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NO. 9

TOKYO

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12/29/44 Date
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CONSOLIDATED MISSION REPORT

FIELD ORDER NUMBER 23
MISSION NUMBER 9
DATE OF MISSION
29 NOVEMBER 1944

HEADQUARTERS
73RD BOMBARDMENT WING
APO #5666, % POSTMASTER
SAN FRANCISCO, CALIFORNIA

2-5239-92

M9

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Headquarters
73rd Bombardment Wing

Mission No. 9
Field Order No. 23
29 November 1944

CONSOLIDATED MISSION REPORT

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S E C R E T

Headquarters
73rd Bombardment Wing
APO #5666, % Postmaster
San Francisco, California

Field Order No. 23
Mission No. 9
Date of Mission
29 November 1944

CONSOLIDATED MISSION REPORT

TACTICAL NARRATIVE

1. The Target

Field Order Number 23 of the 73rd Bombardment Wing directed that each of four Groups supply ten aircraft, to proceed from this base to bomb, as their primary target, the industrial area of the city of Tokyo. No secondary target. Last resort target: any industrial city.

2. Take-off

In compliance with this order, the first aircraft took off at 290748Z, the last at 291210Z. A total of 29 aircraft was airborne.

3. Bomb Loading

Each airborne aircraft was loaded with three T4E4 420-lb fragmentation clusters and seventeen M18 350-lb incendiary clusters. A total of 84 fragmentation clusters (17.64 tons) and 483 incendiary clusters (84.52 tons) was carried.

4. Route Out

Attack was by individual aircraft with no fighter escort on route out or back.

5. Bombing Data

Four aircraft of the 29 taking off failed to attack, three owing to mechanical failures, and one which is missing and is presumed to have failed to reach the target.

Twenty-three aircraft attacked the primary target, Tokyo, dropping bombs individually. Sixty-four fragmentation clusters (13.44 tons) and 369 incendiary clusters (64.575 tons) were dropped on this target. The first aircraft released its bombs at 241451Z and the last at 291927Z. Release altitudes were from 17,500 feet to 33,200 feet. Sixteen aircraft bombed by radar, six bombed by DR, and one sighted on glow in clouds over Tokyo.

One aircraft, because its radar was inoperative, bombed Numozu (35°15'N, 139°00'E) at 291557Z, from 25,000 feet.

One aircraft, because of mechanical failure, released its bombs over Yokohama at 291512Z, from 30,000 feet.

6. Enemy Air Opposition

One B-29 at 24,000 feet received attack by a single unidentified aircraft approximately 100 miles from primary target on return course. Gun flashes from attacking aircraft indicated a pass to within 400 yards.

S E C R E T

S E C R E T

Tactical Narrative, Mission No. 9, page 2

7. Enemy Attack Data

See paragraph 6.

8. Antiaircraft Fire

Heavy, meager, and inaccurate flak was observed by fewer than half the aircraft bombing the Tokyo area. Bursts were generally below, behind, and to the left of attacking aircraft, although several bursts were accurate as to altitude.

One aircraft reported one searchlight beam over Tokyo; the beam never located the aircraft and did not penetrate the cloud cover effectively.

9. Route Back

Aircraft returned individually and without reported incident except as noted in paragraph 6.

10. Bomb Damage Assessment

No strike photographs were taken.

11. Own Losses and Aircraft Damage

One aircraft is missing. No report received from this aircraft following its take-off.

One aircraft was damaged by friendly fire over Tokyo at 291601Z. Subsequent examination disclosed bullet lodged in cowling and identified as U.S. .50 cal AP IC MG ammunition.

Personnel losses: 12 missing.

12. Claims

There were no claims.

13. Weather

A polar front was encountered somewhat south of the forecast position.

Solid cloud cover over target was encountered; alto-stratus clouds were reported to be in many layers south of Tokyo.

14. Observations of Importance

At 291815Z, A/C V50 (42-63447) on route back from target observed, first by radar and then visually, an enemy aircraft carrier and an escort vessel. These vessels appeared to be anchored on the west side of an island (27°N, 142°E), probably Chichi Jima but may be diamond-shaped island in the same vicinity.

Above plane reported that radar showed what appeared to be a formation of planes proceeding at 1200T toward Haha Jima.

S E C R E T

S E C R E T

Tactical Narrative, Mission No. 9, page 3

15. Landing Data

The first aircraft landed at 292048Z and the last at
300235Z.

Kenneth P. Bergquist

KENNETH P. BERGQUIST
Colonel, Air Corps
DC/S, Opns and Trng

S E C R E T

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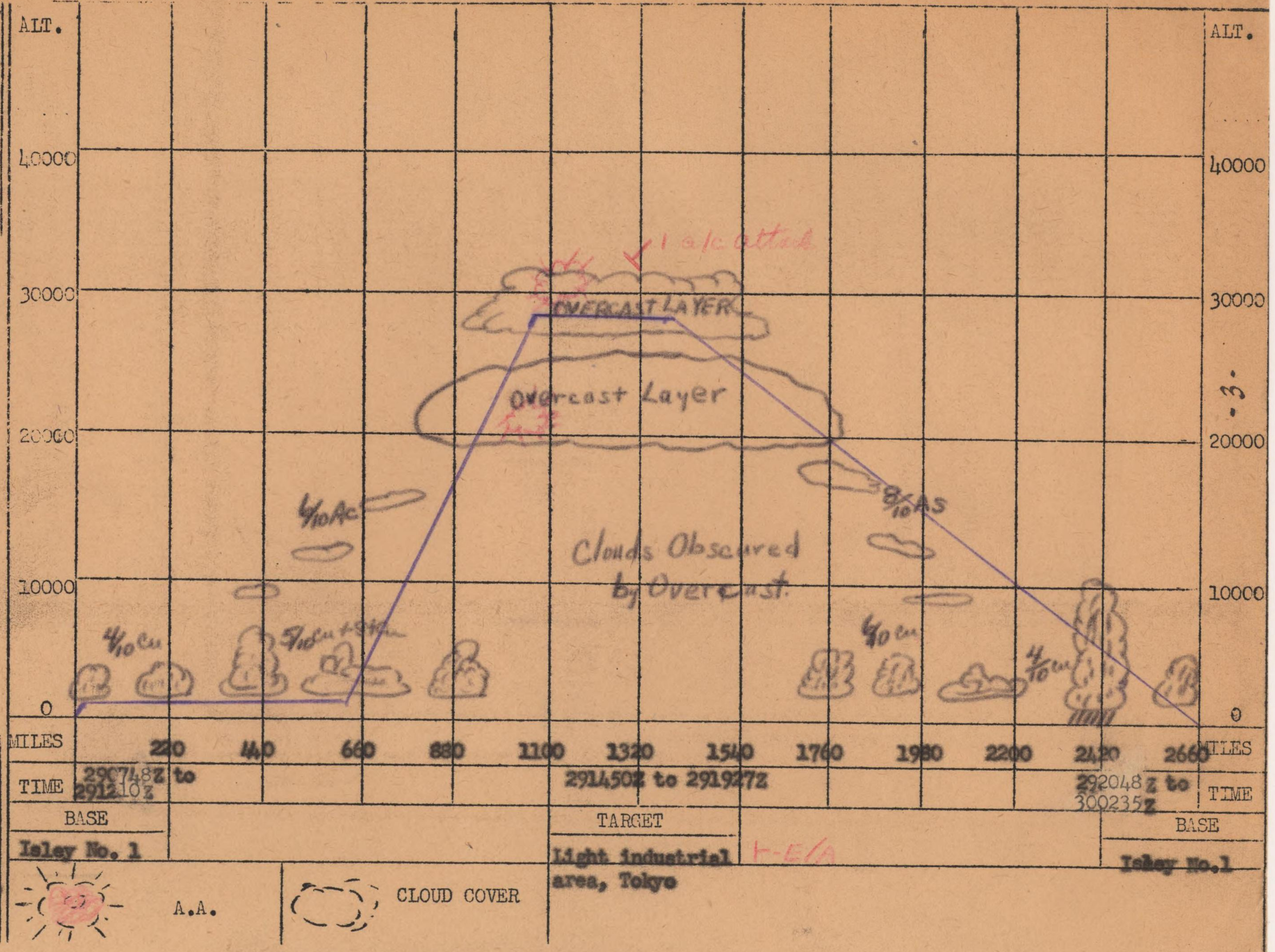
NND 76468

By MNA/PA Date 8/30/05

F.O. NO. **23**
 MISSION NO. **9**
 DATE OF MISSION
29 November 1944

CONSOLIDATED MISSION REPORT
 VERTICAL CHART

73rd ECMB WING
 DATE **8 Dec 44**
 BY **Capt. J.T. Davis**



FLIGHT LINE SHOWS APPROXIMATE AVERAGE

Headquarters
73rd Bombardment Wing

S E C R E T

Field Order No. 23
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29 November 1944

CONSOLIDATED MISSION REPORT

FORMATIONS

CUT	CUT	I P
ALL AIRCRAFT FLEW, BOMBED, AND RETURNED INDIVIDUALLY		
OVER TARGET NO. 1	OVER TARGET NO. 2	RETURN

COMMENTS: (Report position of your group to wing (a) according to F.O.;
(b) deviations if any and reasons)

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Headquarters
73rd Bombardment Wing

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CONSOLIDATED MISSION REPORT

BASIC DATA

1. TIME OF TAKE OFF:

Group	Place	1st A/C	TIME	Last A/C
497	Saipan	290759Z		290839Z
498	Saipan	290859Z		291210Z
499	Saipan	290748Z		291010Z
500	Saipan	290813Z		290838Z

2. TIME OF LANDING:

Group	Place	1st A/C	TIME	Last A/C
497	Saipan	292104Z		292308Z
498	Saipan	292235Z		300235Z
499	Saipan	292125Z		292155Z
500	Saipan	292048Z		292210Z

3. SQUADRON ASSEMBLY:

None ordered.

4. GROUP ASSEMBLY:

None ordered.

5. WING ASSEMBLY:

None ordered.

6. AIRCRAFT RETURNING EARLY:

A/C No	Sq	Place	Time	Reason
M48(42-24648)	871	Saipan	290934Z	Inoperative - main inverter burned out alternate (No AC voltage).
T29(42-24681)	874	Saipan	291430Z	Engine failure.
V41(42-24651)	879	Guam	291950Z	Fuel transfer system inoperative.

7. ROUTE OUT:

(Note: By order, no Squadron or Group formation was flown on this mission; hence, each A/C followed its own individual route. The following data comprises an approximate course followed by the A/C of each Bomb Group)

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S E C R E T

Basic Data, Par #7 (cont'd).

a. 497th Bomb Group:

Position	Time	Alt	C. A. S.	Corr. Temp.
From: Base	290808Z	---	---	26C
To: 18°00'N, 144°00'E	290933Z	5,000'	200	17C
26°30'N, 144°07'E	291200Z	5,000'	215	12C
34°44'N, 139°49'E	291405Z	26,000'	200	-25C
Target	291504Z	25,500'	200	-25C

b. 498th Bomb Group:

From: Base	290952Z	---	---	30C
To: 21°34'N, 144°00'E	291134Z	10,000'	200	20C
26°00'N, 143°00'E	291400Z	10,000'	195	20C
33°05'N, 142°10'E	291600Z	26,000'	195	-25C
Target	291647Z	26,500'	195	-30C

c. 499th Bomb Group:

From: Base	290755Z	---	---	25C
To: 27°40'N, 141°28'E	291217Z	10,000'	212	6C
32°07'N, 142°39'E	291334Z	26,000'	190	-28C
34°44'N, 141°20'E	291414Z	26,000'	190	-33C
Target	291451Z	26,000'	195	-33C

d. 500th Bomb Group:

From: Base	290818Z	---	---	---
To: 23°10'N, 143°41'E	291114Z	1,500'	200	19C
28°04'N, 143°36'E	291252Z	1,700'	200	16C
34°35'N, 141°23'E	291440Z	27,000'	192	-32C
Target	291531Z	26,000'	197	-28C

8. ROUTE BACK: (See Note, Par 7.)

a. 497th Bomb Group:

From: 33°50'N, 141°05'E	291520Z	25,000'	205	-25C
To: Base	292136Z	---	---	---

b. 498th Bomb Group:

From: Target	291647Z	26,500'	195	-30C
To: 33°00'N, 141°00'E	291800Z	22,000'	195	-28C
27°30'N, 143°20'E	292000Z	12,000'	195	4C
21°00'N, 143°05'E	292200Z	8,000'	190	16C
18°05'N, 145°10'E	292300Z	4,000'	185	21C
Base	300009Z	---	---	---

c. 499th Bomb Group:

From: Target	291454Z	26,000'	192	-33C
To: 34°00'N, 141°28'E	291533Z	21,000'	190	-19C
27°00'N, 143°46'E	291737Z	10,000'	192	5C
Base	292155Z	---	---	---

d. 500th Bomb Group:

From: Target	291531Z	26,000'	197	-28C
To: 34°48'N, 139°48'E	291544Z	25,000'	192	-25C
26°45'N, 143°45'E	291720Z	18,800'	200	-12 C
19°26'N, 144°44'E	291919Z	10,000'	208	10C
Base	292035Z	---	---	---

S E C R E T

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Basic Data (cont'd).

