DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188

ATTN: Terry Mcleod

York Unit #1

31-15s-30w Gove,KS

Start Date: 2013.07.07 @ 00:12:00
End Date: 2013.07.07 @ 07:07:00
Job Ticket #: 53088 DST #: 1

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

Printed: 2013.07.15 @ 14:08:51

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry Mcleod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53088 **DST#: 1**

Test Start: 2013.07.07 @ 00:12:00

GENERAL INFORMATION:

Formation: **Lansing " A "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:16:00
Time Test Ended: 07:07:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Jace McKinney
Unit No: 46

Interval: 3818.00 ft (KB) To 3845.00 ft (KB) (TVD)
Total Depth: 3845.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

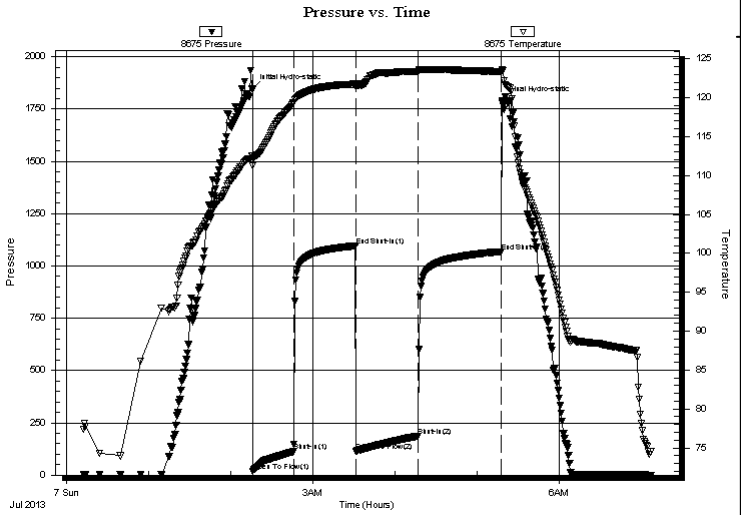
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 187.36 psig @ 3819.00 ft (KB)
Start Date: 2013.07.07 End Date: 2013.07.07
Start Time: 00:12:15 End Time: 07:07:00

Capacity: 8000.00 psig
Last Calib.: 2013.07.07
Time On Btm: 2013.07.07 @ 02:15:45
Time Off Btm: 2013.07.07 @ 05:18:30

TEST COMMENT: B.O.B. in 23 min.
Bled off for 5 min. No return blow
B.O.B. in 35 min.
Bled off for 5 min. No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1845.66	112.53	Initial Hydro-static
1	18.72	111.29	Open To Flow (1)
30	112.85	119.33	Shut-In(1)
76	1095.95	121.74	End Shut-In(1)
76	115.45	121.44	Open To Flow (2)
121	187.36	123.36	Shut-In(2)
182	1068.40	123.36	End Shut-In(2)
183	1791.57	123.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
373.00	100% Water with oil scum	4.11
2.00	clean oil	0.03

Gas Rates

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

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry Mcleod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53088 **DST#: 1**

Test Start: 2013.07.07 @ 00:12:00

GENERAL INFORMATION:

Formation: **Lansing " A "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:16:00
Time Test Ended: 07:07:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Jace McKinney
Unit No: 46

Interval: 3818.00 ft (KB) To 3845.00 ft (KB) (TVD)
Total Depth: 3845.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

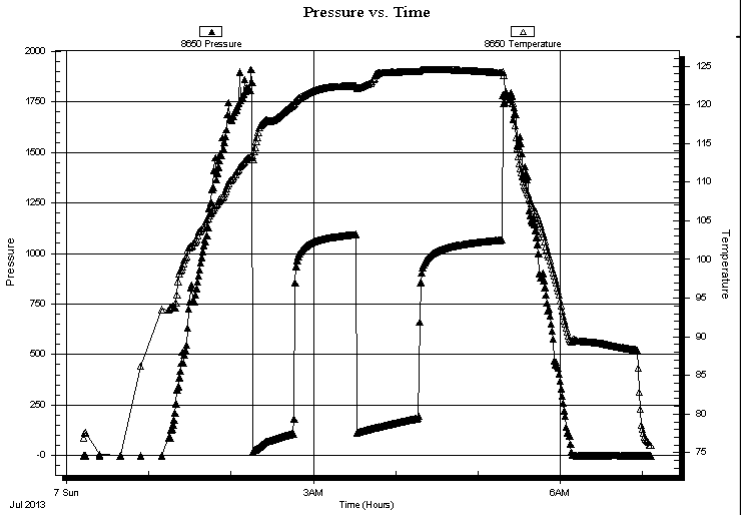
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 3819.00 ft (KB)
Start Date: 2013.07.07 End Date: 2013.07.07
Start Time: 00:12:15 End Time: 07:06:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.07
Time On Btm:
Time Off Btm:

TEST COMMENT: B.O.B. in 23 min.
Bled off for 5 min. No return blow
B.O.B. in 35 min.
Bled off for 5 min. No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
373.00	100% Water with oil scum	4.11
2.00	clean oil	0.03

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry Mcleod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53088 **DST#: 1**

Test Start: 2013.07.07 @ 00:12:00

Tool Information

Drill Pipe:	Length:	3688.64 ft	Diameter:	3.80 inches	Volume:	51.74 bbl	Tool Weight:		1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	123.50 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		66000.00 lb
					Total Volume:	52.35 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		16.64 ft					String Weight:	Initial	52000.00 lb
Depth to Top Packer:		3818.00 ft						Final	56000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		27.00 ft							
Tool Length:		49.50 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			3796.50		
Shut In Tool	5.00			3801.50		
Hydraulic tool	5.00			3806.50		
Safety Joint	2.50			3809.00		
Packer	5.00			3814.00	22.50	Bottom Of Top Packer
Packer	4.00			3818.00		
Stubb	1.00			3819.00		
Recorder	0.00	8675	Inside	3819.00		
Recorder	0.00	8650	Outside	3819.00		
Perforations	23.00			3842.00		
Change Over Sub	0.00			3842.00		
Drill Pipe	0.00			3842.00		
Change Over Sub	0.00			3842.00		
Bullnose	3.00			3845.00	27.00	Bottom Packers & Anchor
Total Tool Length:	**49.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry Mcleod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53088 **DST#: 1**

Test Start: 2013.07.07 @ 00:12:00

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:	61.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.16 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
373.00	100% Water with oil scum	4.107
2.00	clean oil	0.028

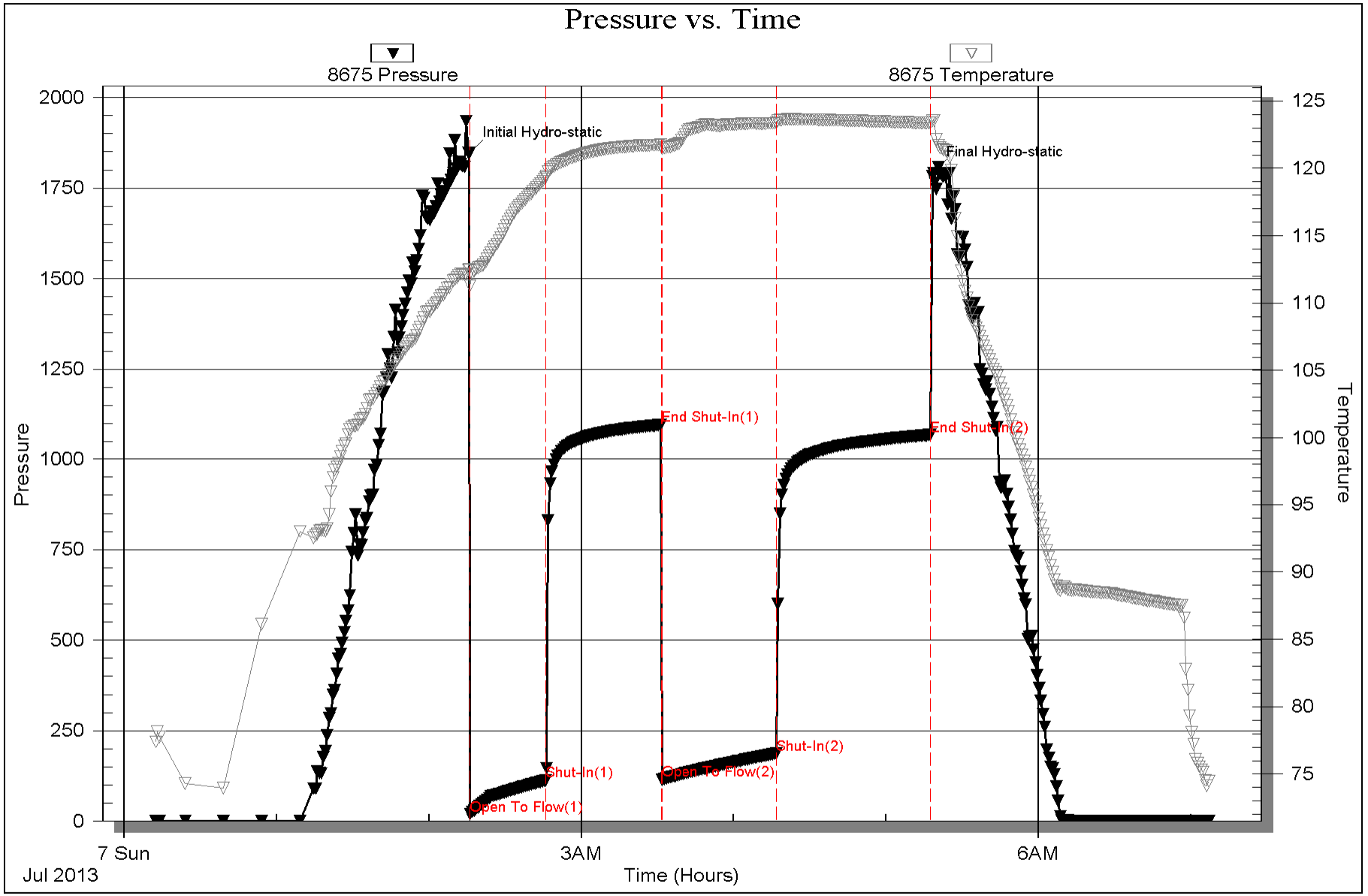
Total Length: 375.00 ft Total Volume: 4.135 bbl

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

Laboratory Name: Laboratory Location:

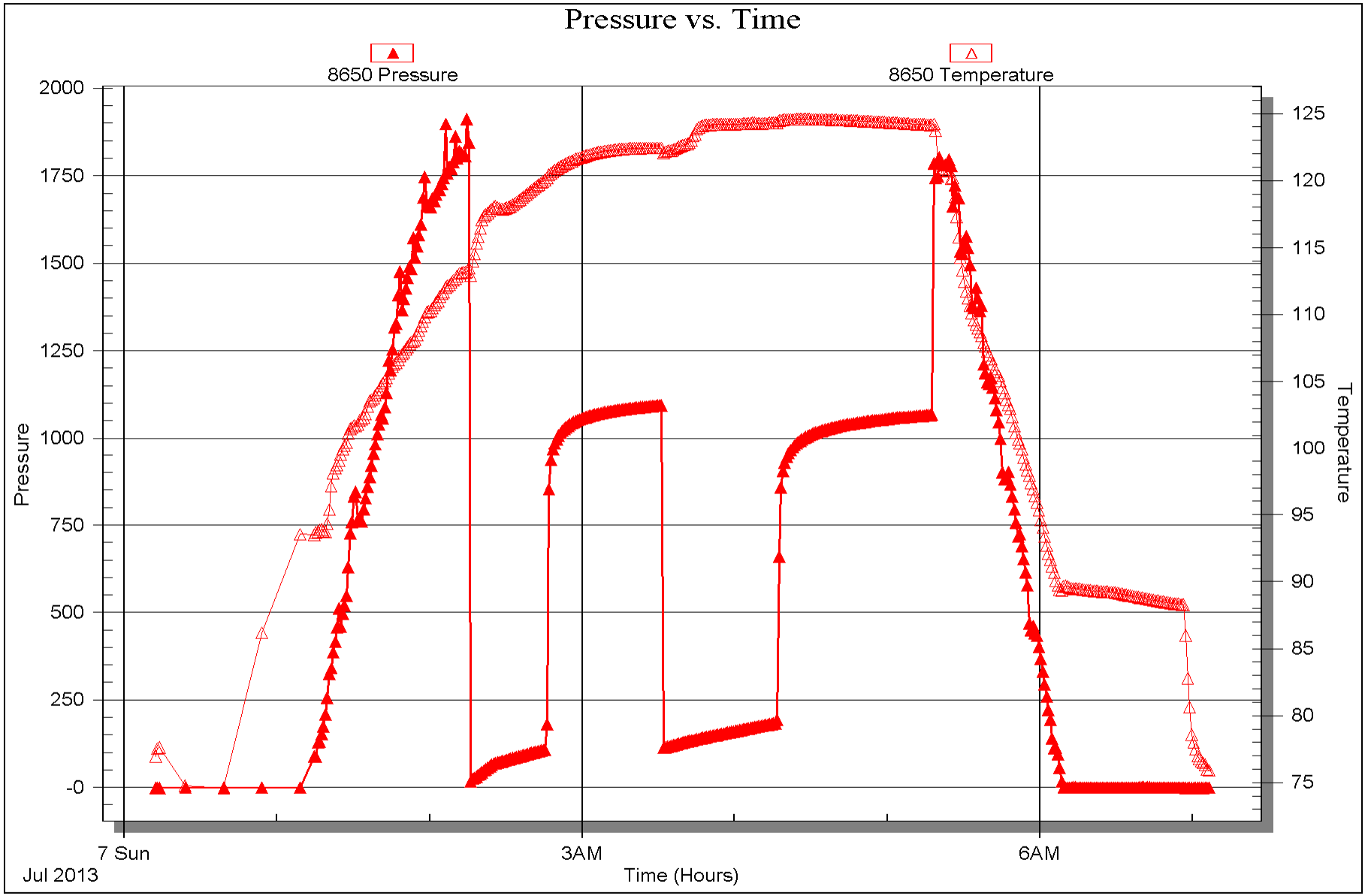
Recovery Comments: RW: .1 @ 75 F = 60,000

