

2838

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey

Topographic

Field No.

Office No.

2838

LOCALITY

State

Alaska

General locality

Sphingaria

Locality

Bar South

Cordova Bay.

1907

CHIEF OF PARTY

E. F. Dickson

LIBRARY & ARCHIVES

DATE



2838

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. F. Tammann
Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

Topo Sheet No. *2838*

LOCALITY:

Iphigenia Bay
As Cordova Bay

1907

CHIEF OF PARTY:

E. F. Dickinson

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Description of Anchorages and Coast Pilot Notes,

West coast of Prince of Wales Island,

South-eastern Alaska
1907.

By Party on Steamer "Godney",

E.F. Dickins, Assistant,

Commanding.

Anchorage along the West coast of Prince Of Wales Island.

AUGUILLA HARBOR:

On the North side of Aguilla Island, opposite Heceta Island on the Western side of the Bocas de Finas:

In entering give Bush Top Island a berth of from 100 to 200 yards and stand in on a Southerly course anchoring in from 12 to 15 fathoms, soft bottom. Good for all winds.

NORTH SIDE OF SAN JUAN BAUTISTA ISLAND:

Between Agueda Point and the point to the Westward of it, a shallow bight gives a fair anchorage for Easterly and Southerly winds, anchor close in shore in from 15 to 20 fathoms, soft bottom. Not good for Westerly or Northerly winds.

PORT ESTRELLA:

This bay is an indentation in the shore of Prince of Wales Island about two miles deep, Cape Flores forms its Westerly entrance point. In entering favor Joe's Island (which forms Cape Flores) until passed the cabins on the main island point, on a E.S.E. course to avoid the kelp patch making of from the little island on the Northern side of the Bay, then stand over to the North side or to the head of the Bay, and anchor in either place in from 8 to 12 fathoms, soft bottom. Good for all winds.

PORT CALDERA:

An indentation in the shore of Prince of Wales Island about 5 miles to the North-eastward of Cape Flores. Enter in mid channel on a South-easterly course and anchor near the head of the Bay in from 12 to 15 fathoms, soft bottom. Good for all winds.

ADRIEN COVE:

A small bight on the North-eastern shore of Suemez Island, opposite Cape Flores. It affords a good anchorage from all winds in the S.E. corner of the cove in from 10 to 12 fathoms, soft bottom.

MEARES ANCHORAGE:

On the North side of Ullea Channel opposite Meares Island, Enter on either side of the small island lying on the Northern side of the channel. The anchorage is at the entrance of a small passage (formed by an island) about 400 yards South-easterly from the main shore of the Prince of Wales Island, in about 15 fathoms, soft bottom. Care should be taken to avoid a rock, marked with kelp, lying about 150 yards from the Westerly point of anchorage, in a South-westerly direction.

NORTH BAY:

An indentation in the Eastern shore of Dall Island about 2-1/2 miles to the Southward of Tlevak Narrows, it extends into the island about 1-1/2 miles in a S.S.W. direction. The head of ^{the Bay} is divided into two small bights by a high water island. In entering favor the S.E. side on account of the reef making off the N.W. entrance point towards mid channel and anchor near the head of the bay in about 12 or 15 fathoms, soft bottom, the point of the above named high water island bearing about W.S.W. Good shelter from all winds.

FARALLON BAY:

On the Western side of Tlevak Strait, about a mile to the Southward of North Bay, making in to the Eastern shore of Dall Island for about a mile in a S.S.W. direction. Enter in mid channel and anchor near head of Bay in from 12 to 15 fathoms, soft bottom, a small high water island lying near the head of the Bay should bear about S.E. Care must be taken to avoid two rocks, which cover at half tide, lying about 300 or 400 yards off the Westerly point of entrance, in an E.N.E. direction.

BREEZY BAY:

An indentation in the Eastern shore of Dall Island, on the Western side of Tlevak Strait, about two or three miles to the Southward of Farallon Bay and nearly opposite the Nichols Islands, It is quite a large bay divided into two arms by a point near the middle, There several small islands and

numerous rocks and reefs in the bay. It does not appear to afford any anchorage.

BALDY BAY:

A large bay in the Eastern shore of Dall Island, on the Western side of Tlevak Strait opposite the Mc Farland Islands, it is divided into two large arms and two smaller bights by projecting points. The largest and Western most arm is called False Lead and View Cove, on our charts. A group of small islands lie near the middle, between the two entrance points, Reef Point to the Northward and High Point to the Southward. A rock which covers about half tide bears about E.S.E. distant about half a mile from Reef Point.

The Bay has not been examined and its use is not recommended.

