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Report date: 23 July 1943

Title: Report of Allied Force Airborne Board in connection with the invasion of Sicily

Author: Allied Force Headquarters NATO Airborne Board

Abstract: This report was for review by the Allied Force Airborne Board of the airborne operations conducted in connection with the invasion of Sicily. Include information on Operation Husky. Maps are included.

Number of pages: 75 p.

Notes: From the MCoE HQ Donovan Research Library, Fort Benning, GA. Documents collection. Call #: D769.2 .A2.

Note: pages 17-20 are missing as of 26 March 1990.

Classification: Unclassified; Approved for public release

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Report of allied force Airborne
Board - Sicily.

RECORD OF CIRCULATION

DATE	INDIVIDUAL TO WHOM ISSUED	INITIALS OF INDIVIDUAL TO WHOM ISSUED (FOR RECORD)
30 Nov 43	Col Dalbey	
3 Dec 43	Lt Chrystall	
17 Dec 43	Lt Col Barker	gao
20 Dec 43	Col Smith	ms
29 Dec 43	Lt Col McKee	
15 Jan 44	Col R. Shepherd	MS
17 Jan 44	Col Brundt	ms
1 Feb 44	Lt Col Kachner	MC
2 Feb 44	Major Honeycutt	ACH
7 Feb 44	Major Blades	fr

DECLASSIFIED
DOD DIR 5200. 9

~~SECRET~~
HEADQUARTERS
ARMY GROUND FORCES
ARMY WAR COLLEGE
WASHINGTON, D. C.

~~SECRET~~
AUTH: CG, *[Signature]*
INITIALS: *[Signature]*
DATE: 23 NOV 1943

32

24 NOV 1943

319.1 (NATO)(S)(24 NOV 1943) GNGCT

SUBJECT: Report of Allied Force Airborne Board in Connection with
Invasion of Sicily.

TO: Commanding General, Airborne Command, Camp Mackall, N. C.

For your information only.

By command of LT. GEN. McNAIR:

[Signature]
J. R. DRYDEN,
Lt. Col., A.G.D.,
Asst. Ground Adj. Gen.

1 Incl.
Rpt - subj as above.

~~SECRET~~
~~DOMESTIC~~



~~SECRET~~

DECLASSIFIED
DOD DIR 5200. 9

AUTH: CG
INITIALS: *[Signature]*
DATE: 23 NOV 1943

DECLASSIFIED.
DOD DIR 5200.9

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DOD DIR 5200.9



S2 NOV 1943

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ALLIED FORCE HEADQUARTERS
APO 512

AG 370-1(Airborne)GCT-AGM

13 October 1943

SUBJECT: Report of Allied Force Airborne Board.

10-792

TO : Secretary of the Navy,
Washington 25, D.C.

Inclosed herewith for your information is a copy of the approved proceedings of a board of officers convened at this headquarters for the purpose of reviewing airborne operations conducted in connection with the invasion of SICILY.

For the Commander-in-Chief:

T. J. DAVIS,
Brigadier General, USA,
Adjutant General.

1 Incl.
Rpt. - Subject as above.

18 OCT 1943

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(Pages 17-20 noted as missing,
26 March 1990 *ET*)

P.O. By No.
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COMINCH FILE

UNITED STATES FLEET
HEADQUARTERS OF THE COMMANDER IN CHIEF
NAVY DEPARTMENT, WASHINGTON, D. C.

23 October 1943

MEMORANDUM

From: F-48
To: Secret Mail Room
Subject: Distribution of Allied Force Headquarters Report
of Allied Force Airborne Board in connection with
the invasion of Sicily.

1. Please have subject report distributed as follows:

CominCh	
(F-105; F-48(2); F-30; F-46)	5
VOpNav	
(Op-35(2))	2
Naval War College	1
General Board	1
CinCPac	1
CinCLant	1
ComAirPac	1
ComAirLant	1
ComdtMarCorps	1
Chief of Staff, U.S. Army	3
Commanding General, U.S. Army Air Forces	1
Comdt Army and Navy Staff College	1
Comdt Command and General Staff School, Fort Leavenworth, Kansas	1
Comdt Marine Corps Schools, Marine Barracks Quantico, Virginia	1

with
A. D. CLARK.

① 28370.2

(13. Oct. 43)

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DOD DIR 5200.9

[REDACTED]

PROCEEDING OF

BOARD OF OFFICERS

CONSIDERING

AIRFRAME OPERATIONS

[REDACTED]
(Equals which most cases)

DOWNGRADED AT 3 YEAR INTERVALS:
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

DECLASSIFIED
DOD DIR 5200.9

DECLASSIFIED
DOD DIR 5200.9

PROCEEDINGS OF A BOARD OF OFFICERS CONVENED PURSUANT TO THE FOLLOWING ORDER:

ALLIED FORCE HEADQUARTERS

G-3 SECTION

23 July, 1943

MEMORANDUM FOR: Brigadier General Craig
Brigadier General Crane
Rear Admiral Philip Vian (co-active Naval Member)
Colonel Ross

1. By direction of the C-in-C, you are appointed as a Board of Officers to review recent airborne operations in this theater, and recommend such changes or improvements in the tactics and technique of such operations (including coordination with other services) as may be indicated. Your inquiry should be directed toward discovering the factors which lessened the effectiveness of operations and toward finding the remedy, such matters as:

- Selection of objectives.
- Selection of routes.
- Navigation.
- Weather.
- (Coordination with Naval, ground, and other air operations.)
- Identification to other services.
- Timing of the operation.
- Command during the various phases.

2. In its proceedings the Board will avail itself of all available expert opinion, from all services affected.

3. The record of the proceedings of the Board will include the draft of a Training Memorandum covering its recommendations and will be submitted to G-3 AF Hq not later than 31 July.

LWR/hls

s/ LOWELL W. ROOKS,
t/ LOWELL W. ROOKS,
Major General, U.S.C.,
Assistant Chief of Staff, G-3.

The Board met at AFHQ pursuant to the above order at 1430 hours, 24 July, 1943.

Present: Brigadier General H. A. Craig, A C
Brigadier General W. C. Crane, USA
Colonel Fay Ross, Infantry
Absent: Rear Admiral Philip Vian, R N

Other conferees present:

Air Chief Marshall A. Tedder, C-in-C, Mediterranean Air
Major General F.A.M. Browning, Commander Airborne Forces
Fifteenth Army Group.
Major General L. W. Rooks, G-3, AFHQ
Brigadier General R. A. Dunn, AG, CO, 51st Troop Carrier

DECLASSIFIED
DOD DIR 5200.9

Brigadier General D. J. R. Richards, 25th AA Brigade
Captain G. Barnard, R.N., Hq C in C, Mediterranean
Colonel S. J. Davis, AC, 51st Troop Carrier Wing.
Colonel R. R. Hendrix, CAC, 2626 CA Brigade (AA)/
Colonel H. L. Clark, AC, 52d Troop Carrier Wing.
Colonel H. L. Lewis, Inf., 82d Airborne Division.
Lieut. Colonel J.W. Oberdorf, AC Hq Troop Carrier Comd., NAAF.
Lieut. Colonel D.R. Petty, AC, 52d Troop Carrier Wing.
Lieut. Colonel W.T. Ryder, Inf., AGF Observer (Airborne).
Lieut. Colonel C.D. Farr, AC, 82d Airborne Division.
Lieut. Colonel H.O. Wright, G (Airborne) Hq 15th Army Group.
Lieut. Colonel A.G. Walsh, Hq Airborne Force.

Subsequent meetings of the board were as follows:

At 1000 hours, 25 July, 1943:

Present: Rear Admiral Sir Philip Vian, KBE, DSO, Royal Navy
Brigadier General H. A. Craig
Brigadier General W. C. Crane
Colonel Fay Ross

Other conferees present:

Brigadier General R. A. Dunn
Colonel W. T. Gardiner, AC, A-2, 51st Troop Carrier Wing.
Lieut. Commander J.B.E. Wainwright, RN, Staff Officer (Ops).

At 1130 hours, 25 July, 1943:

Present: Rear Admiral Sir Philip Vian
Brigadier General H. A. Craig
Brigadier General W. C. Crane
Colonel Fay Ross

Other conferees present:

Rear Admiral S. S. Lewis, USN, Chief of Staff

At 1500 hours, 25 July, 1943:

Present: Brigadier General H. A. Craig
Brigadier General W. C. Crane
Colonel Fay Ross
Absent: Rear Admiral Vian

Other conferees present:

Comdr George Dufek, Staff Air Officer, COMNAV
Brigadier General R. A. Dunn
Colonel W. T. Gardiner

At 1100 hours, 27 July, 1943:

Present: Brigadier General H. A. Craig
Brigadier General W. C. Crane
Rear Admiral Philip Vian
Colonel Fay Ross

At 1100 hours, 29 July, 1943:

Present: Brigadier General H. A. Craig
Brigadier General W. C. Crane
Rear Admiral Philip Vian
Colonel Fay Ross

[REDACTED]

At 1000 hours, 30 July, 1943:

Present: Brigadier General H. A. Craig
Brigadier General W. C. Crane
Rear Admiral Philip Vian
Colonel Fay Koss

At 1000 hours, 31 July, 1943:

Present: Brigadier General H. A. Craig
Brigadier General W. C. Crane
Rear Admiral Philip Vian
Colonel Fay Koss

2. PROCEDURE AND LIST OF DOCUMENTS CONSIDERED.

The procedure followed by the board in conducting the investigation and reaching its conclusions was as follows:

a. Round table discussions, using the points enumerated in the order convening the board as the agenda.

b. Study of the following described reports and other documents:

Chart showing data on friendly AA fire off southeast coast of Sicily. (Inclosure No. 1)

Tabulation of data to accompany above chart. (Inclosure No. 2)

Chart showing data on friendly AA fire off southwest coast of Sicily. (Inclosure No. 3)

Letter Hq. NAAF Troop Carrier Command, 13 July, 1943, with 1st Ind. Hq. NAAF, 20 July 1943, and 2d Ind. Hq. Air Command. (Inclosure No. 4).

Letter Hq. NAAF Troop Carrier Command 15 July, 1943. (Inclosure No. 5).

Report of Husky Airborne Operations submitted by Major General F. A. M. Browning, Airborne Adviser to C-in-C, Allied Force. (Inclosure No. 6)

Notes on Husky Airborne Operations by Chief of Combined Operations, with comment thereon by C-in-C Mediterranean (Inclosure No. 7).

Letter C-in-C Mediterranean, to C-in-C Allied Force, 23 July, 1943 (Inclosure No. 8).

Notes on routing of troop carriers during Husky Operations by C-in-C Mediterranean, 24 July, 1943. (Inclosure No. 9).

c. Study of stenographic record of conferences.

3. DESCRIPTION OF OPERATIONS.

Husky airborne operations were as follows:

a. In the first US operation one parachute combat team was dropped on the road approaches to the CEIA area on night 9-10 July, with the mission

of blocking enemy attempts to reinforce the GELA sector. Because of errors in navigation, a contributory cause of which was a high wind (35MPH), the dropping zones were missed by all but one battalion. This battalion, however, captured its objective, and held it against counterattack. Morale effect was considerable, and losses slight. 220 aircraft were employed, of which 8 were lost. None was lost as result of friendly AA fire. See report of General Browning (Inclosure No. 6) for details.

b. In the second US operation approximately 2500 additional troops of the 82d Airborne Division were flown into the GELA area on the night of 10-11 July. The mission was merely one of reinforcement, the intention being to drop parachute troops within our own lines. This force, consisting of 170 aircraft, was subjected to AA fire from enemy ground forces and friendly naval and ground forces, with losses of 23 aircraft and 410 personnel. 50% of returned aircraft were damaged. This flight arrived in the battle area just following an enemy bombing attack. The operation achieved its intention. See report of General Browning (Inclosure No. 6), report of General Williams (Inclosure No. 4) and chart (Inclosure No. 3) for details.

c. The first British use of airborne troops was a glider operation on the night of 9-10 July. This involved a brigade group (equivalent of 1 US combat team) which was to be landed west of SYRACUSE with the mission of seizing the river crossing in that vicinity and capture the Western outskirts of the city. 134 gliders were used. As result of errors in navigation due in part to a high wind (35MPH) only approximately 12 gliders were landed on or near the objective, and approximately 47 were released too soon and went into the sea. Others were so badly scattered that they were able to operate only in small groups. See report of General Browning (Inclosure No. 6) for details.

d. The second British operation on the night 13-14 July had as its mission the capture of the bridge across the SARUALLA RIVER seven miles south of CATANIA. 124 aircraft transporting a parachute brigade (equivalent of 1 US regiment) were employed. 17 of the aircraft towed gliders. 56 aircraft dropped their troops on or near the dropping zones, 24 made drops which were widely scattered, 27 returned to their base without dropping their troops. 10 aircraft were lost, principally due to friendly antiaircraft fire. The route of the airborne troops was over a friendly naval convoy which was under attack by enemy aircraft at the time. 40% of returning aircraft were damaged by antiaircraft fire. Mission was accomplished. See report of General Browning (Inclosure No. 6), report of General Williams (Inclosure No. 5), chart (Inclosure No. 1) and tabulation (Inclosure No. 2) for details.

e. Summary of aircraft employed and losses (approximate):

	Sorties	Missing	Out of commission as result of AA fire
Troop Carriers	666	42	118
Glider	134	47 (a)	

(a) Landed in sea. Of the remaining 87 landed in SE Sicily on casualties is not yet available.

4. CONCLUSIONS

After careful consideration of the discussions and available any evidence the board reaches the following conclusions:

a. That the principal factors contributing to the destruction of troop carrying aircraft by friendly antiaircraft fire were as follows:

(1) Delay by military commanders in reaching executive decision to employ airborne troops resulted in time being insufficient to:

(a) Communicate necessary information to minor war vessels, merchant ships and ground forces.

(b) Allow necessary adjustment to routing of surface vessels.

(2) Lack of uniformity in fitting of downward recognition lights to all types of aircraft employed led to hesitation in allowing their employment in all cases. (Operation described in 3d.).

(3) Flying at such low altitudes as to become vulnerable to all types of antiaircraft fire. (All missions).

(4) Low altitude of flights in combination with vicinity of high land, rendered R.D.F. (radio direction finder), and therefore I.F.F. (identification friend or foe), equipment, largely inoperative. (All missions).

(5) Straying from prescribed routes, due to weather, navigational difficulties, and proximity of friendly fire (Operation described in 3 b. and 3 d.).

(6) Troop carriers flying over friendly naval and ground forces during enemy bombing attacks. (Operation described in 3 b. and 3 d.).

(7) The unexpected late sailing of Convoy M.E.S. 37 from SYRACUSE resulted in convoy and escort paralleling the flight path of the airborne force proceeding via MALTA to CATANIA area. (Operation described in 3 d.).

(8) The loss of gliders on the night of July 9th - 10th was caused by the inexperience of the pilots in the operational conditions prevailing at the time.

The conditions met were darkness, high wind, flak.

The standard of navigation of the pilots was not adequate to meet these conditions. Craft were unable to keep their routes, gliders were released too far from land, and in some cases gliders broke adrift as a result of maneuvers by the tugs to turn away from distant flak.

No evidence has been available to show by whom the decision was taken to launch gliders in the prevailing wind.

b. That straying of troop carrier aircraft from prescribed sea routes is probable at night unless some system of marking the route is employed.

c. That special training of troop carrier crews is required in preparation for each specific operation.

d. That the standard of training of troop carrier crews should be the same as other operational combat crews.

e. That specially trained "pathfinder" aircraft should precede the airborne flights to the dropping zone and drop marking lights for the guidance of troop carriers and gliders.

f. That departure from prescribed routes to avoid AA fire or other causes, is dangerous, and likely to lead to fire from friendly or ground forces.

g. That for overwater operations a zone approximately 5 miles on either side of the route should be established, and surface vessels kept clear of this zone so far as operationally practicable.

h. That it must be recognized that naval forces must and will fire without warning at night at approaching aircraft unless aircraft are identified as friendly; that under the foregoing conditions the onus of identification lies with the aircraft. This does not preclude the necessity for issuing timely warning to naval forces.

i. That routes for the approach to dropping zone should be as nearly a straight line as the situation will permit.

j. That aircraft crews must recognize the fact that Recognition Cartridges (or Very Lights), if fired by aircraft after AA fire has been opened on them, may not be distinguishable to the ground or naval forces.

k. That downward recognition lights (belly lights) should be fitted to all troop carrier aircraft employed in an operation.

l. That ground force commanders must realize the importance of making an early executive decision on use of airborne troops.

m. That wherever possible vessels should be employed to mark troop carrier aircraft routes at night.

n. That there was a lack of a well understood, uniform definition of the responsibilities of the several authorities concerned in all stage of airborne operations and of command in the various stages.

o. That armored and armed combat type troop carrier aircraft should be provided at earliest practicable date.

5. RECOMMENDATION:

The board recommends publication of the attached draft Training Memorandum, subject Employment of Airborne Forces, to all ground, naval and air forces of the Allied Force. (See Inclosure No. 10).

H. A. CRAIG
Brigadier General, AC

W. C. CRANE
Brigadier General, USA

PHILIP VIAN, MBE, DSO
Rear Admiral,
Royal Navy

FAY ROSS
Colonel, Infantry

ALLIED FORCE HEADQUARTERS
AFPO 512

31 July 1943

Approved.

By command of General EISENHOWER:

/s/ W. B. Smith
W. B. Smith
Major General, U.S. Army
Chief of Staff

A TRUE COPY

Fay Ross
FAY ROSS
Col, G. S. C.

GROUND INSTALLATIONS OPERATING
1-3 MI. S. AND W. OF TARGET:
13 LIGHT A.A. OR M/G POSITIONS
1 S/L (?)