Serial #: 8675 **Inside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 1

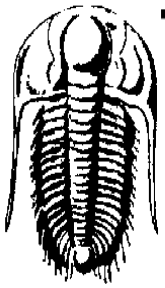


Trilobite Testing, Inc Ref. No: 53088 Printed: 2013.07.15 @ 14:08:54

Serial #: 8650 **Outside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 53088 Printed: 2013.07.15 @ 14:08:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188

ATTN: Terry McLeod

York Unit #1

31-15s-30w Gove,KS

Start Date: 2013.07.07 @ 14:10:00
End Date: 2013.07.07 @ 20:40:45
Job Ticket #: 53089 DST #: 2

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

Printed: 2013.07.15 @ 14:03:36

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53089 **DST#: 2**

Test Start: 2013.07.07 @ 14:10:00

GENERAL INFORMATION:

Formation: **Lansing " C "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:58:30
Time Test Ended: 20:40:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 3846.00 ft (KB) To 3865.00 ft (KB) (TVD)
Total Depth: 3865.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

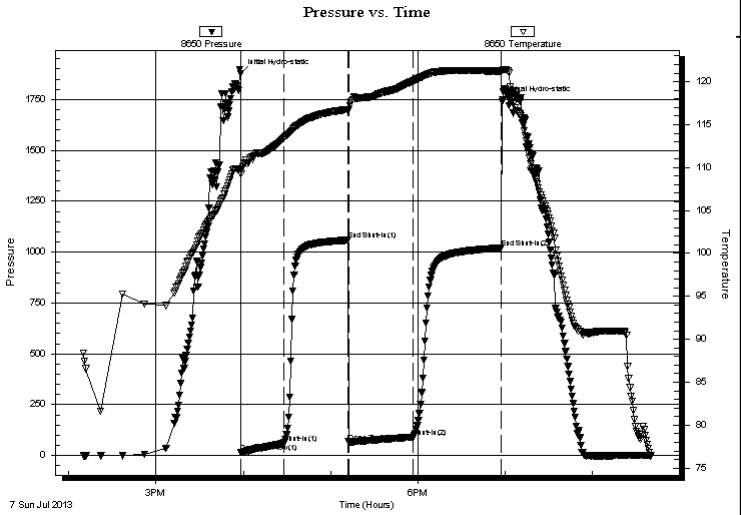
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: 90.94 psig @ 3847.00 ft (KB)
Start Date: 2013.07.07 End Date: 2013.07.07
Start Time: 14:10:15 End Time: 20:40:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.07
Time On Btm: 2013.07.07 @ 15:58:15
Time Off Btm: 2013.07.07 @ 18:58:30

TEST COMMENT: Built to 4" blow
No return blow
Built to 5" blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1877.15	109.88	Initial Hydro-static
1	15.49	109.27	Open To Flow (1)
30	60.15	113.42	Shut-In(1)
74	1059.35	116.77	End Shut-In(1)
75	67.69	116.75	Open To Flow (2)
119	90.94	120.11	Shut-In(2)
180	1020.96	121.20	End Shut-In(2)
181	1747.23	121.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	mcw with oil scum 40%M 60%O	0.39
60.00	0cm 10%O 90%M	0.45
40.00	Clean Oil 5%G 95%O	0.56

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53089 **DST#: 2**

Test Start: 2013.07.07 @ 14:10:00

GENERAL INFORMATION:

Formation: **Lansing " C "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:58:30
Time Test Ended: 20:40:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 3846.00 ft (KB) To 3865.00 ft (KB) (TVD)
Total Depth: 3865.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

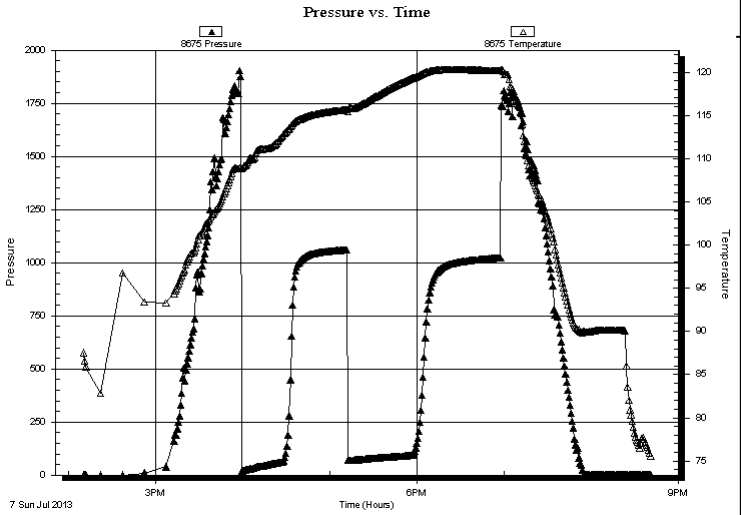
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: psig @ 3847.00 ft (KB)
Start Date: 2013.07.07 End Date: 2013.07.07
Start Time: 14:10:15 End Time: 20:41:00

Capacity: 8000.00 psig
Last Calib.: 2013.07.07
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 4" blow
No return blow
Built to 5" blow
No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
80.00	mcw with oil scum 40%M 60%O	0.39
60.00	0cm 10%O 90%M	0.45
40.00	Clean Oil 5%G 95%O	0.56

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53089 **DST#: 2**

Test Start: 2013.07.07 @ 14:10:00

Tool Information

Drill Pipe:	Length:	3720.47 ft	Diameter:	3.80 inches	Volume:	52.19 bbl	Tool Weight:		1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	123.50 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		64000.00 lb
					Total Volume:	52.80 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		20.47 ft					String Weight:	Initial	52000.00 lb
Depth to Top Packer:		3846.00 ft						Final	52000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		19.00 ft							
Tool Length:		41.50 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			3824.50		
Shut In Tool	5.00			3829.50		
Hydraulic tool	5.00			3834.50		
Safety Joint	2.50			3837.00		
Packer	5.00			3842.00	22.50	Bottom Of Top Packer
Packer	4.00			3846.00		
Stubb	1.00			3847.00		
Recorder	0.00	8675	Inside	3847.00		
Recorder	0.00	8650	Outside	3847.00		
Perforations	15.00			3862.00		
Change Over Sub	0.00			3862.00		
Drill Pipe	0.00			3862.00		
Change Over Sub	0.00			3862.00		
Bullnose	3.00			3865.00	19.00	Bottom Packers & Anchor
Total Tool Length:	**41.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53089 **DST#: 2**

Test Start: 2013.07.07 @ 14:10:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	27 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	50000 ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.95 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	mcw with oil scum 40%M 60%O	0.393
60.00	0cm 10%O 90%M	0.445
40.00	Clean Oil 5%G 95%O	0.561

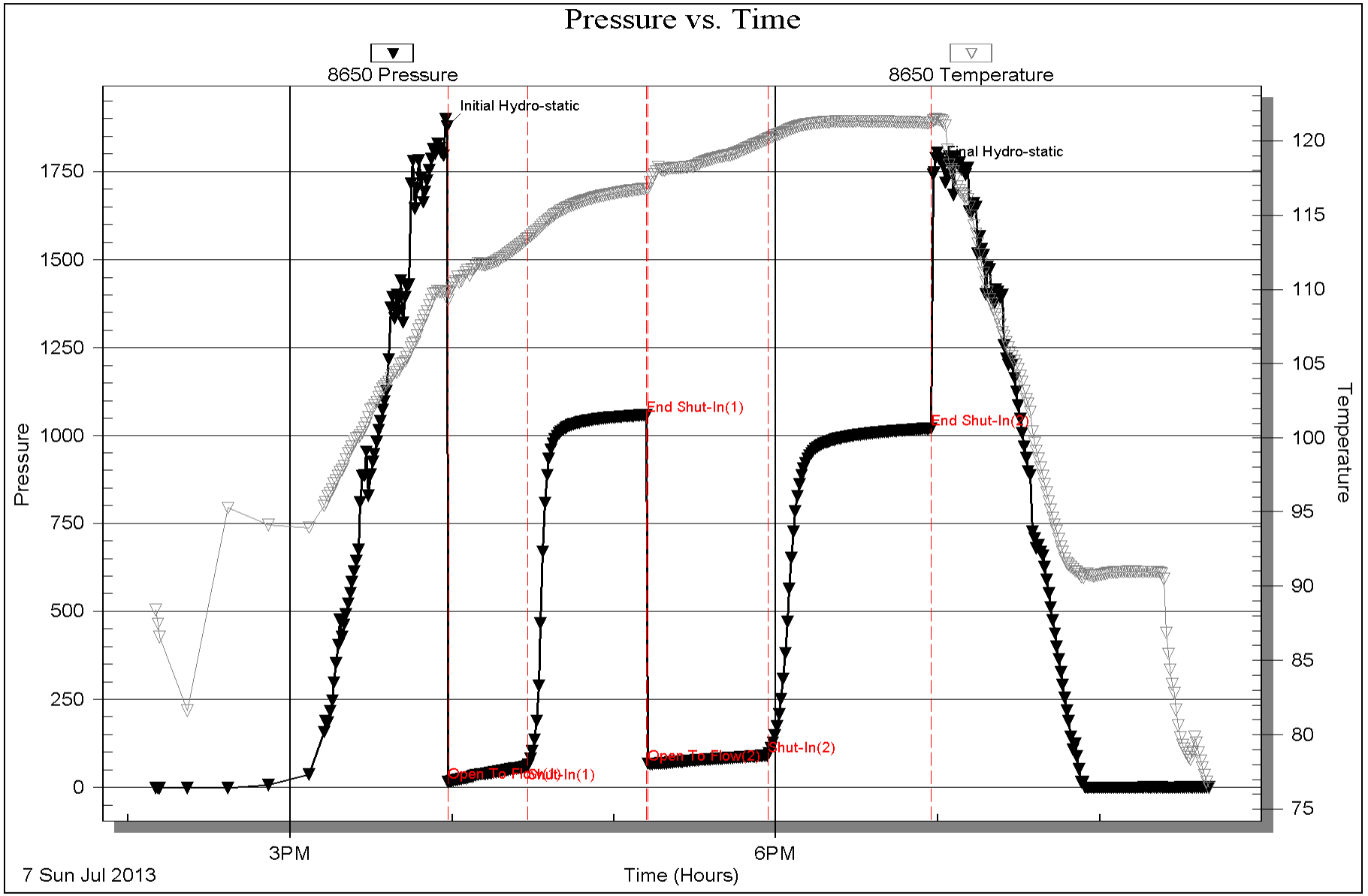
Total Length: 180.00 ft Total Volume: 1.399 bbl

