

**JAMES C. MUSGROVE**

Petroleum Geologist, LLC  
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Mai Oil Operations  
Simpson 3-5 #6  
NW-SE-NW-SE (1905' FSL & 1683' FEL)  
Section 12-11s-17w  
Ellis County, Kansas

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**Dry and Abandoned**

**Contractor:** Southwind Drilling Co. (rig #3)  
**Commenced:** July 23, 2015  
**Completed:** August 1, 2015  
**Elevation:** 1775' K.B., 1773' D.F., 1767' G.L.  
**Casing program:** Surface; 8 5/8" @ 963  
Production, None  
**Sample:** Samples saved and examined 2700' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 2700' to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were four (4) Drill Stem Tests ran by Trilobite Testing Co.  
**Electric Log:** None

<u>Formation</u>	<u>Sample Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	960	+815
Base Anhydrite	1000	+775
Heebner	2918	-1143
Toronto	2940	-1165
Lansing	2963	-1188
Base Kansas City	3203	-1428
Conglomerate	3217	-1442
Reworked Arbuckle	3284	-1509
Arbuckle	3313	-1538
Rotary Total Depth	3320	-1545

All tops and zones determination were made from a correlation of drilling time and sample analysis.

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

**TOPEKA SECTION**

2700-2918' There were several zones of well-developed porosity encountered in the drilling of the Topeka Section, but no shows of oil/or gas was noted.

**TORONTO SECTION**

2940-2946' Limestone, white, light gray, finely crystalline, few fossiliferous, poor pinpoint and inter-crystalline, chalky in part, type porosity. Trace poor stain, no show of free oil and faint odor in fresh samples. Trace white boney chert.

**LANSING SECTION**

2963-2967' Limestone, cream, tan, finely crystalline, poor visible porosity, chalky in part, no shows.

2980-2990' Limestone, white, cream, finely crystalline, poor porosity, plus white/gray chert.

2997-3002' Limestone, cream, tan, finely crystalline, oolitic/fossiliferous, poor pinpoint and inter-crystalline type porosity, chalky in part, trace edge staining, no free oil and weak odor in fresh samples.

3006-3016' Limestone, cream, tan, finely crystalline, poor porosity, trace stain, no shows of oil and no odor, trace white boney chert.

3020-3030' Limestone, as above.

3030-3042' Limestone, white, cream, finely crystalline, poor visible porosity; plus chert, white/cream, boney, no shows.

3045-3054' Limestone, cream, tan, finely crystalline, oolitic poor to fair fine vuggy to inter-crystalline type porosity, brown spotty stain, no free oil and faint odor in fresh samples.

3056-3066' Limestone, cream, tan, oolitic, oomoldic, poor to fair inter-crystalline and oomoldic porosity, slightly chalky, brown stain, no free oil and no odor in fresh samples.

3100-3110' Limestone, white, cream, finely crystalline, poor vuggy porosity, brown stain, no free oil and weak odor in fresh samples.

3118-3124' Limestone, cream, white, tan, finely crystalline, oolitic/fossiliferous, poor scattered inter-crystalline and finely vuggy type porosity, spotty dark brown stain, no free oil and no odor in fresh samples.

3136-3141' Limestone, white, light gray, finely oolitic, poor visible porosity, dense, trace white boney and translucent chert.

3156-3161' Limestone, white, cream, oolitic, dense

3166-3178' Limestone, white, finely crystalline, oolitic, poor inter-crystalline porosity, spotty brown stain, trace of free oil and faint odor in fresh samples.

