State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

MAR 6, 1963

Well No. K5-9

Contractor P&L

DESCRIPTION OF ACTIVITIES

At 6:00 AM. Changed out 3" Top Valve and Put on Coupon
In 2,500 lbs. At 8:30 AM. Started Drilling
No water at 7" Tool - No Trouble or Hi. Pumped
Water All Night Through 3" Top Valve.

At 10:15 PM. Out of Hole With Tool - Weight Indicator Showed Positive
Runs. Tool - Nippled Down Coupon - No Fluid. Ran to Surface at 437' (7-9 AM)

At 11:30 AM. Back on with Coupon & Hinge Showing Rung at 500. When Cutting
on Bittum Got Hung Up. Possibly on Tool. Weight Indicator Shows Less of Weight
Possibility of Line of Bittum - Came Out Slowly. Brought Wire Into Coupon -
Nippled Down Coupon - Tool Off. No Fluid. Swaiched For Sheared - Might
Have Been on Bittum. Called 1000 & Ever. Remains Will Make a Test -
At 2:30 PM. Well Sheared. Pumping Water at 2,400 - Wellhead Pressure
250 psi.

After Making Decission Made for No More Filling and Over
5% Oilings Shows to Be 0.00 With 0.5" Tool Passing Through.
Will Proceed to Set Plug in the 5% Casing As Per
Approval Proposal for Work Over.

Weather Rainy
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Mar 5, 1953

Well No. K5-9 Contractor Pau

DESCRIPTION OF ACTIVITIES

At 9:45 A.M. Well Head Pressure - 295 PSI. - Pumping Water
At 9 A.M. - Wringing out Luminaire to Cool. (Unders Luminaire
to Air) - Tank Water Away - 2000 Gals.

At 2:30 P.M. Standard Timing off 2" Union and Nipping Luminaire
At 4:10 P.M. Luminaire Tested and Master Valves Open Ready to Feed
At 6:30 P.M. Out of Steel with 9000 Gals. Master Valves Closed
At 7:30 P.M. Luminaire Off and 3" Union Back on - No Feed. Plans
to Pump Water Through 3" Wing Valve.
At 7:45 P.M. Well Secured - Pumping Water At 5 PSI. Wellhead
Pressure 220 PSI. Will Continue Operations tomorrow morning.

Weather Rain

Submitted by Eric Casse
DAILY REPORT

Mar 4, 1993

Well No. 165-9

Contractor P&O

DESCRIPTION OF ACTIVITIES

At 11:35 am Well 5th Flr. Wellhead Pressure 275 PSI. Pumping Water at 2/3 PPS. Total Pumped Away at 1:16 pm. At Report 11:30 am. Received OK from P&O to Start Elevating Pump Station Operations. At 3:30 pm. Stopped Operations Due To No Test on Lubricator. Repair Work Necessary. Will Start Again CommonlyMorning.

Weather Rosey

Submitted by Eric O'Leary
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

March 3, 1998

Well No. 143-9

Contractor Piu

DESCRIPTION OF ACTIVITIES

Last night started pumping water at 3:00 p.m. to kill and cool well by 4:00 a.m. to start fishing trip.

Waiting on HPD approval to start operation.

At 8:00 a.m. Wellhead Pressure 580 psi. Total Water Pumped: 375 bbl.s

At 5:00 a.m. Wellhead Pressure: 460 psi. Total Water Pumped: 500 bbl.s

At 10:50 a.m. Wellhead Pressure: 400 psi. Total Water Pumped: 550 bbl.s

At 1:55 p.m. Wellhead Pressure: 300 psi. Total Water Pumped: 730 bbl.s

Weather Rainy

Submitted by [Signature]
DAILY REPORT

Mar 2, 1983

Well No. 14-9
Contractor PCL

DESCRIPTION OF ACTIVITIES


Weather Cloudy

Submitted by [Signature]
DAILY REPORT

Mar. 19, 43

Well No. 14-9

Contractor

DESCRIPTION OF ACTIVITIES

At 11:00 AM Well Shit In- Well Head Pressure, 1500 PSI.

For 4HRS Building Leaking on Top Fence. And Las Around

Casing. Placed Cement Stay Down 15. And Change Out 3' Top

Work. Upper And Lower Range. Well Secure. Shit In-

Plans Are To Try To Fish Tool Before Processing With

Any Other Operations.

Weather Good

Submitted by

[Signature]
DAILY REPORT

FEB 28, 1993

Well No. 15-9

Contractor P60

DESCRIPTION OF ACTIVITIES

Lost pump with temperature tool with the following loss after

Pumping, Caused water stage

100' - 107.56°F 500' - 104.80°F

200' - 117.56°F 600' - 150.56°F

300' - 107.83°F 700' - 349.46°F

400' - 104.85°F 705' - 354.00°F

Pulled out of hole to change out tool - During Run Lubrication leaked

And Changed His Reamer - Heavy concentration on Poo - But No

Ramenoe at Perimeter - All Recorder Not Seen.

After changing out tool, Water Back up and stopped at around 700'. Still

Pumping out lubrication - Line started to come out of lubrication with the food

Minute, all line out of hole - And no tool - 2' Line Was closed - Yet

Did not hold - Have to shut master valve. Approx 7-10 minutes before release

Could not Stop - No expansion on Location - Around Perimeter. High Line at

10:09 P.M. - About 15 M.P.H. - No Excellence over 25 M.P.H. From Average - Average

From Location 20' In the Area. (No HS on Location) (but no Perimeter) - Two

Possibly - Tool was moving. Not Enough Weight - Or Tool Was Lost on Rattlar -

Weather Good
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

April 8, 1953

Well No. 16-9

Contractor ZH

DESCRIPTION OF ACTIVITIES

Mechanical Contractor Hooking - Up Final Testing -
Nitrogen Placing in the Wellhead at 1500 P.S.I. -
Holding Stanton - Looks Like April 16, 1953 Day
of Cleanout Flow -

Weather Good

Submitted by Eric Cole
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

APRIL 7, 1993

Well No. 145-9

Contractor P.C.U.

DESCRIPTION OF ACTIVITIES

MECHANICAL CONTRACTOR HOUSING UP FINAL REBOUND

WELL HEAD TO HYDRO DIST.

Weather Cloudy

Submitted by Eric Cole
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

April 6, 1983

Well No. 6-9
Contractor MCO

DESCRIPTION OF ACTIVITIES

Crew rigging up flow test equipment.

Well test equipment is hooked up Monday morning.

Plans to run clean out flow on Thursday, April 15, 1983.

Weather

Submitted by [Signature]
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

March 5, 1983

Well No. 16-5

Contractor

DESCRIPTION OF ACTIVITIES

Millcraft 00 A. Report of 455' - Hole Got Oily -
   On Bottoms-Up, Encountered H2S at One Spot
   Added 25 PPM of Sodium Water to Volume - Monitoring
   On Location, Gas Disappeared Quickly - No Others -
   Shut In Well and Pumped Water at 2 BPM With
   Wellhead Pressure of 250 PSI. Dispacked Well-Body
   With Nitrogen and Rig Down Hydraulic Line -
   Gas Complete - Turn Well Over to Production

Weather Good

Submitted by
DAILY REPORT

April 2, 1953

Well No. 148-9

Contractor

DESCRIPTION OF ACTIVITIES

THREADING IN WITH CEMENT MILL BIT HD MILL ON LOST SECTION OF COST TOOL. PUMPING AT 1/2 BAR OF WATER WITH WELLHEAD PRESSURE AT 275 FT PE.

Weather Good

Submitted by [Signature]
DAILY REPORT

April 1, 1995

Well No. 14-5  Contractor PCU

DESCRIPTION OF ACTIVITIES

Crew note on file out of hole, left at 10AM.

1/2 of 15" of gravel in hole, pumping water at 2 BPM, wellhead pressure at 250 psi.

Pressure was added to make mile pump to

Grind up and make 400 pounds of coal in mile.

Weather Good

Submitted by Eric Gehr
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

March 31, 1983

Well No. 12 - 9
Contractor PCU

DESCRIPTION OF ACTIVITIES

Drilling out of hole and picked up some stuck tool
Drill for casing tool - Tapped up at 4526' (135' more bottom) Act like the Lower Cameron Plug -
Lumped, wrote down got to 4407' Plug Moving -
Will keep on pumping to get to bottom - During
The night lumped wrote at 23 ft and weighted
Pumpman at 445 psi

Weather Cloudy

Submitted by
March 30, 1953

Well No. 16-9

Contractor

DESCRIPTION OF ACTIVITIES

Ran 14' with 8' hit to top of Linne. Hung at 30 ft. - Other pulled out of hole to pick-up Pressure tools to go down Cusano tool on bonnet. Well had pressure at 400 psi with water being pumped in at 2 GPM.

Weather Good

Submitted by D. H. Cullen
Well No. K5-5

Contractor PCC

DESCRIPTION OF ACTIVITIES

Cleared out Calmers to 500' - Holding 1600 PSI back pressure

on exclusion - After clearing out of pipe @ 1 inch. Pressure up to 1400 PSI. Well took 6% of fluid. Pressure Blank

Over 600 PSI over 30 minutes. Triggered in 5 coats

Of new pipe - No indication of weight. Triggered up

Pressure up on well at 2 BPM. At 1500 PSI plug

Loose in well bore - Well starts plug to liner. Cut at 3074' - OD breaking - Stops pumping at 400 PSI - Stop pumping

Weather Good

Submitted by [Signature]
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

March 28, 1988

Well No. KS-9  Contractor  PDU

DESCRIPTION OF ACTIVITIES

At 12:00 noon cleaning out cement at approx.

410'- No pressure or temperature as yet -

Using Sugar - cork to hold back pressure or

400 psi - on next joint or drill pipe will start

Holding 1000 psi back pressure

Weather  Good

Submitted by
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

MARCH 27, 1983

Well No. K5-9 Contractor PCE

DESCRIPTION OF ACTIVITIES

Run Multiple (60) Capps Tool Inside of 9-5/8" casing to 290'- Run Two (2) Raws- Preliminary Shows casing to be in good shape- Well starts cleaning out bottom cement plus.

Weather Good

Submitted by Eric Chan
DAILY REPORT

March 25, 1983

Well No. 15-9 Contractor P&O

DESCRIPTION OF ACTIVITIES

Crew Crew Run on Mix with Mud. Toosh 1st Run
Tapped Top of Cement Mix at 150' KBO. Hop Started
Cleaning out Top of Cement

Weather Clouds

Submitted by Eric Cole
Well No. 169-9

Contractor PEO

DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

March 24, 1953

DESCRIPTION OF ACTIVITIES

Chains R1c30111 by Hydraulic Whip - Pressure Pipe

Bore Stick: Pressure Runs to 2500 psi and

Hydrill to 1000 feet. Will start cleanout

Operation in the morning.

Weather Cloudy

Submitted by [Signature]
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

March 23, 1953

Well No. 125-9

Contractor

DESCRIPTION OF ACTIVITIES

Rising up hydraulic limit. Most likely to be ready to start sometime tomorrow - roadbed

Pressure - 0 psi

Weather Good

Submitted by [Signature]
DAILY REPORT

Month 27, 1983

Well No. K5-9
Contractor PEO

DESCRIPTION OF ACTIVITIES

During the weekend, installed new casing packer for annulus between 5'6" and 13'6". Crews rigging up hydraulic work over unit - William Pearson 0-PSI

Weather Good

Submitted by [Signature]
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

[March 15, 1953]

Well No. K5-9
Contractor P&O

DESCRIPTION OF ACTIVITIES

* Well Secured - Well Head Pressure - 0.055 *
* Drilling Packets for Annulus between 13 1/8 and 5 7/8 Casing *

Weather Good

Submitted by [Signature]
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Mar 18, 1953

Well No. 155-9

Contractor


DESCRIPTION OF ACTIVITIES

Well Secured - Water Level Pressure - 0-15C

Weather Good

Submitted by [Signature]
DAILY REPORT

March 17, 1993

Well No. K5-9 W0          Contractor PGV

DESCRIPTION OF ACTIVITIES

Tested expansion space and master valve with nitrogen to 3500 psi, held for 30 min.
Test good. Annular space between 9 5/8” and 13 3/8” casing tested with nitrogen at 1000 psi, for 30 min, test good. Nipped up 3” valve to expansion space. — well secure.