ROSE INLET:

On the Western side of Tlevak Strait and nearly opposite Square Island, making into the Eastern shore of Dall Island for about a mile in a Southerly direction then turning W.S.W. for about 1-1/2 miles with an average width of about a mile. There are several islands a little inside the line between the two entrance points, with apparently clear channels between them. Near the head of the Bay several small rocks were seen, but the bay has not been carefully examined.

VESTA BAY:

On the Western side of Tlevak Strait, about a mile to the Southward of Rose Inlet, and nearly opposite Grand Island, runs into Dall Island for about a mile in a South-westerly direction, a mid channel course appears to be clear, the anchorage near the head of the bay is cramped, in 15 or 20 fathoms soft bottom.

GRACE HARBOR:

On the Western side of Tlevak Strait, about a half a mile to the Southward of Vesta Bay, and extending into the Eastern shore of Dall Island for about a mile in a South-westerly direction. In entering, give Grace Point,

the North western entrance point, a berth of about a quarter of a mile to avoid the rocks making out from the point in a Southeasterly direction, then stand in for the inner bay or basin keeping mid channel and anchor near the middle of the basin in from 10 to 15 fathoms soft bottom.

A Salmon Saltery is located in the S.W. corner of the inner basin and a flat makes out from 150 to 200 yards from the mouth of the creek.

The Southwesterly winds seem to draw through a low divide from the Ocean.

KASOCK INLET:

Making into the Southern shore of Sukkwan Island about two miles to the Westward of the S.E. Point of the island. The entrance is blocked by a couple of small islands lying close together with a good clear channel on either side. About a quarter of a mile inside these islands the Inlet is divided into two arms, one making in a North-westerly direction for about 1-3/4 miles, the head of this arm forms a bay about 1/3 by 1/2 a mile in diameter, with good anchorage in the right hand side of bay in about 12 fathoms soft bottom, keep mid channel in going through the narrow part of the channel leading to this bay. The other arm runs Northerly for about one mile into a good sized bay about a mile in diameter, with a short arm turning to the Eastward for about one quarter of a mile. Anchor just inside the entrance to the short Easterly arm, in about 15 fathoms soft bottom.

CAPE LYNCH:

Is the prominent point at the Western extremity of Heceta Island and forms the Southern point of entrance to Davidson Inlet and the North-eastern point of entrance to the Bocas de Finas, the inside channel leading to the Southward. Foul ground extends for about $3/4$ of a mile to the North-westward of the Cape; The channel to the Southward passes from a $1/2$ to $3/4$ of a mile to the Westward of the Cape, about half way between it and the Gull Island reefs.

WHITE CLIFF:

Is a very prominent white cliff on the Western shore of Heceta Island, about 4 miles to the Southward of Cape Lynch, the channel passes from a $1/2$ to $3/4$ of a mile off the cliff and between it and the outlying rocks and reefs to the Westward.

BOCAS DE FINAS:

Is the channel or passage between Heceta and Aguilla Islands, the portion to the Southward of White Cliff appears to clear of dangers, but between Cape Lynch and the Cliff there are numerous rocks and reefs through which the channel passes, when the survey is completed good courses can be given and the dangers avoided but at present it is not safe for a stranger without a pilot.

About a half a mile to the Southward of Point Desconocida there is a rock which is awash at extreme low tide, it is generally marked with kelp, there is deep water between it and the point.

GULF OF ESQUIBEL:

Is quite a large body of water bounded on the Westward by Auguilla, San Pedro and Noyes Islands, it has several outlets to the Ocean but they have not yet been examined. The Gulf is about 5 by 8 miles in extent and is apparently clear of dangers except close along the shores, About a mile to the South-westward of St Philip Island there is a reef marked with kelp

which should be looked out for on the course from Becas de Finas to San Christoval Channel.

PORTILLO CHANNEL:

Between San Fernando and Gertrude Islands is foul and should be avoided until a careful examination is made.

SAN CRISTOVAL CHANNEL:

Is divided into two channels by a group of islands the one to the Southward of the islands is now generally used and the dangers in it are marked by kelp but they are quite numerous and great care should be taken in passing through. I am of the opinion that an examination will prove the channel to the Northward of the Rosary Islands to be the best.

The cluster of rocks shown on Chart No 8150 as lying in the Western entrance of the channel about $3/4$ of a mile to the Northward of Palisade Point do not exist.

SAN ALBERTO BAY:

There are several kelp patches between San Christoval Channel and Parida Island, the courses given will clear them but a sharp lookout should be kept.

Balandra Shoal and Fern Reef have not yet been carefully examined and no description can be given at present.

The channels on both sides of San Juan Bautista Island seem to be clear, but the one to the Southward of the Island is generally used, passing between Balandra Shoal and Fern Reef and then between Angueda Point and Balandra Island.

