

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD  
 Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

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  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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**JAMES C. MUSGROVE**

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

Office (620) 588-4250

Res. Claflin (620) 587-3444

Mai Oil Operations  
Steinle #2  
SE-NW-NE-NW (591' FNL & 1652' FEL)  
Section 2-14s-15w  
Russell County, Kansas

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**5 1/2 Production Casing Set**

**Contractor:** Southwind Drilling Co. (rig #3)  
**Commenced:** January 2, 2018  
**Completed:** January 10, 2018  
**Elevation:** 1911' K.B., 1909' D.F., 1903' G.L.  
**Casing program:** Surface; 8 5/8" @ 939'  
Production, 5 1/2" @ 3390'  
**Sample:** Samples saved and examined 2300' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 2300' to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were five (5) Drill Stem Tests ran by Trilobite Testing Co.  
**Electric Log:** By Eli, Dual Induction; Compensated Density/Neutron Log and Micro Log.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	949	+962
Base Anhydrite	985	+926
Grand Haven	2470	-559
1 <sup>st</sup> Tarkio Sand	2480	-569
Dover	2500	-589
2 <sup>nd</sup> Tarkio Sand	2518	-607
Topeka	2795	-630
Heebner	3018	984
Toronto	3037	-1107
Lansing	3073	-1126
Base Kansas City	3299	-1388
Gorham Sand	3324	-1413
Reagan Sand	3352	-1441
Granite Wash	3394	-1483
Rotary Total Depth	3400	-1489
Log Total Depth	3396	-1487

(All tops and zone(s) corrected to Electric Log Measurements)

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

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

2481-2488' Sand, tan, gray, medium grained; micaeous, poor to fair intergranular porosity, black dead stain, show of oil (dead appearing) and no odor in fresh samples.

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

2519-2523' Sand, gray, medium grained friable; fair intergranular porosity, black spotty stain, trace of free oil and faint odor in fresh samples.

**TOPEKA SECTION**

2796-2800' Limestone, tan, finely crystalline, fair pinpoint type porosity, light brown stain show of free oil, trace gas bubbles and strong odor in fresh samples.

2813-2820' Limestone, as above, scattered pinpoint type porosity, chalky in part, trace poor brown stain, show of free oil and strong odor in fresh samples.

**Drill Stem Test #1** **2778-2826**

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

**Blow:** Fair to good

**Recovery:** 30' heavily oil and gas cut watery mud  
(20% gas; 40% oil; 10% water; 30% mud)  
45' Very slightly oil cut mud  
(2% oil; 98% mud)

**Pressures:** ISIP 466 psi  
FSIP 967 psi  
IFP 14-26 psi  
FFP 24-38 psi  
HSH 1379-1349 psi

2890-2897' Limestone, tan buff, mottled, poorly developed porosity; trace brown stain, no show of free oil and no odor in fresh samples.

2970-2980' Limestone, gray, white, fine to medium crystalline; fair porosity, no shows.

2980-2998' Limestone, white, cream, few granular in part; pinpoint to fine vuggy type porosity, chalky, light golden brown stain, show of free oil and strong odor in fresh samples.



**Drill Stem Test #2**

**2958-2995**

**Times:** 30-30-30-30  
**Blow:** Weak  
**Recovery:** 40' watery mud, trace of oil  
**Pressures:** ISIP 669 psi  
FSIP 638 psi  
IFP 13-23 psi  
FFP 25-33 psi  
HSH 1489-1453 psi

**TORONTO SECTION**

3037-3046' Limestone, white, finely crystalline, poor visible porosity, golden brown stain, trace of free oil and faint odor in fresh samples.

**LANSING SECTION**

3073-3083' Limestone, white, finely crystalline, poor visible porosity, cherty in part, no shows.  
3095-3101' Limestone, white, cream, finely crystalline fossiliferous, poor to fair porosity, light brown stain, show of free oil and fair odor in fresh samples.  
3101-3115' Limestone, white, gray, oomoldic, fair oomoldic and scattered vuggy type porosity, light brown stain and saturation, show of free oil and strong odor in fresh samples.  
3121-3130' Limestone, white, cream, finely crystalline, poor visible porosity, no shows.

**Drill Stem Test #3**

**3079-3130**

**Times:** 30-30-45-45  
**Blow:** Strong  
**Recovery:** 40' slightly oil and gas cut watery mud  
(3% gas; 4% oil; 5% water; 88% mud)  
45' very slightly oil and gas cut muddy water  
(10% gas; 2% oil; 30% water; 58% mud)  
15' watery mud  
**Pressures:** ISIP 674 psi  
FSIP 690 psi  
IFP 15-35 psi  
FFP 37-59 psi  
HSH 1549-1524' psi

- 3143-3148' Limestone, cream, white, finely crystalline, few with fair vuggy porosity, brown stain, and saturation, show of free oil and strong odor in fresh samples.
- 3150-3160' Limestone, cream, white, oomoldic, poor to fair oomoldic porosity, black to brown stain, show of free oil and strong odor in fresh samples, plus trace white/gray opaque, chert.

**Drill Stem Test #4 3132-3160**

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

**Blow:** Fair

**Recovery:** 30' oil and slightly gas cut mud  
 (2% gas; 18 oil; 80% mud)  
 60' very slightly oil and gas cut muddy water  
 (10% gas; 2% oil; 5% water; 83% mud)  
 15' watery mud

**Pressures:** ISIP 820 psi  
 FSIP 818 psi  
 IFP 16-32 psi  
 FFP 34-57 psi  
 HSH 1592-1566 psi

- 3161-3171' Limestone, white, oomoldic, fair oomoldic porosity, brown stain, no free oil and faint odor in fresh samples.
- 3208-3220' Limestone, white, finely crystalline, few fossiliferous, poor visible porosity, chalky in part; trace white chalk and smoky gray chert; no shows.
- 3226-3236' Limestone, white, oolitic, sub-oomoldic, poor visible porosity, trace brown stain, show of free oil and faint to fair odor in fresh samples.
- 3248-3260' Limestone, gray, tan, finely crystalline, slightly cherty, no shows.
- 3284-3296' Limestone, tan, cream, finely crystalline, slightly cherty, poor porosity, no shows.

**GORHAM SAND**

- 3321-3326' Sand, clear, quartzitic, medium grained, "tight", light brown stain, show of free oil and fair odor in fresh samples.
- 3326-3333' Sand; clean, quartzitic, sub-rounded; medium grained; well sorted; fair to good intergranular porosity, trace of pyrite, light brown stain, show of free oil and strong odor in fresh samples.



Mai Oil Operations  
Steinle #2  
SE-NW-NE-NW (591' FNL & 1652' FEL)  
Section 2-14s-15w  
Russell County, Kansas

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**Drill Stem Test #5**

**3292-3333**

**Times: 15-30-15-30**

**Blow: Strong**

**Recovery: 2270' water; trace of mud**

**Pressures:** ISIP 1082 psi  
FSIP 1019 psi  
IFP 220-834 psi  
FFP 863-1019 psi  
HSH 1693-1606 psi

3333-3352' Sand, clear, quartzitic, medium grained; sub-rounded; friable; fair porosity, light brown stain, show of free oil and strong odor in fresh samples, plus abundant pyrite.

**REAGAN SAND**

3352-3360' Sand, clear, medium grained; sub-rounded, fair to poorly sorted; light brown stain, show of free oil and strong odor in fresh samples.

3360-3394' Sand, clear, quartzitic, fine grained, well sorted; brown stain, show of free oil and strong odor in fresh samples.

**GRANITE WASH SECTION**

3394-3400' Feldspar, orange, pink; trace biotite and large quartz grains, no shows.

