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Diag. Cht. No. 8152-1

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: Alaska.

DESCRIPTIVE REPORT.

Hyd. Sheet No. 3541

LOCALITY:

Southeast, Alaska,
Dixon Entrance
Vicinity of
Cape Muzon

1913

CHIEF OF PARTY:

R. B. Derickson

11—4645

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Hydrographic Sheet of 3541

Southern extremity Cape Muzon,

S.E.Alaska.

Scale 1:2000

Steamer GEDNEY.

Season April to October 1913.

R.B.Derickson, Asst.,Comdg. — Chief of Party

R.W.Healy, Mate, C.& G.S. — Hydrographer.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET 8541

SOUTHERN EXTREMITY CAPE MUZON, S.E. ALASKA

The sounding lines and positions on this sheet were plotted on board the Str. GEDNEY, scale 1:2000.

The hydrographic sheet and projection was made in the field. Signals and shoreline transferred directly from the topographic sheet.

The soundings were made with hand lead from the whaleboat.

Individual soundings with positions were taken when it was impracticable to run a regular line on account of kelp and sea.

The object of this hydrographic survey is to show the depths in the vicinity of and between the bare rocks at the extremity of Cape Muzon.

Hydrography by R.W. Healy, Mate, in charge of the sounding boat.

The tidal station is a plane staff near triangulation station CAPE. The datum of soundings was derived by simultaneous comparisons with the automatic gauge at Cruz Bay. No Boat Sheet was used

Respectfully submitted,

R. B. Arnold

Chief of Party, C.& G.S.

(Data for Boundary Survey)

It is presumed that the draftsman based his criticisms on the assumption that the work is on a scale of 1:20,000 as shown in the title. This is erroneous; the work was done on a scale of 1:20000 and is exceptionally close for open coast work.

(1) The recording of the courses was omitted from the records by reason of the fact that the sounding boat was hardly more than a few boat lengths on each course. The ocean swell and back wash from the rocks would cause the boat to swing many points. The recording of courses under such circumstances would confuse the records and would be of no value.

The character of the work would not permit of the use of a boat sheet. It could not be handled in the sounding boat. The work was plotted by the officer in charge of the boat upon leaving the locality.

(2) The soundings on the outer slope of the 4/6 fathom spot east and southeast of ⊙Frogfag are within 30 meters of the top of the shoal. The 4/6 and 3/6 soundings are within 35 meters of the main island rock. The object of the survey was to determine the depths in the passages between the rocks off Cape Muzon.

R B Arickson
Chief of Party

MKQ
Dec.8,1913.

HYDROGRAPHIC SHEET 3541.

Vicinity of Cape Muzon, S. E. Alaska, by

Asst. R. B. Derickson in 1913.

TIDES.

	Cape Muzon ft.
Mean lower low water, or plane of reference on staff	2.9
Lowest tide observed " "	0.8
Highest " " " "	15.8
Mean range of tide	10.0

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EXAMINATION OF HYDROGRAPHIC SHEETS
by the
~~DIVISIONS OF~~ Section FIELD WORK AND FIELD RECORDS.

Sheet No. 3541

Alaska

1. + Are numbers of hydrographic sheets adjoining limits of work shown? No

2. Are transferred soundings of adjacent hydrographic sheets made to show that ground has been covered? No

3. + Is sheet of proper size?

4. + Is sheet well laid out, no additions required?

5. Are limits of hydrography regular? No

6. + Are positions of signals accentuated by light dot of black ink to assist plotting? No

7. + Are tidal stations plotted on sheet? No

8. Is area of work completely covered? No

9. Are critical soundings and dangers shown distinctly?

10. + Is the control good? No tidal stations

11. + Are positions of signals clearly shown?

12. Are soundings well distributed? No

13. Are shoals carefully and sufficiently developed? No
10 fms. in lat 54 - 30 2/3 and 1 5/6 fms shoal near rock baring at low water.

Do soundings cross satisfactorily?

15. Is existence or non-existence of a reported shoal determined? .....

16. Is least sounding over bar probably determined by check soundings or diagonal sounding lines crossing same? .....

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.....

17.+ Are projection and plotting checked? .....

18. Is the scale of this sheet sufficient to show the necessary details in the navigable channels? .....

.....

19. +Is the shoreline shown? .....

20.+ Is there an accompanying list of plane table or sextant positions of signals? No .....

21. Has sufficient attention been given to the development of channel? No .....

.....

22. Are sufficient bottom characteristics shown? .....

.....

23. Are sounding lines normal to coast? .....

.....

24. Have suspicious soundings been investigated? .....

.....

25. Are ranges or bearings given for important shoals? .....

.....

26.. Are sailing directions given? No .....

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27. Is the general hydrography in the entire area properly developed? .....

28. Are shallow channels for motor boats sounded? .....

.....

29. Is there a note as to coloration of water in or near mouths of rivers and bays? .....

30. Is there any information given as to obtaining fresh water? ..

.....