3190-3200' Limestone, white, light gray, oolitic, poor visible porosity, cherty, dense, no shows

**Drill Stem Test #1** **3106-3215**

**Times:** 30-30-30-30  
**Blow:** Weak  
**Recovery:** 90' mud, with oil spots  
**Pressures:** ISIP 359 psi  
FSIP 367 psi  
IFP 57-65 psi  
FFP 311-379 psi plugging action  
HSH 1496-1493 psi

**Remarks:** FFP pressures questionable

**CONGLOMERATE SECTION**

- 3222-3226' Sand, brown, white, fine grained; sub-rounded; sub-angular, fair sorting; poor to fair inter-granular porosity, brown stain and saturation, show of free oil and faint odor in fresh samples.
- 3226-3240' Chert; white, cream, boney, few scattered porosity, dark brown to black stain, trace of free oil and fair odor in fresh samples.
- 3240-3261' Chert, white/gray, boney; poor to fair porosity; brown to black stain, weak show of free oil and faint odor in fresh samples.

**Drill Stem Test #2** **3213-3261**

**Times:** 30-45-X-X  
**--Misrun--packer failure 2<sup>nd</sup> opening**

**Drill Stem Test #3** **3192-3261**

**Times:** 30-30-30-30  
**Blow:** Weak  
**Recovery:** 10' mud, with oil spots  
**Pressures:** ISIP 234 psi  
FSIP 154 psi  
IFP 22-25 psi  
FFP 25-31 psi  
HSH 1561-1535 psi

**REWORKED ARBUCKLE**

- 3284-3300' Dolomite, fine crystalline, secondary quartz (reworked); finely crystalline, cherty; plus white, oolitic, boney chert.
- 3300-3313' Dolomite, as above, plus brown and gray shale.

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**ARBUCKLE SECTION**

3313-3320' Dolomite, cream to tan, finely crystalline; few medium crystalline, poor to fair inter-crystalline porosity; dark brown stain, show of free oil and fair odor in fresh samples.

**Drill Stem Test #4** **3192-3320**

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

**Blow:** Strong

**Recovery:** 292' mud  
315' muddy water


**Pressures:** ISIP 1024 psi  
FSIP 1048 psi  
IFP 34-156 psi  
FFP 164-308 psi  
HSH 1584-1552 psi

**Rotary Total Depth** 3320-1545

**Recommendations:**

The Mai Oil Operations Inc., Simpson 3-5 #6; was plugged and abandoned at the Rotary Total Depth 3320-1545.

Respectfully yours,

  
Kurt Talbott  
Petroleum Geologist



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mai Oil Operations, Inc  
 8411 Preston RD STE 800  
 Dallas, TX 75225  
 ATTN: Kurt Talbott

**12-11s-17w Ellis,KS**  
**Simpson 3-5 #6**  
 Job Ticket: 61635      **DST#: 1**  
 Test Start: 2015.07.29 @ 22:26:00

**GENERAL INFORMATION:**

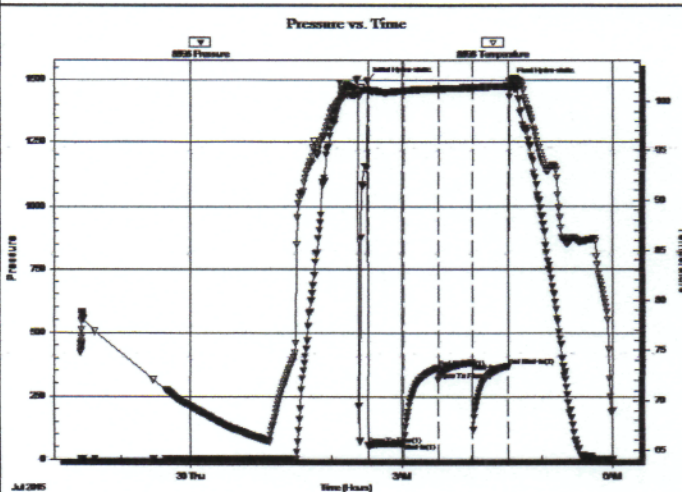
Formation: **LKC "H-K"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:31:10  
 Time Test Ended: 06:00:39  
 Interval: **3106.00 ft (KB) To 3215.00 ft (KB) (TVD)**  
 Total Depth: 3215.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Phillip Gage  
 Unit No: 77  
 Reference Elevations: 1775.00 ft (KB)  
 1767.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8898**

