



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy, Inc.**

PO Box 252  
Great Bend, KS 67530

ATTN: Kurt Talbott

### **Staub #1**

#### **27-22s-14w Stafford,KS**

Start Date: 2014.04.14 @ 00:56:38

End Date: 2014.04.14 @ 07:55:53

Job Ticket #: 52004                      DST #: 1

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

Printed: 2014.04.19 @ 11:50:06



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

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

**27-22s-14w Stafford, KS**

**Staub #1**

Job Ticket: 52004      **DST#: 1**  
 Test Start: 2014.04.14 @ 00:56:38

## GENERAL INFORMATION:

Formation: **LKC "H"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:04:53  
 Time Test Ended: 07:55:53  
 Interval: **3598.00 ft (KB) To 3625.00 ft (KB) (TVD)**  
 Total Depth: 3625.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Matt Smith  
 Unit No: #53  
 Reference Elevations: 1947.00 ft (KB)  
 1940.00 ft (CF)  
 KB to GR/CF: 7.00 ft

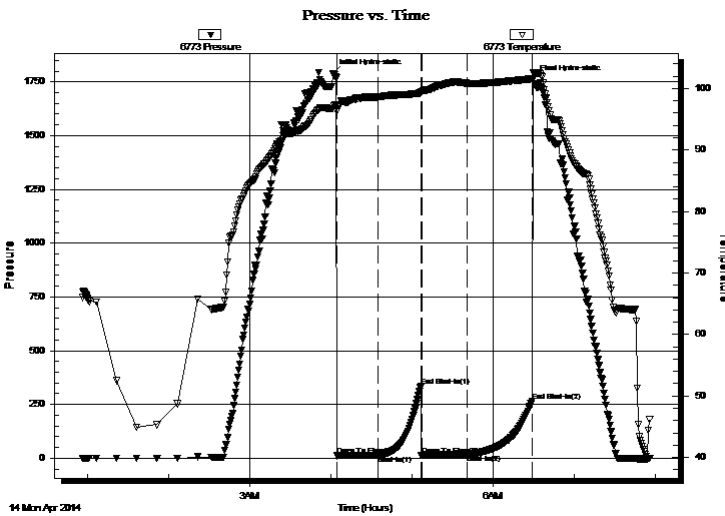
## Serial #: 6773

**Outside**

Press@RunDepth: 16.76 psig @ 3599.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2014.04.14      End Date: 2014.04.14      Last Calib.: 2014.04.14  
 Start Time: 00:56:43      End Time: 07:55:52      Time On Btm: 2014.04.14 @ 04:01:53  
 Time Off Btm: 2014.04.14 @ 06:29:38

TEST COMMENT: IF: Weak blow . Surf., to 1".  
 IS: No blow .  
 FF: No blow .  
 FS: No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1786.95	96.70	Initial Hydro-static
3	11.59	96.20	Open To Flow (1)
34	13.65	98.62	Shut-In(1)
65	336.23	99.25	End Shut-In(1)
66	14.64	99.45	Open To Flow (2)
100	16.76	100.85	Shut-In(2)
147	265.00	101.59	End Shut-In(2)
148	1761.09	102.62	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Drig Mud 100%m	0.14

## Gas Rates

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



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TESTING, INC**

# DRILL STEM TEST REPORT

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

**27-22s-14w Stafford, KS**

**Staub #1**

Job Ticket: 52004      **DST#: 1**  
Test Start: 2014.04.14 @ 00:56:38

### GENERAL INFORMATION:

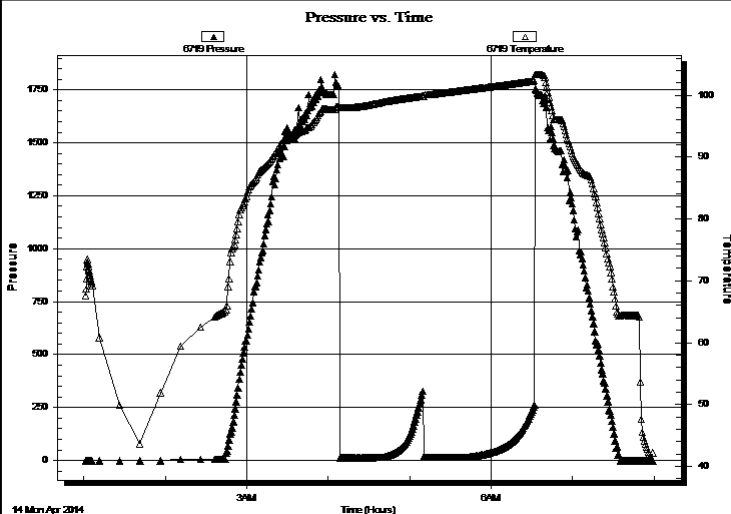
Formation:	<b>LKC "H"</b>		
Deviated:	No	Whipstock:	ft (KB)
Time Tool Opened:	04:04:53		
Time Test Ended:	07:55:53		
<b>Interval:</b>	<b>3598.00 ft (KB) To 3625.00 ft (KB) (TVD)</b>		
Total Depth:	3625.00 ft (KB) (TVD)		
Hole Diameter:	7.88 inches	Hole Condition:	Fair
		Reference Elevations:	1947.00 ft (KB) 1940.00 ft (CF)
		KB to GR/CF:	7.00 ft

**Serial #: 6719**

**Outside**

Press@RunDepth:	psig @ 3599.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2014.04.14	End Date:	2014.04.14
Start Time:	01:01:19	End Time:	07:58:58
		Last Calib.:	2014.04.14
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: IF: Weak blow . Surf., to 1".  
IS: No blow .  
FF: No blow .  
FS: No blow .



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
10.00	Drig Mud 100%m	0.14

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**27-22s-14w Stafford,KS**  
**Staub #1**  
Job Ticket: 52004      **DST#: 1**  
Test Start: 2014.04.14 @ 00:56:38

**Tool Information**

Drill Pipe:	Length: 3599.00 ft	Diameter: 3.80 inches	Volume: 50.48 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: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 50.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3598.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3579.00	
Shut In Tool	5.00			3584.00	
Hydraulic tool	5.00			3589.00	
Packer	4.00			3593.00	20.00      Bottom Of Top Packer
Packer	5.00			3598.00	
Stubb	1.00			3599.00	
Recorder	0.00	6719	Outside	3599.00	
Recorder	0.00	6773	Outside	3599.00	
Perforations	23.00			3622.00	
Bullnose	3.00			3625.00	27.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>47.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**27-22s-14w Stafford,KS**  
**Staub #1**  
Job Ticket: 52004      **DST#: 1**  
Test Start: 2014.04.14 @ 00:56:38