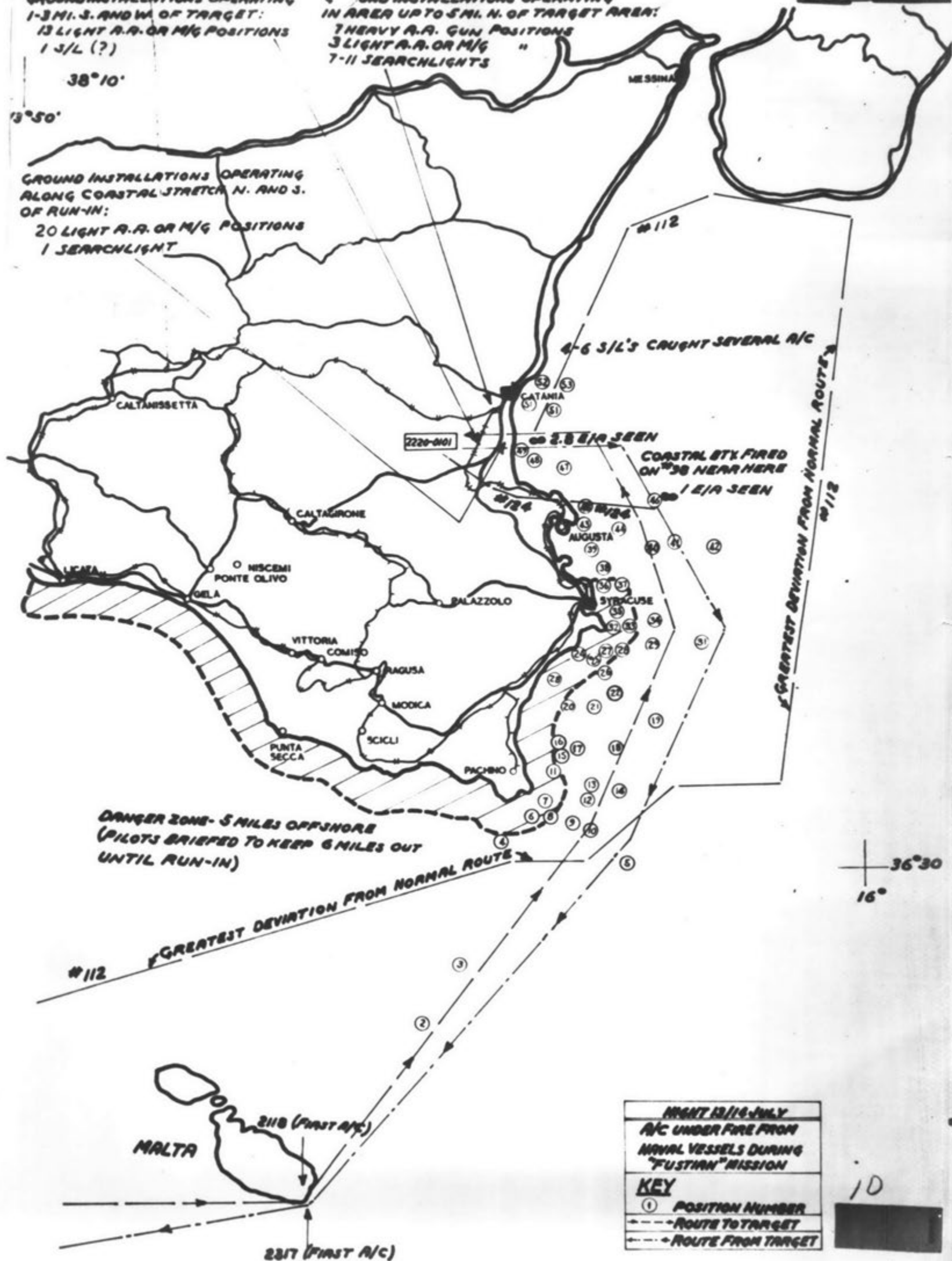
38°10'

3°50'

GROUND INSTALLATIONS OPERATING
ALONG COASTAL STRETCH N. AND S.
OF RUN-IN:
20 LIGHT A.A. OR M/G POSITIONS
1 SEARCHLIGHT

GROUND INSTALLATIONS OPERATING
IN AREA UP TO 5 MI. N. OF TARGET AREA:
7 HEAVY A.A. GUN POSITIONS
3 LIGHT A.A. OR M/G " "
7-11 SEARCHLIGHTS

NOT SCALE



4-6 S/L'S CAUGHT SEVERAL A/C

2220-0101

COASTAL STX FIRED ON "38 NEAR HERE
1 E/A SEEN

GREATEST DEVIATION FROM NORMAL ROUTE

DANGER ZONE - 5 MILES OFFSHORE
(PILOTS BRIEFED TO KEEP 5 MILES OUT
UNTIL RUN-IN)

GREATEST DEVIATION FROM NORMAL ROUTE

36°30'
16°

MALTA
2318 (FIRST A/C)
2317 (FIRST A/C)

WENT 13/14 JULY
A/C UNDER FIRE FROM
NAVAL VESSELS DURING
"FUSTIAN" MISSION
KEY
① POSITION NUMBER
--- ROUTE TO TARGET
--- ROUTE FROM TARGET

10

HEADQUARTERS FIFTY FIRST TROOP CARRIER WING
APO 760

20 July, 1943

REFERENCE LIST TO ACCOMPANY MAP SHOWING A/C UNDER FIRE
FROM NAVAL VESSELS DURING "FUSTIAN" MISSION

Position Number	Stick Number	Type of Flak	Altitude if Known	Time If Known
1	113	L	600'	2230
2	113	L	600'	2240
	113-A	L	600'	2240
3	113	L	1000'	2243
	117	L	600'	2320
4	112	L	600'	2245
	117	L		
	89	L		
5	37	H Int. & Acc.		2150
6	38	M/G -50-Cal		2245
	39	M/G -50-Cal		2245
7	25	L-up to 2000		2135
	26	L-Inacc.		2135
	23	L-Inacc.		2120 ?
	22	L & H-Inacc.		2120 ?
8	64	L-Acc.	500'	2200
	70	L	6000'	2335
	90	L Int. & Acc.	500'	2235
	4	H Int. & Acc.	500'	2120 ?
	5	L Int. & Acc.	500'	2130
	6	L Int. & Acc.	500'	2130
	7	L Int. & Acc.	500'	2137
	9	L Int. & Acc.	500'	2130
	12	L Int. & Acc.	500'	2135
	13	L Int. & Acc.	500'	2145
	36	L Int. & Acc.	500'	2205
	31	H-Int.	500'	2140

REFERENCE LIST TO ACCOMPANY MAP SHOWING A/C UNDER FIRE
FROM NAVAL VESSELS DURING "FUSTIAN" MISSION
CONT'D

Position Number	Stick Number	Type of Flak	Altitude If Known	Time If Known
8 cont'd	29	L	5000'	2320
	56	L	500'	2210
9	32	L-Int.	400'	2150
	34	L-Int.	500'	2155
	26	L	600'	2140
	29	L-Inacc.	500'	2220
	31	L-Int.	500'	2200
	42	L	6000'	2315
10	124	L	1500'	0025
11	12		500'	2140
	10	H	500'	2130
12	108	L-Acc.	500'	2250
	111	L-Acc.	600'	2255
	112	L-Acc.	600'	2255
13	63	L	500'	2345
	100	L	500'	2245 ?
	101	L	500'	2245 ?
	91	(Shot Down)		
	4	L&H-Acc.	200'	2125
	6	L&H-Acc.	200'	2125
	12	L&H-Acc.	400'	2145
	13	L&H-Acc.	300'	2150
	52	L&H-Acc.	500'	2205
14	94	H-Int.	500'	2250
	96	H-Int.	500'	2250
	97	H-Int.	500'	2252
	100	H-Int.	500'	2253
15	36	L		2208
	9	L	500'	2145
16	33	L	500'	2210
17	7	L	500'	2142

REFERENCE LIST TO ACCOMPANY MAP SHOWING A/C UNDER FIRE
FROM NAVAL VESSELS DURING "FUSTIAN" MISSION
CONT'D

Position Number	Stick Number	Type Flak	Altitude If Known	Time If Known
17 cont'd	8	L	500'	2142
	9	L	500'	2145
18	3	L-Int.	500'	2135
	62	L-Acc.	600'	2210
	65	L-Acc.	500'	2212
19	36	H-Inacc.	200'	2210
	52	H-Inacc.	300'	2210
	112	H-Inacc.	600'	2300
20	119	L	1000'	0055
21	1	L	500'	2130
	2	L	500'	2130
	14	L	500'	2150
22	9	L-Acc.	500'	2151
	12	L-Inacc.	500'	2148
23	3	L-Acc.	500'	2134
	5	L-Acc.	500'	2134
24	10	L-Inacc. (nearby)	500'	2140
25	7	L-Acc.	600'	2150
26	9	L-Acc.	500'	2147
	12	L-Acc.	500'	2150
27	25	L	500'	2140
28	10	L-Int.	500'	2143
	11	L-Int.	500'	2143
29	9	L Acc. & Int.	500'	2155
30	1	L (nearby)	500'	2134
	14	L	500'	2154
31	18	L (nearby)	6000'	2238
32	49	L Probably from land	500'	2215
33	12	L	500'	2153

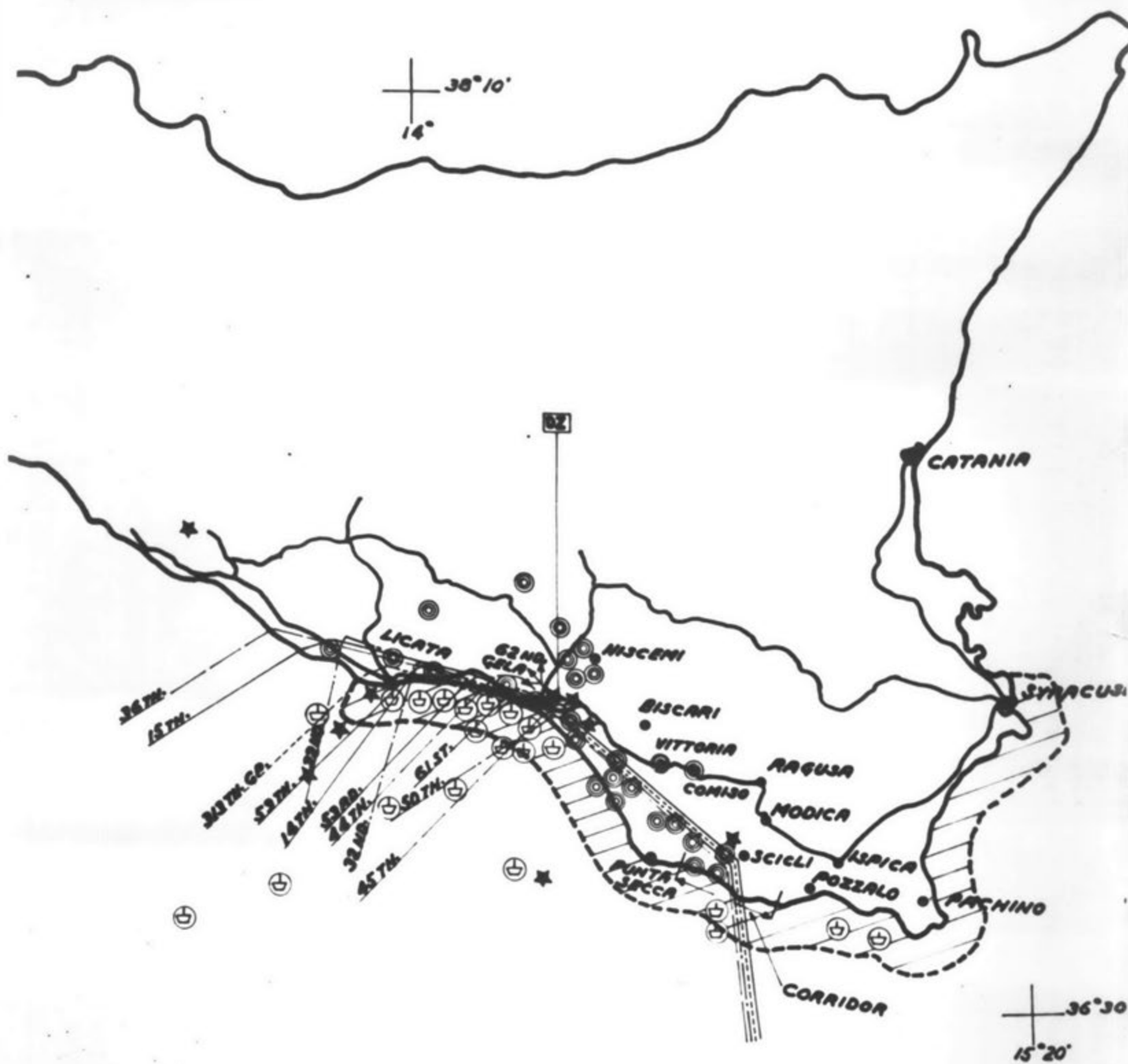
REFERENCE LIST TO ACCOMPANY MAP SHOWING A/C UNDER FIRE
FROM NAVAL VESSELS DURING "FUSTIAN" MISSION
CONT'D

Position Number	Stick Number	Type of Flak	Altitude If Known	Time If Known
	53	L	500'	2215
34	105	H	700'	2305
	111	H	1000'	2310
	113	H	1000'	2310
35	126	L-Int.	1400'	0035
	95	L	500'	2200
36	27	L-Inacc.	500'	2235
	29	L-Inacc.	500'	2235
37	17	L	500'	2150
38	7	L	500'	2155
39	7	L	600'	2157
	100	L	600'	0035
40	110	L	500'	2310
	113	L	500'	2315
	116	L	500'	0045
41	122	L	4500'	0140
	78	L-Int.	500'	2250
	98	L-Int.	700'	2305
42	68		500'	2220
43	124	L	1000'	0043
44	102	L	500'	2245
	103	L	500'	2245
45	10	H-Int.	150'	2205
	11	H-Int.	150'	2205
	92	L	1000'	2305
46	102	L	800'	2247
	103	L	500'	2247
47	68	L	500'	2230
48	1	L	500'	2200
	2	L	500'	2200

REFERENCE LIST TO ACCOMPANY MAP SHOWING A/C UNDER FIRE
FROM NAVAL VESSELS DURING "FUSTIAN" MISSION
CONT'D

Position Number	Stick Number	Type of Flak	Altitude If Known	Time If Known
49	69	L	500'	2235
	109	L&H-Int.	1500'	2325
	110	L&H-Int.	1500'	2325
	117	L&H-Int.	700'	0110
	120	L&H-Int.	600'	0105
50	57	L	500'	2250
51	113	L	500'	2320
	117	L & H	700'	0115
	124	L	800'	0100
52	117	L&H-Int.	900'	0120
53	1	L	500'	2205

TOP SECRET



LEGEND

- ⊙ GROUND FIRE ENCOUNTERED
- ⊕ NAVAL FIRE ENCOUNTERED
- ★ DEFINITE T.C. CRASHES
- ▨ BEACH AND ANTI-AIRCRAFT DEFENSE DANGER ZONE

HUSKY-2

11/12 JULY 1943

EUROPE AIR CHARTS

1:250,000

52ND T.C. WING A-2 SECTION

15 JULY 1943

KEY

- 316TH T.C. GP.
- - - 314TH T.C. GP.
- · · 313TH T.C. GP.
- 61ST T.C. GP.

3

Subject : Follow-up Lift 82nd Airborne Division.

To : Commanding General, Force 343.

1. After the initial assault by a combat team of the 82nd Airborne Division on night D-1/D, two or more combat teams will be flown into HORRIFIED on subsequent nights.

2. In order to speed up and simplify the procedure in launching these lifts, the following arrangements, in respect to code words and timings will obtain, AOC, NATAF has concurred in these arrangements.

Combat Team	Code Word	Night	Aircraft	Route	Time
No. 2	MACKALL	D/D / 1 or later nite as ordered	150 (Approx- imate)	HONGKONG- thence to lane thru shipping to landfall coast of HONGKONG.	First Aircraft landfall on coast of HONGKONG 2230B; last aircraft Approxi- mate 2310B.
No. 3	BRACO	D / 1/D / 2 or later night as ordered	150 (Approx- imate)	"	"
No. 4	ABERDEEN	D / 2/D / 3 or later night as ordered	"	"	"
No. 5	PINEHURST	D / 3/D / 4 or later night as ordered	"	"	"

3. The Commanding General, Force 343, will decide by 1730 P each day whether or not an airborne team is to be flown in to HORRIFIED. If the flight is to be made, the approximate code word followed by "TONIGHT" will be wirelessly direct to 82nd Airborne Division Base Airfield (52nd Troop Carrier Command Wing) to reach there not later than 1800B. If the combat team is not to be launched, the code word will be sent as early as possible followed by "NEGATIVE".

4. The message will in all cases be repeated by Tac and Main Hq, Force 141, and to the troop Carrier Command.

s/ A. S. LEVING,
General,
Commander-in-Chief.

Hq Force 141,
Copies to: Tac Hq, Force 141, Airborne Adviser Force 141 (2),
82nd Airborne Division, NATAF, Troop Carrier Command, 343 Hq, COLIN.

HEADQUARTERS
52nd TROOP CARRIER WING AAF
APO 650 US Army

MAEKALL
D plus 1
or D plus 2

Corrected Copy Annex IV Air Movement Table for 504th CT TO Accompany Husky FO #1

SERIAL NO	A/C UNIT	A/B UNIT	A/C REQUIRED	DEPART AIRPORTS	TIME OVER DEP POINT	DZ	TIME OVER DZ	REMARKS
6#	313th TCG	A/B Unit 1st Bn 504	37	N & O	20:35 B	S	22:43 B	Be prepared to take-off 1830 D day. Information regarding times, Routes, and DZ's, will be furnished as soon as possible.
7#	61st TCG	2nd Bn 504	37	M & K	20:45 B	S	22:55 B	" " "
8#	314th TCG	Reg CT HQ 504 Btry A 376 FA 12 Btry B 376 FA 12 32	8	J & L	20:55 B	S	23:05 B	" " "
9#	316th TCG	Hq Btry Btry C 376 Co C 307 A/B Eng Btry D 376 FA 8 35	6 12 9 8 35	G G	21:05 B	S	23:15 B	" " "

NOTE: Last eight (8) planes indicated under serial number 9 will be loaded and flown if aircraft are available. If aircraft are available the Wing they will be assigned to 316th Group for this serial.

OFFICIAL: LOEL L. CROUCH, A-3.

H. L. CLARK, CO

Hq 82d A/B Div.
APO # 469
291400B June 1943

Plan for Ct 504 (less 3d Bn)

I CT 504 (less 3d Bn)

To move by air and drop on HORMIFIED as stated below:

- a. Commander: Colonel R. M. Tucker 504th Parachute Inf.
- b. Troops: 504th Parachute Inf (less 3d Bn)
376th Parachute FA Bn
Co G 397th A/B Engr Bn

II 1. Plan RED

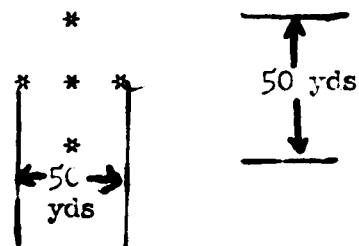
To drop on DZs of CT 505 prepared for ground action as ordered.