**Outside**

Press@RunDepth: 379.73 psig @ 3107.00 ft (KB)  
 Start Date: 2015.07.29 End Date: 2015.07.30  
 Start Time: 22:26:01 End Time: 06:00:40  
 Capacity: 8000.00 psig  
 Last Calib.: 2015.07.30  
 Time On Btm: 2015.07.30 @ 02:30:50  
 Time Off Btm: 2015.07.30 @ 04:33:20

TEST COMMENT: 30-IF-Built to 1/4", died back to surface blow.  
 30-ISI-No Return  
 30-FF-No Blow  
 30-FSI-No Return



**PRESSURE SUMMARY**

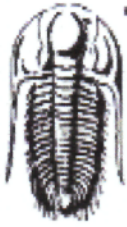
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1496.00	101.21	Initial Hydro-static
1	57.32	100.86	Open To Flow (1)
32	65.07	101.10	Shut-In(1)
61	359.29	101.29	End Shut-In(1)
61	311.54	101.27	Open To Flow (2)
90	379.73	101.42	Shut-In(2)
121	367.40	101.57	End Shut-In(2)
123	1493.26	102.14	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
90.00	M, w with oil spots	1.26

**Gas Rates**

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mai Oil Operations, Inc  
 8411 Preston RD STE 800  
 Dallas, TX 75225  
 ATTN: Kurt Talbott

**12-11s-17w Ellis,KS**  
**Simpson 3-5 #6**  
 Job Ticket: 61636      **DST#: 2**  
 Test Start: 2015.07.31 @ 07:28:00

**GENERAL INFORMATION:**

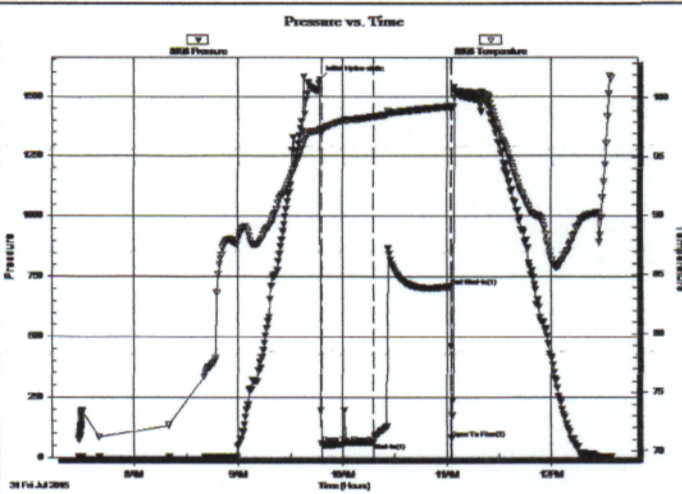
Formation: **Conglomerate**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:47:50  
 Time Test Ended: 12:34:20  
 Interval: **3213.00 ft (KB) To 3261.00 ft (KB) (TVD)**  
 Total Depth: 3261.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Phillip Gage  
 Unit No: 77  
 Reference Elevations: 1775.00 ft (KB)  
 1767.00 ft (CF)  
 KB to GRVCF: 8.00 ft

**Serial #: 8898**

**Outside**

Press@RunDepth: 61.89 psig @ 3214.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2015.07.31      End Date: 2015.07.31      Last Calib.: 2015.07.31  
 Start Time: 07:28:01      End Time: 12:34:20      Time On Btm: 2015.07.31 @ 09:47:10  
 Time Off Btm:

**TEST COMMENT:** 30-IF-Lost 20' of mud, 5" blow, bleed off then got weak surface blow  
 45-ISI-No Return  
 FF-Packer Failure  
 FS-



