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

State: _____

11-5613

DESCRIPTIVE REPORT.

Map Sheet No. *3634*

LOCALITY:

191

CHIEF OF PARTY:

3634

Coast and Geodetic Survey,

E. Lester Jones, Superintendent,

A Descriptive Report to Accompany Topographic Sheet (No. 1) 3634.

Port Bazan,

West Coast of Dall Island,

S. E. Alaska.

May - June 1916

By Party on Steamer "EXPLORER"

F. H. Hardy, Assistant,
Chief of Party.

Limits:-

This sheet includes only the harbor of Port Bazan on the West Coast of Dall Island; between Latitudes $54^{\circ} 48'$ and $54^{\circ} 51'$, and Longitudes $132^{\circ} 53'$ and $133^{\circ} 01'$. The scale is 1: 10,000.

General character of the country:-

This section of the coast is much the same as that throughout the whole island, being very rugged and broken up into ridges and mountain peaks with many small inlets and harbors indenting the coast line. Port Bazan lies between two of the high prominent peaks of this section (about five miles apart). The one to the northward (Tip) is a 2505 ft. mountain, the top of which narrows down to a small tip. The one to the southward (Wood) is a 1950 ft. mountain more or less the shape of a round ended cone; it is thickly wooded to the top; and many times when fog and low clouds enveloped the tops of the others, it for some reason, appeared to be the only one standing out clear. 11

In the Port the ridges to the southward are lower and further from the shore line; along the northern shore, the incline is abrupt and fairly steep terminating in a peak (at the western end of a short ridge) and a shoulder separated by a wide hollow. There are two large valleys at the head of the bay; a narrow and deep one running off to the northward, and the other a broad one running off to the eastward and then branching to the north and south.

The rock structure is very irregular and in many places is of igneous character, small seams of marble and quartz veins being very numerous, especially in the entrance. Many small samples of copper and galena ore were found in this neighborhood.

The trees all belong to the pine family - spruce, hemlock and cedar - and are quite tall and straight but of rather small diameter; ^

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The ridges are generally covered with scrub cedar and grass. Salmon-berry and blue-berry bushes are abundant, and in the flats water-lilies are thick while the devil-club is to be found at every hand.

There are a number of deer to be found here and traces of bear, wolves and ptarmigan.

The bay proper is about a mile and a quarter broad and three miles deep. At the entrance there is a large wooded island (Dolgoi Island) about $3/4$ mile wide and $1-1/2$ miles long; on either side of which are only narrow channels. This island is thickly wooded and rises in a mound shape to an elevation of 756 feet, down the south-east slope of this mound is a long narrow area of dead trees and logs. Along the outer coast of this island the tree line is about 100 meters or more back from the shore line and the area between is a broken rocky shelf rising from 10 to 30 feet above high-water. The south-west section of this island for about 500 meters rises in an abrupt cliff from the water to a height of 40 to 50 feet.

On the outside of Dolgoi Island are four smaller islands, on the largest of which \triangle Bazan was located. This island is about 200 meters wide and 700 meters long and is composed of a smooth rock formation of light brown to white color. The outer third of the island is the highest and \triangle Bazan was located on the highest nob of rock, being 125 ft. high; the inner two thirds of the island is lower and is wooded; however the tops of the trees rise about 15 or 20 feet higher than \triangle Bazan. The shore line rises abruptly on all sides of the island.

Just inside of this island and separated from it by only a narrow opening is the second larger island; it is much the same in character as the outer one and is wooded thruout. The two smaller islands are almost connected to this latter island by reefs and rocks. They are only about 20 to 30 ft. high and are bare of all vegetation.

Both entrance channels were used by the ship, but the north one much more than the southern. The north entrance at its narrowest part is little more than 100 meters wide in the clear way and late in the season heavy growths of kelp lined both sides.

To the north of the north entrance the main shore line is rugged and steep, cliffs 50 to 60 ft. in height rising from the water line thru-out most of the section. Two deep ravines cut into the mountain side, the northern one has a smooth bare rock face.

