



DRILL STEM TEST REPORT

Prepared For: **Gra Ex, LLC**

PO Box 32
Kingman, KS 67068

ATTN: Jeff Burk

Michael #1

1-24s-14w Stafford,KS

Start Date: 2013.12.05 @ 01:37:13

End Date: 2013.12.05 @ 10:14:30

Job Ticket #: 51902 DST #: 1

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

Printed: 2013.12.11 @ 10:41:41



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS

Michael #1

Job Ticket: 51902

DST#: 1

Test Start: 2013.12.05 @ 01:37:13

GENERAL INFORMATION:

Formation: **LKC "B"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 04:59:13
 Tester: Leal Cason
 Time Test Ended: 10:14:30
 Unit No: 74
 Interval: **3604.00 ft (KB) To 3626.00 ft (KB) (TVD)**
 Reference Elevations: 1935.00 ft (KB)
 Total Depth: 3626.00 ft (KB) (TVD)
 1930.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

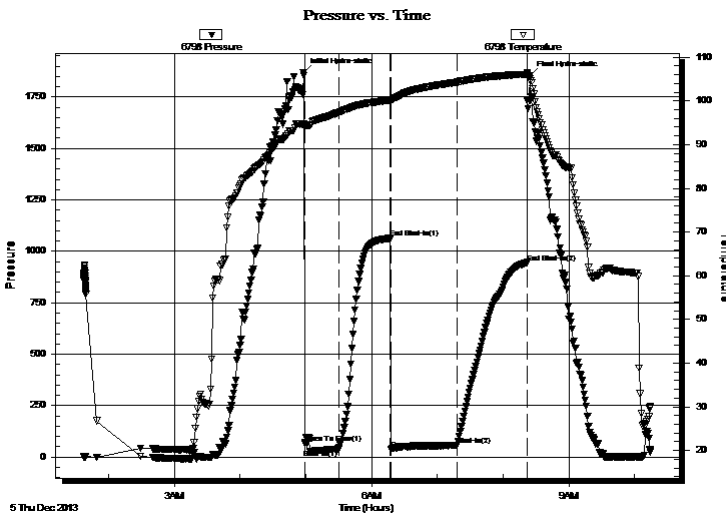
Serial #: 6798

Inside

Press@RunDepth: 57.02 psig @ 3605.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.05 End Date: 2013.12.05 Last Calib.: 2013.12.05
 Start Time: 01:37:14 End Time: 10:14:31 Time On Btm: 2013.12.05 @ 04:57:43
 Time Off Btm: 2013.12.05 @ 08:24:28

TEST COMMENT: IF: Fair Blow , BOB in 9 minutes
 IS: 1/2 inch Blow Back
 FF: Strong Blow , BOB in 15 seconds
 FS: Blow Back Built to 3 inches

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1869.91	94.70	Initial Hydro-static
2	64.86	94.46	Open To Flow (1)
32	39.57	97.35	Shut-In(1)
80	1063.10	100.15	End Shut-In(1)
80	35.78	99.90	Open To Flow (2)
141	57.02	104.30	Shut-In(2)
204	945.73	106.12	End Shut-In(2)
207	1853.92	105.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	2839 GIP	0.00
122.00	SGCM 4%G 96%M	0.65

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51902 **DST#: 1**
Test Start: 2013.12.05 @ 01:37:13

Tool Information

Drill Pipe:	Length: 3465.00 ft	Diameter: 3.80 inches	Volume: 48.60 bbl	Tool Weight:	2100.00 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: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 49.18 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3604.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 ft				
Tool Length:	48.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Shut In Tool	5.00			3583.00	
Hydraulic tool	5.00			3588.00	
Jars	5.00			3593.00	
Safety Joint	2.00			3595.00	
Packer	5.00			3600.00	26.00 Bottom Of Top Packer
Packer	4.00			3604.00	
Stubb	1.00			3605.00	
Recorder	0.00	6798	Inside	3605.00	
Recorder	0.00	8367	Outside	3605.00	
Perforations	18.00			3623.00	
Bullnose	3.00			3626.00	22.00 Bottom Packers & Anchor

Total Tool Length: 48.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51902 **DST#: 1**
Test Start: 2013.12.05 @ 01:37:13

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 0.02 inches			

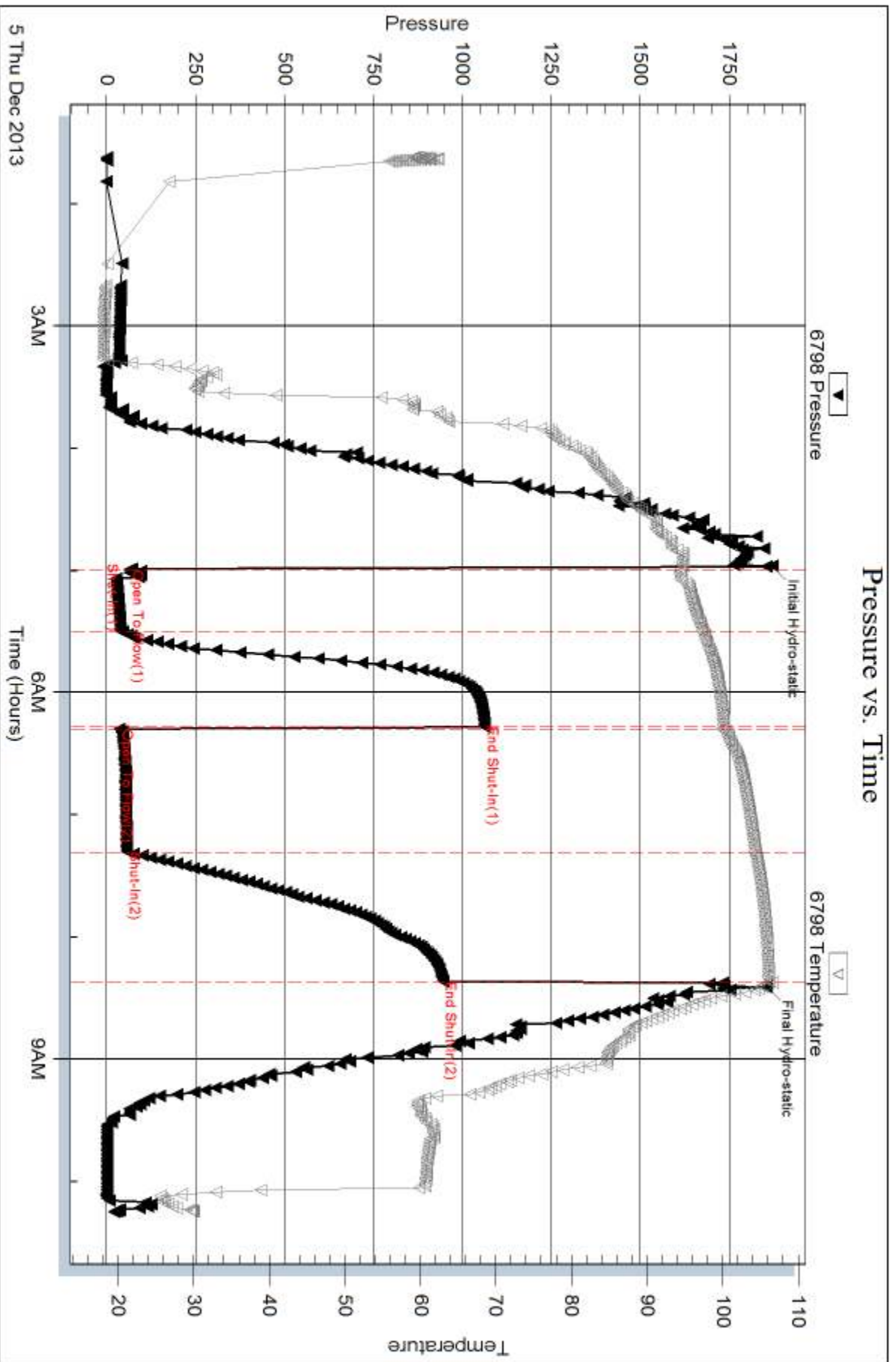
Recovery Information

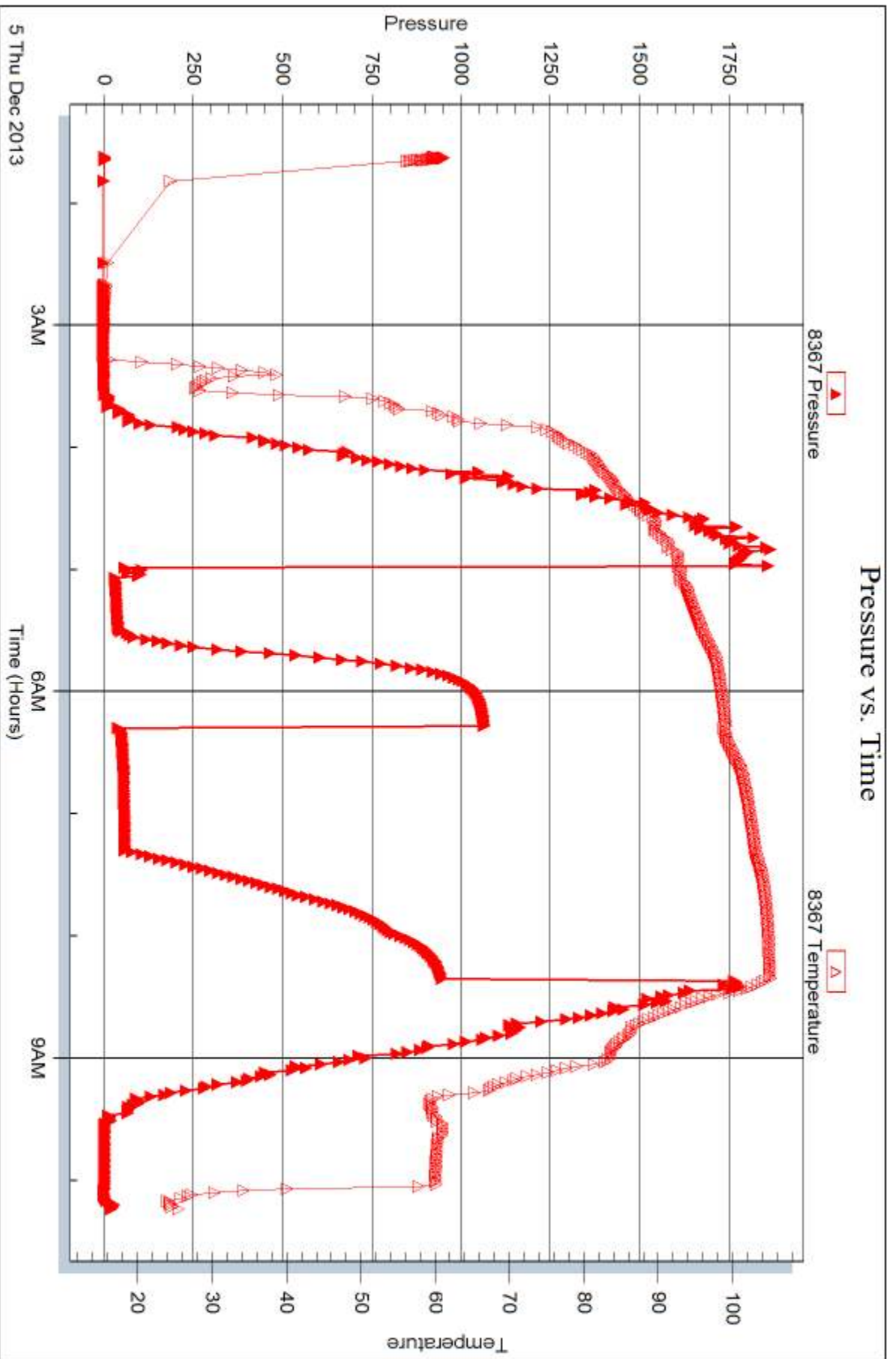
Recovery Table

Length ft	Description	Volume bbl
0.00	2839 GIP	0.000
122.00	SGCM 4%G 96%M	0.646

Total Length: 122.00 ft Total Volume: 0.646 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Gra Ex, LLC**

