

6000

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: California

DESCRIPTIVE REPORT

~~Hydrographic~~
Hydrographic

T-5014
Sheet No. B

AEW
10/15/02

LOCALITY

San Joaquin River Delta
Taylor Slough to Old River

1933-1934

CHIEF OF PARTY

Lieut. L. P. Raynor

6000

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
APR 24 1934
Acc. No. _____

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

Field No. B. (75014)

REGISTER NO.

State California

General locality San Joaquin River Delta

Locality Taylor Slough to Old River

Scale 1:10,000 Date of survey Oct. 6, 1933-Mar. 7, 1934

Vessel Launch Helen F.

Chief of Party Lieut. L. P. Raynor

Surveyed by Frank Davis

Protracted by K. L. DeBlois *K. L. DeBlois*

Soundings penciled by K. L. DeBlois *K. L. DeBlois*

Soundings in ~~fathoms~~ feet

Plane of reference MLLW

Subdivision of wire dragged areas by _____

Inspection by W. H. Bamford

Inked by R. B. Krum

Verified by R.B.K. + W.H.B.

Instructions dated 22LE 1990, 3-17-33; 26RS 1990, 11-9-33;
22AHH 1990, 8-12-33; 22AHH 1990, 11-16-33;
22RS 1990, 9-2-33; 22MEN 1990, 12-2-33.

Remarks: _____

DESCRIPTIVE REPORT

of

HYDROGRAPHIC SHEET B (5014)

AUTHORITY, LIMITS, DATES:

The INSTRUCTIONS for this work are contained in the following:

1. 22LE 1990 March 17, 1933
2. 22AHH 1990 August 12, 1933
3. SUPPLEMENTAL INSTRUCTIONS PROJECT 98HT Sept. 2, 1933
4. 26RS 1990 November 9, 1933
5. 22AHH 1990 November 16, 1933
6. 22MEN 1990 December 2, 1933

The sheet covers Sand Mound, Piper, and Taylor Sloughs and parts of Dutch Slough and Old River in the San Joaquin Delta, and includes the dredger cuts made in the reclamation of the various islands and tracts in this area. Most of the work was accomplished in November 1933, but some additional work was done in March and April, 1934.

GENERAL NOTES:

As has been previously noted in the report on the photo field inspection, much of the cultivated land was originally tule marsh. The levees are built up from dredged material taken from the adjacent waterway, and due to the settlement of the levees, dredging has to be done periodically to keep the top at height and grade. As the material is needed for levee work the dredger pays more attention to the needs of the levee than to the depth of the channel for navigation purposes. This leaves an uneven bottom though a general attempt is made not to dredge so deep that the levee will tend to fall back into the waterway.

The bottom is mud, peat, sand, and clay. The original river bottom also shows considerable unevenness due, apparently, to the presence or absence of sand or clay.

SURVEY PARTY

This work was done by Frank Davis, Surveyor, usual duties in charge of the launch; Joseph LeConte, Observer, left angle and bearings with pelorus; Chas. M. Anstead, right angle and reading range finder; S. H. Van Gelder, Plotting; C. Kester, Recorder; M. D. Dibble and Myron Bear, alternating as Leadsman and Coxwain. Kester had had considerable experience in the Coast and Geodetic Survey in his position as Recorder, although with no experience as recorder with range finder and bearings. Anstead had had much previous experience with the sextant and proved to be efficient and reliable in the use of the range finder. The rest of the party were entirely new to our work and as this sheet was one of the first on which work was done, several discrepancies occurred as will be noted later, some of which may be attributed to lack of experience. The Chief of Party supervised the field work of the hydrographic party until it seemed certain that the men in charge had a full understanding of the work.

SURVEY METHODS

The signals for control of the work were located by several methods:

1. Some of the signals at the lower end of Old River, east of the Frank Tract and also near the large shed on the levee on Mandeville Island were located by standard topographic methods using Whatmans paper which had been well seasoned in this locality and on which the projection had been drawn and triangulation control plotted. This sheet has been submitted as a revision sheet for topography on T 5014, (sheet # 6 Air Photo film).

2. Other signals were located by using the photolithographic print of T 5014 as a planetable sheet and rodding in the signals from some well identified object on the sheet. These points are shown on the print, which was later used as a boat sheet, thus (P) and in red ink.
3. Spotting directly on the smooth sheet from the topographic detail, i.e. tule points, intersection of ditch lines with the high water lines, gables of buildings, corners of sheds, and other prominent landmarks. These are listed in Vol. 1, p. 2, 62, 63, 64, and 66; Vol. 5, p. 11; and the signal Vol. p. 2.
4. Sextant cuts and three point fixes. These are shown in blue circles on the boat sheet and smooth sheet and are listed in Vol. 1, p. 2, 62, 63, 64, and 65; Vol. 2, p. 2; and Vol. 3, p. 2.

B. The positions were obtained either with the usual sextant three point fix or by the use of range finder No. 7277 and bearings by compass No. 24874 using pelorus No. 24874. The deviations of the compass were determined by using range No. 3, San Joaquin River and taking bearings on every 15° rhumb. The magnetic bearing used for determining the deviation was 312°. The "Observation of Compass Deviation" and "Deviation Table" are attached to this report. The range finder was calibrated on Nov. 1, 1933 and used for "A" to "P" days, inclusive, It was also calibrated on Nov. 18, 1933 and used for "Q" day only. The calibration on April 3, 1934 was used for "S" day. The conversion curves which reduce the range finder readings to meters are shown on sheets attached. The distances when the range finder reads above 50 are not considered as reliable as readings less than that, and when a signal was used that was further away than a 50 reading, and at the same time there is a distance measured to the nearest shore line, the latter will govern in case of a discrepancy.

C. The depths were obtained by the standard method using

either the leadline or sounding pole. Soundings were read to the nearest one-half foot. On the smooth sheets the soundings were plotted to the nearest one-half foot up to 10 feet and to the nearest foot for depths over 10 feet as authorized by the instructions of December 2, 1933.

In the files, soundings were plotted to the nearest half foot in actual depth only (the field misinterpreted the instructions).

- D. The smooth sheet is aluminum coated with tanned gum arabic. It is free from the distortion that is troublesome with the Whatman sheets. The positions and signals are easily marked by a needle indentation. The surface takes ink quite satisfactorily. However, in plotting the soundings in pencil, the surface acts similar to a very fine sandpaper even with 9H pencils. If the figures are examined under a reading glass it will be seen that they do not form a continuous line but rather a series of black and white dots. Erasures are easy but it removes the surface coat leaving a shiny mark and making pencil or ink work over the erasure unsatisfactory.

ANCHORAGES AND LANDINGS

There are very few wharves on these sloughs. The boats and barges using the channels make fast along side the levee at nearly any place desired. Usually landings are made at the various sheds shown on the levee. There are four ferry slips, one on each of the four islands, Bradford, Jersey, Frank, and Webb, at the junction of Taylor Slough, False River, and Fisherman Cut. These are used by the ferry operated by the Contra Costa County and furnishes hourly service during daytime.

SHOALS, WRECKS, AND SNAGS

1. There is an $8\frac{1}{2}$ foot shoal between SMS1 and SMN1 extending part of the way across the channel from the north tip of a small tule island. ✓
2. There is a $1\frac{1}{2}$ foot shoal between DS6 and DM6. ✓
3. There is a long narrow shoal extending south from PM4 down the center of Piper Slough. The least depth is $7\frac{1}{2}$ ft. ✓
also 1 foot sounding 100 m NNE of DS6
Pos 15416 R
4. There is an 8 foot spot in the center line of the channel in Piper Slough, and 70 meters northwest of PE2, also a 9 foot spot in the center line 40 meters east of PW3. ✓

There is a sunken barge near WQM5 and located by positions 104 and 105J. There is also a sunken barge near SMM10, located by positions 116 and 117J. These are both shown on the smooth sheet. ✓

There are snags between positions 132 and 133J and one snag between positions 1 and 2N. These are shown on the smooth sheet and should be avoided by all small craft to which considerable damage to propellor and hull could be done. ✓
It is not known, however, how long they will remain in place.

CHANNELS

Practically all of the waterways are used for navigation, either by pleasure craft or by commercial vessels. The pleasure craft draw from $1\frac{1}{2}$ up to 4 feet, while tugs and barges draw from 4 to 9 feet, the greater depth being that of some of the deeper tugs. The channel depths vary and are as indicated by the depth curves as drawn on the boat sheet. Thus far the U. S. Engineers projects in most of sloughs have called for a depth of 9 ft. at MLLW.

DEPTH DISCREPANCIES

The following discrepancies in depths at various places were noted but it was not considered necessary to make a field correction for the reasons given below.

