



DRILL STEM TEST REPORT

Prepared For: **Prater Oil & Gas Operations**

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

Maurath #1

S15-10s-31w Thomas,KS

Start Date: 2014.04.16 @ 09:59:00

End Date: 2014.04.16 @ 17:22:30

Job Ticket #: 56270 DST #: 1

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

Printed: 2014.04.24 @ 14:19:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56270

DST#: 1

ATTN: Scott Alberg

Test Start: 2014.04.16 @ 09:59:00

GENERAL INFORMATION:

Formation: **Toronto - LKC B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:30:18

Time Test Ended: 17:22:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 62

Interval: 3990.00 ft (KB) To 4075.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4075.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8357

Inside

Press@RunDepth: 582.27 psig @ 3992.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.16

End Date:

2014.04.16

Last Calib.:

2014.04.16

Start Time: 09:59:05

End Time:

17:22:29

Time On Btm:

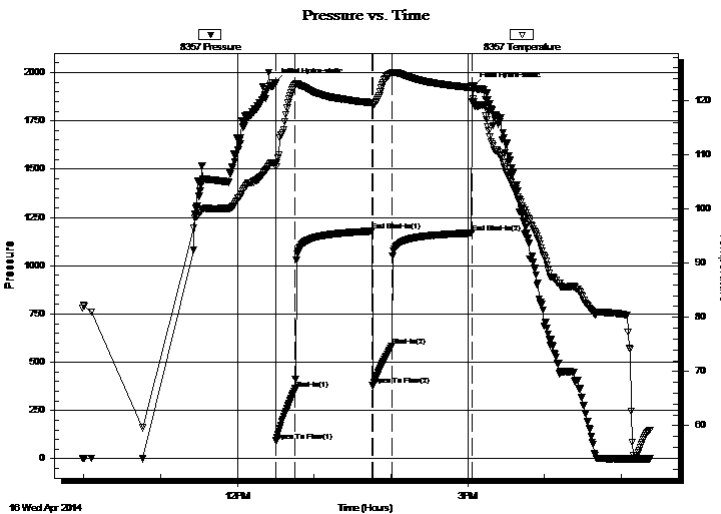
2014.04.16 @ 12:28:54

Time Off Btm:

2014.04.16 @ 15:04:12

TEST COMMENT: 15- B.O.B. @ 2 min.
60- No return.
15- B.O.B. @ 3 min.
60- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1946.27	108.55	Initial Hydro-static
2	92.93	107.78	Open To Flow (1)
17	362.99	122.87	Shut-In(1)
77	1179.07	119.58	End Shut-In(1)
77	378.95	119.26	Open To Flow (2)
92	582.27	125.03	Shut-In(2)
155	1169.26	122.38	End Shut-In(2)
156	1928.54	120.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
245.00	MW 5m 95w Oil spots in tool.	2.62
496.00	MW 15m 85w	6.96
439.00	WM 25w 75m	6.16

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56270

DST#: 1

ATTN: Scott Alberg

Test Start: 2014.04.16 @ 09:59:00

GENERAL INFORMATION:

Formation: **Toronto - LKC B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:30:18

Time Test Ended: 17:22:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 62

Interval: 3990.00 ft (KB) To 4075.00 ft (KB) (TVD)

Total Depth: 4075.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2993.00 ft (KB)

2985.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: psig @ 3992.00 ft (KB)

Start Date: 2014.04.16

End Date: 2014.04.16

Start Time: 09:59:35

End Time: 17:21:29

Capacity: 8000.00 psig

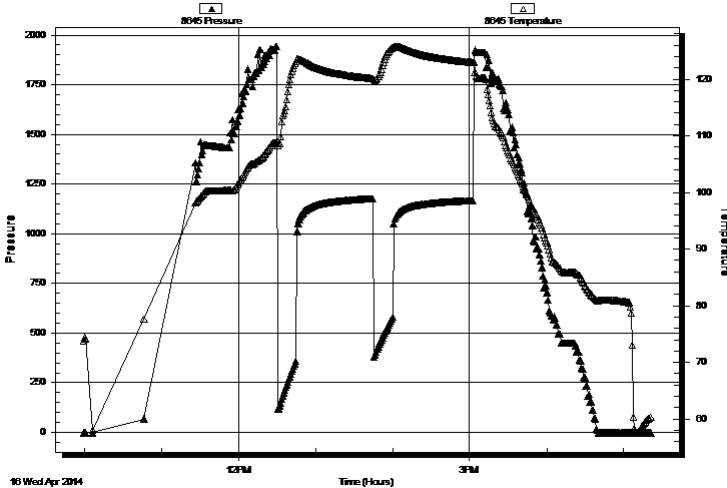
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: 15- B.O.B. @ 2 min.
60- No return.
15- B.O.B. @ 3 min.
60- No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
245.00	MW 5m 95w Oil spots in tool.	2.62
496.00	MW 15m 85w	6.96
439.00	WM 25w 75m	6.16

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56270

DST#: 1

ATTN: Scott Alberg

Test Start: 2014.04.16 @ 09:59:00

Tool Information

Drill Pipe:	Length: 3885.00 ft	Diameter: 3.80 inches	Volume: 54.50 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 90.00 ft	Diameter: 2.25 inches	Volume: 0.44 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.50 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3990.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	112.50 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			3963.50	
Shut In Tool	5.00			3968.50	
Hydraulic tool	5.00			3973.50	
Jars	5.00			3978.50	
Safety Joint	2.50			3981.00	
Packer	5.00			3986.00	27.50 Bottom Of Top Packer
Packer	4.00			3990.00	
Stubb	1.00			3991.00	
Perforations	1.00			3992.00	
Recorder	0.00	8357	Inside	3992.00	
Recorder	0.00	8645	Outside	3992.00	
Perforations	16.00			4008.00	
Change Over Sub	1.00			4009.00	
Drill Pipe	62.00			4071.00	
Change Over Sub	1.00			4072.00	
Bullnose	3.00			4075.00	85.00 Bottom Packers & Anchor
Total Tool Length:	112.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56270

DST#: 1

ATTN: Scott Alberg

Test Start: 2014.04.16 @ 09:59:00

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:

70000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
245.00	MW 5m 95w Oil spots in tool.	2.617
496.00	MW 15m 85w	6.958
439.00	WM 25w 75m	6.158

Total Length: 1180.00 ft Total Volume: 15.733 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .133 @ 59 Degrees F = 70000 PPM

