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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
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State: Oregon	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. 4228
LOCALITY	
Coast	
Sylvan Point to	
Nehalem River	
1926	
CHIEF OF PARTY	
R.F. Luce	

GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT

TOPOGRAPHY

Oregon Coast

1926.

Sheet ^C~~Three~~: Latitude 45-38 to Latitude 45-51.

AUTHORITY

The Directors Instructions for field work dated April 17, 1926.

GENERAL DESCRIPTION

Sylvan Point at the northern extremity of the sheet is formed by a steep rocky ridge that slopes sharply down to the high water line. It is the first prominent point south of Chapman Point and is distinguished by a pyramidal rock 81 feet high on about the low water line. This rock has a huge archway through it which is bare at low water. Just south of the point is another large rock slightly further off shore which was located by triangulation and used as a signal for launch hydrography.

From Sylvan Point south the beach extends in a general north and south direction as far as Cape Falcon. The high water line, except where broken by jutting cliffs, is fairly straight with the timber line extending to the very edge. The beach is broad and flat and composed of fine white sand which between the high and low water line furnishes an excellent driving surface. Back from the beach the heavily timbered hills rise to considerable height.

Humbag Point is the steep rocky termination of a spur of the ridge forming Sylvan Point. The vertical cliffs drop straight to the sand beach, where, between the bluff and the off lying rock shown on the

the sheet, is a strip of hard packed sand.

The next point south is Hug Cape (Locally known as Hug Point).

This rocky bluff at one time formed a barrier to driving along the beach but a few years ago a narrow auto road was blasted out of the face of the cliff thus opening the beach south to traffic. The cliffs are yellow sand stone and on a bright day show clearly against the dark background.

Next comes Arch Cape the highest and most precipitous of all. It rises sheer from the beach for a hundred feet or more then slopes steeply back to a maximum elevation of over 600 feet. A regular, cone-shaped rock 107 feet high rises from the sand a few meters west of the cliffs. It is impossible to pass these cliffs on the beach at high water.

About 0.8 miles west by north of Arch Cape is a large square rock rising out of fairly deep water to a height of 157 feet. It is known locally as Castle Rock because of its peculiar resemblance to a turreted castle set on a great rock.

South of Arch Cape the broad sand beach extends unbroken as far as Cape Falcon except for two large rocks as shown on the topographic sheet.

Cape Falcon is the second large headland south of the Columbia River. It rises to a height of over 700 feet, is very precipitous on the north western face and is densely covered with fir and deciduous growth. The bluffs on the northwestern face are broken and consists of Volcanic rock, soft sand stone, and yellow clay. The beach line along this stretch is mostly talus from the rock cliffs and is impassable at any stage of the tide. This headland does not present as bold and an appearance as Tillamook Head. In latitude 45 - 46 is a small cove surrounded by vertical rock walls and having a short strip of gravel beach at the back. It is impossible to reach this beach from the land.

Just south of this cove is a narrow rocky point which forms the northern boundary of a sheltered cove known locally by two names:- Short Sand Beach and Smugglers Cove. The former name being in common use. The beach is broad and flat and easily reached by a trail which comes over Neah Kah Nie Mountain from Manzanita. The cliffs to the north and south of the beach drop sheer into deep water. From the cove south to about the latitude of station Neah-Kah-Nie₂ the cliffs are impassable at any stage of the tide. Photographs No. 6 and 9 give a good idea of the coast line.

Station Carlton can be seen as a sharp hill tangent to Neah-Kah-Nie Mountain when viewed from the northwest but from the west or south west it blends with the higher background.

Neah-Kah-Nie Mountain is the most prominent landmark along this stretch of coast. It is divided into two main peaks, the south eastern one where the triangulation station is located is again divided into three very small peaks at the top. The north western and higher peak is roughly shaped and quite pointed at the top. It is bare of forest for about two thirds of its height and so forms a distinct contrast to the surrounding peaks which are all heavily forested.

With the exception of a long wooded ridge just north of Manzanita, the country south of Neah-Kah-Nie Mountain along the beach is low and flat as far as the Nehalem River. See photograph No. 12.

The long spit extending south from Station Manzanita and separating the Nehalem river from the sea is composed of low sand dunes with an average elevation of ten feet above high water.

Signal Silver is the highest point on a large sand dune about 60 feet high which shows from the sea very white against a forest background.

The mouth of the Nehalem River is well defined by jetties and part of the trestle used in building them. The bar is very shallow and only small fishing boat can cross it at high tide in comparatively smooth weather. South of the river as far as signal Mouth the beach resembles very closely that already described to the north. The country immediately east of the Nehalem entrance and signal Mouth slopes quite sharply up to a line of wooded hills as indicated by the form lines.

