



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1134087  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1134087

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	Louie 'A' 11
Doc ID	1134087

Tops

Name	Top	Datum
Anhydrite	765	-1030
Tarkio Lime	2388	-593
Topeka	2651	-856
Heebner	2880	-1085
Toronto	2898	-1103
Lansing	2941	-1146
Base Kansas City	3143	-1348
Basal Sand	3175	-1380
Quartzite	3184	-1389

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

April 17, 2013

Allen Bangert  
Mai Oil Operations, Inc.  
8411 PRESTON RD STE 800  
DALLAS, TX 75225-5520

Re: ACO1  
API 15-167-23858-00-00  
Louie 'A' 11  
NE/4 Sec.34-14S-14W  
Russell County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Allen Bangert

**JAMES C. MUSGROVE**

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

Office (620) 588-4250

Res. Claflin (620) 587-3444

Mai Oil Operations  
Louie 'A' #11  
NE-SW-NE-NE (850' FNL & 850' FSL)  
Section 34-14s-14w  
Russell County, Kansas  
Page 1

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

**Contractor:** Southwind Drilling Co. (Rig #3)  
**Commenced:** March 1, 2013  
**Completed:** March 8, 2013  
**Elevation:** 1795' K.B; 1793' D.F; 1787' G.L.  
**Casing program:** Surface; 8 5/8" @ 556'  
Production; 5 1/2" @ 3279'.  
**Sample:** Samples saved and examined 2220' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 2220 ft. to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were six (6) Drill Stem Tests ran by Trilobite Testing Co.  
**Electric Log:** By Nabors; Dual Induction, Compensated Density/Neutron Log and Micro.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	765	+1030
Base Anhydrite	803	+992
Grand Haven	2315	-520
1 <sup>st</sup> Tarkio Sand	2326	-531
Dover	2341	-546
2 <sup>nd</sup> Tarkio Sand	2350	-555
Tarkio Lime	2388	-593
3 <sup>rd</sup> Tarkio Sand	2411	-616
Elmont	2450	-655
Howard	2586	-791
Topeka	2651	-856
Heebner	2880	-1085
Toronto	2898	-1103
Lansing	2941	-1146
Base Kansas City	3143	-1348
Basal Sand	3175	-1380
Quartzite	3184	-1389
Rotary Total Depth	3280	-1485
Log Total Depth	3280	-1485

(All tops and zones corrected to Electric Log measurements).

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

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

2326-2333' Sand; light gray, fine grained, well sorted, friable, light brown stain, trace of free oil and odor samples broken.

**2<sup>ND</sup> TARKIO SAND SECTION**

2350-2355' Sand; light gray, fine grained, sub rounded, micaceous, shaley, fair stain and saturation, show of free oil and faint odor samples broken.

**Drill Stem Test #1** **2327-2389'**

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

**Blow: Strong**

**Recovery: 225' muddy water**

**Pressures: ISIP 651 psi**  
**FSIP 653 psi**  
**IFP 37-83 psi**  
**FFP 98-129 psi**  
**HSH 1108-1097 psi**

**TOPEKA SECTION**

Limestone; tan, gray, finely crystalline, fossiliferous, poor porosity, light brown stain, no free oil and no odor.

**TORONTO SECTION**

2898-2910' Limestone; tan, light gray, finely crystalline, few fossiliferous, no shows.

**LANSING SECTION**

2941-2954' Limestone; white, tan, finely crystalline, dense, trace brown stain, no free oil and no odor.

2966-2970' Limestone; white, tan, finely crystalline, scattered porosity, trace stain, show of free oil and faint odor in fresh samples.

2974-2980' Limestone; white, finely crystalline, sub oomoldic, few with scattered vuggy porosity, light brown stain, show of free oil and faint odor.

