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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

\_\_\_\_\_  
Superintendent.

State: N. J.

DESCRIPTIVE REPORT. See Rept# \_\_\_\_\_  
for positions

76 Sheet No. 13

LOCALITY:

Main N Coast

\_\_\_\_\_  
1913

CHIEF OF PARTY:

J. B. Miller

11-4645

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DEPARTMENT OF COMMERCE

Coast and Geodetic Survey

O. H. Tittmann, Superintendent

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HAWAIIAN ISLANDS

Maui Island, North Coast

Original Hydrographic Sheet No. 72

PAUWELA POINT TO PAUWALU POINT

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Surveyed in February 1913 by the party on the C. & G. Survey

Steamer PATTERSON

James B. Miller, Assistant, C. & G. S., Chief of Party

G. C. Mattison, Aid, C. & G. S., in charge of hydrographic party

Scale: 1: 20 000

Positions plotted by O. W. Swainson, Aid

checked by G. C. Mattison, Aid

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DEPARTMENT OF COMMERCE AND LABOR  
COAST AND GEODETIC SURVEY.

O. H. Tittmann, Supt.

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HAWAIIAN ISLANDS.

NORTH COAST OF MAUI ISLAND

A DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET NO. ~~72~~ FROM  
PAUWELA POINT TO PAUWALU POINT

Surveyed by the Steamer PATTERSON, February 7 to 12, 1913.

REPORT, LIMITS, METHODS, OBSERVER.

I have the honor to report as follows upon hydrographic sheet No. 72, which shows inshore hydrography along the northeast coast of Maui Island, Hawaiian Islands, between Pauwela Point and Pauwalu Point, executed by a party from the Steamer PATTERSON. The sounding was done in Launch No. 47, in charge of George C. Mattison, Aid, C. & G. Survey, and was all done with the hand lead. Lines were run at intervals of 1/6 mile and closer, depending on the character of the bottom and importance of locality. In the vicinity of Keanae Point, lines were run at intervals of 1/16th mile.

GENERAL DESCRIPTION.

The shore line is very steep, with occasional valleys. From an elevation of about 150 feet at Pauwela Point, the bluffs gradually increase in height until Keanae Cove is reached, where they have a maximum height of 450 feet. From there, the height decreases to 120 feet at Pauwalu Point. Back of the shore, it is mostly heavily wooded. Pauwela Point is marked by Pauwela Light House, and is a bold, rocky point 150 feet high. The small cove about 400 meters southeast of Pauwela Light is about 200 meters wide and has a pebble beach at its head. Kaulakulua Point, 1 1/2 miles east by south from the Light, has an elevation of 150 feet, and is a steep bluff of reddish color, which color is characteristic of the cliffs within 1/2 mile to the eastward.

Pana Point, 2 1/2 miles east of the Light, is a bold black headland, 140 feet high.

Uaea Bay, 3 miles from Pauwela Light, has steep shores on either side about 200 feet high. At the head, is a pebble beach.

Puale Cove has steep cliffs on either side, with a deep valley extending back from the head. A lone coconut tree and two or three small huts are just above the pebble beach at the head. Between this cove and Honopou, the cliffs, about 160 feet high, are dark colored.

Honopou Cove has, on either side, steep, rocky cliffs, 160 feet high on the northwest side, and 110 feet on southeast side. The derrick and warehouse are easily seen at the head of the bay. A small cliff rises just back of the pebble beach at the head of the bay.

Honekela Point is a steep cliff 200 feet high. A low, dark colored spit extends 200 meters off shore from the base of the cliff. The bay 3/4 mile

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south of Honokāla Point has steep, black shores with a pebble beach in the south end.

Huelo Point is a bold, black headland 300 <sup>feet</sup> meters high. 1/2 mile south of Huelo Point, is a small cove with a pebble beach. A fertile valley extends back from the head of the cove. Between here and Puola Cove, the shore line rises abruptly to an elevation of from 350 to 400 feet, forming steep, rocky cliffs. Several waterfalls are scattered along this part of the coast.

Puola Cove is a deep cove, with steep sides 300 feet high and at the head is a pebble beach. A fertile valley extends back into the island from the head. From this cove to the cove just west of Kalaloa Point, is a steep rocky cliff 300 feet high. At the head of the cove southwest of Makai Peak, is a pebble beach, while a deep fertile valley extends back from the cove. The cove just west of Kalaloa Point has a gravel beach at its head. Two or three coconut trees and a house or two are situated just inshore of the gravel beach.

Kalaloa Point is a steep, rocky cliff 420 feet high. The cove just southeast of this point has a pebble beach at its head, and a small coconut grove 100 meters inshore. The valley extending back is broad and deep. Just east of Keanae Point, is a pebble beach. Between here and Pauwela Light is a rocky cliff 120 to 160 feet high, broken by a valley 1/2 mile west of the light. Keanae Point is a low flat lava flow, inconspicuous from offshore, and covered by INSHORE DANGERS. mixed vegetation, and the houses of the town of Keanae.

About 300 meters north by west of Pauwela Light House are 3 low, flat, black rocks over which the sea usually breaks high with only a moderate swell, while at times breakers occur 100 meters outside of the outermost rock. A reef extends off Kaulakulua Point, but its character could not be determined, as heavy breakers occur 600 meters northwest of the point increasing in size and force as they near the point. Just off the entrance and 630 meters northeast from the head of Honopou Bay is a sunken reef, which usually breaks with only a small sea running. 630 meters east of the church at Keanae Point is a rocky shoal with a least depth of 5 fathoms. Many of the inshore dangers are not mentioned here, but are shown on the hydrographic and topographic sheets.

