



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1175193  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
-----------------------------------	-----------------	---

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1175193

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
----------------	-------	---------	------------	---

Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
--	--	---

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 7768

Cell 785-324-1041

Date	9-12-13	Sec.	18	Twp.	18	Range	13	County	Barton	State	Ks	On Location		Finish	4:45 AM
------	---------	------	----	------	----	-------	----	--------	--------	-------	----	-------------	--	--------	---------

Lease **F E** Location **Hoisington, Ks - 15 to Vet Clinic, 1 1/4 W**

Well No.	1	Owner	S/Intb
Contractor	Royal 2	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	

Type Job	Surface	Charge To	Charter Energy
Hole Size	12 1/4"	T.D.	810'
Csg.	8 5/8"	Depth	810'

Tbg. Size		Depth		City		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.			

Cement Left in Csg.	41.40'	Shoe Joint	41.40'	Cement Amount Ordered	350 sx Com 3% CC 2% Gel
---------------------	--------	------------	--------	-----------------------	-------------------------

Meas Line		Displace	49 BUS	Common	350
-----------	--	----------	--------	--------	-----

EQUIPMENT					
Pumptrk	16	No.	Cement Helper Billy	Poz. Mix	
Bulktrk	13	No.	Driver Dang	Gel.	7
Bulktrk	p.u.	No.	Driver Rick	Calcium	13

JOB SERVICES & REMARKS	
Remarks:	Cement did Circulate.

Rat Hole		Flowseal	
Mouse Hole		Kol-Seal	

Centralizers		Mud CLR 48	
Baskets		CFL-117 or CD110 CAF 38	

D/V or Port Collar		Sand	
		Handling	370

		Mileage	
--	--	---------	--

FLOAT EQUIPMENT	
	Guide Shoe
	Centralizer

	Baskets
	AFU Inserts

	Float Shoe
	Latch Down

	1- Baffle plate
	1- Rubber plug

	Pumptrk Charge
	Mileage 12

	Tax
	Discount

X Signature	Tom Blake	Total Charge	
-------------	-----------	--------------	--

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6896

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-18-13	18	18	13	Barton	KS		11:00AM

Location Horsington 15, 74W

Lease <u>FE</u>	Well No. <u>1</u>	Owner
Contractor <u>Royal #2</u>		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Type Job <u>Plug</u>		Charge To <u>Charter Energy Inc.</u>
Hole Size <u>7 7/8</u>	T.D.	Street
Csg.	Depth	City State
Tbg. Size	Depth	
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered <u>205 sx 60/40 4% gel 4# Flow</u>
Meas Line	Displace	

**EQUIPMENT**

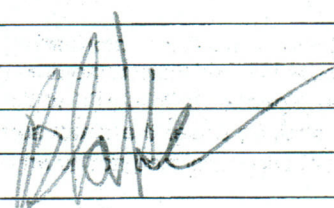
Pumptrk <u>17</u>	No.	Cementer	Common
		Helper <u>Cody</u>	Poz. Mix
Bulktrk <u>8</u>	No.	Driver <u>David</u>	Gel.
		Driver <u>Travis</u>	Calcium

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
<u>50 sx at 3389</u>	Sand
<u>40 sx at 860</u>	Handling
<u>60 sx at 330</u>	Mileage

**FLOAT EQUIPMENT**

<u>10 sx at 40 with wood plug</u>	Guide Shoe
<u>30 sx Rat</u>	Centralizer
<u>15 sx Mouse</u>	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
	<u>1 wood plug</u>
	Pumptrk Charge
	Mileage

X Signature 	Tax
	Discount
	Total Charge



## DRILL STEM TEST REPORT

Prepared For: **Charter Energy Inc**

PO Box 252  
Great Bend KS 67530

ATTN: Jim Musgrove

**FE #1**

**18-18s-13w Barton KS**

Start Date: 2013.09.17 @ 06:08:00

End Date: 2013.09.17 @ 12:04:30

Job Ticket #: 54457                      DST #: 1

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

Printed: 2013.09.18 @ 09:57:31



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Charter Energy Inc  
 PO Box 252  
 Great Bend KS 67530  
 ATTN: Jim Musgrove