CT 505 will mark DXs as follow:

- a. Provide radars and operators for two DZs.
- b. Display visual signals day or night as indicated:

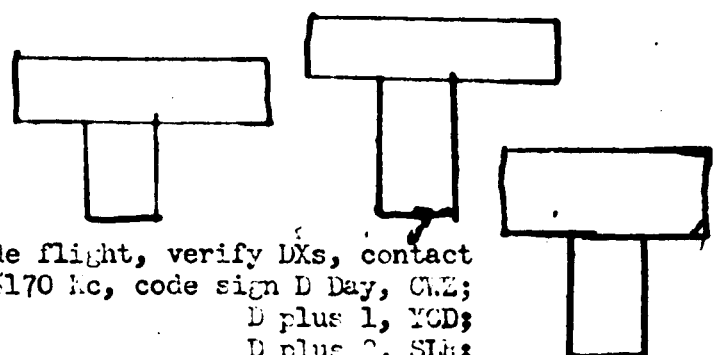
At time of drop or upon approach of transports red lights will be displayed thus:

Day and Night



A vee of panels (AP50) thus:

Day only.



- c. One command plane will recede flight, verify DXs, contact CT 505 by radio (Frequency 5170 kc, code sign D Day, CUE; D plus 1, YCD; D plus 2, SLR; D plus 3, RSH; D plus 4, CHU; D plus 5, OCF;

direct TC squadron to DZs.

- d. CT 505 will notify 1st Inf Div of time and place of drop.
- e. 52nd Troop Carrier Wing will notify HAF of time and place of drop.

2. Plan WHITE

To drop on DZs in the vicinity of HORMIFIED and be prepared for ground action as ordered.

CT 505 will mark DXs in the same manner as described in Plan RED.

3. Plan BLUE

Tod rop on DZs near FIBULA and be prepared for ground action as ordered.

Prcht Lnd with 3d Inf Div will be responsible for marking DZs as described in plan RED.

4. Plan GREEN

To mover Serials 11 - 14 inclusive, Division Hq Forward Echelon and 1st. Bn CT 325 Glider Inf, by glider to land in the vicinity of FATELLO prepared for ground action as ordered.

CT 505 will mark two or more landing fields as described in Plan RED.

CT 505 will prepare landing fields by removal of obstacles, including mines, cutting down trees, etc., using prisoner labor, if available.

5. Plan PURPLE

Dependent upon gliders or planes available, to move Serials 15-26 inclusive, consisting of:

	<u>Glider Loads</u>	<u>Plane Loads</u>
Btry A 3 19th Glider FA Bn (less det)	16	
LST Plat Co A 307th A/B Engr Bn	4	
H & S Co 325th Glider Inf	27	
Regtl Med Det 325th Glider Inf	2	
2nd Bn 325th Glider Inf	64	
Btry B 319th Glider FA Bn (less 3 glider loads)	13	
319th Glider FA Bn (less Det)		47
320th Glider FA Bn		50
307th A/B Med Co (less Adv Det)		20
Co A 307th A/B Engr Bn		9
82d A/B Div Rear Echelon (less Base Echelon)		15
80th A/B AA Bn		73

Prepared to go by glider to land on airfield or landing strip.

6. Plan BROWN

2d Bn 509th Prcht Inf (39 plane loads) to be prepared to take off four hours after return of planes from previous lifts.

MEMORANDUM:

This document has just been received, and is issued to you at this time for cursory examination only, in order that you may determine whether you wish to make a more detailed study of the document. Other sections have an interest in this document, and should have the same early opportunity for cursory examination. Your cooperation in prompt return of the document to G-2, for further circulation, will be appreciated.

It will assist the G-2 Section in issuing the document to you at a later date if you will call for it by the "G-2 No." shown on the face of the document.

1 ^{copy} ^{HAS} copies of this item ~~have~~ been received and ^{is} ~~are~~ in circulation.

31 Jul 43 - rr

MDL
G-2

HEADQUARTERS 82nd AIRBORNE DIVISION
A. P. O. 469, U. S. Army

30 June, 1943

SUBJECT: Red, White, Blue, Green, Purple and Brown Messages.

TO : Chief of Staff.

1. Recommend the following prearranged code between
General Ridgway and General Taylor:

<u>Meaning</u>	<u>Message</u>
Put* _____ plan into effect at:	
1. D Day	1. Wear* _____ Pyjamas
2. D Plus 1	2. Carry* _____ Hat
3. D Plus 2	3. Break* _____ bottle
4. D Plus 3	4. Open* _____ Knife
5. D Plus 4	5. Close* _____ Door
6. D Plus 5	6. Eat* _____ Apples
7. D Plus 6	7. Print* _____ Letters
8. D Plus 7	8. Your* _____ Eyes
9. D Plus 8	9. Dirty* _____ Shirt
10. D Plus 9	10. Drink* _____ Wine
11. D Plus 10	11. Milk* _____ Cows
12. D Plus 11	12. Scramble* _____ Eggs
13. D Plus 12	13. Tie* _____ Knot
14. D Plus 13	14. Pick* _____ Cherries
15. D Plus 14	15. Kiss* _____ Lips
16. D Plus 15	16. Watch* _____ light

* Insert one of the following colors: Red, White
Blue, Green, Purple or Brown.

R. K. FOYD,
Lt. Col. G. S. C.
AC of S, G-3

CG
EIGHTY SECOND A/B DIV

MACKALL TONIGHT WEAR WHITE FIJAMAS WILLIAM HOW TW SEVEN FIVE
TWO SEVEN DARK FRIENDLY ACKNOWLEDGE FOR TAYLOR FROM RIDGWAY

118830

Recd 1030

[REDACTED]

TO: Commanding General II Corps
" " 43rd Inf. Div.
" " 1st Inf. Div.
" " 2nd Armored Div.
" " 3rd Inf. Div.

Your will warn your command that on each of the nights of D/D plus 1 to D plus 6, all inclusive, they are to expect flights of friendly troops carrying TE transport planes, C-47 type, approaching coast vicinity SAMPIERI following northwesterly courses, generally two to four miles inland at altitude below 1000 feet, leaving coast in vicinity Licata. Flights will pass between 2230 and 2400 hours approximately. Length of flight approximately forty minutes. Flights will drop parachutists of release gliders. Advise respective Naval Commanders.

COPY

This message sent by CG, AF, to all ground units.
Copy was furnished me by Gen. Swing.

/s/ H. L. CLARK
Commanding.

[REDACTED]

HEADQUARTERS
82ND TROOP CARRIER WING, AAF
APO 650, U.S. Army

12 July 1943

FROM: 0800, 11 July 1943

TO : 0800, 12 July 1943

NOTE: Due to the circumstances under which this report is rendered report will consist only of a mission report for HUSKY No. 2 for which this wing was ordered 11 July 1943.

1. Groups: 61st, 313th, 314th, 316th.
2. Squadrons: All committed.
3. Mission Identification: HUSKY No. 2 -- 144 Airplanes (C-47 and C-53).
4. Period Covered by Report: 1900, 11 July 1943 -- 0300, 12 July 1943.
5. Route Followed: As designated: From rendezvous over KURIAE ISLANDS, thence to Southern tip of MALTA, thence to prescribed corridor at Southern tip of SICILY, thence Northwest to designated DZ. Route varied in many instances due to fire from presumably friendly naval and ground forces compelling airplanes to turn inland in many instances after entering corridor and to fly Northwest of DZ for many miles before leaving SICILY for home.
6. Weather and Visibility: Generally good, according to varied reports from Groups. Scattered stratus clouds from MALTA to SICILY. Haze over SICILY and light scattered clouds over DZ area. Wing navigator who flew mission reports weather generally as forecast as to winds and visibility.
7. Air Contact with Enemy: Three Groups report none. 313th Group reports one enemy night fighter seen over land. Also reports surmise that naval vessels off-shore were being bombed from high altitude. This report may be important. If true, it may partially explain firing on our airplanes by our own naval craft. Three pilots this Group report enemy a/c firing on naval vessels and strafing beach positions. However, a/c have not definitely identified at this hour.
8. Air Contact with Friendly Aircraft: Three groups report none, with exception of C-47 and C-53 type. 61st Group reports seeing one P-40 vicinity MALTA on return flight.
9. Air Contact with Unidentified Aircraft: Many unidentified airplanes are reported off-shore. Also some airplanes unidentified at DZ area. 61st Group reports 1 a/c attacked at DZ by twin-engine fighter. 4 light bombers with blue light on wing tip seen near lake. One unidentified pursuit leaving DZ. One single tail twin engine a/c near MALTA. 1 a/c seen to crash near ODICA.
10. Contact with Enemy Naval Craft: All groups report none.
11. Contact with Friendly Naval Craft: Many naval and merchant vessels, presumably friendly, off GELA, off LECOSA, off KURIAE ISLANDS, off SICILY. Heavy naval fire on our airplanes reported by all groups at varying locations. One group reports naval fire on our airplanes at MALTA (313th). Two pilots report firing stopped when pyrotechnics

were displayed. Other report naval fire continued, regardless of recognition signals.

12. Contact with Unidentified Naval Craft: Five small craft in formation heading for MALTA. Seven freighters heading to sea from SOUSSE. Six freighters off I.L. OSA. Two battleships between MALTA and SICILY -- Vessels not definitely identified. Generally, all reports indicate heavy AA fire from practically all vessels encountered.
13. Contact with Enemy Ground Installations: Fire from AA (both light and heavy), fire from shore batteries, fire from machine guns along entire corridor route reported by all elements. Extremely heavy fire from GELA and LICATA areas from presumably friendly troops. Two groups (313th and 61st) report firing on parachutists at DZ area from ground forces below.
14. Signal Communications: Radio silence maintained by all Groups with exception of emergency Air Sea Rescue procedure. NAUTICAL beacon contacted. Beacons at MALTA and FAITHELIERA weak. All pyrotechnics expended by majority of a/c. In many instances naval vessels did not challenge and did not recognize signals. Recognition signals ignored by ground forces.
15. Casualties: Casualties were great with many airplane crews seriously wounded and many dead from crashes. At this hour it is too early to definitely determine total casualties. However, with 25 a/c missing it is safe to assume that casualties were extremely heavy. Known dead at this hour total 20. Known wounded at this hour total 10.
16. Equipment Lost or Damaged: 25 a/c are reported missing at this hour, many of which were seen to crash by our airplane crews. 61st Group reports one a/c known to have been shot down by naval convoy, 3 a/c believed to have crashed after having been fired upon. In addition to 25 missing, Wing A-3 reports 37 additional a/c rendered non-operational by ground and naval action.
17. Difficulties Encountered: 61st Group report difficulty in locating DZ due to machine guns fire at this point which killed and wounded paratroopers. Generally, all group elements reached designated DZ on schedule despite heavy AA fire along route and despite poor ground visibility due to haze and smoke. Could not hold straight course due to ground fire. 313th Group reports: "On what information indicated was friendly territory was found to be more dangerous than what information indicated as hostile territory."
18. Was Briefing Adequate? All Groups agree that information as to route to DZ and return was correct. All Groups agree that Intelligence as to enemy installations was correct. However, all Groups agree that clearance that flight over SICILY as friendly territory was definitely incorrect.
19. Was Mission Successful? From point of view of transportation of troops and Airborne operations tactics to a designated area the mission was successful. For example, 313th Group reports dropping all paratroopers carried at or near DZ, with exception of two men. (One paratrooper ill, the other hysterical). 314th reports dropping all paratroopers with exception of three loads which were returned to home base due to AA fire, and inability to reach DZ area after 3 passes. It is not known at this hour if all a/c missing dropped their loads. 314th Group reports incomplete at this hour with 6 a/c missing. 61st Group dropped majority of paratroopers at designated DZ, despite heavy

ground fire.

Conclusions: The mission was successful so far as dropping equipment and personnel was concerned. It was disastrous so far as losses to this Wing are concerned.

20. Miscellaneous: Missing a/c and crews at this hour are as follows:

61st T. C. Group.....4
313th T. C. Group.....3
314th T. C. Group.....4
316th T. C. Group.....12

TOTAL.....23

Appropriate conclusion to this report is expressed in words of F/O Anderson and Lt. Harpster, pilot and co-pilot of a/c No. 505, 45th T. C. Squadron, 316th T. C. Group:

"Something should be done about friendly naval craft firing on us. On the whole, the mission was extremely dangerous and costly whereas it had no reason to be. Evidently, the safest place for us tonight while over SICILY would have been over enemy territory".

For the Commanding Officer:

HAROLD P. DISJON, JR.,
Captain, Air Corps,
A-2

Addenda: Report just received: 316th T. C. Group reports 39 Officers and 24 Enlisted Men missing in action as a result of MOSBY Mission No. 2

[REDACTED]
HEADQUARTERS
52nd TROOP CARRIER WING, AAF
A.F.O. 760, U. S. Army

12 July, 1943.

SUBJECT: Operational Report.

TO : Commanding General, AAF Troop Carrier Command
(Prov), AFO 760, U. S. Army.

1. 61st Troop Carrier Group:
 - a. 38
 - b. 0
 - c. 37
 - d. 1 - crashed and burned in flak, 3 - missing unknown.
 - e. 99%
 - f. Believed all ships missing or lost due to friendly fire.
2. 313th Troop Carrier Group:
 - a. 38
 - b. 0
 - c. 38
 - d. 1 - gun fire, 2 - unknown.
 - e. 95%
 - f. Heavy and intense flak from friendly forces.
3. 314th Troop Carrier Group:
 - a. 33
 - b. 2 - overcast over drop zone.
 - c. 29
 - d. 4 - reasons unknown.
 - e. From paratroopers standpoint 90% efficient - From Air Corps standpoint due damage 35% efficient.
 - f. Majority of firing from territory supposedly in friendly hands.
4. 316th Troop Carrier Group:
 - a. 35
 - b. 4 unable to reach DE
 - c. 19
 - d. 12 - AA fire.
 - e. 50%
 - f. Poor liaison between Air, Ground and Naval Forces.

By order of Colonel CLARK:

- *a. # A/C participating in mission)
- b. # A/C not reaching destination)
- c. # A/C returned, after mission)
- d. # A/C missing.
- e. Percentage of efficiency of mission)
- f. Reason for failure to complete mission.)

S/ WILLIAM F. NAVRAN,

WILLIAM F. NAVRAN,
1st. Lt., Air Corps,
Adjutant

[REDACTED]

HEADQUARTERS
NAAF Troop Carrier Command (Prov),
A. P. O. 760, U.S. Army

F-1-ecb

15 July 1943

SUBJECT: Operation FUSTIAN (Subsequent Mission 51st Troop Carrier Wing and 1st British Airborne Division).

TO : Commander in Chief, Allied Force Headquarters,
THRU: Commanding General, Northwest African Air Forces.

1. The second assault mission in connection with HUSKY Plan for occupation HORRIFIED was performed on night of July 13-14, or D plus 3, by subject units.

2. Originally, plans showing routes, altitudes and schedules to be used were submitted for approval and for information to Ground and Naval forces to effect coordination. These plans were approved but exact routes could not be prescribed at Conference at 141, 22 June 1943. However, tentative routing from "Malta to the East of Cape Passero, thence North to Dropping Zones" was established at conference. One 12 July 1943, message was received from Hq. 15th Army Group establishing the following route for FUSTIAN, quote "Aircraft Routing for Operation FUSTIAN as follows - South of HOBGOBLIN as before. Five miles east of Cape Passero, five miles east of Cape Surro di Porco. Five miles east of Cape St. Croce. Thence to Dropping Zone. Return route as previously arranged", end quote.

3. a. Message received from competent authority states that in order to expedite airborne movement, the "Seventh Army will address to 82nd U.S. Airborne Division and Troop Carrier Command. Eight Army will address to 1st British Airborne Division and Troop Carrier Command. Both Armies will repeat message to C. in C., Mediterranean Air Command."
- b. At approximately 2:35 p.m. July 13th, 1943, message was received by 51st Troop Carrier Wing from 1st British Airborne Division that the mission FUSTIAN would be performed. In accordance with instructions, it was assumed that the proper coordination had been arranged and Naval and Ground units notified as to routes, altitudes and time that Troop Carrier Aircraft would be in their area.
- c. In response to message, this headquarters, requesting information as to operational restrictions, we were advised as follows by 15th Army Group, quote "No report no operational restriction for FUSTIAN operation anticipated definite decision will be made if any operational instruction necessary early 13 July," end quote.

Troop Carrier representative at Malta reports that the Navy was contacted by General Browning's office when decision was made to the Affirmative, and were given exact courses, timing, altitude and approximate number of aircraft involved. A check was made with the Navy Operations to see that this information was sent to all Naval and Shipping craft.

It was also reported from Malta Control Room that excellent Navigation to and from the target through corridors designated was displayed by aircraft crews. Message received from Malta Operations, quote "Lt. Simpkins, Pilot, slightly injured, Lt. Mason, Co-pilot, killed, other personnel injured, damage resulted from flak from convoy about fifteen miles north-east of Island near Cape Passero. Damage to plane flown by Major Nowotny who landed with Simpkins at Cozo was damaged by same convoy." Many reports indicate same story as above.

[REDACTED]

Hq. NAAFTCC, Subject: Operation FUSTIAN, dated 15 July 1943, Cont'd.

There is no question but that the Allied Navies in water on our routes fired upon and destroyed Troop Carrier aircraft. This is not in form of accusation but a further effort to assist in effecting coordination.

4. MISSION:-

- a. The mission "FUSTIAN" as set up and put into effect on D plus 3 day (13th July 1943) was carried through with the following comments and effects.
- b. The purpose of the mission was to attack and hold strategic positions on the Island of Sicily in the vicinity of Catania.
- c. The force involved consisted of one hundred and five Troop Carrier aircraft, twenty three Albermarles (RAF) aircraft and eight Halifax (RAF) aircraft, the latter two types towing eleven Horsa and eight Wacco gliders. The land forces involved were made up of the 1st Airborne Division (British). There were one thousand nine hundred and forty seven officers and men of this organization involved.
- d. At the scheduled time of take off, approximately 1900 hours, one hundred and twenty-nine of the scheduled one hundred and thirty five aircraft became airborne and proceeded on the assigned mission. Of the one hundred and twenty nine, twenty-six aircraft returned early due to engine trouble and intense flak both off-shore and over the Dropping Zone. Pilots reported flak from the time they left Malta to time of return.

5. Losses Suffered in Personnel and Aircraft:-

- a. Estimate forty-four (44) officers and men missing.
- b. Ten (10) casualties and two (2) deaths were verified from return ships.
- c. Estimate 1300 paratroopers dropped on "Dropping Zone." Two hundred (200) missing and four hundred thirty seven (437) returned to base with aircraft.
- d. Total of eleven (11) ships missing, of which four (4) are RAF. One ship confirmed destroyed, 40% of aircraft out of commission.

