

U. S. COAST & GEOBETIC SURVEY LIBRARY AND ARCHIVES

MAY 16 1936

Acc. No.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic)

Highwanhid Sheet No.S.A. B. BB & Y

StateOREGON

LOCALITY

COLUMBIA RIVER

Clatsop Spit to Smith Point

1935

Form 537a

DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES

MAY 16 1936

REG. Z

Acc. No.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

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	rield LetterA	
	REGISTER NO.	
State	Oregon	
General locality	Columbia River	
Locality	Clatsop Spit to Point Adams	
Scale 1:10,000	Date of survey July, 1935 19	9
Vessel Party No.	9	
	Robert W. Knox	
Surveyed by	R. S. Thompson	
Inked by	RWK	
Heights in feet al	boveto ground to tops of tr	rees
= -	ate contour Form line interval	
Instructions dated	d = (. o b 2 c , 19	93 X
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Form 587a

DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SU	
MAY 16 1035	REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter R 6481 a

REGISTER NO.

State	Oregon				
General locality	Columbia River				
Scale 1:10,000	Date of survey June, 1935	19			
Vessel Party No. 9					
Chief of Party	Robert W. Knox				
Surveyed by	R. S. Thompson				
Inked by	K. McBean				
Heights in feet above	to ground to tops of	trees			
Contour Approximate	contour Form line interval	_feet			
Point Adams to Lewis and Clark River Scale 1:10,000 Date of survey June, 1935 , 19 Vessel Party No. 9 Chief of Party Robert W. Knox Surveyed by R. S. Thompson Inked by K. McBean Heights in feet above to ground to tops of trees Contour Approximate contour Form line interval feet Instructions dated February 26, 1935 , 19 Remarks:					
Remarks:					
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B. S. GOVERNMENT PRINTING OFFICE: 1926

DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY

MAY 16 1936

U. S. COAST & GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET ACC. AC.

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter BB 6481 b

REGISTER NO.

State	Oregon
General locality	Columbia River
	Lewis and Clark River to Smith Point
	Date of survey June, 1935 , 19
	·
Chief of Party	Robert W. Knox
Surveyed by	R. S. Thompson
Inked by	K. McBean
Heights in feet abov	reto ground to tops of trees
Contour Approximate	e contour Form line intervalfeet
Instructions dated	February 26, 1935 , 19
Remarks:	

Form 537a

DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY

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TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter $\underline{\textbf{Y}}$ $\underline{6482}$

REGISTER NO.

StateOregon
General locality Columbia River
Locality Lewis & Clark and Youngs Rivers
Scale 1:10,000 Date of survey June and July, 19359
Wessel Party No. 9
Chief of Party Robert W. Knox
Surveyed by R. S. Thompson
Inked byK. McBean
Heights in feet above to ground to tops of trees
Contour Approximate contour Form line intervalfeet
Instructions dated February 26, 1935 , 19
Remarks:

DESCRIPTIVE REPORT

TO ACCOMPANY TOPOGRAPHIC SHEETS NOS.

"A", "B", "BB" & "Y"

Scale 1:10,000

COLUMBIA RIVER

OREGON

ASTORIA TO CLATSOP SPIT

Instructions dated Feb. 26, 1935

Surveyed by R. S. Thompson

GENERAL DESCRIPTION: The four topographic sheets listed above are a survey of the Oregon bank of the Columbia River from Clatsop Spit to Smith Point, Astoria, and include Youngs Bay and the lower portions of the Youngs and Lewis and Clark Rivers.

With the exception of that shown on Sheet Y (Lewis and Clark and Youngs Rivers), the territory along the river is low and fairly flat; low hills lie between and on either side of the two rivers. Except near the spit and ocean, the entire country is covered with a thick growth of small timber and brush.

CONTROL: The control used for the survey of these four sheets is from the triangulation scheme executed by this party during the past season. No old stations were used whose positions had not been re-determined.

SURVEY METHODS: Standard survey methods were used. Before field work was begun the instrument was adjusted, the rods were tested on a measured base and several four-meter rods were graduated so that longer half interval sights might be taken along the traverse.

No record of closing errors could be found, but the topographer, Mr. R. S. Thompson, Surveyor, periodically reported to the writer that closures were negligible.

