

**JAMES C. MUSGROVE**

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Mai Oil Operations  
Martin Dietz #2  
NW-NE-SW-NW (1475' FNL & 700' FWL)  
Section 9-15s-14w  
Russell County, Kansas

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**Dry and Abandoned**

**Contractor:** Southwind Drilling Co. (rig #3)  
**Commenced:** May 14, 2014  
**Completed:** May 19, 2014  
**Elevation:** 1832' K.B., 1830' D.F., 1824' G.L.  
**Casing program:** Surface; 8 5/8" @ 516'  
Production, none  
**Sample:** Samples saved and examined 2200' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 2200 ft. to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were three (3) Drill Stem Tests ran by Trilobite Testing Co.  
**Electric Log:** -None-

<u>Formation</u>	<u>Sample Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	822	+1010
Base Anhydrite	851	+981
Grand Haven	2391	-559
1 <sup>st</sup> Tarkio Sand	2404	-572
Dover	2418	-586
2 <sup>nd</sup> Tarkio Sand	2430	-598
Tarkio Lime	2463	-631
Elmont	2536	-704
Howard	2663	-831
Topeka	2728	-896
Heebner	2956	-1124
Toronto	2973	-1141
Lansing	3015	-1183
Base Kansas City (Mai)	3226	-1394
Arbuckle	3264	-1432
Rotary Total Depth	3275	-1443

All tops and zones determinations were made from a correlation of Drilling Time Log and Sample Analysis.

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

**1<sup>ST</sup> TARKIO SAND**

2404-2414' Sand, gray, grayish green; very fine granular; few friable; poorly developed porosity, trace brown stain; trace of free oil; no odor in fresh samples.

**2<sup>nd</sup> TARKIO SAND**

2430-2443' Sand; gray, tan; very fine grained; "silty", poorly developed; trace light brown stain, trace of free oil and no odor in fresh samples.

**Drill Stem Test #1 2394-2448**

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

**Blow:** Fair (6")

**Recovery:** 126' slightly oil cut muddy water  
(5% oil; 35% mud; 60% water)  
55' mud; trace of water  
(1% water; 99% mud)

**Pressures:** ISIP 553 psi  
FSIP 566 psi  
IFP 37-85 psi  
FFP 87-108 psi  
HSH 1174-1104 psi

**TOPEKA SECTION**

2910-2922' Limestone; white/cream, finely crystalline, fossiliferous, poor pinpoint to inter-crystalline porosity, chalky, dark brown stain, no show of free oil and no odor.

**TORONTO SECTION**

2973-2980' Limestone, white, light gray, finely crystalline, chalky; poor scattered porosity, trace of stain, no free oil and no odor.

**LANSING SECTION**

3020-3026' Limestone, white, light gray, oolitic, chalky, poor developed pinpoint and inter-crystalline type porosity, light brown stain, trace of free oil and fair odor in fresh samples.

3038-3044' Limestone, white, cream, finely crystalline, oolitic; chalky; poor porosity, no shows.

3057-3062' Limestone, white, light gray, finely crystalline, scattered sub-oomoldic to fair oomoldic porosity; light brown and golden brown stain, trace of free oil and faint order in fresh samples.

3080-3084' Limestone, cream, tan, finely crystalline, oolitic, chalky and spotty stain, no show of free oil and no odor in samples.

**Drill Stem Test #2** **3019-3085**

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

**Blow:** Weak

**Recovery:** 10' mud

**Pressures:** ISIP 315 psi  
FSIP 171 psi  
IFP 32-33 psi  
FFP 34-35 psi  
HSH 1540-1450 psi

3115-3120' Limestone; white, gray, finely crystalline, chalky; spotty stain, no show of free oil and no odor, plus white/cream chert.

3120-3132' Limestone, white/cream, finely crystalline, oolitic, scattered inter-crystalline and sub oomoldic porosity, chalky, trace spotty stain, no show of free oil and no odor in fresh samples.

3141-3150' Limestone, white cream finely crystalline, oomoldic in part; chalky; trace of stain, no free oil and no odor.

3166-3174' Limestone, white, gray, sub-oomoldic, poorly developed porosity, chalky, no shows.

3182-3186' Limestone, cream, tan, finely crystalline, fair oolitic, dense.

3206-3216' Limestone, tan, cream, finely crystalline, chalky in part, dense; poor visible porosity, no shows.

**ARBUCKLE SECTION**

3264-3275' Dolomite, white, cream, fine to medium crystalline, fair inter-crystalline porosity, golden brown to dark brown stain, show of free oil and good odor in fresh samples

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**Drill Stem Test #3 3212-3275**

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

**Blow: Strong**

**Recovery: 2502' muddy water  
(20% mud; 80% water)**

**Pressures: ISIP 1108 psi  
FSIP 1109 psi  
IFP 132-736 psi  
FFP 744-1064 psi  
HSH 1676-1541 psi**

**Rotary Total Depth 3275-1443**

**Recommendations:**

The Mai Oil Operations, Inc., Martin Dietz #2, was plugged and abandoned at the Rotary Total Depth 3275 (-1443)..

