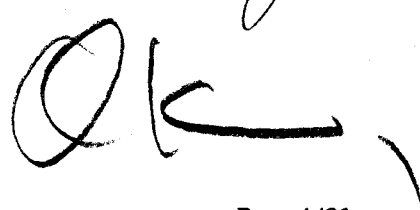


REGULATION BRANCH
Division of Water Resource Management

FROM: Just DATE: 10/28/91 FILE IN: _____

TO:	INITIAL:	PLEASE:	REMARKS:
_____	_____ G. MATSUMOTO	_____ See Me	<i>Manabu,</i> Request approval to FAX this info to Mr. Steven Stephenson 1-967 7448. He is with County Management Associates doing work contracted by Hawaii County Planning Dept. <i>Just</i> 
_____	_____ F. Ching	_____ Call	
_____	_____ T. Kam	_____ Review & Comment	
_____	_____ S. Samuels	_____ Take Action	
_____	_____ D. Nakano	_____ Investigate & Report	
_____	_____ S. Yong	_____ Draft Reply	
_____	_____ C.P. Chang	_____ Acknowledge Receipt	
✓ _____	_____ J. Swift	_____ Type Draft	
_____	_____ T. Nakama	_____ Type Final cc: _____	
_____	_____ B. Micua	_____ Xerox _____ copies	
_____	_____	_____ File	
_____	_____	_____ Mail	
_____	_____ G. AKITA	FOR YOUR:	
_____	_____ L. Nanba	✓ _____ Approval	
_____	_____ E. SAKODA	_____ Signature	
_____	_____ E. LAU	_____ Information	
_____	_____ L. CHANG		
_____	_____ Y. SHIROMA		
✓ _____	_____ M. TAGOMORI		
_____	_____ S. Kokubun		



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. BOX 373
HONOLULU, HAWAII 96809

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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MANABU TAGHORI
DAN T. KOCHI
AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCE ENFORCEMENT
CONSERVATION
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
PROGRAM
LAND MANAGEMENT
STATE PARKS
WATER RESOURCE MANAGEMENT

FACSIMILE TRANSMITTAL PAGE

Please deliver the following pages to:

Name: Steve Stephenson
Company: Community Management Associates
From: Janet Swift
Date: 10/29/91 Time: 10:45 a.m.
Message: info. from our well files

Total number of pages (including Transmittal Page): 2

* * * * *

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BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
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Geothermal
Wells

	<u>Latitude</u>	<u>Longitude</u>	<u>Tax Map Key</u>
HGP-A	19-28-31	154-53-43	1-4-01:02
Ashida 1	19-26-59	154-55-32	1-3-01:24
Lanipuna 1	19-28-16	154-53-33	1-3-09:07
Lanipuna 2	19-28-16	154-53-33	1-3-08:06, 07,19
			1-3-09:07
Lanipuna 6	19-28-44	154-53-04	1-3-08:07
KS1	19-28-47	154-53-39	1-4-01:02
KS2	19-28-55	154-53-22	1-4-01:19
KS1A	19-28-48	154-53-37	1-4-01:02
KS3			1-4-01:02
KS4			1-4-01:02
KS5			1-4-01:02
KS6			1-4-01:02
KS7			1-4-01:19
KS8			1-4-01:19
KS9			1-4-01:02
KS10			1-4-01:02
KS11			1-4-01:02
True A1-1			1-2-10:03

Geothermal
Wells

Latitude

Longitude

Tax Map Key

HGP-A	19-28-31	154-53-43	1-4-01:02
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			1-3-09:07
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KS1	19-28-47	154-53-39	1-4-01:02
KS2	19-28-55	154-53-22	1-4-01:19
KS1A	19-28-48	154-53-37	1-4-01:02
KS3			1-4-01:02
KS4			1-4-01:02
KS5			1-4-01:02
KS6			1-4-01:02
KS7			1-4-01:19
KS8			1-4-01:19
KS9			1-4-01:02
KS10			1-4-01:02
KS11			1-4-01:02
True A1-1			1-2-10:03

