U. S. Coast and Geodetic Survey.

F. M. Thorn

Superintendent

Reconnaissance.

Grays Harbor to Cape Flattery

Washington Territory

Description Of

Eight Topographical Sheets on a Scale Of

1:20000

1887.

By

J. F. Pratt, Asst.,

Chief Of Party.
This work was commenced at the south end on May 2, and was completed on June 12, at Neeah Bay.

From Damon's Point (Sheet No. 1 Post No. 31) to Point Grenville (Sheet No. 3 Post No. 34) the distance was measured with a 100 me-

ve steel wire, the terminals of these wire bases being occupied with a theodolite: the planetable was run over this portion very

hurriedly.

At Point Grenville the value in distance of the Ocular microm

ceter to the Planetable Alidade was carefully determined, and from here on all the distances depend on this micrometer, a mean of sev-

eral readings on the targets being used for the forward lines, much of the detail being sketched: this method was not, and cannot, be

used where it was impossible to keep along the beach and detours through the timbers had to be made, at which places positions had
to be established by compass and resections on offshore rocks, when the beach had been regained.

At feasible points angles were measured with the theodolite on conspicuous objects, these objects in turn being occupied as close-

ly as practicable, their distances depending on the planetable determinations.

The projections on the sheets were constructed after the field

work was executed and the position of the entire work depends upon the adopted positions of points at both ends as follows. At the north end on the latitude of "Neeah Bay" and longitude of "Tatoosh Island", at the south
and upon the assumed position of "Lone Fir" as measured from
"Point Humson" (Grays Harbor) Astronomical Station on a trac-
ing of the topography of the Entrance to Grays Harbor by Assistant
Gilbert in 1858.

The longitude of the entire coast line is controlled by a
series of azimuth lines that are continuous from Post No. 21
Sheet No. 1 to Tatoosh Light House sheet No. 3.

The numbers in red on Sheet 1, 2, and 3 indicate the termin-
als of the wire bases.

The names of the Azimuth stations from Point Grenville to
Tatoosh Island are in red.

The country between the entrance to Grays Harbor and
Point Grenville is the hunting ground for Sea Otter. The methods
adopted by the hunters is to build "derricks" (scaffolds) about
thirty feet high in favorable places overlooking the water where
they lay in wait watching for the animals which are very wary and
when they are within three or four hundred yards of shore they are
shot at with very heavy target rifles: It is said that the Otters
seldom comes nearer shore than the outer line of breakers. These
animals are not abundant and the hunters realize from $75.00 to
$100.00 per skin according to size and quality. If a hunter secures
five or eight skins per year he is very fortunate; there are seldom
more than six or eight of these, hermit, hunters on the entire
beach at a time.
Sheet No. 1.

The station "Long Fir" "Damon's Tree" and "Sand" are determined by triangulation using bases "2" to "3" and "3" to "4".

The portion indicated in red is from the work of Assistant Gilbert in 1880.

The beach is of clean hard sand with a large amount of drift piled up just above ordinary high water mark.

The conventional topographical signs explain the character of the country better than words.

Connor creek is choked with drift as soon as the forest is reached, it can be forded at its mouth, in any kind of weather at low tide except during freshets.

The transportation of camp, provisions etc. was by a wagon hauled, along the beach, by three animals.

The first camp was in Mr. Damon's barn at Damon's Point the next was at a point marked "C" on the N.W. bank of Connor Creek.

Sheet No. 2

The distance from Post No. "11" to "13" across the Chepalis River is determined by triangulation from the base "12" to "13".

The stations "Chepalis" and Chepalis Rock are determined by triangulation using the bases "11" to "12" and "14" to "15" respectively.

"Je Creek Tree" is determined topographically.

The "Chepalis River" is navigable for small boats and canoes some distance above J. C. Renner's (Indian Trader) place and
can be forded in the vicinity of "A" to "B" in smooth weather at: the extreme low tide, except where there is a freshwater. Within memory of man the mouth of this river was just south of and adjoining the mass of rocks under Chepalis Head.

Boone Creek is small and can be forded at ordinary half tide except when swollen with rains and melting snow.

"Jo Creek" is about the same character as Boone Creek.

The Neah-to-lips River joins the southern boundary of the Quinault Indian Reservation; it can be forded at low tide by crossing from "a" to the opposite shore and then keeping along under the bluff to "b" where dry land can be again regained. The beach here is bold and a wave in moderate weather the breakers are large and quite heavy, in the entrance to the stream.

