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U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

AUG 30 1934

Acc. No. _____

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic | Sheet No. K.L.M. 6087
~~Hydrographic~~ | 6088
6089

State CALIFORNIA

LOCALITY

SAN CLEMENTE ISLAND

1933

CHIEF OF PARTY

Robert W. Knox H. & G. Engr.

T6088 Applied to drawing of Chart 5111

Mar. 8, 1935 - J.T.W.

T6087 Applied to drawing of Chart 5111

Apr. 30, 1935 - J.T.W.

T6089 Applied to drawing of Chart 5111

Apr. 30, 1935 - J.T.W.

25 J - 21, 1936
J.T.W.

Applied to Chart 5101 - May, 1936 R.M.Z.

Applied to Chart Comp 511P Sept 1939 J.T.W.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

AUG 30 1934

Acc. No. _____

REG. NO. 6087

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. 1933

REGISTER NO. 6087

State CALIFORNIA

General locality SAN CLEMENTE ISLAND

Locality NORTHERN PART

Scale 1:20,000 Date of survey August, 1933

Vessel Launch and Shore Party, California

Chief of party Robert W. Knox

Surveyed by John C. Mathisson

Inked by D. L. Ackland

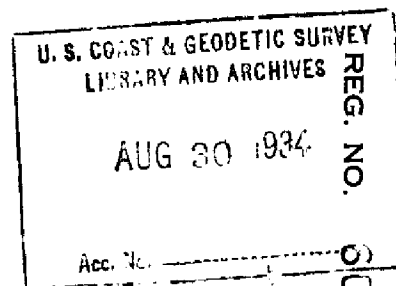
Heights in feet above M.H.W. to ground ~~to top of trees~~

~~Contour~~, Approximate contour, ~~Form~~ Line interval 50 feet

Instructions dated September 13, 1933

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



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, 1933

REGISTER NO. 6088

State CALIFORNIA

General locality SAN CLEMENTE ISLAND

Locality CENTRAL PART

Scale 1:20,000 Date of survey August & September 1933

Vessel Launch and Shore Party, California

Chief of party Robert W. Knox

Surveyed by John C. Mathisson

Inked by D. L. Ackland

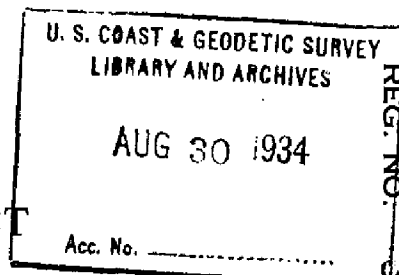
Heights in feet above M.H.W. to ground ~~to tops of trees~~

~~Contour~~ Approximate contour, ~~from the~~ interval 50 feet

Instructions dated September 13, 1933, 19

Remarks:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



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. 1933

REGISTER NO. 3083

State CALIFORNIA

General locality SAN CLEMENTE ISLAND

Locality SOUTHERN PART

Scale 1:20,000 Date of survey August and September, 1933

Vessel Launch and Shore Party, California

Chief of party Robert W. Knox

Surveyed by John C. Mathisson

Inked by D. L. Ackland

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

~~Contour~~, Approximate contour, ~~form line~~ interval 50 feet

Instructions dated September 13, 1933

Remarks: _____

DESCRIPTIVE REPORT
To Accompany
TOPOGRAPHIC SHEETS FIELD LETTERS K, L, & M, 1933
SAN CLEMENTE ISLAND
CALIFORNIA
AUGUST AND SEPTEMBER, 1933
ROBERT W. KNOX, CHIEF OF PARTY
SCALE 1:20,000

INSTRUCTIONS

The instructions for this project were dated September 13, 1933. This work was begun in accordance with telegraphic authority received prior to the date of the instructions.

INTRODUCTION

This report covers the Aluminum Topographic Sheets, Field Letters K, L, & M, surveyed during August and September, 1933. The general characteristics of the area covered by each of these three sheets are very similar. A combined report for all three is therefore submitted to avoid the repetition necessary if a separate report were submitted for each sheet.

The area covered by each sheet is as follows:

SHEET K Northwest portion of San Clemente Island.
SHEET L Central portion of San Clemente Island.
SHEET M Southeast portion of San Clemente Island.

GENERAL DESCRIPTION OF AREA

San Clemente Island is a rather long, narrow island off the coast of Southern California. It lies about fifty miles south of San Pedro and about the same distance west of San Diego.

The axis of the island lies in a northwest-southeast direction. The island is about nineteen miles long and about four miles wide at the widest part, which is near the southeast end. The maximum elevation, which occurs near the widest part and very close to the northeast side, is slightly over 1900 feet.

A mesa extends northwest and southeast from the highest part of the island. This mesa narrows toward the southeast and breaks into the ridge which forms Pyramid Point, the southeast tip of the island. Northwest of the highest part of the island this mesa loses elevation in a series of steps. A low saddle back of Wilson Cove has an elevation of 500 feet. From this point the mesa rises again to an elevation of 640 feet, then drops away to the northwest end of the island.

