U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey: Topographic
Field No.: ______________________ Office No.: 2007

LOCALITY
State: Oregon
General locality: Columbia
Locality: River

1890-194-

CHIEF OF PARTY
Cleveland Rockwell

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FORM 504
The character of the topography embraced within the limits of the planestatic sheet herein described can be divided into two prominent features. On the Oregon side of the Columbia river, including Hayderis island, and on the North side west of the projected railroad bridge, the bottom lands occupy the areas shown. This portion of the country is subject to periodical floods or overflow in June and July. These floods are wholly due to the melting snows at the headwaters of the tributaries of the Columbia. The waters do not ordinarily cover all the areas spoken of above; the highest ridges near the banks of the river and others in the interior often remaining above the water, but in occasional years, the water may completely submerge every foot of land shown as above. The extreme range of these floods is about twenty-seven feet. The Washington side of the river above the site of the bridges present topograph-
features broad and simple, rising in gentle slopes and more abrupt ridges, to elevations of 240 or 250 feet.

The geological character of these slopes is also very simple and consists of beds of fine gravel, in many situations deeply covered with a fine yellow soil. These beds of soil and gravel show by the course of the contours that they have been deposited by the currents of the river as a junction when the land stood at a very much lower level than now, and from the general character of the country on the north side of the river, but which is not shown on the limited area of this sheet, it is evident than the water stood for long periods at successive elevations.

This is even apparent to casual observation and is moreover indicated by the prevailing names of three different levels; an "Mile plane," Fourth plane, Fifth plane, etc.

It is probable that the prevailing rock of the country, basalt, underlies the
steep and gently side hills, but in 3
not exposed above the deep gravel drifts
though further up the river the drifts become
much thinner and the rocky ledges are
fully exposed. At the northeastern cor-
ner of the military reservation, however,
where are situated the pumping stations
for water works, the wells were bored
to a depth of 220 feet or more, through
continuous beds of gravel and sand.
The overflowed or bottom lands on the
south side of the river are much cut up
and intersected by numerous shallow
ponds, lakes and sloughs.
The largest and greater number of these
ponds are drained by the sloughs and
are subject to the influx of the tides tidal
influence in the river at times of ordinary
flow water. The large ponds are partly
filled up sloughs shown on the chart by the
character for freshwater marsh are not
drained by the tides sloughs and are
thickly er with a dense mass of the
Sagittaria latifolia or "Wapato."
and often with large rushes called "Tules." Cottonwood, ash, willow, and oak with a dense undergrowth, clothe the shores of the river and sloughs and the higher ridges are often covered with impenetrable thickets of low scrubby bushes of wild rose, hack- back, and blackberry vines. Large areas are covered with natural meadows of a coarse grass which is annually cut and made into hay. The higher ridges are sometimes cut

first in wheat, oats, potatoes and other root crops and when not killed out by the high water, the yield is very pro-
ductive, as much as 75 or 80 bushels of

wheat being raised to the acre. Orchardals, also often occupy the highest ground and apples, pears, pears, and peaches do not suffer in the back from standing water in two or three feet deep. The high water however will kill the

fir, Douglas, spruce, and the maple and the limits of the floods can readily be seen by the line to which these trees advance.
These bottomlands are however mostly utilized for dairy or stock purposes. During high water, the cattle and hogs are driven or recovered by steamboats to high ground, the owners following or retiring to the second story of their residences. The high or unsubmerged lands on the north side of the river were originally covered with forests of fir or Douglas spruce, the common and valuable timber of the country. But large areas have been cleared of the native growth and are now in cultivation. The fine character of the soil and the slope of the land to the south makes many localities favorable for fruit raising. It will be noticed that large areas, with their orchards, were covered with orchards. The deeper soil is underlaid with the gravel deposits serving the purpose of underdraining, enabling the cultivation of peaches and particularly of the French, Italian and German prune, very productive. Numerous drying buildings or evaporators can be seen, dishing the landscape.
I am credibly informed that more than five hundred dollars is often the net profit of the product of an acre of prairie land bearing

A large area of the same is covered by the city of Vancouver and suburbs and by the military reservation of Vancouver Barracks. The latter occupies the site of the former.

Vancouver, originally established by the Hudson Bay Co. as a factory or trading station and was also the site of a Roman Catholic mission, that Church still controlling the U.S. title to a portion of the reservation.

The southern half of the reserve is a natural prairie, with a few scattered trees and groves of scrub oak, now occupied by the quarters barracks and parade ground of the garrison, the last portion south of the County road being the garrison and that near the river, where not overflowed, the drill ground of the cavalry and artillery.

