



## DRILL STEM TEST REPORT

Prepared For: **CMX Inc.**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

ATTN: Ken LaBlanc

### **Woelk #1-18**

#### **18-13s-14w Russell,KS**

Start Date: 2015.04.10 @ 04:03:00

End Date: 2015.04.10 @ 11:10:00

Job Ticket #: 61985                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.04.15 @ 10:49:14



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

CMX Inc.  
1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206  
ATTN: Ken LaBlanc

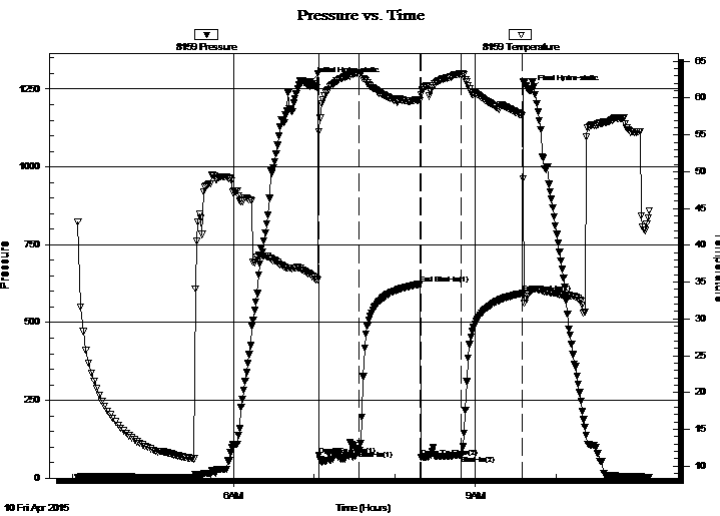
**18-13s-14w Russell,KS**  
**Woelk #1-18**  
Job Ticket: 61985 **DST#: 1**  
Test Start: 2015.04.10 @ 04:03:00

## GENERAL INFORMATION:

Formation: **LKC "A-B"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 07:03:30  
Time Test Ended: 11:10:00  
Interval: **2852.00 ft (KB) To 2890.00 ft (KB) (TVD)**  
Total Depth: 2890.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Poor  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Shane Konzem  
Unit No: 56  
Reference Elevations: 1687.00 ft (KB)  
1674.00 ft (CF)  
KB to GR/CF: 13.00 ft

**Serial #: 8159 Outside**  
Press@RunDepth: 74.84 psig @ 2887.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.04.10 End Date: 2015.04.10 Last Calib.: 2015.04.10  
Start Time: 04:04:00 End Time: 11:10:00 Time On Btm: 2015.04.10 @ 06:57:30  
Time Off Btm: 2015.04.10 @ 09:41:30

**TEST COMMENT:** IFP 30 Minutes. Weak blow built to 1 1/2"  
ISI 45 Minutes. No blow back.  
FFP 30 Minutes. No blow. Flushed tool and gained a weak surface blow.  
FSI 45 Minutes. No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1273.38	35.99	Initial Hydro-static
6	72.82	55.45	Open To Flow (1)
36	88.58	63.32	Shut-In(1)
81	623.69	59.68	End Shut-In(1)
82	67.27	60.48	Open To Flow (2)
112	74.84	63.34	Shut-In(2)
157	593.46	57.60	End Shut-In(2)
164	1247.24	33.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	100% Mud.	0.39

## Gas Rates

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



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# DRILL STEM TEST REPORT

CMX Inc.  
 1700 N. Waterfront PKWY BLDG 300B  
 Wichita KS 67206  
 ATTN: Ken LaBlanc

**18-13s-14w Russell,KS**  
**Woelk #1-18**  
 Job Ticket: 61985 **DST#: 1**  
 Test Start: 2015.04.10 @ 04:03:00

## GENERAL INFORMATION:

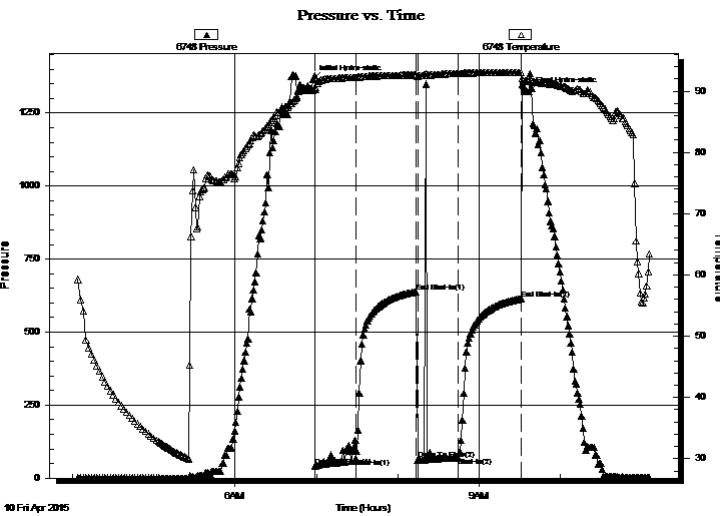
Formation: **LKC "A-B"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:03:30  
 Time Test Ended: 11:10:00  
**Interval: 2852.00 ft (KB) To 2890.00 ft (KB) (TVD)**  
 Total Depth: 2890.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 56  
 Reference Elevations: 1687.00 ft (KB)  
 1674.00 ft (CF)  
 KB to GR/CF: 13.00 ft

## Serial #: 6748

Inside

Press@RunDepth: 614.73 psig @ 2886.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.04.10 End Date: 2015.04.10 Last Calib.: 1899.12.30  
 Start Time: 04:04:00 End Time: 11:05:30 Time On Btm: 2015.04.10 @ 06:57:30  
 Time Off Btm: 2015.04.10 @ 09:36:30

TEST COMMENT: IFP 30 Minutes. Weak blow built to 1 1/2"  
 ISI 45 Minutes. No blow back.  
 FFP 30 Minutes. No blow. Flushed tool and gained a weak surface blow.  
 FSI 45 Minutes. No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1364.73	90.05	Initial Hydro-static
2	39.51	90.30	Open To Flow (1)
32	67.77	92.25	Shut-In(1)
76	638.35	92.65	End Shut-In(1)
77	63.19	92.47	Open To Flow (2)
107	69.80	92.88	Shut-In(2)
153	614.73	93.06	End Shut-In(2)
159	1323.05	91.62	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	100% Mud.	0.39

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc.

**18-13s-14w Russell, KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61985

**DST#: 1**

ATTN: Ken LaBlanc

Test Start: 2015.04.10 @ 04:03:00

## Tool Information

Drill Pipe:	Length: 2700.00 ft	Diameter: 3.80 inches	Volume: 37.87 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 152.43 ft	Diameter: 2.25 inches	Volume: 0.75 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 38.62 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	22.43 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	2852.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			2835.00	
Hydraulic tool	5.00			2840.00	
Safety Joint	2.00			2842.00	
Top Packer	5.00			2847.00	
Packer	5.00			2852.00	22.00 Bottom Of Top Packer
Anchor	33.00			2885.00	
Recorder	1.00	6748	Inside	2886.00	
Recorder	1.00	8159	Outside	2887.00	
Bull Plug	3.00			2890.00	38.00 Anchor Tool
<b>Total Tool Length:</b>	<b>60.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX Inc.

**18-13s-14w Russell,KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61985

**DST#: 1**

ATTN: Ken LaBlanc

Test Start: 2015.04.10 @ 04:03:00

## 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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	100% Mud.	0.393