Weather rain

Submitted by
March 16, 1993

Well No. KS-9  Contractor PGV

DESCRIPTION OF ACTIVITIES
Crew working on injecting packing material into expansion space. Expansion space nipped up. Crew nipping up master valve on expansion space. Then torquing nuts on master valve. Crew nipping up 3" valve on top of master valve. Well head will be tested using nitrogen after assembled.

Inspected Melting Material to 3500 psig - Held 3500 psig

Weather good

Submitted by J Flas
March 15, 1993

Well No. K5-9 DGU

Contractor DGU

DESCRIPTION OF ACTIVITIES

Welded on 1/3/93

Installing expansion space packing
welding on 95/6" bit guide, bolting up expansion
spool. Later will nipple up master valve and
balance of well head tree.

Also, when opening up well this morning
no pressure and no traces of H2S noted.

Weather good

Submitted by
DAILY REPORT

Mar 14, 19 53

Well No. 145 Contractor P60

DESCRIPTION OF ACTIVITIES

Started Nipping Down Wellhead Assembly at 6:16 AM - At 5:16 PM.

Got Expansion Spool Off of Well Head - No Leaks 93/8" Longer
in Expansion Spool Prior to Initial Installation (Invoice 7")

Now 14" - Inspected 93/4" Casting Inside of Spool, Good Shelf -
Working on Wellhead Center Around 93/4" Casting - Good And
Hard. At 4:00 P.M. Wellhead Off of 133/8" At 10:40 PM.

Inspected 93/4" Casting - Good Shelf - At 2:00 P.M. Nipped off
133/8" Spool - Thinner in Casing, Good Shelf - Sewed New
Wellhead on - Forged Casing to 14,000 ft - Nipped Up
Expansion Spool and Side, Bliss Facing - At 8:10 A.M.

Well Secure. Tomorrow will Complete Packing Expansion
Spool and Nipple Up Mason Over and Side Line

Down - Ready for Work Over Rig.

Weather Good

Submitted by
DAILY REPORT

Monday, 12th, 1983

Well No. 14-9

Contractor P&O

DESCRIPTION OF ACTIVITIES

Monday, March 12, 1983 - Over Night, No Build Up. Weather So

Tuesday - Started Nipping Down BOP Equipment and

SIP, Going Under Two Replacement with Blind Pads

and Blind Flanges - Writing on Well Head to

Arrive - Possibility to arrive Tomorrow Afternoon -

Monday, 14th, 1983 - Most Probable be back to start work over on

Sunday 3-14-83

Weather Coudy

Submitted by [Signature]
DAILY REPORT

Mar 11, 1988

Well No. 16-9

Contractor

DESCRIPTION OF ACTIVITIES

Well plugged. Maintain pressure at Wellhead.

No build up over night. Waiting on Wellhead

equipment to arrive before proceeding on with coring.

Work will resume next day. Rig moved.

Bad equipment.

Weather Good

Submitted by
DAILY REPORT

Mar 13, 1983

Well No. 14-9 Contractor Pce

DESCRIPTION OF ACTIVITIES

At 11:45 Well Head Pressure: Expansion Spool
Annulus at 250 psi - to be blown off in course
Bore - Prior to later to pop of last cement plug
Made pop of plug at 123.6'

Weather Rainy

Submitted by [Signature]
DAILY REPORT

Mar 10, 1993

Well No. I8-9

Contractor P60

DESCRIPTION OF ACTIVITIES

Crew set L250’ pipe at 259’ CL and sand packed with
11-5 Gal. Neudorff sand - then pumped to center of chart -
(Hawaiian cement w/ 40% sand, 65% C3S, and 3% C4AF)

Estimated flow of 600’ at 127’ CL (plug 150’) installing on
Cement and monitored well head.

Weather Rain

Submitted by Eric Oishi
DAILY REPORT

Date: 9-19-83

Well No. 125-9

Contractor

DESCRIPTION OF ACTIVITIES

Finalize Dog river pipe line with caustic water, other

Nineteen down to install single gate box now

Hydrom - Function Control - OK - 100' 3% A.P. with 5%

Bit #10 float to check invasion of 97% casing and

To run E255 packer (casing ok) - over stand pipe

Third pump at 400' and over stand pipe

Re-Tie down at first pipe at 700' from surface

No gas while tripping in - over night. Wellhead

Pressure went up 100 PSI from 350/152 - small leak

Weather 14/47

Submitted by Eric Oball
DAILY REPORT

Mar 8, 1983

Well No. 16-9  Contractor  PLO

DESCRIPTION OF ACTIVITIES

On Sunday Pumping Cement Plug And Held Pressure On Plug -- After Waiting On Cement to Set, Increased Pressure To 2500 psi. Started Lossing Pressure Check.

Inhibition Spot - Oil Plug Leaking - Recorded Pressure

Lubricator and Workmen to Run In Hole to Top of Plug - Tossed Top of Plug at 700' From Surface.

Due to Leaking Plug - Will Set EBSV Picker - Other Pack With Sand, Then Set Another Cement Plug on Top and Monitor for Any Leak.

Weather  Frost

Submitted by  [Signature]
DAILY REPORT

Feb 26, 1983

Well No. 105-9 Contractor P&V

DESCRIPTION OF ACTIVITIES

At 7:00 P.M. Well Shut In. Water and Pressure 1400 P.s.f.

Weather Good

Submitted by Eric Oka
DAILY REPORT

FRI 26, 1985

Well No. 16-9

Contractor 160

DESCRIPTION OF ACTIVITIES

At 12:30 P.M. Well Start Down to 1380 PSI

Weather Good

Submitted by Eric Cole
DAILY REPORT

Date 24, 1983

Well No. 1K-9

Contractor Plu

DESCRIPTION OF ACTIVITIES

At 10:50 a.m. civilian shot fired - Well Head Pressure

1350 lbs.

Weather Cloudy

Submitted by [Signature]
DAILY REPORT

Feb 23, 1983

Well No. K5-9 Contractor PCV

DESCRIPTION OF ACTIVITIES

At 2:00 P.M. Well Shf Ex - Wellhead Pressure

1380 psi

Weather Good

Submitted by Eric Aaker
Well No.  129-9  
Contractor  P60  

DESCRIPTION OF ACTIVITIES

At 11:15 a.m. well shut down. Well head pressure 1380 psi. Attempt to work over program.

Weather  Rainy

Submitted by  [Signature]
1. Notify DLNR and other regulatory agencies, as necessary of intent to perform work over.

2. Have cellar sniffed and secured prior to entry.
   2.1. Tie Howco into 3"-5M side valve below master valve and test lines.
   2.2. Pressure up Howco lines to balance pressure inside of wellbore and open 3" valve.
   2.3. Pump 10 barrels of caustic water mixed at 10% into wellbore and close valve.

3. Rig up Flo-Log's 10"-5M lubricator and test to 2500 psi.
   3.1. Run minimum inside diameter caliper tool along with temperature tool.

4. Tie Howco into 3"-5M side valve below master valve and test lines.
   4.1. Be sure master valve is closed.
   4.2. Pressure up on Howco lines to balance pressure inside of wellbore and open 3" valve.

5. Pump 8 barrels of caustic water ahead at 1 barrel per minute.
   5.1. Pump 8 barrels of hi-vis mud at 1 barrel per minute.
   5.2. Pump 82 cubic feet of Hawaiian cement premixed with 40% SSA-1 plus 0.65% CFR-3 and 3% calcium chloride.
   5.3. Displace cement with 22 barrels of water.
   5.4. Shut in and monitor pressure for 12 hours.

6. Bleed off pressure and check for flow.
   6.1. Pressure test plug to 2500 psi.
   6.2. Bleed off and check for flow.

7. Run feeler gage on wire line and tag top of cement.

8. Nipple up crossover flange and 12"-1500 series double gate with 3-1/2" pipe rams and function test.

9. Rig up crane and run 3-1/2" drill pipe to top of cement plug. (theoretically at 300')

10. Pump a balanced plug consisting of 41 cubic feet of Hawaiian cement premixed with 40% SSA-1 plus 0.65% CFR-3 and 3% calcium chloride.
    10.1. POH with 3-1/2" drill pipe and WOC 12 hours.
    10.2. Tag top of cement with feeler gage on wire line. (theoretically at 200')

11. If possible and equipment is available, rig up and blow off 100 linear feet of water from 9-5/8" casing to sump thru 2" or 3" line.

12. Strip off well head equipment.
13. Excavate around 20" casing at bottom of cellar and cut off 20" casing.
   13.2. Locate a spot on 13-3/8" casing above collar where diameters are at proper specifications and cut. Split and remove 13-3/8" casing above cut.
   13.3. Hydro blast cement from 9-5/8" casing in preparation for well head work.

14. Hot-Head weld 13-5/8"-5M well head to 13-3/8", 68# K-55 casing that has been precut and prepared for "Pen Weld".
   14.1. Use rose buds and heat tabs to preheat 13-3/8" casing prior to "Pen Weld".
   14.2. "Pen Weld" 13-3/8" wellhead joint to 13-3/8" stub and heat treat for stress relief to 800F using heat tabs. Be sure slip on sleeve is in place prior to "Pen Weld".
   14.3. Slip on sleeve to be welded across "Pen Weld".
   14.4. Have 20" casing precut and slipped on prior to "Pen Weld" of 13-3/8" casing stub.

   15.1. Be sure no water enters annulus.
   15.2. Install centering ring.

16. Install expansion spool packing.
   16.2. Nipple up expansion spool with side valves.
   16.3. Install 10"-5M master valve.
   16.4. Test expansion spool.
   16.5. Weld on 20" casing as protective outer lining. The pressure integrity of the 20" casing should be preserved.
   16.7. Seal weld centering ring screws in casing head.
   16.8. Circulate water through casing head valves to flush out debris.

17. Nipple up BOPE and CUDD Hydraulic Snubbing Unit.

18. Notify DLNR in time to witness all pressure tests.

19. Rig up circulating tank, Howco V-12 and power swivel.

20. Make up 8-1/2" bit and drilling assembly.
   20.1. Use hi-temp floats and profile nipples.

21. RIH to top of cement.

22. Clean out cement through panic line.
   22.1. Clean out last 50' of cement in snub position and circulating through choke lines.
23. Snub out of hole and close master valve. Secure well.

24. Rig up Barton recorder and monitor pressures.

25. Tear out CUDD and BOPE.

26. Install kill line spool, second 10"-1500 series top master valve and flow cross with 10" X 3"-5M adaptor complete with 3"-1500 series swab valve.

27. Release well to O&M.
Well KS-9 Casing Repair

13-3/8" 68# K-55 Casing

Sleeve (13-3/8" K-55 Collar bored for slip fit)

Pen Weld

20" Casing
02/16/93

PLAN "B"

Steps 1 through 11 are the same as plan "A"

12. Excavate around 20" casing at bottom of cellar and cut off 20" casing.
   12.2. Cut off well head.

13. Rig up high torque tongs and back off 13-3/8" exposed joint.
   13.1. Inspect collar and threads.

14. Cut the pin end off of one joint 13-3/8" 68# K-55 casing measured to fit, including well head.
   13.1. Hot head weld 13-3/8" 5M well head onto 68# cut off and test weld.

15. Screw in 13-3/8" 68# well head joint into exposed seal lock collar to proper torque specifications.

   15.1. Be sure no water enters annulus.
   15.2. Install centering ring.

17. Install expansion spool packing.
   16.2. Nipple up expansion spool with side valves.
   16.3. Install 10"-5M master valve.
   16.4. Test expansion spool.
   16.5. Weld on 20" casing as protective outer lining.
   16.7. Seal weld centering ring screws in casing head.
   16.8. Circulate water through casing head valves to flush out debris.

18. Nipple up BOPE and CUDD Hydraulic Snubbing Unit.

19. Notify DLNR in time to witness all pressure tests.

20. Rig up circulating tanks, Howco V-12 and power swivel.

21. Make up 8-1/2" bit and drilling assembly.
   21.1. Use hi-temp floats and profile nipples.

22. RIH to top of cement.

23. Clean out cement through panic line.
   23.1. Clean out last 50' of cement in snub position and circulating through chokes.
25. Rig up Barton recorder and monitor pressures.
26. Tear out CUDD and BOPE.
27. Install kill line spool, second 10"-1500 top master valve and flow cross with 10" X 3"-5m adaptor complete with 3"-1500 series swab valve.
27.1. Secure cellar.
28. Release well to O & M.

Plan "C"

12.3. Attempt to unscrew collar and replace with new collar.
12.4. If threads are bad after unscrewing collar then cut off pin.
12.5. Use plan "A" with "Pen Weld" and sleeve technique.

