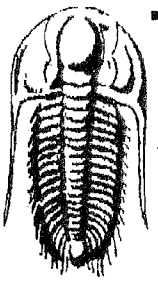
15-007-23445 28-31s-13w IND



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Roberts Resources**

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212

ATTN: Kent Roberts

28-31s-13w Barton KS

THOM A 1-28

Start Date: 2009.08.31 @ 15:55:00

End Date: 2009.09.01 @ 01:00:30

Job Ticket #: 36504 DST #: 1

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

Roberts Resources THOM A 1-28 28-31s-13w Barton KS DST # 1 Lower Topeka 2009.08.31

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36504 **DST#: 1**

Test Start: 2009.08.31 @ 15:55:00

GENERAL INFORMATION:

Formation: **Lower Topeka**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:09:00
Time Test Ended: 01:00:30

Test Type: Conventional Bottom Hole
Tester: Jake Fahrenbruch
Unit No: 43

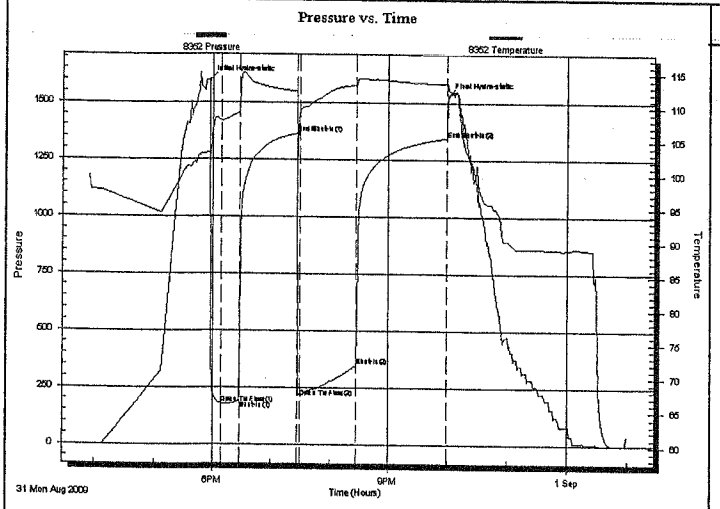
Interval: 3330.00 ft (KB) To 3354.00 ft (KB) (TVD)
Total Depth: 3354.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1559.00 ft (KB)
1546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8352 **Inside**
Press@RunDepth: 347.99 psig @ 3331.00 ft (KB)
Start Date: 2009.08.31 End Date: 2009.09.01
Start Time: 15:55:02 End Time: 01:00:30

Capacity: 7000.00 psig
Last Calib.: 2009.09.01
Time On Btm: 2009.08.31 @ 17:57:20
Time Off Btm: 2009.08.31 @ 22:00:40

TEST COMMENT: IF: Strong blow, BOB 10 seconds, GTS 4 minutes 15 seconds.
ISI: Bled off, blow back @ BOB.
FF: Strong blow, BOB 5 seconds.
FSI: Bled off, blow back @ BOB.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1596.26	103.34	Initial Hydro-static
12	174.56	108.03	Open To Flow (1)
30	189.29	109.23	Shut-In(1)
90	1363.25	112.33	End Shut-In(1)
93	207.30	109.47	Open To Flow (2)
150	347.99	113.35	Shut-In(2)
243	1343.89	113.48	End Shut-In(2)
244	1529.33	113.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
440.00	Water 100%w	4.53
250.00	GssySMCWCO 30%g5%m20%w 45%o	3.51
65.00	GCOCM 20%g 10%o 70%m	0.91
45.00	GCSOCM 10%g 5%o 85%m	0.63
0.00	RW=.22ohm@64degF=36000ppmChl	0.00
0.00	corrected gravity = 27.5	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	13.00	427.98
Last Gas Rate	0.50	4.00	124.12
Max. Gas Rate	0.50	30.00	299.51

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36504 **DST#: 1**

Test Start: 2009.08.31 @ 15:55:00

Tool Information

Drill Pipe:	Length:	3147.00 ft	Diameter:	3.80 inches	Volume:	44.14 bbl	Tool Weight:		3000.00 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:	180.00 ft	Diameter:	2.25 inches	Volume:	0.89 bbl	Weight to Pull Loose:		78000.00 lb
					Total Volume:	45.03 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		25.00 ft					String Weight:	Initial	70000.00 lb
Depth to Top Packer:		3330.00 ft						Final	76000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		24.00 ft							
Tool Length:		52.00 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			3307.00		
Hydraulic tool	5.00			3312.00		
Jars	5.00			3317.00		
Safety Joint	3.00			3320.00		
Packer	5.00			3325.00	28.00	Bottom Of Top Packer
Packer	5.00			3330.00		
Stubb	1.00			3331.00		
Recorder	0.00	8352	Inside	3331.00		
Recorder	0.00	6799	Inside	3331.00		
Perforations	18.00			3349.00		
Bullnose	5.00			3354.00	24.00	Bottom Packers & Anchor
Total Tool Length:	**52.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36504 **DST#: 1**

Test Start: 2009.08.31 @ 15:55:00

Mud and Cushion Information

Mud Type:	Water	Cushion Type:		Oil API:	27.5 deg API
Mud Weight:	lb/gal	Cushion Length:	ft	Water Salinity:	36000 ppm
Viscosity:	sec/qt	Cushion Volume:	bbl		
Water Loss:	in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
440.00	Water 100%w	4.532
250.00	GssySMCWCO 30%g5%m20%w 45%o	3.507
65.00	GCOCM 20%g 10%o 70%m	0.912
45.00	GCSOCM 10%g 5%o 85%m	0.631
0.00	RW=.22ohm@64degF=36000ppmChl	0.000
0.00	corrected gravity = 27.5	0.000
0.00	gas in all fluid free pipe	0.000

Total Length: 800.00 ft Total Volume: 9.582 bbl

Num Fluid Samples: 1 Num Gas Bombs: 0 Serial #:

Laboratory Name: Caraway Laboratory Location: Liberal, KS

Recovery Comments:

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36504 **DST#: 1**

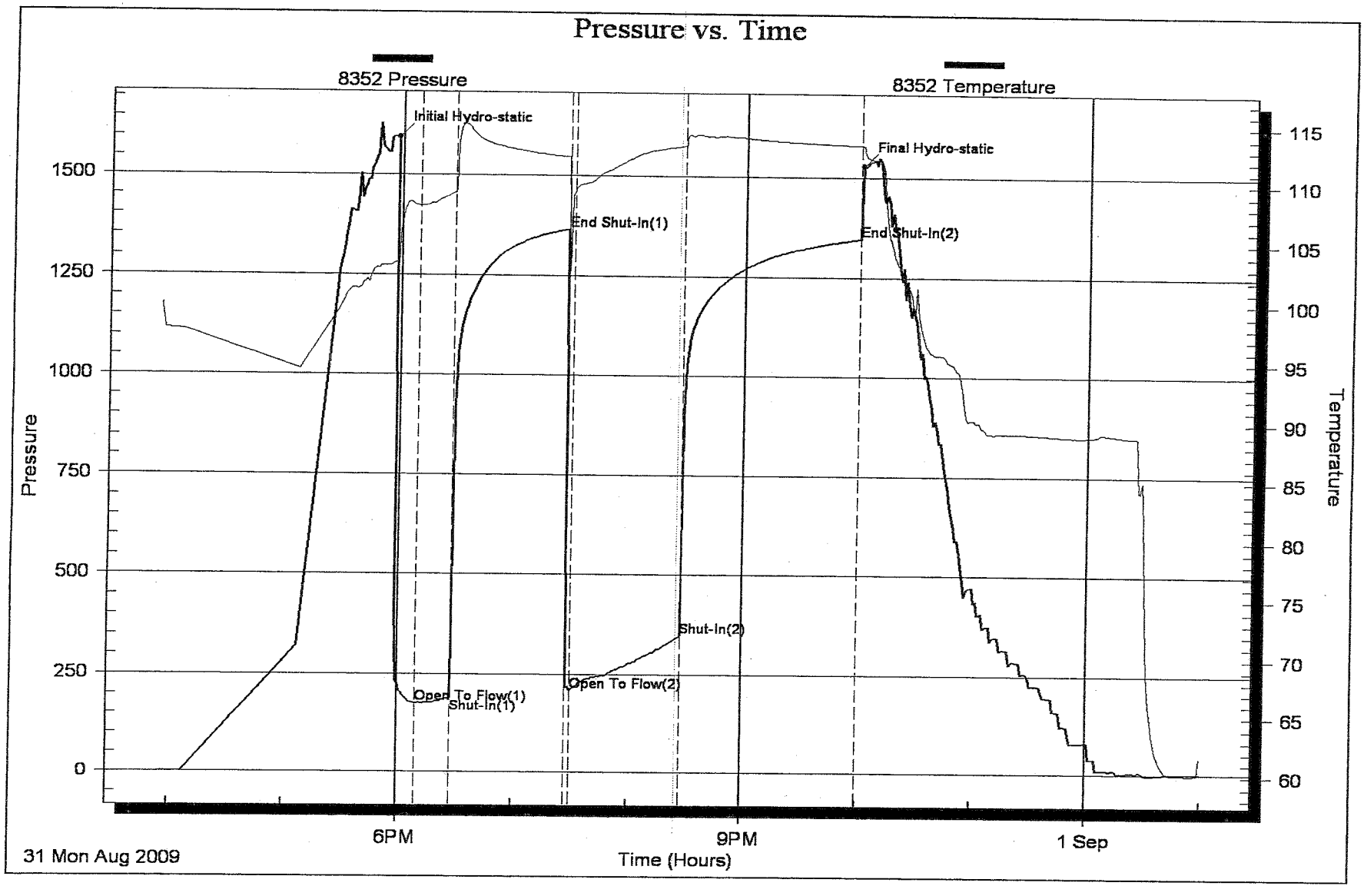
Test Start: 2009.08.31 @ 15:55:00

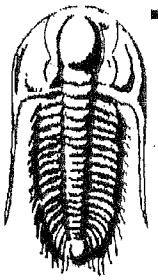
Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m^3/d)
1	5	0.75	13.00	427.98
1	10	0.75	11.00	396.74
1	15	0.75	8.00	349.89
1	20	0.75	5.00	303.03
1	25	0.75	4.00	287.41
1	30	0.75	3.00	271.79
2	5	0.50	25.00	265.78
2	10	0.50	30.00	299.51
2	15	0.50	26.00	272.53
2	20	0.50	21.00	238.80
2	25	0.50	16.00	205.07
2	30	0.50	11.00	171.34
2	35	0.50	9.00	157.85
2	40	0.50	7.00	144.36
2	45	0.50	6.00	137.61
2	50	0.50	5.00	130.87
2	55	0.50	4.00	124.12
2	60	0.50	4.00	124.12


Pressure vs. Time
8352 Pressure
8352 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Pressure
Temperature
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
65
60
6PM
9PM
1 Sep
31 Mon Aug 2009
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Roberts Resources**

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212

ATTN: Kent Roberts

28-31s-13w Barton KS

THOM A 1-28

Start Date: 2009.09.01 @ 19:28:00

End Date: 2009.09.02 @ 03:11:39

Job Ticket #: 36505 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

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36505 **DST#: 2**

Test Start: 2009.09.01 @ 19:28:00

GENERAL INFORMATION:

Formation: **Upper Douglas Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:36:10
Time Test Ended: 03:11:39

Test Type: Conventional Bottom Hole
Tester: Jake Fahrenbruch
Unit No: 43

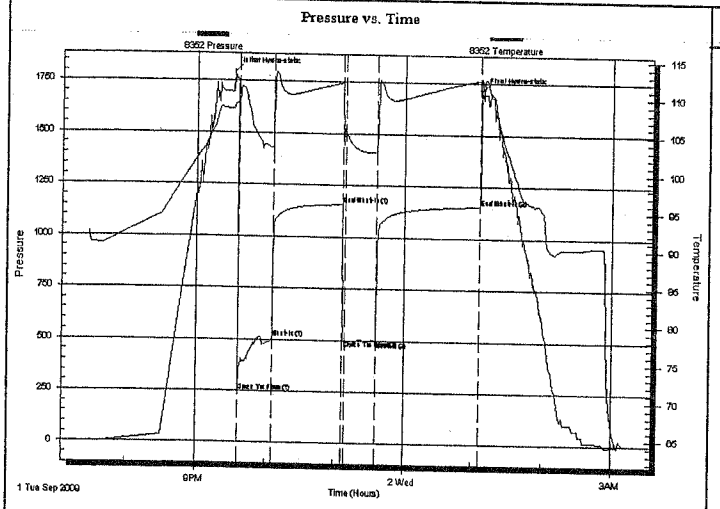
Interval: 3561.00 ft (KB) To 3595.00 ft (KB) (TVD)
Total Depth: 3595.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1559.00 ft (KB)
1546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8352 **Inside**
Press@RunDepth: 500.45 psig @ 3562.00 ft (KB)
Start Date: 2009.09.01 End Date: 2009.09.02
Start Time: 19:28:02 End Time: 03:11:40

Capacity: 7000.00 psig
Last Calib.: 2009.09.02
Time On Btm: 2009.09.01 @ 21:32:20
Time Off Btm: 2009.09.02 @ 01:07:10

TEST COMMENT: IF: Strong blow, BOB 30 seconds. GTS 3 minutes 45 seconds.
ISI: Bled off, no blow back.
FF: Strong blow, BOB immediately.
FSI: Bled off, no blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1794.21	108.61	Initial Hydro-static
4	247.40	108.58	Open To Flow (1)
34	505.36	103.36	Shut-In(1)
94	1156.76	111.91	End Shut-In(1)
97	462.96	105.29	Open To Flow (2)
124	500.45	102.80	Shut-In(2)
215	1152.08	112.37	End Shut-In(2)
215	1715.83	112.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
210.00	Mud 100%m	1.31
0.00	Gas In All Fluid Free Pipe	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	66.00	1255.84
Last Gas Rate	0.75	130.00	2255.51
Max. Gas Rate	0.75	130.00	2255.51

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36505 **DST#: 2**

Test Start: 2009.09.01 @ 19:28:00

Tool Information

Drill Pipe:	Length:	3373.00 ft	Diameter:	3.80 inches	Volume:	47.31 bbl	Tool Weight:	3000.00 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:	180.00 ft	Diameter:	2.25 inches	Volume:	0.89 bbl	Weight to Pull Loose:	83000.00 lb
					Total Volume:	48.20 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		20.00 ft					String Weight: Initial	74000.00 lb
Depth to Top Packer:		3561.00 ft					Final	74000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		34.00 ft						
Tool Length:		62.00 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			3538.00		
Hydraulic tool	5.00			3543.00		
Jars	5.00			3548.00		
Safety Joint	3.00			3551.00		
Packer	5.00			3556.00	28.00	Bottom Of Top Packer
Packer	5.00			3561.00		
Stubb	1.00			3562.00		
Recorder	0.00	8352	Inside	3562.00		
Recorder	0.00	6799	Inside	3562.00		
Perforations	28.00			3590.00		
Bullnose	5.00			3595.00	34.00	Bottom Packers & Anchor
Total Tool Length:	**62.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36505 **DST#: 2**

Test Start: 2009.09.01 @ 19:28:00

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:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	15000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
210.00	Mud 100%m	1.306
0.00	Gas In All Fluid Free Pipe	0.000

Total Length: 210.00 ft Total Volume: 1.306 bbl

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

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36505 **DST#: 2**

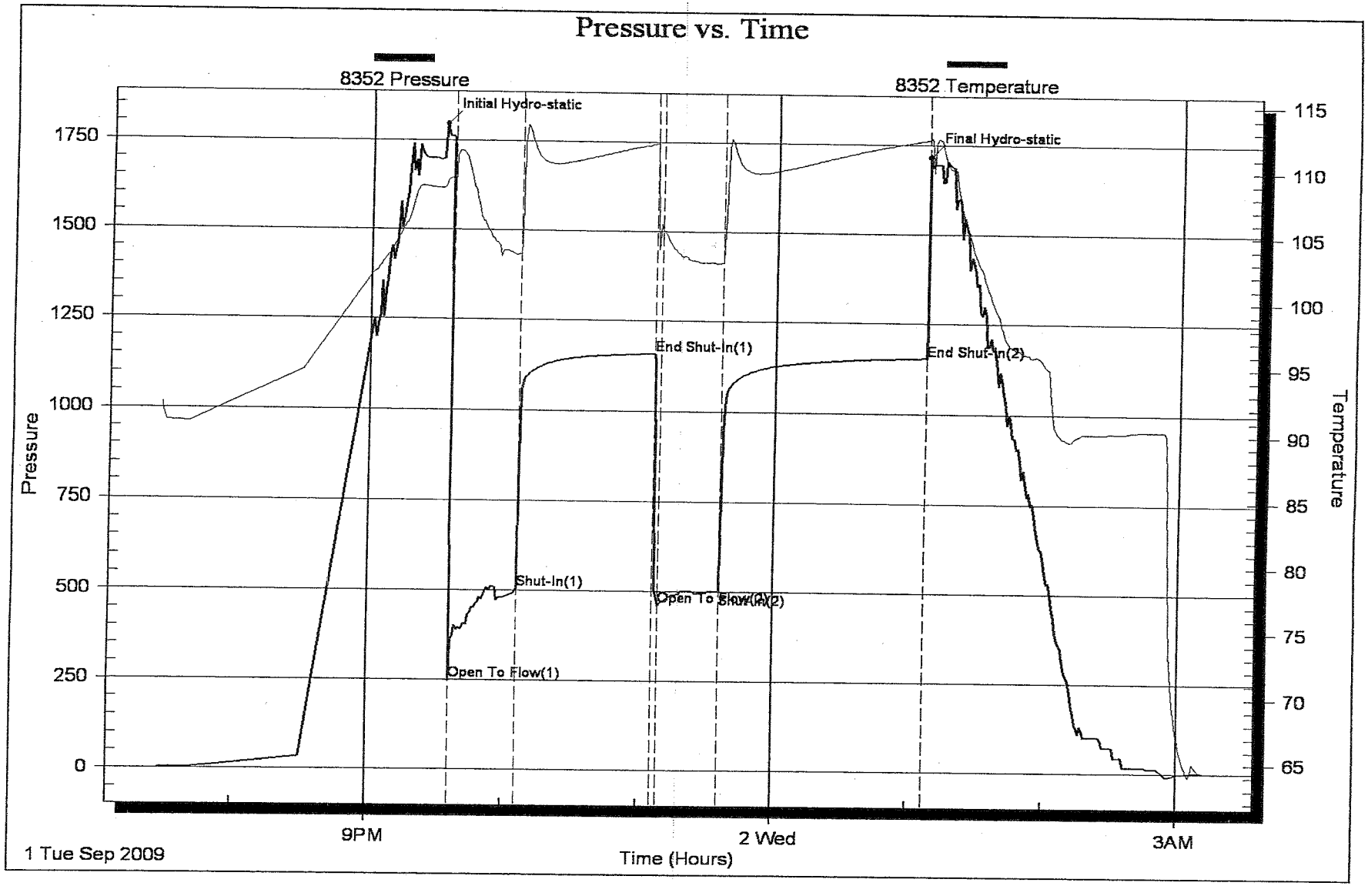
Test Start: 2009.09.01 @ 19:28:00

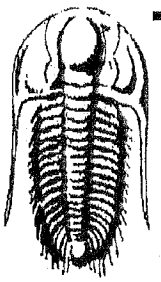
Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m^3/d)
1	5	0.75	66.00	1255.84
1	10	0.75	78.00	1443.28
1	15	0.75	96.00	1724.43
1	20	0.75	102.00	1818.15
1	25	0.75	113.00	1989.97
1	30	0.75	117.00	2052.45
2	5	0.75	105.00	1865.01
2	10	0.75	129.00	2239.89
2	15	0.75	130.00	2255.51
2	20	0.75	130.00	2255.51
2	25	0.75	130.00	2255.51
2	30	0.75	130.00	2255.51


Pressure vs. Time
8352 Pressure
8352 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
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
65
9PM
2 Wed
3AM
1 Tue Sep 2009
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Roberts Resources**

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212

ATTN: Kent Roberts

28-31s-13w Barton KS

THOM A 1-28

Start Date: 2009.09.02 @ 12:30:00

End Date: 2009.09.02 @ 20:28:39

Job Ticket #: 36506 DST #: 3

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36506 **DST#: 3**

Test Start: 2009.09.02 @ 12:30:00

GENERAL INFORMATION:

Formation: **Upper Douglas Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:46:50
Time Test Ended: 20:28:39

Test Type: Conventional Bottom Hole
Tester: Jake Fahrenbruch
Unit No: 43

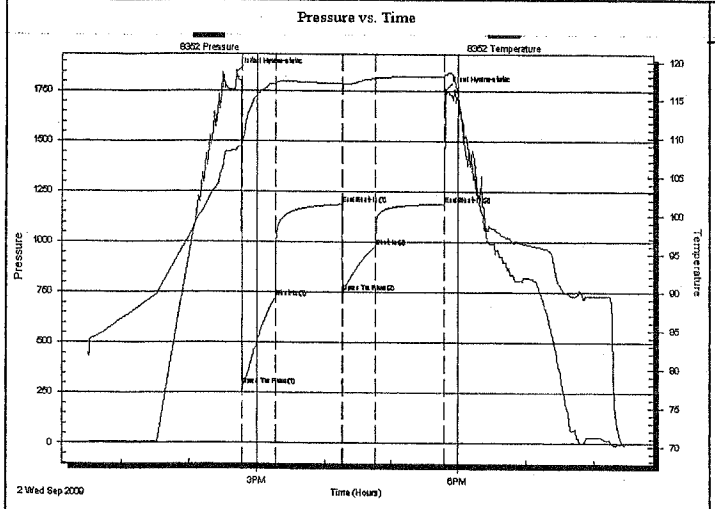
Interval: 3598.00 ft (KB) To 3678.00 ft (KB) (TVD)
Total Depth: 3678.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1559.00 ft (KB)
1546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8352 **Inside**
Press@RunDepth: 980.35 psig @ 3599.00 ft (KB)
Start Date: 2009.09.02 End Date: 2009.09.02
Start Time: 12:30:02 End Time: 20:28:40

Capacity: 7000.00 psig
Last Calib.: 2009.09.02
Time On Btm: 2009.09.02 @ 14:42:00
Time Off Btm: 2009.09.02 @ 17:49:10

TEST COMMENT: IF: Strong blow, BOB 1 minute 15 seconds.
ISI: Bled off, weak surface blow back.
FF: Strong blow, BOB 1 minute 45 seconds.
FSI: Bled off, weak surface blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1843.93	108.69	Initial Hydro-static
5	288.43	109.66	Open To Flow (1)
34	722.69	117.07	Shut-In(1)
94	1187.81	117.18	End Shut-In(1)
95	752.16	117.05	Open To Flow (2)
124	980.35	117.83	Shut-In(2)
187	1190.96	118.08	End Shut-In(2)
188	1756.92	118.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1635.00	MCW & Water (dropped bar)	21.30
335.00	Gassy OSMW 23%g 2%o 35%m 40%w	4.70
0.00	120' GIP	0.00
0.00	RW=.11ohm@81degF=61000ppmCh	0.00

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36506 **DST#: 3**

Test Start: 2009.09.02 @ 12:30:00

Tool Information

Drill Pipe:	Length:	3400.00 ft	Diameter:	3.80 inches	Volume:	47.69 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	180.00 ft	Diameter:	2.25 inches	Volume:	0.89 bbl	
					Total Volume:	48.58 bbl	

Drill Pipe Above KB:	10.00 ft
Depth to Top Packer:	3598.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	80.00 ft
Tool Length:	108.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		4000.00 lb
Weight set on Packer:		25000.00 lb
Weight to Pull Loose:		90000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	74000.00 lb
	Final	84000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3575.00		
Hydraulic tool	5.00			3580.00		
Jars	5.00			3585.00		
Safety Joint	3.00			3588.00		
Packer	5.00			3593.00	28.00	Bottom Of Top Packer
Packer	5.00			3598.00		
Stubb	1.00			3599.00		
Recorder	0.00	8352	Inside	3599.00		
Recorder	0.00	6799	Inside	3599.00		
Perforations	9.00			3608.00		
Blank Spacing	34.00			3642.00		
Perforations	31.00			3673.00		
Bullnose	5.00			3678.00	80.00	Bottom Packers & Anchor
Total Tool Length:	**108.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36506 **DST#: 3**

Test Start: 2009.09.02 @ 12:30:00

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:	61000 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	15000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

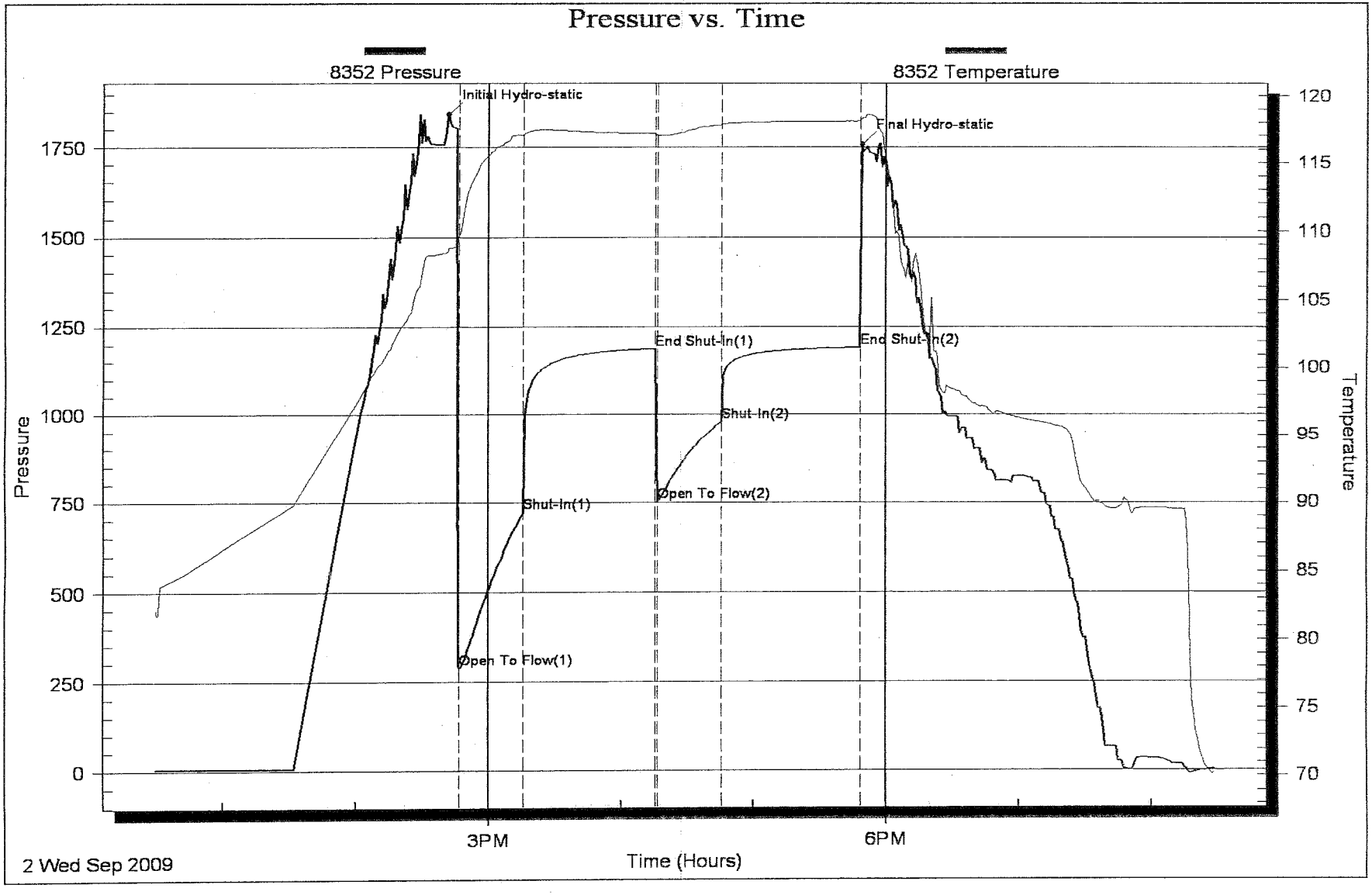
Length ft	Description	Volume bbl
1635.00	MCW & Water (dropped bar)	21.295
335.00	Gassy OSMW 23%g 2%o 35%m 40%w	4.699
0.00	120' GIP	0.000
0.00	RW=.11ohm@81degF=61000ppmChl	0.000

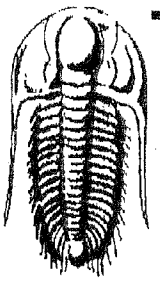
Total Length: 1970.00 ft Total Volume: 25.994 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8352 Pressure
8352 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Shut-In(1)
Open To Flow(2)
Open To Flow(1)
Pressure
Temperature
Time (Hours)
3PM
6PM
2 Wed Sep 2009
1750
1500
1250
1000
750
500
250
0
120
115
110
105
100
95
90
85
80
75
70



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Roberts Resources**

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212

ATTN: Kent Roberts

28-31s-13w Barton KS

THOM A 1-28

Start Date: 2009.09.04 @ 16:30:00
End Date: 2009.09.05 @ 01:29:40
Job Ticket #: 36507 DST #: 4

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w Barton KS

Job Ticket: 36507 **DST#: 4**

Test Start: 2009.09.04 @ 16:30:00

GENERAL INFORMATION:

Formation: **Mississippian**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:30:10
Time Test Ended: 01:29:40

Test Type: Conventional Bottom Hole
Tester: Jake Fahrenbruch
Unit No: 43

Interval: 4222.00 ft (KB) To 4237.00 ft (KB) (TVD)
Total Depth: 4237.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

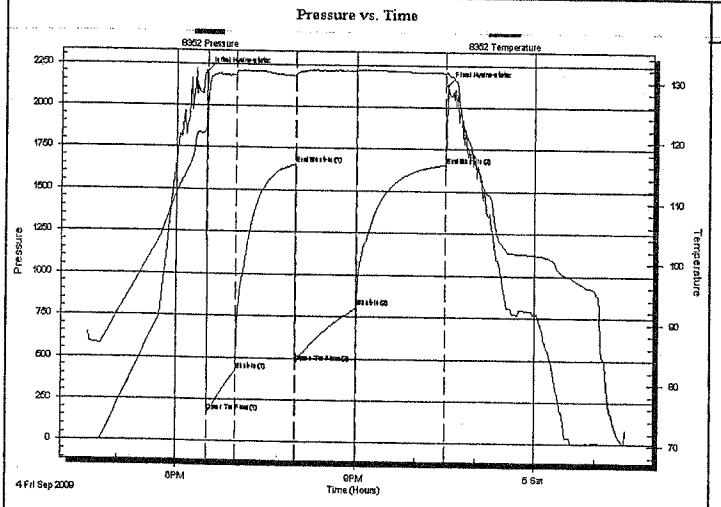
Reference Elevations: 1559.00 ft (KB)
1546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8352 **Inside**

Press@RunDepth: 805.83 psig @ 4223.00 ft (KB)
Start Date: 2009.09.04 End Date: 2009.09.05
Start Time: 16:30:02 End Time: 01:29:40

Capacity: 7000.00 psig
Last Calib.: 2009.09.05
Time On Btm: 2009.09.04 @ 18:29:10
Time Off Btm: 2009.09.04 @ 22:31:20

TEST COMMENT: IF: Strong blow, BOB 2 minutes 10 seconds.
ISI: Bled off, blow back built to BOB.
FF: Strong blow, BOB 2 minutes 50 seconds.
FSI: Bled off, blow back built to 10" in bucket.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2199.12	122.15	Initial Hydro-static
1	177.23	125.84	Open To Flow (1)
31	422.04	130.87	Shut-In(1)
90	1652.41	130.84	End Shut-In(1)
92	474.69	130.87	Open To Flow (2)
152	805.83	131.77	Shut-In(2)
241	1657.44	131.48	End Shut-In(2)
243	2131.08	131.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1595.00	Salt Water	20.73
0.00	860' GIP	0.00
0.00	RW=.10ohm@70degF=78000ppmChl	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w-Barton KS

Job Ticket: 36507 **DST#: 4**

Test Start: 2009.09.04 @ 16:30:00

Tool Information

Drill Pipe:	Length:	4025.00 ft	Diameter:	3.80 inches	Volume:	56.46 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	180.00 ft	Diameter:	2.25 inches	Volume:	0.89 bbl	
					Total Volume:	57.35 bbl	

Drill Pipe Above KB:	11.00 ft
Depth to Top Packer:	4222.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	15.00 ft
Tool Length:	43.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	3000.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	92000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	77000.00 lb
Final	85000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			4199.00		
Hydraulic tool	5.00			4204.00		
Jars	5.00			4209.00		
Safety Joint	3.00			4212.00		
Packer	5.00			4217.00	28.00	Bottom Of Top Packer
Packer	5.00			4222.00		
Stubb	1.00			4223.00		
Recorder	0.00	8352	Inside	4223.00		
Recorder	0.00	6799	Inside	4223.00		
Perforations	9.00			4232.00		
Bullnose	5.00			4237.00	15.00	Bottom Packers & Anchor
Total Tool Length:	**43.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Roberts Resources

2020 N. Tyler Rd.
Suite 106
Wichita, KS 67212
ATTN: Kent Roberts

THOM A 1-28

28-31s-13w-Barton KS

Job Ticket: 36507 **DST#: 4**

Test Start: 2009.09.04 @ 16:30:00

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:	78000 ppm
Viscosity:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	11.97 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	18000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

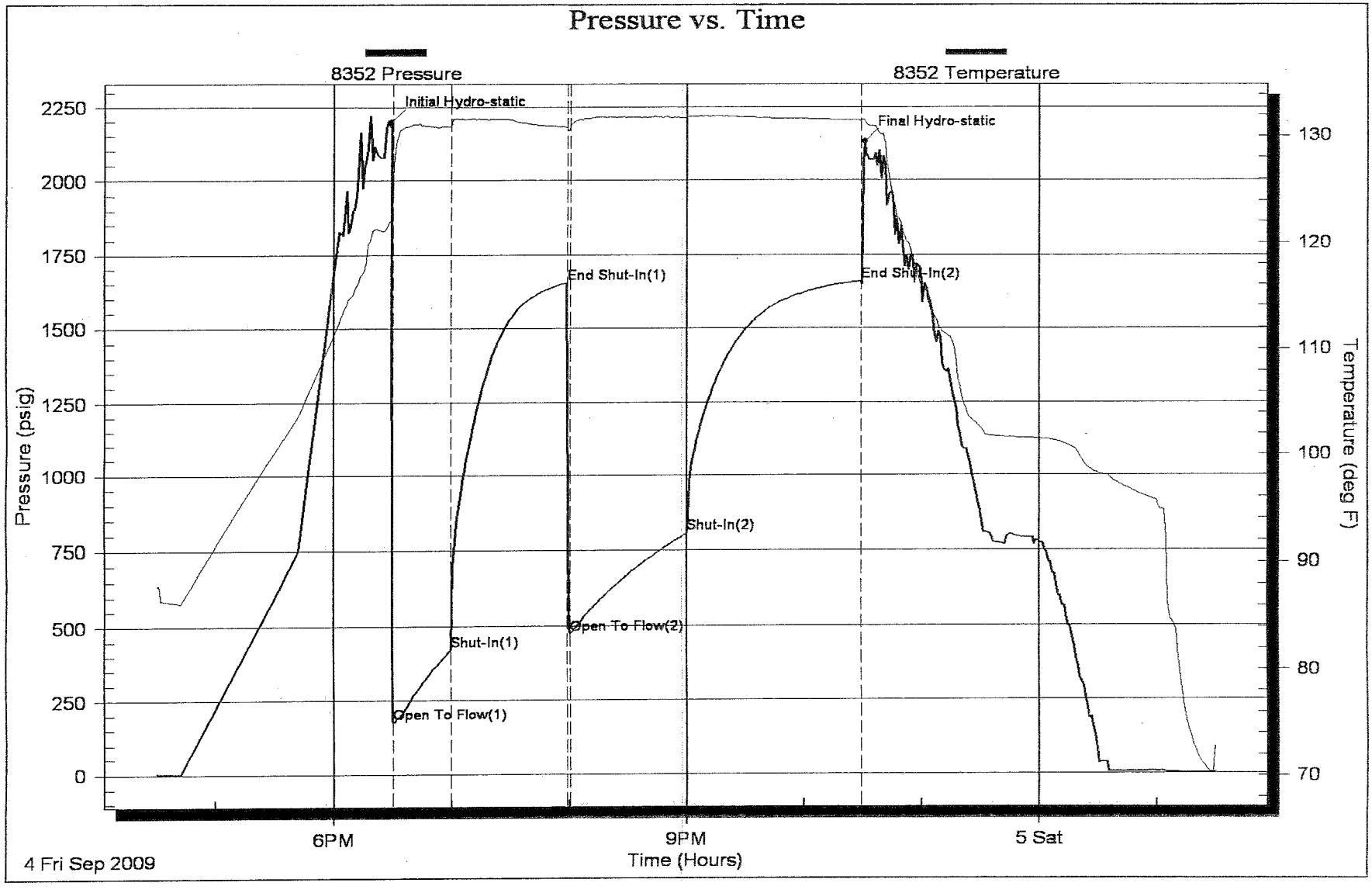
Length ft	Description	Volume bbl
1595.00	Salt Water	20.734
0.00	860' GIP	0.000
0.00	RW=.10ohm@70degF=78000ppmChl	0.000

Total Length: 1595.00 ft Total Volume: 20.734 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8352 Pressure
8352 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Shut-In(1)
Open To Flow(2)
Open To Flow(1)
Pressure (psig)
Temperature (deg F)
2250
2000
1750
1500
1250
1000
750
500
250
0
130
120
110
100
90
80
70
6PM
9PM
5 Sat
Time (Hours)
4 Fri Sep 2009