sighted. There was no clue as to whether the projectiles were originating from below, above, or level.

(7) Some of the enemy planes flashed navigation lights on and off. Several aircraft ostensibly reporting altitude and course of our aircraft were observed.

7. WEATHER (See Annex D):

a. The weather at time of take-off was favorable for the mission. Take-off time, however, was advanced one-half hour because of cross winds that developed sooner than forecast.

b. Aircraft on the route out encountered light to moderate showers and scattered thunderstorms over the east coast of Ceylon. These diminished after 2300 hours. The clouds encountered were broken altostratus and altocumulus with bases at 14,000 feet and tops at 15,000, 6/10 cumulonimbus with a 2000-foot base and tops at 10,000 feet, and 5/10 cumulus with a 1500-foot base and tops at 5000 feet. Between 87° E and 96° E., thunderstorms with rain, hail and snow were encountered. The broken altostratus, which was 5/10 to 6/10 the first part of the zone, decreased to 3/10 to 5/10 with a few towering cumulus. Over the mountain area of Sumatra, showers and thunderstorms continued with a few scattered showers off the coast during the morning hours. In the region of 96° East to the mountains there were patches of altocumulus and altostratus, 3/10 to 5/10 cumulus and stratocumulus between 1500 and 5000 feet, and 5/10 to 7/10 cumulus and cumulonimbus over the mountains. The latter had bases of 12,000 feet and tops of 13,000 with occasional tops over 20,000 in the storms. Visibility was generally 6 miles, being reduced to 1 mile in storms. Some aircraft reported moderate turbulence in the storm areas.

c. At Palembang there was a layer of thin 8/10 altostratus between 7000 and 8000 feet with occasional large breaks. At 2000 feet there was also a layer of 2/10 patchy stratocumulus. Visibility was unlimited above the altostratus layer, but limited below to 6 miles with haze. At Pangalanbrandan, the secondary target, there was a thin overcast at 8000 feet.

d. The moon, which was bright and approximately 30° above the horizon, aided the mining of the Moesi River channel.

e. The same conditions encountered on the route out prevailed for the return route.

f. The returning aircraft found the base at China Bay clear until 110330Z, when a 4/10 cumulus layer formed at 3000 feet. There was also a 10 mph surface wind from the southwest.

g. Navigation on this long over-water mission was hampered by the inability of the navigators to take celestial fixes along the route.

h. With some minor exceptions, the weather encountered was as forecast.

8. BATTLE LOSSES AND BATTLE DAMAGE:

a. Battle Losses: No aircraft was lost as the result of enemy action.

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b. Battle Damage: No damage was suffered by any aircraft as the result of antiaircraft fire or enemy interception.

9. COMMUNICATIONS (See Annex E):

a. General Communications Data:

(1) The selection of China Bay as a staging base for this mission greatly increased normal communications requirements. Before the communications needs at China Bay could be fulfilled, it was found necessary to provide for 3 CW and 1 voice air-ground frequencies, a radio homing beacon, a YJ radar beacon, and a point-to-point channel to the rear bases. It was also necessary to provide the usual machine-coding devices.

(2) These facilities were used to provide control on a plan similar to that already employed during previous missions from the China Bases. However, some minor changes were necessary. The use of British naval vessels for navigational check points contributed to a large degree to minor violations of radio discipline.

(3) Some difficulty was experienced by the ground station in receiving transmissions from our aircraft. Only 21 of the 43 expected "bombs away" messages were received. Poor radio discipline was a contributing factor. However, it is believed that "skip", "fading," and the improper tuning of aircraft transmitters resulted in the nonreception of many of the messages.

(4) Navigational facilities provided were many and varied. The British Navy provided surface vessels capable of providing D/F and equipped with Mark III IFF. Our aircraft could home on this IFF equipment with the SCR-729, although this procedure was not entirely successful since the aircraft transponders "cluttered" the SCR-729 scope and the surface vessel's response could not be read. The shore-based YJ radar beacon was used successfully in a number of instances. Most successful of all was the 3-kilowatt radio homing beacon which pilots reported hearing while over the target area. Nevertheless, a majority of the aircraft asked for D/F aid.

(5) One enemy station was reported to have attempted to contact an aircraft in the clear using CW; however, this attempt was disregarded by the radio operator as being obviously enemy.

(6) Reports from the Group Communications Specialists indicate that the communications efficiency for the mission was good. The specialists agreed, however, that a more concise briefing would have cleared some of the procedural doubts arising in the minds of the operators, and thus reduced the discrepancies.

b. Controller Communications Data:

(1) Operation of the Aircraft Control Center, established at China Bay for this mission, was quite satisfactory. However, the movement from the rear bases to China Bay was accomplished under radio silence. Consequently the fact that PX's from the rear bases arrived in many cases after the aircraft caused some inconveniences.

(2) During the mission, air-ground communications were kept to a minimum, thus allowing the Aircraft Control Center to hear the S.O.S. call of the aircraft that ditched and others in distress. Cooperation of the R.A.F. and the Royal Navy with the Aircraft Control Center was exceptionally good.

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10. RADAR AND RCM (See Annex F):

a. Radar:

(1) Navigation: On this mission in which celestial fixes were few, radar played an important part in identifying the landfall and Initial Points. Seventy per cent of those aircraft with radar operative at take-off used it to compute ground speed and drift, while 74 per cent used it to identify the Initial Point. Four aircraft, unable to obtain radar fixes off the west coast of Sumatra, however, were forced to return when a diminishing gas supply cut short any further search for the target.

(2) Bombing: The target proved to be an excellent one for radar bombing in that it offered a bright signal with the dark river in the foreground. This is borne out by the fact that of the 41 aircraft with radar operative, 36 identified the target signal from usable ranges. Of the 8 aircraft successfully mining the Moei River, all used radar to locate it. Of the 34 aircraft bombing targets 18 released by radar. In addition, of the 16 bombing visually, 6 made the bomb run by radar and released visually when a last-minute opening in the clouds permitted a view of the target.

(3) Operator Efficiency: The radar operators did not demonstrate any marked improvement over other missions in the use of the aids to radar operation. Slight improvement was noted in the percentage of operators computing ground speed and drift. About the same percentage used sector scan and azimuth stabilization, but a decreased percentage used the desired 10-mile sweep for bombing.

(4) Radar-Scope Photography: Of the 9 aircraft equipped with C-3 radar cameras, 6 failed to bomb the primary target. However, the remaining 3 aircraft secured usable sets of photographs, 2 sets of which were excellent. It was noted that the actual scope photographs compared favorably with the briefed scope appearances.

(5) Radar Serviceability: The level of serviceability for the radar set was higher than heretofore. Ninety-six per cent were operative at take-off and 89 per cent operative over the targets. This improvement can be ascribed partly to the lower altitudes flown and partly to improved maintenance. Flight maintenance was excellent with 5 radar failures and numerous minor difficulties repaired in the air.

(6) Auxiliary Radar Equipment: The serviceability of the auxiliary radar sets again was excellent. There were no failures reported on the SCR-695 (IFF) 1 failure on the SCR-729 (Interrogator Responder), and 3 on the SCR-718 (Altimeter). However, the operational use of the SCR-729 was quite unsatisfactory and the need for training radio operators in its use is again indicated. Operators used the wrong switch setting in one Group and another Group reported no recon responses, only to find 5 to 6 days later that 21 of their 23 SCR-729's obtained excellent ranges on recons with experienced operators. Only 1 IFF signal was reported from the naval craft stationed along the course.

b. RCM:

(1) As on past missions, RCM activities were confined to search for Japanese radar signals while enroute to the target, at the target area, and on return. No offensive action was taken.

(2) Search was made in the following frequency ranges: (a) 70-100 megacycles, and (b) 300-1000 megacycles. Five of the aircraft completing the mission were equipped with search receivers and one of these

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had a new D/W antenna installed. However, the lines of bearing were not sufficiently accurate to pinpoint the enemy transmitter other than to place in it the Palembang area. No intercepts were obtained in the 300-1000 megacycle band.

(3) The following conclusions may be drawn as a result of RCM intercepts and observations: (a) The Japanese have an early warning system in operation on Sumatra or on the islands off its west coast; (b) If the enemy has AI and GCI available, it was either not used or unsuccessfully employed; (c) If the enemy has radar-controlled searchlights, he failed to use them in an effective manner; and (d) there was no evidence of radar-controlled antiaircraft fire.

11. CENTRAL STATION FIRE CONTROL (See Annex G):

a. Lack of aggressive fighter attacks again prevented an effective test of the Central Station Fire Control System under combat conditions.

b. Enemy fighters opened fire in 22 attacks and this fire was returned by the B-29's in 16 cases. No claims of enemy aircraft resulted.

c. Although ground ordnance maintenance has improved, some malfunctions developed when the guns were fired in test or in combat. Of the guns thus fired, 5.3 per cent of the .50-cal. machine guns and 14.3 per cent of the 20 mm. cannons had malfunctions. The necessity for test firing the guns prior to entering enemy territory was again demonstrated.

12. CAMERAS AND PHOTOGRAPHS (See Annex H):

a. Of the 11 K-19 night cameras installed, 2 were in aircraft that failed to bomb the primary target, and 2 were lost when jettisoned preparatory to ditching, although one of the aircraft subsequently made base. Five of the remaining cameras took photographs and the other 2, although in operating condition, failed to take photographs. It is believed that in the latter case clouds prevented the flash bombs from activating the photo-electric cell.

b. Although 29 exposures were made with K-19 cameras, 24 negatives were not usable because of heavy cloud coverage. Nevertheless, from the best of the photographs taken, it may be ascertained that 2 and possibly 3 strikes hit in the target area. (See Annex K).

c. As indicated in the Radar section, the 3 C-3 cameras (Radar) installed on aircraft completing the mission functioned well. Three sets of scope photographs were obtained, 2 of which were used after the mission to reconstruct the course of the aircraft.

13. FUNCTIONING OF EQUIPMENT (See Annex I):

a. Movement from the Rear Bases to the Staging Area: On D-Day minus 1, 56 aircraft were assigned to take-off from the rear bases. All were airborne, but 3 were forced to return to their bases because of mechanical difficulties. However, 3 replacement aircraft were dispatched, making a total of 56 aircraft that landed at China Bay.

b. Malfunctions During the Mission:

(1) On D-Day 55 aircraft were ready to take-off. Of these 1 failed to become airborne because of a defective magneto.

(2) Of the 54 aircraft airborne, 10 failed to bomb the primary target because of the following mechanical failures: (a) 4 undesignated engine failures, (b) 1 front exhaust stack which blew off, (c) 1

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carburetor malfunction, (d) 1 fuel-transfer system failure, (e) 1 right nacelle door which would not close, (f) 1 bomb-release malfunction, and (g) 1 combination weather and mechanical difficulties.

(3) In addition, 1 aircraft was forced to ditch after bombing the primary target because of the failure of the bomb-bay check valve.

14. RESCUE FACILITIES: (See Annex J):

a. Search and Rescue: The provisions made for search and rescue were the most extensive for any of the missions yet flown. On D-Day the Royal Navy had 1 light cruiser, 3 destroyers, and 2 submarines along the flight track of the B-29's. In addition, 1 submarine was made available in the area of the secondary target for the purpose of aiding distressed crews. The R.A.F. provided various aircraft to fly patrols over the course of the returning aircraft as far out from China Bay as 700 miles. Furthermore, several other aircraft and high-speed launches were held in readiness in the China Bay area. During take-off, crash boats and rescue craft were standing by in Tambalagam Bay, which adjoins the up-wind end of the runway. The actual operating of the air-sea rescue units was the responsibility of the R.A.F.

b. Escape and Evasion: The R.A.F. furnished escape purses containing Netherlands currency, silk maps, a language guide, and escape material. To this was added an American blood chit. On the basis of information obtained from the O.S.S., 3 escape routes were planned, 1 for each of the target areas. These routes terminated at a rendezvous point where the Commander of Submarines of the Royal Navy agreed to have a submarine should it become necessary to pick up any of our crew members. Although it was not necessary to use these routes, their establishment was an aid to the morale of the crews.

c. Ditching of Aircraft 420: The first indication that this aircraft was in trouble was when it sent an S.O.S. stating they were ditching at 09° 00' N - 83° 30' E. No fix was obtained. Several aircraft and surface vessels were ordered to search this area and the area to the south, which was closer to the briefed route, but without success. Nine of the 10 crew members successfully ditched and were able to send out 3 S.O.S. calls by means of the emergency radio set (Gibson Girl). The first call probably was not heard; the second, although heard, was not sufficient for homing; but the third call, sent the morning of the twelfth, was strong enough to be homed on by several rescue craft. It was picked up by a destroyer 80 miles away, a PBV 170 miles away, and other aircraft, including a B-29, which were in the vicinity. The destroyer, HMS Redoubt, picked the men up early that afternoon and brought them to Trincomalee Harbor.

15. TARGET DAMAGE ASSESSMENT (See Annex K):

a. There has been as yet no post-mission photo coverage of the primary target. Furthermore, as a result of the unfavorable conditions over the primary target, photographs taken by the attacking aircraft were unsatisfactory for damage assessment. An analysis of 5 poor-quality strike photographs shows the following:

(1) A strike just south of the K and L tank farms, intermediate to the reforming plant tanks, and about 1200 feet east of Distilling Units V and VI. (See Annex 2 to Annex K). What may be another strike in an earlier state of development is seen just north of this main strike. (See Annex 1 to Annex K).

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(2) A strike about 300 feet from the northeast corner of the R and O tank farm, aviation gas and crude oil tanks, and about 1000 feet east of the site of the new aviation gasoline plant. (See Annex 2 to Annex K).

(3) A possible barrage balloon just east of the site of the new aviation gasoline plant. (See #3, Annex 1 to Annex K).

b. No photographs were obtained of the secondary target.

For the Commanding General:

Leo Herman

LEO I. HERMAN,
Colonel, Air Corps,
Acting Adjutant General.

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ANNEX

A

MOVEMENT FROM REAR AREA TO STAGING AREA

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MOVEMENT FROM REAR AREA TO STAGING AREA

Mission No. 5

10-11 August 1944

	40th	444th	462nd	468th	Total
Aircraft assigned to take off	14	14	14	14	56
Aircraft airborne	14	14	14	14	56
Aircraft returning to XX Bomber Command Bases	0	0	2-a	1-b	3
Aircraft landing in Staging Area	14	14	12	13	53
Replacements	0	0	2	1	3
Total aircraft landing in Staging Area -c	14	14	14	14	56

- a. A/C 287 and 830 - No. 1 engine failures.
- b. A/C 334 - Right landing gear failed to retract.
- c. All aircraft were airborne and landed on D-Day minus 1.

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ANNEX

B

EXECUTION OF THE MISSION

I - Details of Routes

- A. Primary Target - Palembang - 40th Group
- B. Primary Target - Palembang - 444th & 468th Groups
- C. Primary Target - Moesi River - 462nd Group

II - Chart - Track and Vertical Flight Path

III - Disposition of Bombs

IV - Disposition of Mines

- A. Chart - Fladjoe Area

V - Type of Bomb and Mine Releases

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I - DETAILS OF ROUTES

Mission No. 5

10-11 August 1944

A. Primary Target - Palembang (40th Group)

11 Aircraft	Location	Time at Point (Z time)	Altitude (feet)	I.A.S. (mph)
Base to;	China Bay	101001- 101331	--	--
First Turning Point to;	01°47'S- 99°14'E	101630- 101945	4500- 15,000	190- 200
Second Turning Point* to;	02°02'S- 104°41'E	101832- 102102	5500 15,000	190- 200
Initial Point (Kelian Point) to;	02°05'S- 105°08'E	101842- 102150	14,800- 16,400	185- 200
Target to;	Palembang	101850- 102210	15,000- 16,500	185- 200
Turning Point - Route Back to;	01°47'S- 99°14'E	102041- 102120	11,500- 15,000	185- 200
Base	China Bay	110248- 110715	--	--

* Some aircraft went direct from first turning point to Initial Point since second turning point did not deviate materially from a direct route.

B. Primary Target - Palembang (444th and 468th Groups)

20 Aircraft	Location	Time at Point (Z Time)	Altitude (feet)	I.A.S. (mph)
Base to;	China Bay	100958- 101057	4000*	200*
First Turning Point to;	01°47'S 99°14'E	101500- 101823	2500- 16,000	190- 200
Second Turning Point to;	02°02'S- 104°41'E	101730- 102000	13,000- 16,000	190- 205
Initial Point (Kepi Point) to;	02°21'S- 104°45'E	** - 102015	10,000- 16,000	190- 200
Target to;	Palembang	101823- 102023	10,000- 16,000	190- 200
Turning Point - Route Back to;	01°47'S- 99°14'E	102019- 102208	5500- 16,700	180- 208
Base	China Bay	110221- 110613	8000*	190*

* Includes only aircraft from the 468th Group.
** Not available

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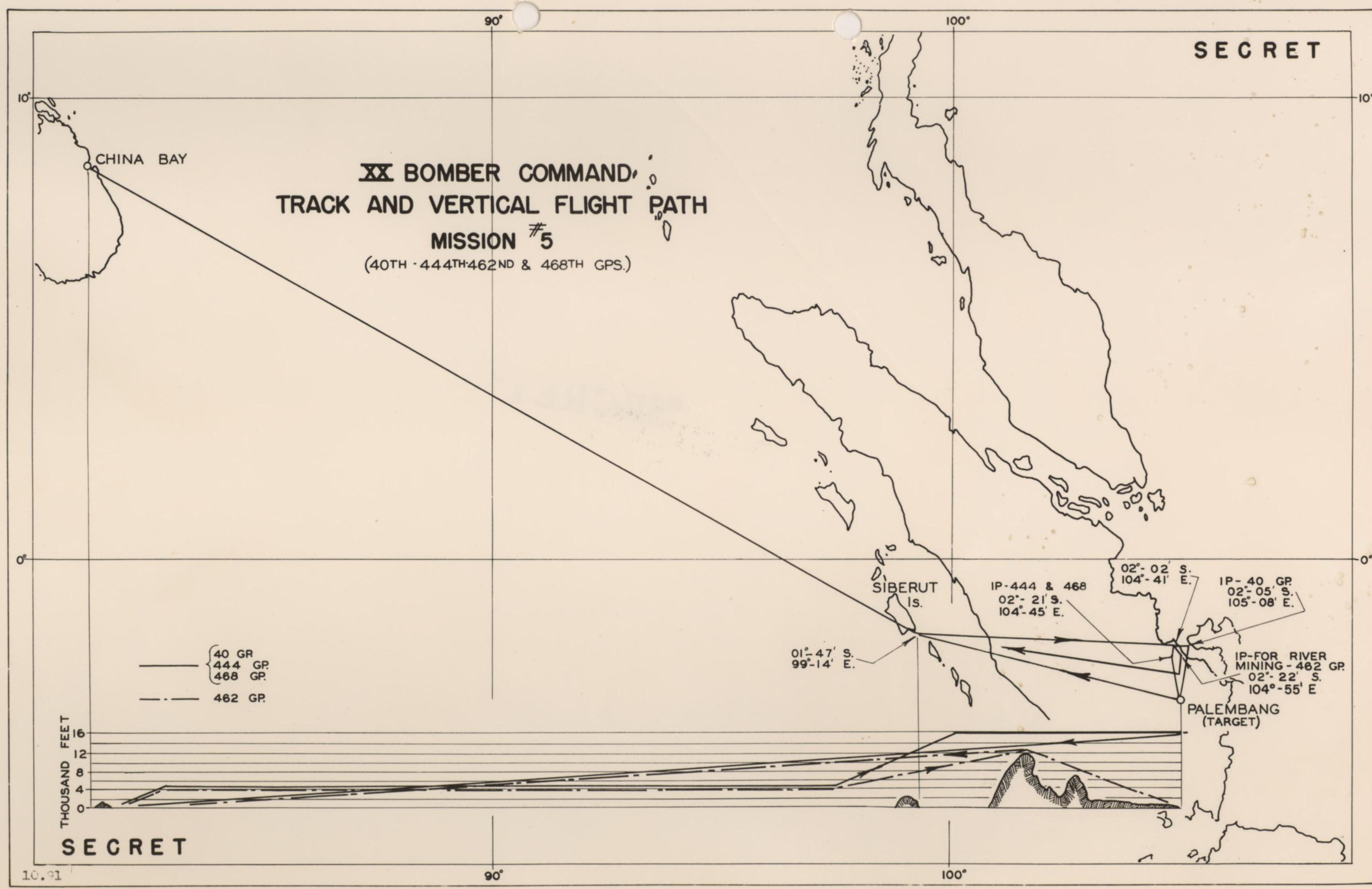
C. Primary Target - Moesi River (462nd Group)

8 Aircraft	Location	Time at Point (Z time)	Altitude* (feet)	I.A.S.* (mph)
Base to;	China Bay	100945- 101014	--	--
First Turning Point to;	01°47'S- 99°14'E	101621- 101713	1300- 13,500	195- 205
Second Turning Point to;	02°02'S 104°41'E	101802- 101900	1000- 3000	205- 215
Initial Point (Pajoeng Island) to;	02°22'S- 104°55'E	101810- 101912	1000- 3000	200- 210
Target to;	Moesi River	101825- 101931	500- 1000	200
Turning Point- Route Back to;	01°47'S- 99°14'E	102030- 102202	5000- 10,000	185- 200
Base	China Bay	110236- 110439	1100- 1500	160- 200

* Based on 6 aircraft.

