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Form 504
Ed. June, 1928
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, Director

C. & G. SURVEY

L. & A.

APR 12 1929

Acc. No.

State: CALIFORNIA

DESCRIPTIVE REPORT

Topographic
Hydrographic

Sheet No.

4496 to 4499 incl
4503 to 4508

LOCALITY

COAST OF

NORTHERN CALIFORNIA

Horseshoe Pt. to Rockport

1929

CHIEF OF PARTY

F. G. ENGLE AND F. B. T. SIEMS.

8054
45081057
45079054
45068058
45051503
45046053
45036644
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44987644
44979644
4496

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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 A, B, C, D, H, J, K, L, M, N.

REGISTER NO.

State CALIFORNIA

General locality NORTHERN CALIFORNIA

Locality * ROCKPORT LANDING TO HORSESHOE POINT
to Lat. 39°21' and from Lat. 39°03'

Scale 1:10,000 Date of survey APRIL 22-NOV. 6, 1929

Vessel STEAMER DISCOVERER

Chief of Party F. C. ENGLE? F. B. T. SIEMS

Surveyed by A. C. THORSON

Inked by A. C. THORSON

Heights in feet above M. H. W. to ground * to tops of trees

Contour Approximate contour Form line interval 20 feet

Instructions dated March 25, 1929

Remarks: The sheets A, B, C, D, H, J, K, L, M, N and E, F, G
extend from Rockport Landing to Horseshoe Point.

(see descriptive report under "Limits of work.")

DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEETS A,B,C,D,H,J,K,L,M and N.

COAST OF NORTHERN CALIFORNIA
FROM ROCKPORT SOUTH TO CABRILLO POINT AND FROM RED BLUFF
TO HORSESHOE POINT.

SCALE: 1:16,000----- STR. DISCOVERER.

This area was covered by previous surveys. The field numbers that correspond with former Register Numbers are as follows:

A-- 1322	J-- 1228
B-- 1380b	K-- 1535b
C-- 1380a	L-- 1535a
D-- 1363b	M-- 1497b
H-- 1279	N-- 1497a

INSTRUCTIONS: The topography was executed in accordance with instructions of the Director of the Coast and Geodetic Survey dated March 25, 1929, covering combined operations of the Steamer Discoverer.

LIMITS OF WORK: The California coast-line covered by this survey extends from Rockport Landing, Latitude $39^{\circ} - 43'$, joining sheet Reg. No. 4209(1926) on the north, to Cabrillo Point Latitude $39^{\circ} - 21'$, there joining Sheet "E" executed by Mr Fish also working from the Steamer Discoverer. This stretch of coast-line is covered by Field Sheets A, B, C, and D. Field Sheets H, J, K, L, M, and N cover the extent of coast-line from a point south of Red Bluff, Latitude $39^{\circ} - 03'$ to Horseshoe Point, Latitude $38^{\circ} - 36'$. On the north this joins Field Sheet "G" executed by Mr LeFever also operating from the Steamer Discoverer.

OBJECT OF SURVEY: The topography consists of a resurvey of the coastline, locating the high and low water lines, bluff line, rocks

and reefs, checking elevations of rocks and contours. Signals for use of hydrographic party were built and located. Some of the area adjacent to the coast was detailed.

ORGANIZATION OF PARTY: The party included one officer and three men. A government truck was used for transportation.

GENERAL DESCRIPTION OF COAST: The description of the coast covered by this survey as found in the U.S. Coast Pilot is accurate with the following notes:
Field sheet N: There is only one buoy marking channel to Cove at Stewart Point.

Field Sheet L: Gualala Point Island is connected to mainland by a sand and gravel spit covered at high water. Sand dunes at this point extend inland about 200 meters.

The sand beach at the Gualala River entrance extends south one-half mile.

The name Bowen's Landing is known as Bournes Landing on old bromides and also is local name in use today.

Field Sheet J: There is only one small mooring buoy at Arena Cove. This buoy is the property of the Coast Guard and is not used for commercial vessels.

Cleone (Laguna Landing) has been abandoned.

LANDMARKS:

<u>Object and Description.</u>	<u>Lat.</u>	<u>D.P.</u>	<u>Long.</u>	<u>D.M.</u>
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The prominent landmarks on this stretch of coast are described in the U.S. Coast Pilot.

CONTROL: Permanent triangulation stations were recovered and used for control in this survey. These triangulation stations were located in 1873, 1874, 1876, 1888, 1889, 1906, and 1919. Additional stations as needed were established and located by a triangulation party from the Steamer Discoverer in charge of C.M. Durgin. Ample control was had thruout the survey.

SURVEY METHODS: Traverses were run between triangulation stations and the plane-table setups marked. No details were located during progress of traverse. A check of the distortion in sheet was made each mile and correction was made for distortion and inclined distances. As the traverses were short and made without stopping to cut in details they checked within the allowable error in most cases. Where they did not check within the allowable error they were re-run. This method was used because of the numerous rocks off-shore necessitating a large amount of adjusting if the topography had been completed as the traverse progressed. It also assured accurate control and consequently more accurate location of signals and topographic detail. Errors within the allowable limit were adjusted.

All outlying rocks were located by three cuts or more. Inshore rocks were located by two ore more cuts. Where inshore rocks were numerous some of them were sketched with reference to rocks close by that had been located.

The traverse was run on top of the bluff for the most part. The bluffline and high water line and also the low water line (where possible) were rodded in. Signals were located by rod readings and cuts.

Elevations were determined with the use of the hypsograph. On each sheet the elevation of several prominent rocks or points was determined and other elevations determined from them.

Several tests were made during the season to determine the accuracy of the alidade. Distances were measured with a steel tape to check the accuracy of the stadia readings.

