



## DRILL STEM TEST REPORT

Prepared For: **CMX Inc**

1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206

ATTN: Ken LeBlanc

### **Beacon Hill #1-20**

### **20-27S-14W Pratt,KS**

Start Date: 2018.03.05 @ 15:22:31

End Date: 2018.03.05 @ 23:12:33

Job Ticket #: 63366                      DST #: 1

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

Printed: 2018.03.13 @ 09:06:19

CMX Inc  
20-27S-14W Pratt,KS  
Beacon Hill #1-20  
DST # 1  
Lansing "B"  
2018.03.05



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

CMX Inc  
 1700 N Waterfront Pkw y  
 Bldg 300 B  
 Wichita, KS 67206  
 ATTN: Ken LeBlanc

**20-27S-14W Pratt,KS**

**Beacon Hill #1-20**

Job Ticket: 63366

**DST#: 1**

Test Start: 2018.03.05 @ 15:22:31

## GENERAL INFORMATION:

Formation: **Lansing "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:20:18

Time Test Ended: 23:12:33

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

Interval: **3955.00 ft (KB) To 3975.00 ft (KB) (TVD)**

Reference Elevations: 2003.00 ft (KB)

Total Depth: 3975.00 ft (KB) (TVD)

1990.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 13.00 ft

**Serial #: 8875**

**Inside**

Press@RunDepth: 366.12 psig @ 3956.00 ft (KB)

Capacity: psig

Start Date: 2018.03.05

End Date:

2018.03.05

Last Calib.:

2018.03.05

Start Time: 15:22:32

End Time:

23:12:33

Time On Btm:

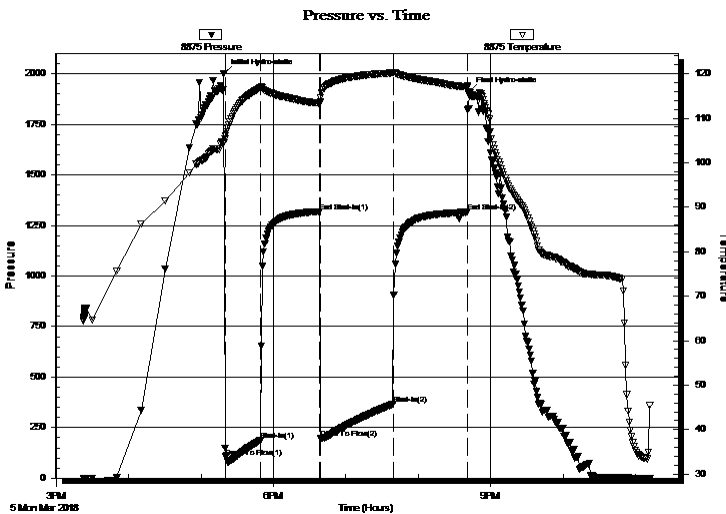
2018.03.05 @ 17:18:48

Time Off Btm:

2018.03.05 @ 20:42:03

**TEST COMMENT:** IF: Strong Blow , BOB in 30 seconds, Built to 243"  
 IS: Blow Back Built to 44"  
 FF: Strong Blow , BOB immediate, Built to 231"  
 FS: Blow Back Built to 25"

## PRESSURE SUMMARY



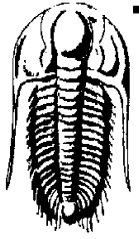
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2002.19	104.53	Initial Hydro-static
2	104.81	106.16	Open To Flow (1)
31	185.63	116.85	Shut-In(1)
80	1318.41	113.40	End Shut-In(1)
81	195.99	114.67	Open To Flow (2)
141	366.12	120.28	Shut-In(2)
202	1315.59	117.03	End Shut-In(2)
204	1911.07	115.31	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	3185 GIP	0.00
527.00	Water	5.74
63.00	GOMCW 10%G 2%O 10%M 78%W	0.88
166.00	GWMCO 20%G 10%W 12%M 58%O	2.33

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

CMX Inc  
1700 N Waterfront Pkw y  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**

**Beacon Hill #1-20**

Job Ticket: 63366

**DST#: 1**

Test Start: 2018.03.05 @ 15:22:31

**GENERAL INFORMATION:**

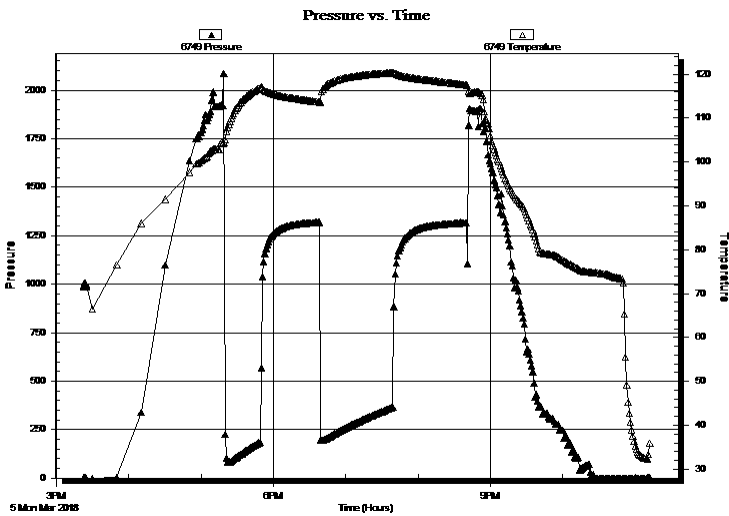
Formation: **Lansing "B"**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 17:20:18 Tester: Leal Cason  
 Time Test Ended: 23:12:33 Unit No: 74  
 Interval: **3955.00 ft (KB) To 3975.00 ft (KB) (TVD)** Reference Elevations: 2003.00 ft (KB)  
 Total Depth: 3975.00 ft (KB) (TVD) 1990.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

**Serial #: 6749 Outside**

Press@RunDepth: psig @ 3956.00 ft (KB) Capacity: psig  
 Start Date: 2018.03.05 End Date: 2018.03.05 Last Calib.: 2018.03.05  
 Start Time: 15:22:43 End Time: 23:12:44 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: Strong Blow , BOB in 30 seconds, Built to 243"  
 IS: Blow Back Built to 44"  
 FF: Strong Blow , BOB immediate, Built to 231"  
 FS: Blow Back Built to 25"

**PRESSURE SUMMARY**



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

**Recovery**

Length (ft)	Description	Volume (bbl)
0.00	3185 GIP	0.00
527.00	Water	5.74
63.00	GOMCW 10%G 2%O 10%M 78%W	0.88
166.00	GWMCO 20%G 10%W 12%M 58%O	2.33

**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 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**  
**Beacon Hill #1-20**  
Job Ticket: 63366      **DST#: 1**  
Test Start: 2018.03.05 @ 15:22:31

**Tool Information**

Drill Pipe:	Length: 3760.00 ft	Diameter: 3.80 inches	Volume: 52.74 bbl	Tool Weight: 2100.00 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.63 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	3955.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	44.00 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>
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Shut In Tool	5.00			3936.00	
Hydraulic tool	5.00			3941.00	
EM Tool	3.00			3944.00	
Safety Joint	2.00			3946.00	
Packer	5.00			3951.00	24.00      Bottom Of Top Packer
Packer	4.00			3955.00	
Stubb	1.00			3956.00	
Recorder	0.00	8875	Inside	3956.00	
Recorder	0.00	6749	Outside	3956.00	
Perforations	16.00			3972.00	
Bullnose	3.00			3975.00	20.00      Bottom Packers & Anchor

**Total Tool Length: 44.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX Inc  
1700 N Waterfront Pkw y  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt,KS**  
**Beacon Hill #1-20**  
Job Ticket: 63366      **DST#: 1**  
Test Start: 2018.03.05 @ 15:22:31

## Mud and Cushion Information

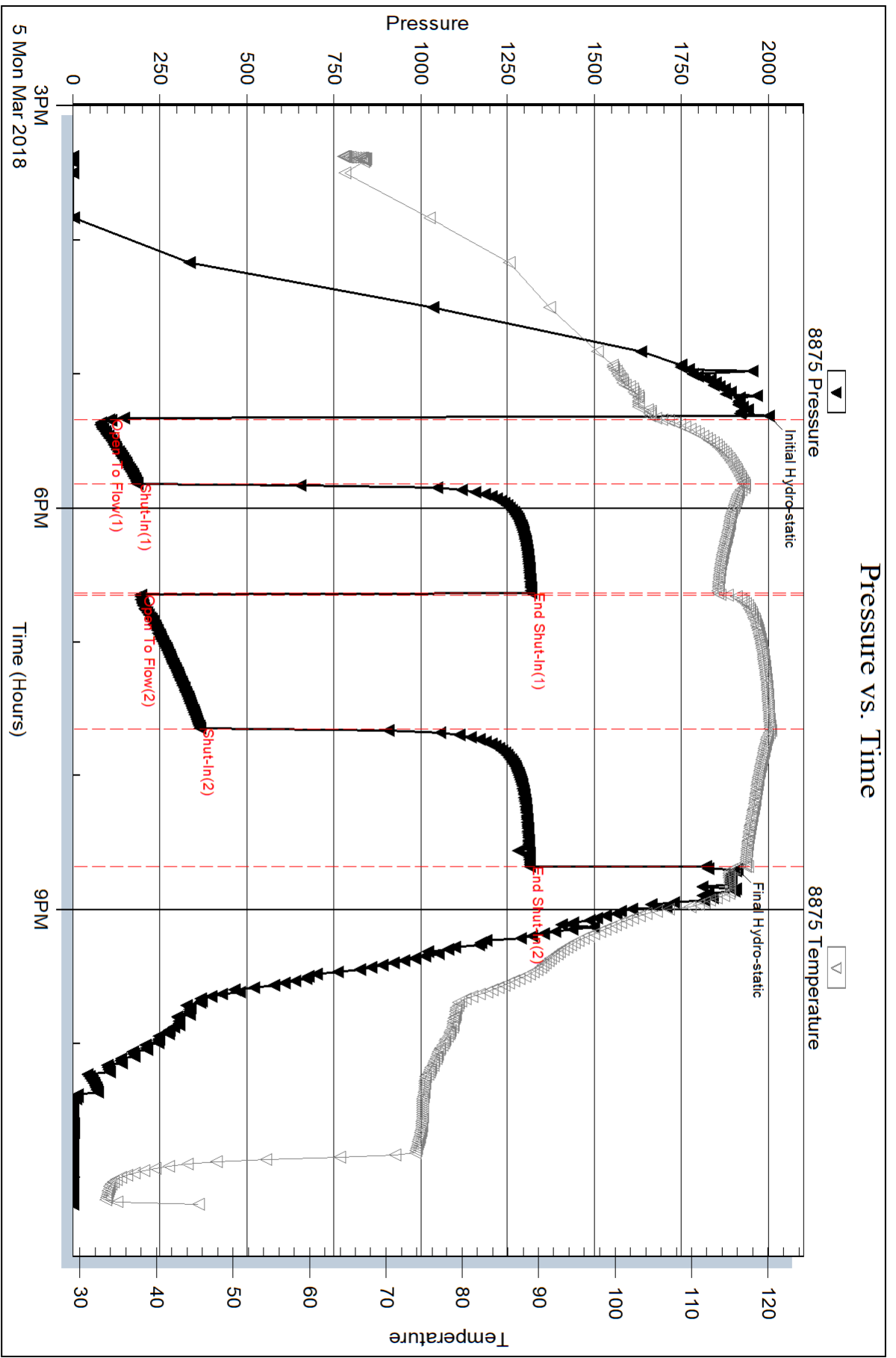
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	87000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 0.02 inches			

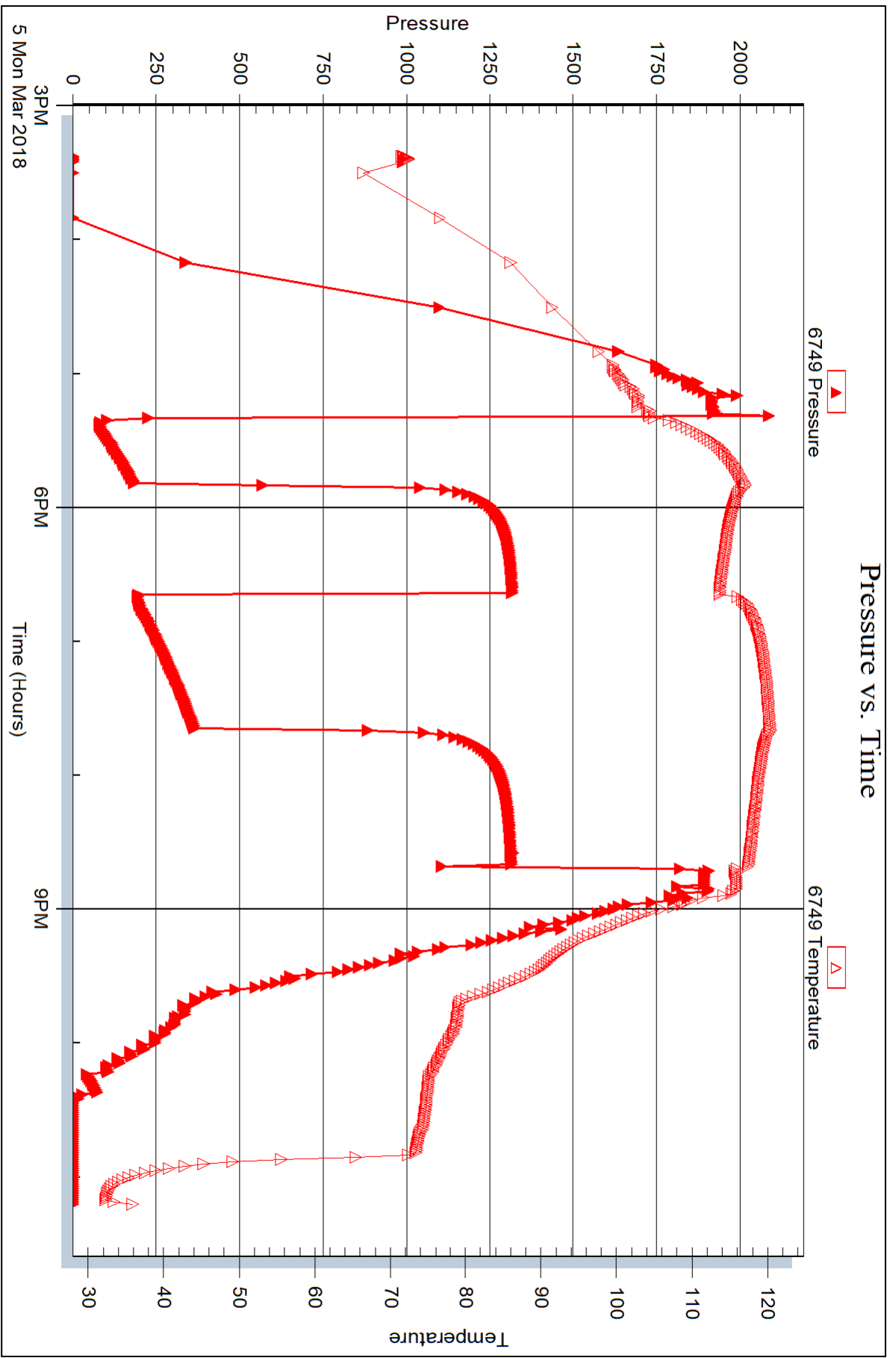
## Recovery Information

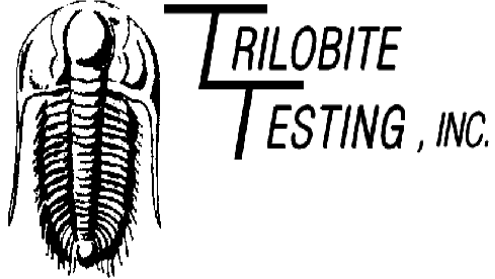
Recovery Table

Length ft	Description	Volume bbl
0.00	3185 GIP	0.000
527.00	Water	5.744
63.00	GOMCW 10%G 2%O 10%M 78%W	0.884
166.00	GWMCO 20%G 10%W 12%M 58%O	2.329

Total Length: 756.00 ft      Total Volume: 8.957 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: RW w as .15 @ 42 degrees







## DRILL STEM TEST REPORT

Prepared For: **CMX Inc**

1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206

ATTN: Ken LeBlanc

### **Beacon Hill #1-20**

### **20-27S-14W Pratt,KS**

Start Date: 2018.03.06 @ 16:18:14

End Date: 2018.03.06 @ 22:20:16

Job Ticket #: 63367                      DST #: 2

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

Printed: 2018.03.13 @ 09:05:58





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

CMX Inc  
 1700 N Waterfront Pkw y  
 Bldg 300 B  
 Wichita, KS 67206  
 ATTN: Ken LeBlanc

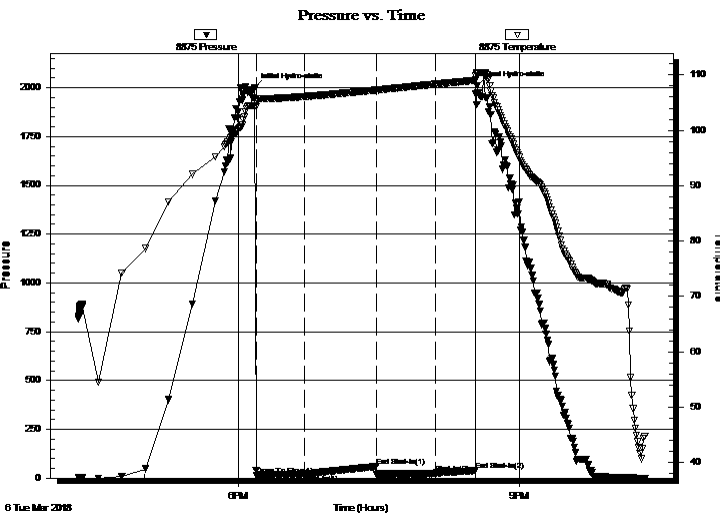
**20-27S-14W Pratt,KS**  
**Beacon Hill #1-20**  
 Job Ticket: 63367 **DST#: 2**  
 Test Start: 2018.03.06 @ 16:18:14

## GENERAL INFORMATION:

Formation: **LKC "H"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:12:01  
 Time Test Ended: 22:20:16  
 Interval: **4085.00 ft (KB) To 4100.00 ft (KB) (TVD)**  
 Total Depth: 4100.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 2003.00 ft (KB)  
 1990.00 ft (CF)  
 KB to GR/CF: 13.00 ft

**Serial #: 8875** **Inside**  
 Press@RunDepth: 26.08 psig @ 4086.00 ft (KB) Capacity: psig  
 Start Date: 2018.03.06 End Date: 2018.03.06 Last Calib.: 2018.03.06  
 Start Time: 16:18:15 End Time: 22:20:16 Time On Btm: 2018.03.06 @ 18:10:46  
 Time Off Btm: 2018.03.06 @ 20:32:46

**TEST COMMENT:** IF: Weak Blow , Built to 3"  
 IS: No Blow Back  
 FF: Weak 1/2" Blow  
 FS: No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1999.67	104.85	Initial Hydro-static
2	14.91	105.11	Open To Flow (1)
32	20.36	106.11	Shut-In(1)
78	58.99	107.27	End Shut-In(1)
78	20.09	107.27	Open To Flow (2)
116	26.08	108.36	Shut-In(2)
141	39.11	109.06	End Shut-In(2)
142	2011.86	110.36	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

CMX Inc  
1700 N Waterfront Pkw y  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

20-27S-14W Pratt, KS

Beacon Hill #1-20

Job Ticket: 63367

DST#: 2

Test Start: 2018.03.06 @ 16:18:14

### GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:12:01

Time Test Ended: 22:20:16

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

Interval: **4085.00 ft (KB) To 4100.00 ft (KB) (TVD)**

Total Depth: 4100.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2003.00 ft (KB)

1990.00 ft (CF)

KB to GR/CF: 13.00 ft

Serial #: **6749** Outside

Press@RunDepth: psig @ 4086.00 ft (KB)

Start Date: 2018.03.06

End Date: 2018.03.06

Capacity: psig

Last Calib.: 2018.03.06

Start Time: 16:18:06

End Time: 22:20:07

Time On Btm:

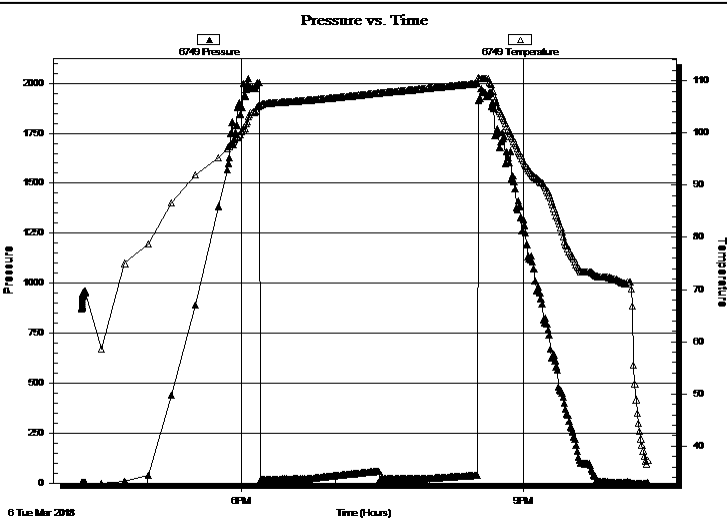
Time Off Btm:

TEST COMMENT: IF: Weak Blow, Built to 3"

IS: No Blow Back

FF: Weak 1/2" Blow

FS: No Blow Back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc  
1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**  
**Beacon Hill #1-20**  
Job Ticket: 63367      **DST#: 2**  
Test Start: 2018.03.06 @ 16:18:14

## Tool Information

Drill Pipe:	Length: 3885.00 ft	Diameter: 3.80 inches	Volume: 54.50 bbl	Tool Weight: 2100.00 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 55.39 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4085.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4066.00	
Hydraulic tool	5.00			4071.00	
EM Tool	3.00			4074.00	
Safety Joint	2.00			4076.00	
Packer	5.00			4081.00	24.00      Bottom Of Top Packer
Packer	4.00			4085.00	
Stubb	1.00			4086.00	
Recorder	0.00	8875	Inside	4086.00	
Recorder	0.00	6749	Outside	4086.00	
Perforations	11.00			4097.00	
Bullnose	3.00			4100.00	15.00      Bottom Packers & Anchor

**Total Tool Length: 39.00**



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Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**  
**Beacon Hill #1-20**  
Job Ticket: 63367      **DST#: 2**  
Test Start: 2018.03.06 @ 16:18:14

## Mud and Cushion Information

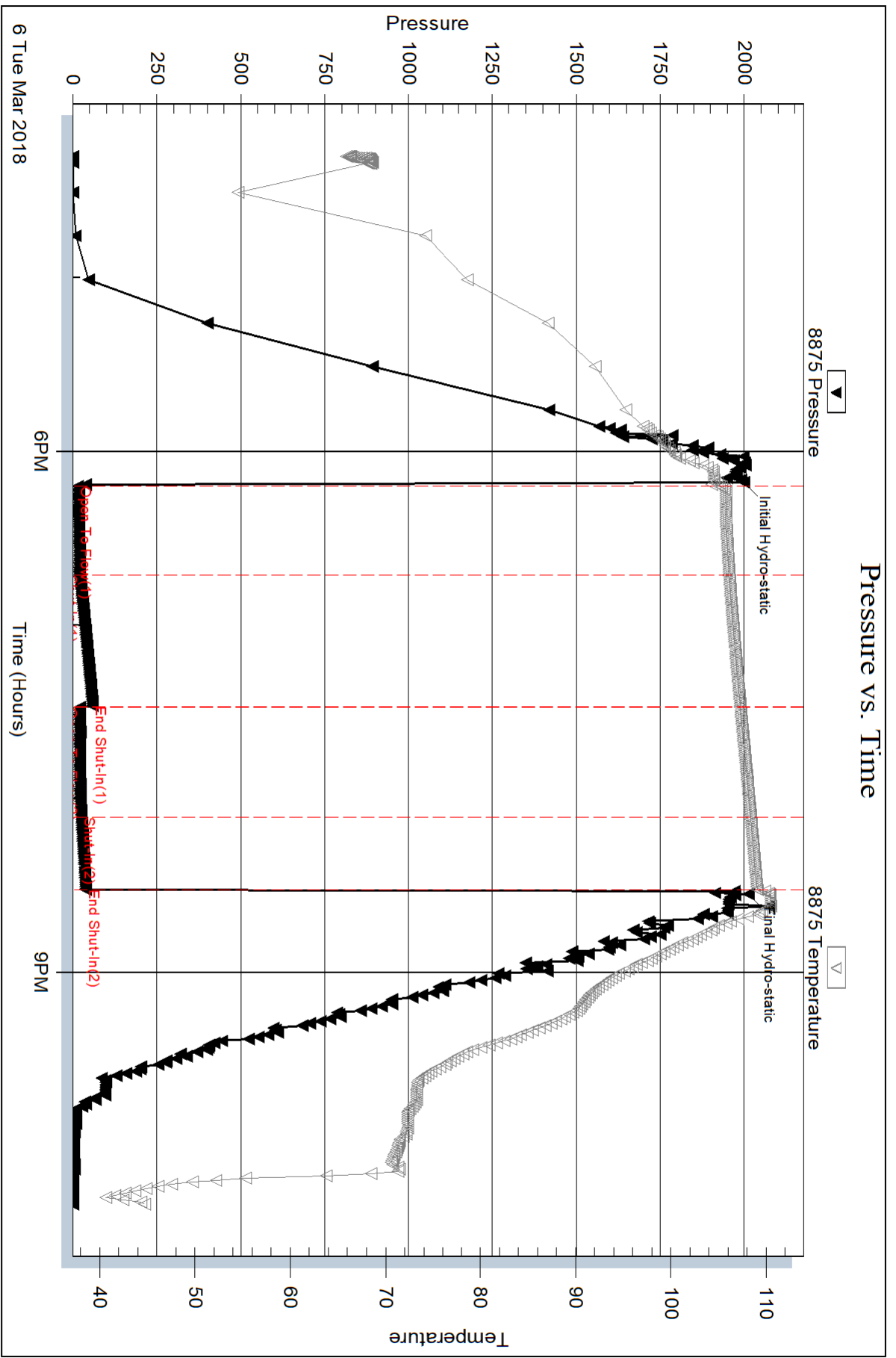
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

