

## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

P.O Box 783188  
Wichita KS 67278

ATTN: Max Lovely

### **Don Unit #1**

### **22-13s-31w Gove,KS**

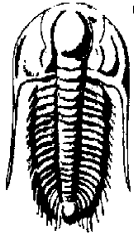
Start Date: 2013.08.30 @ 06:42:00

End Date: 2013.08.30 @ 14:09:09

Job Ticket #: 53010                      DST #: 1

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

Printed: 2013.09.05 @ 16:08:21



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 P.O Box 783188  
 Wichita KS 67278  
 ATTN: Max Lovely

**22-13s-31w Gove,KS**  
**Don Unit #1**  
 Job Ticket: 53010 **DST#: 1**  
 Test Start: 2013.08.30 @ 06:42:00

## GENERAL INFORMATION:

Formation: **LKC "A-C"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 08:45:40 Tester: Will MacLean  
 Time Test Ended: 14:09:09 Unit No: 58  
 Interval: **3967.00 ft (KB) To 4009.00 ft (KB) (TVD)** Reference Elevations: 2907.00 ft (KB)  
 Total Depth: 4009.00 ft (KB) (TVD) 2902.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

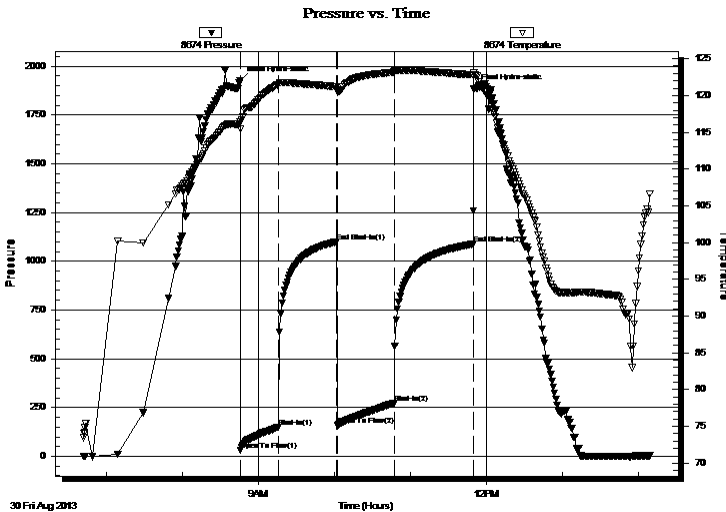
## Serial #: 8674

Inside

Press @ Run Depth: 273.66 psig @ 3968.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.08.30 End Date: 2013.08.30 Last Calib.: 2013.08.30  
 Start Time: 06:42:00 End Time: 14:09:09 Time On Btm: 2013.08.30 @ 08:45:25  
 Time Off Btm: 2013.08.30 @ 11:49:54

TEST COMMENT: IF- Weak Surface Blow Built to BOB in 15 1/2 min  
 IS- No Blow  
 FF- Weak Surface Blow Built to BOB in 20 1/4 min  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1926.49	116.38	Initial Hydro-static
1	30.68	115.43	Open To Flow (1)
31	150.17	121.49	Shut-In(1)
77	1100.67	121.21	End Shut-In(1)
77	159.57	120.58	Open To Flow (2)
122	273.66	123.17	Shut-In(2)
184	1087.40	122.80	End Shut-In(2)
185	1883.33	123.05	Final Hydro-static

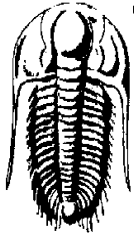
## Recovery

Length (ft)	Description	Volume (bbl)
185.00	MCW 22%w 78%w	1.47
248.00	MCW 28%w 72%w with Few Oil Spots	3.48
102.00	MCW 47%w 53%w with Oil Spots	1.43

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53010

**DST#: 1**

ATTN: Max Lovely

Test Start: 2013.08.30 @ 06:42:00

## Tool Information

Drill Pipe:	Length: 3844.00 ft	Diameter: 3.80 inches	Volume: 53.92 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:	24000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	18000.00 lb
			<u>Total Volume: 54.52 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3967.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	42.00 ft				
Tool Length:	70.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

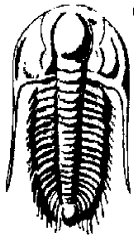
Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3940.00	
Shut In Tool	5.00			3945.00	
Hydraulic tool	5.00			3950.00	
Jars	5.00			3955.00	
Safety Joint	3.00			3958.00	
Packer	5.00			3963.00	28.00 Bottom Of Top Packer
Packer	4.00			3967.00	
Stubb	1.00			3968.00	
Recorder	0.00	8355	Outside	3968.00	
Recorder	0.00	8674	Inside	3968.00	
Perforations	4.00			3972.00	
Change Over Sub	1.00			3973.00	
Drill Pipe	30.00			4003.00	
Change Over Sub	1.00			4004.00	
Bullnose	5.00			4009.00	42.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53010

**DST#: 1**

ATTN: Max Lovely

Test Start: 2013.08.30 @ 06:42:00

## 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:

48000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.12 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	MCW 22% <sub>m</sub> 78% <sub>w</sub>	1.475
248.00	MCW 28% <sub>m</sub> 72% <sub>w</sub> with Few Oil Spots	3.479
102.00	MCW 47% <sub>m</sub> 53% <sub>w</sub> with Oil Spots	1.431

Total Length: 535.00 ft      Total Volume: 6.385 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .096 @ 109 = 48000

