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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

*Topo* Sheet No. *3104*

LOCALITY:

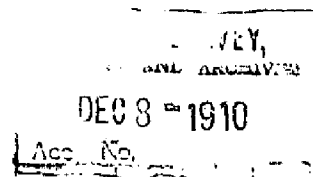
*Cook Inlet - West Shore -  
Turnigan Arm - Entrance  
to Arm*

1910

CHIEF OF PARTY:

*H. L. Beak.*

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DESCRIPTIVE REPORT

to accompany Plane Table Sheet E

of the

Entrance to Turnagain Arm

Cook Inlet, Alaska.

St'm'r. McArthur.

Henry L. Beck Ass't. Com'd'g.

1910.

DESCRIPTIVE REPORT TO ACCOMPANY PLANE TABLE SHEET OF ENTRANCE  
TO TURNAGAIN ARM.

The following is a descriptive report of the topographic sheet of the shoreline at the entrance to Turnagain Arm at the head of Cook Inlet, Alaska. The sheet starts from Pt. Campbell on the Northern side and from  $\triangle$  Grand View, at the beginning of Chickaloon Bay on the Southern side of the Arm.

General Appearance of the Shoreline.

Northern Side.

Beginning at Pt. Campbell at a point where the survey ended last year, a traverse was run along the beach to a point a half mile beyond  $\triangle$  Again. From here the traverse was run by Mr. E.E. Mumaw, Aid, to Potter Creek, five miles beyond.

For two miles from Pt. Campbell there is a shingle beach about 40 meters wide, the edge of which is uncovered about half tide. Mud and sand flats extend from this beach out to the low water mark. Inshore a ridge rises from the flat marshy area at the Point and follows the line of the beach to the point where the shingle beach ends. From here the ridge recedes from the shoreline and gradually drops to the level of the plain which begins at the point where the shingle beach ends. The ridge is fairly uniform at a height of 150 ft. with two knolls rising to a height of 200 ft. On the second of these  $\circ$  Turn is located. The slopes of this ridge are wooded except in numerous small patches where land-slides have left a bare yellow spot. These patches are more prominent at the foot of the slope. There is a small wooded knoll 100 ft. high back of  $\triangle$  Again.

The plain is a fresh water marsh extending from high water mark to the tree line an average width of 400 meters. The banks of this marsh are about 2 feet above mean high water, although in some places there is no bank and the line between the mud flat and the marsh is not very plain.

Offshore the mud flats extend a quarter of a mile to the sand flats which continue to the low water mark. The low water mark was not established on the plane table sheet as it was from 4 to 6 miles off. This was left for the hydrographic party to determine.

A mile and a half West of  $\Delta$ Again a very prominent creek crosses the marsh and empties into the ~~marsh~~ Arm. The local name for this creek could not be ascertained. At low water the creek has about five feet of water in it and flows through the sand flats in a channel which is apparently subject to frequent changes in location. The sides of the creek are of soft mud. Inshore the tree line opens up to form an opening  $1\frac{1}{2}$  mile wide by  $1\frac{1}{2}$  miles long, through which the creek winds.

There are two prominent creeks crossing the marsh West of  $\Delta$ Again. The first is called Rabbit Creek and the second ~~Botter~~ Creek. These are local names.

Cuts to two mountain peaks to establish the contours were taken by Mr. Munaw from stations on the marsh. Height of one was computed at 2800 ft. and the other at 4045 feet.

#### The Southern Shore.

The Southern part of the sheet is the shoreline of Chickaloon Bay. The survey was a traverse along the high water mark from a point below  $\Delta$ Grand View to the flats, about nine miles altogether. For  $5\frac{1}{2}$  miles from  $\Delta$ Grand View there is shingle beach about 60 meters wide with large boulders scattered off the Western end.

The low water mark is about 300 meters off this end but the distance offshore increases toward the flats. Above the beach is a bare yellow bluff of clay and gravel about 125 ft. high. On top of this bluff at the Western end is a rolling country with patches of alders and back of this the ground slopes to a fairly level wooded country with several small ponds. From the knoll on which the station Grand View is situated it is possible to look for miles over the country.

As one travels <sup>E</sup>astward, the general height of the bluff becomes a little lower but several knolls on it rise to over 100 ft. and from where the flats begin, the ridge turns inshore to become more irregular in outline. In several places there are knolls about 130 feet high and in others valleys can be traced showing the drainage of this country into the marsh.

From where the shingle beach ends a salt marsh begins, ~~which~~ which gradually widens to a width of one mile. There is no bank at the high water mark so that part of the marsh is subject to overflow by all high waters above the mean high. Offshore for a half mile is a very soft mud and quicksands and from thence to the low water mark are sand flats. Quicksands prevail across these flats. The low water mark was determined by the hydrographic party at from 2 to 3 miles off shore.

The marsh is drained by numerous salt water sloughs which have but two or three feet of water in them at low tide and whose banks are of soft mud.

A small stream of fresh water is situated about seven miles from ΔGrand View. Its course across the marsh from the tree line

is very irregular. There is more vegetation on the sides of this creek than on the banks of the salt water sloughs. There is about three feet of water in the creek near the high water mark at low tide.

A small stream of fresh water flows from a wooded ravine 2 1/2 miles from  $\Delta$  Grand View. The water is very clear and cold. The steam launch was watered here several times, no difficulty being found in getting close to the stream at high water.

The heights to the hills in this report are to the tops of the trees. The trees consist of cottonwoods, birches and spruce with clumps of alders in some places on the top of the bluffs.

The scale of the sheet is 1-40,000. No permanent P. T. positions were established, but two hydrographic signals were located.

List of Plane Table Positions including

Triangulation and Hydrographic Signals

see next page

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*List of Positions and Stations.*

| Station       | Latitude | D.M.   | Longitude. | D.P.   |
|---------------|----------|--------|------------|--------|
| △ Grand View. | 61 01    | 103.8  | 150 20     | 788.7  |
| △ Fire Island | 61 07    | 908.2  | 150 14     | 135 31 |
| △ Gull Rock   | 60 57    | 1843.4 | 149 50     | 232.2  |
| △ Again       | 61 06    | 1278.5 | 149 56     | 638.7  |
| ⊙ Turn        | 61 08    | 954.7  | 150 01     | 700.9  |
| ⊙ John        | 60 57    | 1745.2 | 150 17     | 728.3  |

*L. O. Colburn.*

A'ss't. C. & G. Survey,

Topographer.

Approved

*Henry L. Beck*

A'ss't. Com'd'g. St'm'r. McArthur.

SUPPLEMENTAL REPORT.

The general direction of the shoreline beyond the surveyed limits has been dotted on the plane-table sheet.

Cuts were taken from the triangulation stations tangent to  
(local name)  
Burnt Island, and to a prominent point East of  $\Delta$  Gull Rock.

On the South side of the Arm, the mud flats continue to Burnt Island. There are several creeks crossing the flats and the tree line is about two miles from the high water mark. From Burnt Island the shore line is rocky and mountains rise directly from the beach to an estimated height of 3000 feet. The mountain slopes are heavily timbered with spruce and hemlock. On the accompanying sheet is a photograph of the shore line East of Gull Rock which was taken from that station. It shows the rocky formation of the beach and the slope of the mountains from the beach.

On the North shore, the mud flats end where the work

stopped. From here, as on the opposite side, the mountains  
rise precipitously from the high water mark. The slopes are  
wooded right to this mark, and from the high water mark sand  
flats extend offshore at low water to a small channel.

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Photograph Showing Shore-line East of Gull Rock.