



## DRILL STEM TEST REPORT

Prepared For: **CMX, Inc.**

1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206

ATTN: Marc Downing

### **Huss #1-22**

#### **22-1s-33w Rawlins,KS**

Start Date: 2016.02.05 @ 05:35:00

End Date: 2016.02.05 @ 15:17:30

Job Ticket #: 65303                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.02.08 @ 10:38:19

CMX, Inc. 22-1s-33w Rawlins,KS Huss #1-22 DST # 1 LKC "D" 2016.02.05



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

CMX, Inc.  
 1700 N Waterfront Pkwy  
 Bldg. 300 STE B  
 Wichita, KS 67206  
 ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65303

**DST#: 1**

Test Start: 2016.02.05 @ 05:35:00

## GENERAL INFORMATION:

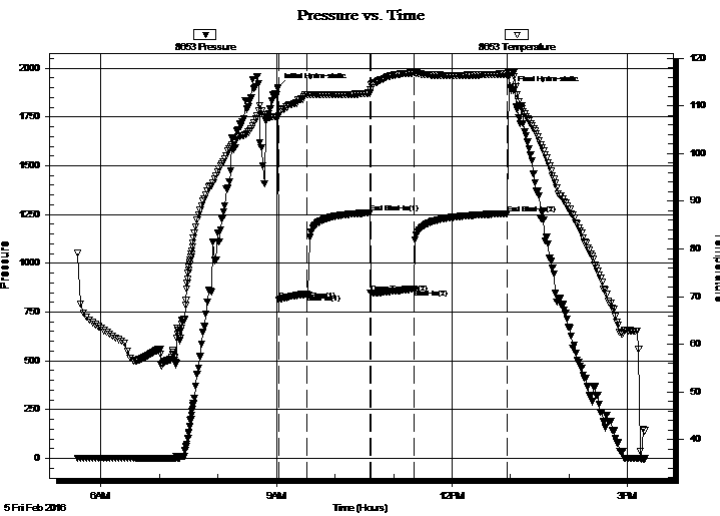
Formation: **LKC "D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:02:30  
 Time Test Ended: 15:17:30  
 Interval: **3971.00 ft (KB) To 4024.00 ft (KB) (TVD)**  
 Total Depth: 4024.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 82  
 Reference Elevations: 2998.00 ft (KB)  
 2990.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8653

**Outside**

Press@RunDepth: 868.18 psig @ 3972.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.02.05 End Date: 2016.02.05 Last Calib.: 2016.02.05  
 Start Time: 05:36:00 End Time: 15:17:30 Time On Btm: 2016.02.05 @ 09:01:30  
 Time Off Btm: 2016.02.05 @ 13:00:30

**TEST COMMENT:** 30 - IF- Blow present w hile putting the head joint on - bled off - Surface Blow built to 7"  
 60 - IS- No Return  
 45 - FF- Surface Blow started at 2 mi. Built to 7 3/4"  
 90 - FS- No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1899.63	107.67	Initial Hydro-static
1	810.48	107.91	Open To Flow (1)
30	842.43	112.32	Shut-In(1)
94	1259.07	112.66	End Shut-In(1)
95	849.34	113.39	Open To Flow (2)
139	868.18	116.96	Shut-In(2)
235	1255.18	116.69	End Shut-In(2)
239	1887.48	116.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
441.00	OSM 100M (oil spots)	6.19
1260.00	Mud 100M	17.67

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

CMX, Inc.

**22-1s-33w Rawlins,KS**

1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**Huss #1-22**

Job Ticket: 65303      **DST#: 1**  
Test Start: 2016.02.05 @ 05:35:00

## GENERAL INFORMATION:

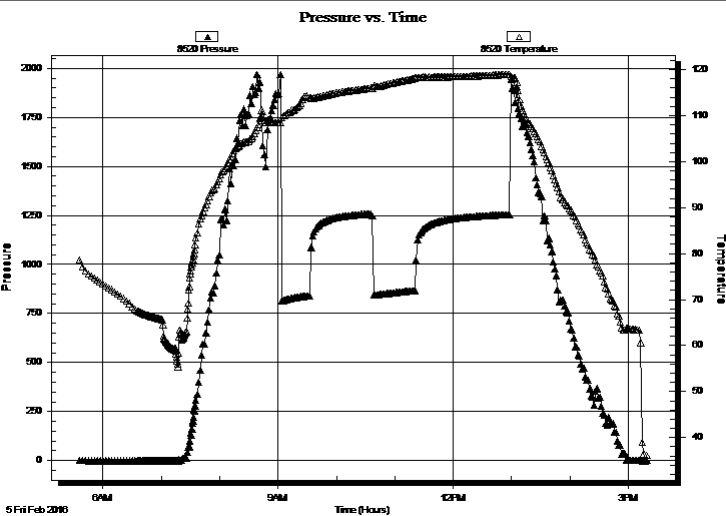
Formation:	<b>LKC "D"</b>		
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened:	09:02:30		Tester: Kevin Mack
Time Test Ended:	15:17:30		Unit No: 82
Interval:	<b>3971.00 ft (KB) To 4024.00 ft (KB) (TVD)</b>		Reference Elevations: 2998.00 ft (KB)
Total Depth:	4024.00 ft (KB) (TVD)		2990.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition: Good	KB to GR/CF: 8.00 ft

## Serial #: 8520

Inside

Press@RunDepth:	psig @ 3972.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2016.02.05	End Date:	2016.02.05
Start Time:	05:36:00	End Time:	15:19:30
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: 30 - IF- Blow present w hile putting the head joint on - bled off - Surface Blow built to 7"  
60 - ISI- No Return  
45 - FF- Surface Blow started at 2 mi. Built to 7 3/4"  
90 - FSI- No Return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
441.00	OSM 100M (oil spots)	6.19
1260.00	Mud 100M	17.67

## 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. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65303

**DST#: 1**

Test Start: 2016.02.05 @ 05:35:00

## Tool Information

Drill Pipe:	Length: 3969.00 ft	Diameter: 3.80 inches	Volume: 55.67 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 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: 72000.00 lb
			<u>Total Volume: 55.67 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3971.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	81.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: tool opened w hile picking up dst's. Large mud recovery

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3944.00	
Shut In Tool	5.00			3949.00	
Hydraulic tool	5.00			3954.00	
Jars	5.00			3959.00	
Safety Joint	3.00			3962.00	
Packer	5.00			3967.00	28.00 Bottom Of Top Packer
Packer	4.00			3971.00	
Stubb	1.00			3972.00	
Recorder	0.00	8653	Outside	3972.00	
Recorder	0.00	8520	Inside	3972.00	
Perforations	14.00			3986.00	
Change Over Sub	1.00			3987.00	
Drill Pipe	31.00			4018.00	
Change Over Sub	1.00			4019.00	
Bullnose	5.00			4024.00	53.00 Bottom Packers & Anchor

**Total Tool Length: 81.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX, Inc.  
1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**  
**Huss #1-22**  
Job Ticket: 65303      **DST#: 1**  
Test Start: 2016.02.05 @ 05:35:00

