15-185-23264

15-23S-13W

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1975 FNL 865 FEL

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KCC WICHITA

5 ½" Production Casing Set

Contractor: Discovery Drilling Company (Rig #2)

Commenced: July 20, 2004

Completed: July 28, 2004

Elevation: 1887' K.B.; 1885' D.F.; 1879' G. L.

Casing Program: Surface; 8 5/8" @ 318'
Production; 5 1/2" @ 3887'

Samples: Samples saved and examined 1900' to the Rotary Total Depth.

Drilling Time: One (1) foot drilling time recorded and kept 1900' to the Rotary Total Depth.

Measurements: All depths measured from the Kelly Bushing.

Formation Testing: There were five (5) Drill Stem Tests ran by Trilobite Testers.

Electric Log: By Eli Wireline Services; Dual Induction, Compensated Density Neutron Log and Micro Log.

Formation	Log Depth	Sub-Sea Datum
Anhydrite	768	+1190
Herington	1797	+90
Winfield	1848	+39
Towanda	1916	-29
Ft. Riley	1948	-61
Florence	2005	-118
Wreford	2081	-194
Council Grove	2130	-243
Neva	2310	-423
Red Eagle	2372	-485
Admire	2479	-592
Wabaunsee	2559	-672
Stotler	2686	-799
Tarkio	2748	-861
Howard	2894	-1007
Severy	2956	-1069
Topeka	2978	-1091
Heebner	3281	-1394
Toronto	3300	-1413
Douglas	3318	-1431
Brown Lime	3416	-1529
Lansing	3434	-1547
Base Kansas City	3689	-1802
Marmaton	3715	-1828
Conglomerate Sand	3721	1834

Viola	3732	-1845
Simpson Shale	3761	1874
Simpson Sand	3786	-1899
Arbuckle	3817	1930
Rotary Total Depth	4050	2163
Log Total Depth	4052	-2165

(All tops and zones corrected to Electric Log measurements.)

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

Remarks; after log analysis, the following "shallow" gas horizons could possibly be productive.

WREFORD SECTION

2081-2088' Limestone; gray, white, highly fossiliferous, plus loose fossil fragments.

COTONWOOD SECTION

2250-2260' Limestone; white, gray, fossiliferous, fair fossil cast porosity.

NEVA SECTION

2310-2312' Limestone; gray and white, fossiliferous, chalky increasingly cherty, trace gray white chert.

RED EAGLE THROUGH TOPEKA SECTION

2372-2956' There were several zones of well developed porosity encountered in the drilling of the Red Eagle through Howard Section but no shows of oil and/or gas was noted (see attached, Drilling Time and Sample Log).

SEVERY SECTION

2964-2972' Sand; gray, light gray, sub rounded, sub angular, friable, fair intergranular porosity, micaceous, few shaley, spotty brown stain, show of free oil and faint odor in fresh samples.

TOPEKA SECTION

2978-2982' Limestone; tan, brown, chalky, poor visible porosity, trace brown stain, no show of free oil or odor in fresh samples.

3008-3022' Limestone; tan, brown, finely crystalline, few granular, slightly fossiliferous, chalky, pinpoint to intergranular type porosity, brown and golden brown stain, trace of free oil and fair odor in fresh samples.

3026-3040' Limestone; beige, chalky, scattered porosity, spotty stain, weak show of free oil and strong odor in fresh samples.

3049-3058' Limestone; tan, beige, granular, few fossiliferous, fair intercrystalline and pinpoint porosity, fair to good stain and saturation, show of free oil and strong odor in fresh samples.

3106-3120' Limestone; white, gray, slightly fossiliferous, granular, scattered porosity, no shows.

3170-3178' Limestone; as above, fair porosity, no shows.

3184-3200' Limestone; tan, brown, finely crystalline, granular in part, slightly chalky.

3200-3218' Limestone; as above, trace brown spotty stain, no show of free oil and faint odor in fresh samples.

3244-3270' Limestone; tan, brown, slightly sucrosic, dolomitic in part, poor visible porosity.

