



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy Inc.**

PO.Box 252  
Great Bend KS 67530

ATTN: Kurt Talbott

### **Shuart #1**

#### **1-22s-15w Pawnee KS**

Start Date: 2014.05.27 @ 11:56:57

End Date: 2014.05.27 @ 17:30:12

Job Ticket #: 54213                      DST #: 1

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

Printed: 2014.05.30 @ 14:43:33



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy Inc.  
 PO.Box 252  
 Great Bend KS 67530  
 ATTN: Kurt Talbott

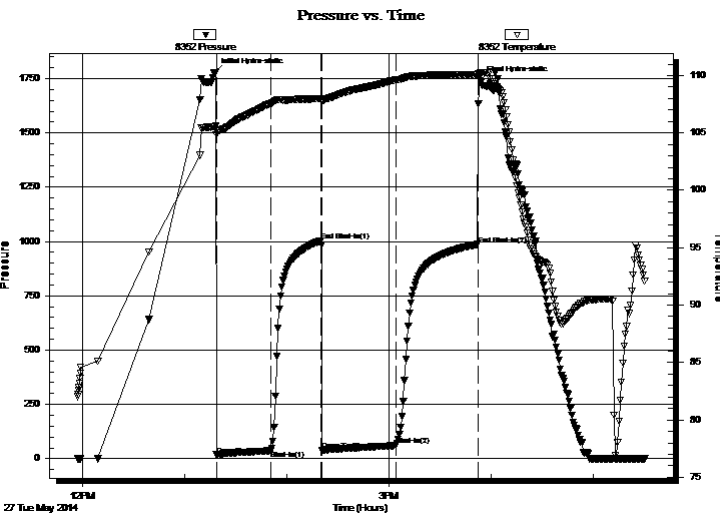
**1-22s-15w Pawnee KS**  
**Shuart #1**  
 Job Ticket: 54213 **DST#: 1**  
 Test Start: 2014.05.27 @ 11:56:57

## GENERAL INFORMATION:

Formation: **Lans.**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:18:27  
 Time Test Ended: 17:30:12  
 Interval: **3543.00 ft (KB) To 3600.00 ft (KB) (TVD)**  
 Total Depth: 3600.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Gary Pevoteaux  
 Unit No: 56  
 Reference Elevations: 1963.00 ft (KB)  
 1957.00 ft (CF)  
 KB to GR/CF: 6.00 ft

**Serial #: 8352 Outside**  
 Press@RunDepth: 60.23 psig @ 3544.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.05.27 End Date: 2014.05.27 Last Calib.: 2014.05.27  
 Start Time: 11:57:02 End Time: 17:30:11 Time On Btm: 2014.05.27 @ 13:17:12  
 Time Off Btm: 2014.05.27 @ 15:53:27

TEST COMMENT: IF:Weak blow . 1/2 - 3 1/2".  
 IS:No blow  
 FF:Weak blow . 1/2 - 2".  
 FS:No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1778.43	105.56	Initial Hydro-static
2	17.36	104.86	Open To Flow (1)
34	36.79	107.57	Shut-In(1)
63	1003.59	107.99	End Shut-In(1)
64	39.46	107.68	Open To Flow (2)
107	60.23	109.60	Shut-In(2)
155	986.38	110.08	End Shut-In(2)
157	1741.27	110.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
92.00	MW 28%w 72%w /Rw .085@ 75deg	1.29
0.00	Oil scum@ top of tool	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Charter Energy Inc.

**1-22s-15w Pawnee KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54213

**DST#: 1**

ATTN: Kurt Talbott

Test Start: 2014.05.27 @ 11:56:57

## Tool Information

Drill Pipe:	Length: 3554.00 ft	Diameter: 3.80 inches	Volume: 49.85 bbl	Tool Weight: 2400.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 61000.00 lb
			<u>Total Volume: 49.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3543.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	77.00 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			3524.00	
Shut In Tool	5.00			3529.00	
Hydraulic tool	5.00			3534.00	
Packer	4.00			3538.00	20.00 Bottom Of Top Packer
Packer	5.00			3543.00	
Stubb	1.00			3544.00	
Recorder	0.00	8352	Outside	3544.00	
Recorder	0.00	8370	Inside	3544.00	
Perforations	4.00			3548.00	
Blank Spacing	32.00			3580.00	
Perforations	15.00			3595.00	
Bullnose	5.00			3600.00	57.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Charter Energy Inc.

**1-22s-15w Pawnee KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54213

**DST#: 1**

ATTN: Kurt Talbott

Test Start: 2014.05.27 @ 11:56:57

## 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:

86000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4700.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
92.00	MW 28% <sub>m</sub> 72% <sub>w</sub> /Rw .085@ 75deg	1.291
0.00	Oil scum@ top of tool	0.000

Total Length: 92.00 ft      Total Volume: 1.291 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

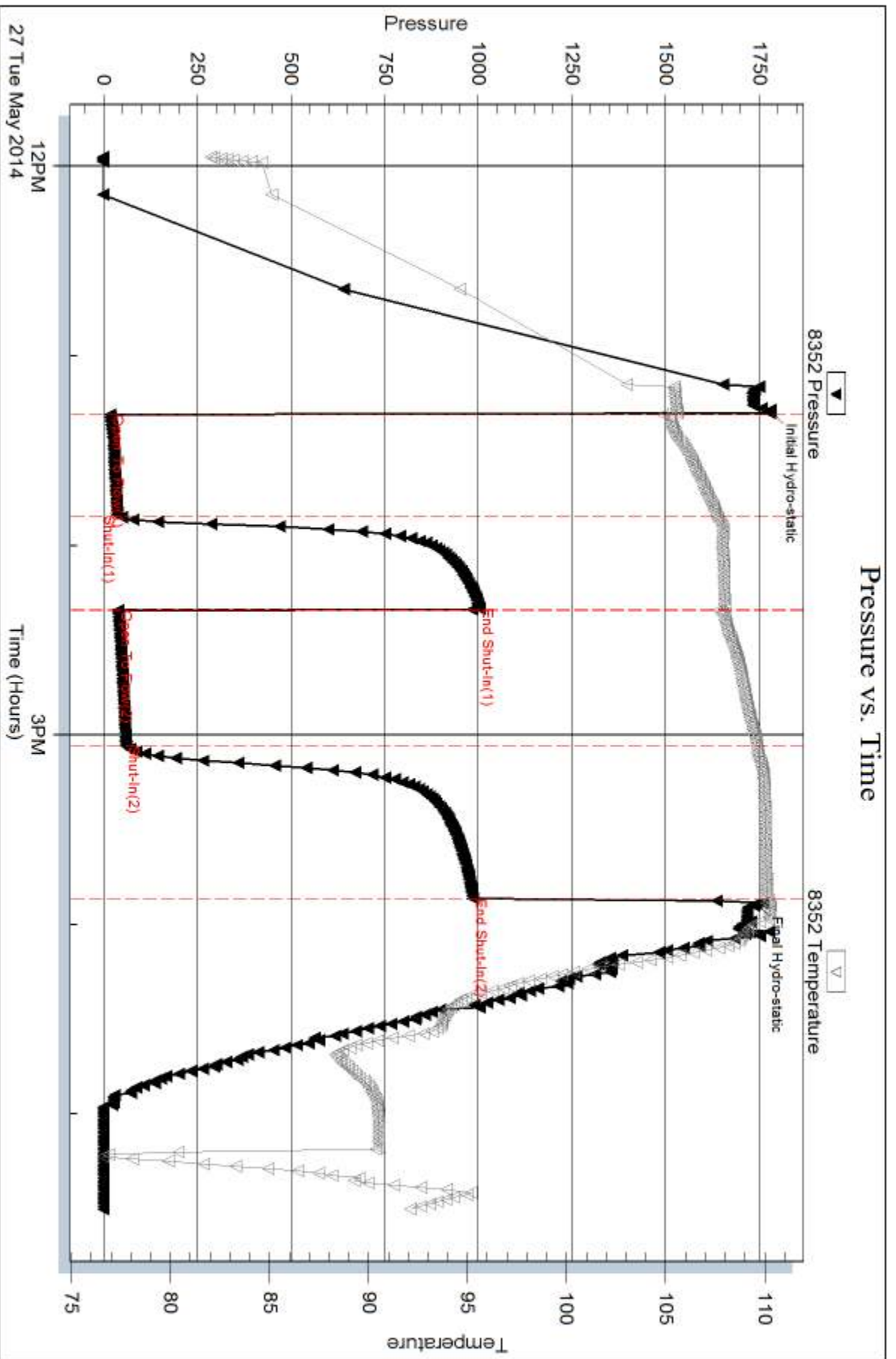
Recovery Comments:

Serial #: 8352

Outside Charter Energy Inc.

