



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1107342  
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: \_\_\_\_\_



1107342

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	Schmitt 4
Doc ID	1107342

Tops

Name	Top	Datum
Anhydrite	761	+1009
Tarkio Lime	2401	-631
Topeka	2669	-899
Heebner	2895	-1125
Toronto	2911	-1141
Lansing	2955	-1185
Base Kansas City	3166	-1396
Arbuckle	3217	-1447

**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 Inc.  
Schmitt #4  
SE-SW-NE-SE (1470' FSL & 760' FEL)  
Section 4-15s-14w  
Russell County, Kansas  
Page 1

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

**Contractor:** Southwind Drilling Co. (Rig #3)

**Commenced:** October 12, 2012

**Completed:** October 20, 2012

**Elevation:** 1770' K.B; 1768' D.F; 1762' G.L.

**Casing program:** Surface; 8 5/8" @ 473'  
Production; 5 1/2" @ 3292'

**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 six (6) Drill Stem Tests ran by Trilobite Testing Co.

**Electric Log:** By Nabors Completion and Production Services Co; Dual Induction Compensated Density/Neutron and Micro Log.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	761	+1009
Base Anhydrite	799	+971
Grand Haven	2331	-561
1 <sup>st</sup> Tarkio Sand	2346	-576
Dover	2356	-586
2 <sup>nd</sup> Tarkio Sand	2362	-592
Tarkio Lime	2401	-631
3 <sup>rd</sup> Tarkio Lime	2422	-652
Elmont	2463	-693
Howard	2603	-833
Topeka	2669	-899
Heebner	2895	-1125
Toronto	2911	-1141
Lansing	2955	-1185
Base Kansas City	3166	-1396
Arbuckle	3217	-1447
Rotary Total Depth	3295	-1525
Log Total Depth	3293	-1523

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

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

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

2346-2350' Poorly developed sand, silty, no shows. (Log indicates clean sand).

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

2362-2374' Sand; gray, white, very fine grained, sub rounded, friable, micaceous in part, fair intergranular porosity, fair stain and saturation, show of free oil and questionable odor in fresh samples.

**Drill Stem Test #1 2339-2400'**

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

**Blow: Strong, gas to surface in 2 minutes, gas gauged as follows:**

<b>Initial Flow</b>	
<b>10 minutes</b>	<b>535,608 cfgpd</b>
<b>20 minutes</b>	<b>535,608 cfgpd</b>
<b>30 minutes</b>	<b>535,608 cfgpd</b>

<b>Final Flow</b>	
<b>10 minutes</b>	<b>535,608 cfgpd</b>
<b>20 minutes</b>	<b>528,862 cfgpd</b>
<b>30 minutes</b>	<b>515,371 cfgpd</b>

**Recovery: 180' gassy mud**

<b>Pressures:</b>	<b>ISIP 772</b>	<b>psi</b>
	<b>FSIP 765</b>	<b>psi</b>
	<b>IFP 169-202</b>	<b>psi</b>
	<b>FFP 172-201</b>	<b>psi</b>
	<b>HSH 1106-1088</b>	<b>psi</b>

**3<sup>RD</sup> TARKIO SAND SECTION**

2422-2426' Sand; gray, grayish green, very fine grained, micaceous trace brown stain, trace of free oil and no odor in fresh samples.

**TOPEKA SECTION**

2706-2711' Limestone; cream, white, finely crystalline, slightly dolomitic, questionable stain, no free oil and trace of gas bubbles.

2845-2856' Limestone; white, cream, finely crystalline, sub oomoldic, chalky, brown stain, show of free oil and faint odor in fresh samples.

**TORONTO SECTION**

2911-2922' Limestone; gray, white, fossiliferous, finely crystalline, scattered porosity, brown stain, no free oil and no odor in fresh samples.

**LANSING SECTION**

- 2956-2962' Limestone; tan, fossiliferous, chalky, poor intercrystalline and pinpoint porosity, brown stain and saturation, show of free oil and odor in fresh samples.
- 2980-2985' Limestone; brown, finely oolitic, fossiliferous, fair porosity, fair stain and saturation, show of free oil and faint odor in fresh samples.
- 2993-3001' Limestone; cream, white, sub oomoldic, oolitic, chalky, poorly developed porosity, no shows.