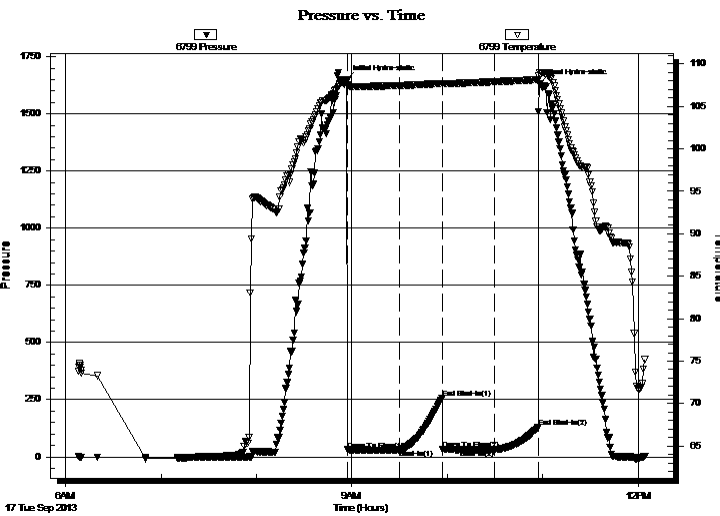
**18-18s-13w Barton KS**  
**FE #1**  
 Job Ticket: 54457 **DST#: 1**  
 Test Start: 2013.09.17 @ 06:08:00

## GENERAL INFORMATION:

Formation: **Arbcukle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:57:15  
 Time Test Ended: 12:04:30  
 Interval: **3324.00 ft (KB) To 3380.00 ft (KB) (TVD)**  
 Total Depth: 3380.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Cody Bloedorn  
 Unit No: 53  
 Reference Elevations: 1873.00 ft (KB)  
 1866.00 ft (CF)  
 KB to GR/CF: 7.00 ft

**Serial #: 6799 Outside**  
 Press @ RunDepth: 31.35 psig @ 3362.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.17 End Date: 2013.09.17 Last Calib.: 2013.09.17  
 Start Time: 06:08:05 End Time: 12:04:29 Time On Btm: 2013.09.17 @ 08:56:45  
 Time Off Btm: 2013.09.17 @ 10:58:00

**TEST COMMENT:** 30 - IF-1/4" blow , dieid in 23 Min.  
 30 - IS- No return  
 30 - FF- No blow  
 30 - FS- No return



## PRESSURE SUMMARY

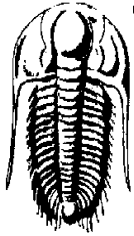
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1650.60	108.00	Initial Hydro-static
1	31.02	107.49	Open To Flow (1)
33	32.11	107.44	Shut-In(1)
60	255.75	107.71	End Shut-In(1)
61	34.05	107.66	Open To Flow (2)
93	31.35	107.90	Shut-In(2)
121	129.69	108.14	End Shut-In(2)
122	1632.14	108.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
4.00	SOCM, 10%O, 90%M	0.06
1.00	Free oil, 100%O	0.01

## 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: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
Job Ticket: 54457      **DST#: 1**  
Test Start: 2013.09.17 @ 06:08:00

**Tool Information**

Drill Pipe:	Length: 3318.00 ft	Diameter: 3.80 inches	Volume: 46.54 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:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 46.54 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3324.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	56.00 ft				
Tool Length:	82.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments: Ran Jars to break apart. No charge for JARS.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3299.00	
Shut In Tool	5.00			3304.00	
Hydraulic tool	5.00			3309.00	
Jars	5.00			3314.00	
Packer	5.00			3319.00	26.00      Bottom Of Top Packer
Packer	5.00			3324.00	
Stubb	1.00			3325.00	
Perforations	5.00			3330.00	
Change Over Sub	1.00			3331.00	
Drill Pipe	31.00			3362.00	
Recorder	0.00	6799	Outside	3362.00	
Recorder	0.00	8655	Inside	3362.00	
Change Over Sub	1.00			3363.00	
Perforations	14.00			3377.00	
Bullnose	3.00			3380.00	56.00      Bottom Packers & Anchor

**Total Tool Length: 82.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Charter Energy Inc  
PO Box 252  
Great Bend KS 67530  
ATTN: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
Job Ticket: 54457      **DST#: 1**  
Test Start: 2013.09.17 @ 06:08:00

## 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: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5300.00 ppm			
Filter Cake: inches			