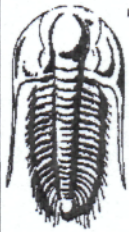
**Rotary Total Depth 3400 -1489**  
**Log Total Depth 3398 -1487**

**Recommendations:**

5 1/2" production casing was set and cemented on the Mai Oil Operations, Inc. Steinle #2

Respectfully yours,

  
Wyatt Urban  
Petroleum Geologist



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

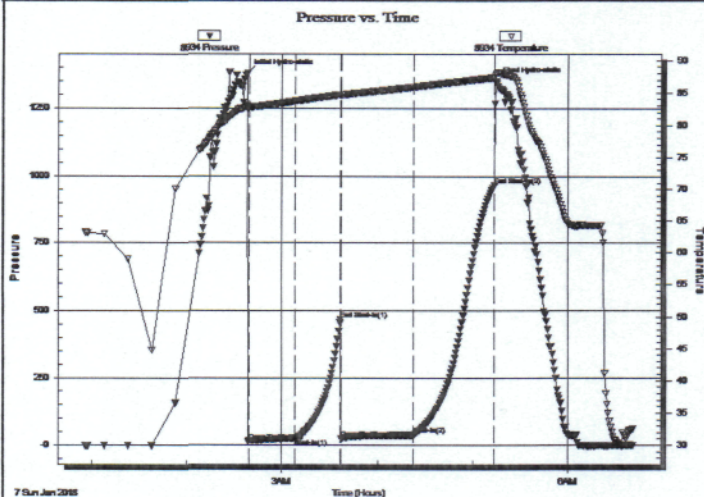
**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63534 **DST#: 1**  
Test Start: 2018.01.07 @ 00:56:00

### GENERAL INFORMATION:

Formation: **Topeka**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 02:39:00  
Time Test Ended: 06:41:15  
Interval: **2728.00 ft (KB) To 2826.00 ft (KB) (TVD)**  
Total Depth: 2826.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Spencer J. Staab  
Unit No: 84  
Reference Elevations: 1911.00 ft (KB)  
1903.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8934** Inside  
Press@RunDepth: 38.92 psig @ 2781.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2018.01.07 End Date: 2018.01.07 Last Calib.: 2018.01.07  
Start Time: 00:56:15 End Time: 06:41:15 Time On Btm: 2018.01.07 @ 02:38:15  
Time Off Btm: 2018.01.07 @ 05:14:30

TEST COMMENT: 30-IF-Fair Blow ; Built to 10"  
30-ISI-No Return  
45-FF-Fair Blow ; BOB (11") in 35 mins  
45-FSI-No Return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1379.22	82.94	Initial Hydro-static
1	14.98	82.69	Open To Flow (1)
31	26.53	83.67	Shut-In(1)
59	466.32	84.70	End Shut-In(1)
60	24.31	84.63	Open To Flow (2)
105	38.92	85.89	Shut-In(2)
156	967.44	87.35	End Shut-In(2)
157	1349.18	88.02	Final Hydro-static

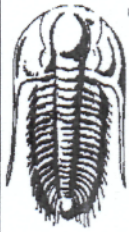
### Recovery

Length (ft)	Description	Volume (bbl)
30.00	GVMCO 20%G 10%W 30%M 40%O	0.15
45.00	VSOCM 2%O 98%M	0.35

### Gas Rates

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





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63534      **DST#: 1**  
Test Start: 2018.01.07 @ 00:56:00

**Tool Information**

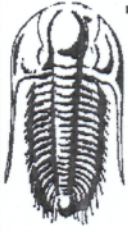
Drill Pipe:	Length: 2701.00 ft	Diameter: 3.80 inches	Volume: 37.89 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length:            ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 61.00 ft	Diameter: 2.25 inches	Volume: 0.30 bbl	Weight to Pull Loose:	39000.00 lb
			<u>Total Volume:</u> - bbl	Tool Chased	ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	2778.00 ft			Final	35000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	48.00 ft				
Tool Length:	68.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2759.00	
Shut In Tool	5.00			2764.00	
Hydraulic tool	5.00			2769.00	
Packer	5.00			2774.00	20.00      Bottom Of Top Packer
Packer	4.00			2778.00	
Stubb	1.00			2779.00	
Perforations	1.00			2780.00	
Change Over Sub	1.00			2781.00	
Recorder	0.00	9120	Inside	2781.00	
Recorder	0.00	8934	Inside	2781.00	
Drill Pipe	31.00			2812.00	
Change Over Sub	1.00			2813.00	
Perforations	9.00			2822.00	
Bullnose	4.00			2826.00	48.00      Bottom Packers & Anchor

**Total Tool Length: 68.00**





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63534      DST#: 1  
Test Start: 2018.01.07 @ 00:56:00

**Mud and Cushion Information**

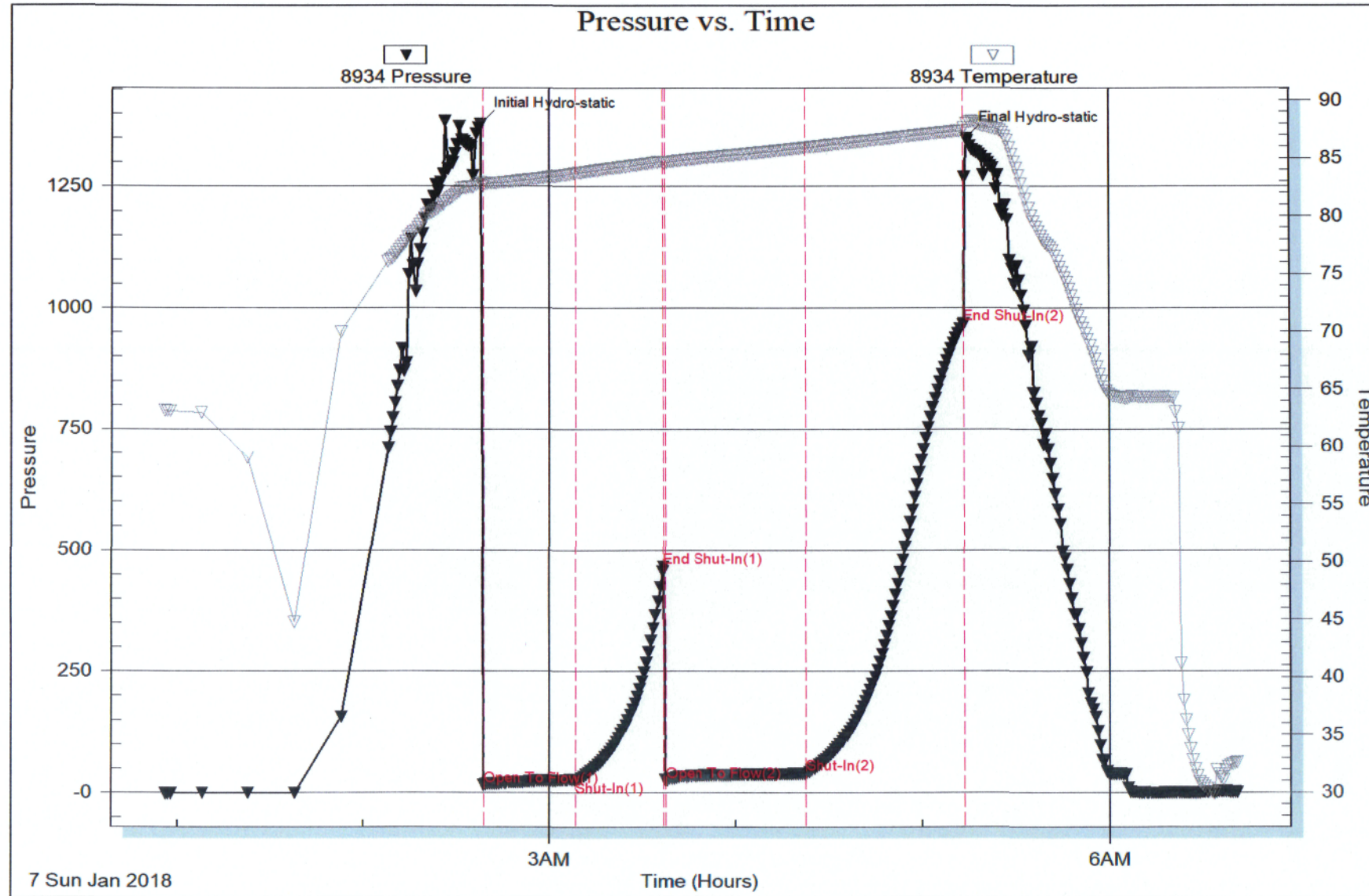
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	76000 ppm
Viscosity: 68.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1800.00 ppm			
Filter Cake: inches			