Shunt #1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54213

Printed: 2014.05.30 @ 14:43:34

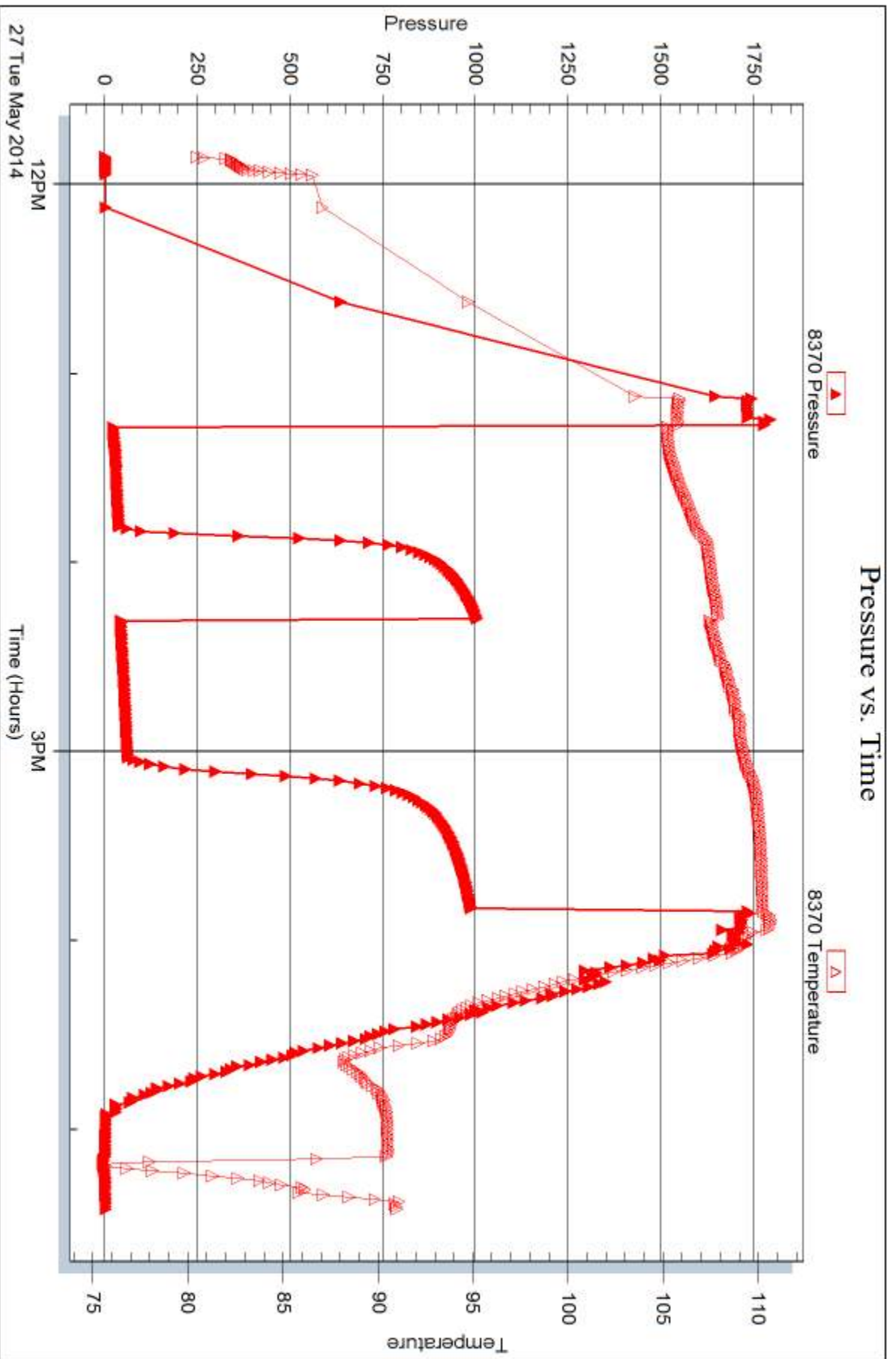
Serial #: 8370

Inside

Charter Energy Inc.

Shuart #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54213

Printed: 2014.05.30 @ 14:43:34



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy Inc.**

PO.Box 252  
Great Bend KS 67530

ATTN: Kurt Talbott

### **Shuart #1**

#### **1-22s-15w Pawnee,KS**

Start Date: 2014.05.28 @ 12:51:26

End Date: 2014.05.28 @ 16:19:56

Job Ticket #: 54214                      DST #: 2

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

Printed: 2014.05.30 @ 14:42:33





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy Inc.

**1-22s-15w Pawnee, KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54214

**DST#: 2**

ATTN: Kurt Talbott

Test Start: 2014.05.28 @ 12:51:26

## GENERAL INFORMATION:

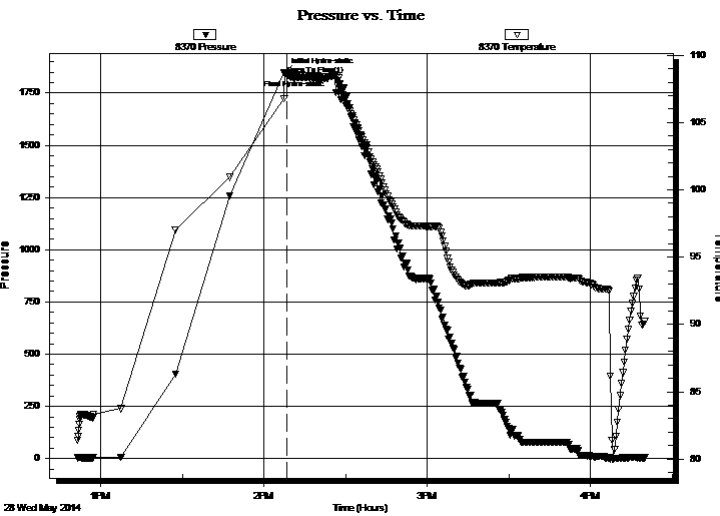
Formation: **Viola**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:08:26  
 Time Test Ended: 16:19:56  
 Interval: **3753.00 ft (KB) To 3820.00 ft (KB) (TVD)**  
 Total Depth: 3820.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Gary Pevoteaux  
 Unit No: 56  
 Reference Elevations: 1963.00 ft (KB)  
 1957.00 ft (CF)  
 KB to GR/CF: 6.00 ft

**Serial #: 8370**

**Inside**

Press@RunDepth: psig @ 3754.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.05.28 End Date: 2014.05.28 Last Calib.: 2014.05.28  
 Start Time: 12:51:31 End Time: 16:19:56 Time On Btm: 2014.05.28 @ 14:07:41  
 Time Off Btm: 2014.05.28 @ 14:24:26

**TEST COMMENT:** IF: Strong blow. Packers failed. Picked up & re-set tool using more string weight. Packers failed. Misrun!



