

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

Ames P #8

6-18S-10W Rice,KS

Start Date: 2013.03.16 @ 04:04:12

End Date: 2013.03.16 @ 10:29:12

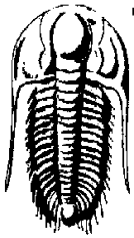
Job Ticket #: 50901 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.21 @ 11:52:55



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50901

DST#: 1

Test Start: 2013.03.16 @ 04:04:12

GENERAL INFORMATION:

Formation: **LeCompton Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:46:12

Time Test Ended: 10:29:12

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 45

Interval: 2748.00 ft (KB) To 2812.00 ft (KB) (TVD)

Reference Elevations: 1799.00 ft (KB)

Total Depth: 2812.00 ft (KB) (TVD)

1790.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 6798 Inside

Press@RunDepth: 56.59 psig @ 2749.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.16

End Date:

2013.03.16

Last Calib.: 2013.03.16

Start Time: 04:04:13

End Time:

10:29:12

Time On Btm: 2013.03.16 @ 05:40:12

Time Off Btm: 2013.03.16 @ 08:51:42

TEST COMMENT: IF: Weak Blow , 1 1/2 inch, Died Off to 1/2 inch

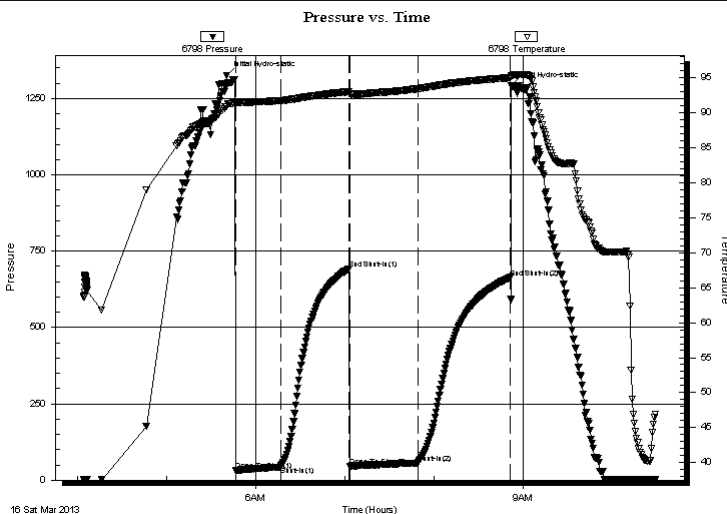
IS: No Blow Back

FF: Weak Surface Blow

FS: No Blow Back

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1325.84	90.93	Initial Hydro-static
6	31.56	91.39	Open To Flow (1)
37	45.77	91.76	Shut-In(1)
83	692.15	93.03	End Shut-In(1)
83	45.59	92.76	Open To Flow (2)
129	56.59	93.44	Shut-In(2)
191	663.63	95.03	End Shut-In(2)
192	1290.53	95.20	Final Hydro-static

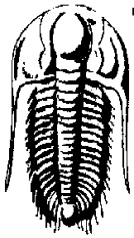


Recovery

Length (ft)	Description	Volume (bbl)
87.00	Mud	1.22

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50901

DST#: 1

Test Start: 2013.03.16 @ 04:04:12

GENERAL INFORMATION:

Formation: **LeCompton Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:46:12

Time Test Ended: 10:29:12

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 45

Interval: 2748.00 ft (KB) To 2812.00 ft (KB) (TVD)

Total Depth: 2812.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 2749.00 ft (KB)

Start Date: 2013.03.16

End Date:

2013.03.16

Start Time: 04:04:13

End Time:

10:29:12

Capacity: 8000.00 psig

Last Calib.: 2013.03.16

Time On Btm:

Time Off Btm:

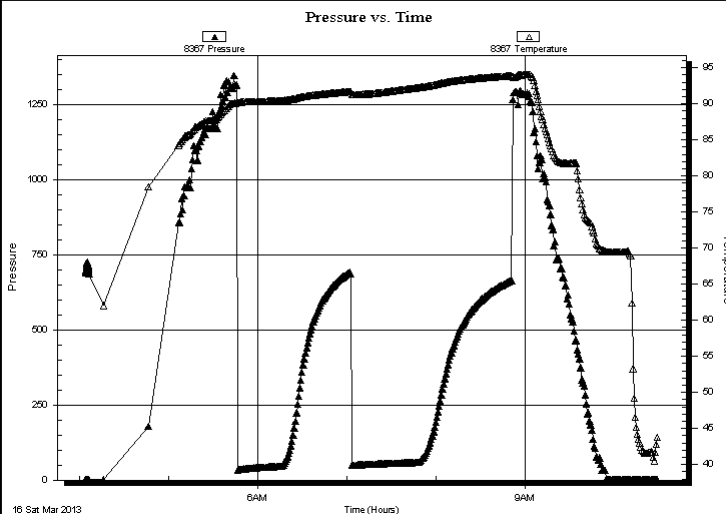
TEST COMMENT: IF: Weak Blow , 1 1/2 inch, Died Off to 1/2 inch

IS: No Blow Back

FF: Weak Surface Blow

FS: No Blow Back

PRESSURE SUMMARY



Time
(Min.)

Pressure
(psig)

Temp
(deg F)

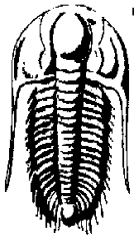
Annotation

Recovery

Length (ft)	Description	Volume (bbl)
87.00	Mud	1.22

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50901

DST#: 1

ATTN: Mac Armstrong

Test Start: 2013.03.16 @ 04:04:12

Tool Information

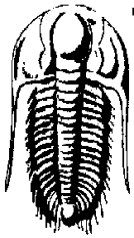
Drill Pipe:	Length:	2743.00 ft	Diameter:	3.80 inches	Volume:	38.48 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	50000.00 lb
					Total Volume:	38.48 bbl	Tool Chased	5.00 ft
Drill Pipe Above KB:	22.00 ft						String Weight: Initial	30000.00 lb
Depth to Top Packer:	2748.00 ft						Final	30000.00 lb
Depth to Bottom Packer:	ft							
Interval between Packers:	64.00 ft							
Tool Length:	91.00 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			2726.00		
Hydraulic tool	5.00			2731.00		
Jars	5.00			2736.00		
Safety Joint	2.00			2738.00		
Packer	5.00			2743.00	27.00	Bottom Of Top Packer
Packer	5.00			2748.00		
Stubb	1.00			2749.00		
Recorder	0.00	6798	Inside	2749.00		
Recorder	0.00	8367	Outside	2749.00		
Perforations	6.00			2755.00		
Change Over Sub	1.00			2756.00		
Drill Pipe	32.00			2788.00		
Change Over Sub	1.00			2789.00		
Perforations	20.00			2809.00		
Bullnose	3.00			2812.00	64.00	Bottom Packers & Anchor

Total Tool Length: 91.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50901

DST#: 1

ATTN: Mac Armstrong

Test Start: 2013.03.16 @ 04:04:12

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:

ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
87.00	Mud	1.220

Total Length: 87.00 ft

Total Volume: 1.220 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

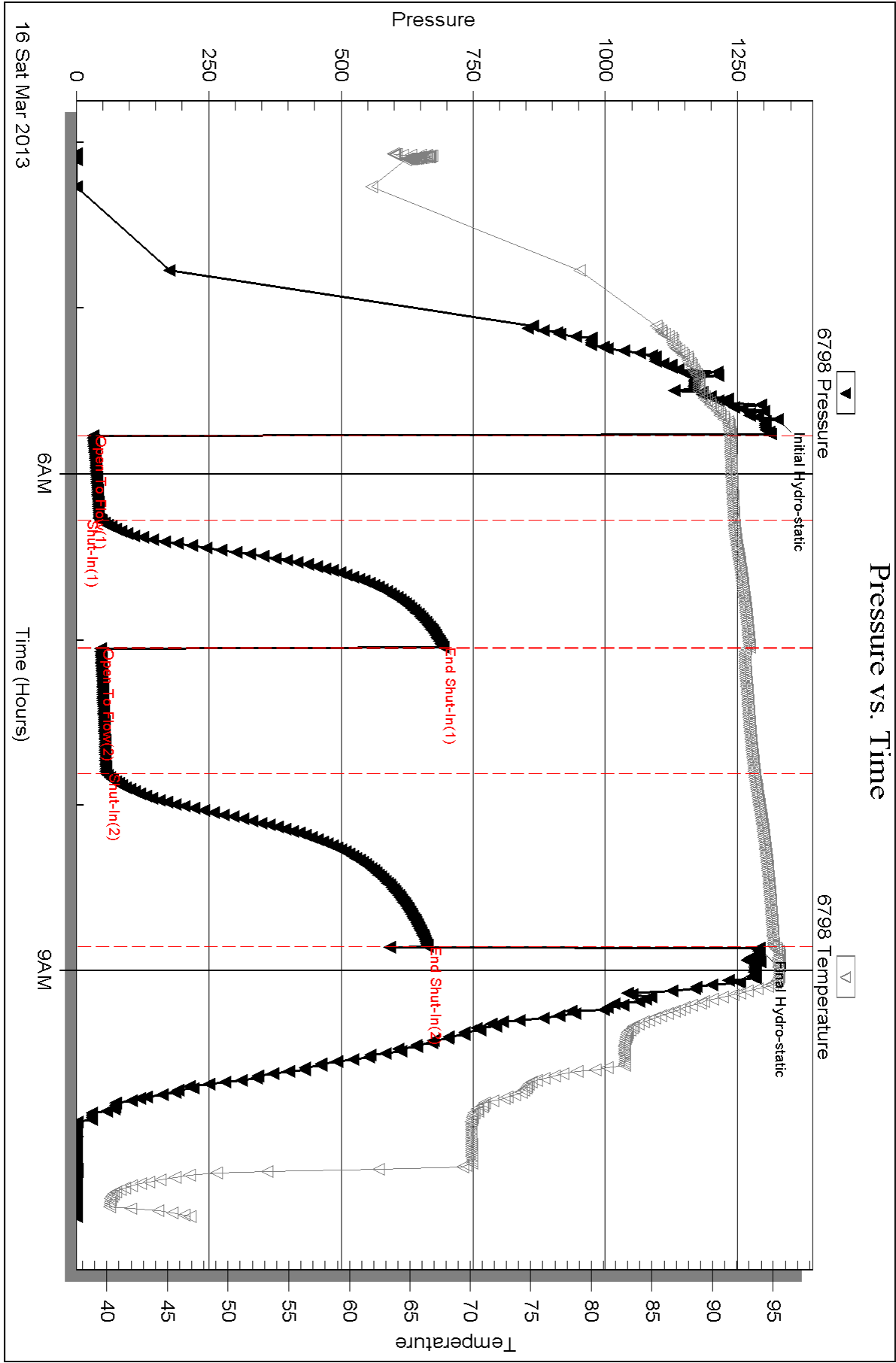
Serial #: 6798

Inside

Ritchie Exploration

Ames P#8

DST Test Number: 1

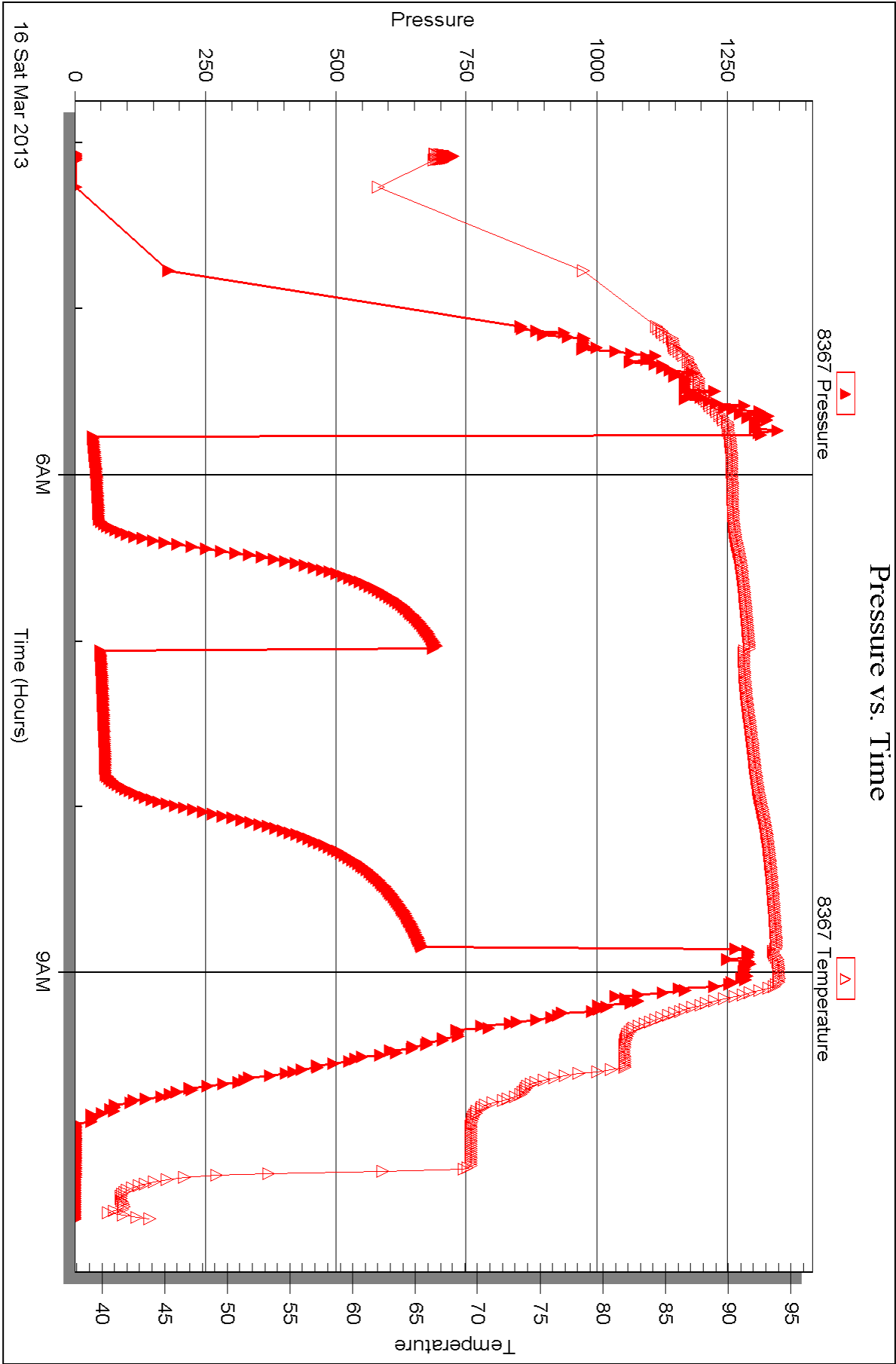


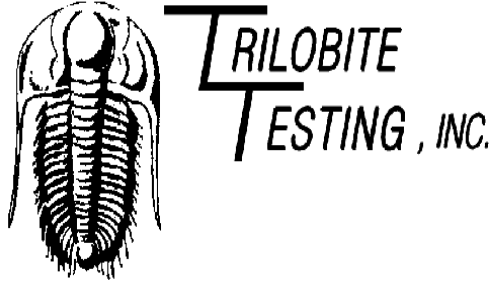
Serial #: 8367

Outside Ritchie Exploration

Ames P#8

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

Ames P #8

6-18S-10W Rice,KS

Start Date: 2013.03.16 @ 23:54:04

End Date: 2013.03.17 @ 06:05:49

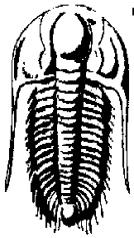
Job Ticket #: 50902 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.21 @ 11:51:59



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50902

DST#: 2

Test Start: 2013.03.16 @ 23:54:04

GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:34:49

Time Test Ended: 06:05:49

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 2936.00 ft (KB) To 3022.00 ft (KB) (TVD)

Total Depth: 3022.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6798 Inside

Press@RunDepth: 64.54 psig @ 2937.00 ft (KB)

Start Date: 2013.03.16

End Date:

2013.03.17

Start Time: 23:54:05

End Time:

06:05:49

Capacity: 8000.00 psig

Last Calib.: 2013.03.17

Time On Btm: 2013.03.17 @ 01:27:04

Time Off Btm: 2013.03.17 @ 04:37:49

TEST COMMENT: IF: Fair Blow Built to 9 inches
IS: No Blow Back
FF: Strong Blow, BOB in 30 seconds
FS: No Blow Back

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1506.87	93.02	Initial Hydro-static
8	50.59	95.44	Open To Flow (1)
37	61.02	96.18	Shut-In(1)
83	251.36	97.41	End Shut-In(1)
84	60.23	97.28	Open To Flow (2)
129	64.54	97.92	Shut-In(2)
190	270.33	99.36	End Shut-In(2)
191	1454.93	98.73	Final Hydro-static

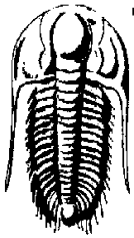
Recovery

Length (ft)	Description	Volume (bbl)
0.00	150 GIP	0.00
30.00	VSOCM 1%O 99%M	0.42

Gas Rates

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



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DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50902

DST#: 2

Test Start: 2013.03.16 @ 23:54:04

GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:34:49

Time Test Ended: 06:05:49

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 2936.00 ft (KB) To 3022.00 ft (KB) (TVD)

Total Depth: 3022.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 2937.00 ft (KB)

Start Date: 2013.03.16

End Date:

2013.03.17

Start Time: 23:54:05

End Time:

06:05:34

Capacity: 8000.00 psig

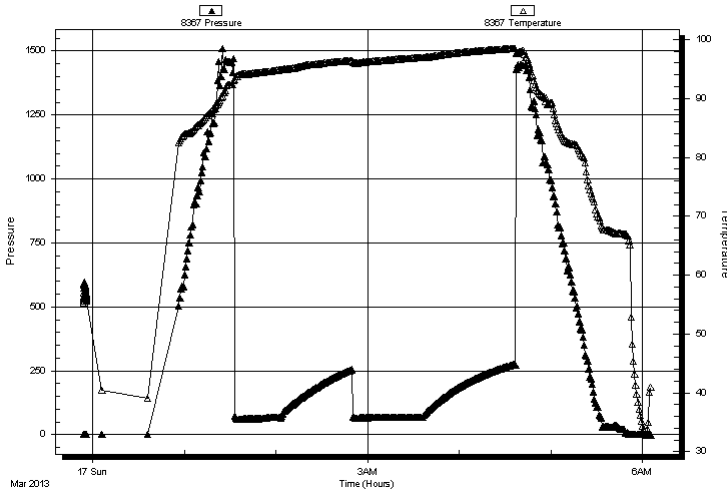
Last Calib.: 2013.03.17

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Fair Blow Built to 9 inches
IS: No Blow Back
FF: Strong Blow, BOB in 30 seconds
FS: No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

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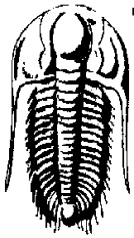
Recovery

Length (ft)	Description	Volume (bbl)
0.00	150 GIP	0.00
30.00	VSOCM 1%O 99%M	0.42

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

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50902

DST#: 2

ATTN: Mac Armstrong

Test Start: 2013.03.16 @ 23:54:04

Tool Information

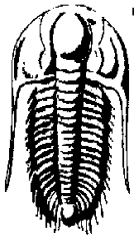
Drill Pipe:	Length: 2933.00 ft	Diameter: 3.80 inches	Volume: 41.14 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
		Total Volume:	41.14 bbl	Tool Chased ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	2936.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	86.00 ft			
Tool Length:	113.00 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			2914.00	
Hydraulic tool	5.00			2919.00	
Jars	5.00			2924.00	
Safety Joint	2.00			2926.00	
Packer	5.00			2931.00	27.00 Bottom Of Top Packer
Packer	5.00			2936.00	
Stubb	1.00			2937.00	
Recorder	0.00	6798	Inside	2937.00	
Recorder	0.00	8367	Outside	2937.00	
Perforations	3.00			2940.00	
Change Over Sub	1.00			2941.00	
Drill Pipe	62.00			3003.00	
Change Over Sub	1.00			3004.00	
Perforations	15.00			3019.00	
Bullnose	3.00			3022.00	86.00 Bottom Packers & Anchor

Total Tool Length: 113.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50902

DST#: 2

ATTN: Mac Armstrong

Test Start: 2013.03.16 @ 23:54:04

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 7.98 in³

Resistivity: ohm.m

Salinity: 5200.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	150 GIP	0.000
30.00	VSOCM 1%O 99%M	0.421

