

## **APPENDIX A. SITES**

This appendix consists of two tables generated out of the ASMIS data base.

Table A-1 is a listing of all known sites in HAVO, with a brief description and bibliographic reference. It also identifies sites that are in the GIS database, the HAVO ASMIS number (if any), and the ahupua'a location based on Emory, Cox et al. (1959).

Table A-2 contains expanded information on selected sites from the ASMIS database (sites are marked with an asterisk in Table 1); only those sites in the database that have lengthy descriptions are included in this secondary table. The text in the last column ("Description") is extracted nearly verbatim from the ASMIS database, except for minor editing.



Table A-1. Inventory of HAVO Archeological and (Selected) Cultural Sites (note: burial sites removed).

Site No.	Name/description (modified from HAVO records)	ASMIS Description (in CAPS: ARC DBF DESC)* (in parentheses, added information)	InArc GIS DB	Reference	Condition (not complete)	Park ID (ASMIS)	Ahupua'a
05501	'Āinapō Trail	Narrow, single-file, twisting, occasionally abraded trail over lava fields; above 11,600 foot elevation; leads up broad SE flank of Mauna Loa to and along E side of Moku 'āweoweo*		NRHP form HAVO Dougherty 2004			Kahuku Kapāpala
05502	Kīlauea Crater	Summit of Kīlauea volcano has collapsed to form a broad, shallow caldera, within which is Kīlauea Crater; within Kīlauea Crater is Halema'uma'u Crater*		HAVO			Keauhou
05503	Puna-Ka'ū Historic District	The human occupation of the Puna/Ka'ū district, as nearly as can be determined, covers a span of nearly 600 years*		HAVO			multiple
05504	Mauna Loa Trail	Trail on lava that leads to the summit of Mauna Loa Volcano, with ahū		Glidden and Rivoli 2000 Dougherty 2004		HAVO-2003	Kapāpala
05505	Footprints Area	* FOOTPRINT IMPRESSIONS, PETRO	x	Moniz Nakamura 2003a			Kapāpala
05506	Whitney Seismographic Vault	*		HAVO		B-29	Keauhou
05507	Wilkes' Campsite	*	x	NRHP form McCoy 1988 Dougherty 2004		HAVO-2003-M-69	Kapāpala
05508	Old Volcano House	Old Volcano House					Keauhou
19248	Catchment Dump Site 19270 (Acc 354)	Historic trash dump*	x	Keswick HVASR			Keauhou
19429	Ainahou Ranch House	Ainahou Ranch House (also possible location of Keauhou Goat Ranch and Pogue House)	x	Keswick HVASR			Keauhou
19445	CCC Camp Foundations at Res Mgmt	*		Keswick HVASR			Keauhou
19446	1942 Ainahou Tank Foundation	1942 Ainahou tank foundation	x	Keswick HVASR			Keauhou
19447	Keauhou Landing	Complex of enclosures, walls, a rectangular cistern, walkways, stairs, and pahoe-hoe quarries, dating from late 1800s to the 1940s.*	x	Keswick HVASR			Keauhou
19448	Shed by Nene Pen and by 19446	3.15 x 3.83 m redwood storage shed, 3 m high	x	Keswick HVASR			Keauhou
19450	Lower Water Tank [Rusty Tank by Nene Pen: Excel]	Lower Water Tank	x	Keswick HVASR			Keauhou
19452	Ainahou Upp W. Tank #1	Ainahou Upper Water Tank #1	x	Keswick HVASR			Keauhou
19453	Ainahou Monster Tank	Ainahou Monster Tank	x	Keswick HVASR			Keauhou
19454	Ainahou Upp W. Tank #2	Ainahou Upper Water Tank #2	x	Keswick HVASR			Keauhou
19455	Steam Flats Dump 3900 (Acc. #356)	Historic trash dump*	x	Keswick HVASR			Keauhou
19456	Steam Crack Bath House	Historic structure	x	Keswick HVASR			Keauhou
19457	Ginger Patch Dump (Acc. #355)	Historic trash dump*	x	Keswick HVASR			Keauhou
19458	Headquarters' Crack Dump	Said to be the main dump site for the 1877 Volcano House and other buildings of the area*	x	Keswick HVASR			Keauhou
19459	CCC Water Tank Foundations	*	x	Keswick HVASR			Keauhou

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19460	House site complex	Enclosures, platforms, caves, fishermans shelter, salt drying areas, filled cracks, ahu, ca 17,000 petroglyphs. Permanently Sealed		Spears 1995		HV-198 HV-212 HV-225 HV-375 HV-376	Pānau Iki
19461	Palm Tree Site, Paliuli	House site, pre-Contact, post-Contact*	x	Smart et al. 1965 Glidden 2006	dest. by lava	HV-189 (A-E) HV-190 (A-C)	Lae'apuki Pānau Iki
19462	'A'a site	Caves, enclosures, terraces, petroglyphs (Wall and platforms; Smart et al. 1965)	x	Smart et al. 1965 Glidden 2006	dest. by lava	HV-194	Lae'apuki Pānau Iki
19463	Petroglyph Cave	Cave with petroglyphs and water collection*	x	Glidden 2006	dest. by lava	#360	Lae'apuki Pānau Iki
19465	1930s Power Plant	Structure, historic	x	Keswick HVASR			
19466	Salt Drying Areas	Eleven salt drying area and 13 other features. Destroyed*	x	Morlock, L.			
19467	Enclosure, cave	Enclosure, wall (Long wall and structures; Smart et al. 1965)	x	Smart et al 1965 Glidden 2006	dest. by lava	HV-194	Lae'apuki Pānau Iki
19468	Trail	Stepping stone trail that connects Sites 19462 and 19467 *		Emory, Cox et al.1959 Smart et al. 1965 Glidden 2006	dest. by lava	HV-194	Lae'apuki Pānau Iki
19469	Ag. features and ahu	Petroglyphs, ahu, agricultural complex MANY PETROS AND AHU; PETROGLYPHS (Cairns; Smart et al. 1965)	x	Smart et al. 1965 Glidden 2006	dest. by lava	HV-188 (A-H)	Lae'apuki Pānau Iki
19470	Ag. terraces	Mounds, terraces, petroglyphs MANY PETROGLYPHS (Cairns and terraces; agricultural strustures; Smart et al. 1965)	x	Smart et al. 1965 Glidden 2006	dest. by lava	HV-191	Lae'apuki Pānau Iki
19471	House site	Enclosure ENCLOSURE (House site; Smart et al. 1965) Permanently Sealed	x	Smart et al. 1965 Glidden 2006	dest. by lava	HV-187	Lae'apuki Pānau Iki
19472	House site w/ ag. features	Agricultural features; platform PLATFORM (Enclosure; Smart et al. 1965)	x	Smart et al. 1965 Glidden 2006	dest. by lava	HV-192	Lae'apuki Pānau Iki
19473	Long J-shaped wall	Long wall		Smart et al. 1965 Glidden 2006	dest. by lava	HV-194	Lae'apuki Pānau Iki
19474	Papalehau Cave	*		Waipa HVASR			
19475	Petroglyph Trail	13 petroglyphs along a worn trail MANY PETROGLYPHS (Enclosures; house site, shelter cave, petroglyph; Smart et al. 1965) [listed in Pānau Iki in ASMIS General] (HAVO-103 in ASMIS general, not located) Some permanently sealed?	x	Glidden 2006	dest. by lava		Lae'apuki Pānau Iki

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20414	C-shape and pavement	C-shape, papamu CSHP	x	Glidden 2006	dest. by lava	T101 T229	Lae'apuki Pānau Iki
20415	C-shape	C-shape in a lava bubble SHELTER	x	Glidden 2006	dest. by lava	T103	Lae'apuki Pānau Iki
20416	petroglyph	PETROGLYPH	x	Glidden 2006	dest. by lava	T104	Lae'apuki Pānau Iki
20417	C-shape	C SHAPE, PITS	x	Glidden 2006	dest. by lava	T105	Lae'apuki Pānau Iki
20418	petroglyphs	Four petroglyphs PETROGLYPHS	x	Glidden 2006	dest. by lava	T106+	Lae'apuki Pānau Iki
20419	Cupboard; petroglyph	Cupboard and Petroglyph PETROGLYPH	x	Glidden 2006	dest. by lava	T108 T138	Lae'apuki Pānau Iki
20420	Enclosure, J-shaped wall	Walls, enclosures L SHAPE, ENCLOSURE, TERRACES	x	Glidden 2006	dest. by lava	T109 T110	Lae'apuki Pānau Iki
20421	Enclosure	Enclosure TERRACE, PETROS, C SHAPE	x	Glidden 2006	dest. by lava	T111	Lae'apuki Pānau Iki
20422	C-shape, terrace, petroglyphs	C-shape, terrace, petroglyphs AHU	x	Glidden 2006	dest. by lava	T112+	Lae'apuki Pānau Iki
20423	ahus	Ahu	x	Glidden 2006	dest. by lava	T113	Lae'apuki Pānau Iki
20424	enclosures, petroglyph	Enclosure, petroglyph PETROGLYPH, +	x	Glidden 2006	dest. by lava	T119+	Lae'apuki Pānau Iki
20425	C-shape	C-shape L SHP	x	Glidden 2006	dest. by lava	T122	Lae'apuki Pānau Iki
20426	Mound	Mound CBL\BLDR MOUND	x	Glidden 2006	dest. by lava	T123	Lae'apuki Pānau Iki
20427	C-shape	C-shape SHELTER	x	Glidden 2006	dest. by lava	T125	Lae'apuki Pānau Iki
20428	Terrace, wall	Terrace WALLED STRCT	x	Glidden 2006	dest. by lava	T126 T128	Lae'apuki Pānau Iki
20429	C-shape	C-shape	x	Glidden 2006	dest. by lava	T127	Lae'apuki Pānau Iki
20430	Wall	L-shape L SHP	x	Glidden 2006		T131	Lae'apuki Pānau Iki
20431	C-shape	C-shapes C SHAPE	x	Glidden 2006		T132	Lae'apuki Pānau Iki
20432	cave	Cave CAVE	x	Glidden 2006		T133	Lae'apuki Pānau Iki
20433	Terrace, enclosure	Terrace, enclosure TERRACE	x	Glidden 2006		T134 T135	Lae'apuki Pānau Iki
20434	T143 and T144a,b,c petroglyphs	Four petroglyphs PETROGLYPHS	x	Glidden 2006	partially dest. by lava	T143	Lae'apuki Pānau Iki
20436	Agricultural complex	Agricultural mounds and related features MANY AG MOUNDS	x	Glidden 2006	dest. by lava	T102+	Lae'apuki Pānau Iki

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20439	Filled cracks, mounds	Filled cracks, mounds		Glidden 2006		T375-T380	Lae'apuki Pānaui Iki
20440	Filled cracks, mounds	Filled cracks, mounds		Glidden 2006	partially dest. by lava	T381+	Lae'apuki Pānaui Iki
20441	Filled cracks, mounds	Filled cracks, mounds		Glidden 2006	dest. by lava	T383+	Lae'apuki Pānaui Iki
20443	Kalapana Trail	Trail illustrated on 1912 Territorial survey map as extending east/southeast from Keauhou Ranch Road to the Puna coastline* MOUNDS, BENCHMARK +	x	Emory, Cox et al. 1959 Glidden 2006 Dougherty et al. 2004b Kirkendahl 1993a		HAVO-2002-B-33	Lae'apuki Pānaui Iki
20750	Petroglyph Cave	(Shelter cave, petroglyphs; Smart et al. 1965)	x	Smart et al. 1965 Stasack		HV-076	Keauhou
20874	Lava Plastered Cone Trail	Trail	x	Waipa HVASR			
20875	Hot Cave Trail			Waipa HVASR			
21146	Enclosure	Very large enclosure*		Smart et al. 1965 Keswick HVASR		HV-196	Lae'apuki (Pānaui Nui)
21215	Pulu Factory	Mid-late 1800s, timbers and walls*		Glidden 1998 Glidden and Rivoli 2000		HV-377	Pānaui Nui
21230	Jim's Pen complex	Jim's Pen complex by Ke'āmoku Flow		Keswick HVASR			
21276	Rainshed Crack Dump	Historic dump in large volcanic crack, approx. 10 x 200 m; 1877 Volcano House (current Volcano Art Center) located about 100 m to SE	x	Keswick HVASR			Keauhou
21316	Coastal Trail through SDA (19,466)	Coastal trail*		Abrams, S.?			
21353	Namakani Paio Crack Dump	Historic dump in a geological crack; just W of cabin # 1 in the Namakani Paio Campground	x	Keswick HVASR			Keauhou
21676	Terrace (Fea. 10)			Glidden et al. 1998			Pānaui Nui
21677	C-shape (Fea. 55)	C-SHAPE	x	Glidden et al. 1998			Pānaui Nui
21678	Cave (Fea. 61)	Cave with midden*  CAVE	x	Glidden et al. 1998			Pānaui Nui
21680	Cave (Fea. 86)	North-south oriented cave; relatively small; interior contains rock mound, with octopus lure, sea urchin spine and kukui nut shell fragments CAVE	x	Glidden et al. 1998			Pānaui Nui
21681	Terrace	TERRACE	x	Glidden et al. 1998		Feature 180	Pānaui Nui
21682	Caves	Cave with north section that ends in a natural pahoehoe plug; kukui nut fragments in cave CAVES	x	Glidden et al. 1998		Feature 246? (Fea. 256a, 256b)	Pānaui Nui
21684	Cave (Fea. 283)	Cave contains goat bones, kukui nut fragments, sea urchin spines, shell midden, large chunks of charcoal; 80 m long, narrow with low ceiling CAVE	x	Glidden et al. 1998			Pānaui Nui
21685	Alignment (Fea. 348b)	Alignment		Glidden et al. 1998			Pānaui Nui
21686	Cave (Fea. 396)	CAVE	x	Glidden et al. 1998			Pānaui Nui

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21687	Walls (Fea. 413a and b)	WALL	x	Glidden et al. 1998			Pānau Nui
21688	Cave (Fea. 445)	CAVE	x	Glidden et al. 1998			Pānau Nui
21689	Cave (Fea. 481)	CAVE	x	Glidden et al. 1998			Pānau Nui
21690	C-shape (Fea. 504)	* MOUND	x	Glidden et al. 1998			Pānau Nui
21691		CAVE	x				Pānau Nui
21692	Cave (Fea. 514)	Entrance consists of a skylight with an approx. depth of 3 m, with weak pahoehoe edges; needs to be revisited with rappelling equipment in order to access it. CAVE	x	Glidden et al. 1998			Pānau Nui
21693	Cave (Fea 554)			Glidden et al. 1998			Pānau Nui
21694	Cave (Fea. 525)	3.6 m x 0.5 m stepping stone trail constructed of 4 pahoehoe slabs placed over the aa lava and running in northeast-southwest direction TRAIL	x	Glidden et al. 1998			Pānau Nui
21695	Trail (Fea. 584a and b) from Excel	10 x 0.5 m stepping stone trail constructed of 10 pahoehoe slabs placed over the aa lava and running in north-south direction. TRAIL	x	Glidden et al. 1998			Pānau Nui
21696	Hearth (Fea. 620)	Hearth	x	Glidden et al. 1998			Pānau Nui
21697	Ki Cave (Fea. 638)	Entrance is a collapsed skylight; cultural material includes large opihi shell, petroglyphs, wood fragments, and charcoal; rock mounds and petroglyphs outside of the cave CAVE	x	Glidden et al. 1998			Pānau Nui
21698	Ag. Area (Fea.#1-652)	Agricultural complex* MOUND, PITS, TRAILS, CAVES, ETC	x	Glidden et al. 1998 Dougherty et al. 2004a Dougherty et al. 2004b		HAVO-2002-B-23	Pānau Nui
21699	Cave (Fea. 1)	Shelter cave with some cultural material* CAVE	x	Glidden et al. 1998		Feature 1	Pānau Nui
21700	Trail (Fea. 2)	Trail* TRAIL, TRAIL CAIRNS	x	Glidden et al. 1998 Dougherty et al. 2004a Dougherty et al. 2004b		HAVO-2005-L-187	Pānau Nui
21701	C-shape (Fea. 4)	C-SHAPE	x	Glidden et al. 1998			Pānau Nui
21702	Cave (Fea. 12)	Cave with cultural material* ROCK SHELTER	x	Glidden et al. 1998		HAVO-2003-L-318	Pānau Nui
21703	Platform (Fea. 37)	PLATFORM	x	Glidden et al. 1998			Pānau Nui
21704	Cave (Fea. 38)	ROCK SHELTER	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003-L-249	Pānau Nui
21705	Petroglyphs (Fea. 49)	PETROGLYPH	x	Glidden et al. 1998		49	Pānau Nui
21706	Trail (Fea. 52)	TRAIL	x	Glidden et al. 1998		52	Pānau Nui
21707	Cave (Fea. 53)	Petroglyph cave*	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003-L-319	Pānau Nui

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21708	Wall (Fea. 59)	WALL	x	Glidden et al. 1998		59	Pānaui Nui
21709	Ahu (Fea. 87)	AHU	x	Glidden et al. 1998		87	Pānaui Nui
21710	Platform (Fea. 88)	platform*  PLATFORM	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003- L-330	Pānaui Nui
21711	C-shape (Fea. 89)	C-SHAPE	x	Glidden et al. 1998		89	Pānaui Nui
21712	Cave (Fea. 90)	CAVE	x	Glidden et al. 1998		90	Pānaui Nui
21713	Trail (Fea. 105)	Trail?		Glidden et al. 1998			Pānaui Nui
21714	Petroglyphs (Fea. 108)	PETROGLYPH	x	Glidden et al. 1998			Pānaui Nui
21715	Cave (Fea. 109)	PETROGLYPHS, SHELTER, CAVES	x	Glidden et al. 1998			Pānaui Nui
21716	Cave (Fea. 110)	ROCK SHELTER	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003- L-256	Pānaui Nui
21717	Cave (Fea. 120)	CAVE	x	Glidden et al. 1998		120	Pānaui Nui
21718	Terrace (Fea. 121)	TERRACE	x	Glidden et al. 1998		121	Pānaui Nui
21719	Cave (Fea. 122)	CAVE	x	Glidden et al. 1998		122	Pānaui Nui
21720	Platform (Fea. 123)	PLATFORM	x	Glidden et al. 1998		123	Pānaui Nui
21721	Enclosure (Fea. 130)	Enclosure*  ENCLOSURE	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003- L-384	Pānaui Nui
21722	Cave (Fea. 143)	ROCK SHELTER	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003- L-334	Pānaui Nui
21723	C-shapes (Fea. 56 and 57)	C-SHAPES	x	Glidden et al. 1998		56 and 57	Pānaui Nui
21724	Petroglyphs (Fea. 6 and 144)	PETROGLYPHS	x	Glidden et al. 1998			Pānaui Nui
21725	Terrace (Fea. 103) and C-shape (Fea. 104)	TERRACE	x	Glidden et al. 1998		Feature 103 and 104	Pānaui Nui
21726	Terraces (Fea. 125 and 1260)	TERRACES	x	Glidden et al. 1998		Feature 125 and 126	Pānaui Nui
21727	Wall (Fea. 13) and Terrace (Fea. 14)	Habitation complex with 7 features (terraces, platforms, and petroglyphs) ENCLOSURE, PLATFORMS, PETROS	x	Glidden et al. 1998 Dougherty et al. 2004a			Pānaui Nui
21728	Enclosure (Fea. 40), Terrace (41), Cave (15)	Habitation complex* WALL, PLATFORMS, MOUNDS	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003- L-326	Pānaui Nui
21729	Petroglyphs (Fea. 7,8,10,11) and Ahu	PETROGLYPHS	x	Glidden et al. 1998			Pānaui Nui
21730	Cave (Fea. 98) Terraced Platforms (Fea. 99 and 100), Mound (101)	Habitation complex* CAVE, PLATFORMS, C-SHAPES	x	Glidden et al. 1998 Dougherty et al. 2004a			Pānaui Nui
21731	C-shapes, Caves, Terraces	C-SHAPE, TERRACE, CAVE	x	Glidden et al. 1998			Pānaui Nui
21732	Petroglyphs and Terraces	PETROGLYPHS, TERRACES	x	Glidden et al. 1998			Pānaui Nui
21733	Wall, Platform, Terrace, Enclosure, Cistern	Habitation complex* CISTERN, TERRACES, PLATFORMS	x	Glidden et al. 1998 Dougherty et al. 2004a		HAVO-2003- L-385	Pānaui Nui
21734	Enclosures, Cave, Terraces, Platform and Petroglyphs	Habitation complex (enclosures, platforms, terraces, caves, and petroglyphs) ENCLOSURE, TERRACES, PETROGLYPH (96), CAVES, PETROGLYPHS	x	Glidden et al. 1998 Dougherty et al. 2004a			Pānaui Nui

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21735	Enclosures, Cave, Terraces, L-shape, and Papamu	Habitation complex* TERRACE, CAVE, ENCLOSURE, PETROGLYPH (118)	x	Glidden et al. 1998 Dougherty et al. 2004a			Pānau Nui
21736	Enclosures, Terraces, Platforms, Ahu, L-shapes, Petroglyph	TERRACES, AHU, ENCLOSURES	x	Glidden et al. 1998			Pānau Nui
21737	Caves, Papamu, Enclosures, Terraced platforms, wall, Petroglyphs, C-shapes, Hearth	Habitation complex, with largest concentration of habitation features recorded during Glidden 1998 survey.* TERRACE, CAVES, PLATFORMS, PETROGLYPHS AND KONANE, PETROGLYPHS	x	Glidden et al. 1998 Dougherty et al. 2004a			Pānau Nui
21751	Ainahou Ranch Cave System	Complex tube with 23 known entrances; as of 1994 is the longest surveyed cave within HAVO, with many cultural features* CAVE (Shelter cave, petroglyphs; Smart et al. 1965)	x	Smart et al. 1965 Dougherty et al. 2004a		HV-185	Keauhou
22487	CCC features on Hilina Pali Rd. (LCS#101791)	Historic site* ROCK MOUND, QUARRIES, WALLS, PETROGLYPH (D-55)	x	Wulzen 1999 Roper 2005		HAVO00276.000	Kapāpala
22726	Fishermen's Cave	Cave (Shelter cave; Smart et al. 1965)	x	Smart et al. 1965 Ladefoged et al. 1987 Waipa, J./Laqua, T.		HV-228 (Site 911)	Kapāpala
22738	Keauhou Trail Cave	Cave	x				
22973	C-shapes in Footprints area	20 features*	x	Moniz Nakamura 2003a		(Fea. 1-14)	Kapāpala
22974	Shelter and volcanic glass quarry in Footprints area.	Shelter and volcanic glass quarry*	x	Moniz Nakamura 2003a			Kapāpala
22975	Shelters and volcanic glass quarry in Footprints area	*	x	Moniz Nakamura 2003a			Kapāpala
22976	Shelters and volcanic glass quarry in Footprints area.	*	x	Moniz Nakamura 2003a		18	Kapāpala
22977	Shelters, petroglyphs, and volcanic glass quarry in Footprints area.	*	x	Moniz Nakamura 2003a		24	Kapāpala
22978	Structures in Footprints area.	May be functionally associated with the Ka'ū - Volcano Trail (Site 22982) but are not spatially associated.*	x	Moniz Nakamura 2003a		26	Kapāpala
22979	Structures, volcanic glass quarry in Footprints area,	High density of features (8 enclosures, 6 overhangs, 5 C-shapes, 5 U-shapes, 3 mounds, 3 walls, 1 volcanic glass quarry) along edge of the Ke'āmoku flow; site is approximately 70 m south of the Ke'āmoku Cross Trail (Site 23033)*	x	Moniz Nakamura 2003a		31	Kapāpala
22980	Structures in Footprints area	Structures associated with two trails*	x	Moniz Nakamura 2003a		52	Kapāpala
22981	Structures in Footprints area	Dense cluster*	x	Moniz Nakamura 2003a		63	Kapāpala
22982	Structures and trails in Footprints area	*	x	Moniz Nakamura 2003a		(Fea. 53, 69, 98-111, 112, 116, etc)	Kapāpala

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22983	Cave in Footprints area	*	x	Moniz Nakamura 2003a		98-624	Kapāpala
22984	Structures in Footprints area	*	x	Moniz Nakamura 2003a		78	Kapāpala
22985	Structures in Footprints area	*	x	Moniz Nakamura 2003a		85	Kapāpala
22986	Overhangs in Footprints area	*	x	Moniz Nakamura 2003a		96	Kapāpala
22987	Structures in Footprints area	* Largest site in the area, with 47 structures	x	Moniz Nakamura 2003a		101	Kapāpala
22988	Structures in Footprints area	* C SHAPES	x	Moniz Nakamura 2003a			Kapāpala
22989	Cave in Footprints area	*	x	Moniz Nakamura 2003a		152	Kapāpala
22990	Cave in Footprints area	*	x	Moniz Nakamura 2003a		155	Kapāpala
22991	Cave in Footprints area	*	x	Moniz Nakamura 2003a		154	Kapāpala
22992	Structures in Footprints area	*	x	Moniz Nakamura 2003a		153	Kapāpala
22993	Structures in Footprints area	* C SHAPES, ENCLOSURES, ETC.	x	Moniz Nakamura 2003a		164	Kapāpala
22994	Structures in Footprints area	*	x	Moniz Nakamura 2003a		190	Kapāpala
22995	Structures in Footprints area	*	x	Moniz Nakamura 2003a		202	Kapāpala
22996	Structures in Footprints area	48 features, most built on Ke'āmoku flow*	x	Moniz Nakamura 2003a		212	Kapāpala
22997	Peter Lee Road in Footprints area	Road built for the Punalu'u hotel owned by Peter Lee and for visitors staying at Volcano House; the first official road built in this area, completed in 1891*	x	Moniz Nakamura 2003a		Peter Lee Road	Kapāpala
22998	Structures in Footprints area	16 features (10 C-shapes, 3 walls, 1 terrace, 1 modified overhang, 1 enclosure), built primarily on the Ke'āmoku flow* C SHAPES, ENCLOSURES	x	Moniz Nakamura 2003a		254	Kapāpala
22999	Structures in Footprints area	three features (C-shape, terrace, possible cupboard)	x	Moniz Nakamura 2003a		264	Kapāpala
23000	Structures, lithic workshop in Footprints area	* C SHAPE, ENCLOSURES, CAIRNS (A), 10-19	x	Moniz Nakamura 2003a		269	Kapāpala
23001	Structures in Footprints area	* C SHAPE, ENCLOSURES NEAR 117	x	Moniz Nakamura 2003a			Kapāpala
23002	Structures in Footprints area	11 features (6 C-shapes, 4 walls, 1 enclosure) C SHAPE, WALLS, ENCLOSURES	x	Moniz Nakamura 2003a			Kapāpala
23003	Structures in Footprints area	in the Ka'ū Desert area* SURVEY MONUMENT, WALLS	x	Moniz Nakamura 2003a			Kapāpala
23004	Structures in Footprints area	4 features (enclosure, wall, two C-shapes); in close association with Ka'ū-Volcano Trail (Site 22982) C SHAPES, 11-24	x	Moniz Nakamura 2003a			Kapāpala
23005	Structures in Footprints area	Structures along the Peter Lee Road* N OF 77C	x	Moniz Nakamura 2003a			Kapāpala
23006	Big 'Ōhi'a Cave, in Footprints area	* BIG 'ŌHI'A CAVE	x	Withrow 1987 Moniz Nakamura 2003a		Feature 98-32	Kapāpala
23007	Structures, lithic workshops in Footprints area	Lithic workshops may be the outer extent of a large cluster of lithic block quarries identified in 2001 and surveyed in 2002* LITHIC WORKSHOPS	x	Moniz Nakamura 2003a			Kapāpala
23008	Cave in Footprints area	* BY CRATER RIM RD, LIKE BIG ŌHIA CAVE	x	Moniz Nakamura 2003a			Kapāpala

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23009	Cave in Footprints area	* BY HWY 11	x	Moniz Nakamura 2003a			Kapāpala
23010	Volcanic glass quarry in Footprints area	Located next to Mauna Iki Trail CG BY MAUNA IKI TRAIL, 5-24	x	Moniz Nakamura 2003a			Kapāpala
23011	Structures in Footprints area	Four features (C-shape, mound, wall, enclosure) C-SHAPES, ENCLOSURES	x	Moniz Nakamura 2003a			Kapāpala
23012	Volcanic glass quarry in Footprints area	Four features (2 volcanic glass quarries, enclosure, wall); just east of Footprints interpretive trail ENCLOSURES, 10-20	x	Moniz Nakamura 2003a			Kapāpala
23013	Structures in Footprints area	Seven features (4 enclosures, C-shape, terrace); located along and just SW of Footprints interpretive trail. Shrine. C SHAPE, ENCLOSURES	x	Moniz Nakamura 2003a			Kapāpala
23014	Volcanic glass quarry in Footprints area	Single volcanic glass quarry located very close to existing Footprints Shelter		Moniz Nakamura 2003a			Kapāpala
23015	Structures, petroglyphs in Footprints area	Pre-Contact and post-Contact* WALLS, C-SHAPES, ALIGNMENTS, MOUNDS, HISTORIC LETTERS, 11-16; CORRALS	x	Moniz Nakamura 2003a			Kapāpala
23016	Structures in Footprints area	12 features (1 wall, 4 enclosures, 5 volcanic glass quarries, 2 C-shapes); located SSW of Site 23015 near the Ka'ū-Volcano Trail (Site 22982) 4 ENCLOSURES 10-06; CG QUARRY, 10-06	x	Moniz Nakamura 2003a			Kapāpala
23017	Volcanic glass quarry in Footprints area	11 features (8 volcanic glass quarries, 2 enclosures, 1 terrace); located SE of Site 23015 at base of the Ke'āmoku lava flow	x	Moniz Nakamura 2003a			Kapāpala
23019	Footprints		x	Moniz Nakamura 2003a			Kapāpala
23020	Structures in Footprints area	Two wall features near the Ka'ū-Volcano Trail (Site 22982) ENCLOSURE, 10-06		Moniz Nakamura 2003a			Kapāpala
23021	Trail in Footprints area	Section of Old Puna-Ka'ū Trail* B ON AA 315, 10-14	x	Moniz Nakamura 2003a			Kapāpala
23022	Structures, volcanic glass quarry in Footprints area	* ENCLOSURE, 10-07	x	Moniz Nakamura 2003a			Kapāpala
23023	Footprints		x	Moniz Nakamura 2003a			Kapāpala
23024	Footprints	1868 TUBE, 10-14	x	Moniz Nakamura 2003a			Kapāpala
23025	Footprints						Kapāpala
23026	Enclosure	290 x 310 cm enclosure, 80 cm high; constructed with pahoehoe cobbles and small boulders stacked 2 courses high	x	Roper 2005		HAVO-2005-D-121	Kapāpala
23027	Cairns, C-shape, quarry	Cairns, C-shape, quarry, etc.	x	Roper 2005		HAVO-2005-D-127	Kapāpala
23028	Hilina Pali Road	Portions of old Hilina Pali Road; plus CCC OLD ROADS; PLUS NON-CCC TRAIL, TRAIL, ROCK PILE,	x	Roper 2005		HAVO-2005-D-138	Kapāpala
23029	Footprints (Enclosure 11-23)	?					Kapāpala

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23030	Trail and features	Trail fragments, ahu, etc	x	Roper 2005		HAVO-2005-D-140	
23031	Rock pile	*	x	Roper 2005		HAVO-2005-D-153	
23032	Halfway House Trail, in Footprints area	Trail segments leading to Ka'ū Halfway House (rest station for visitors traveling from Hilo to Ka'ū in late 19th, early 20th centuries)* CAIRN		Moniz Nakamura 2003a		98-472	Kapāpala
23033	Ke'āmoku Cross Trail, in Footprints area	Trail across the Ke'āmoku flow just south of the beginning of the largest concentration of structures along the lava flow*	x	Moniz Nakamura 2003a			Kapāpala
23034	Kau Road, in Footprints area	Road built by the Territory of Hawai'i, paralleled much of the then existing Peter Lee Road (Site 22997)*		Moniz Nakamura 2003a		75	Kapāpala
23035	Footprints	2 fea: Pu'u Ohale survey		Moniz Nakamura 2003a			Kapāpala
23049	Crater Rim Road Wall	Wall heads in an E-W direction with the west and possibly east ends disrupted by the Crater Rim Road.*	x	Waipa, J.			
23269	Kahue Coastal Features	Mounds, enclosures, petroglyphs, historic artifacts	x	Waipa, J.		#2	Kahue
23270	Kealakomo Coastal Features	Habitation complex*	x	Waipa, J.			Kealakomo
23271	Pu'uloa Petroglyph Field	*		Smart et al. 1965 Emory 1965, in Smart et al. 1965 Lee and Stasack 1999 Schuster, L.		HV-225	Pānau Nui
23275	Keanakāko'i Crack Dump	*	x	Waipa, Schuster			Keauhou
23314	'Āinahou Road/Keauhou Trail	This site consists of both the Keauhou Trail and the 'Āinahou Road. These features were lumped together as a single site due to the fact that the 'Āinahou Road used to be a section of the Keauhou Trail*		Waipa, J.			Keauhou
23315	'Āpua Point	Habitation complex* (House sites; Smart et al. 1965)	x	Smart et al. 1965 Waipa, J.		HV-045	'Āpua
23316	'Āpua Point	Enclosure* (Enclosure; Smart et al. 1965)	x	Smart et al. 1965 Waipa, J.		HV-046	'Āpua
23317	'Āpua Point Spring	* (Spring; Smart et al. 1965)	x	Smart et al. 1965 Waipa, J.		HV-050	'Āpua
23362	Pepeiau Shelter Cabin	Park cabin, probably 1930s*	x	Waipa, J.			
23363	Platform and shelters, shrine?	* (Platform and shelters; Smart et al. 1965)	x	Smart et al. 1965 Waipa, J.		HV-047	'Āpua
23399	Hilina Pali Road	Date?*	x	Schuster, L.			Kapāpala
23400	Road marker with benchmark		x	Schuster, L.			
23401	Bore Hole for Steam experiments			Schuster, L.			
23402	Byron Ledge Lithic Scatter	Lithic scatter	x	Schuster, L.			Keauhou
23403	1924 Landing Field	Military landing field	x	Durst/Moniz Nakamura 2002			Kapāpala

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23645	Kupukupu Water Cave			Moniz Nakamura 2002b Dougherty et al. 2004b		HAVO-2002- B-426	Pānau Nui
23646	Agricultural complex	* ROCK PILES, PITS, PETROGLYPH; EXCAV PITS	x	Moniz Nakamura 2002b Dougherty et al. 2004b		HAVO-2002- B-143	Pānau Iki
23647	Lithic Block Quarry Features	Site consist of 277 individual quarry locales*	x	Thompson/Roper 2002 Moniz Nakamura 2006			
23794	Highway 11 Chute Dump	Historic dump site	x	Waipa, J.			
23795	CCC Incinerator		x	Waipa, J.			
23796	Salt Drying Area	Rock alignments	x	Schuster, L.			
23797	Kapāpala /Keauhou Rock Wall	Rock wall	x	Waipa, J.			Kapāpala Keauhou
23975	Kupukupu Feature KA1	Rock pile.*	x	Maxey/Schuster 2003 Dougherty et al. 2004b		HAVO-2003- F-01	Pānau Nui
23976	Kupukupu Features KB1-3	Rock shelter, wall, excavated pit	x	Maxey/Schuster 2003		HAVO 2003 F-02	Pānau Nui
23977	Kupukupu Features KC2-8	Excavated pits, rock piles	x	Maxey/Schuster 2003		HAVO 2003 F-05	Pānau Nui
23978	Kupukupu Features KD1-5	Excavated pits, rock piles	x	Maxey/Schuster 2003		HAVO 2003 F-12	Pānau Nui
23979	Kupukupu Features KE1-5	Rock walls, caves,mounds	x	Maxey/Schuster 2003		HAVO 2003 F-17	Pānau Nui
23980	Kupukupu Features KF1-4	Excavated pits and mounds	x	Maxey/Schuster 2003		HAVO 2003 F-22	Pānau Nui
23981	Kupukupu Features KG1-3,6-8	Excavated pits, walls	x	Maxey/Schuster 2003		HAVO 2003 F-26	Pānau Nui
23982	Kupukupu Features KH1-4	Enclosure, excavated pits, walls	x	Maxey/Schuster 2003		HAVO 2003 F-32	Pānau Nui
23983	Kupukupu Features KI1-4	Rock shelter, pits	x	Maxey/Schuster 2003		HAVO 2003 F-36	Pānau Nui
23984	Kupukupu Features KK1-8	Excavated pits, walls, mounds, rock shelters	x	Maxey/Schuster 2003			Pānau Nui
23985	Kupukupu Features KL1A-C	Excavated pits, mounds	x	Maxey/Schuster 2003		HAVO 2003 F-47	Pānau Nui
23987	Kupukupu Features KN1-2	Pits, rock sheleter	x	Maxey/Schuster 2003		HAVO 2003 F-57	Pānau Nui
23988	Kupukupu Features KO1-2	Rock shelters, two	x	Maxey/Schuster 2003		HAVO 2003 F-59	Pānau Nui
23989	Kupukupu Features KP1-2	Pits	x	Maxey/Schuster 2003		HAVO 2003 F-61	Pānau Nui
23990	Kupukupu Feature KQ1	Pit	x	Maxey/Schuster 2003		HAVO 2003 F-63	Pānau Nui
24007	Kupukupu Ag complex	Agricultural complex*  MOUNDS	x	Dougherty et al. 2004b		HAVO-2002- B-47	Pānau Nui
24008	Kupukupu rock shelter	ROCK SHELTER	x	Dougherty et al. 2004b			Pānau Nui
24009	Kupukupu cave	CAVE, PLATFORM	x	Dougherty et al. 2004b			Pānau Nui

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24010	Kupukupu trail		x	Dougherty et al. 2004b			Pānau Iki
24012	Kupukupu	ROCK SHELTER	x	Dougherty et al. 2004b			Pānau Nui
24013	Kupukupu	MOUNDS. ENCLOSURE	x	Dougherty et al. 2004b		HAVO-2002-B-541	Pānau Iki
24014	Kupukupu	PLATFORM	x	Dougherty et al. 2004b			Pānau Iki
24015	Kupukupu	ROCK SHELTER	x	Dougherty et al. 2004b			Pānau Nui
24016	Kupukupu	ROCK SHELTER	x	Dougherty et al. 2004b			Pānau Nui
24017	Kupukupu platform	* PLATFORM	x	Dougherty et al. 2004b			Pānau Nui
24018	Complex	COMPLEX	x	Dougherty et al. 2004b			Pānau Nui
24076	Habitation complex	Habitation complex TERRACE, ENCLOSURES	x	Dougherty et al. 2004a		HAVO-2003-L-1	
24077	TERRACE	TERRACE	x	Dougherty et al. 2004a		HAVO-2003-L-19	
24078	ENCLOSURE	ENCLOSURE	x	Dougherty et al. 2004a		HAVO-2003-L-48	
24079	TERRACE, C-SHAPE	TERRACE, C-SHAPE	x	Dougherty et al. 2004a		HAVO-2003-L-59	
24080	CAVE	CAVE	x	Dougherty et al. 2004a		HAVO-2003-L-64	
24082	ENCLOSURE	ENCLOSURE	x	Dougherty et al. 2004a		HAVO-2003-L-84	
24083	ROCK SHELTER	ROCK SHELTER	x	Dougherty et al. 2004a		HAVO-2003-L-93	
24084	ROCK SHELTER	ROCK SHELTER	x	Dougherty et al. 2004a		HAVO-2003-L-94	
24085	ROCK SHELTER	ROCK SHELTER	x	Dougherty et al. 2004a		HAVO-2003-L-117	
24086	ENCLOSURE	ENCLOSURE	x	Dougherty et al. 2004a		HAVO-2003-L-123	
24087	PETROGLYPH	PETROGLYPH	x	Dougherty et al. 2004a		HAVO-2003-L-138	
24088	Rock wall	Rock wall		Dougherty et al. 2004a		HAVO-2003-L-169	
24090	Platform	Platform		Dougherty et al. 2004a		HAVO-2003-L-213	
24091	Platform	Platform		Dougherty et al. 2004a		HAVO-2003-L-226	
24092	PETROGLYPH	PETROGLYPH	x	Dougherty et al. 2004a		HAVO-2003-L-270	
24093	ENCLOSURE	ENCLOSURE	x	Dougherty et al. 2004a			
24094	Agricultural complex	Large agricultural complex* ROCK PILES, TERRACES, PITS	x	Dougherty et al. 2004a		HAVO-2003-L-5	

