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Grady Bolding Corporation  
 Betts #1  
 SW-NW-NE; Section 6-14s-11w  
 Russell County, Kansas  
 Page No. 1

15-167 - 23180 6-14s-11w  
 4290 FSL  
 2310 FEL

**Dry and Abandoned**

**Contractor:** L.D. Drilling Company (Rig #1)  
**Commenced:** November 20, 2000  
**Completed:** November 26, 2000  
**Elevation:** 1825' K.B.; 1823' D.F.; 1820' G. L.  
**Casing Program:** Surface; 8 5/8" @ 420'  
 Production; None  
**Samples:** Samples saved and examined 1400' to the Rotary Total Depth.  
**Drilling Time:** One (1) foot drilling time recorded and kept 1400' to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Formation Testing:** There were two (2) Drill Stem Test ran by Trilobite Testing.  
**Electric Log:** None.

<u>Formation</u>	<u>Sample Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite (driller)	692	+723
Grand Haven	2252	-427
1 <sup>st</sup> Tarkio Sand	2258	-433
Dover	2275	-450
Tarkio Lime	2328	-503
Willard Sand	2365	-540
Elmont	2390	-565
Burlingame	2466	-641
Scranton	2483	-658
Howard	2535	-710
Topeka	2574	-749
Heebner	2846	-1021
Toronto	2871	-1046
Douglas	2885	-1060
Brown Lime	2935	-1110
Lansing	2950	-1125
Base Kansas City	3234	-1409
Conglomerate	3271	-1446
Arbuckle	3281	-1456
Rotary Total Depth	3310	-1485

(All tops and zones determinations were made from a correlation of Drilling Time Log and Sample Analysis.)

SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.

HERINGTON THRU RED EAGLE SECTION

There were several zones of well developed porosity encountered in the shallow zones but no shows of oil and/or gas were noted.

TARKIO SECTION

2258-2270' Sand; light gray to gray, very fine grained, sub angular to sub rounded, fair sorting, friable, fair intergranular porosity, few calcareous, shaley, micaceous, questionable gas bubbles, no stain, no free oil and no odor in fresh samples.

WILLARD SECTION

2365-2376' Sand; gray, very fine grained, sub rounded, few sub angular, good sorting, friable, fair to good intergranular porosity, shaley in part, micaceous, questionable gas bubbles, trace light brown spotty stain, no show of free oil or odor in fresh samples.

TOPEKA SECTION

2721-2734' Limestone; gray, highly fossiliferous, cherty, dense, no shows.

2754-2759' Limestone; gray to tan, fossiliferous, cherty, no shows.

2776-2786' Limestone; gray to tan, granular, sub oocastic, poorly developed porosity, no shows.

2805-2826' Limestone; tan to gray, fossiliferous, cherty, plus tan to gray fossiliferous chert.

TORONTO SECTION

2871-2880' Limestone; white to cream, oolitic, slightly cherty, scattered porosity, trace white oolitic chert.

DOUGLAS SECTION

2900-2916' Sand; very fine grained, sub rounded to sub angular, micaceous, shaley, friable, fair intergranular porosity, no shows.

LANSING SECTION

2950-2952' Limestone; white to gray, chalky, trace pin point porosity, spotty brown to golden brown stain, weak show of free oil and no odor in fresh samples.

2961-2964' Limestone; white, fossiliferous in part, chalky, trace gray fossiliferous chert.

2968-2981' Limestone; tan, oocastic, good oocastic porosity, fair brown to light brown stain, show of free oil (gassy) and faint odor in fresh samples.

Drill Stem Test #1 2938-2982'

Times: 30-30-30-30

Blow: Weak

Recover: 5' mud

Pressures: ISIP 652 psi  
FSIP 545 psi  
IFP 37-37 psi  
FFP 37-37 psi  
HSH 1469-1401 psi

- 3001-3006' Limestone; gray to white, highly oolitic, slightly cherty, poor visible porosity, and faint odor in fresh samples.
- 3030-3036' Limestone; gray, fossiliferous, chalky, poor visible porosity, no shows.
- 3042-3053' Limestone; gray, oocastic, good oocastic porosity, fair spotty brown to golden brown stain, show of free (gassy), fair odor.

Drill Stem Test #2 3036-3051'

Times: 30-45-45-60

Blow: Weak to strong

Recovery: 270' salt water

Pressures: ISIP 797 psi  
FSIP 797 psi  
IFP 44-59 psi  
FFP 89-127 psi  
HSH 1469-1439' psi

- 3083-3090' Limestone; gray, sub oocastic, chalky, poorly developed porosity, no shows.
- 3103-3112' Limestone; fossiliferous, scattered pinpoint porosity, trace spotty stain, no show of free oil or odor in fresh samples.
- 3121-3134' Limestone; white, oocastic, chalky, fair oocastic porosity, (barren).
- 3161-3170' Limestone; white to gray, oolitic, chalky increasingly cherty, dense.
- 3191-3197' Limestone; tan, cherty, fossiliferous, plus amber to tan, opaque chert.
- 3216-3226' Limestone; gray to tan, fossiliferous in part, chalky, plus gray to tan chert, no shows.

CONGLOMERATE SECTION

- 3271-3281' Limestone; white, highly sandy, plus varied colored oolitic, opaque chert all in matrix varied colored shale.

**ARBUCKLE SECTION**

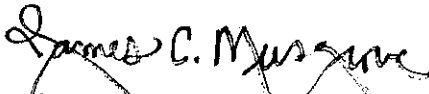
- 3281-3296' Dolomite; gray to tan, sucrosic, scattered pin point porosity, plus white, medium crystalline, cherty, dolomite, no shows.
- 3296-3302' Dolomite; as above, plus trace gray, fine to medium crystalline dolomite, scattered intercrystalline porosity, trace white oolitic chert, no shows.
- 3302-3310' Dolomite and Chert; as above, no shows.

**Rotary Total Depth 3310 (-1485)**

**Recommendations:**

On the basis of the low structural position and the negative Drill Stem Tests, it was recommended by all parties involved to plug and abandoned the Betts #1 at the Rotary Total Depth of 3310 (-1485).

Respectfully submitted,

  
James C. Musgrove  
Petroleum Geologist