DISCREPANCIES: This resurvey when compared with bromides furnished by the Washington office showed that the original work was accurate for the most part. Numerous elevation were taken and checked contours on original work.

The shoreline and offlying rocks also checked the original surveys in most cases. There was some discrepancy in the location of inshore rocks indicating that they were sketched on the original sheets.

The comparison with the bromides indicated the following discrepancies:

OBJECT	LAT.	^M D.P.	LONG.	D.P.	REMARKS
	O, m	m	O, m	m	
Sunken rock	39-38	497.0	123-47	750.0	Shown on bromide not found. <i>pl. survey shown 3/24</i>
Sunken rock	39-35	560.0	123-47	98.0	" " <i>retained</i>
Sunken rock	39-35	600.0	123-47	1410.0	" " <i>retained</i>
Two rocks	38-50	1373.6	123-38	1220.0	" "
Sunken rock	38-49	1243.5	123-37	300.0	" "
Rock	38-49	687.0	123-36	783.0	" "
Rock	38-49	707.8	123-36	745.0	" "
Sunken rock	38-49	151.0	123-36	615.0	" "
Group of rocks	38-48	85.0	123-36	547.0	" "
Rock	38-47	1652.0	123-35	910.0	" "
Two sunken rocks	38-47	1600.0	123-35	875.0	" "
Sunken rock	38-48	72.0	123-35	132.0	" "
Sunken rock	38-48	38.0	123-35	83.0	" "
Sunken rock	38-47	762.0	123-33	1350.0	" "

DISCREPANCIES (CONT.):

OBJECT	LAT. °	D.P. m	LONG. °	D.M. m	REMARKS
P Sunken rock	38-47	762.0	123-33	1188.0	Shown on bromide- found 20m. NW of this position.
f Rock	38-45	1796.0	123-32	612.0	not found
r Rock (with?) (on bromide)	38-44	1733.0	123-31	1230.0	Not found by topo party
s Rock	38-38	592.0	123-23	1165.0	" " " " "
+ Sunken rock	38-36	1493.0	123-22	447.0	This rock was shown on the bromide outside of the red line indicating the outer limit of the rocks and verified by the topographic party.

MAGNETICS: The following magnetic observations were made using
Declinatoire No. 164.

STATION	DATE	OBSERVED DECLINATION	
Hardy Rock	March 17, 1929	18	54
Ten Mile River Bluff	May 16, 1929	17	55
Bell Point	May 10, 1929	18	00
Abalone Point	May 17, 1929	19	24
Laguna Point	May 29, 1929	19	24
Beaver	June 11, 1929	19	11
Mal Passo 3	Aug. 6, 1929	18	35
Lane	Aug. 13, 1929	19	00
Point Arena Lighthouse	July 25, 1929	19	45
Iverson Point	Sept. 9, 1929	19	44
Bournes Landing	Sept. 17, 1929	18	45
Knipp	Oct. 16, 1929	18	43
Horseshoe Point	Oct. 19, 1929	18	38

PLANE TABLE POSITIONS: Field Sheet "A"

OBJECT DESCRIPTION	LAT. 0' m	D.P. m	LONG. 0' m	D.M. m	REMARKS
DOT (w.w. on rock)	39-43	206.0 (1646.0) (344.5)	123-49	610.0 (820.0) (392.7)	Near base of bluff
EDGE (" " ")	39-42	1502.5 (769.0)	123-48	1040.0 (894.5)	" " " " 15' above base of bluff
TIP (" " bluff)	39-42	1078.8 (1532.3)	123-48	536.5 (1075.3)	
SHARP ROCK Elev. 6'	39-42	314.8 (86.5)	123-48	356.7 (1207.7)	Sharp rock off shore
SUP (superstructure on end of dock)	39-41	-- (82.4)	123--48	225.2	Center of structure Elev. 95'
SQ (square tank)	39-41	-- (573.7)	123-48	15.5 (791.4)	S.W. corner of tank
ARCH (arched rock)	39-41	1270.5 (1085.5)	123-47	1346.1 (588.3)	Highest point 24'
TANK (white round tank)	39-41	760.0 (289.8)	123-47	839.2 (819.6)	Center of tank 80'
SHAK (w.w. shack on top of bluff)	39-40	1558.5	123-47	613.7	" " shack
IS (w.w. near top of rock)	39-40	721.5	123-47	651.6	Elev. 25'

Field Sheet "B"

WHIG(w.w.on rocky blu bluff)	39-39	(247.5) 1600.0 (638.0)	123-47	(1066.5) 364.5 (1400.0)	
GABLE(on barn)	39-39	1208.8 (1455.7)	123-47	28.8 (1360.3)	Southern of two 60'
TAN(w.w. on bluff)	39-39	392.6	123-47	71.7	Near base of bluff
ON (w.w.on rocky point)	39-38	(140.0) 1708.5	123-47	(1280.0) 152.4	Elev.45' Near top of bluff
OX (w.w.on rocky point)	39-38	(828.7) 1018.6 (1327.7)	123-47	(1287.2) 144.2 (1062.8)	Elev. 50' Near top of bluff
DOCK (shack on dock)	39-38	518.3 (1377.8)	123-47	367.0 (1336.0)	At Westport Landing
WAT (water tank)	39-38	470.0 (1587.4)	123-47	96.7 (1348.5)	" " "
DO (church steeple)	39-38	259.7 (1505.7)	123-47	80.7 (177.1)	" " "
SCHOOL (school house)	39-38	342.5 (140.5)	123-46	1253.2 (1343.5)	Gable of school house
BAY (w.w.on bluff)	39-37	1705.0	123-47	90.0	Near base of bluff

PLANE TABLE POSITIONS: (Cont.)

Field Sheet "B" (Cont.)