<u>Geothermal Well</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Tax Map Key</u>
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Ashida 1	19-26-59	154-55-32	1-3-01:24
Lanipuna 1	19-28-16	154-53-33	1-3-09:07
Lanipuna 2	19-28-16	154-53-33	1-3-08:06,07,11 1-3-09:07
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KS 1A	19-28-48	154-53-37	1-4-01:02
KS 3			1-4-01:02
KS 4			1-4-01:02
KS 5			1-4-01:02
KS 6			1-4-01:02
KS 7			1-4-01:19
KS 8			1-4-01:19
KS 9			1-4-01:02
KS 10			1-4-01:02
KS 11			1-4-01:02
True A1-1			1-2-10:03

1
2480
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850.
4730

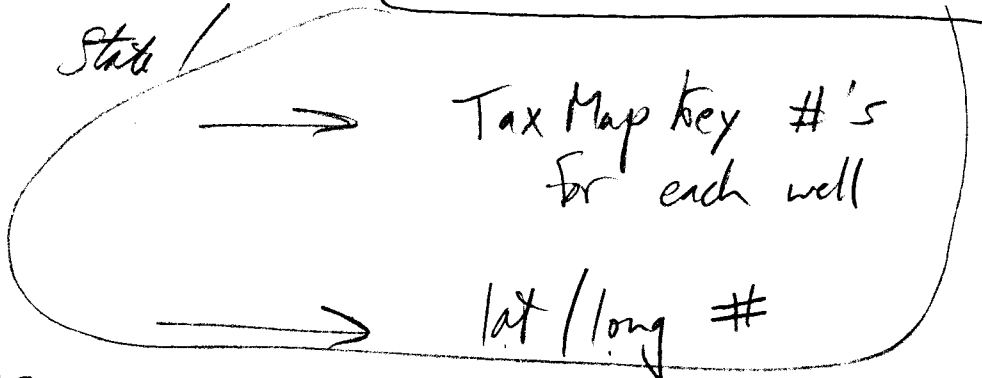
Community Management Associates
Lat/Long information on each geo site
~~within 0.1~~ Stephenson
Steel ~~Sun~~ Stephenson
4500
geo well sites

1-967
7448

FAX Forward

3-4 pm

do Sandy Davis 956 3138
956 6488



TMA

SOH 1	1-4-01:2 pot.		
SOH 2	1-4-02:32 pot.	Lampina	1-3-09:7
SOH 3	1-2-10:03 pot.	* "	1-3-08: por 6,7,19 1-3-09: por 7
SOH 4	1-2-10:01 pot.		6 1-3-08:7
KS 3	1-4-01:02	Ashida #1	1-3-01:24
KS 2	1-4-01:19	HGRA	1-4-01: por 2
KS 1	1-4-01:2	KS 7	1-4-01:19
KS 1-A	1-4-01:02	KS 8	1-4-01:19
KS 4	1-4-01:02	KS 9	1-4-01:02
KS 6	1-4-01:02	KS 10	1-4-01:02
KS 5	1-4-01:02	KS 11	1-4-01:02
True A1-1	1-2-10:3		

* lat 19° 28' 44" long 154° 53' 03"

PROGRESSIVO
PER LA
ESECUZIONE
DEI POZZI

WELLS DRILLED KILAUEA EAST RIFT ZONE

11-14-89
need to:
- verify coordinates
of geoth wells.
- copy of GIS map &
well locations plot

