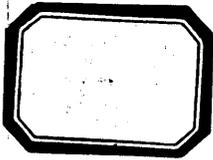


3816

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

State: *Alaska*

11-5613

DESCRIPTIVE REPORT. *3816*

Hydrographic Sheet No. *3816*

LOCALITY:
Port Gravina
Prince William
Sound Alaska

1915

CHIEF OF PARTY:
G. T. Rude

D E S C R I P T I V E R E P O R T

to Accompany

HYDROGRAPHIC SHEET No. 3816

PORT GRAVINA, PRINCE WILLIAM SOUND,

--- A L A S K A ---

U.S.COAST AND GEODETIC SURVEY STEAMER "TAKU"

GILBERT T. RUDE, Chief of Party

Date of Instructions, March 24, 1915.

Season 1915.

---cOo---

D E S C R I P T I V E R E P O R T

to Accompany

HYDROGRAPHIC SHEET No. 3816

PORT GRAVINA, PRINCE WILLIAM SOUND,

A L A S K A

Steamer TAKU,
Gilbert T. Rude, Chief of Party.
Gilbert T. Rude, Hydrographer.

Season 1915.

Date of Instructions, March 24, 1915.

Limits and Locality:

This sheet covers the whole of Port Gravina on a scale of 1:20,000, including St. Matthews Bay, Olson Bay, Parsha Bay, Bear Trap Bay, and Comfort Cove, and extends from two to three miles into Orca Bay off the entrance to Port Gravina.

The main part of the sheet was covered by the TAKU, supplemented with whaleboat work along the shores and at the heads of the bays and coves. This whaleboat work is shown on a separate boat sheet transmitted with the TAKU boat sheet.

Coast Line:

The shore line is for the most part rocky with the exception of the heads of the bays; at the head of Port Gravina; at Gravina Point and the shores between St. Matthews Bay and Red Head. The heads of the bays and the head of Port Gravina have all been filled with glacial deposit and are low flats with streams running them; the low land between St. Matthews Bay and Red Head is low flat tundra with streams and water holes, and the low point at Point Gravina is composed of gravel and boulders.

Point Gravina is a low grass covered point, with a group of trees

standing well out on the point from the main tree line. These trees are prominent when approached from up Orca Bay or from the direction of Red Head.

Gravina Island is a good land mark, showing well from all directions. It is heavily wooded. Its elevation may be obtained from the topographic sheet of this vicinity.

Red Head is a good land mark. The hill forming the head standing well away from all other hills. This point is heavily wooded to the summit. Its elevation may be obtained from the topographic sheet.

The land surrounding Port Gravina, as shown on the topographic sheet, is high, but the different peaks are not easily identified and are of little service to the navigator.

Shoals:

Shoal water extends off Gravina Point out to and around Gravina Island. The bottom is fairly even and soft. No indications of rocks were found. The shoal is probably a silt deposited by the meeting of the currents from Port Gravina and Orca Bay.

Shoal water extends off signals "Bud" and "Blow" on the east shore, terminating in a group of rocks known as Gravina Rock. These rocks are prominent, standing about ten to fifteen feet above high water.

The depths in the entrance to Bear Trap Bay are less than further up the bay. Considerable development work was done over this area. A rock, probably bare at extreme tides, was found near the middle of the bay and about one third the way up the bay between the entrance and the Narrows. This rock was felt over with the hand lead in the dinghy and the least depth obtained. The Narrows joining the outer and inner bays is very narrow but deep, ranging from 20 to 40 fathoms.

Shoal water, a lateral moraine, extends a short distance off sig-

nal "Zion". Station "Parsha" is on a rock bare at all stages of the tide. The rocks about 200 meters west (true) from station "Parsha" bare at about half tide.

Foul ground extends all along the north shore of Olson Bay from station "Rap" to station "Peep". The hydrographic work was brought well up to this area, but none was attempted in this foul area. All the rocks visible on extreme low water were located, some shown on the topographic sheet and some on the hydrographic sheet. Foul ground also extends to the westward from the small islands on which station "Hole" is located. These islands are heavily wooded. A shoal, least depth 10 fathoms, lies about half a mile west of these islands.

