

8827

Diag. Cht. No. 8502-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. _____ Office No. T-8827

LOCALITY

State Alaska

General locality Alaska Peninsula

Locality Mitrofanian Island

1942-'45

CHIEF OF PARTY

H.E. Finnegan, Chief of Party
Div. of Photogrammetry, Wash., D.C.

LIBRARY & ARCHIVES

DATE February 10, 1950

DATA RECORD

T- 8827

Quadrangle (II):

Project No. (II): 319

Field Office: USC & GS Ship
E. Lester Jones

Chief of Party: H. E. Finnegan

Lou Reed

Compilation Office:
Washington, D. C.

Chief of Party: Stereoscopic Mapping Section

Instructions dated (II III):

12 Mar. 1943) CS-279 27 Feb. 1945
29 Feb. 1944) 22 Mar. 1945
1 Mar. 1946; 30 Dec. 1944; 24 Feb. 1947;
4 Apr. 1947

Copy filed in Descriptive

~~Report No. X- (XII)~~

Div. of Photogrammetry

~~General Files~~

office

Completed survey received in office:

Reported to Nautical Chart Section: Nov. 1948

Reviewed: 13 July 1949 Applied to chart No.

Date:

Redrafting Completed: 9-7-50

Registered: 1 Nov. 1949

Published:

Compilation Scale: 1:20,000

Published Scale:

Scale Factor (III): 1:1

Geographic Datum (III): N.A. 1927

Datum Plane (III): MSL: contours

MHWL: shoreline

Reference Station (III): MITROFANIA 1914

~~Manuscript designation: offshore~~

MLLW: foreshore features

G -6618, p.38

Lat.:

Long.:

Adjusted

~~Unadjusted~~

State Plane Coordinates (VI):

X =

Y =

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
10924 thru 10931	9/5/42	11:57 to 12:05	1:20,000	3.3 Ft. above MLW <i>4.82 - 4.88 " "</i> <i>or</i> <i>0.62 - 0.68 below MHW</i>
21274 21281 21282	10/30/47	12:22 12:40 12:41	1:20,000	

Tide from (III): Chignik, Anchorage Bay; 56°18' & 158°23'

Mean Range: ~~6.3~~ Ft. *6.6* Spring Range: -----

Camera: (Kind or source) *ShU, S3C & G. S. 9-lens camera*
H.E. Finnegan, Chief of Party

Field Inspection by: Ship E.L. JONES date: 1945
H.E. Finnegan, Chief

Field Edit by: *K. S. S.* date:

Date of Mean High-Water Line Location (III):

Projection and Grids ruled by (III) T.L. Jansen date: 7/24/46

" " " checked by: T.L. Jansen date: 7/24/46

Control plotted by: G.R. Bowersox date: 7/26/46

Control checked by: G.B. Willey date: 7/26/46

Radial Plot by: G.R. Bowersox & L.M. Gazik date: 9/ 6/46

Detailed by: B.T. Hynson date: 5/ 9/47

Topo by: W.D. Harris & O.N. Dalbey 1/10/48 & 11/1/48

Reviewed in compilation office by: date:

Manuscript
Elevations on ~~Field Edit Sheet~~
checked by: W.D. Harris & O.N. Dalbey

date: "

STATISTICS (III)

Land Area (Sq. Statute Miles): *about 16.5 sq.mi.*

Shoreline (More than 200 meters to opposite shore): *no double-line streams*

Shoreline (Less than 200 meters to opposite shore): *—*

Number of Recoverable Topographic Stations established: *three*

Number of Temporary Hydrographic Stations located by radial plot: *88*

Leveling (to control contours) - miles: *—*

Roman numerals indicate whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:

Summary to Accompany T-8827

Topographic map T-8827 is one of 24 similar maps in project CS-319, Alaska Peninsula. It covers all of Mitrofan Island, off the southern shore of Alaska Peninsula, and is between Latitude $55^{\circ} 46' - 55^{\circ} 41' N$ / Longitude $158^{\circ} 41' - 56' W$.

Field inspection covered shoreline and offshore data.

Unmarked supplementary horizontal (and vertical) control was established for use in drawing contours by the Reading Stereocartograph at the Washington Office and for shore and offshore detailing at the ~~Baltimore Photogrammetric Office~~. *Washington Office*.

