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Mai Oil Operations
Dolecheck #1
SW-NE-NE-NE (500' FNL & 565' FEL)
Section 35-15s-13w
Russell County, Kansas

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5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (rig #3)
Commenced: March 6, 2015
Completed: March 12, 2015
Elevation: 1886' K.B., 1884' D.F., 1878' G.L.
Casing program: Surface; 8 5/8" @ 491'
Production, 5 1/2" @ 3331'
Sample: Samples saved and examined 2400' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 2400' to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were two (2) Drill Stem Tests ran by Diamond Testing Co.
Electric Log: By Nabors, Dual Induction, Compensated Density/Neutron Log and Micro and Sonic Log.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	830	+1056
Base Anhydrite	861	+1025
Grand Haven	2387	-501
1 st Tarkio Sand	2398	-512
Dover	2411	-525
2 nd Tarkio Sand	2424	-538
Tarkio Lime	2458	-572
Elmont	2509	-623
Howard	2657	-771
Topeka	2732	-846
Heebner	2966	-1080
Toronto	2981	-1095
Lansing	3047	-1161
Base Kansas City	3285	-1399
Granite Wash	3312	-1426
Rotary Total Depth	3377	-1491
Log Total Depth	3380	-1506

All tops and zones corrected to Electric Log Measurement

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

TARKIO SECTION

1ST Tarkio Sand

2398-2406' Sand, gray, very fine grained; well sorted, micaeous, friable, no shows.

2nd Tarkio Sand

2417-2434' Sand, gray, very fine grained; well sorted, friable, micaeous, shaley in part, light black stain, no free oil and no odor. (Poorly developed)

TOPEKA SECTION

2782-2802' Limestone, tan, buff, finely crystalline, chalky; poor scattered porosity, light brown stain, no free oil and faint odor in fresh samples.

2888-2910' Limestone, tan, buff, finely crystalline, chalky in part, poor visible porosity, trace stain, show of free oil and faint odor in fresh samples.

2916-2940' Limestone, tan, finely crystalline, oomoldic, poor to fair oomoldic and vuggy type porosity, light spotty stain, show of free oil and faint odor in fresh samples.

TORONTO SECTION

2981-2997' Limestone, cream, finely crystalline, dolomitic in part, golden brown stain, show of free oil and faint odor in fresh samples.

LANSING SECTION

3057-3066' Limestone, cream, tan, finely crystalline, fossiliferous, poor scattered porosity, no shows and no odor in fresh samples.

3068-3076' Limestone, cream, tan, finely crystalline, poor visible porosity, dense, no stain, no free oil and strong odor in fresh samples.

3081-3091' Limestone, cream, oomoldic, good oomoldic and vuggy type porosity, light brown stain, show of free oil and strong odor in fresh samples.

3091-3100' Limestone, tan, finely crystalline, few fossiliferous, scattered porosity, no stain, no free oil and faint odor in fresh samples.

Drill Stem Test #1 **3055-3100**

Times: 30-30-45-45

Blow: Strong

Recovery: 5' Clean oil
126' oil and gas cut muddy water
(5% gas; 15% oil; 50% water; 30% mud)
63' oil and gas cut muddy water
(5% gas; 10% oil; 60% water; 25% mud)
63' oil and gas cut muddy water
(5% gas; 10% oil; 60% water; 25% mud)
63' oil cut muddy water
(20% oil; 50% water; 25% mud)

Pressures: ISIP 933 psi
FSIP 933 psi
IFP 62-122 psi
FFP 119-209 psi
HSH 1517-1444 psi

3115-3120' Limestone, tan, buff, finely crystalline, fossiliferous, scattered porosity, light spotty stain, show of free oil and faint odor in fresh samples.

3130-3135' Limestone, white, tan, oomoldic, good oomoldic/vuggy type porosity, black stain, show of free oil and strong odor in fresh samples.

Drill Stem Test #2 **3098-3135**

Times: 30-30-45-45

Blow: Strong

Recovery: 75' gas in pipe
252' slightly oil and gas cut muddy water
(20% gas; 5% oil; 75% water; 5% mud)
126' oil and gas cut muddy water
(40% gas; 10% oil; 35% water; 5% mud)
315' oil and gas cut muddy water
(50% gas; 10% oil; 60% water; 25% mud)
63' oil and gas cut muddy water
(60% gas; 12.5% oil; 25% water; 2.5% mud)

Pressures: ISIP 909 psi
FSIP 910 psi
IFP 91-291 psi
FFP 304-489 psi
HSH 1539-1476 psi

3135-3158' Limestone, cream oomoldic, good oomoldic and vuggy type porosity, light brown spotty stain, show of free oil and faint odor in fresh samples.

3190-3206' Limestone, tan, gray, finely crystalline, chalky, poor scattered porosity, light brown stain, show of free oil and questionable odor in fresh samples.

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- 3230-3240' Limestone, cream, tan, finely crystalline, few fossiliferous, poor visible porosity, light brown stain, show of free oil plus gray, chert.
- 3260-3271' Limestone, tan, buff, finely crystalline, chalky, poor scattered porosity, light brown stain, show of free oil and questionable odor in fresh samples.
- 3278-3284' Limestone, tan, gray, finely crystalline, poor scattered porosity, light brown stain, no free oil and faint odor in fresh samples.

GRANITE WASH/QUARTZITE

- 3312-3320' Quartz, clear, frosty, fractured; micaeous, trace light brown stain, no free oil and no odor.
- 3320-3340' Quartz, as above, micaeous, black stain, no free oil and no odor in fresh samples.
- 3340-3360' Quartz, as above, trace pink/red feldspar; micaeous, black spotty stain, no free oil and no odor in fresh samples.
- 3360-3380' Quartz, as above, no shows.

Rotary Total Depth 3371
Log Total Depth 3380

Recommendations:

The 5 1/2" production casing was set and cemented on Mai Oil Operation Inc., Dolecheck #1.

Respectfully yours,



Wyatt Urban
Petroleum Geologist