9. INITIAL POINTS:

Group	Target No.	Position	Time	Alt.
497	1	34°44'N, 141°20'E	291430Z	25,500'
	3	Same	Same	Same
498	1	33°05'N, 142°10'E	291600Z	26,000'
	3	Same	Same	Same
499	1	34°44'N, 141°20'E	291429Z	26,000'
500	1	No definite IP was used.		

10. TARGET ATTACK DATA:

a. No A/C attacking targets:

Group	Primary	NUMBER ATTACKING		Opportunity
		Secondary	Last Resort	
497	7	0	1*	0
498	8	0	1**	0
499	2	0	0	0
500	6	0	0	0
Total	23	0	2	0

*Bombed city of Yokohama.

**Bombed city of Nunozu (35°15'N, 139°00'E).

b. Times over target (See note: Section 7):

Group	Target No.	Time of 1st A/C	Time of Last A/C
497	1	291451Z	291545Z
	3	291512Z	
498	1	291633Z	291927Z
	3	291557Z	
499	1	291451Z	291602Z
500	1	291518Z	291547Z

c. Heading and Altitude from IP to target (See note: Section 7):

Group	Target No.	Heading	Altitude
497	1	308°	24,340' to 31,000'
	3	308°	30,300'
498	1	73° to 312°	26,000' to 30,000'
	3	310°	25,000'
499	1	268° to 300°	26,250' to 26,500'
500	1	No definite IP was used.	17,500' to 33,200'

d. Heading and Altitude over target (See Note: Section 7):

Group	Target No.	Heading	Altitude
497	1	280° to 350°	24,340' to 31,000'
	3	247°	30,300'
498	1	73° to 312°	26,000' to 30,000'
	3	310°	21,000'
499	1	Same as Section 10 c	26,350' to 26,500'
500	1	130° to 308°	17,500' to 33,200'

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Basic Data, Far #10 (cont'd)

e. Breakaway: See Note: Section 7.

Group	Target No.	Heading	Altitude
497	1	140° to 180° right turn	Descending 100' per minute.
497	3	90° left turn	Same
498	1	Breakaway by individual Aircraft	
498	3	Same	
499	1	Same	
500	1	Same	

f. Rally point:

None ordered.

g. Extra runs over target:

None

h. Reasons for failure to attack:

All planes, except those listed in Sections 6 and 14 bombed.

11. ESCORT DATA:

None ordered.

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Headquarters
73rd Bombardment Wing

Mission No. 9
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29 November 1944

CONSOLIDATED MISSION REPORT

LOSS AND DAMAGE

12. CASUALTIES -- PERSONNEL:

See Consolidated Statistical Report, Table X, Casualties.

13. AIRCRAFT LOST:

See Section 14.

14. AIRCRAFT MISSING:

A/C 244(42-65218) reported missing. This A/C was not seen or heard from at any time. Circumstances surrounding its fate are unknown. This A/C is presumed to have been non-effective.

15. TOTAL A/C FAILING TO RETURN:

1 A/C - 883rd Bombardment Squadron.

16. DAMAGE TO AIRCRAFT:

879th Squadron - A/C W,7(42-63439) -- damaged over target at 291601Z -- bullet holes in #3 prop, #4 cowl flap and wing. Examination of bullet lodged in cowling disclosed it to be butt end of U.S. cal .50 AP 1C M/G ammunition. S-2 evaluation -- bullet was from friendly A/C.

SECRET : 9.

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By MNA/PA Date 8/30/05

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Headquarters
73rd Bombardment Wing

Mission No. 9
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CONSOLIDATED MISSION REPORT

AA AND AIR TO AIR BOMBING

17. ENEMY ANTI-AIRCRAFT FIRE:

Heavy, meager and inaccurate flak was observed by less than 10 A/C flying singly at altitudes varying from 24,000 to 27,000 feet. These observations were made over scattered areas in and around Tokyo. Bursts were generally below, behind and to the left of attacking A/C, although several bursts were accurate in altitude. Type of fire was unknown by all but A/C which reported barrage fire.

Only one A/C noted a searchlight beam over the target. The beam never located the A/C and did not penetrate cloud cover to any effective extent.

Comments: None.

18. OUR TACTICS VERSUS AA:

Only 2 A/C reported evasive action which consisted of slight turns only.

19. AIR TO AIR BOMBING AND ROCKETS:

There were neither air-to-air bombs nor rockets used against the B-29s.

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Headquarters
73rd Bombardment Wing

Mission No. 9
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CONSOLIDATED MISSION REPORT

COMBAT DATA

Paragraphs 20 through 28a:

There was only one attack on one B-29. This action took place at 1607Z and at 24,000 feet, approximately 100 miles from the target on the return flight. The firing aircraft was not seen and, from machine gun flashes through the overcast, it is estimated that firing started at 800 yards, breaking off at 400 yards. It is believed that the B-29 return fire was opened at 600 yards. No result of the bomber's fire was observed.

(Note: It was erroneously stated in Mission Report (Teletyped) that additional attacks had been made against another B-29.)

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Headquarters
73rd Bombardment Wing

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29 November 1944

CONSOLIDATED MISSION REPORT
OBSERVATIONS AND CREW COMMENTS

29. EXPENDITURE OF AMMUNITION:

See Consolidated Statistical Report, Table XII, Ammunition Consumption Data.

30. OUR OBSERVED LOSSES BY E/A:

None.

31. OUR OBSERVED LOSSES BY A/A:

None.

32. OBSERVATIONS:

a. At 291815Z, A/C V50(42-63447) on route back from target observed, first, radar and then visually an enemy A/C carrier and an escort vessel. These vessels appeared to be anchored on the west side of an island (27°N, 142°E), probably Chichi Jima but may be diamond-shaped island in the same vicinity.

b. Above plane reported that radar showed what appeared to be a formation of planes proceeding at 120° T toward Haha Jima.

33. COMMENTS ON MAPS, CHARTS, AND PHOTOS USED:

None.

34. CREW SUGGESTIONS:

a. Insufficient time to prepare for a mission of this type.

b. Several crews have requested the frequencies of the Tokyo radio stations and the locations of each so they might home on them. Not yet have any of these Tokyo stations gone off the air while our planes were overhead.

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Headquarters
73rd Bombardment Wing

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29 November 1944

CONSOLIDATED MISSION REPORT

GENERAL TECHNICAL DATA

35. **FUNCTIONING OF OXYGEN SYSTEM:**

Satisfactory.

36. **FUNCTIONING OF CLOTHING AND PERSONAL EQUIPMENT:**

In a number of planes the cabin heaters were turned off over the target in an attempt to keep the windows from frosting. Cold air was also blown on the windows from the outside. In so doing the temperature was quite cold and crews complained of being cold even though intermediate flying clothing, winter gloves, and flying boots were worn.

37. **CAMERAS:**

See Photographic Officer's Report.

38. **TECHNICAL FAILURES:**

See Flight Engineer's Report.

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Headquarters
73rd Bombardment Wing

Mission No. 9
Field Order No. 23
29 November 1944

CONSOLIDATED MISSION REPORT

BOMBING DATA

39. BOMB DATA:
See Consolidated Statistical Report, Table IV, Loading and Disposal of Bombs.
40. TARGET ATTACK DATA:
See Consolidated Statistical Report, Table III, Bombing Run.
41. CONDITIONS OVER TARGET:
Solid overcast altostratus below 28,000 feet; broken (estimated 8/10) cirrostratus 29,000 feet to 31,000 feet. Very meager AA and only one fighter attack reported.
42. IP AND AP:
The selection of the IP and OAP was good as they were easily identified by radar.
43. REASONS FOR FAILURE TO BOMB:
All A/C over the target bombed.
44. RESULTS OF BOMBING OBSERVED:
No bombing results observed due to complete undercast.
45. POSSIBLE SOURCES OF ERROR IN BOMBING:
Bombing in some A/C had to be accomplished by dead reckoning due to the failure of the radar and the lack of any visibility. Failure to follow the prescribed route probably caused errors in some cases.
46. USE OF RADAR AND EFFICIENCY:
Radar was used by all aircraft in which it was operational (16) with efficiency from good to excellent. Nine out of 25 aircraft over the target had radar malfunctions that prevented its use, that is the radar was 64 % operational.
47. COMMENTS AND SUGGESTIONS:
Improved radar maintenance will allow a larger percentage of effective aircraft against a target.

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14.

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Headquarters
73rd Bombardment Wing

Mission No. 9
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CONSOLIDATED MISSION REPORT

BOMB IMPACT DATA

Paragraphs 48 through 51

DAMAGE ASSESSMENT

No. of A/C over target: 23 over primary. One bombed Yokohama, one bombed Numazu.

Bomb load: 17 x 500-lb M-18 3 x 500-lb T.E.4.

Direction of Attack: Varied from 73° to 312° (T).

Aiming Point: Mouth of Ara River (CAP).

Photographic Coverage and Quality: This being a night mission no photographs were taken.

SUMMARY

None

CONCLUSION

None

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Headquarters
73rd Bombardment Wing

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Field Order No. 23
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29 November 1944

CONSOLIDATED MISSION REPORT

NAVIGATION NARRATIVE

1. The first group night mission was quite satisfactory as far as navigation was concerned. There was no group assembly; all aircraft proceeding individually to the target, following the prescribed route.
2. The route to the target was not within range of any radar check point, therefore, radar as a navigational aid to determine an accurate wind could not be used. Although the coast of Honshu was very easily recognizable on radar, the bombing could not be considered precision, due to the lack of accurate wind information. Some excellent radar scope pictures of the target areas are being obtained to help in future operations.
3. Navigators are rapidly becoming proficient in celestial work and would much rather navigate at night.
4. Maintenance of all navigation instruments is becoming a serious problem.

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Headquarters
73rd Bombardment Wing

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29 November 1944

CONSOLIDATED MISSION REPORT

BOMBARDIER

See paragraphs 39 through 47.

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7 FEB 1944
JCH
WEATHER SUMMARY.

HEADQUARTERS 73rd BOMBARDMENT WING
CONSOLIDATED MISSION REPORT

FO # 23
Mission # 9
29 Nov 1944

The polar front situated just south of Japan (see enclosed map) at the time of the forecast was moving southeast under the influence of the well developed high to the north and was forecast to continue this movement. On this basis the frontal zone was forecast to be quite narrow (on the order of 100 miles).

