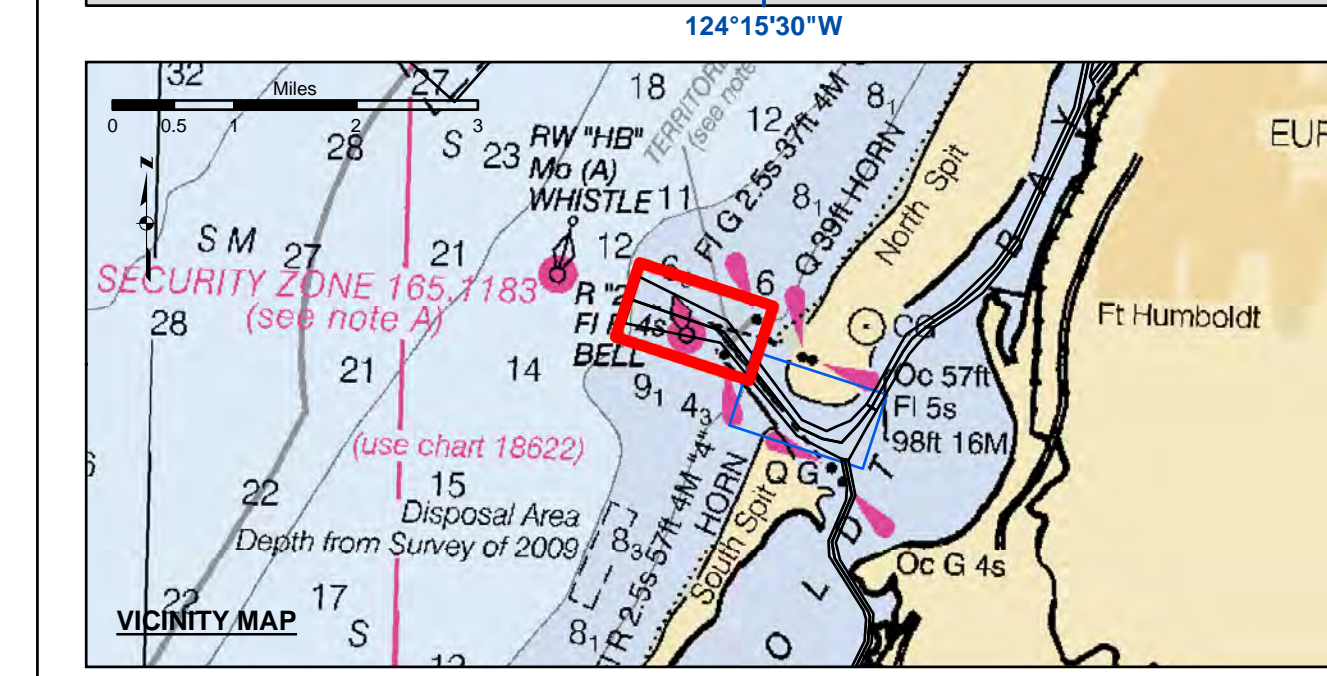


NAD 83  
CENTERLINE ANGLE POINTS  
HUMBOLDT BAY  
(BAR & ENTRANCE)

PT	X	Y
C1	5936273.49	2172157.43
C2	5938147.59	2171508.43
C3	5940265.09	2170773.43
C4	5943553.39	2166602.43
C5	5944545.29	2166122.43
C6	5945376.39	2165957.23
C7	5946085.69	2166728.23
C8	5946886.99	2167508.33
C9	5947166.09	2168359.43
C10	5948048.99	2169917.43
C11	5948433.89	2170455.43
C12	5948233.79	2171119.43
C13	5950417.39	2171891.43
C14	5951328.29	2172556.43
C15	5952138.39	2173530.43
C16	5952989.89	2174706.43
C17	5955711.89	2180451.43
C18	5956236.79	2183159.43
C19	5957823.09	2186978.43
C20	5958152.59	2187513.43
C21	5958681.79	2187878.43
C22	5959281.79	2188378.43
C23	5959581.79	2189078.43

NAD 83  
CHANNEL ANGLE POINTS  
HUMBOLDT BAY (BAR & ENTRANCE)