It was understood from correspondence with the Office that an air-photo compilation of the Columbia River was contemplated; consequently no time was spent in running in non-navigable shoughs, etc., nor in locating with precision detail back of the shore line, except such objects as might prove useful in the air-photo compilation.

The U. S. Engineers plane coordinate grid system was overlaid on the sheets in full lines. It appears as if that Bureau will make continued use of the sheets in their periodic surveys of the channels. The position of the grid with respect to the geographic system was computed from the four corner intersections of the parallels and meridians in the case of each sheet, and checked by at least two triangulation stations whose positions had been reduced to the plane coordinate system.

MAGNETIC MERIDIAN: The declinatoire used in the determination of the magnetic meridians appearing on these sheets was standardized against compass declinometer No. 22 and found to have an error of +53 minutes. Correction applied. The meridians as they appear on the sheets should be moved eastward that amount. The measurements, however, appear to be erratic. The scaled values (corrected) are:

At East Jetty sheet A = 23° 47' east Hiway common to sheets Y = 24 20 and BB

Leahy sheet Y = 24 36

Leahy sheet Y = 24 36

The value obtained at \triangle Tansy Pointz - about in the middle of the area covered by the above sheets - with a compass declinometer was 23° 01' east.

NOTES ON INDIVIDUAL SHEETS: The following part of this report covers notes on each of the several sheets and deals with specific items that are not of a general nature. The notes on each sheet have been typed separately.

Respectfully submitted:

Robert W. Knox, H. & G. Eng'r. Sheet "A" - Clatsop Spit to Point Adams

COMPARISION WITH PREVIOUS SURVEYS: The area covered by sheet A was last surveyed in 1926, registry No. 4264. A comparision between the two sheets shows considerable change in the high water line, the most important being the narrowing of Clatsop Spit. Erosion has occured from sea and river sides. The spit was about 700 meters wide in 1926, compared with about 400 meters in July, 1935.

The shore line is changing continually, particularily during the winter storms, and some fear is felt that an exceptionally have and prolonged blow would cause the seas to cut through the spit. A tremendous amount of damage would result from such action.

To forestall such a catastrophe, a system of low drift fences have been built along the seaward slope of the spit, and within the last few months a systematic planting of a hearty type of grass has been attempted.

A fair junction - about 20 meters- with the 1926 work was obtained in the vicinity of the wreck of the Peter Iredale. It is doubtfull whether or not a better junction could be obtained north of the rocky beach line near Tillamook Head.

The U. S. Engineers periodically run cross sections of the spit and the high water line appearing on their surveys is determined in that manner. The writer was informed that "about the 10-foot contour" was used as the high water line. It is believed that this curve is appreciable about the high water line.

Time did not permit the re-survey of Swash Lake, but it is doubtful if any material change in its form has taken place since 1926.

The area south of the southern end of the shoal bay formed by Clatsop Spit is low and marshy, the high water line being extremely vague. A field inspection of this area was recently made with the idea of completing the line by sextant fixes. Such a method was found to be impossible and it is believed that the only satisfactory method would be to carry levels with the plane table.

GEOGRAPHIC NAMES are correct and complete as they appear upon the published chart.

LANDMARKS FOR CHARTS will be submitted under separate cover.

STATISTICS:

Statute miles of shore line = 16.1 Statute miles of railroad = 3.8 Sheet B - Lewis and Clark River to Point Adams. T-64812

COMPARISION WITH PREVIOUS SURVEYS: The area covered by sheet B was last surveyed in 1926, registry number 4263 and 4264, the former extending from the eastern limits of the sheet to the Skipanon Waterway and the later from there to the western limits of the sheet.

Sheet 4263: The agreement between these two sheets is fair, the 20 or 30 meter differences in the location of the shore line probably being due to the interpretation of the low marshy shore line by the two topographers.

The agreement between the two surveys in the vicinity of the Skipanon Waterway is not good, each jetty now appearing about 7 meters west of their original location. It has been determined that the jetties have not been rebuilt since they were first constructed. The bromide copy of the original sheet used in the comparision is somewhat distorted, and it may be that much of the apparent discrepancy is due to this cause.

Sheet 4264: With the exception of the Skipanon Water-way, as noted above, the agreement between sheet 4264 and the present sheet is considered very good. There is a slight difference in the representation of the large abandoned pier at Fort Stevens, but as the pier is in ruins it is possible that it now presents a different outline than it did in 1926.