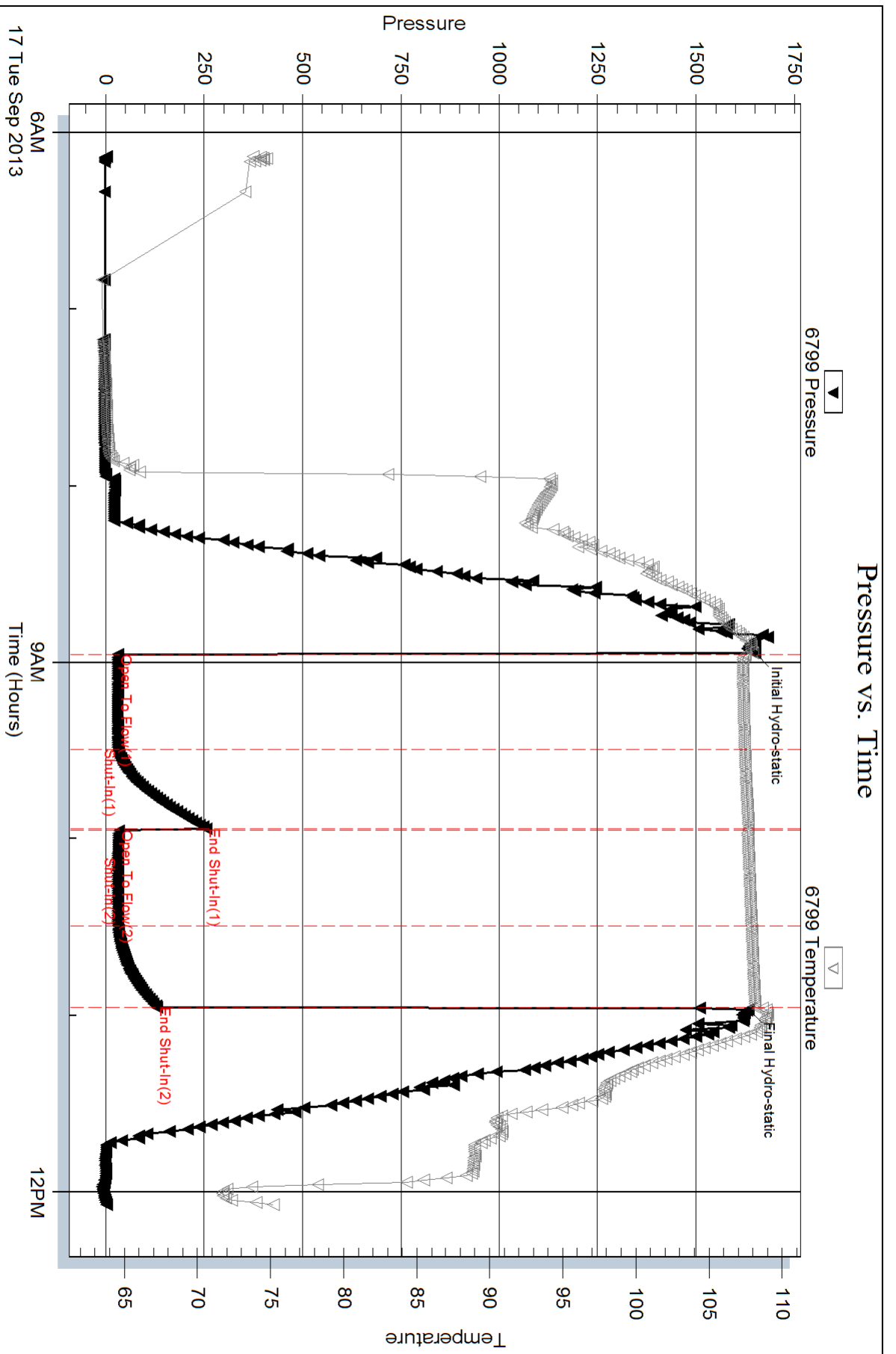
## Recovery Information

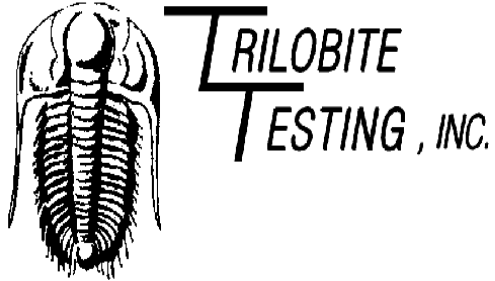
Recovery Table

Length ft	Description	Volume bbl
4.00	SOCM, 10%O, 90%M	0.056
1.00	Free oil, 100%O	0.014

Total Length: 5.00 ft      Total Volume: 0.070 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Charter Energy Inc**

