



DRILL STEM TEST REPORT

Prepared For: **K3 Oil & Gas Operating**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Grusing #10-14

10-16s-27w Lane,KS

Start Date: 2014.11.21 @ 19:56:15

End Date: 2014.11.22 @ 02:10:45

Job Ticket #: 59665 DST #: 1

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

Printed: 2014.11.26 @ 13:54:18



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59665

DST#: 1

ATTN: Tom Williams

Test Start: 2014.11.21 @ 19:56:15

GENERAL INFORMATION:

Formation: **KC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:28:15
 Time Test Ended: 02:10:45
 Interval: **3936.00 ft (KB) To 3960.00 ft (KB) (TVD)**
 Total Depth: 3960.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 2597.00 ft (KB)
 2587.00 ft (CF)
 KB to GR/CF: 10.00 ft

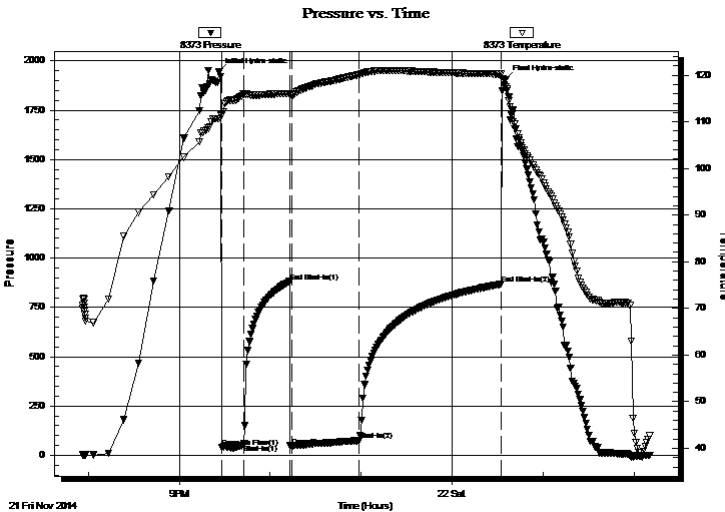
Serial #: 8373

Inside

Press@RunDepth: 74.09 psig @ 3937.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.21 End Date: 2014.11.22 Last Calib.: 2014.11.22
 Start Time: 19:56:20 End Time: 02:10:44 Time On Btm: 2014.11.21 @ 21:26:15
 Time Off Btm: 2014.11.22 @ 00:35:15

TEST COMMENT: IF: 1/4" blow built to 2 1/2" in 15 mins.
 IS: No return.
 FF: Surface blow built to 3" in 45 mins.
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.19	110.73	Initial Hydro-static
2	40.97	111.30	Open To Flow (1)
17	58.57	115.98	Shut-In(1)
47	880.71	116.10	End Shut-In(1)
48	45.88	115.71	Open To Flow (2)
92	74.09	120.09	Shut-In(2)
186	867.66	120.24	End Shut-In(2)
189	1903.74	117.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	w cm 40%w 60%m	0.87
40.00	mcw 60%w 40%m	0.56

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59665

DST#: 1

ATTN: Tom Williams

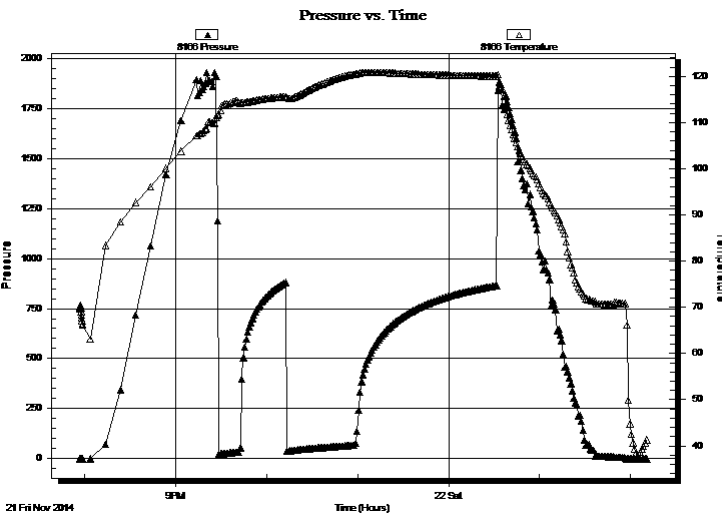
Test Start: 2014.11.21 @ 19:56:15

GENERAL INFORMATION:

Formation: **KC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:28:15
 Time Test Ended: 02:10:45
 Interval: **3936.00 ft (KB) To 3960.00 ft (KB) (TVD)**
 Total Depth: 3960.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 2597.00 ft (KB)
 2587.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
 Press@RunDepth: psig @ 3937.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.21 End Date: 2014.11.22 Last Calib.: 2014.11.22
 Start Time: 19:56:37 End Time: 02:10:31 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: 1/4" blow built to 2 1/2" in 15 mins.
 IS: No return.
 FF: Surface blow built to 3" in 45 mins.
 FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	w cm 40%w 60%m	0.87
40.00	mcw 60%w 40%m	0.56

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59665

DST#: 1

ATTN: Tom Williams

Test Start: 2014.11.21 @ 19:56:15

Tool Information

Drill Pipe:	Length: 3917.00 ft	Diameter: 3.80 inches	Volume: 54.95 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3936.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Stubb	1.00			3910.00	
Shut In Tool	5.00			3915.00	
Hydraulic tool	5.00			3920.00	
Jars	5.00			3925.00	
Safety Joint	2.00			3927.00	
Packer	5.00			3932.00	27.00 Bottom Of Top Packer
Packer	4.00			3936.00	
Stubb	1.00			3937.00	
Recorder	0.00	8373	Inside	3937.00	
Recorder	0.00	8166	Outside	3937.00	
Perforations	18.00			3955.00	
Bullnose	5.00			3960.00	24.00 Bottom Packers & Anchor

Total Tool Length: 51.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59665

DST#: 1

ATTN: Tom Williams

Test Start: 2014.11.21 @ 19:56:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

65000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	w cm 40%w 60%m	0.870
40.00	mcw 60%w 40%m	0.561

Total Length: 102.00 ft Total Volume: 1.431 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .19@45=65000

Serial #: 8373

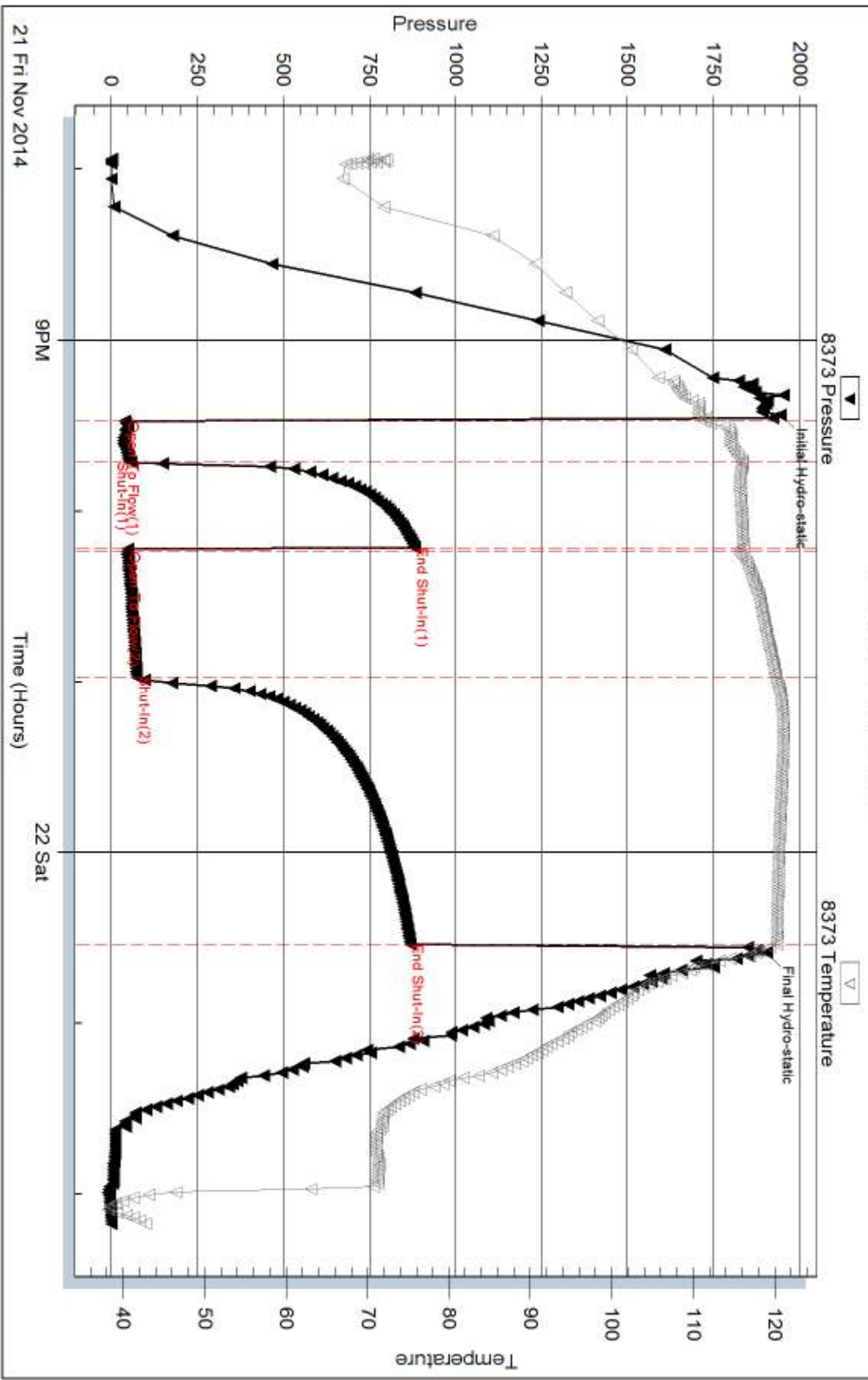
Inside

K3 Oil & Gas Operating

Grubing #10-14

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 59665

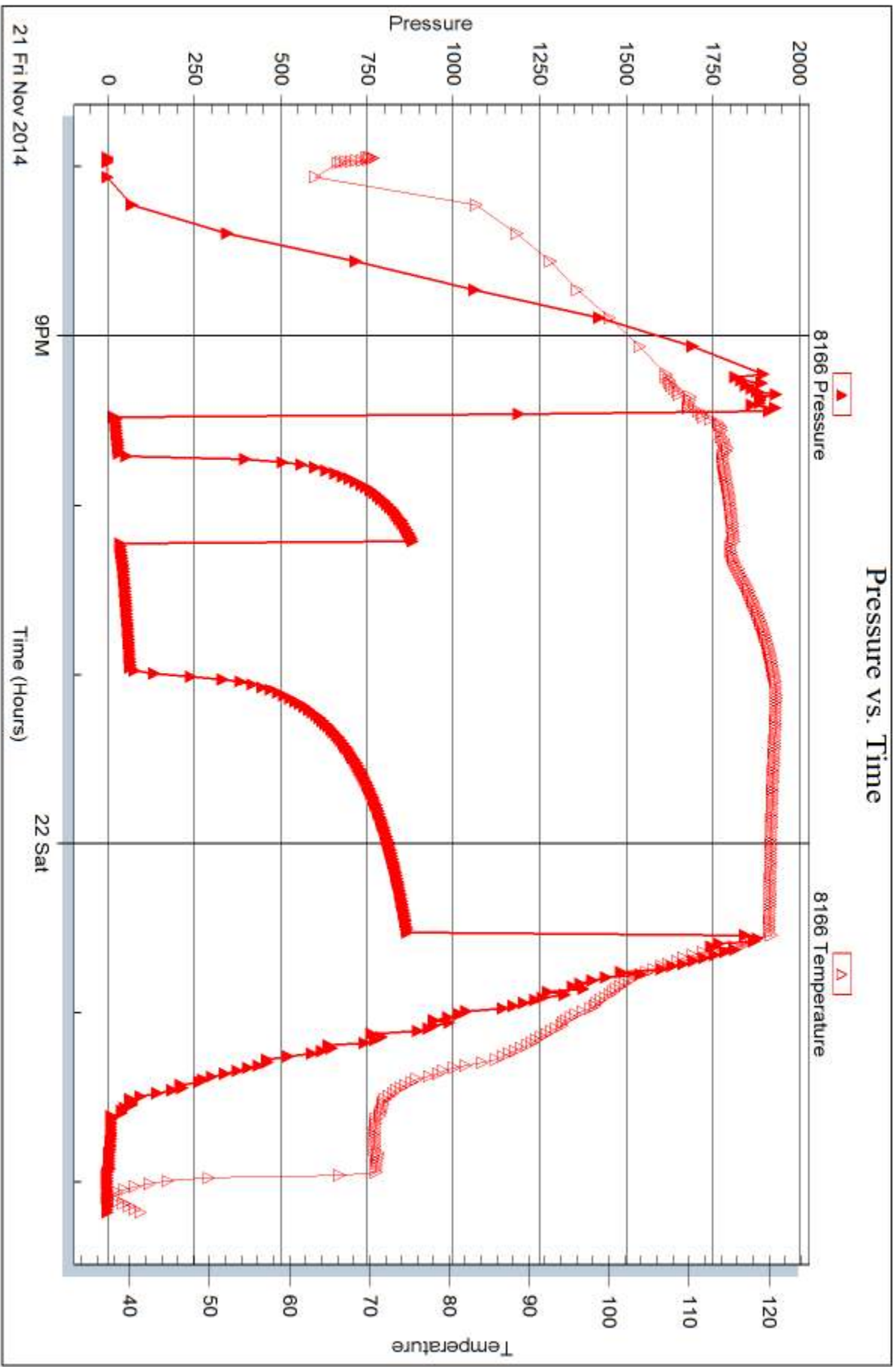
Printed: 2014.11.26 @ 13:54:19

Serial #: 8166

Outside K3 Oil & Gas Operating

Gushing #10-14

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **K3 Oil & Gas Operating**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Grusing #10-14

10-16s-27w Lane,KS

Start Date: 2014.11.22 @ 14:44:07

End Date: 2014.11.22 @ 21:17:07

Job Ticket #: 59666 DST #: 2

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

Printed: 2014.11.26 @ 13:53:45

K3 Oil & Gas Operating

10-16s-27w Lane,KS

Grusing #10-14

DST # 2

LKC F Lime

2014.11.22



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

K3 Oil & Gas Operating
 211 Highland Cross
 Houston, TX 77073
 ATTN: Tom Williams

10-16s-27w Lane, KS
Grusing #10-14
 Job Ticket: 59666 **DST#: 2**
 Test Start: 2014.11.22 @ 14:44:07

GENERAL INFORMATION:

Formation: **LKC F Lime**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:33:07
 Time Test Ended: 21:17:07
 Interval: **4012.00 ft (KB) To 4025.00 ft (KB) (TVD)**
 Total Depth: 4025.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 2597.00 ft (KB)
 2587.00 ft (CF)
 KB to GR/CF: 10.00 ft

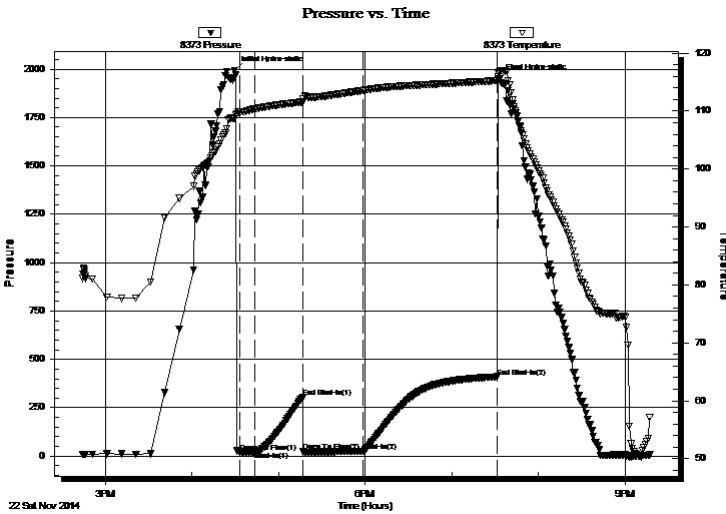
Serial #: 8373

Inside

Press@RunDepth: 23.30 psig @ 4013.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.22 End Date: 2014.11.22 Last Calib.: 2014.11.22
 Start Time: 14:44:12 End Time: 21:17:06 Time On Btm: 2014.11.22 @ 16:29:37
 Time Off Btm: 2014.11.22 @ 19:32:37

TEST COMMENT: IF: 1/4" blow built 2.
 IS: No return.
 FF: 2" blow BOB in 30 min.
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1993.57	108.70	Initial Hydro-static
4	21.25	109.90	Open To Flow (1)
14	22.15	110.41	Shut-In(1)
47	302.17	111.58	End Shut-In(1)
48	21.93	112.08	Open To Flow (2)
89	23.30	113.56	Shut-In(2)
182	409.72	115.27	End Shut-In(2)
183	1952.14	116.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
31.00	ocm 10%o 90%m	0.43
0.00	279 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59666

DST#: 2

ATTN: Tom Williams

Test Start: 2014.11.22 @ 14:44:07

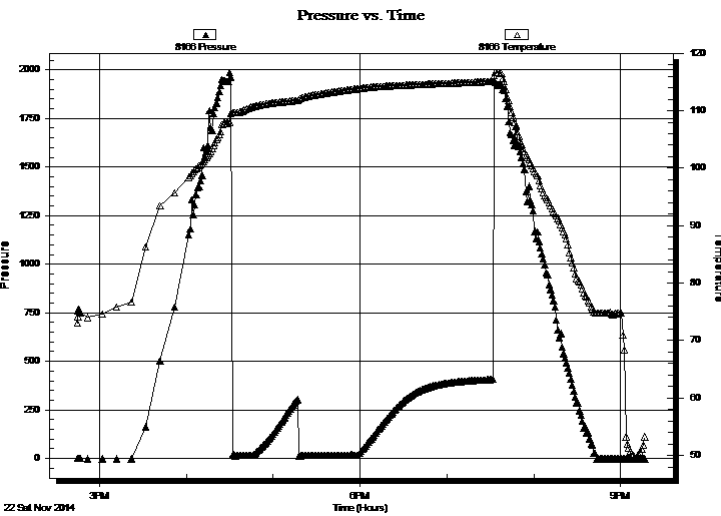
GENERAL INFORMATION:

Formation: **LKC F Lime**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 16:33:07
 Tester: Brandon Turley
 Time Test Ended: 21:17:07
 Unit No: 79
Interval: 4012.00 ft (KB) To 4025.00 ft (KB) (TVD)
 Reference Elevations: 2597.00 ft (KB)
 Total Depth: 4025.00 ft (KB) (TVD)
 2587.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 10.00 ft

Serial #: 8166 Outside

Press@RunDepth: psig @ 4013.00 ft (KB)
 Capacity: 8000.00 psig
 Start Date: 2014.11.22
 End Date: 2014.11.22
 Last Calib.: 2014.11.22
 Start Time: 14:44:43
 End Time: 21:17:07
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: 1/4" blow built 2.
 IS: No return.
 FF: 2" blow BOB in 30 min.
 FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
31.00	ocm 10%o 90%m	0.43
0.00	279 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59666

DST#: 2

ATTN: Tom Williams

Test Start: 2014.11.22 @ 14:44:07

Tool Information

Drill Pipe:	Length: 4010.00 ft	Diameter: 3.80 inches	Volume: 56.25 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 56.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4012.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Stubb	1.00			3986.00	
Shut In Tool	5.00			3991.00	
Hydraulic tool	5.00			3996.00	
Jars	5.00			4001.00	
Safety Joint	2.00			4003.00	
Packer	5.00			4008.00	27.00 Bottom Of Top Packer
Packer	4.00			4012.00	
Stubb	1.00			4013.00	
Recorder	0.00	8373	Inside	4013.00	
Recorder	0.00	8166	Outside	4013.00	
Perforations	7.00			4020.00	
Bullnose	5.00			4025.00	13.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59666

DST#: 2

ATTN: Tom Williams

Test Start: 2014.11.22 @ 14:44:07

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
31.00	ocm 10%o 90%m	0.435
0.00	279 GIP	0.000

Total Length: 31.00 ft Total Volume: 0.435 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

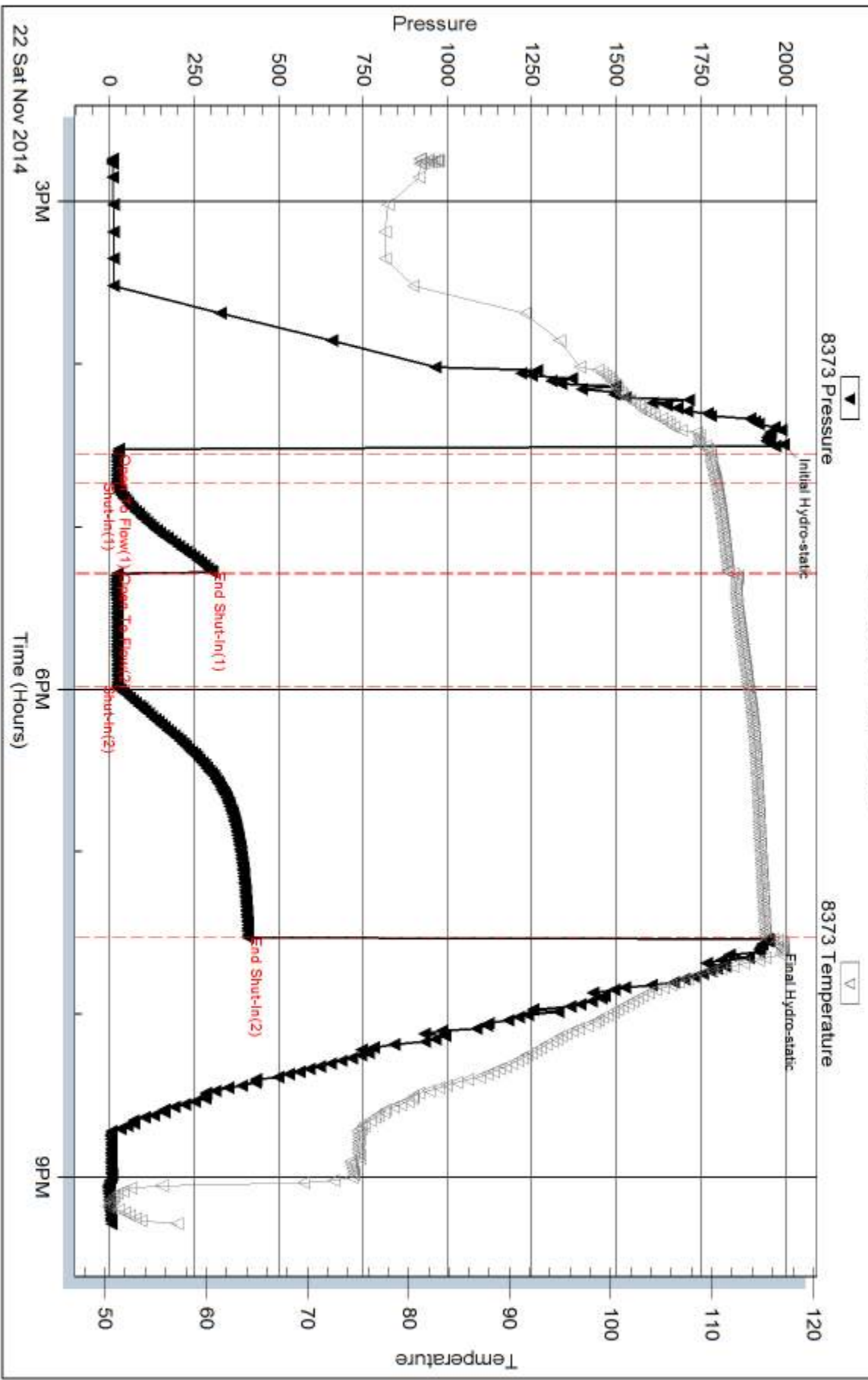
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

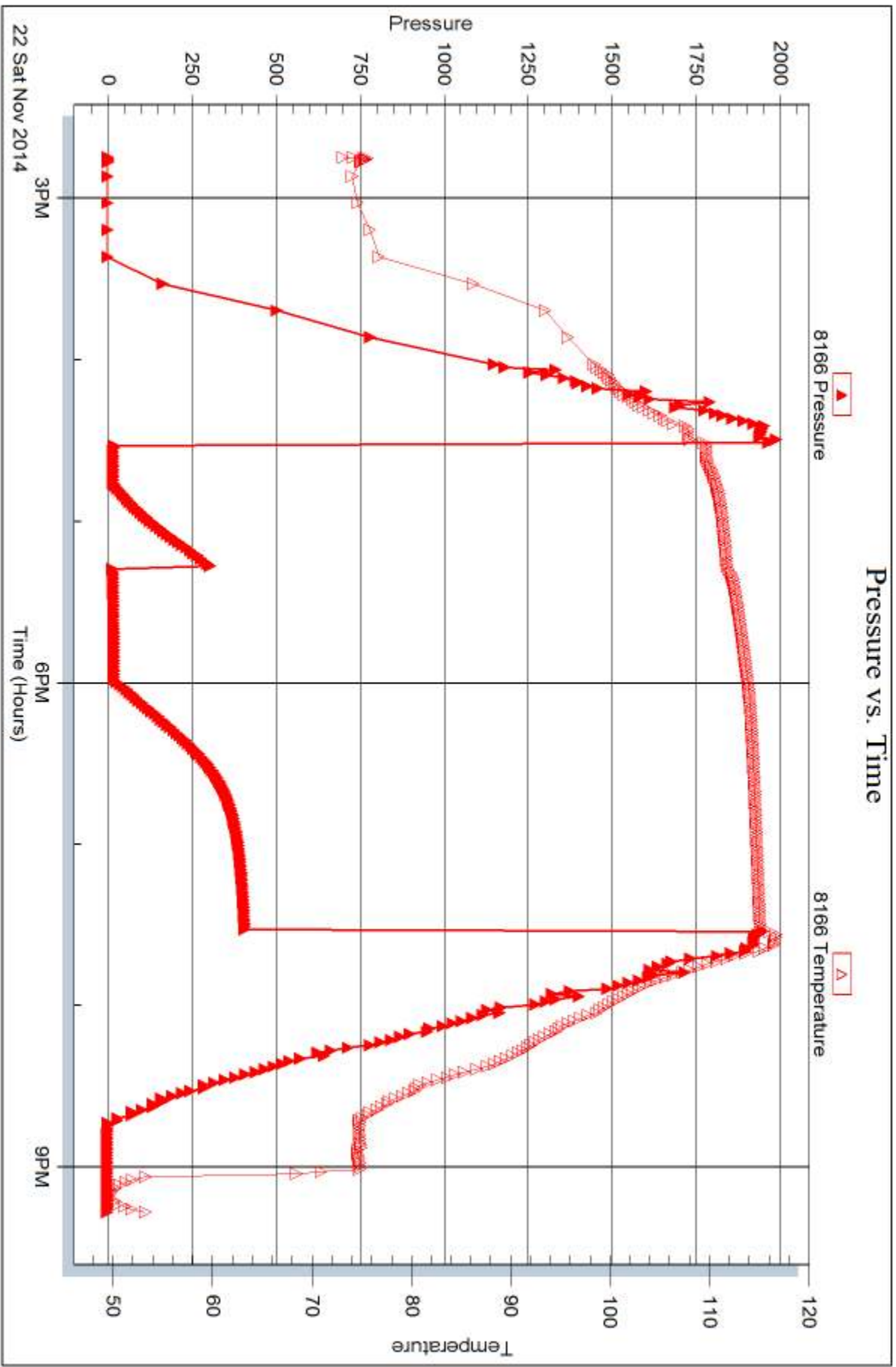


Serial #: 8166

Outside K3 Oil & Gas Operating

Grubing #10-14

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 59666

Printed: 2014.11.26 @ 13:53:46



DRILL STEM TEST REPORT

Prepared For: **K3 Oil & Gas Operating**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Grusing #10-14

10-16s-27w Lane,KS

Start Date: 2014.11.23 @ 08:15:51

End Date: 2014.11.23 @ 13:12:51

Job Ticket #: 59667 DST #: 3

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

Printed: 2014.11.26 @ 13:53:23



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59667

DST#: 3

ATTN: Tom Williams

Test Start: 2014.11.23 @ 08:15:51

GENERAL INFORMATION:

Formation: **LKC G Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:42:21

Time Test Ended: 13:12:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4025.00 ft (KB) To 4045.00 ft (KB) (TVD)

Reference Elevations: 2597.00 ft (KB)

Total Depth: 4045.00 ft (KB) (TVD)

2587.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: 27.30 psig @ 4026.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.23

End Date:

2014.11.23

Last Calib.:

2014.11.23

Start Time: 08:15:56

End Time:

13:12:50

Time On Btm:

2014.11.23 @ 09:41:51

Time Off Btm:

2014.11.23 @ 11:47:51

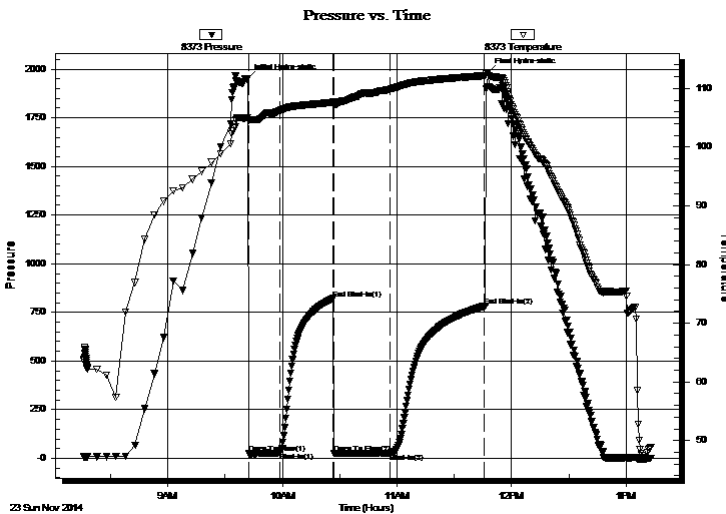
TEST COMMENT: IF: 1/4" blow died in 8 min.

IS: No return.

FF: No blow.

FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1950.03	105.01	Initial Hydro-static
1	23.65	104.60	Open To Flow (1)
17	29.91	106.17	Shut-In(1)
45	820.63	107.65	End Shut-In(1)
45	25.02	107.29	Open To Flow (2)
75	27.30	109.86	Shut-In(2)
124	782.44	112.17	End Shut-In(2)
126	1982.97	112.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100%m	0.14

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

ATTN: Tom Williams

Job Ticket: 59667

DST#: 3

Test Start: 2014.11.23 @ 08:15:51

GENERAL INFORMATION:

Formation: **LKC G Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:42:21

Time Test Ended: 13:12:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4025.00 ft (KB) To 4045.00 ft (KB) (TVD)

Total Depth: 4045.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2597.00 ft (KB)

2587.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8166 Outside

Press@RunDepth: psig @ 4026.00 ft (KB)

Start Date: 2014.11.23

End Date: 2014.11.23

Capacity: 8000.00 psig

Last Calib.: 2014.11.23

Start Time: 08:15:41

End Time: 13:12:05

Time On Btm:

Time Off Btm:

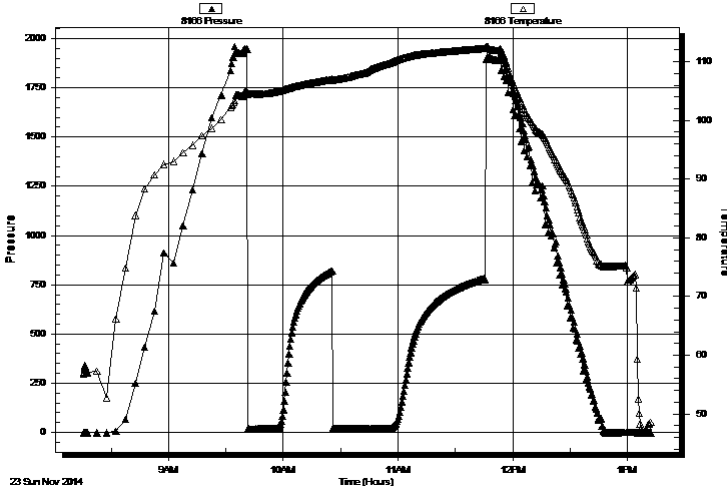
TEST COMMENT: IF: 1/4" blow died in 8 min.

IS: No return.

FF: No blow.

FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100% m	0.14

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59667

DST#: 3

ATTN: Tom Williams

Test Start: 2014.11.23 @ 08:15:51

Tool Information

Drill Pipe:	Length: 4010.00 ft	Diameter: 3.80 inches	Volume: 56.25 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 56.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4025.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			3999.00	
Shut In Tool	5.00			4004.00	
Hydraulic tool	5.00			4009.00	
Jars	5.00			4014.00	
Safety Joint	2.00			4016.00	
Packer	5.00			4021.00	27.00 Bottom Of Top Packer
Packer	4.00			4025.00	
Stubb	1.00			4026.00	
Recorder	0.00	8373	Inside	4026.00	
Recorder	0.00	8166	Outside	4026.00	
Perforations	14.00			4040.00	
Bullnose	5.00			4045.00	20.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59667

DST#: 3

ATTN: Tom Williams

Test Start: 2014.11.23 @ 08:15:51

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 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
10.00	mud 100%m	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8373

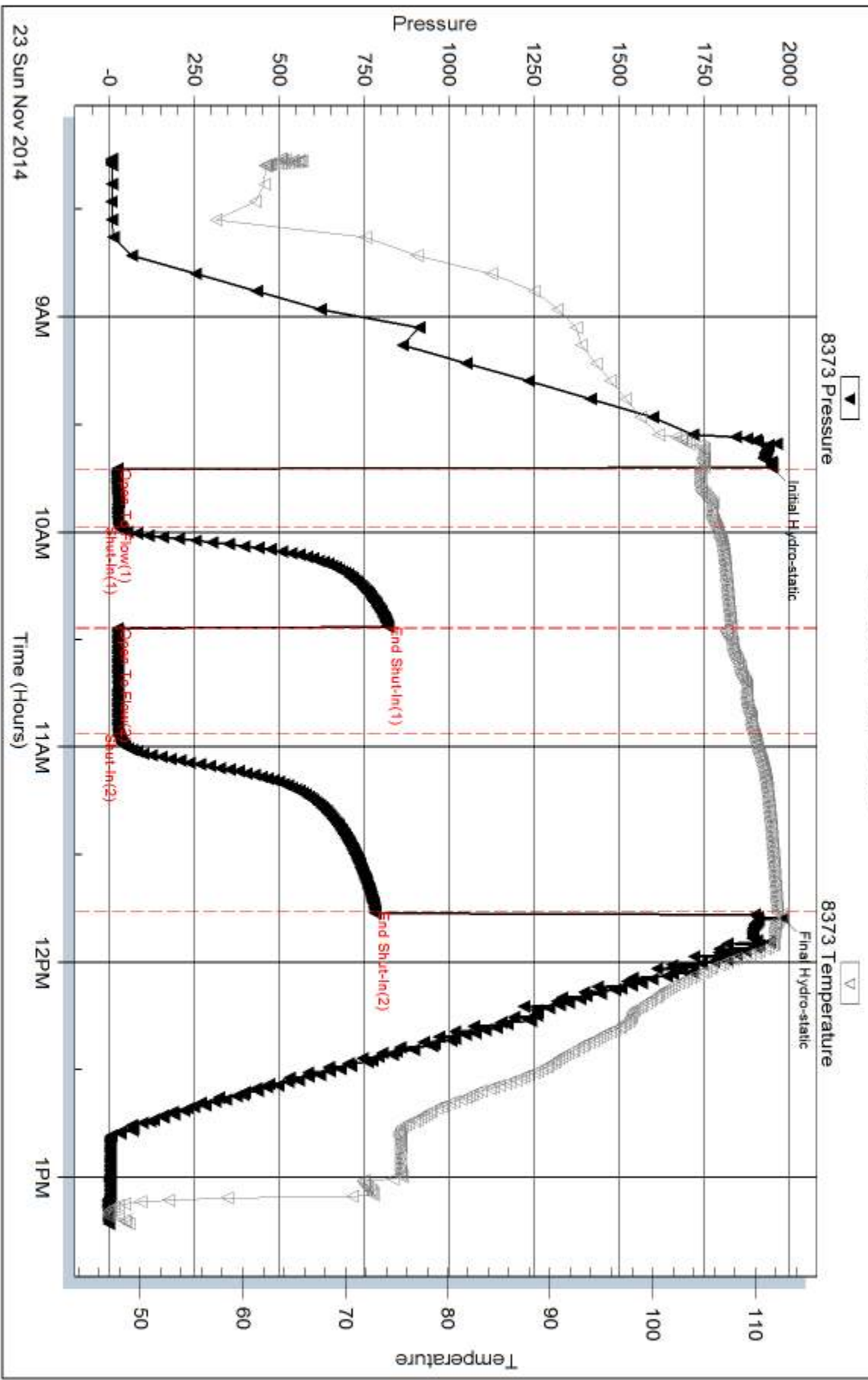
Inside

K3 Oil & Gas Operating

Grubing #10-14

DST Test Number: 3

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 59667

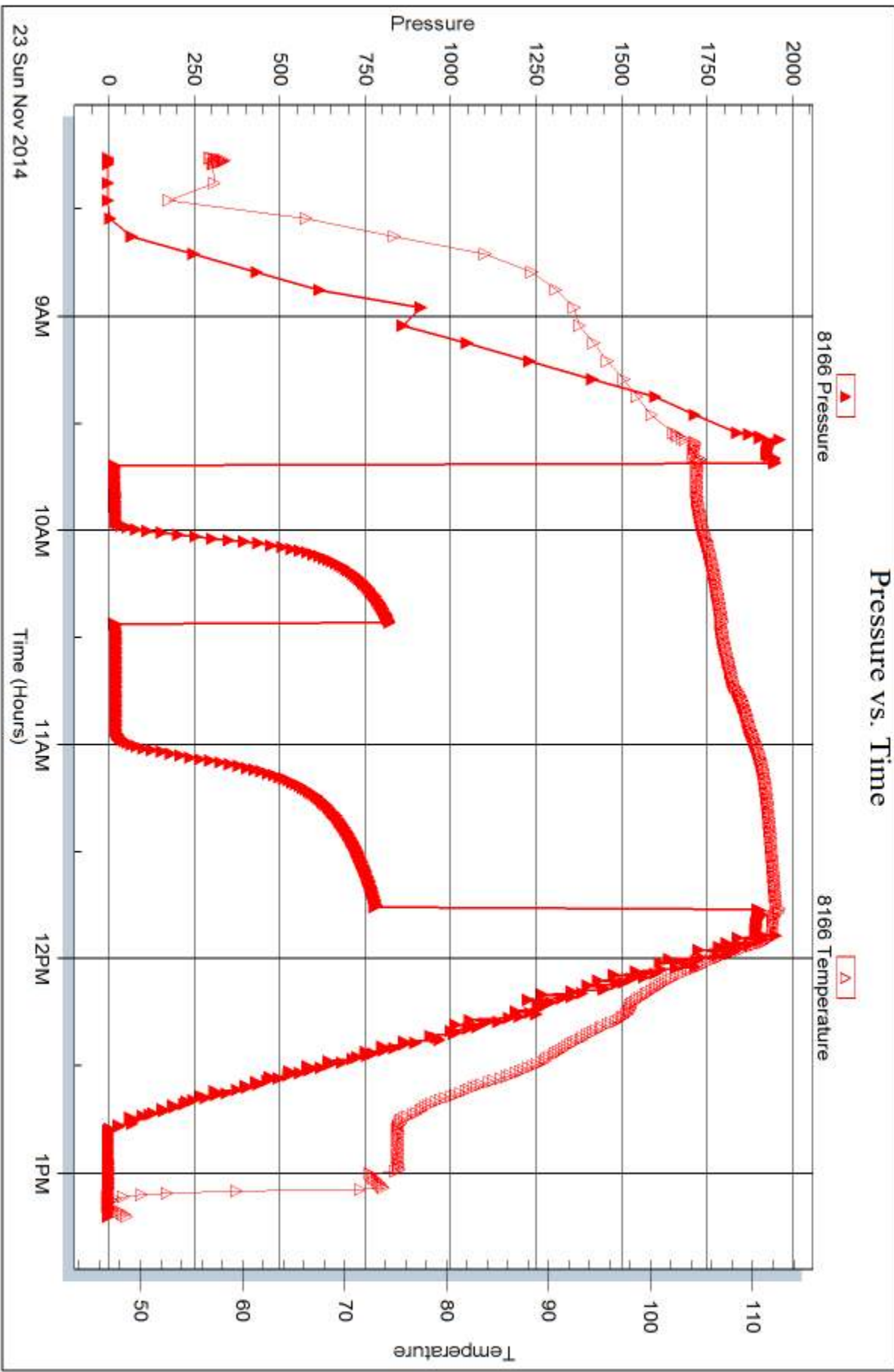
Printed: 2014.11.26 @ 13:53:24

Serial #: 8166

Outside K3 Oil & Gas Operating

Gushing #10-14

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **K3 Oil & Gas Operating**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Grusing #10-14

10-16s-27w Lane,KS

Start Date: 2014.11.23 @ 21:49:36

End Date: 2014.11.24 @ 04:04:36

Job Ticket #: 59668 DST #: 4

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

Printed: 2014.11.26 @ 13:52:57



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59668

DST#: 4

ATTN: Tom Williams

Test Start: 2014.11.23 @ 21:49:36

GENERAL INFORMATION:

Formation: **H lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:51:36

Time Test Ended: 04:04:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4058.00 ft (KB) To 4070.00 ft (KB) (TVD)

Reference Elevations: 2597.00 ft (KB)

Total Depth: 4070.00 ft (KB) (TVD)

2587.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: 112.68 psig @ 4059.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.23

End Date:

2014.11.24

Last Calib.: 2014.11.24

Start Time: 21:49:41

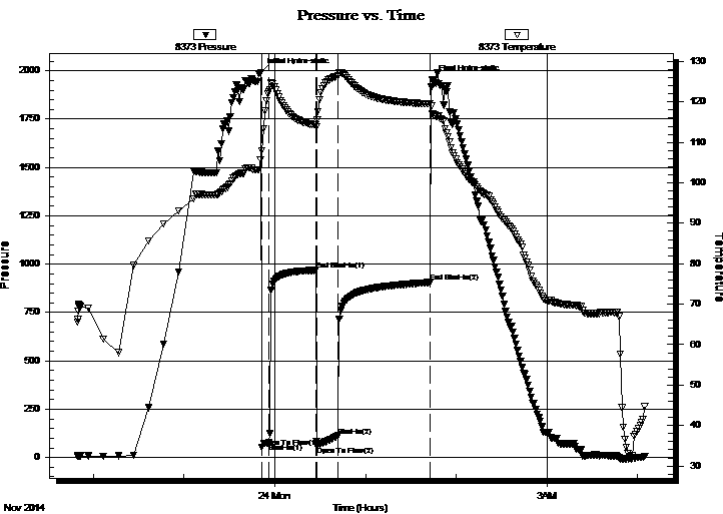
End Time:

04:04:35

Time On Btm: 2014.11.23 @ 23:50:36

Time Off Btm: 2014.11.24 @ 01:44:06

TEST COMMENT: IF: BOB in 1 min.
IS: Surface blow built to 6" in 30 min.
FF: BOB in 1 min.
FS: BOB in 24 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1991.89	105.76	Initial Hydro-static
1	53.95	107.87	Open To Flow (1)
6	76.31	122.53	Shut-In(1)
37	969.15	114.32	End Shut-In(1)
38	59.23	115.53	Open To Flow (2)
51	112.68	126.39	Shut-In(2)
112	905.92	119.54	End Shut-In(2)
114	1953.41	117.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	mcgo 50%g 10%o 40%m	0.87
62.00	go 20%g 80%o	0.87
155.00	go 10%g 90%o	2.17
0.00	3701 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

K3 Oil & Gas Operating
 211 Highland Cross
 Houston, TX 77073
 ATTN: Tom Williams

10-16s-27w Lane, KS
Grusing #10-14
 Job Ticket: 59668 **DST#: 4**
 Test Start: 2014.11.23 @ 21:49:36

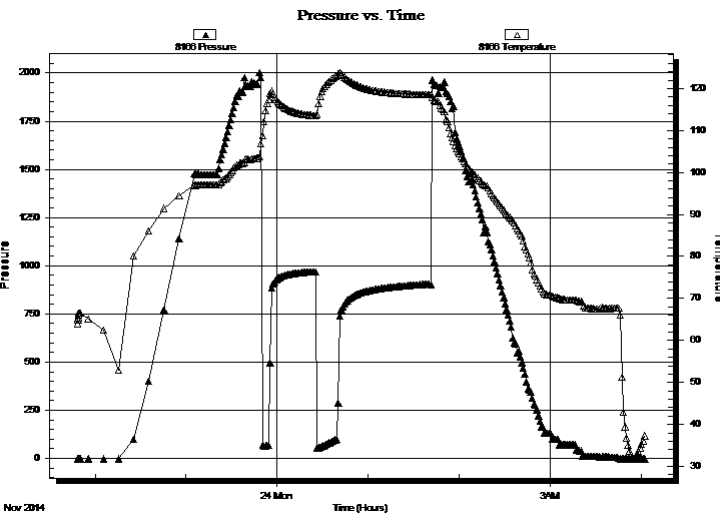
GENERAL INFORMATION:

Formation: **H lime**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 23:51:36 Tester: Brandon Turley
 Time Test Ended: 04:04:36 Unit No: 79

Interval: 4058.00 ft (KB) To 4070.00 ft (KB) (TVD) Reference Elevations: 2597.00 ft (KB)
 Total Depth: 4070.00 ft (KB) (TVD) 2587.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
 Press@RunDepth: psig @ 4059.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.23 End Date: 2014.11.24 Last Calib.: 2014.11.24
 Start Time: 21:48:30 End Time: 04:02:54 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: BOB in 1 min.
 IS: Surface blow built to 6" in 30 min.
 FF: BOB in 1 min.
 FS: BOB in 24 min.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	mcgo 50%g 10%o 40%m	0.87
62.00	go 20%g 80%o	0.87
155.00	go 10%g 90%o	2.17
0.00	3701 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59668

DST#: 4

ATTN: Tom Williams

Test Start: 2014.11.23 @ 21:49:36

Tool Information

Drill Pipe:	Length: 4041.00 ft	Diameter: 3.80 inches	Volume: 56.68 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 56.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4058.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			4032.00	
Shut In Tool	5.00			4037.00	
Hydraulic tool	5.00			4042.00	
Jars	5.00			4047.00	
Safety Joint	2.00			4049.00	
Packer	5.00			4054.00	27.00 Bottom Of Top Packer
Packer	4.00			4058.00	
Stubb	1.00			4059.00	
Recorder	0.00	8373	Inside	4059.00	
Recorder	0.00	8166	Outside	4059.00	
Perforations	6.00			4065.00	
Bullnose	5.00			4070.00	12.00 Bottom Packers & Anchor

Total Tool Length: 39.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59668

DST#: 4

ATTN: Tom Williams

Test Start: 2014.11.23 @ 21:49:36

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 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 bbbl
62.00	mcgo 50%g 10%o 40%m	0.870
62.00	go 20%g 80%o	0.870
155.00	go 10%g 90%o	2.174
0.00	3701 GIP	0.000

Total Length: 279.00 ft

Total Volume: 3.914 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

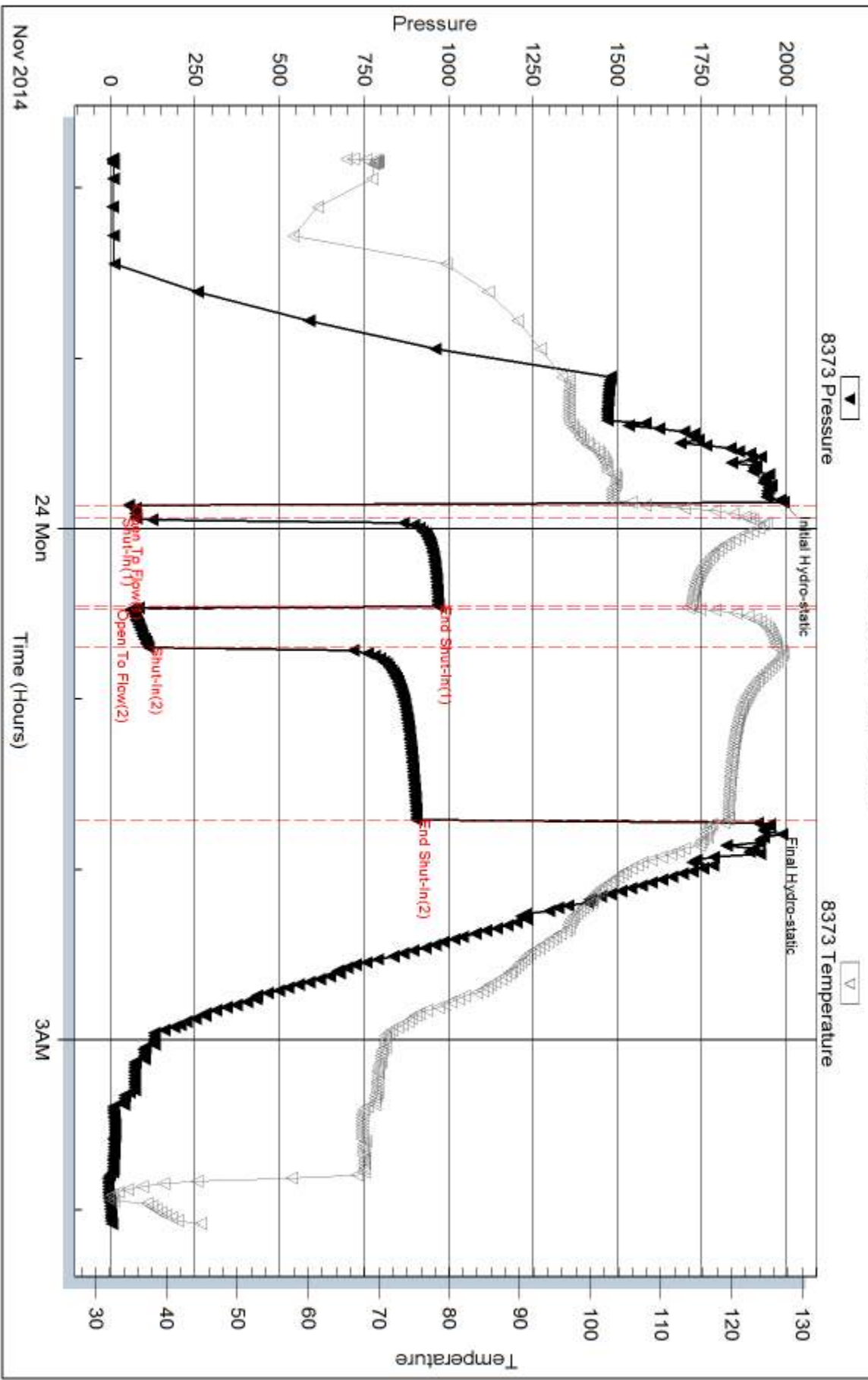
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 37@40=39

Pressure vs. Time

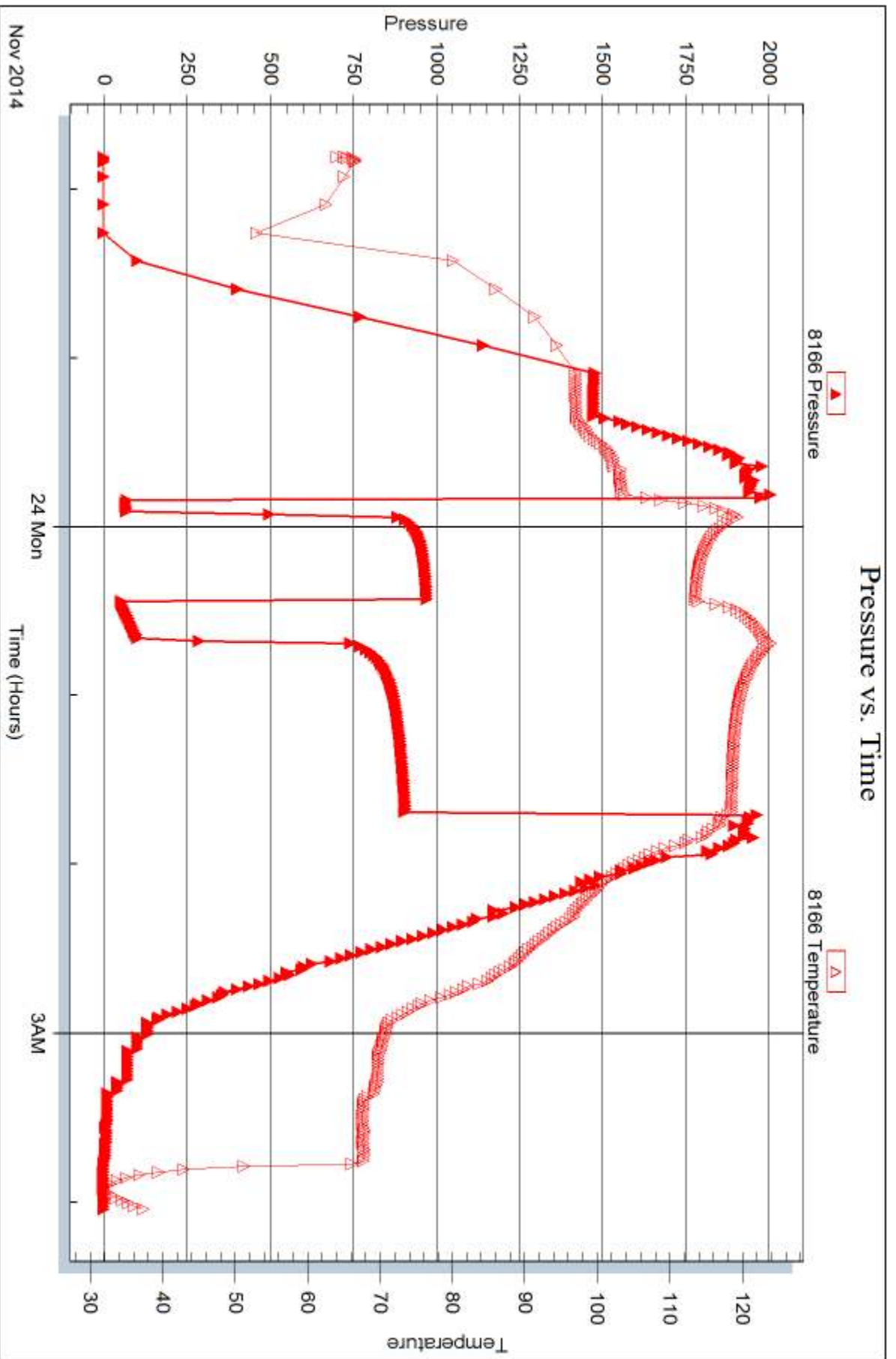


Serial #: 8166

Outside K3 Oil & Gas Operating

Gushing #10-14

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **K3 Oil & Gas Operating**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Grusing #10-14

10-16s-27w Lane,KS

Start Date: 2014.11.24 @ 14:06:00

End Date: 2014.11.24 @ 20:09:00

Job Ticket #: 59669 DST #: 5

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

Printed: 2014.11.26 @ 13:51:49



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59669

DST#: 5

ATTN: Tom Williams

Test Start: 2014.11.24 @ 14:06:00

GENERAL INFORMATION:

Formation: **I Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:59:30

Time Test Ended: 20:09:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4072.00 ft (KB) To 4100.00 ft (KB) (TVD)

Reference Elevations: 2597.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2587.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: 47.68 psig @ 4073.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.24

End Date:

2014.11.24

Last Calib.:

2014.11.24

Start Time: 14:06:05

End Time:

20:08:59

Time On Btm:

2014.11.24 @ 15:57:30

Time Off Btm:

2014.11.24 @ 18:36:30

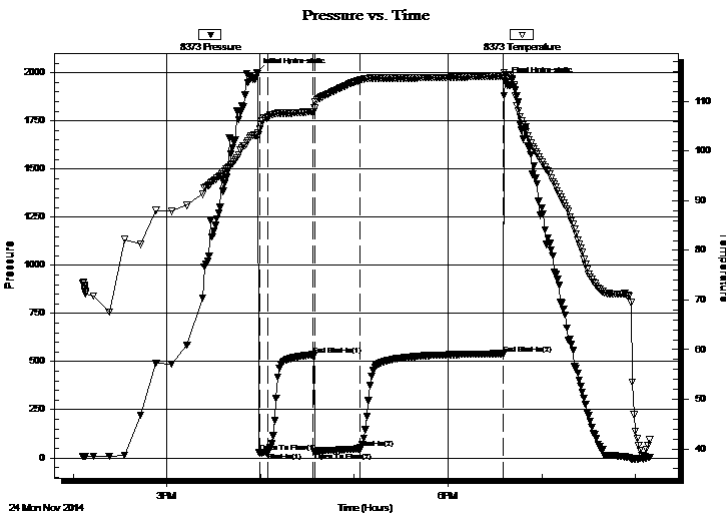
TEST COMMENT: IF: 1/4" blow built to 5"

IS: No return.

FF: BOB in 16 min.

FS: Surface blow died in 30 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2001.92	103.21	Initial Hydro-static
2	27.19	104.44	Open To Flow (1)
7	28.91	106.72	Shut-In(1)
36	535.81	108.00	End Shut-In(1)
37	30.25	108.69	Open To Flow (2)
66	47.68	114.29	Shut-In(2)
158	541.14	115.18	End Shut-In(2)
159	1953.47	115.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	ocm 10%o 90%m	0.87
5.00	oil 100%o	0.07
0.00	310 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

10-16s-27w Lane, KS

Grusing #10-14

Job Ticket: 59669

DST#: 5

Test Start: 2014.11.24 @ 14:06:00

GENERAL INFORMATION:

Formation: **I Lime**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:59:30
 Time Test Ended: 20:09:00
 Interval: **4072.00 ft (KB) To 4100.00 ft (KB) (TVD)**
 Total Depth: 4100.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 2597.00 ft (KB)
 2587.00 ft (CF)
 KB to GR/CF: 10.00 ft

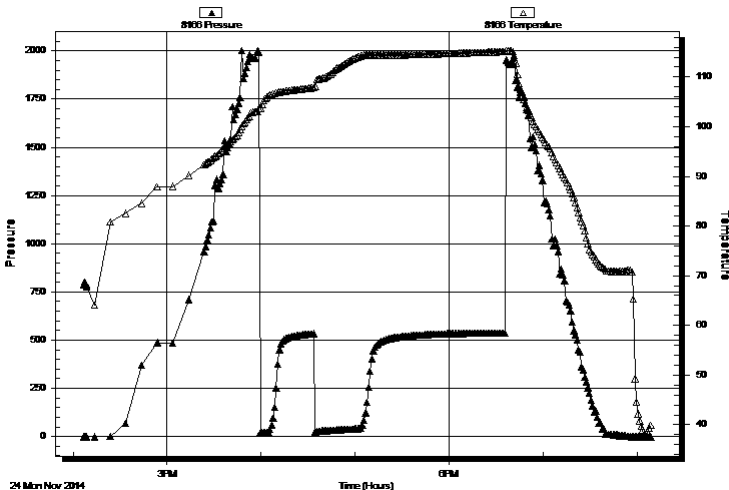
Serial #: 8166

Outside

Press@RunDepth: psig @ 4073.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.24 End Date: 2014.11.24 Last Calib.: 2014.11.24
 Start Time: 14:06:44 End Time: 20:09:08 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: 1/4" blow built to 5"
 IS: No return.
 FF: BOB in 16 min.
 FS: Surface blow died in 30 min.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	ocm 10%o 90%m	0.87
5.00	oil 100%o	0.07
0.00	310 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

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59669

DST#: 5

ATTN: Tom Williams

Test Start: 2014.11.24 @ 14:06:00

Tool Information

Drill Pipe:	Length: 4073.00 ft	Diameter: 3.80 inches	Volume: 57.13 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 57.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4072.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			4046.00	
Shut In Tool	5.00			4051.00	
Hydraulic tool	5.00			4056.00	
Jars	5.00			4061.00	
Safety Joint	2.00			4063.00	
Packer	5.00			4068.00	27.00 Bottom Of Top Packer
Packer	4.00			4072.00	
Stubb	1.00			4073.00	
Recorder	0.00	8373	Inside	4073.00	
Recorder	0.00	8166	Outside	4073.00	
Perforations	22.00			4095.00	
Bullnose	5.00			4100.00	28.00 Bottom Packers & Anchor

Total Tool Length: 55.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 59669

DST#: 5

ATTN: Tom Williams

Test Start: 2014.11.24 @ 14:06:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	ocm 10%o 90%m	0.870
5.00	oil 100%o	0.070
0.00	310 GIP	0.000

Total Length: 67.00 ft Total Volume: 0.940 bbl

Num Fluid Samples: 0

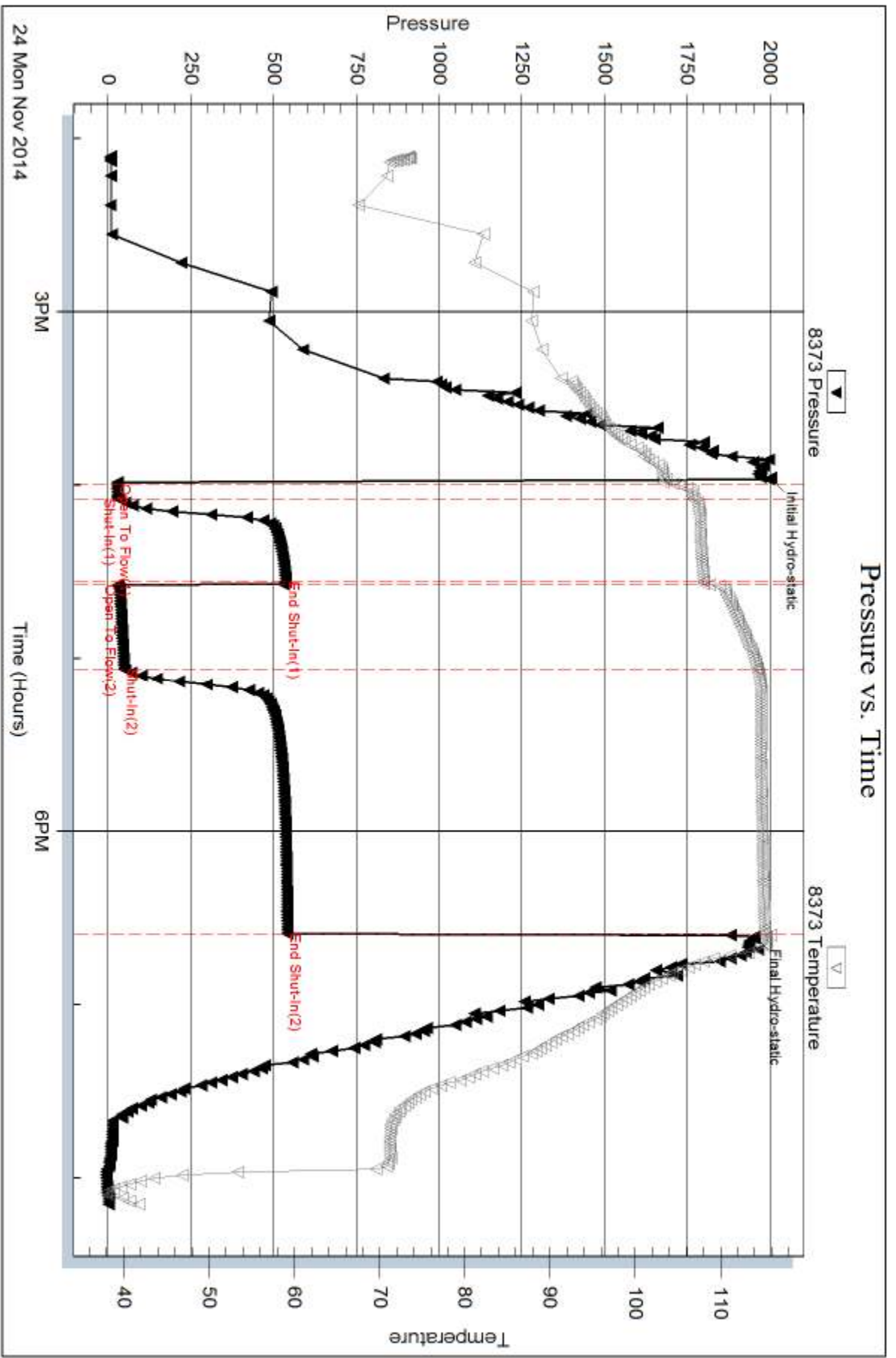
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

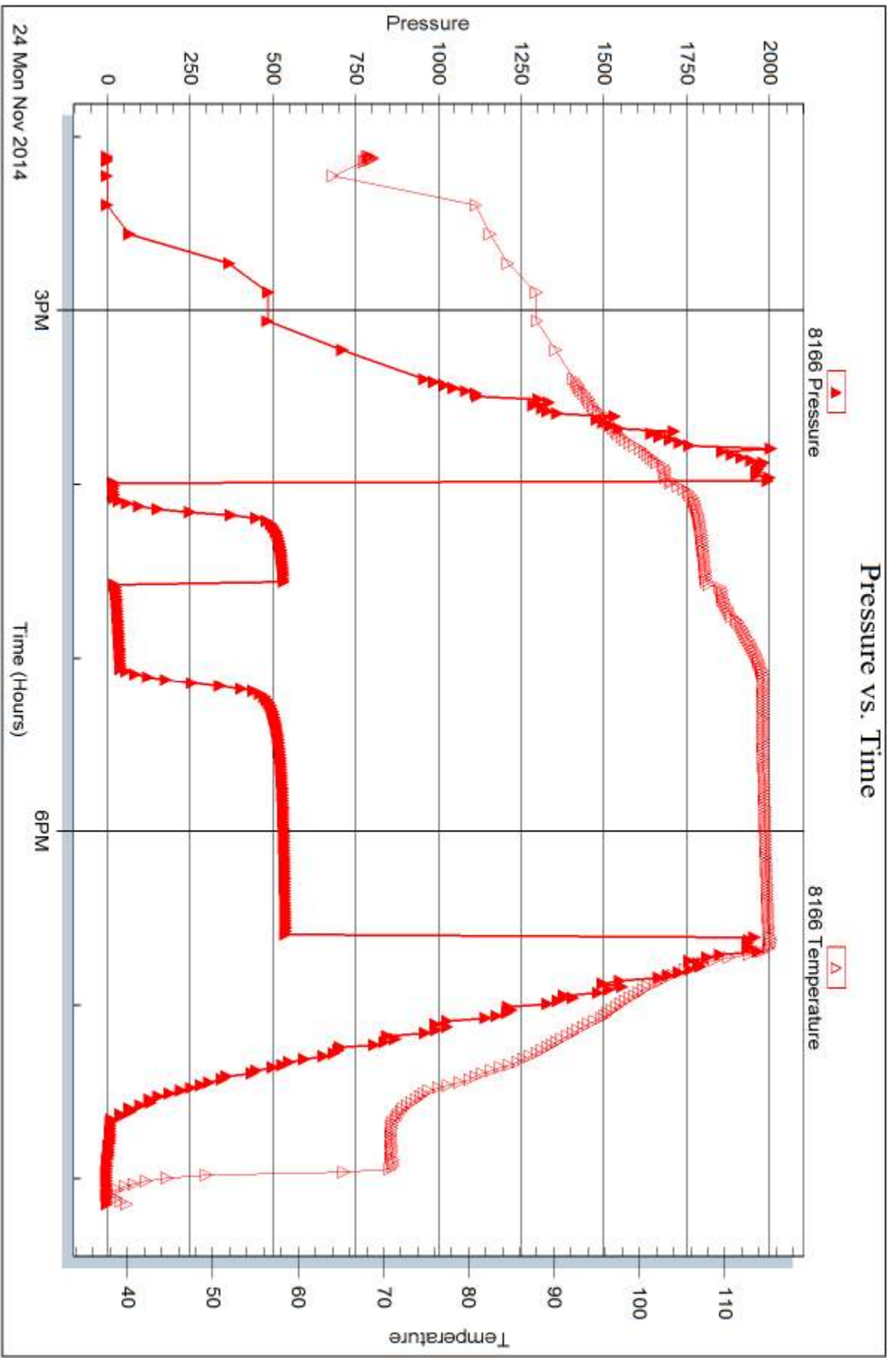


Serial #: 8166

Outside K3 Oil & Gas Operating

Grusing #10-14

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 59669

Printed: 2014, 11, 26 @ 13:51:51



DRILL STEM TEST REPORT

Prepared For: **K3 Oil & Gas Operating**

211 Highland Cross
Houston, TX 77073

ATTN: Tom Williams

Grusing #10-14

10-16s-27w Lane,KS

Start Date: 2014.11.25 @ 08:29:46

End Date: 2014.11.25 @ 16:24:10

Job Ticket #: 58606 DST #: 6

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

Printed: 2014.11.26 @ 13:49:01



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

K3 Oil & Gas Operating
 211 Highland Cross
 Houston, TX 77073
 ATTN: Tom Williams

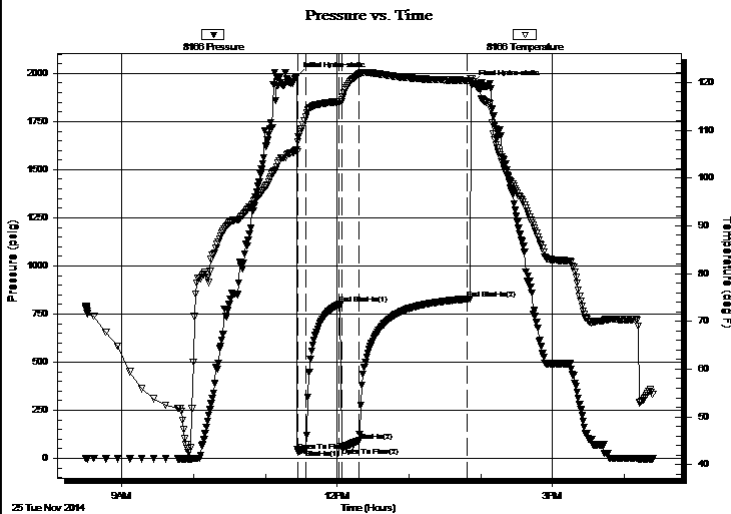
10-16s-27w Lane, KS
Grusing #10-14
 Job Ticket: 58606 **DST#: 6**
 Test Start: 2014.11.25 @ 08:29:46

GENERAL INFORMATION:

Formation: **"J" Lime**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:27:11
 Time Test Ended: 16:24:10
 Interval: **4102.00 ft (KB) To 4130.00 ft (KB) (TVD)**
 Total Depth: 4130.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Geier
 Unit No: 79
 Reference Elevations: 2597.00 ft (KB)
 2587.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 90.47 psig @ 4103.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.25 End Date: 2014.11.25 Last Calib.: 2014.11.25
 Start Time: 08:29:46 End Time: 16:24:10 Time On Btm: 2014.11.25 @ 11:26:11
 Time Off Btm: 2014.11.25 @ 13:52:41

TEST COMMENT: IF: BOB in 2 min
 IS: No return
 FF: BOB in 3 min.
 FS: No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1985.34	105.89	Initial Hydro-static
1	37.48	107.63	Open To Flow (1)
8	46.58	112.72	Shut-In(1)
36	800.03	115.93	End Shut-In(1)
38	58.12	116.46	Open To Flow (2)
52	90.47	121.72	Shut-In(2)
143	828.30	120.42	End Shut-In(2)
147	1944.83	120.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
88.00	g c w o 20%g 30%w 50%o	1.23
88.00	g c m o 5% g 80%m 15%o	1.23

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 58606

DST#: 6

ATTN: Tom Williams

Test Start: 2014.11.25 @ 08:29:46

GENERAL INFORMATION:

Formation: **"J" Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:27:11

Time Test Ended: 16:24:10

Interval: 4102.00 ft (KB) To 4130.00 ft (KB) (TVD)

Total Depth: 4130.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: James Geier

Unit No: 79

Reference Elevations: 2597.00 ft (KB)

2587.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: psig @ 4103.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.25

End Date:

2014.11.25

Last Calib.:

2014.11.25

Start Time: 08:29:57

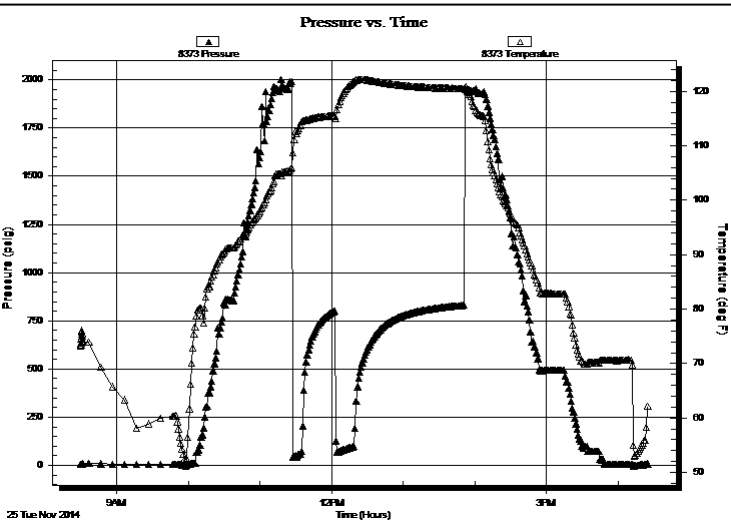
End Time:

16:24:51

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB in 2 min
IS: No return
FF: BOB in 3 min.
FS: No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
88.00	g c w o 20%g 30%w 50%o	1.23
88.00	g c m o 5% g 80%m 15%o	1.23

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K3 Oil & Gas Operating

10-16s-27w Lane,KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 58606

DST#: 6

ATTN: Tom Williams

Test Start: 2014.11.25 @ 08:29:46

Tool Information

Drill Pipe:	Length: 4100.00 ft	Diameter: 3.80 inches	Volume: 57.51 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 750000.0 lb
			<u>Total Volume: 57.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4102.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			4076.00	
Shut In Tool	5.00			4081.00	
Hydraulic tool	5.00			4086.00	
Jars	5.00			4091.00	
Safety Joint	2.00			4093.00	
Packer	5.00			4098.00	27.00 Bottom Of Top Packer
Packer	4.00			4102.00	
Stubb	1.00			4103.00	
Recorder	0.00	8373	Inside	4103.00	
Recorder	0.00	8166	Outside	4103.00	
Perforations	22.00			4125.00	
Bullnose	5.00			4130.00	28.00 Bottom Packers & Anchor

Total Tool Length: 55.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

K3 Oil & Gas Operating

10-16s-27w Lane, KS

211 Highland Cross
Houston, TX 77073

Grusing #10-14

Job Ticket: 58606

DST#: 6

ATTN: Tom Williams

Test Start: 2014.11.25 @ 08:29:46

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
88.00	g c w o 20%g 30%w 50%o	1.234
88.00	g c m o 5% g 80%m 15%o	1.234

Total Length: 176.00 ft Total Volume: 2.468 bbl

Num Fluid Samples: 0

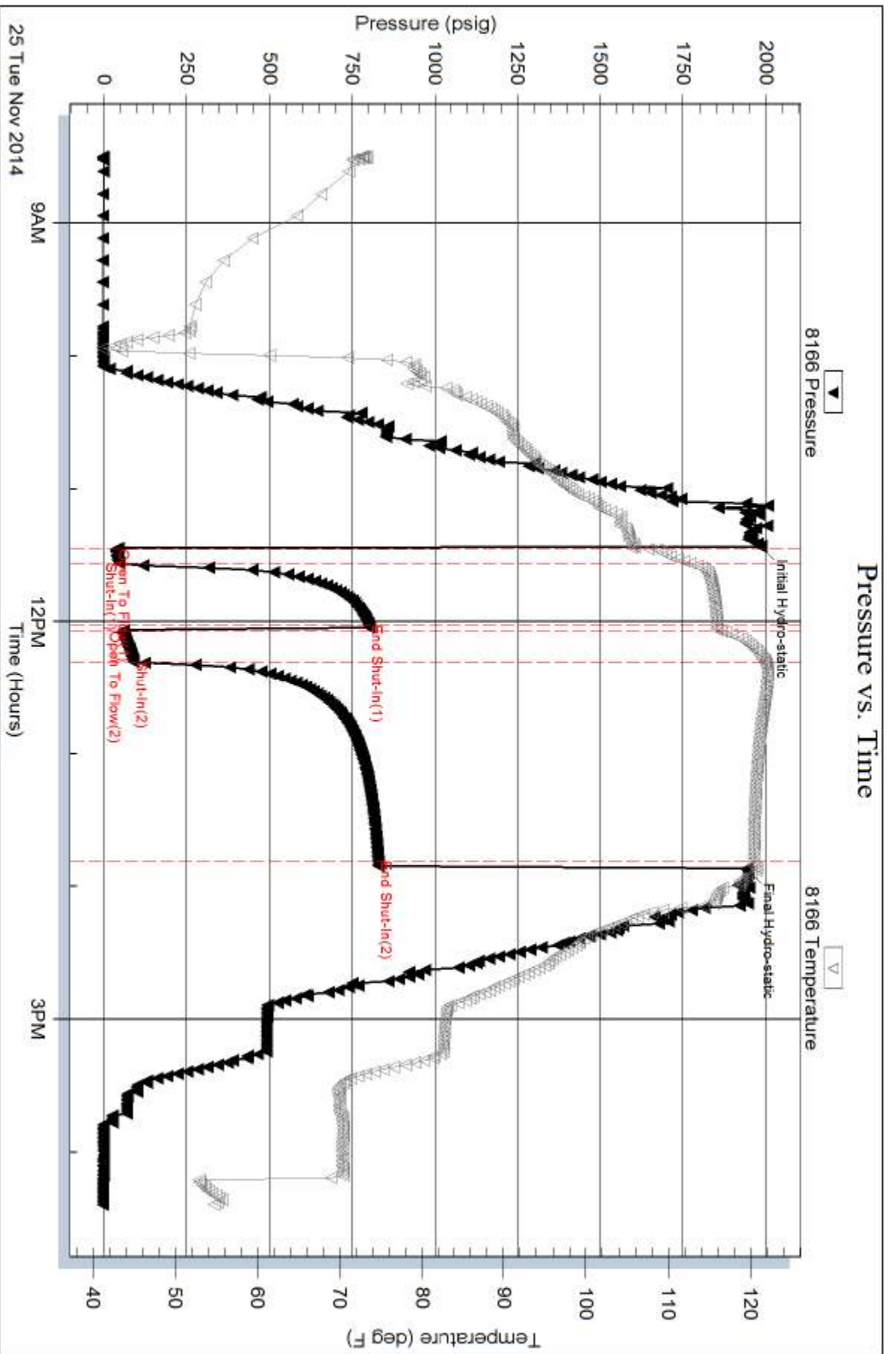
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 461' Gas in pipe



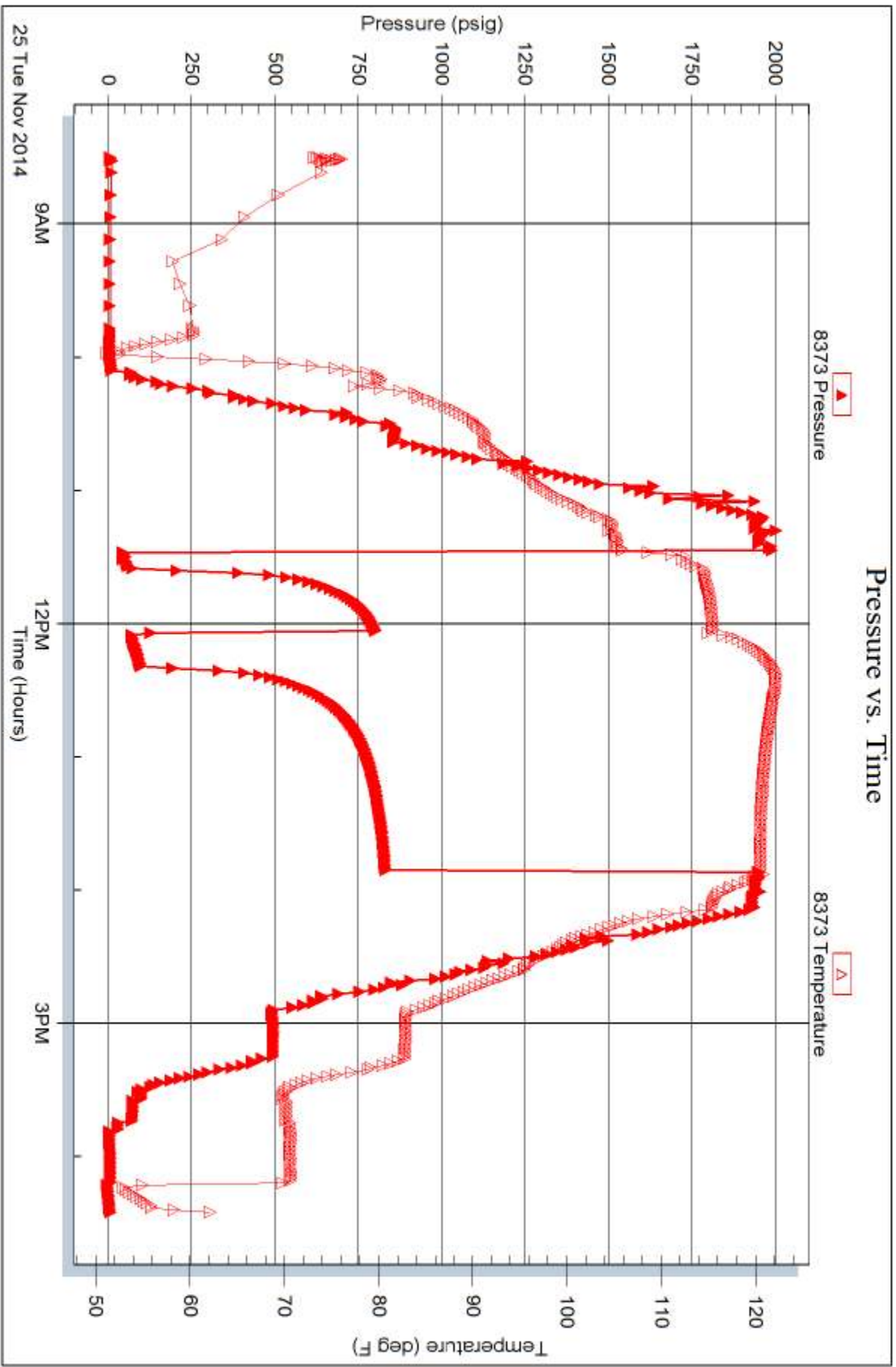
Serial #: 8373

Inside

K3 Oil & Gas Operating

Grusing #10-14

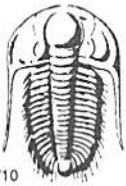
DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 59606

Printed: 2014, 11, 26 @ 13:49:02



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59665

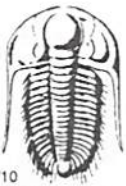
Well Name & No. GRUSING 10-14 Test No. 1 Date 11-21-14
 Company K3 oil & Gas operating Elevation 2597 KB 2587 GL
 Address 211 Highland CROSS Houston, TX 77073
 Co. Rep / Geo. TOM WILLIAMS Rig DAKE #8
 Location: Sec. 10 Twp. 16 Rge. 27 Co. LONE State KS

Interval Tested 3936 3960 Zone Tested KC
 Anchor Length 24 Drill Pipe Run 3917 Mud Wt. 9.2
 Top Packer Depth 3931 Drill Collars Run — Vis 48
 Bottom Packer Depth 3936 Wt. Pipe Run — WL 8.8
 Total Depth 3960 Chlorides 4000 ppm System LCM 1
 Blow Description IF: 1/4 blow built to 2 1/2 in 15 mins,
IS: No return,
FF: surface blow built to 3 in 45 mins.
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>MCW</u>		<u>60</u>	<u>40</u>	
<u>62</u>	<u>wcm</u>		<u>40</u>	<u>60</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 102 BHT 120 Gravity — API RW .19 @ 45° F Chlorides 65,000 ppm
 (A) Initial Hydrostatic 1943 Test 1150 T-On Location 19:10
 (B) First Initial Flow 40 Jars 250 T-Started 19:56
 (C) First Final Flow 58 Safety Joint 75 T-Open 21:28
 (D) Initial Shut-In 880 Circ Sub N/C T-Pulled 00:28
 (E) Second Initial Flow 45 Hourly Standby _____ T-Out 2:12
 (F) Second Final Flow 74 Mileage 98-151.90 Comments on the bank
 (G) Final Shut-In 867 Sampler _____ at 6:15 was told
 (H) Final Hydrostatic 1903 Straddle _____ 8:00
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 15 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 90 Day Standby _____
 Accessibility _____
 Sub Total 1626.90 Sub Total _____
 Total 1626.90 Total _____
 MP/DST Disc't _____

Approved By Tom Williams 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. 59666

Well Name & No. Grasing 10-14 Test No. 2 Date 11-22-14
 Company K3 oil & gas operating Elevation 2597 KB 2587 GL
 Address _____
 Co. Rep / Geo. Tom Williams Rig Duke 8
 Location: Sec. 10 Twp. 16 Rge. 27 Co. Lawe State K5

Interval Tested 4012 4025 Zone Tested LKC 'F' Lime
 Anchor Length _____ Drill Pipe Run 4010 Mud Wt. 9.2
 Top Packer Depth _____ Drill Collars Run _____ Vis 49
 Bottom Packer Depth 4012 Wt. Pipe Run _____ WL 8.0
 Total Depth 4025 Chlorides 4000 ppm System LCM 1

Blow Description IF: 1/4 blow built to 2.
F5: No return.
FF: 2" blow BOB in 30 min.
F3: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>31</u>	<u>6cm</u>	<u>10</u>		<u>90</u>	
<u>—</u>	<u>279 GEP</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 31 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

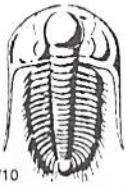
(A) Initial Hydrostatic 1993 Test 1250 T-On Location 14:15
 (B) First Initial Flow 21 Jars 250 T-Started 14:44
 (C) First Final Flow 22 Safety Joint 75 T-Open 16:30
 (D) Initial Shut-In 302 Circ Sub NIL T-Pulled 19:30
 (E) Second Initial Flow 21 Hourly Standby _____ T-Out 21:15
 (F) Second Final Flow 23 Mileage 98 151.90 Comments _____
 (G) Final Shut-In 409 Sampler _____
 (H) Final Hydrostatic 1952 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 15
 Initial Shut-In 30
 Final Flow 45
 Final Shut-In 90

Sub Total 1726.90
 Total 1726.90
 MP/DST Disc't _____

Approved By Tom Williams Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59667

Well Name & No. Grusing 10-14 Test No. 3 Date 11-23-14
 Company 153 oil & gas operating Elevation 2597 KB 2587 GL
 Address _____
 Co. Rep / Geo. Tom Williams Rig Duke 8
 Location: Sec. 10 Twp. 16 Rge. 27 Co. Lane State KS

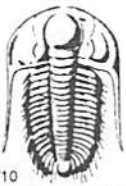
Interval Tested 4025 4045 Zone Tested LKC 6 Lime
 Anchor Length _____ 20 Drill Pipe Run 4010 Mud Wt. 9.3
 Top Packer Depth _____ 4020 Drill Collars Run _____ Vis 45
 Bottom Packer Depth _____ 4025 Wt. Pipe Run _____ WL 6.4
 Total Depth _____ 4045 Chlorides 3000 ppm System LCM Ø
 Blow Description IF: 1/4 blow died in 8 min.
IS: No return.
FF: No blow.
FS: No return.

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

Rec Total 10 BHT 112 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1950</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>8:00</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:15</u>
(C) First Final Flow <u>29</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>9:40</u>
(D) Initial Shut-In <u>820</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>11:40</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>13:15</u>
(F) Second Final Flow <u>27</u>	<input checked="" type="checkbox"/> Mileage <u>98-151.90</u>	Comments _____
(G) Final Shut-In <u>1982</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1982</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>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby _____	Total <u>1726.90</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1726.90</u>	

Approved By _____ Our Representative _____
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59668

Well Name & No. GRUSING 10-14 Test No. 4 Date 11-23-14
 Company 153 oil & gas operating Elevation 2597 KB 2580 GL
 Address _____
 Co. Rep / Geo. Tom Williams Rig duke 8
 Location: Sec. 10 Twp. 16 Rge. 27 Co. Linne State KS

Interval Tested 4058 4070 Zone Tested H Lime
 Anchor Length 12 Drill Pipe Run 4041 Mud Wt. 9.3
 Top Packer Depth 4053 Drill Collars Run — Vis 45
 Bottom Packer Depth 4058 Wt. Pipe Run — WL 6.4
 Total Depth 4070 Chlorides 3000 ppm System LCM 8
 Blow Description IF: BoB in 1 min.
IS: surface blow built to 6 in 30 min.
FF: BoB in 1 min.
FS: BoB in 26 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>155</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>62</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>62</u>	<u>MC90</u>	<u>50</u>	<u>10</u>		<u>40</u>
	<u>3701 G&P</u>				

Rec Total 279 BHT 119 Gravity 39 API RW — @ — °F Chlorides — ppm

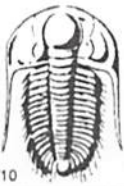
(A) Initial Hydrostatic 1991 Test 1250 T-On Location 21:20
 (B) First Initial Flow 53 Jars 250 T-Started 21:48
 (C) First Final Flow 76 Safety Joint 75 T-Open 23:48
 (D) Initial Shut-In 969 Circ Sub NIL T-Pulled 1:38
 (E) Second Initial Flow 59 Hourly Standby _____ T-Out 4:05
 (F) Second Final Flow 112 Mileage 98 151.90 Comments _____
 (G) Final Shut-In 905 Sampler _____
 (H) Final Hydrostatic 1953 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1726.90

Initial Open 5
 Initial Shut-In 30
 Final Flow 15
 Final Shut-In 60

Sub Total 1726.90

Approved By Tom Williams Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59669

Well Name & No. Grusing 10-14 Test No. 5 Date 11-24-14
 Company K3 oil & gas operating Elevation 2597 KB 2587 GL
 Address _____
 Co. Rep / Geo. Tom Williams Rig Duke 8
 Location: Sec. 10 Twp. 16 Rge. 27 Co. Lone State KS

Interval Tested 4072 4100 Zone Tested F Lime
 Anchor Length 28 Drill Pipe Run 4073 Mud Wt. 9.3
 Top Packer Depth 4067 Drill Collars Run — Vis 50
 Bottom Packer Depth 4072 Wt. Pipe Run — WL 8.0
 Total Depth 4100 Chlorides 3200 ppm System LCM 0

Blow Description IF: 1/4 blow built to 5.
IS: No return.
FF: BoB in 16 min.
FS: surface blow died in 30 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>oil</u>	<u>100</u>			
<u>62</u>	<u>OCM</u>	<u>10</u>		<u>90</u>	
	<u>310 GFP</u>				

Rec Total 67 BHT 115 Gravity — API RW @ F Chlorides — ppm
 (A) Initial Hydrostatic 2001 Test 1250
 (B) First Initial Flow 27 Jars 250
 (C) First Final Flow 28 Safety Joint 75
 (D) Initial Shut-In 535 Circ Sub _____
 (E) Second Initial Flow 30 Hourly Standby _____
 (F) Second Final Flow 47 Mileage 98 - 151.90
 (G) Final Shut-In 541 Sampler _____
 (H) Final Hydrostatic 1953 Straddle _____

T-On Location 13:44
 T-Started 14:06
 T-Open 15:58
 T-Pulled 18:33
 T-Out 20:10

Initial Open 5 Ruined Shale Packer _____
 Initial Shut-In 30 Ruined Packer _____
 Final Flow 30 Extra Copies _____
 Final Shut-In 90 Extra Recorder _____
 Sub Total 0 Total 1726.90
 Sub Total 1726.90 MP/DST Disc't _____

Approved By Tom Williams Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58606

Well Name & No. Cruising 10-14 Test No. 6 Date 11/25/14
 Company L3 Oil & Gas Oper Elevation 2597 KB 2587 GL
 Address 211 Highland Cross Houston TX 77073
 Co. Rep / Geo. Tom Williams Rig Duke 8
 Location: Sec. 10 Twp. 16 Rge. 27 Co. LANE State KS

Interval Tested 4102 — 4130 Zone Tested "I" lime
 Anchor Length 29' Drill Pipe Run 4109 Mud Wt. 9.3
 Top Packer Depth 4098 Drill Collars Run 0 Vis 50
 Bottom Packer Depth 4102 Wt. Pipe Run 0 WL 8.0
 Total Depth 4130 Chlorides 3000 ppm System LCM 0

Blow Description IP: BOB in 2 min
ISI: No Return
FF: BOB in 3 min
FST: No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>88</u>	<u>9c wo 20/9</u>	<u>20</u>	<u>50</u>	<u>30</u>	
<u>88</u>		<u>5</u>	<u>15</u>		<u>80</u>
	<u>BIT 4cl'</u>	<u>100</u>			

Rec Total 176 BHT 120 Gravity 1250 API RW 151.90 @ 151.90 ° F Chlorides 3000 ppm

(A) Initial Hydrostatic 1985 Test 1250 T-On Location 0734
 (B) First Initial Flow 137 Jars 250 T-Started 0829
 (C) First Final Flow 46 Safety Joint 75 T-Open 1130
 (D) Initial Shut-In 800 Circ Sub W/A T-Pulled 1346
 (E) Second Initial Flow 58 Hourly Standby T-Out 1624
 (F) Second Final Flow 90 Mileage 99 1/2 151.90 Comments loaded tools 11/26 12:30
 (G) Final Shut-In 838 Sampler 151.90
 (H) Final Hydrostatic 1944 Straddle Ruined Shale Packer Ruined Packer

Initial Open 5 Shale Packer Extra Packer Extra Copies
 Initial Shut-In 30 Extra Recorder Sub Total 0
 Final Flow 4/5 Day Standby Total 1878.80
 Final Shut-In 90 Accessibility MP/DST Disc't

Approved By Tom Williams Our Representative [Signature]
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