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

Laboratory Name: Laboratory Location:

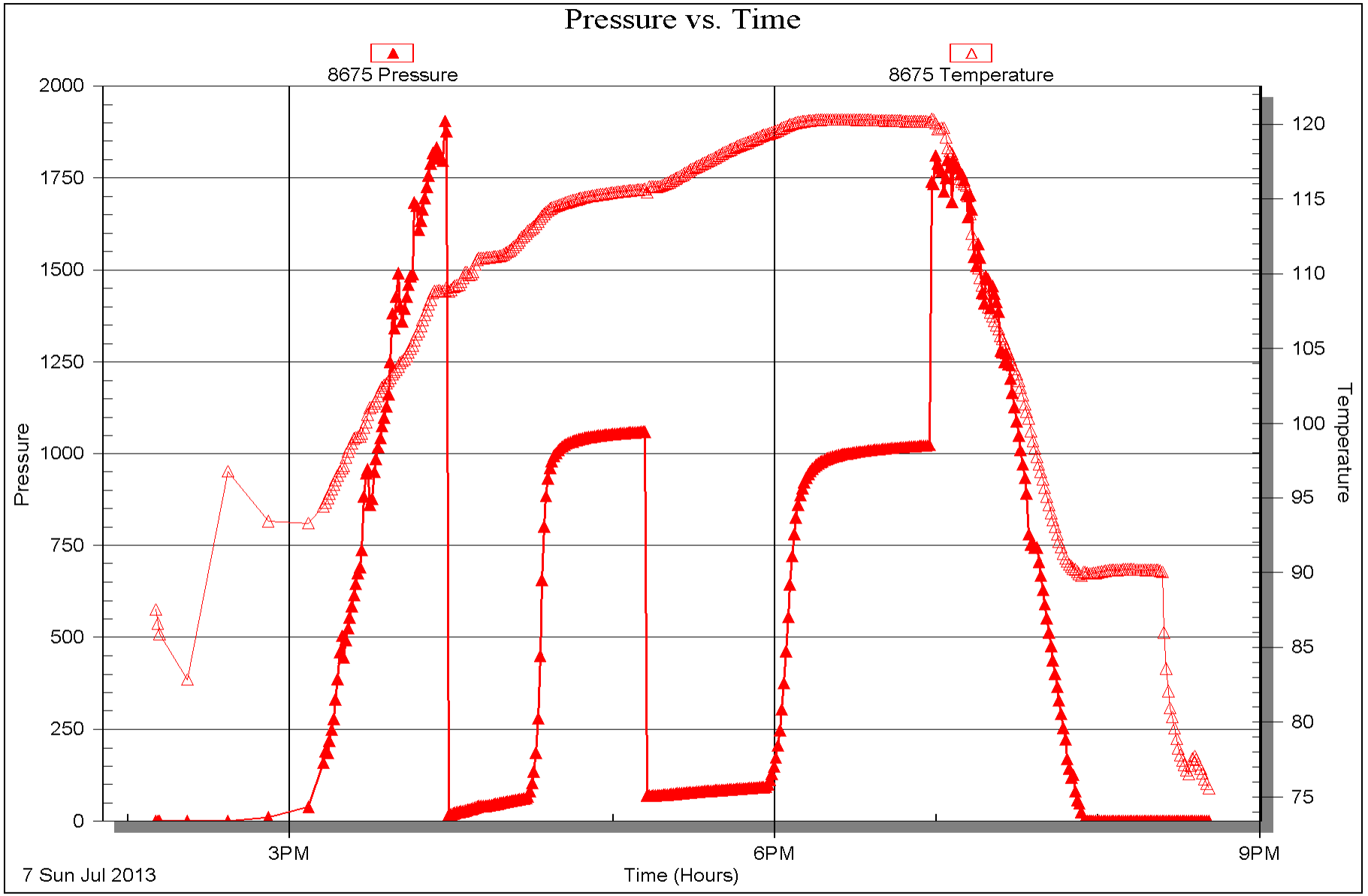
Recovery Comments: RW: .13 @ 80 F = 50,000
API: 29 @ 80 F = 27

Serial #: 8650 **Outside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 2

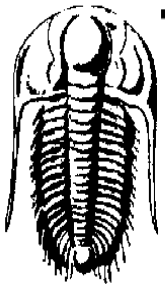


Trilobite Testing, Inc Ref. No: 53089 Printed: 2013.07.15 @ 14:03:39

Serial #: 8675 **Inside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 53089 Printed: 2013.07.15 @ 14:03:39



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188

ATTN: Terry McLeod

York Unit #1

31-15s-30w Gove,KS

Start Date: 2013.07.08 @ 13:30:00
End Date: 2013.07.08 @ 18:52:45
Job Ticket #: 53090 DST #: 3

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

Printed: 2013.07.15 @ 14:02:15

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53090 **DST#: 3**

Test Start: 2013.07.08 @ 13:30:00

GENERAL INFORMATION:

Formation: **Kansas City " H & I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:21:30
Time Test Ended: 18:52:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 3988.00 ft (KB) To 4060.00 ft (KB) (TVD)
Total Depth: 4060.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

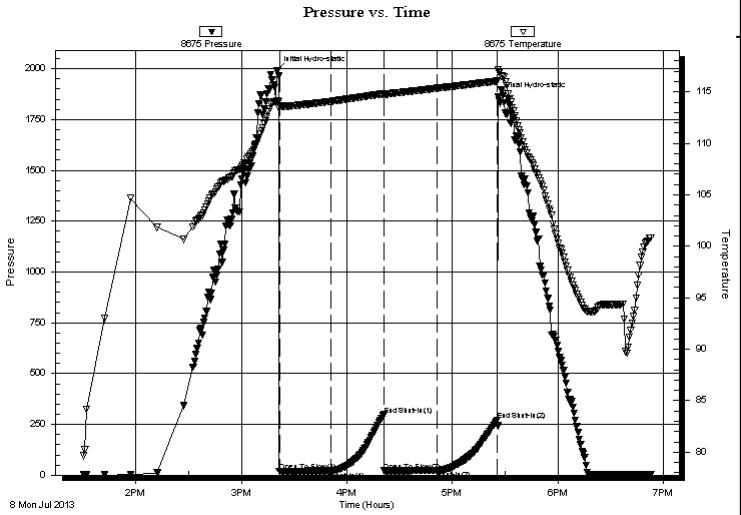
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 23.49 psig @ 3989.00 ft (KB)
Start Date: 2013.07.08 End Date: 2013.07.08
Start Time: 13:30:15 End Time: 18:52:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.08
Time On Btm: 2013.07.08 @ 15:20:15
Time Off Btm: 2013.07.08 @ 17:26:00

TEST COMMENT: Built to 1/4" blow , died in 20 min.
No return blow
No blow , flushed tool 10 min. into
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1992.33	114.08	Initial Hydro-static
2	18.04	113.48	Open To Flow (1)
31	20.32	114.07	Shut-In(1)
61	296.86	114.82	End Shut-In(1)
61	20.28	114.67	Open To Flow (2)
92	23.49	115.35	Shut-In(2)
126	268.75	116.05	End Shut-In(2)
126	1863.73	117.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% Mud with oil spots in tool	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53090 **DST#: 3**

Test Start: 2013.07.08 @ 13:30:00

GENERAL INFORMATION:

Formation: **Kansas City " H & I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:21:30
Time Test Ended: 18:52:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 3988.00 ft (KB) To 4060.00 ft (KB) (TVD)
Total Depth: 4060.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

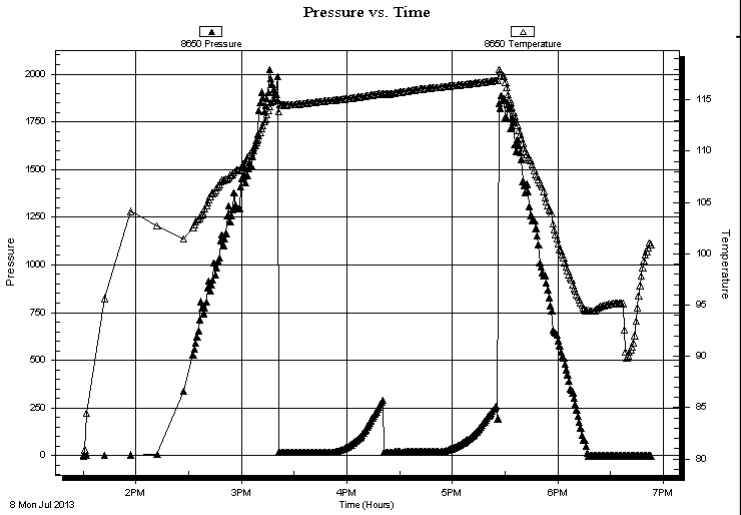
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 3989.00 ft (KB)
Start Date: 2013.07.08 End Date: 2013.07.08
Start Time: 13:30:15 End Time: 18:52:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.08
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 1/4" blow , died in 20 min.
No return blow
No blow , flushed tool 10 min. into
No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% Mud w ith oil spots in tool	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53090 **DST#: 3**

Test Start: 2013.07.08 @ 13:30:00

Tool Information

Drill Pipe:	Length:	3876.37 ft	Diameter:	3.80 inches	Volume:	54.38 bbl	Tool Weight:		1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	123.50 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		64000.00 lb
					Total Volume:	54.99 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		34.37 ft					String Weight:	Initial	54000.00 lb
Depth to Top Packer:		3988.00 ft						Final	54000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		72.00 ft							
Tool Length:		94.50 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			3966.50		
Shut In Tool	5.00			3971.50		
Hydraulic tool	5.00			3976.50		
Safety Joint	2.50			3979.00		
Packer	5.00			3984.00	22.50	Bottom Of Top Packer
Packer	4.00			3988.00		
Stubb	1.00			3989.00		
Recorder	0.00	8675	Inside	3989.00		
Recorder	0.00	8650	Outside	3989.00		
Perforations	29.00			4018.00		
Change Over Sub	1.00			4019.00		
Drill Pipe	31.00			4050.00		
Change Over Sub	1.00			4051.00		
Bullnose	9.00			4060.00	72.00	Bottom Packers & Anchor
Total Tool Length:	**94.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53090 **DST#: 3**

Test Start: 2013.07.08 @ 13:30:00

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:	ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.76 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

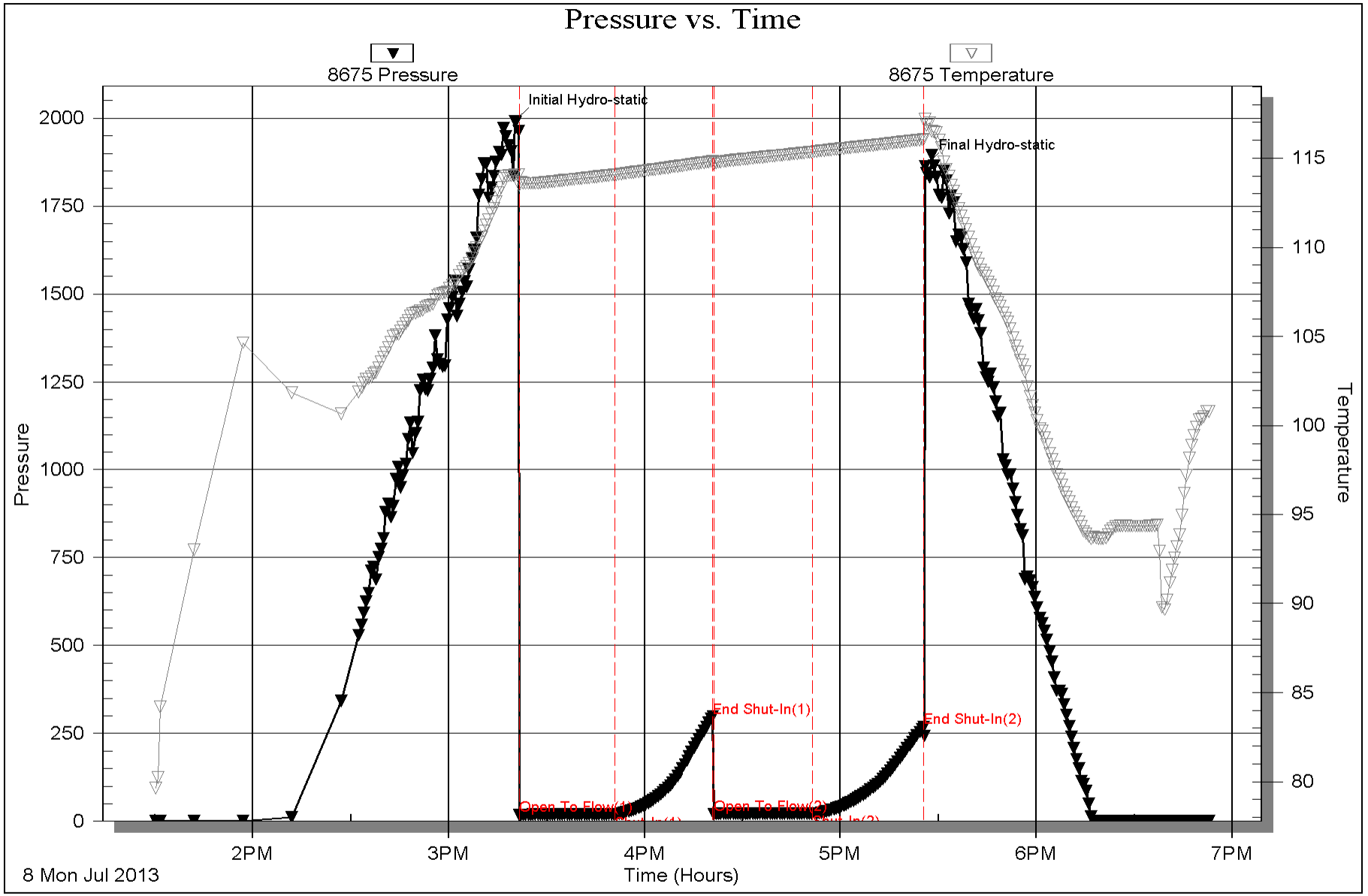
Recovery Table

Length ft	Description	Volume bbl
10.00	100% Mud with oil spots in tool	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

