TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

McKenna Unit #1-9

9-18s-29w Lane,KS

Start Date: 2014.03.13 @ 14:33:00

End Date: 2014.03.13 @ 18:47:45

Job Ticket #: 56362 DST #: 1

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

Printed: 2014.03.20 @ 17:40:38

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56362 **DST#: 1**

Test Start: 2014.03.13 @ 14:33:00

GENERAL INFORMATION:

Formation: **" I "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:16:30
Time Test Ended: 18:47:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Samuel Esparza
Unit No: 71

Interval: 4159.00 ft (KB) To 4185.00 ft (KB) (TVD)
Total Depth: 4185.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

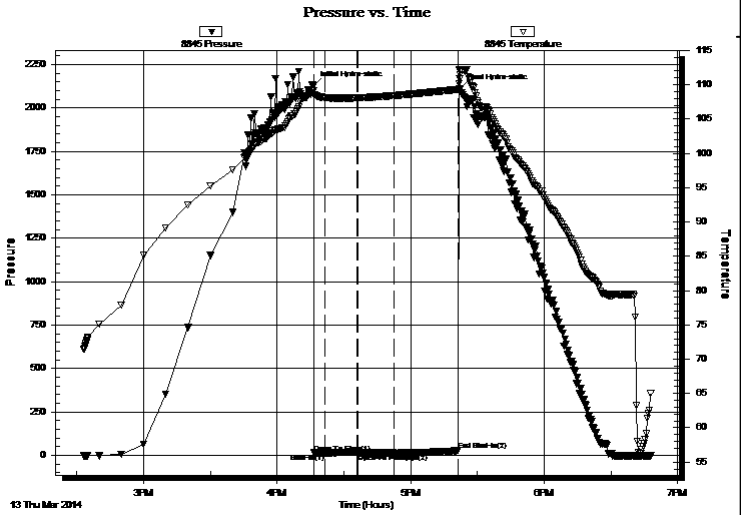
Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8845 **Outside**

Press@RunDepth: 12.99 psig @ 4160.00 ft (KB)
Start Date: 2014.03.13 End Date: 2014.03.13
Start Time: 14:33:05 End Time: 18:47:45

Capacity: 8000.00 psig
Last Calib.: 2014.03.13
Time On Btm: 2014.03.13 @ 16:16:15
Time Off Btm: 2014.03.13 @ 17:22:00

TEST COMMENT: IF: Weak Surface Blow .
ISI: No Return.
FF: Weak Surface Blow Died @ 11min.
FSI: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2129.63	109.19	Initial Hydro-static
1	14.14	108.47	Open To Flow (1)
5	14.50	108.11	Shut-In(1)
20	19.96	108.08	End Shut-In(1)
20	13.20	108.09	Open To Flow (2)
36	12.99	108.41	Shut-In(2)
65	27.92	109.32	End Shut-In(2)
66	2112.44	110.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m (Oil Spots)	0.02

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56362 **DST#: 1**

Test Start: 2014.03.13 @ 14:33:00

GENERAL INFORMATION:

Formation: **" I "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:16:30
Time Test Ended: 18:47:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Samuel Esparza
Unit No: 71

Interval: 4159.00 ft (KB) To 4185.00 ft (KB) (TVD)
Total Depth: 4185.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

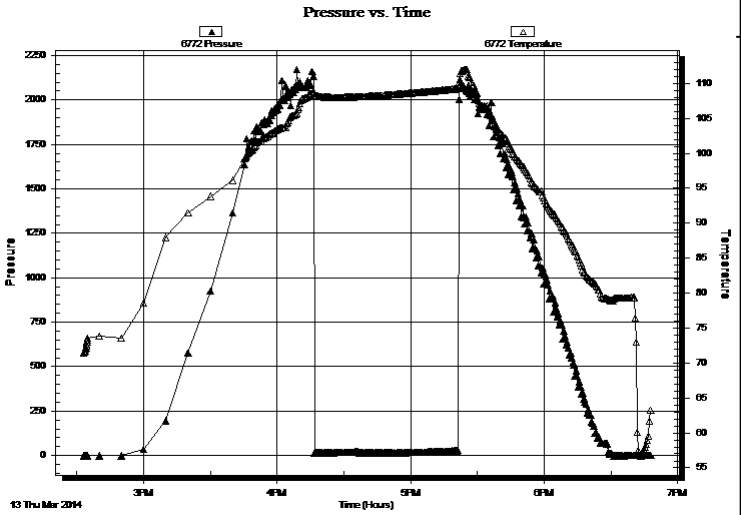
Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6772 **Outside**

Press@RunDepth: psig @ 4160.00 ft (KB)
Start Date: 2014.03.13 End Date: 2014.03.13
Start Time: 14:33:05 End Time: 18:48:00

Capacity: 8000.00 psig
Last Calib.: 2014.03.13
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak Surface Blow .
ISI: No Return.
FF: Weak Surface Blow Died @ 11min.
FSI: No Return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m (Oil Spots)	0.02

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56362 **DST#: 1**

Test Start: 2014.03.13 @ 14:33:00

Tool Information

Drill Pipe:	Length:	4044.00 ft	Diameter:	3.80 inches	Volume:	56.73 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	116.00 ft	Diameter:	2.25 inches	Volume:	0.57 bbl	
					Total Volume:	57.30 bbl	

Drill Pipe Above KB:	29.00 ft
Depth to Top Packer:	4159.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	26.00 ft
Tool Length:	54.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	54000.00 lb
	Final	54000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4132.00		
Shut In Tool	5.00			4137.00		
Hydraulic tool	5.00			4142.00		
Jars	5.00			4147.00		
Safety Joint	3.00			4150.00		
Packer	5.00			4155.00	28.00	Bottom Of Top Packer
Packer	4.00			4159.00		
Stubb	1.00			4160.00		
Recorder	0.00	6772	Outside	4160.00		
Recorder	0.00	8845	Outside	4160.00		
Perforations	20.00			4180.00		
Bullnose	5.00			4185.00	26.00	Bottom Packers & Anchor
Total Tool Length:	**54.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56362 **DST#: 1**

Test Start: 2014.03.13 @ 14:33:00

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:	8.38 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2100.00 ppm				
Filter Cake:	2.00 inches				

