

**JAMES C. MUSGROVE**

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Mai Oil Operations  
B&R Dechant #3  
S/2-SE-NE-NE (1065' FNL & 330' FEL)  
Section 19-20s-22w  
Ness County, Kansas

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

**Contractor:** Southwind Drilling Co. (rig #2)  
**Commenced:** December 9, 2014  
**Completed:** December 16, 2014  
**Elevation:** 2198' K.B., 2196' D.F., 2189' G.L.  
**Casing program:** Surface; 8 5/8" @ 265'  
Production, 5 1/2" @ 4408'  
**Sample:** Samples saved and examined 3600' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 3600' 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 Nabors, Dual Induction, Compensated Density/Neutron Log and Micro Log.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	1426	+772
Base Anhydrite	1460	+738
Heebner	3680	-1482
Toronto	3692	-1494
Lansing	3728	-1530
Base Kansas City	3988	-1790
Marmaton	4106	-1908
Pawnee	4179	-1981
Fort Scott	4249	-2051
Cherokee Shale	4272	-2074
Mississippian Osage	4346	-2148
Rotary Total Depth	4409	-2211
Log Total Depth	4412	-2214

All tops and zones corrected to Electric Log Measurement

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

**TORONTO AND LANSING/KANSAS CITY SECTIONS**

3692-3704'  
3428-4054'      There were several zones of well-developed porosity encountered in drilling the Toronto and Lansing/Kansas City Sections, but no shows of oil and/or gas was noted (see attached Sample Log/Geologist report).

**MARMATON SECTION**

4106-4126'      Limestone, tan, gray, finely crystalline, poor visible porosity, few fossiliferous, no shows.  
4130-4152'      Limestone, gray, cream, finely crystalline, poor visible porosity, dense.  
4160-4177'      Limestone, gray, tan, finely crystalline, cherty in part, poor visible porosity, dense.

**PAWNEE SECTION**

4180-4200'      Limestone, tan, gray, finely crystalline, slightly sucrosic, poor visible porosity, dense.  
4200-4220'      Limestone, as above, cherty in part.  
4220-4244'      Limestone, tan, buff, finely crystalline poor visible porosity, few fossiliferous, cherty in part.

**FORT SCOTT SECTION**

4260-4267'      Limestone, tan, gray, finely crystalline, oolitic, few fossiliferous, poor pinpoint to inter-crystalline type porosity, brown stain, trace of free oil and faint odor in fresh samples.

**CHEROKEE SECTION**

4279-4295'      Limestone, cream, gray, finely crystalline, few fossiliferous, poor visible porosity, cherty in part plus gray/white opaque chert.  
4303-4310'      Limestone, cream, tan, gray, finely crystalline, slightly oolitic, poor porosity, chalky in part.  
4317-4322'      Limestone, cream, white, chalky; no shows.  
4340-4345'      Sand, white, fine grained; well sorted, sub-rounded, no shows.

**MISSISSIPPIAN "OSAGE" SECTION**

4346-4350'      Chert, white, cream, boney, semi tripolitic, fair vuggy type porosity, golden brown stain, good show of free oil and good odor in fresh samples.

**Drill Stem Test #1**

**4279-4350**

**Times: 30-45-30-60**

**Blow: Strong**

**Recovery: 567' muddy gassy oil  
(10% gas; 80% oil; 10% mud)  
252' heavily oil and gas cut mud  
(10% gas; 40% oil; 50% mud)  
693' gassy muddy oil  
(10% gas; 80% oil; 10% mud)  
315' gassy oil  
126' oil cut mud  
(10% oil; 90% mud)**

**Pressures: ISIP 1338 psi  
FSIP 1338 psi  
IFP 142-492 psi  
FFP 504-754 psi  
HSH 2128-2076 psi**

- 4350-4360' Chert, shite/gray, scattered vuggy porosity, brown stain, trace of free oil and fair odor in fresh samples.
- 4360-4380' Chert; as above.
- 4380-4400' Chert, white, gray, cream, poor vuggy type porosity, trace dark brown stain, no free oil and faint odor in fresh samples.
- 4400-4409' Chert, white, gray, opaque, poor porosity, trace dark brown stain, no free oil and very faint odor in fresh samples.

**Rotary Total Depth 4409  
Log Total Depth 4412**

**Recommendations:**

The 5 1/2" production casing was set and cemented on Mai Oil Operation Inc., B&R Dechant #3.

Respectfully yours,



Kurt Talbott  
Petroleum Geologist



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil Operations, Inc.

19-20s-22w Ness,KS

8411 Preston RD STE 800  
Dallas TX 75225-5520

**B&R Dechant #3**

Job Ticket: 58513

DST#: 1

ATTN: Kurt Talbot

Test Start: 2014.12.15 @ 03:30:00

### GENERAL INFORMATION:

Formation: **Miss 'Osage'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:45

Time Test Ended: 17:44:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Jace McKinney

Unit No: 75

Interval: **4279.00 ft (KB) To 4350.00 ft (KB) (TVD)**

Total Depth: 4351.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2198.00 ft (KB)

2189.00 ft (CF)

KB to GR/CF: 9.00 ft

### Serial #: 8675

Inside

Press@RunDepth: 753.94 psig @ 4301.00 ft (KB)

Start Date: 2014.12.15

End Date:

2014.12.15

Start Time: 03:30:15

End Time:

17:44:15

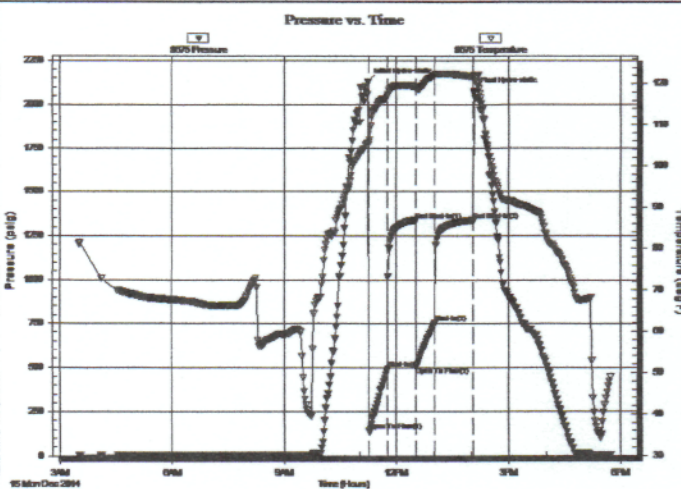
Capacity: 8000.00 psig

Last Calib.: 2014.12.15

Time On Btm: 2014.12.15 @ 11:14:45

Time Off Btm: 2014.12.15 @ 14:04:15

TEST COMMENT: B.O.B. in 1 3/4 min.  
Bled off for 5 min, Wdeak blow back died in 40 min  
B.O.B. in 2 min  
Bled off for 5 min, No blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2128.22	105.72	Initial Hydro-static
1	142.36	105.14	Open To Flow (1)
32	491.82	117.17	Shut-In(1)
77	1337.97	119.29	End Shut-In(1)
77	504.48	118.91	Open To Flow (2)
107	753.94	122.00	Shut-In(2)
168	1338.13	121.63	End Shut-In(2)
170	2075.62	121.94	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
126.00	ocm 10%O 90%O	1.77
315.00	gco 15%G 85%O	4.42
693.00	gcmo 10%G 10%M 80%O	9.72
252.00	gcom 10%G 40%O 50%M	3.53
567.00	mcgo 10%M 10%G 80%O	7.95

### Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)

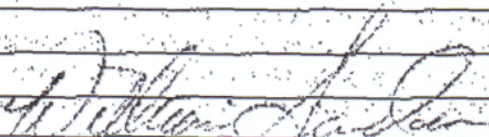
# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 8818

Date	12-9-14	Sec.	19	Twp.	20	Range	22	County	MISS	State	KS	On Location		Finish	11:00pm	
Location								Barline 3w to APRD 95 to 40 Rd 2w to Rd 1 1/2 Sw into								
Lease	B & R Dechant			Well No.	3			Owner								
Contractor	Southwind			2			To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cement and helper to assist owner or contractor to do work as listed.									
Type Job																
Hole Size	12 1/4			T.D.	266			Charge To	Ma. Oil							
Csg.	8 5/8			Depth	266			Street								
Tbg. Size				Depth				City	State							
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.								
Cement Left In Csg.	15			Shoe Joint	15			Cement Amount Ordered	170 sl 6 9/16 3 7/16 2 7/16 1							
Meas Line				Displace	15 3/4											
<b>EQUIPMENT</b>																
Pumptrk	16	No.	Cementer	Rick			Common	102								
			Helper				Poz. Mix	68								
Bulktrk	3	No.	Driver	Dana			Gel.	3								
			Driver				Calcium	10								
Bulktrk	PU	No.	Driver	Billy												
<b>JOB SERVICES &amp; REMARKS</b>																
Remarks:	Cement did circulate															
Rat Hole																
Mouse Hole																
Centralizers																
Baskets																
D/V or Port Collar																
	Handling 193															
	Mileage															
<b>FLOAT EQUIPMENT</b>																
	Guide Shoe															
	Centralizer															
	Baskets															
	AFU Inserts															
	Float Shoe															
	Latch Down															
	Pumptrk Charge															
	Mileage 20															
	Tax															
	Discount															
X Signature														Total Charge		

# 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. 989

Date	12-16-14	Sec.	19	Twp.	20	Range	22	County	NESS	State	KS	On Location		Finish	7:00pm
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Location Bazine 3WARRD 9S to 40RD 2W 1723 WINTO

Lease	B/R Dechan +		Well No.	3	Owner	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.									
Contractor	Southwind #2				Charge To	ma. O.I.									
Type Job	Production String				T.D.	4412									
Hole Size	7 7/8				Depth	4408									
Csg.	5 1/2 14#				Depth	1423									
Tbg. Size					Depth	21.44									
Tool	Bot Color				Shoe Joint	21.44									
Cement Left in Csg.	21.44				Displace	107BC									
Meas Line					Displace	107BC									

**EQUIPMENT**

Pumptrk	No.	Cementer	20	Daig	Common
		Helper			Poz. Mix
Bulktrk	No.	Driver		WIK	Gel.
		Driver			Calcium
Bulktrk	No.	Driver	15	WIK	
		Driver			

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
5 1/2 on bot can 15' Circulation Pump	Sand
1000 gal mud clear 107BC 5' each Cement	Handling
Rubber - mud seal Cement 5 1/2 with	Mileage
130SK - Clear lines & Displace Plug	

**FLOAT EQUIPMENT**

Phg (air) @ 1500# Release	Guide Shoe
Piercing Tool	Centralizer
	5 Turbols
	Baskets
	1 Red
	AFU Inserts
	Port Collar
	Float Shoe
	1
	Latch Down
	1

**Quality Oilwell Cementing**

	Pumptrk Charge	
	Mileage	
		tax
		Discount
		Total Charge

X Signature *[Handwritten Signature]*