



GEOLOGICAL COMPLETION REPORT
HELMERICH & PAYNE, INC.
NO. 1-11 WILLIAM L. DOWNING

RECEIVED
AUG 23 1976
COLORADO OIL & GAS CONS. COMM.

Location: C NW NW (660' FN & 660' FW) Section 11, Township 3 South, Range 56 West, Washington County, Colorado.

Elevation: 4770' ground, 4779' kelly bushing, Powers.

Type: Wildcat

Spud Date: July 19, 1976 at 7 P.M. Plug down at 10:30 P.M. Drilled out at 7:15 A.M., July 20. Made total depth at 4:20 P.M., July 24, 1976.

Status: P&A July 25, 1976. Hole filled with 9.9# mud, plugged with 15 sacks across bottom and 10 at top of surface casing.

Casing: 4 joints of 8-5/8" new 24# set at 169' KB with 150 sacks, 3% CC.

Total Depth: 5252 driller, 5250 logger.

Mud: Chem-gel, Magcobar. While drilling the "D" and "J" the viscosity was 55 sec./qt, weight 9.9# and water loss 8.2 Mi. per 30 min.

Cores & DST: No cores. One DST of "J", Lynes.

Logs: Schlumberger: Induction-Electrical 5249' to 163'
Density-Gamma ray 5248' to 4850'

Contractor: Allison Drilling Co., Denver, Colorado. Rig #1
Tool Pusher: Tom Blake; Pump: Gardner Denver- 16"
Derrick: Lee C. Moore, double; Drawworks: National T-32

Samples: 30 foot 170' to 4500', 10 to 5100', 5' to 5150', 10' to 5250
Samples deposited at AMSTRAT, Denver.

7 A.M. July 21, drilling at 2710'; July 22, drilling at 4002'; July 23, drilling at 4755'; July 24, drilling at 5187'.

Deviation: 1/2° at 510' & 885', 1/4° at 1230' & 1609', 1/2° at 1885', 3/4° at 2032 & 2679', 1/2° at 3023, 1-1/4° at 3183, 1° at 3520', 1-1/4° at 3868 & 4222', 1° at 4569', 1/2° at 4757'.

Bit Record:	Bit No.	Size	Make	Type	Depth Out	Footage	Hours
		12-1/4	Sec.	S-3			2
	1	7-7/8"	Stc.	DSJ	3183	3039	26-3/4
	2	7-7/8"	Stc.	DTJ	4757	1574	27-3/4
	3	7-7/8"	Stc.	DGJ	5195	438	20-1/4
	4	7-7/8"	Htc.	ODH	5252	57	2

GEOLOGICAL INFORMATION

Formation Tops:

Cretaceous

Niobrara
Fort Hays
Carlile
Greenhorn
"X" Bentonite
"D" Sandstone
"J" Sandstone
T.D. in "J"

Schlumberger

4144
4597
4641
4724
4960
5053
5107
5250

Datum

+635
+182
+135
+ 55
-181
-274
-328
-471

DVR	
FJP	
HHM	✓
JAM	✓
JJD	✓
GCH	
COM	

Samples were examined under a binocular microscope with a 9X lens. Sandstone samples were examined for fluorescence and cut with an ultraviolet light and chlorothene. All samples were examined wet and are not corrected for lag. Niobrara through Greenhorn is described from the first sample containing same.

4290-4320 Niobrara - Shale, gray with light brown to white chalk specks.
Some pyrite.

4610-4620 Fort Hays - Limestone, light gray to white, chalky.

file

4670-4680 Carlile - Shale, gray, silty, micaceous.

4740-4750 Greenhorn - Limestone, brownish gray, microcrystalline, fragmental. Strap at 4757', no correction (0.48')

5060-5070
(5053 log) "D" Sandstone - Sandstone, fine to medium grain, light gray to white, hard, poor porosity, yellow fluorescence, weak silver cut. Very little sand, one cluster in tray.

