



DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Haase #1

34-14s-9w Ellsworth KS

Start Date: 2014.02.01 @ 14:36:00

End Date: 2014.02.01 @ 22:08:00

Job Ticket #: 56062 DST #: 1

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

Printed: 2014.02.05 @ 11:06:18



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56062

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.02.01 @ 14:36:00

GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:34:00

Time Test Ended: 22:08:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 2706.00 ft (KB) To 2756.00 ft (KB) (TVD)

Reference Elevations: 1623.00 ft (KB)

Total Depth: 2756.00 ft (KB) (TVD)

1613.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6799

Inside

Press@RunDepth: 100.47 psig @ 2743.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.01

End Date:

2014.02.01

Last Calib.:

2014.02.01

Start Time: 14:36:05

End Time:

22:07:59

Time On Btm:

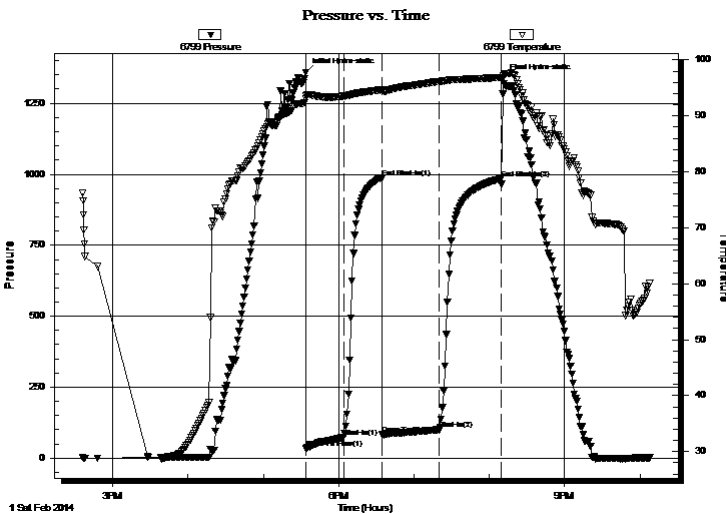
2014.02.01 @ 17:33:45

Time Off Btm:

2014.02.01 @ 20:11:00

TEST COMMENT: 30 - IF- 9" blow
30 - ISI-No return
45 - FF- 3 1/2" blow
45 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1358.95	93.67	Initial Hydro-static
1	33.46	93.14	Open To Flow (1)
31	73.68	93.53	Shut-In(1)
61	986.33	94.66	End Shut-In(1)
61	84.94	94.44	Open To Flow (2)
107	100.47	96.16	Shut-In(2)
156	984.97	96.89	End Shut-In(2)
158	1337.57	97.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	WM - Spots of oil, 40%W, 60%M	0.87

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56062

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.02.01 @ 14:36:00

GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:34:00

Time Test Ended: 22:08:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 2706.00 ft (KB) To 2756.00 ft (KB) (TVD)

Reference Elevations: 1623.00 ft (KB)

Total Depth: 2756.00 ft (KB) (TVD)

1613.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8655 Outside

Press@RunDepth: psig @ 2743.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.01

End Date:

2014.02.01

Last Calib.:

2014.02.01

Start Time: 14:36:05

End Time:

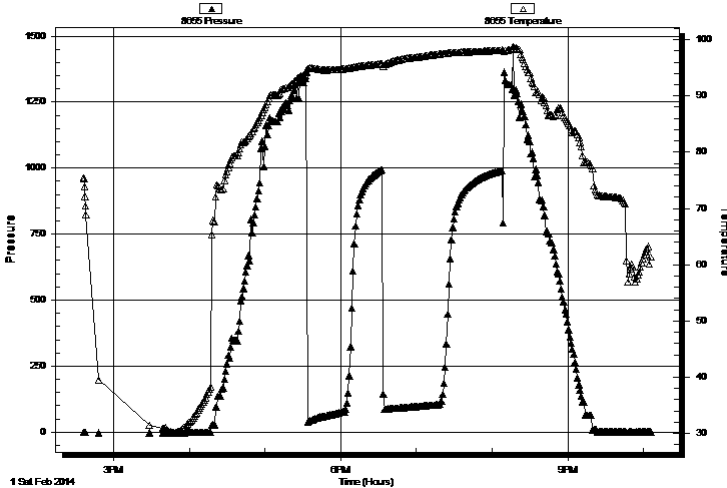
22:06:14

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- 9" blow
30 - ISI-No return
45 - FF- 3 1/2" blow
45 - FSI- No return

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
140.00	WM - Spots of oil, 40%W, 60%M	0.87

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56062

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.02.01 @ 14:36:00

Tool Information

Drill Pipe:	Length: 2591.00 ft	Diameter: 3.80 inches	Volume: 36.34 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 36.93 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	2706.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2686.00	
Shut In Tool	5.00			2691.00	
Hydraulic tool	5.00			2696.00	
Packer	5.00			2701.00	21.00 Bottom Of Top Packer
Packer	5.00			2706.00	
Stubb	1.00			2707.00	
Perforations	3.00			2710.00	
Change Over Sub	1.00			2711.00	
Drill Pipe	31.00			2742.00	
Change Over Sub	1.00			2743.00	
Recorder	0.00	6799	Inside	2743.00	
Recorder	0.00	8655	Outside	2743.00	
Perforations	10.00			2753.00	
Bullnose	3.00			2756.00	50.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56062

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.02.01 @ 14:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
140.00	WM - Spots of oil, 40%W, 60%M	0.871

Total Length: 140.00 ft Total Volume: 0.871 bbl

Num Fluid Samples: 0

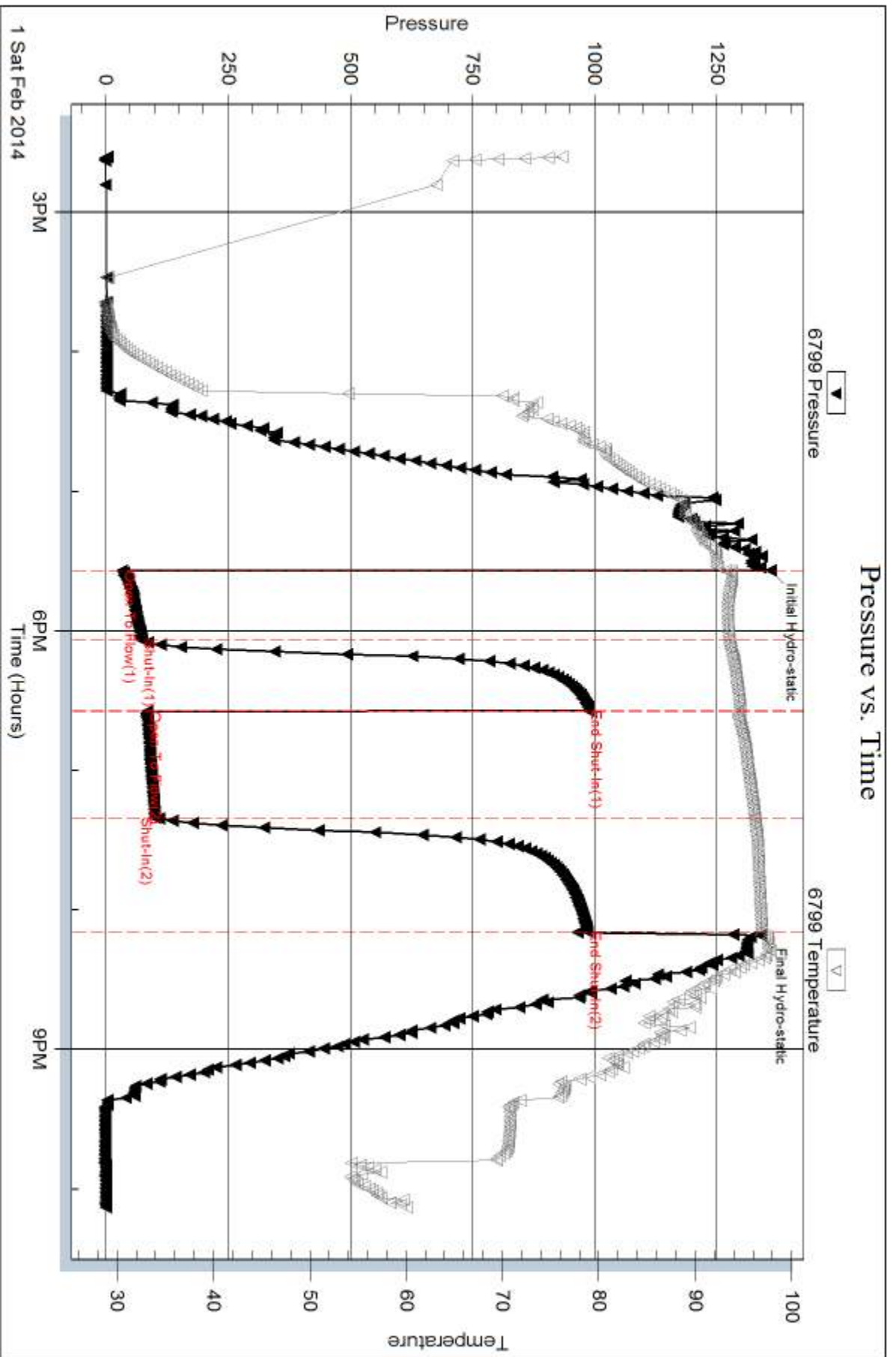
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

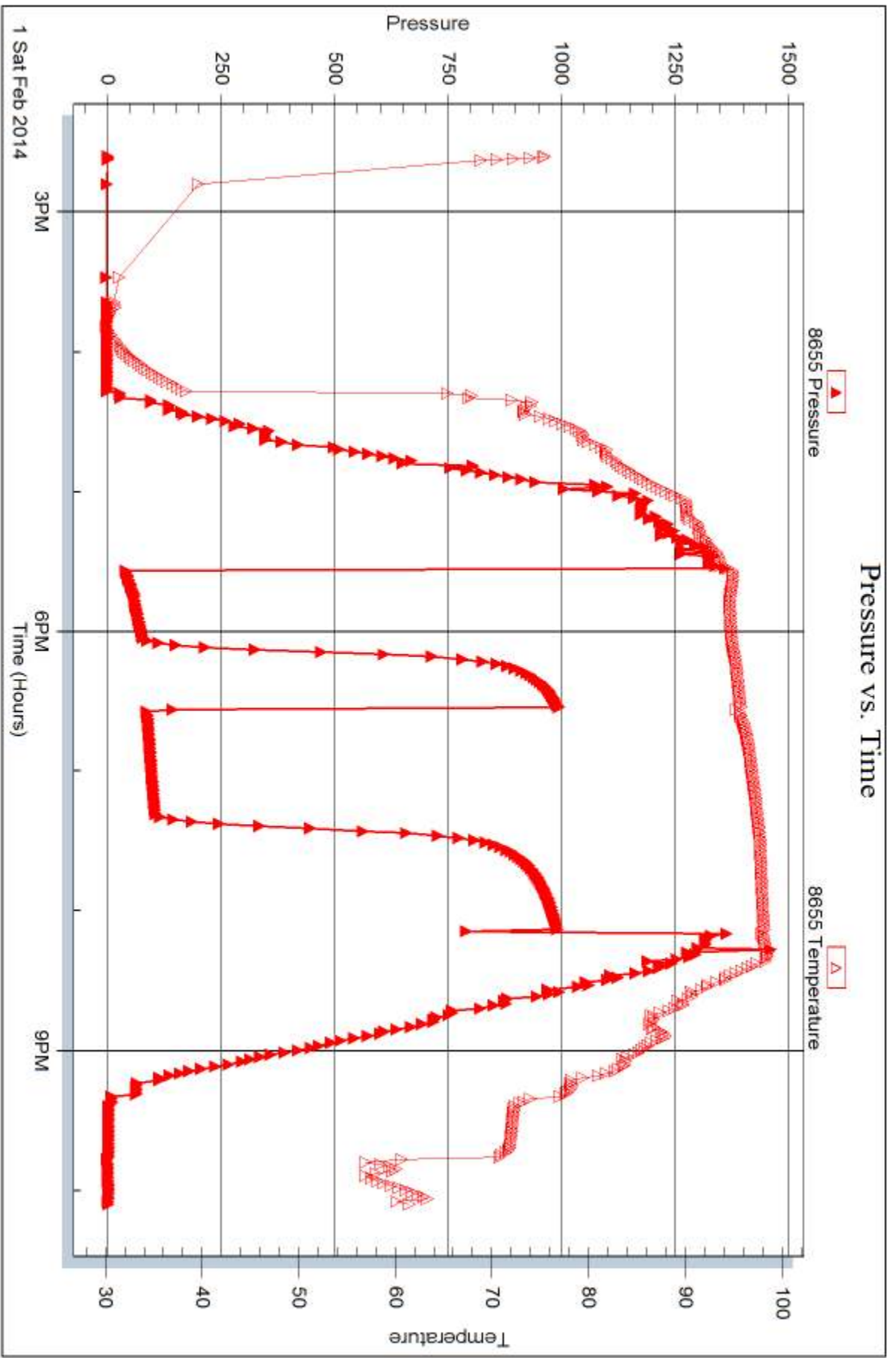


Serial #: 8655

Outside John O. Farmer Inc

Haase #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56062

Printed: 2014.02.05 @ 11:06:21



DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Haase #1

34-14s-9w Ellsworth KS

Start Date: 2014.02.02 @ 06:55:00

End Date: 2014.02.02 @ 13:08:00

Job Ticket #: 56063 DST #: 2

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

Printed: 2014.02.05 @ 11:05:47



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56063

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.02.02 @ 06:55:00

GENERAL INFORMATION:

Formation: **LKC "E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:17:00

Time Test Ended: 13:08:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 2764.00 ft (KB) To 2792.00 ft (KB) (TVD)

Reference Elevations: 1623.00 ft (KB)

Total Depth: 2792.00 ft (KB) (TVD)

1613.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8655 Outside

Press@RunDepth: 17.98 psig @ 2768.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.02

End Date:

2014.02.02

Last Calib.:

2014.02.02

Start Time: 06:55:05

End Time:

13:07:59

Time On Btm:

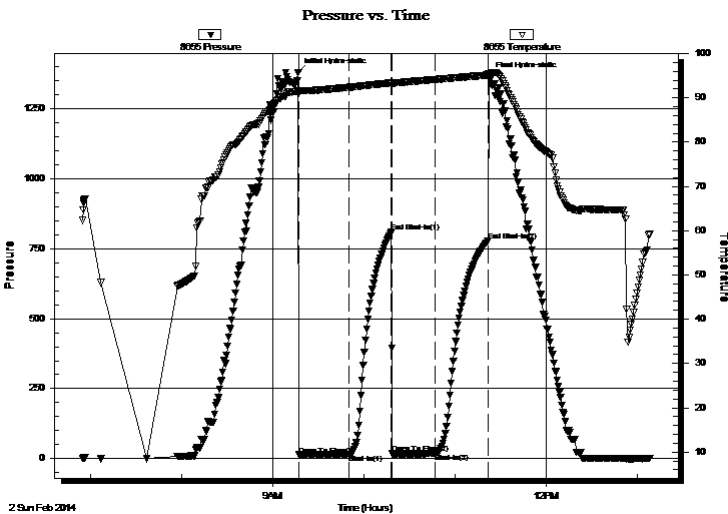
2014.02.02 @ 09:16:45

Time Off Btm:

2014.02.02 @ 11:22:00

TEST COMMENT: 30 - IF- 1" blow
30 - IS- No return
30 - FF- No blow
30 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1379.61	91.62	Initial Hydro-static
1	13.29	90.96	Open To Flow (1)
34	15.29	92.36	Shut-In(1)
62	809.46	93.37	End Shut-In(1)
62	17.70	93.21	Open To Flow (2)
91	17.98	94.12	Shut-In(2)
125	778.50	95.11	End Shut-In(2)
126	1363.46	95.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	MW, 2%W, 98%M	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56063

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.02.02 @ 06:55:00

Tool Information

Drill Pipe:	Length: 2652.00 ft	Diameter: 3.80 inches	Volume: 37.20 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	54000.00 lb
			<u>Total Volume: 37.79 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	2764.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	49.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2744.00	
Shut In Tool	5.00			2749.00	
Hydraulic tool	5.00			2754.00	
Packer	5.00			2759.00	21.00 Bottom Of Top Packer
Packer	5.00			2764.00	
Stubb	1.00			2765.00	
Perforations	3.00			2768.00	
Recorder	0.00	6799	Inside	2768.00	
Recorder	0.00	8655	Outside	2768.00	
Perforations	21.00			2789.00	
Bullnose	3.00			2792.00	28.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56063

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.02.02 @ 06:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	MW, 2%W, 98%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