PO Box 252  
Great Bend KS 67530

ATTN: Jim Musgrove

**FE #1**

**18-18s-13w Barton KS**

Start Date: 2013.09.17 @ 16:30:00

End Date: 2013.09.17 @ 20:55:30

Job Ticket #: 54458                      DST #: 2

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

Printed: 2013.09.18 @ 09:55:59



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Charter Energy Inc  
 PO Box 252  
 Great Bend KS 67530  
 ATTN: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
 Job Ticket: 54458 **DST#: 2**  
 Test Start: 2013.09.17 @ 16:30:00

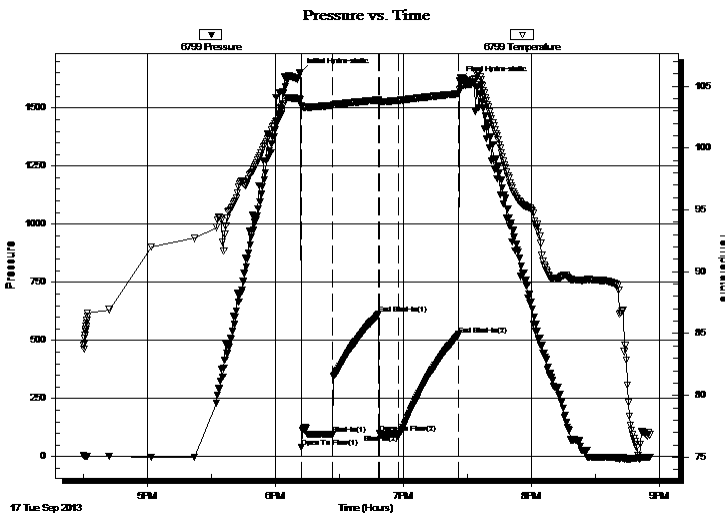
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 18:12:15 Tester: Cody Bloedorn  
 Time Test Ended: 20:55:30 Unit No: 53  
 Interval: **3324.00 ft (KB) To 3385.00 ft (KB) (TVD)** Reference Elevations: 1873.00 ft (KB)  
 Total Depth: 3385.00 ft (KB) (TVD) 1866.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

**Serial #: 6799 Outside**  
 Press @ Run Depth: 96.33 psig @ 3362.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.17 End Date: 2013.09.17 Last Calib.: 2013.09.17  
 Start Time: 16:30:05 End Time: 20:55:29 Time On Btm: 2013.09.17 @ 18:11:45  
 Time Off Btm: 2013.09.17 @ 19:26:15

**TEST COMMENT:** 15 - IF- B.O.B. in 45 Seconds  
 20 - IS- No return  
 10 - FF- No blow  
 30 - FS- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1652.72	103.91	Initial Hydro-static
1	40.23	103.38	Open To Flow (1)
15	96.51	103.43	Shut-In(1)
37	612.17	103.88	End Shut-In(1)
37	99.13	103.60	Open To Flow (2)
46	96.33	103.85	Shut-In(2)
74	525.11	104.39	End Shut-In(2)
75	1616.19	104.73	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
134.00	Mud, with oil spots, 100%M	1.88

\* 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  
 PO Box 252  
 Great Bend KS 67530  
 ATTN: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
 Job Ticket: 54458      **DST#: 2**  
 Test Start: 2013.09.17 @ 16:30:00

**Tool Information**

Drill Pipe:	Length: 3319.00 ft	Diameter: 3.80 inches	Volume: 46.56 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: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 46.56 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3324.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	1	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>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3304.00	
Shut In Tool	5.00			3309.00	
Hydraulic tool	5.00			3314.00	
Packer	5.00			3319.00	21.00      Bottom Of Top Packer
Packer	5.00			3324.00	
Stubb	1.00			3325.00	
Perforations	5.00			3330.00	
Change Over Sub	1.00			3331.00	
Drill Pipe	31.00			3362.00	
Recorder	0.00	6799	Outside	3362.00	
Recorder	0.00	8655	Inside	3362.00	
Change Over Sub	1.00			3363.00	
Perforations	19.00			3382.00	
Bullnose	3.00			3385.00	61.00      Bottom Packers & Anchor

**Total Tool Length: 82.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Charter Energy Inc  
PO Box 252  
Great Bend KS 67530  
ATTN: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
Job Ticket: 54458      **DST#: 2**  
Test Start: 2013.09.17 @ 16:30:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5300.00 ppm			
Filter Cake: inches			