The south entrance is only about 100 meters wide at the inner end and but very little more at the outer part. The shoreline along the south shore of the entrance and on to the southward is extremely irregular and consists of a saw-tooth arrangement of sharp points and many narrow deep and long crevices with steep sides.

In the main part of the Bay are four noticable islands- two large and two small; the largest being about 500 x 800 meters and the

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two small ones about 50 x 100 meters. All are wooded and none of them are high.

The head of the bay narrows down to a small inner bay the southern half of which is blocked off by a large island separated from the main shore by a narrow channel which is quite foul and cannot be used on low water.

Shore line:-

The shore line in general is rocky and there are only a few small sand or gravel beaches of very limited extent. On the southern shore, about 100 meters south (all directions are true) of \odot Rot is a white sand beach about 20 meters wide. This can be distinctly seen when passing thru the south channel.

At the head of a small bight about 200 meters east of \odot See is a small gravel beach, and in most of the bights along the south shore of the south entrance there are small traces of sand and gravel. Along the north shore about 350 meters N. N. E. of \odot Chris is a small narrow bight having a sand and gravel beach; during the season the "COSMOS" was beached here for repairs. On the north shore of the North Entrance about 200 meters west of \odot Dove is a small stretch of gravel.

Anchorage:-

Port Bazan is without doubt the best harbor along the west coast of Dall Island. It is thoroughly protected from the outside sea and the mountains are so situated that even in the hardest blows there are no "willie-wahs". The best anchorage for the ship was found to be in the north east bight about midway between \odot 's Pro and Pod where 12 fathoms of good sticky holding bottom was found. Small craft and launches find good shelter here also, besides being able to utilize several smaller and shallower places about the bay. The best of the latter is at the head of the inner bay about 100 meters off \odot End; another one is near the inner end of the North Entrance about 225 meters south-west of \odot Pole; small fishing boats anchored here quite frequently, but it is not recommended as the water is fairly deep and the bottom not very good for holding.

Streams:-

There are a number of small fresh water streams emptying into the bay. The largest are at the head of the inner bay, but even these in the widest parts are not more than 10 feet across and varying from just a few inches to a couple of feet deep. The stream flowing in from the north comes from a small lake about a mile back from the shore; the stream in places runs completely underground. These streams are difficult to use in watering launches or boats as there are a number of rocks and boulders at the mouth. Along the north shore are several streams terminating in small waterfalls at their mouths; these are used frequently in obtaining fresh water for the ship and launches- the most conve-

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nient one being near station Pro. The streams along the southern shore were very small and difficult to approach with a boat.

Dangers:-

Rocks:-

On the outside there are two submerged rocks, but neither is in a fair channel; one is 170 meters south of Δ Bazan and was never seen to bare, although it breaks at half tide with only a moderate swell; the other is 190 meters W. x. N. of \odot Bit and bares at low tide.

At the inner end of the narrowest part of the north entrance there are submerged rocks on each side, those on the north baring at low water and the one on the south side baring only at low water springs. In the South Entrance a long reef with isolated rocks makes out from the cove between \odot 's Sam and So; the rock farthest out is about 200 meters N.N. W. of \odot So and bares at half tide.

The small bay just east of \odot Ham is foul and was rarely entered with the launch.

A small rock 180 meters south of \odot Rock is awash at low-water and be left on the port side when going into the inner bay.

Two other rocks about 240 meters E. x. N. of \odot Slate that bare at low water are not far off a fair passage between the two islands here.

Kelp:-

Kelp is quite abundant in both entrances and by the end of the season had extended far out into the fair channel and well out toward open water.

Tides:-

Although the entrance channels are very narrow, tide currents through there are very small even on the springs and never exceed a one knot rate.

On low water springs many of the small bights at the head of the bay, into which the streams empty, bare much further out than is shown on the sheet where only the ordinary low water is shown.

The ordinary tide range is about 9 ft. which increases to about 15 ft. on springs.