"Wrock Creek" is about the same size and character as Boone and Jo Creeks.

"Chepalis Head" is the first headland North from Grays Harbor Entrance and shown quite prominently from along the beach both from the South and the North; it cannot be safely rounded with animals and wagon at extreme high tide in smooth weather it should only be ventured at low water, off this headland are the first rocks that appear going north from Grays Harbor.

The Bluffs on this sheet are generally composed of a yellowish clay with the exception that at Chepalis Head they are of a darker color.
Chépalis Rock is conical in appearance and very conspicuous, it projects about 35 feet above the water and has bolted to its apex a tiny hut belonging to a sea-Otter hunter; this rock is in the breakers and can only be reached with a canoe in the very smoothest weather, this hunter often remains there for weeks without communication other than by sign language with his companions on shore.

Between Post "18" and "18" is the scene of two or three gold mining excitements; here in places the beach has a large proportion of ferruginous sand in which is found small quantities of very light flake gold.

Transportation of camp provisions etc. was by wagon hauled along the beach by three animals.

Camp was made at "c" on the south bank of the Chépalis River and at "d" abreast of Post "17".

Sheet No. 3.

Post "24" is the end of the beach measure.

"Grenville Tree" is determined by triangulation from the wire bases Posts "21" to "22" and "22" to "23".

The azimuth stations for continuing the work are "Grenville Tree" "Cape Elizabeth" "June Tree" "Promontory Tree" and "Stump on Beach".

"Quinaielt Astronomical Station" was not the success that was desired on account of cloudy weather.

The "Quinaielt (Que'naiel) River" could be navigated with
river steamers for fifteen or twenty miles; it is a powerful stream and cannot be forded at any time; on the south side of its mouth is located the Quinault Indian Agency and village.

Raft River is navigable for canoes and small boats for quite a distance especially at high water, it can be forded only at low tide.

Granville Bay should not be used as a harbor of refuge, apparently it has a rocky bottom, but can be used as an anchorage in northerly smooth weather for craft below medium size; the best anchorage would be about where the letters "r" and "e" are in the name "Granville Bay" on this sheet or a little further in shore and more to the westward if the craft is quite small, as the extreme southerly point and the two large rocks break the sea considerably.

The headland "Point Granville" and "Cape Elizabeth" are both prominent and very important land marks for the navigator. From the southward they appear as one, Cape Elizabeth extending to the westward of Pt. Granville judging from the low gap that the Quinault River makes, with the abrupt hills on the north side of its valley, it is probable that from seaward Cape Elizabeth appears quite, if not more prominent and is often mistaken for Pt. Granville by mariners: this view is corroborated by old experienced shipmasters.

The beach that has extended from Grays Harbor stops under the south side of Pt. Granville and owing to rocks the last mile
can only be traversed at low tide with a team. It is impossible to climb around Point Grenville at any stage of the tide. The Agent at the Quincialt Reservation has had a road built over it. The beach between Pt. Grenville and the Quincialt River is composed of very coarse shifting sand, is very bold, and impassable at high tide or at half-tide in very rough weather. There is very little beach between the Quincialt and Cape Elizabeth, which point cannot be passed without except at very low tide and only then, in smooth weather, with much climbing up and down over rocks and at the extreme point by going through a cove with the water at low tide nearly waist deep in it. From Cape Elizabeth the beach extends to the foot of the bluff just beyond the point marked "A." From here to the point marked "C," the shore line is again impassable at any stage of the tide and a detour through the timber has to be made. The timber all along this outside coast is so choked with underbrush, principally the salal bush that it is almost impassable but close to the shore invariably denser than it is a mile or two further back. From the point marked "C" to the end of the sheet there is a broken beach which offers only a few minor obstacles.

The Bluffs at Pt. Grenville and as far as the Quincialt are of a dark appearance and composed principally of hard sandstone and conglomerate. The bluffs at and in the vicinity of Cape Elizabeth are lighter in color than at Pt. Grenville the upper portion being
being of yellowish clay and the lower portion of a sort of sandstone conglomerate. From Cape Elizabeth to the end of the sheet they have a yellowish appearance and are principally composed of clay with a rock foundation.

The first important rocks north from Grays Harbor appear on this sheet. Grenville Arch, five eights of a mile S.W. from Pt. Grenville, eighty two feet high, is a very prominent rock it is white in summer, from bird lime; (which is usually washed off in winter from rains and heavy seas) it has a small arch extending through it in an easterly and westerly direction.

