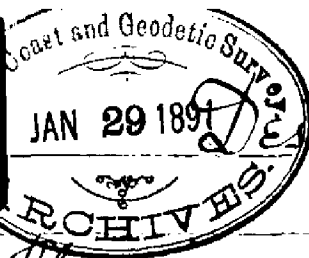
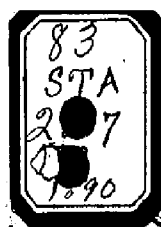


2007

2007

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	<i>Topographic</i>
Field No.	Office No. <i>2007</i>
LOCALITY	
State	<i>Oregon</i>
General locality	<i>Columbia</i>
Locality	<i>River</i>
<i>1890</i>	
<i>-194-</i>	
CHIEF OF PARTY	
<i>Cleveland Rockwell</i>	
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Topc. Sheet No 2007

Descriptive Report Cleveland Rockwell

The character of the topography embraced within the limits of the plan and table sheet herein described can be divided into two prominent features.

On the Oregon side of the Columbia river, including Hayden's 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 freshets or overflows 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 will 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, presents topographic-

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features broad and simple, rising in gentle slopes and more abrupt side hills 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 at a period 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 that 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 these different levels as "Mile plane", "Fourth plane", "Fifth plane", etc.

It is probable that the prevailing rock of the country, basalt, underlies the

steeper ridges and side hills, but it is not exposed above the deep gravel drifts, though further up the river the drift becomes much thinner and the rocky ledges are fully exposed. At the northeastern corner 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 feeble tidal influence in the river at times of ordinary low water. The large ponds and partly filled up sloughs, shown on the sketch by the character for freshwater marsh, are not drained by the tidal sloughs and are thickly set with a dense mass of the *Sagittaria laucifolia* 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, hard-
hack and blackberry vines.

Large areas are covered with natural
meadows of a coarse grass which is
annually cut and made into hay.

The highest ridges are sometimes cul-
tivated in wheat, oats, potatoes and other
root crops, and when not killed out
by the high waters the yield is very pro-
lific; as much as 75 or 80 bushels of
wheat being raised to the acre.

Orchards, also often occupy the highest
ground and apples, pears, prunes and
peaches do not suffer in the least from
standing water two or three feet deep.

The high water however will kill the
fir or Douglas spruces and the maples
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 removed 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 on the shore are covered with orchards. The deep rich soil is underlain with the gravel deposits serving the purpose of underdraining, making the cultivation of peaches and particularly of the French, Italian and German pome very productive. Numerous drying buildings or evaporators can be seen, dotting the landscape.

I am credibly informed that more than six hundred dollars is often the net profit of the product of an acre of prunes in full bearing.

A large area of the shore is covered by the city of Vancouver and Cuberos and by the military reservation of Vancouver Barracks. The latter occupies the site of old Fort 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 contests the U. S. title to a portion of the reservation.

The southern half of the reserve is a natural prairie, with a few scattered firs and groves of scrub oak, now occupied by the quarters barracks and parade ground of the Garrison, the flat portion south of the County road being the Gardens and that near the river, when not overflowed, the drill ground of the Cavalry and Artillery.

The northern half is still an unbroken forest through which good roads have been made.

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The trees have been cleared away over an area occupied by a 1000 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 5000, 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, Klaskanine and Takima rail road built to a distance of 12 or 15 miles in the interior. Sash, door and blind factories, pork packing and other smaller industries are in operation. The roads throughout the high land being generally over gravelly ground are of fair grades and generally good condition while those on the bottom lands are only wagon tracks, unworked and are bad in summer and mired in winter.

The country beyond ^{to} the limits of the sheet on the south or Oregon side may be generally described as a flat peninsula rising to ^a height 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 8 or 10 miles above the P.V. 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 rail boards or palings and on the bottoms are often of barbed wire and being subject to be torn by floating drift at 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 Puget 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 first class steel draw bridge with double track and also double decks for wagon and foot travel.

The piers are set on pneumatic foundations and the opening in the draw is to be 300 feet in the clear.

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The Vancouver Klickitat and Yakima railroad is of standard gauge, built, as I have said 12 or 15 miles into the interior, and chiefly used at present to haul saw-logs to the mills. It is projected to run to the Yakima and Klickitat Valleys through the Coal fields alleged to exist 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 primitive 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 boles 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 Wiamette river, due very greatly to the two bars and 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

Haydens 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 two bars, the larger 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 ruin 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 sand bar east of the P. & V. Railway was formerly a small island and the main boat or ship channel followed the old shore shown behind the Bar. Even so slight an obstruction as the sheer boom, a long double row of spiles 50 feet apart, sustaining a floating boom of logs has served to determine 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, sit on
Hayden island, showing the sand bar
near the foreground, and Ryan's
point and Mount Hood in the
distance.

Respectfully submitted, by
Cleveland Rockwell,
Assistant.

Not found by me
R. H. C.

1.29.91

Descriptive Report

by Cleveland Rockwell
Assistant