



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1158855
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
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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: _____



1158855

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
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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: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Valhalla Exploration LLC
Well Name	Barclay-Circle Unit 1-3
Doc ID	1158855

All Electric Logs Run

DIL
DUCP
MICRO
SONIC

Form	ACO1 - Well Completion
Operator	Valhalla Exploration LLC
Well Name	Barclay-Circle Unit 1-3
Doc ID	1158855

Tops

Name	Top	Datum
TOP	2852	-927
HEEB	3208	-1283
BR LM	3318	-1393
LANS	3329	-1404
BKC	3542	-1617
VIOL	3558	-1633
SIMP	3586	-1661
ARB	3636	-1711

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 18, 2013

Kris Kennedy
Valhalla Exploration LLC
8100 E 22ND ST N
BLDG 1800-2
WICHITA, KS 67226

Re: ACO1
API 15-185-23829-00-00
Barclay-Circle Unit 1-3
NE/4 Sec.03-21S-14W
Stafford County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Kris Kennedy



DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Barton

Start Date: 2013.09.02 @ 05:41:00

End Date: 2013.09.02 @ 09:31:30

Job Ticket #: 17618 DST #: 1

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.02 @ 09:42:30



DRILL STEM TEST REPORT

Valhalla Exploration LLC
 8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

3/21S/14W/Barton
Barclay Circle #1-3
 Job Ticket: 17618 **DST#: 1**
 Test Start: 2013.09.02 @ 05:41:00

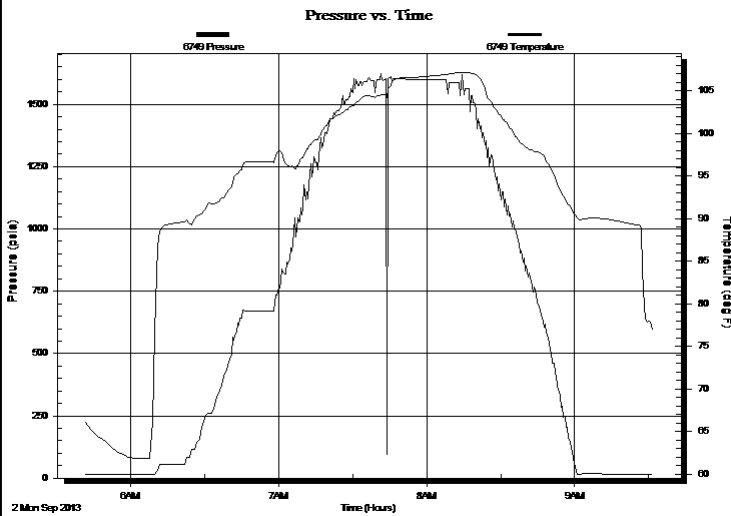
GENERAL INFORMATION:

Formation: **Lansing/Kansas City**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: Tester: Ken Swinney
 Time Test Ended: 09:31:30 Unit No: 3325 Great Bend/24
 Interval: **3345.00 ft (KB) To 3415.00 ft (KB) (TVD)** Reference Elevations: 1925.00 ft (KB)
 Total Depth: 3415.00 ft (KB) (TVD) 1917.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Poor KB to GR/CF: 8.00 ft

Serial #: 6749

Press @ Run Depth: psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.09.02 End Date: 2013.09.02 Last Calib.: 2013.09.02
 Start Time: 05:41:00 End Time: 09:31:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: Hit bridge or fill 60 foot off bottom/Set tool 3 times to push through/Only went 20 foot further down/Pull test



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling mud 100%	0.98

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Barton

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17618 **DST#: 1**
 Test Start: 2013.09.02 @ 05:41:00

GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 09:31:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3345.00 ft (KB) To 3415.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3415.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 6838 Outside

Press @ Run Depth: psia @ 3412.28 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.02 End Date: 2013.09.03

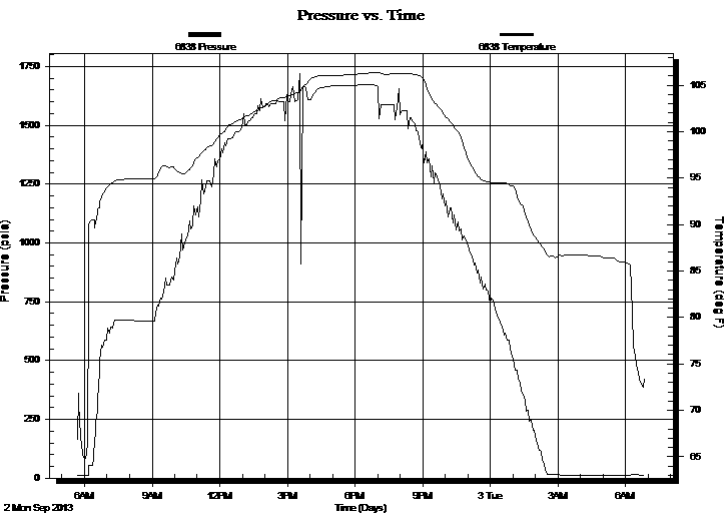
Last Calib.: 2013.09.02

Start Time: 05:41:00 End Time: 06:50:15

Time On Btm:

Time Off Btm:

TEST COMMENT: Hit bridge or fill 60 foot off bottom/Set tool 3 times to push through/Only went 20 foot further down/Pull test



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling mud 100%	0.98

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Barton

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17618

DST#: 1

Test Start: 2013.09.02 @ 05:41:00

Tool Information

Drill Pipe:	Length: 3342.00 ft	Diameter: 3.80 inches	Volume: 46.88 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: 20000.00 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: 46.88 bbl</u>	Tool Chased 20.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3345.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.28 ft			
Tool Length:	97.28 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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Shut In Tool	5.00			3323.00	
Hydraulic Tool	5.00			3328.00	
Jars	5.00			3333.00	
Safety Joint	2.00			3335.00	
Packer	5.00			3340.00	27.00 Bottom Of Top Packer
Packer	5.00			3345.00	
Perforations	5.00			3350.00	
Change Over Sub	0.75			3350.75	
Drill Pipe	31.78			3382.53	
Change Over Sub	0.75			3383.28	
Anchor	27.00			3410.28	
Recorder	1.00	6748	Inside	3411.28	
Recorder	1.00	6838	Outside	3412.28	
Bullnose	3.00			3415.28	70.28 Bottom Packers & Anchor

Total Tool Length: 97.28



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Barton

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17618

DST#: 1

Test Start: 2013.09.02 @ 05:41:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 50.00 sec/qt
 Water Loss: 8.80 in³
 Resistivity: ohm.m
 Salinity: 5000.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Drilling mud 100%	0.982

Total Length: 70.00 ft Total Volume: 0.982 bbl

Num Fluid Samples: 0

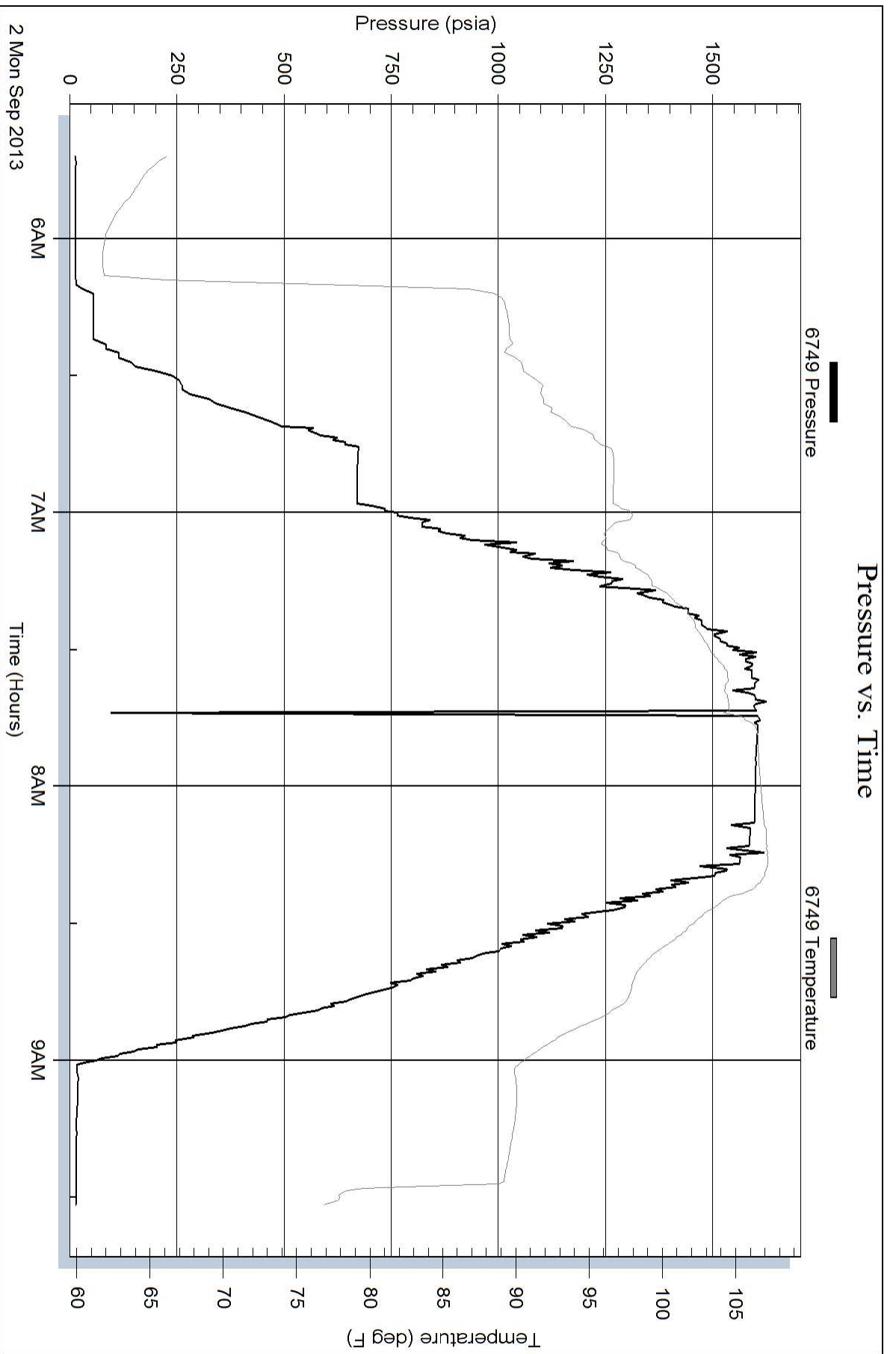
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

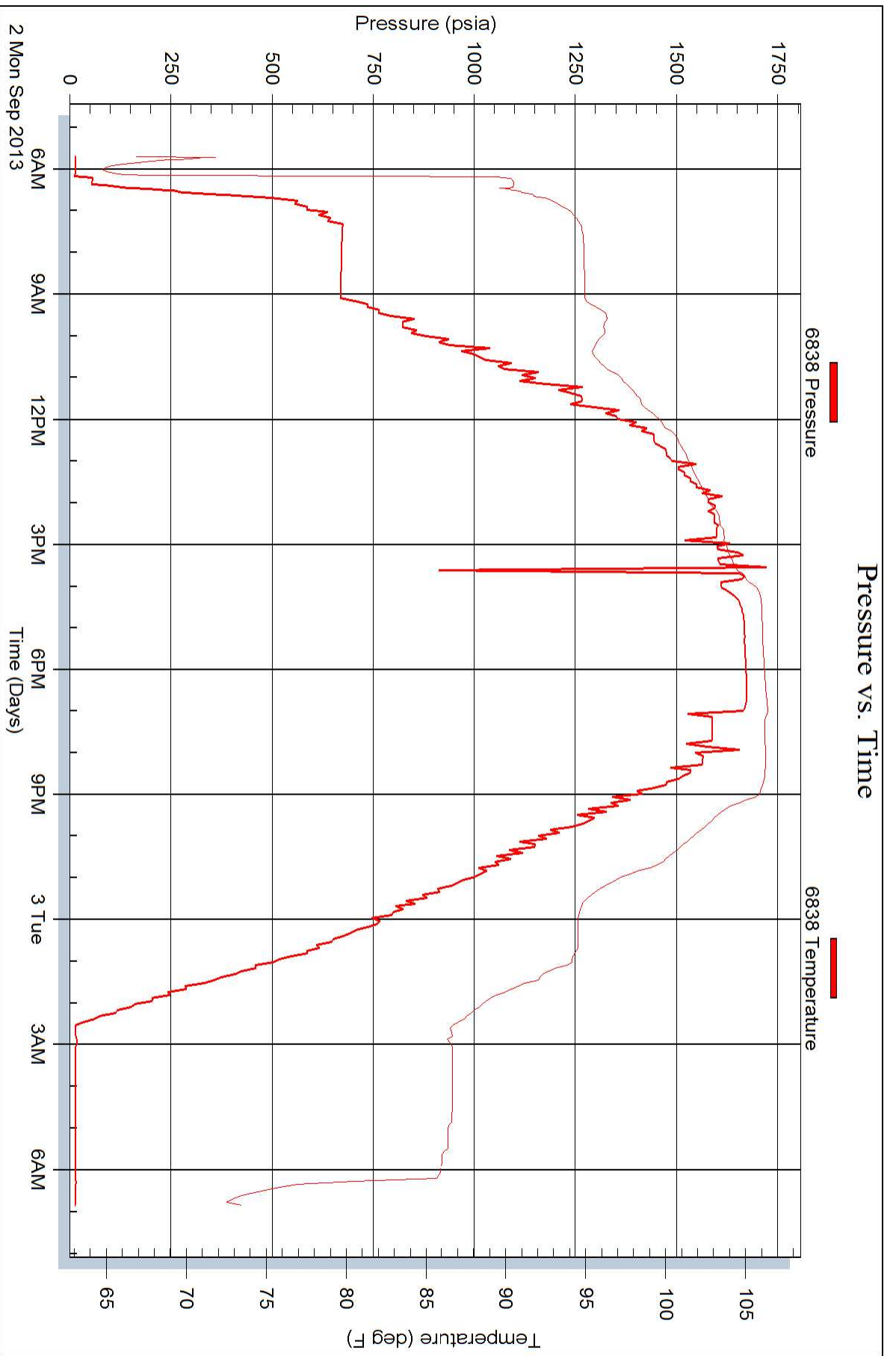


Serial #: 6838

Outside Valhalla Exploration LLC

Barclay Circle #1-3

DST Test Number: 1



Superior Testers Enterprises LLC

Ref. No: 17618

Printed: 2013.09.02 @ 09:42:31



DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Stafford

Start Date: 2013.09.03 @ 03:21:00

End Date: 2013.09.03 @ 08:49:00

Job Ticket #: 17619 DST #: 2

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.03 @ 08:58:38



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17619

DST#: 2

Test Start: 2013.09.03 @ 03:21:00

GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:54:00

Time Test Ended: 08:49:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3455.00 ft (KB) To 3512.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3512.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6749 Inside

Press @ Run Depth: 62.88 psia @ 3507.59 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.03