LOW WATER LINE: In order to make the sheet complete, the lower-low water line was transferred to it from the smooth hydrographic sheet and the proper type of bottom inked in. The data for this was obtained from notes of the topographer and from notes in the sounding volumes.

GEOGRAPHIC NAMES are as they appear on chart No. 6151.

LANDMARKS FOR CHARTS will be submitted under separate cover.

STATISTICS:

Statute miles of shore line = 13.2 Statute miles of railroads = 5.4 Statute miles of roads = 0.9 Sheet BB - Lewis and Clark River to Smith Point T-648 | b

COMPARISION WITH PREVIOUS SURVEYS: The area covered by sheet BB was last surveyed in 1926, registry No. 4263. In general, the agreement is excellent, the few differences in the shore line can most probably be attributed to a) artificial changes, b) recession of the shore line due to the wash of tugs or c) differences in intempretation of the high water line in the flat, marshy areas by the two topographers. The more important changes are:

- 1) A small bight in the vicinity of Smith Point has been filled in.
- 2) There is a considerable difference in the delineation of the high water line on the east side of Youngs River between Station Vic and Dad, probably due to interpretation, as the area is very flat and marshy.
- 3) Thecabove is true in the vicinity of the south side of Youngs Bay between \circ Vet and the highway bridge.

LOW WATER LINE: In order to make the sheet complete, the lower-low water line was transferred to it from the smooth hydrographic sheet and the proper type of bottom inked in. The data for this was obtained from notes of the topographer and recorded bottom specimens from the sounding volumes.

GEOGRAPHIC NAMES: Geographic names are as they appear upon the published chart with one addition:

Daggett Point

A well established local name

LANDMARKS FOR CHARTS will be submitted under separate cover.

STATISTICS:

Statute miles of shore line = 13.2 Statute miles of railroads = 0.9 Statute miles of roads = 5.7 Sheet Y Lewis and Clark and Youngs Rivers. T-6482

COMPARISION WITH PREVIOUS SURVEYS: There are no previous surveys covering this area in its entirety. Sheet registry No. 4263, surveyed in 1926, shows about a mile of the Lewis and Clark. On the east side of this portion of the river the agreement is good. On the west side, the present survey shows that the bank has been washed away, south of o Sod, an average distance of about 50 meters. Only a few hundred meters of the west side of Youngs River is common to the two surveys.

LOW WATER LINE: In order to make the sheet complete, the lower - low water line was transferred to it from the smooth hydrographic sheet and the sandy, muddy or marshy portions inked in with their proper symbol, the data for which was obtained from notes of the topographer, and from bottom specimens as noted in the sounding volumes. The buoy No beginn this appearing on the topographic sheet will be found to have identical locations with those on the smooth hydrographic sheet.

GEOGRAPHIC NAMES: In addition to the names appearing on the chart, ie., Lewis & Clark and Youngs Rivers, the following names are well established and it is recommended that they be accepted:

- 1) Walluski River, emptying into the Youngs River near charts 59024 6000 A Nurnberg.
- 2) Tucker Creek, emptying into the Youngs River Near A Oman LANDMARKS FOR CHARTS will be submitted under separate cover

STATISTICS:

Statute miles of shoreline = 19.8 Statute miles of roads = 2.1

Plane-table Positions Sheet A

	Object or name of signal	I	atit	ude	L	ongi	.tude	Remarks
		۰	7	\mathbf{m}	٥	*	m	
	Observation Tower	46	12	7867	123	57	1089 /	fire control tower
	J-1 USE	46	12	1576 /	123	58	158 /	end of groin
:	J-2 USE	46	13	239 /	123	58	1126 /	end of groin
	Bar	46	13	971	123	5 9	7 53 /	marked hydrographic station
	Black Tank USE	46	13	1067/	124	00	896 /	low black wooden tank on
	Dolphin	46	12	1619 -	123	58	810/	jetty
	Sea Thrush	46	ᅫ	887/	124	01	632 /	mast of portion of wreck
	Dolphin	46	13	3 62/	123	59	549/	
	Ire	46	10	1596/	123	58	1009/	marked hydrographic station
	Peter Iredale	46	10	1318 /	123	58	1021/	bowsprit of wreck

scaled by RWK ck KMcB

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Plane-table Positions Sheet B

