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C. & G. SURVEY  
L. & A.  
FEB 28 1916  
Acc. No.

Form 504  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: \_\_\_\_\_  
11-5613

DESCRIPTIVE REPORT.

*Top.* Sheet No. *3561*

LOCALITY:

\_\_\_\_\_  
191  
\_\_\_\_\_  
CHIEF OF PARTY:

3561

DEPARTMENT OF COMMERCE  
U.S. COAST & GEODETIC SURVEY  
E. LESTER JONES, SUPERINTENDENT

\* \* \* \* \*

DESCRIPTIVE REPORT

To accompany

TOPOGRAPHIC SHEET *2561.*

Of

EAST-CENTRAL PART OF HAGAI ISLAND

SHUMAGIN ISLANDS, SOUTHWESTERN ALASKA

Surveyed during August, September, and October, 1915.

Scale 1/20,000 *Contour Interval 100 ft.*

By Party of U.S.S. Patterson

H.C. Densen, Ass't., Commanding

M.O. Nelson, Aid, Topographer

Under Instructions from the Superintendent,

dated March 18, 1915.

## DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET OF THE EASTCENTRAL PART OF NAGAI ISLAND, SHUMAGIN ISLANDS, SOUTHWEST ALASKA

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LIMITS. The work done on this sheet extends south from the creek draining the east valley between Mist Mountain and the 1520 ft peak to the south of it, down to the granite-bound point forming the southeast seaward tangent of the large bight just below East Bight, along the east coast of Nagai Id.

DESCRIPTION OF THE COAST. Going south along the east coast of Nagai Id. from Mist Harbor, the one mile of land between the Harbor and East Bight is divided into two prominent triangular bluffs by a creek and valley between Mist Mountain (1823) and the 1520 ft hill Southeast of it. The north one of these bluffs is about 1200 ft high while the south one, which is very irregular and steep is about 1250 ft. From this south bluff around to hyd. signal "Ful", on the north shore of East Bight, it is difficult to describe the shore cliffs on account of their jaggedness and irregularity. From 1/4 mile offshore the cliffs take on a more flat appearance since the rock is homogeneously dark and iron stained.

Signal "Nest" is built near the outer end of a 60 meter rocky spur of about 95 ft elevation above H W, at the extreme Northeast tangent of East Bight. Big boulders and pinnacles abound off this tangent.

From the 900 ft triangular bluff 5/8 mile Northwest of Signal "Nest", running Northwest along the north shore to the head of the bight the shoreline is exceedingly jagged. The 525 foot gully cliff shown north of hyd. signal "Gin", is very noticeable, the jagged cliff to either side tapering down to the valley stream beds.

The point of land terminated by hyd. signal "Jota" is noticeable by reason of the 230 ft block top bluff, as well as the laminated structure of the sharply folded rock cliffs humped up to a maximum of 580 ft north of hyd signal "Imo".

From the bight north of hyd signal "Kel", to the head of the bight the cliffs are generally less than 100 ft.

The 3/4 mile strip of non-cliff beach at the head of the bight is lined with grey-white boulders, from 6 to 24 inches in diameter.

The creek falls 3/4 mile inshore and beyond the lake can be seen outside of the bight. At the extreme H W, or when the lake floods, this lake is connected to salt water by a gully running along the low cliffs at the most southerly end.

The beach at hyd signal "Sam" is covered with grey-white rounded boulders, while the shores of the 1375 ft peak west of hyd signal "Tina", are littered with irregular fragments of all sizes, weatherings from the slate-like dark, iron-stained rock of the mountains.

The shore of the west wing of East Bight are generally boulder lined, with a backing of low cliffs, serving as a fringe to the grass and alder covered hill slopes, studded here and there with rock outcrops, which increase in frequency as the summits are approached. A very low valley nearly connects Sanborn Harbor with East Bight at the Northwest extremity of this wing.

The boulder spit on which triangulation signal "Hook" was built, is grass-covered, and will just clear extreme H W.

High bluffs identify the east and south faces of the peninsula forming the southwest tangent of East Bight. The southeast tip of this point terminates.