Total Length: 30.00 ft

Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

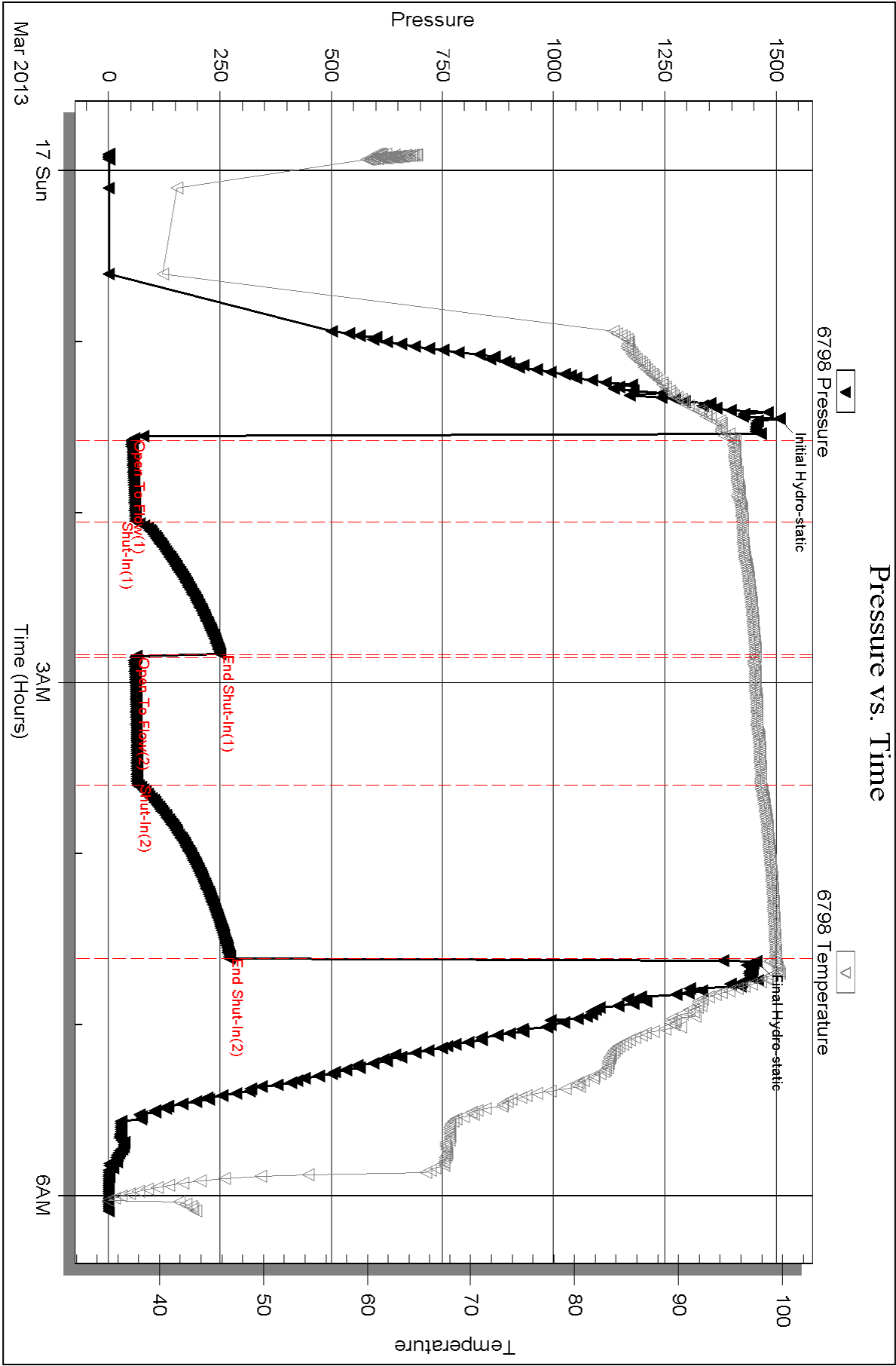
Serial #: 6798

Inside

Ritchie Exploration

Ames P#8

DST Test Number: 2

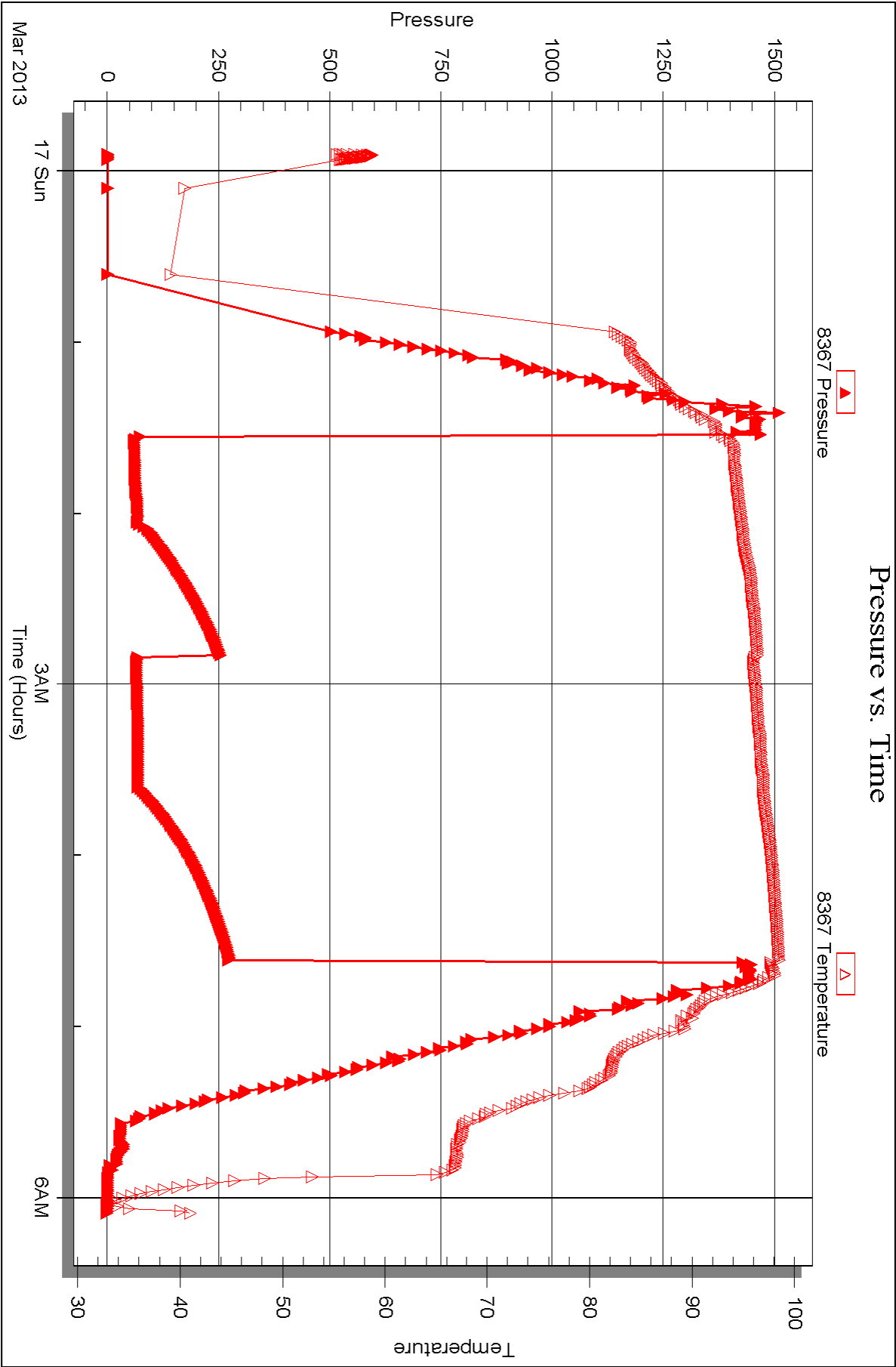


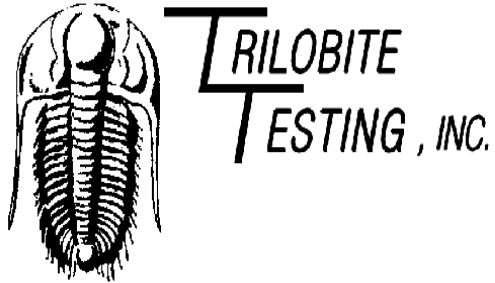
Serial #: 8367

Outside Ritchie Exploration

Ames P#8

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

Ames P #8

6-18S-10W Rice,KS

Start Date: 2013.03.17 @ 12:03:59

End Date: 2013.03.17 @ 17:52:44

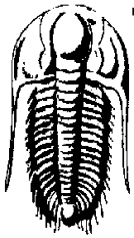
Job Ticket #: 50903 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.21 @ 11:50:48



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DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50903

DST#: 3

Test Start: 2013.03.17 @ 12:03:59

GENERAL INFORMATION:

Formation: **Lansing "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:25:59

Time Test Ended: 17:52:44

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 3015.00 ft (KB) To 3039.00 ft (KB) (TVD)

Total Depth: 3039.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6798 Inside

Press@RunDepth: 95.19 psig @ 3016.00 ft (KB)

Start Date: 2013.03.17

End Date:

2013.03.17

Start Time: 12:04:00

End Time:

17:52:44

Capacity: 8000.00 psig

Last Calib.: 2013.03.17

Time On Btm: 2013.03.17 @ 13:24:59

Time Off Btm: 2013.03.17 @ 16:26:14

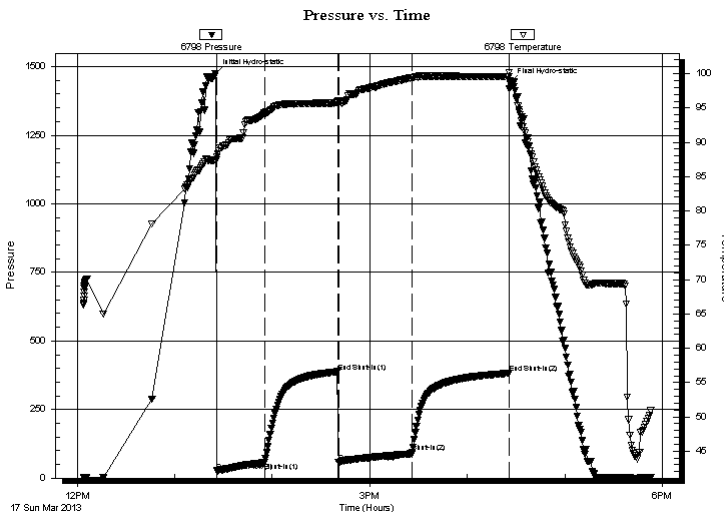
TEST COMMENT: IF: Fair Blow , BOB in 5 minutes

IS: No Blow Back

FF: Strong Blow , BOB in 2 minutes

FS: Weak Surface Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1475.97	87.32	Initial Hydro-static
1	26.20	87.80	Open To Flow (1)
31	57.91	94.31	Shut-In(1)
76	387.69	95.83	End Shut-In(1)
76	58.17	96.06	Open To Flow (2)
121	95.19	99.44	Shut-In(2)
181	381.99	99.61	End Shut-In(2)
182	1441.99	99.03	Final Hydro-static

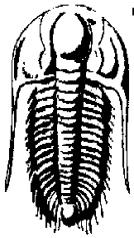
Recovery

Length (ft)	Description	Volume (bbl)
0.00	1225 GIP	0.00
62.00	GSY OMCW 15%G 5%O 32%M 48%W	0.87
98.00	GSY OCM 20%G 5%O 75%M	1.37

Gas Rates

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



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DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50903

DST#: 3

Test Start: 2013.03.17 @ 12:03:59

GENERAL INFORMATION:

Formation: **Lansing "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:25:59

Time Test Ended: 17:52:44

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 3015.00 ft (KB) To 3039.00 ft (KB) (TVD)

Total Depth: 3039.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 3016.00 ft (KB)

Start Date: 2013.03.17

End Date:

2013.03.17

Start Time: 12:04:00

End Time:

17:52:44

Capacity: 8000.00 psig

Last Calib.:

2013.03.17

Time On Btm:

Time Off Btm:

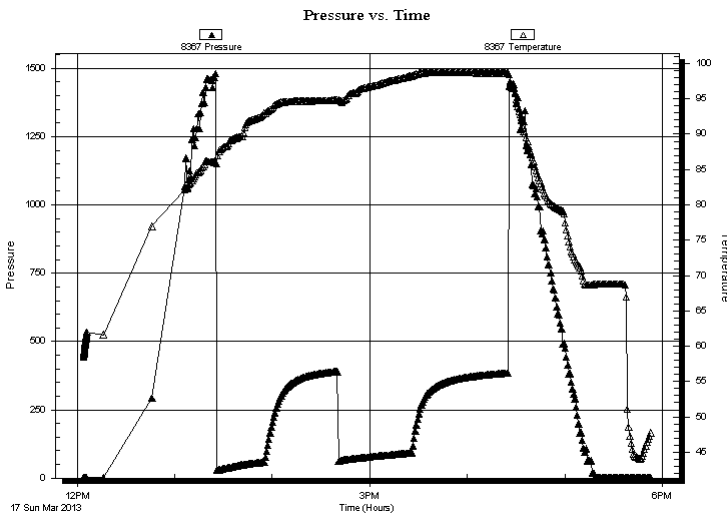
TEST COMMENT: IF: Fair Blow , BOB in 5 minutes

IS: No Blow Back

FF: Strong Blow , BOB in 2 minutes

FS: Weak Surface Blow Back

PRESSURE SUMMARY



Time
(Min.)

Pressure
(psig)

Temp
(deg F)

Annotation

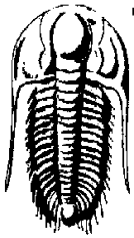
Recovery

Length (ft)	Description	Volume (bbl)
0.00	1225 GIP	0.00
62.00	GSY OMCW 15%G 5%O 32%M 48%W	0.87
98.00	GSY OCM 20%G 5%O 75%M	1.37

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

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50903

DST#: 3

ATTN: Mac Armstrong

Test Start: 2013.03.17 @ 12:03:59

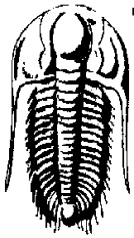
Tool Information

Drill Pipe:	Length:	2997.00 ft	Diameter:	3.80 inches	Volume:	42.04 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	38000.00 lb
					Total Volume:	42.04 bbl	Tool Chased	6.00 ft
Drill Pipe Above KB:		9.00 ft					String Weight: Initial	32000.00 lb
Depth to Top Packer:		3015.00 ft					Final	34000.00 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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Shut In Tool	5.00			2993.00	
Hydraulic tool	5.00			2998.00	
Jars	5.00			3003.00	
Safety Joint	2.00			3005.00	
Packer	5.00			3010.00	27.00 Bottom Of Top Packer
Packer	5.00			3015.00	
Stubb	1.00			3016.00	
Recorder	0.00	6798	Inside	3016.00	
Recorder	0.00	8367	Outside	3016.00	
Perforations	20.00			3036.00	
Bullnose	3.00			3039.00	24.00 Bottom Packers & Anchor

Total Tool Length: 51.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50903

DST#: 3

ATTN: Mac Armstrong

Test Start: 2013.03.17 @ 12:03:59

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 7.98 in³

Resistivity: ohm.m

Salinity: 5200.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity: 125000 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	1225 GIP	0.000
62.00	GSY OMCW 15%G 5%O 32%M 48%W	0.870
98.00	GSY OCM 20%G 5%O 75%M	1.375

Total Length: 160.00 ft Total Volume: 2.245 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW was .085 @ 55 degrees

Serial #: 6798

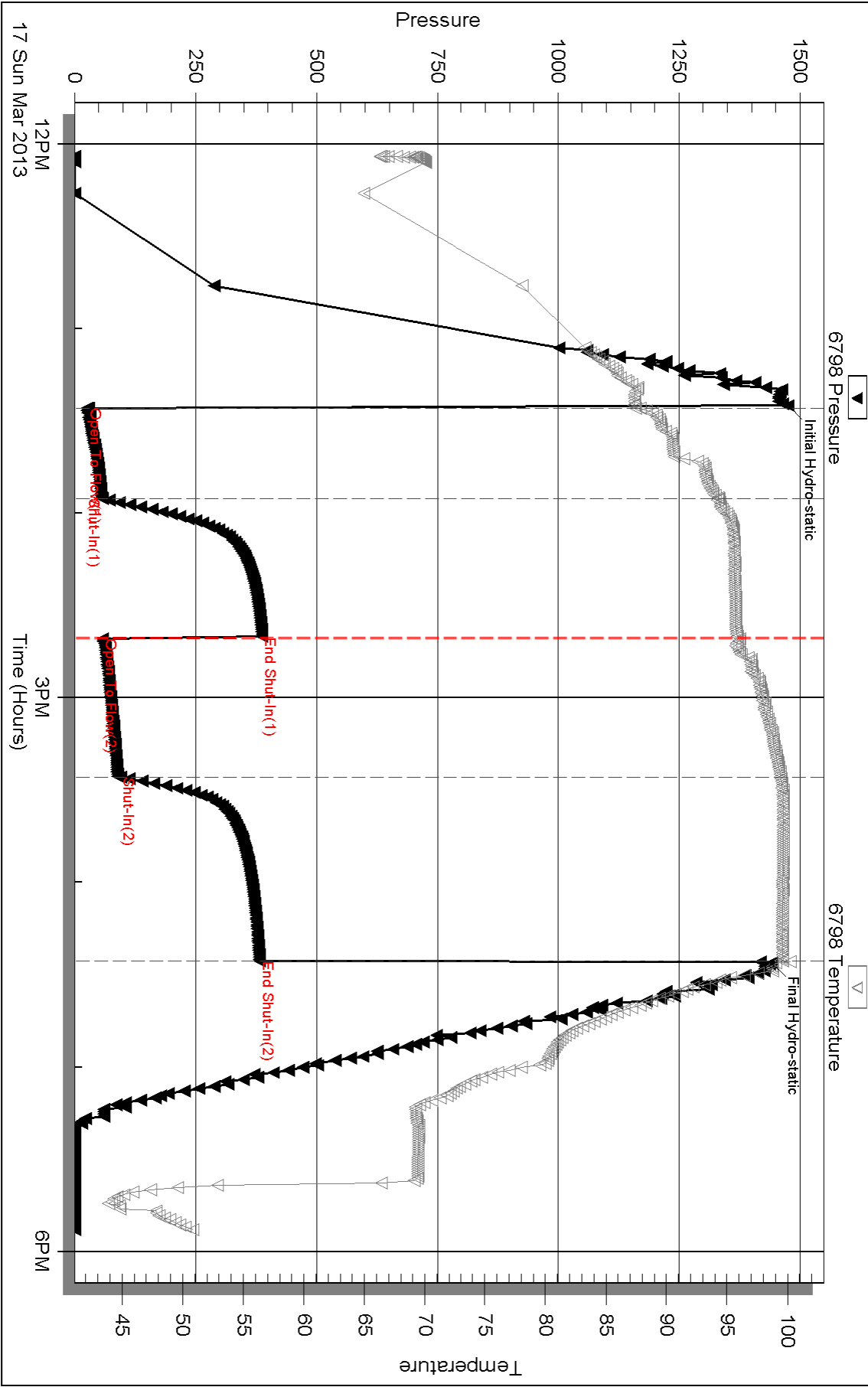
Inside

Ritchie Exploration

Ames P#8

DST Test Number: 3

Pressure vs. Time

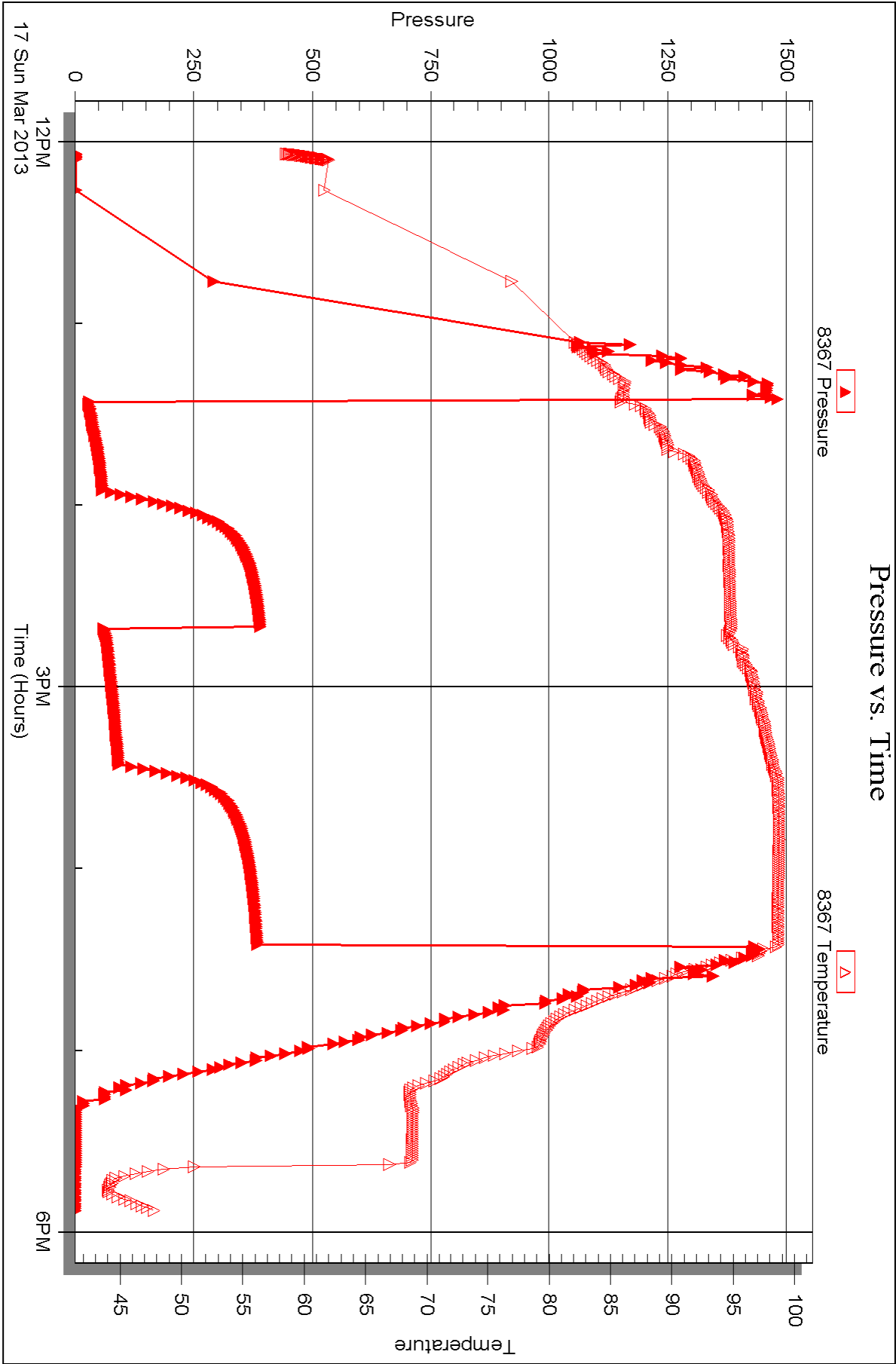


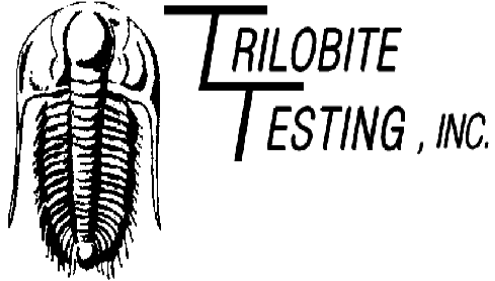
Serial #: 8367

Outside Ritchie Exploration

Ames P#8

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

Ames P #8

6-18S-10W Rice,KS

Start Date: 2013.03.18 @ 08:46:05

End Date: 2013.03.18 @ 14:10:50

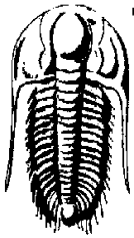
Job Ticket #: 50904 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.21 @ 11:50:04



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50904

DST#: 4

Test Start: 2013.03.18 @ 08:46:05

GENERAL INFORMATION:

Formation: **Lansing "H-L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:54:05

Time Test Ended: 14:10:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 3076.00 ft (KB) To 3218.00 ft (KB) (TVD)

Total Depth: 3218.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6798 Inside

Press@RunDepth: 95.99 psig @ 3077.00 ft (KB)

Start Date: 2013.03.18

End Date:

2013.03.18

Start Time: 08:46:06

End Time:

14:10:50

Capacity: 8000.00 psig

Last Calib.: 2013.03.18

Time On Btm: 2013.03.18 @ 09:52:05

Time Off Btm: 2013.03.18 @ 12:54:20

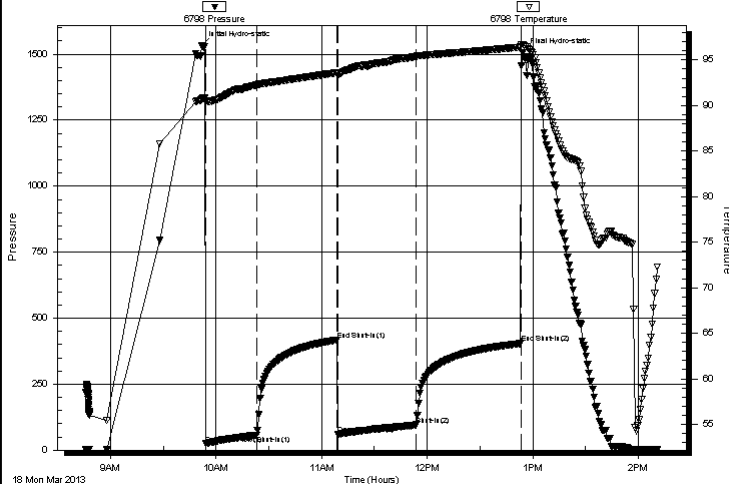
TEST COMMENT: IF: Weak Blow , Built to 3 1/2 inches

IS: No Blow back

FF: Weak Blow , Built to 1 1/2 inch

FS: No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1533.72	90.70	Initial Hydro-static
2	23.36	90.44	Open To Flow (1)
31	56.96	92.27	Shut-In(1)
77	417.60	93.60	End Shut-In(1)
77	59.14	93.43	Open To Flow (2)
122	95.99	95.36	Shut-In(2)
181	403.81	96.41	End Shut-In(2)
183	1506.41	96.71	Final Hydro-static

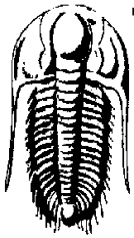
Recovery

Length (ft)	Description	Volume (bbl)
150.00	Mud	2.10

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

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50904

DST#: 4

Test Start: 2013.03.18 @ 08:46:05

GENERAL INFORMATION:

Formation: **Lansing "H-L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:54:05

Time Test Ended: 14:10:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 3076.00 ft (KB) To 3218.00 ft (KB) (TVD)

Reference Elevations: 1799.00 ft (KB)

Total Depth: 3218.00 ft (KB) (TVD)

1790.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 3077.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.18

End Date:

2013.03.18

Last Calib.:

2013.03.18

Start Time: 08:46:06

End Time:

14:10:50

Time On Btm:

Time Off Btm:

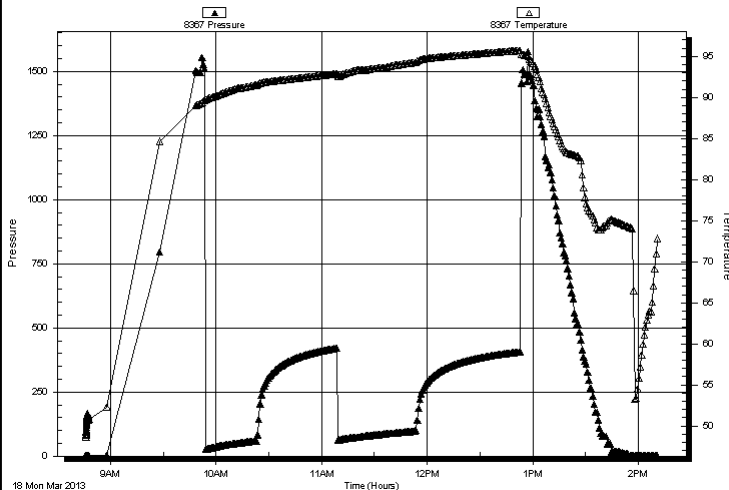
TEST COMMENT: IF: Weak Blow , Built to 3 1/2 inches

IS: No Blow back

FF: Weak Blow , Built to 1 1/2 inch

FS: No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

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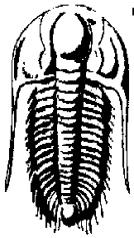
Recovery

Length (ft)	Description	Volume (bbl)
150.00	Mud	2.10

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50904

DST#: 4

ATTN: Mac Armstrong

Test Start: 2013.03.18 @ 08:46:05

Tool Information

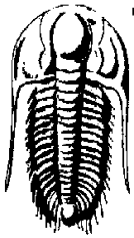
Drill Pipe:	Length:	3056.00 ft	Diameter:	3.80 inches	Volume:	42.87 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	38000.00 lb
					Total Volume:	42.87 bbl	Tool Chased	ft
Drill Pipe Above KB:		7.00 ft					String Weight: Initial	35000.00 lb
Depth to Top Packer:		3076.00 ft					Final	35000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		142.00 ft						
Tool Length:		169.00 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			3054.00		
Hydraulic tool	5.00			3059.00		
Jars	5.00			3064.00		
Safety Joint	2.00			3066.00		
Packer	5.00			3071.00	27.00	Bottom Of Top Packer
Packer	5.00			3076.00		
Stubb	1.00			3077.00		
Recorder	0.00	6798	Inside	3077.00		
Recorder	0.00	8367	Outside	3077.00		
Perforations	4.00			3081.00		
Change Over Sub	1.00			3082.00		
Drill Pipe	127.00			3209.00		
Change Over Sub	1.00			3210.00		
Perforations	5.00			3215.00		
Bullnose	3.00			3218.00	142.00	Bottom Packers & Anchor

Total Tool Length: 169.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50904

DST#: 4

ATTN: Mac Armstrong

Test Start: 2013.03.18 @ 08:46:05

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 47.00 sec/qt

Water Loss: 8.39 in³

Resistivity: ohm.m

Salinity: 7200.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	Mud	2.104

Total Length: 150.00 ft

Total Volume: 2.104 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

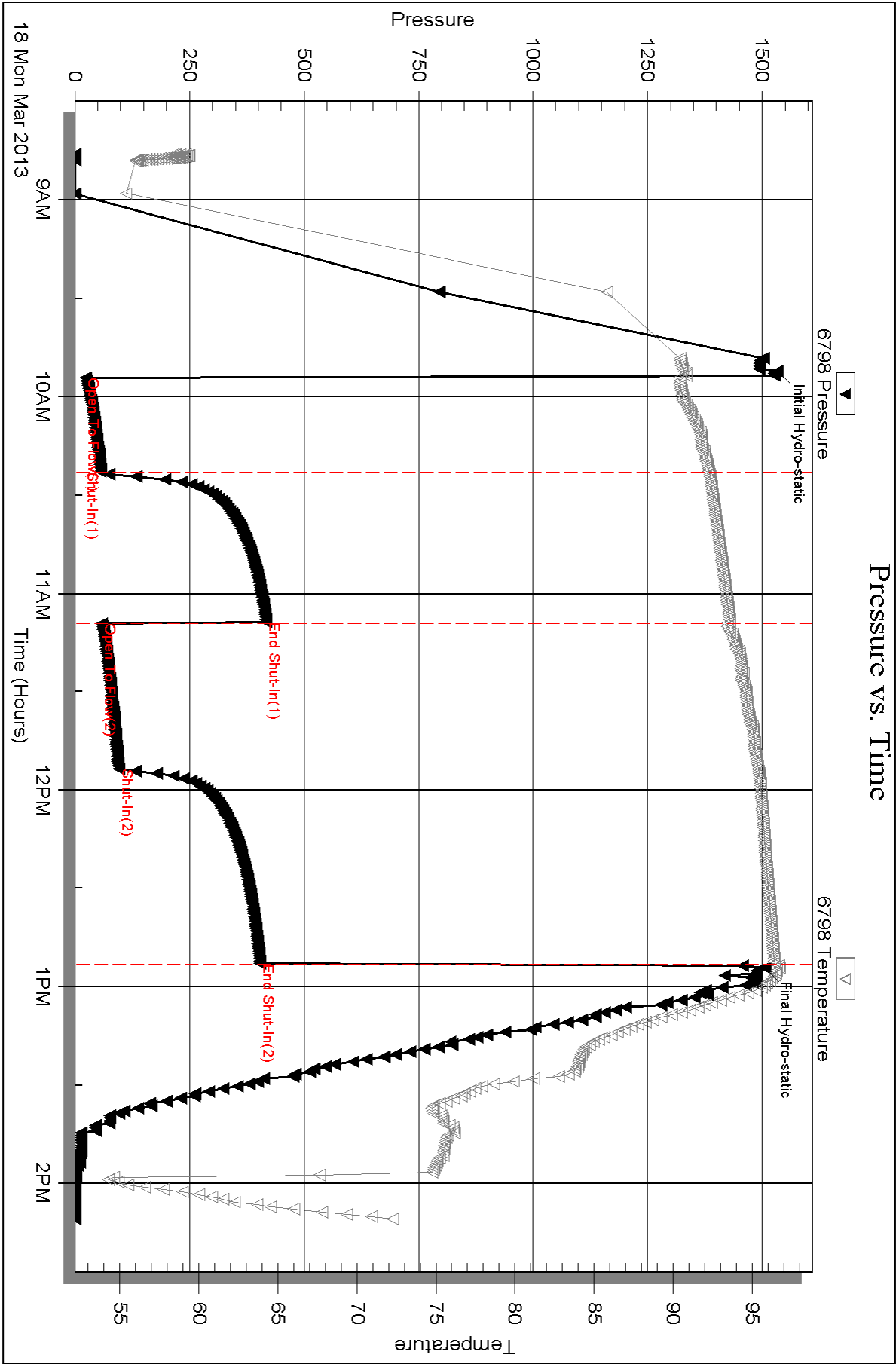
Serial #: 6798

Inside

Ritchie Exploration

Ames P#8

DST Test Number: 4

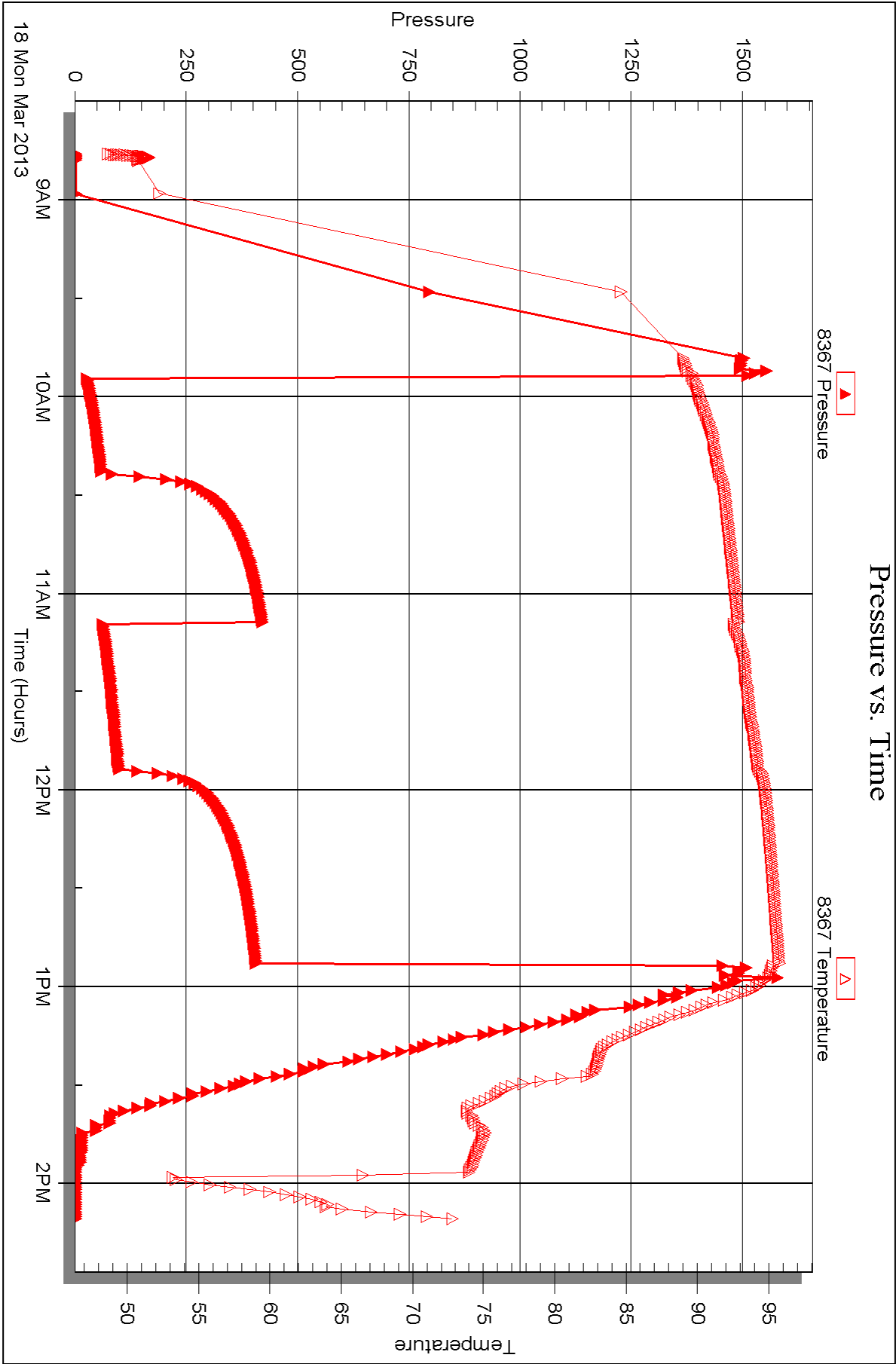


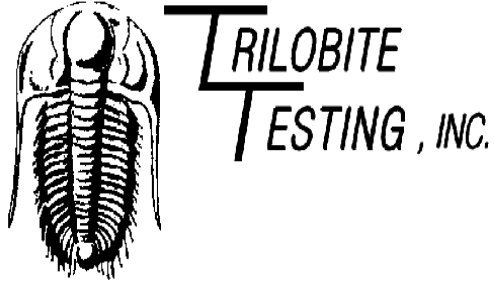
Serial #: 8367

Outside Ritchie Exploration

Ames P#8

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

Ames P #8

6-18S-10W Rice,KS

Start Date: 2013.03.18 @ 19:01:54

End Date: 2013.03.19 @ 01:38:54

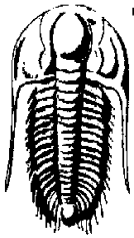
Job Ticket #: 50905 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.21 @ 11:48:42



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50905

DST#: 5

Test Start: 2013.03.18 @ 19:01:54

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:29:24

Time Test Ended: 01:38:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 3211.00 ft (KB) To 3235.00 ft (KB) (TVD)

Total Depth: 3235.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6798 Inside

Press@RunDepth: 860.17 psig @ 3212.00 ft (KB)

Start Date: 2013.03.18

End Date:

2013.03.19

Start Time: 19:01:55

End Time:

01:38:54

Capacity: 8000.00 psig

Last Calib.: 2013.03.19

Time On Btm: 2013.03.18 @ 20:23:39

Time Off Btm: 2013.03.18 @ 23:13:39

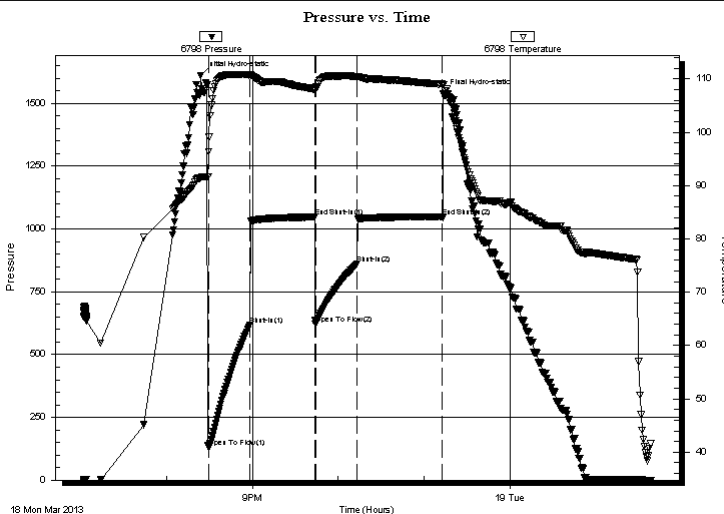
TEST COMMENT: IF: Strong Blow , BOB in 90 seconds

IS: No Blow Back

FF: Strong Blow , BOB in 2 minutes

FS: No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1612.13	91.42	Initial Hydro-static
6	129.12	96.37	Open To Flow (1)
35	617.26	110.75	Shut-In(1)
80	1047.70	108.06	End Shut-In(1)
81	622.56	108.43	Open To Flow (2)
110	860.17	110.42	Shut-In(2)
170	1048.76	108.99	End Shut-In(2)
170	1539.63	109.00	Final Hydro-static

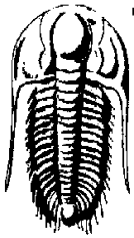
Recovery

Length (ft)	Description	Volume (bbl)
992.00	Water	13.92
434.00	GSY MOCW 20%G 5%M 25%O 50%W	6.09
372.00	GSY MWCO 20%G 5%M 30%W 45%O	5.22
90.00	Oil	1.26
0.00	GIP 120	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration

8100 E 22nd St N # 700
Wichita, KS 67278

ATTN: Mac Armstrong

6-18S-10W Rice,KS

Ames P #8

Job Ticket: 50905

DST#: 5

Test Start: 2013.03.18 @ 19:01:54

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:29:24

Time Test Ended: 01:38:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 45

Interval: 3211.00 ft (KB) To 3235.00 ft (KB) (TVD)

Total Depth: 3235.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1799.00 ft (KB)

1790.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 3212.00 ft (KB)

Start Date: 2013.03.18

End Date:

2013.03.19

Start Time: 19:01:55

End Time:

01:38:54

Capacity: 8000.00 psig

Last Calib.: 2013.03.19

Time On Btm:

Time Off Btm:

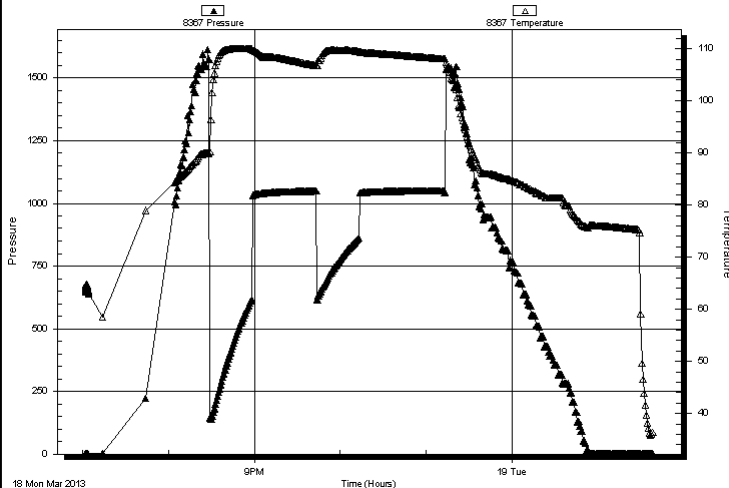
TEST COMMENT: IF: Strong Blow , BOB in 90 seconds

IS: No Blow Back

FF: Strong Blow , BOB in 2 minutes

FS: No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

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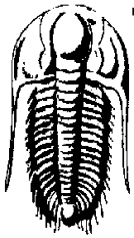
Recovery

Length (ft)	Description	Volume (bbl)
992.00	Water	13.92
434.00	GSY MOCW 20%G 5%M 25%O 50%W	6.09
372.00	GSY MWCO 20%G 5%M 30%W 45%O	5.22
90.00	Oil	1.26
0.00	GIP 120	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

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50905

DST#: 5

ATTN: Mac Armstrong

Test Start: 2013.03.18 @ 19:01:54

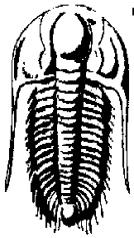
Tool Information

Drill Pipe:	Length:	3213.00 ft	Diameter:	3.80 inches	Volume:	45.07 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	45000.00 lb
					Total Volume:	45.07 bbl	Tool Chased	ft
Drill Pipe Above KB:		29.00 ft					String Weight: Initial	35000.00 lb
Depth to Top Packer:		3211.00 ft					Final	41000.00 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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Shut In Tool	5.00			3189.00	
Hydraulic tool	5.00			3194.00	
Jars	5.00			3199.00	
Safety Joint	2.00			3201.00	
Packer	5.00			3206.00	27.00 Bottom Of Top Packer
Packer	5.00			3211.00	
Stubb	1.00			3212.00	
Recorder	0.00	6798	Inside	3212.00	
Recorder	0.00	8367	Outside	3212.00	
Perforations	20.00			3232.00	
Bullnose	3.00			3235.00	24.00 Bottom Packers & Anchor

Total Tool Length: 51.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

6-18S-10W Rice,KS

8100 E 22nd St N # 700
Wichita, KS 67278

Ames P #8

Job Ticket: 50905

DST#: 5

ATTN: Mac Armstrong

Test Start: 2013.03.18 @ 19:01:54

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 47.00 sec/qt

Water Loss: 8.78 in³

Resistivity: ohm.m

Salinity: 7200.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

39 deg API

Water Salinity:

30000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
992.00	Water	13.915
434.00	GSY MOCW 20%G 5%M 25%O 50%W	6.088
372.00	GSY MWCO 20%G 5%M 30%W 45%O	5.218
90.00	Oil	1.262
0.00	GIP 120	0.000

Total Length: 1888.00 ft Total Volume: 26.483 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity was 40.2 @ 48 degrees

RW was .29 @ 55 degrees

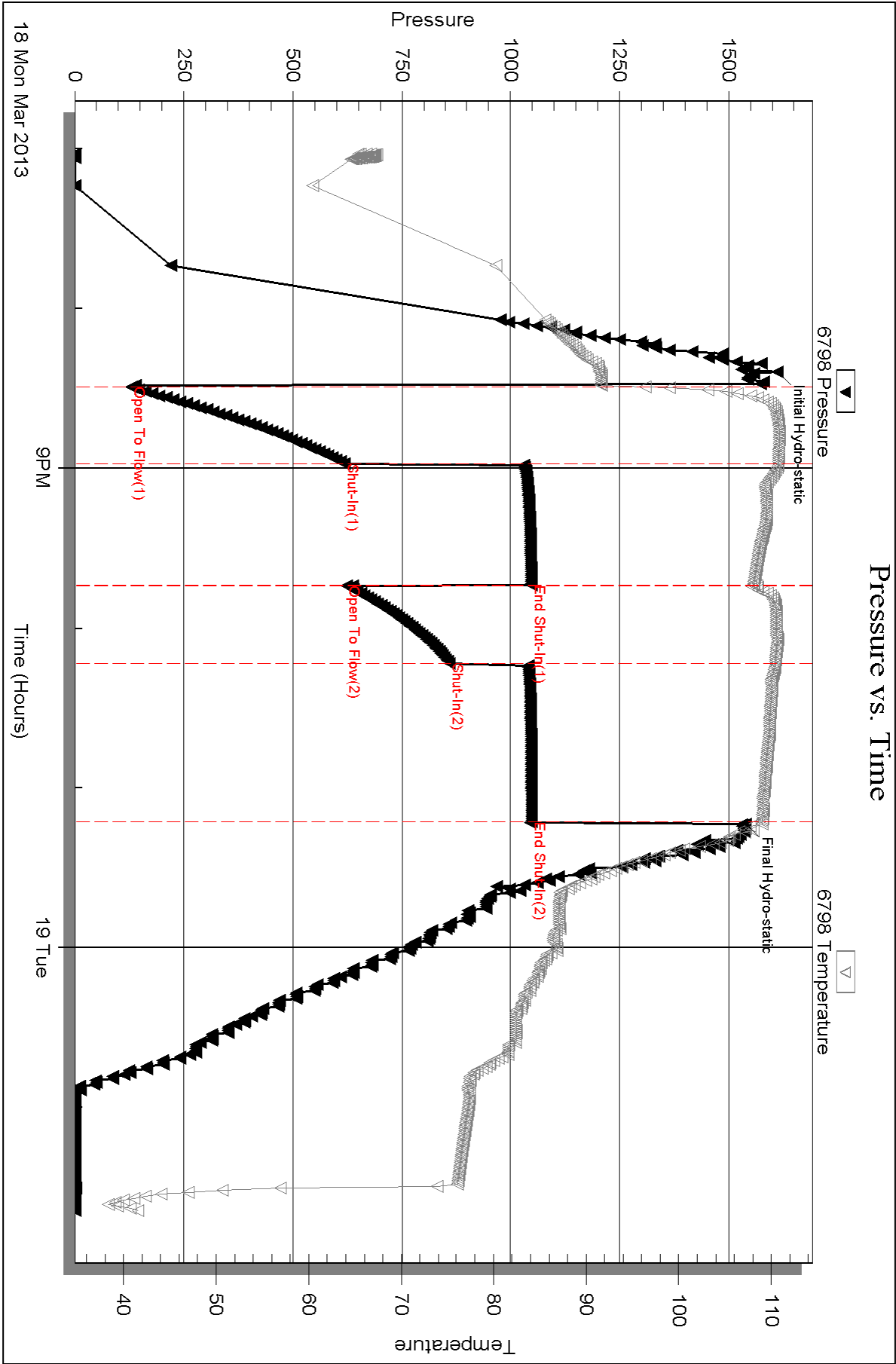
Serial #: 6798

Inside

Ritchie Exploration

Ames P#8

DST Test Number: 5

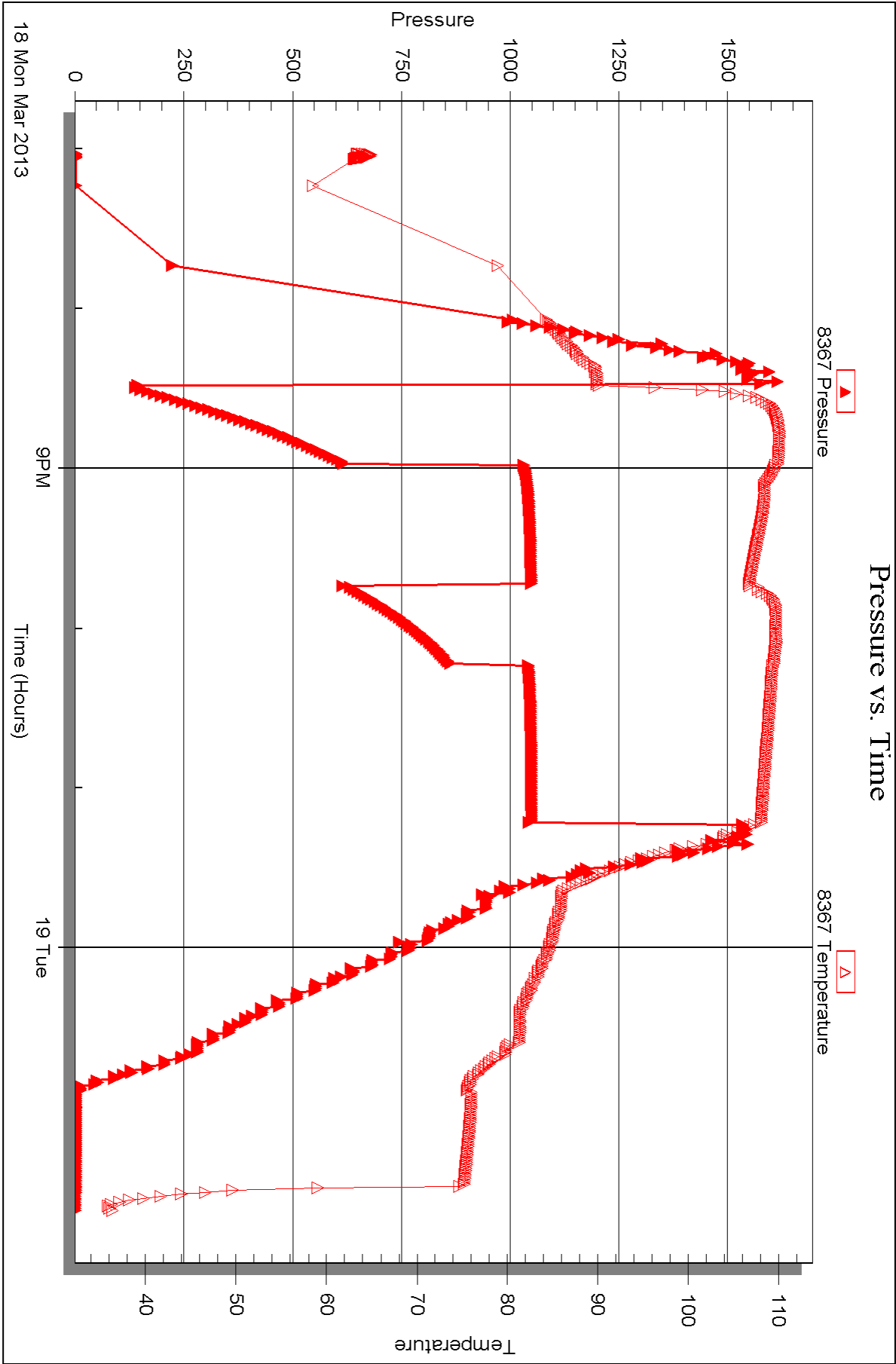


Serial #: 8367

Outside Ritchie Exploration

Ames P#8

DST Test Number: 5





**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **50901**

Well Name & No. Ames P 8 Test No. 1 Date 03/16/13
 Company Ritchie Exploration Elevation 1799 KB 1790 GL
 Address 8100 E 22nd St N # 700 Wichita, KS 67278
 Co. Rep / Geo. Mac Armstrong Rig Southwind 2
 Location: Sec. 6 Twp. 18S Rge. 10W Co. Rice State KS

Interval Tested 2748 - 2812 Zone Tested LeCompton Lime
 Anchor Length 64 Drill Pipe Run 2743 Mud Wt. 8.7
 Top Packer Depth 2743 Drill Collars Run 0 Vis 46
 Bottom Packer Depth 2748 Wt. Pipe Run 0 WL 8.8
 Total Depth 2812 Chlorides 3500 ppm System LCM 1

Blow Description IF: weak Blow, 1 1/2 inches, Dried off to 1/2 inch

ISI: NO BLOW BACK

FF: weak Surface Blow

FSI: NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>87</u>	<u>Mud</u>				

Rec Total 87 BHT 95 Gravity N/C API RW N/C @ N/C F Chlorides N/C ppm

(A) Initial Hydrostatic 1326
 (B) First Initial Flow 32
 (C) First Final Flow 46
 (D) Initial Shut-In 692
 (E) Second Initial Flow 46
 (F) Second Final Flow 57
 (G) Final Shut-In 664
 (H) Final Hydrostatic 1290

☒ Test 1150
☒ Jars 250
☒ Safety Joint 75
☐ Circ Sub
☐ Hourly Standby
☒ Mileage (140) 217
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
 Sub Total 1692

T-On Location 03:15
 T-Started 04:04
 T-Open 05:46
 T-Pulled 808:51
 T-Out 10:29
 Comments
☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total 0
 Total 1692
 MP/DST Disc't

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



**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **50902**

Well Name & No. Ames P 8 Test No. 2 Date 6/3/16/13
 Company Ritchie Exploration Elevation 1799 KB 1790 GL
 Address 8100 E 22nd ST N #700 Wichita, KS 67278
 Co. Rep / Geo. Mac Armstrong Rig Southwind 2
 Location: Sec. 6 Twp. 18S Rge. 10W Co. Rice State KS

Interval Tested 2936 - 3022 Zone Tested Lansing
 Anchor Length 86 Drill Pipe Run 2933 Mud Wt. 8.9
 Top Packer Depth 2931 Drill Collars Run 0 Vis 5.3
 Bottom Packer Depth 2936 Wt. Pipe Run 0 WL 8.0
 Total Depth 3022 Chlorides 5200 ppm System LCM 1

Blow Description IF: Fair Blow, Built to 9 inches
ISI: NO Blow Back

PF: Strong Blow, BOB in 30 seconds

FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>GIP</u>				
<u>30</u>	<u>V50CM</u>		<u>1</u>		<u>99</u>

Rec Total 30 BHT 99 Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic 1507
 (B) First Initial Flow 51
 (C) First Final Flow 61
 (D) Initial Shut-In 251
 (E) Second Initial Flow 60
 (F) Second Final Flow 64
 (G) Final Shut-In 270
 (H) Final Hydrostatic 1455

☒ Test 1150
☒ Jars 250
☒ Safety Joint 75
☐ Circ Sub
☐ Hourly Standby
☒ Mileage (140) 217
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
 Sub Total 1692

T-On Location 23:15
 T-Started 23:54
 T-Open 01:34
 T-Pulled 04:36
 T-Out 06:05
 Comments
☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total 0
 Total 1692
 MP/DST Disc't

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

W. I. M. M. T. M.



**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **50903**

Well Name & No. Ames P 8 Test No. 3 Date 03/17/13
Company Ritchie Exploration Elevation 1799 KB 1790 GL
Address 8100 E 22nd St N # 700 Wichita, KS 67278
Co. Rep / Geo. Mac Armstrong Rig Southwind 2
Location: Sec. 6 Twp. 18S Rge. 10W Co. Rice State KS

Interval Tested 3015 - 3039 Zone Tested Lansing "G"
Anchor Length 24 Drill Pipe Run 2997 Mud Wt. 8.9
Top Packer Depth 3010 Drill Collars Run 0 Vis 53
Bottom Packer Depth 3015 Wt. Pipe Run 0 WL 8.0
Total Depth 3039 Chlorides 5200 ppm System LCM 1

Blow Description IF: Fair Blow, BOB in 5 minutes

ISI: NO Blow Back

FF: Strong Blow, BOB in 2 minutes

FSI: Weak Surface Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>1225</u>	<u>GTP</u>				
<u>98</u>	<u>GSY OCM</u>	<u>20</u>	<u>5</u>		<u>75</u>
<u>62</u>	<u>GSY OMCW</u>	<u>15</u>	<u>5</u>	<u>48</u>	<u>32</u>

Rec Total 160 BHT 99 Gravity N/C API RW .085 @ 55 °F Chlorides 125000 ppm

(A) Initial Hydrostatic <u>1476</u>	☐ Test <u>1150</u>	T-On Location <u>11:30</u>
(B) First Initial Flow <u>26</u>	☒ Jars <u>250</u>	T-Started <u>12:03</u>
(C) First Final Flow <u>58</u>	☒ Safety Joint <u>75</u>	T-Open <u>13:25</u>
(D) Initial Shut-In <u>388</u>	☐ Circ Sub	T-Pulled <u>16:25</u>
(E) Second Initial Flow <u>58</u>	☐ Hourly Standby	T-Out <u>17:52</u>
(F) Second Final Flow <u>95</u>	☒ Mileage <u>(140)</u> <u>217</u>	Comments
(G) Final Shut-In <u>382</u>	☐ Sampler	
(H) Final Hydrostatic <u>1442</u>	☐ Straddle	
	☐ Shale Packer	☐ Ruined Shale Packer
	☐ Extra Packer	☐ Ruined Packer
	☐ Extra Recorder	☐ Extra Copies
	☐ Day Standby	Sub Total <u>0</u>
	☐ Accessibility	Total <u>1692</u>
Initial Open <u>30</u>		MP/DST Disc't
Initial Shut-In <u>45</u>		
Final Flow <u>45</u>		
Final Shut-In <u>60</u>		
	Sub Total <u>1692</u>	



**TRILOBITE
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1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **50904**

Well Name & No. AMES P 8 Test No. 4 Date 03/18/13
Company Ritchie Exploration Elevation 1799 KB 1790 GL
Address 8100 E 22nd St N Wichita, KS 67278
Co. Rep / Geo. Mac Armstrong Rig Southwind 2
Location: Sec. 6 Twp. 18S Rge. 10W Co. RICE State KS

Interval Tested 3076 - 3218 Zone Tested Lansing "H-L"
Anchor Length 142 Drill Pipe Run 3056 Mud Wt. 9.1
Top Packer Depth 3071 Drill Collars Run 0 Vis 47
Bottom Packer Depth 3076 Wt. Pipe Run 0 WL 8.4
Total Depth 3218 Chlorides 7200 ppm System LCM 1/2

Blow Description IF: weak Blow, Built to 3 1/2 inches

ISI: no Blow Back

FF: weak Blow, Built to 1 1/2 inch

FSI: No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>Mud</u>				

Rec Total 150 BHT 96 Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic 1534
(B) First Initial Flow 23
(C) First Final Flow 57
(D) Initial Shut-In 418
(E) Second Initial Flow 59
(F) Second Final Flow 96
(G) Final Shut-In 404
(H) Final Hydrostatic 1506

☒ Test 1150
☒ Jars 250
☒ Safety Joint 75
☐ Circ Sub
☐ Hourly Standby
☒ Mileage (140) 217
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
Sub Total 1692

T-On Location 08:15
T-Started 08:46
T-Open 09:54
T-Pulled 12:53
T-Out 14:10
Comments

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
Sub Total 0
Total 1692
MP/DST Disc't

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



**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **50905**

Well Name & No. Ames P 8 Test No. 5 Date 03/18/13
 Company Ritchie Exploration Elevation 1799 KB 1790 GL
 Address 8100 E 22nd St N #700 Wichita, KS 67278
 Co. Rep / Geo. Mac Armstrong Rig Southwind 2
 Location: Sec. 6 Twp. 18S Rge. 10W Co. Rice State KS

Interval Tested 3211 - 3235 Zone Tested Arbuckle
 Anchor Length 24 Drill Pipe Run 3213 Mud Wt. 9.3
 Top Packer Depth 3206 Drill Collars Run 0 Vis 47
 Bottom Packer Depth 3211 Wt. Pipe Run 0 WL 8.8
 Total Depth 3235 Chlorides 7200 ppm System LCM 1/2

Blow Description IF: strong Blow, BOB in 90 second

ISI: NO Blow BACK

FF: Strong Blow, BOB in 2 minutes

FSL: NO Blow BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>GIP</u>				
<u>90</u>	<u>oil</u>				
<u>372</u>	<u>Gsy MWCO</u>	<u>20</u>	<u>45</u>	<u>30</u>	<u>5</u>
<u>434</u>	<u>Gsy MOCW</u>	<u>20</u>	<u>25</u>	<u>50</u>	<u>5</u>
<u>992</u>	<u>water</u>				

Rec Total 1888 BHT 109 Gravity 39 API RW .29 @ 55 °F Chlorides 30000 ppm

(A) Initial Hydrostatic 1612

(B) First Initial Flow 129

(C) First Final Flow 617

(D) Initial Shut-In 1048

(E) Second Initial Flow 623

(F) Second Final Flow 860

(G) Final Shut-In 1049

(H) Final Hydrostatic 1540

Initial Open 30

Initial Shut-In 45

Final Flow 30

Final Shut-In 60

☒ Test 1150

☒ Jars 250

☒ Safety Joint 75

☐ Circ Sub

☐ Hourly Standby

☒ Mileage (140) 217

☐ Sampler

☐ Straddle

☐ Shale Packer

☐ Extra Packer

☐ Extra Recorder

☐ Day Standby

☐ Accessibility

Sub Total 1692

T-On Location 18:30

T-Started 19:01

T-Open 20:29

T-Pulled 23:12

T-Out 01:38

Comments

☐ Ruined Shale Packer

☐ Ruined Packer

☐ Extra Copies

Sub Total 0

Total 1692

MP/DST Disc't