

JAMES C. MUSGROVE

Petroleum Geologist, LLC
212 Main Street
P.O. Box 215
Claflin, KS 67525

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Mai Oil Operations
Dechant Unit #1
NE-NW-SE-NE (1430' FNL & 815' FEL)
Section 17-20s-22w
Ness County, Kansas

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5 1/2" Disposal Casing Set

Contractor: Southwind Drilling Co. (rig #2)
Commenced: January 19, 2015
Completed: January 27, 2015
Elevation: 2200' K.B., 2198' D.F., 2191' G.L.
Casing program: Surface; 8 5/8" @ 263'
Production, 5 1/2" @ 4613'
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	1428	+772
Base Anhydrite	1464	+736
Heebner	3684	-1484
Toronto	3698	-1498
Lansing	3730	-1530
Stark	3989	-1789
Base Kansas City	4056	-1856
Marmaton	4097	-1897
Pawnee	4177	-1977
Fort Scott	4260	-2060
Cherokee Shale	4274	-2074
Conglomerate	4330	-2130
Mississippian "Osage"	4360	-2160
Gilmore City	4481	-2281
Viola	4551	-2351
Simpson Shale	4723	-2523
Arbuckle	4753	-2553
Rotary Total Depth	4850	-2650
Log Total Depth	4856	-2656

All tops and zones corrected to Electric Log Measurement

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

TOPEKA/TORONTO/LANSING SECTIONS

3600-4054' There were several zones of well-developed porosity encountered in the drilling of the Topeka/Toronto/Lansing Sections but no shows of oil and/or gas was noted (see attached sample log/geologist report).

MARMATON SECTION

4097-4120' Limestone, white, cream, chalky, poor porosity, plus white chert, no shows.

4130-4150' Limestone, white, gray, oolitic, chalky, few with sparry calcite cement, no shows.

4153-4175' Limestone, tan, gray, finely crystalline, slightly cherty, dense, no shows plus maroon tinted limestone.

PAWNEE SECTION

4177-4200' Limestone, gray, finely crystalline, fair granular, slightly cherty (dense).

4200-4230' Limestone, as above.

4230-4256' Limestone, as above, dense; slightly argillaceous, no shows.

FORT SCOTT SECTION

4260-4273' Limestone, gray, finely crystalline, few oolitic, dense, no shows.

CHEROKEE SECTION

4278-4296' Limestone, white, gray, finely crystalline, chalky, no shows.

4300-4330' Limestone, gray, white, finely crystalline, chalky, few cherty, tan/gray chert, no shows.

CONGLOMERATE SECTION

4331-4353' Chert, white, gray, yellow, boney, opaque, trace black stain, plus trace white, very fine grained, calcareous, sand, poor porosity, plus black stain, no shows.

MISSISSIPPIAN SECTION
'OSAGE'

4360-4365' Chert, white, cream, boney, fresh; trace brown spotty stain, trace of free oil and no odor.

4365-4377' Chert, as above, few weathered brown stain, trace of free oil and no odor in fresh samples.

Drill Stem Test #1 **4282-4371**
Log Measurements (4288-4377)

Times: 30-30-30-45

Blow: Strong

Recovery: 1290' muddy water

Pressures: ISIP 1360 psi
FSIP 1375 psi
IFP 82-374 psi
FFP 381-625 psi
HSH 2126-2080 psi

- 4371-4400' Chert, as above, glauconitic, boney in part, no shows.
- 4400-4420' Chert; as above, plus dolomitic white, sucrosic, glauconitic, scattered porosity, no shows.
- 4420-4440' Dolomite and chert, as above.
- 4440-4460' Dolomite and chert, as above, no shows.
- 4460-4481' Dolomite, as above.

GILMORE CITY SECTION

- 4481-4523' Limestone, white/tan, fine and medium crystalline, few dolomitic, no shows.
- 4523-4530' Limestone, white, gray, oolitic, chalky, no shows.
- 4530-4551' Limestone, as above, no shows.

VIOLA SECTION

- 4554-4580' Dolomite, gray, white, sucrosic, dense, poor porosity, no shows.
- 4580-4600' Dolomite, white, pink, peach, finely crystalline, sucrosic, poor visible porosity, no shows.
- 4600-4620' Dolomite, white, gray, fine to medium crystalline, few with chalky luster, no shows.
- 4620-4650' Dolomite, as above, plus white, gray boney chert.
- 4650-4680' Dolomite, as above, plus white, cream gray opaque chert.
- 4680-4723' Dolomite and chert as above.

SIMPSON SECTION

- 4724-4734' Sand, gray, sub-angular, dolomitic in part poorly developed, plus gray shale inclusions, no shows.

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Section 17-20s-22w
Ness County, Kansas

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ARBUCKLE SECTION

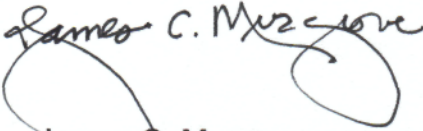
4753-4760'	Dolomite, tan, pink, finely crystalline, few sucrosic, fair porosity, no shows.
4760-4780'	Dolomite, pink, gray, tan, fine and medium crystalline, fair inter-crystalline porosity, no shows.
4780-4800'	Dolomite, as above, plus white chert, no shows.
4800-4820'	Dolomite, as above, sandy in part, no shows.
4820-4850'	Dolomite, as above, fair porosity, no shows.

Rotary Total Depth 4850
Log Total Depth 4856

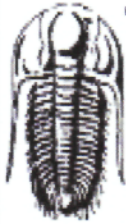
Recommendations:

The 5 ½" disposal casing was set and cemented on Mai Oil Operation Inc., Dechant Unit #1.

Respectfully yours,


James C. Musgrove
Petroleum Geologist





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations, Inc.

17-20s-22w Ness,KS

8411 Preston Rd STE 800 Dallas TX 75225-5520

Dechant Unit #1

ATTN: Jim Musgrove

Job Ticket: 61977

DST#: 1

Test Start: 2015.01.26 @ 05:27:00

GENERAL INFORMATION:

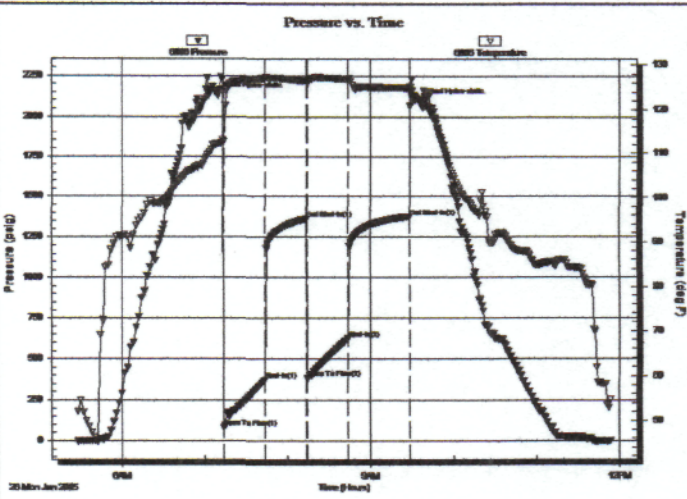
Formation: **Mississippian**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:13:30
 Time Test Ended: 11:53:30
 Interval: **4208.00 ft (KB) To 4371.00 ft (KB) (TVD)**
 Total Depth: 4371.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzern
 Unit No: 56
 Reference Elevations: 2200.00 ft (KB)
 2191.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 6806

Inside

Press@RunDepth: 625.10 psig @ 4293.50 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.01.26 End Date: 2015.01.26 Last Calib.: 2015.01.26
 Start Time: 05:28:00 End Time: 11:53:30 Time On Btm: 2015.01.26 @ 07:09:30
 Time Off Btm: 2015.01.26 @ 09:36:30

TEST COMMENT: FFP 30 Minutes. BOB in 4 minutes and 45 seconds.
 ISI 30 Minutes. No blow back.
 FFP 30 Minutes. BOB in 5 minutes and 30 seconds.
 FSI 45 Minutes. No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2126.65	112.17	Initial Hydro-static
4	82.19	112.63	Open To Flow (1)
34	374.06	126.93	Shut-In(1)
64	1360.72	126.44	End Shut-In(1)
65	381.73	126.10	Open To Flow (2)
94	625.10	126.85	Shut-In(2)
139	1375.66	124.86	End Shut-In(2)
147	2088.14	122.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
156.00	Muddy w ater 50% Mud, 50% w ater	2.19
126.00	Muddy w ater 40% mud, 60% w ater	1.77
252.00	Muddy w ater 20% mud, 80% w ater	3.53
315.00	Muddy w ater 10% mud, 90% w ater	4.42
126.00	Muddy w ater 5% mud, 95% w ater	1.77
315.00	100% w ater	4.42

