

JAMES C. MUSGROVE

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Mai Oil Operations
Dechant #2
NW-NW-SE-NE (1490' FNL & 1175' FEL)
Section 19-20s-22w
Ness County, Kansas

Page 1

5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (rig #2)
Commenced: November 13, 2014
Completed: November 21, 2014
Elevation: 2219' K.B., 2217' D.F., 2210' G.L.
Casing program: Surface; 8 5/8" @ 263'
Production, 5 1/2" @ 4426'
Sample: Samples saved and examined 3500' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 3500' 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 Completion and Production Services Co.; Dual Induction, Compensated Density/Neutron Log and Micro.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	1443	+776
Base Anhydrite	1478	+741
Heebner	3697	-1478
Toronto	3711	-1492
Lansing	3747	-1528
Stark	4007	-1788
Base Kansas City	4071	-1852
Marmaton	4118	-1899
Pawnee	4198	-1979
Fort Scott	4267	-2048
Cherokee Shale	4291	-2072
Mississippian	4351	-2132
Mississippian Osage	4360	-2141
Rotary Total Depth	4430	-2211
Log Total Depth	4426	-2207

All tops and zones corrected to Electric Log Measurement

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

TORONTO AND LANSING SECTIONS

3711-3726'
3747-4071' There were several zones of well-developed porosity encountered in the drilling of the Toronto and Lansing Sections but no shows of oil and /or gas noted. (See attached Sample Log/Geologist Report)

MARMATON SECTION

4118-4126' Limestone, white, tan, finely crystalline, cherty, poor porosity, no shows.
4146-4156' Limestone, cream, tan, gray, finely crystalline, poor inter-crystalline porosity, chalky; few cherty, no shows.
4161-4197' Limestone, white, cream, chalky, no shows.

PAWNEE SECTION

4197-4220' Limestone, tan, gray finely crystalline, chalky, poor visible porosity, dense.
4220-4260' Limestone, tan, gray finely crystalline, chalky, shaley at base, no shows.

FORT SCOTT SECTION

4267-4280' Limestone, cream, gray, finely crystalline, few fossiliferous, trace stain, no free oil and no odor.
4280-4286' Limestone, tan, brown chalky, poor visible porosity, fair stain and saturation, show of free oil and fair odor in fresh samples.

CHEROKEE SECTION

4291-4314' Limestone, gray, medium crystalline, chalky, plus chert, gray white, opaque.
4321-4350' Limestone, as above, trace white/gray opaque cherts at base.

MISSISSIPPIAN SECTION

4351-4360' Chert, white, opaque, black stain, no free oil and no odor.

MISSISSIPPIAN "OSAGE" SECTION

4360-4368' Chert, white, boney, trace black spotty stain, trace of free oil; plus dolomite, tan/gray, finely crystalline, poor to fair pinpoint type porosity, light brown stain, show of free oil and fair odor in fresh samples.

Drill Stem Test #1 **4302-4372**
(Log Measurements 4298-4368)

Times: 30-30-45-45

Blow: Strong

**Recovery: 166' gassy oil
282' slightly oil and gas cut mud
(10% gas; 10% oil; 80% mud)**

**Pressures: ISIP 1360 psi
FSIP 1356 psi
IFP 72-102 psi
FFP 102-200 psi
HSH 2192-2152 psi**

4368-4380' Dolomite, tan, white, finely crystalline, sucrosic, fair porosity, fair stain, show of free oil and odor.

4382-4400' Dolomite, white/cream, finely crystalline, sucrosic, poor visible porosity, brown stain, light show of free oil plus white/cream, yellow, boney chert; spotty stain, trace of free oil.

4400-4420' Chert, as above.


4420-4426' Chert as above, trace tan, white, dolomite, poor to fair inter-crystalline porosity, spotty stain, trace of free oil and faint odor in fresh samples.