Total Length: 80.00 ft      Total Volume: 0.393 bbl

Num Fluid Samples: 0

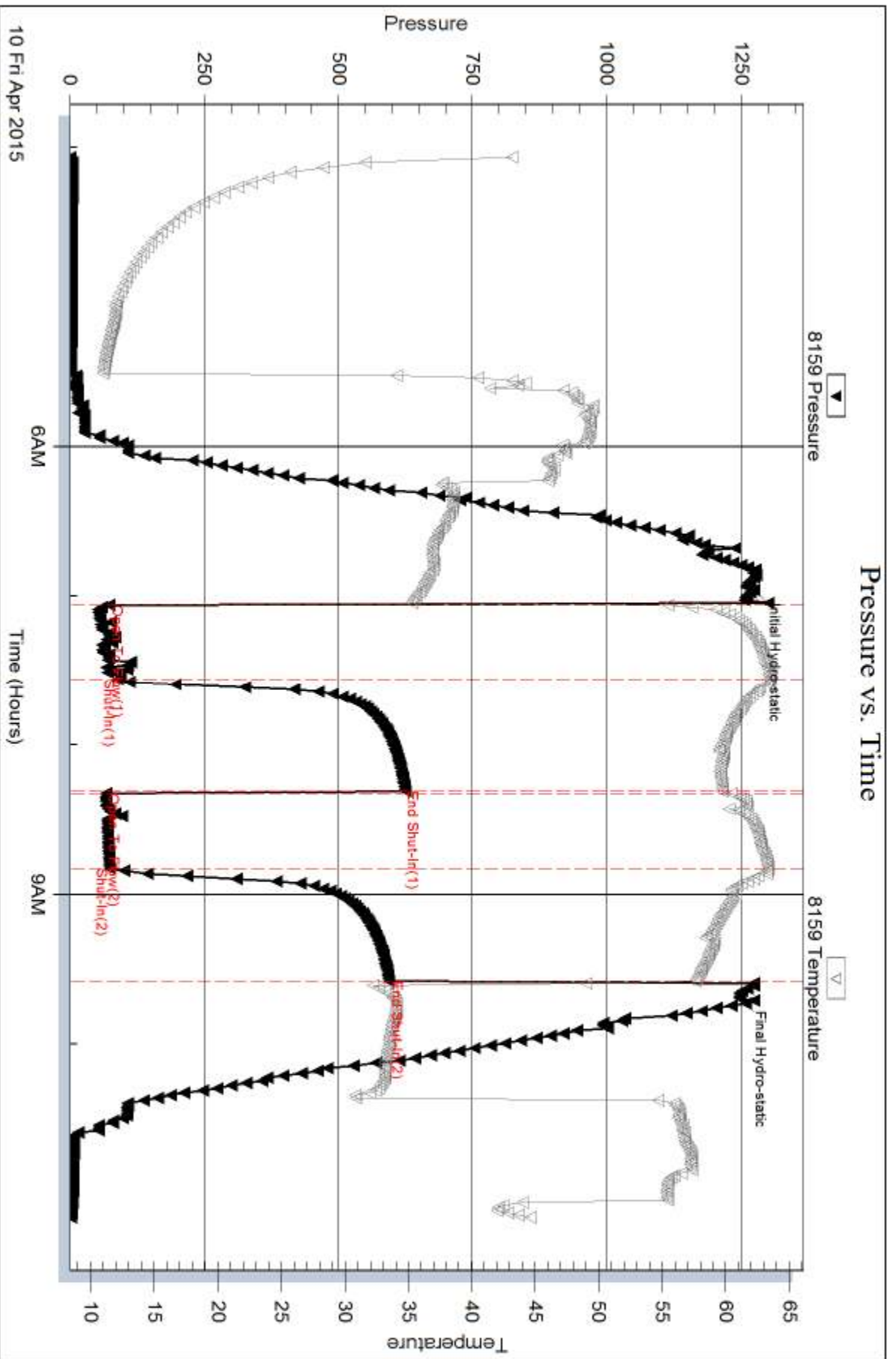
Num Gas Bombs: 0

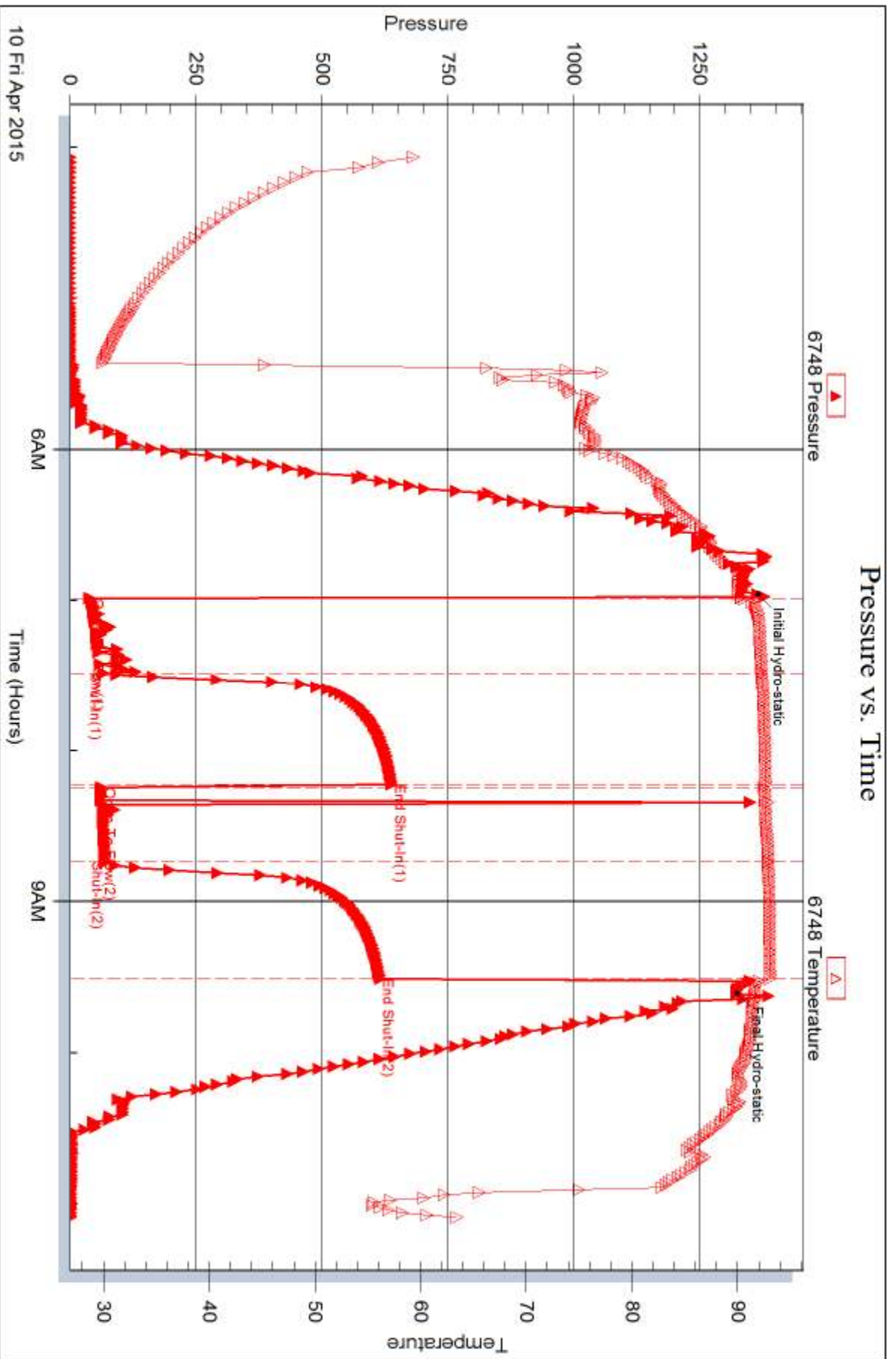
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **CMX Inc.**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

ATTN: Ken LaBlanc

### **Woelk #1-18**

#### **18-13s-14w Russell,KS**

Start Date: 2015.04.11 @ 00:20:00

End Date: 2015.04.11 @ 06:05:30

Job Ticket #: 61986                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.04.15 @ 10:48:43





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

CMX Inc.  
 1700 N. Waterfront PKWY BLDG 300B  
 Wichita KS 67206  
 ATTN: Ken LaBlanc

**18-13s-14w Russell,KS**  
**Woelk #1-18**  
 Job Ticket: 61986 **DST#: 2**  
 Test Start: 2015.04.11 @ 00:20:00

## GENERAL INFORMATION:

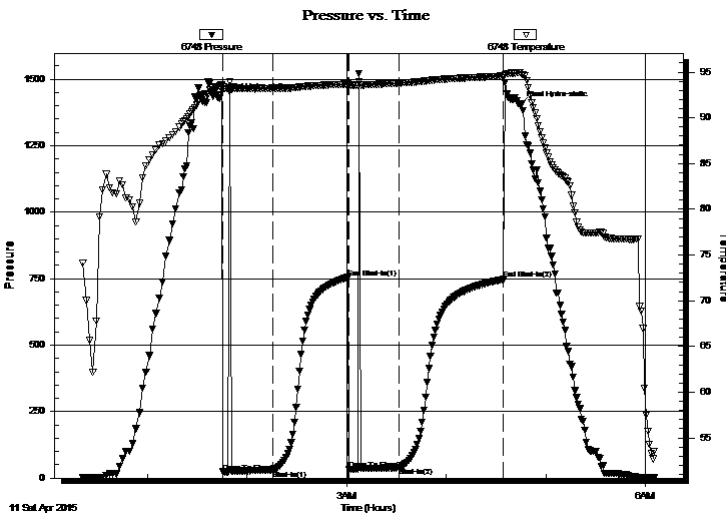
Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:45:30  
 Time Test Ended: 06:05:30  
 Interval: **3026.00 ft (KB) To 3050.00 ft (KB) (TVD)**  
 Total Depth: 3050.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 56  
 Reference Elevations: 1687.00 ft (KB)  
 1674.00 ft (CF)  
 KB to GR/CF: 13.00 ft

## Serial #: 6748

Inside

Press@RunDepth: 39.34 psig @ 3046.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.04.11 End Date: 2015.04.11 Last Calib.: 2015.04.11  
 Start Time: 00:21:00 End Time: 06:05:30 Time On Btm: 2015.04.11 @ 01:42:30  
 Time Off Btm: 2015.04.11 @ 04:44:30

TEST COMMENT: IFP 30 Minutes. Weak surface blow, flushed tool and blow remained a weak surface blow.  
 ISI 45 Minutes. No blow back.  
 FFP 30 Minutes. No blow, flushed tool and gained no blow. Gained very weak surface blow at 17 min.  
 FSI 60 Minutes. No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1431.49	93.44	Initial Hydro-static
3	23.30	93.23	Open To Flow (1)
33	30.06	93.18	Shut-In(1)
78	754.40	93.69	End Shut-In(1)
79	32.87	93.46	Open To Flow (2)
109	39.34	93.80	Shut-In(2)
172	747.24	94.56	End Shut-In(2)
182	1402.88	94.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% mud with trace of oil.	0.02

## Gas Rates

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



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1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206  
ATTN: Ken LaBlanc

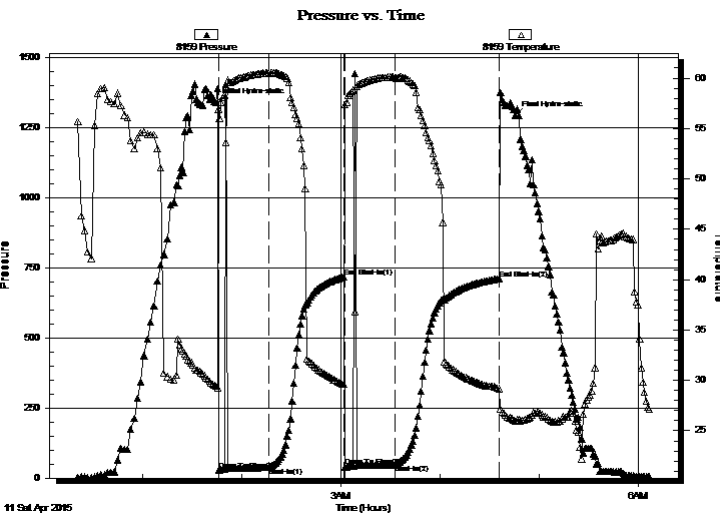
**18-13s-14w Russell,KS**  
**Woelk #1-18**  
Job Ticket: 61986 **DST#: 2**  
Test Start: 2015.04.11 @ 00:20:00