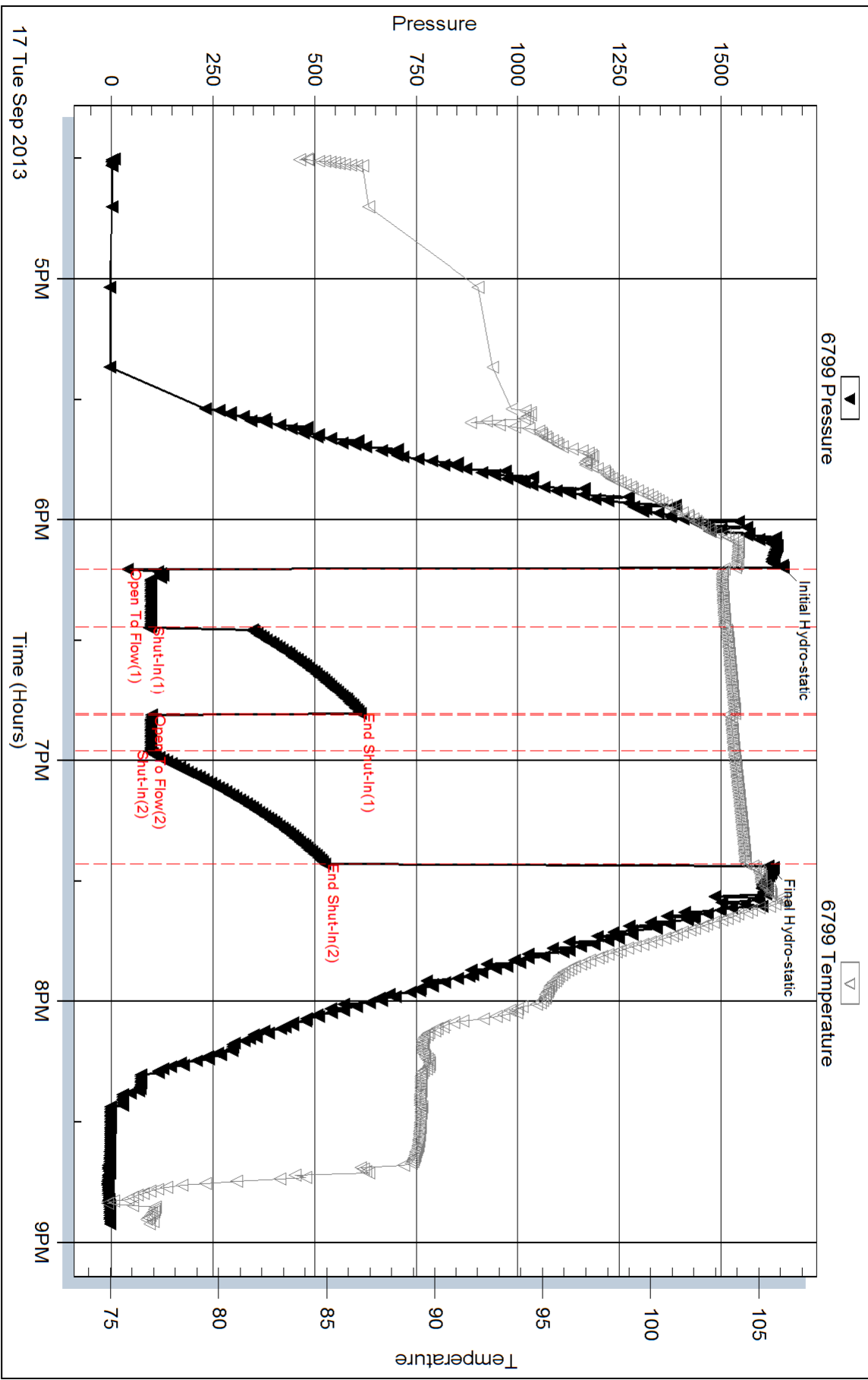
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
134.00	Mud, with oil spots, 100%M	1.880

Total Length: 134.00 ft      Total Volume: 1.880 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Charter Energy Inc**

PO Box 252  
Great Bend KS 67530

ATTN: Jim Musgrove

**FE #1**

**18-18s-13w Barton KS**

Start Date: 2013.09.18 @ 01:11:00

End Date: 2013.09.18 @ 06:19:30

Job Ticket #: 54459                      DST #: 3

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

Printed: 2013.09.18 @ 09:55:32



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Charter Energy Inc  
 PO Box 252  
 Great Bend KS 67530  
 ATTN: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
 Job Ticket: 54459 **DST#: 3**  
 Test Start: 2013.09.18 @ 01:11:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 02:42:00 Tester: Cody Bloedorn  
 Time Test Ended: 06:19:30 Unit No: 53  
 Interval: **3325.00 ft (KB) To 3389.00 ft (KB) (TVD)** Reference Elevations: 1873.00 ft (KB)  
 Total Depth: 3389.00 ft (KB) (TVD) 1866.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