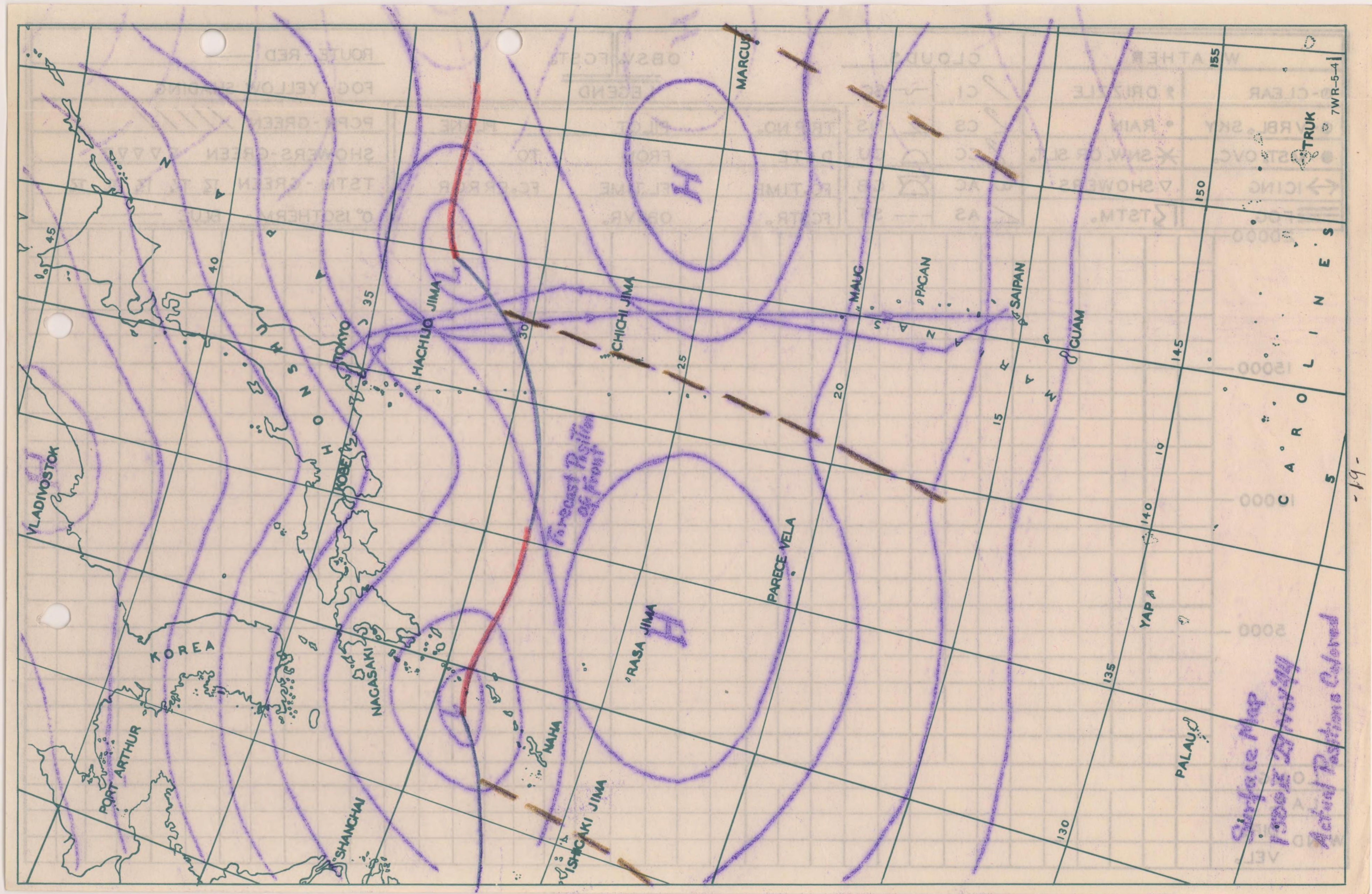
The front was actually encountered slightly further south of its forecast position and its surface had a very shallow slope with considerable overrunning from the south. Thus most of the cloud cover at altitude was encountered far to the north and was most intense along the south coast of the Empire giving a thick overcast at the target.

Since this mission was flown almost entirely at night cloud observations leave something to be desired. However, for some distance south of the target and over the target itself instrument conditions were encountered continuously from 15,000 ft. to 25,000 ft and 70% of the time above. The altocumulus clouds were reported to be in many layers south of the target but merged into a solid cloud mass over the target itself. As the mission was to be a radar bombing mission this increase in cloud cover did not hinder its completion but precluded any possibility of contacting the target visually. Which might have been possible with the 8/10 cloud forecast.

The entire wind forecast was verified very well by the navigators reports.

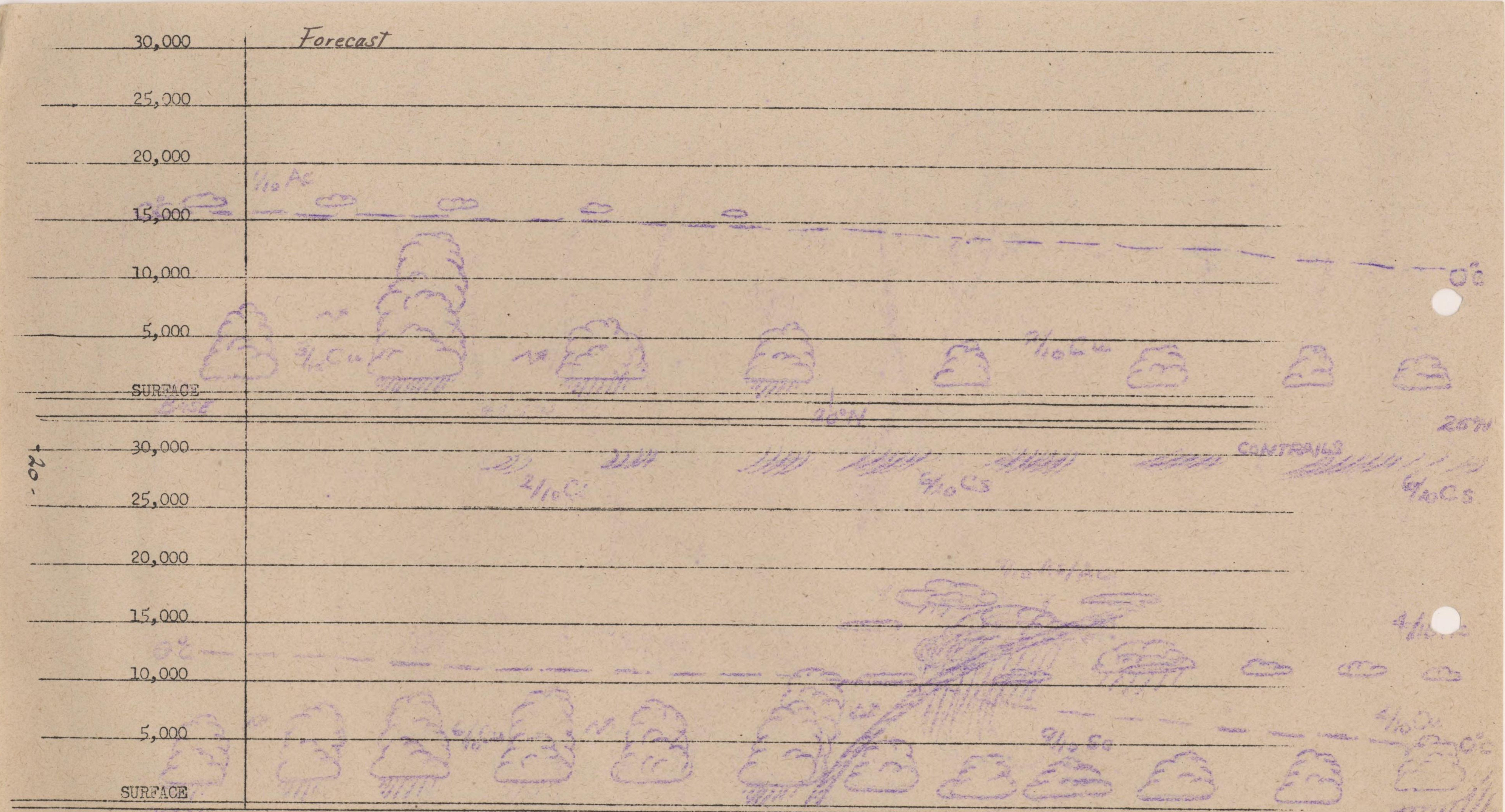
The experimental bombardiers forecast (true altitude) was found by absolute altimeter observations to be about 400 ft too low.

On every high altitude mission so far the reported temperatures have been too warm even when corrected for true airspeed. As upper wind forecasts and the true altitude forecasts are based on these forecast temperatures are very nicely the corrected temperature observations cannot be used to fit any other observations made by these missions. This would seem to indicate that the airspeed corrections now in use are in error. This matter is now being studied.



Surface Map
 1500Z 28 Nov 44
 Actual Positions Colored

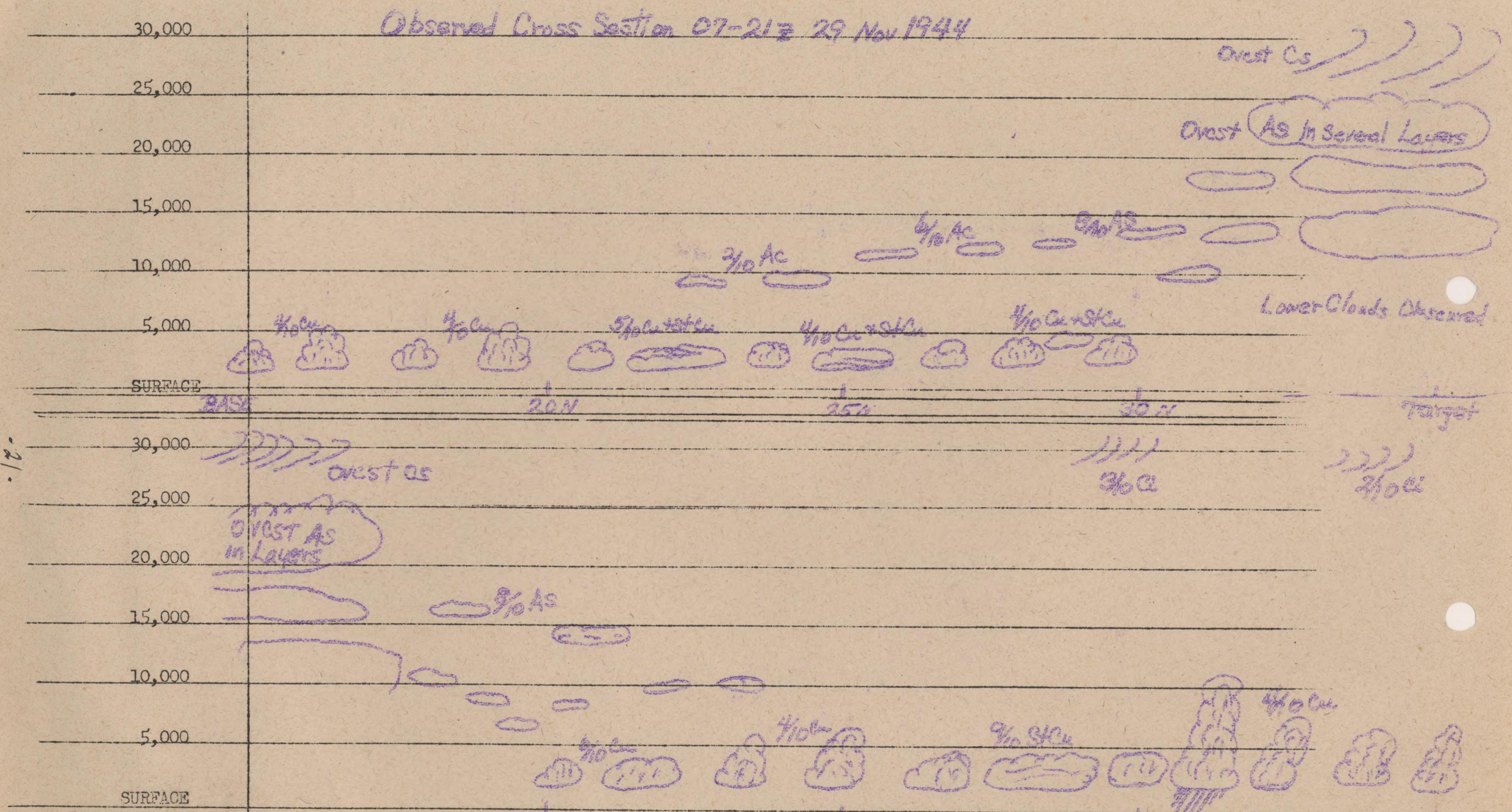
-19-



ADDITIONAL TARGET DATA: Altimeter Setting: _____ in. ; Mean Temperature from Surface to _____ feet: _____ °C.