PT	X	Y	PT	X	Y
1	5936596.69	2173163.63	24	5959081.79	2187578.43
2	5938385.39	2172268.83	25	5958421.69	2187381.23
3	5940404.09	2171258.93	26	5958007.99	2186903.83
4	5943566.09	2169944.43	27	5955425.99	2183093.83
5	5944727.49	2166468.93	28	595165.59	2181842.63
6	5945239.99	216690.33	29	5956346.69	2181424.83
7	5945752.39	2166911.73	30	5955666.99	2180383.43
8	5946464.09	2167631.33	31	5953163.09	2174904.63
9	5946853.59	2168479.53	32	5952300.39	2173413.53
10	5947931.59	2170042.13	33	5951516.79	2172459.63
11	5949193.09	2170679.33	34	5950526.69	2171724.13
12	5949124.59	2171287.33	35	5949343.09	2170952.33
13	5950308.09	2172059.13	36	5948674.79	2170232.13
14	5951141.79	2172853.23	37	5948301.49	2169794.33
15	5951976.39	2173546.23	38	5947386.59	2169234.23
16	5952816.79	2174808.43	39	5946907.49	2167811.23
17	5955484.79	2180520.43	40	5946431.39	2166537.23
18	5956477.79	2183225.33	41	5945672.89	2165192.43
19	5957638.19	2187055.43	42	5945554.09	2162524.33
20	5957883.59	2187647.53	43	5944363.09	2162776.33
21	5958881.79	2188378.43	44	5943441.39	2162611.63
22	5959581.79	2189078.43	45	5942121.19	2172287.33
23	5959681.79	2189378.43	46	5937908.79	2170746.43
			47	5935950.29	2171151.43



Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-48
Placement Area	Navigation Buoy	-47
Anchorage Area	Navigation Buoy	-46
Wreck Area	Shoalest Sounding*	-45
Submerged Wreck		-44
Zone_I_Angle_Points		

NOTES:  
DRAWINGS NOT TO BE USED AS NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY. THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATION REPRESENT THE POSITION OF THE SINKER ONLY.

SURVEYED BY THE CORPS OF ENGINEERS.

SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST TENTHS OF A FOOT.

SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

PLANE GRID AND COORDINATES ARE BASED ON THE STATE OF CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION, ZONE 1 NAD 83, CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY THE NATIONAL OCEAN SURVEY.

PROJECT DEPTHS ARE AS FOLLOWS:  
BAR & ENTRANCE CHANNEL = 48 FEET  
NORTH BAY, SAMOATO MILE 5.0 & = 38 FEET  
EUREKA CHANNEL, FIELDS LANDING CHANNEL & MILE 5.0 TO "N" STREET = 26 FEET

1:00 INDICATES THE NUMBER AND BEGINNING OF A LINE OF SOUNDINGS.  
SOUNDINGS ARE BASED ON TIDE GAUGES REFERENCED TO U.S.C. & G.S.

Vertical and Horizontal Control:  
NOAA Station: 941 8767 - North Spit, CA  
Benchmark:  
NO 11 1940 (PID: LV0359)  
MLLW Elev: 4.251m

Title:  
RTK GPS, using GEOID12a and VDATUM  
RTK elevations calibrated at 10.0ft nail at Coast Guard Station Humboldt Bay

Position:  
RTK Positions

US Army Corps of Engineers  
San Francisco District  
1455 Market Street  
San Francisco, CA 94103