OBJECT DESCRIPTION	LAT.	D.P.	LONG.	D.M.	REMARKS
		(1439.2)		(152.2)	
VIR (w.w. on bluff)	39-37	406.8	123-46	1277.5	
		(533.0)		(71.2)	
GIN (w.w. on bluff)	39-36	1314.2	123-46	1359.7	
		(930.2)		(1167.5)	
YA (w.w. on bluff)	39-36	915.5	123-47	265.2	Near top of bluff
		(1327.5)		(1115.2)	
POST (telephone post)	39-36	517.5	123-47	318.5	On top of bluff
		(1810.9)		(1088.5)	
BAN (pole and banner)	39-36	35.5	123-47	345.8	" " " "
WASH (w.w. on rocky ledge)	39-35	(781.4)		(1302.6)	
		1068.2	123-47	130.2	
		(1554.8)		(410.3)	
ING (w.w. on bluff)	39-35	295.3	123-46	1021.5	
		(789.3)		(505.8)	
TON (w.w. on point)	39-34	1057.2	123-46	928.8	
NOR (w.w. on rocky bluff)	39-34	(1320.0)		(988.2)	
		526.5	123-46	447.4	
		(856.5)		(1409.0)	
HI (high rock)	39-33	990.5	123-46	25.0	

Field Sheet "C"

		(1361.4)		(48.5)	
DIRT (w.w. on point)	39-33	483.3	123-45	1384.4	Ten Mile River
		(199.2)		(1364.5)	
POLE (pole and banner)	39-32	1651.2	123-46	68.8	Ten Mile River Beach
		(674.3)		(1240.0)	
TRI (tripod)	39-32	1175.5	123-46	192.8	" " " "
		(1105.0)		(1128.2)	
BAN (pole and banner)	39-32	745.2	123-46	303.5	" " " "
		(1674.2)		(968.8)	
STA (" " ")	39-32	177.0	123-46	463.7	" " " "
		(399.5)		(811.7)	
PED (tripod)	39-31	1448.0	123-46	620.5	" " " "
		(828.4)		(695.6)	
BUR (pole and banner)	39-31	1018.8	123-46	739.0	" " " "
		(1387.4)		(471.5)	
AL (pole " " ")	39-31	460.4	123-46	962.2	" " " "
		(81.0)		(272.6)	
THOR (tripod)	39-30	1767.5	123-46	1160.0	" " " "
		(460.2)		(131.0)	
SON (pole and banner)	39-30	1388.5	123-46	1301.4	" " " "
		(1285.8)		(1121.5)	
LO (w.w. on rock)	39-30	565.6	123-47	313.3	" " " "
		(276.8)		(840.0)	
STU (pole and banner)	39-29	1572.6	123-47	593.5	South of beach
		(161.2)		(1216.4)	
SMO (w.w. on rock)	39-28	1886.5	123-48	218.5	

PLANE TABLE POSITIONS:(Cont.)

Field Sheet "C"

OBJECT	DESCRIPTION	LAT.	D.P.	LONG.	D.M.	REMARKS
		o ' m		o ' m		
SHAK	(small low shack)	39-28	(928.2) 918.0	123-48	(1136.9) 296.2	Ontop of low bluff
GRE	(pole and banner)	39-28	(1475.3) 370.0	123-48	(785.7) 646.5	" " " "
			(500.0)		(626.6)	
FORT	(w.w.on rock)	39-27	1348.7	123-48	804.7	West "  Fort Bragg

Field Sheet "D"

			(440.2)			
TIT	(w.w. on rock)	39-27	541.6	123-48	995.6	Out from shore
			(50.1)		(86.9)	
POI	(sharp point)	39-26	1791.2	123-48	1349.4	On island
			(542.6)		(121.5)	
TAT	(w.w. on bluff)	39-26	1302.2	123-48	1315.2	Fort Bragg Landing
			(561.7)		(184.9)	
TOE	(" " ")	39-26	1282.7	123-48	1252.4	" " "
			(701.1)		(346.4)	
RO	(" " ")	39-26	1144.7	123-48	1090.0	" " "
			(744.8)		(437.4)	
GUE	(" " ")	39-26	1100.0	123-48	997.8	" " "
			(837.3)		(466.5)	
RED	(w.w. on red shed)	39-26	1008.2	123-48	979.1	" " "
			(900.0)		(403.3)	
TIE	(w.w. on bluff)	39-26	935.2	123-48	1032.8	" " "
			(960.8)		(382.1)	
POLE	(boom-pole)	39-36	884.1	123-48	1053.7	" " "
			(922.9)		(290.0)	
NIL	(w.w.on rock)	39-26	921.8	123-48	1145.3	" " "
			(962.4)		(212.8)	
LOW	(" " ")	39-26	881.2	123-48	1222.3	Off shore F.B. "
			(1183.1)		(1423.6)	
STU	(" " ")	39-26	660.9	123-49	22.2	Fort Bragg Landing
			(1144.8)		(1349.2)	
HI	(" " ledge)	39-26	698.5	123-49	96.6	Top of bluff
SIGN	(square sign on point)	39-26	(1120.0) 723.6	123-49	(1214.8) 221.8	On point
			(242.6)		(134.4)	
SO	(w.w. on rocks)	39-25	1601.3	123-48	1300.0	Mound on top of bluff
			(34.5)		(464.0)	
RED TANK	(water)	39-25	1808.7	123-48	970.4	North of Noyo Harbor
			(240.9)		(289.0)	
BUM	(w.w.on rock)	39-25	1602.0	123-48	1144.2	NOYO Harbor
			(281.8)		(528.8)	
ROCK	(sharp rock)	39-25	1561.5	123-48	904.3	" "
			(390.8)		(736.8)	
BLK	(black shack)	39-25	1453.3	123-48	696.5	" " beach
			(556.9)		(675.7)	
JET	(end of jetty)	39-25	1286.7	123-48	757.2	" "

PLANE TABLE POSITIONS: (Cont.)