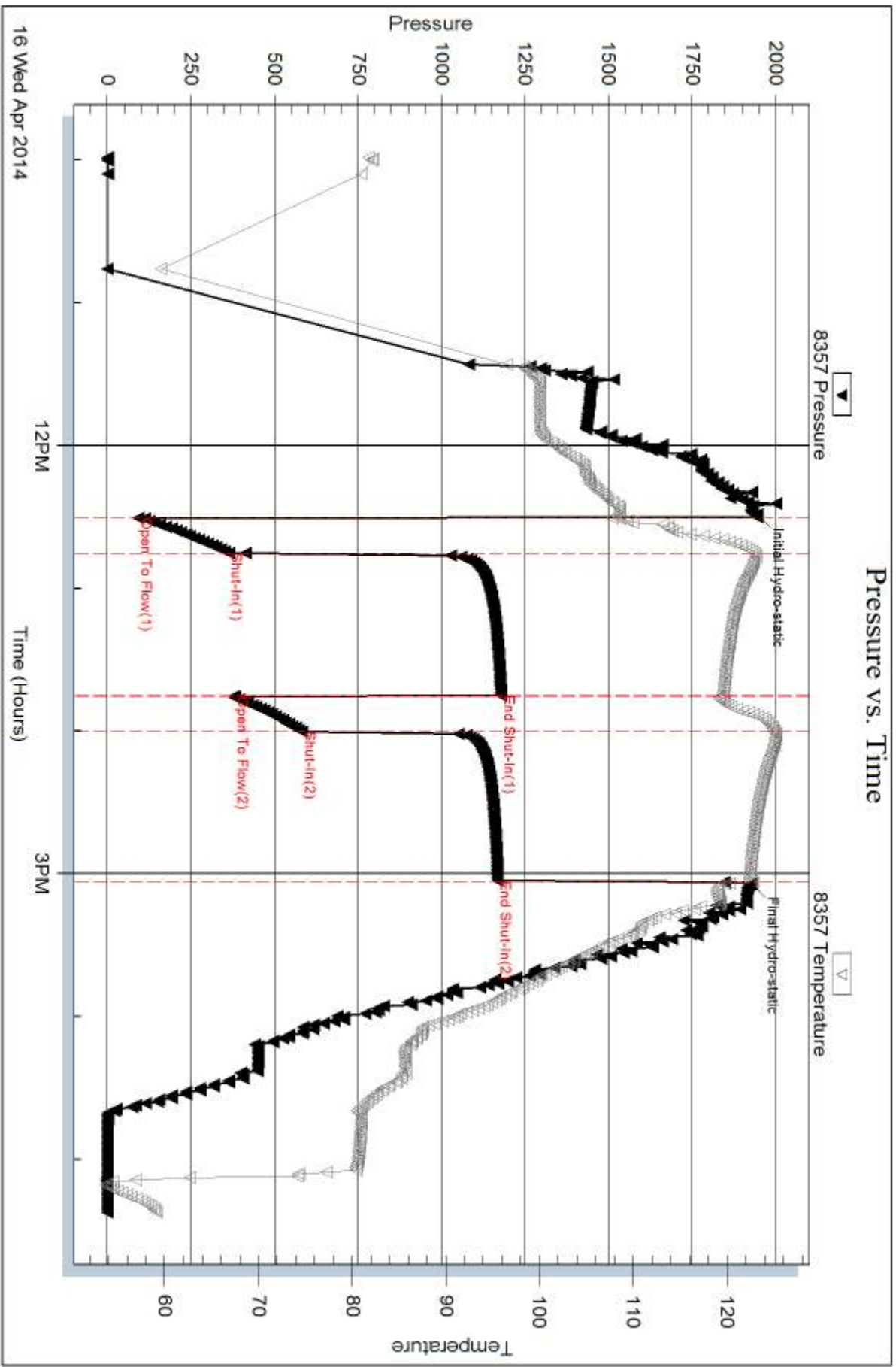
Serial #: 8357

Inside

Prater Oil & Gas Operations

Maurath #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56270

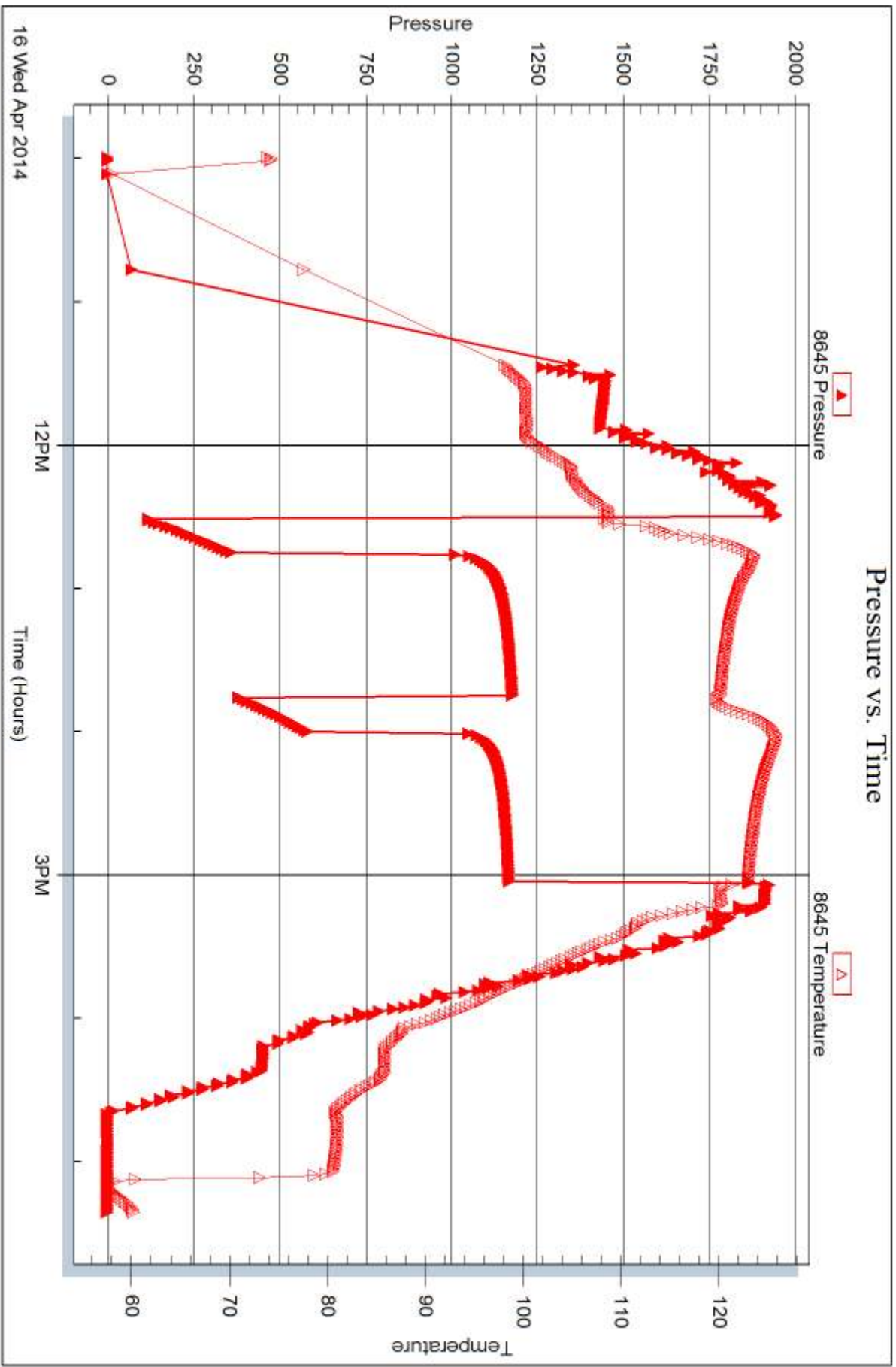
Printed: 2014.04.24 @ 14:19:19

Serial #: 8645

Outside Prater Oil & Gas Operations

Maurath #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56270

Printed: 2014.04.24 @ 14:19:19



DRILL STEM TEST REPORT

Prepared For: **Prater Oil & Gas Operations**

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

Maurath #1

S15-10s-31w Thomas,KS

Start Date: 2014.04.17 @ 01:53:00

End Date: 2014.04.17 @ 09:22:17

Job Ticket #: 56271 DST #: 2

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

Printed: 2014.04.24 @ 14:18:48



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56271

DST#: 2

ATTN: Scott Alberg

Test Start: 2014.04.17 @ 01:53:00

GENERAL INFORMATION:

Formation: **LKC 'E-F'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:55:36

Time Test Ended: 09:22:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4099.00 ft (KB) To 4123.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4123.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8357

Inside

Press@RunDepth: 44.20 psig @ 4101.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.17

End Date:

2014.04.17

Last Calib.:

2014.04.17

Start Time: 01:53:05

End Time:

09:22:18

Time On Btm:

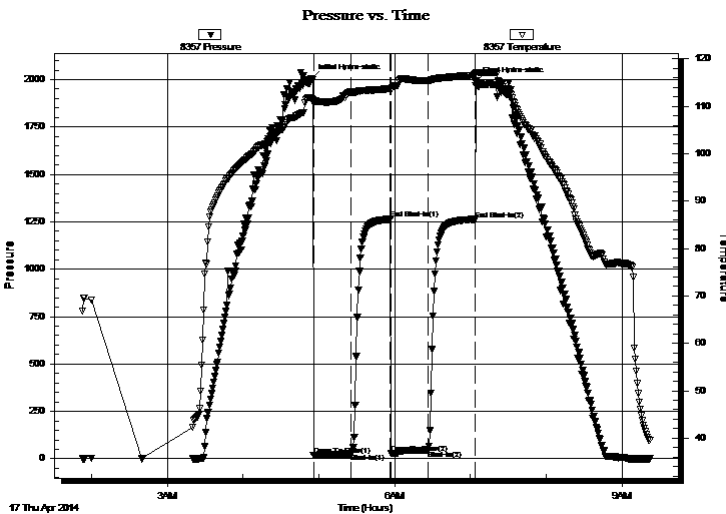
2014.04.17 @ 04:54:06

Time Off Btm:

2014.04.17 @ 07:04:36

TEST COMMENT: 30- 1/4" Blow died @ 7 min.
30- No return.
30- No blow , flushed tool, surge died.
30- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2004.70	111.64	Initial Hydro-static
2	18.04	110.63	Open To Flow (1)
32	26.62	112.97	Shut-In(1)
63	1264.37	113.73	End Shut-In(1)
63	27.60	113.35	Open To Flow (2)
93	44.20	115.42	Shut-In(2)
130	1263.14	116.53	End Shut-In(2)
131	1992.15	117.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	OSM 100m	0.43

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56271

DST#: 2

ATTN: Scott Alberg

Test Start: 2014.04.17 @ 01:53:00

GENERAL INFORMATION:

Formation: **LKC 'E-F'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:55:36

Time Test Ended: 09:22:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4099.00 ft (KB) To 4123.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4123.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: psig @ 4101.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.17

End Date:

2014.04.17

Last Calib.:

2014.04.17

Start Time: 01:53:15

End Time:

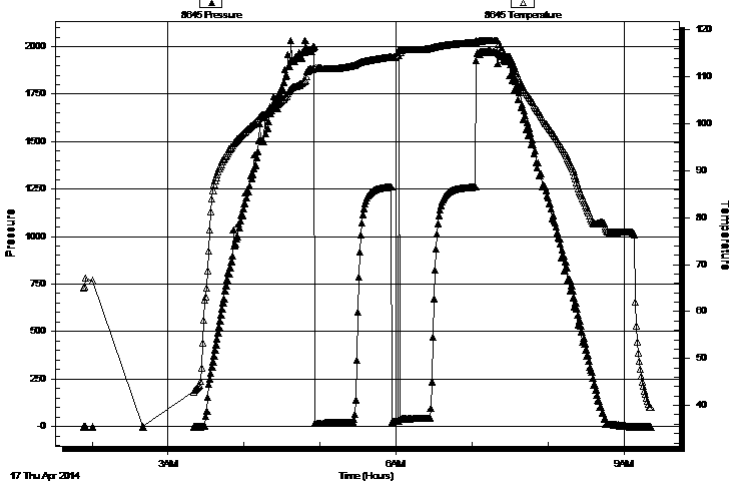
09:21:28

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- 1/4" Blow died @ 7 min.
30- No return.
30- No blow , flushed tool, surge died.
30- No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
50.00	OSM 100m	0.43

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56271

DST#: 2

ATTN: Scott Alberg

Test Start: 2014.04.17 @ 01:53:00

Tool Information

Drill Pipe:	Length: 4071.00 ft	Diameter: 3.80 inches	Volume: 57.11 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.50 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4099.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	51.50 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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Change Over Sub	1.00			4072.50	
Shut In Tool	5.00			4077.50	
Hydraulic tool	5.00			4082.50	
Jars	5.00			4087.50	
Safety Joint	2.50			4090.00	
Packer	5.00			4095.00	27.50 Bottom Of Top Packer
Packer	4.00			4099.00	
Stubb	1.00			4100.00	
Perforations	1.00			4101.00	
Recorder	0.00	8357	Inside	4101.00	
Recorder	0.00	8645	Outside	4101.00	
Perforations	19.00			4120.00	
Bullnose	3.00			4123.00	24.00 Bottom Packers & Anchor

Total Tool Length: 51.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56271

DST#: 2

ATTN: Scott Alberg

Test Start: 2014.04.17 @ 01:53:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	OSM 100m	0.428

Total Length: 50.00 ft Total Volume: 0.428 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

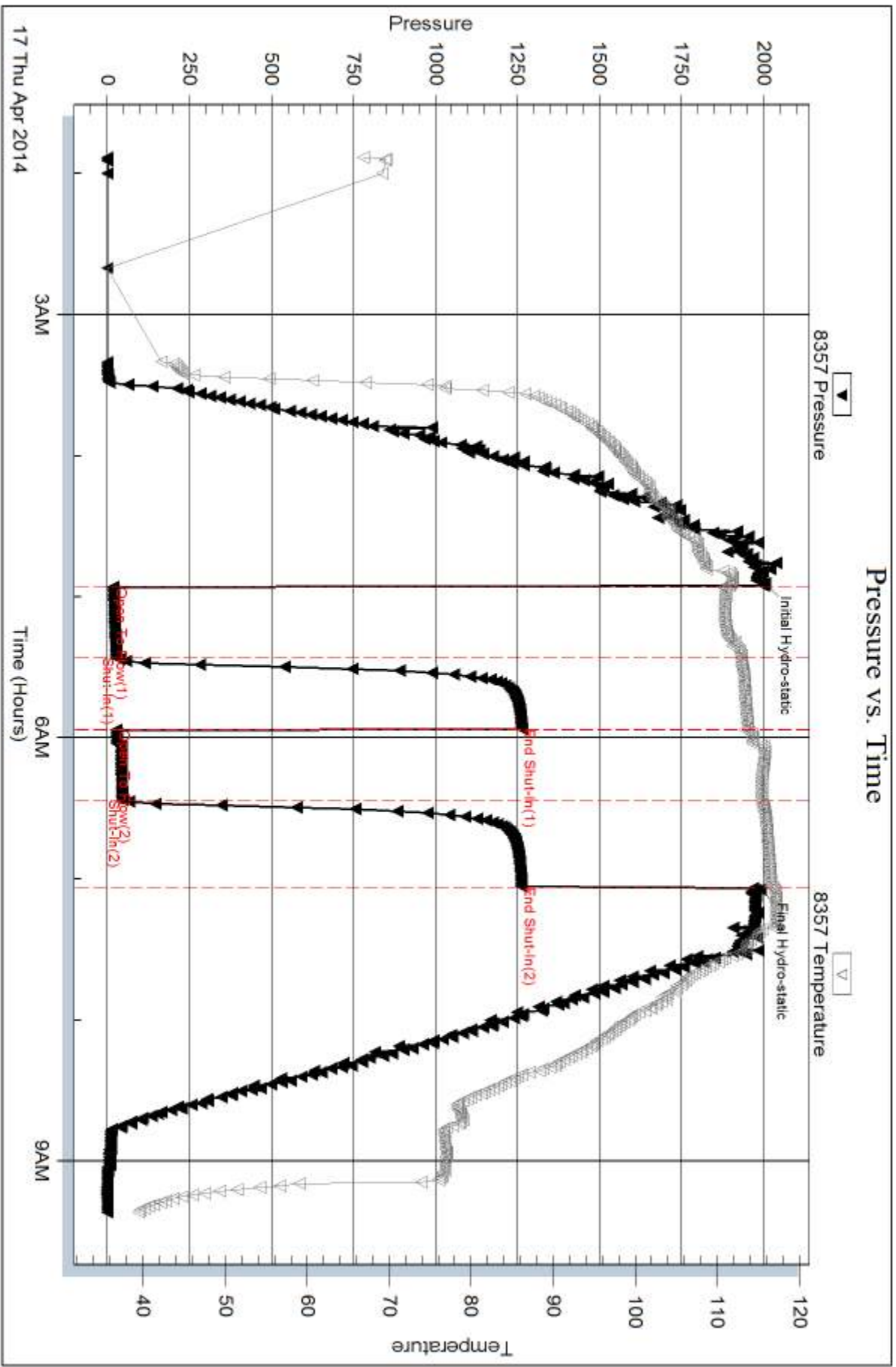
Serial #: 8357

Inside

Prater Oil & Gas Operations

Maurath #1

DST Test Number: 2

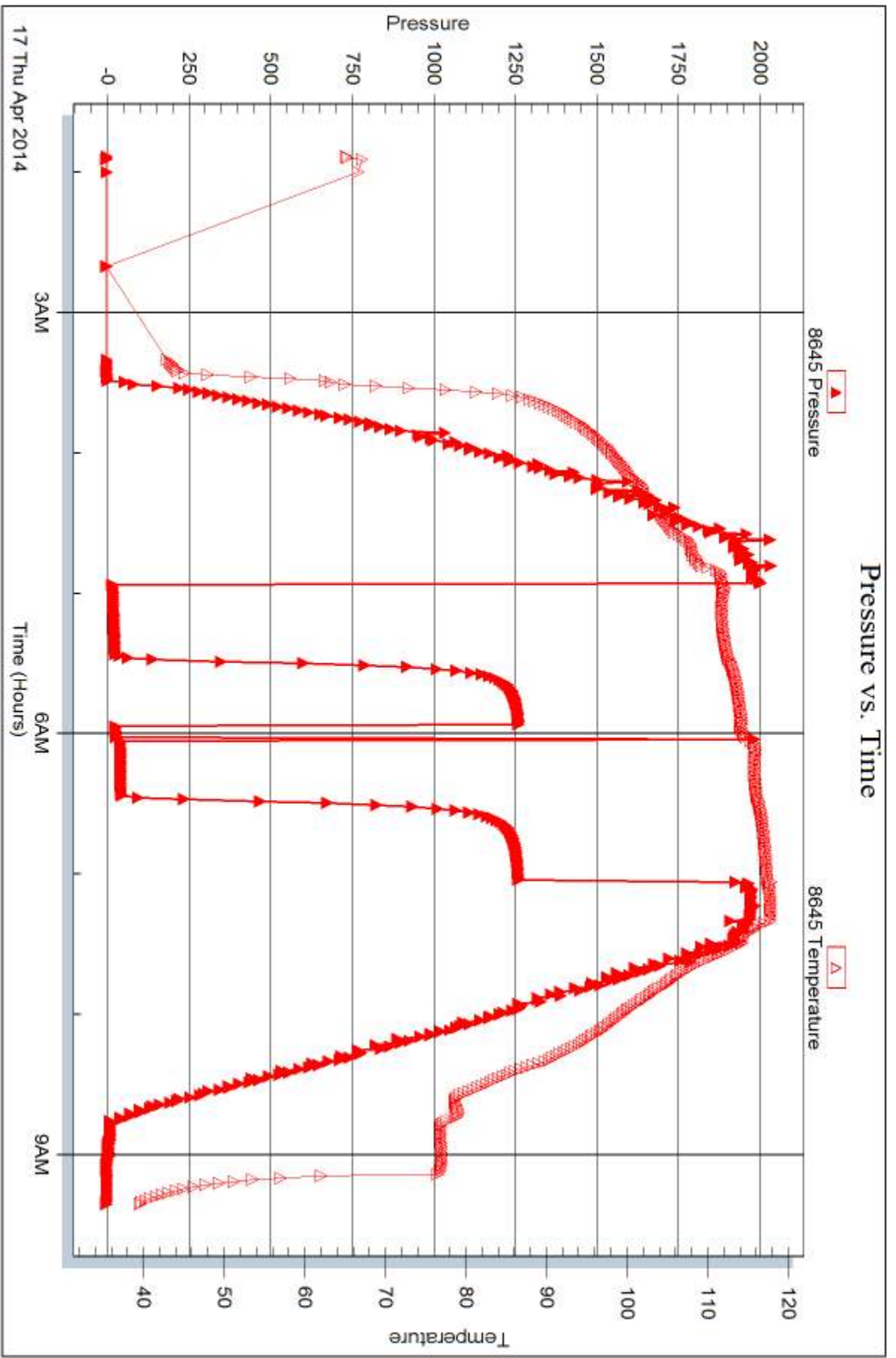


Serial #: 8645

Outside Prater Oil & Gas Operations

Maurath #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Prater Oil & Gas Operations**

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

Maurath #1

S15-10s-31w Thomas,KS

Start Date: 2014.04.18 @ 02:40:00

End Date: 2014.04.18 @ 10:01:17

Job Ticket #: 56272 DST #: 3

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

Printed: 2014.04.24 @ 14:15:39



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56272

DST#: 3

ATTN: Scott Alberg

Test Start: 2014.04.18 @ 02:40:00

GENERAL INFORMATION:

Formation: **LKC 'H-K'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:12:18

Time Test Ended: 10:01:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4156.00 ft (KB) To 4280.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4280.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8357

Inside

Press@RunDepth: 52.98 psig @ 4158.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.18

End Date:

2014.04.18

Last Calib.:

2014.04.18

Start Time: 02:40:05

End Time:

10:01:18

Time On Btm:

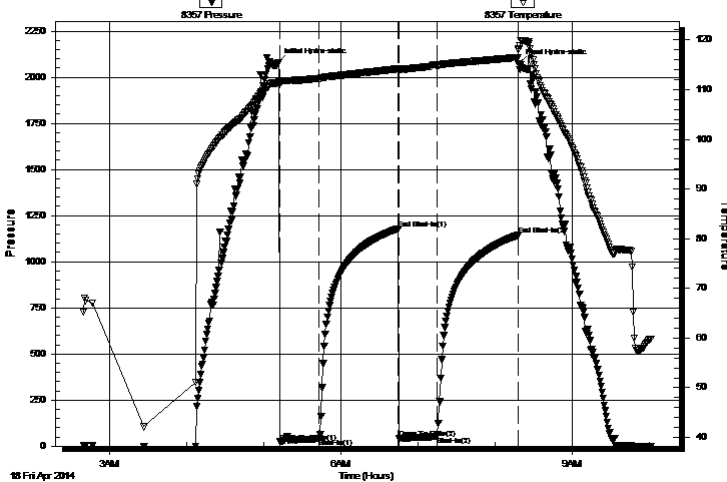
2014.04.18 @ 05:10:54

Time Off Btm:

2014.04.18 @ 08:18:06

TEST COMMENT: 30- 3" Building blow .
60- No return.
30- 1" Blow .
60- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2080.00	111.36	Initial Hydro-static
2	22.55	111.08	Open To Flow (1)
33	41.48	112.25	Shut-In(1)
94	1178.64	114.17	End Shut-In(1)
95	44.20	113.97	Open To Flow (2)
124	52.98	114.91	Shut-In(2)
187	1142.62	116.45	End Shut-In(2)
188	2075.13	118.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	OSWM 40w 60m	0.71

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

S15-10s-31w Thomas,KS

Maurath #1

Job Ticket: 56272

DST#: 3

Test Start: 2014.04.18 @ 02:40:00

GENERAL INFORMATION:

Formation: **LKC 'H-K'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:12:18

Time Test Ended: 10:01:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4156.00 ft (KB) To 4280.00 ft (KB) (TVD)

Total Depth: 4280.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2993.00 ft (KB)

2985.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: psig @ 4158.00 ft (KB)

Start Date: 2014.04.18

End Date:

2014.04.18

Capacity: 8000.00 psig

Last Calib.:

2014.04.18

Start Time: 02:40:17

End Time:

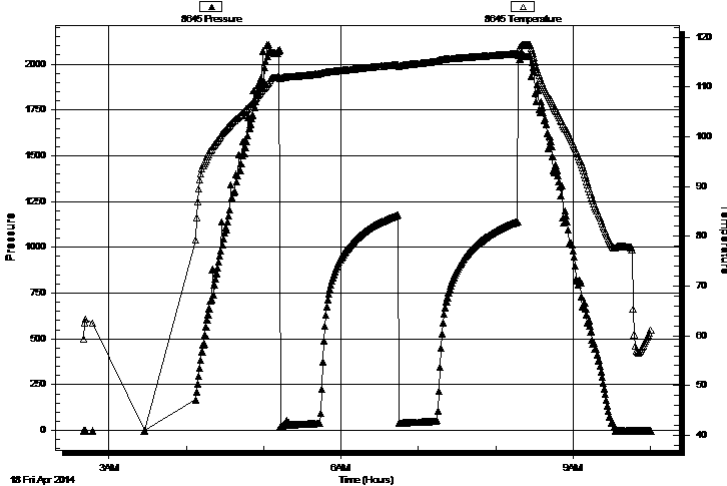
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Time On Btm:

Time Off Btm:

TEST COMMENT: 30- 3" Building blow .
60- No return.
30- 1" Blow .
60- No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
70.00	OSWM 40w 60m	0.71

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56272

DST#: 3

ATTN: Scott Alberg

Test Start: 2014.04.18 @ 02:40:00

Tool Information

Drill Pipe:	Length: 4130.00 ft	Diameter: 3.80 inches	Volume: 57.93 bbl	Tool Weight:	2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 58.08 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.50 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4156.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	124.00 ft				
Tool Length:	151.50 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			4129.50	
Shut In Tool	5.00			4134.50	
Hydraulic tool	5.00			4139.50	
Jars	5.00			4144.50	
Safety Joint	2.50			4147.00	
Packer	5.00			4152.00	27.50 Bottom Of Top Packer
Packer	4.00			4156.00	
Stubb	1.00			4157.00	
Perforations	1.00			4158.00	
Recorder	0.00	8357	Inside	4158.00	
Recorder	0.00	8645	Outside	4158.00	
Perforations	24.00			4182.00	
Change Over Sub	1.00			4183.00	
Drill Pipe	93.00			4276.00	
Change Over Sub	1.00			4277.00	
Bullnose	3.00			4280.00	124.00 Bottom Packers & Anchor
Total Tool Length:	151.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56272

DST#: 3

ATTN: Scott Alberg

Test Start: 2014.04.18 @ 02:40:00

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:

75000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
70.00	OSWM 40w 60m	0.709

Total Length: 70.00 ft Total Volume: 0.709 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: . 175 @ 43 Degrees F = 75000 PPM

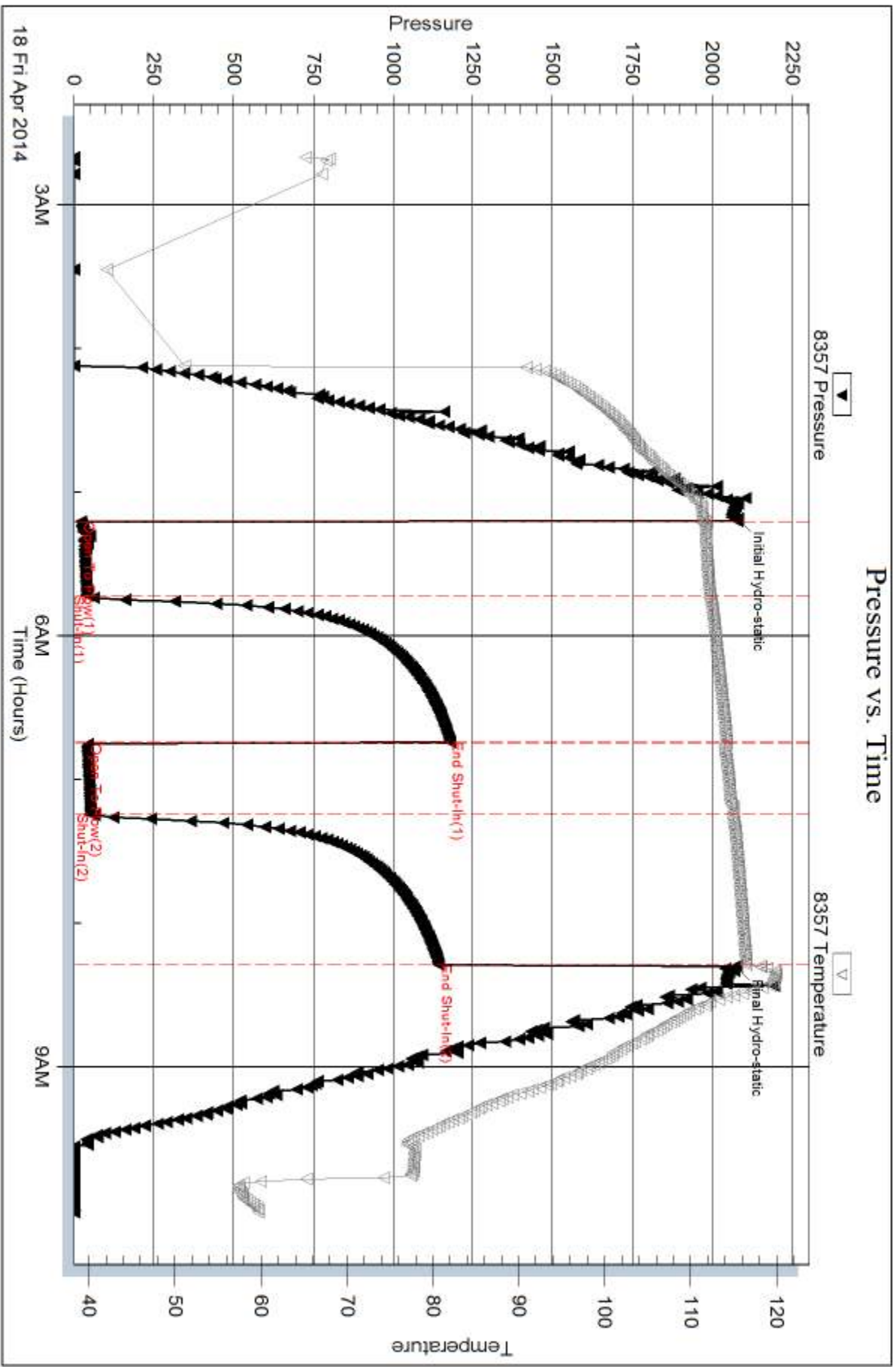
Serial #: 8357

Inside

Prater Oil & Gas Operations

Maurath #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 56272

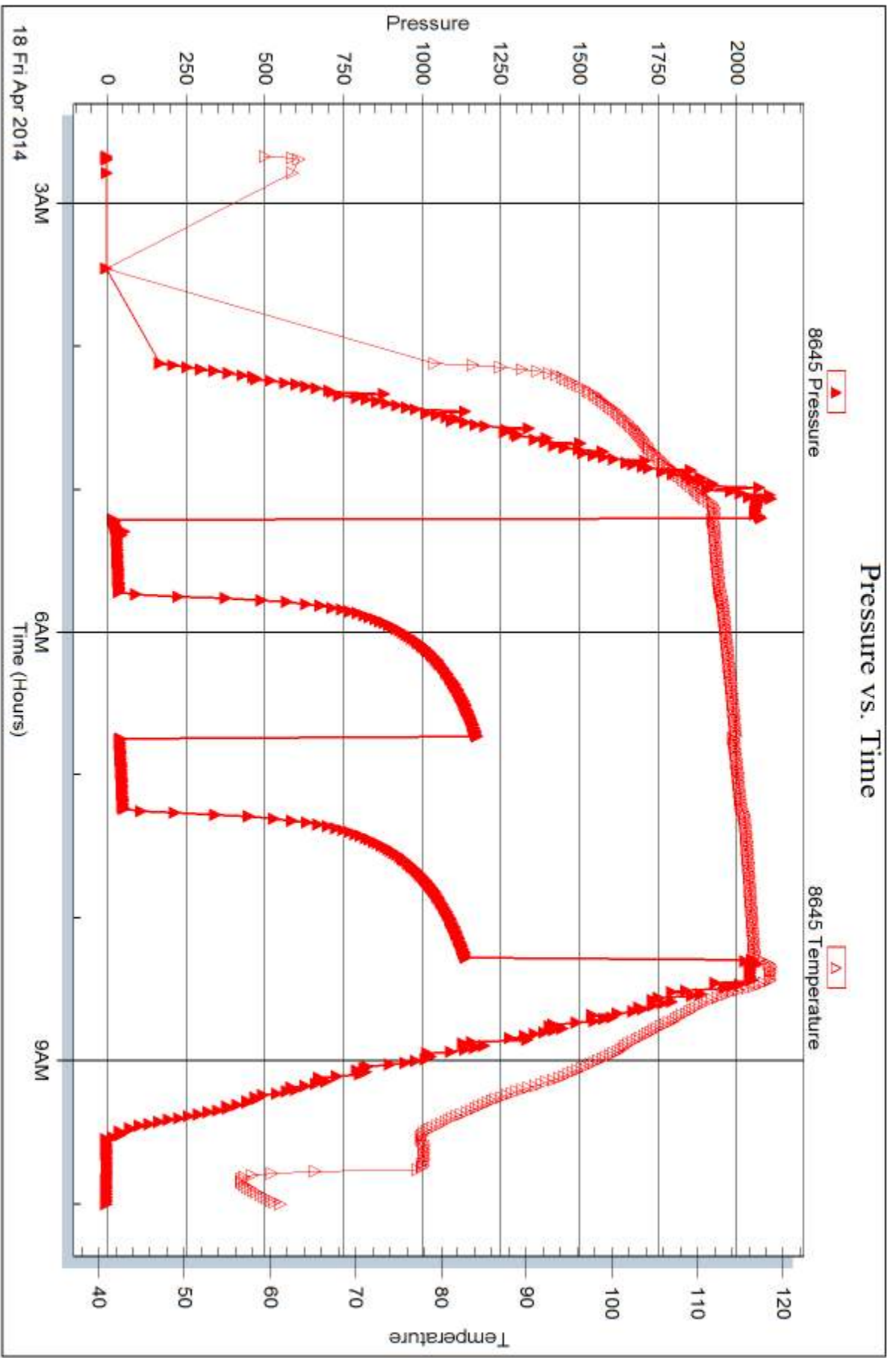
Printed: 2014.04.24 @ 14:15:40

Serial #: 8645

Outside Prater Oil & Gas Operations

Maurath #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 56272

Printed: 2014.04.24 @ 14:15:41



DRILL STEM TEST REPORT

Prepared For: **Prater Oil & Gas Operations**

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

Maurath #1

S15-10s-31w Thomas,KS

Start Date: 2014.04.18 @ 20:50:00

End Date: 2014.04.19 @ 03:43:17

Job Ticket #: 56273 DST #: 4

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

Printed: 2014.04.24 @ 14:15:15

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

Maurath #1

DST # 4

LKC 'L - Lenappah'

2014.04.18



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56273

DST#: 4

ATTN: Scott Alberg

Test Start: 2014.04.18 @ 20:50:00

GENERAL INFORMATION:

Formation: **LKC 'L - Lenapah'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:31:30

Time Test Ended: 03:43:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4280.00 ft (KB) To 4348.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4348.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8357

Inside

Press@RunDepth: 47.64 psig @ 4282.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.18

End Date:

2014.04.19

Last Calib.: 2014.04.19

Start Time: 20:50:05

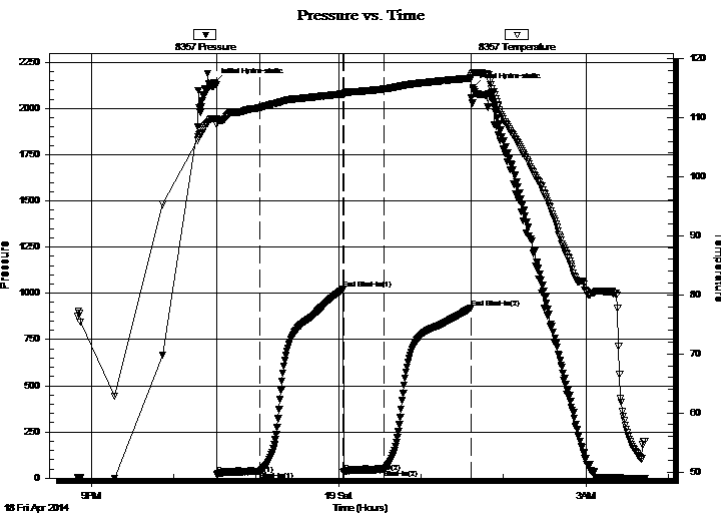
End Time:

03:43:18

Time On Btm: 2014.04.18 @ 22:29:36

Time Off Btm: 2014.04.19 @ 01:38:00

TEST COMMENT: 30- 6" Blow .
60- No return.
30- 8" Blow .
60- No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2137.94	109.82	Initial Hydro-static
2	20.30	108.83	Open To Flow (1)
34	37.44	111.67	Shut-In(1)
94	1021.95	114.00	End Shut-In(1)
94	29.72	113.88	Open To Flow (2)
124	47.64	114.84	Shut-In(2)
187	921.45	116.69	End Shut-In(2)
189	2111.39	117.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 20g 5o 75m	0.57
10.00	GOCM 10g 2o 88m	0.14
0.00	110' Weak GIP	0.00

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56273

DST#: 4

ATTN: Scott Alberg

Test Start: 2014.04.18 @ 20:50:00

GENERAL INFORMATION:

Formation: **LKC 'L - Lenapah'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:31:30

Time Test Ended: 03:43:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: **4280.00 ft (KB) To 4348.00 ft (KB) (TVD)**

Total Depth: 4348.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2993.00 ft (KB)

2985.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: psig @ 4282.00 ft (KB)

Start Date: 2014.04.18

End Date: 2014.04.19

Start Time: 20:50:20

End Time: 03:42:09

Capacity: 8000.00 psig

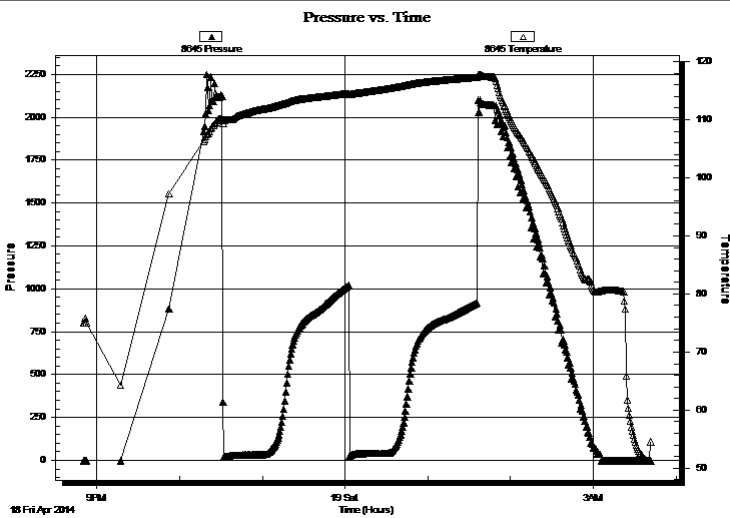
Last Calib.: 2014.04.19

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- 6" Blow .
60- No return.
30- 8" Blow .
60- No return.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 20g 5o 75m	0.57
10.00	GOCM 10g 2o 88m	0.14
0.00	110' Weak GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56273

DST#: 4

ATTN: Scott Alberg

Test Start: 2014.04.18 @ 20:50:00

Tool Information

Drill Pipe:	Length: 4225.00 ft	Diameter: 3.80 inches	Volume: 59.27 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 59.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	2.50 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4280.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.50 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			4253.50	
Shut In Tool	5.00			4258.50	
Hydraulic tool	5.00			4263.50	
Jars	5.00			4268.50	
Safety Joint	2.50			4271.00	
Packer	5.00			4276.00	27.50 Bottom Of Top Packer
Packer	4.00			4280.00	
Stubb	1.00			4281.00	
Perforations	1.00			4282.00	
Recorder	0.00	8357	Inside	4282.00	
Recorder	0.00	8645	Outside	4282.00	
Perforations	30.00			4312.00	
Change Over Sub	1.00			4313.00	
Drill Pipe	31.00			4344.00	
Change Over Sub	1.00			4345.00	
Bullnose	3.00			4348.00	68.00 Bottom Packers & Anchor
Total Tool Length:	95.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56273

DST#: 4

ATTN: Scott Alberg

Test Start: 2014.04.18 @ 20:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCM 20g 5o 75m	0.568
10.00	GOCM 10g 2o 88m	0.140
0.00	110' Weak GIP	0.000

Total Length: 70.00 ft Total Volume: 0.708 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8357

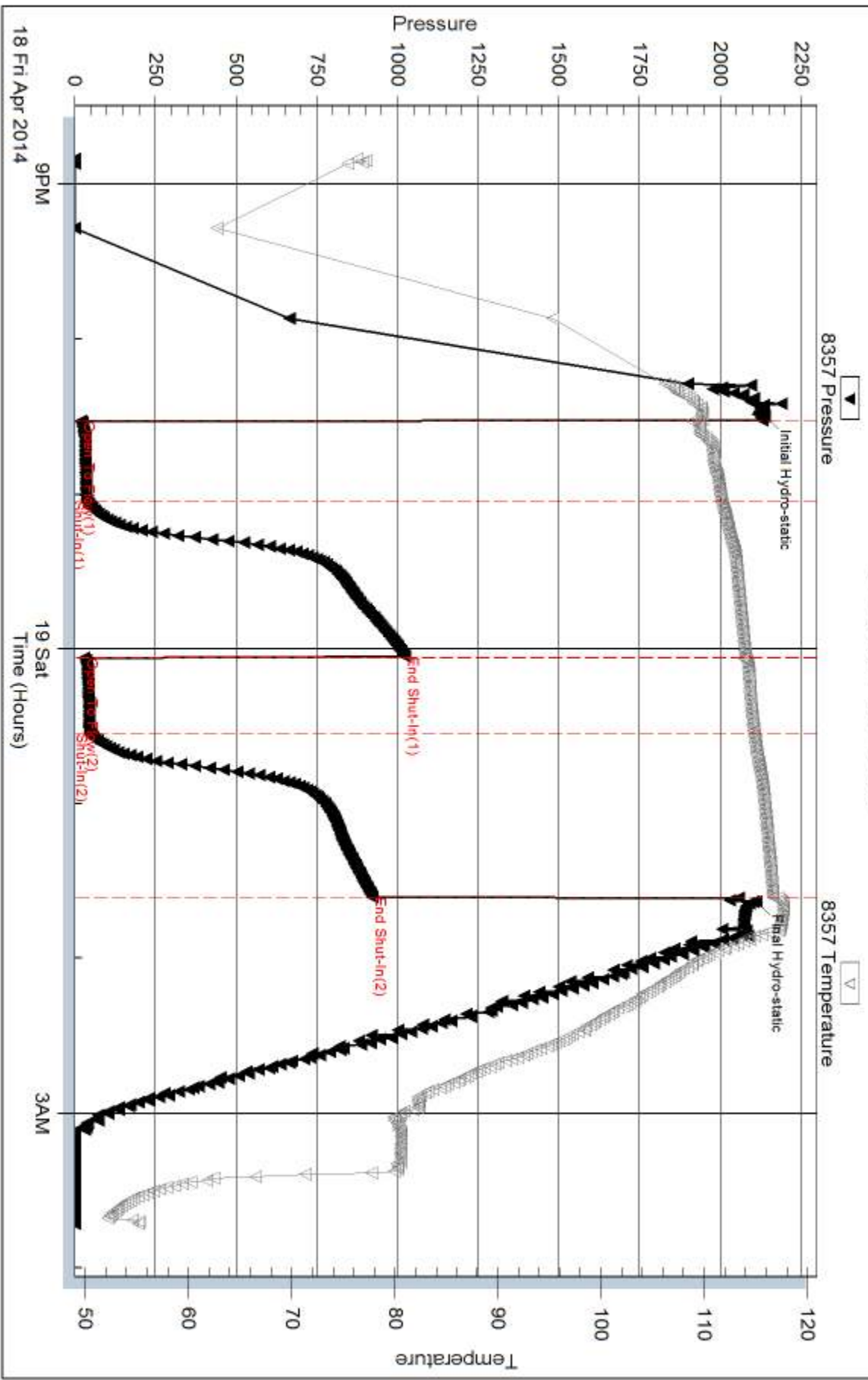
Inside

Prater Oil & Gas Operations

Maurath #1

DST Test Number: 4

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 56273

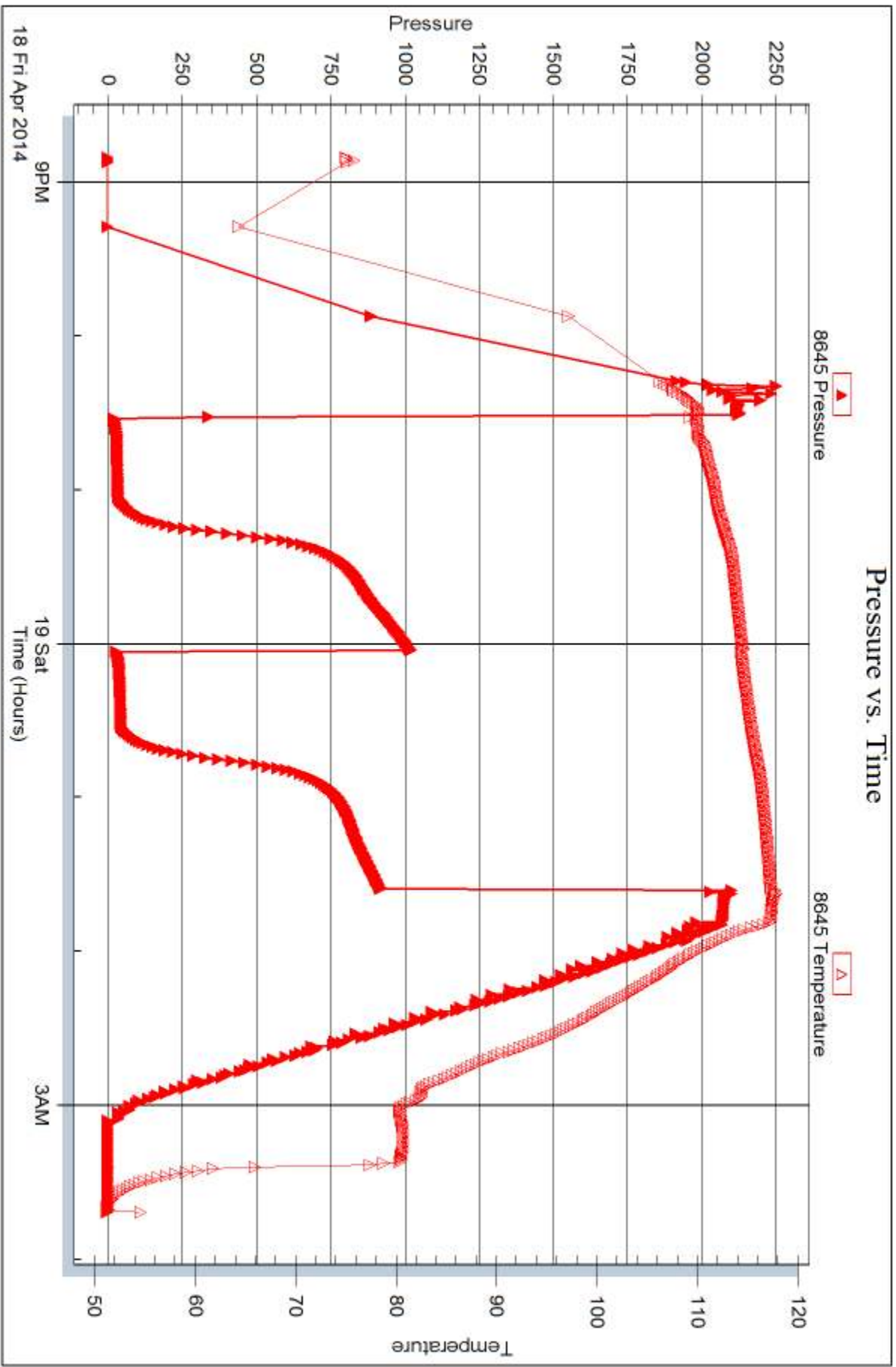
Printed: 2014.04.24 @ 14:15:16

Serial #: 8645

Outside Prater Oil & Gas Operations

Maurath #1

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 56273

Printed: 2014.04.24 @ 14:15:16



DRILL STEM TEST REPORT

Prepared For: **Prater Oil & Gas Operations**

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

Maurath #1

S15-10s-31w Thomas,KS

Start Date: 2014.04.19 @ 17:38:00

End Date: 2014.04.20 @ 00:36:12

Job Ticket #: 56274 DST #: 5

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

Printed: 2014.04.24 @ 14:14:18



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56274

DST#: 5

ATTN: Scott Alberg

Test Start: 2014.04.19 @ 17:38:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:04:06

Time Test Ended: 00:36:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4410.00 ft (KB) To 4460.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4460.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8357

Inside

Press@RunDepth: 25.01 psig @ 4412.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.19

End Date:

2014.04.20

Last Calib.: 2014.04.20

Start Time:

17:38:05

End Time:

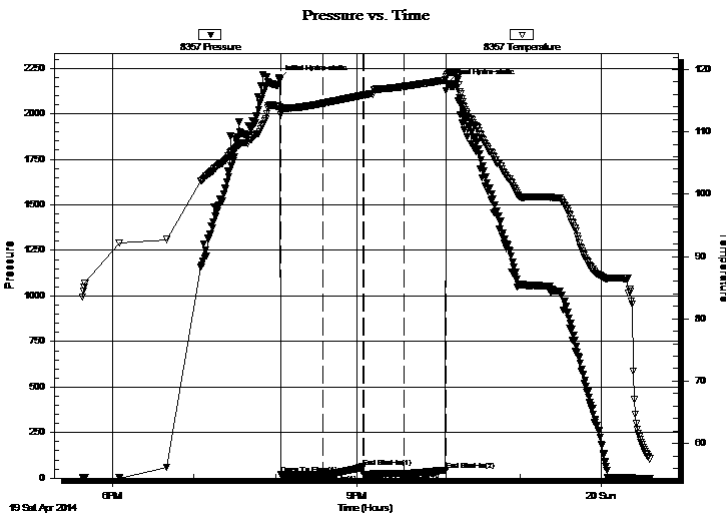
00:36:12

Time On Btm: 2014.04.19 @ 20:02:30

Time Off Btm: 2014.04.19 @ 22:06:24

TEST COMMENT: 30- Surface blow died @ 20 min.
30- No return.
30- No blow , flushed tool, surge died.
30- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2189.74	114.02	Initial Hydro-static
2	19.32	113.22	Open To Flow (1)
33	21.16	114.57	Shut-In(1)
63	62.24	115.88	End Shut-In(1)
63	21.68	115.88	Open To Flow (2)
93	25.01	117.30	Shut-In(2)
123	44.40	118.30	End Shut-In(2)
124	2164.21	119.22	Final Hydro-static

Recovery

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

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

S15-10s-31w Thomas,KS

Maurath #1

Job Ticket: 56274

DST#: 5

Test Start: 2014.04.19 @ 17:38:00

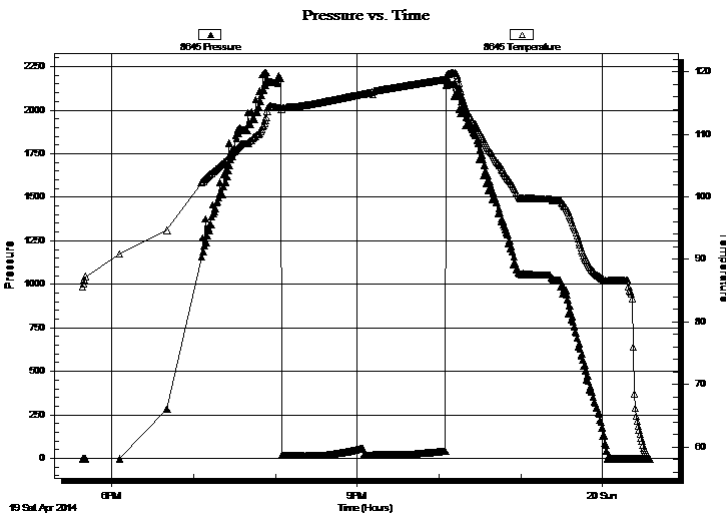
GENERAL INFORMATION:

Formation:	Pawnee		
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened:	20:04:06		Tester: Chuck Smith
Time Test Ended:	00:36:12		Unit No: 62
Interval:	4410.00 ft (KB) To 4460.00 ft (KB) (TVD)		Reference Elevations: 2993.00 ft (KB)
Total Depth:	4460.00 ft (KB) (TVD)		2985.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition: Good	KB to GR/CF: 8.00 ft

Serial #: 8645	Outside		
Press@RunDepth:	psig @ 4412.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2014.04.19	End Date:	2014.04.20
Start Time:	17:38:30	End Time:	00:35:07
		Last Calib.:	2014.04.20
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: 30- Surface blow died @ 20 min.
30- No return.
30- No blow , flushed tool, surge died.
30- No return.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 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

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56274

DST#: 5

ATTN: Scott Alberg

Test Start: 2014.04.19 @ 17:38:00

Tool Information

Drill Pipe:	Length: 4381.00 ft	Diameter: 3.80 inches	Volume: 61.45 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 61.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.50 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4410.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	77.50 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			4383.50	
Shut In Tool	5.00			4388.50	
Hydraulic tool	5.00			4393.50	
Jars	5.00			4398.50	
Safety Joint	2.50			4401.00	
Packer	5.00			4406.00	27.50 Bottom Of Top Packer
Packer	4.00			4410.00	
Stubb	1.00			4411.00	
Perforations	1.00			4412.00	
Recorder	0.00	8357	Inside	4412.00	
Recorder	0.00	8645	Outside	4412.00	
Perforations	12.00			4424.00	
Change Over Sub	1.00			4425.00	
Drill Pipe	31.00			4456.00	
Change Over Sub	1.00			4457.00	
Bullnose	3.00			4460.00	50.00 Bottom Packers & Anchor
Total Tool Length:	77.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56274

DST#: 5

ATTN: Scott Alberg

Test Start: 2014.04.19 @ 17:38:00

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:

bbbl

Water Loss: 8.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 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:

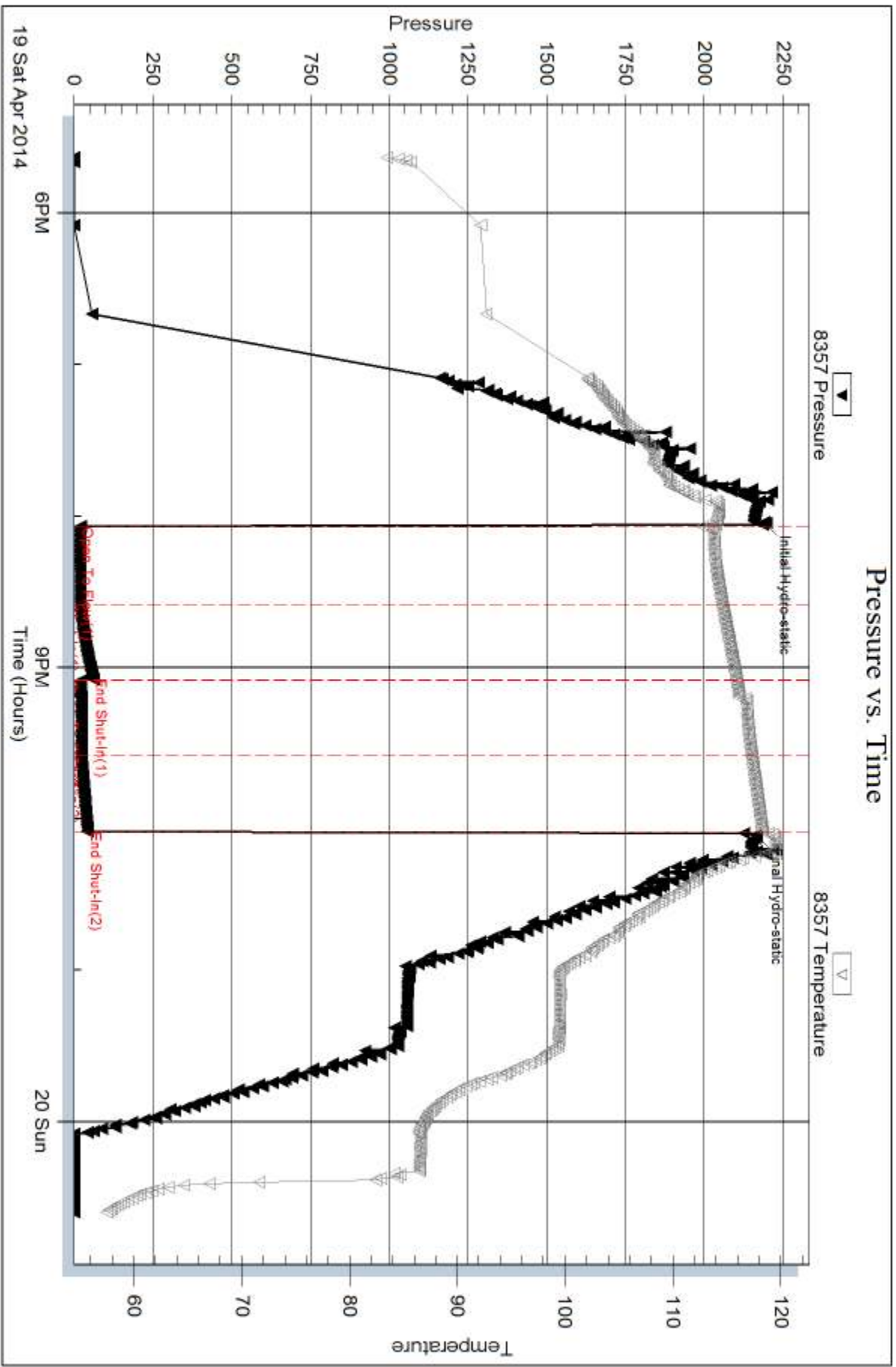
Serial #: 8357

Inside

Prater Oil & Gas Operations

Maurath #1

DST Test Number: 5

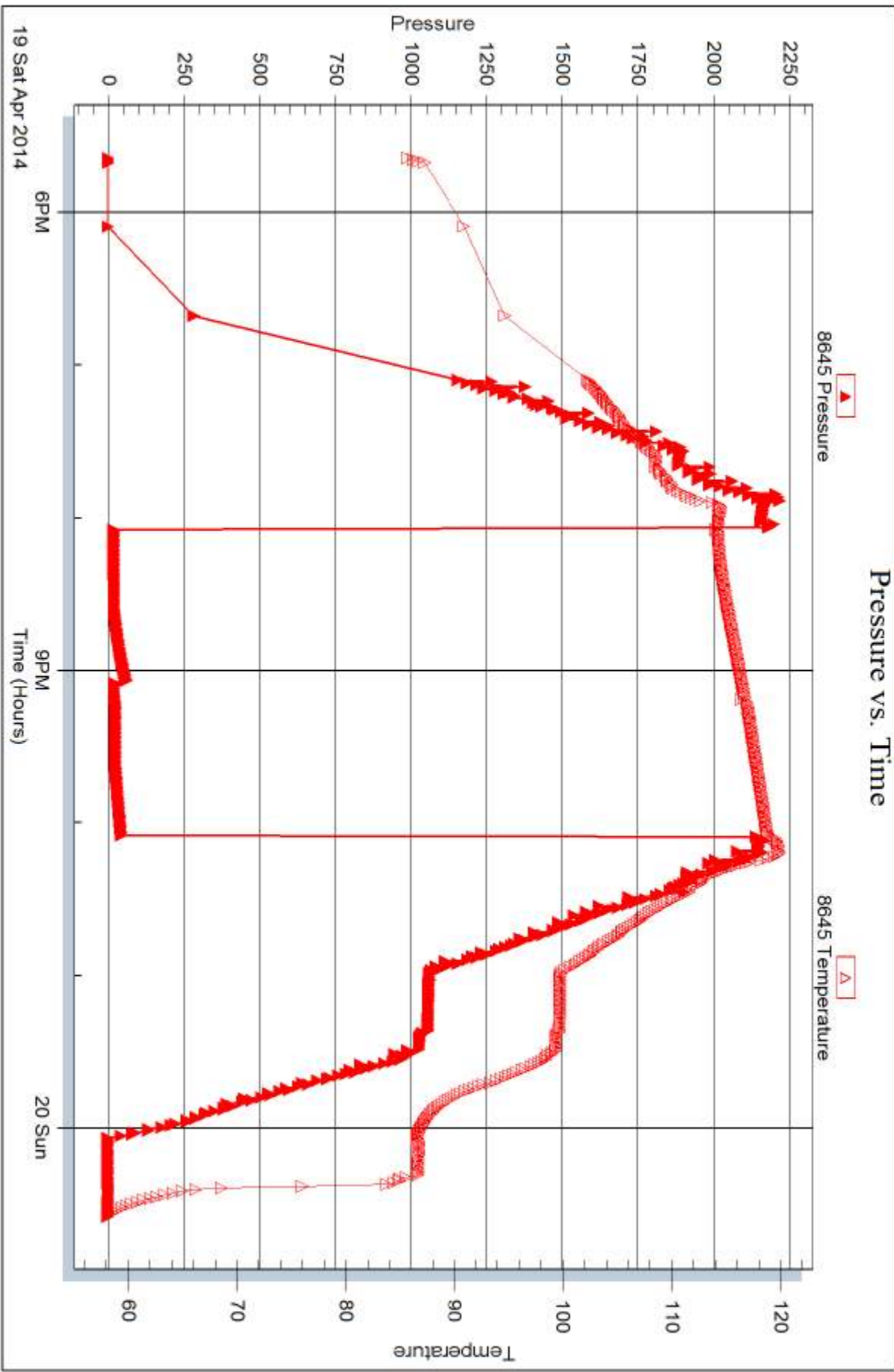


Serial #: 8645

Outside Prater Oil & Gas Operations

Maurath #1

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **Prater Oil & Gas Operations**

1303 N. Main
Pratt, KS 67124

ATTN: Scott Alberg

Maurath #1

S15-10s-31w Thomas,KS

Start Date: 2014.04.20 @ 19:12:00

End Date: 2014.04.21 @ 01:44:30

Job Ticket #: 56275 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.24 @ 14:13:38

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

Maurath #1

DST # 6

Myric Station - John

2014.04.20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56275

DST#: 6

ATTN: Scott Alberg

Test Start: 2014.04.20 @ 19:12:00

GENERAL INFORMATION:

Formation: **Myric Station - John**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:35:30

Time Test Ended: 01:44:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4452.00 ft (KB) To 4593.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4593.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8357

Inside

Press@RunDepth: 37.26 psig @ 4454.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.20

End Date:

2014.04.21

Last Calib.: 2014.04.21

Start Time: 19:12:05

End Time:

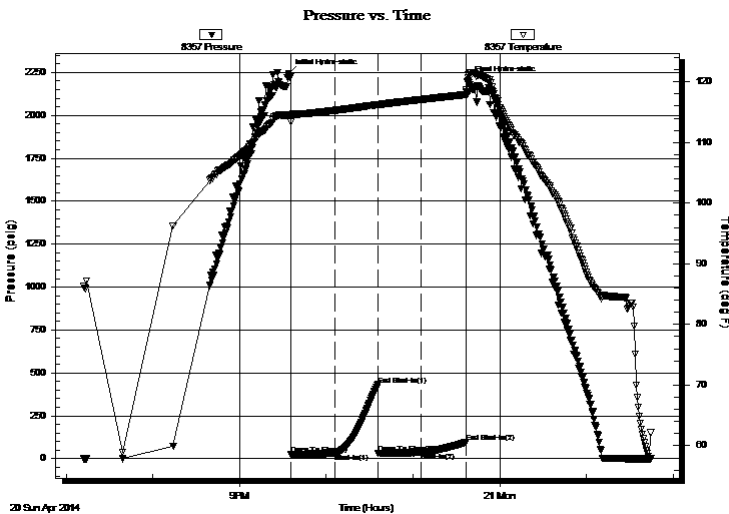
01:44:29

Time On Btm: 2014.04.20 @ 21:34:00

Time Off Btm: 2014.04.20 @ 23:38:00

TEST COMMENT: 30- 3/4" Blow .
30- No return.
30- No blow .
30- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2244.50	114.42	Initial Hydro-static
2	24.66	113.31	Open To Flow (1)
32	30.88	115.28	Shut-In(1)
62	431.79	116.22	End Shut-In(1)
62	33.14	116.10	Open To Flow (2)
92	37.26	117.07	Shut-In(2)
123	96.39	117.88	End Shut-In(2)
124	2199.46	120.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100m	0.07

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56275

DST#: 6

ATTN: Scott Alberg

Test Start: 2014.04.20 @ 19:12:00

GENERAL INFORMATION:

Formation: **Myric Station - John**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:35:30

Time Test Ended: 01:44:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4452.00 ft (KB) To 4593.00 ft (KB) (TVD)

Reference Elevations: 2993.00 ft (KB)

Total Depth: 4593.00 ft (KB) (TVD)

2985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: psig @ 4454.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.20

End Date:

2014.04.21

Last Calib.:

2014.04.21

Start Time: 19:11:40

End Time:

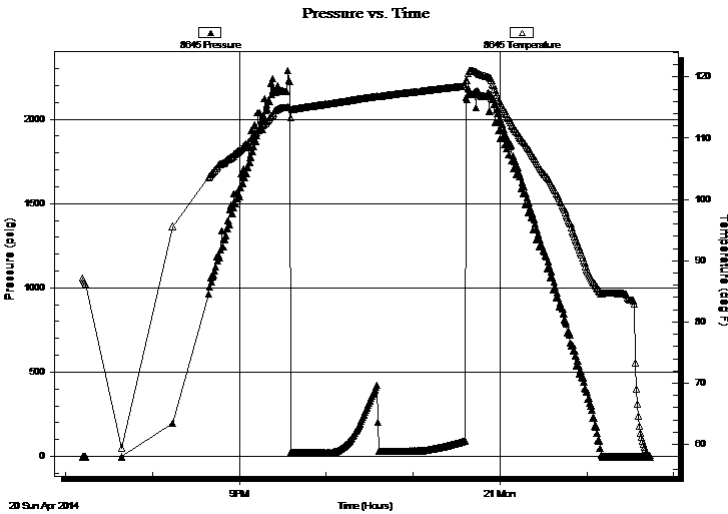
01:43:34

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- 3/4" Blow .
30- No return.
30- No blow .
30- No return.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100m	0.07

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56275

DST#: 6

ATTN: Scott Alberg

Test Start: 2014.04.20 @ 19:12:00

Tool Information

Drill Pipe:	Length: 4409.00 ft	Diameter: 3.80 inches	Volume: 61.85 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 62.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.50 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4452.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	141.00 ft			
Tool Length:	168.50 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			4425.50	
Shut In Tool	5.00			4430.50	
Hydraulic tool	5.00			4435.50	
Jars	5.00			4440.50	
Safety Joint	2.50			4443.00	
Packer	5.00			4448.00	27.50 Bottom Of Top Packer
Packer	4.00			4452.00	
Stubb	1.00			4453.00	
Perforations	1.00			4454.00	
Recorder	0.00	8357	Inside	4454.00	
Recorder	0.00	8645	Outside	4454.00	
Perforations	10.00			4464.00	
Change Over Sub	1.00			4465.00	
Drill Pipe	124.00			4589.00	
Change Over Sub	1.00			4590.00	
Bullnose	3.00			4593.00	141.00 Bottom Packers & Anchor
Total Tool Length:	168.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Prater Oil & Gas Operations

S15-10s-31w Thomas,KS

1303 N. Main
Pratt, KS 67124

Maurath #1

Job Ticket: 56275

DST#: 6

ATTN: Scott Alberg

Test Start: 2014.04.20 @ 19:12:00

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: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OSM 100m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

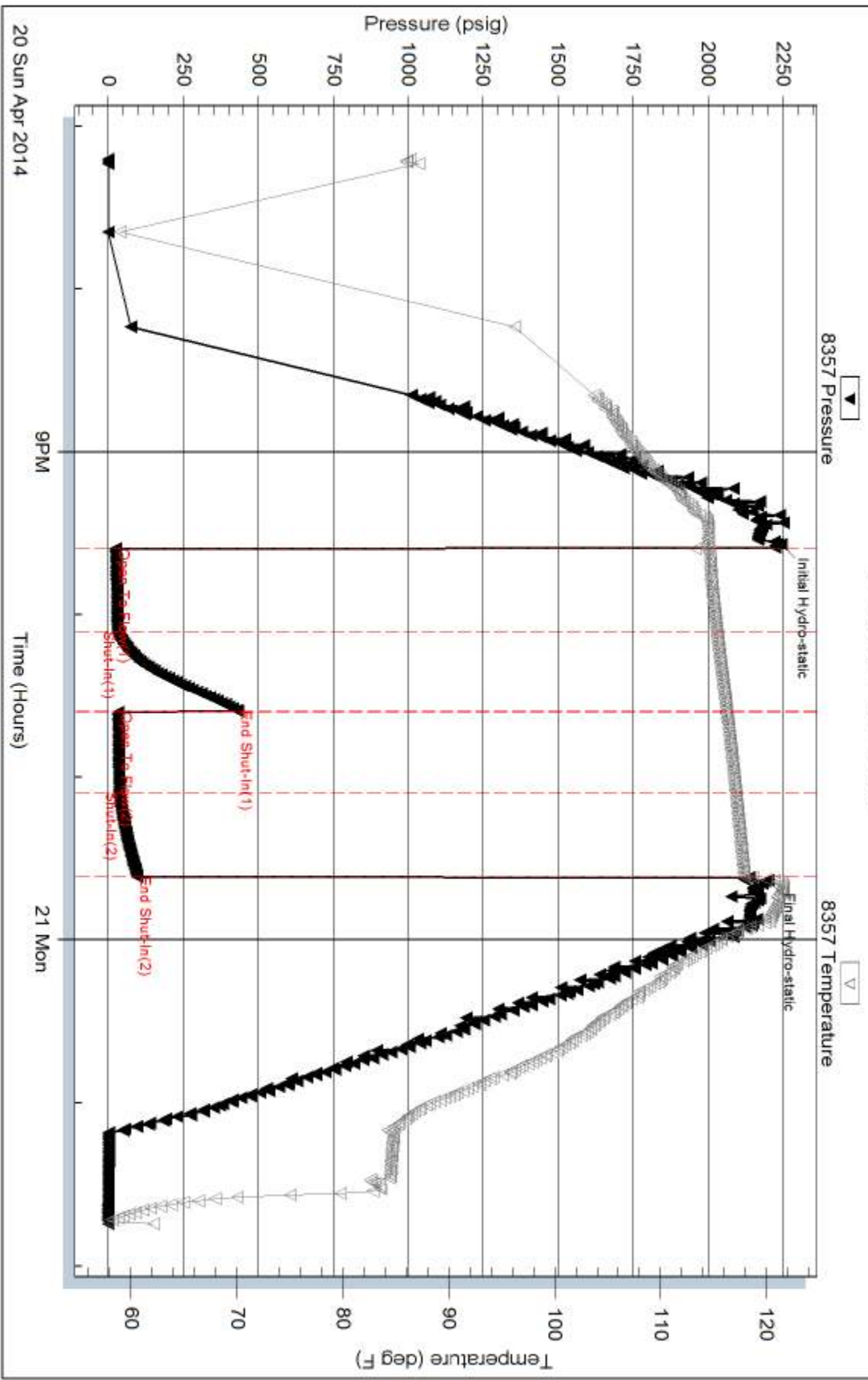
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



20 Sun Apr 2014

9PM

Time (Hours)

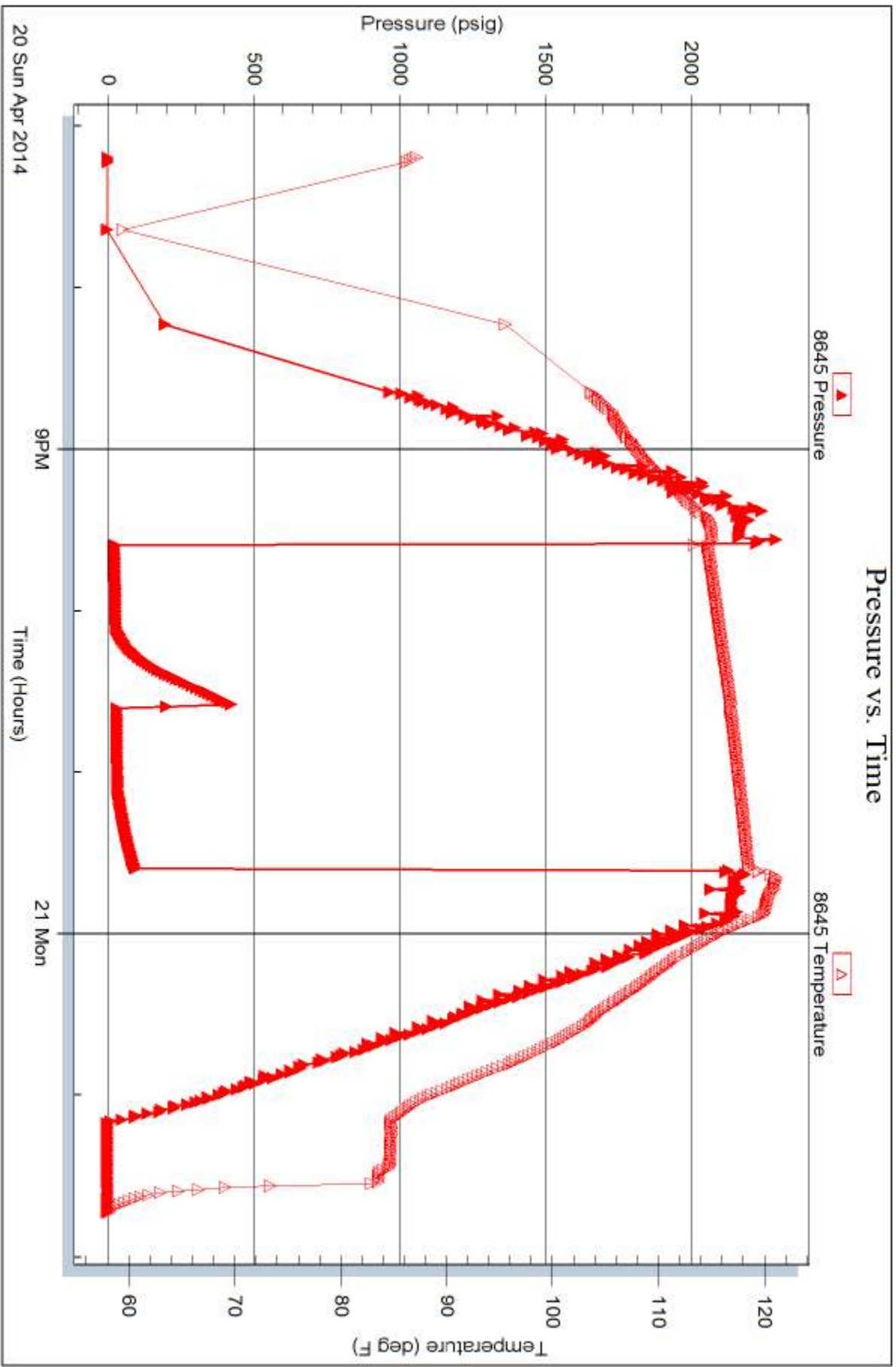
21 Mon

Serial #: 8645

Outside Prater Oil & Gas Operations

Maurath #1

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 56275

Printed: 2014.04.24 @ 14:13:40



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56270**

4/10

Well Name & No. Maurath #1 Test No. 1 Date 4-16-14
 Company Prater Oil & Gas Operations Elevation 2993 KB 2985 GL
 Address 1303 N. Main Pratt, KS 67124
 Co. Rep / Geo. Scott Alberg Rig Maverick 108
 Location: Sec. 15 Twp. 10s Rge. 3W Co. Thomas State KS

Interval Tested 3990 - 4075 Zone Tested Tocant, A+B
 Anchor Length 85 Drill Pipe Run 3885 Mud Wt. 9.1
 Top Packer Depth 3986 Drill Collars Run 90 Vis 47
 Bottom Packer Depth 3990 Wt. Pipe Run 0 WL 7.2
 Total Depth 4075 Chlorides 2000 ppm System LCM 1"

Blow Description B.O.B. @ 2min
No return.
B.O.B. @ 3min.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>439</u>	<u>WM</u>		<u>25</u>	<u>75</u>	
<u>496</u>	<u>MW</u>		<u>85</u>	<u>15</u>	
<u>245</u>	<u>MW</u>	<u>Oil spots in tool.</u>	<u>95</u>	<u>5</u>	

Rec Total 1180 BHT 122 Gravity - API RW .133 @ 59 °F Chlorides 70000 ppm

(A) Initial Hydrostatic 1946 Test 1250 T-On Location 9:37
 (B) First Initial Flow 93 Jars 250 T-Started 9:59
 (C) First Final Flow 363 Safety Joint 75 T-Open 12:30
 (D) Initial Shut-In 1179 Circ Sub NIC T-Pulled 15:03
 (E) Second Initial Flow 379 Hourly Standby _____ T-Out 17:23
 (F) Second Final Flow 582 Mileage 116 RT 179.80 Comments _____
 (G) Final Shut-In 1169 Sampler _____
 (H) Final Hydrostatic 1929 Straddle _____ Ruined Shale Packer _____

Initial Open 15 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 60 Extra Packer _____ Extra Copies _____
 Final Flow 15 Extra Recorder _____ Sub Total 0
 Final Shut-In 60 Day Standby _____ Total 1754.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1754.80

Approved By [Signature] Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56271

Well Name & No. Maurath #1 Test No. 2 Date 4-17-14
 Company Prater Oil & Gas Operations Elevation 2993 KB 2985 GL
 Address 1303 N. Main Pratt, KS 67124
 Co. Rep / Geo. Scott Alberg Rig Maverick #108
 Location: Sec. 15 Twp. 10s Rge. 3W Co. Thomas State KS

Interval Tested 4099-4123 Zone Tested LKC E-F
 Anchor Length 24 Drill Pipe Run 4071 Mud Wt. 9.1
 Top Packer Depth 4095 Drill Collars Run 30 Vis 53
 Bottom Packer Depth 4099 Wt. Pipe Run 0 WL 7.2
 Total Depth 4123 Chlorides 2000 ppm System LCM Trace
 Blow Description 1/4" Blow died @ 7 min.
No return.
No blow, flushed tool, surge died.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>50</u>	Feet of <u>0.5 m</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 50 BHT 117 Gravity - API RW @ °F Chlorides - ppm

(A) Initial Hydrostatic <u>200.5</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>1:30</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1:53</u>
(C) First Final Flow <u>27</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>4:56</u>
(D) Initial Shut-In <u>1264</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>7:04</u>
(E) Second Initial Flow <u>28</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>9:22</u>
(F) Second Final Flow <u>44</u>	<input checked="" type="checkbox"/> Mileage <u>116RT</u> 179.80	Comments
(G) Final Shut-In <u>1263</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1992</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>30</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>38</u>	<input type="checkbox"/> Day Standby	Total <u>1754.80</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1754.80</u>	

Approved By [Signature] Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56272**

4/10

Well Name & No. Maurath #1 Test No. 3 Date 4-18-14
 Company Prater Oil + Gas Operations Elevation 2993 KB 2985 GL
 Address 1303 N. Main Pratt, KS 67124
 Co. Rep / Geo. Scott Alberg Rig Maverick #108
 Location: Sec. 15 Twp. 10s Rge. 3/W Co. Thomas State KS

Interval Tested 4156 - 4280 Zone Tested LKO 'H, I, J, K'
 Anchor Length 124 Drill Pipe Run 4130 Mud Wt. 9.4
 Top Packer Depth 4152 Drill Collars Run 30 Vis 51
 Bottom Packer Depth 4156 Wt. Pipe Run 0 WL 8.0
 Total Depth 4280 Chlorides 2200 ppm System LCM 1*
 Blow Description 3" Building blow.
No return.
1" Blow.
No return.

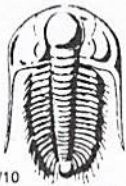
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>70</u>	Feet of <u>OSWM</u>	%gas	%oil	<u>40</u> %water	<u>60</u> %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT 116 Gravity — API RW 1175 @ 43 °F Chlorides 25000 ppm

(A) Initial Hydrostatic <u>2080</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>2:15</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2:40</u>
(C) First Final Flow <u>42</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>5:12</u>
(D) Initial Shut-In <u>1179</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>8:17</u>
(E) Second Initial Flow <u>44</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>10:01</u>
(F) Second Final Flow <u>53</u>	<input checked="" type="checkbox"/> Mileage <u>179.80</u>	Comments
(G) Final Shut-In <u>1143</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2075</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1754.80</u>
Final Shut-In <u>63</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1754.80</u>	

Approved By [Signature] Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56273**

4/10

Well Name & No. Maurath #1 Test No. 4 Date 4-18-14
 Company Prater Oil + Gas Operations Elevation 2993 KB 2985 GL
 Address 1303 N. Main Pratt, KS 67124
 Co. Rep / Geo. Scott Alberg Rig Maverick #108
 Location: Sec. 15 Twp. 10s Rge. 31w Co. Thomas State KS

Interval Tested 4280 - 4348 Zone Tested LKC 'L + Lenapah
 Anchor Length 68 Drill Pipe Run 4225 Mud Wt. 9.3
 Top Packer Depth 4276 Drill Collars Run 30 Vis 53
 Bottom Packer Depth 4280 Wt. Pipe Run 0 WL 6.4
 Total Depth 4348 Chlorides 2000 ppm System LCM 2*
 Blow Description 6" Blow.
No return.
8" Blow.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>10</u>	Feet of <u>GOCM</u>	<u>10</u> %gas	<u>2</u> %oil	%water	<u>88</u> %mud
Rec <u>60</u>	Feet of <u>GOCM</u>	<u>20</u> %gas	<u>5</u> %oil	%water	<u>75</u> %mud
Rec	Feet of <u>110' Weak GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT 117 Gravity — API RW @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2138 Test 1250 T-On Location 20:45
 (B) First Initial Flow 20 Jars 250 T-Started 20:50
 (C) First Final Flow 37 Safety Joint 75 T-Open 22:32
 (D) Initial Shut-In 1022 Circ Sub NIC T-Pulled 1:37
 (E) Second Initial Flow 30 Hourly Standby T-Out 3:43
 (F) Second Final Flow 48 Mileage 179.80 Comments
 (G) Final Shut-In 921 Sampler
 (H) Final Hydrostatic 2111 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 30 Extra Recorder Sub Total 0
 Initial Shut-In 60 Day Standby Total 1754.80
 Final Flow 30 Accessibility MP/DST Disc't
 Final Shut-In 60 Sub Total 1754.80

Approved By [Signature] Our Representative Chuck Amick

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56274

Well Name & No. Maurath #1 Test No. 5 Date 4-19-14
 Company Prater Oil + Gas Operations Elevation 2993 KB 2985 GL
 Address 1303 N. Main Pratt, KS 67124
 Co. Rep / Geo. Scott Alberg Rig Maverick #108
 Location: Sec. 15 Twp. 10s Rge. 31w Co. Thomas State KS

Interval Tested 4410 - 4460 Zone Tested Pawnee
 Anchor Length 50 Drill Pipe Run 4381 Mud Wt. 9.3
 Top Packer Depth 4406 Drill Collars Run 30 Vis 52
 Bottom Packer Depth 4410 Wt. Pipe Run 0 WL 8.6
 Total Depth 4460 Chlorides 3000 ppm System LCM 1#

Blow Description Surface blow died @ 20 min.
No return.
No blow, flushed tool, surge died
No return.

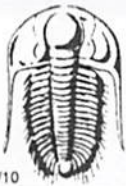
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>5</u>	Feet of <u>0.5m</u>				<u>100</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 118 Gravity — API RW @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>2190</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>17:35</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>17:38</u>
(C) First Final Flow <u>21</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:04</u>
(D) Initial Shut-In <u>62</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>22:05</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>00:36</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>179.80</u>	Comments
(G) Final Shut-In <u>44</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2164</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1754.80</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1754.80</u>	

Approved By [Signature] Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56275

4/10

Well Name & No. Maurath #1 Test No. 6 Date 4-20-14
 Company Prater Oil + Gas Operations Elevation 2993 KB 2985 GL
 Address 1303 N. Main Pratt, Ks 67124
 Co. Rep / Geo. Scott Alberg Rig Maverick #108
 Location: Sec. 15 Twp. 10s Rge. 3W Co. Thomas State Ks

Interval Tested 4452-4593 Zone Tested Myric Station -
 Anchor Length 141 Drill Pipe Run 4409 Mud Wt. 9.4
 Top Packer Depth 4448 Drill Collars Run 30 Vis 50
 Bottom Packer Depth 4452 Wt. Pipe Run 0 WL 8.0
 Total Depth 4593 Chlorides 2200 ppm System LCM 1"
 Blow Description 3/4" Blow.
No return.
No blow.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>15</u>	Feet of <u>OSM</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 118 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2245</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>19:10</u>
(B) First Initial Flow <u>25</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>19:12</u>
(C) First Final Flow <u>31</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:36</u>
(D) Initial Shut-In <u>432</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>23:37</u>
(E) Second Initial Flow <u>33</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1:45</u>
(F) Second Final Flow <u>37</u>	<input checked="" type="checkbox"/> Mileage <u>179.80</u>	Comments
(G) Final Shut-In <u>96</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2129</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>2074.80</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1754.80</u>	

Approved By [Signature]

Our Representative Chuck Smith

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