Map #	Name	Location (N/W)	Mo/Yr.	Max Temp. C (°F)	Max Depth (M) (FT)	Fluids	Operator	1989 Status	Quality of Avail. Data
HA-5	Geothermal 1 (2086-01)	19-26-34/154-56-46 ✓	'61	54 @ 54m	54	No	Hawaii Thermal Power Co.	Aband.	Poor
HA-6	Geothermal 2 (2086-02)	19-26-33/154-56-48 ✓	'61	102 @ 167m	170	No	Hawaii Thermal Power Co.	Aband.	Poor
HA-13	Geothermal 3 (2982-01)	19-29-13/154- ^{52'} 54 55	'61?	93	210	No	Hawaii Thermal Power Co.	Aband.	Poor
HA-15	Geothermal 4 (3081-02)	19-30-39/154-51-19 ✓	'61	43	88	No	Hawaii Thermal Power Co.	Aband.	Poor
HA-1	NSF Kilauea (2317-01)	19-23-44/155-17-21 ✓	'73	139	1262	No	NSF	Aband.	Poor
HA-9	HGP-A (2883-01)	19-28-31/154-53- 44 43"	7/76	358 (676°)	1968 (6455')	100,000#/hr.	University of Hawaii	Suspended Operating	Excellent
HA-4	Ashida 1 (2085-01)	19-26-59/154-55-32 ✓	10/80	288 (550°)	2530 (8300')	?	GEDCO	Suspended Aband.	Fair
HA-10	Lanipuna 1 (2883-02)	19-28-16/154-53-33 ✓	5/81	360 (686°)	1557 (8389')	Yes ?	GEDCO	Suspended Aband.	Fair
HA-11	Kapoho Site 1 state (2883-03)	19-28-47/154-53-39 ✓ (50")	11/81	343 @ 1950 (642°)	2222 (7290')	73,000#/hr.	Puna Geothermal Venture (Thermal Power Company)	Plugged (Temp)	Good
HA-12	Kapoho Site 2 state (2883-04)	19-28- ^{55"} 47 /154-53- ^{22"} 49 (25")	4/82	355 @ 2103 (660°)	2440 (8005')	41,000#/hr.	Puna Geothermal Venture (Thermal Power Company)	Plugged (Temp)	Good
----	Lanipuna 1 ST.	19-28-16/154-53-33 ✓	6/83	220 217 @ 1646 (429°)	1911 (6271')	Yes ?	GEDCO	Suspended Aband.	Good
----	Lanipuna 6 (2883-05)	19-28- ^{44"} 40 /154-53- ^{22"} 42 04"	6/84	168 @ 1290 (335°)	1510 (4956')	No	GEDCO	Suspended Aband.	Good
----	Kapoho State 1A (2883-06)	19-28- ^{48"} 47 /154-53- ^{37"} 39	9/85	369 (654°)	1983 (6505')	78,000#/hr.	Puna Geothermal Venture (Thermal Power Company)	Plugged Temp	Good

8/14/89 - 1106B

SCALA 1:24000
LAT 1" = 1.28 mm
LONG 1" = 1.22 mm

SOH 1-4
True ~~AI~~ AI-1
PGV KS-8
3/13/91 KS-7
8/31/89 3
? 1-A
6/13/90 4
6/13/90 5
6/13/90 6
5/23/91 9
5/23/91 10
pent 5/3/91 11

HGP-A

KS 1

KS 2

Ashida #1

Lanipua #1

#2

#6

Ginny Aste
933 4747
Bonnie Goodell
967 8295

pent #
04, 105, 106
and 114
10/18/91

Publications:

~~6-97~~

~~C-104, 105, 106, 107~~
C-114

~~106~~

C-106

C-3 to 7 5

D-3

G-114

Map p. 5

~~pp 31, 34, 35, 37~~

Donnell Goodell

Box 6 Volcano 96785

C-104, C-105 ~~include~~ all

C-106

C-3 to 7

D-3

C-114

pp 5, 31, 34, 35, 37

2883-02 LANIFUNA 1, Barnwell Indus.(driller:
elevation:
well depth: 8389' DLNR
8400' DPED 7/82 Public Sector Geo Dev Program
casing:
date drilled: 2/9/81-5/26/85
chloride:
temperature:
well bore deviation:

2883-05 LANIFUNA 6, Barnwell/GEDCO (driller:
elevation:
well depth: 4000'
casing:
date drilled: 1984 (completion in May)
chloride:
temperature:
well bore deviation:

?
2102-01 PULAMA, DONALD,(driller: Samson Zerbe)
elevation: 230'
well depth: 250' 1979 Preliminary Regional Survey HIG
casing: 250'; 8" TDS: 838
date drilled: 1963 cl/mg: 355/31
status: unused water level: 1'
location: 192107x1550212
chloride: 110-293 ppm
temperature: 79F or 25.8C