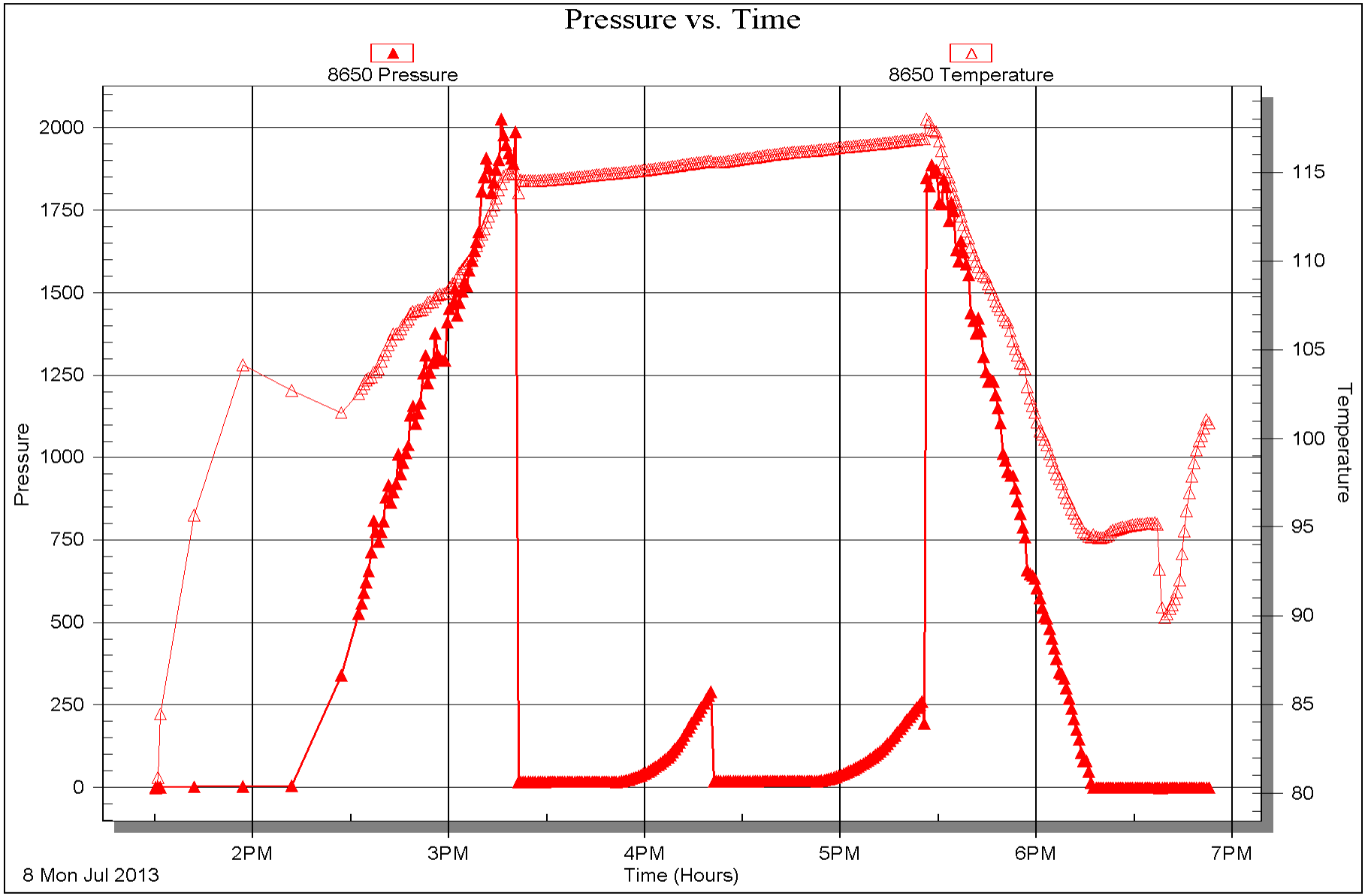
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8675 **Inside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 3

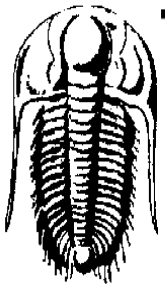


Trilobite Testing, Inc Ref. No: 53090 Printed: 2013.07.15 @ 14:02:18

Serial #: 8650 **Outside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 53090 Printed: 2013.07.15 @ 14:02:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188

ATTN: Terry McLeod

York Unit #1

31-15s-30w Gove,KS

Start Date: 2013.07.09 @ 00:25:00
End Date: 2013.07.09 @ 06:49:45
Job Ticket #: 53091 DST #: 4

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

Printed: 2013.07.15 @ 14:01:05

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53091 **DST#: 4**

Test Start: 2013.07.09 @ 00:25:00

GENERAL INFORMATION:

Formation: **Kansas City " J "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:19:15
Time Test Ended: 06:49:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4057.00 ft (KB) To 4085.00 ft (KB) (TVD)
Total Depth: 4085.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

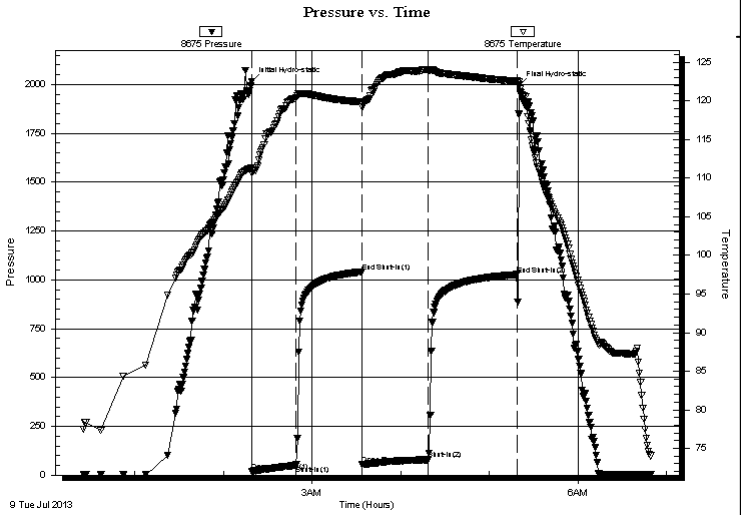
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 79.29 psig @ 4058.00 ft (KB)
Start Date: 2013.07.09 End Date: 2013.07.09
Start Time: 00:25:15 End Time: 06:49:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.09
Time On Btm: 2013.07.09 @ 02:19:00
Time Off Btm: 2013.07.09 @ 05:20:15

TEST COMMENT: Built to 2 1/4" blow
No return blow
Built to 1 1/4" blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2013.80	111.32	Initial Hydro-static
1	17.57	110.62	Open To Flow (1)
31	52.17	120.42	Shut-In(1)
75	1041.52	119.86	End Shut-In(1)
75	54.80	119.18	Open To Flow (2)
120	79.29	123.96	Shut-In(2)
180	1027.42	122.57	End Shut-In(2)
182	1993.51	122.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	mcw 20%M 80%W	0.37
75.00	mcw 50%M 50%W w ith oil scum	0.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53091 **DST#: 4**

Test Start: 2013.07.09 @ 00:25:00

GENERAL INFORMATION:

Formation: **Kansas City " J "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:19:15
Time Test Ended: 06:49:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4057.00 ft (KB) To 4085.00 ft (KB) (TVD)
Total Depth: 4085.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

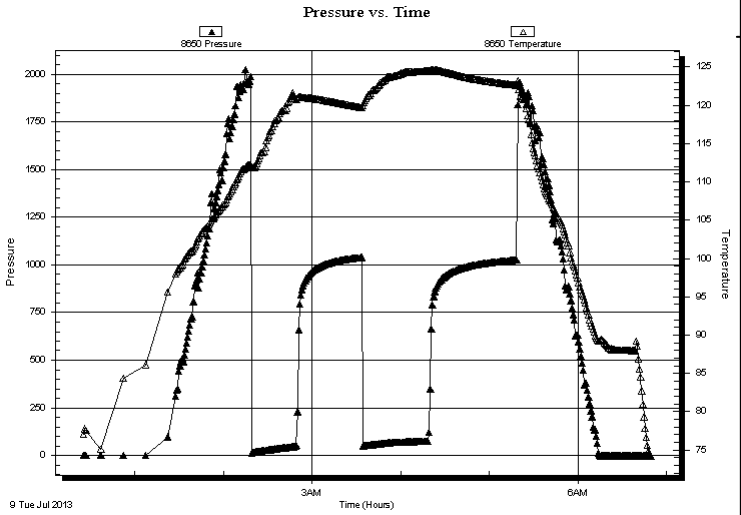
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4058.00 ft (KB)
Start Date: 2013.07.09 End Date: 2013.07.09
Start Time: 00:25:15 End Time: 06:49:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.09
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 2 1/4" blow
No return blow
Built to 1 1/4" blow
No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
75.00	mcw 20%M 80%W	0.37
75.00	mcw 50%M 50%W w ith oil scum	0.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53091 **DST#: 4**

Test Start: 2013.07.09 @ 00:25:00

Tool Information

Drill Pipe:	Length:	3939.88 ft	Diameter:	3.80 inches	Volume:	55.27 bbl	Tool Weight:		1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	123.50 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		70000.00 lb
					Total Volume:	55.88 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		28.88 ft					String Weight:	Initial	54000.00 lb
Depth to Top Packer:		4057.00 ft						Final	54000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		28.00 ft							
Tool Length:		50.50 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			4035.50		
Shut In Tool	5.00			4040.50		
Hydraulic tool	5.00			4045.50		
Safety Joint	2.50			4048.00		
Packer	5.00			4053.00	22.50	Bottom Of Top Packer
Packer	4.00			4057.00		
Stubb	1.00			4058.00		
Recorder	0.00	8675	Inside	4058.00		
Recorder	0.00	8650	Outside	4058.00		
Perforations	24.00			4082.00		
Change Over Sub	0.00			4082.00		
Drill Pipe	0.00			4082.00		
Change Over Sub	0.00			4082.00		
Bullnose	3.00			4085.00	28.00	Bottom Packers & Anchor
Total Tool Length:	**50.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53091 **DST#: 4**

Test Start: 2013.07.09 @ 00:25:00

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:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	mcw 20%M 80%W	0.369
75.00	mcw 50%M 50%W with oil scum	0.610