120-

TARGET

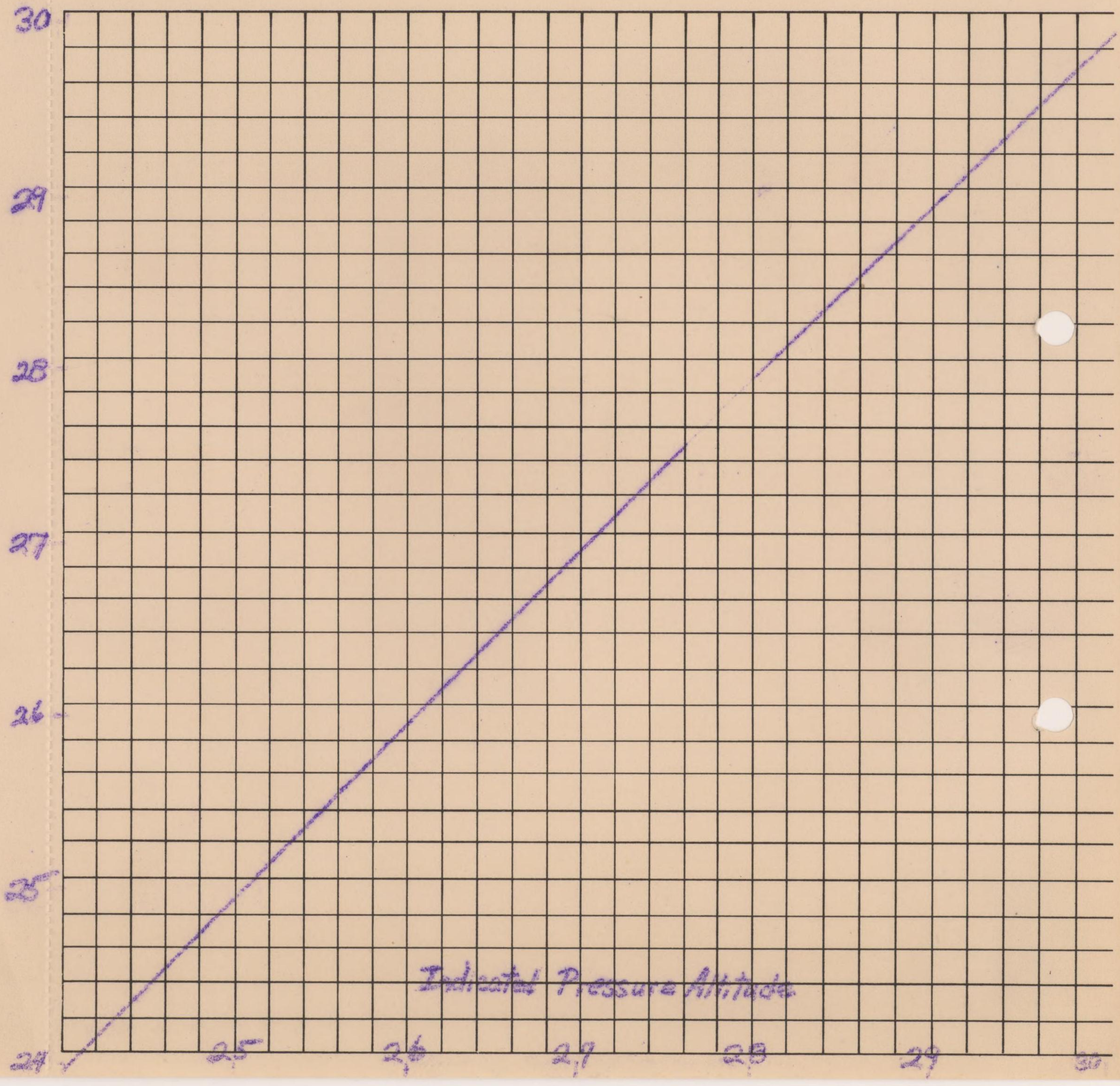


21.

ADDITIONAL TARGET DATA: Altimeter Setting: _____ in. ; Mean Temperature from Surface to _____ feet: _____ °C. BASE

Forecast
 30 NOV '44
 00 30000
 TO 29930
 260°
 115 mph
 -45
 -19
 ft.

True Altitude Above Target



Bombardier's Forecast

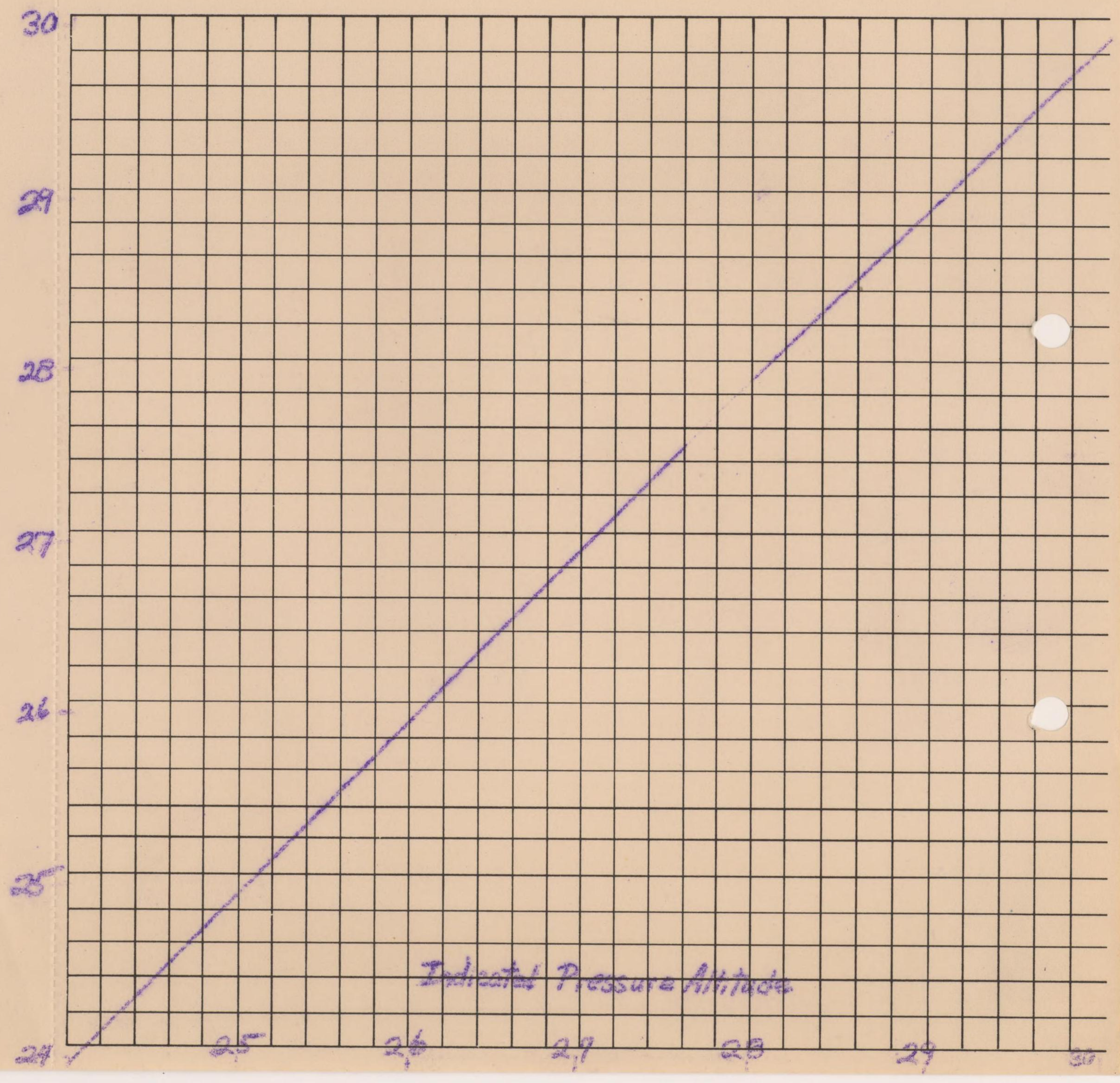
Forecast for Tokyo 15²³30 NOV 44

IPA	24000	26000	28000	30000
Bombing Alt	23960	25960	27950	29930
Wind Dir	270°	270°	260°	260°
Wind Speed	92 mph	100 mph	108 mph	115 mph
Temp	-31	-35	-40	-45
Mean Temp	-13	-15	-17	-19

Pressure Alt of Target +55 ft.

Target Alt. Sg. 29.90'

True Altitude Above Target



Headquarters
73rd Bombardment Wing

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CONSOLIDATED MISSION REPORT

CFC GUNNERY

1. No Enemy Aircraft were encountered and all firing was accomplished for test. Figures include ammunition in lost A/C.
2. The following results of the test firing are of interest:
 - a. 18,411 rounds Cal. 50 ammunition (all types) were expended.
 - b. 496 rounds 20 mm ammunition (all types) were expended.
 - c. 95% of used turrets were operative.
 - d. 97.8% of used Cal. 50 machine guns were operative.
 - e. 81% of used 20 mm cannon were operative.
 - f. There was no instance of total CFC failure.

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29 Nov 44

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CONSOLIDATED MISSION REPORT Mission #9

Part E

REPORTED BY FLIGHT ENGINEER Field Order #23

1. Scheduled A/C failing to take off:

497th Group

A/C No. 594 Cowl flap motor burned out.
" " 431 Electronic turbo regulator inoperative.

499th Group

A/C No. 647 Malfunction turbo regulator and prop governor
#4 engine.

500th Group

A/C No. 436 Insufficient power on #4 engine on take off.
" " 657 Bomb Bay door motor burned out.

2. A/C malfunctioning (Early returns)

497th Group

A/C No. 648 Both inverters out.

498th Group

A/C No. 681 #4 engine torched badly in auto lean and
did not develop full power. #2 fuel pressure
down to 9 psi.

499th Group

A/C No. 651 Fuel transfer system failure (Selector valve
defective).

3. A/C malfunctioning (A/C completing mission)

- a. Oil Leaks Seven reported as excessive.
- b. Cylinder Head Temp Gauges Five reported out.
- c. Swallowed valve One reported.
- d. Inverters One A/C reported both inverters out.
- e. Cabin Heating One reported inoperative.
- f. Prop Governor Malfunctions reported on two.
- g. Turbo Regulator Two reported.
- h. Oil Cooler Regulator Six reported inoperative.
- i. Fuel Transfer System Two reported inoperative.
- j. Shut Off Valve between Bomb Bay Tanks Two reported
stuck.

4. Damage to A/C

- a. None by enemy; by friendly fire, one (1)

5. Cruise Control Analysis

All aircraft participating in this mission flew individually. It will be noted from the fuel consumption data in table XI of the statistical summary that there was a rather large variation between the maximum and minimum. This wide variation is attributed to the fact that the bombing was accomplished by radar and in some instances three runs were made on the target.

SECRET

(-1-)

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S E C R E T

CONSOLIDATED MISSION REPORT 29 NOVEMBER 1944 (CONT'D)

The cruise to the target was at low altitude (1000' - 1500') with maximum range speeds (200 - 305). An average of 4 hours 15 min was spent during this cruise. Aircraft were at bombing altitudes from one to two hours. In all cases, aircraft which remained at altitude the longest consumed the greatest amount of fuel. The return flights varied in altitude due to the weather and winds aloft.

The power settings at bombing altitude were less than reported on formation flights. Settings varied from 2250 RPM and 36"MP to 2350 RPM and 41" MP.

S E C R E T

(-2-)

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3. Breakdown of cameras not taking photos by cause:

Cause	No. of Cameras	Explanation
a. Mechanical failure		
b. Installation error		
c. Processing error		
d. Camera doors not open		
e. M/Switch not on		
f. Vacuum failure		
g. Power failure		
h. Light failure (Target)	1	Heavy Undercast
i. Enemy action		
j. Others	7	Radar Operator did not expose film.
k.		
l.		
m.		
n.		
o. Total		

4. Remarks and suggestions:

5. Instructions for preparing this form:

a. This report will be prepared by Photo Lab Commander and certified by Group S-3:

b. Items:

1a, b, c, d, are self explanatory.

1e - The number of malfunctions due to installation or processing.

1f - Number of non-effective cameras due to camera m/switch not turned on, failure of vacuum to the extent of rendering pictures void, Intervalometer or camera fuze blown, tampering with intervalometer or camera, light conditions over target, enemy action, etc.

1g. g is equal to a minus b, c, d, e, and f.

Item 2 - The f. stop, shutter speed, interval between exposures, altitude will be given for only the vertical cameras by A/C number.

Item 3 - Give a definite explanation of the reason for any malfunction.

