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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

Topographic } Sheet No. 4594
Hydrographic } Field # A, B, C, D, E.

LOCALITY 4595
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Northern California

Preston Pt. to Horseshoe Pt.

1930

CHIEF OF PARTY

L. C. Johnson

U. S. COAST & GEODETIC SURVEY
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Acc. No.

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

Through: L.C.Johnson, Jr. H.& G.E.
Chief of Party,

From: James N. Jones,
Jr. H. & G.E.

Subject: Descriptive Report.

There is respectfully submitted herewith the descriptive report to accompany the following topographic sheets A, B, C, D, and E, covering a portion of the northern coast of California, complying with your instructions dated April 29, 1930.

James N. Jones
James N. Jones
Jr. H. & G.E.

Approved and forwarded:

L.C. Johnson
L.C.Johnson, Jr. H. & G.E.

Chief of Party.

DESCRIPTIVE REPORT
To Accompany Topographic Sheets A, B, C, D, & E
COAST OF NORTHERN CALIFORNIA
From HORSESHOE POINT To HAMLET, TOMALES BAY
SCALE: 1:10,000

The area covered by these sheets has been covered by previous surveys. The registry numbers of the former sheets covered are as follows:

Sheet A	T1497a and T1457
Sheet B	T1457 and T1430b
Sheet C	T1430b and T1430a
Sheet D	T1430a and T883
Sheet E	T883, T849 and T3840.

INSTRUCTIONS:

The topography was executed in accordance with instructions of the Director of the U. S. Coast and Geodetic Survey, dated April 29, 1930, and covering combined operations Project No. 60.

LIMITS OF WORK:

This topography joins T4508 (1929) on the north at Horseshoe Point, Latitude $38^{\circ} 36'$, on the north; on the south it joins T3840 (1921) at Hamlet, Latitude $38^{\circ} 12'$.

OBJECT OF SURVEY:

This topography consists of a resurvey of the coast line, locating the high and low water lines, rocks and off lying dangers. Signals for the use of the hydrographic party were built and located by the topographic party.

GENERAL DESCRIPTION OF THE COAST:

The description of the coast as found in the U. S. Coast Pilot, Pacific Coast is accurate with the following notes:

Sheet A.

The post village at Fisk Mill Cove is abandoned.

Sheet C.

A narrow channel has been constructed across the bar closing the mouth of the Russian River, and a breakwater constructed along the south side of this channel. The channel is used by tugs towing barges of sand and gravel to San Francisco Bay. The line of breakers extends completely across the entrance except in calm weather at high tide.

LANDMARKS:

All prominent landmarks are described in the Coast Pilot.

CONTROL:

Control was based on the scheme of 2nd order triangulation executed by Lt.(jg) J. H. Brittain in 1929-30. The positions furnished this party by him were used.

Several supplementary stations were located by this party in the vicinity of Rocky Point and Bay P. O.

SURVEY METHODS:

Traverses were run between control stations and closing errors within the allowable limits adjusted in the usual manner. All traverses closed well within the allowable limits except the following.

Sheet A.

The traverse Δ Fish to Δ Stockoff 2 closed with an error of 25 m. This traverse was rerun and the features relocated.

Sheet B.

The traverse Δ Pinnacle Rock to Δ Dry Creek, a distance of approximately four miles, closed with an error of 30 m. No resection s from Δ Dixon and Δ Chaparral were available. This traverse was adjusted by cutting in $\odot$ Os from a three point fix 330 m. south of Δ Chaparral and a short traverse along the ridge. The traverse north of $\odot$ Os was adjusted to this location with an error of 10,m. and the traverse to the south rerun.

No methods deviating from standard practices were used.

Off lying features were located by three or more intersecting outs. In the case the inshore rocks were numerous the limiting rocks were cut in and the others sketched with reference to them.

The high and low water lines were rodded in when possible. The steep and inaccessible bluff at many places made a location of the high and low water lines by outs to tangents, prominent rocks and driftwood, and sketching between objects so located.

Signals were located by three or more intersecting outs or by rod readings.

COMPARISON WITH OLD WORK:

The old surveys were found to be very accurate.

Contours on the old surveys were checked and found to be accurate except in the vicinity of Bodega Head, Sheet D. The drifting nature of the sand dunes to the north of Bodega Head caused considerable change. An error of 10' had apparently been made in the elevations on Bodega Head. These contours have been revised.

The following discrepancies were noted:

Sheet B.

There is considerable change in the location of the rocks be-

tween ○ Pig and △ Pinnacle Rock, as shown on the 1:5,000 inset of Fort Ross Cove. The location of rocks as shown on sheet B have been checked and were found correct.

The high water line in Fort Ross Cove was revised to include portions of the beach.

A group of rocks awash and sunken rocks, not shown on previous sheets, was located 620 m. off the mouth of Timber Gulch.

Sheet C.

Two rocks, shown on the old sheet, off Russian Gulch, 280 m 240° true, from ○ Cod were not found. Sounding in this vicinity by the hydrographic party did not indicate their existence.

The island in the mouth of Russian River has been changed by erosion.

The sand beach to the north and south of Russian River has advanced 10 to 20 m.

Sheet D.

The high water line at the mouth of Salmon Creek has changed, caused by erosion and silting.

The high water line along the sand beach from the mouth of Salmon Creek to Bodega Head has advanced 30 to 40 m.

The rocks around Bodega Head have been revised. Considerable changes in size, number and location were necessary.