**Drill Stem Test #2 2961-3020'**

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

**Blow: Strong**

**Recovery: 1700' gas in pipe  
 250' heavy oil and gas cut mud  
 (30% gas, 30% oil, 40% mud)  
 125' heavy oil and gas cut muddy water  
 (20% gas, 40% oil, 30% water, 10% mud)  
 125' muddy water**

**Pressures: ISIP 560 psi  
 FSIP 554 psi  
 IFP 32-123 psi  
 FFP 127-225 psi  
 HSH 1478-1425 psi**

- 3034-3039' Limestone; gray, mottled, chalky, no shows.
- 3047-3052' Limestone; tan, oolitic/fossiliferous, scattered porosity, fair brown stain and saturation, show of free oil and faint odor in fresh samples.

**Drill Stem Test #3 3019-3056'**

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

**Blow: Weak**

**Recovery: 5' mud with oil specks**

**Pressures: ISIP 24 psi  
 FSIP 19 psi  
 IFP 10-12 psi  
 FFP 12-13 psi  
 HSH 1487-1454 psi**

- 3057-3070' Limestone; gray, white, oomoldic, good oomoldic porosity (barren).
- 3104-3110' Limestone; cream, white, fossiliferous in part, poorly developed porosity, no shows.

- 3121-3132' Limestone; white, gray, fossiliferous, chalky, scattered vuggy porosity, brown stain, trace gas bubbles, show of free oil and no odor.
- 3143-3155' Limestone; white, gray, cream, finely crystalline, fossiliferous in part, chalky, trace brown spotty stain, weak show of free oil and no odor in fresh samples.

**Drill Stem Test #4 3116-3170'**

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

**Blow:** Weak

**Recovery:** 2' mud

**Pressures:** ISIP 56 psi  
FSIP 34 psi  
IFP 13-14 psi  
FFP 13-15 psi  
HSH 1564-1463 psi

**ARBUCKLE SECTION**

- 3217-3230' Dolomite; white, gray, medium crystalline, fair intercrystalline porosity, good golden brown stain and saturation, show of free oil and faint odor in fresh samples.

**Drill Stem Test #5 3187-3230'**

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

**Blow:** Strong

**Recovery:** 100' gas in pipe  
20' clean gassy oil  
60' mud cut gassy oil  
(5% gas, 10% mud, 85% oil)  
60' heavy oil cut mud  
(40% oil, 60% mud)

**Pressures:** ISIP 1012 psi  
FSIP 973 psi  
IFP 16-42 psi  
FFP 43-71 psi  
HSH 1616-1581 psi

- 3230-3238' Dolomite; as above, fair stain and saturation, show of free oil and fair odor in fresh samples.

**Drill Stem Test #6** **3230-3238'**

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

**Blow:** Strong

**Recovery:** 1100' gas in pipe  
110' clean oil  
300' heavy oil and gas cut mud  
(5% gas, 35% oil, 60% mud)

**Pressures:** ISIP 984 psi  
FSIP 928 psi  
IFP 35-74 psi  
FFP 114-193 psi  
HSH 1583-1540 psi

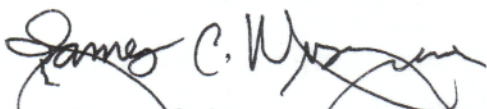
- 3238-3250' Dolomite; gray, white, finely crystalline, sandy, poor visible porosity, trace stain, no free oil and questionable odor in fresh samples.
- 3250-3260' Dolomite; white, gray, medium crystalline, scattered intercrystalline porosity, brown and dark brown stain, trace of free oil and questionable odor in fresh samples.
- 3260-3270' Dolomite; white, tan, finely crystalline, highly sandy, poor visible porosity, trace stain, no free oil and questionable odor in fresh samples.
- 3270-3280' Dolomite; white, tan, highly sandy, plus loose quart grains, trace iron pyrite.
- 3280-3295' Dolomite; as above, few pink, glauconitic, finely crystalline, sandy, no shows.

