

6101042

WATER SAMPLE ANALYSES - DESERT PEAK B21-1
TAKEN NOVEMBER 17, 1976

| Constituent (ppm) | Sample | | |
|--|----------------------|----------------------|----------------------|
| | 1 (12:30 pm) | 2 (12:45 pm) | 3 (1:00 pm) |
| Sodium | 2200. | 2200. | 2200. |
| Potassium | 260. | 260. | 265. |
| Calcium | 97. | 99. | 95. |
| Magnesium | 0.42 | 3.2 | 0.33 |
| Chloride | 3600. | 3600. | 3600. |
| Bicarbonate | 146. | 143. | 132. |
| Carbonate | ND | ND | ND |
| Sulfate | 94. | 96. | 96. |
| Boron | 16. | 16. | 16. |
| Nitrate (NO ₃) | <.02 | <.02 | <.02 |
| Ammonium (NH ₄) | 12. | 11. | 11. |
| Arsenic | 0.17 | 0.16 | 0.17 |
| pH | 7.0 | 7.1 | 7.2 |
| TDS (ppm) | 6600. | 6500. | 6700. |
| Conductivity $\left(\frac{\text{mhos}}{\text{cm}}\right) \left(10^{-3}\right)$ | 9.18 | 9.19 | 9.19 |
| Radioactivity ($\mu\text{Ci/ml}$) | $<1. \times 10^{-9}$ | $<1. \times 10^{-9}$ | $<1. \times 10^{-9}$ |

DAILY REPORT DETAILED

LEASE Desert Peak

WELL NO. "B" 21-1

SHEET NO. 1

| DATE | TOTAL DEPTH | NATURE OF WORK PERFORMED |
|----------|-------------|---|
| 10-25-76 | 112 | Nippling up 13 3/8" Conductor pipe. Location: 781' FSL and 1327' FEL, Sec. 21-22N-27E, Churchill Co., NV, 6000' Geothermal Exploratory Well, PPCo-100%, Operator. AFE PE-5511. Signal Drilling Company, Inc., Contr. Spudded 17 1/2" hole at 3:00 p.m., 10-24-76. Elevation: GL 4410', RKB 4437'. Drld 17 1/2" hole to 112' RKB at 5:30 p.m., 10-24-76. Ran two joints and one pc, 13 3/8" OD, 54.5#, K-55, BT&C csg, set at 110' RKB. Cemented w/150 sx Class G cement, 3% CaCl ₂ . Circ 60 sx good cement, job complete at 8:30 p.m., 10-24-76. WOC 6 hrs, started nippling up. |
| 10-26-76 | 920 | Drilling Sand, Gravel and claystone. Finished nippling up. Started 12 1/4" hole at 112'. Totco, 1/4" at 115', 1/4" at 250', 1/2" at 406', 3/4" at 533, 3/4" at 683', 3/4" at 810'. Mud 8.8, V 60, WL 20, FC 4/32, pH 10.0, YP 39, PV 8, Gels 0-41, 10-81, Chl 5200. Flow line temp at 920', 110° F in, 134° F out. |
| 10-27-76 | 1040 | WOC Drld 12 1/4" hole to 1040', circulated out. Made wiper trip and circ hole clean. Came out of hole. Ran 13 jts, 9 5/8" OD 47# S-95 8R LT&C and 12 jts, 9 5/8" OD 47# N-80 BT&C csg w/baker guide shoe and float collar set csg at 1028'RKB. Cemented w/385 sx Class G cement, 1:1 perlite, 40% Silica flour, 2% gel, 3/4% D-31 and 2/10% R-5, 13.3#/gal. Lost approx 50% returns when cement to surface on last 60 bbls displacement. Cement dropped slowly in annulus after plug down. Job complete at 8:30 p.m., 10-26-76. WOC. |
| 10-28-76 | 1040 | Nippling up BOP's WOC 1 1/2 hrs. Filled annulus w/pea gravel from 70' RKB to surface. Welded on 9 5/8" SO X 10" 900 bradenhead. Tested to 1500#, OK. Started nippling up BOP. |
| 10-29-76 | 1040 | Picking up 8 1/2" drilling assembly Finished nippling up. Tested blind rams and casing to 1500#, OK. Tested pipe rams, choke line, manifold valves, safety valves and Kelly Cock to 1500#, OK. Tested Hydril to 1000#, OK. |

DAILY REPORT DETAILED

LEASE Desert Peak "B" 21-1

WELL NO. 21-1

SHEET NO. 2

2

| DATE | TOTAL DEPTH | NATURE OF WORK PERFORMED |
|----------|-------------|---|
| 10-30-76 | 1620 | Drilling chert and andesite Picked up 8 $\frac{1}{2}$ " drilling assy, drilled float collar, cement and shoe. Started 8 $\frac{1}{2}$ " hole at 1040'. Mud 8.9, V35, WL 11.2, FC 3/32, pH 7.6, YP 5, PV 7, Gels 0-3, 10-11, Chl 6100. Totco 3/4 at 1238', 1 at 1457'. Flow line temp at 1620', 148° F in, 152° F out. |
| 10-31-76 | 2270 | Drilling andesite. Mud 8.9#, V 31, WL 12, FC 2/32, pH 7.6, YP 5, PV 5, Gels 0-3, 10-9, Chl 6000'. Totco 1 at 1627, 1 at 1832, 1 3/4 at 2020'. Flow line temp at 2270', 140° F in, 153° F out. |
| 11-1-76 | 3090 | Drilling lime, tuff and andesite. Mud 8.8#, V 30, WL 18, FC 2/32, pH 7.6, YP 3, PV 2, Gels 0-2, 10-4, Chl 6200. Totco 2 at 2239', 4 2898'. Flow line temp at 2750', 164° F in, 182° F out. Started adding cooling water and circulating thru all pits. Flow line temp at 3090', 145° F in, 162° F out. |
| 11-2-76 | 3674 | Trip for bit. Drilled to 3628, lost circulation, mixed LCM, regained circ. Drilled to 3674, losing approx 50 bbls mud/hr. Lost approx 500 bbls. Formation has some pyrite and some alteration. CO ₂ increased below lost circulation zone from 5600 to 1100 ppm. Totco 3 at 3380. Flow line temp at 3628', 126° F in, 150° F out. |
| 11-3-76 | 3674 | Running temperature survey. Finished trip, circulated and conditioned mud. Pulled up into casing at 100'. Waited on Agnew and Sweet to run temperature survey. (Appears some water entry in hole). |
| 11-4-76 | 3784 | Drilling in limestone with full returns. Temp 158° in and 172° F out. Finished running Agnew and Sweet temp survey. Max temp at 3647', 282° F after leaving instrument seventeen minutes on bottom. Added approx 10 bbls/hr to keep hole full before running temp survey. Installed master gate-RIH and now drilling ahead. |
| 11-5-76 | 3881 | Running temperature survey. Drilled to 3881', lost returns, mixed LCM (30#/bbl) pumped in hole, no returns. Pulled up into casing, let set 14 hrs. Rigged up Agnew and Sweet to run temp survey. |