From Grenville northward there are myriads of rocks and submerged reefs, many of which on account of smooth weather and carrying the work on rapidly as possible along from the low beach were undoubtedly not seen. There are some heavy breaks, indicated on this sheet, off shore, about midway between Pt. Grenville and Cape Elizabeth, those are in the line of and are the heaviest part of what Capt. Willoughby the Agent at Quinault in formed me was an heavy weather a line of dangerous breakers continuing from abreast of Grenville Arch to abreast of Cape Elizabeth in the shore of an arc of a circle with a few passages through.

Split Rock is black and conspicuous, about one and one fourth miles off shore and 85 feet high; was so named from the fact that it is cleft in two, in an easterly and westerly direction; from the
fact that there is a small rock about midway between it and Cape
elizabeth another one half of a mile south of it and a third about
three fourths of a mile S. S. W. of it. I would infer that there
are others, perhaps submerged, in its vicinity.

Willoughby Rock is large and rounded, and 123 feet high: it is
inside of split rock and is named after Captain Willoughby at Qui-
naelet.

Sea Lion Rock appears, from shore, small and black, it is
7. 5-8 miles N. W. x N. from Cape Elizabeth and is 3 miles off shore
being 1. 7-8 further off shore than split rock it was moderate
weather when we were abreast of this rock and no breaks could be
seen from the beach in its vicinity.

Transportation by wagon ceased at Quinaelet it being impossible
to go further with any kind, of four legged, beasts of burden and
from here to the Questa River the only possible means that could
be utilized to carry the outfit was by a pack train composed of
eight Kootenays (Indian squaws): each carrying about 75lb.
apiece on their backs supported by a strap across the forehead. (it
is beneath the dignity of the bucks (males) to do manual labor of
this character) When this unique train was rounding the south-
only one of two points at Cape Elizabeth one of the Kootenays fell
of the ledge, around which we had to crawl, into the surf with
about 80lbs. on her back, it being low tide we managed to climb
down into the breakers and pull her and the pack out, if the tide
had been two feet higher the sea would have beaten her to death against the rocks in a few minutes and it would have been impossible to have reached her. These creatures are practically beast of burden, have no sense of honor, never expect to stick to their agreement and are very difficult to manage: as a rule, every morning they concoct a strike for either for more money or additional recruits and sometimes for both; after they have several days wages due then they can be better controlled with the threat that they will not be paid unless they keep to their original agreement.

Camp was made at the following places, at "c" on Point Grenville, at Quinaielt Village, on the sand beach at "d" and at "e".

Sheet No. 4

The Azimuth stations for continuing the work are "Quests Tree" "Flag" and Outer of Four Trees Flag."

The lower portion of the Quests River could be navigated with river steamers; it has a strong current and is a powerful stream. By referring to the sheet it will be found that its mouth has, at some time, been about one and one third of a mile, than it is at present, it is now rapidly cutting into the cement bluff at Quests Tree. The breakers off its mouth are very heavy. The Quests Indian Village is on the west bank of this stream about one half of a mile from its mouth.

The beach south of Quests River is smooth and composed of gra-
vel and sand; between the Quests and "Outer of Four trees flag", it
is very bold and precipitous and composed of very loose shifting
shingle worn smooth and rounded; from here on, the intervening
beaches are composed of coarse sand with scattering boulders. It
is impossible to pass from "a" to "b" except at extreme low tide
and in smooth weather.

The bluffs along the entire sheet are of the same clayey char-
acter and are of a yellowish color with the exception that from "a"
to "b" the base is of conglomerate and darker in color.

There are very few rocks on this sheet and none of them of im-
portance, the furthest being only about one third of a mile off
shore.

The Kootenai men post train belonging to the Quinault Tribe
would not go beyond the south side of the Quests entrance and from
here on to the yoh River two Quests Indians one squaw and two
"Teiutan" (ponies) were employed for transporting the outfit.

Camps were made on the beach under Quests Tree and at the
point marked "a".

Sheet No. 5

The azimuth stations for containing the work are "Cultis Tree"
"Tree East End Destruction Island" "Hoh River Topographical" and
"Tolkeak Point".

The Hoh River could be navigated with river steamers at its
lower end, it is a powerful stream and cannot be forded at any time
on the south side of its mouth is located the Hoh Indian Village.
composed of about six buildings. There is a sunken rock directly off its mouth.