TORONTO SECTION

3300-3316' Limestone; white, gray, cream, slightly fossiliferous, chalky, trace questionable stain, no show of free oil or odor in fresh samples.

LANSING SECTION

3438-3446' Limestone; tan, brown, finely crystalline, fossiliferous/oolitic, scattered porosity, trace spotty stain, no show of free oil and questionable odor in fresh samples.

3466-3471' Limestone; tan, brown, fine to medium crystalline, fossiliferous, fair porosity, brown to golden brown stain, trace free oil and faint odor in fresh samples.

3478-3484' Limestone; gray, white, fossiliferous, chalky, dull gray to brown stain, trace of free oil and faint odor in fresh samples.

3498-3502' Limestone; white, cream, fossiliferous, brown, gray, black stain, weak show of free oil and faint odor in fresh samples.

3504-3511' Limestone; white, gray, finely crystalline, slightly fossiliferous, few granular, gray and brown stain, trace of free oil and faint odor in fresh samples.

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Drill Stem Test #1 3439-3510'

Times: **30-45-45-60**

Blow: **Strong**

Recovery: **1290' gas in pipe**
330' mud (few oil specks)
120' muddy water

Pressures:

ISIP	**1035**	**psi**
FSIP	**992**	**psi**
IFP	**43-123**	**psi**
FFP	**138-224**	**psi**
HSH	**1703-1660**	**psi**

3525-3531' Limestone; gray, tan, oomoldic, fossiliferous, scattered porosity, brown, black stain, trace of free oil.

3550-3556' Limestone; tan, fossiliferous, scattered porosity, trace gray and black stain.

3567-3572' Limestone; gray, white, sub oomoldic, chalky, poor visible porosity, gray, black stain, trace of free oil and questionable odor in fresh samples.

3584-3594' Limestone; gray, oolitic/fossiliferous, brown and gray stain, trace of free oil and faint odor in fresh samples.

3598-3602' Limestone; as above.

3607-3614' Limestone; gray, oolitic, sub oomoldic, fair porosity, brown and black stain, trace of free oil and faint odor in fresh samples.

3621-3640' Limestone; tan, fine to medium crystalline, oolitic/fossiliferous, fair to good vuggy to intercrystalline porosity, fair golden brown stain, show of free oil and fair odor in fresh samples.

Drill Stem Test #2 3546-3647'

Times: **30-45-45-60**

Blow: **Weak to fair**

Recovery: **115' mud (w/oil spots)**

Pressures:

ISIP	**1235**	**psi**
FSIP	**1228**	**psi**
IFP	**17-44**	**psi**
FFP	**49-73**	**psi**
HSH	**1764-1699**	**psi**

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3666-3671' Limestone; gray, fossiliferous/oolitic, chalky, poor spotty stain, no show of free oil or odor in fresh samples.

3684-3688' Limestone; gray, white, fossiliferous, chalky, black stain.

CONGLOMERATE SECTION

3721-3724' Sand; black, gray, sub angular, sub rounded, friable, good (100%) black to gray and brown stain, no show of free oil and questionable odor in fresh samples.

VIOLA SECTION

3732-3740' Chert; white, gray, cream, boney, opaque, few weathered, black, brown edge staining, no show of free oil or odor in fresh samples.

3740-3760' Chert; as above, spotty stain, trace of free oil, and questionable odor in fresh samples.

Drill Stem Test #3 **3717-3766'**

Times: **30-45-45-60**

Blow: **Strong**

Recovery: **3610' gas in pipe**
30' mud

Pressures:

ISIP	**488**	**psi**
FSIP	**800**	**psi**
IFP	**40-17**	**psi**
FFP	**85-21**	**psi**
HSH	**1843-1821**	**psi**

SIMPSON SAND SECTION

3786-3794' Sand; white, very fine grained, highly dolomitic, trace brown to gray and black stain, trace of free oil and faint odor in fresh samples.