Certified by _____

Prepared by *Glenn F. Hellman*
GLENN F. HELLMAN
 PHOTO LAB COMMANDER
 WING PHOTO OFFICER

Rank _____

Rank _____

CONFIDENTIAL

73rd Bomb Wing
4 December 44

Field Order No 23

COMMUNICATIONS

1. Strike Reports: Received without difficulty.
2. Fox Messages: Aircraft received Fox messages without difficulty.
3. Radio Frequencies: Strike frequencies were entirely satisfactory with exception of 7310 which was exceptionally crowded. Lower frequency 3145 KCS had much greater range than experienced in daytime use which would be expected.
4. Navigation Aids: A total of 34 requests were made for D/F bearings of which 26 were obtained. Radio buoys (AN/CRN-1) were again dropped. On this mission, three were dropped so as to form an approximate 50 mile equilateral triangle approximately two hundred fifty (250) miles from Saipan on the return leg. Aircraft were able to home as well as obtain a fix. Meager use was made of the additional navigational aid, many aircraft reported they were unable to receive the signal. Three separate frequencies and codings were used.

5. Security and Net Discipline: Net discipline was satisfactory. No breaches of security were noted.

6. Enemy Transmissions: Interference was caused on 7310 KCS by enemy broadcasts. It was noticed that one program carrying music and voice was stopped as first airplanes arrived over the target. Ground Station operators definitely believe 7310 KCS is being jammed. Enemy on same frequency and transmits CW signal at the same time the aircraft or Ground Station transmits.

7. Distress and Emergency Signals: Two emergency requests for bearings were made, one of which was cancelled.

8. Malfunctions:

SET	MALFUNCTION	497	498	499	500
AN/ARN-7	Noisy	.	.	.	1
	Antenna lead-in broken	.	1	.	.
	Extreme hunting	.	.	.	1
SW-141A	Shorted at R.O. position	1	.	.	.
BC 34807	Insensitive	.	2	.	.
AN/AIC-2	Intermittent

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E.O. 11652, Sec. 3(E) and 5(D) (U)
By *AMM* 740120
NARS, Date 01.2.1 1975

SECRET

Headquarters
73rd Bombardment Wing

Field Order No. 23
Mission No. 9
29 November 1944

CONSOLIDATED MISSION REPORT

RADAR EMPLOYMENT AND RADAR EQUIPMENT PERFORMANCE

1. RADAR EMPLOYMENT.

- a. Crews were briefed to enter bomb run individually if possible or to bomb on leaders tail signal if necessary. No conclusive information was obtained on the practicability of loose formation bombing on moon-lit nights.
- b. Due to radar equipment failures two systems of emergency instrument bombing were attempted.
- (1) A/C homed on local Tokyo broadcasting station. When SCR-718 altimeter indicated A/C was crossing shoreline bombs were released.
- (2) A/C homed on local Tokyo broadcasting station and released bombs when radar compass needle began to swing. Common practice of siting of broadcasting transmitters in open country makes this emergency procedure of questionable value.
- c. Navigators experienced difficulty in navigating to I P and getting on briefed bomb run due to high cross wind and lack of radar check points for wind runs along the planned course prior to landfall near the I P.

2. RADAR EQUIPMENT PERFORMANCE (N/APC-B).

- a. Of 23 A/C reporting:
- (1) A/C radar satisfactory for bombing 16 A/C 70%
- (2) A/C radar unsatisfactory for bombing 7 A/C 30%
- b. Fragmentary information on 18 malfunctions reported indicates.
- (1) Inverter malfunctions 17%
- Pressurization malfunctions 11%
- Low sensitivity 22%
- Preflight inspection and adjustments failures 50%

3. SCR-695 (IFF), SCR-718 (ALTIMETER) EMPLOYMENT AND EQUIPMENT PERFORMANCE.

a. Employment.

(1) SCR-695 (IFF): Employment was normal. The IFF was turned on after leaving the target area to avoid assisting enemy radar and to minimize interference with ECM search equipment.

(2) SCR-718 (Altimeter) Normal employment of the altimeter for altitude measurements was made. In addition, the altimeter was used as an emergency blind bombing instrument.

b. Equipment performance (Incomplete Reports)

- (1) SCR-695 Failures Reported 1
- (2) SCR-718 Failures Reported 1

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SECRET

Headquarters
73rd Bombardment Wing

Field Order No. 23
Mission No. 9
29 November 1944

CONSOLIDATED MISSION REPORT

ECM

1. Number of Radar Observers participating 3
2. Number of Radar Observers completed mission 1
3. Equipment employed:

SEES

AV HOURS ON

MALFUNCTIONS

AN/AER 4
AN/APR 5A
AN/APR 5
AN/APAGE

6.5
--
--
--

--
--
--
--

4. Signals logged:

BAND

NUMBER

PRF RANGE

PULSE WIDTH RANGE

A-70-85
B-85-120
C-120-170
D-170-220
E-220-300
F-300-1000
Above, specify
Frequency

5
9
4
4
--
--
--

Not Measured
"
"
"
"
--
--
--

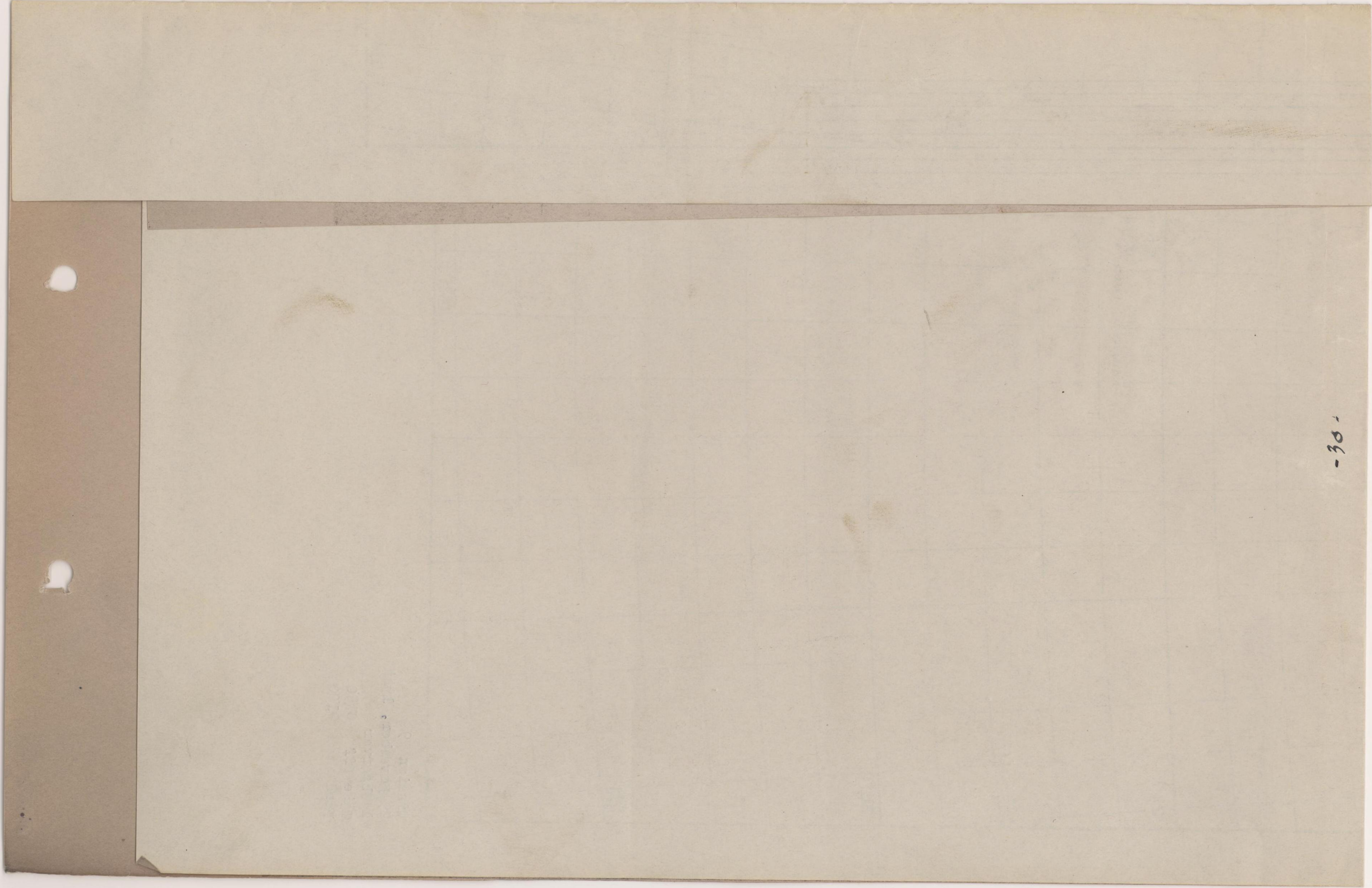
Not Measured
"
"
"
"
4.
--
--

5. Track overlay: Annotated map showing: (See Part II)

- a. Track made good.
- b. Position in hourly intervals (Z Time).
- c. Approximate position at intercept of signals. (Letters A-F are encircled to show location of A/C when signals in the band specified were heard).

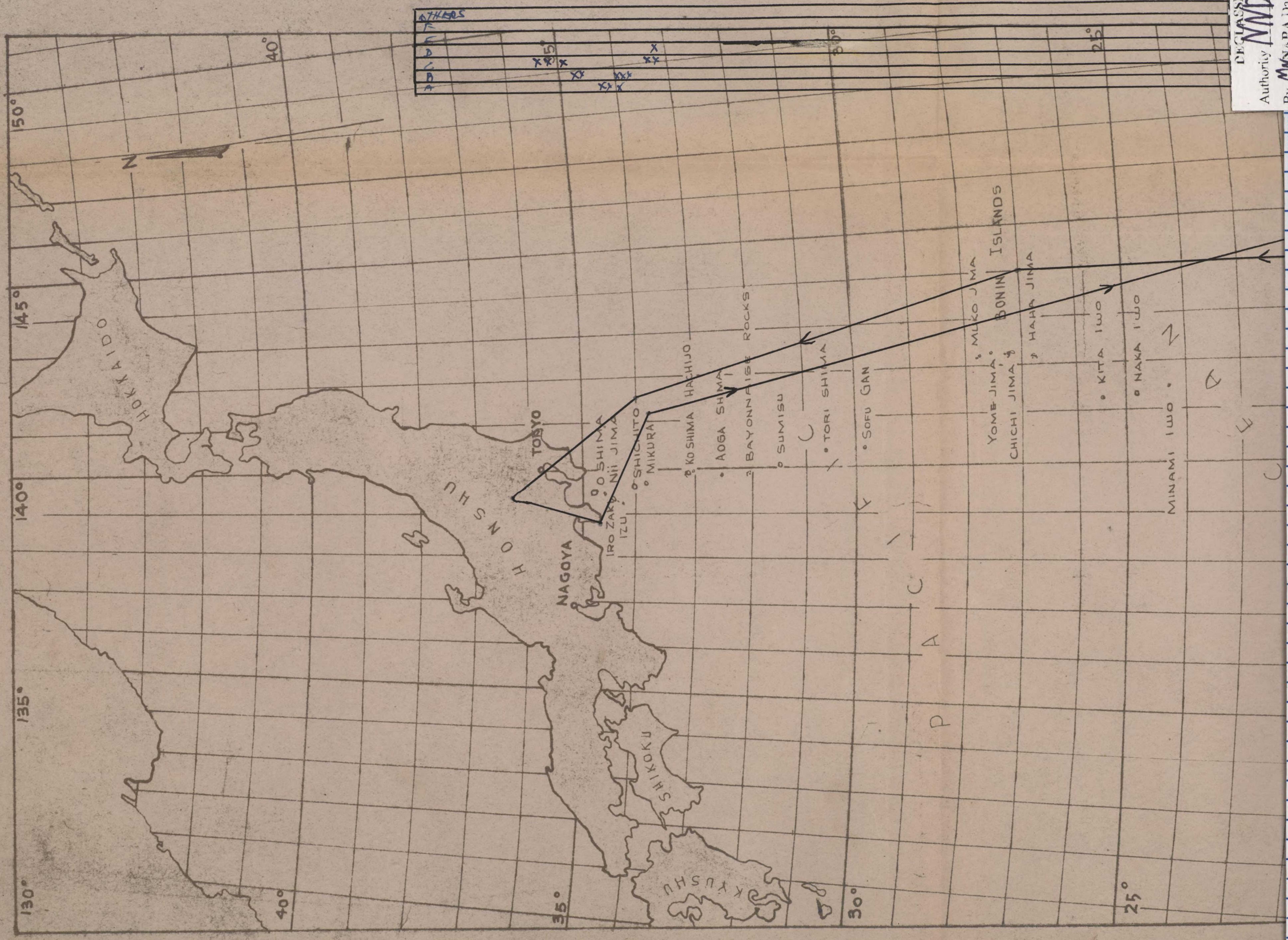
6. Remarks:

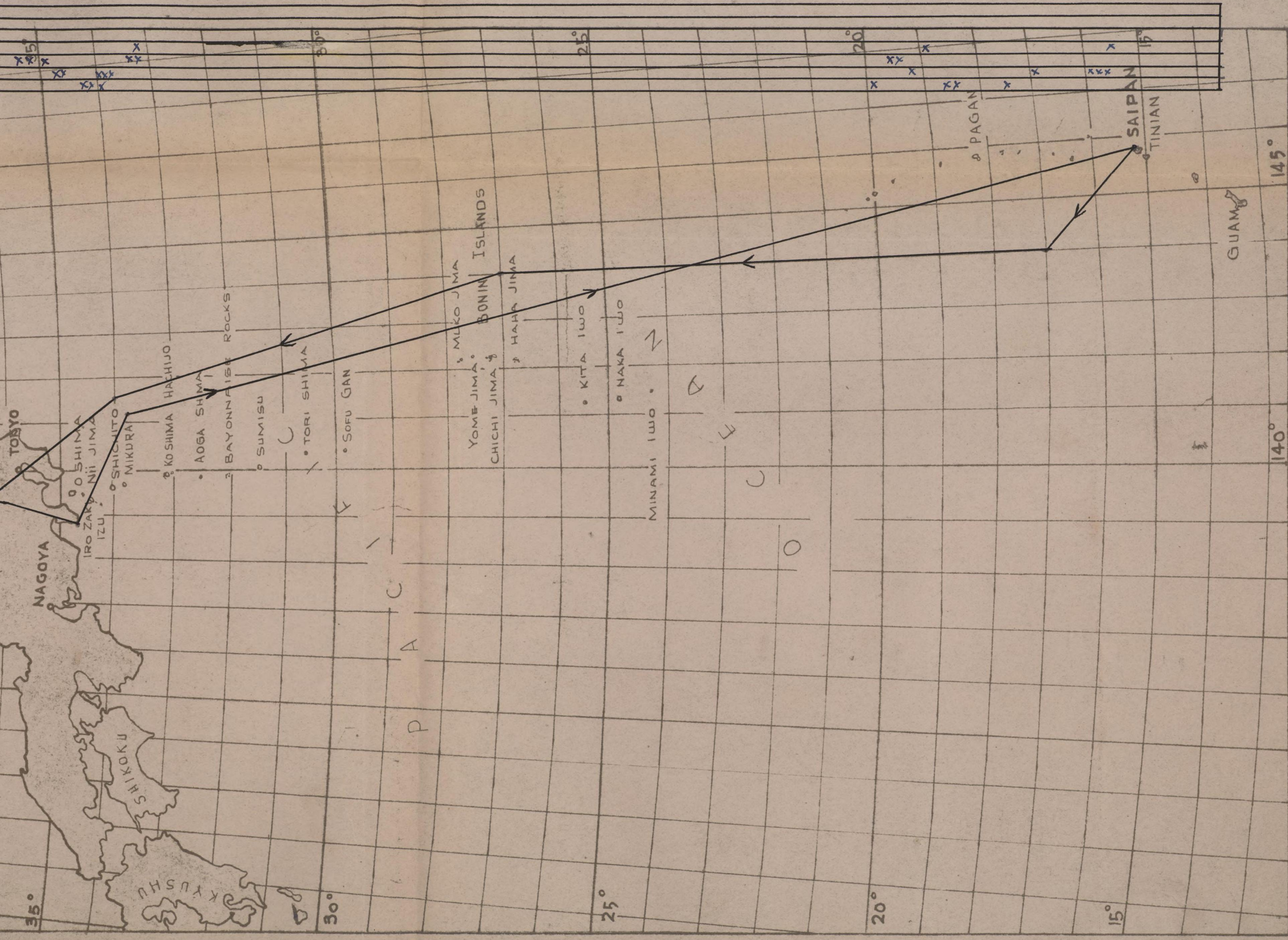
- a. Frequencies from 75-300 Mc monitored.
- b. High frequency units (above 300 Mc) not available.
- c. Night mission no reports of accurate flak possible radar controlled.
- d. No substantiated reports of radar night fighters.



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Authority *NND 76468*
By *MNAPA* Date *8/3/05*





Mission #9
 29 November, 1944
 1 Observer
 Take Off 0750
 Land 2100

73RD BOMB WING

S E C R E T

FIELD ORDER NO. 23

MISSION NO. 9

29 Nov 44

Consolidated Statistical Summary

Primary Target LIGHT INDUSTRIAL & DOCK AREA; TOKYO, JAPAN

Table I Aircraft Participating

	NUMBER OF AIRCRAFT				
	TOTAL WING	497	498	499	500
A/C Scheduled to Take-off	33	10	10	4	9
A/C Failing to Take-off	5	2a	0	1e	2g
A/C Airborne	29b	9b	10	3	7
Number of Non-Effective Sorties	4	1	1	1	1h
Percent of Airborne A/C Non-Effective	14%	11%	10%	33%	14%
A/C Reaching Target	25	8c	9d	2	6
A/C Bombing Target	25	8c	9d	2	6
A/C Failing to Return to Home Base	1	0	0	0f	1h
Time of Take-off:		29 Nov	29 Nov	29 Nov	29 Nov
Earliest	0748 Z	0759 Z	0859 Z	0748 Z	0813 Z
Latest	1210 Z	0839 Z	1210 Z	1010 Z	0838 Z
Time of Return:		29 Nov	29 Nov	29 Nov	29 Nov
Earliest	2048 Z	2104 Z	2235 Z	2125 Z	2048 Z
Latest	30 Nov	0235 Z	2308 Z	0235 Z	2210 Z

a. A/C 594 BURNED OUT COWL FLAP MOTOR #2 ENGINE

A/C 431 NO TURBO BOOST

b. INCLUDED 1 SPARE A/C 593

c. 1 A/C BOMBING YOKOHAMA AS LAST RESORT TARGET

d. 1 A/C BOMBING NUMOZU AS LAST RESORT TARGET

e. A/C 647 TURBO REGULATOR & PROP GOVERNOR #4 ENGINE MALFUNCTION

f. A/C 651, NON-EFFECTIVE, LANDED AT GUAM

g. A/C 436 - #3 ENGINE WOULD NOT PULL T.O. POWER. AMPLIFIER FUSE BURNED OUT

A/C 657 - BOMB BAY DOOR MOTOR BURNED OUT

h. A/C 218 - MISSING. NO REPORT OF A/C AFTER TAKE-OFF. PRESUMED TO BE NON-EFFECTIVE.

S-E-C-R-E-T

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73RD BOMB WING

S E C R E T

FIELD ORDER NO. 23

MISSION NO. 9

29 Nov 44

Consolidated Statistical Summary

Table II Breakdown of Non-Effective Aircraft by Cause

CAUSE	NUMBER OF AIRCRAFT				
	TOTAL WING	497	498	499	500
Mechanical Failure	3	1a	1b	1c	
Personnel Failure					
Flight Conditions					
Enemy Action					
Unknown	1				1d
Other					
Total	4	1	1	1	1

- a. A/C 648 ELECTRICAL TROUBLE. INVERTERS OUT
- b. A/C 681 #2 FUEL PRESSURE 9 lbs; #4 ENGINE BACKFIRES.
- c. A/C 651 - FUEL TRANSFER SYSTEM FAILURE
- d. A/C 218 - MISSING. NO REPORT OF A/C AFTER TAKE-OFF. PRESUMED TO BE NON-EFFECTIVE

S E C R E T
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DECLASSIFIED
Authority NND 160000
By MMN/PA Date 8/30/05

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73RD BOMB WING

Consolidated Statistical Summary

Table IV Loading & Disposal of Bombs

29 Nov 44

FIELD ORDER NO. 23

MISSION NO. 9

GROUP	TYPE & WEIGHT OF BOMBS	FUSE SETTING		NUMBER OF BOMBS												PERCENT OF BOMBS RELEASED ON TARGET		
		NOSE	TAIL	LOADED				RELEASED				JETTISONED		UNKNOWN			RETURNED	
				ON ALL AIRCRAFT		ON AIRBORNE AIRCRAFT		ON PRIMARY TARGET		ON OTHER TARGETS								
				NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS		NO.	TONS
497	T4E4 420lb Frag Cl	8 sec	none	33	6.9	27	5.67	18	3.78	3 a	.63	6 b	1.26					78%
	M18 350lb Inc. Cl	41.2 sec.	"	187	32.7	153	26.77	105	18.375	17 a	2.975	31 b	5.42					80%
498	T4E4 420lb Frag Cl	8 sec	"	36	7.56	30	6.3	24	5.04	3 c	.63	3	.63					90%
	M18 350lb Incend. Cluster	40.5-41.2 sec	"	204	35.7	170	29.75	136	23.8	17 c	2.975	17	2.975					90%
499	T4E4 420lb Frag Cl	8 sec	"	8	1.68	6	1.26	4	.84	0	0	2	.42					67%
	M18 350lb Incend. Cluster	40.6 sec	"	60	10.5	45	7.875	30	5.25	0	0	15	2.625					67%
500	T4E4 420lb Frag Cl	8 sec	"	33	6.9	21	4.41	18	3.78					3 d	.63			86%
	M18 350lb Incend. Cluster	41.2 sec	"	183	32.025	115	20.125	98	17.15					17 d	2.975			85%
WING	T4E4 420lb Frag Cl	8 sec	none	110	23.04	84	17.64	64	13.44	6	1.26	11	2.31	3	.63			
TOTAL	M18 350lb Incend. Cluster	40.5-41.2 sec	"	634	110.93	483	84.52	369	64.575	34	5.95	63	11.02	17	2.975			
TOTAL				744	133.97	567	102.16	433	78.015	40	7.21	74	13.32	20	3.605			83%

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a. YOKOHAMA
 b. A/C 741 SALVOED BOMBS NEAR TARGET AREA

SECRET

c. NUMOZA
 d. A/C 218 MISSING. NO REPORT FROM A/C AFTER TAKE-OFF

SECRET

73RD BOMB WING

FIELD ORDER NO. 23

MISSION NO. 9

29 Nov 44

Consolidated Statistical Summary

Table V Bombing Accuracy

Target LIGHT INDUSTRIAL & DOCK AREA, TOKYO, JAPAN

G R O U P	Bombs Released On Target		Number of Hits and Distance from Target											
			0-500'		500-1000'		1000-2000'		2000-3000'		TOTAL			
			No.	%	No.	%	No.	%	No.	%	No.	%		
	No.	Tons												
			10/10	CLOUD	COVER	AGE	OVER	TARGET	--	RADAR	SCOPE			
			PICTURES	INDICATE	GOOD	RESULTS.								

