U. S. COAST AND GEODETIC SURVEY.

P.M. Thorne, Superintendent.

State: Washington Territory.

DESCRIPTIVE REPORT.

Topographic sheets Nos. 1781, 1782, 1783, 1784, 1787, 1788, 1789, 1790.

LOCALITY:

Gray's Harbor to Cape Flattery.

1887.

CHIEF OF PARTY:

J. H. Pratt.
Descriptive Report

Coast & Geodetic Survey

Superintendent

J. M. Thorn

Reconnaissance

Grays Harbor to Cape Flattery

Washington Territory

Eight Topographical Sheets

Scale of 1:20,000

1887

Chief of Party

By

[Signature]
This work was commenced at the South end on May 2nd and closed on June 13th at Neah Bay. From Damon's Point (Sheet No. 1 Post No. 2) to Point Grenville (Sheet No. 3 Post No. 24) the distance was measured with a 100 metre steel wire. The terminus of these wire bases being occupied with a theodolite the Plane Table was run over this portion very hurriedly.

At Point Grenville the value in distance of the Ocular Micrometer to the Plane Table Alidade was carefully determined, and from here on all the distances depend on this micrometer, a mean of several 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 timber had to be made at which plane 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 closely as practicable, their distances depending on the plane-table 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 "Neelah Bay" and the longitude of "Tatook Island"; at the south end upon the assumed position of "Lone Fire" as measured from "Point Hudson" (Grays Harbor) astronomical station on a tracing of the topography of the entrance to
Group Harbor by Assistant Gilbert in 1886.

The longitude of the entire coast line is controlled by a series of azimuth lines that are continuous from Post No. 2', Sheet No. 1 to Tatoosh Light House Sheet Nos.

The numbers in red on Sheet Nos. 1, 2 and 3 indicate the terminals of the wire Buses.

The names of the azimuth stations from Point Greenville to Tatoosh Island are in red.

The country between the entrance to Group Harbor and Point Greenville is the hunting ground for Sea Otter. The method adopted by the hunters is to build "derenka" (scaffold) 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
every heavy targeted rifles; it is said
that the Otter seldom come 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 stations "Lone Fir"
"Damon's Tree" and "Sun" are deter-
mined by triangulation using bases
"2" to "3" and "3" to "4."
The portion indicated in red is
from the work of Assistant Gilbert
in 1886.
The beach is of clean sand and
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 at Mud Damons turn at Damons 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 12" across the Chepulis 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. "Jo Creek Foot" is determined topographically.

The "Chepalis River" is navigable for small boats and curves some distance above J. C. Benner's (Indian trader) place and can be forded in the vicinity of "a few" in smooth weather at extreme low tide, except when there is a freshet. Within the 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 of about the same character as Boone Creek.

The Re-mo-to-lipse River forms 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 even in moderate weather the breakers are large and quite heavy in the entrance to this stream.

"Wreck Creek" is of about the same size and character as Boone and Jr. creeks.

"Chepalis Head" is the first headland South from Grays Harbor entrance 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 and in rough 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
Here they are of a darker color.

Chegali's 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-letter 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 No. 16 and No. 18 is the scene of two or three gold mining excitements; here in places the beach has a large proportion of 'feruginous 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 Chegali River and at "D"
abreast of Post '17:

Sheet No. 3.

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

"Greenville Tree" is determined by triangulation from the wire fences Posts '21' to '22' and '22' to '23.'

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

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

The "Animailek (Ané-naielk) 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 Animailek Indian Agency and Village.

Rolf River is navigable for curves
and small boats for quite a distance especially at high water. It can be found only at low tide.

Grenville 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 "Grenville Bay" on this sheet or a little further inshore and more to the westward if the craft is quite small, as the extreme southern Point and the two large rock break the sea considerably.

The headland "Point Grenville" 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. Grenville. 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 as much more prominent and is often mistaken for Pt. Greeneville by mariners; this view is corroborated by old experienced shipmasters.