ULLOA CHANNEL:

Extending from Cape Flores to Tlevak Narrows, a mid channel course through seems to clear all dangers, care should be taken in rounding Cape Flores at the Northern entrance to the channel as a reef seems to extend off the Cape for about half a mile to the Northwestward.

TLEVAK STRAIT:

Extends from Tlevak Narrows to Hewkan Narrows, a distance of about 25 miles. There are numerous islands and rocks lying in the Straits and it impossible to give a satisfactory description of them until the Survey is completed. The courses given will clear all dangers, but a sharp lookout should be kept, the reefs are generally marked with kelp.

In going from Tlevak Strait to Cerdeva Bay the channel along the Southern shore of Sukkwan Island seems to be clear, and the passage both North and South of Jackson Island is clear.

SUKKWAN STRAIT:

Although there seems to be not less than 3 or 4 fathoms in the channel it is rather contracted and complicated and should not be attempted without a Pilot.

Coast Pilot Notes, courses magnetic, distances in nautical miles,
From Cape Polo to Klawak Cannery, (distance about 40 miles)
Cape Polo bearing N.E. $3/4$ E. distant 1 mile.
Cape Polo abeam, steer S.E. $3/4$ E. for 11 miles,
Cape Lynch abeam, steer S.E. x E. $1/2$ E. for 2- $1/2$ miles,
Dead Tree Point abeam, steer S.E. for $3/4$ of a mile,
White Cliff abeam, steer E. x S. for 3- $1/4$ miles,
Bush Top Island abeam, steer E. x S. for 2- $1/4$ miles, $1/2$ W.
Aguilla Point abeam, steer E. x S. for 8- $1/2$ miles,
West Channel Id. (W. Pt.) abeam, steer E. x S. for $3/8$ of a mile,
Black Rock abeam, steer E. x N. for $1/2$ mile,
N. Pt. San Fernando Id. abeam, E. x S. for $1/2$ mile,
E. Pt. East Channel Id. abeam, steer E. x S. for 3- $1/2$ miles, $1/2$ W.
Parida Id. distant 1 mile on starboard beam, steer E. x S. for 1- $3/4$ miles,
Fish Egg Id, steer E. x N. for $1/4$ of a mile,
Klawak Reef, on port beam, steer N.E. for 1- $3/8$ miles,
Entrance Point abeam, steer N. $1/2$ W. for 3 miles,
N. Pt. Klawak Id. rounding in to Cannery wharf S.E. x S. for $3/4$ of a mile.

From Parida Island to Cerdeva Bay,

Parida Island as above distant one mile on starboard beam,
steer S.E. x S. $1/2$ S. for 3 miles, 1 E
Balandra Id. under Knob Mt. (E. side Pt Caldera) steer S.E. x E. for 1- $1/4$ miles,
W. Pt. Balandra Id. abeam, steer S.E. x E. for 1- $3/4$ miles,
San Juanita Id. and Cape Flores open, c.c. South for 5 miles, $3/4$ E
Cape Flores abeam, steer S.E. x E. $1/2$ E. for 4- $3/4$ miles, $1/4$ E
Pt. San Antonio, abeam, steer E. x N. $3/4$ N. for 2- $3/4$ miles, 0
Moares Island abeam, steer East for 1- $1/4$ miles, $1/2$ W.
Kelp Point, abeam, steer N.E. for $5/8$ of a mile,

Turn Point, abeam, steer S.E. x E. $1/4$ E. for $1/8$ of a mile,
 Block Island, abeam, steer S.E. x E. $1/4$ E. for $1-1/2$ miles,
 Three Tree Islet, abeam, steer S.E. for 1 mile,
 Mid Channel position off North Bay, steer S.E. x E. for $4-1/2$ miles,
 S.E. Pt. Nichols Id. abeam, steer S.E. x E. for $6-1/2$ miles,
 S.E. Pt. Mc Farland Id. abeam, steer East for $6-3/4$ miles,
 S.E. Pt. Sukkwan Id. abeam, steer East for $1-1/2$ miles,
 E. Pt. Jackson Id. abeam, steer EAST for $3/4$ of a mile,
 Lacey Island, Cordeva Bay.

Going towards Howkan,

Position $1/2$ mile S.W. from Mc Farland Id. steer S.E. for $4-1/4$ miles,
 Square Id. $1/2$ mile on port beam, steer S.E. for 1 mile,
 Bushy Id. distant $1/2$ mile on Starboard beam, steer S.E. x E. $1/2$ E. for $3-1/4$ miles
 Dead Pine Id. reef, abeam, steer S.E. x E. $1/2$ E. for $1/4$ of a mile,
 Pond Rock, abeam, steer S.E. x E. $1/2$ E. for $3/4$ of a mile,
 East point Channel Island,

This course leaves the reef making off to the North-eastward from
 Dead Pine Island and Pond Rock to the South-westward and the Kelp patch
 ($1/3$ of a mile from the East point of Channel Island) to the North east,

It appears to be a clear channel with good water but without the kelp showing
 it may be a little narrow unless the lead is kept going.