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24121	Kahuku-'Āinapō Trail	Segment of an "old trail system" used in historic times for driving cattle between various cattle ranching operations associated with Parker Ranch (ca. 1912-1947); located in Kahuku Management Unit*		Quiseng 2006 Waipa, J.			Kahuku
24335	Historic Trail-side Complex	Complex with C-shapes, rock shelters, wall, trail (77 m); temporary habitation	x	Dougherty 2004		HAVO-2003-	Kapāpala
24336	Complex	Excavated pits, bird nesting	x	Dougherty 2004		HAVO-2003-	Kapāpala
24337	EXCAVATED PITs	Excavated pits, bird nesting	x	Dougherty 2004		HAVO-2003-	Kapāpala
24338		Cluster of excavated pits utilized by dark-rumped petrel for nesting	x	Dougherty 2004		HAVO-2002-	Kapāpala
24339	EXCAVATED PITs	Three excavated pits, three quarries, one rock pile Quarries, mounds, pits; Bird nesting pits	x	Dougherty 2004		HAVO-2003-	Kapāpala
24340	Excavated pits, quarry	Quarries, mounds, pits	x	Dougherty 2004		HAVO-2003-	Kapāpala
24341	Excavated pits	Excavated pits, bird nesting	x	Dougherty 2004		HAVO-2003-	Kapāpala
24342	Excavated pits	Excavated pits, bird nesting	x	Dougherty 2004		HAVO-2003-	Kapāpala
24343	Excavated pits	Excavated pits, bird nesting	x	Dougherty 2004		HAVO-2003- M-66	Kapāpala
24344	Excavated pits	Excavated pits, bird nesting	x	Dougherty 2004		HAVO-2003- M-27	Kapāpala
24345	Excavated pits ROCK PILE (AHU)	Excavated pits, bird nesting ROCK PILE (AHU)	x	Dougherty 2004		HAVO-2003- M-26	Kapāpala
24346	Jagger's Cave, Rock shelter	Rock shelter	x	Dougherty 2004		HAVO-2003- M-81	Kapāpala
24347	ENCLOSURES	ENCLOSURES	x	Dougherty 2004		HAVO-2003-	Kapāpala
24348	Bates Camp? Campsite	Campsite; 1915?		Dougherty 2004		HAVO-2003- M-82	Kapāpala
24349	Sawkins Camp	Cave, 1851	x	Dougherty 2004		HAVO-2003- M-83	Kapāpala
24355	TRAIL	TRAIL	x				
24356	EXCAVATED PIT	EXCAVATED PIT	x				
24523	Petroglyph	Historic petroglyphs consisting of initials "JM," "ECH," and "HML;" also "CCC Camp" PETROGLYPH	x	Roper 2005			
24524	Shelter	Overhang/rock shelter formed in the natural pāhoehoe flow; in interior is a table constructed from a large pāhoehoe slab (approx. 1 x 1.5 m); two CCC petroglyphs nearby ROCK SHELTER	x	Roper 2005			
24525	Petroglyph	Historic petroglyph pecked on an open slab of pāhoehoe bedrock; letters "R.E.D. DENISON, CCC 1940" PETROGLYPH	x	Roper 2005			
25093	Enclosure			Dougherty et al. 2004a		HAVO-2003- L-208	

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25935	Halapē Ruins	Habitation complex* (House site; Smart et al. 1965)	x	Smart et al. 1965 HAVO		HV-073	Kapāpala
25936	Halapē Ruins	Enclosure, house site? * (House site? Smart et al. 1965)	x	Smart et al. 1965 HAVO		HV-070	Kapāpala
25937	Kalue Ruins	Five historic structures*	x	HAVO		LCS 07540	
25938	Kūē'ē Ruins	Remote village site; used as a fishing camp up to the 1970s* (Multiple features/sites; Smart et al. 1965) [HV-121,HV-122, HV-123, HV-124,HV-125, HV-126, HV-127,HV, 128, HV-129, HV-130, HV-133, HV-134, HV-137]	x	Smart et al. 1965 HAVO		HV-121-130. 133, 134, 135	Ka'ala'ala makai
25939	Keauhou Ruins-Heiau Cave	*	x	Emory, Cox et al.1959 Smart et al. 1965 HAVO		HV-078 LCS 07519	Keauhou
25940	Road Cut Cave	Cave with 9 entrances, lots of cultural material, outside trail*		HAVO		CV017	
25941	Mel's Ahu	Ahu and petroglyphs*					
25942	Petroglyph Grotto	Site consists of rock shelter, petroglyphs, and possible agricultural features; located 25 m west of Pu'u'loa Petroglyph Field*					
25943	Hilina Pali Cave	Deposits and petroglyphs*				HV-386	
25944	Earthquake Cave	Cave with deposits*	x				
25945	Kahuku K1 Cave	Bird bones and deposits*					
25946	Charcoal Cave	Substantial deposits*					
25947	Calabash Cave	Cave for water collection*				CV15B	
25948	Hilina Pali Cave					HV-393	
25949	Hilina Pali Cave					HV-383	
25950	Pen #9						
25951	?			Waipa, J.			
25952	?			Waipa, J.			
CLG-1	Inland agriculture and habitation			Ladefoged et al. 1987			
CLG-2	Inland agriculture and habitation			Ladefoged et al. 1987			
HV-001	Shelters and spring	Shelters and spring	x	Smart et al. 1965		HV-001	Pānaui Nui
HV-002	House, walled	House, walled	x	Smart et al. 1965		HV-002	Pānaui Nui
HV-003	Papamū	Papamū	x	Smart et al. 1965		HV-003	Pānaui Nui
HV-004	Platforms	Platforms		Smart et al. 1965		HV-004	Pānaui Nui
HV-005	House site	House site		Smart et al. 1965		HV-005	Pānaui Nui
HV-006	House site, papamū	House site, papamū		Smart et al. 1965		HV-006	Pānaui Nui
HV-007	House site	House site		Smart et al. 1965		HV-007	Pānaui Nui
HV-008	Enclosure and platforms	Enclosure and platforms		Smart et al. 1965		HV-008	Pānaui Nui
HV-009	Platforms	Platforms		Smart et al. 1965		HV-009	Pānaui Nui
HV-010	Enclosure	Enclosure		Smart et al. 1965		HV-010	Pānaui Nui
HV-011	Cairn	Cairn		Smart et al. 1965		HV-011	Pānaui Nui
HV-012	Platform	Platform		Smart et al. 1965		HV-012	Pānaui Nui

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HV-013	Shelters	Shelters		Smart et al. 1965		HV-013	Pānau Nui
HV-014	Platform and enclosure	Platform and enclosure		Smart et al. 1965		HV-014	Pānau Nui
HV-015	Platform	Platform		Smart et al. 1965		HV-015	Pānau Nui
HV-016	Stone alignments	Stone alignments	x	Smart et al. 1965		HV-016	Pānau Nui
HV-017	Stone alignments	Stone alignments		Smart et al. 1965		HV-017	Pānau Nui
HV-018	Enclosure	Enclosure	x	Smart et al. 1965		HV-018	Kahue
HV-019	Enclosure	Enclosure	x	Smart et al. 1965		HV-019	Kahue
HV-020	Enclosure	Enclosure	x	Smart et al. 1965		HV-020	Kahue
HV-021	Enclosure	Enclosure	x	Smart et al. 1965		HV-021	Kahue
HV-022	Enclosure	Enclosure	x	Smart et al. 1965		HV-022	Kahue
HV-023	Wall	Wall		Smart et al. 1965		HV-023	
HV-024	Enclosure	Enclosure	x	Smart et al. 1965		HV-024	Kahue
HV-025	Platform	Platform	x	Smart et al. 1965		HV-025	Kealakomo
HV-026	Cairn	Cairn	x	Smart et al. 1965		HV-026	Kealakomo
HV-027	Cairn	Cairn	x	Smart et al. 1965		HV-027	Kealakomo
HV-028	Cairn	Cairn	x	Smart et al. 1965		HV-028	Kealakomo
HV-029	House site ?	House site ?	x	Smart et al. 1965		HV-029	Kealakomo
HV-030	House site	House site	x	Smart et al. 1965		HV-030	Kealakomo
HV-031	Cairns?	Cairns?	x	Smart et al. 1965		HV-031	Kealakomo
HV-032	Enclosure and cave	Enclosure and cave	x	Smart et al. 1965		HV-032	Kealakomo
HV-033	Enclosure	Enclosure	x	Smart et al. 1965		HV-033	Kealakomo
HV-034	Wall	Wall	x	Smart et al. 1965		HV-034	Kealakomo
HV-035	Enclosure	Enclosure	x	Smart et al. 1965		HV-035	Kealakomo
HV-036	Enclosure	Enclosure	x	Smart et al. 1965		HV-036	Kealakomo
HV-037	Corral	Corral	x	Smart et al. 1965		HV-037	Kealakomo
HV-038	Enclosure	Enclosure	x	Smart et al. 1965		HV-038	Kealakomo
HV-039	Enclosure	Enclosure	x	Smart et al. 1965		HV-039	Kealakomo
HV-040	Shelter and cave	Shelter and cave	x	Smart et al. 1965		HV-040	Kahue
HV-041	Wall and cave	Wall and cave	x	Smart et al. 1965		HV-041	Kahue
HV-042	Enclosure	Enclosure	x	Smart et al. 1965		HV-042	Kahue
HV-043	Enclosure and cave	Enclosure and cave	x	Smart et al. 1965		HV-043	Kahue
HV-044	Enclosure	Enclosure	x	Smart et al. 1965		HV-044	Kahue
HV-048	House site	House site		Smart et al. 1965		HV-048	
HV-049	'Āpua Point Cross Trail Cave	Shelter cave; deposit, pre-Contact, post-Contact		Smart et al. 1965 HAVO 2007		HV-049	
HV-051	House sites	House sites		Smart et al. 1965 HAVO 2007		HV-051	
HV-052	House sites	House sites, platforms; recently damaged by tidal action		Smart et al. 1965		HV-052	
HV-054	House sites	House sites		Smart et al. 1965		HV-054	
HV-055	Petroglyphs	Petroglyphs		Smart et al. 1965		HV-055	
HV-056	petroglyphs	Petroglyphs		Smart et al. 1965		HV-056	
HV-057	Enclosure	Enclosure		Smart et al. 1965		HV-057	
HV-058	Shelters	Shelters		Smart et al. 1965		HV-058	
HV-059	Shelter cave	Shelter cave		Smart et al. 1965		HV-059	'Āpua

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HV-060	Shelter cave	Shelter cave		Smart et al. 1965		HV-060	
HV-061	Cairn	Cairn	x	Smart et al. 1965		HV-061	'Āpuia
HV-062	Shelters	Shelters	x	Smart et al. 1965		HV-062	'Āpuia
HV-063	Shelters	Shelters	x	Smart et al. 1965		HV-063	'Āpuia
HV-064	Grave	Grave	x	Smart et al. 1965		HV-064	'Āpuia
HV-066	Enclosure	Enclosure	x	Smart et al. 1965		HV-066	'Āpuia
HV-067	Wall	Wall	x	Smart et al. 1965		HV-067	'Āpuia
HV-068	Wall and pavement	Wall and pavement	x	Smart et al. 1965		HV-068	'Āpuia
HV-069	?			Smart et al. 1965		HV-69	
HV-071	Halape Ruins: Platforms	Platform and terrace	x	Smart et al. 1965 HAVO 2006		HV-071	Kapāpala
HV-072	Halape ruins Shelter cave	Shelter cave, deposit	x	Smart et al. 1965 HAVO 2006		HV-072	Kapāpala
HV-074	House site	House site	x	Smart et al. 1965		HV-074	Kapāpala
HV-075	Shelter cave, petroglyph	Shelter cave, petroglyph	x	Smart et al. 1965		HV-075	Keauhou
HV-077	Shelter cave, petroglyph	Shelter cave, petroglyph	x	Smart et al. 1965		HV-077	Keauhou
HV-079	Shelter cave	Shelter cave		Smart et al. 1965		HV-079	Keauhou
HV-080	Shelter cave	Shelter cave		Smart et al. 1965		HV-080	Keauhou
HV-081	Shelter cave	Shelter cave		Smart et al. 1965		HV-081	Keauhou
HV-082	Shelter cave	Shelter cave		Smart et al. 1965		HV-082	Keauhou
HV-083	Shelter cave	Shelter cave		Smart et al. 1965		HV-083	Keauhou
HV-084	Shelter cave	Shelter cave		Smart et al. 1965		HV-084	Keauhou
HV-085	Shelter cave	Shelter cave		Smart et al. 1965		HV-085	Keauhou
HV-086	Shelter cave	Shelter cave		Smart et al. 1965		HV-086	Keauhou
HV-087	Shelter cave	Shelter cave		Smart et al. 1965		HV-087	Keauhou
HV-088	Shelter cave	Shelter cave		Smart et al. 1965		HV-088	Keauhou
HV-089	Wall, clearing	Wall, clearing		Smart et al. 1965		HV-089	Keauhou
HV-090	Shelter cave	Shelter cave		Smart et al. 1965		HV-090	Keauhou
HV-091	Shelter cave	Shelter cave		Smart et al. 1965		HV-091	Keauhou
HV-092	Shelter cave	Shelter cave		Smart et al. 1965		HV-092	Keauhou
HV-093	Shelters	Shelters		Smart et al. 1965		HV-093	Keauhou
HV-094	House site and cave	House site and cave		Smart et al. 1965		HV-094	Keauhou
HV-095	Shelter cave	Shelter cave		Smart et al. 1965		HV-095	Keauhou
HV-097	Papamū	Papamū		Smart et al. 1965		HV-097	Keauhou
HV-098	Shelter cave	Shelter cave		Smart et al. 1965		HV-098	Keauhou
HV-099	Shelter	Shelter		Smart et al. 1965		HV-099	Keauhou
HV-100	Shelter cave	Shelter cave		Smart et al. 1965		HV-100	Keauhou
HV-101	Shelter cave	Shelter cave		Smart et al. 1965		HV-101	Keauhou
HV-102	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-102	Keauhou
HV-104	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-104	Keauhou
HV-105	Platform	Platform	x	Smart et al. 1965		HV-105	Keauhou
HV-106	Platform	Platform	x	Smart et al. 1965		HV-106	Keauhou
HV-107	Enclosure	Enclosure	x	Smart et al. 1965		HV-107	Keauhou
HV-108	Shelter cave, petroglyph	Shelter cave and petroglyph	x	Smart et al. 1965		HV-108	Keauhou

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HV-109	Shelter cave and spring	Shelter cave and spring	x	Smart et al. 1965		HV-109	Keauhou
HV-110	Enclosure	Enclosure	x	Smart et al. 1965		HV-110	Kapāpala
HV-111	House site	House site	x	Smart et al. 1965		HV-111	Kapāpala
HV-112	Enclosure	Enclosure	x	Smart et al. 1965		HV-112	Keauhou
HV-113	Petroglyphs	Petroglyphs	x	Smart et al. 1965		HV-113	Keauhou
HV-114	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-114	Keauhou
HV-115	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-115	Keauhou
HV-116	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-116	Keauhou
HV-117	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-117	Keauhou
HV-118	House sites	House sites	x	Smart et al. 1965		HV-118	Keauhou
HV-119	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-119	Keauhou
HV-120	Refuge cave	Refuge cave	x	Smart et al. 1965		HV-120	'Āpua
HV-138	Platforms and enclosures	Platforms and enclosures	x	Smart et al. 1965		HV-138	Kahue
HV-139	House site	House site, platform	x	Smart et al. 1965 HAVO 2007		HV-139	Kahue
HV-140	Platform	Platform	x	Smart et al. 1965 HAVO 2007		HV-140	Kahue
HV-141	Shelter	Shelter	x	Smart et al. 1965		HV-141	Kahue
HV-142	Wall and clearing	Wall and clearing	x	Smart et al. 1965		HV-142	Kahue
HV-143	Wall	Wall	x	Smart et al. 1965		HV-143	Kahue
HV-144	Platform	Platform	x	Smart et al. 1965		HV-144	Kahue
HV-145	House site	House site	x	Smart et al. 1965		HV-145	Kahue
HV-146	Enclosures	Enclosures	x	Smart et al. 1965		HV-146	Kahue
HV-147	House sites	House sites	x	Smart et al. 1965		HV-147	Kahue
HV-148	House sites, petroglyphs	House sites, petroglyphs	x	Smart et al. 1965		HV-148	Kahue
HV-149	Corral	Corral	x	Smart et al. 1965		HV-149	Kahue
HV-150	Petroglyphs	Petroglyphs	x	Smart et al. 1965		HV-150	Kahue
HV-151	House site, papamū	House site, papamū	x	Smart et al. 1965		HV-151	Kahue
HV-152	Platform	Platform	x	Smart et al. 1965		HV-152	Kahue
HV-153	Wall	Wall	x	Smart et al. 1965		HV-153	Kahue
HV-154	House site, papamū	House site, papamū	x	Smart et al. 1965		HV-154	Kahue
HV-155	House site	House site	x	Smart et al. 1965		HV-155	Kahue
HV-156	Cairns	Cairns	x	Smart et al. 1965		HV-156	Kahue
HV-157	House site and spring	House site and spring	x	Smart et al. 1965		HV-157	Kahue
HV-158	Platform	Platform	x	Smart et al. 1965		HV-158	Kapāpala
HV-159	Enclosure	Enclosure		Smart et al. 1965		HV-159	Kapāpala
HV-160	Enclosure	Enclosure		Smart et al. 1965		HV-160	Kapāpala
HV-161	Enclosure	Enclosure	x	Smart et al. 1965		HV-161	Kapāpala
HV-162	Wall	Wall	x	Smart et al. 1965		HV-162	Kapāpala
HV-163	Shelter cave	Shelter cave		Smart et al. 1965		HV-163	Kapāpala
HV-164	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-164	Kapāpala
HV-165	Enclosure	Enclosure	x	Smart et al. 1965		HV-165	Kapāpala
HV-166	Enclosure	Enclosure	x	Smart et al. 1965		HV-166	Kapāpala
HV-167	Enclosure	Enclosure	x	Smart et al. 1965		HV-167	Kapāpala

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HV-168	Corral	Corral	x	Smart et al. 1965		HV-168	Kapāpala
HV-169	Enclosures	Enclosures	x	Smart et al. 1965		HV-169	Kapāpala
HV-170	Shelter cave and wall	Shelter cave and wall	x	Smart et al. 1965		HV-170	Kapāpala
HV-171	Enclosure	Enclosure	x	Smart et al. 1965		HV-171	Kapāpala
HV-172	Enclosures	Enclosures	x	Smart et al. 1965		HV-172	Kapāpala
HV-173	Petroglyphs	Petroglyphs	x	Smart et al. 1965		HV-173	Pānau Nui
HV-174	Corral	Corral	x	Smart et al. 1965		HV-174	Kealakomo
HV-175	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-175	Kealakomo
HV-176	Shelter	Shelter	x	Smart et al. 1965		HV-176	Kealakomo
HV-177	Trails	Trails	x	Smart et al. 1965		HV-177	Kealakomo
HV-178	Shelter	Shelter	x	Smart et al. 1965		HV-178	Kealakomo
HV-179	House site	House site	x	Smart et al. 1965		HV-179	Pānau Nu
HV-180	Wall and palm trees	Wall and palm trees	x	Smart et al. 1965		HV-180	Pānau Nui
HV-181	Wall and cave	Wall and cave	x	Smart et al. 1965		HV-181	Pānau Nui
HV-182	Stone outline	Stone outline	x	Smart et al. 1965		HV-182	Kealakomo
HV-183	Enclosure	Enclosure	x	Smart et al. 1965		HV-183	Pānau Nui
HV-184	Spring, petroglyphs	Spring, petroglyphs	x	Smart et al. 1965		HV-184	Kapāpala
HV-186	Platform	(Platform; Smart et al. 1965); Permanently Sealed	x	Smart et al. 1965		HV-186	Lae'apuki (Pānau Nui)
HV-191		Cairns and terraces				HV-191	Pānau Nui
HV-193		Shelter cave				HV-193	Pānau Nui
HV-195	Enclosures	Enclosures; Permanently Sealed	x	Smart et al. 1965		HV-195	Lae'apuki (Pānau Nui)
HV-197	Enclosures	Enclosures	x	Smart et al. 1965		HV-197	Lae'apuki (Pānau Nui)
HV-199	Corral?	Corral?	x	Smart et al. 1965		HV-199	Kahue
HV-200	Enclosures	Enclosures	x	Smart et al. 1965		HV-200	Kahue
HV-201	Enclosures	Enclosures		Smart et al. 1965		HV-201	'Āpua
HV-202	Enclosure	Enclosure		Smart et al. 1965		HV-202	'Āpua
HV-203	Platform	Platform	x	Smart et al. 1965		HV-203	Kealakomo
HV-204	Platform	Platform	x	Smart et al. 1965		HV-204	Kealakomo
HV-205	House site and cave	House site and cave	x	Smart et al. 1965		HV-205	Kealakomo
HV-206	Trail	Trail		Smart et al. 1965		HV-206	Kealakomo
HV-207	Trial	Trial		Smart et al. 1965		HV-207	Kealakomo
HV-208	trails	trails	x	Smart et al. 1965		HV-208	Kealakomo
HV-209	House site	House site	x	Smart et al. 1965		HV-209	Kealakomo (Pānau Nui)
HV-210	Heiau, Kamooalii; Petroglyphs	Petroglyphs		Baker 1922 Smart et al. 1965 Scheffler 1994b		HV-210	Ka'ala'ala Makai
HV-211	Petroglyphs	Petroglyphs	x	Smart et al. 1965		HV-211	Kahue
HV-213	House site	House site; Permanently Sealed	x	Smart et al. 1965		HV-213	Lae'apuki
HV-214	Platform	Platform; Permanently Sealed	x	Smart et al. 1965		HV-214	Lae'apuki
HV-215	Shelter	Shelter; Permanently Sealed	x	Smart et al. 1965		HV-215	Lae'apuki

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HV-216	Stone alignments	Stone alignments; Permanently Sealed	x	Smart et al. 1965		HV-216	Lae'apuki
HV-217	Filled cracks	Filled cracks	x	Smart et al. 1965		HV-217	Pānau Nui
HV-218	Occupation refuse	Occupation refuse	x	Smart et al. 1965		HV-218	Pānau Nui
HV-219	Cairn	Cairn	x	Smart et al. 1965		HV-219	Pānau Nui
HV-220	Walls and caves	Walls and caves	x	Smart et al. 1965		HV-220	Pānau Nui
HV-221	Stone alignments	Stone alignments	x	Smart et al. 1965		HV-221	Pānau Nui
HV-222	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-222	Pānau Nui
HV-223	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-223	Pānau Nui
HV-224	Shelters	Shelters	x	Smart et al. 1965		HV-224	Pānau Nui
HV-226	Wall and clearings	Wall and clearings	x	Smart et al. 1965		HV-226	Pānau Nui
HV-227	Trail and cave	Trail and cave	x	Smart et al. 1965		HV-227	Pānau Nui
HV-230	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-230	Kahue
HV-231	House site	House site	x	Smart et al. 1965		HV-231	Kahue
HV-232	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-232	Kahue
HV-233	Petroglyphs	Petroglyphs	x	Smart et al. 1965		HV-233	Kahue
HV-234	House site	House site	x	Smart et al. 1965		HV-234	Kahue
HV-235	House site and petroglyph	House site and petroglyph	x	Smart et al. 1965		HV-235	Kahue
HV-236	Shelter cave	Shelter cave	x	Smart et al. 1965		HV-236	Kahue
HV-237	Shelter cave and Petros	Shelter cave and petroglyphs	x	Smart et al. 1965		HV-237	'Āpua
HV-240	Stone mound (No. 7)	Stone mound (No. 7)		Smart et al. 1965		HV-240	Kamoamo
HV-241	Stone Mound (No. 8)	Stone Mound (No. 8)		Smart et al. 1965		HV-241	Kamoamo
HV-242	Moa Heiau	Moa Heiau		Smart et al. 1965 Ladefoged et al. 1987		HV-242	Kamoamo
HV-243	House site	House site		Smart et al. 1965		HV-243	Kamoamo
HV-244	Petroglyphs	Petroglyphs	x	Smart et al. 1965		HV-244	Kahue
HV-245	Meeting place?	Meeting place?	x	Smart et al. 1965		HV-245	Kealakomo
HV-246	Petroglyphs	Petroglyphs		Smart et al. 1965		HV-246	Pānau Nui
HV-250	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-250	Pūlama
HV-251	Platform-Heiau?	Platform-Heiau?		Smart et al. 1965 Ladefoged et al. 1987		HV-251	Pūlama
HV-252	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-252	Pūlama
HV-253	Platform-Shrine?	Platform-Shrine?		Smart et al. 1965 Ladefoged et al. 1987		HV-253	Pūlama
HV-254	pen	pen		Smart et al. 1965 Ladefoged et al. 1987		HV-254	Pūlama
HV-255	House site and platform	House site and platform		Smart et al. 1965 Ladefoged et al. 1987		HV-255	Pūlama
HV-256	Enclosures	Three enclosures		Smart et al. 1965 Ladefoged et al. 1987		HV-256	Pūlama
HV-257	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-257	Pūlama

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HV-258	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-258	Pūlama
HV-259	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-259	Pūlama
HV-260	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-260	Pūlama
HV-261	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-261	Pūlama
HV-262	Pens	Two pens		Smart et al. 1965 Ladefoged et al. 1987		HV-262	Pūlama
HV-264	Enclosure	Enclosure		Smart et al. 1965		HV-264	Pūlama
HV-265	Enclosure	Enclosure		Smart et al. 1965 Ladefoged et al. 1987		HV-265	Pūlama
HV-266	Platform	Platform		Smart et al. 1965 Ladefoged et al. 1987		HV-266	Pūlama
HV-267	Platform	Platform		Smart et al. 1965 Ladefoged et al. 1987		HV-267	Pūlama
HV-268	Platform	Platform		Smart et al. 1965 Ladefoged et al. 1987		HV-268	Pūlama
HV-269	Pen	Pen		Smart et al. 1965 Ladefoged et al. 1987		HV-269	Pūlama
HV-270	Canoe shed?	Canoe shed?		Smart et al. 1965 Ladefoged et al. 1987		HV-270	Pūlama
HV-271	Shrine or House site	Shrine or House site		Smart et al. 1965 Ladefoged et al. 1987		HV-271	Pūlama
HV-272	Shrine	Shrine		Smart et al. 1965 Ladefoged et al. 1987		HV-272	Pūlama
HV-273	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-273	Pūlama
HV-274	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-274	Pūlama
HV-275	Trail	Trail		Smart et al. 1965		HV-275	Pūlama
HV-276	Wahaula Heiau	Wahaula Heiau, Permanently Sealed	x	Smart et al. 1965 Ladefoged et al. 1987; Masse et al. 1991		HV-276	Poupou, Puna (Pūlama)
HV-277	Enclosure and house site	Enclosure and house site		Smart et al. 1965 Ladefoged et al. 1987		HV-277	Pūlama
HV-278	Enclosure	Enclosure		Smart et al. 1965 Ladefoged et al. 1987		HV-278	Pūlama
HV-279	Enclosure	Enclosure		Smart et al. 1965 Ladefoged et al. 1987		HV-279	Pūlama
HV-280	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-280	Pūlama
HV-281	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-281	Pūlama

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HV-282	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-282	Pūlama
HV-283	Platform	Platform		Smart et al. 1965 Ladefoged et al. 1987		HV-283	Pūlama
HV-284	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-284	Pūlama
HV-285	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-285	Pūlama
HV-286	Pen	Pen		Smart et al. 1965 Ladefoged et al. 1987		HV-286	Pūlama
HV-287	Pavement	Pavement		Smart et al. 1965 Ladefoged et al. 1987		HV-287	Pūlama
HV-288	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-288	Pūlama
HV-289	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-289	Pūlama
HV-290	Mortars	Mortars		Smart et al. 1965 Ladefoged et al. 1987		HV-290	Pūlama
HV-291	Platform	Platform		Smart et al. 1965 Ladefoged et al. 1987		HV-291	Pūlama
HV-292	Platform	Platform		Smart et al. 1965 Ladefoged et al. 1987		HV-292	Pūlama
HV-293	House site and pens	House site and pens		Smart et al. 1965 Ladefoged et al. 1987		HV-293	Pūlama
HV-294	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-294	Pūlama
HV-297	Footprint of Niheu	Footprint of Niheu		Smart et al. 1965		HV-297	Pūlama
HV-298	Petroglyphs	Petroglyphs		Smart et al. 1965		HV-298	Pūlama
HV-299	Spear hole	Spear hole		Smart et al. 1965		HV-299	Pūlama
HV-300	Petroglyphs	Petroglyphs		Smart et al. 1965 Ladefoged et al. 1987		HV-300	Kamoamoa
HV-301	Canoe shed	Canoe shed		Smart et al. 1965 Ladefoged et al. 1987		HV-301	Kamoamoa
HV-304	Enclosure	Enclosure		Smart et al. 1965		HV-304	Kamoamoa
HV-305	Pavement	Pavement		Smart et al. 1965		HV-305	Kamoamoa
HV-306	Pavement	Pavement		Smart et al. 1965		HV-306	Kamoamoa
HV-307	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-307	Kamoamoa
HV-308	Well	Well		Smart et al. 1965 Ladefoged et al. 1987		HV-308	Kamoamoa
HV-309	Mortars	Mortars		Smart et al. 1965 Ladefoged et al. 1987		HV-309	Kamoamoa
HV-310	Enclosure, platforms	Enclosure, platforms, 3		Smart et al. 1965		HV-310	Kamoamoa
HV-311	Enclosure	Enclosure		Smart et al. 1965 Ladefoged et al. 1987		HV-311	Kamoamoa

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HV-312	Platform	Platform		Smart et al. 1965		HV-312	Kamoamoa
HV-313	Platform	Platform		Smart et al. 1965		HV-313	Kamoamoa
HV-314	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-314	Kamoamoa
HV-315	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-315	Kamoamoa
HV-316	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-316	Kamoamoa
HV-317	House site	House site		Smart et al. 1965		HV-317	Kamoamoa
HV-318	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-318	Kamoamoa
HV-319	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-319	Kamoamoa
HV-320	Pen and platforms	Pen and platforms		Smart et al. 1965		HV-320	Kamoamoa
HV-321	House site	House site		Smart et al. 1965		HV-321	Kamoamoa
HV-322	Circular structure	Circular structure		Smart et al. 1965 Ladefoged et al. 1987		HV-322	Kamoamoa
HV-323	Petroglyphs	Petroglyphs		Smart et al. 1965 Ladefoged et al. 1987		HV-323	Lae'apuki
HV-324	Pens and petroglyphs	Pens and petroglyphs		Smart et al. 1965 Ladefoged et al. 1987		HV-324	Lae'apuki
HV-325	House site and pens	House site and pens		Smart et al. 1965 Ladefoged et al. 1987		HV-325	Lae'apuki
HV-326	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-326	Lae'apuki
HV-327	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-327	Lae'apuki
HV-328	Goat pen	Goat pen		Smart et al. 1965 Ladefoged et al. 1987		HV-328	Lae'apuki
HV-329	House site	House site		Smart et al. 1965		HV-329	Lae'apuki
HV-330	House site	House site		Smart et al. 1965 Ladefoged et al. 1987		HV-330	Lae'apuki
HV-331	Platform	Platform		Smart et al. 1965 Ladefoged et al. 1987		HV-331	Lae'apuki
HV-332	Shrine	Shrine		Smart et al. 1965 Ladefoged et al. 1987		HV-332	Lae'apuki
HV-374	?	Permanently Sealed	x			HV-374	Kamoamoa
HV-375	?	Permanently Sealed	x			HV-375	Lae'apuki
HV-376	?	Permanently Sealed	x			HV-376	Lae'apuki
HV-380	Oararauo Heiau	(never relocated after Ellis identified it near the crater)		Ellis 1963 Stokes 1991 Emory et al 1965:II:33			Keauhou?
K-?	Kamoamoa Trail	Curbstone trail connecting with Kalapana Trail		Kirkendall 1993a, b			Kamoamoa
K-01-56	Habitation, with some agriculture	Multiple platforms, enclosures, etc		Kirkendall 1993a, b			Kamoamoa

Site No.	Name/description (modified from HAVO records)	ASMIS Description (in CAPS: ARC DBF DESC)* (in parentheses, added information)	InArc GIS DB	Reference	Condition (not complete)	Park ID (ASMIS)	Ahupua'a
K-100+	Agriculture with some habitation, trails	Mounds, terraces, enclosures		Kirkendall 1993a, b			Kamoamo
LCS 058266	Mauna Loa Observation Shelter	Built in 1937, probably by CCC		Dougherty 2004			Kapāpala
LCS 058267	Mauna Loa Truck Trail Seismographic Vault	Date?		Dougherty 2004			Kapāpala
LCS 058268	Mauna Loa Pit Toilets	Date?		Dougherty 2004			Kapāpala
LCS 058269	Mauna Loa Summit Rest House	Built in 1934		Dougherty 2004			Kapāpala
LCS 058430	Mauna Loa Truck Trail	Built in 1935		Dougherty 2004			Kapāpala
LCS 05844	Red Hill Rest House	Built in 1915, by US Army, 25 <sup>th</sup> Infantry, Co. E		Dougherty 2004			Kapāpala
TR-1	agriculture and habitation			Carter and Somers 1990			Lae'apuki
TR-2	habitation, caves, petroglyphs; possible ahupua'a boundary; evidence of 1868 earthquake			Carter and Somers 1990			Lae'apuki Pānau Iki Pānau Nui
TR-3	habitation; agriculture, volcanic glass quarry			Carter and Somers 1990			Pānau Nui
TR-4	agriculture, petroglyphs			Carter and Somers 1990			Pānau Nui
TR-5	agriculture, petroglyphs, wet cave			Carter and Somers 1990			Pānau Nui
X-?	Umi Cavern?	Is this an archeological site?		Dougherty 2004			Kahuku
X-01	Scattered features"	(Scattered small features, caves, petroglyphs)		Baker 1922 Smart 1965 Scheffler 1994b			Ka'ala'ala
X-02	Na Puu o Na Ele Makule bombing reange; WW II practice bombing area	(WW II training ordnance; Note: area on map with solid line identified in Scheffler; area in dashed line from general maps; area used 1940-1950)		cf. Jackson 1972 Scheffler 1994b			Ka'ala'ala
X-03	Keaoi Island	(May have been a large stone platform: Smart 1965:29)		Smart 1965			Kapāpala
X-04	Heiau (unnamed)	Earth temple reported in Shipman pasture; not relocated by Stokes		Stokes 1991			Keauhou?
X-05	Ritual (?) cave	("Large sleeping cave at Pali-lele-o-kalihi-paa")		on 1912 map of Kīlauea			Keauhou Kapāpala
X-06	Jagger Airfield	"March 1927" marked by hand on USGS (also see Site 22403)					
X-07	Kau Impact area ("Bombing Range, Army")	(ca. 1940-1945)					Kapāpala
X-08	Keanakāko'i Quarry	(location of Keanakāko'i Quarry, buried by lava in 1877)					Keauhou
X-09	Keauhou Goat Ranch and Pogue House	(Location uncertain; probably general vicinity of the Ainahou Ranch House, Site 19429)					Keauhou
X-10	Early airfields			survey			
X-11	Kapi'olani's rejection of Pele						

Site No.	Name/description (modified from HAVO records)	ASMIS Description (in CAPS: ARC DBF DESC)* (in parentheses, added information)	InArc GIS DB	Reference	Condition (not complete)	Park ID (ASMIS)	Ahupua'a
X-12	place where Keoua's army + track						
X-13	Track of Kapi'olani and scorched earth						
X-14	Track of William Ellis						various
X-15	Kahuku Military Camp			Dougherty 2004			Kahuku
XAC-1	Upland features, Mauna Loa			Dougherty 2004			Kapāpala
XAC-2	Upland features, Mauna Loa			Dougherty 2004			Kahuku
XAC-3	Upland features, Mauna Loa	Trail, sleeping cave		Dougherty 2004			Kahuku
XAC-4	Upland features, Mauna Loa	Trail, other features		Dougherty 2004			Kahuku
XAC-5	'Umi cavern complex, Mauna Loa	Features near 'Umi cavern, including upland shrine		Dougherty 2004			Kahuku
X-Misc	Features variously documented in Section 106 reports	Incompletely reviewed, site/feature numbers undetermined		HAVO Section 106 reports			

Note: Feature numbers from Ladefoged et al. (1987) not provided in table.

X: Added as "working sites."

\* Indicates that a detailed description is provided in Appendix A. Table 2.

(1) Listed as agricultural pits in ASMIS; these are bird nesting pits, corrected in the table.

Table A-2. Detailed Information On Selected Sites in Table 1.\*

Site No.	Site Name	Description
05501	'Ainapō Trail	A narrow, single-file, twisting, and occasionally slightly abraded trail over lava fields (some fields are rough and scoriaceous, others are smooth and billowy) above 11,600 ft elevation; leads up the broad SE flank of Mauna Loa to and along the E side of Moku'āweoweo. The trail along the crater's edge is above the 13,200 ft elevation. Intermittent, and in places infrequent, stacks of loose lava boulders (ahu) line the sides of the trail. Abraded spots occur only on the rare surface types subject to pockmarking by metal blows; this was done by iron-shod hooves since 1870s, when horses and mules began to be used.
05502:	Kīlauea Crater	The summit of Kīlauea volcano has collapsed to form a broad, shallow caldera within which is Kīlauea Crater; within Kīlauea Crater is Halema'uma'u, an historically active lava vent (in the past, Halemaumau has contained a boiling lake of lava, which at times rose and overflowed onto adjacent crater floor). Kīlauea eruptions are typically mild and nonexplosive activity; on rare occasions, water has filtered into the volcano's "plumbing" and the resulting steam pressure has caused explosions. One of these occurred in 1790 and is noted in Hawaiian history because the hot blast of rock and dust overwhelmed and killed part of a native army marching near the crater. Kīlauea Crater is one of the world's most active volcanoes; its floor often tilts differentially and in total, rises and falls as much as five feet in a short period of time. Earthquakes are numerous.
05503	Puna-Ka'ū Historic District	The human occupation of the Puna-Ka'ū Historic District, as nearly as can be determined, covers a span of nearly 600 years and is represented by a variety of archeological-historical remains, including prehistoric fishing-farming, and historic goat-cattle ranching and pulu harvesting.
05505	Footprints Area	An area of approximately 4,284 acres bounded on the NW by the Ke'āmoku lava flow and the SE by the Ka'ū Desert Trail; contains an unknown number of fossil footprints and hoofprints in a superficial ash deposit from 1790 phreatic explosions of Kīlauea Crater.
05506	Whitney Seismographic Vault	A 5.8 by 5.3 m (inside dimensions) underground room, with reinforced concrete walls (0.45 m thick), concrete floor (ext. 0.15 m thick), and reinforced concrete slab (8 inches thick) roof. The floor rests on a solid ledge of basalt, reached by digging 1.67 m from the 1912 natural ground level through ash and pumice. The top of the vault makes a mound that is covered by topsoil; it is incorporated in the lawn on the crater side of the Volcano House. The cut pahoehoe block stone steps and walkway that lead to the entrance of this structure are partially dug into the ash layer. This structure is not in original form: the first documented modifications took place in 1941 and involved extending the ceiling height, creating a cement roof, installing ceiling light outlets, covering the roof with top soil, and constructing the exterior access steps as well as timing circuit outlets.
05507	Wilkes' Campsite	Remains of camp constructed by US Exploring Expedition party led by Captain Charles Wilkes in 1841; adjacent to the E rim of the Mauna Loa summit crater, at 13,240 ft above sea level; built on surface of pahoehoe lava. The principal building was a pre-fabricated portable house, carried in pieces to and assembled in the camp; it contained a pendulum for scientific experiments. There was an officer's tent, three tents for others in the expedition, tents for storage, cooking and for study of magnetism, astronomy, temperature, and barometric pressure changes. Each individual structure consisted typically of a tent that was encircled with a drylaid wall as high as the tent eaves; walls were built for protection from high winds, blizzards, and intense cold. "Pendulum Peak, January 1841/US Ex.Ex." was cut into the bedrock at the campsite, but has not been re-located. At abandonment in January 1841, the tents and portable house were dismantled; walls were left in place but soon began to deteriorate from earthquakes, violent storms, and some disturbances by artifact hunters and the curious. The rubble of the fallen walls was probably the principal source for the rocks used in the construction of the nearby summit shelter built by the National Park Service in 1934.
19248	Catchment Dump Site 19270 (Acc. 354)	This site is an historic trash dump in three loci. Artifacts range from about 1890 to 1940 and most likely originate from the pre-1940 Volcano House; most of the ceramics are marked "K.V.H." (Kilauea Volcano House). The site has been bulldozed and no longer exists.