Respectfully submitted;

Kurt Talbott  
Petroleum Geologist



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Mai Oil  
 8411 Preston Rd.  
 Dallas TX 75225  
 ATTN: Kurt talbott

**9-15s-14w Russell,KS**  
**Martin Dietz #2**  
 Job Ticket: 55278      **DST#: 3**  
 Test Start: 2014.05.19 @ 08:16:00

**GENERAL INFORMATION:**

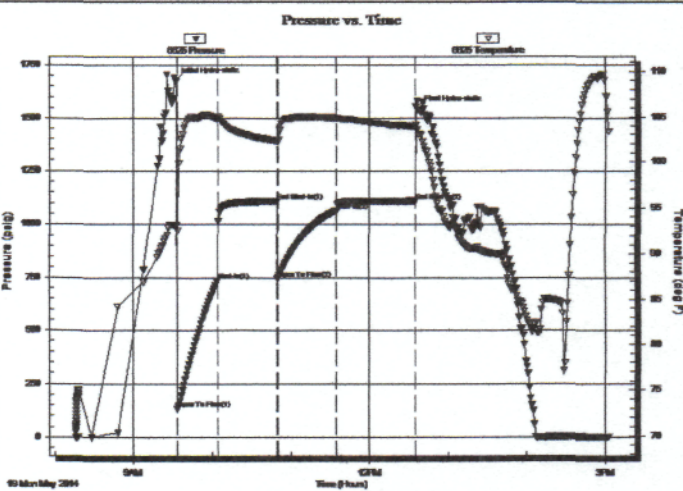
Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:33:30  
 Time Test Ended: 15:03:00  
 Interval: **3212.00 ft (KB) To 3275.00 ft (KB) (TVD)**  
 Total Depth: 3275.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Bob Hamel  
 Unit No: 67  
 Reference Elevations: 1832.00 ft (KB)  
 1824.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 6625**

**Outside**

Press@RunDepth: 1064.26 psig @ 3247.00 ft (KB)  
 Start Date: 2014.05.19 End Date: 2014.05.19  
 Start Time: 08:16:01 End Time: 15:03:00  
 Capacity: 8000.00 psig  
 Last Calib.: 2014.05.19  
 Time On Btmr: 2014.05.19 @ 09:32:00  
 Time Off Btmr: 2014.05.19 @ 12:37:30

**TEST COMMENT:** IF - 30 - BOB in 2 min  
 I.S.I - 45 - No blow back  
 F.F. - 45 - BOB in 1 min  
 F.S.I - 60 - No blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1675.96	93.07	Initial Hydro-static
2	131.51	92.45	Open To Flow (1)
32	736.12	104.81	Shut-In(1)
78	1107.50	102.34	End Shut-In(1)
78	744.09	102.25	Open To Flow (2)
123	1064.26	104.91	Shut-In(2)
183	1108.94	103.88	End Shut-In(2)
186	1540.84	103.04	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
2502.00	H,M,C,W, 20%M 80%W	35.10

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mai Oil  
8411 Preston Rd.  
Dallas TX 75225  
ATTN: Kurt talbott

**9-15s-14w Russell,KS**  
**Martin Dietz #2**  
Job Ticket: 55277      **DST#: 2**  
Test Start: 2014.05.18 @ 14:30:00

## GENERAL INFORMATION:

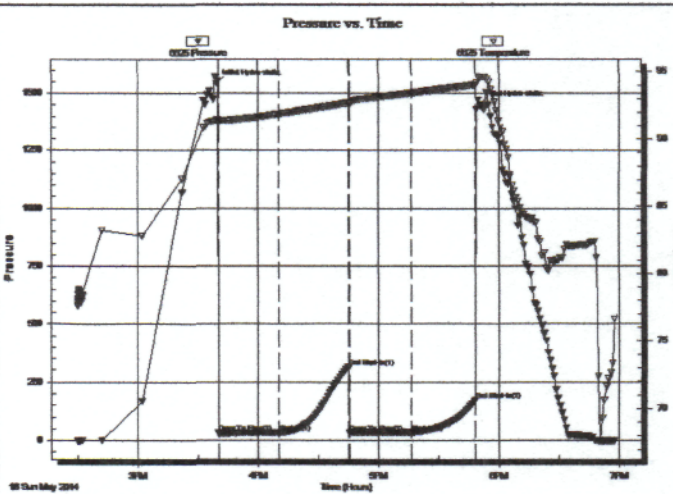
Formation: **LKC "A-C"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 15:40:00  
Time Test Ended: 18:57:30  
Interval: **3019.00 ft (KB) To 3085.00 ft (KB) (TVD)**  
Total Depth: 3085.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Bob Hamel  
Unit No: 67  
Reference Elevations: 1832.00 ft (KB)  
1824.00 ft (CF)  
KB to GRVCF: 8.00 ft

