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COAST AND GEODETIC SURVEY

O. Pittman
Superintendent.

State: *N. D.*

DESCRIPTIVE REPORT.

Top. Sheet No. *3441*

LOCALITY:

191

CHIEF OF PARTY:

3441

DESCRIPTIVE REPORT.

To accompany topog. sheet "L"; sta. Kipaepae to Keaiwa Cairn, Island of Hawaii.
Eoline R. Hand, Asst., Chief of Party

These limits embrace an important district: there is much more soil over the lava than over that shown on preceding West coast sheets, and in consequence, more vegetation, and more people. The coast is for the most part cliff line of varying height, and behind are alternate stretches of rough lava (aa) and smooth lava (pahoehoe) and covered, except close to the shore, with scant growth of grass and weeds, but offering ^{subsistence} to herds of cattle, with which the country is covered. As before, the higher and farther inshore, the more luxuriant is the vegetation. From one to two miles inside the coast, there is a wide band of sugar cane, extending from South of Naalehu to Pahala and beyond. This is controlled by two sugar companies, and the common boundary is in the vicinity of Hilea. The Hutchinson Sugar Plantation Co. has Offices at Naalehu and the mill is situated at Honuapo. the Hawaiian Agricultural Co. Office and mill is at Pahala.

From Kamehame N.E. to end of sheet the country is barren, except for infrequent grass patches. Below Pau Kulekole, in this area, is an interesting lava formation: the smooth lava has hardened in the process of pouring over high cliffs, presenting much the form of frozen waterfalls. Two water holes were also found in this area, in positions indicated on sheet, and they were found invaluable in the prosecution of the work.

The main Govt. belt road traverses this sheet, and passes through the towns of Naalehu, Honuapo, Hilea and Pahala. There is a general store at Naalehu, also a post office, and as previously stated it has the office of the Hutchinson Sugar Plantation Co. At Honuapo is the boat landing: there is a fine wharf, built up on slender rods to escape the action of the swells. The S.S. Mauna Loa of the Inter-Island Steam Navigation Co. makes this port every ten days, proceeds on to Punaluu, and returns, sailing for Honolulu via way ports. Hilea is only a plantation camp for the Hutchinson Co. At Pahala is a hotel and restaurant, a post office, a general store, and the mill and office of the Hawaiian Agricultural Co.

Punaluu is the last port of call for the Mauna Loa. It discharges freight here and takes on sugar from the Pahala mill. No passengers are taken from here: they must embark from Honuapo. there is nothing at Punaluu beyond a few cottages occupied by natives. Punaluu offers a better smallboat landing than Honuapo, being protected to a slight extent from the prevailing N.E. swell. There is an excellent beach at this place. There is no water piped down to wharf at either Punaluu or Honuapo.

Eoline R. Hand
Asst., U.S.C. & G.S.

LIST of POSITIONS

to accompany topog. sheet "E", sta. Kipaeapae to Kealiwa Cairn, Island of Hawaii.

Eoline R. Hand, Asst. Chief of Party.

Suggestions for offshore.

