

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

<u>DATE</u>	<u>TOTAL DEPTH</u>	<u>NATURE OF WORK PERFORMED</u>
-------------	------------------------	---------------------------------

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

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 107^{1/2} 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 -3 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 J 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 7 Drilled 12 1/4" hole from 2706' to 3292'.

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

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

- 4/11 3540' Drilling 10'/hr., 45 rpm, 38K-40K lbs. bit weight. At 5:00 p.m.
 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.

KB 4/15

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'.

KB 4/19

DAILY REPORT DETAILED

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

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

DATE TOTAL DEPTH
NATURE OF WORK PERFORMED

TIGHT HOLE - 8000' Geothermal Test

DATE	TOTAL DEPTH	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 18	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 19	6033'	Drilling. Flow line temp. 177°F. At 5965' calcite w/minor pyrite crystals.
4-23-74 20	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 21	6295'	9'/hr., hard green andesite, nearly 100%. Flow line temperature 179°F.
4-25-74 22	6550'	Drilling as above 4-24-74. 185°-187°F flow line temperature.
4-26-74 23	6677'	Drilling phyllite, dark metamorphosed sediments. Flow line temperature 181°F.
4-27-74 24	6882'	Drilling - Quartzsite
4-28-74 25	7103'	Drilling - Quartzsite and quartz diorite. 181° - 182°F Flow line temperature.
4-29-74 26	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'. New 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 ⁰ 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

DATE NATURE OF WORK	TOTAL DEPTH PERFORMED	
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 DEPTH
 NATURE OF WORK 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.