



U. S. COAST AND GEODETIC SURVEY.

F. M. Thorn, Superintendent.

State: *Oregon.*

DESCRIPTIVE REPORT.

Topographic Sheet No. *1776.*

LOCALITY:

*Coast of Oregon.
From Yaquina Head
to Cascade Head*

1887.

CHIEF OF PARTY:

Cleveland Rockwell

Descriptive Report
to accompany Original sketch of plain table
reconnaissance No. 1, extending from
Yaquina Head to Cascade Head, Coast of
Oregon - May and June 1887 -
(Leland Rockwell, Observer.)

The general course of the Coast shown upon this sketch is a nearly straight line bearing north by west (magnetic) and ^{the topography} is very broken and complex. The country is very generally hilly and in high culminates in two transverse spurs of the Coast range of mountains called Cape Foulweather and Cascade Head, and in a lower point named Yaquina Head. Between the two great Capes long sand beaches extend, which lie along at the foot of broken cliffs of moderate elevation. The continuity of these long beaches is interrupted by Siletz Bay and Salmon River and a lake of considerable size called "Devil's lake" lies among the hills south of Salmon river. The country is generally covered with forest.

though the high peaks of the mountains back of the area represented on the sketch have been run over by fire and show a bristling array of dead and whitened stumps among which a second growth of young trees display a dark growth of green. In many places a dense growth of alder has taken the place of the original evergreen trees. Yaquina Head, Cape Foulweather, and Cascade Head are composed of very dark basaltic rock, capped in many places with bright red and yellow sandstones, and the cliffs back of the sand beaches are of sandstones, clay slates and beds of sand in situ, all appearing very light in color. The beaches are flat and when the sea is high, four or five lines of breakers break upon the shore and in times of storms a stranded ship would not long withstand the shock of the waves.

From the entrance of Yaquina Bay to Yaquina Head there is generally a wide sand beach backed by low bluffs and the land rises from the shore to a moderate elevation and is partly wooded and partly burned over and

Covered with a poor thin sandy soil and a thick growth of Sallal brush and rhododendron. Yaguina Head is composed of a dark-basaltic breccia or conglomerate probably running into ore of iron, which are highly magnetic, occasioning great deflection of the magnetic needle. The whole head is bare and covered with grass and fern.

Immediately north of the Head a wide sea beach extends for five miles to the beginning of Cape Poulweather. Low bluffs occur at intervals broken by numerous small streams.

The land rises to the hills about two miles back with a moderate slope, and for the most part is densely timbered, though evidence of fire may be seen even from a distance. The bluffs between Yaguina Head and Cape Poulweather are generally of sand stone, whitish or yellow color, very friable. Under the sandstone are beds of Clay slates filled with numerous fossils of Clams, peccena and other species of post tertiary shells. The beach is composed of silex and basalt and in numerous localities black sand is found in considerable quantities.

Composed largely of magnetic iron ore. No tests were made of this sand to discover gold or platinum. Frequent ledges of rocks protrude through the sand beaches. Low water is defined on the sheet by a simple dotted line for the sand, and by the usual topographical signs for rocks and ledges. The sand stones and beds of sand are everywhere above the slates and shales and are capped by a deposit of drift and gravel: they are subject to very rapid erosion. The sea during the extreme high tides of December, lashes the foot of these cliffs as is shown by the height to which drift wood has been driven into the mouths of the numerous small gullies and creeks. About a mile north of Yaquina head and half a mile back from the shore is an isolated butte or peak, about 630 feet high, covered with trees. The cliffs and bluffs along the shore show numerous springs and gullies of fresh water. About a mile north of Yaquina head and half a mile off shore, an isolated ledge of rocks appears at low water. Otter rock is about a mile south of the south end of Cape Foulweather and rather more than a

Mile off shore: it is about 30ft high, and a low ledge of rock lies about half a mile south and a ledge of rocks covered with *Lup* to the north. Cape Foulweather presents between beaches a face of about seven miles to the ocean. It shows from Yaquina Pt. like a lofty ridge of land running N.W. and S.E. The sea face of the Cape is (except in places) bare of trees and covered with grass and fern upon the steep slopes, which, run up to an altitude of 500 or 600 feet. The extreme summit of the ridge seen from Yaquina Head is about $1\frac{3}{4}$ miles back from the shore and about 1600 feet high and to the East of this summit the land falls rapidly away to 600 or 700 feet elevation. The bare patch on the S.W. side of this summit would be a prominent land mark from the ocean. One great cliff of perpendicular basalt about 430 feet high occurs in the face of this Cape. (All heights given in this report are reckoned above average high water mark.).

