

Computer Inventoried

JAMES C. MUSGROVE
Petroleum Geologist
2021 Forest
P.O. Box 1162
Great Bend, Kansas 67530

ORIGINAL

Office (316) 792-7716

Res. Claflin (316) 587-3444

GEOLOGICAL REPORT

Grady Bolding Corporation
Debes #1
SW-NW-SW; Section 30-17s-11w
Barton County, Kansas
Page No. 1

API #15-009-24580

5 1/2" PRODUCTION CASING SET

K C C

FEB 21 1995

CONTRACTOR: Shields Drilling Company (Rig #1)

COMMENCED: 7-29-94

COMPLETED: 8-5-94

ELEVATIONS: 1849' K.B.; 1846' D.F.; 1844' G.L.

CASING PROGRAM: Surface - 8 5/8" at 311'
Production - 5 1/2" at 3399' (log measurements)

SAMPLES: Samples saved and examined 2250' to the Rotary Total Depth.

DRILLING TIME: One (1) foot drilling time recorded and kept 2250' to the Rotary Total Depth.

MEASUREMENTS: All depths measured from the Kelly Bushing.

ELECTRIC LOG: By Wire-Tech; Dual Induction Log; Compensated Density Neutron Log.

FORMATION TESTING: There were three (3) drill stem tests ran by Swift Formation Testers.

<u>FORMATION</u>	<u>ELECTRIC LOG DEPTH</u>	<u>SUB-SEA DATUM</u>
Anhydrite	676	+ 1173
Howard	2626	- 777
Topeka	2659	- 810
Heebner	2951	- 1102
Toronto	2970	- 1121
Douglas	2984	- 1135
Brown Lime	3056	- 1207
Lansing	3075	- 1226
Base Kansas City	3318	- 1469
Conglomerate	3332	- 1483
Arbuckle	3364	- 1515
Rotary Total Depth	3400	- 1551
Log Total Depth	3413 3399'	- 1550

(All tops and zones corrected to Electric Log Measurements)

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CONSERVATION DIVISION
WICHITA, KANSAS

JAMES C. MUSGROVE

Petroleum Geologist

2021 Forest

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

TOPEKA SECTION

2902-2906' Limestone; gray to white, oolitic, oocastic, poorly developed porosity, chalky, questionable stain, no show of free oil or odor in fresh samples.

2910-2924' Limestone; gray to tan; medium crystalline, scattered porosity, dark brown to brown stain, show of free oil and no odor in fresh samples.

TORONTO SECTION

2970-2978' Limestone; tan to beige, highly dolomitic, sucrosic, fair pin point to intercrystalline porosity, spotty light brown stain, show of free oil and no odor in fresh samples.

DRILL STEM TEST - #1 2950 - 2990'

Times: 45-45-45-45

Blow: Weak

Recovery: 20' mud

Pressures:	ISIP	1046	psi
	FSIP	1021	psi
	IFP	41-56	psi
	FFP	65-72	psi
	HSH	1430-1419	psi

LANSING SECTION

3080-3088' Limestone; white to gray, fine to medium crystalline, chalky, few fossiliferous, trace stain, no show of free oil or odor in fresh samples.

3106-3112' Limestone; white to gray, oolitic, chalky, spotty stain, trace of free oil and faint odor in fresh samples.

3121-3124' Limestone; gray, fossiliferous; scattered porosity; trace stain, trace of free oil and faint odor in fresh samples.

3133 - 3137' Limestone; gray, highly oolitic, poor porosity, no show of free oil or odor in fresh samples.

3143 - 3148' Limestone; tan, finely crystalline, few fossiliferous, spotty stain, trace of free oil and no odor in fresh samples.

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3154 - 3169'	Limestone; brown, oocastic, fair oocastic porosity, no shows, trace gray chert.
3174 - 3178'	Limestone; buff, oocastic, good oocastic porosity, no shows.
3214 - 3218'	Limestone; tan to gray, oolitic, scattered porosity, trace stain, trace of free oil and faint odor in fresh samples.
3228 - 3232'	Limestone; cream to white, oolitic, slightly chalky, spotty brown to dark brown stain, show of free oil and faint odor in fresh samples.
3239 - 3250'	Limestone; gray to cream, oolitic, sub oocastic, poor visible porosity, no shows.
3270 - 3276'	Limestone; white to cream, oolitic, chalky, fair stain, fair show of free oil and fair odor in fresh samples.

DRILL STEM TEST - #2 3217-3288'

Times: 45-45-45-45

Blow: Weak to good

Recovery: 430' gas in pipe
75' muddy oil

Pressures:	ISIP	537	psi
	FSIP	529	psi
	IFP	55-68	psi
	FFP	78-89	psi
	HSH	1627-1605	psi

3305 - 3311'	Limestone; gray to tan, oolitic (fossiliferous), spotty golden brown stain, trace of free oil and fair odor in fresh samples.
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WICHITA STATE UNIVERSITY

JAMES C. MUSGROVE

Petroleum Geologist

2021 Forest

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DRILL STEM TEST - #3 3293 - 3324'

Times: 45-45-45-45

Blow: Weak to good

**Recovery: 480' gas in pipe
70' clean oil
60' mud cut gassy oil
30' heavy oil cut mud**

Pressures:	ISIP	138	psi
	FSIP	122	psi
	IFP	24-65	psi
	FFP	80-96	psi
	HSH	1669-1651	psi

ARBUCKLE SECTION

3365 - 3370'	Dolomite; tan, finely crystalline; slightly cherty, no shows.
3370 - 3385'	Dolomite; tan to gray, finely crystalline, sucrosic, fair porosity, questionable stain, no show of free oil or odor in fresh samples.
3385 - 3390'	Dolomite; as above, trace white oolitic chert, no shows.
3390 - 3400'	Dolomite; tan, finely crystalline, sucrosic in part, scattered porosity, no shows.

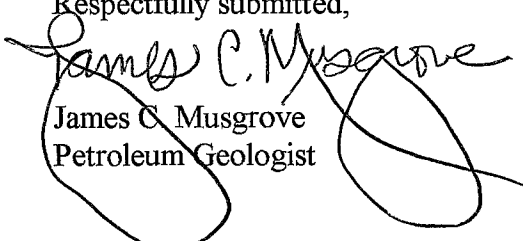
ROTARY TOTAL DEPTH	3400'	(-1551)
LOG TOTAL DEPTH	3399'	(-1550)

RECOMMENDATIONS

On the basis of the favorable structural position and positive results of the Drill Stem Tests #2 and #3, it was recommended by all parties involved to set and cement 5 1/2" production casing @ 3399' (one foot off bottom) to further test the following zones:

1.	Lansing	3305 - 3311
2.	Lansing	3270 - 3276
3.	Lansing	3228 - 3231

Respectfully submitted,



James C. Musgrove
Petroleum Geologist

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