Land marks:-

Among the most noticeable features of this neighborhood is the white island on which Δ Bazan is located; several peaks also stand out quite clearly: "Peak" - a 2205 ft. tip on the north side; "Cone Mt." - a 492 ft. cone shaped hill at the inner end of the South Entrance; "Dol" - the high part of Dolgoi Island "Lump" - a 760 ft. end of shoulder back of the head of the bay; and "Brown" - a large brown rock face on the side of the mountain just to the south of "Lump".

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Names:-

The names "Cape Magdalena" and "Point Bazan" were taken from the chart; however both of these, as located on the chart, are misleading. "Cape Magdalena" seems to be the outside point on the small island at the mouth of "North Entrance". This island is not over 15 feet high and does not resemble a cape as the term is commonly interpreted; the point between O Hike and O Zan would seem to be more appropriate.

At "Pt. Bazan" there is no distinct point, but the whole series of small points here round the shore-line gradually into the bay.

The island on which Δ Bazan is located juts out to a sharp point and it would seem that the term "Cape Bazan" or "Pt. Bazan" could be very well applied here.

The terms "North Entrance" and "South Entrance" are those that were most commonly applied to those channels.

Methods used:-

At the time the survey was made no triangulation control of this neighborhood had been established. A base line 265.65 meters long was measured between O Seal and O Base and from this base a plane-table traverse was extended through-out the bay. (This base was the longest that could be readily and easily measured.) All intersections and rod distances to stations checked very satisfactorily. Later when Δ Bazan was located, an azimuth to O Lump was determined from the outside triangulation, and from this azimuth the projection was constructed.

Five stations ("End", "Ping", "Shag", "Mak", and "Seal") were marked and should be easily recovered while others such as "Bat", "Pod", "Yel", "Ham", "Point", "Cold", "Nob", and "Nar", could be almost as easily recovered from the nature of the topography.

Respectfully Submitted,

Raymond P. Egan
Aid, C. & G. Survey.

Approved and Forwarded,

W. Sturdy
Assistant, C. & G. Survey,
Commanding Stmr. "EXPLORER"

PLANETABLE POSITIONS.

Name	Latitude .		D. M.	Longitude .		D. P.	Height .	Remarks.
	c	o	Meters	o	;	Meters	Feet	
Base ✓	54	49	1372	132	59	115	8	
Bazan Δ	54	49	350.7	133	00	225.7	125	Triangulation Δ
Bob ✓	54	48	523	132	58	448	67	
Bit ✓	54	49	1557	132	59	998	62	
Bat ✓	54	50	793	132	55	736		Bares 2 ft. at L.W.
Bunch ✓	54	50	655	132	56	757	3	
Blow ✓	54	49	330	132	59	387	12	
Cane ✓	54	49	1385	132	56	350	2	Cairn of rocks.
Car ✓	54	48	1583	132	59	39	50	
Check ✓	54	49	616	132	59	485	12	
Cris ✓	54	50	507	132	57	40	4	Bares at L.W.
Cross ✓	54	48	1430	132	58	797	45	
Cold ✓	54	49	1259	132	58	1066	12	
Com ✓	54	50	874	132	55	746	1	
Der ✓	54	49	527	132	57	872	2	
Dig ✓	54	50	121	132	55	817	2	
Dove ✓	54	49	1658	132	58	682	2	
Duck ✓	54	49	996	132	57	191	2	
End ✓	54	50	1336	132	55	75	4	Marked
Fin ✓	54	49	1957	132	59	320	15	
Flag ✓	54	49	1725	132	55	1010	2	Flag in tree.
Gale ✓	54	49	1590	132	58	135	1	
Gull ✓	54	50	1074	132	55	152	3	
Grass ✓	54	49	1423	132	58	57		(Awash at half tide.)
Ham ✓	54	49	1490	132	55	956		Awash at H.W.
Hike ✓	54	50	12	133	000	330	54	
Him ✓	54	48	48	132	58	188	45	
Hot ✓	54	49	1278	132	59	607	15	
Hum ✓	54	48	665	132	58	415	26	
Kid ✓	54	48	1767	132	58	117	4	
Last ✓	54	50	897	132	55	41	2	
Lem ✓	54	48	1587	132	58	446	4	
Log ✓	54	49	1170	132	56	652	5	
Mak ✓	54	50	191	132	57	768	3	Marked
Move ✓	54	49	11	132	57	572	3	
Nar ✓	54	48	1810	132	57	678	4	
Nob ✓	54	49	410	132	59	880	25	
Out ✓	54	49	1347	132	59	982	15	