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1849.06	108.72	Initial Hydro-static
1	1839.43	108.67	Open To Flow (1)
17	1848.23	108.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
195.00	Drig mud	2.74

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Charter Energy Inc.

**1-22s-15w Pawnee,KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54214

**DST#: 2**

ATTN: Kurt Talbott

Test Start: 2014.05.28 @ 12:51:26

## Tool Information

Drill Pipe:	Length: 3742.00 ft	Diameter: 3.80 inches	Volume: 52.49 bbl	Tool Weight: 2400.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 61000.00 lb
			<u>Total Volume: 52.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3753.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	87.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3734.00	
Shut In Tool	5.00			3739.00	
Hydraulic tool	5.00			3744.00	
Packer	4.00			3748.00	20.00 Bottom Of Top Packer
Packer	5.00			3753.00	
Stubb	1.00			3754.00	
Recorder	0.00	8352	Outside	3754.00	
Recorder	0.00	8370	Inside	3754.00	
Perforations	4.00			3758.00	
Blank Spacing	32.00			3790.00	
Perforations	25.00			3815.00	
Bullnose	5.00			3820.00	67.00 Bottom Packers & Anchor

**Total Tool Length: 87.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Charter Energy Inc.

**1-22s-15w Pawnee,KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54214

**DST#: 2**

ATTN: Kurt Talbott

Test Start: 2014.05.28 @ 12:51:26

## 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:

4800 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
195.00	Drig mud	2.735

Total Length: 195.00 ft      Total Volume: 2.735 bbl

Num Fluid Samples: 0

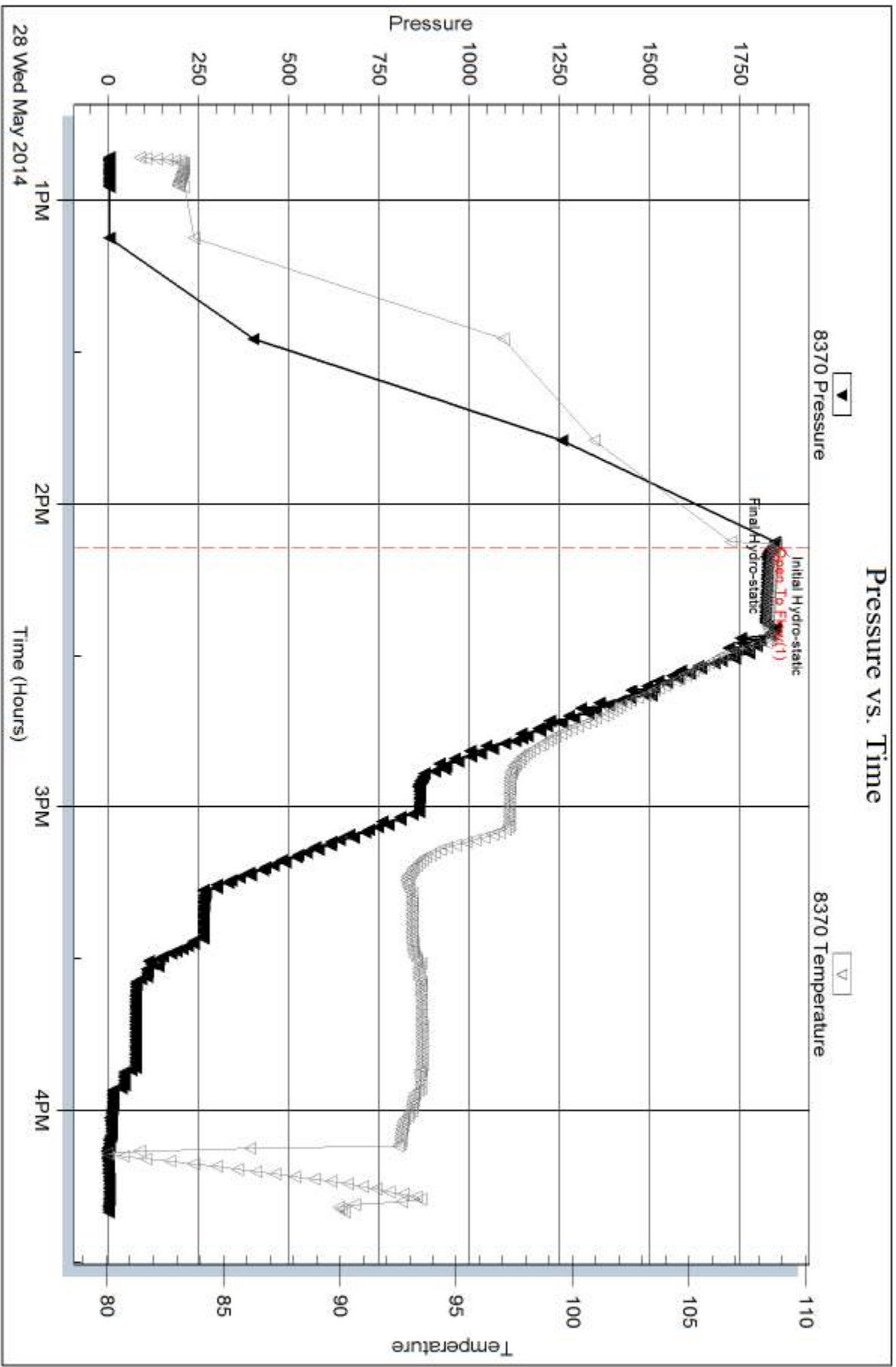
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

