

6749

CONFIDENTIAL



6749



Form 504 Rev. April 1935	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Topographic Hydrographic	T 6749 Sheet No. D-40
U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES MAR 3 1941 Acc. No. ....	
Aleutian Islands.	
State	<del>Alaska</del>
LOCALITY	
Herbert Island	
Islands of Four Mountains,	
<del>Alaska</del>	
193 40	
CHIEF OF PARTY	
J. H. Peters	

U. S. GOVERNMENT PRINTING OFFICE 102221

ef

DECLASSIFICATION BY NOAA  
PURSUANT TO DOC SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.3 (a), EXECUTIVE ORDER 12356

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. D-40

REGISTER NO. T- 6749

T6749

State ~~Alaska~~, Aleutian Islands

General locality Islands of Four Mountains

Locality Herbert Island

Scale 1:20,000 Date of survey July & August, 19 40

Vessel EXPLORER & E. LESTER JONES

Chief of party J. H. Peters & L. C. Wilder

Surveyed by E.B. Latham, J.C. Ellerbe, C. J. Wagner, H.A. Paton

Inked by C.J. Wagner, J.C. Ellerbe

Heights in feet above M.H.W. to ground to tops of trees

~~Contour, Approximate contour~~, Form line interval 100 feet

Instructions dated February 3, 19 38

Remarks:



DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET D-1940

REGISTER NO. 6749

Project HT-218

M.V. "E. LESTER JONES"

L. C. WILDER, Commanding Officer

**AUTHORITY:**

This work was accomplished in accordance with Director's instructions, Project HT-218, dated February 3, 1939, and subsequent supplementals. ✓

**CONTROL:**

Triangulation executed by the Ship PIONEER in 1939, and by the M.V. "E. LESTER JONES" in 1940. ✓

**EXTENT:**

The work on this sheet covers Herbert Island in its entirety. The party on the "E. LESTER JONES" accomplished the work on the northern portion of the island, while the southern portion was done by the Ship EXPLORER. The heavy pencil line across the sheet indicates the division between the work of the two vessels. A small part of the shoreline (from a point 165 meters East of topo signal Gok, extending southward to a point 338 meters south of topo signal Erg) on the northeast side of the island was done by the EXPLORER. The form lines in this vicinity, however, were determined by the "E. LESTER JONES". This report deals only with that portion of the sheet surveyed by the latter vessel, except where, for purposes of description, it is necessary to treat the island as a whole. ✓

**DESCRIPTION; (General):**

When approaching Herbert Island from east or west, it appears fairly flat on the northern end for a distance of about 1/2 mile inshore, then begins rising abruptly to the northern end of the crater, from whence there is a more gradual rise toward the highest point, on the southern edge of the crater. The whole island may be likened to a truncated cone, with the truncated section lower on the northern side. From well offshore to the northward, one can see partially into the crater. The island is tundra and grass covered well up the slopes of the peak, where the ground becomes bare (snow covered from fall to early summer). ✓



*extensive*  
*part? 1000* - 2 - *side? 1000*  
Along the west side of the northern end of the island is a low bluff, less than 50 feet high, which gives way on the east and west sides to high, sheer bluffs of from 200 to 400 feet. Under these high bluffs, the shoreline is mainly a boulder beach, ten to twenty meters wide, with kelp offshore. On the flat part of the northern end, however, the beach is fairly wide and there are wide reefs, with many rocks awash, extending well offshore, and beds of heavy kelp for some distance outside the reef and foul area line. (A)

On the western side of the island, triangulation station LEO, on a 60 foot rock, is very prominent, and easily recognizable.

#### LANDMARKS:

The only prominent landmark except the island as a whole (due to its peculiar shape) is triangulation station LEO, referred to above. This rock is 1/2 mile offshore, and stands out very prominently from both the north and south.

#### METHODS USED:

A traverse was begun at triangulation station ELK, rodding to the eastward to topographic signal Gob, and carried along the beach to a tie-in at triangulation station REB. Frequent resection on the other triangulation stations and checking of the orientation was obtained all along the traverse, and a flat closure was obtained on REB.

The traverse was continued southward along the shoreline, it being necessary to go up over the cliff for about 1/2 mile just south of REB, thence along the beach to a point inshore of LEO (topo signal Man), where it was picked up by the party on the Ship EXPLORER and continued southward. A check was obtained at this point on Man, which was located by cuts from REB and LEO. No error was found.