**Rotary Total Depth** 3295  
**Log Total Depth** 3293

**Recommendations:**

5 1/2" production casing was set and cemented on the Schmitt #4.

Respectfully submitted;

  
James C. Musgrove,  
Petroleum Geologist







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil Operations Inc  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Jim Musgrove

**4-15s-14w Russell,KS**  
**Schmitt #4**  
Job Ticket: 49353 **DST#: 1**  
Test Start: 2012.10.15 @ 00:43:05

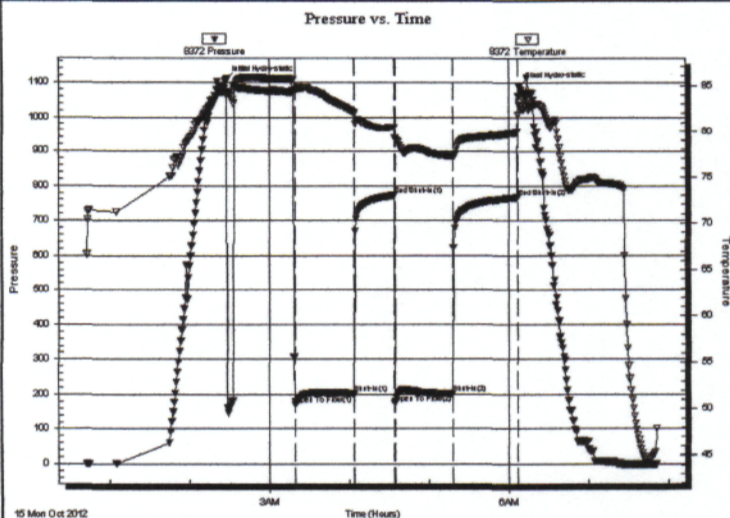
### GENERAL INFORMATION:

Formation: **Tarkio**  
Deviated: **No** Whipstock: **ft (KB)**  
Time Tool Opened: 03:19:50  
Time Test Ended: 07:50:59  
Test Type: **Conventional Bottom Hole (Initial)**  
Tester: **Andy Carreira**  
Unit No: **39**  
Interval: **2339.00 ft (KB) To 2400.00 ft (KB) (TVD)**  
Reference Elevations: **1770.00 ft (KB)**  
**1762.00 ft (CF)**  
Total Depth: **2400.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
KB to GR/CF: **8.00 ft**

**Serial #: 8372** **Outside**  
Press@RunDepth: **201.29 psig @ 2344.00 ft (KB)** Capacity: **8000.00 psig**  
Start Date: **2012.10.15** End Date: **2012.10.15** Last Calib.: **2012.10.15**  
Start Time: **00:43:05** End Time: **07:50:59** Time On Btm: **2012.10.15 @ 02:27:20**  
Time Off Btm: **2012.10.15 @ 06:07:20**

**TEST COMMENT:** IF:(45min) BOB immediately, Gas to surface 2 min.  
IS:(30min) BOB 1 min after bled off  
FF:(45min) BOB  
FS:(45min) BOB 1 min after bled off

### PRESSURE SUMMARY



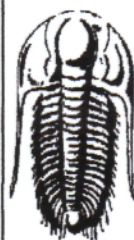
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1106.00	84.22	Initial Hydro-static
53	169.97	84.48	Open To Flow (1)
97	202.07	81.97	Shut-In(1)
127	772.03	80.43	End Shut-In(1)
127	172.60	79.24	Open To Flow (2)
171	201.29	77.20	Shut-In(2)
219	765.96	79.85	End Shut-In(2)
220	1088.03	82.92	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
180.00	GM g=20% m=80%	1.43
0.00	GTS	0.00

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	65.00	535.61
Last Gas Rate	0.50	62.00	515.37
Max. Gas Rate	0.50	65.00	535.61



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil Operations Inc  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Jim Musgrove

