



DRILL STEM TEST REPORT

Prepared For: **RP Nixon Operations, Inc**

207 W. 12th
Hays, KS 67601

ATTN: Richard Bell

Theresa #7

27-12s-17w Ellis,KS

Start Date: 2014.02.05 @ 12:26:38

End Date: 2014.02.05 @ 18:48:16

Job Ticket #: 53750 DST #: 1

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

Printed: 2014.02.10 @ 15:26:19



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53750

DST#: 1

ATTN: Richard Bell

Test Start: 2014.02.05 @ 12:26:38

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:56:36

Time Test Ended: 18:48:16

Test Type: Conventional Bottom Hole (Initial)

Tester: Stuart Stover

Unit No: 44

Interval: 3602.00 ft (KB) To 3648.00 ft (KB) (TVD)

Reference Elevations: 2119.00 ft (KB)

Total Depth: 3648.00 ft (KB) (TVD)

2114.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8288 Inside

Press@RunDepth: 20.90 psig @ 3603.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.05 End Date: 2014.02.05

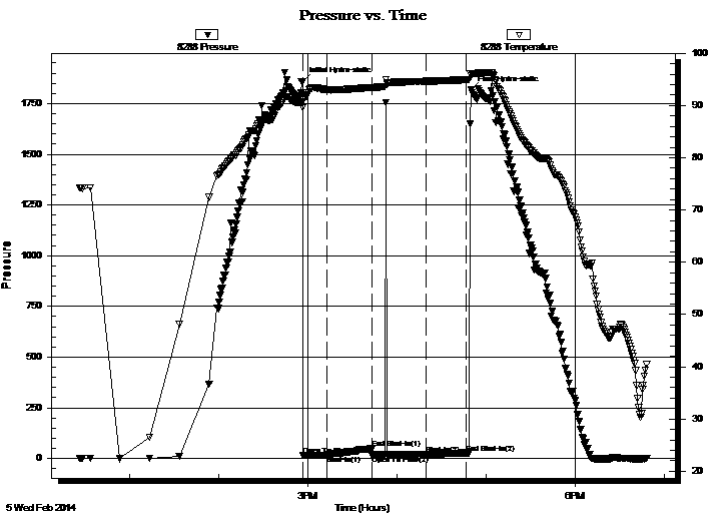
Last Calib.: 2014.02.05

Start Time: 12:26:38 End Time: 18:48:16

Time On Btm: 2014.02.05 @ 14:56:25

Time Off Btm: 2014.02.05 @ 16:49:46

TEST COMMENT: IFP: Steady 1/4" Blow
FFP: No Blow Flush Tool, No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1859.24	90.69	Initial Hydro-static
1	15.31	89.63	Open To Flow (1)
17	17.33	92.99	Shut-In(1)
47	47.72	93.47	End Shut-In(1)
47	15.52	93.46	Open To Flow (2)
84	20.90	94.63	Shut-In(2)
111	27.35	94.92	End Shut-In(2)
114	1816.33	95.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drig mud	0.04

Gas Rates

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



DRILL STEM TEST REPORT

RP Nixon Operations, Inc

27-12s-17w Ellis, KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53750 **DST#: 1**

ATTN: Richard Bell

Test Start: 2014.02.05 @ 12:26:38

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 14:56:36

Tester: Stuart Stover

Time Test Ended: 18:48:16

Unit No: 44

Interval: 3602.00 ft (KB) To 3648.00 ft (KB) (TVD)

Reference Elevations: 2119.00 ft (KB)

Total Depth: 3648.00 ft (KB) (TVD)

2114.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6769

Press@RunDepth: psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.05 End Date: 2014.02.05

Last Calib.: 2014.02.05

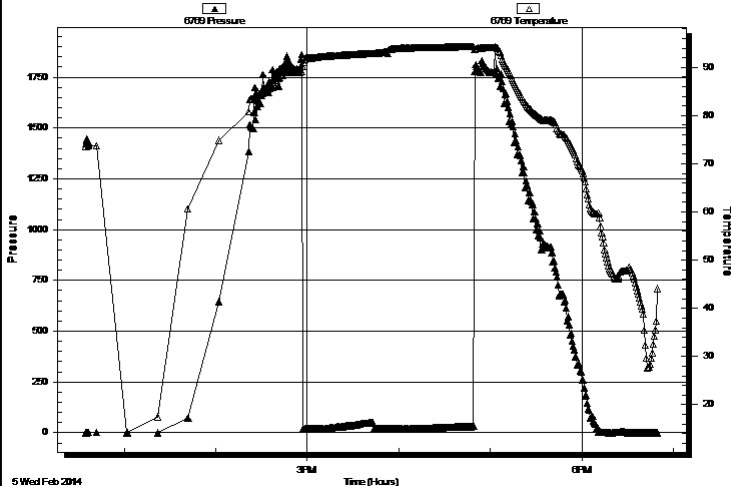
Start Time: 12:34:43 End Time: 18:49:41

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP: Steady 1/4" Blow
FFP: No Blow Flush Tool, No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drig mud	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53750

DST#: 1

ATTN: Richard Bell

Test Start: 2014.02.05 @ 12:26:38

Tool Information

Drill Pipe:	Length: 3147.00 ft	Diameter: 3.80 inches	Volume: 44.14 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 465.00 ft	Diameter: 3.00 inches	Volume: 4.07 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 48.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3602.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3588.00	
Hydraulic tool	5.00			3593.00	
Packer	5.00			3598.00	19.00 Bottom Of Top Packer
Packer	4.00			3602.00	
Stubb	1.00			3603.00	
Recorder	0.00	8288	Inside	3603.00	
Recorder	0.00	8521	Outside	3603.00	
Perforations	8.00			3611.00	
Change Over Sub	1.00			3612.00	
Drill Pipe	31.00			3643.00	
Change Over Sub	1.00			3644.00	
Bullnose	4.00			3648.00	46.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53750

DST#: 1

ATTN: Richard Bell

Test Start: 2014.02.05 @ 12:26:38

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:

4200 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Drig mud	0.044

Total Length: 5.00 ft Total Volume: 0.044 bbf

Num Fluid Samples: 0

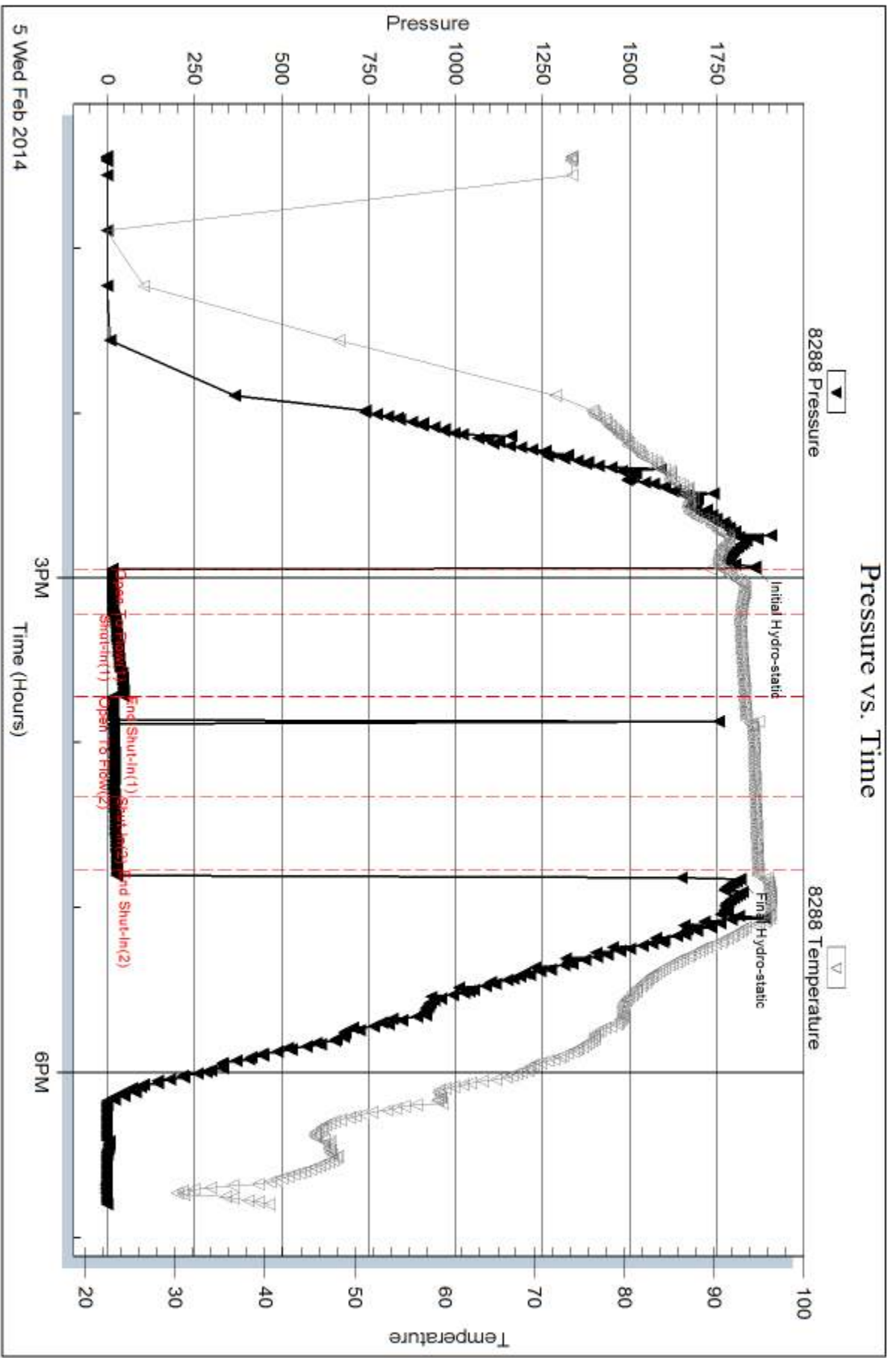
Num Gas Bombs: 0

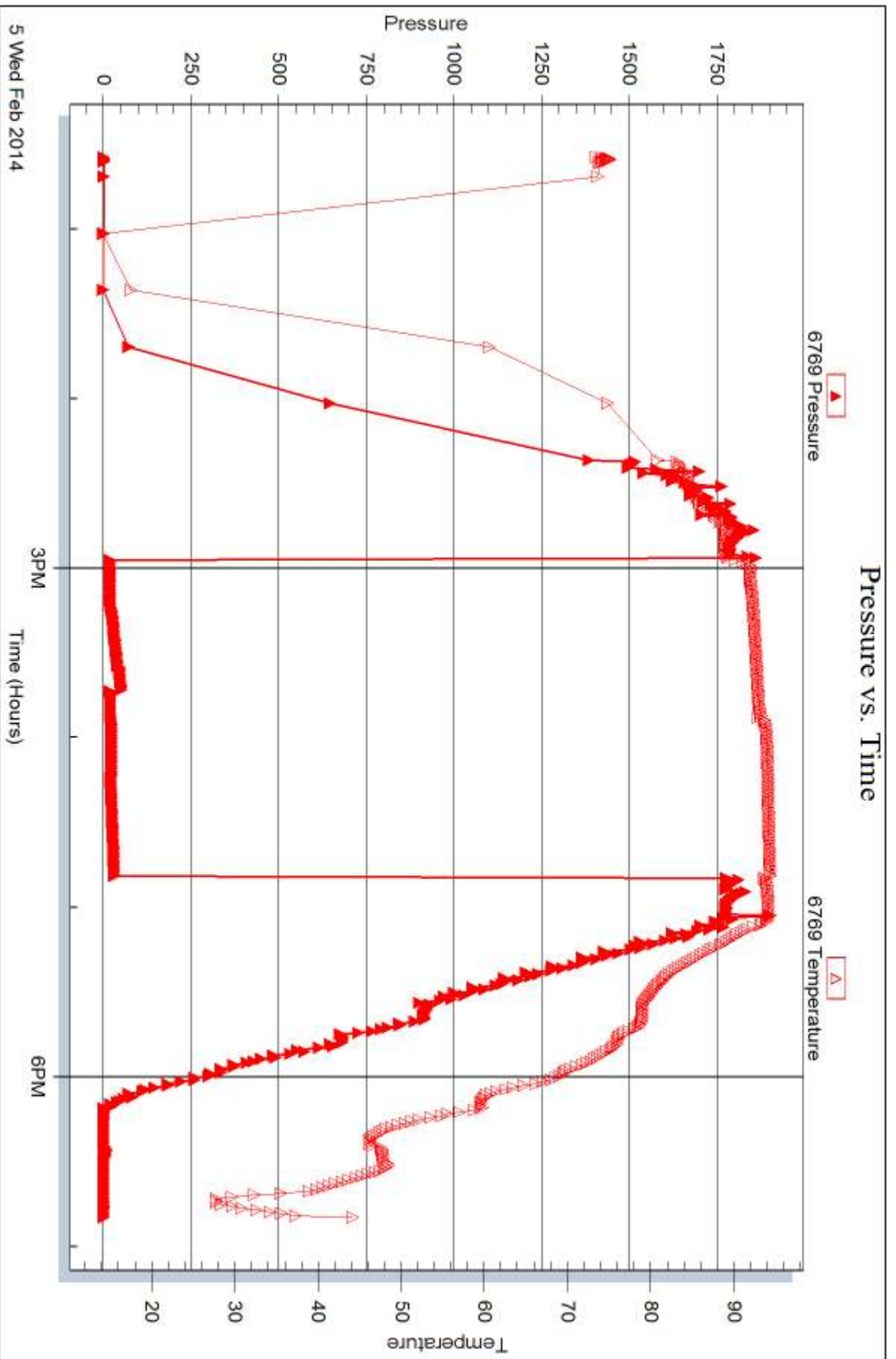
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **RP Nixon Operations, Inc**

207 W. 12th
Hays, KS 67601

ATTN: Richard Bell

Theresa #7

27-12s-17w Ellis,KS

Start Date: 2014.02.06 @ 03:30:24

End Date: 2014.02.06 @ 06:45:14

Job Ticket #: 53676 DST #: 2

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

Printed: 2014.02.10 @ 15:25:47



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53676

DST#: 2

ATTN: Richard Bell

Test Start: 2014.02.06 @ 03:30:24

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:03:14

Time Test Ended: 06:45:14

Test Type: Conventional Bottom Hole (Reset)

Tester: Stuart Stover

Unit No: 44

Interval: 3647.00 ft (KB) To 3658.00 ft (KB) (TVD)

Reference Elevations: 2119.00 ft (KB)

Total Depth: 3658.00 ft (KB) (TVD)

2114.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8288 Inside

Press@RunDepth: 17.25 psig @ 3648.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.06

End Date:

2014.02.06

Last Calib.:

2014.02.06

Start Time: 03:30:26

End Time:

10:37:13

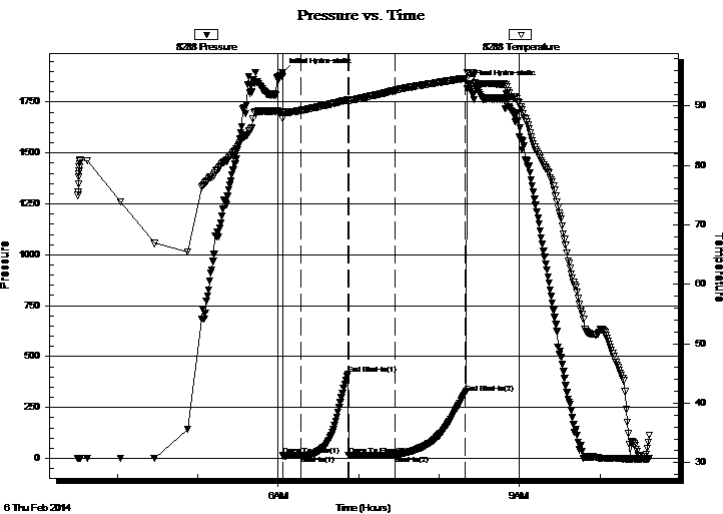
Time On Btm:

2014.02.06 @ 06:03:04

Time Off Btm:

2014.02.06 @ 08:21:33

TEST COMMENT: IFP: Steady 1/4" blow
FFP: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.61	89.06	Initial Hydro-static
1	13.03	87.92	Open To Flow (1)
14	14.02	89.24	Shut-In(1)
49	415.21	91.03	End Shut-In(1)
50	14.97	90.92	Open To Flow (2)
84	17.25	92.62	Shut-In(2)
137	321.15	94.65	End Shut-In(2)
139	1837.94	95.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	sligocm 2% gas 20% oil 78% mud	0.13

* Recovery from multiple tests

Gas Rates

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



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RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
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Theresa #7

Job Ticket: 53676

DST#: 2

ATTN: Richard Bell

Test Start: 2014.02.06 @ 03:30:24

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:03:14

Time Test Ended: 06:45:14

Interval: 3647.00 ft (KB) To 3658.00 ft (KB) (TVD)

Total Depth: 3658.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Stuart Stover

Unit No: 44

Reference Elevations: 2119.00 ft (KB)

2114.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6769

Press@RunDepth: psig @ ft (KB)

Start Date: 2014.02.06

End Date: 2014.02.06

Start Time: 03:37:15

End Time: 10:37:34

Capacity: 8000.00 psig

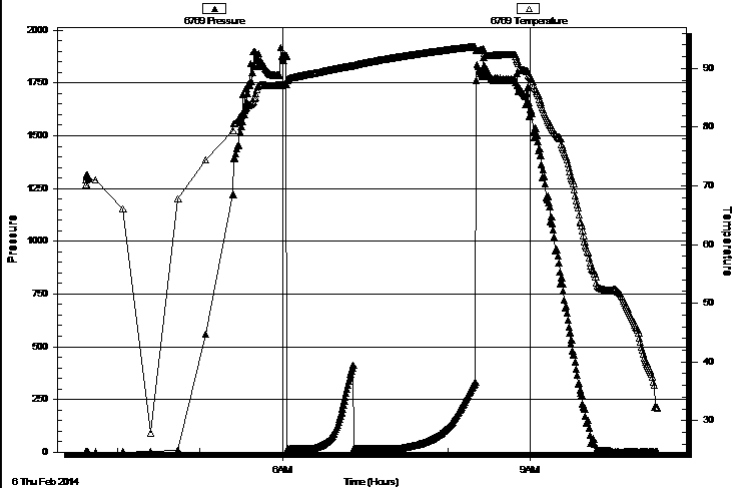
Last Calib.: 2014.02.06

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP: Steady 1/4" blow
FFP: No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	sligocm 2% gas 20% oil 78% mud	0.13

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53676

DST#: 2

ATTN: Richard Bell

Test Start: 2014.02.06 @ 03:30:24

Tool Information

Drill Pipe:	Length: 3192.00 ft	Diameter: 3.80 inches	Volume: 44.78 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 465.00 ft	Diameter: 3.00 inches	Volume: 4.07 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 48.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3647.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3633.00	
Hydraulic tool	5.00			3638.00	
Packer	5.00			3643.00	19.00 Bottom Of Top Packer
Packer	4.00			3647.00	
Stubb	1.00			3648.00	
Recorder	0.00	8288	Inside	3648.00	
Recorder	0.00	8521	Outside	3648.00	
Perforations	6.00			3654.00	
Bullnose	4.00			3658.00	11.00 Bottom Packers & Anchor
Total Tool Length:	30.00				



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FLUID SUMMARY

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Hays, KS 67601

Theresa #7

Job Ticket: 53676

DST#: 2

ATTN: Richard Bell

Test Start: 2014.02.06 @ 03:30:24

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:

4200 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
15.00	sligocm 2% gas 20% oil 78% mud	0.131

Total Length: 15.00 ft Total Volume: 0.131 bbf

Num Fluid Samples: 0

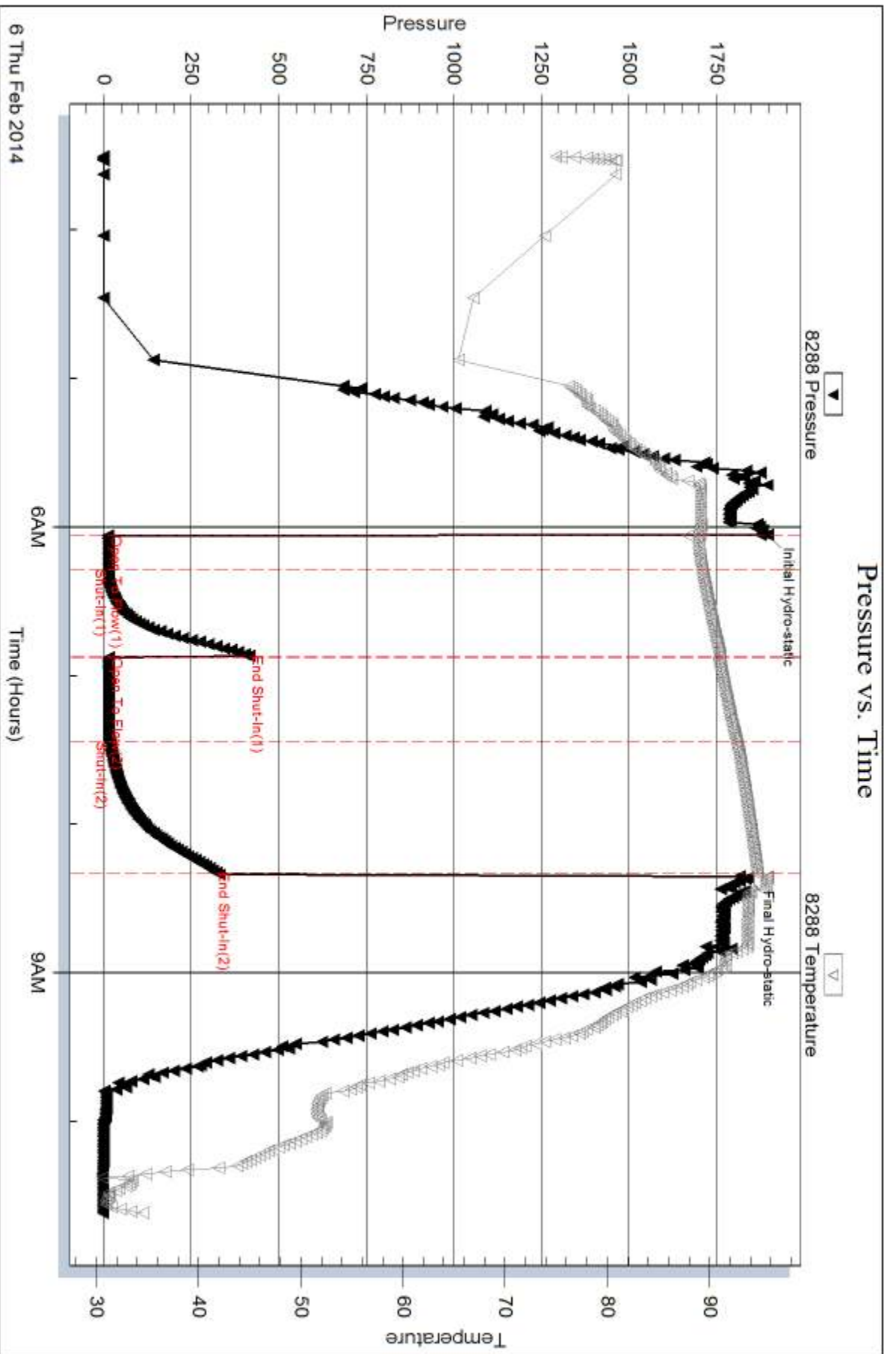
Num Gas Bombs: 0

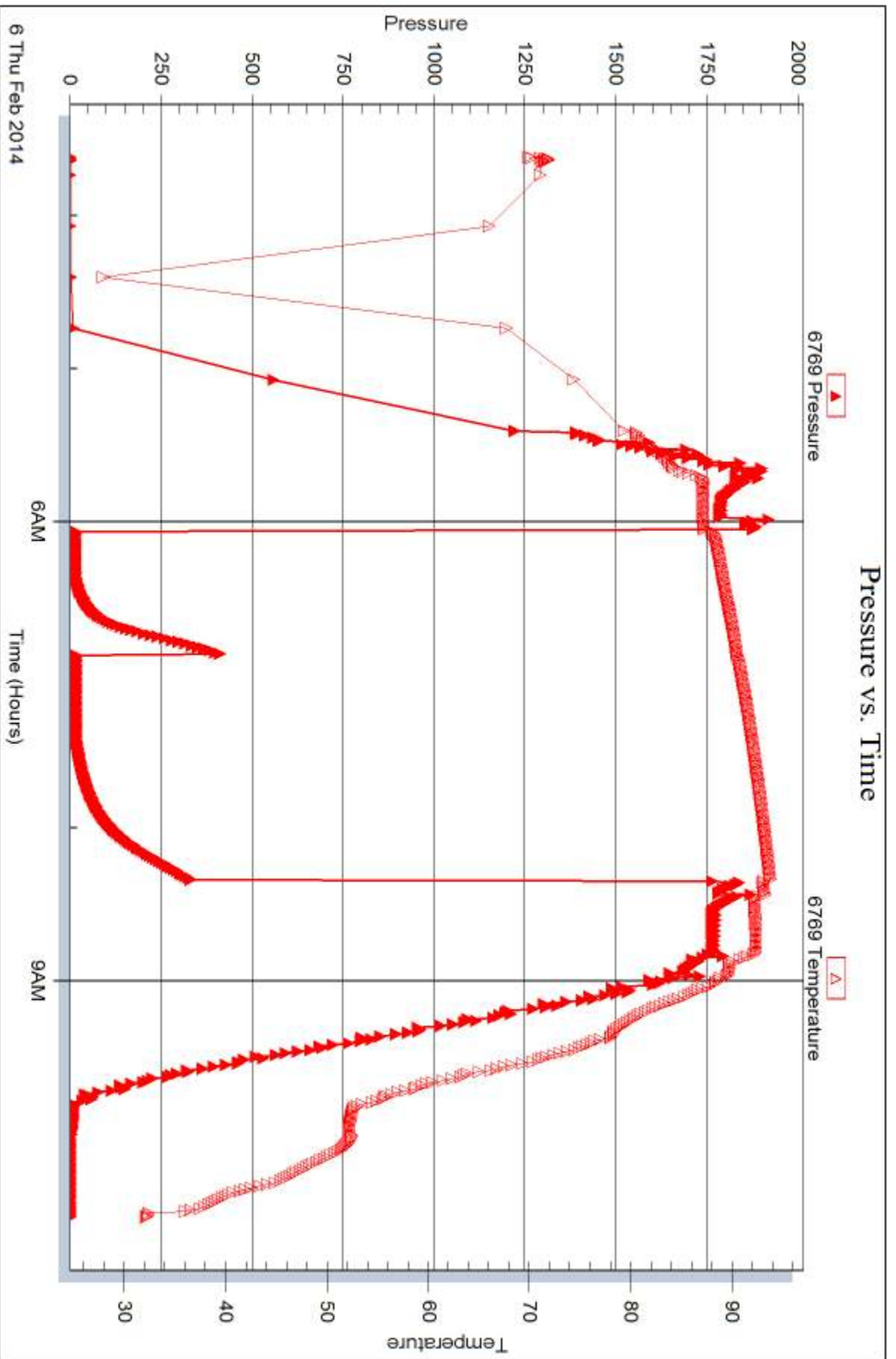
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **RP Nixon Operations, Inc**

207 W. 12th
Hays, KS 67601

ATTN: Richard Bell

Theresa #7

27-12s-17w Ellis,KS

Start Date: 2014.02.06 @ 16:41:49

End Date: 2014.02.06 @ 23:33:28

Job Ticket #: 53677 DST #: 3

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

Printed: 2014.02.10 @ 15:25:15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53677

DST#: 3

ATTN: Richard Bell

Test Start: 2014.02.06 @ 16:41:49

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:41:39

Time Test Ended: 23:33:28

Test Type: Conventional Bottom Hole (Reset)

Tester: Stuart Stover

Unit No: 44

Interval: 3658.00 ft (KB) To 3668.00 ft (KB) (TVD)

Reference Elevations: 2119.00 ft (KB)

Total Depth: 3668.00 ft (KB) (TVD)

2114.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8288 Inside

Press@RunDepth: 36.90 psig @ 3659.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.06 End Date: 2014.02.06

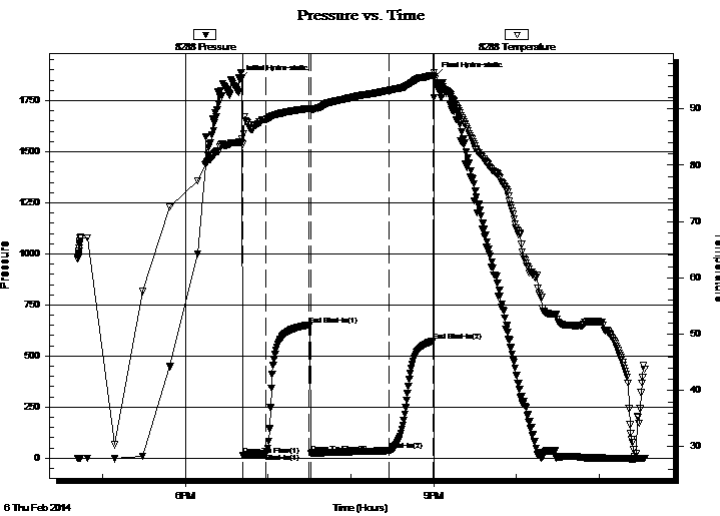
Last Calib.: 2014.02.07

Start Time: 16:41:51 End Time: 23:33:29

Time On Btm: 2014.02.06 @ 18:39:39

Time Off Btm: 2014.02.06 @ 21:00:58

TEST COMMENT: IFP: 1/4" blow increasing to 1 1/2"
FFP: Weak surface blow thru out



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1853.06	84.05	Initial Hydro-static
2	13.78	83.72	Open To Flow (1)
19	21.94	88.11	Shut-In(1)
50	651.92	90.08	End Shut-In(1)
52	24.89	89.96	Open To Flow (2)
108	36.90	93.29	Shut-In(2)
141	574.46	95.94	End Shut-In(2)
142	1866.70	95.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Free oil	0.01
60.00	ocw m 10% oil 10% w tr 80% mud	0.52

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53677

DST#: 3

ATTN: Richard Bell

Test Start: 2014.02.06 @ 16:41:49

GENERAL INFORMATION:

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Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:41:39

Time Test Ended: 23:33:28

Test Type: Conventional Bottom Hole (Reset)

Tester: Stuart Stover

Unit No: 44

Interval: 3658.00 ft (KB) To 3668.00 ft (KB) (TVD)

Total Depth: 3668.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2119.00 ft (KB)

2114.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6769

Press@RunDepth: psig @ ft (KB)

Start Date: 2014.02.06

End Date: 2014.02.06

Capacity: 8000.00 psig

Start Time: 16:56:16

End Time: 23:42:33

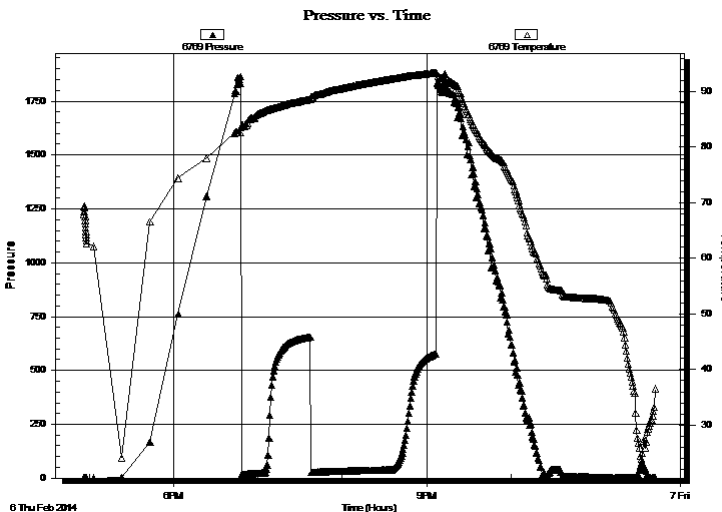
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP: 1/4" blow increasing to 1 1/2"
FFP: Weak surface blow thru out

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Free oil	0.01
60.00	ocw m 10% oil 10% w tr 80% mud	0.52

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53677

DST#: 3

ATTN: Richard Bell

Test Start: 2014.02.06 @ 16:41:49

Tool Information

Drill Pipe:	Length: 3180.00 ft	Diameter: 3.80 inches	Volume: 44.61 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length: 465.00 ft	Diameter: 3.00 inches	Volume: 4.07 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume: 48.68 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	36000.00 lb
Depth to Top Packer:	3658.00 ft			Final	36000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	29.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3644.00	
Hydraulic tool	5.00			3649.00	
Packer	5.00			3654.00	19.00 Bottom Of Top Packer
Packer	4.00			3658.00	
Stubb	1.00			3659.00	
Recorder	0.00	8288	Inside	3659.00	
Recorder	0.00	8521	Outside	3659.00	
Perforations	5.00			3664.00	
Bullnose	4.00			3668.00	10.00 Bottom Packers & Anchor
Total Tool Length:	29.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53677

DST#: 3

ATTN: Richard Bell

Test Start: 2014.02.06 @ 16:41:49

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:

50000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
1.00	Free oil	0.009
60.00	ocw m 10% oil 10% w tr 80% mud	0.525

Total Length: 61.00 ft Total Volume: 0.534 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

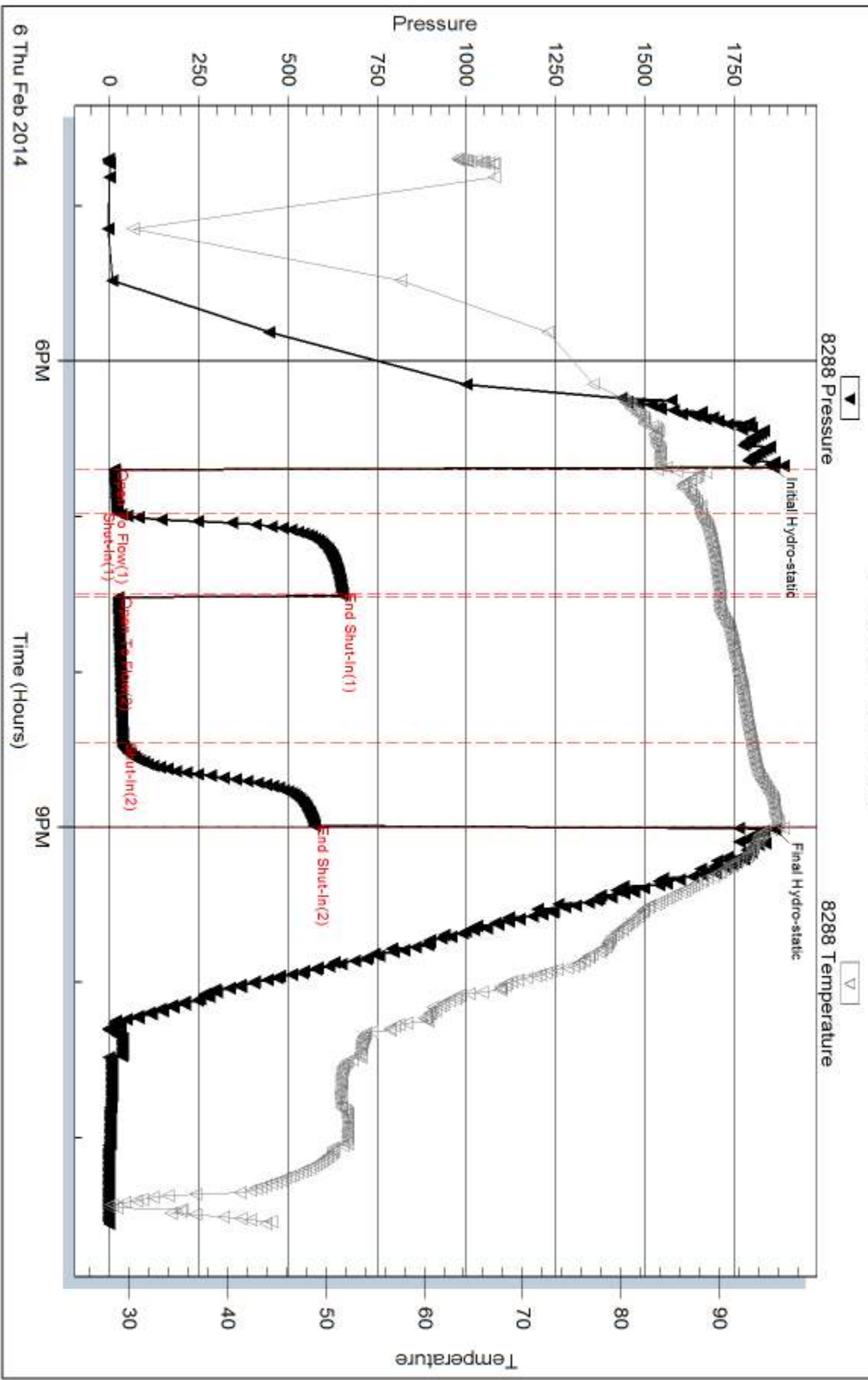
Serial #:

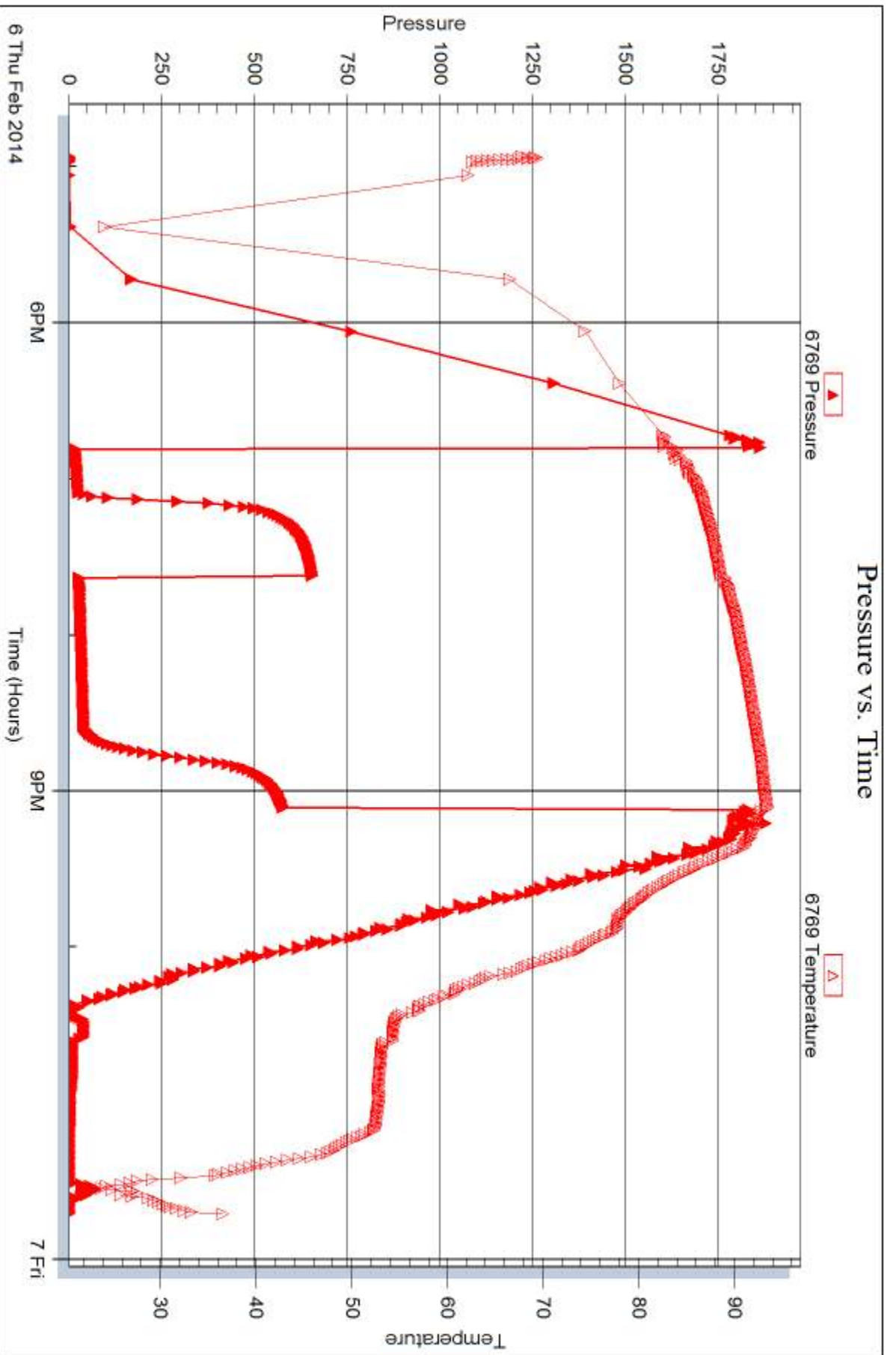
Laboratory Name:

Laboratory Location:

Recovery Comments: RW 0.25@ 70 deg

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **RP Nixon Operations, Inc**

207 W. 12th
Hays, KS 67601

ATTN: Richard Bell

Theresa #7

27-12s-17w Ellis,KS

Start Date: 2014.02.07 @ 10:52:48

End Date: 2014.02.07 @ 18:13:18

Job Ticket #: 53678 DST #: 4

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

Printed: 2014.02.10 @ 15:24:18



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53678

DST#: 4

ATTN: Richard Bell

Test Start: 2014.02.07 @ 10:52:48

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:54:08

Time Test Ended: 18:13:18

Test Type: Conventional Bottom Hole (Reset)

Tester: Stuart Stover

Unit No: 44

Interval: 3667.00 ft (KB) To 3675.00 ft (KB) (TVD)

Reference Elevations: 2119.00 ft (KB)

Total Depth: 3675.00 ft (KB) (TVD)

2114.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8288

Inside

Press@RunDepth: 53.39 psig @ 3668.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.07

End Date:

2014.02.07

Last Calib.:

2014.02.07

Start Time: 10:52:50

End Time:

18:13:18

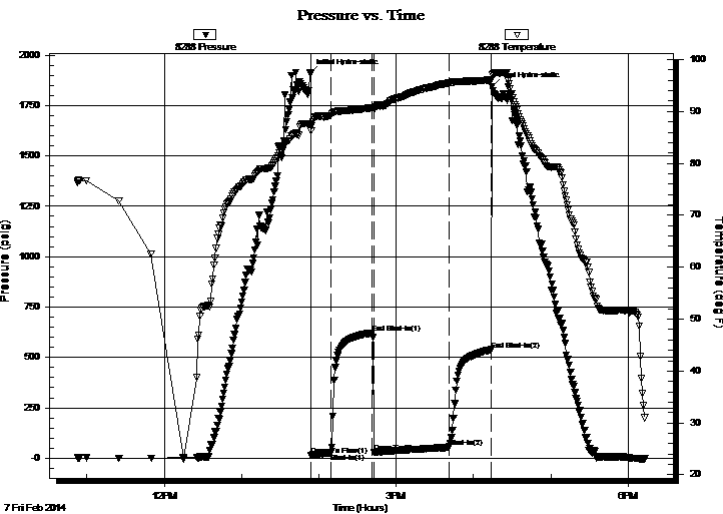
Time On Btm:

2014.02.07 @ 13:52:48

Time Off Btm:

2014.02.07 @ 16:14:27

TEST COMMENT: IFP: 1/4" blow increasing to 2" blow
FFP: Surface blow slow increase to 1 1/2" blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1911.00	87.65	Initial Hydro-static
2	15.37	86.31	Open To Flow (1)
17	26.64	89.23	Shut-In(1)
49	622.19	90.72	End Shut-In(1)
50	28.75	90.59	Open To Flow (2)
108	53.39	95.52	Shut-In(2)
141	538.60	96.06	End Shut-In(2)
142	1844.94	97.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Free oil	0.01
75.00	Sliocmw 2% oil 20% mud 78% w tr	0.66

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

RP Nixon Operations, Inc

27-12s-17w Ellis, KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53678

DST#: 4

ATTN: Richard Bell

Test Start: 2014.02.07 @ 10:52:48

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:54:08

Time Test Ended: 18:13:18

Test Type: Conventional Bottom Hole (Reset)

Tester: Stuart Stover

Unit No: 44

Interval: 3667.00 ft (KB) To 3675.00 ft (KB) (TVD)

Reference Elevations: 2119.00 ft (KB)

Total Depth: 3675.00 ft (KB) (TVD)

2114.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6769 Outside

Press@RunDepth: psig @ 3668.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.07 End Date: 2014.02.07

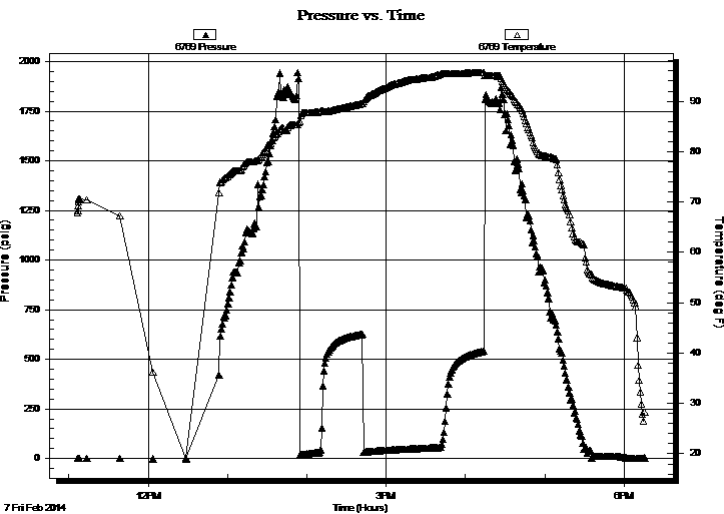
Last Calib.: 2014.02.07

Start Time: 11:06:40 End Time: 18:15:48

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP: 1/4" blow increasing to 2" blow
FFP: Surface blow slow increase to 1 1/2" blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Free oil	0.01
75.00	Sliocmw 2% oil 20% mud 78% w tr	0.66

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53678

DST#: 4

ATTN: Richard Bell

Test Start: 2014.02.07 @ 10:52:48

Tool Information

Drill Pipe:	Length: 3212.00 ft	Diameter: 3.80 inches	Volume: 45.06 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length: 465.00 ft	Diameter: 3.00 inches	Volume: 4.07 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	42000.00 lb
			<u>Total Volume: 49.13 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial	36000.00 lb
Depth to Top Packer:	3667.00 ft			Final	36000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	8.00 ft				
Tool Length:	27.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3653.00		
Hydraulic tool	5.00			3658.00		
Packer	5.00			3663.00	19.00	Bottom Of Top Packer
Packer	4.00			3667.00		
Stubb	1.00			3668.00		
Recorder	0.00	8288	Inside	3668.00		
Recorder	0.00	6769	Outside	3668.00		
Perforations	3.00			3671.00		
Bullnose	4.00			3675.00	8.00	Bottom Packers & Anchor
Total Tool Length:	27.00					



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

RP Nixon Operations, Inc

27-12s-17w Ellis,KS

207 W. 12th
Hays, KS 67601

Theresa #7

Job Ticket: 53678

DST#: 4

ATTN: Richard Bell

Test Start: 2014.02.07 @ 10:52:48

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:

50000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Free oil	0.009
75.00	Sluicmw 2% oil 20% mud 78% w tr	0.656

Total Length: 76.00 ft Total Volume: 0.665 bbl

Num Fluid Samples: 0

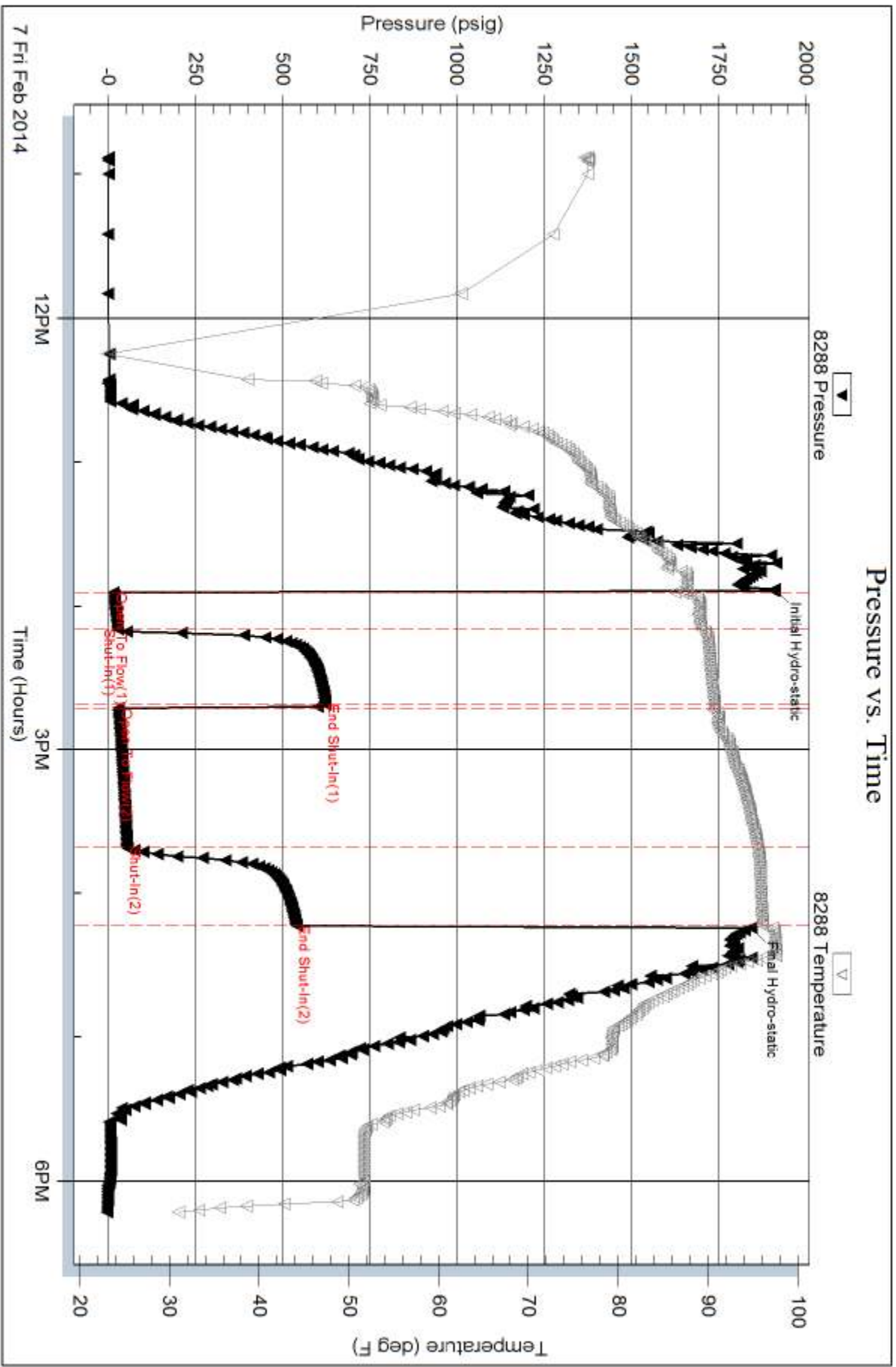
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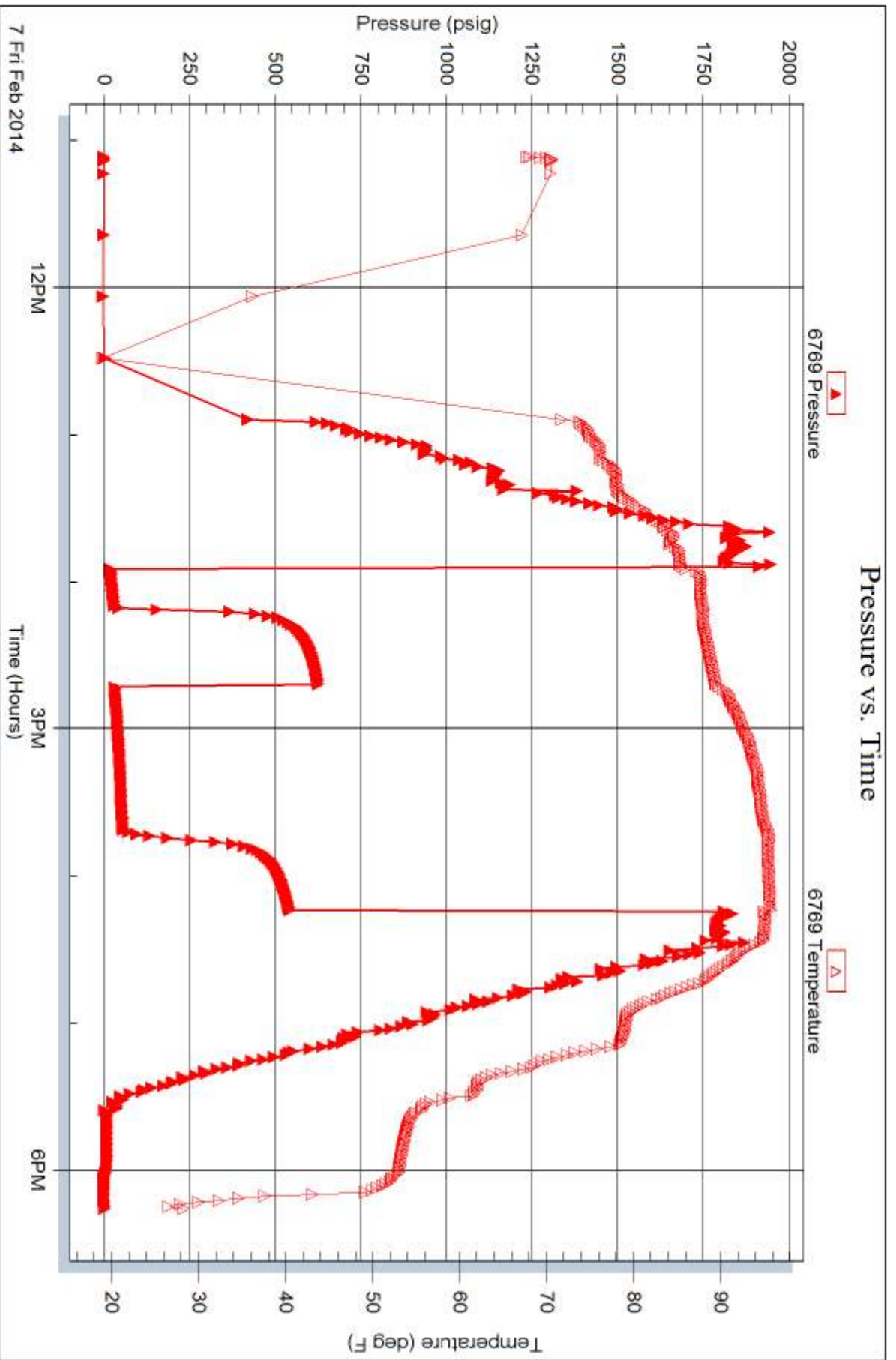
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW 0.2 @ 47 deg.







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

2064/641-2
288

Test Ticket

NO. 53750

Well Name & No. Theresa # 7 Test No. 1 Date 2-5-2014
 Company R. P. Nixon Operations, Inc Elevation 2119 KB 2114 GL
 Address 207 W. 12th Hays, KS, 67601
 Co. Rep / Geo. Richard Bell Rig Sheilds Drg
 Location: Sec. 27 Twp. 12S Rge. 17W Co. ELLIS State KS

Interval Tested 3602 - 3648 Zone Tested Arbuckle
 Anchor Length 46 Drill Pipe Run 3147 Mud Wt. 9.0
 Top Packer Depth 3597 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3602 Wt. Pipe Run 465 WL 6.0
 Total Depth 3648 Chlorides 4200 ppm System LCM 4200

Blow Description IFP: Steady 1/4" Blow
FFP: No Blow, Flush Tool, No Blow

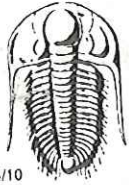
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Dmg MUD</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 98 Gravity _____ API RW _____ @ _____ °F Chlorides 4200 ppm

(A) Initial Hydrostatic 1859 Test 1150 T-On Location 915
 (B) First Initial Flow 15 Jars _____ T-Started 1230
 (C) First Final Flow 17 Safety Joint _____ T-Open 1455
 (D) Initial Shut-In 47 Circ Sub _____ T-Pulled 1640
 (E) Second Initial Flow 16 Hourly Standby _____ T-Out _____
 (F) Second Final Flow 21 Mileage 20 RT 31 Comments _____
 (G) Final Shut-In 27 Sampler _____
 (H) Final Hydrostatic 1816 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1181
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1181

Approved By Richard Bell Our Representative STUART STOUER

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53676

Well Name & No. Theresa # 7 Test No. 2 Date 2-6-2014
 Company R. P. Nixon Operation Inc Elevation 2119 KB 2114 GL
 Address 207 W. 12th HAYS KS 67601
 Co. Rep / Geo. Richard Bell Rig Shields # 2
 Location: Sec. 27 Twp. 12S Rge. 17W Co. ELLIS State KS

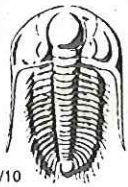
Interval Tested 3647-3658 Zone Tested Ar buckle
 Anchor Length 11 Drill Pipe Run 3192 Mud Wt. 9.0
 Top Packer Depth 3642 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3647 Wt. Pipe Run 465 WL 6.0
 Total Depth 3658 Chlorides 4200 ppm System LCM
 Blow Description IFF: Steady 1/4" Blow
FFP: No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Oil Cut MVD</u>	<u>2</u>	<u>20</u>	<u>88</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 15' BHT 98° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 1876 Test 1150
 (B) First Initial Flow 13 Jars _____
 (C) First Final Flow 14 Safety Joint _____
 (D) Initial Shut-In 415 Circ Sub _____
 (E) Second Initial Flow 15 Hourly Standby _____
 (F) Second Final Flow 17 Mileage 31
 (G) Final Shut-In 321 Sampler _____
 (H) Final Hydrostatic 1838 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1181

T-On Location 2:30
 T-Started 3:30
 T-Open 5:00
 T-Pulled 6:45
 T-Out _____
 Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1181
 MP/DST Disc't _____

Approved By Richard Bell Our Representative _____
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the _____



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53677

Well Name & No. Theresa # 7 Test No. 3 Date 2-6-2019
 Company R. P. Nixon Elevation 2119 KB 2114 GL
 Address 207 W 12th Hays, KS. 67601
 Co. Rep / Geo. Richard Bell Rig Shields # 2
 Location: Sec. 27 Twp. 12S Rge. 17W ~~17E~~ Co. ELLIS State KS

Interval Tested 3658-3668 Zone Tested Arbuckle
 Anchor Length 10 Drill Pipe Run 3180 Mud Wt. 9.2
 Top Packer Depth 3653 Drill Collars Run 0 Vis 52
 Bottom Packer Depth 3658 Wt. Pipe Run 465 WL 6.8
 Total Depth 3668 Chlorides 4200 ppm System LCM
 Blow Description IFP: 1/4" blow increasing to 1 1/2"
FFP: Weak surface blow thru out

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free oil</u>				
<u>60</u>	<u>Oil cut w try mud</u>		<u>10</u>	<u>10</u>	<u>80</u>

Rec Total 61 BHT 98 Gravity _____ API RW 0.25@ 70 °F Chlorides 50,000 ppm

(A) Initial Hydrostatic <u>1853</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1600</u>
(B) First Initial Flow <u>14</u>	<input type="checkbox"/> Jars _____	T-Started <u>1645</u>
(C) First Final Flow <u>22</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>1850</u>
(D) Initial Shut-In <u>652</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>2005</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby _____	T-Out _____
(F) Second Final Flow <u>37</u>	<input type="checkbox"/> Mileage <u>31</u>	Comments _____
(G) Final Shut-In <u>574</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1867</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>15</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>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1181</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1181</u>	

Approved By Richard Bell Our Representative Stuart Stover

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53678

Well Name & No. Theresa #7 Test No. 4 Date 2-7-2014
 Company R. P. Nixon Elevation 2119 KB 2114 GL
 Address 207 W 12th Hays, KS, 67601
 Co. Rep / Geo. Richard Bell Rig Sheilds #2
 Location: Sec. 27 Twp. 12S Rge. 17W Co. Ellis State K5

Interval Tested 3467 - 3675 Zone Tested Arbuckle
 Anchor Length 8' Drill Pipe Run 3212' Mud Wt. 9.3
 Top Packer Depth 3642 Drill Collars Run 0 Vis 55
 Bottom Packer Depth 3667 Wt. Pipe Run 465' WL 6.8
 Total Depth 3675 Chlorides 4200 ppm System LCM
 Blow Description FFP-1/4" blow increasing to 2" blow
FFP = Surface blow slow increase to 1 1/2" blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free oil</u>				
<u>75</u>	<u>Sludgem</u>		<u>2</u>	<u>78</u>	<u>20</u>

Rec Total 76 BHT 98° Gravity _____ API RW 0.2 @ 47° F Chlorides 5000 ppm

(A) Initial Hydrostatic <u>1911</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>10:00</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars _____	T-Started <u>11:00</u>
(C) First Final Flow <u>27</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>1:55</u>
(D) Initial Shut-In <u>422</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>4:10</u>
(E) Second Initial Flow <u>29</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>6:00</u>
(F) Second Final Flow <u>53</u>	<input type="checkbox"/> Mileage <u>31</u>	Comments _____
(G) Final Shut-In <u>539</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1845</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>15</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>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1181</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1181</u>	

Approved By Richard Bell Our Representative Stuart Stover

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