## Mud and Cushion Information

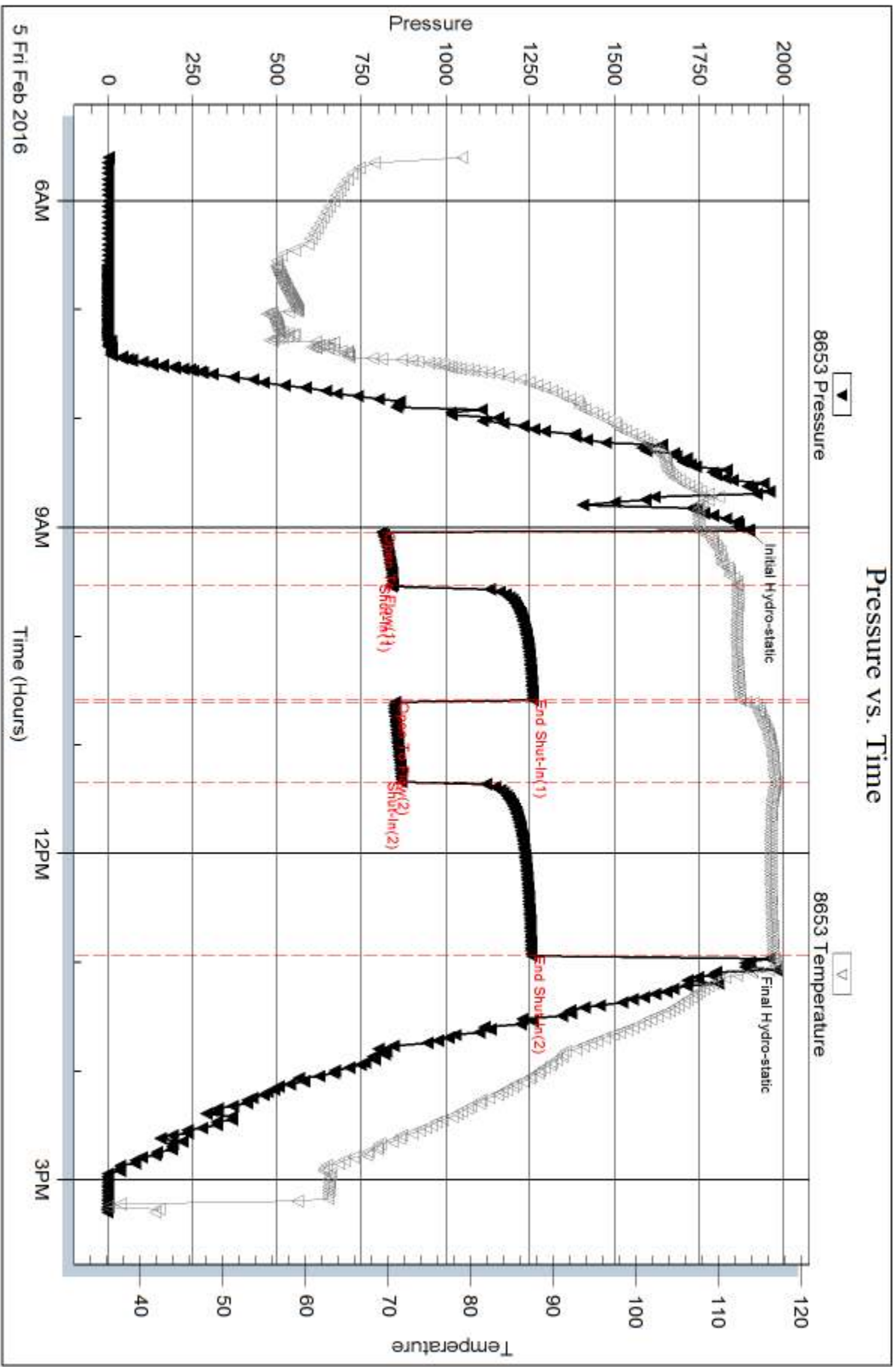
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 500.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
441.00	OSM 100M (oil spots)	6.186
1260.00	Mud 100M	17.674

Total Length: 1701.00 ft      Total Volume: 23.860 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



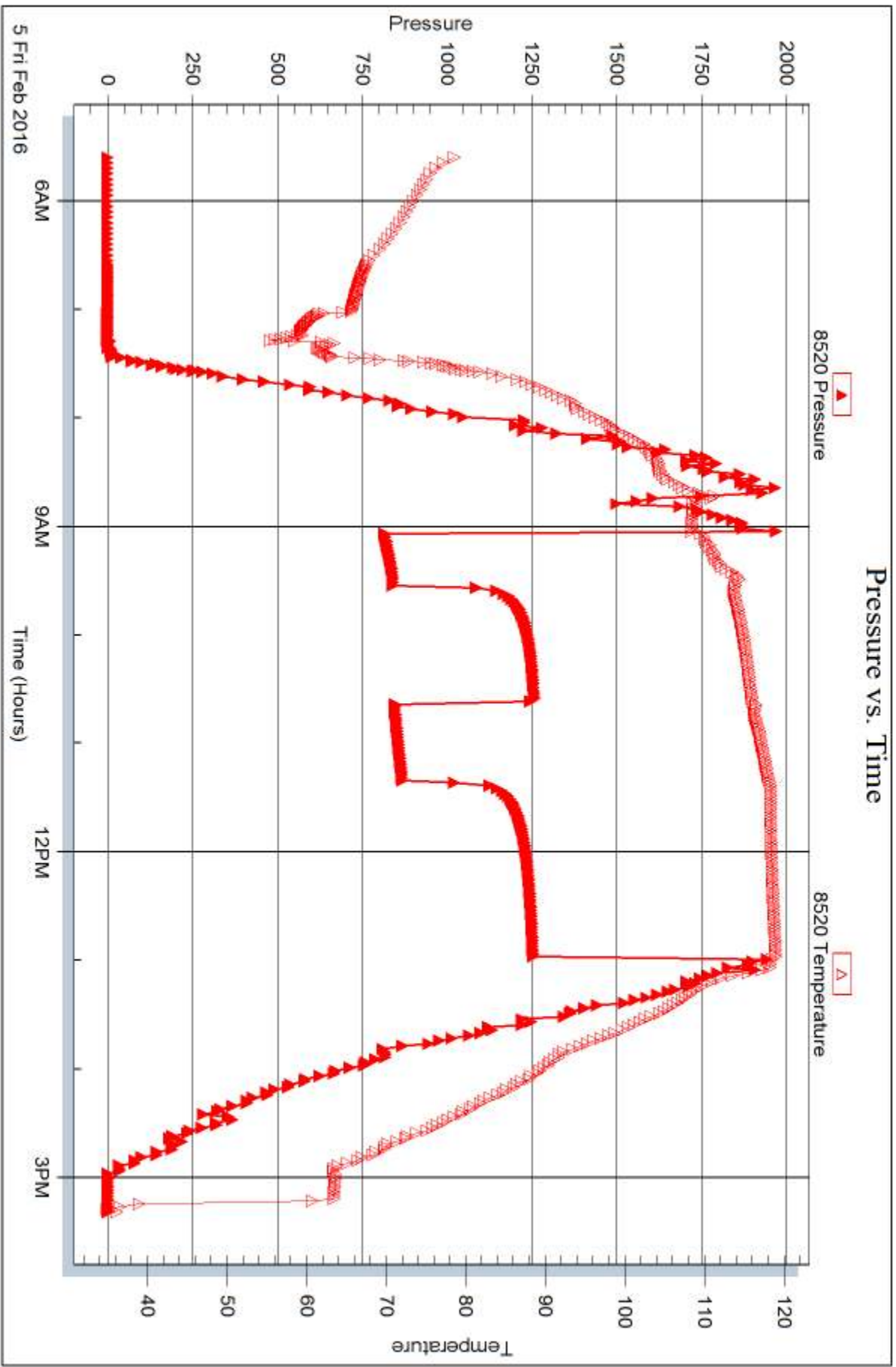
Serial #: 8520

Inside

CMX, Inc.

