



00362703

Well: No.3 Miller
 Operator: Apex Oil Company
 Contractor: Allison Drilling Company
 Location: E $\frac{1}{2}$ SW .SE Sec. 21-3S-50W
 County: Washington
 State: Colorado
 Elevation: 4555.8 Gr. 4562 KB
 Casing: 8 5/8" at 268
 Commenced: September 1, 1965
 Logs: Schlumberger IES & Micro
 Completed: September 5, 1965
 Status: D & A

ELECTRIC LOG TOPS

<u>Formation</u>	<u>Top</u>	<u>Subsea</u>
NIOBRARA	2986	
FT. HAYS	3350	
GREENHORN	3598	
BENTONITE	3784	+778
"D" SAND	3868	+694
"J" SAND	3922	+640
Total Depth	4001 Driller 4006 Schlumberger	

00362707

SAMPLE DESCRIPTION

- 3200 - 20 Gray shaly limestone with few pieces gray-green bentonitic shale
- 20 - 40 Same as above
- 40 - 60 Same as above
- 60 - 80 Same as above
- 80 - 3300 Same as above
- 3300 - 20 Same as above with increase in bentonitic shale
- 20 - 40 Gray shaly limestone and gray limy shale with gray-green bentonitic shale
- 40 - 60 Same as above
- 60 - 80 Same as above
- 80 - 3400 White crystalline- chalky limestone, gray limy shale
- 3400 - 20 Same as above (most of limestone is crystal clear)
- 20 - 40 Same as above
- 40 - 60 Same as above
- 60 - 80 Same as above
- 80 - 3500 Same as above
- 3500 - 20 Gray limy shale with trace limestone as above
- 20 - 40 Same as above
- 40 - 60 Same as above
- 60 - 80 Same as above
- 80 - 3600 Same as above
- 3600 - 20 White crystalline limestone and gray shale (samples poor contains Niobrara Ft. Hays and Greenhorn)
- 20 - 40 Same as above (sample poor)
- 40 - 60 Same with increase in limestone
- 60 - 80 Same as above
- 80 - 3700 Same as above

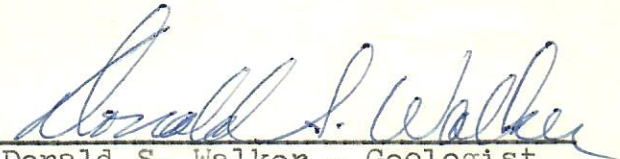
3700 - 20 Same as above
 20 - 40 Same as above
 40 - 60 Gray shale with trace limestone as above
 60 - 80 Gray bentonitic shale (sample poor)
 80 - 3800 Same as above
 3800 - 20 Same as above
 20 - 40 Same as above
 40 - 60 Same as above
 60 - 70 Same as above
 70 - 80 White fine- medium grained sandstone and gray shale
 No show
 80 - 90 Same as above
 90 - 3900 Same as above
 3900 - 20 Same as above with decrease in sandstone
 20 - 40 White to gray medium grained porous sandstone- Light
 staining
 40 - 60 Same as above with increase in sandstone
 60 - 80 Same as above
 80 - 4000 Same as above

 Circulated samples at 4001(driller)
 15 Minutes Same as above
 30 Minutes Same as above

The Apex No.3 Miller located in the E $\frac{1}{2}$ SW SE Section 21-3S-50W Washington County, Colorado ran 24 feet structurally lower than the British-American No.1 Miller located in the SE SE Section 21-3S-50W. Subsurface geology and seismic indicated that this well would run structurally higher than the BA No.1 Miller which carried oil shows in the "J" Sandstone section.

The Apex No.3 Miller cut a fault in the Fort Hays topped at a depth of 3350 feet. The samples from drill cuttings of the Fort Hays section were unique in the No.3 Miller in that they were approximately 50% clear calcite crystals - indicative of fault plane - with the remainder being normal white chalky limestone. The electric log of the No.3 Miller clearly shows the faulted zone in the Fort Hays. The limestone at 3380 feet was drilled again at a depth of 3470 feet. This repeated section accounts for the structurally low position of the No.3 Miller.

Due to the low structural position and lack of sufficient oil shows, the well was plugged and abandoned September 5, 1965.


Donald S. Walker - Geologist