## Serial #: 6625

## Outside

Press@RunDepth: 35.07 psig @ 3053.00 ft (KB)  
Start Date: 2014.05.18 End Date: 2014.05.18  
Start Time: 14:30:01 End Time: 18:57:30  
Capacity: 8000.00 psig  
Last Calib.: 2014.05.18  
Time On Btmr: 2014.05.18 @ 15:39:00  
Time Off Btmr: 2014.05.18 @ 17:50:30

TEST COMMENT: I.F. - 30 - Weak surface blow throughout  
L.S.L - 30 - No blow back  
F.F. - 30 - No blow  
F.S.I - 30 - No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1540.30	91.36	Initial Hydro-static
1	31.75	91.16	Open To Flow (1)
31	33.41	91.87	Shut-In(1)
66	315.35	92.71	End Shut-In(1)
67	34.40	92.67	Open To Flow (2)
97	35.07	93.43	Shut-In(2)
129	170.72	94.04	End Shut-In(2)
132	1449.85	94.61	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD 100%	0.14

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil  
8411 Preston Rd.  
Dallas TX 75225  
ATTN: Kurt talbott

**9-15s-14w Russell,KS**  
**Martin Dietz #2**  
Job Ticket: 55267      **DST#: 1**  
Test Start: 2014.05.17 @ 01:45:00

### GENERAL INFORMATION:

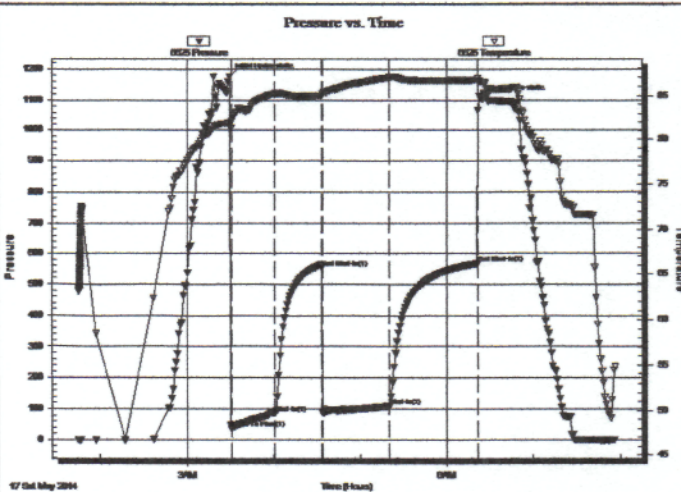
Formation: **Tarkio**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 03:31:00  
Time Test Ended: 07:57:00  
Interval: **2394.00 ft (KB) To 2448.00 ft (KB) (TVD)**  
Total Depth: 2448.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches      Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Bob Hamel  
Unit No: 67  
Reference Elevations: 1832.00 ft (KB)  
1824.00 ft (CF)  
KB to GR/CF: 8.00 ft

### Serial #: 6625

Outside

Press@RunDepth: 107.73 psig @ 2429.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2014.05.17      End Date: 2014.05.17      Last Calib.: 2014.05.17  
Start Time: 01:45:01      End Time: 07:57:00      Time On Btm: 2014.05.17 @ 03:29:30  
Time Off Btm: 2014.05.17 @ 06:24:00

TEST COMMENT: I.F. - 30 - Weak blow built to 6"  
I.S.I. - 30 - No blow back  
F.F. - 45 - Weak blow built to 7"  
F.S.I. - 60 - No blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1174.19	81.91	Initial Hydro-static
2	36.53	82.06	Open To Flow (1)
32	85.14	85.19	Shut-In(1)
64	553.20	84.93	End Shut-In(1)
65	86.75	85.18	Open To Flow (2)
111	107.73	87.00	Shut-In(2)
172	566.20	86.71	End Shut-In(2)
175	1104.17	86.54	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
126.00	S,O,C,M,W, 5%O 35%M 60%W	0.62
55.00	S,O,S,W,M, 1%W 99%M (FEW OIL SP)	0.77

### 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. 182

Date	5-15-14	Sec.	Twp.	Range	County	State	On Location	Finish
					Russell	KS		5:00 AM

Location 281 + Walters Rd 2 W 1/4 S E into

Lease	Martin-Dietz	Well No.	42	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		3		
Type Job	Surface				
Hole Size	12 1/4	T.D.	516'	Charge To	Man Oil
Csg.	8 5/8	Depth	516'	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.	30'	Shoe Joint		Cement Amount Ordered	250 6 3/4 3 3/4 cc 2 3/4 gal

Meas Line	Displace 31 bbl
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**EQUIPMENT**

Pumptrk	5	No.	Cementer	Helper	David	Common
Bulktrk	14	No.	Driver	Driver	Clayton	Poz. Mix
Bulktrk	P4	No.	Driver	Driver	Brett	Gel.
			Driver			Calcium

**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
	Sand
	Handling
	Mileage
	8 5/8
	<b>FLOAT EQUIPMENT</b>
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
	Rubber Plug!
	Pumptrk Charge
	Mileage

X Signature *Gay Dean*

	Tax
	Discount
	Total Charge