Huss #1-22

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 65303

Printed: 2016.02.08 @ 10:38:20



## DRILL STEM TEST REPORT

Prepared For: **CMX, Inc.**

1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206

ATTN: Marc Downing

### **Huss #1-22**

#### **22-1s-33w Rawlins,KS**

Start Date: 2016.02.06 @ 16:37:00

End Date: 2016.02.06 @ 23:42:30

Job Ticket #: 65304                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.02.08 @ 10:35:59

CMX, Inc. 22-1s-33w Rawlins,KS Huss #1-22 DST # 2 LKC "J" 2016.02.06





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

CMX, Inc.  
 1700 N Waterfront Pkwy  
 Bldg. 300 STE B  
 Wichita, KS 67206  
 ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65304

**DST#: 2**

Test Start: 2016.02.06 @ 16:37:00

## GENERAL INFORMATION:

Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:23:50  
 Time Test Ended: 23:42:30  
 Interval: **4117.00 ft (KB) To 4166.00 ft (KB) (TVD)**  
 Total Depth: 4166.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Kevin Mack  
 Unit No: 82  
 Reference Elevations: 2998.00 ft (KB)  
 2990.00 ft (CF)  
 KB to GR/CF: 8.00 ft

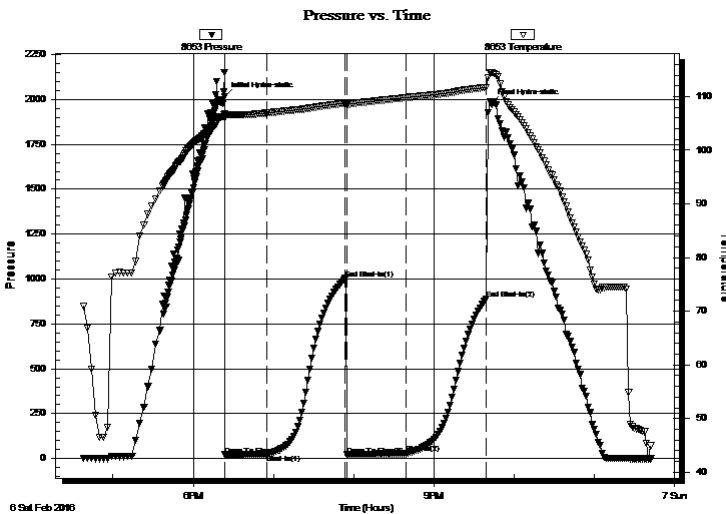
## Serial #: 8653

**Outside**

Press@RunDepth: 27.41 psig @ 4118.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.02.06 End Date: 2016.02.06 Last Calib.: 2016.02.06  
 Start Time: 16:38:00 End Time: 23:42:30 Time On Btm: 2016.02.06 @ 18:23:40  
 Time Off Btm: 2016.02.06 @ 21:43:00

**TEST COMMENT:** 30 - IF- 1/8" Blow built to 1 3/4", then led back to 1/4"  
 60 - IS- No Return  
 45 - FF- Weak Surface Blow started at 5 min. Did not build or die.  
 60 - FS- No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2014.88	106.86	Initial Hydro-static
1	20.59	106.03	Open To Flow (1)
32	23.80	106.93	Shut-In(1)
90	1002.72	108.74	End Shut-In(1)
92	20.80	108.58	Open To Flow (2)
136	27.41	109.78	Shut-In(2)
196	889.52	111.70	End Shut-In(2)
200	1977.17	114.50	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	OCM 30o 70m	0.35
5.00	Clean Oil 100o	0.07

## Gas Rates

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



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**DRILL STEM TEST REPORT**

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Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65304

**DST#: 2**

Test Start: 2016.02.06 @ 16:37:00

**GENERAL INFORMATION:**

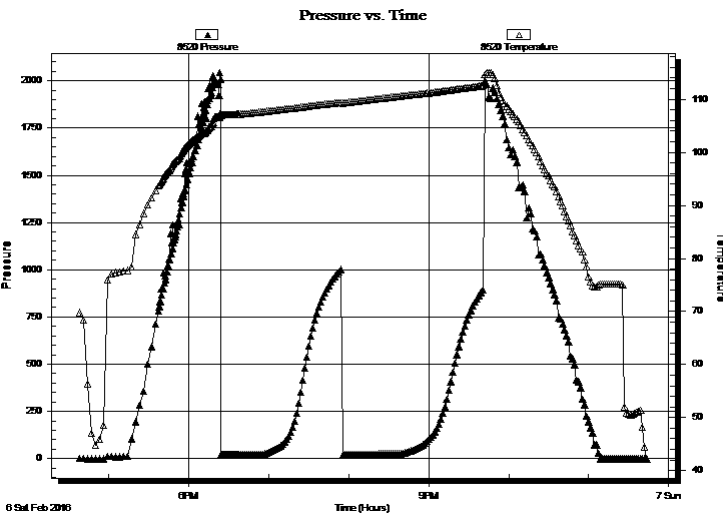
Formation: **LKC "J"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 18:23:50 Tester: Kevin Mack  
 Time Test Ended: 23:42:30 Unit No: 82  
**Interval: 4117.00 ft (KB) To 4166.00 ft (KB) (TVD)**  
 Reference Elevations: 2998.00 ft (KB)  
 Total Depth: 4166.00 ft (KB) (TVD) 2990.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

**Serial #: 8520**

**Inside**

Press@RunDepth: psig @ 4118.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.02.06 End Date: 2016.02.06 Last Calib.: 2016.02.06  
 Start Time: 16:38:00 End Time: 23:43:30 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30 - IF- 1/8" Blow built to 1 3/4", then led back to 1/4"  
 60 - IS- No Return  
 45 - FF- Weak Surface Blow started at 5 min. Did not build or die.  
 60 - FS- No Return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
25.00	OCM 30o 70m	0.35
5.00	Clean Oil 100o	0.07

**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. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65304

**DST#: 2**

Test Start: 2016.02.06 @ 16:37:00

## Tool Information

Drill Pipe:	Length: 4093.00 ft	Diameter: 3.80 inches	Volume: 57.41 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 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: 75000.00 lb
			<u>Total Volume: 57.41 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4117.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4090.00	
Shut In Tool	5.00			4095.00	
Hydraulic tool	5.00			4100.00	
Jars	5.00			4105.00	
Safety Joint	3.00			4108.00	
Packer	5.00			4113.00	28.00 Bottom Of Top Packer
Packer	4.00			4117.00	
Stubb	1.00			4118.00	
Recorder	0.00	8653	Outside	4118.00	
Recorder	0.00	8520	Inside	4118.00	
Perforations	12.00			4130.00	
Change Over Sub	1.00			4131.00	
Drill Pipe	31.00			4162.00	
Change Over Sub	1.00			4163.00	
Bullnose	3.00			4166.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX, Inc.  
1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**  
**Huss #1-22**  
Job Ticket: 65304      **DST#: 2**  
Test Start: 2016.02.06 @ 16:37:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 33 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 500.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