**Recovery Information**

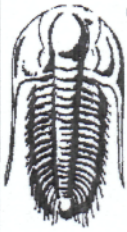
Recovery Table

Length ft	Description	Volume bbl
30.00	GVMCO 20%G 10%W 30%M 40%O	0.148
45.00	VSOCM 2%O 98%M	0.349

Total Length: 75.00 ft      Total Volume: 0.497 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 2#LCM  
                                  RW=.245@30degrees







**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

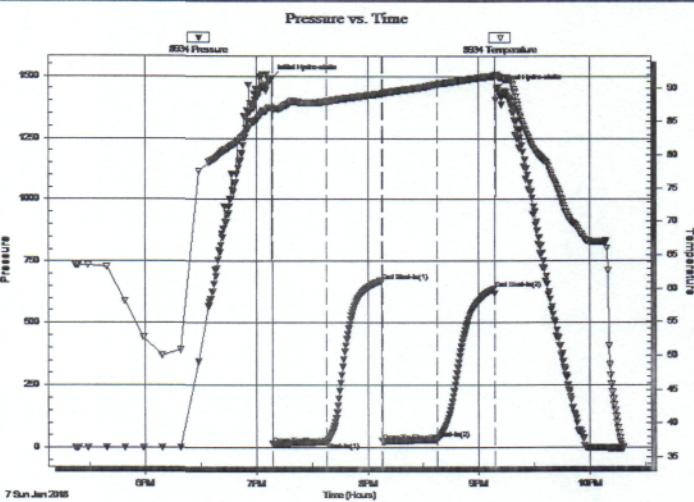
**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63535      **DST#: 2**  
Test Start: 2018.01.07 @ 17:22:00

**GENERAL INFORMATION:**

Formation: **Plattsmouth**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 19:08:45  
Time Test Ended: 22:18:30  
Interval: **2958.00 ft (KB) To 2995.00 ft (KB) (TVD)**  
Total Depth: 2995.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 1911.00 ft (KB)  
1903.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8934**      **Outside**  
Press@RunDepth: 33.99 psig @ 2960.00 ft (KB)  
Start Date: 2018.01.07      End Date: 2018.01.07  
Start Time: 17:22:15      End Time: 22:18:30  
Capacity: 8000.00 psig  
Last Calib.: 2018.01.07  
Time On Btm: 2018.01.07 @ 19:08:15  
Time Off Btm: 2018.01.07 @ 21:10:00

**TEST COMMENT:** 30-IF-Weak Blow ; Built to 4"  
30-IS-No Return  
30-FF-Weak Blow ; Built to 1 1/2"  
30-FSI-No Return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1489.53	87.02	Initial Hydro-static
1	13.69	86.58	Open To Flow (1)
30	23.39	87.97	Shut-In(1)
59	669.68	89.14	End Shut-In(1)
60	25.13	89.17	Open To Flow (2)
90	33.99	90.54	Shut-In(2)
121	638.16	91.77	End Shut-In(2)
122	1453.59	91.80	Final Hydro-static

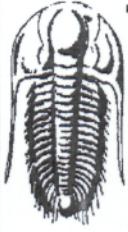
**Recovery**

Length (ft)	Description	Volume (bbl)
40.00	VSWC Oil Spotted Mud 2%W 98%M	0.56

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63535      **DST#: 2**  
Test Start: 2018.01.07 @ 17:22:00

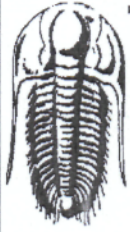
**Tool Information**

Drill Pipe:	Length: 2955.00 ft	Diameter: 3.80 inches	Volume: 41.45 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length:            ft	Diameter: 2.75 inches	Volume:        - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:        0.00 ft	Diameter: 2.25 inches	Volume:        0.00 bbl	Weight to Pull Loose:	36000.00 lb
			<u>Total Volume:</u>	Tool Chased	ft
				String Weight: Initial	32000.00 lb
Drill Pipe Above KB:	17.00 ft			Final	32000.00 lb
Depth to Top Packer:	2958.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	37.00 ft				
Tool Length:	57.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2939.00	
Shut In Tool	5.00			2944.00	
Hydraulic tool	5.00			2949.00	
Packer	5.00			2954.00	20.00      Bottom Of Top Packer
Packer	4.00			2958.00	
Stubb	1.00			2959.00	
Perforations	1.00			2960.00	
Recorder	0.00	9120	Inside	2960.00	
Recorder	0.00	8934	Outside	2960.00	
Perforations	31.00			2991.00	
Bullnose	4.00			2995.00	37.00      Bottom Packers & Anchor

**Total Tool Length: 57.00**





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mai Oil Operations, Inc.

**2-14S-15W Russell,KS**

8411 Preston Rd STE 800  
Dallas TX 75225+5520

**Steinle #2**

Job Ticket: 63535

**DST#: 2**

ATTN: Wyatt Urban

Test Start: 2018.01.07 @ 17:22:00

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
40.00	VSWC Oil Spotted Mud 2%W 98%M	0.561

Total Length: 40.00 ft      Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

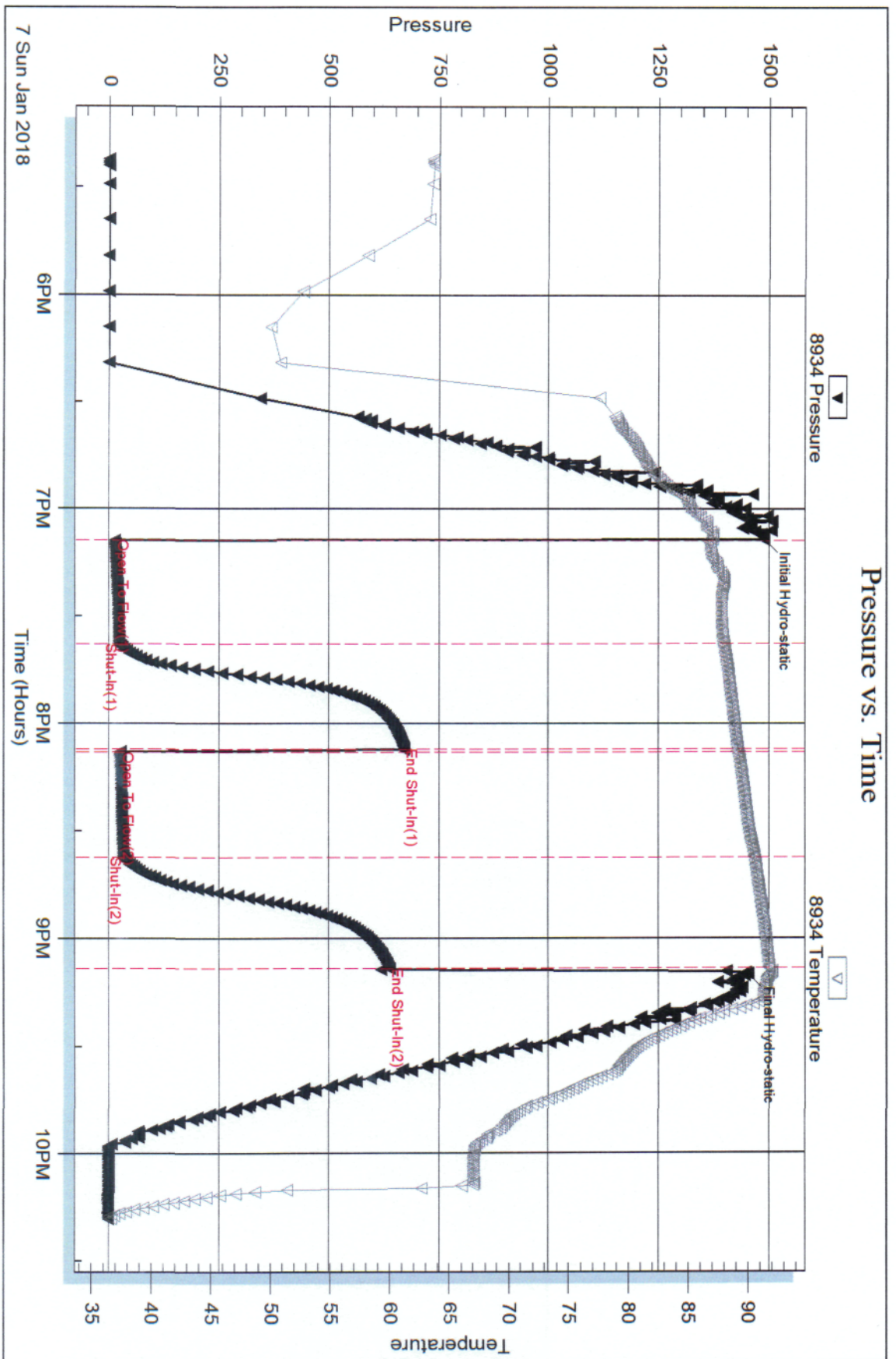
Recovery Comments: 3&1/2#LCM

Serial #: 8934

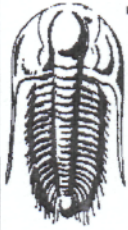
Outside Mail Oil Operations, Inc.