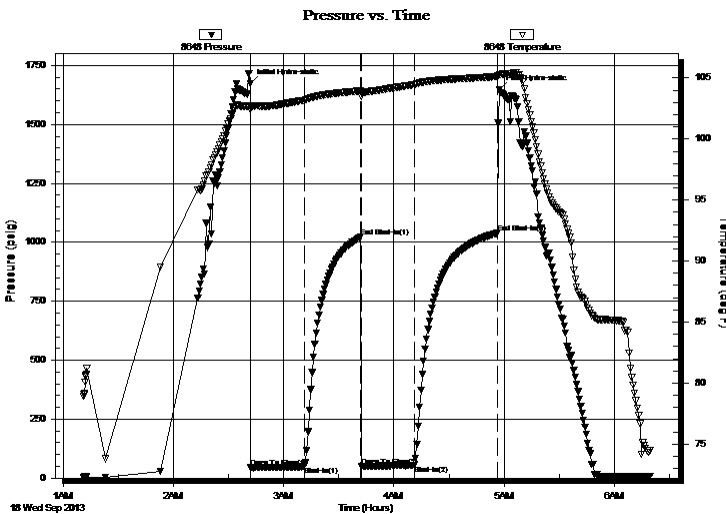
## Serial #: 8648

Inside

Press @ Run Depth: 53.86 psig @ 3363.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.09.18 End Date: 2013.09.18 Last Calib.: 2013.09.18  
 Start Time: 01:11:05 End Time: 06:19:29 Time On Btm: 2013.09.18 @ 02:41:45  
 Time Off Btm: 2013.09.18 @ 04:57:30

TEST COMMENT: 30 - IF- 1 1/2" blow  
 30 - IS- No return  
 30 - FF- No blow  
 45 - FS- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1673.03	102.71	Initial Hydro-static
1	43.86	102.39	Open To Flow (1)
30	48.91	103.18	Shut-In(1)
60	1021.57	103.95	End Shut-In(1)
61	50.36	103.46	Open To Flow (2)
90	53.86	104.46	Shut-In(2)
135	1039.29	105.12	End Shut-In(2)
136	1648.66	105.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud, with oil spots, 100%M	0.42

\* 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  
PO Box 252  
Great Bend KS 67530  
ATTN: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
Job Ticket: 54459      **DST#: 3**  
Test Start: 2013.09.18 @ 01:11:00

**Tool Information**

Drill Pipe:	Length: 3404.00 ft	Diameter: 3.80 inches	Volume: 47.75 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: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 47.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	100.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3325.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	85.00 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>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3305.00	
Shut In Tool	5.00			3310.00	
Hydraulic tool	5.00			3315.00	
Packer	5.00			3320.00	21.00      Bottom Of Top Packer
Packer	5.00			3325.00	
Stubb	1.00			3326.00	
Perforations	5.00			3331.00	
Change Over Sub	1.00			3332.00	
Drill Pipe	31.00			3363.00	
Recorder	0.00	6799	Outside	3363.00	
Recorder	0.00	8648	Inside	3363.00	
Change Over Sub	1.00			3364.00	
Perforations	22.00			3386.00	
Bullnose	3.00			3389.00	64.00      Bottom Packers & Anchor

**Total Tool Length: 85.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Charter Energy Inc  
PO Box 252  
Great Bend KS 67530  
ATTN: Jim Musgrove