The shore line along the western side of the lagoon back of Bodega Head has advanced, particularly the sand point nearest the sand spit, which has shifted SE 150 m. and the point at the head of the lagoon between ○ Barn and ○ Tow, which has shifted S 200 m. These changes have been caused by the drifting sand.

In the vicinity of ○ Sign on the west⁽³⁾ side of the lagoon, the high water line has been shifted out about 200 m. This change has been caused by silting. The creek which empties at this point is practically dry in the summer months, but has considerable flow during the rainy season.

The low water line in the lagoon has been shifted to show the present channels. The two improved channels shown are maintained by fishing companies working out of the town of Bay. These channels are marked by stakes, which are shown on the sheet by pencil circles.

The high water line around the sand spit at the mouth of the lagoon has been changed.

The sand bar at the mouth of Estero Americano has changed.

Sheet E.

The sand bar at the mouth of Stemple Creek has changed.

Two large rocks, shown on the old survey, 250 m. WxS from ○ Dog were not found.

The sand beach from Dillon Beach around Sand Point has changed considerably. Sand Point is constantly changing, caused by erosion and building up by drifting sand. It has receded 300 m. from the location shown on the last survey (1921).

The railroad shown at Hamlet has been abandoned and the tracks torn up.

NAMES:

Sheet A.

Wildcat Creek and Warren Gulch, indicated on the sheet in pencil are fairly well established local names.

The native names shown on T1457 and T1497~~2a~~ have not been transferred to the sheet.

Sheet B.

Coleman Gulch, shown on the sheet in pencil, is an established local name,

Windermere Point, shown on the sheet in pencil, is in local use with a few of the older residents. It is so called after the British ship Windermere, which was a total wreck off this point in 1883.

Sheet C.

Ele Head and Bird Rock are described under these names in the Pacific Coast Pilot, 1889. The former is applied to a small but prominent head-land. These names are not in local use.

Out Rocks are described under ~~this name~~ in the Pacific Coast Pilot, 1889. This group of rocks is sometime locally called Mile Rocks and the lower rock midway between this group and Max sometime called Half Mile Rock. The name Out Rocks is not in local use.

Gull Rock as designated on the sheet follows the description given in the U. S. Coast Pilot, Pacific Coast. On chart 5502 the name is erroneously given to the large arched rock one half mile north of Gull Rock.

Arched Rock is so called in the Pacific Coast Pilot, 1889, and is described in the later editions. It is a very descriptive name; a large perforation, approximately 40 ft high runs through the rock in a north and south direction. This name is not in local use.

Death Rock is a well established local name. This rock, off the Rocky Point head-land, is so called because "more than a dozen" people have lost their lives here, being washed off by unexpected heavy ground swell, while fishing or posing.

Stump Beach and Wright Beach are established local names.

Sheet D.

Around Bodega Head, Mussel Point, Horseshoe Cove, and Spud Point are local names but are not widely used.

Bodega Port as shown on the charts and old topographic sheets is an obsolete designation.

The town at the head of the lagoon is called Bay. Post Office and telephone facilities are obtained here. It is mainly a resort for fishing and clam digging parties.

Estero Americano is sometime called Valley Ford Creek.

Sheet E.

The estero or creek south of Estero Americano is called Stemple Creek. This is a well established local name

Approved for this
sheet. Do not chart
KTH

The post office at Hamlet is called Telmat. This name was never heard applied to the settlement.

REMARKS:

THE low water line in the lagoon back of Bodega Head was located by plane table cuts to tangents at low water, location of channel stakes by three or more plane table cuts, and by sextant fixes taken at points on the low water line. The absence of any very low tides during the progress of the field work made it necessary to estimate portions of it. It is believed to be fairly accurate but should be checked by hydrography.

STATISTICS:

Sheet A.

Statute miles of shoreline	13.2
" " " " of islands	1.5
" " " roads	10.6
" " " streams	4.3
Square statute miles of topography	3.5

Sheet B.

Statute miles of shoreline	11.5
" " " " of islands	0.5
" " " roads	10.0
" " " streams	4.5
Square statute miles of topography	3.0

Sheet C.

Statute miles of shoreline	14.9
" " " " of islands	3.0
" " " roads	10.4
" " " streams	6.2
Square statute miles of topography	3.6

Sheet D.

Statute miles of shoreline	20.4
Statute miles of shoreline of islands	0.4
" " " roads	7.3
" " " streams	3.6
Square statute miles of area	6.8

Sheet E.

Statute miles of shoreline	13.8
" " " " of islands	3.4
" " " roads	3.6
" " " streams	1.2
Square statute miles of topography	3.2