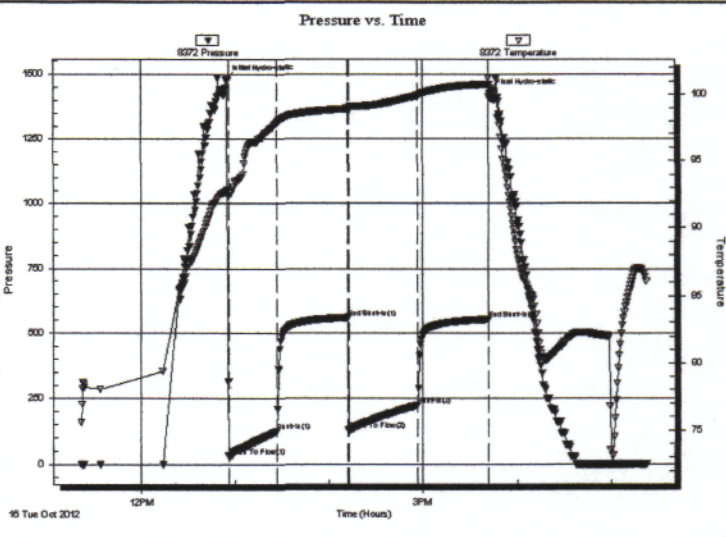
4-15s-14w Russell,KS  
**Schmitt #4**  
Job Ticket: 49354      **DST#: 2**  
Test Start: 2012.10.16 @ 11:22:05

### GENERAL INFORMATION:

Formation: **LKC**  
 Deviated: **No** Whipstock:                      ft (KB)  
 Time Tool Opened: 12:56:00  
 Time Test Ended: 17:22:59  
 Interval: **2961.00 ft (KB) To 3020.00 ft (KB) (TVD)**  
 Total Depth: **3020.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Andy Carreira  
 Unit No: 39  
 Reference Elevations: 1770.00 ft (KB)  
 1762.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8372**      **Outside**  
 Press@RunDepth: 225.02 psig @ 2964.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.10.16      End Date: 2012.10.16      Last Calib.: 2012.10.16  
 Start Time: 11:22:05      End Time: 17:22:59      Time On Btm: 2012.10.16 @ 12:54:30  
 Time Off Btm: 2012.10.16 @ 15:42:30

**TEST COMMENT:** IF:(30min) BOB 1 min.  
 IS:(45min) Return Blow . 4" in 7 min. Built to 10" in 30 min.  
 FF:(45min) BOB immediately.  
 FS:(45min) Return Blow , 4" in 4 min. 10" in 7 min. BOB in 8 min.



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1478.99	92.78	Initial Hydro-static
2	32.73	92.41	Open To Flow (1)
32	123.10	97.83	Shut-In(1)
78	560.74	98.93	End Shut-In(1)
78	127.68	98.77	Open To Flow (2)
123	225.02	99.94	Shut-In(2)
168	554.73	100.77	End Shut-In(2)
168	1425.72	100.78	Final Hydro-static

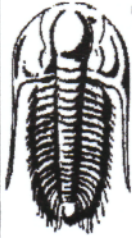
### Recovery

Length (ft)	Description	Volume (bbl)
125.00	MW m=10% w =90%	1.75
125.00	GMCWO m=10% g=20% w =30% o=40%	1.75
250.00	HOCGM g=30% o=30% m=40%	3.51
0.00	GIP= 1700 ft	0.00

\* 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+5520  
ATTN: Jim Musgrove