Plan "D"

1. Rig up to run 7" tie-back, and install 9-5/8"-1500 series well head.
2. See attached program.
DAILY REPORT

Feb 21, 1953

Well No. Ks-9

Contractor

DESCRIPTION OF ACTIVITIES

At 8:00 am. Well shut in. Wellhead pressure 1340.05

Weather Rody

Submitted by
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

FEB 19, 1983

Well No. 14-9

Contractor

DESCRIPTION OF ACTIVITIES

At 2:55 P.M. Well STARTED: Well head Pressure

1370 PSI

Weather

Submitted by
DAILY REPORT

Feb 18, 19 88

Well No. 125-9

Contractor KEO

DESCRIPTION OF ACTIVITIES

12:00 O'clock - Moopy Well start-in - Wellhead Pressure

1320 - PSF

Weather Good

Submitted by

[Signature]
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Feb 17, 1983

Well No. 428-9

Contractor

DESCRIPTION OF ACTIVITIES

At 2:13 PM: Water slug in - Wellhead pressure

1320 psi

Weather: Good

Submitted by

[Signature]
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Fri 16, 19 93

Well No. K8 - 9

Contractor

DESCRIPTION OF ACTIVITIES

At 11:40 a.m. Well shut in - Well head pressure.

At 1:30 p.m. - Well Request Modification Permit

To re-work 13 3/8" casing.

Weather Good
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Feb. 12, 1963

Well No. K8-9
Contractor

DESCRIPTION OF ACTIVITIES
At 11:30 AM. WELL SHOT IN WILLIAM PRESSMAN
12-80 P.E.F.

Weather Good

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

DAILY REPORT

FEB 11, 1958

WELL NO. K-3-P

CONTRACTOR POLI

DESCRIPTION OF ACTIVITIES

AT 11:30 AM WELL SLAM ED- WELDING PRESSURE

1,380 P.S.I. - DRILLING, INITIATE WARM UP OF WELL ON MONDAY.

THE 2" RELIEF LINE FROM THE MOTHER OF THE 13½ TO 5¼" (THE

EXPANSION SPOUT) GOT PLUGGED AND WATER GOT PRESSED IN THE 13½"

PRESSURE BETTER UP AND THE CASING EXPANSION. THE CASING WAS

CALCULATED AND DIMENSIONS SENT TO MANUFACTURER TO RECALCULATE

STRENGTH (YIELD) - NO PROBLEM - FOR CASING RATED AT 1,700 P.S.I. YIELD

(RESPECT K-55 at 5500 P.S.I. YIELD) AND ESTIMATING 10% LESS WOULD

STILL BE GUARANTEED THAN 5500 P.S.I. PLANS HAD TO Rework WELL

to REPLACE EXPANSION CASING - (WITH WORK OVER REG) - ALSO

PLANS WAS NOT TO CLEANMNT WELL.

WEATHER

Submitted by

E. D III
<table>
<thead>
<tr>
<th>Date</th>
<th>Jan 10, 1983</th>
</tr>
</thead>
</table>

**Well No.**

<table>
<thead>
<tr>
<th>Well No.</th>
<th>145-9</th>
</tr>
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</table>

**Contractor**

<table>
<thead>
<tr>
<th>Contractor</th>
<th>JCO</th>
</tr>
</thead>
</table>

**DESCRIPTION OF ACTIVITIES**

- **At 2:30 p.m.** WELL 5HT RN WELL HEAD REPAIR
- **1:30 P.M.** CARENS DOING DIAGNOSTIC WORK ON WELL HEAD PIPE

**Weather**

<table>
<thead>
<tr>
<th>Weather</th>
<th>P45N</th>
</tr>
</thead>
</table>

Submitted by [Signature]
DAILY REPORT

FChecks 9 1983

Well No. 14-5 Contractor P. W. U.

DESCRIPTION OF ACTIVITIES

At 9:05 a.m. well shock in - well hand pressure 1250 psi.
Well not flushing clear out flow too - working on well.
From 10 a.m. - muddy suspended at 4:00 p.m., at county civil defense. plans were to pump casino into well bore
and also direct stream of the 2nd vent to deposit there.

Write in the well bore - (the initial water before the
stream) to migrate has gone 6’ in the incident

On Monday -

Weather Cloudy

Submitted by Eric Austin
DAILY REPORT

Feb 8, 1943

Well No. 163-9

Contractor PCU

DESCRIPTION OF ACTIVITIES

At 7:45 A.M. Well Shut In - Wellhead Pressure - 1300 PSI. All Kill Lines and Admission Lines Hooked up Ready to Go - At 8:00 AM operators 2. By-pass Union to start warming up equipment - At 9:15 AM

Shift in 2" Values to do Repairs on Expansion Tank and Pumps - During this interval operations the water in the well bore came out and the condenser H's blown out at atmospheric pressure. Mass amounts of H's was released - BOP measured 6000 PSI on tophead Gardner - Don't

Shift Down Operations - During, warm up Max Wellhead Pressure to 1500 PSI

Pumping Report 100,000 GPM and Wellhead Gage head of 15" - After 1 Hour

After Shut In - Wellhead Back at Original Height - On Saturday (2/10/43)

Rain Not Severe - Wind About 50MPH - Temperatures At Site of 70°

At 6:40° 60°F from 1200' Down - Pressure Increases

Water Column At 1500' - Then 2 before Below - 1800' - Irrigation

Active Cell No 3 in 15-8 - Attached To Graph Form

PIT Survey

At 4:00 AM Well Shut In - Wellhead Pressure At 1400 PSI

Crew Installing Pack Off Between 70° and 73° Obeying

Weather Good

Submitted by
PUNA GEOTHERMAL VENTURE
KS-9 TEMPERATURE AND PRESSURE PROFILES

PRESSURE (PSIG)

TEMPERATURE (deg.F)

DEPTH (ft) KB

Legend

- STATIC TEMPERATURE SURVEY, 2/6/93
- STATIC PRESSURE SURVEY, 2/6/93

FIGURE 2
DAILY REPORT

Feb 5, 1953

Well No. 145-9

Contractor

DESCRIPTION OF ACTIVITIES

At 11:00 AM, Well Shut En - Well Pumped Massively

12:00 PM - Crew Working on Flow Line

2 PM - Preparation for Clay Out on Monday 2-8-53

Weather Good

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

DAILY REPORT

FRI 4, 1993

Well No. 145-9		Contractor 

DESCRIPTION OF ACTIVITIES

At 12:15 P.M. Well shut in until water level measured.

At 1:20 P.M. Crew repairing expansion joint.

Weather: Cloudy.

Submitted by [Signature]
DAILY REPORT

Feb 3, 1973

Well No. 19-9
Contractor KCU

DESCRIPTION OF ACTIVITIES

At 12:30 P.M. Well SH-7 was - drill and pressure.

1300 P.M. Plans were to run P&T survey on

Saturday - 2-6-73 - They did receive permit

plan for - for cleanout they - this morning

Plans for cleanout will be for Monday 2-7-73.

Weather Cloudy

Submitted by [Signature]
DAILY REPORT

Feb 2, 1953

Well No.  K8-9  Contractor  PLO

DESCRIPTION OF ACTIVITIES

At 12:00 noon Well shot 44 ft. Well Head Pressure
1280 PSI. Crew working on Flow Line.

Weather  Good

Submitted by
DAILY REPORT

Frieb 1, 1958

Well No. K3-9 Contractor P&V

DESCRIPTION OF ACTIVITIES

At 11:30 AM, well start-in. Wellhead pressure:

1270 lbs. Mechanical contractor working on flow

Line to muffler for cleanout flow

Weather Crown

Submitted by Eric Davis
**PGV WELL RECORD**

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<thead>
<tr>
<th>LEASE</th>
<th>Ragoeho State (KS-9)</th>
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<tr>
<td>WELL #</td>
<td>91</td>
</tr>
<tr>
<td>FIELD</td>
<td>Ragoeho Field</td>
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<tr>
<td>LOCATION</td>
<td>Tank 1-4-01 02</td>
</tr>
<tr>
<td>B.H.L.</td>
<td>66.85' S 639.16' E of Surface Le</td>
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</table>
| DEPTH | TD 4564 TVD ...

**SPUD DATE:** 12-6-92  **COMP DATE:**  

<table>
<thead>
<tr>
<th>CONTRACTOR</th>
<th>Peaker Dalp Co</th>
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<tr>
<td>RIG #</td>
<td>23</td>
</tr>
<tr>
<td>ELEVATION: GROUND</td>
<td>619</td>
</tr>
<tr>
<td>K.B. TO GROUND</td>
<td>585</td>
</tr>
<tr>
<td>K.B. TO CSG. HEAD</td>
<td>31.2</td>
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<tr>
<td>TYPE WELL:</td>
<td>EXPL.  DEP.</td>
</tr>
<tr>
<td>OBSV.</td>
<td></td>
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**HOT WTR. STMT. INJ.**

**APPROVED:**  

**COMPANY SUPERVISOR:** Chuck Ward  

**David Weisgerber**

### CASING RECORD

<table>
<thead>
<tr>
<th>SIZE</th>
<th>WEIGHT</th>
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<th>THREAD</th>
<th>TOP</th>
<th>BOTTOM</th>
<th>REMARKS</th>
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<tr>
<td>3&quot;</td>
<td>94#</td>
<td>K-55</td>
<td>Butt</td>
<td>73</td>
<td>935</td>
<td>Cemeneted</td>
</tr>
<tr>
<td>4&quot;</td>
<td>94#</td>
<td>K-55</td>
<td>Steel/IV</td>
<td>73</td>
<td>935</td>
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</tbody>
</table>
| 5"
| 6.25" | 7.70 | New Un | 1792 | 3225 | Cemeneted |
| 7"   | 29.0#  | L-80  | New Un | 1792 | 804    | Cemeneted |

### WELL HEAD ASSEMBLY

**MAKE:** Foster  
**TYPE:**  
**SERIAL #:** 61/1672  
**DESCRIPTION:** 2 side outlets  
**SIZE:** 12 9/16 x 13 5/8  
**I.D.:** 12 9/16  
**LENGTH:** 14"  
**PRESS. RATING (PSI):** 5000 #

**MATERIAL:**  
**EXPANSION SPOOL:**  
**HANGER SPOOL:** 
**XO SPOOL:**  

### VALVES

**MAKE:** Foster  
**TYPE:** D- Seal  
**SERIAL #:** 620037  
**SIZE & I.D.:** 10 -10.60  
**PRESS RATING (PSI):**  
**PERFORATED LINER:**  
**PERFORATION DESIGN:** 6' Open Hole  
**PERFORATIONS:**  
**BLANK:**  

**TEST DATE:**  
**WHP:**  
**TEMP:**  
**FLOW RATE:**  

**REMARKS:**  

**93 JAN 29 AID:**  
**RECEIVED:**  

**WAY OF WATER & LAND DEVELOPMENT:**  

**REMARKS:**
**PGV WELL RECORD**

**LEASE**  KAPOHO STATE (KS-9)  **SPUD DATE** 12/6/92  **COMP DATE** __

**WELL #** KS-9  **CONTRACTOR** PARKER DRILG CO.

**FIELD**  KAPOHO PUNA  **RIG #** 231

**LOCATION**  8957.46 N & 9771.73 E  **ELEVATION**  GROUND 619

BENCHMARK  KAPOHO, PUNA  K.B. TO GROUND  25'

DIST. HI, COUNTY HI  K.B. TO CSG. HEAD 31.20

**B.H.L.**  66.85'S & 659.18'E OF SURFACE LOCATION

**TYPE WELL:**  EXPL.  **DEV. XX**

**DEPTH:**  TD 4564' TVD 4427'  **ETD** 4564'  **OBSV** STM XX  **INJ**

**HOT WTR**  **DRY HOLE**

**APPROVED**  PAUL STROUD  **COMPANY SUPERVISOR** CHUCK WARD

**D. WEISGERBER**

**CASING RECORD**

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<td>94#</td>
<td>K-55</td>
<td>BUTT</td>
<td>0</td>
<td>101'</td>
<td>CEMENTED</td>
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<tr>
<td>20&quot;</td>
<td>68#</td>
<td>K-55</td>
<td>SEAL LK</td>
<td>0</td>
<td>935</td>
<td>CEMENTED</td>
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<tr>
<td>13¾&quot;</td>
<td>94#</td>
<td>C-90</td>
<td>NEW VAM</td>
<td>0</td>
<td>2005</td>
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<tr>
<td>LNR</td>
<td>47#</td>
<td>C-90</td>
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<td>T-BK</td>
<td>47#</td>
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<tr>
<td>7&quot;</td>
<td>29.0#</td>
<td>L-80</td>
<td>16 NEW VM/3024</td>
<td>4169</td>
<td>CEMENTED</td>
<td></td>
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</table>