DAILY REPORT DETAILED

LEASE DESERT PEAK

WELL NO. B 21-1

SHEET NO. 3

| DATE NATURE OF WORK | TOTAL DEPTH PERFORMED | |
|------------------------|-----------------------------|--|
| 11-6-76 | 3881 | Flowing well. Finished running temperature survey, max BHT 357° F. Went in hole open-ended. RU Nowsco, started jetting well at 1:25 p.m., well kicked off at 2:00 p.m., Flowing through 2½" ID choke line, WHP 150#, manifold pressure 100#, flowing temp 309-322° F, well cleaning up. |
| 11-7-76 | 3881 | Flowing well. Flowed 24 hrs through 3" choke line (2½" ID), Max flwg temp 340° F, WHP 150#, choke line 105#. |
| 11-8-76 | 3881 | Waiting on air drilling equipment. Shut in at 7:30 a.m., 11-7-76. Pumped in 20 bbls water to cool pipe, wellhead press to zero. Pulled drill pipe. Removed rotating head. RU Agnew and Sweet, Ran temperature survey, max temp 399.9° F at 3879'. |
| 11-9-76 | 3935 | Waiting on parts to repair air compressor. Rigged up air drilling equipment. Drilled with aerated water 3881-3935 and booster on air equipment broke down. (Drilled 8' fractures and drilled into Greenstone). |
| 11-10-76 | 4140 | Tripping (Tuff? Greenstone?) Repaired air compressor. Went in hole w/new bit, drilled fractures 3955-60' w/air and water, lost returns. Drilled to 3971' with no returns. Pulled up to 3690', regained circ w/air and water. Well came in, flowing steam, 300#, temp over 300 F. Cooled DP, went in hole to 3971', used soap, water and air, well circulated. Drilled to 3990' with steam, air, soap and water, lost returns. Regained circulation in two hours with maximum air, soap, and water. Drilled to 4140' with well flowing great amount of water and steam, gained approximately 1800 bbls wtr while drilling. Well hard to control due to pressure and temperature. Float in drill pipe plugged, started out of hole. |
| 11-11-76 | 4150 | Laying down drill pipe. Finished trip out of hole, corrected TD 4150'. RU Schlumberger, ran DIL and Sonic logs. GR tool failed. Laid down DP while repairing GR. Reran GR log. Started Laying down DP. |

DAILY REPORT DETAILED

LEASE DESERT PEAK

WELL NO. B 21-1

SHEET NO. 4

| <u>DATE</u> | <u>TOTAL DEPTH</u> | <u>NATURE OF WORK PERFORMED</u> |
|-------------------------|--------------------|--|
| 11-12-76 | 4150 | Removing BOP's. Finished laying down drill pipe. Waited on Agnew & Sweet. Ran temperature survey. |
| 11-13-76 to 11-17-76 | 4150 | Preparing to flow. Tore down rotary. Waiting on NOWSCO unit. |
| 11-18-76 | 4150 | Moving out rotary. RU NOWSCO, went in hole to 600' [±] , kicked well off at 12:00 noon 11-17-76. Flowed well 1 hr. 5 mins. & shut in due to vibration. Mass flow 477,600# 1 hr., (21% steam) FL temp. 327°F, FWHP 104#. ISIP 118#. Ran Agnew & Sweet temperature survey. Max temp. 402.5°F after 5 mins. on bottom (4102'). Shut in. 9 5/8" casing at 1028', open hole 1028-4150'. <u>FINAL REPORT.</u> |

11-17-76

| <u>Time</u> | <u>Lip Press</u> <u>Psig</u> | <u>WH Press</u> <u>Psig</u> | <u>Temp</u> <u>PF</u> | <u>Comments</u> |
|-------------|---------------------------------|--------------------------------|--------------------------|----------------------------|
| 12:00N | | | | Well opened-N ₂ |
| 12:10 | 27 | 90 | 300 | Surging-433,000# 1hr. |
| 12:15 | 29 | 100 | 320 | WH up ~5" 453,000 |
| 12:20 | 30 | 100 | 324 | 463,000 |
| 12:30 | 31 | 102 | 325 | 473,000 |
| 12:40 | 31.5 | 103 | 325 | 478,000 |
| 12:45 | 31.5 | 103 | 325 | 478,000 |
| 12:50 | 31 | 103 | 325 | 473,000 |
| 12:55 | 31 | 104 | 325 | 473,000 |
| 1:00 | 31.5 | 103 | 325 | 478,000 |
| 1:03 | - | - | - | Well shut in |
| 1:05 | | 118 | 260 | |
| 1:10 | | 97 | 210 | |
| 1:15 | | 80 | 200 | |
| 1:25 | | 64 | - | |

Solids in Water Samples

Cl = 4800 ppm
 Salinity ≈ 1200 μmhos (≈8000 ppm)
 pH = 6.9 dropping to 6.4
 Ca++ = 62 ppm
 ALK = 58 ppm as HCO₃⁻
 SiO₂ = 300-310 ppm