1. Depth at position 13B near WQ1 is 17 ft.
" " " 11C " " 29 ft.
" " " 12C " " 16 ft.
Old River is quite deep and the bottom drops off so sharply ✓
that these depths are quite possible even though the positions
plot close to each other.
2. Depth at position 42C near ORM27 is 18 ft.
Depth between positions 58 and 59B is 15 ft. ✓
The 15 ft. depth is shown on the smooth sheet. Both lines are
tied in by three point fixes. Being close to shore it is
possible that the bottom may vary 3 ft. in a short distance.
3. Depth between positions 69 and 70D near EQ2 is 20 ft. ✓
" " " 61 " 62B " " " 32 ft. ✓
" " " 40 " 41E " " " 23 ft. ✓
None of these points fall exactly on each other and it is
safe to assume that the bottom drops off sharply.
4. Depth between positions 31 and 32E near SQ12 is 7½ ft. ✓
" " " 52 " 53B " " " 14 ft. ✓
Both lines are located by three point fixes. It is possible
that the "B" line at the 14 ft. sounding may have been taken
further from the shore than indicated. The 7½ is shown. ✓
5. Depth between positions 38 and 39E near ORM25 is 26 ft. ✓
" " " 54 " 55B " " " 34 ft. ✓
The shore line "E" may have been closer in at this point. ✓
The Old River bottom drops off sharply and two or three meters
in distance is likely to account for considerable variation
in depth. The 26 ft. is shown.
6. Depth between positions 54 and 55C near ORM33 is 10 ft. ✓
" " " 62 " 63E " " " 5 ft. ✓
Both lines are located by three point fixes. The "E" line is
evidently nearer the shore than the "C" line at this point.
7. Depth between positions 76 and 77E near EQ9 is 16 ft. ✓
" " " 69 " 70C " " " 22 ft. ✓
The 22 ft. point is slightly outside of the 16 ft. The 16 ft.
is plotted.
8. Depth between positions 75, 76, and 77^E near EQ9 are 21, 18, & 16 ft. ✓
" " " 95 and 96E are 26, 25, and 26 ft. ✓
The "X" line is located by three point fixes and plotted as
straight lines between fixes. This line is evidently on the
outside of the "X" line. The shallower depths are plotted.
* 75-76 & 77 E LINE → Corrections by W.H. DUNFORD.
9. Depth at position 109E is 8½ ft. ✓
Depth between positions 131 and 132C near ORM30 is 14 ft. ✓
The 14 ft. depth is plotted as being more consistent with the
channel construction depth. The 8½ ft. depth may be due to the
stopping of the boat causing the lead line to be further inshore.

10. Depth between positions 45 and 46G near ORW55 is $5\frac{1}{2}$ ft. ✓
" " " 118 " 119C " " " 11 ft. ✓
The ~~shore~~ line "G" must be inside of the 11 ft. depth.
11. Depth between positions 90 and 91H near SMS1 is 24 ft. ✓
" " " 76 " 77C " " " 9 ft. ✓
The 24 ft. point is north of the 9 ft. depth. The soundings indicate a shoal extending in a northeastwardly direction from the north end of the small tule island.
12. Depth between positions 29 and 30Q near DS3 is 16 and 18 ft. ✓
" " " 7 " 8H " " " 13 ft. ✓
The 13 ft. depth is shown. There is evidently a hole on the "Q" line.

Note: Some of these discrepancies may be due to the sounding chair being located 1 meter off the center of the boat on the starboard side.

TIDAL DATA

The tide reducers were obtained from the records of standard automatic gage, located on Sand Mound Slough, near pumphouse on Frank Tract, and from the portable automatic gage placed on False River near the Ferry Slip on Webb Tract. The areas and times, for which each gage are to be used are indicated on the boat sheet by appropriate notes. The tide tabulations, records, comparisons, marigrams, data sheets, and level records were received by you on April 5, 1934, with the exception of what is attached to this report.

The plane of reference for reduction of soundings is MLLW, and is 4.4 on the tide staff at the Webb Tract. The highest tide observed at this gage was 9.0 on the staff and occurred on October 30, 1933; the lowest tide was 4.0 on the staff and occurred on November 18 and 19, 1933. MLLW on the staff at the Frank Tract is 2.4 on the staff, while the highest tide was 6.6 on this staff and the lowest 1.8.

Tables used for reduction of soundings using these gages follow:

TABLES FOR TIDE REDUCERS

Webb Gage

MLLW is 4.4 on staff.

Staff reads

2.6 to 3.1	add $1\frac{1}{2}$ ft.
3.1 to 3.6	" 1 ft.
3.6 to 4.1	" $\frac{1}{2}$ ft.
4.1 to 4.6	subtract 0 ft.
4.6 to 5.1	" $\frac{1}{2}$ ft.
5.1 to 5.6	" 1 ft.
5.6 to 6.1	" $1\frac{1}{2}$ ft.
6.1 to 6.6	" 2 ft.
6.6 to 7.1	" $2\frac{1}{2}$ ft.
7.1 to 7.6	" 3 ft.
7.6 to 8.1	" $3\frac{1}{2}$ ft.
8.1 to 8.6	" 4 ft.

Frank Gage

MLLW is 2.3 on staff.

Staff Reads

0.5 to 1.0	add $1\frac{1}{2}$ ft.
1.0 to 1.5	" 1 ft.
1.5 to 2.0	" $\frac{1}{2}$ ft.
2.0 to 2.5	0 ft.
2.5 to 3.0	subtract $\frac{1}{2}$ ft.
3.0 to 3.5	" 1 ft.
3.5 to 4.0	" $1\frac{1}{2}$ ft.
4.0 to 4.5	" 2 ft.
4.5 to 5.0	" $2\frac{1}{2}$ ft.
5.0 to 5.5	" 3 ft.
5.5 to 6.0	" $3\frac{1}{2}$ ft.
6.0 to 6.5	" 4 ft.

CLEARANCES; OVERHEAD POWER LINES, AND BRIDGES

1. Farrar Park Bridge is a timber highway bridge on pile bents. All the spans are fixed. Horizontal opening is 11 ft. Vertical clearance at MHHW is 8 ft.
2. Jersey Island Bridge is a timber highway bridge on pile bents. All spans are fixed. Horizontal opening is 13 ft. Vertical clearance at MHHW is $8\frac{1}{2}$ ft. at the ends of the bridge. Vertical clearance at MHHW is 10 ft. at the center of the bridge. *at 10' 2" in NW, near 113*
3. The overhead cable, Holland to Frank Tract over Sand Mound Slough is a new line the south support of which was erected since the pictures were taken. The clearance as determined by the range finder in November 1933 was 105 ft. *Plotted* but permit of the U. S. Engineers calls for a height of 110 ft. and is, I believe, No. 99 on the *Chart # 738 (1933)* list of clearances as furnished by the U. S. Engineers and sent to you some time ago.
4. For the overhead cable, *Frank* Holland to Quimby, the vertical clearance, 110 ft. at HW as printed on the smooth sheet, was taken from data furnished by the U. S. Engineers and gives the minimum clearance allowed by the permit for this crossing. The clearance as determined by the range finder in November, 1933, was 120 ft. but 110 ft. is the official height and is correctly shown on the sheet.

LANDMARKS.

Copy of List of Landmarks on form 567 is attached to this report, and a further copy has been mailed under separate cover. The objects with (3) are useful in local navigation only, for a help in determining, the camp near which one is passing or the exact location in the adjacent slough. The objects with (2) (3) are for the most part power line poles, wooden or steel, and can be seen for a considerable distance. They should prove of much help in the general navigation of the Delta. As most of them are located by means of third order triangulation, their positions are well determined. They could therefore, be used as ranges for the determination of compass deviations, if so desired. It is suggested that both classes of landmarks be placed on the chart (new) of the Delta if space permits. At any rate all of those in class (2) (3) should appear on the chart.

COMPARISONS WITH THE U. S. ENGINEER SURVEYS.

Hydrography accomplished by the U. S. Engineers in False River and Washington Slough was transferred to sheet T 5014 and mailed to you some time ago. A tracing of this transfer was retained here, and compared with our work in this vicinity and found to check well. In accordance with your letter of November 16, 1933, no work was done by this party in either False River or Washington Slough.

BP 2702 /
accompanied by
letter (chart) 11/16/33

TABLE OF STATISTICS

SHEET B (T5014)

Date	Day	Miles	Soundings	Positions
Oct. 6	A	0.75	40	7
Nov. 1	B	3.90	253	62
" 3	C	12.00	668	137
" 4	D	10.70	592	88
" 6	E	10.70	692	111
" 7	F	12.00	758	105
" 8	G	14.00	880	111
" 9	H	14.50	993	119
" 10	J	16.90	1378	138
" 13	K	19.00	1715	146
" 14	L	7.00	569	54
" 15	M	6.90	627	71
" 16	N	1.30	165	14
" 17	P	1.20	113	16
" 20	Q	3.40	345	46
Mar. 7	R	<u> </u>	<u>23</u>	<u>21</u>
TOTALS		<u>134.25</u>	<u>9811</u>	<u>1246</u>
April 6	S	2.2	158	30
" 9	T	1.0	187	23
		<u>137.45</u>	<u>10156</u>	1299 1299

CHANGES AND ADDITIONS TO T 5014

Referred to Air-
Photo Section
Hudson

The following changes or additions resulting from the field inspection of sheet T 5014 during the progress of the hydrographic work are shown on the smooth sheet.