On the northeast side of the mesa the terrain breaks very sharply to the shore line. On the southwest side the slope is much more gradual and is broken by a series of benches, or possibly former sea beaches. Toward China Point the slope of the terrain is gradual.

There is a small mesa with a maximum elevation of 195 feet at the extreme west tip of the island. This mesa is separated from the main body of high land by a low strip, known locally as "The Isthmus", which extends southwesterly from Northwest Harbor to West Cove.

The entire length of the island on the northeast side is steep and rugged. The southwest side is broken by steep and broad canyons or arroyos, eroded in the slope of the mesa. Southeast of West Cove there is an extensive area of shifting sand dunes.

There are no prominent peaks or other features which would be of value as landmarks. Pyramid Head is probably the most prominent feature on the island. It is low and is visible only when approaching from the northeast or southwest.

Another less prominent feature is the saddle immediately south of Wilson Cove.

The beaches on the southwest side of the island are of gravel, rocks, ledges, and large boulders.

There are sand beaches in Northwest Harbor, West Cove, and Pyramid Cove.

On the northeast side of the island there is only a very narrow beach which is made up of boulders and gravel.

The vegetation is of the typically desert variety. Cholla cactus abounds on the southeast portion of the island together with the common broad leaf variety of cactus. There are some scattered patches of grass. Bur clover and Australian salt bush have been imported to provide grazing for sheep.

In a few of the arroyos there are occasional scattered clumps of deciduous trees, mostly ironwood and wild cherry.

About ten years before the date of this survey a rather extensive attempt at cultivation was made. A large area on top of the mesa was cleared and planted to barley, but because of the scant rainfall the return did not pay for the investment and the attempt has been abandoned.

The roads on the island are very crude and rough. The large, loose boulders, which abound on the island, have been removed, but no further construction work has been attempted. Three teams of horses hitched

to a heavy army type freight wagon are used to haul a load of one ton over the road from Wilson Cove to Pyramid Cove and Northwest Harbor.

There is a good pack trail from the above road to Mosquito Harbor.

At the time of this survey the entire island was under lease to the San Clemente Sheep Company and was being used as a sheep ranch. This company grazed about 10,000 head of well bred sheep on the island and 68 head of horses. This company also maintains a system of barbed wire fences, numerous tanks, and several concrete reservoirs.

Headquarters of the San Clemente Sheep Company are at Wilson Cove. The company was of great assistance in transporting signal building material, camping equipment, and drinking water. Without their assistance both the triangulation and the topographic survey would have required a much longer time to complete.

CONTROL

The original triangulation on San Clemente Island was executed in 1860-62, and supplemented by additional work in 1878. This triangulation was found to be entirely inadequate to control the plane table

traverses as only two stations were on the beach and very few were located where they were easily visible.

For the above reason, it was necessary to extend the triangulation throughout the length of the southwest side of the island.

It was very difficult to extend the triangulation on the northeast side due to the very steep slopes. Three figures were required to extend Δ CHIEF to a point 279 feet over the high water line. On the northeast side it was possible to obtain points on the beach in only three places, which resulted in the necessity of running long plane table traverses.

The triangulation in Pyramid Cove and on the south side of the island was executed by Charles Pierce in 1933, prior to the date of this survey.

SURVEY METHODS

The alidade was adjusted before the field work was undertaken.

Three and a half meter rods were graduated from a measured base so that longer half interval sights were possible along the traverses.

Standard methods were used in running and in adjusting the traverses. Three-point fixes were possible

at several points along the southwest side of the island, and advantage was taken of this fact whenever possible.

Due to the scant control along the northeast side of the island it was necessary to end a traverse without a tie-in to triangulation. This point was located by a traverse on the next sheet. The error between the two positions for this point was adjusted on each sheet proportional to the length of traverse on that sheet. Because this method is irregular and not standard practice, unusual care was taken in running the traverse.

The above method was used on the northeast side of the island at the junction of Sheets K and L, and also at the junction of Sheets L and M. On the southwest side of the island both the above junctions were handled in the usual manner.