DAILY REPORT DETAILED

LEASE Desert Peak BWELL NO. 21-2SHEET NO. 1

| DATE | TOTAL DEPTH | NATURE OF WORK PERFORMED |
|----------|-------------|--|
| 11-24-76 | 92 | Sand, gravel & clay, repairing pumps. Loc: 455.8' south & 377.6' west of NE corner of Section 21-22N-27E Churchill County, Nevada. 6000' Geothermal Well. PPGCo 100% - Oper. AFE PE 5513. Signal Drilling Company, Inc., - contr. MI&RJR Spudded 26" hole at 6:00 PM 11-23-76, drilled to 92' and shut down to repair pumps. Elev: GL 4600, RKB 4627. |
| 11-25-76 | 105 | Drilling. Finished repairing pump. Drilled to 100', circulated out & came out of hole. Ran 2jts. & lpc, 20" OD, 94#, H-40 csg, set at 95' RKB. Cemented w/200 sx class G, 3% CaCl ₂ , 15.8#/gal. Circulated estimated 100 sx cement. Job complete at 1:30 p.m. 11-24-76. WOC 6 hrs. Nippled up, started drlg. 17 1/2" hole at 100'. |
| 11-26-76 | 781 | Drilling welded tuff. Mud 8.9, V40, WL 60, FC 3/32, pH 7.6, YP24, PV7, Gels 0-18, 10-31, Chl 6000. Totco, 1 1/4 Deg. 244, 1 1/4 Deg. 348, 1 1/4 Deg. 454, 1 1/4 Deg 543, 2 Deg. 673. Flow line temp. at 781', 84° F in, 102° F out. |
| 11-27-76 | 1004 | Circulating, preparing to run casing. Drilled 17 1/2" hole to 1004', circulating out to run csg. Mud 9.4, V34, WL50, FC 3/32, pH 7.6, YP8, PV7, Gels 0-g, 10-12, Chl 5800, Flow line temp. at 1000', 72° F in, 110° F out. |
| 11-28-76 | 1004 | WOC Finished circulating out, strapped out of hole. Ran 24 jts, 13 3/8" OD, 54.5#, K-55, BT&C csg, set at 1000' RKB. Cemented w/820 sx Class G, 1:1 Perlite, 40% Silica flour, 3% gel, 3/10% R-5, 3/4% D-31 at 12.6#/gal. Lost returns w/90% cement mixed. Displaced plug slowly, regained 25% returns, no cement to surface. Job complete at 3:30 p.m. 11-27-76. WOC. |
| 11-29-76 | 1004 | Nippling up. WOC 5 hrs. Ran 1" pipe in 20" X 13 3/8" annulus to 100', circulated out water. Went to 244' RKB, tagged cement, washed out of w/water. Mixed 250 sx class G cement w/1:1 Perlite, 40% Silica flour, 2% gel, 2% CaCl ₂ , 13.6#/gal. Circulated cement. Job complete at 3:00 p.m. 11-28-76 WOC 12 hrs. Cutoff 20" & 13/38" csg, started installing 13 3/8" braden head. |

DAILY REPORT DETAILED

LEASE Desert Peak BWELL NO. 21-2SHEET NO. 2

| <u>DATE</u> | <u>TOTAL DEPTH</u> | <u>NATURE OF WORK PERFORMED</u> |
|-------------|--------------------|--|
| 11-30-76 | 1004 | Testing BOP's. Installed 12" 900 x 13 3/8" SOW Bradenhead, tested head to 1100#. Installed 12" 900 Double BOP, Hydril and Grant Rotating head. Tested blind rams and casing to 1000#, thirty mins, OK. Picked up DP and finished nipling up to test Hydril and pipe rams. |
| 12-1-76 | 1240 | Trip to recover Totco. Fin nipling up. Tested BOP, Hydril, choke manifold valves, safety valve and Kelly cock to 1000#. PU 12 1/4" drilling assembly drilled plug, cement and float equipment. Started 12 1/4" hole at 1004'. Drilled to 1240', dropped Totco, stuck in crow's foot. Came out of hole to recover Totco. Mud 8.5, V32, WL 60, FC 3/32, pH 10.6, Chl 6800. Totco 2' at 1186'. Flow line temp 124.0', 117.0 F in, 124 F out. |
| 12-2-76 | 1695 | Drilling Dacite Mud 8.6#, V 29, WL 40, FC 2/32, pH 9.0, YP-1, PV 4, Gels 0-0, 10-3, Chl 5600. Totco 2 1/4' at 1426', 2 1/2' at 1657'. Flow line temp at 1695', 120.0 F in, 125 F out. |
| 12-3-76 | 2037 | Rigging up to run 9 5/8" casing. Mud 8.8#, V36, WL 38, FC 2/32, pH 8.5, yp 2, PV 4, Chl 5800 and LCM 4#/bbl. Drilled rhyolite to 2037'. Totco 2 1/4' -2012'. Flow line temp at 2037', 144 F in and 154 F out. |
| 12-4-76 | 2037 | WOC Ran 47 jts, 9 5/8" OD, 40#, K-55, R-3, BT&C casing w/Howco shoe, set casing at 2030' RKB. Circ one hr to cool hole. Pmpd in 40 bbls fresh water ahead of 775 sx Class G cement, 1:1 perlite, 40% silica flour, 2% gel, 3/4% D-31 and 1% R-11, 13.6#/gal. Circ estimated 700 cu ft good cement. Job complete at 2:30 p.m., 12-3-76. |
| 12-5-76 | 2037 | Nipling up BOP stack. WOC 8 1/2 hrs, picked up 12" 900 BOP stack, cut off 9 5/8" casing. Installed 9 5/8" expansion spool, tested to 2000#. Installed 10" 600 Master Gate, started nipling up BOP's. |
| 12-6-76 | 2037 | Testing BOP's. Finished nipling up BOP stack. Tested blind rams and 9 5/8" casing to 1200#, OK. Tested master gate, bottom pipe rams, choke line valves and safety valves to 1200#, OK. Seals on upper type "F" BOP failed. Waited on seals, replaced seals. |