Field Sheet "D" (Cont.)

OBJECT	DESCRIPTION	LAT. O	D.P. m	LONG. O	D.M. m	REMARKS
ITE (entrance light)		39-25	(605.7) 1240.7	123-48	(681.1) 752.8	Entrance to Noyo River
SHARP (sharp rock)		39-25	(617.7) 1228.5	123-48	(593.2) 840.8	Noyo Harbor
DOT (w.w. on rock)		39-25	(801.0) 1045.1	123-48	(412.3) 1021.3	" "
LONE (sharp rock)		39-25	(733.8) 1112.7	123-48	(40.2) 1393.7	" "
FEE (w.w. on rock)		39-25	(1590.0) 245.4	123-48	(371.0) 1062.7	Top of bluff
BLU (pole and banner)		39-24	(1655.5) 186.1	123-48	(143.6) 1290.0	On island
DIA (w.w. on rock pile)		39-24	(782.9) 1060.3	123-49	(1371.3) 66.9	Top of bluff
CONE (w.w. on rockpile)		39-24	(1622.5) 221.1	123-49	(1148.8) 291.3	" " "
FLAT (w.w. on point)		39-23	(231.6) 1612.4	123-49	(1151.8) 286.8	Near top of bluff
Hay (pole and banner)		39-23	(1534.1) 309.9	123-49	(1237.5) 200.0	" " "
FAR (w.w. on rock)		39-22	(1080.0) 1668.2	123-49	(172.2) 356.3	Off shore
CAS (w.w. on point)		39-22	(167.3) 1074.2	123-49	(1032.6) 404.3	
LUM (w.w. on point)		39-22	(1574.2) 265.5	123-49	(697.1) 741.1	Caspar Landing
YA (w.w. on bluff)		39-22	(1521.1) 119.4	123-49	(837.6) 600.4	" "
FOR (w.w. on bluff)		39-21	(42.2) 1801.2	123-49	(1015.6) 423.3	" "
Eye (w.w. on bluff)		39-21	(245.5) 1597.4	123-49	(1233.2) 204.7	" "
CAL (w.w. on pile)		39-21	(435.4) 1407.7	123-49	(1357.7) 80.0	Caspar chute.
TANK-north (red tank)		39-21	(205.0) 1637.7	123-49	(111.1) 1325.3	Caspar Lbr. Co.
TANK-south (red tank)		39-21	(268.7) 1574.5	123-48	(213.8) 1233.3	" " "
STACK (black stack)		39-21	(563.3) 1281.2	123-48	(278.3) 1156.5	" mill
TON (w.w. on rock)		39-21	(610.0) 1232.8	123-49	(1272.4) 167.4	" landing
ING (w.w. on rock)		39-21	(530.0) 1313.3	123-49	(1010.8) 427.7	" "
WASH (pole and banner)		39-21	(616.1) 1226.5	123-49	(830.0) 608.1	On point south of C. L.
TOW (red tank)		39-20	(53.6) 123-49	459.1	(975.2)	At Cabrillo Light Sta.

PLANE TABLE POSITIONS:(Cont.)

T-4503

Field Sheet "H"

OBJECT	DESCRIPTION	LAT.	D.P.	LONG.	D.M.	REMARKS
		0	m	0	m	
PUNK	(w.w. on rock)	39-04	(813.0) 1025.5	123-42	(1255.0) 183.6	On point
LO	(" " ")	39-04	(1373.3) 463.7	123-42	(1413.2) 25.6	Near base of bluff
ROK	(outlying rock)	39-04	(1689.3) 148.8	12 3-42	(1195.3) 245.5	White with bird-lime
AN	(w.w. on rock)	39-03	(112.2) 1724.8	123-41	(209.0) 1234.6	Base of bluff
DEEE	(w.w. on rock)	39-03	(279.2) 1556.5	123-41	(310.5) 1134.2	" " "
SPO	(" " ")	39-03	(477.9) 1358.6	123-41	(514.8) 930.0	" " "
PILE	(pole on rock)	39-03	(700.0) 1137.4	123-41	(422.7) 1023.3	Rock 20m off shore
TREE	(w.w. on rock)	39-03	(1232.8) 603.7	123-41	(520.0) 925.6	Near base of bluff
SLA	(" " ")	39-03	(1548.8) 286.5	123-41	(708.5) 737.5	30 m from shore
LAS	" " "	39-02	(733.7) 1103.5	123-41	(761.5) 680.7	In sight
SAL	" " "	39-02	(868.8) 969.2	123-41	(538.2) 907.2	On point
TAN	(highest point)	39-02	(1355.0) 485.4	123-41	(564.8) 878.5	" rocky point
JAN	(w.w. on rock)	39-01	(269.3) 1575.3	123-41	(807.8) 634.3	40' from base
LIME	(outlying rock)	39-01	(670.0) 1170.6	123-41	(483.3) 958.5	White with birdlime
OUT	(w.w. on rock)	39-01	(1641.5) 201.6	123-41	(699.0) 745.8	Outlying rock
LEFT	(" " bluff)	39-00	(326.5) 1514.5	123-41	(637.5) 807.5	Near base of bluff
RITE	(" " rock)	39-00	(1506.8) 334.1	123-41	(294.2) 1151.7	" " " "
MAST	(mast on wreck)	38-59	(1164.5) 674.8	123-42	(882.5) 560.0	Elev.10'

Field Sheet "J"

T-4504

TRI	(tripod)	38-59	(1030.0) 345.3	123-42	410.5	On sand beach
BAN	(pole and banner)	38-58	(727.2) 1110.0	123-42	(602.0) 840.0	" " "
POD	(tripod)	38-58	(1351.2) 487.8	123-42	(161.2) 1283.3	" " "
NER	(square banner)	38-57	(210.0) 1630.0	123-42	(1151.0) 295.6	" " "

PLANE TABLE POSITIONS: (Cont.)

