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OIL & GAS  
 CONSERVATION COMMISSION

GEOLOGICAL REPORT

S. D. JOHNSON #4 WIANT

- I. LOCATION: SE NW SE of Section 33-3S-49W  
Washington County, Colorado
- II. CONTRACTOR: S. D. Johnson  
Denver, Colorado
- III. TYPE WELL: Field Extension
- IV. CASING: Set 224 ft. of 8-5/8" casing at  
235' K.B. with 125 sacks of cement.
- V. ELEVATION 4416 Ground 4426 Kelly Bushing.

VI. TOPS:

	<u>ELECTRIC LOG</u>	<u>SUB-C DATUM</u>
Niobrara	2644	
Ft. Hays	3116	
Base of Codell	3179	
Greenhorn	3286	
Bentonite	3467	
"D" Sand	3554	Plus 872
"J" Sand	3606	Plus 820
Total Depth	3632	

VII. CORES:

- Core #1 3591-3608 Drillers Depth  
3595-3612 Electric Log Depth
  - 11 ft. Black shale.
  - 1 ft. Reworked sand and shale.
  - 5 ft. Light gray, medium grained sandstone with occasional thin shale streaks, good porosity and permeability, good stain and fluorescence.
  
- Core #2 3608-3628 Drillers Depth  
3612-3632 Electric Log Depth
  - 1 ft. Light gray, medium grained sandstone, fair staining, good porosity and permeability.
  - 1 ft. Sandstone as above with black shale laminations.

## Core #2 (Cont'd)

14 ft. White, medium grained, slightly shaley sandstone, good porosity and permeability, slight fluorescence.

2 ft. Light gray medium grained shaley sandstone, poor porosity, spotted staining.

1 ft. Reworked sand and shale, staining in sandstone.

1 ft. Reworked sand and shale. No shows.

## VIII. CORE ANALYSIS:

DEPTH	HORIZONTAL PERM.	VERTICAL PERM.	POROSITY	SATURATION	
				OIL	WATER
3602-03	38	17	20.7	15.4	74.4
04	355	135	24.7	32.0	53.5
05	260	159	24.6	29.0	58.8
06	643	547	21.7	35.9	24.4
07	756	667	23.1	39.5	22.8
08	880	673	24.0	47.9	24.8
09	805	537	23.0	4.4	88.7
10	1830	1660	23.2	3.4	89.3
11	2120	1960	24.9	0.0	92.0
12	1460	1320	23.4	0.0	88.5
3624-25	812	735	25.2	21.0	56.8
26	40	11	21.8	15.2	72.0
27	52	10	22.4	8.5	83.1
28	15	3.0	20.9	0.0	90.8

## IX. DRILL STEM TESTS:

D. S. T. #1 3604-3608 Drillers Depth  
3608-3612 Electric Log Depth

Open 5 minutes, shut in 15 minutes.

Recovered 120 feet and  
300 feet muddy water  
650 feet water

Flow pressure 396-552

Shut in pressure 734

Hydrostatic pressure 1924

## X. DAILY REPORT:

Feb. 2 Moved and set surface.  
3 Drilling 258 to 2508  
4 Drilling 2508 to 3591  
5 Coring 3591-3608 and 3608-3628  
Ran D.S.T. #1 and Electric Log  
6 Plugged and abandoned.



XI. CORING TIME:

DEPTH From-To	MINUTES PER ONE FOOT INTERVAL
3591-3601	17-19-17-17-21-22-23-25-27-30
3601-3611	30-2-1-5-10-7-8-3-2-5
3611-3621	7-7-6-7-8-10-8-7-8-9
3621-3628	9-9-8-8-6-2-2

XII. SAMPLE DESCRIPTION:

3500-3554	Black shale.
3554-3560	Light gray medium grained sandstone, good porosity, good show of oil, wet.
3560-3587	Light gray fine to medium grained sandstone with black shale streaks, good porosity, wet with a fair show of oil.
3587-3595	Black shale.
3595-3632	Cores #1 and #2

XIII. POSSIBLE PAY ZONES:

"D" Sand

The entire "D" Sand had a show of oil, but this zone contained too high a percentage of water to make a commercial well.

"J" Sand

The top six feet of the "J" Sand had a good show of oil. A drill stem test of this zone recovered mud and water.

The remainder of the "J" was non-productive.

XIV. PRODUCTION:

Plugged and abandoned.

Duane S. Larson  
 Petroleum Geologist