

4422

~~CONFIDENTIAL~~

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
E. Lester Jones, Director	
<div>C. &amp; G. Surv. L 4 APR 29 1929 Acc. 111</div>	
Hawaiian Is. State: <del>Territory of Hawaii</del>	
DESCRIPTIVE REPORT	
Topographic <del>Hydrographic</del>	Sheet No. B 4422
LOCALITY	
Necker Island,	
Territory of Hawaii.	
192 8	
CHIEF OF PARTY	
T. J. Maher.	

GOVERNMENT PRINTING OFFICE

DECLASSIFICATION BY NOAA  
PURSUANT TO DOC SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.3 (a), EXECUTIVE ORDER 12356

DESCRIPTIVE REPORT  
to accompany

TOPOGRAPHIC SHEET, FIELD NO. "B".

NECKER ISLAND, T. H.  
Scale 1/2500

DATE OF INSTRUCTIONS: March 26, 1928.

DATE OF SURVEY: June 9 and 12 - 16, 1928.

CHIEF OF PARTY: T. J. Maher.

TOPOGRAPHY BY: T. J. Maher and F. B. Quinn.

INTRODUCTION: Work was started on this sheet before the astronomic location of the island was determined. After the completion of the field work the position of station "Astro", and the azimuth from station "Magnet" to station "Bowl", were obtained from the astronomic party. This data was used to superimpose the projection on the topography, a north line being laid off through the astronomic station and the d.m. and d.p. of the station measured to the nearest intersection.

METHOD: A combination of plane table triangulation and plane table traverse was used to determine the relative positions of the peaks. The stadia method was used for rodding the shore line and details. Elevations were figured from vertical angles, and stadia distances.

The survey was begun on the shore line near signal "Bog". A rod reading was carefully taken to signal "Lit" and later checked back from signal "Lit". Cuts were taken to the flags on the peaks and to such hydrographic signals as were visible from the set-up.

The locations and elevations of signals "North" and "Magnet" were then determined, care being exercised to correct the sloping distance to horizontal. Both elevations and distances were checked from set-ups at the signals.

Signal "West" was located and its elevation determined by rod readings and vertical angles from both "North" and "Magnet".

The traverse was carried from signal "Magnet", to "Sta", to "Low", etc. as far as signal "Clif", cuts being taken at each set-up to the other peaks. From "Clif" the traverse was checked back to "Lit" through "Had".

Elevations were carried along with the traverse over the peaks and checked back to the water level near signal "Had". An additional check was obtained on each peak by a vertical angle to the starting point.

The rock east of signal "Clif", and signal "Rok" were located by cuts from various points on the island. Cuts to the tangents were taken to determine its extent, the easterly

end being estimated.

Approximately 1550 meters of the high water line southwest of Summit Hill was impassable and had to be sketched.

Difficulty was experienced in getting from one place to another on the shore line, it being necessary at times to climb up the hills and down again to go ahead a few meters. The footing was uncertain on the side hills. At one place the man carrying the table lost his footing on a loose rock and rolled quite a distance down the slope. The sheet was removed after most of the set-ups, and the board taken off the tripod much of the time.

Declination settings were taken on nearly all of the peaks and appear in a group on the sheet. The apparent variance of the one taken at "Bowl" may be due to ore in the rock which at this spot is loose lava of a reddish tint. It was apparently built up in a cairn by people of an earlier day.

Numerous elevations were taken to assist in plotting the approximate contour lines.

The traverse, the north and west shore lines, the elevations of peaks, the contours on "Northwest Cape" and those east of signal "East", and the detached rock off the east end of the island were obtained by F. B. Quinn. The south shore line from signal "Out" to signal "Was", and the contours from the west end of the island to signal "East" were obtained by T. J. Maher.

**GENERAL DESCRIPTION:** The island is approximately 0.7 of a mile long in an East and West direction and about 0.1 of a mile wide at its widest part. It is made up entirely of lava rock, and has a very sparse growth of weeds on the westerly slopes of Summit Hill and Flagpole Hill. This is the only vegetation. The island is inhabited by thousands of sea birds that live entirely on fish.

The highest peak is Summit Hill with an elevation of 277 feet. Next comes Bowl Hill with 262 feet, and third Annexation Peak with 249 feet. When first sighted from the North and Northeast, Annexation Peak appears as a detached island, due to the lower elevation of Flagpole Hill. The small rock east of the island is about five feet in elevation, and is only noticeable at a short distance.

Most of the peaks have so-called temples. They are merely rocks stood on edge, and in some cases leveled or terraced areas. They are believed to be places of worship built by people of Hawaiian or Polynesian extraction of an early age.

The best landing place found by this party is the point on the westerly end of the island marked by the landing boom. The bay on the north is unprotected from the prevailing northeast wind.

**GEOGRAPHIC NAMES:** The names lettered in black ink were obtained from the survey by the "Tanager" Expedition of the U.S. Navy in June, 1923. No new names were assigned.