T-4504

FIELD SHEET "J" (Cont.)

OBJECT	DESCRIPTION	LAT.	D.P.	LONG.	D.M.	REMARKS
		0	m	0	m	
POLE	(pole and banner)	38-57	(835.5) 1004.5	123-43	(720.0) 725.8	On sand beach
Ww	(w.w. on rock)	38-57	(1222.0) 619.3	123-43	(27.7) 1417.5	Garcia River
OX	(w.w. on point)	38-57	(1051.6) 790.0	123-44	(1282.5) 162.3	Point Arena
PET	(w.w. on point)	38-57	(1176.5) 666.6	123-44	(1186.0) 259.0	" "
BIR	(birdlime)	38-57	(1638.7) 893.0	123-44	(647.8) 796.1	High rock Pt. A.
WIND	(windmill)	38-57	(1616.0) 224.5	123-44	(1122.4) 323.6	At Pt. Arena
UP	(w.w. on rock)	38-56	(180.8) 1660.0	123-44	(1334.3) 109.3	Near top of bluff
CEN	(w.w. on rock)	38-56	(956.6) 885.6	123-43	(202.5) 1241.8	" " " "
LO	(w.w. on low rock)	38-56	(1241.2) 600.5	123-43	(357.5) 1086.8	" " " "
SE	(pole and banner)	38-56	(1483.0) 360.0	123-43	(337.6) 1107.5	
HID	(w.w. on bluff)	38-56	(1452.16) 389.3	123-43	(616.7) 827.5	
PIN	(w.w. on point)	38-56	(1830.0) 12.5	123-43	(613.6) 830.5	Near top
PB	(pole and banner)	38-55	(440.5) 1403.3	123-43	(415.5) 1029.7	On top of bluff
DUL	(w.w. on rock)	38-55	(878.2) 967.0	123-43	(490.0) 957.6	Near top of bluff
LOOK	(pole and banner)	38-55	(1683.3) 159.0	123-43	(737.7) 710.0	On point
C.G. LOOKOUT SHACK		38-55	(1596.4) 248.4	123-43	(905.5) 544.2	
BAN	(white banner)	38-55	(1537.7) 304.7	123-43	(1091.5) 356.5	Arena Cove Near base of bluff
OP	(w.w. on rock)	38-55	(1784.5) 54.7	123-42	(77.0) 1367.4	Near base of bluff
BEN	(w.w. on rock)	38-54	(14.0) 1823.7	123-42	(460.0) 984.5	Near base of bluff
WHITE POST		38-54	(155.7) 1686.2	123-42	(628.1) 815.8	C.G. boat ways
HOUSE	(small shack)	38-54	(261.6) 1578.7	123-42	(688.5) 757.3	In Arena Cove
BAN	(square white ban.)	38-54	(290.0) 1550.2	123-42	(653.8) 790.5	" " "
OX	(w.w. on rock)	38-54	(402.6) 1439.0	123-42	(597.4) 849.0	" " "
ROK	(sharp rock)	38-54	(510.0) 1328.2	123-42	(485.7) 960.0	" " "
NON	(sq. white ban.)	38-54	(636.0) 1205.8	123-42	(538.8) 906.5	On point

PLANE TABLE POSITIONS: (Cont.)

T-4504

Field Sheet "J" (Cont.)

		(607.7)	(664.4)	
RIC (oil derrick)	38-54	1234.3	123-42 782.4	Top of bluff Elev. 340'
		(792.0)	(927.6)	
LO (sq white banner)	38-54	1049.5	123-42 517.0	Near base of bluff
		(1281.2)	(1105.7)	
BLK (banner)	38-54	559.7	12 3-42 338.8	" " " "
		(550.2)	(852.0)	
BUM (w.w. on bluff)	38-53	1290.7	123-41 594.2	" " " "
		(786.4)	(1227.5)	
NG (" " ")	38-53	1054.4	123-41 217.2	" " " "
		(1154.2)	(1321.5)	
PUNK (" " ")	38-53	687.4	123-41 124.4	" " " "
		(1420.0)	(164.7)	
SLA (" " ")	38-53	420.0	123-40 1280.0	" " " "
		(15.5)	(265.0)	
SQU (square banner)	38-52	1824.5	123-40 1182.5	" " " "
		(175.4)	(784.5)	
GUD (pole and banner)	38-52	1664.6	123-40 659.7	In sight
		(434.8)	(1063.5)	
NOT (square banner)	38-52	1405.3	123-40 370.5	On dead tree

Field Sheet "K" —

T-4505

		(854.4)	(313.0)	
IN (w.w. on rock)	38-52	991.7	123-39 1131.0	Elev. 83' Near Top bluff
		(1093.5)	(615.2)	
TOP (" " ")	38-52	751.5	123-39 829.7	" 78' " " "
		(1766.4)	(1025.2)	
BLUF (pole & banner)	38-52	75.7	123-39 419.7	" 71' On " "
		(1307.8)	(1368.2)	
ENG (w.w. on rock)	38-51	537.5	123-39 76.6	" 86' Near " "
		(1755.7)	(149.4)	
RIT (w.w. on rock)	38-51	89.8	123-38 1294.3	Near top of bluff
		(194.3)	(246.3)	
ROK (sharp rock)	38-52	1649.3	123-38 1200.0	Elev 45'
		(637.6)	(524.8)	
Is (w.w. on rock)	38-50	1204.5	123-38 920.5	Near base of bluff
		(1080.5)	(1328.2)	Elev. 73'
TOP (w.w. on rock)	38-50	762.5	123-38 116.4	" top " "
		(1430.7)	(371.0)	
ARCH (w.w. on rock)	38-50	411.2	123-37 1075.0	Elev. 77'
		(157.2)	(785.5)	
FOX (banner)	38-49	1683.6	123-37 659.3	On top of bluff
		(551.5)	(1341.0)	
ANG (pole and banner)	38-49	1290.5	123-37 102.0	" " " "
		(662.7)	(475.5)	
FN (w.w. on rocks)	38-49	1180.0	123-36 968.0	Pile of rocks top bluff
		(1386.8)	(850.0)	
HI (High rock)	38-49	454.3	123-36 595.5	Elev. 51' off shore
		(1364.4)	(1143.7)	
TIP (w.w. on rock)	38-49	478.3	123-36 300.0	On point
		(119.4)	(1386.7)	
SPL (w.w. on rock)	38-48	1721.4	123-36 58.0	" " " "