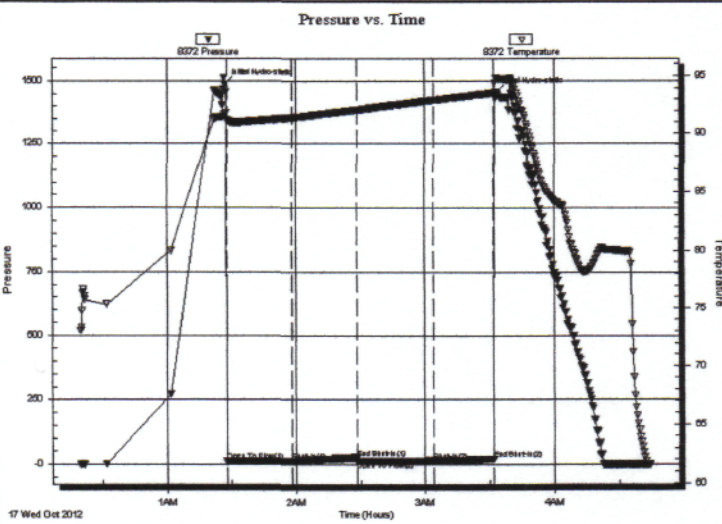
**4-15s-14w Russell,KS**  
**Schmitt #4**  
Job Ticket: 49356      **DST#: 3**  
Test Start: 2012.10.17 @ 00:20:05

### GENERAL INFORMATION:

Formation: **LKC"E-F"**  
Deviated: **No** Whipstock:                      ft (KB)  
Time Tool Opened: 01:27:50  
Time Test Ended: 04:44:59  
Interval: **3019.00 ft (KB) To 3056.00 ft (KB) (TVD)**  
Total Depth: 2400.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 1770.00 ft (KB)  
1762.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8372      Outside**  
Press@RunDepth: 13.98 psig @ 3020.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.10.17      End Date: 2012.10.17      Last Calib.: 2012.10.17  
Start Time: 00:20:05      End Time: 04:44:59      Time On Btm: 2012.10.17 @ 01:27:00  
Time Off Btm: 2012.10.17 @ 03:33:00

**TEST COMMENT:** IF:(30min) Blow died in 15 min.  
ISl:(30min) No Return  
FF:(30min) No Blow  
FSl:(30min) No Return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1487.12	91.69	Initial Hydro-static
1	10.38	91.16	Open To Flow (1)
32	12.15	91.39	Shut-In(1)
62	24.58	92.05	End Shut-In(1)
62	12.60	92.05	Open To Flow (2)
97	13.98	92.90	Shut-In(2)
125	19.50	93.53	End Shut-In(2)
126	1454.24	94.79	Final Hydro-static

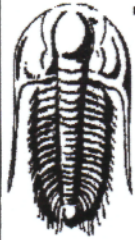
### Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud w / oil spks in tool	0.03

\* 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+5520  
 ATTN: Jim Musgrove

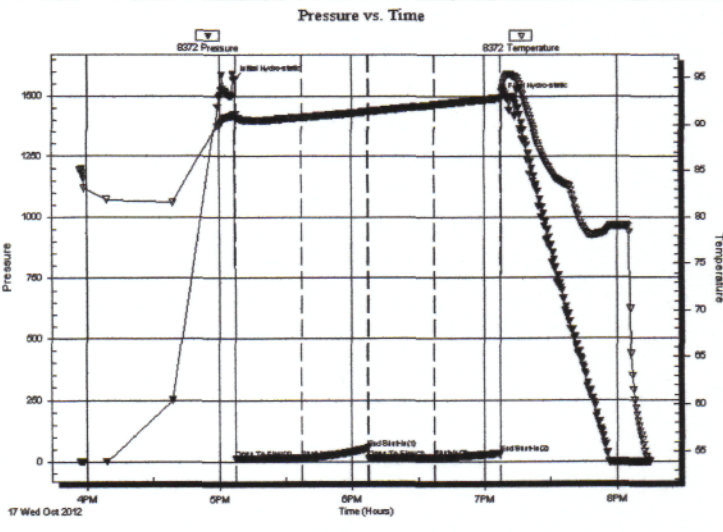
**4-15s-14w Russell,KS**  
**Schmitt #4**  
 Job Ticket: 49356 **DST#: 4**  
 Test Start: 2012.10.17 @ 15:57:05