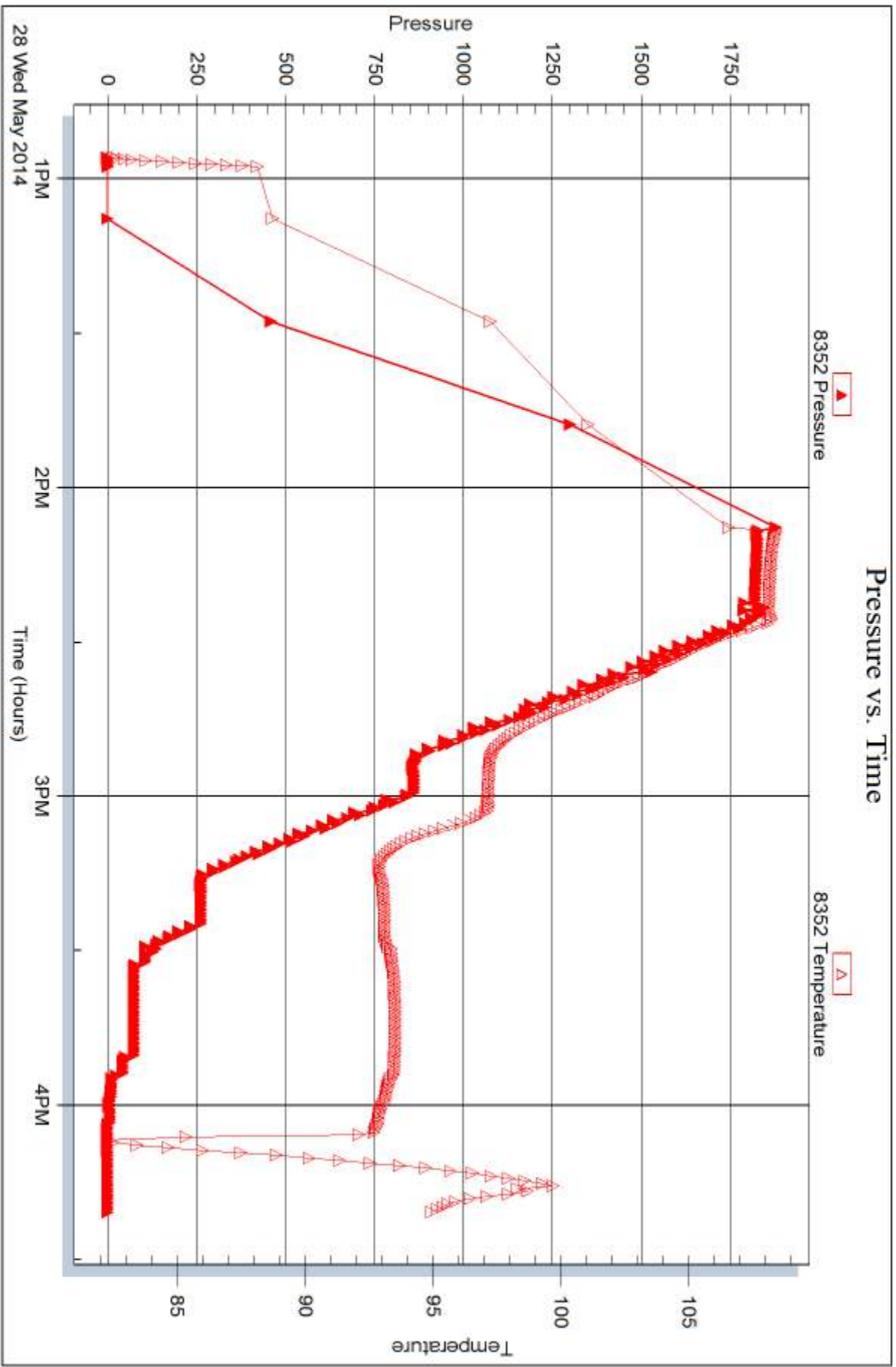


Serial #: 8352

Outside Charter Energy Inc.

Shuart #1

DST Test Number: 2



28 Wed May 2014

Trilobite Testing, Inc

Ref. No: 54214

Printed: 2014.05.30 @ 14:42:34



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy Inc.**

PO.Box 252  
Great Bend KS 67530

ATTN: Kurt Talbott

### **Shuart #1**

#### **1-22s-15w Pawnee,KS**

Start Date: 2014.05.28 @ 16:35:14

End Date: 2014.05.28 @ 22:05:14

Job Ticket #: 54215                      DST #: 3

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

Printed: 2014.05.30 @ 14:42:11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy Inc.  
PO.Box 252  
Great Bend KS 67530  
ATTN: Kurt Talbott

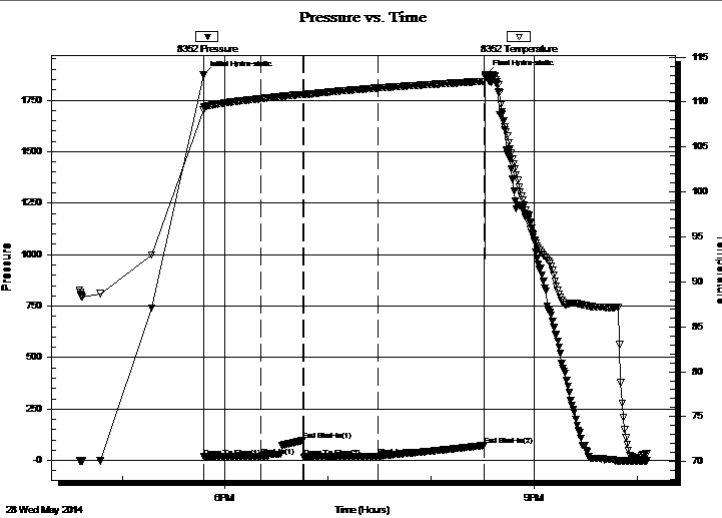
**1-22s-15w Pawnee,KS**  
**Shuart #1**  
Job Ticket: 54215      **DST#: 3**  
Test Start: 2014.05.28 @ 16:35:14

## GENERAL INFORMATION:

Formation: **Viola**  
Deviated: No Whipstock: ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 17:47:29      Tester: Gary Pevoteaux  
Time Test Ended: 22:05:14      Unit No: 56  
**Interval: 3777.00 ft (KB) To 3820.00 ft (KB) (TVD)**      Reference Elevations: 1963.00 ft (KB)  
Total Depth: 3820.00 ft (KB) (TVD)      1957.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair      KB to GR/CF: 6.00 ft

**Serial #: 8352      Outside**  
Press@RunDepth: 21.29 psig @ 3778.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2014.05.28      End Date: 2014.05.28      Last Calib.: 2014.05.28  
Start Time: 16:35:19      End Time: 22:05:13      Time On Btm: 2014.05.28 @ 17:47:14  
Time Off Btm: 2014.05.28 @ 20:31:44

TEST COMMENT: IF:Weak blow . 3/4" decreasing.  
IS:No blow .  
FF:Weak blow . 1 - 3".  
FS:No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1871.83	109.11	Initial Hydro-static
1	17.86	109.47	Open To Flow (1)
34	20.99	110.38	Shut-In(1)
58	98.06	110.86	End Shut-In(1)
59	15.43	110.82	Open To Flow (2)
102	21.29	111.56	Shut-In(2)
164	73.76	112.31	End Shut-In(2)
165	1875.19	112.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
18.00	OCM 13%o 87% m/Clean oil @ top of tool	0.25
0.00	75 ft.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**

Charter Energy Inc.

**1-22s-15w Pawnee,KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54215

**DST#: 3**

ATTN: Kurt Talbott

Test Start: 2014.05.28 @ 16:35:14

## Tool Information

Drill Pipe:	Length: 3775.00 ft	Diameter: 3.80 inches	Volume: 52.95 bbl	Tool Weight:	2400.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 52.95 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3777.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	43.00 ft				
Tool Length:	63.00 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			3758.00	
Shut In Tool	5.00			3763.00	
Hydraulic tool	5.00			3768.00	
Packer	4.00			3772.00	20.00 Bottom Of Top Packer
Packer	5.00			3777.00	
Stubb	1.00			3778.00	
Recorder	0.00	8352	Outside	3778.00	
Recorder	0.00	8370	Inside	3778.00	
Perforations	5.00			3783.00	
Blank Spacing	32.00			3815.00	
Bullnose	5.00			3820.00	43.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Charter Energy Inc.

**1-22s-15w Pawnee,KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54215

**DST#: 3**

ATTN: Kurt Talbott

Test Start: 2014.05.28 @ 16:35:14

### 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:

6000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
18.00	OCM 13%o 87%m/Clean oil @ top of tool	0.252
0.00	75 ft.of GIP	0.000