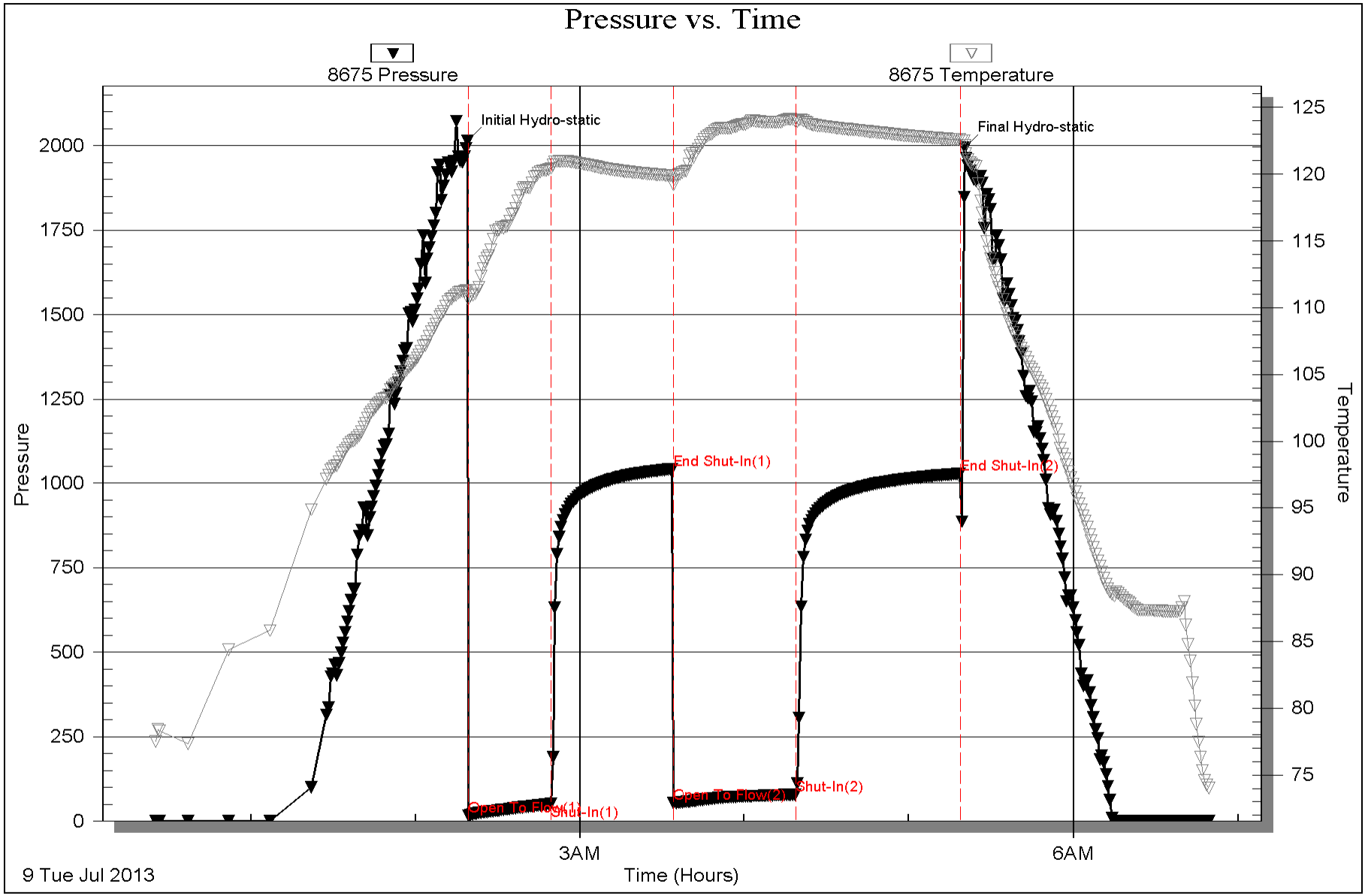
Total Length: 150.00 ft Total Volume: 0.979 bbl

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

Laboratory Name: Laboratory Location:

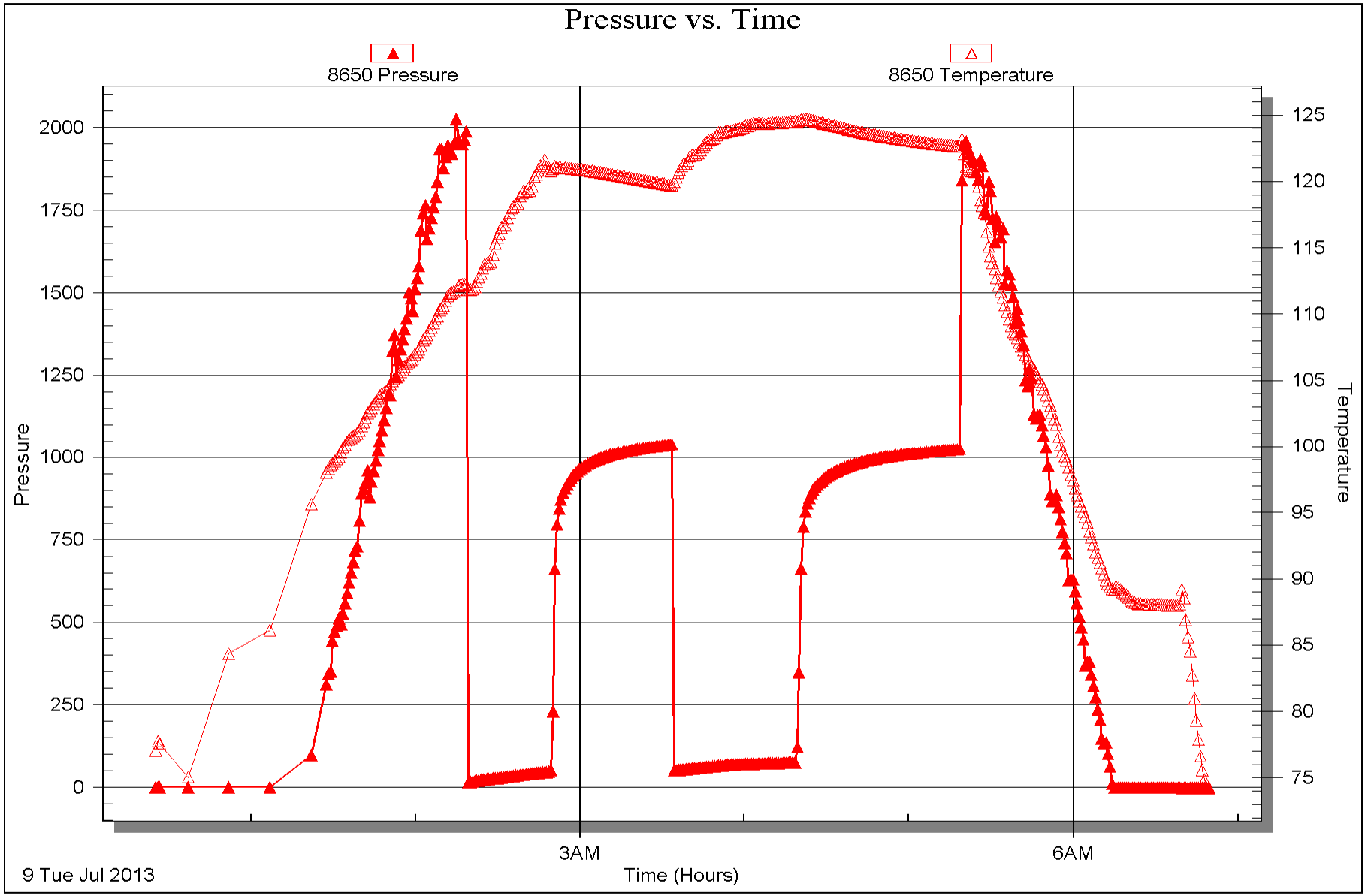
Recovery Comments: RW: .15 @ 75 F = 50,000

Serial #: 8675 **Inside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 53091 Printed: 2013.07.15 @ 14:01:08

Serial #: 8650 **Outside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 53091 Printed: 2013.07.15 @ 14:01:08

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188

ATTN: Terry McLeod

York Unit #1

31-15s-30w Gove,KS

Start Date: 2013.07.09 @ 15:40:00
End Date: 2013.07.09 @ 22:12:45
Job Ticket #: 53092 DST #: 5

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

Printed: 2013.07.15 @ 13:59:27

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53092 **DST#: 5**

Test Start: 2013.07.09 @ 15:40:00

GENERAL INFORMATION:

Formation: **Kansas City " K & L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:32:45
Time Test Ended: 22:12:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4081.00 ft (KB) To 4155.00 ft (KB) (TVD)
Total Depth: 4155.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

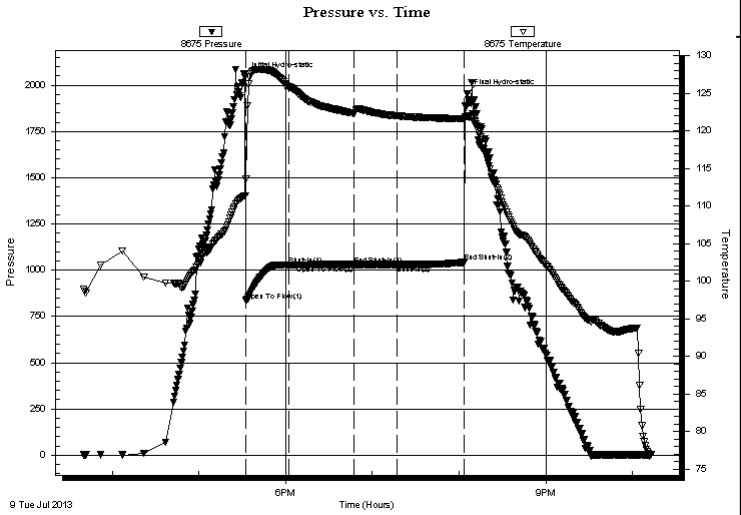
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 1030.61 psig @ 4082.00 ft (KB)
Start Date: 2013.07.09 End Date: 2013.07.09
Start Time: 15:40:15 End Time: 22:12:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.09
Time On Btm: 2013.07.09 @ 17:32:00
Time Off Btm: 2013.07.09 @ 20:05:45

TEST COMMENT: B.O.B. in 30 seconds
Bled off for 5 min. No return blow
Built to 1/4" died in 20 min.
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2046.49	111.37	Initial Hydro-static
1	835.81	113.62	Open To Flow (1)
30	1028.92	125.84	Shut-In(1)
75	1030.16	122.33	End Shut-In(1)
76	1027.70	122.32	Open To Flow (2)
105	1030.61	121.98	Shut-In(2)
152	1042.42	121.61	End Shut-In(2)
154	1954.07	121.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1857.00	100% Water	24.92
278.00	mcw 30%M 70%W	3.90

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53092 **DST#: 5**

Test Start: 2013.07.09 @ 15:40:00

GENERAL INFORMATION:

Formation: **Kansas City " K & L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:32:45
Time Test Ended: 22:12:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4081.00 ft (KB) To 4155.00 ft (KB) (TVD)
Total Depth: 4155.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

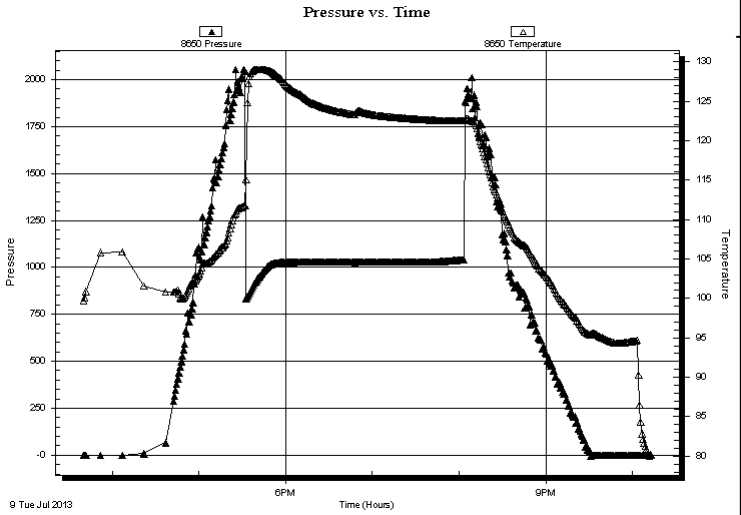
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4082.00 ft (KB)
Start Date: 2013.07.09 End Date: 2013.07.09
Start Time: 15:40:15 End Time: 22:12:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.09
Time On Btm:
Time Off Btm:

TEST COMMENT: B.O.B. in 30 seconds
Bled off for 5 min. No return blow
Built to 1/4" died in 20 min.
No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1857.00	100% Water	24.92
278.00	mcw 30%M 70%W	3.90