TRAVERSE DISTANCES AND CLOSURES

TRAVERSE	TRAVERSE DISTANCE (METERS)	CLOSURE (METERS)
Sheet K		
NORTH HEAD 1860-62 to DRIGGS 1933	3440	4
DRIGGS 1933 to FIN 1933	3705	5
FIN 1933 to SHELL 1933	1950	0
SHELL 1933 to ABALONE 1933	1750	6
ABALONE 1933 to RED 1933	1435	5
SAND 1933 to QUEEN 1933	4730	2
QUEEN 1933 to JOE 1933	3025	6
JOE 1933 to Common Point Sheet L	2530	0
Sheet L		
Common Point Sheet K to CLIFF 1933	1780	0
CLIFF 1933 to STEEP 1933	4110	9
STEEP 1933 to Common Point Sheet M	2510	0
RED 1933 to EEL PT. 1933	3640	9
EEL PT. 1933 to fix near ○ SKAN	3025	5
Fix near ○ SKAN to MAIL PT. 1933	1760	0
MAIL PT. 1933 to fix near ○ BRIG	2150	7
Fix near ○ BRIG to POINT 1933	3400	8

TRAVERSE DISTANCES AND CLOSURES (continued)

TRAVERSE	TRAVERSE DISTANCE (METERS)	CLOSURE (METERS)
Sheet M		
POINT 1933 to CANYON 1933	2900	8
CANYON 1933 to fix near O MUM	1770	6
Fix near O MUM to SEAL 1862	2840	0
Common point Sheet ^L K to fix near O BERG	6410	0
Fix near O BERG to PYRAMID PT. 1933	7770	22

All of the above traverse errors were adjusted by proportion.

NOTES ON INDIVIDUAL SHEETS

The following pages of this report contain notes on each of the several sheets. They are intended to supplement the information given above without duplication, and consist of such items as comparison with previous surveys and other items which can be handled more readily for each individual sheet.

The notes for each sheet have been typed as a separate unit.

Sheet K joins Sheet N, 1933 on the north in the vicinity of Northwest Harbor and Sheet L, 1933 on the south.

The original survey of this area, Sheet Registry No. 1526, was executed in 1878.

The delineation of the high water line as shown on this sheet agrees very well with that on Sheet No. 1526, surveyed in 1878. The agreement along the northeast side of the island is almost perfect. A few slight changes are noted along the southwest shore.

Most of the offlying rocks were verified, but three rocks shown on Sheet No. 1526 were not found. Two of these rocks are shown as rocks awash offshore from
○ BOX on Sheet 1526. The third is shown southwest of
△ ABALONE, 1933.]

The rocks in the vicinity of Castle Rock as shown on this sheet do not conform to Sheet 1526. The original survey probably used the sunken rock symbol to indicate breakers seen from the point to Castle Rock. These rocks have been carefully located and are shown accurately on this sheet.

Three rocks not charted by the survey of 1878 were discovered and are shown on this sheet. One, a rock awash, is about 250 meters northeast of Castle Rock. This rock is important as it lies just

*These rocks are carried forward
See Review T6087 also Review H5475*

outside of the edge of the kelp. ^{*} A second rock lies on the southwest side of the island, just offshore from \odot BAS. The third location is that group of rocks close under the point on which \odot CLIFF is located, on the northeast side of the island.)

Tide data was forwarded to the office before this sheet was inked. For that reason it was not available for reduction, and the notations on some rocks have therefore been left in pencil on this sheet. It is requested that the necessary reductions in such cases be made in the office.

In the vicinity of Wilson Cove and in the area where fences are shown, the curves of equal elevation were drawn by the undersigned. Other elevations and curves of equal elevation were secured by a supplemental party under P.M.Scott. The work by P.M.Scott was done on a separate projection and was transferred to this sheet at a later date.

The curves of equal elevation should be classed as approximate contours. The elevations are within two or three feet of the true height above mean high water.

The fences shown do not represent all the fences in the area of this sheet. The circular section is a wire fence corral.

* These rocks were located on T.152C (1878) and is not a newly discovered rock

Sheet L, 1933 joins Sheet K, 1933 on the north and Sheet M, 1933 on the south.

The original survey of this area, Sheet Registry No. 1526, was executed in 1878.

Comparison of this sheet with Sheet No. 1526 shows a large discrepancy in the high water line on the northeast side of the island. This discrepancy reaches a maximum near ~~MA~~ ^A STEEP, 1933, where the survey of 1878 shows the high water line about 218 meters offshore from the true position as determined by this survey. From this point the discrepancy diminishes gradually in both directions. At a distance of about one and a half miles, both in a northwesterly and a southeasterly direction from the maximum point, the high water line shown on Sheet 1526 coincides with that determined by this survey, although the small points on the survey of 1878 are displaced slightly to the southeast from the locations given on Sheet L, 1933.

In general the high water line as shown by the survey of 1878 agrees very well with that determined by this survey. The most important difference is in the high water line of the cove just south of Eel Point. The south point of this cove is shown on Sheet 1526 about 120 meters north of the location as determined by this survey.

A sunken rock in the center of this cove, not shown on Sheet 1526, was located and charted by this survey.

The location of rocks in Seal Harbor, and the north point of that harbor, show an excellent agreement between the two surveys.

Most of the offlying rocks and reefs shown on Sheet No. 1526 were verified by this survey, but sometimes in slightly different positions.

The survey of 1878 shows a rock on the southwest side of the island about 240 meters south of
⊙ TAB. This rock was not found.

