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Mai Oil Operations
Mighell-Weeks Trust Unit #1
NW-NW-SW-NE (1500' FNL & 2685' FWL)
Section 18-15s-13w
Russell County, Kansas

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5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (rig #3)
Commenced: September 10, 2014
Completed: September 16, 2014
Elevation: 1860' K.B., 1858' D.F., 1852' G.L.
Casing program: Surface; 8 5/8" @ 514'
Production, 5 1/2 @ 3374'
Sample: Samples saved and examined 2300' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 2300 ft. to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were six (6) Drill Stem Tests ran by Diamond 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	861	+999
Base Anhydrite	883	+977
Grand Haven	2405	-545
1 st Tarkio Sand	2414	-554
Dover	2427	-567
2 nd Tarkio Sand	2431	-571
Tarkio Lime	2474	-614
3 rd Tarkio Sand	2501	-641
Elmont	2537	-677
Howard	2672	-812
Topeka	2739	-879
Heebner	2802	-942
Toronto	2999	-1139
Lansing	3049	-1189
Base Kansas City	3281	-1421
Arbuckle	3300	-1440
Rotary Total Depth	3375	-1515
Log Total Depth	3371	-1511

All tops and zones corrected to Electric Log Measurement.

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

1st TARKIO SAND

2414-2421' Sand; gray, fine grained; sub-rounded, well sorted, brown stain, show of free oil and faint odor in fresh samples.

2ND TARKIO SAND

2431-2448' Sand; gray, fine and medium grained, sub-rounded, friable, micaeous, brown stain, show of free oil and faint odor in fresh samples.

Drill Stem Test #1 **2408-2477**

Times: 30-30-45-45

Blow: Good

Recovery: 30' oil cut mud
(15% oil; 85% mud)
90' oil and gassy cut mud
(50% gas; 30% oil; 20% mud)

Pressures: ISIP 523 psi
FSIP 559 psi
IFP 33-44 psi
FFP 53-65 psi
HSH 1123-1095 psi

WILLARD SAND
(3RD TARKIO)

2501-2516' Sand, gray, fine and medium grained; fair inter-granular porosity, shaley; friable; spotty stain, trace of free oil and no odor in fresh samples.

TOPEKA SECTION

2739-2902' No shows of oil and/gas was noted in the drilling of the Topeka Section (see attached sample log and geologist report).

TORONTO SECTION

2999-3012' Limestone, tan, buff, chalky, few fossiliferous, poor visible porosity, light brown stain, trace of free oil and no odor in fresh samples

LANSING SECTION

3049-3056' Limestone, white, tan, finely crystalline, chalky, poor porosity, no shows.

3068-3074' Limestone, cream, finely crystalline, chalky, poor visible porosity, no shows.

3081-3092' Limestone, tan, oomoldic, good oomoldic and vuggy type porosity, light brown stain, show of free oil and fair odor in fresh samples.

Drill Stem Test #2 **3054-3100**

Times: 30-30-45-45

Blow: Weak

Recovery: 10' oil cut mud
(5% oil, 95% mud)

Pressures: ISIP 113 psi
FSIP 82 psi
IFP 32-29 psi
FFP 34-28 psi
HSH 1508-1481 psi

3103-3112' Limestone, cream, white, finely crystalline, chalky, poor visible porosity, light brown stain, no free oil and no odor in fresh samples.

3123-3129' Limestone, cream, tan, brown, finely crystalline, fossiliferous, poor visible porosity, no free oil and no odor in fresh samples.

3141-3159' Limestone, tan, oomoldic, good oomoldic and vuggy type porosity, brown stain, show of free oil and strong odor in fresh samples.

Drill Stem Test #3 **3062-3147**

Times: 30-30-45-45

Blow: Weak

Recovery: 45' very slightly oil cut mud
(2% oil, 95% mud)

Pressures: ISIP 325 psi
FSIP 275 psi
IFP 33-38 psi
FFP 41-48 psi
HSH 1543-1484 psi

3181-3186' Limestone, tan, oomoldic, chalky, scattered oomoldic porosity, no shows.

3195-3205' Limestone, cream, tan, fine and medium crystalline, poor inter-crystalline and vuggy type porosity, light brown and golden brown stain, show of free oil and faint odor.

3214-3224' Limestone, tan, gray, finely crystalline, poor visible porosity, (dense0, no shows.

3228-3236' Limestone, tan, gray, sub-oomoldic, chalky, dense, no shows.

3260-3265' Limestone, tan, finely crystalline, few fossiliferous, dense.

Drill Stem Test #4 **3186-3260**

Times: 30-30-30-30
Blow: Weak
Recovery: 10' mud
Pressures: ISIP 53 psi
FSIP 43 psi
IFP 23-23 psi
FFP 24-24 psi
HSH 1572-1565 psi

3270-3282' Limestone, cream, tan, finely crystalline, oolitic, poorly developed porosity, light brown stain, show of free oil and faint odor in fresh samples.

ARBUCKLE SECTION

3300-3308' Dolomite, tan, white, finely crystalline, sucrosic, poor to fair inter-crystalline type porosity, brown stain, show of free oil and faint odor in fresh samples.

Drill Stem Test #5 **3266-3308**

Times: 30-45-45-60
Blow: Weak
Recovery: 45' oil and gas cut mud
(5% gas; 15%oil; 80% mud)
Pressures: ISIP 1059 psi
FSIP 1040 psi
IFP 26-31 psi
FFP 33-41 psi
HSH 1607-1598 psi

3308-3315' Dolomite, white, medium crystalline, fair inter-crystalline porosity, fair stain and saturation, show of free oil and good odor in fresh samples.

Drill Stem Test #6 **3266-3315**

Times: 30-30-30-30

Blow: Strong

Recovery: 63' slightly oil and gas cut water
(10% gas; 10% oil; 80% water)
315' oil and gas cut water
(80% gas; 15% oil; 5% water)
315' oil and gas cut muddy water
(20% gas; 15% oil; 60% water; 5% mud)
630' oil and gas cut muddy water
(65% gas; 20% oil; 10% water; 5% mud)
441' oil and gas cut muddy water
(40 gas; 20% oil; 20% water; 20% mud)
156' Heavy oil and gas cut muddy water
(20% gas, 30% oil; 40% water, 10% mud)

Pressures: ISIP 1101 psi
FSIP 1102 psi
IFP 123-559 psi
FFP 568-825 psi
HSH 1606-1592 psi

- 3315-3330' Dolomite, tan, finely crystalline, poor to fair inter-crystalline porosity, light brown stain, show of free oil and faint odor in fresh samples.
- 3330-3340' Dolomite as above.
- 3350-3360' Dolomite, white, gray, finely crystalline, poor to fair porosity, no shows.
- 3360-3365' Dolomite as above.
- 3365-3371' Dolomite, white, gray, finely crystalline, poor inter-crystalline porosity, no shows.

Rotary Total Depth 3375
Log Total Depth 3371

Recommendations:

5 1/2" production casing set and cemented on the Mai Oil Operations Inc., Mighell-Weeks Trust Unit #1.

Respectfully yours,



Wyatt Urban
Petroleum Geologist