6. Report of 51st Troop Carrier Wing, which is attached and made a part hereof, indicates the following:-

- a. Attack upon our aircraft by friendly Naval forces, after assurance our entry corridors were approved and all concerned notified.
- b. Obviously there existed a definite lack of coordination between Air and Sea units.
- c. Mission successful as paratroop operation, costly due to friendly Naval action.
- d. Enemy fire inaccurate, Allied Naval fire very accurate and concentrated. We need their cooperation.

7. Recommendations:-

- a. That a more rapid means of control be established for dispatching emergency air missions. Complicated procedure now

Hq. NAAFTCC, Subject: Operation FUSTIAN, dated 15 July 1943, cont'd.

exists and involves going through too many commands.

- b. That Naval and Ground units be instructed not to fire on aircraft unless proven hostile when there is a possibility that Troop Carrier aircraft are in vicinity.
- c. That definite entry and exit corridors route be established to avoid necessity of coordinating each individual emergency resupply mission between our forces.

8. Our losses in aircraft by friendly and enemy action have been large, but both missions wherein we have been fired upon by friendly forces have been highly successful. This contribution to the effort justifies any losses we have sustained; it is the responsibility of all to avoid unnecessary losses due to lack of coordination. The future development and progress of airborne employment depends on coordination of land, sea and air forces. Every effort must be made to profit by this bitter experience and provide adequate dissemination of information as rapidly as possible.

s/ Paul L. Williams
t/ PAUL L. WILLIAMS
Brigadier General, USA
Commanding.

[REDACTED]

HEADQUARTERS FIFTY FIRST TROOP CARRIER WING
A.P.O. 760

14 July 1943

SUBJECT: Report of "FUSTRIAN" mission.

TO : Commanding General, NAAF Troop Carrier Command (Prov).

1. Groups: 60th, 62nd and 38th RAF Wing.
2. Squadrons: All committed.
3. Mission Identification: Fustian - 135 a/c (108 C-47's, 23 Albatrosses, 7 Halifaxes, 11 Corsairs, 8 Wacos).
4. Period covered by report: 1900, 13 July - 1600, 14 July.
5. Route Followed: As designated from rendezvous over Kuriate Islands, to Delimare Point, and thence 40° for 68 miles, thence 26° for 32 miles, thence 348° for 16 miles, thence 326° for 14 miles, thence 273° for 13 miles to the DZ area. A left turn and a course of 93° for 23 miles, thence returning slightly to east and south of route out. Numerous variations from this route were made in the general target area, in attempt to take evasive action from anti-aircraft fire.
6. Weather: CAVU. A sample report was: "Wind WNW 14 m.p.h. from Malta out. 90° wind, 8 m.p.h. from Malta in." A few reports mention slight haze in DZ area.
7. Air contact with enemy: Only one of our a/c reports having two enemy fighters on his tail going into DZ area.
8. Air contact with friendly aircraft: None.
9. Air contact with unidentified aircraft: Above 70% of our a/c report that they experienced anti-aircraft fire from naval vessels directed at or near them. This action took place in some cases as much as ten miles off shore, especially off Cape Passero and in the Cape Murro di Porco area. One a/c reports being fired at 3 miles E of Syracuse. Stick #8 reports seeing one a/c crash into sea near Calabernardo and three a/c crash into sea just south of the Simeto River mouth, apparently from anti-aircraft fire from friendly ships nearby. One a/c reports that at this point the colors of the day were fired, but that the barrage continued. A few others report that fire from the naval vessels ceased at this signal. A large convoy was sighted directly below at 2340 between Linosa and Malta, flying balloons at 1000' according to the Halifax making report.
10. Contact with unidentified naval craft: Several ships of the 60th Group observed a boat firing on them from the mouth of river Simeto. It was not determined whether or not this vessel was friendly.

~~SECRET~~

Ltr. Hq. 51st TC Wg, Subj.: Report of FUSTIAN Mission, cond't.

11. Contact with enemy ground installations:

- a. A number of a/c report a barrage of light AA fire along beaches south of Catania, and probably machine gun fire to the north and south of Simeto River mouth.
- b. In the area of the DZ's, 50 cal. machine gun fire was reported S. of DZ #4 and S.W. of DZ #1, and intense light flak well to the north of the DZ area.
- c. The consensus is that from 3-6 searchlights were operating along the coast S. of Catania. One or more a/c were caught in these lights, but escaped them after making landfall. One searchlight, variously reported as being slightly south and slightly north of DZ #4, caused considerable trouble and obliged several of our a/c to take evasive action.

12. Signal communications: There have been no criticisms thus far of communications discipline or of facilities provided for navigation.

13. Casualties: 60th Group: 5 casualties (one, Capt. McCormack, serious, 1 killed, Mason W., 2nd Lt.)
62nd Group: 3 casualties
38th Wing : 2 casualties.

14. Equipment lost or damaged: At the present writing 13 of our a/c are still missing: 8 C-47's of the 60th Gp., 1 C-47 of the 62nd Gp., and 3 Albermarles and 1 Halifax of the 38th Wing.

15. Difficulties encountered: Above any other difficulties encountered was that the following the prescribed course in the face of constant anti-aircraft or machine gun fire along the route and the approached to the DZ area. The evasive action of our a/c not only made it difficult for them to locate the DZ's, but also injured some parachutists, thus preventing jumps.

16. Was briefing adequate: Individual reports from pilots not yet received by A-2 section, Wing Headquarters.

17. Was mission successful? From the point of view of the transportation of airborne troops, the mission can be counted about 75% successful, but was disastrous so far as losses to this Wing are concerned. In spite of the difficulties encountered, preliminary reports indicate that 62 aircraft dropped their parachutists or released their gliders at the appointed location, and 17 more within 1/2 mile. (Report of sticks dropped by planes down at Malta not received at time of this report).

18. Missing personnel: We must assume, for the present, that the crews of the 14 aircraft still missing are also lost.

For the Commanding General:

OWEN C. BIRTWISTLE,
Lt. Col. Air Corps,
Chief of Staff.

[REDACTED]

Report on Airborne Operations.

'H U S K Y'

Between nights 9/10th July, 43 and 16/17th July, 43.

1. Plans.

(a) I (Br) Airborne Division.

Three operations were planned.

(i) Night 9/10th July (D-I/D) - Glider Operation.

Force - 1 Airlanding Bde (Two Bns. A/Tk guns, R.E. & Medical)

Aircraft - 137.

Gliders - 10 Horsas
127 Wacos.

Objectives- 1st. - Bridges over canal (127293) and ry (115294) SOUTH of SYRACUSE.
2nd. - Western outskirts of SYRACUSE.
Exploitation into the town if little opposition.

Timings. Gliders to be released between 2210 hrs and 2230 hrs 3,000 yds out to sea at height of 1,900 ft (Wacos) and 4,000 ft (Horsas).
Landing Zones - WEST of PENISOLA DELLA MADDALENA for Wacos and in fields near canal bridge for Horsas.

Routing. Via S.E. corner of MALTA - CAP PASSARO (S.E. corner of SICILY) - thence along EAST coast keeping 3,000 yds out to sea to landing Zones. Aircraft to return same route.

RESULT.

Weather Conditions.

There was a half moon at 230° from the Landing Zones. A high wind got up during the afternoon of the 9th July and at the time of casting off the gliders it was estimated as 30 m.p.h. This made conditions bumpy and should have only increased the difficulties of navigation to a limited extent but in fact caused considerable errors.

Pilots were briefed correctly on the strength of the wind so that allowance for drift should have been calculated.

The following figures are estimated from information collected up to date.

Take Off.

Aircraft - 134

Gliders - 134

Release and Landings/....

Release and Landings.

12 Gliders approximately in the correct landing zone.
75 Gliders somewhere in the S.E. part of the island.
The remainder landed in the sea.
There were no tug aircraft missing from this operation.
These figures are still subject to amendment.

Effective Force in action on Landing.

Only 8 Officers and 65 OR of different units reached the canal br during the night 9/10th July and held it till 1530 hrs, 10th July. At that time there were only four officers and 15 ORs unwounded and this force was closely surrounded by approximately a Battalion of the enemy supported by Field Artillery and mortars.

By 1530 hrs the small party had been forced to withdraw along the SOUTH bank of the canal almost to the edge of the sea. The enemy were in control of the br which he was in a position to blow if he had time and material available. This critical situation was relieved when patrols of the 17 Inf Bde, 5 Div arrived and drove the enemy NORTH of the br which was found to be intact.

The Airborne party took over the defense of the br again while the 17 Inf Bde advanced across it.

At 2100 hrs, 10th July, HQ 1 Airlanding Bde arrived at the br.

Glider loads of the Airlanding Bde which landed in the wrong Landing Zones attacked every Italian post found and contributed greatly to the general disorganisation of the beach defenses and reserves.

CONCLUSION.

The operation was a reasonable one and well planned. Its object was achieved i.e. the canal br was held intact and SYRACUSE was cleared by the 5 Div without trouble.

The route via MALTA and CAP PASSERO was straightforward and easy.

The high wind was not allowed for sufficiently either during navigation or for the height and distance from the coast gliders were cast off.

Although there was no flak within thousands of yards of the glider release point, there is no doubt that the inexperience of the pilots in flying near Flak induced them to cast off too soon and too far out to sea.

Judgement of distance out to sea from a coast line had not been practised sufficiently. A coast line appears to be almost underneath the aircraft when flying at 1,500 ft and 3,000 yds out to sea.

Navigation generally was bad. This is proved by the small number of gliders which landed even reasonably close to the Landing Zone.

With the present standard of navigation, it will be essential in the future to land small parties of troops, piloted by picked aircrews, before the main landing to put out lights or other aids.

The results achieved/....

The results achieved on this, our first glider landing, do not shake my confidence in the value of gliders for carrying airborne troops to the battlefield by night.

It is a matter of obtaining good aircraft, good experienced crews, and above all, of training.

CASUALTIES. (22 July)

29 Officers and 583 ORs are still missing, but this number is being reduced daily.

(i) Night 10th/11th July (D/D/1 - Parachute Operation.

This operation was planned to capture the br at 042498 and the high ground WEST of and overlooking AUGUSTA.

Owing to the disorganisation of the defense and the speed of 5 Div's advance this operation was cancelled during the afternoon of D/1/D/2/.

(iii) Night 13/14th July (D/3/D/4) - Parachute Operation.

The objective was the bridge over R. SIMETO and is the only crossing over this obstacle which controls the exits from the high ground into the CATANIA plain.

The only chance of preventing the blowing of the bridge was to launch an airborne force to surprise the defenders, seize it and hold it till the arrival of the leading troops of 13 Corps.

Force. - 1 Parachute Bde (less half a bn) and Gliderborne A, Tk guns, R.E. and Medical.

Aircraft. - 124

Gliders. - 11 Horsas
6 Wacos

Timings. - 2220 hrs - One Para Coy to drop close to bridge to overpower the immediate defence and remove the charges.
2240 hrs - 2328 hrs - Main body.
2353 hrs - Glider force.

Routing.

Owing to the shipping traffic and the A.A. defence zones around the beaches which extended 11,000 yds out to sea, the aircraft were routed ten miles clear of the SICILIAN EASTERN coast after leaving MALTA.

This made a correct landfall at the mouth of R. SIMETO difficult.

RESULT

The following is the summary of the take off and landings.

Take Off Parachute aircraft - 107
Tugs and Gliders - 17

Parachute dropping.

56 aircraft dropped their troops on or near the D.Z.'s.

27 returned to base without dropping owing to losing their way or Flak.

24 dropped their/....

24 dropped their troops in various places a long way from D.Z's.

Out of all parachute aircraft which took off ten are missing but five of the crews are safe.

Glider Landings. 13 Gliders were released successfully and landed except for 1 which crashed.
3 gliders damaged during take off.
1 landed in the sea off Sicilian coast.
1 tug aircraft is missing.

Effective Force in action on landing.

Approximately 200 Parachute troops and five A. Tk guns got into action against the br, captured it and removed the charges. The br was intact.

Throughout the following day 14 July the strength of the force grew as those of the Bde who had been dropped astray rejoined their units. The br and the high ground SOUTH of it was held throughout the day but owing to casualties and enemy pressure the Bde Comd ordered a withdrawal as soon as it was dark to the high ground to the SOUTH the loss of which would have prejudiced the advance of the 13 Corps. Early the next morning the 13 Corps reached the br which was still intact.

CONCLUSION.

1 Para Bde carried out the task it was given. The loss of this crossing over R. SILETO would have produced a serious delay in the EIGHTH ARMY'S advance.

The operation was not a satisfactory one from an airborne point of view as it entailed flying through Flak and dropping in or very near enemy defences.

It was well planned and, except for too many aircraft failing to reach the correct dropping zones, it was well carried out against considerable odds.

CASUALTIES.

18 Officers and 470 ORs are still missing (22nd July).

The number of missing is gradually being reduced as ships returning from SICILY come in.

(b) 82nd (U.S) Airborne Division.

One assault operation and a number of follow-up lifts were planned. The latter were to take place in the daylight with fighter escort.

The plan was received very late, it entailed a decision by the C-in-C as to the feasibility and value of carrying out the follow-up lifts and little or no warning of its scope had been received by Airborne Adviser.

(i) Night 9/10th July (D-1/D) - Parachute Operation.

Force. - R.C.T. of One para Regt plus one para bn, one Arty para bn and R.E. and Medical.

Aircraft. - 220 (all C47s)

Objectives/....

Objectives - The high ground and rd junctions six miles EAST of GELA.

This controls the exits of the beaches four miles to the SOUTH over which 1 (U.S.) Div was landing. It was a well chosen objective and a fitting task for airborne troops.

Timings. - The first aircraft was due to drop at 2330 hrs and the last at 0006 hrs.

Routing. - Via S.E. corner of MALTA, thence NORTH to coast of SICILY, then WEST along coast to lake two miles EAST of GELA, then due NORTH to dropping zones.

RESULT

The same weather conditions obtained as for the British operation.

Owing to bad navigation the R.C.T. were dropped very widely dispersed, but the objective was captured, counter-attacks which included tanks were successfully beaten off and the operation had a decisive effect on the successful landing and the advance inland of the seaborne forces. There is little doubt that the action of the American airborne troops speeded up the landing and advance inland by at least 48 hrs.

Losses. Aircraft - 8 missing.

(ii) Night 10/11th July (D/D+1) - Fly in of second lift.

Approximately 170 aircraft flew in a second R.C.T. by night.

In spite of early warning to the Navy and 7th Army, and a wide lane six miles wide being laid down by the Navy, twenty-three aircraft were lost mostly due to action of our own A/A.

(iii)

Day 16th July. (D+6)

The HQ personnel of R.C.T.'s were flown in successfully, escorted by fighters, in 51 aircraft.

2. CONCLUSIONS.

(a) Control and Staff.

It is not realised yet that the planning, staffwork and control during operations of airborne forces must be centralised to a very great extent. The experiences in HUSKY are quoted as a typical example and it has borne out views expressed repeatedly in the past.

(i) 1 (Br) Airborne Division was placed under command FIFTH ARMY and 82 (U.S.) Airborne Division under SEVENTH ARMY.

(ii) The allotment of aircraft and glider was decided by AFHQ, H.A.C., and 15th Army Group. The allocation of wings to Divisions and the detail of control and training was carried out by Troop Carrier Command under the direction of P.A.A.A.F.

(iii) The Divisional Commanders were given tasks and objectives after they had given expert airborne advice to Army Commanders as to what could and could not be done.

(iv) From then on detailed planning as far as direct co-operation between airborne and ground forces with or under them the former would be operating in landing was carried by Divisions.

(v) Apart from this planning of the battle on the ground, all information, photographic cover, aircraft routing which intimately concerns the Navy, Air Support, dropping of dummies, provision of stores and equipment, reconnaissance and setting up of training and airborne bases, was dealt with direct between Airborne Forces Adviser 15th Army Group, and 1 (Br) Airborne Division. This is the correct and most efficient procedure and worked well.

The 82 (U.S) Airborne Division, on the other hand, attempted to do everything through their 7th Army H.Q. The latter do not know what is required nor should they be bothered with the many details which are entirely airborne affairs.

(vi) It has been abundantly proved that, although Airborne Divisions may be used sub-allotted to formations, centralised planning and control of all airborne matters, apart from the detailed ground planning between formations with whom they will be working after landing, are an essential.

(vii) The responsibility for sanctioning the launching of an airborne operation rests with the Air C-in-C, or Senior Air Officer at Air H Q., controlling the air operations.

(b) Routing.

From the earliest stage of planning an operation which necessitates crossing the sea, a lane or lanes must be kept permanently clear of all shipping, and across beaches along which troop carrying aircraft can be routed. This applies more particularly to operations after D day when the sea traffic is less controlled than in the initial seaborne assault, and beach defences, both sea and land are fully organised.

A conservative estimate of our own troop carrier aircraft shot down by our own ships and beach defences is put at 25 aircraft i.e. over half of aircraft which are missing. The patrolling and lighting of these lanes by the Navy and our own beach parties are dealt with below under navigation.

(c) Navigation.

In spite of the clear weather, suitable moon, the existence of MALTA as a check point only 70 miles from SICILY and the latter very obvious and easily recognisable coast-line, the navigation by the troop carrier aircrews was bad.

In the first assault by 1 (Br) Airborne Division it is estimated, that only twenty-five per cent of the aircraft reached the correct point for glider release and a number of these released too far out to sea to enable the gliders to reach land.

The remaining 75 per cent released their gliders on a front of no less than 30 miles with the result that a few only of the force reached their objective.

In the parachute operation on night D+3/D+4 approximately 50% of aircraft dropped their sticks on or close to their correct Dropping Zones.

In the 82nd (U.S) Airborne Division assault the parachutists were dropped as far apart as 50 and 60 miles i.e. from NOTO to LICATA.

The troops comprising both British and American Airborne Divisions are of a very high quality and their training takes time and is expensive. They are given important tasks which may acutely affect the operations as a whole.

It is essential both from the operational and moral point of view that energetic steps be taken to improve greatly on the aircrews' performance up to date.

Intensive training in low flying navigation by night especially over coastlines, must be organised and carried out continuously. This must form part of the aircrews' training before they reach a theatre of war and the standard set must be very high.

Every aid which can be made available must be used to assist the aircrews to find the night landing or dropping zone owing to the present standard of navigation. The lanes across the sea should be patrolled by vessels especially detailed and trained, and lights on these vessels marking the lane must be used. In the initial assault and at the risk of sacrificing surprise, picked crews will have to be used to land small parties to put out homing devices and lights to guide the aircraft in. After the initial assault these parties and our own troops inland must be warned early of the routing of troop carrying aircraft.

It is emphasised that these lanes and routes must be laid down in the early stages of planning. The mistake made was being over-confident in the standard of training reached by the aircrews after two months intensive training.