**Drill Stem Test #2** **2945-2991'**

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

**Blow:** Weak

**Recovery:** 130' gas in pipe  
55' slightly oil cut gassy mud  
(10% gas, 10% oil, 80% mud)

**Pressures:** ISIP 137 psi  
FSIP 127 psi  
IFP 24-31 psi  
FFP 32-36 psi  
HSH 1499-1467 psi

- 3010-3020' Limestone; gray, tan, fossiliferous, chalky, no show.
- 3023-3030' Limestone; tan, finely crystalline, fossiliferous, chalky, trace light brown stain, no free oil and fair odor in fresh samples.
- 3033-3050' Limestone; tan, finely crystalline, sub oomoldic/oomoldic, poorly developed porosity, no shows.
- 3085-3098' Limestone; tan, cream, finely crystalline, dense, trace white chert.
- 3101-3111' Limestone; tan, cream, finely crystalline, fossiliferous, chalky, few cherty, scattered fair porosity, no shows.
- 3121-3136' Limestone; white, finely crystalline, fossiliferous, scattered pinpoint porosity, trace brown stain, weak show of free oil and no odor in fresh samples.

**BASAL SAND SECTION**

- 3175-3184' Sand; clear, quartzitic, angular, fractured, biotite inclusions, micaceous light black stain, no free oil and no odor.

**QUARTZITE SECTION**

- 3184-3188' Quartz; angular, fractured, micaceous, brown/black stain, trace of free oil and no odor.

**Drill Stem Test #3** **3163-3188'**

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

**Blow:** Strong

**Recovery:** 295' gassy oil  
83' oil and gas cut mud

**Pressures:** ISIP 988 psi  
FSIP 974 psi  
IFP 29-83 psi  
FFP 95-153 psi  
HSH 1615-1573 psi

3188-3200' Quartz; white, clear, angular, fractured, micaceous, light brown stain, show of free oil and no odor.

**Drill Stem Test #4 3188-3200'**

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

**Blow: Strong**

**Recovery: 598' gas in pipe  
95' heavy oil and gas cut mud  
(10% gas, 40% oil, 40% mud)  
945' gassy oil**

**Pressures: ISIP 872 psi  
FSIP 866 psi  
IFP 70-237 psi  
FFP 260-383 psi  
HSH 1629-1628 psi**

3200-3214' Quartz; as above, highly fractured, light brown stain, trace of free oil and faint odor.

**Drill Stem Test #5 3201-3214'**

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

**Blow: Strong**

**Recovery: 935' gassy oil  
53' heavy oil and gas cut mud  
(20% gas, 40% oil, 40% mud)**

**Pressures: ISIP 935 psi  
FSIP 931 psi  
IFP 44-142 psi  
FFP 207-316 psi  
HSH 1628-1597 psi**

3214-3229' Quartz; white, clear, angular, micaceous, fractured in part, light brown stain, trace of free oil and no odor.

**Drill Stem Test #6 3216-3229'**

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

**Blow: Weak**

**Recovery: 94' gas in pipe  
31' heavy oil cut watery mud  
(45% oil, 5% water, 50% mud)**



Mai Oil Operations  
Louie 'A' #11  
NE-SW-NE-NE (850' FNL & 850' FSL)  
Section 34-14s-14w  
Russell County, Kansas  
Page 5

<b>Pressures:</b>	<b>ISIP</b>	<b>1089</b>	<b>psi</b>
	<b>FSIP</b>	<b>1087</b>	<b>psi</b>
	<b>IFP</b>	<b>21-25</b>	<b>psi</b>
	<b>FFP</b>	<b>23-32</b>	<b>psi</b>
	<b>HSH</b>	<b>1632-1617</b>	<b>psi</b>

3229-3250' Quartz; clear, white, angular, fractured, no stain, no free oil and no odor.

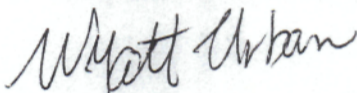
3250-3280' Quartz; as above, no shows.

<b>Rotary Total Depth</b>	<b>3280</b>
<b>Log Total Depth</b>	<b>3280</b>

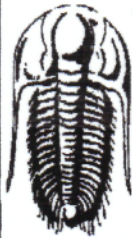
**Recommendations:**

5 1/2" production casing was set and cemented on the Louie 'A' #11.