**14 BUTTRESS**

**WELL HEAD ASSEMBLY**

**Casing Head**  **Expansion Spool**  **Hanger Spool**  **Xo Spool**

<table>
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<th>MAKE</th>
<th>TYPE</th>
<th>SERIAL</th>
<th>DESCRIPTION</th>
<th>SIZE</th>
<th>I.D.</th>
<th>PRESS. RATING</th>
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<td>SOW</td>
<td>W01672</td>
<td>2 SIDE OUTLETS</td>
<td>13¾ X 13¼</td>
<td>10-1500</td>
<td>5000</td>
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<td>FOSTER</td>
<td>FLANGED</td>
<td>W.D. 2062</td>
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<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>32¾&quot;</td>
<td>5000</td>
<td></td>
<td></td>
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<tr>
<td>BARTON (4)</td>
<td>D-SEAL</td>
<td>25777-25779</td>
<td></td>
<td>3¾ 5000</td>
<td>3 1/16 5000</td>
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<tr>
<td>D-SEAL</td>
<td>EXT BONNET</td>
<td>25782-25780</td>
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<tr>
<td>5000 TEST 3600</td>
<td>5000</td>
<td>5000</td>
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**VALUES**

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<th>SIZE &amp; I.D.</th>
<th>PRESS RATING</th>
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<td>6D0037</td>
<td>10-1500</td>
<td>5000 TEST 3600</td>
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<tr>
<td>FOSTER</td>
<td>EXT BONNET</td>
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<td>5000</td>
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</table>

**PERFORATIONS**

**PERFORATION DESIGN**

**TEST DATA:**

<table>
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<tr>
<th>TEST DATE</th>
<th>WHP</th>
<th>TEMP</th>
<th>FLOW RATE</th>
</tr>
</thead>
</table>

**REMARKS:**  N/A
GROUND SURFACE 619' ABOVE MSL

ALL DEPTHS MEASURED FROM KB HEIGHT OF 25' ABOVE TOP OF CELLAR

- 30" CONDUCTOR CEMENTED TO SURFACE 101'

- 20" 94#/K-55 BT&C CEMENTED 0-935'

- 20" CASING SHOE 935'

- 13-3/8" 6#/K-55 SEAL LOCK CEMENTED 0-2005'

- 9-5/8" TIE BACK HANGER TOP 1798'

- 13-3/8" CASING SHOE 2005'

- 9-5/8" 47#/C-90 NEW VAM CEMENTED 0-3224' (TIED BACK)

- 9-5/8" X 7" BUTRESS MIDWAY DOUBLE SLIP LINER HANGER SET AT 3024'

- 9-5/8" CASING SHOE 3224'

- 7" CASING SHOE 4169'

- OPEN HOLE COMPLETION

TD 4564' MD
TD 4427' TVD

PUNA GEOTHERMAL VENTURE

PRODUCTION WELL KS-9
CASING SCHEMATIC
AS COMPLETED 1/22/93

DATE 1/23/93
REV. 2

FILE:POA/KS9AS9LT.DWG
FIGURE NO. 1
**SCHEMATIC DESCRIPTION**

-101', 30" CONDUCTOR CEMENTED.

-935', 20" 94# K-55 BT & C CEMENTED

-1805', 9 5/8" 47# NEW VAM CASING STAB IN & CEMENTED TO SURFACE.

-2005', 13 3/8" 68# K-55 SEAL LOCK CEMENTED.

-3024', 9 5/8" X 7" BUTTRESS MIDWAY DOUBLE SLIP LINER HANGER SET AT 3024'

-3224', 9 5/8" 47# NEW VAM CEMENTED TO TOP OF HANGER AT 1798'

-4169', 7" 29# COMBINATION STRING OF BT&C LINER 3024' - 3569' + 7" 23# ALLOY NEW VAM X BUTTRESS X OVER 3569' - 3571 + 7" 29# L-80 NEW VAM LINER 3671' - 4169' AND CEMENTED TO 3024'

**STEAM ENTRIES**

4545' - 4564'

**SIDE TRACKS**

NONE

**LOST CIRCULATION ZONES**

SURF - 950'

**MISCELLANEOUS**

RIG: PARKER RIG #231

SURFACE: N8957.46' AND E 9771.72' BENCHMARK KOPoho, PUNA DIST HI, COUNTY HI.

B.H.: 66.85' & 659.18' OF SURFACE LOCATION

<table>
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<tr>
<th>PGV</th>
<th>GROUND ELEVATION:</th>
<th>SPUD DATE:</th>
<th>T.M. DEPTH:</th>
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<tbody>
<tr>
<td>KS-09 PRODUCER</td>
<td>618'</td>
<td>12/06/92</td>
<td>4564'</td>
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<th>KELLY BUSHING:</th>
<th>COMPLETION DATE:</th>
<th>T.V. DEPTH:</th>
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<tbody>
<tr>
<td>25'</td>
<td>01/25/93</td>
<td>4427'</td>
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<table>
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<tr>
<th>TOTAL FOOTAGE:</th>
<th>RIG TEST:</th>
<th>E.T. DEPTH:</th>
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</thead>
<tbody>
<tr>
<td>4564'</td>
<td>N/A</td>
<td>4564'</td>
</tr>
</tbody>
</table>
January 19, 1993

MEMORANDUM

TO: The Honorable Mufi Hannemann
    The Honorable John C. Lewin
    The Honorable William Paty
    Dr. Joshua Agsalud
    Bruce Anderson, Deputy Director, DOH
    Tak Yoshihara, Deputy Director, DBEDT
    Jack Keppefer, Deputy Director, DLNR
    Dean Nakano, Geothermal Project Office, Manager, DBEDT

FROM: Michelle Wong-Wilson, Coordinator

SUBJECT: GEOTHERMAL UPDATE - 1/18/93

PGV ACTIVITIES - At KS-9, the Parker drilling crew stopped drilling on Friday at the 4180-foot level. Casing and cement work took place over the weekend. Monday morning (yesterday), the casing crew completed the 7-inch casing work down to approximately 4180 feet. The casing-cement work was to be allowed to set until midnight or so (last night), then would be hydrotested. Provided the seal was satisfactory, the last drilling stage can begin. It is estimated that the resource is another 300 to 400 feet down and can be reached within two or three days of drilling.

DOH ACTIVITIES - Noise and air monitoring continued. Noise complaints were registered at 4:47 p.m. Friday (Martinovich residence in Lanipuna Gardens) and at 6:45 a.m. on Saturday (Petricci residence in Leilani Estates). Sound levels of 32-33 dba were detected following the latter complaint. Additionally, two air complaints were received Sunday evening—one from the Petricci residence (“smelled H2S”) at 8:39 p.m., and one from the Olson residence on Hinaio St. (“smelled fumes earlier this evening”). No violations reported.
Well No. _16-9_  Contractor _Kuu_

DESCRIPTION OF ACTIVITIES

At 11:30 AM: Well shut in - Wellhead Pressure - 1180 psi - Rig moved off -

Weather _Rain_

Submitted by _[Signature]_
DAILY REPORT

May 27, 1983

Well No. K8-9

Contractor K8-0

DESCRIPTION OF ACTIVITIES

At 11:15 A.M. well started. Wellhead pressure 1100 p.s.i. Started to open rigging down to move to K8-10.

Weather Cloudy

Submitted by [Signature]
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Oct 26, 1983

Well No. 15-9

Contractor

---

DESCRIPTION OF ACTIVITIES

At 2:00 P.M. wellhead pressure - At 1100 P.S.I. with well shut-in. All indications point to situation like drill kill. Some water like attraction cell - more discussions have to be done (P.O. survey) to

Up next - crew rigging down for reperforation to move to 15-10

Weather Coud

Submitted by
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Jan 25, 1983

Well No. K5-9

Contractor PEO

DESCRIPTION OF ACTIVITIES

On 1-22-83 at 12:00 mid-night stopped injecting water.

Down hole and wellhead pressure started building -- 570 p.s.f. as of 7:10 a.m. 1-24-83. Wellhead pressure at 891 p.s.f. at 12:05 p.m. 1-25-83. Wellhead pressure 1050 p.s.f.

Craned 5000 ft. RIG DOWN IN PREPARATION TO MOVE # 2 K5-10.

Weather Good

Submitted by Eric [Signature]
## Field Report

**Company:** Pruett Industries, Inc.  
**Address:** 9915 Rosedale Highway, Bakersfield, California 93312  
**Phone:** (805) 589-2768  
**Date:** Jan 26, 1993  
**Well Name:** KS-9  
**Run:** 3  

### Well Details
- **Casing:**  
- **Elevation:**  
- **Depth:**  
- **Zone:**  
- **Pump Shoe:** Gas Anchor  
- **Purpose:** Intake  

### Element Details
- **Serial No.:**  
- **Clock:**  
- **Turn:**  
- **Engage Stylus:**  
- **Disengage Stylus:**  
- **Obil. Test Press:**  
- **Cpl. Test Press:**  

### Stabilization Period
- **Gross Oil Rate b/d:**  
- **Net Oil Rate b/d:**  
- **Formation Gas MCF/D:**  
- **GOR (STB/MBBL):**  
- **Circulated Gas MCF/D:**  
- **Oil Dry Gravity API:**  
- **BHP:**  

### Temperature and Pressure

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<th>R-1</th>
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### Comments:

*Insert comments here.*
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Date 7/22/93

Well No. 14-9 Contractor RCO

DESCRIPTION OF ACTIVITIES

At 10:40 a.m. Last Night - At Depth of 454' - Started Losing
Rajuan Circulation - Drilled to 4564' With No Return Circulation. At 10:57 a.m. - Turned Off Pump - With Well Shut In. Wellhead Pressure Started Building. At 11:27 a.m. Wellhead Pressure. Anne 10.54 PSI - Turned On Pumps And Pressure Staying Going The Other Way. At 11:05 a.m. Pumping Water At 6.3 BPM - Pump Pressure 1004 PSI - Wellhead Pressure - 250 PSI - Plans Are To Mix Mud 10.0 PPG - Pump Mud Down Hole To Get Well To Go On A Uniform. Other Trip Pipe Out Of Hole With Well On Vac. After Out Of Hole To Displace Mud With Water In The Hole - Then Continue Pumping Water For Several PPG Reduced To Zero - After Complete Stop PPG Source And PTF Source - Est. Abs. Pressure - 2170 PSI - Balance Mud 9.7 PPG - Est. TVD 4500' - At 2:30 a.m. out of hole with

Mix Sand - Closed Blend Pumps - Well Shut In - Will Start Declining

With Water. (Note - When Piping Pipe Out Of Hole - Worker Cut Knuckle Down By CO2 Gas - Gave Oxygen - Worker Ok)

Weather Green

Submitted by E. Tule
DAILY REPORT

Jan 21, 1993

Well No. 1659

Contractor

DESCRIPTION OF ACTIVITIES

As of 11:55 AM. Drilling At A Depth of 4497' With 6" Bit and Full Riser Operation - Cperature - 74° -

Temperature - out 122°, R.P. 2657 ft. - Pump Pressure 1583 psi.

At 95 S.P.M. - Survey 4295' 2' + deg. Dev. - 195° Dev. Angle

4492' - 26' deg. Dev. - 306° Tang. - No Disconnection Due
d to No More Cable in Hole at the Spring - (Gyro Equipment
Due to Arrive to Find Exact Disconnection Hole is Honolulu)

Mud Weight In - 10.0 + BC - Mud Weight Out 10.18% (Soln)

Formations -

4200 - 4320' 26% Vesicular 80% Amphibitic

4320 - 4360' 0 - 30 Amphibitic - 70 - 100 Porphyritic

4360' - 4390' 10 - 30 Highly Amphibitic - 70 - 90 Amphibitic - 30 - 50 Porphyritic

4390 - 4310' 100% Porphyritic

4310 - 4340' 30 - 60 Amphibitic - 40 - 70 Porphyritic

Weather - Good

Submitted by: Eric Smith
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Oct. 20, 1993

Well No. K8-9

Contractor

DESCRIPTION OF ACTIVITIES

11:00 a.m. DRILLING HAMPS WITH 6" BENT AT

12:45' W/P FULL STAR CURRENT

ROP. 7.2 FT/HR. PUMPS AT 100 SPM - PUMP PRESSURE

OF 1460 PSI - TEMPERATURE IN 105°F - TEMPERATURE OUT

127°F - VERY SLOW DRIVING - SLIGHT ADJUSTMENTS

NITRO TYPE PUMP

Weather Good

Submitted by Eric Parks
DAILY REPORT

Well No. K59 Contractor PVC

DESCRIPTION OF ACTIVITIES

Pressure Cist of 2" liner cap. Pressure up to 1100 PSI. Lost 400 PSI over 2 minutes. No leak. Plans are to squeeze liner cap and re-test.