Chah-lutt creek is small and can be forded.

The mouth of the Keh-chen-whitt River is inaccessible from the beaches on either side, a short distance above its mouth it divides into two streams neither of which are navigable, on the westerly branch there is a beautiful waterfall.

In smooth weather the Indians go in and out of the Woh River with the canoes; as the outer breakers are quite heavy there, they generally keep inside of them by wading their canoes in the surf until they are sheltered by the rocks that are about one mile N.W. of the entrance where they then put out to sea.

Close to the end of Toleak Point and on its south side the Indians land with their canoes in moderate weather, this place is full of sunken and rock swash rocks and is dangerous in rough weather.

Woh Head is bold and conspicuous, the cliffs on its seaward face being vertical and impassable.

Toleak Point with its outlying rocks is quite prominent but not as much so as the headlands N. W. of it, which come on the next sheet: at this place there is an Indian settlement composed of two buildings.

Beginning with the south end the beach can be traversed all the way to the Woh River at low tide, there being but two places impassable at half tide viz: at "Cultis Tree" and from "x" to "z"
From the Hoh River the coast line can be walked and climbed along until the point "a" is reached where a detour through the timber and over the highland has to be made the beach being regained at "b" from "b" to "c" and from "d" to "e" it is impassable except at low water; from "f" to "g" is also another impassable place; from "h" to "i" a long circuitous detour through timber has to be made wading both branches of the Keh Chenwhitt River and from "j" to "k" another circuit inland had to be made.

The bluffs generally speaking are clay of a yellowish appearance with the exception that at Hoh Head in the vicinity of the Keh Chenwhitt River and from "j" to "k" they are of a dark color and composed of conglomerate, mainly.

The most important object off shore on this sheet is Destruction Inland, which is about three and one half miles from the mainland, from which it appears perfectly flat and as if composed of a single terrace, the only low marks on it are three trees, or small clumps of bushes, its shore line is reduced from the survey of Assistant Lawson in 1886.

There are numerous rocks, islets and submerged and swash reefs on this sheet, the outer ones of which average about one and one half of a mile off the shore: The more conspicuous being North Rock a column 100 feet high, Perkin's reef large and jagged, Alexander Island smooth and rounded one hundred and twenty feet high, Rounded Island dome shaped one hundred and thirty feet high and the Giants
Giants Graveyard composed of about a half a dozen huge monoliths from eighty eight to two hundred and twelve feet high.

The pack train composed of Indians and ponies could not go beyond the Hoh River and from here a sealing canoe with a crew of three Indians was engaged to take the outfit to Toleak Point the nearest landing place. After reaching Toleak Pt, the weather became too rough to use the canoe and from here on to Quillihute an Indian pack train had to be resorted to again.

Camps were made at the Hoh Indian Village and at Toleak Point.

Sheet No. 0

As some of the outlaying rocks would not come on the sheet which had to be stopped on it as shown.

The Azimuth stations for continuing the work are "Jones Island" and "Cape Rock".

The lower portion of the Quillihute River could be navigated with river steamers, it is a very powerful stream and cannot be forded under any conditions: within the memory of man its mouth has been between Jones's Island and Quillihute Village: the Dickodochteedar River branches off to the northward about one third of a mile from its mouth.

A Seattle firm has a trading post at Quillihute Village, their goods being brought by schooner which anchors in smooth weather in the cove inside (east) of Jones's Island; if much of a sea rises before she completes discharging, she has to put out to sea and wait
until smooth weather.

Teahwhit Head and the first point south of Quillihuate are the only prominent headlands.

The beach ceases at "a" Teahwhit Head cannot be climbed around at any stage of the tide, and a detour has to be made through the woods to "b" then there is about one and one fourth of a mile of beach and then another impassable head is wet and has to be crossed over from "c" to "d", from "d" to a point about two miles north of the mouth of the Quillihuate River there is a sand and gravel beach, the remaining distance consists of alternate strips of sand and "bubbly" (stony) beach.

The bluffs at Teahwhit Head, the first point south of Quillihuate and the four inlands off Quillihuate are precipitous and are composed of a dark conglomerate. The bluffs in the vicinity of Cape Johnson are composed of clay and conglomerate.