(d) Follow-up operations and codewords.

The launching of an airborne operation entails the closest co-operation of Navy and Air Forces. Codewords will invariably be used. As an instance the follow-up assaults in Husky affected the following.

The Navy. - For routing over the sea. Although all ships had been previously warned of the routes to be flown it was necessary to ensure that every ship of many hundreds were warned that the flight would take place, giving time, route, height, and recognition signal.

Air Forces.- A.O.C. MALTA for night-fighters, anti-searchlight operations, routing past the S.E. corner of the island, warning to airfields to look out for damaged aircraft landing and Air Sea Rescue.

MAC - for agreement that the airborne operation could be launched, orders to Troop Carrier Command, Light Bombers, dummy dropping aircraft and Air Sea Rescue.

It is essential, for decision to be taken by the command ordering the operation as early as possible and certainly not later than 12 hours before the time the operation is due to start. It is emphasised again that the sanction of the Air Officer Commanding the Air Forces in the operation must be given before the airborne operation can be launched.

(e) Signals.

Two direct links must be established. One from the Army Commander ordering the operation to base airfield control and the other to airborne control at Army Group H.Q.

These links must have their own frequency and must not be used for any other purpose.

3. Parachute or Glider.

The advantage of glider-borne troops over parachute troops, wherever, it is possible to use the former, have been demonstrated. Troops carried by glider land in formed, even if small, bodies and can carry with them a more liberal supply of ammunition, transport and comparatively heavy weapons. They can land in most country that is suitable for parachute troops but their range may not be quite so great. Gliders can be released at a distance from their landing zones and thus the aircraft may not have to run the same risks of Flak that they might experience when carrying parachute troops; this is particularly important while our main troop-carrying and tug aircraft are the vulnerable C47s as at present. Gliders themselves, having been released in the

correct place, are difficult flak targets. On the other hand, it is almost certain that in future small advance parties will have to land ahead of the gliders to mark landing zones with small lights; this should normally be perfectly feasible and should not forfeit surprise unduly.

There is probably more risk of parachute troops being dropped in the wrong place than there is of gliders being released incorrectly.

4. Summary of aircraft losses and navigational accuracy.

It must be emphasised that the C47 (or DC3) aircraft, which forms the major part of the troop-carrying and tug aircraft available, was designed as the standard pre-war freight and passenger carrying A/C in America. It is a reasonably suitable aircraft for the moment, as regards load-carrying capacity and range, and it is extremely reliable and maneuverable.

It suffers, however, from the very serious disadvantages that it is unarmoured and unarmed and has not got self-sealing tanks. The latter disadvantage, besides making the aircraft very vulnerable, has a particularly demoralising effect on the pilots. It is of the greatest importance, if we are to continue using these aircraft in large numbers for airborne operations that self-sealing petrol tanks should be fitted urgently.

An armed and armoured aircraft capable of dropping parachutists and towing both the Horsa and Waco glider is an urgent operational requirement if the great future of airborne operations is to be realised.

The B24 (USA) is the type required and it is understood that production has reached a formidable figure.

- (a) Total aircraft used - 352
- (b) Total sorties flown - 666
- (c) Total missing - 42 (At least ten crews known to be safe up to the present time).
- (d) Percentage losses:
 - Total sorties - 7%
 - Total original number of aircraft - 11%
- (e) Air Chief Marshal Tedder's estimate of losses before the operation - 20% per operation.
- (f) Percentage of pilots who failed to drop their troops - 15% (Proved on D+3/D+4, 1 Para Bde operation).
- (g) Percentage of pilots who dropped their troops or cast their gliders over the wrong area owing to bad navigation. - 60%

5. Preliminary Bombing.

Great care must be taken to ensure that preliminary bombing, and nearby bombing actually during the airborne flight and landings, does not so light up the ground by explosions and fires that recognition of routes and landing or dropping areas becomes difficult. As an instance of this, a large fire near the lake east of GELA made the lake itself, an important landmark on the route, very difficult to see and many aircraft lost their way at this point.

6. Finally.

In spite of the fact that only 30 per cent of aircraft released their gliders or dropped their parachutists fairly accurately (a lesser percentage

really accurately) the airborne assaults were successful in achieving their object and carrying out the tasks given them by the Army Commanders.

Furthermore, the energetic and determined action taken by airborne troops who were dropped many miles from their objective caused widespread alarm, rumours and confusion among the enemy troops.

Commander, 7th Army estimates that his swift and successful landings followed by a rapid advance inland would not have been achieved at such a light cost or at such a speed without the action of his Airborne Division.

Commander, 8th Army has stated that the assaults of the two Bdes on the bridges SOUTH of SYRACUSE and CATANIA, coupled with the widespread confusion referred to above, accelerated his advance by no less than seven days.

It has been proved that the action of airborne troops, can have a decisive effect on the battle. This has been proved in spite of the very small number who were landed on their correct landing zones.

Specially trained crews and suitable aircraft are urgently needed if the Allies daily increasing air superiority is to be taken advantage of in all operations to come.

Many mistakes were made and many lessons learnt. It should be remembered, however, that these airborne operations at night, involving the simultaneous use of over 350 aircraft (plus gliders) and 5,000 troops, are the first large scale efforts of this type in the history of war to be made by any nation.

The operations started from airfields and airborne bases set up at short notice in the bare desert and involved an outward and return flight over the sea of about 400 miles each way.

In addition the time for training and organisation was very short. My conclusion is that these operations were probably the most difficult which will ever be carried out by airborne troops but they completely achieved their objectives and a corner of the veil over future possibilities has been lifted.

(SIGNED) F.A.M. BROWNING

Major - General
Airborne Forces Advisor.

24th July, 1943

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C.C.O.'s NOTES ON AIR ASPECT OF OPERATION HUSKY

Location of Air Commanders.

1. The Air c. in C. and Commanders of his main forces (Tactical, Strategical, Coastal and Troop Carrier) should be located so that the Commanders of the main forces or their deputies can attend the Air C. in C.'s daily meeting, with representatives from the Army and Navy C.'s in C.

Daily Joint Meetings and Air Meetings.

2. Although in HUSKY difficulties were experienced in getting the Army Intelligence properly analysed before 1000 daily, the Air Meeting had to be held as early as possible for orders to take effect in view of the time required for briefing crews and deciding bomb loads. In HUSKY it was, therefore, necessary to hold the Air Meeting before the Joint Meeting, which meant that the Air Meeting had to anticipate the requirements of the other services. In future every effort should be made to have the Joint Meeting first.

Airborne Troops.

3. No airborne operations should be undertaken or even planned without the prior concurrence of the Air Commander. Airborne operations are air operations until the drop or release is made. Questions of fighter protection, routing, height, time of despatch are air matters upon which the Air Commander must have the final say.
4. There should be a General Officer in charge of all airborne operations, who should work in close touch with the Tactical Air Force Commander.
5. The standard of navigation of transport aircraft pilots must be very high.
6. Transport pilots must have had some previous operational experience in order that they will not be confused by intense A.A. fire.
7. Clear and effective warning must be given to all ships and

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craft over which the transport aircraft are likely to fly.

8. Routing must be arranged so that aircraft avoid passing over large concentrations of ships and craft. In fact proper "safety lanes" must be allowed for as on D day of HUSKY to avoid aircraft being shot down by our own forces, as happened both in the U.S. and British sectors after D day, although detailed routing had been agreed with Naval and Army Commanders.

9. Airborne troops should only be used in their specified assault roles, they should not be used as ordinary military reinforcements, which should be fed in by sea.

10. In airborne operations aircraft must be given considerable latitude in conditions of approach, and other services should, within reasonable limits, give way to air considerations, especially when night operations are entailed.

Application of Air Effort and Bomb Line.

11. It is the Air Commander's responsibility to apportion air effort between Naval, Military and Air Targets. It is essential that he has almost hour to hour information on intentions of Navy and Army Commanders. In particular the Army must give a bomb line twice a day: without precise information on the bomb line, no air effort can be risked close to the area of land operations.

12. In operation HUSKY there was little difficulty on the Naval side, but there was considerable difficulty in obtaining an accurate picture of land operation, and of the intentions of the Army Commanders. For example, on the U.S. front only one report was received in 48 hours.

Air Supremacy.

13. During the first four days of HUSKY the number of allied sorties was more than ten times as great in the battle area as enemy sorties, and the proportion was steadily becoming greater. Further, our aircraft remained for much longer periods in the battle area, so that the chances of aircraft being friendly was 20 or 30 to 1. Nevertheless, both ashore and afloat

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in the U.S. and British sectors, rules were being broken and friendly aircraft, even when in formation above the agreed height, were shot at. We suffered more losses in aircraft shot down or damaged by our own fire than we suffered from enemy action.

14. It seems clear that special rules will be needed in future combined operations, depending on the degree of air superiority attained.

Offshore Air Defence Organisation.

15. The Offshore Air Defence Organisation, both day and night, was well set up and worked extremely well from the start, resulting in many successful interceptions, especially at night. In this respect the lessons of TORCH have been well learned.

Movement of Squadrons Forward.

16. The A.L.C. Organisation, R.A.F. Servicing Commandos and R.A.F. Beach Organisation worked well.

15th July, 1943.

C O P Y

Office of Commander-in-Chief,
Mediterranean,
MALTA.

23rd July, 1943.

COMMENTS ON NOTES BY CHIEF OF COMBINED OPERATIONS
ON AIR ASPECT OF OPERATION HUSKY.

1. Location of Air Commanders. This is fully agreed and is conditioned only by various physical factors which made it impracticable in the case Husky.
2. Daily joint meetings and Air meetings. No Naval comment other than joint service meetings are of the highest importance.
3. Airborne troops.
 - (a) While agreeing that the Air Commander-in-Chief must have the final say on the route eventually used by airborne troops, it is considered that his decision must be tempered by the Naval and air situation prevailing at the time.
5. Fully concur in the vital necessity for a very high standard of navigation by transport aircraft pilots.
7. Fully concur in need of clear and effective warning. One of the outstanding faults during the operation was the failure to take decisions to move airborne troops in sufficient time to allow of this effective warning to the large number of units at sea and having in mind the inevitable delays in communications when major operations are in progress.
8. Routing is arranged to avoid passing over large concentrations of ships and craft but conditions may well arise when "safety lanes" are not practicable and the only remedy is a considerable detour. It must then be considered whether the detour is justifiable or whether the operation cannot take place.
10. Agreed that all possible latitude must be given to aircraft in conditions of approach but it must be realised that ships are slow moving instruments and cannot be displaced at short notice to clear approach lanes. An essential, as already stated above, is to ensure aircraft follow the path designated for them, which in its turn emphasizes the need for efficient navigation.
11. Application of air effort and bomb line.
- 11 & 12. Agreed in so far as the Navy is concerned.
13. Air supremacy. There is a fundamental difference between the Naval and ground situation as regards the presence of small numbers of enemy aircraft. While a ground force can accept a low scale of air attack with comparative equanimity, this does not apply to ships where one bomb or torpedo may sink a valuable ship full of personnel and stores with consequent most serious effects on the military situation. For this reason at night the presence of friendly aircraft in the vicinity of ships is unacceptable. The statement that "rules were broken" needs further investigation before it is accepted. On at least two occasions friendly aircraft were over convoys at the same time as hostile formations.

/In one case....

C O P Y

- 2 -

In one case a friendly aircraft and an Italian bomber were shot down simultaneously. In another, friendly aircraft were dodging about over ships in the light of aircraft flares dropped by the enemy. Both these cases were probably due to the aircraft being navigationally incorrectly in that position.

15 & 16. Concur, otherwise no comment.

C O P Y

Office of Commander in Chief,
Mediterranean Station,
MALTA.

23rd July, 1943.

No.Med./00358A/R.1.

ALLIED COMMANDER IN CHIEF.

ALLIED FORCE HEADQUARTERS.

(Copies to :- Commanding General,
15th Army Group,
Air Commander in Chief,
Mediterranean Air Command).

AIRBORNE TROOPS - ENQUIRY.

I fully concur with your signal No.8942 of 21st July, but suggest that the emphasis placed on the alleged lack of A.A. discipline to the exclusion of other causes may tend to prejudice the findings of the enquiry by Senior Officers which I understand it is intended to hold.

2. I would stress that at night, which is when the operation of airborne troops took place, no question of A.A. undiscipline can arise. All ships fire at once at any aeroplane particularly low flying ones which approach them. Nothing less is acceptable without incurring grave risk of the loss or damage to valuable merchant vessels or fleet units.

3. In the preliminary discussions on the routing of the airborne troops this was constantly kept in the foreground and pointed out by my staff. It would appear, therefore, that the reason for these most unfortunate incidents must be either in bad routing or bad navigation on the part of the aircraft pilots.

(Signed) A E Cunningham

ADMIRAL OF THE FLEET.

C O P Y

Office of Commander in Chief,
Mediterranean Station,
MALTA.

24th July, 1943.

No. Med./00358A/R.1.

REAR ADMIRAL SIR PHILIP VIAN, K.B.E., D.S.O.,

(Copy to :- Captain G. Barnard, D.S.O.,
Royal Navy).

The attached notes on the routing of Troop Carriers during HUSKY operations are forwarded for your information in connection with the Board of Enquiry being assembled to investigate the employment of airborne troops. Commander in Chief, Mediterranean's message 222250 refers.

(Signed)

Kayan Dick

for ADMIRAL OF THE FLEET

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C O P Y

ROUTEING OF TROOP CARRYING AIRCRAFT

The routeing of troop carrying aircraft presented throughout a difficult problem, with the navigational needs of the aircraft conflicting awkwardly with the absolute necessity for keeping them clear of own ships gunfire.

Many changes were made as the operational plan developed. The routes finally used on the night of D - 1 were defined at a conference at the Commander in Chief's Operations Room on D - 3. General Swing, General Browning and Commander Power were present. The routes so decided worked, as far as is known, admirably on that date and no untoward incident occurred with the exception of loss of gliders off SYRACUSE owing to wind being misjudged. △

The first difficulty arising from own gunfire occurred during the operation carried by 82nd Airborne Division on D + 1. Aircraft had been routed at the request of General Swing through a corridor between MARINA Di RAGUSA and PUNTA RELIGIONE, an area in which no ships were expected to be (see attached).

As far as is known no ships were there: but it is understood that considerable fire from ground troops was experienced. Whether due to this or to some other cause it is understood the aircraft did not leave the area, as routed, N & W of LICATA, but passed S. of LICATA and over the shipping in DIME area during an Air Raid while flares were still burning and German aircraft were still in the area. A number of troop carrying aircraft are believed to be missing as a result of this error.

The only other untoward incident which is known occurred to troop carrying aircraft of 1st Airborne Division on the night of D + 3/D + 4.

After considerable false starts and cancellations it was finally decided to lay on Operation MARSTON at extremely short notice on the evening of the 13th. Doubt was expressed at the time as to whether my 131744 (attached) would reach all ships in time.

The only major convoy expected to move in the area was MES 37 which was expected to leave SYRACUSE about 1600 or 1700 and should have been clear to the Southward of the aircraft track by 2100.

N.O.I.C. SYRACUSE 131738 (attached) which was received in the Naval Operations Room about 2000 confirmed that the convoy would still be clear to the Southward.

In fact the convoy was unfortunately delayed and was not finally formed up until 2100 steering a track of about one to two miles inside (i.e. to Westward) of the stated route for the troop carrying aircraft.

WISHART (S.O. of escort) had received my 131744, realised that this would mean troop carrying aircraft flying in the vicinity of his convoy and took all possible steps to warn the convoy. It is unlikely in view of the lateness of the notice and the activities of forming up

the convoy.....

C O P Y

the convoy that the warning got through to all ships. They had however been charged by W.C.S.O. ALEXANDRA that unless definitely attacked they were not to fire on unidentified aircraft by night.

Conditions were ideal for air attack. WISHART concealed his convoy with smoke against Torpedo Aircraft and waited developments. Air attack was in progress on the Acid beaches on his starboard hand.

From 2130 until midnight troop carrying aircraft streamed in pairs low directly over the convoy. Full details are not available but it is considered these aircraft must have been to Westward of their course to pass actually over the convoy.

In spite of everything WISHART could do to prevent it the Merchant Ships fired at these aircraft.

At 2223 enemy aircraft joined in, night fighter cannon fire was observed overhead and bombs were dropped among the convoy.

As far as is known one troop carrier aircraft was shot down, the crew being rescued by KANARIS, and one Italian bomber almost simultaneously the crew also being recovered by VENOMOUS. Both rescuing destroyers were either bombed or had torpedoes fired at them.

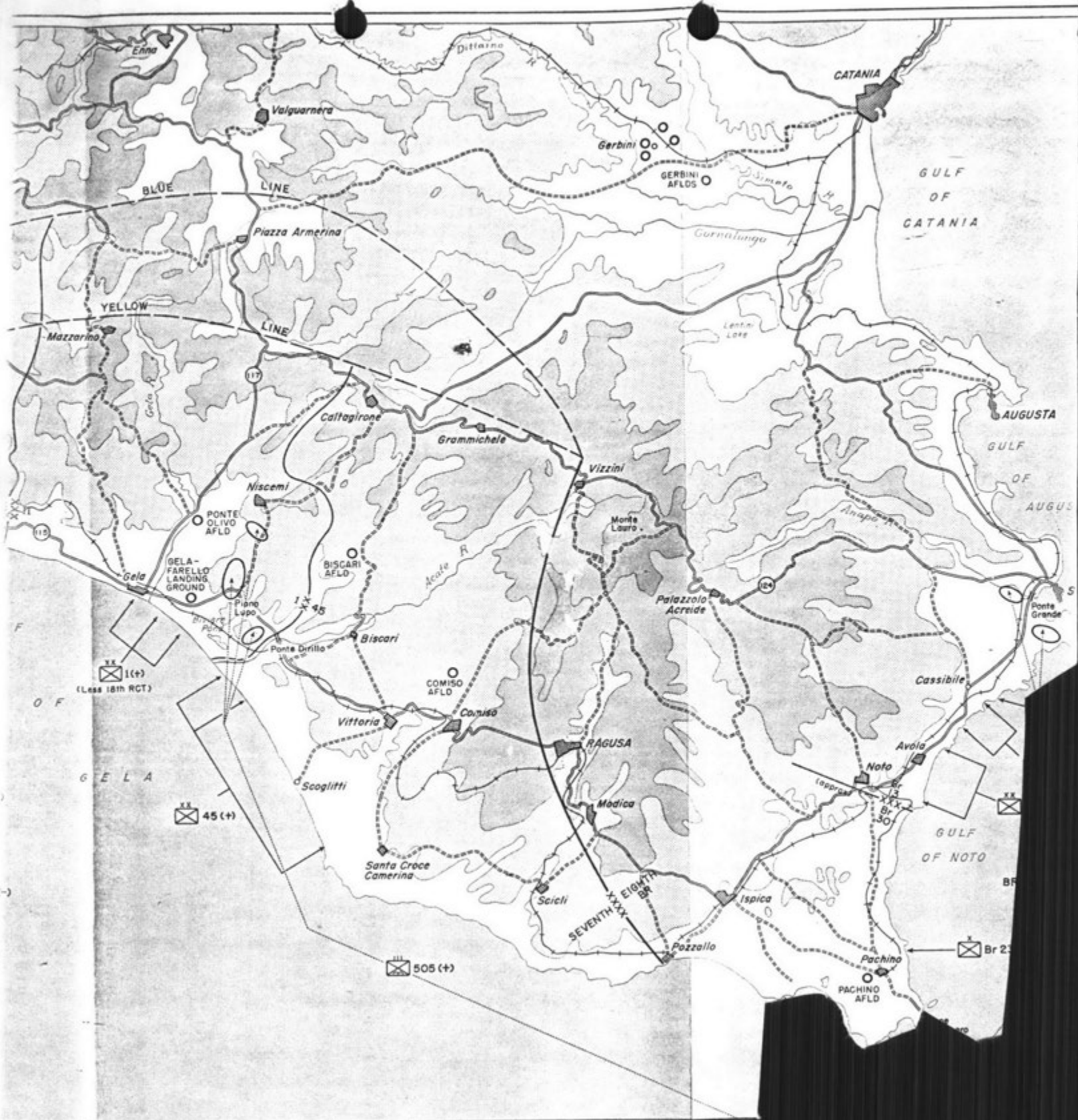
It was fortunate that this incident did not end more disastrously. That it arose was due

- (a) To the lateness of warning of passage of aircraft, which did not allow routeing to be adjusted.
- (b) To the delay in the sailing of the convoy, which in itself was unavoidable and which was not known in time for action to be taken.

