

Confidentiality Requested:

☐ Yes ☒ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1191956

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 # 33186

Name: LB Exploration, Inc.

Address 1: 2135 2ND RD

Address 2: _____

City: HOLYROOD State: KS Zip: 67450 + 9021

Contact Person: Michael Petermann

Phone: (785) 252-8034

CONTRACTOR: License # 34541

Name: Ninnescah Drilling LLC

Wellsite Geologist: Steven Petermann

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: C & C Exploration

Well Name: Petermann #1

Original Comp. Date: 11/25/1985 Original Total Depth: 3352

☒ 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 #: _____

8/16/2013 8/22/2013 9/16/2013
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-053-20985-00-02

Spot Description: _____

SW SE NE SE Sec. 28 Twp. 17 S. R. 10 ☐ East ☒ West

1420 Feet from ☐ North / ☒ South Line of Section

430 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: Ellsworth

Lease Name: Petermann 28 Well #: 1

Field Name: _____

Producing Formation: Lansing

Elevation: Ground: 1829 Kelly Bushing: 1842

Total Vertical Depth: 3598 Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: 304 Feet

Multiple Stage Cementing Collar Used? ☒ Yes ☐ No

If yes, show depth set: 626 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: Evaporated

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: Deanna Garrison Date: 03/14/2014

1191956

Operator Name: LB Exploration, Inc. Lease Name: Petermann 28 Well #: 1
 Sec. 28 Twp. 17 S. R. 10 ☐ East ☒ West County: Ellsworth

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 ☒ Yes ☐ No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey ☒ Yes ☐ No Cores Taken ☐ Yes ☒ No Electric Log Run ☒ Yes ☐ No List All E. Logs Run: Dual Compensated Porosity Dual Induction Microresistivity	☒ Log Formation (Top), Depth and Datum ☐ Sample <table style="width:100%"> <tr> <th style="text-align:left">Name</th> <th style="text-align:left">Top</th> <th style="text-align:left">Datum</th> </tr> <tr> <td>Heebner</td> <td>2865</td> <td>-1023</td> </tr> <tr> <td>Brown Lime</td> <td>2981</td> <td>-1139</td> </tr> <tr> <td>Lansing</td> <td>2996</td> <td>-1154</td> </tr> <tr> <td>Arbuckle</td> <td>3327</td> <td>-1485</td> </tr> </table>	Name	Top	Datum	Heebner	2865	-1023	Brown Lime	2981	-1139	Lansing	2996	-1154	Arbuckle	3327	-1485
Name	Top	Datum														
Heebner	2865	-1023														
Brown Lime	2981	-1139														
Lansing	2996	-1154														
Arbuckle	3327	-1485														

CASING RECORD ☒ New ☐ 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
Production	7.875	5.5	14	3405	ASC	125	

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate				
☐ Protect Casing	-			
☐ Plug Back TD				
☐ 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
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. ☐ Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> ☐ Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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ALLIED OIL & GAS SERVICES, LLC 061748

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

GREAT BEND KS

DATE <u>8-22-13</u>	SEC. <u>28</u>	TWP. <u>17</u>	RANGE <u>10W</u>	CALLED OUT <u>12:00 PM</u>	ON LOCATION <u>5:00 PM</u>	JOB START <u>7:30 PM</u>	JOB FINISH <u>8:30 PM</u>
LEASE <u>PETERMANN 28</u>			WELL # <u>1</u>	LOCATION <u>CLIFFIN E TO 4RD 1 1/2 N</u>		COUNTY <u>GISWORTH</u>	STATE <u>KS</u>
OLD OR <u>NEW</u> (Circle one)			W INTO				

CONTRACTOR NINNESCHA

OWNER Same

TYPE OF JOB Production

HOLE SIZE 7 7/8 T.D. 3600

CASING SIZE 5 1/2 DEPTH 3405

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 1500 MINIMUM 600

MEAS. LINE SHOE JOINT 42.09

CEMENT LEFT IN CSG. 42.09

PERFS.