Respectfully submitted;



Wyatt Urban,  
Petroleum Geologist



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mai Oil Operations, Inc.  
 8411 Preston Rd. Ste. #800  
 Dallas, TX 75225  
 ATTN: Wyatt Urban

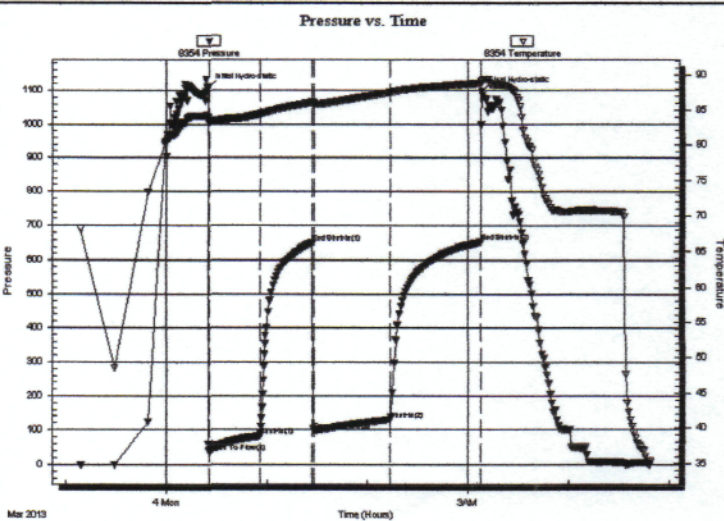
**34-14s-14w Russell, KS**  
**Louie A #11**  
 Job Ticket: 51682 **DST#: 1**  
 Test Start: 2013.03.03 @ 22:59:15

## GENERAL INFORMATION:

Formation: **Tarkio**  
 Deviated: **No Whipstock** ft (KB)  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Time Tool Opened: 00:25:45  
 Tester: **Dustin Rash**  
 Time Test Ended: 04:49:15  
 Unit No: **66**  
 Interval: **2327.00 ft (KB) To 2389.00 ft (KB) (TVD)**  
 Reference Elevations: **1795.00 ft (KB)**  
 Total Depth: **2389.00 ft (KB) (TVD)**  
**1787.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 KB to GRVCF: **8.00 ft**

**Serial #: 8354 Inside**  
 Press@RunDepth: **129.40 psig @ 2366.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2013.03.03** End Date: **2013.03.04** Last Calib.: **2013.03.04**  
 Start Time: **23:09:15** End Time: **04:49:15** Time On Btm: **2013.03.04 @ 00:25:15**  
 Time Off Btm: **2013.03.04 @ 03:08:15**

**TEST COMMENT:** IF-Weak building blow . BOB @ 27 minutes.  
 IS-No Return.  
 FF-Weak building blow . BOB @ 27 minutes.  
 FSI-No Return.



## PRESSURE SUMMARY

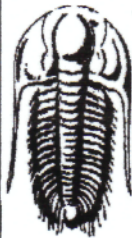
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1107.76	83.84	Initial Hydro-static
1	36.81	83.60	Open To Flow (1)
31	82.66	84.45	Shut-In(1)
62	651.47	86.07	End Shut-In(1)
63	98.11	85.89	Open To Flow (2)
108	129.40	87.47	Shut-In(2)
162	652.77	88.81	End Shut-In(2)
163	1097.13	89.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
225.00	80%Water/20%Mud	2.06
0.00	80' G.I.P.	0.00