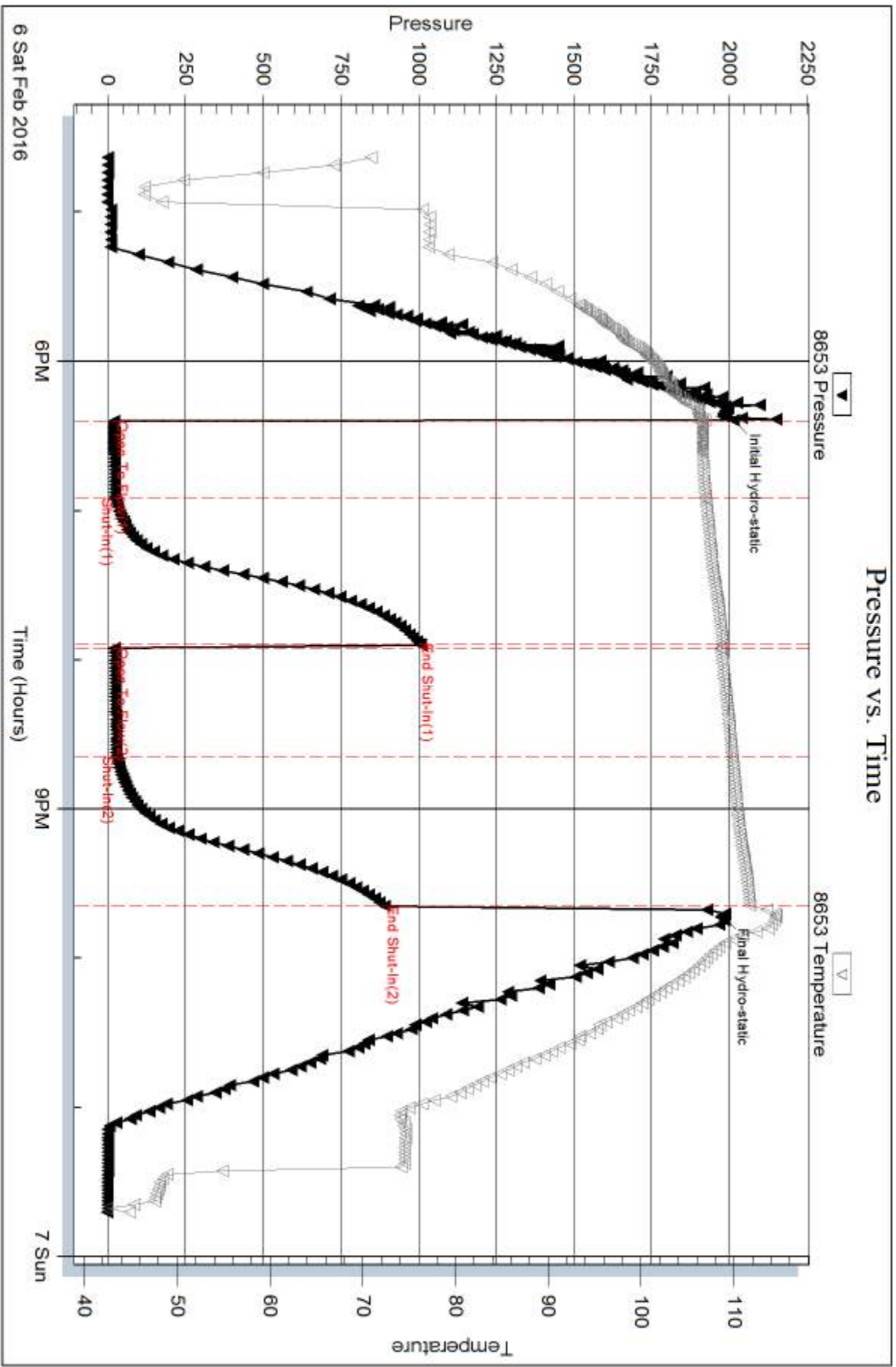
Length ft	Description	Volume bbl
25.00	OCM 30o 70m	0.351
5.00	Clean Oil 100o	0.070

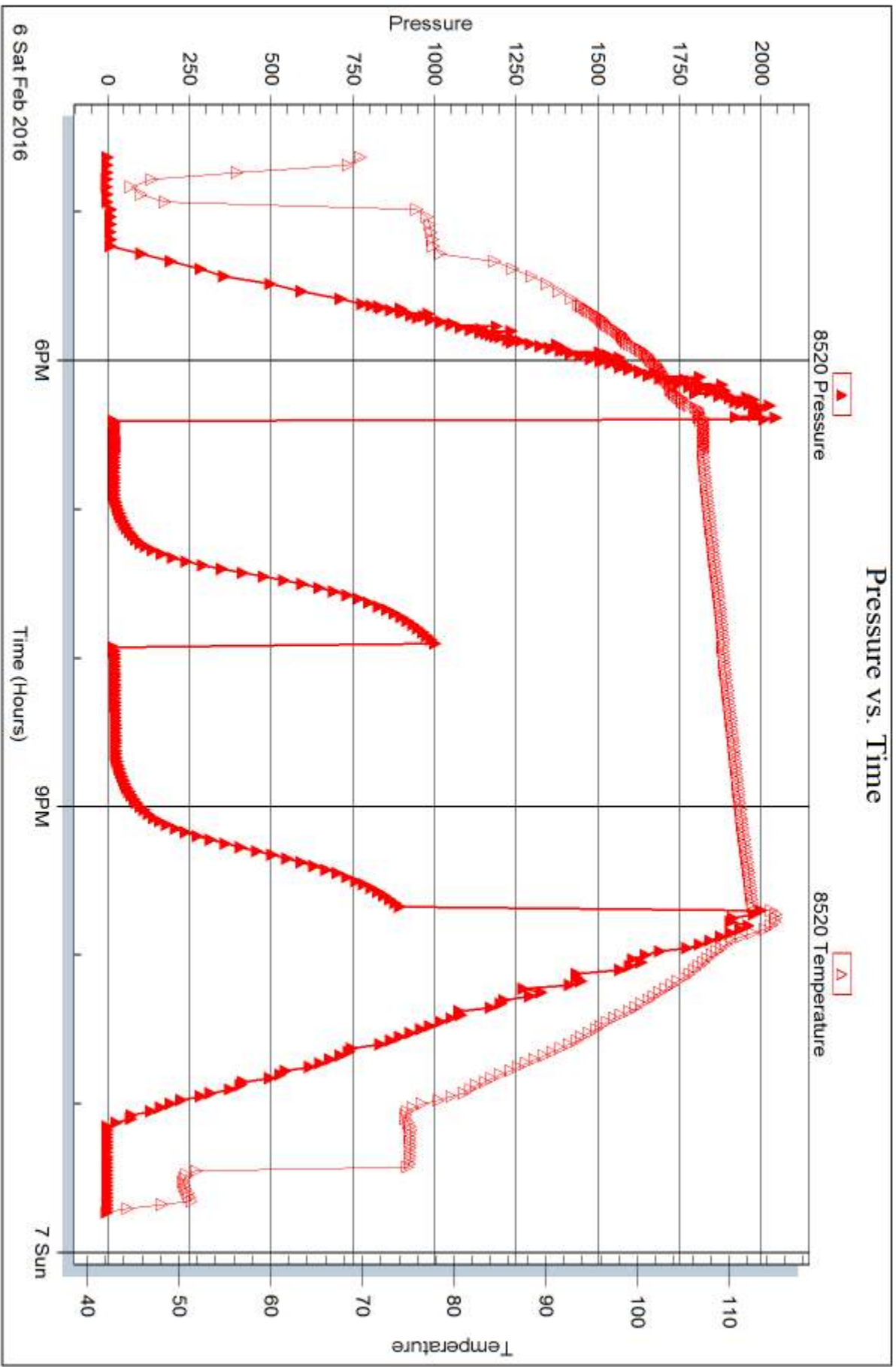
Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Oil API 36 @ 90 deg = 33 corrected