DISPLACEMENT FRESH WATER 82.05 DBIS

EQUIPMENT

PUMP TRUCK CEMENTER TIM DICKSON
597 HELPER KEVIN EDDY
BULK TRUCK
544-241 DRIVER KEVIN WEIGHOUSE
BULK TRUCK
DRIVER

CEMENT

AMOUNT ORDERED 125 ASC 2 1/2" 801 6 1/2" 801

10% SALT 5# PCE BACK GILSONITE 3 1/2" 801 F1160

+DF 50 SKS 60140 4 1/2" 801 500 DV1100

96al KCl

COMMON 30 @ 17.90 537.00

POZMIX 20 @ 9.35 187.00

GEL 2 @ 23.40 46.80

CHLORIDE @

ASC 125 @ 20.90 2,612.50

@

Gilsonite 625 @ .98 612.50

F1160 35 @ 18.90 661.50

DF 17 @ 9.80 166.60

DV1100 500 @ 1.27 635.00

9 Gal KCl @ 34.40 309.60

@

@

HANDLING 199X @ 2.48 493.52

MILEAGE 8.81 X 30 X 2.60 687.18

TOTAL 6,949.20

REMARKS:

Ran 3405 CSs Broke circulation with
Ris Mud Pressure test 1000# 5 DBIS water
10 DBIS DV1100 5 DBIS water cement
rat + mouse hole hook up to head
Ran 23.51 DBIS cement wash lines
Displace 82.05 DBIS water
Plug down 1500# float did hold

SERVICE

DEPTH OF JOB 3406

PUMP TRUCK CHARGE 2600.47

EXTRA FOOTAGE @

MILEAGE Nvm 30 @ 7.70 231.00

MANIFOLD @

Nvm 30 @ 4.40 132.00

@

TOTAL 2,963.47

CHARGE TO: L-B EXPLORATION

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

5 1/2" 1 BASKET 159.40 159.40

8 CENTRALIZERS @ 28.40 227.20

LATEL DOWN PLUG @ 398.75 398.75

PACKER SHOE @ 2,998.00 2,998.00

PORT COLLAR @ 4,904.40 4,904.40

@

TOTAL 8,687.25

To: Allied Oil & Gas Services, LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Michael Petermann

SIGNATURE [Signature]

Thank you!

SALES TAX (If Any)

TOTAL CHARGES 18,600.42

DISCOUNT 2,973.80

IF PAID IN 30 DAYS
15,626.62

ALLIED OIL & GAS SERVICES, LLC 061820

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

Garrett Bendley

DATE <u>9-23-13</u>	SEC. <u>28</u>	TWP. <u>17</u>	RANGE <u>10</u>	CALLED OUT	ON LOCATION <u>11/30</u>	JOB START <u>4:00pm</u>	JOB FINISH <u>4:30pm</u>
LEASE <u>Peterson</u>		WELL # <u>28-1</u>		LOCATION <u> Hwy 156 & E 12th</u>		COUNTY <u>Ellis</u>	STATE <u>TX</u>
☒ OLD OR NEW (Circle one)				<u>1 1/4 N Wins</u>			

CONTRACTOR Chase Well Service
TYPE OF JOB Port Collar
HOLE SIZE 7 7/8 T.D.
CASING SIZE 5 1/2 DEPTH
TUBING SIZE 2 7/8 DEPTH
DRILL PIPE DEPTH
TOOL Port Collar DEPTH 626
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT 2 1/2 bbls Freshwater

EQUIPMENT

PUMP TRUCK CEMENTER Glen Ginter
597 HELPER Charles Kingon
BULK TRUCK
599 DRIVER Shawn Kerns
BULK TRUCK
DRIVER

REMARKS:

RBP @ 2291 / 500 sand @ 2261
Port collar @ 626 ft
500 sand in 7 7/8 water / Pressure Tubing
100# 9 balance. My 100 lbs Displace 2 1/2
100# cement did not cure. Hook up to back side
pump 4 bbls water rough out cement go into
2261 40 wash sand Rig Down

OWNER
CEMENT
AMOUNT ORDERED 100 sacks 65% class A
35% port 65% gel 40 fls

COMMON	@		
POZMIX	@		
GEL	@		
CHLORIDE	@		
ASC	@		
<u>3 sacks of sand</u>	@	<u>14.40</u>	<u>43.20</u>
<u>100 SX Alum</u>	@	<u>16.50</u>	<u>1650.00</u>
<u>410 seal 25</u>	@	<u>2.97</u>	<u>74.25</u>
	@		
	@		
	@		
HANDLING <u>109.99</u>	@	<u>2.48</u>	<u>272.77</u>
MILEAGE <u>4.56 x 30 x</u>			<u>355.68</u>

TOTAL 2352.70
93.20
2395.90

SERVICE

DEPTH OF JOB		
PUMP TRUCK CHARGE	<u>2158.25</u>	
EXTRA FOOTAGE	@	
MILEAGE <u>Hvm 30</u>	@ <u>7.70</u>	<u>231.00</u>
MANIFOLD <u>Hvm 30</u>	@ <u>4.40</u>	<u>132.00</u>
	@	
	@	

TOTAL 2521.75

CHARGE TO: L-B
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	

TOTAL

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

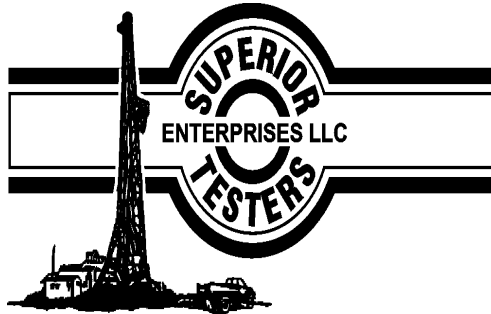
PRINTED NAME x Michael Peterson

SIGNATURE x [Signature]

Thank You!!

SALES TAX (If Any)
TOTAL CHARGES 4874.45
779.91
DISCOUNT IF PAID IN 30 DAYS

4094.53
43.20
4137.73



DRILL STEM TEST REPORT

Prepared For: **L B Exploration**

2135 2nd Rd Holyrood KS 67450+9021

ATTN: Steven Petermann

Petermann 28 #1

28-17-10 Ellsworth

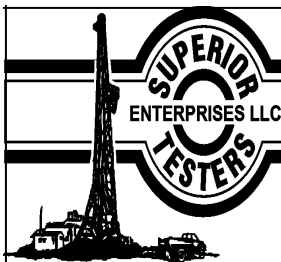
Start Date: 2013.08.19 @ 22:15:00

End Date: 2013.08.20 @ 06:01:00

Job Ticket #: 17024 DST #: 1

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

Printed: 2013.08.20 @ 06:18:00



DRILL STEM TEST REPORT

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 17024

DST#: 1

Test Start: 2013.08.19 @ 22:15:00

GENERAL INFORMATION:

Formation: **LCK**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:48:00

Time Test Ended: 06:01:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jarefd Scheck

Unit No: 3320- Great Bend -60

Interval: **3138.00 ft (KB) To 3253.00 ft (KB) (TVD)**

Reference Elevations: 1840.00 ft (KB)

Total Depth: 3253.00 ft (KB) (TVD)

1830.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6731

Press@RunDepth: 152.27 psia @ ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.19

End Date:

2013.08.20

Last Calib.:

2013.08.20

Start Time: 22:15:00

End Time:

06:01:00

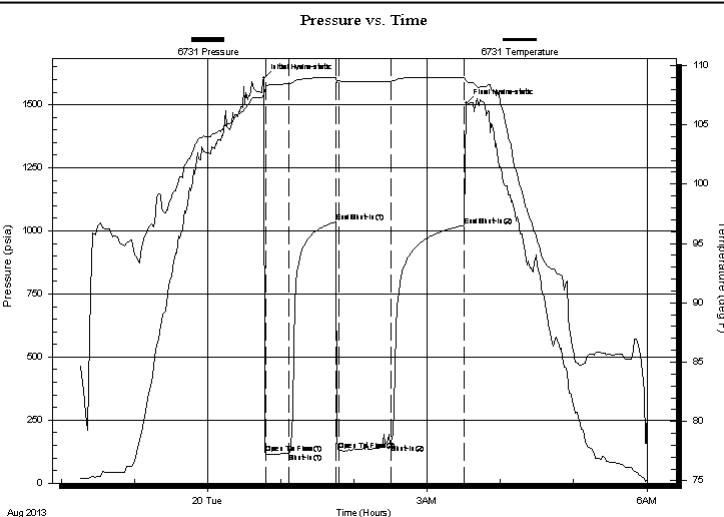
Time On Btm:

2013.08.20 @ 00:46:00

Time Off Btm:

2013.08.20 @ 03:32:00

TEST COMMENT: 1st Opening 20 Minutes-Weak blow built 5 1/2 inches into bucket w water in 20 minutes
1st Shut-in 40 Minutes-No blow back
2nd Opening 40 Minutes-Fair blow built 3 inches from bottom of buckert in 40 minutes
2nd SHut-in 60 MinutesNo blow back



PRESSURE SUMMARY

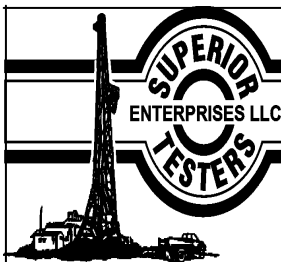
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1604.98	107.59	Initial Hydro-static
2	116.60	108.25	Open To Flow (1)
21	119.75	108.47	Shut-In(1)
59	1035.49	108.98	End Shut-In(1)
62	131.77	108.70	Open To Flow (2)
104	152.27	108.67	Shut-In(2)
164	1021.88	108.98	End Shut-In(2)
166	1506.22	108.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	oil cut mud 5%oil 95%mud	1.54

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 17024

DST#: 1

Test Start: 2013.08.19 @ 22:15:00

GENERAL INFORMATION:

Formation: LCK

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:48:00

Time Test Ended: 06:01:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jarefd Scheck

Unit No: 3320- Great Bend -60

Interval: 3138.00 ft (KB) To 3253.00 ft (KB) (TVD)

Total Depth: 3253.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1840.00 ft (KB)

1830.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8159

Press@RunDepth: 1026.19 psia @ ft (KB)

Start Date: 2013.08.19

End Date:

2013.08.20

Start Time: 22:15:00

End Time:

06:00:30

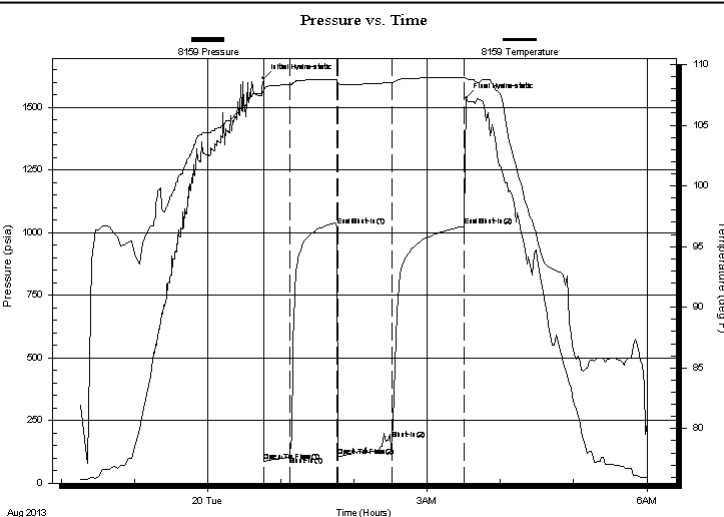
Capacity: 5000.00 psia

Last Calib.: 2013.08.20

Time On Btm: 2013.08.20 @ 00:45:50

Time Off Btm: 2013.08.20 @ 03:32:00

TEST COMMENT: 1st Opening 20 Minutes-Weak blow built 5 1/2 inches into bucket w ater in 20 minutes
1st Shut-in 40 Minutes-No blow back
2nd Opening 40 Minutes-Fair blow built 3 inches from bottom of buckert in 40 minutes
2nd SHut-in 60 MinutesNo blow back



PRESSURE SUMMARY

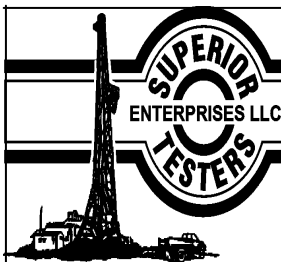
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1617.45	107.89	Initial Hydro-static
1	86.60	107.78	Open To Flow (1)
22	105.68	108.34	Shut-In(1)
60	1028.38	108.73	End Shut-In(1)
61	107.31	108.43	Open To Flow (2)
106	175.19	108.50	Shut-In(2)
165	1026.19	108.94	End Shut-In(2)
167	1538.32	108.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	oil cut mud 5%oil 95%mud	1.54

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 17024

DST#: 1

Test Start: 2013.08.19 @ 22:15:00

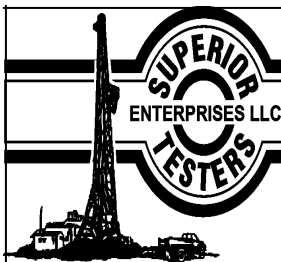
Tool Information

Drill Pipe:	Length:	3122.00 ft	Diameter:	3.80 inches	Volume:	43.79 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
					Total Volume:	43.79 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		4.00 ft					String Weight: Initial	45000.00 lb
Depth to Top Packer:		3138.00 ft					Final	45000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		115.00 ft						
Tool Length:		135.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-In Tool	5.00			3123.00	
Hydraulic Tool	5.00			3128.00	
Packer	5.00			3133.00	20.00 Bottom Of Top Packer
Packer	5.00			3138.00	
Anchor	10.00			3148.00	
Change Over Sub	0.75			3148.75	
Drill Pipe	63.50			3212.25	
Change Over Sub	0.75			3213.00	
Anchor	35.00			3248.00	
Recorder	1.00	6731	Inside	3249.00	
Recorder	1.00	8159	Outside	3250.00	
Bullnose	3.00			3253.00	115.00 Bottom Packers & Anchor

Total Tool Length: 135.00



DRILL STEM TEST REPORT

FLUID SUMMARY

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

Job Ticket: 17024

DST#: 1

ATTN: Steven Petermann

Test Start: 2013.08.19 @ 22:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 7.20 in³

Resistivity: ohm.m

Salinity: 1600.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psia

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	oil cut mud 5%oil 95%mud	1.543