Rotary Total Depth 4430
Log Total Depth 4426

Recommendations:

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

Respectfully yours,


Wyatt Urban
Petroleum Geologist



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Production, Inc
 8411 Preston RD STE 800
 Dallas, TX 75225
 ATTN: Wyatt Urban

19-20s-22w Ness,KS
B&R Dechant #2
 Job Ticket: 60980 **DST#: 1**
 Test Start: 2014.11.19 @ 18:49:00

GENERAL INFORMATION:

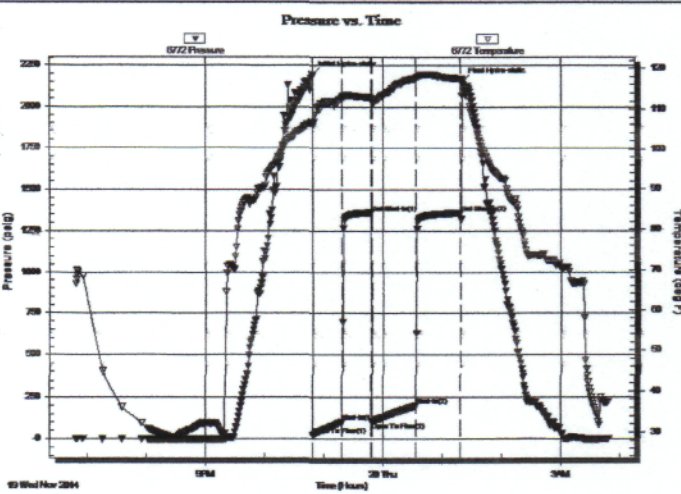
Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:48:30
 Time Test Ended: 03:48:30
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Phillip Gage
 Unit No: 72
 Interval: **4302.00 ft (KB) To 4372.00 ft (KB) (TVD)**
 Total Depth: 4372.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Reference Elevations: 2218.00 ft (KB)
 2209.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 6772

Outside

Press@RunDepth: 200.34 psig @ 4303.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.19 End Date: 2014.11.20 Last Calib.: 2014.11.20
 Start Time: 18:49:05 End Time: 03:48:30 Time On Btm: 2014.11.19 @ 22:48:15
 Time Off Btm: 2014.11.20 @ 01:20:15

TEST COMMENT: 30-IF-BOB in 15 mins.
 30-ISI-No Return
 45-FF-BOB in 16 mins.
 45-FSI-1/4" Return, died in 20 mins.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2192.40	106.62	Initial Hydro-static
1	22.75	106.02	Open To Flow (1)
30	102.04	112.63	Shut-In(1)
60	1360.08	112.89	End Shut-In(1)
61	102.28	112.01	Open To Flow (2)
106	200.34	117.42	Shut-In(2)
150	1356.83	117.43	End Shut-In(2)
152	2152.00	116.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
282.00	SGOCM, 10%g, 10%o, 80%m	3.96
166.00	GO, 30%g, 70%o	2.33
0.00	GP-50'	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. 722

Date	11-13-14	Sec.	12	Twp.	16	Range	13	County	Now Atch	State	KS	On Location		Finish	11:00 PM	
Lease	BNR Dec hant			Well No.	12			Owner	Y Rd 155 W							
Contractor	Southwind #2							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							
Hole Size	12 1/4			T.D.	264			Street								
Csg.	9 5/8			Depth				City	State							
Tbg. Size				Depth				The above was done to satisfaction and supervision of owner agent or contractor.								
Tool				Depth				Cement Amount Ordered	170 60/40 30/60 20/90							
Cement Left in Csg.				Shoe Joint												
Meas Line				Displace	15 1/2 65'											
EQUIPMENT								Common	102							
Pumptrk	5	No.		Cementer	Drew			Poz. Mix	68							
Bulktrk	14	No.		Driver	Chest			Gel.	3							
Bulktrk	PU	No.		Driver	Drew			Calcium	807							
JOB SERVICES & REMARKS								Hulls								
Remarks:								Salt								
Rat Hole								Flowseal								
Mouse Hole								Kol-Seal								
Centralizers								Mud CLR 48								
Baskets								CFL-117 or CD110 CAF 38								
DV or Port Collar								Sand								
								Handling	20							
								Mileage								
								FLOAT EQUIPMENT								
								Guide Shoe								
								Centralizer								
								Baskets								
								AFU Inserts								
								Float Shoe								
								Latch Down								
								Pumptrk Charge	Surface							
								Mileage	20							
								Tax								
								Discount								
								Total Charge								
X Signature	William [Signature]															