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. 0999

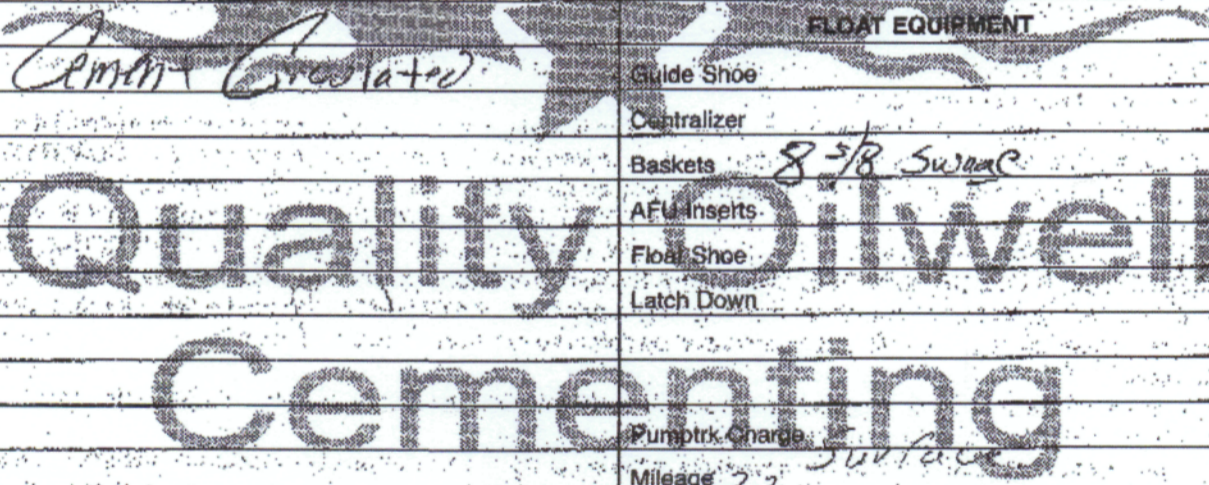
Date	1-19-15	Sec.	17	Twp.	20	Range	22	County	WASS	State	KS	On Location		Finish	11:30p.m.
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Location *Barne 32 BAR 9S 40R 1W 2R 1S WINTO*

Lease	<i>Dechant Unit</i>	Well No.	<i>1</i>	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	<i>Southwind #2</i>	Type Job	<i>Surface</i>	Charge To	<i>Ma Oil</i>
Hole Size	<i>12 1/4</i>	T.D.	<i>264</i>	Street	
Csg.	<i>8 5/8</i>	Depth	<i>263</i>	City	State
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered <i>170⁶⁰/403-LL 2.6EL</i>	
Cement Left in Csg.	<i>15</i>	Shoe Joint			

Meas Line		Displace	<i>15 3/4 BBL</i>	Common	<i>100</i>
EQUIPMENT				Poz. Mix	<i>70</i>
Pumptrk	<i>18</i>	No.		Get.	<i>3</i>
		Cement Helper	<i>Ed</i>	Calcium	<i>2</i>
		Driver	<i>Nick</i>	Hulls	
Bulktrk		Driver		Salt	
Bulktrk	<i>15</i>	Driver	<i>Ryan</i>	Flowseal	

JOB SERVICES & REMARKS					
Remarks:					
Rat Hole					
Mouse Hole					
Centralizers					
Baskets					
D/V or Port Collar					
<i>8 5/8 on bottom For Sealed Mix</i>					
<i>170.5H Displace</i>					



Cement Grouted				FLOAT EQUIPMENT	
				Guide Shoe	
				Centralizer	
				Baskets	<i>8 5/8 Swam</i>
				AFU Inserts	
				Float Shoe	
				Latch Down	
				Pumptrk Charge	<i>Surface</i>
				Mileage	<i>32</i>
Signature <i>[Signature]</i>				Tax	
				Discount	
				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. 1125

Date	1-28-15	Sec.	17	Twp.	20	Range	22	County	NESS	State	KS	On Location		Finish	2:00pm
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Location Bazine 3w to AARD 9s to 40RD 1w 1/2s winto