The routeing of aircraft to clear convoys is always a difficult matter. It is considered that the co-operation between Airborne Divisional commands and Naval routeing authorities has in fact been good, both doing their best to see and surmount each other's difficulties.

What is essential is early warning of movements. It was originally arranged that such warning should be given at 1100 daily. It was due, not to the Airborne Division, but to the changing demands of 8th Army that this was not finally achieved.

Further loss of troop carrying aircraft on D + 3 may be attributable to aircraft flying along the shore in the ACID area. Full reports have not been received but it is known that a number of low flying aircraft were shot down off ACID beaches on that night. If these were in fact troop carrying aircraft they must have been 3 or 4 miles Westward of their course.



(C O P Y)

SECRET CYPHER

N.C. 'JJ'

10th July, 1943.

10 1034

IMMEDIATE

TO:::- All ships operation HUSKY
(R) U.S. and British ANQ Malta.
M.A.C. N.A.A.F.

FROM: :- C-in-C Med.

Troop carrying aircraft of 82nd airborne division about 150 in all, will pass close South and East of Delimara Malta between 2200 and 2230 tonight 10th thence due North crossing Sicilian Coast between Punta Religione and Marina Di Ragusa thence keeping 4 miles inland and return North and West of Licata over Pantellaria. Yellow downward recognition lights.

T.O.C. 10.1034 B

MD/LG/CB

(C O P Y)

(C O P Y)

~~SECRET (S) (C) (U) (R) (A) (N) (I) (S) (E) (C) (R) (E) (T) (Y)~~

NC. 'Y' W/T
S. 6300
Gps. 86.

13th July, 1943.

13.1738

IMMEDIATE

To :- V.A.M.
(R) Admiralty
C-in-C Med.
N.C.E.T.F.
S.O. Force A

FROM :- N.O.I/C. SYRACUSE

Intend to sail convoy MEF.37 at 1800 to-day Tuesday July 13th for Malta speed 12 knots adjusting speed to arrive at Malta 0530 Wednesday July 14th. 11 M/Vs. escorted by H.M.S. Wishart, SWALE, Witherington, Hasty, Easton (Harworth ?) - Adrian routed through 89 EB FC QKB.146 request appropriate air protection. Codeword VIGOROUS. Callsign DRUM.

T.O.O. 131738Z
T.O.R. 131925

(C C P Y)

(C O P Y)

NAVAL MESSAGE

TO :- EASTERN TASK FORCE (R) AHQ MED. FROM :- C IN C MED.

~~CONFIDENTIAL~~

Operation MARSTON tonight 13th/14th. Troop carrying aircraft will be routed close South and East of DELIMARA thence five miles East of the following points.

CAPE PASSERO MURRO DI PORCO CAPE SAN CROCE
thence to dropping zones.

Return by reverse of outward route.

Pass DELIMARA between 2120 and 0001.

T.O.O. 13 1744 B.

(C O P Y)

[REDACTED]

ALLIED FORCE HEADQUARTERS
APO 512

2 August 1943

TRAINING MEMORANDUM)

NUMBER 43)

EMPLOYMENT OF AIRBORNE FORCES

References: U.S. Field Manual 31-30, Tactics and Technique
of Airborne Forces.
U.S. Field Manual 100-5, Field Service Regulations
(Chapter 13).

1. GENERAL

a. Large-scale airborne operations in conjunction with the invasion of Sicily have produced lessons of incalculable value to naval, air, ground, and airborne forces. A thorough study of these operations and their results by all arms and services in this theater is directed. The lessons developed will be promptly and effectively disseminated to all concerned and will be applied to future operations.

b. In the application of the principles set forth in this memorandum it will be realized that certain responsibilities and command channels prescribed herein are based upon the relationship of the Commander-in-Chief, Mediterranean Air Command, Commander-in-Chief, Mediterranean (Navy), and the General Officer Commander-in-Chief, Fifteenth Army Group, under the Commander-in-Chief, Allied force.

2. AIRBORNE OPERATIONS

a. Missions. The use of airborne troops should be confined to missions suited to their role, and the force commander's decision to use them must be made only after he is positive that the mission cannot be accomplished by other means more economical or equally well suited to the mission. In weighing the decision, it must be recognized that airborne operations are both hazardous and difficult of coordination, and can be justified only by a situation which clearly shows the use of such troops to be imperative.

b. Coordination. Full coordination of all elements involved is paramount to the success of airborne operations. Such coordination must provide for possible changes in plan and other contingencies that may arise. All services involved must participate in the planning and must be kept currently informed throughout all planning stages. The decision to use airborne troops must be made in time to permit complete communication of all essential information to air forces, ground forces, naval forces including minor naval craft and merchant ships, and to allow for completion of necessary adjustments in the routing of surface vessels. The minimum time from the decision to the commencement of operations is governed by the existing situation, the mission, and the number and size of forces involved. In all large-scale airborne operations in which troop-carriers use routes over friendly ground and naval forces, a minimum of 12 hours from the decision to the operation should be considered as a guide. The effective use of warning orders is essential for all echelons of all organizations. These should be issued even though there is a probability that the operations may be cancelled.

c. Control and Staff.

(1) Airborne operations are air operations until the drop or release is made. Questions of fighter protection, routing, height, time of dispatch

[REDACTED]

Employment of Airborne Forces(Cont'd)

and use or non-use of downward recognition lights are air matters upon which the Air Commander-in-Chief must have final say. The air and naval situation at the time must accordingly be taken into consideration. The final decision whether or not the operation as planned can be carried out rests with the Air Commander-in-Chief.

(2) Apart from the detailed ground planning between the formations with whom they work after landing, control and planning of all airborne matters should be centralized in one headquarters. Decision to call for previously planned airborne operations is made by the Army Commander to Army Group Headquarters. Army Group, if concurring in the call, relays it to the Air Commander-in-Chief, who has the responsibility for sanctioning the launching of the airborne operation and promptly notifying naval and other authorities concerned.

(3) The Troop Carrier Command should operate under the direct control of the Air Commander-in-Chief in order to simplify command and communications.

3. OPERATIONAL DETAILS

a. Routes, Altitudes, Recognition Measures, and Signals. Routes to and from the dropping zones should avoid ship convoy routes, and naval and ground force concentration areas. Detours may be necessary to accomplish this requirement, and calculation of fuel needs should be made accordingly. Altitudes during flight to and from drop zone should be above the range of light antiaircraft fire whenever practicable, depending on enemy air situation. In the briefing of aircraft crews, the pilots must be warned that they may become exposed to antiaircraft fire from friendly troops and ships if they stray from prescribed routes. It is important that downward recognition lights be installed in all troop carrier aircraft used in operations. Recognition cartridges (Very Lights), if fired from aircraft after AA fire has been opened on them, may not be distinguishable by the naval or ground forces. Aircraft crews must be warned that, should they be flying low and/or in the vicinity of land, their I.F.F. identification device is unlikely to register in the warning receivers of friendly ships and land forces.

b. Airborne Corridors. In airborne operations over water, corridors for the routes of troop-carriers should be established. These corridors should approximate a width of 5 miles on either side of the prescribed route, and all surface vessels should be kept clear of this zone insofar as is operationally possible. Depending on availability of vessels, for night operations the corridors should be marked by naval surface craft wherever possible. It is important that guide ships be located at points where the course changes.

c. Use of Pathfinder Aircraft. Pathfinder aircraft with highly trained crews should be employed to precede the leading airborne flight to the dropping zone and drop marking lights to indicate the zone. Provision should be made for marking the zone for later airborne flights.

d. Flight over Naval Surface Craft. The special hazard of flying over friendly naval surface craft must be understood by all concerned. There is a fundamental difference between the vulnerability of naval surface craft and ground forces to attack by small numbers of enemy aircraft. Ground forces can accept a small-scale air attack with comparative equanimity. On the other hand, naval surface vessels are highly vulnerable. One bomb or aerial torpedo can sink a valuable ship, and for this reason naval forces cannot accept the presence of friendly aircraft in their vicinity at night unless the aircraft are positively identified. Aircraft crews will be warned that naval vessels are required to fire without warning on approaching unidentified aircraft. The onus of identification rests with the aircraft.

4. TRAINING

Realistic and thorough combined training for air forces and airborne troops must be provided for all appropriate units. Thorough training in the technical aspects is not alone sufficient. Training for specific operations

~~SECRET~~

Employment of Airborne Forces(Cont'd)

must cover all details and contingencies, and culminate in a rehearsal of the operation with conditions approximating as closely as possible those of the actual operation. Intensive training in low flying navigation at night, especially over coastlines, must be included. Special attention will be given to the training of glider pilots, including the maintenance of courses despite the effects of adverse winds, and the coordination between glider and tug in determining the glider release point.

The standard of training of troop carrier crews is the same as that of other operational combat crews. Wherever possible in training for a specific operation the troop carrier crews should make a flight on a bombing mission over the route and area selected for the operation in order to familiarize them with terrain features.

By command of General EISENHOWER:

W. B. SMITH,
Major General, GSC,
Chief of Staff.

OFFICIAL:

W. C. Crane
for

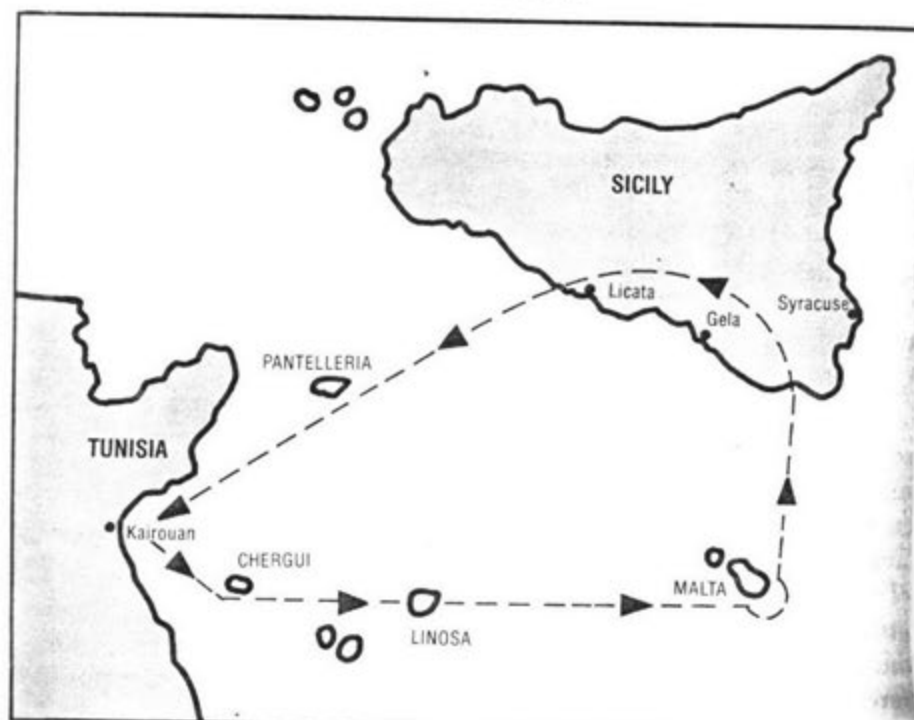
LOWELL W. ROOKS,
Major General, G.S.C.,
Assistant Chief of Staff, G-3.

DISTRIBUTION:

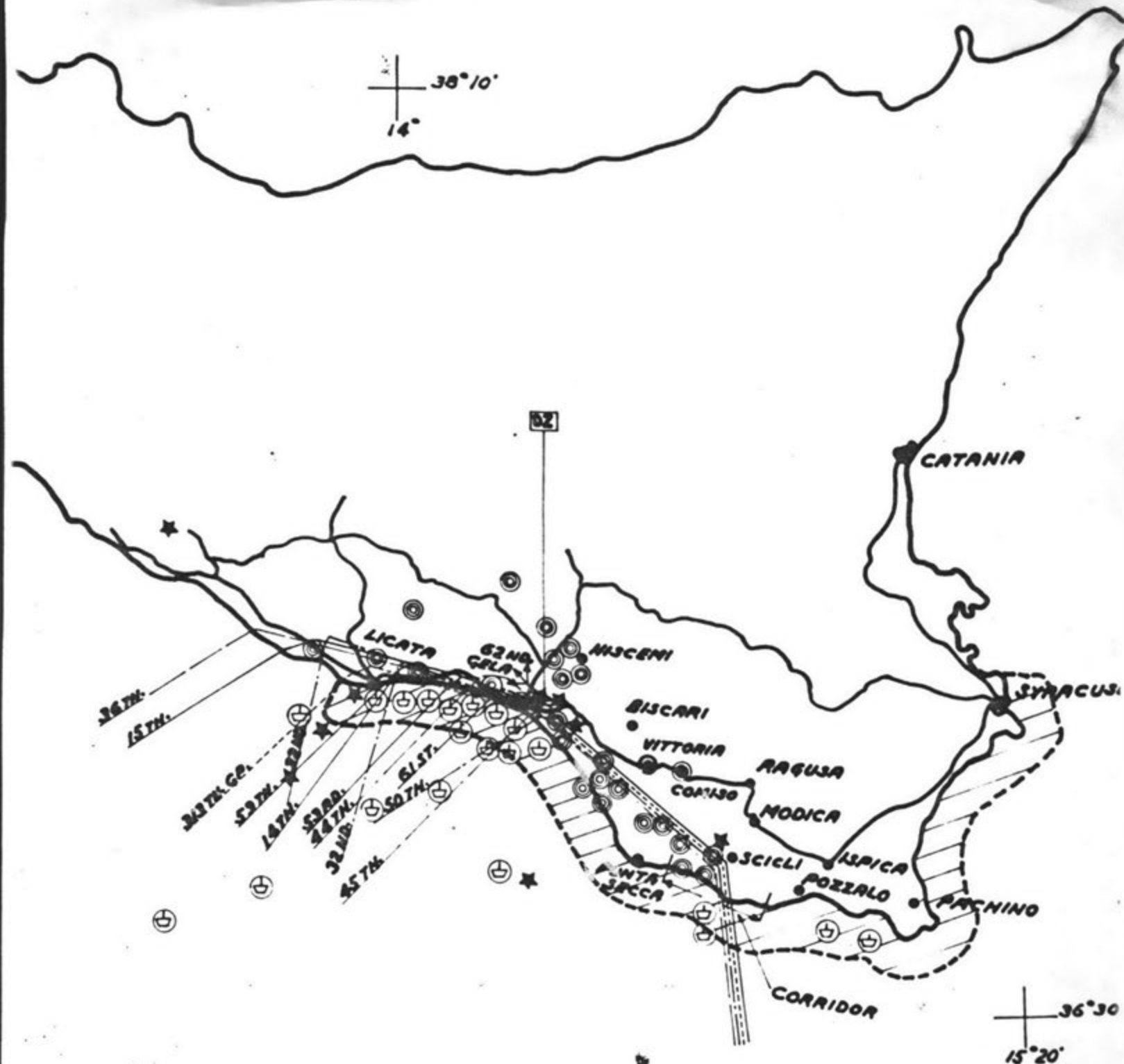
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1	C/S	
1	D C/S	
1	Sec'y. GS	
1	D T/C	
100	Fifteenth Army Group	
200	Seventh Army	
200	Eighth Army	
200	Fifth Army	
200	C-in-C Mediterranean	
100	Comdr. U.S. Naval Forces North African Waters	
200	Mediterranean Air Command	
100	Northwest African Air Force	
15	X Corps (British)	
20	V Corps (British)	
10	Tunisia District	
5	GHQ MEF Cairo	
5	ETOUSA	
10	ABS	
10	MBS	
10	EBS	
70	Gen. and Spec. Staff, AFHQ	
40	Gen. and Spec. Staff, NATOUSA	
10	Army Ground Forces, Washington	
		10 GHQ French Land and Air Forces
		5 L of C
		3 C.T.C. (North Africa) British
		4 DMT (British)
		35 G-3 Trg. AFHQ

~~SECRET~~

PARATROOPER



PLANNED FLIGHT ROUTE FOR HUSKY NUMBER TWO. COLONEL TUCKER AND HIS 504TH PARACHUTE INFANTRY WERE FOLLOWING THIS ROUTE WHEN THEY WERE SHOT DOWN BY BOTH ENEMY AND FRIENDLY GUNNERS.