## 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: Wyatt Urban

**34-14s-14w Russell, KS**  
**Louie A #11**  
Job Ticket: 51683 **DST#: 2**  
Test Start: 2013.03.05 @ 05:06:30

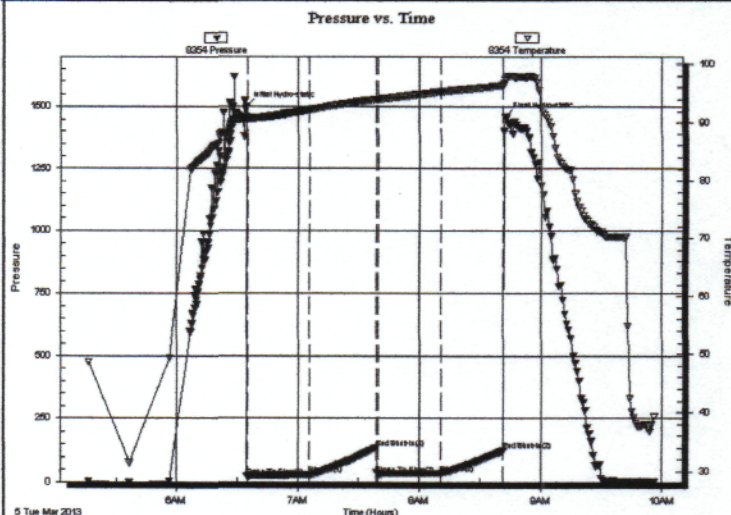
## GENERAL INFORMATION:

Formation: **Lansing "A-D"**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Initial)**  
 Time Tool Opened: **06:34:40** Tester: **Dustin Rash**  
 Time Test Ended: **09:56:30** Unit No: **66**  
 Interval: **2945.00 ft (KB) To 2991.00 ft (KB) (TVD)** Reference Elevations: **1795.00 ft (KB)**  
 Total Depth: **2991.00 ft (KB) (TVD)** **1787.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **8.00 ft**

**Serial #: 8354** **Inside**  
 Press@RunDepth: **36.43 psig @ 2984.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2013.03.05** End Date: **2013.03.05** Last Calib.: **2013.03.05**  
 Start Time: **05:16:30** End Time: **09:56:30** Time On Btm: **2013.03.05 @ 06:34:30**  
 Time Off Btm: **2013.03.05 @ 08:42:30**

**TEST COMMENT:** IF-Weak building blow . Built to 9 inches.  
 ISI-No Return.  
 FF-Weak building blow . Built to 8 inches.  
 FSI-No Return.

## PRESSURE SUMMARY



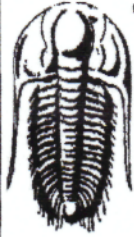
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1499.37	91.05	Initial Hydro-static
1	24.33	90.51	Open To Flow (1)
32	30.71	92.25	Shut-In(1)
64	136.50	93.99	End Shut-In(1)
65	32.07	94.01	Open To Flow (2)
96	36.43	95.26	Shut-In(2)
127	126.61	96.33	End Shut-In(2)
128	1461.00	97.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
55.00	10%Gas/10%Oil/80%Mud	0.27
0.00	130' G.I.P.	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil Operations, Inc.

**34-14s-14w Russell,KS**

8411 Preston Rd. Ste. #800  
Dallas, TX 75225

**Louie A #11**

Job Ticket: 51684

**DST#: 3**

ATTN: Wyatt Urban

Test Start: 2013.03.06 @ 02:34:30

### GENERAL INFORMATION:

Formation: **Granite wash**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:06:30

Time Test Ended: 08:30:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: **3163.00 ft (KB) To 3188.00 ft (KB) (TVD)**

Reference Elevations: 1795.00 ft (KB)

Total Depth: 3188.00 ft (KB) (TVD)

1787.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8354**

**Inside**

Press@RunDepth: 153.34 psig @ 3165.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.06

End Date:

2013.03.06

Last Calib.:

2013.03.06

Start Time: 02:44:30

End Time:

08:30:00

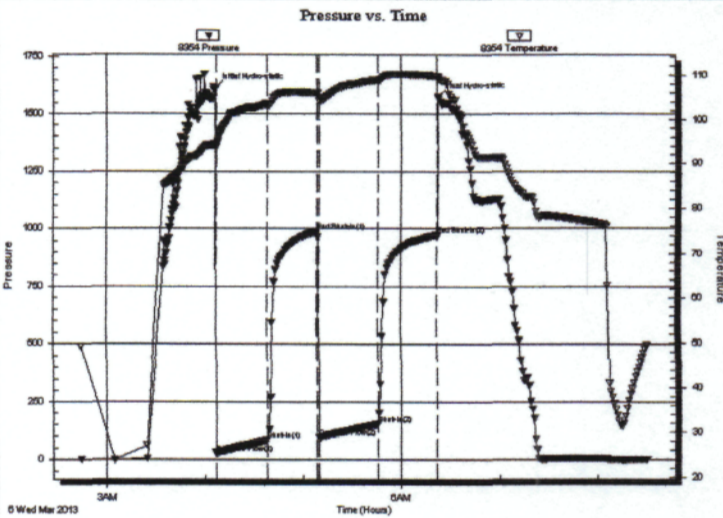
Time On Btm:

2013.03.06 @ 04:06:20

Time Off Btm:

2013.03.06 @ 06:22:30

**TEST COMMENT:** IF-Strong building blow . BOB @ 7 minutes.  
ISI-Return @ 30 seconds. Built to 4 inches.  
FF-Strong building blow . BOB @ 8 minutes 30 seconds.  
FSI-Return @ 30 seconds. Built to 4 inches.



### PRESSURE SUMMARY

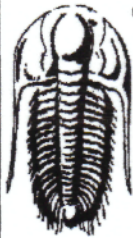
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1614.60	94.33	Initial Hydro-static
1	28.81	93.76	Open To Flow (1)
32	83.39	103.57	Shut-In(1)
63	987.82	105.97	End Shut-In(1)
64	94.83	104.79	Open To Flow (2)
100	153.34	108.92	Shut-In(2)
136	973.80	109.80	End Shut-In(2)
137	1572.94	109.53	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
83.00	20%Gas/10%Oil/70%Mud	1.16
295.00	15%Gas/85%Oil	4.14
0.00	504' G.I.P.	0.00

### 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: Wyatt Urban

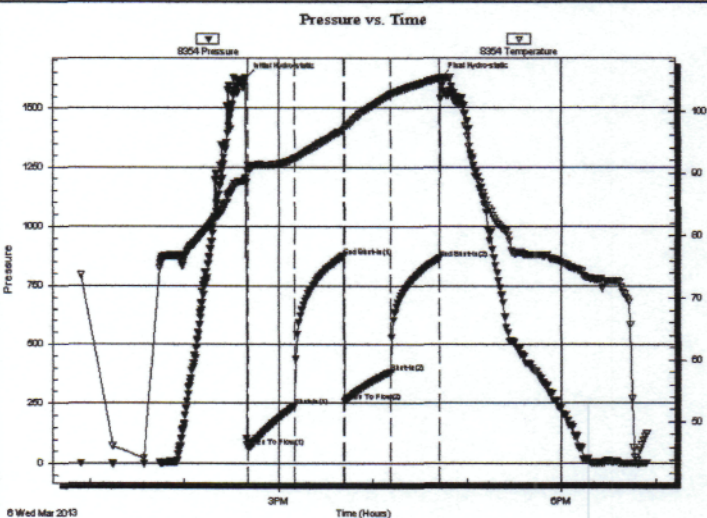
**34-14s-14w Russell,KS**  
**Louie A #11**  
 Job Ticket: 51685 **DST#: 4**  
 Test Start: 2013.03.06 @ 12:44:30

## GENERAL INFORMATION:

Formation: **Granite Wash**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:40:30  
 Time Test Ended: 18:54:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 66  
 Interval: **3188.00 ft (KB) To 3200.00 ft (KB) (TVD)**  
 Total Depth: 3200.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Reference Elevations: 1795.00 ft (KB)  
 1787.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8354 Inside**  
 Press@RunDepth: 383.28 psig @ 3191.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.03.06 End Date: 2013.03.06 Last Calib.: 2013.03.06  
 Start Time: 12:54:30 End Time: 18:54:00 Time On Btm: 2013.03.06 @ 14:39:30  
 Time Off Btm: 2013.03.06 @ 16:43:30