End Date: 2013.09.03

Last Calib.: 2013.09.03

Start Time: 03:21:00

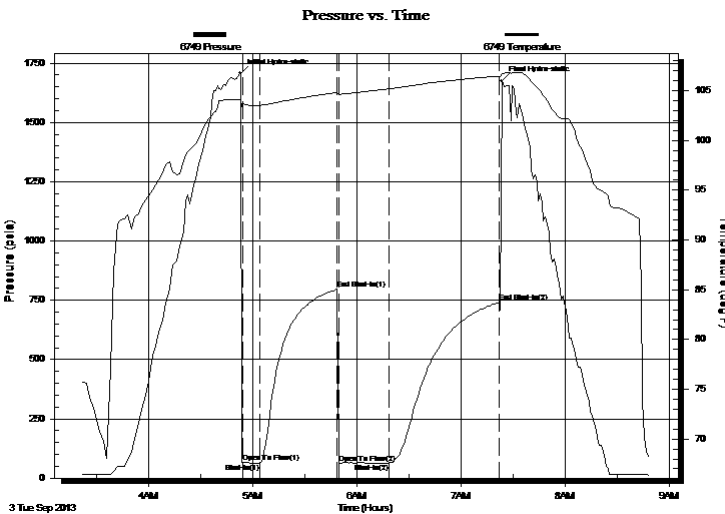
End Time: 08:49:00

Time On Btm: 2013.09.03 @ 04:53:00

Time Off Btm: 2013.09.03 @ 07:23:30

TEST COMMENT: 1st Open 10 Minutes/Weak blow/Blow built to 3/8 inch
 1st Shut In 45 Minutes/No blow back
 2nd Open 30 Minutes/Dead no blow
 2nd Shut In 60 Minutes/No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1707.09	104.08	Initial Hydro-static
1	64.67	103.70	Open To Flow (1)
11	62.74	103.54	Shut-In(1)
56	795.79	104.81	End Shut-In(1)
57	63.71	104.65	Open To Flow (2)
86	62.88	105.19	Shut-In(2)
149	741.01	106.47	End Shut-In(2)
151	1675.84	106.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud with show of oil/Mud 100%	0.14

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17619

DST#: 2

Test Start: 2013.09.03 @ 03:21:00

GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:54:00

Time Test Ended: 08:49:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3455.00 ft (KB) To 3512.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3512.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6666 Outside

Press @ Run Depth: 740.51 psia @ 3508.59 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.03

End Date: 2013.09.03

Last Calib.: 2013.09.03

Start Time: 03:21:00

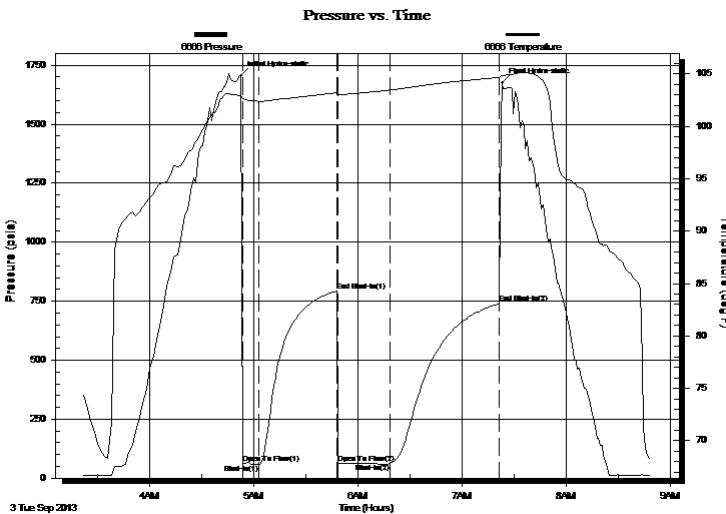
End Time: 08:48:30

Time On Btm: 2013.09.03 @ 04:52:30

Time Off Btm: 2013.09.03 @ 07:23:00

TEST COMMENT: 1st Open 10 Minutes/Weak blow/Blow built to 3/8 inch
 1st Shut In 45 Minutes/No blow back
 2nd Open 30 Minutes/Dead no blow
 2nd Shut In 60 Minutes/No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1706.02	102.95	Initial Hydro-static
1	63.47	102.62	Open To Flow (1)
11	58.91	102.40	Shut-In(1)
56	794.62	103.19	End Shut-In(1)
56	61.89	102.97	Open To Flow (2)
87	61.26	103.46	Shut-In(2)
150	740.51	104.66	End Shut-In(2)
151	1675.22	104.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud with show of oil/Mud 100%	0.14

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17619

DST#: 2

Test Start: 2013.09.03 @ 03:21:00

Tool Information

Drill Pipe:	Length: 3435.00 ft	Diameter: 3.80 inches	Volume: 48.18 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: lb
			<u>Total Volume: 48.18 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial lb
Depth to Top Packer:	3455.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.59 ft			
Tool Length:	83.59 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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Shut In Tool	5.00			3433.00	
Hydraulic Tool	5.00			3438.00	
Jars	5.00			3443.00	
Safety Joint	2.00			3445.00	
Packer	5.00			3450.00	27.00 Bottom Of Top Packer
Packer	5.00			3455.00	
Perforations	5.00			3460.00	
Change Over Sub	0.75			3460.75	
Drill Pipe	30.09			3490.84	
Change Over Sub	0.75			3491.59	
Anchor	15.00			3506.59	
Recorder	1.00	6749	Inside	3507.59	
Recorder	1.00	6666	Outside	3508.59	
Bullnose	3.00			3511.59	56.59 Bottom Packers & Anchor

Total Tool Length: 83.59



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17619

DST#: 2

Test Start: 2013.09.03 @ 03:21:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 64.00 sec/qt
 Water Loss: 8.00 in³
 Resistivity: ohm.m
 Salinity: 6500.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud with show of oil/Mud 100%	0.140

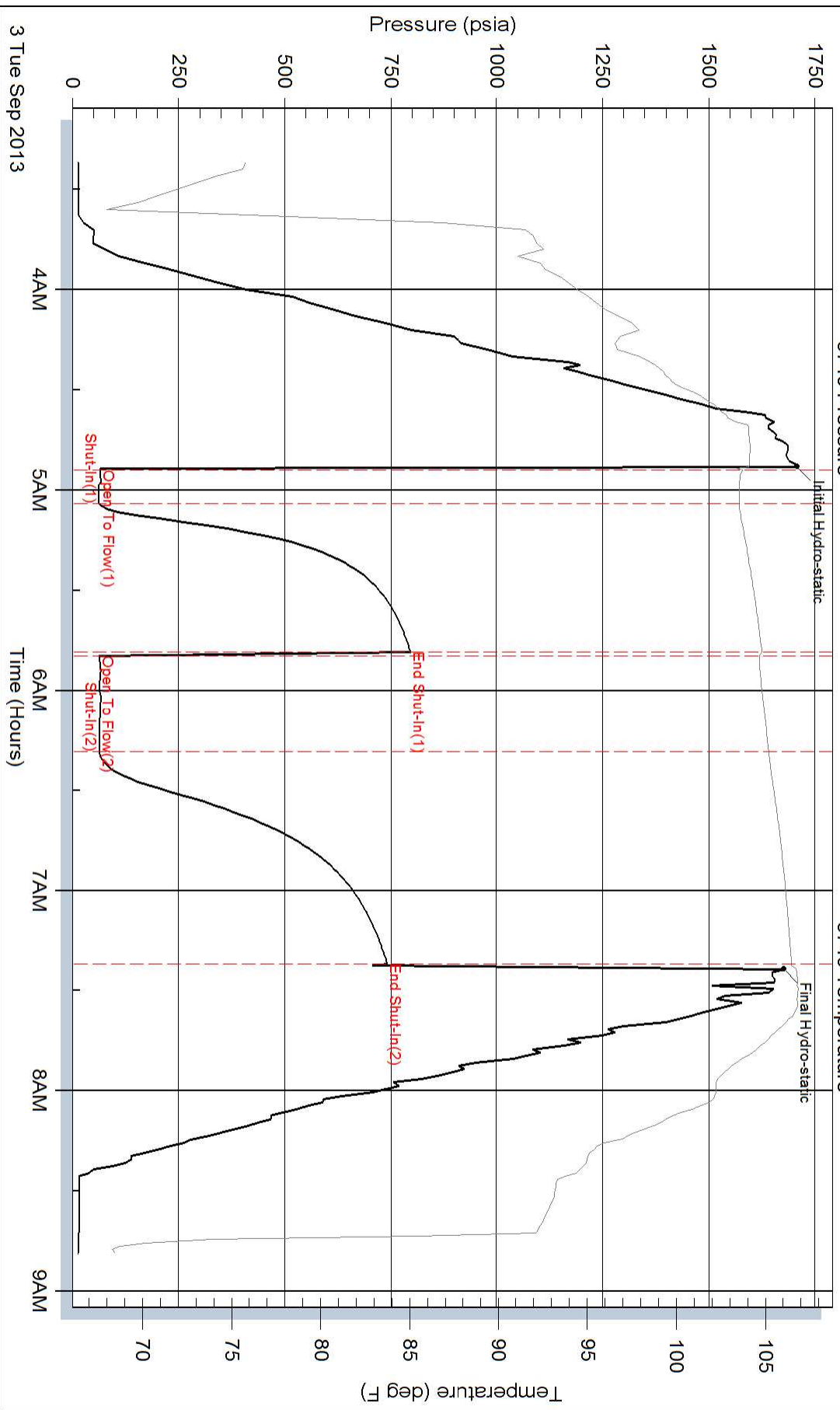
Total Length: 10.00 ft Total Volume: 0.140 bbl

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

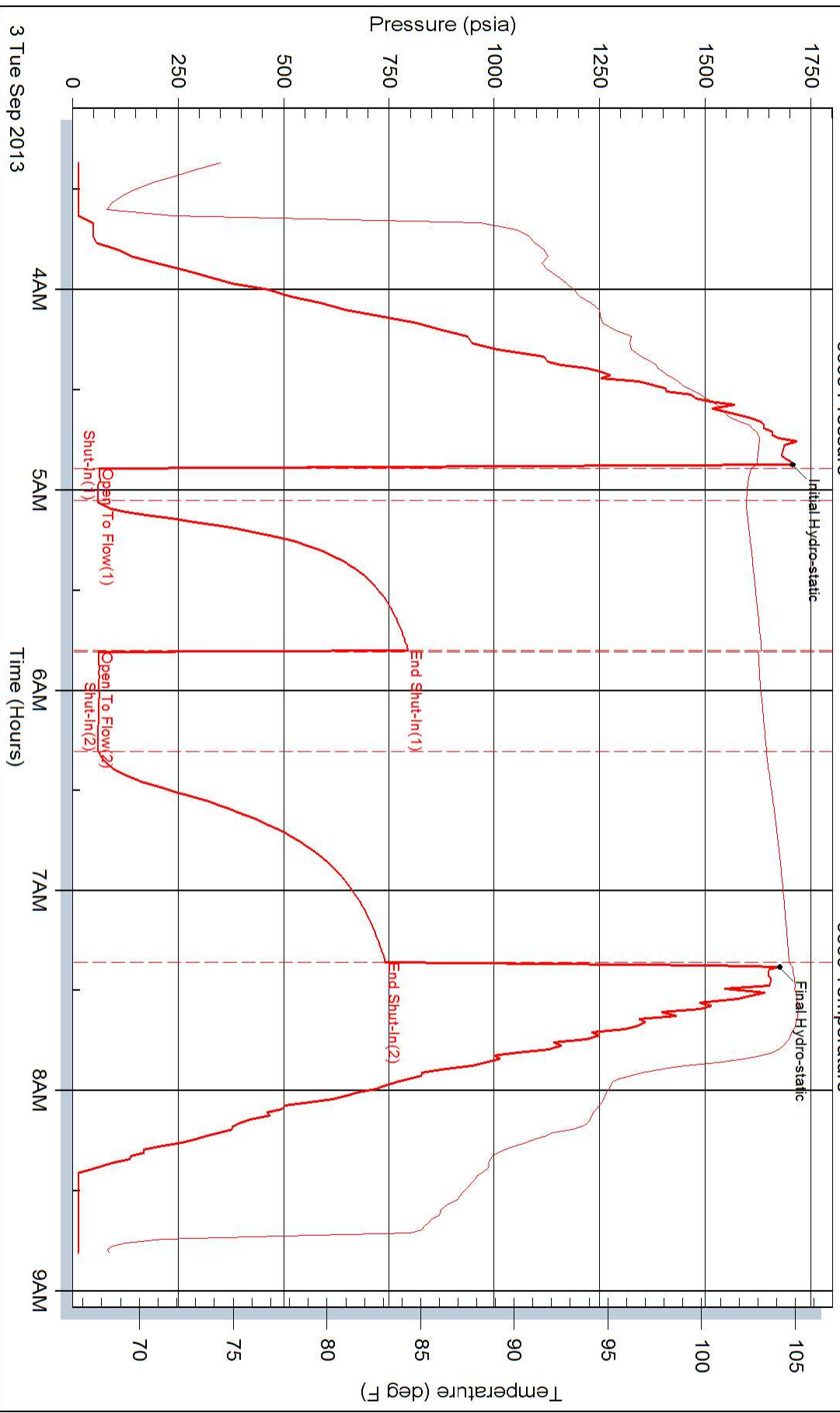
Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Stafford

Start Date: 2013.09.03 @ 17:17:00

End Date: 2013.09.03 @ 22:49:00

Job Ticket #: 17620 DST #: 3

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.03 @ 22:57:25



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17620

DST#: 3

Test Start: 2013.09.03 @ 17:17:00

GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:48:30

Time Test Ended: 22:49:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3510.00 ft (KB) To 3550.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3550.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6749 Inside

Press @ Run Depth: 57.42 psia @ 3546.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.03

End Date: 2013.09.03

Last Calib.: 2013.09.03

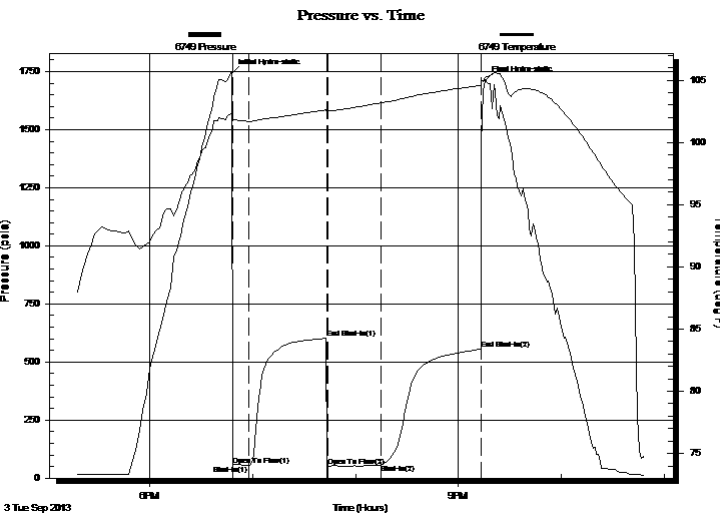
Start Time: 17:17:00

End Time: 22:49:00

Time On Btm: 2013.09.03 @ 18:48:00

Time Off Btm: 2013.09.03 @ 21:15:30

TEST COMMENT: 1ST Open 10 Minutes/Weak blow /Blow built to 1/8 inch
 1ST Shut In 45 Minutes/No blow back
 2ND Open 30 Minutes/One bubble at open then dead/Very weak surface blow after 20 minutes
 2ND Shut In 60 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1743.30	102.29	Initial Hydro-static
1	57.51	101.78	Open To Flow (1)
10	55.82	101.70	Shut-In(1)
55	601.71	102.63	End Shut-In(1)
56	52.27	102.52	Open To Flow (2)
87	57.42	103.18	Shut-In(2)
145	554.93	104.59	End Shut-In(2)
148	1709.26	105.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Oil cut Mud	0.21
0.00	Oil 3% Mud 97%	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17620