1. Between ORW55 and ORW57, the shore line is shown in red and results from a planetable survey executed by this party and submitted on Whatman' paper. ✓ #1

2. Two*additional tule islands are shown in red between ORW51 and ORW52. They were located by three point fixes. See page 63 of Vol. 1 of the sounding records. Another tule island between positions 22T and 23T is located according to the time spacing of the sounding line. See page 54, Vol. 6. ✓ #1
→ Lt 38-003, Long. 121-39, Hudson 10/5/34
*✓ #1 - based from photos
 ded. by hydro. dat.
 some, who not
 available
 not shown on hydro. dat*

3. Barn on levee near ORM33 was relocated by planetable survey mentioned in paragraph 1. ✓ #1

4. The wooden power line pole at Farrar Park opposite DS3 was located by the planetable survey. ✓ #1

5. Change in tule islands at ORM30, ORM31, ORM32 are redrawn in red to agree with the planetable survey. ✓ #1

6. The wooden power line pole north of SMM7 was relocated by third order triangulation and has been replotted as Sand Mound Slough, Frank Tract Wooden Power Pole, 1933. ✓ #1

7. The new steel power line pole erected south of SMM7, some time after the pictures were taken has been plotted on the map as the triangulation station, Sand Mound Slough, Holland Tract, Steel Transmission Pole, 1933. ✓ #1

8. The wooden pole shown on T 5014 in the tule berm near the center of the slough, has been deleted as only the stub remains. The steel pole mentioned in paragraph 7 takes the place of this pole. ✓ #1

9.

The following corrections have been noted on the boat sheet, but not on the smooth sheet.

1. The barn near ORW55 is in the wrong position; see revision sheet of the planetable survey. ✓ #2

2. Barn on levee near M4 is gone and should be deleted. ✓ #2

3. Barn near ORE3 is gone. ✓ #2

4. Ditch near ORE1 is gone. ✓ #2

5. The numbers of the camps near EHM1 have been added ✓ #2

6. Windmill near EHM5 is changed. ✓ #1

7. Barn on levee near EHM4 is gone. ✓ #2

*Referred to Air - Photo
Section - Hoover*

CHANGES AND ADDITIONS TO T 5014(continued)

- 8. Ditch near TW10 is gone. ✓ #2
- 9. Beet loader near TW6 is gone. ✓ #2
- 10. Ditches near TW1 and PW26 are gone. ✓ #2
- 11. Ditch near PE2 is gone. ✓ #2

GEOGRAPHICAL NAMES

On a separate T 5014 sheet, the camp numbers or names which should be added to this sheet are shown in red. The names were obtained locally and were checked by Capt. Lent who is one of the relief pilots for the Port of Stockton and has had many years of tugboating on the Sacramento- San Joaquin Delta.

Box 1132, Stockton, Calif.,
April 13, 1934.

Respectfully submitted by *K. L. DeBlais* K. L. DeBlais

Approved by..... *L. F. Raynor* Lieut. L. F. Raynor


Chief of Party

The sounding records were inspected by the Chief of Party when opportunity arose, and the dates of inspection are noted in the sounding records.

Supervision of the hydrographic and signal building parties was made until it seemed certain that methods of doing the work were understood.

Plotting of the smooth sheet was inspected for gross errors and all discrepancies in depths due to line crossings were inspected and notes for correction made.

Depth curves were drawn in ink on the boat sheet. They were not drawn in pencil on the smooth sheet because of the confusion that would result. They can better be drawn after the soundings have been inked.


L. P. Raynor
H. & G. Engineer
Chief of Party

LIST OF DATA FOR USE WITH HYDROGRAPHIC SHEET B (T5014)

1 Descriptive report containing:

- 13 sheets of descriptive report.
- 1 sheet "Landmarks for Charts", form 567.
- 1 sheet "Hydrographic Title Sheet", form 537.
- 2 sheets "Observation of Compass Deviations", form 355.
- 1 sheet "Deviation Table", form 261.
- 4 sheets of plane table positions.
- 6 sheets of range finder curves(3 curves).

1 Smooth sheet on aluminum.

1 Boat sheet-photolithograph T 5014(white).

1 Sheet with geographic names; photo-lithograph of T 5014(white).

6 Volumes of "Soundings", form 275.

Tidal data, Webb and Frank Tracts(1 book,"Tides", form 277
submitted herewith. Other tidal data received in Washington
April 5, 1934.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Stockton, Calif.,

April 13, 1934

SUPERINTENDENT, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Chief of Party.

DESCRIPTION.	POSITION.					Method of determination.	Charts affected.		
	Latitude.		Longitude.		Datum.				
	'	D. M. meters.	'	D. P. meters.					
Silo (3)	38	00	(1548) 302	121	37	(200) 1264	NA 1927	Planetable	New San Joaquin
Tank (3)	38	00	(1568) 282	121	37	(246) 1218	"	"	"
Farrer Park Wooden Power Pole (3)	38	00	(301) 1459	121	38	(919) 545	"	"	"
✓ Tank (3)	38	01	(929) 921	121	39	(733) 730	"	Photo plot	"
✓ Jersey Island Windmill (3)	38	02	(1333) 517	121	40	(-) 794	"	"	"
Frank Tract Wooden Power Pole (2)(3)	38	01	(1325) 525	121	36	(1368) 95	"	Triangu- lation	"
Holland Tract Steel Power Pole (2)(3)	38	01	(1611) 1239	121	36	(1366) 97	"	"	"
✓ Holland Tract Windmill (3)	38	01	(1483) 367	121	34	(114) 1549	"	Planetable	"
Frank Tract Steel Power Pole (2)(3)	38	01	(155) 1695	121	34	(190) 1273	"	Triangu- lation	"
Quimby Island Steel Power Pole (2)(3)	38	01	(253) 1597	121	34	(451) 1013	"	"	"
✓ N. W. corner of Building on levee (3)	38	02	(1831) 19	121	34	(1305) 158	"	Plane- table	"
✓ Frank Tract Tank (3)	38	02	(291) 1559	121	35	(1437) 26	"	"	"
✓ North of 3 Wood Power Poles-Webb to Frank (2)(3)	38	03	(479) 1371	121	36	(1352) 111	"	Triangu- lation	"
✓ Middle of 3 Wood Power Poles-Webb to Frank (2)(3)	38	03	(567) 1283	121	36	(1405) 58	"	"	"
✓ South of 3 Wood Power Poles-Webb to Frank (2)(3)	38	03	(666) 1184	121	35	(2) 1460	"	"	"
✓ Tank at Ferry Slip (3)	38	03	(1054) 796	121	38	(372) 1091	NA 1927	Photo plot	"
✓ Tank near Instrument Setup 649C (3)	38	03	(610) 1240	121	40	(-) 744	"	"	"

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaves and like objects are not sufficiently permanent to chart.

LAC

July 2, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 6000

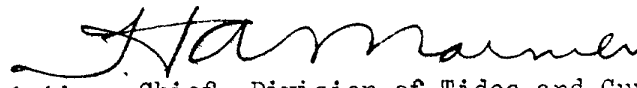
Locality Taylor Slough to Old River, San Joaquin Delta, Calif.

Chief of Party: L. P. Raynor in 1933-34
Plane of reference is mean lower low water, reading
4.4 ft. on tide staff at Webb Tract
9.6 ft. below B. M. 1

2.3 ft. on tide staff at Frank Tract Pump
-0.1 ft. below B.M. 1

Height of mean higher high water above plane of reference
is approximately 3.5 ft.

Condition of records satisfactory except as noted below:


Acting Chief, Division of Tides and Currents

Bowie
Hunter

GEOGRAPHIC NAMES

Survey No. **H-6000**

T-5014

Date Nov. 30, 1934

Chart No. _____

HMS

Names approved Dec. 3, 1934.

Diagram No. _____

H. Bacon

* Approved by the Division of Geographic Names, Department of Interior.

∅ Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>Dutch Slough</u>	Local usage and reliable maps			
	<u>Taylor Slough</u>	"			
	<u>Piper Slough</u>	"			
	<u>Sand Mound Slough</u>	"			
	<u>Old River</u>	"			
	<u>False River</u>	"			
	<u>Jersey Island</u>	"			
	<u>Bradford Island</u>	"			
	<u>Mandeville Island</u>	"			
	<u>Quimby Island</u>	"			
	<u>Rhode Island</u>	"			
	<u>Holland Tract</u>	Earliest maps and U.S.G.S. Quads call it Roosevelt Island. All recent and current maps agree on Holland Tract.			
	<u>Bethadl Tract</u>	Local usage and reliable maps.			
	<u>Franks Tract</u>	"			
	<u>San Joaquin River</u>	"			
	<u>Webb Tract</u>	"			
	<u>Fletchers Landing</u>				
	<u>Shima-Shima Landing</u>	On Weathers maps is Shima.			
	<u>Jersey Landing</u> **	On all maps this is on San Joaquin River, near entrance to False River, instead of where located on H-6000.			
	<u>Fishermans Cut</u>	"			
	<u>Washington Slough</u>	"			Location? JW
	** Approve spelling, but not location of Jersey Landing.			HMS	
	For list of authorities consulted for names see DR for T-4685.			HMS	

5014

Plane Table Sheet

Scaled from Whatmans Sheet
by Topo. Party, R.E.M. Gowen.