PLANE TABLE POSITIONS: (Cont.)

Field Sheet "L"-----

OBJECT DESCRIPTION	LAT.	D.P.	LONG.	D.M.	REMARKS
		(836.2)		(347.0)	
LO (w.w. on rock)	38-48	1606.3	123-35	1098.2	Near base of cliff
		(1267.4)		(163.5)	
PED (sharp rock)	38-48	576.6	123-35	1283.0	Off shore
		(1333.3)		(918.5)	
SLO (w.w. on rock)	38-48	509.0	123-35	526.5	Near top of bluff
		(1535.1)		(965.5)	
CRES (vw on point)	38-48	308.3	123-35	482.0	" " " "
		(46.3)		(668.0)	
PEAK (sharp point)	38-47	1796.6	123-35	779.2	Top of Fish Rock
		(238.9)		(815.0)	
PIN (sharp rock)	38-47	1604.5	123-35	634.0	South of Fish Rocks
		(1477.2)		(1218.5)	
MID (w.w. on rock)	38-48	364.5	123-35	228.0	Havens Anchorage
		(1609.2)		(1370.5)	
SHO (" " ")	38-48	234.6	123-35	74.5	" "
		(1733.4)		(1407.5)	
SCAF (w.w. on point)	38-48	109.5	123-35	39.5	" "
		(1503.0)		(142.0)	
BRI (" " rock)	38-48	342.5	123-34	1301.0	" "
		(1547.0)		(455.0)	
SAN (w.w. on rock)	38-48	300.0	123-34	990.0	" "
		(1840.0)		(760.0)	
EX (w.w. on rock)	38-48	05.0	123-34	684.0	On point
		(193.0)		(945.0)	
CON (" " ")	38-47	1653.0	123-34	500.0	Near top of bluff
		(276.5)		(1270.0)	
HO (white house)	38-47	1568.5	123-34	174.0	" bluff
		(686.0)		(36.0)	
LEF (w.w. on rock)	38-47	1590.0	123-33	1410.0	Off shore
		(1628.0)		(435.5)	
PB (pole and banner)	38-47	815.0	123-33	1013.0	On top of bluff
		(1530.0)		(789.0)	
BO (w.w. on pile)	38-47	315.5	123-47	661.0	Bournes Landing
		(1726.0)		(920.0)	
TAR (w.w. on point)	38-47	118.0	123-33	527.0	" "
		(243.0)		(147.0)	
GUS (w.w. on point)	38-46	1600.0	123-32	1398.0	
		(548.5)		(532.0)	
FLA (w.w. on rock)	38-46	1297.0	123-32	912.0	On point
		(1100.0)		(955.0)	
LEDGE (w.w. on rock)	38-46	744.0	123-32	490.0	Ledge on top of bluff
		(1516.5)		(1337.0)	
BY (w.w. on point)	38-46	327.0	123-32	108.0	
		(1810.0)		(380.0)	
MIT (w.w. on rock)	38-46	133.0	123-31	1062.0	Gualala River
		(492.0)		(340.0)	
NOK (w.w. on log)	38-45	1350.0	123-31	1102.0	" " beach
		(750.0)		(227.0)	
SITE (pole and banner)	38-45	1093.0	123-31	1215.2	South of "

PLANE TABLE POSITIONS:(Cont.)

Field sheet "L" (Cont.)

OBJECT	DESCRIPTION	LAT. °	D.P. m	LONG. °	D.M. m	REMARKS
VON (square banner)		38-45	(967.0) 876.0	123-31	(647.0) 798.0	In bight
ZU (pole and banner)		38-45	(1504.0) 338.5	123-31	(668.0) 776.5	On point
ROW (top of rock)		38-45	(1671.0) 173.5	123-31	(473.0) 973.0	Gualala Point Island
LO (w.w. on bluff)		38-44	(38.5) 1801.0	123-31	(859.5) 584.0	Elev. 27'
GUD " " "		38-44	(273.0) 1566.0	123-31	(1360.5) 84.0	
PT (w.w. on rock)		38-44	(498.0) 1343.5	123-30	(22.0) 1424.0	On point

Field Sheet "M"