DAILY REPORT DETAILED

LEASE Desert PeakWELL NO. B 21-2SHEET NO. 3

| <u>DATE</u> | <u>TOTAL DEPTH</u> | <u>NATURE OF WORK PERFORMED</u> |
|-------------|--------------------|---|
| 12-7-76 | 2287 | Drilling andesite. Finished replacing BOP seals. Tested pipe rams 1200 psi, OK. Tested Hydril w/1000 psi, OK. RIH. Bit plugged w/drill pipe rust. Made trip unplugged bit. Drilled float equipment and cement. Drilled from 2037 to 2287'. |
| 12-8-76 | 2740 | Drilling tuff and andesite. Drilled to 2470'. Made trip for new bit. Repaired mud line valve, drilled from 2470 to 2740. |
| 12-9-76 | 2871 | Drilled from 2740' to 2871'. Hit fractures at 2868'. Lost returns at 2871'. Mixed three pits mud with 20-25#/bbl LCM. Unable to get returns. POOH and cleaned pmp. Rigging up air equip. Flow line temp at 2800', 154° F, 164° F out |
| 12-10-76 | 2894 | Preparing to jet hole. Finished rigging up air equipment. Went in hole w/bit Attempted to circulate, 45 mins and air line parted. One hour repairing air line. Pumped in air, soap and water, had circulation on one hour. Drld to 2889', lost returns. Large fracture, hole void 2887-89'. Pumped in air, soap and water 2 hrs, no returns. Drld to 2894' w/o returns. Pulled up to 1925', jetted hole one hour, max water temp 250° F. Went in hole to TD, attempted to circ w/air, soap and water. Pulled up 2 stands, attempted to circ 5 hours, no returns. Came out of hole. |
| 12-11-76 | 2937 | Repairing air equipment. Went in hole w/bit #7 to 1925'. Jetted w/air 3 hrs, unable to kick off (some flashing, max temp 298° F). Went in hole to 2894', unable to circ w/air, soap and water. Drilled to 2937' without returns, cuttings staying in well bore, trying to stick. Pulled up 70' off bottom several times, wash 30-40' to bottom each time. Pulled up to 1400'. Attempted to jet well, air cooler blew out. |

DAILY REPORT DETAILED

LEASE Desert PeakWELL NO. B 21-2SHEET NO. 4

| DATE | TOTAL DEPTH | NATURE OF WORK PERFORMED |
|----------|----------------|--|
| 12-12-76 | 2937 | Running temperature survey. Down 7½ repairing air equipment. Jetted well 10 hrs through DP at 1400'. Well kicked off flowed 5½ hrs, mostly steam. Max press 60#, final press 8#. COOH. RU Agnew & Sweet, started running temperature survey. |
| 12-13-76 | 2949 | Picking up drill pipe. Ran Agnew and Sweet temp survey. Max temp 374° F at 2800', 334° at 2907'. RU Schlumberger, ran IES, FDC-GR, BHC-Sonic. ELTD 2906'. Made up Christensen Diamond CB and bit, WIH, washed 30' fill w/gel mud. Cored 2937-49' w/water, no returns. COOH, rec 35% badly broken core. WIH open-ended, picking up DP to replace bottom hole assy. |
| 12-14-76 | 2949 | WOC. Finished picking up DP. Went in hole open-ended to 2828'. Mixed and pumped in 550 sx Class G cement w/2% gel, 1% R-11, 14.6#/gal. Job complete at 9:00 a.m., 12-13-76. Came out of hole, WOC 9 hrs. Attempted to fill hole, unable to fill. Mixed 200 bbls 60 vis gel mud w/25#/bbl LCM. WIH open-ended to 2828'. Pumped in 200 bbls mud, followed w/300 sx Class G cement, 1% R-11. Job complete at 1:00 a.m., 12-14-76. WOC. |
| 12-15-76 | 3079 | Waiting on water. WOC 4½ hrs. Mixed 400 bbls 36 vis mud. Went in hole with bit. Drilled cement 2840-88', lost returns. Washed to 2947', no returns. Drilled w/o returns, flushed hole w/mud every 20'. Pulled up into casing, waiting on water. |
| 12-16-76 | 3179 | Drilling, no returns. Drilled to 3111', no returns, ran out of water. Pulled up into casing. Mixed 400 bbls, 36 vis mud, filled all water tanks. Went in hole to 3111', drilling ahead w/o returns. (Drlg approx 50'/hr when on bottom, drlg smooth. Flush with mud on each connection, no drag, no fill.) |