The northern half, too, is now occupied, yet through which good roads have been made.
The trees have been cleared away over an area occupied by a 1,000-yard target range.

The barracks occupy a site of great natural beauty and is the most important military post on the western coast.

The city of Vancouver has a population of 5,000 and is rapidly growing. The settlement of the place by the first inhabitants was induced by the location of the Hudson Bay Co. post and after that by the proximity to the barracks, but is now chiefly maintained by the natural resources of grain, fruit and lumber.

There are several large saw mills working up the timber, which is principally obtained by the Vancouver, Klikitat and Takima railroad built to a distance of 12 or 18 miles in the interior. Dairies, door and blind factories, fruit packing and other smaller industries are in operation. The roads throughout the highland being generally over gravelly ground are of fair grades, and generally good condition, while those on the bottom lands are only wagon tracks, unkempt, and are bad in summer and wetted in winter.
The country beyond the limits of the sheet on the south of Oregon side may be generally described as a flat peninsula rising to heights of 200 feet or more. Immediately south of the topographical margin runs the Columbia Slough, a narrow stream, receiving all the drainage waters from the peninsula and of the numerous lakes and ponds for 50 to 10 miles above the Port Railway. The high land of the peninsula runs along parallel to the general topographical margin spoken of above and about one fourth of a mile from it. This peninsula, in the vicinity of the limits treated of is composed geologically of a great continuous bed of gravel and sand covered thinly with soil. It was originally covered with a dense forest which is now rapidly disappearing. Various suburban railroads, operated by steam and by electricity, traverse the peninsula which is being very rapidly laid out into lots and built upon and will doubtless become a part of Portland.
The County road shown on the sheet on the Oregon side, as ending at the ferry is an elevated roadway built of planks on piles 12 or 15 feet above the ground. The fences on the highlands are of wood, either rails, boards, or palings, and on the bottoms are often of barbed wire and being subject to be torn by floating drift and high water are often broken and dilapidated. The chief means of travel and transportation is by the river boats and by a steam ferry across the Columbia. Connecting with the Portland and Vancouver railway, a narrow gauge line running to Portland. The Portland and Oregon Sound rail road is shown on the sheet projected on the Oregon side, and graded and in process of construction on the North side. The site of the bridge crossing is shown. This bridge is also under construction and is to be a single steel, steel, drawbridge, with double track and also double locks for river and good trave. The piers are on the pneumatic foundations and the opening in the tower is to be 12 feet in the clear.
The Vancouver, Bellingham and Yakima railroad is of standard gauge, built and I have paid 12 or 15 miles in the interior, and chiefly used as a means to have a railroad to the mills. It is projected to run to the Yakima and Kittitas Valley. Through the oat fields adjacent to Extink in the foot hills of the Cascade Mountains 25 or 30 miles distant from Vancouver.

This region is a comparatively level or rolling country occupied by a prairie forest interspersed with a few natural prairies, the result of some ancient fires.

All the natural forests are also covered with a more or less dense undergrowth. The trees are often 150 to 250 feet high and when growing in groves the trunks are frequently 60 to 100 feet bare of limbs.

The river is subject during hard winters to a gorge of floating ice above the mouth of the Wishram River, due very greatly to the two bare sand shoals shown on the map, the one above and the other below the site of the Bridge. The present action of the currents is to flow across the head of
Hayden's Island, and as may be seen by the shape of the head is very rapidly eroding the land, building a peculiar sand spit along the island in Oregon Slough and impinging with great force and cutting a hole in the south bank near the low bluffs, the largest one of which was falling into the river.

It seems evident to me that if this action is allowed to go on, the main river will ultimately discharge more than half its water through the Oregon Slough and raise the channel leading directly to the city.

The obvious course to improve the Vancouver Channel is to build a submerged dike across the Oregon Slough.

The great caldron ends of the P.t.V. Railway was formerly a small island and the main lower or ship channel followed the old shore shown behind the Bar. Even so slight an obstruction as the sheen being a long dense row of spiles to get apart, sustaining a floating mass of logs has served to deter mine the shape of this great bar and to very rapidly increase its growth.
I append a view of Mt. Hood, taken from the south end of the bridge piers on Hayden Island, showing the cataract near the foreground, and Ryand Point and Mount Hood in the distance.

Respectfully submitted by

[Signature]
Assistant

Nor burnt by me 1846

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Descriptive Report

by [Signature]

Assistant