

Drilling Report

Z & S Construction Co., Inc.

Recla #1

SE $\frac{1}{4}$  Sec. 9 - T19S - R 44W  
Malheur County, Oregon

4-26-82

Drove to location. Checked with lawyer, Butler and Looney P.C. Checked with planning commission. Checked with George Recla, Landowner. Everything was O.K. Was Given the go ahead to drill. Landowner will furnish water for \$500.00. Land Damages at \$1,000.00 per location. Chandler and Associates Rig #1 started arriving at 1:00p.m. today.

4-27-82

Lined up fuel for rig with Chevron D.B. Anderson. Started rigging up Rig #1 today. Chandler and Associates Rig #1 Tool Pusher - D.L. Fladeland

4-28-82

Rigging up. Derrick up at 2:00 p.m. Pumped water in pits.

4-29-82

Water tank filled half full. Pumped reserve pit full of water. Rigged up rat hole digger. Start digging rat and mouse hole at 1:00 p.m. Spudded George Recla#1 at 4:00 p.m.

4-30-82

Finished drilling rat hole and mouse hole. Drilling at 45' Vis 70, wt 8-9. Hole still caving. Raised Vis 80-100. Bit #1, 12 $\frac{1}{2}$ " H.T.C. Type OSC 16, liner size 5 $\frac{1}{2}$ " S.P.M. 48. River gravel and rock.

5-1-82

Two days from spud depth at 633'. Bit #1 RPM 85, wt 15/20, pump pressure 500, liner 5 $\frac{1}{2}$ ", deviation 3/4° - 171' 10 a.m. 1/4° - 351' 3/4° - 539' 1° - 625' Ran 1 - 8-5/8 guide shoe, 5 - contholixens and 16 joints 24 lb. 8-5/8 casing. Total on hook 609' Set at 619'. Cemented with 450 sacks 3% cal chloride cement in place at 7:30 p.m. with good returns.

5-2-82

Three days from spud date. Wait on cement. Nipple up B.O.P. Wait on state geologist 4 hours. Tested all B.O.P. equipment. Blind rams ok. Pipe rams ok. Rotating lean ok. Drilling to 735' Bit #2, size 7-7/8", MFG Smith Type DTJ.

5-3-82

Four days from spud date. Drilling at 1338' Deviation 1° - 801', 1° - 1108', 1° - 1338' Bit #2 to 1338'. At 801' wt. 8.4 vis 36 50% shale light to med. gray 50% sand stone. RPM 82 Liner 5 $\frac{1}{2}$ " S.P.M. 63 trip in with Bit #3 at 10:00 p.m. Bit #3 7-7/8" MFG STC Type DTJ.

5-4-82

Five days from spud date. 7:30 a.m. drilling at 1368". Formation 50% bentonite shale wt. 8.8 vis 35. At 8:00 a.m. trip out with Bit #3. Run all 3 cones off. 1 hole at 3 cones. Break in Bit #4 and drilling ahead. Bit #4 Size 7-7/8" MFG. DTJ.

Drilling Report Recla #1

George Recla #1

Malheur County, Oregon

5-5-82

Six days from spud date. 6:30 a.m. drilling at 1512' Formation 50% bentonite shale wt. 8.18 Vis 33 RPM 63 Wt. on bit 35,000. Pump pressure 800, Liner 5 $\frac{1}{2}$ " S.P.M. 63 trip in. Schneider to watch progress today.

## DRILLING REPORT

## Z &amp; S Construction

Recla No. 1  
SE $\frac{1}{4}$  Sec. 9-T19S-R-44W  
Muhleir County, Oregon

## Date

- 5-6-82 Seven days from spud, depth 2321 at 6:00 A.M., made 809' in 24 hrs. Operation tripping, formation-sandstone & basalt. Mud weight 8.8, Vis 35, pump PSI 1000, SPM 65, Liner size 5 $\frac{1}{2}$ , stroke 16", bit wt. 20 to 35,000, RPM 64. 20 drill collars 6 $\frac{1}{2}$ ". Bit #4-7 7/8 -J33, in at 1368 - out at 2321, made 956' in 31 $\frac{1}{2}$  hrs., a rerun. T. G. G. Deviation at 1822 - 1 $^{\circ}$ , 2221 at 2 $^{\circ}$ , operation: Drilling 24 hrs. Survey 1 3/4 hrs. Mud log report: chromatograph gas show - 3 units at 1990' - Methane C1, Hotwire 2 units. Background gas- Hotwire (total) tr-1 unit, methane (c) trace 2 units. 1500-1710 Volcanic basalt (blk) & shale light grey-green. 1710-2030-s.s. very colored, prud, Gn, blk, & brn-volcanics, clear-white qtz, very coarse grain S.B. ang P srt unconsolidated 2030-2280 volcanics basalt & white tuff 2310-S.S. sh. clr. unconsolidated quartz.
- 5-7-82 Eight days from spud, depth 2597 at 6:00 A.M. made 276' in 24 hrs., operation: drilling, formation volcanics shale, M.W. 8.8, Vis. 34, Ph 9.5, solids 3, sand  $\frac{1}{2}$ , P V 4, YP4, pump PSI 1000#, SPM 65, Liner size 5 $\frac{1}{2}$ , Stroke 16, bit wt. 20 to 35,000, RPM 65. D.C. 20-6 $\frac{1}{4}$ ", Drlg. 3 to 4 min. per ft. Operations: drilling 21 hrs., trip 2 $\frac{1}{2}$  hrs. Rig service  $\frac{1}{2}$  hr. Mud log report: Gas show @ 2316-2318, Hotwire-7 units total gas, chromatograph-6 units Methane, trace Ethane, 2 units propane. Background gas- 1-2 units, Hotwire Chromatograph= 1-2 units Methane Lithology 2320-2460 Volc - Vcol, Pred, Blk, Gy, Orng w incr amt uncons qtz C-Vc Gr W Tr sh. Gy-Gm 2460-2580 Volc & sh-Gy-Gn, Brn, Alt, Ash Sft W Blk basalt HD also mix amts qtz w h-clr Vc-GR Anq. Lithology: 2320-2460-Volc, var colors predominate blk, gy, orange with increased amounts unconsolidated quartz, cl-very coarse grained with trace of shale light grey-green. Note: quartz in sample decreased between changes. 2460-2580 volcanics with some shale. Volcanics grey to green to brown, altered ash (shaly like). Soft with black basalt hard, also increased amounts of quartz white to clear, very coarse grained angular.
- 5-9-82 Nine days from spud, depth 2870 at 6:00 A.M. made 266' in 24 hrs. Operation drlg. formation shale and sandstone. M.W. 8.8 Vis 32, WL 14, filtercake 2/32 Ph 10 solids 3.5 sand  $\frac{1}{2}$  PV 12, YP 8 Cl. Tr. chl. 1000 Gel 2/6 pump PSI 900 Spm 64 liner size 5 $\frac{1}{2}$  stroke 16" Bit wt. 35,000 RPM 63 Bit No. 5 7 7/8 SBIW in at 2321, out at 2710, footage 389' in 33 $\frac{1}{2}$  hrs. T S B 4 G 1 Bit #6 7 7/8 F-2 in at 2710, footage 160' in 6 $\frac{1}{2}$  hrs. Operations: 20 hrs., drlg, 4 hrs., trip Dev. 2710-2 $^{\circ}$  Drlg. break at 2809 to 2814, 2844 to 47, 2851 to 2854, 2858 to 2862 no shows. Mud log report: Gas shows @ 2875-2830. Hotwire 6 units Total Gas chromatograph 9 units Methane, trace of Ethane. Background gas: Hotwire 3-4 units 2850-2700 chromatograph 3-4 units Methane trace Ethane, Volcanic tuff various colors with basalt. Medium grey to black, trace quartz, very coarse grained pyrity and mica. 2700-2730-shale-light grey-green blacky non-cake, also tuff, white green and trace of basalt. 2730-2860 sand stone-white to clear coarse to very coarse grained. Angular to sub-angular unconsolidated with free pyrity and mica. Note: A gas show was observed in this zone. Break down above.
- 5-9-82 Ten days from spud, drlg. at 3595 in basalt 60%, sandstone 30%, tough ash 10%, made 725' in 24 hrs., M.W. 8.8, Vis 37, W.L. 9, Filtercake 1/32, ph 9.5, sand  $\frac{1}{2}$  pump PSI-1000# SPM-64, Liner size 5 $\frac{1}{2}$ , stroke 16", Bit wt. 35,000, PRM 63, D.C. 20-6 $\frac{1}{4}$ ", Bit No. 6 -F2 in at 2710, 885' in 27 hrs., Dev. 3151-1 $\frac{1}{4}$  $^{\circ}$ , 3461-2 $\frac{1}{2}$  $^{\circ}$  drilling 5 to 6 min. per ft. Operation: 20 $\frac{1}{2}$  hr. drlg., 1 hr. survey, install valve in flow line 2 $\frac{1}{2}$  hrs. Mud Log Report: No gas shows, background gas Hot wire 2-4 units chromatgraph: 4 units Methane, trace of Ethane Lithology: 2860-3000-Volcanics basalt, black with tuff and ash, trace sandstone.