5070-5080 Sandstone, fine to very fine grain, subangular, fair porosity, no fluorescence, no cut.

5080-5090 Sandstone, fine to very fine, silty, gray, subrounded, slightly carbonaceous and micaceous, poor to fair porosity, no shows, wet.

5090-5100 Sandstone, as above with glauconite and rose quartz, no shows.

5100-5110 Shale, dark gray to black.

5110-5115
(5107 log) "J" Sandstone - Sandstone, fine to medium grain, subrounded, glassy, few dark minerals and rose quartz, slightly micaceous, good porosity, no fluorescence, no cut, wet.

5115-5120 Sandstone, fine to medium grain, subangular, light gray, few dark minerals, rose quartz and pyrite inclusions, poor porosity, no shows, wet.

5120-5125 Sandstone, fine grain, subrounded, light gray, few dark minerals, rose quartz, slightly micaceous, fair to good porosity, no shows, wet.

5130-5135 Sandstone, as both above.

5135-5140 Sandstone, fine grain, subrounded, light gray, few dark minerals and glauconite, fair to good porosity, no shows.

5140-5145 Sandstone, as above.

5145-5150 Sandstone, very fine to siltstone, dirty gray, slightly carbonaceous, poor porosity, no shows.

5150-5160 Sandstone, as above.

5160-5170 Sandstone, fine grain, subrounded, light gray, clean, hard, poor porosity, no shows.

5170-5180 Sandstone, fine grain silty, carbonaceous, poor porosity, no show.

5180-5190 Sandstone, as above.

5190-5200 Sandstone, fine grain, subangular, light gray, few dark minerals, rose quartz, micaceous, fair porosity, no shows. Trip for bit #4 at 5195'.

5200-5210 Sandstone, as above, with spotted clay matrix, fair porosity, no shows.

5210-5220 Sandstone, fine grain, silty, subrounded, glassy, clean, good porosity, no shows with shale dark gray.

5220-5230 Sandstone, fine grain, silty, gray, few dark minerals, micaceous, fair porosity, no shows.

5230-5240 Sandstone, medium grain, light gray, subrounded with medium dark mineral inclusions, white clay matrix, poor porosity, no shows.

5250-- 30 minute - Sandstone, fine grain, subrounded, dark minerals, chlorite, white clay matrix, no shows.

60 and 90 minute - Sandstone, as above with glauconite.

file

[REDACTED]

DST No. 1 5185' to 5196', "J" Sandstone, straddle test, log depth, open 30, shut in 60, open 60, shut in 120, all minutes. Opened with blow from bottom of bucket 1 minute and 45 seconds. Second open weaker with blow from bottom of bucket in 11 minutes, decreasing after 40 minutes and to end of open period. Recovered 1980' fluid: 480' muddy water, 1500' water. Top 1.1 ohms at 90° = 4400 PPM, middle 2.8 ohm at 85° = 1600 PPM, bottom 4.5 ohm at 85° = 1000 PPM. IF 431#, FF 787#, SIP 902#, IF 853#, FF 887#, FSIP 892#, IH 2815#, FH 2641#. Note: Chart recorded slight tool slippage 15 minutes into initial flow period. Bottom sampler volume = 2150 cc, pressure 100#, recovered 1200 cc water, 2.8 ohms at 85° = 1600 PPM. Rig water 1.2 ohms at 70° = 5000 PPM. No oil, no gas, test conclusive.

INFORMATION

The weak show of oil in the "D" is believed to be from the zone 5056' to 5058' shown on the log. No shows of oil or gas were seen in the "J" Sandstone. The DST tested a "log show" 5180' to 5197'. It is believed the fresh formation water recovered accounts for the positive S-P as well as induction resistivity greater than short normal resistivity in the zone tested 5185' to 5196'.

Dated: July 26, 1976



Alexander Boardman
Certified Professional Geologist #442
1000 Majestic Building
Denver, Colorado 80202

file