DAILY REPORT DETAILED

LEASE Desert Peak

WELL NO. B 21-2

SHEET NO. 5

DATE TOTAL
NATURE OF WORK PERFORMED DEPTH

| 12-17-76 | 3192 | <p>Preparing to flow test. Drilled to 3192' and ran out of water. Flushed hole w/gel mud. Came out of hole. Nipped down BOP's, set on 10" tree. Ran Agnew and Sweet Temp Survey, on bottom 16 hrs after drilling. Max temp 363.2° F at 3192'. Nipped up tree and connecting flow line.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|----------------------|--|--------------|-----------------------------------|------------|--------------|--------------|------------|------------|--------------|------|-----|------|-------|-------|-----|-----|--------|------|-----|----|-------|------|-----|----|-------|-------|-----|----|-------|------|-----|----|-------|-------|-----|----|-------|-----------------------------------|-----|---|-----|----------------------|----------------------|------------|------------|-----------|-----------|-----------|-----------|------|-----|----|------|------|-----|---|------|------|-----|----|-----|------|-----|---|------|------|-----|----|-----|------|-----|---|------|------|-----|----|-----|------|-----|----|------|-------|-----|----|-----|--|--|--|--|
| 12-18-76 | 3192 | <p>Testing well. RU Nowsco, started jetting at 1:00 pm at 1000', fluid to surface at 1:11 pm, max jetting depth 1250', shut off nitrogen at 12:30 pm, well flowing. Flowed well 17 hrs.</p> <table border="0"> <thead> <tr> <th><u>TIME</u></th> <th><u>WHT</u></th> <th><u>WHP</u></th> <th><u>LIP P</u></th> <th><u>TIME</u></th> <th><u>WHT</u></th> <th><u>WHP</u></th> <th><u>LIP P</u></th> </tr> </thead> <tbody> <tr> <td>2:30</td> <td>268</td> <td>47½#</td> <td>6.5#</td> <td>11:00</td> <td>280</td> <td>57#</td> <td>9.4#</td> </tr> <tr> <td>3:00</td> <td>271</td> <td>50</td> <td>7.0</td> <td>12MN</td> <td>281</td> <td>60</td> <td>9.65</td> </tr> <tr> <td>4:00</td> <td>276</td> <td>50</td> <td>8.0</td> <td>1:00</td> <td>282</td> <td>*</td> <td>9.7</td> </tr> <tr> <td>4:30</td> <td>276</td> <td>50</td> <td>8.0</td> <td>2:00</td> <td>282</td> <td>*</td> <td>9.8</td> </tr> <tr> <td>5:00</td> <td>277</td> <td>53</td> <td>8.15</td> <td>3:00</td> <td>282</td> <td>*</td> <td>9.84</td> </tr> <tr> <td>6:00</td> <td>278</td> <td>53</td> <td>8.15</td> <td>4:00</td> <td>282</td> <td>*</td> <td>10.0</td> </tr> <tr> <td>7:00</td> <td>279</td> <td>53</td> <td>8.8</td> <td>5:00</td> <td>282</td> <td>*</td> <td>10.0</td> </tr> <tr> <td>8:00</td> <td>279</td> <td>53</td> <td>9.1</td> <td>6:00</td> <td>282</td> <td>*</td> <td>10.1</td> </tr> <tr> <td>9:00</td> <td>280</td> <td>53</td> <td>9.2</td> <td>7:00</td> <td>282</td> <td>65</td> <td>10.1</td> </tr> <tr> <td>10:00</td> <td>280</td> <td>55</td> <td>9.4</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Averaging 800-1000 BWP. * Froze in.</p> | <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | 2:30 | 268 | 47½# | 6.5# | 11:00 | 280 | 57# | 9.4# | 3:00 | 271 | 50 | 7.0 | 12MN | 281 | 60 | 9.65 | 4:00 | 276 | 50 | 8.0 | 1:00 | 282 | * | 9.7 | 4:30 | 276 | 50 | 8.0 | 2:00 | 282 | * | 9.8 | 5:00 | 277 | 53 | 8.15 | 3:00 | 282 | * | 9.84 | 6:00 | 278 | 53 | 8.15 | 4:00 | 282 | * | 10.0 | 7:00 | 279 | 53 | 8.8 | 5:00 | 282 | * | 10.0 | 8:00 | 279 | 53 | 9.1 | 6:00 | 282 | * | 10.1 | 9:00 | 280 | 53 | 9.2 | 7:00 | 282 | 65 | 10.1 | 10:00 | 280 | 55 | 9.4 | | | | |
| <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2:30 | 268 | 47½# | 6.5# | 11:00 | 280 | 57# | 9.4# | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3:00 | 271 | 50 | 7.0 | 12MN | 281 | 60 | 9.65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4:00 | 276 | 50 | 8.0 | 1:00 | 282 | * | 9.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4:30 | 276 | 50 | 8.0 | 2:00 | 282 | * | 9.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5:00 | 277 | 53 | 8.15 | 3:00 | 282 | * | 9.84 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6:00 | 278 | 53 | 8.15 | 4:00 | 282 | * | 10.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7:00 | 279 | 53 | 8.8 | 5:00 | 282 | * | 10.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8:00 | 279 | 53 | 9.1 | 6:00 | 282 | * | 10.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9:00 | 280 | 53 | 9.2 | 7:00 | 282 | 65 | 10.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:00 | 280 | 55 | 9.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12-19-76 | 3192 | <p>Laying down drill pipe. Flowed well as follows:</p> <table border="0"> <thead> <tr> <th><u>TIME</u></th> <th><u>WHT</u></th> <th><u>WHP</u></th> <th><u>LIP P</u></th> <th><u>TIME</u></th> <th><u>WHT</u></th> <th><u>WHP</u></th> <th><u>LIP P</u></th> </tr> </thead> <tbody> <tr> <td>8:00</td> <td>282</td> <td>70</td> <td>10.25</td> <td>12:00</td> <td>281</td> <td>61#</td> <td>10.50#</td> </tr> <tr> <td>9:00</td> <td>281</td> <td>70</td> <td>10.25</td> <td>1:00</td> <td>281</td> <td>61</td> <td>10.50</td> </tr> <tr> <td>10:00</td> <td>281</td> <td>64</td> <td>10.25</td> <td>2:00</td> <td>281</td> <td>61</td> <td>10.50</td> </tr> <tr> <td>11:00</td> <td>281</td> <td>62</td> <td>10.50</td> <td colspan="4">Shut in at 2:00 p.m. - pit filled</td> </tr> </tbody> </table> <table border="0"> <tr> <td><u>Shut in Press</u></td> <td><u>Shut in Press</u></td> </tr> <tr> <td>2:05pm 81#</td> <td>3:30am 35#</td> </tr> <tr> <td>2:30pm 64</td> <td>4:00pm 27</td> </tr> <tr> <td>3:00pm 45</td> <td>4:30pm 20</td> </tr> </table> <p>Rigged up Agnew & Sweet. Ran Temp. Survey. 373° F at 3100', 360° at 3112' on bottom at 3112' 20 mins, 376° F.</p> | <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | 8:00 | 282 | 70 | 10.25 | 12:00 | 281 | 61# | 10.50# | 9:00 | 281 | 70 | 10.25 | 1:00 | 281 | 61 | 10.50 | 10:00 | 281 | 64 | 10.25 | 2:00 | 281 | 61 | 10.50 | 11:00 | 281 | 62 | 10.50 | Shut in at 2:00 p.m. - pit filled | | | | <u>Shut in Press</u> | <u>Shut in Press</u> | 2:05pm 81# | 3:30am 35# | 2:30pm 64 | 4:00pm 27 | 3:00pm 45 | 4:30pm 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | <u>TIME</u> | <u>WHT</u> | <u>WHP</u> | <u>LIP P</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8:00 | 282 | 70 | 10.25 | 12:00 | 281 | 61# | 10.50# | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9:00 | 281 | 70 | 10.25 | 1:00 | 281 | 61 | 10.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:00 | 281 | 64 | 10.25 | 2:00 | 281 | 61 | 10.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:00 | 281 | 62 | 10.50 | Shut in at 2:00 p.m. - pit filled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Shut in Press</u> | <u>Shut in Press</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2:05pm 81# | 3:30am 35# | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2:30pm 64 | 4:00pm 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3:00pm 45 | 4:30pm 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12-20-76 | 3192 | <p>Tearing down rotary. Finished LDDP. Cleaned mud pits. Released rig at 4:00 p.m. 12-19-76. Shut in geothermal well. Open hole 2030-3192'.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12-21-thru 12-27-76 | 3192 | <p>Shut down for Christmas holiday</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12-28-76 | 3192 | <p>Rigging up to test Ran Agnew and Sweet temperature survey. Max temp 391° F at 3119'.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DAILY REPORT DETAILED