Date

5-9-82 Con't.

3000-3440 Alternating from volcanic basalt and ash to a sandstone-white quartz coarse grained moderately sorted unconsolidated. No fluorescence stain on cut.

3440-3590-sandstone as above then changing to a volcanic basalt with angular quartz, tuff ash

5-11-82 Twelve days from spud, depth 4520 made 353' in 24 hrs., operation drilling, formation tuff. M.W. 9.2, vis 42, WL 7, Filtercake 2, PH 9, sand 3/4, PV 11, pump PSI 1150, SPM 64, Liner size 5½, stroke 16', bit wt. 35,000, P.R.M. 63, cum. rot hrs. 127¼, bit #6-7 7/8 F2 in at 2710 made 1810' in 70½ hrs., operation-drilling-20½ hrs. cir. 3½ hrs., mud log report. No gas show, background gas: hot line 3-5 units, total gas.

Chromatograph 4-6 units Methane, trace Ethane, Lithology 4160-4516 Volcanics: tuff-dark grey to green with ash white grey-green also basalt black to dark brown (platy and brittle)

5-12-82 Thirteen days from spud. Depth 4745 made 195 in 13 hrs., operation, cir to log, ran logs to 921', unable to get logs to go, came out, ran bit and drill pipe to 1002', did not touch a thing, rotated for 30 min., came out to log. Log stopped at 923', came out-released loggers. Tripped in with drill pipe, came out laying down. Mud Loggers report: No gas shows: background gas hot wire 4-5 units. Chromatograph-4-6 units methane, Lithology: 4516-4660. Volcanics: basalt black-dark brown also tuff grey-green-brown and ash, light grey-green. 4660-4694-sandstone, white to clear quartz, very coarse grain angular-subangular, poorly sorted unconsolidated poorly cemented and culgarious in part, no fluorescence stain on cut. 4694-4743-volcanics: tuff and ash with some sandstone as above. No fluorescence stain on cut.

run at 1002'  
1395

5-13-82 Hug bottom of drill pipe at 673. Pumped 50 sx reg cement, let set for 4 hrs. Went down to tag plug, found plug at 642. Pumped 25 more sx cement, waited four hrs., found top of plug at 619. Pumped 50 sx of reg cement. Waited four hrs., found plug top at 470'. Layed down drill pipe and removed B.O.P., cut off casing 3' below surface. Put 15 sx cement in top of surface, 35½ to G.L. welded steal plate on top.