## FASKEN OIL AND RANCH, LTD. AVALON FEDERAL NO. 2 DRILL AND COMPLETE

Location: 2080' FSL & 750' FWL, Section 1, T-21-S, R-25-E, Eddy County, New Mexico Elevation: 3265' GL.

Spudded well @ 3:30 am CST 10-31-99.

Drilled 17-1/2" hole to 436' with fresh water. Lost complete returns at 218'. Set 13-3/8" 48.0# H-40 ST&C casing at 437'. Cemented with 500 gallons GW-27, 200 sx Class "H" with 10% A-10B (Thixset), 1% CaCl<sub>2</sub>, 10# gilsonite, and  $\frac{1}{4}$ # celloflake (s.w. 14.6 ppg, yield 1.52 ft<sup>3</sup>/sx) plus 400 sx Class "C" with 2% CaCl<sub>2</sub> (s.w. 14.8 ppg, yield 1.34 ft<sup>3</sup>/sx). PD @ 2:10 am CST 11-1-99. Had partial circulation after landing casing on bottom. Lost all returns during cementing operations. Top of cement at 125' per temperature survey.

1" cemented down 17-1/2" x 13-3/8" annulus as follows; <u>Plug #1:</u> Tagged TOC at 125' with 1" tubing. Cemented @ 125' with 50 sx Class "C" with 6% CaCl<sub>2</sub> (s.w. 14.8 ppg, yield 1.34 ft<sup>3</sup>/sx). <u>Plug #2:</u> WOC 2 hrs, tagged at 90'. Established circulation with 19 bbl fresh water. Cemented to surface with 90 sx Class "C" with 2% CaCl<sub>2</sub> (s.w. 14.8 ppg, yield 1.34 ft<sup>3</sup>/sx). NOTE: Setting plug #2 was witnessed by Ms. Kathy Queen with the BLM, Carlsbad, NM.

Drilled 12-1/4" hole to 2005' with fresh water. Set 9-5/8" 36.0# J-55 ST&C casing at 2003'. Cemented casing with 500 gallons GW-27, 200 sx Class "A" w/ 10% A-10B, 1% CaCl<sub>2</sub>, 10# Gilsonite/sk, 1/# celloflake/sk (sw 14.6 ppg, yield 1.52 cuft/sk) + 525 sx Class "C" w/ 4% Gel, 2% CaCl<sub>2</sub> (sw 13.5 ppg, yield 1.74 cuft/sk) + 200 sx Class "C" w/ 2% CaCl<sub>2</sub> (sw 14.8 ppg, yield 1.34 cuft/sk). Plug down @ 5:55 pm CST 11-5-99. Circulated 607 sx excess cement. Cementing operations witnessed by Mr. Gene Hunt with the BLM, Carlsbad, NM.

Drilled 8-3/4" hole to 8376' with 9.0 ppg cut brine water. Lost complete returns @ 8304'. Pumped mud and LCM plugs with no returns. Spotted open hole cement plugs as follows;

Cement plug #1 spotted @ 8100'; 150 sx Class "H" with 10% A-10B (Thixset), 1% CaCl<sub>2</sub>, 12# gilsonite and 1/4# celloflake (s.w. 14.6, yield 1.52 ft<sup>3</sup>/sx).

Cement plug #2 spotted @ 8100'; 125 sx Class "H" with 10% A-10B (Thixset), 1% CaCl<sub>2</sub>, 12# gilsonite and 1/4# celloflake (s.w. 14.6, yield 1.52 ft<sup>3</sup>/sx).

Cement plug #3 spotted @ 8175'; 125 sx Class "H" with 10% A-10B (Thixset), 1% CaCl<sub>2</sub>, 12# gilsonite and ¼# celloflake (s.w. 14.6, yield 1.52 ft<sup>3</sup>/sx).

Drilled out cement plug and lost complete returns at 8380'. Drilled to 8438' and spotted open hole cement plugs as follows;

Cement Plug #4 spotted @ 8311'; 200 sx Class "H" with 10% A-10B (Thixset), 1% CaCl<sub>2</sub>, 12# gilsonite and 1/4# celloflake (s.w. 14.6, yield 1.52 ft<sup>3</sup>/sx).

Cement plug #5 spotted @ 8160'; 150 sx Class "H" with 10% A-10B (Thixset), 1% CaCl<sub>2</sub>, 12# gilsonite and ¼# celloflake (s.w. 14.6, yield 1.52 ft<sup>3</sup>/sx).

Drilled to TD of 10,600'. Mudded up at 9360' with properties of 9.3 ppg mud weight, 36 sec. viscosity, pH 10.5, 11 cc water loss. Hole losing 10-20 bbl/hr drilling fluid.

Set 5-1/2" 17.0# N-80 LT&C casing at 10,593' with DV tool at 7276'. Cemented casing as follows;