## GENERAL INFORMATION:

Formation: **LKC "J"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 01:45:30  
Time Test Ended: 06:05:30  
Interval: **3026.00 ft (KB) To 3050.00 ft (KB) (TVD)**  
Total Depth: 3050.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Poor  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Shane Konzem  
Unit No: 56  
Reference Elevations: 1687.00 ft (KB)  
1674.00 ft (CF)  
KB to GR/CF: 13.00 ft

**Serial #: 8159 Outside**  
Press@RunDepth: 712.07 psig @ 3047.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.04.11 End Date: 2015.04.11 Last Calib.: 2015.04.11  
Start Time: 00:21:00 End Time: 06:06:30 Time On Btm: 2015.04.11 @ 01:44:30  
Time Off Btm: 2015.04.11 @ 04:45:30

**TEST COMMENT:** IFP 30 Minutes. Weak surface blow, flushed tool and blow remained a weak surface blow.  
ISI 45 Minutes. No blow back.  
FFP 30 Minutes. No blow, flushed tool and gained no blow. Gained very weak surface blow at 17 min.  
FSI 60 Minutes. No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1339.59	29.42	Initial Hydro-static
2	29.22	56.92	Open To Flow (1)
32	38.45	60.52	Shut-In(1)
77	717.95	29.63	End Shut-In(1)
78	40.62	57.35	Open To Flow (2)
108	48.15	60.03	Shut-In(2)
171	712.07	29.19	End Shut-In(2)
181	1294.39	25.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% mud with trace of oil.	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc.

**18-13s-14w Russell,KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61986

**DST#: 2**

ATTN: Ken LaBlanc

Test Start: 2015.04.11 @ 00:20:00

## Tool Information

Drill Pipe:	Length: 2848.00 ft	Diameter: 3.80 inches	Volume: 39.95 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 183.48 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 40.85 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	27.48 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3026.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3009.00	
Hydraulic tool	5.00			3014.00	
Safety Joint	2.00			3016.00	
Top Packer	5.00			3021.00	
Packer	5.00			3026.00	22.00 Bottom Of Top Packer
Anchor	19.00			3045.00	
Recorder	1.00	6748	Inside	3046.00	
Recorder	1.00	8159	Outside	3047.00	
Bull Plug	3.00			3050.00	24.00 Anchor Tool
<b>Total Tool Length:</b>	<b>46.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

CMX Inc.

**18-13s-14w Russell,KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61986

**DST#: 2**

ATTN: Ken LaBlanc

Test Start: 2015.04.11 @ 00:20:00

### 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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.46 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
5.00	100% mud w ith trace of oil.	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

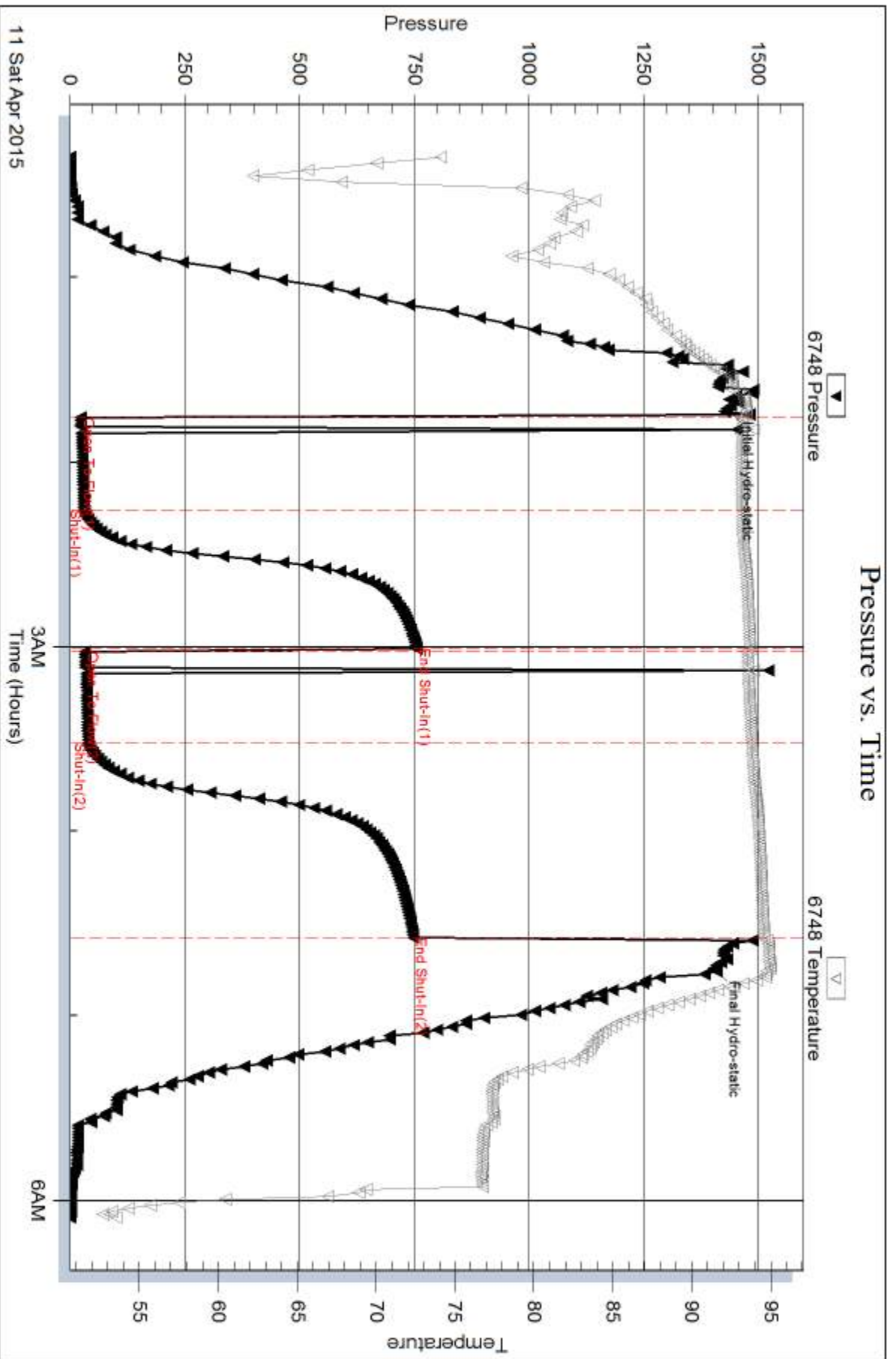
Num Gas Bombs: 0

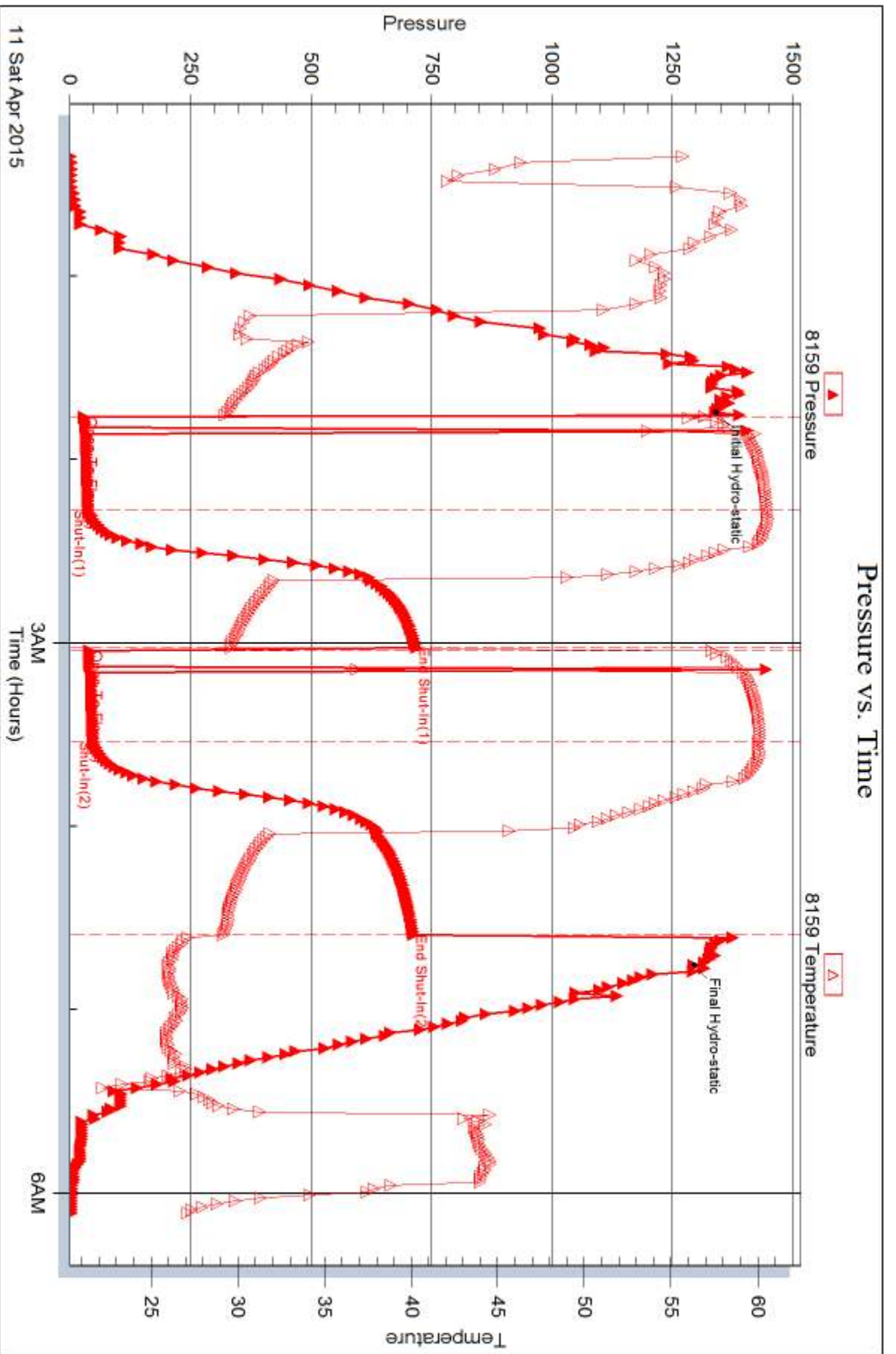
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **CMX Inc.**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

ATTN: Ken LaBlanc

### **Woelk #1-18**

#### **18-13s-14w Russell,KS**

Start Date: 2015.04.11 @ 16:50:00

End Date: 2015.04.11 @ 22:58:00

Job Ticket #: 61987                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.04.15 @ 10:48:10



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

CMX Inc.  
 1700 N. Waterfront PKWY BLDG 300B  
 Wichita KS 67206  
 ATTN: Ken LaBlanc

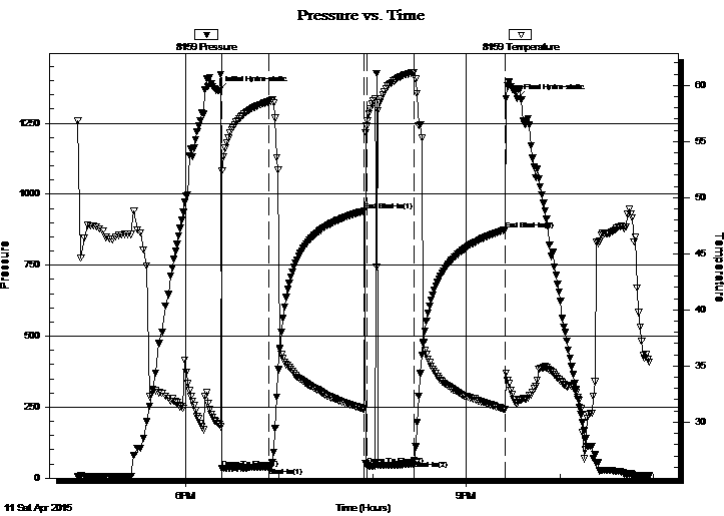
**18-13s-14w Russell,KS**  
**Woelk #1-18**  
 Job Ticket: 61987 **DST#: 3**  
 Test Start: 2015.04.11 @ 16:50:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:23:30  
 Time Test Ended: 22:58:00  
 Interval: **3093.00 ft (KB) To 3120.00 ft (KB) (TVD)**  
 Total Depth: 3120.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 56  
 Reference Elevations: 1687.00 ft (KB)  
 1674.00 ft (CF)  
 KB to GR/CF: 13.00 ft

**Serial #: 8159 Inside**  
 Press@RunDepth: 61.85 psig @ 3116.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.04.11 End Date: 2015.04.11 Last Calib.: 2015.04.12  
 Start Time: 16:51:00 End Time: 22:58:00 Time On Btm: 2015.04.11 @ 18:21:30  
 Time Off Btm: 2015.04.11 @ 21:32:30

**TEST COMMENT:** IFP 30 Minutes. Very weak surface blow.  
 ISI 60 Minutes. No blow back.  
 FFP 30 Minutes. No blow, flushed tool and gained no blow.  
 FSI 60 Minutes. No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1365.37	29.80	Initial Hydro-static
2	33.85	52.40	Open To Flow (1)
32	39.21	58.55	Shut-In(1)
93	940.68	31.14	End Shut-In(1)
95	44.60	56.36	Open To Flow (2)
125	61.85	61.16	Shut-In(2)
184	874.86	31.13	End Shut-In(2)
191	1336.65	31.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	100% Clean Oil	0.00
9.00	OCM 2.5% oil, 97.5% Mud	0.04

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

CMX Inc.  
1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206  
ATTN: Ken LaBlanc

**18-13s-14w Russell,KS**  
**Woelk #1-18**  
Job Ticket: 61987 **DST#: 3**  
Test Start: 2015.04.11 @ 16:50:00

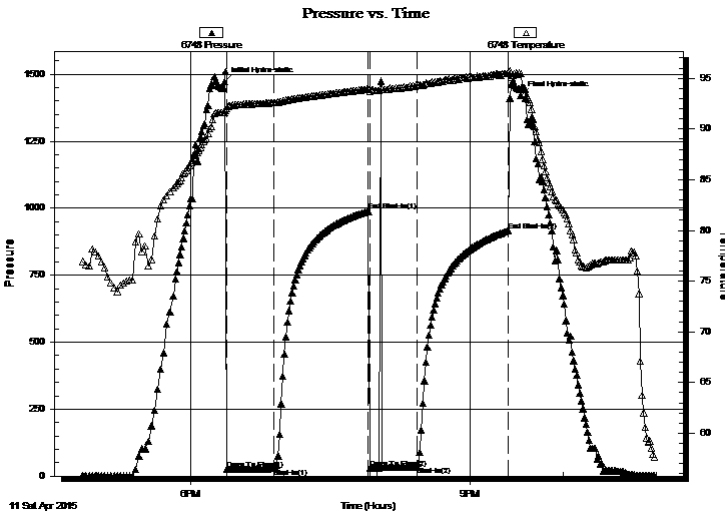
## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:23:30  
Time Test Ended: 22:58:00  
Interval: **3093.00 ft (KB) To 3120.00 ft (KB) (TVD)**  
Total Depth: 3120.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Poor  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Shane Konzem  
Unit No: 56  
Reference Elevations: 1687.00 ft (KB)  
1674.00 ft (CF)  
KB to GR/CF: 13.00 ft

**Serial #: 6748 Outside**  
Press@RunDepth: 916.69 psig @ 3117.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.04.11 End Date: 2015.04.11 Last Calib.: 2015.04.12  
Start Time: 16:51:00 End Time: 22:58:30 Time On Btm: 2015.04.11 @ 18:22:00  
Time Off Btm: 2015.04.11 @ 21:32:30

**TEST COMMENT:** IFP 30 Minutes. Very weak surface blow.  
ISI 60 Minutes. No blow back.  
FFP 30 Minutes. No blow, flushed tool and gained no blow.  
FSI 60 Minutes. No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1471.99	91.61	Initial Hydro-static
2	25.36	92.00	Open To Flow (1)
32	28.16	92.60	Shut-In(1)
93	988.91	93.93	End Shut-In(1)
94	31.06	93.73	Open To Flow (2)
124	34.77	94.33	Shut-In(2)
183	916.69	95.51	End Shut-In(2)
191	1420.68	95.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	100% Clean Oil	0.00
9.00	OCM 2.5% oil, 97.5% Mud	0.04

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc.  
1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206  
ATTN: Ken LaBlanc

**18-13s-14w Russell,KS**  
**Woelk #1-18**  
Job Ticket: 61987      **DST#: 3**  
Test Start: 2015.04.11 @ 16:50:00

**Tool Information**

Drill Pipe:	Length: 2918.00 ft	Diameter: 3.80 inches	Volume: 40.93 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 183.48 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 41.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.48 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3093.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut-In Tool	5.00			3076.00	
Hydraulic tool	5.00			3081.00	
Safety Joint	2.00			3083.00	
Top Packer	5.00			3088.00	
Packer	5.00			3093.00	22.00      Bottom Of Top Packer
Anchor	22.00			3115.00	
Recorder	1.00	8159	Inside	3116.00	
Recorder	1.00	6748	Outside	3117.00	
Bull Plug	3.00			3120.00	27.00      Anchor Tool
<b>Total Tool Length:</b>	<b>49.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

CMX Inc.

**18-13s-14w Russell,KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61987

**DST#: 3**

ATTN: Ken LaBlanc

Test Start: 2015.04.11 @ 16:50:00

### 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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.93 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbbl
1.00	100% Clean Oil	0.005
9.00	OCM 2.5% oil, 97.5% Mud	0.044

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

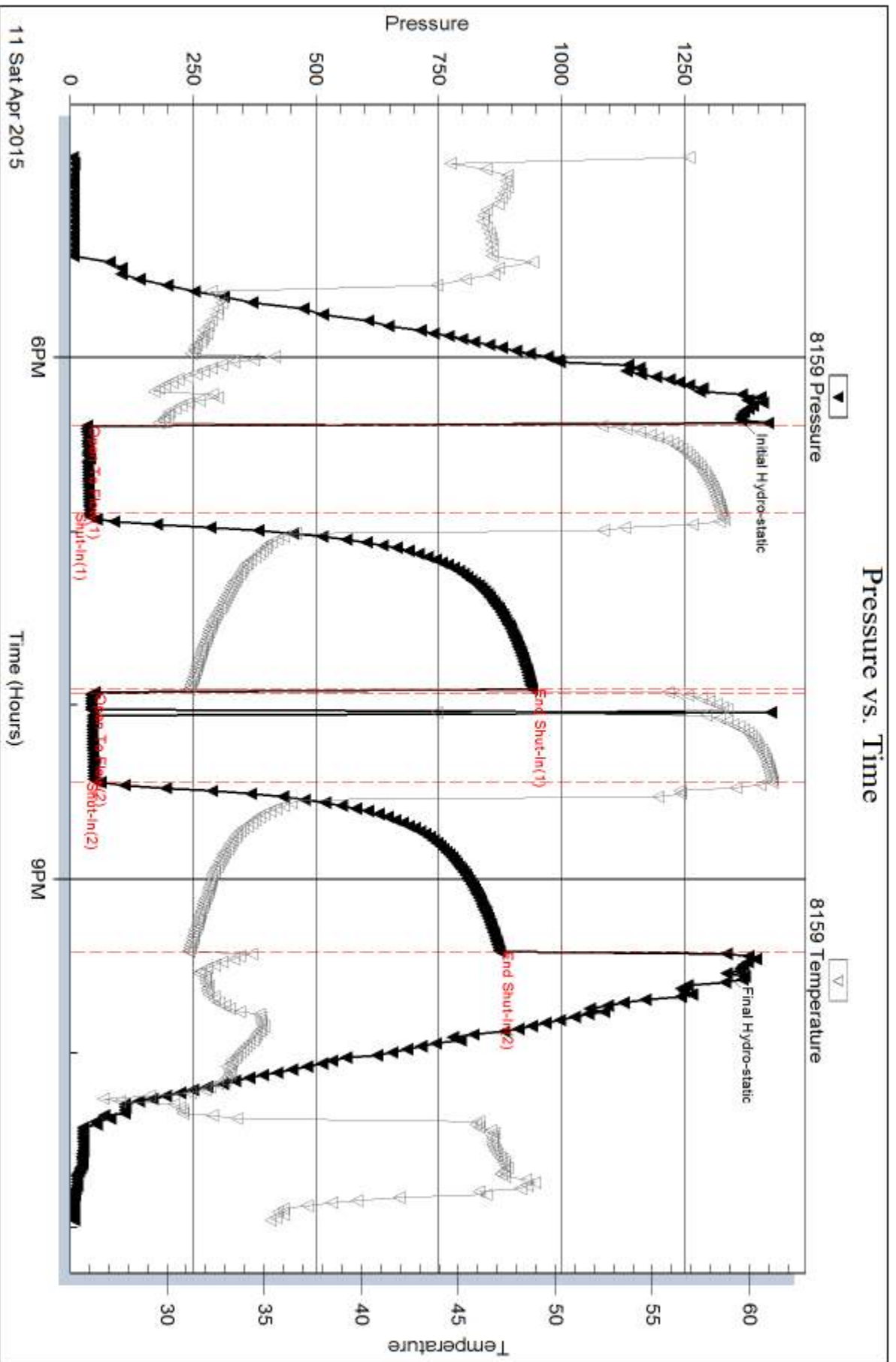
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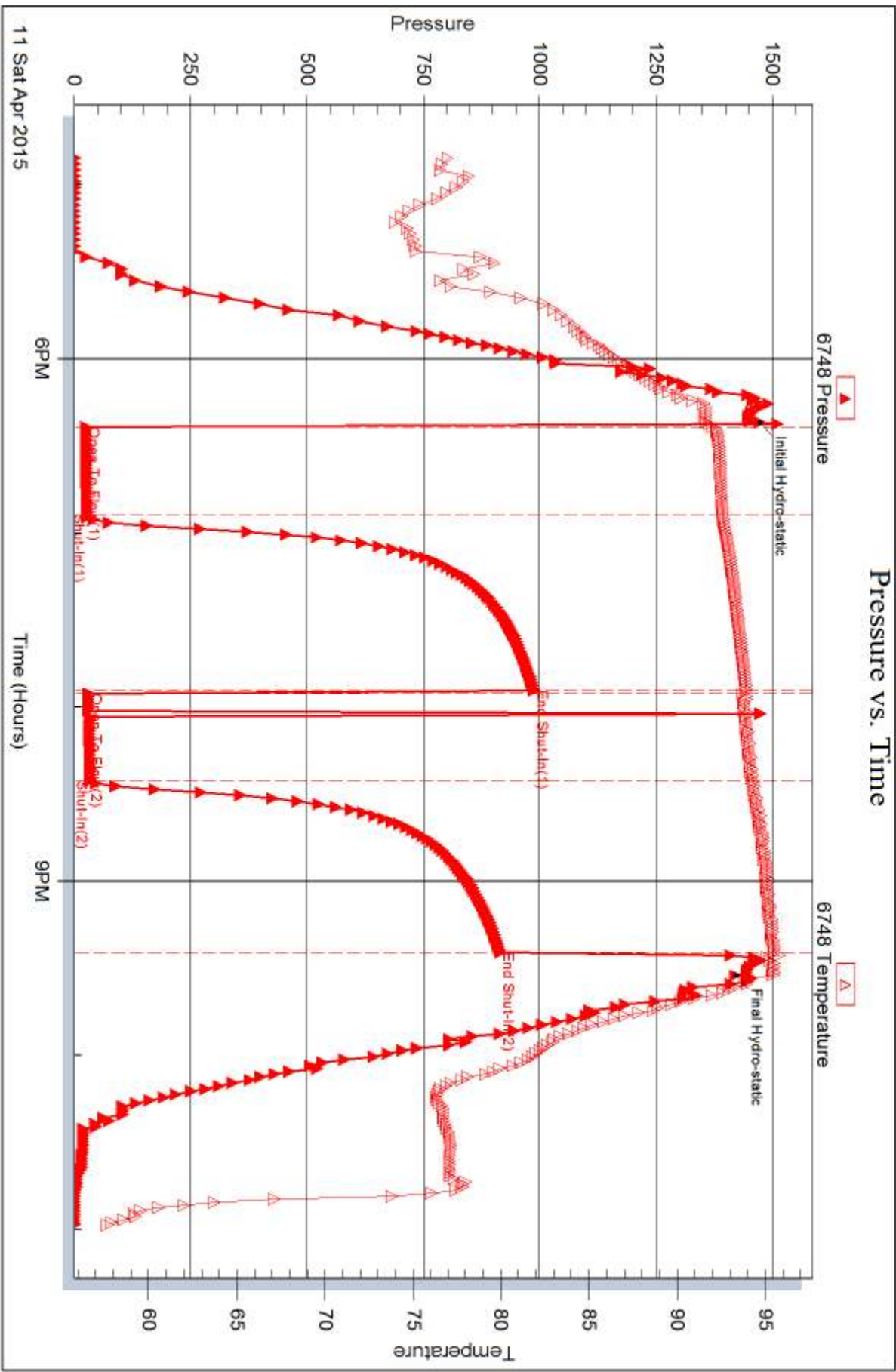
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **CMX Inc.**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

ATTN: Ken LaBlanc

### **Woelk #1-18**

#### **18-13s-14w Russell,KS**

Start Date: 2015.04.12 @ 14:45:00

End Date: 2015.04.12 @ 21:11:53

Job Ticket #: 61988                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.04.15 @ 10:47:38



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

CMX Inc.  
 1700 N. Waterfront PKWY BLDG 300B  
 Wichita KS 67206  
 ATTN: Ken LaBlanc

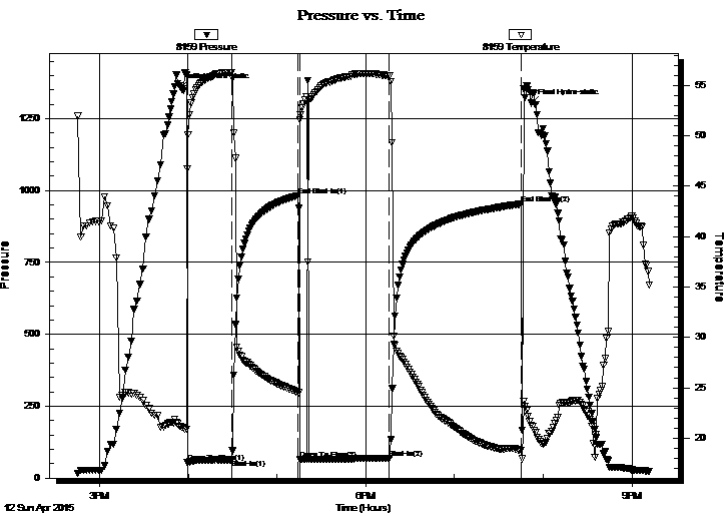
**18-13s-14w Russell,KS**  
**Woelk #1-18**  
 Job Ticket: 61988 **DST#: 4**  
 Test Start: 2015.04.12 @ 14:45:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:59:23  
 Time Test Ended: 21:11:53  
 Interval: **3116.00 ft (KB) To 3126.00 ft (KB) (TVD)**  
 Total Depth: 3126.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 56/60/Hays  
 Reference Elevations: 1687.00 ft (KB)  
 1674.00 ft (CF)  
 KB to GR/CF: 13.00 ft

**Serial #: 8159 Outside**  
 Press@RunDepth: 69.17 psig @ 3123.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.04.12 End Date: 2015.04.12 Last Calib.: 2015.04.12  
 Start Time: 14:45:23 End Time: 21:11:53 Time On Btm: 2015.04.12 @ 15:54:53  
 Time Off Btm: 2015.04.12 @ 19:51:53

**TEST COMMENT:** IFP 30 Minutes. Weak blow built to 1 inch into bucket of water.  
 ISI 45 Minutes. No blow back.  
 FFP 60 Minutes. No blow, flushed tool had good flush bubbles and gained no blow.  
 FSI 90 Minutes. No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1358.48	21.18	Initial Hydro-static
5	53.35	46.71	Open To Flow (1)
35	63.81	56.29	Shut-In(1)
79	982.15	24.56	End Shut-In(1)
81	64.46	51.64	Open To Flow (2)
141	69.17	55.93	Shut-In(2)
230	952.92	18.76	End Shut-In(2)
237	1303.43	21.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	100% Clean oil	0.00
9.00	100% mud w ith trace oil.	0.04

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc.

**18-13s-14w Russell, KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61988

**DST#: 4**

ATTN: Ken LaBlanc

Test Start: 2015.04.12 @ 14:45:00

## Tool Information

Drill Pipe:	Length: 2921.00 ft	Diameter: 3.80 inches	Volume: 40.97 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 183.48 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 41.87 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	10.48 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3116.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	32.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3099.00	
Hydraulic tool	5.00			3104.00	
Safety Joint	2.00			3106.00	
Top Packer	5.00			3111.00	
Packer	5.00			3116.00	22.00 Bottom Of Top Packer
Anchor	5.00			3121.00	
Recorder	1.00	6748	Inside	3122.00	
Recorder	1.00	8159	Outside	3123.00	
Bull Plug	3.00			3126.00	10.00 Anchor Tool
<b>Total Tool Length:</b>	<b>32.00</b>				





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX Inc.

**18-13s-14w Russell,KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61988

**DST#: 4**

ATTN: Ken LaBlanc

Test Start: 2015.04.12 @ 14:45:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 44.00 sec/qt  
Water Loss: 11.94 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 6200.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100% Clean oil	0.005
9.00	100% mud w ith trace oil.	0.044

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

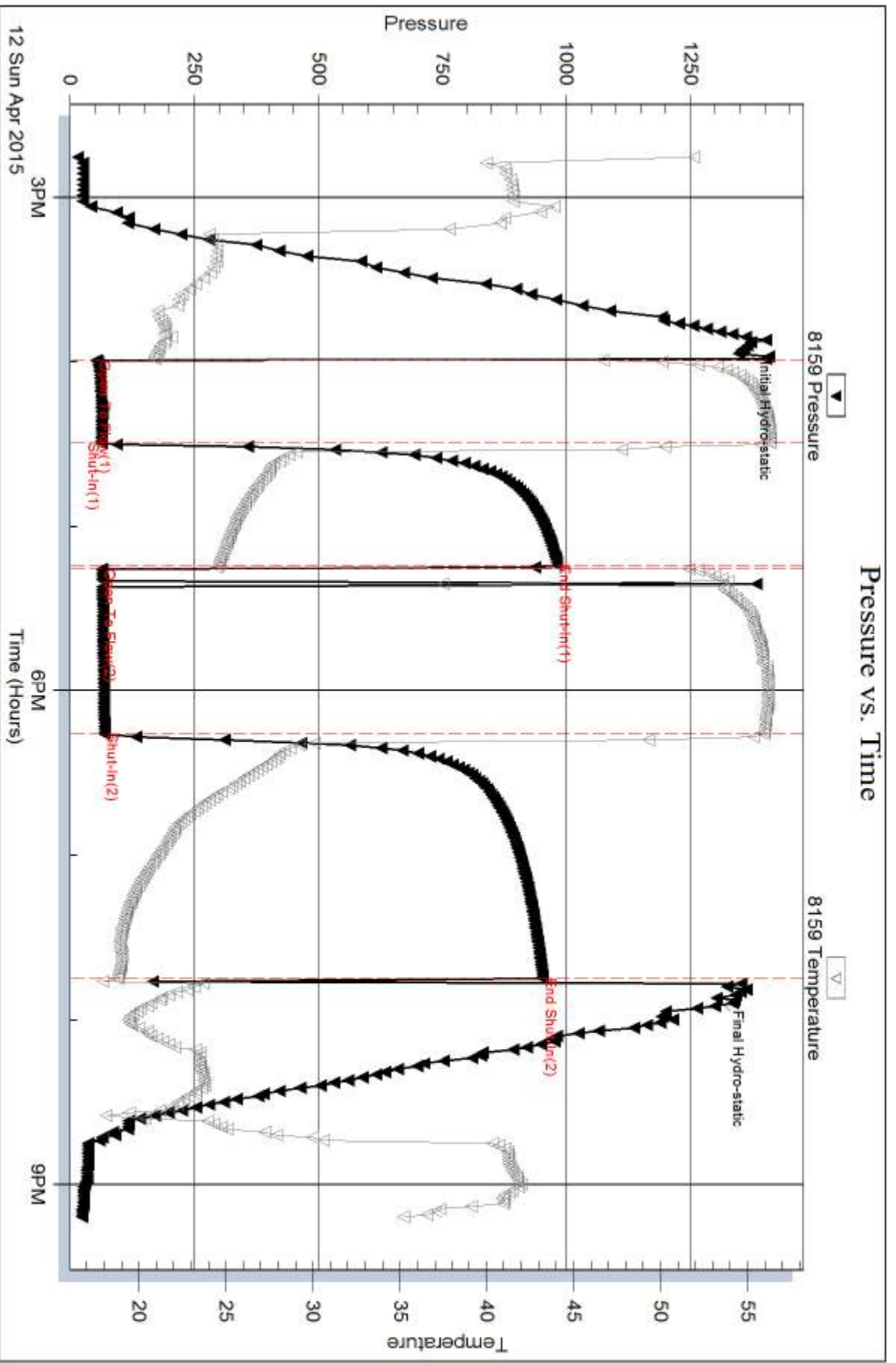
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **CMX Inc.**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

ATTN: Ken LaBlanc

### **Woelk #1-18**

#### **18-13s-14w Russell,KS**

Start Date: 2015.04.13 @ 01:40:00

End Date: 2015.04.13 @ 08:40:30

Job Ticket #: 61989                      DST #: 5

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.04.15 @ 10:40:12

CMX Inc. 18-13s-14w Russell,KS Woelk #1-18 DST # 5 Arbuckle 2015.04.13



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

CMX Inc.  
1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206  
ATTN: Ken LaBlanc

**18-13s-14w Russell, KS**  
**Woelk #1-18**  
Job Ticket: 61989 **DST#: 5**  
Test Start: 2015.04.13 @ 01:40:00

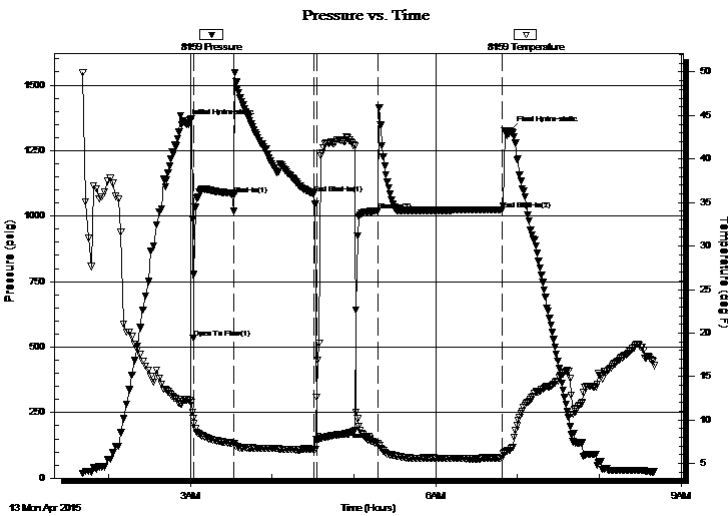
## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 03:02:00  
Time Test Ended: 08:40:30  
Interval: **3116.00 ft (KB) To 3131.00 ft (KB) (TVD)**  
Total Depth: 3131.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Poor  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Shane Konzem  
Unit No: 56/60/Hays  
Reference Elevations: 1687.00 ft (KB)  
1674.00 ft (CF)  
KB to GR/CF: 13.00 ft

**Serial #: 8159 Inside**  
Press@RunDepth: 1018.77 psig @ 3127.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.04.13 End Date: 2015.04.13 Last Calib.: 2015.04.13  
Start Time: 01:41:00 End Time: 08:40:30 Time On Btm: 2015.04.13 @ 02:56:30  
Time Off Btm: 2015.04.13 @ 06:54:30

**TEST COMMENT:** IFP 30 Minutes. Fair blow built to 7 inches into water.  
ISI 60 Minutes. No blow back.  
FFP 45 Minutes. Fair blow built to 7 inches into water.  
FSI 90 Minutes. No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1353.46	12.35	Initial Hydro-static
6	535.70	10.21	Open To Flow (1)
36	1082.38	7.31	Shut-In(1)
94	1085.81	6.63	End Shut-In(1)
96	145.99	12.61	Open To Flow (2)
141	1018.77	7.28	Shut-In(2)
232	1023.84	5.62	End Shut-In(2)
238	1324.57	6.55	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	100% Clean oil	0.44
202.00	Oil cut mud. 15% oil, 85% mud.	1.98

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

CMX Inc.  
 1700 N. Waterfront PKWY BLDG 300B  
 Wichita KS 67206  
 ATTN: Ken LaBlanc

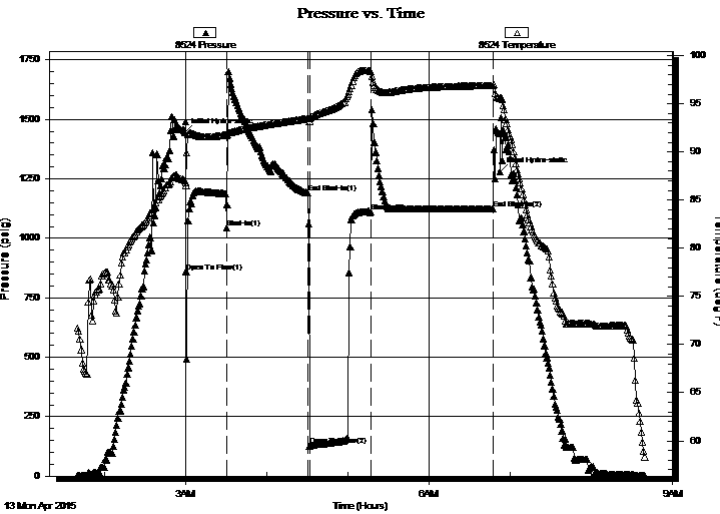
**18-13s-14w Russell, KS**  
**Woelk #1-18**  
 Job Ticket: 61989 **DST#: 5**  
 Test Start: 2015.04.13 @ 01:40:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:02:00  
 Time Test Ended: 08:40:30  
 Interval: **3116.00 ft (KB) To 3131.00 ft (KB) (TVD)**  
 Total Depth: 3131.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 56/60/Hays  
 Reference Elevations: 1687.00 ft (KB)  
 1674.00 ft (CF)  
 KB to GR/CF: 13.00 ft

**Serial #: 8524 Outside**  
 Press@RunDepth: 1124.36 psig @ 3128.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.04.13 End Date: 2015.04.13 Last Calib.: 2015.04.13  
 Start Time: 01:40:01 End Time: 08:39:48 Time On Btm: 2015.04.13 @ 02:59:04  
 Time Off Btm: 2015.04.13 @ 06:52:03

**TEST COMMENT:** IFP 30 Minutes. Fair blow built to 7 inches into water.  
 ISI 60 Minutes. No blow back.  
 FFP 45 Minutes. Fair blow built to 7 inches into water.  
 FSI 90 Minutes. No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1445.11	87.02	Initial Hydro-static
2	858.06	86.54	Open To Flow (1)
32	1044.64	91.74	Shut-In(1)
91	1191.75	93.48	End Shut-In(1)
93	127.70	93.21	Open To Flow (2)
138	1112.54	98.38	Shut-In(2)
228	1124.36	96.91	End Shut-In(2)
233	1280.83	95.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	100% Clean oil	0.44
202.00	Oil cut mud. 15% oil, 85% mud.	1.98

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc.  
1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206  
ATTN: Ken LaBlanc

**18-13s-14w Russell,KS**  
**Woelk #1-18**  
Job Ticket: 61989 **DST#: 5**  
Test Start: 2015.04.13 @ 01:40:00

**Tool Information**

Drill Pipe:	Length: 2921.00 ft	Diameter: 3.80 inches	Volume: 40.97 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 183.48 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 41.87 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	10.48 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3116.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut-In Tool	5.00			3099.00	
Hydraulic tool	5.00			3104.00	
Safety Joint	2.00			3106.00	
Top Packer	5.00			3111.00	
Packer	5.00			3116.00	22.00 Bottom Of Top Packer
Anchor	10.00			3126.00	
Recorder	1.00	8159	Inside	3127.00	
Recorder	1.00	8524	Outside	3128.00	
Bull Plug	3.00			3131.00	15.00 Anchor Tool
<b>Total Tool Length:</b>	<b>37.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX Inc.