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III - DISPOSITION OF BOMBS

Mission No. 5

10-11 August 1944

A. Disposition of Bombs - GP 500 # AN-M-64 (Comp B)

	40th	444th	468th	Total
In A/C assigned to take off	52	56	32	140
In A/C failing to take off	0	4	0	4
In A/C Jettisoning	0	16	4	20
Released on target of opportunity	0	0	4*	4
Released on Secondary Target	8	0	0	8
Released on Primary Target	44	36	24	104

* Released on Djambi Airdrome (01°38'S - 103°38'E).

B. Disposition of Bombs - Incendiary M-17 *

In A/C assigned to take off	In A/C failing to take off	Jettisoned	Brought Back	Released on Primary Target
20	0	2	1	17

* Carried by 5 aircraft of the 468th Group.

C. Disposition of Bombs - Photo-Flash 52 # M-46

	40th	444th	468th	Total
In A/C assigned to take off	12	16	16	44
Jettisoned	0	0	4	4
Released on P.T.	12	16	12	40

Note: A/C 310 (40th Group) which carried 8 M-26 parachute flares, jettisoned them.

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IV - DISPOSITION OF MINES

Mission No. 5

10-11 August 1944

In A/C assigned to take off	Jettisoned	Brought Back	Released on Primary Target
28	8*	4	16

* All were jettisoned unarmed in deep water. Two mines were dropped at each of the following points: (a) 05°30'N - 86°30'E, (b) 01°30'00"N - 99°32'30"E, (c) 00°27'N - 96°30'E, and (d) a point 240 miles from Siberoet Island on a bearing of 320°.

V - TYPE OF BOMB AND MINE RELEASES

Mission No. 5

10-11 August 1944

Release	40th Group		444th Group	462nd Group*	468th Group		Total
	P.T.	S.T.	P.T.	P.T.	P.T.	T.O.	
Radar	6	2	5	0	4	1	18
Visual	5	0	4	8	7	0	24

* The 462nd Group carried aerial mines.

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S E C R E T

TARGET SECTION, A-2
XX BOMBER COMMAND

PLADJOE AREA

MINING OPERATIONS

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PLADJOE AREA

MINE OPERATION

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CHART NO. 25
RESTRICTED



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ANNEX

C

ENEMY OPPOSITION

- I - Enemy Antiaircraft
- II - Enemy Aerial Tactics
- III - Tabular Analysis of Encounters
- IV - Clock Summary of Attacks

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I - ENEMY ANTI-AIRCRAFT

Mission No. 5

10-11 August 1944

A. Heavy Antiaircraft Fire

1. Pladjoe Refinery at P. LEMBANG (03°00'S - 104°50'E): Meager and inaccurate to accurate heavy antiaircraft fire was encountered from 1850Z to 2023Z at altitudes from 15,000 to 18,000 feet. Deviations were reported in all directions; above and below, ahead and behind, and left and right. In general no more than 3 bursts were seen in any group of bursts, although 1 aircraft at 1906Z at an altitude of 14,300 feet observed a total of 10 bursts moving in towards the aircraft about 500 feet to the right and level, breaking off when about 100 feet ahead of the plane. The last aircraft over the target at 2023Z reported intense and accurate heavy antiaircraft fire at 10,000 feet, rocking the plane and level for altitude. It is believed to have been continuously pointed.

2. KEPI POINT (02°21'S - 104°45'E): Intense and inaccurate heavy antiaircraft fire was encountered by 1 aircraft at 2000Z at 10,000 feet. The fire appeared ahead of the aircraft as predicted concentration but was by-passed by avoiding a briefed turn and later turning in on course.

3. Five miles South of DJOEDJOEN (02°16'S - 101°32'E): Heavy antiaircraft fire was reported at 2 places in this vicinity: (a) at 2018Z at 02°15'S - 101°30'E, where it was meager and inaccurate with deviations being behind and right, and (b) at 02°15'S - 101°23'E where bursts appeared up to 25,000 feet at intervals of 3 minutes. There were generally about 10 bursts each time.

4. Three miles north of SOEPAT (02°43'S - 104°01'E): Meager and inaccurate heavy antiaircraft fire (which was below and behind) was reported by 1 aircraft as coming from 02°40'S - 104°00'E at 1826Z.

5. SAROLANCOEN AIRFIELD (02°17'S - 102°45'E): Two white bursts were reported as coming from what is believed to be Sarolancoen Airfield. The bursts, which were below and to the left of the aircraft, were noted at 1950Z at 13,000 feet.

B. Automatic Weapons Fire

1. PALEMBANG (03°00'S - 104°50'E): Between 1850Z and 2023Z while our aircraft were flying at altitudes of 15,000 to 18,000 feet, meager and inaccurate automatic weapons fire was encountered. It was observed to be breaking just out of the tops of the undercast at 10,000 feet. Our aircraft at 3500 feet also reported meager and inaccurate automatic weapons fire over Palembang Airport No. 1.

2. On the shore of the MOLSI RIVER east of BORING ISLAND (02°55'S - 104°52'E): Meager and inaccurate automatic weapons fire, below, behind, and to the right, was encountered at 1825Z at an altitude of 500 feet.

3. SIBEROET ISLAND (01°20'S - 98°50'E): Light antiaircraft fire was observed on the west coast of Siberoet Island.

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4. MOCIMASIMTOLON (01°27'S - 98°45'E): Light antiaircraft was observed.

5. CAPE TENDJOENG (02°10'S - 100°51'E): Intense automatic weapons fire was reported.

6. INDRAPOERA (02°04'S - 100°57'E): Intense automatic weapons fire was encountered.

7. TANDIOENG EDAN (01°55'S - 100°54'E): Intense automatic weapons fire was encountered.

8. POSSIBLE SHIP (01°29'S - 98°34'E): Intense automatic weapons fire possibly from a ship was encountered at the point indicated.

C. Ground-to-Air Rocket Fire

1. East of Pladjoe Refineries, PALEMBANG (03°00'S - 104°50'E): Our aircraft reported possible ground-to-air rocket fire seeming to emanate from an area east of the Pladjoe Refineries at Palembang.

a. The first observation was made 2 minutes before reaching the target. The aircraft was flying a heading of 195° true at an indicated altitude of 15,900 feet. A long string of about 12 balls of fire (which was seen to run from about 10,000 to 16,000 feet in altitude) appeared several miles ahead and about one-half mile to the left of the course. This fire appeared to emanate from an area east of the target near the river.

b. The second observation was made 30 seconds before reaching the target. Two or three strings were seen about 1000 feet below and 3000 feet ahead in 12 and 1 o'clock positions. Once again the balls of fire left a trail in the sky like a Roman candle. A slight jar was felt but no evasive action was taken.

c. At 1920Z over the target the third observation was made. Two or three strings with about 12 balls in each string were seen to reach about 6000 feet ahead and 2000 feet below.

d. The fourth observation was made somewhat later, at 1959Z, when the aircraft at 15,000 feet was at a point approximately 02°15' S - 101°17' E. This fire, consisting of 2 strings of possible rocket fire with a 10-second interval, reached a point about 3000 feet below and 10,000 feet ahead of the aircraft. It came as a surprise to the crew, who had assumed that, after leaving the target, no more rocket fire would be encountered. (This may have been air-to-air rockets as described in this Annex, Part II, B).

e. All the above observations had the following characteristics in common. The fire, which came out of the undercast at 10,000 feet at an angle of about 30°, started to arc into the aircraft at approximately 12,000 to 13,000 feet. All observations indicated that the fire was ahead of the aircraft which was at 16,000 feet. A definite Roman-candle effect with a trail containing several bright spots approximately 500 feet apart was described. (This was determined from reported observations of 12 spots in 6000 feet of altitude.) The projectiles were reported as bursting somewhat like soap bubbles and with a red color. The bursts were pronounced and fairly large - approximately 25 to 30 feet in diameter. There was also a trace of black smoke and possible fragments. Fire was definitely reported as originating from the ground.

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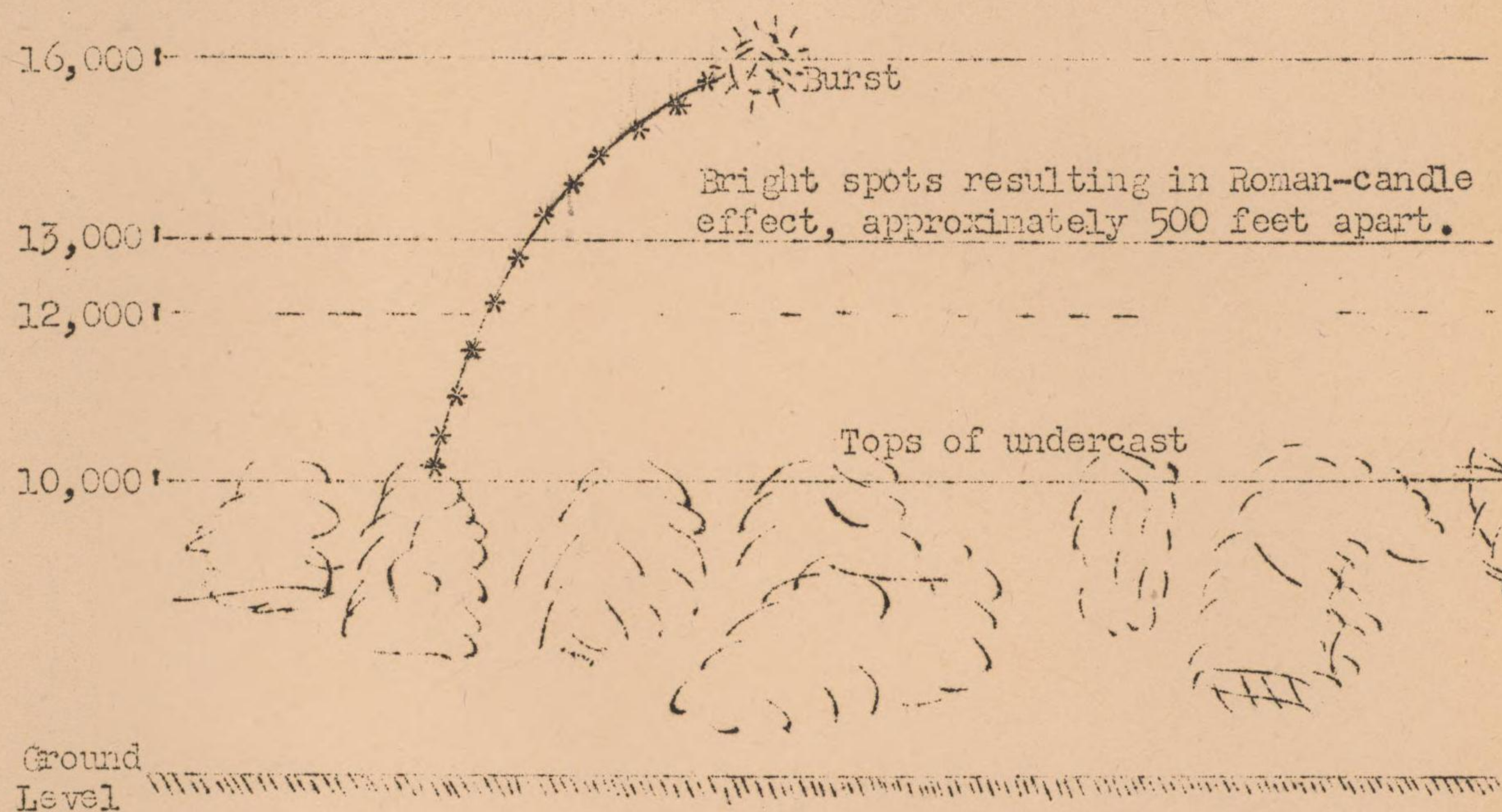
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By NARA Date 10/4

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f. A diagram of this fire is given below;



D. Air-to-Air Rocket Fire

1. SIBIROET ISLAND and TARGET AREA: Reports were received of rocket fire encountered after leaving the target and continuing out over Sibiroet Island. Because of distances, times encountered, and different flight characteristics, this fire was identified as air-to-air rockets. (See Annex C, II, B).

E. Searchlights

1. Fladjoe Refinery, PILLBING (03°00'S - 104°50'E): In general, 12 searchlights were encountered in the target area, although reports varied from 5 to 15. They were primarily ineffective and only 3 aircraft were flicked and these were never tracked or coned. The undercast, which seemed to interfere with the functioning of the searchlights, occasionally had holes through which it was observed that the searchlights were conducting a sweep search of the area. Across the Komering River, a circular pattern of 6 or 7 searchlights was reported. In the center was 1 antiaircraft gun.

2. KEPI POINT (02°21'S - 104°45'E): Three searchlights were reported, but they never located the aircraft, which was flying at 10,000 feet.

3. Three Miles North of SOEPAT (02°43'S - 104°01'E): Three searchlights that never located the aircraft were reported at 02°40'S - 104°00'E (3 miles north of Soepat).

4. PADING (00°54'S - 100°22'E): At 1900Z a searchlight was observed, but it failed to locate the aircraft.

5. SIBIROET ISLAND (01°20'S - 98°50'E): Three searchlights were observed at 1617Z and at 2000Z but none was able to locate the aircraft.

F. Evasive Action

No violent evasive action was taken or found necessary. However, the maneuvers that were made consisted mainly of changes in course to by-pass areas in which fire was being delivered.

S E C R E T

G. Damage From Antiaircraft Fire

There was no damage resulting from antiaircraft fire.

H. Blackouts

1. PALEMBANG (03°00'S - 104°50'E); Blackout conditions were reported to be excellent and effective at the primary target and surrounding areas, including 2 airdromes 15 miles north of Palembang.
2. PANGMELANBRANDAN (04°07'N - 98°10'E); Blackout conditions were reported as excellent.
3. SUMATRA; On the mainland of Sumatra numerous lights were reported, but there were no large concentrations with the one exception of a town which was identified by a mass of lights in a circular pattern.

I. Smoke Screens and Barrage Balloons

1. No smoke screens were reported.
2. PALEMBANG (03°00'S - 104°50'E); One aircraft observed by the light of the flares an indefinite number of barrage balloons at the primary target. This is confirmed provisionally by one strike photo which shows what may be a barrage balloon just east of the site of the new aviation gas plant.

J. Warning Nets

RCM intercepts obtained indicate that an early warning system is in existence on Sumatra. (See Annex F, III)

K. Unusual Occurrences

1. At 1950Z at 15,000 feet between Kepi Point and the primary target, 1 crew observed 2 red flares which described a small arc and disappeared.
2. Red and white flash signals, which evidently were being coordinated with the enemy aircraft in the immediate vicinity, were observed at the primary target.

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S E C R E T

S E C R E T

II - ENEMY AERIAL TACTICS

Mission No. 5

10-11 August 1944

A. Details of Encounters

1. Japanese aircraft made 26 single and coordinated passes and attacks against 8 B-29's; 22 of the 26 encounters resulted in enemy fire, and, although some of the attacks were determined and well executed, none of our aircraft was damaged as a result of enemy air opposition. The attacks were made by a total of 37 fighters, described as 1 NICK, 1 TONY, 18 Single-engine, 12 twin-engine, and 5 unidentified. Our aircraft were under intermittent attack for a period of 2 hours and 48 minutes beginning at 1837Z and terminating at 2125Z. In no instance were our aircraft attacked before the primary target, although 4 of the encounters occurred at the target or immediately thereafter. The remaining 22 attacks were met south of the target and for a distance of 350 miles along the route back, in some instances over the sea off the west coast of Sumatra. Some of the B-29's experiencing attacks reported sightings of enemy aircraft flying out of combat range; allowing for duplication in these sightings and for duplication among fighters making actual attacks on more than one B-29, it is estimated that the mission was opposed by a total of 25 to 35 aircraft of the single-engine and twin-engine type.

2. In general the Japanese pilots were not aggressive in that 69 per cent of the attacks with distances reported terminated between 500 and 1000 yards. Thirty-one per cent were pressed from 500 to 200 yards, the latter being the closest approach to any of our aircraft. Several crews reported that concentrated machine-gun fire from the B-29's and visual evidence that all turrets were functioning had a deterrent effect on closely pressed attacks. One significant change from tactics encountered in previous missions is noted in that 22 of the 26 passes resulted in gun fire by the enemy, a much higher percentage of fire than previously encountered. It is possible that the Japanese pilots attained better firing positions than they had in the past, or that they fired whether they were in proper position or not. The fact that no B-29 was hit lends credence to the latter view.