The following is apparently the best channel:

Bushy Island, as above, steer E. x S. $3/4$ S. for $3-3/4$ miles, this course heads
 for the N.E. shore passing about $1/2$ to $3/4$ of a mile to the Westward of
 Kelp patch, then steer S.E. $3/4$ S. for $4-1/2$ miles,
 East point of Channel Island.

Through Sukkwan Strait.

From Tlevak Strait to head of Hetta Inlet,

Mid channel position off North Bay, steer S.E.x E. for $3/4$ of a mile,
 Guide Island abeam, steer East 1 mile,
 Halibut Nose abeam, steer East for $3-1/4$ miles,
 N.Nichols Island abeam, steer E.x S. for $1/2$ mile,
 Island and landslide in range, steer E. $1/2$ N. for $1-1/4$ miles,
 Turn Rock abeam, steer N.E. $1/4$ E. for 1 mile,
 Grassy Rock abeam, steer N.E. $1/4$ E. for $1/2$ mile,
 Between two islands, steer N.N.E. $1/4$ E. for $1/4$ mile
 Rocky Point abeam, steer N. $3/4$ E. for $3/4$ of a mile, (favor East shore)
 Island Point on port side, steer N.N.W. $1/2$ W. (keep over to West shore give
 small islands a berth of 25 yards)
 Reef Island abeam, steer N.E. $1/4$ E. for $1/4$ mile,
 Island on port side abeam steer N.E. $1/4$ E. for $1/4$ mile,
 Island on port side abeam, steer N.E. $1/4$ E. for $1/4$ mile,
 Island point on port side abeam, steer N. $1/2$ E. for $1/4$ mile,
 Sukkwan Village, rounding easily in mid channel, S.E.x E. $1/2$ E. $1-1/2$ miles,
 Small Island abeam, steer S.E.x.E. $1/2$ E. for $3/4$ mile,
 Saltery Point abeam, steer E. $1/2$ N. for $3/4$ mile,
 Island on starboard hand abeam steer E. $5/8$ S. for 4 miles,
 Island on port hand abeam, steer E. $3/4$ N. for $1-1/2$ miles,
 Eek Point abeam, steer N.x E. $3/4$ E. for $1-1/2$ miles,
 Bare Rock Point abeam, steer N.x W. $1/2$ W. for $1-1/2$ miles,
 Mountain Point abeam, steer N.W. $1/2$ W. for 4 miles,
 Corbin Point abeam, steer N.W.x N. $1/4$ N. for $2-1/4$ miles,
 Dell Island abeam, N.x E. $1/4$ E. for $1-1/2$ miles.
 Sulzer,

The above courses give Turn Rock a berth of from 200 to 300 yards.

4
Grassy Rock 150 yards, take mid channel between the two island points, then follow the Eastern shore after passing Rocky Point at a distance of 100 to 150 yards off. When the point of the island on the opposite side of the channel is abeam stand across the channel towards the North side to avoid the reef making out from Reef Island towards the channel and favor the islands on the port side giving them a berth of from 25 to 30 yards. Pass the old Sukkwan Village in mid channel and round on easy port helm to avoid kelp patch on starboard hand.

There is very little tidal current in Sukkwan Narrows.

Tides and currents in Tlevak Narrows:

The first 4 hours of flood and the last 2 hours of ebb set to the Southward.

The first 4 hours of ebb and the last 2 hours of flood set to the Northward.

Slack water occurs about 2 hours before High and Low water as given by the Tide Tables for Sitka.

During Spring tides there is hardly any slack.

During Neap tides there is from 10 to 30 minutes slack with weak currents for about an hour on either side.

During Spring Tides the current has a velocity of about 8 or 9 knots an hour.

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COAST AND GEODETIC SURVEY
Descriptive Report

to accompany Topographic Sheet # 2838,
JAN 23 1 1908

Iphigenia Bay to Cordova Bay,

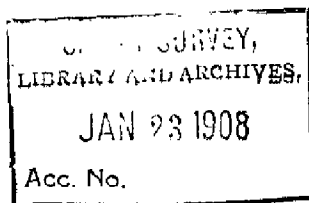
West coast Prince of Wales Island.

S. E. Alaska.

1907

E. F. Rickins, Asst.

Chief of Party.



The triangulation points were plotted with a three arm protractor and the topography sketched by aid of sextant positions and sextant cuts, the party working rapidly in order to keep up with the triangulation party. In places where it was impossible to get sextant positions the topography was sketched by course and distance while running in a small steam launch.