Stearle #2

DST Test Number: 2







**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Mai Oil Operations, Inc.  
 8411 Preston Rd STE 800  
 Dallas TX 75225+5520  
 ATTN: Wyatt Urban

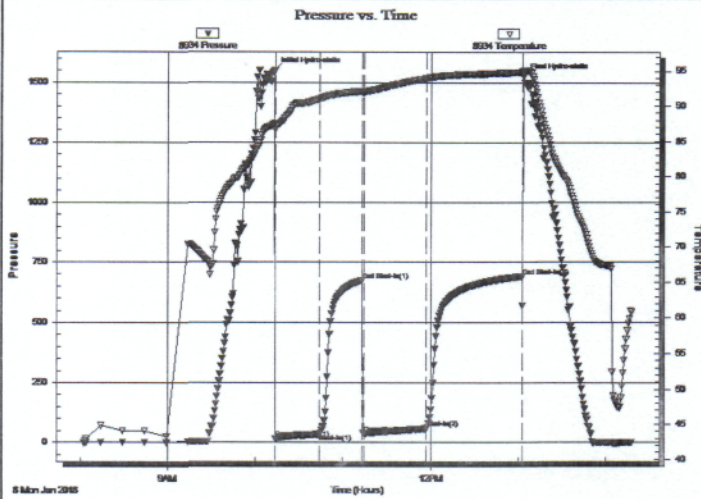
**2-14S-15W Russell,KS**  
**Steinle #2**  
 Job Ticket: 63536 **DST#: 3**  
 Test Start: 2018.01.08 @ 08:02:15

**GENERAL INFORMATION:**

Formation: **LKC 'A-C'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:13:30  
 Time Test Ended: 14:18:00  
 Interval: **3079.00 ft (KB) To 3130.00 ft (KB) (TVD)**  
 Total Depth: 3130.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 1911.00 ft (KB)  
 1903.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8934** **Inside**  
 Press@RunDepth: 59.63 psig @ 3082.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.01.08 End Date: 2018.01.08 Last Calib.: 2018.01.08  
 Start Time: 08:02:15 End Time: 14:18:00 Time On Btm: 2018.01.08 @ 10:13:15  
 Time Off Btm: 2018.01.08 @ 13:03:30

**TEST COMMENT:** 30-IF-Fair Blow ; Built to 9"  
 30-ISI-Weak Surface Blow  
 45-FF-Fair Blow ; BOB in 37 mins  
 60-FSI-No Return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1549.06	87.51	Initial Hydro-static
1	15.92	86.57	Open To Flow (1)
31	35.81	91.03	Shut-In(1)
60	674.77	92.09	End Shut-In(1)
61	37.95	91.97	Open To Flow (2)
104	59.63	93.95	Shut-In(2)
170	690.15	94.85	End Shut-In(2)
171	1524.92	95.09	Final Hydro-static

**Recovery**

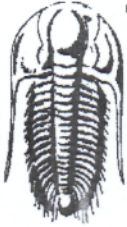
Length (ft)	Description	Volume (bbl)
15.00	VSWCM 2%W 98%M	0.21
45.00	GVSOCWM 10%G 2%O 30%W 58%M	0.63
40.00	GSOWCM 3%G 4%O 5%W 88%M	0.56

\* 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: Wyatt Urban

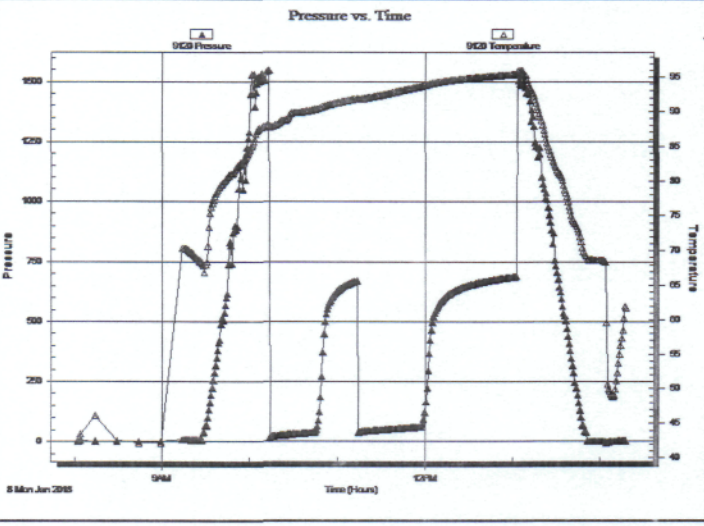
**2-14S-15W Russell,KS**  
**Steinle #2**  
 Job Ticket: 63536 **DST#: 3**  
 Test Start: 2018.01.08 @ 08:02:15

**GENERAL INFORMATION:**

Formation: **LKC 'A-C'**  
 Deviated: **No Whipstock:** ft (KB)  
 Time Tool Opened: 10:13:30  
 Time Test Ended: 14:18:00  
 Interval: **3079.00 ft (KB) To 3130.00 ft (KB) (TVD)**  
 Total Depth: **3130.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: Fair  
 Test Type: **Conventional Bottom Hole (Reset)**  
 Tester: **Spencer J. Staab**  
 Unit No: **84**  
 Reference Elevations: **1911.00 ft (KB)**  
**1903.00 ft (CF)**  
 KB to GR/CF: **8.00 ft**

**Serial #: 9120** **Inside**  
 Press@RunDepth: psig @ 3082.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.01.08 End Date: 2018.01.08 Last Calib.: 2018.01.08  
 Start Time: 08:02:15 End Time: 14:18:00 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30-IF-Fair Blow ; Built to 9"  
 30-ISI-Weak Surface Blow  
 45-FF-Fair Blow ; BOB in 37 mins  
 60-FSI-No Return



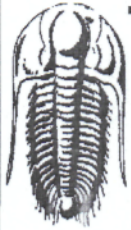
PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
15.00	VSWCM 2%W 98%M	0.21
45.00	GVSOCWM 10%G 2%O 30%W 58%M	0.63
40.00	GSOWCM 3%G 4%O 5%W 88%M	0.56

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

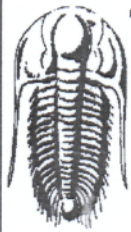
**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63536      **DST#: 3**  
Test Start: 2018.01.08 @ 08:02:15

**Tool Information**

Drill Pipe:	Length: 3079.00 ft	Diameter: 3.80 inches	Volume: 43.19 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 39000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3079.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3060.00	
Shut In Tool	5.00			3065.00	
Hydraulic tool	5.00			3070.00	
Packer	5.00			3075.00	20.00      Bottom Of Top Packer
Packer	4.00			3079.00	
Stubb	1.00			3080.00	
Perforations	1.00			3081.00	
Change Over Sub	1.00			3082.00	
Recorder	0.00	9120	Inside	3082.00	
Recorder	0.00	8934	Inside	3082.00	
Drill Pipe	32.00			3114.00	
Change Over Sub	1.00			3115.00	
Perforations	11.00			3126.00	
Bullnose	4.00			3130.00	51.00      Bottom Packers & Anchor