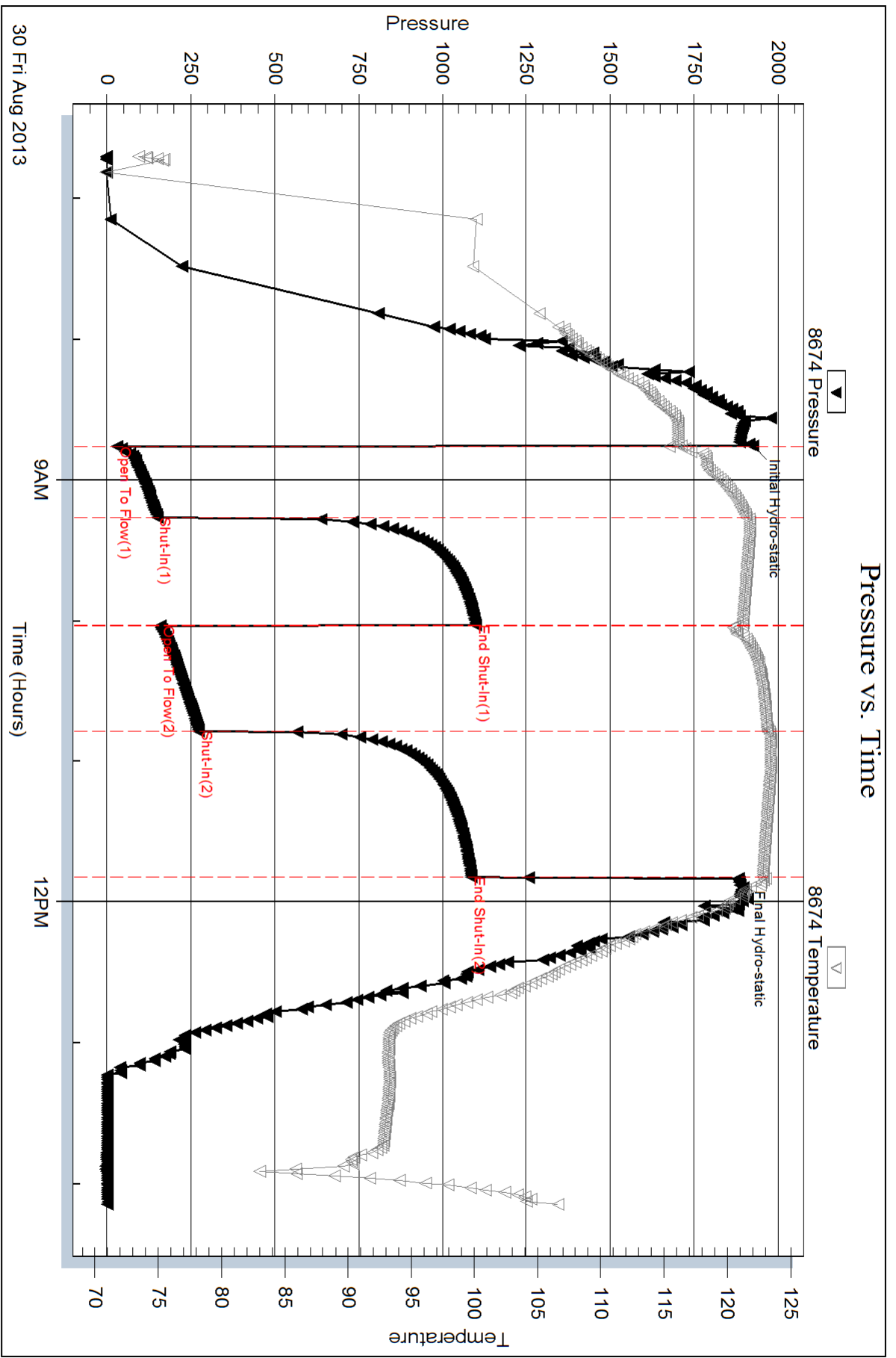
Serial #: 8674

Inside

Ritchie Exploration Inc

Don Unit #1

DST Test Number: 1

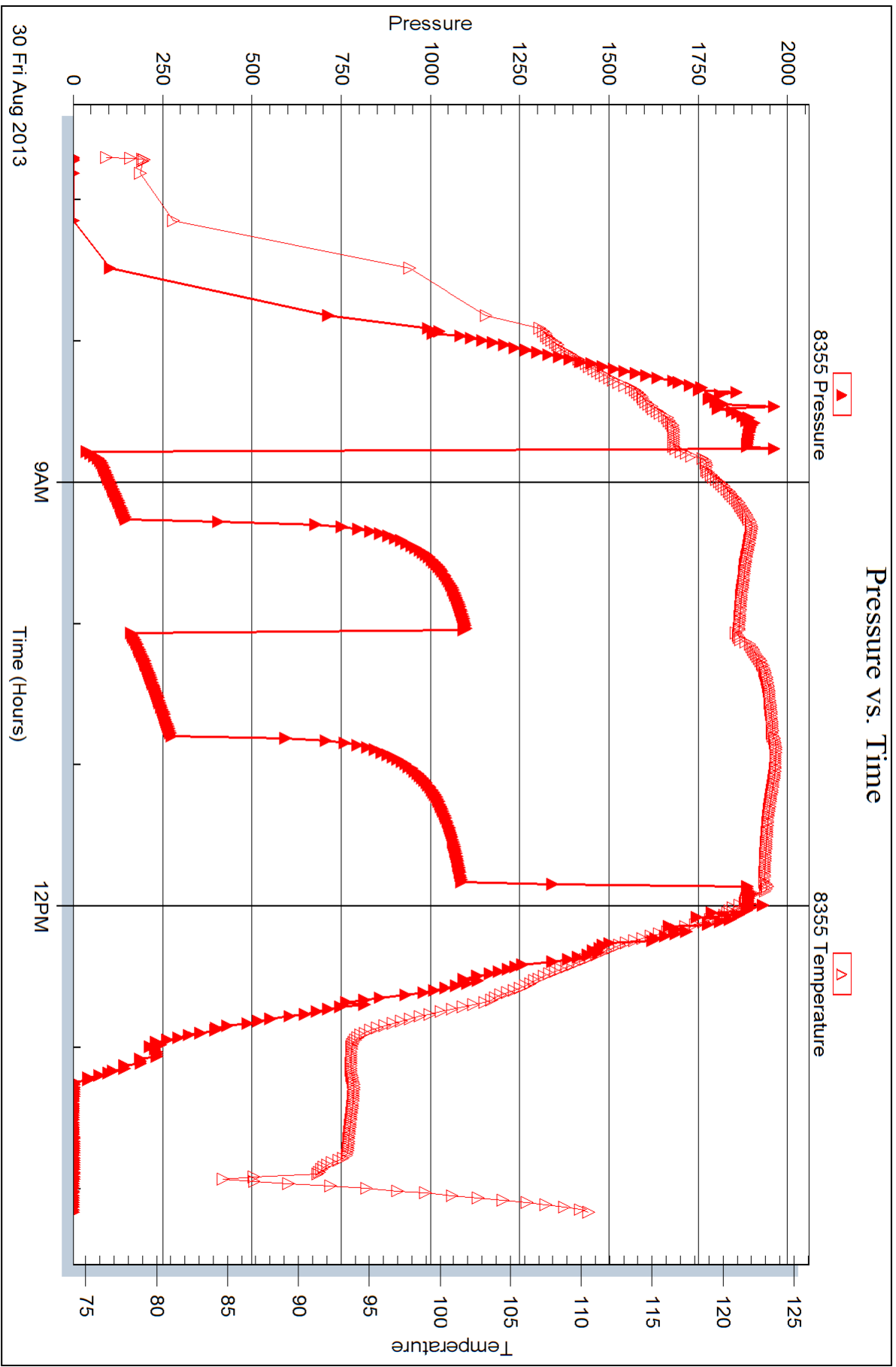


Serial #: 8355

Outside Ritchie Exploration Inc

Don Unit #1

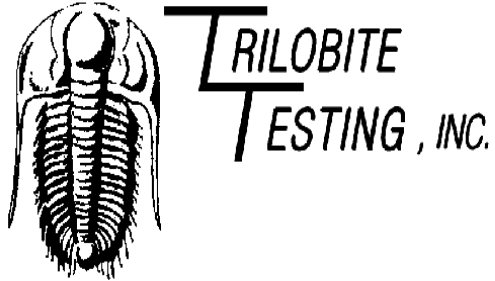
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 53010

Printed: 2013.09.05 @ 16:08:23



## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

P.O Box 783188  
Wichita KS 67278

ATTN: Max Lovely

### **Don Unit #1**

#### **22-13s-31w Gove,KS**

Start Date: 2013.08.30 @ 23:54:00

End Date: 2013.08.31 @ 05:47:24

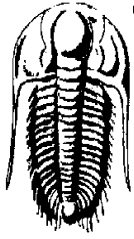
Job Ticket #: 53011                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.05 @ 16:07:58



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 P.O Box 783188  
 Wichita KS 67278  
 ATTN: Max Lovely

**22-13s-31w Gove,KS**  
**Don Unit #1**  
 Job Ticket: 53011 **DST#: 2**  
 Test Start: 2013.08.30 @ 23:54:00

## GENERAL INFORMATION:

Formation: **LKC "E-F"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 01:59:55 Tester: Will MacLean  
 Time Test Ended: 05:47:24 Unit No: 58  
 Interval: **4026.00 ft (KB) To 4060.00 ft (KB) (TVD)** Reference Elevations: 2907.00 ft (KB)  
 Total Depth: 4060.00 ft (KB) (TVD) 2902.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

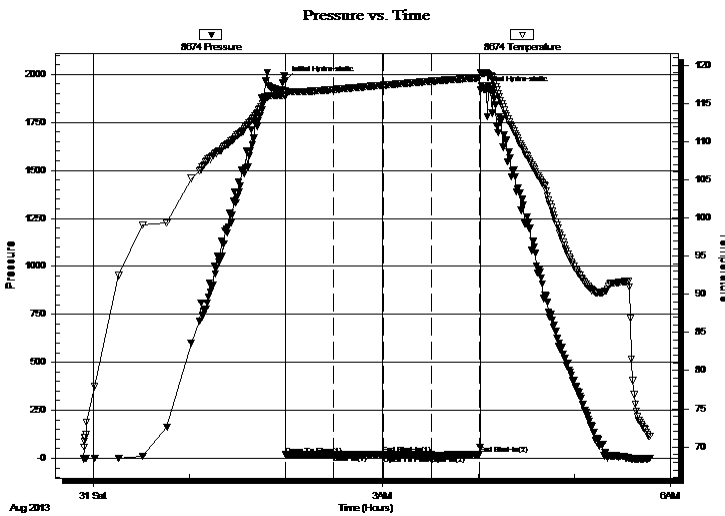
## Serial #: 8674

Inside

Press @ Run Depth: 17.58 psig @ 4027.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.08.30 End Date: 2013.08.31 Last Calib.: 2013.08.31  
 Start Time: 23:54:00 End Time: 05:47:24 Time On Btm: 2013.08.31 @ 01:59:40  
 Time Off Btm: 2013.08.31 @ 04:01:25

TEST COMMENT: IF- Weak Surface Blow Died in 18 min  
 IS- No Blow  
 FF- No Blow (Flushed Tool at 10 min)  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.01	116.64	Initial Hydro-static
1	18.31	115.92	Open To Flow (1)
30	18.54	116.79	Shut-In(1)
61	21.14	117.36	End Shut-In(1)
61	17.75	117.36	Open To Flow (2)
91	17.58	117.88	Shut-In(2)
122	19.83	118.35	End Shut-In(2)
122	1917.32	119.05	Final Hydro-static

## Recovery

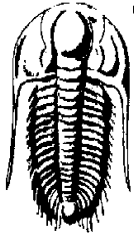
Length (ft)	Description	Volume (bbl)
2.00	100% m with Skim of Oil on Top	0.01

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53011

**DST#: 2**

ATTN: Max Lovely

Test Start: 2013.08.30 @ 23:54:00

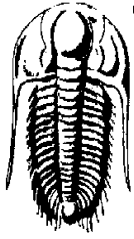
## Tool Information

Drill Pipe:	Length: 3905.00 ft	Diameter: 3.80 inches	Volume: 54.78 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:	26000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	14000.00 lb
			<u>Total Volume: 55.38 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4026.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	54.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4007.00	
Shut In Tool	5.00			4012.00	
Hydraulic tool	5.00			4017.00	
Packer	5.00			4022.00	20.00 Bottom Of Top Packer
Packer	4.00			4026.00	
Stubb	1.00			4027.00	
Recorder	0.00	8355	Outside	4027.00	
Recorder	0.00	8674	Inside	4027.00	
Perforations	28.00			4055.00	
Bullnose	5.00			4060.00	34.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>54.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53011

**DST#: 2**

ATTN: Max Lovely

Test Start: 2013.08.30 @ 23:54:00

## 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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.14 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	100% m with Skim of Oil on Top	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

