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Mai Oil Operations
 Bender Trust #1
 NW-NE-SW-SE (1250' FSL & 1925' FEL)
 Section 23-15s-14w
 Russell County, Kansas
 Page 1

5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (Rig #3)

Commenced: November 20, 2013

Completed: November 26, 2013

Elevation: 1911' K.B; 1909' D.F; 1903' G.L.

Casing program: Surface; 8 5/8" @ 518'
 Production; 5 1/2" @ 3398'

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 four (4) Drill Stem Tests ran by Trilobite Testing Co.

Electric Log: By Nabors; Dual Induction, Compensated Density/Neutron Log and Micro.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	902	+1009
Base Anhydrite	935	+976
Grand Haven	2457	-546
1 st Tarkio Sand	2468	-557
Dover	2481	-570
2 nd Tarkio Sand	2488	-577
Tarkio Lime	2527	-616
Elmont	2590	-679
Howard	2729	-818
Topeka	2800	-881
Heebner	3030	-1119
Toronto	3049	-1138
Lansing	3096	-1185
Base Kansas City	3300	-1389
Conglomerate	3326	-1415
Arbuckle	3343	-1432
Rotary Total Depth	3399	-1488
Log Total Depth	3399	-1488

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

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

1ST TARKIO SECTION

2468-2476' Poor samples; trace sand, gray, grayish green, very fine grained, micaceous, poorly developed.

2ND TARKIO SECTION

2488-2500' Sand; gray, white, very fine grained, micaceous, shaley, poorly develop sand, (no shows).

TOPEKA SECTION

2975-2990' Limestone; gray, finely crystalline, scattered intercrystalline porosity, black stain, no free oil and no odor in fresh samples.

TORONTO SECTION

3049-3060' Limestone; tan, finely crystalline, chalky, poor visible porosity, trace spotty brown stain, no show of free oil and no odor in fresh samples.

LANSING SECTION

3095-3106' Limestone; white, cherty in part, poor visible porosity, trace brown stain, no free oil and no odor.

3115-3120' Limestone; white, gray, finely crystalline, fossiliferous, chalky, fair porosity, brown stain, show of free oil and good odor in fresh samples.

3131-3142' Limestone; gray, oomoldic in part, chalky, poorly developed porosity, no shows.

Drill Stem Test #1 3104-3150'

Times: 30-30-30-30

Blow: Weak

**Recovery: 20' very slightly oil cut mud
(2% oil, 98% mud)**

**Pressures: ISIP 450 psi
FSIP 139 psi
IFP 34-35 psi
FFP 38-37 psi
HSH 1549-1452 psi**

3150-3160' Limestone; cream, cherty, dense.

3178-3191' Limestone; gray, finely crystalline, fossiliferous, poor visible porosity, trace poor stain, trace of free oil and questionable odor in fresh samples.

3188-3200' Limestone; gray, tan, oomoldic, good oomoldic porosity, trace stain, trace of free oil and faint odor in fresh samples.

- 3210-3236' Limestone; gray, white, chalky, no shows.
- 3258-3268' Limestone; cream, oolitic/fossiliferous, chalky, poorly developed porosity, light brown stain, no free oil and faint odor in fresh samples.
- 3276-3288' Limestone; cream, finely crystalline, oomoldic, fair oomoldic porosity, chalky, fair black stain, show of free oil and fair odor in fresh samples.

Drill Stem Test #2 3257-3295'

Times: 30-30-45-60

Blow: Fair to good

Recovery: 90' gas in pipe
 15' clean oil
 20' slightly oil cut mud
 (10% oil, 90% mud)

Pressures: ISIP 521 psi
 FSIP 497 psi
 IFP 33-37 psi
 FFP 31-38 psi
 HSH 1665-1617 psi

- 3313-3320' Limestone; gray, white, chalky, few cherty, dense.

ARBUCKLE SECTION

- 3342-3345' Dolomite; white, cream, finely crystalline, few medium crystalline, poor porosity, no shows.
- 3345-3349' Dolomite; gray, white, medium crystalline, fair to good intercrystalline porosity, good stain and saturation, show of free oil and fair odor in fresh samples.

Drill Stem Test #3 3300-3349'

Times: 30-30-30-30

Blow: Strong

Recovery: 240' gas in pipe
 60' very slightly oil and gas cut mud
 (35% gas, 5% oil, 60% mud)
 200' gassy oil

Pressures: ISIP 1014 psi
 FSIP 999 psi
 IFP 25-75 psi
 FFP 78-120 psi

HSH 1706-1611 psi

3349-3361' Dolomite; white, gray, medium crystalline, few coarse crystalline, good intercrystalline porosity, fair to good stain and saturation, good show of free oil and fair to good odor in fresh samples.

Drill Stem Test #4 3351-3361'

Times: 15-20-20-30

Blow: Strong

**Recovery: 310' slightly mud cut and gassy water cut oil
(10% gas, 65% oil, 25% water, 5% mud)
310' gassy water cut oil
(10% gas, 60% oil, 30% water)
180' very slightly oil cut water
(2% oil, 98% water)**

**Pressures: ISIP 1078 psi
FSIP 1091 psi
IFP 449-744 psi
FFP 832-1005 psi
HSH 1706-1643 psi**

3361-3380' Dolomite; cream, white, finely crystalline, sucrosic, few medium crystalline, trace iron pyrite, brown stain, show of free oil and fair odor in fresh samples.

3380-3399' Dolomite; as above, trace stain, no free oil and fair odor, plus white chalk.

Rotary Total Depth 3399

Log Total Depth 3399

Recommendations:

5 1/2" production casing was set and cemented on the Bender Trust #1.

Respectfully submitted;

James C. Musgrove, *Clint Musgrove*
James C. Musgrove and
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Petroleum Geologists

