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Mai Oil Operations Inc.
Herber 'A' #1
NE-SW-SE-NW (2125' FNL & 1875' FWL)
Section 21-14s-12w
Russell County, KS
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5 1/2" Production Casing Set

Contractor: Southwind Drilling Company (Rig #3)
Commenced: October 23, 2013
Completed: October 29, 2013
Elevation: 1725' K.B; 1723' D.F; 1717' G.L.
Casing program: Surface; 8 5/8" @ 349'
Production 5 1/2" @ 3273'
Sample: Samples saved and examined 2100' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 2100 ft to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were three (3) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Nabors Completion and Production Services Co; Dual Induction, Compensated Density/Neutron Log, and Micro Log.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	626	+1099
Base Anhydrite	649	+1076
Grand Haven	2200	-475
1 st Tarkio Sand	2213	-488
Dover	2224	-499
2 nd Tarkio Sand	2232	-507
Tarkio Lime	2275	-550
3 rd Tarkio Sand	2308	-583
Elmont	2336	-611
Howard	2477	-752
Topeka	2551	-826
Heebner	2791	-1066
Toronto	2809	-1084
Lansing	2875	-1150
Base Kansas City	3159	-1434
Conglomerate	3175	-1447
Arbuckle	3225	-1500
Rotary Total Depth	3274	-1549
Log Total Depth	3276	-1551

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

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

1ST TARKIO SAND SECTION

2213-2218' Sand; gray, very fine grained, silty, micaceous, poor visible porosity, trace stain, trace free oil and no odor.

2ND TARKIO SAND SECTION

2232-2246' Sand; white and gray, very fine grained, calcareous, poor visible porosity, trace stain, show of free oil and questionable odor.

Drill Stem Test #1 2207-2246'

Times: 30-30-45-45

Blow: Weak

Recovery: 230' gas in pipe
70' oil and gas cut mud
(15% gas, 10% oil, 75% mud)

Pressures: ISIP 522 psi
FSIP 572 psi
IFP 14-29 psi
FFP 31-48 psi
HSH 1018-1008 psi

3RD TARKIO SAND THROUGH TOPEKA SECTION

2308-2790' There were several zones of well-developed porosity encountered in the drilling of the Willard Sand (3rd Tarkio Sand) through Topeka section but no shows of oil and/or gas was noted.

TORONTO SECTION

2809-2820' Limestone; white/gray, fine and medium crystalline, dolomitic, brown stain, no free oil and no odor in fresh samples.

LANSING SECTION

2883-2896' Limestone; white, cream, tan, oolitic, chalky, trace brown stain, trace of free oil and questionable odor in fresh samples.

2910-2916' Limestone; tan, finely oomoldic, few highly oolitic, questionable stain, no free oil and no odor in fresh samples.

2935-2944' Limestone; tan, gray, fossiliferous, oolitic, chalky, poor visible porosity, no shows.

2956-2960' Limestone; white, cream, oolitic, sub oomoldic, chalky, trace poor stain, trace of free oil and no odor in fresh samples.

Drill Stem Test #2 **2881-2964'**

Times: 30-30-30-30

Blow: Weak

Recovery: 35' mud, few oil spots

**Pressures: ISIP 564 psi
FSIP 529 psi
IFP 16-29 psi
FFP 29-37 psi
HSH 1443-1387 psi**

- 2966-2980' Limestone; white, cream, finely oomoldic/oolitic, fair porosity, no shows.
- 2980-2995' Limestone; as above.
- 3022-3030' Limestone; white, gray, finely crystalline, few fossiliferous, no shows.
- 3043-3050' Limestone; tan, white, oolitic, poorly developed porosity, no shows.
- 3058-3068' Limestone; white, cream, oomoldic, chalky, trace stain, show of free oil and no odor in fresh samples.
- 3095-3104' Limestone; white, sub oomoldic, chalky, no shows.

Drill Stem Test #3 **3046-3114'**

Times: 20-20-20-20

Blow: Weak

Recovery: 20' mud

**Pressures: ISIP 784 psi
FSIP 765 psi
IFP 16-23 psi
FFP 24-28 psi
HSH 1505-1489 psi**

- 3125-3140' Limestone; white, gray, fine and medium crystalline, chalky, poor porosity, no shows.

CONGLOMERATE SECTION

- 3175-3225' Varied colored chert in matrix of varied colored sandy shale, with loose rounded quartz grains, no shows.

ARBUCKLE SECTION

- 3225-3230' Dolomite; tan, finely crystalline, slightly cherty, dense.

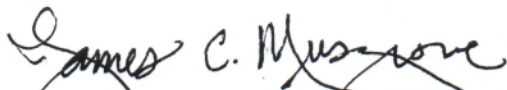
3230-3250'	Dolomite; tan, finely cryatline, sucrosic, poorly developed porosity, cherty in part, no shows.
3250-3260'	Dolomite; as above, sucrosic, no shows.
3260-3274'	Dolomite; white/gray, finely crystalline, oolitic, few with vuggy type porosity, no shows.

Rotary Total Depth	3274 (-1549)
Log Total Depth	3276 (-1551)

Recommendations:

5 1/2" production casing was set and cemented on the Herber 'A' #1.

Respectfully submitted;


James C. Musgrove
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