Lease	<u>Dechant unit</u>		Well No.	<u>1</u>		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	<u>Southwind</u>			<u>2</u>		Charge To	<u>Main oil operations</u>								
Type Job	<u>Production</u>					Street									
Hole Size	<u>7 7/8</u>		T.D.	<u>4850</u>		City									
Csg.	<u>5 1/2</u>		Depth	<u>4613</u>		State									
Tbg. Size			Depth			The above was done to satisfaction and supervision of owner agent or contractor.									
Tool			Depth			Cement Amount Ordered	<u>160sx 60/40 10% salt</u>								
Cement Left in Csg.	<u>20.5</u>		Shoe Joint	<u>20.5</u>		Meas Line	<u>Displace 112 bls 2% gel 1/4 flow seal 1000 gal mud clear</u>								

EQUIPMENT

Pumptrk	<u>16</u>	No.	Cementer Helper	<u>Rick</u>	Common
Bulktrk	<u>3</u>	No.	Driver	<u>Doug</u>	Poz. Mix
Bulktrk	<u>2</u>	No.	Driver	<u>Billy</u>	Gel.
			Driver		Calcium

JOB SERVICES & REMARKS

Remarks:	
Rat Hole	<u>30sx</u>
Mouse Hole	<u>20sx</u>
Centralizers	<u>1, 3, 5, 7, 10, 72</u>
Baskets	<u>1, 73</u>
D/V or Port Collar	<u>144" top of joint 73</u>
Pipe on bottom	<u>Hooked to 5 1/2</u>
Broke circulation for 10 min	<u>Drop ball</u>
Wait 10 min for ball to drop	<u>set</u>
Packer shoe	<u>Pump 1000 gal mud clear. Plug rat hole w 30sx</u>
Mouse hole	<u>20sx Hook to 5 1/2 Pumped 110sx 40 lb plug. Unhook</u>
Wash dump & lines	<u>Released plug</u>
Displace cc w 112 bls water	<u>Landed Plug. Released & plug held.</u>
Lift PSI	<u>1600</u>
Landed Plug	<u>PSI 1500</u>
Packer set at	<u>1000 PSI</u>

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	<u>6</u>
Baskets	<u>2</u>
AFU Inserts	
Float Shoe	
Latch Down	<u>1 + plug</u>
Packer shoe	<u>Port collar</u>
Pumptrk Charge	
Mileage	

X Signature William Sanders

Tax	
Discount	
Total Charge	



CHARGE TO: MAI Oil Operations
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 28235

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1.	e1 SWD	Dechant Unit	Nes	KS	Ness City	27 Feb 15	
2.	TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.	WELL TYPE	WELL CATEGORY	JOB PURPOSE	WELL PERMIT NO.	WELL LOCATION		
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE TRK 114	20	mi			5.00	100.00
576D		1			Pump Charge	1	eq			1250.00	1250.00
33D		1			SWD cement	140	sk			15.75	2205.00
276		1			Fluore	50	lb			2.25	112.50
290		1			D-AIR	1	gal			42.00	42.00
104		1			opening tool rental	1	ea			200.00	200.00
581		1			service charge	175	sk			1.50	262.50
583		1			Drayage (min)	1	eq			250.00	250.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X *Walter Banzert*
 DATE SIGNED TIME SIGNED A.M. P.M.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	4463.00
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				TAX	
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR *Regan* APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 27 Feb 15 PAGE NO. 1

CUSTOMER WAF OIL OPERATIONS WELL NO. #1540 LEASE Dechant Unit JOB TYPE cement port collar TICKET NO. 28235

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								175 sk SMD cement w/ 4# floccle 28" x 5 1/2" Port collar - 144'
	1700							on loc TRK 114
	1255					1000	1000	test to 1000psi - hold open port collar
	1258	3 1/2	2			350		inj rate 3 1/2 bpm @ 350 psi
	1302	3 1/2				350		Mix SMD cement @ 11.2 ppg
	1324	3 1/2	75			400		— cement to surface —
			8					Displace w/ 8 bbl H ₂ O { 140 sk mixing 15 trip }
								close port collar
	1330					1000	1000	test to 1000psi - hold
	1342							Run 5 joints
	1353		25					Reverse hole clean - 2 cement plugs -
								pull tool wash truck
								Stack up
	1430							job complete
								Trucks
								Flat, Home # 1540