Site No.	Site Name	Description
19445	CCC Camp Foundations at Resource Management	The site consists of two areas: Feature A is the remains of a cement slab from the old CCC Camp that was destroyed in 1994; Feature B is a stone-lined depression and cement and stone walk-ways. This general area is where the CCC Camp was located in the early 1940s; it is located next to the Resource Management Administrative Office (Building 322). The area is densely vegetated, with a thick layer of soil.
19447	Keauhou Landing	The Keauhou Landing site covers 10,200 square feet and consists of enclosures, walls, a rectangular cistern, walkways, stairs, and pahoehoe quarries. This was one of the major access points for tourists traveling to Kilauea Crater. The Keauhou Road from the landing to the Volcano House was started in 1885 by the Wilder Steamship Company and was completed in 1886. It apparently fell out of use after 1894 when the road from Hilo was completed.
19455	Steam Flats Dump 3900 (Acc. 356)	This dump site was likely associate with the Volcano House operations. Site disturbances include five unauthorized excavations that have been made into the deposits. The persons involved in this activity must have been looking for complete bottles, as discards of metal, and ceramic fragments surround the hole.
19457	Ginger Patch Dump (Acc. 355)	This dump site was likely associated with Volcano House operations. It is now buried under gravel fill and grass. Artifacts from the dump site are in the Park collections.
19458	Headquarters' Crack Dump	This dump site is located in a large crack about 80 m north of the Park Headquarter's building and the 1977 Volcano House (Art Center). It may have been the main dump site for the 1877 Volcano House and other buildings of the area. Now covered in dense vegetation and is difficult to access.
19459	CCC Water Tank Foundations	This site consists of the old CCC water tank foundations and related features. It is comprised of eight features, six of which are related to water distribution; one was possibly an incinerator and one was associated with the production of curbing stones.
19460	House site complex	This site encompasses enclosures, platforms, caves, a fisherman's shelter, salt-drying areas, filled cracks, ahu, petroglyphs (approximately 17,000 glyphs), a cistern, heiau, mounds, walls, terraces, and a stepping stone trail. Permanently sealed.
19461	Palm Tree Site, Paliuli	This site consists of nine features on a mixed pahoehoe/aa rise: five enclosures, a platform, petroglyphs, and two walls, plus numerous agricultural features (mostly mounds). Numerous historic artifacts are present. The site is currently in a kīpuka and surrounded by new lava flow. The western part of the site was covered by the February 1995 flow (Jason flow). (Smart et al. 1965: house site; platform and enclosure;)
19463	Petroglyph Cave	This site consists of a large, partially paved lava tube with petroglyphs within and outside the entrance. Part of the cave floor is paved with flat pahoehoe stones. A number of opihī shells and charcoal areas are within the cave. Charcoal was identified and was composed of native species including koa ( <i>Acacia koa</i> ).
19466	Salt Drying Areas	This site consists of eleven salt drying areas and 13 other features including rock-filled depressions, rock mounds, quarried areas, a temporary habitation with a small cave, and an anthropomorphic petroglyph. Destroyed; permanently sealed.
19468	Trail	Site is a pahoehoe stepping stone trail on an aa flow. It connects Sites 19462 and 19467. It is relatively intact in areas, with stepping stones still in place. A portion of the trail is covered by the February 1995 lava flow. (Emory, Cox et al.1959; Smart et al. 1965: stepping stone trail)
19474	Papalehau Cave	This site is the entrance to a "subcave" located on the SW end of a large collapsed skylight, one of a series of very large skylights; part of a large lava tube system that is aligned in mauka-makai fashion. The tube system was created by a lava flow that dates between 400-1500 B.P.

Site No.	Site Name	Description
20443	Kalapana Trail	This trail route is most commonly known as the Kalapana Trail. As illustrated on the 1912 Territory of Hawaii survey map, it extends E/SE from Keauhou Road to Punalu'u Heiau on the Puna coastline. Emory, Cox et al. (1959:91-92) describe the trail from the E end: "This trail ... connects with the end of the State road just beyond the Village of Kapa'ahu and continues almost due west for six miles along the gradually ascending mountain slope and then enters the steeper area and becomes a winding mountain path ending at the terminus of the Chain-of Craters Road. The lower straight section takes no particular advantage of the changing terrain, but goes from one point to another in the shortest distance. The hollows in the pahoehoe are filled to the level of the high points with stones. These fills are usually faced on the surface to keep the stones from shifting. The roadbed is six to eight feet wide and is bordered on each side with curbstones." Allen (1979:78) excerpts a Public Lands and Surveyors Office (Hilo Branch) report dated July 31, 1942 (report contained in Land Court File 1374): "The Kalapana-Volcano road across Kamoamoia is a built road and must have been built by the government sometime before 1900. It is well defined with lines of rocks on both sides and with rock fill over depressions. It ... is ten feet wide." In the late 1990s, portions of the Kalapana trail were inventoried as the trail was being utilized as a fuel break. Trail segments observed ranged from a single track worn into the pahoehoe ground surface to a 2 m wide trail with kerbstone lining and filled depression areas with faced retaining walls. Portions of the trail that extend into forested areas are overgrown with dense vegetation. A total of nine features were identified along the Kalapana trail route and consist of trail side modifications, trail signs, and surveyor markers. These features were combined with the existing Kalapana Trail based on their spatial association with the trail route and on their association with trail activity.
21146	Enclosures and platforms	A very large enclosure of irregular plan and roughly made walls, a small stone platform and traces of smaller, rectangular walled constructions are attached to its lower end. (Smart et al. 1965: enclosures and platforms)
21215	Pulu Factory	The Pulu Factory is located between Nāpau and Makaopuhi Craters. Pulu was a marketable item during the mid- to late 1800s; its production was discontinued around 1890. All that is left of this processing area are fallen timbers and stone walls of three structures.
21316	Coastal Trail (19,466)	Site 21316 is a coastal trail route that is not indicated on any maps. Emory, Cox et al. (1959:96) state: "The coast trail from Lae'apuki and Ka'ena and the trail from Pu'uloa meet within the (Kealakomo) compound and continue west along the coast." Emory suggests it is part of the Puna-Ka'ū Trail. Along most of its length, the trail is a narrow ribbon of abraded surface across smooth pahoehoe. Occasional low sections are filled with dirt in which vegetation grows, covering the pathway. Along the trail are various structural features, including several C-shapes that appear to be fairly recent in construction and were likely built by fisherman (fishing is allowed along this section of coast in the park by those 'ohana from Kalapana who have exclusive fishing rights in the area); the creation of temporary shelters is a continued practice for the fishermen.
21678	Cave (Fea. 61)	This site consists of a 14 x 5.5 m pahoehoe tumulus cave; the interior is 80 cm high; the opening is located on the northwest edge of the cave; the entrance is heavily vegetated with ti plants. The entrance of this cave has a shallow ceiling and a level floor lacking rock fall. Opihi shells as well as a large tooth were found on the cave floor. Site is in good condition; vegetation in the area consists of a'ali'i, ūlei, and 'ōhi'a.
21690	C-shape	This C-shape is constructed out of medium to large pahoehoe cobbles stacked 4-6 courses high on a pahoehoe tumulus. The wall of the C-shape is collapsed; the C-shape opens to the west.
21698	Agricultural Area (Fea. 1-652)	This site is an agricultural complex consisting of 541 excavated pits, 299 pit/mound features, 118 mounds, 38 pit/rock scatters and eight filled cracks. The current assessment identified 27 additional features: 10 excavated pits, eight rock pile/scatters, two alignments, two walls, two terraces, two rock shelters, and one mound.
21699	Cave (Fea. 1)	Site 21699 is a small rock shelter in a natural blister; it has a low ceiling. Goat bones are dispersed on the floor; kukui nut shells and pahoehoe cobbles are the only other cultural material in the shelter. Cultural features surrounding the shelter consist of a 3-4 course high rock mound located on the top of the blister, a 1.16 x 0.9 m rock wall, and several rock mounds.

Site No.	Site Name	Description
21700	Trail (Fea. 2)	This trail route consists primarily of an ill-defined track with no worn tread or other trail modifications except for relatively closely spaced cairns (131 identified). The trail generally contours the existing slope and ascends toward the northeast. Numerous cairns are placed along the trail at regular intervals; they are generally low-lying mounds (20-40 cm height; two to four courses of stacked pahoehoe cobbles). The trail was first identified during the Pānaʻu Emergency Survey and Mapping Project (Glidden 1998) and designated Feature 2. Spears (1995b:78) provides information concerning trail routes and the Pea Homestead (HV-376) based on a March 29, 1933 letter from E. Brumaghim to E.P. Leavitt, the Hawaii National Park Superintendent (the letter discusses a field inspection from Makaopuhi Crater to Kalapana related to possible acquisition of park land in lower Puna District): Brumaghim mentions several trail intersections encountered along the Kalapana trail route and references the Pea homestead. Although Site 21700 intersects with the Kalapana Trail approximately 600 m west of the Pea Homestead, it is not mentioned in the letter. The lack of previous documentation and the current condition of the trail (limited tread wear and no stepping stone segments in areas of aa lava) indicate that the trail was most likely recently constructed. The trail may have been constructed to improve hunter access to this portion of the park (Tunison, pers. comm., 2004) as it nearly adjoins a recently constructed “hunter’s trail.”
21702	Cave (Fea. 12)	Site 21702 consists of a temporary habitation that consists of a modified lava blister formation. It was previously recorded by Glidden (1998) as a cave (Feat. 12). Cultural material includes scattered opihi in the NW and SE corners of the chamber, and goat bones throughout the chamber.
21707	Cave (Fea. 53)	Site 21707 is a relatively small petroglyph cave site; there are no other modifications. The petroglyph images are pecked in three areas: Panel A consists of a series of anthropomorphic figures located on the vertical surface of the southern wall; Panel B is located on the relatively flat floor of the cave below Panel A and consists of a series of anthropomorphic figures; and Panel C is located on the vertical surface of the western wall near the cave entrance and consists of a single anthropomorphic figure. Cultural material in the cave consists of one opihi shell ( <i>Cellana</i> sp.) and one <i>Drupa</i> shell, both located in the roof fall S of the petroglyphs.
21710	Platform (Fea. 88)	Site 21710 consists of a single platform feature that is interpreted as a temporary habitation platform. The platform is constructed with small, medium, and large pahoehoe and aa cobbles stacked 3-5 courses high. No cultural material was observed on the platform surface or in the surrounding area.
21721	Enclosure (Fea. 130)	A rectangle-shaped enclosure measures 8.0 m x 10.0 m. The enclosure wall is constructed of aa and pahoehoe cobbles stacked 4-6 courses high. The basal courses are small to medium boulders with the remaining courses consisting of smaller cobbles. The west side of the enclosure is bounded by a natural pahoehoe rise. One hearth feature within the enclosure is constructed from 4 pahoehoe slabs placed on edge forming a square; the remaining interior area consists of level soil. Cultural material observed in the surrounding area includes one mule shoe located adjacent to and S of the enclosure.
21728	Enclosure (Fea. 40) Terrace (Fea. 41) Cave (Fea. 15)	Site 21728 is a habitation complex located in the western central portion of the project area (Quad III). The site was previously identified during the 1998 Pānaʻu Emergency Survey and Mapping Project (Glidden 1998) and consists of two enclosures (Feats. 40 and 97) and one terrace (Feat. 41). One feature (L-96) was located during the current survey and appears to be a portion of the previously recorded enclosure (Feat. 40). The enclosure is mostly collapsed and dense vegetation obscures portions of the enclosure wall and the feature is described below.
21730	Cave (Fea. 98) Terraced Platforms (Fea. 99 and 100) Mound (Fea. 101)	Site 21730 is a habitation complex, previously identified (Glidden et al 1998) and consists of two terraced platforms and other features. The features were interpreted as serving either a religious function or as possible burial features. The current survey identified these existing features plus one additional C-shape. Because no excavation occurred during either the previous or current survey to confirm the “possible burial” functions, the sites’ function was re-assigned to a habitation complex based on the features’ formal type and size.

Site No.	Site Name	Description
21733	Wall, Platform, Terrace, Enclosure, Cistern	Site 21733 is a habitation complex located in the southeastern portion of the project area (Quad IV). The site was previously identified during the 1998 Pānaʻu Emergency Survey and Mapping Project (Glidden 1998) and consists of a wall (Feat. 16), one platform (Feat. 17), two terraces (Feats. 18 and 61), one enclosure (Feat. 58), and one cistern (Feat. 60). Two features identified during the current survey correspond with the previously recorded features and consist of a platform (L-385) and one terrace (L-386). The features are part of the large habitation complex area and are described below.
21735	Enclosures, Cave, Terraces, L-shape, and Papamu	Site 21735 is a habitation complex located in the southeastern portion of the project area (Quad IV). The site was previously identified during the 1998 Pānaʻu Emergency Survey and Mapping Project (Glidden 1998) and consists of four enclosures (Feats. 50, 114, 115, and 116), two terraces (Feats. 111 and 118), one L-shape (Feat. 112), and one petroglyph (papamu) (Feat. 117). Three features identified during the current survey were correlated with this site designation and include one enclosure (L-209), one wall (L-264) and one platform (L265).
21737	Caves, Papamu, Enclosures, Terraced Platforms, Wall, Petroglyphs, C-shapes, Hearth	Site 21737 is a habitation complex located in the southeastern portion of the project area (Quad IV). The site was previously identified by Glidden (1998) and is the largest concentration of habitation features recorded by that previous survey. Enclosures, platforms, petroglyphs.
21751	Ainahou Ranch Cave System	The Ainahou Ranch Cave is a complex tube with 23 known entrances. As of 1994, this resource was the longest surveyed cave within HAVO with a total passage length of 7.11 km, a vertical range of 352 m, and an average gradient of 4 degrees. This vertical range classifies the tube as the fifth deepest cave in the US. It also holds the record as the most important biological cave in the state of Hawai'i with 19 endemic obligate cave-adapted species as of 1994. The cave is also very important archeologically, housing outstanding petroglyphs, temporary habitation sites, water catchment systems, terraces, and one burial. The cave was formed from the 350-500 year old 'Ailā'au lava flow. Due to the fact that this cave has so many unique and valuable resources, and because there is a burial present, the tube is closed to the public.
22487	CCC features on Hilina Pali Road (LCS 101791)	Site 22487 is an historic site and the features it includes were built by the CCC in 1940. The job was referred to as CCC project number 327. The sitespans about 2 kilometers lengthwise and is located along the intermittent streams of the area. The CCC was working here to deter the erosion in the area that occurs during heavy rains. To do this the CCC locally quarried the pahoehoe bedrock of the area and used the rocks to construct walls along the drainages. These retaining walls were built to help contain the water flow into these gullies and by doing this the soil and vegetation would not be washed away and eroded. The site consists of a total of 78 walls, 2 historic petroglyphs, 3 mounds, 13 dams, and 1 cairn.
22973	C-shapes in Footprints area	This site consists of 20 features: five C-shapes, two enclosures, four mounds, three rock piles, one U-shape, and five walls. Features 1 through 4 and 7 through 11 are all located within a recessed area of the Ke'āmoku aa lava flow. This inlet represents an area where the lava has flowed in such as way as to create a natural area protected from the prevailing, and at times strong, winds. The Ke'āmoku flow also provided most of the building material for the structures. Loose cobbles and boulders are utilized to create structure walls, mounds, and rock piles. None of the structures showed evidence of cultural deposits. Most of the C-shapes and enclosures show evidence of ash buildup in the interior of the feature that may contain some subsurface cultural remains.
22974	Shelter and volcanic glass quarry in Footprints area	This site consists of nine features: one overhang shelter, six volcanic glass quarry areas, one wall and one modified outcrop. Unlike Site 22973, only a single structure at 22974 is located along the Ke'āmoku and flow. The other features are located to the east of the Ke'āmoku flow boundary on the undulating p4o pahoehoe flow. Due to the survey method used in 1998, it is unknown at this time whether other structures or features located on the p4o flow could potentially contribute to this site. Although these features represent a dispersed group, at least the quarries are likely functionally related.
22975	Shelters and volcanic glass quarry in Footprints area	This site consists of four features: two overhang shelters, a C-shaped structure, and a volcanic glass quarry. One large quarry. All of the features were found along the flow edge. Due to the survey method used in 1998, it is unknown at this time whether other structures or features on the p4o flow could potentially contribute to this site complex.

Site No.	Site Name	Description
22976	Shelters and volcanic glass quarry in Footprints area	This site consists of four features: two overhang shelters, a C-shaped structure, and a volcanic glass quarry. All of the features were found along the flow edge. Due to the survey method used in 1998, it is unknown at this time whether other structures or features on the p4o flow could potentially contribute to this site complex.
22977	Structures in Footprints area	This site consists of six features: a rock pile, two enclosures, a petroglyph, a U-shaped structure and a volcanic glass quarry. Three of the features are located on the Ke'āmoku flow while the other three were found on the p4o flow. Only one feature (25) is located within a recessed area of the Ke'āmoku flow. Features 98-92 and 98-92a are located nearly adjacent to the Ka'ū-Volcano Trail (Site 22982).
22978	Structures in Footprints area	This site consists of five features: two rock piles, a mound, and two enclosures. Three of the five features that comprise this site are located on the Ke'āmoku lava flow. The mounds and rock piles may be functionally associated with the Ka'ū-Volcano Trail (Site 22982) but are not spatially associated. Along the Ke'āmoku flow, between sites 22973 and 22978, there is a paucity of features (<10); the edge of the Ke'āmoku flow was not used intensively along this section of the flow.
22979	Structures in Footprints area	This site consists of a high density of features, a majority of which are located along or near the edge of the Ke'āmoku flow. Thirty-one features comprise this site. They include: six overhangs, eight enclosures, five C-shapes, five U-shaped structures, one volcanic glass quarry, three mounds and three walls. It is the first large cluster of features located north of Site 22973. This site is approximately 70 m south of the Ke'āmoku Cross Trail (Site 23033). The concentration of features beginning in this area may be related to the Ke'āmoku Cross Trail (Site 23033) that runs perpendicular to the Ke'āmoku flow. The trail may have provided quick access to and from the Ka'ū-Volcano Trail (Site 22982) and resource procurement and habitation sites in the Ka'ū Desert. Thirty of the 31 features that comprise Site 22979 are located on the Ke'āmoku flow.
22980	Structures in Footprints area	This site consists of eight features - five C-shaped structures, and a single terrace, U-shaped structure and overhang. All of the features except Features 55 and 62 are located on top of the Ke'āmoku flow. None of the features are located within a natural recessed area of the Ke'āmoku flow, but they are close to two trail systems, Sites 23033 (Ke'āmoku Cross Trail) and 22982 (Ka'ū-Volcano Trail)..
22981	Structures in Footprints area	This site consists of 17 features – four C-shape, one cupboard, one enclosure, four modified overhangs, a terrace, four U-shapes, a blister cave and a single wall. This relatively dense cluster of features is located 175 m southeast of the Ke'āmoku Cross Trail. All of the features are located on the Ke'āmoku flow.
22982	Ka'ū-Volcano Trail	Site 22982 is comprised of two parallel trail segments and 33 associated features. Identified as two worn areas across the p4o pahohoe flow, these trail segments are located east of the Ke'āmoku flow. The segments run in a northeast/southwest direction. The trails were identified over a six mile (9,656 m) distance. The location of the field data collected by GPS matches the location of the Ka'ū-Volcano Trail on a 1907 digitized map. Along these trail segments, 33 features were identified in close spatial association. Of the 33 features there is one C-shape, one modified outcrop, one modified overhang, 26 mounds and four walls. The mounds were likely used as trail markers by travelers using the area. Mounds are useful trail markers in an area like the Ka'ū Desert because trails worn into the pāhoehoe are often hard to see.
22983	Cave in Footprints area	Feature 98-624 is a cave that extends under the edge of the Ke'āmoku lava flow. The shelter is 12 m x 8 m x 300 cm high. No information on cultural modifications such as associated walls or deposits is provided. Thus, this feature could possibly be natural and deserves further evaluation.
22984	Structures in Footprints area	This site consists of 10 structures - two C-shapes, four mounds, one rock pile, one modified overhang, and two terraces. Features 78, 79, 83, and 84 are located on the Ke'āmoku lava flow, while features 80, 81, and 82 are located at the base of the Ke'āmoku flow. None of the structures showed any evidence of cultural deposits. Most of the structures show evidence of ash buildup in the interior that may contain some subsurface cultural remains.
22985	Structures in Footprints area	This site consists of 15 structures - six walls, two overhangs, four C-shapes, two enclosures, and one associated possible hearth. Features 85, 89, 92, 93, 94, and 95 are located on the Ke'āmoku lava flow, while Features 86, 87, and 88 are located at the base of the flow. None of the structures showed any evidence of cultural deposits. Most of the structures show evidence of ash buildup in the interior that may contain some subsurface cultural remains.

Site No.	Site Name	Description
22986	Structures in Footprints area	This site consists of four overhangs and one wall. All features in this site with the exception of two, (Features 98 and 99), are located on the Ke'āmoku lava flow. None of the structures of the structures showed any evidence of cultural deposits.
22987	Structures in Footprints area	This site consists of 47 features and one isolated marine shell fragment. The features include: nine enclosures, four terraces, 14 walls, eight C-shapes, five overhangs five U-shapes, and two L-shapes. <i>This is the largest site in the project area and contains the most features.</i> Features within this site are found both on and off the Ke'āmoku lava flow.
22988.	Structures in Footprints area	This site consists of one overhang, two enclosures, and five C-shapes. Most of the features are located at the base of the Ke'āmoku flow. Thus, the flow edge is utilized as part of the structure construction.
22989	Cave in Footprints area	Feature 152 is a 2 x 3 m and 150 cm high cave. It is located on a southeastern facing slope of the Ke'āmoku lava flow. There is an alignment of aa boulders immediately outside of the entrance, aligned from east to west that is filled with ash on its northern side to form a terraced area.
22990	Cave in Footprints area	Feature 155 is a 1.80 x 1.80 m and 95 cm high cave. It is located at the base of the Ke'āmoku lava flow. There is some stacking of basalt boulders and cobbles at the southwestern and northeastern ends of the cave entrance.
22991	Cave in Footprints area	Feature 154 is a 3.20 x 2 m and 40 cm high cave. This feature is located at the base of the Ke'āmoku lava flow.
22992	Structures in Footprints area	This site consists of nine features: one wall, three C-shapes, three terraces, one overhang, and one enclosure. Unlike Site 22988, a majority of the features that comprise this site complex are constructed on the Ke'āmoku flow itself. All of the features are found north/northwest of a natural inlet area in the Ke'āmoku flow
22993	Structures in Footprints area	This site consists of 28 features: seven terraces, eight C-shapes, four walls, three overhangs, three L-shapes, one rock pile, one platform, and one mound. A majority of the features are located on the Ke'āmoku flow with several features constructed on the adjacent pahoehoe. None of the features are located within recessed areas of the Ke'āmoku flow.
22994	Structures in Footprints area	This site consists of four C-shapes, one L-shape, two U-shapes and five walls. A majority of the features abut the base of the Ke'āmoku flow, while three are located on the Ke'āmoku flow and one south of the flow on the p4o flow. A rather small cluster of features, Site 22994 is located just northeast of Site 22993.
22995	Structures in Footprints area	This site consists of 12 features: three C-shapes, two terraces, one L-shape, one modified overhang, three enclosures, one wall and one petroglyph. A majority of features within this site cluster are located on the Ke'āmoku flow. Feature 202 is the only structure built within a protected inlet area of the Ke'āmoku flow.
22996	Structures in Footprints area	This site consists of 48 features: four terraces, 27 C-shapes, eight walls, one cupboard, five mounds, one modified overhang, one possible cupboard, and one historic dump. A majority of the features are built on the Ke'āmoku flow. Less than a half-dozen of the features that comprise this site are located either at the base of the Ke'āmoku flow or on the p4o flow. The style of construction of all of the features excluding the glass bottles suggest they are either pre-Contact or early historic in nature.
22998	Peter Lee Road	The Peter Lee Road was built to service the community of Pāhala, in particular the hotel owned by entrepreneur Peter Lee at Punalu'u and visitors who stayed at the Volcano House. The Peter Lee Road was the first official road built in this area. It was completed in 1891 (Olson 1941a:46). The road was nearly 24 miles long and was designed to accommodate carriages and later modified for motorized vehicles. A 1921 USGS map shows a junction in the Peter Lee Road at the 3,363 foot elevation. The north spur of the road leads to a watershed and tanks at Kawikohoni. The map suggests this spur ends near the Mauna Loa Trail. None of this spur road was identified during the current project. By 1927 the Peter Lee Road was replaced by the Kau Road (Site 23034).
23000	Structures, lithic workshop in Footprints area	This site consists of 15 features: one overhang, four enclosures, three C-shapes, one U-shape, one cave, one terrace, two rock piles, one mound and one lithic workshop. This large site complex consists primarily of features constructed on the Ke'āmoku flow. This is the last large (>10 features) site complex found along the Ke'āmoku flow.
23001	Structures in Footprints area	This site consists of eight features: five C-shapes, one terrace, one mound, and one enclosure. Of these eight features, only one Feature, 277, is located on the Ke'āmoku flow; the remainder are on the p4o pahoehoe.

Site No.	Site Name	Description
23003	Structures in Footprints area	Site 23003 consists of a complex located in the Ka'ū Desert area of Hawai'i Volcanoes National Park. This site consists of four discontinuous features along the Ke'āmoku flow. Features consists of rock walls, a C-shape, a rock mound and a single rock feature. Two features were relocated while the other two could not be relocated. Positioned on an a'a flow as well as volcanic sand and duff, this site is positioned in an area prone to flooding and shifting sands. Vegetation present in this area is sparse and consists of a'ali'i, pukiawe, ohia as well as an unidentified shrub. This site is in relatively poor condition and is threatened by flooding, volcanic activity, weathering and seismic activity.
23005	Structures in Footprints area	This site is comprised of four features: three mounds and one platform. All the features that make up site 23,005 are located along the historic Peter Lee Road This site is comprised of four sub-features which includes three ahus (98-551, 98-607, and 98-621) which are likely markers for the historic roads and a platform (98-613). Ahu 98-551 was relocated and has the dimensions 0.8 m X 0.7 m X 0.4 m high. The platform has the dimensions 6.1 m X 3.7 m X 0.55 m high and the feature is of a different character and time period than the others. The platform appears to be a type of temporary habitation.
23006	Big 'Ōhi'a Cave	Feature 98-32 is Big Ohia Cave. Barbara Withrow formally identified this cave in 1987. Withrow located the cave, mapped it, and recorded basic information (HAVO Cave Files). Wulzen revisited the cave in 1998 and 2001 and a site number was also assigned at this time. Wulzen described the site as containing lithics, wood, hearth, and pig bone. Sourcing of the material proved inconclusive.
23007	Structures, lithic workshops in Footprints area	This site consists of eight features: one platform, six lithic workshops, and a cache of waterworn stones. The lithic workshops may be the outer extent of a large cluster of lithic block quarries identified in 2001 and surveyed in 2002 (Moniz Nakamura in prep).
23008	Cave	Feature 98-567 is a cave located 35 m west of Crater Rim Drive. The entrance to the cave is 1.2 m wide by 170 cm high. The sole cultural modifications associated with this cave are some rocks inside which appear to be placed. This site is a single cave feature identified in 1998 by Wulzen.
23009	Cave	This site consists of a single cave. No information was provided by Wulzen (1999). The cave needs to be revisited and formally recorded. Feature 98-568 is a cave located 10 m east of Highway 11 near the Kilauea Military Camp (KMC) baseball field. No reference to cultural material or modifications have been described for this feature.
23015	Structures, petroglyphs in Footprints area	This site consists of 29 features: seven mounds, six C-shapes, seven walls, one historic petroglyph, three enclosures, two terraces, one platform, two modified overhangs. This cluster of features is located at the base of the Ke'āmoku lava flow. The presence of the corrals and historic petroglyph suggest some of these features may be historic in nature. This site is bisected by Ka'ū-Volcano Trail (Site 22982).
23021	Trail in Footprints area	This site is comprised of a segment of trail and six associated mounds that were likely used as trail markers. The location of this trail matches nearly perfectly with the location of a trail identified on a digitized 1907 map as the "Old Puna-Ka'ū Trail." Therefore, the author is confident that the section of trail identified by Wulzen in 1998 is the remnant of this trail system. The Old Puna-Ka'ū Trail appears to link with the Āinapo Trail which is a trail that leads to the summit of Mauna Loa.
23022	Structures, volcanic glass quarry in Footprints area	This site consists of nine features: one modified outcrop, one terrace, one volcanic glass quarry, an enclosure, two walls and three lithic quarries. The site is comprised of a disparate group of features located just south of the Old Puna-Ka'ū Trail (Site 23021). During Site Condition Assessment 2006 we found additional footprints in the ash flow. The area has experienced recent flooding by the appearance of downed ohia trees and dead trees that surround the feature. Approximately 10 footprints are visible and well preserved inspite of the erosion from water movement.
23031	Rock pile	Feature 98-54 is 1.75m long x 1.15m wide x .7m high rock pile is made of dry stacked pahoehoe boulders and cobbles and is stacked one to three courses high. The feature is built on top of pahoehoe bedrock and is near a small opening in the pahoehoe bedrock (a blister) which is feature 98-66. This blister could possibly be big enough for a human to fit inside if lying down.

Site No.	Site Name	Description
23032	Halfway House Trail	This site consists of a segment of trail that forks into two parallel trail segments. The right fork is 733 m (0.5 mi.) long while the left fork is only 340 m (0.2 mi.) long. Both trail segments lead toward the Kau Halfway House. The Kau Halfway House was a rest station constructed for visitors who were traveling from Hilo to Ka'ū in the late nineteenth and early twentieth century. Because of its apparent association with the Halfway House, the trail has been so named. The Halfway House Trail diverges to the west from the Ka'ū-Volcano Trail (Site 22982) near the base of the Ke'āmoku lava flow. Feature 98-472 is the temporary field number assigned to the trail segment identified as the Halfway House Trail.
23033	Ke'āmoku Cross Trail	This site consists of five features: one trail segment, two rock piles, and two mounds. The trail (see description below) crossed the Ke'āmoku lava flow just south of the beginning of the largest concentration of structures that have been identified along the lava flow. The Ke'āmoku Cross Trail is unlike most of the other trails (except the Old Puna-Ka'ū Trail) because lies in an east/west direction. The rock piles and mounds likely served as trail markers for travelers who used it.
23034	Kau Road in Footprints area	Feature 75 is a 3,195 m (1.99 mi.) segment of the Ka'ū Road. This road replaced the Peter Lee Road (Site 22997) by 1927. The Ka'ū Road was built by the Territory of Hawaii and paralleled much of the then existing Peter Lee Road (Site 22997). Today, only a small section of the Ka'ū Road remains, as the existing Māmalahoa Highway now covers much of the same route.
23049	Crater Rim Road Wall	The site consists of a free-standing, dry-stacked rock wall. It is constructed 2-8 courses high of blocky pahoehoe boulders, possibly core-filled and placed upon undulating pahoehoe terrain in a wet rainforest. It heads in an E-W direction with the west and possibly east end disrupted by the Crater Rim Road.
23270	Kealakomo Coastal Features	Enclosures, platforms, mounds, petroglyphs. Historically, large waves and goat activity have impacted the area. Several features, particularly those near the shore, have been affected by wave action, and are partially buried in sand and beach rubble.
23271	Pu'uloa Petroglyph Field	Pu'uloa Petroglyph Field is a very extensive area covered with a dense concentration of petroglyphs. The area is characterized by a long pressure dome hill that rises above the surrounding area. On this hill there are many petroglyphs as well as surrounding this hill. The types of petroglyphs found in this area include pikos or cupules, anthropomorphs, zig zag lines including many other shapes. It is said that Hawaiians came here to bury the umbilical cord in a cupule with a rock over it to ensure a long life. The word "Pu'uloa" translates to hill of long life. There is a trail leading to the petroglyphs with a viewing boardwalk so that people do not trample on the petroglyphs and inflict wear and tear on them. Several old trails intersect this petroglyph field. (Pu'uloa Petroglyphs; Smart et al. 1965)
23275	Keanakāko'i Crack Dump	This site is located against the north base of a large crack extending eastward from Keankako'i Crater. The site consists of three unauthorized excavation pits and is positioned on soil and medium black cinder. White ware shards, glass bottle fragments and metal apparatus are present.
23314	'Āinahou Road/Keauhou Trail	This site consists of both the Keauhou Trail and the 'Āinahou Road. These features were lumped together as a single site due to the fact that the 'Āinahou Road used to be a section of the Keauhou Trail. The historic Keauhou Trail provided access from the Keauhou Landing to upper elevations (the Pulu Factory and the early Volcano House) of Hawaii Volcanoes National Park. The portion of the trail converted into a dirt road ('Āinahou Road) provided and continues to provide access to the secluded Ainahou Ranch House. The Keauhou Trail is approximately 6.2 miles long while the Ainahou Road is approximately 2.0 miles long. Both features meander through myrica faya and broomsedge landscapes in one of driest areas in the Park. The Keauhou Trail is relatively narrow (1-6 feet in width) and is shows signs of erosion. The 'Āinahou Road is in good condition and is maintained by road crew.

Site No.	Site Name	Description
23315	Platforms and Enclosures at 'Āpua Point	This site comprises a combination of three platforms and two enclosures, a single platform and enclosure, a stone tower, and another small enclosure. The main structure has three platforms joined side by side, each faced with boulders, paved with small stones, and each with its own stone hearth. The central (largest) and western platform share a common, boulder paved strip running along their southern edge, and this continues eastward as a wall before turning back to the third platform. The platform facings are thick and show clearly on the surface of the small stone paving and the boulder paving of the two western platforms. Against the southeast corner of the platform structure is a small rectangular walled enclosure, and against the southwest corner is another small, but oval, walled enclosure. This house site was identified and mapped in 1964 by Colin Smart. After the 1975 earthquake and tidal wave the site took considerable damage. The platforms are still structured and definable however the edges of the site are rubbly and blown out. The hearth and post holes in the far eastern platform are distinct, the hearth in the far southern platform is well defined and visible.
23316	Enclosure at Āpua Point	A small square enclosure of roughly made, low stone walls, is located just beside the Apua-Kahue trail a few meters east of the Apua shelter. The enclosed area is of bare rock surface. This site is now in a very disturbed condition. The enclosure is in such bad condition that no map was made because the feature is so haphazard and disturbed.
23317	'Āpua Point Spring	A fissure allowing access to brackish water some 3.25 m. below ground surface and 40 m. from the shore line on the western side of Apua Point seems to have had its opening enlarged or modified. This is the only water source located at Apua Point. Immediately inland from this water source is situated the present overnight shelter at Apua Point (with site No. 47). Opihi shells cove the floor of the cave and there is a large deposit of shells on the northwest surface of the cave. It is used a bathing spot for visitors.
23362	Pepeiau Shelter Cabin	This shelter cabin is a 5.1 m X 3.1 m X 2.3 m high cabin constructed of wood and built in 1946 or prior, the exact date has yet to be determined. The cabin consists of one room and is rectangular in shape. The construction of the cabin exhibits the Park style developed for HAVO in response to available materials and the implementation of the 1930s Park Master Plan.
23363	Platform and shelters, shrine?	This site consists mostly of jumbled rock and waterworn stones due to tsunami action in 1868 and 1975. There are occasional patches of pavement and a few alignments still exist. A 1964 record of this site suggests it may have been used for religious purposes. The site blends into an area on the southwest that was known as a fisherman's shelter and was also used by park rangers from 1950's through to 1975. Possible shrine?
23399	Hilina Pali Road	This road is located on the right hand side of Chain of Craters Road and is 8.2 miles long. The road consists of a one lane road that has been resurfaced several times over the years. This lovely road provides access to the Ka'aha Trail Head as well as the trail leading to Halape and the Peipeia'u Shelter.
23646	Coastal Complex	Site 23646 is complex of features located along the coastal lowlands. The features were identified during the Pili Grassland Prescribed Burn Experiment project and that was conducted in two phases. A total of 61 features were located during phase I and consisted of 34 rock piles, 14 excavated pits, 3 alignments, 2 petroglyphs, 2 mounds, one cave, one enclosure, one slab lined hearth, and one wall. An additional 143 features were identified during phase I but were later determined to be non-cultural. Fewer features were located during phase II. A total of 90 features were located, and 10 of those were determined to be noncultural. The remaining 80 features consisted of 57 excavated pits, 18 rock piles, 2 excavated pits with walls, one alignment, one overhang shelter, and one isolate marine shell. During the current assessment a total of 252 features were included with Site 23646. Of this total, 133 were subsequently inundated by lava, 91 features were relocated, 17 newly identified features were clustered with Site 23646, six previously located features were not relocated, and five features were determined to be non-cultural. The predominant feature types identified are excavated pits and mounds (both feature types generally associated with agricultural activity) but also included: rock scatters, alignments, walls, one possible lithic scatter/y, cairns, and petroglyphs and each is described below.
23647	Lithic Block Quarry Features	This site consists of 277 individual quarry locales. A single cave was identified in this project area. Cave (Lithic Block Cave) will be receiving a separate site number. In the original work done on the site an excavation of one of the quarries took place, collection of some adze preforms and lithic flakes, as well as some collection and testing of charcoal from the Lithic Block Cave. Thompson and Roper Lithic Block Quarry Survey 2002, GIS data available but currently there is no written report for this survey.

Site No.	Site Name	Description
23975	Kupukupu Feature KA1	Feature KA1 is a 198 X 130cm and 30cm in height rock pile. The feature is constructed of loosely piled and scattered pahoehoe boulders and cobbles. The feature is in a loosely circular arrangement. It is located at 1000-1500 feet in elevation
24007	Kupukupu Agricultural Features	Site 24007 consists of agricultural features identified in the western central portion of the project area and includes one mound, one pile/scatter, one excavated pit with mound, and one excavated pit, and each is described below. The site designation was created to encompass the agricultural features in this portion of the project area. Numerous agricultural features (mounds) were identified in this area during the current assessment; however, due to time constraints these features were not formally recorded. If surveys are conducted in this area in the future, then these features should be included with Site 24007 and the current site boundary amended to reflect the broader feature distribution in this area.
24010	Platform	HAVO-2002-488 is an 8.7 x 6.4 m an 95 cm in height rectangular platform (Fig. 22). The platform is constructed on the southern terminus of an aa flow and consists two separate levels (the northern, mauka, level was designated Level 1; the southern level was designated Level 2). The platform is constructed from stacked pahoehoe and aa cobbles and small boulders. The northern platform area (Level 1) consists of a rectangular area delineated on the northern and southern edges by a low lying wall. The wall is mostly collapsed (no verticle facing remains) and appears to be dry stacked constructed (non corefilled). The wall ranges from 35-50 cm in height and is 0.7 m in width. Both the southern and western edges of Level 1 are defined by a single course alignment of both aa and pahoehoe cobbles and small boulders. The interior floor area of Level 1 is relatively level and consists predominately of crushed aa gravels (Fig. 23). Level two is south and joins Level 1. The rectangular portion of the platform consists of a relatively level area paved with both pahoehoe cobbles and slabs (inlaid in the platform surface) surrounded by crushed aa gravels (Fig. 24). Several coral fragments were observed on the platform and consists of larger pahoehoe cobbles and boulders. The mound formation combined with the branch coral remains may indicate a possible burial function for this feature. No other cultural material was identified on the platform surface or in the surrounding area.
24017	Kupukupu platform	The platform is rectangular in shape and is constructed on a south facing slope with the long axis oriented N/S (Fig. 38). The platform is constructed from stacked pahoehoe cobbles and small boulders and the platform edges are mostly collapsed. The platform surface appears to dip slightly toward the slab pavement area; this dip, or depression area, may represent a crypt structure constructed within the platform. The central platform area is roughly 3 meters in length (N/S) and consists of rough pahoehoe cobble pavement mixed with soil and duff accumulation. This pavement area is not as intact as the southern pavement area. The northern half of the platform consists of level soil and a duff layer; these accumulations may overlie a buried cobble pavement surface (Fig. 40). No cultural material was observed on the platform surface or in the surrounding area. The platform most likely served as a permanent habitation feature based on its formal type and on its size. The feature may also represent a possible burial platform; this function is most likely a secondary feature function where an individual was interred post habitation. The feature is in good condition and is located 510 meters (1,673 feet) a.m.s.l.
24081	Cave	The Site 24081 cave is located southeast of Node H26. One adult cranium was observed in the cave, and the remains were designated Human Remains 1 (HR1). HAVO-2003-L-67 is a cave of undetermined length. The cave trends north/south and the cave interior is accessed by a 2.0 wide by 0.7 m in height opening along the eastern edge of the tube. The opening is situated within a relatively small sink formation that measures approximately 4.0 m N/S by 3.0 m E/W. The floor of the sink formation is littered with a thick layer of burned organic material that overlies pahoehoe cobbles (collapsed sink edge material). The opening provides access to both the northern and southern cave extensions. A second opening is located approximately 5 m northwest of the main opening but was not examined. One human cranium (HR1) was observed in the cave interior from the cave opening. The remains are located approximately 5.0 m south of the opening and are situated on the eastern edge of the cave. An unidentified bone fragment (possibly a lower lumbar spine or a sacrum fragment) is located within a pahoehoe cobble concentration at the main opening. Petroglyphs are located on the flat pahoehoe surface immediately west of the tube opening; the motifs are weathered and exact figures could not be accurately discerned because of the deteriorated state of the panel and due to poor lighting conditions.

Site No.	Site Name	Description
24094	Agricultural Features	Site 24094 consists of 338 agricultural features distributed throughout the current project area. The features were designated one site number based upon their apparent affiliation with agricultural activities in this area and on the similar construction materials and methods. The site consists predominately of rock piles (n=237) and rock mounds (n=67); the physical characteristics that differentiate between the two feature types was based primarily on substantive construction and was determined by the individual surveyor. The remaining features of the site include 2 C-shape planting areas (non-habitation), 16 excavated pits, 13 excavated pits within associated mounds, and three agricultural terraces, and each is described below.
24121	Kahuku-‘Āinapō Trail	The Kahuku-‘Āinapō trail is a segment of an “old trail system” that was used in historic times for driving cattle between various cattle ranching operations associated with Parker Ranch (ca. 1912-1947) and is located in the Kahuku Management Unit of the National Park. The trail route included stopover locations at Kapapala Ranch, Keauhou Ranch, Humu’ula Sheep Station, and Pu’u O’o Ranch. (Loyal to the Land, Bergin, ref.). The Kahuku-‘Āinapō trail illustrated on the 1928 USGS Honuapo quadrangle map is a pathway leading north/south through the southern central section of Kahuku to approximately 5,000ft elevation, where it turns to lead northeast/southwest into the upper eastern section of the Kahuku Unit, parallel to the eastern park boundary. The total length of the Kahuku-‘Āinapō trail located within the Kahuku Unit of the national park boundary is 35,000 meters (21.7 miles). The remainder of the trail extends beyond the northeast park boundary, into the state Kau Forest Reserve and Kapapala Ranch. Currently, the trail courses over a’ā and pahoehoe lava types, and bisects various vegetation types that include pastureland, ohia and koa forests, and pukiawe scrublands. A portion of the Kahuku-‘Āinapō trail equal to 24,600 meters (~15 miles), from Pu’u Nanaia (2,000’ elevation) to Punalu‘u Kahawai (6,167’ elevation) was surveyed during the archeological investigations of 2004. The survey identified 24 features associated with the Kahuku-‘Āinapō trail that consist of trail segments, trail/road segments, and cairns. The trail segments range from winding single file width pathways to bulldozed road segments wider than two meters. Significant sections of the trail have been impacted by historic lava flows, vegetation overgrowth, ungulate trampling, and ranch development activities (i.e., modern roads, water system development, and logging). Surveyors experienced difficulty in identifying many of the trail segments in the upland forests, which coincides with earlier attempts to locate upland mountain trails on Mauna Loa’s slope region. The majority of trail segments identified and recorded within the pasture land area (2,000ft 5,000ft), have sustained a moderate to high level of disturbance through pasture development fence line construction, and road system development and improvements (i.e., bulldozing, widening, rerouting). A condition assessment of the site was obtained on 11/14/06 by relocating and observing 8 of the subsites which include H4,H5, H6, H8,H9, H11,H18, and H19. The site can be seen as a pathway through various terrain, including a’ā and soil. It has been obscured by vegetation in many locations. In at least one location rock walls are located in the vicinity and are probably associated with the trail and trail activities.
25935	Halapē Ruins	This site is a habitation complex consisting of a large house platform with four associated enclosures, a windbreak wall, some small paved areas, quarried edges and petroglyphs. House Platform: There is a paved platform ca. 8 m by 7 m with a ca. 0.7 square slab lined hearth of water worn basalt boulders near the center of the paving. The platform is outlined by slabs and cobbles level with the paving on all four sides. There are low walls/alignments outlining the edges on the northeast and southeast sides of the east corner of the platform. This platform has been built on the upper quarried surface of a prominent tumulus well inland from the coast and on the east edge of the village area. There are three probable postholes visible near the edges of the cobble alignments. These indicate the structure of about 7 m by 6.5 meters. There is a slightly lower terrace along the southeast and northeast sides of the platform that appears to have been robbed to build adjacent enclosures 1 and 2. The large size of the house along with the size of the slab-lined hearth, the quality of the construction and prominent position of the feature overlooking the village and the coast of Ka’ū suggest that this is a high status dwelling.
25936	Halapē Ruins	This site is a 9.0m x 18.0m x 1.5 m high large rectangular enclosure with some paved areas, breakdown on the north corner and on the southern side. Vegetation has inundated the interior of the platform. There is a small enclosure within the large enclosure that is approximately 3 m x 3m. The hammerstone that was previously identified in the southern corner of the enclosure was not relocated, probably due to the dense vegetation. There is a paved terrace on the southeast corner of the platform that is approximately 4m X 5 m long.

Site No.	Site Name	Description
25937	Kalua Ruins	This site consists of five historic structures positioned on a sloping pahoehoe lava flow in the southwest region of Hawaii Volcanoes National Park. Labeled as Features A-E on the provided map, features consists of terraces, enclosures, platforms, papamu, and c-shapes. Features associated with this site are described in the provided features forms (Features G and H) and consists of a fishing shrine as well as an enclosure complex. This site is in good condition with little impacts being present. Vegetation is scarce in this area which rest on the edge of a cliff and sea arc.
25938	Kūē‘ē Ruins	This site consists of a remote village site in the park used as a fishing camp up to the 1970s. Area was used by opihi pickers which is evident by mass concentration of ‘opihi shell middens. These ruins are part of the Puna-Ka‘ū Historic District. A series of C-shaped enclosures, excavated areas, house platforms, multi-room rectangular enclosures and cave features compose this site. In all, there are 17 sites, all of which include stone structures, petroglyphs, some small cave sites, two paved areas and the only example of a crop-mark site recorded in the park. The entire site stands upon the surface of an aa flow and pahoehoe flows. The ocean is located approximately 100 meters south of the site which may be described as being extremely barren, dry with occasional tufts of natal redtop and soursbush. This site is a cluster of many features which include a large ahu that at one time marked a brackish water spring that was not identified on this trip (although a crack is nearby that the water may have once been in), an enclosure, a C-shape, and a petroglyph panel pecked into the pahoehoe. Around these features there is shell midden scattered throughout as well as metal fragments, glass fragments and glass bottles.
25939	Keauhou Ruins-Heiau Cave	This site is located south of the Puna-Ka‘ū Trail in the ahupua‘a of Keauhou. “This site is the most complete modification of a lava tube recorded in this area. The lava tube comprises the usual sections—a collapsed section which permits entry into an intact portion of tube leading northwards (and eventually opening to the surface again through another collapse). The collapsed section has a level paved floor, almost 2m below the surrounding ground surface and near vertical walls for the most part. In places the wall of the collapse has been made vertical with carefully placed stones... On several of the paving stones are petroglyphs...” These petroglyphs are in good condition. “A narrow entrance has been constructed in the northeast corner of the paved floor area and permits access down into the intact section of the tube. Within the tube the floor is covered with a tumbled mass of large boulders, several of which are clearly waterworn and must have been carried into the tube...” (Smart et al. 1965:58). Two large, elongated, water-worn boulders are placed upright in the floor, and at least one additional boulder of similar size and shape lies on the floor in line with the other two. The original recordation of this resource notes only these three upright waterworn stones in this resource but the 05/18/2006 visit to the site revealed 20 upright waterworks within the immediate entrance of HV-078. Due to these additional modifications, it may be inferred that this resource continues to be used in a possible religious manner.
25940	Road Cut Cave	Road Cut Cave is a large, 500 m long lava tube with nine entrances. Cultural material is abundant and consists of hearths, charcoal, stepping stone trails, rock walls, gourd cradles, terraces, gourd remains, barrel fragments and a wooden cache of possible sandalwood sticks. This cave is associated with Kealakomo Village and is believed to have been used as a water collection resource.
25941	Mel’s Ahu	This site consists of an ahu, a rock shelter, and four petroglyphs located in the southwest region of the Kahuku unit. The ahu measures 1.5 x 1.7 m and 133 cm high, and is constructed of large basalt cobbles. It is positioned on a large pahoehoe tumulus. This ahu has been damaged recently [within the last year] with its interior being partially gutted. The ahu is currently stacked (very symmetrical) eight courses high. A rock shelter is located directly to the east of the ahu. This feature is relatively small [2.7m x 1.1m] and is partially filled with angular basalt rock rubble. Due to the positioning of the rocks, it appears to be a possible burial. There is a green patina on the rocks giving the impression this feature has not been disturbed for many years. There are four anthropomorphic petroglyphs in this site. Two on the western edge of the tumulus are large (1 meter long). One appears to resemble a mo‘o lizard, the other is shaped like a kane or man. On the interior slope the anthropomorphic glyph is crowned with horns that could be representative of the long horn cattle that arrived with Captain Vancouver in 1896. In addition to these four petroglyphs there is a small pecked circle 6 cm in diameter and 3 cm deep, 50 cm north of the ahu.

Site No.	Site Name	Description
25942	Petroglyph Grotto	Petroglyph Grotto consists of a rock shelter, petroglyphs, and possible agricultural features. Located 25 meters west of the Pu'uloa Petroglyph Field, this site is positioned in a low depression or sink in a pahoehoe lava flow. The agricultural features consists of C-shapes, excavated areas as well as rock walls. This site was determined to be in good condition during the January 1, 2006 but has been disturbed and is threatened by visitor use.
25943	Hilina Pali Cave	This lava tube is a complex maze system with tiered passages and branches. There is very extensive archeology in this cave including several petroglyphs, water catchments, and charcoal deposits. This cave not only houses significant archeological remains but also has intricate and rare geological formations, paleontological deposits, and some biological resources.
25944	Earthquake Cave	The lower or makai entrance of Earthquake Cave is located on the southwest end of the pahoehoe sink. This entrance is 5.2 meters wide and 4.2 meters in height and is heavily vegetated with invasive and native species. The cave entrance slopes down into the main body of the cave. Charcoal as well as a stepping stone trail, rock alignment, metal fragments and gourd cradles were the only cultural materials present within this resource.
25945	Kahuku K1 Cave	This site is comprised of a small (three) cluster of features located at the southeast tip of the Ke'āmoku lava flow. The site is near the edge of the Mauna Iki lava flow which may have covered adjacent features in the area. The mauka section of the resource contains scattered petrel bones, charcoal and ash deposits. Two concentrations of petrel bones were designated as Feature One and Feature two. This section of the cave also contained geological and biological resources.
25946	Charcoal Cave	This site is a lava tube located off of the Hilina Pali Road. The cave has a large sink and a grove of trees that grow in and around the sink. The cave has a lot of sediment and charcoal deposits. These may contain significant cultural and paleontological resources. There is abundant charcoal throughout the cave, some water catchments, and some paleontological and geological resources.
25947	Calabash Cave	The entrance is steep and almost plugged by vegetation. Sediment and ash cover the floor. There are many gourd cradles on the floor of the cave. Charcoal also covers the cave floor as well as goat bones. The geological features present in this resource consist of cave coral. This cave is believed to have been used for water collection by ancient Hawaiians.

\* This table is an expansion of Table 1 and presents information, with some modification, from ASMIS. Sites were selected for listing in this table based on the availability of expanded description in the ASMIS files. Sites marked with an \* in Table 1 are included in this table.

**APPENDIX B.**  
**PUNA-KA'Ū HISTORIC DISTRICT PHOTOGRAPHS**





Figure B-1. HOLEI PALI, from near Naulu forest, Chain of Craters Road, 1972.

Form No. 10-301a  
(7/72)

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
PROPERTY PHOTOGRAPH FORM**

(Type all entries - attach to or enclose with photograph)

STATE		Hawaii	
COUNTY		Hawaii	
FOR NPS USE ONLY			
ENTRY NUMBER	DATE		
	JUL 1 1974		

**1. NAME**

COMMON: Puna-Ka'u Historic District  
AND/OR HISTORIC:

**2. LOCATION**

STREET AND NUMBER:  
Puna-Ka'u District, Hawaii Volcanoes NP

CITY OR TOWN:  
Volcanoes

STATE: Hawaii 96718      CODE 15      COUNTY: Hawaii      CODE 001

**3. PHOTO REFERENCE**

PHOTO CREDIT: National Park Service  
DATE OF PHOTO: September, 1972  
NEGATIVE FILED AT:  
Hawaii Volcanoes NP Neg. No. 691

**4. IDENTIFICATION**

DESCRIBE VIEW, DIRECTION, ETC.  
Looking SE along the ridge formed by HOLEI PALI from near Naulu forest on the Chain of Craters road.

SEE INSTRUCTIONS

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FEB 13 1974  
NATIONAL REGISTER

INT: 154-72

Figure B-2. Text for Figure B-1.



Figure B-3. Waha'ula Heiau from the air, 1967.

Form No. 10-301a (7/72) UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
PROPERTY PHOTOGRAPH FORM**

(Type all entries - attach to or enclose with photograph)

STATE		Hawaii	
COUNTY		Hawaii	
FOR NPS USE ONLY			
ENTRY NUMBER		DATE	
JUL 1 1974			

SEE INSTRUCTIONS

<b>1. NAME</b>			
COMMON: Puna-Ka'u Historic District			
AND/OR HISTORIC:			
<b>2. LOCATION</b>			
STREET AND NUMBER:			
Puna-Ka'u District, Hawaii Volcanoes NP			
CITY OR TOWN:			
Volcanoes			
STATE:	CODE	COUNTY:	CODE
Hawaii	96718	Hawaii	001
<b>3. PHOTO REFERENCE</b>			
PHOTO CREDIT: National Park Service			
DATE OF PHOTO: October, 1967			
NEGATIVE FILED AT:			
Hawaii Volcanoes NP Neg. No. 178			
<b>4. IDENTIFICATION</b>			
DESCRIBE VIEW, DIRECTION, ETC.			
Aerial view of Wahaula temple site after construction of interpretive trails. Looking <u>makai</u> , toward the ocean.			

INT: 154-72

Figure B-4. Text for Figure B-3.



Figure B-5. Keauhou Landing, 1972.

Form No. 10-301a (7/72) UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES**  
**PROPERTY PHOTOGRAPH FORM**  
*(Type all entries - attach to or enclose with photograph)*

STATE		Hawaii	
COUNTY		Hawaii	
FOR NPS USE ONLY			
ENTRY NUMBER		DATE	
JUL 1 1974			

**1. NAME**  
 COMMON: Puna-Ka'u Historic District  
 AND/OR HISTORIC:

**2. LOCATION**  
 STREET AND NUMBER:  
 Puna-Ka'u District, Hawaii Volcanoes NP  
 CITY OR TOWN:  
 Volcanoes  
 STATE: Hawaii 96718 CODE 15 COUNTY: Hawaii

**3. PHOTO REFERENCE**  
 PHOTO CREDIT: National Park Service  
 DATE OF PHOTO: 1972  
 NEGATIVE FILED AT:  
 Hawaii Volcanoes NP, Neg. No. 59-56

**4. IDENTIFICATION**  
 DESCRIBE VIEW, DIRECTION, ETC.  
 Keauhou landing is an important site in connection with the ranching and pulu harvesting periods. The stone walled enclosures and house site are mostly late historic. Some sites in the vicinity are of prehistoric age. Looking toward Halape from Keauhou.

SEE INSTRUCTIONS

RECEIVED FEB 19 1974 NATIONAL REGISTER

INT: 154-72

Figure B-6. Text for Figure B-5.



Figure B-7. Ruins at Kue'e, from the air, 1972.

Form No. 10-301a  
(7/72)

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES**  
**PROPERTY PHOTOGRAPH FORM**

(Type all entries - attach to or enclose with photograph)

STATE		Hawaii	
COUNTY		Hawaii	
FOR NPS USE ONLY			
ENTRY NUMBER	DATE		
	JUL 1 1974		

**1. NAME**  
COMMON: Puna-Ka'u Historic District  
AND/OR HISTORIC:

**2. LOCATION**  
STREET AND NUMBER:  
Puna-Ka'u District, Hawaii Volcanoes National Park  
CITY OR TOWN:  
Volcanoes  
STATE: Hawaii CODE 15 COUNTY: Hawaii CODE 001

**3. PHOTO REFERENCE**  
PHOTO CREDIT: National Park Service  
DATE OF PHOTO: Sept. 25, 1972  
NEGATIVE FILED AT:  
Hawaii Volcanoes NP Neg. No. CIRE-HAVO 413

**4. IDENTIFICATION**  
DESCRIBE VIEW, DIRECTION, ETC.  
Kuee ruins from the air. The white areas in and near the stone enclosures are shell midden from the opihi collecting. The area is still in use by modern day fishermen and shellfish collectors.

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FEB 18 1974  
NATIONAL REGISTER

INT: 154-72

Figure B-8. Text for Figure B-7.

**APPENDIX C.  
STATUS OF HAVO ROCK ART RECORDING**

The following information was provided by Ed and Dianne Stasack in 2006.

Table C-1. Status of Rock Art Recording at HAVO.

Site	Data Pending	Report Pending (1)	Final Completed
<b>PĀNAU IKI AND NUI Ahupua'a</b>			
Lae'apuki/Pānau Iki			March 1999
Kāheka and West			June 1998 Addendum May 2000
Paliuli Cave		X	
Paliuli Surface Sites	X (2)		
Pu'uloa Part II		X	
Pu'uloa Trail Sites:			
West of Pu'u		X	
East of Pu'u		X	
Makai of Pu'u		X	
Transect 3	X (3)		
Transect 6	X (4)		
Chain of Craters Road near Pu'uloa trailhead		X	
Kaena Point		X	
Feature 396			June 1998
Ki Cave (Hairpin Turn Cave)			August 1999
Hōlei Pali Sites:			
Feature 90		X	
Feature 53		X	
Feature 10		X	
Feature 11		X	
<b>KEALAKOMO Ahupua'a</b>			
Roadcut Caves: Locus 1 Locus 2 Locus 3 Locus 4 Locus 5			September 1999
Nā'ulu Cave		Locus 3 addendum	July 1998 (Loci 1 & 2)

Site	Data Pending	Report Pending (1)	Final Completed
Kealakomo mauka (surface and cave)		X	
<b>KAHUE Ahupua'a</b>			
Kahue	X (5)		
<b>'ĀPUA Ahupua'a</b>			
'Āpua Point	(X)	X (6)	
'Ainhou Cave			June 1999
Keauhou Trail Cave	X (7)		
<b>KEAUHOU Ahupua'a</b>			
Keauhou Sites:			
HV-75		X	
HV-76			February 1997
HV-78		X	
HV-113			January 2001
Shore pu'u		X	
Cistern area		X	
<b>KAPĀPALA Ahupua'a</b>			
Halapē	X (8)		
Hilina Pali Sites:			
HV-383-C		X	
HV-386-C		X	
HV-387-S		X	
HV-388-S		X	
HV-389-S		X	
HV-392-S		X	
HV-393-C		X	
Trailside Cave			January 2003
Kamo'oali'i Sites:			
Heiau Site		X	
Pali Site	X (9)		
Trail Site	X (10)		
Benchmark	X (11)		
Misc. Sites	X (12)		
<b>KA'ALA'ALA MAKAI Ahupua'a</b>			
Ku'e'e	X (13)		

Site	Data Pending	Report Pending (1)	Final Completed
OTHERS (exact location unknown to rock art recording project)			
HV-120	X (14)		
Kaukau Cave	X (15)		

Endnotes:

- (1) All of the sites listed under the “Report Pending” column have had field data collected and ready to have final reports prepared. Funds for the final year of the Hawai’i Community Foundation (HCF) grant are primarily for recording as many of the HAVO sites as possible. The Stasacks continue to prepare final reports for all sites under the “Report Pending” column.
- (2) Fieldwork for these sites could be completed by HAVO personnel.
- (3) This site needs to be relocated and assessed for recording in the future.
- (4) This site needs to be relocated and assessed for recording in the future.
- (5) Kahue cannot be recorded at this time. The restrictions on the amount of vegetation that could be removed, i.e., limiting cutting of naupaka to only the lower branches, made recording of this area (very thick in vegetation) unrealistic. Possibly, in the future, recording efforts could be coordinated with the botanical replanting efforts. Much of the vegetation is exotic and planned for replacement with native species. When this occurs, then rock art recording of this area could occur.
- (6) The area around the tumulus is recorded up to about 100 feet mauka of the trail. From this point to the shore, and the area around ‘Āpuā Point itself, have yet to be recorded. These unrecorded areas contain relatively smaller loci of petroglyphs.
- (7) This site has a few petroglyphs (estimated at 15-20) on one wall of a small cave near the Keauhou Trail. HAVO personnel know of its location, and this site can be recorded by them, using the techniques taught them.
- (8) Data have been collected but more work may be needed to complete the recording.
- (9) This site is approximately 1 mile from the heiau site, off the trail and facing away from the trail.
- (10) This is a small site on the old Hawaiian trail mauka and west of the heiau site. This site can be recorded by HAVO personnel using techniques taught them.
- (11) This is a small site on the old Hawaiian trail mauka and west of the heiau site. This site can be recorded by HAVO personnel using techniques taught them.
- (12) There are a number of sites, possibly of individual petroglyphs, located throughout the forested area which are known to the vegetation maintenance crew. Recording of these petroglyph sites can be completed by HAVO personnel.
- (13) This area apparently is a very difficult access for long-term camping (i.e., a 7-day camp-out) and on a site (very windy area) that would not allow for staking tent pegs due to lack of soil. It would have required importation of all water and equipment (by helicopter) for a relatively large number of people. The logistics of this fieldwork out-weighed the information that would be obtained from the recording, based on information from previous surveys. This does not preclude, however, the importance of this area being recorded in the future. It would require considerable in-kind commitment and support on the part of HAVO to complete this recording.
- (14) We inquired about this cave and pali area about 1-2 years ago during the planning process. At that time, we were informed that there were just a few petroglyphs. Given this area would have required helicopter access and an extended camp-out, we decided not to record this area (i.e., the financial commitment to record just a few petroglyphs could not be justified). In October of 2000 we were informed that this site may have 100-200 petroglyphs over a number of sites in the area. Given this new information, it would be an important area to record, especially given its location on/near the Puna-Ka’ū border. However, since the grant monies were reallocated to other sites during the original planning process, this site cannot be recorded with the existing grant. This area probably has

significant connections relative to cultural history and should be recorded. If HAVO takes on this project, we can be available to assist in the future.

- (15) Recording of this site probably cannot be completed because of nene wilderness restrictions for area (personal communication with Bobby Camara, December 1999).

**APPENDIX D.**  
**INVENTORIES OF RESOURCE MATERIALS**  
**(HISTORICAL MAPS, ARCHEOLOGICAL MAPS, AND DOCUMENTS)**

Mangaement of archeological inventory data may involve more that site records. It is often useful to maintain inventories of source materials for research. The following three tables are preliminary inventories of historical maps, archaeological maps, and documents relating to the HAVO area.



Table D-1. Historical Maps Relating to the HAVO Region (see Figures following).

ID	Surveyor	Date	Title	Scale	Notes	Repository/ Source
HM001	?	?	Bishop Estate to Territory of Hawaii, Keauhou, Kau, Hawaii	1 inch = 4000 feet		HAVO Library ***
HM002	Map in Ellis	1825	Hawaii [island]		American edition	Fitz:87
HM002a	Malden	1825	Kilauea			Fitz:89
HM003	Map in Ellis	1827	Hawaii [island]		English edition	M&F:I:86
HM003a	Kalama	1837	Islands			M&F:III:10
HM003a_detail	Kalama	1833	Hawaii		Detail from 1833 map	-
HM004	Lahainaluna Seminary	1838	Hawaii, detail from “A Map of the Hawaiian Islands”		One of the most important maps in history of Hawaii, notable for many ahupua’a names	
HM005	US Exploring Expedition	1840	Island			Fitz:99
HM006	US Exploring Expedition	1841	Island			
HM006a	US Exploring Expedition	1841	Mokuaweoweo			
HM007		1843	Island			Fitz:145
HM008	unknown	1846 Aug	Kilauea Summit	1 inch = 0.67 miles (estimated)	sketch map of Kilauea and Kilauea Iki, note says “found in the Interior Department Books in 1881 and deposited in Survey Office. C.J. Lyons”	State Archives
HM010	Lyman, F.S.	1850	map of Pānau Nui		referenced in Durst and Moniz Nakamura 2003 (Kealakomo report)	
HM011	Lyman, H.M.	1853	map of Pānau Nui		Hawaiian Government Survey, GRM No. 33; section of map reproduced in Langlas 2003	SSO
HM012	Lyman, F.S.	1860	map of Grant 2893, Pānau Nui		referenced in Durst and Moniz Nakamura 2003 (Kealakomo report)	

ID	Surveyor	Date	Title	Scale	Notes	Repository/ Source
HM013	Lydgate, J.M.	1874	Āpua	1 inch = 2,000 ft	GRM No. 12; watercolor on vellum; notes that red line marks “real boundary” and blue line marks “straightened boundary;” affects mauka boundaries above Poliokeawe pali; real boundary is makai side of Puu Huluhulu; shows Puna coast trail, Keauhou trail, Kau-Puna road, and road along mauka Apua boundary going to Kilauea, Puna, and Olaa (this is the Kalapana road)	SSO
HM014	Lydgate, J.M.	1874	Plan of Keauhou, Kau, Hawaii	1:48,000	Hawaiian Government Survey, GRM No. 27	SSO
HM015	Lydgate, J.M.	1874	Kapapala		Hawaiian Government Survey, GRM No. 510	SSO
HM016	Lydgate, J.M.	1874	Crater of Kilauea		Hawaiian Government Survey, GRM No. 5; attached to Lydgate 1874	SSO
HM017	Lydgate, J.M.	1874-75	Crater of Mokuaweoweo		Attached to Hawaiian Government Survey, GRM No. 5	
HM018	Lydgate, J.M.	1875	Crater of Mokuaweoweo and Crater of Kilauea	1:24000	Copy became GRM No. 5	M&F:71
HM019	Lydgate, J.M.	1875	Map of Puna	1:60,000	Hawaiian Government Survey, GRM No. 568; watercolor on linen; fragile; shows Keauhou trail, trail from Kilauea crater to Kalapana (same trails as shown on Lydgate’s map of Apua)	SSO
HM020	Lydgate, J.M.	1875	Crater of Kilauea	1:24,000	Hawaiian Government Survey, GRM No. 5; shows east 1/3 of crater edge with tree symbol, west 2/3 of crater edge in gravel plain; shows extent of 1868 flow within crater; attached to Lydgate 1874 map of crater	SSO
HM021	Dodge, F.S.	1882 Aug 21	Halemaumau	1 inch = 500 feet	map 3 of a series of 10 maps made between 1865 and 1906	State Archives
HM022	Alexander	1885	Craters of Mokuaweoweo			M&F:73
HM023	Wall	1886	Island			M&F: 61
HM024	Dodge, F.S.	1886	The Crater of Kilauea, Hawaii.	1:12,000	“Triangulation and Details of Sunken Portion are from Survey of April 1886 by J.S. Emerson of the Hawaiian Government Survey. Outlines of Kilauea and the Small Craters from Wm. T. Brigham Survey of 1865.”	SSO

ID	Surveyor	Date	Title	Scale	Notes	Repository/ Source
HM025	Dodge, F.S.	1886 Nov	The Crater of Kilauea, Hawaii.	1:6,000	Hawaiian Government Survey, GRM No. 1275; "Survey in Sept-Oct 1886, by Frank S. Dodge. Outlines of Halemaumau and New Lake and a Portion of the Triangulation by J.S. Emerson."	SSO
HM026	Lyons, C.J.	1891	Kaohe and Humu'ula	1 inch = 5,000 ft	GRM No. 1641; detailed map of Mauna Kea but shows info at boundary of Kaohe and Keauhou/Kapapala (see notes below)	SSO
HM027	Dodge, F.S.	1894 July 30	Halemaumau	1 inch = 200 feet	map 4 of a series of 10 maps made between 1865 and 1906	State Archives
HM028	Donn, John M.	1901	Hawaii, Hawaiian Islands	?	Hawaii Territorial Survey; "specially prepared map of the County of Hawaii for Governor's Annual Report, Illustrating Conditions as of June 30, 1906" (base map is dated 1901); in color, showing public lands, homestead settlement tracts, grazing pineapple, sugar plantations, forest reserves, forests not in reserves, rice and taro wetlands, schools, post offices	SSO
HM029	Baldwin, E.D.	1903	Plan of Keauhou, Kapapala. Upper boundary line	1:5,000		
HM030	Baldwin, E.D.	1906 Dec 29	Halemaumau	1 inch = 500 feet	"From survey made by triangulation and stadia measurements with 5" transit. Outlines of 1888 and 1892 from Mr. F.S. Dodge's surveys;" map 5 of a series of 10 maps made between 1865 and 1906	State Archives
HM031	Baldwin, E.D.	1907 Jan 8	Kapapala, Kau, Hawaii. Survey and Map of Makai Portion, including Kau-Volcano Road and Bluffs just above same	1 inch = 2,000 feet	Hawaii Territory Survey; traced from GRM No. 2388, H.E. Newton, January 1907	SSO HAVO CRD BPBM
HM032	Wright, Geo. F.	1907 Jan 8	Kapapala, Kau, Hawaii. Survey and Map of Mauka Portion, including Ohaikea to Ainapou – Forest Reserve and Cane Areas	1 inch = 2000 feet	Hawaii Territory Survey; traced from GRM No. 2388, H.E. Newton, January 1907	SSO HAVO CRD BPBM
HM033	Campbell, Marston	1910	Proposed Volcano National Park (on HTS 1910 base map)	—	Hawaii Territory Survey; traced by George Podmore	reproduced in Durst and Moniz Nakamura 2002

<b>ID</b>	<b>Surveyor</b>	<b>Date</b>	<b>Title</b>	<b>Scale</b>	<b>Notes</b>	<b>Repository/ Source</b>
HM034	Cook, Thomas E.	1910	Plan of Proposed National Park at Kilauea Volcano, Hawaii, T.H.	1 inch = 2,000 feet	Hawaii Territory Survey, GRM No. 2514; compiled from various maps and surveys	SSO
HM035	USGS	1912	Proposed Kilauea Volcano National Park; Special Map, Advance Sheet. Hawaii (Hawaii County)	1:31,680	Surveyed in 1912; USGS and Territory of Hawaii	BPBM
HM036	Pierce	1914	Kapapala, Kau	1 inch = 5000 ft	Reduced from GRM No. 2388	
HM037	O'Neill, R. and J. Iao	1915	Puna Government Tracts, Puna, Hawaii.	1 inch = 5,000 feet	Hawaii Territory Survey; traced from Government Survey Map, January; blueline showing grnts, LCAs, schematic pali, vegetation lines, roads, topographic lines	State Archives
HM038	?	1920	Addition to Hawaii National Park. Portion of Kau Desert. Kapapala, Kau, Hawaii.	?	Survey Department of the Territory of Hawaii.	HAVO CRD *
HM039	USGS	1922	Kilauea Crater Quadrangle	1:31,680	Surveyed 1913-1922; Note: this copy is marked with handwritten note "Jaeger Field" and the caption "showing bore hole location...1922"	BPBM
HM040	USGS	1922	Kapapala Quadrangle	1:31,680	Surveyed 1920 and 1921	BPBM
HM041	USGS	1922	Kau Desert Quadrangle	1:31,680	Surveyed 1912 and 1921; Note "Edition of 1930"	BPBM
HM042	USGA	1922	Keauhou Quadrangle	1:31,680	Surveyed 1912-1922	BPBM
HM043	unknown	1928	Kau Forest Reserve, Kau, Hawaii	1 inch = 4,000 feet	Hawaii Territory Survey	BPBM
HM044	unknown	1928	Addition to Hawaii National Park. Kilauea Crater Section, Puna and Kau, Hawaii	1:10,000		
HM045	Wall, Walter	1928	Map of the Island of Hawaii.	1 inch = 20,000 feet	Hawaii Territory Survey.	
HM046	USGS	1930	Topographic quadrangles: Glenwood; Keauhou; Kau Desert	1:31,680	Surveyed 1913-1922	
HM047	Murray, C.L.	1930 May	Kapapala Forest Reserve, Kapapala, Kau, Hawaii	1 inch = 4,000 feet	GRM 2838	BM

ID	Surveyor	Date	Title	Scale	Notes	Repository/ Source
HM048	Copp, Henry B.	1930 June	Kapapala Forest Reserve, Kapapala, Kau, Hawaii	1 inch = 4,000 feet	Hawaii Territory Survey, HTS Plat 119, traced from GRM No. 2838; only about ¼ of map falls within park (includes Bird Park, Keamoku flow, Mauna Loa trail, Old Kau-Puna trail, old Prison Camp, Halemaumau crater)	HAVO CRD (map drawer)
HM049	USGS	1933	Hawaii National Park (Kilauea – Mauna Loa Section) Island of Hawaii; Topographic Map	1:62,500	Surveyed in 1912-1927; edition of 1933	BPBM
HM050	USGA	1940	Mauna Loa Quadrangle	1:62500	Surveyed 1920 and 1925-1926; This is a 15' quad, with 1940 date	BPBM
HM051	Department Engineer, Ft. Shafter; US Army	1942	Southeast Quadrangle, Island of Hawaii	1:125000		BPBM
HM052	Department Engineer, Ft. Shafter; US Army	1942	Southwest Quadrangle, Island of Hawaii	1:125000		BPBM
HM053	Medeiros, A.B.	1942 Sep	Roads and Trails, Hawaii National Park.	1 inch = 1 mile	hand-drawn, hand lettered map; approximately 24x36 inches; showing trails and roads in park	HAVO Archives (MC2D1F1)
HM054	?	1943	Land Court Map of Kamoamoia with survey lines. Royal Patent 1665 LCA to Kaonaeha	?		HAVO CRD **
HM055	Murray, Chas. L.	1943 Oct	Addition to Hawaii National Park. Keauhou to Kahaualea	3 inches = 800 feet	Hawaii Territory Survey, HTS 863; shows grants, LCAs, coast trail, Keauhou trail, Volcano-Kalapana trail, Ainahou Ranch	HAVO CRD HAVO Archives (MC2D1F1)
HM056	?	1950	Pasture Lease, Kapapala, Kau	?	Survey Department of the Territory of Hawaii; dated July 28.	HAVO CRD *
HM057	TMK	1950?				
HM058	?	1952 Dec 22	Hawaii National Park and Additions. Showing land status	?		HAVO CRD **
HM059	NPS Branch of Plans and Designs	1953 July	Kilauea CCC Camp. Part of the Master Plan for Hawaii National Park	1 inch = 40 feet	Drawing No. 2011-F, Sheet 10; inset shows camp on the north side of Kilauea Iki crater;	HAVO Archives (MC2D2F1)
HM060	?	1954	Addition to Hawaii National Park. Portions of the Land of Kahaualea.	?	Survey Department of the Territory of Hawaii; dated December.	HAVO CRD **

ID	Surveyor	Date	Title	Scale	Notes	Repository/ Source
HM061	?	1954	Addition to Hawaii National Park. Kealakomo.	?	Survey Department of the Territory of Hawaii; dated December.	HAVO CRD *
HM062	?	1954	Addition to Hawaii National Park. Poupou and Pulama, Puna, Hawaii.	?	Survey Department of the Territory of Hawaii; dated December.	HAVO CRD *
HM063	Murray, Chas. L.	1954 Dec	Addition to Hawaii National Park. Portion of Panau Iki and All of Grants 9163:1 and 9163:2. Apua, Panau Nui, and Laeapuki, Puna, Hawaii.	1 inch = 0.5 miles	Hawaii Territorial Survey, HTS Plat 863-D.	HAVO CRD (map drawer)
HM064	Murray, Chas. L.	1954 Dec	Addition to Hawaii National Park. Portion of the Land of Keauhou	1 inch = 0.5 miles	Hawaii Territory Survey; includes Ainahou Ranch.	HAVO CRD
HM065	Murray, Chas. L.	1954 Nov	Addition to Hawaii National Park. Grant 2893 to kenaaulani and Grant 2166 to Palapala. Kealakomo, Puna, Hawaii.	1 inch = 0.5 miles	Hawaii Territorial Survey, HTS Plat 863-C. Shows Puna Trail, area at coast outlined and labeled "Village Site" (presumably Kealakomo village).	HAVO CRD (map drawer)
HM066	?	1955	Addition to Hawaii National Park. Panau Iki. Grant to Pou.	?	Survey Department of the Territory of Hawaii; dated January 14.	HAVO CRD *
HM067	[Hitchcock, D.H.]	n.d.	Notes and plan of Waha'ula heiau. Copied at Volcano House by W. T. Brigham in 1890		handwritten note on the ms. reads "Brigham's handwriting—copying Hitchcock's notes."	BPBM Hawn Sources Coll II, pp. 383-4, Emory Coll, Grp 10, Box 2

ID=temporary id number assigned to cross-reference illustrations in the AOA.

Repositories/Sources: SA=State Archives

SSO=State Survey Office

HAVO CRD=HAVO Cultural Resources Office

BPBM = B.P. Bishop Museum

Fitz = Fitzpatrick 1986

M&F = Moffat and Fitzpatrick 2004

\* listed on "Drawer 4. Inventory of Maps Inherited from Maintenance;" this is an inventory contained in a black 3-ring binder in the Cultural Resources Division's library. Only those maps for which there is no other information or known repository are marked with \*.