The beach that has extended from Grays Harbor steps under the south side of Pt. Greeneville and owing to rocks the last mile can only be traversed at low tide with a team. It is impracticable to climb around Point Greeneville at any stage of the tide: the Agent of the Quinault Reservation has had a track built over it. The beach between Pt. Greeneville and the Quinault River is composed of very coarse shifting sand, is very cold, and impassable at high tide or at half-tide in very rough weather. There is very little beaching between the Quinault and Cape Elizabeth, which points cannot be passed 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 cave 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 "d." From here to the point marked "e" the beach is again impassable at any stage of the tide and a detour through the timber has to be made. The timber along this outside coast is so choked with underbrush, principally the Salal Bush that it is almost impassable but invariably denser close to the shore or bluff line than it is a mile or two further back. From the point marked "e" to the end of the shed there is a broken beach which offers only a few minor obstacles. The Bluffs at Point Breville
and as far as the Quinacela are of a dark appearance and composed principally of two 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 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 in this sheet. Grenville Arch, five eights of a mile SW from Pt. Grenville. Eighty five feet high is a very prominent rock it is white in summer, from bird line which is usually washed off in winter from rains and Lewis Peak it has a small arch extending through it in an eastern and westerly direction.

From Grenville Northward
are myriads of rocks and submerged reefs, many of which on account of smooth weather and curving the work on rapidly as possible along from the low beach were undoubtedly not seen. There are some heavy breakers indicated on this sheet, off shore, about midway between Pt. Grenville and Cape Elizabeth, these are in the line of and are the heaviest part of what Capt. Willoughby the Agent at Grenville informed me was in heavy weather a line of dangerous breakers continuing from abreast of Grenville Rock to abreast of Cape Elizabeth in the shape 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 easternly and westernly 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 Quinicalet.

Sea Lion Rock appears from shore, small and black. It is 1 7/8 miles N.W.X.N. from Cape Elizabeth and is 3 miles off shore, being 1 7/8 farther off shore than Split rock. It was moderate weather when we were abreast of this rock and no breakers could be seen from the beach in its vicinity.

Transportation by wagon ceased at Quinicalet, it being impossible to go further with any kind of four legged beasts of burden.
and from here to the Anaciz River the only possible means that could be utilized to carry the outfit was by a packtrain composed of eight klootchmen (Indian squaws); each carrying about 75 lbs. on their backs supported from 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 southerly one of the two points of Cape Elizabeth, one of the klootchmen fell off the ledge, around which we had to crawl, into the surf with about 80 lbs. on her back, it being low tide we managed to climb down into the breakers and pull her and the buck 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 reach her.
These creatures are practically beasts 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 convoke a strike for either more money
or additional secourite and sometimes
for both: after they have several days
wages due them 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 follow-
ing places: at "c" on Pt. Grenville,
at Annamite Village, on the worn
beach at "d" and at "e"

Sheet No 4

The azimuth stations for
continuing the work are "Queets Tree"
"Flag" and "Butta of Four Trees Flag."
The lower portion of the Queets
River could be navigated with
river steamers; it has a strong current and is a powerful stream. By referring to the chart it will be seen 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 Queets tree. The breakers off its mouth are very heavy. The Queets Indian Village is on the west bank of this stream about one half of a mile from its mouth.

The Beach South of the Queets River is smooth and composed of gravel and sand; between the Queets and "kurr of your knees" 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 stretch are of the same clayey character 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 stretch and none of them of importance. the farthest being only about one third of a mile off shore.

The Kootenay pack train belonging to the Quinault tribe would not go beyond the South side of the Queets entrance and from here on to the Hoh River two Quelts making one squaw and two 'Kintans.' (ponies) were employed for transporting the outfit.

Camps were made on the beach under Queets tree and at the point marked 'a'.
Sheet No. 5.

The azimuth stations for continuing the work are "Cultus Tree," "Tree East End Destruction Island," "Hoh River Topographical," and "Fleak 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 also a sunken rock directly off its mouth. Chuk-lutt creek is small and can be forded.

The mouth of the teh-ch'en-whitt River is inaccessible from the beach on either side, a short distance above its mouth it divides into two streams neither of which are navigable, on the western branch there is a beautiful waterfall. In smooth weather the Indians go in and out of the Hoh River with
canoe: as the outer breakers are quite heavy there, they generally keep inside of them by making 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 Isleak Point and on its south side the Indians land with their canoes in moderate weather this place is full of sunken and sunken rocks and is dangerous in rough weather.

