

4432

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State SOUTHEAST ALASKA

11-5013

DESCRIPTIVE REPORT.

Hydrog. Sheet No. (80) 4432

LOCALITY:

Baranof I. — W. Coast

Offshore — Puffin Pt. to Biorka I.

1924

CHIEF OF PARTY:

A.M. Sobieralski

4432

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET # 80

Offshore Soundings

West Coast of

Baranof Island

S.E. Alaska

Surveyed by

U.S.C. & G.S.S. SURVEYOR

A.M. Sebieralski, H. & G.E., Comdg.

April 9 to Oct. 4, 1924

Scale 1 : 80,000

Instructions dated Feb. 6, 1924.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. 80

The work on this sheet was done by the U.S.C. & G.S. S. SURVEYOR, A.M. Sebieralski, H. & G. Eng'r Commanding, during the season of 1924. During sounding watches either the Commanding officer, H.B. Campbell, H. & G. Engr., or R.W. Healy, Mate, was in charge, as indicated in the records.

As very little area suitable for the use of sounding tubes occurs on this sheet, all soundings were taken up and down with the ship stopped. Stranded wire and a 35# lead were used in depths up to 300 fathoms. Beyond that depth weights of about 60# were used. Beyond 500 fathoms the weights were usually detached, using a detaching rod similar to the one designed by Capt. Maher.

The electric sounding machine #52 together with the usual type of registering sheave were used almost exclusively for this work and gave excellent service. The only criticism which might be made is that in rough weather the reel shifts from side to side with the roll of the ship, causing the break to engage and making it difficult to keep good control of the wire when running out.

With anchorage so close to the working grounds, it was not difficult to arrange the work so that it could be done without laying offshore continuously, although whenever there were indications of an extra fine day which would be suitable for work in the vicinity of the 1,000 fathom curve, the ship would run out and lay to over night. Such days were exceedingly rare during this season, only a few occurring in August and September.

The spacing of the soundings was in accordance with the orders dated Feb. 6, 1924, and gives, in my opinion, an adequate development of this area.

Where this work joins the work of the previous season no discrepancies were found, and soundings made by launches working inshore check with the soundings made by the ship. Some soundings made by the COSMOS, in charge of R.R. Moore, do not appear to agree so well, but the apparent

discrepancy is probably due to the extremely irregular bottom, for the COSMOS under H.B. Campbell later made some soundings, both to develop indications of shoals and investigate these apparent discrepancies, and found such irregular bottom that nothing could be definitely proved without a very extensive survey on a large scale.

Where the work in Sitka Sound is joined, however, there is a discrepancy. Our soundings are eight fathoms deeper in depths of about 100 fathoms and the discrepancy decreases as the depths decrease. From this I conclude that the work in Sitka Sound was done with a machine using a register which counts the number of revolutions of the reel, and does not take into account the varying diameter due to the varying amount of wire on the reel.

Practically all the signals used on this sheet were determined by triangulation, a few by topography (with a plane table) and only three by sextant cuts.

Of the signals located this year, signals New and West Point are identical with the signals of the same name used in plotting the work done by the SURVEYOR in 1923. There is a slight discrepancy between the two determinations of positions of these points which might affect the plotting of positions on the 1923 sheet. Another signal, Pag, is presumably identical on the two sheets, although there are several peaks in this vicinity of the same height and appearance, so that it is not certain which peak was used in 1923.

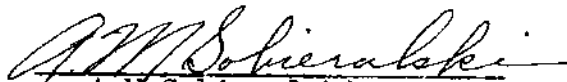
Advantage was taken of periods of rough weather to watch for breakers, and as this area was frequently seen in weather when it would be quite sure to break in 5 fathoms or more, it can confidently be stated that no dangers exist in this area.

All indications of shoals were developed. A suspicious 37 fathom sounding in Lat. 56 - 35.25, Long. 136 - 25.36, was R. 95 LL examined, but all the surrounding soundings are much deeper. It might be suspected that the sounding was an error, but the records show that the sounding was checked when taken.

While the bottom outside of the 50 fathom curve is very regular, sloping moderately, inside of the 50 fathom curve a very remarkable series of irregular patches are found, and soundings are so irregular that a close system of development was required, but no dangers were discovered.