## Mud and Cushion Information

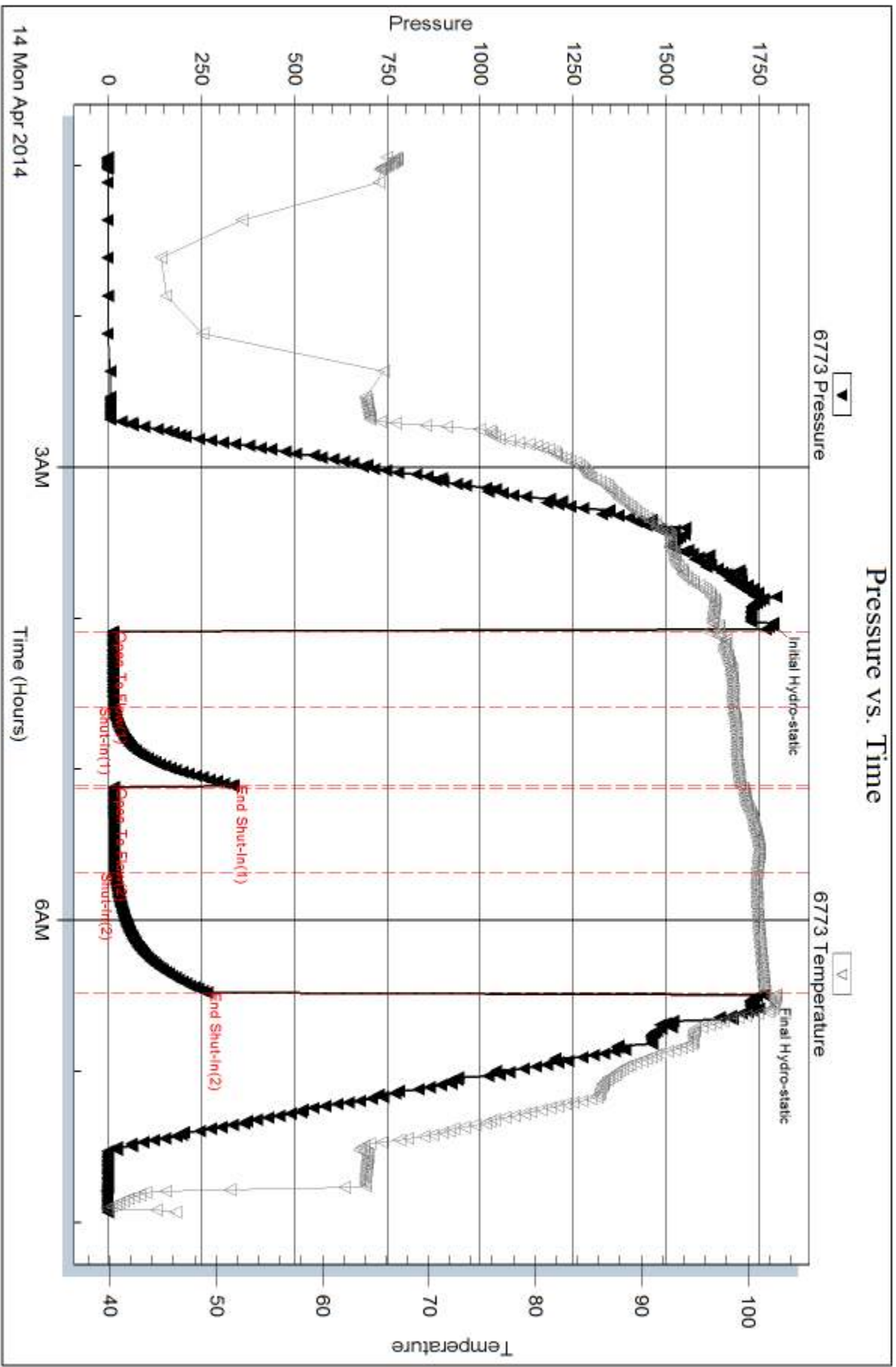
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	7200 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.17 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 7200.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Drig Mud 100%m	0.140

Total Length: 10.00 ft      Total Volume: 0.140 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

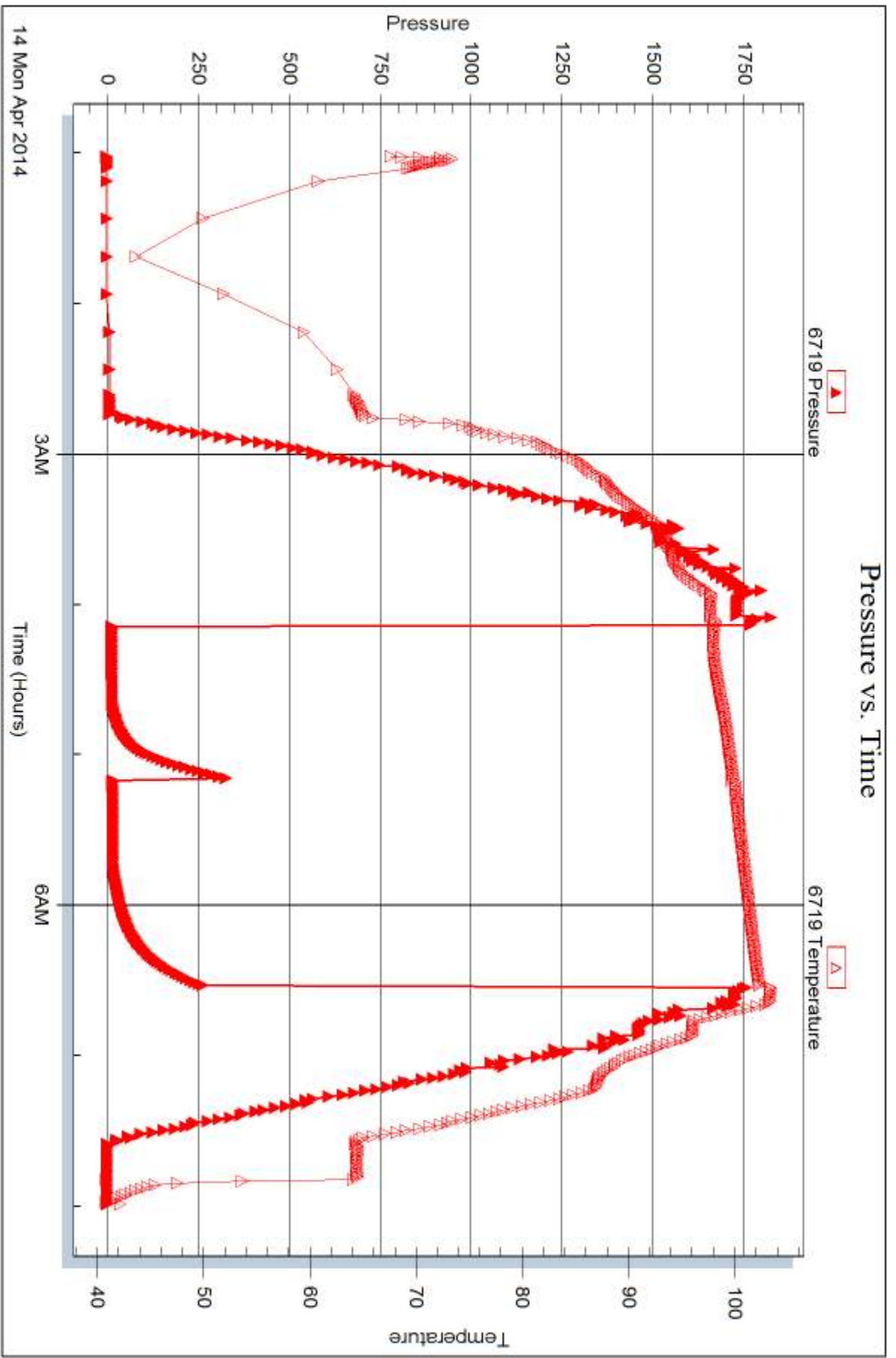


Serial #: 6719

Outside Charter Energy, Inc.