\*\* listed on “Drawer 5. Inventory of Maps Inherited from Maintenance;” this is an inventory contained in a black 3-ring binder in the Cultural Resources Division’s library. Only those maps for which there is no other information or known repository are marked with \*\*.  
\*\*\* information taken from listing titled “Maps in HAVO Library;” in black 3-ring binder in the Cultural Resources Division’s library.

Notes on Lyons 1891 map of Kaohe and Humu‘ula:

cone in Mokuaweoweo Crater has label “first adopted as a corner by Lydgate for the land Kapapala.”

Point called Naohuleelua at the corner of Keauhou, Puuanahulu, and Kaohe has label “Scene of battle between Hamakua and Kau birdcatchers.

Located by J.M. Alec [unreadable] on Keauhou survey. Settled as ... [unreadable];” point is on north side of “Lava Flow of 1859.”

## **FIGURES FOR APPENDIX D, TABLE D-1**

The following figures are reproduced as well as printing resolution will allow. In several cases details cannot be resolved. In these instances the maps in the appendix can be used as a guide for the general information available, but the source used for map duplication or the original map will need to be consulted for greater detail.

In general, for any research that involves critical map study an examination of original maps is recommended. Experience has shown that important details may be lost in even the best of published reproductions. Further, archival map research will on occasion result in the discovery of maps that have hand-written notes which are of historical value.

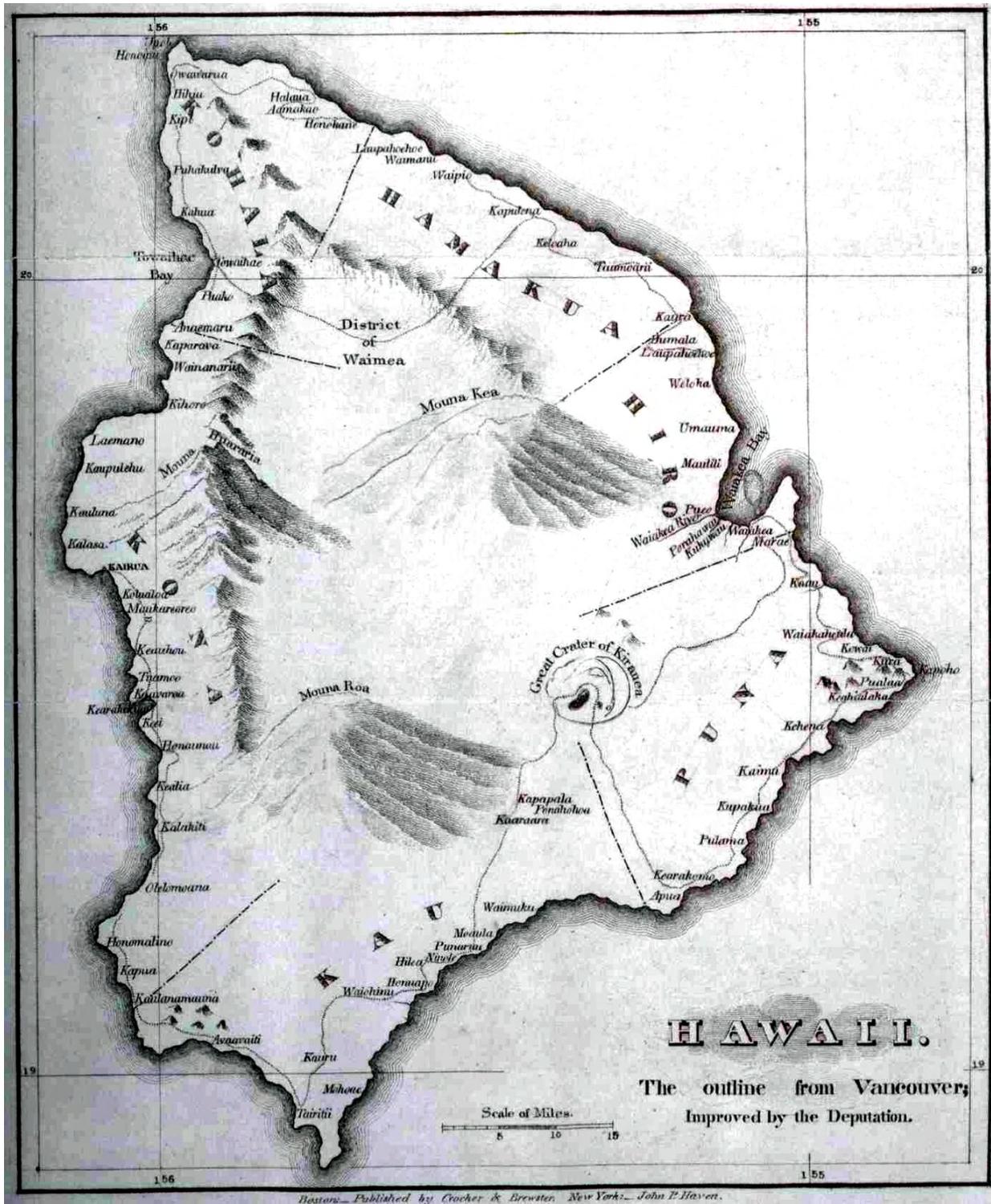
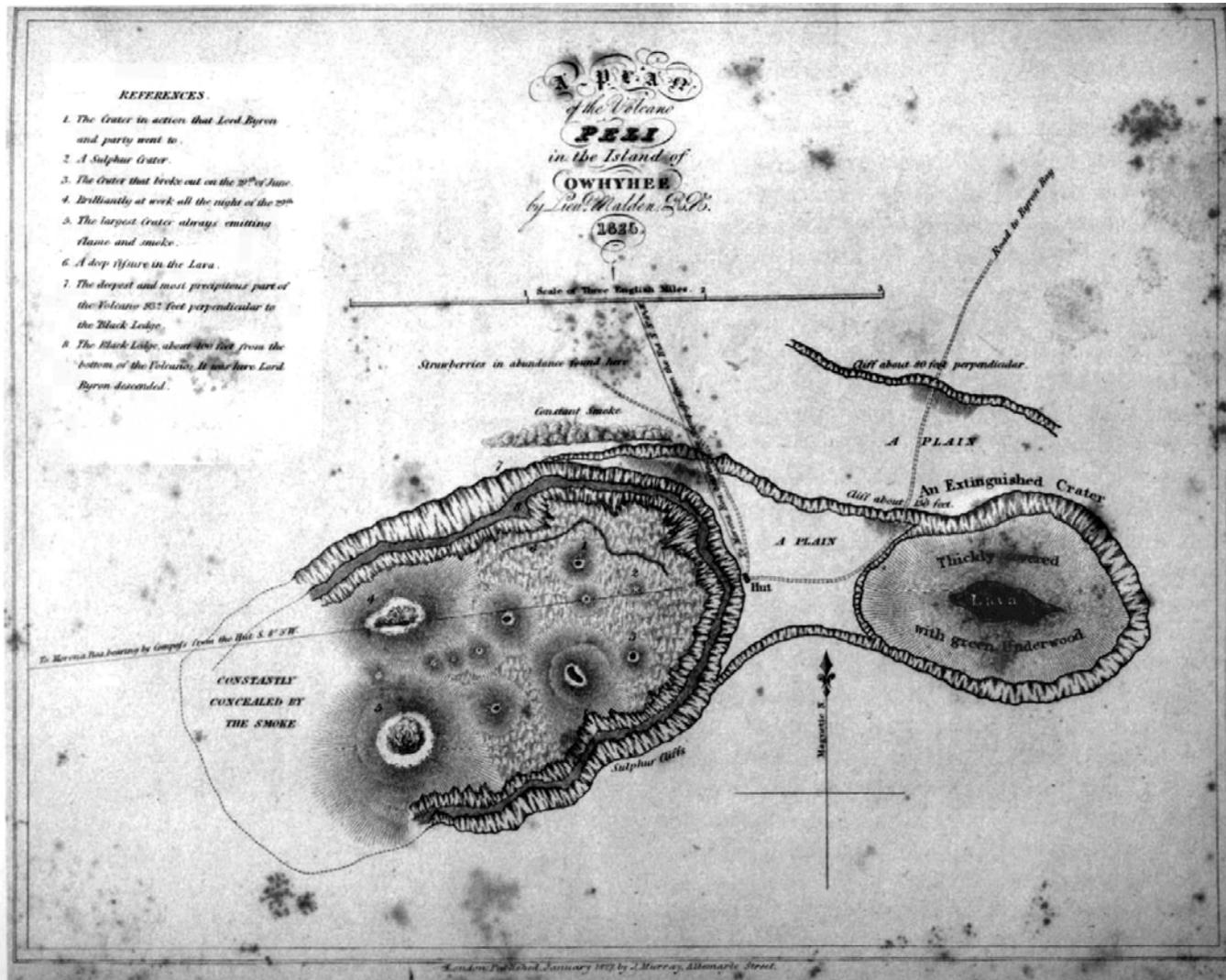


Figure D-1. HM002\_1825.



50 Kilauea, Charles Malden, 1825

Published in 1827, this map drawn in 1825 is a result of the first survey of the famous volcano. Scientific study of the volcanoes of Hawai'i essentially began with Malden's survey.

Figure D-2. HM002a\_1825.





Figure D-4. HM003a\_1837.



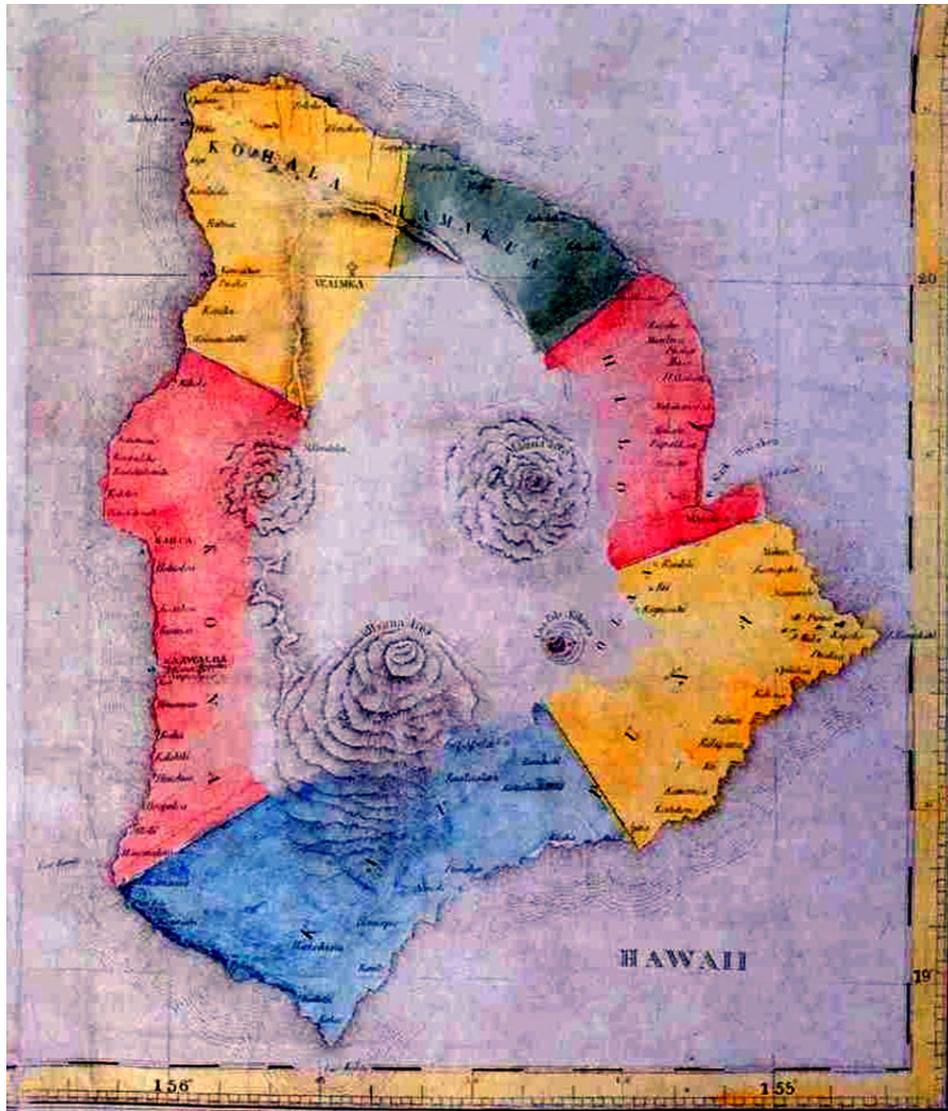


Figure D-6. HM004\_1838.



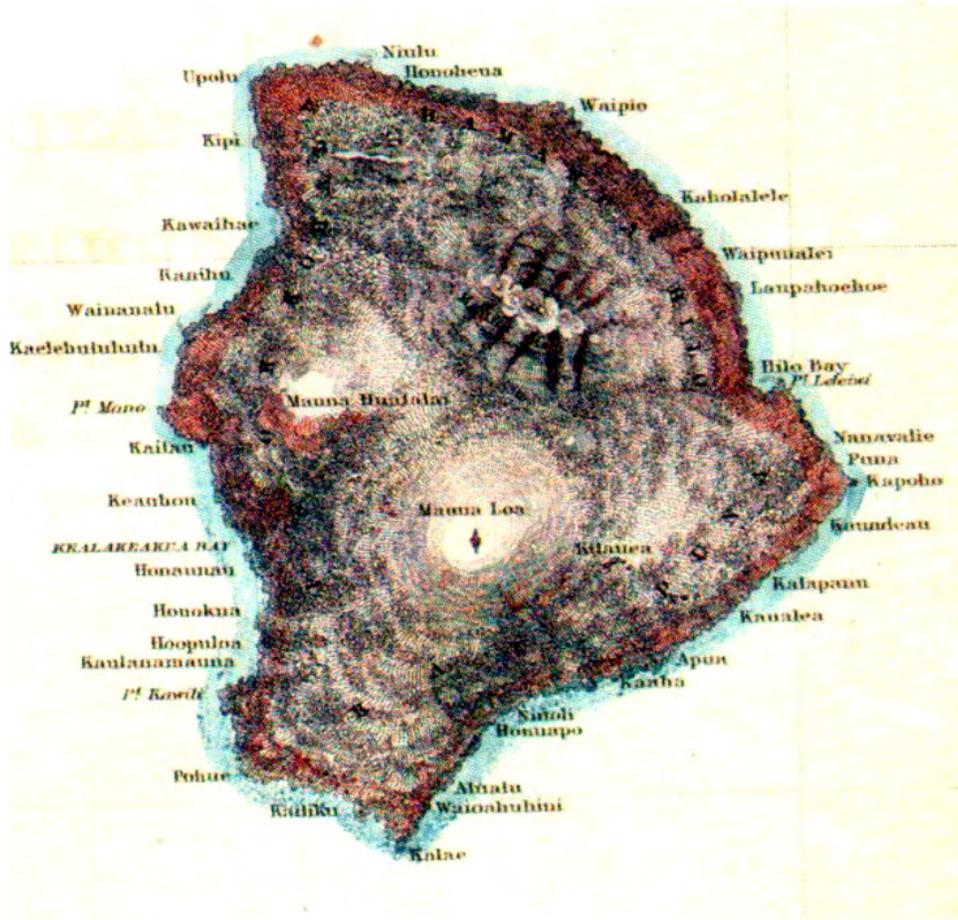
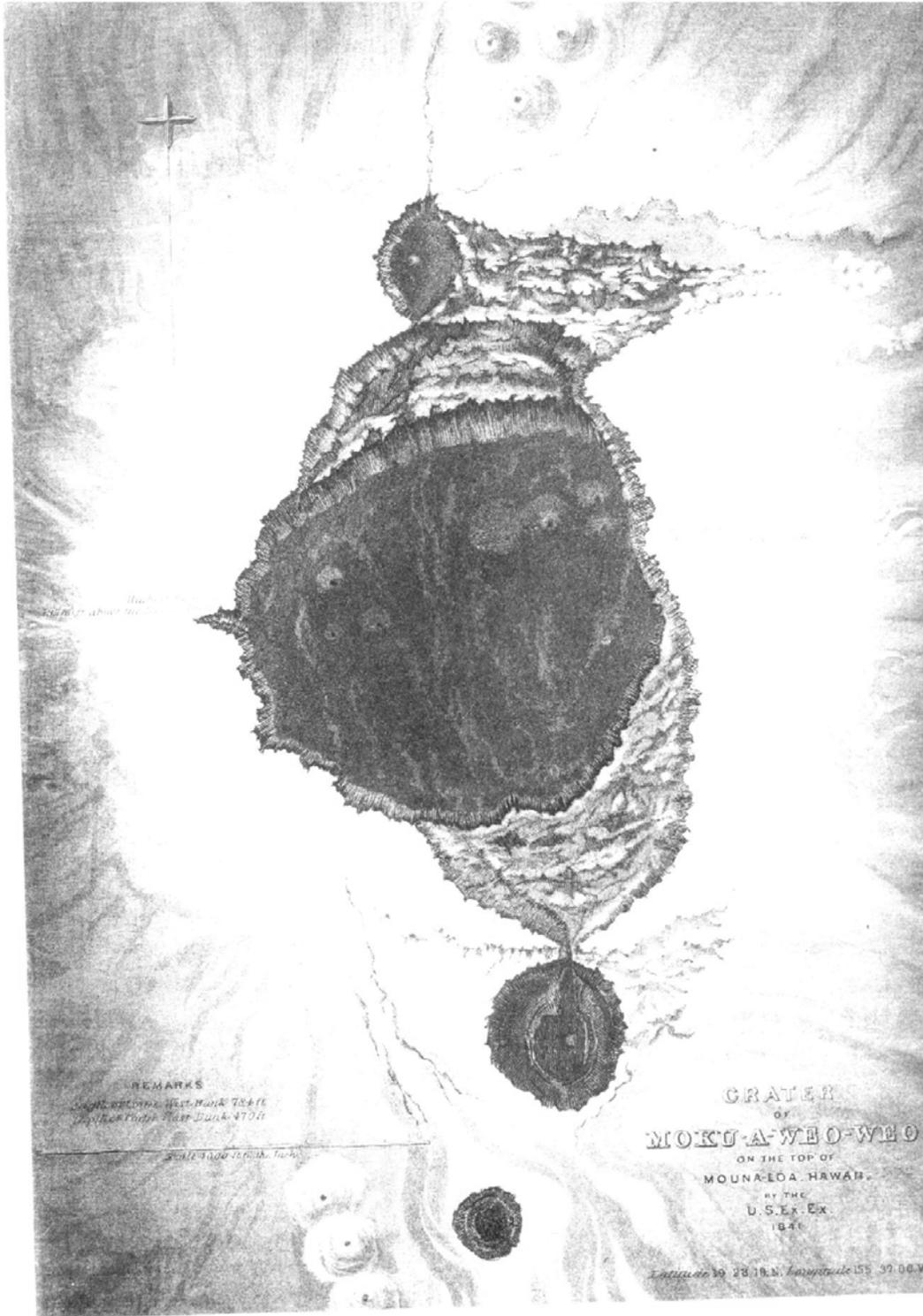


Figure D-8. HM006\_1841.



Figure D-9. HM006a\_1841.



62. Moku-A-weo-weo Crater, U. S. Exploring Expedition, 1841

Members of the U. S. Ex. Ex. spent over twenty days mapping the summit crater of Mouna Loa. Based on an exact and precise survey, the printed map is an example of the technique of copperplate engraving. While the map is appealing as a work of art, the heavy lines of the hachuring technique tend to obscure the scientific framework on

Figure D- 10. HM006a1\_1841.







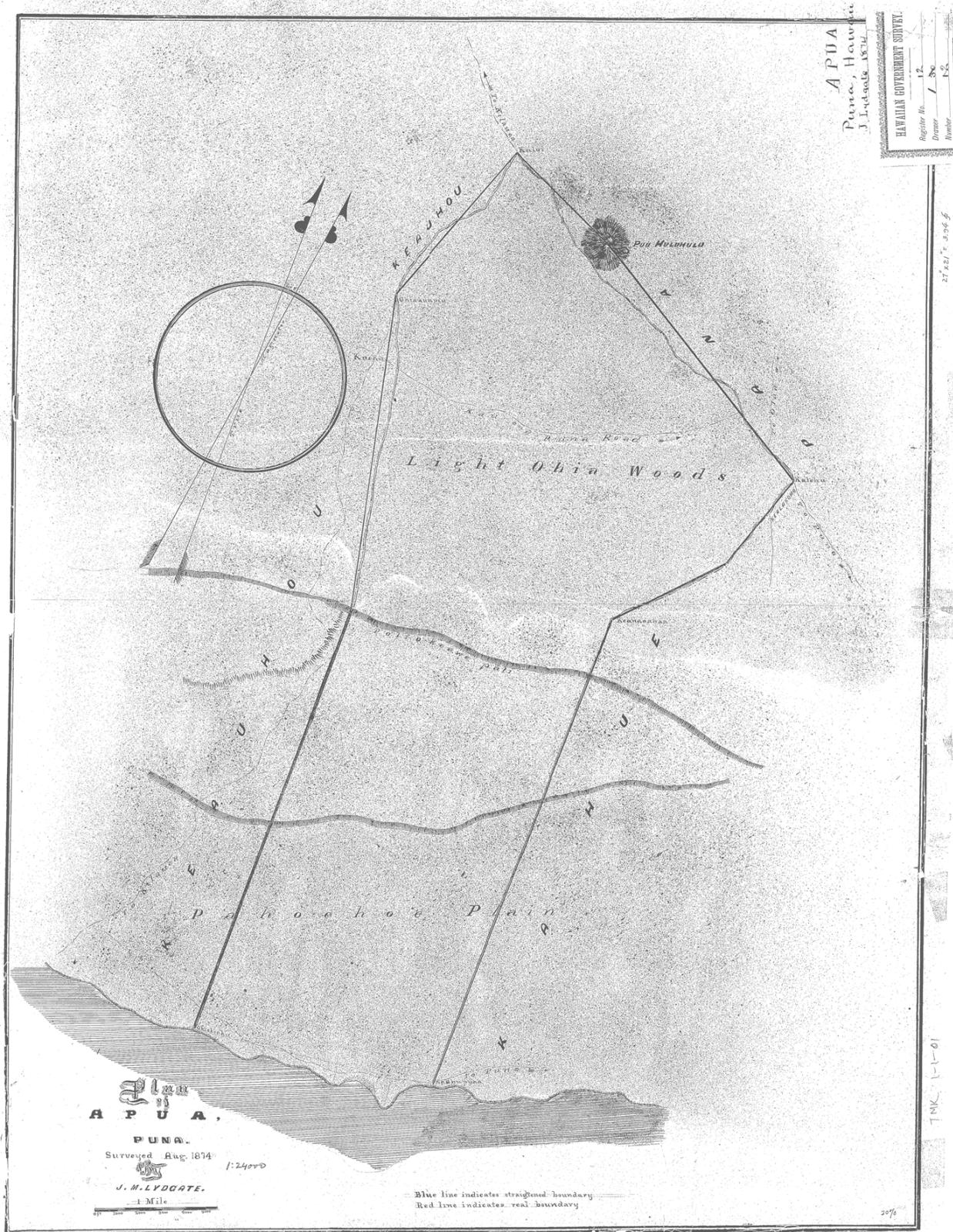


Figure D-14. HM013\_1874.



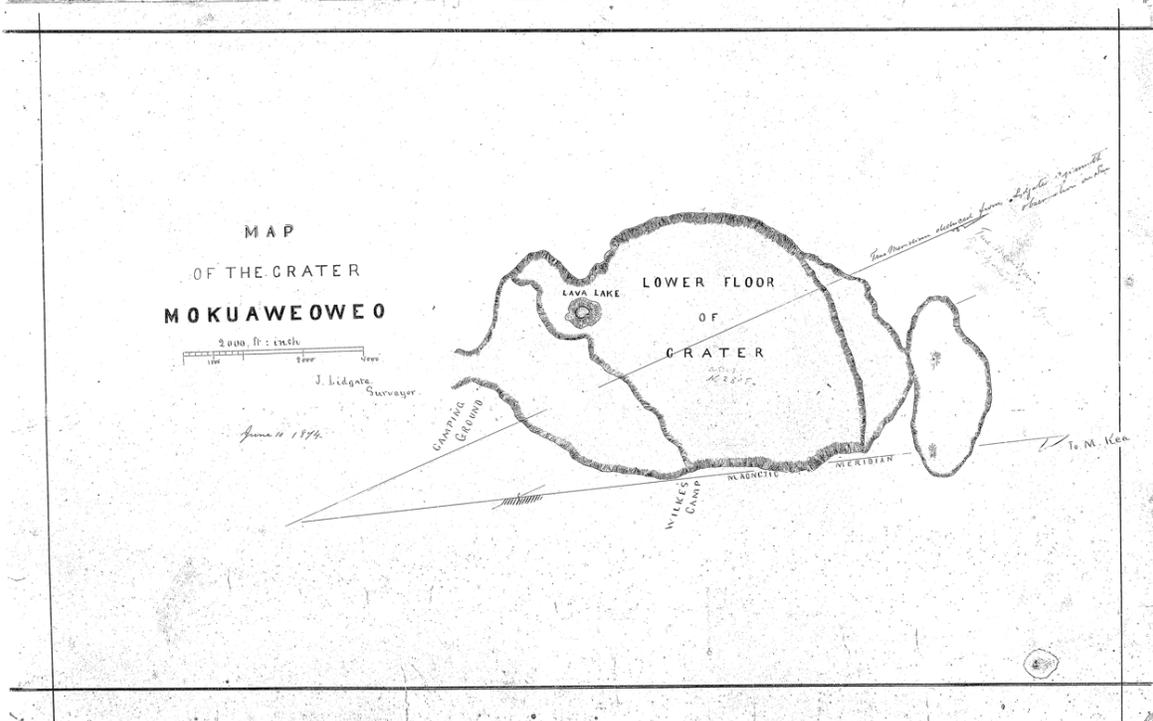


Figure D-16. HM016\_1875.

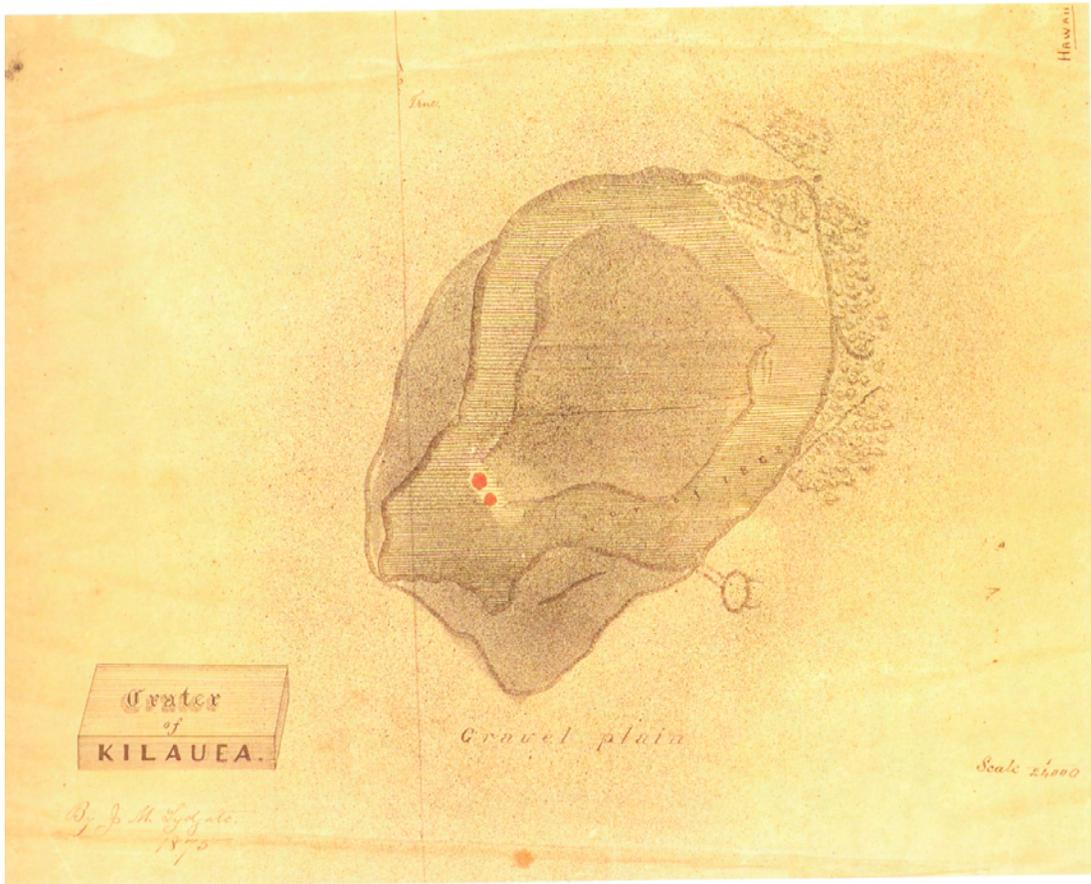
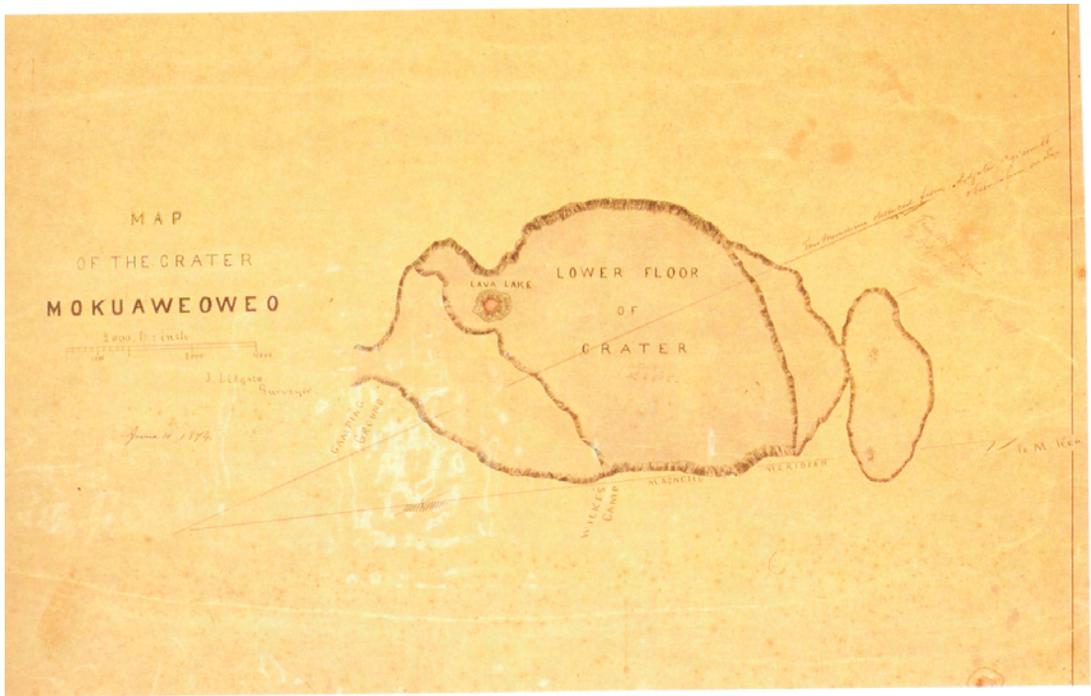


Figure D-17. HM018\_1875.

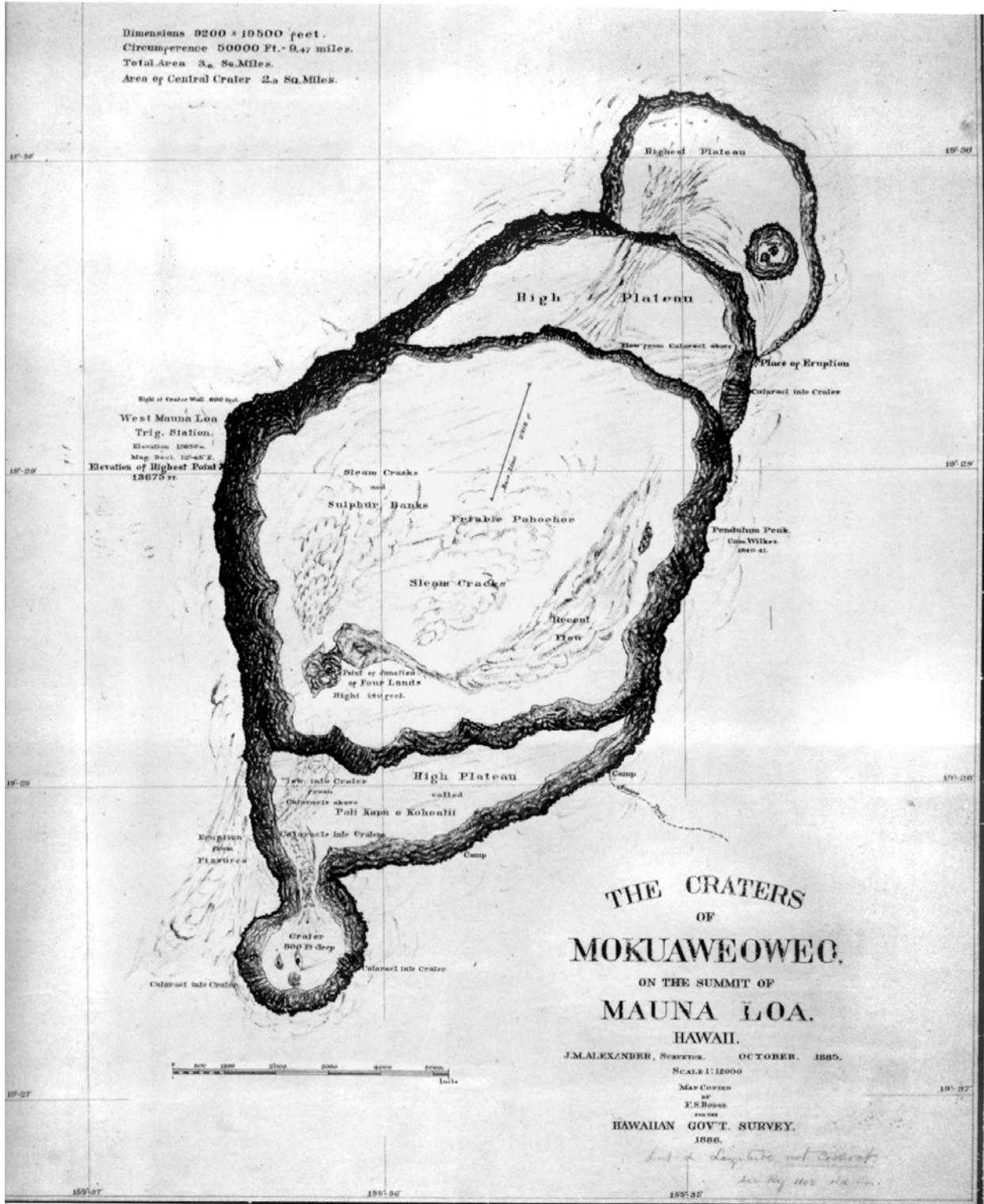


Figure D-18. HM022\_1885.

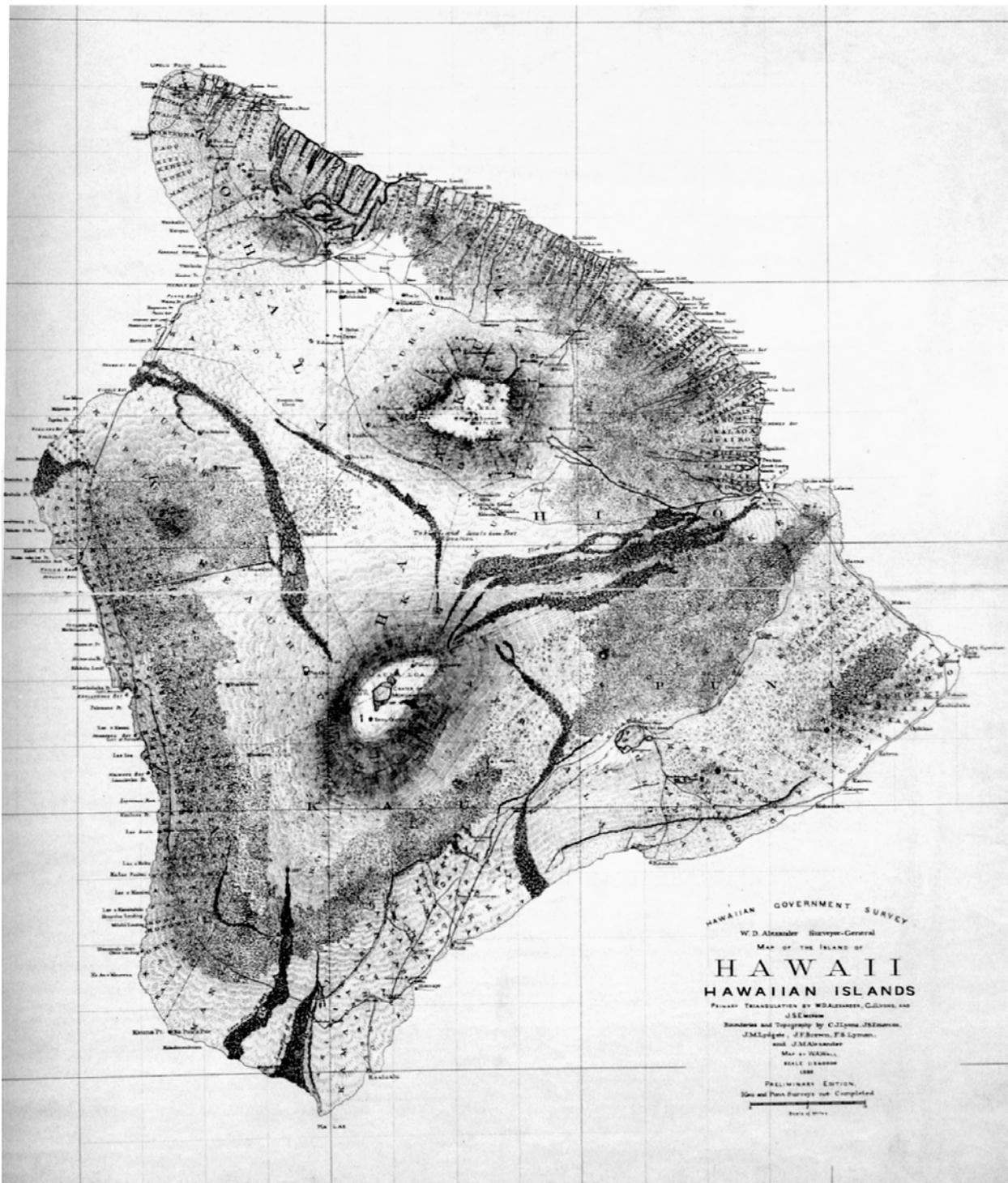


Figure D-19. HM023\_1886.