Data pertaining to T-8817² is filed as follows:

A. Division of Photogrammetry General Files:

1. Acetate manuscript
2. Field inspection photographs
3. Duplicate of compilation report for T-8466
4. Three forms No. 524, - recoverable topographic stations

B. Bureau Archives:

1. Registered original descriptive report
2. A cloth-backed lithographic print of the reviewed map manuscript at compilation scale.

C. Library and Archives:

1. Season's Report, 1945, H. E. Finnegan
 - (a) Field inspection (No. 106)
 - (b) Triangulation (No. 100)

Lena T. Stevens
31 October 1949

COMPILATION REPORT

26. Control: The following 14 triangulation stations on N.A.1927 datum were used to control the plot:

Held	✓ Mitrofanina-----	1914	(Office recovery)
mis-ident	✓ Spitz Island-----	1914	
not held	✓ Spitz Island, Outer Rock-----	1914	
mis-ident	✓ Fan-----	1914	(Office recovery)
1.0	✓ Parrot-----	1914	
Held	✓ Cairn-----	1914	
1.0	✓ Bud-----	1914	
0.5	✓ Mit-----	1914	
0.5	✓ Lion-----	1920	
0.5	✓ Nip-----	1945	
mis-ident	✓ Olaf-----	1945	
1.0	✓ Church-----	1945	west of limits
Held	✓ Acre Pinnacle-----	1945	(Office recovery)
1.0	✓ Small Rock Below Slant-----	1945	(Office recovery)

Cairne, Acre Pinnacle, and Mitrofanina were held by the radial plot; Lion, Mit, and Nip were held to within 0.5mm; Small Rock below station Slant, Parrot, Bud, and Church, appearing only in outer wing chambers, were held to within 1.0mm. Fan, the highest point on the island, was misidentified in the field and could not be office-located with sufficient accuracy to be used for control. Spitz Island fell into the same category as Fan. The spotting of Spitz Island, Outer Rock, on photo No.10931, is at variance with information on the pricking card, and the station, appearing only in the outer wing chambers, could not be held. Station Olaf was misidentified in the field and could not be held. Station Church was the only control point appearing on less than three photos.

27. Radial Plot: Eight 1942 9-lens photographs, scale 1:20,000, numbered 10924 thru 10931, were used to lay the radial plot. Hand templets were made for each photo of vinylite ruled with black acid ink, adjustment being made for each photo junction.

The density of horizontal control was adequate even though some of the stations were not properly identified in the field. Photographic coverage was also adequate; however, large relief displacements and clouds in a few local areas did limit the transfer of pass points and control stations to fewer photos than is normal.

28. Detailing: Complete field inspection of offshore features and of the MHWL was lacking, but an attempt was made to compile these features within the limits of accuracy for this scale. It was done thruout except where the displacement of high bluffs obscured the shoreline, or clouds covered it. The places where shoreline is lacking are short and few in number, and they occur only on the west coast and at the SE point of the island; *see Review Report* It is suggested that a hydro party can best fill in these gaps. In general, the photos were clear enough to permit good detail delineation; a minimum of generalization was necessary.

29. Supplemental Data: None

30. Mean High-Water Line: Partially shown on field inspection photos.

31. Low-Water Line and Shoal Line: Not considered.

32. Details Offshore from the High-Water Line: The extent of ledge areas offshore and the MHWL on detached rocks is not considered complete due to lack of field inspection. These features should receive special attention by the hydro party.

34. Wharves and Shoreline Structures: None

35. Landmarks and Aids to Navigation: Mitrofanina Island Light was located from information listed on the reverse side of field inspection photo 10928*. The objects, A, B, and C, used for fixes were cut in after the radial plot had been laid. Object B could be clearly seen on only two photos and was located by two cuts only. After the three fixes had been plotted, the fixes referred to except no. 2, were reproduced on acetate templates and laid in the same manner as a radial plot. In this way the Light was positioned. *Copy of information attached.

35. Hydrographic Control: Three described and marked H & T stations were located by radial plot: QUIT, MOSS, and FROG. Three other H & T stations could not be located. Eightyseven temporary hydrographic control signals were cut in with three or more radial line intersections, except as indicated on the map manuscript. All were identified by field inspection. No office selected stations are shown. The numbering system is arbitrary being the last two digits of the T-sheet number and in numerical order thereon.