#### CHARACTER OF BOTTOM.

The bottom is rocky and irregular close inshore and sandy where the deeper soundings were taken. All the shoals are covered with coral of a yellow tinge. Vessels should keep at least 1/2 mile off shore when running along the coast.

#### ANCHORAGES.

One of the best anchorages on this side of the island for vessels of all sizes is Uaqa Bay. Anchor according to choice in from 12 to 15 fathoms, hard sand bottom. This anchorage is a most excellent one when a southerly wind is blowing. Puale Cove is a most excellent anchorage for launches and small vessels when the trade winds are blowing. Anchor in 4 or 5 fathoms, rocky bottom. Honopou Cove is a very poor anchorage when the wind or sea is from northeast or north. When a heavy swell is coming from the north, breakers on the outlying rock continue on into the cove increasing in size and force. The cove 1/2 mile south of Huelo Point is a good anchorage for launches and small boats at some times when the trade winds are blowing. Anchor in the small bight in south end in 3 fathoms of water, rocky bottom. In the little bight just west of Kapukeamani Point is an excellent anchorage for launches, especially when the trade winds are

blowing. Anchor in 3 fathoms, rocky bottom, about 50 meters from pebble beach. Opuola Cove is a good anchorage for launches sometimes when the trade winds are blowing. Anchor according to choice in from 3 to 6 fathoms. The small bight just inshore of Makai Peak is an excellent anchorage for launches when the trades are blowing. Anchor in from 3 to 5 fathoms, rocky bottom near head of bight. The cove between Keopuka Point and Kalaloa Point is another good anchorage for small boats when the trades are blowing. Anchor in 2 or 3 fathoms about 120 meters from beach at head of bight.

#### LANDING PLACES.

Puale Cove is a good landing place at most times. The pebble beach is fairly steep. At times when Honopou is unsafe, this beach is usually an excellent landing place. Honopou is very bad especially when the trade winds are blowing. The cove 1/2 mile south of Huelo Point is a good landing place at times when the trade winds are blowing, as is also Opuola Cove. The cove west of Kalaloa Point, is an excellent landing place when the ordinary northeast swell is running.

#### CURRENTS.

A current runs along the coast in an easterly direction. It is especially strong off Pauwela, Kanae and Pauwalu Points. Just west of all prominent points, there is a decidedly off shore current evidently caused by this easterly current.

#### STREAMS.

All of the streams are small, and none are navigable. Kanae is a small cluster of houses on Kanae Point, a low point 3/4 mile west by north from Pauwalu Light. There is a prominent lone cocconut tree and a stone church on the outer end of the point. On the west side of the point is a derrick for unloading from small boats. Conditions are bad for landing here, as the approach to the derrick is only a small opening between the rocks, 50 meters wide and as there is usually at least a 6 foot swell running, this place is not recommended as a landing. Kanae has weekly communication by steamer with Honolulu. The bottom is very foul and irregular within 100 meters of shore all around the point. 300 meters off the derrick is a rock about 15 meters across and projecting about 15 feet above the water. The depths around this rock vary from 5 to 9 fathoms. 150 meters off this rock and in range with the north end of the rock and the derrick is a submerged rock over which the sea breaks when a heavy swell is running. Evidently from 1 to 3 fathoms on it.

Respectfully Submitted,  
George C. Mathison,  
Aid, C. + G. S.

At Sea, Mar. 18, 1913.

Approved,

J. J. Miller

Asst. C. + G. Survey  
Chief of Party.

# 3515

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SHEET NO. "72"

Locality: Maui Island, T. H.

Date	Boat	Letter	Vol.	Hours	Positions	Sdgs.	Miles (stat)
(1913)							
Feb. 7	Launch 47	a	1	10.5	101	296	24.6
" 8	" "	b	1	6.0	56	129	9.4
" 10	" "	c	1	9.0	108	367	20.1
" 11	" "	d	1&2	10.5	123	340	14.4
" 12	" "	e	2	1.5	26	59	1.5
Mar. 7	Whaleboat	f	2		13	30	1.0
				37.5	427	1221	71.0

*8.4 Ag. mi.*

HHF  
July 11, 1913.

HYDROGRAPHIC SHEET 3515.

*CCG*  
*7/15/13*

Coast of Maui Island, Hawaiian Islands, by  
Assistant J. B. Miller in 1913.

TIDES.

Kahului  
Maui Island.

ft.

Mean lower low water, or plane of reference on staff,	3.0
Lowest tide observed " "	2.0
Highest " " " "	6.3
Mean range of tide,	1.6

Myd. Sheet # 3515\*

The sheet was plotted in the field, inked and verified in the office.

In a few cases angles were recorded wrong, e. g.  $\checkmark_b$ ,  $\checkmark_b$ , where there is enough evidence to show, that  $\checkmark$  should read  $67^\circ 00'$  instead of  $62^\circ 00'$  and  $31^\circ 27'$  instead of  $21^\circ 27'$ .

With the exception of the strip in the immediate vicinity of Keanac Point, the development of the area covered is far from being complete, especially, when the character of the bottom and the numerous dangers are taken into consideration.

x { In no case were the positions of the rocks, shown on the sheet, determined by angles or bearings, their location, in every case, having been obtained roughly by distance only. The entire work can only be looked upon as partly done.

J. P. Shklem

Nov. 6 - 1913.

P.S. Soundings plotted in fathoms.

x It should be noted that this is open coast work. *Dr. P. S.*