On the eastern end of the sheet, the party on the EXPLORER had run a traverse to the southward from BED to a point 338 meters south of topo signal Erg. This traverse was picked up at this point and extended to the southward to BAY, where it checked in flat. At BAY, the EXPLORER party again took over and extended the traverse to the southward to meet the one being run from the westward.

During the running of these traverses, all possible cuts for elevations were obtained, and form lines sketched in as opportunity was afforded.

#### COMPARISON WITH PREVIOUS SURVEYS:

No adequate previous surveys of this area were available for comparison.



#### JUNCTIONS:

Since the sheet covers the entire island, there were no junctions.

#### NEW NAMES:

No new names were assigned by the field party.

#### ANCHORAGES:

No anchorages were found. The small shallow bight between ELK and HERB may be used in calm weather, but it has a boulder bottom, and is subject to heavy seas which wash around the island from the southward in southerly weather. Strong currents were also encountered in this bight, tending to form tide rips in conjunction with any sea which might be running simultaneously.

#### MAGNETICS:

Magnetic declinations were determined at intervals along the shoreline. The declinoire used was standardized at the Sitka Magnetic Observatory in April, and again at Lincoln Park, Seattle, upon returning to the states in the fall. Reports of the standardizations are attached.

It will be noted that at BAY there seems to be a large amount of local attraction. The dip at this station was also excessive, so much so that the north end of the needle would hang up on the box when pointing to magnetic north, thus necessitating taking readings at N plus and minus  $5^{\circ}$ , at which points the needle, though tilted badly, still swung free.

40  
Declination about  
 $4^{\circ}$  less than  
normal. Div. of  
G. and S. notified.

#### DATUM:

The datum used on this sheet was Unalaska, 1901, ~~partially~~ adjusted (see note PIONEER, 1938-39, triangulation, regarding the adjustments made by the Washington Office to the line KIGUSH - ADUGAK, control being carried forward from that partially adjusted line).

#### STATISTICS:

Statute miles of shoreline	17.6
Area (square statute miles)	9.4
Number of elevations obtained	117

Respectfully submitted:

Forwarded and Approved:

*L. C. Wilder*  
L. C. WILDER,  
H. & G. E., Ch. of Pty.,  
Comdg., M.V. "E. LESTER JONES".

*John C. Ellerbe*  
JOHN C. ELLERBE,  
Jr. H. & G. Engr.,  
Coast and Geodetic Survey.



NOTE TO EXPLORER

regarding

TOPOGRAPHIC SHEET D-40

The work done by the E. LESTER JONES has been inked, with the exception of the names of the hydro signals, which we do not have. The projection has not been inked, nor the geographic names and vegetation, all of which are to be done by the processing office.

The descriptive report covering the northern end of the sheet has been typed and is to be attached, in toto, into the full descriptive report. The island has been treated as a whole therein only when necessary for purposes of description. The title sheet has not been prepared. A copy of the report on standardization of the declinatoires is attached and should be included in the report as part of our section. ✓

It is desired that our section of the report be kept intact, and it has been prepared and typed accordingly.

*R. C. Wilder*

L. C. WILDER,  
Commanding Officer,  
M.V. "E. LESTER JONES"

Note - Please type in the name of the topo signal at the north end of Latham's work on page 1 of the Descr. Report, also in blank space under Methods, page 2. J.C. ✓OK

Note - Report <sup>on magnetics</sup> will be forwarded to you in a day or two -



REPORT

on

STANDARDIZATION OF DECLINATOIRES

Season 1940

M.V. "E. LESTER JONES"

L. C. WILDER, COMMANDING

During the field season 1940, while working on projects HT-218 and HT-247, the two declinatoires aboard this vessel were standardized in accordance with instructions.

The spring standardization was made at the Sitka Magnetic Observatory, on April 18, 1940. The azimuth of the mark was obtained from the magnetic observer there. Complete computations for the error of the two instruments were made. It will be noted that declinatoire No. 172 was slightly sluggish.

The fall standardization was made at the newly established station at Lincoln Park, Seattle, Washington, the line from the station to Alki Point Light being used for reference. No magnetic values for the station are known, therefore the computations are being submitted unfinished. It will be noted that declinatoire No. 172 was again found sluggish.

Four readings were taken for the standardization of each instrument. The angles made with the true azimuth line were then scaled with a steel protractor, and the four values meaned. The resulting mean angle was applied to the true azimuth of the mark in each case to determine the value of magnetic north by declinatoire. The true variation was then applied to this value to determine the error of the instrument concerned.

Declinatoire No. 172, which is obviously out of order, is being returned to the office and requisition for replacement has been made.

Following are the computations for each standardization:

(1). SITKA MAGNETIC OBSERVATORY--April 18, 1940.

Declination	29° - 57' E.
Diurnal Variation	<u>+02'</u>
Actual Variation	29° - 59' E.



	Declinatoire C.L. Berger & Sons(A) (10:25 a.m.)	Declinatoire # 172 (10:30 a.m.)
Asimuth of mark	172° - 36' True	172° - 36' True
Mn. angle measured (4)	<u>142° - 39'</u>	<u>141° - 31'</u>
Magnetic North by declinatoire	29° - 57'	31° - 05'
Actual Variation	<u>29° - 59'</u>	<u>29° - 59'</u>
Declinatoire Error	-02'	+1° - 06'

(2). LINCOLN PARK, SEATTLE, WASHINGTON--October 12, 1940.

Declination

Diurnal Variation

Actual Variation

	Declinatoire C.L. Berger & Sons(A) (1:08 p.m.)	Declinatoire # 172 (1:04 p.m.)
Asimuth of Mark	342° - 37' True	342° - 37' True
Mn. Angle measured (4)	<u>40° - 42'</u>	<u>39° - 53'</u>
Magnetic North by declinatoire	<u>23° - 19'</u>	<u>22° - 30'</u>
Actual Variation	<u>23° - 14'</u>	<u>23° - 14'</u>
Declinatoire Error	+05'	-44'

The values which are unknown are to be filled in by the Office and computations completed.

Respectfully Submitted:

*John C. Ellerbe*  
J. C. ELLERBE,  
Jr. H. & G. Engr.  
U. S. Coast and Geodetic Survey

Forwarded; Approved:

*L. C. Wilder*

L. C. WILDER,  
H. & G. E., Ch. of Pty.,  
Comdg., M.V. "E. LESTER JONES".



DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET D-40

HERBERT ISLAND

ISLANDS OF FOUR MOUNTAINS

ALASKA

U. S. C. & G. S. S. EXPLORER

J. H. Peters, Comdg.



DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET D-40

Register No. 6749

PROJECT H. T. -218

U.S.C. & G.S.S. EXPLORER,

J. H. Peters, Comdg. Officer

This descriptive report is submitted to supplement the information contained in the report by Lieut. (j.g.) John C. Ellerbe of the M. V. E. LESTER JONES.

EXTENT

The shoreline along the northeast part of the island was done by Lieut. (j.g.) Ector B. Latham. His work extended from 450 meters northwest of station "GOAT" to 338 meters south of topo. signal "ERG". The section from station "LEO" to signal "PIG" was done by Lieut. (j.g.) C. J. Wagner. From signal "PIG" to station "BAY" was done by Lieut H. A. Paton.

DESCRIPTION:

The report on the general appearance of the island has been covered by Lieut. Ellerbe's report. On the southwest portion of the island there is cup-shaped valley, apparently the eroded remains of a crater. The shore consists of a boulder beach with moderate slopes behind it. Beginning with the extreme southwest corner of the island and extending around the south side, the shore line is bordered with cliffs of varying heights. At the foot of the cliffs there is <sup>a</sup>found narrow boulder beach in most places.



In general, all offshore rocks are within 200 meters of the shore. Off the southeast corner, however, is found a prominent  
"TIT"  
pinnacle rock, 135 feet in height, which is about 550 meters offshore. The passage between this rock and the island is not clear, there being one rock awash, and another which extends two feet above M. H. W. Beds of kelp extend along the entire shore.

#### LAND MARKS

Only two additional landmarks are worthy of charting—the pinnacle rock on which station "TIT" is located, which has been mentioned in the preceding paragraph, and a small trappers cabin located on the north shore. Lat. 52° 47' 2" Long. 170° 06' 8"

#### METHODS USED

The section surveyed by Lieut. (j.g.) Ector B. Latham was done in accordance with standard Coast Survey methods. A traverse was begun at station "GOAT" and was extended southward to station "BED"; the traverse closed without appreciable error.

On the southwest shore, Lieut. (j.g.) C. J. Wagner started at station "LEO" and extended the survey southward to station "DUB". This section was controlled by graphic triangulation and there were no errors.

Unfavorable weather condition prevented landings for some time and in order that the hydrographic work be not delayed, the white washed signals and other natural objects were cut in by sextant from the ship or launches. The cuts were plotted on the topo sheets and transferred to the boat sheets. Later an opportunity was obtained



to make landings and a traverse was run from station "BAL" to signal "PIG" by Lieut. Paton and from station "Dub", to signal "PIG", by Lieut. Paton station "DUB", to signal "PIG", by Lieut Wagner. These traverses joined with zero closure.