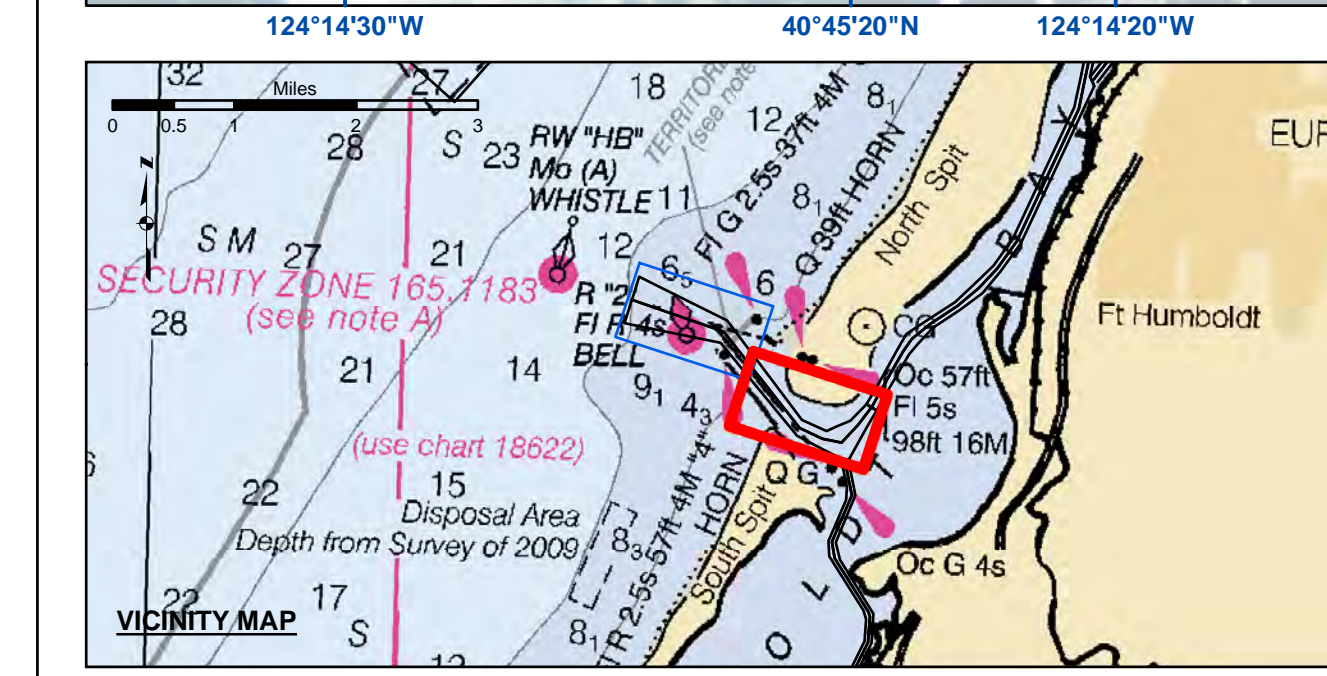
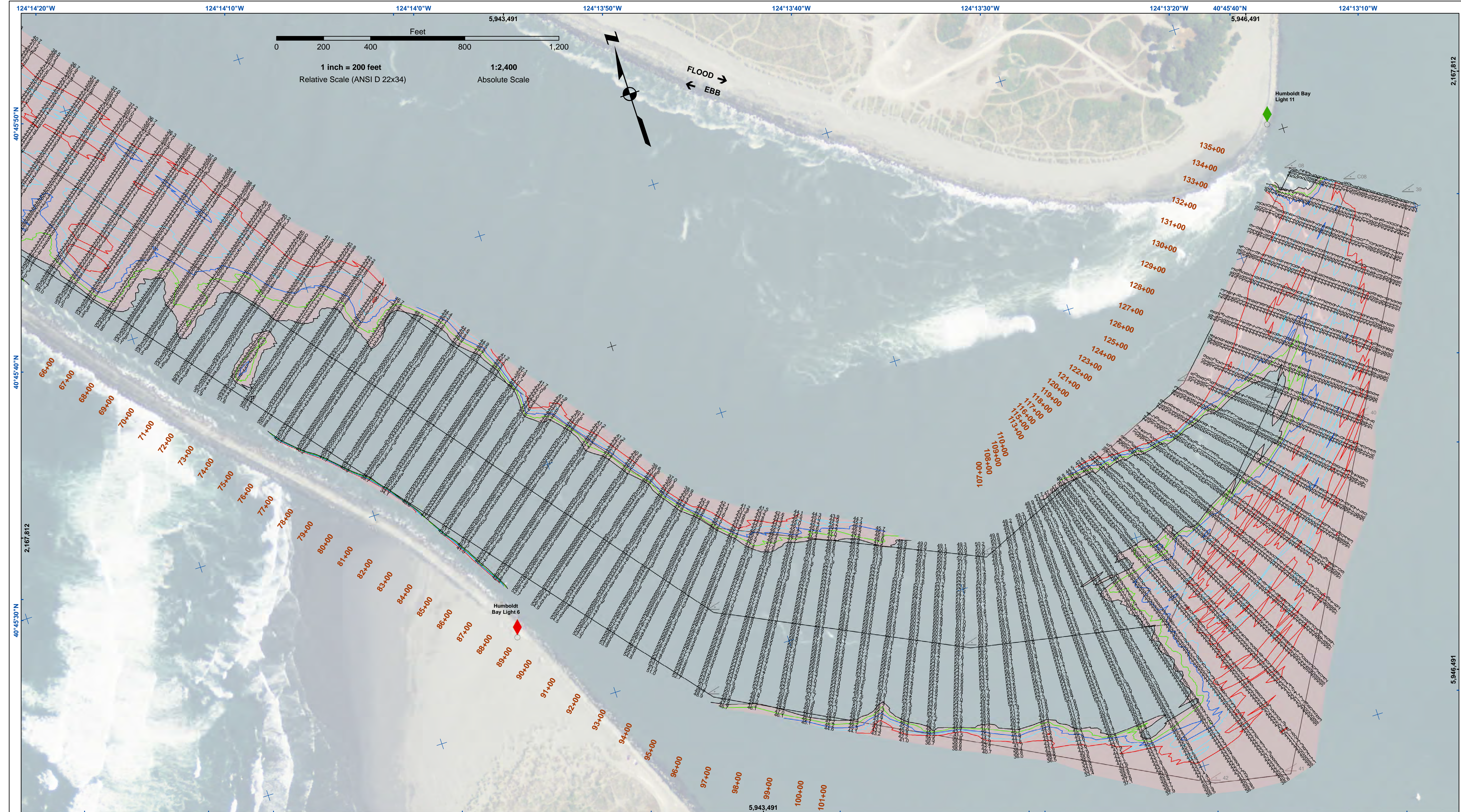
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Prepared Under the Direction of:	Travis J. Rayfield	Chart Date:	Nov 30, 2018
LT Colonel, C.E. District Engineer		Surveyed By:	
Submitted:	Hydro Survey Team Leader	Plotted By:	PDT
Recommended:	Chief, Hydro Survey Section	Checked By:	PDT
Approved:	Chief, Construction Branch	Drawn by:	PDT