PLANE TABLE POSITIONS: (SHEET A) T-4593

Name & Description	LAT.	D.M.	LONG.	D.P.
AMY w.w. rock	38 36'	308 (1548)	123 21	1252 (200)
BET w.w.	38 36	137 (1713)	123 21	935 (517)
CUD pole and ban'r.	38 35'	1619 (231)	123 21	591 (861)
GAB SW gable, barn	38 36	38 (1812)	123 20	1417 (35)
DIG w.w. on bluff	38 35	1576 (274)	123 21	71 (1381)
EVA w.w. on bluff	38 35	1399 (452)	123 20	1323 (129)
FOT w.w. top of bluff	38 35	926 (924)	123 20	917 (535)
GAG ban'r on point	38 35	451 (1399)	123 20	731 (721)
HAM w.w. top of bluff	38 35	106 (1744)	123 20	430 (1022)
IKE w.w. large rock	38 34	1464 (386)	123 20	306 (1146)
JOY w.w. large rock	38 34	1121 (729)	123 20	405 (1047)
KID w.w. and ban'r.	38 34	663 (1187)	123 20	474 (978)
LEO w.w. rocky mass	38 34	523 (1327)	123 20	60 (1392)
NEW small w.w.	38 34	22 (1828)	123 19	1200 (253)
OLD small w.w.	38 34	56 (1794)	123 19	1022 (430)
BIG small w.w.	38 33	1803 (47)	123 19	1047 (406)
REC bow of wreck	38 33	1598 (252)	123 19	829 (624)
PAD w.w. on bluff	38 33	1614 (236)	123 19	684 (769)
MAY w.w. low on bluff	38 33	1150 (700)	123 19	157 (1296)
Que peak of rock	38 33	1024 (826)	123 18	1437 (16)
RAM peak, white rock	38 33	973 (877)	123 18	1324 (129)
SIP w.w. near LW.	38 33	736 (1114)	123 18	820 (633)
TUD w.w. on shack	38 33	707 (1143)	123 18	516 (937)
UKE w.w. on point	38 33	342 (1508)	123 18	456 (997)
VIM w.w. on bluff	38 32	1563 (287)	123 18	45 (1408)
WED w.w. on bluff	38 32	1080 (770)	123 17	794 (659)
YID bushy tree	38 32	1059 (791)	123 17	660 (793)

PLANE TABLE POSITIONS: (cont.)

SHEET A (cont.) T-4593

Name & Description.	LAT.	D.M.	LONG.	D.P.
ZAB w.w. poles	38 32	861 (989)	123 17	522 (931)
ABE w.w. on point	38 32	753 (1097)	123 17	257 (1196)
BUN w.w. on low point	38 32	317 (1533)	123 16	1286 (167)
CON small w.w. on bluff	38 32	238 (1612)	123 16	988 (465)
DOT w.w. on point	38 31	-- (161)	123 16	960 (493)
EBA w.w. post	38 31	-- (10)	123 16	640 (813)

SHEET B. T-4594

EBA w.w. post	38 31	1837 ⁴⁰ (10)	123 16	640 (813)
FIT w.w. on point	38 31	1560 ³ (287)	123 16	296 (1158)
GOD tripod	38 31	1007 (843)	123 16	94 (1360)
HAT w.w. top of bluff	38 31	913 (937)	123 16	00 ---
IMP w.w. on bluff	38 31	679 (1171)	123 15	1204 (250)
JAM w.w. on bluff	38 31	477 (1373)	123 15	1035 (419)
KEN w.w. on point	38 31	47 (1803)	123 15	603 (851)
LAP tripod on point	38 30	1213 (637)	123 14	1370 (84)
GAB E. gable of shed	38 30	1412 (438)	123 14	1240 (214)
NED w.w. on point	38 30	1339 (511)	123 14	910 (540)
OX w.w. on point	38 30	1182 (668)	123 14	705 (749)
PIG w.w. on point	38 30	1101 (749)	123 14	635 (919)
BAT ban'r. on knoll	38 30	1107 (743)	123 14	226 (1228)
SAM w.w. on bluff	38 30	738 (1112)	123 14	20 (1434)
TID tide gauge tower	38 30	1460 (390)	123 14	1074 (380)
MIN cloth on shed	38 30	1408 (442)	123 14	950 (504)
TOP pole and banner	38 30	415 (1435)	123 13	1140 (314)
UMP w.w. at top of bluff	38 30	383 (1467)	123 13	1061 (393)
VAG w.w. on bluff	38 30	282 (1568)	123 13	873 (581)

PLANE TABLE POSITIONS: (cont.)

SHEET B. (cont.)

T-4594

Name & Description.	LAT.	D.M.	LONG.	D.P.
WIN w.w. top of bluff	38 30	81 (1769)	123 13	504 (950)
AL w.w. edge of bluff	38 29	1813 (37)	123 13	249 (1205)
BEN w.w. slats	38 29	1822 (28)	123 13	40 (1414)
CAL w.w. shale bluff	38 29	1836 (14)	123 12	1214 (240)
DAD w.w. rock on bluff	38 29	1664 (186)	123 12	1036 (418)
ETA w.w. rock on bluff	38 29	1591 (259)	123 12	931 (522 ³)
FOX w.w. cairn	38 29	1486 (364)	123 12	683 (771)
GUS w.w. low on bluff	38 29	1390 (460)	123 12	380 (1074)
HER w.w. on ^{beach} ~~bluff~~	38 29	1284 (566)	123 12	197 (1257)
ISM w.w. on bluff	38 29	1026 (824)	123 11	1351 (103)
JAN small w.w. near HW	38 29	965 (885)	123 11	1216 (238)
KIT w.w. pin. rock	38 29	884 (966)	123 11	1065 (389)
LEN w.w. large boulder	38 29	748 (1102)	123 11	780 (674)
MAT w.w. low on bluff	38 29,	520 (1330)	123 11	477 (977)
NOB w.w. on bluff	38 29	404 (1446)	123 11	305 (1149)
OS w.w. on beach	38 29	312 (1538)	123 11	183 (1271)
PEN w.w. low on bluff	38 29	213 (1637)	123 10	1380 (74)
REX highest point of nub	38 28	1840 (10)	123 10	1293 (161)
SIN double banner	38 28	1582 (268)	123 10	907 (548)
TEE highest part of nub	38 28	1304 (546)	123 10	612 (842)
UP w.w. on high point	38 28	1256 (594)	123 10	517 (937)
VAN w.w. top of point	38 28	1011 (839)	123 10	188 (1266)

PLANE TABLE POSITIONS: (cont.)

SHEET C

Name & Description.	LAT.	D.M.	LONG.	D.P.
POT highest part of nub	38 28	327 --	123 09	1160 (294)
AXE w.w. top of bluff	38 28	248 --	123 09	1057 (397)
BUG tripod near end of point	38 28	100 --	123 09	575 (879)
CAD double banner	38 27	1710 (140)	123 09	441 (1013)
DIP w.w. near top of bluff	38 27	1326 (524)	123 08	1324 (130)
END w.w. peak rky. pt.	38 27	955 (895)	123 08	1031 (423)
PIN tripod on point	38 27	773 (1077)	123 08	767 (689)
GUM highest point rky. islet.	38 27	594 (1256)	123 08	794 (662)
HAD w.w. rocky mass	38 27	624 (1226)	123 08	300 (1154)
IKE odd shaped pinnacle	38 27	392 (1458)	123 08	179 (1276)
JOB w.w. peak of rock	38 27	368 (1482)	123 07	1286 (169)
KID end of breakwater	38 27	122 (1728)	123 07	1165 (290)
LOT SW corner gas sta.	38 27	102 (1749)	123 07	650 (805)
MAX w.w. on bluff	38 26	1314 (536)	123 07	742 (713)
NIB small w.w. on bluff	38 26	999 (851)	123 07	759 (696)
PAT w.w. near HW,	38 26	909 (941)	123 07	689 (766)
SAP w.w. on bluff	38 26	559 (1291)	123 07	411 (1044)
TEX w.w. low on bluff	38 26	202 (1648)	123 07	341 (1114)
UN w.w. on nub.	38 25	1832 (18)	123 07	345 (1110)
ROB w.w. on bluff	38 26	829 (1021)	123 07	534 (921)
VEX w.w. on bluff	38 25	1558 (292)	123 07	322 (1133)
WAD w.w. rocky mass	38 25	1111 (739)	123 06	1165 (286)
YUM w.w. rky. nub	38 25	540 (1310)	123 06	1037 (418)
ZIP w.w. rock in fields	38 25	548 (1302)	123 06	828 (627)
AT w.w. on fence	38 25	208 (1642)	123 06	608 (847)
BEG w.w. on bluff	38 25	00 --	123 06	346 (1109)

PLANE TABLE POSITIONS: (cont.)

SHEET C. (cont.)

Name & Description	LAT.	D.M.	LONG.	D.P.
DED w.w. top of bluff	38 24	1396 (454)	123 06	68 (1387)
EAT w.w. on bluff	38 24	1086 (764)	123 05	1390 (65)
FIG w.w. on red bluff	38 24	726 (1124)	123 05	1285 (170)
HUT w.w. post on beach	38 24	194 (1665)	123 05	1112 (344)
JAP w.w. in field	38 24	139 (1711)	123 05	939 (517)
GOP peak offlying rock	38 24	1258 (592)	123 06	791 (665)
KIM w.w. on bluff	38 23	1650 (200)	123 05	882 (574)
LET sign on point	38 23	1340 (510)	123 05	1037 (419)
MAB w.w. on point	38 23	1202 (648)	123 05	1006 (450)
NIG cloth on BAR shack	38 23	1275 (575)	123 05	662 (794)
OAK SW gable large barn	38 23	1210 (640)	123 05	49 (1407)
POT w.w. edge of bluff	38 23	974 (876)	123 05	251 (1205)
RAP w.w. large rock in field.	38 23	672 (1178)	123 04	1081 (375)
SUM double banner	38 23	281 (1569)	123 04	1451 (5)
STY W gable large barn	38 23	12 (1838)	123 04	874 (582)
TAR w.w. on large rock	38 22	-- (50)	123 04	1327 (129)

SHEET D

ACE w.w. on point	38 22	940 (910)	123 03	987 (469)
BUG w.w. on sharp point	38 22	711 (1139)	123 03	808 (648)
CON w.w. on large rock	38 22	361 (1489)	123 03	675 (781)
DIG w.w. rock on beach	38 22	169 (1681)	123 03	473 (983)
ROCK large rock crest of hill	38 22	8 (1842)	123 02	629 (827)
EST pole and slats	38 21	1341 (509)	123 03	130 (1327)
FIG w.w. sharp point	38 21	1072 (778)	123 03	72 (1385)
GAB w.w. top of bluff	38 21	803 (1047)	123 02	1441 (16)
HIS pole and slats	38 21	266 (1584)	123 02	1413 (44)

PLANE TABLE POSITIONS: (cont.)

SHEET D. (cont.)

Name & Description.	LAT.	D.M.	LONG.	D.P.
ISM pole and slats	38 20	1679 (171)	123 03	44 (1413)
TANK black tank	38 20	1843 (7)	123 02	1091 (366)
JIM pole and slats	38 20	1123 (727)	123 03	40 (1417)
KID log and slats	38 20	641 (1209)	123 03	9 (1448)
LEX pole and slats	38 20	130 (1720)	123 03	130 (1327)
BARN Wgable of barn	38 20	442 (1408)	123 02	566 (890)
MUG pole and slats	38 19	1519 (331)	123 03	237 (1220)
NUT pole and slats	38 19	1052 (798)	123 03	394 (1063)
ON ban'r. and w.w.	38 19	718 (1132)	123 03	887 (571)
PIG tripod highest part of point.	38 19	578 (1272)	123 03	822 (636)
BAT w.w. on bluff	38 19	326 (1524)	123 03	584 (874)
SAM pole and banner	38 19	68 (1782)	123 03	426 (1032)
DUCK duck blind	38 19	1104 (746)	123 02	284 (1174)
TOW white water tower	38 19	1654 (196)	123 01	1131 (326)
FLAG flag pole school yard.	38 19	1270 (580)	123 01	723 (734)
SIGN small sign top of knoll	38 19	446 (1404)	123 01	128 (1330)
TIP w.w. side of hill	38 18	1550 (300)	123 03	131 (1327)
HI w.w. and tripod high- est part of head.	38 18	1288 (562)	123 02	1339 (119)
BAN pole and banner	38 18	1000 (850)	123 02	1395 (63)
NUB peak of red nub.	38 18	593 (1257)	123 02	1270 (189)
CON peak of cone shaped pinnacle rock	38 18	371 (1479)	123 02	1289 (170)
TRI tripod on bluff	38 18	391 (1459)	123 02	1246 (212)
RED red water tank	38 18	399 (1451)	123 03	1126 (332)
LUG w.w. top of bluff	38 18	128 (1722)	123 03	978 (480)
KIM w.w. and tripod	38 17	1830 (20)	123 03	741 (717)

PLANE TABLE POSITIONS: (cont.)

SHEET D. (cont.)

Name & Description.	LAT.	D.M.	LONG.	D.P.
JIT double banner	38 17	1741 (109)	123 03	615 (843)
IT w.w. on bluff	38 18	4 (1846)	123 03	377 (1081)
HAM signal cloth on stakes	38 17	1832 (18)	123 03	292 (1165)
GOD tripod top of bluff	38 18	129 (1721)	123 03	185 (1273)
Pop banner in bush	38 18	299 (1551)	123 03	134 (1324)
ETA w.w. on point	38 18	393 (1457)	123 03	161 (1297)
DOG w.w. on point	38 18	556 (1294)	123 03	405 (1053)
CAT banner in bushes	38 18	853 (997)	123 03	648 (810)
BE SW tree on beach	38 18	1237 (613)	123 03	948 (510)
AT N'y tree on bluff	38 18	1398 (452)	123 03	972 (486)
VIM banner on sand spit	38 18	1222 (628)	123 03	234 (1224)
UP w.w. boards	38 18	1398 (452)	123 02	1341 (117)
TAR starboard half of old skiff	38 18	1576 (274)	123 02	968 (490)
SAP tripod	38 18	1607 (243)	123 02	421 (1137)
RAM double banner	38 18	1487 (363)	123 01	1365 (93)
QUE stone chimney	38 18	1693 (157)	123 01	1116 (342)
PAT windmill	38 18	1676 (174)	123 01	1071 (387)
NED pole and slats	38 18	1377 (473)	123 01	1001 (457)
MAN barrel and boards	38 18	1241 (609)	123 01	671 (787)
OUT W gable of S barn	38 18	1377 (473)	123 01	344 (1114)
LAP w.w. top of bluff	38 18	1045 (805)	123 01	381 (1077)
KIP w.w. on bluff	38 18	886 (964)	123 01	176 (1282)
JAN peak large pinnacle	38 18	806 (1043)	123 01	263 (1195)
IMP w.w. on boulder	38 18	731 (1119)	123 01	4 (1454)
HOT w.w. and banner	38 18	654 (1196)	123 00	1308 (151)

PLANE TABLE POSITIONS: (cont.)

SHEET D. (cont.)

NAME & DESCRIPTION	LAT.	D.M.	LONG.	D.P.
GUS banner top of bluff	38 18	545 (1305)	123 00	1164 (294)
FIN w.w. boards on fence	38 18	389 (1461)	123 00	979 (479)
EAT peak of rock	38 18	211 (1639)	123 00	1049 (409)
DED tripod top of bluff	38 17	1804 (46)	123 00	567 (891)
COD peak thumb shaped rock	38 17	1658 (192)	123 00	741 (717)
BUN w.w. on bluff	38 17	1594 (256)	123 00	386 (1072)
ABE w.w. peak of rock	38 17	1272 (578)	123 00	104 (1354)

SHEET E.

AX w.w. peak of rock	38 17	895 (955)	122 59	1436 (22)
BUG w.w. large rock	38 17	580 (1270)	122 59	1112 (346)
CAT w.w. low on point	38 17	52 (1798)	122 59	924 (534)
DOG w.w. top of rock	38 16	1737 (113)	122 59	662 (796)
EVA w.w. below bluff	38 16	1403 (447)	122 59	326 (1132)
GUS w.w. fence post	38 16	1175 (675)	122 59	224 (1234)
FIN peak of pin. rock	38 16	1136 (714)	122 59	705 (753)
HIP w.w. on sharp ridge	38 16	938 (912)	122 59	292 (1166)
IRA w.w. on outcrop	38 16	808 (1042)	122 59	189 (1269)
BAG w.w. peak of nubl	38 16	609 (1241)	122 58	1302 (156)
KIP w.w. on rock	38 16	452 (1398)	122 58	1153 (305)
LAP w.w. on bluff	38 16	29 (1821)	122 58	896 (562)
MAY peak of S pin. rock	38 15	1755 (95)	122 58	1047 (411)
NO w.w. on boulder	38 15	1536 (314)	122 58	595 (863)
PUP peak prominent rock	38 15	1402 (448)	122 58	776 (682)
QUE peak of rocky nub	38 15	1286 (564)	122 58	587 (871)
RAM w.w. large boulder	38 15	1042 (808)	122 58	288 (1170)

PLANE TABLE POSITIONS: (cont.)

SHEET E. (cont.)

NAME & DESCRIPTION	LAT.	D.M.	LONG.	D.P.
SIR w.w. on rocky point	38 15	629 (1221)	122 58	270 (1189)
TUG W gable of NW cabin	38 15	209 (1641)	122 57	1446 (13)
UP W gable of SW cabin	38 15	77 (1773)	122 57	1406 (53)
VAN green nub peak of hill	38 14	923 (927)	122 57	774 (685)
WAD pole and slats	38 14	284 (1568)	122 58	361 (1098)
OX pole and slats	38 13	1686 (164)	122 58	300 (1159)
YID banner on bluff	38 14	21 (1829)	122 57	348 (1111)
ZEB chimney lone shack	38 13	1283 (567)	122 57	140 (1319)
AMY banner on log	38 13	781 (1069)	122 57	99 (1360)
BAD w.w. low on point	38 13	314 (1536)	122 57	283 (1177)
CAN duck blind	38 13	267 (1583)	122 57	1036 (424)
DAM sign on ridge	38 12	1730 (120)	122 57	117 (1343)
ES small out-house	38 13	237 (1613)	122 56	549 (911)
BAL w.w. on top of bluff	38 12	1395 (455)	122 56	112 (1348)
ONE duck blind	38 12	1219 (631)	122 55	1220 (240)
TO duck blind	38 12	968 (882)	122 55	1364 (96)

The hydrographic names were given in the list of plane table positions.

15
DESCRIPTIONS OF MARKED TOPOGRAPHIC STATIONS

SHEET A. 4593

- GAG Tripod and slats.
In the center of a grass covered point called Neck Bluff.
The standard disc marker was set in a rock embedded under the signal
- KID W.W.
At approximately the center of a sandstone point. Standard disc
set in cement at center of signal.
- ZAB Poles and Slats
At the end of the point at the north end of Stillwater Cove.
Standard disc set in cement at center of signal

SHEET B. 4594

- Hat. W.W.
At the top and at the edge of the bluff line. Stand disc set
in drill hole at center of signal
- Ben Slat Signal.
At the top and edge of the bluff line. Stand. disc set in cement
in boulder under signal.

SHEET C. 4595

- JOB W.W.
At the peak of the large rock on the sand beach just north of the
mouth of the Russian River. Stand. disc set in cement at the peak
of the rock

DESCRIPTIONS OF MARKED TOPOGRAPHIC SIGNALS SHEET "D" 1930.

- ACE W. W. On point at south end of short sand beach. Marked by stand. disc set in cement at S. end of signal.
- Bug W. W. On small sharp point, Signal at the edge of bluff line on sandstone. Marked by ten penny nail set in cement. Nail projects 1"
- CON W. W. At the top of the W. end of the largest rock in this vicinity. The rock is accesable from the beach at $\frac{1}{2}$ tide or less. Signal was not marked.
- DIG W. W. At top of pinnacle rock on beach. The rock is approximately 20' high; Signal is marked by stand. disc set in cement on SW face of top of rock.
- AMOS Triangulation.
- EST W.W. POLE AND SLATS Six paces back of bluff line and 14 paces W of road. Signal marked by stand. disc set in cement and rocks at base of pole.
- FIE W. W. On prominent sharp point . signal is directly above the HW line (elev. 20') Marked by ten penny nail set in cement.
- GAB W. W. On face of peak of rock projecting above bluff line. Concrete culvert under road just back of signal. Signal marked by stand. disc set in cement at top of rock.
- HIS POLE AND SLATS On sand beach south of Salmon Creek. At edge of line of grass and dunes. The signal is built against the 7th post of a barb wire fence. A triangle of 12 small nails was driven in post.
- TANK BLACK WATER TANK Cut in by triangulation.
- ISM POLE AND SLATS A large chest and small boxes filled with sand brace signal. A 1x6 pine board was nailed on fence 77 paces -00- with MOAN. Board marked by triangle of 12 nails.
- JIM POLE AND SLATS Pole nailed to $2\frac{1}{2}$ ' length 6f 12"x12" buried in sand and braced by 2 boxes filled with sand. A stake projecting 2', marked by triangle of nails set 40 paces back of signal in range with MOAN.
- KID LOG AND SLATS Signal built around an upright log 4ft long by $2\frac{1}{2}$ ft in diameter. Stake marked by triangle of nails set 31 paces back of signal in range with SAND HILL2.
- LEX POLE AND SLATS Signal nailed to log 10ft long by 2ft in diameter. A stake marked by a triangle of nails set back of signal 64 paces in range with MOAN.
- MUG POLE AND SLATS Signal nailed to log 12ft x $2\frac{1}{2}$ ft in diameter. A stake was set back of the signal 41 paces in range with MOAN