The two rocks at north entrance to Portillo Channel are large and about 4 feet above high water. The rock at S Head in Portillo Channel is large and about 3 feet above high water.

There is no position in the topographic record for the S.E. patch in the north entrance

to Portello Channel, but the approximate position is given it on the sheet as it was seen by the triangulation reconnaissance party.

The rock off St. Philip Island in the Gulf of Esquibel is bare at low water. The rocky reef about a mile west of the witnesses and the one about $1\frac{1}{4}$ miles north of Parada Island in San Alberto Bay are bare at all stages of the tide.

△ Cement is on a large grass covered rock about 20 feet above high water.

△ Anguilla, Philip, and Moke are on large rocks.

Rock about $\frac{1}{2}$ mile south of Parada Island is bare at low water.

Fern Reef is bare at low water.

△ Fish is on a long rocky ledge about 4 feet above high water.

△ Fog is on a large rock about 8 feet above high water.

△ Port in Portello Channel is on a rock about 3 feet above high water.

△ Til is on a rock about 2 feet above high water.

△ Foul is on a long rocky reef about 4 feet above high water.

The mid-channel rock about a mile north-east of Ignace Island is about 75 meters in circumference and about 6 feet above high water.

Rock about $\frac{1}{2}$ mile north-west of Point Rosalia in Gulf of Esquibel bares at low water.

The island about 25 meters south of a Til in Tortillo Channel is small and wooded.

The island off Sword Point in Tortillo Channel is heavily wooded, a long low rocky spit running out from the west end. A Clam is located on this spit.

Tortillo Channel is foul.

On entering St. Philip Island Anchorage from the southward, the large mid channel rock (about 10 feet above high water) was left to starboard, passing between the rock and the island, nearer the rock.

A Tilt in Christoval Channel is on a green top rock about 2 feet above high water.

A few sounding lines were run over Balandra Shoal. From a tidal prediction and reduction by the Tidal Division the least water found was four feet.

Balleria and Balandra Islands are heavily wooded.

San Juanito Island is a small wooded island

south of San Juan Bautista Island.

The Coabras Islands in Bucareli Bay are wooded.

The two San Adrian Islands on the west side of Ulloa Passage are wooded.

△ Kelp is on a rock about 2 feet above low water.

Rocky reef off south-east point of Meares Island is bare at all stages of tide.

△ Moss is on a small wooded island.

△ Log is on a small island with a few scrubby trees in center.

△ Isle is on a small wooded island.

The large rock about $\frac{1}{2}$ mile south-west of Log is bare at all stages of tide.

Block Island is heavily wooded. The passage on the east side of Block Island is foul.

△ Mid is on a small wooded island.

● Round is a low, round, bushy tree on a small island.

△ Bunn is on a small wooded island.

△ Reef is in a large rock which corals at high water.

△ Guide is on Guide Island, a small wooded island in Herak Strait.

△ Mac is on a small wooded island, probably Sentinel Island.

△ Turne is on a large rock about one foot above high water.

△ Ark is on Turn Rock, a rock about 4 feet above high water at the entrance to Sukkwan Strait.

△ Lap is on a large rock about 6 feet above high water. The large rock east of the one on which station is located is about 100 meters long; 20 feet high, and covered with low weeds and brush with a lone spruce tree on the east end.

△ Sentinel is located on a small wooded island. The rock about $\frac{1}{2}$ mile south-east of Reef Point is covered at high water.

△ Cut is located on one of three large rocks from 10 to 20 feet above high water.

△ Nice is located on one of a group of small wooded islands. The rocky reef south-east of station Nice is bare at all stages of tide.

△ Shoe is located on Shoe Rock, about 15 feet above high water.

△ Keg in Kargami Strait is located on a small grass covered island.

△ Howkan is located on a small island with a few trees in center.

The rock in Kargami Strait between △ Shoe

and a line is bare at all stages of tide.

Rock about $\frac{1}{2}$ mile south of a Grace in Grace Harbor is bare at all stages of tide.

Square island is heavily wooded.

The country from Sphigevia Bay to Cordova Bay is mountainous and heavily wooded. It was necessary to follow the water courses with the triangulation scheme as all the hills are heavily wooded. Many of the trees, having an insecure hold in the thin layer of soil covering the rocky surface of country, are blown down or die, making it almost impossible to penetrate the woods, which are composed mostly of spruce trees.

The shoreline is all rocky, with few exceptions all the triangulation stations for the season are marked in solid rock.

The numerous islands along the survey are high and wooded.

There are no rivers, only an occasional rivulet from the mountains.

The country is sparsely inhabited, the few Indians composing the population, are clustered in the small villages and work for the Salmon Canneries.