Two rocks not shown by the survey of 1878 were located and charted. Both are on the southwest side of the island, one about 190 meters south of

⊙ PIN and the other about 260 meters west of ⊙ SLO. There are also numerous rocks awash in the latter location which were not charted by the previous survey.

The offlying rock in Seal Harbor is a large rock ledge bare a low water with only a small head visible at high water.

Pencil notes on three rocks shown on this sheet give the amount of rock above water at the time of the survey. It was impossible to reduce these, as the tide

data had been forwarded to the office before this sheet was inked. It is therefore requested that these rocks be reduced in the office.

The U.S.Navy Emergency Landing Field is shown on this sheet. The elevation in the vicinity of this field is approximately 840 feet.

The curves of equal elevation shown on this sheet should be classed as approximate contours. The elevations shown are within two or three feet of the accurate elevation above Mean High Water.

These elevations and approximate contours were determined by a supplementary topographic party under P.M.Scott, a civilian employee. This work was done on a separate projection and the result transferred to this sheet.

This sheet joins Sheet L, 1933 on the northwest and Sheet N, 1933 in the vicinity of Pyramid Cove on the south.

The original survey of this area, Sheet Registry No. 1526, was executed in 1878.

In general the comparison with the former survey showed very good agreement. Several slight discrepancies were noted in the delineation of the high water line. More serious discrepancies were noted in the location and delineation of offlying rocks.

The greatest difference in the location of the high water line occurs on the southwest side of the island between \odot BIR and \odot TRI. The survey of 1878 shows an indentation in this locality with no point in evidence.

The old survey shows rocks to the northwest of this locality. The only rocks in this vicinity charted by the present survey lie directly off the point. This discrepancy is believed to be an error in the survey of 1878.

A majority of the offlying rocks along the southwest side of the island, as shown on Sheet 1526, were verified by this survey, although in slightly different locations. The group of rocks shown by the

survey of 1878 west of ○ MUM, was not found.

On the northeast side of the island this survey finds the high water line in a position different from that given by the survey of 1878. This difference reaches a maximum near △ SKEETER, 1933, at which point the survey of 1878 shows the high water line 70 meters northeast of the position determined at this time.

The points northwestward from △ SKEETER, 1933 show fair agreement. Southeastward from △ SKEETER, 1933 the points show a gradual northwestward displacement on Sheet No. 1526, reaching a maximum at the rocky point on which ○ REEF is located. At this point the displacement is about 90 meters.

The delineation of the high water line in this area agrees fairly well. The bight which forms Mosquito Harbor has filled in considerably since 1878. This is probably due to deposit of material from erosion of the hills.

The offlying rocks in the above locality were verified. Two offlying sunken rocks shown on Sheet No. 1526 were not found. One of these rocks was shown on Sheet No. 1526 at a point approximately 110 meters northeast of ^{Gas?} ○ GUS and the other southeast of the rock awash near ○ SPOT. The existence of these rocks is doubted.

The lines of equal elevation on this sheet should be classed as approximate contours. They were located to revise the topography of the area as shown on Sheet No. 1526. The elevations were taken from rod shots from the three-point fixes in the higher topography and are correct within two or three feet.

The survey to determine these elevations was executed by a supplemental party under P. M. Scott, a civilian employee. After the completion of the survey the data was transferred to this sheet.

LANDMARKS

For a list of landmarks for charts in the area covered by these three sheets, see the descriptive report for Hydrographic Sheets Field Nos. S.C. 21 and 22.

GEOGRAPHIC NAMES

All the following geographic names are in common use by the inhabitants of the island and by fishermen using the adjacent waters.

SHEET K, 1933

CASTLE ROCK. So called because of its shape. This rock is also known as SHIP ROCK, but CASTLE ROCK is the more generally accepted name.

THE ISTHMUS. This name is applied to the low lying strip of land between Northwest Harbor and West Cove. Its use is universal among the sheep men on the island.

SHEET L, 1933

EEL POINT. This name is derived from the long, slender shape of the point when viewed from above. It is not a well established name. *Sp. Anguilla*

MAIL POINT. This name is in occasional use by the inhabitants of the island, but can not be said to be well established. *Sp. Correo*

SEAL HARBOR. The cove designated as SEAL HARBOR on the present editions of charts of this vicinity is properly named as great numbers of sea lions frequent the rocks during the breeding season. The cove, however, is an uncomfortable anchorage. Even during prevailing weather, it is difficult to effect a landing anywhere in the vicinity. It is therefore suggested that it be given less prominence on future editions of charts of the island.

SHEET M, 1933

CAPE HORN. The point to which this name applies is not prominent, but as the name is in common use by the inhabitants of the island, it is shown on the sheet.

Removed from sheet by order of Ch. of Dir. Charts. CLK

LOS ANGELES HARBOR. This name is in common use by the inhabitants of the island, and for that reason is shown on the sheet. The cove is worthless as an anchorage.