Weather Good

Submitted by Eric Osaki
### 7" 29.0 New Vam and Buttress

**Casing Detail**  
1/16/93

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<td>3024.73 Hanger Top</td>
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<td>KB used 25.0</td>
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KS-9

7" LINER 29#/ L80 NEW VAM AND BUTTRESS

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Shoe & F.C.
X-O 2.15
Liner & Hanger 8.25

Centralizers
1 cent. 10' up 1st Jt.
1 1st Collar
Jt 3-5-9-13-17-21-25-29
PGV KS-9
Depth vs MRT & Temp In-Out

deg F

feet

MRT  Temp In  Temp Out

20° @ 935', 13° @ 2005', 9° @ 3224'
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

May 19, 1993

Well No. K5-9

Contractor PCV

DESCRIPTION OF ACTIVITIES

Pumped and Shaked 100 cu ft of cement at the
liner lap of the 7" casing - Waiting on cement and

cleaned out cement - Cycled two GT 90 pumps to cut out

cement out of the sleeve - Cleaned out cement to top

of liner, homogenize at 800 psi - Pressured up to 1100 psi

Help - OK - Cleaned out cement to 8034' - Other other

length of the liners and Pressured up to 1100 psi.

Premise: No change - OK - Someone cleaning out

cement. Plan to go to the first collar at 5065' - Other

Personal Casing Pressure - Completed cleaning out cement

to the first collar at 7:15 pm. Then Cycled cement

up to clean liner. Pressured up to 1300 psi with

100 psi, red on the drill and fell - Pressure study

Building due to that expansion from hole - No losses.
Pressured out - Good - Planning to Dril ahead -

New b' hole.

Weather Cloudy

Submitted by

[Signature]
Well No.  Ws-9         Contractor  XML

DESCRIPTION OF ACTIVITIES

Commenced Hole to Compaction Hole - 8º Run Casing -

Cased Hole - Staged Casing Placed - No Apparent Leaks

Premixed - Agitated LCM - Showed Loss of 15º BGL PCC

Hone and Drilled to Pump a Stabilization Cement

Plug (75 Linear ft) on Bottom to Cure. Loss Dwan

Polish off Top of Plug and Run 2º Casing

Weather  Rain

Submitted by  Eric Hill
DAILY REPORT

Date 14, 1953

Well No. 149

Contractor

DESCRIPTION OF ACTIVITIES

At 11:30 AM. Opened at depth of 4149' with 6% BIF -
with Full Return Circulation. Temperature - IV 113°F -
Temperature out 138°F.ROP - 36 ft/hr. Both Mud Coolers
On. CO₂ at 440 P.P.M. - Mud Weight 11.19% -

Deviation Survey:

3710' - 21 1/2 Deg. NW - S-62°E Direction - 167°F Temperature.
3832' - 21 3/4 Deg. NW - S-75°E Direction - 174°F Temperature.

Formation -

3650' - 3710' - 20.0% Mixed Alcaline - 30.0% Aragonitic.
3700' - 3770' - 10.5% Mixed Alcaline - 0.3% Hyalodendrite - 30.0% Aragonitic.
3780' - 3900' - 0.30% Mixed Alcaline - 20.0% Aragonitic - 20.0% Porphyric.

At 4172' Decision was made to Run 7 Casing to

4172' - With TD at 4182' From of Mix Slurry

do Casing off Kind Rock - and Formation at 4170-4180'.

Very Compassion.

Weather Good

Submitted by Eric Coelho
Well No. 145-9  Contractor PCO

DESCRIPTION OF ACTIVITIES

With Mud Motor and Bike Sub made 34' of new hole to 3650' - Took Directional Scans - Handled BT
The Correct Directive - While Pulling From Hitter
With Drill String - Took a Gas Coal - Went to Bdr and Calculated Kick out - City Popped up
No - Has and Only Small Quantity of CO - Formation

At 3600' - 3650' - 30-100% Higher Average - 0-20% Anthracite
Mud Weight Going In at 11.1 API - Compress out at 10.7 API
CO Cutting Mud - Will Continue Mud to Being Weight
Up and Go Back in Hole to Drill Again

Weather Rainy

Submitted by
State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCE MANAGEMENT  
P. O. Box 373  
Honolulu, Hawaii 96809

DAILY REPORT

Date 12, 1993

Well No. K-9  
Contractor P&V

DESCRIPTION OF ACTIVITIES

Day 06 to 3672' - Trying to go down through kick - 
Mud motor not working - Plans are to pull out for  
Mud motor change - Last night while drilling in 267' - Rock & CO2 Kick - A point of 60 bars gain -
Stuck in well and pumped Kick out - With bottom -
Up - CO2 2772 PAM and H2S 700 PPM at the pits

Original mud weight 11.1 PPG - After Kick 10.1 PPG -

(Probably cut off due to CO2) Plans are to kick -

Well to Correct Direction and Point to Target -

Plans are to Bar Dash Weight up to 11.3 PPG and

Dead Ahead

Weather Cloudy

Submitted by
DAILY REPORT

June 11, 1993

Well No. 168-9

Contractor Pico

DESCRIPTION OF ACTIVITIES

DRILLED TO A DEPTH OF 3614' WITH 8 1/2 IN HOLLOW RODS CIRCULATING (No Loss) - Temperature at 3575' 85°F, at 3598' 82°F.

Temperature out - 138°F - Mud Coolers (2) on - Changing out mud to have mud weight to 10.9 PPG - Shut pumps off to check for flow - About a 1/2 ft.

Plans are to weight up mud to 11.1 PPG - Other tools pulled out of hole to pick-up mud motor to Keck.

Well is in a Southerly direction - 3907' - 28° Avg. Dip - N 87° E - Temperature 85°F - 3553' - 28° Avg. Dip - N 85° E - 15°F.

The flow about 6 BBL per hour.

Weather Good

Submitted by [Signature]
DAILY REPORT

January 9, 1983

Well No. Ks-9

Contractor

DESCRIPTION OF ACTIVITIES

Completed Nipples, Up Expansion Spool, 10" massed valve, and Bob stock went into the hole to clean out casing.

Later,ハンガー and pull out plug and clean to shop.

And pressure on casing - then set bits and pressure

the expansion spool and massed valve to 3500 Psi.

Bob stock to the casing, pressure to 3500 Psi, and

pressure to 2000 Psi - all set percussion and

All ok - Pressure on casing completed - Plans are

to run P & S survey, then convert leak off first at

the site, then calculate E.M.W T. To drill out

with - other spots followed New well.

Weather Good.

Submitted by Eric Allen
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Ann. 8, 1982

Well No. K6-9 Contractor P&V.

DESCRIPTION OF ACTIVITIES

Run a JOINT of 46 feet of 8 3/8" casing

47 # C-90 - New Dam. Add Cement to Surface-

Cement in place at 10:45 AM. Last Nighth - Cement-

To Surface. Cut Off Casing - Covered on Cement - Started

Nipping w/ Expansion Seal and 10' Measure Valve-

In Preparation to Pressure Test Casing and Drift Stack

Weather Good

Submitted by
### ROPE PRESSURE TEST

**Instructions:** Please print or type and send completed form with any attachments to Division of Water Resource Management, P.O. Box 272, Honolulu, Hawaii 96820.

Reference DLNR Regulations:

Section 13-183-76 (b) All casing strings shall be pressure tested after cementing and before commencing any other operations on the well. Minimum casing test pressure shall be approximately one-third of the manufacturer's rated internal yield pressure; provided that the test pressure shall not be less than six hundred pounds per square inch and greater than 1500 pounds per square inch. In cases where combination strings are involved, the above test pressures shall apply to the lowest pressure-rated casing used. Test pressures shall be applied for a period of thirty minutes. If a drop of more than ten percent of the test pressure should occur, the casing or cement job shall be considered defective and corrective measures shall be taken before commencing any further operations on the well.

#### Casing Pressure Test:

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<table>
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<tr>
<td>2.</td>
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<td>3.</td>
<td>Well name and number</td>
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<td>4.</td>
<td>Location</td>
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<td>5.</td>
<td>Person(s) taking test</td>
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<td>6.</td>
<td>Date of test</td>
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<td>7.</td>
<td>Time of test</td>
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<tr>
<td>8.</td>
<td>Depth of hole</td>
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<td>9.</td>
<td>Size of last casing string</td>
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<tr>
<td>10.</td>
<td>Depth to top of casing (Casing Lap)</td>
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<tr>
<td>11.</td>
<td>Depth to bottom of casing (Casing Shoe)</td>
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<td>12. (a)</td>
<td>Pressure at which casing tested (to Master Valve)</td>
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<tr>
<td>12. (b)</td>
<td>Drop in Pressure to (after 30 minutes)</td>
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<tr>
<td>13. (a)</td>
<td>Pressure at which Upper Blind Rams tested</td>
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<td>13. (b)</td>
<td>Drop in Pressure to (after 30 minutes)</td>
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<td>13. (c)</td>
<td>Pressure at which Lower Blind Rams tested</td>
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<td>13. (d)</td>
<td>Drop in Pressure to (after 30 minutes)</td>
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<td>14. (a)</td>
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<td>16. (b)</td>
<td>Drop in Pressure to (after 30 minutes)</td>
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</table>

**Other Information:** (use additional sheet, if necessary).
DAILY REPORT

Day 7, 1983

Well No. 15-9

Contractor PW

DESCRIPTION OF ACTIVITIES

During the night powered off to the top of the lease

Moved at 1795' - Then cleaned out cement at the

Start of the 9% casing at 3251' - Cured out

Pulled mud works from 1810' to surface

Proceeded to Ponasuan Best Lease Cap - to A. of Grout

(Fs 1 PSI Surface Pressure) - Added Pressure for 30

Minutes with no loss - Good Otter Ok - Plans were to

Run 9 9/8" IBH Both Casing to Surface

Weather Good

Submitted by
DAILY REPORT

JAN 4, 1987

Well No. 145-9

Contractor

DESCRIPTION OF ACTIVITIES

Poured a total of 87 bbls of 35% cement and sand
Casing, with top of liner hanger at 180'- Affixing Completion
Pumping cement in 18 3/4' casing displaced 460'
Cement - Gresel cement - last cement on top of liner
Hanger to set - Good cement job of liner casing - Will
Wait on cement to set up, plans are to polish off
to top of liner hanger with 3 7/8' bit - than cement out
Cement to top of port collar at 3152' - with 8 1/2' bit - than
Conduct pressure test of liner lap area - Waiting on
Cement a total of 24 hours - Cement by plug at
2:45 AM - Will last lap to .9 gradient (approx 650'5"
At surface with 107 912 mud in hole) - After pressure
Test will continue with the back to surface

Weather Good

Submitted by
DAILY REPORT

[Date] 1993

Well No. 14-9
Contractor PCU

DESCRIPTION OF ACTIVITIES

Last night pumped 100 cubic yards of cement and pulled out.

Also worked on cement - went back in and cased P.O.

Plug at 3207' - polished off top of hole to 3255'.

Then conditioned hole in preparation to run 5½ casing.

(liner - total 37 feet) Cut shoe at appox 3255' and:

Dep 1 liner kitchan at 1805' - (shoe of 13½' at 2005') Approx. 200' of other lap and the 13½' casing.