There are numerous rocks, islets and submerged and awash reefs on this coast: the more conspicuous ones being Quillihuate Headland, which is pointed like a spire, eighty five feet high. Jones' Island is high, bold and wooded, this Island is connected with the mainland at low tide. Cake Rock which is one and three quarter of a mile off shore, it appears of the sand shape from all directions and has a slight rise, or mound in its centre like a leaf of cake, hence its name, it is 116 feet high and from its peculiar shape (shape) and location is one of the conspicuous land marks on this part of the coast and is familiar to all of the experienced coasters.
The Indian pack train was discontinued at Quillihute, the weather being smooth a canoe with two Indians was employed to transport the outfit.

Camps were made at Quillihute Village and at "e".

Sheet No. 7

The Azimuth stations for continuing the work are "Jagged Islet" "Carroll Islet" "Man Rock" and "Wah-yoh" "Camp Head" "Flag" and Wah-Yoh were occupied with the theodolite. The Osett River is not navigable and can be forded at low tide it is the outlet of what is locally called Osett Lake, known on the chart as the Lake of the Sun; there are a few settlers living on its shores, two of which I saw, they described it as being irregular in shape with small bays, points, etc. It has never been called Lake of the Sun except by strangers who obtained the name from the map. The name Osett Lake is well known in the minds of all who practically know anything about it, they seldom if ever see maps, and the chances are that locally it will always be called by that name.

The only important headland, on the sheet, is the one back of Osett Indian Village, which with the large, high, outlying timbered island is very conspicuous and often mistaken for Cape Flattery. The Beach with few minor interruptions can be traversed on foot; by referring to the sheet it will be seen that it is very much broken, being composed at intervals of sand and at other intervals of
irregular stones (bubbly)" which are very tedious to walk and climb over.

None of the Bluffs are conspicuous, they being composed of clay or conglomerate, respectively at irregular intervals.

There are innumerable rocks, Islets, and submerged and awash reefs on this sheet, the more conspicuous and important ones are as follows. Jagged Islet, two and one third miles off shore in a large irregular, jagged reef its highest point being about 70 feet; about one mile N x E from it is Carroll Islet which is high and wooded with a columnar rock, 125 feet high, one eighth of a mile from it.

Hand Rock from some directions resembles an index hand, it is small and 27 feet high. Umatilla Reef is low and practically awash, it is about two and one half miles off shore and the same distance further west than Lateoth Island and is in the most dangerous position of any rocks in this vicinity. The Steamships Umatilla struck one of these rocks, hence its name.

Ossett and Bodelteh Islets are high and timbered; from the fact that they are further to the westward than Cape Flattery they are from very conspicuous landmarks to the mariners coming from the southward.

Transportation was by canoe by two Indians.

Camp was made at "a" and at Ossett Indian Village.

Sheet No. 8 with supplement.

The only station on this sheet for controlling the azimuth is Tatoosh Astronomical Station.
The lower portion of the Loo-e-ez River is navigable for small boats and canoes, it has quite a volume of water and can be forded about one mile above, its mouth at exceedingly low tide: about one and a half miles above its mouth and between it and the beach is an Indian settlement composed of two or three buildings, only one of which is used.

Watch slough runs through the low valley to within a stones throw of the beach at Neenah Bay, it is simply a tidal slough and can be forded almost anywhere at low water.

The Headland south of the point of the Arches and Portage Head are high and bold but from the southward they show against Cape Flattery which is the important headland and has a background of a mass of high wooded hills.

The water in Loo-e-ez Bay is not very deep and vessels can anchor there in northerly and easterly weather with safety provided that there is not too much sea.

Watch Indian Village is a winter habitation while Arch-nevat is exclusively a summer abode.

Commencing with the south end there is a poor beach to "a" from "a" to "b" it is impossible to climb along the shore so a long detour has to be made to "b" at low tide and to "b" at high tide: there is a good sand beach from "b" to "c": from "c" to "d" it is impossible along the shore and a very long detour has to be made, this stretch was the most difficult of any to get across and around with the work: from "d" to Watch Slough there is a good
sand beach with one breal in it: From Watch to the N. W. corner of Cape Flattery there is no beach worth mentioning and from half of a mile beyond Archawat Indian Village to the end it is impossible to climb or walk along and the work had to be carried on by landing on the outlying rocks with a canoe.

The bluffs at Point of the Arches, Portage Head and from Watch to the end of the work are of a coarse dark conglomerate.