LEGEND

GROUND FIRE
ENCOUNTERED

NAVAL FIRE
ENCOUNTERED

DEFINITE T.C. CRASHES

BEACH AND ANTI-AIRCRAFT
DEFENSE DANGER ZONE

HUSKY-2

11/12 JULY 1943

EUROPE AIR CHARTS

1:250,000

52ND T.C. WING A-2 SECTION

15 JULY 1943

KEY

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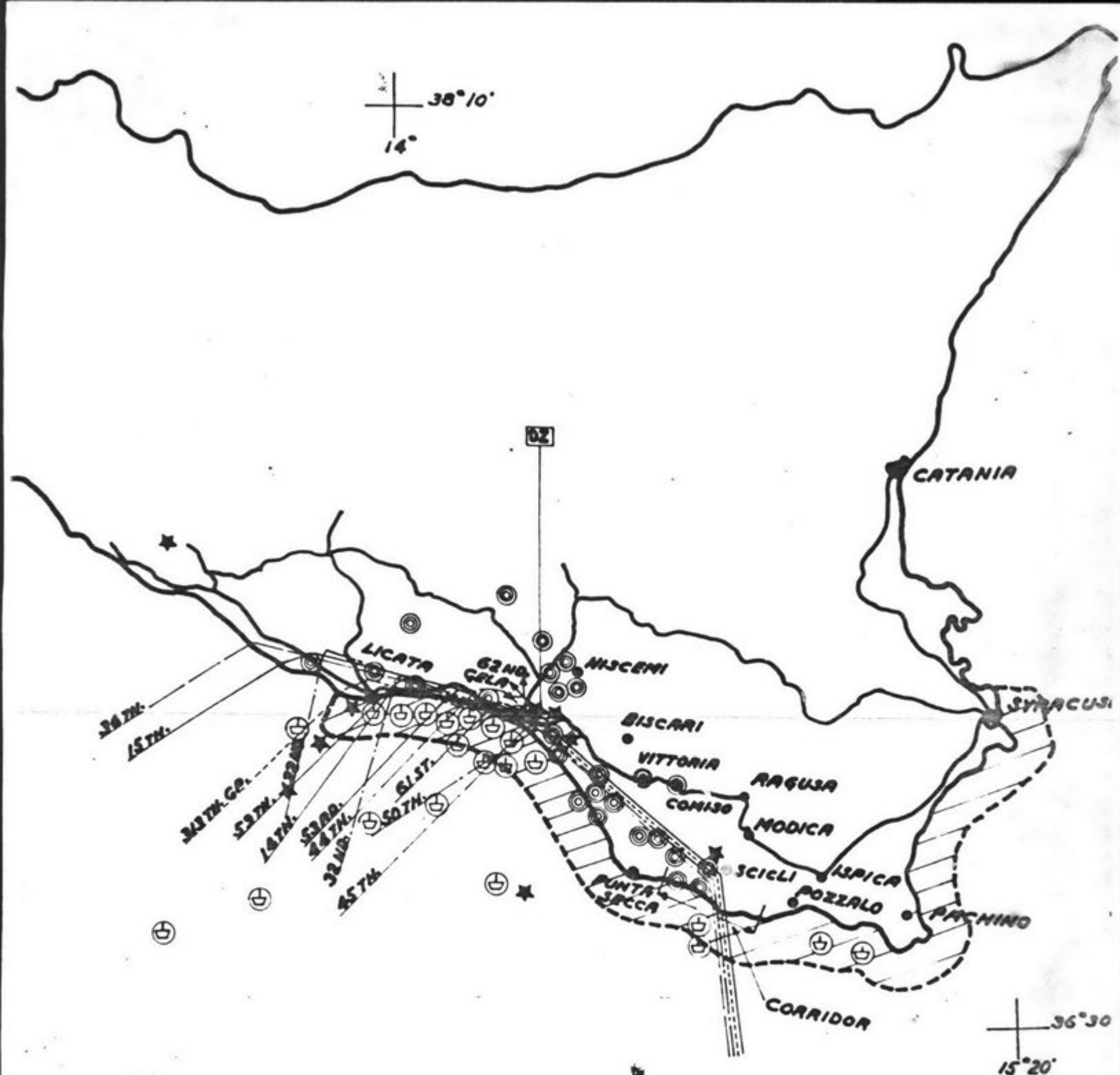
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313TH T.C. GP.

61ST T.C. GP.

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16



LEGEND

GROUND FIRE
ENCOUNTERED

NAVAL FIRE
ENCOUNTERED

DEFINITE T.C. CRASHES

BEACH AND ANTI-AIRCRAFT
DEFENSE DANGER ZONE

HUSKY-2

11/12 JULY 1943

EUROPE AIR CHARTS

1:250,000

52ND T.C. WING A-2 SECTION

15 JULY 1943

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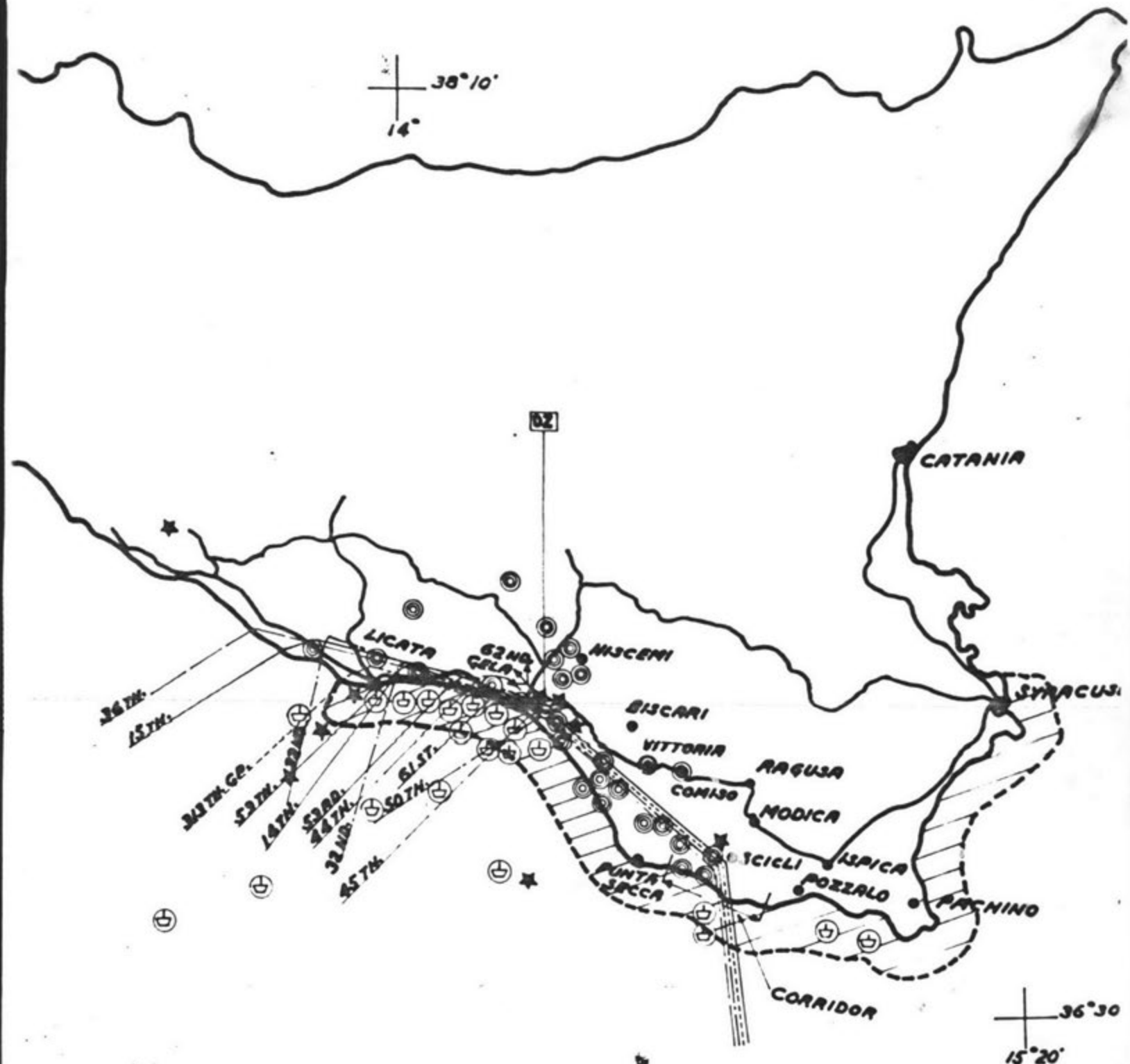
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LEGEND

GROUND FIRE
ENCOUNTERED
NAVAL FIRE
ENCOUNTERED
DEFINITE T.C. CRASHES
BEACH AND ANTI-AIRCRAFT
DEFENSE DANGER ZONE

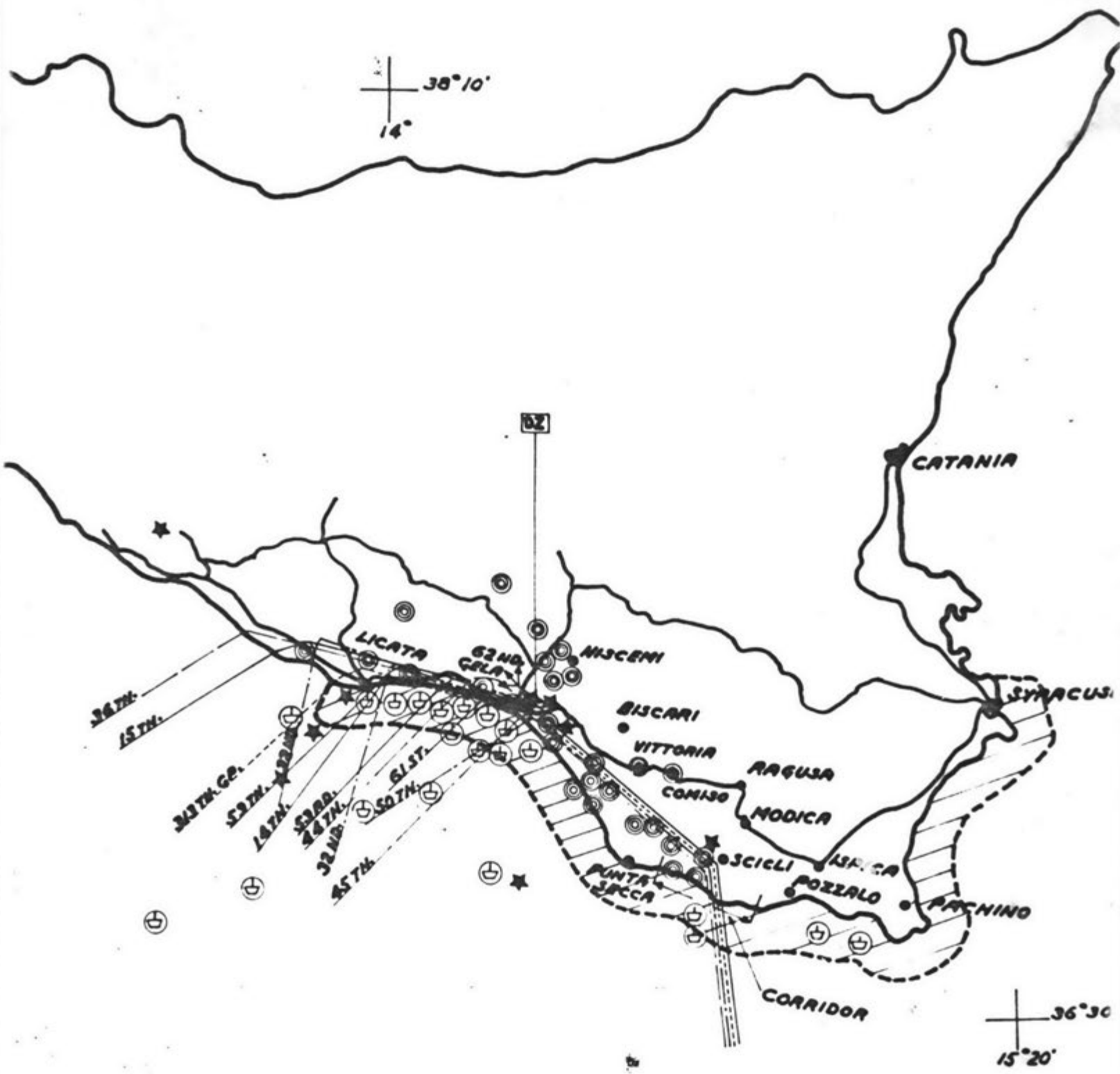
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EUROPE AIR CHARTS
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52ND T.C. WING A-2 SECTION
15 JULY 1943

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LEGEND

- GROUND FIRE ENCOUNTERED
- NAVAL FIRE ENCOUNTERED
- DEFINITE T.C. CRASHES
- BEACH AND ANTI-AIRCRAFT DEFENSE DANGER ZONE

HUSKY-2

11/12 JULY 1943

EUROPE AIR CHARTS

1:250,000

52ND T.C. WING A-2 SECTION

15 JULY 1943

KEY

- 316TH T.C. GP.
- 314TH T.C. GP.
- 313TH T.C. GP.
- 61ST T.C. GP.



LEGEND

GROUND FIRE
ENCOUNTERED

NAVAL FIRE
ENCOUNTERED

DEFINITE T.C. CRASHES

BEACH AND ANTI-AIRCRAFT
DEFENSE DANGER ZONE

HUSKY-2

11/12 JULY 1943

EUROPE AIR CHARTS

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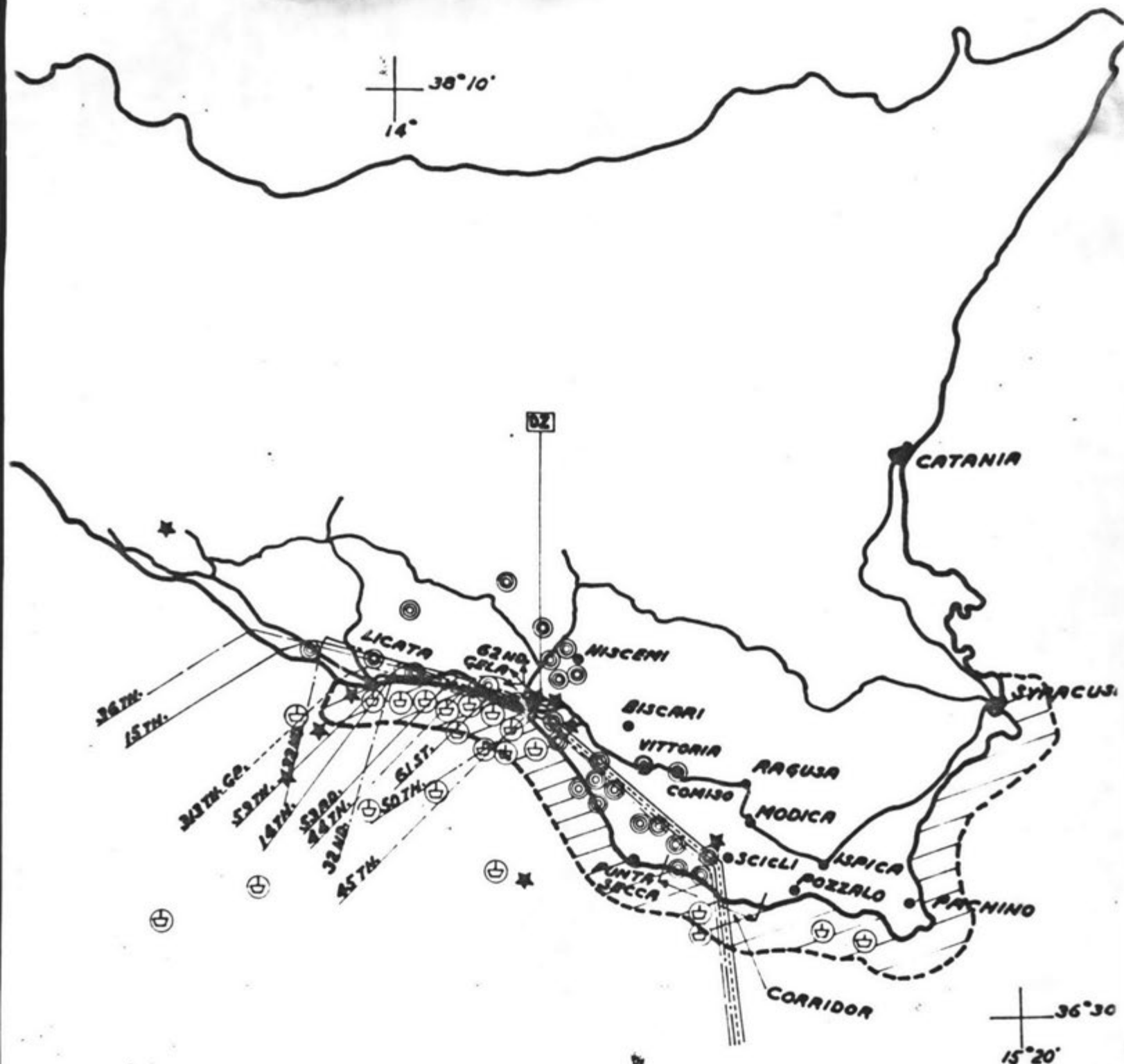
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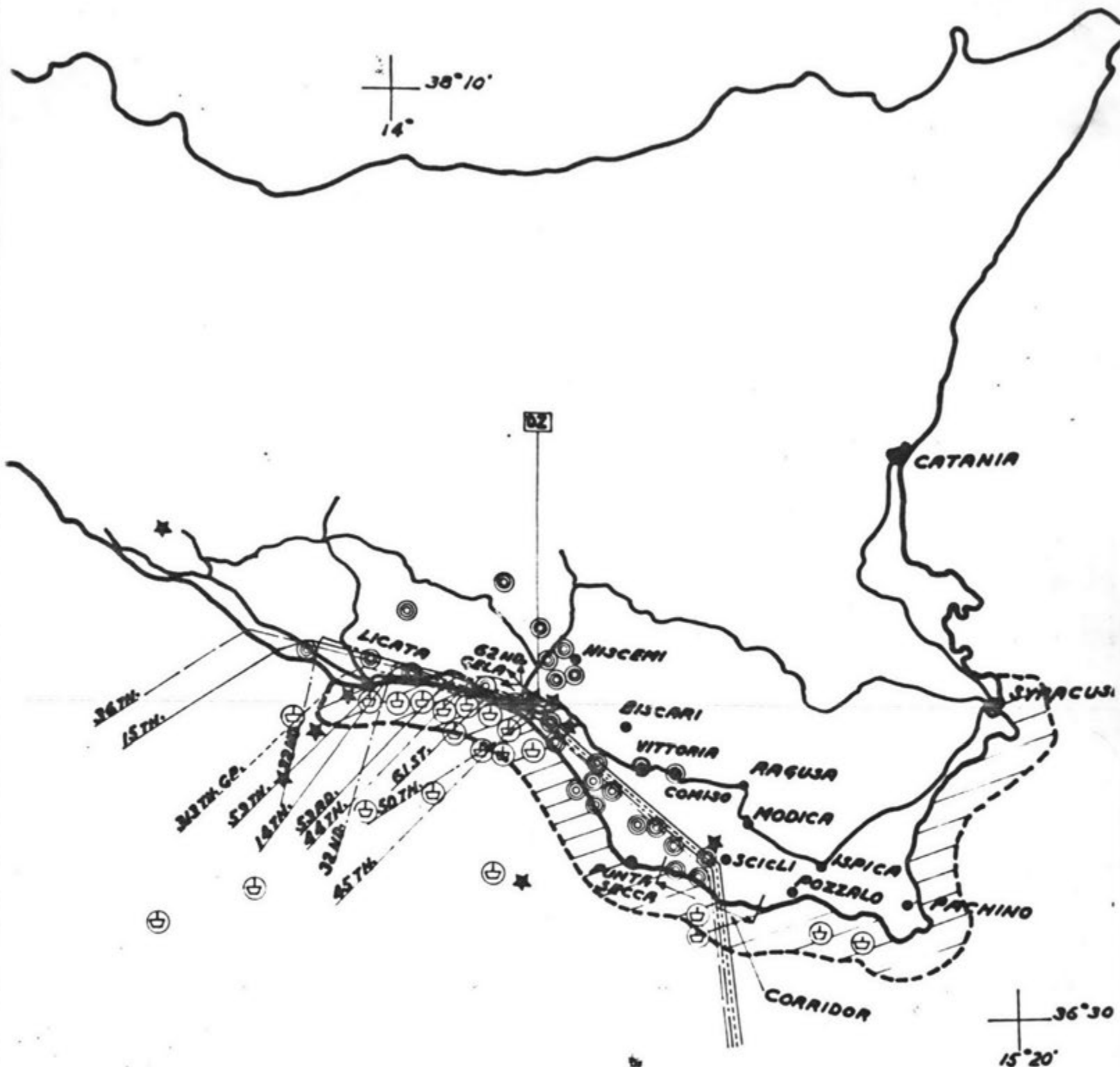


LEGEND
GROUND FIRE ENCOUNTERED
NAVAL FIRE ENCOUNTERED
DEFINITE T.C. CRASHES
BEACH AND ANTI-AIRCRAFT DEFENSE DANGER ZONE

HUSKY-2
11/12 JULY 1943
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52ND T.C. WING A-2 SECTION
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KEY
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314TH T.C. GP.
313TH T.C. GP.
61ST T.C. GP.