Do not chart because of confusion of name

WHITE ROCK. This rock lies close inshore, but is very prominent because of its color, which is caused by its being covered with the dung of birds. It is just offshore from the only spring of running water available on the

island during the dry months of summer.

PHOTOGRAPHS

The attached photographs are included in this report to show the type of topography and the character of the vegetation on the island.

The exact points from which these pictures were taken were not recorded, but the following list gives the approximate positions and a general description of the topographic features which appear in the photograph.

No.1 Secured from a point near Δ STONE, 1933 and shows the character of the topography on the northeast side of the island. (Sheet L, 1933)

No.2 Secured from a point near Δ UTE, 1933. The canyons eroded in the slope of the mesa are visible in the foreground. Δ POINT, 1933 appears in the background. (Sheet L, 1933)

No.3 Secured from a point near Δ UTE, 1933 This photograph shows Mail Point and Seal Harbor. (Sheet L, 1933)

No.4 This photograph shows the stone ruins near Δ BOULDER, 1862. Note the abundance of loose rock on the surface of the ground. (Sheet L, 1933)

No.5 This is a photograph taken toward the northwest from a point near Δ BLUFF, 1960. (Sheet L, 1933)

No.6 Secured from a point near Δ TOMB^b, 1933. Seal Harbor is just visible. (Sheet L, 1933)

No.7 Secured from a point near Δ STONE, 1933 and shows the character of the topography to the northwest. (Sheet L, 1933)

No.8 This is a view of Wilson Cove taken from the south. (Sheet K, 1933)

No.9 Secured from a point near Δ ARIZONE, 1933. It is taken looking toward the south and shows the depth of the canyons eroded in the south slope of the island. (Sheet L, 1933)

No.10 This was secured from the high mesa. It shows the steps, or former sea beaches, on the south slope of the island.

No. 11 This is a photograph of Δ THIRST, 1960, showing the station as recovered after seventy-three years. The center pole is redwood. (Sheet M, 1933)

No. 12 This is a photograph of a pack-horse and shows the character of the roads on the island.

No. 13 A photograph of a typical recovery
of an old station. Rock cairns were used to mark
all of the stations. They were found intact.

INKING

These sheets were inked by a civilian
draftsman under the direct supervision of the
undersigned. After completion each sheet was checked
to see that all detail had been inked.

John C. Mathisson
John C. Mathisson
Jr. H. & G. Engineer
U.S. C. & G. Survey


Forwarded approved

Robert W. Knox
Robert W. Knox
H. & G. Engr.
Chief of Party

VERIFICATION REPORT
SHEETS K, L, & M, 1933
SAN CLEMENTE ISLAND
CALIFORNIA

I have reviewed the sheets covered by this report and have supervised the field and office work on the sheets in so far as it was possible without interference with the progress of the field work.

These sheets are hereby approved.


Robert W. Knox
H. & G. Engineer
Chief of Party

STATISTICS
SAN CLEMENTE ISLAND
CALIFORNIA

SHEET K, 1933

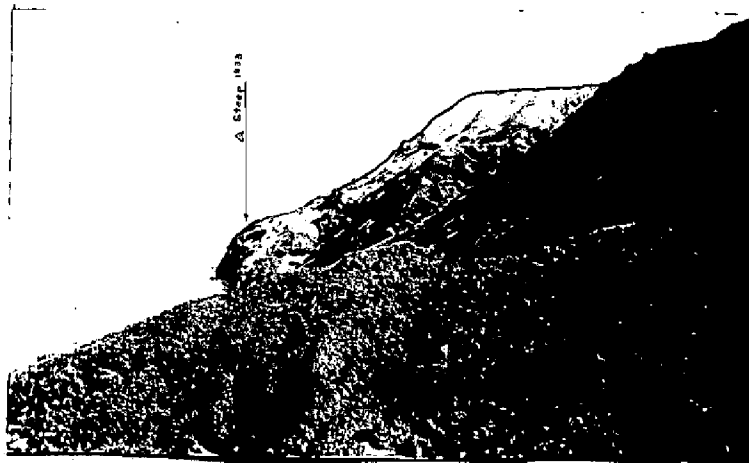
Statute Miles of Shore Line	13.1
Square Statute Miles of Area	9.5