**18-13s-14w Russell,KS**

1700 N. Waterfront PKWY BLDG 300B  
Wichita KS 67206

**Woelk #1-18**

Job Ticket: 61989

**DST#: 5**

ATTN: Ken LaBlanc

Test Start: 2015.04.13 @ 01:40:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 44.00 sec/qt  
Water Loss: 11.97 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 6200.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 34 deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	100% Clean oil	0.443
202.00	Oil cut mud. 15% oil, 85% mud.	1.982

Total Length: 292.00 ft      Total Volume: 2.425 bbl

Num Fluid Samples: 0

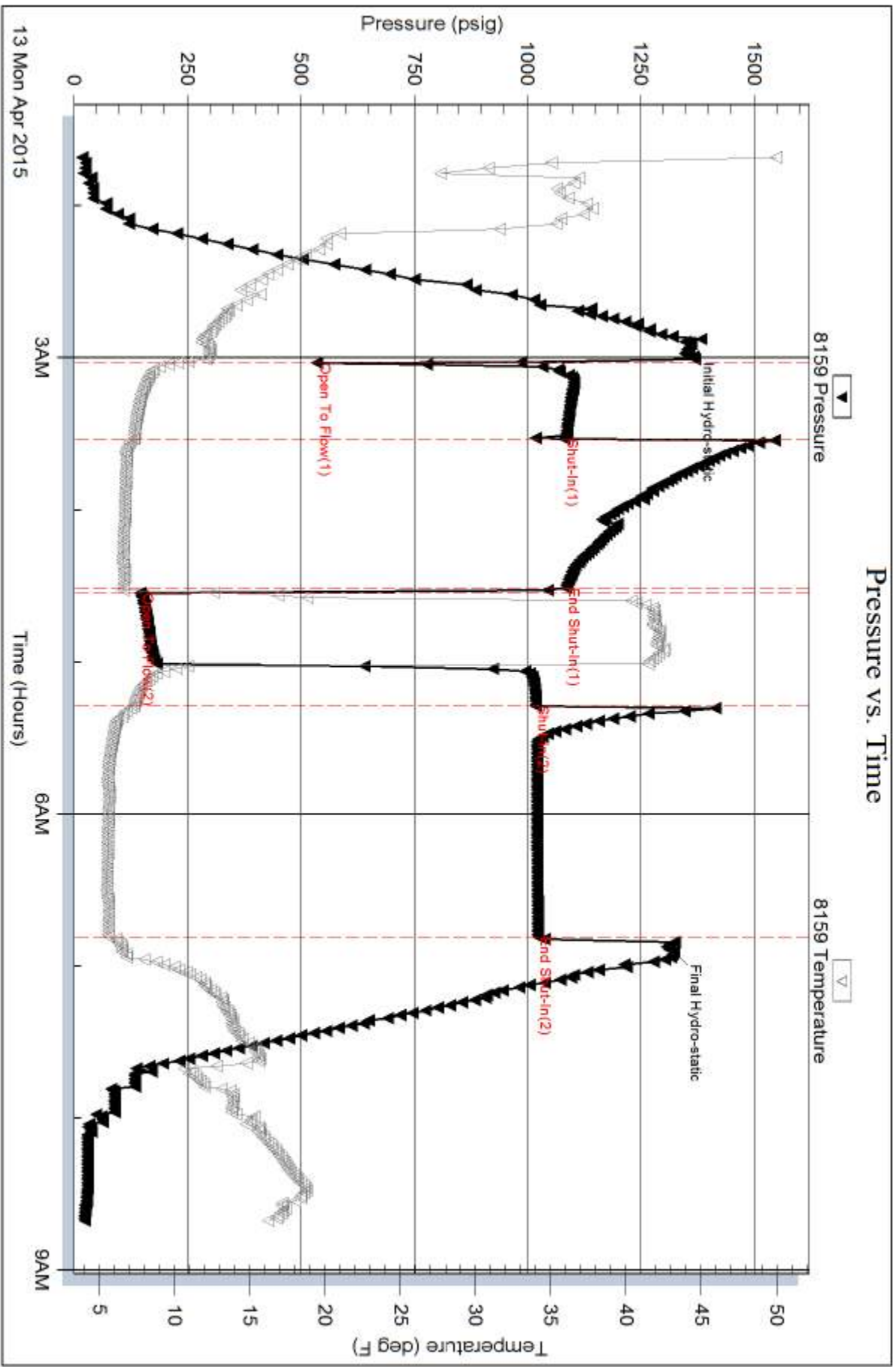
Num Gas Bombs: 0

Serial #:

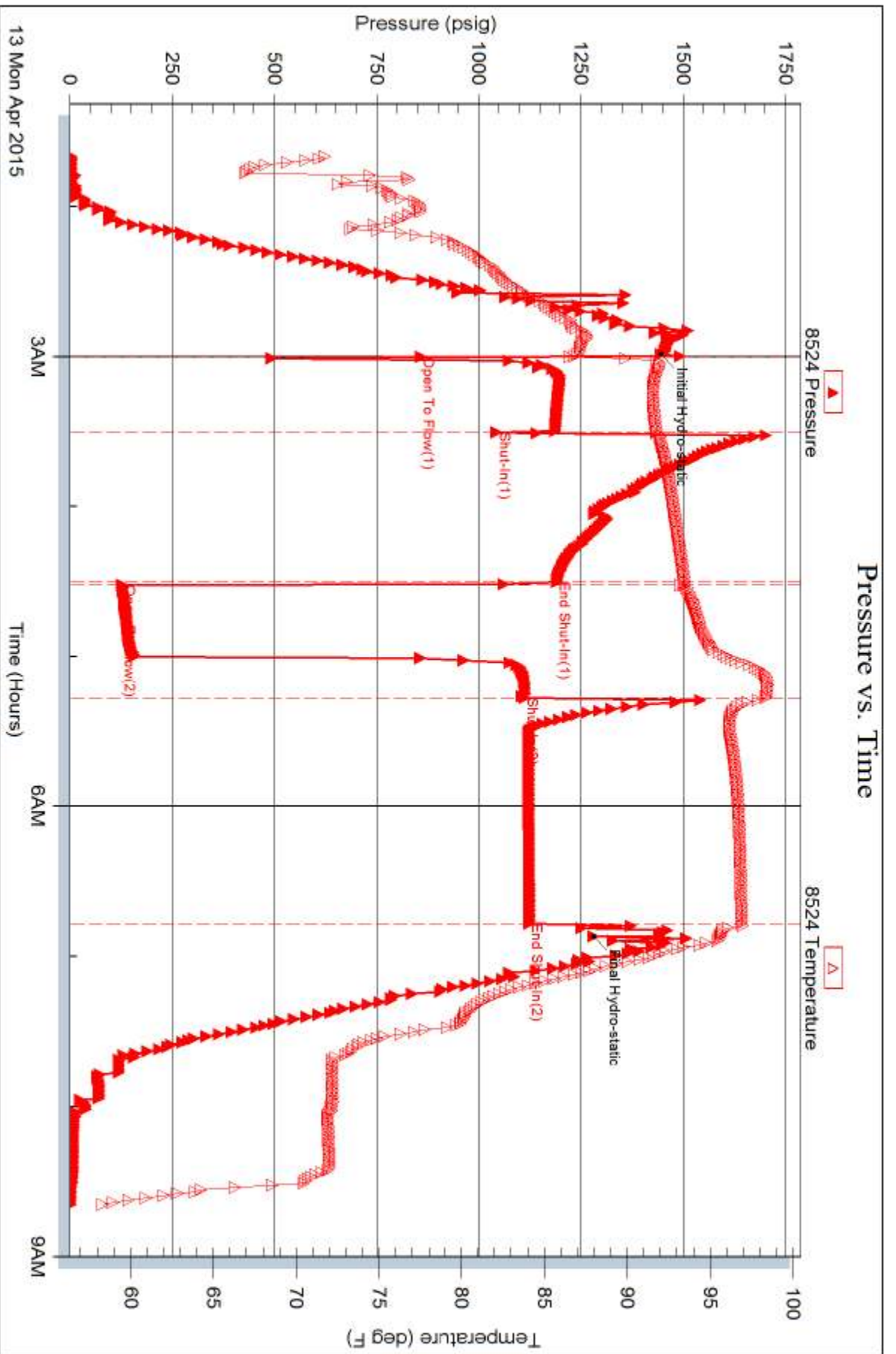
Laboratory Name:

Laboratory Location:

Recovery Comments:









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61985

Well Name & No. Woeik # 1-18 Test No. 1 Date 4-13-15  
 Company CMX Inc Elevation 1687 KB 1674 GL  
 Address 1200 N. Waterfront PKWY BLDG 300B Wichita KS 67206  
 Co. Rep / Geo. Ken LaBlanc Rig Duke 7  
 Location: Sec. 18 Twp. 13 S Rge. 14 W Co. Russell State KS

Interval Tested 2852-2890 Zone Tested Lansing "A-B"  
 Anchor Length 38' Drill Pipe Run 2200 Mud Wt. 8.7  
 Top Packer Depth 2847 Drill Collars Run 153-43 Vis \_\_\_\_\_  
 Bottom Packer Depth 2852 Wt. Pipe Run 0 WL 5.0  
 Total Depth 2890 Chlorides 1500 ppm System LCM 0  
 Blow Description 1<sup>st</sup> open built to 1 1/2 inches. 1<sup>st</sup> Shut In - No blow back.  
2<sup>nd</sup> Open - No blow flushed tool gained weak surface blow.  
2<sup>nd</sup> Shut In - No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>mud</u>			<u>100</u>	
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 80 BHT 93 Gravity      API RW      @      ° F Chlorides      ppm

(A) Initial Hydrostatic 1273  Test 1050 T-On Location 0245  
 (B) First Initial Flow 22  Jars \_\_\_\_\_ T-Started 0600  
 (C) First Final Flow 88  Safety Joint 75 T-Open 0700  
 (D) Initial Shut-In 623  Circ Sub \_\_\_\_\_ T-Pulled 0930  
 (E) Second Initial Flow 67  Hourly Standby \_\_\_\_\_ T-Out 1100  
 (F) Second Final Flow 74  Mileage 60 52 Comments \_\_\_\_\_  
 (G) Final Shut-In 593  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1247  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1177  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45 Sub Total 1177

Approved By \_\_\_\_\_ Our Representative Shane Kaper

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61986

Well Name & No. Woeik #1-18 Test No. 2 Date 4-11-15  
 Company cmx Inc. Elevation 1687 KB 1674 GL  
 Address 1700 N. Waterfront PKWY BLDG 300B Wichita KS 67206  
 Co. Rep / Geo. Ken Lablanc Rig Duke 7  
 Location: Sec. 18 Twp. 13s Rge. 14w Co. Russell State KS

Interval Tested 3026-3050 Zone Tested Lansing T  
 Anchor Length 24 Drill Pipe Run 2848 Mud Wt. 8.9  
 Top Packer Depth 3021 Drill Collars Run 183.48 Vis 53  
 Bottom Packer Depth 3026 Wt. Pipe Run 0 WL 7.5  
 Total Depth 3050 Chlorides 5,000 ppm System LCM 0#

Blow Description 1st Open - weak surface blow, flushed tool and blow remained weak surface blow. 1st shut in - No blow back. 2nd Open - No blow, flushed & gained no blow, gained very weak surface blow at 17 minutes. 2nd shut in - No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud w/Trace Oil</u>		<u>F</u>		<u>100</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

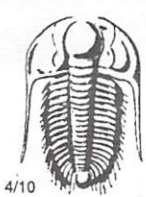
Rec Total 5 BHT 95 Gravity 1050 API RW 1 @ 1 °F Chlorides 1 ppm

(A) Initial Hydrostatic 1431  Test 1050 T-On Location 0000  
 (B) First Initial Flow 23  Jars 0030  
 (C) First Final Flow 30  Safety Joint 75 T-Open 0135  
 (D) Initial Shut-In 754  Circ Sub 0420  
 (E) Second Initial Flow 32  Hourly Standby 0545  
 (F) Second Final Flow 39  Mileage 60 52  
 (G) Final Shut-In 747  Sampler  
 (H) Final Hydrostatic 1402  Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1177

Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1177  
 MP/DST Disc't 8159/6748

Approved By \_\_\_\_\_ Our Representative Shan Kay

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61987

Well Name & No. Woelk #1-18 Test No. 3 Date 4-11-15  
 Company SMX Inc Elevation 1687 KB 1674 GL  
 Address 1700 N. Waterfront PKWY BLDG 300B Wichita KS 67206  
 Co. Rep / Geo. Ken LaBlanc Rig Duka 7  
 Location: Sec. 18 Twp. 13S Rge. 14W Co. Russell State KS

Interval Tested 3093 - 3120 Zone Tested Arbuckle  
 Anchor Length ~~3088~~ 27 Drill Pipe Run 2918 Mud Wt. 8.7  
 Top Packer Depth ~~3093~~ 3088 Drill Collars Run 183.48 Vis 4.5  
 Bottom Packer Depth ~~3120~~ 3093 Wt. Pipe Run 0 WL 10  
 Total Depth 3120 Chlorides 5,000 ppm System LCM 0  
 Blow Description 1<sup>st</sup> Open - very weak surface blow. 1<sup>st</sup> open - No blow back. 2<sup>nd</sup> Open - No blow, flushed tool gained no blow. 2<sup>nd</sup> shut In - No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Clean oil</u>	<u>100</u>			
<u>9</u>	<u>oil cut mud</u>	<u>2.5</u>		<u>97.5</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT \_\_\_\_\_ Gravity 1 API RW 1 @ 1 °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1365  Test 1050 T-On Location 1695  
 (B) First Initial Flow 33  Jars \_\_\_\_\_ T-Started 1720  
 (C) First Final Flow 39  Safety Joint 75 T-Open 1820  
 (D) Initial Shut-In 940  Circ Sub \_\_\_\_\_ T-Pulled 2120  
 (E) Second Initial Flow 44  Hourly Standby \_\_\_\_\_ T-Out 2230  
 (F) Second Final Flow 61  Mileage 60 <sup>52</sup> Comments \_\_\_\_\_  
 (G) Final Shut-In 874  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1336  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Day Standby \_\_\_\_\_ Total 1177  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1177

Approved By \_\_\_\_\_ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 61988

Well Name & No. Waelk # 1-18 Test No. 4 Date 4-12-15  
 Company CMX Inc. Elevation 1687 KB 1674 GL  
 Address 1700 N. Waterfront BLVD BLDG 300B Wichita KS 67206  
 Co. Rep / Geo. Ken LaBlanc Rig Duke #7  
 Location: Sec. 18 Twp. 13S Rge. 14W Co. Russell State KS

Interval Tested 3116-3126 Zone Tested Arbuckle  
 Anchor Length 10 Drill Pipe Run 2921 Mud Wt. 8.7  
 Top Packer Depth 3111 Drill Collars Run 183.48 Vis 44  
 Bottom Packer Depth 3116 Wt. Pipe Run 8 WL 12.0  
 Total Depth 3120 Chlorides 6,200 ppm System LCM 0<sup>TH</sup>  
 Blow Description 1<sup>st</sup> Open - 1 inch blow. 1<sup>st</sup> Shut In. No blow back. 2<sup>nd</sup> Open - No blow  
flushed tool, good flush bubbles and gained no blow. 2<sup>nd</sup> Shut In - No  
blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>clean oil</u>	<u>100</u>			
<u>9</u>	<u>Mud with Trace of oil</u>	<u>T</u>		<u>100</u>	

Rec Total 10 BHT \_\_\_\_\_ Gravity 1 API RW 1 @ 1 ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1358  Test 850 T-On Location 1440  
 (B) First Initial Flow 53  Jars \_\_\_\_\_ T-Started 1450  
 (C) First Final Flow 63  Safety Joint 75 T-Open 1600  
 (D) Initial Shut-In 982  Circ Sub \_\_\_\_\_ T-Pulled 1945  
 (E) Second Initial Flow 64  Hourly Standby \_\_\_\_\_ T-Out 2110  
 (F) Second Final Flow 69  Mileage 60 52 Comments \_\_\_\_\_  
 (G) Final Shut-In 952  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1303  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1177  
 Final Flow 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 90 Sub Total \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Alan [Signature]  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

8524 / 8159  
0140

## Test Ticket

NO. 61989

Well Name & No. Hoelk # 1-18 Test No. 5 Date 4-13-15  
 Company cmx, Inc. Elevation 1687 KB 1674 GL  
 Address 1700 N. Waterfront Blvd Bldg 300 B Wichita KS 67209  
 Co. Rep / Geo. Ken LaBlanc Rig Drake 7  
 Location: Sec. 18 Twp. 13 S Rge. 14 W Co. Russell State KS

Interval Tested 3116-3131 Zone Tested Arbuckle  
 Anchor Length 15 Drill Pipe Run 2921 Mud Wt. 8.7  
 Top Packer Depth 3111 Drill Collars Run 183.48 Vis 44  
 Bottom Packer Depth 3116 Wt. Pipe Run 0 WL 12.0  
 Total Depth 3131 Chlorides 6200 ppm System LCM 0 #  
 Blow Description 1<sup>st</sup> Open - fair blow built to 7 inches. 1<sup>st</sup> Shut In - No blow back.  
2<sup>nd</sup> Open - fair blow built to 7 inches. 2<sup>nd</sup> Shut In - No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>clean oil</u>	<u>100</u>			
<u>202</u>	<u>oil cut mt</u>	<u>15</u>			<u>85</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 292 BHT \_\_\_\_\_ Gravity 34 API RW 1 @ 1 ° F Chlorides 1 ppm

(A) Initial Hydrostatic 1353  Test 1050 T-On Location 0145  
 (B) First Initial Flow 535  Jars \_\_\_\_\_ T-Started 0215  
 (C) First Final Flow 1082  Safety Joint 75 T-Open 0320  
 (D) Initial Shut-In 1085  Circ Sub \_\_\_\_\_ T-Pulled 0705  
 (E) Second Initial Flow 145  Hourly Standby \_\_\_\_\_ T-Out 0845  
 (F) Second Final Flow 1018  Mileage 60 52 Comments \_\_\_\_\_  
 (G) Final Shut-In 1023  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1324  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1177

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 45  
 Final Shut-In 90

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1177  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Shae Koger

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