Drill Stem Test #4 **3750-3805'**

Times: **30-45-45-60**

Blow: **Weak**

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Recovery: **100' gas in pipe**
20' mud few oil spots

Pressures:

ISIP	**53**	**psi**
FSIP	**50**	**psi**
IFP	**20-22**	**psi**
FFP	**21-23**	**psi**
HSH	**1850-1827**	**psi**

ARBUCKLE SECTION

3817-3823' Dolomite; gray, dark gray, fine to medium crystalline, good intercrystalline to vuggy and some oomoldic porosity, good stain and saturation, show of free oil and strong odor in fresh samples.

Drill Stem Test #5 **3759-3823'**

Times: **30-45-45-60**

Blow: **Weak to strong**

Recovery: **250' gas in pipe**
220' heavy oil cut mud
(25% oil, 75% mud)

Pressures:

ISIP	**1105**	**psi**
FSIP	**1046**	**psi**
IFP	**22-72**	**psi**
FFP	**78-122**	**psi**
HSH	**1861-1812**	**psi**

3823-3830'	Dolomite; as above.
3836-3840'	Dolomite; tan, gray, finely crystalline, slightly cherty, trace tan, sucrosic, dolomite, trace stain.
3840-3846'	Dolomite; tan, gray, finely crystalline, sucrosic, scattered porosity, brown and dark brown stain, weak show of free oil and fair odor in fresh samples.
3846-3856'	Dolomite; white and gray, medium crystalline, gray, black stain, trace of free oil and faint odor, plus iron pyrite.
3856-3880'	Dolomite; gray, white, medium, coarse crystalline, fair intercrystalline porosity, gray and brown stain, show of free oil and fair odor in fresh samples.
3880-3890'	Dolomite; as above, plus white boney chert.
3890-3906'	Dolomite; as above, sandy in part.
3910-3924'	Dolomite; gray, white, medium crystalline, fair to good intercrystalline porosity, trace black and brown stain, show of free oil (heavy, black) and faint odor in fresh samples.
3930-3940'	Dolomite; as above, plus dolomite, gray, white, sucrosic, sandy, fair to good porosity, no show.
3950-3970'	Dolomite; as above, good porosity, abundant iron pyrite.
3980-4000'	Dolomite; tan, brown, oomoldic, fair to good oomoldic and vuggy type porosity, plus white gray chert.
4000-4020'	Dolomite; gray, white, finely crystalline, few medium crystalline, granular/sandy, scattered porosity, no shows.
4010-4020'	Dolomite; white, gray, tan, finely crystalline, trace white chalk.
4020-4050'	Dolomite; tan, fine to medium crystalline, few sucrosic, plus white chert.

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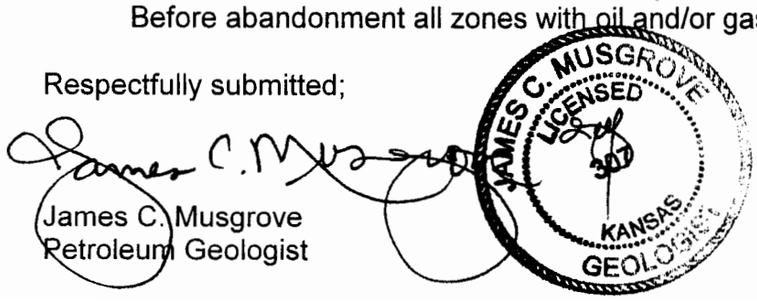
Rotary Total Depth **4050 (-2163)**
Log Total Depth **4052 (-2165)**

Recommendations:
On the basis of the favorable structural position and the positive Drill Stem Tests it was recommended by all parties involved to set and cement 5 ½" production casing at 3887' (163 feet off bottom) and the following zones be tested in the Ward #2:

1. Arbuckle 3887-4050' (salt water disposal by open hole completion methods)
2. Arbuckle 3819-3821' perforate/oil
3. Conglomerate Sand 3710-3713' perforate/gas

Before abandonment all zones with oil and/or gas shows should be perforated.

Respectfully submitted;



James C. Musgrove
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