SHEET L, 1933

Statute Miles of Shore Line	15.7
Square Statute Miles of Area	5.5

SHEET M, 1933

Statute Miles of Shore Line	13.1
Square Statute Miles of Area	5.5

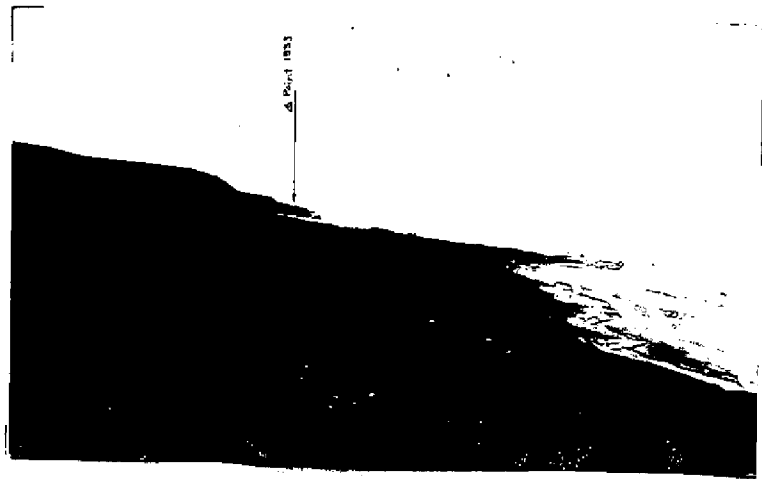


Lot 32-55
Long 118-28½

No. 1.

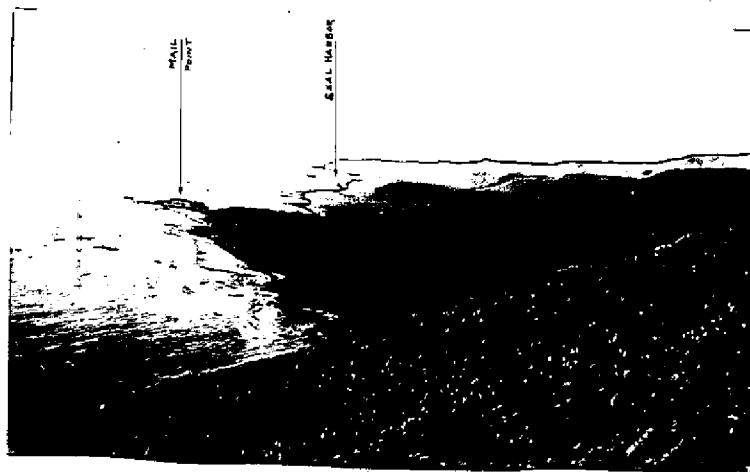
△ Stone

Lot 32-51
Long 118-30



No. 2.

△ UTE
looking at



Lot 32-53
Long 118-31

△ UTE
Mail Pt
Seal Harbor

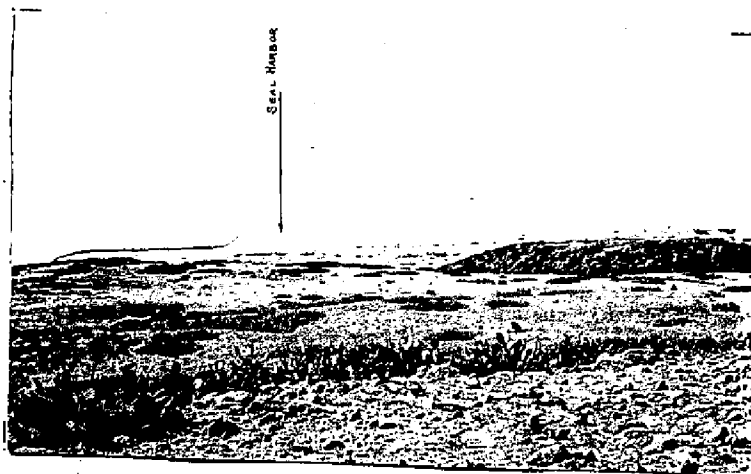
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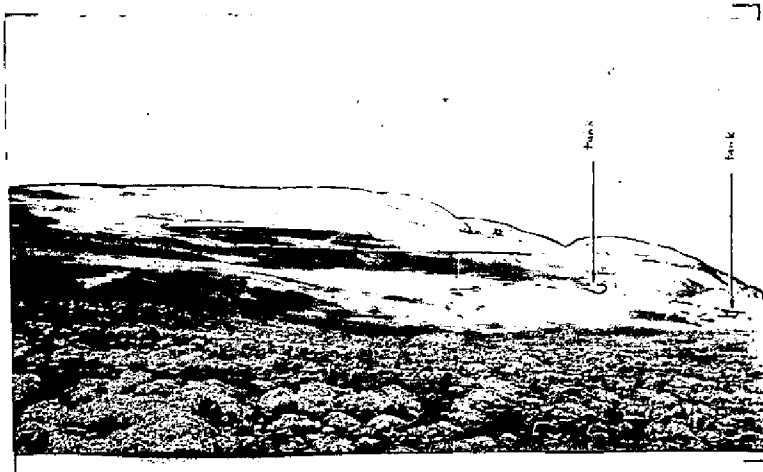
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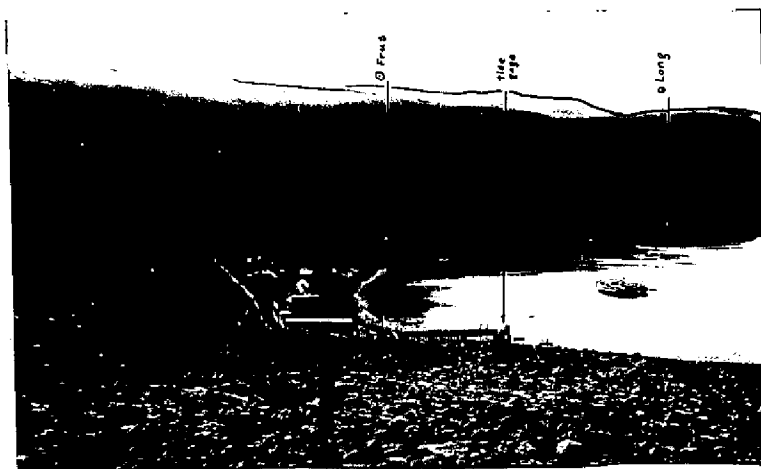
No. 5.



