

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal 15-009-25152

25 17 13 Barton KS

Hekele # 1-25

Start Date: 2008.02.16 @ 13:00:44
End Date: 2008.02.16 @ 21:57:14
Job Ticket #: 30307 DST #: 1

RECEIVED
KANSAS CORPORATION COMMISSION
JUN 18 2008
CONSERVATION DIVISION
WICHITA, KS

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30307 **DST#: 1**

Test Start: 2008.02.16 @ 13:00:44

GENERAL INFORMATION:

Formation: **E-F LKC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:12:44
Time Test Ended: 21:57:14

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 38

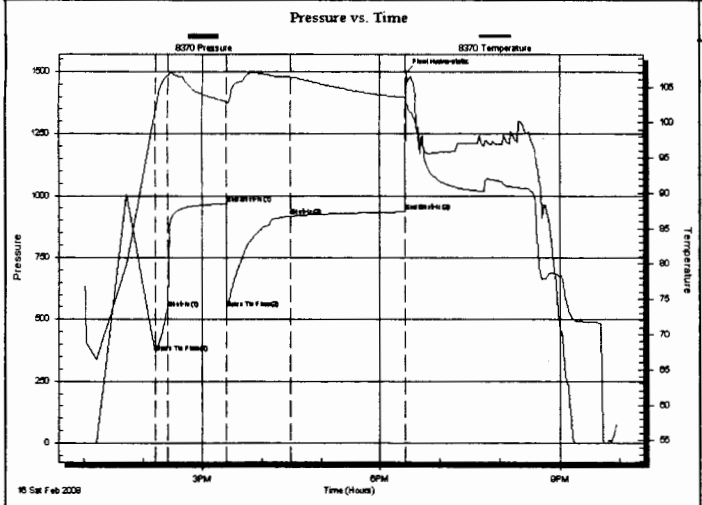
Interval: 3127.00 ft (KB) To 3182.00 ft (KB) (TVD)
Total Depth: 3182.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1827.00 ft (KB)
1819.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8370 **Inside**
Press@RunDepth: 916.92 psig @ 3130.00 ft (KB)
Start Date: 2008.02.16 End Date: 2008.02.16
Start Time: 13:00:45 End Time: 21:57:14

Capacity: 7000.00 psig
Last Calib.: 2008.02.16
Time On Btm:
Time Off Btm: 2008.02.16 @ 18:25:44

TEST COMMENT: IF Strong BB in 1 min
ISI Strong BB in 2 min GTS in 2 min
FF Strong BB in 30 sec GTS {TSTM} Gas sample taken
FSI Strong BB in 2 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	367.11	101.36	Open To Flow (1)
12	546.14	106.51	Shut-In(1)
72	968.30	102.87	End Shut-In(1)
72	546.13	102.56	Open To Flow (2)
136	916.92	106.36	Shut-In(2)
252	934.79	103.53	End Shut-In(2)
253	1495.85	103.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MCGsyO 20%G 60%O 20%M	1.74
2604.00	CGsyO 30%G 60%O	36.53

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30307 **DST#: 1**

Test Start: 2008.02.16 @ 13:00:44

Tool Information

Drill Pipe:	Length:	3115.00 ft	Diameter:	3.80 inches	Volume:	43.70 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:	50000.00 lb
					Total Volume:	43.70 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		17.00 ft					String Weight: Initial	40000.00 lb
Depth to Top Packer:		3127.00 ft					Final	48000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		55.00 ft						
Tool Length:		84.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3099.00		
Shut In Tool	5.00			3104.00		
Hydraulic tool	5.00			3109.00		
Jars	5.00			3114.00		
Safety Joint	3.00			3117.00		
Packer	5.00			3122.00	29.00	Bottom Of Top Packer
Packer	5.00			3127.00		
Stubb	1.00			3128.00		
Perforations	1.00			3129.00		
Change Over Sub	1.00			3130.00		
Recorder	0.00	8370	Inside	3130.00		
Recorder	0.00	8368	Outside	3130.00		
Drill Pipe	31.00			3161.00		
Change Over Sub	1.00			3162.00		
Perforations	17.00			3179.00		
Bullnose	3.00			3182.00	55.00	Bottom Packers & Anchor
Total Tool Length:	**84.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30307 **DST#: 1**

Test Start: 2008.02.16 @ 13:00:44

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	42 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	68.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.17 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8500.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

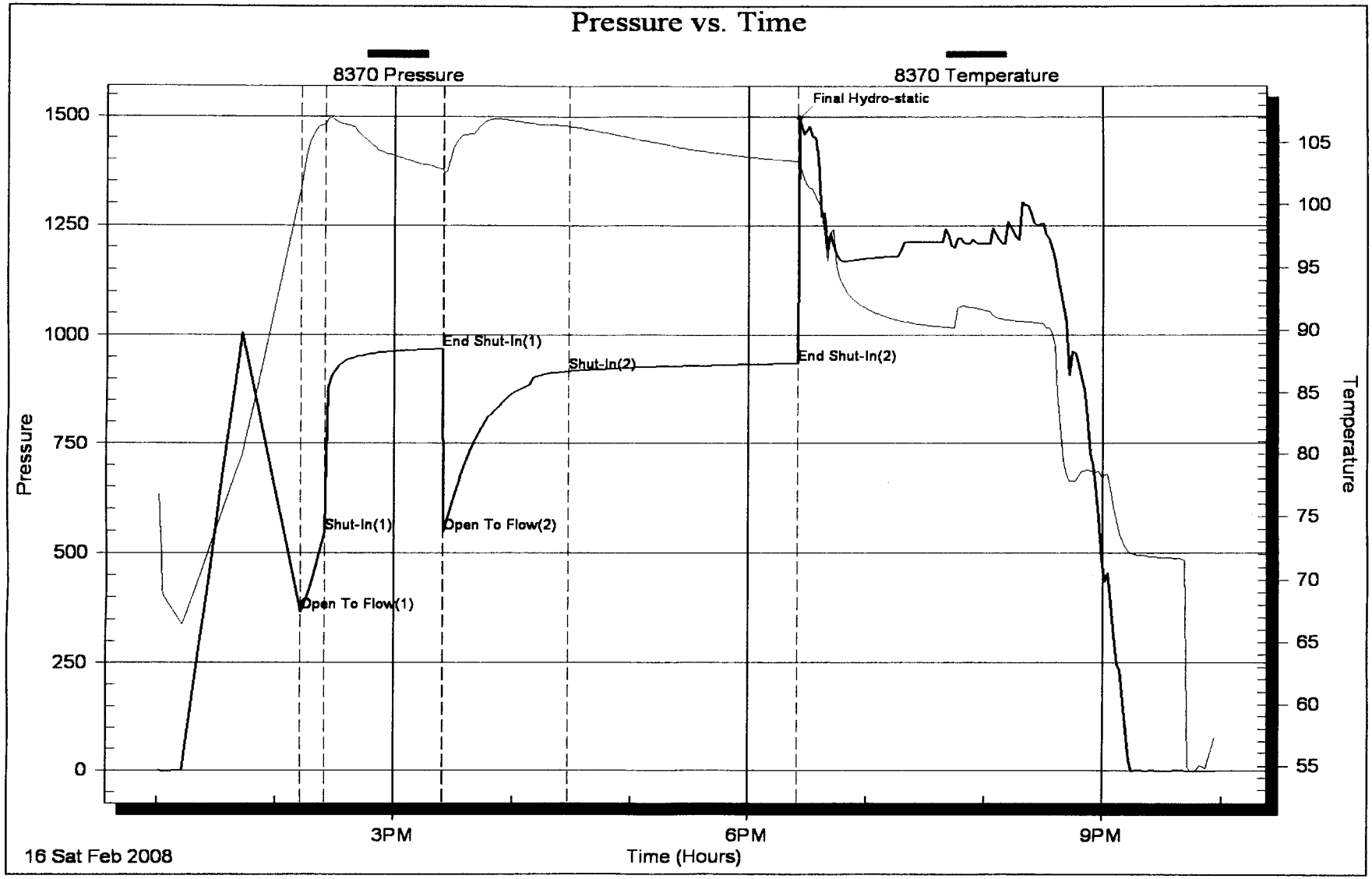
Length ft	Description	Volume bbl
124.00	MCGsyO 20%G 60%O 20%M	1.739
2604.00	CGsyO 30%G 60%O	36.527

Total Length: 2728.00 ft Total Volume: 38.266 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: GTS


Pressure vs. Time
8370 Pressure
8370 Temperature
Final Hydro-static
End Shut-In(1)
Shut-In(2)
End Shut-In(2)
Shut-In(1)
Open To Flow(2)
Open To Flow(1)
Pressure
Temperature
1500
1250
1000
750
500
250
0
105
100
95
90
85
80
75
70
65
60
55
3PM
6PM
9PM
16 Sat Feb 2008
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

25 17 13 Barton KS

Hekele # 1-25

Start Date: 2008.02.17 @ 18:15:07
End Date: 2008.02.18 @ 02:39:37
Job Ticket #: 30308 DST #: 2

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30308 **DST#: 2**

Test Start: 2008.02.17 @ 18:15:07

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:45:37
Time Test Ended: 02:39:37

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 38

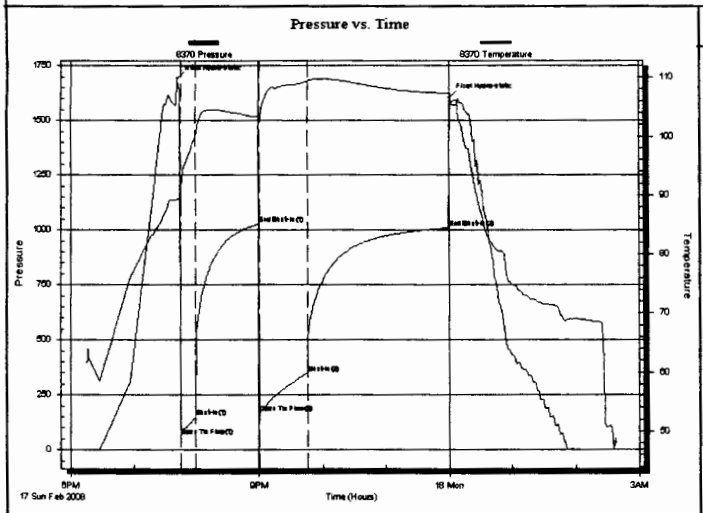
Interval: 3333.00 ft (KB) To 3355.00 ft (KB) (TVD)
Total Depth: 3355.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1827.00 ft (KB)
1819.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8370 **Inside**
Press@RunDepth: 349.71 psig @ 3334.00 ft (KB)
Start Date: 2008.02.17 End Date: 2008.02.18
Start Time: 18:15:08 End Time: 02:39:37

Capacity: 7000.00 psig
Last Calib.: 2008.02.18
Time On Btm: 2008.02.17 @ 19:42:37
Time Off Btm: 2008.02.18 @ 00:00:37

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1690.76	89.27	Initial Hydro-static
3	63.75	89.06	Open To Flow (1)
18	149.95	99.86	Shut-In(1)
77	1026.77	103.26	End Shut-In(1)
78	168.50	102.70	Open To Flow (2)
123	349.71	109.24	Shut-In(2)
257	1010.55	107.25	End Shut-In(2)
258	1606.24	107.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	MCGsyO 10%G 70%O 20%M	1.26
640.00	CGsyO 10%G 90%O	8.98
0.00	124 GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30308 **DST#: 2**

Test Start: 2008.02.17 @ 18:15:07

Tool Information

Drill Pipe:	Length:	3335.00 ft	Diameter:	3.80 inches	Volume:	46.78 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:	50000.00 lb
					Total Volume:	46.78 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		31.00 ft					String Weight: Initial	41000.00 lb
Depth to Top Packer:		3333.00 ft					Final	43000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		22.00 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	
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	8370	Inside	3334.00		
Recorder	0.00	8368	Outside	3334.00		
Perforations	18.00			3352.00		
Bullnose	3.00			3355.00	22.00	Bottom Packers & Anchor
Total Tool Length:	**51.00**					

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DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary & Associates Inc

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Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30308 **DST#: 2**

Test Start: 2008.02.17 @ 18:15:07

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	36 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.38 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	10500.00 ppm				
Filter Cake:	inches				

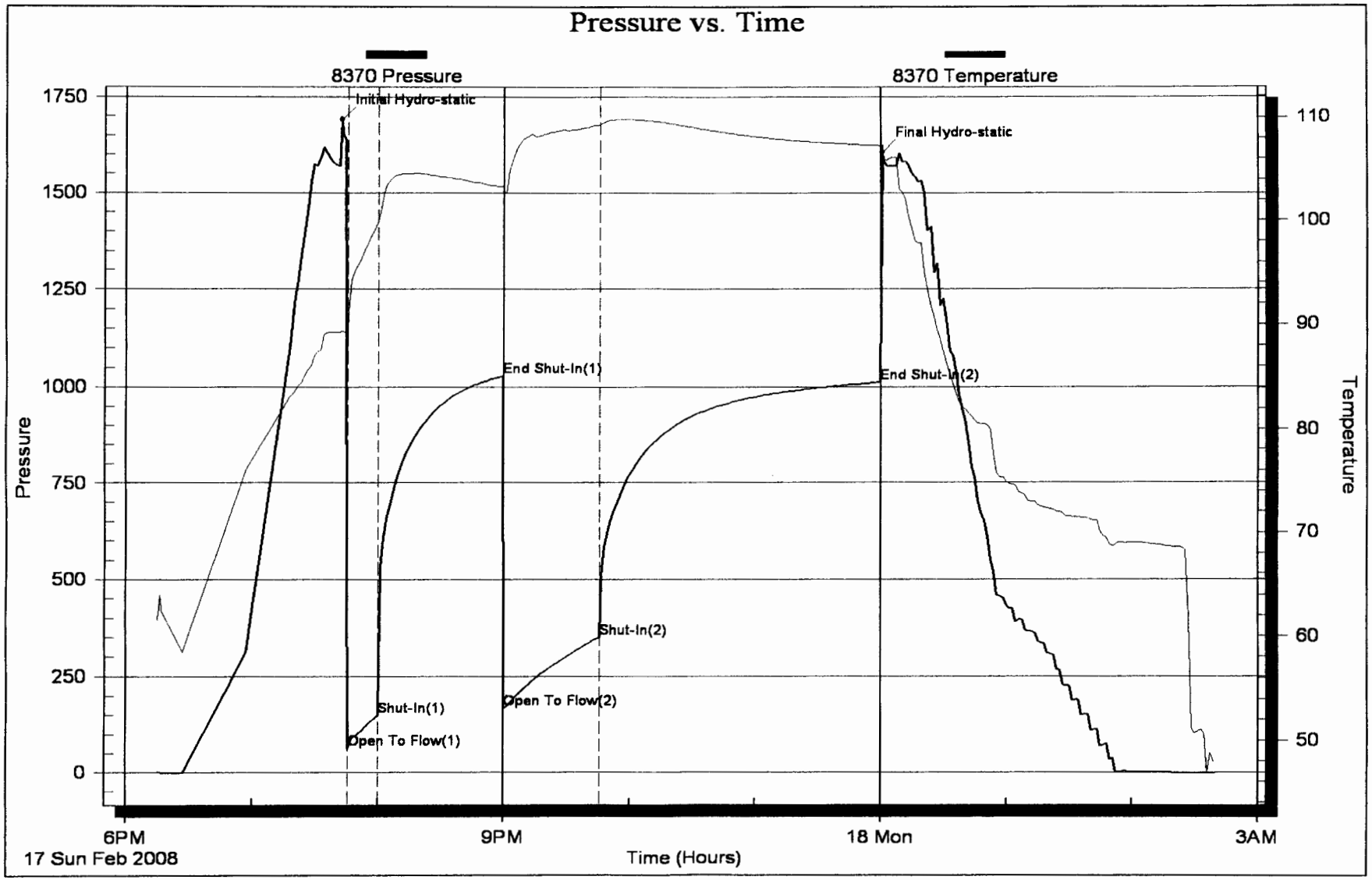
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	MCGsyO 10%G 70%O 20%M	1.262
640.00	CGsyO 10%G 90%O	8.978
0.00	124 GIP	0.000

Total Length: 730.00 ft Total Volume: 10.240 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:


Pressure vs. Time
8370 Pressure
8370 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Shut-In(2)
Open To Flow(1)
Open To Flow(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
0
110
100
90
80
70
60
50
6PM
17 Sun Feb 2008
9PM
18 Mon
3AM
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

25 17 13 Barton KS

Hekele # 1-25

Start Date: 2008.02.18 @ 08:00:19
End Date: 2008.02.18 @ 16:39:19
Job Ticket #: 30309 DST #: 3

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30309 **DST#: 3**

Test Start: 2008.02.18 @ 08:00:19

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:25:49
Time Test Ended: 16:39:19

Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 38

Interval: 3355.00 ft (KB) To 3362.00 ft (KB) (TVD)
Total Depth: 3362.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

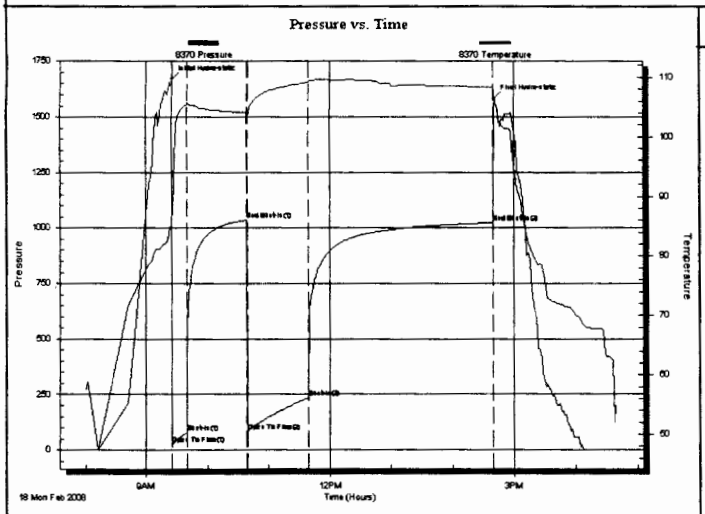
Reference Elevations: 1827.00 ft (KB)
1819.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8370 **Inside**

Press@RunDepth: 235.41 psig @ 3356.00 ft (KB)
Start Date: 2008.02.18 End Date: 2008.02.18
Start Time: 08:00:20 End Time: 16:39:19

Capacity: 7000.00 psig
Last Calib.: 2008.02.18
Time On Btm: 2008.02.18 @ 09:25:19
Time Off Btm: 2008.02.18 @ 14:40:19

TEST COMMENT: IF Strong BB in 8 min
FF Strong BB in 15 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1669.96	85.13	Initial Hydro-static
1	28.03	85.22	Open To Flow (1)
15	79.07	105.49	Shut-In(1)
73	1035.79	104.09	End Shut-In(1)
74	82.84	103.44	Open To Flow (2)
134	235.41	109.13	Shut-In(2)
314	1024.46	108.35	End Shut-In(2)
315	1581.23	107.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	MW 90%W 10%M	1.26
585.00	CGsyO 10%G 90%O	8.21
0.00	125 GIP	0.00

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30309 **DST#: 3**

Test Start: 2008.02.18 @ 08:00:19

Tool Information

Drill Pipe:	Length:	3335.00 ft	Diameter:	3.80 inches	Volume:	46.78 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
					Total Volume:	46.78 bbl	

Drill Pipe Above KB:	9.00 ft
Depth to Top Packer:	3355.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	7.00 ft
Tool Length:	36.00 ft
Number of Packers:	2
Diameter:	6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		50000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	41000.00 lb
	Final	43000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3327.00		
Shut In Tool	5.00			3332.00		
Hydraulic tool	5.00			3337.00		
Jars	5.00			3342.00		
Safety Joint	3.00			3345.00		
Packer	5.00			3350.00	29.00	Bottom Of Top Packer
Packer	5.00			3355.00		
Stubb	1.00			3356.00		
Recorder	0.00	8370	Inside	3356.00		
Recorder	0.00	8368	Outside	3356.00		
Perforations	3.00			3359.00		
Bullnose	3.00			3362.00	7.00	Bottom Packers & Anchor
Total Tool Length:	**36.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary & Associates Inc

1560 Broadway Ste 2100
Denver CO 80202

ATTN: Tom Fertal

Hekele # 1-25

25 17 13 Barton KS

Job Ticket: 30309 **DST#: 3**

Test Start: 2008.02.18 @ 08:00:19

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	36 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	25000 ppm
Viscosity:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.37 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	10500.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

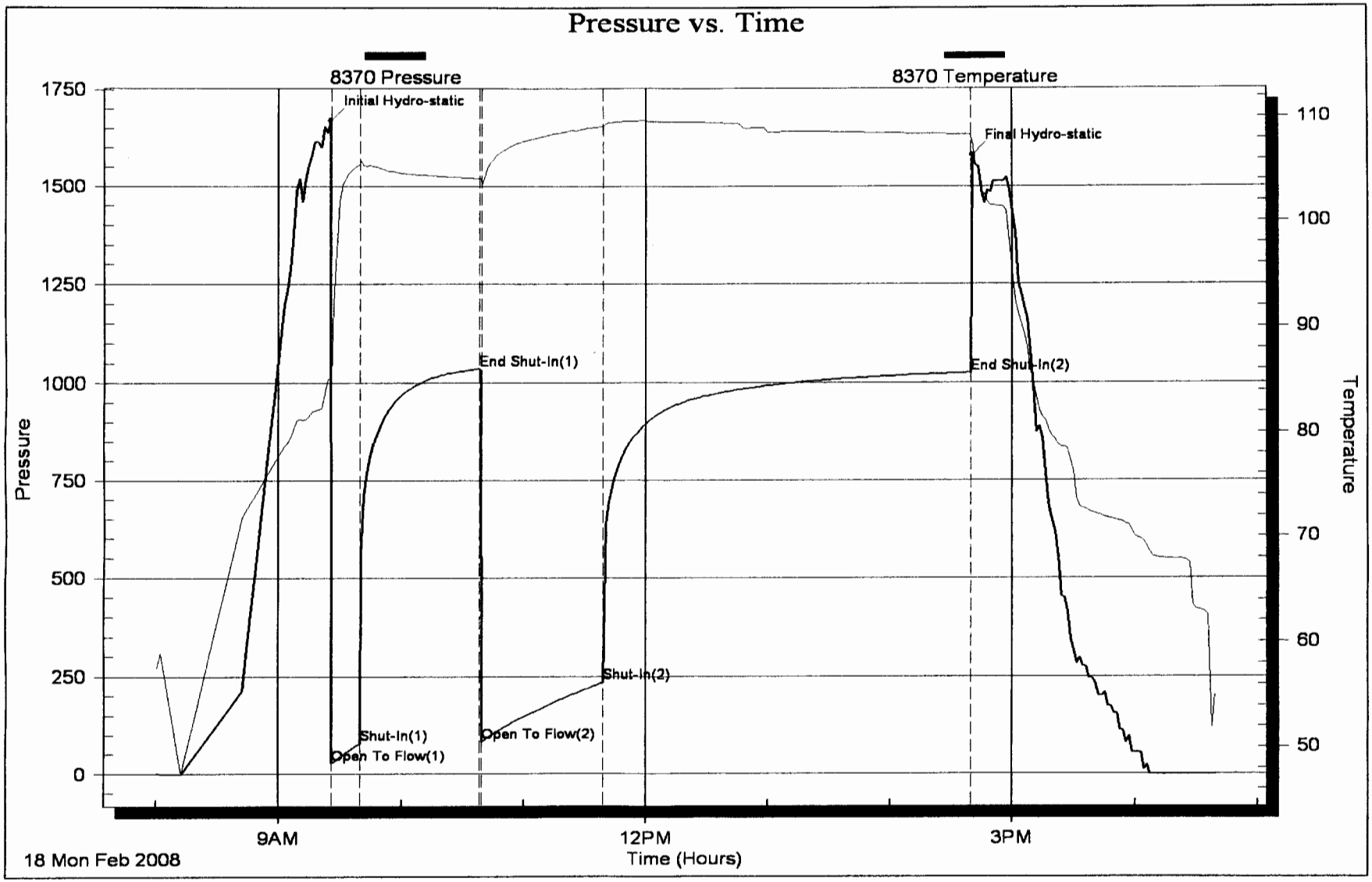
Length ft	Description	Volume bbl
90.00	MW 90%W 10%M	1.262
585.00	CGsyO 10%G 90%O	8.206
0.00	125 GIP	0.000

Total Length: 675.00 ft Total Volume: 9.468 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW .25 @ 80 = 25000ppm


Pressure vs. Time
8370 Pressure
8370 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
Time (Hours)
9AM
12PM
3PM
18 Mon Feb 2008
1750
1500
1250
1000
750
500
250
0
110
100
90
80
70
60
50