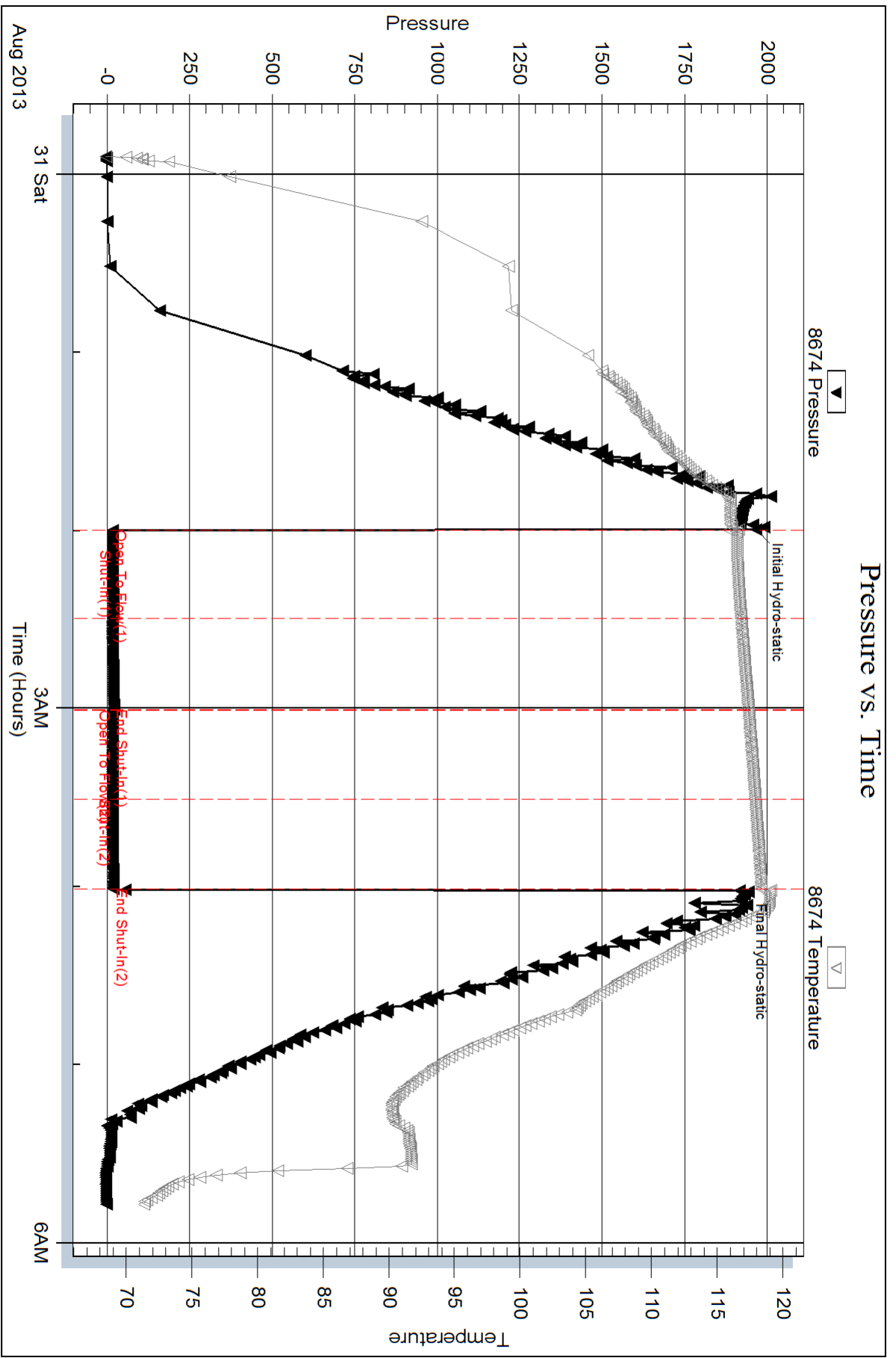
Serial #: 8674

Inside

Ritchie Exploration Inc

Don Unit #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 53011

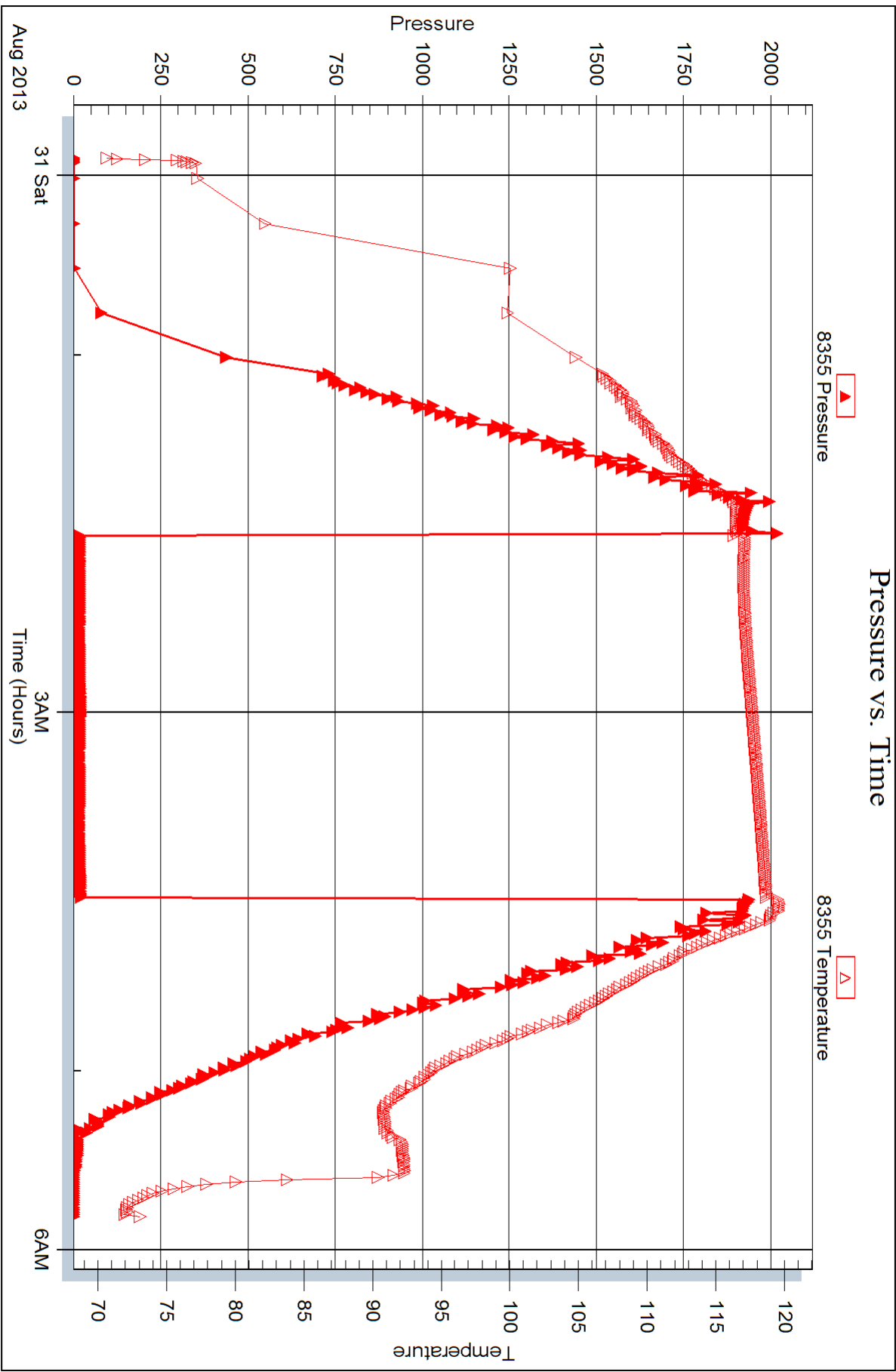
Printed: 2013.09.05 @ 16:07:59

Serial #: 8355

Outside Ritchie Exploration Inc

Don Unit #1

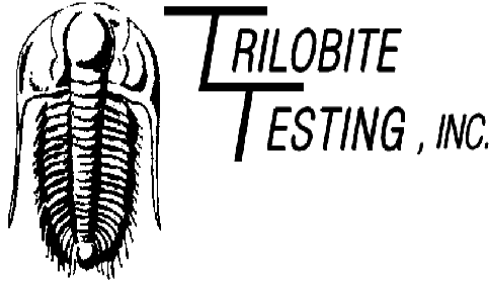
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 53011

Printed: 2013.09.05 @ 16:07:59



## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

P.O Box 783188  
Wichita KS 67278

ATTN: Max Lovely

### **Don Unit #1**

### **22-13s-31w Gove,KS**

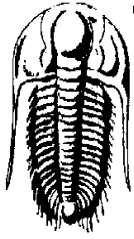
Start Date: 2013.08.31 @ 19:44:00

End Date: 2013.09.01 @ 02:39:39

Job Ticket #: 53012                      DST #: 3

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

Printed: 2013.09.05 @ 16:07:31



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 P.O Box 783188  
 Wichita KS 67278  
 ATTN: Max Lovely

**22-13s-31w Gove,KS**  
**Don Unit #1**  
 Job Ticket: 53012      **DST#: 3**  
 Test Start: 2013.08.31 @ 19:44:00

## GENERAL INFORMATION:

Formation: **LKC "H-I"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 21:32:25 Tester: Will MacLean  
 Time Test Ended: 02:39:39 Unit No: 58  
 Interval: **4108.00 ft (KB) To 4177.00 ft (KB) (TVD)** Reference Elevations: 2907.00 ft (KB)  
 Total Depth: 4177.00 ft (KB) (TVD) 2902.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

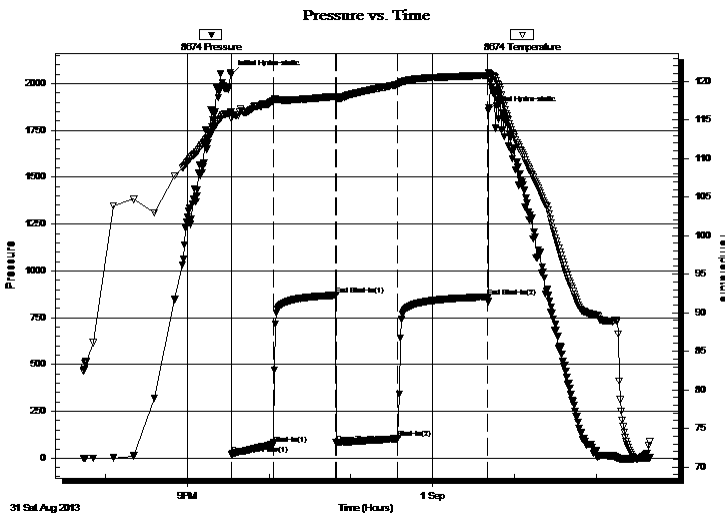
## Serial #: 8674

Inside

Press @ Run Depth: 104.63 psig @ 4109.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.08.31 End Date: 2013.09.01 Last Calib.: 2013.09.01  
 Start Time: 19:44:00 End Time: 02:39:39 Time On Btm: 2013.08.31 @ 21:32:10  
 Time Off Btm: 2013.09.01 @ 00:40:54

TEST COMMENT: IF- Weak Surface Blow Built to 3 1/2"  
 IS- No Blow  
 FF- Weak Surface Blow Built to 3/4"  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2048.20	116.05	Initial Hydro-static
1	22.14	115.13	Open To Flow (1)
31	73.72	117.46	Shut-In(1)
77	870.09	118.06	End Shut-In(1)
77	81.98	117.64	Open To Flow (2)
123	104.63	119.59	Shut-In(2)
189	861.03	120.78	End Shut-In(2)
189	1856.68	121.16	Final Hydro-static

## Recovery

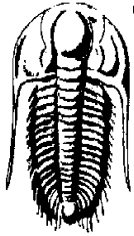
Length (ft)	Description	Volume (bbl)
61.00	WCM 2%w 98%m	0.30
61.00	WCM 10%w 90%m	0.30
62.00	OWCM 1%oil 3%w 96%m	0.86

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53012

**DST#: 3**

ATTN: Max Lovely

Test Start: 2013.08.31 @ 19:44:00

## Tool Information

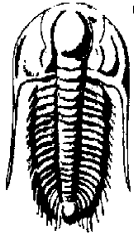
Drill Pipe:	Length: 3971.00 ft	Diameter: 3.80 inches	Volume: 55.70 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 56.30 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4108.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4089.00	
Shut In Tool	5.00			4094.00	
Hydraulic tool	5.00			4099.00	
Packer	5.00			4104.00	20.00 Bottom Of Top Packer
Packer	4.00			4108.00	
Stubb	1.00			4109.00	
Recorder	0.00	8355	Outside	4109.00	
Recorder	0.00	8674	Inside	4109.00	
Perforations	29.00			4138.00	
Change Over Sub	1.00			4139.00	
Drill Pipe	32.00			4171.00	
Change Over Sub	1.00			4172.00	
Bullnose	5.00			4177.00	69.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53012

**DST#: 3**

ATTN: Max Lovely

Test Start: 2013.08.31 @ 19:44:00

## 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:

34000 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.56 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
61.00	WCM 2%w 98%m	0.300
61.00	WCM 10%w 90%m	0.300
62.00	OWCM 1%oil 3%w 96%m	0.861

Total Length: 184.00 ft      Total Volume: 1.461 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .173 @ 80f = 34000