DST#: 3

Test Start: 2013.09.03 @ 17:17:00

GENERAL INFORMATION:

Formation: **Lansing/Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:48:30

Time Test Ended: 22:49:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3510.00 ft (KB) To 3550.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3550.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6666 Outside

Press @ Run Depth: 553.77 psia @ 3547.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.03

End Date: 2013.09.03

Last Calib.: 2013.09.03

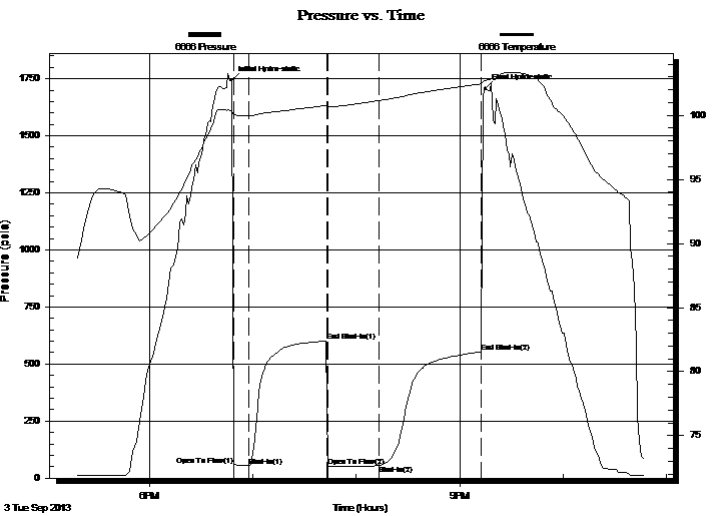
Start Time: 17:17:00

End Time: 22:48:00

Time On Btm: 2013.09.03 @ 18:47:30

Time Off Btm: 2013.09.03 @ 21:15:00

TEST COMMENT: 1ST Open 10 Minutes/Weak blow /Blow built to 1/8 inch
 1ST Shut In 45 Mintues/No blow back
 2ND Open 30 Mintues/One bubble at open then dead/Very weak surface blow after 20 minutes
 2ND Shut In 60 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1741.99	100.39	Initial Hydro-static
1	58.39	100.08	Open To Flow (1)
10	53.55	99.97	Shut-In(1)
55	600.70	100.78	End Shut-In(1)
56	51.76	100.65	Open To Flow (2)
86	54.93	101.14	Shut-In(2)
145	553.77	102.46	End Shut-In(2)
148	1706.87	102.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Oil cut Mud	0.21
0.00	Oil 3% Mud 97%	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17620

DST#: 3

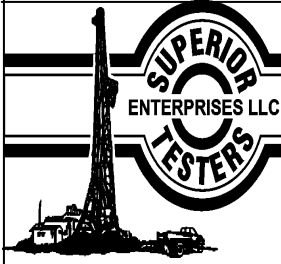
Test Start: 2013.09.03 @ 17:17:00

Tool Information

Drill Pipe:	Length: 3495.00 ft	Diameter: 3.80 inches	Volume: 49.03 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: 20000.00 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: 49.03 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3510.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3488.00	
Hydraulic Tool	5.00			3493.00	
Jars	5.00			3498.00	
Safety Joint	2.00			3500.00	
Packer	5.00			3505.00	27.00 Bottom Of Top Packer
Packer	5.00			3510.00	
Anchor	35.00			3545.00	
Recorder	1.00	6749	Inside	3546.00	
Recorder	1.00	6666	Outside	3547.00	
Bullnose	3.00			3550.00	40.00 Bottom Packers & Anchor
Total Tool Length:	67.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17620

DST#: 3

Test Start: 2013.09.03 @ 17:17:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 64.00 sec/qt
 Water Loss: 7.99 in³
 Resistivity: ohm.m
 Salinity: 6500.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Oil cut Mud	0.210
0.00	Oil 3% Mud 97%	0.000

Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

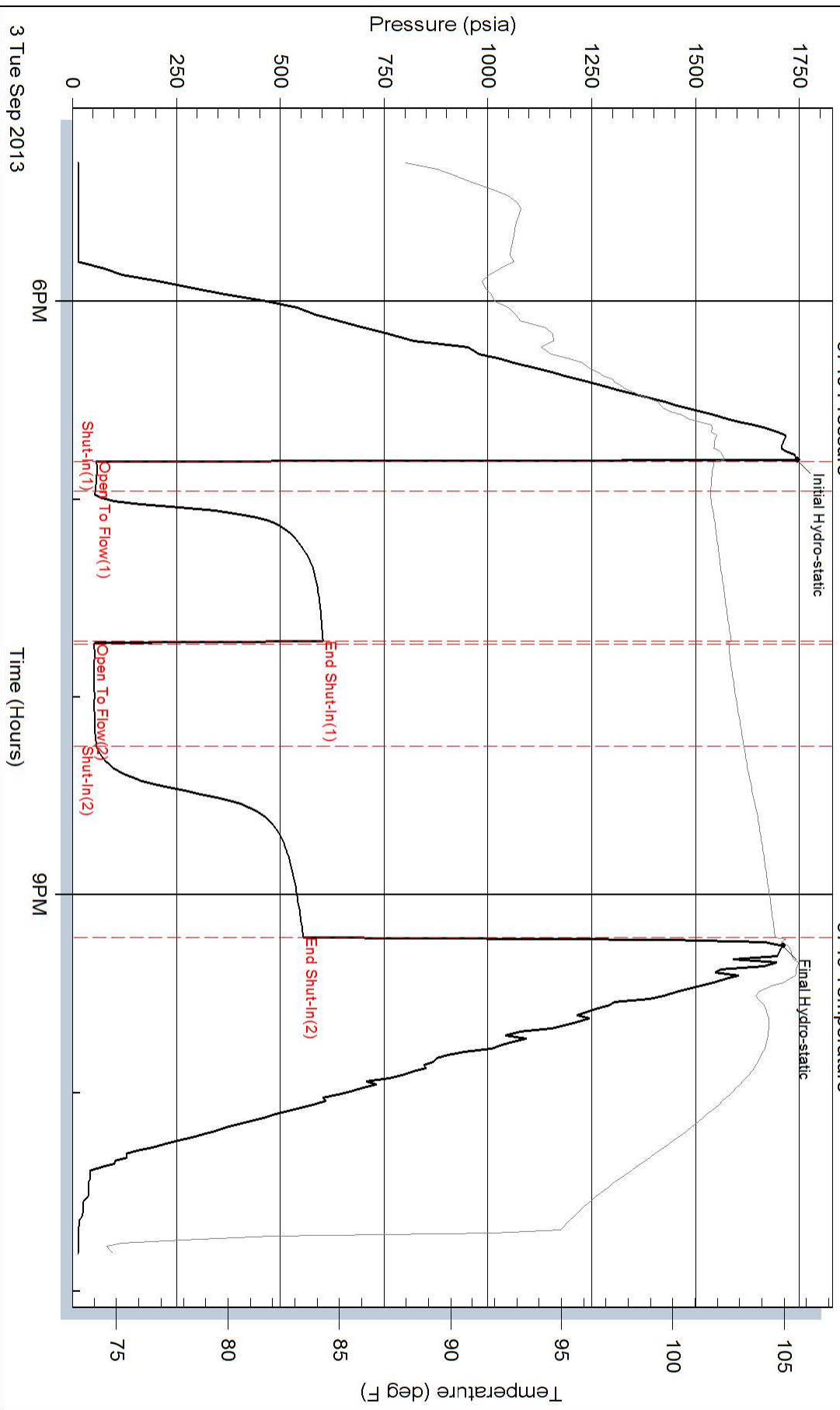
Serial #:

Laboratory Name:

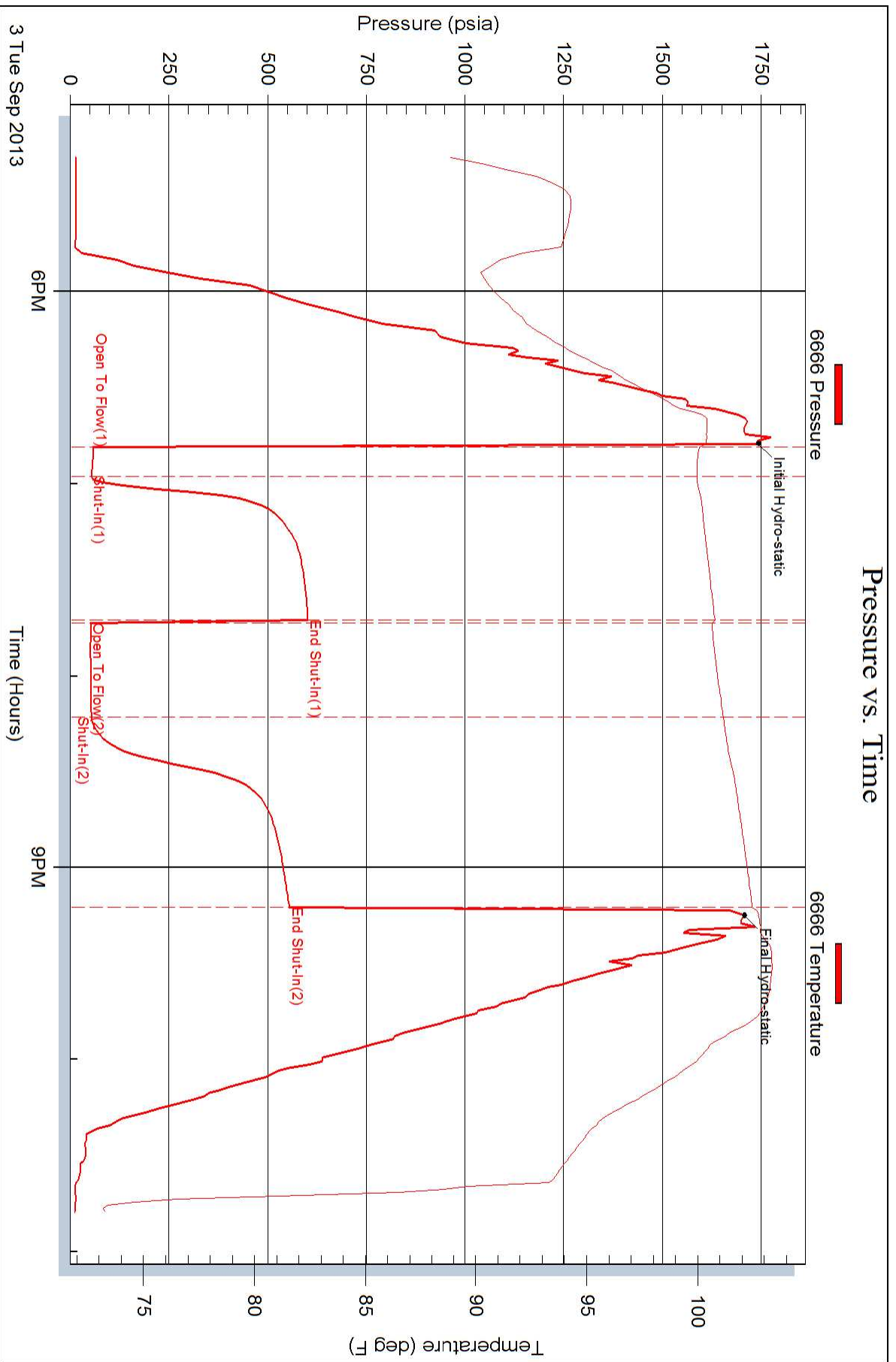
Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Stafford

Start Date: 2013.09.04 @ 10:21:00

End Date: 2013.09.04 @ 17:54:30

Job Ticket #: 17621 DST #: 4

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.04 @ 18:10:45



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17621

DST#: 4

Test Start: 2013.09.04 @ 10:21:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:01:00

Time Test Ended: 17:54:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3585.00 ft (KB) To 3649.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3649.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6749

Inside

Press @ Run Depth: 385.22 psia @ 3644.71 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.04

End Date:

2013.09.04

Last Calib.:

2013.09.04

Start Time: 10:21:00

End Time:

17:54:30

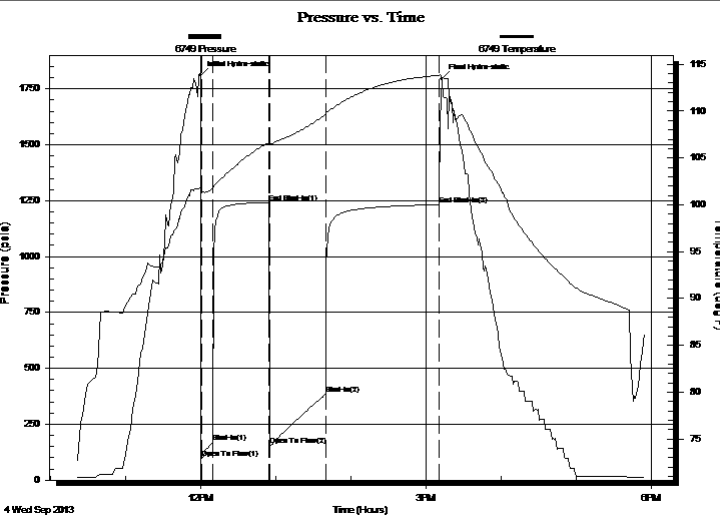
Time On Btm:

2013.09.04 @ 12:00:00

Time Off Btm:

2013.09.04 @ 15:12:30

TEST COMMENT: 1ST Open 10 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes 15 seconds
 1ST Shut In 45 Minutes/Blow back built to 1 inch
 2ND Open 45 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes 15 seconds
 2ND Shut In 90 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1811.08	101.78	Initial Hydro-static
1	98.43	101.42	Open To Flow (1)
10	171.48	101.77	Shut-In(1)
55	1241.56	106.64	End Shut-In(1)
56	154.59	106.48	Open To Flow (2)
100	385.22	109.61	Shut-In(2)
191	1232.09	113.83	End Shut-In(2)
193	1795.31	113.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	Slightly mud cut gassy oil	6.09
0.00	Mud 2% Gas 15% Oil 83%	0.00
372.00	Slightly mud cut gassy oil	5.22
0.00	Mud 5% Gas 10% Oil 85%(15% emuls oil)	0.00
62.00	Emulsified Oil 100%	0.87
0.00	Corrected Grav. Oil. 32	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17621

DST#: 4

Test Start: 2013.09.04 @ 10:21:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:01:00

Time Test Ended: 17:54:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3585.00 ft (KB) To 3649.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3649.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6666 Outside

Press @ Run Depth: 1230.81 psia @ 3645.71 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.04

End Date:

2013.09.04

Last Calib.:

2013.09.04

Start Time: 10:21:00

End Time:

17:49:30

Time On Btm:

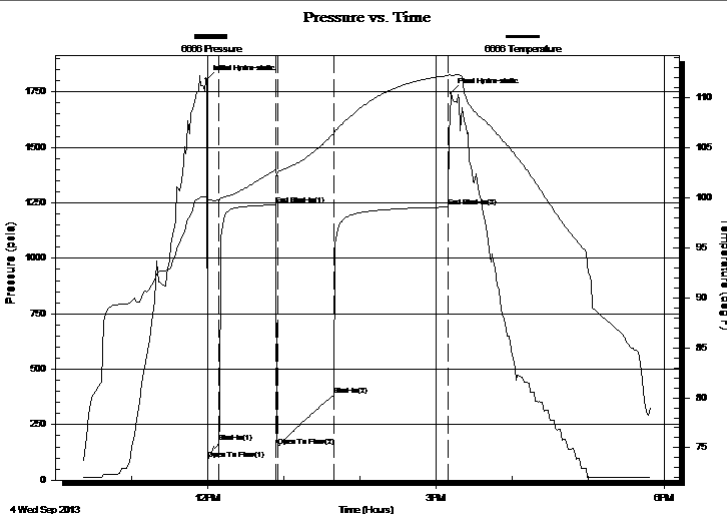
2013.09.04 @ 11:59:00

Time Off Btm:

2013.09.04 @ 15:12:00

TEST COMMENT: 1ST Open 10 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes 15 seconds
 1ST Shut In 45 Minutes/Blow back built to 1 inch
 2ND Open 45 Minutes/Good blow/Blow built to bottom of bucket in 5 minutes 15 seconds
 2ND Shut In 90 Minutes/No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1807.62	100.12	Initial Hydro-static
1	92.23	99.77	Open To Flow (1)
10	169.22	99.76	Shut-In(1)
55	1240.43	102.80	End Shut-In(1)
56	153.66	102.62	Open To Flow (2)
101	384.42	106.43	Shut-In(2)
191	1230.81	112.22	End Shut-In(2)
193	1745.24	112.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	Slightly mud cut gassy oil	6.09
0.00	Mud 2% Gas 15% Oil 83%	0.00
372.00	Slightly mud cut gassy oil	5.22
0.00	Mud 5% Gas 10% Oil 85%(15% emuls oil)	0.00
62.00	Emulsified Oil 100%	0.87
0.00	Corrected Grav. Oil. 32	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17621

DST#: 4

Test Start: 2013.09.04 @ 10:21:00

Tool Information

Drill Pipe:	Length: 3561.00 ft	Diameter: 3.80 inches	Volume: 49.95 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 49.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3585.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.71 ft			
Tool Length:	90.71 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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Shut In Tool	5.00			3563.00	
Hydraulic Tool	5.00			3568.00	
Jars	5.00			3573.00	
Safety Joint	2.00			3575.00	
Packer	5.00			3580.00	27.00 Bottom Of Top Packer
Packer	5.00			3585.00	
Perforations	5.00			3590.00	
Change Over Sub	0.75			3590.75	
Drill Pipe	31.21			3621.96	
Change Over Sub	0.75			3622.71	
Anchor	21.00			3643.71	
Recorder	1.00	6749	Inside	3644.71	
Recorder	1.00	6666	Outside	3645.71	
Bullnose	3.00			3648.71	63.71 Bottom Packers & Anchor

Total Tool Length: 90.71



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17621

DST#: 4

Test Start: 2013.09.04 @ 10:21:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 66.00 sec/qt
 Water Loss: 10.40 in³
 Resistivity: ohm.m
 Salinity: 7400.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

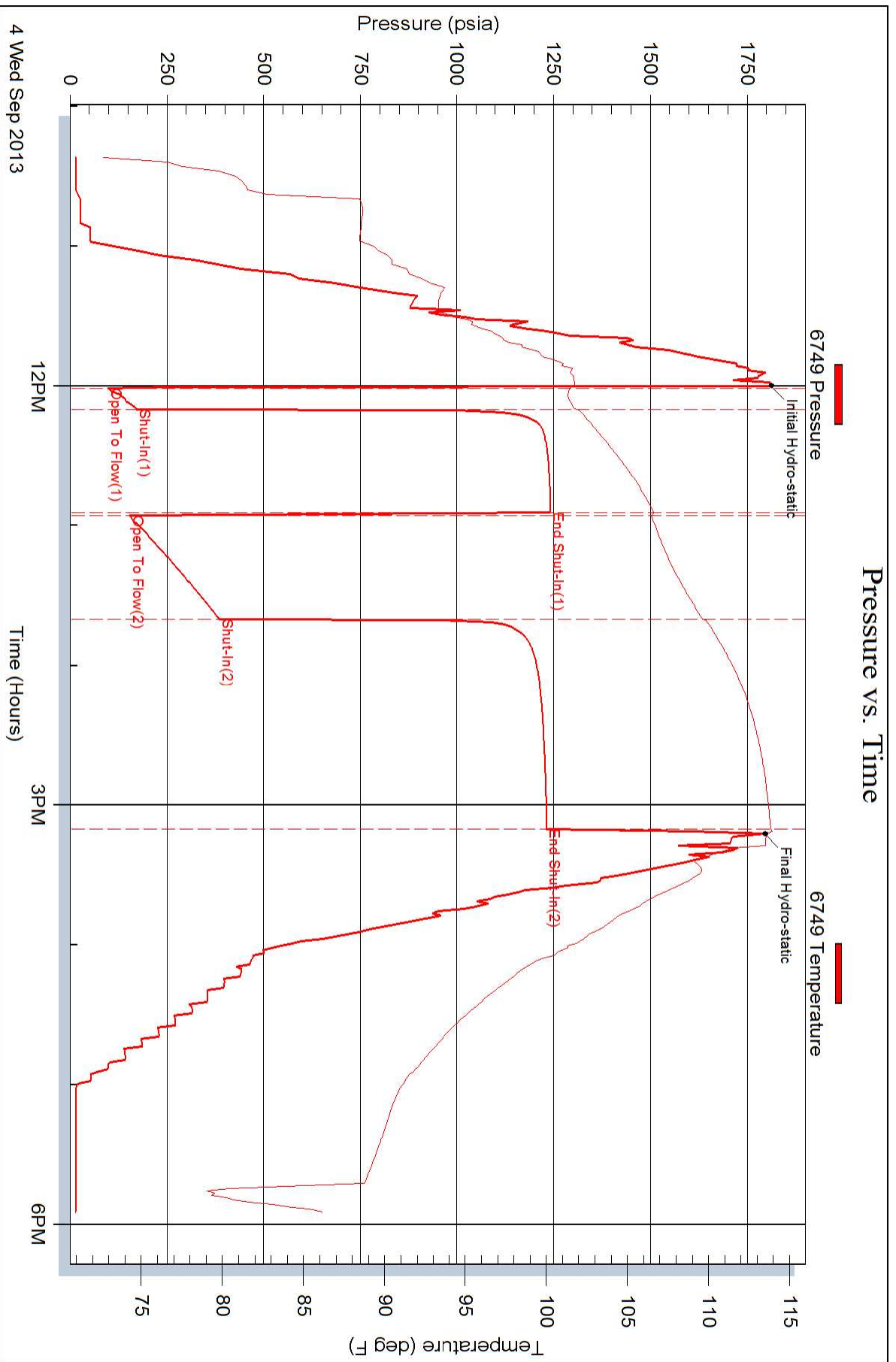
Recovery Table

Length ft	Description	Volume bbl
434.00	Slightly mud cut gassy oil	6.088
0.00	Mud 2% Gas 15% Oil 83%	0.000
372.00	Slightly mud cut gassy oil	5.218
0.00	Mud 5% Gas 10% Oil 85%(15% emuls oil)	0.000
62.00	Emulsified Oil 100%	0.870
0.00	Corrected Grav. Oil. 32	0.000

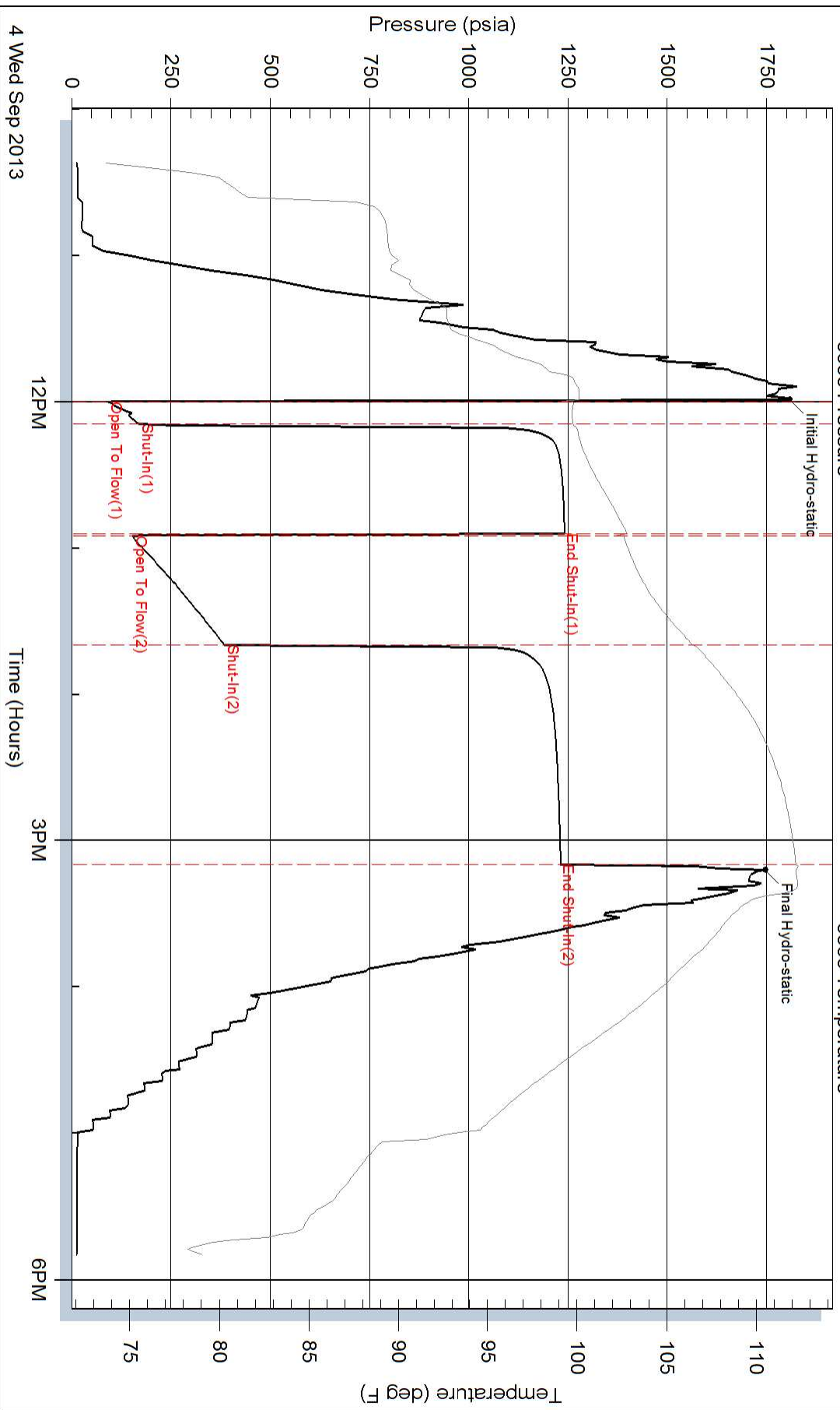
Total Length: 868.00 ft Total Volume: 12.176 bbl

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

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Stafford

Start Date: 2013.09.05 @ 00:55:00

End Date: 2013.09.05 @ 09:17:30

Job Ticket #: 17622 DST #: 5

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.05 @ 09:31:38



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17622

DST#: 5

Test Start: 2013.09.05 @ 00:55:00

GENERAL INFORMATION:

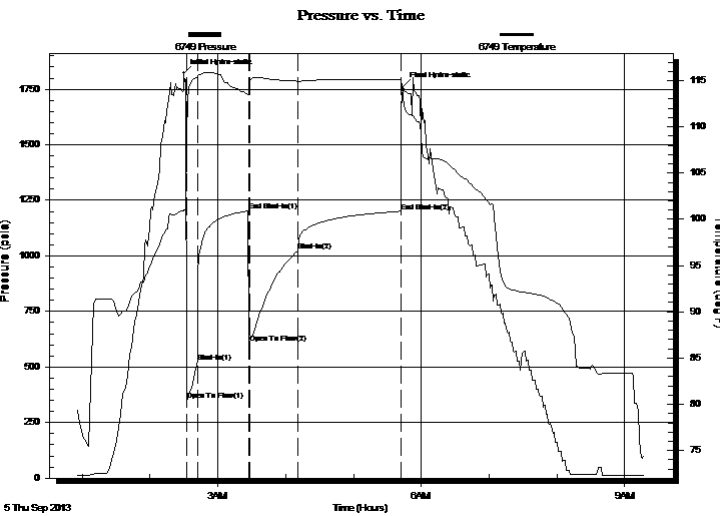
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 02:32:30 Tester: Ken Swinney
 Time Test Ended: 09:17:30 Unit No: 3325 Great Bend/24
 Interval: **3649.00 ft (KB) To 3656.00 ft (KB) (TVD)** Reference Elevations: 1925.00 ft (KB)
 Total Depth: 3656.00 ft (KB) (TVD) 1917.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6749

Inside

Press @ Run Depth: 1023.30 psia @ 3652.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.09.05 End Date: 2013.09.05 Last Calib.: 2013.09.05
 Start Time: 00:55:00 End Time: 09:17:30 Time On Btm: 2013.09.05 @ 02:30:00
 Time Off Btm: 2013.09.05 @ 05:43:30

TEST COMMENT: 1ST Open 10 Minutes/Strong blow/Blow built to bottom of bucket in 30 seconds
 1ST Shut In 45 Minutes/Blow back built to 5 inches
 2ND Open 45 Minutes/Strong blow/Blow built to bottom of bucket in 30 seconds
 2ND Shut In 90 Minutes/Blow back built to 1 1/2 inch



PRESSURE SUMMARY

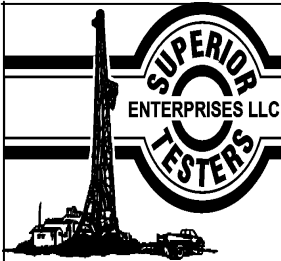
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1822.26	101.02	Initial Hydro-static
3	351.62	109.13	Open To Flow (1)
12	522.32	115.33	Shut-In(1)
57	1202.35	113.44	End Shut-In(1)
58	609.21	114.47	Open To Flow (2)
101	1023.30	114.92	Shut-In(2)
192	1200.76	115.07	End Shut-In(2)
194	1761.81	113.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2728.00	Clean gassy oil	38.27
0.00	Gas 10% Oil 90%	0.00
62.00	Slightly water cut muddy emulsified oil	0.87
0.00	Water 5% Mud 25% Emulsified oil 70%	0.00
0.00	Corrected Spec Grav Oil 34	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17622

DST#: 5

Test Start: 2013.09.05 @ 00:55:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:32:30

Time Test Ended: 09:17:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Great Bend/24

Interval: 3649.00 ft (KB) To 3656.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3656.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6666 Outside