Sheet # 2

Number of Sheets is ✓

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DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET OF THE EASTCENTRAL PART  
OF NAGAI ISLAND, SHUMAGIN ISLANDS, SOUTHWEST ALASKA

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in a rocky spur of over 100 meters in length, and 30 meters width, with a summit tooth on the inshore end of about 100 ft elevation. Numerous rocks skirt the point.

To the north of hyd signal "Cut" the cliffs are of a dark iron-stained color, and somewhat shaly nature, while to the southward one finds a hard, grey-white, coars-grained granite, extending as far as the shoreline was run. The 1707 ft hill N N W of hyd signal "Edna" is covered with granite blocks, outcrops, and presents a very jumbled appearance from the west and south.

The potato-shaped head of this bight is fringed with fine white sand dunes, which expand in a low water beach extending 150 meters or more to seaward. Numerous creeks drain the adjacent hill-sides.

Hyd signals "Kap", and "Clif" are located on a long low rocky table topped extreme H W island.

The granite shore-cliffs gradually increase in height as they round triangulation station "Gull", and the heavy swell prevalent here, together with weather effects have slivered and sliced the rock so that it is difficult to convey a correct idea of the shore cliffs on the sheet.

SURVEY METHODS. Frequent triangulation intersection stations furnished ample control. The shoreline in East Bight was put in entirely by radiation and resection, all the signals and white-washes having been put in before doing the topography. The shoreline running between signals "Ledge", and "Gull", was traversed, the error of closure being 15 meters. The shoreline was adjusted for this error and also for the variation in the sheet, which was serious, averaging about 10 meters per minute of longitude, and a little less for latitude (checked). The contouring was done in the field as far as possible. That along the headland between Mist Harbor and East Bight was done on the basis of several determined elevations, and location cuts with the assistance of a photograph, and memory. At the heads of the two large bights on this sheet, the contours were sketched in while on the ground, as well as it was possible without sending the rodmen inshore or making special hill set-ups and the work is thought to be sufficiently accurate for the navigator's purposes.

MAGNETICS. No declinatoire observations appear on this sheet, since the declinatoire was "frozen", and out of commission. The 1914 topographic sheet covering adjacent terrain, shows a plane table determination of the magnetic declination as  $19^{\circ} 27'$  at triangulation station "Nagai". (shown on this sheet)

M. O. Nelson  
Aid. Edna

### Statistics.

Area, Square Statute miles	14
Shore line	" " 21
River, creeks	" " 6
Ponds, lakes	" " 2
Number of topographic stations	50
Number of topographic and hydrographic signals located	52
Number of elevations determined	103

### Plane Table Positions.

<u>Object and Description</u>	<u>Lat.</u>	<u>D.M</u>	<u>Long.</u>	<u>D.P.</u>	<u>Height</u>	<u>Remarks</u>
					ft.	
Triangular Pinnacle	55°06'	260	159°51'	402	60	Top center
" "	05	1410	52	250	25	"
" "	06	380	53	164	30	"
Rock Spur Point		980	54	60	10-20	Seaward Tan
Pinnacle Rock		1237		1050	15	Highest Point
HW Detached Rock off Point	07	470	55	391		NW extremity of pt.
Cliff Face - Point		918	56	906		Vertical extremity
Large boulder - HW Beach	06	681	56	825	10-15	10-15 ft. diameter
Rock detached at HW	06	494	58	453	08	" m "
						grass covered
Irregular Large Rock extending out from HW (about 30x20 m)	05	275	56	313	30	Highest Point
Rock 50 y. Offshore	04	716	55	867	06	" " 5-6 m.
						diameter
Pinnacle Rock 10 ft. + high	04	10	55	826	10	100 m. off pt. -
Outermost Rock						alongside 50 m.
						narrow reef
Rock about 200 m. offshore from Creek Falls	04	206	57	917	15	Highest point
Prominent pinnacle	04	270	58	527	35	" "
Large Rock about 200 m. offshore	04	1038	59	992		" "