?
2317-01 VOLCANO NATIONAL PARK, Colorado School of Mines(Water Res. Int'l)
elevation: 3606' water level: 2000'
well depth: 4127'
casing: 1025'; 14"
date drilled: 1973
status: observation
location: 192344x1551721 (1 km S. Halemaumau)
chloride: 1150 ppm (HIG Chloride/Magnesium Ratio 1979)
temperature: 279F or 137C

?
2487-01 KEAUCOHANA 1, DWS (Ocean View Drilling)
elevation: 752' water level: 6.4'
well depth: 802' TDS: 222
casing: 800'; 8" cl/mg: 70/3
date drilled: 1961
status: Municipal
location: 192456x1545719
chloride: 72-92ppm
temperature: 72-75F or 23.9C

?
2487-02 KEAUCOHANA 2, DWS (Layne Driling)
elevation: 752' water level: 6.4'
well depth: 803' TDS: 304
casing: 803'; 12" cl/mg: 160/6
date drilled: 1970
status: Municipal
location: 192457x1545718
chloride: 124-134ppm
temperature: 23.5C

3

2655-x (2685-01 DLNR) ASHIDA: BARNWELL/BEDCO (driller: Water Resources)
elevation: 244.8m water level: 9.9'
well depth: 8000' TDS: 1410
casing: cl/mg: 460/11
date drilled: 1980
status:
location: near Bryson's cinder pit, land owner Harold Ashida
chloride: 460 DLNR bailing sample
temperature:

? 2686-01 PUNA THERMAL 1, Haw. Thermal Power (driller: Samson Zerbe)
GEO THERMAL 1
elevation: 1009 water level:
well depth: 178' TDS:
casing: 177'; 14" cl/mg: 3410/59
date drilled: 1961
status: unused
location: 192634x1545646
chloride:
temperature: 54.5C

? 2686-02 PUNA THERMAL TH2, Haw. Thermal Power (driller: Samson Zerbe)
GEO THERMAL 2
elevation: 1035'
well depth: 556'
casing: 107'; 14"
date drilled: 1961
status: unused
location: 192633x1545648 Opihikao off highway
chloride:
temperature: 83C (Preliminary Regional Survey, HIG 1974)
Abandoned at 350' due to loose formation; lost drill piece

? 2783-01 MALAMA KI, DOWALD (driller: Ocean View Drilling)
elevation: 274' water level: 1.9'
well depth: 319' TDS: 11,700
casing: 319'; 8" cl/mg: 5850/324
date drilled: 1962
status: unused
location: 192728x1545301
chloride: 2200-6600ppm (Preliminary Regional Survey HIG 1974)
temperature: 129F or 53.9C
Chloride/Magnesium Ratio HIG 1979: 9/62 5850ppm
1/74 11000ppm
1/75 3811ppm

? 2881-01 POHOIKI PUNA, Oneloa Co. (driller: Cont. Drilling)
ALLISON (Ralph)
elevation: 132' water level: 2.2'
well depth: 140' TDS:
casing: 138'; 4" cl/mg: 281/15
date drilled: 1973
status: irrigation
location: 192819x1545110
chloride: 722-2300ppm
temperature: 39C

✓ ALLISON SPRING
location:
Chloride/Magnesium Ratio, HIG, 1979: 1/74 38C 281ppm chloride

1/75 37.9C 1400ppm chloride

4

2883-01 H6PA, University of Hawaii(driller:UH/GEDCO)

elevation: 184.1m water level: 10'

well depth: 6455'

casing: 2270'; intermediate depth slotted liner rather than cement

date drilled: 11/75-4/76 Plant installed:6/81

status: production

location:

chloride: 1040ppm (Chloride/Magnesium Ratio HIG 1979) cl/mg: 4720/14

1000-2000 DLNR bailing sample

9/22/87 Don Thomas to Jack Huisingh NELH "The presence of only slightly brackish water at 2km depths suggested that some mechanism associated with the rift zone was responsible for exclusion of seawater from the interior of the geothermal reservoir."

