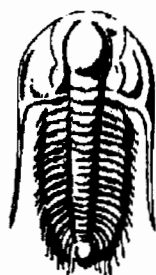


15-165-21859

14-16s-16w



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Samuel Gary JR & Associates Inc.**

1515 Wynkoop St
Suite 700
Denver, CO 80202

ATTN: Clayton Camozzi

14-16s-16w Rush KS

Long Family Partnership #1-14

Start Date: 2009.11.14 @ 12:51:21

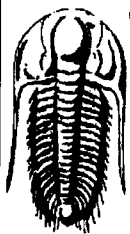
End Date: 2009.11.14 @ 20:24:21

Job Ticket #: 36642 DST #: 1

KCC
MAR 03 2010
CONFIDENTIAL

RECEIVED
MAR 05 2010
KCC WICHITA

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary JR & Associates Inc.

Long Family Partnership #1-14

1515 Wynkoop St
Suite 700
Denver, CO 80202
ATTN: Clayton Camozzi

14-16s-16w Rush KS

Job Ticket: 36642 DST#: 1

Test Start: 2009.11.14 @ 12:51:21

GENERAL INFORMATION:

Formation: LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:42:36

Time Test Ended: 20:24:21

Test Type: Conventional Bottom Hole

Tester: Tyson Flax

Unit No: 44

Interval: 3255.00 ft (KB) To 3305.00 ft (KB) (TVD)

Total Depth: 3305.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1960.00 ft (KB)

1950.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6719

Inside

Press@RunDepth: 74.98 psig @ 3260.00 ft (KB)

Start Date: 2009.11.14

End Date:

2009.11.14

Capacity: 8000.00 psig

Last Calib.: 2009.11.14

Start Time: 12:51:26

End Time:

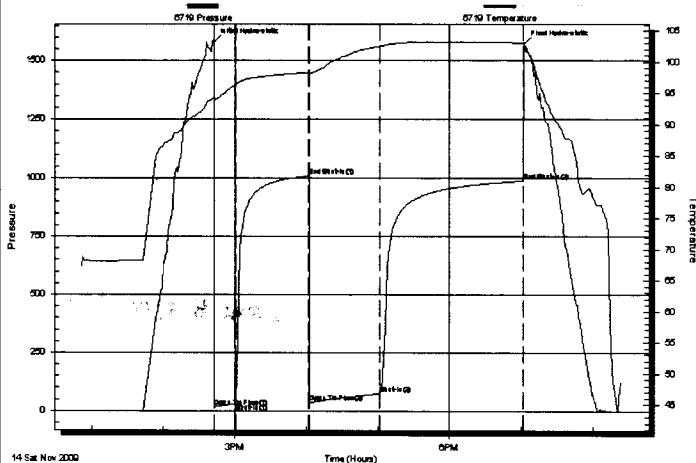
20:24:20

Time On Btm: 2009.11.14 @ 14:42:06

Time Off Btm: 2009.11.14 @ 19:02:35

TEST COMMENT: IFP-Weak blow built to 3"
ISI-no blow back
FFP-Weak blow built to 5.5"
FSI-no blow back

Pressure vs. Time



PRESSURE SUMMARY

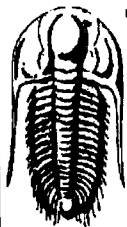
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1579.37	94.31	Initial Hydro-static
1	16.12	93.98	Open To Flow (1)
19	30.81	96.38	Shut-In (1)
80	1008.68	98.36	End Shut-In (1)
81	34.94	98.19	Open To Flow (2)
140	74.98	102.53	Shut-In (2)
260	987.88	103.12	End Shut-In (2)
261	1572.00	102.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
122.00	MW 90%W,10%M	1.73

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	12.00	41.88



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary JR & Associates Inc.