PO Box 32
Kingman, KS 67068

ATTN: Jeff Burk

Michael #1

1-24s-14w Stafford,KS

Start Date: 2013.12.05 @ 19:17:12

End Date: 2013.12.06 @ 02:57:27

Job Ticket #: 51903 DST #: 2

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

Printed: 2013.12.11 @ 10:41:14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Gra Ex, LLC
 PO Box 32
 Kingman, KS 67068
 ATTN: Jeff Burk

1-24s-14w Stafford, KS
Michael #1
 Job Ticket: 51903 **DST#: 2**
 Test Start: 2013.12.05 @ 19:17:12

GENERAL INFORMATION:

Formation: **LKC "F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:36:42
 Time Test Ended: 02:57:27
 Interval: **3651.00 ft (KB) To 3673.00 ft (KB) (TVD)**
 Total Depth: 3673.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1935.00 ft (KB)
 1930.00 ft (CF)
 KB to GR/CF: 5.00 ft

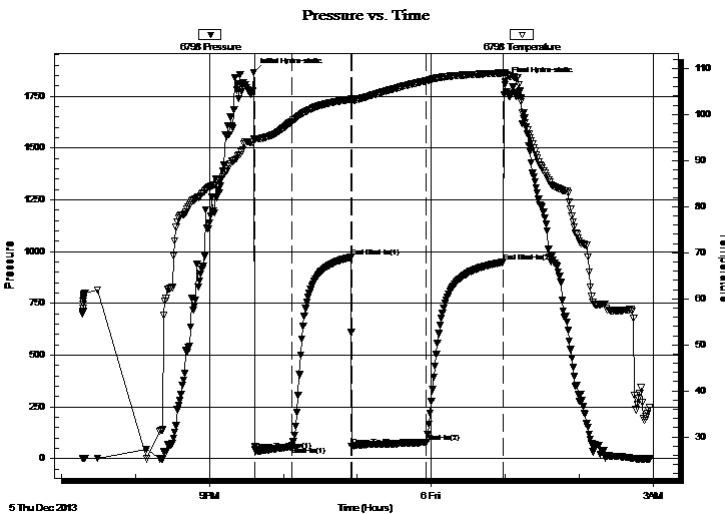
Serial #: 6798

Inside

Press@RunDepth: 80.18 psig @ 3652.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.05 End Date: 2013.12.06 Last Calib.: 2013.12.06
 Start Time: 19:17:13 End Time: 02:57:27 Time On Btm: 2013.12.05 @ 21:35:57
 Time Off Btm: 2013.12.06 @ 00:59:42

TEST COMMENT: IF: Fair Blow , Built to 11 inches
 IS: No Blow Back
 FF: Fair Blow , BOB in 14 minutes
 FS: Weak Surface Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1865.68	94.79	Initial Hydro-static
1	43.53	94.50	Open To Flow (1)
31	59.07	98.49	Shut-In(1)
79	972.52	103.30	End Shut-In(1)
80	60.24	103.04	Open To Flow (2)
140	80.18	107.32	Shut-In(2)
203	949.32	109.02	End Shut-In(2)
204	1821.81	109.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	310 GIP	0.00
58.00	MCW 14%M 86%W	0.29
58.00	SOCM 2%O 98%M	0.29

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51903 **DST#: 2**
Test Start: 2013.12.05 @ 19:17:12

Tool Information

Drill Pipe:	Length: 3527.00 ft	Diameter: 3.80 inches	Volume: 49.47 bbl	Tool Weight: 2100.00 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: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 50.05 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3651.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3630.00	
Hydraulic tool	5.00			3635.00	
Jars	5.00			3640.00	
Safety Joint	2.00			3642.00	
Packer	5.00			3647.00	26.00 Bottom Of Top Packer
Packer	4.00			3651.00	
Stubb	1.00			3652.00	
Recorder	0.00	6798	Inside	3652.00	
Recorder	0.00	8367	Outside	3652.00	
Perforations	18.00			3670.00	
Bullnose	3.00			3673.00	22.00 Bottom Packers & Anchor

Total Tool Length: 48.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51903 **DST#: 2**
Test Start: 2013.12.05 @ 19:17:12

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:	74000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.16 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

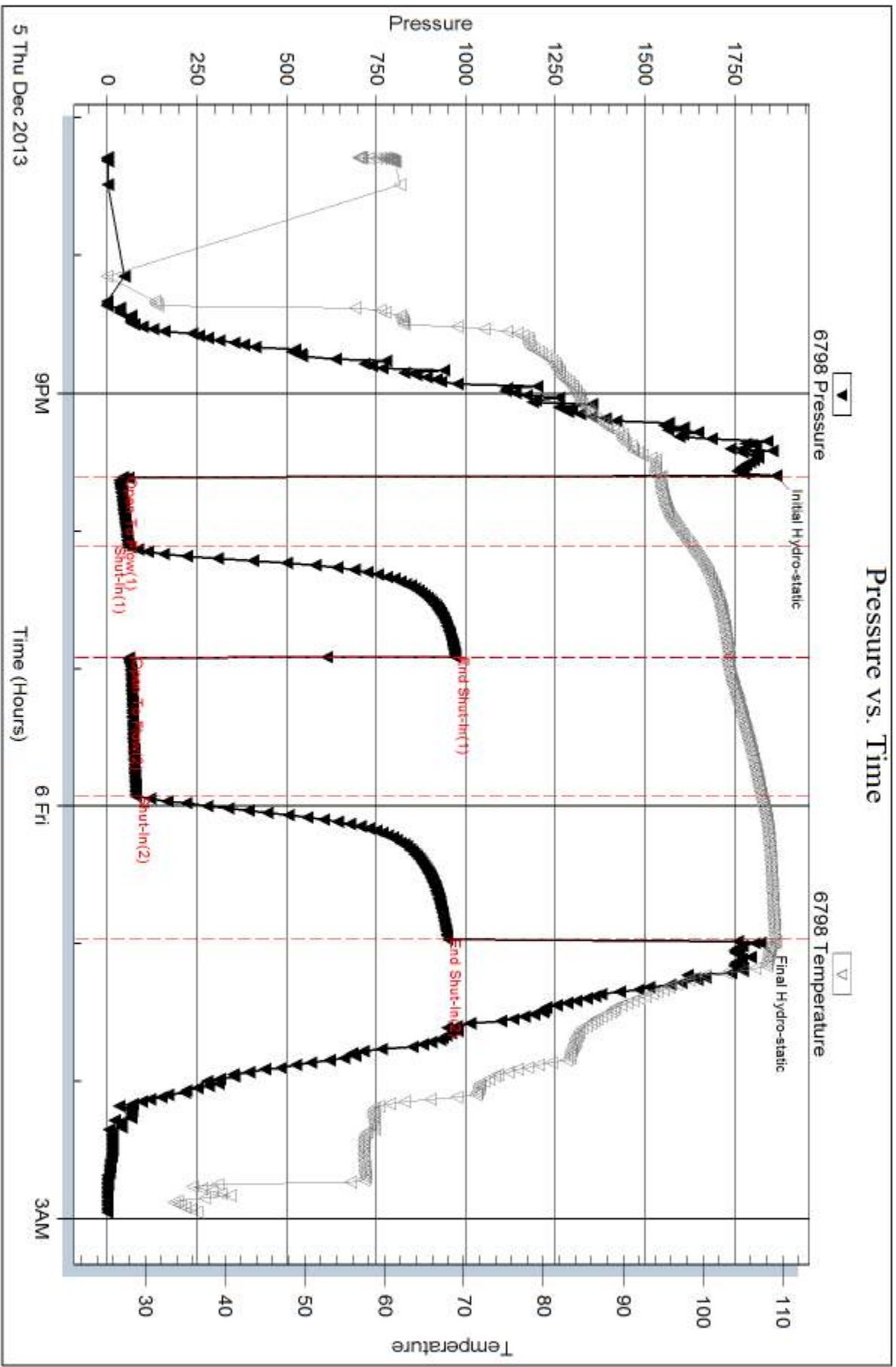
Length ft	Description	Volume bbl
0.00	310 GIP	0.000
58.00	MCW 14%M 86%W	0.285
58.00	SOCM 2%O 98%M	0.285

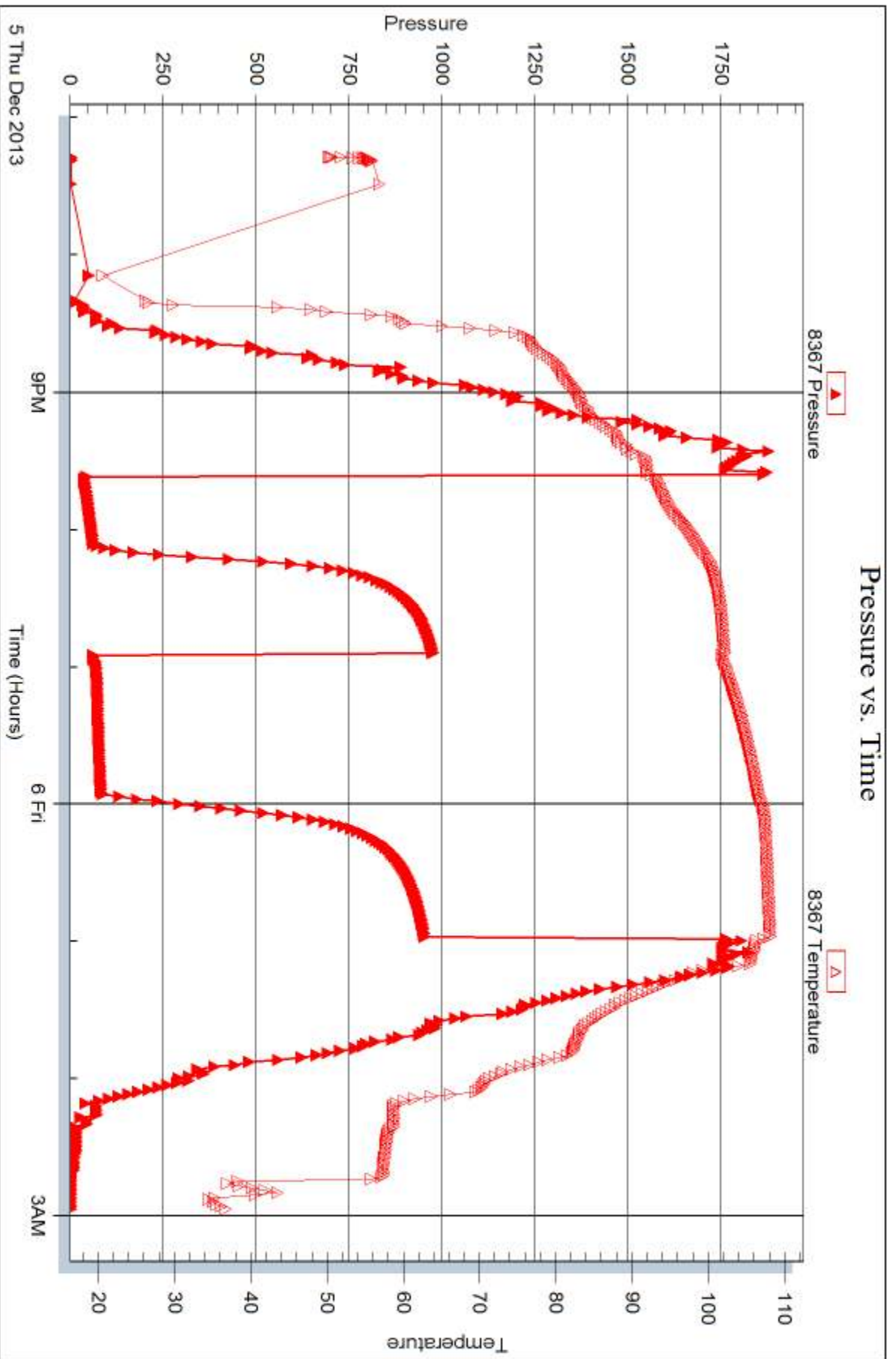
Total Length: 116.00 ft Total Volume: 0.570 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW Was .23 @ 32 degrees







DRILL STEM TEST REPORT

Prepared For: **Gra Ex, LLC**

PO Box 32
Kingman, KS 67068

ATTN: Jeff Burk

Michael #1

1-24s-14w Stafford,KS

Start Date: 2013.12.06 @ 13:58:33

End Date: 2013.12.06 @ 21:04:03

Job Ticket #: 51904 DST #: 3

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

Printed: 2013.12.11 @ 10:40:40



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS

Michael #1

Job Ticket: 51904

DST#: 3

Test Start: 2013.12.06 @ 13:58:33

GENERAL INFORMATION:

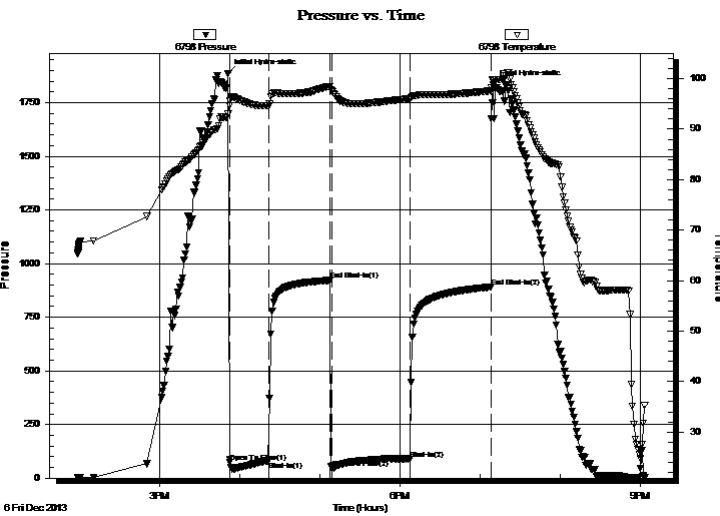
Formation: **LKC "H"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 15:52:33
 Tester: Leal Cason
 Time Test Ended: 21:04:03
 Unit No: 74
 Interval: **3712.00 ft (KB) To 3728.00 ft (KB) (TVD)**
 Reference Elevations: 1935.00 ft (KB)
 Total Depth: 3728.00 ft (KB) (TVD)
 1930.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

Serial #: 6798

Inside

Press@RunDepth: 88.04 psig @ 3713.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.06 End Date: 2013.12.06 Last Calib.: 2013.12.06
 Start Time: 13:58:34 End Time: 21:04:03 Time On Btm: 2013.12.06 @ 15:51:18
 Time Off Btm: 2013.12.06 @ 19:10:03

TEST COMMENT: IF: Strong Blow , BOB in 20 seconds, GTS in 14 minutes, Gauged Gas
 FS1: 1/4 inch Blow Back
 FF: Strong Blow , BOB & GTS Immediate, Gauged Gas
 FS1: 1 inch Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1886.38	93.05	Initial Hydro-static
2	73.78	95.58	Open To Flow (1)
31	80.54	94.62	Shut-In(1)
76	921.92	98.49	End Shut-In(1)
78	45.34	97.52	Open To Flow (2)
136	88.04	96.00	Shut-In(2)
197	890.44	97.61	End Shut-In(2)
199	1833.59	99.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3585 GIP	0.00
122.00	SGOCM 2%G 2%O 96%M	0.65

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	37.00	81.54
Last Gas Rate	0.25	44.00	92.65
Max. Gas Rate	0.25	46.00	95.82



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51904 **DST#: 3**
Test Start: 2013.12.06 @ 13:58:33

Tool Information

Drill Pipe:	Length: 3590.00 ft	Diameter: 3.80 inches	Volume: 50.36 bbl	Tool Weight: 2100.00 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: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 50.94 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3712.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	16.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3691.00	
Hydraulic tool	5.00			3696.00	
Jars	5.00			3701.00	
Safety Joint	2.00			3703.00	
Packer	5.00			3708.00	26.00 Bottom Of Top Packer
Packer	4.00			3712.00	
Stubb	1.00			3713.00	
Recorder	0.00	6798	Inside	3713.00	
Recorder	0.00	8367	Outside	3713.00	
Perforations	12.00			3725.00	
Bullnose	3.00			3728.00	16.00 Bottom Packers & Anchor

Total Tool Length: 42.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51904 **DST#: 3**
Test Start: 2013.12.06 @ 13:58:33

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 10000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3585 GIP	0.000
122.00	SGOCM 2%G 2%O 96%M	0.646

Total Length: 122.00 ft Total Volume: 0.646 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Gra Ex, LLC

1-24s-14w Stafford,KS

PO Box 32
Kingman, KS 67068

Michael #1

Job Ticket: 51904

DST#: 3

ATTN: Jeff Burk

Test Start: 2013.12.06 @ 13:58:33

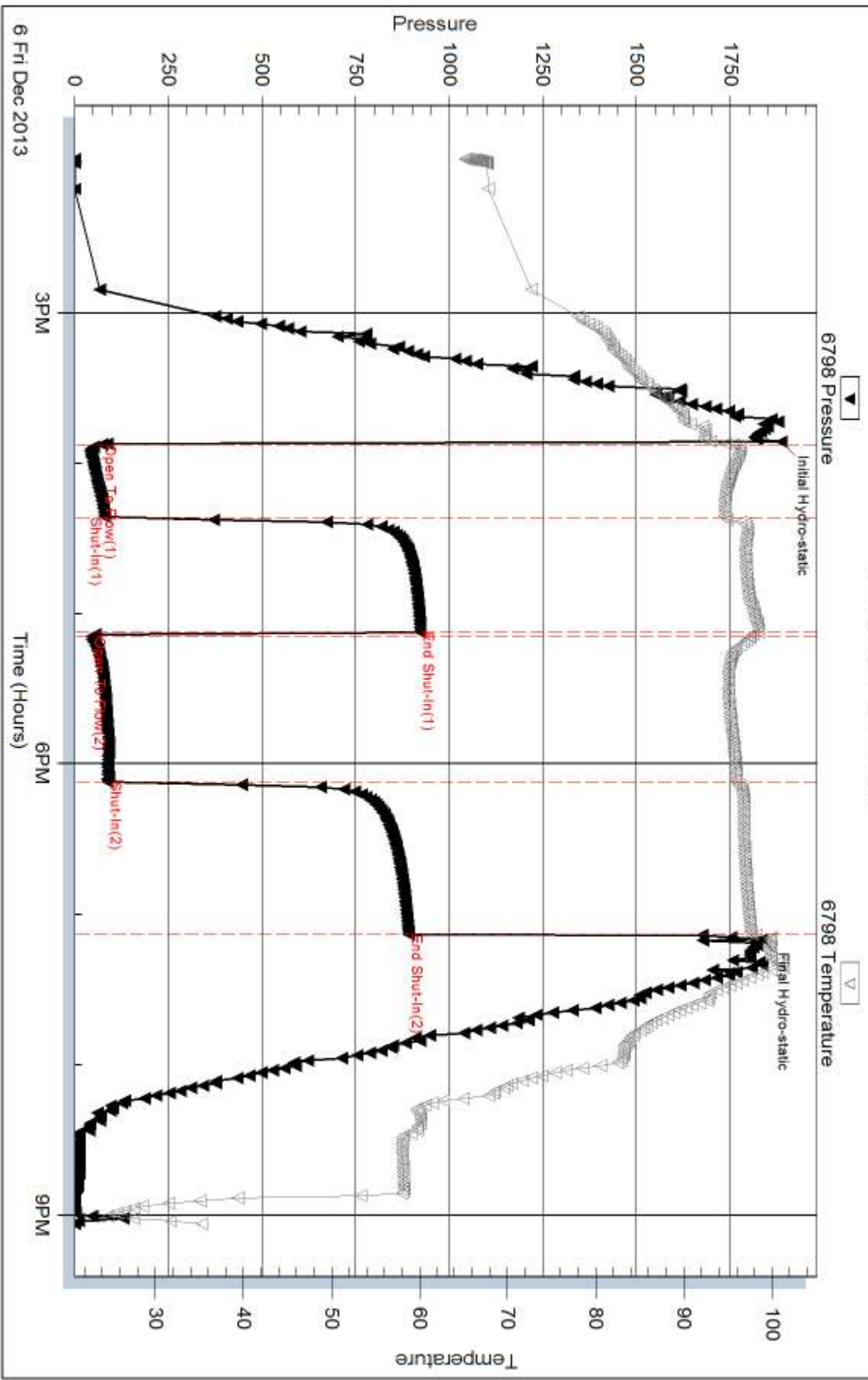
Gas Rates Information

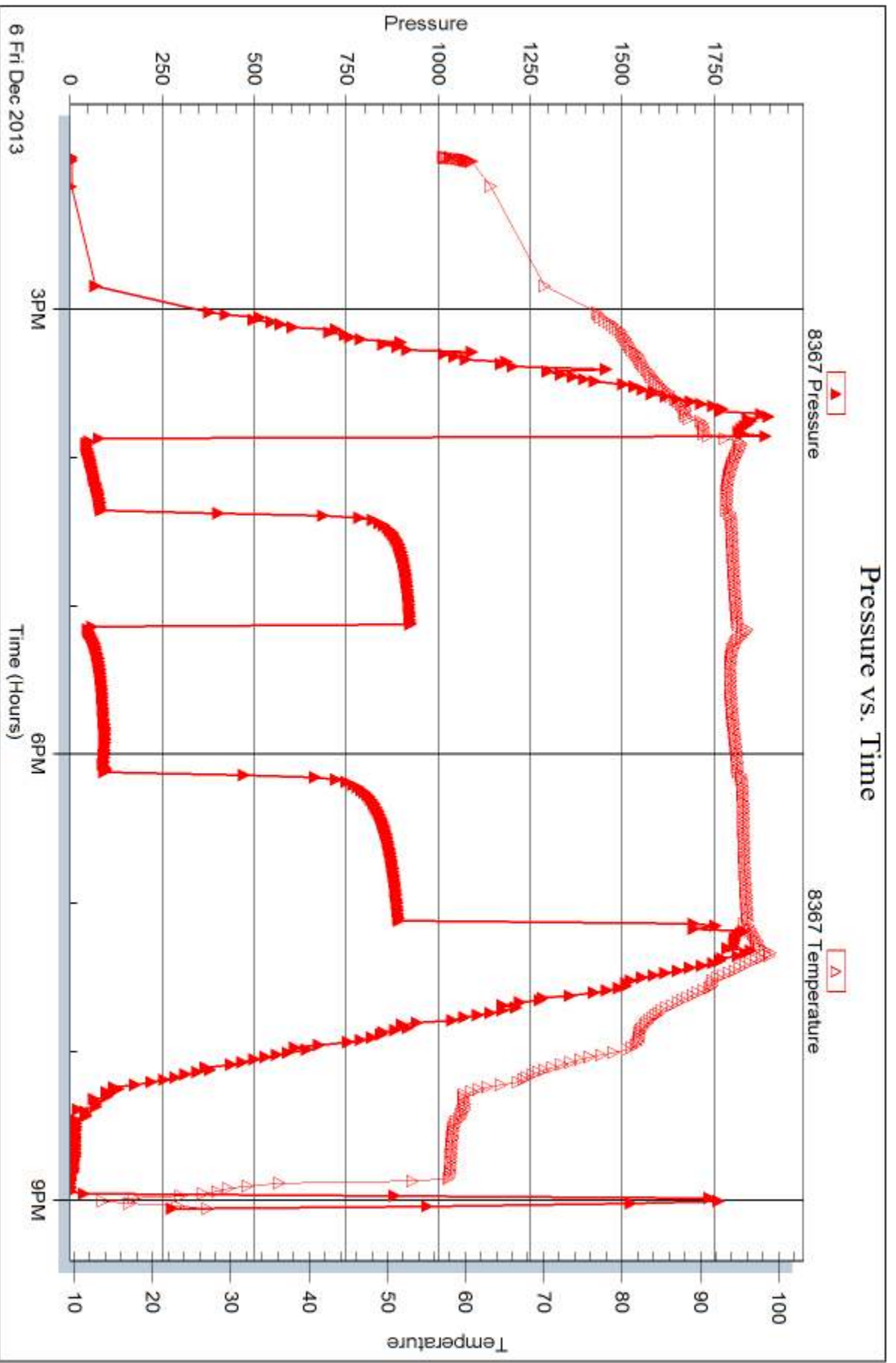
Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	20	0.25	37.00	81.54
1	30	0.25	46.00	95.82
2	10	0.25	29.00	68.85
2	20	0.25	38.00	83.13
2	30	0.25	42.00	89.47
2	40	0.25	44.00	92.65
2	50	0.25	44.00	92.65
2	60	0.25	44.00	92.65

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Gra Ex, LLC**

PO Box 32
Kingman, KS 67068

ATTN: Jeff Burk

Michael #1

1-24s-14w Stafford,KS

Start Date: 2013.12.07 @ 07:42:59

End Date: 2013.12.07 @ 14:24:29

Job Ticket #: 51905 DST #: 4

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

Printed: 2013.12.11 @ 10:38:40

Gra Ex, LLC
1-24s-14w Stafford,KS
Michael #1
DST # 4
LKC "I, & J"
2013.12.07



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Gra Ex, LLC
 PO Box 32
 Kingman, KS 67068
 ATTN: Jeff Burk

1-24s-14w Stafford, KS

Michael #1

Job Ticket: 51905 **DST#: 4**

Test Start: 2013.12.07 @ 07:42:59

GENERAL INFORMATION:

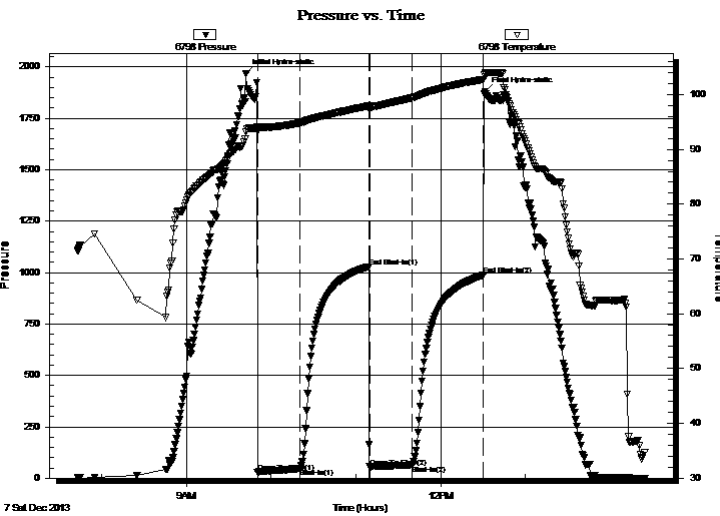
Formation: **LKC "I, & J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:50:14
 Time Test Ended: 14:24:29
 Interval: **3737.00 ft (KB) To 3775.00 ft (KB) (TVD)**
 Total Depth: 3775.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1935.00 ft (KB)
 1930.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6798

Inside

Press@RunDepth: 63.74 psig @ 3738.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.07 End Date: 2013.12.07 Last Calib.: 2013.12.07
 Start Time: 07:43:00 End Time: 14:24:29 Time On Btm: 2013.12.07 @ 09:42:14
 Time Off Btm: 2013.12.07 @ 12:31:14

TEST COMMENT: IF: Weak Blow , Built to 1 inch
 IS: No Blow Back
 FF: Weak Blow , Built to 1/2 inch
 FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1969.21	93.27	Initial Hydro-static
8	29.16	93.22	Open To Flow (1)
39	48.21	94.85	Shut-In(1)
87	1028.94	97.96	End Shut-In(1)
88	55.12	97.70	Open To Flow (2)
118	63.74	99.43	Shut-In(2)
168	988.58	102.78	End Shut-In(2)
169	1880.69	103.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	SGCM 2%G 98%M	0.32

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51905 **DST#: 4**
Test Start: 2013.12.07 @ 07:42:59

Tool Information

Drill Pipe:	Length: 3622.00 ft	Diameter: 3.80 inches	Volume: 50.81 bbl	Tool Weight: 2100.00 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: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 51.39 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3737.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3716.00	
Hydraulic tool	5.00			3721.00	
Jars	5.00			3726.00	
Safety Joint	2.00			3728.00	
Packer	5.00			3733.00	26.00 Bottom Of Top Packer
Packer	4.00			3737.00	
Stubb	1.00			3738.00	
Recorder	0.00	6798	Inside	3738.00	
Recorder	0.00	8367	Outside	3738.00	
Perforations	34.00			3772.00	
Bullnose	3.00			3775.00	38.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51905 **DST#: 4**
Test Start: 2013.12.07 @ 07:42:59

Mud and Cushion Information

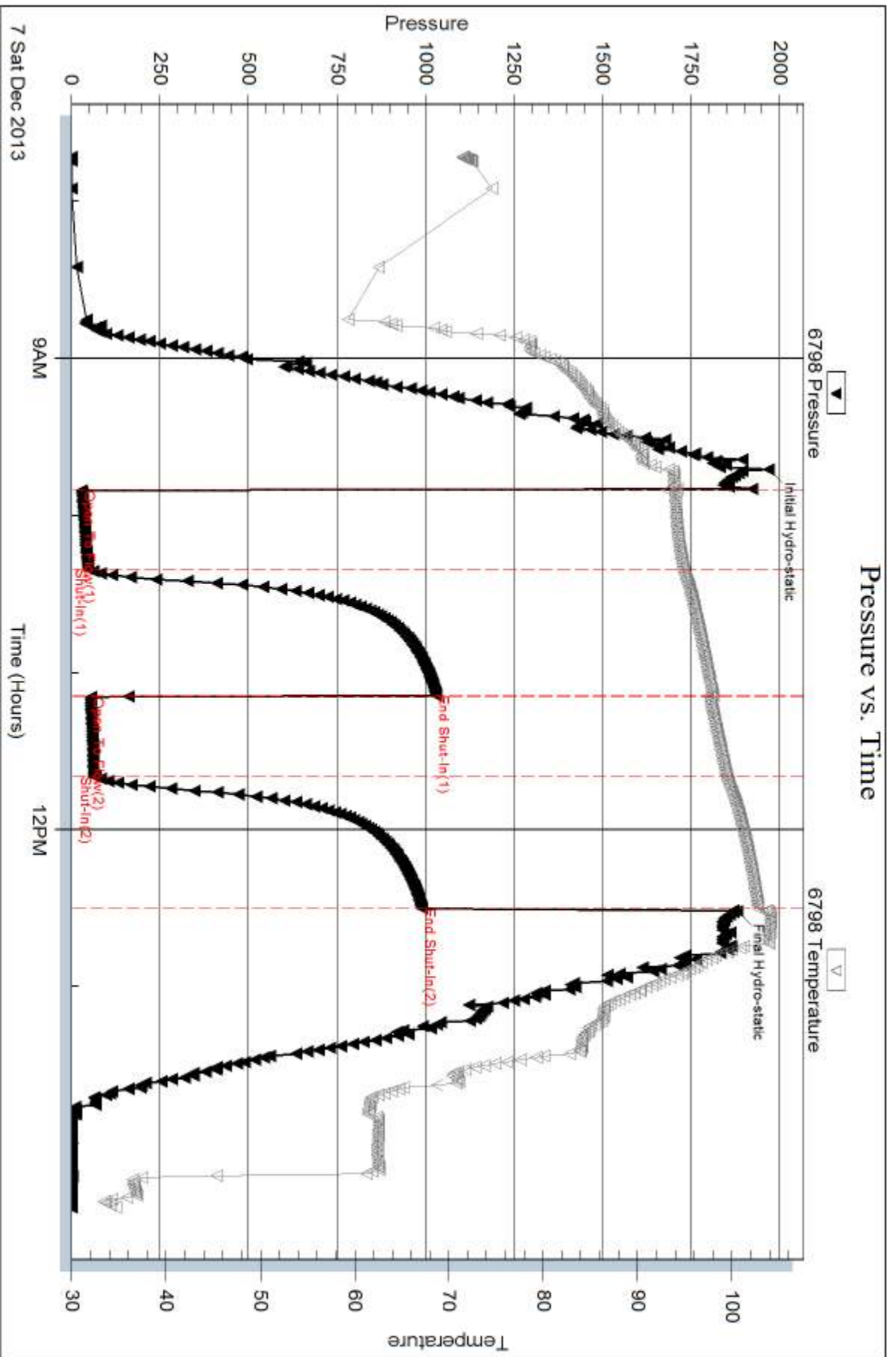
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 10000.00 ppm			
Filter Cake: 0.02 inches			

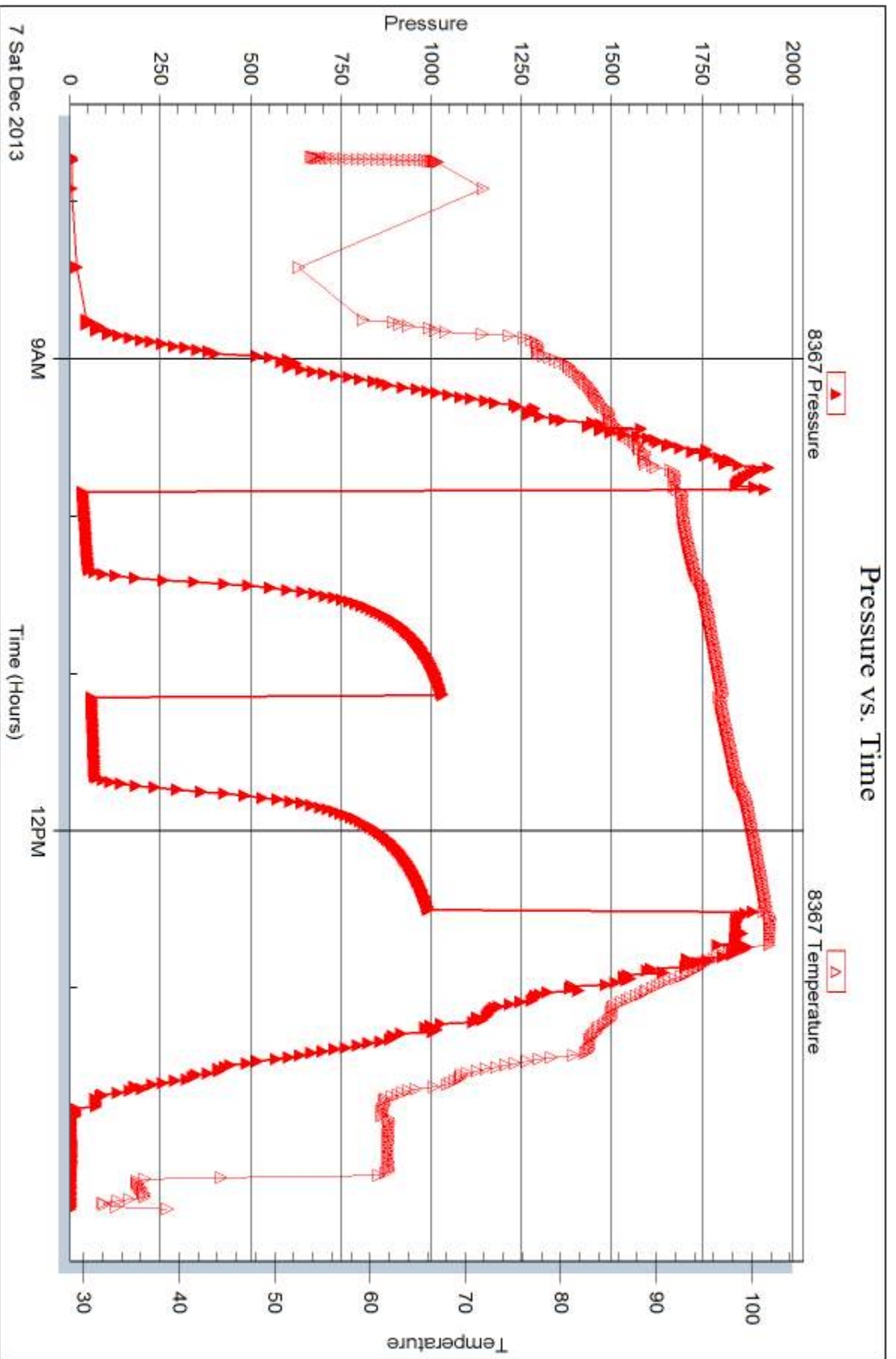
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	SGCM 2%G 98%M	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Gra Ex, LLC**

PO Box 32
Kingman, KS 67068

ATTN: Jeff Burk

Michael #1

1-24s-14w Stafford,KS

Start Date: 2013.12.08 @ 02:03:25

End Date: 2013.12.08 @ 09:13:32

Job Ticket #: 51906 DST #: 5

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

Printed: 2013.12.11 @ 10:37:44



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Gra Ex, LLC
 PO Box 32
 Kingman, KS 67068
 ATTN: Jeff Burk

1-24s-14w Stafford, KS

Michael #1

Job Ticket: 51906

DST#: 5

Test Start: 2013.12.08 @ 02:03:25

GENERAL INFORMATION:

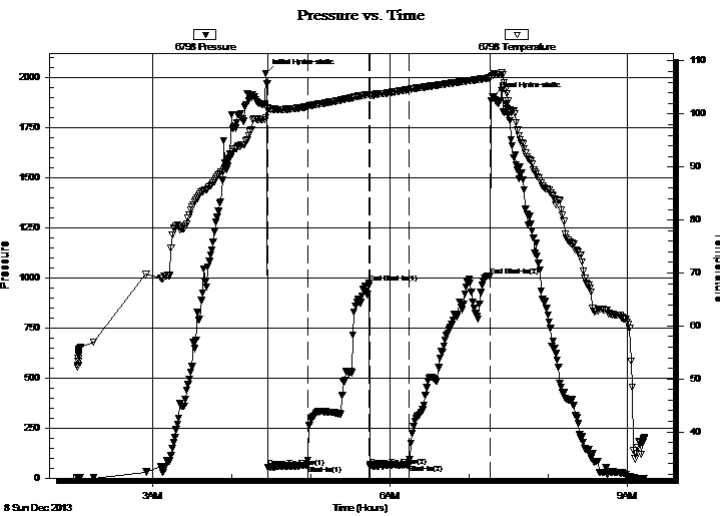
Formation: **LKC "K & L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:27:55
 Time Test Ended: 09:13:32
 Interval: **3782.00 ft (KB) To 3840.00 ft (KB) (TVD)**
 Total Depth: 3840.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 1935.00 ft (KB)
 1930.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6798

Inside

Press@RunDepth: 69.30 psig @ 3783.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.08 End Date: 2013.12.08 Last Calib.: 2013.12.08
 Start Time: 02:03:26 End Time: 09:13:32 Time On Btm: 2013.12.08 @ 04:26:10
 Time Off Btm: 2013.12.08 @ 07:18:10

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds, GTS in 27 minutes
 IS: Blow Back Built to BOB in 6 minutes
 FF: Strong Blow , BOB & GTS Immediate, Caught Sample, TSTM
 FS: Would Not Bleed Off



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2021.54	99.34	Initial Hydro-static
2	53.22	100.93	Open To Flow (1)
32	63.66	101.40	Shut-In(1)
79	973.66	103.71	End Shut-In(1)
80	59.97	103.46	Open To Flow (2)
109	69.30	104.60	Shut-In(2)
171	1009.55	106.82	End Shut-In(2)
172	1903.07	107.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3636 GIP	0.00
134.00	SGCM 4%G 96%M	0.81

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51906 **DST#: 5**
Test Start: 2013.12.08 @ 02:03:25

Tool Information

Drill Pipe:	Length: 3653.00 ft	Diameter: 3.80 inches	Volume: 51.24 bbl	Tool Weight: 2100.00 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: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 51.82 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3782.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3761.00	
Hydraulic tool	5.00			3766.00	
Jars	5.00			3771.00	
Safety Joint	2.00			3773.00	
Packer	5.00			3778.00	26.00 Bottom Of Top Packer
Packer	4.00			3782.00	
Stubb	1.00			3783.00	
Recorder	0.00	6798	Inside	3783.00	
Recorder	0.00	8367	Outside	3783.00	
Perforations	5.00			3788.00	
Change Over Sub	1.00			3789.00	
Drill Pipe	32.00			3821.00	
Change Over Sub	1.00			3822.00	
Perforations	15.00			3837.00	
Bullnose	3.00			3840.00	58.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51906 **DST#: 5**
Test Start: 2013.12.08 @ 02:03:25

Mud and Cushion Information

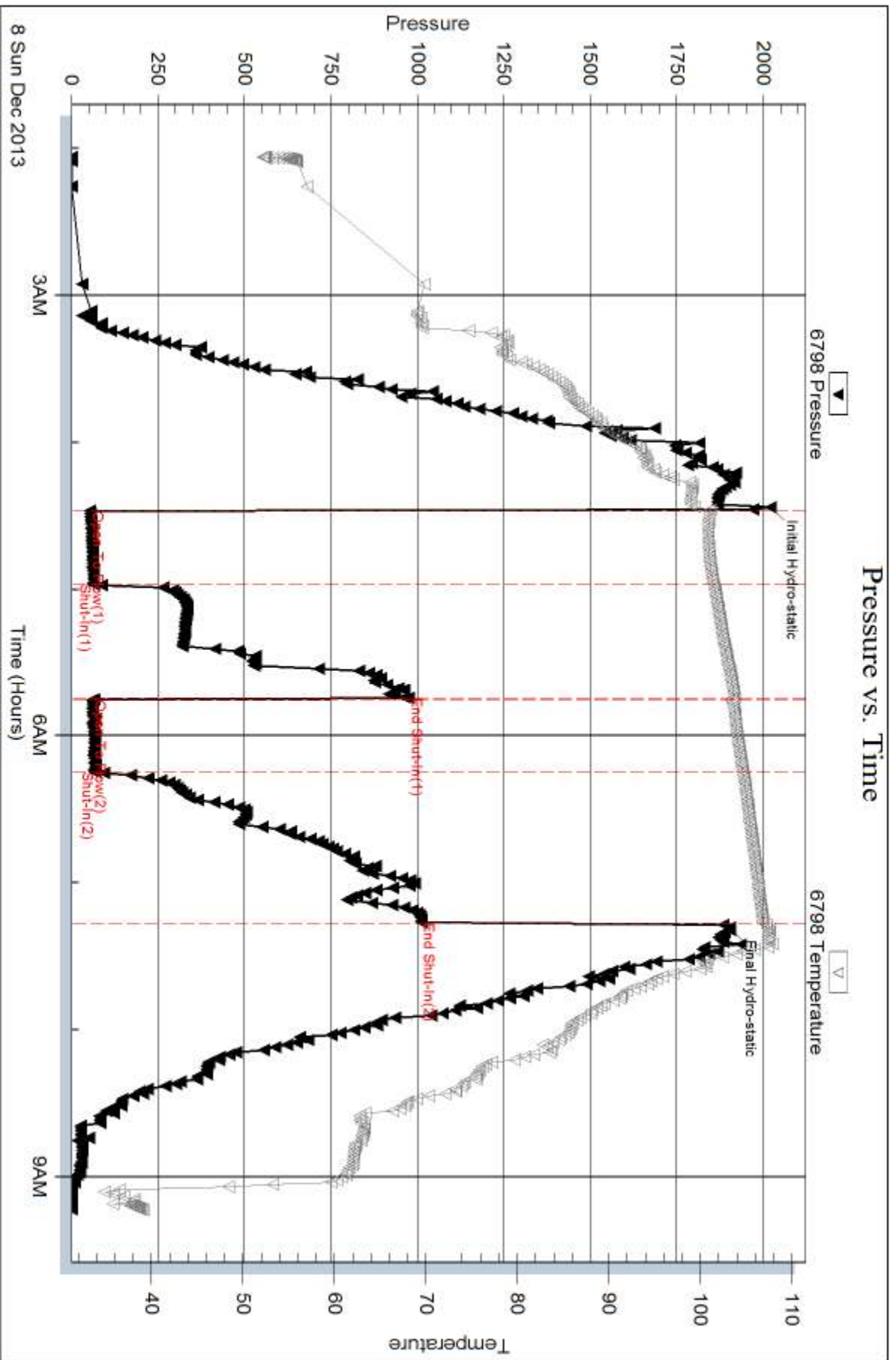
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 0.02 inches			

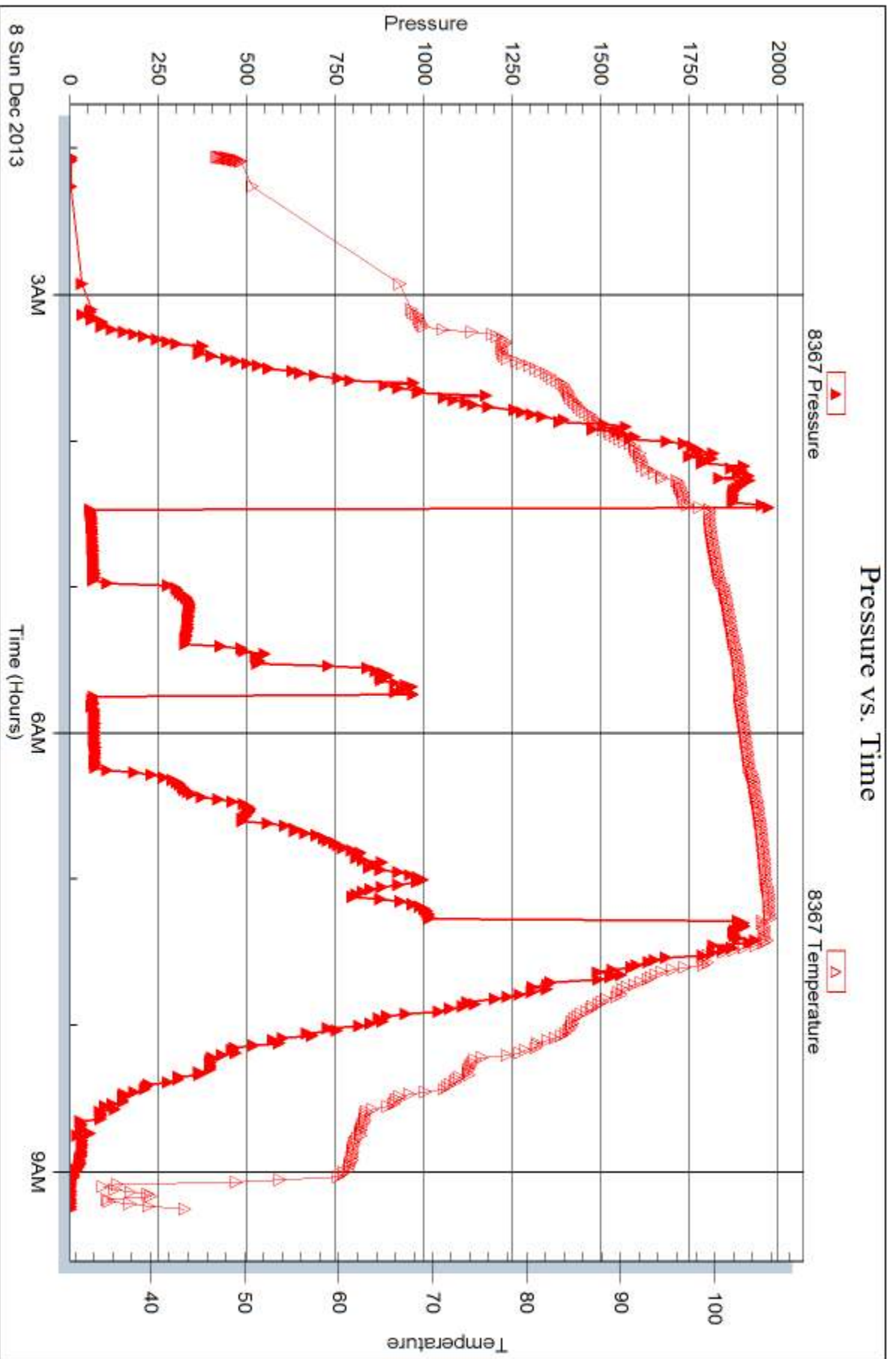
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3636 GIP	0.000
134.00	SGCM 4%G 96%M	0.814

Total Length: 134.00 ft Total Volume: 0.814 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Gra Ex, LLC**

PO Box 32
Kingman, KS 67068

ATTN: Jeff Burk

Michael #1

1-24s-14w Stafford,KS

Start Date: 2013.12.08 @ 23:50:35

End Date: 2013.12.09 @ 08:31:05

Job Ticket #: 51907 DST #: 6

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

Printed: 2013.12.11 @ 10:37:04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Gra Ex, LLC
 PO Box 32
 Kingman, KS 67068
 ATTN: Jeff Burk

1-24s-14w Stafford, KS

Michael #1

Job Ticket: 51907

DST#: 6

Test Start: 2013.12.08 @ 23:50:35

GENERAL INFORMATION:

Formation: **Mississippi Conglome**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:10:35

Time Test Ended: 08:31:05

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

Interval: 3940.00 ft (KB) To 3970.00 ft (KB) (TVD)

Reference Elevations: 1935.00 ft (KB)

Total Depth: 3970.00 ft (KB) (TVD)

1930.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6798

Inside

Press@RunDepth: 1247.02 psig @ 3941.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.08

End Date:

2013.12.09

Last Calib.:

2013.12.09

Start Time: 23:50:36

End Time:

08:31:05

Time On Btm:

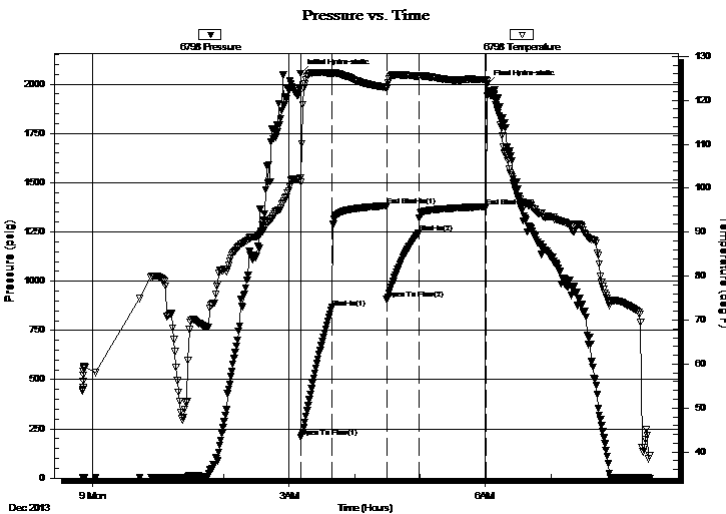
2013.12.09 @ 03:10:20

Time Off Btm:

2013.12.09 @ 06:01:35

TEST COMMENT: IF: Strong Blow , BOB in 1 minute
 IS: Blow Back Built to 3 inches
 FF: Strong Blow , BOB in 1 minute
 FS: Blow Back Built to 3 inches

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2055.61	102.41	Initial Hydro-static
1	206.44	101.37	Open To Flow (1)
29	865.98	126.13	Shut-In(1)
79	1384.19	122.87	End Shut-In(1)
79	907.90	122.79	Open To Flow (2)
109	1247.02	125.55	Shut-In(2)
171	1378.91	124.66	End Shut-In(2)
172	1998.80	123.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2294.00	Water	31.11
310.00	GMCW 6%G 14%M 80%W	4.35
186.00	GCM 5%G 95%M	2.61

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51907 **DST#: 6**
Test Start: 2013.12.08 @ 23:50:35

Tool Information

Drill Pipe:	Length: 3810.00 ft	Diameter: 3.80 inches	Volume: 53.44 bbl	Tool Weight: 2100.00 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: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 54.02 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3940.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3919.00	
Hydraulic tool	5.00			3924.00	
Jars	5.00			3929.00	
Safety Joint	2.00			3931.00	
Packer	5.00			3936.00	26.00 Bottom Of Top Packer
Packer	4.00			3940.00	
Stubb	1.00			3941.00	
Recorder	0.00	6798	Inside	3941.00	
Recorder	0.00	8367	Outside	3941.00	
Perforations	26.00			3967.00	
Bullnose	3.00			3970.00	30.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Gra Ex, LLC
PO Box 32
Kingman, KS 67068
ATTN: Jeff Burk

1-24s-14w Stafford,KS
Michael #1
Job Ticket: 51907 **DST#: 6**
Test Start: 2013.12.08 @ 23:50:35

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:	72000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 0.02 inches			

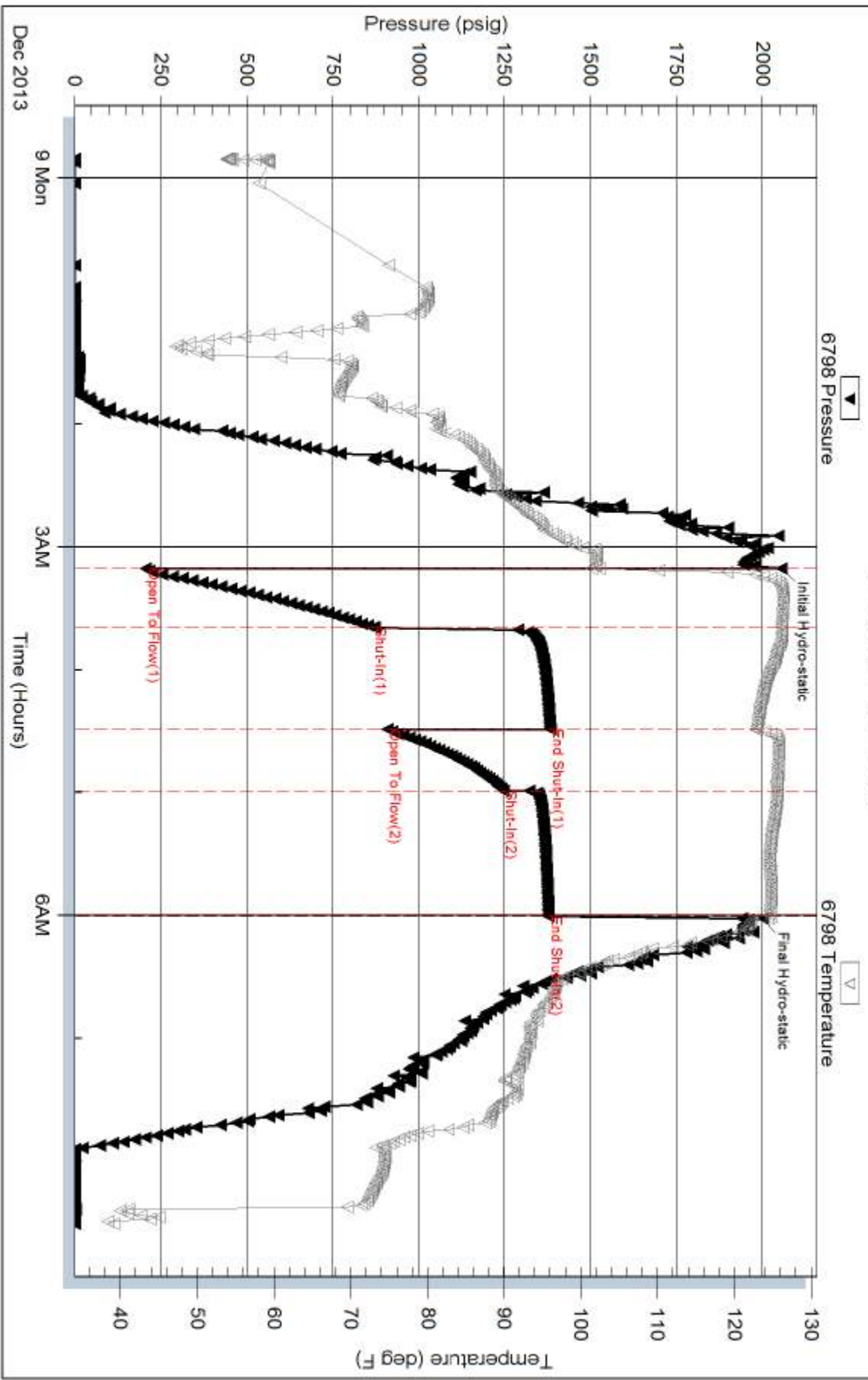
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2294.00	Water	31.113
310.00	GMCW 6%G 14%M 80%W	4.348
186.00	GCM 5%G 95%M	2.609

Total Length: 2790.00 ft Total Volume: 38.070 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW w as .18 @ 42 degrees

Pressure vs. Time

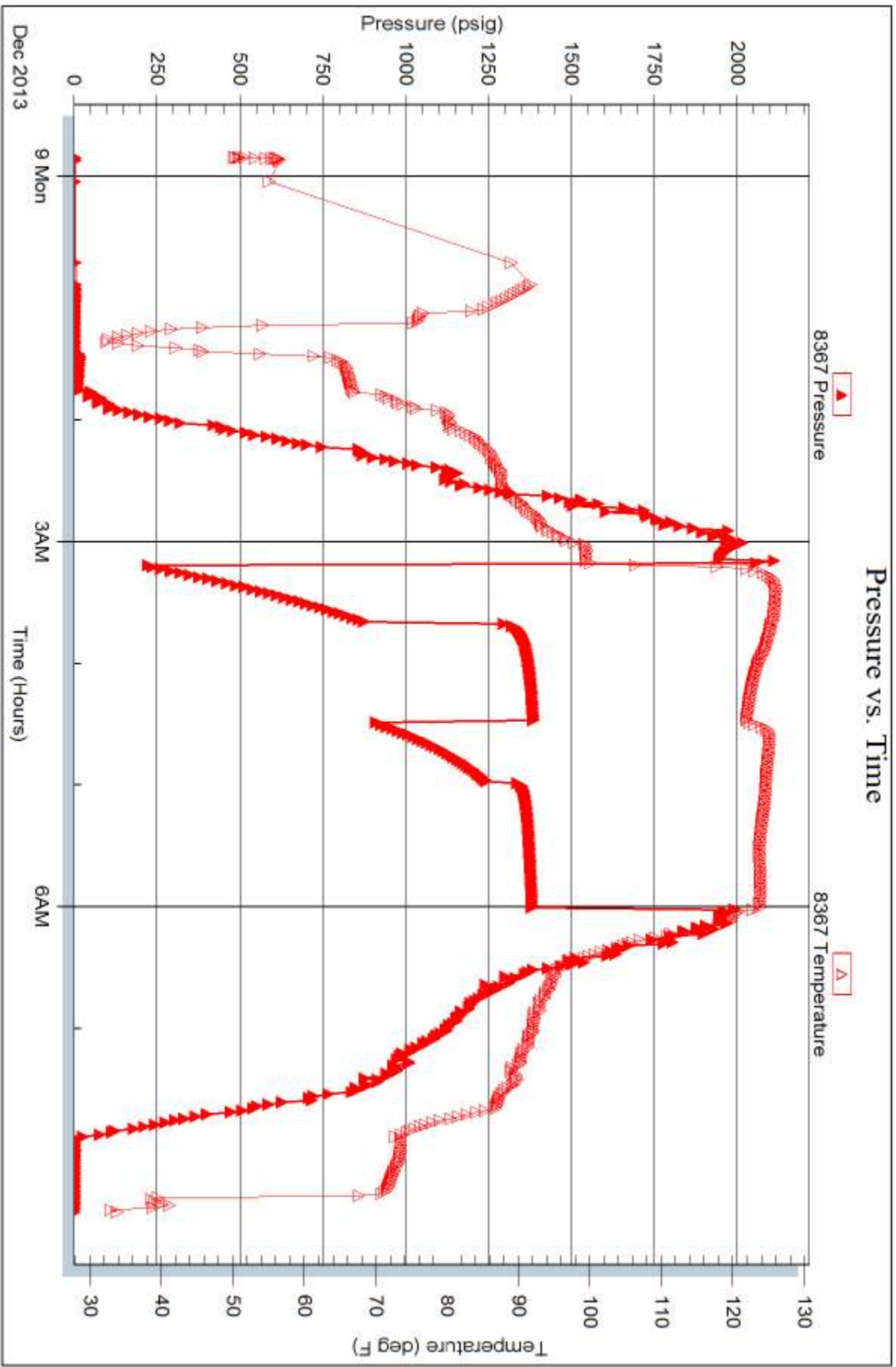


Serial #: 8367

Outside Gra Ex, LLC

Michael #1

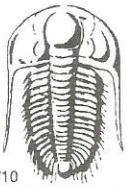
DST Test Number: 6



Tribble Testing, Inc

Ref. No: 51907

Printed: 2013.12.11 @ 10:37:07



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51902

Well Name & No. Michael 1 Test No. 1 Date 12/04/13
 Company Gra Ex, LLC Elevation 1935 KB 1930 GL
 Address PO Box 32 Kingman, KS 67608
 Co. Rep / Geo. Jeff Burk Rig Petromark 2
 Location: Sec. 1 Twp. 24S Rge. 14W Co. Stafford State KS

Interval Tested 3604 - 3626 Zone Tested Lansing "B"
 Anchor Length 22 Drill Pipe Run 3465 Mud Wt. 9.4
 Top Packer Depth 3599 Drill Collars Run 117 Vis 54
 Bottom Packer Depth 3604 Wt. Pipe Run 0 WL 8-8
 Total Depth 3624 Chlorides 4800 ppm System LCM

Blow Description IF: Fair Blow, BOB in 9 minutes
ISI: 1/2 inch Blow Back
FF: Strong Blow, BOB in 15 seconds
FSL: Blow Back Built to 3 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>2839</u>	<u>Feet of GIP</u>				
<u>122</u>	<u>Feet of SGCM</u>	<u>4</u>			<u>96</u>

Rec Total 122 BHT 106 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic 1870 Test 1150 T-On Location 20:30
 (B) First Initial Flow 65 Jars 250 T-Started 01:37
 (C) First Final Flow 40 Safety Joint 75 T-Open 04:59
 (D) Initial Shut-In 1063 Circ Sub _____ T-Pulled 8:21
 (E) Second Initial Flow 36 Hourly Standby 5 4.75h 475 T-Out 10:41
 (F) Second Final Flow 57 Mileage (50) 77.50 Comments _____
 (G) Final Shut-In 946 Sampler _____
 (H) Final Hydrostatic 1954 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 2027.50

Initial Open 30
 Initial Shut-In 45
 Final Flow 60
 Final Shut-In 60

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 2027.50
 MP/DST Disc't

Approved By [Signature] Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged or 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. 51903

Well Name & No. Michael 1 Test No. 2 Date 12/09/13
 Company Gra Ex, LLC Elevation 1935 KB 1930 GL
 Address PO Box 32 Kingman, KS 67608
 Co. Rep / Geo. Jeff Burk Rig Petromark 2
 Location: Sec. 1 Twp. 24S Rge. 14W Co. Stafford State KS

Interval Tested 3651 - 3673 Zone Tested Lansing "F"
 Anchor Length 22 Drill Pipe Run 3527 Mud Wt. 9.4
 Top Packer Depth 3646 Drill Collars Run 117 Vis 51
 Bottom Packer Depth 3651 Wt. Pipe Run 0 WL 11.2
 Total Depth 3673 Chlorides 7000 ppm System LCM

Blow Description IF: Fair Blow, Built to 11 inches
ISF: NO Blow Back
FF: Fair Blow, BOB in 14 minutes
FSI: Weak surface Blow Back

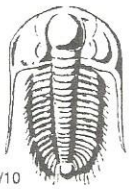
Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>GFP</u>				
<u>58</u>	<u>SOCM</u>	<u>2</u>			<u>98</u>
<u>58</u>	<u>MCW</u>		<u>86</u>		<u>14</u>

Rec Total 116 BHT 109 Gravity N/C API RW .23 @ 32 °F Chlorides 74000 ppm

(A) Initial Hydrostatic <u>1866</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>18:45</u>
(B) First Initial Flow <u>44</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>19:17</u>
(C) First Final Flow <u>59</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:36</u>
(D) Initial Shut-In <u>973</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>00:58</u>
(E) Second Initial Flow <u>60</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>02:57</u>
(F) Second Final Flow <u>80</u>	<input checked="" type="checkbox"/> Mileage <u>(50)</u> <u>77.50</u>	Comments
(G) Final Shut-In <u>949</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1822</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>45</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>60</u>	<input type="checkbox"/> Day Standby	Total <u>1552.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't <input checked="" type="checkbox"/>
	Sub Total <u>1552.50</u>	

Approved By [Signature] Our Representative [Signature]

TriLOBITE TESTING Inc. shall not be liable for damaged or 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. 51904

Well Name & No. Michael 1 Test No. 3 Date 12/06/13
 Company Gra EX, LLC Elevation 1935 KB 1930 GL
 Address PO Box 32 Kingman, KS 67608
 Co. Rep / Geo. Jeff Burk Rig Petromark 2
 Location: Sec. 1 Twp. 24S Rge. 14W Co. Stafford State KS

Interval Tested 3712 - 3728 Zone Tested Lansing "H"
 Anchor Length 16 Drill Pipe Run 3590 Mud Wt. 9.3
 Top Packer Depth 3707 Drill Collars Run 117 Vis 49
 Bottom Packer Depth 3712 Wt. Pipe Run 0 WL 12.0
 Total Depth 3728 Chlorides 10,000 ppm System LCM

Blow Description IF: strong Blow, BOB in 20 seconds, GTS in 14 minutes, Gauged Gas
ISI: 1/4 inch Blow Back

FF: strong Blow, BOB + GTS immediate, Gauged Gas
FSI: 1 inch Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>3585</u>	<u>GLP</u>				
<u>122</u>	<u>SGOCM</u>	<u>2</u>	<u>2</u>	<u>96</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

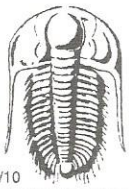
Rec Total 122 BHT 100 Gravity NIC API RW NIC @ NIC° F Chlorides NIC ppm

(A) Initial Hydrostatic 1886 Test 1150 T-On Location 13:00
 (B) First Initial Flow 74 Jars 250 T-Started 13:58
 (C) First Final Flow 81 Safety Joint 75 T-Open 15:52
 (D) Initial Shut-In 922 Circ Sub _____ T-Pulled 19:08
 (E) Second Initial Flow 45 Hourly Standby _____ T-Out 21:04
 (F) Second Final Flow 88 Mileage (50) 77.50 Comments _____
 (G) Final Shut-In 890 Sampler _____
 (H) Final Hydrostatic 1834 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1552.50
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1552.50

Approved By [Signature] 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. 51905

4/10

Well Name & No. Michael 1 Test No. 4 Date 12/07/13
 Company Gra Ex, LLC Elevation 1935 KB 1930 GL
 Address PO Box 32 Kingman, KS 67608
 Co. Rep / Geo. Jeff Burk Rig Petromark 2
 Location: Sec. 1 Twp. 24S Rge. 14W Co. Stafford State KS

Interval Tested 3737 - 3775 Zone Tested Lansing "I+J"
 Anchor Length 38 Drill Pipe Run 3622 Mud Wt. 9.3
 Top Packer Depth 3732 Drill Collars Run 117 Vis 53
 Bottom Packer Depth 3737 Wt. Pipe Run 0 WL 12.0
 Total Depth 3775 Chlorides 10,000 ppm System LCM

Blow Description IF: Weak Blow, Built to 1 inch
ISI: No Blow Back
FF: Weak Blow, Built to 1/2 inch
FSI: No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>56CM</u>	<u>2</u>		<u>98</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

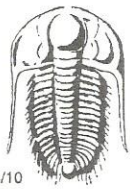
Rec Total 65 BHT 103 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic <u>1969</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>07:15</u>
(B) First Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>07:42</u>
(C) First Final Flow <u>48</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>09:50</u>
(D) Initial Shut-In <u>1029</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>12:30</u>
(E) Second Initial Flow <u>55</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>14:24</u>
(F) Second Final Flow <u>64</u>	<input checked="" type="checkbox"/> Mileage <u>(50)</u> <u>77.50</u>	Comments
(G) Final Shut-In <u>989</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1981</u>	<input type="checkbox"/> Straddle	

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby	Total <u>1552.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1552.50</u>	

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51906

Well Name & No. Michael 1 Test No. 5 Date 12/08/13
 Company Gra Ex, LLC Elevation 1935 KB 1930 GL
 Address PO Box 32 Kingman, KS 67608
 Co. Rep / Geo. Jeff Burk Rig Petromark 2
 Location: Sec. 1 Twp. 24S Rge. 14W Co. Stafford State KS

Interval Tested 3782 - 3840 Zone Tested Lansing "K+L"
 Anchor Length 58 Drill Pipe Run 3653 Mud Wt. 9.4
 Top Packer Depth 3777 Drill Collars Run 117 Vis 54
 Bottom Packer Depth 3782 Wt. Pipe Run 0 WL 10.8
 Total Depth 3840 Chlorides 7000 ppm System LCM

Blow Description IF: Strong Blow, BOB in 30 seconds, GTS in 27 minutes
ISI: Blow Back Built to BOB in 6 minutes
FF: Strong Blow, BOB + GTS immediate, ~~was~~ caught sample, TSTM
FST: Would NOT bleed off

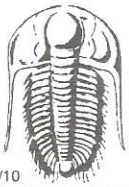
Rec	Feet of	%gas	%oil	%water	%mud
<u>3636</u>	<u>GI P</u>				
<u>134</u>	<u>SGCM</u>	<u>4</u>			<u>96</u>

Rec Total 134 BHT 107 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic <u>2022</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>01:00</u>
(B) First Initial Flow <u>53</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>02:03</u>
(C) First Final Flow <u>64</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>04:27</u>
(D) Initial Shut-In <u>974</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>07:16</u>
(E) Second Initial Flow <u>60</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>09:13</u>
(F) Second Final Flow <u>69</u>	<input checked="" type="checkbox"/> Mileage <u>(50)</u> <u>77.50</u>	Comments _____
(G) Final Shut-In <u>1009</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1903</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>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1552.50</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't <input checked="" type="checkbox"/>
	Sub Total <u>1552.50</u>	

Approved By [Signature] 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. 51907

4/10

Well Name & No. Michael 1 Test No. 6 Date 12/08/13
 Company Gra EX, LLC Elevation 1935 KB 1930 GL
 Address PO Box 32 Kingman, KS 67608
 Co. Rep / Geo. Jeff Burk Rig Petromark 2
 Location: Sec. 1 Twp. 24S Rge. 14W Co. Stafford State KS

Interval Tested 3940 - 3970 Zone Tested Mississippi conglomerate
 Anchor Length 30 Drill Pipe Run 3810 Mud Wt. 9.5
 Top Packer Depth 3935 Drill Collars Run 117 Vis 56
 Bottom Packer Depth 3940 Wt. Pipe Run 0 WL 10.8
 Total Depth 3970 Chlorides 10,000 ppm System LCM

Blow Description IF: Strong Blow, BOB in 1 minute
ISI: Blow Back Built to 3 inches
FF: Strong Blow, BOB in 1 minute
FST: Blow Back Built to 3 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>GCM</u>	<u>5</u>			<u>95</u>
<u>310</u>	<u>GMCW</u>	<u>6</u>		<u>80</u>	<u>14</u>
<u>2294</u>	<u>Water</u>				

Rec Total 2790 BHT 124 Gravity N/C API RW .18 @ 412 °F Chlorides 72,000 ppm

(A) Initial Hydrostatic <u>2056</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>22:30</u>
(B) First Initial Flow <u>206</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>23:50</u>
(C) First Final Flow <u>866</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>03:10</u>
(D) Initial Shut-In <u>1384</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>06:00</u>
(E) Second Initial Flow <u>908</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>08:31</u>
(F) Second Final Flow <u>1247</u>	<input checked="" type="checkbox"/> Mileage <u>50.9</u> <u>77.50</u>	Comments
(G) Final Shut-In <u>1379</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1999</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>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1552.50</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't <input checked="" type="checkbox"/>
	Sub Total <u>1552.50</u>	

Approved By [Signature]

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.