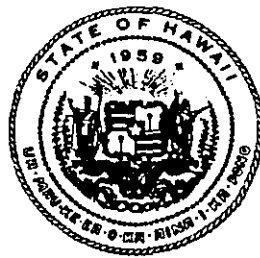


KILAUEA MIDDLE EAST RIFT
GEOTHERMAL RESOURCE SUBZONE

Island of Hawaii



State of Hawaii
BOARD OF LAND AND NATURAL RESOURCES

April 1986

**KILAUEA MIDDLE EAST RIFT
GEOTHERMAL RESOURCE SUBZONE**

Legal Authority

Pursuant to Sections 205-5.1 and 205-5.2, Hawaii Revised Statutes, as amended by Act 151, Session Laws of Hawaii 1984, and Title 13, Chapter 184, Administrative Rules, as amended, the Board of Land and Natural Resources, State of Hawaii, has designated the Kilauea Middle East Rift, Island of Hawaii, as a Geothermal Resource Subzone (GRS).

Location

The subzone area is designated on the attached map identified as the Kilauea Middle East Rift Geothermal Resource Subzone. The subzone area contains approximately 9,014 acres more or less, subject to verification, and is located within the area formerly known as the Wao Kele 'O Puna Natural Area Reserve and includes a portion of the Upper Kaimu Homesteads. The GRS subzone area includes the following Tax Map Keys (TMK):

Tax Map Keys

TMK 1-2-08: portions of 8, 12, and 13
TMK 1-2-08: 14 and 15
TMK 1-2-08: portions of 16 and 17
TMK 1-2-10: portions of 1 and 3

The attached map defining the boundaries of the designated subzone is adapted from U.S. Geological Survey topographic maps (Kalalua and Pahoa South Quadrangles).

Questions regarding the GRS and requests for information may be directed to the Division of Water and Land Development, Department of Land and Natural Resources, Room 227, 1151 Punchbowl Street, Kalanimoku Building, Honolulu, Hawaii 96813 (telephone 548-7539).

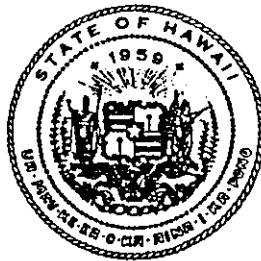
KILAUEA (MIDDLE EAST) RIFT
GRS

PRELIMINARY
SUBJECT TO CHANGE

TAX MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	CURRENT LAND OWNER	OTHER
1-2-08-8 (POR.)	37	AG/20ac	STATE OF HAWAII	
1-2-08-12 (POR.)	2	AG/20ac	RONSTROM, ROBERT W.	
1-2-08-13 (POR.)	37	AG/20ac	STATE OF HAWAII	
1-2-08-14	90	AG/20ac	STATE OF HAWAII	
1-2-08-15	80	AG/20ac	KAMAKANI, K. ESTATE et al YAMAGUCHI, ALBERT K. et al	
1-2-08-16 (POR.)	41	AG/20ac	KAMELAMELA, SAMUEL JR.	
1-2-08-17 (POR.)	21	AG/20ac	BRENNER, GAIL et al HEUER, MARK A./ LISA et al	
1-2-10-1 (POR.)	310	AG/20ac	JAMES CAMPBELL ESTATE	FORMERLY STATE LAND
1-2-10-3 (POR.)	8396	CONS.	JAMES CAMPBELL ESTATE	FORMERLY STATE LAND
9014		TOTAL ACREAGE IN SUBZONE		

**HALEAKALA SOUTHWEST RIFT
GEOTHERMAL RESOURCE SUBZONE**

Island of Maui



**State of Hawaii
BOARD OF LAND AND NATURAL RESOURCES**

May 1986

**PRELIMINARY
SUBJECT TO CHANGE**

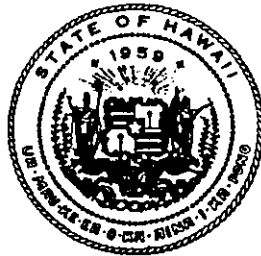
**GEOHERMAL RESOURCE SUBZONE
(HALEAKALA)**

MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
-1-03-32 (POR.)	1.07	AG/PAS/PRI	GOODNESS, STANLEY K., etal ULUPALAKUA RANCH INC.
-1-03-50 (POR.)	152.86	AG/PAS/PRI	STATE OF HAWAII ULUPALAKUA RANCH INC.
-1-04-6 (POR.)	523.60	SPLIT	ULUPALAKUA RANCH INC. CONS.(966.36);AG(604.44)
-1-04-7	24.60	SPLIT	GOODNESS, STANLEY K., etal ULUPALAKUA RANCH INC. -CONS/(24.9ac);AG/(14.9ac)
-1-04-8	110.00	SPLIT	GOODNESS, GUY S. ESTATE CONS/(19ac);AG/(91ac)
-1-04-9	57.61	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-11	28.95	AG/PAS/PRI	HAAKE, RICHARD, etal JACINTHO, WILLIAM, etal
-1-04-12	1.43	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-14	12.27	AG/PAS/PRI	PAGE-PAPAZIAN, JOHN H./DALE L.
-1-04-15	21.34	AG/PAS/PRI	STATE OF HAWAII ULUPALAKUA RANCH INC.
-1-04-16	2.22	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-17	6.98	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-18	22.64	AG/PAS/PRI	GOODNESS, STANLEY K., etal
-1-04-19	8.21	AG/PAS/PRI	GOODNESS, STANLEY K., etal ULUPALAKUA RANCH INC. ULUPALAKUA RANCH, etal
-1-04-20	4.22	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-21	16.10	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-22	13.38	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-23	49.27	AG/3ac	ULUPALAKUA RANCH INC.
-1-04-49 (POR.)	337.59	SPLIT	STATE OF HAWAII CONS/(154.87ac);AG/(845ac) ULUPALAKUA RANCH INC.
-1-04-71	19.72	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-04-80	6.78	AG/PAS/PRI	FLEMING, WRAY D., etal
-1-04-94	20.82	AG/PAS/STATE	STATE OF HAWAII
-1-04-109	1.94	AG/PAS/STATE	STATE OF HAWAII
-1-08-1 (POR.)	25.00	AG/PAS/PRI	ULUPALAKUA RANCH INC.
-1-09-1 (POR.)	2600.00	SPLIT	ULUPALAKUA RANCH INC. CONS/(374.65ac);AG/(5516.98ac)
-1-09-17	16.87	AG/PAS/PRI	VOCKRODT, JACK E., etal TRUST
-1-09-19	0.56	AG/PAS/PRI	ULUPALAKUA RANCH INC. HAWAIIAN TELEPHONE CO.
-2-01-1 (POR.)	22.00	SPLIT	ULUPALAKUA RANCH INC. CONS/(80.6ac);AG/(249.4ac)

4108.03 TOTAL ACREAGE IN SUBZONE

**KILAUEA LOWER EAST RIFT
(KAPOHO SECTION)
GEOTHERMAL RESOURCE SUBZONE**

Island of Hawaii



**State of Hawaii
BOARD OF LAND AND NATURAL RESOURCES
May 1986**

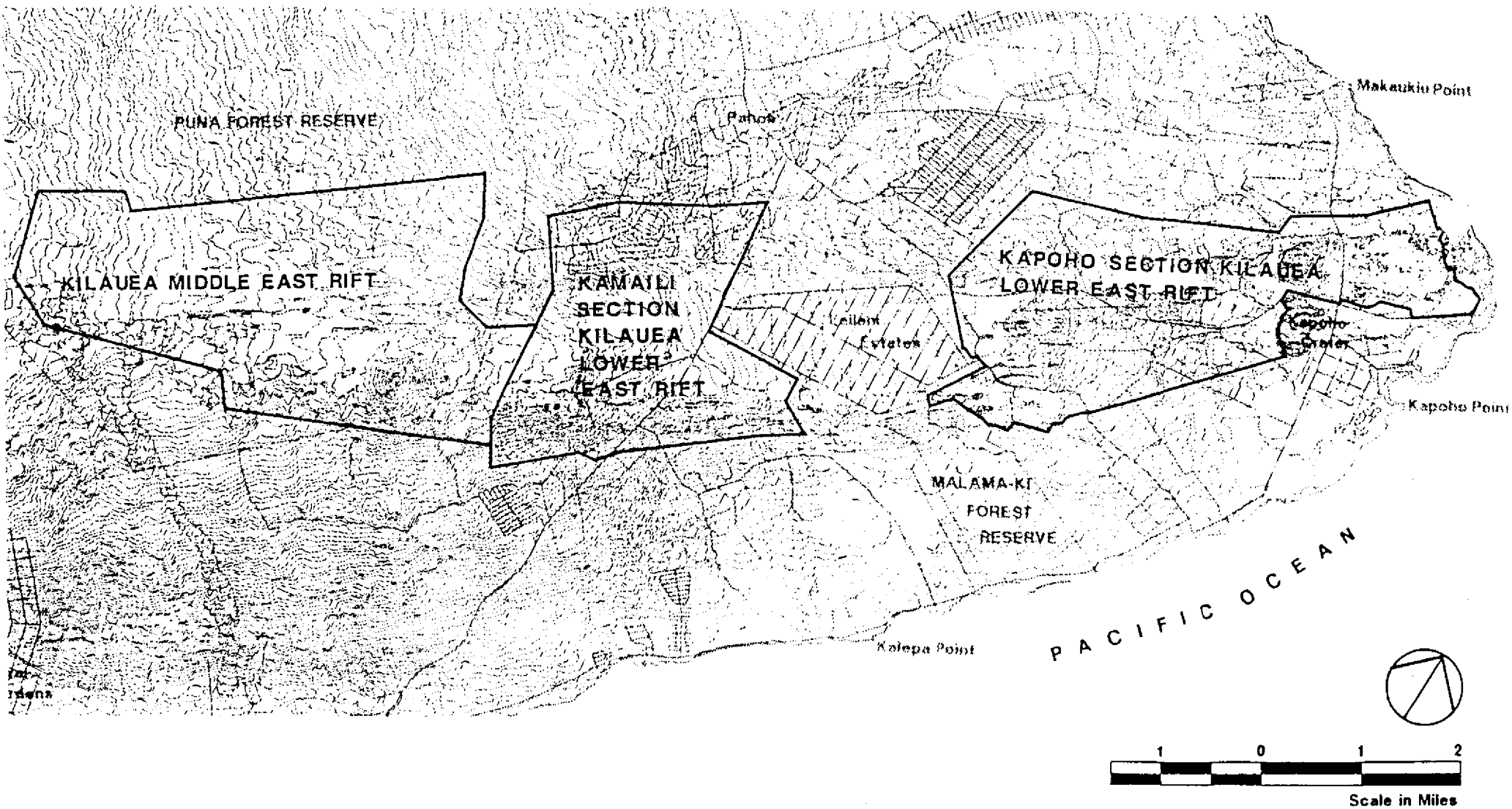


Figure 1-2
GEO THERMAL RESOURCE SUBZONES

**KILAUEA LOWER EAST RIFT (Kapoho Section)
GEOTHERMAL RESOURCE SUBZONE**

Legal Authority

Pursuant to Sections 205-5.1 and 205-5.2, Hawaii Revised Statutes, as amended by Act 151, Session Laws of Hawaii 1984; and Title 13, Chapter 184, Administrative Rules, as amended; the Board of Land and Natural Resources, State of Hawaii, has designated the Kilauea Lower East Rift (Kapoho Section), Island of Hawaii, as a Geothermal Resource Subzone (GRS).

Location

The subzone area is designated on the attached map identified as the Kilauea Lower East Rift (Kapoho Section) Geothermal Resource Subzone. The subzone area contains approximately 5,636 acres, more or less, and is located west of Leilani Estates and extends eastward to Cape Kumukahi. The GRS subzone area includes the following Tax Map Keys (TMK):

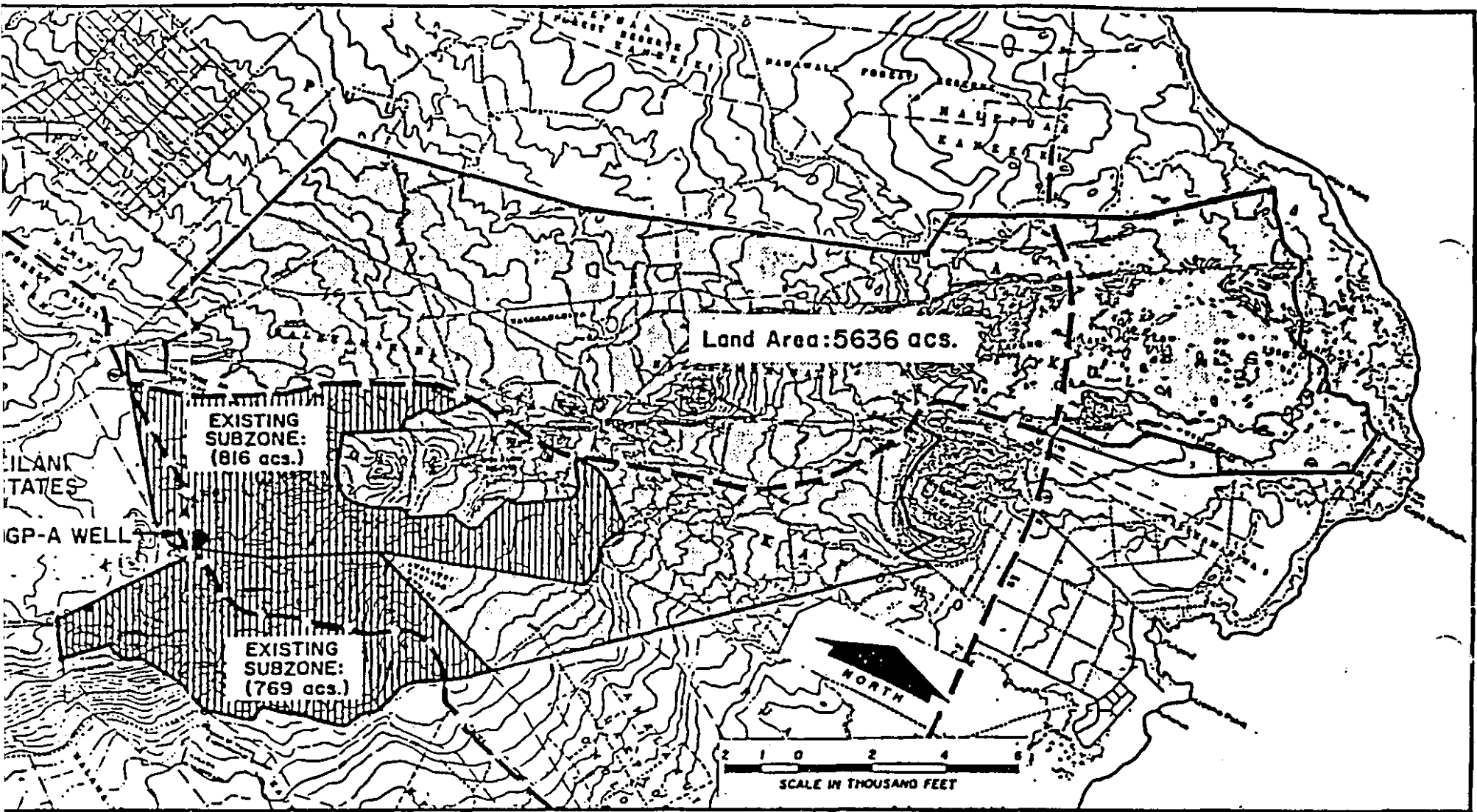
Tax Map Keys

TMK 1-4-01: Portions of 10, 21, 26-28, 31-33, 40, 46, 54, 55, 56, 63, 66-69, 81
TMK 1-4-01: 13, 41, 50, 51, 52, 53, 59, 60, 64, 65, 70 and 72
TMK 1-4-02: 2, 10, 11, 18, 27, 31, 32, 34, 37, 40, 41, 44-46, 65, 67, 68, 72, 80, 86, and 87
TMK 1-4-02: Portion of 71
TMK 1-4-05: 1, 2, 4, 22, 23, 25, 26, 29 and 31
TMK 1-4-05: Portion of 18
TMK 1-4-06: 1-2, 8-13, 15, and 16
TMK 1-4-07: 2-7
TMK 1-4-08: 1-5
TMK 1-4-09: 2-9
TMK 1-4-12: 1-7
TMK 1-4-13: 1-7
TMK 1-4-14: 1-15
TMK 1-4-15: 1-10
TMK 1-4-16: 1-13
TMK 1-4-17: 1-13
TMK 1-4-18: 1-14
TMK 1-4-19: 1-13
TMK 1-4-20: 1-12
TMK 1-4-21: 1-9
TMK 1-4-22: 1-16
TMK 1-4-23: 1-7
TMK 1-4-24: 1-7, and 10-12
TMK 1-4-78: Portions of 1-9

Total: Approximately 5,636 acres, more or less.

The attached map defining the boundaries of the designated subzone is adapted from the U.S. Geological Survey topographic maps - Pahoa North, Pahoa South, and Kapoho Quadrangles.

Questions regarding the GRS and requests for information may be directed to the Division of Water and Land Development, Department of Land and Natural Resources, Room 227, Kalanimoku Building, 1151 Punchbowl Street, Honolulu, Hawaii 96813 (telephone 548-7539).



**KILAUEA LOWER EAST RIFT
(KAPOHO SECTION)
GEOHERMAL
RESOURCE SUBZONE
Island of Hawaii**

GEOHERMAL RESOURCE SUBZONE
(KAPOHO SECTION)

PRELIMINARY
SUBJECT TO CHANGE

MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
-4-01-10 (POR.)	258.69	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
-4-01-13	3.21	AG/3ac	KAPOHO LAND AND DEV. CO. LTD. KAPOHO PROPERTIES INC. etal
-4-01-21 (POR.)	15.95	AG/3ac	MURPHY, JOHN E. etal
-4-01-26 (POR.)	1.01	AG/3ac	REID, RANDOLPH K./LAURIE B.
-4-01-27 (POR.)	2.41	AG/3ac	REID, RANDOLPH K. etal WALKER, VIVIAN
-4-01-28 (POR.)	0.69	AG/3ac	IMAINO, PAUL M.
-4-01-31 (POR.)	5.44	AG/3ac	SHINDE, YOSHIO/HELENE TRS.
-4-01-32 (POR.)	5.35	AG/3ac	SHINDE, YOSHIO/HELENE TRS.
-4-01-33 (POR.)	17.51	AG/3ac	KLINGENSTEIN, CLARA L. R.C. ROBERTS AND CO. KENNY, DUANE
-4-01-40 (POR.)	8.47	AG/3ac	KLINGENSTEIN, CLARA L.
-4-01-41	5.00	AG/3ac	CHOW, WILLIAM PC/HARRIET L.
-4-01-46 (POR.)	3.54	AG/3ac	MEACHUM, DOUGLAS F./JUDY
-4-01-50	10.87	AG/3ac	MARTIN, CARY L.
-4-01-51	13.67	AG/3ac	YOZA, ALLAN M.
-4-01-52	10.87	AG/3ac	MARTIN, BETTY L.
-4-01-53	20.71	AG/3ac	CHANG, KALEONANI S. COLEMAN, KALEONANI
-4-01-54 (POR.)	13.00	AG/3ac	SHIMOZONO, JAMES A. etal
-4-01-55 (POR.)	9.39	AG/3ac	PLUMERIA FARMS AND ENT. INC.
-4-01-56 (POR.)	3.58	AG/3ac	YAMADA, RYUICHI/ A., etal TEASDALE, RAYMOND
-4-01-59	26.06	AG/3ac	PERRY, DELAN A./JENNIFER V.
-4-01-60	18.74	AG/3ac	HANSHAW, FREDERICK J.
-4-01-63 (POR.)	3.00	AG/3ac	CHOW, ROBERT etal TR.
-4-01-64	585.76	AG/1ac	KAPOHO PROPERTIES INC. etal/BARNWELL IND. INC.
-4-01-65	142.54	AG/1ac	INDEX INC. etal
-4-01-66 (POR.)	73.46	AG/1ac	INDEX INC. etal/ VIKING PROPERTIES INC.
-4-01-67 (POR.)	64.28	AG/1ac	KAPOHO PROPERTIES INC. etal/BETTENCOURT GEORGE C/E A
-4-01-68 (POR.)	32.14	AG/1ac	PUNA SUGAR CO. LTD.
-4-01-69 (POR.)	26.73	AG/1ac	KAPOHO PROPERTIES INC. etal/VIKING PROPERTIES INC.
-4-01-70	414.25	AG/3ac	KAPOHO PROPERTIES INC. etal/BARNWELL IND. INC.
-4-01-72	0.61	AG	KAPOHO PROPERTIES INC. etal
-4-01-81 (POR.)	1.17	AG/3ac	REID, RANDOLPH K./ LAURIE B.
-4-02-2	1089.30	CONS-L	KAPOHO LAND AND DEV. CO. LTD.
-4-02-10	180.47	AG/10ac	DAIICHI SEIKO OF HAWAII INC.
-4-02-11	2.69	AG/10ac	STATE OF HAWAII
-4-02-18	454.89	SPLIT	KAPOHO LAND AND DEV. CO. LTD. SPLIT: AG/123.52; CONS-L/331.37
-4-02-27	20.00	AG/10ac	BISHOP B.P. TR. EST. HANOHANO, EPHRAIM K./FELISA
-4-02-31	303.87	SPLIT	KAPOHO LAND AND DEV. CO. LTD. SPLIT: AG/256.29; CONS-L/47.58
-4-02-32	444.50	SPLIT	KAPOHO LAND AND DEV. CO. LTD. SPLIT: AG/357.50; CONS-L/87.00
-4-02-34 (POR.)	323.56	AG/10ac	RICHFIELD OF HAWAII INC. etal
-4-02-37 (POR.)	36.00	AG/10ac	BISHOP B.P. TR. EST. IKEDA, LEIGHTON
-4-02-40	48.44	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
-4-02-41	10.08	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.

GEOHERMAL RESOURCE SUBZONE
(KAPOHO SECTION)

TAX MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
1-4-02-44	5.63	AG/3ac	HONGO NURSERY INC.
1-4-02-45	0.50	AG/3ac	COUNTY OF HAWAII BOARD OF WATER SUPPLY
1-4-02-46	1.50	CONS-L	SANTO, TSYUYOSHI
1-4-02-65(POR.)	7.00	CONS-L	KOEHLER, GUSF./F.W.
1-4-02-67(POR.)	19.77	AG/10ac	KEALOHA, JAMES/MIULAN Y. PA O PUNA FARM LTD.
1-4-02-68(POR.)	66.86	AG/10ac	KEALOHA, JAMES/MIULAN Y. PA O PUNA FARM LTD.
1-4-02-71(POR.)	0.73	AG/10ac	KEALOHA, JAMES M.
1-4-02-72	1.83	CONS	KAPOHO LAND AND DEV. CO. LTD.
1-4-02-80	5.12	CONS-L	KAPOHO LAND AND DEV. CO. LTD.
1-4-02-86	0.04	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-02-87	8.71	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-05-1	30.91	CONS-L	SWAIN, ROSE P.K. etal KEALOHA, JAMES/MIULAN Y.
1-4-05-2	2.47	AG/3ac	YOUNG, TIM HU/ ELIZABETH YOUNG, DONALD M.
1-4-05-4	1.00	AG/3ac	ELDERTS, WILLIAM SR. ESTATE ELDERTS, HERMAN K.
1-4-05-18(POR.)	1.35	AG/3ac	WORSWICK, JOHN W./LORNA M.
1-4-05-22	2.00	AG/3ac	KENOI, NELLIE HOOKANO McBRIDE, GRACE
1-4-05-23	1.00	AG/3ac	AIONA, KEAI KUALAPAI AIONA, AKA AGNES K.
1-4-05-25	1.00	AG/3ac	MATHEWS, MARGARET A.F.
1-4-05-26	0.13	AG/3ac	HOUMANA NAAUAD O HAWAII/PIOHIA NANCY K. REV.
1-4-05-29	15.00	AG/3ac	CHONG, WING K. etal
1-4-05-31	0.73	AG/OPEN	AKONI, MARGARET B. etal
1-4-06-1	0.40	CONS-L	AKAHORI, TED S.
1-4-06-2	0.29	CONS-L	MAKINO, EUGENE/KAZUE
1-4-06-8	0.17	CONS-L	STATE OF HAWAII
1-4-06-9	0.36	CONS-L	TANAKA, CHIYOKI
1-4-06-10	0.82	CONS-L	NAKAHARA, HISAKO T., etal YUKITOMU, MASAKU
1-4-06-11	0.94	CONS-L	SOGA, MANUBU/TAMIKO
1-4-06-12	1.05	CONS-L	MASUDA, TAKEU
1-4-06-13	0.51	CONS-L	SHIMIZU, MIKI, etal JT. SHIMIZU, KAURU
1-4-06-15	.00	CONS-L	STATE OF HAWAII
1-4-06-16	0.38	CONS-L	STATE OF HAWAII
1-4-07-2	0.04	CONS-L	MAISUMOTO, HISAYO, etal
1-4-07-3	0.04	CONS-L	UYEDA, MASAU/YUKIKU K.
1-4-07-4	0.65	CONS-L	ERICKSON, DEBORAH ANN ISHAEL, AARON L.
1-4-07-5	0.51	CONS-L	SAKAGUCHI, JUJI/MISAKO
1-4-07-6	0.99	CONS-L	PUMMERENK, GREGORY C., etal
1-4-07-7	0.92	CONS-L	CHING, REGINALD K.Y.
1-4-08-1	0.26	SPLIT	TANIUKA, ISAMI IRS. SPLIT:AG/.07;CONS-L/.19
1-4-08-2	0.86	CONS-L	KAWAGUCHI, HAROLD Y. /MILDRED
1-4-08-3	0.48	AG/OPEN	SHIGASAKI, YASU, etal, JT.

GEOHERMAL RESOURCE SUBZONE
(KAPOHO SECTION)

TAX MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
1-4-08-4	0.94	AG/1ac	SOGA, KUNIIJI MR./MRS. SOGA HIROSHI
1-4-08-5	1.11	AG/1ac	TAKEGUCHI, YUTAKA
1-4-09-2	0.85	AG/3ac	MANSFIELD, CHARLES F.
1-4-09-3	0.67	AG/3ac	SEIJI, KAWATE, etal JT.
1-4-09-4	0.39	AG/3ac	HAYASHI, ROBERT/MISAE
1-4-09-5	0.39	AG/3ac	CHUN, STANLEY, KATHERINE
1-4-09-6	0.44	AG/3ac	UYEKI, KAMETARO/HAJIME UYEKI, JULIE Y.
1-4-09-7	0.33	AG/3ac	NAKAMURA, HARUO/SUMIKO
1-4-09-8	0.45	AG/3ac	SEKI, YOSHIKAZU/UTAKO
1-4-09-9	0.12	AG/10ac	STATE OF HAWAII
1-4-12-1	5.45	AG/10ac	NIIYA, KAZUO/MAY M.
1-4-12-2	2.59	AG/10ac	POMMERENK, KATHERINE
1-4-12-3	1.53	AG/10ac	HOFFMAN, PHILIP TRUST
1-4-12-4	2.04	AG/10ac	WILLHITE, JEAN B. TRUSTEE RANKIN, LON KENNETH
1-4-12-5	11.85	AG/10ac	WILLHITE, JEAN B. TRUSTEE
1-4-12-6	24.43	AG/10ac	DeLUZ, DAVID S. MARKHAM, STEVEN R., ETAL
1-4-12-7	2.04	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-13-1	5.27	AG/10ac	NUHA, SUSUMU/YOSHIKO NUHA, SAM
1-4-13-2	7.34	AG/10ac	KRUEGER, WILLIAM E.
1-4-13-3	15.30	AG/10ac	GRUNDY, THOMAS J. etal
1-4-13-4	0.09	AG/10ac	HUELSKAMP, RICHARD F., etal
1-4-13-5	4.09	AG/10ac	HUELSKAMP, RICHARD F./CAROL D.
1-4-13-6	9.75	AG/10ac	HUELSKAMP, RICHARD F., etal
1-4-13-7	2.26	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-14-1	0.44	AG/3ac	SANTO, NOBUCHIKA/SACHIYO
1-4-14-2	5.96	AG/3ac	HIGA, ROBERT Y./SAYOKO N.
1-4-14-3	5.55	AG/3ac	HIGA, ROBERT Y./SAYOKO N. KAMEI, MASAMI
1-4-14-4	0.49	AG/3ac	KAMEI, UMEKI, etal JACINTO, MANUEL
1-4-14-5	10.58	AG/3ac	KAMEI, UMEKI, etal
1-4-14-6	3.66	AG/3ac	JACINTO, MANUEL
1-4-14-7	2.19	AG/3ac	DOE, JAMES TADASHI
1-4-14-8	2.94	AG/3ac	DOE, JAMES TADASHI
1-4-14-9	5.19	AG/3ac	IWATA, ISAMU/E.
1-4-14-10	7.39	AG/3ac	IWATA, RAYMOND
1-4-14-11	2.22	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-14-12	0.70	AG/3ac	KAPOHO LAND AND DEV. CO. LTD. TANIOKA, ISAMI TRUSTEE
1-4-14-13	13.61	AG/3ac	TANIOKA, I. TRANSP. & FARM INC.
1-4-14-14	1.45	AG/3ac	MIYOSE, MYLES/MORRIS
1-4-14-15	0.06	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-15-1	7.21	AG/3ac	BISHOP TRUST CO. LTD. TRS.
1-4-15-2	3.92	AG/3ac	SANTO, ISUYOSHI
1-4-15-3	19.51	AG/3ac	ISHII, ISUTAE
1-4-15-4	11.63	AG/3ac	SANTO, ISUKASA/MASAYU

()

GEOHERMAL RESOURCE SUBZONE
(KAPOHO SECTION)

AX MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
			NINO, LUIGI M., etal MARTINEZ, JOHN
1-4-15-5	14.41	AG/3ac	NOTE, JAMES TADASHI
1-4-15-6	1.85	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-15-7	0.56	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-15-8	3.02	AG/3ac	SHANKS, MICHAEL F.
1-4-15-9	0.73	AG/3ac	SANTO, TSUYOSHI
1-4-15-10	0.34	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-16-1	17.74	AG/10ac	DUFF, RUTH M.
1-4-16-2	3.39	AG/10ac	COLLINS, CLIFF
1-4-16-3	6.01	AG/10ac	DUGGER, WILLIAM C. ESTATE/DAY, BARTLEY F.
1-4-16-4	0.24	AG/10ac	HAGIWARA, MILTON/DONNA
1-4-16-5	4.43	AG/10ac	HIWA HIWA A JOINT VENTURE
1-4-16-6	8.16	AG/10ac	HICKS, DOUGLAS J./JANICE D.
1-4-16-7	6.02	AG/10ac	AMELL, WILLIAM
1-4-16-8	3.43	AG/10ac	COLLINS, CLIFF HONDA, MELVIN T./KAYLEEN K.
1-4-16-9	9.70	AG/10ac	PUNA, GEOTHERMAL VENTURE
1-4-16-10	9.45	AG/10ac	FUKUMOTO, KIYOSHI/MILDRED K. PUNA GEOTHERMAL VENTURE
1-4-16-11	10.85	AG/10ac	NAMBA, KENNETH H. PUNA GEOTHERMAL VENTURE
1-4-16-12	2.08	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-16-13	2.00	AG/10ac	KOBAYASHI, YOSHIMI/KAZUKO PUNA GEOTHERMAL VENTURE
1-4-17-1	5.70	AG/10ac	FRENCH, THOMAS. B.
1-4-17-2	4.84	AG/10ac	FRINK, WILLIAM E., etal
1-4-17-3	32.10	AG/10ac	KAPOHO LAND AND DEV. CO. LTD. DUFF, RUTH M.
1-4-17-4	4.71	AG/10ac	KIFFE, J.W., etal K.G.C. PARTNERSHIP
1-4-17-5	4.33	AG/10ac	CUNBOY, ELMER/MARIGOLD SARHANIS, ANDREW J.
1-4-17-6	4.71	AG/10ac	COLLINS, CURT/ SARHANIS, ANDREW
1-4-17-7	5.33	AG/10ac	ALTMAN, DALE/MARGARET
1-4-17-8	4.96	AG/10ac	IWATA, AKIRA, etal PUNA GEOTHERMAL VENTURE
1-4-17-9	4.86	AG/10ac	SANTO, NOBUCHIKA/SACHIYO WENGERD, TIMOTHY M.
1-4-17-10	4.31	AG/10ac	PUMMERENK, ALBERT/T.G.
1-4-17-11	7.46	AG/10ac	KALAPANA, GARDENS CORP. WAI'AU, GILBERT, etal
1-4-17-12	1.37	AG/10ac	IWATA, AKIRA, etal PUNA GEOTHERMAL VENTURE
1-4-17-13	4.27	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-18-1	3.44	AG/10ac	IWATA, ISAMU/EDITH H. PUNA GEOTHERMAL VENTURE
1-4-18-2	13.49	AG/10ac	IWATA, ISAMU/EDITH H. PUNA GEOTHERMAL VENTURE

GEOHERMAL RESOURCE SUBZONE
(KAPOHO SECTION)

IX MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
-4-18-3	3.01	AG/10ac	UYEDA, TSUNEO, etal UYEDA, EDWARD T.
-4-18-4	2.09	AG/10ac	UYEDA, TSUNEO, etal UYEDA, EDWARD T.
-4-18-5	5.50	AG/10ac	KOBAYASHI, HIDEO/YOSHIMI PUNA GEOTHERMAL VENTURE
-4-18-6	10.29	AG/10ac	SCHAUMBURG, DALE P., etal
-4-18-7	7.81	AG/10ac	MIYATAKE, SHIRYO PUNA GEOTHERMAL VENTURE
-4-18-8	4.37	AG/10ac	MIYATAKE, SHIRYO PUNA GEOTHERMAL VENTURE
-4-18-9	4.77	AG/10ac	IWATA AKIRA, etal PUNA GEOTHERMAL VENTURE
-4-18-10	3.46	AG/10ac	IWATA AKIRA, etal PUNA GEOTHERMAL VENTURE
-4-18-11	13.62	AG/10ac	WHITE, CLAYTON, etal
-4-18-12	1.91	AG/10ac	KAPOHO LAND AND DEV. CO. LTD. IWATA, ISAMU/EDITH H.
-4-18-13	1.11	AG/10ac	KING, CHRISTEN PUNA GEOTHERMAL VENTURE
-4-18-14	1.28	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.
-4-19-1	8.39	AG/10ac	HIGASHI, KIMIE PUNA GEOTHERMAL VENTURE
-4-19-2	19.89	AG/10ac	KAWATE, RANDY K./ KAREN K. PUNA GEOTHERMAL VENTURE
-4-19-3	15.87	AG/10ac	KOBAYASHI, HIDEO/YOSHIMI PUNA GEOTHERMAL VENTURE
-4-19-4	11.66	AG/10ac	UYEDA, TSUNEYO, etal MATSUURA, CLARENCE, etal
-4-19-5	4.45	AG/10ac	YAMADA, KATSUYA
-4-19-6	8.10	AG/10ac	CHING, REGINALD K.Y.
-4-19-7	1.55	AG/10ac	CHING, REGINALD K.Y.
-4-19-8	8.80	AG/10ac	LANDT, MARK R.
-4-19-9	1.70	AG/10ac	IKEDA, MERVIN K./ELINOR N.
-4-19-10	0.39	AG/10ac	KAPOHO LAND AND DEV. CO. LTD.
-4-19-11	0.22	AG/3ac	A SMALL PIECE OF HAWAII LTD. PUTZKE, WARREN A.
-4-19-12	0.21	AG/3ac	CHING, REGINALD K.Y.
-4-19-13	0.04	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
-4-20-1	8.40	AG/3ac	KAMEI, UMEKO, etal
-4-20-2	1.03	AG/3ac	MARTHALLER, C.R./F.J.
-4-20-3	3.00	AG/3ac	WOOD, NATHAN C./JANET C.
-4-20-4	2.90	AG/3ac	WEEKS, DONALD D./JUNKO
-4-20-5	3.59	AG/3ac	COHEN, RUDOLF A./JOYCE
-4-20-6	8.37	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
-4-20-7	17.50	AG/3ac	KUWAHARA, AKISUKE, etal TANOUE, TADO/YURIKO, etal PUNA GEOTHERMAL VENTURE
-4-20-8	6.23	AG/3ac	HIGA, ROBERT Y./SAYOKO N. PUNA GEOTHERMAL VENTURE

GEOHERMAL RESOURCE SUBZONE
(KAPOHO SECTION)

AX MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
1-4-20-9	0.50	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-20-10	0.36	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-20-11	0.69	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-20-12	2.99	AG/3ac	WOOD, NATHAN C./JANET C. KIMZEY, CAROLYN
1-4-21-1	13.64	AG/3ac	KAKUGAWA, MATSUE
1-4-21-2	1.62	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-21-3	0.56	AG/3ac	IKEDA, SHINJI/JANET
1-4-21-4	6.90	AG/3ac	IKEDA, SHINJI/JANET
1-4-21-5	3.87	AG/3ac	UYEDA, TSUNEYO
1-4-21-6	2.49	AG/3ac	NAKASHIMA, LORILEI, etal
1-4-21-7	9.80	AG/3ac	HERBST, ARTHUR G./JANE F.
1-4-21-8	0.79	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-21-9	0.34	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-22-1	9.41	AG/3ac	KUKINO, HISASHI/TOMIYE NAKANISHI, ROY M./DOROTHY P.
1-4-22-2	10.71	AG/3ac	KOLOHE BANANA CO,
1-4-22-3	6.95	AG/3ac	HANSHAW, FREDERICK
1-4-22-4	0.94	AG/3ac	ITO, PHILIP, J./CAROLE
1-4-22-5	4.60	AG/3ac	TILLEN, GORDON R.
1-4-22-6	5.22	AG/3ac	NAKANISHI, ROY M./DOROTHY
1-4-22-7	1.20	AG/3ac	RICHARDSON, LYNN P., etal
1-4-22-8	0.86	AG/3ac	RICHARDSON, LYNN P., etal
1-4-22-9	5.62	AG/3ac	NAKANISHI, ROY M./DOROTHY
1-4-22-10	1.49	AG/3ac	KUWAHARA, AKISUKE/D.M.
1-4-22-11	1.00	AG/3ac	KELLY, GLADYS C., etal KELLY, JAMES W.N.
1-4-22-12	4.78	AG/3ac	KELLY, GLADYS C., etal
1-4-22-13	3.76	AG/3ac	KELLY, JAMES W.N.
1-4-22-14	4.03	AG/3ac	OSHITA, HATSUE
1-4-22-15	2.12	AG/3ac	OSHITA, HATSUE
1-4-22-16	1.17	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-23-1	13.70	AG/3ac	KLEIN, HENRY F./RITA T.
1-4-23-2	16.58	AG/3ac	JOHNSON, ALICE M., etal
1-4-23-3	17.73	AG/3ac	KAWABATA, MASAKAZU
1-4-23-4	7.14	AG/3ac	GOSHIGAISHA ITO BUILDING
1-4-23-5	11.65	AG/3ac	DOE, JAMES TADASHI
1-4-23-6	15.00	AG/3ac	KAPOHO LAND AND DEV. CO. LTD. PERRY, DELAN A./JENNIFER
1-4-23-7	2.18	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-24-1	3.67	AG/3ac	CHONG, CLAYTON E., etal
1-4-24-2	3.31	AG/3ac	R&J STEEL INC.
1-4-24-3	7.78	AG/3ac	H&S ENTERPRISE INC.
1-4-24-4	3.39	AG/3ac	H&S ENTERPRISE INC.
1-4-24-5	3.13	AG/3ac	R&J STEEL INC.
1-4-24-6	1.09	AG/3ac	NAMBA, KENNETH H., etal
1-4-24-7	8.21	AG/3ac	CHONG, CLAYTON E., etal
1-4-24-10	2.13	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-24-11	2.15	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.
1-4-24-12	0.39	AG/3ac	KAPOHO LAND AND DEV. CO. LTD.

GEOHERMAL RESOURCE SUBZONE
(KAPOHO SECTION)

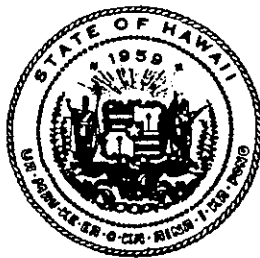
TAX MAP KEY	AREA (ACRES)	LAND USE CLASSIF.	LAND OWNERS
1-4-78-1 (POR.)	0.14	AG/3ac	TOKIOKA, LIONEL Y., etal, TRS.
1-4-78-2 (POR.)	2.75	AG/3ac	NANI UNITED CORPORATION LTD.
1-4-78-3 (POR.)	2.48	AG/3ac	NANI UNITED CORPORATION LTD.
1-4-78-4 (POR.)	2.40	AG/3ac	SPERCEL, ANNE LEY, ANNE
1-4-78-5 (POR.)	2.50	AG/3ac	CHUNG, KENNETH K.H./HYESIL
1-4-78-6 (POR.)	2.50	AG/3ac	ISBELL, DONALD D./V. TRUST
1-4-78-7 (POR.)	2.40	AG/3ac	LAU, ERIC S., etal GALKO, EWA ELIZABETH
1-4-78-8 (POR.)	1.51	AG/3ac	JAMES, MARY M.
1-4-78-9 (POR.)	0.43	AG/3ac	NAT'L. SECURITIES & INVESTMENTS BUCK, THOMAS A.

R-2 and K-3

5756.11 TOTAL ACREAGE IN GRS KAPOHO SECTION (NOT INCLUDING GRML'S)

**KILAUEA LOWER EAST RIFT
(KAMAILI SECTION)
GEOTHERMAL RESOURCE SUBZONE**

Island of Hawaii



**State of Hawaii
BOARD OF LAND AND NATURAL RESOURCES**

May 1986

KILAUEA LOWER EAST RIFT (KAMAII SECTION)
GEOTHERMAL RESOURCE SUBZONE

Legal Authority

Pursuant to Sections 205-5.1 and 205-5.2, Hawaii Revised Statutes, as amended by Act 151, Session Laws of Hawaii 1984; and Title 13, Chapter 184, Administrative Rules, as amended; the Board of Land and Natural Resources, State of Hawaii, has designated the Kilauea Lower East Rift (Kamaili Section), Island of Hawaii, as a Geothermal Resource Subzone (GRS).

Location

The subzone area is designated on the attached map identified as the Kilauea Lower East Rift (Kamaili Section) Geothermal Resource Subzone. The subzone area contains approximately 5,555 acres, more or less, and is located west of the Kilauea Middle East Rift GRS and east of Leilani Estates, Puna, Hawaii. The GRS subzone area includes the following Tax Map Keys (TMK):

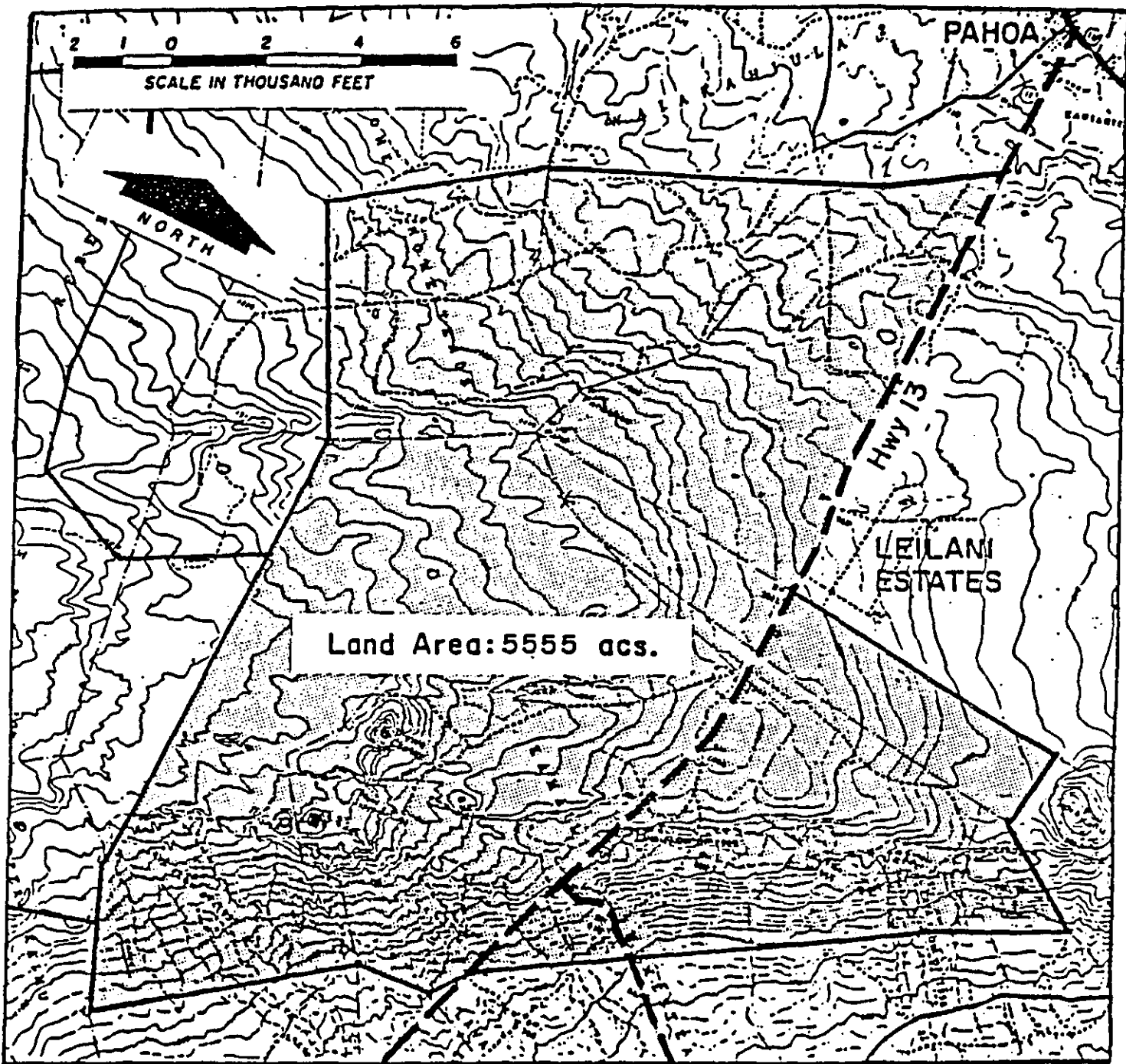
TAX MAP KEYS

TMK 1-2-10: Portion of 1
TMK 1-3-01: Portions of 1, 16, 25, 26 and 59-61
TMK 1-3-01: 2-4, 7-10, 17-24, 31, 32, 35, 36,
42, 43, 47-49, 51-55, 57, 58, 62-69
TMK 1-3-09: 1, 2, 8, 10 and 11
TMK 1-3-09: Portion of 3
TMK 1-3-10: Portions of 7, 11, 12 and 17
TMK 1-3-10: 13-16
TMK 1-5-01: Portions of 3, 16, 23, 24, and 55
TMK 1-5-01: 4-9, 13-15, 27-40, 49, and 50

Total: Approximately 5,555 acres, more or less.

The attached map defining the boundaries of the designated subzone is adapted from the U.S. Geological Survey topographic map - Pahoehoe South Quadrangle.

Questions regarding the GRS and requests for information may be directed to the Division of Water and Land Development, Department of Land and Natural Resources, Room 227, Kalanimoku Building, 1151 Punchbowl Street, Honolulu, Hawaii 96813 (telephone 548-7539).



**KILAUEA LOWER EAST RIFT
(KAMAILI SECTION)
GEOHERMAL
RESOURCE SUBZONE
Island of Hawaii**

GEOHERMAL RESOURCE SUBZONE
KILAUEA LOFT 1ST RIFT
(KAMAHAMA) (ON)

7-18-86

PRELIMINARY
SUBJECT TO CHANGE

TAX MAP KEY	AREA (ACRE)	LAND USE CLASSIF.	LAND OWNERS
1-2-10-1 (por.)	1447.50	AG/20ac	STATE OF HAWAII - JAMES CAMPBELL ESTATE (FORMERLY STATE LANDS)
1-3-01-1 (por.)	76.56	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-2	12.20	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-3	25.70	AG/20ac	KAMELANELA, JOSEPH K. etal
1-3-01-4	6.60	AG/20ac	KAMELANELA, JOSEPH K. etal
1-3-01-7	559.81	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-8	20.01	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-9	21.32	AG/20ac	A&E ENTERPRISES, LTD. ROUBIQUE, RALPH J. JR.
1-3-01-10	27.44	AG/20ac	PAHOA 15
1-3-01-16 (por.)	66.60	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-17	164.58	AG/20ac	ELBERTS, KAHIKINA etal KAAWALOA, MINNIE
1-3-01-18	7.94	AG/20ac	EDWARDS, RICHARD G. etal EDWARDS, HELEN E.
1-3-01-19	5.29	AG/20ac	RANNE-KEENEY-SCROGGINS
1-3-01-20	1.34	AG/20ac	BAKER, FRANCIS M. etal
1-3-01-21	47.00	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-22	27.78	AG/20ac	BISHOP, B.P. TRUST EST. TRS. B.P. BISHOP ESTATE
1-3-01-23	237.40	AG/20ac	BISHOP, B.P. TRUST EST. TRS. B.P. BISHOP ESTATE
1-3-01-24	49.60	AG/20ac	ASHIDA, HAROLD T./CLARA
1-3-01-25 (por.)	19.08	AG/20ac	JUNGERS, ELIZABETH MILLER DEREK RUSSELL etal
1-3-01-26 (por.)	7.00	AG/20ac	LEE, CURTIS W. etal LEE, YILMAN
1-3-01-31	81.17	AG/20ac	DAIICHI SEIKO OF HAWAII
1-3-01-32	0.44	AG/20ac	McCANDLESS, PAULA E. etal
1-3-01-33	48.83	AG/20ac	GREAT HAWK FINANCIAL CORP
1-3-01-36	0.06	AG/20ac	GREEN, JAMES SIMPSON GREEN, WILLIAM F.
1-3-01-42	9.42	AG/20ac	LEE CONSTRUCTION, INC
1-3-01-43	1.32	AG/20ac	TAKAGI, HENRY H/S
1-3-01-47	3.06	AG/20ac	DAIICHI SEIKO OF HAWAII
1-3-01-48	0.19	AG/20ac	DAIICHI SEIKO OF HAWAII
1-3-01-49	16.55	AG/20ac	EDWARDS, RICHARD G. etal EDWARDS, HELEN E.
1-3-01-51	0.32	AG/20ac	McCANDLESS, PAULA E. etal
1-3-01-52	1.35	AG/20ac	ELBERTS, KAHIKINA H. MRS. J. dec'd
1-3-01-53	16.70	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-54	2.80	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-55	18.54	AG/20ac	PUNA SUGAR CO., LTD.
1-3-01-57	6.00	AG/20ac	VOST, WILLIAM D. etal HOUSTON, DUANE D. etal

1-3-01-58	33.50	AG/20ac	BISHOP, B.P. TRUST EST. TRS. B.P. BISHOP ESTATE
1-3-01-59(por.)	60.10	AG/20ac	BISHOP, B.P. TRUST EST. TRS. B.P. BISHOP ESTATE
1-3-01-60(por.)	12.00	AG/20ac	PSYDEN, EDWARD W/ MARY E. PEDERSEN, KEITH G.E. etal
1-3-01-61(por.)	3.50	AG/20ac	GRONROOS, HAROLD B./EARLINE M.
1-3-01-62	24.57	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-63	26.25	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-64	23.61	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-65	25.05	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-66	23.96	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-67	23.06	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-68	23.35	AG/20ac	A&E ENTERPRISES, LTD.
1-3-01-69	24.01	AG/20ac	A&E ENTERPRISES, LTD.
1-3-09-1	206.17	AG/20ac	ROUBIQUE, RALPH J. JR. BISHOP, B.P. TRUST EST. TRS. B.P. BISHOP ESTATE
1-3-09-2	157.72	AG/5ac	BISHOP, B.P. TRUST EST. TRS. B.P. BISHOP ESTATE
1-3-09-3(por.)	838.02	AG/20ac	PUNA SUGAR CO.,LTD.
1-3-09-8	5.17	AG/20ac	BISHOP, B.P. TRUST EST. HBK ENTERPRISES, LTD.
1-3-09-10	23.26	AG/20ac	BISHOP, B.P. EST. TRS.
1-3-09-11	0.26	AG/20ac	WATER COMMISSION OF THE COUNTY OF HAWAII
1-3-10-7(por.)	0.40	AG/20ac	PHILLIPS, KEN C. ENTER., INC. COMPTON, RANDY
1-3-10-11(por.)	0.80	AG/20ac	ROBINSON, ALBERT G.
1-3-10-12(por.)	0.96	AG/20ac	POHEROY, JAMES G./GAIL ANN
1-3-10-13	3.99	AG/20ac	ROBINSON, ALBERT G.
1-3-10-14	3.98	AG/20ac	WATER RESOURCES INT'L INC. MILLER, BRENT etal
1-3-10-15	3.87	AG/20ac	CUTLER, ALLEN I.
1-3-10-16	4.70	AG/20ac	KUNA, BASIL
1-3-10-17(por.)	2.82	AG/20ac	BUTIERREZ, FERNANDO
1-5-01-3(por.)	396.58	AG/5ac	ROMAN CATHOLIC MISSION BISHOP, TRUST CO., LTD.
1-5-01-4	24.74	AG/5ac	HARTE, ROY S.
1-5-01-5	46.60	AG/5ac	YAMAGUCHI, KAZUO/KIYOICHI
1-5-01-6	42.39	AG/5ac	KUWAHARA, ALAN A. etal
1-5-01-7	45.20	AG/5ac	TAGUCHI, PAUL J. etal PUNA SUGAR CO.,LTD.
1-5-01-8	45.60	AG/5ac	YAMAGUCHI, TAKEO
1-5-01-9	35.79	AG/5ac	KAOHE RANCH ASSOC. FARMER, ROBERT N.
1-5-01-13	33.13	AG/5ac	OISHI, TORU/FAYE, F.
1-5-01-14	12.64	AG/5ac	JOSE, CARMERINE etal KNAPP, THOMAS P. etal
1-5-01-15	2.17	AG/5ac	JOSE, CARMERINE etal KNAPP, THOMAS P. etal

1-5-01-16(por.)	4.06	AG/5ac	OISHI, STANLEY Y./HIROKO
1-5-01-23(por.)	10.56	AG/5ac	YAMADA, EMMA TRUST
1-5-01-24(por.)	10.75	AG/5ac	YAMADA, EMMA TRUST
1-5-01-27	31.32	AG/5ac	JOSE, CARRHERINE etal KNAPP, THOMAS P. etal
1-5-01-28	19.01	AG/5ac	JOSE, CARRHERINE etal KNAPP, THOMAS P. etal
1-5-01-29	0.76	AG/5ac	JOSE, CARRHERINE etal KNAPP, THOMAS P. etal
1-5-01-30	1.31	AG/5ac	KNAPP, THOMAS P. etal
1-5-01-31	35.86	AG/5ac	SATO, HAYAMI etal PUNA SUGAR CO.,LTD.
1-5-01-32	2.63	AG/5ac	SANEKANE, TOSHIMI
1-5-01-33	14.45	AG/5ac	TANAKA, SHIGEYO etal TSUTSUI, OSAMU/SATORU/YASUMI etal
1-5-01-34	10.50	AG/5ac	SATO, HAYAMI etal SATO, HIROO
1-5-01-35	4.65	AG/5ac	KELLY, TERRY M./MARY etal
1-5-01-36	4.65	AG/5ac	BLANCO, ROSA
1-5-01-37	4.65	AG/5ac	HOLZGROVE, CHARLES/PONIRA T.
1-5-01-38	4.65	AG/5ac	REYBURN, STEVE/CHEROKEE
1-5-01-39	4.65	AG/5ac	STOUT, DENNIS/MARTHANN
1-5-01-40	35.78	AG/5ac	KADHE RANCH ASSOC. SIRACUSA, RENE etal CHARTRAND, LIONEL
1-5-01-49	11.45	AG/5ac	EGUCHI, EUGENE M. TRUST etal
1-5-01-50	10.00	AG/5ac	NISHIMURA, ALBERT G/F
1-5-01-55(por.)	32.27	AG/5ac	OISHI, STANLEY Y./HIROKO

5531.38 TOTAL ACREAGE IN SUBZONE