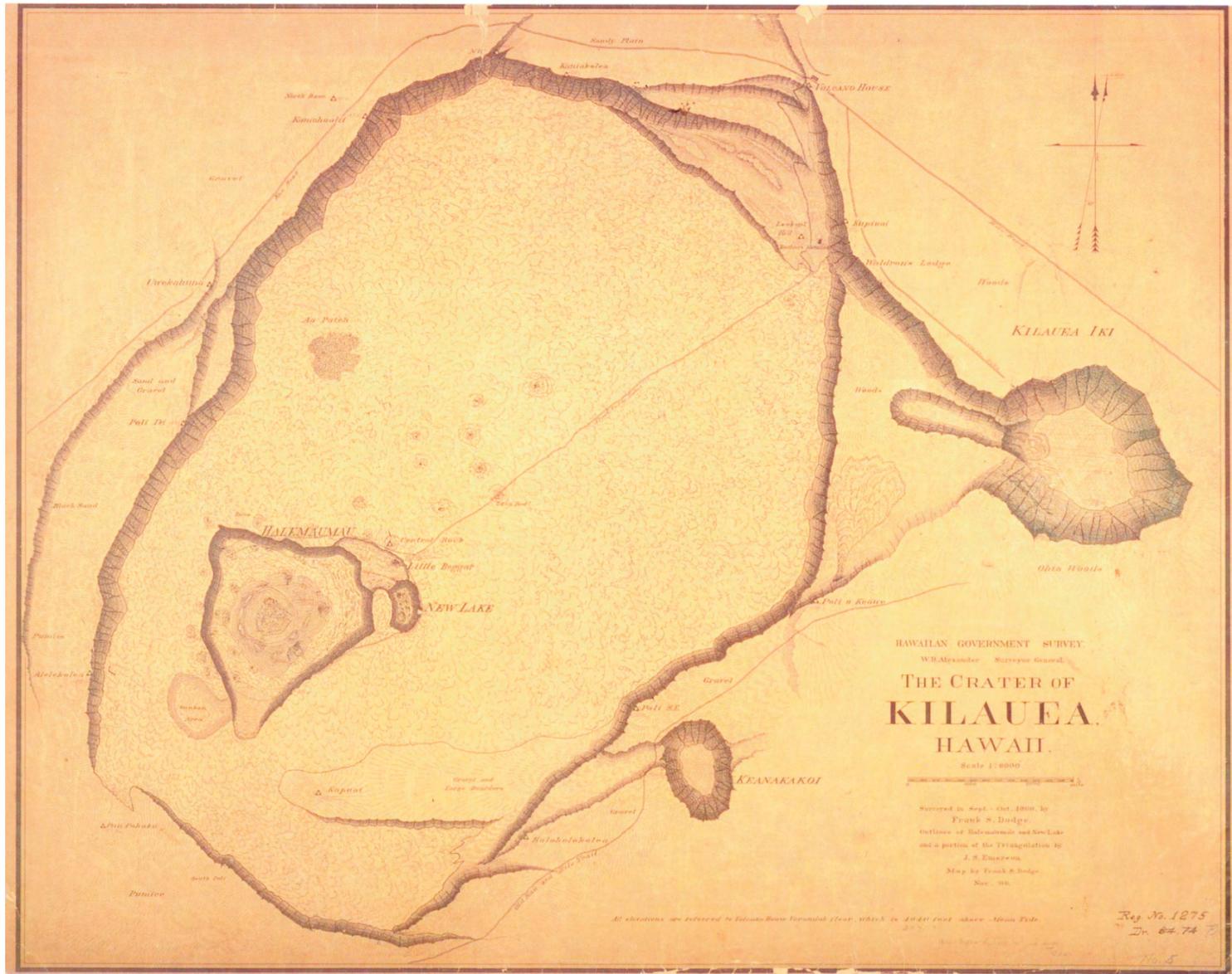


Figure D-22. HM025\_1886\_Kil.

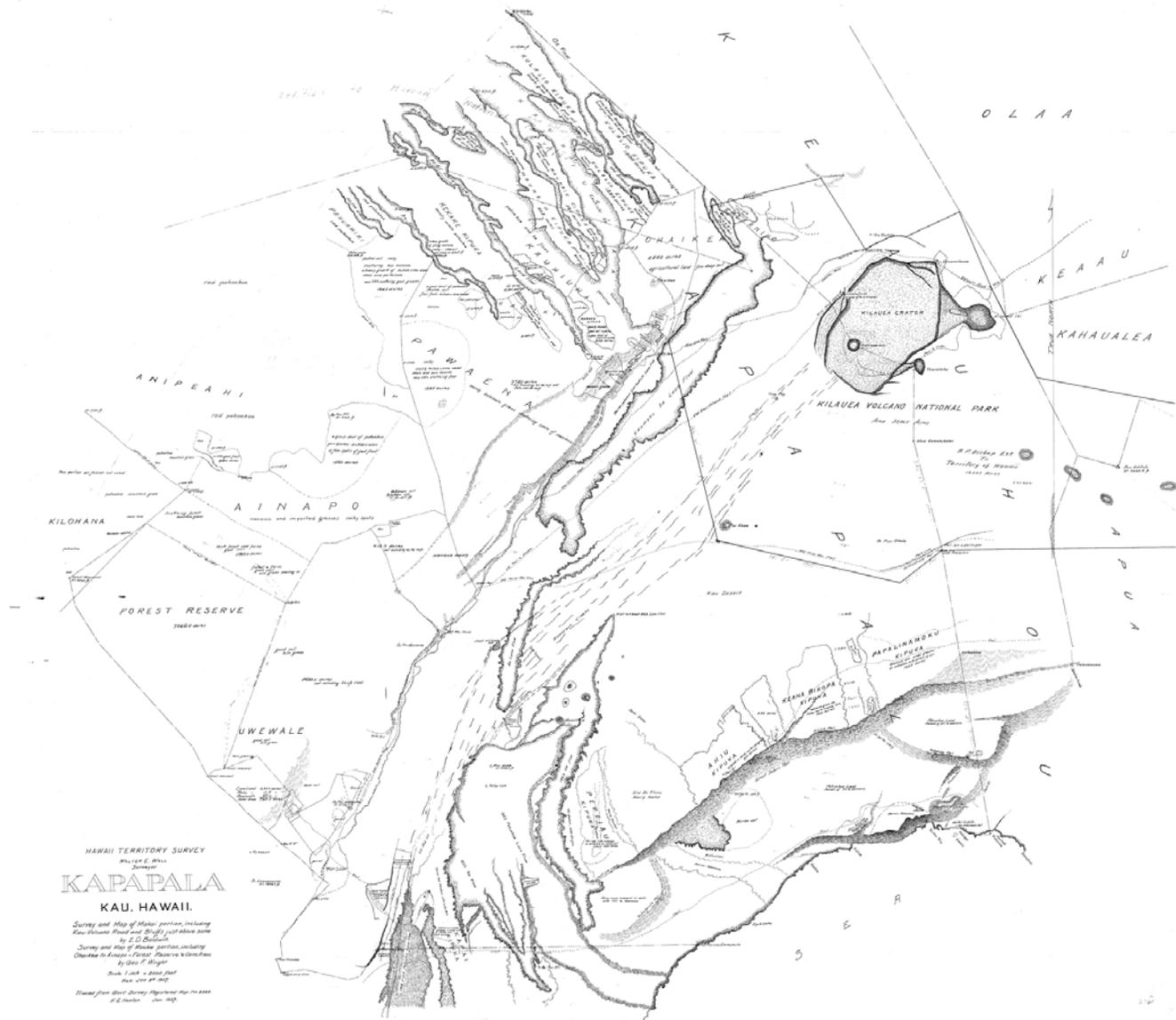


Figure D-23. HM032\_1907.



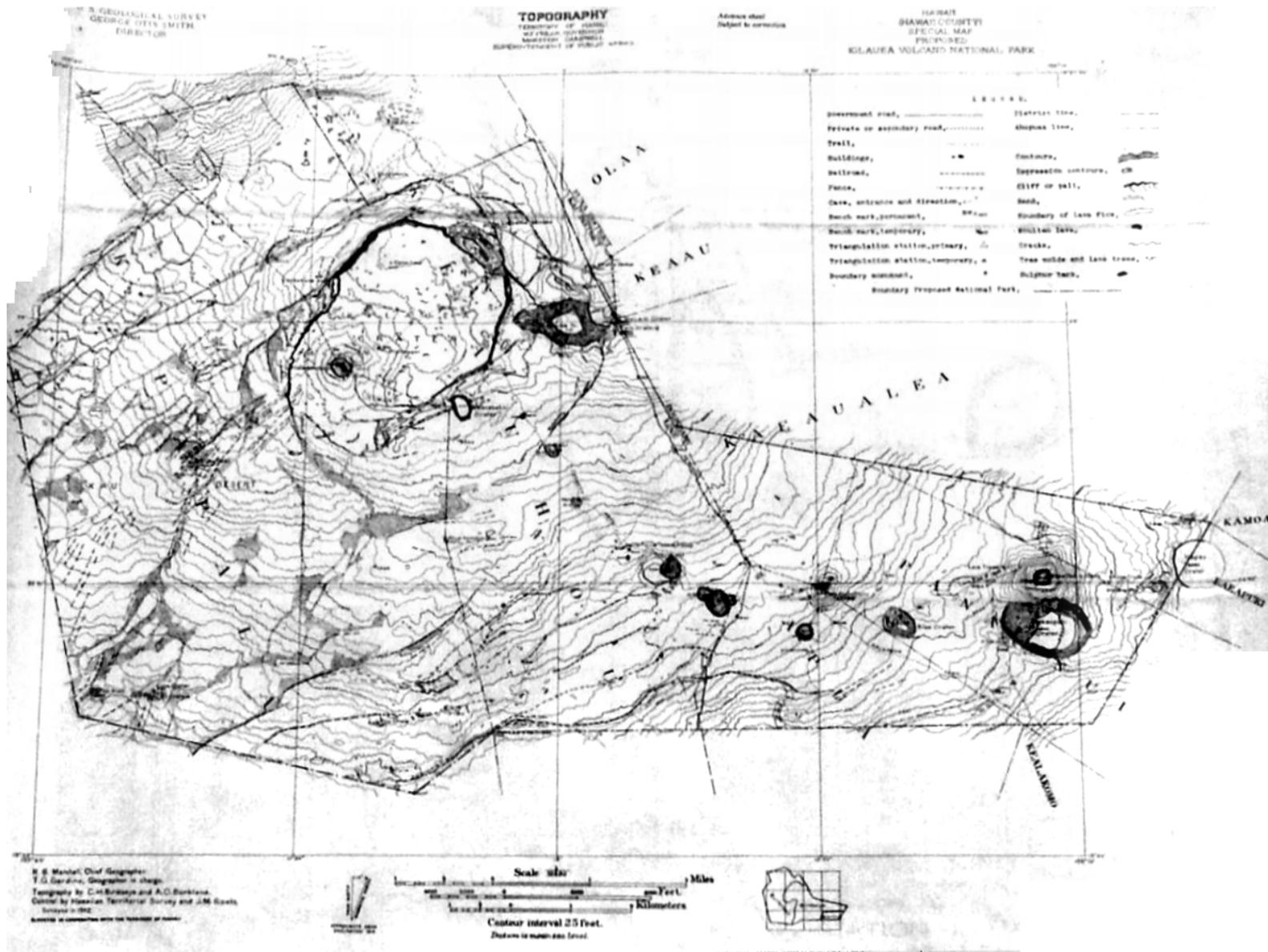


Figure D-25. HM035.

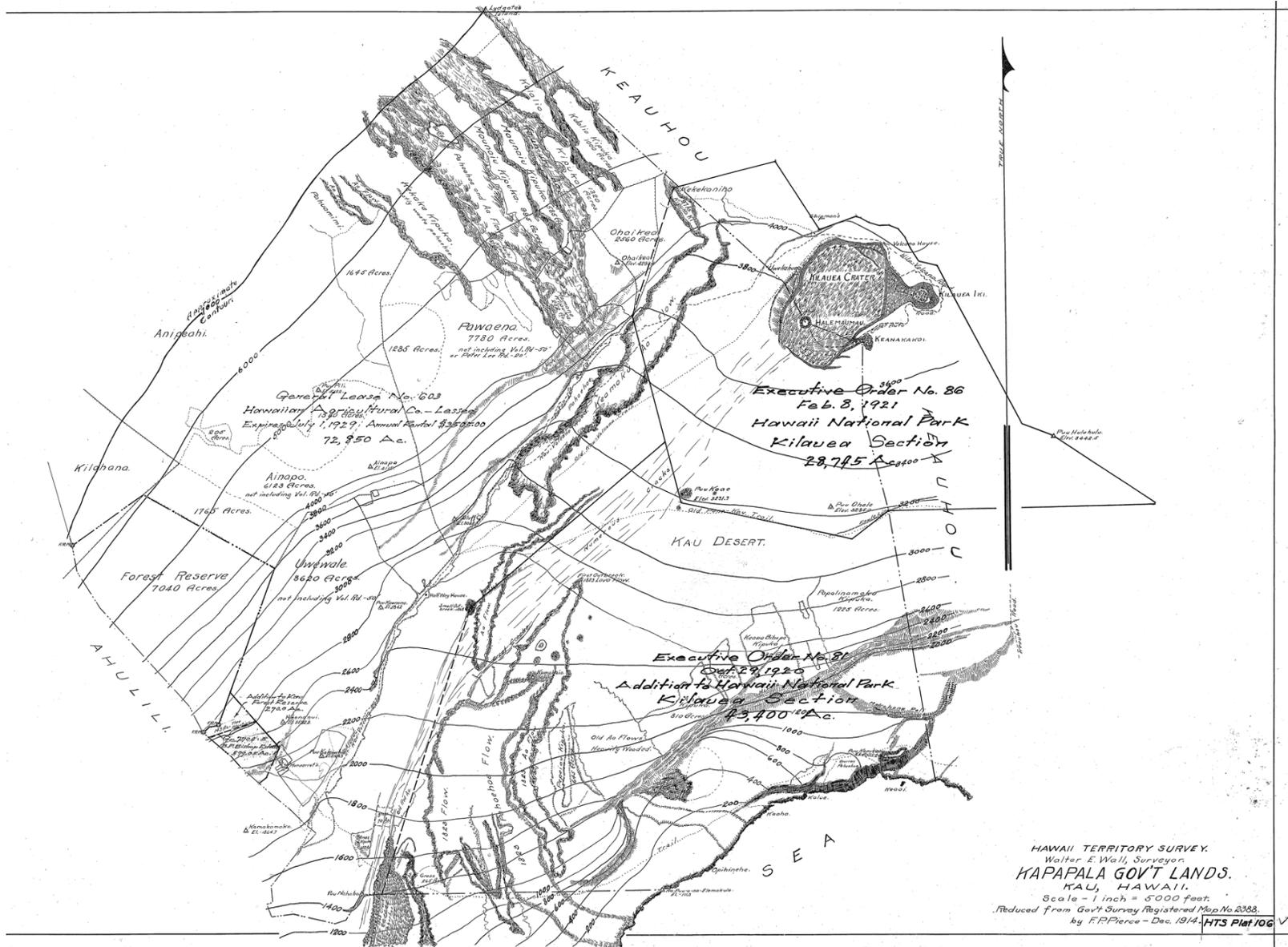


Figure D-26. HM036\_1914.



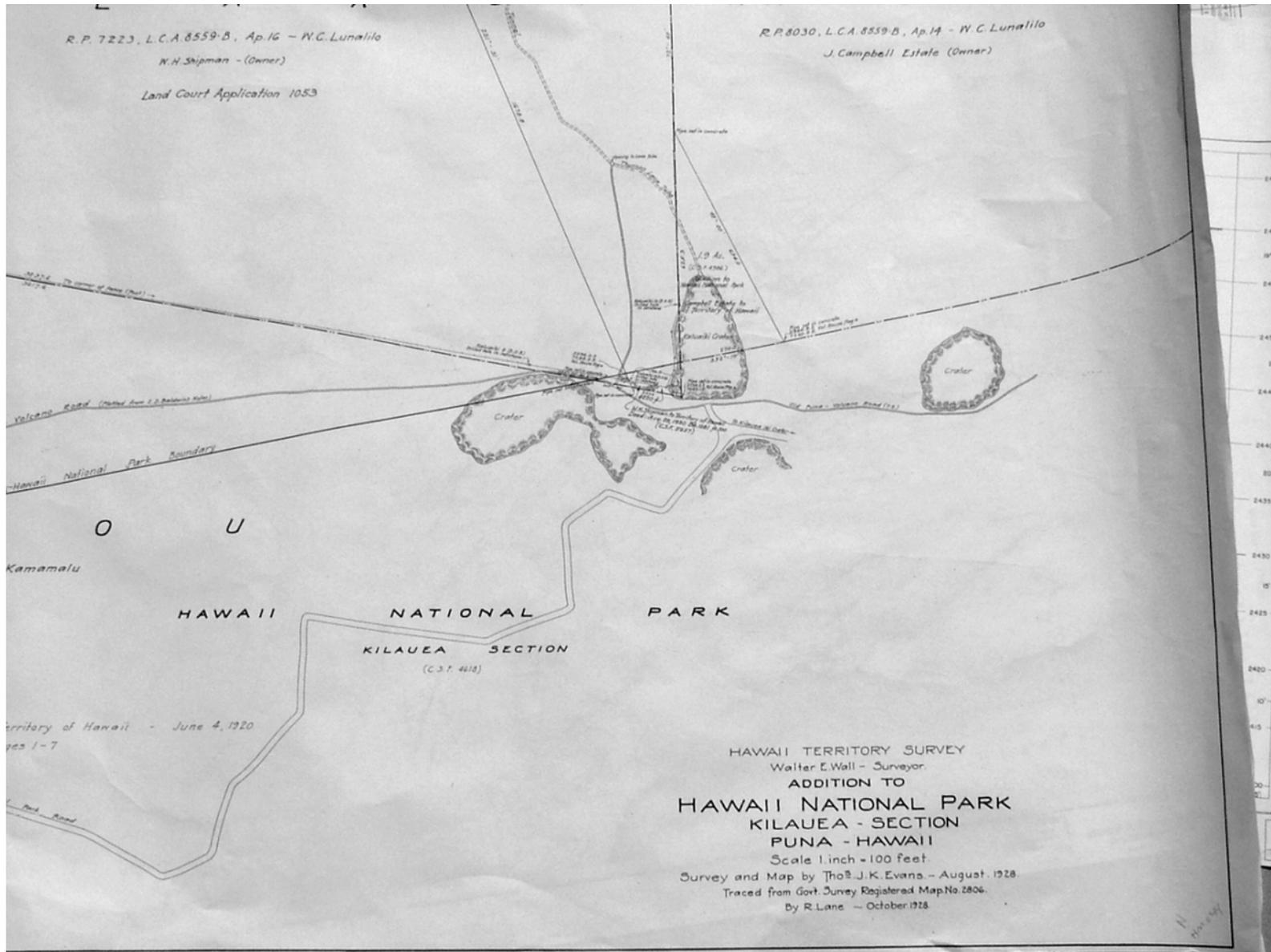


Figure D-28. HM044\_detail2.

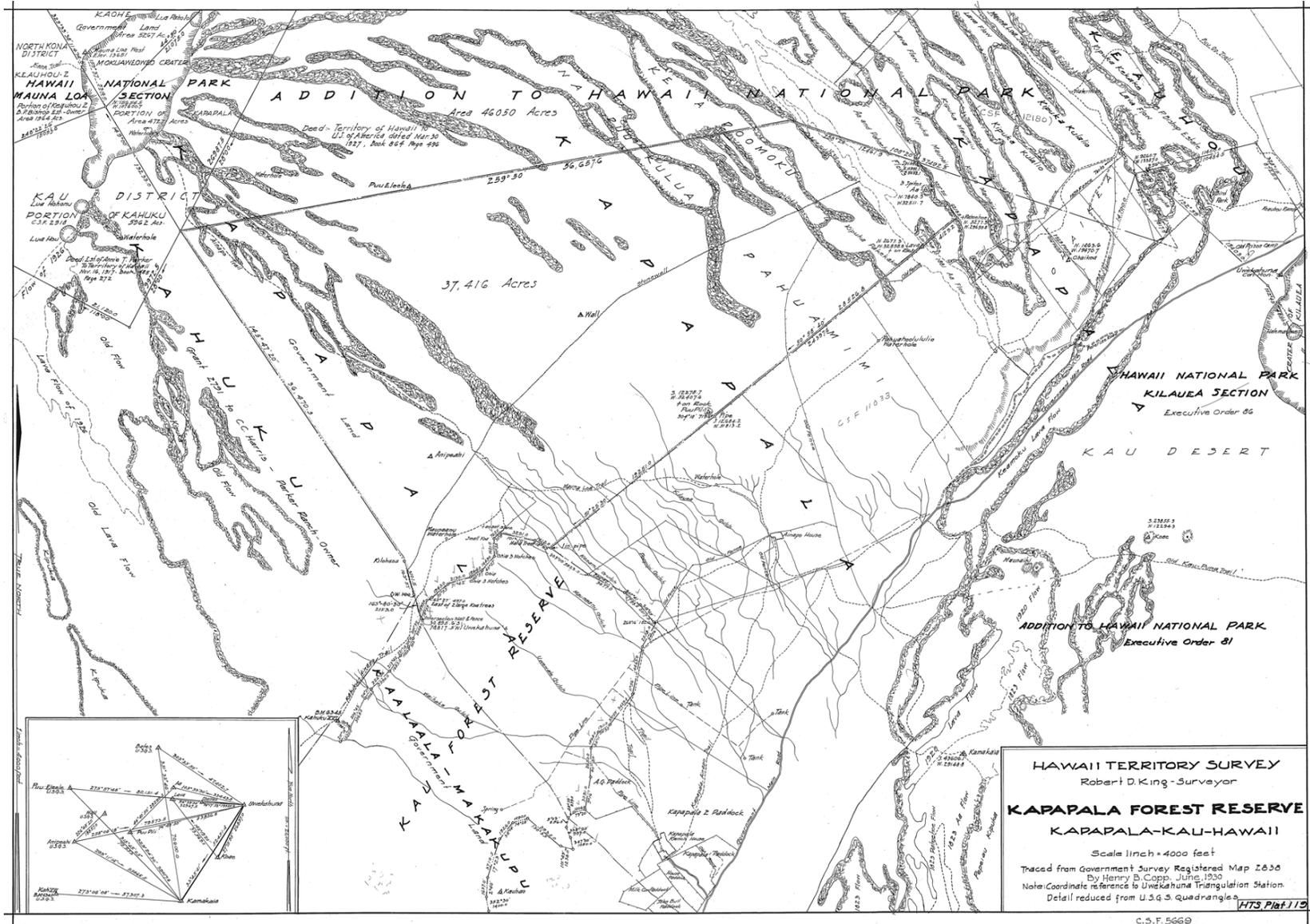


Figure D-29. HM047\_1930.

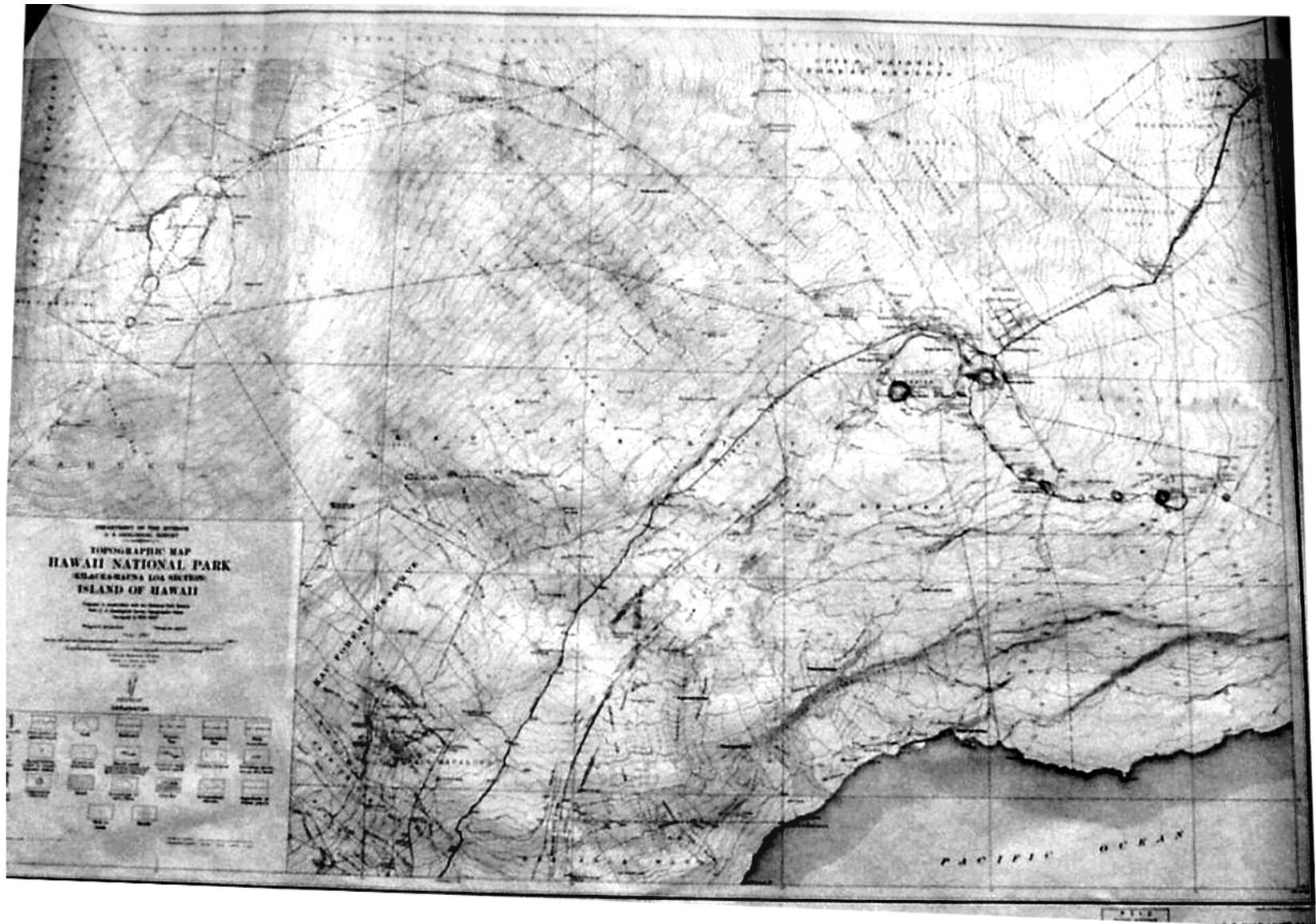


Figure D-30. HM049.



Figure D-31. HM049\_detail.

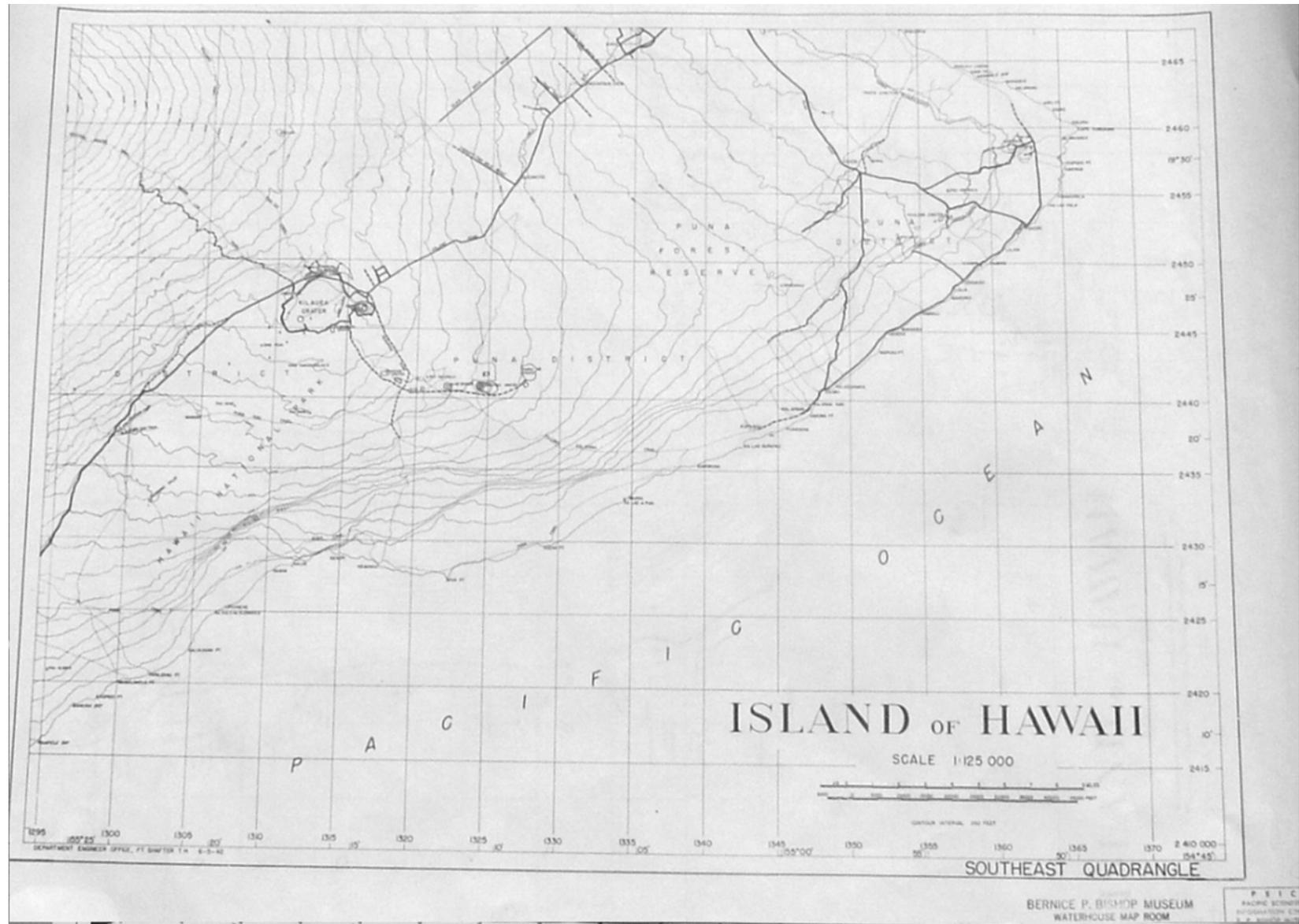


Figure D-32. HM051\_1942.

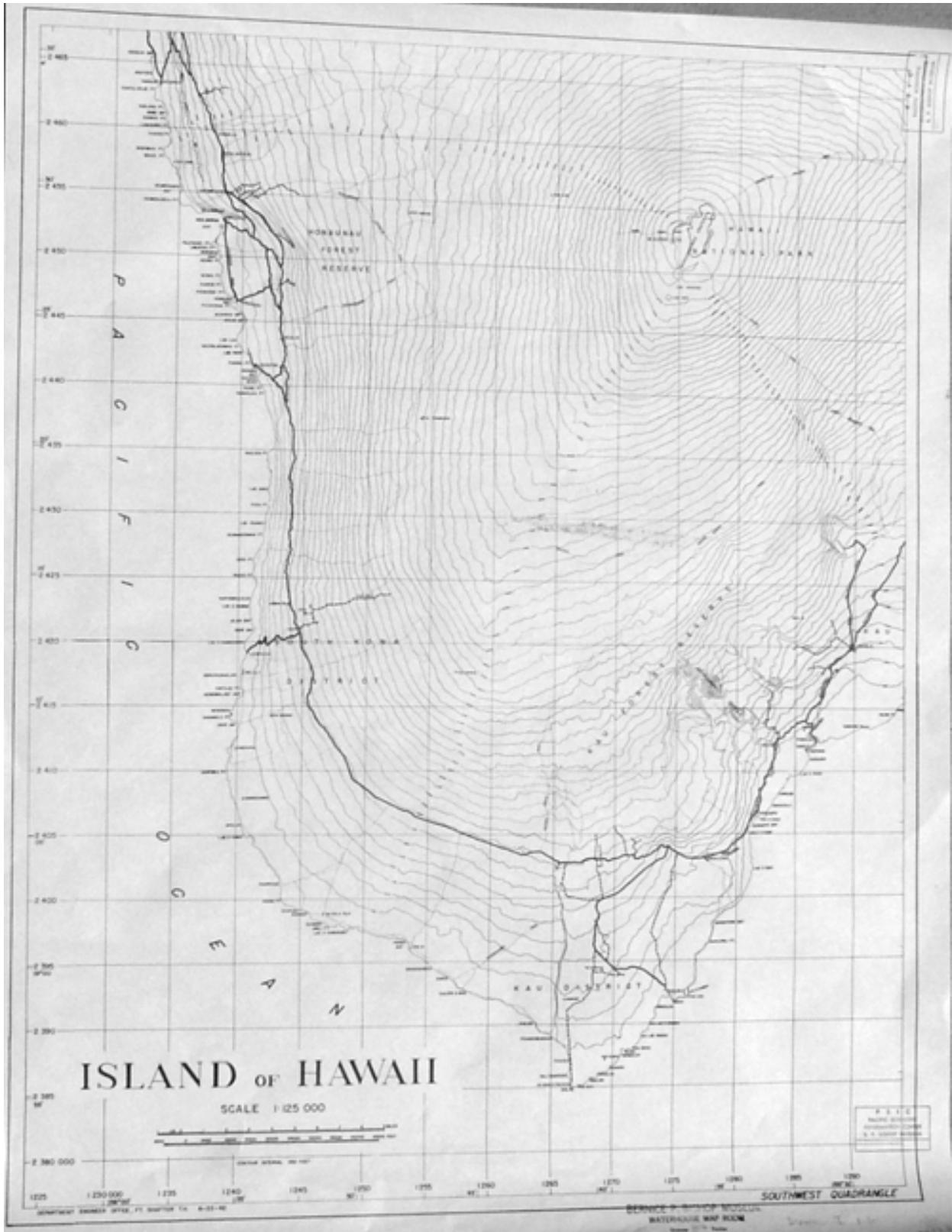


Figure D-33. HM052\_1942.

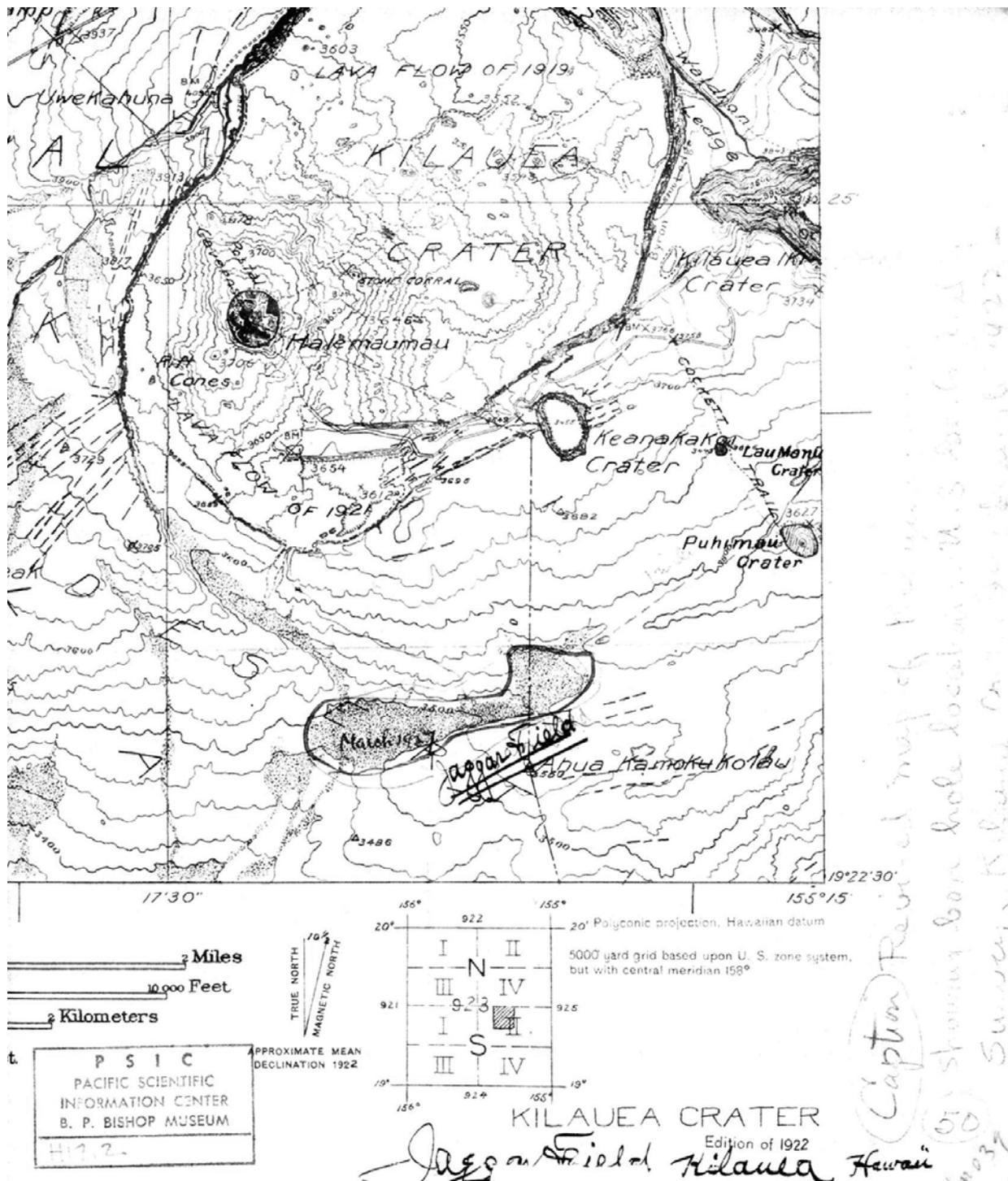


Figure D-34. HMO\_USGS\_Jaggars.

Table D-2. Archeological Maps Relating to the HAVO Region.