37. Topography Compilation: The contours were compiled on the 10924-31 (1942) 9-lens plotter (No. 1) in two separate stages. The first and major plot was executed using the same photos (eight) as used in laying the radial plot; see paragraph 27 above. This first work was done early in 1947 leaving several small areas devoid of contours because of overhanging ledges along the shoreline, cloud shadows, and cliff shadows. During the 1947 photo season three additional photos were taken along the N shore of the island and by using them, much of the contour gaps and shoreline gaps were completed or added to. This last stage took place in Nov 1948. However, small gaps still exist in both shoreline and contours and it is believed that it would be much easier for a hydro part to complete the job rather than to require additional photography for such small gaps. In this light the sheet is considered complete in so far as practicable for the compilation office. ~~is concerned.~~

21274-
24281
21282

Form lines
added during
review. (---)

45. Comparison with Nautical Charts: No accurate comparison can be made with Chart 8302 because of scale difference. This sheet supersedes Prelim. reconn. survey T-8466 at 1:20,000 which was compiled previously without the benefit of field inspection of the shoreline. (On Unalaska Datum)

40: Quality of Contours: All contours on this sheet conform to the national standards of accuracy for a contour interval of 200 feet, except the 100-foot contour above sea level which conforms to the national standards of accuracy for a contour interval of 100 feet.

L. C. Lande
Lester C. Lande
Chief, Graphic Compilation
Section

Lou Reed 12/15/48
Louis J. Reed
Chief, Stereoscopic Mapping
Section

V.M.

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
TO BE DELETED

STRIKE OUT ONE

11 July 1949

I recommend that the following objects which have *(have not)* been inspected from seaward to determine their value as landmarks be charted on *(deleted from)* the charts indicated.

The positions given have been checked after listing by

S. V. Griffith

Chief of Party.

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

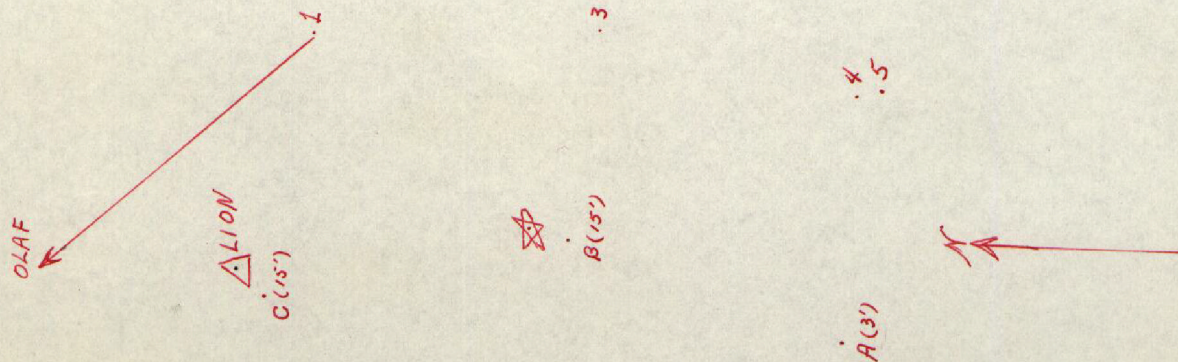
T-8827 Mëtrofania

Location of Mëtrofania Island Light
(Copy from photo 10928)

"A" Offlying reef bare 3' MLW (photo. 10929)

"B" Pinnacle rock 15' off point next south of light
pt. (photo. 10929)

"C" Detached rock (15') SW of LION (photo. 10929)



Angles taken for the location of Mëtrofania Island Light, which was established in 1943 on sharp rocky ridge near the southeast end of the northeasterly one of double point, about $\frac{1}{2}$ mile south of \triangle LION.

Objects used for fixes are shown here in relative positions and at the scale of the photograph. Objects were pricked on acetate from photograph, positions plotted and results transferred here as shown.

Computation of elevation should be checked after final plot is made.