Signal	Lat.	D.M.	Long.	D.P.	Adjusted D.M.	Adjusted D.P.
ORM 55	38°-03'	(1807.5) 41.8	121-34	(325.0) 1141.2	(1808.2) 41.8	(324.2) 1138.3
ORM 55A	38°-03'	(1589.0) 263.4	121-34	(341.5) 1124.5	(1587.0) 263.0	(340.7) 1121.7
ORM 56	38°-03'	(1142.3) 710.0	121-34	(287.5) 1178.8	(1140.9) 709.1	(286.7) 1175.7
ORM 57	38°-03'	(626.2) 1176.0	121-34	(224.2) 1242.1	(625.4) 1174.6	(223.6) 1238.8
ORM 58	38°-03'	(357.8) 1494.6	121-34	(152.2) 1314.8	(357.4) 1492.6	(151.7) 1310.7
Tank	38°-02'	(291.0) 1560.0	121-35	(1436.6) 26.0	(290.8) 1559.2	(1437.2) 26.0
N. Gable	38°-03'	(11494.0) 353.4	121-34	(59.0) 1406.2	(11497.0) 353.4	(59.0) 1403.4
E. Gable	38°-03'	(258.4) 1091.3	121-35	(1393.6) 68.5	(758.5) 1091.5	(1393.9) 68.5
ORW 57	38°-03'	(203.8) 1148.3	121-35	(1461.0) 2.0	(703.0) 1147.0	(1460.4) 2.0
S. Gable	38°-01'	(138.8) 1712.0	121-33	(323.5) 1139.2	(438.8) 1711.2	(323.7) 1139.9
N.W. Cor.	38°-02'	(1829.7) 19.2	121-34	(1305.3) 158.3	(1830.8) 19.2	(1304.9) 158.3
ORM 37	38°-02'	(733.2) 1117.3	121-34	(751.5) 714.4	(733.0) 1117.0	(749.8) 712.8
EQ 9	38°-02'	(854.2) 996.6	121-34	(896.8) 568.2	(853.8) 996.2	(895.5) 567.3
EQ 8	38°-02'	(1025.7) 825.9	121-34	(1067.2) 396.8	(1024.8) 825.2	(1066.4) 396.5
ORM 35	38°-02'	(1096.7) 754.0	121-34	(1200.0) 263.8	(1096.3) 753.7	(1199.8) 263.7
EQ 7	38°-02'	(1392.3) 457.7	121-34	(1136.8) 326.8	(1392.3) 457.7	(1136.3) 326.7
ORM 34	38°-02'	(1535.0) 314.3	121-34	(1281.0) 182.5	(1535.6) 314.4	(1280.7) 182.4

Signal	Lat.	D.M.	Long.	D.P.	Adjusted D.M.	Adjusted D.P.
M3	38-02	(1600.0) 251.2	121-34	(1355.6) 107.8	(1599.0) 251.0	(1355.3) 107.8
M4	38-02	(1334.2) 515.5	121-34	(1341.2) 123.3	(1334.4) 515.6	(1339.8) 123.2
M5	38-02	(1143.0) 707.5	121-34	(1294.0) 170.0	(1142.7) 707.3	(1293.0) 169.9
M6	38-02	(905.0) 945.6	121-34	(1217.8) 245.4	(904.7) 945.3	(1217.5) 245.3
M7	38-02	(738.8) 1113.1	121-34	(1037.0) 427.2	(738.0) 1112.0	(1035.9) 426.8
M8	38-02	(651.6) 1200.0	121-34	(860.5) 603.1	(651.0) 1199.0	(860.0) 602.7
ORM36	38-02	(793.7) 1057.9	121-34	(964.4) 499.8	(793.0) 1057.0	(963.4) 499.3
ORM33	38-02	(1836.7) 14.6	121-34	(1236.0) 227.8	(1835.4) 14.6	(1235.5) 227.7
EQ2	38-01	(1014.9) 836.8	121-33	(289.1) 1175.7	(1014.0) 836.0	288.8 1174.6
EQ3	38-01	(570.8) 1280.4	121-33	(255.7) 1208.1	(570.4) 1279.6	(255.6) 1207.9
EQ4	38-01	(488.2) 1362.4	121-34	(1334.0) 130.1	(488.0) 1362.0	(1333.5) 130.0
ORM28	38-01	(601.0) 1250.0	121-33	(411.7) 1052.2	(600.7) 1249.3	(411.6) 1051.9
ORM29	38-01	(464.1) 1386.5	121-33	(425.6) 1038.0	(464.0) 1386.0	(425.6) 1037.9
ORM30	38-01	(263.2) 1585.8	121-33	(293.3) 1170.7	(263.3) 1586.7	(293.2) 1170.1
ORM31	38-01	(403.2) 1445.7	121-33	(105.3) 1356.3	(403.4) 1446.6	(105.4) 1357.9
ORW56	38-03	(1216.4) 634.3	121-34	(52.4) 1412.6	(1215.9) 634.1	(52.3) 1410.2
ORW55	38-03	(1605.0) 245.8	121-34	(78.2) 1386.3	(1604.3) 245.7	(78.1) 1384.4
EQ6	38-01	(12.2) 1838.5	121-34	(1093.3) 370.8	(12.2) 1837.8	(1092.6) 370.6

					Adjusted	
Signal	Lat.	D.M.	Long.	D.P.	D17	DP
EQ5	38-01	(343.4)✓ 1507.8✓	121-34✓	(1096.5)✓ 367.4✓	(343.2)✓ 1506.8✓	(1096.1)✓ 367.2✓
M2	38-01	(144.5)✓ 1707.9✓	121-34✓	(1380.2)✓ 84.0✓	(144.3)✓ 1705.7✓	(1379.3)✓ 83.9✓
Windmill	38-01	(1483.5)✓ 367.5✓	121-34✓	(114.4)✓ 1350.9✓	(1482.7)✓ 367.3✓	(114.3)✓ 1349.3✓
Wood Pole Farrow Port	38-00	(391.5)✓ 1461.5✓	121-38✓	(919.1)✓ 545.0✓	(390.9)✓ 1459.1✓	(918.9)✓ 545.0✓
Silo	38-00	(1550.0)✓ 303.0✓	121-37✓	(197.0)✓ 1264.8✓	(1548.0)✓ 302.0✓	(200.0)✓ 1264.0✓
Center of Tank House	38-00	(1567.8)✓ 283.5✓	121-37✓	(244.0)✓ 1217.5✓	(1568.0)✓ 282.0✓	(246.0)✓ 1218.0✓
SMS3 Dryer Bell	38-01	(465.8)✓ 1385.6✓	121-35✓	(996.5)✓ 466.2✓	(465.4)✓ 1384.6✓	(997.1)✓ 466.5✓
Wood Power Pole	38-01	(1325.2)✓ 524.8✓	121-36✓	(1368.4)✓ 95.1✓	(1325.2)✓ 524.8✓	(1368.4)✓ 95.1✓
Steel Power Pole	38-01	(1611.0)✓ 239.0✓	121-36✓	(1366.2)✓ 97.3✓	(1611.0)✓ 239.0✓	(1366.2)✓ 97.3✓

Plotted R. L. J.
Checked J. L. C.