Surveyor	Date	Title	Scale	Notes	Repository
BPBM	1959	South Puna, Hawaii, Archeological Sites, Keauhou to Kahaualea	1 inch=2,500 feet	Survey by BPBM for Hawaii Volcanoes National Park; shows mapped sites in Pulama, Kamoamo, Laeapuki east, Puuloa, Kealakomo makai; unmapped sites in Panau Iki, Panau Nui, Naulu, Kealakomo Waena, Kaena, Kahue, Apua, and Keauhou; Ainahou Ranch boundaries; call no. 50	HAVO Archives (MC1D1F1)
BPBM	1959	Moa Heiau, Kamoamo. Sheet III-A	?	Survey by BPBM for Hawaii Volcanoes National Park; call no. 80	HAVO Archives (MC1D1F1)
BPBM	1959	Petroglyphs on Boundary, Laeapuki. Sheet IV-A	?	Survey by BPBM for Hawaii Volcanoes National Park; call no. 110	HAVO Archives (MC1D1F1)
BPBM	1959	Petroglyphs Kealakomo. Sheet VI-D	?	Survey by BPBM for Hawaii Volcanoes National Park; call no. 100	HAVO Archives (MC1D1F1)
BPBM	1959	House Site, Kealakomo. Sheet VI-F	?	Survey by BPBM for Hawaii Volcanoes National Park; call no. 90	HAVO Archives (MC1D1F1)
BPBM	1959	Kealakomo, Puna. Sheet VI	1 inch=100 feet	Survey by BPBM for Hawaii Volcanoes National Park; call no. 40	HAVO Archives (MC1D1F1)
BPBM	1959	Wahaula Heiau Area. Sheet II-A	1 inch=25 feet	Survey by BPBM for Hawaii Volcanoes National Park; call no. 30	HAVO Archives (MC1D1F1)
BPBM	1959	Petroglyphs Kamoamo. Sheet III-B	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	House site with petroglyphs, papamu and holes, Kealakomo. Sheet VI-E	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Main Compound, Kealakomo. Sheet VI-A	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Puuloa, Puna. Petroglyph area. Sheet V	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Petroglyphs Puuloa. Sheet V-A	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Laeapuki, Puna. Arch. Sites. Sheet IV	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Kamoamo, Puna. Arch. Sites. Sheet III	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Poupou, Puna. Arch. Sites. Sheet I	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Wahaula-Kailiili, Puna. Arch. Sites. Sheet II	?	illustration from Emory et al. 1959	HAVO CRD **
BPBM	1959	Kailiili Village. Sheet II-B	?	illustration from Emory et al. 1959	HAVO CRD **

Surveyor	Date	Title	Scale	Notes	Repository
BPBM	n.d.	Puuloa	1 inch=2.5 feet	16 maps; 22 x 22 inches; missing sheets 2, 6, 12, 14, 15, 16; includes cut and tape map of physical layout of petroglyphs	HAVO Library *
HAVO	?	Archeological Base Maps. Completed Project Area Index (to 4/85), Wahaula, Kamoamo, Kalapana (123-82004, 82026, 82031)	1 inch=250 feet	Drawing 124/82032; 1 sheet; call no. 190	HAVO CRD HAVO Archives (MC1D1F2)
HAVO	?	Archeological Base Maps. Completed Project Area Index (to 7/87), Wahaula, Kamoamo, Kalapana (123-82004, 82026, 82031, 82044)	?	Drawing 124/82032; 1 sheet; Figure 1 in Ladefoged et al. 1987	HAVO CRD
HAVO	?	Archeological Base Maps. Waha'ula Series	3 inches=500 feet	Drawing 124/82027; 1 sheet; call no. 200	HAVO CRD HAVO Archives (MC1D1F2)
HAVO	?	Archeological Base Maps. Kamoamo Mauka Phase 2	1:5	Drawing 124/82044; 2 sheets; used in Ladefoged et al. 1987	HAVO CRD
Nordgren, D.	1967 July	Wahaula Heiau and Vicinity, Hawaii Volcanoes National Park.	1 inch=30 feet	topography by E.G. Wingate; base map used in Ladd reports on Waha'ula; call no. 180	HAVO Archives (MC1D1F1)
HAVO	1976	Archeological Base Map. Kalapana Extension.	1 cm=100 m	Drawing 124/82003; 1 sheet (cover sheet index for 124/82004; drawn by CNH; used in Ladefoged et al. 1987; call no. 230	HAVO CRD HAVO Archives (MC1D1F3)
HAVO	1976	Archeological Base Maps. Kalapana Extension.	1 cm=5 m	Drawing 124/82004; 42 sheets; drawn by CNH; fieldwork by PH Rosendahl, Ed Ladd, MLK Rosendahl between 1974 and 1976; used in Ladefoged et al. 1987; call no. 230, 240	HAVO CRD HAVO Archives (MC1D1F3)
HAVO	1978	Archeological Base Maps. Kamoamo Village Complex, Kalapana Extension, Hawaii.	1 cm=20 m	Drawing 124/82030; 1 sheet (cover sheet for 124/83031); drawn by CNH; call no. 220	HAVO Archives (MC1D1F3)
HAVO	1978	Archeological Base Maps. Kamoamo Village Complex, Kalapana Extension, Hawaii.	1 cm=20 m	Drawing 124/82031; 62 sheets; drawn by CNH; call no. 220	HAVO Archives (MC1D1F3)
HAVO	1980	Archeological Base Map. Index to Drawing Number 124/82023 (1-7). Pulu Factory. Hawaii Volcanoes National Park, Hawaii	1 cm=4 m	Drawing 124/82022. Sheet 1 of 1. Drawn by CNH.	HAVO CRD (map drawer)

Surveyor	Date	Title	Scale	Notes	Repository
HAVO	1980	Archeological Base Map. Pulu Factory. Hawaii Volcanoes National Park, Hawaii	1 cm=1 m	Drawing 124/82023. Seven sheets. Drawn by CNH.	HAVO CRD (map drawer)
HAVO	1983, 1985	Archeological Base Maps. Kalapana Extension-Wahaula	1 inch=5 m	Drawing 124/82026; 44 sheets; Sheets 1 to 5 drawn by MML in 1985; Sheets 6 to 44 drawn by FS in 1983; used in Ladefoged et al. 1987	HAVO CRD HAVO Archives (MC1D1F2)
Kekahuna, HEP	1951 June 28	Makaiwa Heiau in Kahaualea, Puna, Hawaii, with Brief Descriptive Notes.	—	No. Archeo-Puna-5; call no. 120 (reduction); full size blueline in MC1D1F5 (call no. 3780)	HAVO Archives (MC1D1F1)
Kekahuna, HEP	1951 July 13	Kikoa Heiau in the land of Kikoa, Kalapana section, district of Puna, island of Hawaii.	—	No. Archeo-Puna-6; call no. 130 (reduction); full size blueline in MC1D1F5 (call no. 3780)	HAVO Archives (MC1D1F1)
Kekahuna, HEP	1951 July 14	Ku'ula Heiau, Fishermen's Shrine, land of Ki, Kapaahu section, district of Puna, island of Hawaii.	—	No. Archeo-Puna-7; call no. 140 (reduction); full size blueline in MC1D1F5 (call no. 3780)	HAVO Archives (MC1D1F1)
Kekahuna, HEP	1951 July 6	Hakuma Cave, Kupahu'a, Puna, Hawaii, with Brief Descriptive Notes.	—	No. Archeo-Puna-8; call no. 150 (reduction) ); full size blueline in MC1D1F5 (call no. 3780); cave has narrowed refuge-type entrance (similar to Honokohau cave)	HAVO Archives (MC1D1F1)
Kekahuna, HEP	1951 June 27	Waha'ula Heiau and adjoining grounds in Pulama, Puna, Hawaii, with Brief Descriptive Notes	—	No. Archeo-Puna-9; call no. 160 (reduction); full size blueline in MC1D1F5 (call no. 3780)	HAVO Archives (MC1D1F1)
Kekahuna, HEP	1951 June 24	Punaluu Heiau, Punaluu Pool and Adjoining Grounds, Kahau'a'lea, Puna, Hawaii, with Brief Descriptive Notes	—	No. Archeo-Puna-10; call no. 170 (reduction); full size blueline in MC1D1F5 (call no. 3780)	HAVO Archives (MC1D1F1)
Ladd	1972 July	Historic Village of Keauhou Landing, (portion) Hawaii Volcanoes National Park.	1 inch=20 feet	Drawing 124/40,006; 2 foot contours; surveyed by Youth Conservation Corps (YCC), under direction of Pacific Archaeologist (Ed Ladd); call no. 60	HAVO Archives (MC1D1F1)
Partee, R.A.	1971 September	Plan and Topography, Kailiili Village, Puna District, Hawaii Volcanoes National Park.	1 inch=20 feet	Drawing 124/40,006; 2 foot contours; call no. 70	HAVO Archives (MC1D1F1)
Medville, D. and H. Medville	1996	Roadcut Cave, Hawai'i Volcanoes National Park. Cave Survey of October 8, 1996			HAVO CRD

Surveyor	Date	Title	Scale	Notes	Repository
Metcalf, D.S.	1960 June	Archeological Base Map. Part of the Master Plan, Hawaii National Park.	1 inch=1.5 miles	Drawing No. NP-HAW/3117, Sheet 1; map of park showing site locations based on BPBM survey	HAVO CRD (map drawer) HAVO Archives (MC2D2F1)
Metcalf, D.S.	1960 June	Archeological Base Map. Part of the Master Plan, Hawaii National Park.	variable	Drawing No. NP-HAW/3117, Sheet 2; inset maps at variable scales showing detailed plans of sites shown on Sheet 1	HAVO CRD (map drawer) HAVO Archives (MC2D2F1)
Neller, Earl	1990 Sept 30	Pe‘a Homestead	1:250	field map of homestead; about 24 x 36 inches	HAVO CRD (rolled)
HAVO	?	Archeological Base Map. Puuloa Working Maps, Hawaii Volcanoes National Park.	1 cm=1 m	12 sheets; drawn by MLR in 1975; call no. 210	HAVO Archives (MC1D1F2)
PAR	1978	Puuloa Working Maps	1 cm=1 m	shows very general layout (grass, ohia, and petroglyph area)	HAVO Library *
Partee, R.A.	1971 September	Plan and Topography, Kealakomo Village Before 1971 Lava Flow, Puna District, Hawaii Volcanoes National Park.	1 inch=40 feet	Drawing 124/40,005; note on map says “village destroyed by 1971 lava flow”	HAVO CRD (map drawer)
unknown	n.d.	Archeological Survey Areas, Hawaii Volcanoes National Park, Kalapana, Hawaii	1 inch=2,000 feet	shows surveyed areas from 1974 to 1988; total 1,360 acres; drawn on a plotter (AutoCad?)	HAVO CRD (map drawer)
unknown	n.d.	Archeological Resources of Hawaii Volcanoes National Park, Site HV-225, Puu Loa Petroglyphs	1 inch=100 feet	16 sheets; call no. 10, 20	HAVO Archives (MC1D1F1)

\* Information taken from listing titled “Maps in HAVO Library;” in black 3-ring binder in the Cultural Resources Division’s library.

\*\* Listed on “Drawer 4. Inventory of Maps Inherited from Maintenance;” this is an inventory contained in a black 3-ring binder in the Cultural Resources Division’s library. Only those maps for which there is no other information or known repository are marked with \*\*.

Table D-3. Documents Relating to the HAVO Region (with selected annotation).

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Allen, Melinda Sue	1979. The Kalapana Extension in the 1800s: A Research of the Historical Records	ms in HAVO CR Division. Summary of historical research on Kalapana area of HAVO
Anonymous	1996. List of Classified Structures, Hawaii Volcanoes National Park.	ms in HAVO CR Division
Apple, Russell	1954. A History of Land Acquisition for Hawaii National Park to December 31, 1950.	ms in HAVO Library
Apple, Russell	1973. HAVO Archeological Site Record (Kilauea Crater).	site record form in HAVO CR Division
Apple, Russell	1973. HAVO Archeological Site Record (Whitney Seismographic Vault).	site record form in HAVO CR Division
Apple, Russell	1973. Mountain Trails: The Ainapo and Mauna Loa.	ms in HAVO Library
Argy, Eleni	1994. HAVO Archeological Site Record (CCC Water Tank Foundations).	site record form in HAVO CR Division
Argy, Eleni	1994. HAVO Archeological Site Record (Steam Flats Dump).	site record form in HAVO CR Division
Argy, Eleni and Tim Scheffler	1994. HAVO Archeological Site Record (Lower Water Tank)	site record form in HAVO CR Division
Argy, Eleni and Tim Scheffler	1994. HAVO Archeological Site Record (Upper Water Tank1).	site record form in HAVO CR Division
Argy, Eleni and Tim Scheffler	1994. HAVO Archeological Site Record (Shed by Nene Pen)	site record form in HAVO CR Division
Argy, Eleni and Tim Scheffler	1994. HAVO Archeological Site Record (Ainahou Monster Tank).	site record form in HAVO CR Division
Argy, Eleni and Tim Scheffler	1994. HAVO Archeological Site Record (Upper Water Tank 2).	site record form in HAVO CR Division
Baker, Albert S.	1922. Petroglyphs of Kau	ms in HAVO Archives
Baker, Albert S.	1931. "Puna Petroglyphs," Hawaiian Annual for the Year 1933, pp. 62-67.	publication
Bevens, Darcy	1992. Volcano House Register, Hawaii Natural History Association	
Blickhahn, Harry Miller	1961. Uncle George of Kilauea: the Story of George Lycurgus.	publication
Brumaghim, Everett	1933. Report of Heiau Sites, District of Puna. March 29.	ms in HAVO Library
Burrell, Jahkotta	2004. Analysis of a Hawai'i Lithic Cave	ms in HAVO CR Division
Carey & Co. Inc.	2002. Hawai'i Volcanoes and Haleakala National Parks the Early Years (1916-1945).	ms in HAVO Library. Historical Resource Study identifies, documents, and evaluates early National Park Service, Civilian Conservation Corps and World War II structures within HAVO
Carter, Laura A. and Gary F. Somers	1990. Here Today Lava Tomorrow: Archeological Work in Hawaii Volcanoes National Park 1987 to 1989.	publication. Salvage survey and excavations in area threatened by lava, including Waha'ula
Cleghorn, Paul L.	1980. The Hilina Pali Petroglyph Cave, Hawaii Island: A Report on Preliminary Archaeological Investigations.	archaeology report in HAVO CR Division; B.P. Bishop Museum
Cox, David W.	1974. Fieldwork Report on Mapping of Pu'u'loa Petroglyph Field, Puna Site Ha-HV-225.	ms in HAVO CR Division
Cox, J.H., and W.J. Bonk	1959. A Preliminary Archaeological Report of South Puna, Hawaii.	archaeology report in HAVO CR Division
CRM	2003. HAVO Archeological Site Record (Keanakako'i Historic Dump).	site record form in HAVO CR Division
CRM Cave Files	CRM Cave Files.	records in HAVO CR Division

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Dorn, Don	1996. Letter report on radiocarbon dates for Pu'uloa Petroglyphs	ms in HAVO CR Division
Dougherty, D., S. Roper, and N. Thompson	2004. Kupukupu Fire Assessment 2003, Archeological Inventory for the Kupukupu Fire, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division. Monitoring and recording of effects of fire suppression activities on cultural resources during the 2002 Kupukupu Fire. Monitoring included examining fire line construction along the fire perimeter and within the burn interior.
Dougherty, D., S. Roper, and N. Thompson	2004. Panau Iki Rehabilitation 2003. Archeological Inventory of 665 Acres in Hawaii Volcanoes National Park.	archaeology report in HAVO CR Division. Survey of 409 replanting nodes within 655 acres of the Pānaui Iki burn area in August and September 2003; 402 archeological features in 19 new sites and 16 previously documented sites was identified, of which 338 features fall within one site. Features indicate extensive agricultural exploitation of the uplands integrated with both temporary and permanent habitation structures; includes Hōlei Village.
Dougherty, Dennis	2004. "Giant of the Pacific:" Mauna Loa Reconnaissance 2003. Edited by Jadelyn J. Moniz Nakamura.	archaeology report in HAVO CR Division. Survey in high elevation zones of Mauna Loa, including archival research, reconnaissance survey along existing known trails, the Wilkes Camp site, and on the SE slopes of Mauna Loa, and aerial reconnaissance of the SE and SW slopes of Mauna Loa. Survey recorded 83 new features and collected data on 23 previously recorded features.
Dougherty, D., S. Roper, and N. Thompson	2004. Kupukupu Fire Assessment 2003: Archeological Inventory for the Kupukupu Fire, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division. Survey of inland area btwn 300 to 2,400 ft asl and monitoring of fire suppression activities in 2003; Sites 23007-24018
Durst, Mara, and Jadelyn J. Moniz Nakamura	2002. [draft] Landing Field Survey and Associated Areas Kīlauea Caldera, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division. Survey of 113 acres at Kīlauea summit in area of 1924 landing field which was modified by construction of sediment mounds; mounds are believed to have been created at beginning of WWII by NPS and Army to prevent possible enemy use of the field.
Durst, Mara, and Jadelyn J. Moniz Nakamura	2003. [draft] Kealakomo. "The Entrance Path" Hawai'i Volcanoes National Park New Interpretive Area Study.	archaeology report in HAVO CR Division. Two inventory surveys of Kealakomo Waena: inventory of kīpuka west of the Chain of Craters road (1999-2001); and of 46-acre kīpuka east of the road (2002). Purpose of surveys was to document archeological features to provide baseline data for development of plan to interpret the area for public visitation; also to document the impacts of fire on archeological features. Included testing in Road Cut Cave.
Durst, Mara, and Jadelyn Moniz Nakamura	2005. A Historic Resource Study of the Lower Portion of the 'Ili 'Āina Of Keauhou, District Of Ka'ū, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division. Historic resource study of 'ili 'āina of Keauhou; provides a synthesis of known resources and historic properties within Keauhou.
Emory, Kenneth P.	Field Trip to Kalapana, September 12 to 17, 1961	ms in HAVO Archives, B.P. Bishop Museum Archives. Description of field trip to collect wooden images from house compound about 1 mile from shore in Keauhou; also stopped at petroglyph cave in 'Āpua.
Eaton, J.P. and C.K. Wentworth	1962. The Hawaiian Volcano Observatory. In Thrum's All About Hawaii, pp. 35-44	publication
Emory, K. P., J. H. Cox, W. J. Bonk, Y. H. Sinoto and D. B. Barrere	1959. Natural and Cultural History Report on the Kalapana Extension of the Hawaii National Park. Volume I, Cultural History Report.	archaeology report in HAVO CR Division; B.P. Bishop Museum. Research on traditions, history, and archaeology of area proposed for extension of Chain of Craters road to Kalapana.

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Emory, K. P., L. J. Soehren, and E. J. Ladd	1965. The Archeological Resources of Hawaii Volcanoes National Park, Hawaii. Part II, Additional Sites, Test Excavations and Petroglyphs.	archaeology report in HAVO CR Division; B.P. Bishop Museum. Report on additional survey, excavation in 1964 in Kalapana Extension; petroglyph survey by W. Bonk.
Emory, Kenneth P.	1969. Inventory of Archaeological and Historical Sites in the Districts of Kona and Kau and in Anaehoomalu, South Kohala, Island of Hawaii.	archaeology report in HAVO CR Division; B.P. Bishop Museum
Fagerlund, Gunnar O.	1946. Chief Rangers Report of Horse-back Patrol of Outlying Parts of Kilauea Section.	ms in HAVO Archives
Fagerlund, Gunnar O.	1947. Petroglyphs in HI National Park. February 14.	ms in HAVO Archives
Friends of Hawai'i Volcanoes National Park, Volcano, Hawaii.	2003. The Oral Histories of 'Ainahou Ranch.	ms in HAVO Library and CR Division. Report summarizes the history of 'Ainahou Ranch, with emphasis on Herbert Shipman's interest in conservation and preservation; includes transcripts of oral history interviews with people who were related to, worked for, and were friends of Shipman.
Glidden, C., J. Waipa, T. Laqua, and M. Durst	1998. Results of Phase II of the Panau Emergency Survey and Mapping Project.	archaeology report in HAVO CR Division. Emergency survey and excavation of sites threatened by lava inundation
Glidden, Catherine	1994. "Lines of Descent: of Umbilical Cords, Ancestors, and Ahupuaa."	ms in HAVO CR Division
Glidden, Catherine	1997. The 1995 Paliuli Emergency Archaeological Salvage Project Report, Hawai'i Volcanoes National Park, Hawaii	archaeology report in HAVO CR Division. Survey of area above Paliuli Pali in Pānau Iki and Lae'apuki ahupua'a. See Glidden 2006 for final report.
Glidden, Catherine	1998. "Results of Field Work Conducted at the Pulu Processing Center in Hawaii Volcanoes National Park."	ms in HAVO CR Division. Paper presented at the Society for Hawaiian Archaeology conference, Hilo, Hawaii.
Glidden, Catherine	2006. Paliuli Emergency Salvage Project, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division. Survey initiated due to the threat of lava from Puu Ō'ō crater; fieldwork between February 27 and April 21, 1995, with initial emphasis on features near the flow. Once these areas were documented, the project area was extended to include a 20 m wide and 1,000 m long transect to the west of the flow. Latter effort involved testing of features within mauka-makai transect, with the explicit focus on mauka areas in Pānau Iki and Lae'apuki ahupua'a. All sites identified have been covered by lava flows, except Sites 20430-20433, 20439, and portions of Sites 20434 and 20440.
Glidden, Catherine, and Jill J. Rivoli	2000. Untitled report on Pulu Processing Site.	archaeology report in HAVO CR Division. Emergency excavation of the Pulu Processing Site in 1997; also archival research. Fieldwork included mapping, GPS locations, subsurface testing, and photography.
Hawaiian Volcano Observatory	Weekly and/or monthly reports, 1912-1925.	ms in HAVO Library and Archives
Heilen, M., and B. Camara	1995. Emergency Survey of Coastal Archaeological Features Adjacent to Recent Pu'u Ō'ō Lava Flows in Lae'apuki and Panau Iki Ahupua'a.	Information incorporated into Waipa (1999?) Kāheka report.
Howarth, F., F. Stone, E. Pearthree, and J. Lippert	1993. Hawai'i Volcanoes National Park Cave Inventory, Apua Point 1-4 Caves.	ms in HAVO CR Division
Jackson, Frances	1972. An Administrative History of Hawaii Volcanoes National Park. Haleakala National Park, Honolulu, Hawai'i.	ms in HAVO Library

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Jaggar, T.	1921. Ancient Rock Pictures	ms in HAVO Library
Keswick Janet	1998. HAVO Archeological Site Record (Namakani Paio Dump).	site record form in HAVO CR Division
Keswick, Janet	1994. HAVO Archeological Site Record (Ginger Patch Dump)	site record form in HAVO CR Division
Keswick, Janet	1994. Archeological Clearance Survey Form: Construct Ainahou Nene Enclosure/Habitat Enhancement (Mowing)	archaeology report in HAVO CR Division
Keswick, Janet	1994. HAVO Archeological Site Record (CCC Camp Foundations)	site record form in HAVO CR Division
Keswick, Janet	1994. HAVO Archeological Site Record (Keauhou Landing)	site record form in HAVO CR Division
Keswick, Janet	1995. HAVO Archeological Site Record (Power Plant)	site record form in HAVO CR Division
Keswick, Janet	1997. HAVO Archeological Site Record (Rainshed Crack Dump)	site record form in HAVO CR Division
Kirkendall, M.A.	1993b. Archeological Inventory Survey Kamoamoā Ahupua‘a. Prepared for Hawai‘i Volcanoes National Park	archaeology report in HAVO CR Division
Kirkendall, M.A.	1993a. Kamoamoā Ahupua‘a: An Archeological and Historical Picture	archaeology report in HAVO CR Division
Ladd, Edmund J.	1962. Kalapana Salvage: Preliminary Report to the Superintendent.	archaeology report in HAVO Archives
Ladd, Edmund J.	1962. Archaeological Survey and Test, Kamoamoā Campgrounds—Hawai‘i Volcanoes National Park.	archaeology report in HAVO Archives. Survey of Kamoamoā Campground, road, and turn-outs; excavation of two mounds, one of which is burial
Ladd, Edmund J.	1962. Ruins Stabilization, Moa Heiau, Kamoamoā Campgrounds, Puna.	archaeology report in HAVO Archives. Description of Moa Heiau and stabilization work carried out
Ladd, Edmund J.	1962. Ruins Stabilization Record, Pre-stabilization Report (Waha‘ula Heiau). Ms. on file, HAVO Archives.	archaeology report in HAVO Archives. Description of Waha‘ula Heiau.
Ladd, Edmund J.	1964. Salvage Report. Grave Site 5-A, Kamoamoā Campground	archaeology report in HAVO CR Division. Salvage of one of three grave sites at campsite 5-A
Ladd, Edmund J.	1965. Chain of Craters Road, Puna, Hawaii, Hawai‘i Volcanoes National Park. Salvage Report.	archaeology report in HAVO Archives. Summarizes 3 years of salvage and stabilization work in area between Kamoamoā and Waha‘ula
Ladd, Edmund J.	1969. Chain of Craters Road, Hawaii Volcanoes National Park, Puna: Salvage Project. In <i>Archaeology on the Island of Hawaii</i> , edited by Richard Pearson, pp. 26-73.	publication. See Ladd 1965
Ladd, Edmund J.	1972. Test Excavations at Waha‘ula: Structure C.	archaeology report in HAVO CR Division. Detailed mapping, excavation to establish chronology of construction of heiau
Ladd, Edmund J.	1973. Nomination to the National Register of Historic Sites for Puna-Ka‘u Historic District.	ms in HAVO CR Division
Ladd, Edmund J.	1977. Archeological Clearance Survey Form: Visitor Use Trail at Puuloa Petroglyph Field	archaeology report in HAVO Archives
Ladefoged, Thegn	1987. Settlement Pattern Analysis and Relational Databases: An Archeological Study in Hawai‘i Volcanoes National Park.	MA thesis, Department of Anthropology, University of Hawaii, Honolulu. See Ladefoged et al. 1987
Ladefoged, Thegn, Gary F. Somers, and M. Melia Lane-Hamasaki	1987. A Settlement Pattern Analysis of a Portion of Hawaii Volcanoes National Park. Archeology at Hawaii Volcanoes National Park.	Publications in Anthropology No. 44. Western Archeological and Conservation Center. National Park Service. Survey continues, expands on 1974 survey of Kalapana Extension (see Unknown 1974); also to record damage from 1985 flow.

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Langlas, Charles	2003. Ethnographic Studies at Hawai'i Volcanoes National Park.	ms in HAVO Library and CR Division. Report contains supporting documentation for <i>Native Hawaiian Use of Hawai'i Volcanoes National Park: A Historical and Ethnographic Overview</i> . Part A covers HAVO coastal zone with description of historic marine resource use by Native Hawaiians from 1930 to 1985 (including current use) and an ethnographic landscape of the coast; Part B contains a description of current Native Hawaiian use of plant resources in the Park under the Park's collection permit program. Part C is list of Native Hawaiian place names and place name stories taken from documentary sources.
Langlas, Charles	2003. Native Hawaiian Use of Hawai'i Volcanoes National Park: A Historical and Ethnographic Overview.	ms in HAVO Library and CR Division. Ethnographic study on past and present traditional Native Hawaiian use of resources on HAVO; examines relationship between resource use and HAVO management; makes recommendations for Park management to better accommodate Native Hawaiian desires regarding traditional resource use in the Park, while still protecting those resources. Phase 1 was a preliminary survey of documentary ethnographic sources and records concerning Park policy. Phase 2 focused on Native Hawaiian use of Park resources between 1930 to 1980, based on oral history interviews with older Hawaiians who could describe their use of the Park for subsistence or ritual purposes. Phase 3 focused on current use of the Park, mainly use of marine resources, use of ritual sites, and collection of plants; information gathered primarily by interviews with Native Hawaiian resource users and with Park personnel.
Lee, Georgia	1993. The Petroglyphs of Pu'uloa (HV-225), Hawai'i Volcanoes National Park.	ms in HAVO CR Division
Lee, Georgia and Edward Stasack	1999. Spirit of Place, Petroglyphs of Hawai'i	publication. Includes section on Pu'uloa Petroglyph Field.
Lippert, Jill	1993. Road Cut Cave	archaeology report in HAVO CR Division
Maly, Kepa and Onaona Maly	2005. <i>He Wahi Mo'olelo no Keauhou a me Na Wahi Pana ma Laila.</i>	oral history report prepared for Kamehameha Schools, Land Assets Division; copy in HAVO CR Division
Martin, James F.	1991. Native Hawaiian Water Collection Systems in Lava Tubes (Caves) and Fault Cracks – Puna-Kau District, Hawaii.	ms in HAVO Library
Martin, Jean, and Frances Jackson	1995. Archaeological Data Recovery Site 50-10-52-19248, Hawaii Volcanoes National Park, Island of Hawaii, Hawaii.	archaeology report in HAVO CR Division. Report documents results of monitoring of water catchment basin excavation, and subsequent laboratory analysis of collected materials; includes a narrative of historical uses of the general Park Headquarters area and a history of water supply in this area; project area is general location of trash deposition from pre-1940 Volcano House operations (stables, garden, poultry yard).
Masse, W.B., L.A. Carter, and G.F. Somers	1991. Waha'ula Heiau – The Regional and Symbolic Context of Hawai'i Island's "Red Mouth Temple."	publication: Asian Perspectives 30(1):19-56
Maxey, Jessica and Laura A. Schuster	2003. Rehabilitate 455 acres of fire-damaged transitional mesic ohia and sword fern forest, Hawaii Volcanoes National Park, Hawaii	archaeology report in HAVO CR Division
Medville, Doug and Hazel Medville	1996. Roadcut Cave, Hawaii Volcanoes National Park. Surveyed on October 8, 1996.	map in HAVO CR Division
Melloy, Kilian	1995. Apua Notes	ms in HAVO CR Division

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Moniz Nakamura, Jadelyn	2002. Build Predator Exclosure Fence To Protect Dark-rumped Petrel Breeding Habitat, Hawaii Volcanoes National Park.	Section 106 Clearance report.in HAVO CR Division
Moniz Nakamura, Jadelyn	2003. Pili Grassland Prescribed Burn Experiments.	archaeology report in HAVO CR Division
Moniz Nakamura, Jadelyn	2003. Keonehelelelei. The Falling Sands. Hawai'i Volcanoes National Park Archeological Inventory of the Footprints National Register Site. Publications in Anthropology 2, Pacific Island Cluster, National Park Service, U.S. Department of the Interior.	archaeology report in HAVO CR Division. Inventory survey between 1998 and 2001 of the 1790 Footprints National Register parcel (approx. 4,284 acres) in Kapāpala, Ka'ū district. Two test excavations were dug and monitoring program was started. Fifty-five sites consisting of 516 individual features identified; also 73 isolated artifacts and 1,773 footprints representing a minimum of 441 individuals. At least two pre- and post-contact trail systems parallel the Ke'āmoku flow on the east; several other trails and road segments identified.
Moniz Nakamura, Jadelyn	2004. Out of the Ashes: The Discovery of Lithic Block Quarry Workstations on the Slopes of Kilauea Caldera, After Dark in the Park Program	ms in HAVO CR Division
Moniz Nakamura, Jadelyn	2005. Memorandum to Files Re. Replacement of Cap Rocks for Burial Site 21679	memo to file in HAVO CR Division
Morlock, L. J. Waipa, and J. Keswick	1995. HAVO Archeological Site Record (Salt Drying Area)	site record form in HAVO CR Division
CLI	2004. Ainahou Ranch House and Gardens, Hawai'i Volcanoes National Park	cultural landscape inventory report in HAVO CR Division.
Olsen, Gunder	1941. The Story of the Volcano House. Hilo Tribune Herald, Hilo	publication. Popular history of Volcano House.
Pearthree, E. and Laura A. Carter	1991. Re-evaluation of Sites Along the Puna-Ka'u Coast Trail within the Ahupua'a of Kaena, Kealakomo, Kahue, Apua, Keauhou, and Halape.	ARPA report in HAVO CR Division
Pietrusewsky, Michael	1976. Letter report to Pacific Archaeologist at City of Refuge National Historic Park, re: Mauna Loa Skeletons.	ms in HAVO CR Division. Osteological analysis of human remains found in lava shelter near summit of Mauna Loa; two male individuals.
Pietrusewsky, Michael	1987. An Osteological Report on a Human Skeleton (87-01) from Kamoamo Picnic Ground. March.	archaeology report in HAVO CR Division. Osteological analysis of human remains found at Kamoamo picnic grounds (Somers 1987); individual is an adult Polynesian female, about 30 to 40 years old; burial did not include the skull.
Quiseng, Christopher L.	2006. [draft] Kahuku-Ainapo Trail Reconnaissance 2004 (Phase I) and the Kahuku Inventory Survey 2005 (Phase II). Kahuku Management Unit, Hawaii Volcanoes National Park.	archaeology report in HAVO CR Division. Surveys in Kahuku Management Unit from July 2004 to March 2006. Phase I focused on identifying and recording ground location and associated features of the Kahuku-Ainapo trail (Site 24, 121). Phase II was inventory survey over a broad geographical area carried out in collaboration with the HAVO Natural Resources vegetation management staff.
Rivoli, J.J.	1999. An Archeological Survey of the Wilkes Site, United States Exploring Expedition 1840-1841.	archaeology report in HAVO CR Division
Roper, Summer	2003. Cave Monitoring 2003-2004, Book One	field notes in HAVO CR Division
Roper, Summer	2005. [draft] Hilina Pali 2005. The Civilian Conservation Corps. An Archeological Inventory Survey of the Hilina Pali Erosion Control Project of 1940.	archaeology report in HAVO CR Division. The Hilina Pali Civilian Conservation Corps (CCC) project took place in three phases between 1998 and 2003. A total of 201 features was located and recorded, mostly retaining walls and dams. The majority of these features are related to the CCC erosion control project of 1940.

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Scheffler, Timothy	1994. HAVO Archeological Site Record (Steam Crack Baths).	site record form in HAVO CR Division
Scheffler, Timothy	1994. Kamooali'i Reconnaissance Survey, "Ahupua'a Written in Stone."	archaeology report in HAVO CR Division. Reconnaissance survey of seven transects within an area of approximately 15 square miles over period less than a week. Eight sites identified: three large clusters of petroglyphs, two shelter-type enclosures, a single petroglyph and ahu, a shell midden scatter, and a cluster of five enclosures and associated platforms and terraces.
Scheffler, Timothy	1994. Archaeological Survey Report. Panau Iki: "Paliuli GPS Survey."	archaeology report in HAVO CR Division. Feature forms for structures in the Paliuli area of Pānau Iki and Lae'apuki.
Scheffler, Timothy and Janet Keswick	1994. Survey of Headquarters Area, Hawaii Volcanoes National Park, Hawaii	ms in HAVO CR Division. Systematic survey of Headquarters Area "to preempt the onslaught of archeological compliance surveys by taking a proactive approach"
Smart, C., K. Emory, L. Soehren, and E. Ladd	1965. The Archaeological Resources of Hawaii Volcanoes National Park. Parts I and II. Department of Anthropology, B.P. Bishop Museum, Honolulu.	archaeology report in HAVO CR Division. Survey expands on 1959 survey of Kalapana Extension and coastal east HAVO; Smart's field book and a draft of the report are in the HAVO Archives (Shelf O4; HAVO-608)
Somers, Gary	1986. Preliminary Report: Kamoamo Picnic Ground, Burial 86-1, Hawaii Volcanoes National Park.	ms in HAVO CR Division and Archives. Emergency removal of burial from Kamoamo picnic grounds (in black sand between pahoehoe sea cliff and coconut trees in picnic area; makai of the parking lot); burial exposed by high surf during Hurricane Estelle in July 1986. At the request of the Kalapana Hawaiian community, the remains were reburied near by.
Somers, Gary	1987. Preliminary Report: Kamoamo Picnic Ground, Burial 87-1, Hawaii Volcanoes National Park.	ms in HAVO CR Division and Archives. Emergency removal of burial from Kamoamo picnic grounds (in black sand between pahoehoe sea cliff and coconut trees in picnic area; about 20 m southwest of Burial 86-1 (see Somers 1986); burial was exposed by high surf during Hurricane Estelle in July 1986. No evidence of burial pit, although this could be due to the erosional damage from the hurricane. See Pietruszewky 1987 for description of individual.
Sommers, Gary	1993. Archeological Clearance Survey Form: Rehabilitate Park Water System, Phase II, Headquarters Area, Hawaii Volcanoes National Park, Hawaii	ms in HAVO CR Division
Spears, Patricia	1995. Panau Iki: Continuities of Residence Through Two Hundred Years. Reconnaissance Survey of a Portion of Site 50-10-63-19460 and Historical Source Review of the Panau Iki Area.	ms in HAVO CR Division. Detailed mapping of a portion of Site 19460; includes discussion of the Pe'a homestead; prepared for the Hawai'i Natural History Association.
Spears, Patricia	1995. HAVO Archeological Site/Survey Record (Panau Iki)	site record form in HAVO CR Division
Stasack, Edward and Diane Stasack	1997. Petroglyph Recording Project, Cave HV-76 (State Site No. 50-10-62-22750). Keauhou, Puna-Ka'u Historic District, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division
Stasack, Edward and Diane Stasack	1998. Kaheka and West of Kaheka. Rock Art Recording Project. Panau Iki Ahupua'a, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division
Stasack, Edward and Diane Stasack	1998. Nāulu Locus 1 and Locus 2 Rock Art Recording Project: Kealakomo Ahupua'a, Puna District, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Stasack, Edward and Diane Stasack	1998. Feature 396 Rock Art Recording Project. Panau Nui Ahupua'a, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division
Stasack, Edward and Diane Stasack	1999. Roadcut Cave Rock Art Recording Report: Kealakomo Ahupua'a, Puna District, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division
Stasack, Edward and Diane Stasack	1999. Ki Cave Rock Art Recording Project. Panua Nui Ahupua'a, Puna District, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division
Stasack, Edward and Diane Stasack	1999. Lae'apuki/Panau Iki (Transect 2) Rock Art Recording Project. Lae'apuki/Panau Iki Ahupua'a, Puna District, Hawai'i Volcanoes National Park.	archaeology report in HAVO CR Division
Superintendent Reports	Multiple	in HAVO Archives and Library
Suzuki/Morgan Architects, Ltd.	2003. Historic Structures Report for the Ainahou Ranch House at Hawai'i Volcanoes National Park	ms in HAVO Library
Swanson, Donald	in press; paper on Hawaiian oral tradition	—
unknown (probably E.J. Ladd)	1974. Walk-Through Archaeological Survey-Kalapana Extension, Hawaii Volcanoes National Park, Hawaii (Portion).	archaeology report in HAVO CR Division and Archives. Survey of the portion of the Kalapana Extension inland of Chain of Craters Road, just west of Waha'ula Heiau to 200 to 400 ft asl; 156 sites identified.
unknown	1987. untitled	ms in HAVO CR Division and Archives. Report summarizes research project by B. Withrow at Keanakāko'i Crater and Big 'Ōhi'a Cave (reconnaissance survey for doctoral research on prehistoric production, distribution, and use of Hawaiian adzes).
Waipa, Jennifer	1996. HAVO Archeological Site Record (Lava Plastered Cone Trail).	site record form in HAVO CR Division
Waipa, Jennifer	1997. HAVO Archeological Site Record (HV47)	site record form in HAVO CR Division
Waipa, Jennifer	1998. HAVO Archeological Site Record (Papalehau Cave)	site record form in HAVO CR Division
Waipa, Jennifer	2001. HAVO Archeological Site Record (Kahue Coastal Features)	site record form in HAVO CR Division
Waipa, Jennifer	2001. HAVO Archeological Site Record (Hwy. 11 Dump Chute)	site record form in HAVO CR Division
Waipa, Jennifer	2001. HAVO Archeological Site Record (Keanakako'i Crack Dump)	site record form in HAVO CR Division
Waipa, Jennifer	2001. HAVO Archeological Site Record (Poliokaeawe Platforms)	site record form in HAVO CR Division
Waipa, Jennifer	2002. HAVO Archeological Site Record (Pepeiau Shelter Cabin)	site record form in HAVO CR Division
Waipa, Jennifer	2002. HAVO Cultural Survey Form, PROJECT HAVO 2002 H	site record form in HAVO CR Division
Waipa, Jennifer	2003. HAVO Archeological Site Record (Crater Rim Road Wall)	site record form in HAVO CR Division
Waipa, Jennifer	2003. HAVO Archeological Site Record (Kahuku-'Ainapo Trail)	site record form in HAVO CR Division
Waipa, Jennifer	2003. HAVO Archeological Survey Form, PROJECT HAVO 2003 B (see Feature 10, LCS-20)	site record form in HAVO CR Division
Waipa, Jennifer	2004. Replace/Modify Sections of the Peter Lee and Kipuka Ki Fencelines, Hawai'i Volcanoes National Park, Hawai'i	ms in HAVO CR Division
Waipa, Jennifer	2005. [draft] Kāheka: A Study of a Small Coastal Settlement	ms in HAVO CR Division

<b>Author</b>	<b>Date and Title</b>	<b>Selected Annotation</b>
Waipa, Jennifer and Taylor Houston	2001. HAVO Archeological Site Record (Kealakomo Coastal Features)	site record form in HAVO CR Division
Warshauer and Jacobi	1973. A Biological Survey	ms in HAVO Library
Wingate, Edward G.	1939. A Photographic Report Covering Some of the Natural Features, Physical Construction Improvements, Conservation Activities, Etc.	ms in HAVO CR Division. Document appears to be a justification for park improvements, with photographs of infrastructure problems. Caption to Photo 13 says: "Kipuka Puaulu had long been used as a picnic ground. It had previously been farmed as a homestead. Following Dr. E.P. Meinecke's inspection of the park, his suggestion regarding making this a sacred area has been carried out. Picnic grounds, formerly located inside the kipuka were removed to an adjacent area."
Wulzen, Warren	1999. [draft] Footprints 98 Project. Archeological Survey of Site 50-10-61-5505 and Beyond. Kapāpala and Keauhou Ahupua'a, Hawai'i Volcanoes National Park	archaeology report in HAVO CR Division. Information from this draft report was incorporated into Moniz Nakamura (2003).
Yen, D.	1971. An Ethnobotanical Survey of the National Parks at Honaunau and Kalapana on the Island of Hawaii, and Kipahulu, Maui	ms in HAVO CR Division
Zabrok, Pete	1986. Aloha Caving. In the Toronto Caver	publication; copy in HAVO CR Division



**APPENDIX E.  
BURIAL INFORMATION**



Table E-1. Burial Site Inventory.