Object or name	I	atit	ade	I	ongi,	tude	Remarks
of signal	•	r	m	•	t	m	
0ak	46	10	286 ′	123	54	1254/	Mill stack
East gable barn	46	09	1818 /	123	54	562 ′	
East gable house	46	10	227/	123	54	631 <	
Flavel Rear Rang	;e46	11	1209 /	123	55	1265 /	•
Flavel Front Rge	46	11	1159/	123	5 5	684~	
Tansy Pt Rear	46	11	53 3′	123	55	874	
Range Tansy Pt Front	46	11	585/	123	55	456 ~	
Range Rede	46	12	41/	123	56	394	River gable red shack
Gar	46	12	285 /	123	56	732 /	East gable boat house
Monument	46	12	377	123	5 7	262 /	Boundry monument Fort Stevens
Stev	46	12	94/1×	123	56	1271/	Marked hydrographic signal
Nap	46	09	1766′	123	53	1237 /	do
Oil USE	46	10	15531	123	53	884	Stack fish-oil house
Observation towe	r46	12	786 [/]	123	57	1085 ′	Coast Guard tower, Ft. Stevens
Tall stack USE	46	10	598 ′	123	54	1018	Mill stack, Warrenton
Front FR USE	46	10	3 3 ′	123	54	1100/	Skipanon waterway front range
Middle Stack USE	46	09	1774/	123	55	75 ′	Middle of three mill stacks
Skipanon Water-	46	11	119 🗸	123	54	540 /	•
way west light Cable	46	12	685 ′	123	57	37 [~]	Cable crossing sign
Prominent dead tree	46	09	1376	123	52	773 ′	

scaled by RWK
ok by KMcB

Plane-table Positions Sheet BB

•	Object or name	L	atit	ude	· L	ongi	tude	Remarks
	of signal	•	t	m	0	ı	\boldsymbol{w}	
	Kab	46	09	1386 🗸	123	50	ᅄ	north gable of barn
	Vie	46	0 9	1048 /	123	48	544	marked hydro. station
	Smith	46	11	· 188 /	123	51	881 🗸	do
	Bay	46	10	1225	123	5 1	171	do
•	Elk	46	10	/ 1541	123	51	731	gable red warehouse
	Dig	46	10	1366	123	51	424	gable shed
	Cur	46	10	991/	123	50	1196′	gable of shack
	Doc	46	10	428 /	123	49	294/	end of pier (SW corner) marked by sq of gal. iron
	Not	46	09	1229/	123	49	941	north gable barn
	Jam	46	09	1488	123	48	1015 /	pile
	He r	46	09	1256 ′	123	48	1045/	pile
	Cod	46	09	′995 [/]	123	48	1077 /	pile
•	Mid	46	09	745 /	123	48	1116 🗸	pile
	Wun	46	09	373 [~]	123	49	108 /	pile

scaled by RWK ck by KMcB

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Plane-table Positions Sheet Y

Name of signal or object	I	atit	aude	L	ongi	tude	Remarks
·	•	•	m	•	•	In.	
Pi	46	09	190 ′	123	51	674 /	center old swing-bridge pier
Dyer	46	08	1167 /	123	51	936′	marked hydrographic station
Dog	46	07	406	123	52	677 ′	black tank
River gable red ba	m46	07	672	123	51	771 /	
River gable unpain ed barn	t-46	06	1330 /	123	51	319 /	N.
Prominent dead tre	е 46	06	842	123	52	19 ^	
River gable red bar	n 46	07	. 107×	123	49	3 70 ′	
Span	46	06	1164/	123	47	942/	marked hydrographic station
Guk	46	06	1065/	123	48	252 /	north gable barn
Wal	46	08	1478/	123	47	6241	marked hydrographic station
Bar	46	06	892	123	48	871	east gable barn
Flagpole	46	09	178 /	123	47	910/	on grounds of County Farm
Tat	46	06	1081/	123	47	1008	long span crossing power pole
Kus	46	09	30 0 ′	123	51	850 /	cable crossing sign
Fad	46	09	236 ′	123	51	5 55 ′	cable crossing sign
Gam	46	09	21/	123	51	701 /	river gable small shack
Uno	46	07	8/11	123	52	682 /	down stream gable red shack
Win	46	07	99 ′	123	51	571	window in gable of house
North gable barn	46	06	600 /	123	51	708 ′	

scaled by RWK ck by KMcB

APPROVAL OF CHIEF OF PARTY

Topographic sheets A, B, BB and Y have been inspected and approved by me. The field work was done under my occasional supervision; the office work in part under by supervision and in part by myself. No additional work is considered necessary.