A few positions are difficult to plot on account of distant signals, but it was not considered advisable to make a new sheet on a smaller scale for so small an area.

Respectfully submitted,



A.M. Sobieralski
H. & G.E., C. & G. Survey
Comdg. U.S.C. & G.S.S. SURVEYOR

STATISTICS - SHEET NO. 80

Date, 1924	Letter	Volume	Positions	Soundings	Miles-statute	Vessel
April 9	A	1	20	20	8.2	Ship
April 14	B	1	5	5	1.5	"
April 16	C	1	34	34	14.8	"
April 17	D	1	31	31	12.4	"
April 18	E	1	64	64	28.4	"
April 30	F	1	104	104	52.0	"
May 2	G	1	35	35	16.5	"
May 2	G	2	73	73	38.7	"
May 3	H	2	50	50	28.4	"
May 5	J	2	49	49	28.8	"
May 13	K	2	51	51	23.0	"
May 14	L	2	34	34	12.0	"
May 16	M	2	69	69	32.6	"
May 17	N	3	32	32	14.3	"
May 20	P	3	53	53	23.9	"
May 21	Q	3	28	28	13.8	"
May 27	R	3	134	134	71.5	"
May 28	S	3	11	11	4.6	"
May 29	T	3	27	27	12.0	"
June 5	U	3	6	6	2.0	"
June 10	V	3	24	24	9.0	"
June 10	V	4	45	45	23.0	"
June 11	W	4	127	127	67.0	"
June 12	X	4	121	121	56.0	"
June 13	Y	4	62	62	28.0	"
June 13	Y	5	78	78	27.0	"
June 17	Z	5	43	43	16.7	"
June 28	AA	5	33	33	13.7	"
June 30	BB	5	51	51	15.0	"
July 1	CC	5	4	4	1.0	"
July 8	DD	5	90	90	28.0	"
July 9	EE	5	30	30	12.0	"
July 9	EE	6	69	69	27.5	"
July 10	FF	6	73	73	21.2	"
July 12	GG	6	17	17	5.7	"
July 16	HH	6	33	33	13.0	"
July 17	JJ	6	120	120	46.0	"
July 19	KK	7	47	47	18.0	"
July 21	LL	7	127	127	51.0	"
July 26	MM	7	45	45	14.7	"
July 28	NN	7	34	34	11.0	"
July 30	PP	7	90	90	38.5	"
July 30	PP	8	24	24	6.5	"
August 6	QQ	8	10	10	2.5	"
August 7	RR	8	140	140	67.0	"
August 12	SS	8	16	16	3.0	"
August 13	TT	8	91	103	27.3	"
August 14	UU	8	3	3	1.0	"

Continued on next page

STATISTICS - SHEET NO. 80 - CONTINUED

Date, 1924	Letter	Volume	Positions	Soundings	Miles-statute	Vessel
August 15	VV	9	25	25	43.5	Ship
August 15	WW	8	13	13	8.0	"
August 16	XX	9	15	15	27.5	"
August 23	YY	10	27	27	5.8	"
August 25	ZZ	10	146	146	37.2	"
August 26	AB	10	88	88	34.5	"
August 27	AC	10	51	51	24.0	"
September 17	AD	10	12	12	5.4	"
September 18	AE	11	72	72	17.5	"
September 19	AF	11	36	36	9.0	"
September 22	AG	11	33	53	11.0	"
September 23	AH	11	74	74	62.0	"
September 24	AJ	11	90	90	56.0	"
September 25	AK	11	31	31	10.5	"
September 25	AK	12	91	91	43.0	"
September 30	AL	12	111	111	28.0	"
October 1	AM	12	36	36	9.2	"
October 2	AN	12	95	95	26.2	"
October 3	AO	13	101	101	34.3	"
October 4	AP	13	16	16	2.9	"
August 28	AQ	9	18	18	48.0	"
August 29	AR	9	26	26	35.0	"
TOTALS:-			3764	3776	1670.2	

NOTE:-

All soundings were taken in fathoms.

The plane of reference used was lower low water at Sitka, Alaska.

The tide gauge was located on the C.M. McGrath dock at Sitka and was the only one used on this sheet.

Plane of reference, reading on gauge - 9.8 feet.

Lowest tide observed, " 6.7 " on July 17th.