temperature: 358F

water table: 5 samplings taken at drill time

4/76: Venting

7/2/76: Unabated 4 hrs, vertical plume 200-300'

7/22/76: Unabated flashing 4 hrs

7/27-28/78: flashing

11/78: flow test

1/79: daily venting of well to keep pressure below 500 psig

5/79: casingcaliper log and cement bond log found substantial deterioration of the cement bond with lack of high temperature cement in original casing program

6/12/81: Bear Kumukahi, Gutierrez Nohea, Zoeteway Hookupu, Rueckheim Moku, odor and noise

6/15/81: Davids Panioki(?) odor

6/17/81: Zoeteway, H2S caused wife to black out

6/22/81: Bear, odor, effect on baby

6/26-30/81: odor up to 3 mi from plant

8/8/81: Kakara Leilani stomach cramps tested water found nothing

8/11/81: Zubaty odor

9/18/81: smell reported as bad

12/11/81: venting through silencers, plume over Lanipuna, 110dba; Heather Carrol

12/15/81: Carrol, odor

12/19/81: Amasa Gilman Kaupili & Kahukai odor

12/22/81: Gilman noise

12/23/81: Gilman odor

2/8/82: asthma attack reported

2/11/82: Pommerenk, odor and noise

3/4/82: bad smell in Leilani, steam blocking Fohoiki road

3/14/82: Gilman noise and smell

3/19/82: smell reported worse than ever

3/30/82: smell & ear infections reported

4/14/81: Warren Bennett headaches, odor

9/18-20/84: venting, H2S exceeded instrument calibration of 150ppb

9/19/84: odor and noise (brine sparger) complaint filed

7/8,9/86: RM odor at Kubera, Gidley

7/22/86: RM air actuator jammed, Kubera odor, Neilson (Nanawale Estates noise).

8/25-26/86: odor complaint (plant abatement system out of service for repair) RM; Kubera headache

10/15/86: loss of John Zink and DOW

10/27-29/86: twin stack venting;Kubera, Marcy Neilson (Nanawale odor)

12/2/86: no abatement, Kubera

12/13/86: John Zink trip, Kubera

12/18/86: BURNING RUBBER SMELL; Kubera, TP 10 hour gas cap burn

temperature: 22.2C or 74F
chloride: 2-6ppm

6

2986-02 FAHOA BATTERY 2B, DWS (driller: Pacific Drilling)
elevation: 705' water level: 15.9'
well depth: TDS: 126
casing: cl/mg: 6/2
date drilled: 1963
status: municipal
location: 192925x1545646
temperature: 23C
chloride: 6-27ppm

ISAAC HALE SPRING at Pohoiki (Chloride/Magnesium Ratio HIG 1979)
temperature: 38.9C; ph:7.28; chloride: 4062ppm TDS:2300

3080-01 KAPOHO CRATER, DWS (driller: Hawaii DWS)
elevation: 39' water level: 36' 6/87
well depth: 46' TDS: 548
casing: 46'; 66" cl/mg: 170/31
date drilled: 1961
status: municipal
location: 193016x1545021
temperature: 25.3C
chloride: 64-174ppm

3081-01 KAPOHO AIRSTRIP, DWS (driller: Ocean View)
elevation: 287' water level: 4.5' 1973
well depth: 337' TDS: 131
casing: 8" cl/mg: 220/17
date drilled: 1961
status: unused
location: 193024x1545159
temperature: 33.9C (1961= 28C)
chloride: 331-345ppm (1972 220ppm USGS)

3081-02 FUNA THERMAL TH4, Hawaii Thermal Power Co (driller: Samson Zerbe)
elevation: 250'
well depth: 290'
casing: 14"
date drilled: 1961
status: unused, hole plugged with rocks at 98'
location: 193039x1545119
temperature: 43C
chloride:

3185-01 HAWAIIAN SHORES 1, Miller & Lieb (driller: Ocean View Drilling)
elevation: 402' water level:
well depth: 446' TDS: 126
casing: 446', 8" cl/mg: 14/4