Name	♂	D.M.	λ	D. P.	Hel.	Description and symbols.
Next	19°		155°34'			See sheet K.
Grove	19°05'	254 1591	155°36'	329 1436	2125 unmarked	Centre of grove Eucalyptus trees tops some hills as a kapuna 2. Left tangent group, Aripooapae, and a kapuna 3 in range on bearing N 42 W (mag)
Wally	19°01'		155°34'		180	Paint on end stone wall.
Edge	19°02'		155°33'		200	" " edge cliffs below yellow soil.
Top	02'		33'		250	The highest point of land along cliffs: at edge of grass & above eroded bank about 25 m. above, and to right (S) of paint spot 0 "Edge". Shows up down coast.
Bur	02'		33'		160	Paint on end stone wall.
Cor	08'		33'		330	" " cliff corner: seen from Honuapoe wharf as head land.
Line	19°03'	93 1502	33'	670 1084	50-55	" many crossed lines. orient at Honuapoe.
Live	03'		33'		60	shack, one of 2 about 10 m. apart, most S. ly.
Spot	03'		33'		40-50	Paint " " edge cliff on N. side point.
Dan	19°04'		33'		65-70	" on a cliff edge cliff on S. side deep cove, & inside ledge of water line.
Woe	04'		33'		70	" many spots on lava outcropping.
Cum	04'		33'		90	" edge cliff S. side cove, and RR cut.
Cut	04'		33'		235	Centre of RR cut at track: highest part cliffs.
Ed	19°05'		33'		55	Paint (possibly spots) on cliff face at point bet. RR cut & wharf at Honuapoe.
Sugar	05'		33'			S. gable Sugar warehouse at Honuapoe.
School	05'		155°32'			School, br. yellow, N. E. of mill, Honuapoe.
Ruin	06'		32'			Paint on cairn at ruins old stone house.
Joe	19°06'		32'			" " highest rock at S. edge rough lava.
Hal	06'		155°31'			Low, long stone house at point: grass roof.
No	06'		31'			Paint: near shore, about middle smooth lava area.
Grass	19°07'		31'			Grass house, N. side cove, at junction smooth and rough lava.
Zoe	19°08'		31'			Paint on high rock.
Pun	19°08'		31'			" " cairn, with pole.
School	19°08'		155°32'		235	Govt school at Hilea: br. yellow, red roof: black water tank E. end, six windows on S. side arranged in two sets of three.
Hot	19°07'		155°31'			" " S. side narrow reach.
In	07'	557 1557	155°30'	1898 166	45	" " sharp pinnacle 25 m. inside: highest around. orient at same home.
Fit	07'		30'			"
Aug	07'		30'			" " well S. side entrance to bay S. of Punaluu.
Sew	19°08'		30'			College, white: shingler roof extends out, forming porch: faces sea.
Shed	08'		30'		45 1557	Shed, white: just 45 m. E. of Warehouse at Punaluu.
Sore	08'		155°29'			Paint on highest rock.
Lap	08'		29'			" " large, loose stones on smooth lava.
ILL	08'		29'			" " pile of water-worn stones on lava mound.
Big	08'		29'		55-65	Large whitewashed cairn.
Burn	08'		155°28'			Paint on smooth rock on flat lava, 10 m. back from edge cliff.
Wat	08'		28'			" " pile smooth rocks 25 m. inside edge cliff.
Drink	08'		28'			" " horseshoe wall of stones: water to drink in pit below.
Pig	08'		155°27'			" " rocks.
Bush	19°10'	329 816	155°32'	722 1031	2340 2000	Bush on highest part Pu Enuho Out. Identify as Pu Enuho, which is about 10 m. ENE.
Pur	19°09'		155°27'		55	Yellow hill: pyramid white cement at top: survey mark.
Ned	09'		27'		45	Sharp lava pinnacle.
Wet	09'		27'			Paint on small cairn: hot deep cove: fresh water at cove: see note on sheet.
Top	09'		27'		90	Large cairn on highest lava mound: paint on mound.
Vin	09'		155°26'			Paint, large circular spot, where lava pours over cliffs.
Vim	09'		26'		65	" " where cliff makes out to point.
Dip	19°10'		26'		75	" " on sharp lava top, resembling house gable.  at edge cliff.
Dig	10'		155°25'		40	A sharp cliff corner.
Sup	10'		25'			Paint ○
Rage	10'		25'			Large awash rock.
Hat	10'		25'		160	Prom shoulder: Paint, many Δs
Off	10'		25'			Awash rock.
Dil.	19°11'		25'			Sharp cliff point, where cliff turns in shore.
Rag	11'		25'			Paint on cliff point, whitened by salt spray.
Spug	11'		155°24'		30	" " "
Snag	11'		24'		70-75	Large lava mound, about 15 m. higher than surrounding flat lava. 
Pug	11'		24'			Paint on pile stones at sharp point.
Verd	11'		24'		160	Hill, green topped.