**GENERAL INFORMATION:**

Formation: **LKC "I-J"**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Reset)**  
 Time Tool Opened: **17:07:30** Tester: **Andy Carreira**  
 Time Test Ended: **20:15:29** Unit No: **39**  
 Interval: **3116.00 ft (KB) To 3170.00 ft (KB) (TVD)** Reference Elevations: **1770.00 ft (KB)**  
 Total Depth: **3170.00 ft (KB) (TVD)** **1762.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **8.00 ft**

**Serial #: 8372** **Outside**  
 Press@RunDepth: **15.00 psig @ 3119.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2012.10.17** End Date: **2012.10.17** Last Calib.: **2012.10.17**  
 Start Time: **15:57:05** End Time: **20:15:29** Time On Btm: **2012.10.17 @ 17:06:20**  
 Time Off Btm: **2012.10.17 @ 19:07:40**

**TEST COMMENT:** IF:(30min) Blow died in 5 min.  
 ISl:(30min) No Return  
 FF:(30min) No Blow  
 FSl:(30min) No Return

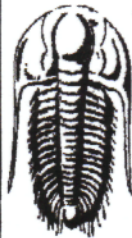


PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1564.93	90.95	Initial Hydro-static
2	13.07	90.46	Open To Flow (1)
31	14.37	90.74	Shut-In(1)
61	56.13	91.36	End Shut-In(1)
62	13.45	91.35	Open To Flow (2)
91	15.00	92.06	Shut-In(2)
121	34.22	92.78	End Shut-In(2)
122	1493.62	93.51	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
2.00	Mud	0.03

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil Operations Inc  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Jim Musgrove

4-15s-14w Russell,KS

Schmitt #4

Job Ticket: 49357

DST#: 5

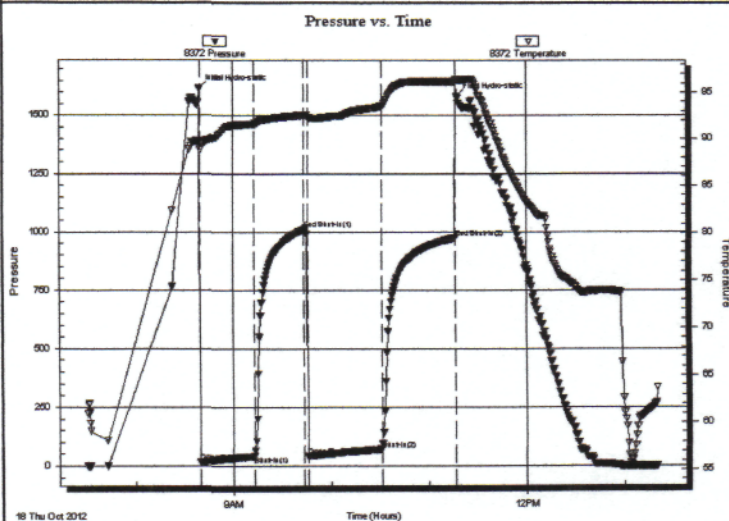
Test Start: 2012.10.18 @ 07:31:05

### GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: **No Whipstock:** ft (KB)  
 Test Type: **Conventional Bottom Hole (Reset)**  
 Time Tool Opened: 08:40:10  
 Tester: **Andy Carreira**  
 Time Test Ended: 13:20:09  
 Unit No: **39**  
 Interval: **3187.00 ft (KB) To 3230.00 ft (KB) (TVD)**  
 Reference Elevations: **1770.00 ft (KB)**  
 Total Depth: **3230.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches**  
 Hole Condition: **Fair**  
 KB to GR/CF: **8.00 ft**

**Serial #: 8372 Outside**  
 Press@RunDepth: **71.49 psig @ 3191.00 ft (KB)**  
 Capacity: **8000.00 psig**  
 Start Date: **2012.10.18** End Date: **2012.10.18** Last Calib.: **2012.10.18**  
 Start Time: **07:31:05** End Time: **13:20:10** Time On Btm: **2012.10.18 @ 08:39:30**  
 Time Off Btm: **2012.10.18 @ 11:17:00**