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53092 **DST#: 5**

Test Start: 2013.07.09 @ 15:40:00

Tool Information

Drill Pipe:	Length:	3939.78 ft	Diameter:	3.80 inches	Volume:	55.26 bbl	Tool Weight:		1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	123.50 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		80000.00 lb
					Total Volume:	55.87 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		4.78 ft					String Weight:	Initial	54000.00 lb
Depth to Top Packer:		4081.00 ft						Final	64000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		74.00 ft							
Tool Length:		96.50 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			4059.50		
Shut In Tool	5.00			4064.50		
Hydraulic tool	5.00			4069.50		
Safety Joint	2.50			4072.00		
Packer	5.00			4077.00	22.50	Bottom Of Top Packer
Packer	4.00			4081.00		
Stubb	1.00			4082.00		
Recorder	0.00	8675	Inside	4082.00		
Recorder	0.00	8650	Outside	4082.00		
Perforations	6.00			4088.00		
Change Over Sub	1.00			4089.00		
Drill Pipe	62.00			4151.00		
Change Over Sub	1.00			4152.00		
Bullnose	3.00			4155.00	74.00	Bottom Packers & Anchor
Total Tool Length:	**96.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53092 **DST#: 5**

Test Start: 2013.07.09 @ 15:40:00

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:	9.57 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1857.00	100% Water	24.924
278.00	mcw 30%M 70%W	3.900

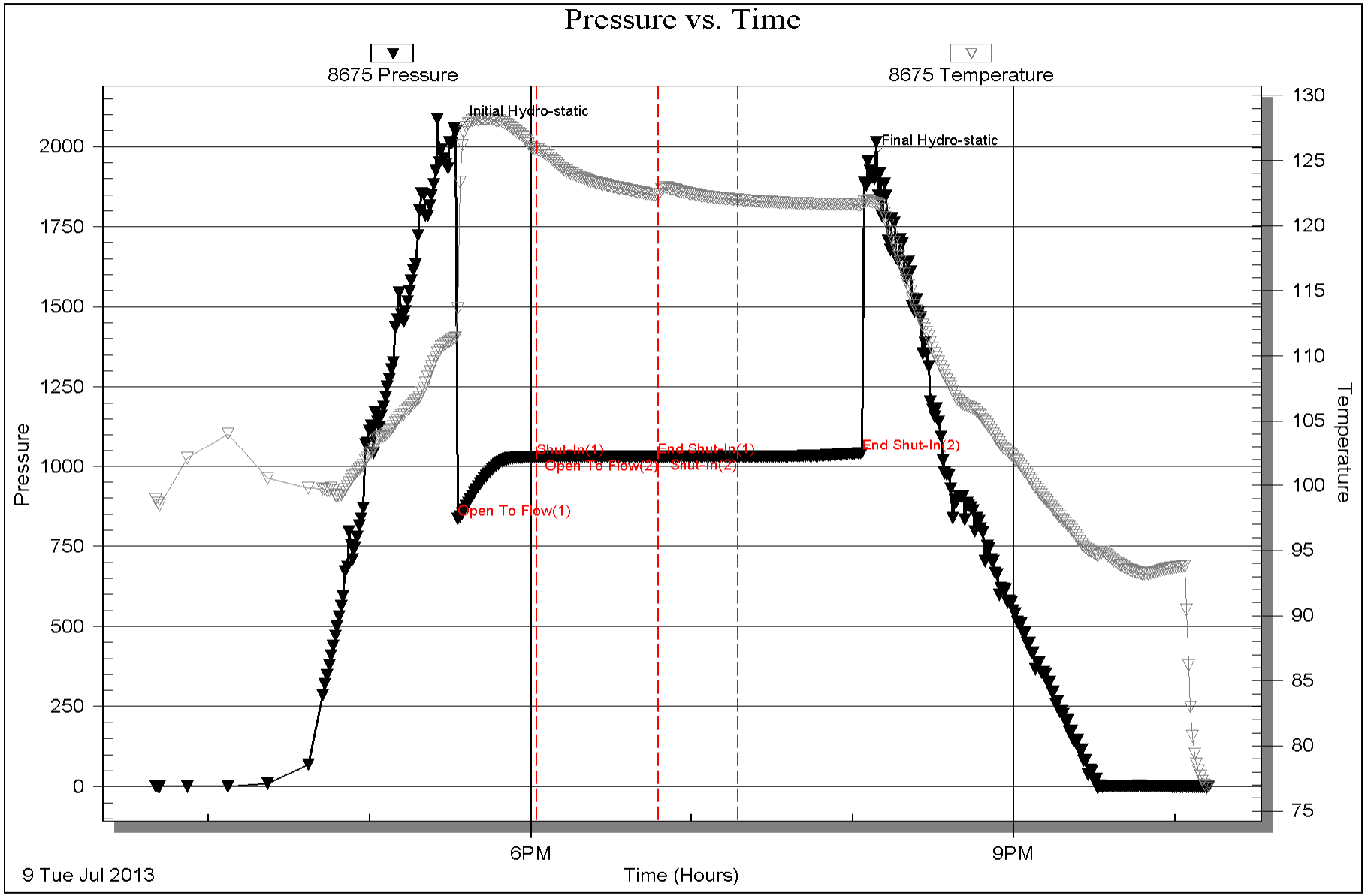
Total Length: 2135.00 ft Total Volume: 28.824 bbl

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

Laboratory Name: Laboratory Location:

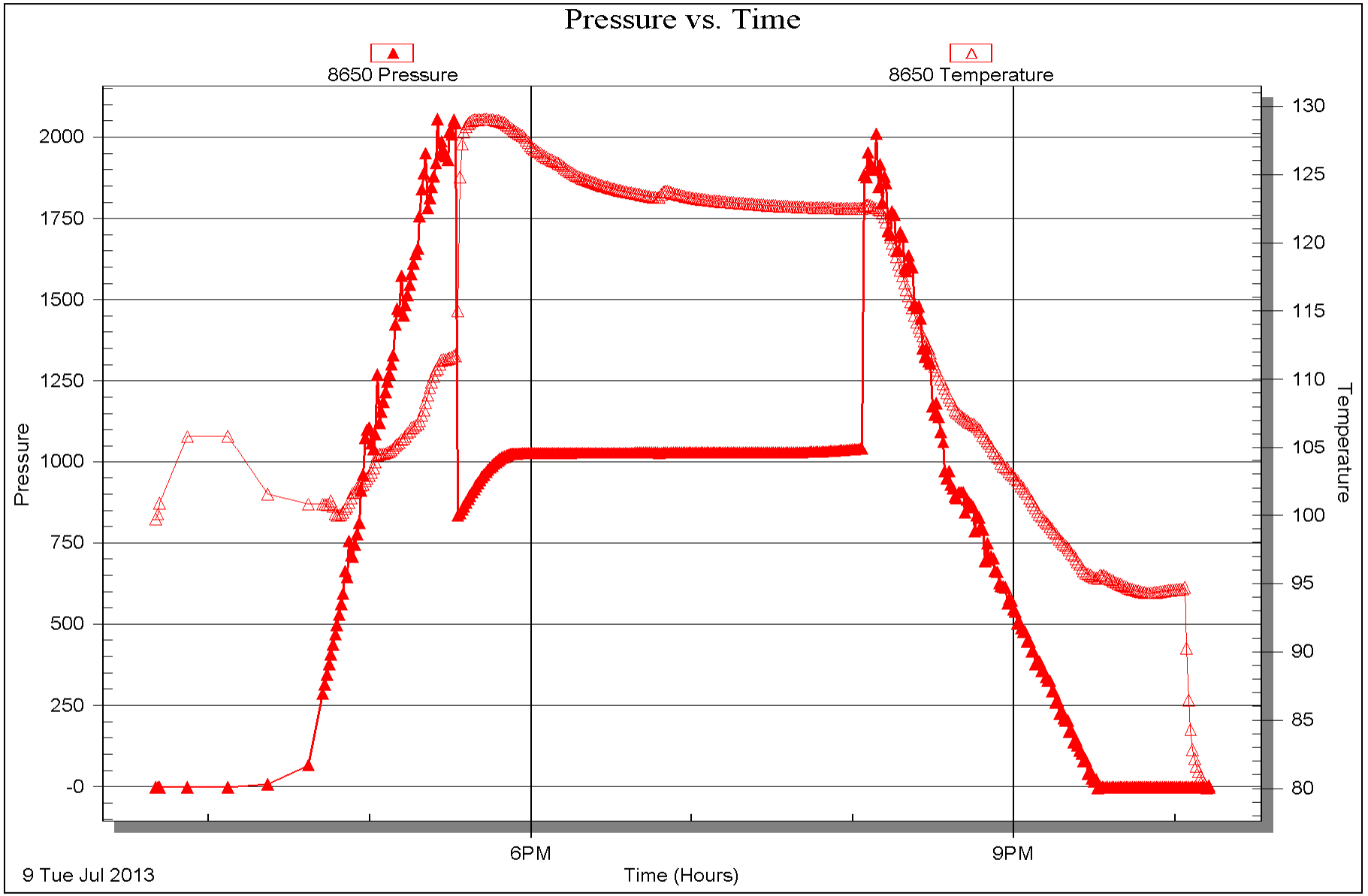
Recovery Comments: RW: .12 @ 85 F = 50,000

Serial #: 8675 **Inside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 53092 Printed: 2013.07.15 @ 13:59:30

Serial #: 8650 **Outside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 53092 Printed: 2013.07.15 @ 13:59:30

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188

ATTN: Terry McLeod

York Unit #1

31-15s-30w Gove,KS

Start Date: 2013.07.10 @ 23:59:00
End Date: 2013.07.11 @ 07:22:45
Job Ticket #: 53093 DST #: 6

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

Printed: 2013.07.15 @ 13:58:42

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53093 **DST#: 6**

Test Start: 2013.07.10 @ 23:59:00

GENERAL INFORMATION:

Formation: **Johnson Zone**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:21:00
Time Test Ended: 07:22:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4400.00 ft (KB) To 4435.00 ft (KB) (TVD)
Total Depth: 4435.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

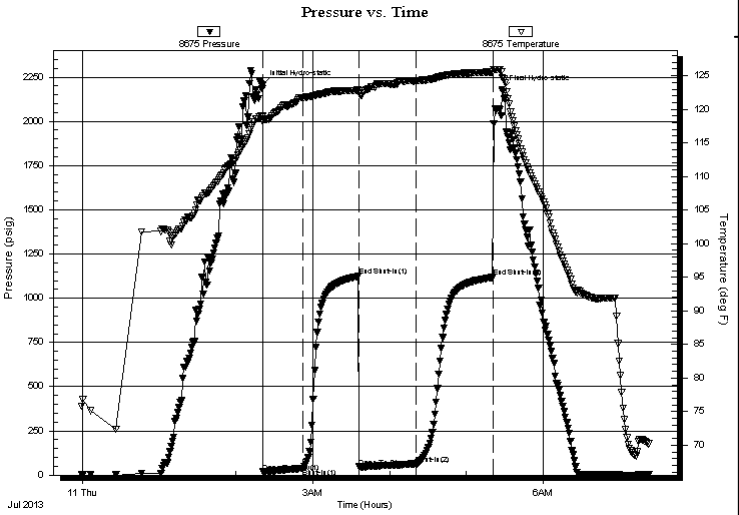
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 62.48 psig @ 4401.00 ft (KB)
Start Date: 2013.07.10 End Date: 2013.07.11
Start Time: 23:59:15 End Time: 07:22:45

Capacity: 8000.00 psig
Last Calib.: 2013.07.11
Time On Btm: 2013.07.11 @ 02:20:45
Time Off Btm: 2013.07.11 @ 05:28:00

TEST COMMENT: Built to 2" blow
No return blow
Built to 1/2" blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2205.28	119.00	Initial Hydro-static
1	18.07	118.15	Open To Flow (1)
31	38.36	121.73	Shut-In(1)
75	1123.62	122.85	End Shut-In(1)
76	46.49	122.52	Open To Flow (2)
120	62.48	124.23	Shut-In(2)
180	1118.00	125.56	End Shut-In(2)
188	2178.82	124.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	w com 5%W 10%O 85%M	0.32
5.00	Clean Oil	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53093 **DST#: 6**

Test Start: 2013.07.10 @ 23:59:00

GENERAL INFORMATION:

Formation: **Johnson Zone**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:21:00
Time Test Ended: 07:22:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4400.00 ft (KB) To 4435.00 ft (KB) (TVD)
Total Depth: 4435.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