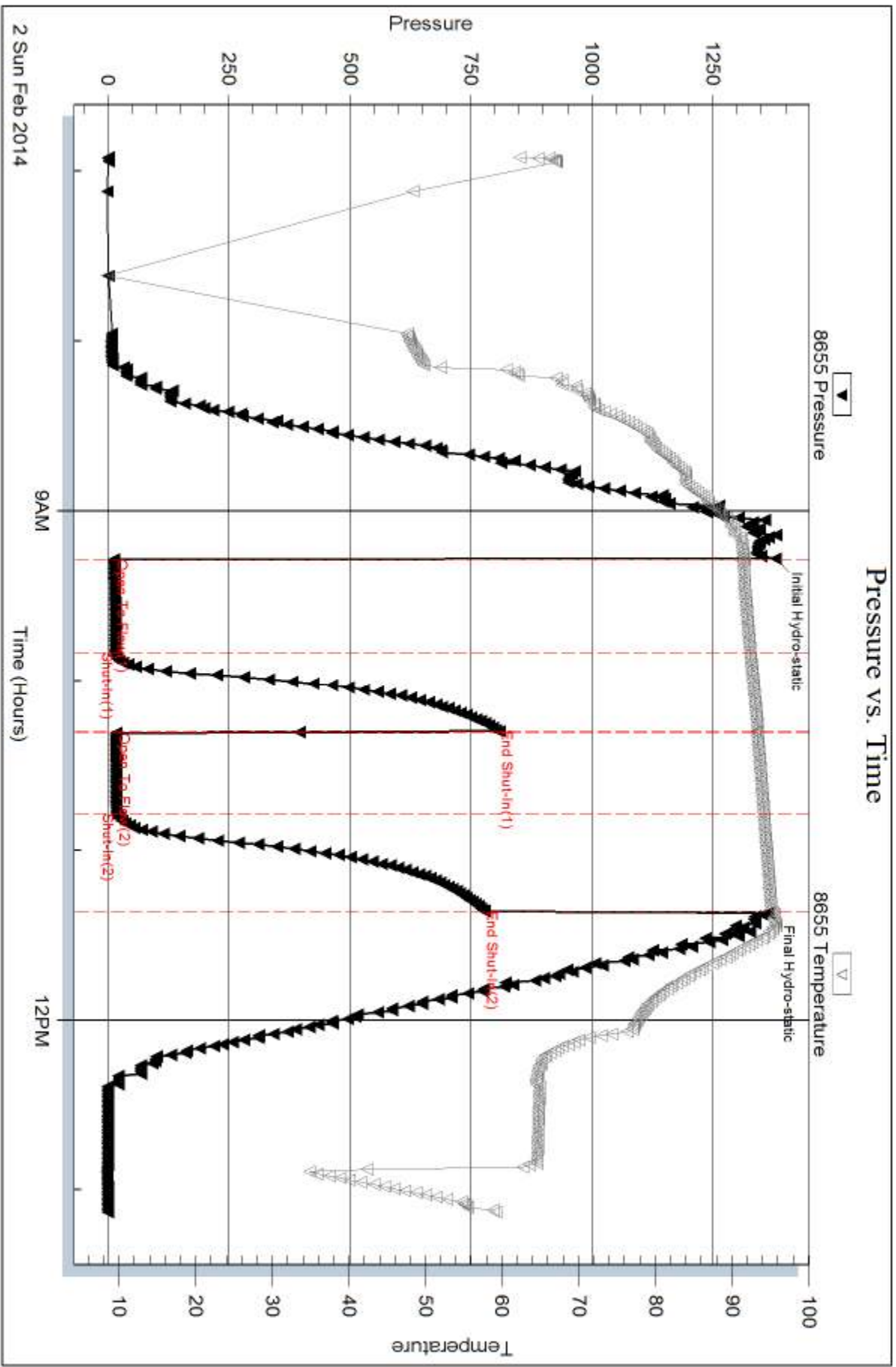
Num Gas Bombs: 0

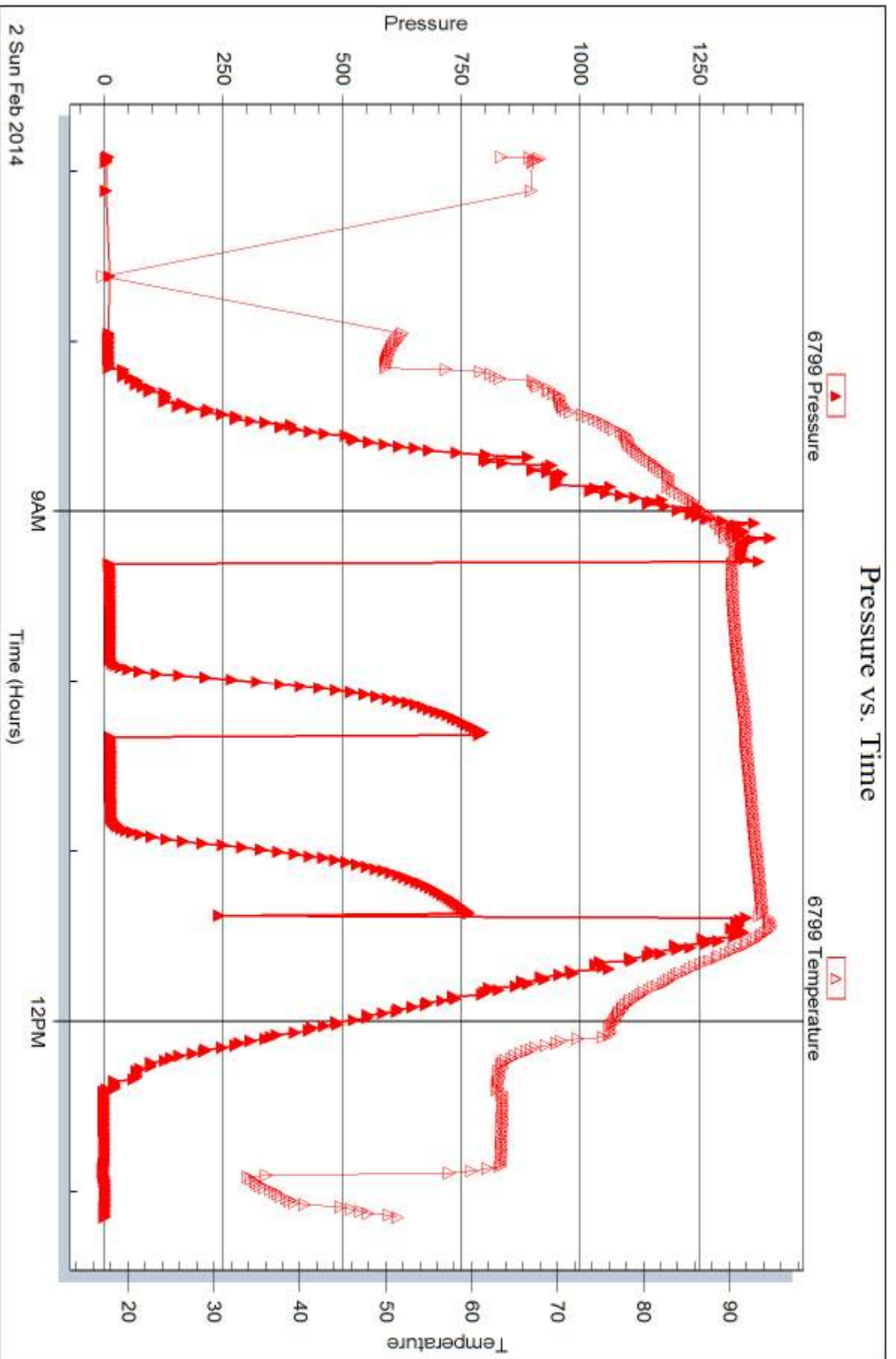
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Haase #1

34-14s-9w Ellsworth KS

Start Date: 2014.02.02 @ 20:19:00

End Date: 2014.02.03 @ 03:16:00

Job Ticket #: 56064 DST #: 3

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

Printed: 2014.02.05 @ 11:04:39



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56064

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.02.02 @ 20:19:00

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:27:30

Time Test Ended: 03:16:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 2793.00 ft (KB) To 2807.00 ft (KB) (TVD)

Reference Elevations: 1623.00 ft (KB)

Total Depth: 2807.00 ft (KB) (TVD)

1613.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8655 Outside

Press@RunDepth: 24.18 psig @ 2794.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.02

End Date:

2014.02.03

Last Calib.:

2014.02.03

Start Time: 20:19:05

End Time:

03:15:59

Time On Btm:

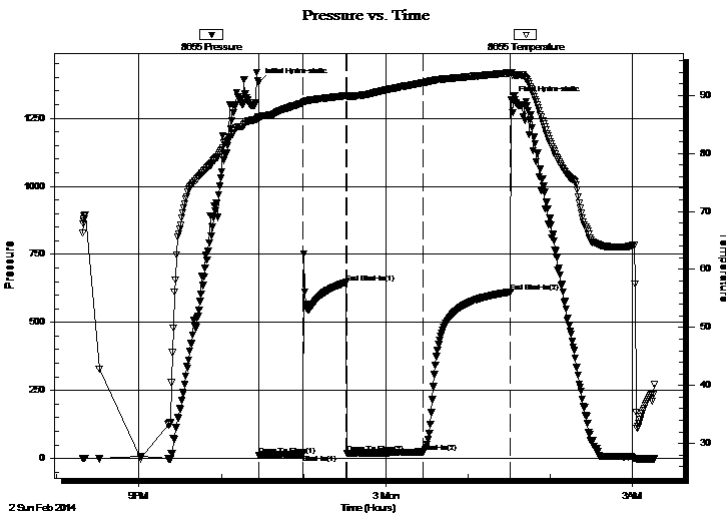
2014.02.02 @ 22:27:15

Time Off Btm:

2014.02.03 @ 01:31:45

TEST COMMENT: 30 - IF-1" blow
30 - IS- No return
60 - FF- Surface blow, died in 21 minutes
60 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1381.77	86.21	Initial Hydro-static
1	12.36	85.87	Open To Flow (1)
33	16.85	88.70	Shut-In(1)
64	646.74	89.95	End Shut-In(1)
65	19.34	89.85	Open To Flow (2)
120	24.18	92.19	Shut-In(2)
184	612.12	93.90	End Shut-In(2)
185	1316.50	93.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud, 100%M	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56064

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.02.02 @ 20:19:00

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:27:30

Time Test Ended: 03:16:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 2793.00 ft (KB) To 2807.00 ft (KB) (TVD)

Reference Elevations: 1623.00 ft (KB)

Total Depth: 2807.00 ft (KB) (TVD)

1613.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6799 Inside

Press@RunDepth: psig @ 2794.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.02

End Date:

2014.02.03

Last Calib.:

2014.02.03

Start Time: 20:19:05

End Time:

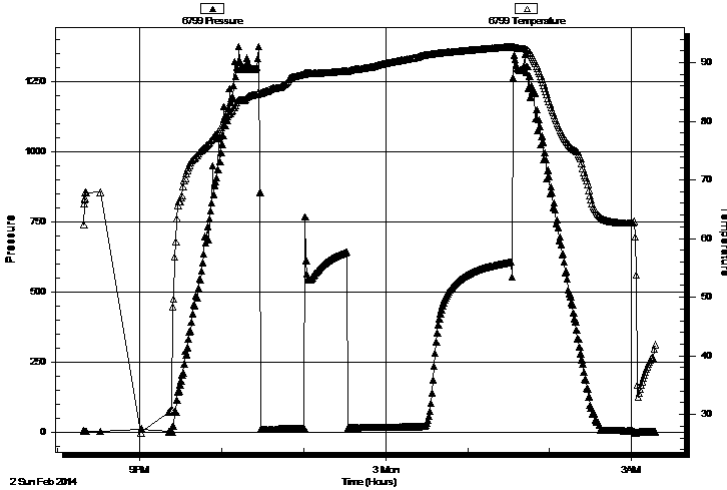
03:17:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF-1" blow
30 - IS- No return
60 - FF- Surface blow , died in 21 minutes
60 - FS- No return

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
10.00	Mud, 100%M	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56064

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.02.02 @ 20:19:00

Tool Information

Drill Pipe:	Length: 2716.00 ft	Diameter: 3.80 inches	Volume: 38.10 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 60.00 ft	Diameter: 2.25 inches	Volume: 0.30 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume: 38.40 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	2793.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	14.00 ft				
Tool Length:	35.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Driller pulled past string weight when we went to shut tool in on first shut in.
Did not effect test.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2773.00	
Shut In Tool	5.00			2778.00	
Hydraulic tool	5.00			2783.00	
Packer	5.00			2788.00	21.00 Bottom Of Top Packer
Packer	5.00			2793.00	
Stubb	1.00			2794.00	
Recorder	0.00	6799	Inside	2794.00	
Recorder	0.00	8655	Outside	2794.00	
Perforations	10.00			2804.00	
Bullnose	3.00			2807.00	14.00 Bottom Packers & Anchor
Total Tool Length:	35.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56064

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.02.02 @ 20:19:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud, 100%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

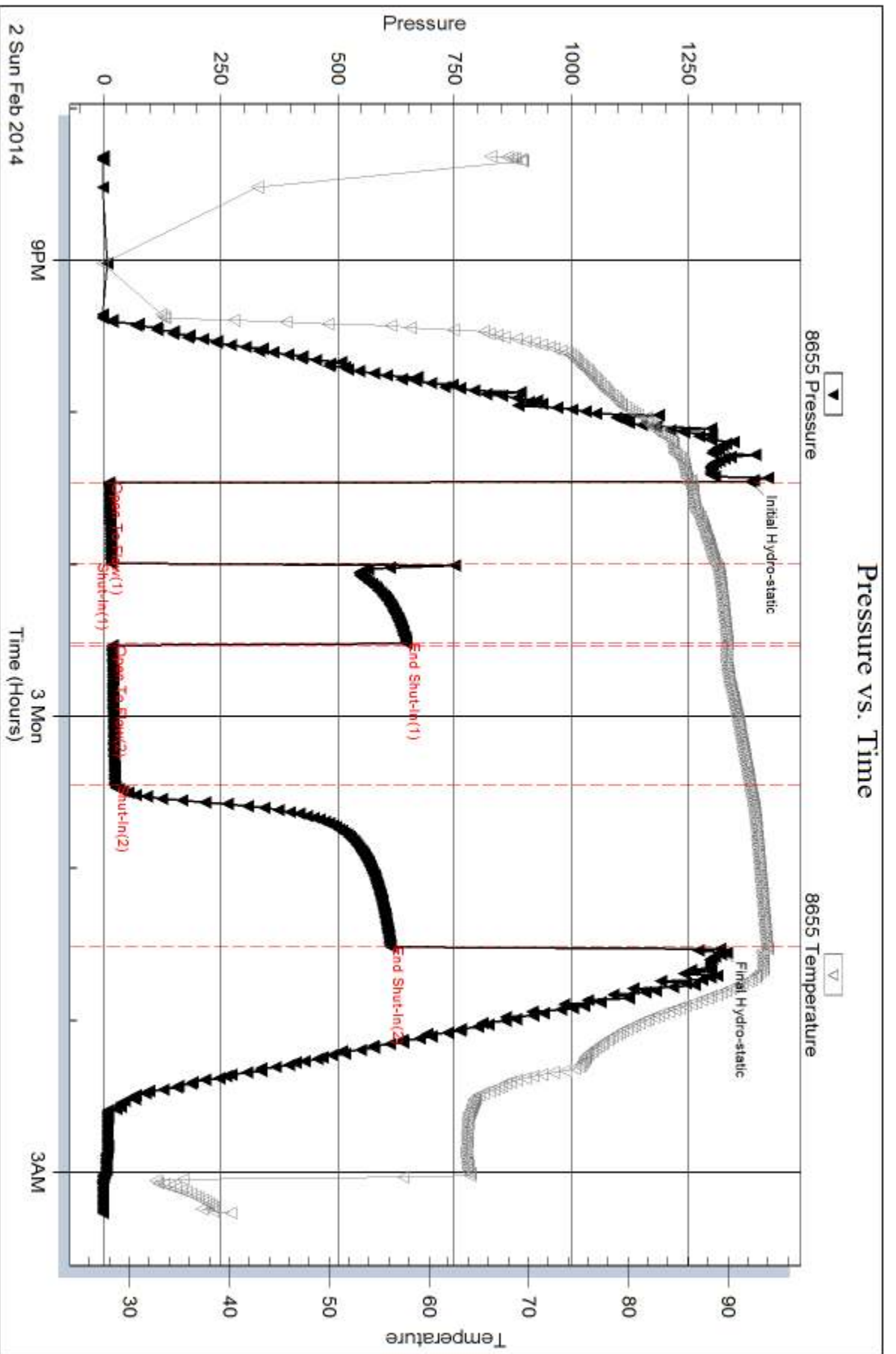
Num Gas Bombs: 0

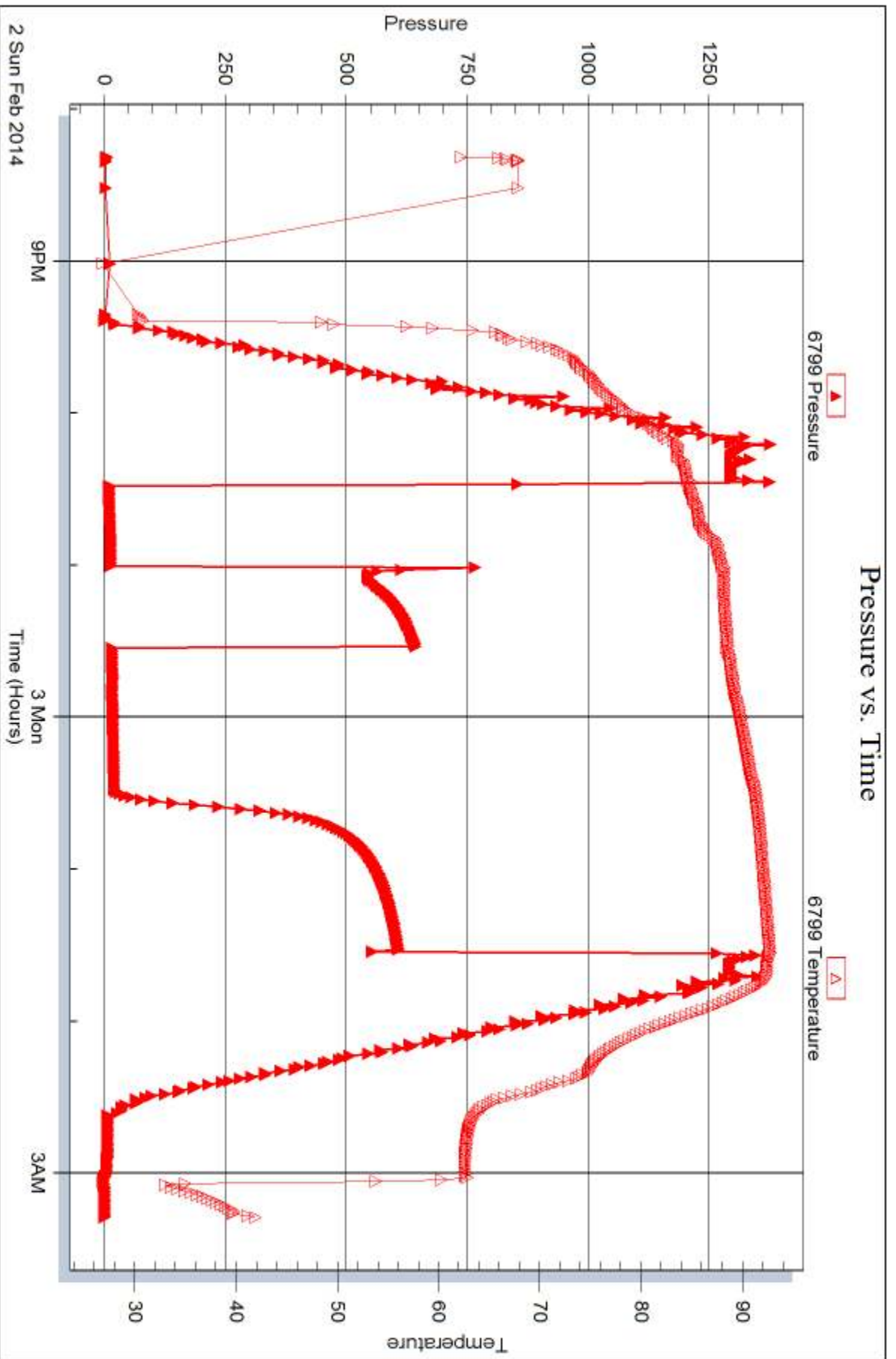
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Haase #1

34-14s-9w Ellsworth KS

Start Date: 2014.02.03 @ 10:42:00

End Date: 2014.02.03 @ 16:17:15

Job Ticket #: 56065 DST #: 4

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

Printed: 2014.02.05 @ 11:03:48

John O. Farmer Inc
34-14s-9w Ellsworth KS
Haase #1
DST # 4
LKC "G"
2014.02.03



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56065

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.02.03 @ 10:42:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:24:00

Time Test Ended: 16:17:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 2806.00 ft (KB) To 2821.00 ft (KB) (TVD)

Reference Elevations: 1623.00 ft (KB)

Total Depth: 2821.00 ft (KB) (TVD)

1613.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8655 Outside

Press@RunDepth: 134.69 psig @ 2807.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.03

End Date:

2014.02.03

Last Calib.:

2014.02.03

Start Time: 10:42:05

End Time:

16:17:14

Time On Btm:

2014.02.03 @ 12:23:45

Time Off Btm:

2014.02.03 @ 14:25:00

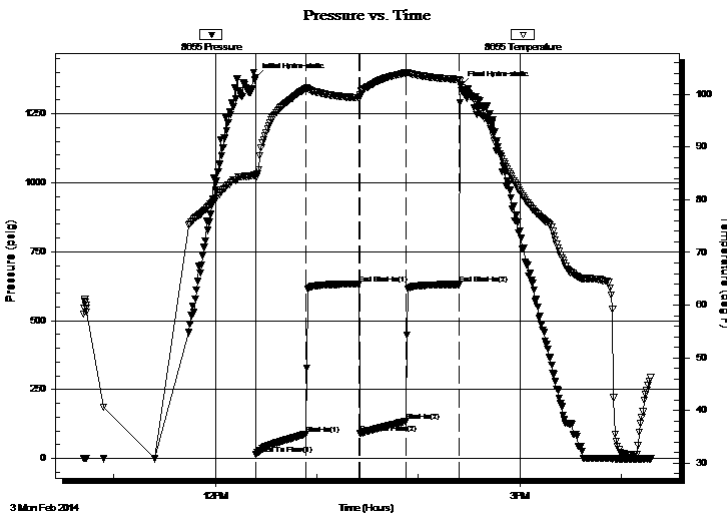
TEST COMMENT: 30 - IF- B.O.B. in 18 minutes

30 - IS- No return

30 - FF-7" blow

30 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1382.05	84.54	Initial Hydro-static
1	15.37	84.27	Open To Flow (1)
30	89.10	101.09	Shut-In(1)
61	633.16	99.34	End Shut-In(1)
62	90.95	99.52	Open To Flow (2)
89	134.69	104.09	Shut-In(2)
121	631.59	102.81	End Shut-In(2)
122	1353.98	101.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	MW, 5%M, 95%W	2.06
82.00	MW, 40%M, 60%W	1.15

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56065

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.02.03 @ 10:42:00

Tool Information

Drill Pipe:	Length: 2747.00 ft	Diameter: 3.80 inches	Volume: 38.53 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 60.00 ft	Diameter: 2.25 inches	Volume: 0.30 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 38.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	2806.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	36.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2786.00	
Shut In Tool	5.00			2791.00	
Hydraulic tool	5.00			2796.00	
Packer	5.00			2801.00	21.00 Bottom Of Top Packer
Packer	5.00			2806.00	
Stubb	1.00			2807.00	
Recorder	0.00	6799	Inside	2807.00	
Recorder	0.00	8655	Outside	2807.00	
Perforations	11.00			2818.00	
Bullnose	3.00			2821.00	15.00 Bottom Packers & Anchor
Total Tool Length:	36.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc

34-14s-9w Ellsworth KS

PO Box 352
Russell KS 67665

Haase #1

Job Ticket: 56065

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.02.03 @ 10:42:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: 35000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 7100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	MW, 5%M, 95%W	2.063
82.00	MW, 40%M, 60%W	1.150

Total Length: 268.00 ft Total Volume: 3.213 bbl

Num Fluid Samples: 0

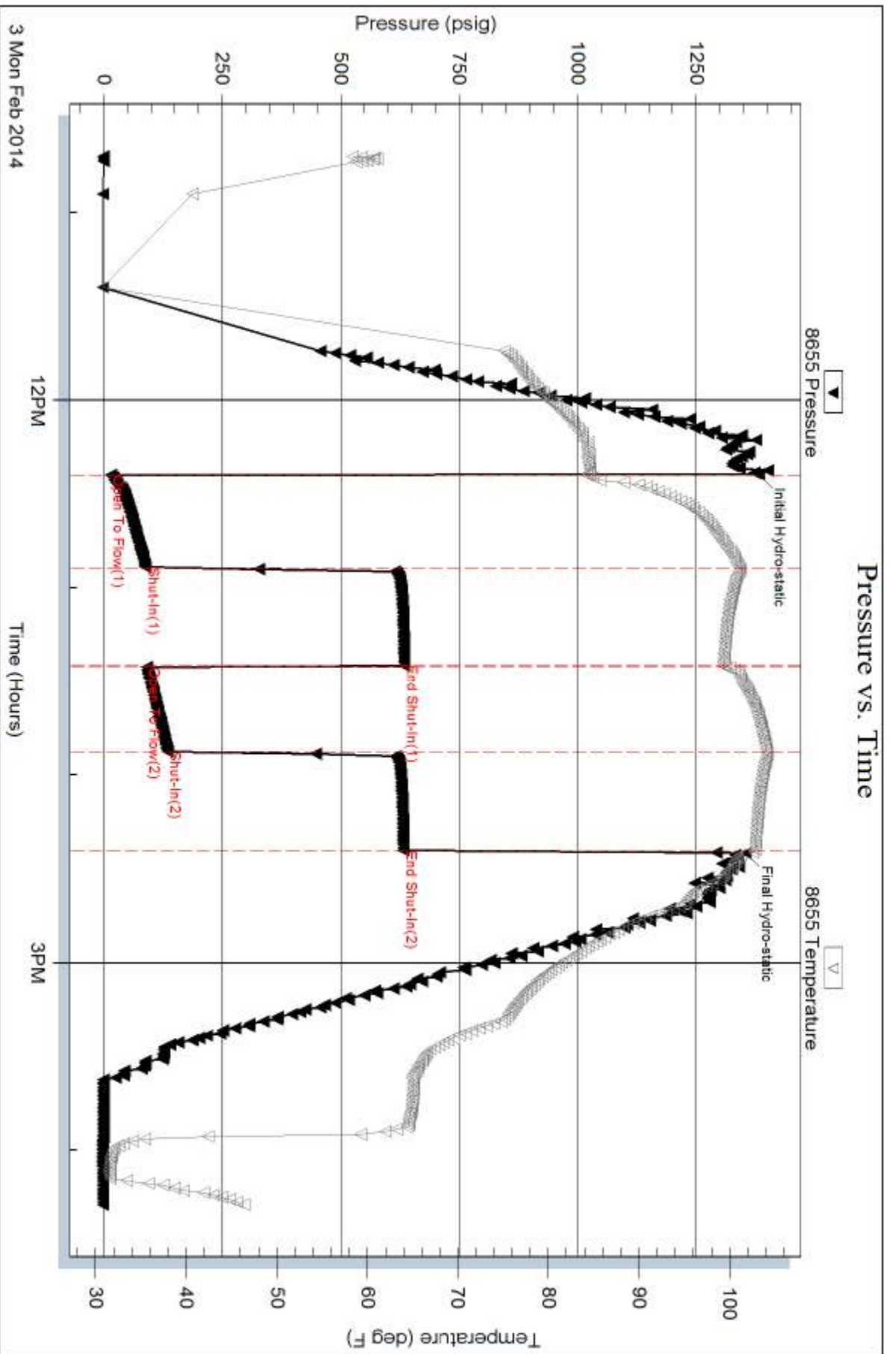
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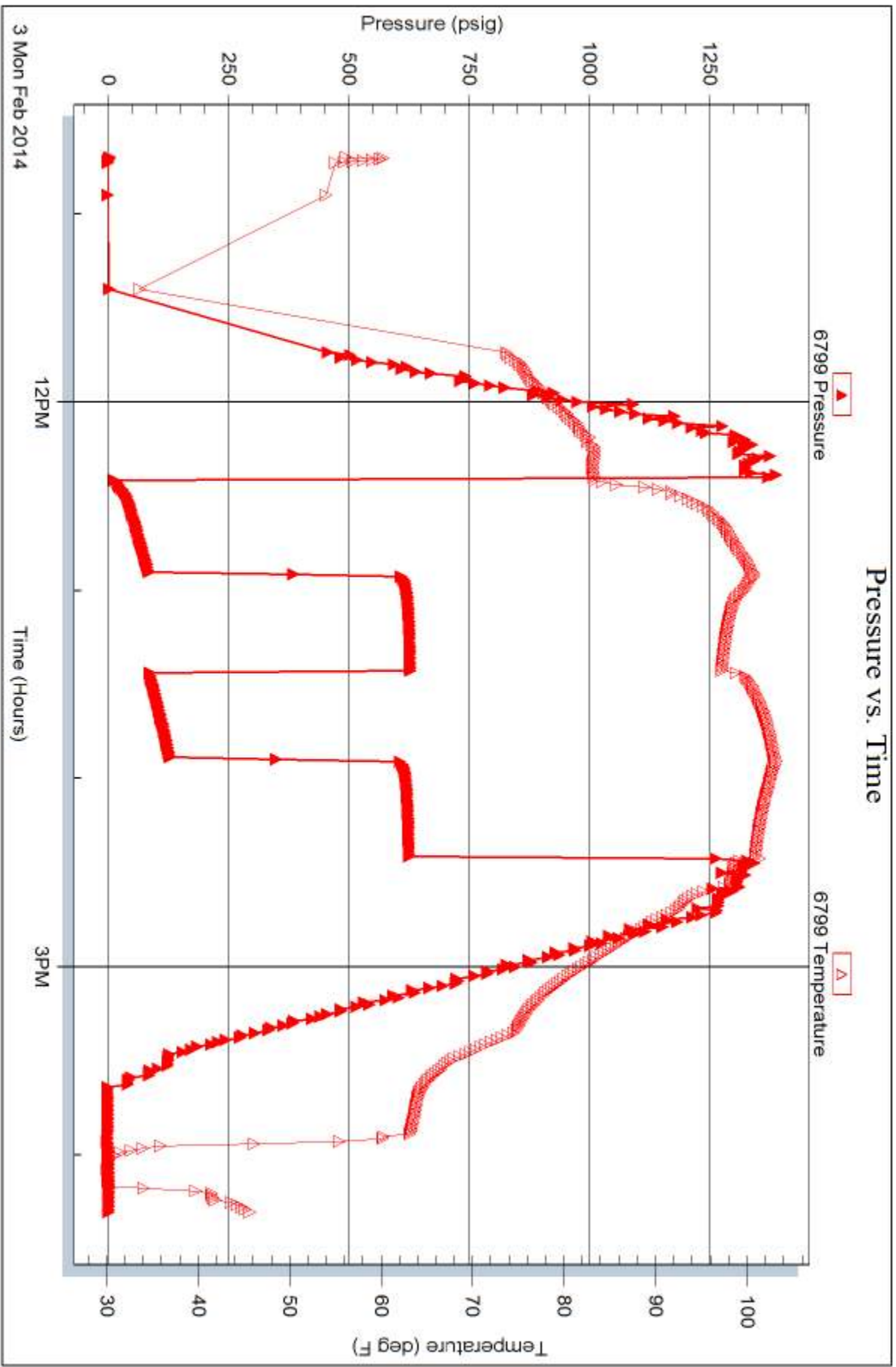
Serial #:

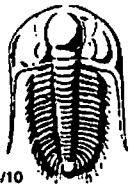
Laboratory Name:

Laboratory Location:

Recovery Comments: .44 @ 40 Degrees = 35000







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

56062

NO.

Well Name & No. Haase #1 Test No. 1 Date 2-1-14
 Company John O. Forman INC Elevation 1623 KB 1613 GL
 Address Po Box 352 Russell KS, 67665
 Co. Rep / Geo. Austin Klaus Rig Val #6
 Location: Sec. 34 Twp. 14s Rge. 9w Co. Ellsworth State KS

Interval Tested 2706 - 2756 Zone Tested LKC "A-C"
 Anchor Length 50' Drill Pipe Run 2591' Mud Wt. 9.1
 Top Packer Depth 2701 Drill Collars Run 120' Vis 51
 Bottom Packer Depth 2706 Wt. Pipe Run — WL 8.0
 Total Depth 2756 Chlorides 3,500 ppm System LCM —

Blow Description IF-9" blow
ISI - No return
FF-3 1/2" blow
FSI - No return

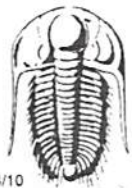
Rec	Feet of	%gas	%oil	%water	%mud
<u>140</u>	<u>WM - spots of oil</u>			<u>40</u>	<u>60</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 140' BHT _____ Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic _____ Test 1150 T-On Location 1314
 (B) First Initial Flow _____ Jars _____ T-Started 1436
 (C) First Final Flow _____ Safety Joint _____ T-Open 1734
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled 2004
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 2207
 (F) Second Final Flow _____ Mileage 123RT 190.65 Comments Hotel
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic _____ Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1340.65
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1340.65

Approved By _____ Our Representative Cody Bleda

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. **56063**

4/10

Well Name & No. Haase #1 Test No. 2 Date 2-2-14
 Company John O. Farmer INC Elevation 1623 KB 1613 GL
 Address Po Box 352, Russell KS, 67665
 Co. Rep / Geo. Austin Klaus Rig Val #6
 Location: Sec. 34 Twp. 14s Rge. 9w Co. Ellsworth State KS

Interval Tested 2764-2792 Zone Tested LKC "E"
 Anchor Length 28' Drill Pipe Run 2652' Mud Wt. 9.1
 Top Packer Depth 2759 Drill Collars Run 120' Vis 51
 Bottom Packer Depth 2764 Wt. Pipe Run — WL 8.0
 Total Depth 2792 Chlorides 3,500 ppm System LCM —
 Blow Description IF-1" blow
ISI- No return
FF- No blow
FSI- No return

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

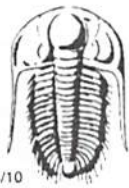
Rec Total 5' BHT 95° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1379 Test 1150 T-On Location 0623
 (B) First Initial Flow 13 Jars — T-Started 0655
 (C) First Final Flow 15 Safety Joint — T-Open 0917
 (D) Initial Shut-In 809 Circ Sub — T-Pulled 1117
 (E) Second Initial Flow 17 Hourly Standby — T-Out 1308
 (F) Second Final Flow 17 Mileage 123RT 190.65 Comments Hotel
 (G) Final Shut-In 778 Sampler —
 (H) Final Hydrostatic 1363 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder — Sub Total 0
 Day Standby — Total 1340.65
 Accessibility — MP/DST Disc't —
 Sub Total 1340.65

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

Approved By _____ Our Representative Cody Bloodorn

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56064**

4/10

Well Name & No. Haase #1 Test No. 3 Date 2-2-14
 Company John o. Farmer INC Elevation 1623 KB 1613 GL
 Address Po Box 352, Russell KS, 67665
 Co. Rep / Geo. Austin Klaus Rig Val #6
 Location: Sec. 34 Twp. 14s Rge. 9w Co. Ellsworth State KS

Interval Tested 2793 - 2807 Zone Tested LKC "F"
 Anchor Length 14' Drill Pipe Run 2716' Mud Wt. 9.3
 Top Packer Depth 2787 Drill Collars Run 60' Vis 46
 Bottom Packer Depth 2793 Wt. Pipe Run - WL 9.2
 Total Depth 2807 Chlorides 7,100 ppm System LCM -
 Blow Description IF - 1" blow
ISI - No return
FF - Surface blow, died in 21 minutes
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud,</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>* Driller Pulled past</u>	%gas	%oil	%water	%mud
Rec	Feet of <u>string weight on</u>	%gas	%oil	%water	%mud
Rec	Feet of <u>first shut in. *</u>	%gas	%oil	%water	%mud

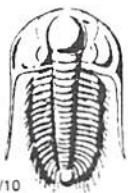
Rec Total 10' BHT 93° Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1381 Test 1150 T-On Location 1950
 (B) First Initial Flow 12 Jars - T-Started 2019
 (C) First Final Flow 16 Safety Joint - T-Open 2228
 (D) Initial Shut-In 646 Circ Sub - T-Pulled 0128
 (E) Second Initial Flow 19 Hourly Standby - T-Out 0318
 (F) Second Final Flow 24 Mileage 123RT 190.65 Comments Hotel
 (G) Final Shut-In 612 Sampler -
 (H) Final Hydrostatic 1316 Straddle - Ruined Shale Packer -
 Shale Packer - Ruined Packer -

Initial Open 30 Extra Packer - Extra Copies -
 Initial Shut-In 30 Extra Recorder - Sub Total 0
 Final Flow 60 Day Standby - Total 1340.65
 Final Shut-In 60 Accessibility - MP/DST Disc't -
 Sub Total 1340.65

Approved By _____ Our Representative Cody R. [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56065**

Well Name & No. Haase #1 Test No. 4 Date 2-3-14
 Company John O. Farmer Inc Elevation 1623 KB 1613 GL
 Address Po Box 352, Russell KS, 67665
 Co. Rep / Geo. Austin Klaus Rig Val #6
 Location: Sec. 34 Twp. 14S Rge. 9W Co. Ellsworth State KS

Interval Tested 2806 - 2821 Zone Tested LKC "6"
 Anchor Length 15 Drill Pipe Run 2747' Mud Wt. 9.3
 Top Packer Depth 2801 Drill Collars Run 60' Vis 46
 Bottom Packer Depth 2806 Wt. Pipe Run — WL 9.2
 Total Depth 2821 Chlorides 7,100 ppm System LCM —

Blow Description IF - B.O.B. in 18 minutes
ISI - No return
FF - 7" blow
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>186</u>	<u>MW</u>			<u>9.5</u>	<u>5</u>
<u>82</u>	<u>MW</u>			<u>60</u>	<u>40</u>

Rec Total 268' BHT 102° Gravity — API RW .44 @ 40 °F Chlorides 35,000 ppm

(A) Initial Hydrostatic 1382 Test 1150 T-On Location 1026
 (B) First Initial Flow 15 Jars — T-Started 1042
 (C) First Final Flow 89 Safety Joint — T-Open 1223
 (D) Initial Shut-In 633 Circ Sub — T-Pulled 1423
 (E) Second Initial Flow 90 Hourly Standby — T-Out 1617
 (F) Second Final Flow 134 Mileage 123 RT 190.65 Comments —
 (G) Final Shut-In 631 Sampler —
 (H) Final Hydrostatic 1353 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 30 Extra Recorder — Sub Total 0
 Initial Shut-In 30 Day Standby — Total 1340.65
 Final Flow 30 Accessibility — MP/DST Disc't —
 Final Shut-In 30 Sub Total 1340.65

Approved By _____

Our Representative Cody Black