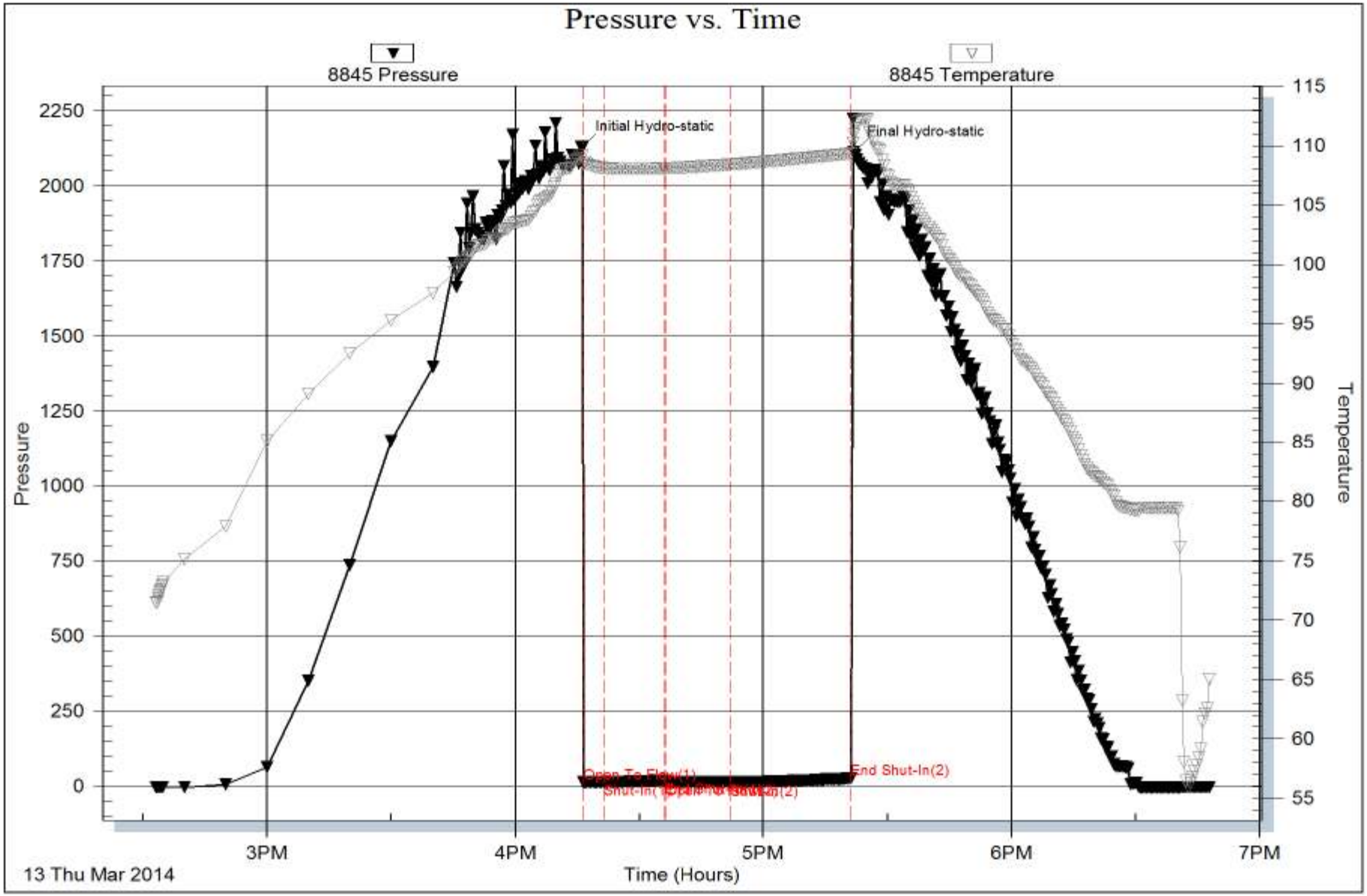
Recovery Information

Recovery Table

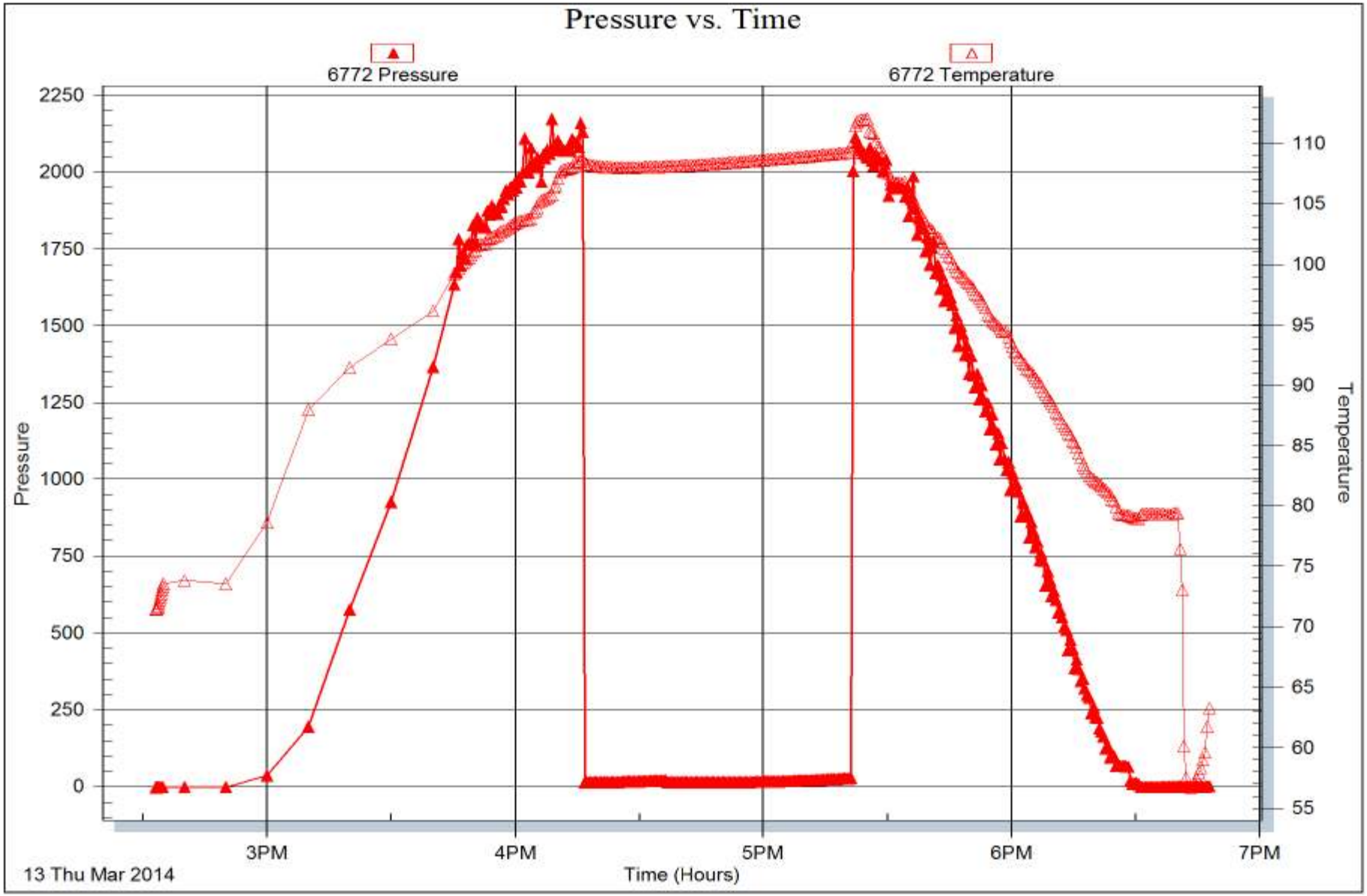
Length ft	Description	Volume bbl
5.00	Mud 100m (Oil Spots)	0.025

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:


Pressure vs. Time
8845 Pressure
8845 Temperature
Initial Hydro-static
Final Hydro-static
Open To Flow(1)
End Shut-In(2)
Pressure
Temperature
2250
2000
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
65
60
55
3PM
4PM
5PM
6PM
7PM
13 Thu Mar 2014
Time (Hours)

Serial #: 6772 **Outside** Larson Engineering, Inc. McKenna Unit #1-9 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 56362 Printed: 2014.03.20 @ 17:40:40

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

McKenna Unit #1-9

9-18s-29w Lane,KS

Start Date: 2014.03.14 @ 15:07:00
End Date: 2014.03.14 @ 19:20:30
Job Ticket #: 56363 DST #: 2

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

Printed: 2014.03.20 @ 17:40:17

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56363 **DST#: 2**

Test Start: 2014.03.14 @ 15:07:00

GENERAL INFORMATION:

Formation: **" L "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:41:30
Time Test Ended: 19:20:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Samuel Esparza
Unit No: 71

Interval: 4250.00 ft (KB) To 4268.00 ft (KB) (TVD)
Total Depth: 4268.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

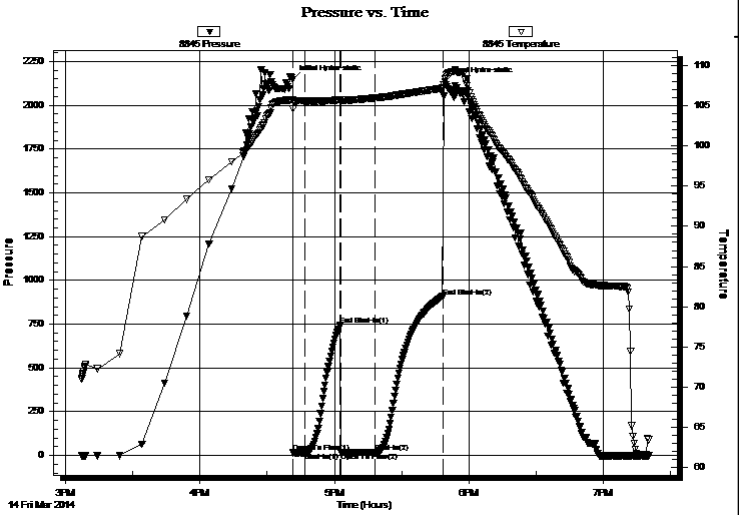
Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8845 **Outside**