SURVEY METHODS

Control:- Third order triangulation with signals two to three miles apart or sometimes closer. A traverse was run by the usual stadia plane table method from Signal Bluff south to latitude 45 - 46.8, the end of the sand beach. The base of operation was then shifted from Cannon Beach to Manzanita and a traverse was run from Station Mouth south of the Nehalem River to topographic signal South in latitude 45 - 43.9. Where possible along these traverse lines the high water line and all prominent objects were rodded in but such objects as could not be reached by a rodman were located by intersections taken from three or more points.

Due to the vertical cliffs, the broken country and the patches of heavy forest it was impossible to either follow the beach or the top of the cliff line from latitude 45 - 43.9 north to Cannon Beach. However, at a height of about 600 feet, a new road is being constructed along the face of Neah-Kah-Nie Mountain and it was possible to set up at several points along this grade, locate the table by three point fixes and cut in all the points and tangents in sight. Station Carlton was occupied and a round of cuts taken and a short traverse run by way of the next headland to the north, into Short Sand Beach. Thus I was able to rod in the limits of the beach and get more cuts to points and rocks. Here again the traverse had to be

abandoned and a set up located by three point fix on the north point of the cove - again cuts were taken to everything in sight. It was impossible to get another set up between this point and the traverse on Cannon Beach but by occupying a previously located station about latitude 45 - 47 it was possible to rod in at low water the beach line as far south as latitude 45 - 46.4. With the aid of the great number of intersections obtained it was possible to sketch in very closely the remaining portion of shore line. Later an excellent check was obtained on this sketching when the hydrographic signals cut in by the launch were transferred to the smooth sheet and found to coincide with the topographic features as shown on this sheet.

NEW PLACE NAMES

✓ SYLVAN POINT and HUMBUG POINT as shown ^{on} the sheet are well known local names and are in common use by the residents.

HUG CAPE is very seldom referred to by that name but is known as Hug Point and is so listed on one of the stage line schedules.

CASTLE ROCK is a well established name applied to the large rock west by north of Arch Cape. Refer to photograph No. 1.

OUTLYING DANGERS

Castle Rock and Falcon rock would come under this head but as both are accurately located and well known, no description is necessary.

NOTE:- Falcon Rock is described in the Coast Pilot as having an elevation of 50 feet. This is so obviously an error that the launch party made an investigation and the rock was found to have an elevation of 15 feet above high water.

About 1/2 mile S.W. of Castle Rock is a large rock awash at half tide. The location on the topographic sheet was secured from several cuts taken from points along the beach.

Between Falcon Rock and the beach a long reef juts out. This was carefully sounded out and located by the hydrographic party under F. W. Hough so no notation is made on the sheet.

DM's + DP's for Topo. Sheet #3

St. Pierre, Oregon, 1926.

Signal	Latitude	Neters	Longitude	Neters	Height	
Big	45	51 565	123	57 1240	106	Large rock (highest point) 400 m. S.E. of Sylvan Point.
House	45	51 200	123	57 867		Chimney of lone house on beach.
Brown	45	50 1670	123	57 924	65	Cone shaped rock off Humburg Point
Red	45	50 878	123	57 733		Chimney - red rooted house
Yel	45	50 291	123	57 816	70	Peak of triangular yellow bluff 400 m. north of Hug Cape
Black	45	49 1103	123	57 927	15	Black rock on beach 600 m. south of Hug Cape.
Cone	45	48 348	123	58 106	107	Cone shaped rock off Arch Cape.
White	45	47 1142	123	58 367	64	Larger of two rocks 1100 m. S.W. of Arch Cape.
Low	45	47 1036	123	58 285	48	Smaller of two rocks named above.
South	45	43 1686	123	56 770		Southernmost of two houses on the beach nearest to Neah Kah Nie Mt.
Sign	45	43 161	123	56 439		Large white sign on a low hill at Manzanita
Silver	45	42 120	123	55 527		Highest point of large white sand hill.
Grab	45	40 1299	123	55 491		Rounded yellow bank on R.R. cutting east of Nehalem River
Nor	45	39 898	123	56 475		West end of north jetty facing Nehalem River entrance.
Bank	45	38 894	123	56 423		Eroded yellow bank 1600 m. south of the Nehalem River and 150 m. from the h.w. line.

Copied by [unclear]

[unclear]

To accompany the Descriptive Report, topographic sheet No. 3.