HUMBOLDT COUNTY  
CALIFORNIA  
HUMBOLDT BAY  
BAR & ENTRANCE CHANNEL  
POST-DREDGE SURVEY  
29-30 OCTOBER 2018

Sheet  
Number  
1 of 2





Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-48
Placement Area	Navigation Buoy	-47
Anchorage Area	Navigation Buoy	-46
Wreck Area	Shoalest Sounding*	-45
Submerged Wreck		-44
Zone_I_Angle_Points		

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 SURVEYED BY THE CORPS OF ENGINEERS.  
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1:00 INDICATES THE NUMBER AND BEGINNING OF A LINE OF SOUNDINGS.  
 SOUNDINGS ARE BASED ON TIDE GAUGES REFERENCED TO U.S.C. & G.S.  
 Vertical and Horizontal Control:  
 NOAA Station: 941 8767 - North Spit, CA  
 Benchmark:  
 NO 11 1940 (PID: LV0359)  
 MLLW Elev: 4.251m  
 Tides:  
 RTK GPS, using GEOID12a and VDATUM  
 RTK elevations calibrated at 10.0ft nail at Coast Guard Station Humboldt Bay  
 Position:  
 RTK Positions

**US Army Corps of Engineers**  
 San Francisco District  
 1455 Market Street  
 San Francisco, CA 94103

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Prepared Under the Direction of	Chart Date:	Nov 30, 2018
LT COLONEL C.E. DISTRICT ENGINEER	Surveyed By:	
Subject: Hydro Survey Team Leader	Plotted By:	PDT
Recommended: Chief, Hydro Survey Section	Checked By:	PDT
Approved: Chief, Construction Branch	Drawn by:	PDT

CALIFORNIA  
 HUMBOLDT COUNTY  
**HUMBOLDT BAY  
 BAR & ENTRANCE CHANNEL  
 POST-DREDGE SURVEY  
 29-30 OCTOBER 2018**

**Sheet  
 Number  
 2 of 2**