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Mai Oil Operations  
Milton-Butler Unit #1  
SE-NW-SE-NE (1854'FNL & 785' FWL)  
Section 29-21s-12w  
Stafford County, Kansas

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**5 1/2" Production Casing Set**

**Contractor:** Southwind Drilling Co. (rig #3)  
**Commenced:** August 16, 2016  
**Completed:** August 23, 2016  
**Elevation:** 1861' K.B., 1859' D.F., 1853' G.L.  
**Casing program:** Surface; 8 5/8" @ 667'  
Production, 5 1/2" @ 3697'  
**Sample:** Samples saved and examined 2900' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 2900' to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were one (1) Drill Stem Tests ran by Trilobite Testing Co.  
**Electric Log:** By Eli Wireline Services, Dual Induction, Compensated Density/Neutron Log and Micro Log

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	653	+1208
Base Anhydrite	677	+1184
Heebner	3125	-1264
Toronto	3145	-1284
Douglas	3157	-1296
Brown Lime	3255	-1394
Lansing	3265	-1404
Base Kansas City	3291	-1430
Viola	3508	-1647
Simpson Shale	3539	-1678
Arbuckle	3588	-1727
Rotary Total Depth	3700	-1839
Log Total Depth	3700	-1839

(All tops and zones corrected to Electric Log Measurement)

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

**TOPEKA SECTION**

2900-3124' No shows of oil and or/gas was noted in the drilling of the Topeka Section (See attached Sample/Geological reports)

**TORONTO SECTION**

3145-3153' Limestone, tan, buff, finely crystalline, chalky in part; trace brown spotty stain, no show of free oil and no odor in fresh samples.

**LANSING SECTION**

3265-3278' Limestone, cream, tan, finely crystalline, poorly developed inter-crystalline porosity, no show.

3288-3296' Limestone, tan, finely crystalline, oolitic, poor visible porosity, no shows.

3308-3319' Limestone, cream, white, finely crystalline, chalky in part, dense, no shows.

3329-3334' Limestone, cream, white, finely crystalline, few fossiliferous, poor scattered porosity, chalky in part; trace stain, trace of free oil and no odor in fresh samples.

3340-3347' Limestone, gray, tan, oolitic, poor scattered porosity, chalky in part; spotty stain, trace of free oil and questionable odor in fresh samples.

3350-3356' Limestone, white, poor to fair porosity, few sub-oomoldic, chalky; trace stain, poor show of free oil and faint odor in fresh samples.

3360-3384' Limestone, tan, gray, finely crystalline, chalky, few cherty, dense.

3394-3402' Limestone, tan, oolitic, poor scattered porosity, cherty in part, no shows.

3411-3424' Limestone, as above; no shows

3434-3440' Limestone, gray, white, sub-oomoldic, chalky, no shows.

3451-3456' Limestone, tan, brown, oolitic, poor inter-crystalline porosity, chalky, light brown stain, spotty stain, show of free oil and faint odor.

3475-3480' Limestone, cream, tan, oolitic, fair porosity, no shows.

**VIOLA SECTION**

3508-3539' Chert; white, yellow, opaque, brown spotty/black stain, trace of free oil and faint odor in fresh samples.



**SIMPSON SECTION**

3580-3584' Trace sand, clear, medium grained; sub-rounded well sorted; poor flurs, no show of oil and questionable odor in fresh samples.

**ARBUCKLE SECTION**

3588-3598' Dolomite, tan, finely crystalline, poor visible porosity, trace stain, show of free oil and strong odor in fresh samples.

3598-3608' Dolomite, tan, finely crystalline, fair inter-crystalline porosity; trace gas bubbles; fair stain, show of free oil and strong odor in fresh samples

**Drill Stem Test #1 3524-3608**

**Times: 30-30-30-30**

**Blow: Strong**

**Recovery: 620' gas in pipe  
1364' oil and gas cut muddy water  
(30% gas; 20% oil; 50% water; 10% mud)  
310' oil and gas cut muddy water  
(20% gas; 20% oil; 50% water; 10% mud)  
124' gas cut muddy water  
(10% gas; 80% water; 10% mud)  
186' water**

**Pressures: ISIP 1108 psi  
FSIP 1079 psi  
IFP 245-603 psi  
FFP 616-839 psi  
HSH 1841-1716 psi**

3608-3620' Dolomite, white, cream, finely crystalline, poor to fair porosity, spotty show of free oil and faint odor in fresh samples.

3620-3640' Dolomite; as above.

3640-3660' Dolomite, white, sucrosic, fair pin point, inter-crystalline porosity, trace stain, show of free oil and faint odor in fresh samples.

3660-3680' Dolomite, tan, cream, finely crystalline, sucrosic, no shows.

3680-3690' Dolomite, white, pink, rose, coarse crystalline, poor to fair inter-crystalline porosity, no shows.

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3690-3700' Dolomite, white, pink, finely crystalline, dense, no shows, no odor.