**TEST COMMENT:** IF-Strong building blow . BOB @ 45 seconds.  
 ISI-Return @ 1 minute. Built to 8 inches.  
 FF-Strong building blow . BOB @ 2 minutes.  
 FSI-Return @ 1 minute. Built to 8 inches.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1629.01	89.27	Initial Hydro-static
1	69.65	91.27	Open To Flow (1)
31	237.31	92.28	Shut-In(1)
62	872.11	96.96	End Shut-In(1)
63	260.16	97.17	Open To Flow (2)
92	383.28	102.64	Shut-In(2)
123	865.73	105.21	End Shut-In(2)
124	1628.29	105.39	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
95.00	20%Gas/40%Oil/40%Mud	1.33
945.00	40%Gas/60%Oil	13.26
0.00	598' G.I.P.	0.00

## 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: Wyatt Urban

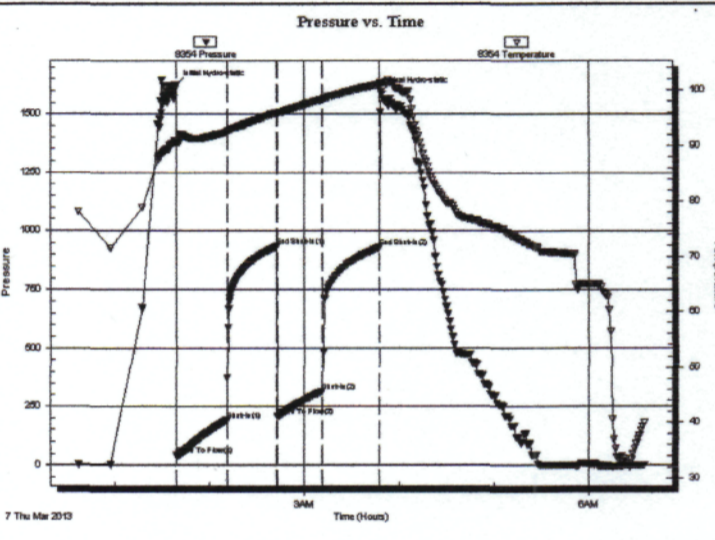
**34-14s-14w Russell,KS**  
**Louie A #11**  
 Job Ticket: 51686 **DST#: 5**  
 Test Start: 2013.03.07 @ 00:27:30

**GENERAL INFORMATION:**

Formation: **Granite Wash**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:39:30  
 Time Test Ended: 06:35:00  
 Interval: **3201.00 ft (KB) To 3214.00 ft (KB) (TVD)**  
 Total Depth: 3214.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 66  
 Reference Elevations: 1795.00 ft (KB)  
 1787.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8354 Inside**  
 Press@RunDepth: 316.05 psig @ 3204.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.03.07 End Date: 2013.03.07 Last Calib.: 2013.03.07  
 Start Time: 00:37:30 End Time: 06:35:00 Time On Btm: 2013.03.07 @ 01:39:10  
 Time Off Btm: 2013.03.07 @ 03:48:30

**TEST COMMENT:** IF-Strong building blow . BOB @ 1 minute 45 seconds.  
 ISI-Return @ 1 minute. Built to 9 inches.  
 FF-Strong building blow . BOB @ 3 minutes 30 seconds.  
 FSI-Return @ 1 minute. BOB @ 28 minutes.



**PRESSURE SUMMARY**

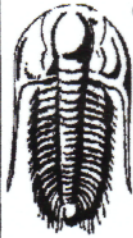
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.99	90.77	Initial Hydro-static
1	43.65	90.45	Open To Flow (1)
33	191.97	92.51	Shut-In(1)
64	935.12	95.96	End Shut-In(1)
64	206.59	95.84	Open To Flow (2)
93	316.05	98.32	Shut-In(2)
129	930.83	101.06	End Shut-In(2)
130	1596.50	101.24	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
30.00	10%Gas/45%Oil/5%Water/40%Mud	0.42
53.00	20%Gas/40%Oil/40%Mud	0.74
935.00	40%Gas/60%Oil	13.12
0.00	491' G.I.P.	0.00

**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: Wyatt Urban

**34-14s-14w Russell, KS**  
**Louie A #11**  
Job Ticket: 51687      **DST#: 6**  
Test Start: 2013.03.07 @ 11:50:15

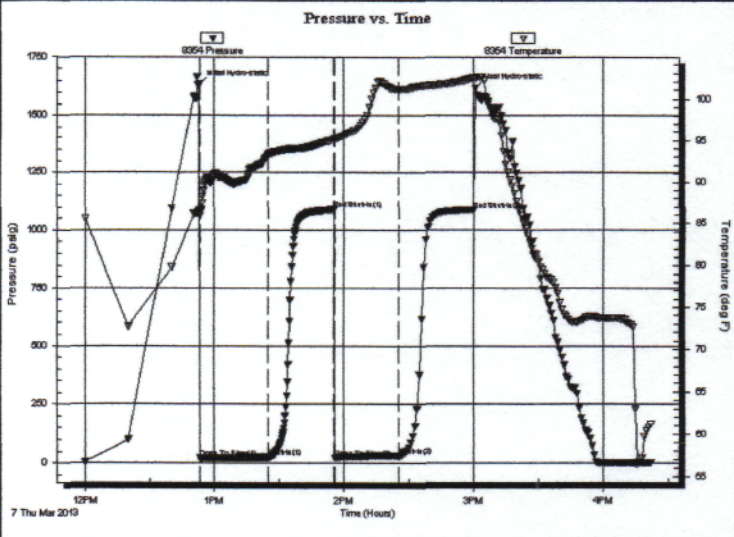
## GENERAL INFORMATION:

Formation: **Granite Wash**  
 Deviated: **No Whipstock**      ft (KB)  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Time Tool Opened: 12:53:15      Tester: **Dustin Rash**  
 Time Test Ended: 16:22:15      Unit No: **66**  
 Interval: **3216.00 ft (KB) To 3229.00 ft (KB) (TVD)**      Reference Elevations: **1795.00 ft (KB)**  
 Total Depth: **3229.00 ft (KB) (TVD)**      **1787.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**      KB to GR/CF: **8.00 ft**

**Serial #: 8354      Inside**  
 Press@RunDepth: **31.82 psig @ 3219.00 ft (KB)**      Capacity: **8000.00 psig**  
 Start Date: **2013.03.07**      End Date: **2013.03.07**      Last Calib.: **2013.03.07**  
 Start Time: **12:00:15**      End Time: **16:22:15**      Time On Btm: **2013.03.07 @ 12:53:05**  
 Time Off Btm: **2013.03.07 @ 15:00:45**

**TEST COMMENT:** IF-Weak building blow . Built to 3 inches.  
 ISI-Return @ 12 minutes. Built to 1/4 inch.  
 FF-Weak building blow . Built to 3 inches.  
 FS-No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1632.48	86.59	Initial Hydro-static
1	20.54	85.90	Open To Flow (1)
32	25.12	93.27	Shut-In(1)
63	1088.55	95.13	End Shut-In(1)
63	23.28	94.98	Open To Flow (2)
93	31.82	101.19	Shut-In(2)
127	1087.34	102.41	End Shut-In(2)
128	1616.56	102.44	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
31.00	45%Oil/5%Water/50%Mud	0.43
0.00	94' G.I.P.	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. 6390

Date	3-2-13	Sec.	34	Twp.	14	Range	14	County	Russell	State	Ks	On Location		Finish	1:45 AM
------	--------	------	----	------	----	-------	----	--------	---------	-------	----	-------------	--	--------	---------

Lease **Louie A** Location **Russell, Ks - 65 to Fairfield Rd, turn**

Well No. **#11** Owner **W + then S Into, S+W to Rig**  
 Contractor **Southwind #3** To Quality Oilwell Cementing, Inc.  
 Type Job **Surface** You are hereby requested to rent cementing equipment and furnish  
 cementer and helper to assist owner or contractor to do work as listed.