Weather Overcast

Submitted by [Signature]
PGV  KS-9
Shut-In Pressure at 3329'

Wellhead Pressure

Time

PSIG

18:30  18:40  18:50  19:00  19:10  19:20
20  40  60  80  100  120  140  160  180  200  220  240  260  280  300  320  340  360  380  400
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Jan 4, 1993

Well No. K-4 Contractor

DESCRIPTION OF ACTIVITIES

Drilled to a depth of 3329', then encountered a kick.
Lost all weight on bit and also lost line pressure.
Drilled immediately shut in well and saw pressure of
340 psi at the wellhead - started pumping on the well
and started mixing KCL weight mud - calculated at 12.3 psi mud - Cemento
in KCL and dispersed with KCL mud - Completed displacement and
stopped at ID lab for pH. No pH - 0 PSI on the wellhead - Well
Pumped - Bore string back with approx. 3' of fill on boom.
Direction surveys: (273.4, 43.6) (273.5, 13.4) (578.4, 3.4) (584.4,
19.15) (273.5, 15.8) (333.5, 16.3) (343.5, 16.3) (302.4, 19.2) (584.4,
8.45) (333.5, 16.3) (333.5, 43.6) (578.4, 21.6) (584.4, 8.45) - TO AT
3329' true vertical depth - 3291' reported from Vertical - Plans are to play
back with cond. polish off of 31/2 in. - Set 5 7/8 in. shoe at 3255' - Then tie back
and complete wellhead equipment (expansion part - 10° MAUER VALUE) - Then
open out with 6 1/2 bit. When circulating out kick - Cut Ribs
up - Encountered gas at the gas anchor - Out of the hole
H2S - 250 PPM - CO2 500 PPM.

Weather [200°F]

Submitted by
DAILY REPORT

Dec 31, 1952

Well No. 15-9

Contractor

DESCRIPTION OF ACTIVITIES

At 10:30 A.M. DEWELLING AT DEPTH OF 2442' WEST

12' Bit AND MUD MOTOR - DOING PERCENTAGE WORK

Temperature 84' - 114° F. - Auger House - 116° F.

With Mud Coolers OFF

Deviation Survey - 2038' - 2 3/4 Dg. N. 87.0 N Dtom

2110' - 2 3/4 Dg. N. 68.0 W

2140' - 1/4 Dg. N. 58.0 W

Weather Good

Submitted by [Signature]
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Dec. 30, 1942

Well No. 1439 Contractor FGU

Description of Activities

Circulated out cement to 200' - Circulated non-cement
And performed line off test - Cemented off at 450 psi.
(Water at 500 psi for 17 gradient) Pumps water to
Get a direction rate of 2 BPM at 800 psi. Then draw
To the top of cement - No cement - Watered to 10 at 20 psi.
(Probably fell on bottom before going Cement Obs on casing)
Pumped 150 cu ft of cement and squeezed – Got a
total of 7 barrels of cement squeezed away - Amp helped
1900 psi for 1 hour - Washed out cement. Then started
To clean out cement and debris around (new hole) - At
11:00 AM, pumped to 70 psi - Then pulled out of hole to
pick-up mud motor and began setup to kick wall away
from KS1 annular.

Weather Rainy

Submitted by
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Dec. 29, 1992

Well No. K5-9

Contractor

DESCRIPTION OF ACTIVITIES

Completed Pressure Test of 13¾' Casing and BOP Stack - Clearing out cement and to Drill out of the hole at 200 psi. Then perform leak-off test.

Looking for a .07 gradient (500 psi plus hydrostatic differential of 1400 psi at the hole). If cannot get .07 gradient - will pump cement and square the hole. Conduct leak-off test until attain .07 gradient - then start reaming new hole.

Weather Good

Submitted by [Signature]
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Dec. 28, 1982

Well No. 14-9 Contractor PDU

DESCRIPTION OF ACTIVITIES

Conducted Pressure Test of 1 3/4' casing and 2 7/8' stack.
Pressure casing to 200' PSS Hilt for 30 minutes - Lost Horse
Set Wellhead Plug to 50' Area of 2 7/8' stack to 350' PSS.
From piston to top - steel core pipe, blendor pipe, rubber core pipe.

Ultrasonic w/Pipe, Hydral - Desk Blendor Pipe to 350' PSS

Hold for 30 minutes - Lost 105' PSS - Relock steel core pipe to 350' PSS.

Hold for 20 minutes - Lost 30' PSS - Relock Rubber Pipe Ramps.

350' PSS Hold for 30 minutes - Lost 0' PSS - Third ultrasonic pipe -
With Chico Penofla. Found a leak and working on leaks.

Fourth ultrasonic at 350' PSS Hold for 30 minutes - Lost 0' PSS.

Cashed Hydral to 250' PSS over 30 minutes Lost 0' PSS. Pressing
120-02 - Prepare to change mandrel and perform.

Look-off test at site.

Weather Rain

Submitted by Mark Acker
State of Hawaii
Department of Land and Natural Resources
Division of Water Resource Management

**ROPE PRESSURE TEST**

Instructions: Please print or type and send completed form with any attachments to Division of Water Resource Management, P.O. Box 273, Honolulu, Hawaii 96812

Reference DLNR Regulations:

Section 13-183-76 (b) All casing strings shall be pressure tested after cementing and before commencing any other operations on the well. Minimum casing test pressure shall be approximately one-third of the manufacturer's rated internal yield pressure; provided that the test pressure shall not be less than six hundred pounds per square inch and greater than 1500 pounds per square inch. In cases where combination strings are involved, the above test pressure shall apply to the lowest pressure-rated casing unit. Test pressures shall be applied for a period of thirty minutes. If a drop of more than ten percent of the test pressure should occur, the casing or cement job shall be considered defective and corrective measures shall be taken before commencing any further operations on the well.

**Casing Pressure Test:**

1. **Project name**
   - Puu Bohannan Venture

2. **Drilling company**
   - Paar Drilling Co.

3. **Well name and number**
   - Kapoho State # 9

4. **Location**
   - Puu District

5. **Person(s) taking test**
   - David Wiegleb Eric Tanaka

6. **Date of test**
   - 12-28-92

7. **Time of test**
   - 1800 hours

8. **Depth of hole**
   - 2050

9. **Size of last casing string**
   - 18 1/4 68\(^{th}\)

10. **Depth to top of casing (Casing Lap)**
    - Surface

11. **Depth to bottom of casing (Casing Shoe)**
    - 2050

12. (a) **Pressure at which casing tested**
    - 2000 Surface Pressure

    (b) **Drop in Pressure to (after 30 minutes)**
    - 110 PSI

13. (a) **Pressure at which Upper Blind Rams tested**
    - 3500 Surface Pressure

    (b) **Drop in Pressure to (after 30 minutes)**
    - 105 PSI

    (c) **Pressure at which Lower Blind Rams tested**
    - 3500 Surface Pressure

    (d) **Drop in Pressure to (after 30 minutes)**
    - 30 PSI

14. (a) **Pressure at which Upper Pipe Rams tested**
    - 3500 Surface Pressure

    (b) **Drop in Pressure to (after 30 minutes)**
    - 0

    (c) **Pressure at which Lower Pipe Rams tested**
    - 3500 Surface Pressure

    (d) **Drop in Pressure to (after 30 minutes)**
    - 0

15. (a) **Pressure at which Hydril tested**
    - 2500 Surface Pressure

    (b) **Drop in Pressure to (after 30 minutes)**
    - 0

16. (a) **Pressure at which Choke Manifold tested**
    - 3500 Surface Pressure

    (b) **Drop in Pressure to (after 30 minutes)**
    - 0

**Other Information:** (use additional sheet, if necessary)
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Dec. 25, 1992

Well No. 13-9		Contractor	P. O.

DESCRIPTION OF ACTIVITIES

Drilled to a Depth of 2050' - With 172' Air Time and 172' Water Time

Cemented Hole to Run 13¾' Casing - Landed Shoe at 2005' - Plugged Cement - with 100% Success - Completed Plugging Cement and Prepared to Do Top Set

With 1' P.E. Down the Annulus - At the Very Beginning of Pumping with 1' 13¾' Cement Come Back to Surface - and Prepared to Discharge Top Portion of Cement with Toe Type Cement in the Upper Portion of the 13¾' Casing - (Stronger Cement at Surface) - Cement Stood Off at Surface - Last Division survey at 1575' -

2 deg. Dec. - 5-13-16
temperature - 135°F Temperature -

Crawling Down 20° BOP Stacks and Nipping Up 13¾' BOP Stack and Preparing for Pressure Test and Leak-off Test of the 13¾' Stack

Before Being Able to Drill New Hole - (12°/1500')

Weather Open

Submitted by Eric Aiken
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Dec. 24, 1992

Well No. 14-9  Contractor: JDC

DESCRIPTION OF ACTIVITIES

December 16-24 - Sheet Pile Drivetrain Survey.

Survey at 1624 - 1st Day - Wearing Down 135° Argentine.

During the Survey, the Sheet Pile went Differential Stuck.

Working on Pipe and After Pumping Nitrogen Gas
do Lighten Mud Weight. Got String Loose - Pulled Out
of Hole to Check Drill String and Also Changed Out

Tips - Repaired Back in with Drill Pipe and
Got to Bottom with No Fail on Bottom - Canceled

Hole Clean and Displaced Mud with New Mud -

And Prepared to Drill Ahead. Plans are now to

Keep Working Till 13 3/4" Casing is in Place and

Cemented in Place.

Weather: Rain

Submitted by: Eric Setus
DAILY REPORT

Dec. 23, 1952

Well No. 115-9

Contractor


DESCRIPTION OF ACTIVITIES

As of 11:30 A.M. Drilling New Formation at Depth Of 1621' With 4-7/8' Bit - Rate of Penetration of 11 F.P.H. Per Hour,

Pump Pressure - 1312 P.S.I. - Full Suction Cylinders - Temperature - In - 116° - Temperature Out - 123° F. - Co2 - 441 P.S.I.

After Pumping A Total Of 2 Cubic Yards And Squeezing, Brought Cement Level To 147' - Cleared Out

Cement To 1674' - Other Cement To Deep New Formation - Very Hard Formation - Now Drilling

Weather Rainy

Submitted by

[Signature]
DAILY REPORT

Dec. 22, 1992

Well No. 16-9

Contractor

DESCRIPTION OF ACTIVITIES

Cleaned out Cement to 1624', then drilled down

1652' to 1645' (1 ft) Lost Circulation Again. Large

Lost - Pulled out of Hole to Pump Cement and Stopped

Water in Cement - Tried to Fill Hole with Water. -

Still Losing, As Trying To Build Up Pressure in Well. Will

Trip Back to Hole to Top of Cement Then Pump

and Squeeze Cement Again to Try to Build Lost

Circulation

Weather: Rain

Submitted by
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Dec. 21, 1992

Well No. 1459

Contractor

DESCRIPTION OF ACTIVITIES

Drilled to a depth of 1624' with 173' AD. and lost all
returns, Ran wire line and found top of water at 1550'.

Pumped cement to clear lost circulation. After waiting on
Cement, Tried to fill hole with water - Hole still losing
water, Ran in to the top of cement at 1450'. Pumped another
300 Sacks of mortar cement and came out of hole to come on
Cement, filled hole with water, Hole not flowing water.

Ran in hole with bit and tested top of cement at 957'.

Plans are to clean out cement and drill ahead.

Directional Survey:

1360' - 3/4 Deg. Nov. S. 74.5 W. Depression 180' E.

1350' - 3/4 Deg. Nov. S. 40.1 W. Depression 180' E.

1445' - 2 Deg. Nov. S. 83.8 W. Depression 180' E.

1560' - 1/2 Deg. Nov. S. 43.10 Depression 180' E.

Formation:

Sedimentary - Waterline - Porphyritic

Weather

Good

Submitted by: [Signature]
Well No. 16-9

Contractor

DESCRIPTION OF ACTIVITIES

After Square Cut - Cement out Cement to 98'-900
Pression for Lower off - Stress Down to 250 psi.

Cement - Stripped out of 94'-965 for Dressing Assembly -

and back in to pull new Hie - Pressed to 94'-

and lost水泥 circulation - Pull out of Hie and

Presso from 94'-965 and cement to cure lost circulation

Prepared to go back in Hie with Dressing Assembly

to Place New Hie.

Weather Good

Submitted by
Well No.  K5-9  Contractor  P60

DESCRIPTION OF ACTIVITIES

After completion of casing, pressure test. Cleaned out cement and pulled out shot to 846 - Céparation!