**TEST COMMENT:** IF:(30min) 2" Blow in 4 min, 6" in 16 min, BOB in 29 min.  
 IS:(30min) No Return  
 FF:(45min) 2" Blow in 5 min, 6" in 26 min, 10" in 45 min.  
 FS:(45min) Slight surface return blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1615.68	89.75	Initial Hydro-static
1	16.35	88.77	Open To Flow (1)
34	41.76	91.62	Shut-In(1)
64	1012.35	92.54	End Shut-In(1)
67	42.90	92.30	Open To Flow (2)
112	71.49	93.50	Shut-In(2)
157	973.34	96.10	End Shut-In(2)
158	1581.22	96.31	Final Hydro-static

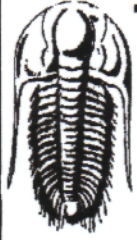
### Recovery

Length (ft)	Description	Volume (bbl)
60.00	HOCM o=40% m=60%	0.84
60.00	MCGO g=5% m=10% o=85%	0.84
20.00	GO g=5% o=95%	0.28
0.00	GIP=100ft	0.00

\* 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+5520  
 ATTN: Jim Musgrove

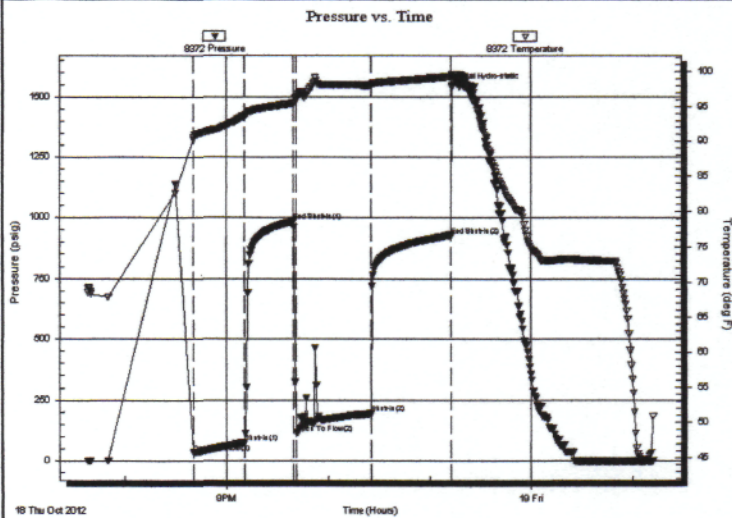
**4-15s-14w Russell, KS**  
**Schmitt #4**  
 Job Ticket: 49358      **DST#: 6**  
 Test Start: 2012.10.18 @ 19:38:05

### GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: **No** Whipstock:                      ft (KB)  
 Time Tool Opened: 20:40:20  
 Time Test Ended: 01:11:59  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Andy Carreira  
 Unit No: 39  
 Interval: **3230.00 ft (KB) To 3238.00 ft (KB) (TVD)**  
 Total Depth: 3238.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Reference Elevations: 1770.00 ft (KB)  
 1762.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8372      Outside**  
 Press@RunDepth: 193.49 psig @ 3231.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.10.18      End Date: 2012.10.19      Last Calib.: 2012.10.19  
 Start Time: 19:38:05      End Time: 01:11:59      Time On Btm:  
 Time Off Btm: 2012.10.18 @ 23:13:00

**TEST COMMENT:** IF:(30min) 3" blow in 7 min, 6" in 12 min, BOB in 23 min.  
 ISt:(30min) Surface return blow  
 FF:(45min) BOB 4 min.  
 FSt:(45min) Surface return blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	35.35	90.27	Open To Flow (1)
31	74.42	93.79	Shut-In(1)
60	984.14	95.52	End Shut-In(1)
61	113.85	95.94	Open To Flow (2)
105	193.49	98.14	Shut-In(2)
152	928.22	99.31	End Shut-In(2)
153	1540.63	99.57	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
300.00	HOCGM g=5% o=35% m=60%	4.21
110.00	GO g=5% o=95%	1.54
0.00	GIP= 100ft	0.00