Site No.	Name/Description (modified from HAVO records)	ASMIS Description (in CAPS: ARC DFB DESC) (in parentheses, added information)	In Arc GIS	Source	Park_ID ASMIS
19449	Pu'u 'Iwi Makule	Burial		Keswick HVASR	
19451	Horse Corral Burial	Burial		Keswick HVASR	
19464	Gourd Cave Burial	Burial, water collection features (destroyed by lava)	x	Glidden 2006	Gourd Cave
21679	Cave (Fea. 70)	Burial cave. CAVE	x	Glidden et al. 1998	
21683	Cave (Fea. 253)	Burial cave. Seismic activity as well as flooding could and may be affecting this site. CAVE	x	Glidden et al. 1998	
23793	Poliokeawe Platforms	Burial	x	Waipa, J.	
23986	Kupukupu Features KM1-6	Pits, hearth, burial		Schuster, L.	
24010	Kupukupu Platform	Burial? Shrine? PLATFORM	x	Dougherty et al. 2004b	HAVO-2002-488
24011	Kupukupu	Burial LAVA BLISTER	x	Dougherty et al. 2004b	HAVO-2002-B-498
24081	Cave	Burial cave, petroglyphs.* CAVE	x	Dougherty et al. 2004a	HAVO-2003-L-67
24089	Burial	Burial		Dougherty et al. 2004a	HAVO-2003-L-176
HV-053	Graves	Graves		Smart et al. 1965	HV-053
HV-096	Grave, cairn, papamu	Grave, cairn, papamu (in Keauhou)		Smart et al. 1965	HV-096
HV-103	Grave	Grave (in Keauhou)	x	Smart et al. 1965	HV-103
HV-229	Burial	Burial site, 948+35, permanently sealed (in Poupou, Ka'ili'ili Village)	x	Ladd 1965 Smart et al. 1965 Ladefoged et al. 1987	HV-229
HV-238	Burial (Site 5-A)	Burial (Site 5-A) (in Kamoamo)		Ladd [1964], 1965 Smart et al. 1965 Ladefoged et al. 1987	HV-238
HV-239	Burial (Mound 3)	Burial (Mound 3) (in Kamoamo)		Ladd 1962a, 1965 Smart et al. 1965 Ladefoged et al. 1987	HV-239
HV-263	Platform — Graves?	Platform — Graves? (in Pūlama)		Smart et al. 1965	HV-263

<b>Site No.</b>	<b>Name/Description (modified from HAVO records)</b>	<b>ASMIS Description (in CAPS: ARC DFB DESC) (in parentheses, added information)</b>	<b>In Arc GIS</b>	<b>Source</b>	<b>Park_ID ASMIS</b>
<b>HV-295</b>	Burial platform	Burial platform (in Pūlama)		Smart et al. 1965 Ladefoged et al. 1987	HV-295
<b>HV-296</b>	Burial platform	Burial platform (in Pūlama)		Smart et al. 1965 Ladefoged et al. 1987	HV-296
<b>HV-302</b>	Grave	Grave (in Kamoamoā)		Smart et al. 1965 Ladefoged et al. 1987	HV-302
<b>HV-303</b>	Grave	Grave (in Kamoamoā)		Smart et al. 1965 Ladefoged et al. 1987	HV-303
<b>no no.</b>	Mauna Loa	(2 adult males in lava shelter near summit)		Pietrusewsky 1976	—
<b>86-1</b>	Burial	(burial in sand in Kamoamoā picnic grounds, exposed by high surf during Hurricane Estelle)		Somers 1986	—
<b>87-1</b>	Burial	(burial in sand in Kamoamoā picnic grounds, exposed by high surf during Hurricane Estelle)		Somers 1987	—

**APPENDIX F.**  
**GAZETTEER OF PLACE NAMES AND GLOSSARY OF HAWAIIAN WORDS**



Table F-1. Gazetteer of Place Names Used in HAVO AOA.

Basic Name	Name with Diacriticals	Description	Location
Ailaa	‘Ailā‘au	lava flow	Kīlauea East Rift, Puna district
Ainahou	‘Ainahou	ranch	lower to mid-elevation Keauhou
Ainapo	‘Ainapō	trail	upland Mauna Loa, Kahuku
Akihi	‘Akihi	cinder cone (Mauna Loa)	Kahuku, Ka‘ū district
Alala	‘Alalā	lava flow (Mauna Loa)	upland Kahuku, Ka‘ū district
Alika	‘Alikā	cinder cone (SW Rift of Mauna Loa)	Kahuku, Ka‘ū district
Apua	‘Āpua	ahupua‘a, point, coastal village	Puna district
Halape	Halapē	place, coastal village	Kapāpala; Ka‘ū district
Halemaumau	Halema‘uma‘u	caldera at Kīlauea summit	Keauhou, Ka‘ū district
Hamakua	Hāmākua	district	east Hawai‘i
Hilina	Hilina	pali	Kapāpala, Ka‘u district
Hokukano	Hōkūkano	village	coastal southeast Ka‘ū district
Holei	Hōlei	pali, inland village	Puna district; village is in Pānau Nui
Honuapo	Honu‘apo	coastal village	central Ka‘u district
Hualalai	Hualālai	mountain	western Hawai‘i Island
Humuula	Humu‘ula	saddle between Mauna Loa and Mauna Kea	Hilo and Hāmākua districts
Ihuanu	Ihuanu	cinder cone (SW Rift of Mauna Loa)	Kahuku, Ka‘ū district
Kaalaala	Ka‘ala‘ala	ahupua‘a	central Ka‘ū district
Kaalaiki	Ka‘alāiki	ahupua‘a, village	central Ka‘ū district
Kaalualu	Ka‘alu‘alu	village	central Ka‘ū district
Kaena	Ka‘ena	point, village	Pānau Nui, Puna district
Kahaualea	Kahauale‘a	ahupua‘a, village	Puna district
Kahue	Kahue	ahupua‘a, village	Puna district
Kahuku	Kahuku	ahupua‘a, ranch	western Ka‘ū district
Kailiili	Ka‘ili‘ili	village	Pūlama, Puna district
Kalaeloa	Kalaeloa	site of 1790 battle between Keōua and Ka‘iana	Ka‘ū district
Kalapana	Kalapana	ahupua‘a, village	Puna district
Kamaoa	Kamā‘oa	ahupua‘a; site of battle btwn Keōua and Ka‘iana	Ka‘ū district; South Point
Kamoamo	Kamoamo	ahupua‘a, village	Puna district
Kaohe	Ka‘ohe	ahupua‘a	Hāmākua district
Kapapala	Kapāpala	ahupua‘a, inland village, ranch	eastern Ka‘ū district
Kapualaala	Kapu‘ala‘ala	cinder cone (SW Rift of Mauna Loa)	Kahuku, Ka‘ū district
Kau	Ka‘ū	district	southern Hawai‘i
Kealakomo	Kealakomo	ahupua‘a, village	Puna district
Keamoku	Ke‘āmoku	lava flow (Kīlauea)	NNW of Kīlauea crater
Keanakakoi	Keanakāko‘i	crater (south of Kīlauea crater)	Keauhou, Ka‘ū district
Keauhou	Keauhou	ili‘aina, landing, village	eastern Ka‘ū district
Kekeekai	Keke‘ekai	inland ahupua‘a	western Ka‘ū district
Kiao	Kī‘ao	inland ahupua‘a	western Ka‘ū district
Kilauea	Kīlauea	volcano, crater	Keauhou, Ka‘ū district
Kiolakaa	Kiolaka‘a	ahupua‘a	central Ka‘ū district
Kipuku Nene	Kīpuka Nēnē	kīpuka	Kapāpala, Ka‘ū district
Kuee	Kūē‘ē	village	Ka‘ala‘ala Makai, Ka‘ū district
Kumukahi	Kumukahi	point	easternmost point of Hawai‘i Island
Laeapuki	Lae‘apuki	ahupua‘a, point, village	Puna district
Lua Palalauhala	Lua Palalauhala	crater	above Pali o Māmalu, Ka‘ū district
Lua Poai	Lua Pō‘ai	crater	above Pali o Māmalu, Ka‘ū district
Lua Puali	Lua Pū‘ali	crater	above Pali o Māmalu, Ka‘ū district
Makahuna	Makahuna	fault scarp	Kapāpala, Ka‘ū district
Makaopuhi	Makaopuhi	crater on Kīlauea East Rift	Pānau Nui, Puna district
Manienie	Mānienie	inland ahupua‘a	western Ka‘ū district
Mauna Kea	Mauna Kea	volcano	central Hawai‘i Island
Mauna Loa	Mauna Loa	volcano	southern Hawai‘i Island
Mauna Ulu	Mauna Ulu	crater on Kīlauea East Rift	Pānau Nui, Puna district

<b>Basic Name</b>	<b>Name with Diacriticals</b>	<b>Description</b>	<b>Location</b>
Mokuaweoweo	Moku‘āweoweo	caldera at Mauna Loa summit	Kahuku, Kapāpala, Ka‘u district
Naohuleelua	Nā‘ōhule‘elua	site of 1790 battle between Keōua and Ka‘iana	Ka‘ū district
Napau	Nāpau	inland place, crater on Kīlauea East Rift	Kamoamoā, Puna district
Napuulena	Nāpu‘ulena	inland ahupua‘a	western Ka‘ū district
Naulu	Nā‘ulu	village on Hōlei Pali	Kealakomo, Puna district
Ohohio	‘Ōhohio	cinder cone (SW Rift of Mauna Loa)	Kahuku, Ka‘ū district
Olaa	‘Ōla‘a	ahupua‘a, inland village	Puna district
Pahala	Pāhala	ahupua‘a, village	Puna district
Paiahaa	Paiaha‘a	site of 1790 battle between Keōua and Ka‘iana	Ka‘ū district
Pakini	Pākini	ahupua‘a, village	western Ka‘ū district
Pali o Kaeo	Pali o Ka‘eo	fault scarp; inland section of Pali o Māmalu	western Ka‘ū district
Pali o Mamalu	Pali o Māmalu	major fault scarp; also called Kahuku Fault	western Ka‘ū district
Paliuli	Paliuli	fault scarp	Pānau and Lae‘apuki, Puna district
Panau	Pānau	inland settlement near Makaopuhi Crater	Pānau Nui, Puna district
Panau Iki	Pānau Iki	ahupua‘a	Puna district
Panau Nui	Pānau Nui	ahupua‘a	Puna district
Pohaku Hanalei	Pōhaku Hanalei	inland point of Hilo district	Hilo district
Pohakuloa	Pōhakuloa	cinder cone (SW Rift of Mauna Loa)	Kahuku, Ka‘ū district
Poliokeawe	Poliokeawe	fault scarp	Puna and Ka‘ū districts
Poupou	Poupou	ahupua‘a	Puna district
Poupou Kauka	Poupou Kauka	village	coastal Puna district
Pulama	Pūlama	ahupua‘a	Puna district
Puna	Puna	district	eastern Hawai‘i Island
Punaluu	Punalu‘u	ahupua‘a, bay, village	central Ka‘ū district
Puu Kaone	Pu‘u Kaone	hill	coastal Kapāpala, Ka‘ū district
Puu Kapukapu	Pu‘u Kapukapu	hill	coastal Kapāpala, Ka‘ū district
Puu o Kahuku	Pu‘u o Kahuku	cinder cone (Mauna Loa)	Kahuku, Ka‘ū district; above Belt Rd
Puu o Keokeo	Pu‘u o Ke‘oke‘o	cinder cone (SW Rift of Mauna Loa)	Kahuku, Ka‘ū district
Puu o Lokuana	Pu‘u o Lokuana	cinder cone (Mauna Loa)	Kahuku, Ka‘ū district; above Belt Rd
Puu Oo	Pu‘u ‘Ō‘o	cinder cone, vent (Kīlauea)	Kamoamoā, Puna district
Puu Ulaula	Pu‘u ‘Ula‘ula	cinder cone (near Mauna Loa summit)	Kapāpala, Ka‘ū district
Puueo	Pu‘ue‘o	fault scarp	Keauhou, Kapāpala, Ka‘ū district
Puuloa	Pu‘uloa	place, petroglyph field	Pānau Nui, Puna district
Uwekahuna	Uwēkahuna	cliff in Kīlauea crater	Keauhou, Ka‘ū district
Wahaula	Waha‘ula	heiau	Pūlama, Puna district
Waiohinu	Wai‘ōhinu	ahupua‘a, inland village	central Ka‘u district
Wilipea	Wilipea	coastal village, point	Lae‘apuki, Puna district

Table F-2. Glossary of Hawaiian Terms.

<b>‘a‘ā</b>	Stony lava.
<b>ahu</b>	Heap, pile, collection, mound, mass; altar, shrine, cairn.
<b>ahupua‘a</b>	Land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (ahu) of stones surmounted by an image of a pig (pua‘a), or because a pig or other tribute was laid on the altar as tax to the chief.
<b>‘āina</b>	Land, earth (Pukui and Elbert 1986:11).
<b>akua</b>	God, goddess, spirit, ghost, devil, image, idol, corpse.
<b>akua loa</b>	Also termed Lono-makua; this is the idol termed the “Makahiki god” that was carried around the island during the Makahiki (Malo 1951:144-145). Other gods involved with this ceremony are the akua poko (short god) and akua paani (god of sports) (Malo 1951:145).
<b>akua paani</b>	“God of sports” that accompanied the akua loa during the Makahiki (Malo 1951:145); described as “consisting of spears, the heads of which were surrounded with a sort of basket work intertwined and decorated with lei and streamers of white and yellow tapa. It is said that the games of the festival were directed by gestures made with these poles.” (Malo 1951:154).
<b>akua poko</b>	“Short god” carried only as far as the district boundary and taken back, during the Makahiki (Malo 1951:145); Malo also describes what he believed to be an akua poko as “a staff of kauila, having a small figure in the form of a man arrayed with the mahi-ole, feather helmet. The lower end of the staff is sharpened as if for thrusting into the ground ... The length of the staff is about three feet four inches (sic).” (Malo 1951:155).
<b>‘alā</b>	Dense waterworn volcanic stone, as used for poi pounders, adzes, hula stones; hard lava, basalt (Pukui and Elbert 1986:16).
<b>ali‘i</b>	Chief, chiefess, officer, ruler, monarch, peer, headman, noble, aristocrat, king, queen, commander.
<b>‘anā‘anā</b>	Black magic, evil sorcery by means of prayer and incantation; to practice this.
<b>‘aumakua</b>	Family or personal gods; deified ancestors who might assume the shape of a variety of animals, plants, rocks, and clouds; mortals did not harm ‘aumakua and ‘aumakua warned mortals in dreams, visions and calls.
<b>hale</b>	House, building, station, hall.
<b>heiau</b>	Hawaiian term for a pre-Christian place of worship, shrine.
<b>hōlua</b>	Ancient sled used on grassy slopes.
<b>‘ili</b>	Land section, next in importance to ahupua‘a and usually a subdivision of an ahupua‘a.
<b>imu</b>	Underground oven.
<b>ipu hula</b>	Dance drum made of two gourds sewed together.
<b>iwi</b>	Bone; carcass; core; bone of the dead.
<b>kā‘ai</b>	Sash, belt, girdle or any king; sennit casket ...; protective cloth wrapped around an object; to bind, tie around, encircle, gird on; to put on, as armor or a mourning garment.
<b>kahu</b>	Honored attendant, guardian, nurse, keeper of ‘unihipili bones, regent, keeper, administrator, warden, caretaker, master, mistress; pastor, minister, reverend, or preacher of a church ... one with a personal relationship between a god and its guardian or keeper.
<b>kahuna</b>	Kāhuna, plural; priest, sorcerer, magician, wizard, minister, expert in any profession (whether male or female); in the 1845 laws doctors, surgeons, and dentists were called kahuna.

<b>kanalu</b>	Priest of Kū serving in the <i>luakini</i> temple, said to be named for the first such priest (Pukui and Elbert 1986:127).
<b>kapu</b>	Taboo; prohibition; special privilege or exemption from ordinary taboo; sacredness; forbidden; holy; consecrated; no trespassing.
<b>kauhale</b>	Group of houses comprising a Hawaiian home; Hawaiian home.
<b>kiawe</b>	Introduced leguminous tree, <i>Prosopis pallida</i> .
<b>ki'i</b>	Image, statue, picture, photograph, drawing, diagram, illustration, likeness, cartoon, idol, doll, petroglyph.
<b>kino lau</b>	The forms taken by a supernatural being.
<b>kipuka</b>	A calm place in a high sea, deep place in a shoal, opening in a forest, openings in cloud formations, and especially a clear place or oasis within a lava bed where there may be vegetation.
<b>koa haole</b>	Introduced leguminous shrub, <i>Leucaena leucocephala</i> .
<b>kōnane</b>	Hawaiian term for an ancient game resembling checkers, played with pebbles placed in even lines on a stone or wood board called papa kōnane or papamū.
<b>kukui</b>	Candlenut tree, <i>Aleurites moluccana</i> .
<b>kumu</b>	Hawaiian term for bottom, base, foundation .... teacher, tutor, manual, primer, model, pattern.
<b>kumulipo</b>	Origin, genesis, source of life, mystery; name of the Hawaiian creation chant (Pukui and Elbert 1986:182).
<b>kupua</b>	Demigod, or culture hero, especially a supernatural being possessing several forms; one possessing mana; to possess kupua (magic) powers.
<b>kupuna</b>	(kūpuna, plural) Grandparent, ancestor, relative or close friend of the grandparent's generation, grandaunt, granduncle (Pukui and Elbert 1986:186).
<b>lua iki</b>	A term the recorders previously used to describe a poho or cupule; lua is a hole that has a bottom, contrasting with puka, a perforation; iki means small, little, slightly; the recorders have since replaced this term with poho.
<b>luakini</b>	Temple, church, cathedral, tabernacle; large heiau where ruling chiefs prayed and human sacrifices were offered ...; a belief was that building of a luakini heiau caused a famine since the inner bark of the ohia (which was used in a luakini heiau) was red (Malo 1951:189).
<b>mahele</b>	Portion, division, section, zone, lot, piece, quota, installment, bureau, department, precinct, category, scene or act in a play; share, as of stocks; measure in music; land division of 1848 (the great <i>mahele</i> ) (Pukui and Elbert 1986:218).
<b>Makahiki</b>	“Ancient festival beginning about the middle of October and lasting about four months, with sports and religious festivities and taboo on war” (Pukui and Elbert 1986:225). A more in depth description of the Makahiki can be found in Malo (1951:141-159), which provides a better understanding of this ceremony.
<b>makai (or kai)</b>	On the seaside, toward the sea, in the direction of the sea.
<b>mana</b>	Supernatural or divine power, mana, miraculous power; a powerful nation, authority; to give mana to, to make powerful; to have mana, power, authority ...
<b>mapele</b>	A heiau (temple) built for worshipping after the rite of Lono (Malo 1951:160); a king might build a mapele after building a luakini since the belief was that a mapele would bring prosperity to the land because the lama wood used in its construction was black (Malo 1951:189).
<b>mauka (or uka)</b>	Inland, upland, towards the mountain.

<b>moa</b>	Chicken; red jungle chicken fowl ( <i>Gallus gallus</i> ), as brought to Hawai‘i by Polynesians; an ‘aumakua to some. Parts of the chicken are named as follows: comb (lepe); beak (nuku); wattles (lepelepe); eye (maka); ear (pepeiao); breast (umauma); tail (puapua or pupua); wing (eheu or pekekeu); feet and legs (wawae); spurs (kakala or kokala); long tail feathers (hulu ko‘o); and fluffy underfeathers (hulu weuweu). Mother hen (kumulau or kinana moa); peeping chick (‘io‘io moa); young child chick (moa keiki); young chicken [piopio moa (from ‘opio mean young)]; and young pullet or young cock (ohi moa). (Pukui and Elbert 1986:248; Handy and Handy 1991:256).
<b>moku or moku ‘āina</b>	District, island, islet ... a State (as in United States).
<b>mo‘olelo</b>	Story, tale, myth, history, tradition, literature, legend, journal, log, yarn, fable, essay, chronicle, record, article.
<b>‘ohana</b>	Family, relative, kin group; related.
<b>‘opihi</b>	Limpets. Hawaiians recognize three kinds: kō‘ele ( <i>Cellana talcosa</i> , the largest); ‘ālinalina ( <i>C. sandwicensis</i> ); and makaiauli ( <i>C. exarata</i> ). Scientists also recognize <i>C. melanostoma</i> .
<b>pāhoa</b>	Short dagger; sharp stone, especially as used for a weapon.
<b>pāhoehoe</b>	Smooth, unbroken type of lava, contrasting with ‘a‘ā.
<b>pali</b>	Cliff, precipice, steep hill ... full of cliffs.
<b>pana or wahi pana</b>	Celebrated, noted, or legendary place.
<b>paniolo</b>	Cowboy (sometimes called <i>paniolo pipi</i> to distinguish from <i>paniolo</i> ) (Pukui and Elbert 1986:315).
<b>papa</b>	Flat surface, stratum, plain, reef, layer, level, foundation, story of a building, floor, class, rank, grade, order, table ...; native born, especially for several generations.
<b>papamū</b>	“Checkerboard” or similar array of pits. At times, these have been considered to be the base upon which the game kōnane is played. For our recording purposes, the recorders do not automatically assume that all papamū are for this purpose and that they may represent “grids” or a framework for other functions, activities or purposes.
<b>piko</b>	Navel, navel string, umbilical cord.
<b>pōhaku</b>	Rock, stone, mineral, tablet, sinker (Pukui and Elbert 1986:334).
<b>poho</b>	Hollow...depression; receptacle, pouch; mortar (Pukui and Elbert 1986:336); a Hawaiian word used for cupule. These are classified differently than mortars (see “processing areas”); and there are poho on vertical surfaces which preclude a functional purpose and which may have a metaphorical or symbolical purpose. There are poho which may have had a functional purpose, and there are deep poho which may serve as mortars.
<b>wahi kapu</b>	Sacred place, location, setting.
<b>wahi pana</b>	See pana.



**APPENDIX G.**  
**DEFINITIONS OF “CULTURAL RESOURCES,”**  
**“SITE,” AND “TRADITIONAL”**

**CULTURAL RESOURCES AND SITES**

A general definition of cultural resources is found in *Caring for the Past, Managing for the Future* (2001, Advisory Council on Historic Preservation):

Cultural resources are generally defined by federal agencies to mean the same thing as historic properties, although there is no consistent legal definition, and individual agencies and organizations use different emphases. Under *10 U.S.C. § 2684*, which deals with *Department of Defense’s* responsibilities to manage “cultural resources,” such resources are defined to include properties included in or eligible for inclusion in the *National Register of Historic Places*, cultural items defined by the *Native American Graves Protection and Repatriation Act*, archaeological resources as defined by the *Archaeological Resources Protection Act*, and archaeological artifact collections and associated records. The *National Park Service* lists archaeological resources, cultural landscapes, structures, museum objects, and ethnographic resources in its management guidance and definition of “cultural resources.” Use of the term “cultural resources” by other agencies may be confusing because arts agencies and cultural endowments may use it to refer to art, performance, music, and other forms of cultural expression.

The accompanying table provides a number of definitions of cultural resources and types of sites taken from NPS management documents.

Table G-1. NPS Cultural Resource Definitions.

Subject	Definitions
Archeological resource	[see Cultural Resource, archeological resource]
Cultural Landscape	[see Cultural Resource, cultural landscape]
CULTURAL RESOURCE:	<p>an aspect of a cultural system that is valued by or significantly representative of a culture or that contains significant information about a culture.</p> <p>A cultural resource may be a tangible entity or a cultural practice.</p> <p><i>Tangible cultural resources</i> are categorized as districts, sites, buildings, structures, and objects for the National Register of Historic Places and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources for NPS management purposes. <b>[DO 28 Glossary]</b></p> <p>an aspect of a cultural system that is valued by or significantly representative of a culture, or that contains significant information about a culture. A cultural resource may be a tangible entity or a cultural practice. Tangible cultural resources are categorized as districts, sites, buildings, structures, and objects for the National Register of Historic Places, and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources for NPS management purposes. <b>[NPS Management Policies]</b></p> <p>To focus attention on <i>management requirements</i> within these property types, the NPS <i>Management Policies</i> [2001] categorizes cultural resources as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources. <b>[DO-28, Chapter 1.B.2]</b></p>
Cultural Resource: ARCHEOLOGICAL RESOURCE	<p>...any material remains or physical evidence of past human life or activities which are of archeological interest, including the record of the effects of human activities on the environment. They are capable of revealing scientific or humanistic information through archeological research. <b>[DO 28 Glossary]</b></p> <p><b>Archeological resources</b> are the remains of past human activity <i>and records documenting the scientific analysis</i> of these remains. Archeological resources include stratified layers of household debris and the weathered pages of a field notebook, laboratory records of pollen analysis and museum cases of polychrome pottery. Archeological features are typically buried but may extend above ground; they are commonly associated with prehistoric peoples but may be products of more contemporary society. <b>[DO-28:Chapter 1.B.2]</b></p> <p>any material remains or physical evidence of past human life or activities which are of archeological interest, including the record of the effects of human activities on the environment. An archeological resource is capable of revealing scientific or humanistic information through archeological research. <b>[NPS Management Policies]</b></p>

<p>Cultural Resource: CULTURAL LANDSCAPE</p>	<p>a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or esthetic values. There are four non- mutually exclusive types of cultural landscapes: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes. <b>[NPS Management Policies]</b></p> <p><b>Cultural landscapes</b> are settings we have created in the natural world. They reveal fundamental ties between people and the land—ties based on our need to grow food, give form to our settlements, meet requirements for recreation, and find suitable places to bury our dead. Landscapes are intertwined patterns of things both natural and constructed: plants and fences, watercourses and buildings. They range from formal gardens to cattle ranches, from cemeteries and pilgrimage routes to village squares. <i>They are special places: expressions of human manipulation and adaptation of the land.</i> <b>[DO-28 Chapter 1.B.2]</b></p> <p>a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general kinds of cultural landscape, not mutually exclusive. <b>[DO 28 Glossary]</b></p>
<p>Cultural Resource: CULTURAL LANDSCAPE 1 <i>HISTORIC SITE</i></p>	<p><b>Historic site:</b> a landscape significant for its association with a historic event, activity, or person. <b>[DO 28 Glossary]</b></p>
<p>Cultural Resource: CULTURAL LANDSCAPE 2 <i>HISTORIC DESIGNED LANDSCAPE</i></p>	<p><b>Historic designed landscape:</b> a landscape significant as a design or work of art; was consciously designed and laid out either by a master gardener, landscape architect, architect, or horticulturist to a design principle, or by an owner or other amateur according to a recognized style or tradition; has a historical association with a significant person, trend or movement in landscape gardening or architecture, or a significant relationship to the theory or practice of landscape architecture. <b>[DO 28 Glossary]</b></p>
<p>Cultural Resource: CULTURAL LANDSCAPE 3 <i>HISTORIC VERNACULAR LANDSCAPE</i></p>	<p><b>Historic vernacular landscape:</b> a landscape whose use, construction, or physical layout reflects endemic traditions, customs, beliefs, or values; in which the expression of cultural values, social behavior, and individual actions over time is manifested in physical features and materials and their interrelationships, including patterns of spatial organization, land use, circulation, vegetation, structures, and objects; in which the physical, biological, and cultural features reflect the customs and everyday lives of people. <b>[DO 28 Glossary]</b></p>
<p>Cultural Resource: CULTURAL LANDSCAPE 4 <i>ETHNOGRAPHIC LANDSCAPE</i></p>	<p><b>Ethnographic landscape:</b> areas containing a variety of natural and cultural resources that associated people define as <i>heritage resources</i>, including plant and animal communities, geographic features, and structures, each with their own special local names. <b>[DO 28 Glossary]</b></p> <p>an area containing a variety of natural and cultural resources that traditionally associated people define as heritage resources. The area may include plant and animal communities, structures, and geographic features, each with their own special local names. <b>[NPS Management Policies]</b></p>

<p>Cultural Resource: ETHNOGRAPHIC RESOURCE</p>	<p>a site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it [i.e., a TCP] <b>[DO 28 Glossary]</b></p> <p>objects and places, including sites, structures, landscapes, and natural resources, with traditional cultural meaning and value to associated peoples. Research and consultation with associated people identifies and explains the places and things they find culturally meaningful. Ethnographic resources eligible for the National Register of Historic Places are called traditional cultural properties. <b>[NPS Management Policies]</b></p> <p><b>Ethnographic resources</b> are basic expressions of human culture and the basis for continuity of cultural systems. A cultural system encompasses both the tangible and the intangible. It includes traditional arts and native languages, religious beliefs and subsistence activities. Some of these traditions are supported by ethnographic resources: special places in the natural world, structures with historic associations, and natural materials. <i>An ethnographic resource might be a riverbank used as a Pueblo ceremonial site or a schoolhouse associated with Hispanic education, sea grass needed to make baskets in an African-American tradition or a 19th-century sample of carved ivory from Alaska.</i> Management of ethnographic resources acknowledges that culturally diverse groups have their own ways of viewing the world and a right to maintain their traditions. <b>[DO-28, Chapter 1.B.2]</b></p> <p>Ethnographic resources are variations of natural resources and standard cultural resource types. They are subsistence and ceremonial locales and sites, structures, objects, and rural and urban landscapes assigned cultural significance by traditional users. The decision to call resources “ethnographic” depends on whether associated peoples perceive them as traditionally meaningful to their identity as a group and the survival of their lifeways. Some such resources may be designated by other terms and cross-listed in other NPS inventories. Sites defined as archeological for preservation purposes, for example, are ethnographic if traditional religious practitioners consider them significant sources of spiritual power. Members of associated groups may also ascribe meaning to properties in park collections perceived as sacred or as items of cultural identity and heritage. Groups also assign their own cultural meanings to natural landscapes and localities... Ethnographic resource types...<i>Sites... Objects... Structures...Landscapes</i> <b>[DO-28, Management, Chapter 7]</b></p>
<p>Cultural Resource: MUSEUM OBJECTS</p>	<p><b>Museum objects</b> are manifestations and records of behavior and ideas that span the breadth of human experience and depth of natural history. They are evidence of technical development and scientific observation, of personal expression and curiosity about the past, of common enterprise and daily habits. Museum objects range from a butterfly collection to the woven fragments of a prehistoric sandal. They include the walking cane of an American president, a blacksmith’s tools, and the field notes of a marine biologist. They encompass fossilized dinosaur bones and business journals, household furnishings and love letters bound with a faded ribbon. They are invaluable—samples and fragments of the world through time and the multitude of life therein. <b>[DO-28 Chapter 1.B.2]</b></p>

Cultural Resource: STRUCTURE (Prehistoric and Historic Structure)	<p>a constructed work, usually immovable by nature or design, consciously created to serve some human activity. Examples are buildings of various kinds, monuments, dams, roads, railroad tracks, canals, millraces, bridges, tunnels, locomotives, nautical vessels, stockades, forts and associated earthworks, Indian mounds, ruins, fences, and outdoor sculpture.</p> <p><i>In the National Register program “structure” is limited to functional constructions other than buildings. [DO 28 Glossary]</i></p> <p><b>Structures</b> are material assemblies that extend the limits of human capability. Without them we are restricted to temperate climates, the distances we can walk, and the loads we can carry. With them we can live where we choose, cross the continent in hours, and hurl a spacecraft at the moon. Structures are <i>buildings</i> that keep us warm in winter's worst blizzard and <i>bridges</i> that keep us safe over raging rivers; they are <i>locomotives</i> that carry us over vast prairies and monuments to extend our memories. They are <i>temple mounds and fishing vessels, auto factories and bronze statues</i>—elaborations of our productive ability and artistic sensitivity. <b>[DO-28 Chapter 1.B.2]</b></p>
CULTURAL RESOURCE MANAGEMENT:	the range of activities aimed at understanding, preserving, and providing for the enjoyment of cultural resources. It includes research related to cultural resources, planning for actions affecting them, and stewardship of them in the context of overall park operations. It also includes support for the appreciation and perpetuation of related cultural practices, as appropriate. <b>[DO 28 Glossary]</b>
Cultural Sites	[not defined, see Archeological Resource and Ethnographic Resource under Cultural Resource, and also see DO-28 service-wise Inventory column]
Ethnographic resource	[see Cultural Resource, Ethnographic Resource]
HISTORIC PROPERTY	a district, site, building, structure, or object significant in the history of American archeology, architecture, culture, engineering, or politics at the national, state, or local level. <b>[NPS Management Policies]</b>
HISTORIC RESOURCES	[not defined, see HRS in DO-28 Baseline Reports Column]
HISTORIC SITE:	<p>the site of a significant event, prehistoric or historic occupation or activity, or structure or landscape whether extant or vanished, where the site itself possesses historical, cultural, or archeological value apart from the value of any existing structure or landscape; see <i>cultural landscape</i>. <b>[DO 28 Glossary]</b></p> <p>[definition taken from National Register];</p> <p>[the term is also used for a category of Cultural Landscape, q.v.]</p>
Historic Structure	[see Structure]
INTEGRITY:	the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during its historic or prehistoric period; the extent to which a property retains its historic appearance. <b>[DO 28 Glossary]</b> [different from National Register]
Museum Objects	[see Cultural Resource, Museum Objects]
Prehistoric Structure	[see Structure]
SACRED SITES	certain natural and cultural resources treated by American Indian tribes and Alaska natives as sacred places having established religious meaning, and as locales of private ceremonial activities. <b>[NPS Management Policies]</b>
SPIRITUAL ACTIVITY FIELD	a spiritually important area identified by traditional religious practitioners around a place with traditional sacred significance. <b>[DO 28 Glossary]</b>
Structure	[see Cultural Resource, Structure]

TRADITIONAL CULTURAL PROPERTY	a property associated with cultural practices, beliefs, the sense of purpose, or existence of a living community that is rooted in that community’s history or is important in maintaining its cultural identity and development as an ethnically distinctive people. Traditional cultural properties are ethnographic resources eligible for listing in the National Register. <b>[NPS Management Policies]</b> [from Parker and King]
TRADITIONALLY ASSOCIATED PEOPLES	...For purposes of these Management Policies, social/ cultural entities such as tribes, communities, and kinship units are “traditionally associated” with a particular park when (1) the entity regards park resources as essential to its development and continued identity as a culturally distinct people; (2) the association has endured for at least two generations (40 years); and (3) the association began prior to establishment of the park. <b>[NPS Management Policies]</b>

Table is compiled from NPS *Cultural Resource Management Guideline* (1998) and NPS *Management Policies* (2001). [Items in brackets are added.]

## **DEFINITION AND DISCUSSION OF THE CONCEPT OF “TRADITIONAL” (FROM STATE OF HAWAII BURIAL SITES PROGRAM 2003)**

The following is quoted from the document: Burial Sites Program 2003 *Assessment of Traditional Cultural Practices Related to Burial Sites, Hōkūli‘a Project, South Kona, Hawai‘i Island*. Prepared by Burial Sites Program, History and Culture Branch, State Historic Preservation Division, Department of Land and Natural Resources, State of Hawaii. The document was written regarding traditional burial practice, but the discussion of “traditional” is relevant to the study of cultural resources, beliefs, and practices.

### **What is traditional?**

The term “traditional practice” is highly subjective given an estimated 1500 to 2000 year habitation of the Hawaiian Islands by native Hawaiians. What may have been traditional in 500 AD may have evolved into a very different practice in 1300 AD and into a completely new practice in the year 1750. In the year 2003, a traditional practice may cover an expanse of time and evolving culture to the extent that it is difficult to absolutely include or exclude any given generalized cultural practice in the category of “traditional.”

It is also generally known that in addition to the changes in protocol, ceremony, beliefs and practices over the centuries of Hawaiian occupation of the Hawaiian islands, that often these beliefs and practices could vary considerably from island to island, *ahupua‘a* to *ahupua‘a* and family to family. Arguably, notwithstanding issues relative to social status and societal rank, beliefs and practices could vary, within calculated reason, from individual to individual.

### **Continuity of Traditional Practices**

In looking at traditional practices on a continuum throughout Hawaiian recorded history, both oral and written, the concept of what is traditional can often be easier to digest in terms of a “snapshot” in time. Notwithstanding differences from island to island or even family to family, often cited observations of cultural inclinations of the Native Hawaiian people, whether it be in an oral chant handed down through a family, the observations of a turn of the century missionary or modern day recordation of archaeological evidence, are truly a characterization of an act or belief practiced for an unknown duration and for reasons often only known to the actual practitioner.

Nonetheless, recurring or similar practices observed or recorded across a relatively large portion of Hawaiian history can provide insight into more commonly accepted practices, which appear to fit the definition of “traditional practices.” Such continuity in the usage or description of a practice adds both internal and external validity to that particular practice.

### **Abandonment and Revival of Practices**

The issue of whether a practice deemed traditional must have been constantly practiced by an individual in order for that individual to claim rights to that practice, in light of the *Ka Pa‘akai* decision, has never really been substantively addressed by this department as it pertains to burial sites.

In recent times, some traditional practices of the Hawaiian culture, such as those relating to *hula kahiko*, have experienced a resurgence among younger generations cultivating a connection to the cultural practices of their past. While the debate continues regarding the “true” forms of *hula* as a strict religious

practice with often onerous training versus the sometimes more open and interpretive performances of some modern *halau*, one can begin to see the difficulty in defining a practice as traditional and continuous in this particular area.

In the passing of a particular chant through a family along with an associated *hula*, the information regarding the cultural integrity of the practice, as it relates to that particular family, remains fairly consistent. Even when a generation is skipped, if the primary source holder within the family is able to transmit this information to another person successfully, the integrity of the practice would still remain somewhat constant.

Once the transmission of such information loses the direct transference from primary source to learner, then changes inevitably occur in the transmitted information. Such would be the case where someone comes across cultural information, either orally or in writing, and attempts to interpret it in their own way to implement it, based upon their own beliefs, training, understandings and perceptions. It wouldn't matter how sincere such an individual was in trying to remain true to the intent of the source, inevitable changes would infiltrate the practice and lead to substantive evolutionary changes as the information continued to be passed down through successive generations.

Even noted Hawaiian scholar, Mary Kawena Pukui, observed:

*Gradually Hawaiians concealed their practice or forgot their knowledge of much of their ancient culture. What was remembered would be recalled with increasing distortion. For when a specific practice was discarded or forgotten, there went with it the enduring, often wise concept from which the practice evolved (Pukui, Nana I Ke Kumu, Vol. I, p. 303)*

This is not to say that a practice based upon an indirect source preceding the practitioner's generation could not be classified as "traditional." This would have to be assessed based upon many factors such as the source of the information regarding the practice, the completeness of the information, the understanding of the practitioner and a general comparison to more universally and documented understandings of the practice as it would pertain to the Hawaiian culture.

A particular practice could then skip several generations and yet remain classified as traditional when it appears years or decades later in a successive generation and in an evolved form. Thus, the abandonment of a particular practice or custom, whether intentional or unintentional, should not necessarily equate to the extinguishment of that particular practice should it be resurrected in a future generation, provided it fits in with general assessments of cultural knowledge widely accepted by the Native Hawaiian community.

With regards to burial disposition, and perceived difficulties of trying to carry the strict practices of the past into today, it is noted:

*Today, one family may yet obey the old edicts. Another may have discarded or forgotten kapus against bone burning. The ashes of one Hawaiian surfer or fisherman may be scattered at sea; another's corpse may be dropped deep in the water. (Pukui, Vol. I, p. 110)*

There should be some latitude to consider the great many of Native Hawaiian individuals living today who are partially or completely removed from practices associated with their culture or who are dispersed throughout the world. Some who know and understand aspects of their culture choose not to practice any aspects of it. Others feign to know aspects of traditional Hawaiian cultural practices and utilize this

against those who may not know enough to tell the difference between credible information and a smooth coherent presentation peppered with 'olelo Hawaii. Yet others find a balance in the new and the old, constantly shaping their actions and expanding their understanding of core issues affecting their identity.

(From Burial Sites Program 2003:5-7)



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