Leak-off test - no leak - pumped cement area

Squeezed cement - went on cement.
DAILY REPORT

Dec. 16, 1992

Well No. 14-9

Contractor P&O

DESCRIPTION OF ACTIVITIES

Concentrate Pressure of 20" Casing and 20" Hydrant. Pressure up to 1500 psi. Lost to 1460 psi. Help fur 30 minutes. Got oil. Working on Hydrant to see if repair in sight. Got big to see any connection pressure. Drag out.
Well No. 15-9

Contractor

DESCRIPTION OF ACTIVITIES

Drillers working on cement - will start nippleing up

Bohr stock (Hyd-Pump Rotating Head) on 20" casing

Then proceed to cement pressure test on casing and

Bit equipment - then proceed on with a look-off bit

At the box - looking for at least a 10' Gradient at

the shok - proceed on to drill ahead with 17" bit

AND MANNING ASSEMBLY

Weather Rainy

Submitted by Eric Tan
Well No. 14-9  Contractor  MCO

DESCRIPTION OF ACTIVITIES

Cement job consists of (60 56c of Superior Fract) (100 5x Hawaiian Cement, Fullard Cement) - (404 5x H.C. - 50 5x Sphagnum - 40% Silica Flour - 1.25% CFA-3 - 5% Fullard 22A - 4% GEL - 5% CACO3) - TAIL - (150 5x H.C. - 40% S.F. - 15% CFA-3 - 3% CACO3) - Displaced
Poured Portland cement with fresh water. No pumped fluid - water on cement - Third 0.75 yard of cement in annulus. Could not find
top - Pumped 500 cubic yards of Hawaiian cement with 1:1 Parline - 40% S.F.
.65% CFA-3 - 3% GEL - water on cement - (No further data available) -
Pumped another 500 cubic yards of the same type of cement - water on
cement. Ordered and poured 18 cubic yards of Ready-mix cement
and brought the cement back to surface - will wait on
cement for 12 hours. Then start with cutting of 20" casing
and wedging on flange. Start nipple up dressing.
Started with 20' holly-

Weather  Good
DAILY REPORT

Dec. 14, 1991

Well No. 15-9

Contractor

DESCRIPTION OF ACTIVITIES

Bore to a depth of 474 ft. with 20" bit and

TO 114' for casing point - last reading at 918 ft.

3'/4" RC casing - N-23'-E direction - No auger at 2/27/84

Lower 20" casing and lowered sander at 935' - Prepared to

Chant A and B at 12:55 p.m. Bumped Plug after displaying

Count in crew. Read - will wait on count then try to try

Top of Chant in Annular. No Diamonds to Surface.

During the weekend shut down during the night

to indicate closure due to use of 5 air compressors.

Shut down Friday night & Saturday night

Weather Good

Submitted by [Signature]

[Signature]
DEPARTMENT OF LAND AND NATURAL RESOURCES
DEPARTMENT OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

November 23, 1952

Well No. K5-9 Contractor P.C.W

DESCRIPTION OF ACTIVITIES

30° CONNE& TO PIPE FOR MACH AND AMMUNITION

Surface

Weather Rain

Submitted by [Signature]
State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCE MANAGEMENT  
P. O. Box 373  
Honolulu, Hawaii 96809  

DAILY REPORT  

Dec 11, 1991  

Well No. 18-9  
Contractor PW  

DESCRIPTION OF ACTIVITIES  

At 12:00 Noon, Drilling to a depth of 827' West  
2'-3/4' BHA, Wood Pilling in the Receiver, Used Ammonium  
Pump - Rate: 14.5 FLD/hr. Temperature: 74°F - Temperature  
Out: 92°F. Pump Pressure: 631 x 55 Deviation - Survey's  
Att: 595'-1/4 Deviation - 585'-10 Direction - 94%  
Temperature: Att 70°F, 0° Deviation. 90° Direction  
Formation Consist of Scoria, Vesicular, and Porphyritic.  

Weather: Rain  

Submitted by [Signature]
DAILY REPORT

Dec 10, 1992

Well No. K-9

Contractor

DESCRIPTION OF ACTIVITIES

Pumping to a depth of 700' - Pulling out of

Note: Do not fill for water sample - water

Level at approx 600' - caught sample and

Barrier at Dwell/ above to next casing point

1,100' - (20' casing)

Weather Rain

Submitted by [Signature]
State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

Dec. 10, 1997

Well No. 165-7
Contractor

DESCRIPTION OF ACTIVITIES

At 12:30 P.M. At Raising of 674' - Width 26' Wet.

Partial Returns - Relieve with Weather Fluid.

Plug A Drill to 700' - Then Bail for Water Sample.

Someday Donist - Shut Down Early this Morning.

Due to Noise Levels At 45 DB and 46 DB. Restarted

At 7:00 AM. This Morning. Encountered Water At

App. 610'.

Deviated swung at 350' - 3/4 Avg. Deviation 5-22-90

Vertical 58' Deviation -

481' - 3/4 Dev. Dec. 5-19-90 Deviation 4050 feet.

on Thermometer.

Weather Cloudy

Submitted by
Well No. 16-9  Contractor  REV.  

DESCRIPTION OF ACTIVITIES

At 2:00 P.M. DRILLING AT A DEPTH OF 472' WIDE

26° 31' N, Lease No.  HUSING ARROW POINT

Morning Summary - 14. 258' 1/4 Deg. Dev. 5-05 W - No Roaring

At 357' - 3/4 Deg. Dev. 5-22 W Direction - 98° Temperature

Weather SUN

Submitted by Eric Oehl
DAILY REPORT

December 8, 19--

Well No. KS-9
Contractor MCO

DESCRIPTION OF ACTIVITIES

At 12:00 Noon Drilling at depth of 316' with 26' bit

With partial return - Slow drilling - Drilling with

Abrasive fluid - Directional survey at 120' - 120. Deviation

5-10' deviation - 84°F Temperature - Formate A

Concrete of Porphyritic and Scoria - N o i s e V a n e s

Below permitted Level

Weather Good

Submitted by [Signature]
<table>
<thead>
<tr>
<th>SITE#</th>
<th>LOCATION</th>
<th>WIND/ETC./COMMENTS</th>
<th>TIME</th>
<th>H2S (PPM)</th>
<th>dB(A)</th>
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<tbody>
<tr>
<td>1</td>
<td>Pohaku S. slope</td>
<td>Audible, crickets</td>
<td>10:44 AM</td>
<td>34-35</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Pohaku S. pasture</td>
<td>Audible</td>
<td>10:37 AM</td>
<td>36-44</td>
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<tr>
<td>3</td>
<td>Pohaku E. toward</td>
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<td>10:40 PM</td>
<td>28-31</td>
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<td>4</td>
<td>Kauhualani E.</td>
<td>Audible, crickets</td>
<td>10:34 AM</td>
<td>27-29</td>
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<tr>
<td>5</td>
<td>Kauhualani E.</td>
<td>not audible</td>
<td>10:32 PM</td>
<td>26-27</td>
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</tr>
<tr>
<td>6</td>
<td>Kuuwia St.</td>
<td>Audible, rain drops on leaves</td>
<td>10:27 PM</td>
<td>37-40</td>
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<tr>
<td>7</td>
<td>Kauhualani S.</td>
<td>Audible</td>
<td>10:23 PM</td>
<td>39-40</td>
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<tr>
<td></td>
<td>Special: Nenzen Robert</td>
<td>Audible, rain</td>
<td>10:15 PM</td>
<td>42-43</td>
<td></td>
</tr>
</tbody>
</table>

INVESTIGATOR: P. Wong / B. Akith

DATE: 12-7-92/12-8-
To: Dave Berube (PGV)  
6:35 pm

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MONITORING DATA

<table>
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<tr>
<th>SITE#</th>
<th>LOCATION</th>
<th>WIND/ETC./COMMENTS</th>
<th>TIME</th>
<th>H2S (PPM)</th>
<th>DB(A)</th>
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<td>*</td>
<td>DRILLING CONTINUING</td>
<td>Wind Spd: 0-2 MPH</td>
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<tr>
<td>1</td>
<td>Pohiki Rd./Leilani Ave.</td>
<td>Audible - Const. Noise at HPIA</td>
<td>12:20 PM</td>
<td>40-44</td>
<td></td>
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<tr>
<td>2</td>
<td>Pohiki Rd. - E-Pad Gate</td>
<td>Unable to take readings due to weather conditions</td>
<td></td>
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<td></td>
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<tr>
<td>3</td>
<td>Pohiki Rd. - Jones Res.</td>
<td>Audible</td>
<td>12:15 PM</td>
<td>39-42</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Kahuka / Hookupu St.</td>
<td></td>
<td>12:29 PM</td>
<td>34-35</td>
<td></td>
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<tr>
<td>5</td>
<td>Kahuka St. - Irvine Res.</td>
<td>Audible - Noise Rustling</td>
<td>12:32 PM</td>
<td>37-39</td>
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<tr>
<td>6</td>
<td>Hinalo St. - Drew Res.</td>
<td>Audible - Const. Noise at HPIA</td>
<td>12:23 PM</td>
<td>38-41</td>
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<tr>
<td>7</td>
<td>Hinalo St. - S. Prop. Line</td>
<td>Audible</td>
<td>12:26 PM</td>
<td>41-42</td>
<td></td>
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</tbody>
</table>

Wind Speed - 0-2 MPH  
Wind Direction - NE

Investigator: U. Eckerd  
Date: 12-7-92
DAILY REPORT

Dec. 7, 1992

Well No. K5-9

Contractor

DESCRIPTION OF ACTIVITIES

Sanded curl at 7:30 am. Yesterdays - 12-6-92

Noise levels in compliance with permit - Ran during the night with noise level at approx. 40 db. Complaints from nearby people - At 12:00 noon dressing at 154' with 70' kit - Maritime Returns - dressing with Atwood water with sdp. (PM) hard formation - slow dressing

Weather Good

Submitted by

Eric Carl
December 4, 1992

Well No. 168-9

Contractor

DESCRIPTION OF ACTIVITIES

Receivg up open rig on top of rig to try to
splice sunday, but more than likely on monday.

Weather Rain

Submitted by

[Signature]
Well No. 128.9

Contractor Pov

DESCRIPTION OF ACTIVITIES

RIGGING UP DREDGE RIG IN PREPARATION TO DREDGE

Weather Rainy

Submitted by  

(Date and Signature)
Well No.  K5-9  

Contractor  

DESCRIPTION OF ACTIVITIES

Rigging up Open Rig Own Well - Possible to be Operate some time on Saturday

Weather  Rainy

Submitted by  Eric
DAILY REPORT

Dec 1, 1992

Well No. 165-9

Contractor

DESCRIPTION OF ACTIVITIES

Rigging up, drill rig over 1428 feet.

Is a copy of updated drilling procedures.

Weather Good

Submitted by [Signature]
1. Move in suitable rig, air compressors and associated equipment.
   1.1. Notify DLNR 24 hours prior to rig up.
   1.2. Install sound proofing equipment.
   1.3. Install direct communication between floor, and both rig supervisor and operators supervisor.
   1.4. Driller will be on floor at all times.
   1.5. Read, understand and comply with all parts of the Plan of Operations that pertain to drilling.
   1.6. Send copies of daily tour sheets to DLNR.
   1.7. Adhere to attached Drilling Reporting Criteria as per the Plan of Operations.

2. Rig up 30" rotating head and flow line.

3. Drill 26" hole to 650'.
   3.1. Use 9½" NAVIDRILL and 2000 cfm air and stiff foam as needed. Increase air volume as required.
   3.1.1. Use 3U to mix polymer as required. If polymer volumes get above the limit of the mist pump use rig pump to pump polymers and mist pump for soap.
   3.2. Take MRT every 90', with directional surveys when below 500 ft.
   3.3. Catch 10' grab samples from drill cuttings and monitor hydrothermal alteration wherever circulation permits. See Attachment 5 for mud logging procedures.
   3.4. Check returns, if any, for salinity and chlorides.

4. At 700' rig up bailer and bail well until clean. Collect a representative sample of ground water at 650' ± RKB.
   4.1. Notify DLNR 24 hours prior to sampling procedure.

5. Continue drilling 26" hole to 1000' ±. Casing shoe will be set in low permeability rock below major lost circulation zones. The casing will be set if high temperatures or hydrothermal alteration is encountered.
   5.1. Keep hole straight as possible.
   5.2. Take surveys every 90' with MRT.
   5.3. Catch 10' grab samples from drill cuttings and monitor for hydrothermal alteration whenever circulation permits.
   5.4. Check returns for increased salinity or chlorides.
   5.5. Monitor well for flow or gases.

6. Set and polish cement plug on bottom if formation is not competent.

KS-9 Drilling Procedures
7. Circulate hole clean and make wiper run.
   7.1. Measure out of hole.
   7.2. Keep hole full at all times.
   7.3. Check for flow.
   7.4. Circulate hole clean after wiper run.