- NUT POLE AND SLATS Signal nailed totlog 7 ft long by 2 ft in diameter. A stake marked by triangle of small nails was set 34 paces back of signal in range with MOAN.
- ON BAN. AND W.W. At the NW point of Bodega Head. A sandy bluff approx. 12 ft. high runs along NW side and near signal. Signal marked by stand. disc set in cement in rock embedded in ground.
- PIG TRIPOD Near highest part of NW corner of Bodega Head. Stand. disc set in rock and cement under signal.
- RAT W. W. Seven ft below bluff line on rotten granite bluff. Marked by nail set in cement projecting 1".
- SAM POLE AND BAN About 50 m. north of extreme NW point at entrance of small cove. near bluff line. Marked by stand. disc set in outcrop of rotten granite.
- TIP W. W. On face of large rock in pile of rocks on side of Hill. Marked by nail set in cement under the signal.
- HI TRIPOD AND W.W. On outcropping rocks at the highest part of Bodega Head. Stand Disc set in cement under signal.
- BAN. POLE AND BAN. Approx. 50 m. North of fence and at edge of bluff line. Stand. disc set in cement and rock at base of pole.
- NUB RED NUB Prominent reddash nub. Not marked.
- CON PEAK OF ROCK The highest point of a prominent cone shaped rock.
- TRI TRIPOD 150 m. south of small stream near bluff line. Marked by stand. disc set in cement under signal.
- RED WATER TANK Near deserted ranch buildings.
- LUG W.W. AT top of bluff. Bluff line at this point makes a 45° bend to SE for approx. 40 m. Marked by stand. disc set in cement above signal.
- KIM TRIPOD AND W.W. AT top of bluff. Stand. disc set in cement under tripod.
- JIT BAN. Double banner 12 ft. below bluff line on side of sandy clay bluff. Stake with triangle of 3 nails set 10 m. back of signal in range with the tip of Pt. Reyes.
- IT W. W. On face of rotten granite bluff. Stand. disc set in cement in center of signal.
- HAM BAN. Signal cloth streched between stakes., 30 ft. below top of bluff. A stake set back of signal in range with the left tangent of Bodega Rock, marked by 6 nails in triangle. Another stake 26

HAM (con.) paces E on range with Pt. Reyes tangent is marked by triangle of 3 nails.

GOD TRIPOD At top of bluff . Stake with triangle of 5 nails driven 2 m. back of signal in range with Dillon Beach houses.

FOP BAN. Nailed to bush at edge of bluff. Stand. disc set with cement in rock 1.5 m. back of signal in range with BODEGA.

ETA W. W. At end of narrow point. Ten penny nail set with cement in rotten granite marks signal.

DOG W. W. At end of a narrow point. A stake was driven 3 m. back of signal, marked by triangle of nails. A lone fence post marked by triangle of nails is about 50 m W. of signal.

CAT BAN. Nailed in a thicket of willow bushes. A larger willow tree back of signal and 12 ft below top of bluff was blazed with 2 triangles.

BE TREE SW'ly of several trees on beach.

AT TREE N'ly tree on bluff.

DUCK Duck BLIND Old duck blind.

BARN W'ly gable of barn.

TOW White water tower. Cut in by triangulation.

FLAG White flag pole in front of school house.

SIGN Small sign at top of mound.

VIM BAN. ~~50~~ paces E of end of dunes and brush on sand spit. Signal anchored by stakes. A Stake marked by a triangle of nails projecting 1' set 9' N of signal.

UP W.W.BOARDS White washed boards anchored by short log and can and boxes filled with sand. Stake projecting 1' marked by triangle of nails marks center of signal.

TAR The starboard half of an old skiff 15' long supported and anchored to 3 boxes filled with sand. Stake projecting 1' marked by triangle of nails marks center of signal.

SAP TRIPOD A 12' tripod constructed of assorted kinds of lumber and cloth. A stake marked with triangle of nails marks center of signal.

RAM BAN. A double banner on a 14' 2x4 anchored to stakes and 2 boxes and a small barrel filled with sand. No mark otherwise.

~~CHIM~~ CHIMNEY Stone chimney on house.

QUE ↗

PAT WINDMILL On side of hill below houses.

NED POLE AND SLATS A 12' 8x8 with slats anchored to stakes and sand filled boxes. Stand. disc set in cement slab in top of tin can, under signal.

MAN BOARDS A barrel and boards nailed to a 8' length of 10x10 anchored horizontally on beach by stakes. A round stake, 2" in diameter was driven 1' back of signal. Stake marked by triangle of nails in head of stake.

OUT Barn W gable of S'y of two large barns.

LAP W. W. AT top of bluff. Marked by stand, disc set in cement in crack in rock.

JAN Highest point of large pinnacle rock.

KIP W.W. On bluff 7' below top, on fairly loose brown rocks. Marked by nail set in cement.

IMP W. W. On face of rock about $\frac{3}{4}$ of distance from top of bluff to HW. Marked by a stand. disc set in cement at top of rock.

HOT White wash on a small rock with signal cloth fastened to stakes back of rock.

GUS BAN. At top of bluff. Stand disc set in cement at base of pole.

FIN BOARDS Nailed to last post of fence ending at bluff line. A triangle of nails was placed on a post 8' back of signal along fence.

Eat Highest point of a prominent rock.

COD Highest point of a prominent thumb shaped rock.

DED TRIPOD Constructed of fence rails., at top of bluff. A stand disc set in cement under signal.

BUN W.W. On face of bluff 20ft above HW. A stand disc set in cement under signal.

ABE W.W. At highest point of prominent rock south of Estero Beach.

MARKED TOPOGRAPHIC SIGNALS, SHEET "F" 1930.