1515 Wynkoop St
Suite 700
Denver, CO 80202
ATTN: Clayton Camozzi

Long Family Partnership #1-14

14-16s-16w Rush KS

Job Ticket: 36642

DST#: 1

Test Start: 2009.11.14 @ 12:51:21

Tool Information

Drill Pipe:	Length: 3251.00 ft	Diameter: 3.82 inches	Volume: 46.08 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 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: 60000.00 lb
		Total Volume: 46.08 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3255.00 ft			Final 45000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3235.00	
Shut In Tool	5.00			3240.00	
Hydraulic tool	5.00			3245.00	
Packer	5.00			3250.00	21.00 Bottom Of Top Packer
Packer	5.00			3255.00	
Stubb	1.00			3256.00	
Perforations	3.00			3259.00	
Change Over Sub	1.00			3260.00	
Recorder	0.00	6719	Inside	3260.00	
Recorder	0.00	6669	Inside	3260.00	
Blank Spacing	31.00			3291.00	
Change Over Sub	1.00			3292.00	
Perforations	10.00			3302.00	
Bullnose	3.00			3305.00	50.00 Bottom Packers & Anchor

Total Tool Length: 71.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary JR & Associates Inc.

Long Family Partnership #1-14

1515 Wynkoop St

14-16s-16w Rush KS

Suite 700

Job Ticket: 36642

DST#: 1

Denver, CO 80202

Test Start: 2009.11.14 @ 12:51:21

ATTN: Clayton Camozzi

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:

41000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
122.00	MW 90%W,10%M	1.729

Total Length: 122.00 ft Total Volume: 1.729 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .37@33' F