Total Length: 18.00 ft      Total Volume: 0.252 bbl

Num Fluid Samples: 0

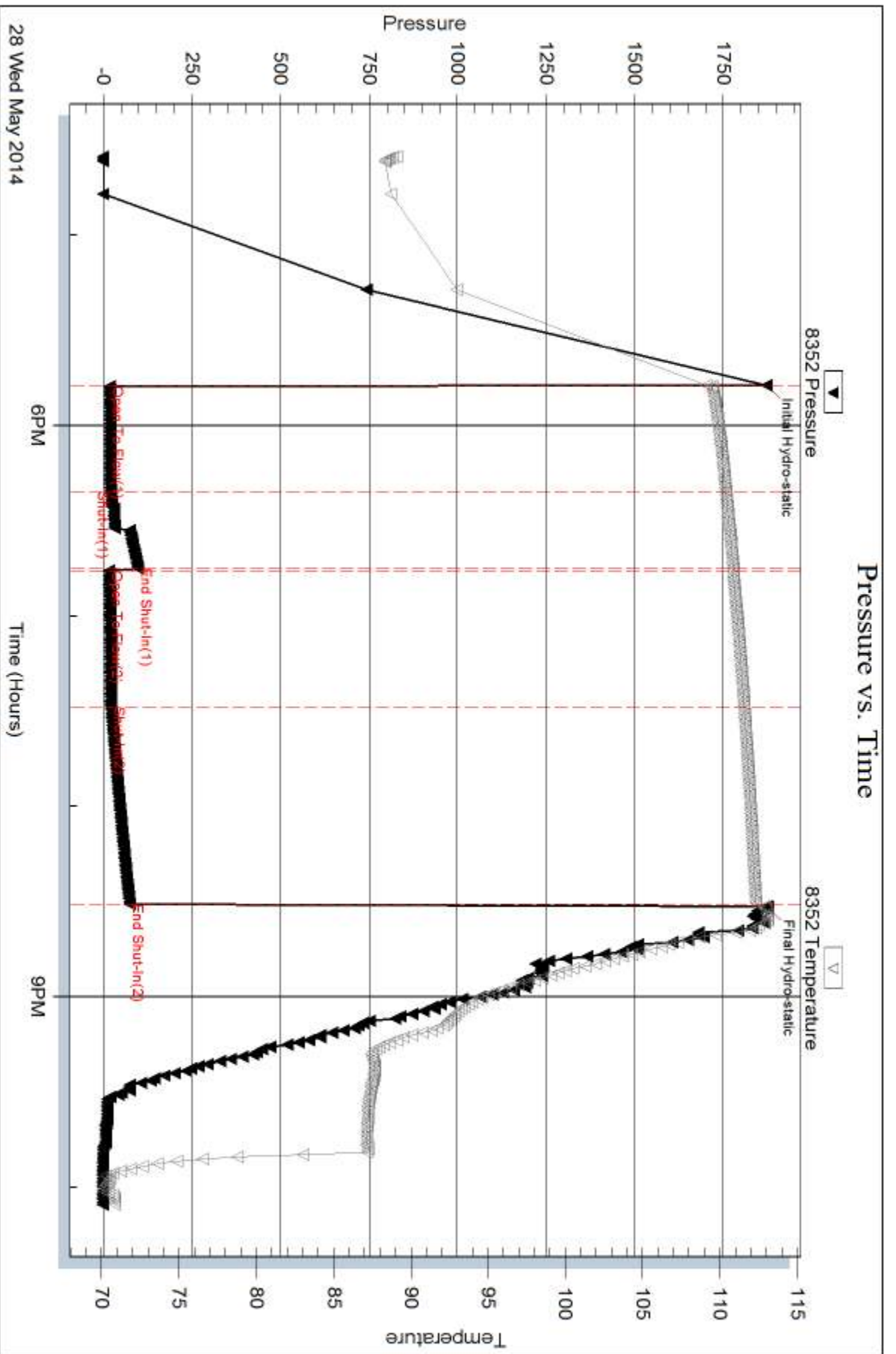
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:



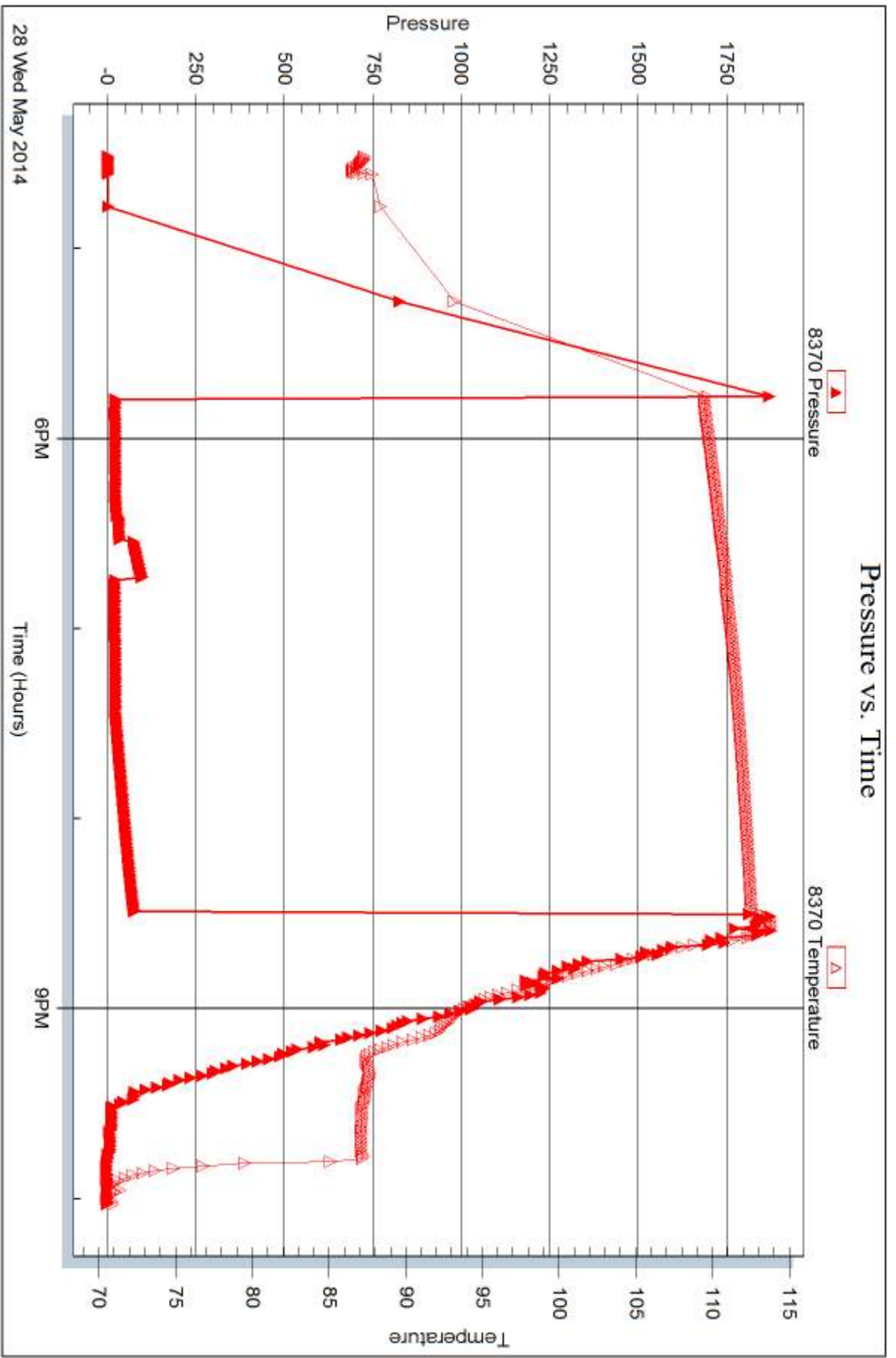
Serial #: 8370

Inside

Charter Energy Inc.

Shuart #1

DST Test Number: 3



28 Wed May 2014

Trilobite Testing, Inc

Ref. No: 54215

Printed: 2014.05.30 @ 14:42:12



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy Inc.**

PO.Box 252  
Great Bend KS 67530

ATTN: Kurt Talbott

### **Shuart #1**

#### **1-22s-15w Pawnee,KS**

Start Date: 2014.05.29 @ 09:30:03

End Date: 2014.05.29 @ 15:39:48

Job Ticket #: 54216                      DST #: 4

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

Printed: 2014.05.30 @ 14:41:31

Charter Energy Inc. 1-22s-15w Pawnee,KS Shuart #1 DST # 4 Simpson/Arbuckle 2014.05.29



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy Inc.