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

Isueak Point with its overlying rocks is quite prominent but not as much so as the headland N.W. of it which come on the next sheet. In this place there is an Indian settlement composed of two build-
Beginning with the south end the beach can be traversed all the way to the Hoh River at low tide. These being but two places impassable at half tide viz. at "Cultus Tree" and from "K" to "Y." From the Hoh River the coast line can be worked and climbed along until the point "A" is reached where a detour through the timber and over the high land 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 chinwahit 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 Kelchenwhitt River and from "J" to "K" they are of a dark appearance and composed of conglomerate mainly.

The most important object off shore on this sheet is Destruction Island, 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 landmarks on it are three trees, or small clumps of bushes, its shore line is reduced from the survey of Assistant Lawson in 1866.

There are numerous rocks, islets and submerged and unwashed 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, Perkins' Reef large and jagged. Alexander Island smooth.
and rounded one hundred and twenty feet high. Rounding Island some shaped one hundred and thirty feet high and the Giants Graveyard composed of about a half 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 Hol River and from here a scaling curve with a crew of three Indians was engaged to take the outfit to Toolek Point the nearest landing place. After reaching Toolek Point the weather became too rough to use the curve and from here on to Guillabute an Indian pack train had to be resorted to again.

Camps were made at the Hol Indian Village and at Toolek Point.
Sheet No 6

As some of the outlying rocks would not come on the sneak whistle to be stopped on it as shown, the Agincourt stations for continuing the work are "James Island" and "Coke Rock."

The lower portion of the Quillihate 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 James Island and Quillihate Village; the Dickoachtias River branches off to the Northward about one third of a mile from its mouth.

A Seattle firm has a trading post at Quillihate Village, their goods being brought by schooners which anchor in smooth weather in the cove inside (east) of James Island. If much of a sea rises
before she completes discharging. She has to put out to sea and wait until smooth weather.

Sealwhit Head and the first point South of Quillihuate are the only prominent headlands.

The beach ceases at "a" Sealwhit Head cannot be climbed around at any stage of the tide, and a deloin 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 met 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" (stone) beach.

The Bluffs at Sealwhit Head, the first point South of Quillihuate and the four islands off Quillihuate are
precipitous
precipitous, and are composed of a dark conglomerate. The bluffs in the vicinity of Cape Johnson are composed of clay and conglomerate.

Here are numerous rocks, islets and submerged and mussel reefs on this shelf: the more conspicuous ones being Quillibute Needle, which is pointed like a spire, eighty-five feet high. James' Island is high, rocky and wooded. This island is connected with the mainland at low tide. Coke Rock, which is one and three-fourth of a mile off shore, it appears of the same shape from all directions and has a slight rise or mound in its centre like a loaf of cake. Hence its name. It is 116 feet high and from its peculiar 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 Quillihuate, the weather being smooth, a curve with two indians was employed to transport the outfit.

Camps were made at Quillihuate village and at e".

Sheet N° 7.

The azimuth stations for continuing the work are "Jessed Islet," "Carroo Islet," "Third Rock," and "Wah-yoh.

"Comp Head," "Flag," and "Wah-yoh" were occupied with the theodolite.

1. The Ockett River is not navigable and can be forded at low tide. It is the outlet of what is locally called Ockett Lake; known on the chart as Lake of the Sun; there are a few settlers living on its shores, two of which I saw. They describe 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 maps. The name Ossette Lake is well
fitted in the mind of all who practically know anything about it, they seldom
ever see maps, and the chances are that locally it will always be called
by that name. The Feb. 24.

The only important headland, on
the sheet, is the one back of Ossette
Indian Village, which with the large
high, outlying timbered island is very
conspicuous and often mistaken for
Cape Flattery.

The Beach with few minor
interlacements 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 ("boulders")
which are very tedious to walk
and climb over.

Some of the Bluffs are con-
spicuous, they being composed of clay or conglomerate, respectively at irregular intervals.