## DRILL STEM TEST REPORT

Prepared For: **CMX, Inc.**

1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206

ATTN: Marc Downing

### **Huss #1-22**

### **22-1s-33w Rawlins,KS**

Start Date: 2016.02.07 @ 20:23:00

End Date: 2016.02.08 @ 07:32:30

Job Ticket #: 65305                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.02.08 @ 10:35:18

CMX, Inc. 22-1s-33w Rawlins,KS Huss #1-22 DST # 3 LKC "D" 2016.02.07



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

CMX, Inc.  
1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65305

**DST#: 3**

Test Start: 2016.02.07 @ 20:23:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:05:00  
 Time Test Ended: 07:32:30  
 Interval: **3969.00 ft (KB) To 4060.00 ft (KB) (TVD)**  
 Total Depth: 4285.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Straddle (Initial)  
 Tester: Kevin Mack  
 Unit No: 82  
 Reference Elevations: 2998.00 ft (KB)  
 2990.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8520

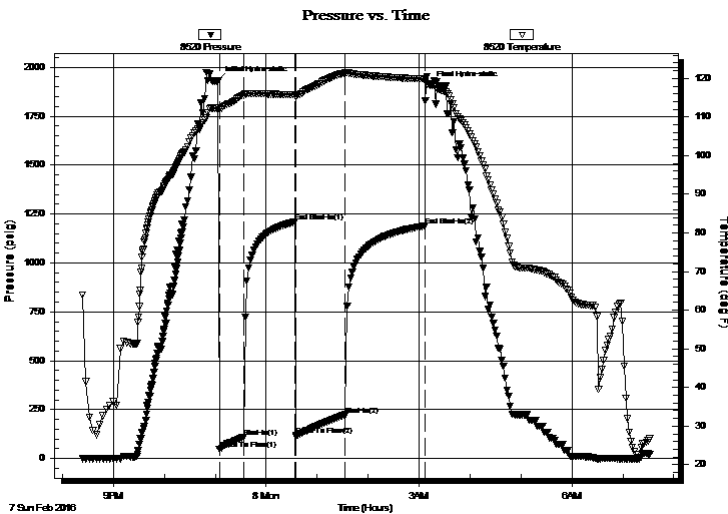
Inside

Press@RunDepth: 224.31 psig @ 3970.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.02.07 End Date: 2016.02.08 Last Calib.: 2016.02.08  
 Start Time: 20:24:00 End Time: 07:32:30 Time On Btm: 2016.02.07 @ 23:03:30  
 Time Off Btm: 2016.02.08 @ 03:13:00

TEST COMMENT: 30 - IF- BoB in 17 min.  
 60 - IS- No Return  
 60 - FF- BoB in 20 min.  
 90 - FS- No Return

## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1932.67	112.36	Initial Hydro-static
2	46.48	111.92	Open To Flow (1)
31	110.78	115.69	Shut-In(1)
91	1208.71	115.82	End Shut-In(1)
92	118.02	115.18	Open To Flow (2)
150	224.31	121.38	Shut-In(2)
244	1189.53	119.84	End Shut-In(2)
250	1907.65	118.32	Final Hydro-static



## Recovery

Length (ft)	Description	Volume (bbl)
189.00	OCMW 10o 10M 80W	2.65
126.00	OCMW 20o 30M 50W	1.77
126.00	OCWM 10o 30W 60M	1.77
103.00	OCWM 10o 10W 80M	1.44
25.00	Free Oil 100o	0.35

## Gas Rates

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





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TESTING, INC**

# DRILL STEM TEST REPORT

CMX, Inc.  
1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65305

**DST#: 3**

Test Start: 2016.02.07 @ 20:23:00

## GENERAL INFORMATION:

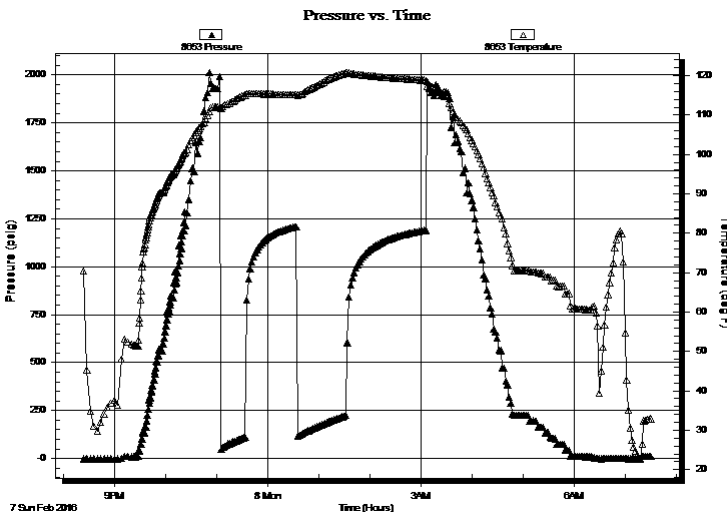
Formation: <b>LKC "D"</b>			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Straddle (Initial)	
Time Tool Opened: 23:05:00		Tester: Kevin Mack	
Time Test Ended: 07:32:30		Unit No: 82	
<b>Interval: 3969.00 ft (KB) To 4060.00 ft (KB) (TVD)</b>		Reference Elevations: 2998.00 ft (KB)	
Total Depth: 4285.00 ft (KB) (TVD)		2990.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF: 8.00 ft	

**Serial #: 8653 Outside**

Press@RunDepth: psig @ 3970.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2016.02.07	End Date: 2016.02.08
Start Time: 20:24:00	End Time: 07:30:00
	Last Calib.: 2016.02.08
	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** 30 - IF- BoB in 17 min.  
60 - IS- No Return  
60 - FF- BoB in 20 min.  
90 - FS- No Return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
189.00	OCMW 10o 10M 80W	2.65
126.00	OCMW 20o 30M 50W	1.77
126.00	OCVM 10o 30W 60M	1.77
103.00	OCVM 10o 10W 80M	1.44
25.00	Free Oil 100o	0.35

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

CMX, Inc.

**22-1s-33w Rawlins,KS**

1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**Huss #1-22**

Job Ticket: 65305

**DST#: 3**

Test Start: 2016.02.07 @ 20:23:00

## GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:05:00

Time Test Ended: 07:32:30

Test Type: Conventional Straddle (Initial)

Tester: Kevin Mack

Unit No: 82

**Interval: 3969.00 ft (KB) To 4060.00 ft (KB) (TVD)**

Total Depth: 4285.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2998.00 ft (KB)

2990.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8017 Below (Straddle)**

Press@RunDepth: psig @ 4063.00 ft (KB)

Start Date: 2016.02.07

End Date:

2016.02.08

Capacity: 8000.00 psig

Last Calib.:

2016.02.08

Start Time: 20:23:05

End Time:

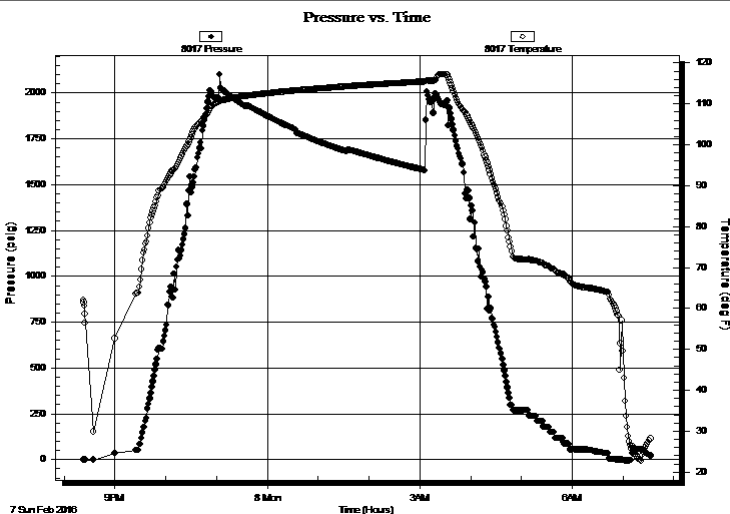
07:32:30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 - IF- BoB in 17 min.  
60 - ISI- No Return  
60 - FF- BoB in 20 min.  
90 - FSI- No Return

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
189.00	OCMW 10o 10M 80W	2.65
126.00	OCMW 20o 30M 50W	1.77
126.00	OCWM 10o 30W 60M	1.77
103.00	OCWM 10o 10W 80M	1.44
25.00	Free Oil 100o	0.35

## 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. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**

**Huss #1-22**

Job Ticket: 65305

**DST#: 3**

Test Start: 2016.02.07 @ 20:23:00

## Tool Information

Drill Pipe:	Length: 3966.00 ft	Diameter: 3.80 inches	Volume: 55.63 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 55.63 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3969.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	4056.00 ft			
Interval between Packers:	87.00 ft			
Tool Length:	344.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Change Over Sub	1.00			3942.00	
Shut In Tool	5.00			3947.00	
Hydraulic tool	5.00			3952.00	
Jars	5.00			3957.00	
Safety Joint	3.00			3960.00	
Packer	5.00			3965.00	28.00 Bottom Of Top Packer
Packer	4.00			3969.00	
Stubb	1.00			3970.00	
Recorder	0.00	8653	Outside	3970.00	
Recorder	0.00	8520	Inside	3970.00	
Perforations	15.00			3985.00	
Change Over Sub	1.00			3986.00	
Drill Pipe	63.00			4049.00	
Change Over Sub	1.00			4050.00	
Perforations	5.00			4055.00	
Blank Off Sub	1.00			4056.00	87.00 Tool Interval
Packer	4.00			4060.00	
Packer - Shale	0.00			4060.00	
Stubb	1.00			4061.00	
Perforations	1.00			4062.00	
Change Over Sub	1.00			4063.00	
Recorder	0.00	8017	Below	4063.00	
Drill Pipe	218.00			4281.00	
Change Over Sub	1.00			4282.00	
Bullnose	3.00			4285.00	229.00 Bottom Packers & Anchor

**Total Tool Length: 344.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX, Inc.  
1700 N Waterfront Pkwy  
Bldg. 300 STE B  
Wichita, KS 67206  
ATTN: Marc Downing

**22-1s-33w Rawlins,KS**  
**Huss #1-22**  
Job Ticket: 65305      **DST#: 3**  
Test Start: 2016.02.07 @ 20:23:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 29 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 80000 ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.20 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 500.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

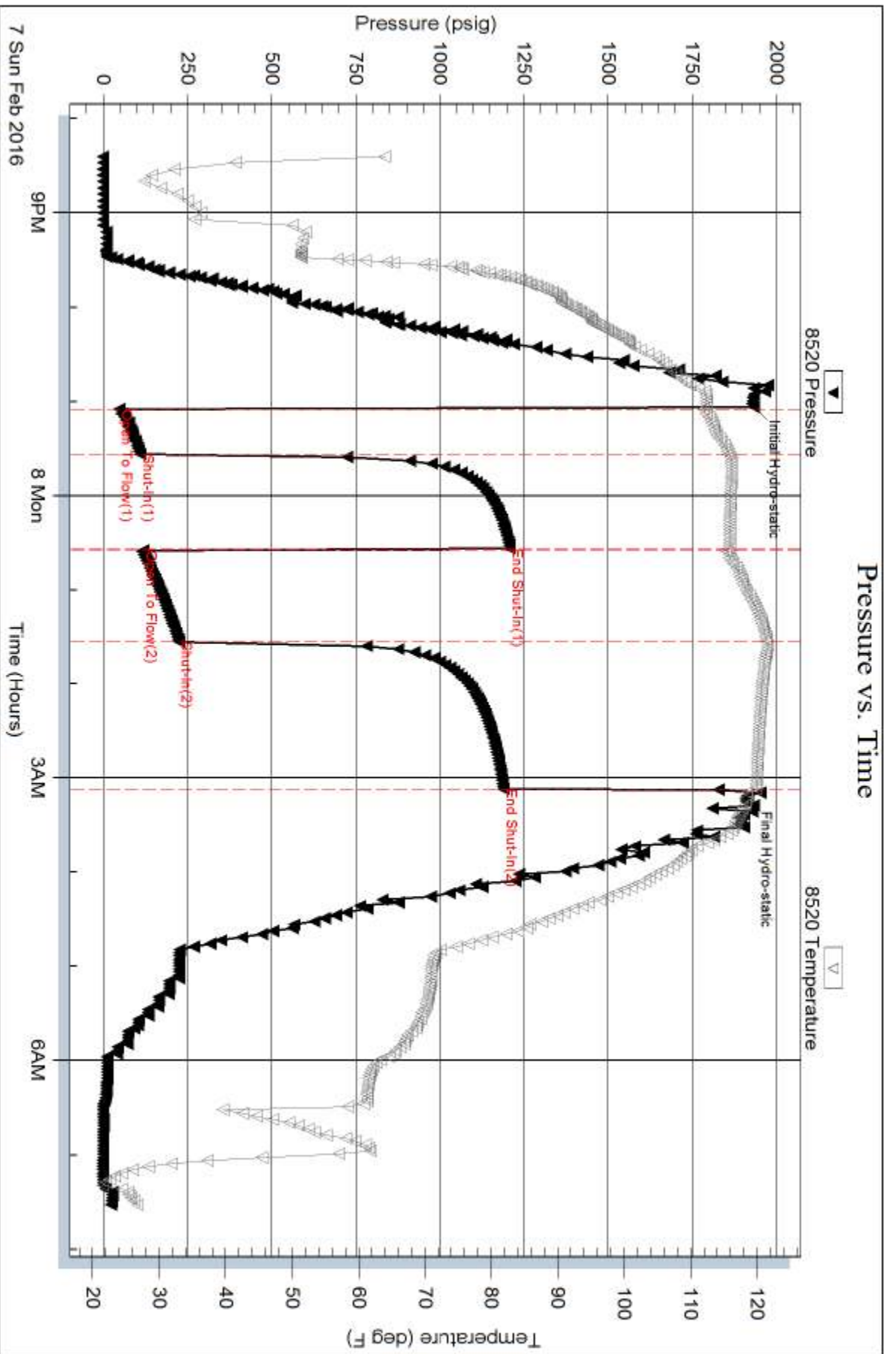
Length ft	Description	Volume bbl
189.00	OCMW 10o 10M 80W	2.651
126.00	OCMW 20o 30M 50W	1.767
126.00	OCWM 10o 30W 60M	1.767
103.00	OCWM 10o 10W 80M	1.445
25.00	Free Oil 100o	0.351

Total Length: 569.00 ft      Total Volume: 7.981 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Oil API = 30 @ 70 deg = 29 corrected  
RW = .21 @ 34 deg. = 80,000ppm

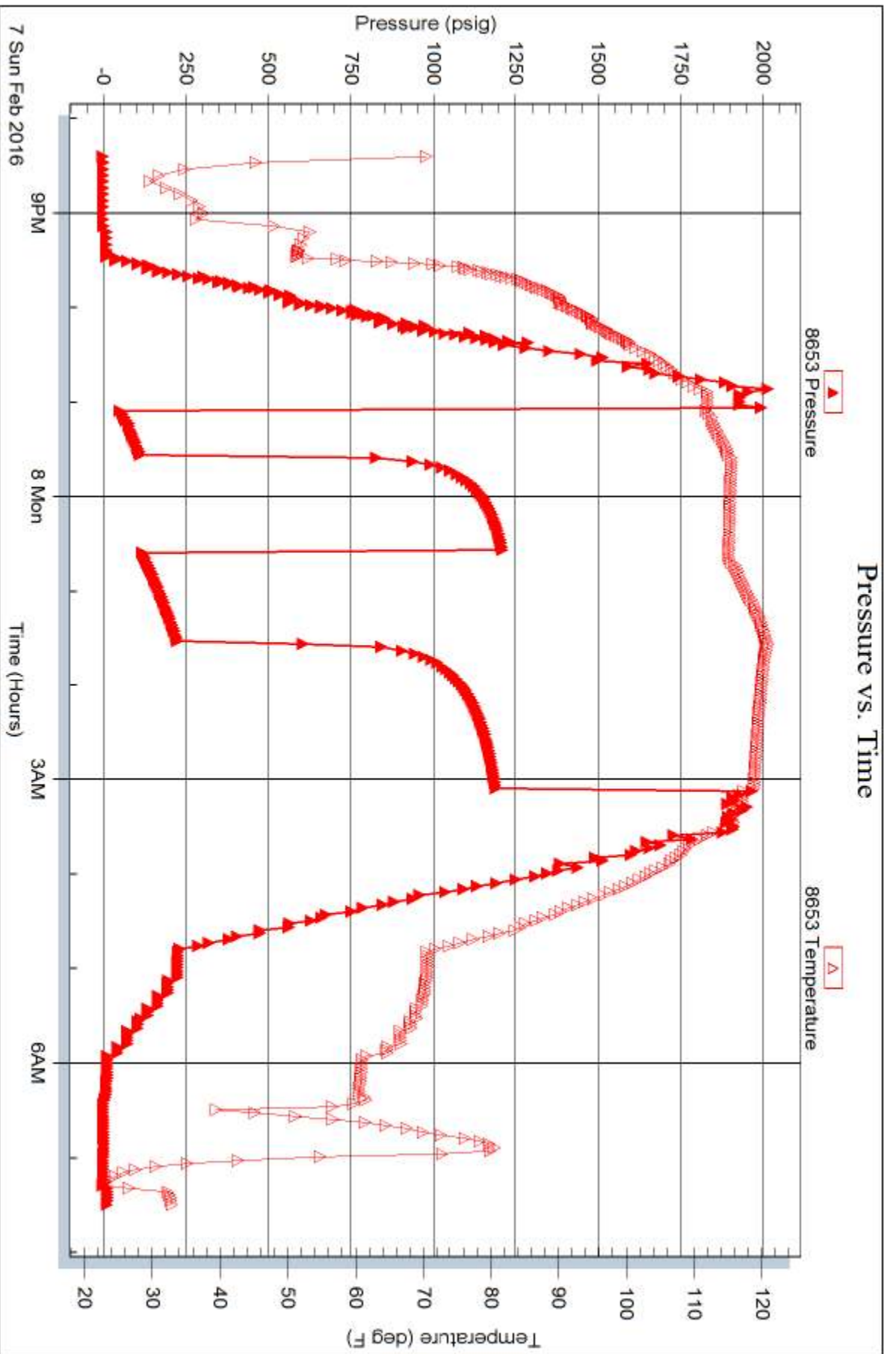


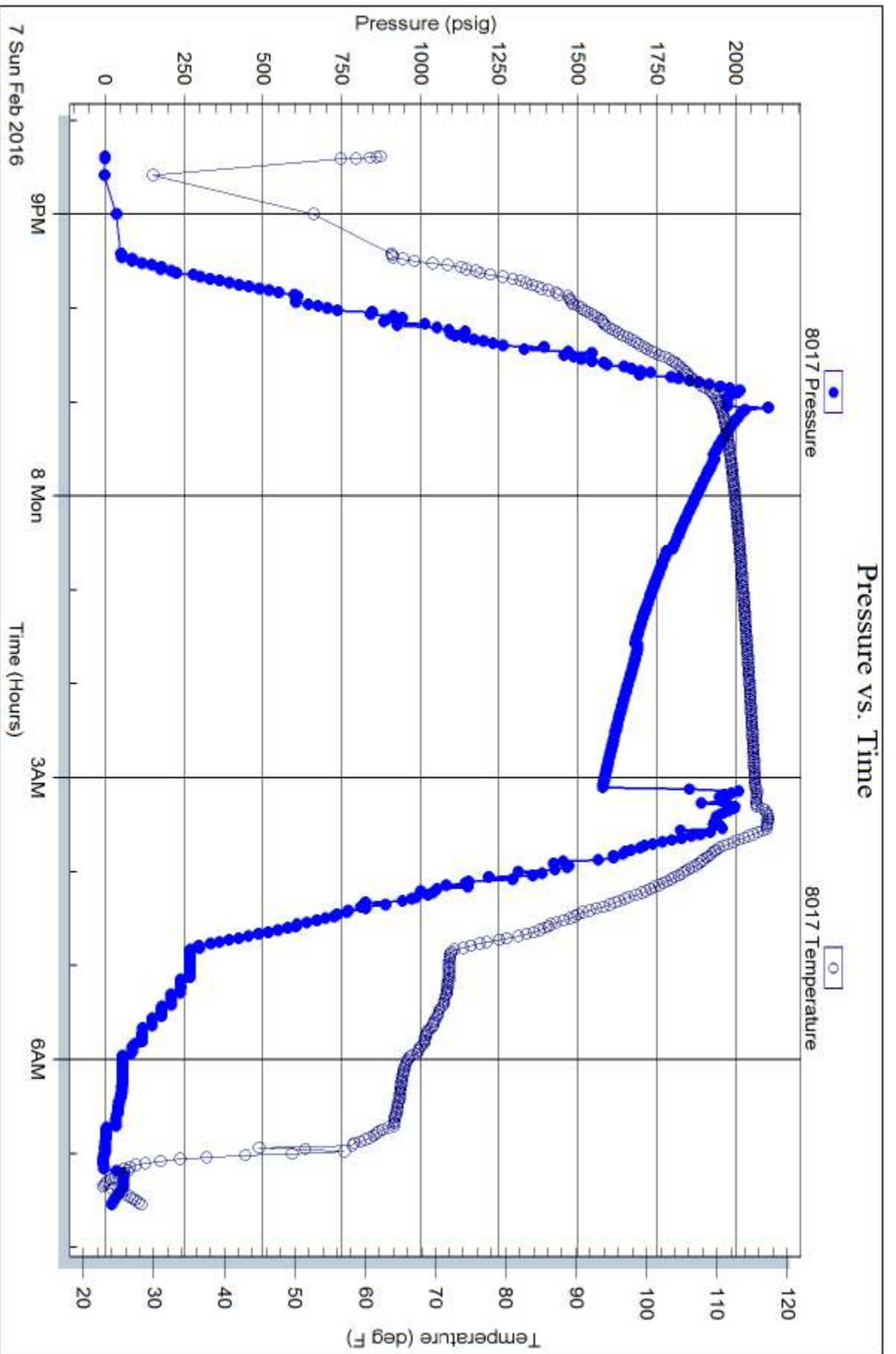
Serial #: 8653

Outside CMX, Inc.

Huss #1-22

DST Test Number: 3







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **65303**

Well Name & No. Huss #1-22 Test No. 1 Date 2-5-16  
 Company C.Mx, Inc. Elevation 2948 KB 29485 GL  
 Address 1700 N Waterfront Pkwy. Bldg 3000 STE B Wichita, KS 67206  
 Co. Rep / Geo. Marc Downing Rig Duke #2  
 Location: Sec. 22 Twp. 15 Rge. 33W Co. Rawlins State KS

Interval Tested 3971-4024 Zone Tested LKC "D"  
 Anchor Length 53' Drill Pipe Run 3969' Mud Wt. 9  
 Top Packer Depth 3967 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 3971 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4024 Chlorides 500 ppm System LCM 2#

Blow Description IF - Surface Blow built to 7"  
PSI - NO Return  
FF - Surface Blow started at 2 min. Built to 7 3/4"  
PSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>1268</u>	<u>Mud</u>			<u>100</u>	
<u>441</u>	<u>OSM</u>	<u>Spots</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 Total 1701 BHT 117 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1899</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u><del>12:22 PM</del> 4:22 AM</u>
(B) First Initial Flow <u>818</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:35 AM</u>
(C) First Final Flow <u>842</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>4:02 AM</u>
(D) Initial Shut-In <u>1259</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>12:47 PM</u>
(E) Second Initial Flow <u>849</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:28 PM</u>
(F) Second Final Flow <u>868</u>	<input checked="" type="checkbox"/> Mileage <u>85 RT</u> 85	Comments
(G) Final Shut-In <u>1255</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1887</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1560</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1560</u>	

Approved By \_\_\_\_\_ Our Representative

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **65304**

Well Name & No. H555 #1-22 Test No. 2 Date 2-6-16  
 Company CMX, Inc. Elevation 2998 KB 2990 GL  
 Address 1700 N Waterfront Pkwy Bldg 3000 STE B Wichita, KS 67206  
 Co. Rep / Geo. Marc Downing Rig Duke #2  
 Location: Sec. 22 Twp. 1S Rge. 33W Co. Rawlins State KS

Interval Tested 4117 - 4166 Zone Tested LKC "J"  
 Anchor Length 49' Drill Pipe Run 4093' Mud Wt. 9.2  
 Top Packer Depth 4113 Drill Collars Run 0 Vis 47  
 Bottom Packer Depth 4117 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4166 Chlorides 500 ppm System LCM 1#  
 Blow Description IF - 1/8" Blow built test 1/4", then died back to 1/4"  
FSI - NO Return  
FF - Weak Surface Blow started at 5 min. did not build or die.  
PSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Clean oil</u>				
<u>25</u>	<u>Oil</u>		<u>30</u>		<u>70</u>

Rec Total 300' BHT - Gravity 33 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2084</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>4:00 PM</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>4:37 PM</u>
(C) First Final Flow <u>23</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>6:24 PM</u>
(D) Initial Shut-In <u>1002</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>9:40 PM</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:44 PM</u>
(F) Second Final Flow <u>27</u>	<input checked="" type="checkbox"/> Mileage <u>85 RT</u> <u>85</u>	Comments
(G) Final Shut-In <u>889</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1977</u>	<input type="checkbox"/> Straddle	
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1560</u>
	Sub Total <u>1560</u>	MP/DST Disc't

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **65305**

Well Name & No. Huss #1-22 Test No. 3 Date 2-7-16  
 Company CMx, Inc. Elevation 2498 KB 2990 GL  
 Address 1700 N Waterfront Pkwy. Bldg #300 STE B Wichita, KS 67206  
 Co. Rep / Geo. Marc Downing Rig Duke #2  
 Location: Sec. 22 Twp. 1S Rge. 33W Co. Rawlins State KS

Interval Tested 3969 - 4060 Zone Tested LKC "D"  
 Anchor Length 91' Drill Pipe Run 3966' Mud Wt. 9.3  
 Top Packer Depth 3965 Drill Collars Run 0 Vis 59  
 Bottom Packer Depth 3964 - 4060 (straddle) Wt. Pipe Run 0 WL 7.2  
 Total Depth ~~4060~~ 4285 Chlorides 500 ppm System LCM 1#  
 Blow Description IF - Bob in 17 min.  
ISE - NO Return  
FF - Bob in 20 min.  
FSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>Free Oil</u>	<u>100</u>			
<u>103</u>	<u>OCWM</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>126</u>	<u>OCWM</u>	<u>10</u>	<u>30</u>	<u>60</u>	
<u>126</u>	<u>OCMW</u>	<u>20</u>	<u>50</u>	<u>30</u>	
<u>189</u>	<u>OCMW</u>	<u>10</u>	<u>80</u>	<u>10</u>	

Rec Total 569' BHT 1200 Gravity 24 API RW -21 @ 34 °F Chlorides 80000 ppm

(A) Initial Hydrostatic <u>1932</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>8:00 PM</u>
(B) First Initial Flow <u>46</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:23 PM</u>
(C) First Final Flow <u>110</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:05 PM</u>
(D) Initial Shut-In <u>1208</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>3:05 AM</u>
(E) Second Initial Flow <u>118</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>7:33 AM</u>
(F) Second Final Flow <u>224</u>	<input checked="" type="checkbox"/> Mileage <u>85</u>	Comments <u>Loaded tools at end of test</u>
(G) Final Shut-In <u>1189</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1907</u>	<input checked="" type="checkbox"/> Straddle <u>85PT</u> <u>600</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>2160</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2160</u>	

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