31. Are there proper intervals between soundings? .....

.....

32. Are projecting points of land and reefs determined by sufficient lines with soundings at close intervals run at right angle to direction of points? No.....

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33. Is there sufficient data to draw depth curves? No (in places)

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34. Are shoal areas remote from shore properly developed by independent system of buoy signals placed in the vicinity of shoal?

.....

35. Are soundings obtained at docks in harbor? .....

.....

36. Is there a full list of data effecting sheet given? No.....

.....

37. Are description of hydrographic signals and marking of same recorded? No.....

38. Is there a list of land marks given? No.....

39.+ Does descriptive report give date of instructions? No

40. Are small islets and rocks distinctly shown? .....

41. Is information relative to anchorage given? .....

42.+ Are survey methods explained sufficiently? .....

43. Are geographical names given on sheet? No

44. Are coast pilot notes given? .....

45. Is the unit of soundings given in title? .....

46. Are sufficient depth curves shown? .....

47. Are aids to navigation shown? .....

48. Are grass or kelp indications shown? .....

49. Are sailing courses shown on sheet? No

50. Is descriptive note given as to visibility of shoals? .....

51. Are dangers fully described in descriptive report? .....

52. Is the character of reefs described on sheet? No

53. Are beaches indicated where vessels in distress could be safely beached? No

54. Are standard symbols used in drafting? .....

55. Is information relative to currents given? .....

56. Is there a statement as to certainty or probability of least depth over dangers given? .....

57. Is the existence of certain shoals doubtful? .....

58. Is a general description of coast given? No

59. Is information relative to commercial importance given? .....

.....

60. Does the descriptive report cover one or a moderate number of sheets? .....

61. Are descriptions of headlands given? .....

62. Is the nature of shoals whether coral rock or sand shown on sheet? .....

63.+ Is the position of the tide gauge well selected? Is the tidal data sufficient for the reduction of soundings over the area of the sheet? .....

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64.+ Have projection lines been numbered around all the edges? ...

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65.+ Has the geographic position of one of the triangulation points on the sheet been inked near the bottom edge of the sheet?

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66. Was the speed of the sounding boat such as to allow vertical readings of the leadline? .....

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67. Were lines of soundings run along the axis of narrow channels?

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68. Have rocks or shoals seen from the sounding boat in passing been definitely located? .....

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69. Have charted shoals reefs, or rocks been investigated? .....

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70.+ Have sounding records been kept in approved form? .....

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71. Are Wire drag surveys required? .....

72. Is the area between the soundings taken and the shore indicated or described as being covered by reefs, etc. as the case may be?

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Other Remarks .....

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The forgoing points marked by a cross (+) and the following additional points are to be considered for wire drag hydrographic sheets.

73. What additional areas, if any, in the locality covered by the sheet should be dragged? .....

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74. Number of small areas inside limits of work missed by drag (few, moderate number, numerous) .....

75. Are shoals discovered with drag clearly shown? .....

76. Were shoals later covered by drag set at suitable depth? .....

.....

77. Are all areas missed by drag clearly shown? .....

78. Are overlaps ample? .....

79. Do effective depths conform to instructions under which the work was done? .....

80. If work was done before present practice as regards effective depths was adopted, should the area be re-dragged to conform to the present practice? .....

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81. Are all shoals discovered shown on current issue of chart? ....

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See attached notes in regard to soundings + boat sheet. 1918

Hyd. Sheet No. 3541.

"Cape Muzon". Southeastern Alaska.

The positions on this sheet were plotted by the field party and have been taken as correct being verified only where errors were apparent or where necessary to locate position and line.

The fact that the records do not show course being run or when changing course and as the lines are run very zig zaged and there being no boat sheet on file with which to check up make Errors possible. This data is called for under "General Instructions".

The work is passably good and appears sufficient for a general development of this area but is not considered sufficient for an accurate development.

(2) The indications are that the shoal making out about southeast from island on which ⊙ "Frog" is located makes beyond the 4/6 fathom sounding recorded and the shoal east of some island may extend beyond 3/6 sounding. That the shoal east of island on which ⊙ "Gull" is located may make further east than the 1 fathom soundings recorded and a shoal may make out southeast or shoaler water from some island toward the detached 10 fathom sounding recorded. These places should have been further examined.

Vicinity The detached rock awash south of ⊙ "Dod" might also have been further examined.

John D. Torrey
5/6/14

soundings and current verified. Edward R. Hand
Nov. 1918.

Hyd. 3542

The records were well kept and the plotting of lines and soundings well done. It is not an exhaustive survey but intended rather to locate the rock upon which the Str. State of Col. struck.

The whole Bay should be resurveyed and the Bay and approaches swept with a wire drag. It is probable that other rocks exist that are likely to be struck.

A triangulation of the Bay should be made and top. revised if found necessary. This survey was not connected with the triangulation.

G.P.D.