Staub #1

DST Test Number: 1



TriCobble Testing, Inc

Ref. No: 52004

Printed: 2014.04.19 @ 11:50:08



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy, Inc.**

PO Box 252  
Great Bend, KS 67530

ATTN: Kurt Talbott

### **Staub #1**

#### **27-22s-14w Stafford,KS**

Start Date: 2014.04.14 @ 15:29:28

End Date: 2014.04.14 @ 20:15:28

Job Ticket #: 52005                      DST #: 2

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

Printed: 2014.04.19 @ 11:49:41





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

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

**27-22s-14w Stafford,KS**

**Staub #1**

Job Ticket: 52005      **DST#: 2**  
Test Start: 2014.04.14 @ 15:29:28

## GENERAL INFORMATION:

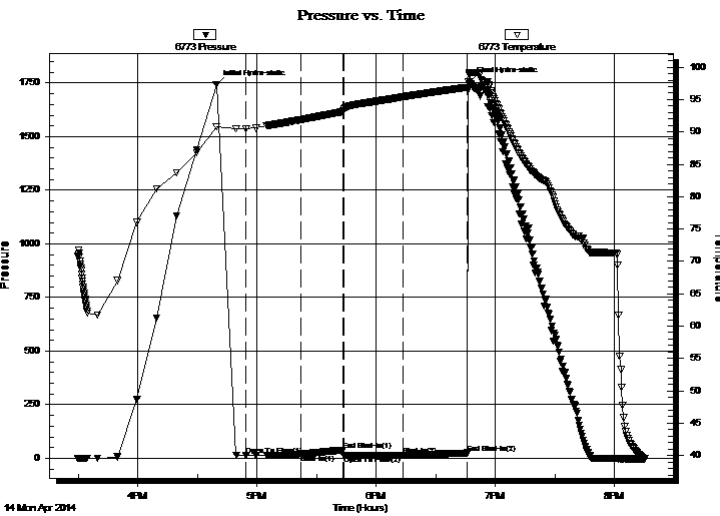
Formation: **LKC "I"**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 16:54:28  
Time Test Ended: 20:15:28  
Interval: **3630.00 ft (KB) To 3645.00 ft (KB) (TVD)**  
Total Depth: 3645.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 1947.00 ft (KB)  
1940.00 ft (CF)  
KB to GR/CF: 7.00 ft

## Serial #: 6773

**Outside**

Press@RunDepth: 14.01 psig @ 3631.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2014.04.14      End Date: 2014.04.14      Last Calib.: 2014.04.14  
Start Time: 15:29:33      End Time: 20:15:27      Time On Btm: 2014.04.14 @ 16:39:28  
Time Off Btm: 2014.04.14 @ 18:47:13

TEST COMMENT: IF: Weak blow . Surf., to 1 1/2".  
IS: Weak blow . Surface only blow back.  
FF: Weak blow . Surf., to 3/4-1".  
FS: No blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1742.94	90.79	Initial Hydro-static
15	13.57	90.49	Open To Flow (1)
43	19.83	91.89	Shut-In(1)
64	38.11	93.15	End Shut-In(1)
64	13.57	93.28	Open To Flow (2)
94	14.01	95.41	Shut-In(2)
127	24.58	96.91	End Shut-In(2)
128	1757.26	99.08	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drig Mud 100% <i>m</i>	0.07

\* 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.

**27-22s-14w Stafford,KS**

PO Box 252  
Great Bend, KS 67530

**Staub #1**

Job Ticket: 52005

**DST#: 2**

ATTN: Kurt Talbott

Test Start: 2014.04.14 @ 15:29:28

## Tool Information

Drill Pipe:	Length: 3632.00 ft	Diameter: 3.80 inches	Volume: 50.95 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: 26000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 50.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3630.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	35.00 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			3611.00	
Shut In Tool	5.00			3616.00	
Hydraulic tool	5.00			3621.00	
Packer	4.00			3625.00	20.00 Bottom Of Top Packer
Packer	5.00			3630.00	
Stubb	1.00			3631.00	
Recorder	0.00	6719	Outside	3631.00	
Recorder	0.00	6773	Outside	3631.00	
Perforations	11.00			3642.00	
Bullnose	3.00			3645.00	15.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>35.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**27-22s-14w Stafford,KS**  
**Staub #1**  
Job Ticket: 52005      **DST#: 2**  
Test Start: 2014.04.14 @ 15:29:28

## Mud and Cushion Information

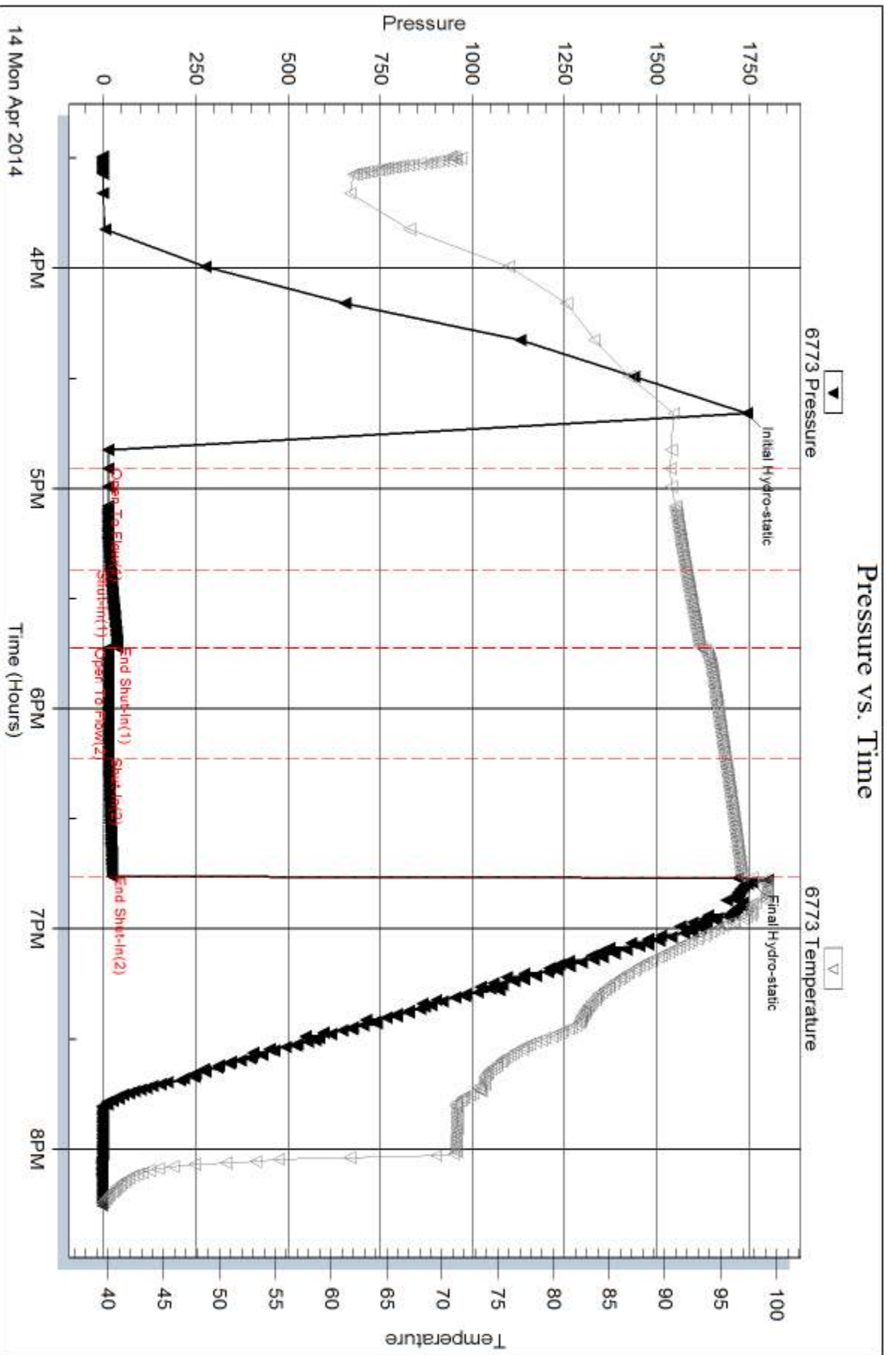
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	9500 ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.17 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 9500.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Drig Mud 100%m	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

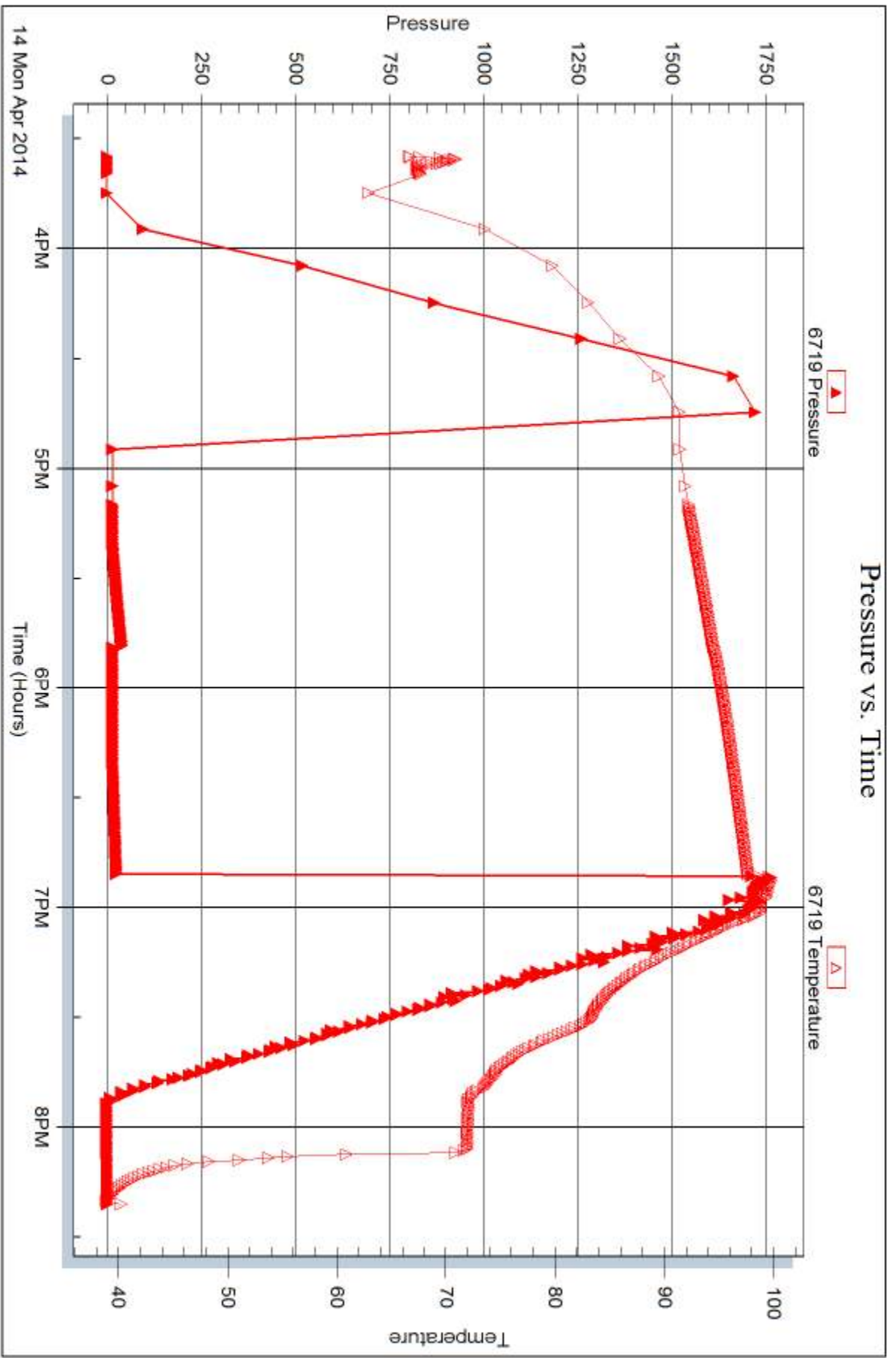


Serial #: 6719

Outside Charter Energy, Inc.

Staub #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 52005

Printed: 2014.04.19 @ 11:49:44



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy, Inc.**

PO Box 252  
Great Bend, KS 67530

ATTN: Kurt Talbott

### **Staub #1**

#### **27-22s-14w Stafford,KS**

Start Date: 2014.04.15 @ 06:11:27

End Date: 2014.04.15 @ 11:44:12

Job Ticket #: 52006                      DST #: 3

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

Printed: 2014.04.19 @ 11:49:03



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

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

**27-22s-14w Stafford, KS**

**Staub #1**

Job Ticket: 52006

**DST#: 3**

Test Start: 2014.04.15 @ 06:11:27

## GENERAL INFORMATION:

Formation: **LKC "J-L"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:11:27  
 Time Test Ended: 11:44:12  
 Interval: **3650.00 ft (KB) To 3720.00 ft (KB) (TVD)**  
 Total Depth: 3720.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Matt Smith  
 Unit No: #53  
 Reference Elevations: 1947.00 ft (KB)  
 1940.00 ft (CF)  
 KB to GR/CF: 7.00 ft

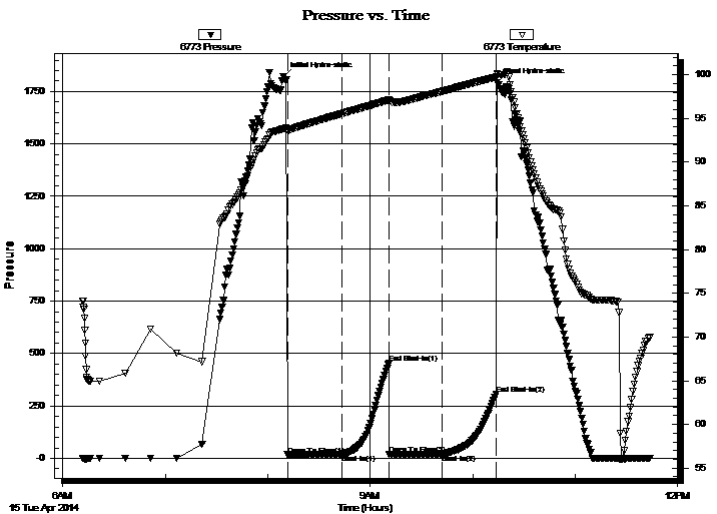
## Serial #: 6773

**Outside**

Press@RunDepth: 21.21 psig @ 3651.00 ft (KB)  
 Start Date: 2014.04.15 End Date: 2014.04.15  
 Start Time: 06:11:32 End Time: 11:44:11  
 Capacity: 8000.00 psig  
 Last Calib.: 2014.04.15  
 Time On Btm: 2014.04.15 @ 08:09:12  
 Time Off Btm: 2014.04.15 @ 10:14:27

TEST COMMENT: IF: Weak blow . Surf., - 2".  
 IS: No blow .  
 FF: Weak blow . Surf., - 1".  
 FS: No blow .

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1821.54	93.81	Initial Hydro-static
3	16.33	93.59	Open To Flow (1)
35	18.44	95.55	Shut-In(1)
62	452.07	97.10	End Shut-In(1)
62	19.35	96.92	Open To Flow (2)
93	21.21	98.07	Shut-In(2)
125	307.02	99.72	End Shut-In(2)
126	1791.83	100.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Dlng mud 100% (w / trc of oil)	0.14

\* 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.

**27-22s-14w Stafford,KS**

PO Box 252  
Great Bend, KS 67530

**Staub #1**

Job Ticket: 52006

**DST#: 3**

ATTN: Kurt Talbott

Test Start: 2014.04.15 @ 06:11:27

## Tool Information

Drill Pipe:	Length: 3663.00 ft	Diameter: 3.80 inches	Volume: 51.38 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: 26000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 51.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3650.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Slight trace of oil

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3631.00	
Shut In Tool	5.00			3636.00	
Hydraulic tool	5.00			3641.00	
Packer	4.00			3645.00	20.00 Bottom Of Top Packer
Packer	5.00			3650.00	
Stubb	1.00			3651.00	
Recorder	0.00	6719	Outside	3651.00	
Recorder	0.00	6773	Outside	3651.00	
Perforations	6.00			3657.00	
Change Over Sub	1.00			3658.00	
Drill Pipe	32.00			3690.00	
Change Over Sub	1.00			3691.00	
Perforations	26.00			3717.00	
Bullnose	3.00			3720.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 90.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**27-22s-14w Stafford,KS**  
**Staub #1**  
Job Ticket: 52006      **DST#: 3**  
Test Start: 2014.04.15 @ 06:11:27

## 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:	9500 ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 9500.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Dng mud 100% (w/ trc of oil)	0.140

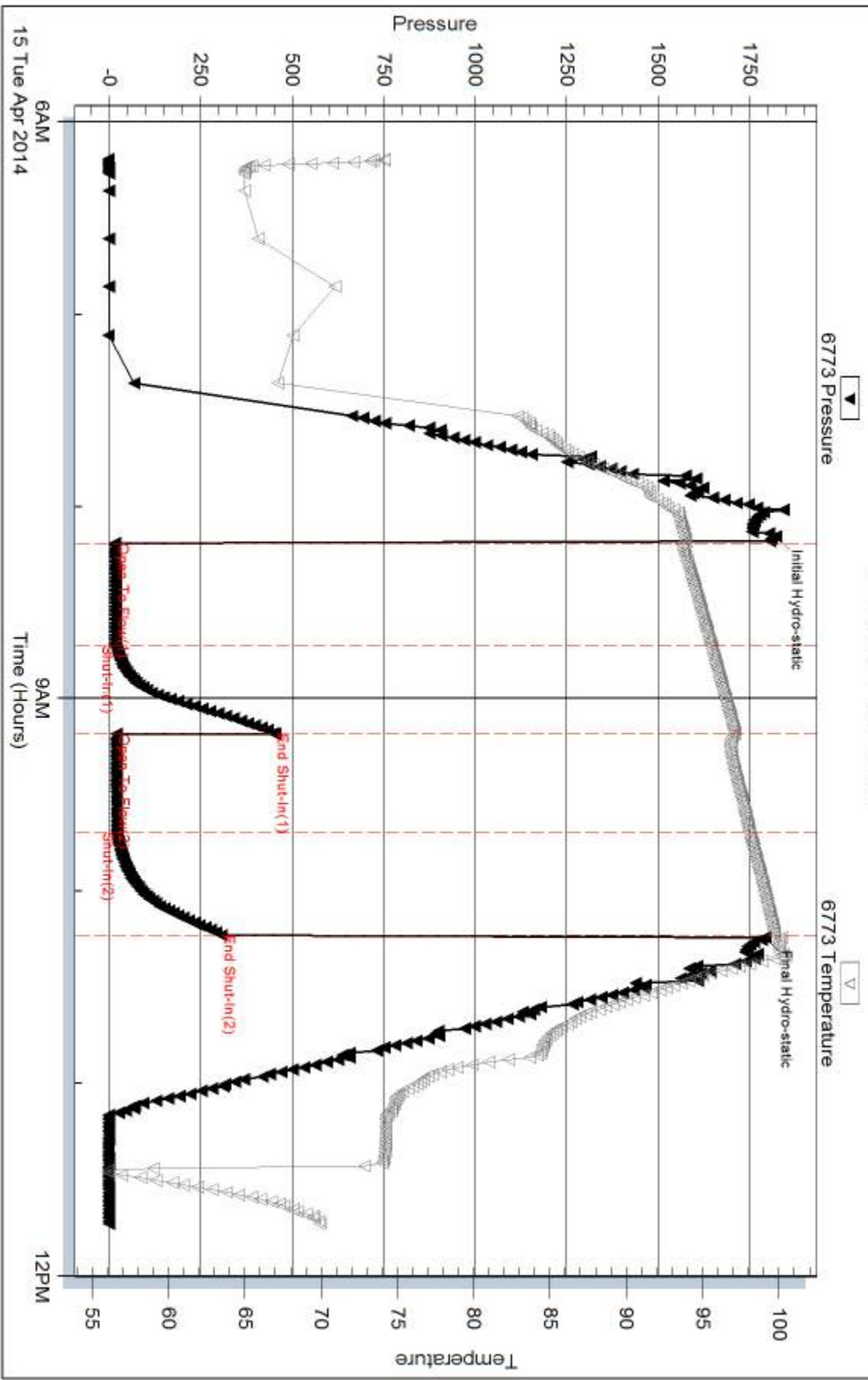
Total Length: 10.00 ft      Total Volume: 0.140 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none

Laboratory Name:      Laboratory Location:

Recovery Comments: Slight trace of oil specks on top of grind out tube.

### Pressure vs. Time

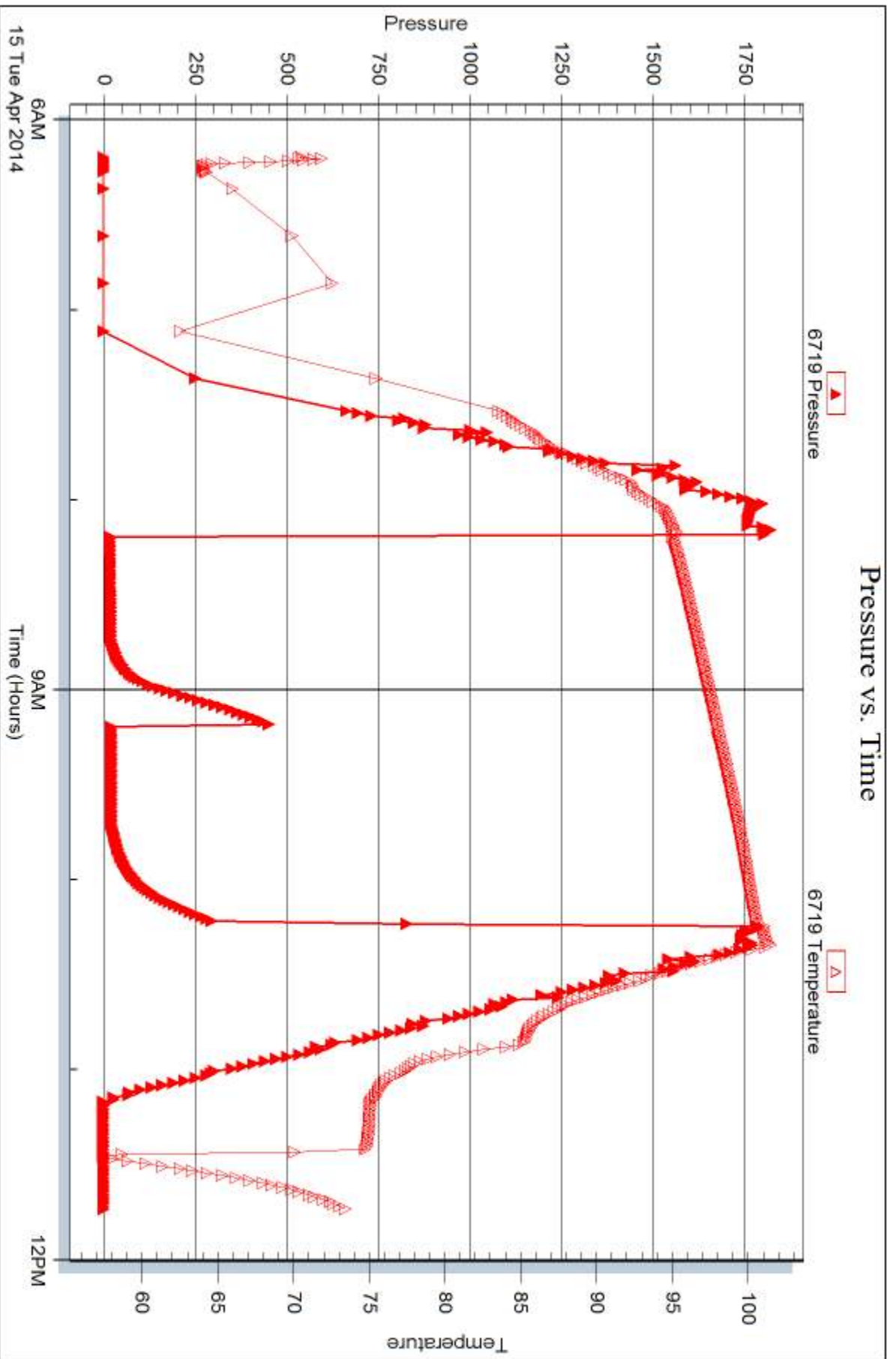


Serial #: 6719

Outside Charter Energy, Inc.

Staub #1

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 52006

Printed: 2014.04.19 @ 11:49:06



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy, Inc.**

PO Box 252  
Great Bend, KS 67530

ATTN: Kurt Talbott

### **Staub #1**

#### **27-22s-14w Stafford,KS**

Start Date: 2014.04.16 @ 03:04:39

End Date: 2014.04.16 @ 10:49:54

Job Ticket #: 52007                      DST #: 4

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

Printed: 2014.04.19 @ 11:48:31



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

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

**27-22s-14w Stafford, KS**

**Staub #1**

Job Ticket: 52007

**DST#: 4**

Test Start: 2014.04.16 @ 03:04:39

## GENERAL INFORMATION:

Formation: **Simpson Sand**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 05:30:09  
 Time Test Ended: 10:49:54  
 Interval: **3805.00 ft (KB) To 3887.00 ft (KB) (TVD)**  
 Total Depth: 3625.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Matt Smith  
 Unit No: #53  
 Reference Elevations: 1947.00 ft (KB)  
 1940.00 ft (CF)  
 KB to GR/CF: 7.00 ft

## Serial #: 6773

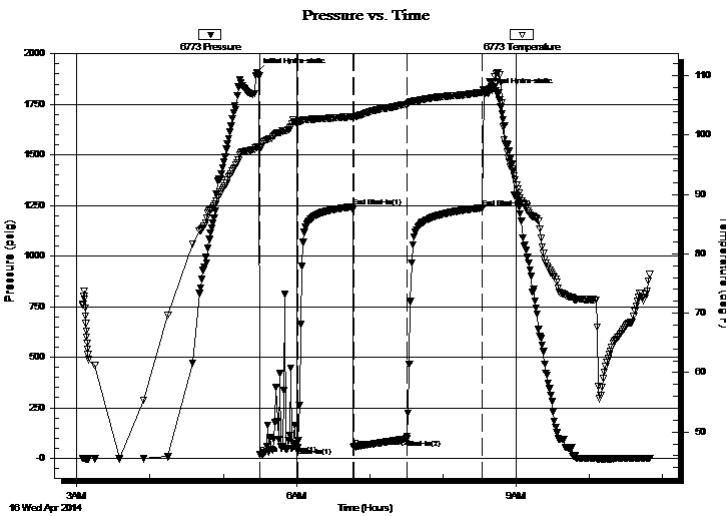
**Outside**

Press@RunDepth: 96.22 psig @ 3806.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.04.16 End Date: 2014.04.16 Last Calib.: 2014.04.16  
 Start Time: 03:04:44 End Time: 10:49:53 Time On Btm: 2014.04.16 @ 05:27:24  
 Time Off Btm: 2014.04.16 @ 08:34:24

TEST COMMENT: IF: Fair blow . Surf., - 8 1/2".  
 IS: No blow .  
 FF: Fair blow . Surf., - 10".  
 FS: No blow .

## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1907.80	97.97	Initial Hydro-static
3	18.83	97.78	Open To Flow (1)
34	52.44	102.06	Shut-In(1)
79	1244.19	103.11	End Shut-In(1)
80	55.25	102.83	Open To Flow (2)
123	96.22	105.17	Shut-In(2)
185	1238.52	107.18	End Shut-In(2)
187	1805.86	107.43	Final Hydro-static



## Recovery

Length (ft)	Description	Volume (bbl)
50.00	MCO 5%o 95%m	0.70
62.00	GOCM 5%g 5%o 90%m	0.87
62.00	GOCM 5%g 5%o 90%m	0.87
0.00	62' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Charter Energy, Inc.

**27-22s-14w Stafford,KS**

PO Box 252  
Great Bend, KS 67530

**Staub #1**

Job Ticket: 52007

**DST#: 4**

ATTN: Kurt Talbott

Test Start: 2014.04.16 @ 03:04:39

**GENERAL INFORMATION:**

Formation: **Simpson Sand**

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)

Time Tool Opened: 05:30:09 Tester: Matt Smith

Time Test Ended: 10:49:54 Unit No: #53

**Interval: 3805.00 ft (KB) To 3887.00 ft (KB) (TVD)** Reference Elevations: 1947.00 ft (KB)

Total Depth: 3625.00 ft (KB) (TVD) 1940.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

**Serial #: 6719 Outside**

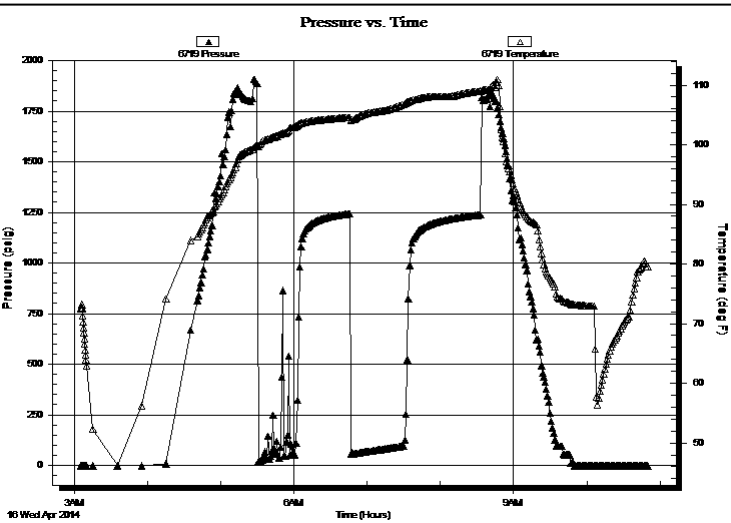
Press@RunDepth: psig @ 3806.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2014.04.16 End Date: 2014.04.16 Last Calib.: 2014.04.16

Start Time: 03:05:09 End Time: 10:50:03 Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Fair blow . Surf., - 8 1/2".  
IS: No blow .  
FF: Fair blow . Surf., - 10".  
FS: No blow .



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
50.00	MCO 5%o 95%o m	0.70
62.00	GOCM 5%g 5%o 90%o m	0.87
62.00	GOCM 5%g 5%o 90%o m	0.87
0.00	62' 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.

**27-22s-14w Stafford,KS**

PO Box 252  
Great Bend, KS 67530

**Staub #1**

Job Ticket: 52007

**DST#: 4**

ATTN: Kurt Talbott

Test Start: 2014.04.16 @ 03:04:39

## Tool Information

Drill Pipe:	Length: 3819.00 ft	Diameter: 3.80 inches	Volume: 53.57 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:	28000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume: 53.57 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3805.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	82.00 ft				
Tool Length:	102.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Used 1 stand out of derrick to make up anchor length.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3786.00	
Shut In Tool	5.00			3791.00	
Hydraulic tool	5.00			3796.00	
Packer	4.00			3800.00	20.00 Bottom Of Top Packer
Packer	5.00			3805.00	
Stubb	1.00			3806.00	
Recorder	0.00	6719	Outside	3806.00	
Recorder	0.00	6773	Outside	3806.00	
Change Over Sub	1.00			3807.00	
Drill Pipe	62.00			3869.00	
Change Over Sub	1.00			3870.00	
Perforations	14.00			3884.00	
Bullnose	3.00			3887.00	82.00 Bottom Packers & Anchor

**Total Tool Length: 102.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**27-22s-14w Stafford,KS**  
**Staub #1**  
Job Ticket: 52007      **DST#: 4**  
Test Start: 2014.04.16 @ 03:04:39

## Mud and Cushion Information

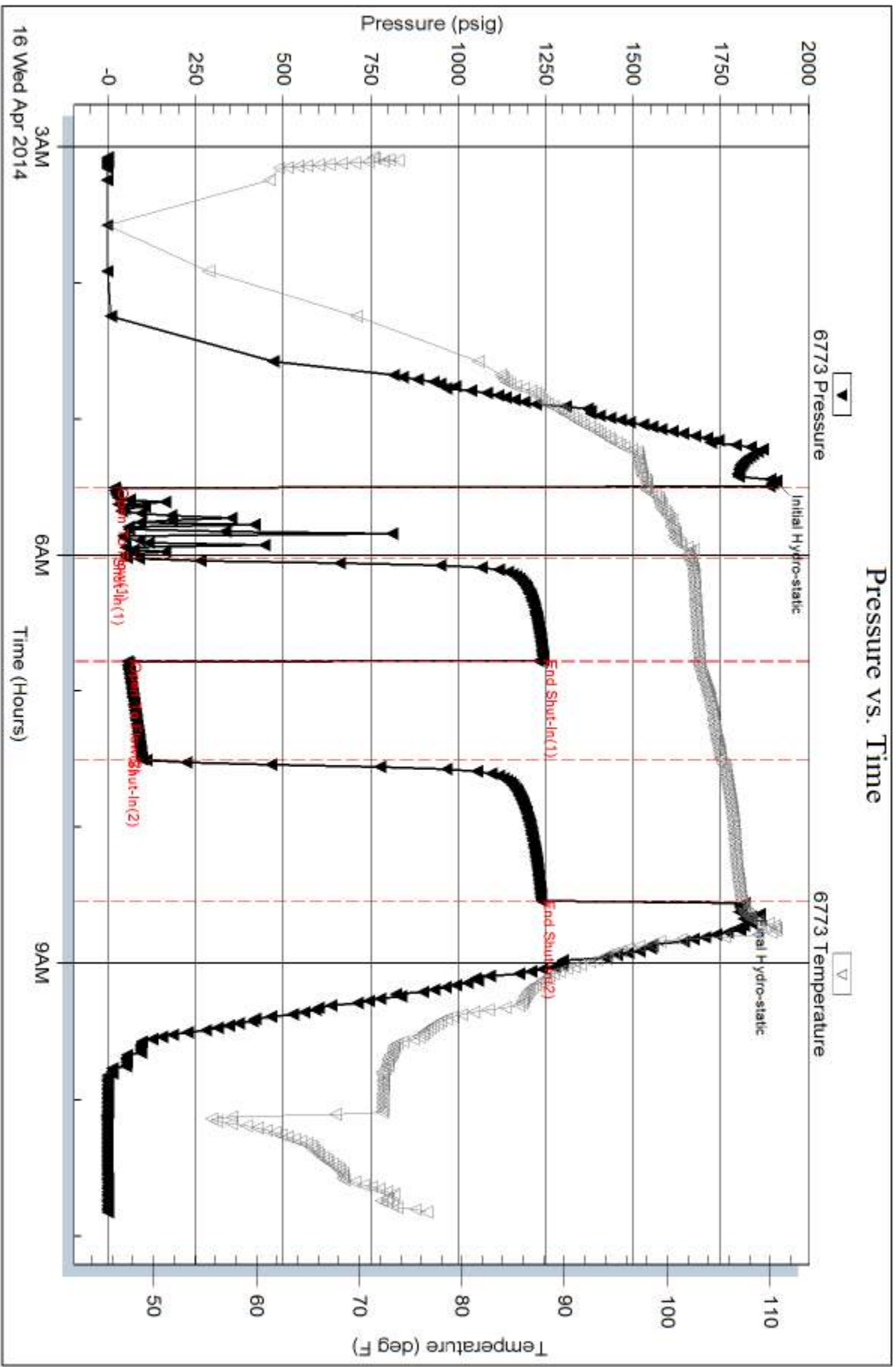
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 85.00 sec/qt	Cushion Volume: bbl		
Water Loss: 16.36 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 14500.00 ppm			
Filter Cake: 0.20 inches			

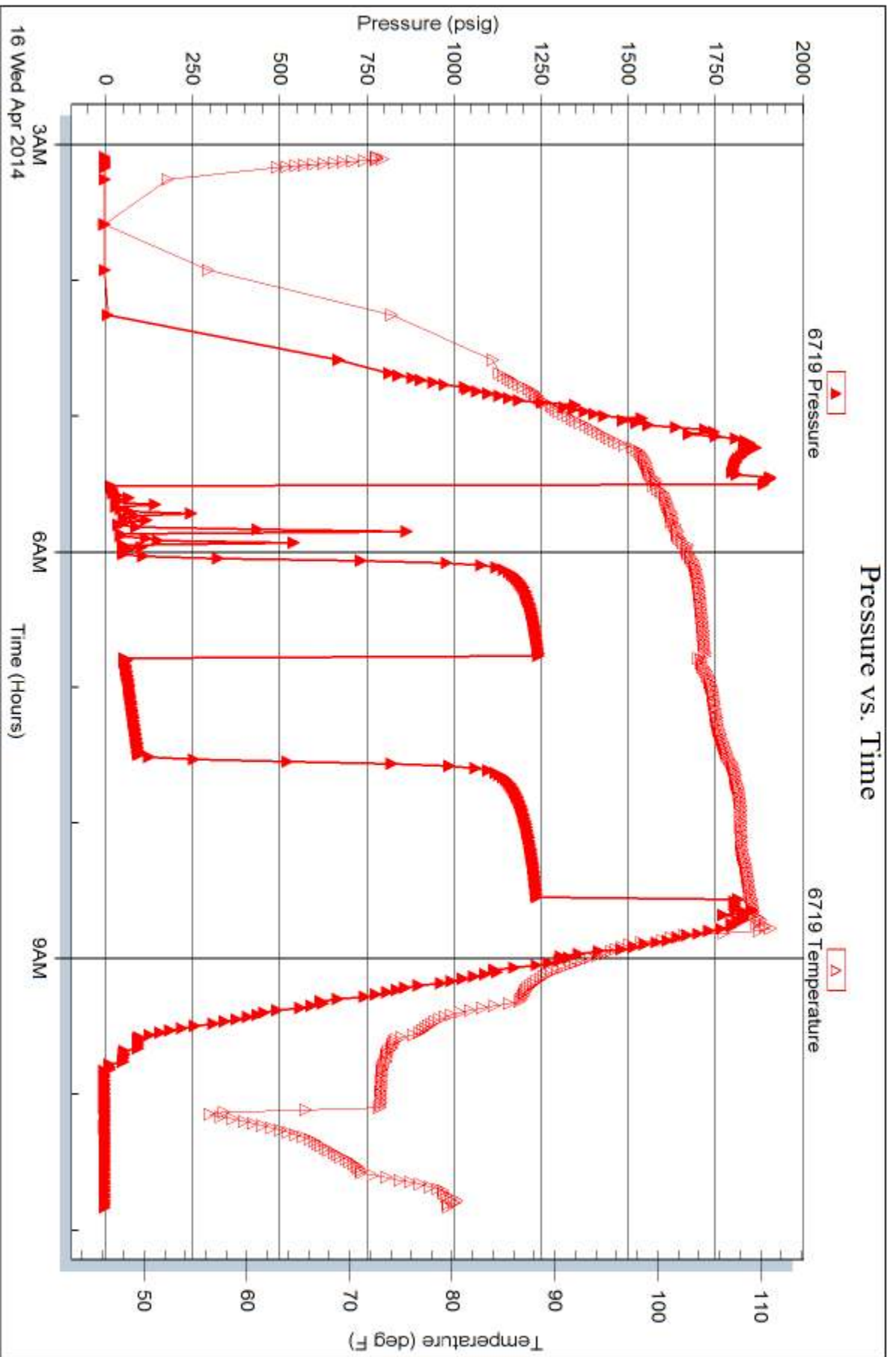
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	MCO 5%o 95%m	0.701
62.00	GOCM 5%g 5%o 90%m	0.870
62.00	GOCM 5%g 5%o 90%m	0.870
0.00	62' GIP	0.000

Total Length: 174.00 ft      Total Volume: 2.441 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: none  
Laboratory Name:      Laboratory Location:  
Recovery Comments:







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52004

4/10

Well Name & No. Staub #1 Test No. 1 Date 4/14/14  
 Company Charter Energy, Inc. Elevation 1947 KB 1940 GL  
 Address P.O. Box 252 Great Bend, KS, 67530  
 Co. Rep / Geo. Kurt Talbot Rig Royal Rig #2  
 Location: Sec. 27 Twp. 22s Rge. 14w Co. Stafford State KS

Interval Tested 3598 - 3625 Zone Tested Lansing "H" zone  
 Anchor Length 27' Drill Pipe Run 3599 Mud Wt. 9.25  
 Top Packer Depth 3593 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 3598 Wt. Pipe Run 0 WL 9.2  
 Total Depth 3625 Chlorides 7,200 ppm System LCM 1/2"

Blow Description IF! Weak blow. Surf - 1" inch.  
ISI! NO blow.  
FF! No blow.  
FSI! No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Feet of DRG MUD</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 Total 10' BHT 102° Gravity N/A API RW N.C. @ — ° F Chlorides 7,200 ppm

(A) Initial Hydrostatic <u>1787</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0037</u>
(B) First Initial Flow <u>12</u>	<input type="checkbox"/> Jars	T-Started <u>0056</u>
(C) First Final Flow <u>14</u>	<input type="checkbox"/> Safety Joint	T-Open <u>0405</u>
(D) Initial Shut-In <u>336</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u><del>0755</del> 0629</u>
(E) Second Initial Flow <u>15</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0755</u>
(F) Second Final Flow <u>17</u>	<input checked="" type="checkbox"/> Mileage <u>78</u> <u>120.90</u>	Comments
(G) Final Shut-In <u>265</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1761</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1270.90</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1270.90</u>	

Approved By \_\_\_\_\_ Our Representative Matthew Smith

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52005

4/10

Well Name & No. Staub #1 Test No. 2 Date 4/14/14  
 Company Charter Energy, Inc. Elevation 1947 KB 1940 GL  
 Address P.O. Box 252 Great Bend, KS, 67530  
 Co. Rep / Geo. Kurt Talbot Rig Royal Rig #2  
 Location: Sec. 27 Twp. 22s Rge. 14w Co. Stafford State KS,

Interval Tested 3630 - 3645 Zone Tested Lansing "I"  
 Anchor Length 15' Drill Pipe Run 3632 Mud Wt. 9.4  
 Top Packer Depth 3625 Drill Collars Run 0 Vis 65  
 Bottom Packer Depth 3630 Wt. Pipe Run 0 WL 9.2  
 Total Depth 3645 Chlorides 9,500 ppm System LCM 1/2"

Blow Description IF: Weak blow, Surf., - 1 1/2".  
ISI: Weak blow, Surface only blow back  
FF: Weak blow, Surf., - 3/4 - 1"  
FSI: NO blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Drilg mud</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 Total 5' BHT 97° Gravity N/A. API RW N.C. @ — °F Chlorides 9,500 ppm

(A) Initial Hydrostatic <u>1743</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1525</u>
(B) First Initial Flow <u>14</u>	<input type="checkbox"/> Jars	T-Started <u>1529</u>
(C) First Final Flow <u>20</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1654</u>
(D) Initial Shut-In <u>38</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1845</u>
(E) Second Initial Flow <u>14</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2015</u>
(F) Second Final Flow <u>14</u>	<input checked="" type="checkbox"/> Mileage <u>78.7</u> <u>120.90</u>	Comments
(G) Final Shut-In <u>25</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1757</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1270.90</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1270.90</u>	

Approved By \_\_\_\_\_ Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52006

Well Name & No. Staub #1 Test No. 3 Date 4/15/14  
 Company Charter Energy, Inc. Elevation 1947 KB 1940 GL  
 Address P.O. Box 252 Great Bend, Ks. 67530  
 Co. Rep / Geo. Kurt Talbot Rig Royal Rig #2  
 Location: Sec. 27 Twp. 22s Rge. 14w Co. STAFFORD State KS.

Interval Tested 3650 - 3720 Zone Tested Lansing "J, K, + L"  
 Anchor Length 70' Drill Pipe Run 3,663 Mud Wt. 9.4  
 Top Packer Depth 3645 Drill Collars Run 0 Vis 65  
 Bottom Packer Depth 3650 Wt. Pipe Run 0 WL 9.2  
 Total Depth 3720 Chlorides 9,500 ppm System LCM 1/2"

Blow Description IF: Weak blow. Surf., - 2"  
ISI: No blow.  
FF: Weak blow. Surf., - 1"  
FSS: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Drig mud (w/slight trace of oil)</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 10' BHT 106° Gravity N.A. API RW N.C. @ — ° F Chlorides 9,500 ppm

(A) Initial Hydrostatic <u>1822</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0605</u>
(B) First Initial Flow <u>16</u>	<input type="checkbox"/> Jars	T-Started <u>0611</u>
(C) First Final Flow <u>18</u>	<input type="checkbox"/> Safety Joint	T-Open <u>0811</u>
(D) Initial Shut-In <u>452</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1014</u>
(E) Second Initial Flow <u>19</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1144</u>
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>78</u> <u>120.90</u>	Comments
(G) Final Shut-In <u>307</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1792</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1270.90</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1270.90</u>	

Approved By \_\_\_\_\_ Our Representative Matthew A. Smith

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52007

Well Name & No. Staub #1 Test No. 4 Date 4/16/14  
 Company Charter Energy, Inc. Elevation 1947 KB 1940 GL  
 Address P.O. Box 252 GREAT BEND, KS. 67530  
 Co. Rep / Geo. Kurt Talbot Rig Royal Rig #2  
 Location: Sec. 27 Twp. 22s Rge. 14w Co. STAFFORD State KS.

Interval Tested 3805 - 3887 Zone Tested Simpson sand  
 Anchor Length 82' Drill Pipe Run 3,819 Mud Wt. 9.35  
 Top Packer Depth 3800 Drill Collars Run 0 Vis 85  
 Bottom Packer Depth 3805 Wt. Pipe Run 0 WL 16.4  
 Total Depth 3887 Chlorides 14,500 ppm System LCM 1/2"

Blow Description IF: Fair blow. Surf., - 8 1/2".  
ISI: NO blow.  
FF: Fair blow. Surf., - 10".  
FSI: NO blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>G.I.P</u>	<u>100</u>			
<u>50</u>	<u>MCO</u>		<u>5</u>		<u>95</u>
<u>62</u>	<u>GDCM</u>	<u>5</u>	<u>5</u>		<u>90</u>
<u>62</u>	<u>GOCM</u>	<u>5</u>	<u>5</u>		<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 174' BHT 107° Gravity N.A. API RW N.C. @ — ° F Chlorides 14,500 ppm

(A) Initial Hydrostatic 1908  Test 1150 T-On Location 0253  
 (B) First Initial Flow 1908  Jars \_\_\_\_\_ T-Started 0304  
 (C) First Final Flow 52  Safety Joint \_\_\_\_\_ T-Open 0530  
 (D) Initial Shut-In 1244  Circ Sub \_\_\_\_\_ T-Pulled 0832  
 (E) Second Initial Flow 55  Hourly Standby \_\_\_\_\_ T-Out 1050  
 (F) Second Final Flow 96  Mileage 78.9 120.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 1239  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1806  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1270.90  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 60  
 Sub Total 1270.90

Approved By \_\_\_\_\_ Our Representative Matthew J. Smith

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