Press@RunDepth: 17.39 psig @ 4251.00 ft (KB)
Start Date: 2014.03.14 End Date: 2014.03.14
Start Time: 15:07:05 End Time: 19:20:30

Capacity: 8000.00 psig
Last Calib.: 2014.03.14
Time On Btm: 2014.03.14 @ 16:41:15
Time Off Btm: 2014.03.14 @ 17:49:15

TEST COMMENT: IF: Weak Surface Blow .
ISI: No Return.
FF: No Blow .
FSI: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2148.84	105.72	Initial Hydro-static
1	15.28	104.62	Open To Flow (1)
6	15.78	105.56	Shut-In(1)
22	746.61	105.72	End Shut-In(1)
22	16.04	105.51	Open To Flow (2)
37	17.39	105.94	Shut-In(2)
67	907.53	107.16	End Shut-In(2)
68	2134.41	108.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56363 **DST#: 2**

Test Start: 2014.03.14 @ 15:07:00

GENERAL INFORMATION:

Formation: **" L "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:41:30
Time Test Ended: 19:20:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Samuel Esparza
Unit No: 71

Interval: 4250.00 ft (KB) To 4268.00 ft (KB) (TVD)
Total Depth: 4268.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

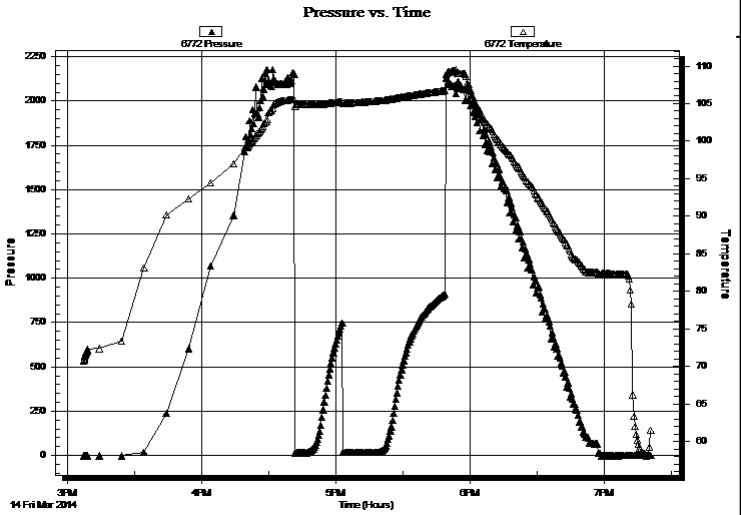
Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6772 **Outside**

Press@RunDepth: psig @ 4251.00 ft (KB)
Start Date: 2014.03.14 End Date: 2014.03.14
Start Time: 15:07:05 End Time: 19:20:45

Capacity: 8000.00 psig
Last Calib.: 2014.03.14
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak Surface Blow .
ISI: No Return.
FF: No Blow .
FSI: No Return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56363 **DST#: 2**

Test Start: 2014.03.14 @ 15:07:00

Tool Information

Drill Pipe:	Length:	4137.00 ft	Diameter:	3.80 inches	Volume:	58.03 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	116.00 ft	Diameter:	2.25 inches	Volume:	0.57 bbl	
					Total Volume:	58.60 bbl	

Drill Pipe Above KB:	31.00 ft
Depth to Top Packer:	4250.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	18.00 ft
Tool Length:	46.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	58000.00 lb
	Final	58000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4223.00		
Shut In Tool	5.00			4228.00		
Hydraulic tool	5.00			4233.00		
Jars	5.00			4238.00		
Safety Joint	3.00			4241.00		
Packer	5.00			4246.00	28.00	Bottom Of Top Packer
Packer	4.00			4250.00		
Stubb	1.00			4251.00		
Recorder	0.00	6772	Outside	4251.00		
Recorder	0.00	8845	Outside	4251.00		
Perforations	12.00			4263.00		
Bullnose	5.00			4268.00	18.00	Bottom Packers & Anchor
Total Tool Length:	**46.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56363 **DST#: 2**

Test Start: 2014.03.14 @ 15:07:00

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:	8.38 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3600.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

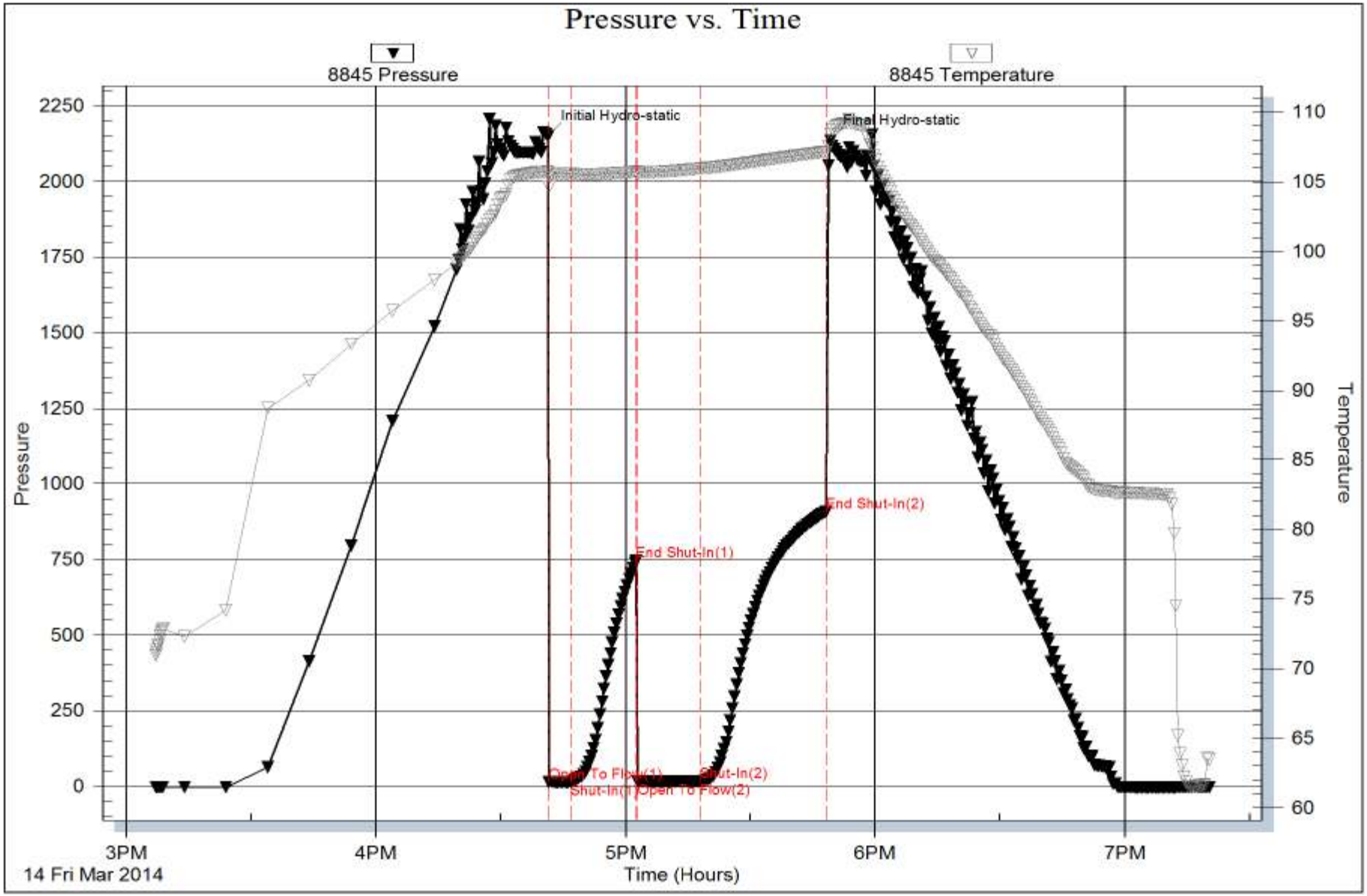
Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100m	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:

Serial #: 8845 **Outside** Larson Engineering, Inc. McKenna Unit #1-9 DST Test Number: 2



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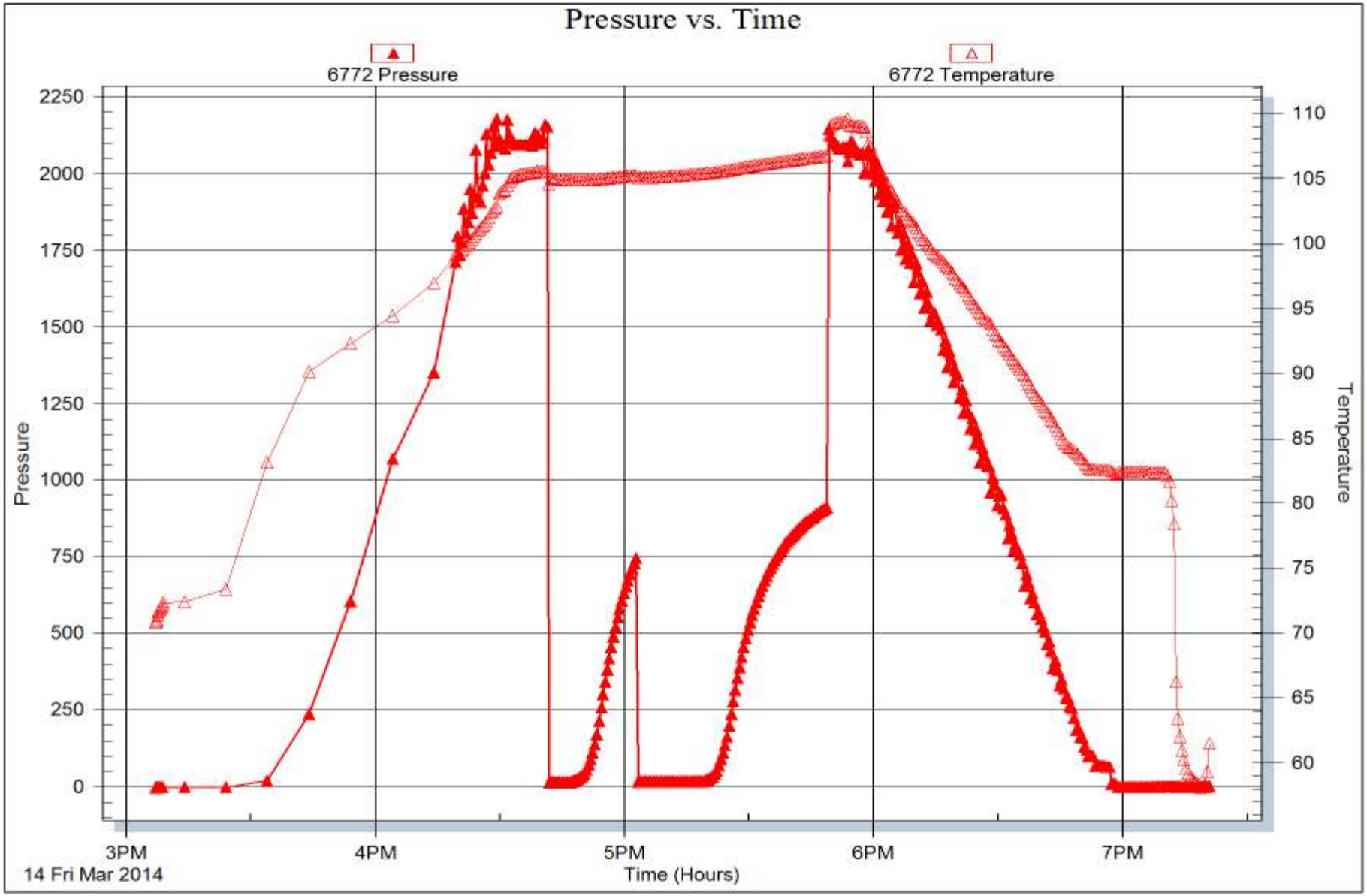
Serial #: 6772 **Outside** Larson Engineering, Inc. McKenna Unit #1-9 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 56363 Printed: 2014.03.20 @ 17:40:19

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

McKenna Unit #1-9

9-18s-29w Lane,KS

Start Date: 2014.03.15 @ 16:48:00

End Date: 2014.03.15 @ 22:40:15

Job Ticket #: 56364 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.03.20 @ 17:39:34

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56364 **DST#: 3**

Test Start: 2014.03.15 @ 16:48:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:01:15
Time Test Ended: 22:40:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Samuel Esparza
Unit No: 71

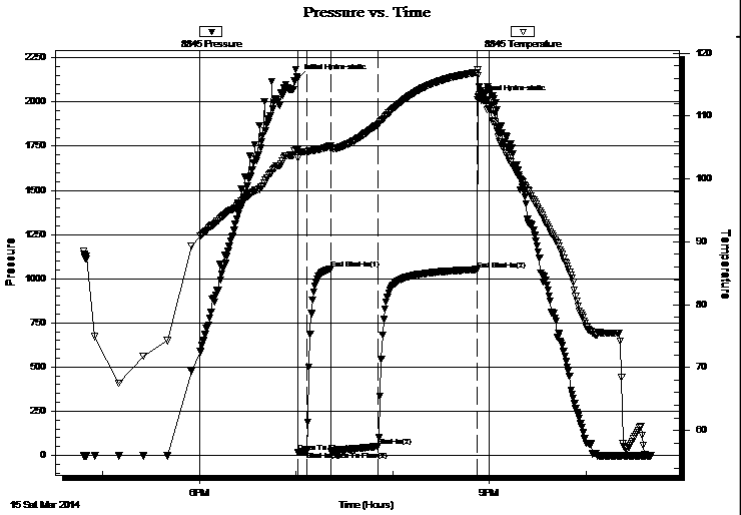
Interval: 4297.00 ft (KB) To 4395.00 ft (KB) (TVD)
Total Depth: 4395.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8845 **Inside**
Press@RunDepth: 51.25 psig @ 4298.00 ft (KB)
Start Date: 2014.03.15 End Date: 2014.03.15
Start Time: 16:48:05 End Time: 22:40:14

Capacity: 8000.00 psig
Last Calib.: 2014.03.15
Time On Btm: 2014.03.15 @ 19:01:00
Time Off Btm: 2014.03.15 @ 20:52:45

TEST COMMENT: IF: 3/4" Blow .
ISI: No Return.
FF: 1 3/4" Blow .
FSI: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2133.83	104.64	Initial Hydro-static
1	16.71	103.33	Open To Flow (1)
6	21.11	104.34	Shut-In(1)
21	1054.76	105.28	End Shut-In(1)
21	24.38	104.73	Open To Flow (2)
50	51.25	108.74	Shut-In(2)
112	1051.58	116.98	End Shut-In(2)
112	2013.03	117.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	WCM 10w 90m	0.44

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56364 **DST#: 3**

Test Start: 2014.03.15 @ 16:48:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:01:15
Time Test Ended: 22:40:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Samuel Esparza
Unit No: 71

Interval: 4297.00 ft (KB) To 4395.00 ft (KB) (TVD)
Total Depth: 4395.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

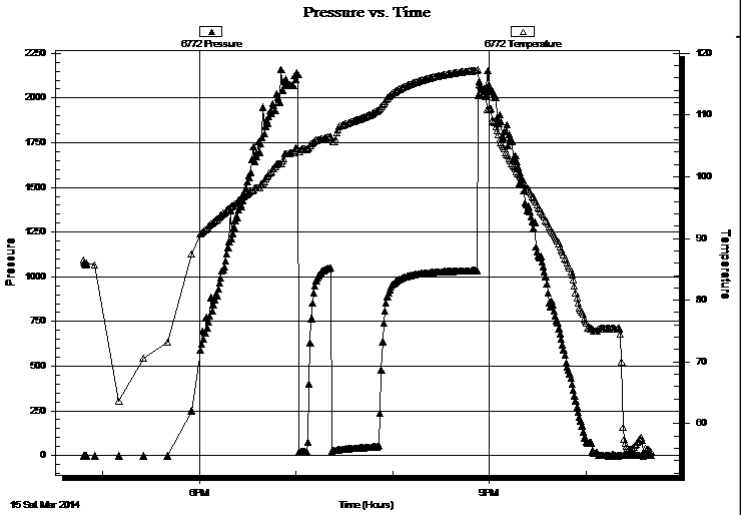
Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6772 **Outside**

Press@RunDepth: psig @ 4298.00 ft (KB)
Start Date: 2014.03.15 End Date: 2014.03.15
Start Time: 16:48:05 End Time: 22:40:29

Capacity: 8000.00 psig
Last Calib.: 2014.03.15
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: 3/4" Blow .
ISI: No Return.
FF: 1 3/4" Blow .
FSI: No Return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
90.00	WCM 10w 90m	0.44

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56364 **DST#: 3**

Test Start: 2014.03.15 @ 16:48:00

Tool Information

Drill Pipe:	Length:	4168.00 ft	Diameter:	3.80	inches	Volume:	58.47	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	116.00 ft	Diameter:	2.25	inches	Volume:	0.57	bbl	
						Total Volume:	59.04	bbl	

Drill Pipe Above KB:	15.00 ft
Depth to Top Packer:	4297.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	98.00 ft
Tool Length:	126.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		75000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	58000.00 lb
	Final	58000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4270.00		
Shut In Tool	5.00			4275.00		
Hydraulic tool	5.00			4280.00		
Jars	5.00			4285.00		
Safety Joint	3.00			4288.00		
Packer	5.00			4293.00	28.00	Bottom Of Top Packer
Packer	4.00			4297.00		
Stubb	1.00			4298.00		
Recorder	0.00	6772	Outside	4298.00		
Recorder	0.00	8845	Inside	4298.00		
Perforations	27.00			4325.00		
Change Over Sub	1.00			4326.00		
Drill Pipe	63.00			4389.00		
Change Over Sub	1.00			4390.00		
Bullnose	5.00			4395.00	98.00	Bottom Packers & Anchor
Total Tool Length:	**126.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56364 **DST#: 3**

Test Start: 2014.03.15 @ 16:48:00

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:	8.38 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2100.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

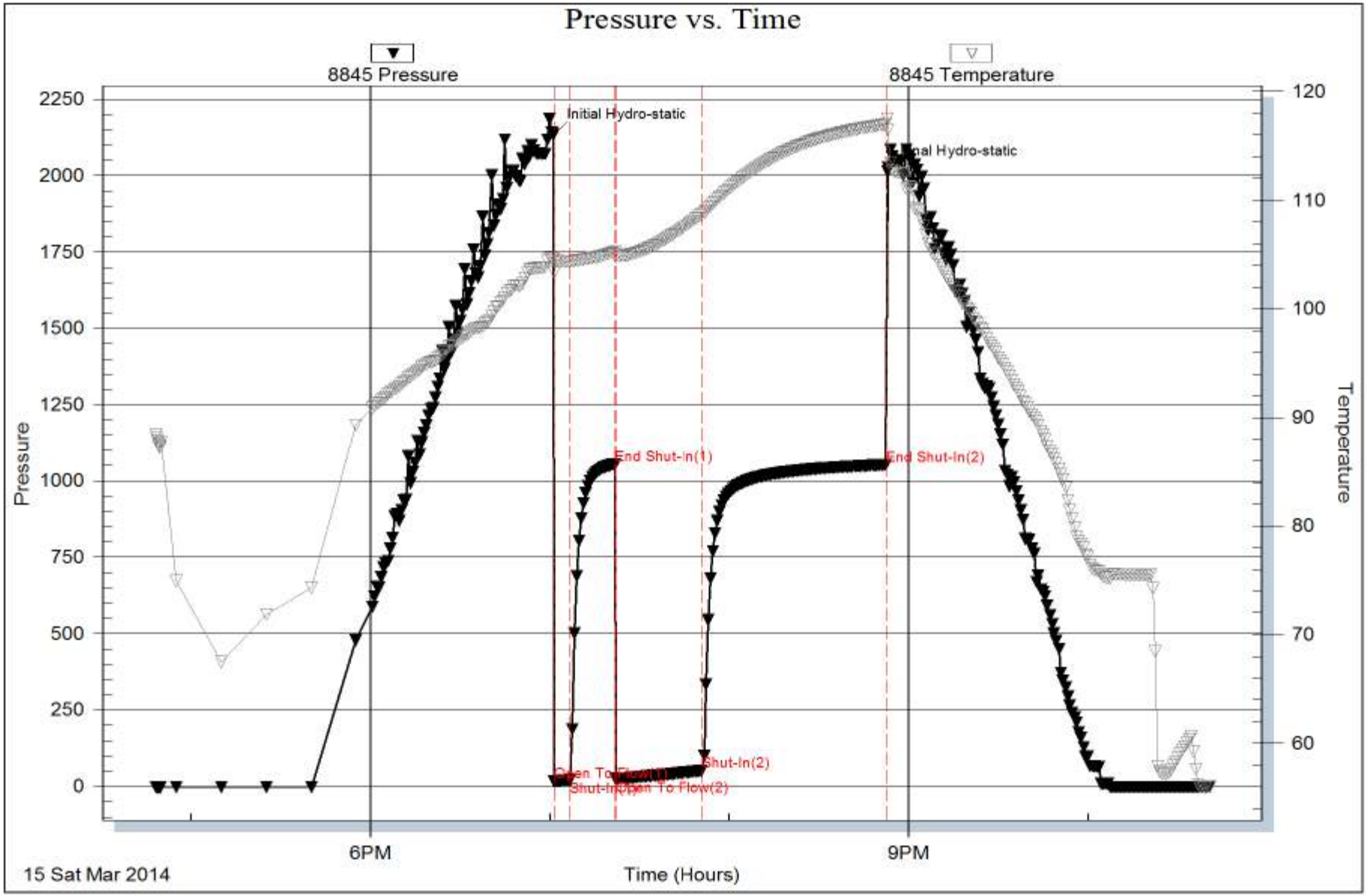
Recovery Table

Length ft	Description	Volume bbl
90.00	WCM 10w 90m	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

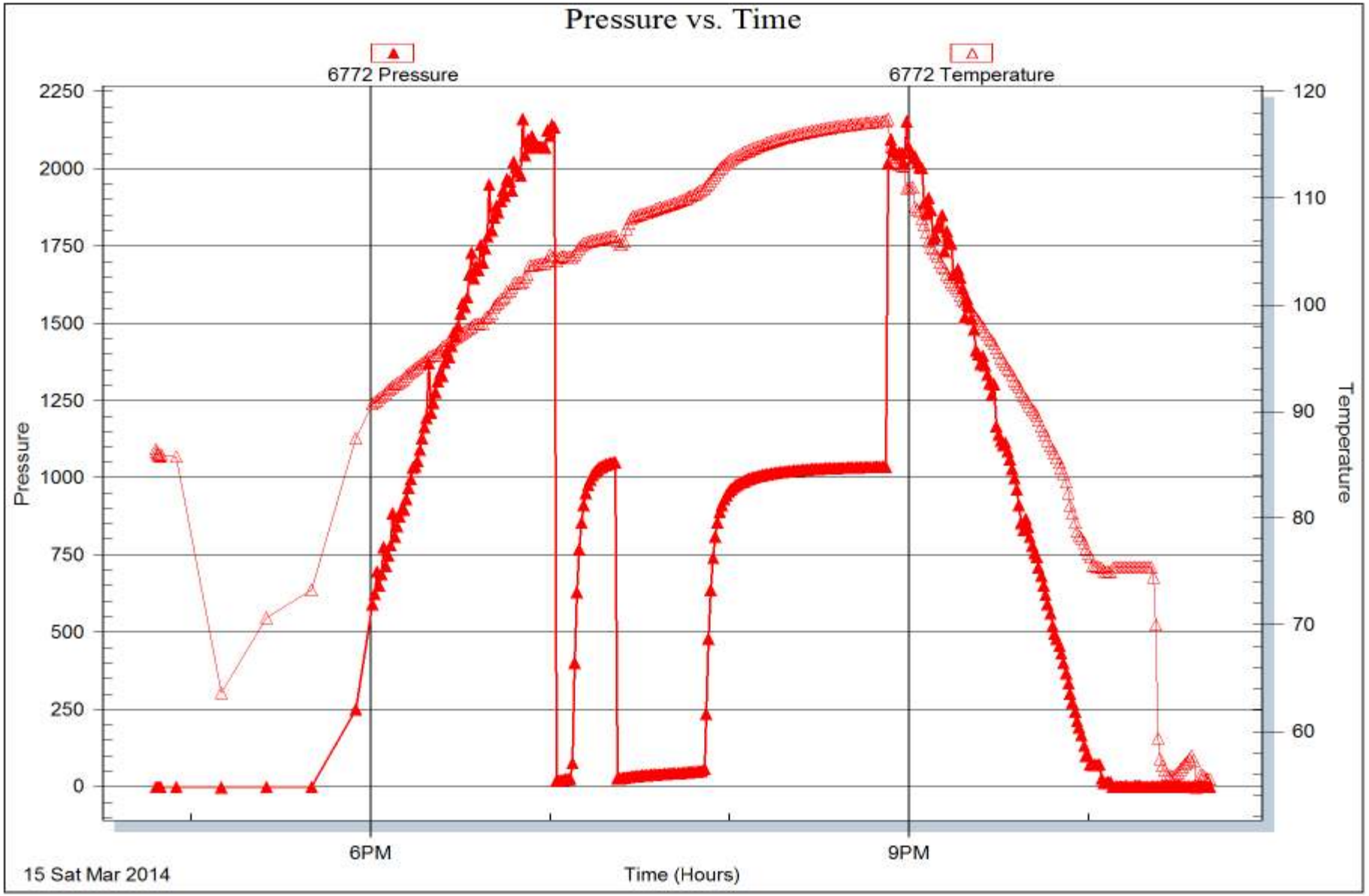
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8845 **Inside** Larson Engineering, Inc. McKenna Unit #1-9 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 56364 Printed: 2014.03.20 @ 17:39:36

Serial #: 6772 **Outside** Larson Engineering, Inc. McKenna Unit #1-9 DST Test Number: 3



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

McKenna Unit #1-9

9-18s-29w Lane,KS

Start Date: 2014.03.16 @ 18:21:00

End Date: 2014.03.16 @ 23:38:30

Job Ticket #: 56365 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.03.20 @ 17:39:01

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56365 **DST#: 4**

Test Start: 2014.03.16 @ 18:21:00

GENERAL INFORMATION:

Formation: **Cherokee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:31:00
Time Test Ended: 23:38:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Samuel Esparza
Unit No: 71

Interval: 4439.00 ft (KB) To 4553.00 ft (KB) (TVD)
Total Depth: 4553.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

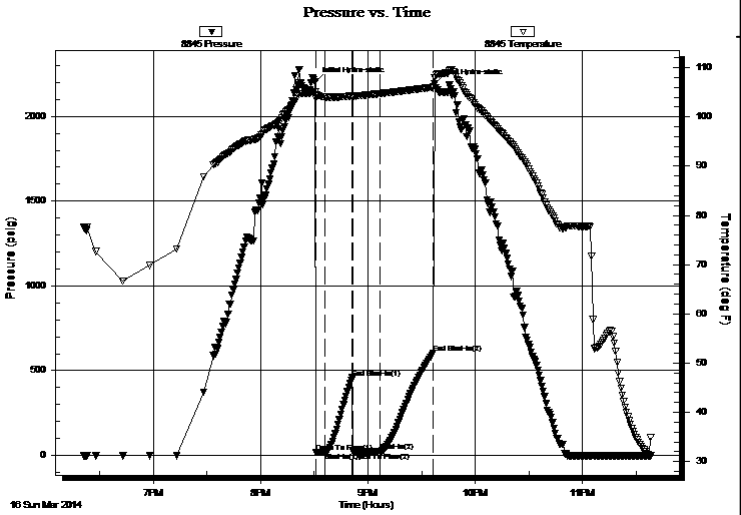
Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8845 **Inside**

Press@RunDepth: 21.92 psig @ 4440.00 ft (KB)
Start Date: 2014.03.16 End Date: 2014.03.16
Start Time: 18:21:05 End Time: 23:38:29

Capacity: 8000.00 psig
Last Calib.: 2014.03.16
Time On Btm: 2014.03.16 @ 20:30:45
Time Off Btm: 2014.03.16 @ 21:37:15

TEST COMMENT: IF: Weak Surface Blow .
ISI: No Return.
FF: Weak Surface Blow .
FSI: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2204.75	105.09	Initial Hydro-static
1	17.23	103.73	Open To Flow (1)
5	19.69	104.03	Shut-In(1)
21	458.39	104.26	End Shut-In(1)
21	20.47	104.14	Open To Flow (2)
36	21.92	104.72	Shut-In(2)
66	603.78	106.01	End Shut-In(2)
67	2195.43	107.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56365 **DST#: 4**

Test Start: 2014.03.16 @ 18:21:00

GENERAL INFORMATION:

Formation: **Cherokee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:31:00
Time Test Ended: 23:38:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Samuel Esparza
Unit No: 71

Interval: 4439.00 ft (KB) To 4553.00 ft (KB) (TVD)
Total Depth: 4553.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

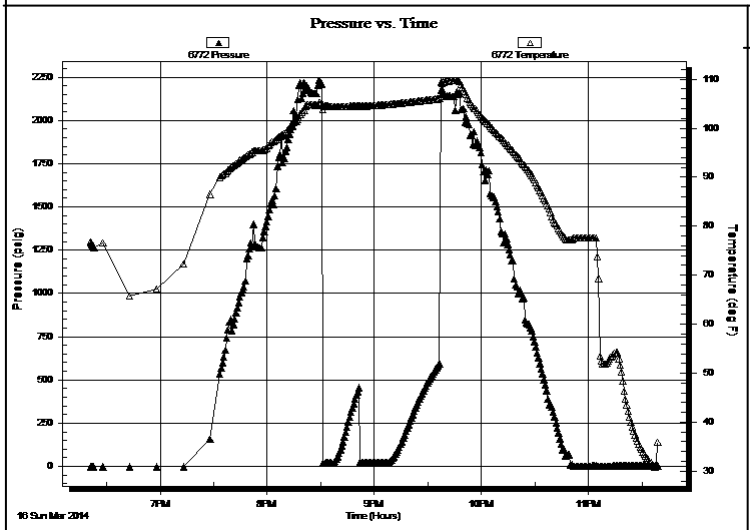
Reference Elevations: 2804.00 ft (KB)
2797.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6772 **Outside**

Press@RunDepth: psig @ 4440.00 ft (KB)
Start Date: 2014.03.16 End Date: 2014.03.16
Start Time: 18:21:05 End Time: 23:38:44

Capacity: 8000.00 psig
Last Calib.: 2014.03.16
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak Surface Blow .
ISI: No Return.
FF: Weak Surface Blow .
FSI: No Return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56365 **DST#: 4**

Test Start: 2014.03.16 @ 18:21:00

Tool Information

Drill Pipe:	Length:	4325.00 ft	Diameter:	3.80	inches	Volume:	60.67	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	116.00 ft	Diameter:	2.25	inches	Volume:	0.57	bbl	
						Total Volume:	61.24	bbl	

Drill Pipe Above KB:	30.00 ft
Depth to Top Packer:	4439.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	114.00 ft
Tool Length:	142.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		75000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	60000.00 lb
	Final	60000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4412.00		
Shut In Tool	5.00			4417.00		
Hydraulic tool	5.00			4422.00		
Jars	5.00			4427.00		
Safety Joint	3.00			4430.00		
Packer	5.00			4435.00	28.00	Bottom Of Top Packer
Packer	4.00			4439.00		
Stubb	1.00			4440.00		
Recorder	0.00	6772	Outside	4440.00		
Recorder	0.00	8845	Inside	4440.00		
Perforations	12.00			4452.00		
Change Over Sub	1.00			4453.00		
Drill Pipe	94.00			4547.00		
Change Over Sub	1.00			4548.00		
Bullnose	5.00			4553.00	114.00	Bottom Packers & Anchor
Total Tool Length:	**142.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

202 West State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

9-18s-29w Lane,KS

McKenna Unit #1-9

Job Ticket: 56365 **DST#: 4**

Test Start: 2014.03.16 @ 18:21:00

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:	62.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.39 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1600.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

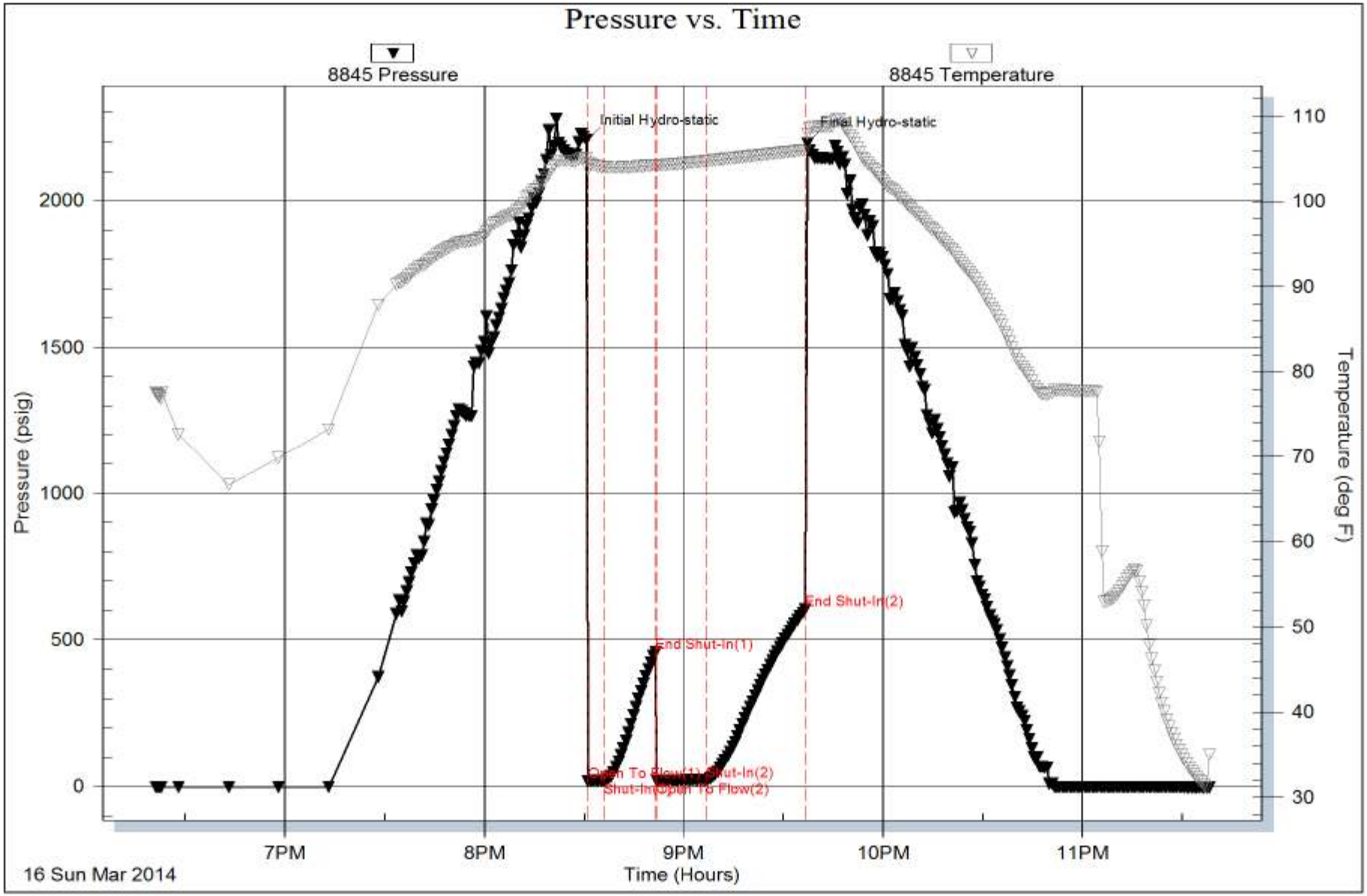
Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

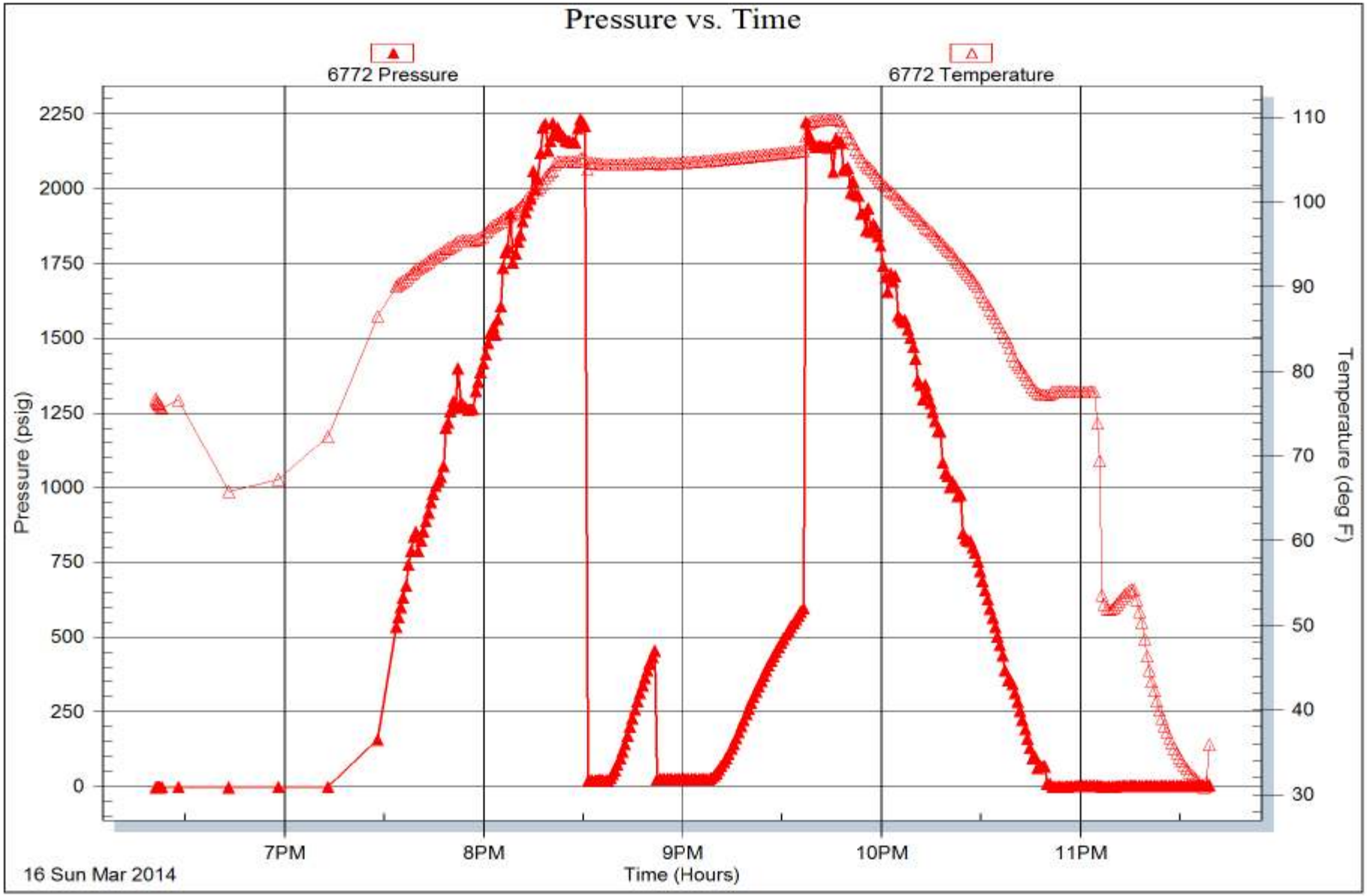
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8845 **Inside** Larson Engineering, Inc. McKenna Unit #1-9 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 56365 Printed: 2014.03.20 @ 17:39:03

Serial #: 6772 **Outside** Larson Engineering, Inc. McKenna Unit #1-9 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 56365 Printed: 2014.03.20 @ 17:39:03

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 56362

Well Name & No. McKenna Unit #1-9 Test No. 1 Date 5/13/11

Company Larson Engineering, Inc Elevation 2804 KB 2797 GL

Address 562 West State Rd 4 Olmitz, KS 67564

Co. Rep / Geo. Vern Schrag Rig HD #3

Location: Sec. 9 Twp. 18S Rge. 29W Co. Lane State KS

Interval Tested 4159-4185 Zone Tested "I"

Anchor Length 26 Drill Pipe Run 4044 Mud Wt. 9.2

Top Packer Depth 4155 Drill Collars Run 116 Vis 52

Bottom Packer Depth 4159 Wt. Pipe Run 0 WL 8.4

Total Depth 4185 Chlorides 2100 ppm System LCM 1

Blow Description IF: Weak surface Blow.

ISI: No Return.

FF: Weak surface Blow died @ 11 min.

FSI: No Return.

Rec 5	Feet of Mud (oil spots)	%gas	%oil	%water	100	%mud
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 — Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2130	☒ Test	1250	T-On Location	1400
(B) First Initial Flow	14	☒ Jars	250	T-Started	14:33
(C) First Final Flow	15	☒ Safety Joint	75	T-Open	16 16
(D) Initial Shut-In	20	☒ Circ Sub	N/C	T-Pulled	17:22
(E) Second Initial Flow	13	☐ Hourly Standby		T-Out	18:48
(F) Second Final Flow	13	☒ Mileage	44 R/T 68.20	Comments	
(G) Final Shut-In	30	☐ Sampler			
(H) Final Hydrostatic	2112	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	5	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	15	☐ Extra Recorder		Sub Total	0
Final Flow	15	☐ Day Standby		Total	1643.20
Final Shut-In	30	☐ Accessibility		MP/DST Disc't	
		Sub Total	1643.20		

Approved By [signature] Our Representative [signature]

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 56363

Well Name & No. McKenna Unit #1-9 Test No. 2 Date 3/14/14

Company Larson Engineering, Inc Elevation 2804 KB 2797 GL

Address 562 West State Road 4 Olmitz, KS 67564

Co. Rep / Geo. Vern Schrag Rig HD #3

Location: Sec. 9 Twp. 18S Rge. 29W Co. Lane State KS

Interval Tested 4250-4268 Zone Tested "L"

Anchor Length 18 Drill Pipe Run 4137 Mud Wt. 9.2

Top Packer Depth 4246 Drill Collars Run 116 Vis 52

Bottom Packer Depth 4250 Wt. Pipe Run 0 WL 8.4

Total Depth 4268 Chlorides 3600 ppm System LCM 1

Blow Description IF: Weak surface Blow.

ISI: No Return.

FF: No Blow.

ESI: No Return.

Rec 5	Feet of Mud	%gas	%oil	%water	100	%mud
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 107 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2149	☒ Test	1250	T-On Location	15:00
(B) First Initial Flow	15	☒ Jars	250	T-Started	15:07
(C) First Final Flow	16	☒ Safety Joint	75	T-Open	16:42
(D) Initial Shut-In	747	☒ Circ Sub	NC	T-Pulled	17:49
(E) Second Initial Flow	16	☐ Hourly Standby		T-Out	19:21
(F) Second Final Flow	17	☒ Mileage	44 R/T 68.20	Comments	
(G) Final Shut-In	908	☐ Sampler			
(H) Final Hydrostatic	2134	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	5	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	15	☐ Extra Recorder		Sub Total	0
Final Flow	15	☐ Day Standby		Total	1643.20
Final Shut-In	30	☐ Accessibility		MP/DST Disc't	
		Sub Total	1643.20		

Approved By Vern Schrag Our Representative

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 56364

Well Name & No. McKenna Unit #1-9 Test No. 3 Date 3/15/11

Company Larson Engineering, Inc. Elevation 2804 KB 2797 GL

Address 522 West State Road 4 Olmitz, KS 67564

Co. Rep / Geo. Von Schling Rig HD #3

Location: Sec. 9 Twp. 18S Rge. 29W Co. Lane State KS

Interval Tested 4297 - 4395 Zone Tested Marmaton

Anchor Length 98 Drill Pipe Run 4164 Mud Wt. 9.3

Top Packer Depth 4293 Drill Collars Run 110 Vis 48

Bottom Packer Depth 4297 Wt. Pipe Run Ø WL 8.4

Total Depth 4395 Chlorides 4400 ppm System LCM 1

Blow Description IF: 3/4" Blow.

ISI: No Return.

FF: 1 3/4" Blow.

FSI: No Return.

Rec 90	Feet of WCM	%gas	%oil	10	%water	90	%mud
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 90 BHT 117 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2134	☒ Test	1250	T-On Location	16:30
(B) First Initial Flow	17	☒ Jars	250	T-Started	16:48
(C) First Final Flow	21	☒ Safety Joint	75	T-Open	19:02
(D) Initial Shut-In	1055	☒ Circ Sub	N/C	T-Pulled	20:53
(E) Second Initial Flow	24	☐ Hourly Standby		T-Out	22:41
(F) Second Final Flow	51	☒ Mileage	4 4 RT 1	68.20	Comments
(G) Final Shut-In	1052	☐ Sampler			
(H) Final Hydrostatic	2013	☐ Straddle		☐ Ruined Shale Packer	
	5	☐ Shale Packer		☐ Ruined Packer	
Initial Open		☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	15	☐ Extra Recorder		Sub Total	0
Final Flow	30	☐ Day Standby		Total	1643.20
Final Shut-In	60	☐ Accessibility		MP/DST Disc't	
		Sub Total	1643.20		

Approved By Our Representative

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 56365

Well Name & No. McKenna Unit #1-9 Test No. 4 Date 3/16/14

Company Larson Engineering, Inc. Elevation 2804 KB 2797 GL

Address 522 West State Road 4 Olmitz, KS 67564

Co. Rep / Geo. Vern Schrag Rig HD #3

Location: Sec. 9 Twp. 18S Rge. 29W Co. Lane State KS

Interval Tested 4439-4553 Zone Tested Cherokee

Anchor Length 114 Drill Pipe Run 4325 Mud Wt. 9.2

Top Packer Depth 4435 Drill Collars Run 116 Vis 62

Bottom Packer Depth 4439 Wt. Pipe Run 0 WL 8.4

Total Depth 4553 Chlorides 1600 ppm System LCM 1

Blow Description IF: Weak Surface Blow.
ISI: No Return.
FF: Weak Surface Blow
FSI: No Return.

Rec	Feet of	%gas	%oil	%water	%mud
5	Mud				100

Rec Total 5 BHT 106 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2205	☒ Test	1250	T-On Location	18:00
(B) First Initial Flow	17	☒ Jars	250	T-Started	18:21
(C) First Final Flow	20	☒ Safety Joint	75	T-Open	20:31
(D) Initial Shut-In	458	☒ Circ Sub	N/C	T-Pulled	21:37
(E) Second Initial Flow	20	☐ Hourly Standby		T-Out	23:38
(F) Second Final Flow	22	☒ Mileage	44 R/T 68.20	Comments	Loaded Tools
(G) Final Shut-In	604	☐ Sampler			
(H) Final Hydrostatic	2195	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	5	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	15	☐ Extra Recorder		Sub Total	0
Final Flow	15	☐ Day Standby		Total	1643.20
Final Shut-In	30	☐ Accessibility		MP/DST Disc't	
		Sub Total	1643.20		

Approved By [signature] Our Representative [signature]