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## **GEOLOGICAL REPORT**

Grady Bolding Corporation  
#24 Grizell  
W/2 SW NE Section 31  
Township 17s – Range 10w  
Ellsworth County, Kansas

Contractor: L.D. Drilling Company

Spud: August 3, 2002

Completed: August 11, 2002

Surface Casing: 8 5/8" @ 330 ft.

Production Casing: 5 1/2" @ 3243 ft.

Measurement: Kelly Bushing

Elevation: 1798 ft. GL      1803 ft. KB

## **GEOLOGIC FORMATION TOPS**

Anhydrite	574	+1229	Brown Lime	2955	-1152
Base Anhydrite	604	+1199	Lansing	2970	-1167
Topeka	2586	-783	Base Kansas City	3235	-1432
Heebner	2840	-1037	Arbuckle	3242	-1439
Toronto	2859	-1056	Rotary Total Depth	3248	-1445
Douglas	2866	-1063			

The formation tops are based on rotary measurements. No log was run in the open hole. The pipe strap at 3248 feet was within one foot of rotary measurements, no correction was made.

The well was under geologic supervision from 2800 feet to rotary total depth. Samples were examined from 2500 feet to rotary total depth.

## II. DRILL STEM TESTS

### Drill Stem Test #1 3232-3248

Open 30 min., SI 60 min., open 30 min, SI 60 min

Initial open: Strong blow off bottom of bucket in 30 seconds, decreasing

Final open: Strong blow decreasing throughout.

Recovered: 2700 feet total fluid. (Approximately 40 barrels)

105 ft slightly oil and gas cut mud (3% oil)

2295 ft slightly oil and gas cut water (12% - 18% oil)

300 ft water

IFP: 648-1089#      ISIP: 1151#

FFP: 1117-1140#      FSIP: 1151#

HP: 1727-1727#

It is noted that the total fluid recovery was about 40 barrels. Approximately 35 barrels were recovered in the first 30 minutes, (about 70 bbls/hour, or about 1680 bbls/day). The total recovery is about 88% water and 12% oil.

## III. STRUCTURAL GEOLOGY

The #24 Grizell encountered both the Lansing and Arbuckle in a favorable structural position. Detailed structural comparisons with surrounding wells in section 31 can be seen on the attached maps of the Lansing, Arbuckle and the Lansing to Arbuckle interval.