- AX W.W. At the highest point of a large jointed rock. This rock is the inshore one of three large rocks and is easily recognized on account of its peculiar color and structure. It can be approached at $\frac{1}{2}$ tide and is fairly easily climbed on the south face.
- BUG W.W. On the face of a large flat rock at the top of bluff. Stand. disc set at top of rock at the SW corner.
- CAT W.W. Low on a yellow shale point. Best approached by following down backbone of ridge then to the N side of rocks out to signal. Stand. disc set in cement on NW face of signal.
- DOG W.W. At the top of a sharp rock, near the bottom of and the most prominent of a number of loose boulders at this point. Stand. disc set on top of rock.
- EVA W.W. On rocky outcrop below upper bluff line. Stand. disc set in cement above signal.
- FIG The highest point of a very prominent pinnacle rock.
- GUS W.W. On a braced fence post.
- HIP W.W. On a loose rocky backbone., A little below and in front of the highest part. Stand. disc set in cement at signal.
- IRA W.W. On outcrop of rock back from HW. Ten penny nail set in cement marks signal.
- BAG W.W. At the peak of the first sharp rocky backbone north of Stemple creek. The peak is reached over a lower sharp hogback. Stand. disc set in cement marks signal.
- KIP W.W. On rock joined to shore by a narrow sharp ridge. Stand. disc set in cement at top of signal.
- LAP W.W. About 25' below and 20 m. out and to S of a rounded clay nub. A ten penny nail set in cement marks signal.
- May The peak of the S'y of two prominent rocks.
- NO W.W. On a partially embedded boulder about half way between the upper bluff line and HW. The boulder is covered with grass and soil on two faces but is bare on face. Stand disc set in cement marks signal.
- PUP The highest point of prominent rock.
- QUR W.W. At the highest part of a rocky nub connected to the shore by a sharp backbone. Nail set in cement at the signal.
- RAM W.W. On large boulder in small depression at edge of bluff line. Nail set in cement at top of signal.
- SIR W.W. On rocky point approached over a sharp backbone. Stand. disc set in cement at signal.
- Tag The W gable of the NW house at Dillon Beach.
- UP The W gable of the SW house at Dillon Beach

VAN At the highest part of Sugarloaf Hill. A dark green patch of shrubery on top of a small dune. A stake projecting 1' was marked by a triangle of nails and driven in center of signal.

WAD and OX No traces will be found of these signals. They were pole and slat signals built on a very changing sand beach.

YID BAN. At the top of a low bluff. The signal was marked by a stake with a triangle of small nails.

ZEB The chimney of a lone shack near beach.

AMY BAN Nailed to log on beach. Triangle blazed in log.

RAD W.W. Low on a small dirt and rock point. Nail set in cement at signal.

DAM Sign on ridge.

CAN Duck Blind

ES White out house.

BAL W.W. On the face of an outcrop of rock projecting above the top of the bluff. An old stand, disc set in cement was found at the top of the rock.

ONE and TO Duck Blinds.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4593

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 AREGISTER NO. 4593State CaliforniaGeneral locality Northern California CoastLocality Timber Cove to Horseshoe PointScale 1:10,000 Date of survey June - October, 19 30Vessel Shore Party, Project No. 60, Combined OperationsChief of Party L. C. JohnsonSurveyed by James N. JonesInked by James N. JonesHeights in feet above H.W. to ground ~~XXXXXXXXXX~~Contour Approximate contour Form line interval 20 feetInstructions dated April 29, 19 30Remarks: This sheet joins T4508(1929) and runs south.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4594

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 B

REGISTER NO. 4594

State CaliforniaGeneral locality Northern CaliforniaLocality Dry Creek to Timber Cove Fort Ross and Vicinity
1:5,000Scale 1 : 10,000 Date of survey June - October, 1930Vessel Shore Party Project No. 60, Combined OperationsChief of Party L. C. JohnsonSurveyed by James N. JonesInked by James N. JonesHeights in feet above HW to ground ~~to top of rocks~~Contour Approximate contour Form line interval 20 feetInstructions dated April 29, 1930

Remarks:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4595

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 CREGISTER NO. 4595State CaliforniaGeneral locality Northern CaliforniaLocality ~~Russian River to Duncans Landing to Russian River~~
~~Andy, one mile south of Duncan Landing to Dry Creek~~Scale X 1 : 10,000 Date of survey June - October, 19 30Vessel Shore Party. Project No. 60. Combined OperationsChief of Party L. C. JohnsonSurveyed by James N. JonesInked by James N. JonesHeights in feet above HW to ground ~~XXXXXXXXXXXX~~Contour Approximate contour Form line interval 20 feetInstructions dated April 29, 19 30

Remarks:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4596

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 DREGISTER NO. 4596State CaliforniaGeneral locality Northern CaliforniaLocality Bodega Head and Vicinity
Batzen Americano, Bodega Bay to Andy 1 mile S of Duncan Lig.Scale 1:10,000 Date of survey June - October, 19 30Vessel Shore Party, Project No. 60, Combined OperationsChief of Party L. C. JohnsonSurveyed by James N. JonesInked by James N. JonesHeights in feet above HW to ground to ~~XXXXXX~~Contour Approximate contour Form line interval 20 feetInstructions dated April 29, 19 30

Remarks:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEYREG. NO.
4597

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 EREGISTER NO. 4597State CaliforniaGeneral locality Northern CaliforniaLocality Preston Pt.
Hamlet, Tomales Bay to Estero Americano, Bodaga BayScale 1:10,000 Date of survey June - October, 19 30Vessel Shore Party, Project No. 60, Combined OperationsChief of Party L. C. JohnsonSurveyed by James N. JonesInked by James N. JonesHeights in feet above HW to ground ~~XXXXXXXXXX~~Contour Approximate contour Form line interval 20 feetInstructions dated April 29, 19 30Remarks: This sheet makes a satisfactory junction with T 3840