Press @ Run Depth: 1199.62 psia @ 3653.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.05

End Date: 2013.09.05

Last Calib.: 2013.09.05

Start Time: 00:55:00

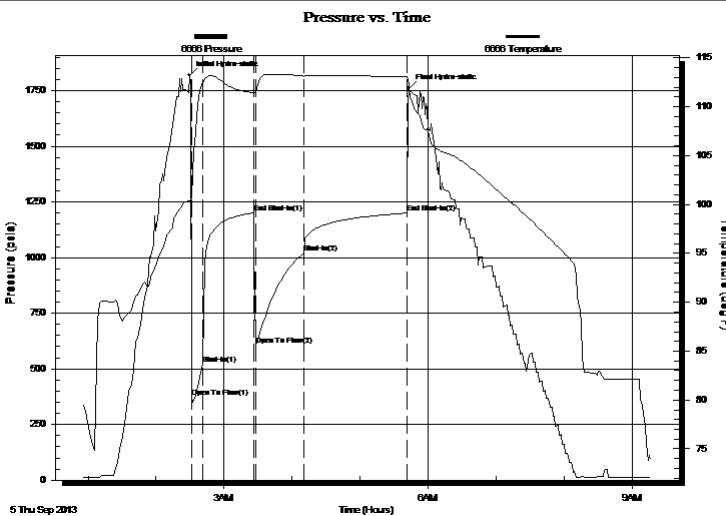
End Time: 09:17:00

Time On Btm: 2013.09.05 @ 02:29:30

Time Off Btm: 2013.09.05 @ 05:43:00

TEST COMMENT: 1ST Open 10 Minutes/Strong blow/Blow built to bottom of bucket in 30 seconds
 1ST Shut In 45 Minutes/Blow back built to 5 inches
 2ND Open 45 Minutes/Strong blow/Blow built to bottom of bucket in 30 seconds
 2ND Shut In 90 Minutes/Blow back built to 1 1/2 inch

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1819.22	100.43	Initial Hydro-static
2	373.48	100.76	Open To Flow (1)
12	521.98	112.53	Shut-In(1)
57	1201.31	111.46	End Shut-In(1)
58	607.92	111.41	Open To Flow (2)
102	1022.07	113.15	Shut-In(2)
192	1199.62	113.10	End Shut-In(2)
194	1759.32	112.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2728.00	Clean gassy oil	38.27
0.00	Gas 10% Oil 90%	0.00
62.00	Slightly water cut muddy emulsified oil	0.87
0.00	Water 5% Mud 25% Emulsified oil 70%	0.00
0.00	Corrected Spec Grav Oil 34	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17622

DST#: 5

Test Start: 2013.09.05 @ 00:55:00

Tool Information

Drill Pipe:	Length: 3654.00 ft	Diameter: 3.80 inches	Volume: 51.26 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 51.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3649.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	7.00 ft			
Tool Length:	29.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3632.00	
Hydraulic Tool	5.00			3637.00	
Jars	5.00			3642.00	
Safety Joint	2.00			3644.00	
Packer	5.00			3649.00	22.00 Bottom Of Top Packer
Anchor	2.00			3651.00	
Recorder	1.00	6749	Inside	3652.00	
Recorder	1.00	6666	Outside	3653.00	
Bullnose	3.00			3656.00	7.00 Anchor Tool
Total Tool Length:	29.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17622

DST#: 5

Test Start: 2013.09.05 @ 00:55:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 66.00 sec/qt
 Water Loss: 10.40 in³
 Resistivity: ohm.m
 Salinity: 7400.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2728.00	Clean gassy oil	38.267
0.00	Gas 10% Oil 90%	0.000
62.00	Slightly water cut muddy emulsified oil	0.870
0.00	Water 5% Mud 25% Emulsified oil 70%	0.000
0.00	Corrected Spec Grav Oil 34	0.000

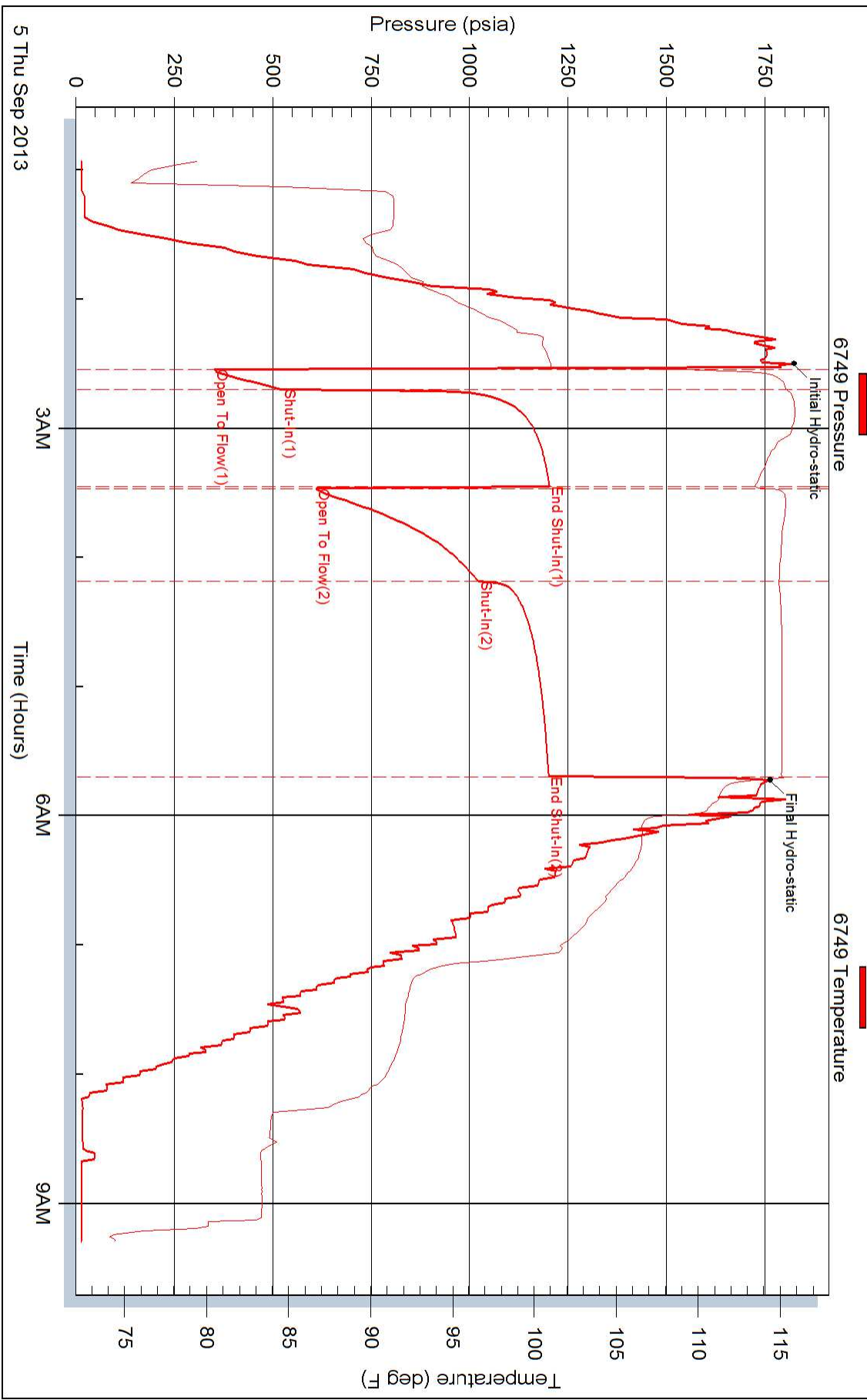
Total Length: 2790.00 ft Total Volume: 39.137 bbl

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

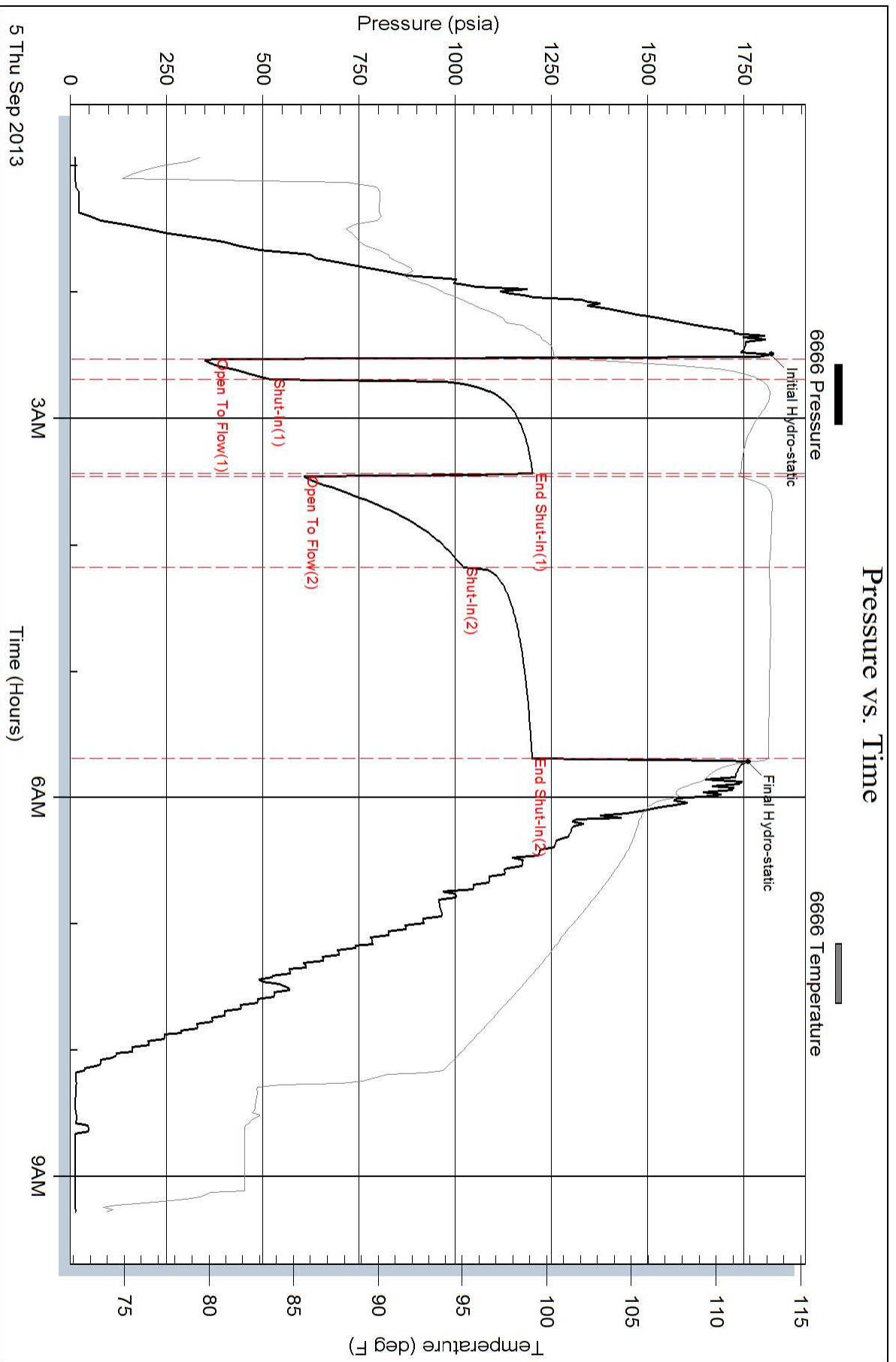
Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Stafford

Start Date: 2013.09.05 @ 18:09:00

End Date: 2013.09.06 @ 03:01:00

Job Ticket #: 17623 DST #: 6

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.06 @ 03:14:56



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17623

DST#: 6

Test Start: 2013.09.05 @ 18:09:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 19:53:00 Tester: Ken Swinney
 Time Test Ended: 03:01:00 Unit No: 3325 Great Bend/24
 Interval: **3656.00 ft (KB) To 3663.00 ft (KB) (TVD)** Reference Elevations: 1925.00 ft (KB)
 Total Depth: 3663.00 ft (KB) (TVD) 1917.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

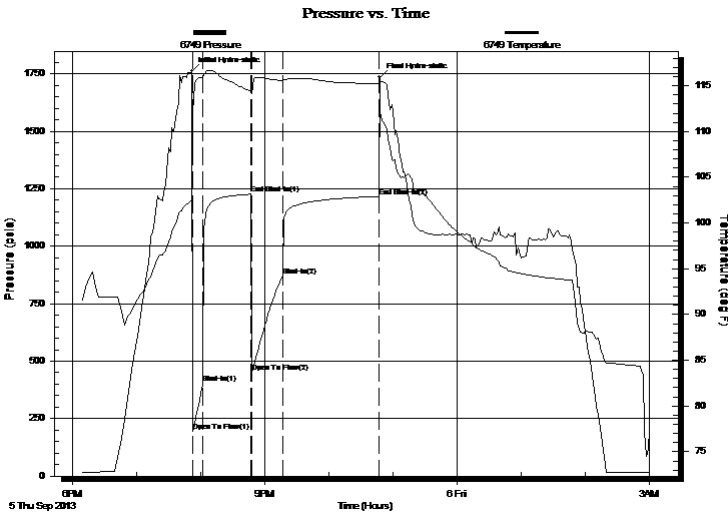
Serial #: 6749

Inside

Press @ RunDepth: 871.59 psia @ 3659.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.09.05 End Date: 2013.09.06 Last Calib.: 2013.09.06
 Start Time: 18:09:00 End Time: 03:01:00 Time On Btm: 2013.09.05 @ 19:52:00
 Time Off Btm: 2013.09.05 @ 22:48:00

TEST COMMENT: 1ST Open 10 Minutes/Strong blow/Blow built to bottom of bucket 45 seconds
 1ST Shut In 45 Minutes/Blow back built to 3 inches
 2ND Open 30 Minutes/Strong blow/Blow built to bottom of bucket in 1 minute
 2ND Shut In 90 Minutes/Blow back built to 2 inches

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1761.40	102.49	Initial Hydro-static
1	193.38	112.02	Open To Flow (1)
11	406.62	115.88	Shut-In(1)
56	1226.32	114.30	End Shut-In(1)
57	453.06	114.09	Open To Flow (2)
85	871.59	115.50	Shut-In(2)
175	1216.90	115.20	End Shut-In(2)
176	1735.29	113.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2138.00	Clean gas cut oil	29.99
0.00	Gas 5% Oil 95%	0.00
124.00	Muddy Emulsified Oil	1.74
0.00	Mud 35% Emulsified Oil 65%	0.00
0.00	Corrected Grav. Oil 33	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17623

DST#: 6

Test Start: 2013.09.05 @ 18:09:00

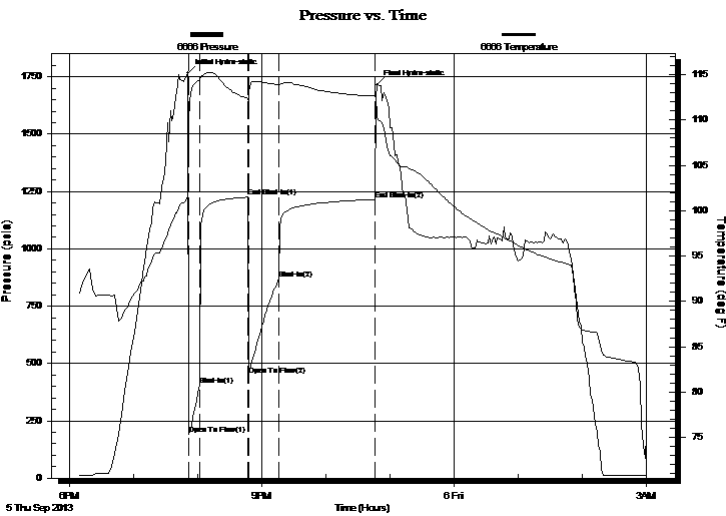
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 19:53:00 Tester: Ken Swinney
 Time Test Ended: 03:01:00 Unit No: 3325 Great Bend/24
 Interval: **3656.00 ft (KB) To 3663.00 ft (KB) (TVD)** Reference Elevations: 1925.00 ft (KB)
 Total Depth: 3663.00 ft (KB) (TVD) 1917.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6666 Outside

Press @ Run Depth: 1215.31 psia @ 3660.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.09.05 End Date: 2013.09.06 Last Calib.: 2013.09.06
 Start Time: 18:09:00 End Time: 03:00:30 Time On Btm: 2013.09.05 @ 19:51:30
 Time Off Btm: 2013.09.05 @ 22:48:30

TEST COMMENT: 1ST Open 10 Minutes/Strong blow/Blow built to bottom of bucket 45 seconds
 1ST Shut In 45 Minutes/Blow back built to 3 inches
 2ND Open 30 Minutes/Strong blow/Blow built to bottom of bucket in 1 minute
 2ND Shut In 90 Minutes/Blow back built to 2 inches



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1765.80	101.56	Initial Hydro-static
1	189.78	109.87	Open To Flow (1)
11	406.03	114.36	Shut-In(1)
56	1225.19	112.37	End Shut-In(1)
57	451.41	112.01	Open To Flow (2)
85	870.24	113.88	Shut-In(2)
175	1215.31	112.63	End Shut-In(2)
177	1714.14	110.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2138.00	Clean gas cut oil	29.99
0.00	Gas 5% Oil 95%	0.00
124.00	Muddy Emulsified Oil	1.74
0.00	Mud 35% Emulsified Oil 65%	0.00
0.00	Corrected Grav. Oil 33	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17623

DST#: 6

Test Start: 2013.09.05 @ 18:09:00

Tool Information

Drill Pipe:	Length: 3654.00 ft	Diameter: 3.80 inches	Volume: 51.26 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 51.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3656.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	7.00 ft			
Tool Length:	29.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3639.00	
Hydraulic Tool	5.00			3644.00	
Jars	5.00			3649.00	
Safety Joint	2.00			3651.00	
Packer	5.00			3656.00	22.00 Bottom Of Top Packer
Anchor	2.00			3658.00	
Recorder	1.00	6749	Inside	3659.00	
Recorder	1.00	6666	Outside	3660.00	
Bullnose	3.00			3663.00	7.00 Anchor Tool
Total Tool Length:	29.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17623

DST#: 6

Test Start: 2013.09.05 @ 18:09:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 58.00 sec/qt
 Water Loss: 9.19 in³
 Resistivity: ohm.m
 Salinity: 6600.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2138.00	Clean gas cut oil	29.991
0.00	Gas 5% Oil 95%	0.000
124.00	Muddy Emulsified Oil	1.739
0.00	Mud 35% Emulsified Oil 65%	0.000
0.00	Corrected Grav. Oil 33	0.000

Total Length: 2262.00 ft Total Volume: 31.730 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

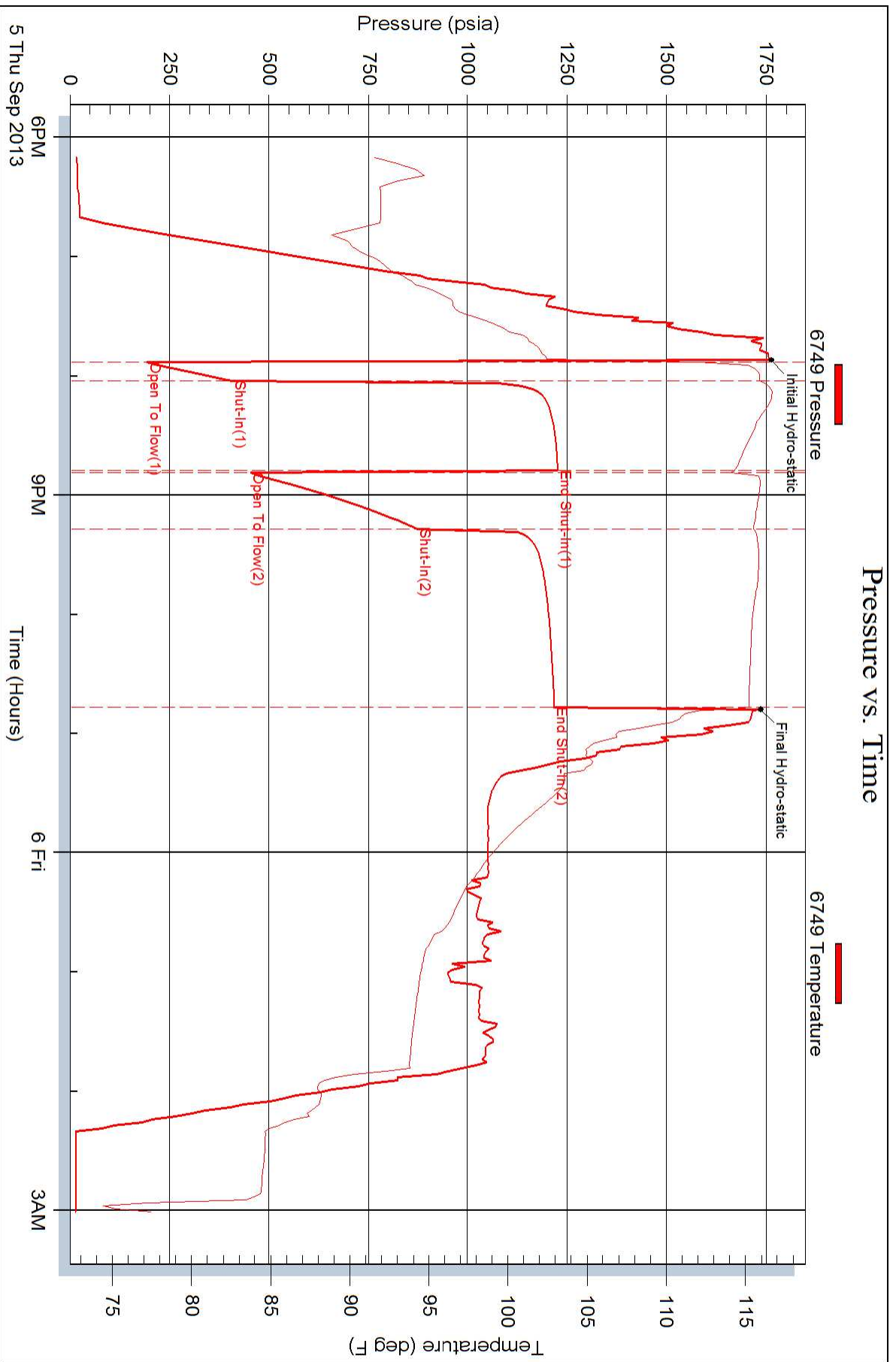
Serial #:

Laboratory Name:

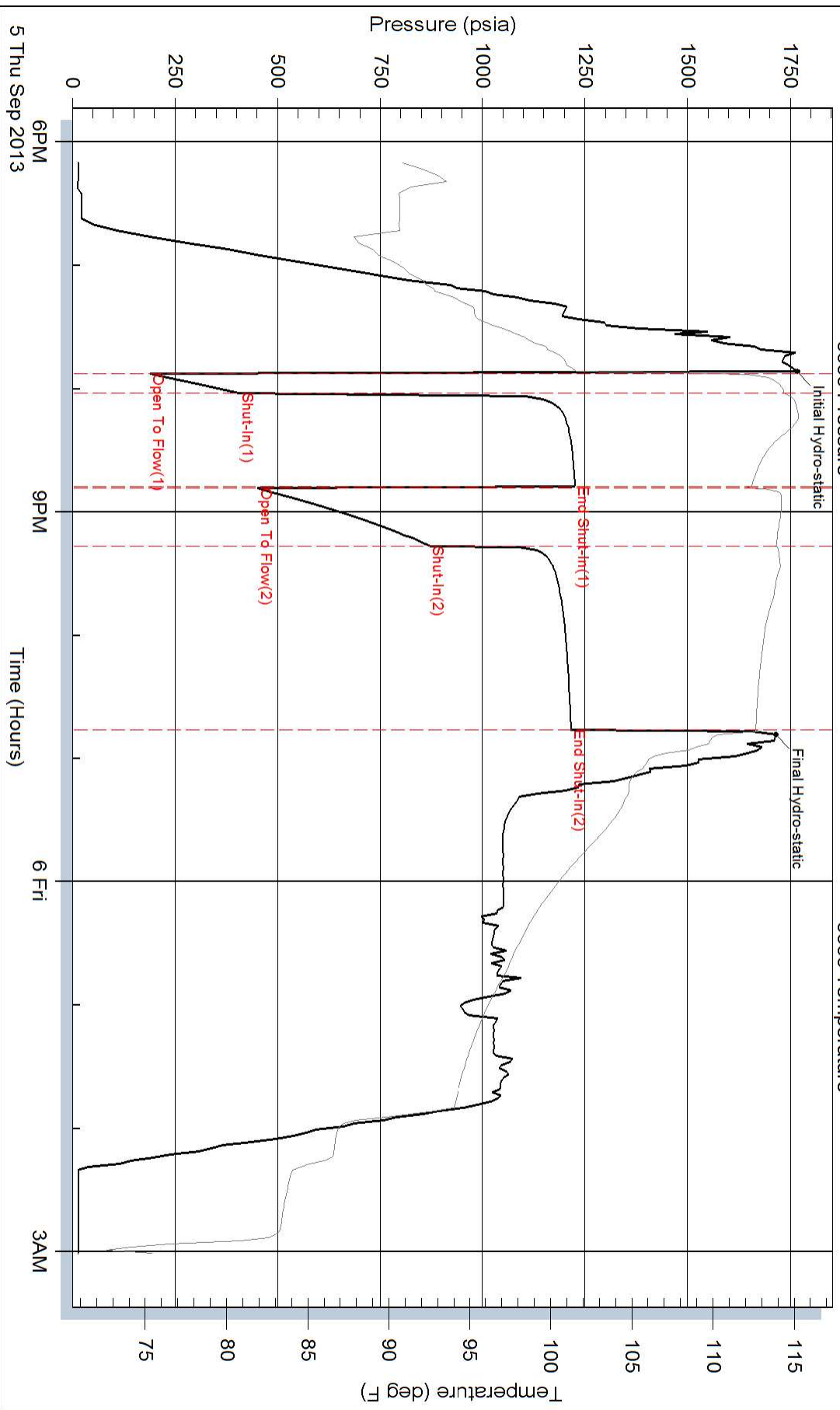
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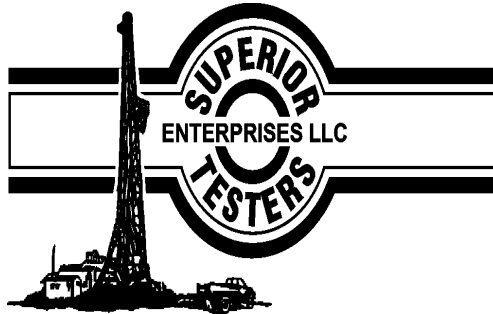
Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Stafford

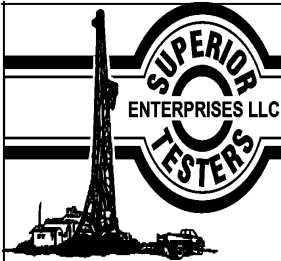
Start Date: 2013.09.06 @ 10:49:00

End Date: 2013.09.06 @ 16:56:00

Job Ticket #: 17624 DST #: 7

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.06 @ 17:12:14



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17624

DST#: 7

Test Start: 2013.09.06 @ 10:49:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:26:30

Time Test Ended: 16:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Great Bend-24

Interval: 3663.00 ft (KB) To 3671.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3671.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6749

Press @ RunDepth: 66.47 psia @ ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.06

End Date: 2013.09.06

Last Calib.: 2013.09.06

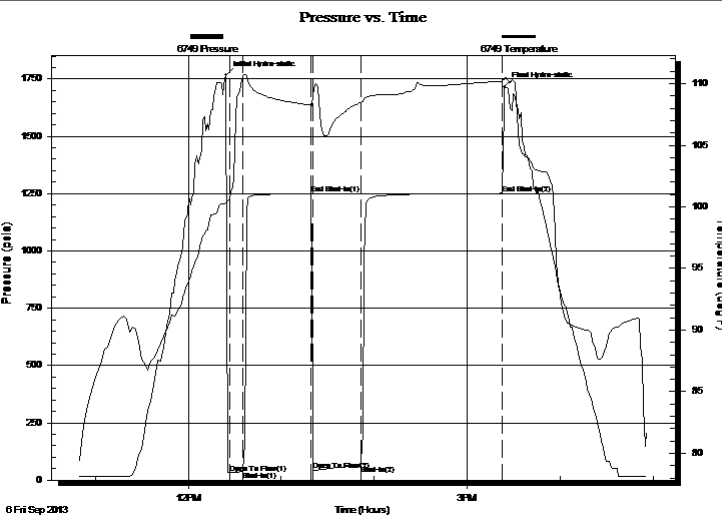
Start Time: 10:49:00

End Time: 16:56:00

Time On Btm: 2013.09.06 @ 12:24:30

Time Off Btm: 2013.09.06 @ 15:24:00

TEST COMMENT: 1st Opening 10 Minutes-Weak blow built 1 inch into water in 10 minutes
 1st Shut-in 45 Minutes-No blow back
 2nd Opening 30 Minutes-Weak blow built 7 1/2 inches into water in 30 minutes
 2nd Shut-in 90 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1766.45	100.33	Initial Hydro-static
2	30.83	100.69	Open To Flow (1)
11	38.56	110.38	Shut-In(1)
55	1249.47	108.26	End Shut-In(1)
56	41.13	109.10	Open To Flow (2)
87	66.47	108.44	Shut-In(2)
178	1250.93	110.21	End Shut-In(2)
180	1716.30	110.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	clean oil	0.14
60.00	oil & Water 5%oil 95%w ater	0.84
0.00	chlorides 22,000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17624

DST#: 7

Test Start: 2013.09.06 @ 10:49:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:26:30

Time Test Ended: 16:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Great Bend-24

Interval: 3663.00 ft (KB) To 3671.00 ft (KB) (TVD)

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3671.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6666

Press @ RunDepth: 1248.33 psia @ ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.06

End Date: 2013.09.06

Last Calib.: 2013.09.06

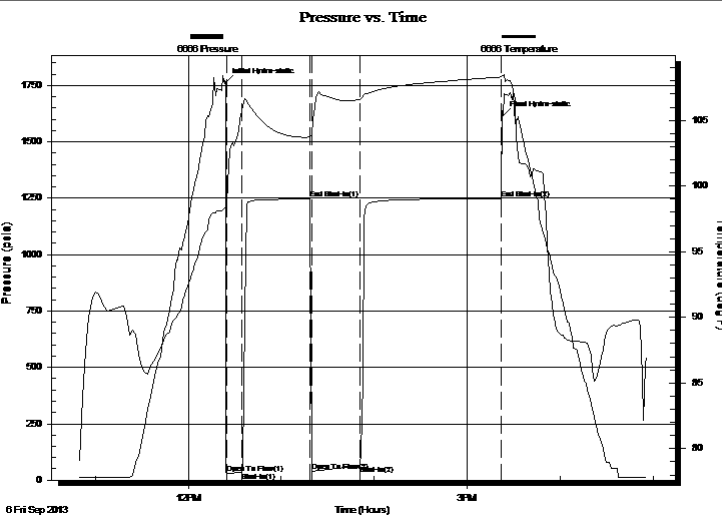
Start Time: 10:49:00

End Time: 16:55:30

Time On Btm: 2013.09.06 @ 12:24:00

Time Off Btm: 2013.09.06 @ 15:23:00

TEST COMMENT: 1st Opening 10 Minutes-Weak blow built 1 inch into water in 10 minutes
 1st Shut-in 45 Minutes-No blow back
 2nd Opening 30 Minutes-Weak blow built 7 1/2 inches into water in 30 minutes
 2nd Shut-in 90 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1763.88	98.43	Initial Hydro-static
1	30.37	98.62	Open To Flow (1)
11	36.12	105.64	Shut-In(1)
55	1246.89	103.73	End Shut-In(1)
56	38.71	103.88	Open To Flow (2)
87	63.47	106.60	Shut-In(2)
178	1248.33	108.30	End Shut-In(2)
179	1616.85	108.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	clean oil	0.14
60.00	oil & Water 5%oil 95%w ater	0.84
0.00	chlorides 22,000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17624

DST#: 7

Test Start: 2013.09.06 @ 10:49:00

Tool Information

Drill Pipe:	Length: 3651.00 ft	Diameter: 3.80 inches	Volume: 51.21 bbl	Tool Weight: 1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 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: 51.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3663.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3646.00	
Hydraulic Tool	5.00			3651.00	
Jars	5.00			3656.00	
Safety Joint	2.00			3658.00	
Packer	5.00			3663.00	22.00 Bottom Of Top Packer
Anchor	3.00			3666.00	
Recorder	1.00	6748	Inside	3667.00	
Recorder	1.00	6749	Outside	3668.00	
Bullnose	3.00			3671.00	8.00 Anchor Tool
Total Tool Length:	30.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226
ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17624

DST#: 7

Test Start: 2013.09.06 @ 10:49:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 78.00 sec/qt
Water Loss: 10.80 in³
Resistivity: ohm.m
Salinity: 9800.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psia

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	clean oil	0.140
60.00	oil & Water 5%oil 95%w ater	0.842
0.00	chlorides 22,000	0.000

Total Length: 70.00 ft Total Volume: 0.982 bbl

Num Fluid Samples: 0

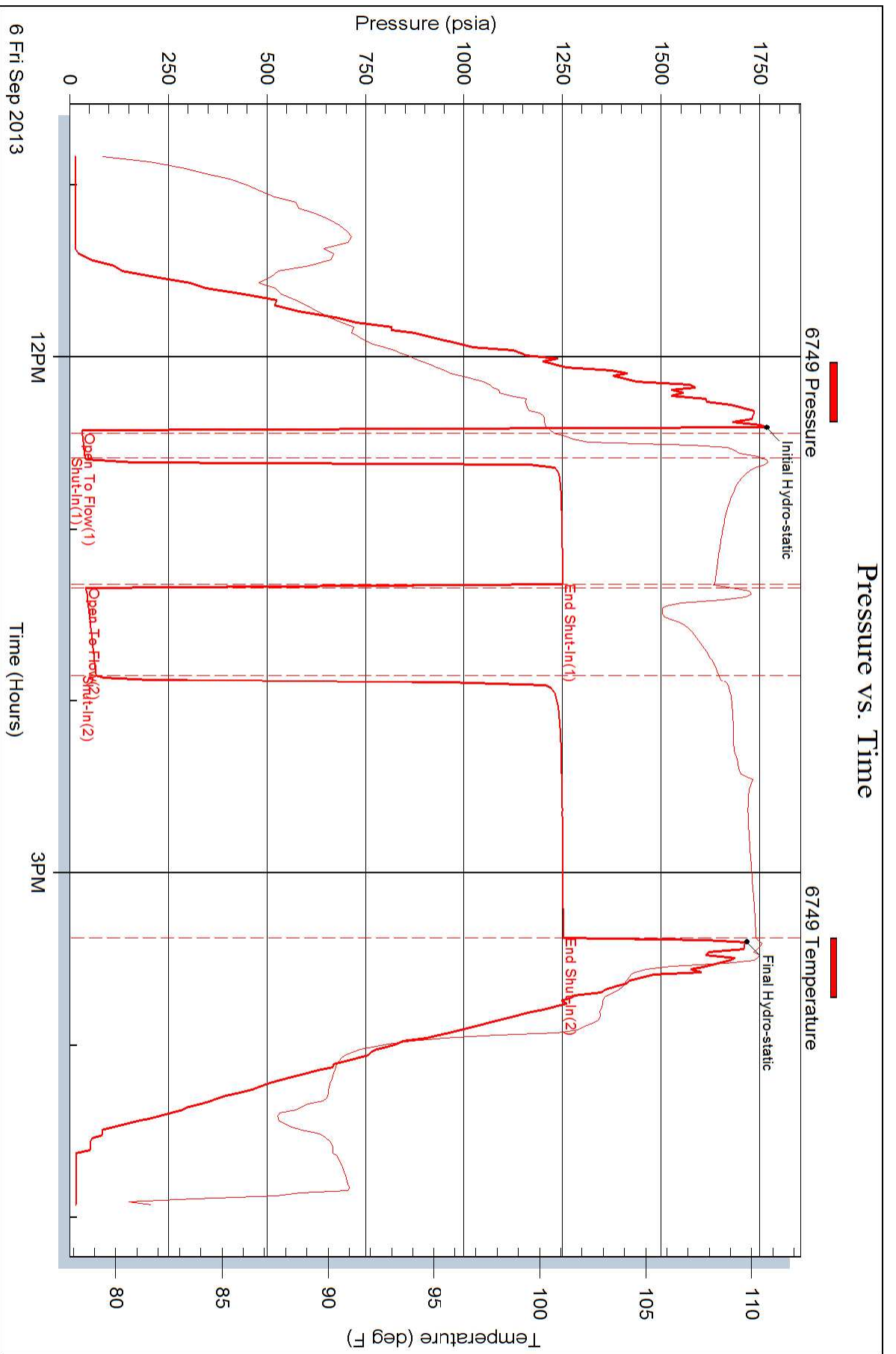
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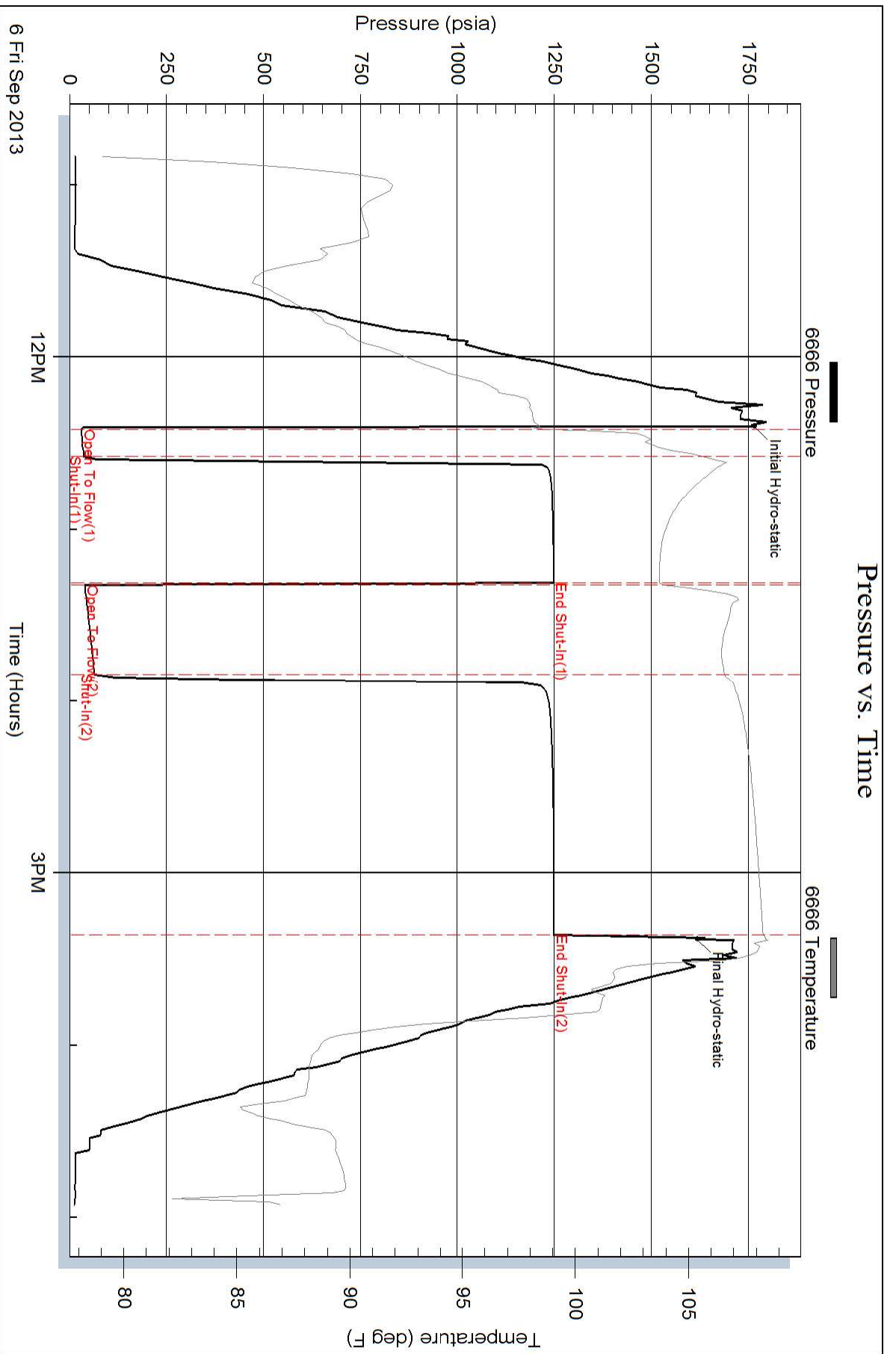
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration LLC**

8100 East 22nd Street North
#1800-2
Wichita, Kansas 67226

ATTN: Adam Nighswonger

Barclay Circle #1-3

3/21S/14W/Stafford

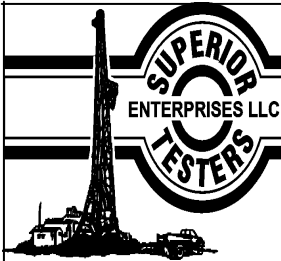
Start Date: 2013.09.06 @ 23:55:00

End Date: 2013.09.07 @ 06:15:30

Job Ticket #: 17625 DST #: 8

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2013.09.07 @ 06:39:09



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17625

DST#: 8

Test Start: 2013.09.06 @ 23:55:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:34:00

Time Test Ended: 06:15:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Great Bend-24

Interval: **3671.00 ft (KB) To 3679.00 ft (KB) (TVD)**

Reference Elevations: 1925.00 ft (KB)

Total Depth: 3679.00 ft (KB) (TVD)

1917.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6666

Press @ RunDepth: 156.02 psia @ ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.09.06

End Date: 2013.09.07

Last Calib.: 2013.09.07

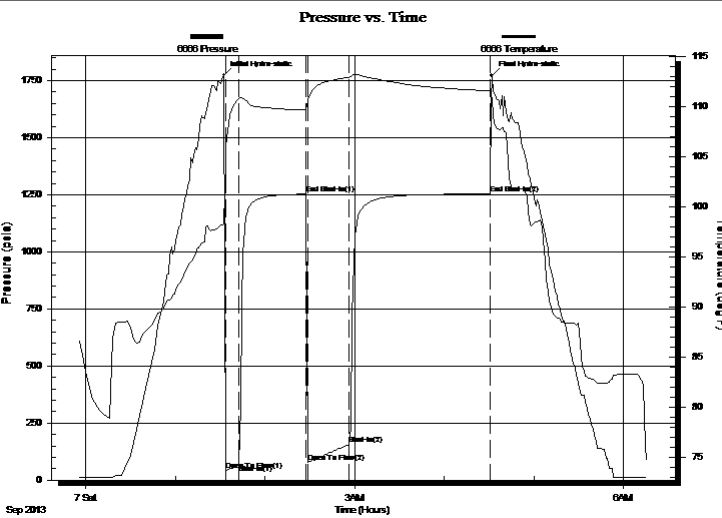
Start Time: 23:55:00

End Time: 06:15:30

Time On Btm: 2013.09.07 @ 01:32:30

Time Off Btm: 2013.09.07 @ 04:32:00

TEST COMMENT: 1st Opening 10 Minutes-Weak blow built 7 inches into water
 1st Shut-in 45 Minutes-No blow back
 2nd Opening 30 Minutes-Fair blow built bottom of bucket in 15 Minutes
 2nd Shut-in 90 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1773.65	98.29	Initial Hydro-static
2	41.92	105.99	Open To Flow (1)
10	68.01	110.78	Shut-In(1)
55	1252.47	109.66	End Shut-In(1)
56	77.51	110.59	Open To Flow (2)
84	156.02	112.93	Shut-In(2)
178	1253.53	111.61	End Shut-In(2)
180	1772.03	110.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	water	1.40
0.00	chlorides 23,000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17625

DST#: 8

Test Start: 2013.09.06 @ 23:55:00

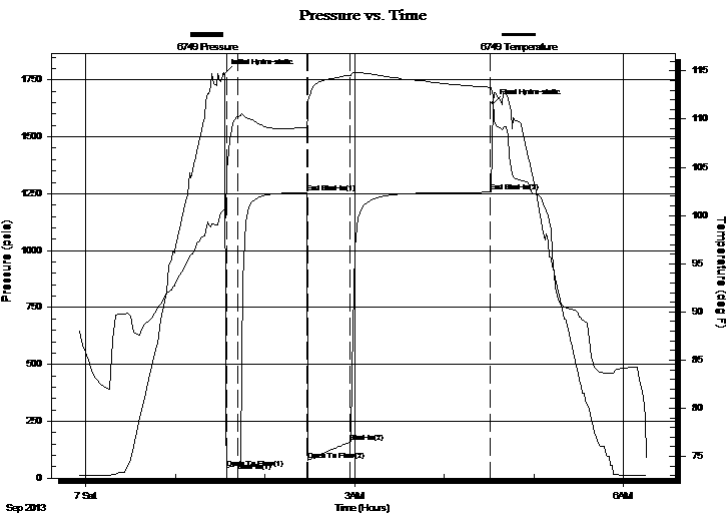
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:34:00
 Tester: Jared Scheck
 Time Test Ended: 06:15:30
 Unit No: 3320-Great Bend-24
 Interval: **3671.00 ft (KB) To 3679.00 ft (KB) (TVD)**
 Reference Elevations: 1925.00 ft (KB)
 Total Depth: 3679.00 ft (KB) (TVD) 1917.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6749