CHU (banner)		38-44	(1008.3) 827.8	123-30	(563.7) 879.7	Elev. 36' On middle of abandoned chute.
AL (pole and banner)		38-44	(987.5) 849.5	123-30	(1071.3) 371.0	Top of cliff
EX (large square ban.)		38-44	(1133.6) 702.5	123-30	(1365.6) 76.0	On log-top of bluff
JAN (pole and banner)		38-44	(1567.7) 266.4	123-29	(746.8) 695.5	On point Elev. 38'
PAD (tripod)		38-45	(232.0) 1609.2	123-29	(1064.8) 378.0	Top of bluff
HED (pole and banner)		38-43	(621.7) 1217.0	123-28	(47.3) 1393.2	At end of cedar hedge
WAS (tripod)		38-43	(924.7) 913.5	123-38	(478.7) 961.4	Top of bluff
HI (pole and banner)		38-43	(1379.8) 462.0	123-28	(1430.5) 10.0	" of mound
BAK (w.w. on rock)		38-43	(1556.5) 284.7	123-27	(652.0) 791.7	Ledge back from shore
TRI (tripod)		38-42	(220.0) 1620.0	123-27	(824.7) 619.3	Top of bluff
POL (pole and banner)		38-42	(655.0) 1184.0	123-27	(1114.0) 332.7	End of hedge
FOG (tripod)		38-42	(1175.4) 663.3	123-27	(1381.0) 61.0	Top of bluff
UP (pole and banner)		38-42	(1378.8) 460.5	123-26	(205.3) 1240.0	" " "
LO (w.w. on boulder)		38-42	(1502.0) 337.3	123-26	(513.4) 930.4	In bight
TELL (w.w. on rock)		38-42	(1767.2) 71.0	123-26	(750.3) 693.5	Near top of bluff
ME (w.w. on top of bluff)		38-41	(236.6) 1602.5	123-26	(887.3) 556.6	On bluff
NOT (pole and banner)		38-41	(551.8) 1288.7	123-26	(984.3) 461.0	On top of bluff

PLANE TABLE POSITIONS: (Cont.)

Field Sheet "M" (Cont.)

OBJECT	DESCRIPTION	LAT. °	D.P. m	LONG. °	D.M. m	REMARKS
IN	(tripod)	38-41	(951.0) 888.4	123-26	(1184.0) 263.2	On point
MORN	(w.w. on bluff)	38-41	(1428.2) 411.3	123-25	(177.2) 1263.7	In bay
FUL	(" " ")	38-41	(1774.5) 64.0	123-25	(194.7) 1249.0	" "
NUM	(pole and banner)	38-40	(100.0) 1738.2	123-26	(1385.5) 58.7	On Bihler Point
BER	(w.w. on rock)	38-40	(500.0) 1338.5	123-25	(530.0) 913.0	Ledge top of bluff
OFF	(pole and banner)	38-40	(773.9) 1065.8	123-25	(853.8) 592.3	Top of bluff
STE	(w.w. on rock)	38-40	(1118.4) 719.5	123-25	(1300.0) 145.2	" " "
HA	(pole and banner)	38-40	(1335.5) 505.8	123-24	(120.5) 1321.8	" " "
BEN	(tripod)	38-39	(02.0) ---	123-24	(740.0) 1176.5	Near edge of bluff
MOUND	(w.w. on rock)	38-39	(344.3) 1495.7	123-24	(740.0) 702.0	Rocky mound
ILL	(w.w. on point)	38-39	(750.0) 1091.0	123-24	(746.8) 696.8	Near top of bluff

Field Sheet "N"

T-4508

CAP	(pole and banner)	38-39	(1647.7) 195.0	123-24	(1146.5) 300.0	On fence post
RIC	(banner) Elev. 63'	38-38	(19.0) 1821.0	123-24	(1276.0) 169.7	On mooring post
BAY	(w.w. on rock) 15'	38-38	(159.3) 1680.8	123-23	(99.0) 1348.0	On point in bay
FISH	(pole and banner)	38-38	(323.6) 1515.5	123-24	----- 05.0	On point
MIR	(w.w. on boulder)	38-38	(683.4) 1154.4	123-23	(173.8) 1272.5	Top of bluff
TEL	(w.w. on rock)	38-38	(924.6) 914.3	123-23	(463.3) 983.3	Near top of bluff
GLA	(pole and banner)	38-38	(1333.3) 506.8	123-23	(554.5) 892.5	On point
DIS	(w.w. on rocky point) "	"	(1747.7) 92.8	123-23	(1052.5) 394.3	Near top of bluff
NOR	(w.w. on bluff)	38-37	(697.9) 1146.5	123-22	(07.5) 1434.3	" " " "
Ma	(pole and banner)	38-37	(989.7) 852.8	123-22	(232.5) 1209.2	On top of bluff
NAN	(w.w. on rock)	38-37	(1447.2) 396.5	123-22	(565.6) 878.5	" " " "

PLANE TABLE POSITIONS: (Cont.)

		<u>FieldSheet "N" (Cont.)</u>		
		(12.2)	(845.0)	
CY (tripod)	38-36	123-22	598.4	On point
		(640.0)	(24.5)	
CAR (w.w. on bluff)	38-36	1200.0	123-21	1419.4 Near top of bluff

The hydrographic names were used for plane table positions.

These names were given to the signals and objects by the hydrographic party.

STATISTICS:

FIELD SHEET "A"

Statute miles of shoreline-----	5.64
" " " " of islands -----	0.50
" " " roads -----	4.14
" " " creeks -----	1.50
Square statute miles of topography -----	2.00

FIELD SHEET "B"

Statute miles of shoreline -----	12.36
" " " " of islands -----	2.50
" " " roads -----	9.83
" " " creeks -----	3.45
Sq! " " topography -----	4.00

FIELD SHEET "C"

Statute miles of shoreline -----	10.35
" " " " of islands -----	0.50
" " " roads -----	3.68
" " " railroads -----	7.48
" " " creeks and rivers -----	5.06
Square statute miles of topography -----	3.75

STATISTICS:(Cont.)