Highest " " " 21.2 " on April 22nd.

March 10, 1925.

Section of Field Records

~~Division of Hydrography and Topography~~

Division of Charts:

Tide reducers are approved in
13 volumes of sounding records for

HYDROGRAPHIC SHEET 4432

Locality: W. of Baranof Island, S. E. Alaska

Chief of Party: A. M. Sobieralski in 1924
Plane of reference is mean lower low water
9.3 ft. on tide staff at Sitka, S. E. Alaska

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks



Chief, Division of Tides and Currents.

Report on Verifying and Inking A. 4432.

As noted by the field party, some of the position fixes are weak and uniform shifts in plotting were found. Where necessary, changes were made, but in general the field plotting was accepted.

The plotting and protracting were excellent. The choice of scale (100,000) for the sheet was a happy one. It was small enough to cover all the signals and soundings; and it was large enough to show all the detail in the shoal development.

The records and notes are excellent with one exception. This is where notes were made "no bottom, lost lead" or a similar expression. In a few places the word "specimen" was inserted between "bottom" and "lost" by the field party and in some cases this was not done but it was assumed in the office that all these notes had the same intent. That is, bottom was actually obtained but due to the lead catching in the bottom and the wire breaking off, no bottom specimen was obtained. However, to make certain that this is true a letter inquiring about this should be sent to the chief of party for his advice. (See 2nd 4 book vol. 1, pp 33-36²)

The quality of paper used in the smooth sheet is of an inferior grade. It was impossible to ink the soundings without frequently picking up fibres in the pen.

May 6, 1925

J. M. Albert, Cartographer
Section of Field Records.

8.02.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND REFER TO No. 4-DEM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON, June 22, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet H. 4432

Vicinity of Baranof Island from Puffin Bay northward

Surveyed in 1924

Instructions dated February 6, 1924.

Chief of Party, A. M. Sobieralski.

Surveyed by A. M. S., H. B. Campbell, R. E. Moore, R. W. Healy.

Protracted by A. C. Zimmerman.

Verified and inked by F. M. Albert.

1. The records were well kept and conform to the requirements of the General Instructions.

There were several instances where notations such as "lost lead", "no bottom" were entered in the bottom characteristics column. It was agreed by Chief of Field Work that these had no reference to the sounding, but merely an explanation for not obtaining the bottom specimen.

2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions. All soundings taken were up and down casts with the ship stopped.
4. The sounding line crossings are adequate and the information sufficient for drawing in the depth curves.
5. The usual field plotting was done by the field party and was excellent.
6. The junction with H. 4261^a on the south and west is adequate. The junctions with the other adjoining contemporary sheets will be taken up when the verifications of those sheets are completed.

There is a discrepancy between this sheet and H. 2175, surveyed in 1893, on the north. In depths of about 100 fathoms the soundings on this sheet are about 8 to 10 fathoms deeper. As suggested by the chief of party, the difference may be due to the use of a

register which counted the number of revolutions on the reel without taking into consideration the varying diameters due to the varying amount of wire on the reel. An examination of the records for the sheet failed to disclose sufficient data for a definite conclusion. However, since the present work was done in accordance with standard practice and as there is no reason to doubt its accuracy, it is believed that the lesser depths on H. 2175 are probably due to the less exact methods of handling the reel, sheave and reading depths, and therefore H. 4432 should be considered correct.

7. All indications of shoals appear to have been well developed and there are no indications of possible dangers.
8. The character and scope of the surveying are excellent. The field drafting is excellent.
9. Reviewed by A. L. Shalowitz, May, 1925.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic 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. 80 4432State **SOUTHEAST Alaska**General locality ~~W. Coast Baranof Island, SW Coast~~Locality ~~Offshore — Puffin Pt.~~
~~See Lion Rocks~~ to Biorca Island.Chief of party A.M. SobieralskiSurveyed by A.M.S., H.B.C. & R.W. HealyDate of survey 1924 (Apr.-Oct.)Scale 1-80,000Soundings in FathomsPlane of reference M.L.L.W.Protracted by A.C. Zimmerman Soundings in pencil by A.C.Z.Inked by F.M. ALBERTVerified by F.M.A.

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, 2 Boat sheets,13 Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks: