



DRILL STEM TEST REPORT

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

562 West State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

Shapland #1-21

21-18s-28w Lane,KS

Start Date: 2014.07.08 @ 05:31:00

End Date: 2014.07.08 @ 10:30:30

Job Ticket #: 57349 DST #: 1

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

Printed: 2014.07.15 @ 10:36:16



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57349

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 05:31:00

GENERAL INFORMATION:

Formation: " J "

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:49:45

Time Test Ended: 10:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Samuel Esparza

Unit No: 71

Interval: 4216.00 ft (KB) To 4245.00 ft (KB) (TVD)

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4245.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8845 Outside

Press@RunDepth: 18.57 psig @ 4217.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.08

End Date:

2014.07.08

Last Calib.:

2014.07.08

Start Time:

05:31:05

End Time:

10:30:29

Time On Btm:

2014.07.08 @ 07:49:30

Time Off Btm:

2014.07.08 @ 08:59:45

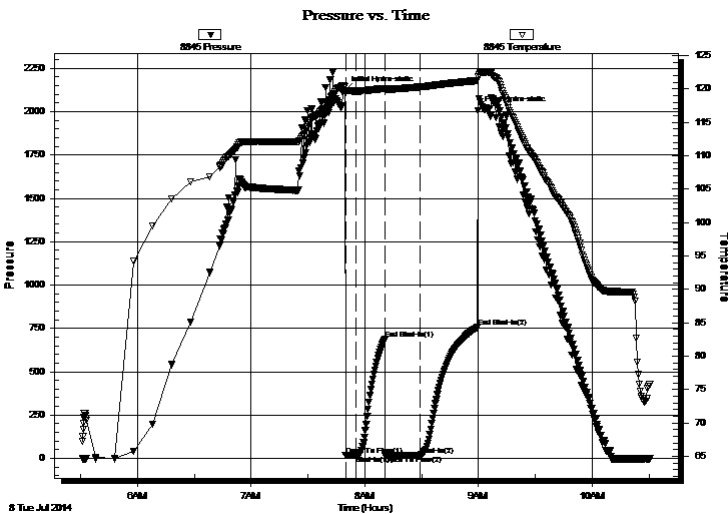
TEST COMMENT: IF: Weak Surface Blow .

IS: No Return.

FF: Weak Surface Blow Died @ 9 min.

FS: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2121.12	120.31	Initial Hydro-static
1	16.06	119.53	Open To Flow (1)
6	17.23	119.67	Shut-In(1)
21	687.01	120.07	End Shut-In(1)
22	17.54	119.83	Open To Flow (2)
40	18.57	120.28	Shut-In(2)
70	755.89	121.23	End Shut-In(2)
71	2007.58	121.82	Final Hydro-static

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57349

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 05:31:00

Tool Information

Drill Pipe:	Length: 4074.00 ft	Diameter: 3.80 inches	Volume: 57.15 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 57.76 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4216.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	57.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4189.00	
Shut In Tool	5.00			4194.00	
Hydraulic tool	5.00			4199.00	
Jars	5.00			4204.00	
Safety Joint	3.00			4207.00	
Packer	5.00			4212.00	28.00 Bottom Of Top Packer
Packer	4.00			4216.00	
Stubb	1.00			4217.00	
Recorder	0.00	6772	Outside	4217.00	
Recorder	0.00	8845	Outside	4217.00	
Perforations	23.00			4240.00	
Bullnose	5.00			4245.00	29.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57349

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 05:31:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 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

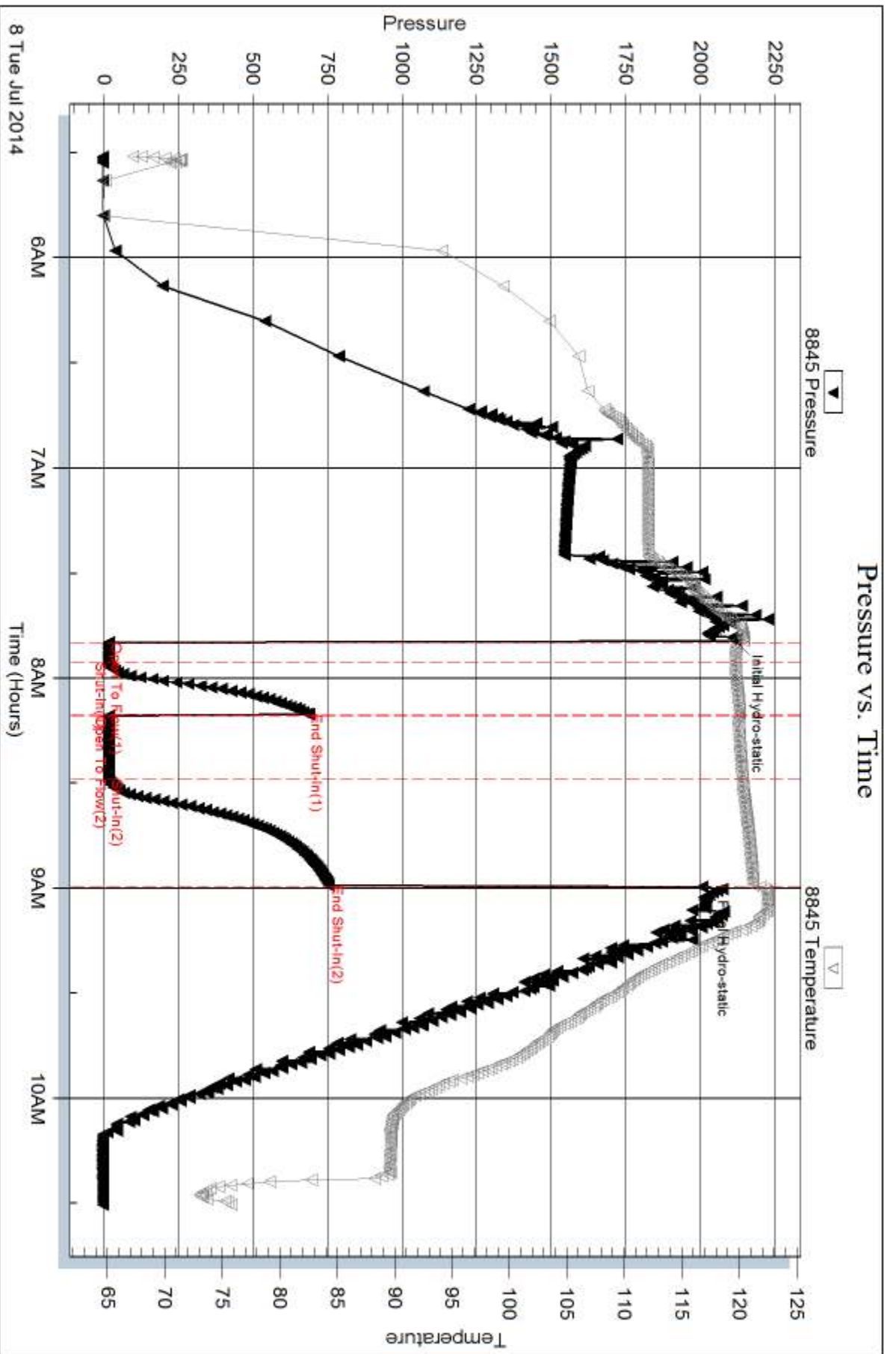
Num Gas Bombs: 0

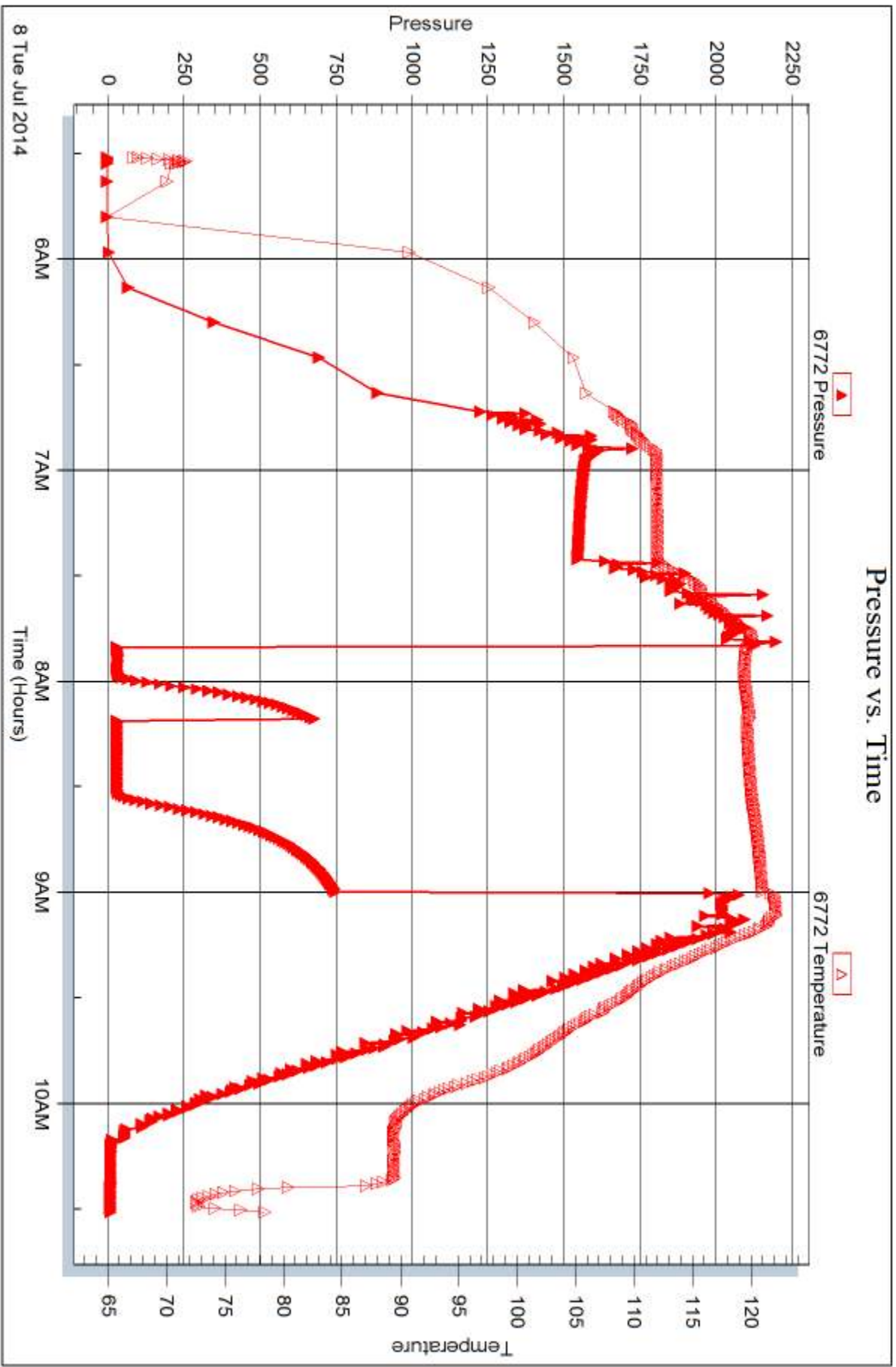
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

562 West State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

Shapland #1-21

21-18s-28w Lane,KS

Start Date: 2014.07.08 @ 17:56:00

End Date: 2014.07.08 @ 22:57:15

Job Ticket #: 57350 DST #: 2

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

Printed: 2014.07.15 @ 10:35:29



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57350

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 17:56:00

GENERAL INFORMATION:

Formation: " K "

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:24:30

Time Test Ended: 22:57:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

Interval: 4253.00 ft (KB) To 4265.00 ft (KB) (TVD)

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4265.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8845 Outside

Press@RunDepth: 21.59 psig @ 4254.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.08

End Date: 2014.07.08

Last Calib.: 2014.07.08

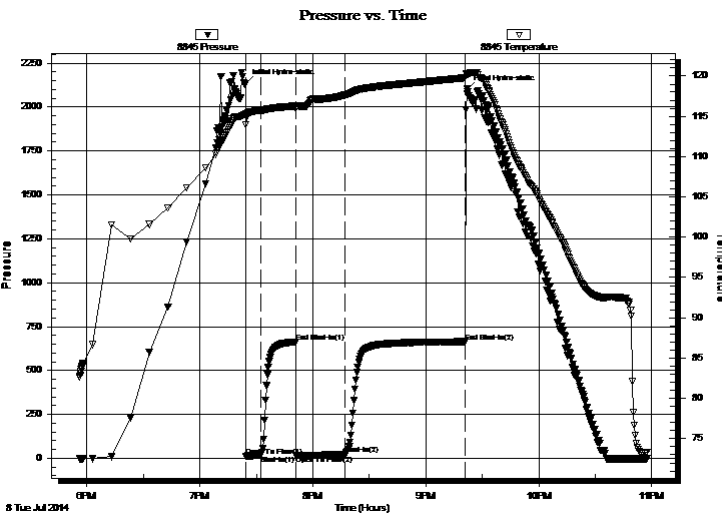
Start Time: 17:56:05

End Time: 22:57:14

Time On Btm: 2014.07.08 @ 19:24:15

Time Off Btm: 2014.07.08 @ 21:22:00

TEST COMMENT: IF: Weak Surface Blow . 1/4" Nipple broke.
IS: No Return.
FF: No Blow . Thought w e had 1/4" nipple fixed but broke again.
FS: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2132.21	115.30	Initial Hydro-static
1	12.19	113.96	Open To Flow (1)
8	16.93	115.68	Shut-In(1)
27	662.72	116.29	End Shut-In(1)
27	15.11	115.94	Open To Flow (2)
53	21.59	117.63	Shut-In(2)
117	664.22	119.77	End Shut-In(2)
118	2101.74	120.23	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)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57350

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 17:56:00

Tool Information

Drill Pipe:	Length: 4108.00 ft	Diameter: 3.80 inches	Volume: 57.62 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 58.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4253.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 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			4226.00	
Shut In Tool	5.00			4231.00	
Hydraulic tool	5.00			4236.00	
Jars	5.00			4241.00	
Safety Joint	3.00			4244.00	
Packer	5.00			4249.00	28.00 Bottom Of Top Packer
Packer	4.00			4253.00	
Stubb	1.00			4254.00	
Recorder	0.00	6772	Outside	4254.00	
Recorder	0.00	8845	Outside	4254.00	
Perforations	6.00			4260.00	
Bullnose	5.00			4265.00	12.00 Bottom Packers & Anchor

Total Tool Length: 40.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57350

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 17:56:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 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

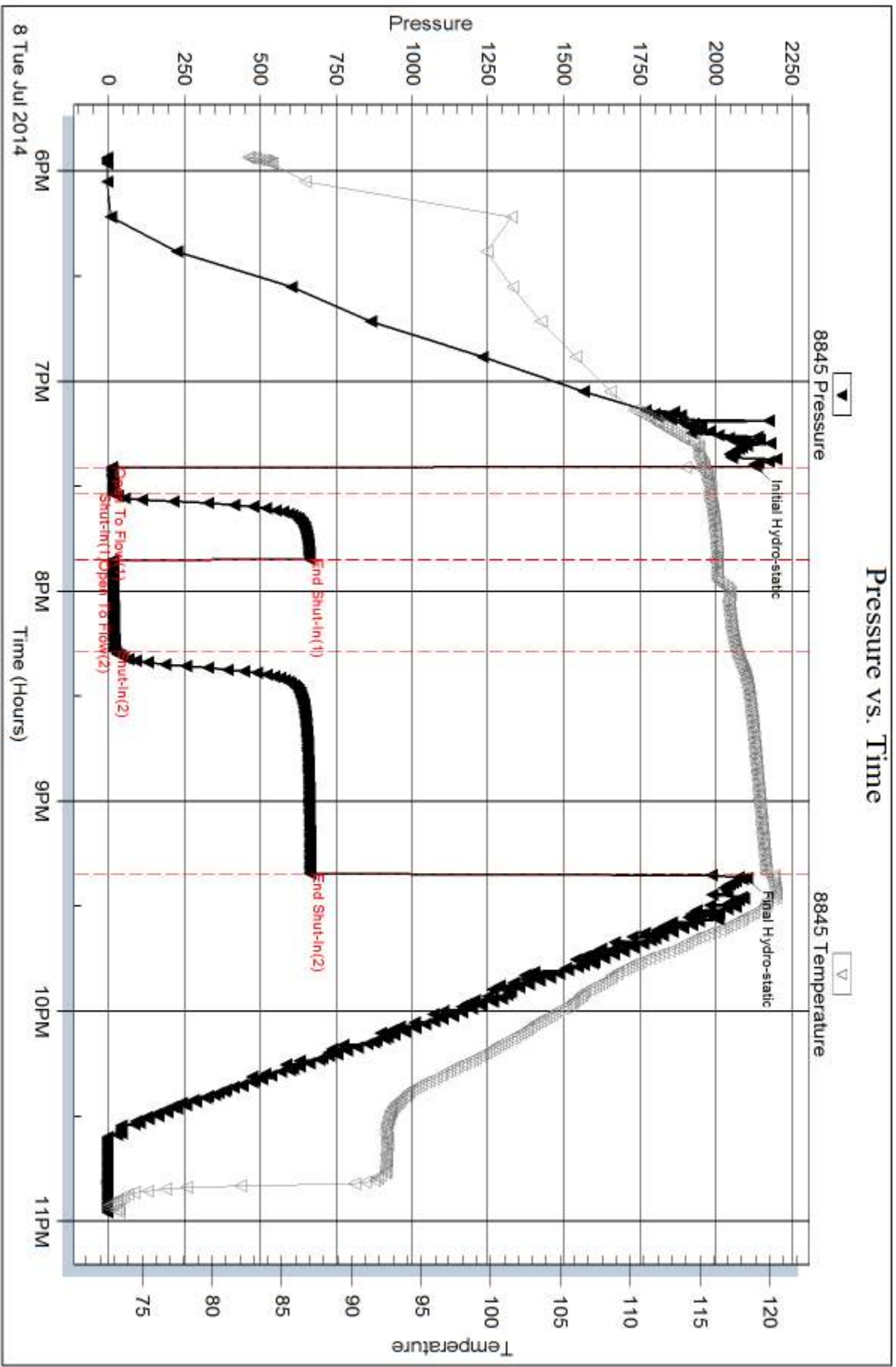
Num Gas Bombs: 0

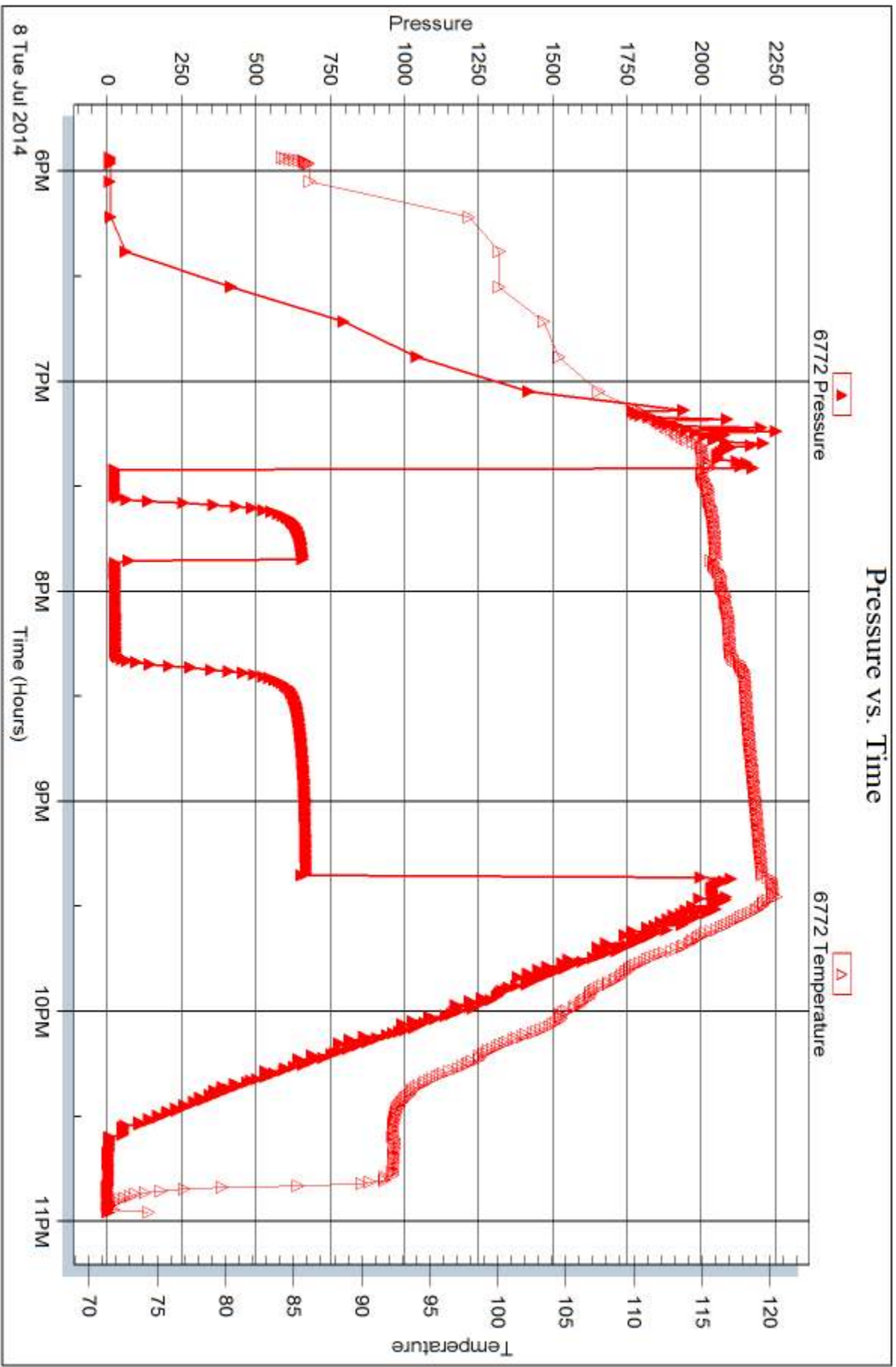
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

562 West State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

Shapland #1-21

21-18s-28w Lane,KS

Start Date: 2014.07.09 @ 07:02:00

End Date: 2014.07.09 @ 12:11:15

Job Ticket #: DST #: 3

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

Printed: 2014.07.15 @ 10:35:07



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

ATTN: Vern Schrag

Job Ticket: **DST#: 3**

Test Start: 2014.07.09 @ 07:02:00

GENERAL INFORMATION:

Formation: " K "

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:35:15

Time Test Ended: 12:11:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

Interval: 4251.00 ft (KB) To 4269.00 ft (KB) (TVD)

Total Depth: 4269.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2749.00 ft (KB)

2742.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8845 Outside

Press@RunDepth: 47.01 psig @ 4252.00 ft (KB)

Start Date: 2014.07.09

End Date: 2014.07.09

Start Time: 07:02:05

End Time: 12:11:14

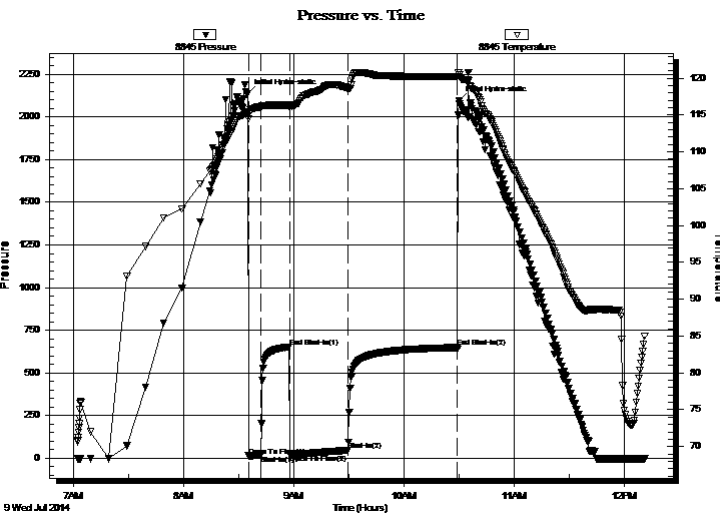
Capacity: 8000.00 psig

Last Calib.: 2014.07.09

Time On Btm: 2014.07.09 @ 08:35:00

Time Off Btm: 2014.07.09 @ 10:30:00

TEST COMMENT: IF: 1/2" Blow .
IS: No Return.
FF: 1 1/2" Blow .
FS: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.70	115.39	Initial Hydro-static
1	14.35	114.48	Open To Flow (1)
7	20.11	116.06	Shut-In(1)
23	652.68	116.33	End Shut-In(1)
23	20.53	115.96	Open To Flow (2)
55	47.01	118.61	Shut-In(2)
114	649.61	120.26	End Shut-In(2)
115	2093.52	120.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	WCM 15w 85m (Oil Scum On Top)	0.34

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket:

DST#: 3

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 07:02:00

Tool Information

Drill Pipe:	Length: 4107.00 ft	Diameter: 3.80 inches	Volume: 57.61 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 58.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4251.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4224.00	
Shut In Tool	5.00			4229.00	
Hydraulic tool	5.00			4234.00	
Jars	5.00			4239.00	
Safety Joint	3.00			4242.00	
Packer	5.00			4247.00	28.00 Bottom Of Top Packer
Packer	4.00			4251.00	
Stubb	1.00			4252.00	
Recorder	0.00	6772	Outside	4252.00	
Recorder	0.00	8845	Outside	4252.00	
Perforations	12.00			4264.00	
Bullnose	5.00			4269.00	18.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket:

DST#: 3

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 07:02:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	WCM 15w 85m (Oil Scum On Top)	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

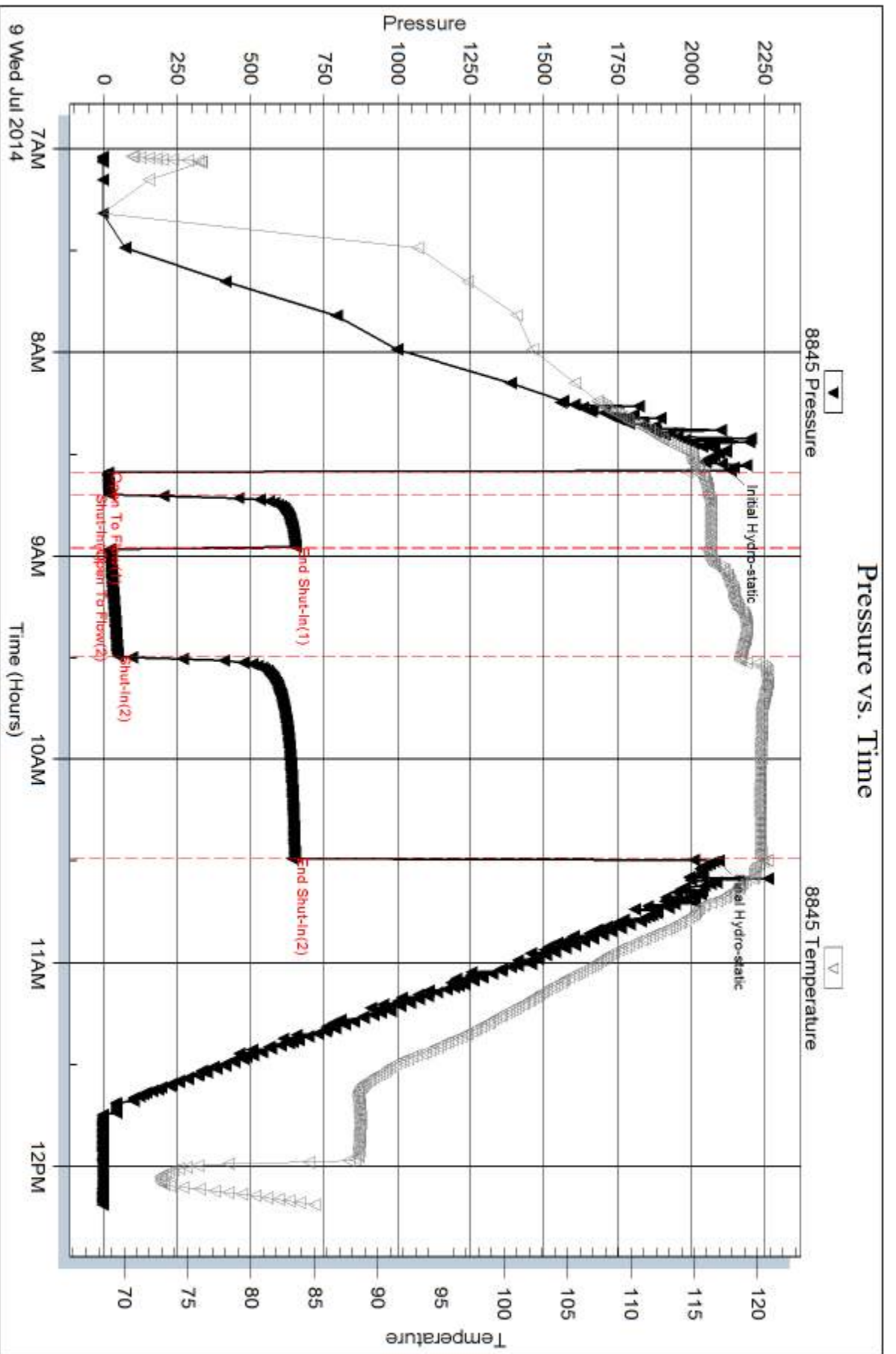
Num Gas Bombs: 0

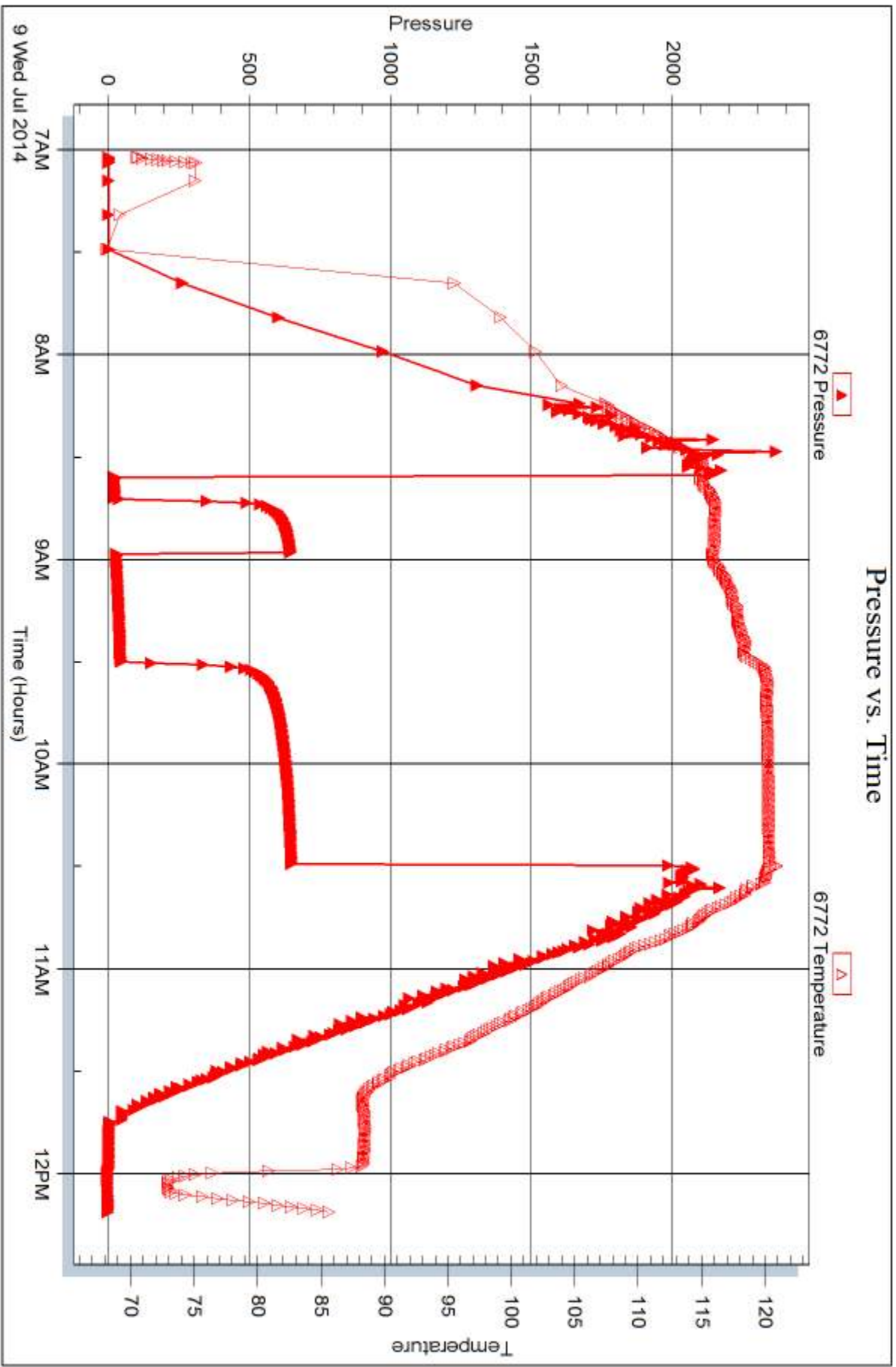
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

562 West State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

Shapland #1-21

21-18s-28w Lane,KS

Start Date: 2014.07.09 @ 23:16:00

End Date: 2014.07.10 @ 04:02:30

Job Ticket #: 59577 DST #: 4

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

Printed: 2014.07.15 @ 10:34:33



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59577

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 23:16:00

GENERAL INFORMATION:

Formation: **Middle Creek**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:52:00

Time Test Ended: 04:02:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

Interval: 4282.00 ft (KB) To 4294.00 ft (KB) (TVD)

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4294.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8845 Outside

Press@RunDepth: 14.38 psig @ 4283.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.09

End Date:

2014.07.10

Last Calib.: 2014.07.10

Start Time: 23:16:05

End Time:

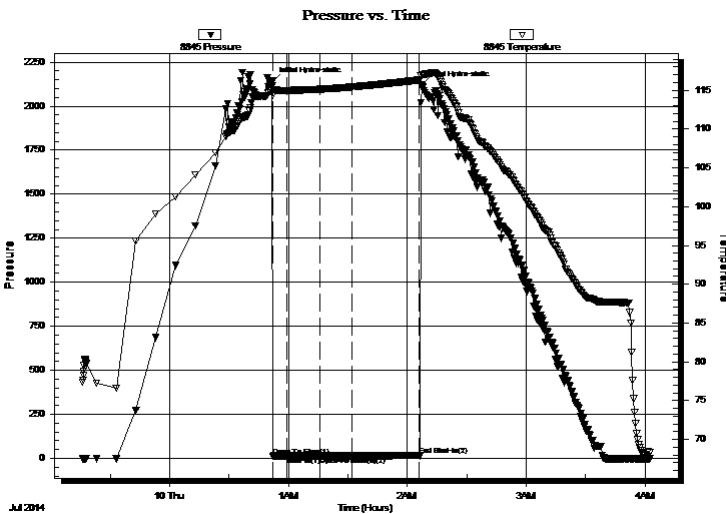
04:02:29

Time On Btm: 2014.07.10 @ 00:51:45

Time Off Btm: 2014.07.10 @ 02:07:30

TEST COMMENT: IF: Weak Surface Blow .
IS: No Return.
FF: Weak Surface Blow died @ 12 min.
FS: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2141.10	115.54	Initial Hydro-static
1	12.99	114.36	Open To Flow (1)
8	13.96	114.98	Shut-In(1)
24	14.88	115.13	End Shut-In(1)
25	14.22	115.13	Open To Flow (2)
40	14.38	115.41	Shut-In(2)
75	15.93	116.33	End Shut-In(2)
76	2119.37	116.99	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)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59577

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 23:16:00

Tool Information

Drill Pipe:	Length: 4140.00 ft	Diameter: 3.80 inches	Volume: 58.07 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4282.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 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			4255.00	
Shut In Tool	5.00			4260.00	
Hydraulic tool	5.00			4265.00	
Jars	5.00			4270.00	
Safety Joint	3.00			4273.00	
Packer	5.00			4278.00	28.00 Bottom Of Top Packer
Packer	4.00			4282.00	
Stubb	1.00			4283.00	
Recorder	0.00	6772	Outside	4283.00	
Recorder	0.00	8845	Outside	4283.00	
Perforations	6.00			4289.00	
Bullnose	5.00			4294.00	12.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59577

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 23:16:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 1.00 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

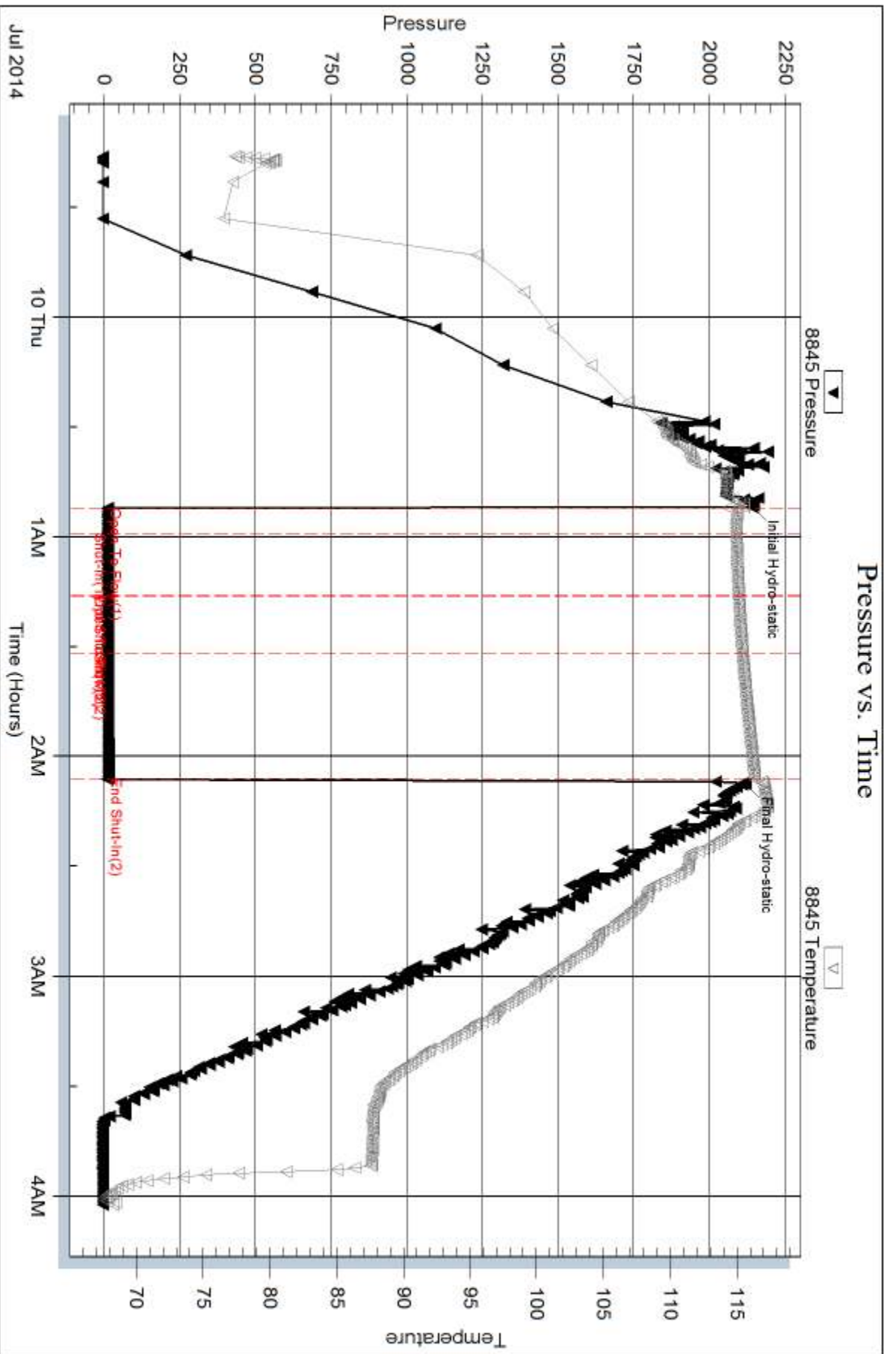
Num Gas Bombs: 0

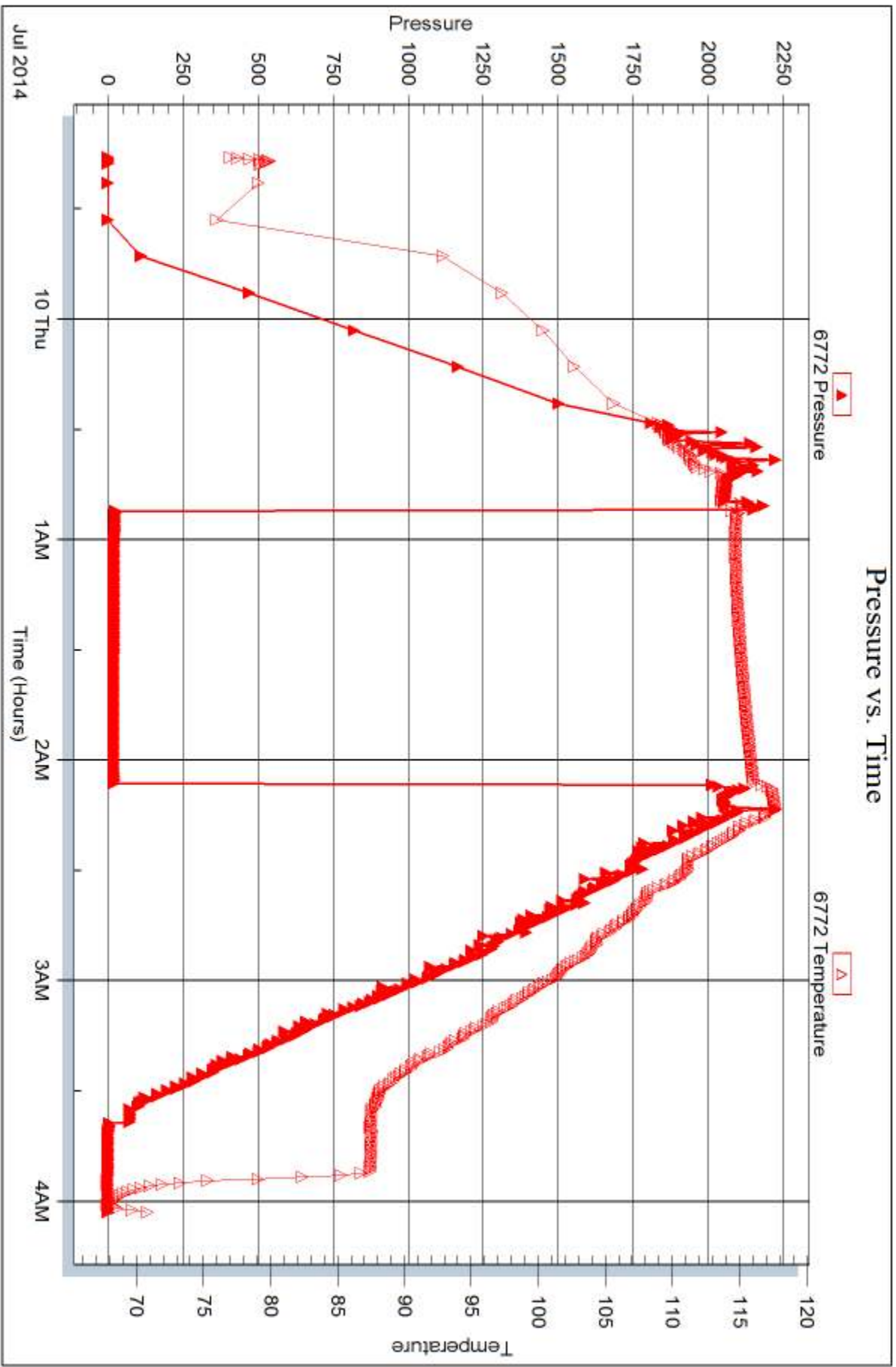
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

562 West State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

Shapland #1-21

21-18s-28w Lane,KS

Start Date: 2014.07.10 @ 23:53:00

End Date: 2014.07.11 @ 04:36:45

Job Ticket #: 59578 DST #: 5

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

Printed: 2014.07.15 @ 10:34:06



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59578

DST#: 5

ATTN: Vern Schrag

Test Start: 2014.07.10 @ 23:53:00

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:40:45

Time Test Ended: 04:36:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

Interval: 4328.00 ft (KB) To 4415.00 ft (KB) (TVD)

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4415.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8845 Inside

Press@RunDepth: 22.45 psig @ 4329.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.10

End Date:

2014.07.11

Last Calib.: 2014.07.11

Start Time: 23:53:05

End Time:

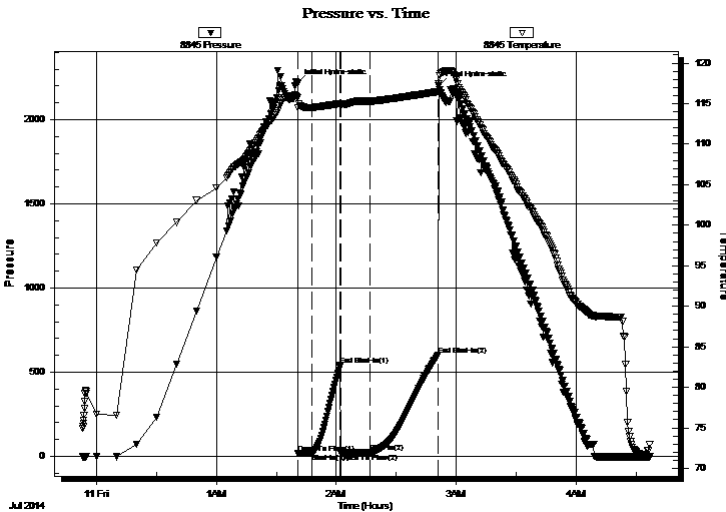
04:36:44

Time On Btm: 2014.07.11 @ 01:40:30

Time Off Btm: 2014.07.11 @ 02:51:15

TEST COMMENT: IF: Weak Surface Blow .
IS: No Return.
FF: Weak Surface Blow .
FS: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2216.77	115.75	Initial Hydro-static
1	16.66	114.48	Open To Flow (1)
8	19.23	114.53	Shut-In(1)
22	541.30	115.01	End Shut-In(1)
22	20.10	114.70	Open To Flow (2)
37	22.45	115.31	Shut-In(2)
71	601.11	116.47	End Shut-In(2)
71	2201.67	117.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100m (Oil Spots)	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59578

DST#: 5

ATTN: Vern Schrag

Test Start: 2014.07.10 @ 23:53:00

Tool Information

Drill Pipe:	Length: 4201.00 ft	Diameter: 3.80 inches	Volume: 58.93 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 59.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4328.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	115.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4301.00	
Shut In Tool	5.00			4306.00	
Hydraulic tool	5.00			4311.00	
Jars	5.00			4316.00	
Safety Joint	3.00			4319.00	
Packer	5.00			4324.00	28.00 Bottom Of Top Packer
Packer	4.00			4328.00	
Stubb	1.00			4329.00	
Recorder	0.00	6772	Outside	4329.00	
Recorder	0.00	8845	Inside	4329.00	
Perforations	16.00			4345.00	
Change Over Sub	1.00			4346.00	
Drill Pipe	63.00			4409.00	
Change Over Sub	1.00			4410.00	
Bullnose	5.00			4415.00	87.00 Bottom Packers & Anchor

Total Tool Length: 115.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59578

DST#: 5

ATTN: Vern Schrag

Test Start: 2014.07.10 @ 23:53:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100m (Oil Spots)	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

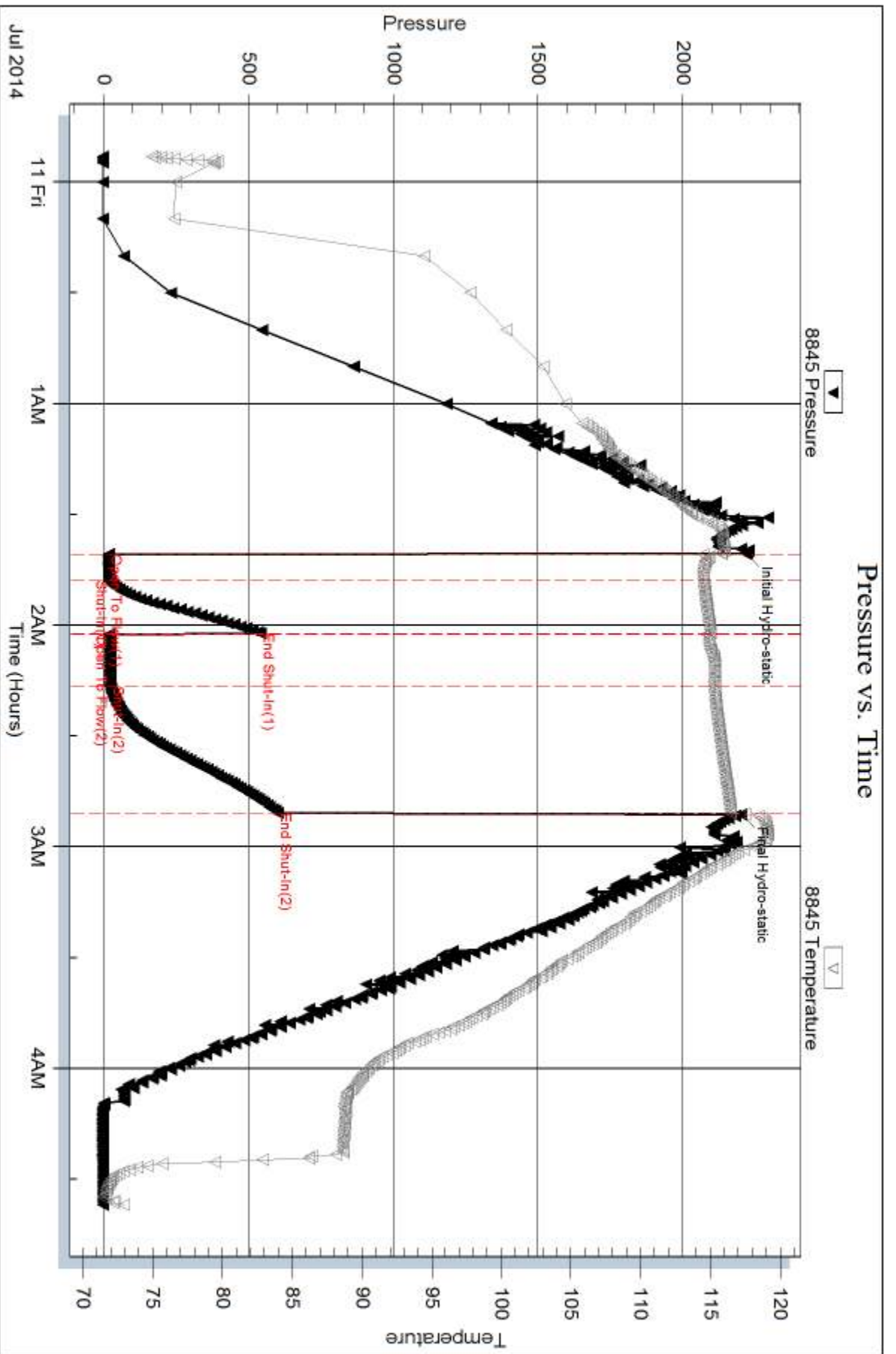
Num Gas Bombs: 0

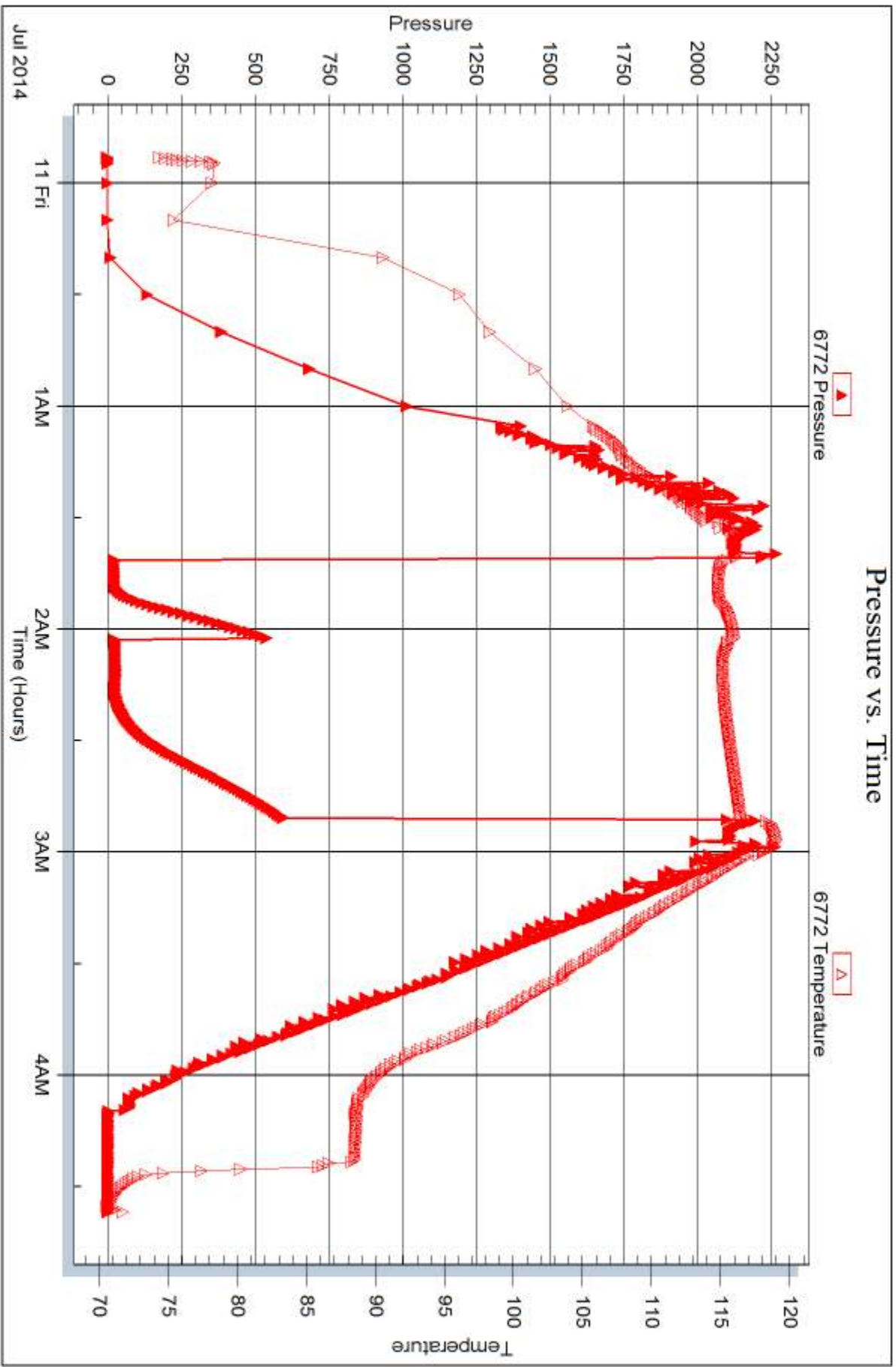
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

562 West State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

Shapland #1-21

21-18s-28w Lane,KS

Start Date: 2014.07.12 @ 00:24:00

End Date: 2014.07.12 @ 05:32:00

Job Ticket #: 59579 DST #: 6

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

Printed: 2014.07.15 @ 10:33:26



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59579

DST#: 6

ATTN: Vern Schrag

Test Start: 2014.07.12 @ 00:24:00

GENERAL INFORMATION:

Formation: **Pawnee- Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:27:15

Time Test Ended: 05:32:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

Interval: 4442.00 ft (KB) To 4580.00 ft (KB) (TVD)

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4580.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8845 Inside

Press@RunDepth: 25.06 psig @ 4443.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.12 End Date: 2014.07.12

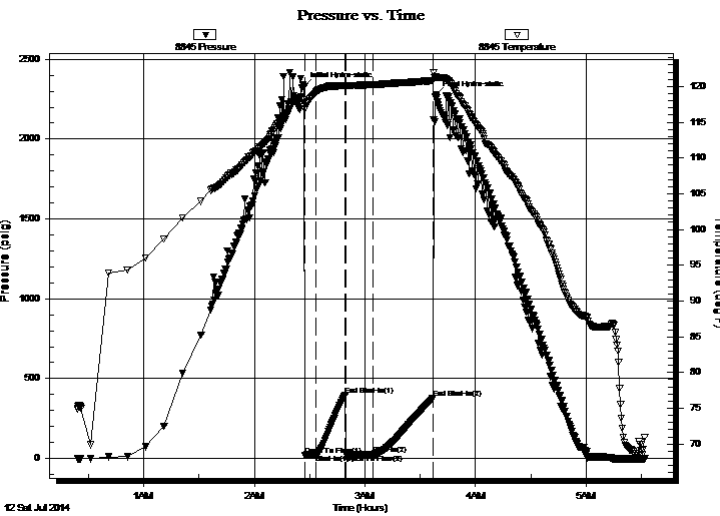
Last Calib.: 2014.07.12

Start Time: 00:24:05 End Time: 05:31:59

Time On Btm: 2014.07.12 @ 02:27:00

Time Off Btm: 2014.07.12 @ 03:38:30

TEST COMMENT: IF: 1/4" Blow .
IS: No Return.
FF: Weak Surface Blow .
FS: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2326.90	118.12	Initial Hydro-static
1	19.88	116.79	Open To Flow (1)
7	22.29	119.24	Shut-In(1)
23	397.96	120.12	End Shut-In(1)
23	23.52	119.95	Open To Flow (2)
38	25.06	120.25	Shut-In(2)
70	379.32	120.82	End Shut-In(2)
72	2275.01	121.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100m	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59579

DST#: 6

ATTN: Vern Schrag

Test Start: 2014.07.12 @ 00:24:00

Tool Information

Drill Pipe:	Length: 4295.00 ft	Diameter: 3.80 inches	Volume: 60.25 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4442.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	138.00 ft			
Tool Length:	166.00 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			4415.00	
Shut In Tool	5.00			4420.00	
Hydraulic tool	5.00			4425.00	
Jars	5.00			4430.00	
Safety Joint	3.00			4433.00	
Packer	5.00			4438.00	28.00 Bottom Of Top Packer
Packer	4.00			4442.00	
Stubb	1.00			4443.00	
Recorder	0.00	6772	Outside	4443.00	
Recorder	0.00	8845	Inside	4443.00	
Perforations	4.00			4447.00	
Change Over Sub	1.00			4448.00	
Drill Pipe	126.00			4574.00	
Change Over Sub	1.00			4575.00	
Bullnose	5.00			4580.00	138.00 Bottom Packers & Anchor

Total Tool Length: 166.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 59579

DST#: 6

ATTN: Vern Schrag

Test Start: 2014.07.12 @ 00:24:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100m	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

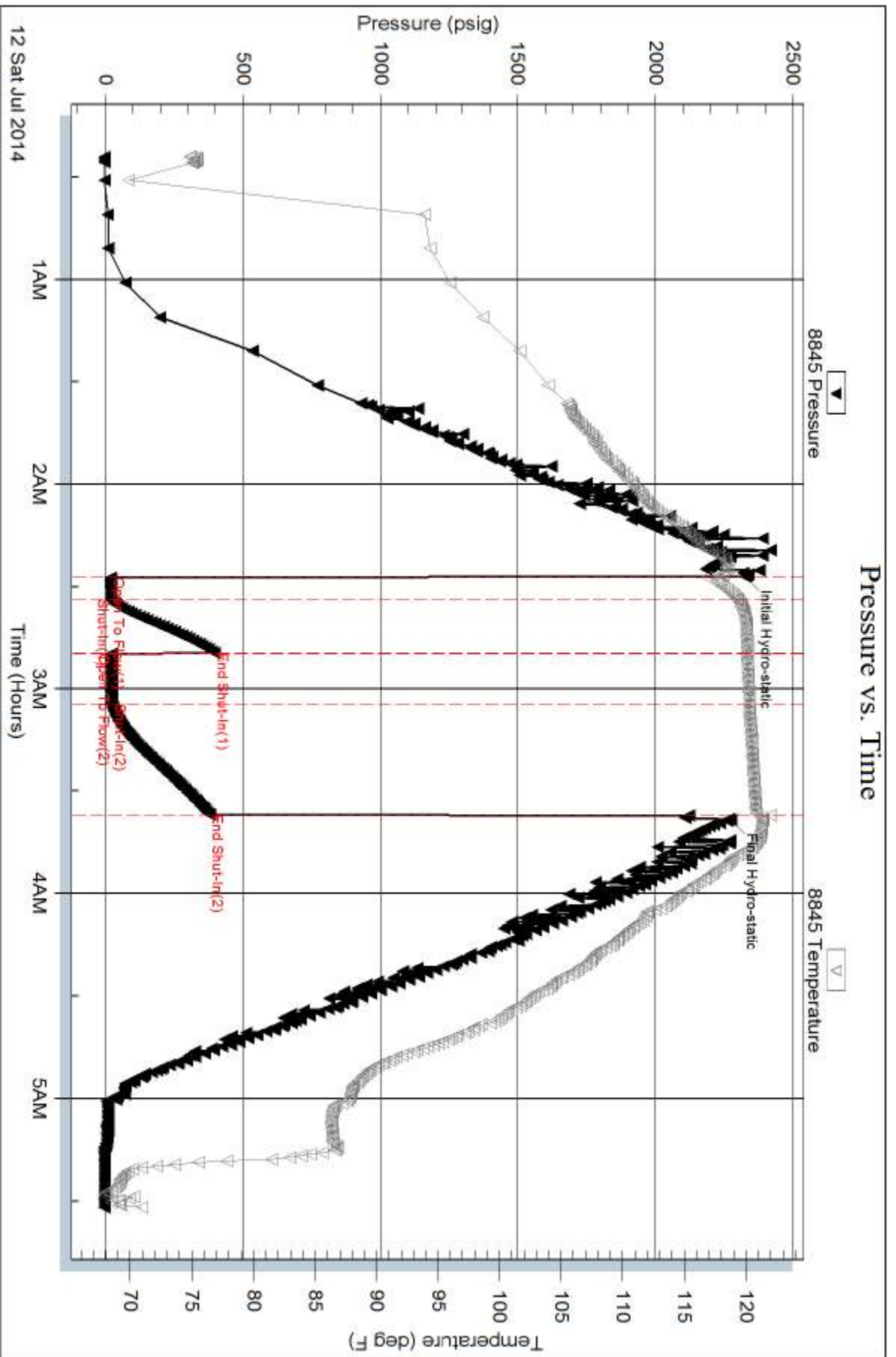
Num Gas Bombs: 0

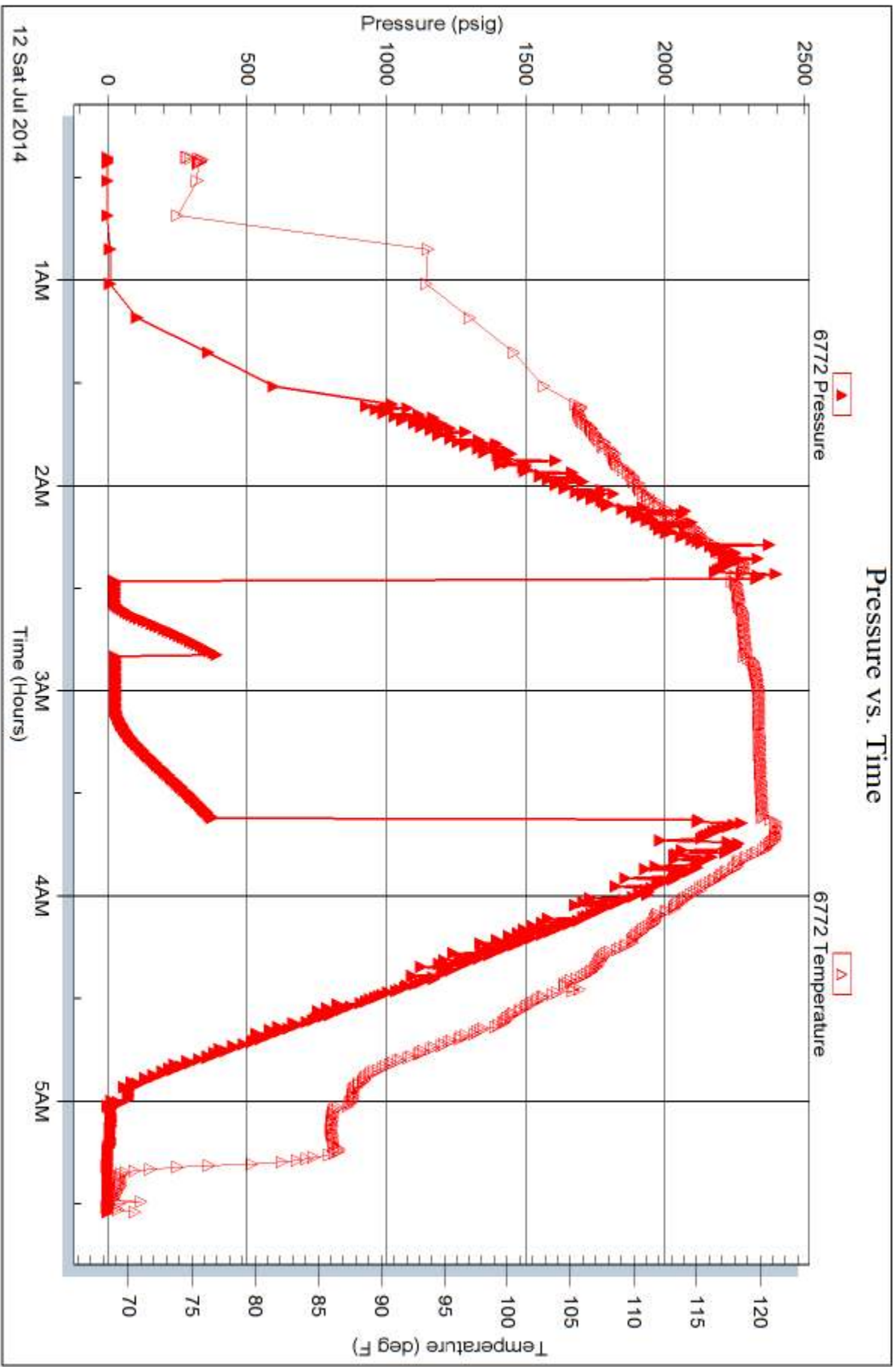
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57349

Well Name & No. Shapland Trust #1-21 Test No. 1 Date 7/8/14
 Company Larsen Engineering, Inc. Elevation 2749 KB 2742 GL
 Address 562 West state RD 4 Olmitz, KS 67564
 Co. Rep / Geo. Vern Schrag Rig HD #3
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4216 - 4245 Zone Tested "J"
 Anchor Length 29 Drill Pipe Run 4074 Mud Wt. 9.1
 Top Packer Depth 4212 Drill Collars Run 124 Vis 50
 Bottom Packer Depth 4216 Wt. Pipe Run Ø WL 8.0
 Total Depth 4245 Chlorides 3000 ppm System LCM 1

Blow Description IF: Weak surface Blow.
TST: No Return.
FF: Weak surface Blow died @ 9 min.
FST: No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 121 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic	<u>2121</u>	<input checked="" type="checkbox"/> Test	<u>1250</u>	T-On Location	<u>04:45</u>
(B) First Initial Flow	<u>16</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>0531</u>
(C) First Final Flow	<u>17</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>0750</u>
(D) Initial Shut-In	<u>687</u>	<input checked="" type="checkbox"/> Circ Sub	<u>N/C</u>	T-Pulled	<u>0900</u>
(E) Second Initial Flow	<u>18</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>1031</u>
(F) Second Final Flow	<u>19</u>	<input checked="" type="checkbox"/> Mileage	<u>62 R/T</u> 96.10	Comments	
(G) Final Shut-In	<u>756</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>2008</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	

Initial Open	<u>5</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Packer	
Initial Shut-In	<u>15</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>15</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Shut-In	<u>30</u>	<input type="checkbox"/> Day Standby		Total	<u>1671.10</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1671.10</u>		

Approved By _____ 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. 57350

4/10

Well Name & No. Shapland Trust #1-21 Test No. 2 Date 7/8/14
 Company Larson Engineering, Inc. Elevation 2749 KB 2742 GL
 Address 562 West State RD 4 Olinette, KS 67564
 Co. Rep / Geo. Vern Schwag Rig AD#3
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4253-4265 Zone Tested "K"
 Anchor Length 12 Drill Pipe Run 4108 Mud Wt. 9.2
 Top Packer Depth 4249 Drill Collars Run 124 Vis 56
 Bottom Packer Depth 4253 Wt. Pipe Run Ø WL 8.4
 Total Depth 4265 Chlorides 300 ppm System LCM 3

Blow Description IP: weak surface Blow, 4" Nipple Broke
IS: No Return
FF: No Blow. Thought we had 4" nipple fixed but broke again
RST: No Return

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

Rec Total 5 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2132</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>5000 1740</u>
(B) First Initial Flow <u>12</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1756</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1925</u>
(D) Initial Shut-In <u>663</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/E</u>	T-Pulled <u>2119</u>
(E) Second Initial Flow <u>15</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2257</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>62 R/T</u> 96.10	Comments <u>Sorry about my 4" nipple breaking work happen again?</u>
(G) Final Shut-In <u>664</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2102</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1671.10</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1671.10</u>	

Approved By _____ Our Representative _____

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59576

4/10

Well Name & No. Shipland Tract #1-21 Test No. 3 Date 7/9/14
 Company Larson Engineering Inc Elevation 2749 KB 2742 GL
 Address 582 West State RD4 Olmitz, KS 67564
 Co. Rep / Geo. Vern Shrage Rig AA 43
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4251-4269 Zone Tested "K"
 Anchor Length 18 Drill Pipe Run 4107 Mud Wt. 9.2
 Top Packer Depth 4247 Drill Collars Run 124 Vis 49
 Bottom Packer Depth 4251 Wt. Pipe Run 0 WL 8.4
 Total Depth 4269 Chlorides 7000 ppm System LCM 1
 Blow Description IP: 1/2" Blw.
FSI: No Return.
PF: 1 1/2" Blw.
FSI No Rdn

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>Wcm SW8sm (oil cement top)</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2136</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>0645</u>
(B) First Initial Flow <u>14</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0722</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0846</u>
(D) Initial Shut-In <u>653</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>1035</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1211</u>
(F) Second Final Flow <u>47</u>	<input checked="" type="checkbox"/> Mileage <u>62 RT</u> 96.10	Comments _____
(G) Final Shut-In <u>650</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2094</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1671.10</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1671.10</u>	

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **59577**

Well Name & No. Shipland Trust # 1-21 Test No. 4 Date 7/9/14
 Company Larson Engineering, Inc. Elevation 2709 KB 2742 GL
 Address 562 West State Rd 4 Olmitz, KS 67564
 Co. Rep / Geo. Vern Shroy Rig AD #3
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4282-4294 Zone Tested Middle Creek
 Anchor Length 12 Drill Pipe Run 4140 Mud Wt. 9.1
 Top Packer Depth 4278 Drill Collars Run 124 Vis 58
 Bottom Packer Depth 4282 Wt. Pipe Run Ø WL 8.8
 Total Depth 4294 Chlorides 3600 ppm System LCM 1

Blow Description IF: Weak surface Blow
ISF: No Return
FF: weak surface Blow lost @ 12 min.
FSD: No Return

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 116 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2141</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>2300</u>
(B) First Initial Flow <u>13</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2316</u>
(C) First Final Flow <u>14</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2250</u>
(D) Initial Shut-In <u>15</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>202</u>
(E) Second Initial Flow <u>14</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>403</u>
(F) Second Final Flow <u>14</u>	<input checked="" type="checkbox"/> Mileage <u>62 R/T</u> 96.10	Comments
(G) Final Shut-In <u>16</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2119</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>20</u>	<input type="checkbox"/> Day Standby	Total <u>1671.10</u>
	<input type="checkbox"/> Accessibility	MP/DST/Disc't
	Sub Total <u>1671.10</u>	

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59578

Well Name & No. Sheplard Trust #1-21 Test No. 5 Date 7/10/14
 Company Loren Engineering, Inc. Elevation 2749 KB 2742 GL
 Address 562 West State Rd 4 Okmiz, KS 67564
 Co. Rep / Geo. Vern Schroy Rig HD #3
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4328-4415 Zone Tested Altamab
 Anchor Length 87 Drill Pipe Run 4201 Mud Wt. 9.2
 Top Packer Depth 4324 Drill Collars Run 24 Vis 60
 Bottom Packer Depth 4328 Wt. Pipe Run 7 WL 8.4
 Total Depth 4415 Chlorides 3500 ppm System LCM 1

Blow Description IF: weak surface Blow.
FST: No Return.
FF: weak surface Blow.
FST: No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud (oil 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	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 117 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2217</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>2330</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2353</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0141</u>
(D) Initial Shut-In <u>541</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>0248</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0437</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>62 RTT</u> 96.10	Comments
(G) Final Shut-In <u>601</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2202</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>13</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1671.10</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1671.10</u>	

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59579

Well Name & No. Shapland Trust #1-21 Test No. 6 Date 7/12/14
 Company Larson Engineering, Inc Elevation 2749 KB 2742 GL
 Address 562 West State RD 4 Olmsted, KS 67564
 Co. Rep / Geo. Vern Schrag Rig AD #3
 Location: Sec. 21 Twp. 18S Rge. 28 W Co. Lane State KS

Interval Tested 4442-4580 Zone Tested Packer - Cherokee
 Anchor Length 138' Drill Pipe Run 4295 Mud Wt. 9.1
 Top Packer Depth 4438 Drill Collars Run 124 Vis 60
 Bottom Packer Depth 4442 Wt. Pipe Run Ø WL 9.2
 Total Depth 4580 Chlorides 3500 ppm System LCM 1

Blow Description IP: 1/4" Blow.
IST: NO Return.
FF: Weak surface Blow.
FSS: NO Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 121 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2327</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>0010</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0024</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0230</u>
(D) Initial Shut-In <u>398</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>0339</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0534</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>62 R/T</u> 96.10	Comments <u>Lost Tools</u>
(G) Final Shut-In <u>379</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2275</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1671.10</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1671.10</u>	

Approved By _____ Our Representative

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