3. Attacks originated from around the clock, presenting a fairly equal distribution except for slight preferences for the 3, 4, 5, and 7 o'clock approaches and the absence of an approach directly at 9 o'clock. Forty-eight per cent of the approaches were low, 40 per cent level, and 12 per cent high. It is noteworthy that 9 of the 26 attacks were made against a single B-29 of that Group assigned to mine-laying operations. The enemy made contact at 3000 feet shortly after the mines were dropped. Due to the decreased speed of the B-29 as it strived for altitude, enemy fighters were able to concentrate approaches on the rear quarter (all attacks originated between 3 and 8 o'clock) where the B-29 exhaust flames could be used as a target and to maintain visual contact. Evasive action consisted of sharp turns to the right and left. After our aircraft reached altitude and indicated 220-230 mph, however, the enemy fighters soon lost contact. This series of 9 encounters indicates the preference for the stern approach against a slow moving target at night, and, on the other hand, the advantage of altitude and speed as evasive measures. Direction and level of approach for all attacks are shown in the following table,

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S E C R E T

Direction of Attack or Pass	Left Side			Front			Right Side				Rear		Total
	8	9	10	11	12	1	2	3	4	5	6	7	
High	1					1				1			3
Level	1		1			1	1	1	1	1	1	2	10
Low				1	1	1	1	2	2	2		2	12
Total	3			5			8				9		25*

* In addition there was one belly attack originating directly below.

4. Fifty-eight per cent of the breakaways were low, 32 per cent high, and 10 per cent level. Dives, rolls, and turns predominated as breakaway maneuvers; most of the enemy aircraft broke off to the right and to the rear.

5. Of the 2 coordinated attacks reported, one is particularly interesting because of the difficulty of its execution at night. Six enemy fighters attacked one B-29 in train and in rapid succession from 1 o'clock low, opened fire at 1000 yards, closed to about 300 yards, performed a wing-over, and went out at 4 o'clock high. Gunnery was poor but the execution of the attack was excellent. The other coordinated attack was made by 2 fighters, one of which entered high at 1 o'clock, opened fire at 600 yards, and went out at 7 o'clock low. Seconds later, another fighter attacked from 1 o'clock high, dived under the B-29, and broke to 7 o'clock low after opening fire at 800 yards.

6. B-29's returned fire in 16 of the 26 encounters. Although no basis for official claims exists, crews believe that several enemy aircraft were at least damaged. The 10 attacks in which B-29's did not fire were a result of briefing instructions to withhold fire unless the enemy had definitely made contact, instructions given to make certain that B-29's would not attack each other. In this regard, one crew believed it was fired on at long range by another B-29, although the facts of the case remain unknown.

B. New Weapons and Tactics

1. One crew sighted a twin-engine enemy fighter that appeared to be firing a rocket projectile. The plane was operating at great distance and observations were sketchy, but the projectiles, described as about one yard long and dark red in color, were released in pairs. The trajectory was relatively flat, and there was no trail or "comet's tail"; instead, the projectiles appeared to be aglow along their entire length. They moved together for a distance of 400-500 yards after release, at which point they appeared to break apart, drop, and die out. No bursts were observed. Fire was inaccurate. This was the only aircraft seen actually firing rockets.

2. Observations were reported by several crews regarding a bizarre and confusing type of new weapon, probably of a rocket nature. (For details of a similar type of fire, see this Annex Part I, C and D) In some cases, crews believed that the projectiles were ground released, but analysis of reports and further interrogation indicate

S E C R E T

that ground release was virtually impossible because of the unlikelihood of ground installations at many of the points where observations were made, and because of the fact that the attacks followed our aircraft continuously over great distances and in some cases out over water. Conversely, no enemy aircraft were sighted during the time of attacks. Because of the need for clarification and identification of this weapon, crew reports are covered in detail below;

a. One aircraft was under continuous attack for 1 hour and 10 minutes, beginning 10 minutes after leaving the target area. Reddish-orange balls, about the size of baseballs, suddenly appeared "out of nowhere" on the starboard beam; a momentary flash or trail about 6 inches long preceded the red-ball effect and this was followed immediately by an explosion. The balls appeared to break up into 4 or 5 fragments that flow in all directions, and appeared in fours, threes, twos and singly, but never more than 4 appeared at the same time. There was usually an interval of about 10 seconds between volleys. The crew estimated that they observed a total of 250-300 separate bursts during the attack. The explosions were always off the right beam, never closer than 400 yards, never farther away than 700 yards, and always accurate as to altitude. The aircraft was flying at 16,000 feet over an undercast at 10,000 feet varying from 5/10 to 10/10. Lateral visibility was estimated as 30 miles except for occasional scattered clouds, but no enemy aircraft were sighted. There were no ground flashes observed when the ground was visible. Bursts were not observed when the aircraft flew through clouds, but reappeared when the clouds were passed. On one occasion the course was altered sufficiently to allow the tail guns to bear in the direction of the bursts, but 20-mm and 50-cal. fire from the B-29 had no visible effect. There was no change in the continuity or characteristics of the bursts when our aircraft reached the west coast of Sumatra and flew out over the Indian Ocean. The explosions continued until after Siberoct Island had been passed. There was no clue as to whether the projectiles were originating from below, level, or above. The B-29 was not damaged.

b. Another crew reported "odd explosions resembling 4th of July fireworks". The bursts were orange in color, and appeared to be 1 to 4 miles off the left beam. The aircraft altered course to evade this area, and no further sightings were made.

c. The third crew reported 12 similar observations from 02°34'S - 102°45'E to 00°14'S - 96°11'E between 1950Z and 2210Z at 15,000 feet. Fire was observed a great distance ahead and on course, but the course was altered and the fire avoided.

d. In view of the reports submitted by the first crew, it appears to be virtually impossible that the projectiles could have been released from the ground, at least in that particular case. The area of attack was too great and the fire too continuous. The fact that enemy aircraft were not sighted during the attacks is unusual, particularly since visibility was good. The ability to maintain contact throughout the 1 hour and 10 minute period, to carry 250-300 projectiles, and to obtain accuracy as to altitude are other confusing aspects. Nevertheless, it is believed that the projectiles were released from one or more aircraft.

3. Nine of the attacking aircraft flashed navigation lights on and off, either as a signal to other planes or as self protection from attacks by other Japanese aircraft.

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S E C R E T

S E C R E T

4. It is the belief of several crews that certain enemy planes flying parallel to our aircraft and out of range relayed speed, altitude, and course information to ground batteries.

C. Summary of Enemy Tactics

1. Weak to moderate fighter opposition, failing to effect damage on any of our aircraft.

2. Encounters in general were not aggressive; enemy pilots appeared reluctant to press attacks.

3. Relatively high percentage of enemy fire in total passes made.

4. Attacks originated from all directions, with low and level approaches predominating.

5. Japanese preference for stern approach against slow moving targets at night.

6. Low breakaways predominated.

7. Two well-executed coordinated attacks.

8. Sighting of 1 enemy aircraft releasing rocket projectiles.

9. Observation of a new weapon, probably of the rocket type and probably released aeriaily.

C-8

S E C R E T

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III - TABULAR ANALYSIS OF ENCOUNTERS

Mission No. 5

10-11 August 1944

	No. of Attacks	No. of B-29's Attacked	E/A Opened Fire (Yards)	E/A Closed to (Yards)	B-29 Opened Fire (Yards)	E/A Level of Breakaway	Coordinated or Single Attack	Time of Attacks
40th	7	2	1-1200 1-900 4-800 1-no	2-1000 1-750 4-700	1-1200 1-1000 1-900 4-800	5-high 1-level 1-low	3-single 4-unrptd	1923Z to 2041Z
444th	7	4	1-1000 1-700 2-500 1-300 2-no	1-700 1-500 1-300 1-200 3-unrptd	6-no 1-unrptd	1-high 6-low	5-single 2-coord	1837Z to 2025Z
462nd	9	1	5-1000 2-800 2-600	3-800 2-600 1-400 1-300 2-unrptd	1-1000 1-500 1-400 1-no 5-unrptd	1-level 3-low 5-unrptd	9-single	1920Z to 2035Z
468th	3	1	1-1500 1-300 1-no	1-300 2-unrptd	3-no	1-low 2-unrptd	3-single	2113Z to 2125Z
TOTALS	26	8	18-over 500 4-500 or less 4-no	13-over 500 6-500 or less 7-unrptd	8-over 500 2-500 or less 10-no unrptd	6-high 2-level 11-low 7-unrptd	20-single 2-coord 4-unrptd	1837Z to 2125Z
See text and clock diagram for direction and level of attack.								

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6-9

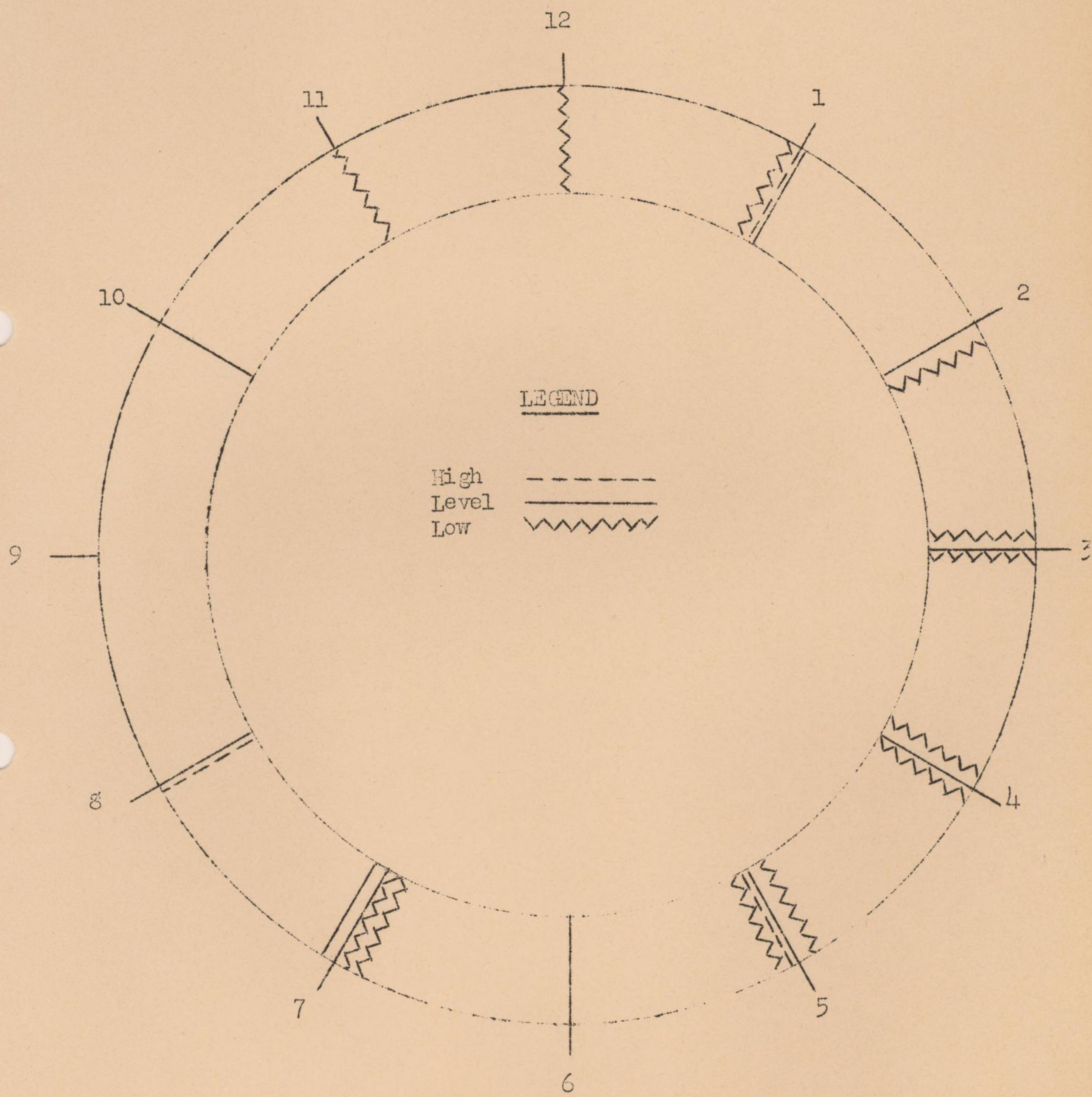
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IV - CLOCK SUMMARY OF ATTACKS

Mission No. 5

10-11 August 1944



Note: In addition there was one belly attack originating directly below.

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Authority 760063
By NARA Date 10/4

S E C R E T

ANNEX

D

WEATHER INFORMATION

- I - Weather Information: As Forecast and As Encountered
- II - Chart - Weather as Briefed
- III - Chart - Weather as Reported by Returning Crews
- IV - Synoptic Map as of 1830 IST, 10 August 1944

S E C R E T

Mission No. 5

I - WEATHER INFORMATION

10-11 August 1944.

	As Forecast	As Encountered
<p>Zone #1 829 to 870 E (Base)</p>	<p>Scattered light to moderate showers with a few scattered thunderstorms for first 150 miles of zone. 6/10 to 8/10 altostratus and altocumulus; base 12,000', tops 14,000', decreasing to 3-4/10 remainder of zone. 7/10 cumulus and cumulonimbus, base 1000'; tops generally 10,000' except a few scattered tops rising to 14,000' over first 150 miles of zone with 5/10 cumulus, base 1000' and tops 5000' over remainder of zone. Vsby over 6 miles except lowering to 1 mile in showers.</p>	<p>Scattered light to moderate showers with scattered thunderstorms over E coast of Ceylon diminishing after 2300 hrs. Zone of convergence latter part of zone with scattered showers and a few thunderstorms. Increasing activity morning hours. Broken altostratus and altocumulus. Base 14,000', tops 15,000'. 6/10 cumulonimbus E coast of Ceylon, base 2000', tops 10,000', diminishing after 2300 hours. 5/10 cumulus, base 1500', tops 5000' with 7/10 cumulus and cumulonimbus, base 1500' and tops 10,000' latter part of route. Tops over 14,000' in precipitation areas. Vsbj over 6 miles except lowering to 1 mile in showers.</p>
<p>Zone #2 870E to 969E</p>	<p>Scattered light to moderate showers central part of zone. 7/10 - 9/10 altostratus, base 14,000', tops 15,000'. 5/10 cumulus increasing to 7/10 cumulonimbus in showers over central portion of zone. Base 1000', tops 5000', except rising to 10,000' in precipitation areas. Vsby over 6 miles except lowering to 1 mile in showers.</p>	<p>Thunderstorms with rain, hail, and snow encountered central part of zone. 9/10 cirrus above 20,000' with broken altostratus at 14,000'. 5/10 to 6/10 first of zone to convergence area with decreasing cloudiness last of zone to 5/10 to 5/10 covered; bases 1500' tops 5000' with few towering cumulus to 10-12,000' at end of zone. Vsbj 6 miles or better except in showers.</p>
<p>Zone #3 969E to Mountains</p>	<p>Diminishing showers and thunderstorms over mountains. Patches of altostratus clouds, base 15,000', estimated 500' thick. 5/10 to 6/10 stratocumulus, base 1000', tops 3000' with 4/10 to 5/10 diminishing cumulonimbus over mountains; tops generally 13,000' with few scattered tops to 20,000'. Vsby over 6 miles except lowering to 1 mile in showers.</p>	<p>Showers and thunderstorms over mountains with few scattered showers off coast morning hours. Patches of altocumulus and altostratus; base 14,000', tops 14,500', 3/10 to 5/10 cumulus and stratocumulus, base 1500', tops 5000' except few scattered tops at 7000'. 5/10 to 7/10 cumulus and cumulonimbus over mountains; base 12,000', tops 13,000' with some tops over 20,000' in storm areas. Vsbj over 6 miles except lowering to 1 mile in precipitation. Moderate turbulence in storms.</p>

(Continued on D-2)

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D-1

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I - WEATHER INFORMATION (Continued from D-1)

At targets	<p><u>PALEMBANG</u>: Few altostratus clouds at 15,000'. Patches of 2/10 to 3/10 stratocumulus clouds increasing to 6/10 stratocumulus at 0600 local time; base 1500', tops 2500'. Vsby over 6 miles. Sea level pressure 29.83". <u>PANGKALANBRANDAN</u>: 5/10 altostratus clouds at 13,000'. 5/10 stratocumulus clouds; base 2500', tops 5000'. Vsby over 6 miles. Same pressure as Palembang. <u>PADANG</u>: 9/10 stratocumulus; base 800', tops 2500'. Vsby over 6 miles. Sea level pressure: 29.77'.</p>	<p><u>PALEMBANG</u>: Thin altostratus 8/10 at 7-8000'; occasional large breaks in thin altostratus. Ceiling and vsby unlimited above altostratus layer. Low clouds generally. 2/10 patchy stratocumulus at 2000'. vsby 6 miles with haze. <u>PANGKALANBRANDAN</u>: Thin overcast at 8000'. <u>PADANG</u>: No reports.</p>
Return Route	No appreciable change in conditions from route out.	Approximately the same conditions prevailed on return as encountered on the route out.
Base on Return	7/10 altostratus at 12,000' with 4/10 stratocumulus; base 2000', tops 4000'. Vsby over 6 miles. Surface wind SW 12 mph.	Clear until 0330Z, then becoming 4/10 cumulus; bases at 3000'. Surface wind SW 10 mph. vsby 6 miles
Turbulence		Moderate in storms.

