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Form 504 Ed. June, 1928		
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. PATTON Director		
<table border="1"><tr><td>C. & G. SURVEY L. & A JAN 30 1930 Acc. No.</td></tr></table>		C. & G. SURVEY L. & A JAN 30 1930 Acc. No.
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State: ALASKA		
DESCRIPTIVE REPORT 4478		
Topographic Hydrographic	Sheet No. #M	
LOCALITY		
LARSEN BAY AND APPROACHES		
KODIAK ISLAND		
AUGUST 1929		
CHIEF OF PARTY R. R. LUKENS		

DESCRIPTIVE REPORT

TO ACCOMPANY

TOPO SHEET # M.

LARSEN BAY APPROACHES. KODIAK ISLAND.

Str. SURVEYOR.

R.R. Lukens, Com'd'g.

INSTRUCTIONS DATED MARCH 14-th, 1929.

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PURPOSE OF SURVEY.

This Topographic sheet is a resurvey of this area. It was executed primarily to locate signals for the hydrographic party. In addition, the improvements around to Alaska Packers' Cannery were surveyed. It also seemed advisable to resurvey the shoreline.

GENERAL DESCRIPTION.

Larsen Bay lies in a trough between two mountain ridges. These ridges are grass covered except for the lower slopes where there are dense growths of alder.

The shoreline of the approaches consists of steep rocky bluffs at whose base are shingle beaches and rocks. The North shoreline of the approach from Signal Gab to triangulation station Dol consists mostly of grassy sand flats, interrupted in several places by low bluffs.

The South shoreline of the approach for a distance of a mile East of the cannery to the cannery is low and grassy, except for several headlands which are about 20 feet high with rocky sides. Sandy beaches and mud flats fill the bight between Signal Gray to Triangulation station Tope at low tide.

The buildings of the Alaska Packers' Association Cannery are on a grassy flat peninsula S.W. of the most narrow part of the entrance channel. This cannery is large and modern with well kept buildings. A company radio station is located here. Limited quantities of food supplies and fresh water can be procured at this cannery.

There are several objects of this cannery which are noticeable to ships approaching the entrance to Larsen Bay. They are the two Radio masts (Signals Rad and Short), the white building of the cannery superintendant (Signal Soup), the twin black stacks on the red cannery buildings, the large yellow disk (triangulation station Disk), painted under the eaves of the most northern red building, and the white building well North of the other buildings.

The headland upon which triangulation station Tope is situated, slopes evenly from the eastern shore to triangulation station Tope at a

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height of about 40 feet. It is grass covered.

The western side of this headland consists of an almost vertical sided eroded bank.

The lagoon West of the islet, running from Signal On to triangulation station Dol is used for an anchorage by small boats. The lagoon is shoal and care should be used in entering. The North entrance should be used.

Triangulation station Entrance is located on a grass and brush covered headland about 40 feet high.

The South and Western shores of Larsen Bay, bordered by fairly broad sand beaches. Most of the North shore of Larsen Bay consists of a low rocky bluff line bordered by narrow shingle beaches.

From the Western end of Larsen Bay the ground rises gradually to a tableland about 300 feet high. A well beaten trail extends to Karluk River from the shore near Signal Ace, and passes several shacks along the stream.

ROCKS AND REEFS.

The most dangerous reef (Triangulation station CAGE), lies East of the entrance to Larsen Bay. It bares about 1 foot at low tide. It is marked by a red steel frame cage, surmounted by a ball shape, about 15 feet above M.H.W.

Black Rock (Signal Nex) is a vertical sided, black rock about 20 feet high. S.S.E. of triangulation station Cage. A reef about 70 meters long at low tide, and covering about 1 foot at high tide, is situated 250 meters, S.E. of Black Rock. ~~seventy~~ meters South of this reef and half way between it and a rocky headland lies another reef which is awash at about half tide. A rock baring 8 feet at M.L.L.W. lies 100 meters S. by E. of Signal Box. Shoal water lies between this rock and the shore.

SURVEY METHODS.