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LEGEND

GROUND FIRE
ENCOUNTERED

NAVAL FIRE
ENCOUNTERED

DEFINITE T.C. CRASHES

BEACH AND ANTI-AIRCRAFT
DEFENSE DANGER ZONE

HUSKY-2

11/12 JULY 1943

EUROPE AIR CHARTS

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15 JULY 1943

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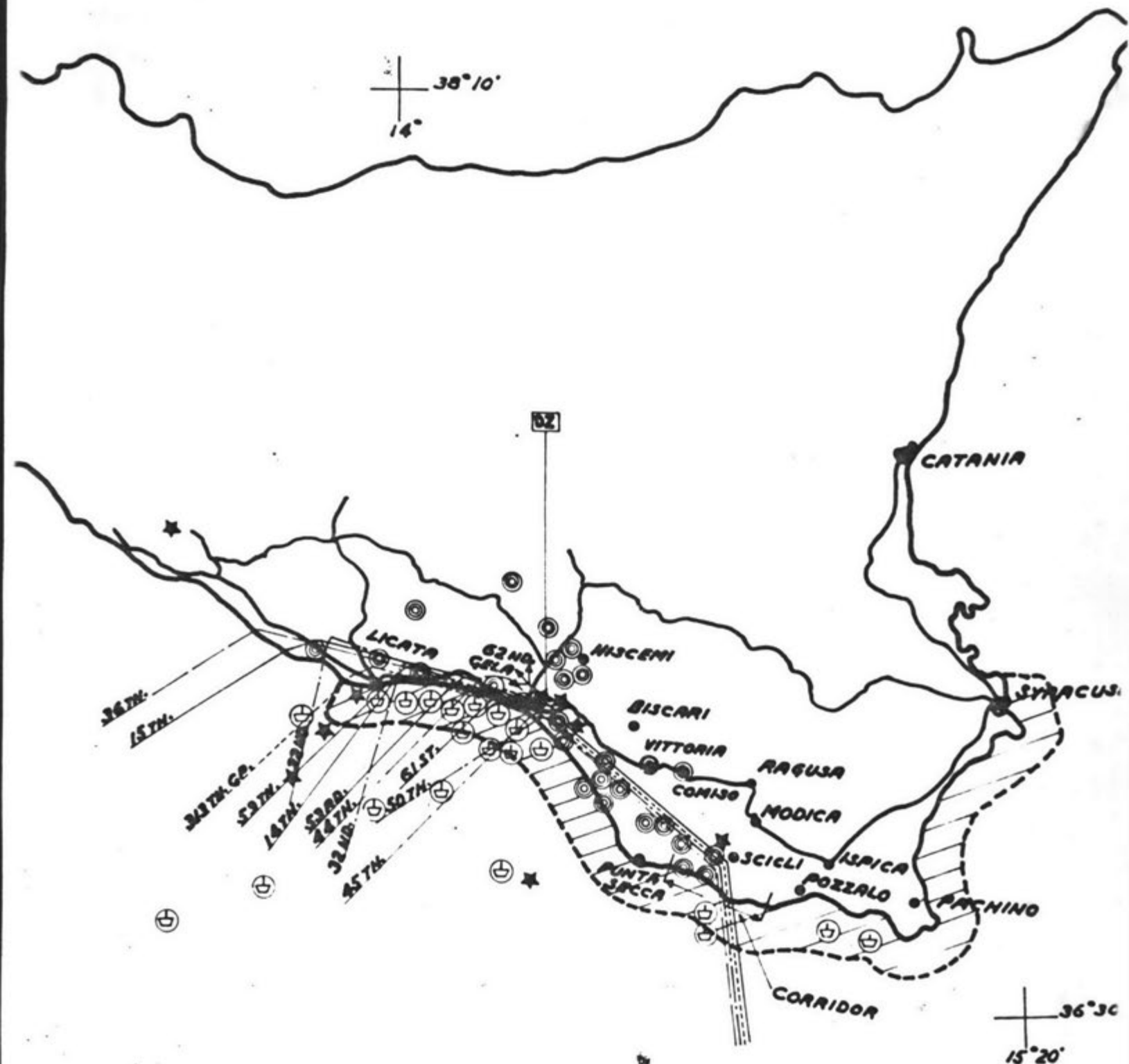
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LEGEND

GROUND FIRE ENCOUNTERED

NAVAL FIRE ENCOUNTERED

DEFINITE T.C. CRASHES

**BEACH AND ANTI-AIRCRAFT
DEFENSE DANGER ZONE**

HUSKY-2

11/12 JULY 1943

EUROPE AIR CHARTS

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52ND T.C. WING A-2 SECTION

15 JULY 1943

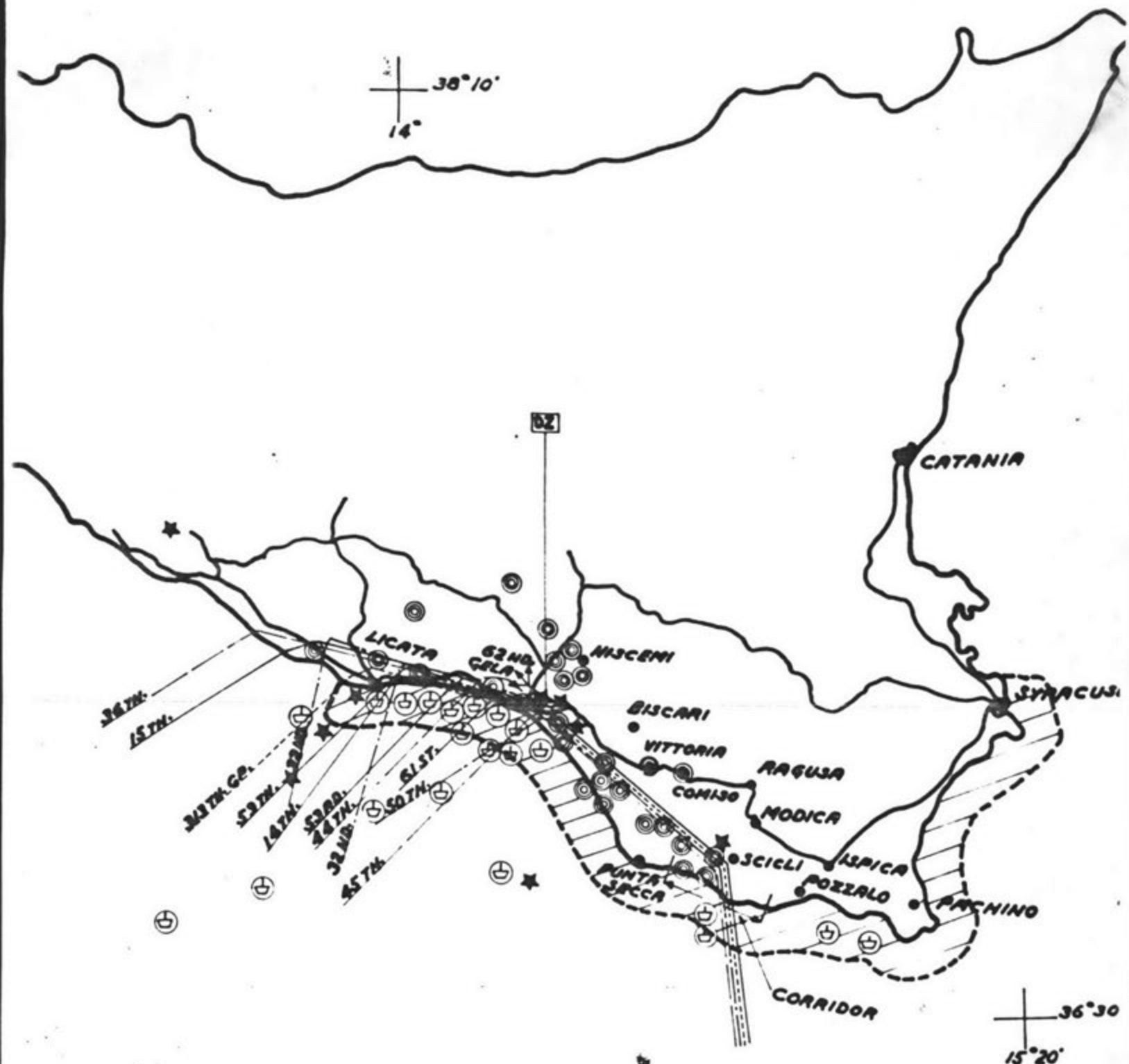
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3/4 TM T.C. GP.

3/3 TH T. C. G.P.

6/ST. T. C. GP.



LEGEND

GROUND FIRE
ENCOUNTERED
NAVAL FIRE
ENCOUNTERED
DEFINITE T.C. CRASHES
BEACH AND ANTI-AIRCRAFT
DEFENSE DANGER ZONE

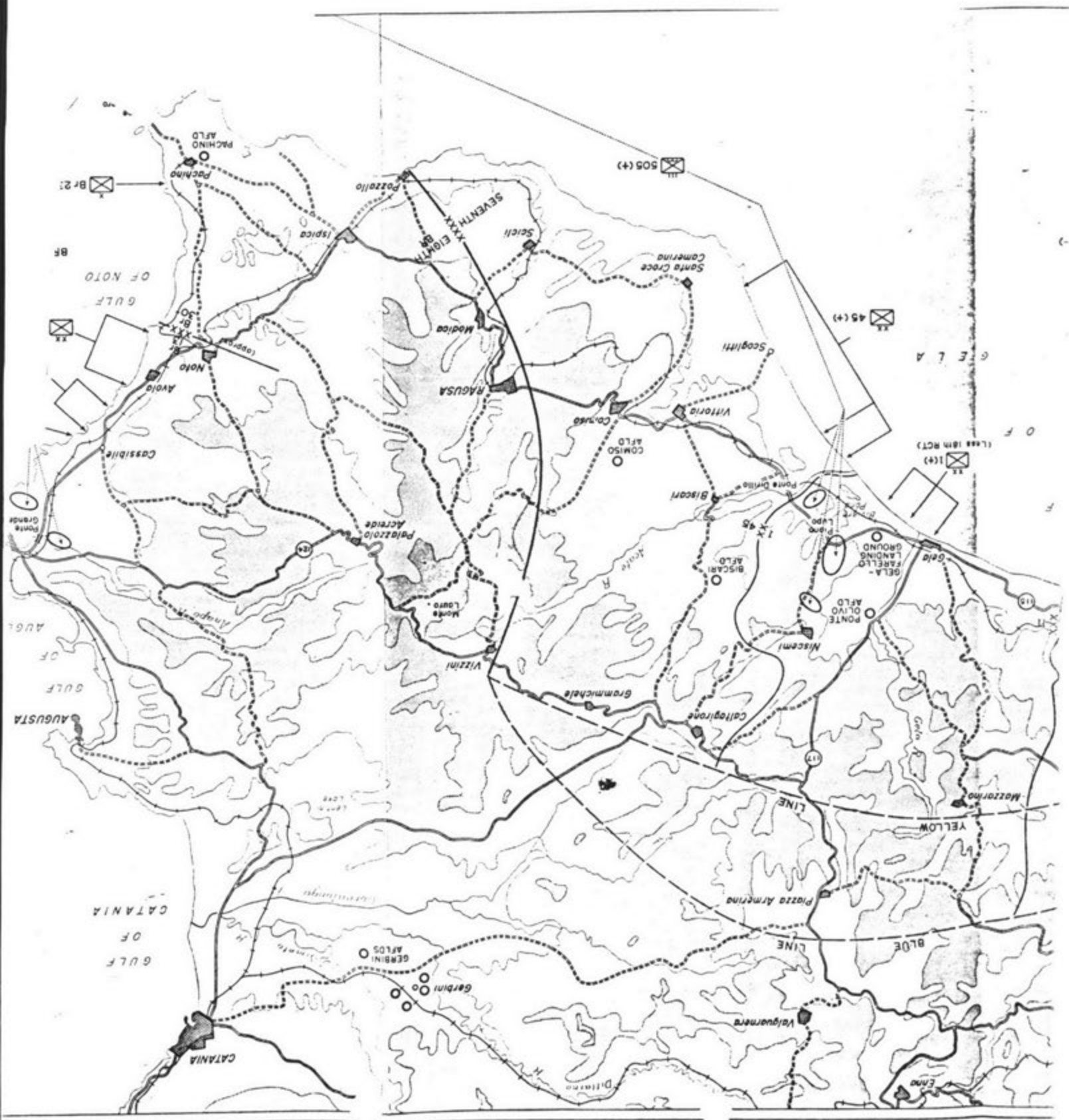
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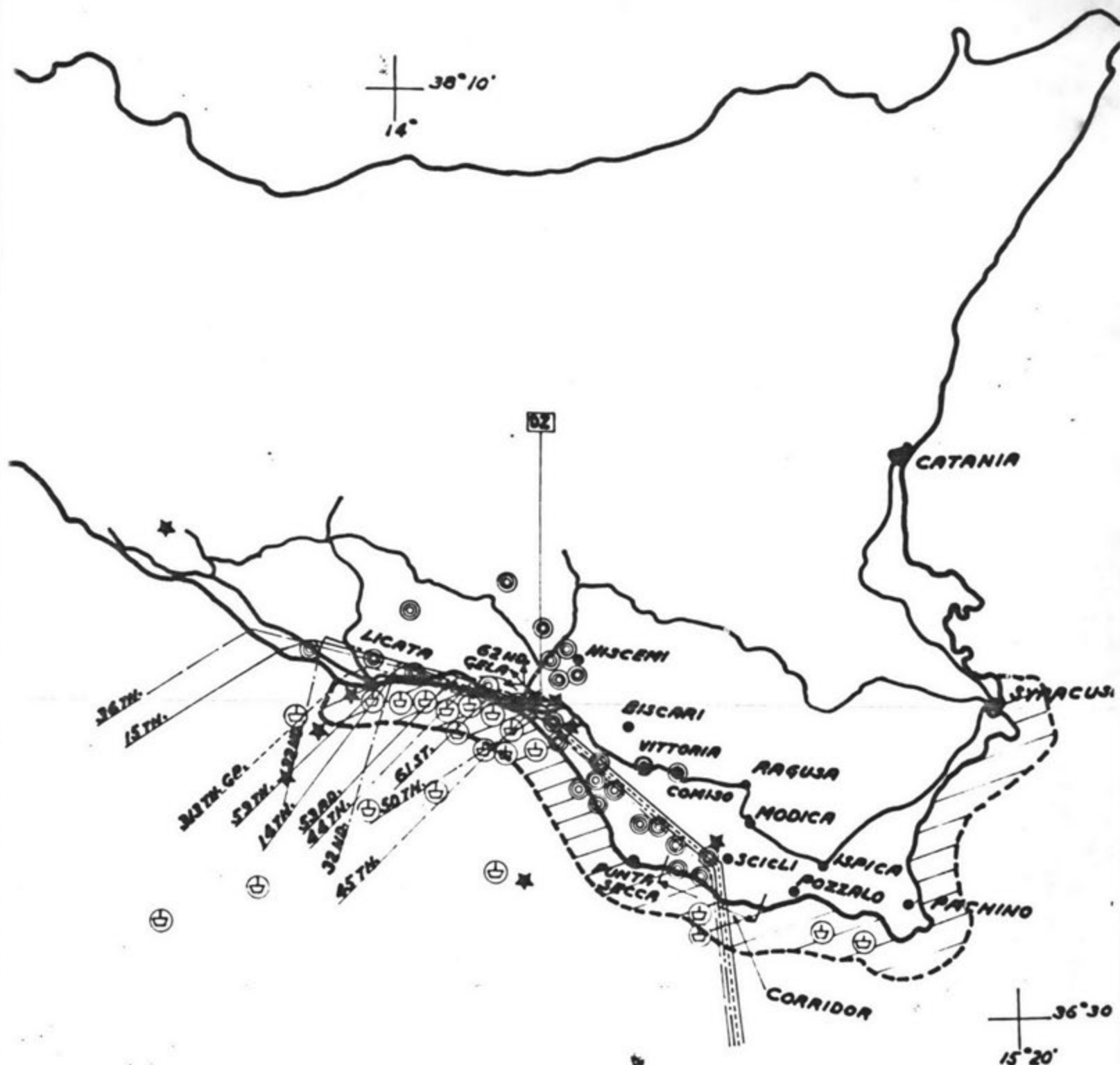
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LEGEND

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