Cement Circulated

Quality Oilwell Cementing

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. 698

Date	11-21-14	Sec.	19	Twp.	20	Range	22	County	Ness	State	KS	On Location		Finish	5:45AM				
Lease								Location		Bazine, 3w to AARd, 95 to 40 Rd, 2w to Y Rd									
BNR D								Well No. 1		Owner 1 1/2 S, wn 2									
Contractor Southwind								2		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 Mai Oil									
Hole Size 7 7/8								T.D. 4430		Street									
Csg. 5 1/2 14 #								Depth 4424		City State									
Tbg. Size								Depth		City State									
Tool								Depth		The above was done to satisfaction and supervision of owner agent or contractor.									
Cement Left in Csg.								Shoe Joint 20.50		Cement Amount Ordered 175sx 60/40, 2% gel, 10% salt									
Meas Line								Displace 107 1/2		1/4 # Flow									
EQUIPMENT												Common							
Pumptrk	17	No.		Cementer	Helper Lonnie W		Poz. Mix												
Bulktrk	9	No.		Driver	Tyson		Gel.												
Bulktrk	14	No.		Driver	Travis		Calcium												
JOB SERVICES & REMARKS												Hulls							
Remarks:												Salt							
Rat Hole 30 sx												Flowseal							
Mouse Hole 15 sx												Kol-Seal							
Centralizers 1, 2, 3, 4, 68												Mud CLR 48 1000 gal							
Baskets 69												CFL-117 or CD110 CAF 38							
DNV or Port Collar #69 at 1472												Sand							
Pipe on bottom broke circulation. Pumped 1000 gal Mud CLR 48 with 10 bbl fw behind it. Plugged Rat hole with 30sx and Mouse hole with 15 sx. Hooked to 5 1/2 and Mixed 130 sx. Shut down washed pump and lines. Released plug and displaced with 107 1/2 bbl fw. Plug landed and held.												Handling							
												Mileage							
QUALITY OILWELL CEMENTING												FLOAT EQUIPMENT							
												Guide Shoe							
												Centralizer 5 turbos							
												Baskets 1 Red							
												AFU Inserts							
												Float Shoe							
												Latch Down 1							
lift pressure 200 psi												1 Port collar							
Plug landed at 1400 psi												Pumptrk Charge							
												Mileage							
X Signature <i>William Adams</i>																Tax			
																Discount			
																Total Charge			

JOB LOG

SWIFT Services, Inc.

DATE 2 JAN 15 PAGE NO.

CUSTOMER NTHI OPERATION WELL NO. LEASE DECHANT 3#R#2 JOB TYPE CEMENT PORT COLLAR TICKET NO. 28181

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1100							ON LOCATION
								PORT COLLAR @ 1472
	1149				✓		1000	TEST-HELD
	1151							OPEN PORT COLLAR
1154	1154	4	77½	✓			300	MIX 140Sx SMD
		3	8	✓				DISPLACE CEMENT
								CIRCULATE 20Sx TO PIT
	1216				✓		1000	CLOSE PORT COLLAR - TEST-HELD
	1223							RUN 4 JTS.
	1229	4	22		✓		200	REVERSE CLEAN
	1238							WASH TRUCK
	1300							JOB COMPLETE.
								THANKS B/15
								JASON DAVE JARED