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S E C R E T

A. Temperatures Aloft

Altitude	Forecast	Encountered
Surface	+24°C	
1000'		+30°C
5000'	-17°C	
9000'		+12°C
10,000'	+10°C	
12,000'		+10°C
15,000'	-2°C	+5°C
17,000'		+2°C
20,000'	-4°C	
25,000'	-10°C	

B. Winds Aloft

Altitude	Forecast			Encountered		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Surface	230° 8mph	225° 12 mph	140°- 4 mph	227° 8 mph		120° 8 mph
1500'				220° 25 mph	230°- 22 mph	
4000'			130°- 10mph			
5000'	270°- 25 mph	230° 25 mph		260°- 21 mph	230°- 21 mph	
6000'			240°- 8 mph			
10,000'	270° 25 mph	270°- 25 mph	240°- 10 mph		263°- 22 mph	235°- 8 mph
12,000'				230°- 23 mph		
13,000'				260°- 14 mph		
14,000'			120° 8 mph			
15,000'	230°- 15 mph	250°- 15 mph		230°- 15 mph	210°- 14 mph	120°- 8 mph
16,000'					110° 10 mph	
17,000'		110° 10 mph	90°- 8 mph		100°- 15 mph	90°- 8 mph
18,000'	90°- 10 mph					
20,000'	100° 15 mph	100°- 10 mph	90°- 5 mph			
25,000'	100°- 25 mph	90°- 10 mph	90°- 5 mph			

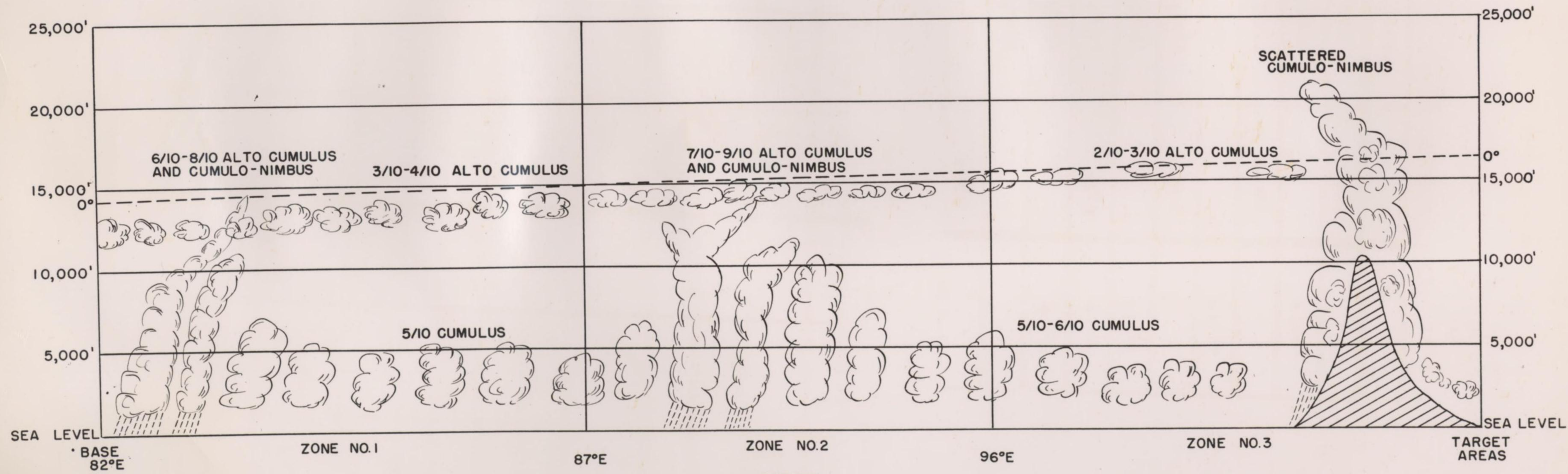
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S E C R E T

SECRET

XX BOMBER COMMAND
MISSION NO.5
10-11 AUGUST 1944

WEATHER AS BRIEFED



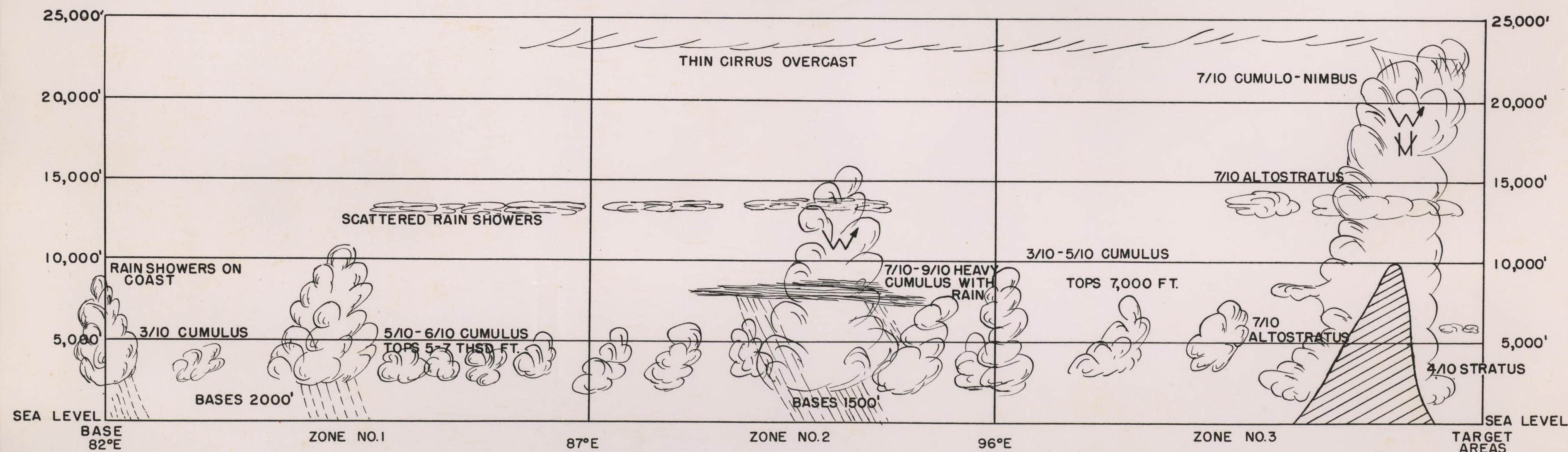
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XX BOMBER COMMAND
MISSION NO. 5
10-11 AUGUST 1944

WEATHER AS REPORTED BY RETURNING CREWS
(OUTGOING AND RETURN CONDITIONS ESSENTIALLY THE SAME)



9.21

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MAP INSTRUCTIONS

1. A station must be plotted to indicate that weather has been observed. The station symbol is: (a) a circle for observations at sea, and (b) a square for observations on land. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation.
2. A station must be plotted to indicate that weather has been observed. The station symbol is: (a) a circle for observations at sea, and (b) a square for observations on land. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation.
3. A station must be plotted to indicate that weather has been observed. The station symbol is: (a) a circle for observations at sea, and (b) a square for observations on land. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation.
4. A station must be plotted to indicate that weather has been observed. The station symbol is: (a) a circle for observations at sea, and (b) a square for observations on land. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation.
5. A station must be plotted to indicate that weather has been observed. The station symbol is: (a) a circle for observations at sea, and (b) a square for observations on land. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation. The station symbol is plotted at the location of the observation.

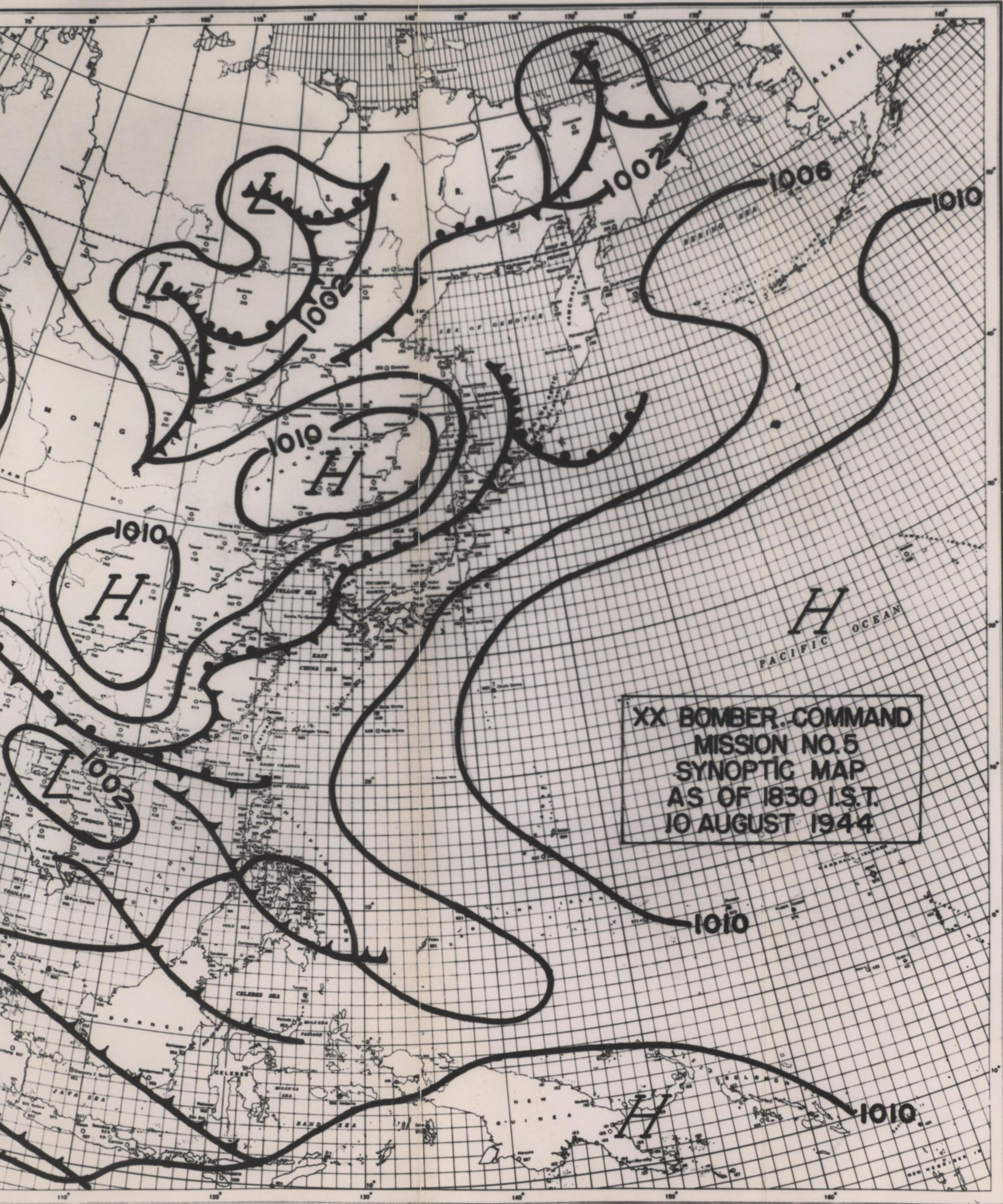
Table 1. Symbols for Standard and Special Charts

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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STATION _____
 DATE _____ TIME _____

XX BO
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WESTERN NORTH PACIFIC OCEAN—METEOROLOGICAL PLOTTING CHART—U.S. NAVY



XX BOMBER COMMAND
MISSION NO. 5
SYNOPTIC MAP
AS OF 1830 I.S.T.
10 AUGUST 1944

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ANNEX

E

COMMUNICATIONS INFORMATION

- I - General Communications Data
- II - Controller Communications Data

DECLASSIFIED
E.O. 11652, Sec. 3(E) and 5(D) or (E)
NND 740120
By CEB/sj NARS, Date Oct 29, 1975

~~SECRET~~

DECLASSIFIED
Authority 760063
By 100 NARA Date 10/4

S E C R E T

I - GENERAL COMMUNICATIONS DATA

Mission No. 5

10-11 August 1944

A. General

Communications facilities were adequate. Considering the additional problems arising as a result of the selection of China Bay as a staging area, results obtained on air-ground and point-to-point channels were good.

B. Air-Ground Communications

All air-ground communications were controlled from one point at China Bay. Generally, however, they were not considered on a par with the air-ground communications of previous missions. Some interference was encountered on voice channels because the Aircraft Control Center and ATC were using frequencies with a differential of only 5 kcs. In addition, the fact that this mission was carried out at the same time as Mission Number 6 from the China bases caused some interference between the Control Center at Hsin-ching and the one at China Bay. Static caused some degree of interference and storms occasionally cut off communications entirely.

C. Navigational Aids

The aircraft on the return route requested several bearings, both from the Control Center Station, SCS, and from naval vessels stationed along the route. The bearings given by the naval vessels were generally more accurate than those given by the land station. The 5-kilowatt homing beacon (BN) was useful at an average distance of 600 miles and the YJ Racon beacon for a distance of about 35 miles. The projected use of the SCR-729 for homing on the IFF was not successful because of interference from other aircraft in the vicinity.

D. Point-to-Point Communications

Communications between China Bay and Rear Headquarters, handled by a circuit established especially for this mission, were excellent.

E. Radio Discipline

Radio silence was maintained by all aircraft on the movement from the rear area to the staging area and during the mission as far as the target. For returning aircraft, provisions were made to break radio silence for "bombs away" messages, for navigational aids, for distress calls, and for clearances into the control area when 250 miles from China Bay. There were reports of some aircraft transmitting while others were still on the air.

F. Signal Security

HEXCH encoding and prearranged messages were used to insure security.

G. Air-to-Air Communications

Since formations were not flown, air-to-air communications were not necessary.

H. Enemy Radio Activity

An enemy station using clear text C.W. transmission tried to contact one of our aircraft. The Radio Operator recognized the transmission as enemy and did not answer.

S E C R E T

E-1

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Authority 760063

By NARA Date 10/4

SECRET

I. Special Messages from the Target Area

Each aircraft was instructed to send a predesignated signal within 10 minutes after bombing the target. The percentage of these messages received was lower than usual with 21 of the 43 messages sent being received.

II - CONTROLLER COMMUNICATIONS DATA

Mission No. 5

10-11 August 1944

1. On the whole the operations of the Aircraft Control Center at China Bay was satisfactory. The air-to-ground traffic was kept to a minimum, enabling the Aircraft Control Center to maintain contact with aircraft 420 when it ditched, and also to get pertinent information from other aircraft in distress.

2. The cooperation of the R.A.F. and the Royal Navy with the Aircraft Control Center was exceptionally good.

3. In most cases the aircraft had arrived at China Bay before the departure message was received from the home base. Since the movement was made under radio silence, this caused some inconvenience to the British defense system.

4. During the mission, however, the Aircraft Control Center received requests for clearance into the local area from 47 of the 54 aircraft returning to China Bay.

5. There is no complete record of the bearings given to returning aircraft since they were given direct by the Royal Navy to the aircraft requesting them.

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E-2

S E C R E T

ANNEX

F

RADAR AND RCM

I - Radar Information

II - Radar Tables

Table 1 - Radar Reports on Bombing

Table 2 - Radar Operator Efficiency

Table 3 - Radar Serviceability

Table 4 - Radar Camera Data

III - RCM Information

S E C R E T

S E C R E T

I - RADAR INFORMATION

Mission No. 5

10-11 August 1944

A. Radar Summary

1. This long-range mission was substantially aided in its success by the use of radar, both for navigation and bombing. Eighteen of the 34 aircraft bombing the targets released by radar and some of the visual bomb releases were made at the end of radar bomb runs.

2. Radar was also successfully employed during the mining operations to locate the Moesi River channel. Some aircraft that were unable to obtain a radar fix on Sumatra and the islands off its west coast, however, were forced to return without having found the primary targets. The serviceability of the radar set was 96 per cent at take-off and 89 per cent over the various targets. The radar operators' efficiency level was slightly improved as indicated by the fact that 70 per cent of the operators obtained ground speed and drift by radar. However, the number of usable radar-scope photographs obtained from the 9 cameras installed was again unsatisfactory, only 3 sets being obtained.

B. Radar Bombing and Operator Efficiency

1. The Pladjoe Refinery offered an excellent target for the radar-bombing technique, for it gave a bright signal which contrasted well with the dark river in the foreground. This seems to be borne out by the fact that 36 aircraft out of the 41 that had radar operative definitely were able to identify the radar signal from the target at ranges of 20 miles or more. This excellent target identification was undoubtedly an aid to the aircraft releasing bombs visually as well as those releasing by radar. Radar operators from 2 of the Groups reported excellent agreement between the scope drawings in the radar briefing folder and the actual appearance of the scope.

2. There was no substantial improvement by the radar operators in the use of aids to radar operation. Only 43 per cent of the operators used sector scan, and 67 per cent, the usual percentage, made use of azimuth stabilization. However, 70 per cent of the operators computed radar ground speed and drift, a slight improvement. Unfortunately, 28 per cent of the operators, an increased percentage, reduced the accuracy of the radar bombing by using the 20-mile sweep instead of the desired 10-mile sweep.

C. Radar-Scope Photography

Of the 9 C-3 radar cameras installed, only 3 were in aircraft reaching the primary target. However, the photographic technique has improved, since all 3 sets of photographs obtained were usable. The courses of aircraft 222, which obtained excellent photographs, and of aircraft 280 have both been plotted from the scope pictures, establishing fairly conclusively the fact that these aircraft bombed the refinery area (see

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exhibit at end of Annex). A directed effort is being made to increase the number of aircraft equipped with C-3 radar cameras.

D. Radar Navigation

The usefulness of radar in navigation was emphasized by the results of this mission. The 3 aircraft that were successful in mining the Loesi River all located the channel by radar. In addition, the fact that 24 bomb runs were radar aided must not be overlooked. This includes 18 runs which terminated in radar releases and 6 which terminated with a visual release but which were dependent upon radar for the approach and bomb run.

E. Radar Serviceability

The level of serviceability of the radar set was exceptionally high on this medium-altitude mission with 96 per cent of the sets operative at take-off and 89 per cent operative over the targets. It is believed this increased serviceability can be ascribed partly to the lower altitudes flown and partly to improved maintenance. The record of flight maintenance was again excellent with 5 radar failures and numerous minor troubles repaired in the air.

F. Auxiliary Equipment

The serviceability of the auxiliary sets was again quite satisfactory. There were no failures of the SCR-695 reported, only 1 of the SCR-729 and 3 of the SCR-718. However, the operational use of the SCR-729 was highly unsatisfactory on this mission and the need for training of radio operators was again indicated. Operators used the wrong switch setting in one Group and the 468th Group reported no racon responses, only to find 5 to 6 days later that 21 of their 23 SCR-729's obtained excellent ranges in racons with experienced operators. Only 1 radio operator reported IFF signals on the SCR-729 from the naval craft stationed along the course.

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II - RADAR TABLES

Mission No. 5

10-11 August 1944

Table I - Radar Reports on Bombing*

	40th		44th		468th		Total	
	No.	L/C %	No.	L/C %	No.	L/C %	No.	L/C %
Aircraft reporting	14		13		13		40	
Aircraft bombing Primary Target	11	100	9	100	11	100	31	100
Aircraft bombing FT by radar	8	73	5	56	5	45	18	58
Aircraft bombing Secondary Target	2	100	0	-	0	-	2	100
Aircraft bombing ST by radar	2	100	0	-	0	-	2	100
Aircraft using radar bomb run with visual release	3	27	1	11	2	18	6-a.	19

* Does not include the 462nd Group since mining was a visual operation.
a. One aircraft not reporting.