The north end of the beach running from Yaquina Pt. is terminated by a bluff of sand stone rock, the commencement of Cape Foulweather, which is about 60 feet high and very red and yellow in color and covered with trees to the edge. The forest growth is

Composed of spruce and hemlock, the latter tree growing often in groves on the flat luxuriant benches or tables. Scrubby willows and alders are found along the streams. The baraltic formations are always covered with a rich deep soil and where it has been burned over on southern exposures or naturally destitute of trees, produces a very abundant growth of grasses and clover and a rank growth of fern. The forests are generally full grown. A scrubby bull pine also grows on the thin poor soil on the sandstones where also flourishes the rhododendron. The undergrowth in the spruce forests is dense and impenetrable without having the road open with the axe or hatchet and is composed mostly of salal (*Gaultheria shallon*.) and salmon berry bushes which reach 10 or 12 feet high with stalks of corresponding thickness and obtnacy. The salal is perennial in character. The spruce trees are from 100 to 200 feet high with boles in many instances of 6 to 8 feet through. The shore line of the Cape is very irregular and broken by numerous small bays

and coars eroded by the sea, such erosions having taken place when the sandstone strata lie un-
 -derimposed on the basaltic breccia. The basalts
 of Cape Foulweather are composed almost
 wholly of conglomerate of large and small
 material, cemented very firmly together in
 bands or strata inclined generally at a
 great angle from the horizontal. From the
 north side of the Cape a sand beach again
 extends for $5\frac{1}{2}$ miles to the entrance to Siletz
 Bay. This beach is generally composed of soft and
 coarse sand much washed up by the sea. Low
 bluffs of soft yellowish sand stones, much
 subject to erosion, nowhere over 50 feet high and
 generally not more than 15 or 20 feet lie back
 of this beach. The bluffs end at a point opposite
 the south end of Siletz Bay and from here to
 the entrance of the Bay, a narrow peninsula
 of sand dunes is found, generally covered with
 very short salted scrub and low pines. A spring
 of excellent pure water may be found on the
 Bay side of this spit about halfway down
 its length. The land slopes very gradually

back from the bluffs and the poor quality of the soil is indicated by the scrubby growth of bull pine and sallab brush. The difference in the quality of the soil between the land formed by the disintegration of the basaltic breccia and that lying on the sand stones before mentioned is very distinctly marked by the character of the vegetation. Sility Bay is about $2\frac{1}{2}$ miles long by one wide, and at low water a very large part of the area is bare sand and mud flats. The entrance to the bay is at the extreme northern end and is under the bluffs. The Sility River enters the bay near the South East corner, emerging from between high steep hills densely covered with timber. Back of the Bay in every direction towards the East are high and rounded mountains, some of which are wooded and others covered with burnt trees and bare. Two other smaller streams, called Schooner Creek and Drift Creek enter the Bay on the East side. Considerable areas of tide marsh fringe the bay near the mouth of the Sility river and also near the entrance of the two smaller streams, and some of these

tide lands could be improved by dikes at his
 great expense. The Siletz river is a very tortuous
 stream and navigable at low water only by can-
 ues. In a direct line it is only 14 miles from the
 Bay to the Agency, but about 26 or 27 miles by the
 river. The Coast from near Yaquina Pt to the
 mouth of Salmon river is an Indian reser-
 vation. Consequently none of the natural re-
 sources of the Country have been developed by
 the whites. The bay is quite a resort for the
 Agency Indians who come down to fish. Large
 numbers of Salmon are said to frequent the
 three streams during the spawning season
 and the bay abounds with salt water fish such
 as flounders, perch and smelt, and with
 crabs and clams, and great numbers of
 the Pholus or rock oyster can be dug out of
 the soft shales and slates along the Coast. There
 are no roads between Yaquina Head and Siletz
 Bay, and no trail from the Bay to the Agency, the
 only means of travel being by canoe on the Siletz
 river. The only route of travel between Yaquina
 Bay and Siletz bay is by the sea beach and by a