Sheet 5014						
Signal	Plane Table Lat.	Locations Scaled from D.M.	From Root Sheet. Long.	Adjusted D.P.	D.M.	D.P.
SQ4	38°-00'	(480) 1372	121-33	(28) -	(479.5) 1370.5	(28) -
SQ6	38°-00'	(148) 1705	121-34	(1103) 357	(147.8) 1702.2	(1105.7) 357.9
SQ7	38°-00'	(46) 1806	121-34	(1006) 454	(46.0) 1804.0	(1008.6) 455.0
SQ9	38-01	(1552) 294	121-34	(1329) 129	(1555.4) 294.6	(1334.0) 129.5
SQ10	38-01	(1628) 217	121-33	(135) -	(1632.4) 217.6	(135) -
SQ11	38-01	(1723) 122	121-33	(318) -	(1727.7) 122.3	(318) -
SQ12	38-00	(36) 1816	121-33	(822) -	(36.0) 1814.0	(822) -
Tree	38-00	(30) 1821	121-33	(671) -	(30.0) 1820.0	(671) -
SMN5	38-01	(1130) 717	121-35	(20) 1439	(1131.8) 718.2	(20.0) 1442.2
SMN8	38-01	(1738) 110	121-36	(765) 686	(1739.9) 110.1	(765.5) 686.5
SMN9	38-00	(34) 1817	121-36	(611) 851	(34.0) 1816.0	(611.0) 851.0
SMN10	38-00	(258) 1592	121-36	(374) 1087	(258.0) 1592.0	(374.3) 1087.7
SMN11	38-00	(257) 1594	121-36	(163) 1297	(256.9) 1593.1	(163.2) 1298.8
SMN12	38-00	(365) 1487	121-37	(1245) 214	(364.6) 1485.4	(1248.0) 214.5
SMN10A	38-00	(314) 1537	121-36	(174) 1286	(313.2) 1536.8	(174.4) 1288.6
SMN13A	38-00	(526) 1326	121-36	(89) 1370	(525.4) 1324.6	(89.2) 1373.8
ORW2	38-00	(1491) 361	121-34	(1080) 379	(1489.4) 360.6	(1083.5) 380.3
ORW4	38-00	(1395) 459	121-34	(517) 943	(1392.0) 458.0	(518.3) 945.5

Signal	Lat	DM	Long	D.P.	Adjusted DM	Adjusted D.P.
ORM9	38°-00'	(1414)✓ 437 ✓	121-34 ✓	(1316)✓ 143 ✓	(1413.2)✓ 436.8 ✓	(1320.4)✓ 143.4 ✓
ORM10	38-00 ✓	(1376)✓ 476 ✓	121-34 ✓	(909)✓ 550 ✓	(1374.5)✓ 475.5 ✓	(912.0)✓ 551.8 ✓
ORM11	38-00 ✓	(686)✓ 1166 ✓	121-34 ✓	(595)✓ 864 ✓	(685.3)✓ 1164.7 ✓	(596.9)✓ 866.8 ✓
ORM12	38-00 ✓	(605)✓ 1247 ✓	121-34 ✓	(844)✓ 615 ✓	(604.3)✓ 1245.7 ✓	(846.7)✓ 617.0 ✓
ORM13	38-00 ✓	(619)✓ 1233 ✓	121-34 ✓	(1078)✓ 382 ✓	(618.3)✓ 1231.7 ✓	(1080.8)✓ 382.9 ✓
ORM14	38-00 ✓	(647)✓ 1204 ✓	121-34 ✓	(1336)✓ 122 ✓	(646.6)✓ 1203.4 ✓	(1341.2)✓ 122.5 ✓
ORM15	38-00 ✓	(532)✓ 1320 ✓	121-33 ✓	(101)✓ -	(531.4)✓ 1318.6 ✓	(101)✓ -
ORM16	38-00 ✓	(259)✓ 1593 ✓	121-33 ✓	(64)✓ -	(258.7)✓ 1591.3 ✓	(64)✓ -
ORM17	38-00 ✓	(60)✓ 1791 ✓	121-34 ✓	(1252)✓ 207 ✓	(60.0)✓ 1790.0 ✓	(1255.9)✓ 207.7 ✓
ORM18	38-01 ✓	(1753)✓ 93 ✓	121-34 ✓	(1089)✓ 370 ✓	(1756.8)✓ 93.2 ✓	(1092.4)✓ 371.2 ✓
ORM19	38-01 ✓	(1645)✓ 202 ✓	121-34 ✓	(1342)✓ 117 ✓	(1647.7)✓ 202.3 ✓	(1346.1)✓ 117.4 ✓
ORM20	38-01 ✓	(1809)✓ 36 ✓	121-33 ✓	(221)✓ -	(1813.9)✓ 36.1 ✓	(221)✓ -
ORM21	38-00 ✓	(149)✓ 1703 ✓	121-33 ✓	(522)✓ -	148.8 ✓ 1701.2 ✓	(522)✓ -
ORM22	38-00 ✓	(168)✓ 1684 ✓	121-33 ✓	(726)✓ -	(167.8)✓ 1682.2 ✓	(726)✓ -
ORM23	38-00 ✓	(104)✓ 1748 ✓	121-33 ✓	(889)✓ -	(103.8)✓ 1746.2 ✓	(889)✓ -
ORM24	38-01 ✓	(1708)✓ 137 ✓	121-33 ✓	(933)✓ -	(1712.6)✓ 137.4 ✓	(933)✓ -
ORM25	38-01 ✓	1606 ✓ 239 ✓	121-33 ✓	(901)✓ -	1610.3 ✓ 239.7 ✓	(901)✓ -
ORM38	38-02 ✓	(810)✓ 1035 ✓	121-34 ✓	(474)✓ 984 ✓	(811.3)✓ 1038.7 ✓	(475.6)✓ 987.2 ✓

Signal	Lat.	D.M	Long.	D.P	Adjusted	
					D.M	D.P
SMM14A	38-00	(466) 1386	121-37	(1365) 93	(465.5) 1384.5	(1369.6) 93.3
SMM15A	38-00	(536) 1314	121-37	(1230) 227	(536.0) 1314.0	(1235.0) 227.9
SMM15B	38-00	(207) 1145	121-37	(1115) 343	(206.2) 1143.8	(1118.8) 344.2
SMM15C	38-00	(593) 1259	121-37	(1079) 379	(592.4) 1257.6	(1082.6) 380.3
TW17	38-01	1787 59	121-39	1375 84	1790.9 59.1	1379.6 84.2
TE10	38-01	(1419) 428	121-39	(1018) 443	(1421.3) 428.7	(1020.0) 443.8
TE11	38-01	(1681) 165	121-39	(1226) 234	(1684.6) 165.4	(1229.2) 234.6
ORM26	38-01	(1369) 477	121-33	(716) -	(1372) 478	(716) -
DN6	38-00	(365) 1485	121-40	- 179	(365.0) 1485.0	- 179
DN7	38-00	(399) 1452	121-40	- 375	(398.8) 1451.2	- 375
DS9	38-00	(217) 1133	121-40	- 217	(217.0) 1133.0	- 217
SMM17A	38-00	(22) 1829	121-36	(211) 248	(22.0) 1828.0	(212.7) 249.8
TE10	38-01	(1419.7) 430.2	121-39	(1019.8) 442.1	(1419.8) 430.2	(1020.9) 442.6
TE11	38-01	(1685.2) 164.6	121-39	(1229.5) 232.8	(1685.4) 164.6	(1230.6) 233.0
TW16	38-01	(1555.3) 294.3	121-39	(1031.5) 431.0	(1555.6) 294.4	(1032.2) 431.3
TW17	38-01	(1788.5) 60.8	121-39	(1378.8) 84.1	(1789.2) 60.8	(1379.4) 84.2
DN6	38-00	(365.6) 1483.8	121-40	- 179.6	(365.7) 1484.3	- 179.6
DN7	38-00	393.7 1450.8	121-40	- 374.5	398.8 1451.2	- 374.5
DS6	38-00	498 1345	121-40	- 36	(500.0) 1350.0	- 36

RANGE FINDER CONVERSION CURVE

RF. No. 7277

Made by Le Conte - Nov. 1, 1933.

3: P.M. Temperature 60°F

Used in Vols. 1 to 6 incl.

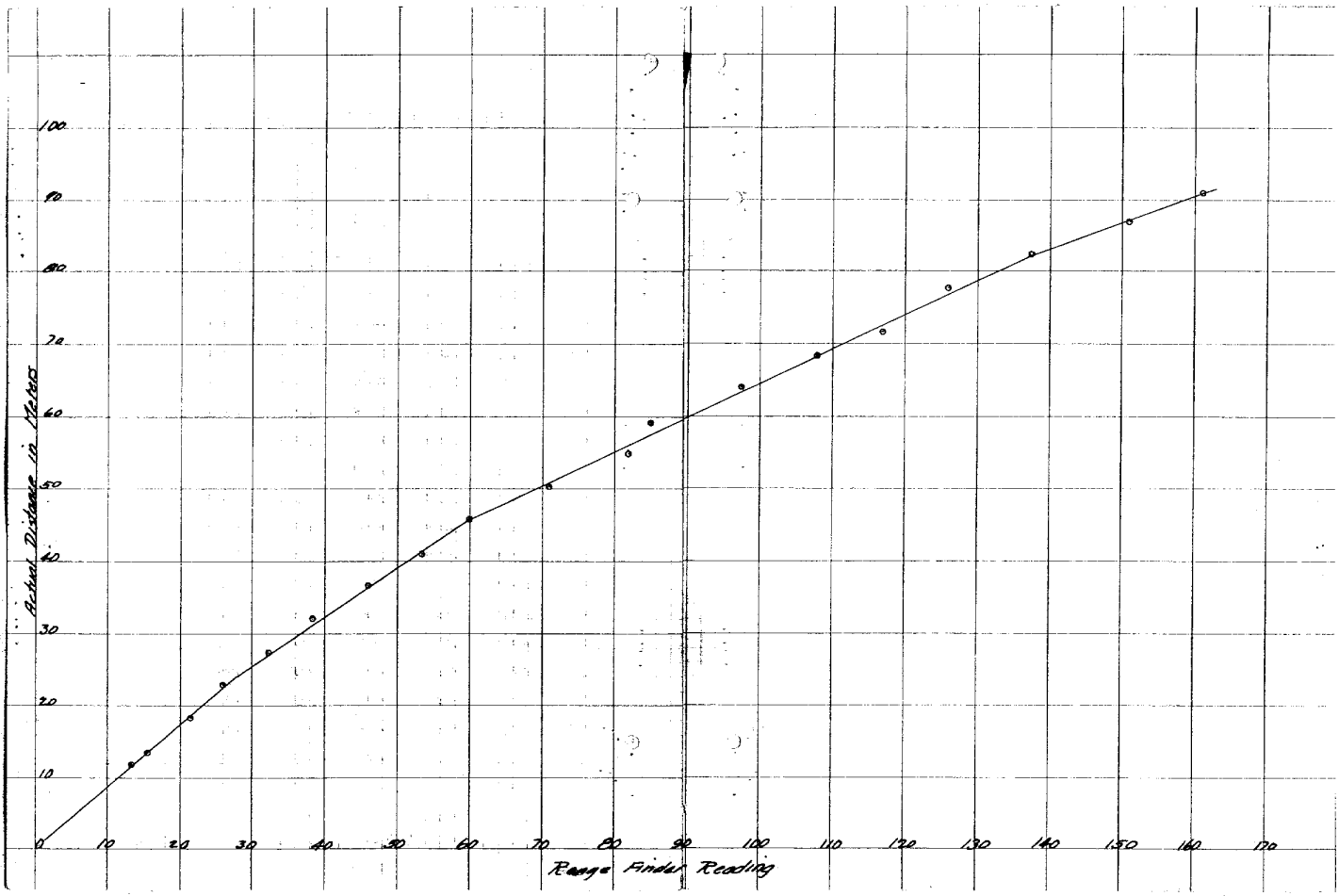
B to P Days incl.