A few elevations were obtained by plane table in this area but most of the formlines were located by sextant cuts, taken from launches or the ship while working close in shore. Lieut. Wagners' work was done on a supplemental topo sheet, (standard aluminum mounted sheet) and transferred to the one on which the rest of the work was done. This supplemental sheet is of no further value and is not being transmitted to the office.

#### NEW NAMES

No new names were assigned by the field party. The name "HERBERT ISLAND" is in use on our charts and in our publications. It is in common use by all people interviewed in Dutch Harbor and should be retained.

#### GENERAL

A good tide gauge site was found in a small land locked basin behind the rock on which signal "HAM" was located.

There were no inhabitants on the island during the summer of 1940. There is, however, a cabin on the north shore and at infrequent intervals this is occupied by the fox trappers.

No wild life was seen by the topographic parties.

Drinking water can be obtained from small water falls in several places but there were no favorable sites for small boats to obtain water in quantity.

There are no trees or bushes on the island. A very thin growth of grass and moss are found on the lower slopes but most of the area is bare cinders and ash.

No steam jets, fumeroles or hot springs were seen.

An observation of magnetic declination was made with the declinometer at signal "SOW"

The elevation of station "HERBERT PEAK", 1938 was determined by plane table and found to be 4235 feet. This elevation was also computed by the triangulation party on the PIONEER and their value was 4225 feet.

The height of all rocks refers to mean high water. ~~The amount rocks awash bare refers to mean high water.~~ The amount rocks awash bare refers to mean lower low water.

STATISTICS

Statute miles of shoreline	11.0
Area (square statute miles)	10.2

Respectfully submitted

*C. J. Wagner*  
C. J. Wagner  
Lieut. (j.g.) C. & G.S.  
*E. B. Latham*  
E. B. Latham  
Lieut. (j.g.) C. & G.S.  
*H. A. Paton*  
H. A. Paton  
Lieut. C. & G.S.

APPROVED AND FORWARDED

J. H. Peters  
Commanding Officer,  
U.S.C. & G.S.S. EXPLORER

*Forwarded*  
*W. H. Bean*  
Chief in Charge,  
Seal Processing Office



## Remarks

## Decisions

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GEOGRAPHIC NAMES  
Survey No. **T6749**

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,							
<u>Herbert Island</u>																1
<u>Islands of Four Mountains.</u>																2
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**J. H. Peters**

Chief of Party.

U. S. GOVERNMENT PRINTING OFFICE 49079


# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTATIC OF~~

~~No. H~~

No. T

**T6749**  


received Mar. 3, 1941  
registered Mar. 5, 1941  
verified  
reviewed  
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
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25	✓	<i>HSC</i>	<i>Pages 1 to 3</i>
26			
30			
40	✓	<i>OWS</i>	<i>Page 3 ✓</i>
62			
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RETURN TO

82	T. B. Reed
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✓ *TBR*



DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF TOPOGRAPHIC SURVEY

REGISTER NO. 6749

Field No. D-40

Aleutian Islands; Islands of Four Mountains; Herbert Island  
Surveyed July - August 1940, Scale 1:20,000  
Instructions dated February 3, 1938 (SURVEYOR)

Plane Table Survey

Aluminum Mounted

Chief of Party - J. H. Peters, L. C. Wilder  
Surveyed by - Officers of Ships EXPLORER and E. LESTER JONES  
Inked by - C. J. Wagner, J. C. Ellerbe  
Reviewed by - J. A. McCormick, June 11, 1942  
Inspected by - H. R. Edmonston

1. Adjoining Surveys

There are no overlaps with other surveys in the vicinity.

2. Previous Surveys

The Coast and Geodetic Survey has made no previous surveys in this area.

3. Comparison with Chart 8802 (New Print of Jan. 29, 1942)

Topography accomplished on the present survey has already been applied to the latest prints. Erratic declination noted at Station Bay (Lat. 52°44', Long. 170°03') was called to the attention of the Division of Geomagnetism and Seismology on the Immediate Attention Memorandum when the sheet was received in the office.

4. Compliance with Project Instructions

Excellent.

5. Additional Field Work Recommended

None.

6. Superseded Surveys

None.

*Robert W. King*  
Chief, Surveys Section

*Fred. L. Peacock*  
Chief, Section of Hydrography

Examined and approved:

*J. B. Borden*  
Chief, Division of Charts

*Stude*  
Chief, Division of Coastal Surveys