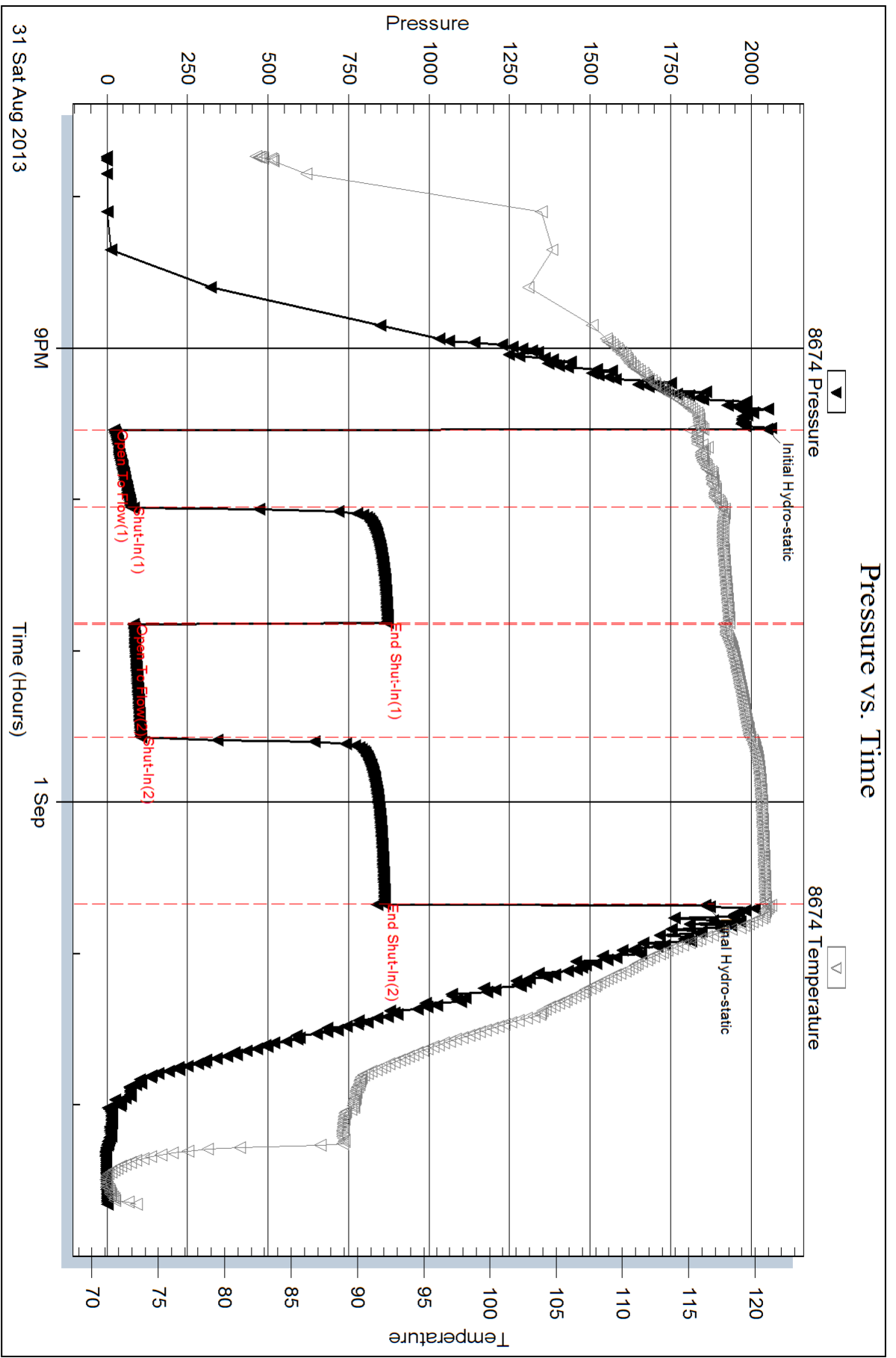
Serial #: 8674

Inside

Ritchie Exploration Inc

Don Unit #1

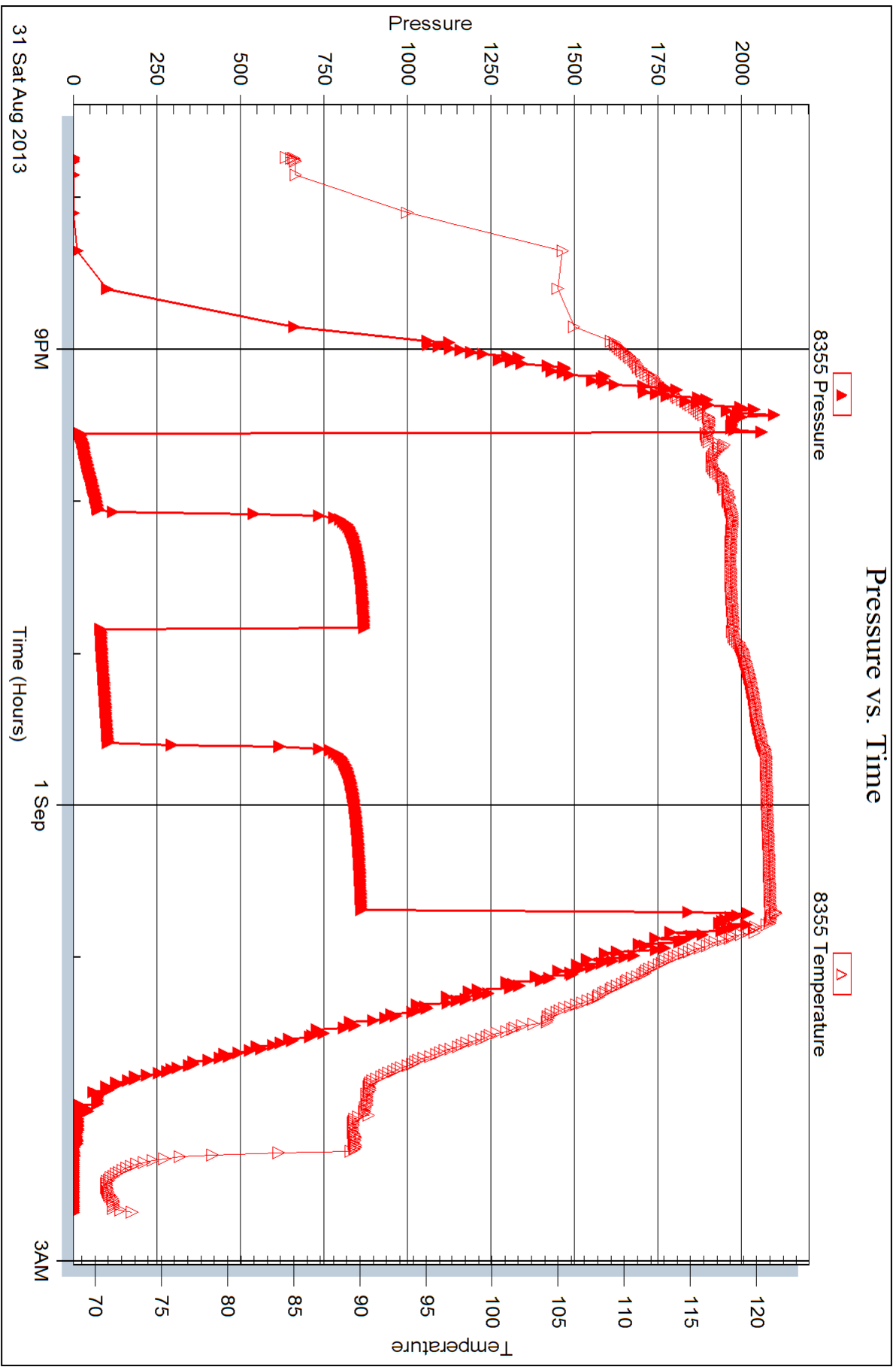
DST Test Number: 3

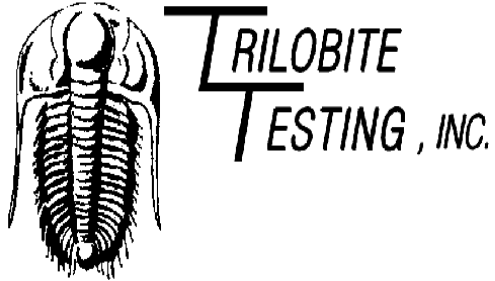


Trilobite Testing, Inc

Ref. No: 53012

Printed: 2013.09.05 @ 16:07:32





## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

P.O Box 783188  
Wichita KS 67278

ATTN: Max Lovely

### **Don Unit #1**

#### **22-13s-31w Gove,KS**

Start Date: 2013.09.01 @ 09:46:00

End Date: 2013.09.01 @ 16:51:24

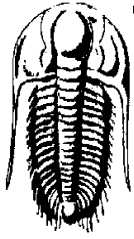
Job Ticket #: 53013                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.05 @ 16:06:54



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 P.O Box 783188  
 Wichita KS 67278  
 ATTN: Max Lovely

**22-13s-31w Gove,KS**  
**Don Unit #1**  
 Job Ticket: 53013 **DST#: 4**  
 Test Start: 2013.09.01 @ 09:46:00

## GENERAL INFORMATION:

Formation: **LKC " J "**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 11:47:55 Tester: Will MacLean  
 Time Test Ended: 16:51:24 Unit No: 58  
 Interval: **4167.00 ft (KB) To 4204.00 ft (KB) (TVD)** Reference Elevations: 2907.00 ft (KB)  
 Total Depth: 4204.00 ft (KB) (TVD) 2902.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

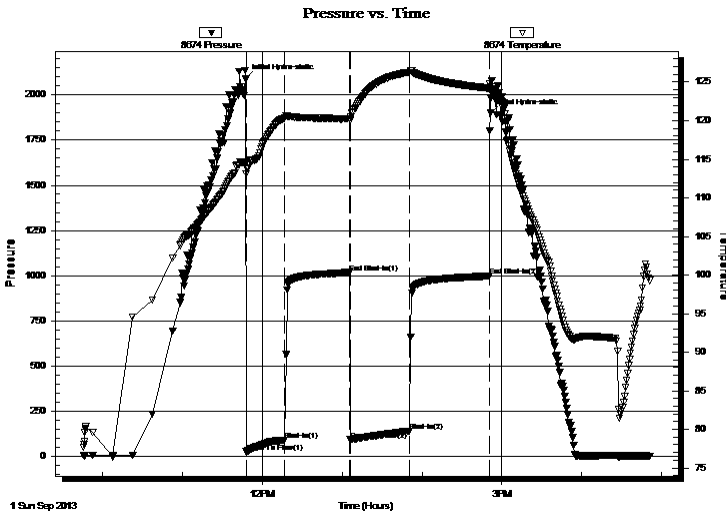
## Serial #: 8674

Inside

Press @ Run Depth: 140.38 psig @ 4168.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.01 End Date: 2013.09.01 Last Calib.: 2013.09.01  
 Start Time: 09:46:00 End Time: 16:51:24 Time On Btm: 2013.09.01 @ 11:47:40  
 Time Off Btm: 2013.09.01 @ 14:51:24

TEST COMMENT: IF- Weak Surface Blow Built to 5"  
 IS- No Blow  
 FF- Weak Surface Blow Built to 5 3/4"  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2087.77	114.49	Initial Hydro-static
1	24.90	113.12	Open To Flow (1)
30	88.78	120.30	Shut-In(1)
78	1016.82	120.29	End Shut-In(1)
79	91.41	120.08	Open To Flow (2)
123	140.38	126.25	Shut-In(2)
183	99.54	124.20	End Shut-In(2)
184	1898.32	124.41	Final Hydro-static

## Recovery

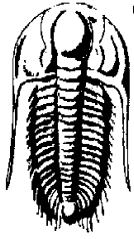
Length (ft)	Description	Volume (bbl)
123.00	MCW 16%m 84%w Few Oil Spots in Tool	0.60
62.00	MCW 34%m 66%w	0.87
82.00	WCM 29%w 71%m	1.15

