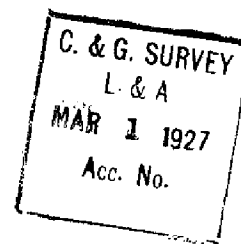
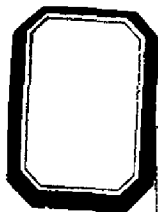


4242



Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Hawaiian Is.

11-5613

DESCRIPTIVE REPORT.

Topo. Sheet No. 5 4242

LOCALITY:

South end Niihau Island

1925

CHIEF OF PARTY:

Clem L. Garner

4242

affixed to chart 4181 Sept. 3, 1940 J.H.S.

DESCRIPTIVE REPORT

to accompany

Topographic sheet #5, South end Niihau Island, T.H.

0000 0 0000

Instructions to Chief of Party dated November 23, 1925.

LIMITS:

The topography on sheet #5 includes a detailed survey of the shore line of the south half of Niihau Island and connects with the shore line of the north half of the island.

In addition, this sheet includes the contours south and west of a line drawn from Latitude $21^{\circ} 52'$ N, Longitude $160^{\circ} 14'$ W, to Latitude $21^{\circ} 50'$ N, Longitude $160^{\circ} 11'$ W.

GENERAL DESCRIPTION:

The south end of Niihau Island is for the most part low and flat and slopes gently toward the sea. At the extreme south end of the island is Cape Kawaihoa, a rocky peak which rises to a height of 548 feet and is the most prominent landmark on this sheet. Kawaewae near the center of this sheet, is a low flat-topped hill 325 feet high and is covered with trees and cactus.

The shore line on the west side of the island is low, rocky, and full of indentations, except for the sand beaches shown, and varies in height from 0 to 50 feet. Landings may be made at various places on the west side of the island from April to September or during smooth weather. Around Cape Kawaihoa the shore line is rocky and rises almost vertically from the water's edge to the top of the peak. On the east side of the island the shore line is steep and rocky and landings cannot be made except in the bight just north of Cape Kawaihoa and then only in calm weather.

South of the stone wall shown on this sheet the interior of the island is sandy and strewn with rocks. North of the stone wall the land is grass covered. The whole area is used as grazing land.

INSHORE REEFS:

The only reef on this sheet is off Kuakamoka. This is a rock which is bare at all stages of the tide and is surrounded by several smaller rocks which are awash at time of high water.

LANDINGS:

The only commercial shipping point on this sheet is Nonopapa Landing situated on the west side of the island. This may be identified by the four buildings shown on this sheet. A small dock and a derrick for loading cargo are located here. Steamers of the Inter-island Steam Navigation Co. call here upon request. There are no stores or postoffices on the island. The principal products shipped from the island are cattle, sheep, wool, and honey. These are lightered out to the ships in whale boats.

STREAMS:

There are no streams on this island. Water is supplied by rainfall caught from the roofs of buildings, and from water holes which are supplied by rainfall and ground-water seepage. The island is entirely devoted to stock raising and production of honey.

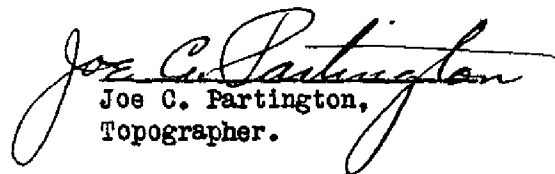
SURVEY METHODS:

A traverse was run from triangulation station SAND to triangulation station KAL closing with an error of 15 meters which was adjusted. From triangulation station KAL to triangulation station DERRICK a traverse was run which was occasionally checked by resection, closing with an error of 4 meters. A traverse was also run from triangulation station DERRICK to triangulation station HOA closing with an error of 40 meters which was adjusted. From triangulation station HOA to triangulation station BLUFF a combination of traverse and three point fixes was used closing on BLUFF with an error of 3 meters. From triangulation station BLUFF to the eastern limit of this sheet a traverse was run checking with three point fixes on triangulation stations HOA, BLUFF, and KAW whenever they were visible. The final position of the plane-table was determined by traverse and checked by a three point fix.


On the south end of Niihau Island contours were run using a 10 foot interval except on Cape Kawaihoa where a 50 foot interval was used. This work was done in cooperation with the U.S. Geological Survey, a party of which was working on the island at the time. Positions for this work were determined by traverse and by three point fixes and elevations were determined by vertical angles.