Hole Size **12 1/4"** T.D. **556'** Charge To **mai oil**  
 Csg. **8 5/8"** Depth **554'** Street

Tbg. Size Depth City State  
 Tool Depth

Cement Left in Csg. **15'** Shoe Joint **15'** The above was done to satisfaction and supervision of owner agent or contractor.  
 Cement Amount Ordered **275 sx 60140 3% CC 2% Gel**

Meas Line Displace **34 BLS**

EQUIPMENT			
Pumptrk	16	No.	Cement Helper <b>Travis</b>
Bulktrk	10	No.	Driver <b>Lonnie M.</b>
Bulktrk	p.u.	No.	Driver <b>Rick</b>
			Common <b>165</b>
			Poz. Mix <b>110</b>
			Gel. <b>5</b>
			Calcium <b>11</b>

JOB SERVICES & REMARKS  
 Remarks: **Cement did Circulate**

Rat Hole Flowseal  
 Mouse Hole Kol-Seal

Centralizers Mud CLR 48  
 Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand  
 Handling **286**

Mileage

FLOAT EQUIPMENT

Guide Shoe  
 Centralizer

Baskets  
 AFU Inserts

Float Shoe  
 Latch Down

**1 - wooden plug**

**Long**  
 Pumptrk Charge **Surface**  
 Mileage **6**

Signature **Jay Davis** 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. 6455

Date	3-8-13	Sec.	94	Twp.	14	Range	14	County	Russell	State	KS	On Location		Finish	1:00 p.m.	
Location								Russell 6.5 W + S into								
Lease	Louie A			Well No.	11			Owner								
Contractor								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								Production String								
Hole Size	7 7/8			T.D.	3280			Charge To								
Ceg.	5 1/2 14#			Depth	3279			mai Oil								
Tbg. Size				Depth				Street								
Tool				Depth				City								
								State								
The above was done to satisfaction and supervision of owner agent or contractor.																
Cement Left in Csg.	20.56			Shoe Joint				Cement Amount Ordered								
								160 60/40 12% Salt + 2% GEL								
Meas Line				Displace	79 1/2 BCL			1000 gal mud clear								
								1/4 # FLO								
<b>EQUIPMENT</b>																
Pumptrk	9	No.	Cement			100 gal			Common							
								96								
Bulktrk		No.	Helper			100 gal			Poz. Mix							
								64								
Bulktrk		No.	Driver			100 gal			Gel.							
								3								
Bulktrk	10	No.	Driver			100 gal			Calcium							
								Hulls								
<b>JOB SERVICES &amp; REMARKS</b>																
Remarks:	Salt 14															
Rat Hole	305K															
Mouse Hole	Flowseal 40#															
Centralizers	Kol-Seal															
Baskets	Mud CLR 48 1000 gal															
D/V or Port Collar	CFL-117 or CD110 CAF 38															
5 1/2 size @ 3279. Est. Circulation.																
Pump 1000 gal mud clear 10 BCL water																
Space. Plug Ret hole. Cement 5 1/2																
with 13052 Clear lines Displace Plug																
Plug landed @ 1500# Release																
Pressure Day.																
								Sand								
								Handling 187								
								Mileage								
<b>FLOAT EQUIPMENT</b>																
								Guide Shoe 5 1/2								
								Centralizer 10 Turbolizers								
								Baskets								
								AFU Inserts								
								Float Shoe 1								
								Latch Down 1								
								Pumptrk Charge								
								6 prod Long String								
								Mileage 6								
Signature <i>Allen Bancroft</i>																
												Tax				
												Discount				
												Total Charge				