LEASE Desert Peak B WELL NO. 21-2 SHEET NO. 6

DATE TOTAL DEPTH
NATURE OF WORK PERFORMED

| <u>DATE</u> | <u>TOTAL DEPTH</u> | <u>NATURE OF WORK PERFORMED</u> | <u>Time</u> | <u>WHP #</u> | <u>WHT °F</u> | <u>Lip Press</u> | <u>Atmos Press Hg</u> | <u>Remarks</u> |
|-------------|--------------------|--|-------------|--------------|---------------|------------------|-----------------------|--|
| 12-29-76 | 3192 | Tearing down rotary. Fin rigging up Nowsco. Started jetting well at 1:20 pm 12-28-76. Well kicked off, shut off nitrogen at 1:30 pm. Flowed as follows: | | | | | | |
| | | | 12-28 | | | | | |
| | | | 1:20pm | 21# | 240 | 1.6 | 25.635 | |
| | | | 1:27 | | | | | Shut off Nitrogen |
| | | | 1:30 | 40 | 283 | 10.0 | | |
| | | | 1:45 | 54 | 285 | 11.0 | | |
| | | | 2:00 | 57 | 285 | 11.0 | | |
| | | | 2:15 | 59 | 286 | 11.0 | | |
| | | | 2:30 | 59 | 286 | 11.0 | | |
| | | | 3:00 | 64 | 286 | 11.0 | | |
| | | | 3:30 | 65 | 287 | 11.0 | | |
| | | | 4:00 | 64 | 286 | 11.0 | 25.570 | |
| | | | 5:00 | 64 | 286 | 11.0 | | |
| | | | 6:00 | 64 | 286 | 11.0 | | |
| | | | 7:00 | 64 | 286 | 11.0 | | |
| | | | 9:00 | 64 | 285 | 11.0 | 25.590 | |
| | | | 11:00 | 64 | 286 | 11.0 | 25.540 | |
| | | | 12-29 | | | | | |
| | | | 1:00 am | 64 | 285 | 11.0 | | |
| | | | 4:00 | 64 | 285 | 11.0 | 25.510 | |
| | | | 5:00 | 64 | 285 | 11.0 | | Reserve pit dike broke. |
| | | | 7:30 | 64 | 285 | 11.0 | 25.490 | |
| | | | 9:00 | 64 | 285 | 11.0 | | |
| | | | 10:27 | | | | | Shut in. |
| | | | 10:30 | 90 | | | | |
| | | | 10:35 | 86 | | | | Total mass flow |
| | | | 10:40 | 82 | | | | averaged 456,000#/Hr. |
| | | | 10:45 | 78 | | | | |
| | | | 10:50 | 74 | | | | |
| | | | 10:55 | 71 | | | | |
| | | | 11:00 | 68 | | | | |
| | | | | | | | | At 1:00 AM had 0.8# draw down on well #21-1. |
| 12-30-76 | 3192 | Tearing down rotary. Rigged up Agnew and Sweet. Ran temperature survey. Max temp 387° F after 20 mins on bottom at 3115'. | | | | | | |
| 03-19-77 | 3192 | Shut-in. On 8-day reservoir limit test (3-10 to 18-77), well flowed at an average rate 288,000 pounds per hour, FWHP 84 psig, indicating a reservoir of 4,480 million barrels. Well completed as a Geothermal Well from open hole 2030-3192. <u>FINAL REPORT</u> | | | | | | |

DAILY REPORT DETAILED

LEASE Desert Peak WELL NO. 21-2 SHEET NO. 7

DATE TOTAL
NATURE OF WORK DEPTH
PERFORMED

| DATE | TOTAL DEPTH | NATURE OF WORK PERFORMED |
|---------|-------------|---|
| 6-30-78 | 3192 | Cleaning out. S. I. Geothermal well. 9 5/8" OD casing set at 2030', open hole 2030-3192. MI&RU Dixie Drilling Company. Went in hole w/2 DC & 8 1/2" bit. Stripped on 6" 900 BOP attached to 10" 600 X 6" 900 spool bolted on top of 10" 600 master gate. Went in hole w/2 7/8" DP, first weight at 781' RKB. Reamed scale to 841', free to 886'. Reamed scale to 896', began torquing up. Picked up DP, slightly stuck. Freed up DP & started reaming, bit plugged, blew nail on safety valve. Pulled out of hole, cleaned bit, went back in hole and shut down overnight. |
| 7-01-78 | 3192 | Cleaning out. Reamed to 931' RKB, circulating white very fine grain sandy substance. Difficult to make connection, scale settles very fast requiring lengthy circulating periods. Temperature in 124° F; out 137° F. Lost returns at 955', drilled to 966' and regained circulation. Had partial loss at 970', full returns at 971'. Drilled to 975', lost complete returns. Reamed hard and slow to 991'. Freed up and reamed to 1010' w/little weight. Ran out of water, shut down to fill water tank, shut down overnight. |
| 7-2-78 | 3192 | Pulling out of hole. Reamed scale from 1010' to 1030', very light weight. Reamed 1030-2005, no weight. Pumped in 3 BW every 40'. Pulled up to 900', made wiper trip to 2005'. Started laying down drill pipe. Shut down overnight. |
| 7-03-78 | 3192 | Shut geothermal well. Finished pulling out of hole. Laid down drill pipe. Tore down rotary, moved out all equipment at 1:00 pm 7-02-78. <u>FINAL REPORT</u> |

DAILY REPORT DETAILED

LEASE DESERT PEAK 29-1 WELL NO. 29-1 SHEET NO. _____

Churchill County, Nevada - Section 29-22N-27E
TIGHT HOLE - 8000' Geothermal Test

DATE TOTAL
NATURE OF WORK DEPTH
PERFORMED

- 4-3-74 Spudded well using Montgomery Drilling contractor, 4 P.M., 4-2-74. Drilled 12 $\frac{1}{2}$ " hole 72'-153' and lost circulation at 153'. Regained - 3 hours with lost circulation materials. Drilled 12" hole 153'-309'.
- 4-4-74 Drilled 12 $\frac{1}{4}$ " hole 309'-775'. Hit Andesite 715'-775'. Pulled out of hole. Opened 12 $\frac{1}{4}$ " hole to 17 $\frac{1}{2}$ " from 72'-775'. Circulated clean. Pulled out of hole. Preparing to run 13 3/8" surface casing.

DAILY REPORT DETAILED

LEASE DESERT PEAK 29-1 WELL NO. 29-1 SHEET NO. _____

DATE TOTAL DEPTH Churchill County, Nevada - Section 29-22N-27E
 NATURE OF WORK PERFORMED TIGHT HOLE - 8000' Geothermal Test

4/5/74 ✓ Cemented 13-3/8" casing at 775' with 1076# 1:1 class G and perlite cement, plus 40% silica flour, 2% gel and 1/2% CFR-2. With 1" pipe hanging at 60', cemented annulus of 13-3/8" x 20" with 1000 cu.ft. above cement mixture.