Robert W. Knox, H. & G. Eng'r, Chief of Party.

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Remarks

Decisions

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FORM M-238

MEMORANDUM IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT	No. T	6480	}	received registered verified reviewed	MAY 2 2 1950 MAY 2 2 1950
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This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

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RETURN TO

C. K. Green

T

REVIEW OF TOPOGRAPHIC SURVEY No. 6480

Title (Par. 56) Clatsop Spit to Point Adams, Oregon

- Surveyed by R.S. Thompson Inked by R.W. Knox Chief of Party R.W. Knox Ship Field Party #9 Instructions dated Feb 26 1935 Surveyed in July 1935
 - The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) Failed to put date of triangulation stations on sheet. They do not appear in the 1935 Ist of geographic positions
 The character and scope of the survey satisfy the instructions.

 - The control and closures of traverses were adequate. (Par. 12, 29.) 3.
 - The amount of vertical control that the Manual specifies for -con-4. tours-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.)
 - The delineation of -contours-formlines- is satisfactory. (Par. 49, 50.)
 - There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) None Submitted
 - High water line on marshy and mangrove coast is clear and adequate 7. for chart compilation. (Par. 16a, 43, 44.)
 - The representation of low water lines, reefs, coral roofs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.)
 - Rocks and other important details shown on previous surveys and on 9. the chart were verified. (Par. 25, 26, 27.)

See reverse side

- 10. The span, draw and clearance of bridges are shown. (Par. 16c.)
- 11. Locations and elevations of summits are given. (Par. 19, 51.)
- 12. The tree line was shown on mountains. (Par. 16g.)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

Paragraph 9

T335 (1851), T317 (1850), T1112 (1868) H250 and H273 (1851)

These former surveys were very general and are of no value in checking the present survey. T6480 supersedes these surveys in part.

T4250, T4264 (1926)

These two surveys of 1926 cover the present survey. They are adequately compared on Page 3 of the Descriptive Report. As stated, the detail to Swash Lake was not resurveyed and must be accepted as shown on the 1926 survey. The Clatsop Spit is changing very fast according to a comparison of T4250 and T4264 with the present survey.

T6480 supersedes T4250 and T4264 in part.

Chart 5902 is in good agreement with the present survey, considering the large difference in scale.

for declinatoire

- 13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.)
- 14. The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.
- 15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DPs, 68.) None Submitted
- 16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.)
- * Meridian on 17. The magnetic meridian was shown and declination was checked. (Par. sheet corrected 17. 52.) Declinat our error +53'

G.R. Mar. 2, 1938. 18. The geographic datum of the sheet is N.A. 1927 (Unadjusted) reference station is correctly noted. (Par. 34.)

Values from field computations used.

Junctions with contemporary surveys are adequate. 19.

Joins T 648/a (1935) on the East

- 20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.)
- The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.)
- 22. No additional surveying is recommended. -
- 23. The Chief of Party inspected and approved the sheet and the descriptive report after review by

24. Remarks:

Reviewed in office by Chus. O. Dush J. June 23, 1936

Examined and approved:

Chief, Division of Charts

ande Chief, Division of Hyd. and Top.

REVIEW OF TOPOGRAPHIC SURVEY No. 648/a

Title (Par. 56) Point Adoms to Lewis & Clark River, Oregon

Chief of Party R.W. Knox Surveyed by R. S. Thompson Inked by K. Mc Bean

Ship Field Party*9 Instructions dated Feb. 26,1935 Surveyed in June 1935

- 1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.)
- 2. The character and scope of the survey satisfy the instructions.
- 3. The control and closures of traverses were adequate. (Par. 12, 29.)

 No closures listed
- 4. The amount of vertical control that the Manual specifies for -contours-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.)
- 5. The delineation of -contours-formlines- is satisfactory. (Par. 49, 50.)
- 6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) None Submitted
- 7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.)
- 8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.)
- 9. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.)