**1-22s-15w Pawnee,KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54216

**DST#: 4**

ATTN: Kurt Talbott

Test Start: 2014.05.29 @ 09:30:03

## GENERAL INFORMATION:

Formation: **Simpson/Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:55:18

Time Test Ended: 15:39:48

Test Type: Conventional Bottom Hole (Reset)

Tester: Gary Pevoteaux

Unit No: 56

**Interval: 3778.00 ft (KB) To 3875.00 ft (KB) (TVD)**

Reference Elevations: 1963.00 ft (KB)

Total Depth: 3875.00 ft (KB) (TVD)

1957.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

**Serial #: 8352 Outside**

Press@RunDepth: 80.62 psig @ 3779.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.29 End Date: 2014.05.29

Last Calib.: 2014.05.29

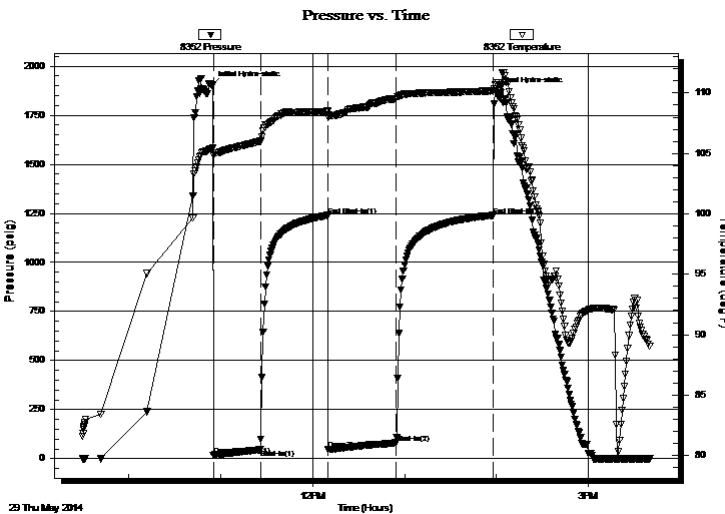
Start Time: 09:30:08 End Time: 15:39:47

Time On Btm: 2014.05.29 @ 10:54:18

Time Off Btm: 2014.05.29 @ 13:59:18

**TEST COMMENT:** IF:Weak to fair blow . Increase to 4 1/2".  
IS:No blow .  
FF:Weak to fair blow . Increase to 5".  
FS:No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1902.25	105.40	Initial Hydro-static
1	17.83	104.85	Open To Flow (1)
32	46.59	106.01	Shut-In(1)
76	1239.31	108.48	End Shut-In(1)
76	46.35	108.01	Open To Flow (2)
121	80.62	109.51	Shut-In(2)
184	1240.11	110.17	End Shut-In(2)
185	1872.89	110.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	Mud w/o specs	0.98
60.00	WM w/o specs 19%w 81%m	0.84

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Charter Energy Inc.  
 P.O.Box 252  
 Great Bend KS 67530  
 ATTN: Kurt Talbott

**1-22s-15w Pawnee,KS**  
**Shuart #1**  
 Job Ticket: 54216      **DST#: 4**  
 Test Start: 2014.05.29 @ 09:30:03

## GENERAL INFORMATION:

Formation: **Simpson/Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:55:18  
 Time Test Ended: 15:39:48  
 Interval: **3778.00 ft (KB) To 3875.00 ft (KB) (TVD)**  
 Total Depth: 3875.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Gary Pevoteaux  
 Unit No: 56  
 Reference Elevations: 1963.00 ft (KB)  
 1957.00 ft (CF)  
 KB to GR/CF: 6.00 ft

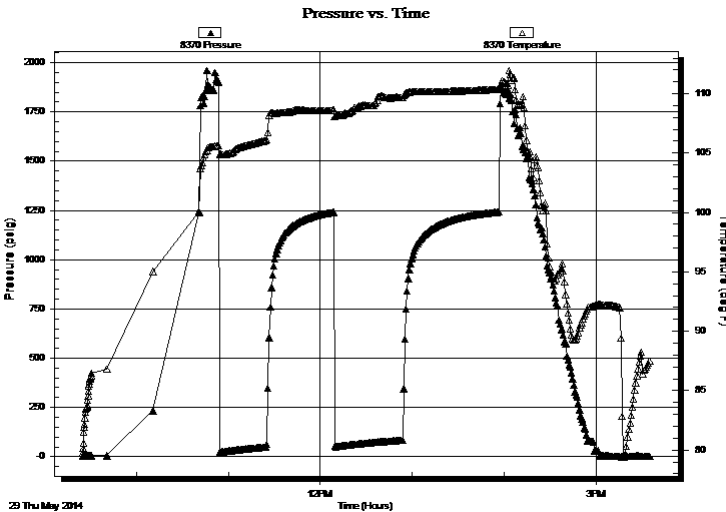
## Serial #: 8370

Inside

Press@RunDepth:                    psig @ 3779.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2014.05.29      End Date: 2014.05.29      Last Calib.: 2014.05.29  
 Start Time: 09:24:58      End Time: 15:35:07      Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF:Weak to fair blow . Increase to 4 1/2".  
 IS:No blow .  
 FF:Weak to fair blow . Increase to 5".  
 FS:No blow .

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	Mud w/o specs	0.98
60.00	WM w/o specs 19%w 81%m	0.84

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Charter Energy Inc.

**1-22s-15w Pawnee,KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54216

**DST#: 4**

ATTN: Kurt Talbott

Test Start: 2014.05.29 @ 09:30:03

## Tool Information

Drill Pipe:	Length: 3773.00 ft	Diameter: 3.80 inches	Volume: 52.93 bbl	Tool Weight:	2400.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	71000.00 lb
			<u>Total Volume: 52.93 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3778.00 ft			Final	55500.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	97.00 ft				
Tool Length:	117.00 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			3759.00	
Shut In Tool	5.00			3764.00	
Hydraulic tool	5.00			3769.00	
Packer	4.00			3773.00	20.00 Bottom Of Top Packer
Packer	5.00			3778.00	
Stubb	1.00			3779.00	
Recorder	0.00	8352	Outside	3779.00	
Recorder	0.00	8370	Inside	3779.00	
Perforations	4.00			3783.00	
Blank Spacing	63.00			3846.00	
Perforations	24.00			3870.00	
Bullnose	5.00			3875.00	97.00 Bottom Packers & Anchor

**Total Tool Length: 117.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Charter Energy Inc.

**1-22s-15w Pawnee,KS**

PO.Box 252  
Great Bend KS 67530

**Shuart #1**

Job Ticket: 54216

**DST#: 4**

ATTN: Kurt Talbott

Test Start: 2014.05.29 @ 09:30:03

### 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:

24000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6600.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Mud w/o specs	0.982
60.00	WM w/o specs 19%w 81%m	0.842

Total Length: 130.00 ft      Total Volume: 1.824 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

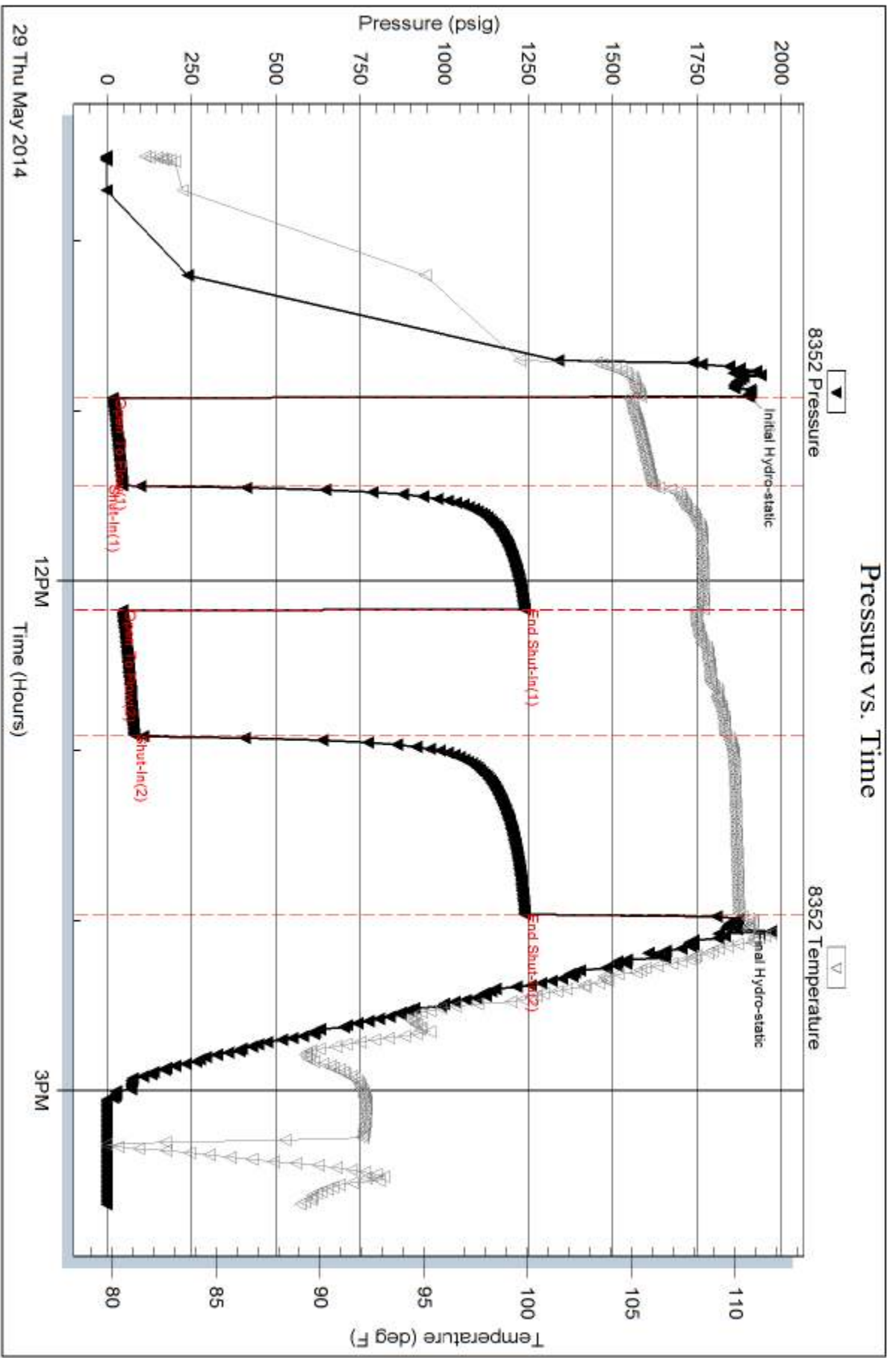
Recovery Comments: Rw .23 ohms@85 deg

Serial #: 8352

Outside Charter Energy Inc.

Shunt #1

DST Test Number: 4



29 Thu May 2014

Triobite Testing, Inc

Ref. No: 54216

Printed: 2014.05.30 @ 14:41:32

Serial #: 8370

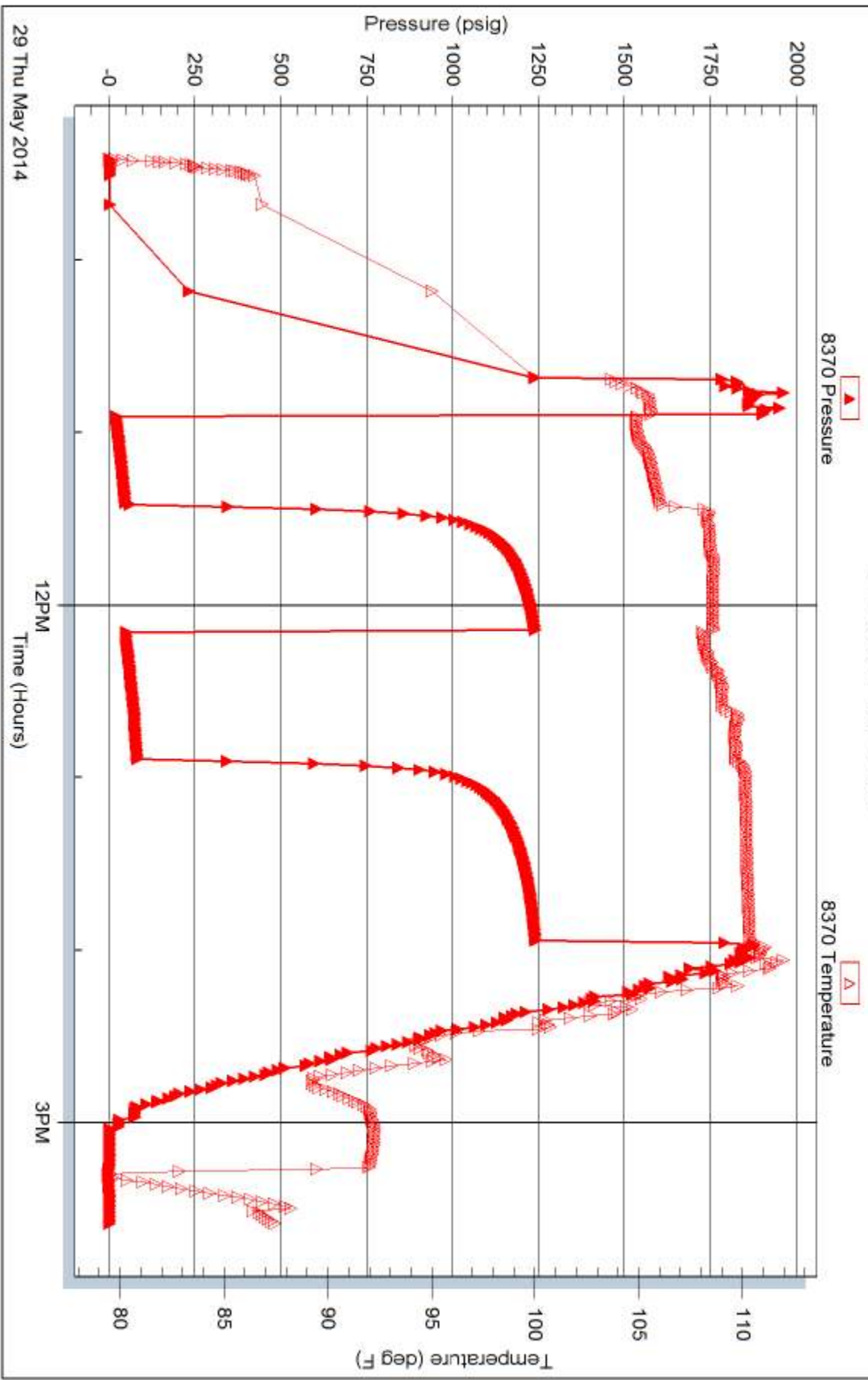
Inside

Charter Energy Inc.