**18-18s-13w Barton KS**  
**FE #1**  
Job Ticket: 54459      **DST#: 3**  
Test Start: 2013.09.18 @ 01:11:00

## Mud and Cushion Information

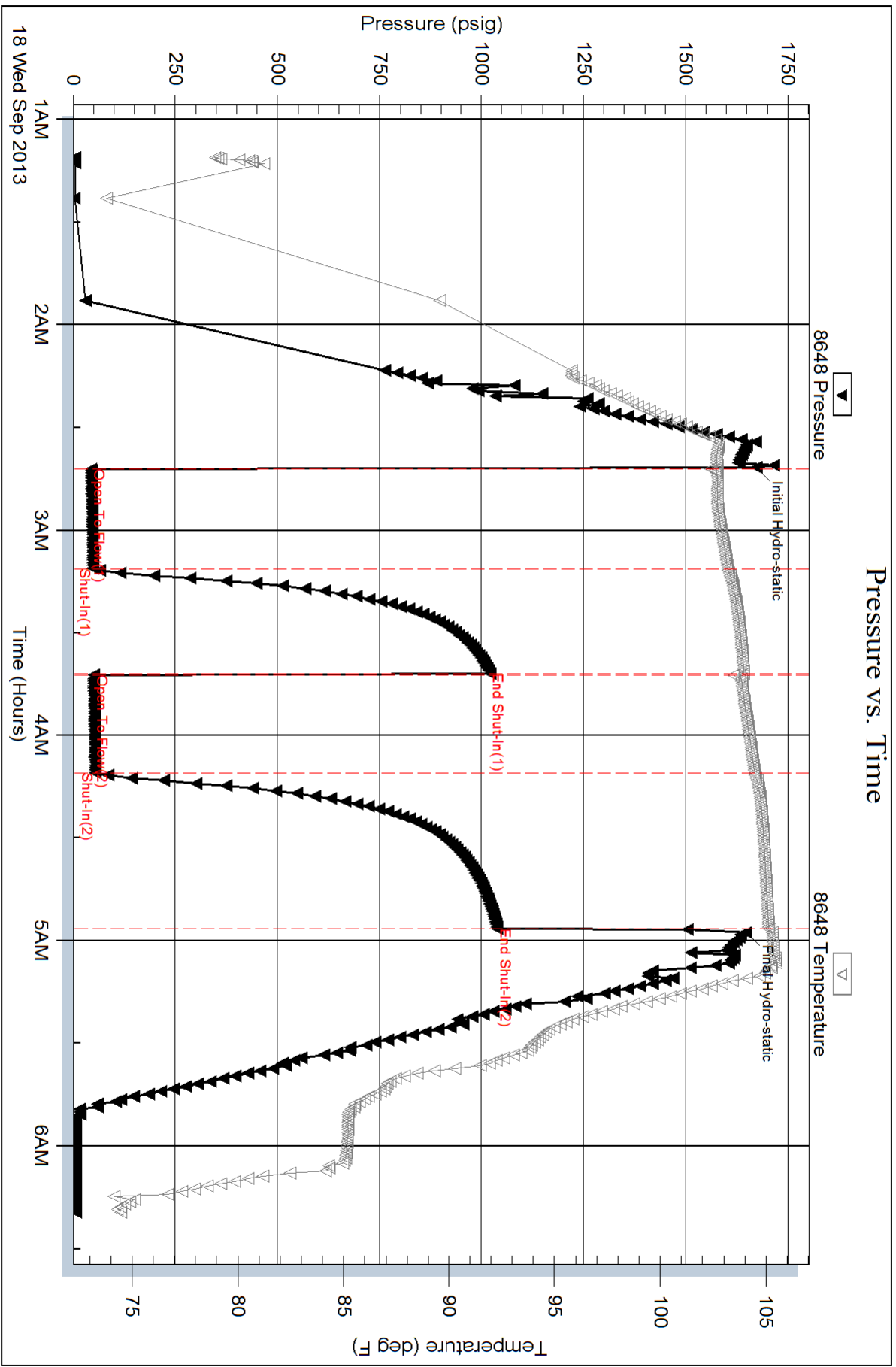
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.95 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5300.00 ppm			
Filter Cake: inches			

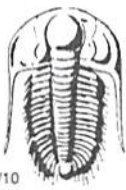
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud, w ith oil spots, 100%M	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54457

Well Name & No. FE #1 Test No. 1 Date 9-17-13  
 Company Charter Energy Inc Elevation 1873 KB 1866 GL  
 Address Po Box 252, Great Bend KS, 67530  
 Co. Rep / Geo. Jim Musgrove Rig Royal 2  
 Location: Sec. 19 Twp. 18s Rge. 13w Co. Barton State KS

Interval Tested 3324 - 3380 Zone Tested Arbuckle  
 Anchor Length 56' Drill Pipe Run 3318' Mud Wt. 9.2  
 Top Packer Depth 3319 Drill Collars Run - Vis 47  
 Bottom Packer Depth 3324 Wt. Pipe Run - WL 8.0  
 Total Depth 3380 Chlorides 5,300 ppm System LCM -

Blow Description IF - 1/4" blow, dired in 23 min.  
ISI - No return  
FF - No blow  
FSI - No return

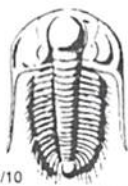
Rec	Feet of	%gas	%oil	%water	%mud
<u>4</u>	<u>SOCM</u>	<u>10</u>		<u>90</u>	
<u>1</u>	<u>Free oil</u>				