Position 1:

"A" 78° 29'
LION
OLAF 30° 46'
Light-LION 67° 15'

Position 3:

"A" 45° 46'
"B"
LION 48° 54'
"B"-Light 11° 27'

Position 2:

"B" 67° 21'
"C"
OLAF 33° 13'
Light-"C" 62° 43'

Position 4:

"A" 60° 50'
"B"
LION 09° 43'
"A"-Light 64° 22'

Position 5:

"A" $56^{\circ} 03'$
"B" $08^{\circ} 56'$
LION $08^{\circ} 56'$

Vert. \angle bet. Lt. of Sh. line below Lt. $2^{\circ} 00'$
H.I. 14.0 above water level at:-
Time 10:40, Aug. 28, 1945 (predicted tide 10')

Scaled distance to shoreline from field plot 0.58 mi. (corr.
and vert. angle = $14'$)

Scaled distance to Light from field plot 1080 meters.

Computation of Elevation

Log. tan $1^{\circ} 46'$ = 8.488170
 log 1080 = 3.033424
Log. 3.2809 ft. = 0.515993

Log Elev. above H. I. = 2.038587
 Elev. above H. I. = 10.92 ft.

H. I. above MHW = 14.0-5.0 = 9.0 ft.
Corr. at level at Light = 118.2 ft.

Hydrographic Stations
T-8827

- 2701 Sharp end of ledge.
- .2 2-foot rock
 - .3 High point at outer end of sharp dike
 - .4 High end of ledge
 - ✓5 Detached pinnacle, elev. about 25 ft.
 - ✓6 Large, flat detached rock, elev. of high point 5'
 - * ↓7 Large pointed boulder, elev. 16'
 - * ✓8 Grass-topped pinnacle, elev. 70'.
 - ✓9 Smooth pyramid-shaped rock, elev. 40'
- 2710 South and low end of pyramidal detached rock, elev. 10'
- ✓1 Conical grass-tipped pinnacle
 - ✓2 8-foot rock
 - .3 Black, low, rocky point
 - 4 End of low bluff
 - 5 Boulder
 - .6 Mouth of stream
 - ✓7 Tip of brush growth on top of bank
 - ✓8 Black-topped 10' rock
 - ✓9 High part of rock, 15'
- ✓2720 Top of 10' rock
- ✓1 Six-foot flat rock
 - ✓2 25-foot pinnacle
 - ✓3 Grass-topped, 60-ft. pinnacle
 - ✓4 7-foot rock
 - ✓5 8-foot, high point, south corner
 - ✓6 4-foot brown rock
 - ✓7 4-foot flat rock

2728 10-foot brown rock on HWL

✓9 12-foot rock-top

✓2730 Top of 15-ft. rock on HWL

✓1 Top of 15-foot sharp rock

✓2 Rocky point about 10' high

✓3 6-foot rock

✓4 Sharp-topped rocky point 10' high

✓5 Top of 60-ft. pinnacle

✓6 6-foot rock

✓7 4-foot, rock

✓9 6-foot rock - not detached

2740 Point of land

✓1 Top of Waterfall

✓2 Rocky point, 10ft high

✓3 Boulder, larger of two

✓4 8-ft. sharp rock

✓5 10-ft. rock

✓6 20-ft. rock on beach

✓7 12-ft. rock

✓8 20-ft. pinnacle

✓9 25-ft. pinnacle

2750 15-ft. rock

1 100-ft. pinnacle

2 10-ft. rock

3 4-ft. rock

4 18-ft. rock, high point, west end

5 20-ft. rock

6 8-ft. rock

- 2757 High point of 8-ft. rock
- ✓8 High part of 5-ft. rock
 - ✓9 40-ft. pinnacle
- 2760 High part of ledge
- 1 14-ft. rock, high part, SE corner
 - ✓2 10-ft. rock
 - ✓3 20-ft. black rock
 - ✓4 NE corner of square point
 - ✓5 Large black rock on beach
 - ✓6 10-ft. black rock, square rock behind it.
 - ✓7 10-ft. black rock, outer edge of slide
 - ✓8 4-ft. rock
 - ✓9 12-ft. rock
- ✓2770 Small 2-ft. rock
- ✓1 6-ft. black rock, SW end
 - * ✓2 Highest point of rock, two pinnacle slabs just westward
 - ✓3 Grass-topped 50-ft. rock
 - ✓4 Top of connected rock, elev. about 20 ft.
 - ✓5 40-ft. pinnacle, southerly tip of three
 - * ✓6 2-ft. rock
 - * ✓7 Top of 20-ft. rock
 - * ✓8 4-ft. rock on reef (ledge)
 - ✓9 Detached rock, elev. 6 ft. about MHW
- ✓2780 Detached rock, elev. 5 ft.
- ✓1 Large detached boulder
 - ✓2 Pinnacle, elev. 40 ft.
 - ✓3 Rock, elev. 5 ft. MHW

- 2784 Detached rock, bares 8' MHW
- 5 Small grass covered projection from bluff
- 7 Point of brush growth (inland)
- ✓2788 Point on edge of cliff (inland)
- ✓ B. Detached 15-ft. rock
- ✓ C. Flat-topped 15-ft. rock

* Located by two cuts only.