No. 6.



No. 7.



No. 8.

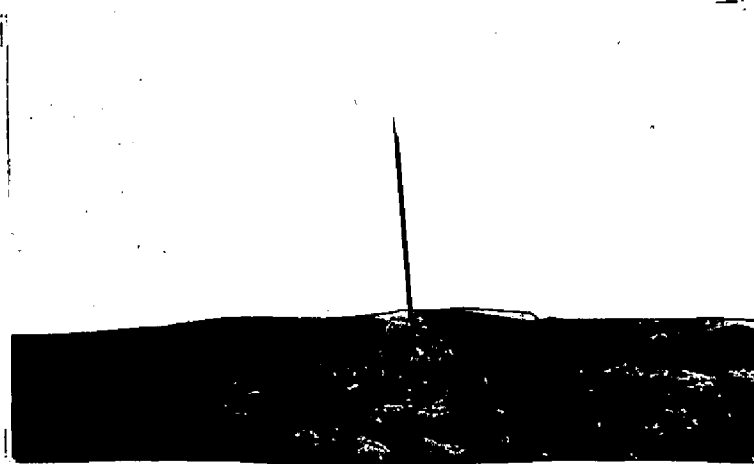
Wilson Cove



No. 9.



No. 10.



No. 11.



No. 12.



No. 13.

(M-136)

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6087 (1933)

San Clemente Island, Northern Part, California

Surveyed: August, 1933

Instructions dated: September 13, 1933 (R. W. Knox)

Plane Table Survey

Aluminum Mounted

Chief of Party - R. W. Knox.

Surveyed by - J. C. Mathisson.

Inked by - D. L. Ackland.

1. Condition of Records.

The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

The projection was checked and found to be satisfactory.

The records conform to the requirements of the Topographic Manual, with the following exceptions:

- a. Pencil notes regarding the amount which the rocks bared at the time of observation were reduced to MLLW by the Tide Division. These notes are now inked on the sheet.

2. Compliance with Instructions for the Project.

The survey complies with instructions. The survey would have been improved if elevations along the bluff tops had been obtained.

3. Junction with Contemporary Surveys.

Satisfactory junctions were made with T-4857 (1933) on the north and with T-6088 (1933) on the south.

4. Comparison with Prior Surveys:

a. T-1526 (1878).

The approximate contours were relocated on a part of the new survey. The new interval of 50 feet made comparison difficult because 40 foot contour intervals were used on the old survey. It appears that no special effort was made by the field party to tie the new contours at their limits into the old system. It is important to make the junctions in the field whenever possible.

The high water line of this survey is in good agreement with the present survey. A newly discovered rock awash was located in lat. $33^{\circ}02.25'$, long. $118^{\circ}36.55'$. Several rocks which are mentioned in the Descriptive Report as not found, were carried forward in red to the new survey, because it is considered there is insufficient evidence of their non-existence. (See Review of H-5475 (1933), par. 7a).

5. Field Drafting.

The field inking is good.

6. Additional Field Work Recommended.

No additional field work is necessary. However, attention is called to the uncompleted contouring on the new survey.

7. Superseding Old Surveys.

Insofar as the topography actually covered on the present survey is concerned, it supersedes the following surveys for charting purposes:

T-1526 (1878) in part.

8. Reviewed by - A. F. Jankowski, November, 1934.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

L. O. Pollock
Chief, Division of Charts.

F. S. Borden
Chief, Section of Field Work.

G. W. de
Chief, Division of H. & T.

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6088 (1933)

San Clemente Island, Central Part, California

Surveyed: August, September, 1933

Instructions dated: September 13, 1933 (R. W. Knox)

Plane Table Survey

Aluminum Mounted

Chief of Party - R. W. Knox.

Surveyed by - J. C. Mathisson.

Inked by - D. L. Ackland.

1. Condition of Records.

The projection was checked and found to be satisfactory.