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73RD BOMB WING

S E C R E T

FIELD ORDER NO. 23
MISSION NO. 9
29 Nov 44

Consolidated Statistical Summary

VI Attacks & Passes by Enemy Aircraft

DIRECTION	ALTITUDE												TOTAL			
	HIGH			LEVEL			LOW			TOTAL						
	497	498	499	500	497	498	499	500	497	498	499	500		Total Wing		
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800											1				1	1
0900																
1000																
1100																
1200															1	1
TOTAL																

VII Enemy Aircraft Destroyed & Damaged

GROUP	DESTROYED		PROBABLY DESTROYED		DAMAGED	
	DESTROYED	PROBABLY DESTROYED	DESTROYED	DAMAGED		
497	0	0	0	0		
498	0	0	0	0		
499	0	0	0	0		
500	0	0	0	0		
TOTAL WING	0	0	0	0		

73RD BOMB WING

SECRETFIELD ORDER NO. 23MISSION NO. 9

29 Nov 44

Consolidated Statistical Summary

Table VIII Aircraft Lost and Damaged

CAUSE	AIRCRAFT LOST				AIRCRAFT DAMAGED					
	TOTAL WING	497	498	499	500	TOTAL WING	497	498	499	500
ENEMY A/C										
ENEMY FLAK										
ENEMY A/C & FLAK										
ACCIDENT										
SELF-INFLICTED										
UNKNOWN	1				1 a					
OTHER						1			1 b	
TOTAL	1	0	0	0	1	1	0	0	1	0

- a. A/C 218 MISSING. NO REPORT FROM A/C AFTER TAKE-OFF.
 b. A/C 439 SUSTAINED BULLET HOLES IN #3 Prop, #4 COWL FLAPS & WING. BULLETS LATER DETERMINED TO BE U.S. CAL. .50 ARMOR PIERCING INCENDIARY M G BULLETS. GP S-2's EVALUATION IS THAT ATTACK WAS BY FRIENDLY A/C/

Table IX Repair of Damaged Aircraft

AIRCRAFT TO BE REPAIRED BY:	497	498	499	500	TOTAL
TACTICAL GROUP	0	0	1	0	1
SERVICE GROUP	0	0	0	0	0
DEPOT GROUP	0	0	0	0	0
TOTAL	0	0	1	0	1
NOT REPARABLE	0	0	0	0	0

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73RD BOMB WING

S E C R E TFIELD ORDER NO. 23MISSION NO. 9

29 Nov 44

Consolidated Statistical Summary

TABLE X Casualties

	Total	P	CP	NB	BN	FE	ROM	RO	CFC	IG	BG	TG	Other
Killed:													
497th													
498th													
499th													
500th													
Total Wing													
Missing:													
497th													
498th													
499th													
500th	12	1	1	1	1	1	1	1	1	1	1	1	1
Total Wing	12	1	1	1	1	1	1	1	1	1	1	1	1
Seriously Injured:													
497th													
498th													
499th													
500th													
Total Wing													
Slightly Injured:													
497th													
498th													
499th													
500th													
Total Wing													
Total Casualties:													
497th													
498th													
499th													
500th	12	1	1	1	1	1	1	1	1	1	1	1	1
Total Wing	12	1	1	1	1	1	1	1	1	1	1	1	1
No. Participating													
497th	102	9	9	9	9	9	9	9	9	9	9	9	3
498th	118	10	10	10	10	10	10	10	10	10	10	10	8
499th	33	3	3	3	3	3	3	3	3	3	3	3	0
500th	83	7	7	7	7	7	7	7	7	7	7	7	6
Total Wing	336	29	29	29	29	29	29	29	29	29	29	29	17

S E C R E T

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29 Nov 44

Consolidated Statistical Summary

Table XI Fuel Consumption Data

	TOTAL WING	GROUP			
		497 a	498 b	499 c	500 d
Average Fuel Aboard	7825	7886	7799	7800	7800
Average Flying Time	13:39	13:20	13:52	14:03	13:20
Average Distance - Nautical Air Miles	2820	2813	2833	2875	2765
Fuel Used:					
Average	6587	6514	6580	6835	6601
Median	6576	6294	6550	6835	6625
Maximum	7200	7200	7080	7170	6790
Minimum	5900	5900	6230	6500	6405
Fuel Remaining:					
Average	1238	1357	1219	965	1199
Median	1179	1506	1270	965	1175
Maximum	1300	1900	1500	1300	1395
Minimum	630	800	744	630	1010
Av Gallons per Hour	4.82	4.88	4.74	4.86	4.93
Av Gallons per Mile	2.34	2.32	2.32	2.38	2.39
Total Gasoline Con- sumed & Lost	182,383	55,988	60,720	18,270	47,405

a. BASED ON 7 A/C/
b. BASED ON 9 A/C.
c. BASED ON 2 A/C.
d. BASED ON 6 A/C

EXCLUDES 1 RETURNING EARLY & 1 RETURNING LATE.
EXCLUDES 1 RETURNING EARLY
EXCLUDES 1 RETURNING EARLY.

APPROXIMATE GROSS WEIGHT AT TAKE-OFF: 137,000 LBS.

TIMES AT VARIOUS ALTITUDES:

497 1000 FT 1:00, 1500 FT 4:09, 15,000 FT 2:09, 31,000 FT 1:15
498 1000 FT 4:10, 27,000 FT 1:20
499 1300 FT 2:30, 25,000 FT 1:30
500 1000 FT 4:55, 26,000 FT 0:26

NOTE: DATA FOR MOST A/C ARE CALCULATED, NOT SERVICE

73RD BOMB WING

S_E_C_R_E_T

FIELD ORDER NO. 23MISSION NO. 929 Nov 44

Consolidated Statistical Summary

Table XII Ammunition Consumption Data

	AMMUNITION EXPENDED PER GROUP					TOTAL
	497th	498th	499th	500th		
20 MM.						
Fired	80	55	8	153		296
On Lost A/C	0	0	0	120		120
Total	80	55	8	273		416
.50 Cal.						
Fired	2310	2780	2745	4576		12411
On Lost A/C	0	0	0	6000		6000
Total	2310	2780	2745	10576		18411

	AMMUNITION EXPENDED PER PLANE					TOTAL WING
	497th ^a	498th	499th	500th		
Upper front	163	44	247	101		139
Lower front	48	49	87	378		141
Upper rear	43	45	247	49		96
Lower rear	90	51	287	236		166
.50 Cal. Tail	40	89	47	151		82
Total .50 Cal.	384	278	915	915		624
20 MM Tail	13	6	3	31		13

^a. Based on 6 A/C

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S_E_C_R_E_T

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SECRET

SECRET
By Auth of CG 73d BW

Initials _____ Date _____

73d Bomb Wg
SAIPAN
0300Z 29 Nov 44

FO 23

Maps: Long Range Navigation Charts: CAROLINE ISLANDS and JAPAN, scale 1:3,000,000. Target Folder 90.17 JAPAN.

- 1. a. (1) Hv intense radar directed AAA over target area. Early warning radar in BONIN ISLANDS, KAZAN ISLAND GROUP and on eastern coast of HONSHU.
- (2) Unknown number of twin-engine night fighters in target area. Single-engine fighters in excess of 400 based in TOKYO area.
- (3) A force of 20 fighters may be based on IWO JIMA and may be capable of intercepting our A/C.

b. (1) Lifeguard submarines will be located at the following points.

- 1. (35° 00'N - 141° 12'E)
- 2. (33° 00'N - 141° 45'E)
- 3. (25° 00'N - 144° 10'E)

If possible do not ditch within seven (7) miles of INUBIO SAKI (35° 43'N - 140° 52'E). Enemy mine fields prohibit friendly Subs from penetrating this area.

- (2) A rescue destroyer will be located at (21° 00'N - 144° 25'E).
- (3) Com Air Forward will provide defense of the operating base.

2. 73d Wg Atks light industrial portion of TOKYO 29 Nov 44. Area of target bounded by coordinates:

- (35° 39'N - 139° 46'E)
- (35° 43'N - 139° 47'E)
- (35° 43'N - 139° 52'E)
- (35° 39'N - 139° 52'E)

Last resort target: Any indus trial city.

Method of bombing: Single A/C using complete radar approach with final adjustment by visual sighting if possible. If radar inoperative A/C drop on flight leader.

Formation: 2 - 4 A/C flights to point just prior to IP or beyond if wing A/C radar is inoperative. Individual A/C to home base.

SECRET

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Authority NND 760008
By MNA/PA Date 8/30/05

FO 23 (cont'd)

S E C R E T

Route out: Base to Pt (17° 00'N - 144° 00'E) to Pt (29° 00'N - 144° 00'E) to Pt (34° 44'N - 141° 20'E) to target. Bombing altitude will be obtained prior to point (34° 00'N - 141° 39'E).

Route back: Target to Pt (34° 48'N - 139° 48'E) to Pt (34° 00'N - 141° 28'E) to Pt (27° 00'N - 143° 46'E) to base.

IP: Pt (34° 37'N - 141° 25'E).

Axis of Atk: 308° T.

Cruise control: See Annex 2.

Aiming Point: Visual - Center of target area.

Radar - Mouth of ARA (NAKA) RIVER (35° 40'N - 139° 51'E).

Maneuver after Atk: Left turn after target avoiding YOKOHAMA.

3. a. 499th Bomb Gp flies 10 A/C takes off Zero Hr.
- b. 500th Bomb Gp flies 10 A/C takes off Zero Hr plus 10 min.
- c. 497th Bomb Gp flies 10 A/C takes off Zero Hr plus 20 min.
- d. 498th Bomb Gp flies 10 A/C. Take 5 A/C off at Zero Hr plus two hrs and 5 A/C off at Zero Hr plus four hrs.
- x. (1) Zero Hr: 0700Z 29 Nov 44.
- (2) Bomb load: 17 - M18 incendiary clusters set to open at 5000 ft Alt. 3 - T4E4 Fragmentation clusters with fuze set at eight (8) sec.
- (3) Bombing altitude: 24,000 ft to 26,000 ft.
- (4) Intervelometer setting: 250 ft.
- (5) Gasoline load: 7800 gal.
- (6) Ammunition: 4000 Rds .50 cal (300 Rds for each gun except tail turret and 500 Rds for each gun in tail turret), 120 Rds 20 mm.
- (7) EEI: Send information to Wg Hqs pertaining to the range and reliability of planted radio bouys within 12 hrs after bombing.
- (8) All available radar scope cameras will be used. Scope pictures will be taken at the IP and point of bomb release by each attacking A/C. These pictures will be forwarded to this Hqs without delay.

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FO 23 (cont'd)

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4. Each Gp will furnish this Hq at Zero Hr minus 60 min schedule of A/C number, call signs and Pilots' names in order of take-off.
5. a. (1) Annex 3 (Comm).
(2) SOP Communications XXI Bom Comd dd 15 Nov 44.
- b. (1) Air - Flight Leaders.
(2) Gnd - Hq 73d Bomb WG.

By command of Brigadier General O'DONNELL:

BRUGGE
DC/S, O & T

OFFICIAL:

WILKINSON
Asst A-3

- Annex 1 - Bombing Data.
- Annex 2 - Cruise Control.
- Annex 3 - Communications w/1 incl.
- Annex 4 - Radar Countermeasures.
- Annex 5 - Formation Signals.

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S E C R E T

ANNEX NO 1 TO FO 23 73D BOMB WG

BOMBING DATA

1. Bomb Load: (Use M18 IC (E6R2) Bomb Tables only)
a. 17 ea Cluster, Aimable Incendiary, 500 lb M-18 (E6R2)

(1) Fused T39E2 mechanical delay

23,000 ft	- - - - -	37.7 secs
24,000 ft	- - - - -	38.9 secs
25,000 ft	- - - - -	40.1 secs
26,000 ft	- - - - -	41.2 secs
27,000 ft	- - - - -	42.3 secs
28,000 ft	- - - - -	43.4 secs
29,000 ft	- - - - -	44.5 secs
30,000 ft	- - - - -	45.4 secs

- b. 3 ea Cluster, Fragmentation, 500 lb T4E4

(1) Fused M111A2 Mech time delay set at 8 secs.

- c. Order of Release: 9 Incen C, 1 Frag C, 4 Incen C, 1 Frag C,
4 Incen C, 1 Frag C.

d. Intervalometer Setting: 250 ft

e. Do not subtract trail fortrain, aiming point given is for
first bomb of train.

f. Table of Disc Speeds for use with 150 mil trail setting.

Altitude	True Air Speed - Miles per hour	
	260	300
23,000	132.9	135.6
23,500	131.2	133.8
24,000	129.6	132.2
24,500	127.9	130.6
25,000	126.4	129.0
25,500	124.9	127.5
26,000	123.4	126.0
26,500	122.0	124.5
27,000	120.6	123.1
27,500	119.3	121.9
28,000	118.0	120.6
28,500	116.8	119.3
29,000	115.6	118.1
29,500	114.4	116.9
30,000	113.3	115.8

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Annex No 1 to FO 23 (contd)

2. Primary Target: Industrial Area of Tokyo (90.17)
 - a. Coordinates: Area bounded by (35° 43'N - 139° 46'E)
(35° 43'N - 139° 52'E)
(35° 39'N - 139° 47'E)
(35° 39'N - 139° 52'E)
 - b. Axis of Atk: 308° T
 - c. Aiming Point: Center of Target
 - d. Elevation Average 75 ft
 - e. Initial Point: Point 10 NM SE of TAITO POINT (35° 12'N - 140° 35'E)
 - f. Variation: 6° W
 - g. Method of Atk: By individual A/C using complete radar approach with final adjustment by visual-sighting if possible. If radar inoperative A/C drops on a leader. All leaders will make use of the bomb formation light to indicate release. Single ships will have this light turned off.
 - h. Bombing Altitude: Between 24,000 ft and 26,000 ft P.I.A. Groups will assign individual A/C to their altitudes.
 - i. Bombing Airspeed: 195 mph CLAS
 - j. Offset Aiming Point: Mouth of ARA (NAKA) River (35° 40'N - 139° 51'E)
 - k. OAP to 1st Bomb : 3.5 NM
 - l. Slant Range to start bombsight: 8 NM, error meas 11 NM
3. Secondary Target: none, Last Resort Target: any industrial city.