1. Castle Rock as seen from the launch looking north east.
2. Rock formations at Arch Cape showing hands and equipment.
3. Arches at Arch Cape.
4. Looking northward along Cannon Beach from a point near the top of Cape Falcon, elevation about 600 feet.
5. Looking down from the same position as No. 4.
6. Looking south from the northern end of Short Sand Beach. Carlton showing as highest of two bare hills in the distance.
7. Looking northward into Short Sand Beach from the elevation marked 348 in latitude 45-45.1
8. Looking northwest to Short Sand Beach from a point on Neah Kah Nie Mountain near the elevation marked 615 in latitude 45-44.7. Note Carlton on the extreme left.
9. A typical bit of cliff in the small cove just north of Carlton. Taken from an elevation of 340 feet.
10. Looking westward from the same position as No. 8.
11. Neah Kah Nie Mountain as viewed from the beach at Manzanita.
12. Looking south along Nehalem Beach to the river of the same name from a point on Neah Kah Nie Mountain, about latitude 45-44.5, elevation 700 feet.

N 2
T 4 2 2 8



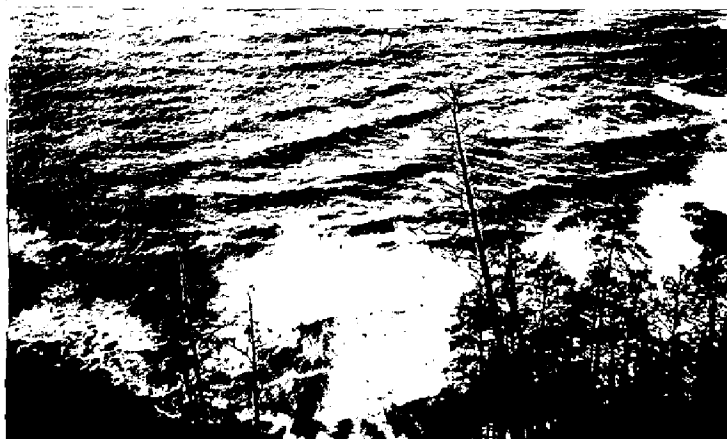
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N 4
T 4 2 2 8



N 1
T 4 2 2 8



N 5 T 4 2 2 8



H 6

T 4228



H 7

T 4228



H 8

T 4228



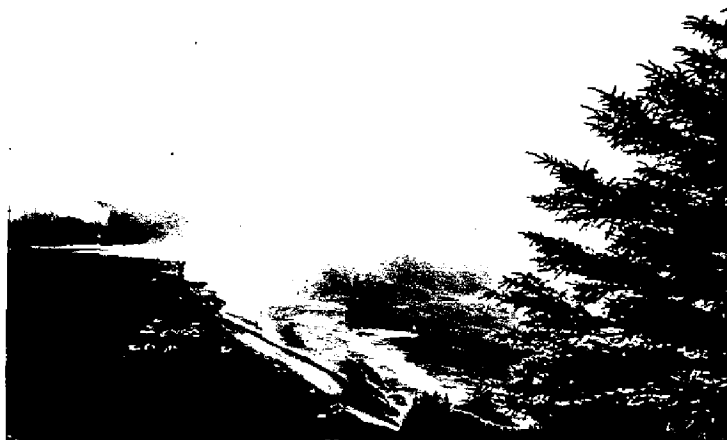
H 9
T 4228



N 10 T 4228



H 11 T 4228



H 12 T 4228

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U. S. COAST AND

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ALTY FOR PRIVATE USE, \$300



Topographic Sheet #3.C

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IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

DEPARTMENT OF COMMERCE

AND REFER TO No. 11-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

December 16, 1927.

SECTION OF FIELD RECORDS

Report on Topographic Sheet No. 4228

Sylvan Point to Nehalem River, Oregon

Surveyed in 1926

Instructions dated April 17, 1926 (PIONEER)

Chief of Party, R. F. Luce.

Surveyed and inked by S. B. Grenell.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of the survey satisfy the requirements of the General Instructions except as noted in paragraph 5 and 6.
3. The plan and extent of the survey satisfy the specific instructions except for the omission of the railroad at the mouth of the Nehalem River.
4. The junctions with the adjoining surveys are adequate.
5. Paragraphs 5 and 6 of the review of T. 4227, relative to treatment of elevations and rocks, are equally applicable to this sheet. The old surveys covering the same area as T. 4228 are T. 1382a, 1416a and 1416b.
6. The shoreline between Cape Falcon and Δ Carlton is very different from T. 1416a. The shoreline of Falcon Rock should have been shown.
7. The formlines on the old surveys are very complete, and the new formlines do not appear to give any additional information and could have been omitted.

8. The character and scope of the surveying and field drafting are fair.
9. Reviewed by E. P. Ellis, November, 1927.

Approved:

Chief, Section of Field Records (Charts)

L.O. Pollock

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. ^C4228

4228

State Oregon

General locality . . ~~Northern Oregon~~ Coast

Locality Sylvan Point to Nehalem River.

Chief of party . . R. F. Luce

Surveyed by S. B. Grenell

Date of survey . . July, 1926.

Scale 1:20,000

Heights in feet above . . Mean sea level

Contour interval .100. . feet.

Inked by . S.B. Grenell. Lettered by S. B. Grenell.

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: