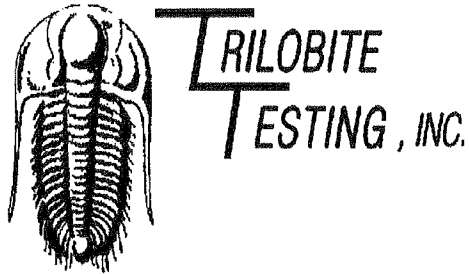


15-009-25184

36-17s-13w

IND



DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr & Associates**

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Ferial

36 17S 13W Barton KS

Jacobs # 1-36

Start Date: 2008.05.10 @ 13:25:21

End Date: 2008.05.10 @ 18:34:06

Job Ticket #: 30924

DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Samuel Gary Jr & Associates

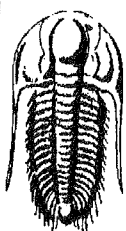
Jacobs # 1-36

36 17S 13W Barton KS

DST # 1

LKC"A-E"

2008.05.10



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr & Associates

Jacobs # 1-36

1560 Broadway Ste 2100
Denver CO 80202

36 17S 13W Barton KS

Job Ticket: 30924

DST#: 1

ATTN: Tom Fertal

Test Start: 2008.05.10 @ 13:25:21

GENERAL INFORMATION:

Formation: **LKC"A-E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:37:51

Time Test Ended: 18:34:06

Test Type: Conventional Bottom Hole

Tester: Kyle Kinderknecht

Unit No: 38

Interval: **3100.00 ft (KB) To 3170.00 ft (KB) (TVD)**

Total Depth: 3170.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1823.00 ft (KB)

1815.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8368 Outside

Press@RunDepth: 21.90 psig @ 3104.00 ft (KB)

Start Date: 2008.05.10

End Date:

2008.05.10

Start Time: 13:25:22

End Time:

18:34:06

Capacity: 7000.00 psig

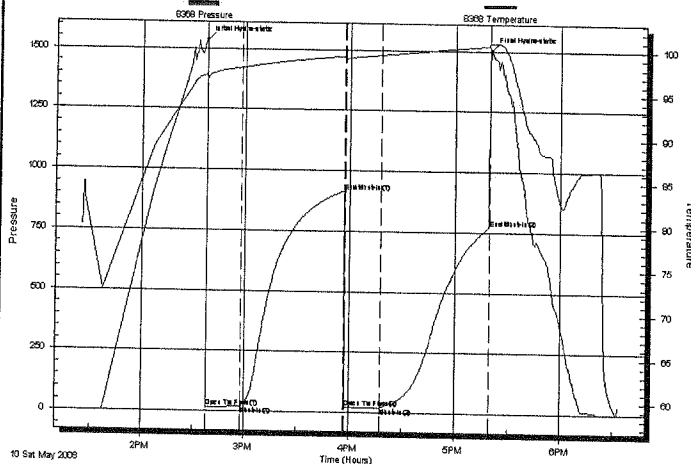
Last Calib.: 2008.05.10

Time On Btm: 2008.05.10 @ 14:37:36

Time Off Btm: 2008.05.10 @ 17:20:06

TEST COMMENT: IF 1/4" Died to 0 in 12 min
FF No blow

Pressure vs. Time



PRESSURE SUMMARY

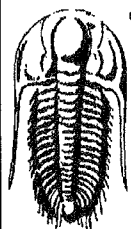
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1535.35	97.15	Initial Hydro-static
1	17.41	96.58	Open To Flow (1)
21	18.94	97.91	Shut-In(1)
79	914.78	99.31	End Shut-In(1)
80	20.24	98.94	Open To Flow (2)
101	21.90	99.49	Shut-In(2)
162	771.23	100.61	End Shut-In(2)
163	1502.48	100.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr & Associates

Jacobs # 1-36

1560 Broadway Ste 2100
Denver CO 80202

36 17S 13W Barton KS

Job Ticket: 30924

DST#: 1

ATTN: Tom Fertal

Test Start: 2008.05.10 @ 13:25:21

Tool Information

Drill Pipe:	Length: 3086.00 ft	Diameter: 3.82 inches	Volume: 43.75 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	35000.00 lb
		Total Volume:	43.75 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	34000.00 lb
Depth to Top Packer:	3100.00 ft			Final	34000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	70.00 ft				
Tool Length:	99.00 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			3072.00	
Shut In Tool	5.00			3077.00	
Hydraulic tool	5.00			3082.00	
Jars	5.00			3087.00	
Safety Joint	3.00			3090.00	
Packer	5.00			3095.00	29.00 Bottom Of Top Packer
Packer	5.00			3100.00	
Stubb	1.00			3101.00	
Perforations	2.00			3103.00	
Change Over Sub	1.00			3104.00	
Recorder	0.00	8372	Inside	3104.00	
Recorder	0.00	8368	Outside	3104.00	
Blank Spacing	62.00			3166.00	
Change Over Sub	1.00			3167.00	
Bullnose	3.00			3170.00	70.00 Bottom Packers & Anchor

Total Tool Length: 99.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr & Associates

Jacobs # 1-36

1560 Broadway Ste 2100
Denver CO 80202

36 17S 13W Barton KS

Job Ticket: 30924

DST#: 1

ATTN: Tom Fertal

Test Start: 2008.05.10 @ 13:25:21

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 47.00 sec/qt

Water Loss: 9.59 in³

Resistivity: ohm.m

Salinity: 4700.00 ppm

Filter Cake: 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
10.00	Mud	0.142

Total Length: 10.00 ft

Total Volume: 0.142 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

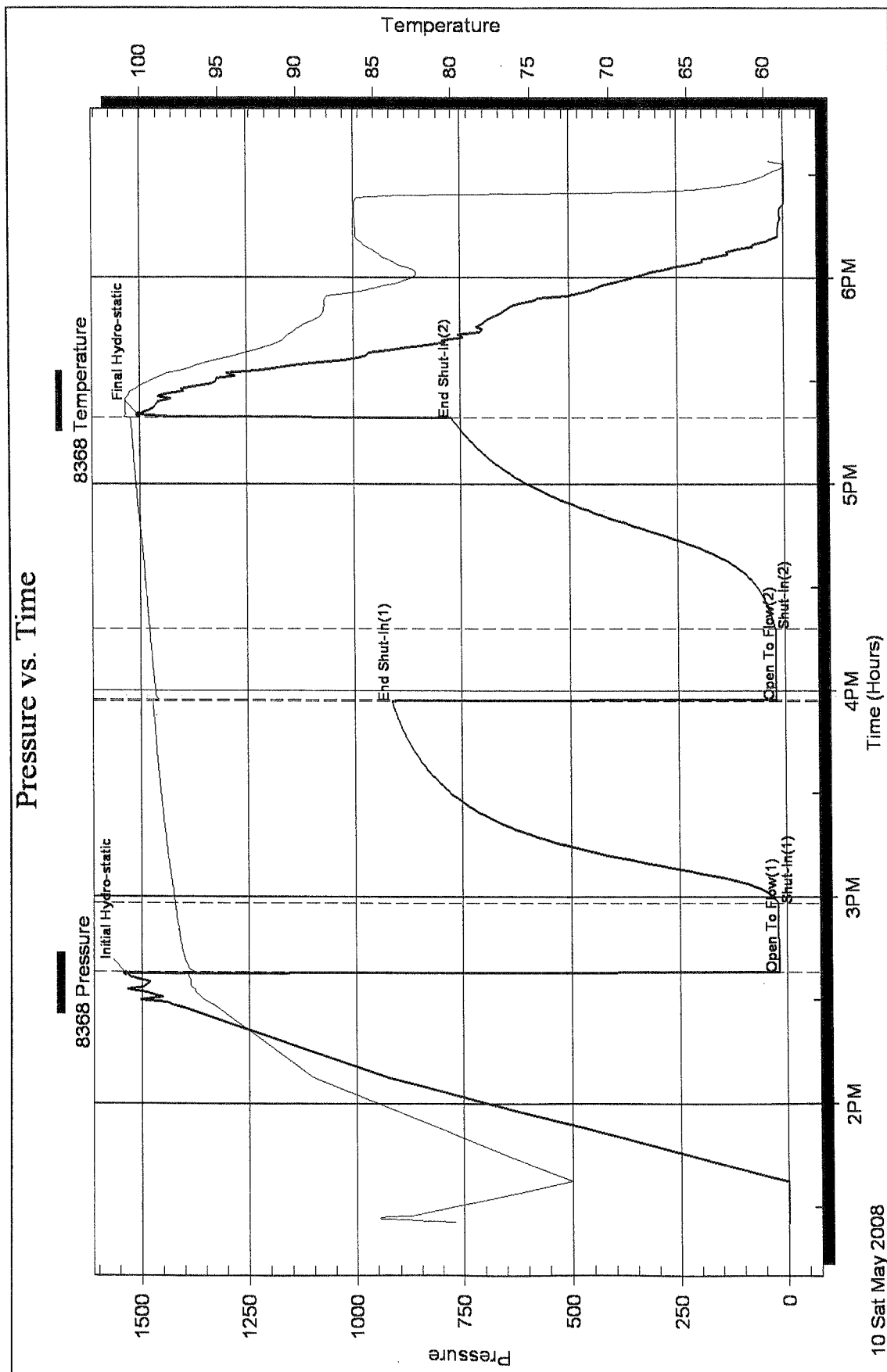
Serial #:

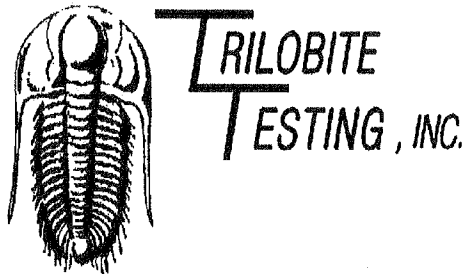
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr & Associates**

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

36 17S 13W Barton KS

Jacobs # 1-36

Start Date: 2008.05.11 @ 14:05:29

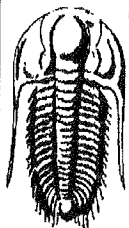
End Date: 2008.05.11 @ 22:05:59

Job Ticket #: 30925 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

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Jacobs # 1-36

36 17S 13W Barton KS

Job Ticket: 30925

DST#: 2

Test Start: 2008.05.11 @ 14:05:29

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:44:59

Time Test Ended: 22:05:59

Interval: **3333.00 ft (KB) To 3353.00 ft (KB) (TVD)**

Total Depth: 3170.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Reference Elevations: 1823.00 ft (KB)

1815.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8372

Inside

Press@RunDepth: 181.64 psig @ 3334.00 ft (KB)

Start Date: 2008.05.11

End Date:

2008.05.11

Start Time: 14:05:30

End Time:

22:05:59

Capacity: 7000.00 psig

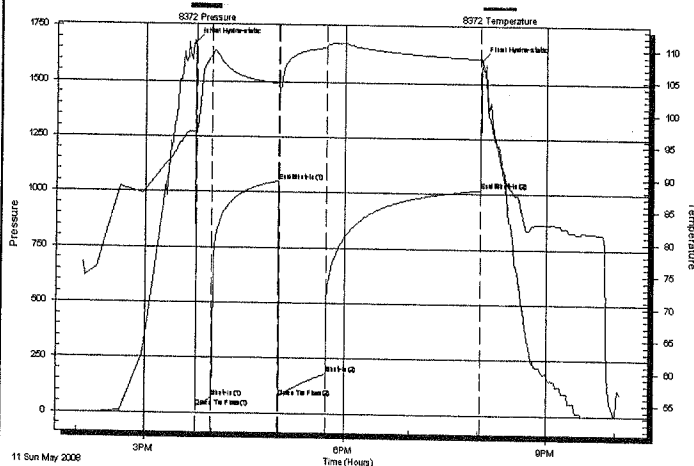
Last Calib.: 2008.05.11

Time On Btm: 2008.05.11 @ 15:44:29

Time Off Btm: 2008.05.11 @ 20:02:59

TEST COMMENT: IF Strong BB in 6 min
ISI Weak blow building to 1/2 " died in 20 min
FF Strong BB in 9 min
FSI No blow back

Pressure vs. Time



PRESSURE SUMMARY

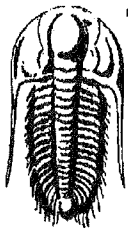
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1678.19	97.06	Initial Hydro-static
1	23.93	96.84	Open To Flow (1)
15	69.74	108.79	Shut-In(1)
75	1051.36	104.56	End Shut-In(1)
76	75.63	103.24	Open To Flow (2)
119	181.64	110.13	Shut-In(2)
257	1017.12	108.61	End Shut-In(2)
259	1606.35	108.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	MCGsyO 10%G 60%O 30%M	0.88
473.00	CGsyO 10%G 90%O	6.70
0.00	145 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

Jacobs # 1-36

1560 Broadway Ste 2100
Denver CO 80202

36 17S 13W Barton KS

Job Ticket: 30925

DST#: 2

ATTN: Tom Fertal

Test Start: 2008.05.11 @ 14:05:29

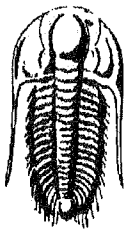
Tool Information

Drill Pipe:	Length: 3335.00 ft	Diameter: 3.82 inches	Volume: 47.28 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:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	39000.00 lb
			<u>Total Volume: 47.28 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3333.00 ft			Final	39000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	49.00 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			3305.00	
Shut In Tool	5.00			3310.00	
Hydraulic tool	5.00			3315.00	
Jars	5.00			3320.00	
Safety Joint	3.00			3323.00	
Packer	5.00			3328.00	29.00 Bottom Of Top Packer
Packer	5.00			3333.00	
Stubb	1.00			3334.00	
Recorder	0.00	8372	Inside	3334.00	
Recorder	0.00	8368	Outside	3334.00	
Perforations	16.00			3350.00	
Bullnose	3.00			3353.00	20.00 Bottom Packers & Anchor

Total Tool Length: 49.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr & Associates

Jacobs # 1-36

1560 Broadway Ste 2100
Denver CO 80202

36 17S 13W Barton KS

Job Ticket: 30925

DST#: 2

ATTN: Tom Fertal

Test Start: 2008.05.11 @ 14:05:29

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 60.00 sec/qt

Water Loss: 8.79 in³

Resistivity: ohm.m

Salinity: 5600.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

36 deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	MCGsyO 10%G 60%O 30%M	0.879
473.00	CGsyO 10%G 90%O	6.705
0.00	145 GIP	0.000

Total Length: 535.00 ft

Total Volume: 7.584 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

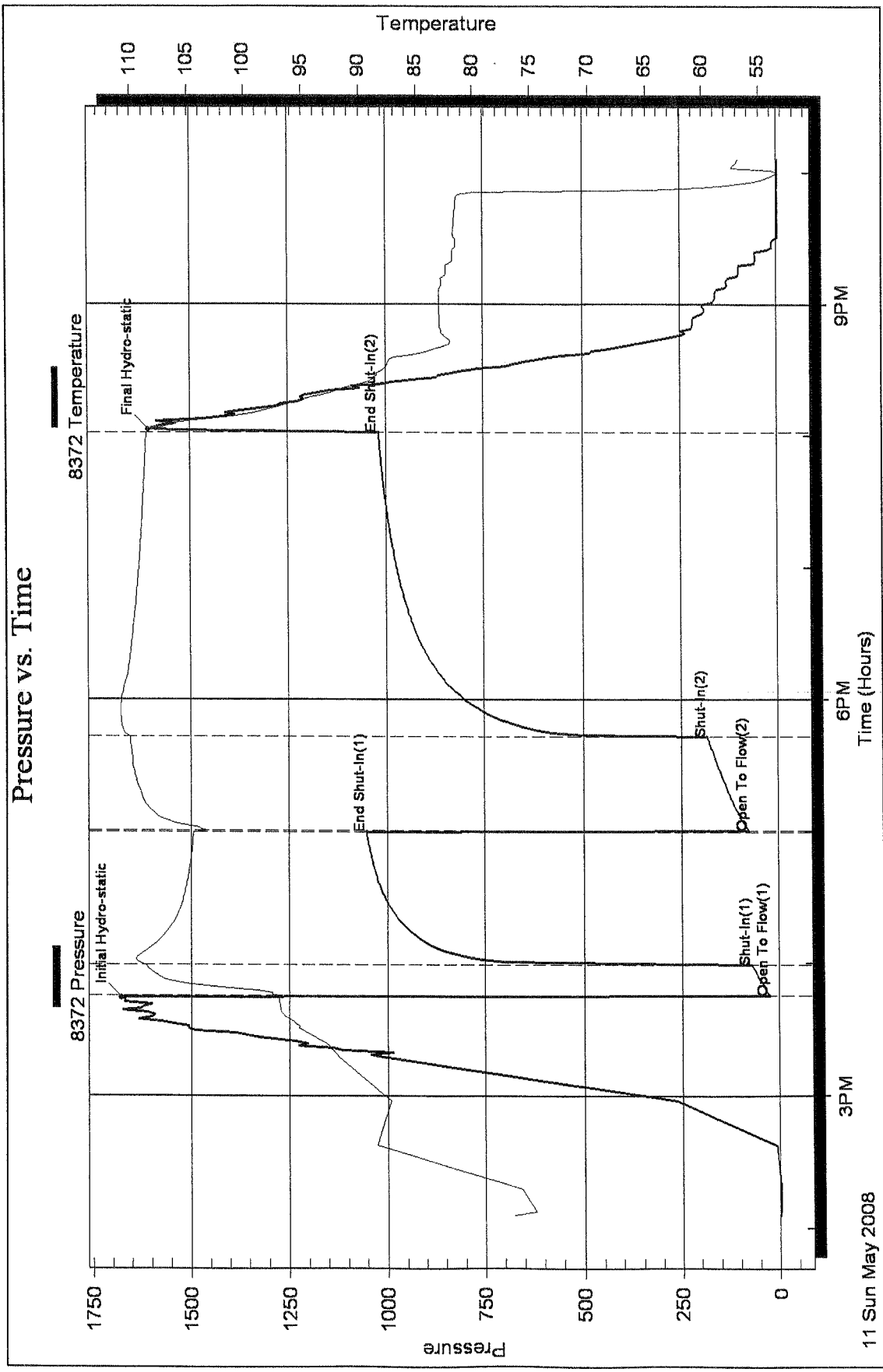
Serial #:

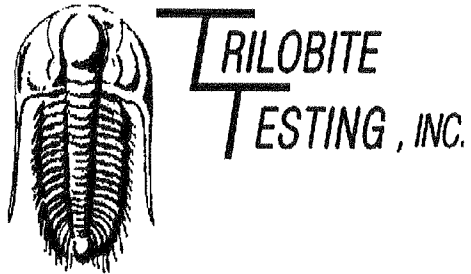
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr & Associates**

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

36 17S 13W Barton KS

Jacobs # 1-36

Start Date: 2008.05.12 @ 02:46:51

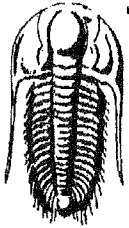
End Date: 2008.05.12 @ 10:35:21

Job Ticket #: 31926 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

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Jacobs # 1-36

36 17S 13W Barton KS

Job Ticket: 31926

DST#: 3

Test Start: 2008.05.12 @ 02:46:51

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:12:21

Time Test Ended: 10:35:21

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Interval: **3353.00 ft (KB) To 3358.00 ft (KB) (TVD)**

Total Depth: 3358.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1823.00 ft (KB)

1815.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8372 Inside

Press@RunDepth: 151.69 psig @ 3354.00 ft (KB)

Start Date: 2008.05.12

End Date: 2008.05.12

Start Time: 02:46:52

End Time: 10:35:21

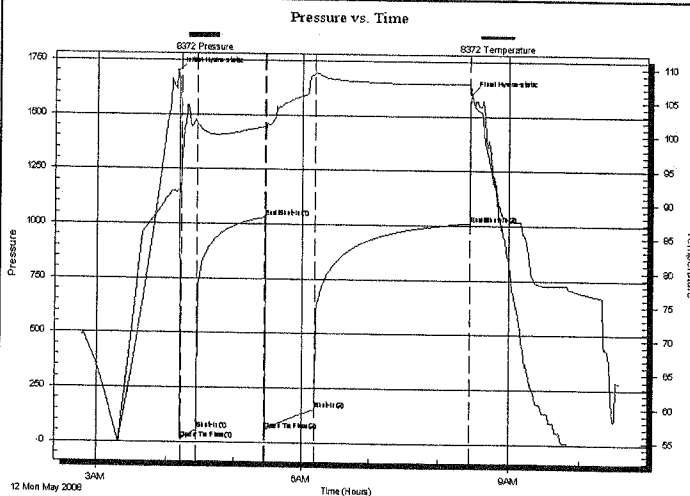
Capacity: 7000.00 psig

Last Calib.: 2008.05.12

Time On Btm: 2008.05.12 @ 04:09:51

Time Off Btm: 2008.05.12 @ 08:27:51

TEST COMMENT: IF Strong BB in 12 min
ISI Weak steady surface blow
FF Strong BB in 15 min
FSI No blow back



PRESSURE SUMMARY

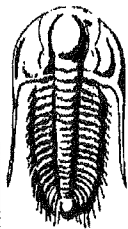
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1698.38	91.64	Initial Hydro-static
3	14.25	94.15	Open To Flow (1)
17	54.46	101.69	Shut-In(1)
77	1030.57	101.18	End Shut-In(1)
78	58.66	100.58	Open To Flow (2)
121	151.69	109.06	Shut-In(2)
257	1011.17	107.76	End Shut-In(2)
258	1602.71	105.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	MW 80%W 20%M	0.57
355.00	CGStO 10%G 90%O	5.03
0.00	165 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

Jacobs # 1-36

1560 Broadway Ste 2100
Denver CO 80202

36 17S 13W Barton KS

Job Ticket: 31926

DST#: 3

ATTN: Tom Fertal

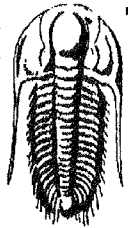
Test Start: 2008.05.12 @ 02:46:51

Tool Information

Drill Pipe:	Length: 3337.00 ft	Diameter: 3.82 inches	Volume: 47.30 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:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	37000.00 lb
			<u>Total Volume: 47.30 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3353.00 ft			Final	37000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	5.00 ft				
Tool Length:	29.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3330.00	
Shut In Tool	5.00			3335.00	
Hydraulic tool	5.00			3340.00	
Jars	5.00			3345.00	
Safety Joint	3.00			3348.00	
Packer	5.00			3353.00	24.00 Bottom Of Top Packer
Stubb	1.00			3354.00	
Recorder	0.00	8372	Inside	3354.00	
Recorder	0.00	8368	Outside	3354.00	
Perforations	1.00			3355.00	
Bullnose	3.00			3358.00	5.00 Anchor Tool
Total Tool Length:		29.00			



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr & Associates

Jacobs # 1-36

1560 Broadway Ste 2100
Denver CO 80202

36 17S 13W Barton KS

Job Ticket: 31926

DST#: 3

ATTN: Tom Fertal

Test Start: 2008.05.12 @ 02:46:51

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 60.00 sec/qt

Water Loss: 8.79 in³

Resistivity: ohm.m

Salinity: 5600.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

36 deg API

Water Salinity:

25000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	MW 80%W 20%M	0.567
355.00	CGstO 10%G 90%O	5.032
0.00	165 GIP	0.000

Total Length: 395.00 ft

Total Volume: 5.599 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .22 @ 80 = 25000ppm

Pressure vs. Time