PLANETABLE POSITIONS.

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Name	Latitude	D. M.	Longitude	D. P.	Height	Remarks
	0	Meters	0	Meters	Feet	
Paul✓	54 50	255	132 55	435	3	
Pile✓	54 49	1730	132 56	266	2	Cairn of rocks
Ping✓	54 50	574	132 55	395	8	Marked
Pod✓	54 50	696	132 56	434		Bares 2 ft. L.W.
Point✓	54 49	620	132 56	1044	12	
Port✓	54 50	872	132 55	395	3	
Pro✓	54 50	1234	132 56	712	8	
Pole✓	54 49	1470	132 58	272	8	
Rag✓	54 50	80	132 56	586	2	Flag in tree
Ref✓	54 50	1420	132 55	346	2	
Rock✓	54 50	1217	132 55	455	3	
Rot✓	54 49	950	132 55	942		Awash at H.W.
Row✓	54 49	60	132 57	1020	4	
Sat✓	54 49	1025	132 56	372	3	
Seal✓	54 49	1487	132 58	946	3	Marked
See✓	54 48	1820	132 57	284	3	
Shag✓	54 49	1100	132 56	705	2	Marked
Ship✓	54 49	457	132 56	268	2	
Slate✓	54 49	1171	132 56	1051	3	
So✓	54 48	1238	132 58	133	3	
Som✓	54 48	1572	132 57	1040	8	
Son✓	54 48	1058	132 58	386	40	
Spot✓	54 50	26	132 55	1033	2	
Ter✓	54 49	1191	133 00	18	12	
Top✓	54 49	1575	132 55	573	2	Flag in tree
Trap✓	54 50	1147	132 55	934	4	
Wash✓	54 49	664	132 57	440	1	
White✓	54 48	221	132 58	310	33	
Wild✓	54 49	580	132 57	700	2	
Wind✓	54 49	463	133 00	369	61	
Yel✓	54 50	516	132 56	941		(3 ft. yellow boulder awash at H.W.)
Zan✓	54 50	200	133 00	580	15	

PLANETABLE POSITIONS.

Name	. Latitude .	D. M.	. Longitude .	D. P.	Height	Remarks.
Cone Mt.	54 49	226	132 56	852	492	Cone mountain on south side of inner end of south channel.
Brown ✓	54 50	1119	132 53	139	878	Bare brown rock on side of Mt.
Dol ✓	54 49	372	132 58	532	756	High part of Dolgoi Island.
Lump ✓	54 51	62	132 53	602	760	Shoulder of mountain dropping off to Northward.
Peak ✓	54 50	1326	132 58	547	2205	High tip of Mt on north side of Port Bazan.



DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. (1) 3634

State Alaska
General locality . West Coast Dall Island., S. E. Alaska. .
Locality Port. Bazan.
Chief of party . . F. H. Hardy, Ass't., C. & G. S.
Surveyed by . . . R. P. Eyman, Aid, C. & G. S.
Date of survey . . May 1st, - June 29th, 1916.
Scale 1 to 10,000
Heights in feet above . Mean high water.
Contour interval . 100 . feet.
Inked by . R. P. Eyman, . Lettered by . R. P. Eyman,
Records accompanying sheet (check those forwarded): Photographs, ✓
Descriptive report, ✓ Horizontal angle books, Field computations,
Data from other sources affecting sheet

Remarks: List of D.M and D.P. of Stations located for hydrographic use attached.