**Total Tool Length: 71.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mai Oil Operations, Inc.

**2-14S-15W Russell,KS**

8411 Preston Rd STE 800  
Dallas TX 75225+5520

**Steinle #2**

Job Ticket: 63536

**DST#: 3**

ATTN: Wyatt Urban

Test Start: 2018.01.08 @ 08:02:15

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

37000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
15.00	VSWCM 2%W 98%M	0.210
45.00	GVSOCWM 10%G 2%O 30%W 58%M	0.631
40.00	GSOWCM 3%G 4%O 5%W 88%M	0.561

Total Length: 100.00 ft      Total Volume: 1.402 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 3#LCM

RW=.260@54degrees

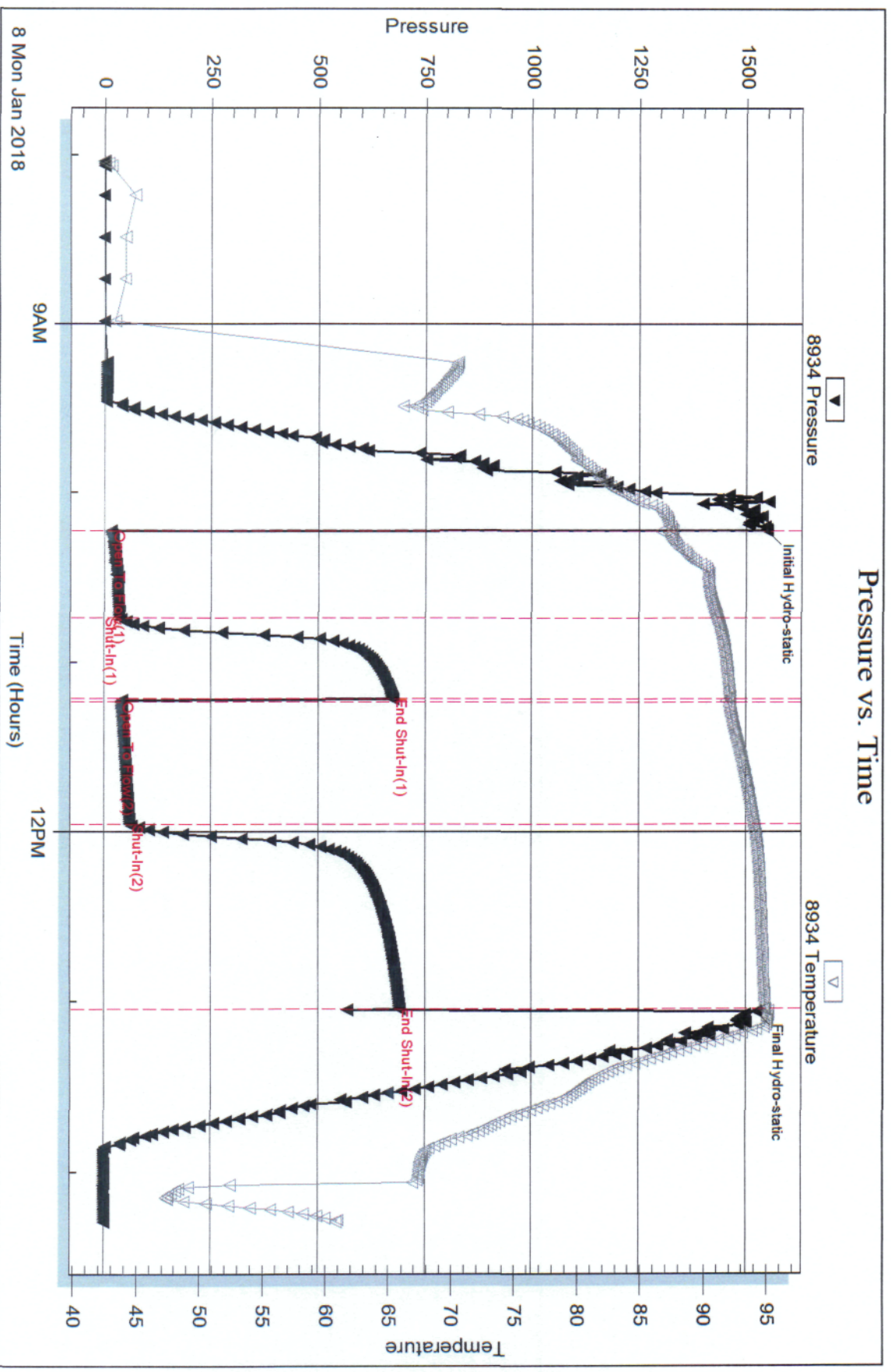


Serial #: 8934

Inside Mat Oil Operations, Inc.

Sterile #2

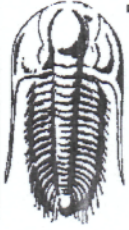
DST Test Number: 3



Triobite Testing, Inc

Ref. No: 63536

Printed: 2018.01.10 @ 11:53:30



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

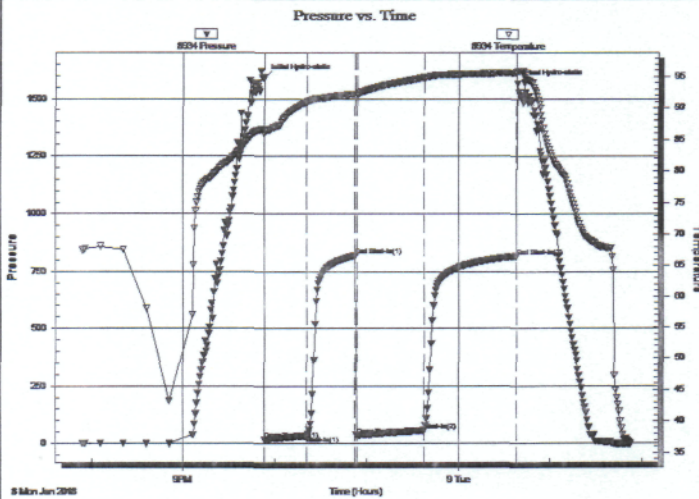
**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63537      **DST#: 4**  
Test Start: 2018.01.08 @ 19:54:00

## GENERAL INFORMATION:

Formation: **LKC 'D-F'**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 21:53:15  
Time Test Ended: 01:53:00  
Interval: **3132.00 ft (KB) To 3160.00 ft (KB) (TVD)**  
Total Depth: **3160.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Spencer J. Staab  
Unit No: 84  
Reference Elevations: 1911.00 ft (KB)  
1903.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8934**      **Inside**  
Press@RunDepth: 57.09 psig @ 3135.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2018.01.08      End Date: 2018.01.09      Last Calib.: 2018.01.09  
Start Time: 19:54:15      End Time: 01:53:00      Time On Btm: 2018.01.08 @ 21:53:00  
Time Off Btm: 2018.01.09 @ 00:38:15

**TEST COMMENT:** 30-IF-Fair Blow ; Built to 9 1/2"  
30-ISI-No Return  
45-FF-Fair Blow ; BOB (11") in 29 mins  
60-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1592.48	86.65	Initial Hydro-static
1	16.28	85.89	Open To Flow (1)
28	32.46	91.04	Shut-In(1)
60	820.49	92.26	End Shut-In(1)
61	34.65	92.18	Open To Flow (2)
105	57.09	94.90	Shut-In(2)
165	818.34	95.67	End Shut-In(2)
166	1566.27	95.90	Final Hydro-static

## Recovery

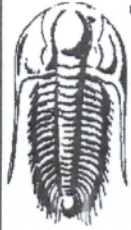
Length (ft)	Description	Volume (bbl)
60.00	GV SOWCM 10%G 2%O 5%W 83%M	0.84
30.00	GOCM 2%G 18%O 80%M	0.42

\* 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: Wyatt Urban

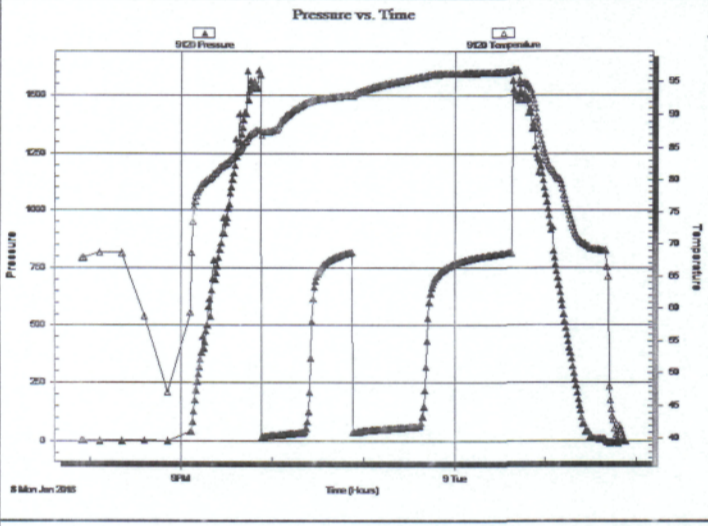
**2-14S-15W Russell,KS**  
**Steinle #2**  
 Job Ticket: 63537 **DST#: 4**  
 Test Start: 2018.01.08 @ 19:54:00

**GENERAL INFORMATION:**

Formation: **LKC 'D-F'**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:53:15  
 Time Test Ended: 01:53:00  
 Interval: **3132.00 ft (KB) To 3160.00 ft (KB) (TVD)**  
 Total Depth: 3160.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Spencer J. Staab  
 Unit No: 84  
 Reference Elevations: 1911.00 ft (KB)  
 1903.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 9120** Inside  
 Press@RunDepth: psig @ 3135.00 ft (KB)  
 Start Date: 2018.01.08 End Date: 2018.01.09 Capacity: 8000.00 psig  
 Start Time: 19:54:15 End Time: 01:53:00 Last Calib.: 2018.01.09  
 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30-IF-Fair Blow ; Built to 9 1/2"  
 30-ISI-No Return  
 45-FF-Fair Blow ; BOB (11") in 29 mins  
 60-FSI-No Return

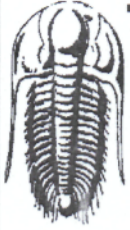


PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
60.00	GVSOWCM 10%G 2%O 5%W 83%M	0.84
30.00	GOCM 2%G 18%O 80%M	0.42

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63537      **DST#: 4**  
Test Start: 2018.01.08 @ 19:54:00

**Tool Information**

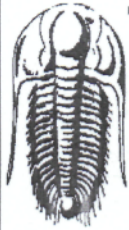
Drill Pipe:	Length: 3142.00 ft	Diameter: 3.80 inches	Volume: 44.07 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length:            ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased                            ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3132.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3113.00	
Shut In Tool	5.00			3118.00	
Hydraulic tool	5.00			3123.00	
Packer	5.00			3128.00	20.00      Bottom Of Top Packer
Packer	4.00			3132.00	
Stubb	1.00			3133.00	
Perforations	2.00			3135.00	
Recorder	0.00	9120	Inside	3135.00	
Recorder	0.00	8934	Inside	3135.00	
Perforations	21.00			3156.00	
Bullnose	4.00			3160.00	28.00      Bottom Packers & Anchor

**Total Tool Length: 48.00**





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mai Oil Operations, Inc.

**2-14S-15W Russell,KS**

8411 Preston Rd STE 800  
Dallas TX 75225+5520

**Steinle #2**

Job Ticket: 63537

**DST#: 4**

ATTN: Wyatt Urban

Test Start: 2018.01.08 @ 19:54:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

56000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GVSOWCM 10%G 2%O 5%W 83%M	0.842
30.00	GOCM 2%G 18%O 80%M	0.421

Total Length: 90.00 ft      Total Volume: 1.263 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 3#LCM

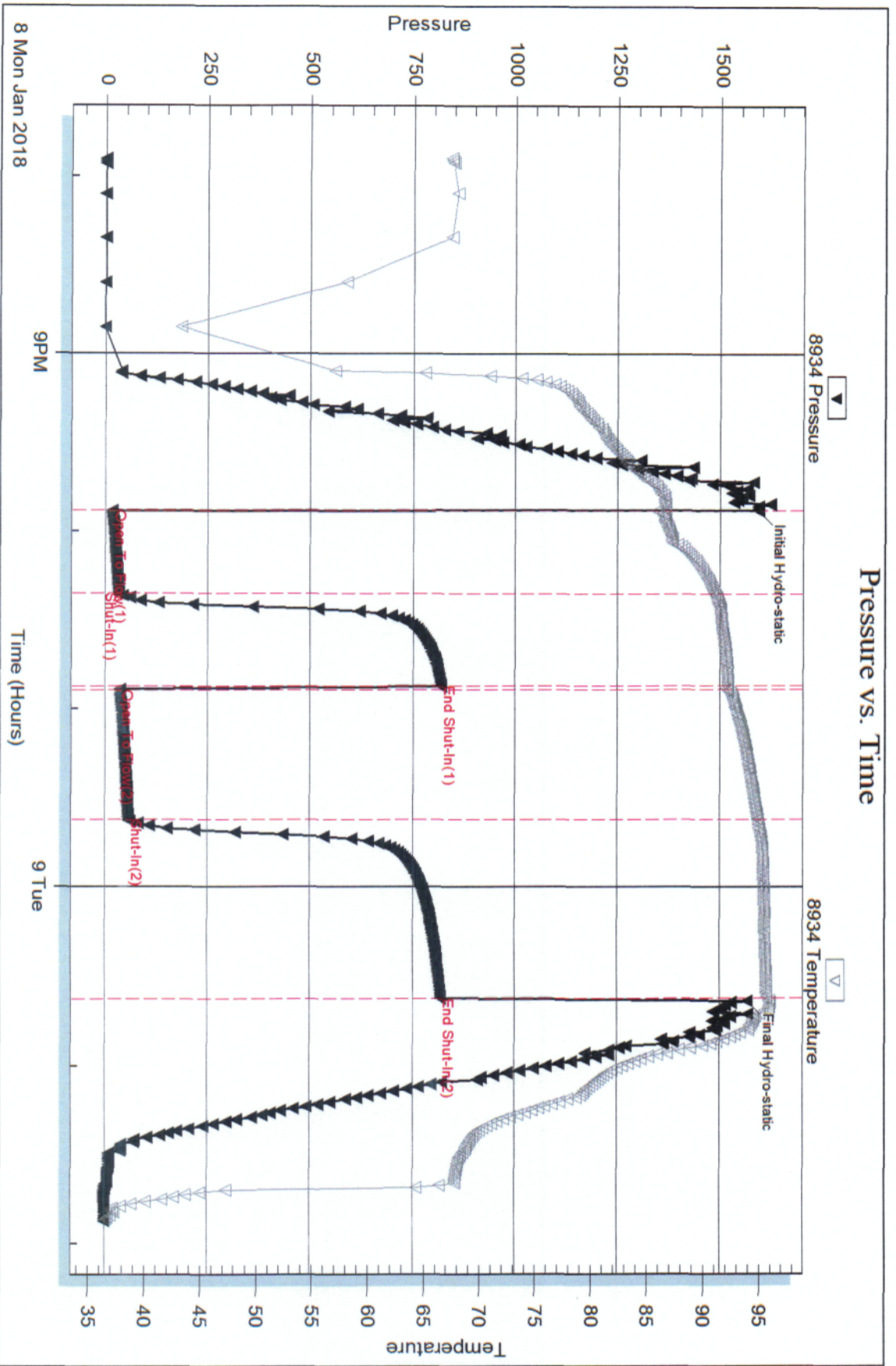
RW=.249@39degrees

Serial #: 8934

Inside Mai Oil Operations, Inc.

Steinle #2

DST Test Number: 4

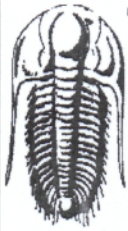


Triobite Testing, Inc

Ref. No: 63537

Printed: 2018.01.10 @ 11:52:55





**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Mai Oil Operations, Inc.  
 8411 Preston Rd STE 800  
 Dallas TX 75225+5520  
 ATTN: Wyatt Urban

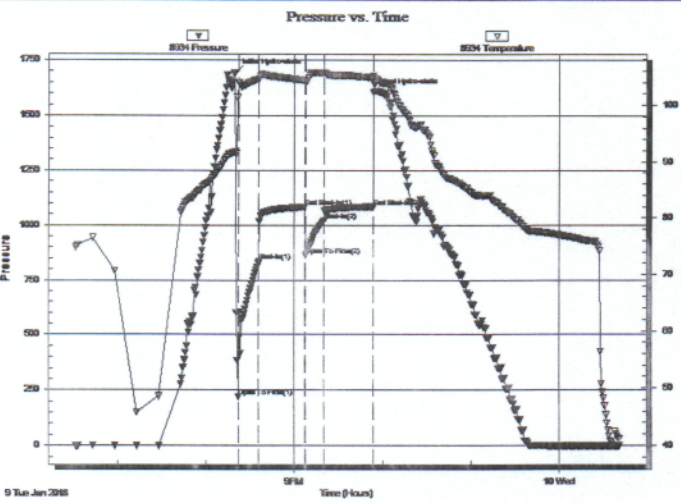
**2-14S-15W Russell,KS**  
**Steinle #2**  
 Job Ticket: 63538 **DST#: 5**  
 Test Start: 2018.01.09 @ 18:31:00

**GENERAL INFORMATION:**

Formation: **Gorham Ss**  
 Deviated: **No Whipstock:** ft (KB)  
 Test Type: **Conventional Bottom Hole (Reset)**  
 Time Tool Opened: 20:22:00  
 Tester: **Spencer J. Staab**  
 Time Test Ended: 00:40:45  
 Unit No: **84**  
 Interval: **3292.00 ft (KB) To 3333.00 ft (KB) (TVD)**  
 Reference Elevations: **1911.00 ft (KB)**  
 Total Depth: **3333.00 ft (KB) (TVD)**  
 1903.00 ft (CF)  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 KB to GR/CF: **8.00 ft**

**Serial #: 8934** **Inside**  
 Press@RunDepth: **1019.49 psig @ 3297.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2018.01.09** End Date: **2018.01.10** Last Calib.: **2018.01.10**  
 Start Time: **18:31:15** End Time: **00:40:45** Time On Btm: **2018.01.09 @ 20:20:00**  
 Time Off Btm: **2018.01.09 @ 21:53:30**

**TEST COMMENT:** 15-IF-Strong Blow ; BOB (11") in 25 seconds  
 30-IS-No Return  
 15-FF-Strong Blow ; BOB in 15 seconds  
 30-FSI-No Return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1693.01	91.76	Initial Hydro-static
2	220.71	103.97	Open To Flow (1)
16	834.34	104.50	Shut-In(1)
48	1082.32	104.36	End Shut-In(1)
48	863.10	104.27	Open To Flow (2)
60	1019.49	105.59	Shut-In(2)
94	1083.67	104.82	End Shut-In(2)
94	1606.96	105.11	Final Hydro-static

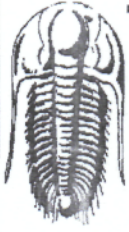
**Recovery**

Length (ft)	Description	Volume (bbl)
1770.00	VSMCW 2%M 98%W	24.83
500.00	VSWCM 3%W 97%M	7.01

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63538      **DST#: 5**  
Test Start: 2018.01.09 @ 18:31:00

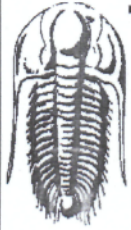
**Tool Information**

Drill Pipe:	Length: 3302.00 ft	Diameter: 3.80 inches	Volume: 46.32 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume:</u> - bbl	Tool Chased	ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3292.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	41.00 ft				
Tool Length:	61.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3273.00	
Shut In Tool	5.00			3278.00	
Hydraulic tool	5.00			3283.00	
Packer	5.00			3288.00	20.00      Bottom Of Top Packer
Packer	4.00			3292.00	
Stubb	1.00			3293.00	
Perforations	3.00			3296.00	
Change Over Sub	1.00			3297.00	
Recorder	0.00	9120	Inside	3297.00	
Recorder	0.00	8934	Inside	3297.00	
Drill Pipe	31.00			3328.00	
Change Over Sub	1.00			3329.00	
Bullnose	4.00			3333.00	41.00      Bottom Packers & Anchor

**Total Tool Length: 61.00**





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mai Oil Operations, Inc.  
8411 Preston Rd STE 800  
Dallas TX 75225+5520  
ATTN: Wyatt Urban

**2-14S-15W Russell,KS**  
**Steinle #2**  
Job Ticket: 63538      **DST#: 5**  
Test Start: 2018.01.09 @ 18:31:00

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 54000 ppm	
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
1770.00	VSMCW 2%M 98%W	24.828
500.00	VSWCM 3%W 97%M	7.014

Total Length: 2270.00 ft      Total Volume: 31.842 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: 2#LCM  
 RW=.236@43degrees

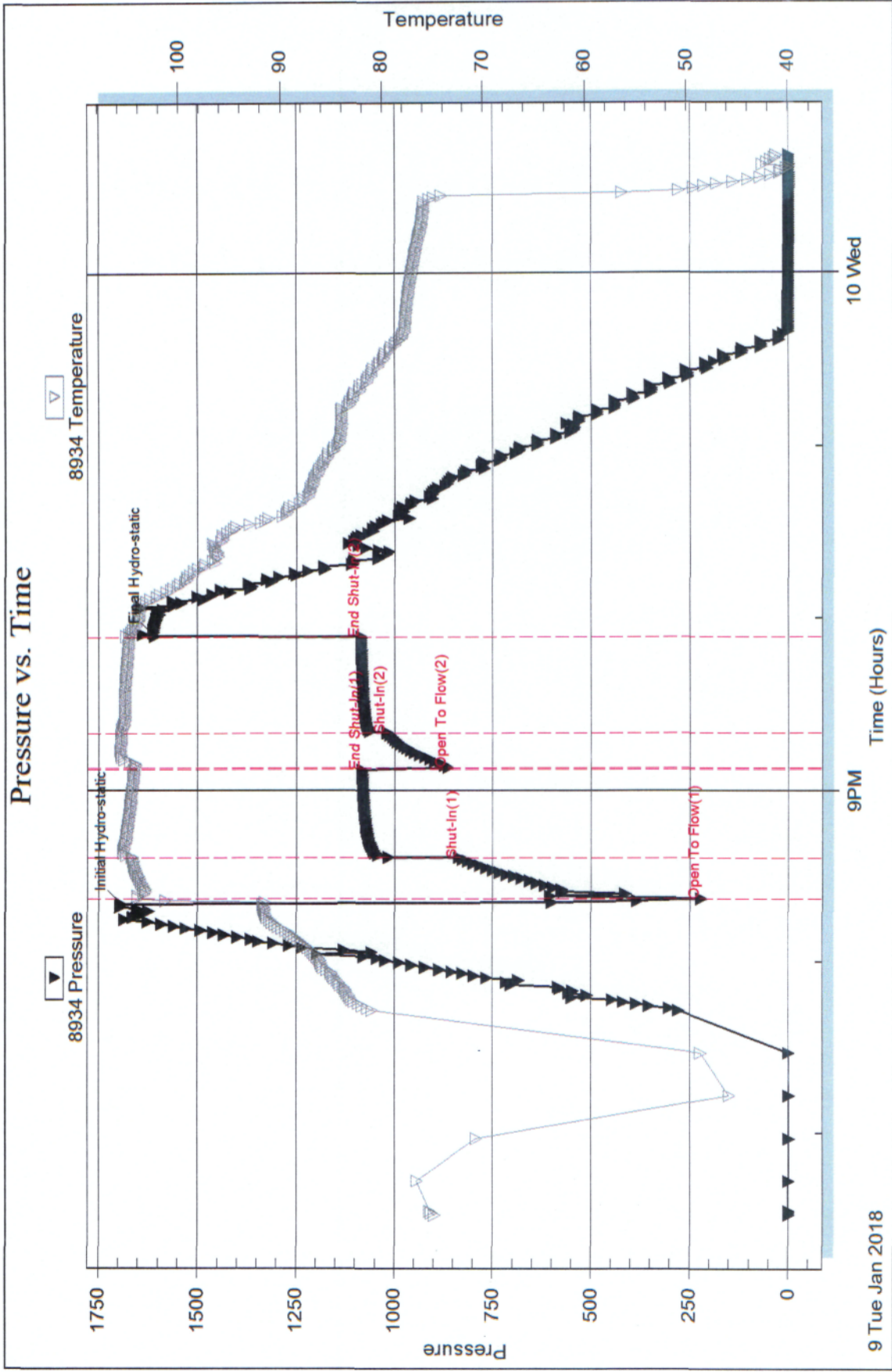
Serial #: 8934

Inside

Mai Oil Operations, Inc.

Steinle #2

DST Test Number: 5





# 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. 508

Date	Sec.	Twp.	Range	County	State	On Location	Finish
1-4-18	2	14	13	RS	KS		6:00 pm

Location Balta Rd 15 1/4 W

Lease	<u>Steinle</u>	Well No.	<u>2</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 3</u>			Charge To	<u>Ma. Oil</u>
Type Job	<u>Long Surface</u>			Street	
Hole Size	<u>12 1/4</u>	T.D.	<u>946</u>	City	State
Csg.	<u>8 5/8</u>	Depth	<u>939</u>	The above was done to satisfaction and supervision of owner agent or contractor.	
Tbg. Size		Depth		Cement Amount Ordered	<u>350 @ 4% CC 2% gel</u>
Tool		Depth			
Cement Left in Csg.	<u>20</u>	Shoe Joint			
Meas Line		Displace	<u>58 1/2</u>		

**EQUIPMENT**

Pumptrk	<u>18</u>	No.	Cementer	<u>Dave</u>	Common
			Helper		
Bulktrk	<u>21</u>	No.	Driver	<u>Dave</u>	Poz. Mix
			Driver		
Bulktrk	<u>pu</u>	No.	Driver	<u>Jordan</u>	Gel.
			Driver		
					Calcium

**JOB SERVICES & REMARKS**

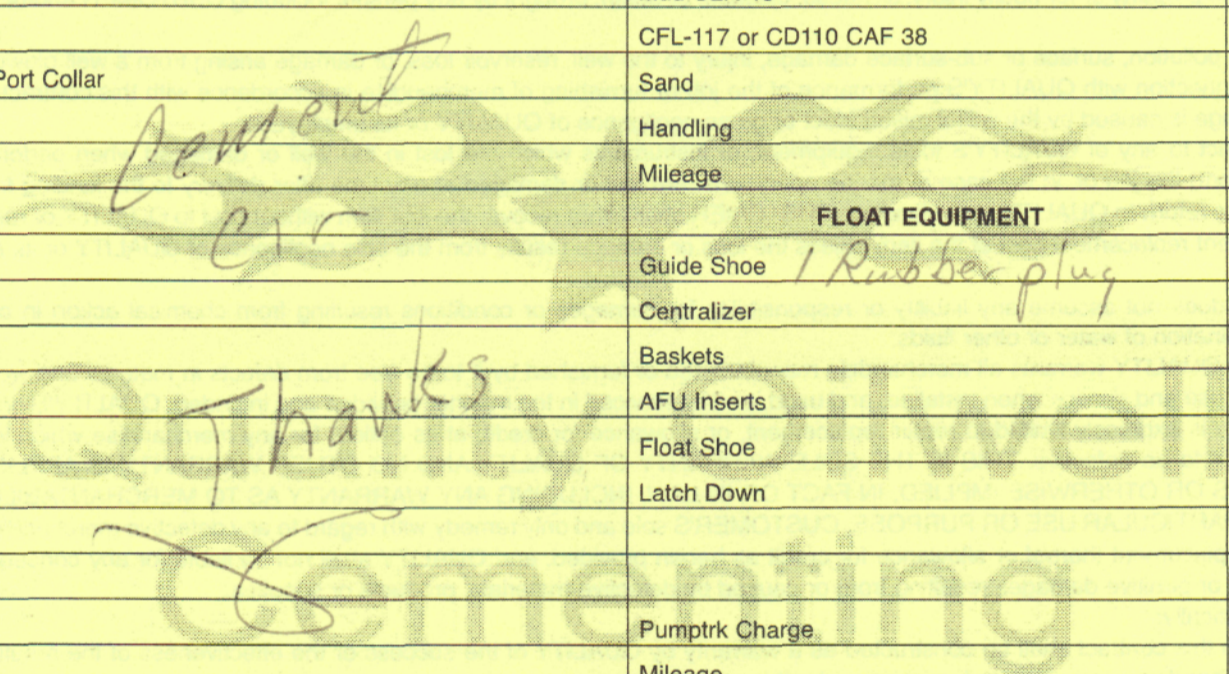
Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling
	Mileage

**FLOAT EQUIPMENT**

	Guide Shoe	<u>1 Rubber plug</u>
	Centralizer	
	Baskets	
	AFU Inserts	
	Float Shoe	
	Latch Down	
	Pumptrk Charge	
	Mileage	

	Tax	
	Discount	
	Total Charge	

X Signature Jay Hrier





# 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. 583

Date	1-10-18	Sec.	2	Twp.	14	Range	15	County	Russell	State	KS	On Location		Finish	10:30am
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Location Baltax F-70 1/2W S-10

Lease	<u>Steinle</u>	Well No.	<u>2</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 #3</u>			Charge To	<u>Ma 0:1</u>
Type Job	<u>Production string</u>			Street	
Hole Size	<u>7 7/8</u>	T.D.	<u>3400</u>	City	
Csg.	<u>5 1/2 14#</u>	Depth	<u>3397</u>	State	
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	<u>160 60/40 10/ salt</u>
Cement Left in Csg.	<u>3070</u>	Shoe Joint		Meas Line	<u>82 1/4 BCL 2/ Gel 1/4 # F10 1000 gal mud @ car</u>

**EQUIPMENT**

Pumptrk	<u>20</u>	No.	Cementer		Common
			Helper	<u>Graig</u>	Poz. Mix
Bulktrk		No.	Driver	<u>Drett</u>	Gel.
Bulktrk	<u>14</u>	No.	Driver	<u>Sordan</u>	Calcium

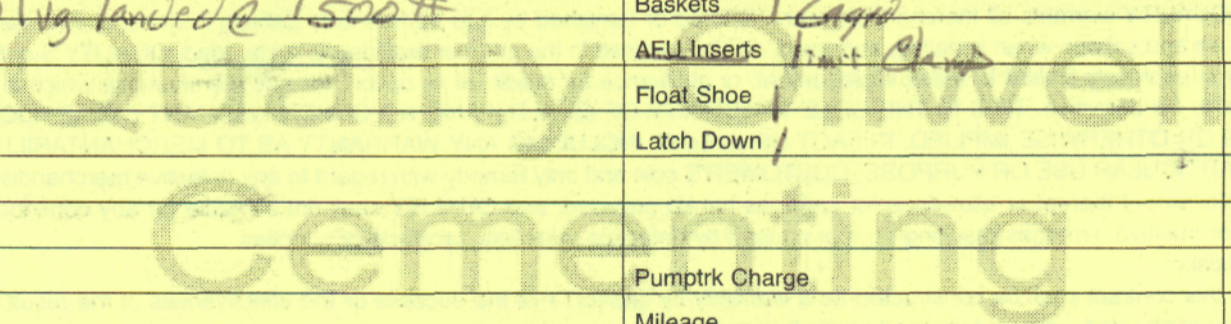
**JOB SERVICES & REMARKS**

Remarks:		Hulls	
Rat Hole	<u>30SK</u>	Salt	
Mouse Hole		Flowseal	
Centralizers		Kol-Seal	
Baskets		Mud CLR 48	
D/V or Port Collar		CFL-117 or CD110 CAF 38	

5 1/2 size 3397 Baffle 3366  
ES Circulation Pump 1000 gal mud  
Clear 4 10BL spooly Plug  
Rathole w/ 30SK Cement 5 1/2  
with 130SK Clear lines & Displace Plug  
Plug landed @ 1500#

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	<u>14</u>
Baskets	<u>1 Caged</u>
AEU Inserts	<u>limit clamp</u>
Float Shoe	<u>1</u>
Latch Down	<u>1</u>



Pumptrk Charge		Tax	
Mileage		Discount	
Signature	<u>Jay Kuer</u>	Total Charge	