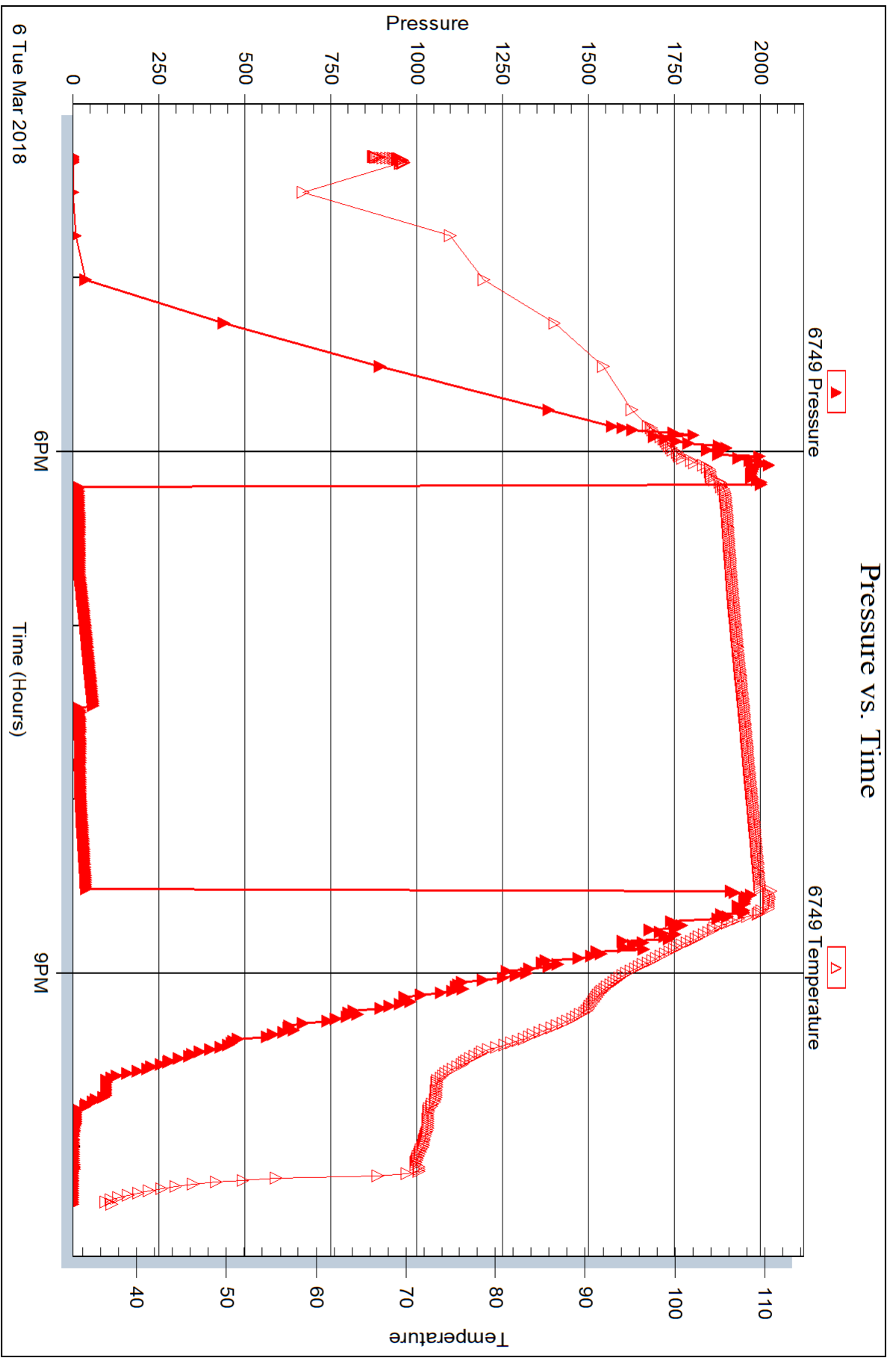
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	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 300 B  
Wichita, KS 67206

ATTN: Ken LeBlanc

### **Beacon Hill #1-20**

### **20-27S-14W Pratt,KS**

Start Date: 2018.03.08 @ 20:15:17

End Date: 2018.03.09 @ 05:19:19

Job Ticket #: 63368                      DST #: 3

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

Printed: 2018.03.13 @ 09:05:33



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

CMX Inc  
 1700 N Waterfront Pkw y  
 Bldg 300 B  
 Wichita, KS 67206  
 ATTN: Ken LeBlanc

**20-27S-14W Pratt,KS**

**Beacon Hill #1-20**

Job Ticket: 63368

**DST#: 3**

Test Start: 2018.03.08 @ 20:15:17

## GENERAL INFORMATION:

Formation: **Simpson**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:30:34  
 Time Test Ended: 05:19:19  
 Interval: **4540.00 ft (KB) To 4567.00 ft (KB) (TVD)**  
 Total Depth: 4567.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 2003.00 ft (KB)  
 1990.00 ft (CF)  
 KB to GR/CF: 13.00 ft

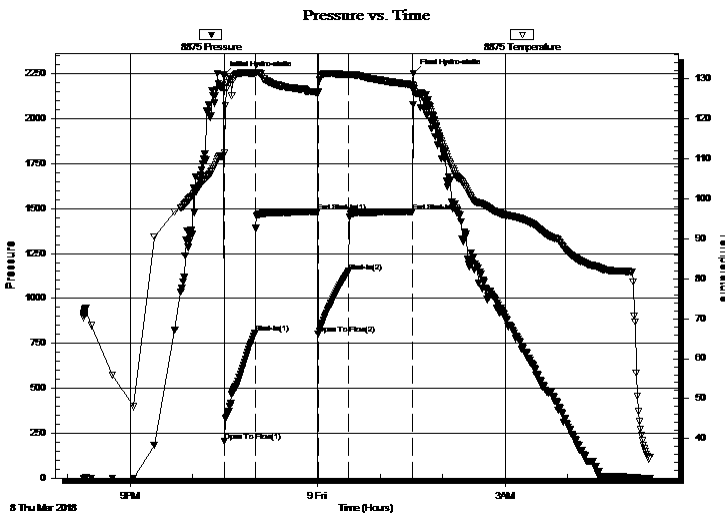
## Serial #: 8875

Inside

Press@RunDepth: 1149.37 psig @ 4541.00 ft (KB) Capacity: psig  
 Start Date: 2018.03.08 End Date: 2018.03.09 Last Calib.: 2018.03.09  
 Start Time: 20:15:18 End Time: 05:19:19 Time On Btm: 2018.03.08 @ 22:29:34  
 Time Off Btm: 2018.03.09 @ 01:31:49

TEST COMMENT: IF: Strong Blow , BOB in 2 minutes  
 IS: 1" Blow Back  
 FF: Strong Blow , BOB in 3 minutes  
 FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2241.76	110.72	Initial Hydro-static
1	206.52	111.40	Open To Flow (1)
31	808.58	131.46	Shut-In(1)
90	1480.49	126.71	End Shut-In(1)
91	800.55	126.55	Open To Flow (2)
121	1149.37	131.07	Shut-In(2)
181	1480.94	128.56	End Shut-In(2)
183	2251.51	127.87	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	30 GIP	0.00
2394.00	Water	31.93
93.00	SOSWCM 2%O 48%W 50%M	1.30

\* Recovery from multiple tests

## 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 Pkw y  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**  
**Beacon Hill #1-20**  
Job Ticket: 63368      **DST#: 3**  
Test Start: 2018.03.08 @ 20:15:17

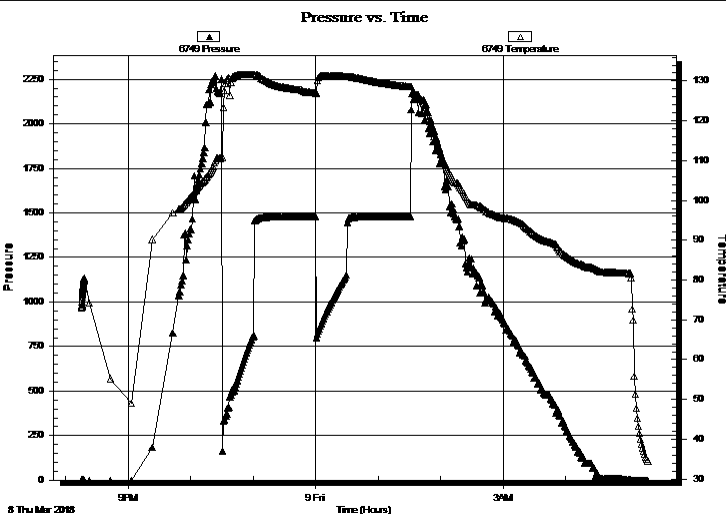
## GENERAL INFORMATION:

Formation: **Simpson**  
Deviated: No Whipstock: ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 22:30:34      Tester: Leal Cason  
Time Test Ended: 05:19:19      Unit No: 74  
**Interval: 4540.00 ft (KB) To 4567.00 ft (KB) (TVD)**      Reference Elevations: 2003.00 ft (KB)  
Total Depth: 4567.00 ft (KB) (TVD)      1990.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good      KB to GR/CF: 13.00 ft

## Serial #: 6749      Outside

Press@RunDepth:      psig @ 4541.00 ft (KB)      Capacity:      psig  
Start Date: 2018.03.08      End Date: 2018.03.09      Last Calib.: 2018.03.09  
Start Time: 20:15:20      End Time: 05:19:21      Time On Btm:  
Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 2 minutes  
IS: 1" Blow Back  
FF: Strong Blow , BOB in 3 minutes  
FS: No Blow Back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	30 GIP	0.00
2394.00	Water	31.93
93.00	SOSWCM 2%O 48%W 50%M	1.30

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc  
1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**  
**Beacon Hill #1-20**  
Job Ticket: 63368      **DST#: 3**  
Test Start: 2018.03.08 @ 20:15:17

**Tool Information**

Drill Pipe:	Length: 4357.00 ft	Diameter: 3.80 inches	Volume: 61.12 bbl	Tool Weight: 2100.00 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 90000.00 lb
		Total Volume: 62.01 bbl		Tool Chased 4.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4540.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4524.00	
Hydraulic tool	5.00			4529.00	
Safety Joint	2.00			4531.00	
Packer	5.00			4536.00	21.00      Bottom Of Top Packer
Packer	4.00			4540.00	
Stubb	1.00			4541.00	
Recorder	0.00	8875	Inside	4541.00	
Recorder	0.00	6749	Outside	4541.00	
Perforations	23.00			4564.00	
Bullnose	3.00			4567.00	27.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>48.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX Inc  
1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt,KS**  
**Beacon Hill #1-20**  
Job Ticket: 63368      **DST#: 3**  
Test Start: 2018.03.08 @ 20:15:17

## 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:	48000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4300.00 ppm			
Filter Cake: 0.02 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	30 GIP	0.000
2394.00	Water	31.933
93.00	SOSWCM 2%O 48%W 50%M	1.305

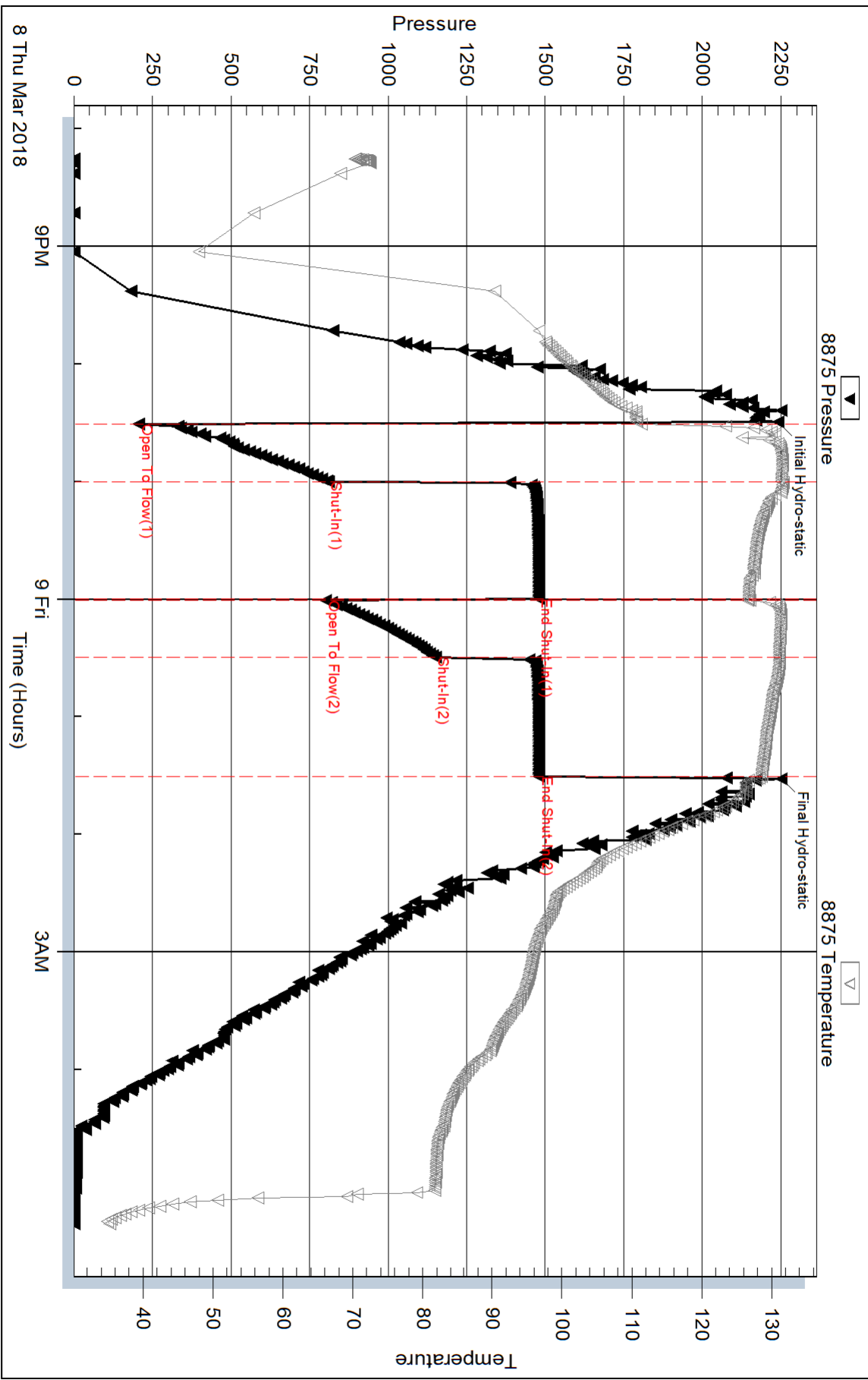
Total Length: 2487.00 ft      Total Volume: 33.238 bbl

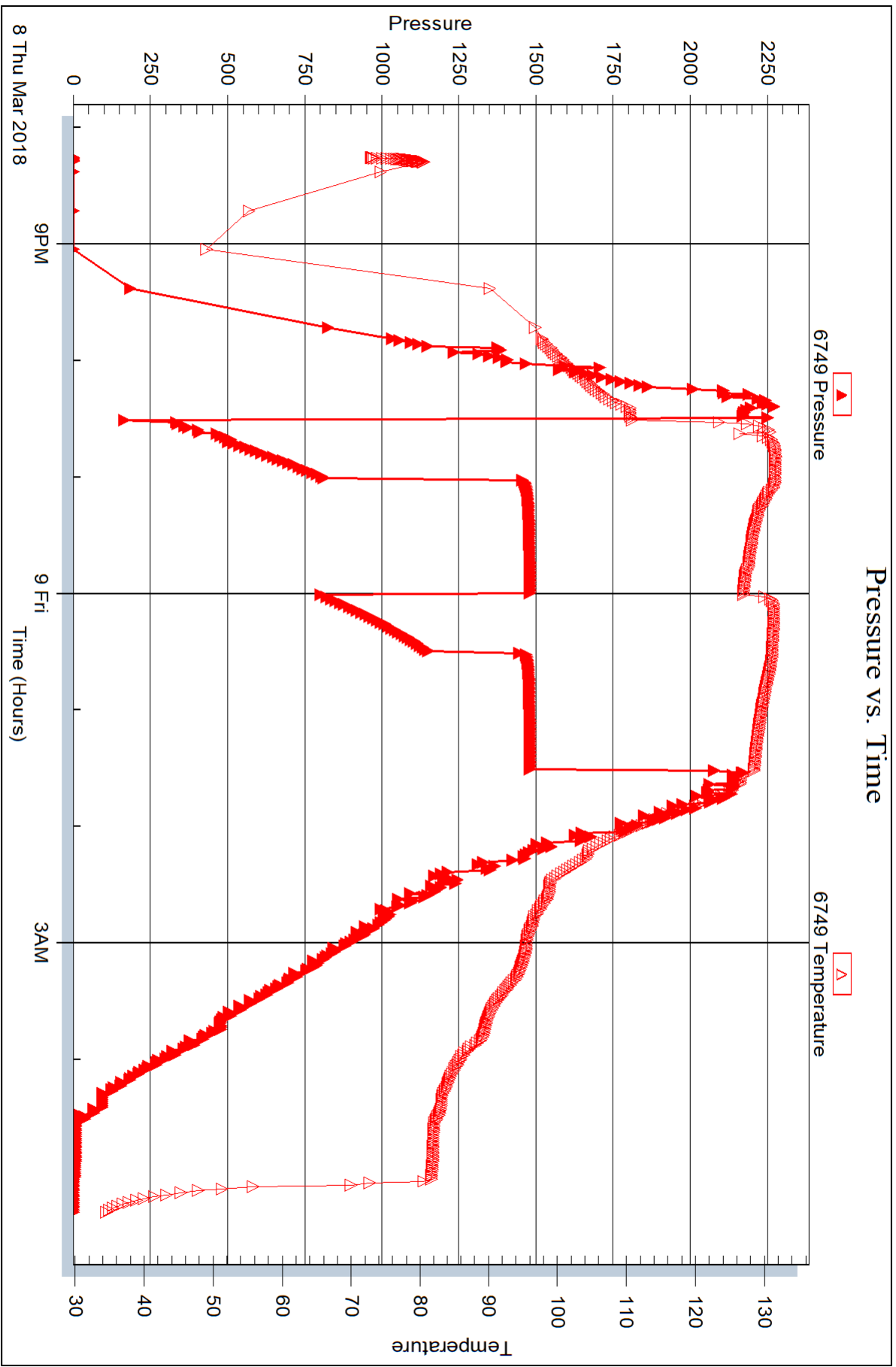
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW w as .28 @40 degrees

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **CMX Inc**

1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206

ATTN: Ken LeBlanc

### **Beacon Hill #1-20**

### **20-27S-14W Pratt,KS**

Start Date: 2018.03.09 @ 22:22:32

End Date: 2018.03.10 @ 06:10:34

Job Ticket #: 63369                      DST #: 4

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

Printed: 2018.03.13 @ 09:04:39



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

CMX Inc  
1700 N Waterfront Pkw y  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt,KS**

**Beacon Hill #1-20**

Job Ticket: 63369

**DST#: 4**

Test Start: 2018.03.09 @ 22:22:32

## GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:57:19

Time Test Ended: 06:10:34

Test Type: Conventional Straddle (Reset)

Tester: Leal Cason

Unit No: 74

**Interval: 4485.00 ft (KB) To 4546.00 ft (KB) (TVD)**

Reference Elevations: 2003.00 ft (KB)

Total Depth: 4617.00 ft (KB) (TVD)

1990.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 13.00 ft

**Serial #: 8875**

**Inside**

Press@RunDepth: 44.84 psig @ 4486.00 ft (KB)

Capacity: psig

Start Date: 2018.03.09

End Date:

2018.03.10

Last Calib.:

2018.03.10

Start Time:

22:22:33

End Time:

06:10:34

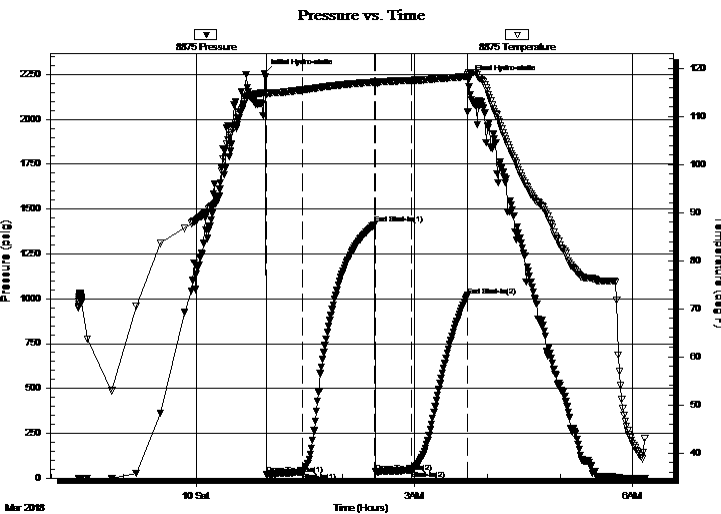
Time On Btm:

2018.03.10 @ 00:55:49

Time Off Btm:

2018.03.10 @ 03:44:34

**TEST COMMENT:** IF: Weak 1/2" Blow  
IS: No Blow Back  
FF: Weak Surface Blow  
FS: No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2256.43	115.05	Initial Hydro-static
2	19.39	114.56	Open To Flow (1)
32	32.14	115.57	Shut-In(1)
92	1414.84	117.16	End Shut-In(1)
92	34.72	116.85	Open To Flow (2)
122	44.84	117.56	Shut-In(2)
168	1017.44	118.38	End Shut-In(2)
169	2223.48	119.05	Final Hydro-static

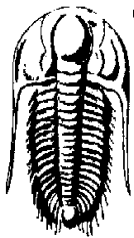
## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

## Gas Rates

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

\* Recovery from multiple tests



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

CMX Inc  
 1700 N Waterfront Pkw y  
 Bldg 300 B  
 Wichita, KS 67206  
 ATTN: Ken LeBlanc

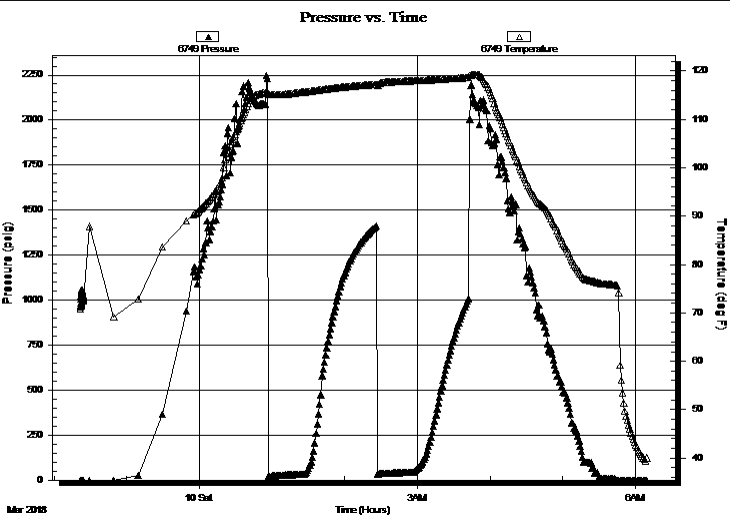
**20-27S-14W Pratt, KS**  
**Beacon Hill #1-20**  
 Job Ticket: 63369      **DST#: 4**  
 Test Start: 2018.03.09 @ 22:22:32

### GENERAL INFORMATION:

Formation: <b>Viola</b>					
Deviated: No Whipstock:		ft (KB)	Test Type: Conventional Straddle (Reset)		
Time Tool Opened: 00:57:19			Tester: Leal Cason		
Time Test Ended: 06:10:34			Unit No: 74		
<b>Interval: 4485.00 ft (KB) To 4546.00 ft (KB) (TVD)</b>			Reference Elevations: 2003.00 ft (KB)		
Total Depth: 4617.00 ft (KB) (TVD)					1990.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Good		KB to GR/CF: 13.00 ft		

<b>Serial #: 6749</b>	<b>Outside</b>				
Press@RunDepth:	psig @	4486.00 ft (KB)	Capacity:		psig
Start Date: 2018.03.09	End Date:	2018.03.10	Last Calib.:		2018.03.10
Start Time: 22:22:01	End Time:	06:10:02	Time On Btm:		
			Time Off Btm:		

TEST COMMENT: IF: Weak 1/2" Blow  
 IS: No Blow Back  
 FF: Weak Surface Blow  
 FS: No Blow Back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

### Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

CMX Inc  
1700 N Waterfront Pkw y  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**

**Beacon Hill #1-20**

Job Ticket: 63369

**DST#: 4**

Test Start: 2018.03.09 @ 22:22:32

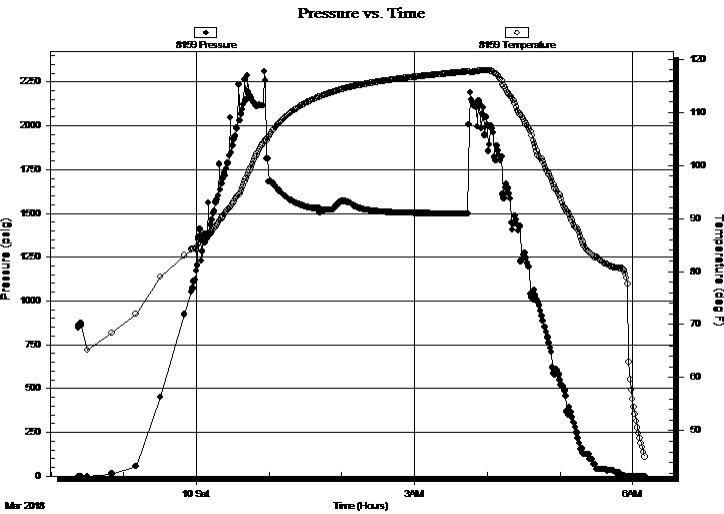
## GENERAL INFORMATION:

Formation: **Viola**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Straddle (Reset)  
 Time Tool Opened: 00:57:19  
 Tester: Leal Cason  
 Time Test Ended: 06:10:34  
 Unit No: 74  
 Interval: **4485.00 ft (KB) To 4546.00 ft (KB) (TVD)**  
 Reference Elevations: 2003.00 ft (KB)  
 Total Depth: 4617.00 ft (KB) (TVD)  
 1990.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 13.00 ft

## Serial #: 8159 Below (Straddle)

Press@RunDepth: psig @ 4550.00 ft (KB) Capacity: psig  
 Start Date: 2018.03.09 End Date: 2018.03.10 Last Calib.: 1899.12.30  
 Start Time: 22:22:37 End Time: 06:10:38 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF: Weak 1/2" Blow  
 IS: No Blow Back  
 FF: Weak Surface Blow  
 FS: No Blow Back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

CMX Inc  
1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt,KS**  
**Beacon Hill #1-20**  
Job Ticket: 63369 **DST#: 4**  
Test Start: 2018.03.09 @ 22:22:32

## Tool Information

Drill Pipe:	Length: 4295.00 ft	Diameter: 3.80 inches	Volume: 60.25 bbl	Tool Weight: 2100.00 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 61.14 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4485.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	4546.00 ft			
Interval between Packers:	61.00 ft			
Tool Length:	158.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments: Successful Straddle

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4464.00	
Hydraulic tool	5.00			4469.00	
Jars	5.00			4474.00	
Safety Joint	2.00			4476.00	
Packer	5.00			4481.00	26.00 Bottom Of Top Packer
Packer	4.00			4485.00	
Stubb	1.00			4486.00	
Recorder	0.00	8875	Inside	4486.00	
Recorder	0.00	6749	Outside	4486.00	
Perforations	2.00			4488.00	
Change Over Sub	1.00			4489.00	
Drill Pipe	31.00			4520.00	
change Over Sub	1.00			4521.00	
perforations	24.00			4545.00	
Blank Off Sub	1.00			4546.00	61.00 Tool Interval
Packer	3.00			4549.00	
Change Over Sub	1.00			4550.00	
Recorder	0.00	8159	Below	4550.00	
Drill Pipe	63.00			4613.00	
Change Over Sub	1.00			4614.00	
Bullnose	3.00			4617.00	71.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>158.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

CMX Inc  
1700 N Waterfront Pkwy  
Bldg 300 B  
Wichita, KS 67206  
ATTN: Ken LeBlanc

**20-27S-14W Pratt, KS**  
**Beacon Hill #1-20**  
Job Ticket: 63369      **DST#: 4**  
Test Start: 2018.03.09 @ 22:22:32

## 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: 80.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

## Recovery Information

Recovery Table

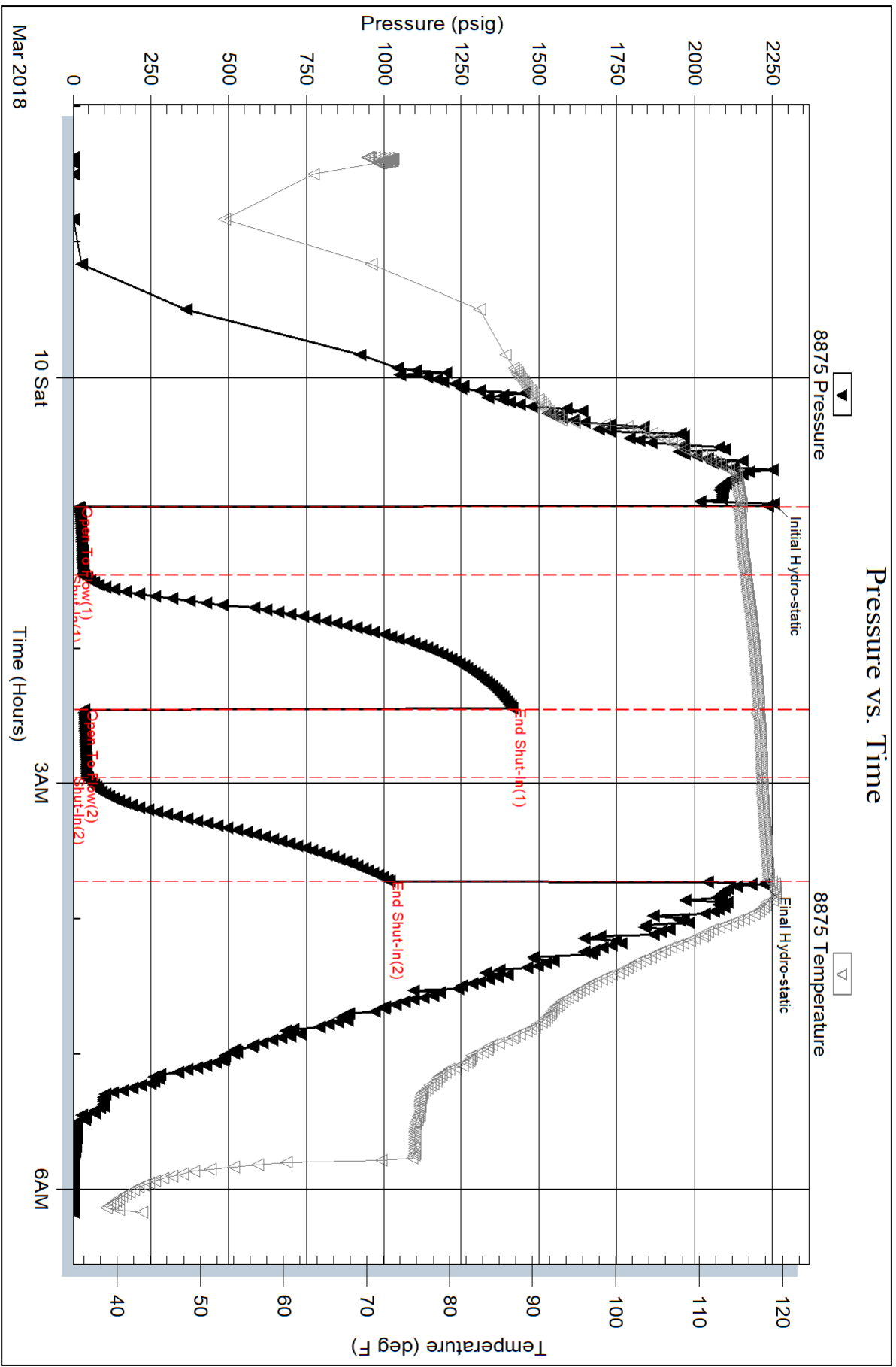
Length ft	Description	Volume bbl
5.00	Mud	0.025

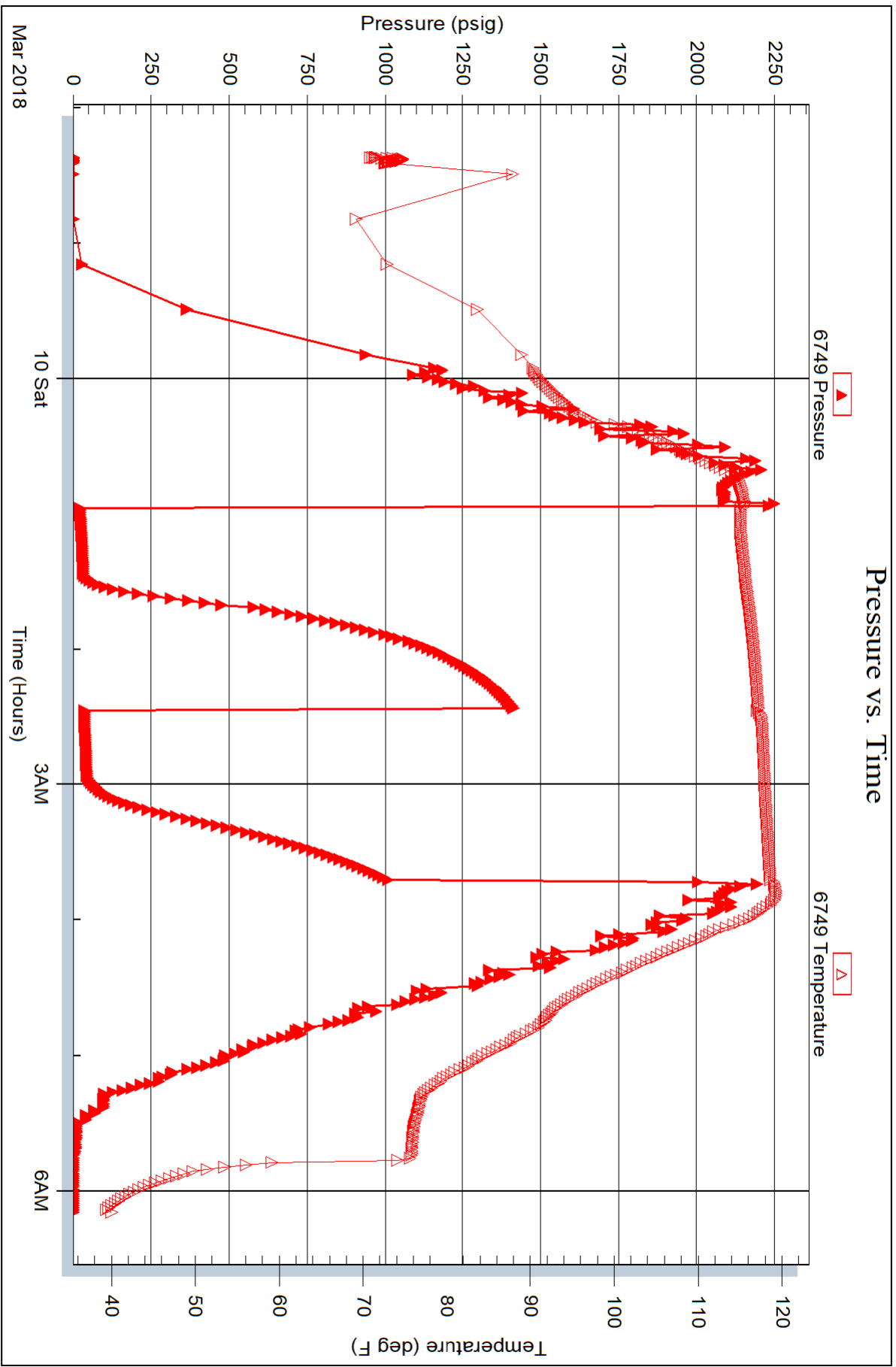
Total Length: 5.00 ft      Total Volume: 0.025 bbl

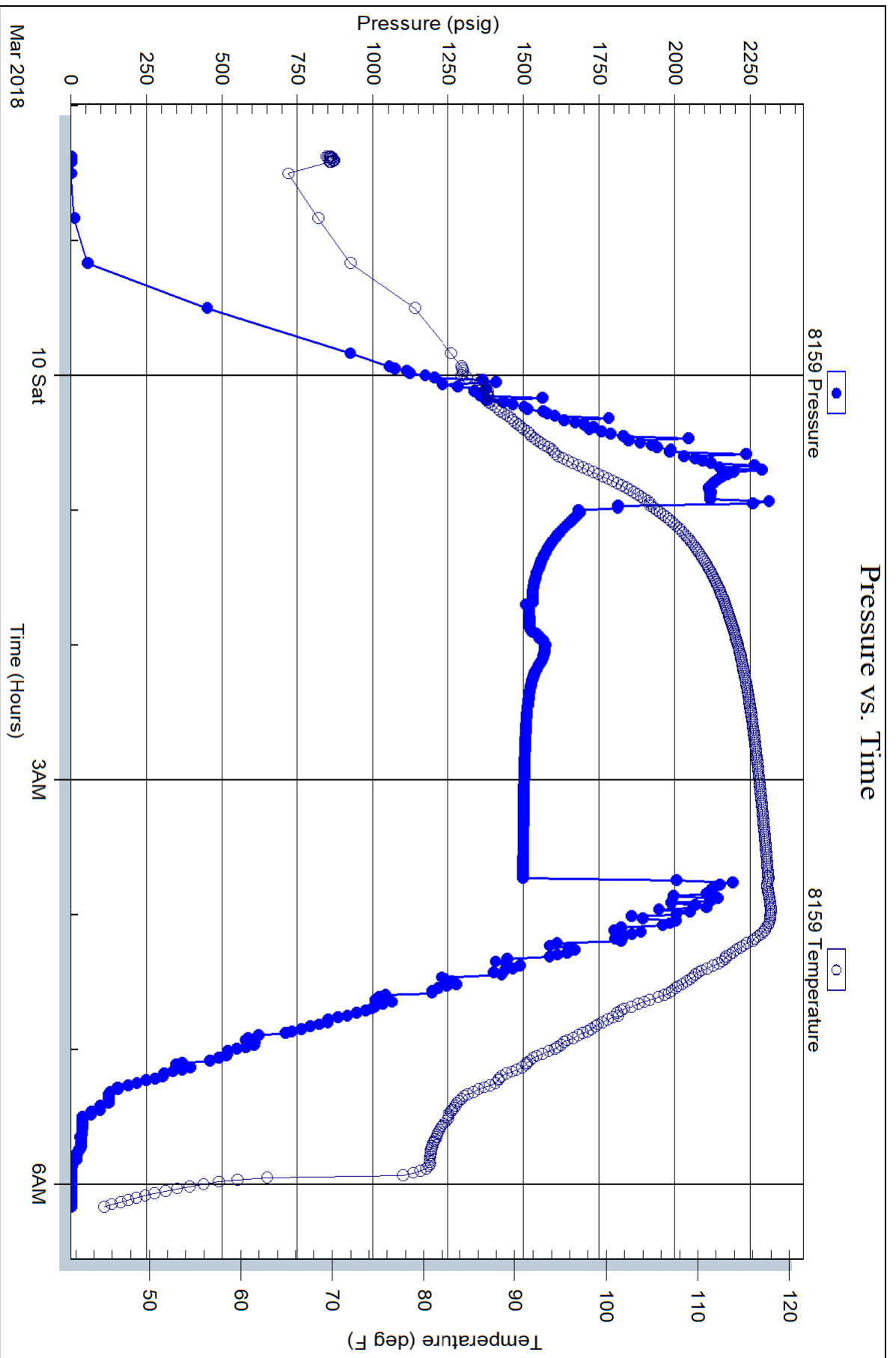
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

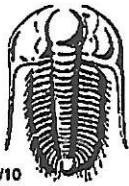
Laboratory Name:      Laboratory Location:

Recovery Comments:









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63366

Well Name & No. Beacon Hill 1-20 Test No. 1 Date 03/05/18  
 Company CMX INC Elevation 2003 KB 1990 GL  
 Address 1700 N. Waterfront Pkwy Bldg 300B Wichita, KS 67206  
 Co. Rep / Geo. Ken Le Blanc Rig Duke 7  
 Location: Sec. 20 Twp 27S Rge. 14W Co. Pratt State KS

Interval Tested 3955 - 3975 Zone Tested Lansing "B"  
 Anchor Length 20 Drill Pipe Run 3760 Mud Wt. 9.4  
 Top Packer Depth 3950 Drill Collars Run 181 Vis 56  
 Bottom Packer Depth 3955 Wt. Pipe Run 0 WL 6.8  
 Total Depth 3975 Chlorides 3000 ppm System LCM 2#

Blow Description IF: Strong Blow, BOB in 30 seconds, Built to 243 inches  
ISI: Blow Back Built to 44 inches  
FF: Strong Blow, BOB Immediate, Built to 231 inches  
FST: Blow Back Built to 25 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>3175</u>	<u>GIP</u>				
<u>166</u>	<u>GW MCO</u>	<u>20</u>	<u>58</u>	<u>10</u>	<u>12</u>
<u>63</u>	<u>GOMCW</u>	<u>10</u>	<u>2</u>	<u>78</u>	<u>10</u>
<u>527</u>	<u>Water</u>				
Rec	Feet of	%gas	%oil	%water	%mud

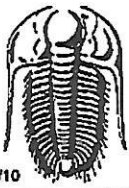
Rec Total 756 BHT 120 Gravity 1.10 API RW 15 @ 42 °F Chlorides 87000 ppm

(A) Initial Hydrostatic	<u>2002</u>	<input checked="" type="checkbox"/> Test	<u>1050</u>	T-On Location	<u>14:00</u>
(B) First Initial Flow	<u>105</u>	<input type="checkbox"/> Jars		T-Started	<u>15:22</u>
(C) First Final Flow	<u>186</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>17:20</u>
(D) Initial Shut-In	<u>1318</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>20:40</u>
(E) Second Initial Flow	<u>196</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>23:12</u>
(F) Second Final Flow	<u>366</u>	<input checked="" type="checkbox"/> Mileage	<u>20</u> 20	Comments	
(G) Final Shut-In	<u>1315</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1911</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>49</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>60</u>	<input type="checkbox"/> Day Standby		Total	<u>1145</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1145</u>		

Approved By Ken Le Blanc 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. 63367

Well Name & No. Beacon Hill 1-20 Test No. 2 Date 03/06/18  
 Company CMX inc Elevation 2003 KB 1990 GL  
 Address 1700 N. Waterfront Pkwy Bldg 300B Wichita, KS 67206  
 Co. Rep / Geo. Ken LeBlanc Rig Duke 7  
 Location: Sec. 20 Twp 27S Rge. 14W Co. Pratt State KS

Interval Tested 4085 - 4100 Zone Tested Lansing "H"  
 Anchor Length 15 Drill Pipe Run 3885 Mud Wt. 9.15  
 Top Packer Depth 4080 Drill Collars Run 181 Vis 52  
 Bottom Packer Depth 4085 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4100 Chlorides 4000 ppm System LCM 2

Blow Description IF: weak Blow, Built to 3 inches  
ISI: NO Blow Back  
FF: weak 1/2 inch Blow  
FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>				

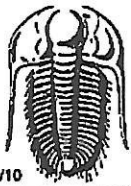
Rec Total 5 BHT 110 Gravity NIC API RW NIC @ NIC F Chlorides NIC ppm  
 Test 1150 T-On Location 15:30  
 Jars \_\_\_\_\_ T-Started 16:18  
 Safety Joint 75 T-Open 18:12  
 Circ Sub \_\_\_\_\_ T-Pulled 20:31  
 Hourly Standby \_\_\_\_\_ T-Out 22:20  
 Mileage 20 20 Comments \_\_\_\_\_  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1245

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 30  
 Sub Total 0  
 Total 1245  
 MP/DST Disc't \_\_\_\_\_

Approved By Ken LeBlanc Our Representative \_\_\_\_\_

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. **63368**

Well Name & No. Beacon Hill 1-20 Test No. 3 Date 03/08/18  
 Company CMX JAC Elevation 2003 KB 1990 GL  
 Address 1700 N Waterfront PKWY Bldg 300B Wichita, KS 67206  
 Co. Rep / Geo. Ken LeBlanc Rig Duke 7  
 Location: Sec. 20 Twp 27S Rge. 14W Co. Pratt State KS

Interval Tested 4540 - 4567 Zone Tested Simpson  
 Anchor Length 27 Drill Pipe Run 4357 Mud Wt. 9.2  
 Top Packer Depth 4535 Drill Collars Run 181 Vis 53  
 Bottom Packer Depth 4540 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4567 Chlorides 4300 ppm System LCM 4

Blow Description IF: strong Blow, BOB in 2 minutes  
ISI: 1 inch Blow Back  
FF: strong Blow, BOB in 3 minutes  
FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>GLP</u>				
<u>93</u>	<u>505 WCM</u>		<u>2</u>	<u>48</u>	<u>50</u>
<u>2394</u>	<u>Water</u>				

Rec Total 2487 BHT 128 Gravity NIC API RW 28 @ 40 °F Chlorides 48000 ppm

- (A) Initial Hydrostatic 2242
- (B) First Initial Flow 206
- (C) First Final Flow 809
- (D) Initial Shut-In 1480
- (E) Second Initial Flow 800
- (F) Second Final Flow 1149
- (G) Final Shut-In 1481
- (H) Final Hydrostatic 2251

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

- Test 1150
- Jars
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 20 20
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby 1.5d 9h
- Accessibility
- Sub Total 1245

- T-On Location 19:15
- T-Started 20:15
- T-Open 22:30
- T-Pulled 01:30
- T-Out 05:19

- Comments
- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 300
- Total 1545
- MP/DST Disc't

Approved By Ken LeBlanc 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. 63369

Well Name & No. Beacon Hill 1-20 Test No. 4 Date 03/09/18  
 Company CMX INC Elevation 2003 KB 1990 GL  
 Address 1700 N Waterfront PKwy Bldg 300B Wichita, KS 67206  
 Co. Rep / Geo. Ken LeBlanc Rig Duke 7  
 Location: Sec. 20 Twp 27S Rge. 14W Co. P10A7 State KS

Interval Tested 4485 - 4546 Zone Tested Viola  
 Anchor Length 61 Drill Pipe Run 4295 Mud Wt. 9.25  
 Top Packer Depth 4480 Drill Collars Run 181 Vis 80  
 Bottom Packer Depth 4516 Wt. Pipe Run 0 WL 6.4  
 Total Depth 4617 Chlorides 41000 ppm System LCM 4

Blow Description IF: Weak 1/2 inch Blow  
ISI: NO Blow Back  
FF: Weak surface Blow  
FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</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 119 Gravity NK API RW NK @ NK F Chlorides NK ppm  
 (A) Initial Hydrostatic 2256  Test 1150 T-On Location 21:15  
 (B) First Initial Flow 19  Jars 250 T-Started 22:22  
 (C) First Final Flow 32  Safety Joint 75 T-Open 00:57  
 (D) Initial Shut-In 1415  Circ Sub \_\_\_\_\_ T-Pulled 03:43  
 (E) Second Initial Flow 35  Hourly Standby \_\_\_\_\_ T-Out 06:10  
 (F) Second Final Flow 45  Mileage 20 20 Comments successful  
 (G) Final Shut-In 1017  Sampler \_\_\_\_\_ straddle  
 (H) Final Hydrostatic 2223  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 2095  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 2095

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

Approved By Ken LeBlanc Our Representative [Signature]

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