\* 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. 6045

Date	10-2-12	Sec.	4	Twp.	15	Range	14	County	Russell	State	KS	On Location		Finish	11:45pm
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Location *Russell 5 Walters Lane 1/2 mi S into*

Lease	<i>Schmitt</i>	Well No.	<i>4</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 #3</i>				
Type Job	<i>Surface</i>				
Hole Size	<i>12 1/4</i>	T.D.	<i>473</i>	Charge To	<i>M&amp;E Oil</i>
Csg.	<i>8 5/8</i>	Depth	<i>473</i>	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.	<i>20'</i>	Shoe Joint		Cement Amount Ordered	<i>225 60/40-30/100 29/100</i>
Meas Line		Displace	<i>28 1/2 B/L</i>		

**EQUIPMENT**

Pumptrk	<i>16</i>	No.		Cementor Helper	<i>naia</i>	Common	<i>135</i>
Bulktrk		No.		Driver	<i>Travis</i>	Poz. Mix	<i>90</i>
Bulktrk	<i>10</i>	No.		Driver	<i>Doug</i>	Gel.	<i>5</i>
				Driver		Calcium	<i>9</i>

**JOB SERVICES & REMARKS**

Remarks:		Hulls	
Rat Hole		Salt	
Mouse Hole		Flowseal	
Centralizers		Kol-Seal	
Baskets		Mud CLR 48	
DV or Port Collar		CFL-117 or CD110 CAF 38	
		Sand	
	<i>8 5/8 on bottom - Est Circulation - Mix</i>	Handling	<i>249</i>
	<i>225 SK + Displace Plus</i>	Mileage	

	<i>Cement Circulated</i>		
		<b>FLOAT EQUIPMENT</b>	
		Guide Shoe	
		Centralizer	
		Baskets	<i>8 5/8 wooden plugs</i>
		AFU Inserts	
		Float Shoe	
		Latch Down	

		Pumptrk Charge	<i>Surface</i>
		Mileage	<i>11</i>

		Tax	
		Discount	
		Total Charge	

X Signature *Jay Shriver*

# 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. 5244

Date	10-19-12	Sec.	4	Twp.	15	Range	14	County	Russell	State	KS	On Location	5:30pm	Finish	9:15pm	
Lease	Schmitt	Well No.	4	Location		Russell S to water rd 1/4 W S into										
Contractor	Southwind	Res	3	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.										
Type Job	Long Stang	Hole Size		T.D.	3295	Csg.		Depth	3298	Charge To		mai oil				
Tbg. Size	Tool		Depth		Street		City									State
Cement Left in Csg.	19,95ft	Shoe Joint	19,95ft	The above was done to satisfaction and supervision of owner agent or contractor.												
Meas Line	14 #	Displace	80 BBL	Cement Amount Ordered		150 gal 18% salt + 2% gel										
EQUIPMENT				V4 flow 100 gal 10% salt + 2% gel												
Pumptrk #9	No.	Cement	Helper	Common V4 flow 150												
Bulktrk 1, 14	No.	Driver	Dave	Poz. Mix 6/60												
Bulktrk pu	No.	Driver	Heath Cody	Gel. 5												
JOB SERVICES & REMARKS				Calcium												
Remarks:				Hulls												
Rat Hole 30 SKS				Salt												
Mouse Hole				Flowseal 49#												
Centralizers 12 5/2				Koi-Seal												
Baskets 1 5/2				Mud CLR 48 1000 gal												
D/V or Port Collar				CFL-117 or CD110 CAF 38												
Lift pressure 800				Sand												
Landed pipe 1200				Handling 304												
Released float hole				Mileage												
				FLOAT EQUIPMENT												
				Guide Shoe												
				12 Centralizer 1-10 20 24												
				1 Baskets #11 10 fact up												
				Align inserts												
				Float Shoe												
				1 Latch Down												
				Pumptrk Charge prod long string												
				Mileage												
Signature				Tax												
				Discount												
				Total Charge												



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

January 09, 2013

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

Re: ACO1  
API 15-167-23829-00-00  
Schmitt 4  
SE/4 Sec.04-15S-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