

Wolfson Ranch #1
Sec. 22-T38S-R24E
Lake County, Oregon

MAPCO - San Juan
Warner Valley Prospect
Geothermal Well

MAPCO WI 100%
Elev. 4498' GL
A.F.E. SJ-6771
Proposed TD 7,500'

10-16-75 Location Staked
10-20-75 Leveling Location.
10-21-75 Leveling location.
10-22-75 Leveling Location.

10-23-75 28° and 1" Snow on Ground. Base Complete 12:00 noon. Today
digging pits. Start moving rig on today.

10-24-75 Weather Clear, Rig mat down, 4 loads of rig on Location.

10-25-75 Moving rig on location. Rigging up & digging pits.
thru
10-26-75

10-27-75 Rig all moved in. Starting to rig up. Tentative Spud date,
Friday 10-31-75.

10-28-75 Rigging up and 4" snow on ground.

10-29-75 Rigging Up will definitely spud on 11-1-75.

10-30-75 Derrick Raised, Rain & show causing delay.

10-31-75 Finished Rigging Up will spud 11-1-75.

11-01-75 Finished Rigging UP.

11-02-75 Spudded @ 3:30 P.M. 11-02-75. Went on day work @ 8:00 A.M. Drilled
rat hole. Mixed 2 pits Spud mud.

11-03-75 Drilling @ 60' 26" hole. MW 10.5, Vis 65.

11-04-75 Drlg @ 313' MW 11.2, Vis 65 8% sand. Mud temp 62° in & 62° out.

11-05-75 TD 313' Waiting on cement. cmt 20" conductor pipe w/750 sx- good
returns, will drill out tonite.

11-06-75 TD 313' 18 hrs Nippling Up 20" Hydril, 6 hrs working on closing unit,
Testing Hydril & pipe.

11-07-75 Drlg @ 730' Days:5 Daily Ftg 417' Drlg Hrs:10½ Trip Time:2½.
Formation Sd & Igneous Debris. Casing: 20" @ 310'. WOB 8-10,000# @
48 rpm. P.P. 900# @ 60 spm. Bit #2 17½" OSC-J Hughes in @ 313',
(417'/10½ hrs). Dev - 0° @ 300'; ¼° @ 505'. Mud Type:Jel-Chem
MW 11.5, Vis 65. Daily Mud Cost \$151.00, Cum \$2945.00. 3 hrs t
to 600# on pipe, held press 15 min, no leaks. 3 hrs drlg plug & 65'.
Cmt top @245'. 2 hrs Gamma Ray logging. 3 hrs drlg mouse hole. 2½ hr
TIH & picking up DC. 10½ hrs drlg. Mud temp out 70°F.

11-08-75 TD 1,033' Days: 6. Daily Ftg: 303'. Drlg Hrs: 8½. Trip Time:1½ hrs.
WOC. Formation sd & debris (3000' to 1000').

11-11-75

TD 1,033' Days: 9. Testing BOP's. Bit #3 12 $\frac{1}{4}$ " S3J Security, in @ 33', Jets: 3-5/8". Type Muddelled Chemical. MW 8.8, Vis 60. 24 hrs NU & testing. Temp 10°. Chill factor -20°, snow & ice. Cum \$2961 Total Well Cost 121,372.80

11-12-75

10 Days since spud. 12" WKM valve on blowey line failed approx. 1:00 11-11-75 - rig down & on their own time. Replacement valve coming from Phoenix.

11-13-75

Depth 1,033' - rig still down waiting on 12" WKM valve.

11-14-75

TD 1,205' Days: 12 Daily Ftg 172'. Drlg Hrs: 12. Activity - Drilling Csg: 20" @ 310'; 13 3/8" @ 1030'. Bit #3 12 1/4 S3J Security in @ 1033'. Type Mud: Gel Chemical, Wt. 8.6, Vis. 43, PH 9.5, 3% Solids, Daily Mud Cost \$422, Cum. \$3,383, Total Well Cost \$129,217.80. 12 Hours waiting on valve. Test stack to 1100# held for 15 minutes, no leaks. Mud Temp. 58° in and out.

11-15-75

Drilling @ 1467' Days: 13, Daily Ftg: 262', Drlg Hrs: 19 $\frac{1}{4}$
Trip time: 3. Casing: 20" @ 310', 13 3/8" @ 1033'. WOB 40,000# @ 45 rpm. BHA: Bit jars + 15 drlg. SPM:60, PP:300#, GPM:358,.
Bit #3 12 $\frac{1}{4}$ " S-3J in @ 1033', out @ 1229', (196'/12 $\frac{1}{4}$ hrs). Jets:3-5/8"
Condition:T-4; B-4; G-1/8" out. Bit #4 12 $\frac{1}{4}$ " M-4NGJ Security in @ 1227', (238'/18 $\frac{1}{2}$ hrs). Jets: 3-5/8". MW 8.6, Vis 43. F.C. 3/32 pH:9.5, Solids:3%, Sand:6%. 1 3/4 hrs pump repair. 19 $\frac{1}{2}$ hrs drilling 3 hrs trip time. Mud Temp 58° out & in. Cum \$3383 Total \$133,633.

11-16-75

Drilling @ 1621' Days: 14, Daily Ftg: 154', Drlg Hrs: 12 $\frac{1}{2}$
Trip time: 3. Formation: Tuff & Shale. WOB 30-40,000# @ 40-45 rpm.
Pump Size: 5 $\frac{1}{2}$ x 18 SPM 60, PP:200, GPM:358. Bit #4 12 $\frac{1}{4}$ " M4NGJ Security in @ 1229', out @ 1537', (308'/24 3/4 hrs). Jets: 3-5/8
Condition: T-5, B-5, G-0. Bit #5 12 $\frac{1}{4}$ " J-33 Hughes in @ 1537, (84'/4 $\frac{1}{4}$ hrs). Jets:out. Dev - $\frac{1}{4}$ ° @ 1230'. MW 9.0, Vis 38, PV:15 Yp:10 WL:12.0 F.C:3/32 pH:9.5 Oil:0% Solids:5% Sand:4% LCM:15 Gels Init./10 min: 2/11 Chloride:600 PPM. Lost 400 bbls mud from 1492'-1533'. 8 $\frac{1}{2}$ hrs mix mud & lost circ material. 12 $\frac{1}{2}$ hrs drlg 3 hrs trip time. Mud temp in 52° out 52°. Cum: \$4454 Total:\$144,109

11-17-75

Drlg @ 2147' Days: 15, Daily Ftg: 526', Drlg Hrs: 21 3/4. WOB 40,000 SPM:60 PP:350, GPM:358 Bit #5 12 $\frac{1}{4}$ J-33 Hughes in @ 1537', (610'/26 $\frac{1}{2}$ hrs). Jets:0. Dev - 0° @ 1744'. MW 8.6, Vis 34, pH:9.5 Solids:2%, Sand:1% LCM:10. 3/4 hrs pump repair. 1 hr L.C. @ 1947', $\frac{1}{4}$ hr Survey, 21 $\frac{1}{2}$ hrs Drilling. Mud Temp 52° in & out. Cum \$6425 Total Well Cost \$152,221

11-18-75

Drlg @ 2,549' Days: 13, Daily Ftg: 402', Drlg. Hrs: 22 $\frac{1}{2}$. Casing 13 3/8" set @ 1030'. WOB 40,000 RPM:45, BHA: Bit jars + 15 drlg. Formation: Basalt. Pump size: 5 $\frac{1}{2}$ x 18. SPM:60 P.P. 350#. GPM:358. Bit #5 12 $\frac{1}{4}$ " J-33 Hughes in @ 1537', (1012'/49 hrs). Jets:none. Type Mud: Gel Chem MW:8.6, Vis:40, PV:24. F.C.:2-30 seconds, pH: 9.5, Oil:0%, Solids:2%, Sand:2%, LCM:5, Chloride:600 ppm. $\frac{1}{2}$ hr survey. 1 hr work on pump. 22 $\frac{1}{2}$ hrs drilling. Mud Temp 60° in & out. Cum Mud Cost \$6425 Total Well Cost \$165,326.95.

11-19-75

Drlg @ 2666' (117') Days:17, Drlg. Hrs:17 $\frac{1}{2}$. Trip Time:4 $\frac{1}{2}$. Formation: Shale & Weathered Basalt. WOB 40,000 RPM:45 BHA: Bit jars + 15 drlg. Pump size:5 $\frac{1}{2}$ x 18 SPM:60, PP:300#

11-20-75

Drlg @ 2,815' (149'/16 3/4 hrs). Days:18. Trip Time: 3 hrs.
Formation: salt & Sh. Casing: 13 3/8" @ 130'. WCB 35,000# @ 45 rpm.
BHA:Bit jars + 15 drlg. Pump Size: 5½ x 18, P.P. 450# @ 60 spm. GPM:360
Bit #6 12¼" S-86 Security in @ 2592', out @ 2698', (160'/16½ hrs).
Jets:open. Condition: T-1, B-1, G-N. Bit #7 12¼" M4NGJ Security
in @ 2698', (117'/11 hrs). Jets:1-11/16 & 2 5/8. Type Mud: Gel Chem
MW:9.1, Vis:42, PV:14, Yp:4, WL:10.4, FC:2 3/2 pH:9.5, Oil:0%
Solids:6%, Sand:1 3/4%, LCM:8, Chloride:550 ppm. 3 hrs Trip time.
2¼ hrs change head on pump. 1½ hr lost circ @ 2664', lost 550 bbls mud.
½ hr jet pit. 16 3/4 hrs drilling. Mud temp 60° out & 57° in. 1" snow
10°. Daily Mud Cost \$561.00 Cum Mud Cost 8,188.00.
Total Well Cost \$174,416.45

11-21-75

Drlg @ 3,097' (282'/21 3/4 hrs) Days:19. Formation: Basalt & Sh.
Casing: 20" @ 310' & 13 3/8" @ 1,030'. WCB 40,000# @ 47 rpm.
BHA:Bit jars + 15 drlg. Pump Size: 5½ x 18. P.P.:450# @ 60 spm.
GPM:360. Bit #7 12 1/4" M4NGJ Security in @ 2698', (399'/32 3/4 hrs).
Jets: 1-11/16. & 2-5/8. Type Mud:Gel-Chem, MW:9.0, Vis:39,
WL:11.4, FC:2-32, pH:9.0, Oil:0, Solids:5%, Sand:2%, LCM:15%
Chloride:550 ppm. Mud Temp 61° in & 62° out. Lost 800 bbls mud
in 24 hrs. New Lost circ zone 2,890'. 1 3/4 hrs jet pits. 1/2 hr un-
plugged flow line. Weather - Loosing Mud continually, also 20' over
cast short periods of pit gain appear to be Fresh water flows.
Correction to report of 11-21-75.

Weather: 20° over cast. Loosing mud continually, short periods of
pit gain appear to be fresh water flows.

11-22-75

Drlg @ 3343' (230'/19 hrs). Days:20 Trip time:4 hrs. Formation: Basalt
& clay. Casing: 20" @ 310'; 13 3/8" @ 1030'. WCB 35-40,000# @
48 rpm. BHA:Bit jars + 15 drlg. Pump Size: 5½ x 18, P.P. 500# @ 60 spm.
GPM:358. Bit #7 12¼" M4NGJ Security in @ 2698', out @ 3333',
(635'/46 hrs). Jets:2-5/8 & 1-7/8". Cond: T-7, B-7, G-in gauge.
Bit #8 14¼" J-54 Smith Tool Co. In @ 3333', (10'/6 hrs). Dev -½° @ 3325'
Type Mud: Gel-Chem MW:8.9, Vis:50, PV:16, YP:8, WL:10.2,
FC:2/30 pH:9.5, Oil:0%, Solids:5%, Sand:2½% LCM:8, Chloride:550 ppm/
1 hr jet pit, 19 hrs drilling, 4 hrs trip time, Temp 60° in & out.
Daily Mud Cost \$2,631.16 Cum \$12,339.00 Total Well Cost \$190,318.45

11-23-75

Tripping @ 3429' (96'/14 hrs). Days:21, Trip time:7 hrs. Formation: Clay
& Basalt. Casing: 13 3/8" @ 1030'. WCB 10-15,000# @ 48 rpm.
BHA:Bit jars + 15 drlg. Pump Size: 5½ x 18, P.P.:500# @ 60 spm. GPM:358
Bit #8 12¼ JS-4 Smith Tool Co. in @ 3333', out @ 3346', (13'/8 hrs).
Jets:2-5/8 & 1-7/8". Cond: T-1, B-1, G-in gauge. Bit #9 12¼" 3JS
Security in @ 3346', out @ 3416', (70'/14 hrs). Type Mud: Gel-Chem
MW:8.9, Vis:43, PV:17, Yp:8, WL:10.2, FC:2/32, pH:9.5, Oil:0%
Solids:5%, Sand:3%, LCM:17. Chloride:550 ppm. 14 hrs drilling
7 hrs trip time. 3 hrs cleaning pit. Mud Temp. 67° in & 70° out.
Daily Mud Cost \$2,359.91 Cum Mud Cost \$14,700.00 TotalWell
Cost \$195,711.45.

11-24-75

Drlg @ 3596' (173'/13 hrs). Days:22 Trip time:5 hrs. Formation: Basalt
and Volanic. Casing: 13 3/8" @ 1030'. WCB 40,000# @ 45 rpm.
BHA: 15 drill collars & jars, 3 8" drill collars & 12 6½" drill collars.
Pump Size:5½ x 18, 12¼" JS-4 Smith Tool Co, in @ 3,416', (180'/20¼ hrs).
Jets:1-½", & 1-9/16" & 1-7/16". Type Mud:Gel Chem. MW:8.8,
Vis:39, PV:12, Yp:6, WL:10.4, FC:2/32, pH:9.0, Oil:0%, Solids:5%
Sand:2%

11-26-75

Drlg @ 3976' (130'/22 hrs) Days:24, Formation: Volcanic Ash, Casing:
10 3/8" @ 1030'. BHA:15 DC & jars. WOB 45,000# @ 48 rpm. Pump Size:
5½ x 18. P.:600 GPM:358. Bit #8 Rev. 12¼" J-34 Smith in @ 3333',
(560'/63 3/4 hrs). Jets:1-1/2, 1-7/16, 1-9/16. Type Mud:Gel-Chem
MW:8.9, Vis:44, PV:9, Yp:4, WL:10.2, FC:1/32, pH:9.8, Oil:0%,
Solids:4%, Sand:2%, LCM:12, Gels Init./10 min:1/7, Chloride:550 ppm
Daily Mud Cost \$846.00 Cum Mud Cost \$17,692.00 Total Well
Cost \$212,310.45 1½ hrs Temp Survey @ 3888' #1 Thermometer 102°F
#2 Thermometer 104°F. 22 hrs Drlg. Well gain Mud. Mud Temp -
74° in & 74° out. To 3962' Basalt & weathered basalt. 3962'-3976' TD
Bentonite-white, soft, water absorbing.

11-27-75

Drlg @ 4,294' (318'/16¼ hrs) Days:25 Trip Time:6 hrs. Form:Volcanic tuff
Casing:20" @ 310' & 13 3/8" @ 1030'. WOB 40,000# @ 48 rpm. BHA:
15 DC & jars. Pump Size:5½ x 18 P.P. 650# @ 60 spm. GPM:358.
Bit #8 Rerun 12¼" J4S Smith Tool in @ 3333', out @ 3978', (645'/65 hrs.).
Condition: T-2, B-2, G-in gauge. Bit #10 12¼" M4NGJ Security in @ 3978',
(316'/16¼ hrs). Jets:2-9/16 & 1-15/32. Dev - 2° @ 3976'. Type Mud:Gel-
Chem. MW:8.9, Vis:44, PV:44, Yp:4, WL:8.8, FC:2/32, pH:9.0,
Oil:0%, Solids:5%, Sand:1½%, LCM:12 Gels Init./10 min:3/10,
Chloride:550 ppm. Daily Mud Cost \$1,781 Cum Mud Cost \$19,472
Total Well Cost \$216,725.45. Mud Temp 70° in & 72° out.
Temp Survey @ 3976' = 1-106° 2-108° 1-110°. 3/4 hr temp survey.
1 hr jet pit.

11-28-75

Drlg @ 4,562' (268'/24 hrs) Days:26, Formation:Volcanic. Casing:
13 3/8" @ 1030'. WOB 40,000# @ 48 rpm. BHA:15 DC & jars.
Pump Size:5½ x 18. P.P. 650# @ 60 spm. GPM:358. Bit #10 12¼" M4NGJ
Security in @ 3978', (584'/40¼ hrs). Jets:2-9/16 & 1-15/32.
Type Mud:Gel Chem, MW:9.4, Vis:48, PV:18, Yp:10, WL:10.2,
FC:2/32, pH:9.5, Oil:0%, Solids:5%, Sand:1½%, LCM:10, Gels Init./
10 min:3/12, Chlorid:550 ppm. Daily Mud Cost \$1,280, Cum Mud
Cost \$20,753 Total Well Cost \$221,118.45 Mud Temp 75° in & out.

11-29-75

Drlg @ 4,740' (178'/17 hrs) Days:27, Trip Time: 6 hrs. Formation:Volcanic
13 3/8" @ 1030'. WOB 40,000# @ 48 rpm. BHA:15 DC & jars. Pump Size:
5½ x 18. PP:650# @ 60 spm, GPM:358. Bit #10 12¼" M4NGJ Security in
@ 3,978', out @ 4661', (683'/48 hrs). Jets:2-9/16 & 1-15/32.
Condition: T-6, B-6, G-in gauge. Bit #11 12¼" M4NGJ Security in @ 4661'
(79'/9 3/4 hrs). Jets:2-9/16 & 1-15/32. Dev - 1 3/4° @ 4661'. MW:9.4,
Vis:46, PV:18, Yp:10, WL:10, FC:2/32, pH:9.5, Oil:0%, Solids:5%,
Sand:1%, LCM:10 Gels Init./10 min:3/12. Chloride:550 ppm. Daily Mud
Cost \$419 Cum Mud Cost \$21,754 Total Well Cost \$226,533.45
1 hr jet pit. Temp 81° in & 83° out. Survey @ 2° @ 4661'.

11-30-75

TD 4,898' (158'/17 hrs) Tripping Days:28, Trip Time:3½ hrs. Form:Basalt
13 3/8" @ 1030'. WOB:40,000# @ 48 rpm. BHA:15 DC & Jars. Pump Size:
5½ x 18. PP:725# @ 60 spm, GPM:360. Bit #11 12¼" M4NGJ Security in
@ 4661', out @ 4898', (203'/26½ hrs). Jets:2-9/16 & 1-15/32. Condition:
T-7, B-7, G - in gauge. Dev - 1 3/4° @ 4898'; Type Mud: Gel Chem,
MW:9.2, Vis:55, PV:26, Yp:20, WL:9.8, FC:2/32, pH:8.0, Oil:0%,
Solids:7%, Sand:2%, LCM:10 Gels Init./10Min:4/25 Chloride:550 ppm
Daily Mud Cost \$ 0. Cum Muc Cost \$21,754 Total Well Cost
\$231,926/45 2½ hrs new seat & piston on pump. 1 hr jet pit.
Temp 81° in & 83° out.

12-01-75

Drlg @ 5,196' (298'/18 hrs) Days:29, Trip Time:4 hrs. Formation:Basalt
Casing:13 3/8" @ 1030'. WOB 40,000# @ 48 rpm. BHA:3-8" DC's
11-16½" DC & Jars Laid down DC & had a weld box. Pump Size:5½ x 18
PP:900# @ 58 spm. GPM:360. Bit #8 Rerun 12¼" JS4 Smith Tool in @ 4898'

12-03-75

Drlg @ 5546' (129'/12 hrs) Days:31 Trip Time:7 1/2 hrs. Form:Fesellit
Basalt Casing 13 3/8" @ 1030'. WC 40,000# @ 47 rpm. BHA: 3-8" D
11-16", 2" DC & jars. Laid down DC had a sweld box. Pump Size: 5
8. PP 800# @ 58 spm. GPM:358. Bit # 8 ReRun 12 1/4" JS4 Smith in
4898', out @ 5437', (1090'/108 hrs) Jets:2-9/16 & 1-5/8". Cond: T-3,
B-8, G in gauge. Bit #12 12 1/4" F3 Smith in @ 5437', (109'/8 3/4 hrs)
Jets:2-9/16 & 1-5/7". Dev - 1° @ 5437'. Type Mud:Gel Chem, MW:9.
Vis:50, PV:25, Yp:15, WL:9.0, FC:2/32, pH:9.0, Oil:0%, Solids:7%
Sand:1 3/4%, LCM:6 Gel Init./10 min:5/20 Chloride:550 ppm. Daily
Mud Cost-\$478 Cum Mud Cost \$23,255 Total Well Cost \$248,325.45
Mud Temp 92° in & out. Temp Survey @ 5437' 4 themo 148°, 148°, 144°
148°. 4 1/2 hrs pump repair. Washed out pump seat.

12-04-75

Drlg @ 5,906' (360'/23 hrs) Days:32, Formation:Filcrite & Basalt.
13 3/8" @ 1030'. WOB 40,000# @ 47 rpm. BHA: 3-8" DC's & 11-16 1/2"
DC & Jars. Pump Size: 5½ x 18. PP 750# @ 58 spm. GPM:358. Bit #12
12¼" F3 Smith in @ 5437', (469'/31 3/4 hrs). Jets:2-9/16" & 1-5/8".
Type Mud:Gel Chem, MW 9.1, Vis:46, PV:20, Yp:11, WL 9.5,
FC:2/32, pH:9.0, Oil:0%, Solids:6%, Sand:1%, LCM:2, Gels:3/16
Chloride:550 ppm. Daily Mud Cost \$503.00 Cum Mud Cost \$23,758
Total Well Cost \$253,822.05. Mud Temp 86° in & 89° out. 1 hr jet pit

12-05-75

Drlg @ 6166' (260'/19 3/4 hrs) Days:33, Formation:Weathered Basalt
Casing: 13 3/8" @ 1030'. WOB 40,000# @ 47 rpm. BHA:3-8" DC's
& 11-16½" DC & Jars. Pump Size:5 1/2 x 18. PP 800# @ 58 spm.
GPM:358. Bit #12 14 1/4" F-3 Smith in @ 5437', (729'/51 1/2 hrs).
Jets:2-9/16 & 1-5/8". Type Mud:Gel Chem, MW 9.1, Vis:40,
PV:18, Yp:9, WL:9.6, FC:2/32, pH:5, Oil:0%, Solids:6%,
Sand:3/4%, LCM:0 Gels:0/10 Chloride:540 Daily Mud Cost \$541
Cum Mud Cost \$24,299 Total Well Cost \$258,237.05. At 6,000'
1 1/2 hrs ran Temp Survey in pipe. 144° 144° 145° 146°.
1 1/4 hrs jet pit. 1 1/2 hrs unplug line between mud tank. Temp
in 84°, out 87°.

12-06-75

Drlg @ 6,046' (194'/21½ hrs) Days:34 3½ hrs repairing pump.
Formation:Weathered Basalt. Casing:13 3/8" @ 1030' WOB:40,000# @
47 rpm. BHA:3-8" DC's & 11-16½" DC & jars. Pump Size:5½ x 18
PP 800# @ 58 spm. GPM:358. Bit #12 12¼" S3 Smith in @ 5447',
(1023'/73 hrs). Jets:2-9/16" & 1-5/8". Type Mud:Gel-Chem MW:8.9,
Vis:40, PV:12, Yp:9, WL:10, FC:2/32, pH:10, Oil:0%, Solids:6%,
Sand:¼%, LCM:0, Gels:2/15, Chloride:300 ppm. Daily Mud Cost \$689.00
Cum Mud Cost \$24,982.00 Total Well Cost \$262,652.05
Temp 78° in & 92° out.

12-07-75

TD 6,500' (40'/3½ hrs) Repair spool equip. Days:35 Trip time:2¼ hrs
Casing:13 3/8" @ 1030'. WOB 40,000# @ 47 rpm. BHA: 3-8" DC's &
11-16½" DC & jars. Pump Size:5½ x 18. PP 800# @ 58 spm. GPM:358
Bit #12 12¼" S3 Smith in @ 5447', out @ 6500', (1063'/76½ hrs). Jets:2-
9/16". Condition: T-5, B-4, G-in gauge. Bit #13 8 3/4" S3 Smith in
@ 6500', Jets:3-5/8". Type Mud:Gel-Chem MW:8.9, Vis:45, PV:15
Yp:10, WL:9.8, FC:2/32, pH:10, Solids:5%, Sand:¼%, Gels 3/7,
Chloride:300 ppm. Daily Mud Cost \$384 Cum Mud Cost \$25,371
Total Well Cost \$270,421.05 Temp in 88° out 90°. 14¼ hrs remove
BOP's and repair spool. 2 hrs survice @ 6500'. 12 hrs @ 6500' BOP
temp 194°. 2 hrs trip in hole.

12-08-75

Drlg @ 6703' (203'/21¼ hrs) Days:36 Trip time:2 hrs. Formation: Felcite
Basalt, clear, quartz & harder drilling. WOB 15-30,000# @ 47 rpm. BHA:
11-16 1½ drill collars. Pump Size:5½ x 18 PP 800# @ 58 spm. GPM:358
Bit #13 8 3/4" S-3 Smith in @ 6500' (203'/21¼ hrs). Jets:3-5/8". Dev -

12-10-75

Drlg @ 6,750' (165'/21 hrs) Days:38 Formation:Weathered Basalt & tuff
WOB 35,000# @ 48 rpm. BHA:Bit junk sub 11.6 DC's. Pump Size:5½ x 18
PP 800# @ 58 spm. GPM:358, Bit #14 8 3/4" F-5 Smith in @ 6716',
(244'/28½ hrs) Jets:3-5/8. Type Mud:Gel-Chem, MW 9.0, Vis:54,
PV:19, Yp:9, WL:9.4, FC:2/32, pH:10.0, Solids:6%, Sand:¼%,
Gels:0/10, Chloride:400 ppm. Daily Mud Cost \$287,370.05
3 hrs repair kelly & kelly bushing. Loss some Volume - 40-50 Barrel Mud
Temp in 98°, out 102°.

12-11-75

Drlg @ 7,208' (248'/24 hrs) Days:39, Formation:Decomposed Basalt
Casing:20" @ 310', 13 7/8" @ 1030'. WOB 35,000# @ 47 rpm. BHA: Bit
Junk sub 11.6 DC's. Pump Size:5½ x 18, PP 850# @ 58 spm. GPM:358
Bit #14 8 3/4" F-5 Smith in @ 6716', (492'/52½ hrs). Jets:3-5/8".
Type Mud:Gel Chem MW 9.0, Vis:53, PV:21, Yp:10, WL:9.6, FC:2/32
pH:10, Solids:6%, Sand:¼% Gels:0/6 Chloride:400 ppm. Daily Mud
Cost \$836 Cum Mud Cost \$28,352 Total Well Cost \$291,785.05
Temp in 90°, out 110°.

12-12-75

Drlg @ 7,334' (136'/15 3/4 hrs) Days:40, Trip time:6 hrs. Formation:
Decomposed Basalt. Casing 13 3/8" @ 1030'. WOB 35,000# @ 47 rpm.
Bit & 11-6½" DC. Pump Size:5½ x 18, PP 850# @ 58 spm. GPM:358.
Bit #14 8 3/4" F-5 Smith in @ 6916', out @ 7,215', (499'/53½ hrs).
Jets:3-5/8". Cond:T-2, B-3, G in gauge. Bit #15 8 3/4" F-3 Smith in @
7,215', (129'/14 3/4 hrs) Jets 3-5/8". Dev - 3¼° @ 7215'. Type Mud:
Gel-Chem. MW:8.9, Vis:57, PV:20, Yp:9, WL:9.8, FC:2/32, pH:
Solids:6%, Sand:¼%, Gels:0/6, Chloride:650 ppm. Daily Mud Cost \$553
Cum Mud Cost \$29,905 Total Well Cost \$330,901.05 Temp in 96°,
out 108°. 2½ hrs temp survey. 184° @ 7215'; 172° @ 6915'.

12-13-75

Depth 7510' (166'/24 hrs.) Days - 41, logging, Drlg. hrs. 16,
trip time 4½ hrs. Casing 20" @ 310, 13-3/8" @ 1030'. WOB
35,000#, RPM 48. Pump size 5½ x 18, SPM 58, P.P. 850, GPM
358. Bit #15 (8-3/4 F3 Smith) in @ 7215', out 7510' (295'/30-3/4 hrs.
Jets 3-5/8, Cond. T-3, B-3, G - in gauge. Type mud gel chem,
weight 9.0, vis. 54 PV 22, YP 12, W.L. 9.6, FC 2/32, pH 10,
solids 6%, sand ¼%, gels 4/12, chl. 650 ppm, daily mud cost -
\$319.00, cum. mud cost \$30,224; total cost well \$339,036.80.

12-14-75

Depth 7516', no drlg. time, days - 42, logging. Casing 20" @
310, 13-3/8" @ 1030'. 24 hrs. logging. Temp. log (max. temp.
185°), compen. vel. log (7500' up to 1,000'), frac finder log
(7500' up to 1,000'), radioactivity log (7500' up to 1010').

12-15-75

TD 7516' - Days - 43 (nipple down). Casing 20" @ 310', 13-3/8"
@ 1030'. Ran in and laid down drilling pipe, set cement plug
1100' up to 970', cement with 115 sx. reg. cement, plug in place
@ 12:30 a.m. 12-15-75. Laid down remainder of drill pipe.

12-16-75

TD 7,516' Days:44 Nipple down. Total Well Cost \$355,878.28

12-17-75

TD 7,516' Days:45. Rig Released @ 12:00 Noon 12-16-75
Total Well Cost #360,212.02