Sheet 5014

Yards	Meters	Range Finder Readings			
		Right	Left	Down	Up
13	11.9	13.3	13.35	13.40	13.4
15	13.7	15.5	15.5	15.6	15.5
20	18.3	20.5	21.0	20.7	20.9
25	22.9	25.9	26.2	26.2	26.5
30	27.4	32.5	32.5	33.0	33.0
35	32.0	39.50	39.0	38.5	39.5
40	36.6	46.0	46.0	47.5	44.5
45	41.1	53.0	54.0	53.0	53.0
50	45.7	60.0	60.0	63.0	62.0
55	50.3	70.0	72.0	70.0	70.0
60	54.9	84	80	80	80
65	59.4	85	85	85	88
70	64.0	98	97	97	102
75	68.6	105	111	108	108
80	71.6	115	119	118	135
85	77.7	125	127	135	138
90	82.3	140	135	142	143
95	86.9	150	152	150	150
100	91.1	162	160	170	170

Note:- Readings "Right" & "Left" only are used in plotting curve.

(over)



RANGE FINDER CONVERSION CURVE

R.F. No. 7277

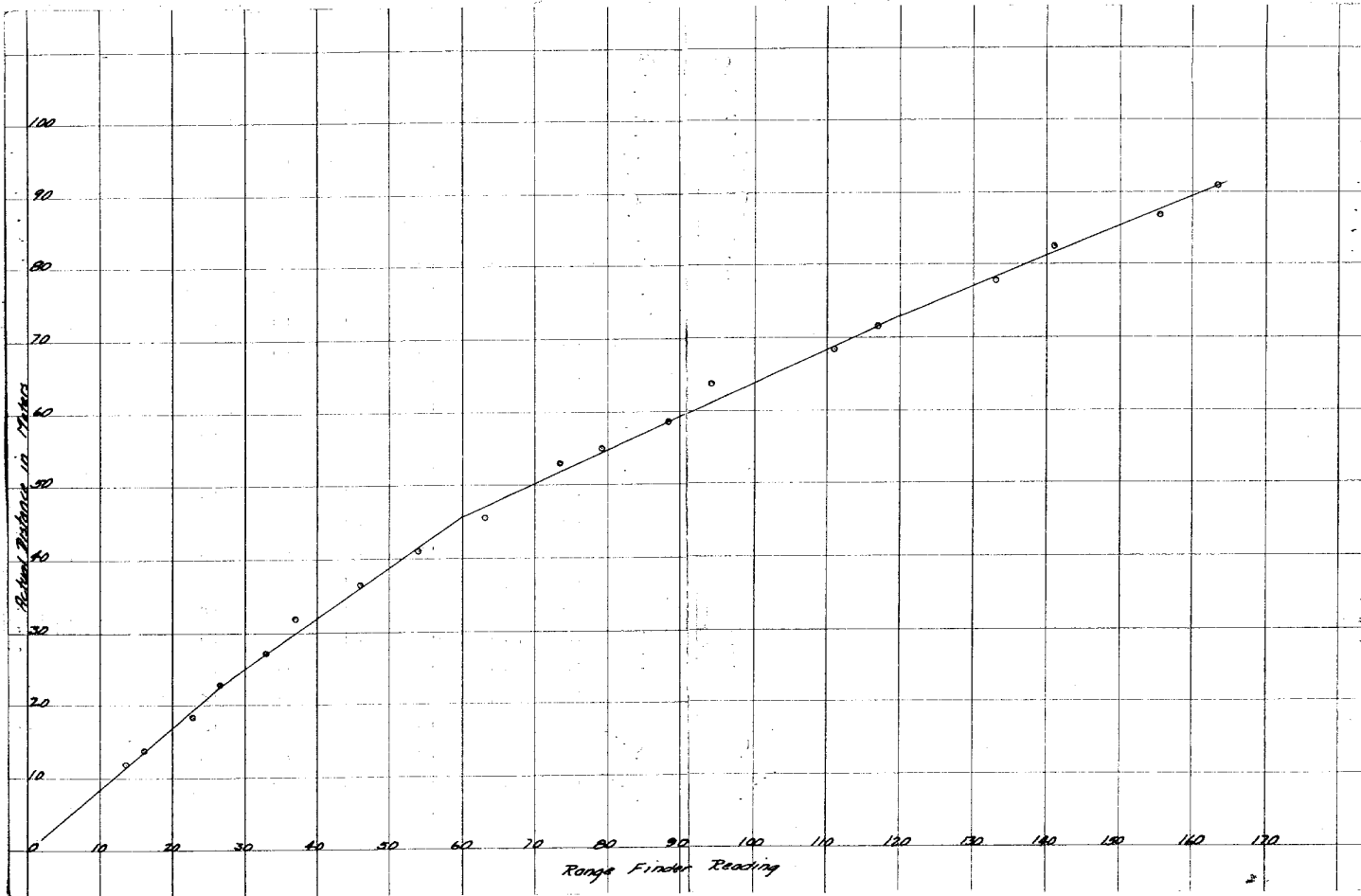
Made by White - Nov. 18, 1933

7:45 AM Temperature 55°F

Used in Volume 6-9 Day only

Sheet 5014

Yards	Meters	Right	Left	Down	Up
13	11.9	13.7	13.7	13.5	13.65
15	13.7	15.8	16.4	15.6	15.6
20	18.3	21.4	21.7	21.8	21.8
25	22.9	26.4	26.5	26.7	26.6
30	27.4	32.9	32.9	33.0	33.0
35	32.0	37.1	37.1	38.1	38.0
40	36.6	45.8	45.9	45.8	45.6
45	41.1	54	54	55	56
50	45.7	63	63	62	63
55	50.3	74	73	73	74
60	54.9	79	79	77	77
65	59.4	89	88	86	88
70	64.0	94	94	96	102
75	68.6	111	111	106	107
80	71.6	117	117	113	114
85	77.7	134	132	135	134
90	82.3	142	140	140	144
95	86.9	155	156	158	158
100	91.1	163	164	170	171