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53013

**DST#: 4**

ATTN: Max Lovely

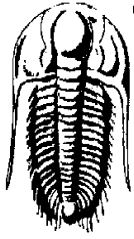
Test Start: 2013.09.01 @ 09:46:00

## Tool Information

Drill Pipe:	Length: 4032.00 ft	Diameter: 3.80 inches	Volume: 56.56 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:	26000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	12000.00 lb
			<u>Total Volume: 57.16 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4167.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	37.00 ft				
Tool Length:	57.00 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			4148.00	
Shut In Tool	5.00			4153.00	
Hydraulic tool	5.00			4158.00	
Packer	5.00			4163.00	20.00 Bottom Of Top Packer
Packer	4.00			4167.00	
Stubb	1.00			4168.00	
Recorder	0.00	8355	Outside	4168.00	
Recorder	0.00	8674	Inside	4168.00	
Perforations	31.00			4199.00	
Bullnose	5.00			4204.00	37.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>57.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53013

**DST#: 4**

ATTN: Max Lovely

Test Start: 2013.09.01 @ 09:46:00

## 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:

44000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.95 in<sup>3</sup>

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
123.00	MCW 16%m 84%m Few Oil Spots in Tool	0.605
62.00	MCW 34%m 66%w	0.870
82.00	WCM 29%w 71%m	1.150

Total Length: 267.00 ft      Total Volume: 2.625 bbl

Num Fluid Samples: 0

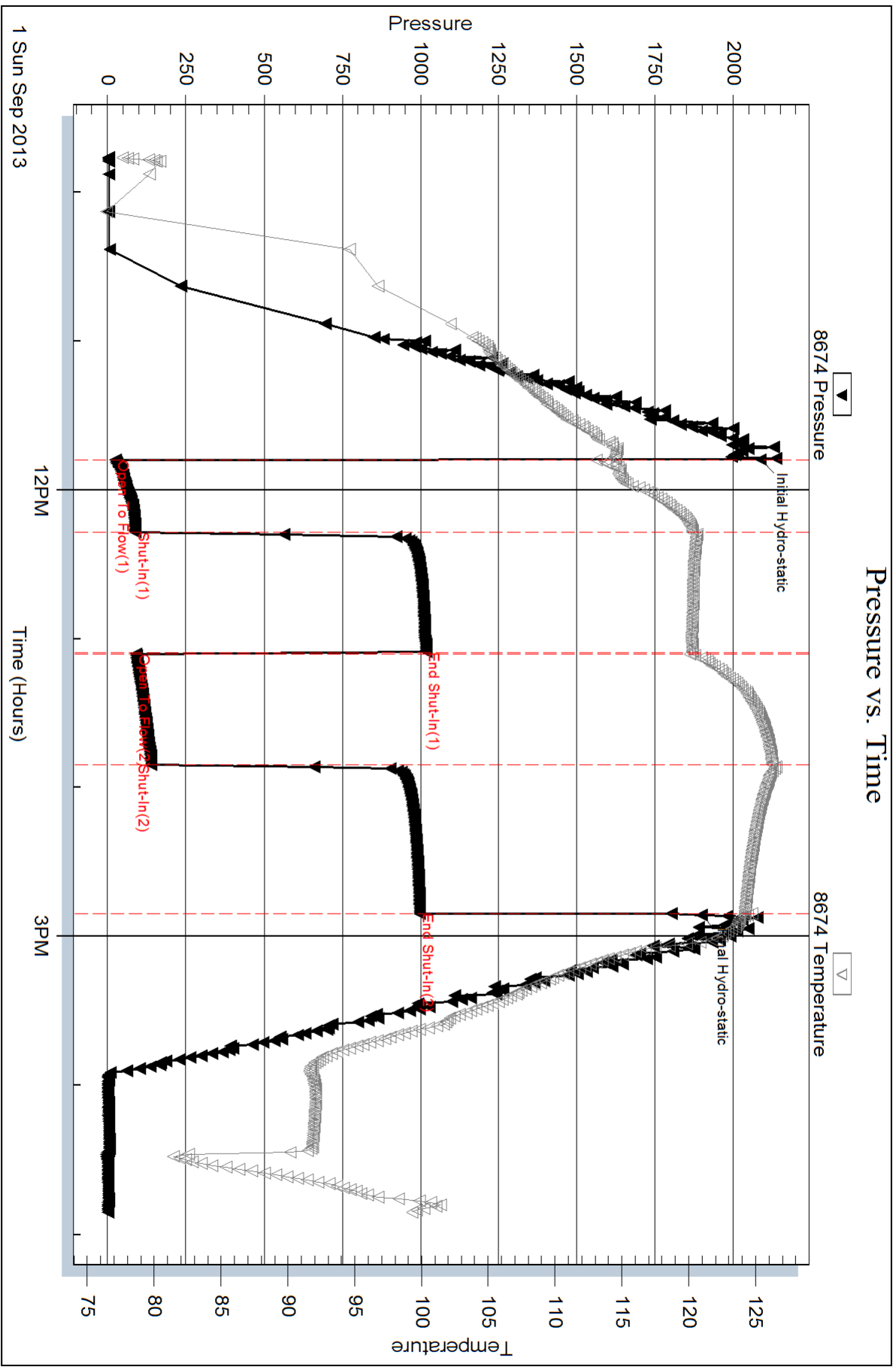
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .104 @ 108 = 44000

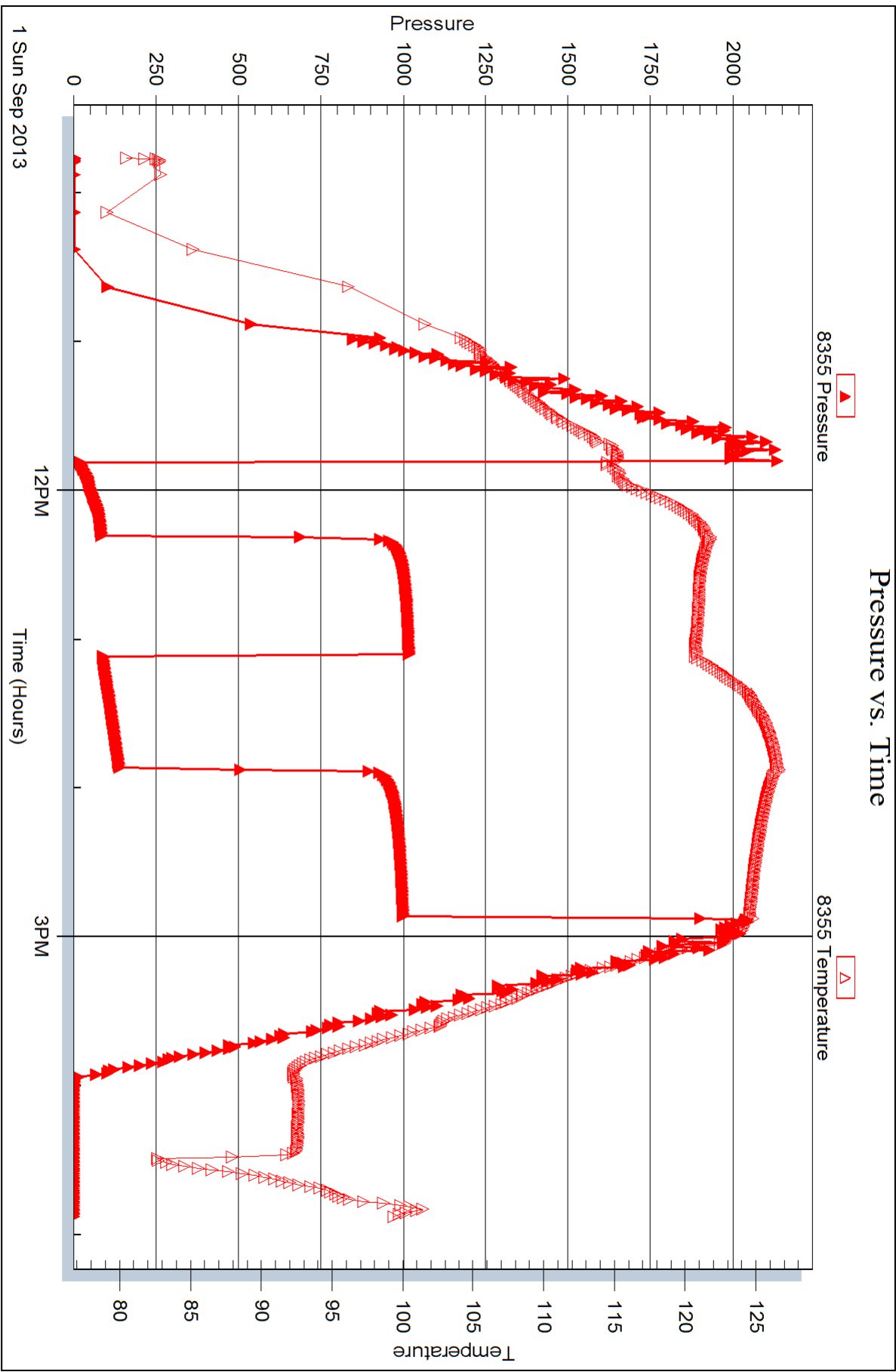


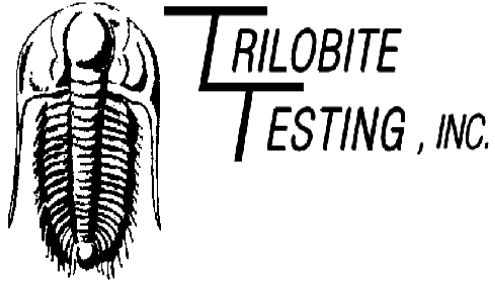
Serial #: 8355

Outside Ritchie Exploration Inc

Don Unit #1

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

P.O Box 783188  
Wichita KS 67278

ATTN: Max Lovely

### **Don Unit #1**

### **22-13s-31w Gove,KS**

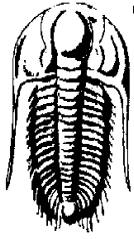
Start Date: 2013.09.01 @ 23:44:00

End Date: 2013.09.02 @ 05:34:09

Job Ticket #: 53014                      DST #: 5

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

Printed: 2013.09.05 @ 16:06:11



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 P.O Box 783188  
 Wichita KS 67278  
 ATTN: Max Lovely

**22-13s-31w Gove,KS**  
**Don Unit #1**  
 Job Ticket: 53014 **DST#: 5**  
 Test Start: 2013.09.01 @ 23:44:00

## GENERAL INFORMATION:

Formation: **LKC " K "**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 01:48:40 Tester: Will MacLean  
 Time Test Ended: 05:34:09 Unit No: 58  
 Interval: **4197.00 ft (KB) To 4233.00 ft (KB) (TVD)** Reference Elevations: 2907.00 ft (KB)  
 Total Depth: 4233.00 ft (KB) (TVD) 2902.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

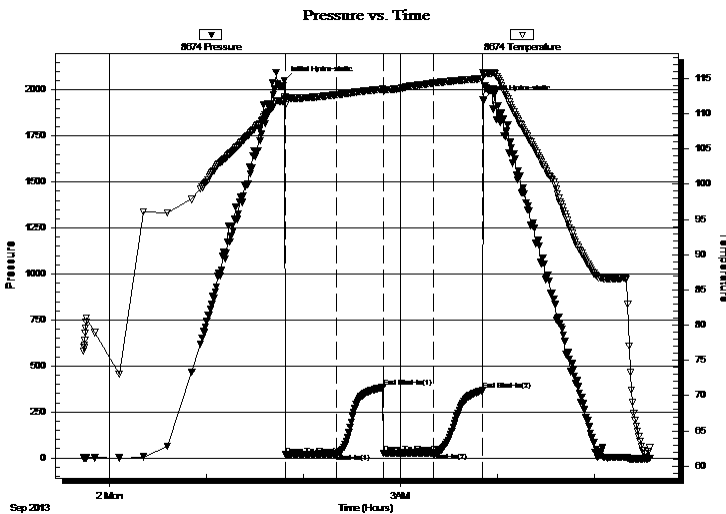
## Serial #: 8674

Inside

Press @ Run Depth: 29.24 psig @ 4199.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.01 End Date: 2013.09.02 Last Calib.: 2013.09.02  
 Start Time: 23:44:00 End Time: 05:34:09 Time On Btm: 2013.09.02 @ 01:48:25  
 Time Off Btm: 2013.09.02 @ 03:50:55

TEST COMMENT: IF- Weak Surface Blow Died in 27 min  
 IS- No Blow  
 FF- No Blow (Flushed the Tool)  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2051.50	112.40	Initial Hydro-static
1	16.78	111.19	Open To Flow (1)
32	23.22	112.66	Shut-In(1)
61	384.30	113.47	End Shut-In(1)
61	24.38	113.19	Open To Flow (2)
92	29.24	114.36	Shut-In(2)
123	366.88	114.97	End Shut-In(2)
123	1948.42	115.84	Final Hydro-static

## Recovery

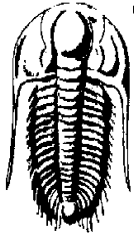
Length (ft)	Description	Volume (bbl)
10.00	WCM 2%w 98% m with a Couple Oil Sp	0.05

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53014

**DST#: 5**

ATTN: Max Lovely

Test Start: 2013.09.01 @ 23:44:00

## Tool Information

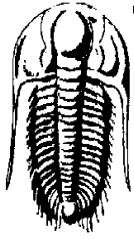
Drill Pipe:	Length: 4066.00 ft	Diameter: 3.80 inches	Volume: 57.04 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	8000.00 lb
			<u>Total Volume: 57.64 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4197.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	56.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4178.00	
Shut In Tool	5.00			4183.00	
Hydraulic tool	5.00			4188.00	
Packer	5.00			4193.00	20.00 Bottom Of Top Packer
Packer	4.00			4197.00	
Stubb	1.00			4198.00	
Perforations	1.00			4199.00	
Recorder	0.00	8355	Outside	4199.00	
Recorder	0.00	8674	Inside	4199.00	
Perforations	29.00			4228.00	
Bullnose	5.00			4233.00	36.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53014

**DST#: 5**

ATTN: Max Lovely

Test Start: 2013.09.01 @ 23:44:00

## 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: 58.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.95 in<sup>3</sup>

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 bbf
10.00	WCM 2%w 98%m with a Couple Oil Spots	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbf

Num Fluid Samples: 0

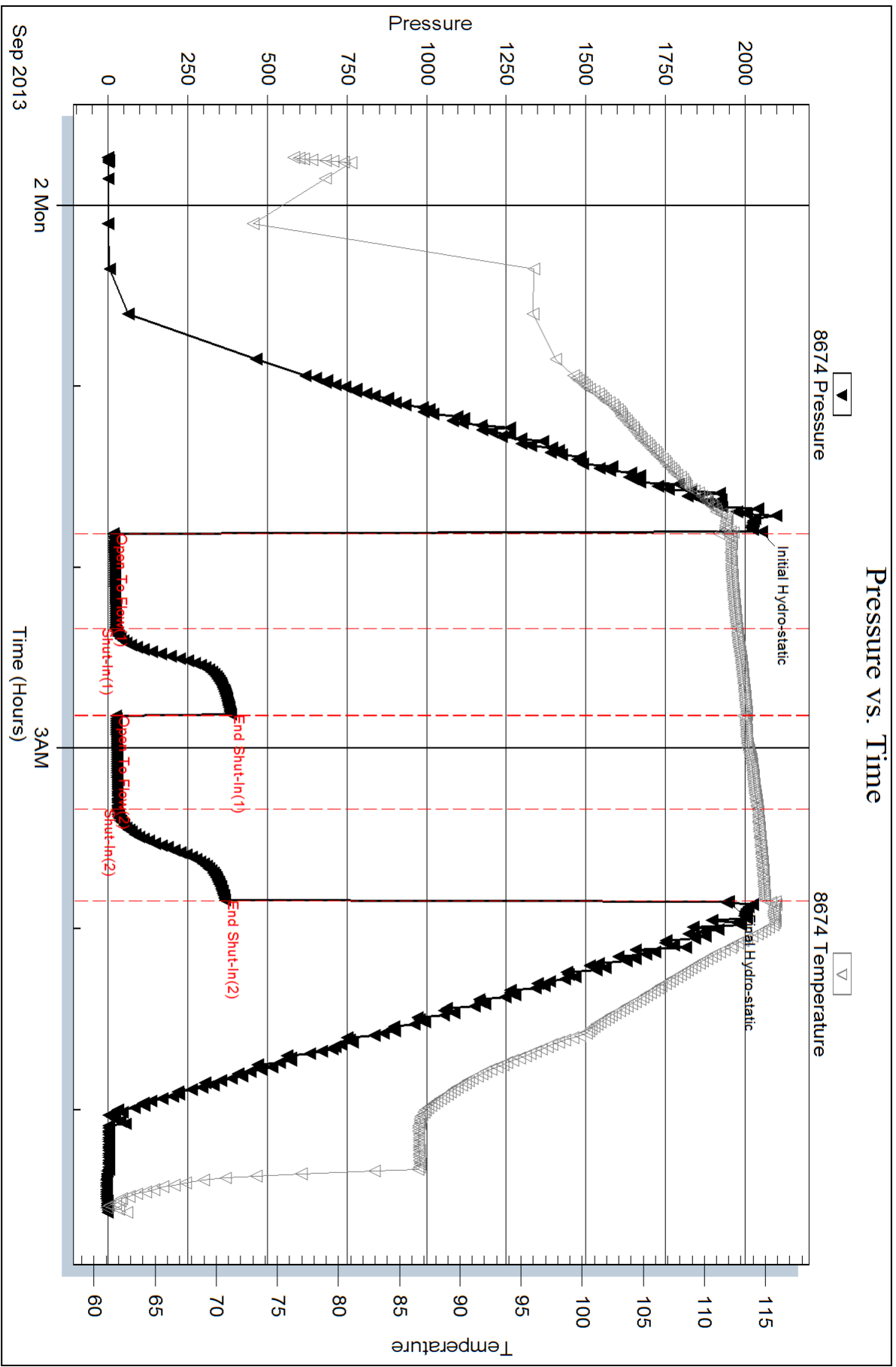
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

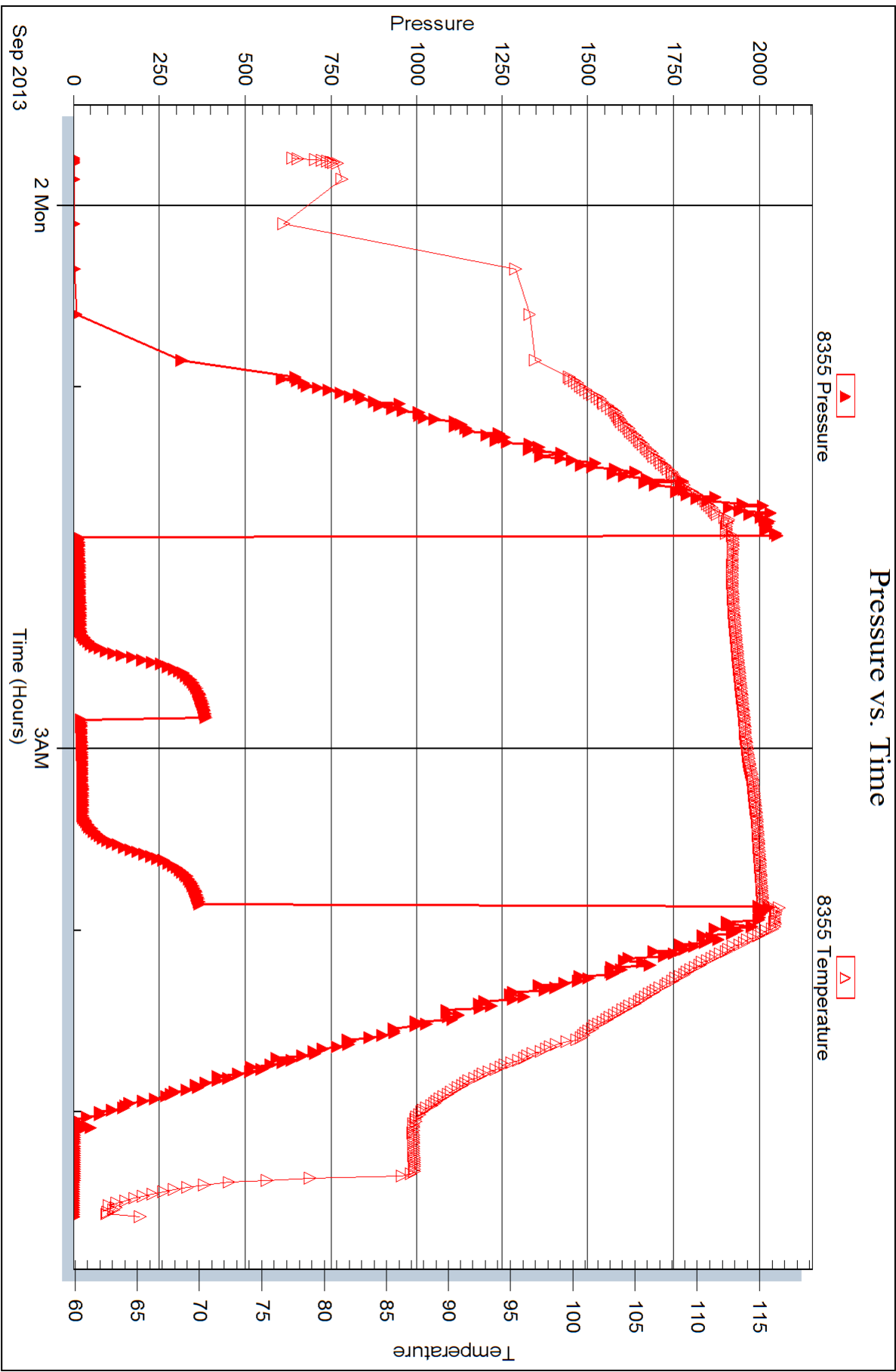


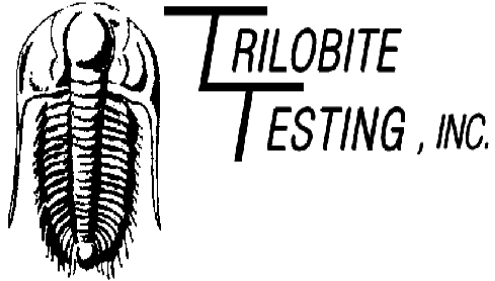
Serial #: 8355

Outside Ritchie Exploration Inc

Don Unit #1

DST Test Number: 5





## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

P.O Box 783188  
Wichita KS 67278

ATTN: Max Lovely

### **Don Unit #1**

### **22-13s-31w Gove,KS**

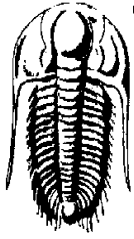
Start Date: 2013.09.03 @ 12:40:00

End Date: 2013.09.03 @ 20:20:09

Job Ticket #: 53015                      DST #: 6

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

Printed: 2013.09.05 @ 16:05:34



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 P.O Box 783188  
 Wichita KS 67278  
 ATTN: Max Lovely