Rec Total 5 BHT 108° Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1650  Test 1150 T-On Location 5:24am  
 (B) First Initial Flow 31  Jars - T-Started 6:08am  
 (C) First Final Flow 32  Safety Joint - T-Open 8:58am  
 (D) Initial Shut-In 255  Circ Sub - T-Pulled 10:58am  
 (E) Second Initial Flow 34  Hourly Standby - T-Out 12:06pm  
 (F) Second Final Flow 31  Mileage 106 RT 164.30 Comments -  
 (G) Final Shut-In 129  Sampler -  
 (H) Final Hydrostatic 1632  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 1314.30  
 Final Flow 30  Accessibility - MP/DST Disc't -  
 Final Shut-In 30 Sub Total 1314.30

Approved By \_\_\_\_\_ Our Representative Cody Black

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. 54458

Well Name & No. FE #1 Test No. 2 Date 9-17-13  
 Company Charter Energy Inc Elevation 1873 KB 1866 GL  
 Address Po Box 252, Great Bend KS, 67530  
 Co. Rep / Geo. Jim Musgrove Rig Royal 2  
 Location: Sec. 18 Twp. 18s Rge. 13w Co. Barton State KS

Interval Tested 3324 - 3385 Zone Tested Arbuckle  
 Anchor Length 61' Drill Pipe Run 3319' Mud Wt. 9.2  
 Top Packer Depth 3319 Drill Collars Run — Vis 47  
 Bottom Packer Depth 3324 Wt. Pipe Run — WL 8.0  
 Total Depth 3385 Chlorides 5300 ppm System LCM —

Blow Description IF - B.O.B in 4.5 seconds  
ISI - No ~~flow~~ return  
FF - No blow  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>134</u>	<u>Mud with oil spots</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

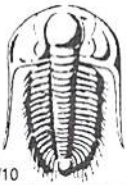
Rec Total 134' BHT 104° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1652</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>4:00 pm</u>
(B) First Initial Flow <u>40</u>	<input type="checkbox"/> Jars	T-Started <u><del>6:07 pm</del> 4:30 pm</u>
(C) First Final Flow <u>96</u>	<input type="checkbox"/> Safety Joint	T-Open <u>6:07 pm</u>
(D) Initial Shut-In <u>612</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>7:22 pm</u>
(E) Second Initial Flow <u>99</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>8:50 pm</u>
(F) Second Final Flow <u>96</u>	<input checked="" type="checkbox"/> Mileage <u>106 RT</u> 164.30	Comments
(G) Final Shut-In <u>525</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1616</u>	<input type="checkbox"/> Straddle	

Initial Open <u>15</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>20</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>20</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1314.30</u>
	Sub Total <u>1314.30</u>	MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **54459**

Well Name & No. FE #1 Test No. 3 Date 9-18-13  
 Company Charter Energy Inc Elevation 1873 KB 1866 GL  
 Address Po Box 252, Great Bend KS, 67530  
 Co. Rep / Geo. Jim Musgrove Rig Royal 2  
 Location: Sec. 18 Twp. 18s Rge. 13w Co. Barton State KS

Interval Tested 3325 - 3389 Zone Tested Arbuckle  
 Anchor Length 64' Drill Pipe Run 3404' Mud Wt. 9.2  
 Top Packer Depth 3320 Drill Collars Run - Vis 47  
 Bottom Packer Depth 3325 Wt. Pipe Run - WL 8.0  
 Total Depth 3389 Chlorides 5,300 ppm System LCM -

Blow Description ±F - 1 1/2" blow  
ISI - No return  
FF - No blow  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Mud w oil spots</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 30 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1673  Test 1150 T-On Location 12:50am  
 (B) First Initial Flow 43  Jars \_\_\_\_\_ T-Started 1:11am  
 (C) First Final Flow 48  Safety Joint \_\_\_\_\_ T-Open 2:43am  
 (D) Initial Shut-In 1021  Circ Sub \_\_\_\_\_ T-Pulled 4:58am  
 (E) Second Initial Flow 50  Hourly Standby \_\_\_\_\_ T-Out 6:21am  
 (F) Second Final Flow 53  Mileage 106 RT 164.30 Comments \_\_\_\_\_  
 (G) Final Shut-In 1039  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1648  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 1314.30  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45 Sub Total 1314.30

Approved By \_\_\_\_\_ Our Representative Cody Blaedon

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.