STATISTICS:

Number of statute miles of shoreline = 2.4  
Number of square miles of area . . . = 0.1  
Number of days . . . . . = 6  
Number of men in party . . . . . = 3

Respectfully submitted,

*Francis B. Quinn*

Francis B. Quinn,  
Jr. H. & G. E.

Forwarded, approved.

*K. T. Adams*

K. T. Adams,  
Chief of Party.

*This survey conforms to the general and specific instructions and the work is adequate.*

*See season's report dated July 30, 1928 by J. J. Maher for photographs.*

*The name Northwest Cape was added to the sheet from Bishop Museum Bulletin 35.*

*E. P. Ellis, Dec. 2, 1929*

TOPOGRAPHIC POSITIONS on independent datum  
NECKER ISLAND

El. above mean tide level

SIGNAL	Latitude Longitude	D. M. D. P.	REMARKS.
122' NORTH	23 34 164 42	1425.8 (420.0) 502.8 (1199.1)	6 inch length of 1 inch pipe in cement.
NIX	23 34 164 42	1424.4 (421.4) 569.2 (1132.2)	(421) Rock with string tied on it.
IN	23 34 164 42	1368.5 (477.3) 554.7 (1146.7)	Rock at shore line.
SEE	23 34 164 42	1407.0 (438.8) 641.1 (1060.3)	Rock near H. W. line.
MTT	23 34 164 42	1371.1 (474.7) 644.4 (1057.0)	Small pole.
159' WEST	23 34 164 42	1368.7 (477.1) 648.2 (1053.2)	Triangulation mark set in cement.
BOG	23 34 164 42	1334.8 (511.0) 617.6 (1083.8)	Rock on shore line.
BUD	23 34 164 42	1247.6 (588.2) 623.4 (1078.0)	Boulder on shore line.
POLE	23 34 164 42	1173.9 (671.9) 755.4 (946.0)	Flag pole in large boulder.
249' STA	23 34 164 42	1172.8 (673.0) 758.1 (943.3)	Triangulation mark west of boulder.
OUT	23 34 164 42	1214.7 (631.1) 910.4 (-----)	6 inch length of 1 inch pipe set in cement.
TOM	23 34 164 42	1189.6 (656.2) 855.0 (-----)	Whitewash.
NUB	23 34 164 42	1153.6 (692.2) 484.5 (1216.9)	Sharp rock 35 ft. above H W line.
OFF	23 34 164 42	1009.7 (836.1) 591.7 (1109.7)	Detached rock.
167' LOW	23 34 164 42	1048.4 (797.4) 522.9 (1178.5A)	Triangulation mark cemented in rock.
277' TOP	23 34 164 42	993.7 (852.1) 318.2 (1383.2)	6 inch length of 1 inch pipe set in cement.
PIN	23 34 164 42	1116.3 (729.5) 284.0 (1417.4)	Sharp rock near water line.
11' LIT	23 34 164 42	1127.9 (717.9) 107.0 (1594.4)	6 inch length of 1 inch pipe in cement.
BIG	23 34 164 42	1101.4 (744.4) 103.2 (1598.2)	Large boulder
UP	23 34 164 42	926.0 (919.8) 179.5 (1521.9)	6 inch length of 1 inch pipe in cement.
262' BOWL	23 34 164 42	1043.2 (802.6) 96.8 (1604.6)	- as above -
HAD	23 34 164 42	1062.0 (-----) 1563.2 (138.2)	- as above -
241' EAST	23 34 164 41	1004.0 (-----) 1594.1 (117.3)	Rock cairn and triangulation mark.
MIK	23 34 164 41	935.8 (-----) 1576.1 (125.3)	6 inch length of 1 inch pipe in cement.
WAS	23 34 164 41	939.8 (-----) 1482.3 (219.1)	- as above -

- - SEE OTHER SIDE - -

# TOPOGRAPHIC POSITIONS

NECKER ISLAND (continued from opposite side).

SIGNAL	Latitude Longitude	D M D P	REMARKS
56 CLIF	23 34 164 41	980.8 ----- 1444.3 (257.1)	6 inch length of 1 inch pipe in cement.
ROK	23 34 164 41	977.1 ----- 1388.5 (312.9)	as above

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4422

TOPOGRAPHIC TITLE SHEET

~~CONFIDENTIAL~~

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. 4422

State Territory of Hawaiian Is.

General locality Necker Island

Locality Necker Island

Scale 1/2500 Date of survey June 9 & 12-16, 1928

Vessel Steamer GUIDE

Chief of Party T. J. Maher

Surveyed by T. J. Maher and F. B. Quinn

Inked by T. J. Maher and F. B. Quinn

Heights in feet above M.T.L. to ground ~~text of text~~

~~Contour~~ Approximate contour, ~~horizontal~~ interval 20 feet

Instructions dated March 26, 1928

Remarks: Latitude and longitude from astronomical observations of party of E. J. Brown. Azimuth by same party.

Applied to check 4/81 Aug 19, 1946. g K S.