8. POH, keeping hole full, if possible, and checking for excess flow

9. Rig up and run 1000' of 20" 94# K-55 casing equipped as follows. Guide shoe and screw-in baffel plate with latch in plug. Centralize 10' above shoe, first collar and every third collar there after.
   9.1. Run casing at slow speeds to prevent down surge.
   9.2. Fill casing with mud while running.
   9.3. Keep hole full if possible.
   9.4. Have casing sized to remain above bottom.

10. Trip in hole with drill pipe and screw into 20" shoe.
   10.1. Circulate hole clean.
   10.2. Reciprocate casing 5-10' while circulating to prevent differential sticking.

11. Pump 50 ft³ H₂O ahead followed by 100 ft³ CaCl₂ H₂O mixed 10% plus 20 ft³ H₂O plus 250 ft³ Sodium Silicate plus 20 ft³ H₂O. Pump 100 ft³ Hawaii cement followed by 3040 ft³ premixed Hawaii cement, 1:1 perlite with 40% SSA-1 plus 2% gel, 0.75% CFR-3 and 2% CaCl₂, followed by 300 ft³ Hawaii cement mixed 40% SSA-1, 0.75% CFR-3 and 3% CaCl₂. Drop plug and displace cement out of drill pipe.
   11.1. Reciprocate casing 5-10' while cementing to prevent differential sticking.
   11.2. Monitor returns and surface pressures throughout job.
   11.3. Center casing and WOC.
   11.4. Be prepared to do top job through 1" pipe with high density cement.
   11.5. Have at least 20 cubic yards of sand, gravel, and or volcanic cinders on hand to fill annulus through lost circulation zones if required.
   11.6. WOC minimum of 12 hours.
   11.7. Perform top job as required.

12. Cut off casing and weld on 20" -2M slip on flange.
   12.1. Install pre fabricated 20" riser with 20" - 2M flanges and 2 each 6" side outlets with 6" x 2" swages and bull plugs.

13. Install 20" annular preventer and rotating head.
   13.1. Notify DLNR 24 hours prior to testing.
   13.2. Test BOPE and casing and have DLNR to witness and approve.
   13.3. Log test results on tour sheet and morning report. Test casing to 2000 psi or 70% of

KS-9 Drilling Procedures
burst, whichever is less.

13.4. Periodic BOPE drills will be conducted and logged on tour sheets.
13.5. Install and test and run high efficiency mud cooler.
13.6. All personnel will have BOPE training. Training will be logged on the daily tour report.

14. Make up 17½” slick BHA. Clean out cement with mud.

15. Drill 1’ to 5’ of new 17½” hole and circulate clean with mud.

16. Perform leak off test and squeeze if necessary.

17. Install 6” diverter valves and line as shown in Figure 3-4. Install H₂S abatement equipment on diverter line.

17.1. Function test diverter

18. Make up BHA and drill 17½” hole to 2000’+

18.1. Keep hole straight.
18.2. Survey every 90’ and run MRT.
18.3. Catch 10’ grab samples of drill cuttings.
18.4. Check mud for increased salinity and chlorides
18.5. Monitor well for increase or decrease in flow rates and gasses.
18.6. Keep close watch on samples for changes in mineralogy indicative of a high-temperature geothermal reservoir.
18.7. Cement off lost circulation zones.
18.8. Be prepared to set casing if there are any signs of encountering a high temperature reservoir.

19. Run high pump volumes with Howco and/or PDC yard pump.

19.1. Run 80’s on shale shakers (run 20’s, if we need to).
19.2. Dump shale pit each 2 - 4 hours while drilling. Run mud cleaner at all times.
19.3. Keep mud plastic viscosity and gels as low as possible with at least a 1/32” mud cake.


20.1. Measure out of hole.
20.2. Keep hole full.
20.3. Monitor well and be sure well takes proper amount of fluid.


21.1. Use thread protectors.
21.2. Use Stab-in guides and drill pipe centralizers.
21.3. Run casing at slow speeds to prevent down surge.
21.4. Fill casing with mud while running.
21.5. Keep monitoring well.
21.7. Have casing sized to remain off bottom.

22. Rig up and run 5" drill pipe with Davis Lynch screw-in sub.
22.1. Screw into float collar.
22.2. Be sure casing is full of mud.
22.3. Circulate and condition hole for cement job.
22.4. Observe casing and drill pipe annulus, to be sure stab-in is not leaking.
22.5. Reciprocate casing while circulating to prevent differential sticking.

23. Pump 50 ft³ H₂O ahead followed by 50 ft³ CaCl₂, H₂O and 133 ft³ Sodium Silicate, and 5 ft³ H₂O. Pump 50 ft³ Hawaii cement followed by 3000 ft³ Hawaii cement, mixed 1:1 perlite with 40% SSA-1 plus 2% gel 0.65% CFR-3 and retarded, as required, followed by 300 ft³ Hawaii cement with 40% SSA-1 0.75% CFR-3. Drop plug and displace cement.
23.1. Reciprocate casing 5-10' while cementing.
23.2. If casing becomes excessively sticky during cementing phase, place casing at proper position and centralize.
23.3. Monitor returns and pressures throughout job.
23.4. Be prepared for top job.

24. If instructed perform foam cement job instead of conventional job described in step 24
24.1. Need 6" to 2" swages to replace diverter valves for foam cement job.
24.2. A written program will be provided.

25. WOC at least 12 hours. Cut off casing and install 13¾" x 13¾" -5M casing head, using hot head.
25.1. Test casing head.

26. Install 13¾" -5M mud cross, 13¾" 5,000# double gate, 13¾" 5,000# banjo box with rupture disk and single gate, 13¾" 5,000# double gate, 13¾" 5,000# annular preventer, rotating head, choke and kill lines, blooie line and muffler. Also include water lines and abatement lines as per Figure 3-8 in Attachment III. Install and check all monitoring equipment including drillers assistant.
26.1. Notify DLNR 24 hours proper to test.
26.2. Test BOPE and casing and have DLNR witness and approve.
26.3. Log test results and approval of test on tour sheets and morning report.
26.4. All pushers, drillers and derrick men will be trained in use of monitoring equipment and this training will be logged in IADC tour sheets.
26.5. Test casing to 2000 psi or 70% of burst, whichever is less.
26.6. Install test plug in casing head and test BOPE to 3500 psi.
27. Use 12 1/4" bit with slick BHA and clean out cement and floats.

28. Drill 1' to 5' of new hole and circulate hole clean.

29. Perform leak-off test, and squeeze cement if necessary.

30. POH. Make up 12 1/4" bit and tools. Drill 12 1/4" hole to 4000' ±. Casing point will be in the cap rock above the reservoir as determined by the wellsite geologist using criteria described in the Plan of Operations.

30.1. Do directional work and drill 12 1/4" hole to 4000' ±. See directional program.
30.2. Survey as required at intervals not to exceed 120'. Take MRT with surveys.
30.3. Catch 10' grab samples of drill cuttings.
30.5. Monitor well for increase or decrease in flow rates and gasses.
30.6. Keep close watch on samples for changes in mineralogy indicative of a high-temperature geothermal reservoir.
30.7. Cement off lost circulation zones.
30.8. Turn on one mud cooler when FLT reaches 150°F and 2nd mud cooler if FLT reaches 150°F again.
30.9. If well indicates flow or pressure during trips, cool hole with both coolers and then recheck well.

31. Circulate hole clean and wipe hole to shoe. Circulate hole clean.

32. POH and rig up to run 9%4" liner on liner hanger, providing 200 linear feet of lap. Equip liner as follows. Float shoe and float collar 80' up from shoe. Centralize liner 10' up from shoe, on 1st, 2nd, 3rd and every 4th collar thereafter or as per program through kick and build. Liner hanger to have tie-back capability.

32.1. Make up liner hanger prior to running liner and stand back in derrick.
32.2. Run approximately 2200' of 9%4" 47# C90 New Vam casing.
32.3. Run casing at slow speeds to prevent down surge on formation.
32.4. Fill casing while running.
32.5. Keep hole full.
32.6. Monitor well closely.
32.7. Be cautious of slips on hanger when running through BOPE.
32.8. Run and hang liner and break nut.

33. Rig up and circulate hole clean and condition mud for cement job.

34. Pump 50 ft³ H₂O ahead plus 133 ft³ flow check, and 10 ft³ H₂O followed by Hawaii cement with 40% SSA-1, required additives, and retarded as needed, followed by 85 ft³ Hawaii cement with 40% SSA-1 + 0.65% CFR-2. Drop dart and displace cement.

34.1. Monitor well closely while cementing.

35. Release liner and pull out of hole 200'.
36. WOC for minimum of 8 hours.

37. RIH with 12 ¼" bit and clean out cement to top of liner hanger.

38. Make up 8½" bit and clean out liner hanger.

39. Test liner lap to 0.9 psi/ft. gradient. Squeeze cement and retest if necessary.

40. Make up latch-in stab-in mandrel for tie back receptacle and 1800'± of 9¾" 47# C-90 New Vam casing, equipped with insert float on top of 1st joint and centralized with positive centralizers on 1st, 2nd and every 3rd collar thereafter with positive centralizers.

40.1. Size casing so collar will not be in expansion spool packoff.

40.2. Circulate hole clean.

40.3. Install centering ring.

41. Pump 50 ft³ H₂O ahead followed by 970 ft³ Hawaii cement with 40% SSA-1 + 0.65% CFR-3 + 3% gel and 3% CaCl₂. Drop plug and displace to insert.

41.1. WOC 16 hours.

42. Cut off casing and install expansion spool. Test with nitrogen to 3500 psi.

43. Install BOP stack for 9 5/8" casing including master valve (see Figure 3-6).

43.1. Notify DLNR 24 hours prior to testing BOPE.

43.2. BOPE to be tested to 3500 psi. Set RTTS in 9-5/8" casing for test.

43.3. Test to be witnessed and approved by DLNR.

44. Test tieback casing to 2000 psi or 70 % of burst, whichever is less.

45. Clean out tie back and liner to float.

45.1. Test liner to 2000 psi or 70% of burst, whichever is less.

45.2. Set RTTS below lap if needed for test.

46. Clean out casing and drill 1' to 5' of new 8½" hole.

46.1. Circulate hole clean.

46.2. Perform leak-off test and squeeze if necessary.

47. Drill 8½" hole to 7100'± TVD or until sufficient production is encountered.

47.1. Take surveys every 120' and include MRT.

47.2. Catch 10' grab samples of drill cuttings.
47.3. Keep close watch on mud properties. Weight up as needed to control well. Keep PH approximately 9.
47.4. Be sure all monitoring equipment is in good working order.
47.5. Watch closely for flow or loss.
47.6. Watch closely for changes in mineralogy indicative of high temperature geothermal reservoir.
47.7. Turn on one mud cooler when FLT reaches 150°F. Turn on 2nd cooler when FLT again reaches 150°F.
47.8. If well indicates flow or shut in pressure during trips, cool hole with both mud coolers and recheck well.
47.9. Stroke master valve from full open to close and test on every trip.

48. At TD circulate hole clean.
48.1. Displace mud with water or completion fluid.

49. Perform preliminary flow test to muffler to clean out well.

50. If needed to maintain hole stability, run 7" perforated liner from 100' above the 9 5/8" shoe to T.D. (If we can keep well dead with water or weighted mud.)

51. Lay down drill pipe and tools.

52. Perform flow test and surveys to inspect mechanical integrity of well.

53. Secure well.
53.1. Install companion flange and swab valve.

54. Rig down and move rig.

55. Release well to O&M
Well No. 145-9
Contractor P&G

DESCRIPTION OF ACTIVITIES

Yesterady: Kelly broke - replaced Kelly 45' pipe
At depth of 60'

Weather: Ground

Submitted by: Eric Aka
November 12, 19__

Well No. 12-9

Contractor

DESCRIPTION OF ACTIVITIES

Drilling 42' Contractor 1500# at Co'

Weather Good

Submitted by Eric Olsen
DAILY REPORT

November 10, 1992

Well No. KE-9

Contractor

DESCRIPTION OF ACTIVITIES

Drill 47' competent shale at depth of 27'.

Weather Good

Submitted by
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

November 9, 1992

Well No. KS-9 Contractor PGV

DESCRIPTION OF ACTIVITIES
Rat Hole Regard - Drilling Conductor Hole

Weather Rain

Submitted by
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER RESOURCE MANAGEMENT
P. O. Box 373
Honolulu, Hawaii 96809

DAILY REPORT

November 6, 1992

Well No. K5-9

Contractor: Raj

DESCRIPTION OF ACTIVITIES

Drilling, completion, test

Weather: Rainy

Submitted by: [Signature]