Table II - Radar Operator Efficiency

	40th		44th		462nd		468th		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Radar operative at take-off	14	100	11	100	8	100	13	100	46	100
Computed radar G.S. and drift	7	50	10	91	5	63	10	77	32	70
Identified I.P. at usable range	11	79	9	82	6	75	8	62	34	74
Identified target at usable range	11	79	8	73	7	87	10	77	36	78
Used sector scan	5	36	4	36	2	25	9	69	20	43
Used azimuth stabilization	8	57	7	64	7	87	9	69	31	67
Used 10-mile scale for bombing	11	79	4	36	4	50	9	69	28	61

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Table III - Radar Serviceability

	40th		44th		462nd		468th		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Aircraft reporting	14	100	13	100	8	100	13	100	48	100
Radar operative at take-off	14	100	11	85	8	100	13	100	46	96
Radar operative over target	13	93	9	69	7	87	12	92	41	89
Radar failing to operate over target	1	7	2	16	1	13	1	8	5	11
No. of radar repairs made during flight	2		1		1		1		5	

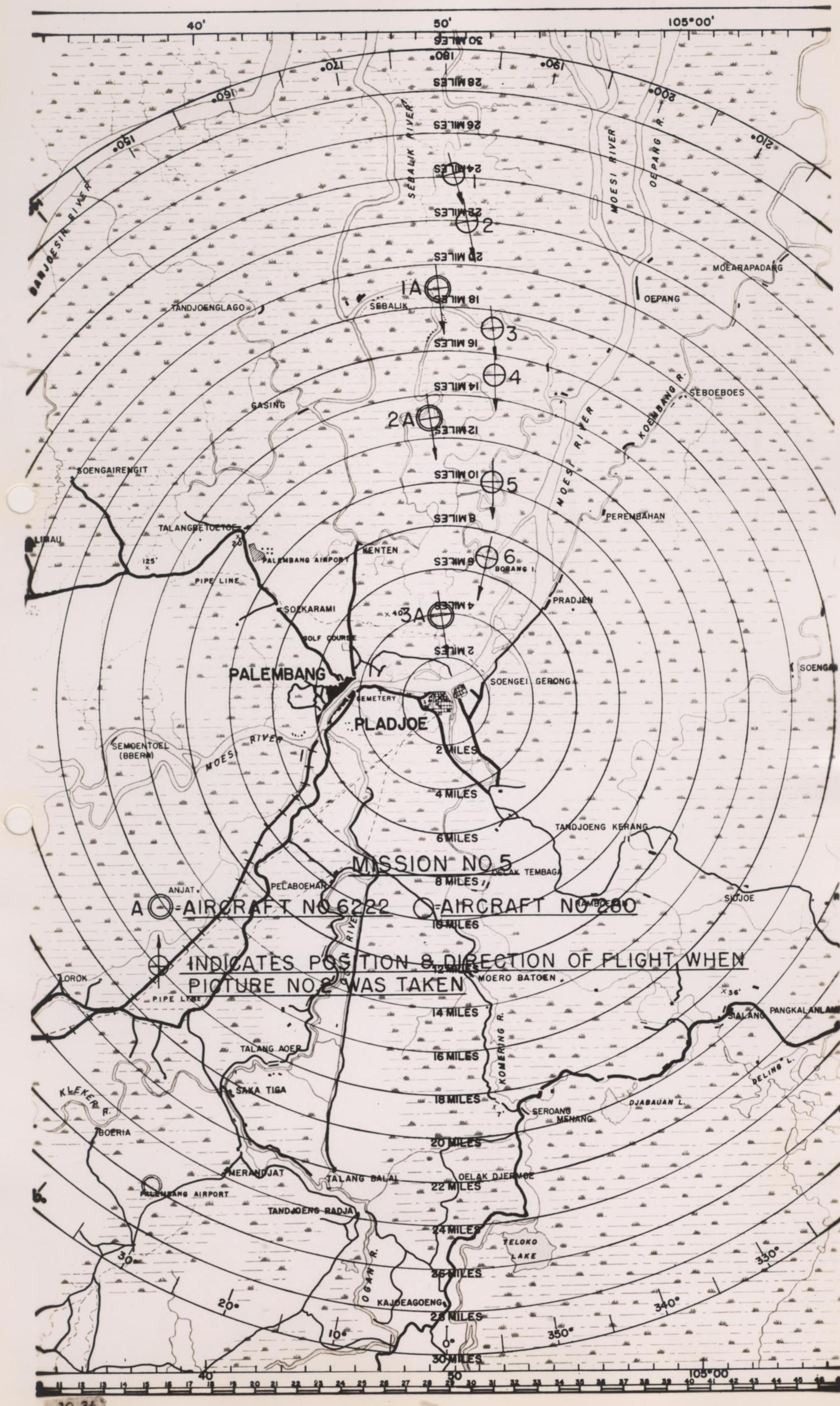
Table IV - Radar Camera Data

	40th	44th	462nd	468th	Total
No. of aircraft with cameras installed	2	2	3	2	9
No. of cameras airborne	2	1	1	1	5
No. of usable scope sets	2	1	0	0	3

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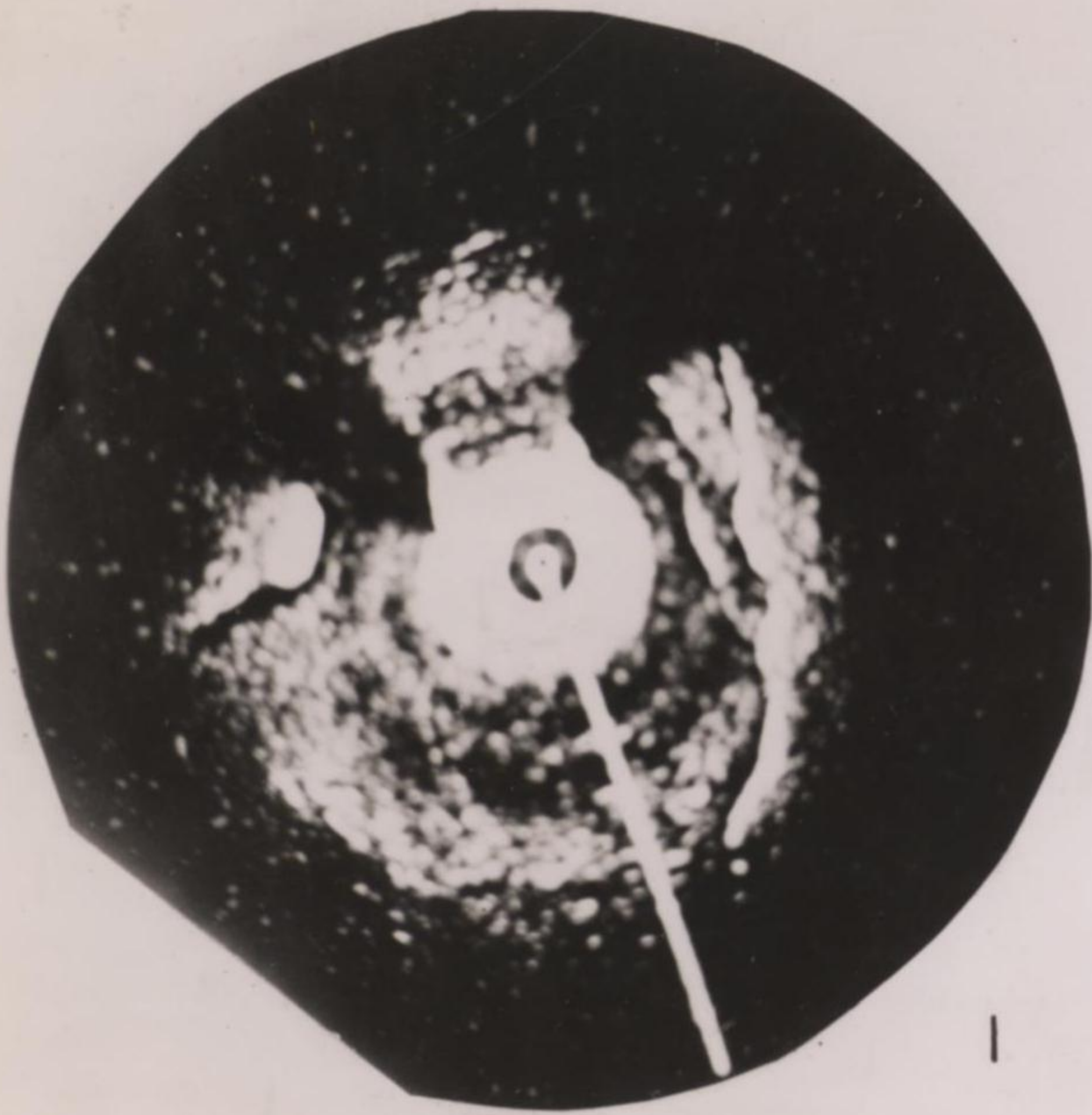
PLADJOE AREA
 PLADJOE REFINERY
 (3°00'S, 104°50'E)



10.34

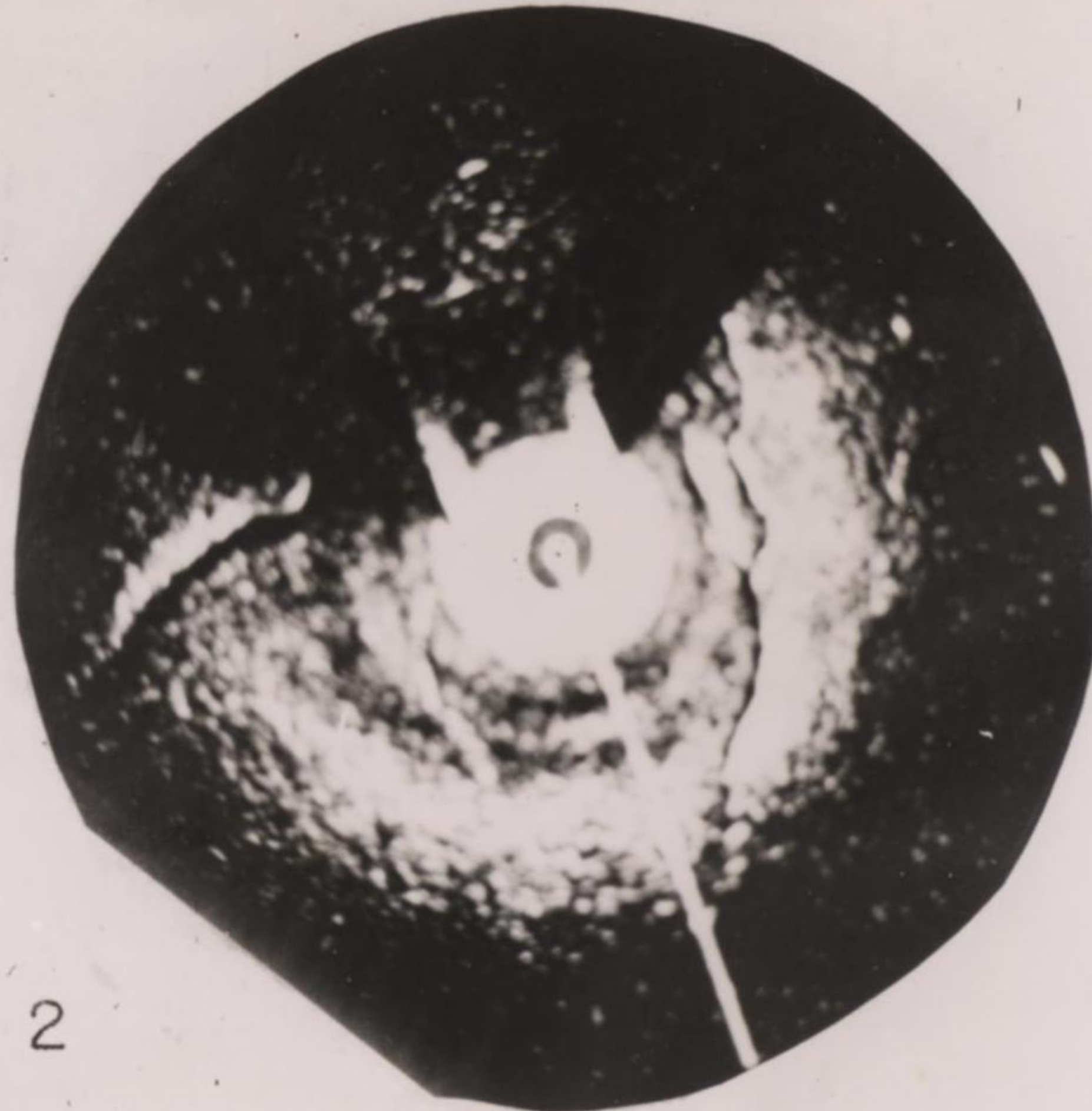
SECRET

RADAR SCOPE PHOTOGRAPHS
PLADJOE OIL REFINERIES
A/C #280 444TH BOMB GROUP



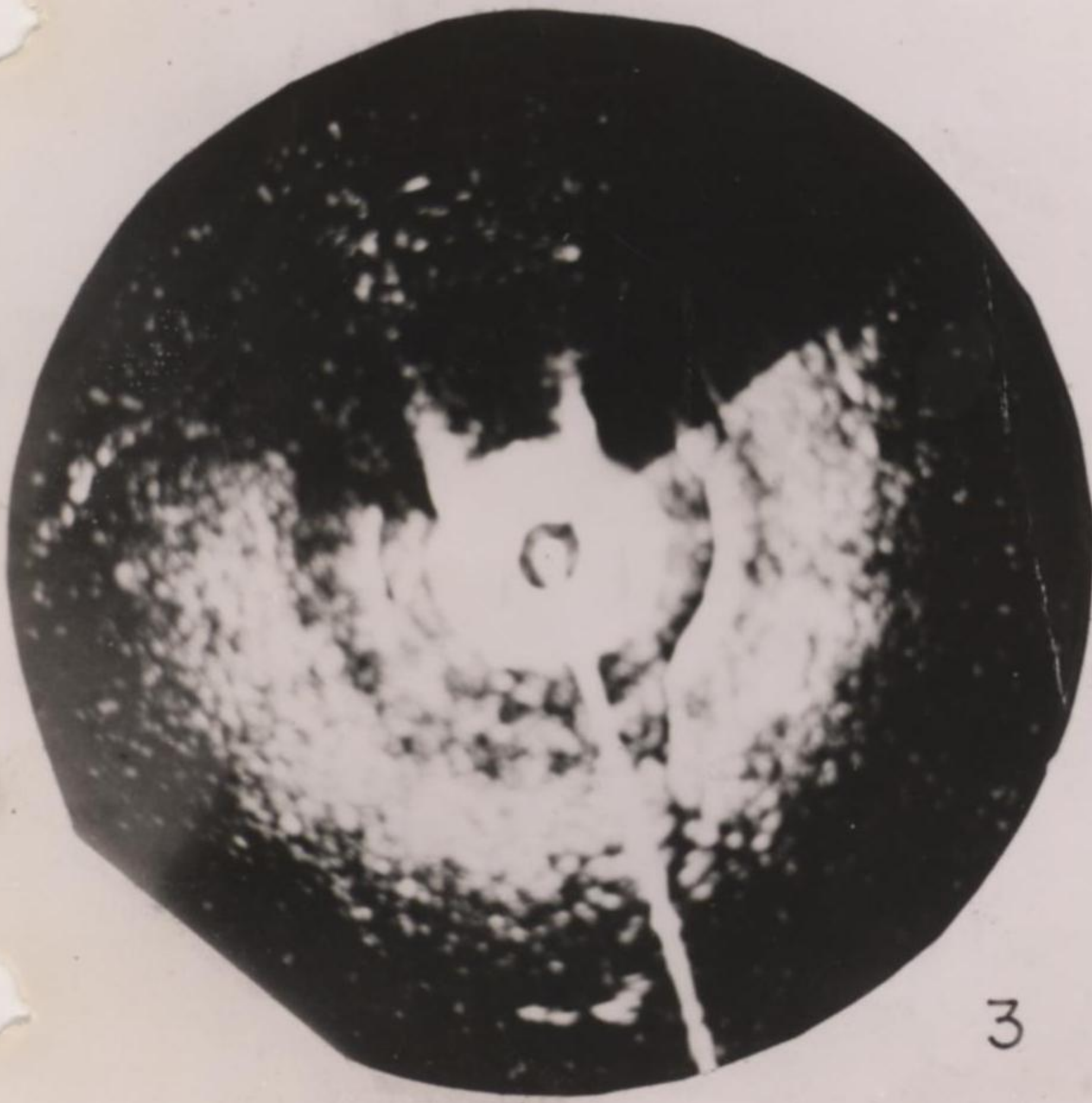
1

20 MILE SWEEP
MOESI RIVER 9 MILES
FROM 2 O'CLOCK TO 5 O'CLOCK



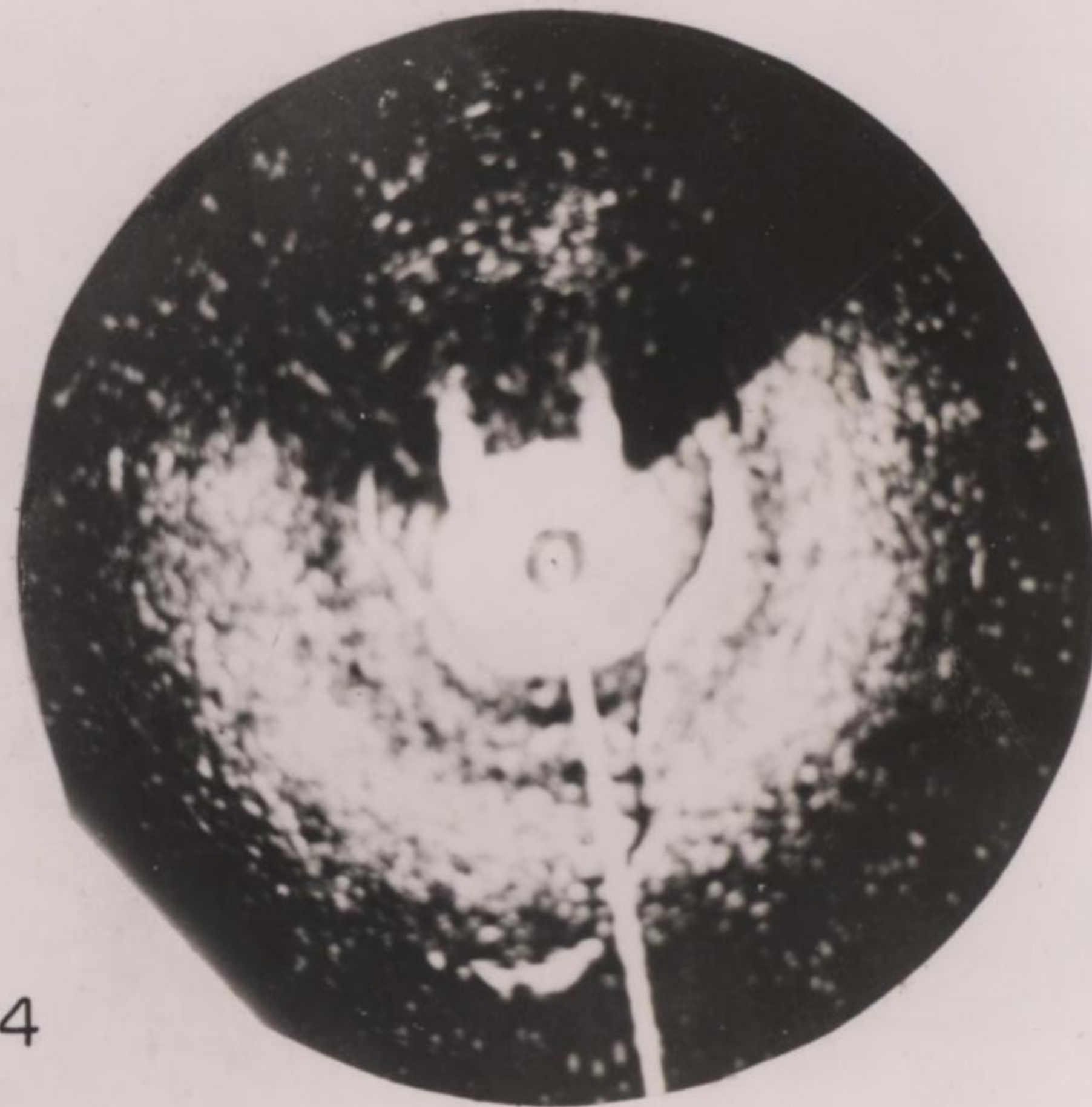
2

20 MILE SWEEP
MOESI RIVER 8 MILES HEADING 160°
NOTE BOMBAY DOOR SHADOW



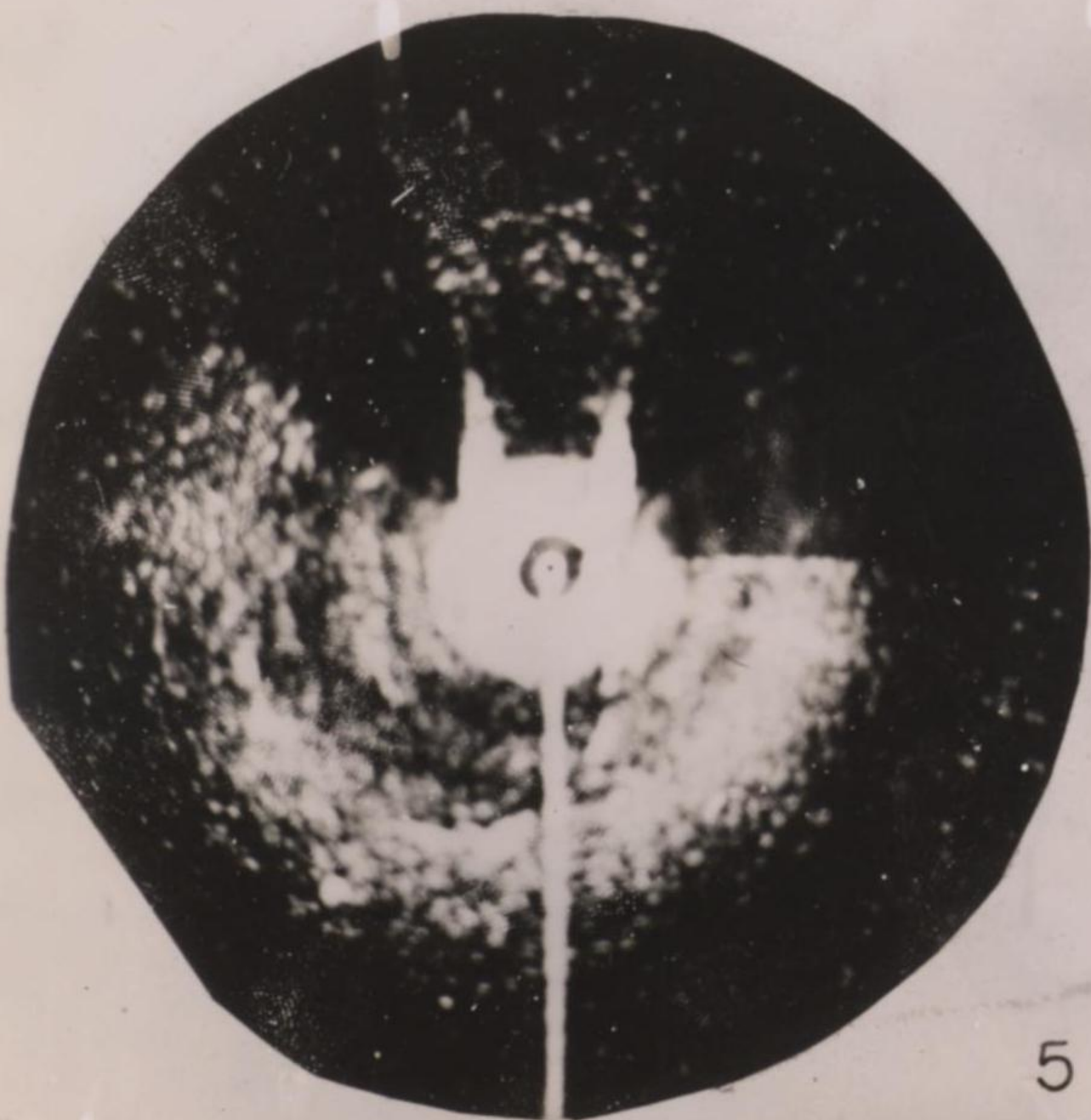
3

20 MILE SWEEP
PLADJOE 17 MILES
AT 6 O'CLOCK



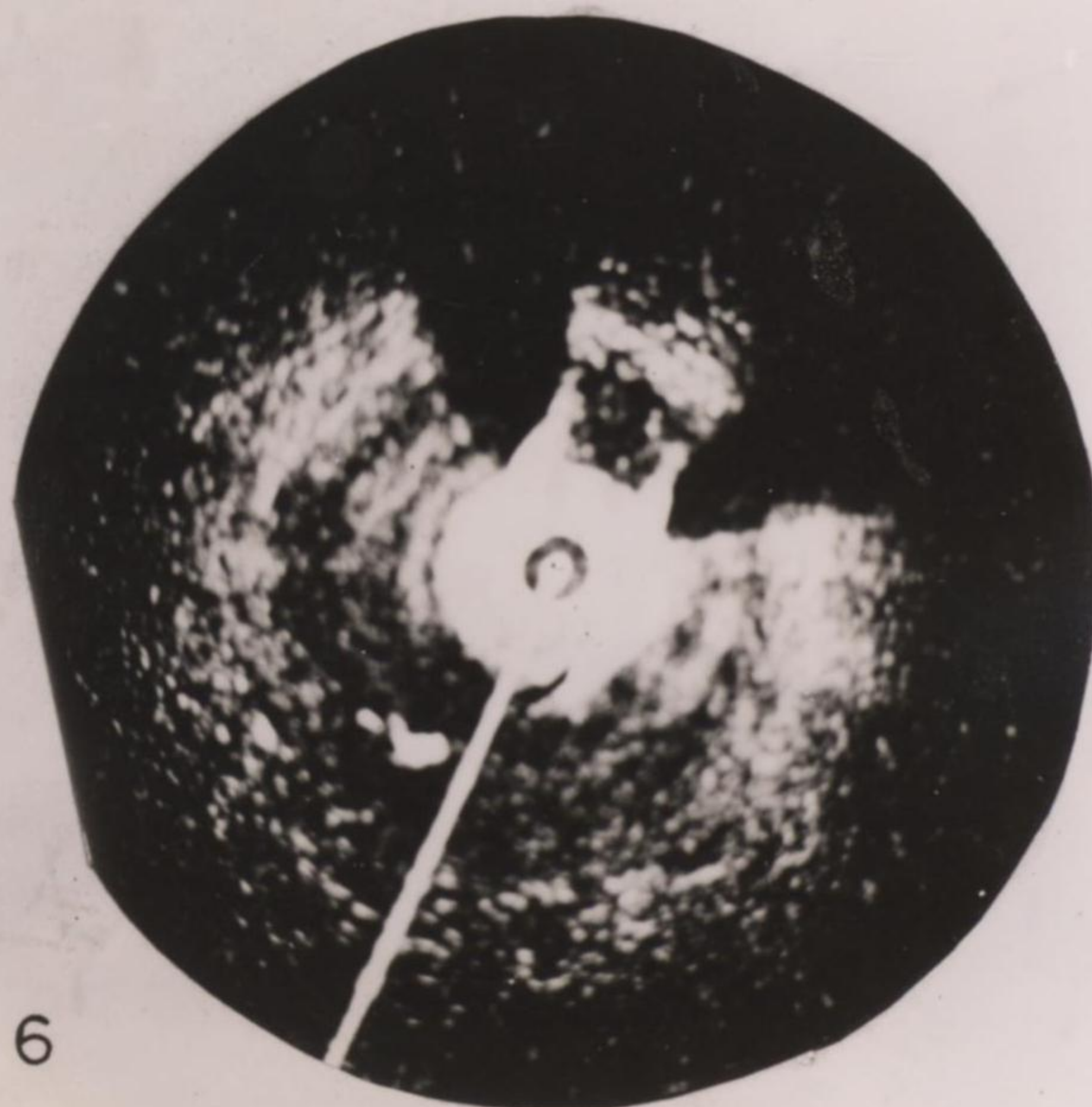
4

20 MILE SWEEP
PLADJOE 15 MILES
HEADING 170°



5

20 MILE SWEEP
PLADJOE 11 MILES HEADING 180°
NOTE BOMBAY DOOR SHADOW



6

20 MILE SWEEP
PLADJOE 7 MILES
HEADING 200°

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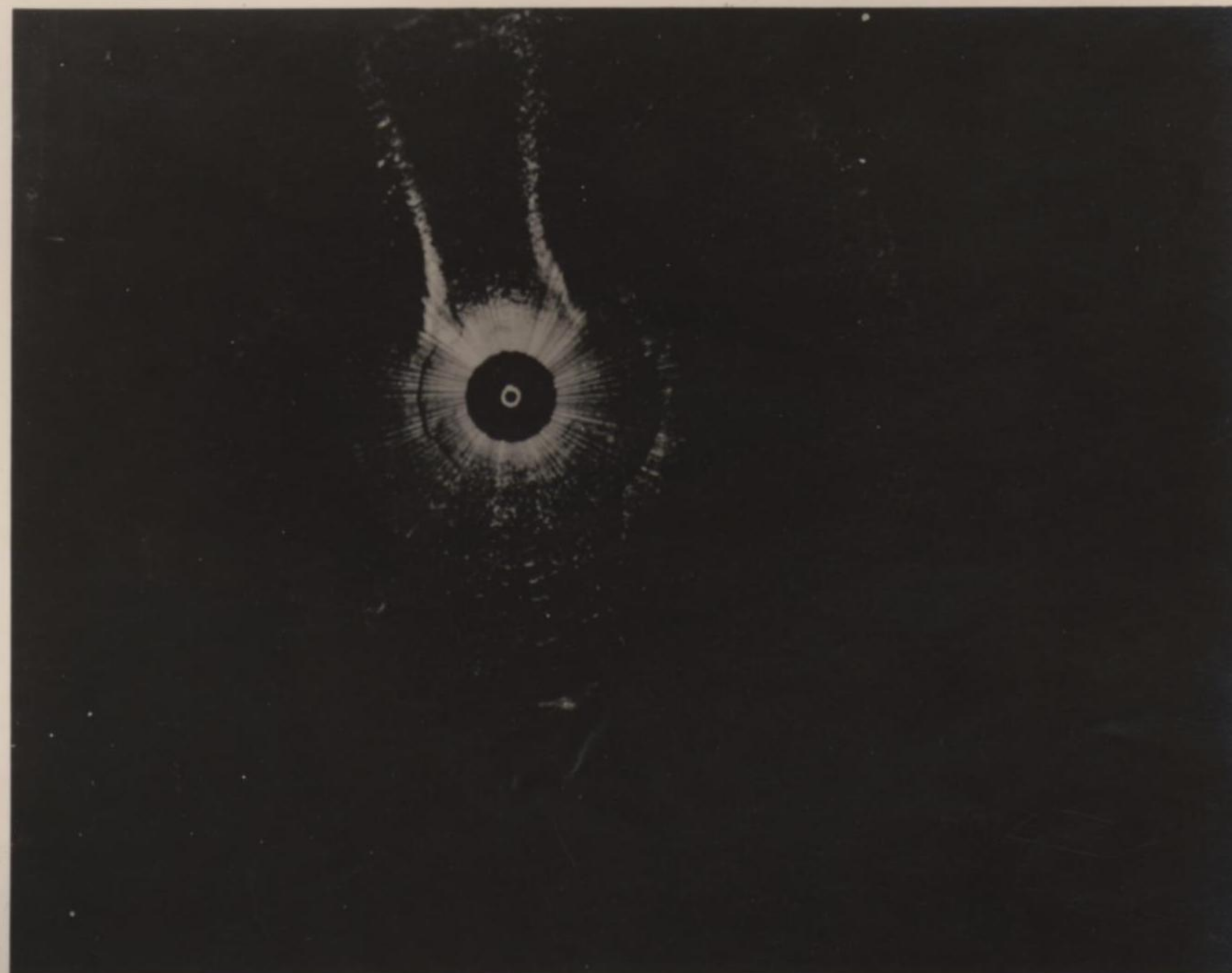
By NARA Date 10/4

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SCOPE PICTURES FROM
A/C #6222 MISSION #5
TARGET PLADJOE

PICTURE #1A. 20 MILE
SWEEP. HEADING 170°
MAG. NOTE: TARGET AT
19 S. MILES RANGE

1A



PICTURE #2A. 20 MILE
SWEEP. HEADING 170°
MAG. NOTE: BOMB BAY
DOOR SIGNALS ON ALL
3 PICTURES

2A



PICTURE #3A. 10 MILE
SWEEP. HEADING 170°
MAG. TARGET 4 S. MILES.
RANGE TRACK INDICATES
LOW DEFLECTION ERROR

3A



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III - RCM INFORMATION

Mission No. 5

10-11 August 1944

A. General

1. As in past missions, RCM activities were confined to search for Japanese radar signals while enroute to the target, at the target area, and on return. No offensive action was taken.
2. Search was made in the following frequency ranges; (a) 75-300 megacycles and (b) 300-1000 megacycles.
3. One of the aircraft searching the 75-300 megacycle range was equipped with a direction-finding antenna. Other aircraft of this Command are currently being equipped with this equipment.
4. Five of the aircraft completing the mission were equipped with search receivers.

B. Frequencies Intercepted

1. 78-82 Megacycle Band: As the aircraft approached the coast of Sumatra, a 78-megacycle signal of the early-warning type was picked up. (This signal had a pulse recurrence frequency of 280 PPS and a pulse length of 4.4 microseconds.) While nearing the target area, one early-warning signal of 81 megacycles became continually stronger. (This signal had a pulse recurrence frequency of 540 PPS and a pulse length of 60 micro-seconds.) The aircraft with the D/F equipment intercepted a signal of 80.5 megacycles, 500 PPS, and a pulse length of 70-80 microseconds. The enemy transmitter was located in the area of Palembang; however, the intersection cuts were greatly scattered, preventing an exact pinpointing.
2. 97-103 Megacycles Band: Signals at 97 and 103 megacycles with respective pulse recurrence frequencies of 54 and 1650 PPS and a pulse length of 3.3 microseconds were noted near Sumatra. These transmitting stations are believed to be part of the early-warning system of the Sumatra Area.
3. 177-198 Megacycles Band:
 - (a) Possible night fighter II signals were picked up over Sumatra with a frequency of 177 megacycles, a pulse recurrence frequency of 1300 PPS, and pulse length of 4.4 microseconds. Aircraft #280 reported that a night fighter made a pass while flashing a red light, and at that moment the 177-megacycle signal became extremely strong. Another aircraft reported that night fighters picked it up when IFF was turned on upon leaving the west coast of Sumatra, but that the fighters disappeared when the IFF was turned off.
 - (b) Other signals were intercepted at 198 megacycles, but no conclusions were drawn.
4. 200-219 Megacycles Band:
 - (a) Signals from possible searchlight radar were noted at 200

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megacycles, 1020 PFS, and a pulse length of 6.4 microseconds. One aircraft reported, "As we approached the target, the 200-megacycle signal suddenly came on and about a dozen searchlights flashed on a few seconds later." This would seem to indicate possible searchlight-control radar at this frequency. Only one fleeting 200-megacycles signal was heard near the secondary target (Pangkalanbrandan) and it disappeared before analysis could be made.

(b) Near the first turning point on the west coast of Siberoot Island, one aircraft picked up one or two 214-megacycle signals with a pulse recurrence frequency of 550 PFS and a pulse length of 3-4 microseconds. It is believed these signals emanated from allied submarines stationed there to guide our aircraft with IFF beacons, since they were picked up near the briefed locations of the craft.

(c) Other intercepts were made at 207 and 218 megacycles, but no conclusions were drawn.

5. 300-1000 Megacycles Band: No interception of enemy radar signals was made in this band.

C. Summary of Interceptions Made

Frequencies	PRF	Pulse Lengths	No. of Readings
78	280	4.4	3
78	185	2.2	1
79	1950	6.4	1
80.5	500	70-80	D/F
81	540	60	4
82	50 (?)	5.5	1
97	54 (?)	3.3	1
97.5	185	2.2	1
103	1650	3.3	1
177	1100	4.4	1
177	1350	3.3	1
177	2300	3	1
198	1100	9.6	1
198	1200	22.4	1
200	1020	6.4	1
207	74	2.2	1
218	550	5.5	1
218	720	3.3	1
219	550	6.6	1

D. Equipment Malfunctions Reported

1. D/F antenna: The spring return operated sluggishly in the last 60° of rotation with the antenna lagging considerably behind the operating handle. However, the spring worked appreciably better at reduced air speeds.

2. Hewlett Packard Oscillator: After 2-3 hours of successful operation, the Hewlett-Packard oscillator would stop oscillating. After being turned off for 10-15 minutes, however, it would again function normally. This occurred in two sets.

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3. APA-6X: While en route to the staging area, the RCI inverter output voltage became erratic, causing a multiple trace to appear on the APA-6X. The inverter was replaced at the staging area and gave no further trouble.

E. Conclusions

1. The Japanese are operating an early-warning system on Sumatra and on the islands off its west coast.
2. Night-fighter opposition was weak and ineffective. If the enemy has AI and GCI available, it was either not used or unsuccessfully employed.
3. If the enemy has radar-controlled searchlights, he failed to use them in an effective manner.
4. There was no evidence of radar-controlled antiaircraft fire.

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A N N E X

G

CENTRAL STATION FIRE CONTROL

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CENTRAL STATION FIRE CONTROL

Mission No. 5

10-11 August 1944

A. Comments on System

1. As in previous missions, the failure of enemy fighter aircraft to press home attacks has prevented a satisfactory test of the CSFC System under battle conditions. However, functional tests continue to indicate that the system is potentially satisfactory.

2. The continued reluctance of enemy fighters to fire while in range possibly may be attributed to their underestimating the speed of the B-29 with a resulting inability to get into a satisfactory firing position. In 22 cases the enemy fighter opened fire, and the fire was returned by the B-29's in 16 instances. However, no claims against enemy aircraft resulted.

3. Of the 322 .50-cal. machine guns fired either during tests or combat, 17 malfunctions developed. Of the 42 20-mm cannons similarly fired, 6 malfunctions developed. There were also approximately 15 minor malfunctions among the 36 CSFC Systems included in the reports rendered. Forty-four aircraft used their secondary control and found it satisfactory.

4. The present experience has shown that the ground ordnance maintenance has improved and that there is a continued necessity to test fire all guns prior to reaching enemy territory.

B. Summary of Guns Fired

	40th	444th	462nd	468th	Total
.50 cal	126	62	66	68	322
20 mm	14	10	11	7	42
Total	140	72	77	75	364*

* A gun fired both in test and in combat is considered as two guns.