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1568.45	97.35	Initial Hydro-static
1	57.28	97.08	Open To Flow (1)
31	61.89	98.50	Shut-In(1)
75	710.96	99.35	End Shut-In(1)
76	79.26	99.13	Open To Flow (2)

**Recovery**

Length (ft)	Description	Volume (bbl)
206.00	Mud	2.89

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mai Oil Operations, Inc  
 8411 Preston RD STE 800  
 Dallas, TX 75225  
 ATTN: Kurt Talbott

**12-11s-17w Ellis,KS**  
**Simpson 3-5 #6**  
 Job Ticket: 61638      **DST#: 3**  
 Test Start: 2015.07.31 @ 15:50:00

## GENERAL INFORMATION:

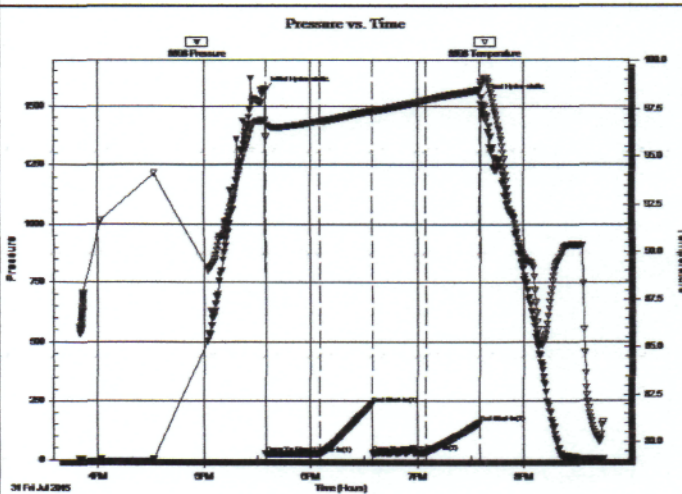
Formation: **Conglomerate**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 17:34:40  
 Time Test Ended: 20:44:39  
 Interval: **3192.00 ft (KB) To 3261.00 ft (KB) (TVD)**  
 Total Depth: 3261.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Phillip Gage  
 Unit No: 77  
 Reference Elevations: 1775.00 ft (KB)  
 1767.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8898

Outside

Press@RunDepth: 31.59 psig @ 3193.00 ft (KB)  
 Start Date: 2015.07.31 End Date: 2015.07.31  
 Start Time: 15:50:01 End Time: 20:44:40  
 Capacity: 8000.00 psig  
 Last Calib.: 2015.07.31  
 Time On Btm: 2015.07.31 @ 17:34:30  
 Time Off Btm: 2015.07.31 @ 19:35:50

TEST COMMENT: 30-IF-1/4" Blow  
 30-ISI-No Return  
 30-FF-No Blow  
 30-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1567.17	96.86	Initial Hydro-static
1	22.98	95.97	Open To Flow (1)
31	25.16	96.81	Shut-In(1)
60	234.08	97.39	End Shut-In(1)
61	25.35	97.28	Open To Flow (2)
91	31.59	97.94	Shut-In(2)
121	154.65	98.46	End Shut-In(2)
122	1535.22	98.73	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	M, w with oil spots, 100%m	0.14

\* Recovery from multiple tests

## Gas Rates

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



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 8411 Preston RD STE 800  
 Dallas, TX 75225  
 ATTN: Kurt Talbott