St. Lawrence Village is composed mostly of Indian houses on the east side of the small inlet, also a church and a school house. On the west side of the inlet there are a few Indian houses; a Salmon Cannery; two or three houses for employees of the cannery, and a large general merchandise store and post office.

At Nauyasau Village there is a church and a school house and the remainder of the village is composed entirely of Indian houses.

At the office, Washington, a projection, scale 1-100,000, was made; the triangulation stations plotted on it by D.M.'s and D.P.'s. from field computations, and the topography adjusted to it. In the field at each triangulation station a round of angles was taken to islands, reefs, points etc. These cuts were plotted on the new Projection and used as far as possible in adjusting the topography. In the case of long cuts to distant objects the azimuth of the initial line was laid off and used with protractor to prevent swing. In addition to this the sextant positions recorded in the topographic records were plotted and used as far as possible to adjust the topography. In many cases both in triangulation and topographic records, the

cuts and positions could not be identified, so were not used.

The mountain peaks were plotted on the new projection from the triangulation records with a three arm protractor. The azimuth of the initial line was laid off to prevent swing.

Description of Anchorages, channels, currents, etc. are dealt with in Assistant Dickins', "Description of Anchorages and Coast Pilot Notes".

The following is a list of ~~most~~ of the changes made in adjusting the topography from cuts and positions from the triangulation and the topographic records:

San Pedro and Hood Islands changed to suit on cuts. It was necessary to change considerably size and shape of San Pedro Isld.

Twiber Island smaller to suit on cuts.

Emerald Island smaller to suit on cuts.

The line from Δ Head to Δ Done in San Christoral Channel known to be open, so "Slope" Island was swung to eastward, necessary to make smaller on the west side the island on which Δ Back and Δ Spur are located.

Reef along Hecate Island shore nearly half

way from Δ Mike to Δ Lynch, lengthened to fit Δ on cuts.

Reef south of Δ Feather made longer to southward to fit Δ on cuts.

Reef east of Δ Gull Rock plotted from Δ on cuts.

Reef south of Emerald Island moved slightly to northward to suit Δ on cuts.

"Crack" Island lengthened to southward to fit Δ on cuts.

Small reef north-east of Δ Timber placed on sheet from Δ on cuts.

Two small reefs near Δ Gull Rock placed on sheet from Δ on cuts.

Small reef 2000 meters south of Δ Feather placed on sheet from Δ on cuts.

A small island about 300 meters off the north west shore of Anguilla Island and about S x E (true) of Δ Twin made larger to fit Δ on cuts.

Small islands at Δ Bob changed to open line to Δ inner. This line known to be open inside the small island a short distance east of Δ Bob.

Island off north west point of Anguilla Island swung to southward to fit Δ on cuts.

North west point of Anguilla Island swung to southward to fit Δ on cuts.

Island near and west of Δ Mike enlarged a little.

to fit Δn cuts.

Culebra Island changed to fit Δn cuts.

St. Philip Island changed to fit Δn cuts.

The three islands 3500 meters north east of Δ Squeeze shifted to suit Δn cuts.

Necessary to change vicinity of Howkan considerably.

Rock between Δ Roe and Δ Lin in Mangani Strait shifted to suit Δn cuts.

Size and shape of Channel Islands near Howkan Village changed to suit Δn cuts.

North end of Shoe Island changed to fit Δn cuts.

Square Island made smaller to suit Δn cuts.

Small island east of Δ Cent made smaller to suit Δn cuts.

"Axe" Island in Mangani Strait lengthened to fit Δn cuts.

Point at west entrance to Kasook Inlet lengthened to fit Δn cuts.

Islands at entrance to Kasook Inlet are too large, but were not changed as it is known that Kasook Inlet was wholly sketched and changing them would change the relation existing between them and the inner entrances to the inlet.

"Punk" Island changed to fit Δn cuts. Necessary.

to change shape, making it narrower.

Reef S.E. & N.E. shortened on east side to suit Δ n cuts.
 not able to identify cuts to islands near Δ Shore, so they were ruled as sketched on original sheet.

Point of Long Island 1500 meters north of Δ Ship swung to northward to fit Δ n cuts.

Aston Isld. lengthened to northward to fit Δ n cuts.

Small islands north of Aston Isld. changed to suit Δ n cuts.

"Nice" Isld. changed to fit Δ n cuts.

The entrance to Sukkwan Strait sketched from memory, having made reconnaissance and built Δ n signals there.

Point Boreas lengthened to southward to suit Δ n cuts.

Small islands 1500 meters south-east of Δ cut & changed to suit Δ n cuts.

Small island 400 meters west of Δ Truck made smaller to suit Δ n cuts.

Square Island made smaller to suit Δ cuts.