C. Summary of Gun Malfunctions

	40th	444th	462nd	468th	Total
.50 cal	4	5	3	5	17
20 mm	2	4	0	0	6
Total	6	9	3	5	23

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D. List of Gun Malfunctions by Cause

	.50 cal.	20 mm.	Total
Guns	7	1	8
Ammunition	1	0	1
Feeding System	4	3	7
Personnel	1	1	2
Undetermined	4	1	5
Total	17	6	23

E. Summary of Rounds Fired

		40th	44th	462nd	468th	Total
Testing	.50 cal.	6325	3160	13700	6768	29,953
	20 mm.	278	323	370	262	1,233
In Combat	.50 cal.	120	120	960	25	1,225
	20 mm.	0	0	0	0	0
Total		6723	3603	15030	7055	32,411

F. Summary of CSFC Malfunctions

	40th	44th	462nd	468th	Total
Number	4	4	2	5	15

G. List of CSFC Malfunctions

Aircraft No.	Malfunction
342	Leak in gun charger air hose.
425	Failure of micro switch on timing mechanism to actuate.
281	Failure of turret well safety switch to actuate.
303	Lower aft camera circuit shorting firing circuit.
215	Failure of left blister gyros to run.
215	Opposite corrections put into tail mount.
472	Failure of right tail sight trigger to fire guns.
472	Parallax all sights. Double image left blister.
*	Failure of firing circuit.
*	Tail dynamotor flooded out.
279	Lf computer indicating light out.
362	Air compressor burnt out.
272	Ring sight computer indicating light out.
272	Parallax in left blister sight.
272	Rheostat bad.

* Not available.

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A N N E X

H

CAMERAS AND PHOTOGRAPHS

I - K-19 Night Cameras

II - C-3 Cameras (Radar)

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S E C R E T

I - CAMERAS AND PHOTOGRAPHS

Mission No. 5

10-11 August 1944

I - F-19 Night Cameras*

Cameras	40th	444th	468th	Total
Installed	3	4	4	11
In A/C not reaching PT	1	0	1	2
Lost in ditching or preparing to ditch	1-a	1	0	2
In operating condition not taking photographs	1-b	0	1-b	2
Taking photographs	0	3	2	5

No. of exposures	0	17	12	29
Usable negatives	0	3	2	5

- * No cameras were installed in the aircraft of the 462nd Group. (Mine-laying mission.)
- a. Camera was thrown overboard in preparation for ditching although the aircraft subsequently made base.
 - b. It is believed clouds prevented the flash bombs from activating the photo-electric cell.

II - C-5 Cameras (Radar)

Cameras	40th	444th	462nd	468th	Total
Installed	2	2	3	2	9
Taking photographs	2	1	0	0	3

No. of exposures	12	24	0	0	36
Usable negatives	12	20	0	0	32

S E C R E T

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S E C R E T

ANNEX

I

FUNCTIONING OF EQUIPMENT

- I. Details of Mechanical Difficulties
- II. Summary of Mechanical Difficulties
- III. Malfunctioning of Equipment - Engineering
- IV. Fuel Consumption Data

S E C R E T

S E C R E T

I. DETAILS OF MECHANICAL FAILURES

Mission No. 5

10-11 August 1944

1. A/C assigned to take off to China Bay-----	59
2. Less A/C failing to take-off-----	0
3. A/C airborne to China Bay-----	59
4. Less A/C returning to bases-----	3
a. A/C 287 (462nd) - No. 1 engine failure	
b. A/C 830 (462nd) - No. 1 engine failure	
c. A/C 334 (468th) - Failure of right landing gear to retract.	
5. A/C landing at China Bay-----	56
6. Less A/C not scheduled for mission-----	1
a. A/C 264 (468th) - Exhaust valve failure of #7 cyl., #2 engine.	
7. A/C scheduled for mission-----	55
8. Less A/C failing to take-off-----	1
a. A/C 321 (444th) - Defective magneto	
9. A/C airborne on mission-----	54
10. Less A/C failing to bomb primary targets-----	15
a. Returning early:	
(1) A/C 310 (40th) - #3 engine cutting out.	
(2) A/C 251 (444th) - #2 engine cutting out intermittently.	
(3) A/C 267 (444th) - Fuel transfer system out; #1 engine swallowed valve.	
(4) A/C 352 (444th) - Front exhaust stack blew off.	
(5) A/C 285 (462nd) - #1,2,3 engines cutting out - carburetor trouble.	
(6) A/C 347 (462nd) - Right nacelle door would not close.	
(7) A/C 360 (462nd) - Failure of #4 engine.	
(8) A/C 305 (462nd) - Lost and low on gas.	
(9) A/C 442 (468th) - Failure of #14 cyl., #2 engine.	
b. Bombing secondary target:	
(1) A/C 308 (40th) - Lack of gas.	
(2) A/C 303 (40th) - Lack of gas.	
c. Bombing target of opportunity:	
(1) A/C 253 (468th) - Weather and mechanical difficulties.	
d. In PT area but failed to bomb:	
(1) A/C 215 (444th) - Malfunction of bomb release.	
(2) A/C 248 (462nd) - Unable to locate target.	
(3) A/C 209 (462nd) - Unable to locate target.	
11. A/C bombing primary targets-----	39
12. Less A/C not returning after bombing primary target-----	1
a. A/C 420 (444th) - Failure of bomb bay check valve and inaccurate fuel gauges (ditched).	
13. A/C returning to base after bombing primary targets-----	38

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S E C R E T

II. SUMMARY OF MECHANICAL DIFFICULTIES

Mission No. 5

10-11 August 1944

Total aircraft in movement	59
A/C scheduled but failing to take-off, both phases	1
Returning to bases for mechanical reasons, both phases	11
A/C in staging area not assigned to take off	1
Mechanical difficulties but bombing target of opportunity	1
Over primary target but bomb-rack malfunction	1
Bombed primary target but failed to return	1

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III. MAIFUNCTIONING OF EQUIPMENT - ENGINEERING*

Mission No. 5

10-11 August 1944

Oil leaks	9
Cylinder head temperature guage out	8
Oil Cooler auto control erratic	7
Propeller governor leak	5
Fuel transfer system out	4
Tachometer out	4
Oil pressure gauge reading low	4
Generator inoperative	2
Distributor oil seal leak	2
Hydrometer leak	1
Cowl flap inoperative	1
Cabin pressurization out	1
C.A.T. gauge inoperative	1
Collector ring malfunction	1

* For details of malfunctioning of other equipment, see pertinent annexes.

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S E C R E T

IV. FUEL CONSUMPTION DATA

Mission No. 5

10-11 August 1944

A. Average Fuel Consumption*

	40th	444th	462nd	468th	Overall Average
Number of aircraft	11	9	5**	11	36
Average gross weight	133000	132500	132800	132650	132700
Range of bombing altitude	14000-17000	11000-18000	600-1000	14000-18000	600-18000
Average bombing altitude	14700	15300	800	16000	800 and 15400
Average total flight time	17:12	16:59	18:05	16:47	17:08
Average time to target	8:55	8:53	9:09	8:30	8:46
Average ground miles flown	***	3800	3770	3702	3705 ^X
Average air miles flown	***	3767	4030	3773	3855
Average total gals. consu.	7140	6820	6990	6900	6970
Average gals/air mile	1.89 ^{XX}	1.81	1.74	1.83	1.82

* Based on aircraft bombing primary target.

** Three additional aircraft bombed the primary target but data is not available.

***Not available.

^X Includes 40th Group

^{XX} Estimated.

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B. Minimum - Maximum Fuel Consumption*

	40th	444th	462nd	468th	Over- All
Minimum gallons consumed	6700	6500	6315	6400	6400
Maximum gallons consumed	7550	7300	7074	7225	7550

* Based on aircraft bombing primary targets and returning under normal operating conditions.

C. Aircraft in Various Fuel Ranges*

Gallons of fuel	6400-6699	6700-6999	7000-7299	7300-7599	7600-All
No. of aircraft	5	15	11	3	2**
Percentage	13.9	41.7	30.6	8.3	5.5

* Based on 36 aircraft bombing primary targets; data on 3 additional aircraft bombing primary targets not available.

** One aircraft ditched and the other had one engine windmilling for 1700 miles.

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S E C R E T

3.

ANNEX

J

RESCUE FACILITIES

- I - Search and Rescue
- II - Escape and Evasion
- III - Ditching of A/C # 420

S E C R E T

S E C R E T

I. SEARCH AND RESCUE

Mission No. 5

10-11 August 1944

A. Preparations for Air-Sea Rescue in connection with this mission were extensive and carefully worked out in a series of conferences among representatives of the XX Bomber Command, The C-in-C Eastern Fleet, and R.A.F. 222nd Group personnel. The C-in-C Eastern Fleet was charged with the placement of cruisers, destroyers, and submarines, and the R.A.F. with the operation of all rescue aircraft, high-speed launches, and crash boats.

B. The final plan agreed upon by the Royal Navy employed 1 cruiser, 3 destroyers, and 3 submarines. All vessels with the exception of one submarine the Tantiy, were to be placed in position along the track of the returning aircraft. The Tantiy was to be made available off Pangkalanbrandan, the secondary target, in order to assist any crews in distress in that area. These vessels were directed to remain at their assigned positions until ordered to conduct a search or return to base, and were stationed at the positions indicated in the chart below.

Class	Name	Position	Time
CL	HMS Ceylon	02°50'N-91°20'E	2200Z D-Day
DD	HMS Raider	05°12'N-87°16'E	2300Z D-Day
DD	HMS Racehorse	06°03'N-85°49'E	2300Z D-Day
DD	HMS Redoubt	06°58'N-84°12'E	2300Z D-Day
SS	Trenchant	02°00'S-100°00'E	Prior to 1500Z D-Day
SS	Terrapin	01°48'S-99°30'E	Prior to 1500Z D-Day
SS	Tantiy	04°54'N-97°58'E	Prior to 1500Z D-Day

C. The plan devised in cooperation with the R.A.F. required the employment of several aircraft, high-speed launches, and crash boats. All performed the patrols ordered or were held in readiness as agreed.

1. Three Catalina aircraft flew C.L.A. overlapping patrols over the return track of the B-29's, covering a belt 28 miles wide. The extent and times of patrols are indicated in the chart below:

Catalina	Extent of Patrol or Course	Time of Reaching Easternmost Extremity	Duration of Patrol
1	91°37'E-86°00'E	102300Z	5 hrs.
2	90°26'E-85°50'E	102345Z	6 hrs.
3	88°52'E-85°45'E	102400Z	6 hrs.

2. Two Warwicks equipped with dinghies also flew C.L.A. overlapping patrols over the return track of our aircraft. The data pertaining to these aircraft is tabulated at the top of the next page:

S E C R E T

J-1

S E C R E T

Warwick	Extent of Patrol on Course	Time of Reaching Easternmost Extremity	Duration of Patrol
1	87°12'E-85°03'E	110045Z	3 hrs.
2	85°58'E-83°24'E	110115Z	3 hrs.

3. In addition, 4 Beaufighters, flying one mile apart, made a sweep on course from 83°32'E to 81°25'E beginning at 110245Z.

4. Held in readiness at China Bay were 4 Walruses, 4 Thunderbolts, and accompanying Spitfires. In addition, 2 high-speed launches were standing by at each of the following points: Foul Point, Snug Cove, and a rendezvous position 50 miles from Foul Point on a bearing of 120°.

5. During take-off the R.A.F. arranged to have rescue craft held in readiness in Tambalagam Bay adjoining the up-wind end of the runway. A jungle rescue party and medical personnel were also standing by.

D. Communications for air-sea rescue were established with each unit of the Royal Navy and each aircraft of the R.A.F. All were assigned a special call sign. The navigators and radio operators were given "flimsies" with this necessary information. Special pyrotechnic signals were agreed upon in case it became necessary to abandon the aircraft or to signal from a dinghy.

E. The actual operating of the air-sea rescue units was the responsibility of the R.A.F. at China Bay. An R.A.F. officer was stationed in the XX Bomber Command control room and maintained close liaison between the XX Bomber Command Staff and the British operations room. An officer of the Royal Navy was stationed in the British operations room to transmit orders to the units of the fleet. Plots of incoming aircraft were maintained in both control rooms.

S E C R E T

J-2

S E C R E T

II. ESCAPE AND EVASION

Mission No. 5

10-11 August 1944

A. There was little information or material concerning escape and evasion in Sumatra available through U.S. Army sources within the Theater. However, arrangements were made with the 222nd Group of the R.A.F. to furnish a purse containing 500 guilders of Netherlands currency, an excellent silk map of Sumatra, a language guide, a compass, a saw and a British blood chit. This purse was supplemented by an American blood chit obtained from M.I.S.-India.

B. Information regarding the current situation in Sumatra was not available at R.A.F. Headquarters, but O.S.S. in Colombo, Ceylon, provided recent information on the location of Japanese troops, terrain features, and the attitude of the natives in various sections.

C. A series of conferences was held at China Bay between personnel of the XI Bomber Command and that of O.S.S. Based on the latter's knowledge of the terrain installations and the people of Sumatra, a definite walk-out route was established from each of the 3 target areas. The terminus of each route was a rendezvous point on the coast where the Commander of Submarines of the Royal Navy agreed to have a submarine during specified dates for the purpose of taking aboard any of our crew members who may have made their way there. These rendezvous points were carefully chosen with regard for accessibility to submarines, avoidance of hostile forces, and simplifying instructions.

D. Although it was unnecessary to use these routes, the establishment of these routes and of definite rendezvous points was an important morale factor on this mission.

S E C R E T

J-3

S E C R E T

III. DITCHING OF A/C # 420

Mission No. 5

10-11 August 1944

A. The first indication that A/C 420 was in trouble was at 110400Z when an SOS was received reporting that the plane was about to ditch and giving its position as 09°00'N - 83°30'E. The radio operator aboard the aircraft did not have time to clamp down the key. Consequently, no fix was obtained, although facilities were available at Ceylon for obtaining fixes.

B. Patrol planes already in the area were advised of the position and ordered to search. Immediately 2 high-speed launches, 1 Beaufighter, and 1 PBV were dispatched to search an area bounded by 08°16'N - 83°30'E, 08°16'N - 85°10'E, 09°50'N - 85°10'E, and 09°50'N - 83°30'E until 112400Z. The destroyer, HMS Redoubt, was instructed to cooperate in this search. In the meantime, 9 of the 10 crew members successfully ditched and by means of the emergency radio set (Gibson Girl) sent an SOS at approximately 110530Z. There was no confirmed report that this call was received by anyone, although a liberty ship heading for Madras may have received it since the ship was observed the following morning heading toward the ditching position and about 80 miles and 120° off her prescribed course. It is certain that this ship heard either this first call or a later one and was homing on it. At 110610Z 2 additional high-speed launches were instructed to search the area bounded by 08°20'N - 83°20'E, 08°20'N - 83°40'E, 08°40'N - 83°20'E, and 08°20'N - 83°40'E.

C. The second SOS from the Gibson Girl was heard at approximately 110625Z by a Warwick 220 miles southwest of the rafts and by a Beaufighter about 125 miles south of the position, but it was not possible to home on this signal. Since it was not known that the emergency transmitter had a range approaching these distances, R.A.F. ASR operations decided to concentrate its search in the area between these 2 planes, a 74-mile stretch. Consequently, 2 PBV's were dispatched at 110730Z to search this area. In the meantime, the search continued in the area of the first reported position and was conducted throughout the night in the hopes of sighting flares.

D. It was decided to start a search at daylight the following day (12 August) of an area spreading fanwise to the east of China Bay and north of the patrol lane of the eleventh of August. This was to extend to 08°50'N - 86°00'E and was to be flown in N-S sections from the coast using C.L.A. with legs 4 miles apart. In pursuance to this plan, the R.A.F. dispatched between 112250Z and 120105Z 22 aircraft of various types. It was also decided that the B-29's would make a search while en route to their home bases.

E. However, a third SOS from the Gibson Girl was picked up at 120145Z by a destroyer 80 miles south-southwest of the rafts and it homed on this signal. The same call was received and homed on by a PBV 170 miles southeast from the position. Other rescue craft in the vicinity, including Beaufighters, Warwicks, and a B-29, were also able to home on this signal. The Beaufighter homed on the signal until it was no longer heard, circled at 1000 feet to pick it up, but was unable to do so or to see the men who were directly below. The next to arrive was the Warwick which first saw the box kite bearing the antenna and then 2 dinghies. He lost sight of the dinghies while circling, but relocated them at 120440Z. Their position at that time was established as 09°16'N - 82°43'E, some 45 miles from their radioed position. The B-29 arrived shortly thereafter, and 2 high-speed launches, 2 PBV's and a destroyer were directed to this position. The PBV's were unable to land, but the Warwick, one PBV, and the B-29 circled until rescue was effected by the destroyer, HMS Redoubt, at 120745Z.

S E C R E T

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S E C R E T

F. The destroyer arrived at Trincomalee Harbor at about 121230Z.
At 121455Z the two seriously injured crew members (one with a broken leg and
one with an injured spine) were flown by C-47 to Colombo for hospitalization.
All the search aircraft and surface vessels returned safely.

S E C R E T

J-5

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Authority 760063
By NARA Date 10/4

S E C R E T

ANNEX

K

TARGET DAMAGE ASSESSMENT

* ****
* Prepared by: *
* *
* TARGET INTELLIGENCE SECTION *
* XX Bomber Command *
* *
* ****

S E C R E T

S E C R E T

HEADQUARTERS
XX BOMBER COMMAND
Intelligence Section
APO 493

SECRET
Auth: CG XX BC
Initials Q. A. 2
Date 20 Aug 44

DAMAGE ASSESSMENT REPORT NO. 6 (PROVISIONAL)

TARGET: Pladjoe Refinery, Palembang, Sumatra (03° 00' S; 104° 50' E).

GENERAL STATEMENT:

This provisional report relates to damage resulting from an attack on this target by B-29 aircraft of the XX Bomber Command on the night of 10/11 August 1944. The assessment is based on interpretation of five poor quality strike photographs from two cameras in aircraft of the 444th and 468th Bomb Group - Nos. 487 and 330. The R. and O. Tankfarm, the K. and L. tankfarm and the Polymerization and Hydrogenation plants are covered but heavy cloud precludes a detailed interpretation. Only two, possibly three, strikes are noted on the photographs taken over the target (see Annex 1 and 2) reportedly the 18th out of 31 aircraft bombing. One strike and possibly two can be seen just south of the K. and L. tankfarm about 1200 feet east of Distilling Units V and VI. Another strike is seen about 300 feet off the north-east corner of the R. and O. tankfarm about 1000 feet east of the site of the new Aviation Gasoline Plant.

Both strikes appear to have occurred in open ground although tanks in the immediate vicinity may have been damaged. No definite statement as to the degree of damage can be made.

REFERENCE: Air Objective Folder No. 94.6-61.

WEIGHT OF ATTACK: 31 Aircraft bombed dropping 104 500# GP AN-M-64 (Composition B) and 17 AN-M-17 Incendiary Bombs.

PHOTOGRAPHS: (1) Aircraft 487, scale approximately 1:13,000
(2) Aircraft 330, scale approximately 1:7,500

PREVIOUS PHOTO COVER: Aerial photos 1939, Ground Plan

AIMING POINT: Distilling, Cracking and Reforming Installation located in east central portion of plant.

ANNEXES: (1) Annex 1 - Annotated Print.
(2) Annex 2 - Aerial Photo, 1939.

DETAILS OF DAMAGE:

(All numbers in parentheses refer to corresponding numbers on the attached annexes).

- (1) A strike is noted just south of the K. and L. tankfarm, intermediate reforming plant tanks, about 1200 feet east of Distilling Units V and VI. The strike appears to have occurred in open ground but nearby tanks may have been damaged. Just north of the main strike is what may be another in an earlier state of development.