Pending the completion of triangulation, the North shore of the entrance to Larsen Bay, from triangulation station ENTRANCE to Signal Gab. was surveyed on a sheet without a projection. This was subsequently transferred to the regular sheet. A traverse was run between Triangulation stations Entrance and Stan (topo sheet 'N'). The closing error was 5 meters. This was adjusted N. of signal Fly on sheet 'N.' A traverse was run from triangulation station Entrance to Larsen. The closing error was 17 meters. When the traverse was run, the signals from signals To to Or lacked distance to cuts previously taken from the North shore. In adjusting, the shoreline was moved Eastward between Signals To and Or so that the signals plotted on the cuts. This left a balance of 8 meters to be adjusted between Signals Or and triangulation station Larsen. This was distributed proportionately.

In surveying Larsen Bay proper, most of the signals were determined by cuts from set ups at triangulation stations. Traverses never extended

more than three set ups from triangulation stations.
The magnetic meridian was omitted through oversight.

COMPARISON WITH OLD SURVEY.

The shoreline of this survey only roughly checks that of the old survey. The contours of the old survey appeared correct, so no check was made upon them.

*Approved
R. R. Lukens*

L. S. Hubbard

Note by Chief of Party.

The former survey was carried on without triangulation control except for one station in the entrance to the bay. The survey of 1929 was well controlled with triangulation so that there is little chance of much error in the topography.

The ~~For~~ description of the various aids to navigation will be found in the descriptive report accompanying the hydrographic sheet. All the aids are built and maintained by the Alaska Packers Association of San Francisco.

Most of the fish used in the Larsen Bay cannery are brought from the mouth of the Karluk River where there is an extensive red salmon fishery.

R. R. Lukens
R. R. Lukens.

The shoreline of Larsen Bay (T 4478) when reduced to the scale of T 2898 (surveyed in 1908) was found to be in close agreement except as to minor details. The scale of T 2898 was also found to be very close to 1-20000 although the projection indicates a slightly larger scale. It was therefore no difficulty to satisfactorily adjust the old topography to the new shoreline of T. 4478.

For adjusted topography and shoreline, see drawing of Larsen Bay for Chart 8822. H. Bacon June 5/1930

PLANE TABLE POSITIONS

OBJECT AND DESCRIPTION	LATITUDE	D.M.	LONGITUDE	D.P.	HEIGHT
	0		0		
✓ PIN, hut on beach	57-33	1358 (498)	153-58	594 (404)	
✓ GAB, gable, red house	57-33	670 (1184)	153-58	773 (224)	
✓ RED, s.w. gable, red house	57-32	1811 (43)	153-58	904 (94)	
✓ BOX, square white structure	57-32	1691 (165)	153-58	874 (124)	
✓ STAX, n. of twin black stacks	57-32	258 (1617)	153-59	761 (236)	
✓ SOUP, n. gable, white house	57-32	185 (1670)	153-59	639 (358)	
✓ SHORT, short radio mast	57-32	151 (1705)	153-59	607 (390)	
✓ RAD, tall radio mast	57-32	80 (1776)	153-59	607 (390)	
✓ GRAY, gray house	57-32	511 (1345)	153-59	24 (974)	
✓ NEX, Black Rock	57-31	1625 (231)	154-00	701 (296)	

In the Desc. Report of T 4478
The following is said concerning Black Rock.

Black Rock is a vertical sided black rock
20 feet high, south-south-east of
triangulation station Cge.

Desc. Report of Top. 2898 says.
signal sum is placed on a black rock
20 feet high -- It forms a good
land mark on entering bay.

Desc. Report of H 4952 also mentions
this as a "20 ft black rock"

Now none of the reports is
any mention made of a local name.
The term Black Rock is descriptive and
would make a suitable name.

The chief objection is there are
four Black Rocks in southeastern Alaska,
one in Pavlof Bay, Alaska Peninsula and
one in Bristol Bay. The one in Pavlof Bay
is about 300 miles distant. Probably not
near enough to cause confusion.

U.S. Correction has been made on
T 4478 T 2898 & H 4952

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Form 537a

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

4478

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter M.

REGISTER NO. 4478

State ALASKA

General locality KODIAK ISLAND

Locality LARSEN BAY

Scale 1-10,000 Date of Survey August, 19 29

Vessel Str. SURVEYOR

Chief of Party R.R. LUKENS

Surveyed by L.S. HUBBARD

Inked by L.S. HUBBARD

Heights in feet above ----- to ground to tops of trees

Contour Approximate contour Form line interval ----- feet

Instructions dated MARCH 14, 1929

Remarks: -----