Island 600 meters east of Δ cut made smaller to suit Δ cuts.

Rock south of Boreas Point shifted to intersecting of Δ n cuts.

Island north of Δ Ark at entrance to Sukkwan

Strait changed to fit s n cuts.

Two large islands east of "Sari" Island enlarged and shifted and the two smaller islands about 300 meters north of these shifted to fit s n cuts.

Islands north-east of M^cFarland Islands shifted to fit s n cuts.

"Sari" Island lengthened to north-eastward to tangent cut.

Small islands east of Δ Mac shifted and rock placed among islands from s n cuts.

A small indentation made into shoreline a few meters east of Δ Fort at entrance to Sukkwan Strait. Known to exist.

A small island placed on sheet about 100 meters east of Δ Lap at entrance to Sukkwan Strait. Known to exist.

Island east of Δ Reef enlarged to fit s n cuts.

Island, on which Sun and Able ss are located, enlarged. Both ss known to be on same island.

Island north-east of Δ Burn enlarged to fit s n cuts.

Two small islands east of Δ Guide shifted to fit s n cuts.

Point at south entrance to Soda Bay shifted to northward to fit s n tangent cuts.

Large island north-east of Δ mid shifted to fit Δ on tangent cuts.

Small islands north of Δ line remain as sketched in field, cuts could not be identified.

"Claf" island in Ulloa Passage changed to fit Δ on tangent cuts.

Island on which Δ & Δ and Δ are located, changed to fit tangent cuts.

First point west of Δ Big moved to westward to fit Δ on cut.

South side Meares Island changed to fit Δ on tangent cut.

Meares Passage changed considerably. Points placed on sheet from Δ on tangent cuts.

Island on which Δ & Δ and Edge are located, changed slightly to fit Δ on cuts.

4.) This is an island only at an extremely high tide, joined to Smezz Island by a bare shore of sand and rock.

Position of two small islands in Portillo channel south-east of Δ Δ changed, line to Δ Whit from Δ Δ known to pass between the two islands.

Small island in Portillo channel south-east of Δ Δ made smaller as line from Δ Δ to Δ Δ is known to pass over the rocky point on the

north-east end.

Ignace Island changed to fit s.n. cuts.

Name of a Block on Block Island in Herak Narrows not put on sheet, no room.

Point in Port Refugio changed to fit s.n. cuts.

Point Bocas made smaller on west side to fit s.n. cuts.

Rocks about 400 meters north of a Til in Tortilla Channel put on sheet from s.n. cuts.

Rocks about 900 meters north of a shot in Tortilla Channel put on sheet from s.n. cuts.

Rock about 2000 meters north east of a Lat on Ignace Island put on sheet from s.n. cuts.

Unable to identify cuts to points north-west of a Buff in Herak Strait, so points remain as sketched in field.

Not able to identify cuts to islands north and north-east of the Farland Islands.

North shore of Suemez Island on Bucareli Bay changed to suit s.n. cuts to the four principal points.

Rocks in Bucareli Bay north-west of s.n. Enter changed to suit s.n. cuts.

Cabras Islands in Bucareli Bay changed to suit s.n. cuts.

San Juanito Island south of San Juan Bautista Island made smaller to suit triangulation cuts.

Small island at entrance to Port Estrella located by topographic record sextant position.

A small high water island in Portillo Channel was placed on sheet from s n cuts, north west of s Raim. A small bight or bay was made north-west of s Raim. This bight known to exist. Reconnaissance party anchored in it for night in launch Cosmos, after building signal Raim. The line from s Raim to s. Gert known to pass over this little sandy island.

Point back of s Hod lengthened to westward to fit s n cuts and "Hod" Island made smaller in proportion.

Point back of s Til moved to eastward to fit s n cuts.

The island in Portillo Channel on which s clam is located was made larger to fit s n cuts.

Point moving to eastward to fit s n cuts.

Two rocks placed on sheet at entrance to Portillo Channel south-west s Port, from s n cuts.

One rock placed on sheet north-west of s Hod.

Rock south-west s Whit placed on sheet from

on cuts

Unable to identify all cuts to reef, islands, etc.
 Mouth of Ignace Island, as marked nearly as sketched
 in field, reef which could be identified were placed
 on sheet.

Shoreline west of Δ Foul swung to westward to
 place it inside of a cut from Δ Hiet to a Tan-
 gent of Ignace Island.

Placed on sheet from Δ N cuts, a rock off
 point of Smezz Island about 5 miles S. S. E. (true)
 of Δ Ignace.

Necessary to change north end of Ignace Is-
 land to fit Δ N tangent cuts. Tortilla Channel
 and vicinity of Ignace Island very much off
 from scale, making the adjustment more diffi-
 cult.