The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance. The records conform to the requirements of the Topographic Manual with the following exceptions:

- a. Most of the offlying rocks awash have no elevation notes.
- b. Pencil notes regarding rocks which showed the time and amount bare were reduced to MLLW by the Tide Division and the reduced notes are now inked. It was necessary to change a rock bare at HW in lat. $32^{\circ}51.6'$, long. $118^{\circ}30.1'$ to a rock awash.

2. Compliance with Instructions for the Project.

The survey complies with the instructions. The survey would have been improved if elevations along the bluff tops had been obtained.

3. Junction with Contemporary Surveys.

Satisfactory junctions were made with T-6087 (1933) on the north and with T-6089 (1933) on the south. The junction of the new contours with the old is fair although there is an appreciable discrepancy in lat. $32^{\circ}52.5'$, long. $118^{\circ}29.5'$.

4. Comparison with Prior Surveys.

a. T-1529 (1878).

A comparison of this survey with the present survey along the southwest shore shows a very good agreement except in the vicinity of Eel Point where there is a discrepancy of about 120 meters. Discrepancies in offlying rocks were chiefly in positions except that a rock shown on the old survey in lat. $32^{\circ}51.7'$, long. $118^{\circ}30.3'$ was not found. This rock is not shown on either the old or the new hydrographic survey and it is considered an erroneous location of one of the inshore rocks. Newly discovered rocks are shown as follows: Sunken rock in lat. $32^{\circ}54.95'$, long. $118^{\circ}32.60'$, rock awash in lat. $32^{\circ}53.75'$, long. $118^{\circ}31.70'$, rock awash in lat. $32^{\circ}52.3'$, long. $118^{\circ}30.6'$.

Along the northeast shore there is a maximum discrepancy of about 220 meters in shoreline location. This difference is probably due to insufficient control on the prior survey.

5. Field Drafting.

The field inking is good.

6. Additional Field Work Recommended.

No additional field work is required. Attention is called, however, to the incompleting of the new survey.


7. Superseding Old Surveys.

Insofar as the topography actually covered on the present survey is concerned, it supersedes the following surveys for charting purposes:


T-1526 (1878) in part.


8. Reviewed by - A. F. Jankowski, December, 1934.

Examined and approved:

C. K. Green, 
Chief, Section of Field Records.


Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H. & T.

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6089 (1933)

San Clemente Island, Southern Part, California

Surveyed: August - September, 1933

Instructions dated: September 13, 1933 (R. W. Knox)

Plane Table Survey

Aluminum Mounted

Chief of Party - R. W. Knox.

Surveyed by - J. C. Mathisson.

Inked by - D. L. Ackland.

1. Condition of Records.

The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

The projection was checked and found to be satisfactory.

The records conform to the requirements of the Topographic Manual, with the following exceptions:

- a. The elevations of rocks awash and bare rocks are not shown in most cases.
- b. Recovered triangulation stations are shown by a triangle enclosed in a circle. The accepted method is to use triangles only.

2. Compliance with Instructions for the Project.

The survey complies with the instructions. The survey would have been improved if elevations along the bluff tops had been obtained.

3. Junction with Contemporary Surveys.

Satisfactory junctions were made with T-4857 (1933) on the south and with T-6088 (1933) on the north.

It does not appear that an effort was made to tie the new contours at their limits into those shown on the old survey T-1526 (1878). A comparison shows discrepancies up to 200 meters between corresponding contours.

4. Comparison with Prior Surveys.

a. T-1526 (1878).

A comparison of this survey with the southwest shore of the present survey shows good agreement except in lat. $32^{\circ}50.3'$, long. $118^{\circ}28.3'$ where the old survey was found to be in error. The offlying rocks were all verified in slightly different positions

except that no rocks were found by the present survey in lat. $32^{\circ}49.2'$, long. $118^{\circ}27.0'$. The Descriptive Report (see D. R. page 15, par. 6) states the fact and it is considered the rocks do not exist.

There is good agreement between this survey and the present survey along the northeast shore in regard to the delineation of shoreline but the old survey was found to be out a maximum of 70 meters in geographic location. This was probably due to insufficient control for the old survey. There are very few off-lying rocks along this shore and they are all verified on the present survey, with the exception of sunken rocks in lat. $32^{\circ}50.3'$, long. $118^{\circ}22.0'$ and in lat. $32^{\circ}52.4'$, long. $118^{\circ}24.8'$. They are not carried forward (see Descriptive Report page 16).

Mosquito Harbor has filled in considerably due to depositing of earth which is washed down from the hills (see D. R. page 16).

5. Field Drafting.

The field inking of the survey is good.

6. Additional Field Work Recommended.

No additional field work is required.

7. Superseding Old Surveys.

Insofar as the topography actually included on the present survey is concerned, it supersedes the following surveys for charting purposes:

T-1526 (1878).

8. Reviewed by - A. F. Jankowski, December, 1934.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

L. O. Polouin
Chief, Division of Charts.

T. B. Jordan
Chief, Section of Field Work.

G. W. de
Chief, Division of H. & T.