SHEET 5014

RANGE FINDER CONVERSION CURVE

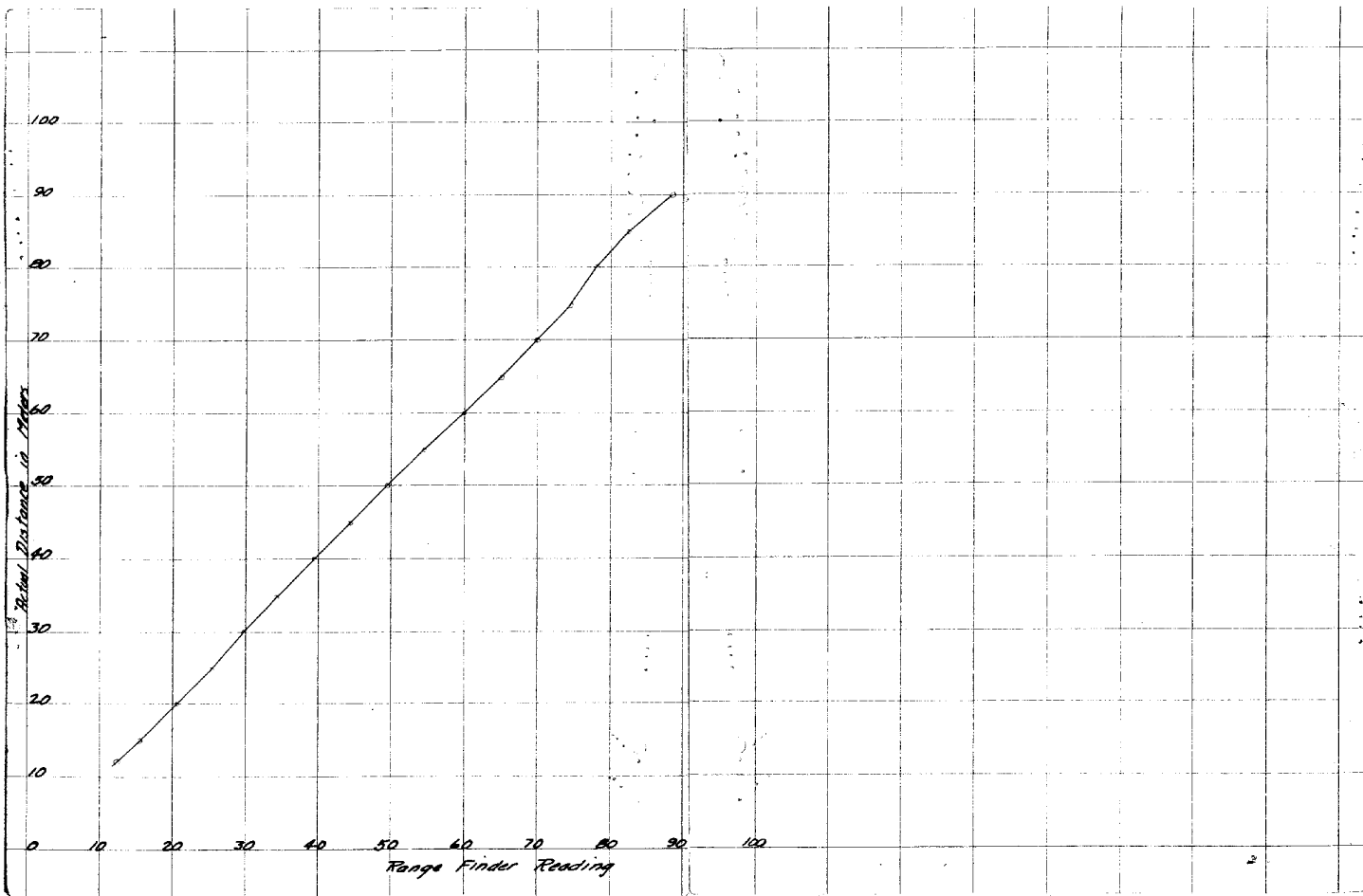
R.F. No. 7277

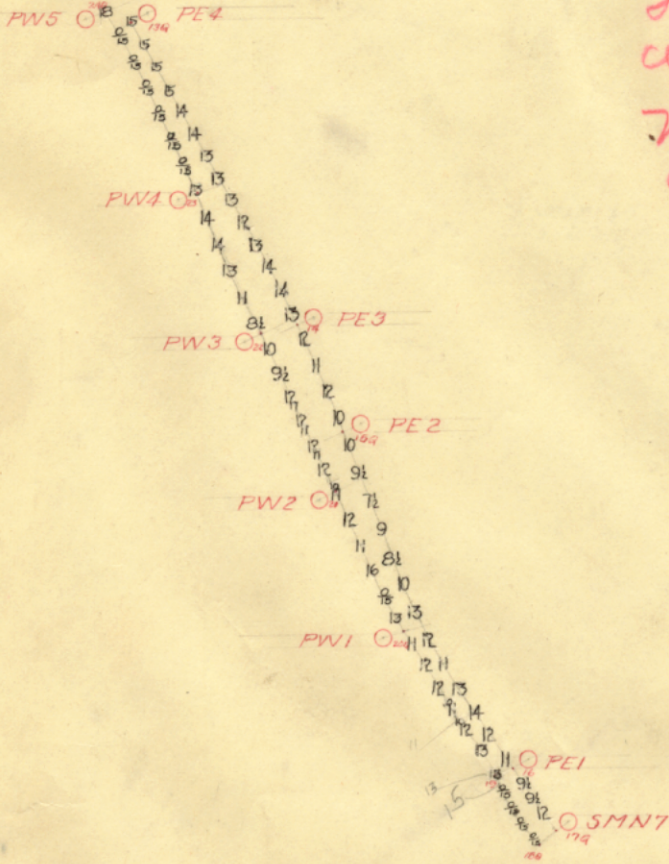
Made by Anstead - April 3, 1934 - A.P.M.

Used in Vol. 6 - 5° Day only

Meters	Object Moving away from Observer	Object Moving toward Observer
12	12.5	12.5
15	15.5	15.5
20	21.0	20.7
25	25.5	25.5
30	29.5	30.0
35	34.0	34.5
40	39.0	40.0
45	45.0	44.0
50	50.0	49.0
55	55.0	54.0
60	60.0	60.0
65	66.0	64.0
70	71.0	69.0
75	75.0	74.0
80	79.0	77.0
85	84.0	81.0
90	89.0	88.0

NOTE: The range finder readings were taken in this manner; a whitewashed lath similar to the signals used in the field was held at 12 meters, the 15, and so on up to 90 meters for the readings in the first column. For the readings in the second column the lath was held at 90 meters, then 85, and so on down to 12 meters.





This tracing has been compared with this sheet. Not deemed advisable to transfer any. J. W. W.

To accompany H-6000
 SHEET 5014
 SAN JOAQUIN RIVER DELTA

L + 15 = 312 (7711)
 At 12. M. / 11 = 7 (mag)

COMPUTATION OF COMPASS DEVIATIONS

Steamer _____ Date _____

Sun's declination _____ Ship's rudder _____

(1) and (2) are to be reckoned to the right from north from 0° to 360°

Ship's head	Local apparent time Slew Cor.	Range Sun's bearing by compass	(2) Sun's azimuth from tables	(3) Error of standard compass	(5) Deviation
0	h. m. s. 13	0	313	0	-1
15					
30	37		316		-8
45	51		314		-2
60					
75					
90	97		312		0
105					
120					
135	127		308		+4
150					
165	156		312		
180	173		315		-3
195					
210			313		-1
225	208		315		-3
240					
255					
270	212		310		+2
285					
300					
315	319		306		-6
330					
345					
Means					

(3) = (2) - (1)
 (5) = (3) - (4)
 Subtract algebraically (with due regard to signs).
 (3) (4) and (5) are positive when easterly, negative when westerly.

Declination from shore observations (or chart) - (4) = _____
 Mean compass error - declination = A = _____

Observation OF COMPASS DEVIATIONS
 Range #3, San Joaquin River

Steamer Helena F Date 9/22/33

Bearing Range 3 1/2 (mag) Ship's rudder
 Sun's declination

(1) and (2) are to be reckoned to the right from north from 0° to 360°

Ship's head	Local apparent time	Range bearing by compass	Mag bearing	(3) Error of standard compass	(5) Deviation
°	h. m. s.	'	'	'	'
0		310	312		+02
15		315	312		-03
30		314	312		-02
45		315	312		-03
60		314	312		-02
75		314	312		-02
90		311	312		+01
105		310	312		+02
120		309	312		+03
135		309	312		+03
150		308	312		+04
165		310	312		+02
180		313	312		-01
195		314	312		-02
210		318	312		-06
225		312	312		0
240		311	312		+01
255		309	312		+03
270		306	312		+06
285		306	312		+06
300		306	312		+06
315		306	312		+06
330		309	312		+03
345		313	312		-01
Means					

(3) = (2) - (1)
 (5) = (3) - (4)
 Subtract algebraically (with due regard to signs).
 (3) (4) and (5) are positive when easterly, negative when westerly.

Declination from shore observations (or chart) (4)

Mean compass error - declination = A =

Observation
COMPUTATION OF COMPASS DEVIATIONS

Range is *3 pt. N to Andrus Steel Pole*

Steamer *Launch Helen F.* Date *March 12, 1934.*

~~Compass~~ Variation used *18° E* Ship's rudder _____

(1) and (2) are to be reckoned to the right from north from 0° to 360°

Ship's head	Local apparent time			Range	Range	(3) Error of standard compass	(5) Deviation
				XXXXX bearing by compass	XXXXX <i>against bearing</i>		
0				210	212	20	+2
15				211	"	19	+1
30				211	"	19	+1
45				211	"	19	+1
60				212	"	18	0
75				211	"	19	+1
90				212	"	18	0
105				213	"	17	-1
120				211	"	19	+1
135				214	"	16	-2
150				215	"	17	-1
165				211	"	19	+1
180				212	"	18	0
195				210	"	20	+2
210				211	"	19	+1
225				211	"	19	+1
240				210	"	20	+2
255				209	"	21	+3
270				209	"	21	+3
285				208	"	22	+4
300				208	"	22	+4
315				209	"	21	+3
330				210	"	20	+2
345				210	"	20	+2
Means							

(3) = (2) - (1) (5) = (3) - (4)
 Subtract algebraically (with due regard to signs).
 (3) (4) and (5) are positive when easterly, negative when westerly.