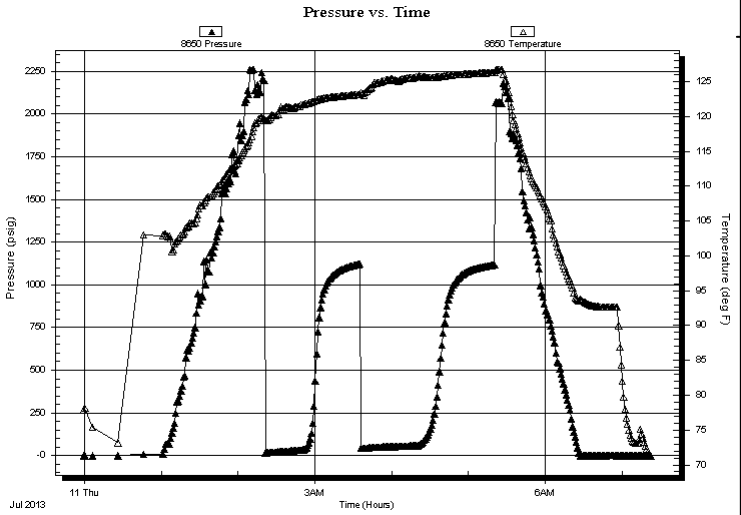
Reference Elevations: 2752.00 ft (KB)
2747.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4401.00 ft (KB)
Start Date: 2013.07.10 End Date: 2013.07.11
Start Time: 23:59:15 End Time: 07:22:30

Capacity: 8000.00 psig
Last Calib.: 2013.07.11
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 2" blow
No return blow
Built to 1/2" blow
No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
65.00	w com 5%W 10%O 85%M	0.32
5.00	Clean Oil	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53093 **DST#: 6**

Test Start: 2013.07.10 @ 23:59:00

Tool Information

Drill Pipe:	Length:	4286.48 ft	Diameter:	3.80 inches	Volume:	60.13 bbl	Tool Weight:		1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	123.50 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:		76000.00 lb
					Total Volume:	60.74 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		32.48 ft					String Weight:	Initial	56000.00 lb
Depth to Top Packer:		4400.00 ft						Final	56000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		35.00 ft							
Tool Length:		57.50 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			4378.50		
Shut In Tool	5.00			4383.50		
Hydraulic tool	5.00			4388.50		
Safety Joint	2.50			4391.00		
Packer	5.00			4396.00	22.50	Bottom Of Top Packer
Packer	4.00			4400.00		
Stubb	1.00			4401.00		
Recorder	0.00	8675	Inside	4401.00		
Recorder	0.00	8650	Outside	4401.00		
Perforations	31.00			4432.00		
Change Over Sub	0.00			4432.00		
Drill Pipe	0.00			4432.00		
Change Over Sub	0.00			4432.00		
Bullnose	3.00			4435.00	35.00	Bottom Packers & Anchor
Total Tool Length:	**57.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

8100 E 22nd St N 700
Box 783188
Wichita KS 67278 - 3188
ATTN: Terry McLeod

31-15s-30w Gove,KS

York Unit #1

Job Ticket: 53093 **DST#: 6**

Test Start: 2013.07.10 @ 23:59:00

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:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

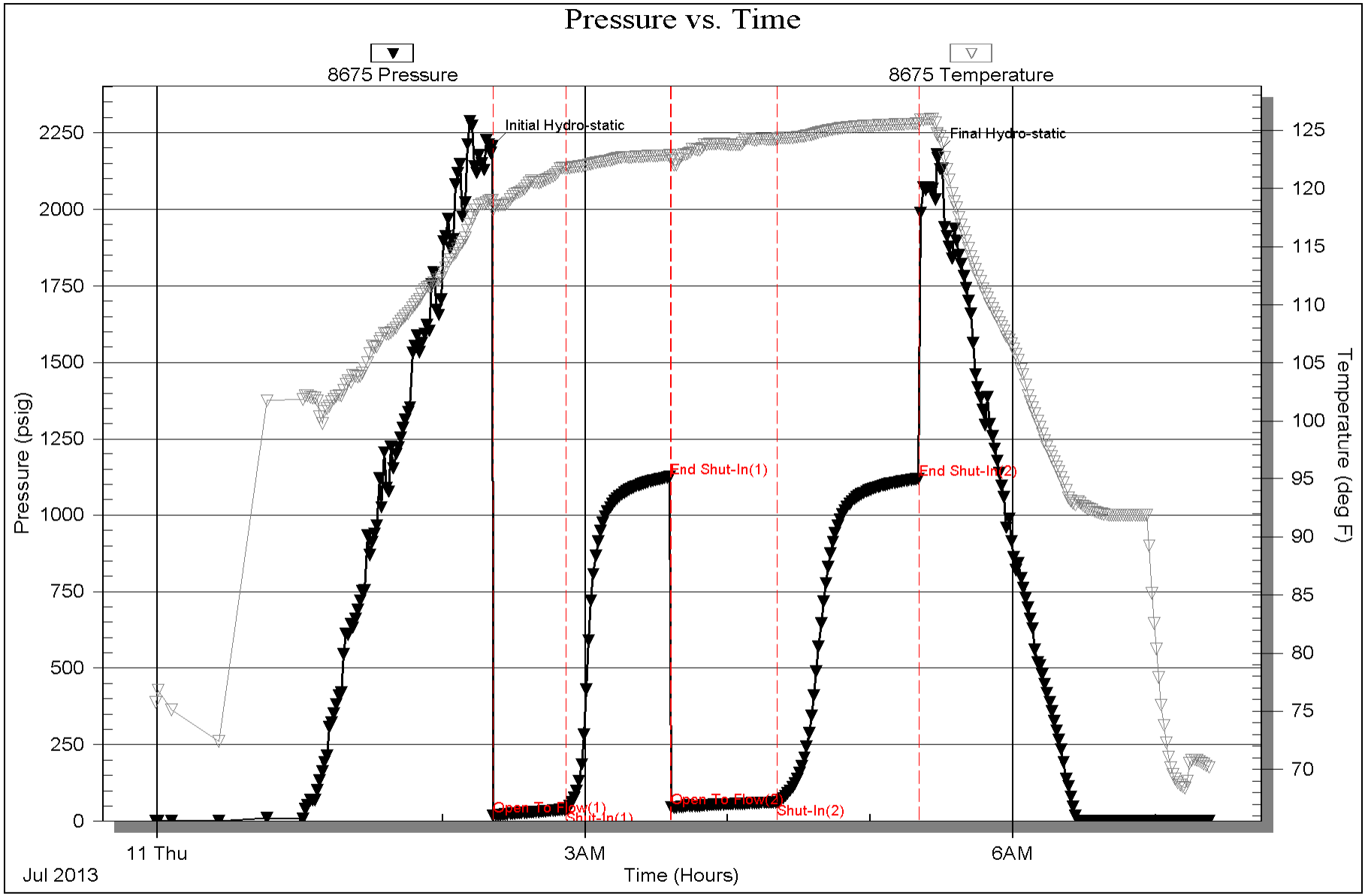
Recovery Table

Length ft	Description	Volume bbl
65.00	w com 5%W 10%O 85%M	0.320
5.00	Clean Oil	0.025

Total Length: 70.00 ft Total Volume: 0.345 bbl

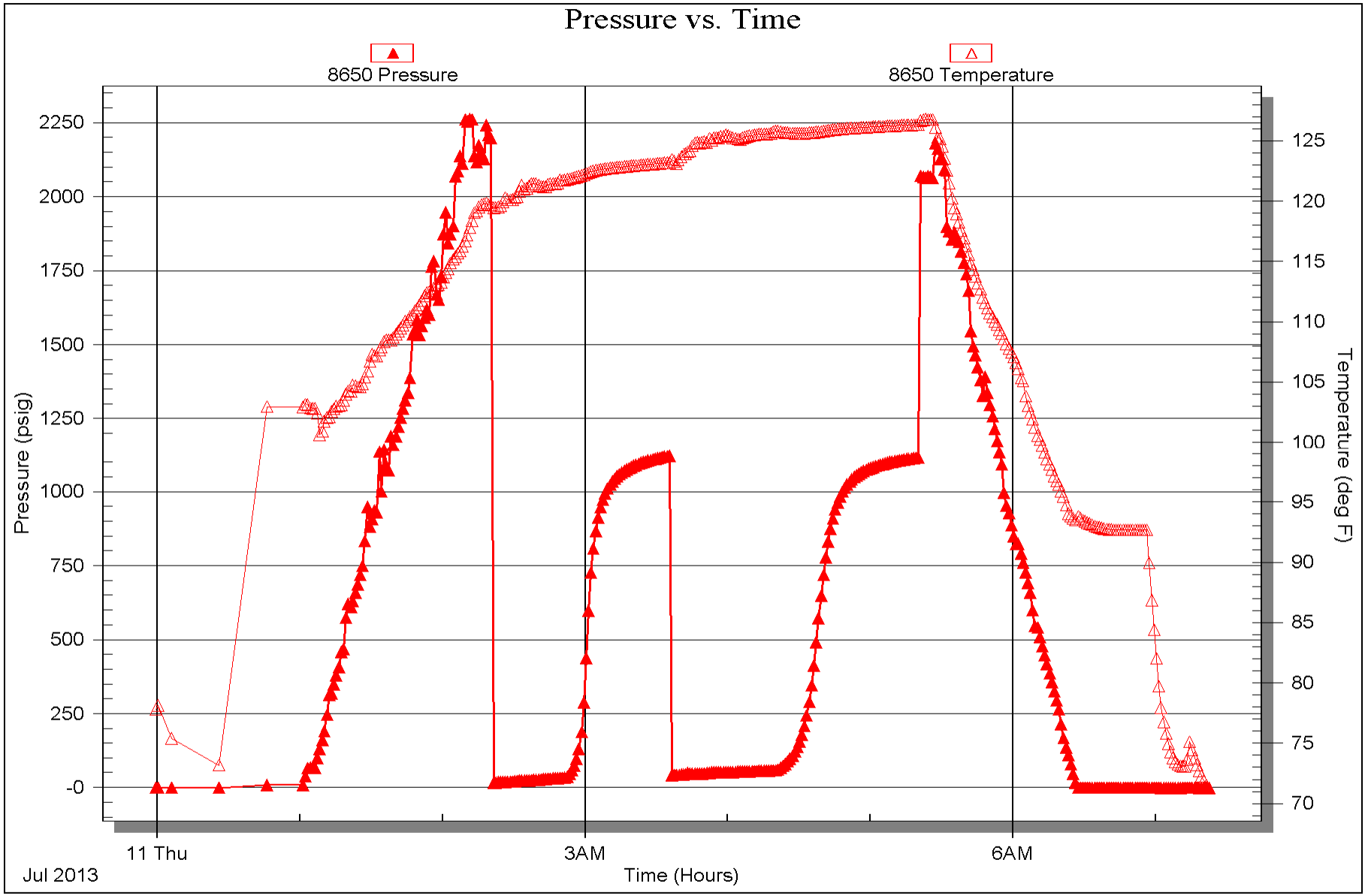
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8675 **Inside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 6



Trilobite Testing, Inc Ref. No: 53093 Printed: 2013.07.15 @ 13:58:44

Serial #: 8650 **Outside** Ritchie Exploration Inc. York Unit #1 DST Test Number: 6



Trilobite Testing, Inc Ref. No: 53093 Printed: 2013.07.15 @ 13:58:45

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 53088

Well Name & No. York Unit #1 Test No. 1 Date 7/6/13 7/7/13

Company Ritchie Exploration, Inc. Elevation 2,752 KB 2,747 GL

Address 8100 E 22nd ST N #700, Box 783188, Wichita KS 67278-3188

Co. Rep / Geo. Terry McLeod Rig WW Rig 2

Location: Sec. 31 Twp. 15S Rge. 30W Co. Gove Co State KS

Interval Tested 3818-3845 Zone Tested Lansing "A"

Anchor Length 27 Drill Pipe Run 3788.64 Mud Wt. 8.7

Top Packer Depth 3814 Drill Collars Run 123.50 Vis 61

Bottom Packer Depth 3818 Wt. Pipe Run — WL 7.2

Total Depth 3845 Chlorides 2,200 ppm System LCM 2

Blow Description B.O.B. in 23 min.
Bled off for 5 min. No return below
B.O.B. in 35 min.
Bled off for 5 min. No return below