FIELD SHEET "D"

Statute miles of shoreline -----	19.90
" " " " of islands -----	6.33
" " " Rivers -----	1.61
" " " creeks -----	3.00
" " " roads -----	10.26
" " " railroads -----	8.86
Square statute miles of topography -----	4.72

FIELD SHEET "H"

Statute miles of shoreline -----	5.98
" " " creeks and rivers -----	2.76
" " " roads -----	6.10
Square statute miles of topography -----	2.20

FIELD SHEET "J"

Statute miles of shoreline -----	15.30
" " " " of islands -----	2.20
" " " Rivers -----	1.70
" " " creeks -----	3.12
" " " roads -----	15.76
Square statute miles of topography -----	5.20

FIELD SHEET "K"

Statute miles of shoreline -----	12.42
" " " " of islands -----	1.73
" " " Roads -----	8.40
" " " rivers and creeks -----	1.38
Sq" " " topography -----	3.20

STATISTICS: (Cont.)

FIELD SHEET "L"

Statute miles of shoreline -----	13.23
" " " " of islands -----	2.19
" " " roads -----	5.52
" " " rivers -----	2.00
" " " creeks -----	0.50
Square statute miles of topography -----	3.30

FIELD SHEET "M"

Statute miles of shoreline -----	15.41
" " " " of islands -----	3.11
" " " roads -----	9.55
" " " creeks -----	1.00
Square statute miles of topography -----	3.75

FIELD SHEET "N"

Statute miles of shoreline -----	8.63
" " " " of islands -----	0.50
" " " creeks -----	0.60
" " " roads -----	0.45
Square statute miles of topography -----	2.00

To: The Director,
U.S.Coast & Geodetic Survey,
Washington, D.C.

Through: The Commanding Officer,
U.S.C.& G.S.S. DISCOVERER.

From: A.C. Thorson,
Jr. H.& G. Engineer,
U.S.C.& G.S.S. DISCOVERER.

Subject: Descriptive Report.

There is respectfully submitted herewith the following descriptive report to accompany topographic sheets A, B, C, D, H, J, K, L, M and N, covering a portion of the California coast required in your instructions of March 25, 1929.



A.C. Thorson,
Jr. H.& G. Engr.C.& G.S.

Approved and forwarded:



F.B.T. Siems,
Chief of Party,
U.S.C.& G.S.S. DISCOVERER.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

4496

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 No. A

REGISTER NO. **4496**

State California

General locality Cape Vizcaino

Locality Abalone Pt. to Cape Vizcaino

Scale 10,000 Date of survey _____, 192

Vessel Discoverer

Chief of Party F.G. Engle

Surveyed by A.C. Thorson

Inked by A.C.T.

Heights in feet above M.H.W. to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Mar 25, 192

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4497

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 No. B.

REGISTER NO. **4497**

State California

General locality Cape Vizcaino

Locality Ten Mile River to Abalone Pt.

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F.G. Engle

Surveyed by A.C. Thorson

Inked by A.C.T.

Heights in feet above M.H.W. to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Mar. 25, 1929

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

4498

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 No. C

REGISTER NO. **4498**

State California

General locality Pt. Cabrillo

Locality Pudding Creek to Ten Mile River

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F.G. Engle

Surveyed by A.C. Thorsen

Inked by A.C.T

Heights in feet above M.H.W. to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Mar. 25, 1929

Remarks: _____

Titled

Form 537a
11-5813

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4499

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 No. D

REGISTER NO. **4499**

State California

General locality Pt. Cabrillo

Locality Pt. Cabrillo to Pudding Creek

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F. G. Engle

Surveyed by A. C. Thorson

Inked by A. C. T.

Heights in feet above M. H. W. to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Mar. 25, 1929

Remarks: _____

Titled

Form 537a
11-5813

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

4503

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 No. M

REGISTER NO. **4503**

State California

General locality Pt. Arena

Locality Alder Creek to Bridgeport Landing

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F.G. Engle

Surveyed by A.C. Thorson

Inked by A.C.T.

Heights in feet above M.H.W. to ground ~~to tops of trees~~

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Mar. 25, 1929

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4504

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 No. J

REGISTER NO. 4504

State California

General locality Pt. Arena

Locality Pt. Arena

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F.B.T. Siems

Surveyed by A.C. Thorson

Inked by A.C. Thorson

Heights in feet above M.H.W. to ground ~~to tops of trees~~

~~Contour, Approximate contour~~, Form line interval 20 feet

Instructions dated Mar. 25, 1929

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4505

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 No. K

REGISTER NO.

4505

State California

General locality Pt. Arena

Locality North of Havens Neck

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F.B.T. Siems

Surveyed by A.C. Thorson

Inked by A.C.T.

Heights in feet above M.H.W. to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated March 25, 1929

Remarks: _____

REG. NO. 4506

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 No. L

REGISTER NO. 4506

State California

General locality Pt. Arena

Locality Del Marr Landing to Havens Neck

Scale 10,000 Date of survey 1929

Vessel Discoverer

Chief of Party F.B.T. Siems

Surveyed by A.C.Thorson

Inked by A.C.T.

Heights in feet above M.H.W. to ground to tops of trees

Contour, Approximate contour, Form line interval_____feet

Instructions dated March 25, 1929

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.
4507

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 No. M

REGISTER NO. **4507**

State California

General locality Pt. Arena

Locality Stewarts Pt. to Del Marr Landing

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F.B.T. Siems

Surveyed by A.C. Thorson

Inked by A.C.T.

Heights in feet above M.H.W. to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated March 25, 1929

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

4508

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 No. N

REGISTER NO. 4508

State California

General locality Pt. Arena

Locality Horseshoe Pt. to Stewarts Pt.

Scale 10,000 Date of survey _____, 1929

Vessel Discoverer

Chief of Party F. B. T. Siems

Surveyed by A. C. Thorson

Inked by A. C. T.

Heights in feet above M. H. W. to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Mar. 25, 1929

Remarks: _____

T-4499 Applied 1/2 Chart Comp. 57.11, Sept. 10, 1941. H. M. Ewen

T-4499 " in part 1/2 Chart Cor 47.03 Oct. 14, 1941 HEM