S E C R E T

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Annex No 1 to FO 23 (contd)

4. Bombardiers Sighting Angle Table:

True Altitude	Sighting angle
23,500	- - - - - 70.0
23,750	- - - - - 69.8
24,000	- - - - - 69.5
24,250	- - - - - 69.3
24,500	- - - - - 69.0
24,750	- - - - - 68.7
25,000	- - - - - 68.5
25,250	- - - - - 68.2
25,500	- - - - - 67.9
25,750	- - - - - 67.7
26,000	- - - - - 67.4
26,250	- - - - - 67.2
26,500	- - - - - 66.9
26,750	- - - - - 66.6
27,000	- - - - - 66.4
27,250	- - - - - 66.1
27,500	- - - - - 65.9
27,750	- - - - - 65.6
28,000	- - - - - 65.3
28,250	- - - - - 65.1
28,500	- - - - - 64.8
28,750	- - - - - 64.5
29,000	- - - - - 64.3
29,250	- - - - - 64.0
29,500	- - - - - 63.8
29,750	- - - - - 63.5
30,000	- - - - - 63.3

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Annex No 1 to FO 23 (contd)

5. Final Course Correction Table:

Error Measured at 11.00 N.M. S. R.	Final Correction $\frac{1}{2}$ N.W. at 8.00 N.M. S.R.
0	0
1	2
2	4
3	6
4	8
5	11
6	13
7	15
8	17
9	19
10	22
11	24
12	27
13	29
14	32
15	34
16	36
17	39

For all errors above 17° make 40° Final Correction.

By command of Brigadier General O'DONNELL:

OFFICIAL:

D. E. Farmer

FARMER
Wg Rader O.

BRUGGE
DC/S, O & T

SECRET

SECRET

ANNEX NO 2 TO FO 23, 73D BOMBING

CRUISE CONTROL

1. Fuel Requirements:

Est Fuel Req (No Wind)	6400 gals
Residual	200 gals
Reserve (Formation and Endurance) / 1000	1170 gals
Total Aboard	7800 gals 7730

2. Loading:

a. Fuel:
Wing tanks 5540 gals
Bombay tanks 1280 gals
Center Wing ~~910~~ 980 gals

Total 7800 gals
7730

b. Ammunition: ⁴⁰⁰⁰ 2600 rds .50 cal
~~120~~ 75 rds 20 MM

c. Bombs: 20 at 350# ea - 30 420# - 7210 #
~~7000#~~

d. Approximate Gross Weight at T.O. 137000 #

3. Cruise Plan:

a. Lead A/C - Route Out:

- (1) Cruise at low altitude at five miles per hour less than maximum range speed until climb point is reached.
- (2) Climb to 1000 ft above bombing altitude with power setting at 41" MP - 2350 RPM.
- (3) Maintain 195 CAS during time at altitude.

b. Lead A/C - Route Back:

- (1) Descend at very slow rate of descent (50 - 75 ft/min) at maximum range speed to altitude with most advantageous winds. Remain at this altitude until within range of home base where a 200 ft/min descent at maximum range speed can be made.

By command of Brigadier General O'DONNELL:

BRUGGE
DC/S, O & T

OFFICIAL: *J. Gibson*

GIBSON
Wg Staff Engr
SECRET
(-1-)

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ANNEX 3 TO F.O. #23. 73BW

COMMUNICATIONS

1. Radio Frequencies:

a. Liaison AN/ART 13

1. 3145	73BW Ground Station	(CW)
2. 7310	73BW Ground Station	(CW)
3. 11160	73BW Ground Station	(CW)
4. 4475	Primary Dumbo Lifeguard	(Voice and CW)
5. 4420	Secondary Dumbo Lifeguard	(Voice and CW)
6. 4595	AACS Ground Station	(CW)
7. 8200	AACS Ground Station	(CW)
8. 4495	Saipan Tower (Emergency only)	(Voice)
9. 7362.5	30th Bomb Group Primary	(CW)
10. 7590	30th Bomb Group Secondary	(CW)
LOW-500	Int'l Distress (CW) guarded by all stations 15-18 min and 45-48 min after the hour. Guarded continuously by Lifeguard during strike.	(CW)

b. VHF Command:

Channel A - Bomber to Fighter
Channel B - Bomber to Bomber
Channel C - Tower, Dumbo and Lifeguard
Channel D - Homing.

c. SCR 274-N:

4495kc
6500kc
TOWER

2. Radio Call Signs and Call Words:

V531 - 497th Bomb Group
V532 - 498th Bomb Group
V533 - 499th Bomb Group
V534 - 500th Bomb Group
00V530 - 73rd Bomb Wing Ground Station
00V550 - 30th Bomb Group Ground Station (Emer. Alternate)

3. Codes, Ciphers, and Recognition:

a. Air-Ground - CSP 1270 (CY)
b. Authentication - Voice and CW - CSP 1270 (CY)
c. Recognition signals:
(1) SP 02440 - Key List
02442 - Recognition signals, surface Vessels
02443 - Recognition signals, Submarines
02312 - Air-Sea Recognition Procedure.

S E C R E T

4. Contact and Strike Reports:

- a. Contact Reports - No contact Report will be made by radio.
- b. Strike Reports - SOP Communications XXI Bomber Command Dtd 15 November 1944.

5. Radio Aids to Navigation:

- a. Extracts of NATAPOA covering Saipan, Tinian and Guam.
- b. Radio Buoys: on 1700kc coded "K" at 18-28N 145-10E, on 1400kc coded "M" at 19-41N 144-26E, and on 1550kc coded "Y" at 20-54N 144-45E.

6. Tower:

- a. Assignment of Primary tower frequencies:

GROUP	PRIMARY	1ST ALT.	2ND ALT.
497th	Channel C (VHF)	4495kc	any other
498th	4495kc	6500kc	any other
499th	6500kc	Channel C (VHF)	any other
500th	Channel C (VHF)	4495kc	any other

- b. Squadron leaders will tower for Take-off instructions in regular manner as for an individual airplane. No other airplane will call on take off.
- c. Use assigned frequencies for requesting landing instructions on return to base.

7. Rescue Procedure and Facilities:

- a. See Inclosure 1 to Annex 3 to FO# 23.

8. IFF:

- a. Turn on at take off. Turn off when 300 miles out from base.
- b. Turn on again when leaving enemy coastline on route home from target. Leave on until landing at home base.
- c. On return route Radar Operator will check IFF ever 15 min from point 150 miles out to home base.

9. Distress Procedure:

- a. SOP Communications XXI Bomber Command dtd 15 November 1944

S E C R E T

- b. Lost and Distress Procedures: Airplane Commander, Nav.
Radio and Radar Operator.

By Command of Brigadier General O'DONNELL:

BYRON E. BRUGGE
Colonel, Air Corps
Dep C/S Op. and Eng.

OFFICIAL:

(A)
EDWIN L. HOTCHKISS
Lt. Colonel, Air Corps
Communication Officer

S E C R E T

Effective 281800Z

INCLOSURE 1 TO ANNEX 3 FO #23 73 BW

AIR-SEA RESCUE

- (This supersedes all previous information on this subject)
1. See Lost and Distress Procedure, A/C Commander, Navigator, Radio and Radar Operator.

(Until 1800GCT 29 Nov. 44)

<u>TYPE</u>	<u>STATION</u>	<u>REFERENCE PT.</u>	<u>CODE NAME</u> <u>REF. PT.</u>	<u>CALL</u>
Sub	35-00N 141-12E	Suno Saki Light	Dingle Dangle	Dingle Dangle
Sub	33-00N 141-45E	Hachijo Shima	Reat Pleat	Reat Pleat
Sub	25-00N 144-10E	Iwo Jima	Leg Lifter	Leg Lifter
Dest	21-00N 144-25E	Iwo Jima	Leg Lifter	Sensation (CW 1JW)

(Until 1800GCT 30 Nov. 44)

<u>TYPE</u>	<u>STATION</u>	<u>REFERENCE PT.</u>	<u>CODE NAME</u> <u>REF. PT.</u>	<u>CALL</u>
Sub	35-00N 141-12E	Suno Saki Light	Full Holster	Full Holster
Sub	33-00N 141-45E	Hachijo Shima	Polluted	Polluted
Sub	25-00N 144-10E	Iwo Jima	Silk Quilt	Silk Quilt
Dest	21-00N 144-25E	Iwo Jima	Silk Quilt	Sensation (CW 1JW)

(Ref. Pt. Code names and calls may be carried in A/C)
(COORDINATES NOT TO BE MARKED ON MAPS OR CARRIED IN A/C)

- a. If possible do not ditch within a seven (7) miles radius of Inubio Saki 35-43N 140-52E. Enemy mine field prohibited friendly subs from penetrating this area.

2. Radio Frequencies Guarded:

- a. Submarine - 4475kc; 500kc; and 140.58mc.
b. Destroyer - 4475kc; 500kc; and 140.58mc and Strike.

By Command of Brigadier General O'DONNELL:

OFFICIAL:

Hotchkiss
EDWIN L. HOTCHKISS
Lt. Colonel, Air Corps
Communications Officer.

BYRON E. BRUGGE
Colonel, Air Corps
Dep C/S Op and Tng

S E C R E T

ANNEX NO 4 TO FO 23 73D BOMB WING

RADAR COUNTER MEASURES

1. Each Gp will equip one (1) A/C with search receivers and will provide one (1) Radar Observer (7888) to operate the equipment.
2. The spectrum from 40 to 6000 Mc will be monitored. Over or near (30 miles) enemy territory particular attention will be paid to the 100 to 300 Mc and 1000 to 6000 Mc bands. Where equipment is available the characteristic of possible AA or GCI radar will be studied.
3. Any reports of possible radar controlled AA fire will be correlated with radar signal intercepted.

By command of Brigadier General O'DONNELL:

BRUGGE
DC/S, O & T

OFFICIAL:

JOHNSON
WG Radar Obsr

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ANNEX NO 5 TO FO 23 73D BOMB WING

FORMATION SIGNALS

1. At Point (34° 00'N - 141° 39'E) each flight leader will signal his wing A/C as to whether or not his radar is functioning properly. This signal will be made with the Aldis Lamp in the following manner:

- a. Flash "R" with Green Disk - - Radar Effective
- b. Flash "R" with Red Disk - - - Radar Ineffective
- c. Each wing A/C will acknowledge with the status of it's radar using the same system.

2. At any time during the route out that the leaders radar becomes ineffective he will signal this to a wing A/C which will immediately assume the lead.

By command of Brigadier General O'DONNELL:

BRUCCE
DC/S, O & T

OFFICIAL:

Wilkinson
WILKINSON
Asst A-3

S E C R E T

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SECRET

HEADQUARTERS XXI BOMBER COMMAND
Office of the Commanding General
APO 234, c/o Postmaster
San Francisco, California

24 December 1944

SUBJECT: Resume of Air Sea Rescue, Brooklyn No. 1

1. The following rescue facilities were available during Brooklyn No. 1 Mission.

- a. Three lifeguard submarines, assigned by Comsubpac and under operational control of CTC 17.7, guarded the rescue frequencies 4475K, 500K and 140.58MC during the entire flight at the following positions.

35-00N 141-25E
33-00N 141-45E
25-00N 144-10E

- b. A rescue destroyer was on station at 21-00N 144-25E during the entire mission guarding the rescue frequencies. A second destroyer was standing by in Tanapag Harbor.

- c. No dummy aircraft were available during this mission.

- d. PBW and PB2Y aircraft were available in Saipan for search. PB2Y aircraft and patrol boats were available for inshore rescue work on take-off and before landing. All facilities except submarines were under command of Commander Forward Area, Central Pacific.

2. Aircraft No. 218 was lost. No visual contact or radio signal was received from this plane at any time after take-off. Detailed interrogation of crews and search of radio logs was made without yielding any evidence regarding the lost plane. Under the circumstances no organized search could be conducted.

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