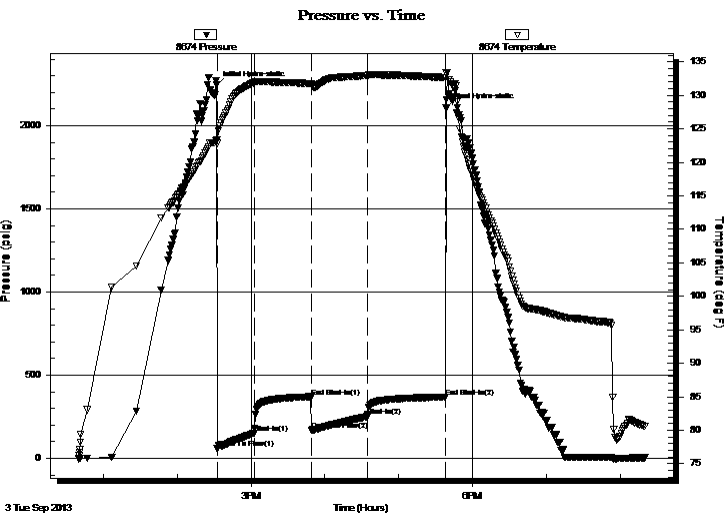
**22-13s-31w Gove,KS**  
**Don Unit #1**  
 Job Ticket: 53015 **DST#: 6**  
 Test Start: 2013.09.03 @ 12:40:00

## GENERAL INFORMATION:

Formation: **Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 14:32:25 Tester: Will MacLean  
 Time Test Ended: 20:20:09 Unit No: 58  
 Interval: **4514.00 ft (KB) To 4552.00 ft (KB) (TVD)** Reference Elevations: 2907.00 ft (KB)  
 Total Depth: 4552.00 ft (KB) (TVD) 2902.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8674 Inside**  
 Press @ Run Depth: 250.59 psig @ 4515.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.03 End Date: 2013.09.03 Last Calib.: 2013.09.03  
 Start Time: 12:40:00 End Time: 20:20:09 Time On Btm: 2013.09.03 @ 14:31:55  
 Time Off Btm: 2013.09.03 @ 17:38:24

**TEST COMMENT:** IF- Surface Blow Built to BOB in 2 3/4 min  
 IS- Weak Surface Blow Built to BOB in 11 1/4 min  
 FF- Surface Blow Built to BOB in 5 1/4 min  
 FS- Weak Surface Blow Built to BOB in 14 min



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.93	123.28	Initial Hydro-static
1	58.15	122.84	Open To Flow (1)
31	152.48	131.87	Shut-In(1)
77	370.08	131.72	End Shut-In(1)
78	170.34	131.56	Open To Flow (2)
123	250.59	132.97	Shut-In(2)
186	368.46	132.66	End Shut-In(2)
187	2105.41	133.29	Final Hydro-static

## Recovery

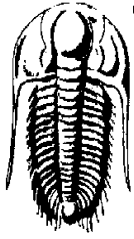
Length (ft)	Description	Volume (bbl)
185.00	WGOCM 3%w 10%g 30%oil 57%m	1.47
62.00	GMCO 22%g 38%m 40%oil	0.87
124.00	MGCO 10%m 27%g 63%oil	1.74
384.00	GO 18%g 82%oil	5.39
0.00	3026' of GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53015

**DST#: 6**

ATTN: Max Lovely

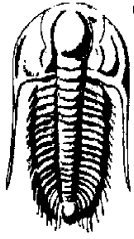
Test Start: 2013.09.03 @ 12:40:00

## Tool Information

Drill Pipe:	Length: 4381.00 ft	Diameter: 3.80 inches	Volume: 61.45 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:	24000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	28000.00 lb
			<u>Total Volume: 62.05 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	4514.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	38.00 ft				
Tool Length:	58.00 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			4495.00	
Shut In Tool	5.00			4500.00	
Hydraulic tool	5.00			4505.00	
Packer	5.00			4510.00	20.00 Bottom Of Top Packer
Packer	4.00			4514.00	
Stubb	1.00			4515.00	
Recorder	0.00	8355	Outside	4515.00	
Recorder	0.00	8674	Inside	4515.00	
Perforations	32.00			4547.00	
Bullnose	5.00			4552.00	38.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>58.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**22-13s-31w Gove,KS**

P.O Box 783188  
Wichita KS 67278

**Don Unit #1**

Job Ticket: 53015

**DST#: 6**

ATTN: Max Lovely

Test Start: 2013.09.03 @ 12:40:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

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
185.00	WGOCM 3%w 10%g 30%oil 57%m	1.475
62.00	GMCO 22%g 38%m 40%oil	0.870
124.00	MGCO 10%m 27%g 63%oil	1.739
384.00	GO 18%g 82%oil	5.387
0.00	3026' of GIP	0.000

Total Length: 755.00 ft      Total Volume: 9.471 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API is 30 @ 80f = 28

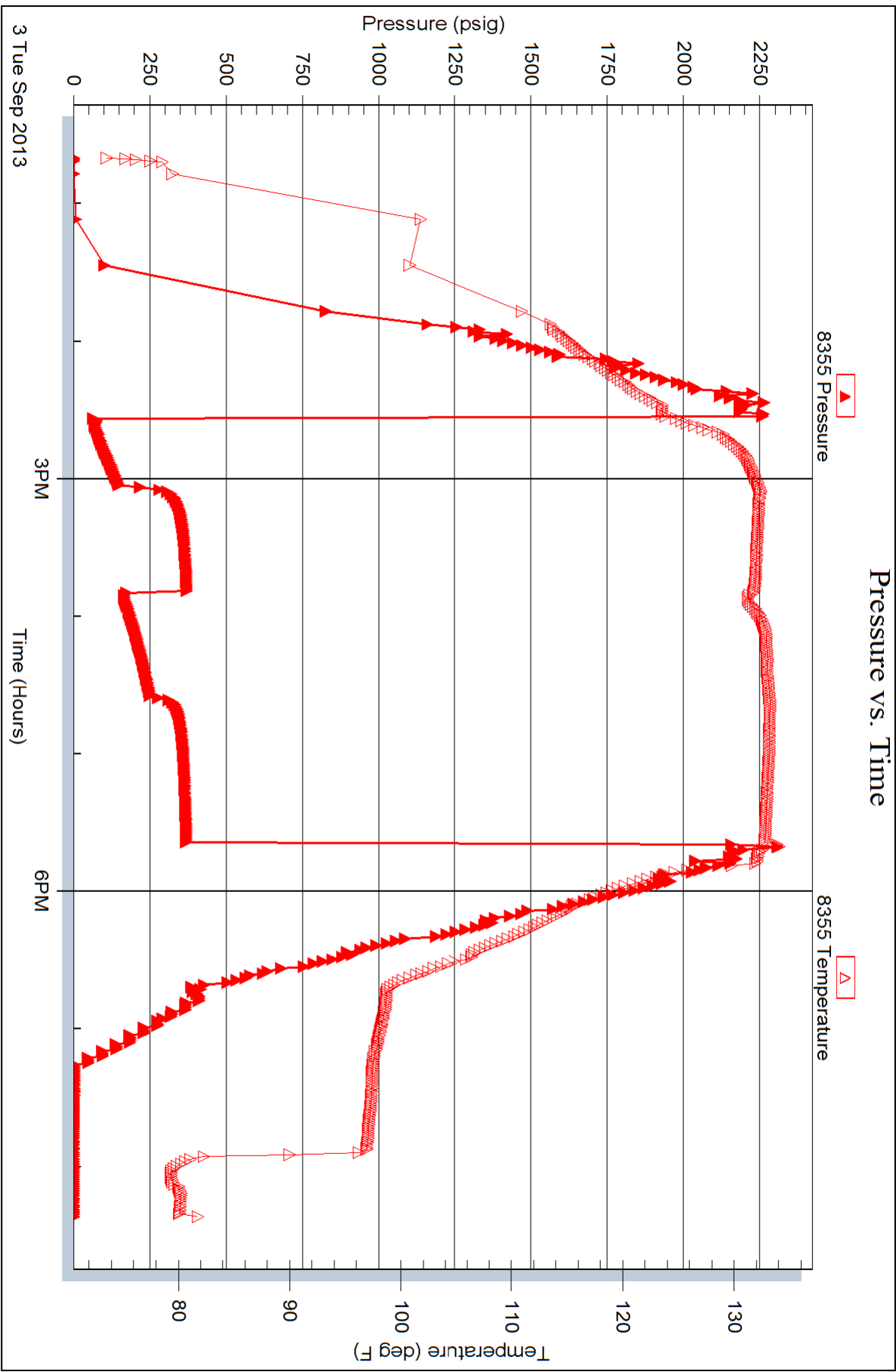


Serial #: 8355

Outside Ritchie Exploration Inc

Don Unit #1

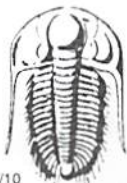
DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 53015

Printed: 2013.09.05 @ 16:05:36



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53010

Well Name & No. Don Unit #1 Test No. DST #1 Date 8-30-13  
 Company Ritchie Exploration Inc Elevation 2907 KB 2902 GL  
 Address P.O. Box 783188 Wichita KS 67278  
 Co. Rep / Geo. Max Lovely Rig WW Rig #2  
 Location: Sec. 22 Twp. 13s Rge. 3/w Co. Grove State KS

Interval Tested 3967-4009 Zone Tested LKC "A-C"  
 Anchor Length 42 Drill Pipe Run 3844 Mud Wt. 8.75  
 Top Packer Depth 3963 Drill Collars Run 123 Vis 52  
 Bottom Packer Depth 3967 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4009 Chlorides 1500 ppm System LCM 216

Blow Description IF-Weak Surface Blow Built to BOB in 15 1/2 min  
ISI- No Blow  
FF-Weak Surface Blow Built to BOB in 20 1/4 min  
FST- No Blow