**Rotary Total Depth**            **3700 (-1839)**  
**Log Total Depth**            **3700 (-1839)**

**Recommendations:**

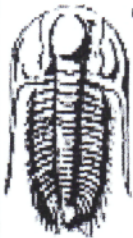
The 5 1/2" production casing was set and cemented on Mai Oil Operations Inc., Milton-Butler Unit #1.

Respectfully yours,



Wyatt Urban  
Petroleum Geologist





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mai Oil Operations  
 8411 Preston Rd Ste 800  
 Dallas, TX 75225  
 ATTN: Wyatt Urban

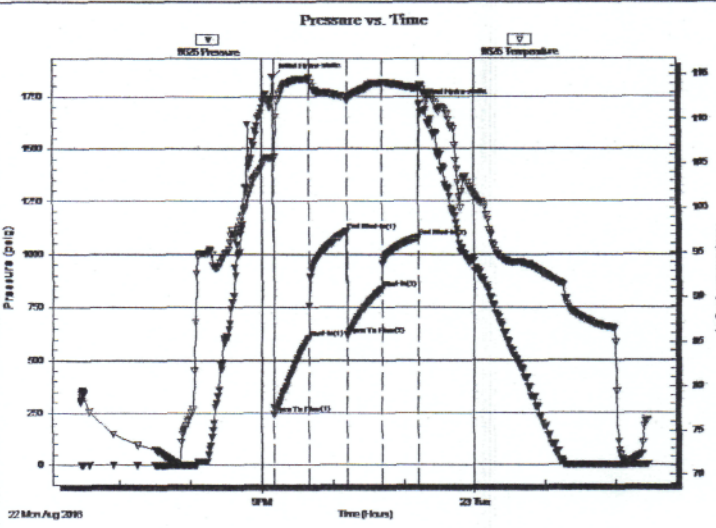
**29-21S-12W Stafford, KS**  
**Milton Butler Unit 1**  
 Job Ticket: 55410      DST#: 1  
 Test Start: 2016.08.22 @ 18:27:50

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:10:20  
 Time Test Ended: 02:27:20  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Leal Cason  
 Unit No: 74  
 Interval: **3524.00 ft (KB) To 3608.00 ft (KB) (TVD)**  
 Total Depth: 3608.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Reference Elevations: 1866.00 ft (KB)  
 1858.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8525**      **Inside**  
 Press@RunDepth: 838.98 psig @ 3525.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2016.08.22      End Date: 2016.08.23      Last Calib.: 2016.08.23  
 Start Time: 18:27:51      End Time: 02:27:20      Time On Btrr: 2016.08.22 @ 21:09:05  
 Time Off Btrr: 2016.08.22 @ 23:13:20

**TEST COMMENT:** IF: Strong Blow, BOB in 2 minutes  
 IS: No Blow Back  
 FF: Strong Blow, BOB in 2 minutes  
 FS: 1/2" Blow Back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1840.74	105.63	Initial Hydro-static
2	245.01	105.31	Open To Flow (1)
31	603.02	114.63	Shut-In(1)
63	1108.45	112.44	End Shut-In(1)
64	616.35	112.11	Open To Flow (2)
93	838.98	114.05	Shut-In(2)
123	1078.70	113.40	End Shut-In(2)
125	1713.94	113.77	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
186.00	Water	2.61
124.00	GMCW 10%G 10%M 80%W	1.74
310.00	GOMCW 20%G 20%O 10%M 50%W	4.35
1364.00	GMOCW 30%G 10%M 20%O 40%W	19.13
0.00	620 GIP	0.00

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



# QUALITY OILWELL CEMENTING, INC.

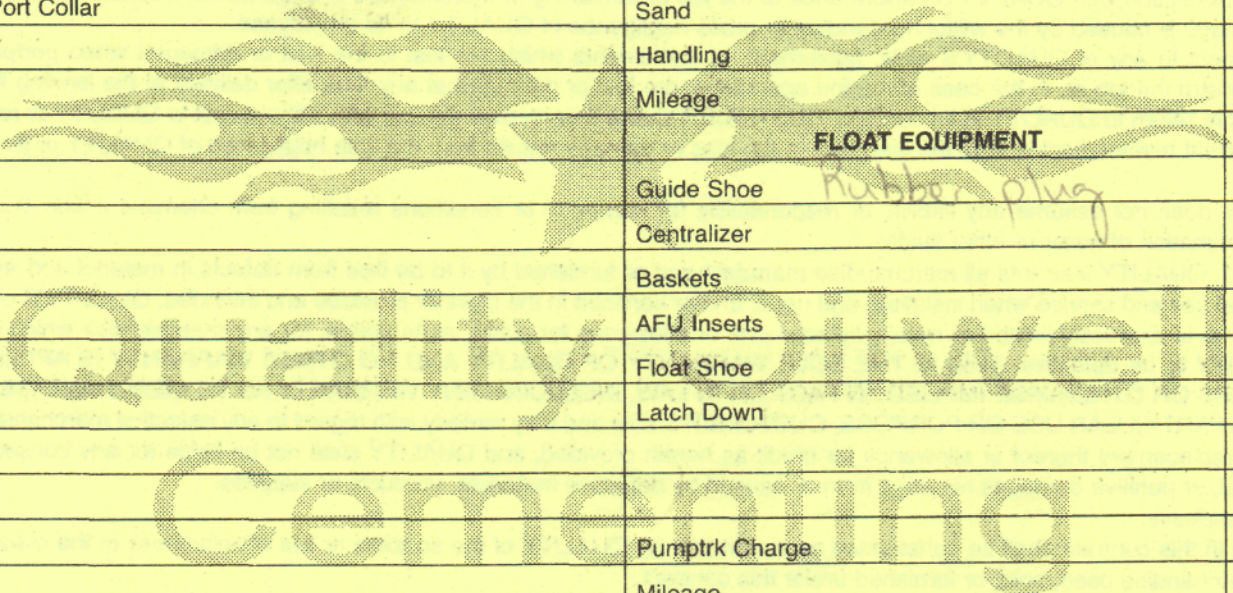
Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1749