A shoal, least depth 10 fathoms, lies near the middle of Olsen Bay off signal "Pin".

A shoal, least depth 16 fathoms, lies about three quarters of a mile off shore between signals "Root" and "Vine" at the entrance of Olsen Bay. Deeper water, from 35 to 40 fathoms, lies between this shoal and the point at the entrance to Olsen Bay.

A patch of broken ground, with depths ranging from eight to twenty fathoms lies well out in Port Gravina off the entrance to St. Matthews Bay. This was closely developed.

Shoal water extends almost clear across the entrance to St. Matthews Bay from a foul boulder-strewn point at the entrance to this bay on the north side. This was closely developed with hand lead.

A rock, bare about half tide, lies half way between signals "Edge" and "Slop" in the hollow on the west side of St. Matthews Bay about half way to its head.

A rock, bare about quarter tide, lies about 200 meters south (true) from signal "Search".

Shoal water extends all along the shore from St. Matthews Bay to Red Head, the 20-fathom curve swinging well off shore east of Red Head. The bottom over this area is fairly even and soft for the most part. ✓

A cluster of rocks, bare at about half tide, extends about a quarter of a mile off the point on which signal ^{"Bar"} ~~"Sax"~~ is located, just inside Port Gravina from Red Head. ✓

Currents:

All currents are tidal, set fair with the channels and are moderate.

Anchorage:

Anchorage in soft bottom may be had for large vessels between Point Gravina and Gravina Island. This is exposed to all but north-east winds down Orca Bay.

Another anchorage area lies off Red Head on the west side of Port Gravina, but it is exposed to nearly all winds.

Anchorage with sticky bottom with shelter from all winds may be found for small craft at the head of St. Matthews Bay.

Large craft can anchor in 15 to 16 fathoms in the outer part of Olsen Bay and small craft in six to seven fathoms, sticky bottom, near the head of the bay, shelter from all winds.

Excellent anchorage for small and medium size vessels may be had in Comfott Cove in five to nine fathoms of water, sticky bottom.

Survey Methods:

The ordinary hand lead, Basnett sounding tubes, Tanner-Blish sounding tubes, and Cosmos sounding machine with registering sheave, were employed on this work. When using tubes the steamer was stopped occasionally and vertical casts made to check the tube readings.

Control:

The survey is controlled by a system of tertiary triangulation executed by the party on the TAKU in 1913 and by topographic signals located by the topographic party while this work was in progress in 1915. The positions of these signals may be obtained from the topographic sheet.

Names:

All names used in this descriptive report appear on C. & G. S. charts with the exception of Parsha Bay. This is a well-established local name.

Respectfully submitted,

Gilbert J. Reed

Assistant, U.S.C. & G. Survey,
Commanding Str. TAKU.

VEC
April 20, 1916.

P.S.
R.K.

HYDROGRAPHIC SHEET 3816.

Port Gravina, Prince William Sound, Alaska, by
Assistant G. T. Rude in 1915.

TIDES.

	Comfort Cove ft.
Mean lower low water, or plane of reference on staff	4.8
Lowest tide observed " "	1.3
Highest " " " "	18.9
Mean range of tide	9.5

DEPARTMENT OF COMMERCE

Hyd Sheet No 3816

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of hydrographic sheet No. 3816

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Drawing Section.

There are no grounds for criticising this work, except perhaps that there is a noticeable absence of cross lines.

The ground is uniformly covered and prominent shoals developed.

This area is very broken and numerous rocks, not shown on the Top. sheet, were found and located.

R. L. Johnston

Close inshore not developed
F.

Soundings shown in fathoms.

*Protracted by Schoppe and J. D. Torrey
Soundings plotted by J. D. Torrey
Verified and inked by R. L. Johnston*