GEOGRAPHIC NAMES

Survey No. T-8827

GEOGRAPHIC NAMES											
Survey No. T-8827											
Name on Survey	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
	A	B	C	D	E	F	G	H	K		
Alaska	(for title)										1
Alaska Peninsula	"	"	: should be used as part of title						USGB	2	
Pacific Ocean	(not North Pacific Ocean)										3
Mitrofanía Island									USGB	4	
Spitz Island										5	
Sosbee Bay		large bay between 2 most southerly points of Mitrofanía I.									6
Cushing Bay		small bay on west side of most northerly point of Mitrofanía I.									7
										8	
										9	
					Names underlined in red are approved. 7-13-49						10
									L. Heck	11	
										12	
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										25	
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										27	

M 234-

Review Report
T-8827

28 Delineation:

To fill in the gaps of shoreline delineation and to check the accuracy of that drawn (10924-31, 1942 photographs), extensive use was made of the series 06270-77(1941) which afforded better views from which to judge the character of the shoreline, and the off-shore features.

The field inspection copy of 10926 was not available so that no check could be made of hydrographic or rock data for the western shore of the bay formed by the curve of Mitrofanina Island.

(0.2' below MHW)

The print for 06274 (affording a good view of the whole northeastern shore of Mitrofanina) was also unavailable. This made it necessary to check adequacy of delineation and to fill gaps in delineation from photographs on which shadows and overhang obscured the shoreline in places. Nevertheless, the shoreline is believed to be correctly placed. A rocky islet appears on the manuscript 400 \pm m off-shore ($55^{\circ} 50\frac{1}{2}'$ / $158^{\circ} 46\frac{1}{2}'$) for which no field inspection data could be found. Two photographs afforded a suggestion that there may be rocks extending out from that point of the shore. It needs investigation. Likewise, no field notes were found to cover the patches of kelp north of Cushing Bay, though a note on the manuscript indicates that they were located by the field party. They have been left on the manuscript.

These photographs were available in late Aug. (1941) and their field data used as a check against the manuscript.

34 Landmarks and Aids to Navigation

Island

Mitrofanina Light was already on chart 8802 (from Notice to Mariners No. 122, 1943; approximate position $55^{\circ} 50'$ / $158^{\circ} 42'$).

Form 567 was filled in during review and forwarded to the Nautical Charts Branch.

43 Comparison with Previous Topographic Surveys:

T-8466 1:20,000; Unalaska Datum; no field inspection; no field edit.

Only four control stations were used for this radial plot. Matching T-8466 and T-8827 by these points made it possible to compare the plots and the shoreline delineation.

The additional control of the radial plot for T-8827 resulted in moving the picture centers from 23 m to 53 m, with a resultant change in location of shoreline.

Topography on T-8466 is suggested only by ridge lines and location of peaks with elevation figures (which are only approximate).

This map supersedes T-8466 for charting purposes.

46. Accuracy Tests

No field edit and no horizontal or vertical accuracy tests were made. Three control stations near the west coast held in the radial plot, so that the shoreline and the contours in the western portion of the island are well fixed. The eastern half of the island had three control stations which held to within 0.5 mm. and numerous points for good radial cuts have held this portion of the map to the required accuracy both for charting purposes and for topographic quadrangles of the 200-foot contour interval.

47. T-8827 has not been applied to charts.

Reviewed by:

Lena T. Stevens
13 July 1949

Reviewed by:

Lena T. Stevens

Approved by:

A. V. Griffith
Chief, Review Section *AKM*
Div. of Photogrammetry

O. S. Reading
Chief, Division of Photogrammetry

H. Edmundson
Chief, Nautical Chart Branch
Division of Charts

Acting R. G. Crosby
Chief, Div. of Coastal Surveys *RC*