Serial #: 6719

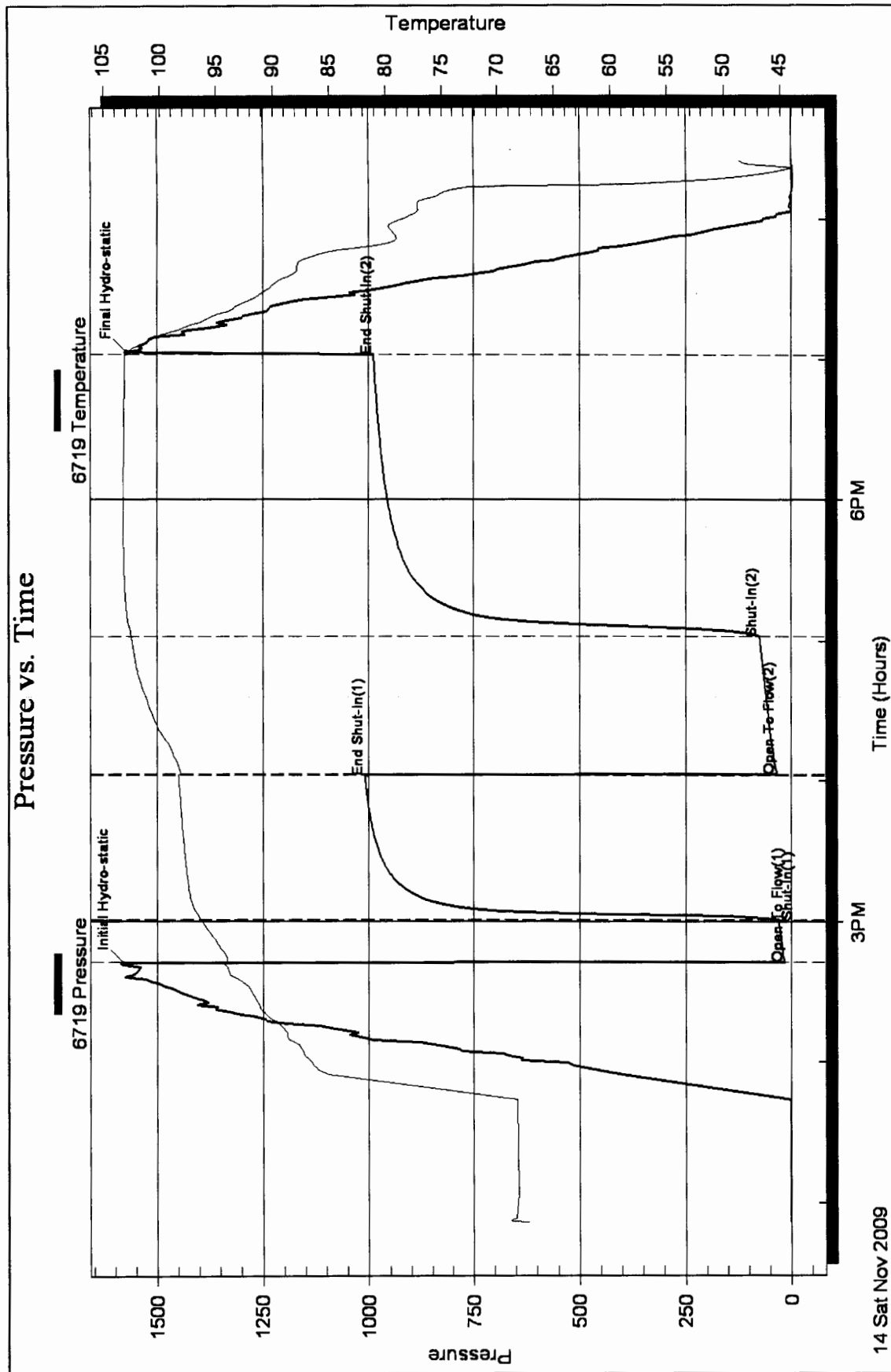
Inside

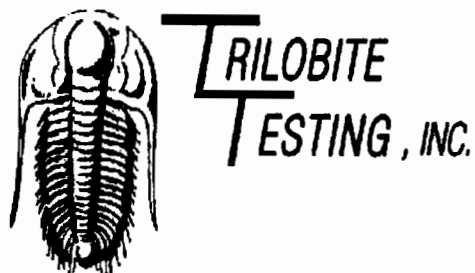
Samuel Gary JR & Associates Inc.

14-16s-16w Rush KS

DST Test Number: 1

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Samuel Gary JR & Associates Inc.**

1515 Wynkoop St
Suite 700
Denver, CO 80202

ATTN: Clayton Camozzi

14-16s-16w Rush KS

Long Family Partnership #1-14

Start Date: 2009.11.15 @ 21:01:26

End Date: 2009.11.16 @ 03:52:56

Job Ticket #: 36643 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary JR & Associates Inc.

1515 Wynkoop St
Suite 700
Denver, CO 80202
ATTN: Clayton Camozzi

Long Family Partnership #1-14

14-16s-16w Rush KS

Job Ticket: 36643 **DST#: 2**

Test Start: 2009.11.15 @ 21:01:26

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 22:46:41

Time Test Ended: 03:52:56

Test Type: **Conventional Bottom Hole**

Tester: **Tyson Flax**

Unit No: **44**

Interval: **3529.00 ft (KB) To 3543.00 ft (KB) (TVD)**

Total Depth: **3543.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **1960.00 ft (KB)**

1950.00 ft (CF)

KB to GR/CF: **10.00 ft**

Serial #: 6669 **Inside**

Press@RunDepth: **53.03 psig @ 3530.00 ft (KB)**

Start Date: **2009.11.15**

End Date:

2009.11.16

Capacity: **8000.00 psig**

Last Calib.: **2009.11.16**

Start Time: **21:01:27**

End Time:

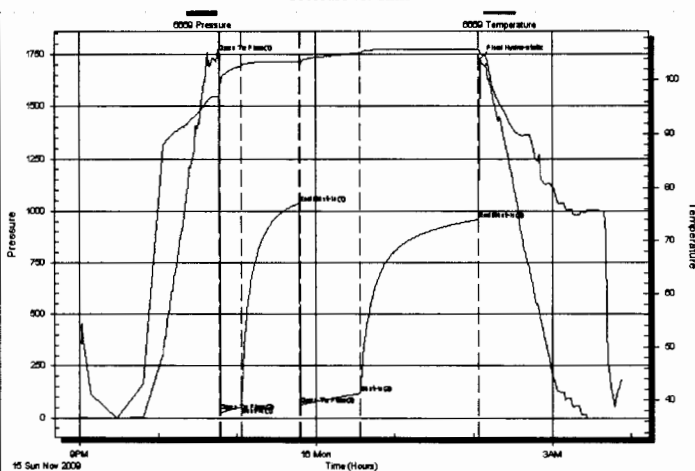
03:52:56

Time On Btm:

Time Off Btm: **2009.11.16 @ 02:04:41**

TEST COMMENT: IFP-BOB in 10 min
ISI-Weak surface blow back died in 20 min
FFP-BOB in 14.5 min
FSI-Weak surface blow back throughout

Pressure vs. Time



PRESSURE SUMMARY

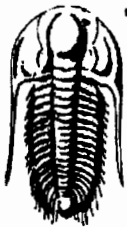
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1757.74	97.14	Open To Flow (1)
1	28.77	97.45	Open To Flow (2)
17	53.03	102.70	Shut-In (1)
61	1037.23	103.49	End Shut-In (1)
62	62.48	102.92	Open To Flow (3)
107	116.57	105.21	Shut-In (2)
197	958.09	105.74	End Shut-In (2)
198	1725.40	105.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OCM 50%O,50%M	0.43
240.00	CO	3.40
0.00	90' GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary JR & Associates Inc.

Long Family Partnership #1-14

1515 Wynkoop St
Suite 700
Denver, CO 80202
ATTN: Clayton Camozzi

14-16s-16w Rush KS

Job Ticket: 36643

DST#: 2

Test Start: 2009.11.15 @ 21:01:26

Tool Information

Drill Pipe:	Length: 3532.00 ft	Diameter: 3.82 inches	Volume: 50.07 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 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: 60000.00 lb
		Total Volume: 50.07 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3529.00 ft			Final 50000.00 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:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3509.00	
Shut In Tool	5.00			3514.00	
Hydraulic tool	5.00			3519.00	
Packer	5.00			3524.00	21.00 Bottom Of Top Packer
Packer	5.00			3529.00	
Stubb	1.00			3530.00	
Recorder	0.00	6669	Inside	3530.00	
Recorder	0.00	6719	Inside	3530.00	
Perforations	10.00			3540.00	
Bullnose	3.00			3543.00	14.00 Bottom Packers & Anchor
Total Tool Length:	35.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary JR & Associates Inc.

Long Family Partnership #1-14

1515 Wynkoop St

14-16s-16w Rush KS

Suite 700

Job Ticket: 36643

DST#: 2

Denver, CO 80202

Test Start: 2009.11.15 @ 21:01:26

ATTN: Clayton Camozzi

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

23 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	OCM 50%O,50%M	0.425
240.00	CO	3.402
0.00	90' GIP	0.000

Total Length: 270.00 ft

Total Volume: 3.827 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 2

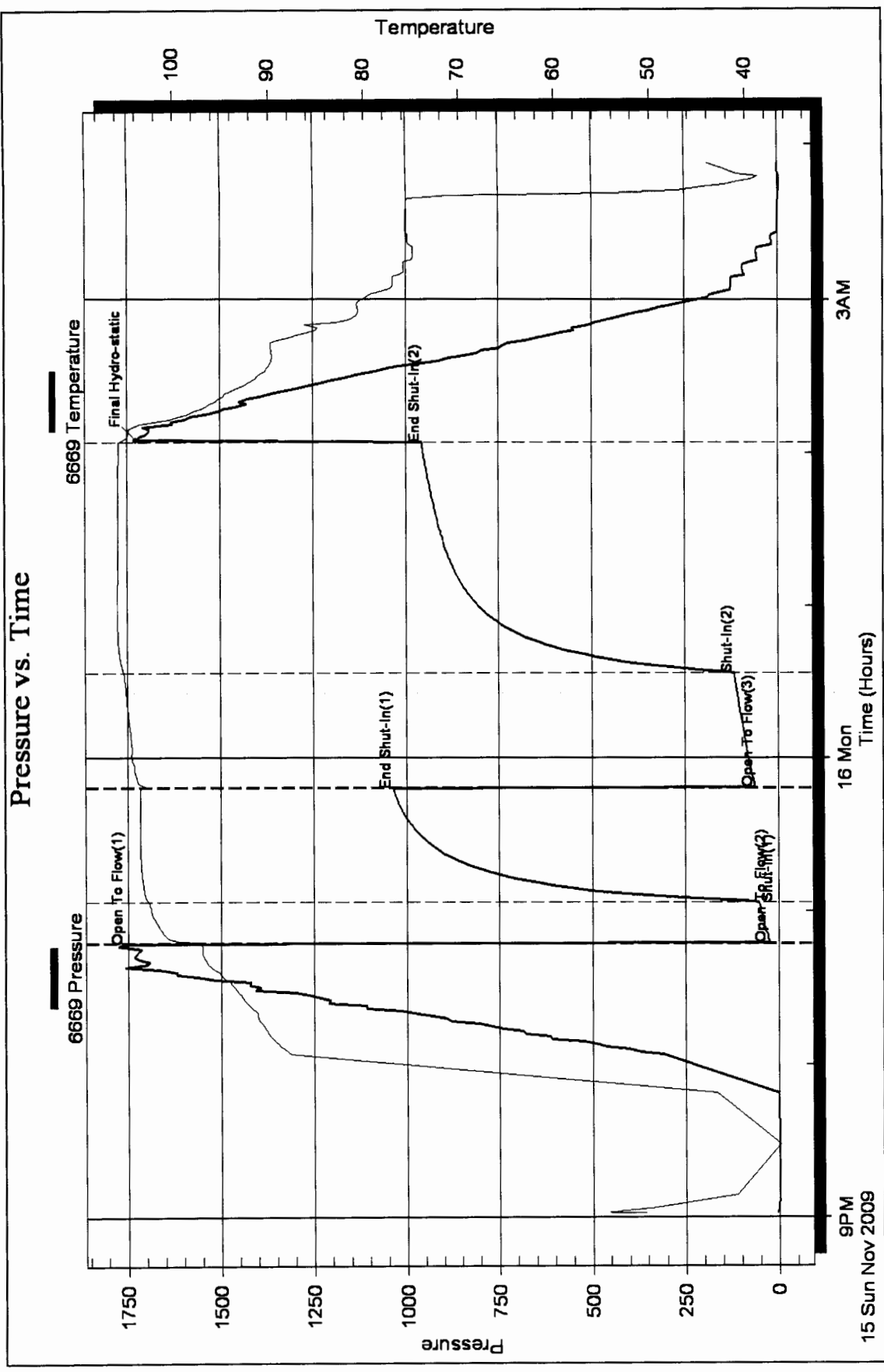
14-16s-16w Rush KS

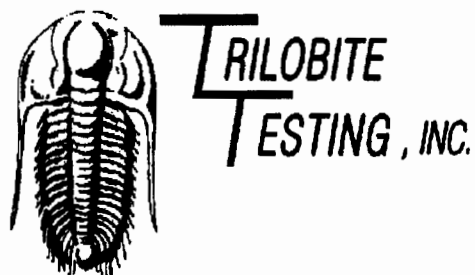
Samuel Gary JR & Associates Inc.

Inside

Serial #: 6669

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Samuel Gary JR & Associates Inc.**

1515 Wynkoop St
Suite 700
Denver, CO 80202

ATTN: Clayton Camozzi

14-16s-16w Rush KS

Long Family Partnership #1-14

Start Date: 2009.11.16 @ 13:40:43

End Date: 2009.11.16 @ 21:01:13

Job Ticket #: 36644 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary JR & Associates Inc.

1515 Wynkoop St
Suite 700
Denver, CO 80202
ATTN: Clayton Camozzi

Long Family Partnership #1-14

14-16s-16w Rush KS

Job Ticket: 36644 **DST#: 3**

Test Start: 2009.11.16 @ 13:40:43

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 15:31:13

Time Test Ended: 21:01:13

Test Type: **Conventional Bottom Hole**

Tester: **Tyson Flax**

Unit No: **44**

Interval: **3543.00 ft (KB) To 3551.00 ft (KB) (TVD)**

Total Depth: **3551.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **1960.00 ft (KB)**

1950.00 ft (CF)

KB to GR/CF: **10.00 ft**

Serial #: 6719 **Inside**

Press@RunDepth: **64.79 psig @ 3544.00 ft (KB)**

Start Date: **2009.11.16**

End Date:

2009.11.16

Start Time: **13:40:48**

End Time:

21:01:12

Capacity: **8000.00 psig**

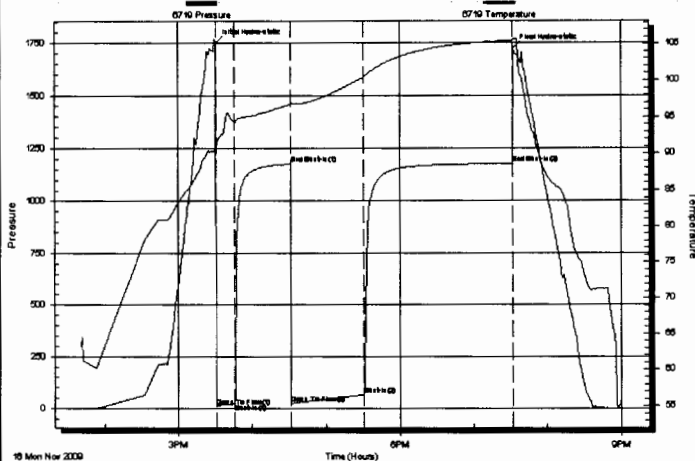
Last Calib.: **2009.11.16**

Time On Btm: **2009.11.16 @ 15:30:43**

Time Off Btm: **2009.11.16 @ 19:32:42**

TEST COMMENT: IFP-Weak blow built to 3"
IS-Weak surface blow back died in 1 min
FFP-Weak blow built to 7"
FSI-no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1752.46	91.31	Initial Hydro-static
1	11.60	90.85	Open To Flow (1)
16	22.35	94.26	Shut-In(1)
61	1175.24	96.69	End Shut-In(1)
61	24.41	96.88	Open To Flow (2)
120	64.79	100.37	Shut-In(2)
241	1176.28	105.47	End Shut-In(2)
242	1724.03	105.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	MM90%W,10%M	1.56

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary JR & Associates Inc.

Long Family Partnership #1-14

1515 Wynkoop St

14-16s-16w Rush KS

Suite 700

Job Ticket: 36644

DST#: 3

Denver, CO 80202

Test Start: 2009.11.16 @ 13:40:43

ATTN: Clayton Camozzi

Tool Information

Drill Pipe:	Length: 3532.00 ft	Diameter: 3.82 inches	Volume: 50.07 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 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:	60000.00 lb
			Total Volume: 50.07 bbl	Tool Chased	ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3543.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	8.00 ft				
Tool Length:	29.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3523.00	
Shut In Tool	5.00			3528.00	
Hydraulic tool	5.00			3533.00	
Packer	5.00			3538.00	21.00 Bottom Of Top Packer
Packer	5.00			3543.00	
Stubb	1.00			3544.00	
Recorder	0.00	6669	Inside	3544.00	
Recorder	0.00	6719	Inside	3544.00	
Perforations	4.00			3548.00	
Bullnose	3.00			3551.00	8.00 Bottom Packers & Anchor
Total Tool Length:	29.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary JR & Associates Inc.

Long Family Partnership #1-14

1515 Wynkoop St

14-16s-16w Rush KS

Suite 700

Job Ticket: 36644

DST#: 3

Denver, CO 80202

Test Start: 2009.11.16 @ 13:40:43

ATTN: Clayton Carozzi

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:

22500 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	MM90%W,10%M	1.559

Total Length: 110.00 ft

Total Volume: 1.559 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .50@42' F

Serial #: 6719

Inside Samuel Gary JR & Associates Inc.

14-16s-16w Rush KS

DST Test Number: 3

Pressure vs. Time