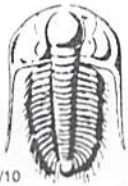
Rec	Feet of	%gas	%oil	%water	%mud
<u>102</u>	<u>Feet of MCW with Oil Spots</u>			<u>53</u>	<u>47</u>
<u>248</u>	<u>Feet of MCW with Few Oil Spots</u>			<u>72</u>	<u>28</u>
<u>185</u>	<u>Feet of MCW</u>			<u>78</u>	<u>22</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total \_\_\_\_\_ BHT 123 Gravity \_\_\_\_\_ API RW 096 @ 109 °F Chlorides 48660 ppm  
 (A) Initial Hydrostatic 1926  Test 1250 T-On Location 4:40  
 (B) First Initial Flow 30  Jars 250 T-Started 6:42  
 (C) First Final Flow 150  Safety Joint 75 T-Open 8:45  
 (D) Initial Shut-In 1100  Circ Sub N/C T-Pulled 11:49  
 (E) Second Initial Flow 159  Hourly Standby \_\_\_\_\_ T-Out 14:09  
 (F) Second Final Flow 273  Mileage 82 R/T 127.10  
 (G) Final Shut-In 1087  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1883  Straddle \_\_\_\_\_

Initial Open -30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 45  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1702.10  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1702.10

Approved By \_\_\_\_\_ Our Representative Will Mn

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

## Test Ticket

NO. 53011

Well Name & No. Don Unit #1 Test No. DST #2 Date 8-30-13  
 Company Ritchie Exploration Inc Elevation 2907 KB 2902 GL  
 Address P.O. Box 783188 Wichita KS 67278  
 Co. Rep / Geo. Max Lovely Rig WW Rig #2  
 Location: Sec. 22 Twp. 13s Rge. 31w Co. Gove State KS

Interval Tested 4026-4060 Zone Tested LRC "E-F"  
 Anchor Length 34 Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.2  
 Top Packer Depth 4022 Drill Collars Run 123 Vis 56  
 Bottom Packer Depth 4026 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4060 Chlorides 1800 ppm System LCM 1 1/2 lb

Blow Description IF- Weak Surface Blow Dried in 18min  
ISI- No Blow  
FF- No Blow  
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud with skin of oil on top</u>			<u>100</u>	
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 2 BHT 118 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1967  Test 1250 T-On Location 23:28  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 23:54  
 (C) First Final Flow 18  Safety Joint \_\_\_\_\_ T-Open 1:59  
 (D) Initial Shut-In 21  Circ Sub \_\_\_\_\_ T-Pulled 4:01  
 (E) Second Initial Flow 17  Hourly Standby \_\_\_\_\_ T-Out 5:47  
 (F) Second Final Flow 17  Mileage 82 RIT 127.10  
 (G) Final Shut-In 19  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1917  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 30  Day Standby \_\_\_\_\_ Total 1377.10  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1377.10

Approved By \_\_\_\_\_ Our Representative Will Mank

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

## Test Ticket

NO. 53012

Well Name & No. Don Unit #1 Test No. DST #3 Date 8-31  
 Company Ritchie Exploration Inc Elevation 2907 KB 2902 GL  
 Address P.O. Box 783188 Wichita KS 67278  
 Co. Rep / Geo. Max Lovely Rig WW Rig #2  
 Location: Sec. 22 Twp. 13s Rge. 31w Co. Cove State KS

Interval Tested 4108-4177 Zone Tested LRC "H-I"  
 Anchor Length 69 Drill Pipe Run 3971 Mud Wt. 9.3  
 Top Packer Depth 4104 Drill Collars Run 123 Vis 6.5  
 Bottom Packer Depth 4108 Wt. Pipe Run 0 WL 7.6  
 Total Depth 4177 Chlorides 1800 ppm System LCM 216

Blow Description IF- Weak Surface Blow Built to 3 1/2"  
ISI- No Blow  
FF- Weak Surface Blow Built to 3 1/4"  
FST- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>OWCM</u>		<u>1</u>	<u>3</u>	<u>96</u>
<u>61</u>	<u>WCM</u>			<u>10</u>	<u>90</u>
<u>61</u>	<u>WCM</u>			<u>2</u>	<u>98</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 184 BHT 121 Gravity API RW 173 @ 80 ° F Chlorides 34000 ppm  
 (A) Initial Hydrostatic 2048  Test 1250 T-On Location 19:14  
 (B) First Initial Flow 22  Jars \_\_\_\_\_ T-Started 19:44  
 (C) First Final Flow 73  Safety Joint \_\_\_\_\_ T-Open 21:32  
 (D) Initial Shut-In 870  Circ Sub N/C T-Pulled 00:40  
 (E) Second Initial Flow 81  Hourly Standby \_\_\_\_\_ T-Out 2:39  
 (F) Second Final Flow 104  Mileage 82 RIT 127.10  
 (G) Final Shut-In 861  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1856  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

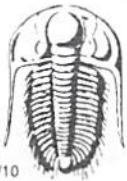
Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 60

Sub Total 1377.10

MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Will Mas

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53013

Well Name & No. Don Unit #1 Test No. DST #4 Date 9-1-13  
 Company Ritchie Exploration Inc Elevation 2907 KB 2902 GL  
 Address P.O. Box 783188 Wichita KS 67278  
 Co. Rep / Geo. Max Lovely Rig WW Rig #2  
 Location: Sec. 22 Twp. 13s Rge. 31w Co. Gove State KS

Interval Tested 4167-4204 Zone Tested LRC "J"  
 Anchor Length 37 Drill Pipe Run 4032 Mud Wt. 9.2  
 Top Packer Depth 4163 Drill Collars Run 123 Vis 58  
 Bottom Packer Depth 4167 Wt. Pipe Run 0 WL 9.0  
 Total Depth 4204 Chlorides 3000 ppm System LCM 216

Blow Description IF-Weak Surface Blow Built to 5"  
ISI- No Blow  
FF-Weak Surface Blow Built to 5 3/4"  
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>82</u>	<u>WCM</u>		<u>29</u>	<u>71</u>	
<u>62</u>	<u>MCW</u>		<u>66</u>	<u>34</u>	
<u>123</u>	<u>MCW Few Oil Spds in Tool</u>		<u>84</u>	<u>16</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 267 BHT 123 Gravity API RW 104 @ 108° F Chlorides 44000 ppm

(A) Initial Hydrostatic 2087  Test 1250 T-On Location 9:30  
 (B) First Initial Flow 24  Jars T-Started 9:46  
 (C) First Final Flow 88  Safety Joint T-Open 11:47  
 (D) Initial Shut-In 1016  Circ Sub N/C T-Pulled 14:51  
 (E) Second Initial Flow 91  Hourly Standby T-Out 16:51  
 (F) Second Final Flow 140  Mileage 82 RIT 127.10 Comments  
 (G) Final Shut-In 997  Sampler  
 (H) Final Hydrostatic 1898  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1377.10  
 Accessibility MP/DST Disc't

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 60  
 Sub Total 1377.10

Approved By \_\_\_\_\_ Our Representative Kib m  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53014

Well Name & No. Don Unit #1 Test No. DST #5 Date 9-1-13  
 Company Ritchie Exploration Inc Elevation 2907 KB 2902 GL  
 Address P.O. Box 783188  
 Co. Rep / Geo. Max Lovely Rig WW Ris #2  
 Location: Sec. 22 Twp. 13s Rge. 31W Co. Gove State KS

Interval Tested 4197-4233 Zone Tested LRC "K"  
 Anchor Length 36 Drill Pipe Run 4066 Mud Wt. 9.2  
 Top Packer Depth 4193 Drill Collars Run 123 Vis 58  
 Bottom Packer Depth 4197 Wt. Pipe Run 0 WL 9.0  
 Total Depth 4233 Chlorides 3000 ppm System LCM 216

Blow Description IF - Wear Surface Blow Died in 27 min  
ISI - No Blow  
FF - No Blow (Flushed the Tool)  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>WCM (with a couple 0.1 Spots)</u>			<u>2%</u>	<u>98%</u>
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

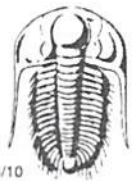
Rec Total 10 BHT 115 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2051  Test 1250 T-On Location 23:22  
 (B) First Initial Flow 16  Jars \_\_\_\_\_ T-Started 23:44  
 (C) First Final Flow 23  Safety Joint \_\_\_\_\_ T-Open 1:48  
 (D) Initial Shut-In 384  Circ Sub NIC T-Pulled 3:50  
 (E) Second Initial Flow 24  Hourly Standby \_\_\_\_\_ T-Out 5:34  
 (F) Second Final Flow 29  Mileage 82 R/T 127.10 Comments \_\_\_\_\_  
 (G) Final Shut-In 366  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1948  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1377.10  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 30 Sub Total 1377.10

Approved By \_\_\_\_\_

Our Representative Will M...

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53015

Well Name & No. Don Unit #1 Test No. DST #6 Date 9-3-13  
 Company Ritchie Exploration Inc Elevation 2907 KB 2902 GL  
 Address P.O. Box 783188 Wichita KS 67278  
 Co. Rep / Geo. Max Lovely Rig WW Rig #2  
 Location: Sec. 22 Twp. 13S Rge. 31W Co. Cove State KS

Interval Tested 4514-4552 Zone Tested Johnson  
 Anchor Length 38 Drill Pipe Run 4831 Mud Wt. 9.3  
 Top Packer Depth 4510 Drill Collars Run 123 Vis 53  
 Bottom Packer Depth 4514 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4552 Chlorides 3000 ppm System LCM 216

Blow Description IF - Surface Blow Built BOB in 2 3/4"  
ISI - Weak Surface Blow Built to BOB in 1 1/4 min  
FF - Surface Blow Built to BOB in 5 1/4 min  
FSI - Weak Surface Blow Built to BOB in 1 1/4 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>384</u>	<u>GO</u>	<u>18</u>	<u>82</u>		
<u>124</u>	<u>MGCO</u>	<u>27</u>	<u>63</u>	<u>10</u>	<u>10</u>
<u>62</u>	<u>GMCO</u>	<u>22</u>	<u>40</u>	<u>38</u>	<u>38</u>
<u>185</u>	<u>WG-OCM</u>	<u>10</u>	<u>30</u>	<u>3</u>	<u>57</u>
	<u>3026' of GIP</u>				

Rec Total 755 BHT 133 Gravity 28 API RW @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2242  Test 1250 T-On Location 12:28  
 (B) First Initial Flow 58  Jars T-Started 12:40  
 (C) First Final Flow 152  Safety Joint T-Open 14:32  
 (D) Initial Shut-In 370  Circ Sub NIC T-Pulled 17:38  
 (E) Second Initial Flow 170  Hourly Standby T-Out 20:20:09  
 (F) Second Final Flow 250  Mileage 82 RIT x 2 254.20 Comments API 15 30 @ 80° = 28  
 (G) Final Shut-In 368  Sampler loaded 8/4 12:00 called at 11:00 AM to test  
 (H) Final Hydrostatic 2105  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer

Initial Open 30  Extra Packer  Extra Copies  
 Initial Shut-In 45  Extra Recorder Sub Total 233.33  
 Final Flow 45  Day Standby 3 1/2 1d 7h Total 1737.53  
 Final Shut-In 60  Accessibility MP/DST Disc't  
 Sub Total 1504.20

Approved By Max Lovely Our Representative \_\_\_\_\_

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