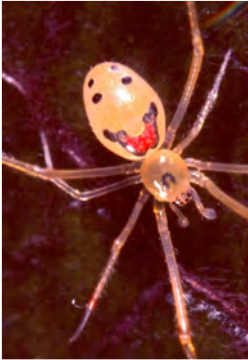
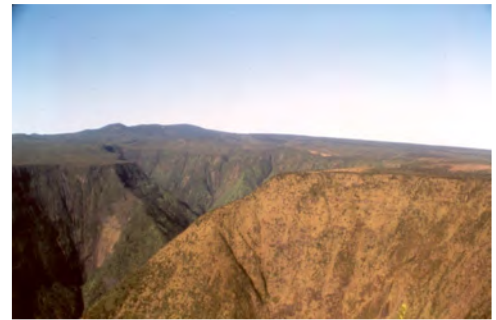


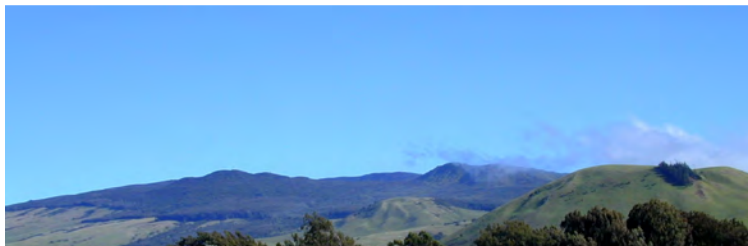
HE MO'OLELO 'ĀINA: A CULTURAL STUDY OF THE PU'U O 'UMI NATURAL AREA RESERVE AND KOHALA-HĀMĀKUA MOUNTAIN LANDS, DISTRICTS OF KOHALA AND HĀMĀKUA, ISLAND OF HAWAI'I



Lanalana (Araneida therididae)
(William Mull, 1974; Photo
Courtesy of DLNR-NARS)



*Pu'u o 'Umi Natural Area Reserve,
above the Waimanu Valley
Headlands (Photo Courtesy of
DLNR-NARS)*



*Pu'u and Forest Lands
of the Pu'u o 'Umi NAR
viewed from Waimea
(Photo KPA-N 1237)*



*'Ōhāwai (Clermontia drepanomorpha)
of Pu'u o 'Umi (Photo Courtesy of DLNR-
NARS)*



*Nā Lā'au 'Ohi Wai o Pu'u o 'Umi
(Photo Courtesy of DLNR-NARS)*



Kumu Pono Associates LLC

Historical & Archival Documentary Research · Oral History Interview Studies ·
Researching and Preparing Studies from Hawaiian Language Documents ·
Māhele 'Āina, Boundary Commission, & Land History Records ·
Integrated Cultural Resources Management Planning ·
Preservation & Interpretive Program Development

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MAY 15, 2004

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EXECUTIVE SUMMARY AND ACKNOWLEDGEMENTS

At the request of Ms. Lisa Hadway, Natural Area Specialist for the State of Hawai'i Department of Land and Natural Resources—Division of Forestry and Wildlife (DLNR-DOFAW), *Kumu Pono Associates LLC*, conducted a series of four detailed studies of historical and archival literature, documenting facets of the cultural landscape of the Natural Area Reserves. This study focuses on the Pu'u o 'Umi Natural Area Reserve, situated within lands of the Kohala and Hāmākua Districts. The documentation also includes detailed oral testimonies—describing the lands, traditional and customary practices, and historical land use—from native residents who relied upon the resources of the Kohala-Hāmākua mountains—that were collected from the 1860s to the early 1900s. The documentation cited herein is the product of years of research, and includes specific research conducted for the study between October 2003 to April 2004. The research was conducted in private and public collections, and that documentation, cited herein, includes written narratives that cover the period from antiquity to the 1980s.

The historical-archival resources were located in the collections of the Hawai'i State Archives, Land Management Division, Survey Division, Bureau of Conveyances and the Natural Areas Reserve offices; the Hawaiian Historical Society; the University of Hawai'i-Hilo Mo'okini Library; private family collections; and in the collection of *Kumu Pono Associates LLC*. The documentation includes rich narratives translated from native Hawaiian accounts; descriptions of lands that make up the Kohala mountains recorded in historic surveys; a history of land tenure from 1848 to the present; records documenting the establishment of the Kohala Forest Reserve, and the subsequent designation of the Pu'u o 'Umi Natural Area Reserve.

The Natural Area Reserve takes its name from Pu'u o 'Umi, literally, the Hill-of-'Umi, the summit of which is situated 5,260 feet above sea level. It is likely that the naming of Pu'u o 'Umi is associated with the reign of the King, 'Umi-a-Liloa, who ruled the island of Hawai'i in the 1500s, and for whom many sites—from mountain to shore—in the Kohala-Hāmākua region are named.

The native traditions and historical accounts associated with the Kohala-Hāmākua mountain lands span many centuries, from Hawaiian antiquity to the later period following western contact. The narratives describe customs and practices of the native people who resided on these lands, walked the trails, and who were sustained by the wealth of the mountain lands, the *kula* (plain and plateau lands), and the adjacent marine fisheries.

The most detailed descriptions of the Kohala-Hāmākua mountain lands, including documentation of traditional and customary rights, are those found in the Kingdom collections, documenting the history of land tenure, and defining the boundaries of *ahupua'a* in the Kohala-Hāmākua Districts. Detailed oral testimonies from elder native tenants were taken in court proceedings of the mid to late 1800s, and document the occurrence of traditional and customary practices, and nature of the resources within given *ahupua'a*. In those records, we learn of the traditional knowledge and occurrence of native practices in the lands which today are a part of, and adjoin the Pu'u o 'Umi Natural Area Reserve.

We find in native traditions and beliefs, that Hawaiians shared spiritual and familial relationships with the natural resources around them. Each aspect of nature from the stars in the heavens, to the winds, clouds, rains, growth of the forests and life therein, and everything on the land and in the ocean, was believed to be alive. Indeed, every form of nature was a body-form of some god or lesser deity. As an example, in this context, and in association with lands which are now included in a part of the landscape of the Pu'u o 'Umi Natural Area Reserve, we find the goddess *Hina-ulu-'ōhi'a* (Hina, goddess whose form is in the groves of 'ōhi'a); and *Pō-kāhi* (The darkened place), a god of the mountain mists (see the tradition of *Lau-ka-'ie'ie* in this study), are deified parts of the landscape of the Pu'u o 'Umi Natural Area Reserve.

In the Hawaiian mind, care for each aspect of nature, the *kino lau* (myriad body-forms) of the elder life forms, was a way of life. This concept is still expressed by Hawaiian *kūpuna* (elders) through the present day, and passed on in many native families. Also, in this cultural context, anything which damages the native nature of the land, forests, ocean, and *kino lau* therein, damages the integrity of the whole. Thus caring for, and protecting the land and ocean resources, is a way of life.

In the traditional context above referenced, we find that the mountain landscape, its' native species, and the intangible components therein, are a part of a sacred Hawaiian landscape. Thus, the landscape itself is a highly valued cultural property. It's protection, and the continued exercise of traditional and customary practices, in a traditional and customary manner, are mandated by native custom, and State and Federal Laws (as those establishing the Kohala-Hāmākua Forest Reserves and Pu'u o 'Umi Natural Area Reserve; and the Endangered Species Act).

In this discussion, protection does not mean the exclusion, or extinguishing of traditional and customary practices, it simply means that such practices are done in a manner consistent with cultural subsistence, where each form of native life is treasured and protected. *Kūpuna* express this thought in the words, "*Ho'ohana aku, a ho'ōla aku!*" (Use it, and let it live!).

In the early 1900s, the Kohala-Hāmākua forest and watershed lands were determined to be one of the most significant in the Hawaiian Islands, and worthy of protection. In 1913, the mountain lands were dedicated as the Kohala Forest Reserve. In the late 1970s, the Kohala Forest Reserve was again signaled out as being a unique and fragile system, and efforts led to the development of the Pu'u o 'Umi Natural Area Reserve in 1987. Since that time, agencies and community members have been working together to try and ensure the health and integrity of the natural and cultural resources of the Pu'u o 'Umi Natural Area Reserve.

As a part of on-going ranching operations, and the mission of the newly formed forestry programs, hunting for pigs, and in earlier times, for wild cattle, has been practiced on lands of the Pu'u o 'Umi NAR. Such hunting interests remain of importance to community members and long-term management goals of the Natural Area Reserve System program.

māua nō me ka ha'aha'a — Kepā a me Onaona Maly

"A'ohe hana nui, ke alu 'ia!

(It is no great task when done together by all!)

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INTRODUCTION

Background

As a part of a state-wide program designed to protect, restore, and further the public benefit of significant Hawaiian natural resources making up three existing Natural Area Reserves, and one reserve, all on the island of Hawai'i, Ms. Lisa Hadway, Natural Area Specialist for the State of Hawai'i Department of Land and Natural Resources—Division of Forestry and Wildlife (DLNR-DOFAW), requested that *Kumu Pono Associates LLC*¹, conduct detailed historical-archival research that would describe the traditional-cultural and historical setting of lands within existing, or proposed Natural Area Reserves on the Island of Hawai'i. This component of the study discusses several *ahupua'a*² that contribute to the land area of the Pu'u o 'Umi Natural Area Reserve situated on the Kohala-Hāmākua mountains, Island of Hawai'i (*Figure 1*).

The Pu'u o 'Umi Natural Area Reserve (NAR) is generally set within the upper reaches of the 'ili³ of Pu'ukapu, which belongs to the larger land of Waimea, though it also includes the upper portions of neighboring watershed forests of other *ahupua'a* in both Kohala and Hāmākua. The NAR was once a part of the Kohala Forest Reserve, which was established by Governor's Proclamation on April 25, 1903, and include nearly 17,000 acres of critical forest and watershed land. On July 9, 1987, Governor's Executive Order No. 3367, established the Pu'u o 'Umi NAR, consisting of some 10,000 acres, comprised of land that was formerly a part of the Kohala Forest Reserve. The NAR takes its name from Pu'u o 'Umi, literally, the Hill-of-'Umi, the summit of which is situated 5,260 feet above sea level. Though no specific tradition was found to describe the origin of the name, it is likely that the naming of Pu'u o 'Umi is associated with the reign of the King, 'Umi-a-Liloa, who ruled the island of Hawai'i in the 1500s, and for whom many sites—from mountain to shore—in the Kohala-Hāmākua region are named.

The lands and boundaries of the Pu'u o 'Umi NAR are also shared by the upper reaches of several other lands of the Kohala and Hāmākua districts. Because the mountain lands mark the points of boundaries of numerous lands from two districts, traditions and cultural practices from many 'ili and *ahupua'a* are tied to lands and resources of the Pu'u o 'Umi NAR. The NAR is described as containing:

...one of the bog ecosystems present on the cloud-shrouded high areas of the Kohala Mountains, where the annual rainfall is 175 inches. Montane bog ecosystems of any significance occur at only two other areas in the state: Mt. Waialeale on Kauai and the West Maui Mountain. The Kohala bog has a ground-cover vegetation of Sphagnum moss, the moss that forms peat bogs on the continents. Many species of ferns, grasses, sedges, and herbs are also present. Tree growth, dominated by 'ōhi'a-lehua (Metrosideros), alani (Pelea), and 'ōlapa (Cheirodendron), is usually stunted and sparsely distributed. *Makai* of the bog region is an 'ōhi'a rainforest ecosystem. A mixed *hala* forest is present at the coastal region. [Pu'u o 'Umi NAR Folder, in collection of the DLNR-NAR Office]

A part of the purpose of the Pu'u o 'Umi NAR is described as being to provide:

...added protection and preservation of the Kohala Watershed and the head waters of Kawainui, Alakahī, Honokane Nui, and Kohakohau Streams, whose water resources

¹ *Kumu Pono Associates LLC*: Kepā Maly, Cultural Historian-Resource Specialist and Onaona Maly, Researcher.

² *Ahupua'a* is a traditional term used to describe an ancient Hawaiian land unit (extending from sea to mountain lands), and remains the primary land unit of the modern land classification system.

³ An 'ili is land division subordinate to the larger *ahupua'a* within which it is found (see discussion on the land divisions of Waimea and South Kohala in this study).



Figure 1. The Pu'u o 'Umi Natural Area Reserve – Kohala Mountains, Island of Hawai'i (H.S.S. Plat No. 513-A; 1986)

are tapped in the low reaches, but equally protected would be the headwaters of Waihilau and Wailikahi Streams, which are major tributaries of Waimanu Stream... [Pu'u o 'Umi NAR Folder, in collection of the DLNR-NAR Office]

This study seeks to provide readers with access to primary documentation on native traditions, customs, and practices associated with the Kohala-Hāmākua mountain lands; and to provide readers with a historical overview of the land and activities of people in the region from the early 1900s through the present-day. Such information will be helpful in planning phases and discussions of the Kohala community and agencies, as efforts to protect the unique natural and cultural landscape of the mountain lands are undertaken. While a great deal of information has been compiled, and is presented in the following sections of this study, we acknowledge that additional information will likely be found through further research. The goal here, is to bring a significant collection of documentation into one study that will help all interested parties plan actions to ensure the well-being of the land for present and future generations.

Historical and Archival Research

The historical-archival research conducted for this study was performed in a manner consistent with Federal and State laws and guidelines for such studies. Among the pertinent laws and guidelines are the National Historic Preservation Act (NHPA) of 1966, as amended in 1992 (36 CFR Part 800); the Advisory Council on Historic Preservation's "*Guidelines for Consideration of Traditional Cultural Values in Historic Preservation Review*" (ACHP 1985); National Register Bulletin 38, "*Guidelines for Evaluating and Documenting Traditional Cultural Properties*" (Parker and King 1990); the Hawai'i State Historic Preservation Statue (Chapter 6E), which affords protection to historic sites, including traditional cultural properties of on-going cultural significance; the criteria, standards, and guidelines of the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) for the evaluation and documentation of cultural sites and practices, Title 13 Sub-Title 13:275-284 (October 21, 2002); and the November 1997 guidelines for cultural impact assessment studies, adopted by the Office of Environmental Quality Control (which also facilitate the standardized approach to compliance with Act 50 amending HRS Chapter 343; April 26, 2000).

While conducting the research, primary references included, but were not limited to—land use records, including an extensive review of Hawaiian Land Commission Award (L.C.A.) records from the *Māhele 'Āina* (Land Division) of 1848; Boundary Commission Testimonies and Survey records of the Kingdom and Territory of Hawai'i; and historical texts authored or compiled by—D. Malo (1951); J.P. I'i (1959); S. M. Kamakau (1961, 1964, 1976, and 1991); Wm. Ellis (1963); Chas. Wilkes (1845); A. Fornander (1916-1919 and 1996); G. Bowser (1880); Handy and Handy with Pukui (1972); M. Kelly (1974); and Clark and Kirch (1983). The study also includes several native accounts from Hawaiian language newspapers (compiled and translated from Hawaiian to English, by the author), and historical records authored by nineteenth century visitors, and residents of the region. The records also include important oral testimonies of elder *kama'āina* of the lands which make up, and surround the Pu'u o 'Umi NAR.

Historical and archival resources were located in the collections of the Hawai'i State Archives, Land Management Division, Survey Division, Natural Area Reserves office, and Bureau of Conveyances; the Bishop Museum Archives; Hawaiian Historical Society; University of Hawai'i-Hilo Mo'okini Library; private family collections; the Parker Ranch and Paniolo Preservation Society (PPS) collections; and in the collection of *Kumu Pono Associates LLC*. This information is generally cited in categories by chronological order of the period depicted in the narratives.

THE LANDS OF THE KOHALA-HĀMĀKUA MOUNTAINS: A CULTURAL-HISTORICAL CONTEXT

Hawaiian Settlement

Archaeologists and historians describe the inhabiting of these islands in the context of settlement which resulted from voyages taken across the vast open ocean, with people coming from small island groups. For many years archaeologists have proposed that early Polynesian settlement voyages between Kahiki (the ancestral homelands of the Hawaiian gods and people) and Hawai'i were underway by AD 300, with long distance voyages occurring fairly regularly through at least the thirteenth century. It has been generally reported that the sources of the early Hawaiian population—the Hawaiian “Kahiki”—were the Marquesas and Society Islands (Emory in Tatar 1982:16-18).

For generations following initial settlement, communities were clustered along the watered, windward (*ko'olau*) shores of the Hawaiian Islands. Along the *ko'olau* shores, in areas such as Waipi'o, Waimanu and Pololū, streams flowed, rainfall was reliable, and agricultural production became established. The *ko'olau* region also offered sheltered bays from which deep sea fisheries could be easily accessed. Also, near-shore fisheries, enriched by nutrients carried in the fresh water flowing from the mountain streams, could be maintained in fishponds and estuarine systems. It was around these bays that clusters of houses where families lived could be found. In these early times, the residents generally engaged in subsistence practices in the forms of agriculture and fishing (Handy, Handy and Pukui 1972:287).

Over a period of several centuries, areas with the richest natural resources became populated and perhaps crowded, and by ca. 900 to 1100 AD, the population began expanding to the *kona* (leeward side) and more remote regions of the island (Cordy 2000:130). Kirch (1979) reported that by ca. AD 1200, there were small coastal settlements at various areas along the western shore line of Hawai'i—for example, the Waimea lands of 'Anaeho'omalu, Kalāhuipua'a, and Puakō, and Kawaihae (Kirch 1979:198). These leeward coastal lands provided the near-shore and deep sea fishery resources necessary for the families of the larger Waimea region. In this system, the near-shore communities shared extended familial relations with those of the Waimea uplands.

By the 1400s, upland elevations to around the 3,000 foot elevation of Waimea—it's smaller attached land divisions, such as Pu'ukapu and 'Ōuli—and neighboring lands like Kawaihae, Waikā, and Kahuā were being developed into areas of residence and a system of mixed dry land and wet land agricultural fields (Clark and Kirch, 1983; and Cordy, 2000). Some of the fields may have been irrigated by such streams as Waikōloa and Keanu'i'omanō, as evidence of *'auwai* (irrigation channels) may still be seen across portions of Kawaihae uka, Waiaka, Pu'ukapu, Noho'āina, Waikōloa, Lihu'e and Lālāmilo. By the 1500s to 1600s, residency in the uplands was becoming permanent, and there was an increasing separation of royal class from commoners. During the latter part of this period, the population stabilized and a system of land management was established as a political and socio-economic factor (see Kamakau 1961; Ellis 1963; Handy, Handy & Pukui 1972; Tomonari-Tuggle 1985; and Cordy 2000).

Natural Resources and Land Management in the Hawaiian Cultural System

In Hawaiian culture, natural and cultural resources are one and the same. Native traditions describe the formation (literally the birth) of the Hawaiian Islands and the presence of life on, and around them, in the context of genealogical accounts. All forms of the natural environment, from the skies and mountain peaks, to the watered valleys and lava plains, and to the shore line and ocean depths are believed to be embodiments of Hawaiian gods and deities. One Hawaiian genealogical account, records that Wākea (the expanse of the sky—father) and Papa-hānau-moku (Papa, who gave birth to the islands)—also called Haumea-nui-hānau-wāwā (Great Haumea, born time and time again)—and various gods and creative forces of nature, gave birth to the islands. Hawai'i, the largest of the

islands, was the first-born of these island children. As the Hawaiian genealogical account continues, we find that these same god-beings, or creative forces of nature who gave birth to the islands, were also the parents of the first man (Hāloa), and from this ancestor all Hawaiian people are descended (David Malo, 1951; Beckwith, 1970; Pukui and Korn, 1973). It was in this context of kinship, that the ancient Hawaiians addressed their environment, and it is the basis of the Hawaiian system of land use.

In the generations that followed initial settlement, the Hawaiians developed a sophisticated system of land use and resource management. By the time 'Umi-a-Līloa rose to rule the island of Hawai'i in ca. 1525, the island (*moku-puni*) was divided into six districts or *moku-o-loko*. Kohala, extending from the slopes of Mauna Kea in the south, across the Kohala Mountains, and to 'Ūpolu Point in the north, is one of those major districts (cf. Fornander 1973–Vol. II:100-102).

The large districts (*moku-o-loko*) like Kohala, and sub-regions (*'okana* and *kalana*) were further divided into political regions and manageable units of land. These smaller divisions or units of land were tended to by the *maka'āinana* (people of the land) (see Malo 1951:63-67). Of all the land divisions, perhaps the most significant management unit throughout the islands was the *ahupua'a*.

Ahupua'a are subdivisions of land that were usually marked by altars with images or representations of a pig placed upon them, thus the name *ahu-pua'a* or pig altar. In their configuration, the *ahupua'a* may be compared to wedge-shaped pieces of land that generally radiate out from the center of the island, extending to the ocean fisheries fronting the land units. Their boundaries are generally defined by topography and geological features such as *pu'u* (hills), ridges, gullies, valleys, craters, or areas of a particular vegetation growth (see Boundary Commission testimonies in this study; and Lyons, 1875).

The *ahupua'a* were also divided into smaller manageable parcels of land—such as the *'ili*, *kō'ele*, *mahina 'ai*, *māla*, and *kīhāpai*)—that generally run in a *mauka-makai* orientation, and are often marked by stone wall (boundary) alignments. In these smaller land parcels the *maka'āinana* cultivated crops necessary to sustain their families, and supplied the needs of the chiefly communities they were associated with. As long as sufficient tribute was offered and *kapu* (restrictions) were observed, the common people who lived in a given *ahupua'a* had access to most of the resources from mountain slopes to the ocean. These access rights were almost uniformly tied to residency on a particular land, and earned as a result of taking responsibility for stewardship of the natural environment and supplying the needs of ones' *ali'i* (see Malo 1951:63-67 and Kamakau 1961:372-377).

Entire *ahupua'a*, or portions of the land were generally under the jurisdiction of appointed *konohiki* or subordinate chief-landlords, who answered to an *ali'i-'ai-ahupua'a* (chief who controlled the *ahupua'a* resources). The *ali'i-'ai-ahupua'a* in turn answered to an *ali'i 'ai moku* (chief who claimed the abundance of the entire district). Thus, *ahupua'a* resources supported not only the *maka'āinana* and *'ohana* (families) who lived on the land, but also contributed to the support of the royal community of regional and/or island kingdoms. This form of district subdividing was integral to Hawaiian life and was the product of strictly adhered to resource management planning. In this system, the land provided fruits, vegetables and some meat in the diet, and the ocean provided a wealth of protein resources.

The Kalana of Waimea – the 'Ili of Pu'ukapu And the Watershed of the Kohala-Hāmākua Ahupua'a

While the fundamentals of land management described above conform with the basic system employed across the Hawaiian Islands, we find that there were other political divisions that affected the status of land. For example, native witnesses in early historic testimonies described Waimea as a "*Kalana*" or "*Okana*," a land division which in ancient times was treated as a sub-district, smaller than the *moku o loko*, yet comprised of a number of smaller lands that contributed to its wealth (see Boundary Commission Testimonies in this study). The lands and resources subject to the *Kalana* of

Waimea included, but were not limited to, 'Ōuli, Wai'aka, Lālāmilo, Puakō, Kalāhuipua'a, 'Anaeho'omalū, Kanakanaka, Ala'ōhi'a, Paulama, Pu'ukalani (Pukalani), Pu'ukapu, and Waikōloa. In the 1840s and 1860s, elder native witnesses described these various lands as "*ili*," or land divisions of lower status than *ahupua'a*, which fell under the jurisdiction of the chiefs of Waimea.

Understanding this difference in the status of the land divisions of the Waimea region helps explain why lands such as 'Anaeho'omalū and Kalāhuipua'a have no independent upland agricultural resources; and why lands such as Pu'ukapu and Waikōloa, and all the other lands within Waimea, except for Lālāmilo and 'Ōuli, have no ocean frontage.

Regarding the status of **Waimea** and lands that were either subordinate to it, or independent of it, Curtis Lyons, a Kingdom Surveyor, who had surveyed lands in the region in 1852, wrote to Crown Lands Commissioner C.P. Iaukea in 1893. He observed:

... **Waimea**, Hawaii, was an *Ahupuaa* which partook largely of the qualities of a *Moku* or division that was however assigned as an *Ahupuaa* in the *Mahele*. That is to say to His Majesty K. III., becoming by the Act of 1865, a Crown Land. It would therefore be assumed that all within its boundaries would be Crown Land excepting such *Ilis* or subordinate *ahupuaas* as some might call them as were recognized within the *Mahele* or in the Land Commission Records, as separate in title; this distinction in title corresponding to the status known as that of an *ili kupono*. All not so recognized would be technically spoken of as a part of the *Ahupuaa*.

The *Ili Kupono* of **Puukapu** was given up in the *Mahele* by Kekauonohi and became Crown Land, thus being practically thereafter one with the *Ahupuaa*.

The other *Ili Kupono* are as follows:

Waikoloa, *Mahele* and Award 8512 B to G.D. Hueu.
Waiaka 2 *Mahele* and Award 8520 B to Lahilahi.
Ouli *Mahele* and Award 8518 B to Kanehoa.
Anaehoomalu *Mahele* and Award 4452 to H. Kalama.
Kalahuipuaa *Mahele* and Award 4452 to H. Kalama
Puako *Mahele* and Award 8559 B to Lunalilo
Kaupo *Mahele* and Award 8515 to Kaoanaeha... [HSA – DAGS 6 Box 22; Nov. 1893]

To this day, remains of extensive dryland planting fields, and residences (both temporary and permanent) on the *kula* (plain lands) may be found in the *Kalana* of Waimea. Such features tell us that in ancient and early historic times, there was intensive use of the upland region. These features generally occur in areas extending from about 1,700 to 3,000 feet above sea level. The *mahina 'ai* (planting fields) were generally marked by a series of *kuaiwi*, *kuakua*, and *kuāuna* (walls and terraces). Planting techniques employed included *mākālua*, *'umokī* and *pu'epu'e* (planting in mulched holes, and mulched mounds of stone and earth), and the *pulu lepo*, or depressions and hollows on the landscape where soil and moisture were caught, and where cultivation was supported. The *mahina 'ai* of the Waimea region also extended up the slopes of the Kohala Mountains in the vicinity of Pu'u Hōkū'ula, and extended across the uplands towards the *Kahuā* section of North Kohala. In these upper fields, as well as in areas crossed by streams like Waikōloa, Wai'aka and Keanu'i'omanō, it is likely that irrigated fields were developed as well.

Clark and Kirch (1983) described an extensive agricultural field system in the Waimea region. Crops planted in these fields included *'uala* (sweet potatoes) and *kalo* (dryland taro). Along the ridges and boundaries of the *mahina 'ai*, and in terraces, outcrops, fissures and mounds, other crops such as *kō* (sugar cane), *wauke* (paper mulberry), *mai'a* (banana), *ipu* (gourds) and *uhi* (yams) were cultivated. In the areas where water was available along the streams, *lo'i* (pond fields) could also have been developed for the cultivation of *kalo wai* (wet taro). At the time of the *Māhele 'Āina* (Land

Division) of 1848, native tenants described agricultural parcels and house lots (often enclosed to keep cattle out) on lands that make up the *Kalana* of Waimea. The claimants generally indicated that their right of residency and land use dated back to the period of Kamehameha I and Kamehameha II (pre 1823), thus indicating that residential and agricultural use had time depth. Ross Cordy reported that features of the “Waimea Field System” were in use up until the mid-nineteenth century (Cordy 1989:4), though Handy, Handy and Pukui (1972), and oral history interviews conducted by Maly, document small gardens kept by Hawaiian residences remained in use along the northern section of this field system through the 1930s.

For many years, the presence of an extensive ‘*auwai* (irrigation channel system), has given rise to the possibility that large portions of the Waimea plains were irrigated and cultivated in ancient times. In fact an important legal case on the water rights of Parker Ranch in the early 1900s led to the production of a detailed map of the ‘*auwai* system on the *kula* of Waikōloa Nui, Waikōloa Iki, Lālāmilo and Pu‘ukapu (Kanakanui et al., 1914; Reg. Map No. 2576), which depicts flow of water to, and through many of the *kuleana* ‘*āina* (fee simple land interests) awarded to native tenants in the region.

The land history of Waipi‘o, Waimanu, Laupāhoehoenuei, ‘Āwini, Honokāne, Pololū and smaller valleys on the Hāmākua and Kohala mountain side is similar to that of the *ahupua‘a* described above. Native traditions and historical accounts of land use and access describe a sophisticated system of resource management, knowledge of the mountain lands, and their resources. Indeed, the names of places such as Pu‘u o ‘Umi and Nā-poe-a-‘umi-hulu-maka-o-ka-lani⁴, seemingly associated with the life and times of ‘Umi-a-Līloa; and other names such as Pupualenalena, Kulanapahu and Ka‘akōlea on the mountain lands between Kohala and Hāmākua, demonstrate knowledge of the landscape, and are tied to traditional travel, access, and practices in the uplands.

All of the witnesses testifying before the Commissioner of Boundaries between 1864 to 1900 described traditional access and use of resources in the mountain lands, that was controlled and monitored by landlords and chiefs. Knowledge of the boundaries of *ahupua‘a*, and the extent of rights on the mountain lands was important. If someone from another land was caught taking resources from a land other than their own, the items were taken from them. Indeed, the large collection of testimonies for the island of Hawai‘i record that infractions of *ahupua‘a* rights led to fights and death of the intruders. Interestingly, collection of native birds such as the *mamo* and ‘*ō‘ō*, and the collection of *olonā* on the Pu‘ukapu mountain lands within the present-day Natural Area Reserve was recorded by elder *kama‘āina*, though no reference to other forms of hunting or pigs, was made in native testimonies of the 1800s (see Boundary Commission Testimonies in this study).

The historical record of ranch development and ranching operations through the 1940s also documents a tightly controlled system of access and hunting rights. The mountain lands and resources were highly valued in traditional times, and in later years, the water generating properties of the mountains were also highly valued. It was for this reason, following the steady decline of the native forest system, that in the early 1900s, the Kohala Forest Reserve was established. Primary access to the mountain lands was to monitor the growing water interests of the ranches and plantations fed by the watershed of the Kohala mountains.

⁴ This *pu‘u*, situated a short distance from Pu‘u o ‘Umi, is also recorded as having several names, apparently depending on the *kama‘āina* witnesses’ place of residence; the hill was also called “Ka-umu-o-ka-lei-ohia, Ka-umu-o-ka-lei-hoohie” (perhaps a misspelling of the preceding name), or “Kilohana” (see Boundary Commission testimonies in this study).

MO'OLELO 'ĀINA: NATIVE TRADITIONS AND HISTORIC ACCOUNTS OF THE KOHALA-HĀMĀKUA MOUNTAINS LANDS

This section of the study provides readers with access to a collection of native traditions of the Kohala-Hāmākua mountain lands, some of the accounts translated from the original Hawaiian language narratives for the first time, by the author. The narratives span many centuries, from Hawaiian antiquity to the later period following western contact. Some of the narratives make specific references to places on the mountain lands associated with the Pu'u o 'Umi NAR, while other accounts are part of larger traditions that are associated with regional and island-wide events. The native traditions describe customs and practices of the native people who resided on these lands, walked the trails, and who were sustained by the wealth of the mountain lands, the *kula* (plains and plateau lands), and the adjacent marine fisheries. It is also appropriate to note here, that the occurrence of these traditions—many in association with place names of land divisions, cultural sites, features of the landscape, and events in the history of the lands which make up the Pu'u o 'Umi NAR—are an indicator of the rich native history of those lands.

The Healing Traditions of Lono-pūhā— A Resident of the Uplands of 'Āwini

One of the early native traditions which references the Kohala-Hāmākua mountain lands is set in distant antiquity, in a time when gods took human form and walked with mankind. In 1837 S.P. Kalama and G. P. Judd collected native traditions documenting the use of *lapa'au* (medicinal herbs) for healing, and how the knowledge was first gained by the Hawaiians. An article series published in the Hawaiian newspaper, *Ka Hae Hawaii* in 1858, presented some of that information to readers of the paper. The narrative is of great interest because it describes several island localities and the founding of Hawaiian medicinal practices and rituals.

The account also alludes to the migrations of the god-form of the *kōlea* (golden plover), in connection with events in the account. A place on the boundary of Pu'ukapu and Waipi'o-Lālākea bears the name Ka'a-kōlea, and was a place of sacrifice in ancient times (see Boundary Commission testimonies in this study; also Register Map No. 872). The *mo'olelo* also tells readers that it was at 'Āwini (neighboring the Kohala mountain lands), that the arts of *lapa'au* were taught, and from there, the practices spread throughout the islands.

A translation of selected narratives from the *mo'olelo* are given below:

Kamā'oa was the husband and Hinaikamalama was the wife. To them were born the children, Kū, Lono, Kāne, Kanaloa, Kamakaokukoa'e, Ka'alaenuiahina, and Kamakanui'aha'ilono. Each of the children were gods and possessed various powers. Kamakanui'aha'ilono's gift was healing. All of the older children departed from their parents and went to reside at various places around the islands. Each of the children were known for their various attributes, some life giving, and others taking life. Being the youngest, Kamā'oa and Hinaikamalama assumed that their small son, Kamakanui'aha'ilono would remain with them, but when he was old enough, he went to his parents and told them that he wished to travel throughout the islands. He visited Ni'ihau, Kaua'i, O'ahu, Moloka'i, Maui, Lāna'i, Kaho'olawe, and then returned to Hawai'i. Along the way, he healed people who were afflicted with various ailments. These ailments were brought about by Kamakaokukoa'e, an elder brother of Kamakanui'aha'ilono. It was the practice of Kamakaokukoa'e to make people ill wherever he traveled.

Kamakanui'aha'ilono traveled along the *alanui* (trail) through Kona to Ka'ū. While in the uplands of Ka'ū, he came across the chief Lono, who was tending his extensive agricultural fields. Kamakanui'aha'ilono distracted Lono, who struck his foot with his

‘ō‘ō (digging stick). Immediately, the wound became badly swollen and infected. Kamakanui‘aha‘ilonono then healed Lono, and from that time he was also known as Lono-pūhā (Swollen Lono). Kamakanui‘aha‘ilonono then set off to continue his journey, heading for Puna and Hilo. Having been healed, Lono-pūhā followed and asked if he could travel with Kamakanui‘aha‘ilonono. Kamakanui‘aha‘ilonono agreed and the two traveled together through Puna, Hilo, and Hāmākua. Along the way, Lono-pūhā observed as Kamakanui‘aha‘ilonono healed people of various ailments by using different herbs.

When they reached the heights of Hāmākua, Kamakanui‘aha‘ilonono decided to pass Waipi‘o (where Kamakaokukoa‘e had settled) for he thought that perhaps his new friend might be killed by Kamakakukoa‘e. The two travelers went to the uplands of Waimea, and from there, they descended to the shore of Puakō and went to Kalāhuipua‘a. Now at Kalāhuipua‘a, Kamakanui‘aha‘ilonono saw a stranger (he did not know it was one of his younger relatives) who had the form of a bird, the *kōlea* (golden plover), and whose path was a rainbow. Now this stranger was also a healer.

Kamakanui‘aha‘ilonono called out to him, “Where are you from?” The stranger answered “From Kona.” But Kamakanui‘aha‘ilonono said, “I have been in Kona and there is no person like you there.” Kamakanui‘aha‘ilonono asked several times, and each time received a different reply, until finally the stranger said, “I am from the shore, here.” Kamaka then said “Yes, you are indeed of this place.” The stranger then said his name was Kōlea-nui-a-Hina (also called Lono-i-kōlea-moku), and told him that they were related. The three stayed there for a while and then went further into Kohala to see Kamanuiohua. Kamakanui‘aha‘ilonono then asked Lono-pūhā where their herbs were, and Lono-pūhā said that they had fallen at the place of Kōleamoku. Lono-pūhā was then told to go to Puakō and fetch the herbs.

When he went to gather the herbs, he found that they were growing there. Seeing this, Lono-pūhā pulled up all of the herbs that could be found, and left none behind. Lono-pūhā then returned to Kamakanui‘aha‘ilonono, who asked where the herbs were. Lono-pūhā told him that he had found them growing, and that he had pulled all of them up, leaving none behind. Hearing this, Lono-i-kōlea-moku became angry and he refused to enter the house of Kamakanui‘aha‘ilonono. Lonoikōleamoku then carved an image and placed it in front of the door of the house of Kamakanui‘aha‘ilonono. He said that he would not again enter the house up to the time that he returned to Kahiki.

When Lonoikōleamoku returned to Kahiki, Kamakanui‘aha‘ilonono, then went to ‘Āwini with his friend, Lono-pūhā, and taught him about making medicines. Lono-pūhā lived at ‘Āwini, and planted herbs and taught healing throughout his life... [Ka Hae Hawai‘i, November 24, 1858:136; Maly, translator]

Several historians cite various versions of this tradition—with Kamakanui‘aha‘ilonono the god-teacher and Lono-pūhā as the student—as the source of how healing arts were originally learned by the Hawaiian people. Lono-pūhā himself, resident at ‘Āwini, was deified and called upon by various practitioners while treating patients. The god-form of the *kōlea* also played an important role in these practices (cf. Malo 1951; Kamakau 1961 & 1964; Thrum 1907; Beckwith 1970).

“Moolelo no Pupualenalena” ***(A Tradition of Pupualenalena)***

Pupualenalena was a supernatural dog, who in the time of Hakau (the half brother of ‘Umi-a-Liloa; ca. AD 1525), lived at Puakō. A place named for this creature is situated on the Kohala mountain lands on the boundary between Pu‘ukapu and Waipio. The tradition of Pupualenalena was collected by Abraham Fornander in the 1880s. A paraphrased summary of the narratives recorded by Fornander is presented here:

Pupualenalena, lived with his master, an old fisherman, at Puakō. When the man went fishing, he always took the dog Pupualenalena with him on his canoe. Now it was the dogs' habit to eat his masters' fish whenever they were tossed into the back of the canoe. The master told Pupualenalena, that it was alright for him to eat the fish, but asked Pupualenalena to go and gather 'awa (*Piper methysticum*) roots for him to make into a drink. Pupualenalena understood the masters' request, and that evening he went to gather 'awa for him.

Pupualenalena traveled all the way to Waipi'o, where the king Hakau lived and had his sacred 'awa garden below Pua'ahuku. Now this 'awa was restricted for use only by Hakau, and if anyone was caught stealing the 'awa, the thief would be killed. Eventually, Hakau determined that someone was stealing his 'awa, and he placed his guards around the 'awa patch. That night, Pupualenalena traveled from Puakō to Waipi'o, and gathered up the 'awa. The kings' men saw the dog stealing the 'awa, but because Pupualenalena was so fast, they could not catch him. One of the kings' runners was able to follow behind Pupualenalena, and they followed him to Puakō, where it was found that the old man exhibited signs of drinking large quantities of 'awa (his skin was red and scaly).

The old fisherman and the dog were taken to Waipi'o, where Hakau asked if the old man had been drinking 'awa. The man answered yes, but stated that he had not known that Pupualenalena had been traveling all the way to Waipi'o to get the 'awa. While Hakau was telling the old man and his dog that they would both be put to death, a great noise arose in Waipi'o. This noise was from a conch shell which was blown throughout the night by the spirits that lived in the uplands of Waipi'o. Because of the constant blowing of the conch shell, the people of Waipi'o were unable to get much sleep. Hakau told the old man, that if Pupualenalena could steal the conch, that they both would be spared. Pupualenalena secured the conch shell, and Hakau cared for the old man and the dog from that day on. (Fornander 1916-1917 Vol. 4-3:558, 560)

Traditions from the Reign of Lono-i-ka-makahiki

One of the traditional narratives which describe events and the occurrence of place names, throughout the region of South Kohala—including references to several of the *pu'u makai* of the Pu'u o 'Umi NAR—date from around the middle 1600s when Lono-i-ka-makahiki, a grandson of 'Umi-a-Liloa, ruled the island of Hawai'i (cf. Kamakau 1961; Fornander 1916-1917 Vol. 4-2:342-344, Vol. 5-2:446-451).

Native historian, Samuel Kamakau (1961) reported that during the reign of Lono-i-ka-makahiki, Kamalālāwalu (the king of Maui), made plans to invade the island of Hawai'i. Kamalālāwalu sent spies to determine how many people lived on the island. The spies "landed at Kawaihae" and traveled around the island, but because they failed to go to the uplands of Kohala, they reported back to their chief, that there were few people in the district. They told Kamalālāwalu:

...“We went all around Hawaii. There were many houses, but few men. We went to Kohala and the men only on the shores...Bare of inhabitants is Kohala, for the men are at the coast.” The spies had seen the land of Kohala [but had failed to see the people for] on all of the fields where sports were held from inner Kohala to outer Kohala, from Kohala of the coastal cliffs to Kohala of the inland, a crowd of people gathered every day from morning to night to play. Kohala was known as a thickly-populated land. The spies thought that if Kohala was conquered, Kona, Ka-'u, and Puna would be easily taken, and they felt that Hilo and Hamakua would lend no assistance. This was true, for the chiefs of these districts were cousins of the chiefs of Maui... (Kamakau 1961:56-57)

Kamakau wrote that Kamalālāwalu and his warriors traveled on a great fleet of canoes and landed in the district of Kohala, “The people had gone up to Waimea, for all observed the services held at the

heiau of Mailekini. Only those of lower Kawaihae and Puako remained” (Kamakau 1961:58). Because only few people were along the coast, the victory of battle went to Kamalālāwalu. Kamalālāwalu and his troops then prepared to march to Waimea and enter into battle. Kamalālāwalu’s counselors told him:

Waimea is not a good battle site for strangers because the plain is long, and there is no water. Should defeat be met with by the warring strangers, they will all be slaughtered... (Kamakau 1961:58)

Kama ignored the advice of his counselors, and instead listened to the advice of two old men of Kawaihae, one of whom was named Pūhau-kole (commemorated as the name of a stream that passes the north side of Pu’ukoholā and Mailekini). These old men purposefully misled Kamalālāwalu, telling him that the plain below Pu’u ‘Oa’oaka (Waimea) would be a good battle field, and that all his canoes should be taken apart so none of the Maui warriors could run back to the canoes and secretly return to Maui (Kamakau 1961:58). The advice of the old men was taken by Kama, and the following events occurred:

After Kama-lala-walu’s warriors reached the grassy plain, they looked seaward on the left and beheld the men of Kona advancing toward them. The lava bed of Kaniku [behind ‘Anaeho’omalū] and all the land up to Hu’ehu’e was covered with the men of Kona. Those of Ka’u and Puna were coming down from Mauna Kea, and those of Waimea and Kohala were on the level plain of Waimea. The men covered the whole of the grassy plain of Waimea like locusts. Kamalālāwalu with his warriors dared to fight. The battlefield of **Pu’oa’oaka** was outside of the grassy plain of Waimea, but the men of Hawaii were afraid of being taken captive by Kama, so they led [Kamalālāwalu’s forces] to the waterless plain lest Maui’s warriors find water and hard, water worn pebbles. The men of Hawaii feared that the Maui warriors would find water to drink and become stronger for the slinging of stones that would fall like raindrops from the sky. The stones would fall about with a force like lightning, breaking the bones into pieces and causing sudden death as if by bullets...

...The Maui men who were used to slinging shiny, water-worn stones grabbed up the stones of **Pu’oa’oaka**. A cloud of dust rose to the sky and twisted about like smoke, but the lava rocks were light, and few of the Hawaii men were killed by them. This was one of the things that helped to destroy the warriors of Kama-lala-walu: They went away out on the plain where the strong fighters were unable to find water...The warriors of Maui were put to flight, and the retreat to Kawaihae was long. [Yet] there were many who did reach Kawaihae, but because of the lack of canoes, only a few escaped with their lives... Kama-lala-walu, ruler of Maui, was killed on the grassy plain of Puako, and some of his chiefs were also destroyed. (Kamakau 1961:58-60).

Another version of this battle, collected by Abraham Fornander, tells readers that Kamalālāwalu’s invading army arrayed itself on top of the hill of Hōkū’ula, where Kamalālāwalu had been falsely told, there were large stones to roll down on the enemy. From the heights of Pu’u Hōkū’ula, the warriors of Maui could see the armies of all Hawai’i advancing and taking their positions along the plains of Waimea. Fornander notes that the warriors from North Kohala were stationed between the lands of Momoualua to Waihaka (Wai’aka) (Fornander 1917 Vol. IV-11:344):

The hill [Hōkū’ula] is located in Waimea until this day...It is a very famous eminence because of the battle fought by Kamalālāwalu and his distinguished warrior Makakuikalani thereon. On that hill, there are no stones, nor trees, but grass and soils are thereon...

While Kamalālāwalu was on the hill of Hokuula, in Waimea, he beheld the dust rising above the stones of Kaniku, the stones being gradually reddened by the dirt. On

account of the many men, the darkness of the stones was covered by the dust. And when Kamalalawalu saw the men of Kaniku advancing, he inquired of Kauhikama: "Where have you traveled on Hawaii that you failed to observe the people?" Kauhikama answered: "From Kawaihae to Kaawaloa, in Kona were the places I visited, but I encountered no person." Kamalalawalu said to Kauhikama: "Did you not see houses standing?" "There were houses indeed, but there were no occupants. There were pigs running about, and there were chickens crowing." Whereupon, Kumaikau and Kumakaia remarked: "You could not find the occupants at home, for they had gone upland to till the ground because it was morning, and they had gone out fishing. If it were in the afternoon you went there, you would have met the men at home."

Kamalalawalu, on hearing this, said to Kauhikama: "We shall perish; we can not be saved. I thought your report was true, but it is not so. By whom have you been taught that the house is a thing that stands without dwellers. Why! The house is erected, the men live therein. Woe betides us that we perish by your report..." (Fornander 1919{5}:446-448).

Kamehameha I: Rise to Power in Kohala (1790-1793)

In ca. 1790 Kamehameha I and his chiefs were living at Kawaihae. Following the advice of a priest from Kaua'i, Kamehameha undertook the reconstruction of the *heiau* Pu'u Koholā, to dedicate it as a house for his god, Kūkā'ilimoku (Kamakau 1961:154). During this time, "thousands of people were encamped on the neighboring hillsides" (Fornander 1996:328). We also learn that large and small 'ōhi'a logs were collected from the mountains above, with which to make the images and houses of the *heiau*. In ca. 1791, Kamehameha dedicated this *heiau*, and his cousin, Keōuakū'ahu'ula (Keōua)—a rival for supremacy on Hawai'i—was offered as the sacrifice. The narratives below are excerpted from Kamakau's account of the events that led up to the dedication of the *heiau*. In order to construct the *heiau*, Kamehameha—

...summoned his counselors and younger brothers, chiefs of the family and chiefs of the guard, all the chiefs, lesser chiefs, and commoners of the whole district. Not one was allowed to be absent except for the women, because it was *tabu* to offer a woman upon the altar... The building of the *heiau* of Pu'u-koholā was, as in ancient times, directed by an expert—not in oratory, politics, genealogy, or the prophetic art, but by a member of the class called *hulihonua* who knew the configuration of the earth (called *kuhikuhi pu'uone*). Their knowledge was like that of the navigator who knows the latitude and longitude of each land, where the rocks are, the deep places, and the shallow, where it is cold and where warm, and can tell without mistake the degrees, east or west, north or south...

When it came to the building of Pu'u-koholā no one, not even a *tabu* chief was excused from the work of carrying stone. Kamehameha himself labored with the rest. The only exception was the high *tabu* chief Ke-ali'i-maika'i [Kamehameha's younger brother]... Thus Kamehameha and the chiefs labored until the *heiau* was completed, with its fence of images (*paehumu*) and oracle tower (*anu'unu'u*), with all its walls outside and the hole for the bones of sacrifice. He brought down the 'ōhi'a tree ('ōhi'ako) for the *haku* 'ōhi'a and erected the shelter house (*hale malu*) of 'ōhi'a wood for Ku-ka'ili-moku according to the rule laid down by the *kahuna* class of Pa'ao. Had the class been that of the Nalu'ulu the god's house would have been made of *lama* wood... (Kamakau 1961:154).

At various times in between 1792 to 1796, after the dedication of Pu'u Koholā, Kamehameha lived at Kawaihae and worked the lands of South Kohala. While at Kawaihae in 1796, Kamehameha initiated work on the great *peleleu* canoe fleet for the invasion of Kaua'i, and had his warriors participate in intensive combat training. One famous *mele* (chant) from this period of Kamehameha's rise to power, also mentions 'Ō-uli. What is unclear in the *mele*, is whether the reference is specifically pertaining to

the land of ‘Ōuli, or to the goddess of sorcery, Uli, for which the land may have been named. This mele, “*Hole Waimea i ka ihe a ka makani...*” is said to commemorate the period in which the warriors of Kamehameha trained on the Waimea plains. The warriors are likened to various attributes of the land and weather—such as the tough *koai’e* forests that are buffeted by the *kīpu’upu’u*, or pelting rains which stab at ones skin like a spear; and call upon the *mana* (supernatural power) of the *ōhāwai* blossoms of Uli, the sorcery goddess for whom the land is named...

*Hole Waimea i ka ihe a ka makani,
Hao mai na ‘ale a ke kīpu’upu’u.
He lā‘au kala’ihi ia na ke anu,
‘O’o i ka nahele o Māhiki.
Ku aku la i ka malanai a ke Kīpu’upu’u.*

Holu ka maka o ka ōhāwai o Uli,

*Niniau ‘eha i ka pua o ke koai’e,
‘Eha i ke anu ka nahele o Waikā...*

(cf. Roberts, 1967; Maly, translator)

Waimea is stripped by the winds,
The buffeting waves of the *kīpu’upu’u*.
The forest is hardened in the cold,
Matured in the forests of Māhiki.
Rising and spreading out before the
kīpu’upu’u.
The centers of the *ōhāwai* (*lobelia*)
blossoms of Uli sway,
The *koai’e* blossoms droop in pain,
The forest of Waikā is pained by
the cold...

“He Moolelo Kaaō Hawaii no Laukaieie” (A Traditional of Lau-ka-‘ie‘ie)

Another tradition, “*He Moolelo Kaaō Hawaii no Laukaieie...*” (A Hawaiian Tradition of Laukaieie) was published in the native language newspaper, *Nupepa Ka Oiaio*, between January 5th 1894 to September 13th 1895. The *mo’olelo* was submitted to the paper by Moses Manu, and is a rich and complex account with island-wide references to—places; descriptions of place name origins; history and *mele*; interspersed with accounts from other traditions and references to nineteenth century events.

The following narratives (translated by Maly), have been excerpted from the *mo’olelo*, and include an overview of the tradition and those narratives which recount the birth of Lau-ka-‘ie‘ie (a forest goddess), and the travels of Mākanike‘oe (a wind god). Importantly, the *mo’olelo* opens in the uplands of the Hāmākua-Kohala forest lands, at a place called Ulu, which is situated within the lands now a part of the Pu‘u o ‘Umi Natural Area Reserve—marking a portion of the boundary between Pu‘ukapu and Waipi‘o (see Boundary Commission testimonies in this study). The introductory narratives of the *mo’olelo* offer the following description of the mountain lands, and identify the origins of several place names; and also name some of the rain-mist forms of the mountain lands:

Kaholokuaiwa [w.] and Koa‘ekea [k.] lived at **Ulu**, in Waipi‘o Valley on the island of Hawai‘i. They were descended from the chiefly and godly lines of Kahiki and Hawai‘i. Their first child was Lauka‘ie‘ie. But, because she was born in an ‘*e‘epa* (mysterious) form, looking more like a plant than a child, she was wrapped in *līpoa* seaweed and set in the stream. Without her parents knowledge, Lauka‘ie‘ie was retrieved by Hina-ulu-‘ōhi‘a, a goddess of the forests and mountain lands, and nurtured. Later, two other children, boys, were born to Kaholokuaiwa and Koa‘ekea. One was named Hi‘ilawe (for whom the falls was named), and the other was Mākanike‘oe (who was also a wind deity).

Koa‘ekea’s sister was Pōkāhi, and her husband was Kaukini. Though they had been married for a long time, they were childless, and because of their prayers and offerings, Hina-ulu-‘ōhi‘a approached Pōkāhi while she was gathering seaweed, and told her that she would have a girl child to raise as her own. The condition was, that no one, not even her brother and sister-in-law were to know about this child. Because Pōkāhi and Kaukini lived on the mountain ridges above Waipi‘o and Waimanu, it was easy for her to

keep the secret. It was in this way, that Lauka'ie'ie came to be raised by her own aunt and uncle. As a youth, Lauka'ie'ie's companions were the spirits of the plants and animals of the forest. When she matured, she was very beautiful, and thoughts of finding an acceptable mate for her began to grow. One night, when Lauka'ie'ie was sleeping, she dreamed of flying past the valley lands of Hawai'i, and across, Maui, Moloka'i, O'ahu, Kaua'i, Ni'ihau, Ka'ula, and on to Lehua⁵, where she saw a handsome young chief, named Kawelonaakalāilehua. It was this chief that was destined to become her husband... [January 5-19, 1894]

In the edition of the paper for April 20, 1894, Manu presented readers with a beautiful *mele*, used by Mākanike'oe to call upon his goddess sister, and the forest-body forms of Hina-ulu-ōhi'a and various plant deities of the mountain lands. Several place names of the Hāmākua-Kohala mountain lands are given in the *mele*, cited below:

*E-o e ka wahine iloko o ka ohu,
O ka ohu noho i ke kuahiwi, kualono,*

Iloko i Ihikalani hale kumu ohu,

*Paihi kau ao ole ka lewa lani,
I ka noho a ka wahine kinolau,*

*He kino he lau o Laukaieie,
E i a'e ka wahine nona ka lei,*

*I uo ia e Hinauluohia,
He liko no ka lama i ka nahele,
O ka hala me ka lehua,
Ke lawe ala ka makani i ke ala,
Puia i ke ala kai o Pakaalana,*

*Ke awili ia me ka lau lipoa
He wahine noho lae kahakai,*

*Alualu huakai o na pali,
Ke lele la ka wai o Kawaikapu,
Ke iho la i na pali,
E iho e Laukaieie, e Laukapalai,
E Lauakolea, pili lau i o uka,
E iho mai.*

Respond o woman there in the mists,
Mist which sits upon the mountain
ridges and peaks,
There in *Ihikalani*, mountain-house that
is source of the mist,
The sky clears, there is not a cloud above,
At the place where the woman of many
body-forms lives,
Body form of the leaves of the 'ie'ie
The woman for whom the *lei* was
made, speaks,
It was bound together by *Hinauluohia*,
from buds of the *lama* in the forest,
Of the *hala* and *lehua*,
The wind carries the fragrance,
It mixes with the fragrance of the sea
at *Paka'alana*,
Interwoven with the *lipoa* seaweed.
There the woman resides on the
costal promontories,
Gathering the sea-spray along the cliffs.
The water leaps from the falls of Kawaikapu,
Descending along the cliffs,
Descend o *Lauka'ie'ie*, *Laukapālai*,
Lau'ākōlea, companion of the upland *lau-i*
Descend.

This *mele* is an example of the depth of the relationship shared between Hawaiians and their environment. It demonstrates the spiritual attachment of Hawaiians to the mountain lands and forest life—they being more than earth and plant. Each of the plant forms are the embodiments of creative forces of nature, and when respected and called upon, they were believed to help the one calling upon them. These plant and weather forms could ensure safe passage through the mountain lands, or cause one to lose one's way.

⁵ The lengthy narratives include site descriptions and traditional accounts for various locations on each of the named islands.

“Kaa Hooniua Puuwai no Ka-Miki”
(The Heart Stirring Story of Ka-Miki)

Perhaps one of the most detailed native traditions which includes rich accounts of place names and traditional practices associated with the Kohala-Hāmākua mountain lands, and adjoining *ahupua’a*, is the historical account titled “*Kaa Hooniua Puuwai no Ka-Miki*” (The Heart Stirring Tale of Ka-Miki). The story of Ka-Miki was published in the Hawaiian language newspaper *Ka Hoku o Hawaii* (1914-1917). It is a long and complex account that was recorded for the paper by Hawaiian historians John Wise and J.W.H.I. Kihe (translators of the work of A. Fornander), with contributions from others of their peers. While “Ka-Miki” is not an ancient account, the authors used a mixture of traditions, local stories, tales, and family traditions in association with place names to tie together fragments of site specific history that had been handed down over the generations.

The complete narrative includes historical accounts of more than 800 place names (many personified, commemorating particular individuals) around the island of Hawai‘i. While the personification of individuals and their associated place names may not be entirely “ancient,” such place name-person accounts are common throughout Hawaiian and Polynesian traditions. The selected narratives below, are excerpted from various sections of the tradition, and provide readers with descriptions of the land, resources, areas of residence, and practices of the native residents, as handed down by *kama‘āina* (those familiar with the land). Of particular interest, specific documentation is given pertaining to the practice of bird catchers, the nature of weather patterns, and the naming of many places on the mountain landscape.

The English translations below (Kepā Maly, translator), are a synopsis of the Hawaiian texts, with emphasis on the main events of the original narratives. Also, when the meaning was clear, diacritical marks have been added to help with pronunciation of the Hawaiian place names and words.

This *mo‘olelo* is set in the 1300s (by association with the chief Pili-a-Ka‘aiea), and is an account of two supernatural brothers, Ka-Miki (The quick, or adept one) and Ma-Ka‘iole (Rat [squinting] eyes). The narratives describe the birth of the brothers, their upbringing, and their journey around the island of Hawai‘i along the ancient *ala loa* and *ala hele* (trails and paths) that encircled the island. During their journey, the brothers competed alongside the trails they traveled, and in famed *kahua* (contest fields) and royal courts, against *‘ōlohe* (experts skilled in fighting or in other competitions, such as running, fishing, debating, or solving riddles, that were practiced by the ancient Hawaiians). They also challenged priests whose dishonorable conduct offended the gods of ancient Hawai‘i.

Ka-Miki and Ma-Ka‘iole were empowered by their ancestress *Ka-uluhe-nui-hihi-kolo-i-uka* (The great entangled growth of *uluhe* fern which spreads across the uplands), who was one of the myriad of body forms of the goddess *Haumea*, one of the creative forces of nature—also called *Papa* or *Hina*—who was also a goddess of priests and competitors.

At one point during their adventure, Ka-Miki reportedly called out in praise of the lands of Kohala, describing the boundaries and famed *pu‘u* (hill) formations of the district in the following saying:

*O Kohala nui, o Kohala iki, o Kohala loko, o Kohala waho, o Kohala makani ‘Āpa‘apa‘a,
o Pili o Kalāhikiola, o Na-pu‘u-haele-lua. ‘Oia ho‘i! ‘Oia la! O nā ‘okina iho la ‘ia o ka
‘āina ha‘aheo i ke kāhili a ka makani ‘Āpa‘apa‘a e ho‘ola‘au mai ana me he ipo ala ka
nē hone i ka poli o ke aloha —*

Large Kohala, little Kohala, inner Kohala, outer Kohala, Kohala of the ‘Āpa‘apa‘a wind, of Pili and Kalāhikiola, the two traveling hills. Indeed! They are the combined sub-districts of this proud land brushed by the ‘Āpa‘apa‘a wind, maturing like a love nestled

fondly in the bosom of love (*Ka Hoku o Hawai'i*, March 22, 1917).

For generations, sayings like the one above, have been spoken in praise of Kohala and its various land divisions which extend from Honoke'ā on the Hāmākua boundary to Ke-ahu-a-Lono on the Kona boundary.

Several places of traditional importance around the perimeter of Waipi'o, on the valley floor and cliffs, and in the forests, were described in the *mo'olelo*. In addition to the place name references, we also find descriptions of traditional customs and practices associated with the various localities mentioned. The following excerpts from the *mo'olelo* identify some of the storied places on the landscape (given by date of occurrence in the original texts); first occurrence of the place names is also identified with bold and italics:

Ha'i-wahine (Woman [who] speaks) and ***Ha'ina-kolo***⁶ (Grumbling answer) are places on the cliffs of ***Waipi'o***. When *Ka-uluhe* prepared *Ka-Miki* and *Maka-i'ole* for the *'ailolo* (completion of training ceremonies), she sent the brothers to fetch certain items; *Ka-Miki* was to fetch the sacred water of *Kāne* from *Kawaiakāne* on *Mauna Kea*; and *Ma-Ka'i'ole* was to get the *'awa* of *Waipi'o*. The brothers were also instructed to visit their ancestress at ***Lanimaomao***. [*Ka Hoku o Hawaii*, February 5, 1914]

The brothers departed to get the required items, and first went to meet with their goddess-ancestress *Lani-nui-ku'i-a-mamao-loa*, commemorated as the place called *Lanimaomao* (near the Māhiki section of the Waimea plateau lands). When *Lani-nui-ku'i-a-mamao-loa* inquired of their journey and quest, *Ma-Ka'i'ole* chanted, telling her about the *'awa* that he was to acquire—

*Aia la ilalo o Waipi'o,
I ka pali o Kaholokua'iwa
I ka 'awa 'ili lena
I ka papa lohi o 'Āpua
A ka mano o ke akua
A kini o ke akua
A ka lehu o ke akua e inu ai*

It is there below in Waipi'o
Along the cliff of ***Kaholokua'iwa***
The yellow barked *'awa*
On the long plain of ***'Āpua***
'Awa of the 4,000 gods
'Awa of the 40,000 gods
'Awa which the 400,000 gods drink

Now this was the cherished *'awa* of *Luanu'u-a-nu'u-pō'ele-ka-pō*, king of the ghost hordes... [*Ka Hoku o Hawaii* February 12, 1914]

Lani-nui-ku'i-a-mamao-loa tested the brothers to ensure that they possessed the skills necessary to complete their tasks. Upon completion of the test, she felt that *Ma-Ka'i'ole* would not be able to safely fetch the *'awa* from *Waipi'o*, so she told *Maka-i'ole* that he should go fetch the *'awa* strainer, *Ka-lau-o-ke-kāhuli* [made from a native rush that grew on the watered lands of *Waikōloa*]. She then prepared *Ka-Miki* to travel to *Waipi'o*, and warned him not to make any sounds lest he awaken the gods as he drew near the ledge of *Ha'iwahine*.

She went on to tell him,

When you reach the hill of ***Pua'ahuku***, gaze below to the *heiau* of ***Pāka'alana***, and look upon *Waipi'o*, there you will see the cliff of ***Kaluahine***. Then look to the side and go into the *'ōhi'a* forest of ***Ka'auana***. It is there that you will find the *'awa* container called *Ka-pāpāiaoa* [*Ka pāpāia'awa* (The ceremonial *'awa*)], which *Luanu'u-a-nu'u-pō'ele-ka-pō* uses as his pillow so that no one could take it.

⁶ *Ha'iwahine* and *Ha'inakolo* – names of a goddess who was called upon as a deity of the forest, birds, and *kapa* makers

Luanu'u will be there in the center of his *hālau hale ali'i* (royal compound), and the assembly of 4,000, 40,000, 400,000 ghosts will be outside.

When *Lanimaomao* completed her instructions, she allowed Ka-Miki to depart.

In the blink of an eye Ka-Miki disappeared from *Lanimaomao*, and arrived at the forest of **Māhiki**. Leaping again, he arrived at **Pua'ahuku**, and he looked upon the beauty of Waipi'o. Ka-Miki then turned and leapt to the heights of Ka'auana, and went to the cliff of Kaholokuaiwa where he saw the royal compound of Luanu'u along the ledge of **Hea-ke-akua** (Call of the Warrior), overlooking **Nā-po'opo'o** (The nooks and crannies), in Waipi'o, not Kona.

Indeed, there were innumerable ghost beings throughout the region. Ka-Miki called upon his mist-goddess elder, *Ka-'ohu-kolo-mai-iluna-o-ka-lā'au*, and a thick mist settled on Waipi'o, even covering the compound of the god *Luanu'u*. Ka-Miki then leapt and landed upon the ridge pole of the gods long house. Ka-Miki parted the bird feathers, for this is what the house was thatched with, and looked in. He saw that the god and those with him were sleeping, nestled in the mists of the 'awa. Now, those in the house were of various shapes and sizes, some with hollow eyes, others with long thin necks, or hands that reached to their feet, truly things which living people would fear...

Before taking Luanu'u's 'awa, Ka-Miki played a trick on *Luanu'u* and awakened him from his 'awa induced sleep. Ka-Miki then hid unseen amongst the rafters of the *hālau*. *Luanu'u* called upon his *kūkini*, *Mū-kā* and *Mū-kī*, commanding that they capture the one who would attempt stealing his cherished 'awa.

Luanu'u sent his messengers to places where 'awa was grown or would be consumed. *Mū-kā* was sent to the cliff of Mōlilele by Palahemo, Ka'ū. *Mū-kī* was sent to start at the cliff of **Ka'enamakaohue** (Neue, Kohala), where the wind entered along the cliff **Makanikāhiō**. *Mū-kī* was then to encircle the island searching, Kapākai and Kahuā (Kohala), Kalina'ōpelu, on the plain of Kanikū; and ascend Pu'u Anahulu to look for a sign from the image of the god *Kapu-ko-malo*.

Mū-kā and *Mū-kī* were then to circle around to the heights of Humu'ula and inquire of 'Ōma'oko'ili and 'Ōma'okanihae if either of them knew who this rascal thief was; and then go to the chiefesses Poli'ahu, Lilinoe and Kapiko-o-Waiau to see where they dug the water way and guarded the sacred water of *Kāne*; to see if they were responsible. *Luanu'u* then commanded them to go to **Pu'u-o-Moe'awa** in the forest of Māhiki and stand guard.

Mū-kā and *Mū-kī* departed and the multitudes of other ghosts wandered ('auana) through the depths of forests of Māhiki and **Pōkāhi** in search of this rebel. Ka-Miki heard the indistinct voices of these many ghosts ascend the cliff, and pass through the forests to the heights of Pū'awali'i in the thick mist which ensnares the fished birds. When all the ghosts were gone *Luanu'u* fell back to sleep with the 'awa container as his pillow. Ka-Miki then leapt from the ridge pole and took *Ka-pāpāiaoa* which was filled with 'awa that had been made ready to use and bundled into balls [wrapped] with *limu pā'ihī'ihī* (a native *limu pōhaku* (rock moss) weed [*Nasturtium sarementosum*]).

Luanu'u arose greatly angered thinking that he would ensnare this rascal upstart in the net of *Nananana-nui-ho'omakua* (*Nana-nui* was also one of Luanu'u's ghost marshals). But unseen, Ka-Miki hid on the ridge pole of the *hālau hale ali'i* where he held the 'awa container [*Ka Hoku o Hawaii* February 19, 1914].

Luanu'u, who was also called *Pāhulu nui*, then leapt to the place where the sacred *pahu* (drum) *Lono Hāwea* was kept at the temple of Pāka'alana. Striking the *pahu*, he

called all the wandering ghosts to return to the lowlands of Waipi'o. The voice of this drum was a great sign that all of the pathways were to be sealed. The command was heard by all—along the *hula'ana* cliffs from Waipi'o to the ledge of Makanikāhiō; heard by those who were at Koholālele and Maulua; heard by those who were by the steep cliffs looking to the uplands of Kalai'eha (Humu'ula); and heard by those who were in the forest of Māhiki. And so all of the pathways and swimming trails were blocked, and the net trap was set.

While all of this occurred Ka-Miki remained hidden in the rafters of the *hālau*. One of the ghosts looked inside and saw Ka-Miki upon the ridge pole and prepared to call out on the *hōkio* (gourd nose flute) which would alert the ghosts that the upstart had been found. With great speed, Ka-Miki then leapt from Heakeakua up to the ridge heights, and landed on a *kāwa'u* (*Ilex anomala*) tree branch. *Ka-'ohu-kolo-mai-iluna-o-ka-lā'au* then covered the region in a thick mist, blocking everything from view.

The cry of the ghost hordes could be heard from uplands to shore, as they hungrily looked for Ka-Miki, having been thwarted in their attempts to ensnare him in their supernatural net *Nananana-nui-ho'omakua*, just as birds were caught. The ghosts wandered along the cliffs and forests of **Ka-'auana** (on the Kohala side of Waipi'o) and Māhiki (on the Hāmākua side of the Waipi'o bluff), and were unable to catch Ka-Miki.

Under the cover of his ancestresses' mist body form, Ka-Miki leapt from the *kawa'u* tree to **Pu'u-o-Moe'awa** in the forest of Māhiki. Because the ghosts wandered hungrily about, two named places commemorate their wandering and having gone hungry—**Ka-'auana** (The wandering), and in Waiko'eko'e, **Pōloli-ke-akua** (The hungry ghosts), which is also called *Pōloli-(i)-ka-manu* (Hungry for the bird).

At **Pu'u-o-moe-awa** (The hill of prostate 'awa growth), Mū-kī Luanu'u's ghost messenger intercepted Ka-Miki, but Ka-Miki thwarted his efforts at catching him by throwing foul smelling dirt (dabs of excrement) at him. Though many other ghosts arrived for the fight, they were all driven off, as Ka-Miki began destroying them.

Hio and Nana-nui, Luanu'u's ghost marshals, told their chief about the events at Pu'uomoe'awa, and Luanu'u blew the conch, *Hā-nō*, also called *Kiha-pū*, which was the conch that the supernatural dog *Puapualenalena* stole from the ghosts of Waipi'o. Hearing the call of the conch, the remaining ghosts fled from Pu'uomoe'awa, leaving Ka-Miki who returned to Lanimaomao. Ka-Miki presented the sacred 'awa container *Kapāpāiao* and 'awa to his ancestress, and she cleansed him in the rains of Waimea.

Ka-Miki and Ma-Ka'iole were reunited and returned to Kona with their treasured items... [*Ka Hoku o Hawaii*, February 26, 1914]

While in the district of Puna, Ka-Miki entered into a contest that required the collection of certain choice items. Among the required items, was an 'o'opu 'ai lehua (lehua blossom eating goby fish) from Hi'ilawe. In the account describing the lands in which this type of 'o'opu was found, we learn further of the nature of the mountain lands and resources of Waipi'o:

Hi'i-lawe (Lift and carry, as when the waters rise clearing the river path from mountain to shore). During the contest between Kahauale'a (of Puna) and Ka-Miki, Ka-Miki was carried by his ancestress *Ka-'ohu-kolo-mai-iluna-o-ka-lā'au* to Waipi'o where he visited the cliffs and wondrous waterfall of Hi'ilawe which cascades from the cliffs of **Kapa'ihī**, below the long plain of **Maukele**. A great rain fell and cleansed the land, the voice of Hi'ilawe was carried to the ocean at Pāka'alana. The water flowed with such force, that it broke the sand ridges, allowing the 'anae and fish of all kinds to swim into the river ponds at the base of Pāka'alana.

Now Hi'ilawe was famed for a variety of goby fish called *'o'opu-ai-lehua* (*'o'opu* which eats *lehua* flowers that fall into the pool at the base of Hi'ilawe). These *'o'opu* were the second of two items which the *kūkini* contests between Ka-Miki and Kahauale'a required be brought back alive to Pū'ula, in Puna. [*Ka Hoku o Hawaii* January 6 and February 3, 1916]

Traveling through the district of Hāmākua, while on their journey around the island, Ka-Miki and his companions arrived in Waipi'o, and set in motion events that would allow Ka-Miki to set right the practices of the *'ōlohe* in the region. In the events that transpired, we learn about the naming of localities, and nature of the landscape of the Hāmākua valleys and mountain lands:

While arranging the contests at Pāka'alana, the chiefs Pili-ka'aka'a and Pili-kuamea called on their *'ōlohe* to unify and support all of Hāmākua in this competition against Ka-Miki. Understanding their intent, Ka-Miki approached the gathering and called out in a *mele* —

*He lā manu ka kēia o Waipi'o,
Ke wili nei i ka lehua,
Ke pi'i nei ka 'ōpae kala'ole,*

*Ka hinana pākanaka o Wailoa,
E ho'okomo ana i ke ao a ka ua,
He lā ua kēia kū'ululū nei,
Kū'ululū ka manu ua 'ōpili,*

'Ōpili i ka ua ho'okina lēhei pā,

*He pā mauka, he pā makai,
Pō'ai a puni a koe koena,
I ho'okoe 'ia na Ka-Miki,
No ka uhu haehae 'upena o nā pali,*

No ka i'a nahu kananā o ka hula'ana,

*Ka 'ala'ihī kala loa e pau 'ai
nā lima i ka 'eke'eke!*

This is a day that the birds gather at Waipi'o
Encircling the *lehua*,
The clawless shrimps (inexpert competitors)
rise up,

As do the tame *hinana* shellfish of Wailoa,
The rain clouds enter the valley,
It is indeed to be a cold rainy day,
The birds are chilled, numbed by
the rain (filled with anxiety),

Numbed in the rain which blemishes,
and passes over walls,

Striking the uplands, striking the lowlands,
Encircling all who remain,

All [the competitors] who remain for Ka-Miki
Who is like the *uhu* fish of the cliff
which tears at the net

Who is like the fierce biting fish [shark] of
the *hula'ana* (swimming trails).

The *'ala'ihī kala loa* [*Holocentrus*] fish which
consumes [pierces] hands in the
fisherman's bag (one who should not
be trifled with)!

The *'ōlohe* Kapua'ikāhi ridiculed Ka-Miki's implications, and asked,

O deceitful one - where indeed are the storm clouds? For one can see that the sky is clear.

Ka-Miki responded,

Because you do not see the sign of the coming rains, you ask your childish questions.

Then, breaking the contest rules, Kapua'ikāhi leapt to attack Ka-Miki, and was immediately killed. The *'ōlohe* cried out and would have broken the protocol of the *kahua* and contest by rushing in to attack Ka-Miki, but Kaho'ālālā'au and the chief Pili-Ka'aka'a commanded they stay in place.

Hono-a-ka'a-ka-lani was called next to compete and lose. In all, twelve master 'ōlohe of Hāmākua competed, and were defeated, either bound or killed by Ka-Miki.

Kaho'ālalā'au then called to Ka-Miki,

Only 'Kaho'ālalā'au-a-Kaholokuaiwa' remains." Kaho'ālalā'au then told Ka-Miki that his grandmother *Kaholokuaiwa-i-ka-papa-lohi-o-Maukele* named him to fulfill his destiny as a master wielder of war clubs and spears.

Ka-Miki and Kaho'ālalā'au both related the nature of their training and prepared to compete [*Ka Hoku o Hawaii*, October 19, 1916]. Ka-Miki evoked *Ka-uluhe mā* and *Niho'eleki*, and then called to Kaho'ālalā'au, "Now is the time to test the skills of our teachers."

Kaho'ālalā'au was famed from Hawai'i to Ni'ihau for his knowledge and skills in spear and club fighting, and had studied the techniques of each island. As the two exceptional 'ōlohe prepared to compete, Ka-Miki called to Ma-Ka'iole, asking him to fetch his war club 'Ōlapa-kahuila-o-ka-lani. Maka'iole departed and immediately disappeared in the "noe pōhina e kokolo a'e ana ma nā pali o Kaholokuaiwa" (mists which crawl over the cliffs of *Kaholokuaiwa*.)

Standing at the door of Ka-uluhe's house, Ma-Ka'iole called to his ancestress and she gave him the cherished war club as he requested. Ma-Ka'iole then returned to those gathered at Pāka'alana. Kaho'ālalā'au and the young Pili chiefs all took note of the dark glistening club, oiled with *niu* (coconut) and *kukui*, and so the people of Hāmākua understood that Ka-Miki was a true expert.

Ka-Miki then called to Kaho'ālalā'au, "What shall the sign of victory be?" Kaho'ālalā'au answered, "The breaking of the others war club." Thus Kaho'ālalā'au and Ka-Miki competed in all manner of war club and spear fighting techniques as practiced on Hawai'i, Maui, O'ahu, and Kaua'i. [*Ka Hoku o Hawaii*, November 9, 1916]

Both competitors were evenly matched, the Pili chiefs, their experts, and all gathered at Pāka'alana were amazed at the fierce nature of their competition. Two of Kaho'ālalā'au's clubs were broken, and when his hand was broken as well he called to Ka-Miki,

"The victory is Ka-Miki's, for I have used four techniques, broken two war clubs and now broken my hand."

Ka-Miki responded,

"It is so, you have been defeated by the fisherman who set down the lines, securing — *Ka 'ōpae pi'i i Kōki o Wailau, i ka paihihi a ka hinana e pi'i ai* (The shrimp which ascend to the heights of Wailau, the trickling waters ascended by the *hinana*).

Kaho'ālalā'au then asked, "Let us end our contest and become friends" [*Ka Hoku o Hawaii*, November 26, 1916].

Ka-Miki accepted the surrender; Kaho'ālalā'au and the Pili chiefs then hosted Ka-Miki to food and a *pāpāi'awa* ceremony. And because Kaho'ālalā'au greatly admired the superior skills of Ka-Miki, he asked to take Ka-Miki *mā* as his foster sons, and that they accept the guardianship of the Pili chiefs. Ka-Miki accepted, and after spending some time in Waipi'o, Ka-Miki, Ma-Ka'iole and Keahialaka departed from the land of the

beloved cliff of Ha'inakolo, and began their journey to the steep cliffs of Waimanu [*Ka Hoku o Hawaii*, December 7, 1916].

Wai-manu (Bird water or Water [of the] bird), was described as a rich land, well watered and cultivated —

O Waimanu ka 'āina, ke ulu ala no ke kalo, ka 'uala, ke kō, ka mai'a, ka uhi, ka pia, ke ku ala no nā pali, a ke lele ala no ka wai i nā pali, o ka 'ōpae pi'i a me ka hinana ke pi'i ala no i Kapa'ihī...

Waimanu is the land in which grows the taro, the sweet potato, the sugar cane, the banana, the yams and the arrowroot, and where the cliffs rise above, [land where] water leaps upon the cliffs, and the 'ōpae and hinana climb up to Kapa'ihī... [*Ka Hoku o Hawaii*, September 21, 1916]

In the following part of the tradition, readers are provided with descriptions of travel through the mountain and valley lands of Hāmākua and Kohala region. Several places within the forest zone of the Pu'u o 'Umi NAR, and along the neighboring valley lands are named. These include Ulu, Kawaiho'olana, and Pōkāhi. Readers are also introduced to traditions associated with practice of the *lawai'a manu*, or bird catchers in the region:

The lands of 'Āwini (Forward, or Bold) were named for the spear fighting instructor and champion of the sacred 'ōlohe-chief **Kala'e** (The clearing), who controlled the lands from **Waimanu** to **Honopu'e**.

Ka-Miki and his companions departed from Pāka'alana in Waipi'o, and traveled along the path which led past the cliff of **Hea-a-ke-koa**. At **Pū-'awa-li'i** (Clumps of 'Awa) and in various places between Waipi'o and 'Āwini, it was the custom of the people to "lawai'a manu" practice the netting of birds, like the netting of fish. The nets of the *po'e lawai'a manu* were hidden in the forests, darkened by the mists of **Pōkāhi** (Darkened Place), which settled thickly over the land. Now the lands and mists of **Pōkāhi** were named for the mysterious formed *kūkini* (messenger-runner and cliff leaper) of the chief Ka-la'e.

As Ka-Miki *mā* ⁷ approached Waimanu, they were met by Pōkāhi, who led the visitors to the compound where his chief, Kala'e and his daughter **Ka-wai-kapu** (The Sacred Water) lived. Leaving Ka-Miki *mā* with Kawaikapu, Pōkāhi went to speak with Kala'e, who seeing the strangers called out to Pōkāhi—

E ku'u keiki i ka 'upena ku'u i ka noe o Pōkāhi, he uwahi ke kāpeku a hei ai ka i'a manu o Pū'awali'i!

O my son of the net set down by the mist of Pōkāhi, mist which strikes (confuses) and ensnares the birds of Pū'awali'i, birds that are caught in nets like fish!

Where have these youth come from? How has their journey brought them to you?

Pōkāhi answered, "They have come from the cliff of Heaakekoa and Kawaikapu."

Kala'e responded, "Listen my son, you know my custom, it is forbidden that anyone travel these cliffs without my permission."

To which Pōkāhi answered, "Yes, I know your laws and so it shall be that the mists of

⁷ *Mā* – and companions.

Pōkāhi ensnare the fished birds of Pū'awali'i. Your wish is my command."

Over hearing this conversation, Ka-Miki called out, "I understand that which you have said. So you say that this place is restricted, and no one may pass by?"

Kala'e said, "It is forbidden!"

Ka-Miki then boldly asked, "So you think that you may set boundaries on where travelers may pass by the cliffs, forbidding any to pass this way?"

Kala'e answered, "I am entitled to set the boundaries, forbidding any who have no right to be here. I am the *ali'i kapu* (sacred chief) of these cliffs—

O Kala'e au o Ulu, o Kala'e au o Kawaiho'olana, o Kala'e au i ka 'upena ku'u i ka noe o Pōkāhi o ku'u kūkini āiwaiwa e ku nei!

I am Kala'e of **Ulu**, Kala'e of **Kawaiho'olana**, I am Kala'e of the net which is set down, of the mist of Pōkāhi who is my mysterious messenger awaiting here.

It is so, boastful youth, and it is a clear day (one for easy victory) along the cliffs of the *hula'ana* (swimming trail) of **Kākā'aukī**."

Ka-Miki told Kala'e, "Is that so? You are Kala'e? You who speaks like a child, with a barren head like the heights of Hihīmanu (without wisdom); like a beardless youth (inexperienced), your name should be — *Kala'e heuheu 'ole*" (Kala'e without fuzz [beardless or without pubic hair, i.e., without experience]).

Hearing Ka-Miki's reply, Kala'e was outraged and he called the spear fighting instructor, 'Āwini to bring *Ku'i-a-lau* the famous spear of Kala'e. 'Āwini arrived, and Kala'e called to Ka-Miki, "Stand to meet 'Āwini and Kala'e." Kala'e thrust at Ka-Miki, but Ka-Miki dodged each attack. 'Āwini then attacked with his club *Ku'i-ka-honua-o-peope*, but both Kala'e and 'Āwini were defeated. Kala'e and 'Āwini surrendered and gave up their waylaying of travelers along the cliff trails.

Ka-Miki then turned to Pōkāhi and called to him—

E ke aikāne, ua 'ike maka iho la 'oe iā Ka-Miki i ke aka o ka hauna lā'au a Ka-uluhe-nui-hihi-kolo-i-uka... O Ka-Miki ku'u inoa, no ka miki i nā mea a pau loa a ku'u kūpuna wahine i a'o mai ia'u a 'oia kēia huaka'i e hele nei. Huaka'i hele e ho'opāpā ma nā mea a pau loa a'u i a'o ai me ku'u kūpuna wahine āiwaiwa hiapa'i'ole, a o ka puni koe o ka moku kele i ke kai o Hawai'i nui kua uli 'āina a ka lā e kia'i mau ana i ka nani o nā kuahiwi kūha'o e ha'awe mai la i ku'u kūpuna wahine iā Ka-'ohu-kolo-mai-iluna-o-ka-lā'au...

Hail o companion, you have personally seen Ka-Miki the image of the war club of *Ka-uluhe-nui-hihi-kolo-i-uka*. My name is Ka-Miki, because I am adept in all things taught to me by my ancestress, and this is the nature of my journey. A journey to compete in all of the things which I have learned from my wondrous and foremost expert ancestress — nearly the entire island of *Hawai'i kua-uli* which sails through the sea has been encircled, this land where the sun watches over the extraordinarily beautiful mountains which bear my ancestress *Ka-'ohu-kolo-mai-iluna-o-ka-lā'au* (The mist which creeps atop the forest).

Pōkāhi cried out, "*Auwē!* So this is your ancestress. She is a close relative of my own ancestress who taught me all I know." Thus Pōkāhi and Ka-Miki *mā* understood their

relationship and parted as friends. Ka-Miki, Maka-‘iole and Keahialaka then traveled to Honoke‘ā and entered Kohala. [*Ka Hoku o Hawaii*, December 7, 1916]

Departing from **Ulu** and **Kala‘e**, Ka-Miki *mā* then met the ‘*ōlohe* brothers, Māhu-a-lele and Ka-lele-a-māhu, whose practice it was to waylay travelers along the cliffs of **Nā-hunapalai** (The *Polypodium hymenophelloides* ferns); also called *Nā pali kapu o ka hula‘ana o Nāhunapalai* (The sacred cliffs of the swimming trail of Nāhunapalai).

The cliffs of Nāhunapalai extend from Waimanu across ‘Āwini and into Kohala. There are many famous places along this expansive cliff line between Hāmākua and Kohala. One place is called Kākā-au-kī (Strip the stalk of the ti plant)), an area famed as a treacherous *hula‘ana* (trail section passed by swimming). Because sections of the *ala loa* (trail) along the coast line here were blocked by steep cliffs, travelers were required to cross the *hula‘ana* in the treacherous shark infested waters (stalks of ti plants were thrown into the crossing before swimming, to test if sharks would attack). [*Ka Hoku o Hawaii*, December 14 & 21, 1916]

Po‘e Lawai‘a Manu me Po‘e Kia Manu ***Bird Catching Techniques of the Ancient Hawaiians***

In addition to the references cited in the preceding section, there are a number of traditional accounts describing the *lawai‘a manu*, those people who "fished for birds," and *po‘e kia manu* (people who caught birds with bird lime). The *lawai‘a manu* were particularly noted in the Hāmākua-Kohala mountain lands, where they relied upon the cover of thick mist and clouds to conceal their nets in the forests. One chant which employs poetic symbolism, describing the fishing for birds, was published in the Hawaiian newspaper *Ka Hoku o Hawai‘i*—Kaukini and Pōkāhi are locations on the mountain bluffs of Waipi‘o; Pōkāhi and *Ka-‘ohu-kā-kikepa*, are famed mists of the region; and Ka‘auana is one of the cliff faces of Waipi‘o Valley:

Ua ike ia Kaukini, he lawaia manu,
He upena kuu i ka noe Pokahi
Ua hoopuni ae la i ka ohu Kakikepa

Ke na‘i la i luna o Ka‘auana...

Kaukini is seen, a place where birds
are caught,
A net is set down in the mist of Pōkāhi,
Surrounding the birds like the mist,
Kākikepa (a mist so thick that it
Is worn like a garment)
Which obtains (reaches) the heights
of Ka‘auana...

[*Ka Hoku o Hawaii*, May 26, 1908; Maly, translator]

Other methods of bird catching were also widely practiced by native Hawaiians. Early historical accounts recorded in the 1900s, tell us that traditionally, the rarer birds, whose feathers were sought for ornamental purposes were not killed by the bird catchers. One account from the later period in the life of Kamehameha I, reported that as a result of growing commercial activities in the islands, traditional methods of harvesting resources and catching birds, were changing. Kamakau (1961) wrote:

Troubles that arose were not of his making, and those that had to do with disputes about religion came after his time. He ordered the sandalwood cutters to spare the young trees and, not to let the felled trees fall on the saplings. "Who are to have the young trees now that you are getting old?" he was asked and he answered, "When I die my chief and my children will inherit them." He gave similar orders to bird catchers, canoe makers, weavers of feather capes, wood carvers, and fishermen. These are the acts of a wise and Christian king who has regard for the future of his children, but the old rulers of Hawaii did the same. [Kamakau, 1961:209-210]

While researching various ethnographic records of the Bernice Pauahi Bishop Museum (BPBM), the author reviewed Hawaiian language papers (handwritten and typed) collected by island historian, Theodore Kelsey. Kelsey was born in Hilo in the late 1800s, and spent his entire life speaking with elderly Hawaiian people, collecting their stories, and translating their writings. Among his papers curated at the Bishop Museum (BPBM Archives–SC Kelsey; Box 1.5), are notes on various aspects of Hawaiian culture including bird catching. Kelsey’s informant, was the elder Reverend Nālimu, who shared his account of bird catching, both as a means of providing feathers used for making Hawaiian emblems of royalty, and with other birds, as a food source. While the account references localities in the uplands of ‘Ōla‘a and the Hilo District, it is cited here, as a first-hand description of traditional and customary practices which had broad application in the mountain regions, as those in the Kohala-Hāmākua mountain lands.

The following Hawaiian texts are presented verbatim as recorded by Kelsey in c. 1921 (including his use of diacritical marks). The English translation of the Hawaiian narratives was prepared by the author of this study, and reflects the basic tenor of the Hawaiian narratives. It should be noted here, that in the Hawaiian language, occurrences of certain words naturally imply a specific action or statement:

AHELE MANU

by H.B. Nalimu

Po’e kia manu o Laa, oia ka po’e ahele manu, kekahi me ka laau a kekahi me ka lehua. O ka mea ahele manu ma ka lehua malaila ka puka e hanai kokoke i ka lehua, he puka paa ke-ia. Kekahi piko o ke kaula ma ka la-la o ka ‘ohi’a e paa ai. Elimā, eono paha anana ka lo-ihi o ke aho mai ka puka mai a hiki i ka lima o ke kanaka e paa nei i ka piko o ke aho. A o ka puka aia ma kahi kokoke i ka lehua e kiko aku ai ka manu i ka lehua. I ka wa e lele mai ai ka manu lele no a ku maluna o ke-ia puka e kiko aku i ka lehua. A ia manawa e huki ai ke kanaka i ka piko o ke kaula a paa ka wawae o ka manu. Pii ke kanaka iluna a lawe i ka manu a hana hou aku i kela puka malaila. O ka akakane a me ka ‘iwi, a me ka ‘o-o’ iluna o ka pua lehua. Ahele me ke aho olona’ makalii. Maluna o ka mai’a pala e ahele i’ ai ka manu o-u’.

KĀWILI KĒPAU. *O ke kepau oia ke kohu o ka ‘ulu. E ‘oki-oki ai i ka ‘ulu a kahe mai ke kohu ke’oke’o, a i ka wa e maloo ai ua kohu ‘la i ke ahiahi alaila ua paa a’e ua kohu la. Hele oe e ho-ulu-ulu ke-ia kohu a pau. Ho-ulu-ulu a nui, alaila lilo a’e’la ua’ kohu nei i kepau. Alaila hele oe e ‘ohi i hookahi kukui maka a hemo kona iwi ‘a ‘o kona ‘i’o malama ‘oe kela’. Hele hou oe i ka’ pa-ihi ku-kepau (kind of clover) he pa-ihi ‘ele-ele ia, a hoohui me ke kukui maka, alaila nau a wali ke kukui maka me ka pa-ihi. Hookomo iloko o ke kapa wauke (he mea uaua ia), alaila ‘uwi’ i ka wai o ke kukui a me ka pa-ihi iloko o ka ‘opihi, oia ka “ipuhao” e kupa ‘ai iluna o ke kapuahi. I ka wa e hoomaka ai e paila alaila ‘oki-oki i ke kepau a liilii a hookomo iloko o ke-ia wai kukui me ka pa-ihi i paila ia. Kii elua ni-au ai ‘ole ia, mau laau liilii paha e koali ai iloko o ke-ia wai paila. Pela e hanai a pau kela’ wai a mo’a kela’ kepau. Hookomo iloko o ke poho ‘opihi a i ‘ole he la-i’ a wahi i ka la-i’. Kāwili ‘iuka a’e nei o Mokau-lele. Neenee ke pulu ‘ohi’a o ia wahi ilalo o ka pahoehoe.*

Ilalo no oe e ku ai o ka pahoehoe a hana oe i ke kepau iluna o ka pua lehua. Ina ekolu, eha’ pua lehua au i kāwili ai i ke kēpau alaila i ka wa e pili ai kekahi pua lehua i ka manu alaila alualu a loaa. Pee hou oe iloko o ka pulu ‘ohi’a (kāhi o ka lau ‘ohi’a e luhe ana ilalo, oia ka pulu ‘ohi’a) a pili hou kekahi manu. Opa’ ke poo o ka manu a make. Hookomo iloko o kekahi eke. Hala ekolu paha alaila ho’i, nui ka manu, i hookahi kaau, iwakalua, kanakolu paha. A kela manu makalii; ua momona—kuhikuhi kona i’o, momona. Oia ke kāwili kēpau.

LAAU KIA MANU. *Ekolu, eha’ paha anana ka lo-ihi o ka laau. Kau ia ka pua lehua iluna o ia laau nei mai kekahi ‘ao-ao o ka laau a hiki i kekahi poo o ka laau. Hana elua*

kanaka, kekahi ma kekahi laau a kekahi ma kekahi. Kēpau maluna o ka laau a he mau pua lehua mawaena o ke-ia mau kēpau—he laau kia manu ia l_____. Olaa ka aina kia manu a me Piihonua. Nui ka manu o-o' ma Puu O-o'. Malaila ka po'e kia manu e hele ai a loaa na lei hulu no na lili. O Pana-'ewa kekahi wahi kia manu.

Huki ka laau kia manu iluna mawaena o na 'ohi'a elua. Hana me ka 'upena kekahi. Huki ia iluna ka 'upena, hookahi laau maluna, hookahi laau malalo. He 'upena 'olona' maka hakahaka, a he kaula 'olona' ma na poo. 'Elima, eha', ekolu paha anana kela' 'upena palupalu. Lele no ka manu, paa ka wawae, paa ka pekekeu. Ina' hookahi, elua manu, waiho no pela', oia na manu e kahea ana i na manu e a'e. Nui ka manu, hookuu ilalo ka 'upena a huki hou iluna. He ulu 'ohi'a ma kekahi 'ao-ao a me kekahi 'ao-ao. Oia ka hana ana o ka po'e lawai'a manu. Ho'i i ka hale e wehe ai ka hulu o ka manu 'o-o'. Piha ke po'i i ka hulu a haku lei. Malalo o ka po-ae-ae o ka o-o' oia ka hulu a-a', a maluna o ka piapia oia me pue.

Bird Snaring (or Trapping)

Bird catchers (*kia manu*) of 'Ōla'a were people who snared ('āhele) birds. Some with branches and others with *lehua* blossoms. The individual who snared birds among the *lehua* made a snare (lasso) close to the *lehua* flower, the snare was secured there. One end of the line was securely fastened on the branch of the 'ōhi'a. The cord of perhaps five or six fathoms long, extended from the lasso (on the branch) to the man's hand where the end of the line was held tightly. The snare was placed close to a *lehua* blossom, where the bird would step (*kīko'o*) to the *lehua*. At that time, the man would then pull the end of the cordage and secure the feet of the bird. The man then climbed the tree, took the bird, and he would make the snare there again. The 'akakane ('apapane), the 'i'iwi, and the 'ō'ō were caught up in the *lehua*, snared with fine *olonā* cordage. The 'ō'ū bird was snared while it was on the ripe banana fruit.

Preparing Bird Lime to Kāwili, or Ensnare Birds.

The bird lime (*kēpau*) is made from the sap of the breadfruit. Cut the breadfruit bark and the white sap flows, and when the sap is dry, say in the evening, the sap is hardened. You go and gather the sap. When enough has been gathered, the sap can be made into bird lime. Then you go and gather some raw *kukui*, removing the shell, you keep its meat. You then go and get the "clover" for making bird lime ('ihi-ku-kapu, the *Nasturtium sarmentosum*), it is a black *pā'ihī*, and you mix it with the raw *kukui*. Then you chew it, and the *kukui* and *pā'ihī* become slimy. This is put into a *wauke* bark cloth (it is a tough piece), then the juice of the *kukui* and *pā'ihī* are squeezed into the 'ōpihi (shell), it is the "pot" for cooking the broth over the fire. When it starts to boil, the ('ulu) gum is cut into small pieces and put in the juice of the *kukui* and *pā'ihī* so it can boil. Then get two coconut mid-ribs or perhaps little sticks to stir this boiling juice. This is how it is done until the juice is cooked and becomes the birdlime. It is then placed into the empty 'ōpihi or a *ti* leaf, wrapped up in *ti* leaves. Kāwili is in the uplands adjoining Mokaulele. Then go to where there is low branching 'ōhi'a (*pulu 'ōhi'a*), where the *pāhoehoe* is below.

You are below on the *pāhoehoe*, and you apply the bird lime above around the *lehua* flowers. Now you *kāwili* (twist, i.e. apply) this bird lime in among three or four *lehua* flowers, then when a bird is stuck by one of the *lehua* that blossoms, you free it and it is caught. You then hide again among the low 'ōhi'a branches (a place where the 'ōhi'a tops droop down, that is the *pulu 'ōhi'a*), and catch another bird. You squeeze the birds head and it is killed. It is placed into a bag. Returning (home) perhaps around three o'clock, there are many birds, perhaps forty, twenty, or thirty. Those small birds; when fat—the meat is tasty and sweet. That's how one prepares *kawili kēpau*, or bird lime to ensnare birds.

Snaring Birds on Branches.

The (decoy) branch is perhaps three or four fathoms long. *Lehua* blossoms are placed on this branch, from one side of the branch up to the tip of the branch. Two men do this job, one at one (end of the) branch and one at the other. Bird lime is placed on top of the branch along with many *lehua* blossoms in between this bird lime—this is a bird catchers (*kia manu*) branch [drawn] |_____|. 'Ōla'a and Pī'ihonua are lands of bird catchers. There are many 'ō'ō birds at Pu'u 'Ō'ō. It is there that the bird catchers go to get the feathers for adornments (*lei*) of the chiefs. Pana'ewa is also a place of the bird catchers.

The bird catchers (decoy) branch is pulled in between the 'ōhi'a *lehua* trees. One (person) uses the net. The net is pulled up, one branch is above, one branch is below. It is an open (wide) meshed *olonā* net ('*upena olonā maka hakahaka*), and *olonā* cordage at the tip. It is a soft (pliable) net perhaps five, four, or three fathoms long. As the birds fly their feet are caught, or their wings caught. Now if there are one or two birds, they are left, these are the birds that call out to the other birds. When there are many birds the net is let down (the birds taken), then the net is pulled up again. 'Ōhi'a growth is all around. So this is the work of the "bird-fishers," or *lawai'a manu*. They return to the house and then remove the feathers of the *manu* 'ō'ō. When the container is filled with feathers, a *lei* is made. Below the wing-pit is where the male 'ō'ō bird feathers are, and above on the back by the tail, are the pale yellow feathers. [Nalimu in Kelsey; Bishop Museum, Archives—SC Kelsey; Box 1.5; Maly, translator]

Places on the Mountain Lands

Commemorated in a Mele of the Early 1900s

In 1918, members of the Kainapau-Lindsey family—with generational attachments to the lands of the Kohala and Hāmākua Districts—lamented the passing away of George Lindsey, a son of William and Kaluna Lindsey. He had been born January 26, 1880, and passed away on December 19, 1917. He was eulogized in a very traditional Hawaiian style by his mother Kaluna Lindsey, in a "*Kanikau*" (chant of lament), published in *Ka Hoku o Hawaii* (May 9, 1918). In the chant, Mrs. Lindsey recalled many of the special places that had been traveled to, and were important to the family, and in the life of George Lindsey. Many of the places named are situated in on the mountain lands of Pu'ukapu and neighboring lands. Excerpts from the *kanikau* (translated by Maly), follow here with reference to many of the *pu'u*, and mists and rains which frequented these lands (see Register Map No.'s 872 & 2785 for locations of the named sites):

He Puolo Waimaka no Kuu Keiki Hele Loa o Geo. Lindsey

...Kuu keiki i ka luna o Haumea

I ka uka noe anu o Holokaiea...

...Hoomaha i ka luna o puu Palailai

(a hill in Momoualoea next to Kino)

Kau aku ka manao no Kino

I ka nee a ka ohu i ka liko o ka lehua...

...Kuu keiki mai ka ua Eelekoa

Ka ua halii mai i ka lau o ke Koaie...

...Kuu keiki mai ka luna o Laelae

Ka waiho mai a Puu Pueo

...My son at the heights of **Haumea**

In the cool misty uplands of *Holokaiea*...

...Resting on the heights of **Pālailai** hill

With thoughts of **Kino**

(in the heights of Momoualoea)

Where the mists move across the

Budding *lehua*...

My son from the 'E'elekoa rain showers

(*E'elekoa* is a name of Waimea storms)

The rain which spreads out the leaves
of the *Koai'e*...

My son from the heights of **La'ela'e**

(the plain across Wai'aka-Kauniho,
and a *pu'u*)

Pu'u Pueo is exposed in the distance

(Pu'u Pueo is in the uplands of Mānā)

Kahiko i ke alo o pua ka lehua

*Ka ihona o pau o Kanilio
Kuu keiki i ka wai lele o Kohakohau*

*la wai koiawe lelehuna mai i ka pali...
...Kuu keiki i ka luna o Hoku'ula
I ka ihona la o Palihoni
Alo aku o la luna o Puoaoaka*

*O ka oni ae a Puuki kau mamua
Ilaila kuu kamalei e walea ai
E kilohi ai i ka nani o Waimea...
...Kuu keiki o ke kula o Kaopapa
Ka piina o Palinui me ke Ahukauina
Auau i ka wai o Puuiki*

*He aloha Ouli kau mai luna
la heiau kaulana o ka aina...
Kuu keiki mai ka piina o Kapahukapu
Nana aku o ke kula o Keanuiomano...
Kuu keiki i ka wai o Opeawai*

*Mai ka piha kanaka o Halekalewa...
[Kaluna Lindsey, in *Ka Hoku o Hawaii*; May 9, 1918]*

Adorned in the presence of the
lehua blossoms
The descent is completed at Kanilio
My son at the waterfalls of **Kohākohau**
(one of the streams fed by the Kohala watershed)

The water that splashes from the cliffs...
...My son on the heights of **Hōkū'ula**
Descending along **Palihoni**
In the presence of the heights
of **Pū'oa'oaka**

Pu'uki is set the in front
It is there that my beloved child relaxed
gazing upon the beauty of Waimea...
...My son on the plains of Ka'ōpapa
Ascending Palinui and the Ahukauina
To swim in the waters of Pu'uiki
(Pu'uiki is near the Pauahi-Momoualua boundary, on the road to Kawaihae)
Greetings to 'Ōuli, placed above
That famous temple of the land...
...My son from the ascent of Kapahukapu
Looks to the plains of Keanu'i'ōmanō...
...My son in the waters of 'Ōpe'awai
(below Wai'aka)
From the fullness of people at Halekalewa...

HISTORICAL OBSERVATIONS OF THE KOHALA-HĀMĀKUA MOUNTAIN LANDS

Because the upper mountain lands of the Kohala-Hāmākua region were so thickly forested and boggy—and so remote from populated areas—there was little call for early historic visitors to travel into the interior lands. Below, follow several historical accounts, describing the valleys and plateau lands adjoining the Kohala Mountain Range, recorded between the 1820s to the 1930s. While little information directly pertaining to lands within the Pu‘u o ‘Umi NAR was found in these historical accounts, we do find references to historical activities that would have impacted the forest lands—for example, the cutting of *‘ili-ahi* (sandalwood) and collection of *pulu* (*hāpu‘u* silk) for commercial interests.

The Journal of William Ellis: Lands of the Hāmākua-Kohala Region Described in 1823)

The earliest eye-witness accounts written about the portion of Hāmākua in which Laupāhoehoe Nui is situated, were recorded by English Missionary, William Ellis (Ellis 1963). In August 1823, visited the valleys of the Hāmākua and North Kohala Districts. The primary motive of the journey was to seek out the best locations for establishment of missions and schools. These generally came to be situated in the areas with the largest populations in a given region—in northern Hāmākua, churches and schools were established in Waipi‘o and Waimanu valleys.

In his journal, Ellis noted that Waipi‘o was a place “celebrated in Hawaiian history” (Ellis 1963:262), and he provided readers with a description of the natural environment and Hawaiian community at the time:

...The bottom of the valley was one continued garden, cultivated with taro, bananas, sugar-cane, and other productions of the islands, all growing luxuriantly. Several large ponds were also seen in different directions, well stocked with excellent fish.

A number of small villages, containing from twenty to fifty houses each, stood along the foot of the mountains, at unequal distances on each side, and extended up the valley till projecting cliffs obstructed the view. [Ellis 1963:256]

While in Waipi‘o Valley, Ellis learned of King ‘Umi, traditions associated with him, and described the *heiau* in region:

I spent the morning in taking a drawing of the valley from the sand-hills on the beach; and in examining some large heiaus in the neighbourhood, in reference to which the natives taxed our credulity by the legendary tales they related respecting the numbers of victims which had on some occasions been offered.

In the days of Umi, they said, that king, after having been victorious in battle over the kings of six of the divisions of Hawaii, was sacrificing captives at Waipio, when the voice of *Kuahiro*, his god, was heard from the clouds, requiring more men; the king kept sacrificing, and the voice continued calling for more, till he had slain all his men except one, whom, as he was a great favourite, he refused at first to give up; but the god being urgent, he sacrificed him also, and the priest and himself were all that remained. Upwards of eighty victims, they added, were offered at that time, in obedience to the audible demands of the insatiate demon. [Ellis 1963:260]

Ellis observed that *‘ili-ahi* (sandalwood) was being taken from the mountains above Waipi‘o, for shipment from the valley, as well:

During the afternoon great numbers of men belonging to the valley returned with loads of sandal wood, which they had been cutting in the neighbouring mountains. The wood was much superior to that which we had seen at Waiakea, being high coloured, strongly scented, and sometimes in large pieces nearly a foot in diameter... [Ellis 1963:261]

The nature of the community, and prominence of Waipi'o in Hawaiian history was further described by Ellis in the following narrative:

...According to the number of houses which we have seen, in all 265, there are at least 1325 inhabitants in this sequestered valley, besides populous villages on each side along the coast, which might be easily visited. This circumstance, together with the fertility of the soil, the abundance of water, the facility with which, at most seasons of the year, supplies can be forwarded by water from Kairua or Towaihae, combine to render this an eligible spot for a missionary station... [Ellis 1963:261]

Waipio Celebrated in Hawaiian History

The valley of Waipio is a place frequently celebrated in the songs and traditions of Hawaii, as having been the abode of Akea and Miru, the first kings of the island; of Umi and Riroa, kings who make a prominent figure in their history.

It is also noted as the residence of Hoakau [Hakau], king of this part of the island, who appears to have been one of the Neros of the Sandwich Islands, and whose memory is execrable among the people, on account of his cruelties; and of whom it is reported, that if a man was said to have a fine-looking head, he would send his servants to behead the individual, and bring his head before him, when he would wantonly cut, and otherwise disfigure it. He is said also to have ordered a man's arm to be cut off, and brought to him, only because it was tataued in a manner more handsome than his own. [Ellis 1963:262]

Ellis and party departed from Waipio, and made their way to Waimanu, where again, the party encountered people preparing to ship *'ili-ahi*, harvested from the mountain lands:

After proceeding pleasantly along for five or six miles, we arrived at Waimanu a little before eight o'clock.

We found Arapai, the chief, and a number of his men, busy on the beach shipping sandal-wood on board a sloop belonging to the governor, then lying at anchor in a small bay off the mouth of the valley. He received us kindly, and directed two of his men to conduct us to his house, which was on the opposite side.

The valley, though not so spacious or cultivated as Waipio, was equally verdant and picturesque; we could not but notice the unusual beauty of its natural scenery. The glittering cascades and waterfalls, that rolled down the deep sides of the surrounding mountains, seemed more numerous and beautiful than those at Waipio... [Ellis 1963:264]

...When we arrived at the house of Arapai, we were welcomed by his wife and several members of his family.

Mr. Thurston walked up to the head of the valley, to number the houses and speak to the people. At one of the villages through which he passed, about 150 of the inhabitants assembled, to whom he preached... [Ellis 1963:268]

Departing by canoe from Waimanu on the way to Honokāne (in Kohala), Ellis passed near the shore of Laupāhoehoe, where he observed the near shore lands and learned of a great landslide that in late

1822 or early 1823, had destroyed much of the village of Laupāhoehoe.

Trip from Waimanu to Honokane

...We took an affectionate leave, and then stepped into a canoe, which Arapai had provided to convey us as far as Honokane, the first village in the division of Kohala.

As the canoe pushed off from the shore, we again bade them farewell. When we saw the interesting group standing on the beach, we could not but feel the most lively concern for their welfare, and involuntarily besought the great Redeemer, that his holy Spirit might be poured out upon them, that the seed sown among them might take root in their hearts, and produce an abundant harvest to his praise.

Formation of Laupāhoehoe

After leaving Waimanu, we passed by Laupāhoehoe, a second village of that name on this part of the coast, where, according to the accounts of the natives, about eight or nine months before, an immense mass of rocks had suddenly fallen down. The mountain that remained appeared nearly 600 feet high. The face next the sea was perpendicular, and as smooth as a compact piece of masonry. The rock appeared volcanic, and the different strata of highly vesicular lava were very distinct. In several places we saw the water oozing from the face of the rock 200 or 300 feet from the summit.

The mass that had fallen lay in ruins at the base, where it had formed two considerable hills, filled up a large fish-pond and part of the sea, presenting altogether a scene of wide-spread desolation. [Ellis 1963:271]

The original surface of the ground appeared to have been broken by an earthquake, as some parts were rent by deep chasms, others sunk down six or twelve feet lower than the rest. The shrubs and grass were growing luxuriantly on the upper or original, and lower or fallen surface, while the perpendicular space between them indicated that the latter had recently sunk down from the former.

Wrecks of houses were seen in several places, some partly buried by the ruins, other standing just on the edge of the huge rocks that had fallen from above. Several houses were standing in the neighbourhood, but all seemed deserted.

The natives say that in the evening when the accident took place, a mist or fog was seen to envelop the summits of the precipice, and that after the sun had set, a luminous appearance, like a lambent flame, was observed issuing from and playing about the top, which made them think it was a forerunner of Pele, or volcanic fire. A priest of Pele and his family, residing in one of the villages below, immediately offered his prayer to the goddess, and told the inhabitants that no harm would befall them.

About ten o'clock at night, however, the whole side of the mountain, for nearly half a mile in extent along the shore, fell down with a horrid crash.

Part of two small villages were destroyed, and several of the inhabitants killed, but the natives did not agree as to the numbers; some said twenty were killed, others only eighteen.

The people with whom we talked on the spot, and at other places subsequently, could not recollect having heard the natives who escaped say any thing about an earthquake at the time.

Continuing the journey along the coast, Ellis described the lands passed while paddling to the Kohala valley lands:

Trails Along Kohala Mountain Bluffs

We did not land at this place, but passed close to the shore, and continued to sail along at the base of steep mountains, 500 or 600 feet high; and although nearly perpendicular, they were intersected here and there by winding paths, which we at first thought could be travelled only by goats, but up which we afterwards saw one or two groups of travellers pursuing their steep and rugged way.

About noon we passed Honokea, a narrow valley which separates the divisions of Hamakua and Kohala, and shortly after reached Honokane, the second village in the latter.

Experiences at Honokane

We landed at Honokane, and went through the village to the house of Ihikaina, chief woman of the place, and sister to Arapai, the chief of Waimanu, from which this district is distant about twenty miles. Ihikaina received us kindly, and for our refreshment provided a duck, some vegetables, and a small quantity of excellent goat's milk, large flocks of which are reared by some of the natives for the supply of ships touching at the islands for refreshments.

The valley contained fifty houses. A number of the people collected round the door of the house, and listened to a short address.

Great Land Slide Near Pololu

About 4 p.m. we left Honokane, and passed on to Pololu. On our way we walked over a long tract of fragments of rocks, occasioned by the falling down of a side of the mountain, which took place at the same time that the mass of rocks fell at Laupahoehoe, which we had passed in the forenoon.

It was impossible, without considerable emotion, to walk over these rocks; some of them were broken in small pieces, others in blocks of several tons weight, each lying exactly as it had fallen, the fractures fresh, and the surface hardly discoloured, while the steep side of the mountain from which they had fallen looked as smooth and even as if the mass below had been separated from it only a few minutes before.

In some places between Honokane and Pololu, we had to walk in the sea, where the water was up to the knees, but by watching the surf we passed by without much inconvenience.

Pololu Described

Pololu is a pleasant village, situated in a small cultivated valley, having a fine stream of water flowing down its centre, while lofty mountains rise on either side.

The houses stand principally on the beach, but as we did not see many of the inhabitants, we passed on, ascended the steep mountain [Ellis 1963:273] on the north side, and kept on our way. The country was fertile, and seemed populous, though the houses were scattered, and more than three or four seldom appeared together. The streams of water were frequent, and a large quantity of ground was cultivated on their banks, and in the vicinity... [Ellis 1963:274]

Later, while traveling across land to the South Kohala-Waimea region, Ellis and party again encountered people returning from the mountains, with loads of *'ili-ahi*. He observed:

Thousands of Men Packing Sandal Wood

Before daylight on the 22d we were roused by vast multitudes of people passing through the district from Waimea with sandal wood, which had been cut in the adjacent mountains for Karaimoku, by the people of Waimea, and which the people of Kohala, as far as the north point, had been ordered to bring down to his storehouse on the beach, for the purpose of its being shipped to Oahu.

There were between two and three thousand men, carrying each from one to six pieces of sandal wood, according to their size and weight. It was generally tied on their backs by bands made of ti leaves, passed [Ellis 1963:286] over the shoulders and under the arms, and fastened across their breast. When they had deposited the wood at the storehouse, they departed to their respective homes. [Ellis 1963:287]

While Ellis remained in the lowlands of Kawaihae, Lorrin Thurston traveled to the uplands of Waimea. He learned of several of the lands that make up Waimea, including Pu'ukapu, "the last village" in Waimea:

Mr. Thurston Visits Waimea Population

About five p.m. Mr. Thurston set out on a visit to the inland district of Waimea, having been furnished with a guide by Mr. Young. It was dark when he reached Ouli, a place belonging to the latter, where he put up for the night.

After worship with the people, on the morning of the 26th, Mr. Thurston walked on to Kalaloe, the residence of the chief of Waimea, Kumuokapiki (Stump of Cabbage). Leaving Kalaloe, he walked on to Waiakea [Waiaka], from thence to Waikaloe [Waikoloa], Pukalani, and Puukapu, which is sixteen or eighteen miles from the sea-shore, and is the last village in the district of Waimea. At these places he addressed the people.

The soil over which he had travelled was fertile, well watered, and capable of sustaining many thousand inhabitants. In his walks he had numbered 220 houses, and the present population is probably between eleven and twelve hundred. [Ellis 1963:289]

Missionary Observations:

Lorenzo Lyons in Waimea (1832-1860)

Following Ellis' circuit around Hawai'i, Waimea was selected as the primary station for the district of Kohala, and Northern Hāmākua. On July 16 1832, Lorenzo Lyons (affectionately called "*Makua Laiana*"), one of the most famed and beloved missionaries of all those who came to Hawai'i, replaced Reverend Dwight Baldwin as Minister at Waimea. Lyons' "Church Field" was centered in Waimea, at what is now the historic church 'Imiola, in Waikōloa (Doyle 1953:40 & 57). Lyons remained in Waimea until his death in 1886.

By 1833, Lyons noted that in the Waimea region, "deaths are more numerous than births. Hence the [native] population is decreasing" (Doyle 1953:72). Lyons' journal entry in December of 1834 documents that he, his wife Betsy, and their son Curtis had departed from Waimea and settled in Hāmākua, nearby the 'Ele'io church at Kanahonua. Describing the journey from Waimea, Lyons wrote to his brother:

We have no roads such as you have in America, but we got to Hamakua after a fashion. Mrs. L. was drawn part of the way in a rocking chair attached to the fore wheels of a wagon; a part of the way she was carried in the same chair by natives; and

a part of the way she walked. The little one [their son Curtis] was carried by a native. You would have smiled to have seen how we lived...⁸ [Doyle 1953: 74]

In September 1837, Lyons reported that mumps, and a famine had overtaken the people of Kohala and Hāmākua. As a result of the famine, the people were traveling into the mountains to seek out roots and other foods:

Something like a famine has been raging for about a year. The common food of the people has failed and they have been compelled to resort to the use of roots such as grow wild in the woods and mountains, and yielding by very little nourishment, just enough to prevent starvations and enable the people to walk about some and attend to some of the ordinary business. The famine does not arise from the indolence of the people, but from the ravages of a worm that abounds in Waimea. As soon as food begins to sprout the worm commences the work of destruction... [Doyle 1953: 99-100]

Between 1839 and 1846, Lyons went out into the field at least three times a year to visit the outlying schools and churches, traveling into Waipi'o, Waimanu, and other lands of Hāmākua and Kohala. He at times traveled via trails across the mountains between Waipi'o-Waimanu, and Waimea:

On the way to Hamakua, there is wet weather, a marsh to pass thro', not much unlike Bunyan's Slough of Despond (Mahiki). It is perhaps four miles long—a most dismal place—yet the woods are sometimes vocal with the music of birds... On one route to Hamakua, part of the road is a mere footpath lying thro' a dense wood of *Koa* and *Ohia*. When we have reached the place of my active labor, my native cooks, usually out doors...Night comes on—a light is needed. *Kukui* nut, about the size of a walnut, are strung on splinters of bamboo, resembling when done, a string of dried apples. Fire is procured perhaps by rubbing two sticks together. Then the string of candle nuts is lighted at one end...

...Arose early (Waipio) and intended to go by canoe to Waimanu. A tremendous wave rolled over the canoe and sank it—swept me into the swelling surf—but I was soon in the hands of natives and delivered safely on shore... All drenched in salt water, I made my way to the house a mile distant, got some dry clothes, and set out again, by way of the mountains. Reached Waimanu, held meetings, etc. ...Left for Waimea via the mountains. About sundown reached my quiet home... [Doyle 1953: 109-111]

Because of diminishing support from the American Board of Commissioners for Foreign Missions (A.B.C.F.M.), Lyons reported that he had selected,

"Hawaiian elders who superintended the different parishes—They...labored without remuneration... They conduct schools and meetings on the Sabbath. On week days they visit from house to house, conduct funerals, direct all the simple affairs of the church." [Doyle 1953:122]

By 1860, Lyons reported that his parish members were busily procuring materials and building their formal churches. Among the enterprises was the collection of *pulu* which was exported, in order to pay for lumber and other construction materials. Lyons wrote:

This is very self denying and badly trying labor. It is tedious work to pick it from the ferns, dry it, pack it and take it to the sea side to be shipped. Sometimes they have to descend precipitous rocks and bluffs to get their *pulu*.

⁸ Describing the "road" traveled, Betsy reported, "A part of it is laid over with spongy logs." These were probably *hāpu'u* (tree-fern) logs, as was the custom around the island, in the wet mountain zones.

But when the vessel brings the lumber, then comes the trying time! There are no harbors on the Hamakua shore. Materials must be landed at the best places that can be found, and then only at certain times of the year. In rough weather no landing can be expected... The people have to struggle hard and work long in the water before the last board is safely on the rocks. Then they must have a hard and long pull to get the lumber in from the rocky shore up the steep precipitous paths and thence up to the site of the church... [Doyle 1953:164-165]

Adventures in the Hāmākua-Kohala Mountain Lands and Valleys in 1873

Isabella Bird, was an English woman who was ahead of her time. She traveled solo about Hawai'i, and in the company of native and local guides, exploring many of the remote regions on the Island. Her narratives (Bird 1964) are colorful and filled with important descriptions of landscape, practices and conditions on the island. Of particular interest to the present study, are Bird's narratives of Waimea and Waipi'o. While she did not travel into the deep forest region making up a part of the Pu'u o 'Umi NAR, she did observe the water production of the watershed, and uses it was put to. Bird also included important descriptions of the cattle and sheep industries in 1873, and observed the changing conditions in the environment and island communities.

First trip to the Valley and Falls of Waipi'o (from Hilo)

The prospect below us was very charming, a fertile region perfectly level, protected from the sea by sand hills, watered by a winding stream, and bright with fishponds, meadow lands, *kalo* patches, orange and coffee groves, figs, breadfruit, and palms. There were a number of grass-houses, and a native church with a spire, and another up the valley testified to the energy and aggressiveness of Rome. [Bird 1964:91]

...We three, with Halemanu's daughter as guide, left on horseback for the waterfall, though the natives tried to dissuade us by saying that stones came down, and it was dangerous; also that people could not go in their clothes, there was so much wading... We rode through the beautiful valley till we reached a deep gorge turning off from it, which opens out into a nearly circular chasm with walls 2,000 feet in height, where we tethered our horses. A short time after leaving them, D. said, "She says we can't go further in our clothes," but when the natives saw me plunge boldly into the river in my riding dress, which is really not unlike a fashionable Newport bathing suit, they thought better of it. It was a thoroughly rough tramp, wading ten times through the river, which was sometimes up to our knees, and sometimes to our waists, and besides the fighting among slippery rocks in rushing water, we had to crawl and slide up and down wet, mossy masses of dislodged rock, to push with eyes shut through wet jungles of Indian shot, guava, and a thorny vine, and sometimes to climb from tree to tree at a considerable height. When, after an hour's fighting we arrived in sight of the cascade, but not of the basin into which it falls, our pretty guide declined to go further, saying that the wind was rising, and that stones would fall and kill us, but being incredulous on this point, I left them, and with great difficulty and many bruises, got up the river to its exit from the basin, and there, being unable to climb the rocks on either side, stood up to my throat in the still tepid water till the scene became real to me.

I do not care for any waterfall but Niagara, nor do I care in itself for this one, for though its first leap is 200 feet and its second 1,600, it is so frittered away and dissipated in spray, owing to the very magnitude of its descent, that there is no volume of water within sight to create mass or sound. But no words can paint the majesty of the surroundings, the caverned, precipitous walls of rock coming down in one black plunge from the blue sky above to the dark abyss of water below, the sullen shuddering sound with which pieces of rock came hurtling down among the trees, the thin tinkle of the water as it falls, the full rush of the river, the feathery growth of ferns, gigantic below, but so diminished by the height above, as only to show their presence by the green

tinge upon the rocks, while in addition to the gloom produced [Bird 1964:93] by the stupendous height of the cliffs, there is a cool, green darkness of dense forest, and mighty trees of strange tropical forms glass themselves in the black mirror of the basin... [Bird 1964:93]

Returning towards the seas, from the base of the Waipi'o cliffs, Bird observed:

...We rode among most extensive *kalo* plantations, and large artificial fish-ponds, in which hundreds of gold-fish were gleaming, and came back by the sea shore, green with the maritime convolvulus, and the smooth-bottomed river, which the Waipio folk use as a road. Canoes glide along it, brown-skinned men wade down it floating bundles of *kalo* after them, and strings of laden horses and mules follow each other along its still waters. I hear that in another and nearly unapproachable valley [Waimanu], a river serves the same purpose... [Bird 1964:95]

The same evening, Halemanu, host of Bird and her party conveyed the following observations about the diminishing Hawaiian population and past history of Waipi'o:

...He's very unhappy; he says, "soon there will be no more Kanakas." He told me that this beautiful valley was once very populous, and even forty years ago, when Mr. Ellis visited it, there were 1,300 people here. Now probably there are not more than 200.

Here was the *Puhonua* [*Pu'uhonua*], or place of refuge for all this part of the island. This, and the very complete one of Honaunau, on the other side of Hawaii, were the Hawaiian "Cities of Refuge..." These two sanctuaries were absolutely inviolable. The gates stood perpetually open, and though the fugitive was liable to be pursued to their very threshold, he had no sooner crossed it than he was safe from king, chief, or avenger. These gates were wide, and some faced the sea, and others the mountains. Hither the murderer, the manslayer, the tabu-breaker fled, repaired to the presence of the idol, and thanked it for aiding him to reach the place of security. After a certain time the fugitives were allowed to return to their families, and none dared to injure those to whom the high gods had granted their protection.

In time of war, tall spears from which white flags were unfurled, were placed at each end of the enclosure, and until the proclamation of peace invited the vanquished to enter. These flags were fixed a short distance outside the walls, and no pursuing warrior, even in the hot flush of victory, could pursue his routed foe one foot beyond. Within was the sacred pale of *pahu tabu*, and anyone attempting to strike his victim there would have been put to death by the priests and their adherents. In war time the children, old people, and many of the women of the neighbouring districts, were received within the enclosure, [Bird 1964:96] where they awaited the issue of the conflict in security, and were safe from violence in the event of defeat. These puhonuas contain pieces of stone weighing from two to three tons, raised six feet from the ground, and the walls, narrowing gradually towards the top, are fifteen feet wide at the base and twelve feet high...

In dreadful contrast to this place of mercy, there were some very large heiaus (or temples) here, on whose hideous altars eighty human sacrifices are said to have been offered at one time. One of the legends told me concerning this lovely valley is, that King Umi, having vanquished the kings of the six divisions of Hawaii, was sacrificing captives in one of these heiaus, when the voice of his god, Kuahilo, was heard from the clouds, demanding more slaughter. Fresh human blood streamed from the altars, but the insatiable demon continued to call for more, till Umi had sacrificed all the captives and all his own men but one, whom he at first refused to give up, as he was a great favourite, but Kuahilo thundered from heaven, till the favourite warrior was slain, and only the king and the sacrificing priest remained.

This valley of the "vanquished waters" abounds in legends. Some of these are about a cruel monster, King Hooku [Hakau], who lived here, and whose memory, so far as he is remembered, is much execrated. It is told of him that if a man were said to have a handsome head he sent some of his warriors to behead him, and then hacked and otherwise disfigured the face for a diversion. On one occasion he ordered a man's arm to be cut off and brought to him, simply because it was said to be more beautifully tattooed than his own. It is fifty-four years since the last human sacrifice was exposed on the Waipio altars, but there are several old people here who must have been at least thirty when Hawaii threw off idolatry forever... [Bird 1964:97]

Regarding the cultivation of *kalo* and its importance as a crop in the watered valley of Waipi'o, Bird described a team of pack mules she encountered on her ascent of the Waipi'o trail:

...We started up the tremendous *pali* at the tail of a string of twenty mules and horses laden with *kalo*. This was in the form of *paiai*, or hard food, which is composed, as I think I mentioned before, of the root baked and pounded, but without water. It is put up in bundles wrapped in ti leaves, of from twenty to thirty pounds each, secured with cocoanut fibre, in which state it will keep for months, and much of the large quantity raised in Waipio is exported to the plantations, the Waimea ranches, and the neighbouring districts. A square mile of *kalo*, it is estimated, would feed 15,000 Hawaiians for a year. [Bird 1964:98]

The following excerpts from Bird's letter, describe the ascent to the village of Waimea, from Kawaihae, commenting on the arid nature of the low lands, and forests upon the mountain lands:

Travel from Kawaihae to the Uplands of Waimea

...Every hundred feet of ascent from the rainless, fervid beach of Kawaihae increased the freshness of the temperature, and rendered exercise more delightful. From the fringe of palms along the coast to the damp hills north of Waimea, a distance of ten miles, there is not a tree or stream, though the scorched earth is deeply scored by the rush of fierce temporary torrents... The island is here only twenty-two miles wide, and strong winds sweep across it, whirling up its surface in great brown clouds, so that the uplands in part appear a smoking plain, backed by naked volcanic cones. No water, no grass, no ferns. Some thornless thistles, a little brush of sapless-looking indigo, and some species of compositae struggle for a doleful existence...The red soil becomes suffused with a green tinge ten miles from the beach, and at the summit of the ascent the desert blends with this beautiful Waimea plain, one of the most marked features of Hawaii. The air became damp and cool; miles of fine smooth green grass stretched [1964:131] out before us; high hills, broken, pinnacled, wooded, and cleft with deep ravines, rose on our left; we heard the clash and music of falling water: to the north it was like the Munster Thal, to the south altogether volcanic. The tropics had vanished. There were frame houses sheltered from the winds by artificial screens of mulberry trees, and from the incursions of cattle by rough walls of lava stones five feet high; a mission and court house, a native church, much too large for the shrunken population, and other indications of an inhabited region. Except for the woods which clothe the hills, the characteristic of the scenery is baldness.

On clambering over the wall which surrounds my host's kraal of dwellings, I heard in the dusk strange, sweet voices crying rudely and emphatically, "Who are you? What do you want?" and was relieved to find that the somewhat inhospitable interrogation only proceeded from two Australian magpies. Mr. S. [Spencer] is a Tasmanian, married to a young half-white lady; and her native mother and seven or eight dark girls are here, besides a number of natives and Chinese, and half Chinese, who are employed about the place. Sheep are the source of my host's wealth. He has 25,000 at three stations

on Mauna Kea, and, at an altitude of 6000 feet they flourish, and are free from some of the maladies to which they are liable elsewhere. Though there are only three or four sheep owners on the islands, they exported 288,526 lbs. of [page 147] wool in 1872*. Mr. S— has also 1000 head of cattle and 50 horses.

The industry of Waimea is cattle raising, and some feeble attempts are being made to improve the degenerate island breed by the importation of a few short-horn cows from New Zealand. These plains afford magnificent pasturage as well as galloping ground. They are a very great thoroughfare... ..The altitude of this great table-land is 2500 feet, and the air is never too hot, the temperature averaging 64° Fahrenheit. There is mist or rain on most days of the year for a short time, and the mornings and evenings are clear and cool... [1964:132]

...The moral atmosphere of Waimea has never been a wholesome one. The region was very early settled by a class of what may be truly termed “mean whites,” the “beachcombers” and riff-raff of the Pacific. They lived infamous lives, and added their own to the indigenous vices of the islands, turning the district into a perfect sink of iniquity, in which they were known by [1964:133] such befitting *aliases* as “Jake the Devil,” &c... [1964:133]

From Waimea, Bird traveled again to Waipi’o and Waimanu valleys. Her letters provide us with further descriptions of the native communities, industry of the people—such as fishing, making *olonā* cordage, and the cultivation of *kalo*—and descriptions of the natural environment of the valleys and mountain lands behind them. While traveling in the Waimea-Hāmākua tract to the Waipi’o Valley trail, Bird also observed that herds of wild goats, cattle and pigs” were destroying the forest in the region:

Waimanu Valley. Hawaii.

I am sitting at the door of a grass lodge, at the end of all things, for no one can pass further by land than this huge lonely cleft. About thirty natives are sitting about me, all staring, laughing, and chattering, and I am the only white person in the region. We have all had a meal, sitting round a large calabash of *poi* and a fowl, which was killed in my honour, and roasted in one of their stone ovens. I have forgotten my knife, and have had to help myself after the primitive fashion of aborigines, not without some fear, for some of them I am sure are in an advanced stage of leprosy. The brown tattooed limbs of one man are stretched across the mat, the others are sitting cross-legged, making *lauhala* leis. One man is making fishing-lines of a beautifully white and marvelously tenacious fibre, obtained from an Hawaiian “flax” plant [*olonā*]...

Nearly all the people of the valley are outside, having come to see the *wahine haole*: only one white woman, and she a resident of Hawaii, having been seen in Waimanu before. I am really alone, miles of mountain and gulch lie between me and the nearest whites. This is a wonderful place: a ravine about three miles long and three-quarters of a mile wide, without an obvious means of ingress, being walled in by precipices from 2000 to 4000 feet high. Five cascades dive from the palis at its head, and unite to form a placid river about up to a horse's body here, and deep enough for a horse to swim in a little below. Dense forests of various shades of green fill up the greater part of the valley, concealing the basins into which the cascades leap, and the grey basalt of the palis is mostly hidden by greenery. At the open end, two bald bluffs, one of them 2000 feet in height, confront the Pacific, and its loud booming surf comes up to within one hundred yards of the house where I am writing, but is banked off by a heaped-up barrier of colossal shingle... [Bird 1964:135]

* In 1875 the export of wool had increased to 465,469 lbs.

Waipio, March 5th.

It seems fully a week since I left Waimea yesterday morning, so many new experiences have been crowded into the time. I will try to sketch my expedition while my old friend Halemanu is preparing dinner... My host kindly provided me with a very fine horse and some provisions in a leather wallet, and with another white man and a native accompanied me as far as this valley, where they had some business... [Bird 1964:137] We rode over level grass-covered ground, till we reached the Hamakua bush, fringed with dead trees, and full of ohias and immense fern trees, some of them with a double tier of fronds, far larger and finer than any that I saw in New Zealand. There are herds of wild goats, cattle, and pigs on the island, and they roam throughout this region, trampling, grubbing, and rending, grinding the bark of the old trees and eating up the young ones. This ravaging is threatening at no distant date to destroy the beauty and alter the climate of the mountainous region of Hawaii. The cattle are a hideous breed--all bones, hide, and horns.

We were at the top of the Waipio *pali* at eight, and our barefooted horses, used to the soft pastures of Waimea, refused to carry us down its rocky steep, so we had to walk. I admired this lonely valley far more than before... Against its dewy greenness the beach shone like coarse gold, and its slow silver river lingered lovingly, as though loth to leave it, and be merged in the reckless loud-tongued Pacific...

Halemanu, with hospitable alacrity, soon made breakfast ready, after which Mr. S., having arranged for my further journey, left me here, and for the first time I found myself alone among natives ignorant of English. For the Waimanu trip it is essential to have a horse bred in the Waimanu Valley and used to its dizzy palis, and such a horse was procured, and a handsome native, called Hananui, as guide. We were away by ten, and galloped across the valley till we came to the nearly perpendicular *pali* on the other side... [Bird 1964:138]

Between the summit and Waimanu, a distance of ten miles, there are nine gulches, two of them about 900 feet deep, all very beautiful, owing to the broken ground, the luxuriant vegetation, and the bright streams, but the *kona*, or south wind, was blowing, bringing up the hot breath of the equatorial belt, and the sun was perfectly unclouded, so that the heat of the gorges was intense. They succeed each other occasionally with very great rapidity. Between two of the deepest and steepest there is a ridge not more than fifty yards wide.

Soon after noon we simultaneously stopped our horses. The Waimanu Valley lay 2500 feet (it is said) below us, and the trail struck off into space. It was a scene of loneliness to which Waipio seems the world. In a second the eye took in the twenty grass lodges of its inhabitants, the five cascades which dive into the dense forests of its upper end... The track is as steep and broken as that which goes up from hence, but not nearly so narrow, and without its elements of terror, for kukuis, lauhalas, ohias, and *ti* trees, with a lavish growth of ferns and trailers, grow luxuriantly in every damp rift of rock, and screen from view the precipices of the *pali*...

There were four houses huddled between the *pali* and the river, and six or eight, with a church and schoolhouse on the other side; and between these and the ocean a steep narrow beach, composed of large stones worn as round and smooth as cannon balls, on which [Bird 1964:139] the surf roars the whole year round. The *pali* which walls in the valley on the other side is inaccessible. The school children and a great part of the population had assembled in front of the house... An old man, clothed only with his dark skin, was pounding baked *kalo* for *poi*, in front of the house; a woman with flowers in her hair, but apparently not otherwise clothed, was wading up to her waist in the

river, pushing before her a light trumpet-shaped basket used for catching shrimps, and the other women wore the usual bright-coloured chemises...

Beyond the houses the valley became a jungle of Indian shot (*Canna indica*), eight or nine feet high, guavas and ohias, with an entangled undergrowth of ferns rather difficult to penetrate, and soon Hananui, whose soul was hankering after the delights of society, stopped, saying, "Lios (horses) no go." "We'll try," I replied, and rode on first... [Bird 1964:140] We fought our way a little further, and then he went out of sight altogether in the jungle... H. had never been any further, and as I failed to make him understand that I desired to visit the home of the five cascades, I had to reverse our positions and act as guide. We crept along the side of a torrent among exquisite trees, moss, and ferns, till we came to a place where it divided. There were three horses tethered there, some wearing apparel lying on the rocks, and some human footprints along one of the streams, which decided me in favour of the other. H. remonstrated by signs, as doubtless he espied an opportunity for much gossip in the other direction, but on my appearing persistent, he again laughed and followed me... [Bird 1964:141]

After an hour of wading we emerged into broad sunny daylight at the home of the five cascades, which fall from a semicircular precipice into three basins. It is not, however, possible to pass from one to the other. This great gulf is a grand sight, with its dark deep basin from which it seemed so far to look up to the heavenly blue, and the water falling calmly and unhurriedly, amidst innumerable rainbows, from a height of 3000 feet. The sides were draped with ferns flourishing under the spray, and at the base the rock was very deeply caverned. I enjoyed a delicious bath, relying on sun and wind to dry my clothes, and then reluctantly waded down the river. At its confluence with another stream, still arched by ohias, a man and two women appeared rising out of the water, like a vision of the elder world in the days of Fauns, and Naiads, and Hamadryads. The water was up to their waists, and leis of *ohia* blossoms and ferns, and masses of unbound hair fantastically wreathed with moss, fell over their faultless forms, and their rich brown skin gleamed in the slant sunshine. They were catching shrimps with trumpet-shaped baskets, perhaps rather a prosaic occupation. They joined us, and we waded down together to the place where they had left their horses. The women slipped into their holukus, and the man insisted on my riding his barebacked horse to the place where we had left our own, and then we all galloped over the soft grass... [Bird 1964:142]

In old days it is said that a king of Hawaii assembled most of the adults of the then populous island, and formed a human chain three miles long to pass up stones for the building of the great *Heiau* in Kona. It is said that this valley had 2000 inhabitants forty years ago, but they have dwindled to 117. The former estimate is probably not an excessive one, for nearly the whole valley is suitable for the culture of *kalo*, and a square mile of *kalo* will feed 15,000 natives for a year. [Bird 1964:144]

Two women were shrimping in the river, the children were swimming to school, blue smoke curled up into the still air, *kalo* was baking among the stones, and a group of women sat sewing and making leis on the ground. The Waimanu day had begun; and it was odd to think that through the long summer years days dawned like this, and that the people of the valley grew grey and old in shrimping and sewing and *kalo* baking. All Waimanu shook hands with me, the kindly "*Aloha*" filled the air, and the women threw garlands over us both... [Bird 1964:145]

George Bowser's "Directory and Tourists Guide" (1880)

George Bowser, editor of "*The Hawaiian Kingdom Statistical and Commercial Directory and Tourists Guide*" (1880) wrote about various statistics and places of interest around the Hawaiian Islands. In the following excerpts from "An Itinerary of the Hawaiian Islands..." (Chapter IV Hawai'i), Bowser

describes the Waimea region, ranching interests, and the journey between Waimea, Kalai'eha, and the summit of Mauna Kea.

...Waimea has always been a place of some considerable importance, and there are around it several pretty homesteads, notably the residences of Mr. F. Spencer and the Reverend Mr. Lyons. From Mr. Spencer's veranda there is a striking view of Maunakea, the summit of which was at this time of the year still in its winter robe of snow. The snow never leaves this mountain-top entirely, but the position of the snow-line varies considerably with the season of the year, and also from one year to another, according to the weather which characterizes them. The country all round is chiefly suitable for grazing, and, besides innumerable wild cattle, descended, no doubt, from those which Vancouver gave to Kamehameha I, there are some 20,000 head depastured in the neighborhood, the property of Mr. Parker, who has, besides, some large droves of horses, probably numbering a thousand head in all. Mr. Spencer has turned his attention chiefly to sheep farming, and occupies a large tract of country with his flock of 15,000 sheep and 15,000 goats. Waimea itself, although of immemorial age, and once populous, is now only a scattered village, with but two stores and a boarding and lodging house and coffee saloon. Good accommodation can, however, be procured by the traveler.

On March 23d, I set out from Waimea to visit the north Kohala district... The road I had now to follow is only a track running through and skirting a range of mountain. For some eight or ten miles at the outset it is very steep and very stony, but after that, for the remainder of the way, about seventeen miles, it is over well-grassed mountain country, and is pleasant riding, with a grand view of the sea all the way... [Bowser 1880:540]

Bowser returned to Waimea from North Kohala, offering readers a description of the water source of Kohala Mountains, which in the early 1900s came to play an important role in the development and expansion of the ranch to the Waikōloa, Waiki'i, and Ke'āmoku section lands:

The mountain which divides North from South Kohala is called Kaala. Near its summit is a very pretty lake which is the source of the Waimea River, a never-failing stream. This lake is very difficult of access, and few foreigners have ever visited it. The way there is, however, quite practicable to the man who does not fear fatigue; and the views obtained from the summit will repay those who adventure the ascent. The height of the mountain is nearly 6,000 feet, and the views from it are uninterrupted in almost all directions, including a most magnificent panorama, almost a bird's-eye view of the Waipio Valley, with its winding streams and grand precipices.

I turned my back with a feeling of reluctance on the rich district of North Kohala, and retraced my steps to Waimea... [Bowser 1880:544]

The district surrounding Waimea is capable of producing most of the ordinary crops of a temperate climate, such as wheat, barley, oats maize, beets, turnips, mangel-wurzel, onions, potatoes and all sorts of vegetables. In the neighboring district of Hamakua, coffee, tobacco and cotton may be grown. In no part of the Kingdom does the guava grow to such perfection as in the Hamakua district. Its fruit is there quite as large as an orange. Three varieties of it are grown-the sour, the sweet and the strawberry guava.

No better opportunity can present itself throughout my journey than when speaking of these rich districts of Kohala and Hamakua, to enumerate for the benefit of the tourist the different fruits that grow wild in the Hawaiian Islands, and give some account of them, and of the seasons at which they ripen. I must give the first place to the mountain strawberry, which is very plentiful all round the three lofty mountains of Hawaii and on

Haleakala. It is ripe in June, July and August. The mountain apple grows all over the Islands, at about 800 feet from the sea level... [page 545] To this list I have to add the more familiar forms of the mango...the orange, lime, citron, lemon and bananas, in great variety. Add to these the bread-fruit, tamarind and the rose-apple... [Bowser 1880:546]

The Hamakua Ditches

H.W. Kinney's "Visitor's Guide" (1913)

In 1913, H.W. Kinney published a visitor's guide to the island of Hawai'i. In it, he included descriptions of the land and communities at the time, historical accounts of events, and descriptions of sites and practices that might be observed by the visitor. Of particular interest to the present study, Kinney also reported on the workings of the Hāmākua Ditches and the mountain lands feeding them:

The great Hamakua ditch system, consisting of a lower and an upper ditch, used to supply water for irrigation and fluming for the Hamakua plantations, affords one of the most splendid scenic attractions of the Islands, as the ditches are accompanied by trails which lead far into the mountain fastnesses, where there is a wealth of wild and impressive scenery. The ditches and trails are also interesting as splendid engineering feats [Figure 2].

The Lower Ditch reaches as far as the lands of the Paauilo Plantation. It gathers its water from the four great valley into which Waipio is split. These are, in order from Kukuihaele northwards, Waima, Koiawe, Alakahi and Kawainui. At each of these is an intake where the water is led into the ditch or rather tunnel, for the entire mountain section is, with the exception of the few places where it has been necessary to cross gulches by means of flumes, an enclosed tunnel about nine miles long. The trails runs along the ridges where the tunnel cuts through. It leads to all the intakes, at each of which is a Japanese keepers house, with a telephone. The trail often passes along precipices where the fall to the bottom of the valley is a couple of thousand feet sheer [Figure 3], and the rise the same distance straight up. It should not be traversed except on mountain horses or on foot. It begins a bit below the Waipio *pali*, or may be reached by a path through the cane fields starting at the ditch company headquarters. It is a fine stone paved trail, easily wide enough for a horse, and only its position provides the element of danger, which my be eliminated by care. It leads

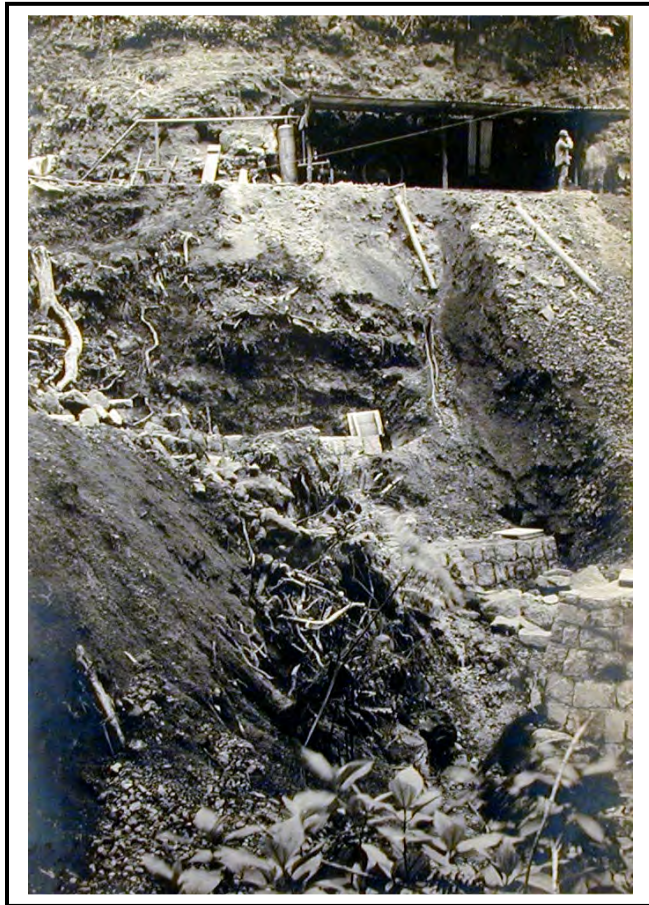


Figure 2. Flume Piers Crossing Head of Waipio Valley, and Air Compressor Plant for Tunnel (1908). Leighton Photograph No. 124, in collection of U.S. Geological Survey, Denver Library. (Copy Photo No. KPA-N316)

above the Hiilawe fall to the Kawainui intake, and between Waima and Koiawe a trail leads down into the Waipio valley. It is fairly steep at places, but can without difficulty be made on horseback, across several fords, and leads through the Waipio village to Kukuihaele. A conspicuous feature thereon is the grave of Thos. Kelly, a ditch employee who was drowned trying to cross a stream in flood time. From the end of the ditch trail to Kukuihaele either way is about eight miles.



Figure 3. McCrossen and Campbell on the Construction Trail at Waipio (1909).
Mendenhall Photograph No. 835, in collection of U.S. Geological Survey, Denver Library. (Copy Photo No. KPA-N209)

The Upper Hamakua Ditch takes its water from the four gulches which feed the lower ditch, but at a much higher elevation. The trail is also a good one and presents some even grander mountain scenery, as well as some rare birds eye views of Waipio and the surrounding country. The trail begins where the ditch crosses Mud Lane, about six miles from Kukuihaele. It is good and absolutely safe as far as Waima. Here it passes along a steep precipice which even ditch employees prefer to pass [Kinney 1913:41] on foot, although the trail is very good. This section may be avoided by taking another trail which leads up to the ditch form Waimea, and which strikes the main trail at Koiawe, whence one may enjoy the rest of the trail to Alakahi and Kawainui, horseback, in perfect safety. From the junction of the trails to Kawainui is about four miles, and to Waima about two miles. [Kinney 1913:42]

The Valley Lands in the 1930s

In the 1930s, E. S. Craighill Handy, conducted an ethnographic study of native Hawaiian customs of agriculture. Handys' work (1940), relied on literature and documentary resources, and information provided by native practitioners. Handy provided readers with the following summary of the agricultural practices in the Hāmākua-Kohala Valley lands:

Waipio. The greatest wet-taro valley of Hawaii and one of the largest planting areas in the entire group of islands was Waipio. This vast, flat valley floor was completely

developed in terraces for an area about 3 miles long and 1 to 0.75 mile wide. Some artificial fishponds took the place of terraces behind the sand dunes flanking the beach. The two large present-day fishponds west of the bay are said to have been one great terrace in the time of King Umi. This terrace was called *umilo'i*, according to Jenny Saffrey, the most eminent living authority on local history. The taro planted in *umilo'i* by the *alii* was *tapu* and was used by the people of the valley only when there was a dearth of food.

Besides the main body of terraces on the flat floor of the valley there were terraces up Hiilawe Valley; beyond the area of flatland in the main valley for several miles up Waipio Stream; and in the side valleys of Waima, Koiawe, Alakahi, and Kawainui. In 1935 many more terraces were planted in taro than in 1931, when previously visited. During the era of rice growing the lower flatlands of Waipio Valley proper were devoted mainly to rice culture by Chinese. At present, perhaps a quarter of the lower valley produces taro; many old terraces serve for pasturing horses, and the rest are neglected. The interior sections of the main valley and of the inner valleys are now a jungle of guava, *kukui*, and other wild growths...

Waimanu. Waimanu was second only to Waipio as a wet-taro valley. The flatland of the main valley averages about a third of a mile wide and 1.5 miles long and is said to have been completely developed in taro patches. Beyond this, terraces extended 1.5 miles farther up the valley of Waimanu Stream and into the section known as Kealai, where three small streams come down the western slope of the valley and enter Waimanu. I am told that the terraces extended a mile up Waihilau Valley, which opens into Waimanu from the southwest. [Handy, 1940:123]

Coastal strip, between Waimanu and Pololu. A little over a mile north-west of Waimanu is the tongue of land at the base of the cliffs known as Laupahoehoe. Here, I am told, there were a number of terraces which are now unused. Just beyond Laupahoehoe is a narrow strip of land named Nakooka where there were terraces (between Paopao and Kukui Gulches). Less than a mile beyond this there were terraces on a narrow strip of land named Apua between Waimaile and Waikalua Streams. Continuing westward there was another group of terraces between Ohiahuaea and Oniu Streams on land named Kawaikapu. Just east of Honopue Valley, on flats below the cliffs were terraces on land named Makakiloia. The valley of Honopue which has flatland in its lower part—about a quarter of a mile wide and three quarters of a mile long—was developed in terraces. Beyond this the terraces continued wherever practicable for about half a mile up the narrower portion of the valley.

In the forest zone on the slopes between Pololu and Waipio and in the gulches and upper valleys grows the usual light green *Aweu* wild taro. In addition to this *kamaaina* informants say that the following varieties are found today, having run wild from early planting in the forest area: *Ulaula*, *Kumu*, *Lauloa*, *Poni*, *Mana ulu*, *Mana pikipiki* (having white corm and petiole) *Palai'i*, *Wewehiwa*, and *leie*. In the forest zone of the Hamakua coast east of Waipio, taro used to be planted and presumably may be found growing wild today. [Handy 1940:124]

THE KOHALA-HĀMĀKUA MOUNTAINS DESCRIBED IN LAND TENURE DOCUMENTS SURVEY RECORDS, AND GOVERNMENT COMMUNICATIONS

The most detailed descriptions of the Kohala-Hāmākua mountain lands, including documentation of traditional and customary rights, are those found in the Kingdom collections, documenting the history of land tenure, and defining the boundaries of *ahupuaʻa* in the Kohala-Hāmākua Districts. This section of the study presents readers with the laws of the Hawaiian Kingdom, which established fee-simple land ownership and codified native tenant rights. Subsequent to the definition of land rights, the Kingdom set about the processes to determine the metes and bounds of the lands which had been granted in fee-simple interest to various parties. As a result, detailed oral testimonies from elder native tenants were taken in court proceedings, which further documented the occurrence of traditional and customary practices, and nature of the resources within given *ahupuaʻa*. In those records, which follow below, we learn of the traditional knowledge and occurrence of native practices in the lands which today are a part of, and adjoin the Puʻu o ʻUmi NAR.

The Māhele ʻĀina (Land Division)

In Hawaiʻi prior to western contact, all land, ocean and natural resources were held in trust by the high chiefs (*aliʻi ʻai ahupuaʻa* or *aliʻi ʻai moku*). The use of land, fisheries and other resources was given to the *hoaʻāina* (native tenants) at the prerogative of the *aliʻi* and their representatives or land agents (*konoiki*), who were generally lesser chiefs as well. By 1845, the Hawaiian system of land tenure was being radically altered, and the foundation for implementing the Māhele ʻĀina (a fee-simple right of ownership) was set in place by Kamehameha III.

Following implementation of the *Māhele*, the King also initiated a land grant program, issuing fee-simple “Royal Patents” on granted land. In addition to the sale of fee-simple interests in land, the Crown and Government lands were also made available for leases and, in some cases, for sale. Together, these three land programs opened the door for the development of the large ranching interests in Waimea, and the larger Kohala-Hāmākua Districts.

On December 10th, 1845, King Kamehameha III (Kauikeaouli), signed into law “Article IV. —of The Board Of Commissioners to Quiet Land Titles,” a joint resolution defining the responsibilities of the Board of Commissioners. Several actions were implemented by this law, among them:

SECTION I. His Majesty shall appoint through the minister of the interior, and upon consultation with the privy council, five commissioners, one of whom shall be the attorney general of this kingdom, to be a board for the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any landed property acquired anterior to the passage of this act; the awards of which board, unless appealed from as hereinafter allowed, shall be binding upon the minister of the interior and upon the applicant...

SECTION VII. The decisions of said board shall be in accordance with the principles established by the civil code of this kingdom in regard to prescription, occupancy, fixtures, native usages in regard to landed tenures, water privileges and rights of piscary, the rights of women, the rights of absentees, tenancy and subtenancy, — primogeniture and rights of adoption; which decisions being of a majority in number of said board, shall be only subject to appeal to the supreme court, and when such appeal shall not have been taken, they shall be final...

Section IX. The minister of the interior shall issue patents or leases to the claimants of lands pursuant to the terms in which the said board shall have confirmed their respective claims, upon being paid the fees of patenting or of leasing (as the case may be)... [In the Polynesian; January 3, 1846:140]

As the *Māhele* evolved, it defined the land interests of Kauikeaouli (King Kamehameha III), some 252 high-ranking *Ali'i* and *Konohiki*, and the Government. As a result of the *Māhele*, all land in the Kingdom of Hawai'i came to be placed in one of three categories: (1) Crown Lands (for the occupant of the throne); (2) Government Lands; and (3) *Konohiki* Lands. The "Enabling" or "*Kuleana* Act" of the *Māhele* (December 21, 1849) further defined the frame work by which *hoa'āina* (native tenants) could apply for, and be granted fee-simple interest in "*Kuleana*" lands (cf. Kamakau in *Ke Au Okoa* July 8 & 15, 1869; 1961:403-403). The *Kuleana* Act also reconfirmed the rights of *hoa'āina* to access on trails, subsistence and collection of resources necessary to their life upon the land in their given *ahupua'a*. The *Kuleana* Act, remains the foundation of law pertaining to native tenant rights. The Act was passed on August 6, 1850, and reads:

An Act confirming certain resolutions of the King and Privy Council passed on the 21st day of December 1849, granting to the common people allodial titles for their own lands and house lots, and certain other privileges... That the following sections which were passed by the King in Privy Council on the 21st day of December A.D. 1849 when the Legislature was not in session, be, and are hereby confirmed, and that certain other provisions be inserted, as follows:

Section 1. Resolved. That fee simple titles, free of commutation, be and are hereby granted to all native tenants, who occupy and improve any portion of any Government land, for the land they so occupy and improve, and whose claims to said lands shall be recognized as genuine by the Land Commission; Provided, however, that the Resolution shall not extend to Konohikis or other persons having the care of Government lands or to the house lots and other lands, in which the Government have an interest, in the Districts of Honolulu, Lahaina and Hilo.

Section 2. By and with the consent of the King and Chiefs in Privy Council assembled, it is hereby resolved, that fee simple titles free of commutation, be and are hereby granted to all native tenants who occupy and improve any lands other than those mentioned in the preceding Resolution, held by the King or any chief or Konohiki for the land they so occupy and improve. Provided however, this Resolution shall not extend to house lots or other lands situated in the Districts of Honolulu, Lahaina and Hilo.

Section 3. Resolved that the Board of Commissioners to quiet Land titles be, and is hereby empowered to award fee simple titles in accordance with the foregoing Resolutions; to define and separate the portions belonging to different individuals; and to provide for an equitable exchange of such different portions where it can be done, so that each man's land may be by itself.

Section 4. Resolved that a certain portion of the Government lands in each Island shall be set apart, and placed in the hands of special agents to be disposed of in lots of from one to fifty acres in fee simple to such natives as may not be otherwise furnished with sufficient lands at a minimum price of fifty cents per acre.

Section 5. In granting to the People, their House lots in fee simple, such as are separate and distinct from their cultivated lands, the amount of land in each of said House lots shall not exceed one quarter of an acre.

Section 6. In granting to the people their cultivated grounds, or *Kalo* lands, they shall only be entitled to what they have really cultivated, and which lie in the form of cultivated lands; and not such as the people may have cultivated in different spots, with the seeming intention of enlarging their lots; nor shall they be entitled to the waste lands.

Section 7. When the Landlords have taken allodial titles to their lands the people on each of their lands shall not be deprived of the right to take firewood, aho cord, thatch, or ti leaf from the land on which they live, for their own private use, should they need them, but they shall not have a right to take such articles to sell for profit. They shall also inform the Landlord or his agent, and proceed with his consent. The people shall also have a right to drinking water, and running water, and the right of way. The springs of water, and running water, and roads shall be free to all should they need them, on all lands granted in fee simple. Provided, that this shall not be applicable to wells and water courses which individuals have made for their own use. Done and passed at the Council House, Honolulu this 6th day of August 1850. [copied from original hand written “Enabling Act”⁹ – HSA, DLNR 2-4]

The most important source of documentation that describes native Hawaiian residency and land use practices — identifying specific residents, types of land use, crops cultivated, and features on the landscape — is found in the records of the *Māhele ‘Āina*. While the “Land Division” gave the *hoa‘āina* an opportunity to acquire fee-simple property interest (*kuleana*) on land which they lived and actively cultivated, the process required them to provide personal testimonies regarding their residency and land use practices. As a result, records of the *Māhele ‘Āina* present readers with first-hand accounts from native tenants generally spanning the period from ca. 1819 to 1855. The lands awarded to the *hoa‘āina* became known as “*Kuleana Lands*” and all the claims and awards (the Land Commission Awards or L.C.A.) were given *Helu* (numbers). The L.C.A. numbers remain in use today, and identify the original owners of lands in Hawai‘i.

The work of the Land Commission was brought to a close on March 31, 1855. The program met with mixed results, and it has been calculated that the total amount of land awarded to *hoa‘āina* (native tenants – the common people of Hawai‘i) equaled approximately 28,658 acres, of a total four million available acres (see Governor’s report 1902:7).

Disposition of Primary Lands of the Pu‘u o ‘Umi Natural Area Reserve in the Māhele

The lands which make up the Pu‘u o ‘Umi NAR include *ahupua‘a* and *‘ili* belonging to the Kohala and Hāmākua Districts. In the *Māhele*, the following division of lands was agreed to by the King and participating *ali‘i* (all page references are to the “*Buke Mahele*” 1848):

<i>Awini</i>	Relinquished by Kalaeokekoi to Kina Kamehameha III [pp. 35-36] Granted by King to Government Land Inventory [pp. 198-199]
<i>Honokaneiki & Honokanenui</i>	Retained by V. Kamamalu [pp. 3-4]
<i>Kahuaiki</i>	Retained by V. Kamamalu [pp. 3-4]
<i>Kahuanui</i>	Retained by Lot Kapuaiwa Kamehameha [pp. 7-8]
<i>Kawaihae Hikina</i>	Retained by Keoni Ana [pp. 160-161]
<i>Kawaihae Komohana</i>	Relinquished by M. Kekauonohi to King Kamehameha III [pp. 25-26] Retained by King Kamehameha III [p. 194]

⁹ See also “*Kanawai Hoopai Karaima no ko Hawaii Pae Aina*” (Penal Code) 1850.

<i>Laupahoehoeiki</i>	Relinquished by Kalaeokekoi to King Kamehameha III [pp. 35-36] Granted by King to Government Land Inventory [pp. 187]
<i>Laupahoehohenui</i>	Retained by Kalaeokekoi [pp. 35-36]
<i>Ouli</i>	Retained by J.Y. Kanehoa [pp. 160-161]
<i>Puukapu</i>	Relinquished by M. Kekauonohi to King Kamehameha III [pp. 27-28] Retained by King Kamehameha III [p. 194]
<i>Waiaka 1</i>	Retained by Kamaikui [pp. 162-163]
<i>Waiaka 2</i>	Retained by Gini Lahilahi [pp. 162-163]
<i>Waimanu</i>	Relinquished by N. Namauu to King Kamehameha III [pp. 174-175]
<i>Waimea</i>	Retained by King Kamehameha III [p. 194]
<i>Waipio</i>	Retained by H. Kalama [pp. 146-147]

Within these lands, *hoa'āina* also made claims for small *kuleana*. Our review of all records of the Māhele revealed that the following number of claims were made in these lands¹⁰:

<i>Ahupuaa</i>	<i>Claims</i>	<i>Awarded</i>	<i>Not Awarded</i>
<i>Awini</i>	0	0	0
<i>Honokaneiki & Honokanenui</i>	6	4	2
<i>Kahuaiki & Kahuanui</i>	1	0	1
<i>Kawaihae 1 & Kawaihae 2</i>	19	13	6
<i>Laupahoehoe iki & Laupahoehoe nui</i>	3	3	0
<i>Ouli</i>	6	1	5
<i>Puukapu</i>	20	13	7
<i>Waimanu</i>	15	14	1
<i>Waimea</i> (and outlying 'ili other than Ouli and Pu'ukapu)	66	47	19
<i>Waipio</i>	109	92	17

None of the claims by *hoa'āina* appear to have identified uses or parcels within what is now a part of the Pu'u o 'Umi NAR, though it is understood (based on traditional and customary practices, and the

¹⁰ The on-going research of *Kumu Pono Associates LLC* in the nearly 60,000 records of the *Māhele 'Āina*, may lead to modifications in these numbers at a later date.

laws cited above) that native tenants of the lands would have accessed the mountain lands in order to collect resources or participate in other traditional practices. Significant testimonies documenting travel and traditional activities in the upper forests between the Kohala and Hāmākua mountain lands were recorded in between 1865 to 1905, in the proceedings of the Boundary Commission (see records below).

***Proceedings of the Boundary Commission:
Documenting Traditional and Customary Practices,
and Land Boundaries (1866-1905)***

In 1862, a Commission of Boundaries (the Boundary Commission) was established in the Kingdom of Hawai‘i to legally set the boundaries of *ahupua‘a* that had been awarded to *Ali‘i*, *Konohiki*, and foreigners during the *Māhele*. By the middle 1860s, land owners and their lessees were petitioning to have the boundaries of their respective lands—which were the foundation of ranching interests on Hawai‘i—settled. Initially, G.M. Robertson began taking testimonies from native residents of the Waimea region early in the Commission’s history. Following Robertson’s death, brothers, Rufus and Fredrick Lyman continued the work and collection of detailed testimonies for the Third and Fourth Judicial Circuits (Island of Hawai‘i).

In 1874, the Commissioners of Boundaries were authorized to certify the boundaries for lands brought before them (W.D. Alexander in Thrum 1891:117-118). The primary informants for the boundary descriptions were old native residents (generally born between the 1780s to 1820s) of the areas being discussed. The native witnesses usually spoke in Hawaiian, and their testimony was translated into English and transcribed as the proceedings occurred.

Readers will note that there are significant inconsistencies in spelling of various words, including place names, people names, and features on the landscape. This is problematic, but with the help of maps produced as a part of the surveys to establish boundaries, and other period maps, many of the locations described can be identified. We have also observed that in some testimonies, when the original translator-transcriber used two of the same vowels, it indicated that he/she heard a lengthened pronunciation of a particular vowel. This emphasis of pronunciation is now indicated by a macron mark—for example, the word “*neenee*” (for *nēnē*), the native goose formerly hunted on the mountain lands. While in the modern context of the language, two of the same vowels are generally both pronounced, and broken by an ‘*okina* or glottal mark.

The narratives cited below, are verbatim transcripts from the testimonies given by native residents or land owners, and those given by surveyors who recorded the boundaries based on the testimony of native guides. The testimonies include descriptions of the primary lands which rise up from the ocean from both the Hāmākua and Kohala Districts (in the case of Pu‘ukapu, from the Waimea plateau lands), to the Kohala Mountain, and which form the region in which the Pu‘u o ‘Umi Natural Area Reserve is located. These native land divisions include the *ahupua‘a* and ‘*ili* of Kahuā nui and Kahuā li‘ili‘i, Kawaihae 1st and Kawaihae 2nd, ‘Ōuli, Pu‘ukapu and Waimea, and Waikā, in the District of Kohala; and the *ahupua‘a* of Honokāne iki & nui, Laupāhoehoe iki & nui, Waipi‘o, and Waimanu, in the district of Hāmākua (see *Figure 4.*, depicting locations of primary mountain boundaries described in testimonies).

The native testimonies describe a wide range of traditional practices including—travel; land use; resource collection; the traditional practices associated with the collection of or “hunting” birds; and the subsequent practices associated with hunting introduced ungulates—all under the control of *Konohiki*¹¹; and changes in the landscape. It is of importance to note that the boundaries were known

¹¹ In regards to hunting, it will be noted that descriptions of traditional hunting practices are limited to native species of birds, including the *ua‘u*, *nēnē*, *mamo* and ‘*ō‘ō*; while descriptions of historical hunting practices are limited to goats, which were hunted under contract of *Konohiki*, the Crown, or the Government.

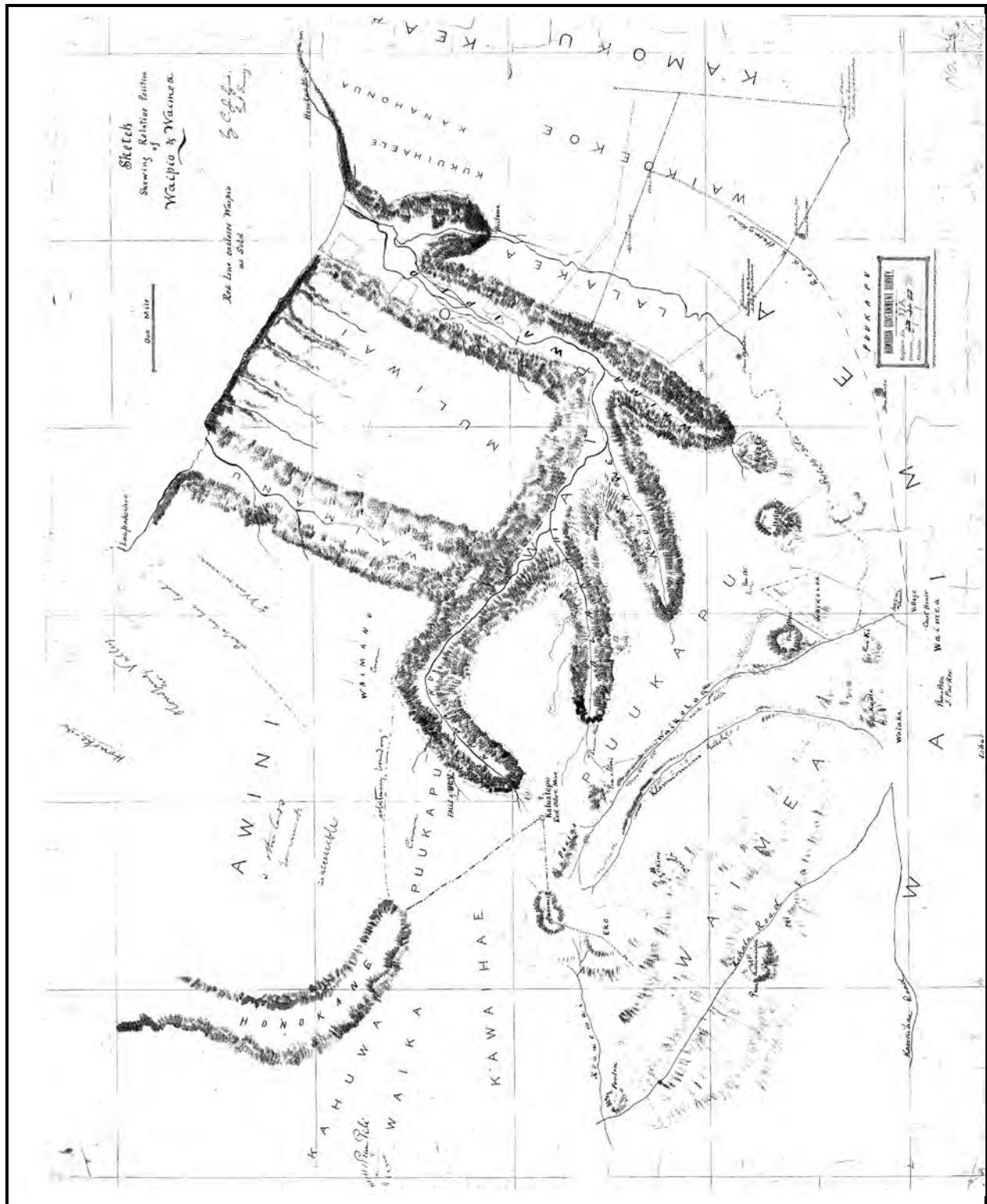


Figure 4. Reduction of Register Map No. 872 (C.J. Lyons, ca. 1875); Depicting Boundaries of Mountain Lands Described in Native Testimonies (State Survey Division)

by the native tenants, and the rights to take or hunt resources in traditional times were fiercely protected—individuals without chiefly, genealogical claims, or residency ties to given lands were not allowed to trespass and take resources from the *ahupua'a*.

Underlining, square bracketing, bold and italic print are used by the compilers here, to highlight place names and particular points of historical interest recorded in the testimonies. The proceedings for the cited lands are given in alphabetical order, and by date of recordation.

Ahupuaa of Honokane

***District of North Kohala, Island of Hawaii,
Boundary Commission, Hawaii, Volume A:245-246***

Honorable R.A. Lyman
Boundary Commissioner
for Island of Hawaii

The undersigned would herewith make application for the settlement of the Boundaries of the following named Ahupuaas or lands belonging to the Estate of the Kekuanaoa & V. Kamamalu, viz...; [page 245]

...***Honokane***, District of Kohala, Hawaii
adjoining lands unknown...

Your Honor therefore will please appoint a day for the hearing of said application, and grant a certificate in accordance therewith,

(sig) J.O. Dominis, admts.
J.F.H. Harris, Atty at Law
Hilo August 16th A.D. 1873 [page 246]

Ahupuaa of Honokane

Boundary Commission, Hawaii, Volume B:119-121

The *Ahupuaa* of ***Honokane***, District of
North Kohala, Island of Hawaii, 3d J.C.

On this, the 22d day of November A.D. 1873 the Commission of Boundaries for the Island of Hawaii, 3d J.C., met at the Court House, North Kohala on the application of J.O. Dominis, for the Estate of M. Kekuanaoa for the settlement of the boundaries of ***Honokane***, situated in the District of North Kohala, Island of Hawaii. Notice of hearing at the ***Waimea*** Court House, South Kohala, for the settlement of the boundaries of lands in Hamakua and Kohala, on the _____
Served by publication in Hawaiian Gazette of _____ and *Kuokoa* of _____
1873, and continued at the Court House in North Kohala on the 22d instant.

Due notice personally served on owners or agents of adjoining lands, as far as known.

Present: Jas. Woods for applicant and for Commissioner of Crown Lands, Kamakaala for Hawaiian Government.

For Petition see Folio 245, Book A.

Testimony

Mamani ^K. Sworn.

I was born at **Honokane** at the time of building the *heiau* at **Kawaihae** [1793], and have always lived there and know all the boundaries of the land. I was told them by my parents. My father, a birdcatcher and cultivator, was a *kamaaina* of the land, and I used to go into the mountain with him.

Honokane is bounded at the sea on the Kohala side by the land of **Pololu**. Commencing at a place called **Kaneaa**. Kahena bounds it along the brow of the *pali*; thence along the edge of the *pali* to **Waihoolana**. It is bounded by **Kahuaiki** from **Kehena** to **Waihoolana**. I do not know whether **Kawaihae** bounds **Honokane** or not, but the boundary of **Honokane** runs along the brow of the *pali*. I have not seen **Waihoolana**, but I have heard that it is a large pool of water. [page 119]

Bounded on the Hilo side by **Awini**, the boundary being on the Hilo *pali* of gulch called **Kalele**; thence along the middle of the *pali* to **Kukuiaweo**. I have not seen this place and do not know what it is. Thence to Mahu, where they used to build fires at night to catch birds. Thence on past some bamboos that are on **Awini**. This is as far as I know of the *mauka* boundaries.

Bounded *makai* by the sea. The Uhu was the konohiki fish, and the fishing rights extended out to sea to a place called Hahaku.

C.X.d.

Puulau ^K. Sworn

I was born here in North Kohala, but do not know when; have always lived here; am a *kamaaina* and know a part of the boundaries. Koko, a brother to the last witness showed them to me (he is now dead). I know a place on the **Honokane** *pali* called **Kilohana** where you can look down into the valley; have heard that **Kehena**

joins **Honokane** there. The boundary runs along the *pali* to **Waihoolana**. **Honokane** does not extend above the brow of the *pali*. I have not heard what lands bound **Honokane** at **Waihoolana**. The boundary at sea shore is at **Nalupai**, at the foot of the *pali*, and at **Kukuilapaweo**, a place on the road. The land above the cocoanut grove, **Kalele**, is now owned by Wiliama. I do not know any more about *mauka* boundaries. Bounded *makai* by the sea; have heard that the ancient fishing rights extended out to sea. I do not know anything about other boundaries.

C.X.d.

Kaaua^K. Sworn, I was born at **Honokane** and was quite small when Kamehameha I died [in 1819]. My mother was a *kamaaina* of **Honokane** and knew a part of the boundaries. My parents used to live at **Kilohana**. **Kehena** is on top of the *pali*, above this place, and the boundary is on the brow of the *pali*; thence to the land of **Kehena** along the brow of the *pali* to **Waihoolana**. I have never been to **Waihoolana** [page 120], but the head of the *pali* is the boundary of the land. I do not know of any land except **Kehena** that joins **Honokane**. Bounded *makai* by the sea, from the land of **Pololu** to a large rock in the sea called Nulupai; thence along land sold on **Awini**; thence along the side of the *pali*; thence to a marked rock on top of the *pali*. Makai^K now on Kauai [Kauai?] who formerly lived on **Awini**, told me that **Kawiwi** gulch is the boundary between **Kehena**, **Awini** and **Honokane**. I do not know the boundary between **Honokane** and **Awini** in this gulch to corner of land sold on **Awini**.

I do not know any other boundaries of **Honokane**, and have never heard that **Waimanu** joins **Honokane**.

C.X.d.

Mr. James Woods says he has been unable to find any more witnesses. For Boundaries between **Pololu** and **Honokane** see Certificate No. ____ Folio _____. For boundaries between **Kehena** 2 and **Honokane** see Certificate of boundaries No. ____ Folio ____.

Case continued until further notice to interested parties.

R.A. Lyman. Commissioner of Boundaries, 3d J.C... [page 121]

Ahupua of Honokane
Boundary Commission, Hawaii, Volume D No. 5:205-209

Continued from page 121, Book B, (No. 2)

The *Ahupuaa* of **Honokane**, District of
North Kohala, Island of Hawaii, 3d & 4th J.C.

Copy

Office of the Trustees under the Will of
Bernice P. Bishop

Honolulu Hawaiian islands
August **1st**, 1898.

Mr. R. A. Lyman
Commissioner of Land Boundaries
Hilo, Hawaii

Dear Sir:

The Trustees of the B.P. Bishop Estate
are desirous of securing the Boundary Commission Award
of the *Ahupuaa* of **Honokane**, North Kohala, Hawaii,
and I herewith submit you a survey and map of
the land in question as required by section 281, Chapter
19, Civil Code (Ballou edition); Laws Hawaiian Islands.
You will observe that the names of the owners of
the adjoining lands are noted on the map submitted.
We shall be pleased to receive your notice as to when
you are prepared to hear the case and have our rep-
resentative appear before you.

Yours respectfully,
(Signed) A.C. Lovekin
for secretary

Copy

Office of the Trustees under the Will of
Bernice P. Bishop
Honolulu, Hawaiian Islands
August 10th, 1898.

Mr. R. A. Lyman
Commissioner of Land Boundaries
Hilo, Hawaii

Dear Sir:

Your communication of the 6th
Inst. is at hand and contents noted.

I have consulted with our surveyor, Mr. W.A. Wall,
and if convenient to you he will leave here on the
S.S. Kinau, sailing Tuesday 13th of September. He will

arrange to bring a *Kamaaina* with him from [page 205]
Kohala, as you suggest.

Kindly inform us if this plan is satisfactory to you.

Yours respectfully
(Signed) A.C. Lovekin
for Secretary

The above letter was answered August 16th 1898,
and notice of time and place of hearing for final
settlement of the boundaries of **Honokane** were
forwarded by mail at same time to the owners
of the adjoining lands, as far as the owners are known.
And the following Notice was published in
the Hawaii Herald published in Hilo, Hawaii,
August 18, 1898, and also Aug. 25th 1898, and
Sept. 1, 1898 in both the English and Hawaiian
languages.

Notice

Commissioner of Boundaries

Notice is hereby given that application having been made
to me by A.C. Lovekin, Secretary for Trustees under
the will of Bernice P. Bishop, for the final settlement
of the boundaries of the *Ahupuaa* of **Honokane**,
situate in the District of North Kohala, Island of
Hawaii, Third Judicial Circuit, and the certificate
of boundaries of said land be issued.

It is hereby ordered that all parties interested in
the boundaries of said land of **Honokane** appear
before me at the Court House, South Hilo, Hawaii
at 10 a.m. September 15th 1898, and show cause if
any, why said petition should not be granted.

(Signed) Rufus A. Lyman
Commissioner of Boundaries, Island of Hawaii
Third and Fourth Judicial Circuit.
Hilo, Hawaii, Aug. 16, 1898. [page 206]

Hilo Hawaii Sept. 15, 1898

The Commission of Boundaries for the 3d and 4th
Judicial Circuits, Island of Hawaii, Republic of Hawaii
met at the South Hilo Court House this 15th day of
September 1898, according to notice published in the
English and Hawaiian Languages in Hawaii Herald
of August 18, 1898, Aug. 25, 1898 and Sept. 1st 1898.

And there appeared the following persons: W.A. Wall,
representing the Trustees under the Will of the Estate of
B.P. Bishop and also representing J.F. Brown, Public Land
Commissioner, Palmer Woods for Estate of James Woods,
the owner or lessees of **Kehena 2d**, J.F. Woods

for owners of Kahua Ranch Co., the owners and lessees of **Kahua Nui** and **Kahualilii**.

The Awini Coffee Fruit & Stock Co., Ltd. by W.V. Rodenhurst, Manager and H.L. Holstien, their Atty. The notes of survey of **Honokane** filed and marked Exhibit A; The map also filed and marked Exhibit B.

The Commissioner of Boundaries stated that on the 16th day of May 1873, J.O. Dominis, Adm. of the Estate of M. Kekuanaoa, by his atty., F.H. Harris filed a petition with Rufus A. Lyman, the Com. of Boundaries for the Island of Hawaii, 3d J.C. to have the Boundaries of the *Ahupuaa* of **Honokane** and other lands settled.

The Petition is recorded on folios 245 & 246 Book A or No. 1.

On the 22d day of Nov. 1873, the Commission of Boundaries for the Island of Hawaii met at the Court House in North Kohala, Hawaii, and took the evidence of Mamani, Puulau and Kaaua in reference to Boundaries of **Honokane**.

See folio 121, 122 and 123 Book B or No. 2, and also the Commissioner of Boundaries had settled the Boundaries of the land of **Pololu**, and the land of **Kehena 2d**, and issued Certificate of Boundaries for both of these lands.

H.L. Holstien that the owners of the lands adjoining **Honokane** wish to prepare a stipulation accepting the boundaries of **Honokane** as surveyed by W.A. Wall.

Granted. [page 207]

Evidence

W.A. Wall, says:

I have surveyed the land of **Honokane** in North Kohala Hawaii. In making the survey I followed the notes of survey of **Pololu**, as given in Certificate of Boundaries of **Pololu**, to the junction of **Honokane**, **Pololu** and **Kehena 2d**, and along land of **Kehena** I followed the notes of survey as given in the Certificate of Boundaries of **Kehena**, to the junction of these lands with land of **Kahua nui**. Along **Kahua** I followed the brow of the *pali*.

On the side adjoining **Awini**, I followed the boundary as given in the notes of survey on the Grant on **Awini** and the boundary of the Homestead lots on **Awini**.

The boundary of Homestead lots had been surveyed [surveyed] along the bottom of the gulch, instead of along the brow of the *pali*, but we decided to give up the *pali* to the Homestead lots.

C.X.d.

H.L. Holstien filed the following stipulation signed by all Land Owners present.
Marked Ex. C.

In the Commissioner's Court of Boundaries of the
Third and Fourth Circuit, Hilo, Hawaii

September 15, 1898.

In the settlement of the boundaries
of the *Ahupuaa* of **Honokane**, District
of North Kohala, Island of Hawaii,
now being held by the Trustees of the Bishop Estate.
Stipulation of parties present in Court.
The respective owners of lands adjacent thereto, as
well as the representative of the Trustees,
now comes the Estate of James Woods, by P.P. Woods;
the Kahua Ranch by J.F. Woods; the Awini Coffee
Fruit & Stock Company by W.V. Rodenhurst, Manager
and H.L. Holstien, their attorney, W.A. Wall, repre-
senting the Trustees of the Bishop Estate, and
J.F. Brown, Commissioner of Public Lands, and
in open session of this Tribunal agree and [page 208]
stipulate that the notes of survey presented and filed in
the above entitled proceeding marked Exhibit A, as well as
the map accompanying said notes, marked Exhibit B, be
and the same are hereby accepted as true field notes
of surveys, bearings, and map, and hereby abide by
the same as exact boundaries of our respective lands.

Done in court this 15th day of September 1898.

(Signed) Est. of James Woods
by P.P. Woods
Kahua Ranch
by J.F. Woods

Awini Coffee Fruit & Stock Co. Ltd.
By W.V. Rodenhurst, Manager

H.L. Holstien
attorney of said Company

W.A. Wall representing B.P. Bishop Estate
& J.F. Brown, Commissioner Public Lands.

Decision

The boundaries of the *Ahupuaa* of **Honokane** are decided to be as set forth in the notes of survey and map made by W.A. Wall and filed this day as Exhibits A and B, and the Certificate of Boundaries will be issued and dated as of today.

Rufus A. Lyman
Commissioner of Boundaries
3d & 4th Jud. Circ's
Hawaiian islands.

Ahupuaa of Honokane
Boundary Commission, Hawaii, Volume C No. 4:93-95

No. 172

Certificate of Boundaries of the Land
of **Honokane**
District of North Kohala
Island of Hawaii,
L. C. Award No. 7713

Commission of Boundaries
3rd & 4th Judicial Circuits
Rufus A. Lyman, Esq., Commissioner

In the matter of the boundaries
of the Land of **Honokane**
District of North Kohala
Island of Hawaii, 3rd Judicial Circuit

Judgement.

An application to decide and certify the Boundaries of the Land of **Honokane**, District of North Kohala Island of Hawaii, having been filed with me on the 16th day of May 1873, by J.O. Dominis, Adm. of the Estate of M. Kekuanaoa, by his Atty., F.H. Harris in accordance with the provisions of an Act to facilitate the settlement of Boundaries; now, therefore having duly received and heard all the testimony offered in reference to the said boundaries, and having endeavored otherwise to obtain all information possible to enable me to arrive at a just decision, which will more fully appear by reference to the records of this matter by me kept in book No. A, pages 245 & 246 and Book B, pages 121-123 and Book D, pages 205-209 and it appearing to my satisfaction that the true, lawful and equitable boundaries are as follows, viz.:

As surveyed by W.A. Wall.

Beginning at a rock marked "**KP**" on the beach at a place called "**Kapili**," and where the house used to stand

is called "**Keawehalu**," the boundary between **Honokane** and **Pololu**, from which point the Government Survey Station "**Makanikahio**" bears N. 74° 23' E. 2450 feet; thence the boundary runs *mauka* over a low sand ridge and up a point of the *pali*; following notes of survey of land of **Pololu**, Certificate of Boundaries, No. 14. S. 6° 00' E. Mag. 884 feet to *Puhala* tree marked **K**; thence up along the *pali* near the brow of it [page 93] South Mag. 1320 feet to place called **Kupehau** S. 5° 00' E. Mag. 924 feet S. 13° 00' W. Mag. 246 feet S. 16° 00' E. Mag. 891 feet to **Kahuapau**; S. 12° 00' W. Mag. 1320 feet to **Keikipuaa**; S. 17° 00' W. Mag. 1320 feet to **Kahinai**; South Mag. 792 feet to end of *Ili* of **Pololu** called **Hoau**; thence over hill named "**Puukana**," S. 20° 00' E. Mag. 1320 feet to **Kaohumaunu**; South 8° 00' W. Mag. 1914 feet to point on high ridge covered with trees; thence along a sharp narrow ridge dividing the two *palis*; S. 17° 30' E. Mag. 1278 feet S. 11° 00' W. Mag. 1518 feet to a large *ohia* tree marked "**H**" at a rock marked "**K**" at a point called "**Kaneaa**" at the corner of **Pololu** and **Kehena 2nd** on the **Honokane** *pali*, right at the brow of the *pali*; thence along land of **Kehena 2nd**, certificate of Boundaries No. 17; S. 6° 00' E. Mag. 5280 feet along brow of *pali*; S. 21° 30' W. Mag. 4,884 feet along brow of *pali* to a small hill known as "**Kilohana**" rock on a ledge marked "**K**," thence along lands of **Kahualilili** and **Kahua nui**; S. 20° 04' W. True 5,980 feet to **Puulaau** (**Puuwau**) at junction of this land with **Kawaihae 2d**; thence along **Kawaihae**; S. 65° 40' E. True 13,300 feet to corner of this land, **Kawaihae** and Awini, Thence along Awini; North, True, 14,000 feet to corner of Homestead Lots, N. 8° 10' W., True 11,800 feet to N.W. corner of Homestead Lots, the stream being the boundary; S. 77° 30' E. True, 800 feet along Homestead Lot #1; N. 5° 30' W. Mag. 1,683 feet along Grant 2497; N. 9° 00' W. Mag. 1,914 feet along Grant 2497; N. 4° 00' W. Mag. 1,633 feet along Grant 2497; N. 21° 45' E. Mag. 2,812 feet along Grant 2497 to the sea; thence along the sea shore to the initial point and containing an area of 5,410 Acres. [page 94]

It is therefore adjudged, and I do hereby decide and certify that the Boundaries of the said land of **Honokane** are, and hereafter shall be as hereinbefore set forth.

Given under my hand at Hilo, Island of Hawaii,
the Fifteenth day of September, A.D. One thousand
eight hundred and ninety-eight.

Rufus A. Lyman
Commissioner of Boundaries,
Third and Fourth Judicial Circuits
H.I... [page 95]

Ahupuaa of Laupahoehoe Nui (2nd)
District of Hamakua, Island of Hawaii
Boundary Commission, Hawaii Volume D No. 5:380-395

In re Boundaries of the L.C.A. No. 6245.
Ahupuaa of Laupahoehoe-nui Kalaeokekoi
or Laupahoehoe 2.
District of Hamakua, Island of Hawaii, 3rd & 4th
Jud. Circs. Territory of Hawaii.

Hilo, Hawaii January 17th 1901.

The Commission of Boundaries for the Island of
Hawaii, Third & Fourth Judicial Circuits of the
Territory of Hawaii, met at the District Court
Room of South Hilo, Hawaii, after due notice pub-
lished in the English language in the Hawaii
Herald at Hilo Hawaii for three weeks, as follows:

Notice of Commissioner of Boundaries.
Notice is hereby given that on the 27th day of June A.D.
1900, Elizabeth K. Booth filed application for the settle-
ment of the boundaries of the *Ahupuaa of Laupahoehoe-
hoe-nui*, situate in the District of Hamakua, Island
and Territory of Hawaii, Fourth Judicial Circuit, and
asks that Certificate of Boundaries of said land be
issued. It is therefore ordered that all par-
ties interested in the boundaries of said land, *Laupahoehoe-nui*
appear before me at 10 a.m. January 17, 1901, at the
Court House, South Hilo, Hawaii, and show cause if any,
why said petition should not be granted.

(Signed) Rufus A. Lyman
Commissioner of Boundaries, Island of Hawaii,
Third and Fourth Judicial Circuits
Hilo, Hawaii, December 28, 1900. 22-3.

And notice published in the Hawaiian language
in the *Elele Hawaii*, at Hilo, Hawaii, for three
weeks as follows:

Hoolaha A Ke Komisina o Na
Palena Aina.

Ke hoolaha ia aku nei ma keia ua waiho mai o
Elizabeth K. Booth he palapala noi kupono i hana

ia, ma ka la 27 o Iune A.D. 1900, no ka hoopono-
pono ana i na palena aina o ke Ahupuaa o
Laupahoehoe-Nui, e waiho la iloko o ka Apana
o Hamakua, Mokupuni a Panalaaui o Hawaii,
Apana Hookolokolo Kaapuni Eha, e noi ana e [page 380]
hoopuka ia ka Palapala o na Palena Aina o ua aina la
i olelo ia. Nolaila, ke kauoha ia aku nei ma keia, o na
poe apau i kuelana i na palena aina o ka aina o **Laupahoehoe-nui** i oleloia, e hele mai lakou imua o'u, ma ka hora
10 kakahiaka o ka la 17 o Januari, 1901, ma ka Hale Hooko-
lokolo o Hilo Hema, Hawaii, a e hoike mai ina kumu, ina
he kumu kekahi, no keaha la e ae ole ia ai ua palapala
noi la.

(Signed) Rufus A. Lyman
Komisina o na Palena Aina, Mokupuni o Hawaii,
Apana Hookolokolo Kaapuni Ekolu me Eha.
Hilo, Hawaii, Dekemapa 28, 1900

Present: T.K. Bipi, the Surveyor, Kahelehookahi Kapololu
and Kahalehau Kumukahi.

The Commissioner of Boundaries having received the follow-
ing letter from the Secretary of Commissioner of Public lands.

Commission of Public Lands
Territory of Hawaii.

Honolulu, Jany. 4th 1901,

R.A. Lyman, Esq.
Commissioner of Boundaries
3rd and 4th Judicial Circuit.

Hilo, Hawaii

Sir:

I beg to acknowledge receipt of yours of the 28th
Ulti. informing that you have set Jany. 17th 1901 at
10 A.M. for the hearing of evidence as to the boundaries
of **Laupahoehoe Nui**, and to say in reply that in
the absence of the Commissioner, I conferred with the
Governor relative to this matter, and he advised
me to request you to hold the same on any other day
than the 17th inst. it being a statutory holiday, and he
further holds that no legal business could be held
on any legal holidays.

I would therefore suggest that you set a day other
than the 17th, informing this office the date of such
hearing.

Mr. E.D. Baldwin will represent the Govern-
ment in the matter.

Yours respectfully,

(Signed) E.S. Boyd
Secretary [page 381]

The foregoing letter was received by the Commissioner of Boundaries on the 10th day of January A.D. 1901, and answered by the Commissioner on the same day as follows.

Hilo, Hawaii, January 10th 1901.

E.S. Boyd, Esq.
Secretary Commission of Public Lands.

Sir

I am in receipt of your favor of the 4th inst. in re the hearing for the settlement of the Boundaries of the *Ahupuaa* of ***Laupahoehoe Nui***.

It was a mistake setting the hearing for the 17th of Jan. 1901, and as the witnesses are coming up from Honolulu and elsewhere next week, I will hold the hearing at 10 a.m. January 18th 1901.

I enclose copies of two letters from J.F. Brown, Commissioner of Public Lands dated July 26, 1900, and Oct. 13, 1900 in re. boundaries & Notes of survey of ***Laupahoehoe Nui***, received by me Oct. 17, 1900 with the corrected Notes of Survey.

The Notes of survey were sent to me several months ago, and I got Attornies for Applicant to refer notes of Survey to Mr. J.F. Brown, Com. of Public Lands, and Mr. Brown wrote letter of July 26 and handed to Kinney, Ballon & McClanahan, and they kept it and handed corrected Notes of survey to Mr. J.F. Brown, and he examined it, and wrote letter dated Oct. 13th 1900, and Kinney, Ballon & McClanahan forwarded both of Mr. Brown's letters and corrected Notes of survey to me.

And as I had there letters of Mr. Brown's in my hands approving T.K. Bipi's Notes of Survey I set time of hearing for settlement of Boundaries, without waiting for Mr. Brown to return.

So as to have the *kamaaina* give evidence as to boundaries, and as to T.K. Bipi's survey, and if they prove boundaries to be the ones given in T.K. Bipi's Notes of survey approved of by the Commissioner of Public Lands, then Cert. of Bound. will be issued, if boundaries given by *Kamaaina* are different from Notes of Survey, then hearing will

be continued, for the Commissioner of Public [page 382]
Lands to appear, and bring in evidence as to the Bound-
aries of land, if he wishes to, before I give my decision.
Hoping everything will be satisfactory, to the Government.

I remain
Yours truly,
(Signed) Rufus A. Lyman
Com. of Boundaries 3rd & 4th J.C.
Territory of Hawaii.

From
(Press Copy Book, Pages 49, 50 & 51)
This 17th day of January A.D. 1901, being a Legal Holiday
and the witnesses for Applicant having arrived in Hilo,
the hearing is continued until 10 A.M. Jany. 1901.

Rufus A. Lyman
Commissioner of Boundaries 3rd & 4th J.C.
Island of Hawaii, Territory of Hawaii.

Hilo, Hawaii, January 18th 1901.

The Commission of Boundaries for the Island of Hawaii
met at 10 A.M. according to adjournment from the
17th inst.

Present: the three witnesses who appeared yes-
terday.

Affidavits of Publication of Notices for the Hearing
for settlement of Boundaries were read... [page 383]

...The Commissioner of Boundaries is summoned to
appear as a witness, in the Circ. Court 4th Jud. Circ.
today, so the hearing is adjourned until
10 A.M. January 19, A.D. 1901.

Rufus A. Lyman
Com. of Bound. 3rd & 4th Jud. Circ.
Island & Territory of Hawaii

Hilo, Hawaii, January 19, 1901
The Commission of Boundaries for the Island of
Hawaii, met at the Dist. Court Room, at the
Court House, Hilo, Hawaii at 10 A.M. accord-
ing to adjournment from Jan. 18, 1901.

Present: A.B. Loebenstein on part of Applicant
and E.D. Baldwin for J.F. Brown, Commissioner of
Public Lands on the part of the Government of the
Territory of Hawaii.
T.K. Bipi, K. Kapololu and others.

Petition of the Applicant read as follows:

In re Boundaries of the
Ahupuaa of **Laupahoehoe-nui**
or **Laupahoehoe 2**

To the Honorable R.A. Lyman
Commissioner of Boundaries for the
Fourth Judicial Circuit of the
Hawaiian Islands.

Now comes your Petitioner, Elizabeth K. Booth,
and says: that by L.C.A. 6245, Part 2, dated March 6,
1854, there was awarded and set apart to one Ka-
laeokekoi the *Ahupuaa* of **Laupahoehoe-nui**
situated at Hamakua, Hawaii, as granted to
said Kalaeokekoi by King Kamehameha III [page 384]
in the land *Mahele* of 1848.

That said land is bounded to the best of the knowledge
and belief of your petitioner as follows:

Northerly by the sea; easterly in part by *Ahupuaa* of **Lau-
pahoehoe 1**, Grant No. 798, by Kamehameha to Keaupuni;
the boundary between the two *Ahupuaas* following the line of
Kaimu Gulch up to the *Loulu* tree; southerly by the *Ahu-
puaa* of **Puukapu**, and westerly by the *Ahupuaa* of
Nakooka; the boundary line between said *Ahupuaa* and
the *Ahupuaa* of **Laupahoehoe 2** following for the most part
Kukui gulch, save at a point about thirty-five hundred
feet *mauka* of the sea coast, where it runs to the west-
ward of said Gulch.

That the owners of the above mentioned adjoining
Ahupuaas are to your petitioner unknown; that the boun-
daries of said *Ahupuaa* have never been definitely es-
tablished either by award or otherwise;
that the boundaries of said *Ahupuaa*, as claimed by
your petitioner, are as follows:

E hoomaka ma kekahi pohaku kaha e pili
ana i ka pali ma ke kahawai o **Nakooka** a e holo
ana ma ka palena o **Nakooka**
N. 60° E. 198 ft. a hiki i ka pohaku i kahakai,
alaila ma ke kai
S. 71° 30' E. 1500 ft. a hiki i ka pohaku ma ke awa
o **Hoopaukuku**;
N. 69° 00' E. 320 ft. i ka pohaku nui ;
S. 84° 00' E. 1100 ft. i ka pohaku nui i ka lae;
S. 46° 00' E. 2240 ft. i ka pohaku nui apo ulaula;
S. 18° 00' E. 900 ft. i ka pohaku nui e ku ana iloko
o ke kai, *makai* pono o ka leina wai o ke
kahawai o **Kaimu**; alaila e holo ana iluna
o ka pali ma ke kahawai o **Kaimu** 1200 ft;
alaila, e holo ana ma ia kahawai no;
S. 21° 00' W. 7920 ft. i ke kumu ohia **X** e pili ana i kae
kahawai;

S. 25° 00' W. 370 ft. alaila;
S. 42° 30' W. 256 ft. alaila;
S. 20° 00' W. 330 ft. alaila;
S. 23° 00' W. 1547 ft. alaila;
S. 25° 00' W. 562 ft. alaila;
S. 61° 00' W. 106 ft. alaila; [page 385]
S. 18° 00' W. 220 ft. alaila;
S. 10° 00' E. 1500 ft. alaila;
S. 20° 00' W. 2850 ft. a hiki i kekahi kumu loulou, e
pili ana i **Puukapu**, alaila e holo i Kohala;
N. 84° 00' W. 5500 ft. a hiki i ke kahawai o **Kukui**, alaila,
holo i kai ma ia kahawai a hiki i kahi i
hoomaka ai;

2356 eka a oi emi paha.

Ua koe mai ke kuleana o na kanaka.

Wherefore Your Petitioner Prays that the Honorable
Commissioner of Boundaries for the Fourth Judicial
Circuit will appoint a day and place at which
the boundaries of the aforesaid *Ahupuaa* may be de-
cided and certified by said commissioner in the
manner by the Statute made and provided.

(Signed) Elizabeth K. Booth

Honolulu, Oahu,
Hawaiian Islands. S.S.
Elizabeth K. Booth being duly sworn on oath
deposes and says; that she is the petitioner above
named; that she has read the foregoing petition
and that all and singular the matters and things
therein alleged are true, except those matters that
are alleged upon information and belief, and as
to those matters she believes them to be true.

(Signed) Elizabeth K. Booth
Subscribed and sworn to before me
this 21st day of June A.D. 1900.
(Notorial Seal) (Signed) Eleanor W. Davis
Notary Public

A.B. Loebenstein for the applicant asks
to have the letter of the Commissioner of Bound-
aries dated June 28th 1900, and letters of
J.F. Brown, Commissioner of Public Lands
dated July 26th, 1900 and October 13th 1900,
made a part of the evidence in this case,
and also the corrected notes of Survey
endorsed by J.F. Brown, Oct. 13th 1900,
recorded as part of the evidence in this case. [page 386]

Motion approved by E.D. Baldwin on the part of the
Government.

Motion Granted.

Copy of letter of Commissioner of Boundaries dated June 28th 1900, copied from Letter Press Copy book, pages 23 & 24.

Hilo, Hawaii, June 28th 1900.

Kinney, Ballon & McClanahan

Honolulu, Oahu

Gentlemen:

I am in receipt of your favor of the 22d inst. and the petition of Elizabeth K. Booth in re Boundaries of the *Ahupuaa* of **Laupahoehoe-nui** or **Laupahoehoe 2**.

At the present time I can not say when or where I will have the hearing for the settlement of the boundaries of this land.

In the meantime, I think it would be well for you to show the map and notes of survey of the land to J.F. Brown, Agent of Public lands, and also to the Govt. Survey Officers, so as to see if they are satisfied that the notes of survey are correct, and if they will file a pap. with me, accepting the boundaries as given in your notes of survey.

The land of **Puukapu** was formerly a Crown land, and was included in Certificate of Boundaries of the *Ahupuaa* of **Waimea**, and I think lands of **Laupahoehoe 1**, and **Nakooka** are both owned by the Government.

If you can get the Govt. to accept the notes of survey filed with me as true and correct, it will save a great deal of expense in going onto the land, or bringing witnesses a long distance to give their evidence.

I remain
Yours truly,
(Signed) R.A. Lyman
Commissioner of Boundaries 3rd & 4th J. C.
Hawaiian Islands.

Mr. J.F. Brown's letter of July 26th 1900, and of Oct. 13th 1900, and corrected Notes of survey endorsed by J.F. Brown, were forwarded by Kinney [page 387] Ballon & McClanahan, Oct. 15th 1900, and received by the Commissioner of Boundaries for the Island of Hawaii, and filed Oct. 17th 1900.

And are as follows:


Commission of Public Lands
Territory of Hawaii
Honolulu, July 26th, 1900
R.A. Lyman, Esq.
Boundary Commissioner
Fourth Judicial Circuit

Sir:

Referring to an application for settlement of boundaries of **Laupahoehoe-nui**, Hamakua, Hawaii, L.C.A. 6245 Part II to one Kalaeokekoi, the said application with accompanying survey being subscribed and sworn to by Elizabeth K. Booth, before Eleanor W. Davies, Notary Public, under date of June 21st 1900, I would state:

That this office has at present no means of proving the correctness of the metes and bounds given in the said survey, but as this land is represented by the survey and accompanying plan to be bounded on three sides by Natural boundaries, namely *makai* by the sea, on the east by **Kaimu** gulch and on the West by **Kukui** gulch, and as the upper line does not apparently encroach on what we hold to be the land of **Puukapu**, no objection will be made to a certificate by this survey if you, as Commissioner of Boundaries are satisfied that the gulches named are respective boundaries of the land.

I would only state further that the plan by T.K. Bipi, dated October 5th 1899 is not strictly in accord with the metes and bounds of survey.

The last course on East side (S. 20^o W. 2850 ft.) reaches only to the point marked **O** on plan and not to the corner marked  Loulu.

I would ask that if this case comes on for hearing this letter be made part of the record.

Yours truly
(Signed) J.F. Brown
Commissioner of Public Lands [page 389]

Commission of Public Lands
Territory of Hawaii
Honolulu, October 13th, 1900

R.A. Lyman, Esq.
Boundary Commissioner
Fourth Judicial Circuit

Sir:

Under date of July 26th last, I wrote you in the matter of the settlement of boundaries of *Ahupuaa* of **Laupahoehoe-nui**, Hamakua. In that letter I referred to an inconsistency between the notes of survey by T.K. Bipi, and the plan furnished.

A corrected survey is now presented at this office, and in regard to same I would say that such corrected survey is accepted by this office, subject to the condition named in my letter of July 26th.

Yours truly,
(Signed) J.F. Brown
Commissioner of Public Lands

Received October 17, 1900

Description of

The Boundary of the *Ahupuaa* of **Laupahoehoe-nui** or **Laupahoehoe 2**.

Commencing at a certain marked rock close to the *Pali* at the Gulch of **Nakooka** and running thence along the boundary of **Nakooka**:

N. 60° 00' Mag. E. 198 feet to a rock at the beach from thence along the sea; thence
S. 71° 30' E. Mag. 1500 feet to a rock at the gulch of Hoopaukuku; thence
N. 69° 00' E. Mag. 320 feet to a big rock; thence
S. 84° 00' E. Mag. 1100 feet to a big rock at a point; thence
S. 46° 00' E. Mag. 2240 feet to a big rock at a red ring;
S. 18° 00' E. Mag. 900 feet to a big rock standing in the sea straight *makai* of the waterfall of the **Kaimu** stream; thence running up the *Pali* along the **Kaimu** stream 1200 feet; thence along said stream;
S. 21° 00' W. Mag. 7920 feet to an *Ohia* tree marked with a cross close to the edge of the stream; [page 389]
S. 25° 00' W. Mag. 370 feet thence;
S. 42° 30' W. Mag. 256 feet thence;
S. 20° 00' W. Mag. 330 feet thence;
S. 23° 00' W. Mag. 1547 feet thence;
S. 25° 00' W. Mag. 562 feet thence;
S. 61° 00' W. Mag. 106 feet thence;
S. 18° 00' W. Mag. 220 feet thence;
S. 10° 00' E. Mag. 1500 feet thence
S. 20° 00' W. Mag. 4050 feet to a certain *Loulu* tree at **Puukapu**; thence toward Kohala;
N. 84° 00' W. 5500 feet to the gulch of **Kukui**; thence running down along this gulch to the sea beach at the point of commencement and containing an area of 2350 acres, a little more or less, excepting the Kuleanas of the Kanakas.

Correct from T.K. Bipi's survey.

Endorsed
(Signed) J.F. Brown
Oct. 13th 1900.

Evidence.

T.K. Bipi ^(K) sworn, says:
I am a surveyor, and know land of **Laupahoehoe-nui**,
District of Hamakua, Island of Hawaii.

I surveyed land of **Laupahoehoe-nui** during month
of October 1899, and had *Kamaaina* with me.
Kapololu Senior, who had charge of the land went
with me, and pointed out the boundaries, from the
sea shore all around the land.

Kaumelelau a *Kamaaina* who went with Kaelema-
kule when he went to survey land, also went with me,
and their statements agreed as to boundaries of land.
Kapololu's son Kahelehookahi Kapololu, Kumu-
kahi, Kapela, and men from Waipio went with us.
Kaumelelau is dead, he died in December 1899,
two months after survey was made.

Kapololu Senior is now in **Waimanu**, Hamakua,
Hawaii, and is unable to come to Hilo, as he is
sick. Kahelehookahi Kapololu
and Kumukahi *opio* have come to Hilo to [page 390]
give evidence.

I could not find Kapela before I came to Hilo to attend
this hearing. Kuamoo is an old *kamaaina* of the land,
and is in Honolulu now. He did not go with me when
I went to survey the land, as he was too feeble to go.

Laupahoehoe-nui is bounded on the East side by land
of **Laupahoehoe iki**, or **Laupahoehoe 1.**, a land own-
ed by the Government, and a gulch is the boundary be-
tween the two lands, from the sea shore to the upper
end of the lands adjoining land of **Puukapu**.

The Boundary follows the middle of the stream of
water flowing in this gulch.

I surveyed from the Sea shore to upper end of land along
the top of the *Pali* or bank of the gulch, as I could not
run my survey up the bottom of the gulch along the
stream, but made the bottom of the gulch the boundary.
My notes of survey are intended to represent the gen-
eral course of the stream of water in the bottom of gulch.
The land of **Laupahoehoe-nui** is bounded on West
side by land of **Nakooka**, owned by the Government,
and a deep gulch is boundary between these two

lands. The gulch is shallow at *mauka* end, and deep from sea shore for three fourths of the way toward the *mauka* end.

The boundary between land of ***Laupahoehoe-nui*** and land of ***Nakooka*** follows the middle of the stream of water that is flowing in this gulch.

I ran my survey along the brow of the *Pali* or bank of this gulch, and the gulch is named the ***Kukui*** gulch. The gulch between ***Laupahoehoe-nui*** and ***Laupahoehoe iki*** is called the ***Kaimu*** gulch. The land of ***Puukapu*** bounds this land on the *mauka* or South side of land. The sea bounds this land on the sea side or North side.

There is no *lwi aina* [boundary wall] between this land and land of ***Puukapu*** where they join each other in the forrest. I had to cut roads or trails to make my survey. The *Kamaaina* pointed out the place to me, where they said land of ***Puukapu*** cut it off. Kapololu Senior said he went to that place with an old bird catcher named Laahiwa, and that Laahiwa pointed out the boundaries [page 391] to him. Laahiwa died a good many years ago.

I identify these notes of survey as the description of notes of survey as made by me, with the exception of course S. 20° 00' West has had the distance changed to 4050 feet, from the original notes of survey made by me, that read S. 20° 00' West 2850 feet.

Note: The Notes of survey identified by the witness are the notes of survey corrected from T.K. Bipi's survey. Endorsed by J.F. Brown, Oct. 13th 1900.

I was two days surveying that course, the first day I ran the survey a distance of 2850 feet, and the second day ran the course a further distance of 1200 feet, but in copying my field notes I copied in only the distance 2850 feet that I ran the first day in surveying that course, and when my notes of survey were examined in Honolulu, they found that the distance of 2850 feet did not reach to the *Loulu* tree mentioned by me.

They wrote to me about this error, and I examined my original field notes, and found that I had ommitted [to put in the distance of 1200 feet, that I ran the second day that I was at work running that line, and that distance has been added in the corrected notes of survey. My survey is made by the Magnetic Meridian and not by true bearings.

C.X.d

Kahelehookahi Kapololu ^(K) Sworn, says:
I live at **Waimanu**, Hamakua, Hawaii.
I am in my 40th year. I was born in **Waimanu**,
and have lived there most of my life.

I know the land of **Laupahoehoe-nui**, and
it is a land close to the land of **Waimanu**.
My father Kapololu is 66 years old, and
is still quite a strong man.

He is a *Kamaaina* of the land of **Laupahoehoe-nui**, and has pointed out the boundaries to me.
He used to have charge of land when Kia Nahaole-lua owned the land.

I went with T.K. Bipi when he surveyed
the land. I was one of the chain men [page 392]

Kaumelelau and my father, Kapololu, went with us,
and pointed out the boundaries of land.

Laupahoehoe iki or 1 bounds this land on the East
side from the sea shore to the upper end of land, where
it is cut off by land of **Puukapu**.

The gulch called **Kaimu** is the boundary, and the
boundary follows the middle of the stream of water
flowing in the bottom of the gulch to a *Loulu* tree
marked +. The mark is an old mark, and Kaumeleleau and Kapololu told us that the tree was marked
to show the boundary of the land of **Puukapu**.

The land of **Nakooka** bounds this land on the West
or Kohala side, and the boundary follows the mid.
of the stream of water that is flowing in the bottom
of the **Kukui** gulch, and the sea bounds this
land on the *makai* or North side.

Kaumelelau and my father Kapololu, both pointed
out the same places, as being the boundaries of the
land of **Laupahoehoe-nui**.

C.X.d. I have lived in Honolulu about a year & came here from there.

Kahalehau Kumukahi ^(K) sworn, says:
I was born at **Waimanu**, Hamakua, Hawaii,
in the year 1852, and have lived there most of my life.
I know the land of **Laupahoehoe-nui**. My Grand-
father Keaupuni owned the land of **Laupahoehoe-iki** or **Laupahoehoe 1**, and lived on that land.

He was a *Kamaaina* of **Laupahoehoe iki** and **Laupahoehoe-nui**. He, Keaupuni went with Elemakule

the Surveyor, when he surveyed land of **Laupahoehoe-nui** and was one of the *Kamaaina* who pointed out the boundaries of the land to him.

The other two *Kamaaina* who pointed out the boundaries to Elemakule when he made his survey were Kapololu Senior, and Kaumelelau, the same *kamaaina* who went with T.K. Bipi and pointed out the boundaries of land to him, when he surveyed **Laupahoehoe-nui** in 1899.

My grandfather Keaupuni told me the boundaries, He was over 70 years old when he died, and has been dead for over 20 years.

I went with T.K. Bipi over a year ago, when he surveyed the land. Kahelehookahi Kapololu [page 393] Kapololu Senior, Kaumelelau and others also went with T.K. Bipi when he made the survey. Kaumeleleu, Kapololu Senior pointed out the same boundaries of land to Bipi, that my Grandfather, Keaupuni, had previously told me were the boundaries of the land.

The sea bounds this land on the *makai* side. Land of **Laupahoehoe iki** bounds it on the East side or side toward **Waimanu** Valley.

The boundary between the two lands of **Laupahoehoe iki and nui**, runs up the middle of the stream of water flowing in the bottom of the **Kaimu** gulch to a *Loulu* tree with an old mark + marked on it, where land of **Puukapu** cuts land off.

The *kamaaina* said *Loulu* tree was on boundary of **Puukapu**. The mark on the *Loulu* tree is an old mark, and I do not know who made it. The **Kaimu** gulch is very shallow there, and is almost at the *mauka* end of it, where this *Loulu* tree stands (Palm tree). The land of **Puukapu** bounds this land on the South side, cutting **Laupahoehoe-nui** off until you reach the bottom of the gulch named **Kukui** gulch.

The **Kukui** Gulch is boundary between **Laupahoehoe-nui** and land of **Nakooka** on the West side or side toward the District of North Kohala, and the boundary between these two lands follows the middle of the stream of water in the bottom of the **Kukui** gulch from land of **Puukapu** to the sea shore.

C.X.d. I have lived in Honolulu about a year,

and came from there here.

Testimony for Applicant closed.
E.D. Baldwin on part of Government
says he is satisfied that boundaries are proved
to be boundaries accepted by J.F. Brown
Commissioner of Public Lands. [page 394]

Decision

The Boundaries of the Land of **Laupahoehoe-nui**,
District of Hamakua, 4th J.C., Island of Hawaii, Territory
of Hawaii, are decided to be as given in the evidence
of the *kamaaina* who have been examined today, and
as described in the Notes of Survey corrected from
Magnetic Survey of T.K. Bipi, endorsed, J.F. Brown
Oct. 13th 1900, and that the boundary between this
land **Laupahoehoe-nui** and **Laupahoehoe-iki**
follow the middle of the stream of water flowing
in the **Kaimu** gulch from sea shore to point near
where (*Loulu*) Palm Tree marked + is growing,
where this land is cut off by land of **Puukapu**, as
set forth in corrected notes of survey until you
reach the bottom of the **Kukui** Gulch on the
West side of land, and the boundary between
this land and land of **Nakooka** follows the
middle of the stream of water flowing in
the bottom of the **Kukui** gulch from the
mauka corner to the sea shore.

The sea bounds land on sea shore.

Certificate of Boundaries for Land of **Lau-
pahoehoe-nui** will be issued as of today.

Rufus A. Lyman
Commissioner of Boundaries
3rd & 4th J.C., Island of Hawaii
Territory of Hawaii.

For Certificate of Boundaries see
Certificate of Boundaries No. 182.
Boundary Records book No. 4, Folios 132-134
Inclusive. [page 395]

**Ahupuaa of Laupahoehoe nui (Laupahoehoe 2)
Boundary Commission, Hawaii Volume C No. 4:132-134**

No. 182
Certificate of Boundaries
of the
Land of **Laupahoehoe-nui** or Laupahoehoe 2
District of Hamakua, Island of Hawaii

Kalaeokekoi, L.C. Award No. 6245, Part 2
Commission of Boundaries

3rd & 4th Judicial Circuits, Rufus A. Lyman, Commissioner
In the Matter of the Boundaries
of the land of **Laupahoehoe-nui**
District of Hamakua
Island of Hawaii

Judgement

An application to decide and certify the boundaries of the Land of **Laupahoehoe-nui**, District of Hamakua, 4th Judicial Circuit, Island of Hawaii, Having been filed with me on the 27th day of June, 1900 by Elizabeth K. Booth, in accordance with the provisions of an Act to facilitate the settlement of Boundaries; now therefore, having duly received and heard all the testimony offered in reference to the said boundaries, and having endeavored otherwise to obtain all information possible to enable me to arrive at a just decision, which will more fully appear by reference to the records of this matter by me kept in Book No. 5, page 380 to page 395 inclusive, and it appearing to my satisfaction that the true, lawful and equitable boundaries are as follows, viz.:

Commencing at a certain rock marked close to the *Pali* at the Gulch of **Kukui**, boundary between this land and land of **Nakooka**, and running thence along the boundary of the land of **Nakooka**:
(Survey runs Magnetic bearings.)

1. N. 60° 00' E. 198 feet to a rock marked at the sea shore, from thence along the sea shore;
2. S. 71° 30' E. 1500 feet to a rock marked at the landing or streams of Hoopaukuku, thence
3. N. 69° 00' E. 320 feet to a big rock marked thence
4. S. 84° 00' E. 1100 feet to a big rock at a point; thence
5. S. 46° 00' E. 2240 feet to a big rock at a red ring [page 132];
6. S. 18° 00' E. 900 feet to a big rock standing in the sea straight *makai* of the waterfall of the **Kaimu** stream; thence running up the *Pali* along the **Kaimu** Stream 1200 feet; thence along said stream; the middle of stream of water flowing in the **Kaimu** gulch being the boundary between this land and land of **Laupahoehoe 1**, to a point opposite and to a *loulou* tree marked + on the boundary of land of **Puukapu** District of Sount Kohala, along brow of *Pali* of the Gulch by the following courses and distances, viz.:
 7. S. 21° 00' W. 7920 feet to an *Ohia* tree close to brow of the *Pali* of the Gulch, marked with a cross.
 8. S. 25° 00' W. 370 feet thence;

9. S. 42° 30' W. 256 feet thence;
10. S. 20° 00' W. 330 feet thence;
11. S. 23° 00' W. 1547 feet thence;
12. S. 25° 00' W. 562 feet thence;
13. S. 61° 00' W. 106 feet thence;
14. S. 18° 00' W. 220 feet thence;
15. S. 10° 00' E. 1500 feet thence
16. S. 20° 00' W. 4050 feet to a certain *Loulu* tree marked +
on the boundary of land of Puukapu;
thence along the land of Puukapu, toward
the District of North Kohala.
17. N. 84° 00' W. 5500 feet to the gulch called ***Kukui***; thence
running down along this gulch, the middle
of same being the boundary of this land,
and land of ***Nokooka***, to the point of
commencement, at rock marked
near the *Pali* close to sea shore; and
containing an area of Two thousand
three hundred and fifty acres more
or less excepting the *kuleana* awards
of the people.

Corrected from Magnetic Survey
made by T.K. Bipi.

It is therefore adjudged, and I do hereby certify
and decide that the boundaries of said land of
Laupahoehoe-nui, and hereafter shall be as hereinbefore set forth.

Given under my hand at Hilo, Fourth
Judicial Circuit, Island and Territory
of Hawaii, the Nineteenth day of January
A.D. 1901.

Rufus A. Lyman
Com. of Boundaries
3rd & 4th J.C.
Island & Territory of Hawaii... [page 133]

Ahupuaa of Waimanu

District of Hamakua, Island of Hawaii

Boundary Commission, Hawaii Volume A No. 1:238-240

Honolulu, July 7, 1873

R.A. Lyman, Esq.
Hilo

Dear Sir
Mr. F.H. Harris is authorized by the
Commissioners of Crown lands to make appli-

cation to you as Commissioner of Boundaries to have the boundaries of all Crown lands on the Island of Hawaii defined. He has a list of the lands with him.

I have also authorized Mr. F.H. Harris to make application to you for the settlement of boundaries of all lands belonging to Est. of His late Majesty and Her Excellency, R. Keelikolani.

I expect to be in Kona by the trip of the "*Kilauea*" which leaves here on the 28th inst. Can't you make it convenient to come round as the steamer goes to Hilo on that trip.

I wish also to apply for the settlement of the boundaries of Honohina.

I remain,
Yours Respy.
Jno. O. Dominis

Honorable R.A. Lyman
Boundary Commissioner
for Island of Hawaii, Haw. Is.

The undersigned would herewith make application for the settlement of the boundaries of the following named Ahupuaas or Lands belonging to the Crown, viz... [page 238]

... **Waipio** in the District of Hamakua adjoining lands unknown.

Waimanu in the District of Hamakua adjoining lands unknown...

Waimea in the District of Kohala adjoining lands unknown...

Puukapu in the District of Kohala adjoining lands unknown...

Kawaihae in the District of Kohala adjoining lands unknown... [page 239]

...Your Honor will therefore please appoint a day for hearing the evidence in the foregoing named lands and having decided upon the same to grant a certificate to that effect to the undersigned.

(Signed) Jno. O. Dominis
Crown Land Agent,
by F.H. Harris
Atty. at law

Hilo Hawaii

August 16th A.D. 1873. [page 240]

Ahupuaa of Waimanu
Boundary Commission, Hawaii Volume B:86-9

The *Ahupuaa* of **Waimanu** District of Hamakua
Island of Hawaii, 3d J.C.

On this, the 17th day of November A.D. 1873 the
Commission of Boundaries for the Island of
Hawaii, 3d J.C. on the application of J.O. Dominis
Commissioner of Crown Lands met at the
Court House in **Waipio**, District of Ham-
akua, for the settlement of the boundaries
of **Waimanu**, Hamakua, Island of Hawaii.

Notice served by publication in the Haw-
aiian Gazette of _____ and *Kuokoa*
of _____ 1873, for settlement of the
boundaries of lands in Hamakua and
Kohala, at the Court House in **Waimea**,
South Kohala on the _____
and adjourned to **Waipio** on the 17th.

Due notice personally served on owners
or agents of adjoining lands, as far as known.

Present: G.W.D. Halemanu for applicant
and N. Keau for Hawaiian Government

For Petition see Folio 238, Book A.

Testimony

Piikea ^W. Sworn.

I was born at **Waimanu**, District of Hamakua
at the time of the Okuu [1803]. Have always lived there
and am a *kamaaina* of a part of the land.
Naone, my father and Keakaaea, my mother
(both dead) told me the boundaries.

Kekalani, an *ili* of **Waimanu** bounds it on
the Kohala side, at shore, at an *ahupuaa* [pig altar]
called **Lonalona** there is a *heiau* there called
Halehiwa; thence from this *heiau* which is close
to the sea shore the boundary runs along
the high tide mark to the mouth of the
river. Fishing right at the Kohala side of
the river in **Waimanu** belonging to **Ke-**
kalani, said fishing right changing accord-
ing to the course of the river. From **Halehiwa**
the boundary runs *mauka* to the *makaha* [sluice gate]
of **Kekalani** pond (now grown up with weeds);
thence along the bank of the pond, down to
the side of a *heiau* called Lonalona,

at the foot of the *pali* turn towards Kohala [page 86]; thence up the *pali* in an *awaawa*, **Keanakohoolua**, to **Pokoli**, at a place where they shoot wood from the head of the *awaawa*. The boundary runs along the brow of the *pali* to **Wailikahi**, a gulch and waterfall. This is all I know of the boundaries of **Waimanu** on the Kohala side. The boundary on the **Waipio** side is at **Naluea** gulch; thence up the gulch to a big waterfall. I have heard that **Waipio** cuts **Waimanu** off up *mauka*. Bounded *makai* by the sea. Ancient fishing rights extending out to sea.

C.X.d.

Kamehaiku ^K. Sworn

I was born at **Waimanu**, Hamakua at the time of *Peleleu 1st* [1795]. I now live at the other end of Hamakua; lived in **Waimanu** from the time of my birth till a few years since. I went with Nakuna, my father, who showed me the boundaries. I was *konohiki* of the land during the reign of Kamehameha 3d, had charge of lands several years, till the time of his death.

Starting from the mouth of the river the boundary runs *makai* side of a wall toward Kohala taking in a narrow strip of sand beach and breakers. Sea and fishing right belonging to **Waimanu** and not to **Kekalani**. Thence on the *makai* side of **Halehiwa** to near the foot of the *pali*; thence *mauka* along the side of an old dried up fish pond; thence to the side of **Lonolono**; thence to the foot of the *pali*; thence up an *awaawa* called **Kumukoa** to **Keanaholua** at the top of the *pali*; thence along the brow of the *pali* to a gulch of water called **Konaiki**. This is the small stream *makai* of **Wailikahi**; thence it cuts **Kekalani** off and runs to **Laupahoehoe** gulch. I have not been there, but Lahiwa, an old bird catcher told me about these boundaries. He said that the boundary between **Laupahoehoe** and **Waimanu** runs up the stream that runs down into **Laupahoehoe** valley, thence to **Wai-hoolana**. I do not know what land cuts **Waimanu** off on the **Kawaihae** side. It is bounded on the **Waipio** side at sea shore by **Muliwai**. **Naluea** gulch is the boundary to **Kukui** waterfall *mauka* side of Govt. road; and from there to **Waialoa**, where the gulch ends; thence along the brow of **Waimanu pali**; [page 87] **Muliwai** being on the top of the *pali* to **Kealai**, a place where the old road comes from **Waipio** and goes down into **Waimanu**, the ridge is very narrow here between the two palis, and bends towards

Kohala. **Muliwai** ends here and **Waipio** joins **Waimanu**; thence along the brow of **Waipio** valley to above **Ulu**; thence to, and across the **Waihoolana** to a big hill on **Waimanu**. I have never seen this place. Have only heard of it.

C.X.d.

I have heard that **Waipio**, **Waimanu** and **Waimea** join at **Waihoolana**. This is what I have heard from olden times and I never head that **Waimanu** took all the land. Lahiwa told me that **Waimanu** runs from **Ulu** to **Waihoolana**. I have never heard that **Waimea** cuts **Waimanu** off. This is all I know about the boundaries.

Kamakahi^K. Sworn, (same witness as on **Muliwai**) I was born at **Pololu**, Kohala at the time of the **Okuu**; came to Kohala when I was young, and have lived here ever since. Know the land of **Waimanu** and its boundaries along **Muliwai**. **Naluea** gulch separates the lands; the boundary runs up the stream to **Kukui** falls; thence to **Kalahikiola**, a place at the end of the gulch on **Waimanu**, where they used to build fires in the night to entrap birds. The ridge is very narrow here; thence along the top of **Waimanu** *pali* to a place called **Kealai**, where **Waipio** and **Waimanu** are separated by a narrow ridge and **Muliwai** ends; thence up a bend in the *pali*; and **Waipio** bounds **Waimanu** to the top of the *pali*; thence along the edge of the *pali* to **Ulu**, the *pali* belonging to **Waipio** and the high land to **Waimanu**. I have never been above here, but have heard that **Waipio** ends at **Ulu**. Have heard from Kukahekahe, an old bird catcher now living here in **Waipio** that **Kawaihae** cuts **Waimanu** off on the *mauka* side. I have never heard that **Waimanu** extends further *mauka* than **Waipio** does.

C.X.d.

Case continued until the 18th instant... [page 88]

Waipio Nov. 18, 1874

Case opened according to adjournment, Present: W.G. Helemanu and others.

Kukahikahi^K. Sworn

I was born in Hamakua at the time of Kiholo [1811], know the land of **Waimanu**; know a place called **Kealai** where **Waipio** and **Waimanu** join and cut **Muliwai** off. **Waipio** and **Waimanu** bound each other to

the first large gulch in **Waipio**. I do not remember whether the names of the gulch is **Kapuna** or **Kaupe**. The boundary does not reach to **Ulu**; as that place is in the middle of **Puukapu**. There are only some small gulches between this gulch and **Ulu**. Thence the boundary between **Waimanu** and **Puukapu** runs *mauka* along the gulch; I have not been in the woods and seen where this gulch comes from but a *kamaaina* told me that the land of **Honokane** cuts **Waimanu** off and joins **Puukapu**. I do not know where the *mauka* end of **Kekalani** is. I have heard that **Puukapu** and **Honokane** join at **Waihoolana**; and that **Waimanu** joins on **Waimanu** side and **Kawaihae** on the **Kawaihae** side, but neither of these lands reach to the point. My *kupuna* was from **Waimea**. Kalaau was his brother, and they were *kamaaina* of **Waimea**. Kalani, a bird catcher from **Ouli** was the one who told me about these boundaries when I was bird catching. I have been with others who were strangers there, and afterwards on meeting him I told him where we had been and he told me what lands I had been on.

C.X.d.

Hihipa^K. Sworn
I have been told by bird catchers, Laahiwa and others, that **Waimanu** runs to **Waihoolana**, but I did not hear what lands cut if off *mauka*.

C.X.d.

Kaanaana^K. Sworn
I was born at **Honopue** at the time of *pa* **Kapakukahola** (Building of the *heiau* at **Kawaihae** [Puukohola, ca. 1793]). Live at **Waimanu** when King Kamehameha II came to the throne [1819], and have been there ever since. I know the boundaries of **Kekalani** and **Waimanu**. Laahiwa (now dead) told them to me when I used to go [page 89] into the woods, after *mamo* with him. The boundary between **Kekalani** and **Waimanu** is at **Ahupuaa**. The boundary is at the mouth of the river; thence towards Kohala passing the Protestant Church at **Halehiwa**; thence to the wall near the Roman Church; thence *mauka* along the wall to the stream; thence along the stream towards Kohala to a *pali*, to **Kumukoa**; thence up the road to the top of the *pali* to **Kaumuki**; thence along the brow of the *pali* to **Konaiki** gulch; thence across the land towards Kohala, to the center of **Pokahi**

gulch; thence the boundary of **Waimanu** runs *mauka* to the end of the gulch bounded by **Laupahoehoe nui**; and up **kuahiwi** [mountain] to **Wai-hoolana**, where **Honokane** and **Waipio** unite and cut **Waimanu** off. This is as Laahiwa told me. I have never been there; know a place called **Kealai** where **Waipio** and **Waimanu** unite; thence the boundary runs along the brow of the *pali* to **Honokane** gulch. **Kaupe** and **Kapuna** gulches are between **Honokane** gulch and **Ulu**. I have been to **Ulu**. The boundary runs *mauka* along to the end of **Honokane** gulch and to **Wai-hoolana**.

C.X.d.

Case continued until further notice to all interested parties.

R.A. Lyman
Commissioner of Boundaries, 3d J.C. [page 90]

[No further description, notes of survey, or Certificate of Boundaries located in Boundary Commission Volumes.]

Ahupuaa of Waipio

District of Hamakua, Island of Hawaii

Boundary Commission Volume A No. 1 pages 230-231

Waipio	District of Hamakua
Kalahuipuaa	District of Kohala, <i>Ili</i> of Waimea
Anaehoomalu	District of Kohala, <i>Ili</i> of Waimea
Kaplaalaea	District of North Kona
Kalamakumu	District of South Kona, <i>Ili</i> of Napoopoo

Honolulu August **1st** 1873

To the Honorable Rufus A. Lyman
Commissioner of boundaries for the Island of Hawaii
H.I.

The Undersigned respectfully represents that he is the owner of the following named lands situated on the Island of Hawaii, Hawaiian islands aforesaid, belonging to the Estate of the late Queen Dowager Kalama, dec'd. and awarded to her by Land Commission Award No. 4452.

From Whom the Undersigned applicant inherited the same, to wit—

the *Ahupuaa* **Waipio**, in the District of Hamakua (*Apana* 5 of said award). 2. Kalahuipuaa, an

Ili of **Waimea**, in the District of Kohala (*Apana* 3 of said award). 3. Anaehoomalu, an *Ili* of **Waimea** in the District of Kohala (*Apana* 4 of said Award). 4. The *Ahupuaa* of Kapalaalaea, in the District of North Kona (*Apana* 2 of said award); and 5. Kalamakumu, an *Ili* of Napoopoo in the District of South Kona. This land having been patented to the undersigned applicant by Royal Patent 4497 and Land Commission Award 8559. That the same have not been awarded by the Land Commission, patented or conveyed by deed from the King by boundaries described in such awards, patent or deed; and therefore he respectfully requests that the boundaries of said lands may be settled by your Honorable Commission, and to that end, make this application to have the same decided and certified by you as Commissioner of Boundaries as aforesaid.

Pursuant to the requirements of the Statute, the Undersigned applicant represents, that the following are the names of the adjoining lands and the names of the owners of the same as far as known to the Undersigned applicant; to wit.

Of the land of **Waipio**

The land of Waikoekoe owned by His Majesty **Waimanu**, owned by applicant [page 230].

Of the *Ili* of Kalahuipuaa

The land of Puako, owned by His Majesty
The land of Anaehoomulu owned by applicant.

Of the *Ili* of Anaehoomalu

The land of Kalahuipuaa, owned by applicant
The land of Napuu, a Crown land

Of the *Ahupuaa* of Kapalaalaea

The land of Laaloa
The land of Kahaluu, owned by R. Keelikolani.

A full description of the boundaries of some of the above lands as claimed is set forth in the annexed surveys with this application and which the undersigned prays may be made a part of this, his application.

Very Respectfully

Chas. Kanaina

by A.F. Judd, his Attorney in fact.

Notes of the Survey of

Anaehoomalu

An *Ili* in **Waimea**, Hawaii

Beginning at the seashore point of junction with Kalaihuipuaa, and running thence along the line of Kalaihuipuaa S. 72 1/3° E. 34.05 ch; thence along the *Alanui Aupuni* S. 16° W. 83.52 ch. S. 24° W. 49.00 ch. S. 25° W. 34.00 ch.; thence along the line of Kapalaoa; N. 73° W. 30.00 ch. to the sea, and thence along the shore N. 35° East 13.00 ch.; N. 32° W. 56.00 ch; N. 39 1/4° E. 59.40 ch; N 39 1/4° East 59.50 to the point of commencement.

Comprising an area of 846 acres more or less.

J. Howard Sleeper
Surveyor

Dec. 3rd 1858.

Note: Notes of survey of Kalaihuipuaa on file. [page 231]

Ahupuaa of Waipio
Boundary Commission, Hawaii Volume A No. 1:238-240

Honolulu, July 7, 1873

R.A. Lyman, Esq.
Hilo

Dear Sir
Mr. F.H. Harris is authorized by the Commissioners of Crown lands to make application to you as Commissioner of Boundaries to have the boundaries of all Crown lands on the Island of Hawaii defined. He has a list of the lands with him.

I have also authorized Mr. F.H. Harris to make application to you for the settlement of boundaries of all lands belonging to Est. of His late Majesty and Her Excellency, R. Keelikolani.

I expect to be in Kona by the trip of the "*Kilauea*" which leaves here on the 28th inst. Can't you make it convenient to come round as the steamer goes to Hilo on that trip.

I wish also to apply for the settlement of the boundaries of Honohina.

I remain,
Yours Respy.
Jno. O. Dominis

Honorable R.A. Lyman
Boundary Commissioner

for Island of Hawaii, Haw. Is.

The undersigned would herewith make application for the settlement of the boundaries of the following named Ahupuaas or Lands belonging to the Crown, viz... [page 238]

... **Waipio** in the District of Hamakua adjoining lands unknown.

Waimanu in the District of Hamakua adjoining lands unknown...

Waimea in the District of Kohala adjoining lands unknown...

Puukapu in the District of Kohala adjoining lands unknown...

Kawaihae in the District of Kohala adjoining lands unknown... [page 239]

...Your Honor will therefore please appoint a day for the hearing of the evidence in the foregoing named lands and having decided upon the same to grant a certificate to that effect to the undersigned.

(Signed) Jno. O. Dominis
Crown Land Agent,
by F.H. Harris
Atty. at law

Hilo Hawaii
August 16th A.D. 1873. [page 240]

Ahupuaa of Waipio
Boundary Commission, Hawaii, Volume B:111-116

The Ahupuaa of **Waipio**, District of Hamakua
Island of Hawaii, 3d J.C.

On this, the 19th day of November A.D. 1873 the Commission of Boundaries for the Island of Hawaii 3d J.C. met at the Court House in **Waipio**, Hamakua, on the application of A.F. Judd, Agent for Hon .C. Kanaina, for the settlement of the boundaries of **Waipio** situated in the District of Hamakua, Island of Hawaii.

Notice of the hearing for the settlement of boundaries of lands in Hamakua and Kohala at **Waimea** Court House, South Kohala on the _____. Served by publication in the Hawaiian Gazette of _____ and Kuokoa of _____, 1873 and adjourned to **Waipio** on the 17th instant and continued on the 18th and 19th. Due notice personally served on agents of adjoining lands, as far as known.

Present: G.W.D. Halemanu for applicant and adjoining lands, J.R. Mills for lessees of **Waipio**.

For Petition see Folio 230, Book A

Note

For the boundaries of **Waipio** adjoining **Muliwai** see boundaries and Decision of **Muliwai**. Folio 83.

Testimony

N. Keau Sworn. (Same witness as in **Waikoekoe**)
I have lived here for over fifty years, and the boundaries of **Waipio** are well known to me. **Lalakea**, an *ili* of **Waipio** bounds it on the Hilo side. I have had charge of **Lalakea** and have leased it for over ten years, and when I leased it I went and saw the boundary between it and **Waipio**. The mouth of the river is the boundary at shore between **Waipio** and **Lalakea**; thence up the wall between **Lalakea** and the stream and thence up the stream to *makai* of G.W.D. Halemanu's house; there turn and run up the *pali*, called Pueohuhunui. [page 111]

Note

The old boundary that runs up the *pali* is *mauka* of Halemanu's house; the boundary surveyed is *makai*.

The place at the foot of the *pali* is called **Waimihi**.

Note:

Keau points out the ridge as running up above A.S. Cleghorn's store.

Thence along the brow of the *pali* till you come to a place called **Poolakiki**, there is a rock there on the *pali* called **Hakalaoa**, an old stone god. The boundary has left the top of the *pali* and come along on the side to this place; thence to the foot of **Hiilawe** falls; thence along the foot of the *pali* to an *auwai*; thence up the *auwai* to a stream of water (The patch called **Haha** is on **Lalakea**) thence up the stream to Kukauloa, a patch where I used to plant food; there the boundary of **Lalakea** turns into the *pali* again along the *loi*, and along the base of the *pali* to the land of Ohia; thence to the middle of the *pali* to a place called **Opailolo** [**Ōpaelolo**], a road which used to run out to the head of the valley. This is the *mauka* corner of the land (This is established by Certificate of Boundaries of

Waimea, as the corner called **Kilohana**, of **Waipio** and **Lalakea**). **Kilohana** is a resting place at the *mauka* end of the *pali*.

C.X.d.

I do not know the *mauka* boundaries of **Waipio** or what lands cut if off on the *mauka* end.

Paaaoa^K. Sworn.

I was born in **Waipio**, Hamakua at the time of *Peleleu* [1795].
I have always lived here and know the boundaries.

Kamehameha I told me the boundaries.

[made correction] Kamehameha I did not tell me the boundaries.

Keala, my *makuakane*, told them to me. He had charge of **Lalakea** and I sometimes went there with him. My mother, *Pelele*, was a *kamaaina* of **Waipio** and she told my father who was from Molokai the boundaries between **Waipio** and **Waimea**. **Lalakea** bounds **Waipio** on the Hilo side. Commencing at the shore close to a *heiau* called **Kahalekapapaulua**, on the Hilo side of the stream; thence the boundary runs to a wall inclosing a fish pond on **Lalakea** [page 112]; thence along the *kuauna* to Halemanu's cook house; thence to the Court House and up an *awaawa* to the top of the *pali*; thence to the *awaawa* of **Kaluahine**, on **Lalakea**. The top of the *pali* is called **Pueohulunui**; thence *mauka* along the side of the *pali* to the road called **Puaahuku** (Contradictory evidence). Thence along this road to the brow of the *pali* that bounds **Kemama** and **Lalakea**; thence along the *pali* to **Hiilawe** falls, to **Puaahuku** road; thence along the brow of the *pali* to **Opailolo**, a road that used to lead to **Waimea** that runs down the head of the valley. I do not know of any place called **Kilohana**. The head of this road, at the top of the *pali* is where **Waimea** joins **Waipio**.
Thence along **Waimea**, along the head of the *pali*, the *awaawa* belonging to **Waipio** and the land above to **Waimea**. The ridges between the *awaawa*, in the valley and **Waipio**, but the land above the big *pali* is **Waimea**; thence along the brow of the *pali* to **Ulu**. From here I have been told that **Waipio** runs up to **Waihooolana**, and joins **Honokane**. **Waimanu** does not reach above **Kealai**. I do not know whether it ends there or not. I do not know what land bounds **Waipio** from **Kealai** to **Waihooolana**; have never been beyond **Ulu**. From **Kealai** to sea shore **Muliwai** bounds **Waipio**.

(Note

See Evidence Certificate of Boundaries of **Muliwai**) Folio 83 & 84 of this book.

Bounded *makai* by the sea. Ancient fishing rights extending out to sea and in olden times they used to extend along to **Naluea** gulch. I saw the line of boundary between **Waipio** and **Lalakea** surveyed from the shore to the Court House, but I did not go any further with them. Pehe^K and others now dead were with the surveyor.

C.X.d.

One of the places called **Manuhi**, in the valley is on **Lalakea**; the *pali* all belongs to **Waipio** but the cultivating ground, **Manuhi makai** on **Lalakea**; this place commences at **Kaihuakapuaa**, the *loi* of that name is on **Waipio**, and the *loi* of the same name further *mauka* is on **Lalakea**; the boundary being the bank between, which runs out into the stream; thence *mauka* up the stream to the bank of the *loi* on **Manuhi mauka**, here [page 113] the boundary turns towards the *pali*; taking in all the *kalo* patches and old potato ground. I can go and point out the boundaries all around that place. The *mauka* boundary of the strip of **Lalakea** in the valley is between two lois called **Kukaua**, there is no other portion of land in the valley belonging to **Lalakea**.

There were formerly strips of land in **Lalakea** belonging to **Waipio**, but when Kaniu had the land she gave **Lalakea** to Kuakini and he took possession of those tracts of land as a part of **Lalakea**. I think this was during Kamehameha III time and they have been held as part of **Lalakea** ever since. The strips were called **Polakikee** and **Kumupapala**, and **Mahikiwaena** was a part of **Kumupapala**. Kuakini took possession of the *pali* above the cultivating ground.

Note:

N. Keau asks to be allowed to make a Statement. Granted.

During the reign of Liholiho the land of **Lalakea** belonged to Kamamalu, and she gave it to her mother, Kaniu^W, and Kaniu gave it to Kuakini, and the boundaries that I testified to are as Kuakini fixed them at that time, and I have not heard of their being changed since. The last witness

has testified to the boundaries as they were formerly. Kuakini changed the boundaries of a great many lands at that time.

Waiokalehua ^K. Sworn. (Same witness as in **Muliwai**)
Nahuina ^K. my *makua* told me the boundaries of **Waipio**, as I testify to today, and I afterwards went with the surveyor of **Waipio** and **Lalakea**. Makuakua ^K. (now dead) was the *kamaaina* of **Waipio** and Puanui (now dead) was the *kamaaina* of **Lalakea**. Kauhine and others who are now dead, went with us and the land was surveyed as the *kamaaina* pointed out the boundaries.

Commencing at the shore between **Lalakea** and **Waipio** at a *heiau* called **Kahalekapapa-ulua**, about five chains from the Hilo side of the river, thence they surveyed across [page 114] the sand beach, to the bank of the fish pond; thence along the wall of the fish pond and the *kuauna* of the river to Halemanu's cook house; thence towards the *pali* passing on the *mauka* side of where the Court House now stands, to the base of the *pali*; thence up a hollow in the *pali* to **Kilohana**, an old *kauhale*; here a portion of **Lalakea** ends and the strip of land called **Kemama** bounds **Waipio**; thence to the *awaawa* of **Kaluahine** which is shallow there. We went to a place called **Kaluapuhe**, and from there sighted to the different points in the valley, and to the top of **Puahuku** [**Puaahuku**] *pali*. The surveyor then took the compass, to **Kai-hupuaa** at the foot of the *pali*, and surveyed out into the valley to the stream to a place called **Keawehale**, thence straight *mauka* along the banks of the *kalo* patches (true boundary) taking in the whole of **Manuhi makai** thence to the Hamakua side of the *pali* and along the base to **Opailolo**, a road running up the *pali*. This is as far as I went with the surveyor. I have been told by them that went with him that he surveyed all around the valley, sighting to different points on the *pali*. It was very pleasant weather and we could see the points on top of the *pali* very distinctly. From the point at the head of the *pali* called **Kilohana**; the boundary runs along the brow of the *pali* to **Hiilawe**. The *pali* being on **Waipio**, thence along the brow of the *pali* to **Puahuku** road. My parents told me that the *pali* above the cultivating ground at **Lalakea** in **Waipio** valley belongs to **Waipio**. I do not know where Kuakini claimed.

They told me that the brow of the *pali* was the boundary line running *mauka* to **Waiakulina**, a gulch that in olden times was the *mauka* corner of **Lalakea**; there is a strip of **Waipio** between there and **Puukapu**. **Kilohana** is a resting place at the top of **Opailolo**, and not far from **Waiakulina**. From **Kilohana** **Waipio** runs to **Ulu**, bounded by **Waimea**. **Waipio** had land on the top of the *pali* between **Kilohana** and **Ulu**. **Waipio** and **Waimea** join and bound each other to **Waihoolana**. I have never been to **Waihoolana** but am told that **Waipio**, **Waimanu** and **Honokane** [page 115] join there. Thence **Waipio** and **Waimanu** bound each other to **Kealai**. The boundary runs along the brow of the *pali* from **Ulu** to **Kealai** which is the *mauka* corner of **Muliwai**; thence *makai* to sea shore along **Muliwai**. For Boundaries see Evidence of Boundaries of **Muliwai**. Folios 83 & 84 of this book.

Bounded *makai* by the sea. Ancient fishing rights extending out to sea.

The **Waipio** people used to go after *olona* on the ridge that projects into the head of the valley.

C.X.d.

I have heard from my mother that **Kawaihae** bounds **Waipio** at the **Waihoolana**.

Case continued until further notice to all interested parties.

R.A. Lyman
Commissioner of Boundaries, 3d J.C.

Note the case was continued to see whether owners of **Waipio** wished to claim the *Ili* of **Waipio**, that were included in the survey of **Lalakea**, to wit. **Mahikiwaena**, **Kumupapala**, and **Polakikee**.

A.F. Judd, Atty. in fact for H. H. Chas. Kanaina filed his acceptance of the boundary between **Waipio** and **Lalakea** as given in notes of survey of **Lalakea** and **Waipio**, filed by owners of **Waipio** and **Lalakea**; See Folio 118 of this book.

R.A. Lyman
Commissioner of Boundaries, 3d J.C.

Decision

The Boundaries of **Waipio** are decided to be as given in Certificate of Boundaries for **Lalakea**, No. 34 for boundary from shore between this land & **Lalakea** to point on East bank of **Waipio** called **Kilohana** for description by survey see Folio 15.

Liber I No. 3;

Thence along brow of *pali* to place called **Ulu** bounded by **Waimea** to junction with **Waimanu**; Thence *makai* along land of **Waimanu** to place called **Kealai**, place where old road to **Waimanu** from **Waipio** ran over the ridge; thence boundary runs down *pali* along land of **Muliwai** to bottom of Pali; thence *makai* along base of *pali*, as pointed out by Kamakahiki & Waiokehua, see Folios 83 & 84 of this book to point in valley where boundary turns out to **Imaikalani**, along Kaluas *kuleana* & **Waiohao** pond, leaving **Muliwai** pond & two *kio pua* on **Muliwai**; & thence from old pond **Mokapu** on **Waipio**, boundary runs towards Kohala to **Kaholokuaiwa** *mauka* side of Govt. road, up the *pali*. Thence to sea shore, bounded *makai* by sea.

New survey to be filed previous to Certificate of Boundaries being issued.

Hilo, May 11, 1874.

R.A. Lyman

Com. of Bound. 3d J.C.

Copy of Decision sent to all interested parties... [page 116]

Ahupuaa of Waipio

Boundary Commission, Hawaii Volume 1, No. 3:332-341

Certificate of Boundaries of the Land
of **Waipio**. District of Hamakua, Island
of Hawaii

L.C. Award No. _____ [4452]

Commission of Boundaries

Third Judicial Circuit. F.S. Lyman, Esq., Commissioner

In the Matter of the Boundaries
of the Land of **Waipio**
District of Hamakua, Island
of Hawaii.

Judgment.

An application to decide and certify the Boundaries
of the Land of **Waipio**, District of Hamakua, Island
of Hawaii, having been filed with me on the ____ day of
August 1873 by A.F. Judd, Agent for Hon.
C. Kanaina, owner of the land of **Waipio**;
in accordance with the provisions of an Act to facilitate
the settlement of Boundaries, &c, approved on the 22d day
of June, A.D. 1868; now therefore having duly received
and heard all the testimony offered in reference to the
said boundaries and having endeavored otherwise
to obtain all information possible to enable me to arrive
at a just decision, which will more fully appear by
reference to the records of this matter by me kept in
Book No. 2 B. page 116, and it appearing to my satis-
faction that the true, lawful and equitable boundaries

are as follows, viz.;

Beginning at the east corner of a stone enclosure known as Waiokalehua's, 290 feet East of Wailoa river bank and about 830 feet from the sea, the same being the East angle of L.C.A. 7860 (Kawahine-ainiu Lot 1) on the boundary of **Lalakea**, from [page 332] whence "**Waipio** trig. Sta." bears $108^{\circ} 5'$ az. from true South, and top of the main or lower **Hiilawe** falls $13^{\circ} 8'$ az. from true South and running:

1. S. $49^{\circ} 10'$ W. true 396 feet along *kuauna* of **Lalakea** fish pond to the *makaha* at south angle of Kawahineainiu's *kuleana*;
2. S. $48^{\circ} 30'$ W. true 292 feet along *kuauna* of **Lalakea** fish pond.
3. S. $33^{\circ} 10'$ W. true 395 feet along *kuauna* of **Lalakea** fish pond;
4. S. $18^{\circ} 20'$ W. true 429 feet along *kuauna* of **Lalakea** fish pond;
5. N. $75^{\circ} 50'$ E. true 175 feet along **Lalakea** to a marked stone 9 feet S.E. of the S.E. corner of the Court House; Thence
6. S. $38^{\circ} 30'$ E. true 1584 feet along **Lalakea** up spur of *pali* by old road, known as **Pueohulunui**, to a marked stone near head of said road whence the top of the main or lower falls of **Hiilawe** bears $20^{\circ} 47'$ az. from true South and "**Waipio** trig. sta." bears $127^{\circ} 42'$ az. from true South;
7. S. $19^{\circ} 35'$ E. true 1132 feet along **Lalakea**, the boundary being the edge of the main **Waipio pali**;
8. S. $6^{\circ} 45'$ E. true 1116 feet along **Lalakea**, the boundary being the edge of the main **Waipio pali**;
9. S. $5^{\circ} 15'$ E. true 1110 feet along **Lalakea**, the boundary being the edge of the main **Waipio pali**;
10. S. $15^{\circ} 10'$ W. true 708 feet along **Lalakea**, the boundary being the edge of the main **Waipio pali**;
11. S. $8^{\circ} 20'$ W. true 722 feet along **Lalakea** to a point on the East edge of **Hooleleke** Gulch;
12. S. $79^{\circ} 40'$ W. true 219 feet across the mouth of the same;
13. S. $53^{\circ} 58'$ W. true 1248 feet;
14. S. $66^{\circ} 30'$ W. true 898 feet to the smaller falls east of **Hiilawe**;
15. S. $68^{\circ} 30'$ W. true 171 feet;
16. N. $56^{\circ} 45'$ W. true 267 feet to the **Hiilawe** falls;
17. N. $63^{\circ} 45'$ W. true 455 feet;
18. N. $33^{\circ} 40'$ W. true 1062 feet;
19. N. $62^{\circ} 30'$ W. true 112 feet to the "Oioina" at the top of the ridge by the old path which descends the spur of the **Puaahuku pali** [page 333];
20. N. $9^{\circ} 45'$ W. true 3114 feet still along **Lalakea** down the ridge to a point at its base which marks the East corner of L.C.A. 11102 (Kahiamoe);

21. N. 62° 35' W. true 301 feet along L.C.A. 11102 (Kahiamoe);
22. S. 73° 40' W. true 169 feet along L.C.A. 11102 (Kahiamoe) to a water course; Thence along water course;
23. S. 33° 40' W. true 315 feet still along L.C.A. 11102;
24. S. 43° 00' W. true 174 feet along **Lalakea**;
25. S. 50° 30' W. true 259 feet along L.C.A. 8472 Keawe;
26. S. 18° 50' W. true 174 feet along L.C.A. 8472; Thence leaving water course;
27. N. 67° 00' W. true 83 feet along *kuauna* by L.C.A. 10781 (Puaanui) to the E. bank of the **Kumaka** river;
28. S. 49° 40' W. true 242 feet along L.C.A. 10781;
29. S. 23° 35' W. true 209 feet along L.C.A. 10781;
30. S. 65° 45' E. true 109 feet along L.C.A. 10781;
31. S. 19° 5' W. true 798 feet along L.C.A. 10781;
32. S. 66° 30' E. true 100 feet along L.C.A. 10781;
33. N. 20° 45' E. true 64 feet along L.C.A. 10781 along water course;
34. S. 71° 00' E. true 128 feet along **Lalakea**;
35. S. 59° 20' E. true 325 feet along L.C.A. 8487 (Kaunauwahi) to its South corner; Thence along side of *pali* by **Lalakea**;
36. S. 31° 50' W. true 976 feet;
37. S. 6° 00' W. true 238 feet to south corner of L.C.A 7056 (Kahulanui) Lot 1;
38. S. 30° 10' W. true 1402 feet to the east corner of the *Ili* of Pueo, Grant No. 664 (Kaaukai); Thence leaving the *pali*;
39. N. 55° 45' W. true 74 feet along Pueo;
40. N. 32° 20' W. true 119 feet along Pueo to east corner of L.C.A. 7956 (Kahulanui) Lot 2;
41. N. 48° 30' W. true 278 feet along Pueo;
42. N. 58° 30' W. true 106 feet along Pueo;
43. N. 79° 20' W. true 62 feet along Pueo;
44. N. 50° 30' W. true 159 feet along Pueo;
45. S. 38° 10' W. true 324 feet along Pueo [page 334];
46. N. 55° 30' W. true 33 feet along the *Ili* of **Kaohia** (Crown);
47. S. 33° 15' W. true 123 feet along the *Ili* of **Kaohia**;
48. N. 54° 30' W. true 192 feet along the *Ili* of **Kaohia**;
49. S. 27° 50' W. true 1054 feet along the *Ili* of **Kaohia** to its West corner on the W side of a water course;
50. S. 60° 10' E. true 272 feet along **Kaohia** to the East corner of L.C.A. 10962 (Konohiki) at a point on the brow of a small *pali* 9 feet east of a pig pen;
51. N. 61° 10' E. true 302 feet along **Kaohia** to a well known marked rock called "**Pohaku Ohia**";
52. S. 23° 25' E. true 244 feet along **Ohia**; thence along the side of the *pali* by **Lalakea**;
53. S. 28° 10' W. true 363 feet to the east corner of L.C.A. 10962 (Konohiki);

54. S. 30° 40' W. true 505 feet;
55. S. 68° 30' W. true 227 feet;
56. S. 74° 45' W. true 446 feet to the south corner of L.C.A. 8481 (Kawilikopaa);
Thence up the *pali* to the top;
57. S. 42° 45' E. true 2380 feet; Thence along the summit edge of *pali*
still along **Lalakea**;
58. S. 30° 15' W. true 430 feet;
59. S. 14° 00' W. true 1073 feet;
60. S. 20° 20' E. true 235 feet;
61. S. 26° 5' W. true 3140 feet;
62. S. 29° 20' W. true 3091 feet;
63. S. 56° 30' W. true 363 feet to a well known marked point called
"**Kilohana**," on the boundary of **Waimea**, at the
head of the old **Opaelolo** road not far above
the rock of **Pupualenalena**;
64. Thence along the brow of the *pali* around the entire head of
Waipio valley and its several branches called **Waima**;
Koiawe; **Alakahi** and **Kawainui**; along the ahupuaas
of **Waimea** and **Waimanu** (**Awini**, **Honopue** and
Laupahoehoe probably also abutting on this *pali*) to [page 335]
a point at **Kealai** or the lowest part of the saddle of
the ridge between **Waipio** and **Waimanu** valleys at the
head of the latter;
65. Thence down *pali* along land of **Muliwai** to bottom of *pali*;
66. Thence along bottom of *pali* by **Muliwai** to a point 360 feet
true North of the junction of the **Koiawe** and **Kawainui**
rivers and N. 58° 0' W. true 6210 feet from sta. 64 at **Kilohana**; Thence
67. N. 82° 0' E. true 792 feet along base of *pali* by **Muliwai**;
68. N. 51° 0' E. true 300 feet along base of *pali* by **Muliwai**;
69. N. 67° 40' E. true 1130 feet along base of *pali* by **Muliwai**;
70. S. 13° 55' E. true 86 feet across **Kawainui** river by **Pohakumauluulu**;
71. N. 86° 50' E. true 819 feet along edge of the river by **Pohakumauluulu**;
72. N. 7° 0' E. true 173 feet across both branches of river by **Pohakumauluulu**;
73. S. 69° 0' E. true 793 feet along base of *pali* by **Muliwai**;
74. S. 77° 30' E. true 563 feet along base of *pali* by **Muliwai** to angle
in the valley 500 feet N.W. of junction of **Kawainui**
and **Waima** rivers and N. 7° 10' W. true 4490 feet
from sta. 64 at **Kilohana**;
75. N. 21° 0' E. true 1223 feet along side of *pali* by **Muliwai**; Thence
along the *Ili* of **Pohakumauluulu** (Crown);
76. S. 63° 40' E. true 767 feet to a mark on large rock at end of stone
wall by edge of small *pali*;
77. S. 61° 10' E. true 178 feet to edge of **Kawainui** river; Thence
along the N.W. bank of **Kawainui** river to a point which bears

78. S. 41° 15' W. true 1474 feet from last station.
79. S. 4° 25' W. true 74 feet across river to a point 70 feet East of junction of **Waima** and **Kawainui** rivers; thence along the S.E. bank of the **Kawainui** river to a point which bears
80. N. 42° 25' E. true 1550 feet from last station and S. 61° 10' E. true 78 feet from station 77;
81. S. 61° 10' E. true 317 feet;
82. N. 44° 0' E. true 490 feet along base of *pali* on E. side of valley [page 336];
83. N. 4° 40' E. true 457 feet along base of *pali* on east side of valley;
84. N. 68° 45' W. true 382 feet crossing **Kawainui** river to an old *kahuahale*;
85. N. 75° 20' W. true 711 feet;
86. N. 67° 50' W. true 358 feet still along **Pohakumauluulu** to its North corner which bears N. 16° 45' E. true 675 feet from sta. 76; Thence along the side of the *pali* by **Muliwai**;
87. N. 11° 25' E. true 1834 feet to S.W. corner of L.C.A. 8539 (Kupele) Lot 1;
88. N. 21° 20' E. true 397 feet to N.W. corner of same;
89. N. 23° 15' E. true 963 feet to S.W. corner of L.C.A. 10781 Puaanui Lot 2, which bears N. 79° 55' W. true 1018 feet from Sta. 57;
90. N. 7° 20' E. true 660 feet;
91. S. 67° 35' E. true 100 feet to west angle of L.C.A. 10286 Manuakui, Lot 1; Thence along the base of the *pali* by **Muliwai**;
N. 37° 15' E. true 903 feet;
93. N. 30° 10' E. true 1789 feet to a point near base **Kumupapala** falls at the West corner of L.C.A. 7860 (Kawahineainiu), Lot 1;
94. N. 39° 30' E. true 507 feet to north corner of L.C.A. 7860; Thence leaving the base and running along
The side of the *pali* still by **Muliwai**;
95. N. 7° 15' W. true 898 feet;
96. N. 14° 40' W. true 230 feet to north corner of L.C.A. 8471 (Kaheana) Lot 1; just South of a small waterfall;
97. N. 42° 45' E. true 361 feet;
98. N. 54° 30' E. true 309 feet;
99. N. 41° 55' E. true 258 feet;
100. N. 53° 50' W. true 120 feet;
101. N. 28° 00' W. true 148 feet to the west corner of L.C.A. 10395 (Nakoko) at a point on the South edge of basin at foot of **Neneuwe** falls;
102. N. 37° 40' E. true 49 feet to a point on east edge of basin;
103. N. 3° 20' E. true 132 feet crossing Neneuwe stream to a point on steep face of a sharp ridge [page 337];
104. N. 87° 0' W. true 223 feet up the ridge; Thence along the side of the *pali* still by **Muliwai**;

105. N. 14° 50' W. true 507 feet to West corner of L.C.A. 9827 (Kipapanui);
106. N. 16° 0' E. true 79 feet;
107. N. 15° 30' W. true 311 feet to West corner of L.C.A. 8401 (Keliinohopali);
108. N. 37° 15' E. true 124 feet;
109. N. 56° 00' E. true 225 feet;
110. N. 39° 35' E. true 211 feet to North corner of L.C.A. 10066 (Maka) Lot 1;
111. S. 49° 50' E. true 377 feet to West corner of L.C.A. 8202 (Hamohamo);
112. N. 50° 10' E. true 48 feet;
113. S. 51° 15' E. true 87 feet;
114. N. 63° 15' E. true 207 feet;
115. N. 8° 35' E. true 122 feet; Thence leaving the boundary of **Muliwai** and running around the *Ili* of **Koloakiu**, L.C.A. 8815 B (Kaonaeha);
116. S. 64° 20' E. true 160 feet down the *pali* to the West bank of the water course by the road;
117. S. 8° 50' W. true 33 feet;
118. S. 73° 10' E. true 89 feet;
119. S. 18° 45' W. true 57 feet;
120. S. 64° 25' E. true 779 feet;
121. N. 34° 0' E. true 982 feet to the south corner of L.C.A. 10960 (Wahakole), Lot 1 on the east bank of the **Makoko** river;
122. N. 21° 5' E. true 105 feet to a point in the middle of the river;
123. N. 54° 50' W. true 1000 feet to the corner of a stone wall by the road at the base of the *pali* near the north corner of the *Loi koele*;
124. N. 49° 10' W. true 360 feet up the *pali* to a marked rock by *puhala* tree at north corner of L.C.A. 10960 (Wahakole) Lot 1; thence leaving the boundary of **Koloakiu** and running along the side of the *pali* by **Muliwai**;
125. N. 55° 25' E. true 178 feet to West corner of L.C.A. 8474 (Kealoha) [page 338];
126. N. 40° 00' E. true 294 feet to North corner of L.C.A. 8479 (Koi);
127. N. 78° 50' E. true 451 feet to West corner of L.C.A. 10565B (Ohule), Lot 1;
128. N. 39° 35' E. true 426 feet;
129. N. 1° 25' E. true 480 feet;
130. S. 72° 30' E. true 108 feet;
131. N. 30° 20' E. true 210 feet;
132. N. 54° 40' W. true 130 feet;
133. N. 35° 15' E. true 66 feet;
134. N. 51° 20' W. true 63 feet to West corner of L.C.A. 7856 (Kamakahiki), Lot 2;
135. N. 46° 0' E. true 380 feet to North corner of L.C.A. 7856 (Kamakahiki), Lot 1;
136. S. 61° 10' E. true 248 feet down the *pali*; Thence along base of *pali* still by **Muliwai**;

137. N. 38° 30' E. true 180 feet;
138. S. 71° 45' E. true 73 feet crossing the road to a point 17 feet East of stone wall;
139. N. 25° 45' E. true 303 feet to the North corner of L.C.A. 7863 (Kalua) Lot 3;
140. N. 13° 00' E. true 172 feet to a point on E. face of stone wall;
141. N. 14° 40' E. true 25 feet to South corner of L.C.A. 7863 (Kalua), Lot 2;
142. N. 75° 15' W. true 28 feet crossing the road to a point on side hill 21 feet *mauka* of "**Leimakani's cave**;"
143. N. 10° 40' E. true 99 feet;
144. N. 33° 0' W. true 25 feet;
145. N. 58° 30' W. true 258 feet;
146. N. 29° 40' E. true 290 feet; Thence leaving the base of *pali* but still following the boundary of **Muliwai**;
147. S. 67° 40' E. true 98 feet to corner of stone wall on East side of road at North corner of L.C.A. 7863 (Kalua), Lot 2;
148. S. 77° 15' E. true 129 feet;
149. S. 1° 50' E. true 208 feet along edge marsh;
150. S. 33° 0' W. true 174 feet along edge marsh;
151. S. 14° 40' W. true 100 feet to sta. 142;
152. S. 14° 40' W. true 25 feet to sta. 141; Thence starting again [page 339] from sta. 141 and running out into the marsh still along **Muliwai**;
153. S. 69° 20' E. true 198 feet along *kuauna* to angle in [*kuauna*];
154. N. 45° 45' E. true 88 feet along *kuauna* to *makaha* of old fish pond;
155. S. 64° 50' E. true 793 feet through marsh to West corner of L.C.A. 10918 (Uma), Lot 3, on East bank of water course;
156. N. 39° 10' E. true 987 feet to North corner of L.C.A. 7860 (Wahineainiu) Lot 2 on East bank of water course;
157. N. 28° 50' E. true 491 feet along edge of the **Muliwai** marsh to the angle in the *kuauna* at its East corner;
158. N. 59° 0' W. true 1344 feet along *kuauna* to a point 30 feet East of the road on the West side of the marsh;
159. S. 6° 0' W. true 55 feet;
160. S. 47° 35' W. true 225 feet to the South corner of L.C.A. 7863 (Kalua) Lot 1, which is N. 31° 25' E. true 841 feet from Sta. 148;
161. N. 49° 20' W. true 146 feet crossing the road to a point on the side of the **Muliwai** *pali*;
162. N. 39° 30' E. true 736 feet along side of *pali* to the North angle of L.C.A. 7863;
163. S. 37° 45' E. true 132 feet down the *pali*;

164. N. 6° 35' W. true 114 feet to a marked point on the rock at base of *pali* where it forms a sharp angle near sea shore;
165. Thence the *Ahupuaa* of **Waipio** owns the shore fishing on all accessible rocks on the coast as far to the Northwest as the gulch **Naluea** about two miles.
Starting again from a point which bears N. 64° 20' E. true, 100 feet from sta. 165 and running along sea shore;
166. S. 29° 0' true 350 feet;
167. S. 66° 55' E. true 2624 feet to a point in the middle of river at its mouth [page 340];
168. S. 78° 40' E. true 330 feet to a point on the sea shore on the division line between this land and **Lalakea**; Thence
169. S. 26° 10' W. true 866 feet along **Lalakea** to initial point.

Containing an area of about 5800 acres.
Surveyed by J.S. Emerson, Gov't. Surveyor

I hereby certify the above description to be in accordance with the past decisions of the boundary Commission of the Island of Hawaii.

(Signed) C.J. Lyons

May 17th 1881

It is therefore adjudged and I do hereby decide and certify that the boundaries of the said land are, and hereafter shall be as hereinbefore set forth.

Given under my hand at Hilo, Island of Hawaii, the 23d day of May A.D. one thousand eight hundred and eighty one.

F.S. Lyman
Commissioner of Boundaries... [page 341]

Ahupuaa of Kahualilii
District of North Kohala, Island of Hawaii,
Boundary Commission, Hawaii, Volume A:245-246

Honorable R.A. Lyman
Honorable R.A. Lyman
Boundary Commissioner
for Island of Hawaii

The undersigned would herewith make application for the settlement of the Boundaries of the following named Ahupuaas or lands belonging to the Estate of the Kekuanaoa & V. Kamamalu, viz...; [page 245]

...**Kahuaike** [Kahuaiki – Kahua liilii] , District of Kohala, Hawaii adjoining lands unknown...

...**Kahua**, District of Kohala, Hawaii adjoining lands unknown...

Your Honor therefore will please appoint a day for the hearing of said application, and grant a certificate in accordance therewith,

(sig) J.O. Dominis, admts.
J.F.H. Harris, Atty at Law
Hilo August 16th A.D. 1873 [page 246]

Ahupuaa of Kahualiilii

**District of North Kohala, Island of Hawaii,
Boundary Commission, Hawaii Volume B:138-139**

The Ahupuaa of **Kahualiilii**, District of North Kona, Island of Hawaii, 3d J.C.

On this, the 24th day of November A.D. 1873 the Commission of Boundaries for the Island of Hawaii, 3d J.C. met at the house of Jas. Woods, Kohala Ranch, North Kohala, on the application of J.O. Dominis, Administrator of the Estate of M. Kekuanaoa for the settlement of the boundaries of Kahualiilii, situated in the District of North Kohala, Island of Hawaii. Notice of hearing, for the settlement of boundaries of lands in Hamakua and Kohala at the Court House in **Waimea**, South Kohala on _____. Served by publication in the Hawaiian Gazette of _____ and *Kuokoa* of _____ 1873, and continued at Kohala Ranch on the 24th instant. Due notice personally served on owners or Agents of adjoining lands, as far as known. Present: Jas. Woods for applicant and all parties.

For Petition see Folio 245 Book A.

Testimony

Kaili^K. Sworn.

I was born in Kohala at the time of the great Famine [ca. 1811], now live in Kokio; know the boundaries of **Kahualiilii**. Kiha, my Father and Pohina, my Uncle, showed them to me. I do not know all the boundaries between **Kahuanui** and **Kahualiilii**. Bounded on the north side at shore by the land of **Pahinahina**. Commencing at a cave called **Lehua**, the boundary runs *makai* to a point at the sea shore called **Kananakauwa**; thence it runs *mauka* to a pile of rocks at **Lehua**;

thence *mauka* to an *ahu* named **Panipani**;
thence *mauka* to another pile of stones;
and thence to a place, called **Kilohana**
where there is a pile of stones that Kahuhu
and I built when Wiltse was surveying.
Kilohana is an old resting place; thence
mauka to **Ahualele**; an *ahua* with a pile
of stones on it; thence *mauka* to **Pahukinikini** [page 138]
a small *ahua* with a pile of rocks on it; thence
to **Puuolani** hill, this is along the land of
Pahinahina; that was sold to Makuaole and is
now owned by Kanehaloa of **Puuehuehue**;
thence to **Lolelole**, the *mauka* corner of land
sold; thence *mauka* to **Ahaloa**, an old *kauhale*
at the *mauka* corner of **Pahinahina**; thence along
Makeloa (belonging to Kamehameha V Estate);
thence the boundary runs *mauka* to **Kalala**,
a water hole in a gulch, thence across the gulch
and *mauka* along the land of **Kalala**; thence
mauka to **Puukoa**; a hill of Koa, at the *mauka*
corner of Kanehalo's land; thence along **Kaili-
kea**, a land *mauka* of **Puukoa** (Wiltse, in
surveying, cut off a corner of **Kalala**, and
ran the line to **Holeipalaoa** gulch); there
is a rock there on the *mauka* side of the
gulch marked **KK**; thence it is bounded
by **Kehena** to **Kilohana** on **Honokane
pali** (Note See Certificate of boundaries
of Kehena). Thence along **Honokane pali**
towards **Waimea**, to the **Waimea** side of
Puuwau hill, the boundary being some
distance this way of the _____; Bounded
at shore by a small gulch called **Huolo**, a
rock marked **K** is at this place; thence up
the gulch to an *ahua*; thence up to where
Keawewai gulch crosses **Huolo** gulch;
thence the boundary runs up the North side
of the gulch; thence to a place called **Kapa-
kamakahonu**; thence to **Pohakuloa**, a large
rock in the gulch; thence to an *ahua*; thence
to **Kawaihae** Government road; thence to
Puuala; thence to **Niupaa**, a bullock pen,
the boundary passing through the center
of the pen. Thence it crosses the Govern-
ment road to the wire fence some distance
to the north of Vida's old house; thence to
Puumanu; thence to the south side of
Ahumoa; thence on the North side of **Waia-
kananaula**, a water place; thence to
Puuiki and from thence to **Honokane pali**.

C.X.d.

The above boundaries are between **Kahuanui** and **Kahualiilii**.

Case continued until further notice to all parties concerned.

R.A. Lyman
Commissioner of Boundaries, 3d J.C... [page 139]

Ahupuaa of Kahualiliii
Boundary Commission, Hawaii Volume D, No. 5:582-586

Kahualiliii, North Kohala

The Boundary Commission met in the Court House, at Kapaau, North Kohala, at 9 A.M. December 19, 1903, according to Notices published in the Hilo Tribune, and *Ku Okoa*, for a hearing November 14, and a continuance to November 21, and to December 19, and notices of the hearing and continuances, having been sent by mail by the Commissioner of Boundaries to each owner of the adjoining lands, viz.; Commissioner of Public Lands; Estate of B.P. Bishop; Holmes and Stanley, attorneys Estate of J.W. Austin and J.F. Woods.

There being present, J.F. Woods, applicant; A.B. Loebenstein, atty. for applicant; J.W. Pratt, Commissioner of Public Lands; L.P. Weaver, attorney for the Territory; J.B. Kahoi, and others.

Applicant presents his application, filed August 27, 1903, for settlement of the Boundaries of this land; and notices of hearing published in the Hilo Tribune, and *Ku Okoa*, in due form; also asks that the testimony about the boundaries of this land, taken before the former Commissioner of Boundaries in the year 1873, and on Record in Book B, page _____ be taken as part of the testimony in this case.

Also presents Stipulation signed by S. M. Damon, for the Estate of J.W. Austin, owner of ***Kahuanui***, and J.F. Woods, owner of ***Kahualiliii***, agreeing to the boundary as surveyed by A.B. Loebenstein between those two lands.

Also Stipulation signed by J.W. Pratt, Commissioner of Public Lands, December 8, 1903, consenting to settlement of the boundaries as set forth in the application. [page 582]

The land is bounded on the north by **Pahinahina**, and Grants; **Pahinahina** is Gov't. land, and not surveyed, except the Grants.

Also Kehena, Boundary Certificate
No. 17.

Presents also notes of survey and description of the land, by A.B. Loebenstein, September 1903, endorsed as accepted by Arthur C. Alexander, Surveyor for the Estate of J.W. Austin, and also for a decision and certificate of Boundaries on such survey

(Application)
Hilo, Hawaii, Aug. 27, 1903

Hon. F.S. Lyman
Commissioner of B'dries 3d & 4th
Circuit, Terr. Hawaii

Sir:
Representing the owners of the *ahupuaa* of **Kahualilili** in the District of North Kohala, Island of Hawaii, I have the honor to request you to set a day for the taking of testimony in this case, and the issuance of a certificate of boundaries. In compliance with the statute I have hereunto annexed a schedule of adjacent lands with respective owners, as far as I have been able to obtain them.

Very respectfully yours,
A.B. Loebenstein
Atty for J.F. Woods owner
land of Kahualilili.

Schedule of contiguous lands.
Pahinahina, Territory of Hawaii
Makiloa, Territory of Hawaii
Honokanenui, Estate B.P. Bishop
Kahuanui, Estate J.W. Austin
Kehena, Estate James F. Woods
Gr. 2330, Makuaole
Gr. 780, Kaneihailua
Gr. 752, Kailikea
Gr. 2642, Kaale [page 583]

(Stipulation)
Before F.S. Lyman
Commissioner of Boundaries for the

Third & Fourth Circuits, Terr. Hawaii.
In the matter of the application by
J.F. Woods (owner of the land) for
settlement of the boundaries of the
land of **Kahualiliii**, North Kohala,
Hawaii.

We, the undersigned, the Estate of
James W. Austin, the owners of the
adjoining land of **Kahuanui**, and
the said J.F. Woods, hereby stipulate
and agree, that the survey (as alter-
ed in ink) of the boundary of the
said land of **Kahualiliii** made by
A.B. Loebenstein, Surveyor, dated
September 1903 and set out in the
schedule hereunto annexed signed
by Arthur C. Alexander, surveyor and
made part of this stipulation, as
shall be accepted and taken as the
boundary between the said lands of
Kahualiliii and **Kahuanui** and enter-
ed of record as such boundary.

Dated, December 15th 1903.

The Estate of
James W. Austin,
by their Atty in fact,
S. M. Damon;
Jas. F. Woods, Owner of
the Land of **Kahualiliii**.

(Stipulation)
Before the Boundary Commission of
the Third Circuit, Territory of Hawaii
F.S. Lyman, Esq. Commissioner

In the matter of the Boundaries
of the land of
Kahualiliii,
North Kohala, Hawaii [page 584]

Return of Territory of Hawaii

Now comes J.W. Pratt, Land Comm-
issioner of the Territory of Hawaii, and
in answer to the application herein
says:

That the boundaries as set forth
in the application herein are correct
in so far as those adjoining the
lands of Puhinahina [sic] and Makiloa,
and hereby consents to a settlement
of said boundaries as set forth in

the application.

Honolulu, T.H., Dec. 8, 1903.
Jas. W. Pratt
Commissioner of Public Lands.

Testimony

A.B. Loebenstein, Sworn. I executed this survey according to the testimony on record in the Bound. Com. taken before R.A Lyman, Nov. 24, 1873, also following description of bounds of adjacent lands Pat'd. by Gov't. Kehena, B. Certificate, No. 17, and land of **Honokanenui**, Certificate of B.

Most of the points are well known, and I had kamaainas where they were available, starting at well known point at sea shore, along boundary of **Pahinahina** to cor. of Grant, Makuaole, and along Grant changed to true bearings between course 15 and 17, correct 16, towards S. hill, as agreed to with Gov't.

L.P. Weaver files - for Territory plan of change to be made in the boundary as Exhibit A.

Then along Grants 780, 752, 2642, and Government remainder, Kalala 2d, then along Kehena, Certificate No. 17 [page 585] on East, Honokanenui Certificate No. 172, to South East Corner, where **Kahuanui** comes in, and survey made according to that to sea coast, and along coast high water mark to commencement.

C.X.d.

No one appearing to contest, and all present consenting, the case is closed, decision to be given later.

Decision.

I hereby decide that the Boundaries of the Land of **Kahualilii**, District of Kohala, Island of Hawaii, T.H., are, and hereafter shall be as described in the Survey on file, made by A.B. Loebenstein, September 1903, Certificate of Boundaries to be issued on payment of costs and expenses of the Commission of Boundaries.

December 22d, 1903
Frederick S. Lyman
Commissioner of
Boundaries 3d
Judicial Circuit... [page 586]

Ahupuaa of Kahualiliii
Boundary Commission, Hawaii Volume C No. 4:138-141

No. 184

Certificate of Boundaries of the Land
of ***Kahualiliii***, District of Kohala, Island of Hawaii,
L. Kamehameha, L.C. Award 7715.

Commission of Boundaries.
Third Judicial Circuit Territory of Hawaii, U.S.A.

Frederick S. Lyman, Commissioner

In the Matter of the Boundaries
of the Land of ***Kahualiliii***,
District of Kohala,
Island of Hawaii

Judgment.

An application to decide and certify the Boundaries of the
Land of ***Kahualiliii***, District of Kohala, Island of Hawaii,
having been filed with me, on the 27th day of August, 1903,
by A.B. Loebenstein, as attorney for J.F. Woods, the owner of
said land, in accordance with the provisions of an Act to facili-
tate the settlement of Boundaries, now therefore, having duly
received and heard all the testimony offered in reference to
the said boundaries and having endeavored otherwise to obtain
all information possible to enable me to arrive at a just
decision, which will more fully appear by reference to the
records of this matter by me kept in Book No. 5, D, pages 582
and it appearing to my satisfaction that the true, lawful, and
equitable boundaries are as follows, viz.:

Beginning at the West angle of this land near the mouth of
a dry water course called "***Lehua***" at a + marked on top of a
low falls, by the opening of a cave called "***Lehua***" the coordinates
being S. 17669.0 W. 20457.3 referred to the Puu Aiea Ref. Survey
Station, the boundary runs by the true meridian:

1. N. 26° 58' 00" E. 1980.0 ft. along Govt. land of ***Pahinahina*** to marked
stone under old mound of stones on West
bank of the ravine;
2. N. 36° 24; 30" E. 5769.0 ft. along ***Pahinahina*** to a VIII cut in boulder
by mound of stones on rise called "***Lana'i***"
W. of ***Keanapakulua*** falls in ravine;
the coordinates being S. 11262.2 W. 16135.5
ft. referred to the ***Puu Aiea*** Ref. Survey

Station; [page 138]

3. N. 37° 54' 10" E. 4977.0 ft. along **Pahinahina** to a + under old mound of stones on a rise called **Panipani**, below the **Kawaihae-Puuhue** road;
4. N. 35° 10' 40" E. 3998.0 ft. along **Pahinahina** to a and old **VI** under large pyramid of stones on rise called **Kilohana**, the coordinates being S. 4068.0 W. 10775.2 ft. referred to **Puu Aiea** Survey and Ref. Station;
5. N. 25° 36' 00" E. 3935.0 ft. along **Pahinahina** to middle point under large mound of stones by ancient roadway on top of slope and lower end of flat bench called **Ahualele**;
6. N. 56° 15' 00" E. 2069.0 ft. along **Pahinahina** to angle by ancient roadway;
7. N. 57° 12' 00" E. 866.0 ft. along **Pahinahina** to large pyramid of stones by ancient roadway marking the South West angle of the Royal Patent (Grant) 2330, Makuaole, the coordinates being N. 1100.6 W. 6227.2 ft. referred to Survey and Ref. Station **Puu Aiea**;
8. N. 61° 54' 30" E. 754.0 ft. along Grant 2330;
9. N. 41° 11' 00" E. 1116.0 ft. along Grant 2330 to an old + cut in stone by ancient roadway;
10. N. 52° 53' 00" E. 792.0 ft. along Grant 2330;
11. N. 60° 01' 00" E. 3930.0 ft. along Grant 2330 to middle point under mound of stones on the slope and near the crest of the Puu o Lani hill, the bearing and distance from the Puu o Lani Survey and Ref. Station being N. 20° 18' W. 117.0 ft.;
12. N. 59° 09' 00" E. 443.0 ft. along Grant 2330;
13. N. 67° 25' 00" E. 1123.0 ft. along Grant 2330;
14. N. 83° 31' 00" E. 1189.0 ft. along Grant 2330;
15. N. 78° 17' 40" E. 1066.0 ft. along Grant 2330 to South East angle of same to a + on stone at lower edge of old Kohala road, the coordinates being N. 5746.5 E. 2450.6 ft. referred to the Survey and Ref. Station **Puu Aiea**;
16. N. 82° 00' 00" E. 1220.0 ft. along **Makiloa** to angle;
17. N. 54° 50' 00" E. 3009.0 ft. along same to an old + on rock ledge on W. bank of **Pokiiahua** stream;
18. N. 76° 21' 00" E. 396.0 ft. along Royal Patent (Grant) 780, Kanehailau, to an old mound of stones marking the South West angle of Royal Patent (Grant 752), Kailikea, the coordinates being N. 7742.4 E. 6502.6 ft. referred to the Survey and Ref. Station **Puu Aiea**;
19. N. 74° 27' 00" E. 1479.0 ft. along Grant 762, to a + under mound of stones marking the South West angle of R.P. (Grant) 2642 [page 139] Kaale, the coordinates being N. 8138.8 E. 7927.1 ft. referred to the Survey and Ref. Station **Puu Aiea**;

20. N. 87° 57' 00" E. 1065.0 ft. along Grant 2642;
21. S. 60° 32' 00" E. 3314.0 ft. along Govt. Land of **Kalala**, to an old >I K of the Wiltse survey of 1857, cut in the rock a short distance above falls and road crossing and on the East bank of the **Hooleipalaoa** stream, the coordinates being N. 6542.9 E. 11876.4 ft. referred to the Survey and Ref. Station **Puu Aiea**;
22. S. 75° 51' 00" E. 8258.0 ft. along the land of Kehena, Bdy. Cert. 17, to the point on the edge of the **Honokane pali** known as **Kilohana**, being an old resting place; now covered by sumach trees, by the intersection of the old trail along the brink of the **pali**, with the one leading into the valley a long lava ledge on the brink being marked, **Kehena** and **Kahua** also on either side of a , also two old **K's**, the coordinates being N. 4524.2 E. 19885.8 ft. referred to the Survey and Ref. Station **Puu Aiea**;
23. S. 11° 52' 00" W. 3130.0 ft. along **Honokanenui**, Cert. 172, the boundary following the windings of the top of the **pali** to a projecting spur, from which point the **pali** makes a sharp turn to the South West, the coordinates being N. 1461.9 E. 19342.2 ft. referred to the Survey and Ref. Station **Puu Aiea**;
24. S 86° 17' 45" W. 7737.8 ft. along the land of **Kahuanui** to South brow of **Puuiki** hill;
25. S. 88° 43' 30" W. 2076.0 ft. along **Kahuanui** to a on stone at foot of post marked , at S. base of **Ahumoa** hill; the coordinates being N. 915.8 E. 9543.7 ft. referred to the Survey and Ref. Station **Puu Aiea**;
26. N. 62° 24' 00" W. 736.0 ft. along **Kahuanui** to a on stone in valley between the **Ahumoa** and the **Waiakanounouula** hills;
27. N. 46° 45' 00" W. 1449.0 ft. along **Kahuanui** to a on boulder in gully at foot of **Ahuaomanu** hill;
28. N. 74° 56' 00" W. 941.0 ft. along **Kahuanui** to post on top of **Ahuaomanu** hill, the coordinates being N. 2506.1 E. 6939.0 ft. referred to the Survey and Ref. Station **Puu Aiea**;
29. N. 63° 40' 00" W. 2414.0 ft. along **Kahuanui** to a + on stone;
30. S. 83° 22' 00" W. 2119.0 ft. same; [page 140]
31. S. 79° 31' 00" W. 2201.0 ft. along **Kahuanui** to a + cut on stone, under mound of stones just above East angle of old stone corral by edge of the **Honoipu** road, the coordinates being N. 2931.9 E. 486.7 ft. referred to the Survey and reference Station **Puu Aiea**;
32. S. 65° 37' 00" W. 3051.0 ft. along **Kahuanui** to a + under mound of stones in ancient roadway;
33. S. 60° 09' 30" W. 2231.0 ft. along **Kahuanui** to an old + on boulder by ancient roadway, the coordinates being N. 562.5 W. 4226.0 ft. referred to the Survey and Ref. Station **Puu Aiea**;

34. S. 32° 15' 00" W. 3817.0 ft. along **Kahuanui** to a + under mound of stones of top of low hill called **Puu Nau**;
35. S. 19° 06' 00" W. 2814.0 ft. along **Kahuanui** to an old **IV** on large vertical boulder called **Pohakuloa**, by roadway and East edge of the **Pohakuloa** gulch, the coordinates being S. 5328.4 W. 7183.5 ft. referred to the Survey and Ref. Station **Puu Aiea**;
36. S. 46° 16' 30" W. 4743.0 ft. along **Kahuanui** to an old **III** cut in large flat lying boulder by roadway on ridge called **Ahua Kii**;
37. S. 30° 08' 00" W. 2722.0 ft. along **Kahuanui** to point in ancient roadway between two large mounds of stones;
38. S. 22° 03' 00" W. 977.0 ft. along **Kahuanui** to an old **II** cut in boulder on the flat of **Kapaokamakahonu**, the coordinates being S. 11870.3 W. 12344.6 ft. referred to the Survey and Ref. Station **Puu Aiea**;
39. S. 43° 02' 00" W. 5362.0 ft. along **Kahuanui**, to an old ++ on boulder near West bank of the **Keawewai** gulch a short distance above the **Waiokanalopaka** falls and pool;
40. S. 32° 01' 00" W. 4864.0 ft. along **Kahuanui** to an old **K** on boulder at the crossing of the **Kawaihae-Mahukona** trail in the **Huolo** gully, the coordinates being S. 19915.3 W. 18582.3 ft. referred to the Survey and Ref. Station **Puu Aiea**; thence down middle of gully to sea shore at high water mark, and following the meanders of same at high water mark to point of beginning, the direct bearing and distance from the said K being;
41. N. 39° 51' 00" W. 2926.0 ft. to said point of beginning.

Containing an area of 4040.0 acres, more or less, surveyed by A.B. Loebenstein, September, 1903.

It is therefore adjudged, and I do hereby certify and decide that the boundaries of said land of **Kahualiilii**, are, and hereafter shall be as hereinbefore set forth.

Given under my hand at Hilo, Island of Hawaii, the 26th day of December, A.D. 1903.

Frederick S. Lyman
Commissioner of Boundaries, Third and Fourth Jud. Circuits.
Territory of Hawaii, U.S.A. [page 141]

Ahupuaa of Kahuanui

District of North Kohala, Island of Hawaii

Boundary Commission, Hawaii, Volume A, No. 1:453

Honolulu, Sept. 185h 1873.

R.A. Lyman, Esq.
Commissioner of Boundaries on Hawaii,
Hilo

Dear Sir:
Until I recv'd. your letter of the 26th ulti.
I was under the impression that I had applied
to you for settlement of boundaries of J.W. Aus-
tin's lands on Hawaii, **Kahuanui** in N.
Kohala and Panau in Puna. As his Attorney
I now request you to define and settle the
boundaries of those lands. The names of the
lands on either side of them, and of the owners
thereof, you know, and I do not. The survey of
Kahuanui was in Mr. Wiltse hands. The land of
Panau in Puna is worth so little. I hope that
expense of survey and settlement will also be
moderate

I remain, Very Respectfully Yours,
Chas. R. Bishop, attorney for J.W. Austin. [page 453]

Ahupuaa of Kahuanui
District of North Kohala, Island of Hawaii
Boundary Commission, Hawaii Volume B:144-146

The *Ahupuaa* of **Kahuanui**, District of
North Kohala, Island of Hawaii, 3d J.C.

On this, the 25th day of November A.D. 1873, the Commis-
sion of Boundaries for the Island of Hawaii, 3d J.C.
met at the house of Jas. Woods, Kohala Ranch,
North Kohala, on the application of C.R.
Bishop, Agent for J. W. Austin for the settle-
ment of the boundaries of **Kahuanui**,
situated in the District of North Kohala, Island
of Hawaii. Notice of hearing, at the **Waimea**
Court House, South Kohala.

Served by publication in the Hawaiian Gazette
of _____ and *Kuokoa* of _____
and continued at Kohala Ranch on the 24th
and 25th instants. Due notice personally
served on owners or agents of adjoining
lands, as far as known.

Present: Jas. Woods for applicant and for
all parties.

For Petition see Folio 453 Book A.

Testimony.
Kekua^K. Sworn.
I was born at the time of *Aepala* [eating of the *pala* during famine ca. 1811] of and have
always lived at **Kahua** until lately.

Kahuanui is bounded on the Kona side by
Waika. Commencing at the mouth of a gulch
the boundary between the *Ahupuaa* and

Kupono [independent land division] begins at a landing place called **Kaiopae**; thence *mauka* along the Kuponos to **Ahu-kuli**, a pile of stones; thence *mauka* to **Puueoka**, a *heiau*; thence to along stone named **Pohakuloa**; thence to **Kamakaiwi**, a resting place; thence to **Kapio**; thence to **Ahumoa**, the boundary running through the hills; thence to **Puuiki**; thence to **Kanoa**, where fire used to be; thence to **Kahawai-kukae**, to *pali* of **Kahawaiiki**; thence to **Kahawaiholopapa**; thence to **Ainamakanui** [Hinamakanui] at the head of **Honokane** Gulch.

The *kupono Kahawainui Kukui* runs up here. **Waika** ends at **Pohoakala**, a place where they used to gather *mamaki*. This is as far as I [page 144] know the boundaries on this side. I have heard that the land runs down to **Mahiki** in Hamakua. When Lyons surveyed **Waika** he cut across the *kupono* of **Kahua** and included them in **Waika**. Know a place called **Ahuanaha**. The real boundary is from **Oneloa** to **Kapai**, a pile of stones by the road; thence to **Kamanukaa**, where the gulch is the boundary between **Waika** and **Kahua**. The boundary crosses the gulch to the Kohala side at **Ahuanaha**; thence it runs to **Ahuakapaakea**; thence *mauka* to **Kalehua**; thence up the gulch to **Moolau**. (The pile of stones is way on the Kohala side of the gulch, but the boundary is at the gulch). Thence past Macy's (G.W. Macy's) old house and *mauka* to **Hookeke**; thence to *kahawai Palapalai*; thence *mauka* to the *pali* of **Kaloloulaula** on **Pili**; thence to **Kapo-hoakala**; thence along to **Kahaliaina**, a place below **Puupala**, where **Kawaihae** joins **Kahua**. From **Kahaliaina** the boundary runs along the foot of the *pali* to just above **Puuwau** on **Kahuanui**. **Puuwau** is a hill a short distance back from **Pili**, thence to **Hinamakanui**, a cabbage garden on the brow of **Honokane pali**.

The boundary at shore between **Kahuanui** and **Kahualiilii** is a rock in the sea called **Kahuapopolo**.

(Note:
Kauuwai^K puts the boundary a few rods on the Kohala side of this rock.)

Thence to **Waiakanalopaka**, a pool of water at the end of the gulch, thence to

Pohakupalahalaha, a wall below the road to **Kawaihae**, now called **Kamakahonu**; thence to **Waikalio** gulch; thence across said gulch to **Ahuakia**; thence the boundary runs to a stone called **Pohaku-loa**; thence *mauka* across **Pohakuloa** gulch to **Puanau**, a resting place; thence to **Puuala**; thence **Kipawale**, a resting place at the Government road; thence to a hill called **Ahuamanu**; thence to **Waiakapiai**; thence to **Ahumoa**, part of which is on **Kahua** and part on another land. This is all I know of the boundaries.

C.X.d. [page 145]

No more witnesses on hand.
Jas. Woods asked to have case continued.
See evidence of boundaries of **Waika & Kahualiilii &c.**

Case continued until further notice to interested parties.

R.A. Lyman
Commissioner of Boundaries, 3d J.C. [page 146]

Ahupuaa of Kahuanui
Boundary Commission, Hawaii Volume D:654-655

In the Matter of the Boundaries
of the Land, **Kahua nui**,
District of North Kohala,
Island of Hawaii.
Third Judicial District, Territory of Hawaii

The application of Herbert Austin and Walter Austin, Trustees under the Will of James W. Austin, deceased, having been filed with the Commissioner of Boundaries for the Third and fourth Judicial Circuits, T.H. on the 4th day of May, 1905. Notices of hearing said application were published in the Hawaiian Gazette, and *Ku Okoa* newspapers, in English and Hawaiian, May 12, 19, 26 and June 2 for a hearing at the Office of the Commissioner of Boundaries in Hilo, Hawaii, on Thursday, the 8th day of June 1905, 9 A.M. Written notices of the time and place of hearing were also sent by mail, May 6th, to Messrs Holmes and Stanley, attorneys for Petitioners; to J.F. Woods, owner of adjoining lands; and to the Trustees of the Estate of Bernice P. Bishop, owner of adjoining land.

On the 8th of June, 1905, the Boundary Commission met in the Office of the Commissioner of Boundaries at Hilo, Hawaii, T.H. at 9 A.M. according to the published notice.

There being Present: W.L. Stanley, Esq., of Holmes & Stanley,

attorneys for the applicants;
and the Trustees of the Estate of B.P. Bishop having filed
acceptance of “the survey as made by the Austin Estate
and filed.”

Due proof was made of the publication of Notice
in the Hawaiian Gazette, and *Kuokoa*, May 12, 19 & 26 and
June 2d in the English and Hawaiian languages.

There were also presented in evidence:

Deed of Victoria Kamamalu and M. Kekuanaoa to James
W. Austin, dated January 31, 1862, Recorded in Liber 15,
pages 38, 39, for the land Kahua-nui, North Kohala,
Hawaii, being Apana 4, Royal Patent 4475 by name
to Victoria Kamamalu. [page 654]

Certified copies of Letters of Trusteeship issued out of the Probate Court,
Suffolk County, Massachusetts, to Herbert Austin and Walter Austin,
Trustees under the Will of James W. Austin, deceased.

Also the testimony before the Commissioner of Boundaries November
25, 1873 in Boundary Commission Records, Book B, 2 on pages
144-6, as evidence in the boundaries of **Kahua-nui**.

Also the Certificates of Boundaries of the adjoining lands; viz.:
Certificate No. 172, **Honokane**, Book C. No. 4, pages 93, 94 & 95.
Certificate No. 183, **Waika**, Book C, No. 4, pages 135-7.
Certificate No. 184, **Kahua-liilii**, Book C, No. 4, pages 138-41.

Also Testimony offered on boundaries of **Kahua-liilii**, Nov. 24,
1873. Book B, 2, pages 138-9, and Book 5, D, pages 582-6.
Testimony for **Waika**, Book 5, D, page 578.
Testimony for **Honokane**, Book A, pages 245 & 6; Book B., pages 121-3;
Book D, pages 205-9.

Copies of letters notifying owners of the adjoining lands; and
letter from Trustees of the Bishop Estate accepting Survey of
Kahua-nui attached to petition

Petitioners ask to continue case for two weeks to file the
acceptance by J.F. Woods, of the survey of **Kahua-nui**
adjoining his lands, **Waika** and **Kahua-liilii**.

Continued until June 22d.

F.S. Lyman
Com. of Boundaries [page 655]

Boundary Commission, Hawaii, Volume D, No. 5:656-661

Kahua-nui
North Kohala

Application To: F.S. Lyman, Esq.

Commissioner of Boundaries for the
Third Judicial Circuit
Territory of Hawaii.

Application for Certificate of Boundaries.

The undersigned, Herbert Austin and Walter Austin,
both of Boston, Massachusetts, United States of America,
Trustees under the Will of James W. Austin, late of Boston
aforesaid, allege as follows:

1. That, as such Trustees, they are the owners in fee
simple of all that certain tract of land containing an
area of 5425 acres, or thereabouts, situate in North
Kohala, Island and Territory of Hawaii, and in the Third
Judicial Circuit of the said Territory, known as the *Ahupuaa*
of **Kahua-nui**, and being the land mentioned in Royal Patent
4475, *Apana 4*, to Victoria Kamamalu.

2. That the said Royal Patent 4475, *Apana 4*, the
said *Ahupuaa* of **Kahua-nui** was not patented by
boundaries in the said Patent decided, but the true
boundaries thereof are set forth in the Schedule hereunto
annexed and made part hereof.

3. That the names of the adjoining lands and of the
owners thereof are:

(a) the *Ahupuaa* of **Waika** owned by J.F. Woods of North
Kohala aforesaid and the boundaries whereof have here-
tofore been decided and certified to in Boundary Certifi-
cate No. 183.

(b) The *Ahupuaa* of **Kahua-lilii** owned by J.F. Woods
aforesaid, and the boundaries whereof have heretofore been
decided and certified to in boundary Certificate No. 184; and

(c) The *Ahupuaa* of **Honokane-nui** owned by the Trustees
of the Estate and under the Will of Bernice P. Bishop, deceased,
and the boundaries whereof have heretofore been decided
and certified to in Boundary Certificate No. 172

Wherefore the undersigned hereby make application
that the boundaries of the said *Ahupuaa* of **Kahua-nui** [page 656]
may forthwith be decided and certified to by the Commissioner
of the Third Judicial Circuit, Territory of Hawaii, or his successor
in office.

Herbert Austin
Walter Austin,
Trustees under the Will of
James W. Austin, deceased
by their attorney in fact,
S.M. Damon

Dated at Honolulu,
May 2, 1905
Holmes & Stanley, Attorneys for Herbert Austin
and Walter Austin, Trustees

Schedule
Description of the Boundaries of the land of **Kahua nui**,
Waimea, Kohala, Hawaii
(See certificate of Boundaries
No. _____, Book C, pages _____.

Hilo, Hawaii, May 6, 1905
To the Trustees of the Estate
under the Will of Bernice P. Bishop,
owners of **Honokane-nui**,
a land adjoining.

Gentlemen:
You are hereby notified
that the application of the Trustees under the Will of James
W. Austin, will be heard at the Office of the Commissioner
of Boundaries, in Hilo, Hawaii, on Thursday, the 8th day
of June, A.D. 1905, at 9 a.m.

Frederick S. Lyman
Commissioner of Boundaries

(a similar notice, sent also to J.F. Woods, **Kahua**, North Kohala,
owner of **Waika**, and **Kahua-lilili**, adjoining lands, and to
Holmes & Stanley, for applicants.) [page 657]

Ahupuaa of Kahuanui
Boundary Commission, Hawaii Volume C, No. 4:160-163

No. 190

Certificate of Boundaries of the Land of **Kahua-nui**
District of **Waimea**, Kohala,
Island of Hawaii, Territory of Hawaii, U.S.A.

Kamamalu, V. – L.C.A. 7713, Patent by Name 4475.

Commission of Boundaries,
Third Judicial Circuit, Territory of Hawaii, U.S.A.,
Frederick S. Lyman, Commissioner.

In the Matter of the Boundaries
of the Land of **Kahua-nui**,
District of **Waimea**, Kohala,
Island of Hawaii

Judgment

An application to decide and Certify the Boundaries
of the land of **Kahua-nui**, District of **Waimea**, Kohala,

having been filed with me on the fourth day of May, A.D. 1905, by S.M. Damon, as attorney in fact for Herbert Austin and Walter Austin, the Trustees under the Will of James W. Austin, deceased, the owner of said land, in accordance with the provisions of an Act to facilitate the settlement of Boundaries, now, therefore, having duly received and heard all the testimony offered in reference to the said boundaries and having endeavored otherwise to obtain all information possible to enable me to arrive at a just decision, which will more fully appear by reference to the records of this matter by me kept in Book No. 5, D, on page 656, and it appearing to my satisfaction that the true, lawful and equitable boundaries are as follows; namely:

Beginning near the sea shore at an old **K** on a boulder in the **Huolo** gully at the crossing of the **Kawaihae-Mahukona** trail, the coordinates being S. 19915.3 ft. W. 18582.3 feet referred to the **Puu Aiea** Survey and Reference Station, the boundary runs by true azimuths:

1. 212° 01' 4864 ft. along **Kahua liilii** to an old **++** on boulder near the west bank of the Keawewai gulch a short distance above the Waikanalopaka falls and pool; [page 160]
2. 223° 12' 5362 ft. along **Kahua liilii** to an old **II** cut in boulder on the flat of **Kapaokamakahonu**, the coordinates being S. 11870.3 ft. W. 12344.6 feet referred to the **Puu Aiea** Survey and Reference Station;
3. 202° 03' 977 ft. along **Kahua liilii** to point of ancient roadway between two large mounds of stones;
4. 210° 08' 2722 ft. along **Kahua liilii** to an old **III** cut in a large flat lying boulder by roadway on ridge called **Ahua Kii**;
5. 226° 16.5' 4743 ft. along **Kahua liilii** to an old **IV** cut on large vertical boulder called **Pohakuloa**, by roadway and East edge of the **Pohakuloa** gulch, the coordinates being S. 5328.4 feet W. 7183.5 feet referred to the Puu Aiea Survey and Reference Station;
6. 199° 06' 2814 ft. along **Kahua liilii** to a **±** under mound of stones on top of low hill called **Puu Nau**;
7. 212° 15' 3817 ft. along **Kahua liilii** to an old **+** on boulder by ancient roadway, the coordinates being N. 562.5 ft. W. 4226.0 feet referred to the **Puu Aiea** Survey and Reference Station;
8. 240° 9.5' 2231 ft. along **Kahua liilii** to a **±** under mound of stones in ancient roadway;
9. 245° 37' 3051 ft. along **Kahua liilii** to a **±** cut on stone under mound of stones just above East angle of old stone corral by edge of the Honoipu road, the coordinates being N. 2931.9 ft. E. 486.7 ft. referred to the **Puu Aiea** Survey

and Reference Station;

10. 259° 31' 2201 ft. along **Kahua liilii** to a \pm on stone;
11. 263° 22' 2119 ft. along same.
12. 296° 20' 2414 ft. along **Kahua liilii** to post on top of Ahuamanu hill, the coordinates being N. 2506.1 ft. E. 6939.0 ft. referred to the **Puu Aiea** Survey and Reference Station;
13. 285° 04' 941 ft. along **Kahua liilii** to a on boulder in gully at foot of **Ahuaomanu** hill;
14. 313° 15' 1449 ft. along **Kahua liilii** to a on stone in valley between the **Ahumoa** and the **Waiakanounouula** hills;
15. 297° 36' 736 ft. along **Kahua liilii** to a on stone at foot of post marked , at South base of Ahumoa hill, the coordinates being N. 915.8 ft. [page 161] E. 9543.7 ft. referred to the **Puu Aiea** Survey and Reference Station;
16. 268° 43.5' 2076 ft. along **Kahua liilii** to the South brow of **Puu Iki** hill;
17. 266° 17.75' 7738 ft. along **Kahua liilii** to a projecting spur on the edge of **Honokane pali**, from which point the **pali** makes a sharp turn to the Southwest, the coordinates being N. 1461.0 ft. E. 19342.2 ft. referred to the **Puu Aiea** Survey and Reference Station;
18. 21° 17' 3130 feet along **Honokane nui**, Certificate 172, the boundary following the windings of the top of the **pali** to a \pm on a stone set in the ground on the South peak of the **Hinamakanui** crater this point being the common angle of the lands of **Honokane**, **Waika**, and **Kahua nui**, the coordinates being S. 1454.3 ft. E. 18206.4 feet referred to the **Puu Aiea** Survey and Reference Station;
19. 72° 10.5' 5514 ft. along the land of **Waika** to the **Puu Pili** triangulation station;
20. 26° 55' 1600 ft. down the slope of Puu Pili to a \pm on a stone at the foot of same in the **Palapalai** ravine;
21. 78° 41' 1097 ft. along **Waika**, the boundary following the middle of said **Palapalai** ravine;
22. 94° 34' 3706 feet along **Waika**, to a \pm on stones, the coordinates being S. 4487.4 ft. E. 7471.1 ft. referred to the **Puu Aiea** Survey and Reference Station. The boundary following the middle of said **Palapalai** ravine;
23. 87° 00' 534 ft. along **Waika**;

24. 88° 38' 1675 ft. along **Waika** to a **K** and \pm with "**Waika**" cut in the rock under mound of stones by upper edge of the Waimea-Kohala govt. road, the coordinates being S. 4555.2 ft. E. 5264.1 ft. referred to the **Puu Aiea** Survey and Refer. Station;
25. 59° 14' 1298 ft. along **Waika** to a \pm cut on boulder by south angle old stone enclosure; [page 162]
26. 78° 47' 1311 ft. along **Waika** to a **5** cut in a rock at a prominent point called "**Kalehua**," the coordinates being S. 5474.4 ft. E. 2862.6 ft. referred to the **Puu Aiea** Survey and Reference Station;
27. 63° 30' 7588 ft. along **Waika** to a \pm and \angle under mound of stones on peak called "**Keahuokapaakea luka**";
28. 41° 46' 1467 ft. along **Waika** to a \pm and **K** under mound of stones on peak called "**Keahuakapaaku Kai**" the coordinates being S. 9953.9 ft. W. 4902.0 feet referred to the **Puu Aiea** Survey and Ref. Station;
29. 48° 54.5' 5745 ft. along **Waika** to a round hole drilled in a boulder on low knoll called "**Ahuanaha**," the coordinates being S. 13729.2 ft. W. 9232.1 ft. referred to the **Puu Aiea** Survey and Ref. Station;
30. 49° 20' 9503 ft. to a \pm in ancient roadway midway between two mounds of stones on low hill near north edge of **Kaiopae** gulch;
31. 56° 24' 1658 ft. along **Waika** to a large boulder at the mouth of the **Kaiopae** gulch; thence to sea shore at high water mark and along said sea shore in all its windings at high water mark to the **Huolo** gully and up the middle of said gully to the point of beginning, the direct bearing and distance being
32. 140° 31' 1197 ft. to the point of beginning.

Containing an area of 5424 Acres.

The foregoing notes of survey having been compiled from Boundary Certificates 183 and 184 for the lands of **Waika** and **Kahua Iilii**.

It is therefore adjudged, and I do hereby Certify and decide that the boundaries of said land of **Kahua-nui** are, and hereafter shall be as hereinbefore set forth.

Given under my hand at Hilo, Island of Hawaii,
the 24th day of June, 1905 [page 163]

Ahupuaa of Kawaihae 1st

***District of South Kohala, Island of Hawaii
Boundary Commission, Hawaii, Volume A, No. 1:238-240***

Honolulu, July 7, 1873
R.A. Lyman, Esq.
Hilo

Dear Sir
Mr. F.H. Harris is authorized by the
Commissioners of Crown lands to make appli-
cation to you as Commissioner of Boundaries
to have the boundaries of all Crown lands on
the Island of Hawaii defined. He has a list of
the lands with him.
I have also authorized Mr. F.H. Harris
to make application to you for the settlement
of boundaries of all lands belonging to Est. of
His late Majesty and Her Excellency, R.
Keelikolani.

I expect to be in Kona by the trip of the
“*Kilauea*” which leaves here on the 28th
inst. Can’t you make it convenient to come
round as the steamer goes to Hilo on that trip.

I wish also to apply for the settle-
ment of the boundaries of Honohina.

I remain, Yours respectfully
Jno. O. Dominis

Honorable R.A. Lyman
Boundary Commissioner
for Island of Hawaii, Haw. Is.

The undersigned would herewith make appli-
cation for the settlement of the boundaries of
the following named *Ahupuaa* or Lands
belonging to the Crown, viz.:

Waiakea in the District of Hilo bounded
by Keaau, Olaa, Kapapala, Humuula, Piihonua.
Piihonua in the District of Hilo, bounded
by Punahoa, Waiakea, Humuula and Puueo,
Paukaa & Alae and other lands names not known.
Ponahawai in the District of Hilo bounded
by Punahoa, Kukuau & other small lands.
Hakalauike in the District of Hilo,
adjoining lands unknown [page 238].
Humuula in the District of Hilo bounded by
Kapapala, various lands in Kona and Kohala
and Hamakua, and Hakalau, Makahanaloa,
Papaikou, Paukaa, Piihonua and Waiaka
in the District of Hilo.

Lalakea in the District of Hamakua,
 adjoining lands unknown.
 Kalopa in the District of Hamakua,
 adjoining lands unknown.
 Honokaia in the District of Hamakua,
 adjoining lands unknown.
 Kaohia in the District of Hamakua,
 adjoining lands unknown.
Waimanu in the District of Hamakua,
 adjoining lands unknown.
 Pohakumauluulu, *Ili* of Waipio
 in the District of Hamakua,
 adjoining lands unknown.
 Muliwai, *Ili* of Waipio
 in the District of Hamakua.
Pololu in the District of Kohala
 adjoining lands unknown.
 Aamakao in the District of Kohala
 adjoining lands unknown.
 Iole in the District of Kohala
 adjoining lands unknown.
 Kaauhuhu in the District of Kohala
 adjoining lands unknown.
Waimea in the District of Kohala
 adjoining lands unknown.
Puukapu in the District of Kohala
 adjoining lands unknown.
Kawaihae in the District of Kohala
 adjoining lands unknown.
 Puuwaawaa In the District of Kona
 bounded by Puuanahulu, Govt.,
 Kaupulehu Est, Kam V
 Haleohiu in the District of Kona bounded by
 Govt. lands & Kaupulehu, Est. Kam V
 Honomalino in the District of Kona bounded
 by Omokaa & Okoe, Govt. & by Kahuku,
 G.W. C. Jones & Co.
 Puaa in the District of Kona
 adjoining lands unknown.
 Onouli in the District of Kona
 adjoining lands unknown [239].
 Manoloa, District of Hilo.
 Hiaananaloli [Hianaloli] II in the District of Kona
 bounded by Hiaananaloli,
 Govt. & Hiaananaloli, R. Keliikolani.
 Waiohinu in the District of Kau
 bounded by Keaa, Govt, Kahilipalinui and
 Kahuku, G.W.C. Jones & Co.
 Kapapala in the District of Kau bounded by
 Kahuku, G.W.C. Jones, Keauhou,
 Est. Kam V, Waiakea, Hilo & other
 lands unknown.
 Olaa in the District of Puna, bounded by
 Keaau, Wm. C. Lunalilo, H. M., Waiakea
 & Kapapala.

Apua in the District of Puna
bounded by various lands in Puna.
Waiakolea *ili* of Kalapana, Dist. of Puna
adjoining lands unknown.

Kaimu in the District of Puna
adjoining lands unknown.
Gehena [**Kehena**] in the District of Puna
adjoining lands unknown.

Your Honor will therefore please appoint
a day for the hearing of the evidence
in the foregoing named lands and having
decided upon the same to grant a certificate
to that effect to the undersigned.

(Signed) Jno. O. Dominis
Crown Land Agent,

Hilo Hawaii
August 16th A.D. 1873

by F.H. Harris
atty. at law. [page 240]

***Ahupuaa of Kawaihae 1st
Boundary Commission, Hawaii, Volume B:147-149***

The *Ahupuaa* of **Kawaihae 1st**, District of North Kohala, Island of Hawaii, 3d J.C.

On this, the 25th day of November A.D. 1873, the Commission of Boundaries for the Island of Hawaii, 3d J.C., met at the house of Jas. Woods, Kohala Ranch, North Kohala, on the application of J.O. Dominis, Agent of Crown Lands for the settlement of the boundaries of **Kawaihae 1st** situated in the District of North [South] Kohala, Island of Hawaii. Notice of hearing for the settlement of boundaries of lands in Hamakua and Kohala at the Court House in **Waimea**, South Kohala on the _____ Served by publication in the Hawaiian Gazette of _____ and *Kuokoa* of _____ 1873, and continued at Kohala Ranch on the 24th and 25th instant.

Due notice personally served on owners or agents of adjoining lands, as far as known. Present: Jas. Woods for applicant and for J.W. Austin, G.W.D. Halemanu for Her Majesty, Queen Emma.

For Petition see Folio _____ Book A.

Testimony.

Kalua ^K. Sworn (same witness as **Kawaihae 2d**)

I am a *kamaaina* of **Kawaihae 1st**. My parents pointed out the boundaries to me. It is bounded on the North side by **Waikaa**, at a place called **Kamake**, where there is an *ahu* on **Waikaa**; thence *mauka* along the *pili* to **Oneloa**, distance of about a mile; there is an *ahu* there; thence to **Waipua** Gulch (the boundary runs from shore in a gulch). Thence to **Keannahalulu**, in the gulch and by the Government road, on the **Waimea** side of the Catholic church. (This is the same gulch that runs from shore.) Thence up the gulch to **Waipouli**; thence to a place called **Pohoakala**; thence the boundary leads into a new gulch, and runs off towards **Kahua**, cutting off **Waikaa**; thence [page 147] Easterly along the old bird catchers trail to **Puuwau**, a hill where they used to catch the *uwau*. **Honokane pali** does not reach to this hill. The land of **Awini**, which is very narrow here, joins **Kawaihae** at this *kauhale*. From thence to **Moananui-kalehua**. This is above where you go down to **Honokea**, the boundary of Hamakua and Kohala. Thence the boundary keeps East to **Waiohoolana**, the *makai* side belonging to **Waimanu**, and this side to **Kawaihae**; there it runs to above **Ulu**; here it turns towards Kohala and runs along **Kawaihae 2d** to a place called **Napoeaumihulumakaokalani**. **Kawaihae 2d** runs along the *kualapa* which is very narrow on the East side of **Waiohoolana**; the slope towards **Mana** is **Waimea**; **Kalualepo** is on **Kawaihae**. **Kawaihae** cuts across the heads of **Waipio** and **Waimanu**. The boundary between the Kawaihaes runs over the hill of **Napoeaumihulumakaokalani**. **Kaulanaahu** is a ridge that runs from this ridge to **Pali o Waiu**. **Keawewai** gulch is on the Kohala side of the ridge; the boundary runs down **Keawewai** gulch to **Keanakawaha**; thence down the gulch to **Pohakuloa** and thence follows the gulch to the sea. **Kawaihae 1st** is bounded *makai* by the sea. Ancient fishing rights extending out to sea.

C.X.d.

There is a place called **Piipamauka** of **Oneloa**. I know the principal points only, of the boundary from the shore. There is a place called **Papalepo** between **Puuwau** and **Puupala**. I was not told what lands run along there, but I know **Waikaa** does not reach there. I have never heard of a place called **Puupili** on **Kawaihae**. My parents told me the *makai* boundary but showed me the *mauka* one. I never heard of **Waikaa** running up to **Waihoolana**.

(Note
See evidence of Ohia ^{K.} on **Waikaa**)

I cannot say for certain, that I can [page 148] give *makai* boundaries correctly, as I have never been there with my parents. I used to go bird catching with them in the woods. I do not know but what I would make mistakes if I should try to point out places in the woods. I am certain I remember the names of the places. I can point out the hill. I do not think I have strength enough to get as far as the *mauka* boundary as I am old, and the road is bad.

Kaheana's father came from **Waimea**. I know a place called **Hinamakanui**. It is an *ahua* on the ridge, the water that flows to **Honokane** gulch flows past this place. **Kahuanui** does not reach there. The old bird catchers road to **Puuwau** runs way *makai* of this place.

I am not certain as I remember all the points as I am old. I was not full grown when I went with my parents, and I have not been since.

Puhi ^{K.} Sworn
I do not know anything about the boundaries of **Kawaihae**, save those adjoining **Waikaa**. I do not know anything about the boundaries of **Kahua**, except what join **Waikaa**.

C.X.d.

Case continued until further notice to all interested parties.

R.A. Lyman
Commissioner of Boundaries, 3d J.C..

Case continued on Folio 279. [page 149]

Ahupuaa of Kawaihae 1st
Boundary Commission, Hawaii, Volume B:279-280

The *Ahupuaa* of **Kawaihae 1st**, District of North Kohala, Island of Hawaii, 3d J.C.

Case continued from November 25th A.D. 1873.
See Folio 149 Book B.

On this, the 10th day of June A.D. 1874 the Commission of Boundaries for the Island of Hawaii 3d J.C. met at the house of Jas. Woods, Kohala Ranch, North Kohala, for the examination of witnesses as to the boundaries of **Kawaihae 1st**. Due notice personally served on all owners or Agents of adjoining lands as far as known. Present: Jas. Woods for Government.

Nahea ^{K.} Sworn

I was born at **Kawaihae** during the reign of Kamehameha I; was very young when he died. I now live at **Pololu**; have lived there for over twenty years, before that I lived on **Kawaihae** and am a *kamaaina* of the land.

I used to go with Kuhekaa and Kanewa, old bird catchers and they told me the boundaries. I do not know the boundary of **Kawaihae 1st** at shore as I used to go on the *mauka* boundary. **Waika** bound it on the North side. Commencing at a gulch at the Government road to **Waimea**, *mauka* and towards **Waimea** of the Catholic Church; thence along the gulch to the side of **Pili**, a hill on **Waika** side. **Waipouli** and **Pohoa** are on the boundary below **Pili**. It is not very far from **Pili** to the end of **Waika**. Thence to a place called **Naelemakule**; thence towards a gulch to a large *ohia* tree at **Papa-lepo**, where they used to hide from the rain; thence to the gulch, **Puuwau**; thence across the gulch and along a trail towards **Honokane** to a place called **Hinamakanui**, where we used to have our houses, situated at the head of **Honokane pali**; thence to **Moano**, where it joins **Waimanu**; thence across the head of **Waimanu** to **Waipio** to a place called **Ulu**. This is as far as I have heard, or know the boundaries. Never heard that **Puukapu** reaches to **Honokane pali**. [page 279]

C.X.d.

I know the place called **Napoeaumihale-**

akakalani, It is on **Kawaihae 1st** but I do not know whether **Kawaihae Hikina** reaches there or not. Know a place called **Kaulanaahu**, I think it is on the boundary between the **Kawaihae 1st** and the **Kawaihae 2d** but I am not sure.

Waihoolana may belong to both Kawaihaes. I do not know the boundaries between the **Kawaihae 1st** and **Kawaihae 2d**. **Keawewai** gulch is the boundary between **Kawaihae 1st** and **Kawaihae 2d**.

Continued

R.A. Lyman
Commissioner of Boundaries, 3d J.C.

See Folio 390 of this Book, evidence given as to boundary between this land and **Kawaihae 2**. [page 280]

Ahupuaa of Kawaihae Hikina (Kawaihae 2nd)
District of South Kohala, Island of Hawaii
Boundary Commission Hawaii Volume A:453

To Hon. R.A. Lyman
Boundary Comsr.
Island of Hawaii

May it please your
Honor to set a day for the hearing and deciding
of the Boundaries of the following lands be-
longing to Her Highness, Emma Leleolani
Queen Dowager, viz.

Kawaihae Hikina in South Kohala
Waiaha 1st (Ili of **Waimea**), South Kohala
Waiaha 2, North Kona
Pahoehoe, North Kona
Konawahi, North Kona
Kahului, North Kona
Kalama, South Kona
Kamoamoa, Puna
Kuikuihala, Puna
Waikahekahe **2d**, Puna
Kaupo, South Kohala

And your petitioner as in duty bound
will ever pray, &c.

J.O. Dominis
Agent for said lands
per E.G. Hitchcock
his atty
H.A. Widemann, Agent for Mrs. Naaea
E.G. Hitchcock, his Atty

Hilo, Hawaii. August **2d**, 1873

***Ahupuaa of Kawaihae Hikina (Kawaihae 2nd)
Boundary Commission, Hawaii Volume B:73-77***

The *Ahupuaa* of **Kawaihae 2d**, District of South Kohala, Island of Hawaii, 3d J.C.

On this, the 15th day of November A.D. 1873 the Commission of Boundaries for the Island of Hawaii, 3d J.C., on the application of J.O. Dominis, acting for Her Majesty, Queen Emma, for the settlement of the boundaries of **Kawaihae 2nd**, situated in the District of South Kohala, Hawaii, met at the Court House in **Waimea**, South Kohala for the hearing of witnesses.

Notice served by publication in the Hawaii-an Gazette of _____ and *Kuokoa* of _____ 1873 of the settlement of the boundaries of lands in Hamakua and Kohala, at the Court House in **Waimea**, South Kohala on the 14th inst. and continued till the 15th. Due notice personally served on owners or agents of adjoining lands as far as known. Present: G.W.D. Halemanu on the part of applicant and Crown Commissioner.

For Petition see Folio 453, Book A.

Testimony

Kahiahikela ^K. Sworn.

I was born at **Kawaihae uka** two years before the building of **Kiholo** [ca. 1809]. I have always lived there, and know all the boundaries.

Kuhelani my Father, and his brother, bird catchers, when they were growing old, showed me the boundaries, as was the custom in olden times. I also went with them when I was young, as they were lunas under the *konohiki* of **Kawaihae Hikina**.

Kawaihae is bounded *makai* by the sea, and has ancient fishing rights extending out to sea; bounded on the Kona side by the *Ahupuaa* of **Waimea**. In Kamehameha I time, I heard from my parents that he gave the land adjoining **Kawaihae** at the sea shore to **Ouli**; thereby making that land extend to the sea, before that time, **Ouli** stopped at **Puuike**. Davis and John Young were great favorites of Kamehameha I and he gave them the land, thereby making **Ouli** (*Ili* of **Waimea**)

bound **Kawaihae** at the sea shore, instead of [page 73] the *Ahupuaa* [pig altar], a place called **Kalepemoa**, a pile of stones near **Waiulaula** gulch is the boundary. Beginning here the boundary runs up the gulch to **Paleuli**, an old cultivating ground near the gulch. There the boundary runs to the left of the gulch to **Lawai** and from thence to **Puainako**, where **Kawaihae** ceases to join **Ouli**, and is bounded by **Napukawaiwai**, an *ili* of **Waimea**. Thence along this land to **Kalualepo**, yellow soil on the **Kawaihae** side of **Waihoolana**, this swamp has *piipiiwai* [a native rush] and *kalokaloha* growing in it and is at the South East corner of **Kawaihae**, and at the place where that land is cut off by **Waipio**, and **Waimanu**. The slope towards **Kawaihae** belonging to **Kawaihae** and the slope towards **Waipio** belonging to that land. No swamp belonging to **Kawaihae**.

(Note: this boundary has already been decided by Judge G.M. Robertson.)

The land of **Puukapu** does not cut **Kawaihae** off. It is about one and a half miles from **Kalualepo** to the boundary of **Waipio**, at a pool of water called **Ulu**, at the foot of the water fall; but the boundary runs along on the top of the *pali* above the falls, having the *pali* at the head of **Waipio** valley, the boundary runs toward **Waimanu** along the lands of **Waipio** and **Waimanu**, on the *makai* side of **Waihoolana**; **Kawaihae 2d** is cut off on the Kohala side by **Kawaihae 1st**, so that it does not reach **Waimanu**, but it is a little on the *makai* side of **Waihoolana**; thence the boundary between **Kawaihae 1st** and **Kawaihae 2** runs across the swamp to **Napoeaumihulu-makaokalani**, a high hill, a little toward **Kawaihae** of the swamp, from which you can see the corners of **Kawaihae**. I have seen them from there. The boundary between **Waimea** and **Kawaihae** runs on the **Mana** side of this hill, but a long distance from it; from this hill the boundary between **Kawaihae 1st** and **Kawaihae 2d** runs across the hill and down a ridge to **Kapaliowaiu**; thence along the top of said *pali* and down the *pali* into **Keawewai** gulch. At the foot of the waterfall; thence down the gulch to Kohala road to **Keanakanaha**, the pool of water below the bridge there the boundary leaves the gulch [page 74] and runs to the *makai* side of Lincolns house to the **Waimea** base of **Olopio**, a hill on **Kawaihae 1st**; thence the boundary turns a little way

toward Kona and runs to **Umelaau**, where a stone crossing is built across the gulch; thence down the gulch to **Makahuna**; and from thence down the center of **Makahuna** gulch to the sea.

C.X.d.

My knowledge has always been that **Puukapu** does not extend to **Honokane** for **Kawaihae 1** and **Kawaihae 2d** lay between these two lands on Kohala hills. The water of **Waihoolana** does not flow into **Waimea**, but into **Waipio** and **Waimanu**.

Kiainiu ^K. Sworn

I was born at **Kawaihae** at the time of **Oku** [1804] and have always lived there. Am a *kamaaina* of the land, know the *makai* boundaries, and have heard the *mauka* ones from old people. Piielua, my father, was a bird catcher and told me the *mauka* boundaries, but I never went to them with him; He used to bring down yellow soil to sell, and he said that he got it from **Keawewai**; This is all that I have heard or know about the *mauka* part. **Kauhuhu** gulch is the boundary between **Kawaihae 1st** and **Kawaihae 2d (Makahuna)** gulch is in the center of **Kawaihae 2nd**; thence up the gulch to **Kenani**; thence to **Keawewai**; the boundary runs to the head of *awaawa*; thence to **Keana-kawaha** at **Keawewai**.

This is as far as I know the boundaries.

C.X.d.

Kalualukela ^K. Recalled.

Makahuna Gulch is the boundary at sea shore between **Kawaihae 1st** and **Kawaihae 2nd**; it lays between John Young's old house and John Parker's house, and is on the Kona side of the latter. **Kauhuhu** gulch is near the trig works.

Kalua ^K. Sworn (same witness as on **Ouli**)

I know the place called **Kalualepo**; it is a hole with yellow soil; it is near the **Waihoolana**. **Puukapu**, an *ili* of **Waimea** bounds **Kawaihae 2d** [page 75]; Thence to **Waihoolana**, a gulch of standing water. This gulch runs to **Waipio**. I lived there one month. Thence along the gulch to **Kaapeape** a place where there used to be a settlement. I do not know that the boundary line is on **Kawaihae 2nd**, but I do know that the land comes to **Kalualepo**, which is the only *mauka* boundary of **Kawaihae** that I know of.

The boundary given is the boundary of **Puukapu**. I know the boundary between **Kawaihae** and **Waimea** going towards shore.

C.X.d.

I know the hill called **Napoeaumihulumaka-okalani**, but I do not know what land it is on. It is a long way off toward Kohala.

Case continued until further notice to all interested parties.

R.A. Lyman
Commissioner of Boundaries, 3d J.C.

Continued Folio 390 of this book. [page 76]

**Ahupuaa of Kawaihae Hikina (Kawaihae 2nd)
Boundary Commission, Hawaii Volume B:390-394**

The *Ahupuaa* of **Kawaihae 2d** or **Kawaihae Hikina**
Continued from Folio 76 of this book,
and folio 280 of this book.

Kawaihae South Kohala, Jan. 20th 1876.
The Commission of Boundaries for the Island of Hawaii, 3d J.C.
met at the house of J.P. Parker at **Kawaihae**, after notice personally
served on the Agent of Crown Lands, and A.J. Cartwright, Agent
for Her Majesty, Emma **Kaleleonalani**, to take further evidence as to bound-
aries between **Kawaihae 1st** and **Kawaihae 2d**.

S.P. Wahinenui appeared on part of applicant, and presented a letter
dated Jan. 11th, 1876 from Her Majesty's Land Agent authorizing him to
act for him. Chas. Williams of Hamakua appears for Agent of Crown
Lands.

Testimony
Kaneahiku^w. Sworn says (quite an elderly woman)
I was born at **Pahoa**, Kohala, Hawaii. I helped carry stones at
the building of Kiholo [ca. 1811]. I was married before the battle, near Keauhou in Kona
in which Kekuakalani was killed [Dec. 1819]. I was born the year before
Kanihonui died at Oahu [ca. 1808]. I know the lands
of **Kawaihae**. I lived here a great many years. My husband
Mahi was buried in the *pali* of **Honokoa**.

I know the boundaries between **Kawaihae 1st and 2d**. Olohana
(John Young) put us on **Kawaihae 2d**, and we lived at place called
Ailipoa below where the church now stands. Mahi was *kono-*
hiki, and I heard him telling people the boundaries.

An old *heiau* called **Kauhuhu** is the boundary at the shore
between the two **Kawaihae**. Thence the boundary between them
runs up the gulch to **Olopio**. Part of this place lays on **Kawaihae 1st**

and part on **Kawaihae 2d**. The boundary runs up the *awawa* from the shore to the Kona side of hill called **Kanani**; Thence up to **Keawewai**, the boundary at that place being in the water in the gulch. I do not know very much about the boundary there, as in those days we were “*noho like ma na Kawaihae elua*.” [lived in the same manner between the two **Kawaihae**.]

From **Keawewai** the boundary runs up the gulch. I do not know the boundaries above there. Kamoehau is the *kamaaina* of the land, and knows the true boundaries.

C.X.d. I know the boundary at shore. I have been away from here 40 or 50 years, and have forgotten the boundaries. John Young was alive when I moved away [prior to 1836]. The beach and sea on the Kona side of **Kauhuhu** belonged to **Kawaihae Hikina**. When we came from the other **Kawaihae** on to this place to fish, we had to give part of our fish to Olohana.

I never heard that place called **Makahuna** is the boundary between these two lands. I know *ili* called **Pohakuloa**. It is on this land, and the gulch is on the other side. **Keawewai** gulch runs *makai* onto **Kawaihae 1st** (note witness seems quite confused, and is very reluctant to give any evidence.) [page 390]

Kamoehau ^K. Sworn says (he is quite an old man, and is the one who last witness says knows the true boundaries of the land. Was sent for by Commissioner of Boundaries, when Kaneahiku made this statement. He had not previously been summoned as a witness by either party.)

I was born at **Kawaihae uka**, I saw the *Peleleu* [1795] and was old enough to cook food at that time. I live on **Kawaihae 1st**, Kohala, Hawaii, and have always lived there. I am a *kamaaina* of these lands, and know the boundaries between them, from the shore to *mauka* end. My parents told me the boundaries. Kuaaawa my father, and Nakoana, my mother, were *kamaaina* here. They told me the boundaries because of the killing of Olohana's man by Kawailepolepo. They wanted to kill the man, but Kalaimahu said no, give the land to pay for it, and so the land from **Pohakuloa** to **Waiulaula** (**Waiulaula** is boundary between **Kawaihae 2d** and **Ouli**) was given to Olohana, and this place where we now are was left for **Kawaihae 1st**. Place called **Pokiiahua** is the boundary at shore between the two **Kawaihae**. It is a water hole; thence the boundary runs up the gulch to *makai* of **Olopio**; there it leaves the gulch and runs up between **Olopio** and **Opulehelehe**, and thence up *auwai* to **Keawewai**; thence up gulch to **Waiaeele**, a *powai* [*po'owai* – water head] in gulch; thence up hills to the **Waikoloa** gulch where these lands are cut off by **Waimea**.

C.X.d. (Note. This witness evidence agrees with G.M. Robertson's Certificate of Boundaries of **Waimea** as to the two **Kawaihae** being cut off by **Waimea**.)

Know place called **Kalualepo**, it belongs to both **Kawaihae**; the **Waikoloa** gulch is a long way from there. **Kalualepo** is at the head of where the water runs to the **Honokane** valley. There is yellowish dirt there. I never heard in olden times that the boundary between these two lands was at **Kauhuhu**. The sea from **Pokiiahua** to **Kauhuhu** belonged to **Kawaihae Akau**, and the sea on the Kona side of **Pokiiahua** to **Kawaihae Hikina**. Mahi lived on the tract of land between **Pokii-**

ahua and **Kauhuhu**, but was *konohiki* under Kalaimoku, and not under Olohana. He used to divide the fish and give part to Olohana. Olohana and Kalaimoku were *noho like*, so they used to give him part of the fish.

Place called **Pohakuloa** is on **Kawaihae Hikina** near boundary. **Pulama** is the *ili aina* next to **Pohakuloa**, and is on **Kawaihae Akau**. They lay side and side to the sea shore. The place where we now are is on **Pulama**, and **Pohakuloa** is east of us, where Olohana's (John Young) house used to stand. Part of the *Pohopaakai* [salt beds] belong to **Kawaihae Hikina**, but most of them belong to **Kawaihae 1st**. The boundary between the two lands is where I stated before. The folks living *mauka* on **Kawaihae 2d** used to go after salt at the shore to the salt works near **Kauhuhu**. The *poho paakai* **Pohakuloa**, **Kaholei**, **Piipapii**, **Nupaa** belong to **Kawaihae Hikina**, the other *poho paakai* to **Kawaihae 1st**. They are *lele* of **Kawaihae Hikina**. **Kaneloa** is on **Kawaihae Hikina**, and I know of *poho paakai* called **Kaneloa**. Know of place of **Kawaihae Hikina** called **Makela**, but do not know of salt place of that name. [page 391]

Malahuehue is an *ili* of **Kawaihae Hikina**, and I know of salt place at shore by that name, and it belongs to **Kawaihae Hikina**. **Kukui** is an *ili aina* of **Kawaihae Hikina**; I do not know of any salt place of that name. **Kapahukapu** is an *ili* of **Kawaihae Hikina**, I do not know of any *poho paakai* of that name. The places I have mentioned are *ili aina* of **Kawaihae Hikina**, and the *poha paakai* of the same names belong to it also.

Kahilione ^K. Sworn says (quite an old man)
I was born on **Kawaihae hikina**. Saw Kekuaokalani and Kamehameha **1st** and have always lived there. I am a *kamaaina* of the land but do not know the boundaries. My parents never told me the boundaries. I have heard that boundaries are at **Keawewai** and **Kaluahine**, but do not know the boundaries at the shore.

C.X.d.

Court adjourned to meet at **Puopelu** [Puuopelu] **Waimea**, S. Kohala, Hawaii at 12 o'clock noon Monday January 24th 1876.

R.A. Lyman
Commissioner of Boundaries, 3d J.C.

Puopelu Waimea, S. Kohala, Hawaii
Jan. 24th, 1876.

Commission of Boundaries met according to adjournment.
Present: S.P. Wahinenui on part of applicant, and Chas. Williams for Agent of Crown Lands.

John P. Parker ^K. sworn (witness for Agt. Crown Lands.)
I was born in N. Kohala, Hawaii in the year 1827, and moved to **Waimea** in 1838 and have lived in **Waimea** and Hamakua ever since. I know the lands of **Kawaihae 1st** and **Kawaihae 2d**, and have heard where the boundary is between them, from Hueu, Kini

Keoki and Kauwe. They told me that the fishing rights belong to the King's **Kawaihae** and that the gulch between my house at the shore and John Young's old house was the boundary. The gulch is on the Kona side of my house. Kauwe is still alive, the other two are dead. I have not heard where the boundary is between the two lands *mauka*, or at the *mauka* road to Kohala.

C.X.d.

Hueu told me the boundary some years ago. Kini Keoke told me when he had charge of the land under Allen & Chillingworth and Kauwe told me last November when I was going to Honolulu and I have always understood this to be the boundary.

S.P. Wahinenui^K. Sworn says

I was born in North Kohala in 1827. I now live at **Kawaihae**, and have lived there for 37 years. The boundaries at the shore between the two **Kawaihae** have been pointed out to me. In 1843 there was a dispute about the boundaries. Kaleiepu was the *kamaaina* [page 392] of **Kawaihae 2d**, also Keliikaheana, Kahooieie Pae, father of Kapa^W, and Puna. The *kamaaina* of **Kawaihae 1st** were Kapuni, Nuholo, Kanakaokai, and they had the dispute near where I live. The *kamaaina* from this land said that the boundary was at **Kauhuhu**, and Nuholo said to Kaleiepu that he was *aloha ole*. I do not know why he said so. Mahi was dead, and Kekuahine was the *konohiki* of **Kawaihae 1st** at this time. Mahi was the *konohiki* of **Kawaihae 1st** during his life. I heard the *kamaaina* of both lands tell where the boundaries were. The *kamaaina* from **Kawaihae 1st** said that **Kapili Kahawai** was the boundary. This is the gulch Mr. Parker spoke of. Kaleiepu, said that used to be the boundary but that the land from there to **Kauhuhu** was given to **Kawaihae 2d** because Kapela was killed by the *keiki* of Kawaileoplepo. He was killed *makai* of where the church now stands. He, Kaleiepu said that Kaleimoku, father of Leleiohoku gave it, and that the boundary between the lands ran from **Kauhuhu** to **Napukoaamauiikiiki**; thence to *kauhale paakai*; thence to **Kekualapo**; thence to **Kanani ana**, a cave in gulch where they used to *kalai* sandalwood. Thence leaving gulch up across land to **Powai**; thence to **Olopio** running along the *auwai*; thence between *ili aina* **Pohakuloa** on **Kawaihae 2d**, and **Pulama** on **Kawaihae 1st**. The *kamaaina* from **Kawaihae 1st** said, and I have since heard the same from Hueu, that the boundary at shore between these lands was at **Kapalala**, a point of rocks. It is now covered with sand. It is between Mr. Parker's house and where John Young's house used to stand, and thence the boundary runs *mauka* up gulch **Pokiiahua** to the bridge; thence up to **Leinakane**, the junction of two gulches; thence to **Puainako**; thence up to *makai* of **Olopio** and **Haleuli**. There the disputed boundary ends. When we used to catch fish, Olohana's man used to take part, and the *konohiki* of **Kawaihae 1st** a part. I do not know why. I have always heard from Hueu (George Davies) that the fishing rights belonged to **Kawaihae 1st**. I have heard that the places for making salt belonged to both lands. The *poho paakai* have the same names as the *ili aina* to which they belong on both **Kawaihae**. The *makaha* of the fish pond is called **Kukui** and belonged to **Kawaihae 2d**. I never heard any dispute about the *poho paakai*, but the dispute was about the land on the Kona side of them to **Pokiiahua** gulch.

Wahinenui says Kauwe is at the beach, that he did not see fit to tell him to come as a witness.

C. Williams requests that his evidence be taken if applicants have any more witnesses examined. Granted.

Case continued by request of applicant to have Fanny Young's evidence taken, and also to take Kauwe's testimony.

R.A. Lyman
Com. of Boundaries, 3d J.C... [page 393]

***Ahupuaa of Kawaihae Hikina (Kawaihae 2nd)
Boundary Commission, Hawaii, Volume D, No. 5, pps. 597-613***

Kawaihae 2d The Boundary Commission South Kohala met in the Court House at Kapaau, North Kohala at 9 A.M. December 19, 1903, according to Notices published in the Hilo Tribune, and *Ku Okoa*, for a hearing November 14, and a continuance to Nov. 21, and to December 19, 1903. — and Notices of the application and hearing, and continuances having been sent by mail, by the Commissioner of Boundaries, to each owner of the adjoining Lands, Namely— The Commissioner of Public Lands, for ***Waimea*** and ***Kawaihae 1st***: and G.W. Macfarlane, for ***Ouli***.

There were present at the hearing, at 1:30 P.M.
A.B. Loebenstein, Attorney for Applicant,
J.W. Pratt, Commissioner of Public Lands,
L.P. Weaver, Attorney for Commissioner of Public Lands,
J.F. Woods, H.H. Holstein, Kanakanui, and others.

The application of Bruce Cartwright, Administrator of the Estate of Queen Emma, amended by permission, to the Trustees of the Queen's Hospital, the present owners of the land; notice to that effect having been received from Bruce Cartwright, and from the Trustees of the Queen's Hospital, and made a part of this record; asking for a settlement of the Boundaries, and a Certificate to Boundaries, for the Land of ***Kawaihae 2d***, District of South Kohala, Island of Hawaii, H.I. presented and read in Court, having been filed August 27, 1903, also Notice of hearing, and continuances, published in due form, also description of the Land ***Kawaihae 2d***, surveyed by A.B. Loebenstein, September -1903.

(Application)

Hilo, Hawaii, August 27, 1903

Hon. F.S. Lyman
Commissioner of Boundaries 3d & 4th Jud.Circuits
Terr. Hawaii:

Sir:
Representing the owners of the *Ahupuaa* of
Kawaihae 2d in the District of South Kohala [page 597],

Isl'd Hawaii, I have the honor to request you to
set a day for the taking of testimony and the issu-
ance of a Certificate of boundaries for said land.
In compliance with the statute I have hereunto
annexed a schedule of adjacent lands with their
respective owners.

Very Respectfully Yours
A.B. Loebenstein
Atty. for Bruce Cartwright
Administrator, Est. of Queen Emma,
Amended to Trustees of the Queen's
Hospital... [page 598]

...Testimony
A.B. Loebenstein, sworn, I am a surveyor
acting under instructions from Bruce Cartwright,
Administrator of the Queen Emma Estate, and
later under the Trustees of the Queen's Hospital,
executed a survey of the land of ***Kawaihae 2d*** –
L.C.A. 8515 – and made a descrip-
tion of its boundaries which I herewith present.
This survey has been made in conformity to
testimony taken before R.A. Lyman, Boundary
Commissioner.

The men, Kalualukela, Kiainui, Kalua, Kaneahiku (w.),
are reported to me as all being dead.

(Copy of the testimony of these witnesses produced,
taken in 1873-6)

Attorney for the Territory objects to this testimony
produced as belonging to an old case that has
expired – the present case having begun with
a new application.

I had correspondence with Curtis J. Lyons of
the Government Survey, and made the survey
according to his direction. I became familiar
with the accepted boundaries of ***Kawaihae***, be-
ing employed by Mr. Parker.

I received this letter from C.J. Lyons in 1902
giving opinion that ***Kawaihae 2d*** cannot go
beyond the Summit, and that was my opinion,
this tracing is of a Map of ***Kawaihae 2d*** made

by me, the lines in blue being the lines of the land all around.

The summit, which I designate is **Kaumukaleiohia** hill, was accepted by me for the reason that Boundary Certificate No.4, on survey of Wiltse, Course 51, & 52 reading as follows: "at end of 51, to the Kohala Road – then 52, thence up and along the general [page 599] course of the Luahine gulch, N. 31° E. 240 chains to a place known as **Kalualepo** at mauka S.E. corner of **Kawaihae 2d** on the boundary of **Waimea**" - in this I followed instructions of Lyons.

1st course, from known point at sea, along **Ouli** to **Puuainako**, practically as per survey of Wiltse in survey of **Waimea**.

No. 4 Certificate and **Ouli** Certificate – following S. boundary of **Kawaihae** to point in **Waimea** Certificate, called 46, Boundary Certificate 4. – to **Luahine** gulch, where it leaves the hills, we then follow the meanders of **Luahine** gulch to its source at confluence of 2 small gullies, maintaining Wiltse survey so far as it follows the gulch; then to a hill named **Eke**, and thence to the Summit, **Kaumukaleiohia** – the general direction of the gulch is along by these hills – the fact that the general direction of the line from course 51 at Kohala road, to the end of 240 chains distance practically passes through **Eke**, magnetic bearing N. 33° E., about 40° true then, variation about 8° now 31° 15' magnetic and true 40° at summit crater given, I fixed mauka or East end of **Kawaihae 2d**.

The **Waimea** description calls for a hole called **Kalualepo** – and there is no other hole or crater – all is a down slope.

Each land is entitled to its own watershed, the divisions of **Kawaihae 1st & 2d** are of recent date – I know by testimony.

Territory asks to strike out what witness said of divisions being of recent date as an opinion.

I refer to testimony of Kamoeahau, p. 390, Vol. B. (reads) —
boundary turns towards Kohala from hill **Kaumukaleiohia**, by **Waimea** people so

called; people in near vicinity call it **Napoeaumihulumakaokalani** – while [page 600] today it is known by residents in that locality as **Kilohana** – from this hill the boundary bent towards Kohala, down the hill to a ridge, down the ridge and *pali* to the **Keawewai** gulch – name of ridge being **Kapaliowai-u** - going in a N. Westerly direction this is a *pali* plainly seen from below and showing 2 noles or hills on the crest that resemble the bosoms of a woman which gives the name, also called **na puu o waiu**, these hills were also pointed out to me in 1893, in company with P. Jarret, J. McGuire, former Manager of the Parker interests, lessees of **Kawaihae 1st**, the latter owner of **Kahua**, and lessee of **Kawaihae 2d**; from **Keawewai** gulch according to testimony at point **Leino-kane**, at head of gulch, called also **Haleo-kane**, by *kamaaina* Kaloa; down the middle of **Keawewai** gulch to point on the top of the waterfall, described in award to Lorenzo Lincoln No. 8513, and at old government road crossing – where in accordance to description in award, the boundary leaves the gulch and runs along *makai* side of old government road, at angle of stone walls, - then follows along stone wall enclosing Lincoln award, by various courses and distances to S. angle of the award, then it goes down to a little rise known as **Makalii**, ditch is a few feet from the top of the nole, at this point found a large mound of stones which I understand was put up by J. Parker; again to another large pile of stones on another nole, called **Olopio**, a hill with sharp crest, ditch being a little one side - 2 **Olopio** hills . I followed general ditch line, not having any *kamaaina* – no other ditches there; only little water runs washed by rains; ditch is 50 to 75 feet S. of **Makalii**, around hill and comes back again, winds in & out. Further down found gully from [page 601] **Kauhuhu** gulch; then to pile **Kanani**, given in original testimony. Thence as straight line as could get, to old road crossing gully, tributary of **Makahuna** gulch, N. branch, thence along N. branch to **Makahuna** gulch, thence along **Ma-kahuna** gulch to sea-coast. Lyons instructed me if I could not get reliable testimony to make a straight line from Lincoln award to the sea, but I had what I believed to be reliable testimony.

In running the line from course 51, on side by **Waimea**, I found practical difficulty in following Wiltse evidence, Wiltse survey of **Waimea**, did not find **Kalualopo**, and ran along **Kawaihae 1st** calling it **Kawaihae 2d** to **Honokane pali**, Kalualukela's testimony others refer to Kamohau.

Kalualokela gives the **Waimea** base of **Olopio** hill as boundary between **Kawaihae 1st** and **Kawaihae 2d**.

Kaneahiku (w.) p. 390, Book B, gives as Follows. "old **Heiau Kauhuhu** boundary at sea, thence up gulch to **Olopio**, part of this place lies on **Kawaihae 1st** and part on **Kawaihae 2nd**."

Kamoeahau gives boundary "runs up gulch to **makai** of **Olopio**, there leaves gulch and runs up between **Olopio** and **Opulehelehe**, thence up **auwa**" &c.

Again Kiainui (Book B) boundary runs &c (see testimony).

Frank Woods, Sworn. I am 28 years old, a rancher in North Kohala. I have a Lease of **Kawaihae 2d**, upper portion, 3/4 of it; from old Kohala road, above **Puuloa** hill, am familiar; starts from Kohala road, used stream as natural fence, **Keawewai** gulch. **Kawaihae 1st** Government is on N. side of gulch; fence [page 602] extends as far as forest goes (shows on plan) along **Keawewai** stream from head down; from head of gulch is a precipice above which is drop of 100 feet and is swampy up to **pali** above; cattle cannot go there. I hold lease of that; have no Lease of **Kawaihae 1st**, is Leased to Parker Ranch. Lease of **Kawaihae 2d** was to McGuire 12 years ago. I run my stock on the land.

C.X.d.

My cattle do get down into swamp land and get fat; when I had the land from McGuire, I asked him the boundaries; he said the boundary was a small gulch North of **Keawewai** stream; to ridge and along ridge; which natives told me, and

McGuire also told me that boundary (shows a tracing - *mauka* boundary **Kawaihae 2d**).

Akahi (now present) told me this boundary; contestant objects to what Akahi told him; stricken out.

Description of land filed by Loebenstein. Attorney for Territory objects to being filed so late, should have been done with application, but as Government had been allowed to see it, does not object to being brought in now.

Note: Commissioner asked applicant for it on application being filed, and was assured it would be forthcoming soon, but has not till now.

Contestant.

S.W. Nawahi – Sworn (Holstein, S. Interp.)
Do not know my age; perhaps 65 years;
am a *kamaaina* of **Kawaihae 2d** since a small child; my father was a bird catcher; I leased **Kawaihae 1st** from S. Parker; do not know *mauka*, or *makai* boundaries; only know disputed boundary at **Pohakuloa**; from boundary Lincoln [page 603] we built wall; from South boundary Lincoln towards sea along fence; from **Pohakuloa** to **Pulama**; then up to corner of Lincoln's land S. boundary of **Kawaihae 1st**; then up to water head **Kahinaimaka** below old Government road; I went there with Kamakanui; do not know above; **Keawewai** gulch is there, in Lincoln's land; do not know above there.

From Lincoln's *makai*, I heard, runs down from **Kahinaimaka** to **Pohakuloa**, along ditch down to **Pulama**, an old village, an *awawa* below, and **Pulama** raised land above. **Pohakuloa** ditch ends there; then a gulch below to sea; do not know its name; it runs down to **Mahukona**; I got these locations from my brother Kahue, now dead; **Olopio** is on North side, on **Kawaihae 1st**; a gulch is on North side of **Olopio**; know hill **Olopio**; boundary is a little south side of that hill; when boundary leaves **Pohakuloa** ditch runs Northerly to S. side of a nole, we put piles of stones with Kahue; do not know name, know ditches; then to **Olopio**; then along *awawa* to **Kanani**; to

place near school house; **Kanani** near **Pulama**; **Makahuna** stream is on other side near J. Parker's.

Other branches into **Makahuna**, and a S. branch; do not know its name; the same gulch to J. Parker's; was told boundary in **Makahuna** gulch; up to **Pulama**, up gulch; then on ridge to **Pulama** village and to **Olopio** which is on **Kawaihae 1st**; South branch at **Pulama** runs into **Kawaihae 2d**; North of Koo's house, which is on **Kawaihae 1st mauka** of **Olopio**, on S. side; **Olopio** is North side of **Pulama**; then to **Pohakuloa**; from **Pulama** to **Pohakuloa** is not a gulch. [page 604]

Olopio is a ditch, not boundary. **Pohakuloa** boundary to **Pulama** (up **Makahuna** gulch from shore). I only heard boundary up gulch to **Pulama**, S. branch; thence gulch runs into **Kawaihae 2d**, and boundary runs North of gulch, on the land (*honua*) where we built wire fence with J. McGuire after dispute with him, as settled by *kamaaina* Kahue; then to South corner Lincoln award; do not know Kanaloa; from **Pulama** boundary follows a ditch to **Pohakuloa** gulch turns South.

C.X.d.

Am *kamaaina*, but do not know all the boundaries of **Kawaihae**; heard from Kahue the son of Pipi; Kahue is dead. Know **Kanani**, a *pali* and water hole; boundary is South of water hole, not far (say 25 fathoms) to Court house fence. **Kanani** is in **Kawaihae 1st**; we put a pile of stones on small hill at the corner of the wire fence; Kahue built it there; that wire fence is still there; a flag was lately on that pile of stones; flag of Loebenstein. Kahue did not put other piles of stones on the boundary; the boundary runs *makai* from this pile of Kahue, South of the pile 2, or 1 fathom South or 3 fathoms, have not measured. **Kanani** is a water hole, on **Kawaihae 1st**; the boundary is S. of it, as far as to Court house fence.

Redirect. Do not know of *Heiau* near **Kanani**; do not know any other *Heiau* there. Do not know the distance of **Kanani** to **Makahuna** gulch; **Pulama** branch goes

into it; distances I said, may be to the Court House fence; to gulch towards **Waimea**; **Kanani** gulch where we live; the boundary is at **Pulama**.

C.X.d.

Kanani, North, and another gulch near **Pulama**, 3 in all; from **Kanani** to 1st about as far as to Court House fence. [page 605]

J.H. Akahi Sworn. This is my 60th year; am *kamaaina makai* to **Kawaihae**; our parents told us boundaries; my father, and Nawahie's mother told me; my father was a School teacher.

The boundary between **Kawaihae 1st** and **2d**, starts in gulch of **Makahuna**, up to **Puuainako**, an old resting place on the side of the gulch; the gulch is the boundary; thence to **Pulama** village; along same gulch, which has small branches; at **Pulama**, the gulch runs in- to **Kawaihae 2d**, Queen's land; at **Pulama** the boundary follows the ditch to **Pohakuloa** where wire fence stands; thence *mauka* along the ditch to the land of Lincoln and on to the Government road; in ditch, and on in ditch to **Hinaimaka**, water head in **Keawewai** gulch.

Contestant objects to evidence about boundary fixed by award to Lincoln. Objection stands.

From the corner of the wire fence at **Pohakuloa**, the boundary runs through the ditch to **Pulama**, which is flat on the land of Queen Emma; a ridge leads down to **Kanani**. **Olopio** is *mauka* of that.

The land from the wire fence slopes down from **Pohakuloa**, uneven, to **Pulama**, leads into **Makahuna** gulch, to **Puuainako**, to crossing in the gulch; southerly, in the gulch **Makahuna** to the sea; **Kawaihae 1st** on one side and **Kawaihae 2d** on the other of the gulch.

The branch of the gulch is some ways up; no branch on the North side.

The boundary *mauka* follows **Pohaku-**

loa ditch to **Keawewai**; I was told, but do not know above that; have chased cattle there; only heard about bounda- [page 606] ries there.

C.X.d.

I heard from Nawahie's mother. Know **Kanani**; it is a water fall into the gulch and water hole on *makai* side of **Olopio**; **Kanani** gulch into **Kauhuhu**; there are other small gulches; other branches in other directions; there is a mound of stones on the ridge between **Pulama** and **Kanani** gulch, which is still there.

Kanani is on the **Kawaihae 1st** side of the pile of stones. I have been to **Kanani** chasing cattle; there are branches of **Makahuna** on Queen's land; there is a bridge there. **Makahuna** gulch from the sea to the bridge; do not know name of the branch; understood branch to be **Kaneloa**, the boundary is on the **Waimea** side of the pile of stones; at **Kanani** pile is on the ridge; the boundary is in the gulch; quite a distance further than the Court House fence; down in the gulch; was told the boundary is in the gulch.

Redirect. Mound is on the ridge, the boundary in the gulch, **Makahuna**; in branch at **Pulama** on **Waimea** side; when we made the wire fence, I was showed the boundary; there at **Puuloa** we showed Kanakanui this boundary; could see it from **Puuloa**;

C.X.d.

We went together to **Keawewai**; did not show Kanakanui boundaries at **Kanani**; could see plainly; we pointed out wire fence; pile of stones; and **Puuainako**; from **Puuloa** can see the corner of the wire fence, pile & **Kanani**.

S.M. Kanakanui Sworn. Am a government surveyor; several years; have [page 607] surveyed line between **Kawaihae 1st** and **Kawaihae 2d**; know boundaries from *kamaaina*'s testimony. Akahi and Nawa-

hie; arrived at **Kawaihae**, investigated at **Makahuna** gulch; coming up on trail we found a prominent gulch on the right going up; one branching N. and 1 South; trail between the two, further up to **Puua-inako** by South branch of the gulch (shows on map); went on up and crossed S. branch; followed up N. side to opposite **Olopio**; there is a ditch, which I followed a little way up to pile of stones which Loebenstein designates as **Makalii**; from there went to fence, wire fence of McGuire.

Next day was at **Puuloa** with Akahi and Nawahi. I investigated then about the boundary between **Kawaihae 1st & 2d** with reference to Hill **Makalii**; they told me the boundary was on the South.

Applicant objects to testimony – overruled, as Akahi and Nawahi have already testified, and he is telling what they showed him on the ground.

Showed me a little South of **Makalii**, is a ditch, which told me is an old ditch known to be the boundary between **Kawaihae 1st** and **2d**, to **Pulama** (shows **Pulama** on Map.) gulch bends S. opposite **Olopio**; with aid of my transit and telescope, as they showed me, should say about 1500 feet between N. and S. gulches, they told me the boundary is the S. branch of **Makahuna** gulch; they told me that above **Makalii** from the corner of the fence, the ditch is the boundary to S. corner of Lincoln award; from there up to water head **Hinaimaka** at **Keawewai** stream; the Lincoln award being in **Kawaihae 1st**, the **Keawewai** stream is the S. boundary of the award; and taking that stream as the boundary of **Kawaihae 1st** [page 608] and **Kawaihae 2d**, to the head of the **Keawewai** stream.

Objection by Loebenstein to the testimony of Kanakanui as an expert.

Court. Witness should state his authority to investigate land.

I was sent there to investigate the land and boundaries for the Government, last month; found land from head of **Keawewai** stream to **Paliowaiu**, to **Kaleihoochie** and to **Eke**; from the land included within these points

forming a basin sloping in all around, forming a big swamp within; from which swamp **Keawewai** stream receives its waters. I was satisfied that that swamp draining water for the **Keawewai** stream; and whereas **Kawaihae 1st** has an unlimited supply from **Keawewai** stream it would be only right **Kawaihae 1st** should have control of that water head; water does not drain from that swamp towards **Waimea**; but only down **Keawewai** gulch into **Kawaihae 1st** and **Kawaihae 2nd**.

Should say boundary S. of **Kawaihae 2d** is correct to **Eke**; the survey of Wiltse changed to true, would run about from the Kohala road to 1/2 or 3/4 of a mile South of **Eke**; *makai* of old government road, crossing **Luahine**, the survey of Loebenstein is correct.

Certificate # 4, made part of this case by consent.

Course # 52 would run South of **Eke** 1/2 to 3/4 mile; Swamp above **Eke**, surrounded; *pali* on Hamakua side, ridge on **Waimea** side, a slope on Kona side, forming a piece of swampy land enclosed all around. [page 609]

C.X.d.

The line runs over 1/2 mile South of **Eke**; does not run to **Eke** and Summit, on Wiltse line.

Official Maps take boundary to **Eke**; beyond that we dispute it for the Government.

Government files Map of Hawaii, showing lines, to be withdrawn after decision of the Commissioner.

Kanakanui continues. The Government considers boundary from the Government road up to **Eke**; and **Eke** to summit boundary. **Waimea** along **Kawaihae 2d** to **Eke**; there **Kawaihae 2d** ends and **Kawaihae 1st** joins **Waimea** to the Summit; the line on Map of **Keawewai** gulch to **Eke** is nearly correct; the Government holds by **Keawewai** stream;

have not examined evidence of **Kawaihae 1st** or **2d**; learned about the boundaries from Akahi and Nawahie; that is all.

I went a little above the head of **Keawewai** stream about 500 feet East and above that much North, and found enough to satisfy myself about the swampy land; the drainage of all that place goes into the **Keawewai** stream; and that was substantiated by Akahi. I was satisfied by investigation that it was all swampy land. I am familiar to a certain extent, to plans of sections of the Island of Hawaii.

Loebenstein offers a tracing of Map objected to by the Government; as not made by applicant or authenticated by any one (objection sustained).

Continues - I spent 2 days on the ground; had never been on the ground before. We were at **Puuloa** with Akahi and Nawahie; they gave enough evidence to satisfy me they were reliable; a big [page 610] cave on the S. branch of the gulch, estimated distance as expert Surveyor; they showed me a pile of stones on S. edge of gulch at **Puuainako**, one of the boundaries of Kawaihea [**Kawaihae 1st** and **Kawaihae 2d**].

Contest. close.

Rebuttal.

A.B. Loebenstein; relative to testimony of Akahi, he informed me he knew very little about boundary below Lincoln Award, in the presence of others; relative to boundaries of **Kawaihae 2d** above the head of **Keawewai** gulch (objected to witness giving Akahi's evidence and objection sustained)

Akahi, I gave testimony about boundaries *makai* of Lincoln truly, as I was told. I saw Loebenstein a few days ago about the boundaries of these lands, and told him as I have stated in this case.

I went up with him, F. Woods, and a boy, to where he had marked. I told him Kakanui had been there with us. I told

Loebenstein about boundaries at **Keawewai**, of **Puukapu** land, cutting them off on the other end by **Waimea**, to **Kawaihae 1st & 2d**. **Puukapu** is *mauka* side of **Waimea**, and *kamaaina* came from there.

A.B. Loebenstein: about testimony of Kananui, state from my inventory and knowledge of the tract of land from the head of **Keawewai** gulch to the North angle of this land at **Paliwau**; thence along N. line of **Kawaihae** to summit hill at E. angle of land; thence toward **Eke** and back to head of **Keawewai** stream, with excepting of land bordering on small feeders forming **Keawewai** stream, is not [page 611] swamp but hard land; that the drainage to North of line of tracing is toward **Honokane**; as also toward **Waimea** around the slope of summit hill, known at **Waimea** as the **Keanuimano** stream (indicates on tracing map) therefore the 240 chains distance of Wiltse survey was not run out to that described length in order that these several lands would each have their respective share of water heads & further, I have not found it possible in my survey of this land, covering several weeks to observe and pick out any of the points mentioned in testimony of Akahi and Nawahie, as visible from **Puuloa** down.

C.X.d.

I was on that hill time and again, could not see the points stated by N. and A. could not see in strong wind; the point **Puuainako** is tract of considerable area, beginning of level place above rising ascent by old trail.

Kanakanui: could see corner fence at **Makalii**, with Transit; could see cave *mauka* of **Heiau** on map.

Testimony closed 9:30 p.m.

Argued

Contested by Applicant. Rational interpretation of the testimony should be taken.

Contestant cites. Riparian Rights of

Kawaihae 2d.

Case rests at 9:50 p.m.

Decision.

The boundaries of the land ***Kawaihae 2d***, are decided to be as follows. Beginning at the South angle of the land, in the mouth of the ***Waiulaula*** gulch, and run up said gulch, along the land of ***Ouli***, Boundary Certificate No. 63, and along the land of [page 612] ***Waimea***, Boundary Certificate No. 4, to, or as far as, the brow of Summit Hill of the Kohala range; thence along the land of ***Kawaihae 1st***, across Summit Hill and along the ridge to ***Kapaliowaiu***; thence along the top of said *pali* and down the *pali* into the ***Keawewai*** stream, and down the middle of said stream to the East angle of L.C. Award, No. 8513, to L. Lincoln; thence along the South East boundary of said Award to its *makai* corner; thence following the general course of the old ***Pohakuloa*** ditch to pile of stones on ***Makalii*** Hill; thence in a direct line to the angle in the South branch of the ***Makahuna*** gulch where it comes from the land of ***Kawaihae 2nd*** and turns *makai*, opposite ***Olopio***, near ***Pulama***; thence follow down the centre of ***Makahuna***, South branch, to its junction with the North branch, and down the centre of ***Makahuna*** gulch to the sea; thence along the sea shore to the point of commencement."

Frederick S. Lyman
Commissioner of Boundaries,
Third and Fourth Circuit
Territory of Hawaii... [page 613]

Ahupuaa of Kawaihae Hikina (Kawaihae 2nd)
Boundary Commission, Hawaii Volume C, No. 4:148-151

No. 187

Certificate of Boundaries of the Land
of ***Kawaihae 2d***, District of Kohala, Island of Hawaii,
Territory of Hawaii, Unites States of America

Keoni Ana, Land Commission Award No. 8515.

Commission of Boundaries
Third Judicial Circuit, Territory of Hawaii, U.S.A.
Frederick S. Lyman, Commissioner

In the Matter of the Boundaries
of the land of **Kawaihae 2d**,
District of Kohala,
Island of Hawaii, T.H.

Judgement.

An application to decide and certify the Boundaries of the Land of **Kawaihae 2d**, District of Kohala, Island of Hawaii, Territory of Hawaii, U.S.A., having been filed with me on the 27th day of June, 1903 by A.B. Loebenstein, Attorney for the Trustees of the Queen's Hospital, in accordance with the provisions of an Act to facilitate the settlement of Boundaries, now therefore, having duly received and heard all the testimony offered in reference to the said boundaries, and having endeavored otherwise to obtain all information possible to enable me to arrive at a just decision, which will more fully appear by reference to the records of this matter by me kept in Book No. 5, D, page 597, and it appearing to my satisfaction that the true, lawful and equitable boundaries are as follows, viz.:

Beginning at the South angle of this land at a boulder Marked **1**, laying in the mouth of the **Waiulaula** gulch, the coordinates of this point being 21941.6 ft. South and 25528.5 ft. West referred to the "Puu Loa" survey station and 6346.4 ft. South, 329.6 ft. West referred to the Survey Reference Station "South Base", the boundary runs by the true meridian —

1. S. 82° 10' 40" E. 9434.0 ft. along the land of **Ouli**, Bdy. Cert. #63, the boundary following the meanders of the South divide of the **Waiulaula** gulch to a **+** on a large flat topped boulder just above beginning of divide; a large pyramid of stones on eminence by North bank of gulch "Paliuli", bearing [page 148] N. 23° 23' E. distant 280 ft.
2. N. 60° 51' 30" E. 4754.0 ft. along land of **Ouli**, to a large pyramid of stones on hill above two small gullies called Lauwai, the coordinates being 20910.4 ft. S. and 12029.9 ft. west referred to the Puu Loa Survey Station;
3. N. 53° 50' 42" E. 4662.0 ft. along the land of **Ouli**, Certificate 63 to a **+** under pyramid of stones on hill called "**Puu Aina Ko**" the coordinates being 18159.9 ft. South and 8265.6 ft. West referred to the **Puu Loa** Survey Station;
4. N. 65° 23' 30" E. 4747.0 ft. along Govt. Land of **Waimea**, Bdry. Cert. #4, to a **+** on boulder in **Luahine** gulch at foot of ridge;
5. N. 45° 16' 00" E. 10026.0 ft. along **Puukawaiwai**, an *ili* of **Waimea** and covered by boundary Cert. #4, the boundary following the meander of the middle of gulch to a **K** marked on boulder at upper edge of the main road crossing in gulch of the **Waimea** Kohala Govt. Road, the coordinates being 9126.0 ft. South and 3172.0 ft. East, referred to the **Puu Loa**

Survey Station;

6. N. 27° 40' 30" E. 10260.0 ft. along land of **Puukawaiwai** and **Waimea** bdry Cert. 4, the boundary following the meanders of the middle of the **Luahine** gulch to a K marked on bed rock between two small gullies that form the **Luahine** stream and gulch, the coordinates being 31.0 ft. South and 7941.0 ft. East referred to the **Puu Loa** Survey Station.
7. N. 47° 29' 30" E. 2660.0 ft. along land of **Waimea**, Cert. #4 to middle of a number of marked trees on brow of the hill called "**Eke**."
8. N. 47° 29' 30" E. 2669.0 ft. along **Waimea** Cert. #4, to point on East slope of Summit hill, called **Kaumukaleihoochie**;
9. N. 51° 10' 00" W. 1062.0 ft. along land of **Kawaihae 1st** to middle of a number of marked trees, on brow of Summit hill of the Kohala range, called **Kaumukaleihoochie**, also **Napoeaumimakahuliokalani**, the coordinates being 4236.0 ft. North and 11042.0 ft. East, referred to the **Puu Loa** Survey Station;
10. N. 51° 10' 00" W. 5408.0 ft. along Govt. land of **Kawaihae 1st** to middle of marked trees on ridge called **Kapaliowaiu** also **Kaulanaahu**;
11. S. 44° 17' 00" W. 3838.0 ft. along Government land of **Kawaihae 1st** to **K** + on boulder at head of the **Keawewai** stream where it leaves the swamp, and at the foot of bluff called [page 149] **Leinaokane**, the coordinates being 4881.0 ft. North, and 4150.0 ft. East referred to the **Puu Loa** Survey Station;
12. S. 46° 02' 00" 5118.0 ft. along the land of **Kawaihae 1st**, the boundary following the meanders of the middle of the **Keawewai** stream to a + marked on brink of the **Pilihoiki** falls which form the East angle of Land Commission Award 8513 to L. Lincoln;
13. S. 58° 56' 15" W. 899.0 ft. along L.C.A. 8513, L. Lincoln, the boundary following the middle of the **Keawewai** stream to a sharp angle in the same toward the North.
14. N. 72° 48' 36" W. 1747.0 ft. along L.C.A. 8513, L. Lincoln, to a cut in the rock at ledge over water fall under old road crossing, the coordinates being 1380.0 ft. North 1972.0 ft. West referred to the **Puu Loa** Survey Station.
15. S. 26° 07' 00" E. 1147.0 ft. along L.C.A. 8513, L. Lincoln to a + at angle in stone wall;
16. S. 60° 18' 00" W. 1837.0 ft. along L.C.A., L. Lincoln;
17. N. 38° 05' 00" W. 1470.0 ft. along L.C.A., L. Lincoln; to cut in stone by side of old ditch at upper edge of **Waimea** Kohala Government Road, the coordinates being 588.0 ft. North and 3988.0 ft. West referred to the **Puu Loa** Survey Station;
18. S. 50° 32' 00" W. 900.0 ft. along L.C.A., L. Lincoln;

19. S. 59° 06' 00" W. 1260.0 ft. along L.C.A., L. Lincoln;
20. S. 71° 30' 00" W. 809.0 ft. along L.C.A., L. Lincoln to a cut in the top of a large boulder by ditch and at angle of stone walls, this point marking the South angle of L.C.A. 8513, L. Lincoln, the coordinates being 888.0 ft. South and 6532.0 ft. West, referred to the **Puu Loa** Survey Station;
21. S. 60° 40' 30" W. 4186.0 ft. along land of **Kawaihae 1st**, to a large pyramid of stones on brow of hill called "**Makalii**," the coordinates being 2938.0 ft. South and 10181.0 ft. West referred to the **Puu Loa** Survey Station;
22. S. 33° 47' 00" W. 1810.0 ft. along **Kawaihae 1st** down slope of **Makalii** hill to bend in **Palihae** also called Paulama ravine the same being the South fork forming **Makahuna** gulch [page 150]
23. S. 51° 26' 00" W. 16214.0 ft. along **Kawaihae 1st**, the boundary following the middle of the said South fork to point of junction of the North and South forks of the **Makahuna** gulch and down middle of said gulch to large boulder in bed of same under bridge, the coordinates being 14551.0 ft. South and 23865.0 ft. West referred to the **Puu Loa** Survey Station and 1044.5 ft. North, 1343.9 ft. East referred to the Survey Ref. Station South Base;
24. S. 50° 01' 00" W. 917.0 ft. along **Kawaihae 1st** as before to junction of same with the gully from the South.
25. S. 69° 19' 00" W. 739.0 ft. along **Kawaihae 1st** as before to the **Kawaihae** road, the coordinates being 194.1 ft. North and 50.5 ft. West referred to the Survey Reference Station, South Base.
26. N. 62° 06' 00" W. 241.0 ft. along **Kawaihae 1st** as before to mouth of stream at high water mark;
27. S. 18° 48' 00" W. 1670.0 ft. the boundary following the shore line at high water mark to a + cut in the rock by the **Kawaihae – Puako** Govt. Road;
28. S. 06° 40' 45" W. 5107.0 ft. the boundary following the shore line at high water mark to point of beginning.

Containing an area of 10615 acres, more or less.

As surveyed by A.B. Loebenstein, September, 1903

It is therefore adjudged, and I do hereby certify and decide that the boundaries of said land of **Kawaihae 2d**, are, and hereafter shall be as hereinbefore set forth.

Given under my hand at Hilo, Island of Hawaii, the 31st day of December 1903

Frederick S. Lyman

Commissioner of Boundaries
Third and Fourth Judicial Circuits., T.H.

Ahupuaa of Waika

District of North Kohala, Island of Hawaii

Boundary Commission, Hawaii Volume A, No. 1:170-174

The *Ahupuaa* of ***Waika***, District of Kohala
Island of Hawaii, 3d J. C.

On this, the fifteenth day of April A.D. 1873, the Boundary Commission met at ***Puuhue***, North Kohala, Hawaii, 3d J.C. to hear the application of Allen and Chillingworth for the settlement of the boundary of ***Waika*** situated in North Kohala, Hawaii. Present: S.C. Wiltse, on part of Crown Commissioners, S.F. Chillingworth, on part of applicants. Mr. Chillingworth states that within the last two months they have received a copy of notes of survey from Mr. J.W. Austin's agent in Honolulu, and there has not been any notice served on the agent, of time of hearing for Mr. Austin, owner of ***Kahuanui***, but petitioners ask to be allowed to introduce their testimony as to boundaries of ***Waika***, as the witnesses are old men; which is granted, reserving Mr. Austin's agent the right to cross question these witnesses and to introduce their evidence to boundaries of lands adjoining ***Waika***, and documentary evidence as to boundaries.

Petition read as follows:

To the Honorable Rufus A. Lyman, Commissioner of Boundaries for the third Judicial Circuit to wit, the Island of Hawaii.

The Petition of Allen & Chillingworth of ***Kawaihae***, Hawaii, respectfully represents unto your honour, the commissioner, as follows:

That the aforesaid Allen & Chillingworth are possessed of a tract of land situated in North Kohala, in the island of Hawaii called the *Ahupuaa* of "***Waika***."

That the aforesaid land or *Ahupuaa* of ***Waika*** was awarded by the Commissioners to Quiet Land Titles, by name only, and not by survey, and that the boundaries of the same are as yet undefined.

That the following are the names of the lands adjoining the said land of ***Waika***, and the owners of the same as far as the same are known to your petitioner, to wit.

Lands	Owners
Kahua nui	J.W. Austin
Kawaihae Uka	Crown

That the boundaries of said land of **Waika** as claimed by your petitioner, are more fully set [page 170] forth in the accompanying survey, marked Exhibit.

That all and singular, the premises are within the jurisdiction of the Honorable Commissioner of Boundaries.

Therefore your petitioner respectfully prays that the boundaries of the said land of "**Waika**" may be decided and certified to by your honor, the Commissioner, and that a certificate defining the said boundaries may be issued to your petitioner, and to this end a day, hour, and place may be appointed, for the hearing of this petition, and the proofs there and then to be adduced, and that due notice according to law may be made to all persons interested on the said matter, to appear and show cause, if any they have, why the said petition should not be granted.

And your Petitioners will ever pray &c.

(Sig) Allen & Chillingworth

April 15th 1873.

Testimony

Puhi ^K. Sworn.

I live on **Waika**, Kohala, Hawaii and was born on said land at time of building Kiholo [ca. 1811] and have always lived there, am a kamaaina of the boundaries of the land. My parents, now dead, pointed them out to me. **Kahuanui** bounds **Waika** on the north side and **Kawaihae** on the South side, the sea on the *makai* side.

A rocky point, named **Oneloa**, is the boundary of **Waika** where **Kawaihae** joins it. I do not know about fishing rights. Saw Lyons survey above the Government road to **Waimea**. Leonui, Mooluna, my father and brother, *kamaaina* of **Waika**, and Kaulalii, the *kamaaina* of **Kahuanui** went clear around the land with him, when he surveyed. (They are all dead now). From Oneloa the boundary between these two lands runs *mauka* to a place called **Piipaa**; thence the line runs up the center of the gulch called **Kahawaiopili**, to a place called **Waipouli**, a water hole which is

sometimes dried up. It is above a hill called **Puupili**, said hill being half on **Waika** and half on **Kahua**. At **Waipouli** the boundary leaves the gulch and runs *mauka* to the north side [page 171] of **Puupala**, have been told that **Waika** keeps on to a large *ohia* tree, at a place called **Papalepo**, and have always been told that **Kawaihae** cut **Waika** off and joined **Kahuanui**, but do not know where. I have never been beyond **Puupala**, a low hill which from some sides looks long and from others sharp. Have heard that **Kawaihae** joins **Awini** above **Honokane**. **Kaiopae** is the boundary at shore, between **Kahuanui** and **Waika**.

Kaiopae is the place where the **Kahawai o Pili** empties into the sea; **Kahuanui** being on the North side and **Waika** on the south side; from thence the boundary between these two lands runs *mauka* to **Waikapu**, following close to the sides or bank of gulch. **Waikapu** is a water hole in the gulch; Thence to **Moolau** a pile of stones, *makai* of a bullock pen at **Kahuanui**; thence up the *iwi aina* up **Puupili** to a depression at the top of the hill. I do not know where the boundary between **Kahuanui** and **Waika** runs to beyond **Puupili**.

C.X.d.

I have heard **Puuomano** is at **Awini**.
(Naiapakai ^K says this hill is on **Honokane**)

Kaohia ^K Sworn

I now live and always have lived at **Waika**, Kohala, Hawaii; was born before the Okuu [prior to 1804]; a foreigner called Kanikili lived on **Waika** in the time of Kamehameha I, after he went away Olohana took it. **Waika** is an *ili* of Kahua. Keaumoku gave it to Kanikili. **Kawaihae** bounds **Waika** on the south side from sea to *mauka* corner, and **Kahuanui** on the North side from shore, *mauka*. The sea is the *makai* boundary, and the land had an ancient fishing right extending out to sea. **Oneloa** is the boundary between **Kawaihae** and **Waika**; thence up a small *awaawa* to a point *makai* of **Maaukaa**, to a pile of stones where the boundary line between these two lands runs into the gulch. **Waikaa** being on the north side of **Piipaa**, and **Kawaihae** on the South side; thence up the gulch passing **Puupili** to end of the gulch, thence to **Waihoolana**, a water hole where **Kawaihae** cuts off **Waika** and **Kahuanui**. **Waipouli** is above the hill, *mauka* of the Catholic Church and **Waihoolana** is

above **Puupili**, the hill on the boundary [page 172] between **Kahuanui** and **Waika**. **Kawaihae** cuts off **Waika** and **Kahuanui** at the water ponds. **Waihoolana** is near **Puupala**. The level land belongs to **Waika** and where the hill begins is **Kawaihae**. **Kahoakala**, where the *mamake* patches used to be is where **Kahuanui** and **Waika** are cut off by **Kawaihae**.

The line between **Kahuanui** and **Waika** runs over **Puupili**; from **Pohokala**, going towards the sea, to a gulch called **Kahawaipalapalai**; thence follow the gulch to a place called **Hookeke**; there leave the gulch and coming up the north side, the boundary leaves the gulch and running into another small gulch, follows said gulch to Government road called in old times, **Kukawai**, but now named **Ke Ahoo Kake**; thence follow down to the bullock pen; thence the boundary leaves the gulch and comes to where Macy's store used to be; thence down to a place called **Moolau**, a pile of stones; thence to **Kalehua**, and down the gully; at **Kalehua**, there leave gulch and runs to pile of stones, **Kaapakea**. Thence the boundary runs to another pile of stones; **Kahimoeanonahaa** on the South side of said pile; thence to another pile of stones; thence to another pile; thence to another pile; and from thence to a pile of stones on the shore; a large flat rock at Kaiopai. I think is marked **W**.

Kaulalii the *kamaaina* of **Kahuanui** and Mooluna and Leonui, the **Waika** *kamaainas* who were with Lyons when he surveyed **Waika** went down from **Puupili** to shore between **Waika** and **Kahua**, and came up between **Waika** and **Kawaihae**, Mooluna was Puhī's father and Leonui was his brother. These *kamaaina* are all dead. In old times the people used to fight over cultivating grounds, and so we used to keep the run of the boundaries of our lands.

C.X.d.

Note: Plan and notes of survey made by C.J. Lyons filed.

Commission adjourned to Mana, Friday,
April 18th, 1873

R.A. Lyman
Boundary Commissioner, 3rd J.C. [page 173]

Mana, April 18th, 1873

Kahaawi^K. Sworn.

I was born at **Waimea** at time of the death of Kekua-okalani [1819] now live at **Kawaihae**, South Kohala, Hawaii; Have lived there twenty seven years and am a *kamaaina* of **Kawaihae**; know a little about the boundaries of **Waika**; used to be *Konohiki* of **Kawaihae**, and know a place called **Waipouli** in **kahawai o Pili**; this side of **Puupili**; It is on the boundary of **Waika** and **Kawaihae**; thence from this point the boundary runs over, and above of **Puupala**. **Kawaihae** cuts off **Waika** at a place called **Kawaihoolana**, a swamp with trees growing in it. I do not know a place called **Kapoakala**. My brother, Paaluhi, now dead, showed me the boundaries. Ehu, his father, also dead, showed them to him. This is all I know about *mauka* boundaries of **Waika**.

C.X.d.

My brother showed me the boundaries when we went to catch *mamo* and *oo*.

Case continued till further notice to all parties concerned.

R.A. Lyman
Boundary Commissioner, 3d J.C.

Puuhue, North Kohala, June 15th, 1874.
Present: G.F. Holmes, for applicant and Jas. Woods

Decision

The boundaries of **Waika** are decided to be as given in the notes of survey, from shore to the top of **Puupili**, and then the land extends to near **Puupala**, as given in the evidence of Kaohia and Kalua Lukela. Notes of survey to be filed previous to Certificate of Boundaries being issued.

R.A. Lyman
Boundary Commissioner, 3d J.C... [page 174]

Ahupuaa of Waika
Boundary Commission, Hawaii Volume D, No. 5:578-581

Waika
North Kohala

The Boundary Commission met in the Court House, at Kapaau, North Kohala, at 9 a.m. December 19, 1903, according to Notices published in the Hilo Tribune

and *Ku Okoa*, for a hearing November 14, and a continuance to November 21, and to December 19, and Notices of the hearing and continuances, having been sent by mail, by the Commissioner of Boundaries, to each owner of the adjoining lands; viz.: The Commissioner of Public Lands, for ***Kawaihae*** 1st, Estate of B.P. Bishop for ***Honokane-nui***; and the Estate of J.W. Austin for ***Kahuanui***.

There being present: J.F. Woods, applicant; A.B. Loebenstein, Attorney for applicant, and for the B.P. Bishop Estate.

J.W. Pratt, Commissioner of Public Lands, L.P. Weaver, Attorney for Public Lands, H.L. Holstein, and others.

The application for settlement of the Boundaries of this land filed August 27, 1903, read in Court, and Notice of hearing published in due form, also presents a map, and description of the land of ***Waika***, as surveyed by A.B. Loebenstein, September, 1903, being "Lahilahi," R.P. No. 1668 by name, L. C. Award 8520 B.

Also Stipulation signed by S.M. Damon for Estate of J.W. Austin, and Jas. F. Woods, the owner of ***Waika***.

Also Stipulation of Land Commissioner E.S. Boyd, November 23, 1903, consenting to settlement of the boundaries as set forth in the application.

Also asks to have the testimony taken before R.A. Lyman, former Boundary [page 578] Commissioner, June 15, 1874, on Record in Book A, page 170 be a part of the Record in this case.

Hilo, Hawaii, August 27, 1903

F.S. Lyman
Commissioner of Boundaries 3d & 4th
Circuit, Territory of Hawaii

[illegible] ...the owners of the *ahupuaa*
[illegible — of ***Waika*** in] the District of North Kohala,

[illegible — Island of Hawaii] I have the honor, to request
[illegible] day for the hearing of testimony and the issuance of a Certificate of boundaries of this land. In compliance with the statute, I have hereunto annexed a schedule of adjacent lands with their respective owners.

Very Respectfully yours,
A.B. Loebenstein
Atty for J.F. Woods, owner
land **Waika**

[illegible — Owners of Adja-] cent lands

[illegible — **Kawaihae** 1st], Territory of Hawaii.
Honokanenui, Estate B.P. Bishop.
Kahuanui, Estate J.W. Austin.

(Stipulation)
Before the Boundary Commissioner,
Third Circuit, Territory [illegible — of Hawaii]
F.S. Lyman, Esq.

In the matter of the Boundaries of the Land of
Waika
North Kohala, Hawaii

Return of Territory of Hawaii.

Now comes E.S. Boyd, Land Commissioner of the Territory of Hawaii, in answer to the application herein says;

That the boundaries as set forth
in the application herein are correct as [page 579]
to any land adjoining the *Ahupuaa*
of **Kawaihae 1st** and he hereby consents
to a settlement of said boundaries, as
set forth in the application.

Honolulu, T. H. Nov. 23rd, 1903.

E.S. Boyd
Land Commissioner

(Stipulation)
Before F.S. Lyman
Commissioner of Boundaries for the
Third and Fourth Circuits,
Territory of Hawaii

In the matter of the application by
J.F. Woods (owner of the land) for settlement of the boundaries of the land of

Waika, District of North Kohala, Island of Hawaii.

We, the undersigned, the Estate of James W. Austin, the owners of the land of **Kahuanui**, and the said J.F. Woods hereby stipulate and agree that the survey (as altered in ink) of the boundary of the said land of **Waika**, made by A.B. Loebenstein, surveyor, dated September 1903, and set out in the schedule hereto annexed signed by Arthur C. Alexander, surveyor, and made part of this stipulation, shall be accepted, and taken as the boundary between the said lands of **Waika** and **Kahuanui** and entered of record of such boundaries dated, December 15th 1903.

The Estate of James W. Austin,
By their Atty in fact,
S.M. Damon

Jas. F. Woods, Owner
of the Land of
Waika [page 580]

(Evidence)
A.B. Loebenstein, Sworn. I made this survey of **Waika**, between February and July of this year; had kamaainas point out bounds where available, the points being clear; also a survey by Curtis J. Lyons in 1852, finding most of the artificial monuments erected by him at that time, on N. by **Kahuanui**.

Award Pat. by name to Kamamalu,
East by **Honokane nui**, Bound. Cert.
No. 173, South by **Kawaihae 1st**, owned
by Ter. Hawaii, found no disputed
point in bounds.

The tracing Map showed the bounds as surveyed by me, given in this description.
C.X 'd.

No one appearing to contest application,
and all present consenting thereto, the
case is closed, decision to be given later.

Decision
I do hereby decide that the Boundaries
of the Land of **Waika**, District of Kohala,
Island of Hawaii, T.H., are, and here-

after shall be as described in the Survey
on file, made by A.B. Loebenstein,
September, 1903.

Certificate of Boundaries to be issued
on payment of costs and expenses of the
Commission of Boundaries

December 22, 1903
Frederick S. Lyman
Com. of Bounda's.
Fourth Judicial Circuit
T.H... [page 581]

Ahupuaa of Waika
Boundary Commission, Hawaii, Volume C, No. 4:135-137

No. 183

Certificate of Boundaries of the Land of
Waika, District of Kohala, Island of Hawaii.

Lahilahi, R.P. 1668 (by name); L.C.Award 8520 B

Commission of Boundaries
Third Judicial Circuit, Territory of Hawaii, U.S.A.
Fredrick S. Lyman, Commissioner.

In the matter of the Boundaries
of the Land of ***Waika***,
District of Kohala,
Island of Hawaii

Judgment.

An application to decide and certify the Boundaries of
the Land of ***Waika***, District of Kohala, Island of Hawaii,
having been filed with me on the 27th day of August 1903,
by A.B. Loebenstein, as Attorney for J.F. Woods, the owner of
said land, in accordance with the provisions of an Act to facil-
itate the settlement of Boundaries, now, therefore, having
duly received and heard all the testimony offered in reference
to the said boundaries and having endeavoured otherwise to
obtain all information possible to enable me to arrive at
a just decision, which will more fully appear by reference
to the records of this matter by me kept in Book No. 5, D,
pages 578 ____ and it appearing to my satisfaction that the
true, lawful and equitable boundaries, are as follows; viz.:

Beginning at the South angle of Ha's land, adjoining the
land of ***Kawaihae 1st***, by the sea shore at high water mark
of the point called "***Oneloa***," the coordinates of same being
South 22803.7 ft. W. 16736.5 ft. referred to the Survey Reference
Station "***Puu Aiea***," the boundary runs by the true meridian:

1. N. 49° 25' E. 2410.0 ft. along **Kawaihae 1st** to a + under mound of stones by ancient roadway;
2. N. 46° 22' E. 6151.00 ft. same as above, the coordinates being S. 16991.3 W. 10454.1 ft., referred to the Survey Ref. Sta. **Puu Aiea**;
3. N. 54° 25' E. 2713.0 ft. along **Kawaihae 1st** to + under mound of stones by small *heiau*;
4. N. 65° 27' E. 2757.0 ft. along **Kawaihae 1st** to + under mound of stones on ledge overhanging the [page 135] "**Keanahalululu**" gulch immediately over the two great cubical boulders, the coordinates being S. 14266.9 W. 5737.7 ft., referred to the Survey Ref. Sta. **Puu Aiea**;
5. N. 64° 16' E. 14547.0 ft. along **Kawaihae 1st**, the boundary following the meanders of the middle of the **Keanahalululu** gulch to ledge over falls at lower edge of the Waimea Kohala Gov't. road the coordinates being S. 7951.0 E. 7364.1 ft. referred to the Survey Ref. Sta. **Puu Aiea**;
6. N. 64° 19' E. 5013.0 ft. along **Kawaihae 1st**, the boundary following the meanders of the middle of **Keanahalululu** stream to an **X** cut in flat boulder on the South bank of the stream by pool and falls called "**Waipouli**," the coordinates being S. 5822.6 E. 11881.1 ft., referred to the Survey Ref. Sta. **Puu Aiea**;
7. N. 88° 12' E. 3121.0 ft. along **Kawaihae 1st** to a cut in post, from which the Gov't. Survey Station **Puu Pili** bears N. 51° 42' W., distant 3292.5 ft.;
8. N. 72° 09' 40" E. 7764.0 ft. along **Kawaihae 1st** to the common angle of the lands of **Kawaihae 1st**, **Waika** and **Honokanenui**, Bdy. Cert. # 172, the said point being on the West edge of a deep gulch, emptying into the **Honokane** canyon, the general name of the locality being "**Waihoolana**," a large cut into the top of a rock mound or knoll bearing S. 31° 59' E. distant 131.2 ft.; said and top of knoll bearing S. 64° 46' 45" E. from the **Hinamakanui** Ref. Sta. and N. 39° 23' 52" E. from the **Puu Pili** Survey Sta.
9. N. 65° 40' W. 4592.0 ft. along **Honokane** Bdy. Cert. #172, to a + on a stone set in the ground on the South peak of the **Hinamakahina** [Hinamakanui] crater, this point being the common angle of the lands of **Honokane**, **Waika** and **Ka-Huanui**, the coordinates being S. 1454.3 - E. 18206.4 ft., referred to the Survey Ref. Sta. **Puu Aiea**;
10. S. 72° 10' 30" W. 5514.0 ft. along the land of **Kahuanui** to the **Puu Pili** Station;
11. S. 26° 55' W. 1600.0 ft. down slope of **Puu Pili** to a + on stone at post of same in the **Palapalai** ravine;
12. S. 78° 41' W. 1097.0 ft. along **Kahuanui**, the bdy. following the middle

of said ravine [page 136]

13. N. 85° 26' W. 3706.0 ft. along **Kahuanui**, to an + on stone, the coordinates being S. 4487.4 - E. 7471.1 ft., referred to the **Puu Aiea** Ref. and Survey Station; the boundary following the bottom of said **Palapalai** ravine;
14. S. 87° 00' W. 534.0 ft. along **Kahuanui**;
15. S. 88° 38' W. 1675.0 ft. along **Kahuanui** to a **K** and + with "**Waika**" cut in the rock, under mound of stones by upper edge of the Waimea Kohala Gov't. road, the coordinates being S. 4555.2 - E. 5264.1 ft., referred to the Survey and Ref. Sta. **Puu Aiea**;
16. S. 59° 14' 15" W. 1298.0 ft. along **Kahuanui** to a + on boulder by South angle old stone enclosure;
17. S. 78° 47' W. 1311.0 ft. along **Kahuanui** to a **5** cut in rock at a prominent point called "**Kalehua**," the coordinates being S. 5474.4 E. 2862.8 ft., referred to the **Puu Aiea** Survey and Ref. Station;
18. S. 63° 30' W. 7588.0 ft. along **Kahuanui** to a + and >I under mound of stones on peak called "**Keahuokapaakea luka**".
19. S. 41° 46' 22" W. 1467.0 ft. along **Kahuanui** to a + and **K** under mound of stones on peak called "**Keahuakapaakea Kai**," the coordinates being S. 9953.0 - W. 4902.0 ft. referred to the Puu Aiea Survey and Ref. Station;
20. S. 48° 54' 30" west 5745.0 ft. to a round drill hole in boulder on low knoll called "**Ahuawaha**," the coordinates being south 13729.2 W. 9232.1 ft., referred to the **Puu Aiea** Survey and Ref. Station;
21. S. 49° 20' W. 9503.0 ft. along **Kahuanui** to a + cut in ancient roadway midway between two mounds of stones on low hill near north edge of **Kaiopae** Gulch;
22. S. 56° 24' W. 1658.0 ft. along **Kahuanui**, to a large boulder at mouth of **Kaiopae** gulch, thence to sea shore at high water mark and along line of said sea shore in all its windings at high water mark to point of beginning, the direct bearing and distance being
23. S. 28° 56' E. 2244.0 ft. to said point of beginning.

Containing an area of 2790 acres, as surveyed by A.B. Loebenstein, September, 1903

It is therefore adjudged, and I do hereby decide and certify that the Boundaries of the said land of **Waika** are, and hereafter shall be as hereinbefore set forth.

Given under my hand at Hilo, Island of Hawaii, the 26th day of December, A.D. 1903.

Fredrick S. Lyman
Commissioner of Boundaries, Third & Fourth Jud. Circ., T. H. [page 137]

The Kalana of Waimea, and Ili Lands

Taking in Portions of the Kohala Mountain Watershed

Testimony and surveys for the *'ili* of Pu'ukapu, being a part of the larger land division of **Waimea**—and also holdings of the Crown—were collected as a part of the proceedings for **Waimea** and neighboring lands. Regarding the status of **Waimea** and lands that were either subordinate or independent to it, Curtis Lyons, a Kingdom Surveyor, who had surveyed lands in the region in 1852, wrote to Crown Lands Commissioner C.P. Iaukea in 1893. He observed:

... **Waimea**, Hawaii, was an *Ahupuaa* which partook largely of the qualities of a *Moku* or division that was however assigned as an *Ahupuaa* in the *Mahele*. That is to say to His Majesty K. III., becoming by the Act of 1865, a Crown Land. It would therefore be assumed that all within its boundaries would be Crown Land excepting such *Ilis* or subordinate *ahupuaas* as some might call them as were recognized within the *Mahele* or in the Land Commission Records, as separate in title; this distinction in title corresponding to the status known as that of an *ili kupo*. All not so recognized would be technically spoken of as a part of the *Ahupuaa*.

The *Ili Kupo* of **Puukapu** was given up in the *Mahele* by Kekauonohi and became Crown Land, thus being practically thereafter one with the *Ahupuaa*.

The other *Ili Kupo* are as follows:

Waikoloa, *Mahele* and Award 8512 B to G.D. Hueu.

Waiaka 2 *Mahele* and Award 8520 B to Iahilahi.

Ouli *Mahele* and Award 8518 B to Kanehoa.

Anaehoomalu *Mahele* and Award 4452 to H. Kalama.

Kalahuihua *Mahele* and Award 4452 to H. Kalama

Puako *Mahele* and Award 8559 B to Lunalilo

Kaupo *Mahele* and Award 8515 to Kaoanaeha... [HSA – DAGS 6 Box 22; Nov. 1893]

In the records that follow, are selected native testimonies and notes of survey for the *ahupua'a* of **Waimea** and *'ili*, taking in the Kohala Mountain lands, which include portions of the earlier Kohala Forest Reserve and the newer Pu'u o 'Umi Natural Area Reserve.

Ouli Ili, Waimea Ahupuaa

District of South Kohala, Island of Hawaii

Boundary Commission, Hawaii, Volume A, No. 1:452

Petitions

Ouli, South Kohala

Waimea, South Kohala,

Hawaii, August 18th 1873

To the Honorable Rufus A. Lyman
Commissioner of Boundaries for the
Island of Hawaii, Hawaiian Islands

The undersigned respectfully
represents, that he is the owner of that
Ahp. of the land named **Ouli**, situated
in this district, South Kohala, Hawaii,
Hawaiian Islands aforesaid, formerly
granted in the fee simple by its ancient
boundaries to His Late Highness, John
Young, from the Heirs of whom the

undersigned applicant inherited the same to wit—

The *Ahupuaa* of **Ouli** according to the annexed Ancient Boundaries is bounded upon the *mauka* side by **Lanikapu** [**Lanikepu**], a Government land, and upon the *makai* side by a Crown Land named Momouloa. The *Ahupuaa* of **Waimea** cuts both of the above named lands off, and runs side by side with **Ouli** to the sea. Said *Ahupuaa* of **Waimea** is a Crown Land, the great part of which is leased to Dr. McKibbin of Honolulu. There are one or more kuleanas on **Lanikapu**.

The *Ahupuaa* of **Ouli**, being granted by its ancient boundaries only. Therefore the Petitioner respectfully requests that the said boundaries may be legally defined and settled by Your Honorable Commission and to that end makes this application, to have the same decided and certified by you as Commissioner of Boundaries as aforesaid, Pursuant to the requirements of the Statute.

Very Respectfully,
(Sig) Francis Spencer. [page 452]

***Ouli, an Ili Aina of Waimea Ahupuaa
Boundary Commission, Hawaii Volume B:64-67***

Ouli an Ili Aina of Waimea in the District
Of South Kohala, Island of Hawaii 3d J.C.

On this, the 14th day of November A.D. 1873 the Commission of Boundaries for the Island of Hawaii, 3d J.C. met at the Court House in **Waimea**, South Kohala, according to notice by publication in the Hawaiian Gazette of _____ and *Kuokoa* of _____ 1873. On the application of F. Spencer for the settlement of the boundaries of **Ouli**, South Kohala, Island of Hawaii. Due notice personally served on owners or Agents of adjoining lands as far as known.

Present: F. Spencer, applicant and
G.W.D. Halemanu on the part of the Crown
and Queen Emma.

For Petition see Folio 452, Book A.

Testimony

Pupuka^k. Sworn.

I was born on **Ouli**, and was quite large at the building of Kiholo [1811], but do not know the date of my birth. I have lived on **Ouli** and adjoining lands. I know all the boundaries of said land, used to *mahiai* [farm] on the *makai* portion of it. **Ouli** is bounded *makai* by the sea, and has ancient fishing rights. It is bounded on the Kona side by **Waimea**.

The boundary at sea shore is **Kaihumoku**, a point of stones in the sea, or the middle of the sand beach, thence direct to **Ahua-haloo**, the boundary following an old trail to the place, thence to **Kulanapahu**, thence to **Kaaweuweu**, where the boundary runs into a gulch called **Waiulaula**. (at the shore there is an *ahu* [cairn – altar] in the gulch)

Thence along the gulch to **Puuike** [**Pu'uiki**] close to the side of the Government road from **Waimea** to **Kawaihae**, from thence to **Liloapoho**, a *punawai* [spring] in the gulch, thence to **Paipai** the *makai* corner of Ohia, formerly Ku's land, and now owned by John Parker, Patent from No. _____, thence along **Ohia** to **Kawa-luna** at the road to North Kohala. [page 64]

Thence along Makaluhi's Land Patent No. _____ to **Haumea**, a hill; thence along Kiai's *kula* land, now owned by Lindsay, No. 1070, along this land to **Ainapu**, a hill by the boundary. Kahekalua's land No. 1070 ends near this place. There is a small remnant of the land of **Lanikapu** [**Lanikepu**] near the road to **Kawaihae**. From the *mauka* corner of Kahekalua's land the boundary runs along **Lanikapu**; thence to **Ohia o Keawe**, a resting place on the road, which we used to go up and catch birds; thence up to **Lua Meki Halukuwailani**, a deep hole with some small ones near to it; thence to the gulch **Kea-nuiomanu** [**Keanu'i'omanō**] where **Ouli** is cut off by the land of **Puukapu**. There is a deep water hole and ancient crossing at the corner of **Momoualoe** and **Ouli** and boundary of **Puukapu**, this point is marked **X**. Thence the boundary between **Ouli** and **Momoualoe** runs *makai* to **Kinoiki**, thence to **Kekualoe** a cultivating ground, belonging to **Ouli**, thence to **Kekuaninau**; between **Kekualoe** and **Kekuaninau** the boundary runs in the gulch, thence leaving said gulch the boundary runs to **Keahupuaa**, a pile of stones, passing around the base of a large hill

called **Kamoa** (said hill is on the *mauka* side of the road to Kohala); thence to **Hookeke**, a *koele* [agricultural field worked for the chief], thence to a gulch on the Kohala side of **Puuiki**, to a place called **Keahukauina** on the road to **Kawaihae**. *Mauka* of **Puuiki**, **Momoualoe** ceases to join **Ouli**; and **Pauahi** joins to **Keahukauina**. Thence along the land of **Kapia**, an *ili* of **Waimea** to a hill called **Kuanuanu** (**Keahukauina** is a resting place in the road). Thence along the land of **Napukawaiwai** (an *ili* of **Waimea**) to **Palinui**, a resting place and hill on the Kona side of **Kawaihae** road. Thence along the land of **Kawaihae** to **Owahuahoalii**, an ancient pile of stones; thence to gulch, thence along the gulch to **Waiulaula** at the shore. My parents (now dead) showed me the boundaries. I went with the surveyor last month, built piles of stones and marked X on them, on the boundaries as I pointed them out. Kalua^K a *kama-aina* of said lands, also went with us.

CX.d.

The boundary between **Ouli** and **Puukapu** [page 65] is the gulch **Keanui o Manu**. I know the boundaries of **Puukapu**, where I used to go after birds.

Kalua^K. Sworn.

I was born in **Waimea** South Kohala Hawaii at the time of the plague [1804], and have lived in **Waimea** and **Kapia**, a land near **Ouli**.

I am a *kamaaina* and know the boundaries of **Ouli**. Kauhine^K a *konohiki* (now dead) showed them to me. The sea bounds it *makai* and the land has ancient fishing rights. Bounded on the Kona side by **Waimea**. (The land **Ouli** is an *ili* of **Waimea**).

Commencing at the sea shore at a place called **Kaihumoku** thence direct *mauka* to **Ahualoo**, thence to **Kulanapahu**, thence to **Kaaweueu**, a place where the trail from shore crosses a gulch; thence up the gulch to **Puuike**, a place by the road from **Waimea** to **Kawaihae**, thence along the gulch to **Waiaohua**, a pool of water in the gulch; thence to **Liloapoho**, thence across the road in the gulch to **Paipai**, where **Lanikapu** joins **Ouli**; thence along land sold on **Lanikapu** to **Kumukawau**, the *mauka* corner of my land, thence along the Government land to **Ohia o Keawe**; Thence to **Luameki Haluku-Wailani**; thence to gulch **Keanuiomano**

where **Ouli** is cut off by **Puukapu**, there is a *pahoehoe* rock in the gulch marked **X**; thence along the gulch towards Kohala, to an ancient crossing place marked **X** thence to **Kini** a hill running along on the land **Moumoualoe** thence to **Kekualoe**, and from thence down the gulch to **Kekuaninau**; there the boundary leaves the gulch and runs along on the south side of said gulch. Thence around the west base of a hill, called **Kamoa** to a rock marked **X** called **Keahupuaa**. Thence to **Hokeke** thence to **Pauahi** gulch. Thence along **Kawaihae** road and land of **Pauahi** to **Keahu Kauina**; thence along the land of **Kapia** and **Panaulukia**, to **Palinui**. Thence along the *ili aina* of **Kapukawaiwai** to **Kaopapa**, a resting place *mauka* of **Puuainako**. Thence to **Puuainako**; thence along the land of **Kawaihae** to **Oahuakahohalii**; thence direct down to the gulch called [page 66] **Waiulaula**, thence down said gulch to **Kalepeamo**, where it is marked by the seashore. I went with the surveyor Mr. Brown, and pointed out the boundaries to him. Pupuka, Samuela, Kalalaluhi and Kanealii and others went with us. The boundaries I testify to today are the ones that were told to me by former *Konohiki* and are the same as I pointed out to the surveyor.

C.X.d.

Kauhine was a *kamaaina*, and I learned from him the boundaries of the *makai* portion of **Ouli**. The upper portion I heard from bird catchers. I went with Kamau and Kanehailua, and lived with them two months catching birds and they told me the *mauka* boundaries.

Moaluhi, ^k, Sworn.

I was born at **Puukapu**, at the same time of Kamehameha III [ca. 1813]; and have always lived in **Waimea**. Am a *kamaaina* of **Puukapu**. Naihe, a cousin of my mothers, who was a bird catcher told me the boundaries.

Puukapu cuts off all lands to **Kawaihae**, but I have not heard the points where the different lands are cut off.

The *mamo* and *olona* grounds belonged to **Puukapu**. **Ouli** as surveyed does not come into **Puukapu**. I have heard where it has been surveyed from the two last witnesses.

C.X.d.

2. South 53° 30' west 5000 feet to **Paliuli**;
3. Thence down the **Waiulaula** gulch along **Kawaihae** to mouth of said gulch bearing South 70° 00' West from initial point, and distant thence 17,500 feet;
4. Thence along the sea shore at high water mark to **Kaihumoku** the direct course and distance being; South 2° 30' East 8500 feet;
5. North 53° 00' East 5800 feet along **Lalamilo** or **Ahupuaa** of **Waimea** to **Ahuahalo**;
6. North 63° 30' East 2900 feet along the same;
7. North 63° 45' East 6040 feet along the same
8. North 61° 30' East 6417 feet along the same;
9. South 77° 00' East 1084 feet into bed of gulch;
10. North 65° 00' East 705 feet still along the **Ahupuaa** of **Waimea** and the middle of gulch;
11. North 33° 45' East 2777 feet along middle of gulch;
12. North 76° 30' East 3750 feet along middle of gulch;
13. North 75° 30' East 3635 feet along middle of gulch;
14. North 48° 30' East 1079 feet along middle of gulch;
15. North 47° 00' East 2584 feet along middle of gulch;
16. North 73° 45' East 5060 feet along the middle of gulch to the South corner of Royal Patent No. 1283 (Grant) at the old road;
17. North 2° 30' East 935 feet along Royal Patent 1283; [page 121]
18. North 9° 30' East 1330 feet along Royal Patent 1283;
19. North 1° 30' East 2800 feet along Royal Patent 1282 (to Makaluhi);
20. North 27° 00' East 300 feet along **Lanikepu** to *puu Pali o Haumea*;
21. North 13° 00' west 2460 feet along Kiai's land, Land Commission Award 4207 and Royal Patent (Grant) 1070;
22. North 14° 00' East 750 feet along the same to an *ohia* tree at its West angle;
23. Due North 7500 feet along Government land in **Lanikepu** to the Keanuio mano Gulch;
24. About Due West 1200 feet along said gulch and line of **Puukapu**;
25. South 6° 30' East 9000 feet along Momonaloa [**Momoualoo**] to where the gulch takes a sudden turn above hill at rock marked **X**;

26. South 26° 30' East 975 feet around hill;
27. South 7° 30' East 500 feet around hill;
28. South 25° 00' West 245 feet around hill;
29. South 56° 00' West 500 feet around hill;
30. North 49° 15' West 150 feet around hill;
31. South 6° 00' West 260 feet around hill;
32. South 54° 30' West 214 feet around hill;
33. South 7° 00' West 635 feet to *mauka* side of Kohala road;
34. South 3° 30' West 258 feet along ***Momoualoe***;
35. South 10° 15' West 2070 feet along [page 122] ***Momoualoe*** to large rock;
36. South 3° 15' West 2150 feet to pile rocks;
37. North 85° 45' West 1050 feet along ***Momoualoe***;
38. South 47° 30' West 3850 feet along ***Pauahi***;
39. South 68° 30' West 1400 feet along ***Kapia***;
40. South 86° 45' West 4311119 feet along ***Kapia*** & ***Puu Kawaiwai***;
41. South 81° 15' West 4560 feet along ***Puu Kawaiwai***;
42. South 75° 30' West 2750 feet along ***Puu Kawaiwai***;
43. South 83° 00' West 2548 feet to top of ***Puuainako***, the point of commencement.

Containing an Area of 3632 Acres.

R.A. Lyman
Commissioner of Boundaries, 3d J.C.

Surveyed by J.F. Brown... [page 123]

Puukapu, Ili Aina of Waimea

District of South Kohala, Island of Hawaii

Boundary Commission, Hawaii, Volume A, No. 1:238-240

[See letter of J.O. Dominis to R.A Lyman, dated July 7, 1873]

August 16th A.D. 1873
Honorable R.A. Lyman
Boundary Commissioner
for Island of Hawaii, Haw. Is.

The undersigned would herewith make application for the settlement of the boundaries of the following named *Ahupuaa* or Lands belonging to the Crown, viz...: [page 238]

...***Waimea*** in the District of Kohala
adjoining lands unknown.
Puukapu in the District of Kohala

adjoining lands unknown... [239].

Your Honor will therefore please appoint
a day for the hearing of the evidence
in the foregoing named lands and having
decided upon the same to grant a certificate
to that effect to the undersigned.

(Signed) Jno. O. Dominis, Crown Land Agent,

Hilo Hawaii. August 16th A.D. 1873

by F.H. Harris. Atty. at law. [page 240]

Waikoloa nui, Ili of Waimea

***District of South Kohala, Island of Hawaii,
Boundary Commission, Hawaii, Volume A, No. 1:6-12***

(No. 2)

Rex vs. George Davis

Boundary Dispute

Waikoloa nui Ili of Waimea – Hawaii.

Testimony taken August 8th and 9th 1865 at ***Waimea***, Hawaii.

Davis' Witnesses:

1. Mi ***1st***
2. Ehu
3. Kuehu
4. Kalua
5. Moolau
6. Kuahine
7. Wahahee

Rex Witnesses:

1. Kaolulu [Kaolulo]
2. Kuupele [Kupele]
3. Kanakaole
4. Moluhi
5. Kanehailua
6. Kahakauwila
7. Kualehelehe

George Davis claims that ***Waikoloa***, as he had heard, begins at Puaapilau, thence down the road from Hamakua to ***Waimea***, to ***Puu Okikona***, thence to ***Paakai nui***, thence to ***Ouli***, the land of Keoniana, and along the boundary of ***Ouli*** to the sea shore at Kaihumoku; thence along the shore to Lalamilo; thence to Keaha [Keahaaha]; thence to Keakolono [***Keahuolono***], on the boundary of Kona; then along the boundary of Kona to ***Kaohe***, then along the boundary of Kaohe to ***Kemoli*** [Kemole], thence to ***Kupaha***.

Ehu – sworn. I am *kamaaina* of ***Puukapu***. I was born in ***Waimea***. I know the boundary from my own and my father's knowledge.

Commence at ***Puaapilau***, thence to ***Napamakani***, thence to ***Paakainui***, thence to ***Kapuulepo***, thence to ***Kapalihalapepe***, thence to ***Puuainako***, thence to ***Kalalakoa***.

I knew Kahanapilo w. wife of George Davis, she was not *konohiki* of the ilis on ***Waikoloa***, nor of ***Waimea***. I was in Kona when she died.

I am *kamaaina* of ***Puukapu*** only – Kainea was the *Konohiki* when I lived there. There was no *pili* grass on that land; my father was not a bird catcher, he used to *mahiai* [farm]. ***Waikoloa*** was the land that had the birds; the boundary as stated is the boundary from the time of Kamehameha first.

Cross – Kainea was *Konohiki* in the time of Kalaimoku – Kainea is dead. **Waikoloa** is an *Ahupuaa* of **Waimea**, which is a *Kalana*, with eight divisions. I only know about **Waikoloa**. I have been on to **Pukalani**, **Nohoaina** and **Paulama**; they join **Waikoloa**, but do not run far out. **Pukalani** joins **Puukapu**. **Nohoaina** joins **Pukalani**, and Paulama joins **Waikoloa**. **Puukapu** is a division of **Waimea**. **Pukalani** belonged to Kamehameha and he gave it to his man Kekoikumoku. **Nohoaina** belonged to the chiefs of **Waimea**, Kupapaulu. **Paulama** belonged to Kupapaulu. **Puukapu** belonged to Kalaimoku. (I do not know the present owners). I do not know who was the *Konohiki* before Kainea.

Wahahee – sworn. I am *kamaaina* of the King's land **Puukapu**. I was born there. Commence at **Puaapilau**, thence to **Pooholua**, thence to **Leohu**, thence to **Paakainui**, thence to **Kapuulepo**, that is all I know... [page 6].

Mi 1st – sworn. I live on **Waikoloa** – I am a *kamaaina* of the lands in dispute. The name of the large land is **Waimea** – I am a witness for George Davis, and also for the Rex. – **Waimea** is a *Kalana*; which is the same as an island divided into districts. – there are eight *Okana* in **Waimea**. In those *Okana* are those lands said to extend out (*hele mawaho*). These lands came in to the possession of Kamehameha I who said to Kupapaulu, go and look out to the large lands running to the sea, for John Young and Isaac Davis.

Kupapaulu went to Keawekulua, the *haku aina*, who said if we give **Waikoloa** to the foreigners they will get **Kalahuipua** [**Kalahuipuaa**] and **Anaiomalu** **Anaehoomalu**] (two lands at the beach) then your master will have no fish. So they kept the sea lands and gave **Waikoloa** to Isaac Davis. John Young asked my parents if it was a large land they said, the black *aa* was **Napuu**, and the good land **Waimea**.

They kept all the valuable part of the lands, and gave the poor land outside to Isaac Davis. They kept **Puukapu**, **Pukalani**, **Nohoaina**, **Kukuiula** (above the church), and **Paulama**; and gave **Waikoloa** to Isaac Davis. The other **Waikoloa**, this side of the stream dividing them, was the King's. It comes down along the stream by Mr. Lyon's, then along the ditch, then along the wall of **Puulua**, to **Ahuli** on the King's land, to the round hill, **Uleiokapihe**, and is cut off here by Davis' **Waikoloa**. The wall was the boundary below, between **Waikoloa** of Isaac Davis and the land of the King, Kamehameha I. The latter built it by Kauliakamoa; to keep the cattle off from the King's land. The boundary runs to **Liuliu**, and the *pili* was all South, on Davis' land; then I know along an old road, **Puupa**; **Waikoloa** being South and **Waimea** North of the road, then to **Kaniku**. That is all I know.

Cross. My parents heard the command of Kamehameha I to Kupapaulu, and they told me, and also about John Young's asking about the land.

I never heard that **Puukapu**, **Nohoaina**, **Pukalani**, and **Paulama** extended out to the *pili*. A road divided the land of the King and that of I. Davis.

Waikoloa. The wall was built to keep off the cattle, and to mark the land. The church is on the King's land. When Kalama measured **Waikoloa** he took in the church, I heard. I went with Kalama some of the time. Kalama said leave the old boundary and make a straight boundary, so I left him lest Davis' land would go to the King. The boundary as I know it is from the English school house along a hollow, to the ditch near to **Hoomaloo**; thence to **puu Makeokeo**; thence to hills outside of **Ahuli**. The church is on **Paulama** which joins **Waikoloa**.

I know the boundary of **Paulama** it does not reach **Napuu**.

I know the *mauka* boundary of **Waikoloa** and **Puukapu**. **Puukapu** extends to **Puulepo**, then goes in (*maloko*)... [page 7]

Moluhi – sworn. I am *kamaaina* of **Puukapu**. I was born there. I know the boundary of **Waipio** and **Puukapu**. At **Puaapilau Paauhau** joins **Puukapu**; thence to **Puukaliali**; thence to **Puupapapa**; thence to **Keanaauloa**, where ends **Puukapu** and commences **Pukalani**; then to **Puulepo**, between **Puukapu** and **Pukalani**; then to **Waialolo**; thence to **Haloa**, the end of **Pukalani**; then **Puukapu** extends to **Kawaihae**.

Pukalani, **Nohoaina**, and **Paulama** lie between **Puukapu** and **Waikoloa**, so I do not know the boundaries of **Waikoloa**. **Puukapu** is a *kupono* of **Waimea Ahupuaa**, my father had charge of it; the present King owns it... [page 10]

Kualehelehe – sworn. I am *kamaaina* of **Puukapu**. I was born there. The boundary of Hamakua and **Puukapu**, commencing at **Waipio**, at **Pupulenalena**; thence to **Kahakolea**; thence to **Kaimuhonu**; thence to **Puuae**; thence to Kalapapohaku, along Kanaina's land to the corner. Then to **Manuheia**; thence to **Papalaokiekie**; thence to **Kahaleula**; thence to **Makahaluhalu**; thence to **Kapuaapilau**; thence to **Puukaliali**; then along **Paauhau** to **Puupapapa**; thence to **Keanaauloa**, the corner of **Paauhau**; thence to **Kapuulepo**; thence to **Waialolo**; thence to **Haloa**, along **Pukalani** to the corner; then along **Nohoaina** to **Paulama** and on to **Puuohu**, the corner of **Waikoloa** of Hueu; and thence on to **Kawaihae**. **Pukalani**, **Nohoaina** and **Paulama** lie between **Puukapu** and **Waikoloa** of Davis. I had charge of **Puukapu** when the late King was king. I am *kamaaina* of this land only. **Pukalani** belongs to the King... [page 11]

The Boundaries of **Waikoloa** nui as decided by the Commissioners of Boundaries at **Waimea** – Hawaii, August tenth 1865.

Commencing at **Kokiaina** run to **Waiakalehua**, to **Kapele**, **Alaanui**, **Alaohia**, **Keakualapalapa**, **Kulanapahu**, **Kaopapa**, **Keanakii**, **Kahoopapale**, **Kahooalapiko**, then along **Napuu** to **Puupaha**; then along the King's land to **Puakowai**, **Kilohana**, **Puuokaa**, **Makeokeo**, **Waikoloa**, to **Puuohu**, and to commencement, as given by Kaolulu, Kuupele, Kanehailua, and Kahakauwila.

P. Cummings
F.S. Lyman. [Volume A No. 1 page 12]

The following letters are selected communications that were made a part of the Boundary Commission proceedings for **Waimea** and associated lands, but not incorporated into the final volumes of the proceedings. The communications include the testimonies taken by G.M. Robertson, used by him to authorize his decisions, and communications from applicants and surveyors, regarding settlement of boundaries.

The communications are given here in chronological order, with those records found in the microfilm collection at appropriate dates. It will be noted that the full testimonies given by witnesses before the Commission were apparently not recorded in the Volumes copied in the microfilms. Thus, greater detail is found in the testimonies of witnesses cited below as dated communications (these additional records were viewed in the collection of the Hawai'i State Archives).

October 4, 1866
To the Hon. George M. Robertson, First Associate Judge of the Supreme Court

& Sole Commissioner of Boundaries:

The undersigned Commissioners of Crown Lands most respectfully beg leave to Represent that they desire Your Honor to take into consideration the settlement of the Boundaries of **Waimea** in the District of South Kohala on the Island of Hawaii, and for that purpose submit that the names of the adjoining Lands to **Waimea** in the District aforesaid are as follows to wit: **Lalakea, Waikoekoe, Kamoku, Paauhau, Puuanahulu, Kalahuipuaa, Kawaihae kai, Kawaihae uka, Honokane 1st and 2nd, Waimanu and Waipio.**

That the names of the owners of said Lands are as follows: **Lalakea**, Keau; **Waikoekoe**, H.H. Lunalilo, now leased to **Waimea** Grazing & Agricultural Company; **Kamoku**, part of it belongs to the **Waimea** Grazing Company and part owned by the Government; **Paauhau**, John P. Parker, Senior; **Puuanahulu**, Government Land; **Kalahuipuaa**, H.M. Queen Kalama, in charge of Kanaina; **Kawaihae kai**, H.M. Queen Emma; **Kawaihae uka**, Crown Land; **Honokane 1st and 2nd**, Estate of the late R.H. Princess Victoria, in charge of Kuke; **Waimanu**, Crown Land; **Waipio**, H.M. Queen Kalama, Leased to Halemanu.

That a formal description of the Boundaries of **Waimea**, aforesaid, is as follows, to wit:

Commencing at a point called **Kilohana** on the south bank of **Waipio pali**, the corner of the land of **Lalakea** to a large *ohia* tree marked "W" on the *makai* side of the Road leaving from **Waimea** to **Waipio**. Thence along the line of Waikoekoe to a large *mamane* post marked "**Puukapu**," at which point Waikoekoe and the land called Kamoku meet. Thence along the line of Kamoku to a *Naio* tree marked H. Thence along the line of Kamoku to a pile of rocks at the S.E. corner of H. Purdy's land. Thence along Kamoku to a large rock marked "P 19" at Puaapilau, where Kamoku and Paauhau meet. Thence to Puupapapa. Thence to Keanaoloa. Thence to Puuahaka or Paakea. Thence to Puumahoelua. Thence to a large rock marked "H." Thence to Kuikahekili; then to Namahana on the line of Kona. Thence along the gulch called Poopoo, bordering the land called Puuanahulu to an *ohia* tree marked "H." Thence to Puuiwaiwa. Thence to a point of rocks marked "H." Thence along the line of Puuanahulu to Kahooalapiko, then to Puuhinei; thence to Puupaha, then to the gulch called Pakoa, then along the gulch to Kapaakea. Thence along the gulch called Pakoa and the road called Keekee or Kiikii to a pile of rocks on a low rocky ridge. Thence to the most Northerly of three small hills called Lolo. Thence to a large pile of rocks at the South East corner of Kalahuipuaa, on the *mauka* side of the Beach Kona Road. Thence along the *mauka* side of said land to a large pile of Rocks on the *aa*, thence *makai* to the sea over a large pile of rocks on the *mauka* side of the Beach Road leading to Kona. Thence along the sea to the mouth of a gulch called **Waiulaula**. Thence up and along the centre of said gulch to a Rock marked "H," on the North side of said Gulch at a point called Malohuihui, where said Boundary line leaves the gulch, thence along **Kawaihae uka** to **Puuainako**. Thence to **Luawahine** Gulch to the head of said gulch at a place called **Kalualepo**, which intersects the land called **Puukapu**. Thence along the *mauka* line of **Kawaihae uka** to the head of **Honokane Pali**. Thence along the head of the Lands called **Honokane 1st and 2nd**, **Waimanu** and **Waipio** to the place of Beginning. Which together with an accompanying chart of the survey of the *Ahupuaa* of **Waimea** District aforesaid, are herewith submitted...

C.C. Harris

F.W. Hutchinson

John O. Dominis

Commissioners of Crown Lands. [HSA – Interior Department Lands]

Waimea Hawaii
October 5th 1866

Land Boundary Commission.

The Commissioners of Crown Lands filed an application for the settlement of the exterior boundaries of the Ahupuaa of Waimea...

Mooluhi sworn. (on behalf of the Crown)

Was born at **Puukapu**, has lived there nearly all his life. **Puukapu** is in the *Ahupuaa* of **Waimea**. Know the boundaries of **Waimea** on the Hamakua and Kohala sides. Beginning at the *pali* of **Waipio** and running to Kaakolea, along the boundary of **Lalakea**; thence at **Waihonakalua** along **Waikoekoe**; thence to Papahookiikii along Waikoekoe; thence on to Puaapilau along the line of Kamoku; thence to Pukaliali, on the boundary of Paauhau; thence along Paauhau to Puapapapa; thence still along Paauhau to Keanaoloa. I don't know the boundary beyond that.

I know some of the boundary on the side next to **Kawaihae uka**, as informed by my ancestors. A hill on the head of **Honokane** gulch is the boundary between **Puukapu** and **Honokane**. The watercourse which starts from the high hill or peak I have mentioned and runs to **Waipio** divide. **Puukapu** from the lands called **Honokane** and **Waimanu** in North Kohala.

The line of **Puukapu** runs on to the *pali* of **Waipio**. Kaakolea was a place of sacrifice. At Papalahookiikii is a hill where the people used to get *mamaki*. Puaapilau is an ancient place of worship. Kamoku, Paauhau and **Puukapu** meet there. Pukaliali and Puapapapa are hills. There is a water course and cave at Keanaoloa.

The boundaries as stated today are the same as I have always known. I got my information from my parents and uncles who lived on **Puukapu** before me. I was *Konohiki* of **Puukapu** from the time of my father's death at the arrival of the missionaries [1820], till recently.

At Keanaoloa the lands called Paauhau, **Puukapu** and Pukalani meet. Pukalani is an *ili* in **Waimea**...

Kaolulo sworn.

Was born at Kaupo in **Waimea**. Knows the boundaries of **Waimea** on the sides of North Kohala and Hamakua. **Kalualepo** is on the boundary of **Waimea** and **Kawaihae uka**. There is a hill at that place; from **Kalualepo** on to **Kalahomane** on the boundary of **Honokane**, the place called **Waimalu** is the boundary of **Waimea**. **Kulanapahu** is on the boundary of **Waimea** and **Honokane** 2nd. Thence on to the gulch at **Oulu [Ulu]**. The stream called Oulu runs clear on to **Waipio** and marks the boundary between **Puukapu** and the North Kohala lands. A place called **Kilohana** at the *pali* of **Kahonohono** and runs to the place called **Kilohana** by the last witness, and then to Kaakolea. Thence to **Waihonakalua**. Thence to Papalahookiikii on Waikoekoe. Thence to Puaapilau. Thence to Pukaaliali. Thence on Puapapapa on the boundary of Paauhau. Thence to Keanaoloa where Paauhau, **Puukapu** and Pukalani meet. Pukalani is an *ili* of **Waimea**. Thence on to Puumahoelua on the boundary of Paauhau. Thence on to Kuikahekili, where is a hill. Thence to Namahana on the boundary of Kona, where there is a gulch called Poopoo. Thence on to a hill called Puuaweoweo. Thence on to Kahooalapiko. Thence to Puupaha. Thence on to Kapaakea where is a gulch, and on to Kepulumao. This is the boundary along Puuanahulu as far as I know it.

I learned the boundaries from my ancestors. **Waimea** was a rebellious land.

[answer to question from Mr. Jones for G.H. Davis] I know **Keahuolono**, it is on the boundary of **Waimea**. Puupoe is on the lava country outside of **Waimea**. It is a hill. I don't know of a cave there. I know Palihae, it is in Paauhau not on the boundary of Kona. Kahanamauloa is in Hamakua. Kapukaiki is in Kona out beyond the line of **Waimea**; and so is Hanaialii, a long way from the boundary of **Waimea**; and so is Wawaekea. Keamuku is also in Kona, a long distance from the line, a point covered with lava. Heewai is also in Kona. Kaawa is in Kona. Puukeekkee is on the boundary of Kaohe. Puukapele is in Kona, on beyond the boundary of **Waimea**. I had to travel over the land to get sandalwood, and I used to go out to hunt for the birds called *uwau*; my father used to point out the different places to me when we had occasion to travel over the land. I have travelled all along the Kona boundary as far as I have stated it. **Waimea** bounds on the Kona line, but that line as now given by some people is new to me. Naohulelua is on the boundary of Kona and Hamakua. I have never heard that Kohala goes out so far as that place...

Kanehailua sworn.

Was born in **Waimea**. Know some of the boundaries of **Waimea**. Commencing at Puaapilau, where **Puukapu** and Hamakua meet. Paauhau touched that point; from thence the boundary runs to Pukaaliali between **Puukapu** and Paauhau; thence on to Puupapapa; thence on to Keanaoloa; thence to Puunahaha between **Waimea** and Paauhau; thence on to Kenakuku; thence to Puumahoelua; thence to Kuikahekili; thence on to Namahana at the junction of **Waimea**, Paauhau, and Puuanahulu, in Kona. Thence on to Puuiwaiwa; thence to Kahooalapiko; thence to Puupaha; thence to Kapaakea; thence to Kalolo and on to Kiikii road, which is on the boundary line of **Waimea**, on to Puali, above Kalahuipuaa. Keahuolono is at the corner of **Waimea** where it touches Kona. Anaehoomalu is the land on the shore and belongs to **Waimea**. Kapalaoa is the land on the Kona side. Then turning and running along the sea beach to Waiulua; thence Iiilinahihi; thence to Kamakaiwa; thence to Kapukalua, a cave; thence to Paniau; thence to Milokukahi; thence to **Waima**; thence to Lalamilo, including Puako hamlet; thence to Wailea; thence to Kaihumoku.

Then leave the sea and run *mauka* to **Puainako** on the boundary between **Kawaihae** and **Waimea**; thence to a gulch called **Kaluahine** which is between **Kawaihae** and **Puukawaiwai**; thence to **Waioakamalii** gulch. Then into the woods and towards the mountains; thence to **Kalualalepo** where **Kawaihae**, **Waimea**, and **Puukapu** join. From **Kalualalepo** to Waipahu; thence to Kaleapi; thence to **Ulu** gulch or stream; the head waters of the streams which run to **Waipio**, **Waimanu**, **Pololu**, **Honokane** and **Keanuio mano**. The stream of **Honokane** is on the boundary of **Honokane** and **Waimea**. On from **Ulu** the boundary runs to **Kilohana** at the termination of two roads, at the boundary between **Puukapu** and **Waipio**. The boundary of **Puukapu** runs along the mountain range, by the head of the ravines which run into North Kohala, till it reached **Waipio**. The boundary runs on from **Kilohana** to **Pupualenalena**; thence to **Kaakolea**; thence to **Waihonakalua**; thence to **Papalahookiikii**; thence to **Puaapilau**.

At **Namahana** on the boundary of Hamakua, Kohala and Kona, there is a gulch called Poopoo. Waikii is a spring in Hamakua, the father of the different streams of Poopoo etc. Kalolo is the same water course that is called Poopoo farther up. It is called **Waiulaula** where it meets the sea.

[answer to question from Mr. Jones for G.H. Davis] Naohulelua is in Kona a long distance from the boundary. It is at the line of Keauhou and Kaohe... Puukeekkee is between Namahana and Puukapele on the boundary between Kona and Hamakua... [HSA – Interior Department Lands; 1866]

Waimea, Dsitrict of Kohala, Island of Hawaii
Boundary Commission, Hawaii Volume A No. 1:16-18

(No. 4)

Ahupuaa (or Kalana) of Waimea Hawaii

On the 4th day of October, 1866 the Commissioners of Crown Lands filed with the Boundary Commissioner an application for the settlement of the boundaries of the *Ahupuaa* (or *Kalana*) of **Waimea**, in the District of Kohala, Island of Hawaii.

Notice was given to all parties interested as far as practicable, and the Commissioner Was occupied at **Waimea**, Hawaii, on the 5th, 6th, 13th, 15th, 17th, and 22nd of October, and at Honolulu, on the 10th and 15th of November, in hearing evidence on behalf of the applicants, and also on behalf of other parties interested. The case was closed and argued by counsel, at Honolulu on the 16th of November. On the 8th of January, 1867, the Commissioner decided and duly certified the Boundaries of the said Land to be as follows, viz.:

Boundaries of Waimea

Beginning at a place known as **Kilohana**, on the South bank of the **Waipio Pali**, corner of the lands of **Waipio** and **Lalakea**, on the Eastern boundary of **Waimea**; Thence along the land **Lalakea**, South 35° 50' E. 90 58/100 chains, to a large *ohia* tree marked **W.** at a place known as **Kaakolea**. Thence along the land **Waikoekoe**, South 60° E 55 30/100 chains, to **Kaimuhonu**. Thence South 69 ¼ E 118 49/100 chains, South 49° E 10 chains, to a large rock marked **W.** at **Kalapapohaku**, *mauka* corner of **Waikoekoe**. Thence along the tract of land known as **Kamoku**, South 22 chains, to **Manuheia** at which point stands a large *mamane* post marked **Puukapu**. Thence South 63° W 30 chains, South 13° W 11 50/100 chains, South 12 ½ E 60 50/100 chains to a tree marked **X**, at a place known as Kahaleula, N.E. corner of Harry Purdy's land in **Waimea**. Thence South 16 ½ E 35 chains, cross the road leading from **Waimea** to Parker's, 45 chains to **Makahaluhalu**, 79 chains to a pile of rocks, S.E. corner of Harry Purdy's land. Thence South 12° E 128 chains to a large rock marked **XIX**, at a place known as **Kapuaa-pilau**. Thence along J.P. Parker's land, **Paauhau**, South 2° E. 63 chains, to a pile of rocks on the top of the hill called **Puukaliali**. Thence along the [page 16] Western boundary of J.P. Parker's land by the line described in his Royal Patent (No. 2769) to a pile of stones marked "**P**" at the most South Westerly point

of **Paauhau**.

Thence up the gulch known as the **Auwaiakeakua**, to a large flat rock marked **XIV**, on the top of a conical hill known as **Puulaau**, at the South East corner of J.P. Parker's land, **Paauhau**. Thence to **Aiakala** on the boundary of the **Ahupuaa** of **Kaohe**. Thence along **Kaohe**, South 14° E 70 chains to the gulch of **Waikii** and **Keoneheehee**. Thence South 13° E 80 chains to a pile of stones marked **X**, at **Kilohana**. Thence South 4° W 31 chains to a pile of stones marked **X**. Thence South 6° E 24 50/100 chains to a pile of stones marked **X**. Thence South 12° E 131 chains to a pile of stones marked **X**, at the corner of **Kaohe**, on the South East side of **Puukapele**. Thence along the boundary of **Puuanahulu** in the district of Kona, North 58° W 194 chains to **Kaaawa**, a resting place, where is a pile of stones. Thence North 62 ½° W. 160 chains to a pile of stones marked **X**. Thence North 85° W. 72 chains to **Heewai**, where is a pile of stones marked **X**. Thence North 58° W 162 chains to **Kea-muku** to a large stone marked **X**. Thence North 65° West 72 chains to a pile of stones marked **X**. Thence North 53° W. 73 chains to a pile of stones marked **X**, at **Wawaekea**. Thence North 42° W. 87 chains to a cave known by the name **Hanaialii**. Thence North 53° W. 136 chains to a pile of stones at **Kikiha**. Thence North 30° W. 65 chains to a pile of stones marked **X**. Thence North 47° W. 84 chains to a cave at **Kapukaiki**. Thence South 89° W. 522 chains by **Kapalihookaakaa**, **Kauakahialaa**, **Hanamauloo**, **Palihai**, and **Puupoe**, to **Keahuaalono** on the side of the road leading to Kona. Thence to **Hiiakaikaalei** on the sea beach, the extreme boundary of the **Ili** of **Anaehoomalu** on the line between Kohala and Kona. Thence along the sea shore **makai** of **Anaehoomalu** and **Kalahuihua** to a large pile of rocks on the **mauka** side of the Beach road. Thence along the sea; North 31° E. 19 55/100 chains, North 5° E. 15 91/100 chains, South 34° E. 59 85/100 chains to the houses on **Waima**. Thence North 80° E. 15 chains, North 42° E. 68 chains to the extreme point of rocks at **Puako**; Thence South 15° E. 16 chains to the church. North 63° E. 20 chains to the South East point of Bay. Thence North 9° E. 16 67/100 chains to **Piliamoo**; Thence North 10 ¼° E. 50 31/100 chains, North 3 ¼° E. 44 85/100 chains to **Kaihumoku**. Thence along the sea to the mouth of **Waiulaula** gulch, at the corner of the lands **Waimea** and **Kawaihae Kai**; Thence up along the center of said gulch to a large [page 17] boulder marked **X**, at a point known as **Paleuli**, at the corner of the lands **Kawaihae Kai** and **Kawaihae uka**, at which point the line leaves the gulch to the right; Thence North 51 ½° E. 75 78/100 chains to a pile of rocks at **Lawai**; Thence North 44° E. 70 45/100 chains to **Puainako**, a small hill on the South side

of the **Waimea** and **Kawaihae Road**. Thence North 53° E. 72 72/100 chains to the **Luwahine** Gulch where it leaves the hills; Thence up along said gulch North 53° E. 70/100 chains, North 10° E. 23 50/100 chains, North 48 ¾° E. 81 chains, North 21° ¾° E. 31 chains, to **Puka-waiwai** 61 80/100 chains to angle; Thence North 11° E. 22 70/100 chains to the Kohala Road; Thence up and along the general course to the **Luwahine** Gulch, North 31° E. 240 chains to a place known as **Kalua-lepo**, at the *mauka* South East corner of **Kawaihae 2nd** on the boundary of **Waimea**; Thence along the *mauka* side of **Kawaihae 1st** and **Kawaihae 2nd** to the head of the **Honokane Pali**. Thence along the *mauka* ends of the lands of **Honokane 1st** and **Honokane 2nd**, **Wai-manu**, and **Waipio 1st** and **2nd**, to the place of commencement.

G. M. Robertson
Commissioner of Boundaries
Honolulu
8th January 1867. [page 18]

Travel, Access and Land Use in the Kohala-Hāmākua Mountain Lands

Another source of documentation describing the Kohala-Hāmākua Mountain Lands, is found in the collection of the Hawai'i State Archives (HSA). Communications in the Interior Department collection describe Kingdom efforts at documenting the nature of the landscape and efforts at managing the lands and access. As a result of the development of ranching and plantation interests, increased importance of the health and quality of the watershed lands was emphasized. Also, we find that by the 1880s, the development and sale of Homestead tracts on Government lands was followed by impacts on the forest lands. The following communications include documentation of access to the mountain lands and descriptions of the changing conditions therein.

By the 1840s, social and economic pressures led to the formalization of a road division in the Hawaiian Kingdom. Native foot trails, which had been used for centuries and often provided the "path of least resistance," to travel around and across the island, proved inadequate for the new methods of travel with horse, wagons and team animals. In 1847, Kamehameha III instructed island governors to undertake the survey of routes and construction of new roads, which became known as the *Alanui Aupuni* (Government Roads). Construction was to be paid for through taxation and "labor days" of the residents of the lands through which the roads would pass. Governor Kapeau, on the island of Hawai'i, wrote his *mana'o* on this matter to Premier and Minister of the Interior, Keoni Ana on August 13, 1847:

Aloha oe e ka mea Hanohano –

I have a few questions which I wish to ask you. Will the police officers be required to pay, when they do not attend the Tuesday (*Poalua*) labor days? How about parents who have several children? What about school teachers and school agents? Are they not required to work like all other people when there is Government work on the roads and highways?

I believe that school agents, school teachers and parents who have several children, should only go and work on the weeks of the public, and not on the *konohiki* days....

...The roads from Kailua and down the *pali* of Kealakekua, and from Kailua to Honokohau, Kaloko, Ooma, the place where our King was cared for, and from thence

to Kaelehuluhulu [at Kaulana], are now being surveyed. When I find a suitable day, I will go to Napoopoo immediately, to confer with the old timers of that place, in order to decide upon the proper place to build the highway from Napoopoo to Honaunau, and Kauhako, and thence continue on to meet the road from Kau. The road is close to the shore of Kapalilua...

The width of the highways around Hawaii, is only one fathom, but, where it is suitable to widen where there is plenty of dirt, two fathoms and over would be all right... If the roads are put into proper condition, there are a lot of places for the strangers to visit when they come here. The Kilauea volcano, and the mountains of Maunaloa, Maunakea, Hualalai.

There is only one trouble to prevent the building of a highway all around, the steep gulches at Waipio and Pololu, but this place can be left to the very last... [HSA – Interior Department, Roads; translation modified by Maly]

July 17th, 1872

Mana

S.C. Wiltse; to Jno. Dominis:

...I am engaged to make a survey of the principle lands that comprise the Puuhue Ranch in N. Kohala, & purpose commencing next week.

One of these lands **Kehena** extends to the **Honokane Pali** & bounds the crown land **Pololu** on the *mauka* side. Another land to be surveyed is “Nunulu” which bounds the crown land Kaauhuhu on the *mauka* side. So I thought you might like to have these crown lands surveyed & justified to by the Boundary Com. at the same time with the Puuhue lands, as it would save nearly or quite one half of the expense that would cost to have them settled separately.

Should you propose to do so, I will forward to you the names of the adjoining lands & the names of parties that own them, so that you could make application at once to Gov. Lyman to have the Boundaries of said lands settled at the same time as the Puuhue lands. [HSA - Interior Department, Lands]

November 21, 1887

Kohala, Hawaii

E.C Bond; to L.A. Thurston:

...I should like to say a word to you in your private capacity—not officially—concerning the gov't. lands 5 or 6 miles *mauka* of us, that are now being surveyed by Mr. Jos. Emerson, with the ultimate view, it is understood, of their being sold out by the Gov't. under the homestead act. I have not been up there to see the precise location & nature of those lands, but judge from a general knowledge & much description as has been given are, that they lie largely if not entirely in the woody, wet lands, from whence many if not all of the watercourses in this district draw their supply & think it would be safe to say although of course some of the springs are located well down *makai*.

The woods have for years, been continually receding from the coast, & lands once well wooded are completely bare, but the lands above referred to, have so far, remained comparatively unchanged.

I am not alone in the opinion that the first thing that will be done by settlers on those lands especially if they are Portuguese, as Portuguese always use & want large wood for their fires, & are particularly destructive of trees—will be to clear off the woods for private use & for making a living on the sales of it.

The end of it will be that our watercourses, already reduced in size, will be so far reduced or entirely deprived of their source of supply, that the Gov't will be called upon for some measures for protection, such as we have witnessed in connection with your Honolulu water supply, & presumably be compelled to take back tracks at considerable expense.

If you will interview Noble Wight on the subject, and also Mr. Emerson, when he returns, I think you will find my statements & opinion confirmed. I see that Rep. Kinney is to introduce (or has done so) a bill or resolution to have a commission appointed to examine into that region ("bet. Hamakua & Kohala") to see whether a water supply cannot be found for the benefit of Hamakua. The lands above referred to, would come under that heading, and altho, I do not know whether the lay of the land would permit of water from the above locality being ditched or flumed to Hamakua, I fail to see, in case it can, why Kohala should be robbed for the benefit of Hamakua.

I draw your attention to this matter because I comprehend somewhat, the value of water supply & the importance of preserving the fountain heads thereof, and think that a word in time, may save a vast amount of trouble & expense in the future.

I notice that amendments to the law pertaining to the commissioners of Private Ways & Water rights have been proposed in the House. While they are about it, I think they might so amend as to make it more clearly to be understood whether the law intended, in case of appeal, that the fees of the Commissioners, as well as other costs, should be forwarded to the appellate court, or whether the said fees may be regarded as, "fees strictly retainable by them."

The law is clear, Ch. XVI, Sec. 1001, page 295, but the amendment passed in 1886, Ch. LXIX, Sec. 4, pg. 127, makes it ambiguous. We do not know what fees or "costs" are "strictly retainable by" us, or whether it was intended that the sending of the fees over to the appellate court was intended to be done away with. We fail to see why our fees nor the constable's for serving summons should be sent over, only to be returned, unless, it is for the purpose of giving the appellate court a chance to cut them down.

As Chairman of said Commissioners, I find, especially in case of appeal, that there is a heap of work to be done if there's "nothing in it."

I don't mind getting the experience, but don't see as that acquisition serves as compensation for time or material...

(Note: Refer to survey with request that Emerson be written to have his opinion in the matter ascertained.) [HSA – Interior Department, Water Rights; Box 55]

December 16, 1887

Kokio, Kohala, Hawaii

J.S. Emerson; to L.A. Thurston:

...Before me is the copy of a letter from Mr. E.C. Bond to yourself, dated Nov. 21, '87, also a letter from Mr. C.J. Lyons, of Dec. 13 in which you "request" any "remarks on the forest subject." The more I think upon Mr. Bonds' letter, the better I am satisfied with the correctness of his statements and the soundness of his inferences. He is certainly justified in feeling that there is great cause for alarm with reference to the water supply of Kohala and the protection of the forests in the region included in my survey. If we limit our attention to the upper portion of my survey, say to the North East of a straight line joining Lahikiola and Puu Hue hills, we have the forest lands of which he speaks, and as thus limited his remarks are very just. Perhaps I might still further limit it to the district East of the meridian passing through Lahikiola. The protection of these forests

from cattle and the axe of the settler is a matter of serious importance to the agricultural interests of the district. Many of the old springs are now dry, I could mention them by name but time forbids. In the Hooleipalaoa, Wailoa and other gulches the water stands in small pools instead of running in a continuous stream. At nearly every mud hole, where the cattle come, their dead carcasses poison the air and the land is full of their stench. They fall and die on all sides for lack of water. This state of things is mainly due to the destruction of these forests by cattle, but to allow ignorant settlers to hasten the work of destruction with the axe will be still worse. The mail man waits—excuse the haste.

December 27, 1887

Puuokumau

L.B. Low; to H.P. Wood:

...On compliance with your instruction I have been around to the Hamakua side of the Kohala Mountains' to ascertain the practicability of locating a bridle path on the seaward route up the west side of the Waipio and the country westward to the Waimanu, including both of its sides with the view of forming part of the road from Kohala to Hamakua.

The west side of the Waipio is practical rocky about three fourths of the way up. Soft rock and earth the balance of the way. From appearance the rock can all or nearly all be removed with pick and gad.

Going west of the Waipio the 1-2-4-5 and 7 canyons are shallow and the present grade practical.

3rd canyon about 800 feet deep will require nearly all new grade.

6, 9 & 10 canyons about 500 feet deep, grade will require to be changed in several places.

8 canyon 1000 feet deep, about one third of the present grade is practical the balance will require a new grade.

11 canyon about 600 feet deep will require nearly all new grade.

East side of the Waimanu is practical, showing several stratas of hard rock will require more or less blasting from top to bottom.

West side is much more favorable, very little rock to be seen, the upper part is covered with *ohia* which extend in places nearly to the bottom of the canyon.

The west side of the Waipio and the east side of the Waimanu will cost nearly as much as all of the canyons between with the west side of the Waimanu included... [HSA – Interior Department, Roads]

By late 1888, the Hawaiian Kingdom had begun work on a Government route, across the Kohala Mountain Lands. Several communications regarding development of the road—a formal trail system—are cited below. Interestingly, by September 1889, work on the road was terminated for a lack of funds, and reevaluation of the need of such a road.

April 2nd, 1888

H.P. Wood, Kohala Road Supervisor, to

L.A. Thurston, Minister of the Interior:

...A road should be built between Kohala and Hamakua along the coast (that is a good

horse trail) there is a fair trail I believe from Kukuihaele Hamakua to **Waimanu** gulch which could be put into good condition for say 1000.00. Kohala has a good trail to the bottom of **Pololu** Gulch and a passable road to **Awini**. From Awini, Waimanu could be reached by skirting *mauka* of the intervening gulches from Awini to Waimanu in a direct line is only about 5 miles perhaps that distance could have work enabled an expenditure of 2500.00 or 3000.00 would connect Hamakua and Kohala by a direct route thus doing away with the long and tiresome journey via **Waimea** besides opening up new land for settlement. Disturbing the operations of *okolehao* distillers perhaps but that could scarcely be mentioned as an objection... [HSA – Interior Department, Roads]

L. Low to

W.P. Wood, Kohala Road Supervisor

December 27, 1888:

...In accordance with your instructions I have been around to the Hamakua side of the Kohala mountains to ascertain the practicability of locating a bridle path on the seaward route up the west side of Waipio and the country westward to the **Waimanu** including both sides, with the view of forming part of the route from Kohala to Hamakua... [HSA – Interior Department, Roads]

December 31st, 1888

H.P. Wood, Kohala Road Supervisor, to

L.A. Thurston, Minister of the Interior:

...As per your authorization of 12 Dec. I have drawn on your dept under date of 26 Dec Draft # 1 favor T.H. Davies & Co 265.21 which sum includes all of Mr. Lows expenses to date "for services of self and party in preliminary work of locating and grading trail from **Honokane** to **Waipio**." The Monday following your Excellency's departure from Kohala Mr. Low started for Hamakua to examine the other end of the route he says the battle is to be fought in the west palis of Waipio and the east palis of **Waimanu**. The intervening 11 or 12 gulches need simply to have the trail cleaned out and drained in some places the grade is fairly good. From personal knowledge of the gulches in the Kohala side and Mr. Lows report of the conditions of the Hamakua end of the trail I am bound to report that while it is practicable to build an easy graded trail along the proposed line, yet owing to the steepness and depth of the gulches the ups and downs and zig zags would increase the distance over double what it is as the crow flies, and such a work properly done would cost from ten to fifteen thousand dollars. Hence I have deferred further work until hearing from your Excellency. There are many reasons why we would like to see the trails commenced and ultimately carried through. For instance it would further the ends of justice in enabling the police to patrol what is now a secure fortress for Illicit Distilleries, Resort of Lepers, Runaway Plantation Hands etc. etc... [HSA – Interior Department, Roads]

H.P. Wood, Kohala Road Supervisor, to

L.A. Thurston, Minister of the Interior

January 18, 1889:

...Though the weather has been some what rainy of late we have been able to make good progress with our road work.

Word received by me from Mr. Low today reports his party at the bottom of **Honokea** having cut a trail across the **Awini** and down the west side of Honokea that is they have done such work as will enable them to carry supplies along and every spade of earth through out is in the direct line and not a waste of time or money. Before the party reaches **Honopue**, I will take a trip over the route and personally inspect same... [HSA – Interior Department, Roads]

February 28, 1889

**J.F. Brown, Hawaiian Government Survey;
to L.A. Thurston, Minister of the Interior:**

...I beg to report: **Honokane** is not to my knowledge a Government land either as a whole or in part. There is however a considerable tract of land between Honokane and Waimanu, comprising the following lands. "**Laupahoehoe**" (not the Hilo land), **Nakooka, Apua, Waikapu, Honopue** and **Awini 1 & 2**.

These lands constitute a rugged mountainous tract, largely inaccessible, and unsurveyed.

By means of the names above given Mr. Wood may be able to identify some locality that would suit him, and for the purpose which he desires the lease, I see no objection to granting the same for any reasonable term, and provided any fit description could be given... [HSA – Interior Department, Lands]

March 13, 1889

**J.W. Kapololu (Resident at Waimanu); to
L.A. Thurston, Minister of the Interior:**

Aloha ia oe.

1. Your Excellency will please be considerate to the pitiful voice of your humble servant.
2. That a portion of the Government land situate at **Honopue**, which joins **Honokea**, the end of the boundary of Hamakua.
3. That these portions of land, being **Honopue nui**, and **Honopue iki**, have *awa* on these lands, that I have heard that some persons from Kohala have been getting it underhandedly.
4. Therefore, my request to you that you will be kind to me, and that I be the agent to look after these Government lands, as herein below set forth.
5. **Laupahoehoe iki, Nakooka, Apua, Kawaikapu, Honepue nui, Honopue iki, Honokea**, end of the boundary of Hamakua, it may be that you remember these Government lands, and if these things are not proper.
6. Which is state to you, please make reply, and if it is all right, reply also.
7. Here is this, I received your letter and also Rowela's concerning the matters pertaining to the Road, and I have met with Hon., [Horner, Hāmākua Road Supervisor at the time] and he consented.
8. And I am commencing to fix the Road... [HSA – Interior Department, Lands]

March 8, 1889

H.P. Wood; to L.A. Thurston, Minister of the Interior:

By this weeks "**Kinau**" I am sending you a sample of coffee grown in **Honokane Gulch**. There are a number of trees distributed throughout the gulch, clean, healthy, thick and bearing freely. Kindly have the sample tested by Honolulu Coffee Experts and let me know how it compares with that grown in Kona.

If there is government land in Honokane that can be obtained by purchase or by a long lease please let me know, and if practicable I will endeavor to start a small coffee plantation there, putting a reliable Portuguese in charge. If no land is at that point for sale or lease can you inform me if there is any between that point and **Honopue**. I am willing to pay for a tracing of your latest and most reliable surveys of any land or lands you may deem fit for any purpose... [HSA – Interior Department, Lands]

Kohala, Hawaii

March 14, 1889

H.P. Wood; to L.A. Thurston, Minister of the Interior:

...Upon receipt of your letter dated 8th Mch. I immediately recalled Mr. Low who had reached **Honopue gulch**. In fact he had established a grade half way down the gulch. Thus far Mr. Low has confined his efforts to cutting a mere trail in the best obtainable grade between Honokane & Honopue. The work has occupied more time than I thought as Mr. Low encountered sundry difficulties in the various gulches but he has established a good grade for a horse trail. By next "*Kinau*" I will forward his report in full. If it is your pleasure we will at once commence work on the grade mapped out by Mr. Low starting at Honokane and making a good road as far as the money appropriated will admit.

The dry spell still continues enabling us to accomplish quite an amount of road work. In fact taking advantage of the favorable weather has caused us to draw somewhat more heavily than anticipated... [HSA – Interior Department, Roads]

March 25, 1889

J.W. Kapololu (Resident at Waimanu), to

L.A. Thurston, Minister of the Interior

Aloha ia oe.

1. I heard again from my son that there is *awa* on **Honopue iki**, on the side adjoining **Honokea**, and that this *awa* was discovered by the road laborers. The road is now at the *Pali* of Honopue these days.
2. I believe that the *awa* will all be taken by the ones from Kohala when the road is in shape. This is what I suggest, that you publish notice in the newspapers to those of Kohala and here of Hamakua... [HSA – Interior Department, Lands]

April 9, 1889

Waimanu, Hawaii

J.W. Kapololu; to L.A. Kakina (Thurston), Minister of the Interior:

...I have duly received the honor from the Interior Department, that is the Commission which was written on the 22nd day of March, 1889.

And I also received another letter written on the 1st day of April, from the Interior Office. This is what I report to you. I have sent three notices to Kohala, on the doors of the stores. There is another notice at Honokane.

Here is another matter to report to you, if you will be agreeable: That you have my name placed in the list of jurors. For the Nov. term, at Waimea, because, I was a juror in 1875, in the month of October 2nd. And to prove it, I send this document so that you will be satisfied, that I was in this work before. And you try hard so that I will be in the jury of this year, you must not forget.

And will Your Excellency please send a box of giant powder for our road, because, if I go to get it from Hon's. place, he will only give three sticks, and so forth. Therefore, you send a whole box for us, so as to finish the bad places. And you address it in the name of Hon., Kukuihaele, and you let him know, that that box belongs to me. [HSA – Interior Department, Roads]

September 19, 1889

B. Bond, Kohala Road Supervisor; to L.A. Thurston, Minister of the Interior:

...The appropriation for the **Honokane** and **Honokea** Road having been exhausted, we have ordered all tools brought in and stored.

It is the unanimous opinion of the Board that time and labor and money have been thrown away on that road, and that the best thing that can be done is to stop it henceforth and forever.

When our main line of travel have been properly opened, and our district roads made good from limit to limit, it will then be time enough to hunt up such a scheme to work upon. Few intelligent men in this community could be brought to favor that road, unless from personal motives... [HSA – Interior Department, Roads]

August 16, 1897

J.F. Brown, Commission of Public Lands;

to J.A. King, Minister of the Interior [Figure 5]:

...I beg to call your attention to the sketch map enclosed herewith, which show outlined in red certain lots laid out for cultivation and settlement on the land of Awini, N. Kohala. The majority of these lots have already been applied for and Auction Sale of same will shortly be made.

A rough trail from Niulii Kohala, reaches the lower Awini land, occupied by Awini Ranch Co., but no road or trail exists to these upper Government lots, though such road or trail is a prime necessity in the development of these new Government lots.

Mr. W.V. Rodenhurst of Mahukona, has, through our Sub-Agent Mr. Williams in Hamakua, made an offer to construct a trail over the line of the road surveyed by A.B. Loebenstein (from A to B of sketch) for sum of \$350. His offer to this effect is herewith enclosed.

The distance between the points A and B is about 3 ½ miles.

The appropriation under which this office has heretofore performed work of this nature, for the opening up of Government lands, is now exhausted, but I understand that an appropriation exists in the Interior Department, "New Road Honokane Nui Gulch" of which some portion might be applied to construction of this trail. This appropriation as I understand, was made for the special purpose of making accessible the Awini lands about the time that petition was received for dividing up the same, the Honokane-nui Gulch being one of the obstacles in the way, but not as I understand, the only object of the appropriation. I would therefore respectfully refer this matter to your department hoping that it may be possible to meet the wants of intending settlers at an early date. And in same connection, enclose a deed from Awini Ranch Co. conveying a right of way through their fee simple lands. This deed was executed by the Awini Ranch Co. on their own volition and no formal acceptance of same has been made. Such right of way however it is desirable for the Government to have... [HSA – Interior Department, Lands]

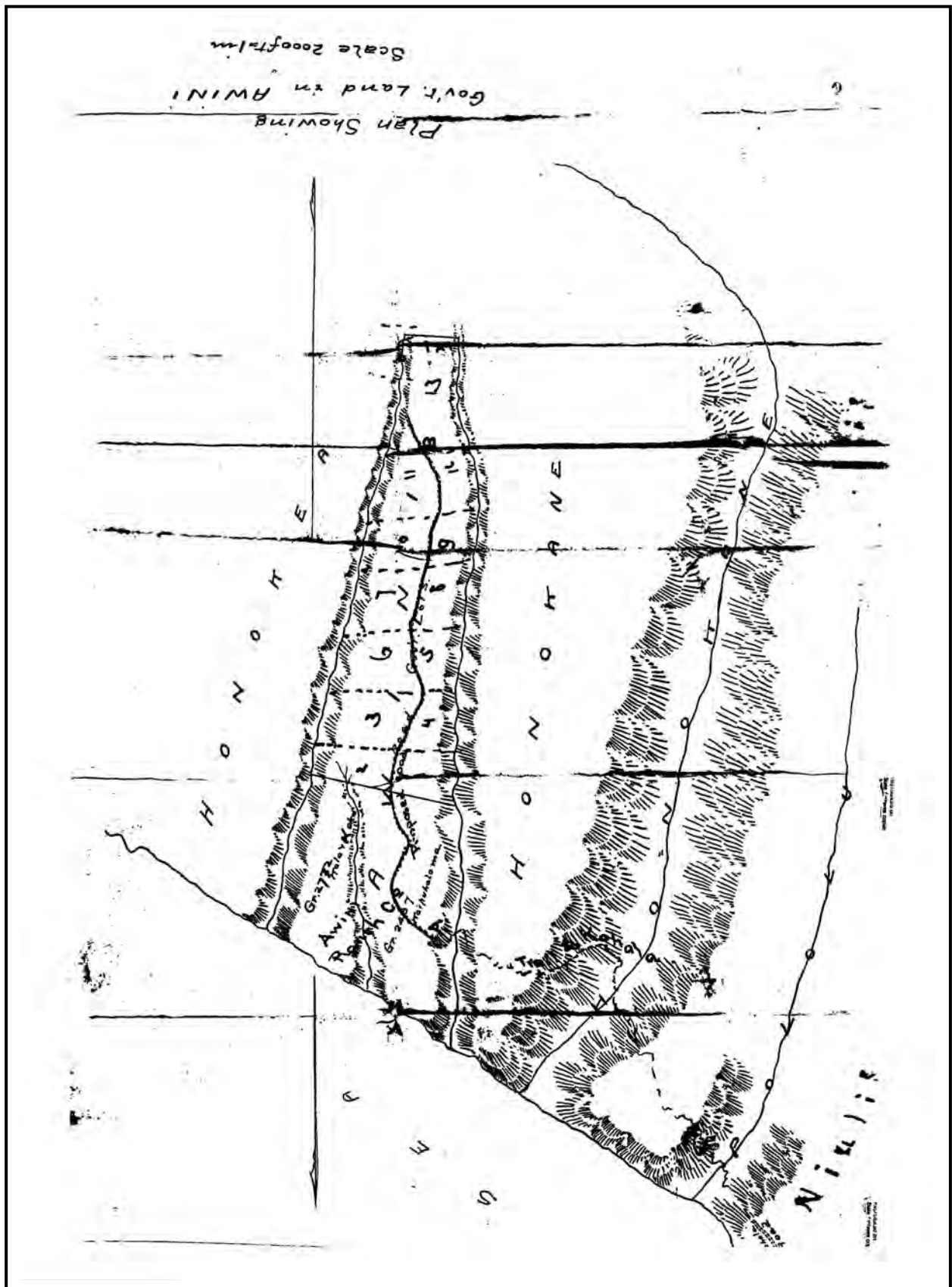


Figure 5. Plan of Awini – Homesteads and Proposed Trail to Uplands (J.F. Brown, 1897)

COMMERCIAL DEVELOPMENT OF WATER RESOURCES FROM THE KOHALA-HĀMĀKUA MOUNTAIN LANDS

This section of the study provides readers with a history of water development on the Kohala-Hāmākua mountain lands. As discussed later in this study, the approach to forestry matters was particularly driven by the desire to ensure that water could be maintained and harvested from the mountains. The efforts of developing water producing systems both pre-dates, and post-dates, establishment of the Kohala and Hāmākua Forest Reserves.

In traditional times, water resources from the mountain lands on both the Kohala and Hāmākua sides, were developed into a system of *‘auwai* that fed *lo‘i* (pond fields) and dry land agricultural activities. In this traditional system, the water drawn off from the streams almost always remained on the land of origin, and unused portions were returned to the stream sources. This ancient system supported both land-based activities and enriched the stream and near shore fisheries.

With the advent of western business interests and development in the region, water usage was increased, and both the ranches and plantations sought to develop a means of transporting the water greater distances to increase the productivity of marginal lands. By the 1880s, interests in Kohala and Hāmākua began investigating the possibilities of developing water resources from the Kohala-Hāmākua mountain lands as a transportable commodity. These efforts led to the development of the Kohala and Hāmākua ditches. In 1889, J.M. Lydgate was under contract to the Kingdom Survey Division, working in the Kohala-Hāmākua districts. His work resulted in the mapping out of the ditch alignment depicted in Register Map No. 1810. Interest by the Kingdom in development of the ditches was described in the letter cited below:

July 11, 1889

L.A. Thurston, Minister of the Interior; to J.M. Lydgate, Surveyor:

...Professor Alexander spoke to me a short time since about your fixing a few stations in the Kohala mountains while there, and said he had written to you on the subject, but that you wanted authority from this office.

As I understand from him, the points desired are in your immediate vicinity will require but little time to fix and could also be used in fixing the location of your ditch.

As the main expense of fixing the points is getting to them, and the work is germane to that you are at present engaged in and can be made useful in connection therewith, I think it is proper that you should do anything of the kind which comes under the above description and which does not to an unreasonable extent interfere with the main object of your expedition.

RE: Kohala Water.

Are you positive that you will be unable to explore the Kohala side? If you can explore sufficiently to ascertain whether there is water enough which can be brought out to make it worth while to do so, I should like it even if you do not have the time to run the line out to Kohala. The Kohala people are getting anxious about the matter. If you cannot, who, if anyone can you recommend?

RE: Waimea Water.

I do not think this water is available for Hamakua except in rainy weather as in dry times there is none to spare from this stream. I suppose you know that Schussler's plan was to run the water from other stream into the Waimea stream making use of it as an aqueduct, and taking it out again lower down... [Parker Ranch – Water File]

A chronological history of the early ditch development in the region was compiled by Parker Ranch's A.W. Carter, and provides the following references to key dates and activities:

Kohala Ditch

1883-1884. Plan to use Hamakua side of watershed for plantations.

1888-1889. Lydgate suggests ditching on upper portions of lands, under Government, for use by Hamakua plantations. Says 7,000,000 gallons daily could be obtained to be used for fluming and domestic purposes. This from Waipio stream, but not to exceed one-one hundredth of Waipio system.

1901-1902. Bernice Pauahi Bishop Estate makes exhaustive report on Honokane and Waipio conditions. Especially valuable because made during recent severe drought.

1901. Sam Parker applies for franchise for ditching for homesteaders and plantations. Immediately many others apply. For three years matter is thrashed out between Honolulu and Washington.

1905. Sam Parker and associates become purchasers. It is stated that the plan is sometime later to establish high reservoirs to carry off storm waters. Hawi-Honokaa, elevations 950 to 1000 feet would supply 19,000,000 gallons daily.

April 12, 1905. J.S. Low pays \$1,000. The area is detailed as North Boundary. The sea, etc. The boundary reaches the 4,200 elevation contour line of Kohala-Hamakua Watershed. Notice of License is given, with particulars as to districts to be supplied by 19 months, 3 years, 4 years. (1) Private Customers; (2) Homesteaders for agriculture; and (3) Plantations.

Later, a license to John W. Jones, Honolulu, appears with full detail, not a franchise. East, the summit separating Waimea Watershed from Kohala Watershed, called Kohala Watershed. Earth, rocks, trees to Jones.

“License to Jones – The license shall divert no water draining toward Waimea, nor in any way interfere with the sources of water supply of Waimea. The waters on the watershed draining from the Kohala Mountains in a northeasterly direction. The Government of the territory of Hawaii shall fix the dividing line between the Waimea Watershed and the Kohala Watershed, herein before described, it being expressly understood and agreed that should any swamp exist near such dividing line, the waters of which may be deemed by the Government to effect in any degree the water supply of Waimea, such swamp shall be excluded from the Kohala Watershed and its waters shall not be diverted by the Licensee.”

Before extensive and sustainable ranching activities could be developed on Parker Ranch, the issue of water resources needed to be addressed and resolved. In the 1890s, the ranch, under John Parker II and manager, Paul Jarrett, began work on a pipe-line system, that transported water from the Kohala Mountains to a few areas on the drier Waimea-Waikōloa plains. But for the most part, livestock on the Mauna Kea mountain lands relied on dew and seasonal rainfall. By 1900, the lack of water in the large, dry region lands of the ranch had almost stopped further growth and development of grazing lands.

A.W. Carter became trustee of the Parker Estate interests of young Annie Thelma Kahiluonapuaapiilani Parker in 1899, while the other half of the estate remained with heir, Samuel Parker. Shortly after his appointment, Carter visited the ranch and conducted an inspection of ranch

assets. Reflecting on the visit, Carter shared his recollections with his assistant, Lucille Brundage, observing that he was—

...Impressed by the idea that if the ranch was to prosper to its fullest possibility several pressing needs should have immediate attention. More lands must be acquired to provide for increase in the herds. Separation by fencing, and the importation of better breeds would improve the stock. Perhaps most essential of all was the necessity of a piping system to carry water from the mountains for distribution over pasture lands.

The region where cattle had suffered most from this need was that below Waikii. “There were not many head”, Mr. Carter said in his reminiscences, “but they had to walk away to Waimea to the stream back of Puuopelu to get a drink of water – a distance of from six to ten miles. This, of course, resulted in plenty of dead cattle in dry weather.”

Near the water sources at these times the ground would be so trampled that no vegetation remained upon which the cattle might subsist, and they would make their weary way back to their usual feeding grounds. This perhaps they would have done by instinct anyway. Weakened as they were, the long trips to and fro meant exhaustion and death for many of their number.

Eager to take steps toward improving these conditions, Mr. Carter returned to Honolulu. But as guardian of little Thelma he represented only half of the ranch interest. No important step could be taken without the approval of the other partner, Sam Parker, and when the plan was submitted to him Mr. Parker was strongly opposed to its adoption. The piping system that was needed would mean an expenditure of thousands of dollars, and he objected to the proceeds of the ranch being diverted this way instead of being available as cash. Moreover he consulted certain Honolulu engineers and was assured that the scheme was not feasible. With pipes laid according to the Carter plan, friction would be so great, they said, that not a drop of water would ever emerge at the end of the line.

Far from admitting the authority of these would-be experts, Mr. Carter decided to become an authority himself. He obtained all possible literature on hydraulics, made a careful study of the subject, and became more strongly convinced than ever. Indeed he guaranteed that if when completed the pipe did not furnish 7,000 gallons in twenty-four hours he would pay for it himself. An agreement with Mr. Parker was reached at last and the work promptly begun.

The pipe line was completed April 14, 1902 and proceeded to justify itself by sending forth 15,840 gallons of water in twenty-four hours. [A.W. Carter Water files, in collection of PPS]

Following A.W. Carter’s appointment as trustee of the ranch interests on behalf of Annie Thelma Kahiluonapuaapiilani Parker, Samuel Parker, grandson of J.P. Parker I, cousin of A.T.K. Parker, and owner of the other half share of the ranch assets, fell at odds with Carter. By 1900, Parker began to seek out ways by which to remove Carter and gain control over the combined ranch assets. There appear to have been four primary areas of leverage sought by Sam Parker and associates in their bid for the ranch—the first was water; the second, the land of Waikōloa (including the Waiki’i and Ke’āmoku sections); the third, guardianship over Annie Thelma Kahiluonapuaapiilani Parker; and the fourth, acquisition of the leasehold interest in Humu’ula and the Kalai’ehea Sheep Station.

On the first two of these items, A.W. Carter observed:

On my first visit to the Ranch I found the place undeveloped in every way.

But for the short line of pipe from Kohala mountains there was no distribution of water. Some cattle had to travel fourteen miles to get a drink of water and return fourteen miles out of their grazing ground.

Waikii paddocks had no water for the steers held there. The fattening paddocks had no water.

I told Mr. Sam Parker that there were two things that should be done immediately; one was to acquire the land of Waikoloa which had a very short lease; the other was to get water across the plain to below Waikii, as cattle in that neighborhood, although there were not many head, had to walk a ways into Waimea to get water at the stream back of Puuopelu, from six to ten miles distant.

Mr. Parker agreed that both things should be done.

Later.

Regarding the pipe line Mr. Parker repudiated this, and said he wanted all the profits and didn't want anything expended for improvements. I told him I could borrow the money. He absolutely refused to give his consent.

He then talked with some of the surveyors in town who knew nothing of hydraulics and they contended that if I went ahead with this scheme that there would not be a drop of water come out of the other end of the pipe.

I had prepared myself for this connection and I told him, that unless a certain amount of water was obtained at that end of the long pipe in twenty-four hours I would pay for it myself. (My recollection is that I said 7,000 gallons within the twenty-four hours.)

The quantity which flowed at the end of the pipe when completed was 15,840 gallons per twenty-four hours.

Some time afterwards he, Parker, came to my office in Honolulu and wanted \$5,000 as he wanted to go to Washington. I thought of the pipe line. I told him there was no profit on hand, I had paid him his share a few days before. He asked if I could not let him have the money myself. I told him I could go out and borrow the sum and loan it to him if he would give his consent to putting in the pipe line which I was anxious to do. His reply was that it was a hold-up proposition, to which I said if he so considered it I would not raise the money for him.

A few days later he came in and said he had been thinking the proposition over and would give his consent, and wanted the check for \$5000, which I borrowed and turned over to him.

The pipe line was completed April 14, 1902. [A.W. Carter Water files, in collection of PPS]

In 1902, A.W. Carter wrote to Fred Knight, regarding the matter of land and water, and a proposal by Samuel Parker to develop and maintain a ditch system in the Kohala mountains, to transport water into Hāmākua. Carter expressed concerns about the proposed ditch companies in the following letter:

January 1902.

The land of Puukapu has an unexpired term of 11 ½ years. The lands was originally leased to J.P. Parker and was held as a partnership property by the Parker Ranch...

It would be detrimental to the interests of all property owners on this end of the island of Hawaii to allow any person or company to have absolute control of these waters. The power to divert water on the mountain will be extremely dangerous to any present property holders.

Water should be allowed to flow in its natural course where it is being utilized. Of course the waters that run down into the streams of Waipio, Waimanu and Honokane, and other gulches that run into the sea, should be used if possible, and we have no objection as far as Parker Ranch is concerned to utilizing these waters, but the natural flow of water on the top of the mountain should not be interfered with.

I am sending you a map which will give you a rough idea of the situation. You will notice the lands of Puukapu and Crown Kawaihae, also leased to Ranch, include most all of the watersheds of the Kohala mountains, the heads of the ravines and gulches being the boundary of Puukapu and Kawaihae.

It is possible that such a Company as is proposed to be formed will have the power to condemn property such as this for their purposes. If this is possible, it will be, I consider, very detrimental to the interests of Thelma. Should this franchise be granted, even if they should not have such powers, it will only be a question of time when they will control the situation... [Parker Ranch, Water File]

Being that timing for the efforts of establishing the Kohala-Hāmākua ditches and Hawaii Ditch Company came shortly after Hawai'i was declared a Territory of the United States, action on the matter was forwarded to the 57th Congress, where a bill was introduced as House Resolution 9307:

January 15, 1902.

Mr. Wilcox introduced the following bill; which was referred to the Committee on the Territories and ordered to be printed.

A Bill

Granting to the Kohala Ditch Company, Limited, the right of way over public lands in the Districts of North and South Kohala, in the island of Hawaii, for the purposes of constructing and maintaining ditches or canals and the necessary reservoirs, dams, and the like for irrigation and domestic purposes in said districts.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled;

That the Kohala Ditch Company, Limited, a corporation duly organized under the laws of the Territory of Hawaii, its successors and assigns, be, and is hereby, granted the right of way to construct and maintain two ditches, to be known as the Upper Kohala Ditch and the Lower Kohala Ditch, said Upper Kohala Ditch to begin at or about the elevation of four thousand five hundred feet on the land known as Puukapu, and said Lower Kohala Ditch to begin at or about the elevation of two thousand feet on the land known as Muliwai, each of said ditches running through and over the public lands in said island of Hawaii, Territory of Hawaii, within 'the following described area, to wit: Bounded on the north by the sea, on the east by Waipio Valley and the summit separating the Waimea Watershed from the Kohala Watershed, on the south by the summit of the Kohala Mountains, and on the west by Pololu Gulch, said area being known as the Kohala watershed, and through, over and upon such other public lands in the districts of North and South Kohala and Hamakua as may be necessary to properly supply the consumers of water, and for the conservation and utilization of waters now running waste into the sea; also the right to construct and maintain reservoirs, dams, impounding embankments, tunnels, feeders, waterways, flumes, inverted siphons, pipe

lines or such other works as may be necessary to conserve and convey the waters of the Kohala watershed along or across said public lands. Said right of way shall be to the extent of the ground occupied by such ditches or canals and reservoirs and their laterals and fifty feet on each side of the marginal limits thereof. The said Kohala Ditch Company is also granted the right to take from the public lands adjacent to the ditches or canals and reservoirs such earth and stone or other material as may be necessary for the construction of the same.

Sec.2. That said Kohala Ditch Company may institute in the United States district court for "the Territory of Hawaii proceedings for the condemnation of such private land as may be necessary to cross and use in constructing and maintaining the ditches or canals and reservoirs as herein described whenever said company and the owners of any such lands fail to come to an agreement in respect thereto.

Sec. 3 That the work of constructing said ditches or canals and reservoirs shall be commenced within two years and completed within six years from the date of the approval of this Act; and in default of either of these conditions Congress may declare the rights herein granted null and void. [Parker Ranch, Water Files]

Samuel Parker succeeded in securing the lease and forming the partnership which developed into the Kohala, Hāmākua and Hawai'i Ditch Companies. In 1906, J.T. McCrosson, manager of the Hamakua Ditch Company described the history of the water and ditch development on the Kohala-Hāmākua mountain lands in the following letter:

July 30, 1906

***J.T. McCrosson, General Manager, Hamakua Ditch Company;
to Geo. R. Carter, Governor of the Territory of Hawaii:***

...Answering your inquiry for information regarding water development for irrigation purposes by Kohala and Hamakua Ditch Companies on the Island of Hawaii, I beg to submit the following:

The plantations of the Kohala and Hamakua Districts are among the oldest and have been in years past among the most productive of non-irrigating plantations on these Islands. Owing to the destruction of the forests on the highlands behind the plantations, the rainfall during the last 25 years has been constantly decreasing and, notwithstanding an increase in acreage, the annual output in sugar has greatly diminished.

The Kohala Mountains between 4,000 and 5,000 elevation, and lying directly in the path of the rain clouds forced by the trade winds between the high mountains of Maunakea on the Island of Hawaii and Haleakala on the Island of Maui, furnish one of the best watersheds on these Islands.

It has long been the desire of the various plantations in Kohala and Hamakua to obtain a water supply for domestic and irrigation purposes because during many of the seasons of drought the Hamakua plantations particularly have been compelled to cart water from the mountain streams for the purpose of supplying their laborers and animals with this most needful liquid.

One of the first attempts to investigate the watershed under discussion was made during the summer of 1880 when Geo. C. Williams, then-Manager of the Kohala plantation commissioned the writer to ascertain the feasibility of obtaining water for fluming purposes for the above plantation. A most bountiful supply was found to exist in the numerous permanent streams, but owing to the excessive cost of bringing the same out to the plantation and the lack of cooperation among the various interests in

Kohala, Mr. Williams abandoned the proposition.

In 1883 or 1884 Mr. H.P. Baldwin in company with Mr. Schussler of San Francisco, made a partial investigation of the Kohala Mountains from the Hamakua side for the purpose of furnishing water to the plantations in Hamakua. Owing to more important business requiring Mr. Baldwin's attention on Maui, the investigation was dropped.

In 1888-1889 the Hawaiian Government through Mr. J.M. Lydgate made a thorough examination of the upper portion of the Kohala Mountains in Hamakua for the purpose of furnishing water for fluming and domestic purposes on the Hamakua plantations. Mr. Lydgate found that a daily supply of about 7,000,000 gallons could be obtained from the high elevation where he proposed locating his ditch. This water would have come from the Waipio streams, but he stated that it would not in any way interfere with the valleys below, as at no time would the 7,000,000 gallons proposed to be taken exceed the 1/100 part of the Waipio system.

The next investigation was made in these mounts, conducted by Mr. W.W. Bruner in 1892, for the Hawaiian Government and was made from the Kohala side of the mountains for the purpose of furnishing a domestic supply for the plantations and homesteads in the Kohala District. This survey, like that of Mr. Lydgate was made near the top of the watershed under investigation, and to keep up the parallel, the report and maps were carefully stored away in the archives of the Minister of the Interior.

The impetus given the sugar business by Annexation to the United States caused some of the plantations in Kohala to install expensive pumping machinery to raise water for irrigating their cane lands. This indication that the plantations were in earnest in their desire for water, induced the writer to visit Hawaii in 1900 and to make a more extended investigation into the quantity of water to be obtained and the approximate cost of conducting the same to homesteaders and plantation consumers. After spending several months studying the situation, I became convinced that it would prove a good commercial proposition to conserve the mountain water then running waste to the sea, leading it to consumers in the districts East and West of the watershed.

During 1901 and 1902 the Bernice Pauahi Bishop Museum Trustees and the Trustees of the Bishop Estate made the most thorough and exhaustive examination of the Waipio and Honokane water resources that has ever been made in the Kohala Mountains. Very fortunately this investigation was made during one of the most severe droughts that has been recorded in Hamakua or Kohala and the data can be relied upon as being the minimum flow of the streams gauged.

Early in 1901 an application was made by Col. S. Parker, the lessee of a considerable portion of the Kohala Mountains, to the Territorial Government for a franchise or license to take the water from the Government land in the Kohala Mountains for the purpose of conducting the same to homesteaders and plantation consumers. Almost immediately after it became known that Col. Parker and his associates had applied for a franchise, to develop the water in question, numerous other applicants and claimants appeared, all asking for the franchise and expressing their willingness to spend their time and money for the benefit of the people of Kohala and Hamakua. After three years of investigation in Honolulu and Washington as to the rights of various claimants, the matter was brought to an issue by the Territorial officials submitting the franchise to Public Competition at an upset price. The agent of Col. Parker and associates became the purchaser, and in the latter part of January 1905, work was commenced on the Kohala Ditch.

This ditch consists of two sections. The first section from Hawi Plantation to Honokane, the first large mountain stream, is 13 miles in length and consists of 9 miles of tunnels, 1/2 mile of fluming and 4 miles of open ditching. The tunnels and open ditching are all lined with concrete or stone, set in cement mortar making a permanent job and reducing the seepage to a minimum. This first section was completed June 1 (1906), of this year and is now supplying its consumers with an average of 19,000,000 gallons daily. The ditch has a capacity of 70,000,000 gallons daily and delivers the water on the plantations at an elevation of between 1000 and 950 feet.

The second section of the Kohala ditch runs easterly from Honokane to Laupahoehoe #2, and is 6-1/2 miles long, being nearly all tunnel. This work will be completed early in 1907, and will furnish sufficient water to develop at least 6000 acres of new land between Hawi and Mahukona. There are many thousands of acres of good land belonging to the Government which will be made most valuable by the completion of the Kohala Ditch proper; and by the construction, later of an auxiliary ditch at much higher elevation which will be capable of carrying off the storm waters in the mountains and storing them in suitable reservoirs from which they can be conducted to the homesteaders and planter below. The present ditch (1906) is capable of caring for only a small portion of the water that at times runs waste to the sea.

In March of the present year the Hamakua Ditch Co. began the construction of the Hamakua Upper Ditch which will take water from the Kohala Mountains in Puukapu for the use of the homesteaders and planters in Hamakua, to flume the cane from the highlands to the mills. This ditch will mean success to the many homesteaders now located in Hamakua. The cost of carting their cane to the mills is so great that many of them have been compelled to give up planting; but with the prospect of obtaining water for fluming purposes, many of the people are again going into cane planting. I may here mention that the management of the plantations in Hamakua are doing everything in their power to encourage the homesteaders, offering them free water for fluming, and remunerative prices for all cane grown by them.

The Hamakua Lower Ditch has not gone further than the preliminary surveys. Actual construction work will probably be commenced within the next 2 months. The completion of those 2 ditches in Hamakua will mean much for that district, insuring a good crop annually and taking the plantations out of the speculative category in which they have been for so many years.

The combined cost of the Hamakua Upper and Lower Ditches will exceed \$1,000,000.00.

Trusting that this outline of the work done and what is being done in the Kohala Mountains answers your inquiry... [Parker Ranch, Water Files]

While Parker and Carter both vied for control over water, lands, and other trust assets, in 1902, Sam Parker, cousin Eben Low and backers set in motion plans to take over the ranch and remove A.W. Carter. Their first action was to contest Carter's trusteeship of Annie Thelma K. Parker. Parker and party also bid, unsuccessfully, on the Waikōloa lands from heirs of the Davis Estate, and attempted to demonstrate that expenditure of Parker Estate funds on the development of the water lines for the ranch was a waste of assets. Things got so heated between Sam Parker, his partners, and A.W. Carter, that a take over was attempted, and on June 7th, 1904, Eben Low, J.A. Magoon, and J. Lightfoot stormed Carter's office, with Low apparently brandishing his pistols (A.W. Carter & Parker files 1904). Things were heated, but no shots were fired. Subsequently, John "Keoni Poko" Lindsey (father of *Kupuna* Elizabeth Lindsey-Kimura) slept in Carter's office, armed, in case of an attack.

In response to criticism and subsequent litigation over trusteeship and waste of ranch capital in the development of water lines and paddocks, numerous communications between A.W. Carter, Fred

Carter (A.W.'s brother, and assistant in the daily management of ranch operations), and Mrs. Elizabeth "Tootsie" Dowsett Parker-Knight (mother of A. Thelma K. Parker) were recorded. Also, as litigation heated up, numerous testimonies by ranch employees describing conditions on the land and ranch operations prior to the availability of reliable water sources on the ranch were taken.

Several communications from the period between 1900 to 1909 are cited below in chronological order, with particular emphasis on development of water resources. Unless otherwise noted, all records cited were viewed in the collections of the Parker Ranch and Paniolo Preservation Society, under such headings as—Water, Cattle, and Employees:

1900 - A.W. Carter Notes on Inspection of Water Resources, and Proposed Development of Water Lines:

From a pool in this stream [Waikōloa], about 1 ½ miles North of Waimea, the stream has a steep descent to the plain. Above this pool it is flat, so by locating the head of the pipe nearly a mile above, but little will be gained in elevation.

This pool, and proposed head of pipe, is lower than the Waikii paddock.

The water can be delivered at a point 8700 feet distant, northerly from Paddock # 2.

This requires a pipe 52,600 feet, or ten miles long. The fall, as indicated by aneroid, is 170 feet. Under these conditions a 2 inch pipe will deliver 20,000 gallons in 24 hours. A 1 ½ inch pipe will deliver 10,000 gallons. The pipe will be 1800 feet shorter. The objection to stopping the pipe at this point is its greater distance from the paddocks.

The water should at all times be allowed to flow freely. There should be no stopcock in the pipe (the main pipe).

The utility of this pipe can be much increased by making one or more reservoirs to store the water which otherwise would run to waste. An asphalt lining would be suitable for such reservoirs...

1901, April 23. (A.W. Carter to F. Carter) – Mr. Howell takes the steamer today for Parker Ranch. I have requested him to examine the water supply on the Kohala side and to run levels for a pipe line across the plain to the direction of the Waikii paddocks; also to run levels from the spring on the Paauhau side towards the Dairy [Pu'u Kikoni]. Mr. Wall will go up next week on the Kinau for the purpose of locating all boundaries and laying out all paddocks on the map [see Parker Ranch Map dated, 1901].

1901 (ca. May). W.A. Wall to A.W. Carter:

Report on Surveys and Investigations for Piping Water from Kohala Mountain to Waikii Paddock, Parker Ranch.

The most practical point for taking water from the mountains is at the head of the rapids on Waikoloa Stream, 1 – ¾ miles north of Waimea Village, at or near a point recommended by Mr. Kleugel. See accompanying sketch of water head. The line was staked out from this point to a point within 8,300 feet of Waikii Paddock. Three terminal stations were located and marked by stakes marked T. No. 1, T. No. 2, and T. No. 3 respectively.

Estimates of flow were made at each point as follows:

Estimated flow through a two inch pipe from water head on Waikoloa Stream into a tank at T. No. 1 – 16000 gallons, to T. No. 2, 14000 gallons and to T. No. 3, 10000 gallons per 24 hours. 10000 gallons per 24 hours being sufficient supply for Waikii. T. No. 3 which point is marked by stakes is a preferable location for tanks and watering

troughs as it is the nearest possible point to paddock to which water can be brought from the adopted water head. The following estimates refer to T. No. 3 as terminus:

Distance from water head to terminus	53,800 ft.
Length of pipe required	54,300 ft.
Assumed elevation of water head	1,000 ft.
Elevation top of entrance tank	997 ft.
Elevation of outflow top of tank 12 ft. high	897 ft.
Total head	100 ft.
Estimated flow per 24 hours	10,000 gal.
Greatest pressure per sq. inch	380 lbs.
Average pressure per sq. inch on pipe across plains	360 lbs.
Distance from terminus to Paddock	8,300 ft.
Elevation of Paddock gate	1,530 ft.

or 645 feet higher than proposed terminus:

Waikii Paddock being higher than any practical point for piping water from Waikoloa Stream, levels were run and investigations made up stream just back of Thos. Lindsay's place. On this stream an elevation 300 ft. higher than adopted water head can be had, but this supply at this elevation in extremely dry seasons would be doubtful. It would require about 1 ½ miles longer pipe on the mountain end and it would be a difficult and expensive task to get pipe in place on mountain. Taking water from this stream at the above mentioned point it could be raised to a point marked A on the accompanying profile which is about 4,800 feet from Paddock or 3,500 feet nearer than adopted terminus.

Considering the additional cost, additional pressure on pipe and doubtful supply of water, it is not economic to take water from this stream in preference to Waikoloa and all further remarks are directed to the Waikoloa Stream.

If it should be necessary to take water from main pipe at any intermediate point or points as B and C (indicated on profile) the only practical method of doing so would be to establish large tanks or reservoirs at desired points, connect them to main with full two inch connections. Place stop valve near and on Waikii side of tank connections, said valve to be closed immediately when water is turned into tank or reservoir. In filling tank or reservoir, allow water to flow at full capacity of main pipe. The valve referred to will prevent Waikii end from emptying and immediately the water is turned through the main it will begin to flow at Waikii. The supply at Waikii will be diminished in proportions to time required to fill tanks at B and C. Ten Thousand gallons at B and C like amount, can be taken by this method in 12 hours leaving 12 hours uninterrupted flow as Waikii, or 5000 gallons during same day or a total of 25000 gallons per 24 hours.

Theoretically by means of automatic valves, or a steady flow at B and C water could be taken from the main at the rate of only 10,000 gallons per 24 hours leaving no or very little flow at Waikii. It would be necessary to have a careful man to look after filling of tanks. Distributions from tanks could be accomplished automatically.

Provision should be made for repairs in main, such as placing flange joints at intervals of 1000 feet or so apart or else keep in stock a number of such joints together with proper tools for fitting in said flange joints. A good quality of commercial galvanized wrought iron pipe would fulfill requirements. All valves inserted in main should be of full two inch openings.

In taking water from stream (see sketch of water head) it will be necessary to blast out a ditch 44 feet long and 3 ft. deep or sufficient depth to take supply without the use of a dam. A flume or 4 inch pipe should convey water to entrance tank marked on sketch.

Stakes were replaced for location of same.

A tank 7 feet in height to be placed where indicated by stakes. A screen must be placed over the top of tank which must be kept at overflow. The main pipe should enter tank two feet or so above bottom. In laying pipe from tank along gulch, care should be taken not to lay in over stakes at any point before leaving gulch...

1902, January 30. (to Mrs. Knight) – The 2 inch pipe line which is to be laid from back of Waimea to Waikii has arrived, and I have engaged one of the Myers boys from Molokai to attend to putting it up.

I believe this will be a great advance in improvement on the Ranch.

1902, April 18. (F. Carter to A.W. Carter) – Regarding water at Waikii, the pipe is now in the tank 17 ft. from the ground and is discharging at rate of 5 gal. every 24 seconds. (17,000 gal. per 24 hours).

1903, December 21. (F. Carter) – No water running in Waimea streams. Still water in water holes on way to Kawaihae. All feed at Kawaihae burned up. Cattle unable to get water at beach on account of high seas. Should have a windmill at Puako side of Kawaihae and one near our cattle pens.

Cattle at Waikii paddocks showed distress, so took them out and put them in Pa Kila with gates open to Pa Aalii where they can get water. Brush all drying up. Even mamani leaves hanging straight down.

No fog, no rain, no dew. In all the years I've been here have never seen it so dry.

1904, June 26.

Statement of John Lindsey, to W.A. Kinney (Translated):

Mr. Carter has done a great deal of piping, and particularly that to Waikii paddock. That is a fine fattening paddock that belongs to the ranch. It is on the slope of the mountain, but when dry weather came on the cattle died for want of water.

As long as the weather is not too windy the dews are sufficient to keep the animals supplied with water, but when it is windy and dry that fails and the animals die very fast.

They are so far away from the water supply at Waimea that it is impracticable to save them by taking them to water there. If they undertake the journey are apt to die right after drinking the water at Waimea.

Thousands of animals have died in that paddock from that cause.

But now that difficulty is overcome as water has been piped across to the paddocks, since which time the death rate has become merely nominal, perhaps two or three in a thousand, whereas previously they have been known to die so fast that the hides could not be saved from the carcasses.

This piping has also helped the land of Waikoloa makai. This is a country without any water or spring, but it is good land for the pasturing of animals.

Heretofore, as soon as dry weather would come on the animals had to leave so that the land would not be carrying stock.

Sometimes the animals would leave and go up to Waimea for water, and attempt to come back, but the distance would wear the stock out travelling to get water, so that the land was not available for stock as soon as the dry weather came on.

Now, however, this pipe line that comes to Waikii also supplies water for the stock at four points, and the result is that the stock is now able to remain on this land, which is good pasture land.

One result also is that the land now carries and sustains more livestock even in dry weather than it did formerly before the water was brought over, in wet weather...

1905 – excerpts of Paul Jarrett's Testimony:

When Waikii is dry the feed dries up there. If the cattle had water or moisture they would manage to exist, but at the Waikii paddocks we trusted to the dew entirely, for their water, which was quite sufficient.

The dew comes when there is no wind, but if the wind is blowing, that is when there is no dew, and the time the stock begins to settle.

Say about two weeks steady wind – the cattle will begin to feel the effects of it then. They have had the young weeds – grass – they get moisture from that, but after two weeks of winds blowing that all seems to parch up, and no moisture in it, and then the cattle begin to settle.

Three weeks wind would cripple that portion of the ranch very effectually. Waikii has the best fattening lands on the ranch. I considered it the cream of the ranch...

Litigation over right of trusteeship was decided on November 3, 1905, in favor of A.W. Carter as trustee. And the case regarding partition of assets was decided in September 1906, thus bringing an end to more than five years of disagreements and litigation. The result was that water flowed across the land to outlying regions, and A.W. Carter went on to develop Parker Ranch to its fullest potential.

As a result of the settlement, Carter fully developed the potential for collection and transport of water from the Kohala Mountains to the Waimea-Waikōloa plains. The development and description of resources is described in the following excerpts of communications and notes from A.W. Carter and other participants in the water development history of the Kohala-Hāmākua mountain lands:

December 7, 1906

J. Jorgensen; to A.W. Carter:

...As requested by you, the undersigned made a preliminary survey of a proposed pipeline from Alakahi Branch of the Waipio Stream said pipeline to connect with two existing pipelines across the Waimea plains to Waikii and Wahinekeahou, and begs to submit the following:

Intake:

Alakahi Stream 4007 feet above sea level; ¼million gallons following dry weather...

January 31, 1909

W.E. Rowell; to A.W. Carter:

The day after I wrote you last week bad weather began and we could not do much *mauka* until Friday and Saturday, when I connected to the falls.

The first trail I ran on the course from the base of Punohu [Puunohu], and it took us over a high hill which would be impractical for a pipe line. So I went back to the old trail, and going forth 980 ft., ran a trail that cleared the hill and struck the trail made by the

Japanese to carry the level around from the Alakahi pipe head.

The point where I struck this trail is Sta. (66); from where I ran N.E. 2,800 ft. to the pipe, and S.W. 2,100 ft. to the stream.

Sta. (20) is on the old trail that I told you of before you went away.

The elevations given on the sketch [Figure 6] are relative; the distances are all measured.

To see how the pipe could be brought out of the valley from the falls, I ran a 6% grade down, and struck Sta. (88) on the cross line, and it will be some distance further to get out of the valley.

On this 6% line the side of the valley is very steep, and the pipe will have to bend in many places to fit the contour.

In a number of places it will have to be fastened to perpendicular rock.

So, as I wrote you, the conditions will be better to make a reservoir somewhere near Sta. *82 and bring the water from the falls in a large pipe on a low grade (which pipe would be about 800 ft. long), and then by a ditch to reservoir.

The reservoir will be at a little higher elevation than the present pipe head, and the pipe shorter.

A large reservoir can be made near (82) than in the stream, and a break in the pipe from the falls would still have the water in the reservoir to draw on.

The distance from (82) to (20) is 5,300 feet; and from (2) back to the pipe I estimate at 2,000 feet, though the line has not been cut.

There seems to me to be no question but the supply will be sufficient. After two weeks of dry weather when there was only 1/4 inch in the stream, supposing the present water head there was more than this on the cross trails than can be carried to the (82) reservoir by ditch, without going into the valley at all.

If you decide to carry out this plan the first thing to do is to make some explorations and select the best site for the reservoir. Then cut trail to (32) and from (20) to the pipe.

Also a good walking trail should be cut from (20) back to the pipe. The distance is about 3,000 feet and it can be done for \$1.00 per 100 feet.

This trail will be used after the pipe is laid by the man who goes up to inspect pipe and water head.

When the weather is bad or if it looks as if it would be bad, it is very hard to get the Japanese to work.

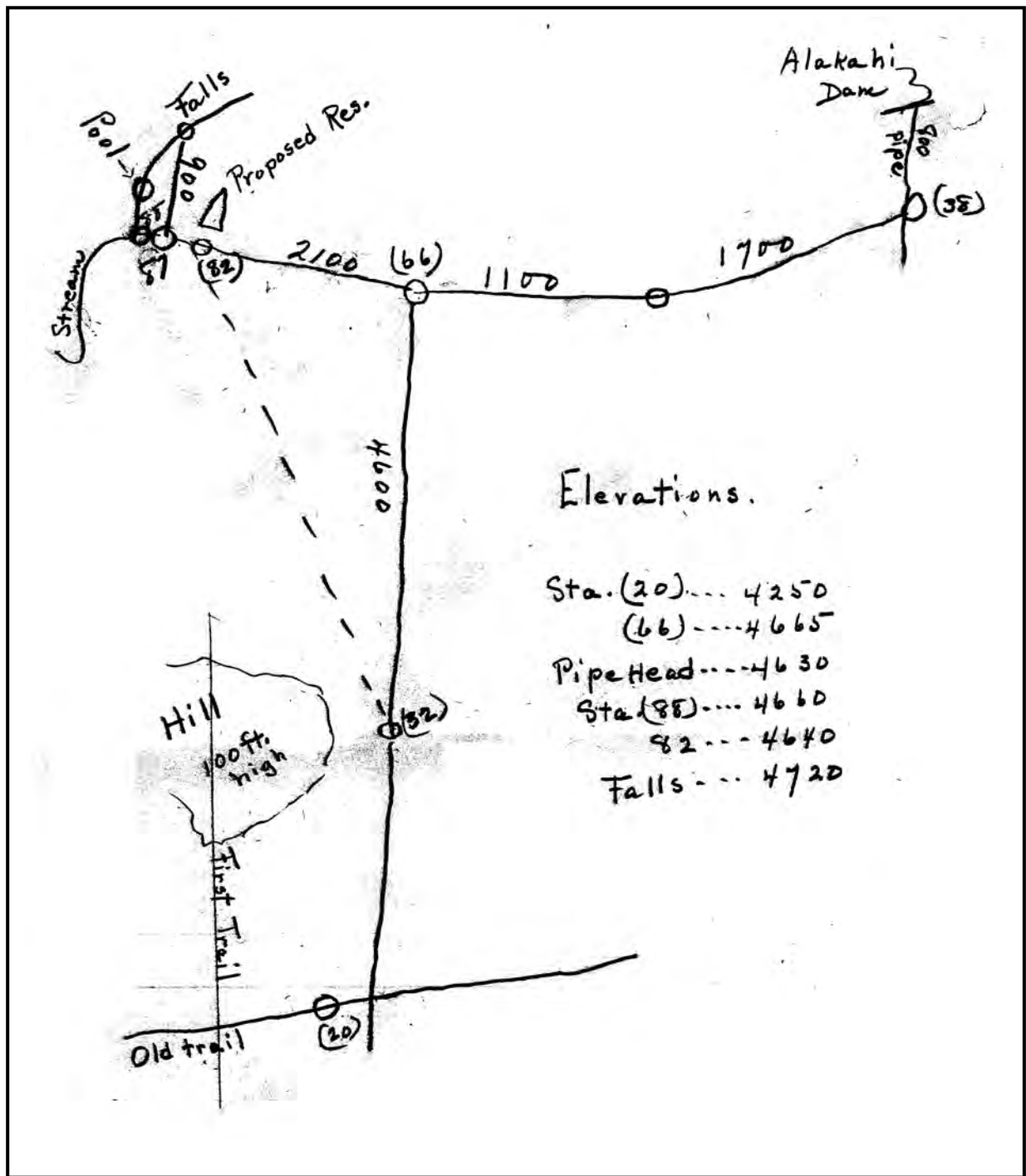


Figure 6. Sketch of Water System Line, Alakahi and Vicinity (1909)

At present there is a large amount of water coming from the falls, and it will be a bigger job to put in a measuring weir than at Alakahi...

The result of the combined projects of Parker Ranch and the Kohala-Hāmākua Plantations was that water flowed from the mountain lands feeding business interests and supplying water to the ever growing community in North Hawai'i. The Kohala Ditch was maintained as a part of plantation operations through 1975. The Hamakua Ditch System was maintained as a part of the plantation operations through 1993. Parker Ranch interests in the Pu'ukapu vicinity intakes, continue to be managed and water used for ranching operations.

One additional historical point regarding the present-day condition of the Kohala-Hāmākua mountain lands, is that things could have been quite different had the United States Military acted on its plan for training in the mountains in 1945. In the letter below, A.W. Carter addressed his concerns to Commander Musser, in response to a U.S. Navy proposal to develop training opportunities on the mountain lands:

August 9, 1945

A.W. Carter; to Commander Musser:

In re. South Kohala Forest Reserve.

As I explained to you in our interview, I am very strongly opposed to using the South Kohala Forest Reservation for training purposes which would involve large numbers of men going into the same.

It would result in contamination of the water system which serves the community and all the Parker Ranch employees in that district. There is no other water available.

Secondly, the forest reserve on the mountain has a very good coverage of growth and undergrowth, and also scrub *ohia* trees. The use of this area for training would be detrimental to the forest.

However, the primary objection is the pollution of the water which is used by all the people of Waimea... [Parker Ranch, Water Files]

In 1963, Richard Smart wrote about the role of water development in the history of the ranch, and summarized events in the following narratives:

The history of water on Parker Ranch is fascinating. In 1900, there was no water distribution system for the Ranch. The break-through to gain water for our lands started under the late Alfred Wellington Carter in the early 1900's. He installed the first two-inch line from Waikoloa intake to Aalii [lower Waiki'i].

Installation of three-inch lines with more branches followed. Higher pressures were introduced by adding intakes not only in Kohakohau but also in Alakahi. Delivery ends of the lines were extended. The water was lifted still higher up Mauna Kea by diesel engine pumps.

Finally, Parker Ranch could count 160 miles of water carrying pipeline. Until the unprecedented drought, this seemed to fill our needs. But in the drought crisis it was brought home that changes would be necessary to fulfill our place in a growing, demanding market... [R. Smart in Paka Paniolo, October 1963; in the collection of PPS]

NĀ ULU LĀ'AU A ME NĀ KINI KINO LAU O LOKO (THE FORESTS AND MULTITUDES DWELLING THEREIN)

As discussed in earlier sections of this study, Hawaiian traditions and beliefs, shared spiritual and familial relationships with the natural resources around them. Each aspect of nature from the stars in the heavens, to the winds, clouds, rains, growth of the forests and life therein, and everything on the land and in the ocean, was believed to be alive. Indeed, every form of nature was a body-form of some god or lesser deity. As an example, in this context, and in association with lands which are now included in a part of the landscape of the Pu'u o 'Umi NAR, we find that the goddess *Hina-ulu-ōhi'a* (Hina, goddess whose form is in the groves of 'ōhi'a); and *Pō-kāhi* (The darkened place), a god of the mountain mists (see the tradition of *Lau-ka-īe'ie* in this study), are deified parts of the landscape. Such body forms and attributes in the Hawaiian mind are "*kino lau*," the myriad body-forms of the gods and creative forces of nature that gave Hawaiians life.

In the Hawaiian mind, care for each aspect of nature, the *kino lau* of the elder forms of life, was a way of life. This concept is expressed by Hawaiian *kūpuna* (elders) through the present day, and is passed on in many native families. When discussing the relationship of native families with the lands and resources around them, it is not uncommon to hear *kūpuna* express the thought — "*E mālama i ka 'āina, a e mālama ho'i ka 'āina iā 'oe! E mālama i ke kai, a e mālama ho'i ke kai iā 'oe!*" (Care for the land, and the land will care for you! Care for the sea, and the sea will care for you!). This concept is one that is centuries old and is rooted in the spirituality of the Hawaiian people. Importantly, the converse is that when one fails to care for, or damages nature—the *kino lau*—around them, they are in-turn punished. This is expressed in many traditional sayings, one being, "*Hana 'ino ka lima, 'ai 'ino ka waha!*" (When the hands do dirty-defiling work, the mouth eats dirty-defiled food!). In this cultural context, anything which damages the native nature of the land, forests, ocean, and *kino lau* therein, damages the integrity of the whole.

Of course, since traditional times, many things that were a part of the native Hawaiian natural and cultural landscape have disappeared—being destroyed by changes in land tenure, changes in residency and subsistence practices, and by the introduction of tens-of-thousands of alien species, which have overrun the formerly balanced and fragile bio-systems that made Hawai'i unique.

Writing in the late 1860s and early 1870s, native historian, S.M. Kamakau, related to readers some aspects of the Hawaiian association and understanding of the mountain lands and forests. While describing traditional knowledge of the divisions of land, Kamakau wrote:

Here are some other divisions of the islands, together with their descriptive names.

Heights in the center or toward the side of a land, or island, are called *mauna*, mountains, or *kuahiwi*, "ridge backs." The highest places, which cover over with fog and have great "flanks" behind and in front (*kaha kua*, *kaha alo*)—like Mauna Kea—are called *mauna*; the place below the summit, above where the forests grow is the *kuahiwi*. The peak of the mountain is called *pane po'o* or *piko*; if there is a sharp point on the peak it is called *pu'u pane po'o*; if there is no hill, *pu'u*, and the peak of the mountain spreads out like the roof of a house, the mountain is described as a *kauhuhu mauna* (house ridgepole mountain); and if there is a precipitous descent, *kaolo* [from the peak] to the *kauhuhu mauna* below this is called a *kualo* ("block"). If there are deep ravines (*'alu ha'aha'a*) in the sides of the mountain it is called a *kihi po'ohiwi mauna* ("shoulder edge" mountain). A place that slopes down gradually (*hamo iho ana*) is called a *ho'oku'u* (a "letting down"); a sheer place is called a *pali lele koa'e* (cliff where *koa'e* birds soar), or a *holo* ("slide"), or a *waihi* (a "flowing down"). Rounded ridges that extend from the mountains or "ridge backs" or hills are called *lapa* or *kualapa* or *mo'o*—and, if they are large, *'olapalapa* or *'omo'omo'o*. Depressions between *lapa* or *mo'o* are *awawa*, valleys.

Here are some names for [the zones of] the mountains—the *mauna* or *kuahiwi*. A mountain is called a *kuahiwi*, but *mauna* is the overall term for the whole mountain, and there are many names applied to one, according to its delineations (*'ano*). The part directly in back and in front of the summit [Kamakau 1976:8] proper is called the *kuamauna*, mountaintop; below the *kuamauna* is the *kuahea*, and *makai* of the *kuahea* is the *kuahiwi* proper. This is where small trees begin to grow; it is the *wao nahele*.⁵ *Makai* of this region the trees are tall, and this is the *wao lipo*. *Makai* of the *wao lipo* is the *wao 'eiwa*, and *makai* of that the *wao ma'ukele*. *Makai* of the *wao ma'ukele* is the *wao akua*, and *makai* of there the *wao kanaka*, the area that people cultivate. *Makai* of the *wao kanaka* is the *'ama'u*, fern belt, and *makai* of the *'ama'u* the *'apa'a*, grasslands.

A solitary group of trees is a *moku la'au* (a “stand” of trees) or an *ulu la'au*, grove. Thickets that extend to the *kuahiwi* are *ulunahale*, wild growth. An area where *koa* trees suitable for canoes (*koa wa'a*) grow is a *wao koa* and *mauka* of there is a *wao la'au*, timber land. These are dry forest growths from the *'apa'a* up to the *kuahiwi*. The places that are “spongy” (*naele*) are found in the *wao ma'ukele*, the wet forest.

Makai of the *'apa'a* are the *pahe'e* [*pili* grass] and *'ilima* growths and *makai* of them the *kula*, open country, and the *'apoho* hollows near to the habitations of men. Then comes the *kahakai*, coast, the *kahaone*, sandy beach, and the *kalawa*, the curve of the seashore—right down to the *'ae kai*, the water's edge.

That is the way *ka po'e kahiko* named the land from mountain peak to sea. [Kamakau 1976:9]

Among the native terms listed by Kamakau, above is one which stands out in reference to the Hāmākua-Kohala mountain lands of the Pu'u o 'Umi NAR; this zone is the *wao akua* (zone or region of the gods and deities). The *wao akua* is so named because of the pattern of cloud cover and precipitation which settles upon the mountain slope—this covering was interpreted as concealing from view the activities of the gods and deities therein (cf. David Malo 1959:16-18; and M.K. Pukui, pers. comm. 1975).

In the traditional context above, we find that the mountain landscape, its' native species, and the intangible components therein, are a part of a sacred Hawaiian landscape. Thus, the landscape itself is a highly valued cultural property. Its protection, and the continued exercise of traditional and customary practices, in a traditional and customary manner, are mandated by native custom, and State and Federal Laws (as those establishing the Kohala-Hāmākua Forest Reserves and Pu'u o 'Umi Natural Area Reserve; and the Endangered Species Act).

In this discussion, protection does not mean the exclusion, or extinguishing of traditional and customary practices, it simply means that such practices are done in a manner consistent with cultural subsistence, where each form of native life is treasured and protected. *Kūpuna* express this thought in the words, “*Ho'ohana aku, a ho'ōla aku!*” (Use it, and let it live!).

Transitions in the Health of Hawaiian Forests Following Western Contact

We find that shortly after western contact, the introduction of alien herbivores, and financial value being placed upon resources of the forests and mountain lands, the health and integrity of the resources began to decline. After western contact, the forests were primarily evaluated in the terms of the western economic system. While in the centuries prior to the arrival of westerners in 1778, and subsequently into the reign of Kamehameha I, the system of land tenure and management mirrored the natural landscape of the islands, later management systems focused on what, and how much could be gotten from the land.

Immediately, upon western contact, foreigners looked at the land—first as a source of provisions for ships; and second as a means for earning money, through the trade of natural resources such as

ʻiliahi (sandalwood). In 1778, European boars, goats, rams, and ewes were introduced by Captain Cook. While offered as a “gift,” one of the motivating factors was that leaving the animals behind would produce a breeding stock to supply other foreign ships (Beaglehole 1967:276, 578-579). Later, in 1793, cattle were brought to Hawaiʻi by Captain Vancouver. Given as gifts to Kamehameha I, the cattle were first let off at Kawaihae (then at Kealahou), and were placed under a ten-year *kapu* to protect them and allow them to reproduce (Kamakau 1961:164). Between 1793 and ca. 1811, new stock was added, and the numbers of cattle had increased dramatically. The cattle and other introduced stock rapidly became a problem to the native population and forests.

While the introduced animals were making their way into the higher elevations, other economic pursuits also led to the clearing of large tracts of land. In the early 1800s (ca. 1810-1829), tens-of-thousands of pounds of *ʻiliahi* (sandalwood) were cut from the forests around Waimea and shipped out of Kawaihae (cf. Kamakau 1961, and Ellis 1963). By the 1830s, the forest had been stripped of sandalwood and many other plants of the forest were impacted by the clearings made for collection and transportation of the *ʻiliahi*. Another reason that large sections of forest were cleared, was to develop lands on which western-introduced food crops could be cultivated and harvested for sale to visiting ships.

In this part of the discussion, it is appropriate to note that the European boar was significantly larger, and thus stronger, than the Polynesian introduced *puaʻa*, or pig (Beaglehole 1967:579). Our review of more than 60,000 native Hawaiian land documents dating from 1846 to 1910 revealed many references to *puaʻa* (pigs), but nearly every reference was in the context of them being near-home and as being cared for (raised), not hunted. In the same review of the native Hawaiian land documents, and a large collection of writings from native authors (e.g., D. Malo, 1951; J.P. Ii, 1959, S.M. Kamakau 1961, 1964 & 1976), every reference to traditional collection or “hunting” (a word seldom used in the historical records), was in the context of native birds—those used either for food or from which feathers were collected for royal ornaments and symbolic dress.

After ca. 1815, we find that when native Hawaiians went hunting in the uplands—as described in testimonies and historical texts of the time—they were hunting bullocks, goats and other introduced grazers, and this was generally done on the demand of their landlords, and later for the growing ranches being established in the islands. The first full-scale efforts of western-style hunting in the Kohala-Hāmākua region did not occur until ca. 1815-1820 (cf. Kamakau, 1961; Government Communications in this study; and Barrera and Kelly 1974:44). Those early outings were focused on controlling the wild herds of cattle that were a threat to travelers, agricultural fields, residences, and forest resources.

One of the earliest Government communications regarding the impacts of an introduced herbivore on the native landscape of Kohala, dates from 1856, and reports the following:

Waimea, Hawaii

November 1, 1856

Isaac Y. Davis, to Keoni Ana, Minister of the Interior

(Describes depredation of forest and grazing lands

as a result of the herds of wild sheep.):

...I now have a good time to write to you with *Aloha*, and tell you my thoughts about those things pertaining to the Nation of our King. Love (*Aloha*) is the foremost, and I dwell here with *Aloha* for all of you.

First, let me tell you about the Sheep of the attorney, Mr. Montgomery, dwelling at Puupueo, on the Mountain. Five or perhaps six miles above the place of J.P. Parker, Esq. E. Sparke Esq., is the one who tends to said Sheep, the Land, and the houses, and many acres of land purchased by Mr. Montgomery. I do not know the number of acres of Land, but I have heard that it is Five hundred (500) Acres, that is all. But the

Sheep roam all about, from one area here, to another area over there. The Sheep roam from Puupueo¹² to Puuhuluhulu, and to the Gulch of Kemole. That is half of Mauna Kea, and many thousands of Acres that the Sheep roam across. The land is cut down, there is no place that anything will grow. The grasses are gone, and there is only dirt on the Land, just like Waimea, and because of this, the cattle are also no more on this section of the Mountain, having been routed from one place to another.

As a result, I inquire of you, has this thing been agreed to by you, that the Sheep could simply roam about this place? Because I do not know, and am unaware of it, I inquire of you.

If the Sheep are allowed to stay for long, as they presently do, all the grass and forest of the place shall be consumed. It will be an evil thing, for these Sheep have exceedingly poisonous teeth.

Here is what I know, the sheep were not numerous before, and there were many animals of other varieties in those 20 or more years past. There has been no evil seen upon the land as at the present time.

Give my Aloha to C.T.B. Rooke, Kamaikui, and *Aloha* all of your household as well.

I am with thanks... [HSA – Interior Department, Misc. Box 146; Maly, translator]

Immersion of Hawaiian Forestry Programs

Throughout the middle and late 1800s, efforts at control of the introduced herbivores continued, but with only minimal success. In 1876, King David Kalākaua appointed a commission “to aid in the development of resources in the Kingdom” (Act of September 25, 1876). In 1877, the Commissioners toured the Island of Hawai‘i, assessing needs, development potentials, and meeting with residents to discuss the general nature of the resources, and concerns regarding conditions on the island. The Commission’s notes describe the Waimea forest and plateau lands, noting particularly the impacts of grazing animals on the forests, areas of residence and agricultural fields. The Commissioners landed at Māhukona, and visited North Kohala, praising its resources and potential. Departing from Pu‘uhū‘e, the commission then traveled to Waimea and offered the following report:

The route lies around the slopes of the Kohala mountains through ***Kawaihae-uka***. The forests on the Kohala mountains are dying rapidly. The land is mostly for grazing purposes, though on the mountain, potatoes of fine quality can be raised in large quantities. In sheltered places, coffee would doubtless grow, but owing to the sparseness of the population and the superior attractions to other parts of the district, this part will hardly soon be settled. The once fertile and populous plain of Waimea looked sterile and desolate when visited by the Commission—a painful contrast to Kohala loko on the other side of the mountain.

The complaint of the people is well founded. The water they use is fouled in many places by cattle, horses and other animals, and as the stream is sluggish it has no chance to free itself of impurities, and the water used by the people in their houses must be a cause of disease and death, especially to the children... It is little wonder that with his crops trodden out by the sheep or cattle of his stronger neighbors, his family sickened perhaps to death by the polluted waters, that the small holder should yield to despair, and abandoning his homestead seek employment in some other district, usually without making another home...

¹² Pu‘upueo is situated in Pā‘auhau, above the Makahālau section of the ranch.

The plains of **Pukapu** [Puukapu] and Waimea are subject to high winds, aggravated by the loss of the sheltering forests of former days. The soil however is very good in many places for sugar cane and other products. To develop its best resources, efforts must be made to restore the forests and husband the supply of water at their sources to furnish a supply for agricultural purposes...

It would seem that a wise appreciation of the best interests of this district, even of the grazing interests themselves, would lead to the decrease of the immense herds which threaten not only Waimea but even Hamakua with almost irreparable disaster. It is to be feared that they will in time render a large part of the land of little value even for grazing purposes. Owing to the increasing frequency and severity of droughts and consequent failure of springs... ...the Government, if it would wish to preserve that part of the island of Hawaii from serious injury, must take some steps for reclaiming the forests.

In this connection we would say that it is unfortunate that large tracts of Crown and Government lands have been lately leased on long terms for grazing purposes, without conditions as to their protection from permanent injury, at rates much lower than their value even as preserves for Government purposes or public protection... [Pacific Commercial Advertiser – May 5, 1877]

So significant was the threat of these animals to the Hawaiian landscape, that on September 19, 1876, King David Kalākaua signed into law, an Act for the Protection and Preservation of Woods and Forests. By that Act, the Minister of the Interior was authorized to set apart and protect from “damage by trespass of animals or otherwise, such woods and forest lands, the property of government...best suited for the protection of water resources...” (Hawaii Laws Chapter XXX:39). The Minister of the Interior was authorized to appoint a superintendent of woods and forests:

...who shall, under the direction of said Minister, enforce such rules and regulations as may be established to protect and preserve such reserved woods and forest lands from trespass. Said superintendent shall have charge of the construction of fences and barriers required to protect the said woods and forest lands, and shall be responsible for their being kept in good condition... (ibid.).

The above Act was further defined by an Act of the Legislature of the Hawaiian Kingdom, approved by Queen Lili'uokalani on January 4, 1893, which established the Bureau of Agriculture and Forestry. Among the Bureau's goals was the “preservation of forests.” On June 14, 1900, the members and functions of the Bureau were absorbed by the Board of Commissioners of Agriculture and Forestry. (Hawaii State Archives – Com 2, Box 11)

On October 29th, 1901, E. Boyd, Commissioner of Public Lands, submitted a report on a visit to the Kohala and Hāmākua Districts to Governor Dole. His communication provides readers with commentary on the condition of portions of what became the Kohala Forest Reserve (later the Pu'u o 'Umi NAR). Excerpts of Boyd's communication follow below.

Departing from Akona's Store in Waimea, Boyd noted that:

...With the assistance of a guide I was able to reach a point on the bank of the Waimea stream, which point is about a half mile N.W. of Akona's store and about 500 feet west of Lyon's church. Above this point I observed in the stream a copious flow of water, and suddenly disappearing. On investigating I found that it flowed into a pool or water hole, and below this pool, the stream was absolutely dry, on questioning my guide and some of the Kamaainas in that vicinity, they informed me that this pool serves as a source of one of the many subterranean channels of the District, and more particularly known in

Hawaiian as a “Nono”. I was also informed that this stream was never known to have dried up, and the drought through which the District is suffering, has brought its flow to the lowest ebb...

From this point as above referred to, the banks of this stream becomes quite precipitous, averaging all the way up on both sides from 50 to 75 feet deep and even more in some places, extending in length about three miles from this point to its source.

Following the west bank of this stream myself and guide came to what is known as the Waikoloa table land; elevation of 500 to 1000 feet higher than Waimea. Looking back to Waimea from this point of vantage the scenic view that is presented to ones eye is something grand and beyond comparison.

This table land was without any question heavily forested and also of swampy character in years gone by before the advent of the cattle industry – but in its present denuded state it affords excellent grazing land. For a quarter of a mile up, the land becomes quite rugged, and cut up by numerous small ravines or gulches and also full of dangerous ruts, characteristic of dried up swamp land, which made horse back travelling a dangerous venture. However my guide being quite familiar with the country found a fair trail which enabled us to reach the edge of the forest as it now stands, also up to and on the west ridge of **Puuohu**.

From this point the forest becomes quite dense, making horseback travelling an impossibility. This ridge slopes into the **Puakalehua** gulch which is in the Public Land of **Puukapu**, from this point we travelled on foot for a distance of about 200 to 300 feet down the slope, our descent was considerably retarded by the thick underbrush. On reaching the bottom of this gulch we found that it was impossible to go any further in the direction we had taken – taking another direction towards the west for about a quarter of a mile we came to an opening, which I judged it to be about 500 feet square and thickly covered with a peculiar kind of Hawaiian water grass. I was then informed by my guide that this opening is a very deep marsh or swamp land, which formed a basin, and from the appearance of the slope of the surrounding country, I am perfectly sure that it does, for conserving all the waters from the adjacent water sheds. Viz.: - East Slopes of **Puupalailai** and **Puakalehua** ridge, north slope of **Puuohu**, west slope of **Puuiki**, and south slope of the land of **Puukapu** from the **Koiawe** ridge.

The **Waikoloa** or **Waimea** stream takes its source from this swamp, and I must say that the amount of water that finds an outlet in this stream is not 1/3 of the amount of water that flows into this swamp from numerous springs that were observed along our path which was about 1/4 of its circumference. Consequently I am satisfied that such water that does not find an outlet through visible streams, percolates through the ground and finds other outlets. Possibilities are that the source of some of the numerous springs in **Waipio** Valley are dependent on this very same basin. However this is only a matter of conjecture.

Finding it impossible to go any further we retraced our steps back to Waimea. From there we immediately took the road to the Puukapu Homesteads, ascending a rather steep bluff, I managed to reach the top of **Puu Neenee** on the land of Puukapu. The land in this locality is very similar in character to that of **Waikoloa-iki**. Forest trees are dying very rapidly from inroads made by cattle and other stocks, and in all essential points the Puukapu lands affords in its present condition a striking example of how cattle can wrought destruction to forest land... [State Archives Executive Files – Dole 1902:1-4]

On October 10, 1924, C.S. Judd, Superintendent of Forestry, wrote the following account of forests and forestry in the Hawaiian Islands to Governor Farrington. Eighty years later, his words still present readers with an important frame work for the on-going efforts in protection of Hawai'i's native forests:

Forestry is practiced in the Territory of Hawaii primarily, not for timber production, but for the conservation of water. Probably in no other section of the world is the relation between a satisfactory forest cover on the mountains and the supply of water for domestic and agricultural uses better or more ably demonstrated...

The chief product, and, the most valuable, coming from the main forested and mountainous regions of the Territory, comprising about one-fourth of the total land area of the eight islands (4,099,860 acres) is water. Because of the comparatively limited terrain, short and steep water sheds, heavy rainfall in certain regions and the great need for irrigating the dry but fertile, sun-warmed lowlands, the value of this liquid product of the forest, on which domestic needs and prosperity of the community depend, is most highly appreciated and every effort is being made to conserve and maintain its sources in the forests.

Character of the Native Forest.

The forest of comparatively small trees found growing naturally on the mountain slopes is admirably suited to prevent erosion and to convert surface runoff into underground drainage, the desideratum in water conservation. The happy combination of small trees, brushes, ferns, vines and other forms of ground cover keep the soil porous and allow the water to percolate more easily into the underground channels. The foliage of the trees breaks the force of the rain and prevents the impacting of the soil by rain drops. A considerable portion of the precipitation is let down to the ground slowly by this three-storied cover of trees, bushes, and floor plants and in this manner the rain, falling on a well-forested area, is held back and instead of rushing down to the sea rapidly in the form of destructive floods, is fed gradually to the springs and streams and to the underground artesian basins where it is held for use over a much longer interval.

Protection of the Forest.

Forest practice in the Territory of Hawaii, therefore, resolves itself into what is known as "forest protection" and the main efforts of the foresters are exerted in maintaining and build up the native forests on the mountains so that they will function to the highest degree in conserving the rainfall.

The native forest, however, is peculiarly constituted in that it is readily susceptible to damage. The shallow-rooted trees depend for proper moisture and soil conditions on the undergrowth of bushes and ferns and when the latter, the first to be attacked by stock, are injured or removed, the tree roots dry out, the trees are weakened and begin to decline, and an opening is made in the forest for the invasion of destructive insects and fungi and of the more vigorously-growing foreign grasses and other plants which choke out native growth and prevent tree reproduction. It is always dangerous for this reason to make any opening in the native forest and the only safe way to preserve it and keep it healthy and vigorous is to maintain it inviolable from all attacks and keep the ground well shaded and dark.

Damage to the Forest.

The chief damage to the native forest is done by cattle and other grazing stock which first attack the toothsome ferns and other plants which give the shallow-rooted trees the protection which is necessary to their existence.

The fencing of exposed forest boundaries to keep out stock and the extermination of wild stock where it exists in the forest constitutes an important item in forest work in the Territory...

Forest Reserves.

Forest lands devoted to the purpose of water conservation have been officially recognized under the law and set apart as forest reserves by proclamation of the Governor. In this manner during the past two decades 50 of such forest reserves have been set aside on the five largest islands of the group. These embrace a total area of 840,984 acres of which 579,905 acres or 68 per cent is land belonging to the Territory... (Hawaii State Archives – Com 2, Box 15)

The Hāmākua and Kohala Forest Reserve Lands

In the early years of the 1900s, the Territory set in motion plans to protect Hawaiian forests by designating select tracts of land as forest reserves. Among these tracts was the Hāmākua-Kohala mountain lands. In the deliberations of the Board of Commissioners of Agriculture & Forestry, descriptions of the lands comprising the Kohala and Hāmākua sections of the proposed forest reserve, were recorded in 1903. The following narratives documenting consideration for establishment of the Kohala Forest Reserve, are taken from the October 5th, 1903 minutes of the Board of Commissioners of Agriculture & Forestry:

Assessment of the Kohala Mountain Forest

Minutes of Special Meeting of the
Board of Commissioners of Agriculture & Forestry,
Held in the Office of the Governor for the
Purpose of Hearing Mr. Wm. L. Hall's
Report on the Forest Question,
on Monday October 5, 1903

Present:—Governor Dole, Mr. Wm. L. Hall, W. R. Castle, A. F. Judd, Prof. Griffiths of Oahu College, F. G. Krauss of Kamehameha School, F. S. Dodge, and the following members : President L. A. Thurston, Secretary H. E. Cooper, A. W. Carter, J. F. Brown, and Jas. D. Dole.

President Thurston stated that as this was a special meeting to meet Mr. Hall and to hear what he had to say regarding his observations on the forest question, the reading of the minutes would be waived.

Mr. Hall stated that it was his intention to have his report in shape to consider with the board, but he thought it more necessary to see as much of the Territory and its conditions as possible, so he was unable to spend much time on the report, and had simply put down a few points for consideration, and continued as follows:

There are great possibilities in a forest system which you may plan, and I have no criticisms to make. I am satisfied Mr. Pinchot wants to know the conditions so that a man may be obtained to make valuable your forests. I think a matter of greatest importance is to protect as quickly as possible your system of forest reserves, as you cannot expect to see it continue intact. The best results will be secured by adopting a system that will touch the 5 important islands of the group, so I think I shall mention some of the regions that seem to me should go into forest reserves...

Island of Hawaii.

The region in Kohala beginning at about here (Kehena Woods Estate pointing on map) should be reserved. This portion includes some land which is now held in fee simple by the Woods'. I do not know whether a satisfactory arrangement can be made with them. This is an important tract of land, and it should be set aside as a forest reserve. It is full of cattle. There are streams which run into these gulches. There is a small reservation here. (Land south of Kehena. Points on map). If any way can be arranged for to get hold of this land, the Government will profit by so doing, for it is more important that any other tract in the whole district. I know of no better place in the whole island to plant and establish a forest than here. In answer to President Thurston as to whether it was not the key to the situation in that district, Mr. Hall stated that it was.

The precipitous part of Kohala should be reserved. The reserve can follow the gulches. The line of the reserve should follow quite closely the present forest line.

Asked by President Thurston as to what he thought of the *manienie* grass, he stated that he had not been able to satisfy himself on this point, I think *manienie* has a damaging influence and keeps the forest from coming up. In the Kohala District, the forest is almost entirely killed out by cattle. My feeling in this case is that were the conditions such that the forest could be brought back with reasonable expense, it would be well to keep the forest further down. It should follow practically the line through Kohala up to the boundary of Hamakua... [HSA – COM 2 Box 8]

In the 1904 annual report of the Division of Forestry, Ralph S. Hosmer, Superintendent of Forestry, submitted his recommendations to the Governor, describing the significance of the Kohala-Hāmākua forest lands in the Territory's program:

Kohala.

Nowhere in the Territory is there more pressing need of forest reservation than in this district, for on the forest area on the Kohala Mountain depends the chief water supply of the north end of the island. To insure its permanence this forest ought to be reserved at once.

The Kohala Reserve should include practically all of the existing forest on the south and west sides of the Kohala mountain, and also a section above the plantations on the windward side of the district, as a water supply is needed both for the agricultural lands near the sea and for the development of the Waimea Plains, which might be made a region of farming lands and of diversified industries. Within the last few years land on and adjacent to the Kohala Mountain has been opened, in which cattle ought never to have been allowed. Unless these areas are reclaimed speedily it will be too late, for the forest is fast disappearing.

Various causes have operated to prevent forest reservation; the latest being the litigation going on over the control of the Parker Ranch [¹³]. But for this a considerable area of the Kohala Mountain would without doubt, by now have been a forest reserve.

Negotiations are now in progress with the owners of lands other than those controlled by the Parker Ranch, which ought to be reserved as forest and the whole matter will be steadily pushed and every effort made to establish the reserve...

¹³ The litigation above mentioned was between A.W. Carter, trustee for Thelma Parker, and Samuel Parker; and in part tied to Carter's efforts at development of the water works from the Alakahi vicinity of the Kohala Mountain. Said water system established in 1904, and the source of water which was drawn to supply the Holoholokū Plains, and Waiki'i and Ke'āmoku out-stations of the ranch (see documentation in this study).

North Hamakua.

The north end of the Hamakua District, between the Kohala District line and the Waipio gulch, and area of seventeen thousand acres, was set apart by Governor Carter as a forest reserve on December 23rd, 1904. The object of this reserve is to protect the watersheds of the streams rising in this section, the water and power from which are soon to be developed. Some additional lands now under private ownership ought also to be included in this reserve, as well as the adjoining section in Kohala... [Forestry, Annual Reports, December 31, 1904]

In 1904, Hosmer provided the Board of Commissioners of Agriculture and Forestry with his report on development of the Hāmākua section of the Forest Reserve adjoining the Kohala mountain lands:

...I have the honor to submit the following report on the proposed forest reserve at the extreme northwestern end of the District of Hamakua, Island of Hawaii, consisting of the section of steep, *pali* country, between the gulches of ***Honokane*** and ***Waipio***.

Under the date of April 2, 1903, Mr. E. E. Olding, the local Consulting Forester, reported to the Board as follows: "As forestry agent for the ***District of Kohala***, I beg to submit the following lands as reserves; all government lands lying between ***Honokane and Waipio Valleys*** (from the headwaters to the sea) as well as government land known as ***Puukapu***, and also all that portion of ***Kawaihae 1***, lying between ***Puupili*** and ***Waimanu***, on expiration of the present leases to Parker Estate."

Upon a request from Mr. Thurston for more definite information, as to metes and bonds, Mr. Olding replied, on May 8th, 1903; "As suggested I enclose herewith a tracing from Government map showing forest lands to windward of Kohala District, which all parties here are willing and desirous to have reserved, proposed reserve is shown and included within" red lines" and is bounded as follows: On the west by the Awini Ranch and Bishop Estate lands, on the south by the Hamakua Boundary line, or lands of Puukapu and Bishop Estate lands, on the east by the Bishop Estate lands of Waipio, on the north by the sea. Land known as Laupahoehoe owned by the Booth Estate is not included."

"As this is in the heart of the forests of Hawaii and joins other government lands it can be added to from time to time as government and private parties desire. It is in a great measure protected from cattle at the present time and should not cost the government much for fencing."

"No settlement has been reached with regard to lands known as ***Puukapu*** and ***Kawaihae 1***, so these lands are not included at this time in proposed reserve."

While I have not personally explored the area in question a task rendered almost impossible from the nature of the country I have carefully considered the question of making this section, with other adjoining lands, a forest reserve. This I believe should be done, for the following reasons:

The chief value which this section now has, or so far as can be foreseen is likely to have, is on account of the streams which head therein, and which can be utilized for irrigating the adjoining agricultural lands, and in the development of power.

To insure the protection of the watersheds of these streams, so that as much as possible of the water falling upon the area be made available for use, it is desirable that the lands be set apart as a forest reserve.

The creation of the forest reserve would in no way hamper the development of water and power. On the contrary it is primarily to maintain and insure this use of the streams that the reserve is proposed to be set apart.

At the present time there is little or no objection to the creation of this reserve; there is , with the exception of certain areas in the **Waimanu** Gulch – excluded in these recommendations – no agricultural land; nor from the nature of the country is it a region which could be so developed.

There are several privately owned lands adjoining the proposed reserve which should be included therein; and which the owners thereof are willing to turn over as a part of the forest reserve, if the Government will set apart its land.

I therefore recommend that the Board request the Governor to set apart, after the public hearing provided by law, the government land described below, as a forest reserve; and I further suggest that negotiations be entered into with the owners of the adjoining lands, with the exception of those under cultivation in the Waimanu Gulch, with a view of extending the reserve to include them also.

The following description of the proposed forest reserve, in the District of Hamakua, Island of Hawaii, furnished by the Survey Office, with a map of the same, is now on file in my office.

“Beginning at the mouth of the **Honokea** Gulch by the sea, being the boundary of the lands of **Awini** and Honokea, in the Districts of Kohala and Hamakua, respectively, running thence up the center of Honokea Gulch, and along Awini homesteads to the land of **Honokane**; thence along said land of Honokane in a southerly direction to its junction with the lands of **Kawaihae 1st** and **Puukapu**; thence in an easterly direction along the land of Puukapu and the north side of **Kawainui** branch of **Waipio** Valley, crossing the head of **Waimanu** Valley to the west side of Waipio Valley; thence down along said west side of Waipio Valley to the sea; thence along the sea to the point of beginning. Total area, 18,940 acres; (including kuleanas in Waimanu Valley 61.05 acres

Homesteads in Waimanu Valley.....195.75 acres

256.80 acres

and that portion of the land of Laupahoehoe owned by C.W. Booth.)”

Total Area 18,940 acres [Hawaiian Forester and Agriculturalist 1904:352-355]

Governor Carter issued the following proclamation establishing the Hāmākua section of the forest reserve on December 23rd, 1904:

BY AUTHORITY.
PROCLAMATION OF FOREST RESERVE.

Under and by virtue of the authority vested in me by the provisions of Act 44 of the Session Laws of the Territory of Hawaii, enacted April 25, 1903, and of every other

power me hereunto enabling, I, George R. Carter, Governor of the Territory of Hawaii, having duly given the notice and held the hearing as in said act provided, do hereby set apart as a forest reserve the Government lands lying between the Waipio Valley and the District of Kohala, in the north end of the District of Hamakua, Island of Hawaii, described as follows, viz.:

Beginning at the mouth of **Honokea** Gulch by the sea, being the boundary of the lands of **Awini** and Honokea, in the Districts of Kohala and Hamakua respectively, running thence up the center of Honokea Gulch and along Awini Homesteads to the land of **Honokane**; thence along said land of Honokane in a southerly direction to its junction with the lands of **Kawaihae First** and **Puukapu**; thence in an easterly direction along the land of Puukapu and the north side of **Kawainui** branch of **Waipio** Valley; crossing the head of **Waimanu** Valley to the west side [page 24] of Waipio Valley; thence down along said west side of Waipio Valley to the sea; thence along the sea to the point of beginning.

Total area 18,940 acres, less 256 acres, kuleanas and homesteads in Waimanu Valley, and that part of the *Ahupuaa* of Laupahoehoe owned by the Booth Estate, area unknown.

IN TESTIMONY WHEREOF I have hereunto set my hand and caused the seal of the Territory of Hawaii to be affixed.

DONE AT THE CAPITOL, in Honolulu, this twenty-third day of December, A.D. 1904.

G.R. CARTER,
Governor of Hawaii. [Hawaiian Forester and Agriculturalist, 1905:25]

From 1905 to 1913, efforts between government representatives and private land owners continued in pursuit of setting aside the Kohala mountain lands as a part of the Kohala Forest Reserve. Site inspections were made, and testimonies began to be recorded in 1905, on this matter. The following citations are among those reviewed, documenting the thinking behind the reserve, and actions considered in securing both public and private land interests for the reserve:

***Territory of Hawaii,
Department of Public Lands.***

Hilo, Hawaii, August 14, 1905.

Jas. W. Pratt, Esq.,
Commissioner of Public Lands,
Honolulu.

Sir: In accordance with the instructions contained in your letter of the 1st inst., I met Mr. R. S. Hosmer, Superintendent of Forestry, in Kohala, for the purpose of looking over the lands of the Woods Estate wanted for forestry purposes, placing a value on the same, and also appraising the lower lands near the north point of this island, which lands it was thought at the time, the management of the Woods Estate wanted in exchange for Kehena 2, the land containing the forest.

On Saturday morning, August 5, we accordingly inspected the lands of Hualua, Kealahewa, Opihipau, Hukiaa and Kokoiki, situated near the North Point. Later on, on Tuesday, August 8, I again went over these lands with Mr. Tulloch, the local appraiser.

It was not until Tuesday morning, the 8th, that we learned from the management of the Woods Estate, just what lands were wanted, in return for the land to be given up, and we then found that the following was asked for in exchange:

1. Kawaihae uka, from about 2,100 feet elevation, to approximately 4,000 feet elevation. This would comprise an area of about 4,000 acres. This land is now under lease to the Parker Estate until 1913.
2. All the lands mentioned above, from Hualua to Kokoiki, situated near the North Point of Hawaii. [page 492]
3. About 700 to 800 acres of the "Pili Lands," from Kaipuhaa to Paoa 6.
4. During the existence of the leases on the above named lands, the Woods Estate is to receive rent for Kehena 2, until the expiration of the respective leases; such rents to be paid by the plantations, who it is claimed, are most directly benefited by the conservation of the forest.

The land of Kehena 2, is said to contain 3,344 acres, or about one-third of the lands owned by the Woods Estate; of this area the Estate wants to turn over to the Government the part contained between a gulch named **Hooleipalaoa**, on the west, to the edge of **Honokane** on the east, and containing approximately 2,000 acres. From the Hooleipalaoa gulch to about where **Niulii** joins **Kehena**, there are large open stretches covered with Hilo grass, and swampy in places, thence to Honokane the forest becomes denser, until from a line from near **Pololu** to Honokane, it becomes impassable for horse back travel on account of the swampy nature of the ground. There are said to be some wild cattle near Honokane, which it would take some time to get out. The western portion has some tame cattle on it, as that part of the land is divided off into paddocks.

The elevation of the part of Kehena to be released, is from about 2600 feet to 3700 feet; there are no running streams on the land, but a number of the gullies contain standing water, the remains of rains, and which the cattle drink.

It is claimed by Mr. Woods, that Kehena is now the only fattening ground for their cattle, and for that reason the ranch would be of no value without said land. I have no reason to doubt that statement.

As land per se, at that elevation, Kehena would not be of any great value; not even as timber land, as it would be very expensive to get wood to market, on account of the swampy nature of the ground. In appraising the same, however, I have taken in consideration the relative value of land to the ranch.

I have endeavored to have Mr. Woods give me what valuation he places on the land, but up to the present have not received anything from him; it is claimed, however, that the income from the ranch as a property, is practically derived from that piece of fattening land.

For the purpose of arriving at a valuation, I have made inquiries at the Tax Office, and find that in 1903 the Puuhue Ranch lands were returned at \$26,678.00, and in 1905 in the neighborhood of \$28,500.00. Allowing Kehena to be worth two-thirds of the whole, would bring the value of the whole of Kehena to \$19,000.00; deducting there from the value of the one-third to be retained by the ranch, leaves a value for the forest part of \$12,667.00.

In placing a valuation of \$6.00 per acre on the land, nearly the same result is obtained. Say 2,000 acres \$6.00 per acre = \$12,000.00, and which is the value I place on the part of Kehena mentioned as a forest reservation.

APPRAISEMENT OF THE LANDS FROM HUALUA TO KOKOIKI.

Of these lands, a small part may be classed as possible cane land, the middle portion being fair pasture, and the lower part dry pasture land. These lands, at the present time, are to a great extent overrun with a heavy growth of lantana, and for that reason I deemed it the most conservative plan, to appraise them at 8 times the rental, especially as the leases were made at a recent date, in 1902.

Hualua, rent \$1.35 per acre, value per acre \$10.80,	289 acres = \$ 3,121.20
Opihipau, rent \$.70 per acre, value per acre \$5.60	449 acres = \$ 2,514.40
Hukiaa, rent \$.70 per acre, value per acre \$5.60	380 acres = \$ 2,128.00
Kokoiki (not leased), rent \$.70 per acre, value per acre \$5.60	399 acres = \$ 2,234.40
Kealahewa (not leased, area unknown) rent \$.70 per acre, value per acre, \$5.60, say	350 acres = \$ 1,960.00
Pili lands (not leased), value per acre \$1.00, say	750 acres = \$ 750.00
	<hr/>
	2617 \$12,708.00

Kawaihae uka: To obtain the middle part of Kawaihae uka, seems to be the main object of Mr. Woods. This is one of the best fattening grounds, and acre for acre is worth fully as much, if not more, than Kehena. I must state, however, that by taking out the middle part of Kawaihae, should such a thing be feasible, on account of the lease now on the land, and for other reasons, in my opinion the lower part of Kawaihae, being the dry part, would become practically of no value to the Government.

As to the Pili lands, Mr. Woods does not care much whether he gets them or not, providing he gets the other lands desired.

Regarding the advisability to preserve the forest in that neighborhood, I have only to say, that where 25 years ago I have seen heavy forest, there is now absolutely none. On Kehena, where the cattle have killed the forest, the swampy features also disappear rapidly; the question apparently being how much the people should pay for the conservation of forests on private property.

Respectfully submitted,

(Signed) GEORGE H. WILLIAMS,
Sub Agent 1st and 2nd Land Districts.
[Hawaiian Forester and Agriculturalist, 1905: 493-494]

Mr. Bluett.
Whose report is that?

Mr. Campbell.
George H. Williams to Land Commissioner Pratt.

Mr. Robertson.
And the date?

Mr. Campbell.

August 14, 1905. The Board of Agriculture and Forestry have discussed the proposition, Mr. Swanzy, as to the amount of money which could be devoted for the next two years to reforestation and fencing in the Kohala Forest Reserve, and have concluded that \$25,000.00 can be devoted to that purpose. Not for the purpose of purchasing the land, but directly to reforestation, fencing and the necessary expenses. It is a liberal proposition, and I believe the Government's function is in the actual work of reforestation those areas that need reforestation—there are certain areas in this forest reserve, I understand from Mr. Hosmer, that when protected against cattle, and fenced, will reforest themselves very rapidly. The Board's position, I think, is quite clear, gentlemen, but if this thing is to go through on the lines suggested, we must have the assistance of the interests in Kohala. I want to say very frankly that I, as Land Commissioner, do not favor the exchange with the Woods Estate of these remnants along the north point, as I believe eventually they will be of material advantage. They are small remnants. Portions of them are good lands, and with the extension of the Kohala Ditch and improvements contemplated, I think may all come under that ditch. They are too valuable for the Government to give away in this exchange.

Mr. Dowsett.

Mr. Chairman, we have heard from Mr. Robertson, representing the Woods Estate, and Mr. Frank Woods. Is there anybody here to speak for the Austin Estate in regard to the land that Mr. Woods has under lease?

Mr. Bottomley.

I represent the Austin Estate land. The land is under lease and you will have to take it up with Mr. Woods before saying anything, and also take it up with the Austin Estate. We will do that.

Mr. Petrie.

Mr. Chairman, on the basis of your last statement, do I understand that all that will now be required to consummate the scheme outlined will be for the parties in interest to acquire those lands and the balance will be taken care of by the Government, on whatever basis that it can be done? That is the point now in controversy.

Mr. Campbell.

That is the point in controversy.

Mr. Swanzy.

Then Mr. Campbell, there does not seem to be anything else to do but to ask the Government to negotiate with Mr. Frank Woods and the Woods Estate for these lands that it is so important to acquire before this can be consummated?

Mr. Campbell.

Mr. Swanzy, the Government feels that it has gone to the limit of its resources when it is willing to throw into this particular forest reserve \$25,000.00. If we should take the \$25,000.00 and buy these lands, if they are willing to sell them for \$25,000.00, it would leave us as I said before, with a paper forest reserve. The Government must have a fund to devote absolutely to forestry and I think the people of Kohala should get together and see if they cannot secure these particular lands, as they are the people directly benefited. Then the Government will expend \$25,000.00; to be devoted to forestry and fencing. The maintenance would necessarily come on the Government, in

the upkeep of fencing and policing, so that what the Government puts in now, that is, in the next two years and a half, is not all—there is a continuous yearly expense on the Government.

Mr. Swanzy.

I think the offer of the Government is exceedingly liberal and it relieves the parties in interest as to any consideration as to care of the reservation to be created, when the fencing is done. But wouldn't the Government undertake to negotiate with the parties in interest to see if they cannot be gotten to name a reasonable price? If they will sell at a reasonable price I take it for granted that the plantations of Kohala will be able to raise the money to buy the land.

Mr. Campbell.

If the Government had any assurance whatsoever, that the interests at Kohala would do that, we would immediately start negotiations in an endeavor to come to a conclusion as regards price.

We believe, however, that if the interests of Kohala would simply come together and arrive at a determination how far each one is willing to go in this matter, then the entire negotiations might be completed with the Government for these lands, and then we could say yes or no. We have been trying since 1904. The Board wants to pass the responsibility of aid in this matter directly up to Kohala and its interests. It is an important thing, it is a thing that I may go on and talk about for an hour, the benefits of forestry, and we would not be any nearer to a conclusion. We all know the benefits, but the Government is unable, even with the liberality of the Legislature in its act, to give all to Kohala. We have other interests to consider and if \$25,000.00 is devoted to this forest reserve it seems to me that the Government has done all that is necessary. Now if Kohala will say that we have only one thing to do, and will go and get the Woods interests and Austin interests to say yes, then the forest reserve is not on paper, but is an actual fact.

Mr. Swanzy.

The Woods Estate owns 2400 and odd acres, which, as I understand it, they are willing to dispose of, if they can get a price which pleases them. Mr. Frank Woods is not disposed to sell and we don't know what the Austin Estate will do. It may be difficult to get lands suitable for Mr. Frank Woods to exchange for this. Under these circumstances, if the Frank Woods and Austin Estate lands cannot be acquired, and if the Woods Estate land of about 2400 acres can be acquired, would the Government be willing to fence that in and reforest it? Would they be willing to do a part of the work if it was not possible for them to be offered the whole of the land for reforestation?

Mr. Campbell.

I may ask Mr. Hosmer, as expert on that matter, what benefit a portion would be without the whole?

Mr. Hosmer.

In reply to that question, I would say that I should much prefer to see the thing go through as a whole, because I believe the value of reserving this whole lot of forest would be much greater than reserving a portion of it. But I do think the Kehena 2nd portion is probably the more important portion of this block, for the reason that several of the small streams that come down into the plantations, some of which go into the ditch, and some others which ought to go into the ditch—surplus water at any rate—rise on this land, or are very largely influenced by Kehena 2nd. And some of those streams don't go up as far as the Kahua lands. For that reason I think the Kehena 2nd portion is somewhat more important than the Kahua lands. Every effort ought, however, to be made to get the whole block.

Mr. Campbell.

In this matter the Government has the right of eminent domain; it could condemn those lands. Of course that proceeding does not want to be invoked except as a very last resort. But, however, if we went into condemnation proceedings for this forest reserve, we would have to be backed up by somebody to guarantee the costs and payment of the judgment rendered by the court, and we could not go into condemnation proceedings until we had such a guarantee. I believe there are other ways to settle without going to that extreme. Of course, in condemnation proceedings there are many nice features that come in. It is a long, slow process, and it might take years to perfect, or get a ruling from the court, or a decision in the matter. In the meantime we are still at a standstill.

Mr. Holstein.

Wouldn't it be a good thing for the Kohala planters, who are present here today, as well as those who act as attorneys and agents, to come together this afternoon and see what they will offer for these lands? I believe this is the sticking point between the ranches and the planters.

Mr. Watt.

I think that the sticking point has always been that the Woods Estate has always refused to state what they would ask for those lands. They would make no statement. Our last meeting, I understood Mr. Holstein was going to write to ask them to state a price. Whether he has done it or not, I don't know.

Mr. Holstein.

They were to hold a meeting. The idea was that the Woods Estate was to come together sometime in September and state to us how much they wanted for these lands. If they are going to ask too large a price for it I don't think that the Kohala planters will deem it advisable to have anything to do with it, but anything within the limit, I think the Kohala planters are willing to consider. I would like to hear from Mr. John Hind on that subject.

Mr. Robertson.

I don't know that there is anything to be gained by that, for the appraiser appointed by the plantation would take the plantation's view of it, and the appraiser appointed by the Woods Estate would take the Woods Estate view of it. Is it not better for the planters to consider the matter themselves? I am inclined to think that possibly that can be done. Let the planters sit down and give careful consideration to the value of that land from the ranch standpoint, if they can put themselves in that position, and having come to the conclusion as to how much they are willing to pay, let them authorize somebody to make an offer. It may be that their offer will be accepted. I don't know. It seems to me that the thing will come to a focus quicker that way than agreeing on the machinery for agreeing on appraisers.

Mr. Campbell.

The Government's position is to get the thing settled as quickly as possible, because by the first of November we ought to have money.

Mr. Swanzy.

I understand the Government is willing to use such portions of the \$25,000.00 for the fencing of Kohala as is necessary for the work.

Mr. Campbell.

Yes.

Mr. Hosmer.

I have not been on the land for some months, but my impression is that most of the places that would have to be replanted would be on Kehena 2. Kahua, except right back of Puupili, has not been opened up so much but that if a fence is put there, the forest will come back naturally, but on the land where cattle grazing is going on, and where is [it] has been going on for some time, artificial reforestation would be necessary to help out natural reproduction.

Mr. Campbell.

The \$25,000.00 would be in this district. There may be some necessary fencing here and there, but the major portion, twenty-three or twenty-four thousand dollars, will be devoted to this area acquired by the plantation interests. That is a definite statement of fact based upon a resolution of the Board on that point. Mr. Robertson, as attorney for the Frank Woods Estate, are you still holding to the proposition that he wants an exchange?

Mr. Robertson.

Yes.

Mr. Campbell.

To be a little clearer, Mr. Swanzy, if we only secured a portion of these lands, we could only afford to spend a portion. Our offer was to expend \$25,000.00, is to take the whole thing, and a proportionate part should be expended if only a portion of these lands should be acquired.

Mr. Petrie.

Mr. Chairman, leaving aside the discussion of Kehena No. 2, I want to ask if the Government has any solution in view of the situation with Mr. Frank Woods, on the basis of an exchange. It seems to me he is not disposed to sell unless he acquires other pasturable lands to continue his ranch business. Has the Government anything in view whereby that part might be solved?

Mr. Campbell.

I cannot give you an answer to that this minute, because I have not in view any lands that might be exchanged. If we have not, we have the other alternative, we can condemn. However, that is a matter that I would be very glad to look into, but I cannot recall now any land that we have.

Mr. Petrie.

So far as Kehena No. 2 is concerned, it does not seem to be of much use to continue this discussion, in view of the attitude that they have taken, and it now remains for the other interests to get together and see if they can make an offer to the Woods Estate to purchase.

Mr. Campbell.

If the interests in Kohala would get busy on that end of it and assure the Government that they would pay the judgment on condemnation proceedings against the Woods Estate, why, we will arrive. That is the only point. I am going to work and try to get a definite answer from Frank Woods, and also an application as to what land he might want. He might want lands that it is impossible for us to give, then we would be up in the air. If we cannot come to a reasonable exchange, then it comes to the question of condemnation, and if it comes to that question, then the interests of Kohala must stand by the Government.

Mr. Petrie.

That might be their conclusion as to how far they are willing to go in the event of the condemnation proceedings.

Mr. Campbell.

Can the Kohala interests get together before the steamer leaves tomorrow and give the Government some idea of what they [they] think they are willing to do? Before the next Legislature meets we want the Forest Reserve fenced and trees planted on it.

Governor Frear, we would like to hear from you on the Kohala Forest Reserve matter.

Governor Frear.

I did not intend to say anything today as I do not feel that I am very familiar with the details of the proposition. It is a proposition, however, in which I have been very much interested for a long while. It seems to me that if there is any place in the Territory where there is need of the application of a correct forestry policy it is right there in Kohala, and something ought to be done and done soon. Mr. Campbell is quite right in stating that the Government is not in a position financially to purchase these different tracts, although it is in a position financially to do much in the way of fencing and in reforesting and in maintaining the forests in the future. I am going a little further, and say that I do not think it is correct in principle that the Government should purchase these tracts even if it had the money, where the principal beneficiaries would be the private owners there.

Just suppose for illustration, that all of this part of Hawaii belonged to one private individual, he would not expect the Government to buy this portion here and put it into the forest for the benefit of the rest of that man's land. On the other hand, supposing the Government owned the whole of that tract, you expect the Government to lay out all of that and keep it as forest, and then sell just the other portions of it if it sold them at all. Now, in general, on these islands, there are government and private tracts sandwiched in. The typical case is the island of Kauai, which is a round island made up of one big mountain, cut up into lands in apple pie fashion, Government, private, Government, private, right around the island. Now everybody that owns one of those tracts of land extending from the seashore up to the top of the mountain is interested in having the upper portion kept as forest reservation for the benefit of the lower portion, and so placing the Government and private owners all on the same basis, each one having upper land and lower land all around the mountain, you would expect all of them to combine and set aside his upper lands for the benefit of the lower lands. That is what they are doing. That is what we are doing here, although this is not quite as typical a case. The principal lands to be benefited are these private lands around here. The Government has some land here, but the principal tracts here are going to be benefited but very little to speak of by setting aside this forest reserve.

Now suppose this forest reserve is set aside as outlined here by the blue line (indicating area on the map showing government ownership), you will note that the Government is giving anyhow a majority of it, all this in green here and this in green here, it is all set aside, this green, which is directly for the benefit of the lands over here as well as the land over here, so that there is really only this little land over here [Kehena and Kahua] which is to be contributed by private individuals or corporations. I don't know what the best thing to do is to get at this thing to settle it. I should think that the Woods Estate is on a little different basis from a sugar corporation. Perhaps the best way would be to get together and appoint a number of appraisers, three or five, according as it may seem best, and let them appraise the different tracts that are needed for the forest reserve, and then make another appraisal as to the payment

for those tracts, that is, how much is this plantation and this plantation and this one to be benefited by this, that is relatively, and then divide up the cost of all of these factors of forest reserve among these different people in proportion to their benefits, and pay these different owners the amount. It may be that that is not practicable.

Perhaps the best way would be simply for the Kohala people, those most interested in the matter, to get together and see what they can do towards purchasing the different interests and then dividing the cost up amongst them.

Mr. Hind.

One of the most difficult questions to settle, I believe, is how the proportion will be borne by the different plantations.

Governor Frear.

Yes.

Mr. Hind.

Now take the matter of our plantation, there is a very large area there of government land. Now we will be called upon to pay our pro rata, but the pro rata of what, land that we may lease? There are a number of leases already expired, and I have not been able to renew them so far. The question is, must I include those lands or not as a part of our plantation? As the thing stands now, they cannot be.

Mr. Hosmer.

I may say in continuation of the point that Governor Frear made, that the area included in the Kohala Forest Reserve as originally recommended was 53 per cent. Government land. Of the remaining 47 per cent, in private ownership, 33 per cent. is Bishop Estate. Since this red line was drawn across Kehena and Kahua, the proportions are somewhat changed.

Governor Frear.

Does that take that (indicating Hamakua, Pali Forest Reserve) in, too?

Mr. Hosmer.

No, that is already set aside as another reserve. That is all Government land except this little white strip here.

Governor Frear.

Yes, but these lands get all the benefit of the trade winds and get the precipitation.

Mr. Hosmer.

Certainly. That would make the Kohala mountains as a whole 75 per cent. Government ownership.

Mr. Campbell.

I desire to thank you gentlemen. We have come nearer to an understanding than we ever have before.

The meeting then adjourned. [Hawaiian Forester and Agriculturalist, 1905: 495-503]

In the issues of the Hawaiian Forester and Agriculturalist for 1909, we find published detailed descriptions of the lands and resources of the proposed Kohala Forest Reserve. The series also presents readers with a summary of key points in the proceedings and evaluation of the proposed reserve. This historical perspective from those interested in the long-term conservation and protection of the mountain and forest resources is of particular value, as it gives us an opportunity to assess

where we are—successes and short comings—in the management programs over the last ninety-five years. It will be noted that fencing to protect the watershed and unique resources on the mountain lands has been a part of the program since its' inception:

On the afternoon of October 18, 1909, a public hearing was held in the Throne Room at the Capitol, to consider the addition to the proposed Kohala Mountain Forest Reserve of certain privately owned forest lands in the section above the sugar plantations in the Kohala District. The meeting was called by the Board of Agriculture and Forestry and was attended by a representative gathering of the men who shape the course of affairs in Kohala. The result of the meeting was an understanding which it is expected will lead to definite action in regard to the setting apart in the near future as a permanent forest reserve of one of the most important forest areas on the island of Hawaii.

The creation of a forest reserve on the Kohala Mountain was one of the first projects undertaken by the present Board of Agriculture and Forestry on its organization in 1903. In December, 1904, a portion of the mountain was set apart as the Hamakua Pali Forest Reserve, but owing to a variety of reasons it has been impossible up to this time to secure comprehensive action for the mountain as a whole. The point seems now to have been reached, however, when the entire summit of the Kohala Mountain will shortly be officially set apart. Consequently it is appropriate that there now be made public, in accordance with the usual custom of the Board, the reports of the Superintendent of Forestry and of the Committee on Forestry in regard thereto, together with a full transcript of the discussion at the hearing of October 18.

These reports give the history of the efforts that have been made to establish this reserve. From the present indications it ought not to be long before a portion of an issue of the "Forester" can be devoted to the formal proclamation announcing its actual creation.

REPORT OF THE COMMITTEE ON FORESTRY.

Honolulu, December 3, 1908.

Board of Agriculture and Forestry,
Honolulu, Oahu.

SIRS:—Your Committee on Forestry have had under consideration the report of R.S. Hosmer, Superintendent of Forestry, under date of October 14, referring to the proposed Kohala Mountain Forest Reserve in the Eastern portion of North Kohala, and in West Hamakua, Island of Hawaii, and hereby recommend:

That, while approving of the recommendations of Mr. Hosmer, we do not feel that they go far enough in the protection of the water-shed of the Kohala Mountains, and therefore further recommend that not only the area proposed by Mr. Hosmer, but the [page 471] additional area suggested by him on page 8 of his said report, together with the small additional area as shown on the 1901 map of the island of Hawaii—marked in blue—(the said map accompanying the Governor's Report of 1906), be included in the said Forest Reserve.

And the Committee further recommends that the Superintendent of Forestry be instructed to at once proceed without further delay to locate said proposed additional area, as above recommended, and report back to the Board at the earliest date possible.

Yours truly — H.M. Von HOLT, Chairman; W.M. GIFFARD, C.S. HOLLOWAY.

REPORT OF THE SUPERINTENDENT OF FORESTRY.

Honolulu, Hawaii, October 14, 1908.

Committee on Forestry,
Board of Agriculture and Forestry,
Honolulu, Oahu.

GENTLEMEN:—I have the honor to submit herewith a report with recommendations on the proposed Kohala Mountain Forest Reserve in the Districts of Kohala and Hamakua, Island of Hawaii.

LOCATION.

The section included in this proposed forest reserve may roughly be described as embracing the area of existing forest on the Kohala Mountain not already included in the Hamakua Pali Forest Reserve, together with the private forest reserve above Kukuihaele, maintained for many years by the Pacific Sugar Mill Company, and the two forest covered gulches at the west end of the mountain, Honokane and Pololu; owned respectively by the Bishop Estate and by the Government. The total area of the proposed Kohala Mountain Forest Reserve is approximately 27,160 acres.

OBJECT.

The Kohala Mountain Forest Reserve is created as a protection forest to assist in the conservation of water on the Kohala Mountain. The Kohala Mountain lies between two districts that contain considerable areas of land that can only be made productive in a large way through irrigation. As it is the only available source of water supply for these districts, the Kohala Moun- [page 472] tain is justly to be regarded as one of the very important water sheds of the Territory. Through the enterprise of two responsible corporations, the Kohala Ditch Company and the Hamakua Ditch Company, water for irrigating cane land is already led out from the windward slopes of the mountain, both into Kohala and into Hamakua. From the leeward face of the mountain water is also piped out onto the Waimea plain, for domestic use and for watering stock. In the full economic development of these several sections every drop of water that can be got is urgently needed. Especially is this so in view of the probability of the development before many years of the Waimea Plains as a place of residence for many people. It is therefore not only wise but from a far-sighted economic standpoint imperative that all reasonable steps be taken to protect, to safeguard and if possible to increase the sources of supply.

The elevation of the Kohala Mountain, 5,505 feet, is sufficient to make the mountain serve as a point around which the moisture laden trade wind clouds congregate and are held to precipitate their contents. But the mountain is not high enough to serve as a complete barrier to the passage of the trade wind clouds, neither is it large enough in area to make its catchment basins of sufficient size to yield any great quantities of water. For these reasons it is the more important that conditions favorable to a sustained flow, through the retardation of run-off be maintained.

DESCRIPTION.

The setting apart of the Kohala Mountain as a forest reserve has been under consideration ever since the passage of the forest reserve law in 1903. The Kohala Mountain was the first forest area in the Territory visited by me after my arrival in 1904. But because of one reason and another, among which the long continued litigation over the Parker Ranch played no small part, it has not been found feasible to bring the

project to the point of action until now.

TOPOGRAPHY.

The Kohala Mountain is the lowest of the four mountains that make up the island of Hawaii. It forms the northern point of the island and with its abrupt palis cuts off the even slope of the Hamakua District from the similarly situated land in Kohala. As is characteristic of windward slopes in Hawaii, the north-eastern side of the Kohala Mountain rises abruptly from the sea. The high wall, deeply cut by gulches and lesser valleys, each with its stream of water falling over the bluff into the ocean, adds much to the picturesqueness of the coast. On the southern and western sides of the mountain the slope is less steep, but owing to the dense cover of vegetation and the boggy character of the ground the [page 473] mountain is rendered difficult of access and is consequently relatively unexplored.

On the windward slopes the only means of access are the trails in connection with the irrigation projects and those along the bluffs near the sea that connect the limited areas of agricultural land in the bottoms of the larger gulches.

Within the limits of the proposed forest reserve the Kohala Mountain is clothed with a dense mass of indigenous vegetation—a cover that for its effect on run-off and for holding back moisture after it once reaches the ground cannot be surpassed.

OWNERSHIP.

Of the lands in the proposed Kohala Mountain Forest Reserve the larger part belong to the Territory. Out of the total area of 27,160 acres, 14,365 acres, or 53 per cent., are Government lands. Next in order of ownership comes the Bishop Estate with 8,970 acres, or 33 per cent. The more important of the remaining lands are owned by the Kohala Sugar Company, the Parker Ranch, the Queen Emma Estate, the Pacific Sugar Mill, and by one or two individuals. The accompanying list shows the name, ownership, area, (and in the case of the Government lands the lessee, lease number and date of expiration of the existing lease) for all the lands in the reserve. (See Appendix.)

BOUNDARY.

In selecting the boundaries of the proposed Kohala Mountain Forest Reserve natural barriers have so far as possible been followed. Where this was not feasible the boundary has been made to conform to existing fence lines for the maintenance of which provision has in most cases been made. Thus on the face of the mountain above Waimea the reserve boundary follows the upper fences of the Parker Ranch paddocks. So far as possible in the renewal of the leases of Government lands, provision should be made for the maintenance of these fences as one of the terms of the new lease. Across other lands it will often be necessary to keep up the fences by other means. At present the forest reserve line above Waimea is kept intact through the interest of the manager of the Parker Ranch, Mr. A.W. Carter, who, realizing the value of a forest cover on the mountain, has built a number of stretches of fence on the face of the mountain to complete the line.

It is recommendation that tends to become trite through repetition that there should be a fund available in this department from which necessary stretches of forest fence could be built in localities where the interests of the Government would otherwise suffer. It is a recommendation that must and will continue urgently to be made until such a fund is provided.

The portion of the Kohala Mountain Forest Reserve that has been reserved by the Pacific Sugar Mill Company as a private [page 474] reserve is at present fenced and will continue to be maintained by that company as it has been for the past twenty

years. For the present the gulch lands at the northwest end of the mountain are not in need of artificial barriers.

It may perhaps be appropriate to note here that the owners of private land within the proposed Kohala Mountain Forest Reserve are in full sympathy with the aims and object of the Government in creating the reserve and in recommending the preservation of this area. As has already been stated the Bishop Estate is, next to the Government, the largest owner of land in the reserve, controlling as it does 33 per cent.

Because of the present inability of the Government to provide for the definite and systematic administration of its forest reserves through a forest ranger organization, the Trustees of the Bishop Estate are not ready to turn their lands over to this department for management, but they are perfectly willing that their forest be included within the reserve limits, as it is their intention to continue themselves to maintain these lands as a forest reserve.

Much the same is the condition under which the private forest reserve of the Pacific Sugar Mill is included as a part of the Kohala Mountain Forest Reserve, except that in this case the inclusion of these lands gives, as it were, an official recognition of the far sightedness of that company.

For over twenty years the Pacific Sugar Mill has maintained at its own expense some 2,800 acres of land as a private forest reserve. This area protects the source and catchment area of the **Lalakea stream**, tributary to the **Waipio Gulch**, which is used on the plantation, and also **Kukuihaele Spring**, near Kukuihaele, one of the very few sources of water in Hamakua that can be depended on even in long periods of drought. When the reserve was established much of the land was fairly open. Thanks to continued protection by carefully kept up fences there has resulted a marked increase in vegetation through natural reproduction. Especially is this true of the last few years, when original conditions have been more nearly approached by the coming back of ferns, shrubs and small trees.

The planting of introduced forest trees has also helped in this regard.

Because of its running streams and its proximity to the densely forested section to the west of Waipio Gulch the Kukuihaele private forest reserve is in a different case from the remainder of the Hamakua forest belt. This being so different treatment is indicated and the permanent reservation of the area becomes a step of economic wisdom.

The other principal holders of private land in the proposed Kohala Mountain Forest Reserve, the Kohala Sugar Company and the Parker Ranch are also in favor of the creation of the reserve and have manifested their interest in a tangible way by the erection and maintenance of forest fences along certain portions of the reserve boundary and by keeping under forest certain lands which [page 475] by the terms of their leases or by being in fee simple ownership could have been opened for cattle grazing.

To meet the objection that can very pertinently be raised that too much dependence in the management of this and other Hawaiian forest reserves is now placed on the good will of private corporations and individuals it has frankly to be admitted that the present condition is far from satisfactory. The condition is one that can only be remedied by the organization of a salaried forest ranger service, responsible to this department alone. Toward this end the energies of the Division of Forestry will continuously be directed until such a force is secured.

In the meantime the work of formally setting apart forest reserves finds its justification in that it is a necessary and essential step in the right direction—one that must be taken before plans for the forest to do its full part in the development of the Territory can be put into effect.

DESIRABLE EXTENSION OF THE RESERVE.

In addition to the area now recommended to be set apart, it is my belief that the Kohala Mountain Forest Reserve should be extended to include the forested section immediately adjoining and to the west of **Honokane** and **Pololu** gulches. This section is made up of the privately owned lands of **Kahua 1 and 2**, **Kehena 2**, and the area of forest above the **Niulii**, the **Halawa** and the eastern part of the Kohala Sugar Company's plantations that has for some years been held as a private forest reserve. This area is not included in the proposed Kohala Mountain Forest Reserve at this time because of complications arising out of uncertainty as to the use to which certain of the lands may at any moment be put by their owners. Several attempts have been made to bring about action that would result in the permanent setting apart of this area as a forest reserve, but so far nothing tangible has resulted. The matter is, however, still under advisement; in time something may be accomplished.

As a matter of record and as one step toward the desired end I may state here that it is my judgment that there should be added to the Kohala Mountain Forest Reserve the area lying to the west of Honokane and Pololu gulches bounded as follows:

Beginning at the Pololu Gulch at the eastern *makai* corner of the private forest reserve of the Niulii plantation, and following the *makai* boundary of the said reserve and its extension across the lands back of and above the Niulii, Halawa and Kohala Sugar Companies' plantations to its western extremity back of and above the Kohala Sugar Company's mill; thence following the western boundary of the reserve up to the land of Kehena 2; thence easterly along the *makai* boundary of Kehena 2 to the **Hooleipalaoa Gulch**; thence following up the western (outside) edge of the said gulch to its source in a little pond just north of **Puu Pili**, to the summit of Puu Pili; thence northerly, along the boundary [page 476] of the Kohala Mountain Forest Reserve to the point of beginning. These should also be included in the reserve the south side of Puu Pili, to protect certain springs on the lower slope of that hill.

In my judgment it is very markedly to the best interests of the Kohala District that all the land within the limits just defined should be held permanently under a forest cover. There is a very considerable area of agricultural land in Kohala that can only be made productive through irrigation. The water bearing area on which the Kohala district has to depend for its supply is at best limited. Large expenditures have been made to bring out water from this area onto the agricultural lands in Kohala. In such a case it is obvious that all possible sources of supply should be turned to account. In the section under discussion there are several springs and brooks that while they are not large are yet of altogether too much importance to be lost sight of. In addition to its value as an actual source of water, this section is also important in that it serves in a measure to protect the forest land lying behind it, on the main slope of the mountain. There is always a tendency in the Hawaiian forest for the edge of the woods to be open and in poor condition. Such an area is now under consideration serves as a buffer and protects the main reserve behind.

With the statement that all the water that can be made available is needed in the development of the Kohala district, it follows as a corollary that all the available sources of water should be carefully protected. The recession of the forest in the Kohala district is one of the most marked examples of the change in natural conditions that is to be found anywhere in the Territory. If the edge of the forest is permitted to be pushed

further back it is my belief that the consequences to the lower lands will be serious. The use for cattle grazing of the forest that now remains decreases in direct proportion the opportunity of making productive the more valuable lower lying lands, from which could be secured larger returns than would ever be possible from raising cattle on the uplands. Individual owners cannot be blamed for making what for their personal interests may appear to be the best use of their own land. But considered from a broad economic stand-point it is very decidedly to be lamented that an area of potentially good agriculture land should be curtailed through the opening up of water-bearing forest areas that should be kept permanently under a dense cover of vegetation.

Owing to the diversity of interest it has been impossible so far to secure the adoption of a comprehensive plan whereby this section could be protected, although such plans have from time to time been proposed and diligently advocated by different persons. At the present time renewed efforts are being made to bring about some sort of a feasible arrangement. But in view of the present uncertainty and the bearing which some of the complications of the past have on the present situation, it has been deemed wise to postpone definite recommendations concerning the reservation of this section until some future time. The present section of this [page 477] report is therefore to be regarded in the nature of a report of progress. It is my hope that it will be followed in due time by a statement of results accomplished.

RECOMMENDATIONS.

For the reasons set forth in the foregoing pages I now recommend that the Board request the Governor of Hawaii to create, in accordance with the law and following the usual method, the Kohala Mountain Forest Reserve, and to set apart as units thereof the Government lands within the boundary officially described by the Government Survey Office.

The Government lands are in two classes, those not under lease, and those on which leases have still some time to run. Those not under lease can be definitely set apart at once; on the others the full reservation takes effect automatically at the expiration of the lease. The lands not under lease are: Pololu 1,000 acres; **Awini** 100 acres; **Pauahi** 150 acres, and **Lanikepu** 435 acres; a total of 1,685 acres. Those on which leases have still some time to run are **Kawaihae 1** 3,370 acres; **Puukawaiwai-Panoluukia-Kapia** 360 acres; **Momouloa** 130 acres; **Puukapu** 8,570 acres; **Kamoku** 20 acres, and **Keaa** 230 acres; a total of 12,680 acres. Altogether there are 14,365 acres of Government land.

OFFICIAL DESCRIPTION OF BOUNDARY.

[In the original there follows the official technical description of the proposed Kohala Mountain Forest Reserve prepared by the Government Survey Office at C.S.F. No. 1960, and shown on Government Survey Registered Map No. 2060. This is omitted here as it will be given in full later, in the formal proclamation. The total area of the Reserve is 27,160 acres.]

Very respectfully,

RALPH S. HOSMER,
Superintendent of Forestry. [Hawaiian Forester and Agriculturalist, 1909:478]

Minutes from the October 18th, 1909 public hearing of the Board of Commissioners on the proposed Kohala Forest Reserve provide the following history on issues and objectives surrounding the proposal:

KOHALA MT. FOREST RESERVE HEARING.

Minutes of a hearing re extension of proposed Kohala Mountain Forest Reserve, held by the Board of Commissioners of Agriculture and Forestry, in the Throne Room, October 18, 1909.

Present: Board of Agriculture and Forestry—Messrs. Marston Campbell, President; H.M. Von Holt, D.P.R. Isenberg and J.M. Dowsett, and Superintendent of Forestry R.S. Hosmer.

Governor Frear and Messrs. A.W. Carter, F.S. Dodge, T.H. Petrie, F.M. Swanzy, H. Holmes, A.W.T. Bottomley, A. Lewis, E.A. Knudsen, H.L. Holstein, A.G.M. Robertson, P.W.P. Bluett, J.S. Low, John Hind, A. Mason, G.C. Watt, J.T. Taylor, J.W. Waldron, O. Sorenson, J.T. McCrosson, S.M. Kanakanui, F.J. Testa, J. Jorgensen, H.R. Bryant and L.G. Blackman.

(Various maps showing the proposed reserve were displayed.)

Mr. Campbell.

Gentlemen:—On September 24, at a meeting of the Board of Agriculture and Forestry, I was directed to issue an invitation to all those in the district of Kohala interested directly or indirectly in the Kohala Forest Reserve, to attend a meeting at this place with the Board of Agriculture and Forestry.

The last Legislature of the Territory made it possible for the Board of Agriculture to take some definite action in regard to reforesting portions of the Islands. It has been recognized that the proposed Kohala Forest Reserve is one of the most important, and there has been, I believe since 1904, an effort made toward accomplishing something in this particular reserve. There has, however, never been any united action between those interested and the Government. There has been somewhat of a diversity of opinion as regards the aid which might be given by those directly benefited by the forest reserve. It was thought that this meeting would bring us closer in touch and possibly result in something which would work toward the solving of this problem.

The Board of Agriculture and Forestry, under the provisions of the Immigration-Conservation Act, is now in a position, provided it receives certain aid from those interested, to go ahead with this forest reserve, and we have asked you here to meet us on this proposition.

I think it would be well to get, if possible, a record of those who are here and particularly what interests they may represent, and if there is no objection, I will ask those present to respond to that question. Mr. Bluett?

Mr. Bluett.

I am really representing the Woods Estate in this matter, owners of Kehena 2, but that matter has been referred to Mr. Robertson here as the attorney for the Estate; he was appointed to represent the Estate. [page 480]

Mr. Campbell.

Mr. McCrosson, are you representing any particular interest, either directly or indirectly in this matter?

Mr. McCrosson.

I am particularly interested in the conservation of the forest outline made here, on account of the Kohala and Hamakua ditches.

Mr. Campbell.

Well gentlemen, instead of asking each one of you the question, would you have any objection to letting us know, so that I may know who is represented here? Mr. Dodge, are you representing the Bishop Estate?

Mr. Dodge.
Bishop Estate.

Mr. Swanzy.
I represent the Union Mill Company, and Mr. Hart, Niulii and Makapala.

Mr. Hind.
I represent the Kohala Plantation Company, and also the Ditch.

Mr. Campbell.
Mr. Petrie?

Mr. Petrie.
Kohala Sugar Company.

Mr. Campbell.
Mr. Watt?

Mr. Watt.
Kohala Sugar Company.

Mr. Campbell.
Mr. Carter?

Mr. Carter.
Parker Ranch and Bishop Estate.

Mr. Campbell.
Mr. Sorenson?

Mr. Sorenson.
Bishop Estate.

Mr. Campbell.
Mr. Mason?

Mr. Mason.
Puakea Ranch.

Mr. Campbell.
Mr. Low?

Mr. Low.
J.F. Woods, Kahua Ranch.

Mr. Bottomley.
I represent the Austin Estate and Bishop Museum.

Mr. Campbell.
Mr. Waldron?

Mr. Waldron.

Pacific Sugar Mill and Honokaa Sugar Co.

Mr. Bryant.
Puakea Plantation.

Mr. Campbell.

Sometime ago I asked Mr. Hosmer, who has had this matter in hand for a number of years, to write me a little report covering the essential features. I will read that report.

Honolulu, Hawaii, July 24, 1909.

Hon. Marston Campbell,
President and Executive Officer,
Board of Agriculture and Forestry,
Honolulu.

Dear Sir: In reply to your request of July 13, it gives me pleasure to hand you the following statement in regard to the present status of the proposed forest reserve on the Kohala Mountain:

The project to create a forest reserve on the Kohala Mountain was one of the first to receive attention on the definite organization of the Division of Forestry in January, 1904. The obvious [page 481] needs of the situation pointed to the necessity for prompt action but owing to a variety of circumstances the actual setting apart of this reserve has been again and again delayed. Chief among the reasons for the delay were the prolonged litigation over the Parker Ranch and the difficulty of bringing to the point of action the various interests concerned with the reservation of certain private lands in Kohala proper that are needed to complete the forest reservation.

In October, 1908, I submitted a report recommending the reservation of the summit of the Kohala Mountain, embracing "the area of existing forest not already included in the Hamakua Pali Forest Reserve, together with the private forest reserve above Kukuihaele, and the two forest covered gulches at the west end of the mountain. Honokane and Pololu, a total area of approximately 27,160 acres." I recommend further that as soon as practicable [practicable] there be added to this reserve the forested section above the Kohala plantations, now in private ownership, and the lands of Kehena 2, Kahua 1 and 2 and Waika. On the 3rd of December, 1908, the Committee on Forestry recommended that this area be included with that originally recommended, and that steps be taken to secure a complete description so that the whole area might be set apart as a reserve. I immediately requested the Survey Department to complete the survey of this area. The field work has been done and the data is now in such shape that a description can quickly be compiled. The description has not yet been furnished, however, because in the meantime the question of the turning over of the private lands to the Government has reached the point where it seems advisable to have the compilation of the description await the definite settlement of boundaries on the ground.

From a number of visits to Kohala and a careful study of the situation in its various aspects, it is my judgment that for the best interests of all concerned there should be permanently maintained under a forest cover the area that for some years has been treated as a private forest reserve above the plantations, together with that section of the Kehena and Kahua lands lying within, that is to the east of, the Hooleipalaoa Gulch, which starts on the northern slopes of Puu Pili. This is, I believe, the best boundary that could now be selected for this portion of the forest reserve for much of the way its banks are steep enough to form a natural barrier, and it is as good a dividing line as can now be selected between the land that should be held in forest and that which is

proper to be used for grazing.

All the area proposed to be added to the Kohala Mountain Forest Reserve is in private ownership. Because of the beneficial influence which I believe this area of forest exerts on the adjacent lands, I have always held that the plantation interests should bear the major portion of the cost of its reservation. In so doing they would only be acting as have private interests in other districts in the Territory. I believe that it would be fair for the different [page 482] plantation companies and those interested in the lower lands which will be benefited by the water to be obtained from this forest reserve, to pay 75 per cent. of the cost of acquiring the additional private lands that are needed to round out the reserve. This would leave one-fourth to be borne by the government. Working on these lines I tried two years ago to effect an arrangement between the plantation interests and the Woods Estate, but without success. During the recent session of the Legislature I brought the matter up again and arranged a number of conferences among those interested. The outcome of these meetings was a proposition on the part of Mr. John Hind that the plantations might get together on a basis of land ownership. I accordingly had Mr. Kanakanui of the Survey Office draw up a table showing the portion of agricultural land owned by the different plantations. The proposition in this form did not meet with the approval of the representatives of several of the Kohala plantations. Accordingly, a revised plan was suggested which is now being worked up by Hon. H.L. Holstein. Mr. Holstein's proposition is that the corporations desiring to buy the forest land get together on a basis of productive value rather than area. He is now at work on this plan. In the past it has been difficult for the prospective purchasers and the owners of the land to arrive at anything like a common figure.

I am sending you herewith a copy of my report dated October 14, 1908; of the report of the Committee on Forestry dated December 3, 1908, and of a map of the areas proposed to be reserved, that was drawn up by Mr. S.M. Kanakanui of the Survey Office. It should perhaps be noted that when the line comes finally to be fixed the reserve should include a small group of trees on the south and west sides of Puu Pili.

Very respectfully,
RALPH S. HOSMER,
Superintendent of Forestry.

Mr. Campbell.

I will also read a resolution, signed by John Hind and others, adopted at a meeting of the Kohala plantation managers, last January:

Kohala, Hawaii, January 30, 1909.

Whereas, the matter of Forest Reservation is of paramount interest to all concerned in all parts of the country, and

Whereas, same is of vital interest to all inhabitants of the District of North Kohala, Hawaii, and

Whereas, there is available a large tract of land *mauka* of Kohala, which is now unused and of no value for agriculture or pasturable purposes, aggregating approximately twenty thousand acre [acres], and [page 483]

Whereas, if reserved for forest same would be for all time a safeguard to the district against droughts, the agricultural and all other industries located in the North Kohala District would benefit;

Therefore, be it Resolved by the Planters and Residents of Kohala, that the Representatives and Senators of this District be requested to take such steps as may be necessary to enact such laws as will enable the government to acquire the lands extending from the timber line on mountains southeast of Kohala to such limits as are recommended by Forester Hosmer.

(Signed) JOHN HIND,
(Signed) ROBT. HALL,
(Signed) H.H. RENTON,
(Signed) J. ATKINS WIGHT,
(Signed) H.R. BRYANT,
(Signed) R.R. ELGIN,
(Signed) GEO. C. WATT.

Mr. Campbell.

I will call on Mr. Hosmer at this point, to describe the proposed forest reserve.

Mr. Hosmer.

The proposed Kohala Mountain Forest is shown on the small blue print map that you hold in your hands. It is made from a tracing of a portion of this big government map of the whole island. It takes in the area shown on this large map by the red lines. The red lines on the blue print take in the whole summit of the Kohala Mountain. In addition to this proposed reserve, a portion of the Kohala Mountain has already been set apart as a forest reserve—the Hamakua Pali Forest Reserve, set apart in 1904.

This new proposed reserve begins with the private forest reserve back of Kukuihaele, maintained for twenty years or more as a private reserve by the Pacific Sugar Mill and on which a good deal of planting has been done. Then it takes in the section back of and above the Waimea plains, a good deal of which is the government land of Puukapu, and all under lease to the Parker Ranch. Mr. Carter, representing the Parker Ranch, has caused fences to be constructed, shutting off this portion of the mountain all the way along from Waimea to the boundary of Waika. I believe that fence is now complete all the way. It consists of paddock fences and other connecting stretches of fence.

The forest reserve as I recommended it on October 14, 1908, did not include the land which we are today considering, because at that time it was not possible to get united action on it and because the Board of Agriculture and Forestry did not feel inclined to make a recommendation of reservation, unless there was prospect of getting something accomplished within a reasonably short time. For that reason the Committee on Forestry, thinking that something could be done and that the whole matter ought to be taken up at once, made the following report on December 3, 1908: [page 484]

Board of Agriculture and Forestry,
Honolulu, Oahu.

Sirs: Your Committee on Forestry have had under consideration the report of R.S. Hosmer, Superintendent of Forestry, under date of October 14, referring to the proposed Kohala Mountain Forest Reserve in the Eastern portion of North Kohala, and in West Hamakua, Island of Hawaii, and hereby recommend:

That, while approving of the recommendations of Mr. Hosmer, we do not feel that they go far enough in the protection of the watershed of the Kohala Mountains, and therefore further recommend that not only the area proposed by Mr. Hosmer, but the additional area suggested by him on page 8 of his said report, together with the small additional area as shown on the 1901 map of the island of Hawaii—marked in blue—

(the said map accompanying the Governor's Report of 1906), be included in the said Forest Reserve.

And the Committee further recommends that the Superintendent of Forestry be instructed to at once proceed without further delay to locate said proposed additional area, as above recommended, and report back to the Board at the earliest date possible.

Yours truly,
H.M. von HOLT,
Chairman;
W.M. GIFFARD,
C.S. HOLLOWAY.

I at once requested Mr. Wall to have the necessary lines run. This blue print map, sent out last spring, is the result. It shows the boundaries that I recommended be adopted. This recommendation is based on personal examination on the ground, the first soon after I came to the Territory in 1904, and I have been on the ground several times since. I decided that this little gulch, Hooleipalaoa, starting behind Puupili and coming down across Kahua 1 and 2 and Kehena 2, is the best boundary that can be adopted as the western limit of the Kohala Mountain Forest Reserve. It would, of course, be possible to carry the boundary further out on Kehena 2, but the cost of making that the forest line would be so much more expensive that I did not feel justified in recommending it. A good portion of the Hooleipalaoa Gulch is sufficiently deep and steep-sided to serve as a natural barrier, thus reducing the cost of fencing.

On this big blue print are shown the areas within the Hooleipalaoa gulch; also the areas of privately owned forest land between the *makai* boundary of Kehena 2 and the plantations. [page 485] This area includes the private forest reserves of the three plantations, which have been maintained by them for some years; by Niulii, Kohala and Halawa plantations. This lower line, which is the *makai* boundary line of the proposed reserve on the north, goes just above the head of the cane. This broken line shows what was in cane last year when Mr. Kananui was up there. This straight line is the proposed boundary of the proposed reserve. The area of each of the private lands and the name of the owner is given on this map: Pololu, belongs to the Government; then Waiapuka, 197 acres, Bishop Estate; Niulii, 560 acres and Makapala, 530, to Judge Hart; Aamakao, 710 acres, Kohala Sugar Company; Halawa, 493, Estate of Jas. Wight; then two or three small areas beyond; then the portion of Kehena 2, inside of Hooleipalaoa Gulch, Woods Estate, 2428 acres; Kahua *liiii*, or Kahua 1,782 acres; Kahua nui, (Kahua 2) 482 acres; and Waika, 463 acres. Kahua 1 and Waika belong to Frank Woods in fee. Kahua 2 is Austin Estate, under lease to him. The government map shows Waika as coming up to a point. This is incorrect. This blue print shows the lines as they actually are.

Now the proposition, this afternoon, is to see if we can get to some definite understanding, in regard to a reservation of these areas.

Mr. Campbell.

You have heard Mr. Hosmer in his description of the proposed area to be taken into the forest reserve. Now I would like to hear from any of the gentlemen present, as to whether there is any opposition to this area to be taken, or suggestions as to additional area, or suggestions as to the cane line.

I might in connection with that read this letter to Mr. Hosmer from Mr. Watt:

Kohala, March 15, 1909.

Ralph S. Hosmer,
Superintendent of Forestry,
Honolulu.

Dear Sir: Your letter of February 26 received and contents noted.

Messrs. Bond, Hind, Renton, Wight and myself met and discussed the matter yesterday. The opinion of these gentlemen seemed to be that the reserve should include all the lands inside of about two miles west of the Hooleipalaoa Gulch. As regards the three private forest reserves above the plantations I would say that I agree with your idea and have so expressed myself to the Halawa people here and also to their Trustee (Mr. R.W. Shingle) in Honolulu.

With regard to us here at Kohala, last year the directors decided to set apart nearly all of the Awini property as a government reserve which I consider would be quite an addition to any forest reserve that may be made in future. [page 486]

Up to this time I have not consulted with Mr. Robert Hall of Niulii Plantation and therefore am unable to say what his views on the subject might be.

If Niulii, Halawa and the Kohala Sugar Company were willing to turn over all these forest reserves to the Government, it seems to me that it would only be fair for the other three plantations (Union Mill, Hawi and Puakea) to purchase Kahua and Kehena and turn it over as their contribution and more especially as these last named plantations will derive far more benefit from such a reserve than the others will.

Yours truly,

GEORGE C. WATT,
Manager, Kohala Sugar Co.

Mr. Hosmer.

There is a string of hills out here to the west, beyond the Hooleipalaoa Gulch, which might be made the boundary (indicating on map a row of hills from Puuiki to Puu Oo, to Lahikiola, to Puu Liolio and Puu Manu), but that land has for so long a time been opened up and there is now no forest remaining on it, that it is a question of planting. The cost of fencing too, would be much greater there. I believe that most of the protection that we need would be secured by having the boundary at Hooleipalaoa. Of course if it is simply a question of spending more money, I am not at all opposed to seeing the forest area extended. But it would very materially increase the cost, and it has seemed to me, up to the present, that we had better get Hooleipalaoa and the area inside done before we talk about getting further forest area, or planting further out towards Mahukona.

Mr. Campbell.

The Board has within its power described the forest reserve as it should be, and I should be pleased to hear—

Mr. Hosmer.

I should like to ask if the gentlemen are still of the same mind as they were [were] when this (Mr. Watt's) letter was written?

Mr. Hind.

That is, with the boundary as we have it there [on the map]?

Mr. Hosmer.

As to bringing the boundary further out.

Mr. Hind.

I think the boundary, as far as I am concerned, I think the boundary as laid out by you along the Hooleipalaoa Gulch is about all we can think of just now.

Mr. Watt.

Well, after that map was finished and submitted to us, it was suggested by resident planters that there be more taken in. There was nothing definite said about it. That is why that letter was written.

Mr. Campbell.

You think at all events that he has covered the ground fairly well, Mr. Watt? [page 487]

Mr. Watt.

Well, so far as I know. The other men know more about the country up there than I did, being practically a stranger.

Mr. Campbell.

Mr. McCrosson, you are particularly familiar with that country.

Mr. Watt.

I think Mr. Bluett knows that country well.

Mr. McCrosson.

I think Mr. Bluett could state more intelligently about that now than I can or almost any of the Kohala people.

Mr. Bluett.

I think that boundary is about the best that could be selected under all conditions, with the exception that the line could go to the west of Puu Pili, and take in the entire hill. There is a certain amount of forest on Puu Pili which is still good. Instead of running through the center of Puu Pili the line should circle the hill. I think that is the only change that I should suggest.

Mr. Hosmer.

My recommendation in the report covers that, although the map does not show it.

Mr. Bluett.

As regards [to] those other hills, there are several, and a number of still other hills; those could sometime be fenced in and planted; that may have a very good effect without taking the strip in between.

Mr. Hosmer.

Reading from his report of October 14, 1908: "There should be also included in the reserve the south side of Puu Pili, to protect certain springs on the lower slope of that hill." Mr. Kanakanui has not worked up his field notes yet, although he is prepared to do so when this matter is settled. The line can go around the hill and take in that side.

Mr. Campbell.

Mr. Holstein, can't you give us any expression of opinion on that subject?

Mr. Holstein.

I think the Kohala planters have expressed themselves as favoring the Hooleipalaoa Gulch. I have been up there on several occasions and bear out Mr. Hosmer's statement, the gulch is a natural boundary with a few exceptions, here and there. I

agree also with Mr. Bluett, on the proposition that the boundary on this Puu Pili should be on the west side instead of climbing up the middle and leaving half the hill for a cattle ranch and the other for forest protection.

The great difficulty in the discussion today will be as to what attitude the owners of these private lands will take in the matter. At the meetings we held in Kohala with the Kohala planters—I believe there were three meetings held—while we were unanimously in favor of forest protection in Kohala, the question is how much or what will these private owners of the land sell for? I believe when it comes down to the question of the Kohala planters buying a tract of land, they would be quite willing to do so, for their own protection as well as the protection of other people there. As we have the parties interested in these private lands here it strikes me that the best proposition now is to ask them whether they will sell. And if they are not willing to sell, the question is, will the Government proceed further in the matter? [page 488] I deprecate any proposition of condemnation of land for forest purposes, the more so for private purposes, for the interests of the planters up there. I hope such an idea will not be carried out, because an agreement could be accomplished by the proper meetings of the owners.

Mr. Campbell.

Mr. Holstein, what is your feeling in regard to a possible exchange of land by the Government at Holiu there for forest reserve?

Mr. Holstein.

Private exchange?

Mr. Campbell.

Do you think the Government is justified in making an exchange with other lands for forest reserve?

A. It all depends on what land the Government is going to exchange.

Mr. Campbell.

Well, possibly agricultural land for land of this kind?

Mr. Holstein.

Then I am opposed to such a proposition.

Mr. Campbell.

Lands of a similar character, you might feel differently about?

Mr. Holstein.

I would feel more favorable to such a proposition.

Mr. Campbell.

The point I particularly want to arrive at is this—

Mr. Holstein.

Pardon me, in that vicinity, we have a great problem in the Kohala district, as well as in South Kohala, the reclamation of land, thousands of acres. I think the Government has in the neighborhood of 15,000 acres of *pili* lands, which in days to come will furnish homes for the people which you wish to have in the Islands. The exchange of agricultural land, I am particularly opposed to in that neighborhood. And if we can come to some proposition whereby these lands could be obtained by the Government, all the better.

Mr. Campbell.

I think the situation with regard to any minor changes in line by taking in Puu Pili and any smaller matters can be determined in the final adjustment. I wanted a general expression of opinion of the people of Kohala, whether we have recommended reasonable boundaries and whether the people of Kohala were satisfied.

Mr. Campbell.

Mr. Bryant, do you feel that we are on the right track?

Mr. Bryant.

Yes.

Mr. Campbell.

Practically every interest in Kohala is represented here today, and later on when we come to a conclusion, we don't want to feel that we have made an error, or in our preliminary meetings determine on a thing which is not proper. If there are any objections to the line as established, I would be pleased to hear them.

Mr. Hosmer.

If the line is not perfectly clear to everybody from these maps, there are here some of the detailed maps of that district, if anybody wants them.

Mr. Holstein.

Silence gives consent. [page 489]

Mr. Campbell.

I so take it. Now we come right down, gentlemen, to the proposition, what can the Government do, and what can the interests in Kohala do? We are all here, and I think everybody is agreed on the importance of this thing, and the necessity of some action being taken to reforest Kohala. From the standpoint of the Government within the next two years and a half, if the land is acquired, the Government can expend a stated sum of money in reforesting those areas that may need reforesting, and in fencing. The Government is not in a position, gentlemen, to purchase the lands required in Kehena 2, and the other lands. If those lands are absolutely necessary to the forest reserve in Kohala, it is up to the interests in Kohala to aid the Government; but for the Government to go in and purchase those lands, it simply means another forest reserve on paper, because all the money that could possibly be devoted to that forest reserve would have to go then to the purchase of lands. But if the Kohala interests will aid the Government in securing these lands, why we can immediately start proceedings. I believe any money that the Government puts into this thing should be devoted exclusively to fencing and reforesting.

Mr. Swanzy.

I would like to suggest, Mr. Chairman, that in order to classify things, we learn exactly how the lands in question are held. My understanding is that for these lands, 2428 acres being the larger land, Kehena, is owned by the Woods Estate.

Mr. Campbell.

Yes.

Mr. Swanzy.

That the next land to that, 463 acres, something like that, 463 acres it is on the map, is owned by Mr. Frank Woods; that the next piece to that, Kahua 2, is owned by the Austin Estate, and the *mauka* piece of all, Kahua liilii, is a piece of 782 acres owned by the Government. Now we have here today the representatives, if I understand it rightly, of the Woods Estate, of Mr. Frank Woods, of the Austin Estate, and it seems to me that

it would be a good idea to learn from these gentlemen what their idea of the value of these properties is, what they would be disposed to sell them for. The Kohala people may have a little difficulty in arriving at conclusions regarding the way in which any purchases that may be made shall be divided, but before they can approach that matter at all, they must know how much it is that is to be divided, then there is to consider how much money is to be expended and then if they think that the reforestation of this land is not commensurate with the expense, why then we can drop the thing, but the first thing to find out, in my humble opinion, is what the owners of these lands ask for the land, and in the second place what the Government that owns 782 acres, if that is the area, would do with its land. In what way would the Government propose to participate in this reforestation? Supposing that it was undertaken, the Government has 782 acres. Would the Government give up that land for the purpose of the forest, would they participate in the cost of fencing? What in [page 490] other words would they do, that is what we ought to know, and then we ought to know from the representatives of these other interests here what their idea of their properties is. Then, as I understand it, Mr. Woods or Kahua Ranch have leases on the Government land and on the Austin Estate land and naturally they would have to be separate, so we would have to hear from them as to what they would need in consideration of giving up their leases or whether they would be willing to give up the leases without any consideration. If these points can be settled, then I think we can get along.

Mr. Campbell.

Mr. Robertson, are you prepared at this time to state, as representative of the Woods interests, what sum of money you would be willing to take for the Woods lands?

Mr. Robertson.

I am not, Mr. Campbell. The Woods Estate as I understand it, would be willing to consider an offer that might be made by the parties in interest, who desire to acquire those lands, but I haven't any authority to submit any proposition on behalf of the Woods Estate at this time. We have to dissent from the language of that resolution read by you, passed at some meeting in Kohala, whereas this land of Kehena is dubbed as being of no value either for pasturable purposes or agricultural purposes. We claim that a large proportion of that area is good for either or both agricultural or grazing purposes. Secondly, any offer that might be made would not stand any chance of being accepted if it was made on the basis of that resolution. The parties at the lower elevations there that desire to see this forest reserve put through will have to bring themselves to a frame of mind where they must concede that these lands have some value, a material value, to the present owners. On that foundation the Woods Estate is willing to consider a proposition, providing one be made upon fair and reasonable terms. In other words, in order to help effectuate this forest reservation, the Woods Estate is willing to sell that area that has been designated by the red line here, a portion of Kehena 2, for such price as they deem fair and reasonable. In regard to Frank Woods, whom I also represent, I think Mr. Swanzy is mistaken as to Woods holding a Government lease. He owns two of those lands, Kahua 1 and Waika, in fee simple, and holds a lease from the Austin Estate of Kahua 2, with nearly twenty years unexpired.

Mr. Swanzy.

Then there is no Government land there at all?

Mr. Robertson.

Not that I know of. In regard to Mr. Frank Woods, Mr. Campbell said he does not desire to sell, but he is willing to entertain a proposition for exchange if practicable. In other words he wants to continue in the ranch business, and if those lands are given up for forest reserve purposes, he wants some other lands in lieu of them. Now then, if the Government, or any private parties in interest, are in a position to make any proposition

for an exchange with Frank Woods, he would be glad to entertain it. [Hawaiian Forester and Agriculturalist, 1909:491]

Proclamation of the Kohala Mountain Forest Reserve (1913)

Deliberations regarding compensation for private lands, and modifications to leases on Public Lands as a part of the Kohala Forest Reserve continued until 1913, at which time, the notices were served, and Governor's Proclamation establishing the reserve were published. The records provide us with the following narratives, leading to establishment of the reserve:

1913

Kohala Mountain Forest Reserve.

Honolulu, June 5, 1913.

Gentlemen:—In October, 1908, I submitted to the Board the recommendation that a forest reserve be set apart on Kohala Mountain in the districts of Kohala and Hamakua, Hawaii. [Published in the *Hawaiian Forester and Agriculturist* for December, 1909; Vol. VI, No. 12: pp. 472-478.] The project was referred back to me by the Board to have included in the proposed reserve an additional section of certain privately-owned land at the west end of the mountain, more particularly a portion of the tract known as ***Kehena 2***.

Since then, as the members of the Board know, persistent efforts have been made to acquire the area in question for the government, that the whole section might be set apart and maintained strictly as a forest reserve. To this end a sum of money for the purchase of the forested part of Kehena 2 was raised among the Kohala district sugar plantation companies, and later condemnation proceedings were instituted by the government for acquiring this land.

Up to the present time these efforts have not been successful, nor is the outlook good that this addition will be made in the near future, as the special fund pledged by the Kohala plantations has recently been withdrawn.

On July 1, 1913, the existing leases expire on the large government land of ***Puukapu*** that embraces the greater part of the summit of Kohala Mountain, as well as on one or two other tracts that also run up into the proposed Kohala Mountain forest reserve. These lands are now held by the Parker Ranch. This ranch has for some years now maintained fences on the mountain bordering the forest. At the time the fences were being built the ranch got out the wild cattle then at large on that mountain.

The object of postponing the creation of the Kohala Mountain forest reserve was primarily to bring pressure to bear toward getting the whole forest area on the Kohala Mountain included in the reserve. In practice it has not worked out so, and especially now that action on Kehena 2 appears likely to be slow in coming to a head, it seems advisable not to wait longer before setting apart the remainder of the lands on Kohala Mountain. I therefore recommend that this project be taken up and disposed of. An addition to the area of the reserve can readily be made later, if Kehena should then be available.

The area now recommended to be reserved differs a little from [page 301] that suggested in my original report in that the reserve as now proposed includes the private forest reserves that have for ten years or more been maintained above the Niulii, Halawa and Kohala plantations in Kohala. The forest line back of Waimea has also been slightly modified, recent surveys having made available more accurate data than were to be had in 1908. Above the recently laid out Puukapu homestead lots, second series, the forest line has been somewhat changed in location, as by so doing it

was possible to secure, as one of the terms of the lease of the remnant of government land adjoining, the building and maintenance of a substantial fence on the forest reserve boundary. No part of the lands of Kehena 2, Kahua 1 and 2, or Waika is included in the reserve as now proposed.

The accompanying revised description, prepared by the Government Survey Office, gives the location of the boundary in detail. The total area of the Kohala Mountain forest reserve as now recommended is 29,627 acres. Of this 14,204 acres, 47.9 per cent., is land belonging to the Territory.

For the reasons set forth at length in my original report on this project, under the date of October 14, 1908, I now recommend that the Board approve the creation of the Kohala Mountain forest reserve and that the governor be requested to hold the necessary hearing and thereafter to set this area apart as a forest reserve, in accordance with law and custom.

Very respectfully,

RALPH S. HOSMER

Superintendent of Forestry... [Hawaiian Forester and Agriculturalist, 1913:302]

1913

Proclamation of Forest Reserve

***In the Districts of North and South Kohala and of Hamakua,
Island and County of Hawaii, Territory of Hawaii.***

UNDER and by virtue of the authority vested in me by the provisions of Chapter 28 of the Revised Laws of Hawaii, as amended by Act 65 of the Session Laws of 1905, and by Act 4 of the Session Laws of 1907, and of every other power me hereunto enabling, I, ERNEST A. MOTT-SMITH, Acting Governor of Hawaii, with the approval of a majority of the Board of Commissioners of Agriculture and Forestry, having held the hearing of which notice has been duly given as in said Acts provided, do hereby RECOMMEND and APPROVE as a forest reserve to be called the Kohala Mt. Forest Reserve, those certain pieces of government and privately owned land in the Districts of North and South Kohala and of Hamakua, Island and County of Hawaii, Territory of Hawaii, which may be described roughly as embracing the summit and upper slopes of the Kohala Mountain, and containing an area of 29,627 acres more or less, more particularly described by and on a map made by the Government Survey Department of the Territory of Hawaii, which said map is now on file in the said Survey Department marked Government Survey Reg. Map No. 2037 and "Kohala Mt. Forest Reserve," and a description accompanying the same numbered C.S.F. No. 2432, which said description now on file in said Survey Department as follows:

KOHALA MOUNTAIN FOREST RESERVE.

Including portions of the lands of ***Awini, Honokane, Pololu, Mekanikahio 1 and 2, Waiapuka, Niulii, Makapala, Aamakao, Halawa, Halelua, Nunulu, Lamaloloa, Kaiholena, Kawaihae 1, Kawaihae 2,*** the ilis of ***Puukawaiwai-Panoluukia-Kapia, Pauahi, Momoualoe, Ouli, Lanikepu, Waikoloa,*** and ***Puukapu;***

In the districts of North and South Kohala, and portions of the *ahupuaa* of ***Waipio,*** the *ili* of ***Lalakea,*** and the *ahupuaas* of ***Kukuihaele, Waikoekoe, Kamoku,*** and ***Keaa;***

In the District of Hamakua, Island of Hawaii.

Beginning at a point on the West edge of **Pololu Pali**, the true azimuth and distance of said point from the forest monument post set in on the boundary of the lands of **Makanikahio** and **Waiapuka**, being 280° 58' 672.0 feet, and the coordinates of said point of beginning referred to Government Survey Trig. Station "Kauhola" and 23,222.1 feet South and 8665.5 feet East, and the boundaries run by true azimuths:

1. 100° 58' 9392.6 feet crossing the lands of Makanikahio 1 and 2, Waiapuka, Niulii, Makapala, and Aamakao to a Forest Monument post set in by the gate of the Kohala Sugar Company's fence on the East side of Aamakao Gulch;
2. 77° 58' 8921.4 feet crossing the lands of Aamakao, Halawa, Halelua and Nunulu to the fence on the East side of the present Waimea-Halawa Road; [page 329]
3. Thence along said fence, crossing the lands of Nunulu, Lamaloloa, and into Kaiholena, direct azimuth and distance being 9° 8' 3997.0 feet;
4. Thence along said fence, crossing and along the land of Kaiholena to the land of Halawa, direct azimuth and distance being 271° 25' 4240.0 feet;
5. Thence *mauka* along said fence, bounding Halawa, to the *makai* corner of Kehena (Government Land), direct azimuth and distance being 348° 40' 1488.0 feet;
6. Thence along the fence bounding Kehena (Government Land) and the land of Halawa to Mahinakaka Gulch, the direct azimuth and distance being 296° 30' 1072.0 feet;
7. Thence along said fence, bounding Kehena (Government Land) and the land of Halawa to Hooleipalaoa Gulch, the direct azimuth and distance being 291° 15' 2022.0 feet;
8. Thence the boundaries follow the land of Kehena 2nd by descriptions in Certificate No. 17 along the heads of the lands of Aamakao, Makapala, Niulii, Waiapuka, Makanikahio 1 and 2, to West edge of Pololu Valley, thence *mauka* and around the edge of Pololu Valley to Honokane (as per Boundary Certificate No. 14), at rock + called Kaneaa on West edge of Honokane Gulch;
9. 2° 20' 5280.0 feet along brow of Honokane Gulch;
10. 29° 50' 4884.0 feet along brow of Honokane Gulch to a small hill called Kilohana at rock marked K on ledge;
11. 11° 52' 3130.0 feet along the land of Kahualiilii to a projecting spur in Honokane Gulch;
12. 21° 17' 3130.0 feet along the land of Kahuanui, the boundaries following the winding of the top of Honokane Gulch to a double cross on stone set in the ground on the South peak of the Hinamakanui Crater, this point being the common corner of the lands of Kahuanui, Waika, and Honokane;
13. 294° 20' 4592.0 feet along the land of Waika to "Waihoolana" (a large cross in triangle) cut in the top of a rock mound, from which the true azimuth and distance is 148° 01' 131.2 feet to the common corner of the lands of Waika, Kawaihae 1st, and Honokane Nui;
14. 72° 10' 7640.0 feet along the land of Waika to a point from which the true azimuth and distance to "Puu Pili" Trig. Station is 138° 45' 10" 3496.5 feet;
15. 318° 45' 10" 9499.5 feet, following the *mauka* fence to the gulch on the boundary of Kawaihae 1st and Kawaihae 2nd;
16. 303° 47' 17" 3308.3 feet, following the *mauka* fence to angle in same;

17. 334° 33' 30" 5263.8 feet, following the *mauka* fence to the gulch on the boundary of Kawaihae 2nd and Puukawaiwai;
18. 43° 19' 788.0 feet down gulch;
19. 295° 43' 8892.3 feet following the *mauka* fence;
20. 00° 50' 30" 3195.0 feet following the fence;
21. 273° 12' 8334.2 feet to a point on the ridge;
22. 309° 34' 30" 7590.2 feet along the *mauka* fence to the West side of Puukapu Homesteads, 1st Series;
23. 234° 25' 00" 2600.0 feet following the fence across the *mauka* tier of Puukapu Homesteads, 1st Series, to Hauani Gulch, on the Eastern boundary of said Homesteads;
24. Thence following down Hauani Gulch to the present forest fence; dividing the pasture land between this and the back line of Puukapu Homesteads, 2nd Series, said point being 7192.4 feet North and 8438.0 feet West from the Government Survey Trig. Station "East Base." [page 330]
25. 238° 10' 3100.0 feet along the present forest fence;
26. 249° 30' 5980.0 feet along and through forest to corner of fence, the true azimuth and distance from a pile of stones with stone marked with the sign of an anchor being 159° 25' 970.0 feet;
27. 258° 40' 4800.0 feet along and through forest to corner of fence near the head of the land of Lalakea;
28. 200° 16' 50" 10,373.2 feet following the *mauka* fence line to a stone marked + at corner of fence, said point being the North-west corner of Homesteads (private subdivision);
29. 312° 59' 3107.0 feet to the boundary of Lalakea and Waikoekoe at the old Mahiki Road at Waapa;
30. 281° 30' 8050.0 feet across the land of Waikoekoe, passing road at 400 feet to corner of fence;
31. 184° 20' 1137.0 feet along fence to corner;
32. 259° 30' 2042.0 feet along fence;
33. 177° 20' 1404.0 feet along fence;
34. 197° 40' 4138.0 feet along fence to corner of present forest reserve on boundary of Mooiki and Keaa;
35. 88° 00' 5490.0 feet to point on the road to Waimea, (Mud Lane) which is distant from "Puu Manu" Trig. Stations 4360.0 feet, the true azimuth being 22° 15';
36. 92° 50' 2760.0 feet to a point *mauka* of No. 1 Reservoir of the Pacific Sugar Mill Co.;
37. 123° 05' 4270.0 feet to a point on the boundary of Waipio above Hiilawe Falls; thence along the top edge of the East Pali to Waipio Valley, the general azimuths and distances being:
38. 129° 40' 860.0 feet;
39. 147° 50' 930.0 feet;
40. 117° 12' 110.0 feet to the top of Puaahuku Ridge, where the boundary of Lalakea descends into Waipio Valley;

41. 31° 20' 5750.0 feet to a point where the boundary of Lalakea again meets the top of *pali*;
42. 30° 30' 450.00 feet along top of *pali*;
43. 11° 00' 1050.0 feet along top of *pali*;
44. 103° 40' 5200.0 feet, more or less, across Waipio Valley to the top of the West *pali*;
45. Thence following along the North side of Kawainui branch of Waipio Valley, crossing the head of Waimanu Valley, thence in a Westerly direction along the boundary of Hamakua and Kohala (being also the South boundary of the HAMAKUA PALI FOREST RESERVE) to the junction of the lands of Honokane, Kawaihae 1st, and Puukapu;
46. Thence along down between the boundary of the land of Honokane and the HAMAKUA PALI FOREST RESERVE IN A Northerly direction;
47. Thence along down the middle of Honokea Gulch to its intersection with the boundary between Awini Homestead Lots 2 and 3;
48. Thence along the boundary between said Lots 2 and 3, and 1 and 4 of the Awini Homesteads, the true azimuth and distance being 90° 00' 4104 feet to the Honokane-iki Gulch;
49. Thence down the Honokane Gulch to the sea;
50. Thence along the sea to "Kapili Rock" on the boundary of the lands of Honokane and Pololu;
51. Thence still along the sea to a point on the edge of the *pali* called "Pohaku Kumaka" on the boundary of the lands of Pololu and Makanikahio 1st;
52. Thence following the boundary between Pololu and Makanikahio 1st to the point of beginning. [page 331]

Excepting and Reserving from the *ahupuaa* of Pololu, the kuleanas, the privately owned *ili* of Pa-u, and the Government rice and other bottom lands in Pololu Valley, area 300 acres, more or less.

Total area, 29,627 acres, more or less. (In government ownership, 14,204 acres.)

AND as provided by law, subject to the existing leases, I do hereby SET APART as parts of the Kohala Mountain Forest Reserve those portions of the government lands of Awini (100 acres), Pololu (1000 acres), Lamaloloa (24 acres), Kawaihae 1st (3370 acres), Puukawaiwai-Panoluukia-Kapia (360 acres), Pauahi (150 acres), Momoualoe (130 acres), Lanikepu (435 acres), Puukapu (8385 acres), Kamoku (20 acres), and Keaa (230 acres), altogether an area of 14,204 acres, more or less, that lie within the metes and bounds of the above described Kohala Mountain Forest Reserve.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the Territory of Hawaii to be affixed. Done at the Capitol in Honolulu this 13th day of October, A.D. 1913.

E.A. MOTT-SMITH

Acting Governor of Hawaii. [Hawaiian Forester and Agriculturalist, 1913:332]

Government efforts to secure the mountain lands of Kehena from the Woods Estate continued, and as documented in the following letter from November 1920, remained unsuccessful:

November 29, 1920

Kohala Forest Reserve.

Minutes of a Public Hearing Held at the Executive Building, Honolulu, On Monday November 29, 1920, at 7:30 P.M. to Discuss the Proposition of Securing Certain Private Lands to be Included in the Kohala Forest Reserve, Hawaii.

ATTENDANCE:

Hon. Gerrit P. Wilder, Chairman Members of Agricultural Committee

“ John Fassoth
 J. Uluihi
 Alex. Lindsay, Jr.
 T. H. Petrie
 John Hind
 G. C. Watt
 P. W. P. Bluett
 Leslie W. Wishard
 Dr. H. L. Lyon
 Robt. M. Lindsay
 C. S. Judd, Executive Officer, Board of Agriculture and Forestry
 M. T. Kelly, Stenographer

The Chairman stated that the meeting had been called for the purpose of discussing the question of the advisability of securing certain private lands to be added to the Kohala Forest Reserve, which lands are now being used for grazing purposes. This matter was presented at the special session of the legislature and the Agricultural Committee of the House of Representatives appointed a Committee of three to visit the section referred to and to make a report at the next legislature. It is the intention of the Committee to leave here on Wednesday December 8, 1920, returning on December 11.

In order to facilitate matters, there being a number of representatives of the Kohala district present in Honolulu at this time, the meeting was called to obtain their views on the matter.

The Chairman asked Mr. Hind for his views, but he referred the matter to Mr. Bluett, as he was more familiar with the lay of the land.

The lands in question are **Kehena 2**, owned by the Jas. Woods Estate, 2,428 acres; **Kahuallilili**, owned by Frank J. Woods, 782 acres; **Kahuanui**, owned by the Austin Estate, 482 acres, and **Waika**, owned by Frank J. Woods, 463 acres, making a total area of 4,155 acres.

Mr. Bluett stated that it was his understanding that the main reason the Woods Estate turned down the proposition of selling this land to the Government in former years was on account of the cutting off of the water supply for their cattle. Mr. Wilder stated that Mr. Palmer Woods had given him the same idea. He also stated that Mr. Woods was very much interested in the Government's securing the land and reforesting the same for the purpose of water conservation, and he hoped that some arrangements could be made whereby the land could either be purchased or exchanged.

Mr. Hind stated that he never remembered the question of water for the cattle being mentioned when the question of securing this land in former years was brought up. Mr. Watt was of the same opinion.

Mr. Bluett stated that in former years the land was covered by a very heavy undergrowth and there were numerous water holes, but since the land was opened to grazing this undergrowth had entirely disappeared and within the last two years there was little or no water there. Mention was also made of wild pigs in the forests which were doing considerable damage. Dr. Lyon remarked that he had had occasion to visit the Kohala district in 1917 there was a very good forest growth in this section but in 1919 clear up to the gulch there was no sign of any undergrowth.

Mr. Wilder then asked if anyone knew the history and the period in which the project was first taken up. Mr. Petrie stated that it was in 1909 or 1910 when the Government proposed to purchase Kehena 2 from the Jas. Woods Estate. The price offered at that time was \$24,000., or approximately \$10. Per acre. Mr. Petrie asked how many acres were involved in the present transaction, Mr. Judd replied, 4,155 acres.

The question was then asked who was attending to the reforestation of the lands below the area in question, also what trees were being planted. Dr. Lyon replied that the Planters' Association was attending to the planting and that different species of trees, for experimental purposes, were being tried out. Mr. Watt here stated that the land had been turned over for this purpose.

Mr. Robt. M. Lindsay stated that at the present time the drought in the district referred to was very severe, that to his knowledge springs that had plenty of water were now dry, and referred specially to one spring where never before was it known not to have sufficient water for domestic and mill purposes, but at the present time it was absolutely dry. He further stated that in his opinion it was of the utmost importance that the Government by some means obtain the area referred to whereby this land could be reforested and the water conserved.

Mr. Alex. Lindsay then asked, by way of suggestion, if it would not be good policy to ascertain from the persons who own the land what price they placed upon it and then negotiate with them to get their bottom price and then see the private interests concerned and see what they would be willing to contribute toward it. If the price was then not fair, the matter could be referred to the Governor with a recommendation that the land be condemned, but before doing anything he thought it would be advisable to first find out what price was set on the land.

Mr. Robt. M. Lindsay stated that he felt it was a waste of time to discuss the necessity of securing this additional land for the forest reserve, that it was apparent on all sides, and the only question to decide is the question of price. If the price they are asking is prohibitive, and the exchange of land is out of the question, condemnation is the only means left to secure the land. This is the quickest way.

Mr. Wilder stated that as the maximum land exchange under the law is 40 acres, exchange of land is out of the question, unless by Act of Congress, which would take two or three years.

Mr. Fassoth gave assurance, as one of the Committee, that everything possible would be done to secure these lands at the earliest possible moment. That the Committee would go to Hawaii on Wednesday next and look over the grounds and would make a report to the Legislature at the coming session.

There being no further business, the meeting adjourned... [HSA, COM 2]

The Pu‘u o ‘Umi Natural Area Reserve (1987)

Following establishment of the Kohala Forest Reserve, management of the Kohala-Hāmākua mountain lands watershed fell under the jurisdiction of the Territory, and then the State of Hawai‘i. During the years from establishment of the reserve to the 1950s, the primary function of the reserve was to produce water for sugar plantations and ranching interests. Lease-hold interests in water and development of water transporting systems were granted to several parties. As described in Executive Order No. 1660 (1954), this function was further granted to the Hawaii Irrigation Authority, while reserving the right of the County of Hawaii to acquire water:

Executive Order No. 1660

December 6, 1954

Setting Aside Land for Public Purposes

To the Hawaii Irrigation Authority for public purposes, to-wit, the Waimea, Hawaii irrigation and water utilization project,

ALL ditches, tunnels, flumes, and structures comprising that segment of the Upper Hamakua Ditch lying within the Kohala Forest Reserve, Kohala, Island of Hawaii, which segment is delineated in red upon the map hereto attached and made a part hereof, together with the right of access thereto;

AND also all government-owned water rising, flowing or captured in that portion of said Kohala Forest Reserve, containing an area of 4547 acres, more or less, shown and colored in green upon said map, which portion comprises the watershed for said segment of the Upper Hamakua Ditch; subject, however, to the right of the Board of Water Supply of the County of Hawaii to a reasonable amount of water from said Upper Hamakua Ditch for use in the Ahualoa-Honokaa domestic water system, Island of Hawaii... [State Survey Division]

In the 1970s, as a better understanding of the unique nature of Hawaiian forests and ecosystems, and threats to them was developing, the State of Hawai‘i began to investigate areas of particular value in the natural eco-systems of the Hawaiian Islands. From those areas, selected lands and resources came to be designated as Natural Area Reserves. In 1978, the Department of Land and Natural Resources submitted a formal proposal to the Governor, describing the proposed Pu‘u o ‘Umi Natural Area Reserve, and its general characteristics. The report offered the following documentation:

PUU O UMI NATURAL AREA RESERVE

LOCATION:

Hawaii, in the Kohala Mountains where it is peaked by Puu O Umi at the 5,260 ft. elev. and seaward to the Hamakua Coast.

APPROXIMATE SIZE: 10,182 acres; 1 to 5 X 9 miles.

ADMINISTRATIVE INFORMATION: It is in the Conservation District’s Protective Sub zone in the 32,000-acre Kohala Forest Reserve. It would include most of the western portion of the Kohala Watershed and all the land of Laupahoehoe I *makai*. The land is owned by the state (portion of TMK 4-9-13:1; portion of 6-1-01:1; 6-2-01:1, 2; portions of 6-3-01:2, 4, 5, 7). The TMK 6-3-01 parcels are indicated as being assigned to Hawaiian Home Lands, but their exchange for state land elsewhere was approved by

the Hawaiian Home Lands Commission in 1977.* Adjoining lands are owned by the state (in forest reserve and an estuarine sanctuary), Department of Hawaiian Home Lands, Queen's Medical Center, Richard Smart (Parker Ranch), and William Kamau/Daniel Cardoza. Water Resource facilities and projects, such as the Kohala Ditch and Tunnel, Kehena Ditch, Upper Hamakua Ditch, intakes, diversion dams, and the proposed Kohakohau Dam, have been excluded from the proposed boundaries.

The Kohala-Waimea and Kawaihae-Waimea Roads are about 1 ½ miles away in a route roughly parallel to the south boundary. Waiaka, Waimea, and the Waimea Homesteads are situated along the Kawaihae-Waimea Road. Dirt roads and jeep trails along pipelines and the Kehena and Upper Hamakua Ditches would approach and skirt the southeast and southwest sections of the proposed natural area reserve. Within the proposed reserve, topographic charts show a 5-mile foot trail from the Kehena Ditch road at the 4,400 ft. elev. leading to abandoned camps of the U.S. Geological Survey at the 3,000 and 2,400 ft. elev.

NATURAL AREA DESCRIPTION:

It contains one of the bog ecosystems present on the cloud-shrouded high areas of the Kohala Mountains, where the annual rainfall is 175 inches. Montane bog ecosystems of any significance occur at only two other areas in the state: Mt. Waialeale on Kauai and the West Maui Mountain. The Kohala bog has a ground-cover vegetation of Sphagnum moss, the moss that forms peat bogs on the continents. Many species of ferns, grasses, sedges, and herbs are also present. Tree growth, dominated by 'ōhi'a-lehua (Metrosideros), *alani* (*Pelea*), and 'ōlapa (Cheirodendron), is usually stunted and sparsely distributed. *Makai* of the bog region is an 'ōhi'a rainforest ecosystem. A mixed *hala* forest is present at the coastal region.

As a natural area reserve, there would not only be added protection and preservation of the Kohala Watershed and the head waters of Kawainui, Alakahi, Honokane Nui, and Kohakohau Streams, whose water resources are tapped in the low reaches, but equally protected would be the headwaters of Waihilau and Wailikahi Streams, which are major tributaries of Waimanu Stream. The adjoining Waimanu Valley and its stream will soon be declared an Estuarine Sanctuary under the National Coastal Zone Management Act.

In 1979, selected lands situated within the Kohala Forest Reserve, were withdrawn from the reserve, in preparation for establishment of the Pu'u o 'Umi Natural Area Reserve. Those lands were described in C.S.F. (Copy of Survey Furnished) No. 18,629, as follows:

C.S.F. 18,629
The Kohala Forest Reserve
Withdrawal Portion of Kohala Forest Reserve
May 4, 1979

Kawaihae 1, Puukawaiwai, Panoluukia, Kapia, Pauahi, Momoualoha, Lanikepu, Waiaka and Puukapu in South Kohala, and Laupahoe 1 in Hamakua, Island of Hawaii, Hawaii

* The approved exchange may, in fact, be inconsequential. In the tax maps, the TMK 6-3-01 parcels are identified as "Hawaiian Home Land (State of Hawaii) Resolution 26". However, Hawaiian Home Land Commission Resolution 26, 1932, deals with TMK 6-4-01 parcels in the Puukapu Homesteads. Also, the TMK 6-3-01 parcels were in the Kohala Forest Reserve by 1913, seven years before the Hawaiian Home Lands Commission Act of 1920, which excluded forest reserve land from "available lands".

Being portions of the Government (Crown) Lands of Kawaihae 1 and Puukapu and portions of the Government Lands of Puukawaiwai, Panoluukia, Kapia, Pauahi, Momoualao, Lanikepu, Waiaka and Laupahoehoe 1.

Beginning at the west corner of this parcel of land on the boundary between the lands of Waika and Kawaihae 1, the coordinates of said point of beginning referred to Government Survey Triangulation Station "PUU PILI" being 2516.38 feet South and 2290.33 feet East, as shown on Government Survey Registered H.S.S. Plat 508-A, thence running by azimuths measured clockwise from True South:—

1. 252° 01' 30" 7250.00 feet along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along Land Court Application 1043 to the south side of Kehena Ditch;

Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along the south side of Kehena Ditch (40.00 feet wide) for the next (2) courses, the direct azimuths and distances between points on said south side of ditch being:

2. 305° 14' 20" 6742.40 feet;
3. 251° 15' 50" 4055.30 feet to the top of south bank of Honokane Nui Stream;
4. Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along the top of south bank of Honokane Nui Stream, the direct azimuth and distance being: 296° 00' 10" 2598.40 feet;
5. 259° 10' 35" 4414.60 feet along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), to the district boundary of North and South Kohala;
6. Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along R.P. 8182, L.C. Award 6245, Part 2 to Kalaeokekoi, the direct azimuth and distance being: 220° 04' 20" 5222.80 feet to the middle of Kaimu Stream;
7. Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along R.P. 8182, L.C. Award 6245, Part 2 to Kalaeokekoi and along the middle of Kaimu Stream, the direct azimuth and distance being: 218° 32' 55" 18,365.10 feet to high-water mark at seashore;
8. Thence along high-water mark at seashore, the direct azimuth and distance being: 303° 28' 40" 2685.60 feet; Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along R.P. 4475, L.C. Award 7713, Apana 22 to V. Kamamalu and along the Government Lands of Waimanu and Waipio, along the top edge of *pali* for the next five (5) courses, the direct azimuths and distances between points on said top edge of *pali* being:
9. 27° 26' 10" 14,725.70 feet;
10. 307° 01' 45" 4753.50 feet;
11. 359° 00' 30" 5741.20 feet;
12. 112° 19' 40" 6389.90 feet;
13. 41° 20' 40" 6560.90 feet to the middle of Kawainui Stream;
14. 20° 31' 30" 8145.40 feet along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), to the middle of Kohakohau Stream;

15. 6° 08' 40" 5966.80 feet along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), to the middle of Haleaha Gulch;
16. 92° 26' 2300.10 feet along the remainder of the Government Land of Puukapu;
17. 125° 37' 1381.00 feet along Grant 793 to Ohiaku and Kamaikaaloa;
18. 91° 28' 976.80 feet along Grant 793 to Ohiaku and Kamaikaaloa and Grant 792 to Lumaawe;
19. 83° 10' 393.00 feet along Grant 1070 to Kiai;
20. 186° 30' 2419.50 feet along R.P. 2237, L.C. Award 8518-B to Kanehoa;
21. 101° 09' 1997.60 along the remainder of R.P. 2237, L.C. Award 8518-B to Kanehoa;
22. 112° 23' 4720.20 along fence, along the remainder of the Government Land of Momoualoha, along Hawaiian Home Land of Pauahi and along the remainder of the Government Land of Kapia;
23. Thence along fence, along the remainder of the Government Lands of Kapia and Panoluukia, the direct azimuth and distance being: 132° 48' 2368.00 feet;
24. 224° 58' 805.00 feet along the remainder of the Government Lands of Panoluukia and Puukawaiwai to a fence;
25. Thence along fence, along the remainder of the Government Lands of Puukawaiwai and R.P. 1666, L.C. Award 8515 to Keoni Ana, the direct azimuth and distance being; 148° 31' 2975.00 feet;
26. 71° 41' 176.00 feet along the remainder of R.P. 1666, L.C. Award 8515 to Keoni Ana to a fence;
27. Thence along fence, along the remainder of R.P. 1666, L.C. Award 8515 to Keoni Ana, the direct azimuth and distance being: 167° 52' 2439.00 feet;
28. 123° 16' 3446.00 feet along the remainder of R.P. 1666, L.C. Award 8515 to Keoni Ana to a fence;
29. Thence along fence, along Hawaiian Home Land of Kawaihae 1, the direct azimuth and distance being: 138° 52' 9441.00 feet to the point of beginning and containing an

GROSS AREA OF 10,949 ACRES AND A NET AREA OF 10,182 ACRES, MORE OR LESS, after excluding and deducting there from Exclusions (767 Acres) as shown on plan attached hereto and made a part hereof listed as follows:

EXCLUSIONS:

Portion of R.P. 1666, L.C. Award 8515 to Keoni Ana 562 Acres
 Portion of R.P. 2237, L.C. Award 8515-B to Kanehoa 187 Acres
 Grant 798 to Keaupuni 18 Acres
 Total of Exclusions 767 Acres... [State Survey Division]

On July 9, 1987, John Waihe'e, Governor of Hawai'i, issued Executive Order No. 3367 establishing the Pu'u o 'Umi Natural Area Reserve. The order reads as follows:

Executive Order No. 3367

Setting Aside Land For Public Purposes

By this Executive Order, I, the undersigned, Governor of the State of Hawaii, by virtue of the authority in me vested by Section 171-11, Hawaii Revised Statutes, and every

other authority me hereunto enabling, do hereby order that the public land hereinafter described be, and the same is, hereby set aside for the following public purposes:

FOR NATURAL AREA RESERVE, to be under the control and management of the Department of Land and Natural Resources, State of Hawaii, being the lands situate at Kawaihae 1, Puukawaiwai, Panoluukia, Kapia, Pauahi, Momoualoe, Lanikepu, Waiaka and Puukapu in South Kohala and Laupahoehoe 1 in Hamakua, Island of Hawaii, State of Hawaii, and designated as PUU O UMI NATURAL AREA RESERVE, containing an area of 10,949 Acres and a net area of 10,142 Acres, more or less, all more particularly described in Exhibit "A" and delineated on Exhibit "B", both of which are attached hereto and made a part hereof, said exhibits being, respectively a survey description designated C.S.F. No. 20,405 and survey map designated H.S.S. Plat 513-A, both dated June 4, 1986 prepared by the Survey Division, Department of Accounting and General Services, State of Hawaii.

SUBJECT to disapproval by the Legislature by two-thirds vote of either the Senate or the House of Representatives or by majority vote of both, in any regular or special session next following the date of this Executive Order... [In Collection of DLNR-NARS]

C.S.F. No. 20,405, established the boundaries of the Pu'u o 'Umi NAR, by the following survey (see Figure 1);

***C.S.F. No. 20,405
June 4, 1986***

PUU O UMI NATURAL AREA RESERVE

Kawaihae 1, Puukawaiwai, Panoluukia, Kapia, Pauahi, Momoualoe, Lanikepu, Waiaka and Puukapu in South Kohala and Laupahoehoe 1 in Hamakua, Island of Hawaii, Hawaii.

Being portions of the Government (Crown) Land of Kawaihae 1 and Puukapu and portions of the Government Lands of Puukawaiwai, Panoluukia, Kapia, Pauahi, Momoualoe, Lanikepu, Waiaka and Laupahoehoe 1.

Beginning at the west corner of this parcel of land and on the boundary between the Lands of Waika and Kawaihae 1, the coordinates of said point of beginning referred to Government Survey Triangulation Station "PUU PILI" being 2516.38 feet South and 2290.33 feet East, as shown on Government Survey Registered H.S.S. Plat 513-A, thence running by azimuths measured clockwise from True South:-

1. 252° 01' 30" 7250.00 feet along the remainder of Kohala Forest Reserve (Governor's proclamation dated December 22, 1928), along Land Court Application 1043 to the south side Kehena Ditch;
Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along the south side of Kehena Ditch (40.00 feet wide) for the next two (2) courses, the direct azimuths and distances between points on said south side of ditch being:
2. 305° 14' 20" 6742.40 feet;
3. 251° 15' 50" 4055.30 feet to the top of south bank of Honokane Nui Stream;
4. Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928) along the top of south bank of Honokane Nui Stream, the direct azimuth and distance being:
296° 00' 10" 2598.40 feet;

5. 259° 10' 35" 4414.60 feet along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along the remainder of the Government Land of Puukapu to the district boundary of North and South Kohala;
6. Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along R.P. 8182, L.C. Aw. 6245, Part 2 to Kalaeokekoi, the direct azimuth and distance being:
220° 04' 20" 5222.80 feet to the middle of Kaimu Stream;
7. Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along R.P. 8182, L.C. Aw. 6245, Part 2 to Kalaeokekoi, along the middle of Kaimu stream, the direct azimuth and distance being:
218° 32' 55" 18,365.10 feet to high-water mark at seashore;
8. Thence along high-water mark at seashore, the direct azimuth and distance being:
303° 28' 40" 2685.60 feet;
Thence along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along R.P. 4475, L.C. Aw. 7713, Apana 22 to V. Kamamalu and along the Government Lands of Waimanu and Waipio, along the top edge of *pali* for the next five (5) courses, the direct azimuths and distances between points on said top edge of *pali* being:
9. 27° 26' 10" 14,725.70 feet;
10. 307° 01' 45" 4753.50 feet;
11. 359° 00' 30" 5741.20 feet;
12. 112° 19' 40" 6389.90 feet;
13. 41° 20' 40" 6560.90 feet to the middle of Kawainui Stream;
14. 20° 31' 30" 8145.40 feet along the remainder of Kohala Forest Reserve (Governor's Proclamation dated December 22, 1928), along the remainder of the Government Land of Puukapu to the middle of Kohakohau Stream;
15. 6° 08' 40" 5966.80 feet along the remainder of Kohala Forest Reserve (Governor's proclamation dated December 22, 1928), along the remainder of the Government Land of Waiaka to the middle of Haleaha Gulch;
16. 92° 26' 2300.10 feet along the Hawaiian Home Land of Puukapu;
17. 125° 37' 1381.00 feet along Grant 793 to Ohiaku and Kamaikaaloa;
18. 91° 28' 976.80 feet along Grant 793 to Ohiaku and Kamaikaaloa and Grant 792 to Lumaawe;
19. 83° 10' 393.00 feet along Grant 1070 to Kiai;
20. 186° 30' 2419.50 feet along R.P. 2237, L.C. Aw. 8518-B to Kanehoa ;
21. 101° 09' 1997.60 feet along the remainder of R.P. 2237, L.C. Aw. 8518-B to Kanehoa;
22. 112° 23' 4720.20 feet along fence, along the remainder of the Government Land of Momoualua, along the remainder of the Land of Pauahi and along the remainder of the Government Land of Kapia;
23. Thence along fence, along the remainder of the Government Lands of Kapia and Panoluukia, the direct azimuth and distance being:
132° 48' 2368.00 feet;

24. 224° 58' 805.00 feet along the remainder of the Government Lands of Panoluukia and Puukawaiwai to a fence;
25. Thence along fence, along the remainder of the Government Land of Puukawaiwai and R.P. 1666, L.C.Aw. 8515 to Keoni Ana, the direct azimuth and distance being:
148° 31' 2975.00 feet;
26. 71° 41' 176.00 feet along the remainder of R.P. 1666, L.C.Aw. 8515 to Keoni Ana to a fence;
27. Thence along fence, along the remainder of R.P. 1666, L.C.Aw. 8515 to Keoni Ana, the direct azimuth and distance being:
167° 52' 2439.00 feet;
28. 123° 16' 3446.00 feet along the remainder of R.P. 1666, L.C.Aw. 8515 to Keoni Ana to a fence;
29. Thence along fence, along the Hawaiian Home Land of Kawaihae 1, the direct azimuth and distance being:
138° 52' 9441.00 feet to the point of beginning and containing a GROSS AREA OF 10,949 ACRES, MORE OR LESS, AND A NET AREA OF 10,142 ACRES, MORE OR LESS, after excluding and deducting there from Exclusions 1 to 4, Inclusive, (807 Acres) as shown on plan attached hereto and made a part hereof listed as follows:

EXCLUSIONS:

- | | |
|--|-------------------------|
| 1. Portion of R.P. 1666, L.C.Aw. 8515 to Keoni Ana | 562 Acres, More or Less |
| 2. Portion of R.P. 2237, L.C.Aw. 8518-B to Kanehoa | 187 Acres, More or Less |
| 3. Grant 798 to Keaupuni | 18 Acres, More or Less |
| 4. Portion of the Land of Pauahi | 40 Acres, More or Less |

TOTAL OF EXCLUSIONS 807 Acres, More or Less

Subject, however to Waimea, Hawaii Irrigation and Water Utilization Project, Governor's Executive Order 1660... [In Collection of DLNR-NARS]

Overview of Resources and Management Objectives of the Pu'u o 'Umi NAR

In 1989, the Department of Land and Natural Resources, Natural Area Reserves System office prepared a management plan for the Pu'u o 'Umi NAR. The following narratives from the 1989 plan, describe resources of the Pu'u o 'Umi NAR and program objectives:

A. General Setting

Puu o Umi Natural Area Reserve occupies 10,142 acres in the Big Island's Kohala Mountains. The Reserve begins at sea level west of Waimanu Valley, immediately climbing sea cliffs to 1,400 feet. The Reserve continues rising onto the largely uneroded slopes of the Kohala shield volcano. Maximum rainfall may exceed 150 inches annually (Giambelluca, Nullet, and Schroeder 1986). ***Waiilikahi*** and ***Kawainui*** streams begin in the Reserve and drop into Waimanu and Waipio valleys, respectively, on the Reserve's northeast and southeast boundaries. Honokane Valley drops away from the northern boundary of the Reserve's western-most extension. The Reserve's southern leg reaches down to 3,600 feet elevation, above the Hawaii Preparatory Academy in the town of Waimea, and its highest point is 5,260 feet at Puu o Umi.

The region of the Kohala Mountains occupied by the Puu o Umi Reserve is largely inaccessible. The nearest highways are the Kohala-Waimea and Kawaihae-Waimea roads, which are about 1.5 miles away from the Reserve's south boundary. Jeep and foot trails along pipelines and the Kehena and Upper Hamakua Ditches approach and skirt the southeast and southwest sections of the Reserve. A rough trail connects the Kehena Ditch at the 4,400 foot elevation to two abandoned camps of the U.S. Geological Survey at the 3,000 and the 2,400 foot elevation.

The Reserve comprises the majority of the Kohala Watershed. The water is captured and delivered for domestic and agricultural uses in the lands of Waimea, Hamakua, and coastal Kawaihae. Existing water resource facilities and projects were purposely excluded from the Reserve. The facilities include the Kohala Ditch and Tunnel, Kehena Ditch, Upper Hamakua Ditch, intakes, and diversion dams adjacent to the Reserve. The Reserve protects the headwaters of **Kaiwainui**, **Alakahi**, **Honokane Nui**, and **Kohakohau** Streams. These water resources are tapped in their lower reaches. Equally protected in the Reserves are the headwaters of **Waihilau** and **Wailikahi** Streams, which are the major tributaries of Waimanu Stream. The adjoining Waimanu Valley is a National Estuarine Research Reserve.

B. Flora

Eight natural communities, two of which are considered rare, were encountered during this survey of Puu o Umi Natural Area Reserve. For the purposes of this management plan, a natural community is considered rare if known from 20 or fewer locations worldwide. The two rare bog communities, Mixed Grass and Sedge Montane Bog and 'Ohi'a Mixed Montane Bog, were located adjacent to each other in the Reserve's eastern extension at approximately 3,700 feet elevation...

Hawaiian bogs dominated by grasses or sedges, with few woody species (Mixed Grass and Sedge Montane Bogs), are known from fewer than five sites on Maui and Hawaii. Each of these rare bogs is dominated by a different but overlapping set of grasses and sedges. The dominant grass in the relatively simple community seen at Puu o Umi was *kuolohia* (*Rhynchospora chinensis*), and the moss, *Sphagnum*. Other grasses included 'ohe (*Isachne distichophylla*), *Dichantherium cynodon* and *D. hillebrandianum*. This bog contained few woody species, such as extremely stunted (often less than eight inches in height) 'ohi'a (*Metrosideros polymorpha*), *pukiawe* (*Styphelia tameiameia*), and 'ohelo (*Vaccinium dentatum*).

Vegetation in the second rare bog observed along Transect 2 was of low stature (less than 36 inches tall), dominated by a bog-form of 'ohi'a, and by 'uki (*Machaerina angustifolia*), growing out of a mat of *Sphagnum* moss. This 'Ohi'a Mixed Montane Bog community is known from fewer than ten sites on the islands of Kauai, Molokai, Maui and Hawaii. On raised, better-drained portions of the bog seen in Puu o Umi Reserve, the 'ohi'a was of higher stature (about 12 inches tall), and formed a canopy over a variety of low shrubs including *pukiawe* and 'ohelo. Species typical of bog habitat observed in this Puu o Umi example included a native violet (*Viola maviensis*), 'ohe, *kuolohia*, *Dichantherium hillebrandianum*, and *D. cynodon*. *Uluhe* (*Dicranopteris linearis*) and *wawae'iole* (*Lycopodium cernuum*) were observed occasionally on bog edges. This rare community is slow to recover from disturbance.

The other six native-dominated natural communities observed were typical of very wet, montane, windward slopes. Two of these communities, *Carex alligata* Montane Wet Grasslands and Mixed Fern/Shrub Montane Wet Cliffs, formed small scattered patches throughout the Reserve...

Carex alligata Montane Wet Grasslands are known from the islands of Kauai, Maui and Hawaii. Many of the low-lying, water-saturated sections of the Reserve seen during the survey were dominated by *Carex alligata*, often to the near exclusion of other species. Associated species included scattered 'ohi'a, 'olapa (*Cheirodendron trigynum*), 'ohelo kau la'au (*Vaccinium calycinum*), and kuolohia.

Vegetation observed on the steepest slopes throughout the Reserve was dominated by ferns and shrubs, forming a Mixed Fern/Shrub Montane Wet Cliff community. Dominant species seen in Puu o Umi included 'ama'u (*Sadleria* spp.), uluhe (*Dicranopteris linearis*, *Sticherus owhyensis* and *Diplopterygium pinnatum*), hapu'u (*Cibotium* spp.), and other ferns, with common native shrubs such as 'ohelo kau la'au, pukiawe, and pilo (*Coprosma dubens*). Occasionally, shrubs such as na'ena'e (*Dubautia plantaginea*), pu'ahanui (*Broussaisia arguta*), koli'i (*Trematolobelia grandifolia*), and 'ape'ape (*Gunnera petaloidea*) were seen. A variety of mosses, liverworts and smaller ferns, and herbs such as 'ala'alawainui (*Peperomia* spp.) occurred under the mixed fern and shrub canopy.

Three distinct types of 'ohi'a-dominated forest were observed during this survey forming a mosaic that covered 86 percent of the Reserve, or 8,702 acres. 'Ohi'a/'Olapa Montane Wet Forest comprised the majority of the 'ohi'a-dominated forests. The 'ohi'a/'olapa canopy reached 30 feet in height, but in many instances was shorter (less than 15 feet). Occasional large tree snags (8-15 inches diameter), probably 'ohia, suggest that some areas of the forest have undergone dieback, and that the low stature canopy represents a regenerative phase. Dieback is a natural successional phenomenon in which older stands die synchronously, leaving gaps in the forest canopy. These gaps provide openings for subsequent 'ohi'a regeneration.

Common associated species in the canopy of the 'ohi'a/'olapa forest included kawa'u (*Ilex anomala*), kolea (*Myrsine sandwicensis* and *M. lessertiana*), alani (*Pelea clusiifolia* and other species), and hapu'u (*Cibotium glaucum* and *C. chamissoi*). Another tree fern, meu (*Cibotium hawaiiense*), was observed infrequently, usually at elevations below those occupied by *C. chamissoi*. Uluhe ferns were often codominant. Shrub species included alani, pukiawe, pu'ahanui, na'ena'e, 'ohawai (*Clermontia* spp.), manono (*Hedyotis terminalis* and *H. hillebrandii*), and pilo (*Coprosma pubens* and *C. ochracea*). Native ferns included ho'i'o (*Athyrium sandwichianum*), akolea (*Athyrium microphyllum*), *Dryopteris* spp., *Asplenium* spp., 'ae (*Polypodium pellucidum*), 'ama'u (*Sadleria pallida* and *S. souleyetiana*), and pala'a (*Odontosoria chinensis*). The ground cover was moss-dominated by *Sphagnum* sp., especially in poorly drained areas, but ground cover also included 'ala'alawainui, and *Cyrtandra paludosa*. Maile (*Alyxia oliviformis*) was sometimes abundant. Aside from the unusual abundance of *Sphagnum*, the components of the 'ohi'a/'olapa forest were typical of the community on other islands.

Forming a mosaic with the more prevalent 'ohi'a/'olapa forest, the 'Ohi'a Mixed Shrub Montane Wet Forest usually occupied the best drained areas on the Reserve's ridge tops. In the Reserve, the 'ohi'a canopy of this forest generally exceeded 15 feet in height. There was often a secondary tree layer containing native species such as kawa'u, 'olapa, kolea, alani (usually *Pelea clusiifolia*), and pilo. Under the tree layer was a discontinuous hapu'u layer and a well-developed native shrub layer containing such species as 'ohelo kau la'au, pu'ahanui, pukiawe, 'ohawai, kamakahala (*Labordia hedyosmifolia*), manono, alani, kolea, koli'i, pilo (*Coprosma pubens*), and saplings of 'ohi'a and 'olapa.

A diversity of native ferns was seen, including ho'i'o, akolea, 'ae, wahine noho mauna (*Adenophorus* spp.), *Asplenium* spp., *Dryopteris* spp., and *Vandenboschia davallioides*. The herb layer contained mosses, liverworts, seedlings of a variety of plants, and

'ala'alawainui. Native vines included *maile*, *hoi kuahiwi* (*Smilax melastomifolia*), and *ma'ohi'ohi* (*Stenogyne calaminthoides*). Epiphytes were well developed, including a variety of mosses, liverworts and ferns.

A broad expanse of 'Ohi'a/Uluhe Montane Wet Forest was observed covering the north slopes leading to the Puu o Umi Reserve's seaward boundary. Patches of similar forest occurred adjacent to gulches or where ungulate damage was severe, such as the areas immediately adjacent to pasture lands. On the whole, the 'ohi'a/uluhe forest occupied about 14 percent (1,420 acres) of the Reserve area. The composition of this forest was relatively simple; under an open canopy of 'ohi'a, the ground cover was dominated by *uluhe*. Other elements of surrounding 'ohi'a forests, especially 'olapa and *hapu'u*, emerged above the thick *uluhe* mats.

Uluhe also forms a shrubland without association of an 'ohi'a canopy, as it can rapidly dominate where there has been disturbance, such as landslides, fires, ungulate damage, or road cuts. Steep slopes and some 'ohi'a dieback areas in the Reserve were dominated by these *Uluhe* Successional Shrublands. On moderate slopes, a variety of scattered low trees and shrubs were also present, including 'ohi'a, 'olapa, and *pukiawe*. On steeper slopes, the cover was almost entirely *uluhe*.

Of the five rare plant taxa reported from the Puu o Umi Reserve area, three have been verified within the Reserve's boundary recently (since 1972). For the purposes of this plan, a species is considered rare and imperilled if it is known from 20 or fewer locations worldwide, or less than 3,000 individuals. The other two taxa may occur in the Reserve; both are known from adjacent areas. The fern *Diplazium molokaiense* was seen in 1983 during a survey of the Hamakua ditch area. The rare mint *Phyllostegia floribunda* has not been reported from the Puu o Umi area since 1911. Additional surveys, specifically designed for rare plants, may uncover these taxa, as well as other rare taxa not yet reported from the Reserve.

Thirteen other rare taxa are reported in literature for the area, but lack specific enough location information to include here... [DLNR 1989]

C. Fauna

Four species of native forest birds were observed during the survey. Forest birds were seen throughout all vegetation types in the Reserve, but were most prevalent in closed-canopy forests of 'ohi'a and 'olapa. 'Elepaio (*Chasiempis sandwichensis*), 'Amakihi (*Hemignathus virens*), 'Apapane (*Himatione sanguinea*), and 'I'iwi (*Vestiaria coccinea*) all appeared abundant. 'I'iwi, 'Apapane and 'Amakihi were observed feeding on the flowers of the non-native banana poka vine (*Passiflora mollissima*) near the edge of pastures, in numbers greater than those observed in native forest. This phenomenon has been observed before, and in this case was probably due to the lack of blooming 'ohi'a at the time of the survey (less than ten percent of trees were estimated in flower).

Although not observed during this July survey, two rare bird species are known from the Reserve area. Hawaiian Hawk, or 'Io (*Buteo solitarius*), has been reported along the Reserve's northwestern boundary. Hawaiian Duck, or *Koloa* (*Anas yvilliana*), was sighted in the southeast extension of the Reserve. During the U.S. Fish and Wildlife Service's Hawaii Forest Bird Survey, a mottled brown-light duck, tentatively identified as a *Koloa*, was observed in the western-most section of the Reserve (USFWS n.d.). Additional sightings of both 'Io and *Koloa* have occurred nearby, but outside the Reserve (Banko 1980, 1987).

Newell Shearwater, or 'A'o (*Puffinus newelli*), is listed as threatened by the U.S. Fish and Wildlife Service (1987). It is thought that this rare seabird has established colonies in the Kohala Mountains, although none have been confirmed. Records of sightings

and calls suggest that 'A'o colonies exist within the Hamakua and Kohala forests, but that these colonies are very dispersed and probably contain very few individuals (Kepler et al. 1979). Because the birds are active at night and nest in dense rain forest on steep slopes, nesting sites are very difficult to locate. There is a possibility that a breeding colony exists in the Reserve's northern, seaward finger; calls were heard during the night in August 1977 at 2,440 feet, west of where Wailikahi Stream drops into Waimanu Valley (Hall 1978). During September 13-15, 1977, 'A'o were heard in Waimanu Valley (Kepler et al. 1979).

Non-native forest birds were also observed throughout the Reserve in all vegetation types. Species noticed included Hwamei (*Garrulax canorus*), Japanese White-eye (*Zosterops japonicus*), and Northern Cardinal (*Cardinalis cardinalis*).

There are many small streams in the Reserve that drain the Kohala summit, but those encountered on this survey did not contain native diadromous species, such as gobies or shrimps. This is probably because the streams observed were either above major waterfalls (blocking upstream migration) or were eventually diverted for agriculture and other uses. However, these streams did contain the typical complement of native aquatic insects, as well as at least one non-native species, an unidentified ranid frog (possibly *Rana rugosa*).

The diversity of native invertebrates observed in the Puu o Umi Reserve was sometimes very high. Where native communities were intact and most diverse, there was an observable parallel in invertebrate diversity. Several guilds of insects, spiders, snails and other invertebrates were observed. Considering the lack of invertebrate sampling in Kohala, it is likely that a large number of previously unknown species await discovery and description.

Though relatively few native land snails inhabit the geologically young island of Hawaii, the relatively old Kohala Mountains contain the greatest diversity of snail species on the island. A comprehensive mollusc inventory in Puu o Umi Reserve and surrounding areas is not available, as there has been little malacological research on the island of Hawaii for most of this century. During this July 1988 survey, the common native arboreal succinids were found abundantly throughout Puu o Umi, and the minute tornatellinids were found in fair numbers near the Reserve's southern and western boundaries.

There are no recent reports of rare land snails in the Puu o Umi Reserve. Within one-half mile of the Reserve's western edge, however, specimens of the tree snail *Partulina physa* were collected in 1984. The forest in this area west of Puu Pala is similar to that throughout most of the Reserve. It is worth noting that the greatest known concentration of tree snails in the islands was recorded below the Reserve on the Waimea Plains (west/southwest of the Reserve) in 1903, where approximately 75,000 *Partulina confusa* were seen in an area of one-half square miles on 150 *olopua* (*Nestegis sandwicensis*) trees (Pilsbry and Cooke 1912-1914). This species is very similar to *Partulina physa* and may still exist in the Kohala Mountains, even though the colony in the Waimea Plains is now extinct.

Non-native invertebrates were observed in the Reserve, distributed somewhat by elevation and proximity to adjacent, non-native vegetation. Portions of the Reserve closest to the pasture lands of Waimea, the lowest elevation lands along the south Reserve boundary, contained high numbers of non-native millipedes and isopods foraging in leaf litter and in living foliage. Other non-native species were more widespread in the Reserve. Large flies associated with mammals (pigs and cattle) were observed at several localities in the Reserve, especially where pig damage was fresh

and heavy. The predatory flatworm (*Geoplana* sp.) was observed in *Sphagnum* moss and leaf litter and the introduced omnivorous snail (*Oxychilus alliarius*) was found in the southern area of the Reserve near the pastures. Both represent a threat to native snails.

Spoor, scats and feeding damage of feral pig were encountered on every transect, but very little evidence of current cattle damage was seen in the Reserve (only one section of fence line was observed to have been breached by calves). The impact of feral pigs is discussed in the Ungulate Control Program section... [DLNR 1989]

Key Management Considerations

The overall management goal is to protect and maintain the Reserve's native ecosystems. The following key considerations were included in the management programs developed to achieve this goal:

- 1) The Puu o Umi Reserve encompasses a very large area, much of which is inaccessible. At this time it is not economically realistic to intensively manage the entire Reserve. Priorities have been set for management of specific areas based on the biological resources they contain, the extent of current disturbances, the nature of other biological threats within and near the area, and the feasibility of management (e.g. topography and access).

Management activity over the next six years will focus on protecting the most intact native bog and forest ecosystems from feral pigs and non-native weeds. Management access into and through the Reserve will be developed by improving roads to the Reserve boundaries and establishing and maintaining a Reserve-wide trail system, with four helipads and three management shelters.

- 2) Feral pigs (*Sus scrofa*) constitute the most severe threat currently affecting the Reserve. Pig rooting and wallowing destroy native plants and disturb ground cover on the forest floor. Such damage limits effective regeneration of native plants, and creates conditions favorable for certain non-native plants throughout the Reserve, especially banana poka, which is the Reserve's most serious weed problem. Non-native plants degrade the quality and integrity of native plant communities, threatening the existence of species that rely on the forest for survival. This disturbance also threatens the quantity and quality of water originating from the forest watershed. Control of feral pigs is the essential first step in maintenance of the Reserve's native plant communities.

Aggressive control activities are critical for effective long term reduction of the pig population. (See Management Programs Priority #1 - Ungulate Control Program.)

- 3) Many non-native plants observed in the Reserve are shade intolerant and pose no major problem as long as the native canopy and ground cover remain intact. Several non-native weed species (e.g. banana poka) in the Reserve, however, form monotypic stands and displace native vegetation over large areas. These are priority weeds for management. Weed control activities will focus on priority weeds within specific management areas, and on localized populations of priority weed species, which could spread if not controlled. (See Management Programs Priority #2 - Non-native Plant Control Program.)

- 4) The Reserve encompasses the majority of Kohala Watershed and protects the head waters of ***Kaiwainui, Alakahi, Honokane Nui, and Kohakohau*** Streams.

These water resources are tapped in their lower reaches for domestic and agricultural uses. Protection of the Reserve's native ecosystems will also protect this valuable watershed. Agencies involved in the water development activities should be informed and involved in Reserve management activities wherever possible.

- 5) The rapidly growing Kohala community should be informed about the resources and involved with appropriate management activities in the Reserve. Improved access and a maintained trail system in the Reserve will help. A nature trail is recommended for **Waipahoehoe Gulch**. A cadre of volunteer Reserve managers from the local community should be developed (See Priority #4 - Volunteer Support Program)... [DLNR 1989]

Management Programs

The following four management programs support the long-term goals for the Reserve. A six-year implementation schedule is proposed. Although the programs are listed by priority, they fit together to form an integrated management package.

Priority #1 - Ungulate Control Program (PUO-RM-01)

GOAL: Eliminate ungulates in select areas of high biologic value. In the rest of the Reserve, reduce the impact of ungulates to a level that prevents further degradation of the Reserve's native ecosystems and allows the greatest possible recovery of the Reserve's native species.

Statement of the Problem: Feral pig control is critical to the survival of native ecosystems and protection of the forest watersheds in the Reserve. There are many techniques for pig control. The NARS manager will need the flexibility to use all the tools available, as the Puu o Umi Reserve presents different vegetation types, topographic features, access problems, and resource protection priorities. These tools include public hunting, fencing, staff hunting, and snaring.

A component of the feral ungulate control program is systematic monitoring. Monitoring will evaluate changes in levels of ungulate damage, the effectiveness of the management program in reducing damage, and the recovery of native vegetation (see Priority #3 - Monitoring Program).

Feral pig activity was observed on all transects in the Reserve. The intensity of damage varied by location and vegetation type. Pig disturbance was limited to the periphery of the pristine bogs. Damage was more prevalent in the better-drained examples of the *Carex* wetlands. The steepest slopes of the mixed fern/shrub cliff community were inaccessible to pigs, but trails and damage on slopes adjacent to less steep terrain were evident. Pig damage was light to moderate in the 'Ohi'a Mixed Shrub Montane Wet Forest community, and regeneration of understory components was observed. Once pigs are controlled, this resilient forest community may resist weed invasion.

Pig damage in the 'Ohi'a/Olapa Montane Wet Forest was generally old and light. A few sections of moderate, fresh damage were noted, however, in which browsed vegetation and rooting was evident. Species such as the Hawaiian orchid *Liparis hawaiiensis*, 'ohawai (*Clermontia* spp.), and *pa'iniu* (*Astelia menziesiana*) were present only as epiphytes, suggesting that pigs have already removed these species from the ground cover. Pigs move readily through the 'Ohi'a/Uluhe Montane Wet Forest, plowing tunnels under the *uluhe* mats. Damage was difficult to assess, since even severe damage could be hidden by fresh *uluhe* growth.

Improved access, fence construction and maintenance, and aggressive removal of pigs, are all integral components of a successful ungulate control program. Attempts to reduce pig populations to remnant levels in terrain similar to the Reserve's without any fences have not been effective, as animals can move into areas where population densities were reduced. Funds spent on feral pig control will be ineffective unless population size can be reduced to low levels and not allowed to build back up.

Alternative Actions and Probable Impacts:

- 1) No action. Accept the continuing deterioration of Puu o Umi's forest watershed and native resources. Without control, pigs degrade native communities, lower biological diversity, and increase non-native plant invasion.
- 2) Attempt control of feral animals without construction or maintenance of any fences. Impacts of feral pigs under this alternative will probably be roughly the same as alternative #1, except for portions of the Reserve where increased hunting activity may keep pig population down and protect small areas of forest. Pig removal will be less effective without fences to keep new populations from moving into the Reserve.
- 3) Control feral pigs with the aid of fences. This method has proven successful and beneficial for the preservation of native ecosystems. Recovery of native vegetation has occurred in similar areas where management programs have been implemented. The advance of non-native weed species encouraged by pig disturbance can also be slowed. Native plant species surviving only as epiphytes because of pig disturbance can become re-established on the forest floor.

Recommended Action: Alternative #3 is recommended, and involves three projects: access improvement and shelter construction, fence construction and maintenance, and pig removal.

Project 1 - Access Improvement and Shelter Construction

Improved access is needed to undertake management programs in the Reserve. The only official road for vehicular access to the Reserve is on the far western boundary. There are three vehicular access routes proposed, two of which are through state-leased land. No roads are proposed into the Reserve. NARS staff will work with landowners and state lessees to formalize and improve these access routes. Use of these routes by the general public will be determined on a case-by-case basis.

A Reserve-wide trail system is needed to improve access within the Reserve. These maintained management trails will be well marked and designed to minimize disturbance to the existing vegetation. Portions of certain trails traversing boggy areas will need boardwalks. Helipads will be built and maintained to allow efficient and safe transfer of materials and staff into remote areas. Three management shelters will be built to expedite overnight work trips... [DLNR 1989]

Project 2 - Fence Construction and Maintenance

Fencing strategies are dictated by the topographic nature of the Reserve and the priority of resources threatened. Natural barriers should be used whenever possible. Three management units are proposed for fencing.

The first is the 630-acre Bog Management Unit which contains two rare and undisturbed natural communities. A one-mile fence will close off the unit by taking advantage of the natural barriers presented by the steep palis of Waimanu and Waipio valleys on three sides.

The Puu o Umi and Opaeha Management Units are also proposed for fencing. These units encompass 2,590 acres and are the heart of the Reserve and contain relatively undisturbed native forest ecosystems. A progressive fencing strategy will be used over three years to allow development of shelter and trail infrastructure. This will also allow time for staff hunting to remove as many pigs as possible inside the units before they are closed off. Pig removal in conjunction with fencing is important to take advantage of induced pig movement. It also avoids restriction of animals in one location which can cause heavy localized damage.

Careful clearing of fence lines is needed to minimize disturbance to existing vegetation. All clothing and equipment will be cleaned to avoid spreading or introducing non-native plants and invertebrates. A botanist will walk the flagged fence route to locate and flag rare plants to be avoided by the brushing crew.^[14]

Ideally, fences should be inspected and maintained monthly or after major storms. However, the remoteness and inclement weather of the Reserve may make this impractical. Maintenance is planned for six times a year. Inspections will be done in conjunction with other resource management activities such as ungulate removal, monitoring, and non-native plant control. All priority weed species found along fence lines will be removed... [DLNR 1989]

Project 3 - Pig Removal

NARS staff involvement will be required in all Reserve ungulate control programs. Activities will range from organizing "special" public hunts to direct removal of animals in specific management units of the Reserve.

Public hunting can be a viable tool for control, especially in the early stages of a Reserve-wide program. Project 1 outlines a system of management trails and shelters that will help improve access to make public hunting a viable tool for control. The maintained hunting trails will direct and distribute hunting pressure. Volunteer groups can play an important role in establishing and maintaining forest trails in the Reserve (see Priority #4 - Volunteer Support Program).

Special hunts to concentrate on specific portions of a Reserve is another effective tool. These hunts will also allow NARS managers to monitor hunting success and collect biological data on harvested animals. Priority management units proposed for staff control of pigs over the next six years comprise only one-third of the Reserve. This points out the need to incorporate public hunting within the Reserve pig control program in certain areas. These areas include the Puu Ahia, Kohakohau, and the Upper and Lower Waillikahi management units, which encompass over 6,900 acres.

Although public hunting may be used as an interim measure, staff will be directly responsible for pig removal in the Puu o Umi, Opaeha, and the Bog management units. Hunting with dogs is an effective control tool and will be used in unfenced units that are not suitable for snaring and for clearing out pigs from planned fenced areas. Hunting may be alternated with snaring in intensive control units.

¹⁴ While it is recognized that the natural landscape is a Hawaiian cultural resource, it is recommended as a part of this study, that DLNR-NARS staff and contractors meet with State Historic Preservation staff as a part of the program to plan for the fencing of the Pu'u o 'Umi NAR. The focus of such a meeting should be to discuss types of traditional cultural sites that may be encountered in the field; and to review the laws and protocols for notification and treatment of inadvertent finds of cultural resources.

Snaring has proven to be an effective pig control tool, especially in remote forested regions like the Puu o Umi Reserve. The Puu o Umi and the Opaelo management units are ideally suited for this control technique. Snaring is most effective in areas with a combination of well-utilized pig trails, topographic features that will channel movements, and trees to anchor the snares. The most effective approach is to set snares and leave the area unattended to minimize the effect of human presence, returning later to assess the success and condition of the snares. Fences will restrict pig movement in the Reserve and create good snaring opportunities along fence lines. Snares in rain forests last six months to a year.

Public access will be restricted and signs posted in all areas where snares are set. Snare locations will be mapped, adequately marked in the field, and snares set to avoid harm to non-target species. Snares should be checked as frequently as possible. If found alive, pigs caught in snares should be disposed of as humanely as possible. Data on health, sex, and age of captured pigs will be recorded to determine effectiveness of the snaring program.

Shooting pigs from helicopters, which is appropriate only in special cases, is recommended for the Bog Management Unit. This unit is remote, contains valuable biological resources, a low pig population, and low-stature vegetation which allows good visibility and use of infrared spotters. The infrared spotter is heat sensitive and is used in the early morning before the sun has heated up the surrounding lands. The warmth of the pig's body shows up on the screen and the aircraft can move directly to its location and make visual contact. Helicopter use in this Bog Management Unit will minimize damage to the wet, boggy area by avoiding trampling of vegetation and reducing the accidental introduction of weed seeds. Training and safety considerations are essential for this work... [DLNR 1989]

Priority # 2 - Non-Native Plant Control Program (PUO-RM-02)

GOAL: To limit the spread and, where possible, eradicate non-native plant species which are already or may become invasive weeds in the Reserve.

Statement of the Problem: Many non-native plants have become established in Hawaii and their total removal from the Reserve is not feasible. The best control strategy is to maintain intact native forests through limiting disturbance. While feral pig control will help, it is not completely effective in limiting weed spread, as many weeds are spread by birds and people.

Control of priority weed species in key management units will be necessary. Priority weed species found in the Reserve include broomsedge (*Andropogon virginicus*), kahili ginger (*Hedychium gardnerianum*), yellow ginger (*Hedychium flavescens*), palm grass (*Setaria palmifolia*), blackberry (*Rubus argutus*), banana poka (*Passiflora mollissima*), and *Tibouchina herbacea*, which was found just outside of the Reserve.

Manual and chemical weed control methods are costly and priorities for their use set by the nature of the weed, the value of the area it is invading, and the effectiveness of the control measure. Biocontrol is an important potential tool in the management of wide spread priority weed species. The NARS should support interagency biocontrol projects, especially for banana poka, by lobbying where appropriate and providing research sites and logistical support.

Non-native plant invasions observed during the survey varied in each community type. Much of the Mixed Grass and Sedge and 'Ohia Mixed Montane Bogs were weed-free. However, a pig-disturbed section of the bog contained an incipient population of broomsedge (*Andropogon virginicus*), and also a few individuals of fireweed (*Erechtites*

valerianifolia). Very few non-native plants were observed in the 'Ohi'a Mixed Montane Bog, however, a few non-flowering individuals of *kahili* ginger were found and uprooted. Other incidentals included *Juncus planifolius* and broomsedge but neither were common, and both tended to occur only at the edges of the bog. The central portion of the bog was pristine.

The steep slopes on which the fern/shrub cliff community grows are subject to erosion. These disturbed areas are sites for non-native plant invasions, which included *Ageratina riparia*, palm grass, thimbleberry (*Rubus rosifolius*), and a variety of grasses. In some areas, yellow ginger was abundant. There were few non-native plants in the 'Ohi'a Mixed Shrub Montane Wet Forest community, but ubiquitous species such as *Juncus planifolius* and *Polygonum punctatum* were observed in pig-disturbed areas. The dense canopy and crowded understory in less disturbed portions hinders shade-intolerant weeds from successful invasion.

In the 'Ohi'a/'Olapa Montane Wet Forest, non-native plants included several species of grass and sedge, especially *Juncus planifolius* and carpetgrass (*Axonopus fissifolius*), as well as herbs such as fireweed, gosmore (*Hypochoeris radicata*), *Polygonum punctatum*, and St-Johnswort (*Hypericum mutilum*). Several other non-native species were confined to trails and the Reserve boundary along pastures. Thimbleberry was seen in areas of old pig disturbance, and was widespread in parts of the Reserve. Blackberry and banana poka were found above the pastures of Waimea in 'ohi'a/'olapa forest, and together represent the greatest weed threat to the Reserve. An incipient population of *Tibouchina herbacea* was found near the beginning of Transect 4, just outside the Reserve boundary.

Non-native plants are infrequent in the 'Ohi'a/Uluhe Montane Wet Forest, which provides a good buffer between disturbed areas, and intact forests deeper in the Reserve. The thick root mat of the *uluhe* seems to inhibit invasion by non-native plants.

Alternative Actions and Probable Impacts:

- 1) Control pigs, but do not attempt to control any priority non-native plant species. This will reduce the spread of many pig-dispersed plant species, but will allow continued advance of plants spread by birds and people. Decreased rooting and disturbance to the forest floor by feral pigs will slow down establishment of many non-native plants, but already established plants may continue to spread unchecked. A few especially aggressive weeds could overwhelm large areas.
- 2) Control priority non-native weed species in the key management areas before they become widely established. Set up monitoring transects to locate other incipient populations of priority weed species. Management measures would include selective use of approved herbicides and manual removal with hand tools.
- 3) Control all non-native plant species in the Reserve. This alternative would require substantial resources and is not practical.

Recommended Action: Alternative #2 is recommended. Non-native plant removal of priority weeds along trails and fences should occur as part of periodic maintenance. The incipient populations of *Tibouchina herbacea*, blackberry, and broomsedge should be removed as soon as possible. All priority weeds should be manually removed from the pristine bogs.

The infestation of banana poka is limited to the lower boundaries of the Reserve. The poka is too widespread for eradication, but attempts need to be made to keep it from

spreading. Infestations should be mapped accurately. Control of mature poka plants should start from the highest elevation of infestation.

The key to checking the spread of poka in the Reserve is pig control. Although both pigs and birds disperse weed seeds, successful seedling establishment seems limited to pig disturbed areas. Pig trails and activity leading from these infestation centers of banana poka should be monitored and poka seedlings found should be removed. Aggressive hunting pressure in infestation centers will help. Volunteer groups can play a key part in the control of banana poka in the Reserve. (See Priority #4 - Volunteer Support.)

Detailed records of the effectiveness of control methods used in the Reserve will be kept. Coordination between NARS and other involved agencies in plant control work will reduce management costs. Strict precautions will be taken to ensure management personnel do not transport weed seeds into the Reserve on their shoes or equipment (including helicopters). Hikers and hunters will be informed of these inadvertent introductions by posted signs along access trails into the Reserve... [DLNR 1989]

Priority # 3 - Monitoring Program (PUO-RM-03)

GOAL: Monitor the effectiveness of management projects and track significant ecological changes through long-term scientific monitoring.

Statement of the Problem: Management activities may not always achieve predicted results and management efficiency needs to be judged. Monitoring changes in non-native and native plant distribution, and animal species abundance entails recording specific data at permanent points and transects in the Reserve. Monitoring also documents progress and facilitates refinement of management techniques employed in the Reserve.

Alternative Actions and Probable Impacts:

- 1) No monitoring program. This could lead to inefficient management resulting from poor understanding of the area's biological needs.
- 2) Conduct ad hoc monitoring whenever possible. This is likely to be considerably less effective in the long run than a systematic approach.
- 3) Establish systematic monitoring programs for ungulate damage, non-native weed invasion, native vegetation recovery, and status of rare species. Increase monitoring intensity for select problems and areas as needed.

Recommended Action: Alternative #3 is recommended. Develop monitoring programs to evaluate effects of management activities and identify future management needs. Many transects will require a two-person crew for safety. Two-person monitoring crews may be dropped off by helicopter in remote areas, take data at established monitoring points, and hike out. Specific goals of the program are to determine:

- 1) the effectiveness of staff and public hunting in reducing ungulate damage;
- 2) the success of priority weed species control;
- 3) the location of incipient populations of other priority weeds; and
- 4) status of known rare species. Some monitoring activities will be done in conjunction with fence inspection... [DLNR 1989]

Priority # 4 - Public Education and Volunteer Program (PUO-RM-04)

GOAL: To build public understanding and support for the Reserve and the NARS in the local community. Educational opportunities will be provided for interested groups. Volunteer labor to help staff in management activities will be recruited.

Statement of the Problem: The population of the Big Island, and especially the Waimea-Kohala area, has increased rapidly. In light of this development, there is strong public sentiment to conserve what is left of the native Hawaiian heritage. Many new and old residents in the Kohala area are unaware of Hawaii's natural heritage and the Puu o Umi Reserve. Even fewer realize that native resources and the benefits they provide are being threatened. Management of this Reserve will be a long-term effort, and public support and involvement is necessary.

The pristine portions of the Reserve are invaluable for baseline research as examples of undisturbed Hawaiian ecosystems. Public use of these areas should not be encouraged, and in certain areas may need to be controlled (e.g. the Bog Management Unit). The general public needs to know the importance of these areas and the management activities necessary to protect them. Public education through appropriate media coverage is crucial, without encouragement of unrestricted public use of these fragile areas. Special efforts to communicate with public hunters who have traditionally used these areas will be necessary.

Volunteer groups have proven successful in certain natural area management activities, especially in labor intensive efforts such as fence construction, weed control, and trail maintenance. These groups tend to be extremely motivated, representing a valuable resource for the Reserve manager.

Alternative Actions and Probable Impacts:

- 1) Do not attempt to inform the general public about the resources protected in the Reserve or explain reasons for specific management actions. Do not use volunteer groups in relevant management activities in the Reserve. The results of this alternative could include less public and legislative support for the NARS, misunderstanding among certain groups resulting in vandalism of capital improvements, and increased costs for overall NARS management, especially in plant control work.
- 2) Maintain community outreach program to give public presentations, provide informational material, and utilize concerned volunteer groups. This could result in cooperation with the general public in feral pig and non-native plant control programs and result in less expensive yet more effective management results. It could also provide a local constituency that would support Reserve management activities.

Recommended Action: Alternative #2 is recommended. Inform the general public about resources within the Reserve and management activities through television, newspaper, and other local media outlets. Present slide shows and talks to community groups. Develop a brochure that describes the resources and ongoing management activities within the Reserve. Establish a self-guided nature trail along the Waipahoehoe Loop Trail.

Utilize volunteer groups for Reserve management whenever feasible. Reserve staff hours will be adjusted so personnel are available to supervise volunteer work groups, especially on weekends. Eventually, leaders from volunteer groups can be trained to supervise their volunteer crews... [DLNR 1989]

This study has been undertaken to provide resource managers and the public with important background information, documenting the wide range of cultural values, practices, and knowledge of resources of the Kohala Mountain lands. An understanding of the cultural environment will help resource managers and the public ensure that the unique qualities of the Pu'u o 'Umi NAR, remain a healthy and resilient part of the cultural landscape through future generations.

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