Date	8-19-16	Sec.	29	Twp.	21	Range	12	County	Stafford	State	KS	On Location		Finish	3:45 AM
Milton - Butler unit								Location Great Bend KS - H S to 170th Rd							
Lease	Well No. 1			Owner SE 1/2 S 7 W 1/2											
Contractor	Southwind 3			To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.											
Type Job	Surface			Charge To Main oil operations											
Hole Size	12 1/4"			T.D.	667'			Street							
Csg.	8 5/8"			Depth	667'			City							
Tbg. Size				Depth				State							
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.	20'			Shoe Joint	20'			Cement Amount Ordered 450 60/40 3% CC 2% Gel							
Meas Line	Displace			41 1/4 BLS			1/2 # Fl - seal								
<b>EQUIPMENT</b>								Common							
Pumptrk	18	No.	Cementer	Brett			Poz. Mix								
			Helper												
Bulktrk	19	No.	Driver	Craig			Gel.								
			Driver												
Bulktrk	P.W.	No.	Driver	Rick			Calcium								
			Driver												
<b>JOB SERVICES &amp; REMARKS</b>								Hulls							
Remarks:	Cement did Circulate			Salt											
Rat Hole				Flowseal											
Mouse Hole				Kol-Seal											
Centralizers				Mud CLR 48											
Baskets				CFL-117 or CD110 CAF 38											
D/V or Port Collar				Sand											
				Handling											
				Mileage											
<b>FLOAT EQUIPMENT</b>															
				Guide Shoe Rubber plug											
				Centralizer											
				Baskets											
				AFU Inserts											
				Float Shoe											
				Latch Down											
				Pumptrk Charge											
				Mileage											
				Tax											
				Discount											
				Total Charge											
X Signature	[Signature]														





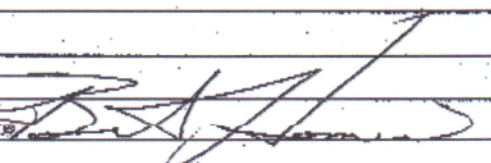
# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 3000

Date	8-24-16	Sec.	29	Twp.	21	Range	12	County	Stafford	State	Ks	On Location		Finish	3:30 AM
Lease	Milton - Butler							Location	Dartmouth Ks - 125 to 170th Ave						
Well No.	1							Owner	IE 1/2 S 1/2 W 1/2						
Contractor	Southwind #3							To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Type Job	Long string							Charge To	Main oil operations						
Hole Size	7 7/8"							T.D.	3700'						
Csg.	5 1/2" 14# used							Depth	3697.50'						
Tbg. Size								Depth							
Tool								Depth							
Cement Left in Csg.	21.24'							Shoe Joint	21.24'						
Meas Line								Displace	89 3/4 BLS Vulk Fl-seal - 1000 gal Mud clear 48						
<b>EQUIPMENT</b>								Common	96						
Pumptrk	5 No. Cementer Helper Brett							Poz. Mix	64						
Bulktrk	14 No. Driver Tom							Gel.	3						
Bulktrk	p.u. No. Driver Rick							Calcium							
<b>JOB SERVICES &amp; REMARKS</b>								Hulls							
Remarks:								Salt	14						
Rat Hole								Flowseal	40#						
Mouse Hole								Kol-Seal							
Centralizers								Mud CLR 48	1000 gal						
Baskets	Pipe on bottom break Circul							FL-117 or CD110 CAF 38							
D/V or Port Collar	pump loop gel Mud Clear							Sand							
48 plug	Bottle w/ 30 ex Hook to							Handling	177						
5 1/2"	+ new 150'							Mileage							
Cement shell down wash pump + lines. Released plug + displaced w/ 89 3/4 BLS of H2O Released to float held.								<b>FLOAT EQUIPMENT</b>							
1 1/2" pressure 700 #								Guide Shoe							
Land plug to 1500 #								Centralizer	12						
								Baskets							
								AFI Inserts							
								Float Shoe							
								Latch Down	1						
								Pumptrk Charge	prod string						
								Mileage	17						
X Signatures 								Tax							
								Discount							
								Total Charge							