4/6/74 ↘ Cut off 13-3/8" and welded on 12" Series 900 casing head. Installed BOPE. Drilled out cement to 760' and pressure tested casing, BOPE and surface equipment to 1000 psi. Drilled out cement and drilled ahead in 12 1/4" hole from 775' to 890'.

4/7/74 ✓ Drilled 12 1/4" hole from 890' to 1430'.

4/8/74 ↘ Drilled 12 1/4" hole from 1430' to 2357'.

4/9/74 ✓ Drilled 12 1/4" hole from 2357' to 2706'.

4/10/74 ↘ Drilled 12 1/4" hole from 2706' to 3292'.

TUFF, SAND, SD ST, BASALT 4/10/74

DAILY REPORT DETAILED

LEASE DESERT PEAK 29-1 WELL NO. 29-1 SHEET NO. _____

Churchill County, Nevada - Section 29-22N-27E
 TIGHT HOLE - 8000' Geothermal Test

| DATE | TOTAL DEPTH | NATURE OF WORK PERFORMED |
|------|--------------------------------------|---|
| 4/11 | 3540' | Drilling 10'/hr., 45 rpm, 38K-40K lbs. bit weight. At 5:00 p.m. |
| 4/11 | 3700' | Drilling 10'-30'/hr. 10 a.m., 4/10 had flow line temp. rise from 120°F to 134°F. Drilling in chlorite and rhyolite breccia with pyrite. |
| 4/12 | 3942' - at 3732' - 2 $\frac{1}{4}$ ° | 139°F. 4135' at 6:00 p.m. |
| 4/13 | 4370' | - Drilling in rhyolite and calcite. 256' in 20 hrs. |
| 4/14 | 4583' | - Drilling rhyolite and calcite. |

AB 7/15

DAILY REPORT DETAILED

LEASE Desert Peak 29-1 WELL NO. 29-1 SHEET NO. _____

DATE
NATURE OF WORK

TOTAL
DEPTH
PERFORMED

Churchill County, Nevada - Section 29-22N-27E
TIGHT HOLE - 8000' Geothermal Test

- 4/15/74 (12) 4858' drilling at 5:10 p.m., 5010'. 160°F flow line temperature. At 4820' temperature increased 6°-7°F. Now drilling in silicious tuff with rhyolite and chlorite in lesser amounts.
- 4/16/74 (13) 5166' drilling. Between 5000'-5100' had temperature of 160°-165°F flow line.
- 4/17/74 (14) 5416' drilling. Between 5300'-5400' temperature dropped to between 155°-160°F. 73 hours on bit - made 946' (13'/hr.). Drilling in rhyolite tuff - varicolored abundant calcite, thin basalt stringer.
- 4/18/74 (15) While drilling at 5574' (9:15 p.m., 4/17/74) twisted off, lost weight and pump pressure. POOH. Lost 403' of fish consisting of 13 - 7" drill collars, 1 - 12 $\frac{1}{4}$ " stabilizer, 1 - crossover sub, 1 - 26' x 7" Monel collar, 1 - shock sub and 1 Hughes J-23 12 $\frac{1}{4}$ " bit. Top of fish 5171'. At 5560' encountered fault zone - slickensided and fault gouge.
- 4/19/74 (16) RIH with overshot, jars and bumper subs. Engaged fish. Pulled and recovered all of same. Magna fluxed all drill collars. RIH with 30' conventional core barrel. Now coring 5585'.

BS 7/19

DAILY REPORT DETAILED

LEASE DESERT PEAK 29-1 WELL NO. 29-1 SHEET NO. _____

Churchill County, Nevada - Section 29-22N-27E

DATE TOTAL DEPTH TIGHT HOLE - 8000' Geothermal Test
NATURE OF WORK PERFORMED

| | | |
|---------------|-------|---|
| 4-20-74 17 | 5604' | Magnafluxed drill collars. Laid down 3 collars. WIH with 30' std core barrel. Core #1 5574-5604' rec 6½'. No indication of lost interval. |
| 4-21-74 16 | 5708' | WIH with 12¼" bit, reamed tight hole 5185-5574'. Opened 10-1/8" core hole to 12¼" 5574-5604'. Drilled 5604-5708' w/J-33 Hughes. |
| 4-22-74 17 | 6033' | Drilling. Flow line temp. 177°F. At 5965' calcite w/minor pyrite crystals. |
| 4-23-74 16 | 6151' | Temperature 182°F. Gray green silicified rhyolite w/pyrite. Trip to change bit. Magnaflux D.C.'s while OOH. Laid down 1 D.C. At 6040', 3/4", S50°E. |
| 4-24-74 17 | 6295' | 9'/hr., hard green andesite, nearly 100%. Flow line temperature 179°F. |
| 4-25-74 16 | 6550' | Drilling as above 4-24-74. 185°-187°F flow line temperature. |
| 4-26-74 17 | 6677' | Drilling phyllite, dark metamorphosed sediments. Flow line temperature 181°F. |
| 4-27-74 17 | 6882' | Drilling - Quartzsite |
| 4-28-74 16 | 7103' | Drilling - Quartzsite and quartz diorite. 181° - 182°F Flow line temperature. |
| 4-29-74 16 | 7141' | Stuck pipe at 6990' while RIH. |
| 4-30-74 | | Ran free point indicator. Pipe stuck at 6424' or top of drill collar. Ran string shot and backed off at 6424'. Now POOH. Fish was stuck right at the tope of the collar. Jumped it with a string shot at the top of the first stabilizer between stabilizer and the crossover sub. Starting to come out of hole. |