See Reverse Side

- 10. The span, draw and clearance of bridges are shown. (Par. 16c.)
- 11. Locations and elevations of summits are given. (Par. 19, 51.)
- 12. The tree line was shown on mountains. (Par. 16g.)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

Paragraph 9

H250 - H273 (1851) "

These two surveys are primarily hydrographic surveys and are of very little value in making a comparison with the present survey. The scale of these two surveys is 1:20,000 where as the p resent survey is on 1:10,000. Details have changed materially in the 84 years between the two surveys of 1851 and T6481-a, many of them man-made.

T317 (1850 and T335 (1851)

These two former surveys are very general and are of little value in making a comparison with the present survey. There are many man-made changes. An inspection would indicate that the South shore of the Columbia River had receded somewhat in spots. At other points mouths of streams have been entirely closed off.

T1123 (1868)

This survey covers only a very minute portion of East and of the present survey. The shore apparently has receded a little and the L.W. line has changed by having receded also.

T1112 (1868)

This survey is of very little value in making a comparison with the present survey. Practically the entire extent of this survey has been changed or affected by man-made changes. The Tansy and Alder Creeks have a pparently been closed off. This is due to changes along the Skipanon Waterway. This construction also affected the area East and South of the Waterway. The H. W. line of that portion of Pt. Adams shown on the present survey has evidently built out somewhat. It is difficult to make an accurate comparison due to the lack of control on the T1112 (1868).

T4263 (1926) and T4264

The comparisons of these two surveys with the present survey is considered adequate. The principle changes are the Skipanon jetties and changes affected by these jetties.

T6481-a supersedes H250, H273, T317, T335, T1123, T1112, T4263 and T4264.

A comparison of the present survey with chart 6151 shows no important changes other than discussed under T4264-4 above.

- 13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.)
- 14. The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.
- 15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of IMs and DPs, 68.) None Submitted
- 16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) —
- 17. The magnetic meridian was shown and declination was checked. (Parillo, 52.) No magnetic meridian shown (value for one this to the given in D. N. (page 2)
- 18. The geographic datum of the sheet is N.A. 1927 (Unadjusted) and the reference station is correctly noted. (Par. 34.)
- 19. Junctions with contemporary surveys are adequate. —

 Joins T 6480 (1935) on the West Joins T 6484 (1935) on the East.
- 20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.)
- 21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.)
- 22. No additional surveying is recommended. Several signals in the water should be cleared up
- 23. The Chief of Party inspected and approved the sheet and the descriptive report after review by
- 24. Remarks:

Reviewed in office by Chus. P. Bushfs July 3, 1936

Examined and approved:

Chief, Section of Field Records

Chief. Division of Charts

Chief, Section of Field Work

Chief, Division of Hyd. and Top.

REVIEW OF TOPOGRAPHIC SURVEY No. 64816(1935) Field No. BB Title (Par. 56) Lewis + Clark River to Smith Point, Columbia River, Oregon. Chief of Party R.W. knox Surveyed by R.S. Thompson Inked by K. Mc Bean Instructions dated feb. 26,1935 Surveyed in June 1935 Ship -(R.W. Knox) The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) 2. The character and scope of the survey satisfy the instructions. The control and closures of traverses were adequate. (Par. 12, 29.) The amount of vertical control that the Manual specifies for -contours-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.) except that the contour interval was not indicated out he Title Sheet. The delineation of -contours-formlines- is satisfactory. (Par. 49, 5. 50.) 6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) None Submitted. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) 8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.) See note on back 10. The span, draw and clearence of bridges are shown. (Par. 16c.) Values not listed. 11. Locations and elevations of summits are given. (Par. 19, 51.) 12. The tree line was shown on mountains. (Par. 16g.)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic

Manual. Use reverse side for extending remarks.

Paragraph 9, continued. a. T-4263(1926) shows a sunker week and an atandone treath (forth charter) in the vicinity of lat. 46°10.9, long. 123049.7 which are rest shows on the fresent topographis or hydrographic sheet. The treatle fells within a much flat area on the present servey. The worsh falls in depths of 6 to 32 feet on H-5976 (1935) and between smuding lines spaced 50 m. apart. There is no certainty that the week has been removed nor that the treathe has entirely disappeared. a definite statement regarding the present status of These features extant and have therefore been carried forward.