Shuart #1

DST Test Number: 4

### Pressure vs. Time

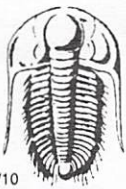


29 Thu May 2014

Triobite Testing, Inc

Ref. No: 54216

Printed: 2014.05.30 @ 14:41:32



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54213

Well Name & No. STUART # 1 Test No. 1 Date 5-27-14  
 Company CHARTER ENERGY INC. Elevation 1963 KB 1957 GL  
 Address P.O. Box 252, GREAT BEND KS. 67530  
 Co. Rep / Geo. KURT TALBOTT Rig ROYAL DRUG # 1  
 Location: Sec. 1 Twp. 22S Rge. 15W Co. SAWNEE State KS

Interval Tested 3543-3600 Zone Tested LWS  
 Anchor Length 57' Drill Pipe Run 3554' Mud Wt. 9.4  
 Top Packer Depth 3538' Drill Collars Run 0 Vis 50  
 Bottom Packer Depth 3543' Wt. Pipe Run 0 WL 8.4cc  
 Total Depth 3600 Chlorides 4700 ppm System LCM 0  
 Blow Description IF: Weak below. 1/2 - 3 1/2". ISF: No below.

FF: Weak blow. 1/2 - 2". FSI: No below.

Rec	Feet of	%gas	%oil	%water	%mud
<u>92</u>	<u>MW</u>		<u>72</u>	<u>28</u>	
	<u>Oil seep @ top of tool</u>				

Rec Total 92 BHT 110 Gravity N/A API RW 08 @ 75 ° F Chlorides 86,000 ppm  
 (A) Initial Hydrostatic 1778  Test 1150 T-On Location 1118  
 (B) First Initial Flow 17  Jars \_\_\_\_\_ T-Started 1156  
 (C) First Final Flow 37  Safety Joint \_\_\_\_\_ T-Open 1318  
 (D) Initial Shut-In 1004  Circ Sub \_\_\_\_\_ T-Pulled 1552  
 (E) Second Initial Flow 39  Hourly Standby \_\_\_\_\_ T-Out 1730  
 (F) Second Final Flow 60  Mileage 90 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 986  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1741  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 45  
 Final Shut-In 45  
 Sub Total 1289.50  
 Total 1289.50  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Craig Wolcott  
 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. 54214

4/10

Well Name & No. SHUART #1 Test No. 2 Date 5-28-14  
 Company CHARTER ENERGY INC. Elevation 1963 KB 1957 GL  
 Address P.O. Box 252, GREAT BEND KS. 67530  
 Co. Rep / Geo. KURT TALBOTT Rig ROYAL DRIG. #1  
 Location: Sec. 1 Twp. 22S Rge. 15W Co. PAWNEE State KS.

Interval Tested 3753 - 3820' Zone Tested U20LA  
 Anchor Length 67' Drill Pipe Run 3742' Mud Wt. 9.4  
 Top Packer Depth 3748' Drill Collars Run 0 Vis 50  
 Bottom Packer Depth 3753' Wt. Pipe Run 0 WL 8.4cc  
 Total Depth 3820' Chlorides 4800 ppm System LCM 0  
 Blow Description IF: Strong blow - Packers failed. Picked up & re-set tool using more string weight. Packers failed! Missum!

Rec	Feet of	%gas	%oil	%water	%mud
<u>195</u>	<u>Drig. Mud.</u>				

Rec Total 195' BHT \_\_\_\_\_ Gravity N/A API RW N.C. @ ~ °F Chlorides 4800 ppm

(A) Initial Hydrostatic \_\_\_\_\_  Test Missum 950 T-On Location 1240  
 (B) First Initial Flow \_\_\_\_\_  Jars \_\_\_\_\_ T-Started 1251  
 (C) First Final Flow \_\_\_\_\_  Safety Joint \_\_\_\_\_ T-Open 1408  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 1422  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 1619  
 (F) Second Final Flow \_\_\_\_\_  Mileage NO CHARGE 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 5-10 secs.  
 Initial Shut-In \_\_\_\_\_  
 Final Flow \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_

Sub Total 1089.50  
 Total 1089.50  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [Signature]  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54215

4/10

Well Name & No. SHUART #1 Test No. 3 Date 5-28-14  
 Company CHARTER ENERGY INC. Elevation 1963 KB 1957 GL  
 Address PO. BOX 252, GREAT BEND KS. 67530  
 Co. Rep / Geo. KURT TALBOTT Rig ROYAL DIRLG. #1  
 Location: Sec. 1 Twp. 22<sup>S</sup> Rge. 15<sup>W</sup> Co. PAWNEE State KS.

Interval Tested 3777-3820' Zone Tested NIOLA  
 Anchor Length 43' Drill Pipe Run 3775' Mud Wt. 9.4  
 Top Packer Depth 3772' Drill Collars Run 0 Vis 60  
 Bottom Packer Depth 3777' Wt. Pipe Run 0 WL 9.6cc  
 Total Depth 3820' Chlorides 6,000 ppm System LCM 0

Blow Description IF: Weak blow. 3/4" dewatering. ISI: No blow.  
FF: Weak blow. 1-3". FSI: No blow.

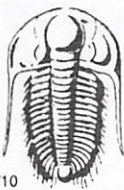
Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>Gas in pipe</u>				
<u>18</u>	<u>ccm / clean oil @ tool top</u>		<u>13%</u>		<u>87%</u>

Rec Total 18 Fluid BHT 112° Gravity N/A API RW N.C. @ — °F Chlorides 6,000 ppm

(A) Initial Hydrostatic 1872  Test 1150 T-On Location N/A  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 1635  
 (C) First Final Flow 21  Safety Joint \_\_\_\_\_ T-Open 1747  
 (D) Initial Shut-In 98  Circ Sub \_\_\_\_\_ T-Pulled 2028  
 (E) Second Initial Flow 15  Hourly Standby \_\_\_\_\_ T-Out 2205  
 (F) Second Final Flow 21  Mileage 90 Comments \_\_\_\_\_  
 (G) Final Shut-In 74  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1825  Straddle \_\_\_\_\_  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1400  
 Accessibility \_\_\_\_\_ MP/DST Dis't \_\_\_\_\_  
 Sub Total 1400

Approved By \_\_\_\_\_ Our Representative Cam [Signature]  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54216

Well Name & No. SHUART #1 Test No. 4 Date 5-29-14  
 Company CHARTER ENERGY INC. Elevation 1963 KB 1957 GL  
 Address GREAT BEND KS. 67530  
 Co. Rep / Geo. KURT TALBOTT Rig ROYAL DRILLG. #1  
 Location: Sec. 1 Twp. 22S Rge. 15W Co. PAWNEE State Ks.

Interval Tested 3778-3875' Zone Tested SIMPSON / ARBUCKLE  
 Anchor Length 97' Drill Pipe Run 3773' Mud Wt. 9.4  
 Top Packer Depth 3773 Drill Collars Run 0 Vis 48  
 Bottom Packer Depth 3778 Wt. Pipe Run 0 WL 10.4cc  
 Total Depth 3875 Chlorides 6600 ppm System LCM 0

Blow Description IF: Weak to fair blow. Increase to 4'12".  
ISI: No blow.  
FF: Weak to fair blow. Increase to 5". ESI: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>Mud w/o specs</u>				
<u>60</u>	<u>WM / w specs.</u>			<u>19</u>	<u>81</u>

Rec Total 130 Fluid BHT 110° Gravity N/A API RW 123 @ 85° F Chlorides 24,000 ppm

(A) Initial Hydrostatic 1902  Test 1150 T-On Location 0927  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 0930  
 (C) First Final Flow 47  Safety Joint \_\_\_\_\_ T-Open 1055  
 (D) Initial Shut-In 1239  Circ Sub \_\_\_\_\_ T-Pulled 1358  
 (E) Second Initial Flow 46  Hourly Standby \_\_\_\_\_ T-Out 1539  
 (F) Second Final Flow 81  Mileage 90 139.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 1240  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1873  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1539.50  
 Final Flow 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1539.50

Approved By \_\_\_\_\_ Our Representative Gray Dvorchansky  
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