There are innumerable rocks, islets, and submerged and abstract reefs on this shelf. The more conspicuous and important ones are as follows. Jagged islet, two and one third miles off shore, is a large irregular and jagged reef, its highest point being about 70 feet; about one mile NNE from it is Carroll islet which is high and wooded with a columnar rock, 125 feet high, one eighth of a mile to seaward from it. Hand Rock from some directions resembles an index hand, it is small and 27 feet high. Umatilla Reef is low and practically abstract. It is about two and one half miles off shore and the same distance further west than latworth Island and is in the most position of any rocks in this vicinity. The steamship
Umatilla struck one of these rocks
to its name.

Ocett and Bodelethe Islets are high
and wooded; from this fact that they
are further to the westward than
Cape Flattening they are very conspicu-
ous landmarks to the mariner com-
ing from the southwest.

Transportation was by canoe
with two Indians.

Camps were made at "a" and at
Ocett Indian Village.

Sheet No. 8 with supplement.

The only station on this sheet
for controlling the azimuth is Intersh
Astronomical Station.

The lower portion of the
Sov-e-e' 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 epeadingly 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 Neah 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 out from the southern they show against Cape Flattery which is the important Headland and has a background of a mass of high wooded hills.

The water in Swall's Bay is not very deep and vessels can anchor there in Northern and eastern weather with safety provided that there is not too much sea.

Watch Indian Village is a
winter habitation while Arch a-wak 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 break in it. From Watch to the N.W. corner of Cape Flattery there is no beach worth mentioning and from a half of a mile beyond Archangel 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 dark coarse 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 inshore 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", "Z", 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 at that. The work was, almost entirely carried on, from the water 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 pretension 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 Grave Harbor and Cape Flattery there are three different and distinct tributaries of
Indians viz., the Quinaults, the Hoh's and the Nisquays, the latter compose the Quillichutes, Ozette, Cape Flattery, and Nook Bay; the languages of these three tribes are so dissimilar that it is impossible for one to understand the other. Their only means of inter-tribal communication being the Chinook jargon.

Only a casual study of the Progress Sketch (on a scale of 1 to 1,000 which accompanied my report dated August 17, 1887, on which the entire work reduced, can be seen at once) will convince any fair-minded person that, with its myriad of outlying reefs and rocks, this stretch of coast line is an exceedingly dangerous one. Stimmons of Fort should be made to impress upon mariners that have occasion to coast along the necessity...
of giving it a wide berth and also that in foggy weather, which extensively prevails during the summer months, that proximity to the shore can be determined with the head 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 Strait of Juan and Columbia River, but if scarcely any practical value to the principal and important part which is between the tributaries to Juan 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 Flattening Rocks; in thick weather they are liable to get too far inshore but not, as a rule, far enough to hear a fog-whistle on Deception Island; they are much more liable to fetch up abeam of the Quillipute River or Flattening Rocks than further to the Southward and Eastward.

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

Masters of both sailing and steam vessels stand in great awe of the South West coast of Vancouver's Island consequently they all try to make Cape Flattening as closely as possible in consequence of which they are liable in thick weather to get too close to islands before reaching them.
James Island abreast of Quillitute 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 "guide-bond" to all found for the Strait of Juan; it is seven and one half miles further west than Destruction Island and vessels nearing flattering rocks would be liable to see either it or Tulavat 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 N.W. Tug and Tugboat Co for that purpose.

Umatilla Reef is low, practically awash, it is two and one half miles further west than Tulavat Island and a very dangerous rock. I would recommend that the most powerful kind of a whistle 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 Unea Strait have been wrecked or disabled north of Black Point, between which and Tatoosh Island there are two practical places for life-saving stations: the southerly one is at Quileute Indian Village, in southerly weather life-saving appliances can be launched from the north side of the sand Spit connecting James Island with the mainland and in northerly weather from its south side. The other is at Ozette Indian Village, the space between Ozette 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,

Chief of party.

To,

Mr. J. H. Smith,
Superintendent,
U.S. Coast + Geodetic Survey,
Washington, D.C.

Seattle w.s.
February 17th 1888