The more important "Rocks" are off the cliffs at Point of the Arches and off Cape Flattery: on account of vessels having to keep to the westward in order to safely round Umatilla Reef none of these are in their track.

In thick weather navigators can always determine when too close in shore in this locality by means of the lead.

Transportation on the outside was by means of a canoe and two Indians: an ox team was employed to haul the outfit from Watch to Neah Bay.

Camps were made at "b", "d", Watch Village and at Neah Bay.

In conclusion I wish to state that this work was (as indicated in the title to each sheet) a reconnaissance and a very rapid one.

The work was almost entirely carried on, from the waters edge: some of the time the weather was very smooth, in consequence of which there would naturally be very few if any "breaks"; undoubtedly some of the awash rocks could not be seen from the low beach and
it should be distinctly understood that no pretention is made that all of the off shore rocks and breakers were determined but simply those that were visible at the time the work was executed regardless of the stage of the tide and roughness of the weather.

Between Grays Harbor and Cape Flattery there are three different and distinct tribes of Indians viz: the Quinaelts, the Hoh's and the micaws, the latter compose the Quillihutes. Osettes, Cape Flattery and Neah Bays: the languages of these three tribes are so dissimilar that it is impossible for one to understand the other, their only means of intertribal communication being the chinook jargon.

Only a casual study of the Progress Sketch (on a scale of 1. 100000 which accompanied my report dated Aug. 17, 1887 on which the entire work reduced, can be seen at once) will convince any, fair minded, person that, with its myriads of outlaying reefs and rocks, this stretch of coast line is an exceedingly dangerous one. Strenuous efforts should be made to impress upon mariners that have occasion to coast along it the necessity of giving it a wide berth and also in foggy weather, which extensively prevails during the summer months, that proximity to the shore can be determined with the land and that it should be used frequently.

There is neither a Light, Beacon or buoy along this stretch to assist the mariner in finding his way, in thick weather, to Cape Flattery. I understand that there has been an appropriation made to
place a light on Destruction Island, this will benefit the shipping, which is only a trifle, between the straits of Puca and Columbia River, but of scarcely any practical value to the principal and important part which is between the tributaries to Puca Strait and California, Sandwich Islands, Mexico and South America: the position of these vessels that are steamships take their departure from Cape Blanco for just outside Flattery Rocks: in thick weather they are liable to get too far in shore but not, as a rule, far enough to hear a fog-whistle on Destruction Island: they are much more liable to fetch up abreast of the Quillihute River or Flattery Rocks than further to the southward and Eastward.

Sailing vessels as a rule, steam further out to sea than steamers but it is their aim to make Tatoosh Light.

Masters of both steamers and sail vessels stand in great awe of the Southwest coast of Vancouver's Island consequently they all try to make Cape Flattery as closely as possible in consequence of which they are liable in thick weather to get too close inshore before reaching there.

James Island abreast of Quillihute is accessible, being connected with the mainland at low tide, it is high and bold, a Light and Fog Signal placed there would serve as a "guideboard" to all bound for the Straits of Puca: it is seven and one half miles farther west than Destruction Island and vessels nearing Flattery Rock
would be liable to see either it or Tatoosh Light. There is a
moderate weather anchorage in the cove on the East side of this
island for vessels bringing supplies and is now used by the W. W.
Fur and Trading Co. for that purpose.

Umatilla Reef is low, practically awash, it is two and one
half miles further west than Tatoosh Island, and a very dangerous
rock.

I would recommend that the most powerful kind of a whistling
buoy be placed off it, which would probably be in from twenty to
twenty-five fathoms of water.

From what I can ascertain a majority of the vessels lost while
bound for Puca Straits have been wrecked or disabled North of
Toleah Point, between which and Tatoosh Island there are two prac-
tical places for life saving stations: the southerly one is at
Quillihute Indian Village, in southerly weather life saving appli-
cances can be launched from the north side of the sand spit connect-
ing Jones' Island with the mainland and in northerly weather from
its south side. The other is at Osette Indian Village, the space:
between Osette Island and the shore is filled with a field of Kelp
and rocks which break the sea; in northerly weather lifeboats can
be launched from the south side of the Kelp patch, and in southerly
weather they can be launched from the beach immediately north of
the village.

Very respectfully

(Signed)  J. F. Pratt

Ass., chief of party.

To,

Rev. W. M. Thorne,

Superintendent,

U. S. Coast and Geodetic Survey

Washington, D. C.

Seattle N. T.

February 17, 1883.