DAILY REPORT DETAILED

LEASE DESERT PEAK 29-1 WELL NO. 29-1 SHEET NO. _____

Churchill County, Nevada - Section 29-22N-27E

TIGHT HOLE - 8000' Geothermal Test

| DATE | TOTAL DEPTH | NATURE OF WORK PERFORMED |
|--------|-------------|--|
| 5-1-74 | 7141' | Prep. to drill ahead. Fin. POOH. Fish left in hole: 12 $\frac{1}{4}$ " bit, shock sub, 18 - 7" DCS., 2 - 12 $\frac{1}{4}$ " stabs., 1 Monel collar and crossover sub. RIH w/Bowen jars, 6 - 7" DCS. and 1 - 12 $\frac{1}{4}$ " stgb. Screwed into fish. Jarred fish loose and POOH. Rec. all of fish. RIH. Rmd. 180' to bottom. |
| 5-2-74 | 7145' | Made rimming run to 7141' and pulled and changed the bit, took out Security S-4J, ran in with Hughes J-33 button bit. Had to rim bottom 90' second time and are now drilling ahead at 7145'. We have 1/2 hr. drilling time...made 4 ft. |
| 5-3-74 | 7328' | Drilling Quartzsite - 195°F Flow Line Temperature. |
| 5-4-74 | 7449' | Circulate to clean hole. Drill 121' in 22 hrs. quartzsite and amphibolite. Drill string parted @ 6:00 a.m. Bit #15 HTC J-33 made 308 total feet in 47 $\frac{1}{2}$ hours. |
| 5-5-74 | 7449' | COOH with fish. Circulated hole clean and pulled out leaving 3 collars, bit sub and bit in hole. Made bit run to 7362' top of fish. Picked up to 7330' and circulated waiting on fishing tools. Off load, rig and run bumper sub, jars and collar over-shot. Circulate down and worked over fish. Chaining out with full string weight. |
| 5-6-74 | 7449' | Working stuck drill pipe and waiting on wire line unit. Off load and rig-up fishing tools; went in hole w/bumper sub, jars and collar over-shot, caught and recovered fish consisting of three collars, bit sub, and bit. Made up bottom hole drilling assembly and went in hole. Pipe stuck at 7306' on trip in. 143' off bottom. |
| 5-7-74 | 7449' | COOH w/drilling assembly. Rig-up go international ran free point tool to 7306' and tag bit. Free point indicated @ 6888'. Ran string shot and attempted back-off @ 6876' top of first stabilizer. Shot failed as primer cord melted. High temperature cord shot failed @ 6876'. Ran second string shot and backed off @ 6786' top of collars. Drill pipe unscrewed up-hole. Made blind-stab and re-torqued full string. Third high temp. cord shot backed off cross-over sub, on top of collars. |
| 5-8-74 | 7509' | Drilling 60' in 13 hours. Finished pulling out of hole. Recovered all of fish. Run in hole with following bottom hole assembly: Bit #16, J-33, bit sub, 3 - 7" drill collars, stabilizer, 9 - 7" drill collars, bumper subs, drilling jars, cross-over sub and 4 $\frac{1}{2}$ " drill pipe. Washed and reamed from 6363' to 6407' and from 6497' to 6587', and reamed from 7269' to 7449' at T.D. Spent 2 $\frac{1}{2}$ hrs. on last bottom section. Mud is 8.9 #/gal. 34 viscosity, $\frac{1}{2}$ % sand equivalent. |

DAILY REPORT DETAILED

LEASE DESERT PEAK 29-1 WELL NO. 29-1 SHEET NO. _____

Churchill County Nevada - Section 29-22N-27E

DATE
NATURE OF WORK

TOTAL
DEPTH
PERFORMED

TIGHT HOLE - 8000' Geothermal Test

| | | |
|---------|-------|---|
| 5-9-74 | 7646' | 137' in 21½ hrs. Operation is circulating. Have been circulating for 2½ hrs. Bit #16, J-33, made 197' in 34½ hrs. Mud weight 8.9 - 34 viscosity, flow line temperature 191°. Plan to run two 400°F temperatures on sand line before pulling out of hole. |
| 5-10-74 | 7646' | Condition hole waiting on S-J high temperature logging unit. Two MRT indicate BHT 200°F. |
| 5-11-74 | 7646' | Circulate and condition hole for logging. Pulled out of hole and laid down bottom hole drilling assembly with collars. Ran full string drill pipe prep to log. |
| 5-12-74 | 7646' | Ran Schlumberger formation evaluation suite: Dual induction - laterolog, BHC sonic, and neutron-density. First two temperature runs completed. |
| 5-13-74 | 7656' | Coring. Completed temperature runs 3 and 4. Pulled out of hole. Picked up coring assembly with 2 stands of collars. Went in with 10-1/8" Smith core bit to cut bottom core. |
| 5-14-74 | 7662' | Prep to run N ₂ drawdown test. Pulled core and recovered 6' of 16' total cut. Quartz and amphibole. Run in hole with open ended drill pipe and wait on nitrogen service. |
| 5-15-74 | 7662' | Rig up Nitrogen Oil Well Service Company stake preventer flow choke assembly and prepare to test. |
| 5-16-74 | 7662' | Observing well. Tested lines w/2500 psi - o.k. Displaced mud in hole w/N ₂ , conventionally. Recovered an estimated 600 bbls. mud. Max. inj. press. 2400 psi. Min. 900 psi. Unable to reverse with 900 psi. Nitrogen appeared to be going into formation. POOH w/drill pipe. Twelve hours observing well. No blow. |
| 5-17-74 | 7662' | Rigging down rotary. Finished observing well. No blow. Ran 4½" O.E. D.P. to 1000'. Filled hole. Took approx. 40 bbls. mud. Layed down drill pipe and DCS. Dumped mud and cleaned pits. Set out BOPS and kill manifold. |
| 5-18-74 | 7662' | Rigging down rotary. 2 hrs. Capped well. Released rig at 0800 hrs. 5/17/74. |

DAILY REPORT DETAILED

LEASE DESERT PEAK 29-1 WELL NO. 29-1 SHEET NO. _____
 Churchill County Nevada - Section 29-22N-27E

DATE TOTAL
 NATURE OF WORK DEPTH
 PERFORMED

| | | |
|---------|----------------------|---|
| 2-10-77 | OTD 7662 PTD 223 | Drilling out cement plug. MI & RU Appleby & Johnson Drlg. Co. to drill out cement plugs to 3000'. Well P & A 1-11-75. Drilled 8' cement in top of hole. Open hole to 128'. D & H cement to 223'. |
| 2-11-77 | OTD 7662 PTD 1500 | Drilling broken cement & bridges. Drilled cement 223-230'. Went in hole to top of cement at 677'. Circ. out water, max. temp. 140°F. Mixed gel mud 8.6#, 36 vis. Drilled broken cement and bridges to 1500'. |
| 2-12-77 | OTD 7662 PTD 3240 | Rigging down rotary. Drilled out cement bridges to 1800', lost complete returns. Went in to 3240', hole open. Laid down drill pipe & started rigging down. |
| 2-13-77 | OTD 7662 PTD 3240 | Moved out rotary. Well opened up to 3240' as observation well. |