A list of plane-table positions and statistics accompany this report.

Respectfully submitted,


Joe C. Partington,
Topographer.

Approved and forwarded:


Clem L. Garner,
Chief of Party.

*Most of the line A Derrick-Bluff
the contours were transferred from
U.S. G.S. sheet, scale 31,680
C.L.G.*

LIST of PLANE-TABLE POSITIONS.

Object	Lat.	D.M. meters	Long.	D.P. meters	Height Feet	Remarks
Wall	21° 50'	³ (496) 1450	160° 14'	(227) 1495	10	End of stone wall
Rob	" 50'	(448) 1498	" 13'	(1284) 437	318	Pole signal on west side Kawaewae hill.
Stone	" 50'	(1586) 260	" 13'	(20) 1704	140	Large conspicuous rock
Lake	" 47'	(858) 990	" 14'	(1610) 112	30	Pile of whitewashed rocks.
Cairn	" 47'	(1615) 230	" 12'	(226) 1498	165	Cairn of rocks
So	" 46'	(109) 1736	" 12'	(543) 1176	50	Large detached pinnacle
Ho	" 47'	(1216) 631	" 12'	(1180) 538	30	NE corner of weather- beaten house.
Brick	" 47'	(1084) 762	" 12'	(1290) 450	50	South one of two large boulders.
Pi	" 48'	(1333) 510	" 11'	(542) 1181	50	Whitewash on rocky point.
Alt	" 50'	(1221) 624	" 10'	(752) 967		Whitewash on rocky point.

Statute miles of shore line	25.0
Square statute miles of area covered	17.1
Statute miles of roads	8.5

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 11-DEM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

April 25, 1927.

SECTION OF FIELD RECORDS

Report on Topographic Sheet No. 4242

Sound End of Niihau, Hawaiian Islands

Surveyed in 1926

Instructions dated November 23, 1925 (DISCOVERER)

Chief of Party, C. L. Garner.

Surveyed and inked by J. C. Partington.

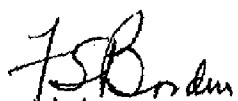
1. The records as well as the plan and character of the survey conform to the requirements of the General Instructions.
2. The plan and extent of the survey satisfy the specific instructions.
3. The junction with the adjoining sheet is adequate.
4. The sheet was inked by a member of the field party. The drafting is excellent except for the marsh symbol. The ruling should be horizontal instead of diagonal. There are several areas that appear to be salt marsh which are inclosed with dashed lines and the marsh area dotted instead of ruled. As this symbol is unknown it should have been indicated with a legend. When it is desired to distinguish between fresh and salt marshes, broken ruled lines should be used for the former and full ruled lines for the latter. Several vegetation legends are lettered on the sheet in pencil. They should have been inked.
5. The conditions attending the application to the sheet of the contours are not fully known in the office. A portion of them appear from the descriptive report to have been surveyed by the U. S. Geological Survey, and the balance by cooperation between that service and the Coast Survey. If it was possible to have obtained prints from the Geological Survey these should have been forwarded to the office in accordance with paragraphs 173 and 174 of the General Instructions instead of reducing them in the field. It is possible also that the Geological Survey work might have sufficed for all the interior details.

6. The legibility of the contours would have been increased if those on 20-foot intervals had been inked in a different color (preferably brown) from the 50-foot contours. It is not customary to show 10-foot contours on C. & G. S. surveys or charts and it is questioned if they were needed in this case.
7. No further surveying is required.
8. The character and scope of the surveying is excellent and the field drafting is good.
9. Reviewed by E. P. Ellis, April, 1927.

Approved:



Chief, Section of Field Records (Charts)



Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

4242

U. S. Coast and Geodetic Survey.

Register No. 4242

State . . . Hawaiian Is.

General locality . Niihau ~~Island~~

Locality South end of Niihau

Chief of party . . Clem L. Garner

Surveyed by . . . J.C. Partington

Date of survey . . July and August 1926

Scale 1:20,000

Heights in feet above . Mean high water

Contour interval 10 & 50 feet.

Inked by J.C. Partington Lettered by J.C. Partington

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: North of the line Δ Derrick - Δ Bluff the contours were transferred from U.S.G.S. sheet, scale 31,680.