S E C R E T

S E C R E T

- (2) Another strike is seen about 300 feet off the north-east corner of the R. and O. tankfarm, aviation gas and crude oil tanks, about 1000 feet east of the site of the new aviation gasoline plant. The strike also appears to have occurred mostly in open ground.
- (3) What may be a barrage balloon is noted just east of the site of the new aviation gasoline plant.

Prepared by:
TARGET UNIT, INTELLIGENCE SECTION
XX BOMBER COMMAND

James D. Garcia
JAMES D. GARCIA *JMG*
Colonel, Air Corps
Chief, Intelligence Section

S E C R E T

-2-

S E C R E T

Annex 1
D. A. Report No. 6 (Provisional)
Fladjoe Refinery
Palembang, Sumatra



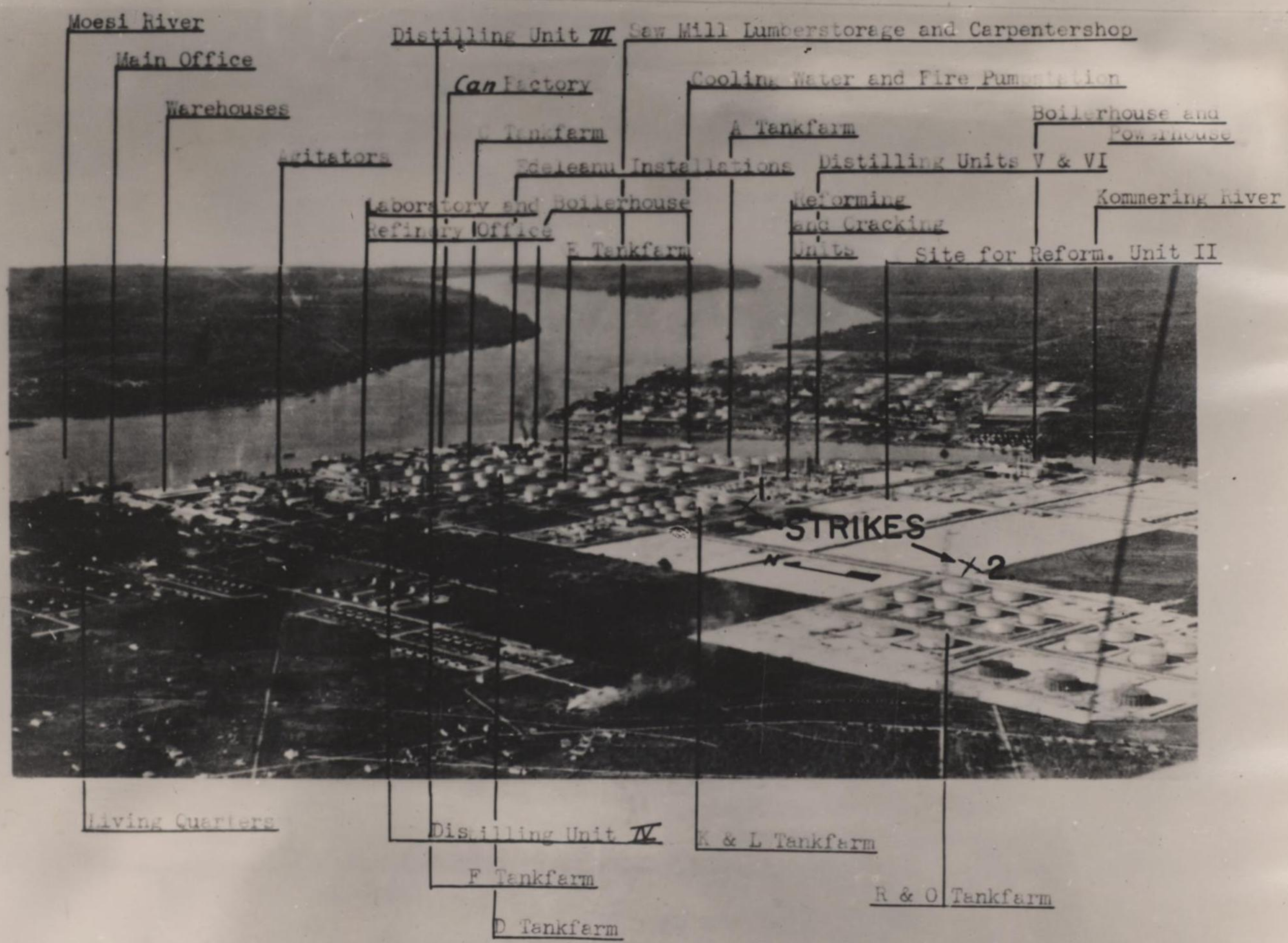
S E C R E T

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S E C R E T

Annex 2
D. A. Report No. 6 (Provisional)
Pladjoe Refinery
Palembang, Sumatra



AERIAL VIEW OF PLADJOE REFINERY (FOREGROUND) AND SOENGEI GERONG REFINERY (BACKGROUND)
Coordinates: 03°00'S. -- 104°50'E. Photograph taken about 1939. Direction: N.W.

8.83

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Authority 760063

By NARA Date 10/4

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ANNEX

L

CONSOLIDATED MISSION STATISTICAL SUMMARY

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*****  
*                                     *  
* Prepared by:                       *  
*                                     *  
*   STATISTICAL SECTION             *  
*                                     *  
*   XX BOMBER COMMAND               *  
*                                     *  
*****
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AA Bomber Command
 CONSOLIDATED MISSION STATISTICAL SUMMARY
 Mission Number Five
 10 August 1944

By Authority of the
 Commanding General:

9-18-44 DHS
 Date Initials

Table I - Aircraft Participating

Group	F.O. No.	Mission No.	Primary Target	A/C Airborne in Rear Area	% Airborne A/C Aborting between Rear & Stg. Area	A/C In Stg Area for Mission	A/C Taking off from Stg. Area	Airborne A/C Failing to Bomb Designated Target				% of Airborne A/C Failing to Bomb Designated Target	Target Bombed			
								Mech Fail	Pers Fail	Weather	Other		Pladjoe	Moesi River	Fangalan Brandan	Djambi
40th	5	5	Pladjoe	14	0	14	14	1	0	0	2 *	21%	11	0	2	0
444th	5	5	Pladjoe	14	0	14	13	4	0	0	0	31%	9	0	0	0
462nd	5	5	Moesi River	16	12.5%	14	14	3	0	0	3 **	43%	0	8	0	0
468th	5	5	Pladjoe	15	6.7%	14	13	2	0	0	0	15%	11	0	0	1
TOTAL				59	5.1%	56	54	10	0	0	5	28%	31	8	2	1

* One aircraft bombed secondary target because gas supply was low.

** Could not find target.

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XX BOMBER COMMAND
 CONSOLIDATED MISSION STATISTICAL SUMMARY
 Mission Number Five
 10 August 1944

By Authority of the
 Commanding General:

9-18-44 D.H.S.
 Date Initials

Table II - Bombing Runs

Group	No. of A/C Bomb- ing	Target Bombed	Time of Release		Altitude of Release		Visual Bombing		Radar Bombing		A/C Dropping On	
			Earliest	Latest	Highest	Lowest	A/C Sighting For		A/C Sighting For		A.FCE	Manual
							R & D	Range	R & D	Range		
40th	2	Pangalan-Brandan	1804Z	1850Z	15,000	15,000			2		1	1
	11	Pladjoe	1850Z	2210Z	16,500	14,750	5		6		11	
444th	9	Pladjoe	1823Z	2023Z	17,000	8,000	4		5		7	2
462nd	8	Moesi River	1825Z	1931Z	1,000	350	8					8
468th	11	Pladjoe	1832Z	2004Z	18,000	16,000	7		4		7	4
	1	Djambi	1923Z	1923Z	23,400	23,400			1			1
TOTAL	42	2-Pangalan-Brandan 31-Pladjoe 8-Moesi River 1-Djambi	1804Z	2210Z	23,400	350	24		18		26	16

SECRET

S E C R E T

XX BOMBER COMMAND
 CONSOLIDATED MISSION STATISTICAL SUMMARY
 Mission Number Five
 10 August 1944

S E C R E T

By Authority of the
 Commanding General:

8-19-44 *slc*
 Date Initials

Table III - Bomb Loading and Disposal

Group	Bomb Loading						Disposal of Bombs							
	High Explosives			Other			On Target		Jettisoned		Returned		Unknown	
	No. & Wght of Bombs	Nose	Tail	No. & Wght of Bombs	Nose	Tail	H.E.	Other	H.E.	Other	H.E.	Other	H.E.	Other
40th				8-M26 53# Prchte Flares	32.38							8		
	52-500# G.P.	.1	.025	12-M46 51#	40			12						
444th				16-M46 51#	32			16						
	52-500# G.P.	.1	.025				36		16					
462nd				28-AN Mark 26 Mod #1 1000 # Aerial Mine				16		8		4		
				20-500# Incend (M-17)	25			17		2		1		
468th				16-M46 51#	34			12		4				
	32-500# G.P.	.1	.025				28		4					
TOTAL				8-M26 53#						8				
				28-Aerial Mines				16 **		8		4		
				20-500# Incend				17 **		2		1		
				44-M46 51#				40 **		4				
	136-500# G.P.						116*		20					

* 500# G.P. bombs were dropped on targets in the following numbers: 104 on Pladjoe, 8 on Pangalam-Brandan, 4 on Diambi.
 ** Dropped on primary target.

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XX Bomber Command
CONSOLIDATED MISSION STATISTICAL SUMMARY
 Mission Number Five
 10 August 1944

SECRET

By Authority of the
 Commanding General:

8-19-44 *SL*
 Date Initials

Table IV -- Aircraft Losses and Claims

Group	Aircraft Lost					Aircraft Damaged								Claims Against Enemy			
	Total Lost	Cause of Loss				Total	Primary Cause of Damage				To be Repaired by			Not Repairable	Destroyed	Probably Destroyed	Damaged
		Flak	E A/C	Accident	Unknown		E/A	Flak	Own Guns	Accident	Tact Gp	Sv Gp	Dep Gp				
40th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
444th	1	0	0	0	1 *	0	0	0	0	0	0	0	0	0	0	0	0
462nd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
468th	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0
TOTAL	1	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0

* Ditched.

SECRET

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XX BOMBER COMMAND
 CONSOLIDATED MISSION STATISTICAL SUMMARY
 Mission Number Five
 10 August 1944

S E C R E T

By Authority of the
 Commanding General:

8-19-44 *ML*
 Date Initials

Table V - Encounters with Enemy Aircraft

DIRECTION	ALTITUDE															
	HIGH				LOW				LEVEL				TOTAL			
	40th	444th	462nd	468th	40th	444th	462nd	468th	40th	444th	462nd	468th	40th	444th	462nd	468th
1200	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
0130	0	1	0	0	0	8	0	0	1	0	0	1	1	9	0	1
0300	0	0	0	0	0	1	1	0	0	0	1	0	0	1	2	0
0430	0	0	0	0	0	1	2	0	2	0	0	0	2	1	2	0
0600	0	0	1	0	0	0	1	0	1	0	0	0	1	0	2	0
0730	0	0	0	0	0	1	1	0	2	0	1	0	2	1	2	0
0900	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
1030	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1
TOTAL	0	1	2	0	1	12 **	5	1 *	6	0	2	2	7	13 **	9	3 *

* One attacked from directly below; no approach seen.

** Includes a coordinated attack by 6 planes as 6 attacks. A coordinated attack by 2 planes included as 2 attacks.

S E C R E T

S E C R E T

XX BOMBER COMMAND
 CONSOLIDATED MISSION STATISTICAL SUMMARY
 Mission Number Five
 10 August 1944

S E C R E T

By Authority of the
 Commanding General:

8-19-44 *STB*
 Date Initials

Table VI - Personnel Losses

Crew Position	Killed				Missing				Seriously Injured				Slightly Injured				Total Casualties				Total Participating			
	40th	444th	462nd	468th	40th	444th	462nd	468th	40th	444th	462nd	468th	40th	444th	462nd	468th	40th	444th	462nd	468th	40th	444th	462nd	468th
Pilot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Co-Pilot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Navigator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Bombardier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Flt. Engr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Radar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Radio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
C.F.C. Spec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Right Gnr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14	16	14
Left Gnr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14	16	14
Tail Gnr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	16	14
Pos Unknown	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0				
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	13	5	
TOTAL	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0	155	167	181	154

S E C R E T

S E C R E T

XX BOMBER COMMAND
 CONSOLIDATED MISSION STATISTICAL SUMMARY
 Mission Number Five
 10 August 1944

S E C R E T

By Authority of the
 Commanding General:

8-19-44 *MB*
 Date Initials

Table VII - Expenditures of Gasoline and Ammunition

Group	Gallons Gasoline Expended Per Plane *					Ammunition Expended Per Plane **					
	Minimum	Maximum	Median	Average Consumption	Aver Burnable Gas Left in Tanks Upon Return	Upper Front	Lower Front	Upper Rear	Lower Rear	.50 Cal Tail	20 MM Tail
40th	6700	7550	7100	7070	834	100	100	100	100	100	0
444th	6500	7300	6700	6793	1111	100	0	0	75	125	35
462nd	6315	7074	6950	6845	1059	200	200	200	200	200	35
468th	6400	7225	6950	6887	1017	80	100	80	275	275	25
TOTAL	6400	7550	6950	6904	1000	115	90	90	110	175	25

* Includes only those planes that bombed the primary target.
 ** Majority was test firing.

S E C R E T

S E C R E T

ANNEX

M

FIELD ORDERS

*
* All Field Order material in the *
* following Annex, originally class- *
* ified TOP SECRET, is here by re- *
* classified to SECRET *
* By authority, CG, XX Bomber Command *
*
* 24 September 1944 JDC *
* Date Initials *
*

S E C R E T

DECLASSIFIED
Authority 760063
By NARA Date 10/4

RECLASSIFIED SECRET
Auth: CG, XX BC
Initials: WKS
Date: 1 Aug 1944

SECRET

TOP SECRET
Auth: CG, XX BC
Initials: WKS
Date: 1 Aug. 1944

NOT TO BE TAKEN INTO THE AIR

ON COMBAT MISSION

XX Bomber Command
APO 493
1 August 1944 0530Z

FIELD ORDER)
NUMBER 5)

MAPS: AAF Aeronautical Charts 1:1,000,000 - #552, 553, 558, 559, 674,
675, 681, 795, 796, 800, 802, 803, 860,
920, 921, 980, 981.

(or) International Map of the World 1:1,000,000 - Calcutta,
Bodavari, Sagannath, Madras, Trichin-
opoly, Ceylon, Nicobar Is., Medan,
Padang, Palembang.

AAF Long Range Air Navigation Charts 1:3,000,000 #26, 38, and 50.

AAF Special Charts - 1:5,000,000 - Western Australia to India.

Naval Aviation Charts V-30 Series, 1:2,188,800 #41, 51 and 69.

1. a. (1) Hostile Ground Situation; See Intelligence Annex No. 1.
(2) Hostile Air Situation; See Intelligence Annex No. 1.
b. (1) Omitted.
(2) Friendly Air Situation:
(a) Friendly Airfields; See Intelligence Annex No. 1.
(b) The RAF will provide fighter protection for Ceylon
bases. For Air-Sea rescue see Annexes No. 1 and 5..
2. a. Staging from CHINA BAY Airfield, CEYLON, the XX Bomber Command
attacks the PLADJOE REFINERY at PLEMBING, SUMATRA (94.2-61,
See Annexes No. 3 and 4), and conducts mining operations on the
MOESI RIVER, SUMATRA (See Annex No. 4 and 6) on D-Day.
b. SECONDARY BOMBING TARGET will be the PINGGALIN BRANDAN REFINERY,
SUMATRA (94.1-33, See Annexes No. 3 and 4).
c. TERTIARY BOMBING TARGET will be INDRUNG CEMENT PLANT, SUMATRA
(94.2-67, See Annexes No. 3 and 4).
d. ROUTE OUT will be CHINA BAY -- 01°47'S, 99°14'E -- 02°02'S,
104°41'E -- IP -- TARGET.
e. ROUTE BACK will be TARGET -- 01°47'S, 99°14'E -- CHINA BAY.
3. a. The 462nd Bombardment Group, dispatching its aircraft from
rear base area as rapidly as possible beginning 2330Z on
D-Day minus 2, will furnish fourteen (14) aircraft at CHINA
BAY Airfield, CEYLON on D-Day minus 1.

These aircraft, being dispatched as rapidly as possible from
CHINA BAY Airfield beginning at 1015Z on D-Day will mine the
MOESI RIVER channel between PLEMBING, SUMATRA, and BANGKI
SPLIT as follows;

- 1 -

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IP will be PAJOENG ISLAND (02°22'S, 104°55'E)

Mines will be placed in MOESI river channel as indicated on BINKI STRAIT Admiralty Chart No. 3471 (See Annex No. 6).

METHOD OF MINING will be by individual aircraft from altitudes not above 1000 feet. Mines must be placed at least 400 feet apart.

Each aircraft will be loaded with two (2) AN-MK 26 Mod. 1 Aerial Mines. All safety features of these mines will be employed until after landing at CHINA BAY. Jettison instructions are contained in Annex No. 6.

- b. The 40th Bombardment Group, dispatching its aircraft from rear base area as rapidly as possible beginning 0100Z on D-Day minus 1, will furnish fourteen (14) aircraft at CHINA BAY Airfield, CEYLON.

These aircraft will be dispatched as rapidly as possible on D-Day, immediately following aircraft of 462nd Bombardment Group.

- (1) Thirteen (13) aircraft will attack the PLADJOE REFINERY at PLEMBING, SUMATRA, as follows:

IP will be KELLAN POINT (02°05'S, 105°08'E)

AXIS OF ATTACK will be 198° True.

AIMING POINT will be northwest corner of central cracking, distilling and reforming unit (See Point A on MAP Target Chart No. 94.2-61, Annex No. 3)

METHOD OF BOMBING will be by individual aircraft at an odd thousand foot altitude above 3,000 ft. true. Bombing will be accomplished visually if possible. Intervalometer setting will be 200 feet.

Each aircraft will load four (4) GP 500# AN-M-64 (Composition B) bombs to be fused one-tenth (.1) second nose and twenty-five thousandths (.025) second tail. Fuses will be carried in each aircraft but bombs will not be fused until after reaching CHINA BAY. In addition, three (3) of the thirteen (13) aircraft will be equipped to obtain night photographs of the target.

- (2) One (1) aircraft will illuminate the PLADJOE REFINERY at PLEMBING, SUMATRA, as follows:

IP will be KEMI POINT (02°21'S, 104°45'E).

Flares will be dropped individually over target so timed as to provide as near constant lighting as possible until all flares have been dropped. Altitude of release will be at a "thousand plus 500 feet" level not less than 3,500 feet true.

This aircraft will be a stripped tanker with one (1) horizontal auxiliary tank and eight (8) M-26 parachute flares in the rear bomb bay, and will be one of the first planes of this Group to take-off.