very bad Indian trail along the face of Cape Foul-
 weather. This trail is scarcely travelled at all
 and is often very difficult to find and hard to
 travel. Bears are very numerous. The Bay
 appears to have a very fair entrance at high
 water, probably at least 6 feet of water at low
 tide would be developed on the bar by a sur-
 vey. At low water it appears to break all the
 way across the bar. From Siletz Bay a beach
 extends again for a distance of $6\frac{3}{4}$ miles to the
 precipitous rocks just south of Salmon River.
 This beach is wide and of much harder sand than
 that below Siletz Bay. Numerous rocks and ledges
 occur, though none far from the low water line.
 The extreme winter tides reach up to the foot of
 the bluffs which are from 50 to 80 feet high of very
 friable sand stones and beds of loose sand in places
 which streams down the cliffs in miniature cas-
 cades when the winds are strong. All these
 sand stone strata are nearly horizontal, and
 undisturbed by upheaval and are of very recent
 origin. Extensive through these cliffs
 are successive strata of ancient tidelands

on log must containing great numbers of prostrate trunks and roots in place, of large spruce trees, compressed by the weight of superlying beds of sand, but very little fossilized, and in an excellent state of preservation. Similar standing stumps were observed protruding through the sand at low water, and it was noticed that the tides navalis had declined to bore such fossilized wood. This wood has perfectly preserved its grain and texture and would burn on a fire with scarcely any flame, leaving a reddish iron tinged ash and with a slightly bituminous odor. Devils Lake, a body of fresh water lying in irregular depressions among the hills between Siletz Bay and Salmon river is about $2\frac{1}{2}$ miles long by $\frac{1}{2}$ wide with an outlet through the beach at the South west corner. The elevation of the surface of the lake above high water mark is about 8 or 10 feet. and a small body of fresh. marsh occupies the area near the outlet. Very large trout may be caught in this lake by trolling and large numbers of Salmon run

into the lake during the spawning season, and are caught and dried by the Indians. There is much open land around the shores of this lake, on the ocean side and towards Salmon river and some of the most civilized Indians have very good houses and are engaged in farming and stock raising.

To the eastward from Devils lake the land rises in a succession of broken hills and ridges to the highest elevations of the Coast range of mountains. The track from Siletz Bay is interrupted just below the mouth of Salmon river by very precipitous rocks at the end of ^a range of hills of over 500 feet elevation. These rocks are of basaltic breccia near the water surmounted by a capping of very friable reddish rock, continually crumbling away and are penetrated in various diagonal directions by dikes of harder material. These rocks would no doubt form a very distinguishing land mark at a considerable distance at sea.

An isolated rock 74 feet high lies west of this precipitous point at about a third of a mile

from the shore. Salmon river enters the ocean just north of this point and immediately at the foot of Cascade Head. A group of 3 rocks lies at the mouth of this stream which are 20-50 and 76 feet high. Salmon river can be forded at low tide; the entrance is very narrow and rocky. Large areas of tideland lie along this stream, and those portions on the south side of the river are very favorably situated for reclamation by dikes at no considerable expense. The run of Salmon in this river during the spawning season is said to be large.

The south side of Cape Cascade Head rises immediately from the banks of the river to an elevation of 1500 feet or more, which is probably as high as any part of the range of hills forming the Cape. This south side is almost entirely bare of trees and covered with fine grass clover and ferns. The slopes are very steep but covered with an excellent soil. From the backbone of this ridge to the northward the country is an unbroken, dense forest of spruce and cedar and hemlock.

The larch, a very handsome tree, is found on the higher ridges. The undergrowth in the forests is dense and luxuriant. Composed largely of the Sallal, dogwood, alder, elder, salmon berry and red huckleberry, with ferns and braker under all. A fair wagon road runs up Salmon river, and crosses the open hills northwest of Devils lake to the ocean beach. This road affords the only means of communication with the Willamette valley through the Grande Ronde Valley. The Indians have also made a small piece of road, shown on the sketch, over the hill near the north side of Siletz Bay to avoid a rocky point on the beach below.

From the Ocean the highest summits of the Coast range would be seen over Siletz Bay and the Country around Devils lake and up the gorge of Salmon River. The Indian names pertaining to the localities mentioned here will be found upon the Topographical sketch.

Cleveland Rockwell
Assistant - Observer.