Press @ RunDepth: 1256.40 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.09.06 End Date: 2013.09.07 Last Calib.: 2013.09.07
 Start Time: 23:55:00 End Time: 06:16:00 Time On Btm: 2013.09.07 @ 01:33:00
 Time Off Btm: 2013.09.07 @ 04:32:30

TEST COMMENT: 1st Opening 10 Minutes-Weak blow built 7 inches into water
 1st Shut-in 45 Minutes-No blow back
 2nd Opening 30 Minutes-Fair blow built bottom of bucket in 15 Minutes
 2nd Shut-in 90 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1776.46	100.58	Initial Hydro-static
2	43.78	104.70	Open To Flow (1)
9	67.41	110.24	Shut-In(1)
55	1255.63	109.17	End Shut-In(1)
56	79.63	111.84	Open To Flow (2)
84	158.95	114.56	Shut-In(2)
178	1256.40	113.30	End Shut-In(2)
180	1647.86	112.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	water	1.40
0.00	chlorides 23,000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17625

DST#: 8

Test Start: 2013.09.06 @ 23:55:00

Tool Information

Drill Pipe:	Length: 3653.00 ft	Diameter: 3.80 inches	Volume: 51.24 bbl	Tool Weight: 1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 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: 51.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3671.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3654.00	
Hydraulic Tool	5.00			3659.00	
Jars	5.00			3664.00	
Safety Joint	2.00			3666.00	
Packer	5.00			3671.00	22.00 Bottom Of Top Packer
Anchor	3.00			3674.00	
Recorder	1.00	6748	Inside	3675.00	
Recorder	1.00	6749	Outside	3676.00	
Bullnose	3.00			3679.00	8.00 Anchor Tool
Total Tool Length:	30.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Valhalla Exploration LLC

3/21S/14W/Stafford

8100 East 22nd Street North
 #1800-2
 Wichita, Kansas 67226
 ATTN: Adam Nighswonger

Barclay Circle #1-3

Job Ticket: 17625

DST#: 8

Test Start: 2013.09.06 @ 23:55:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 78.00 sec/qt
 Water Loss: 10.80 in³
 Resistivity: ohm.m
 Salinity: 9800.00 ppm
 Filter Cake: 1.00 inches

Cushion Type:
 Cushion Length: ft
 Cushion Volume: bbl
 Gas Cushion Type:
 Gas Cushion Pressure: psia

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

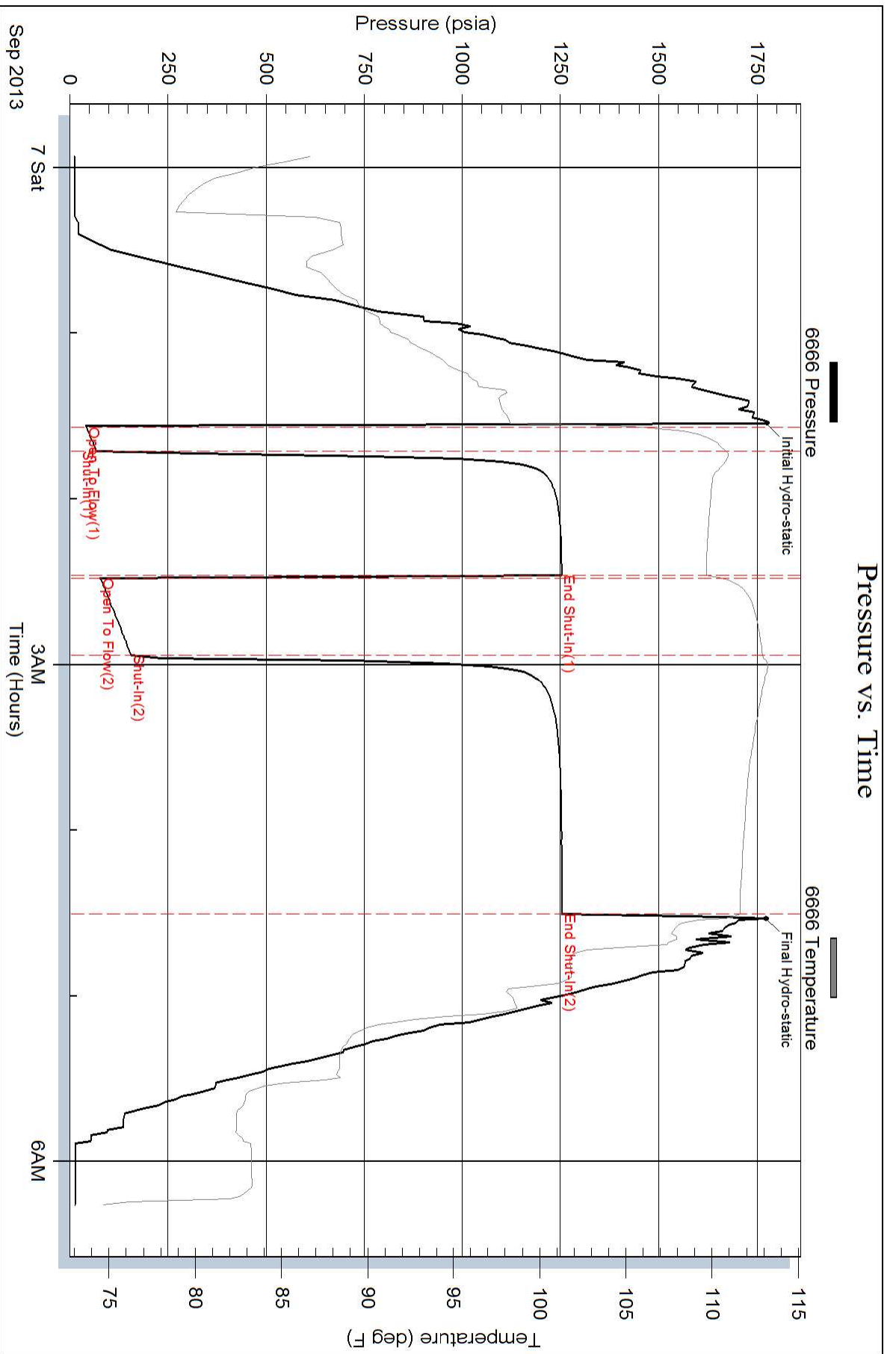
Length ft	Description	Volume bbl
100.00	water	1.403
0.00	chlorides 23,000	0.000

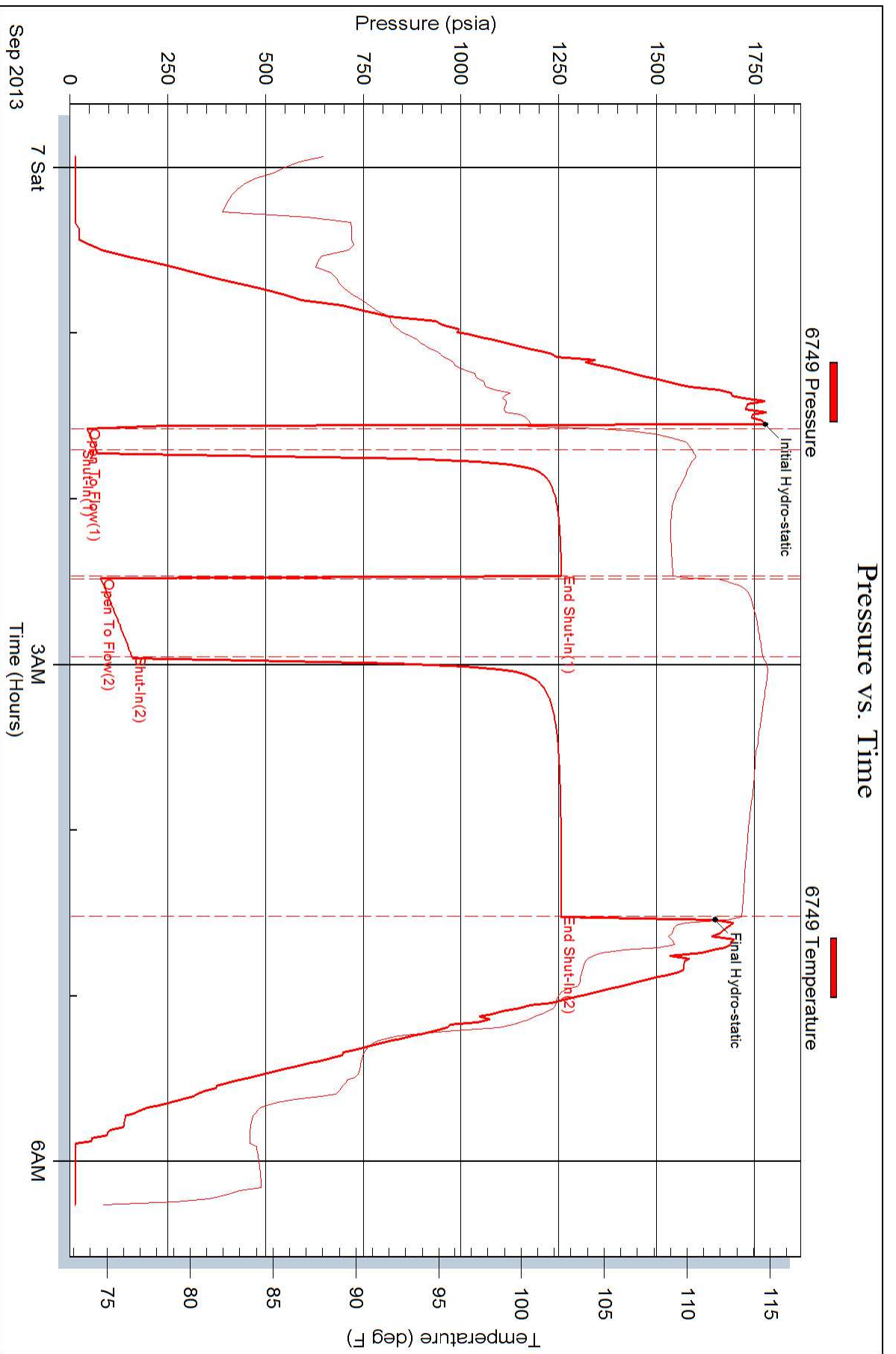
Total Length: 100.00 ft Total Volume: 1.403 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: chlorides 23,000/







PAGE	CUST NO	INVOICE DATE
1 of 1	1007761	08/29/2013
INVOICE NUMBER		
1717 - 91272570		

Liberal (620) 624-2277

B VALHALLA EXPLORATION LLC
 I 133 NORTH GLENDALE
 L WICHITA
 L KS US 67208
 T
 O **ATTN:** KENNEDY

J **LEASE NAME** Barclay-Circle Unit #1-3
 O **LOCATION**
 B **COUNTY** Stafford
 S **STATE** KS
 I **JOB DESCRIPTION** Cement-New Well Casing/Pi
 T **JOB CONTACT**
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40634270	19842		Net - 30 days	09/28/2013

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 08/28/2013 to 08/28/2013				
0040634270				
171704238A Cement-New Well Casing/Pi 08/28/2013 8 5/8" Surface				
A-Con' Blend	200.00	EA	10.79	2,157.60 T
Premium Plus Cement	200.00	EA	9.45	1,890.80 T
Celloflake	200.00	EA	2.15	429.20 T
Calcium Chloride	1,128.00	EA	0.61	686.95 T
Cement Gel	476.00	EA	0.15	69.02 T
"Top Rubber Cmt Plug, 8 5/8""	1.00	EA	130.50	130.50
"Baffle Plate Alum., 8 5/8" (Blue)"	1.00	EA	98.60	98.60
"Centralizer, 8 5/8" (Blue)"	3.00	EA	52.20	156.60
"Cement Basket, 8 5/8"	1.00	EA	182.70	182.70
"Unit Mileage Chg (PU, cars one way)"	45.00	MI	2.47	110.93
Heavy Equipment Mileage	90.00	MI	4.06	365.40
"Proppant & Bulk Del. Chgs., per ton mil	846.00	EA	0.93	785.09
Depth Charge; 501'-1000'	1.00	EA	696.00	696.00
Blending & Mixing Service Charge	400.00	BAG	0.81	324.80
Plug Container Util. Chg.	1.00	EA	145.00	145.00
"Service Supervisor, first 8 hrs on loc.	1.00	EA	101.50	101.50
Cement Data Acquisition Monitor	1.00	EA	319.00	319.00

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	8,649.69
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	374.20
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	9,023.89
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



PAGE 1 of 1	CUST NO 1007761	INVOICE DATE 09/09/2013
INVOICE NUMBER 1718 - 91279676		

Pratt (620) 672-1201
 B VALHALLA EXPLORATION LLC
 I 133 NORTH GLENDALE
 L WICHITA
 L KS US 67208
 T
 O ATTN: KENNEDY

J LEASE NAME Barclay-Circle Unit 1-3
 O LOCATION
 B COUNTY Stafford
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40638209	19843		Net - 30 days	10/09/2013

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 09/08/2013 to 09/08/2013				
0040638209				
171809102A Cement-New Well Casing/Pi 09/08/2013 Cement 5 1/2" Longstring				
50/50 POZ	125.00	EA	8.25	1,031.18 T
60/40 POZ	80.00	EA	9.00	719.95 T
Celloflake	32.00	EA	2.77	88.79 T
C-41P	27.00	EA	3.00	80.99 T
Calcium Chloride	210.00	EA	0.79	165.36 T
Cement Friction Reducer	32.00	EA	4.50	143.99 T
Gypsum	625.00	EA	0.56	351.54 T
FLA-322	84.00	EA	5.62	472.47 T
Cement Gel	210.00	EA	0.19	39.37 T
Gilsonite	625.00	EA	0.50	314.04 T
Mud Flush	500.00	EA	0.64	322.48 T
Claymax KCL Substitute	4.00	EA	26.25	104.99 T
"Latch Down Plug & Baffle, 5 1/2"" (Blu	1.00	EA	299.98	299.98
"Auto Fill Float Shoe 5 1/2"" (Blue)"	1.00	EA	269.98	269.98
"Turbolizer, 5 1/2"" (Blue)"	8.00	EA	82.49	659.95
"5 1/2"" Basket (Blue)"	1.00	EA	217.48	217.48
"Unit Mileage Chg (PU, cars one way)"	45.00	MI	3.19	143.43
Heavy Equipment Mileage	90.00	MI	5.25	472.47
"Proppant & Bulk Del. Chgs., per ton mil	392.00	EA	1.20	470.37
Depth Charge; 3001-4000'	1.00	EA	1,619.89	1,619.89
Blending & Mixing Service Charge	205.00	BAG	1.05	215.23
Plug Container Util. Chg.	1.00	EA	187.49	187.49
"Service Supervisor, first 8 hrs on loc.	1.00	EA	131.24	131.24

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	8,522.66
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	274.21
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	8,796.87
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		