Rec [illegible]	Feet of	%gas	%oil	%water	%mud
Rec 2	Feet of Clean Oil	%gas	%oil	%water	%mud
Rec 373	Feet of Water with oil scum	%gas	%oil	100 %water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 375 BHT 124 Gravity — API RW .1 @ 75 °F Chlorides 60,000 ppm

(A) Initial Hydrostatic	1,846	☑ Test	1,150	T-On Location	23:00
(B) First Initial Flow	19	☐ Jars		T-Started	00:10
(C) First Final Flow	113	☑ Safety Joint [illegible]	75	T-Open	02:15
(D) Initial Shut-In	1,096	☑ Circ Sub N/C		T-Pulled	05:15
(E) Second Initial Flow	115	☐ Hourly Standby		T-Out	07:07
(F) Second Final Flow	187	☑ Mileage 64 RT	99.20	Comments	
(G) Final Shut-In	1,068	☐ Sampler			
(H) Final Hydrostatic	1,792	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open 30		☐ Extra Packer		☐ Extra Copies	
Initial Shut-In 45		☐ Extra Recorder		Sub Total	
Final Flow 45		☐ Day Standby		Total	1,324.20
Final Shut-In 60		☐ Accessibility		MP/DST Disc't	
		Sub Total	1,324.20		

Approved By _____ Our Representative _____

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 53089

Well Name & No. York Unit #1 Test No. 2 Date 7/7/13

Company Ritchie Exploration, Inc. Elevation 2752 KB 2747 GL

Address 8100 E 22nd St N #700, Box 783188, Wichita KS, 67278-3188

Co. Rep / Geo. Terry McLeod Rig WW Rig 2

Location: Sec. 31 Twp. 15S Rge. 30W Co. Gove Co. State KS

Interval Tested 3846-3865 Zone Tested Lansing "C"

Anchor Length 19 Drill Pipe Run 3720.47 Mud Wt. 9.1

Top Packer Depth 3842 Drill Collars Run 123.50 Vis 54

Bottom Packer Depth 3846 Wt. Pipe Run ——— WL 8.0

Total Depth 3865 Chlorides 2,500 ppm System LCM 2

Blow Description Built to 4" 1/2 blow
No return 1/2 blow
Built to 5" 1/2 blow
No return 1/2 blow

Rec 40	Feet of Clean Oil	5 %gas	95 %oil	%water		%mud
Rec 60	Feet of GCM	%gas	10 %oil	%water	90	%mud
Rec 80	Feet of MCW with oil sum	%gas	%oil	60 %water	40	%mud
Rec	Feet of	%gas	%oil	%water		%mud
Rec	Feet of	%gas	%oil	%water		%mud

Rec Total 180 BHT 121 Gravity 27 API RW .13 @ 80 °F Chlorides 50,000 ppm

(A) Initial Hydrostatic	1,877	☑ Test	1,150	T-On Location	13:35
(B) First Initial Flow	15	☐ Jars		T-Started	14:10
(C) First Final Flow	60	☑ Safety Joint	75	T-Open	15:58
(D) Initial Shut-In	1,059	☑ Circ Sub N/C		T-Pulled	18:58
(E) Second Initial Flow	68	☐ Hourly Standby		T-Out	20:40
(F) Second Final Flow	91	☑ Mileage 64 RT	99.20	Comments	
(G) Final Shut-In	1,021	☐ Sampler			
(H) Final Hydrostatic	1,747	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open 30		☐ Extra Packer		☐ Extra Copies	
Initial Shut-In 45		☐ Extra Recorder		Sub Total	
Final Flow 45		☐ Day Standby		Total	1,324.20
Final Shut-In 60		☐ Accessibility		MP/DST Disc't	
		Sub Total	1,324.20		

Approved By ——— Our Representative [signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 53090

Well Name & No. York Unit # 1 Test No. 3 Date 7/8/13

Company Ritchie Exploration, Inc. Elevation 2752 KB 2747 GL

Address 8100 E 22nd ST N # 700, Box 783188, Wichita KS, 67278-3188

Co. Rep / Geo. Terry McLeod Rig WW Rig 2

Location: Sec. 31 Twp. 15S Rge. 30W Co. Gove Co. State KS

Interval Tested 3988 - 4060 Zone Tested Kansas City "H+I"

Anchor Length 72 Drill Pipe Run 3826.37 Mud Wt. 9.0

Top Packer Depth 3984 Drill Collars Run 123.50 Vis 59

Bottom Packer Depth 3988 Wt. Pipe Run — WL 8.8

Total Depth 4060 Chlorides 3,000 ppm System LCM 2

Blow Description Built to 1/4" 1st low
No return 1st low
No 1st low, flushed tool 10 min. into
No return 1st low

Rec 10	Feet of Mud with oil spots in tool	%gas	%oil	%water 100	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT — Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	1,992	☑ Test	1,250	T-On Location	12:30
(B) First Initial Flow	18	☐ Jars		T-Started	13:30
(C) First Final Flow	20	☑ Safety Joint	75	T-Open	15:21
(D) Initial Shut-In	297	☑ Circ Sub N/C		T-Pulled	17:21
(E) Second Initial Flow	20	☐ Hourly Standby		T-Out	18:52
(F) Second Final Flow	23	☑ Mileage 64 RT	99.20	Comments	Flushed tool 10 minutes into second open
(G) Final Shut-In	269	☐ Sampler			
(H) Final Hydrostatic	1,864	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	30	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	30	☐ Extra Recorder		Sub Total	
Final Flow	30	☐ Day Standby		Total	1,424.20
Final Shut-In	30	☐ Accessibility		MP/DST Disc't	
		Sub Total	1,424.20		

Approved By — Our Representative

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 53091

Well Name & No. York Unit # 1 Test No. 4 Date 7/8/13 7/9/13

Company Ritchie Exploration, Inc. Elevation 2752 KB 2747 GL

Address 8100 E 22nd ST N #700, Box 783188, Wichita KS, 67278-3188

Co. Rep / Geo. Terry McLeod Rig WW Rig 2

Location: Sec. 31 Twp. 15S Rge. 30W Co. Gove Co. State KS

Interval Tested 4057 - 4085 Zone Tested Kansas City "J"

Anchor Length 28 Drill Pipe Run 3939.88 Mud Wt. 9.0

Top Packer Depth 4053 Drill Collars Run 123.50 Vis 59

Bottom Packer Depth 4057 Wt. Pipe Run ——— WL 8.8

Total Depth 4085 Chlorides 3,000 ppm System LCM 2

Blow Description Built to 2¼" blow
No return blow
Built to 1¼" blow
No return blow

Rec	75	Feet of	MCW	%gas	%oil	50	%water	50 %mud
Rec	75	Feet of	MCW with oil scum	%gas	%oil	80	%water	20 %mud
Rec		Feet of		%gas	%oil		%water	%mud
Rec		Feet of		%gas	%oil		%water	%mud
Rec		Feet of		%gas	%oil		%water	%mud

Rec Total ——— BHT 123 Gravity ——— API RW .15 @ 75 °F Chlorides 50,000 ppm

(A) Initial Hydrostatic	2,014	☑ Test	1,250	T-On Location	23:25
(B) First Initial Flow	18	☑ Jars	N/C	T-Started	00:25
(C) First Final Flow	52	☑ Safety Joint	75	T-Open	02:20
(D) Initial Shut-In	1,042	☑ Circ Sub	N/C	T-Pulled	05:20
(E) Second Initial Flow	55	☐ Hourly Standby		T-Out	06:49
(F) Second Final Flow	79	☑ Mileage	64 RT 99.20	Comments	
(G) Final Shut-In	1027	☐ Sampler			
(H) Final Hydrostatic	1,994	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	30	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	45	☐ Extra Recorder		Sub Total	
Final Flow	45	☐ Day Standby		Total	1,424.20
Final Shut-In	60	☐ Accessibility		MP/DST Disc't	
		Sub Total	1,424.20		

Approved By ——— Our Representative ———

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 53092

Well Name & No. York Unit #1 Test No. 5 Date 7/9/13

Company Ritchie Exploration, Inc. Elevation 2752 KB 2747 GL

Address 8100 E 22nd St N #700, Box 783188, Wichita KS, 67278-3188

Co. Rep / Geo. Jerry McLead Rig WW Rig 2

Location: Sec. 31 Twp. 15S Rge. 30W Co. Gove Co. State KS

Interval Tested 4081-4155 Zone Tested Kansas City "K+L"

Anchor Length 74 Drill Pipe Run 3939.78 Mud Wt. 9.1

Top Packer Depth 4077 Drill Collars Run 123.50 Vis 53

Bottom Packer Depth 4081 Wt. Pipe Run — WL 9.6

Total Depth 4155 Chlorides 3,200 ppm System LCM 2

Blow Description B.O.B. in 30 sec.
Bled off for 5 min. No return blow
Built to 1/4", died in 20 min.
No return blow

Rec 278	Feet of MCW	%gas	%oil 70	%water 30	%mud		
Rec 1857	Feet of water	%gas	%oil	%water	%mud		
Rec	Feet of	%gas	%oil	%water	%mud		
Rec	Feet of	%gas	%oil	%water	%mud		
Rec	Feet of	%gas	%oil	%water	%mud		

Rec Total 2135 BHT 122 Gravity — API RW .12 @ 85 °F Chlorides 50,000 ppm

(A) Initial Hydrostatic	2,046	☑ Test	1,250	T-On Location	13:00
(B) First Initial Flow	836	☐ Jars		T-Started	13:40
(C) First Final Flow	1,029	☑ Safety Joint	75	T-Open	17:32
(D) Initial Shut-In	1,030	☑ Circ Sub N/C		T-Pulled	20:02
(E) Second Initial Flow	1,028	☐ Hourly Standby		T-Out	22:12
(F) Second Final Flow	1,031	☑ Mileage 64 RT	99.20	Comments	
(G) Final Shut-In	1,042	☐ Sampler			
(H) Final Hydrostatic	1,954	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	30	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	45	☐ Extra Recorder		Sub Total	
Final Flow	30	☐ Day Standby		Total	1,424.20
Final Shut-In	45	☐ Accessibility		MP/DST Disc't	
		Sub Total	1,424.20		

Approved By _____ Our Representative _____

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 53093

Well Name & No. York Unit #1 Test No. 6 Date 7/10/13 7/11/13

Company Ritchie Exploration, Inc. Elevation 2752 KB 2747 GL

Address 8100 E 22nd ST N #700, Box 783188, Wichita KS, 67278-3188

Co. Rep / Geo. Terry McLeod Rig WW Rig 2

Location: Sec. 31 Twp. 15S Rge. 30W Co. Gove State KS

Interval Tested 4400 - 4435 Zone Tested Johnson Zone

Anchor Length 35 Drill Pipe Run 4286.48 Mud Wt. 9.2

Top Packer Depth 4396 Drill Collars Run 123.50 Vis 53

Bottom Packer Depth 4400 Wt. Pipe Run — WL 8.8

Total Depth 4435 Chlorides 3,000 ppm System LCM 2

Blow Description Built to 2" blow
No return blow
Built to 1/2" blow
No return blow

Rec	65	Feet of	WCOM	%gas	10	%oil	5	%water 85 %mud
Rec	5	Feet of	clean oil	%gas		%oil		%water %mud
Rec		Feet of		%gas		%oil		%water %mud
Rec		Feet of		%gas		%oil		%water %mud
Rec		Feet of		%gas		%oil		%water %mud

Rec Total 70 BHT 125 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2,205	☑ Test	1,250	T-On Location	20:45
(B) First Initial Flow	18	☐ Jars		T-Started	00:00
(C) First Final Flow	38	☑ Safety Joint	75	T-Open	02:22
(D) Initial Shut-In	1,124	☑ Circ Sub	N/C	T-Pulled	05:22
(E) Second Initial Flow	46	☑ Hourly Standby	2 1/2 hrs 250	T-Out	07:22
(F) Second Final Flow	63	☑ Mileage	64 RT X 2 198.40	Comments	Standley had to short trip and geo didn't call soon enough
(G) Final Shut-In	1,118	☐ Sampler			
(H) Final Hydrostatic	2,179	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	30	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	45	☐ Extra Recorder		Sub Total	
Final Flow	45	☐ Day Standby		Total	1,773.40
Final Shut-In	60	☐ Accessibility		MP/DST Disc't	
		Sub Total	1,773.40		

Approved By _____ Our Representative _____

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