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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*H. S. Pittman*  
Superintendent.

State: *Cal.*

DESCRIPTIVE REPORT.

*Hydro.* Sheet No. *H-3656*

LOCALITY:

*Bulls Head*  
*Pt. to Row Island*

1914

CHIEF OF PARTY:

*Fremont Morse*

11-4845

3656

U.S. Coast and Geodetic Survey.

O. H. Pittman, Superintendent.

Hydrography.

Sierra Bay, California

Bar off Bulls Head Point and between  
Point Edith and East end of Roe Island.

Sheet No. 3656.

Fremont Moore, Assistant, In Charge  
W. A. Swan, Assistant.

Vent used - Herried Launch

Sounding made April 11-15.

Scale  $\frac{1}{10000}$

7/28/14 Verified and signed by  
Geo. L. Flower

No bottoms given in record.

Descriptive Report to accompany Hydrographic Sheet No. 3,  
Suisun Bay, California, 1914.

The work shown on this sheet was done at the request of the Light House Commissioner, and includes an examination of the bar off Bulls Head Point, and of the stretch of channel from Point Edith to the East end of Roe Island. The spot shown on the chart where a "no bottom" sounding of 62 feet is shown was also examined.

The bar off Bulls Head Point has maintained its channel depth. Nineteen feet can be carried over it, as indicated on the chart. A slight increase in depth is shown on the spit Northward from the channel.

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The bar North eastward from Point Edith shows the same depth as is indicated on the chart; but much greater width between the 18-foot curves.

On the chart black beacon No.3 is shown as standing on the flats in about 2 feet of water, with the 18-foot curve some 300 meters outside, (Southwest) of it. There is now over 6 feet of water at the beacon, and the 18-foot curve is only about 110 meters S.W. from it, there being no such decided southward bulge in the channel bank as is shown on the chart.

It is difficult to make an accurate comparison between the sparse soundings shown on the small scale chart and those shown on a 1/10,000 sheet; but in general the tendency, in the stretch

of channel between Point Edith and the East end of Roe Island seems to be to preserve the depth on the bar above Point Edith, while the bar width increases. There seems to be a tendency towards an increase in depths just above the bar, with a corresponding decrease in depths up near the Roe Island Light House.

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An examination of the locality where the "no bottom" at 62 feet is shown on the chart gave a maximum depth of 59 feet. It appears to me quite likely that the "no bottom" sounding resulted from stray line in the swift current at this point. The leadsman was probably taken by surprise when his lead dropped suddenly into deep water. The current runs like a mill stream at this point on the ebb tide. Our leadsman had difficulty from this cause.

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Several wharves are shown in ink on the sheet, all of which were located with a plane table. The largest of these is the Smith Lumber Co's wharf at Bay Point, opposite the Roe Island Light House. This is equipped with traveling cranes, run by electric power. The longest is the oil wharf at Avon, which extends out from shore more than three quarters of a mile before reaching deep water.

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Within the limits of this sheet, on the South shore of Suisun Bay, as well as on the adjacent sheet (No.2) there are quite a number of changes in buildings and towns. Bay Point on this

sheet is quite a little village, and there are manufacturing establishments and oil tanks between Martinez and Bay Point which ought to be shown on the chart. I did not feel that my instructions covered shore topography, except wharves and changes in shore line, and so did not attempt any work back from the immediate shore line.

*Fremont Morse,*

Assistant.

General Locality: Suisun Bay, California  
 Part-localities: Bar off Bull Head Point, and between  
 Pt. Editt and East end of Roc Island.

Statistics. Sheet No. 3.

Date 1914.	Letter	Vol.	Positions	Soundings	Miles Statute.	Vessel.
April 11th	a	1	118	520	14.4	Launch
" 13th	b	1	43	206	6.3	"
" 14	c	1	93	440	12.7	"
" 15	d	1	81	318	7.9	
Totals			335	1484	41.3	

Note: The soundings are recorded in fathoms and feet, and are reduced to feet and tenths.

The plane of reference is the mean of the lower low waters at the Army Pt. tide station.

The height of the B.M. above this plane was furnished from the office, and the reading of the plane on the staff was determined by leveling between the B.M. and the staff.

Staff reading of plane of reference = 5.06<sup>ft.</sup>  
 Lowest tide observed, April 13th, = 0.6<sup>ft.</sup> below plane.  
 Highest tide observed, April 11th, = 6.4 above plane.

