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GEOLOGIC REPORT

#1 Cook
600' fnl, 990' fwl, Section 35
Twp 2N, Rge 56W
Morgan County, Colorado

SCANNED

Chronological Record

November 11, 1991 Rotary moved on location, Gear Drilling Rig #2 Contractor. Drilled 145' of 12¼" hole and set 8-5/8", 24# surface casing at 140' KB, with 70 sacks cement plus 3% CaCl₂. Plug Down at 3:30 pm. Drilled out at 9:30 pm.

November 12 Drilling at 2000'.

November 13 Drilling at 4290'.

November 14 Reached total depth of 5030'. Ran Great Guns Induction and Compensated Density logs.

November 15 Ran DST #1 5071'-5081'. Recovered 15' oil, 15' HOCM, 47' water. Plugged well with 35 sacks cement in the base of the surface casing and 10 in the top. Released rig.

Deviations: ¼° @ 655', ¼° @ 1217', ½° @ 1773', ¾° @ 2240', 1° @ 2645', 1° @ 3142', 1° @ 3825', ½° @ 4290'.

Samples Description (corrected to log depths)

5050' to 5070' Shale, dark grey, bentonitic.

5070' to 5074' Sandstone, white, vfg, clean, fair to good Porosity and Permeability, good oil stain and fluorescence.

5074' to 5078' Sandstone, white, dirty, very poor P&P, good oil stain and fluorescence.

5078' to 5082' Sandstone, white, vfg, tight, very poor P&P, no shows.

5082' to 5094' Sandstone, white, vfg, partly clay filled, poor P&P, no shows.

5094' to 5105' Sandstone, white, vfg, dirty, poor P&P, no shows.

5105' to 5130' Shale, dark grey, silty.

Bit Record

1. Smith FDS (re-tip) 140' to 4290'
2. Smith FDS (re-run) 4290' to 5030'

Great Guns Formation Tops

Elevations: Ground 4352' KB 4362'

Niobrara shale	4222'	Bentonite marker	4978'
Ft. Hays limestone	4573'	Muddy "D" sand	5070' (-708')
Codell sandstone	4656'	Huntsman shale	5104'
Carlile shale	4661'	Total Depth (logger)	5125'
Greenhorn limestone	4724'	Total Depth (driller)	5130'

Drillstem Test Results

Tester - Pick Testers

Interval tested - 5071' to 5081'

Test Description - The tool opened with a weak blow, increasing to bottom of bucket in 70 minutes.

Times - 90 open, 90 closed.

Recovery - 15' oil, 15' oil cut mud, 47' water.

Sampler - 2150 cc Water - $R_w = 0.85 @ 62^\circ$ (8000 ppm)

Pressures - Initial Hydrostatic 2543 psi
Final Hydrostatic 2356 psi
Initial Flow 50 psi
Final Flow 75 psi
Shutin 872 psi

Comment

The #1 Cook was drilled to a total depth of 5130', 60' below the top of the "D" sand. Structurally this well ran as expected with the top of the "D" sand coming in at -708'. The "D₁" sand was only marginally developed (3') and drillstem test recovered only a small amount of oil and water. This location appears to be on the edge of the "D₁" channel, and there is reason to believe that the sand thickens to the north, making the Huey Ranch acreage very prospective.

The well was plugged in the surface casing according to instructions from the Colorado Oil and Gas Commission with 35 sacks of cement in the base and 10 in the top.



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