Point of San Juan Bautista Island between
 Δ Bay and Δ Mond swung out to westward to
 fit Δ N cut.

Witness Islands in San Alberto Bay changed
 to fit Δ N cuts.

Reef south of Δ Ball in San Alberto Bay placed
 on sheet from Δ N cuts.

Reef north west of Δ Witness placed on sheet
 from Δ N cuts.

Points of Fish Egg Island lengthened to fit Δ n tangent cuts.

- 1) Not able to identify cuts to island west and north-west of Δ Fitness and to islands north west of "Alberto" Island.

Island northwest of Δ Tuft in San Cristobal channel changed to fit Δ n cuts.

St. Philip Island in Gulf of Esquibel changed to fit Δ n cuts.

Small island west of Δ Pasqual in Gulf of Esquibel shifted to westward to fit Δ n cuts.

Three small islands south-east of Δ Philip shifted to Δ n cuts.

Rocks off the north west side of San Fernando Island placed on sheet from topog. record.

- 2) Point Rosalia on north coast of San Fernando Island located by position from topog. record.

Point south-east of Δ Pasqual shifted to Δ n cuts.

South side "Bob" Island forced to northward to open line Δ Bob to Δ Inner.

Necessary to change islands at Δ done to suit Δ n cuts.

Changed west side of island on which Trine Δ

and Δ Balk are located to fit Δ n cuts.

Changed size of Parada Island to fit Δ n cuts.

Changed island on which Δ Jude is located to fit Δ n cuts.

Island on which Δ Alberto is located changed to fit Δ n cuts.

Coronados Islands changed to fit Δ n cuts.

Reef placed on sheet from Δ n cuts 500 meters northwest of Δ Suspire.

Robber Island changed to fit Δ n cuts.

not able to identify cuts to islands in Trocadero Bay, so inked as sketched in field.

Madre de Dios Island swung to suit Δ n cuts.

Small island placed on sheet from Δ n cuts north east of Δ Madre.

Points east of Δ Trouble adjusted to Δ n cuts.

and point placed on sheet with broken line to fill Δ n cuts.

East side of San Juan Bautista Island changed to fit Δ n cuts.

Point in St. Nicholas Harbor lengthened to fit cuts from topog. record.

St. Lawrence Inlet was oriented with the cut to Cause Pass taken on "m" day Topog record no 2.

Rock off first point north-east of small island

in entrance to Port Estrella placed on sheet from topog. record.

1. Point 800 meters west of Δ Trumble placed on sheet from topog. record.

Bare rocks 1600 meters north west Δ enter from topog. record

Unable to identify all cuts to points on south end of large island about 2500 meters east of Δ Alberto in San Alberto Bay. Entrance Point lengthened to fit cuts from topog. record.

Small island about 500 meters south of the anchorage east of Fish Egg Island, known to be a high water island.

Bare rock south of San Adrian Islands in Ulloa Passage from topog. record.

Rocks in Meares Passage plotted from topog. record.

2. Kelp patch in channel between Δ Big and Δ Cabin near Herak narrows plotted from topog. record, page 51, vol. 2, developed on hydrographic sheet of Herak Narrows.

Small island few meters south of Δ done in San Christoral Channel moved to northward to open line Δ Spur to Δ Ball. This line known to be open.

Kelp patch off Mescon Δ at south entrance to Bocas de Fumas plotted from topog. record.

Point Mesconocida lengthened to south-east to position from topog. record.

Culebra Island in Gulf of Esquivel changed to fit topog. cuts from Δ squeeze.

Unable to plot all kelp patches in San Christoval channel on such small scale.

Shoreline east of Δ Vasko in Ulloa Passage changed to fit two positions from topog. record.

Kelp patch south of Δ Cabin plotted from topog. record.

Point north east of Δ Out at entrance to Ilerak narrows forced inland to suit topog. record position.

North Bay adjusted with a cut to a flag at the head of the bay, known to have been on the small island at head of bay.

Development of Alberta reef in San Alberto Bay, Pages 22 and 23, Vol 3, Topographic Records, was not plotted on topog. sheet, scale too small.

Shoreline between Δ Jumbo and Δ Boreas in Ilerak Strait was changed to suit topog. positions which plotted back of shoreline. Same is true with regard shoreline between Steg Δ and Grace Harbor in Mangani Strait.

Shoreline of Jackson Island was changed between
 Δ Hen and Δ Jack and a rock placed off shore a few
 meters from topographic record.

Most of the lettering on the new projection was
 put on in pencil, as it was considered that
 an office draftsman could do it more
 swiftly and better than one of the field force.

To the	Respectfully submitted
Superintendent	Gilbert J. Rude
Coast & Geodetic Survey	Assistant, C & G Survey,
Washington, D.C.	
January 13, 1908.	