State *Cal.*

AZIMUTH. ° ' "	BACK AZIMUTH. ° ' "	TO STATIONS.	DISTANCE. Metres.	LOGARITHMS.
		Square Brick stack at the Oil Works at Aron.		
		Hydrographic signal on West end of Roe Island		
		Hydrographic signal standing on point of island about 1/3 of a mile East from Point Edith.		
		Iron stack on pumping plant on Oil Co wharf at Westing. The wharf is the first one East from the new ferry dock.		
		West gate of warehouse on wharf west from Bulls Head Point. This is the next dock East from the one on which "Pipe" is located.		
		The light over the fog bell on long wharf at Aron.		
		The light on the Echo Board at Pt. Edith.		
		Center of tower.		
		The larger and northernmost of the oil tanks at Aron. It is painted white.		
		Dolphin East of the outer end of the first wharf East from Bulls Head Point		
		Tank near shore line at the Smith Lumber Co dock at Bay Point. It is painted gray.		
		High tank near the Mill of the Smith Lumber Co. at Bay Point. It is also painted gray.		

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U. S. Coast and Geodetic Survey.

[Ed. 9-19-'89-2,500.]

Locality *Quisim Bay*

STATIONS.	LATITUDE.	Seconds in Metres.	LONGITUDE.	Seconds in Metres.
	° ' "		° ' "	
<i>Red</i>	38 03 20.546	633.5	122 02 19.132	466.5
<i>Beak</i>	38 03 56.854	1753.0	122 02 52.888	1289.2
<i>Stand</i>	38 01	350 1502	122 06	1028 438
<i>Chimney</i>	38 02	1698 155	122 06	305 1163

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Locality *Ruisin Bay, Cal*

STATIONS.	LATITUDE.		Seconds in Metres.	LONGITUDE.		Seconds in Metres.
	°	' "		°	' "	
<i>Buck</i>	38	01 49.592	1529.1	122	04 27.303	665.9
<i>Out</i>	38	04 14.682	458.3	122	02 45.103	1099.5
<i>Ed</i>	38	03 11.657	359.4	122	03 37.756	920.6
<i>Pipe</i>	38	01 51.428	1585.7	122	07 44.458	1084.2
<i>Pin</i>	38	01 58.500	1803.8	122	07 31.808	775.7
<i>Bell</i>	38	02 58.215	1795.0	122	05 23.582	575.0
<i>Sign</i>	38	03 14.443	445.3	122	04 14.020	341.8
<i>Rock Island L.H.</i>	38	04 05.640	173.9	122	01 38.986	950.3
<i>White</i>	38	02 10.497	323.7	122	04 37.934	925.1
<i>Pile</i>	38	02 22.344	689.0	122	06 44.715	1090.5
<i>Low</i>	38	03 27.506	848.1	122	01 36.318	885.5
<i>High</i>	38	02 53.607	1652.9	122	01 35.154	857.1

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State

AZIMUTH.

° / "

BACK AZIMUTH.

° / "

TO STATIONS.

DISTANCE.

Metres.

LOGARITHMS.

Positions and Descriptions  
 of  
 Hydrographic Signals  
 in  
 Sheet No. 3.

Suisun Bay, California

Fremont Morse,  
 Assistant.

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State *California*

AZIMUTH.

BACK AZIMUTH.

TO STATIONS.

DISTANCE.

Metres.

LOGARITHMS.

The North gable of the Northmans building at Seal Bluff Landing. There is a small flag staff on the South gable.

Black Beacon No. 3, off the West end of Roe Island.

Iron stand pipe or stack East of summit of hill. The hill is the first one East of Bulls Head Point.

Very tall brick stack at the chemical works Bulls Head Point. It is painted white and is the most conspicuous object about Suisun Bay.

Do not write in this margin.

U. S. Coast and Geodetic Survey.

[Ed. 9-19-'89—2,500.]

Locality

STATIONS.	LATITUDE. ° / "	Seconds in Metres.	LONGITUDE. ° / "	Seconds in Metres.	

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July 16, 1914

HYDROGRAPHIC SHEET 3656.

Bulls Head Point to Roe Island, Suisun Bay, California,  
by Assistant Fremont Morse in 1914.

TIDES.

	Benicia ft.
Mean lower low water, or plane of reference on staff	5.1
Lowest tide observed " "	3.6
Highest " " " "	12.8
Mean range of tide	4.7