Declination from shore observations (or chart) (4) _____

Mean compass error - declination = A = _____

COMPUTATION OF COMPASS DEVIATIONS

Steamer Date

Sun's declination Ship's rudder

(1) and (2) are to be reckoned to the right from north from 0° to 360°

Ship's head	Local apparent time	(1) Sun's bearing by compass	(2) Sun's azimuth from tables	(3) Error of standard compass	(5) Deviation
	<i>h. m. s.</i>	° ' "	° ' "	° ' "	° ' "
0					
15					
30					
45					
60					
75					
90					
105					
120					
135					
150					
165					
180					
195					
210					
225					
240					
255					
270					
285					
300					
315					
330					
345					
Means					

(3) = (2) - (1)
 (5) = (3) - (4)
 Subtract algebraically (with due regard to signs).
 (3) (4) and (5) are positive when easterly, negative when westerly.

Declination from shore observations (or chart) (4)

Mean compass error - declination = A =

Copy Sheet 5014

DEVIATION TABLE
 (For ship's use)

Standard * Compass: 24874

U. S. C. G. S. Launch Helen F

Date September 22, 1933

Latitude Variation used 18° E

Longitude

Ship's head by compass.	Deviation.	Error Magnetic Induction Total	Ship's head by compass.	Deviation.	Error Magnetic Induction Total
0°	0	+20 ✓	180°	0	+17 ✓
15°		+15 ✓	195°		+16 ✓
30°		+16 ✓	210°		+12 ✓
45°		+15 ✓	225°		+18 ✓
60°		+16 ✓	240°		+19 ✓
75°		+16 ✓	255°		+21 ✓
90°		+19 ✓	270°		+24 ✓
105°		+20 ✓	285°		+24 ✓
120°		+21 ✓	300°		+24 ✓
135°		+21 ✓	315°		+24 ✓
150°		+22 ✓	330°		+21 ✓
165°		+20 ✓	345°		+17 ✓

DETAILS OF COMPENSATION

APPROVED: L. P. Rayner
 H. and G. Engineer, Commanding.

* Insert Standard or Steering.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 6000..

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	1299..
Number of positions checked	.76...
Number of positions revised	..4...
Number of soundings recorded	10156.
Number of soundings revised	.101..
Number of signals erroneously plotted or transferred	none..

Date:..... July 16, 1934 and Sept. 30, 1934

Cartographer:..... W. H. Bamford and R. B. Krum

Verification of protracting Verification & inking of rocks and shoals)) by W. H. Bamford	Time: 18 $\frac{3}{4}$ hrs.
Verification of inking by	R. B. Krum	Time: 58 $\frac{1}{2}$ hrs
Review by	H. W. Murray	Time: 7 $\frac{1}{2}$ "

PRELIMINARY REPORT ON H. 6000.

1. The protracting on this sheet was visually compared with the boat sheet and seventy-six positions were protracted - only four were found to be erroneously plotted and were changed.
2. The several paragraphs listed under "Shoals, Wrecks and Snags" on page 5 of the descriptive report were checked by protracting the positions and the shoals, wrecks and snags were inked on the smooth sheet.
3. Adjacent to and ~~west~~^{east} of the 8 foot shoal between \odot SMS-1 and SMN-1 (ref. Par. 1 pg. 5. Descriptive Report) there is a seven foot sounding taken on pos. 15-S-Vol. 6. Both the 8 and the 7 ft. soundings were plotted on the smooth sheet.
4. The "Depth Discrepancies" tabulated on page 6 of the descriptive report were all checked and the positions controlling the soundings were protracted. The field party's recommendations were followed except in Par. 9. In Par. 9 the field party recommends the plotting of the 14 ft. sounding between pos. 131 and 132c instead of the 8 $\frac{1}{2}$ ft. sounding on pos. 109E. It was deemed advisable to plot both soundings as the fix for pos. 109E is strong and appears to be unquestioned in the records as well as the sounding.
5. A correction to the shoreline on the west side of Old River from a point approximately 165 m. south of \odot ORW55 to some distance beyond \odot ORW57 in False River was shown on the correction sheet T. 5014-A.

The original black shoreline was removed from the smooth sheet and the corrected shoreline was shown in red ink. No attempt was made to correct the road running parallel with the shoreline as this may be taken from the correction sheet T. 5014-A by the compiler.

The sounding line adjacent to the shoreline was replotted by the verifier.

6. As noted in Par. 5, pg. 12 of the descriptive report, the Tule islands at ORM30, ORM31 and ORM32 was redrawn on the smooth sheet in red ink. The verifier removed the original black shoreline and replotted the sounding lines adjacent thereto.

July 16, 1934.

Respectfully submitted,

Warren H. Bamford.
Warren H. Bamford.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6000 (1933-34).

Taylor Slough to Old River, San Joaquin River Delta, California.
Instructions dated Mar. 17 and Sept. 2, 1933 (L. P. Raynor).
Surveyed - Oct. 1933 to Mar. 1934.

Hand Lead and Pole Soundings - 5 Point Control on Shore Signals,
Range Finder Distances, Compass
Bearings using Pelorus.

Chief of Party - L. P. Raynor.
Surveyed by - Frank Davis.
Soundings penciled and protracted by - K. L. DeBlois.
Verified and inked by - W. H. Bamford; R. B. Krum.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual with the exception that there was no evidence that the plotting of signals was checked since no initials were shown on the sheet pertaining to the checking. This was accomplished in the office.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the Project. The junction with existing Army Engineers' Surveys (required by the instructions) will be separately considered under Paragraph 5, below.

3. Sounding Line Crossings.

Sounding line crossings are satisfactory.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn.

5. Junctions with Surveys.

a. The junctions with H. 6001 (1933-34) and H. 6005 (1933-34) are satisfactory. The junctions with H. 6003 (1933-34) and H. 6014 (1933) will be considered in the reviews of those sheets.

b. The junctions with the U. S. Engineers' work in False River (BP 27021) is satisfactory.

6. Comparisons with Prior Surveys.

There are no prior surveys by this Bureau in the area covered by this survey.

7. Comparison with Chart.

There is no published chart covering the area of this survey.

8. Field Plotting.

The field protracting and plotting of soundings were accurate and conform to the requirements of the Hydrographic Manual.

9. Additional Field Work Recommended.

This survey is complete, no additional field work is required.

10. Superseding Previous Surveys.

There are no previous surveys to be superseded.

11. Miscellaneous Matters.


a. The official clearance under the power line at Lat. $38^{\circ}1'.2$, Long. $121^{\circ}36'.1$ is 110 feet (by permit of U. S. Engineers, see Chart Letter #738, 1933). The field party determined a clearance of 105 feet (range finder) and this height is shown on the sheet.

b. Page 9 of the descriptive report states that the vertical clearance at MHHW at the center of Jersey bridge in Lat. $38^{\circ}0'.8$, Long. $121^{\circ}39'.5$ is 10 feet. The smooth sheet when received from the field showed a clearance of $10\frac{1}{2}$ feet in pencil. This was changed to 10 feet to conform to the descriptive report. ~~The correct clearance should be determined by correspondence,~~

12. Reviewed by: Harold W. Murray - October 8, 1934.

Inspected by: A. L. Shalowitz.

Examined and approved:


K. T. Adams,
Chief, Section of Field Records.


Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H. & T.

Verification Report H. 6000.

Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual. *except as noted in the revision.* ✓

Protracting.

The protracting was checked in the office by W. H. Bamford. He also partially inked some of the shoals and made the necessary corrections to the shoreline from the correction sheet, T. 5014-A. ✓

Drafting.

The field drafting was well done. ✓

Crossings.

The crossings are in good agreement. ✓

Curves.

The usual depth curves could be drawn, although portions of many curves were omitted where there was not sufficient space to include them without confusing adjacent curves. ✓

Junctions.

This sheet joins H. 6005 on the north, H. 6003 on the east, H. 6001 on the south and H. 6014 on the west.

A tracing of all the junctions accompanied this sheet when it arrived from the field. *These junctions were transferred to this sheet although all the adjoining sheets have not yet been verified. The junctions are in good agreement. * Junctions of H-6003 and 6014 were to be considered in the revision of these sheets. ✓

Remarks.

Although this sheet presents a new type of surface no particular difficulties were found in execution of the inking, except that it is uncomfortable and tiring to reach the upper portions of the sheet even when it is placed on a special table with a revolving cylinder. Also, the penciled soundings do not show up very well, and it is difficult to ink bottom characteristics small enough even with the finest pen. ✓

Submitted by - R. B. Krum,
Sept. 28, 1934.

Applied to drawing of Chart 5527
Dec. 26, 1934 - J.T.W.