**12-11s-17w Ellis,KS**  
**Simpson 3-5 #6**  
 Job Ticket: 61639      **DST#: 4**  
 Test Start: 2015.08.01 @ 07:52:00

## GENERAL INFORMATION:

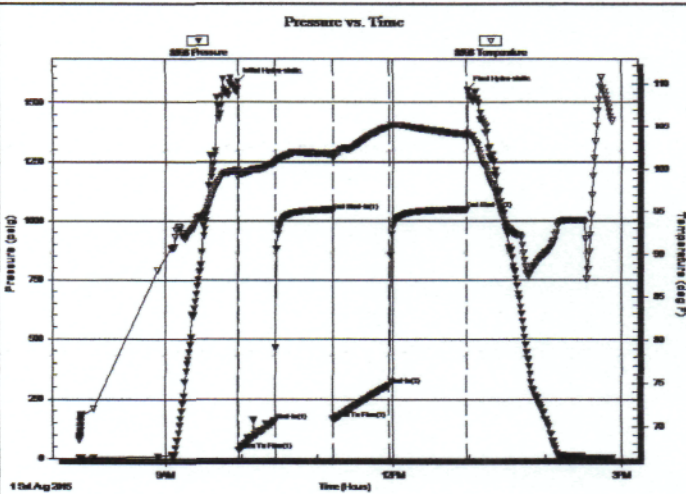
Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:57:40  
 Time Test Ended: 14:52:50  
 Interval: **3192.00 ft (KB) To 3320.00 ft (KB) (TVD)**  
 Total Depth: 3320.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Phillip Gage  
 Unit No: 77  
 Reference Elevations: 1775.00 ft (KB)  
 1767.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8898

Outside

Press@RunDepth: 308.19 psig @ 3193.00 ft (KB)  
 Start Date: 2015.08.01 End Date: 2015.08.01  
 Start Time: 07:52:01 End Time: 14:52:50  
 Capacity: 8000.00 psig  
 Last Calib.: 2015.08.01  
 Time On Btrn: 2015.08.01 @ 09:57:30  
 Time Off Btrn: 2015.08.01 @ 12:58:30

TEST COMMENT: 30-IF-BOB in 10 mins.  
 45-ISI-No Return  
 45-FF-BOB in 11 mins.  
 60-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1584.50	99.80	Initial Hydro-static
1	34.17	99.09	Open To Flow (1)
30	156.84	100.79	Shut-In(1)
75	1042.44	101.77	End Shut-In(1)
75	164.76	101.53	Open To Flow (2)
120	308.19	105.03	Shut-In(2)
181	1048.73	104.06	End Shut-In(2)
181	1552.84	104.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
189.00	MW, 20%m, 80%w	2.65
126.00	MW, 40%m, 60%w	1.77
292.00	M, with oil spots, 100%m	4.10

\* Recovery from multiple tests

## 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. 1477

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-24-15	12	11	17	Ellis	KS		5:45 PM
Location				Cedella River Road SE 1/4 Winto			

Lease	Well No.	Owner	
Simpson 3-5	6	To Quality Oilwell Cementing, Inc.	
Contractor	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.		
Southwind #3			
Type Job	Charge To		
Surface	Moi Oil		
Hole Size	T.D.	Street	
12 1/4	963		
Csg.	Depth	City	
8 5/8	962	State	
Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
		Cement Amount Ordered 425 <sup>60/40</sup> 3/11/21 6FL 1/2 TR	
Cement Left in Csg.	Shoe Joint		
40'	40'		

Meas Line	Displace	EQUIPMENT	
	58' 1/2 BCL	Common	
Pumptrk	No.	Cement	Poz. Mix
5		Helper	Gel.
Bulktrk	No.	Driver	Calcium
		Driver	
Bulktrk	No.	Driver	
19		Brian	

JOB SERVICES & REMARKS		Hulls
Remarks:		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
8 5/8 on bottom. Est. Circulation.		Handling
Mix 425 sk + Displace Plug.		Mileage

Cement Circulated.		FLOAT EQUIPMENT	
		Guide Shoe	
		Centralizer	8 5/8 Rubber Plug
		Baskets	
		AFU Inserts	
		Float Shoe	
		Latch Down	

Quality Oilwell Cementing

X Signature *[Signature]*

Pumptrk Charge	
Mileage	
Tax	
Discount	
Total Charge	