(See letter attached to D.R. of H-5976). 10/1/36 H.W.M.

REVIEW OF TOPOGRAPHIC SURVEY No. 64816 (1935) Page 2

- 13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) except that the errors of closure were not listed.
- 14. The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.
- 15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DPs, 68.) Not accomplished.
- 16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.)
- 17. The magnetic meridian was shown and declination was checked (Par. 17, 52.) However, values at statematical in the Pescriptive Report (page 2).
- 18. The geographic datum of the sheet is North American 1927 and the reference station is correctly noted. (Par. 34.)
- 19. Junctions with contemporary surveys are adequate.

 The junction on the NW will be considered when that work is received from the field.
- 20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.)
- 21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 29, 40, 41, 42, 45, 46, 47, 48, 49, 50.)
- 22. No additional surveying is recommended.
- 23. The Chief of Party inspected and approved the sheet and the descriptive report after review by

24. Remarks:

Se Note on back.

Reviewed in office by HawllW.munay

June 26, 1936

Examined and approved:

Chief, Section of Field Records

chief, Section of Field Records

Chief, Division of Charts

Thed. L. VEacock Chief, Section of Field Work

Chief, Division of Hyd. and Top.

R-317

Paragraph 24, continued.

a. The character of several features such as delphines and remains of old docks on shippans were not indicated by descriptions notes. However, a number of these identical features were described on H-5976(1935) and T-4263(1926). In order to complete the present severy, these descriptions have been abled in Flack.

b. Gils to nowigation will be considered in the reviews of H-5975(1935) and H-5976(1935).

Junctions with contemporary surveys are adequate.
The junction and ten MW mill by considered which that work is received.
From the Field.
Geographic names are shown on the sheet and are covered by the Deboringing report. (For. 64, 66k.)

The quality of the desiting is good. (Per: 31, 32, 35, 55, 57, 58, 59, 40, 41, 42, 45, 45, 48, 49, 60.)

The following the between the between to detail self.

report after review by

viewed in errice by Hardill Townsy ... from 26,1930

And So Kar Control of the Control of

child, Division of Charge Onter, Division of Hyd, and Ton

R-317

REVIEW OF TOPOGRAPHIC SURVEY No. 6482 (1935) Field No. Y Title (Par. 56) Lewis + Clark and Youngs Rivers, Columbia River, Oregon Chief of Party R.W. knox Surveyed by R.S. ThompsomInked by k. McBean Ship -Instructions dated Feb. 26,1935 Surveyed in June-July 1935 (R.W. Knox) The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) 2. The character and scope of the survey satisfy the instructions. The control and closures of traverses were adequate. (Par. 12, 29.) The amount of vertical control that the Manual specifies for -contours-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.) except that the contour interval was not indicated on the title sheet. The delineation of -contours-formlines- is satisfactory. (Par. 49, 50.) There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) No maps submitted. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) The representation of low water lines, reefs, coral reefs and rocks, 8. and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) oftshore Rocks and other important, details shown on previous surveys and on 9. the chart were verified. (Par. 25, 26, 27.) The span, draw and clearence of bridges are shown. (Par. 16c.) 10. 11. Locations and elevations of summits are given. (Par. 19, 51.) 12. The tree line was shown on mountains. (Par. 16g.) NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

- The descriptive report covers all details listed in the Manual, in 13. so far as they apply to this survey. (Par. 64, 65, 66, 67.) except that the errors of closure were not listed.
- 14. The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.
- 15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DPs, 68.) Not submitted on Form 524.
- 16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.)
- The magnetic meridian was shown and declination was checked. (Par. 17, 52.) An error of +53 minutes was found (See D.R.) page 2). The meridians on the smooth sheet was corrected in the office
- The geographic datum of the sheet is North American 1927 (unadjusted) reference station is correctly retain reference station is correctly noted. (Par. 34.)
- Junctions with contemporary surveys are adequate. 19.
- 20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.)
- 21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 29, 40, 41, 42, 45, 46, 47, 48, 49, 50.)
- 22. No additional surveying is recommended.
- 23. The Chief of Party inspected and approved the sheet and the descriptive report after review by

24. Remarks:

Reviewed in office by Hawlell humany

June 27, 1936

Examined and approved:

Division of Charts

Chief, Division of Hyd. and Top.