Total Length: 110.00 ft

Total Volume: 1.543 bbl

Num Fluid Samples: 0

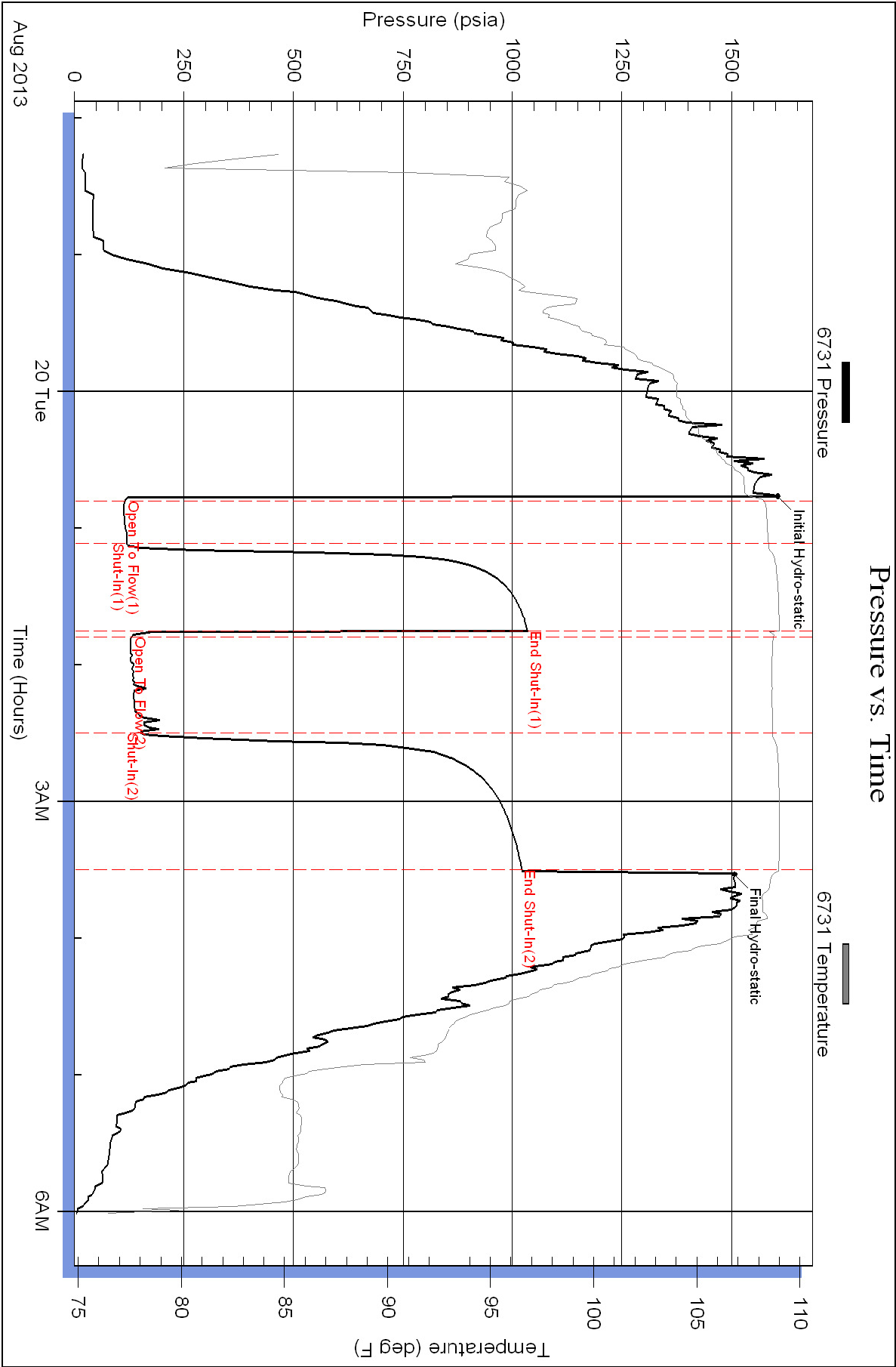
Num Gas Bombs: 0

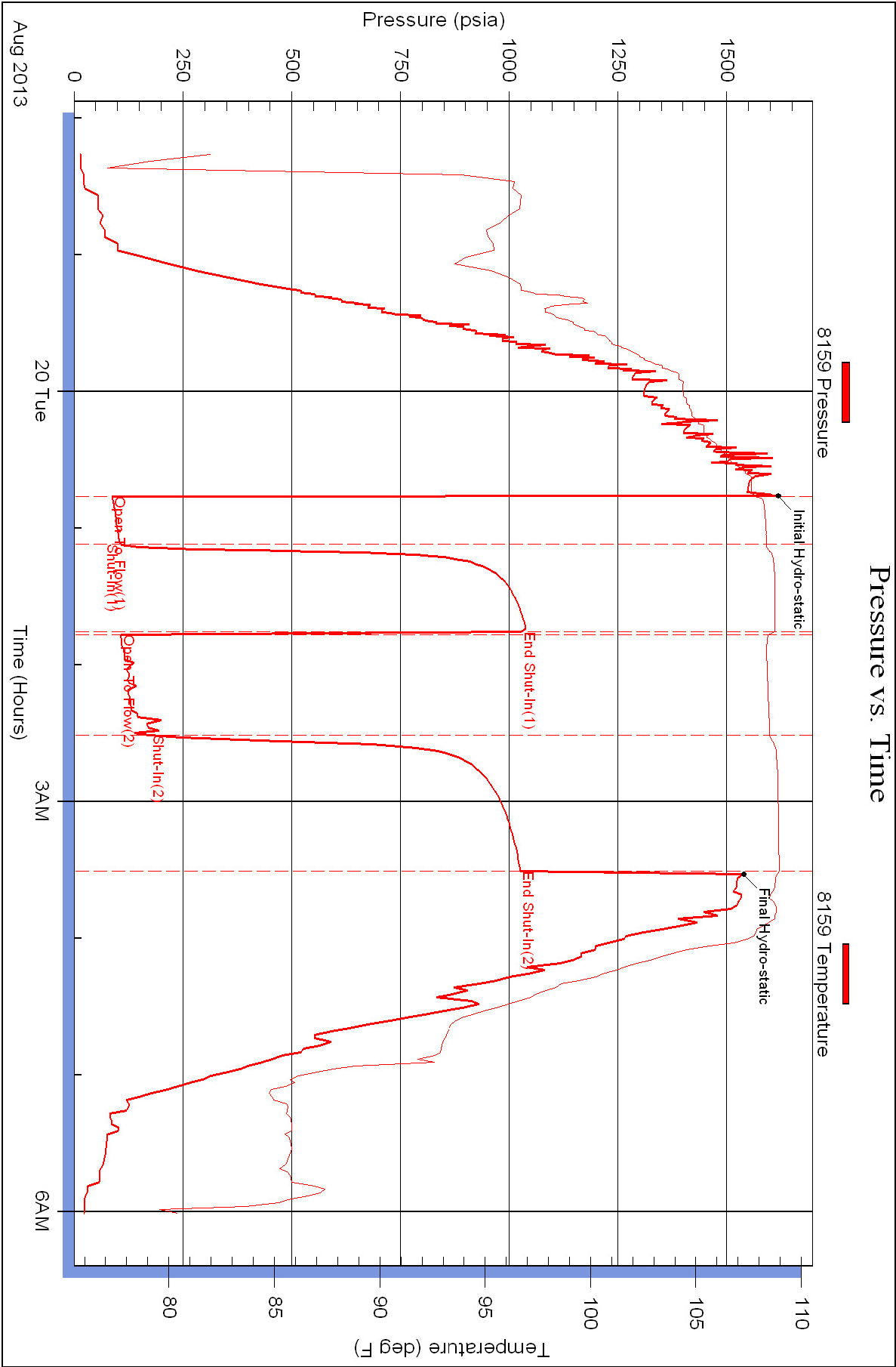
Serial #:

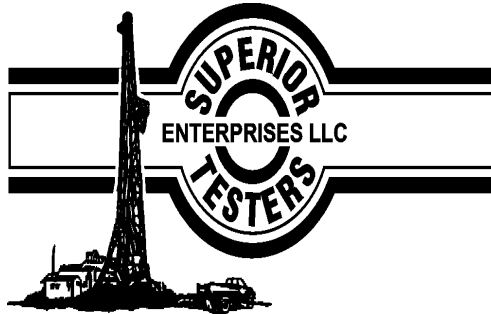
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **L B Exploration**

2135 2nd Rd Holyrood KS 67450+9021

ATTN: Steven Petermann

Petermann 28 #1

28-17-10 Ellsworth

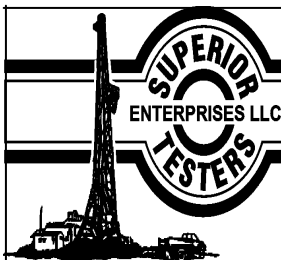
Start Date: 2013.08.20 @ 19:19:00

End Date: 2013.08.21 @ 00:46:30

Job Ticket #: 17025 DST #: 2

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

Printed: 2013.08.21 @ 01:01:57



DRILL STEM TEST REPORT

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 17025

DST#: 2

Test Start: 2013.08.20 @ 19:19:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:57:00

Time Test Ended: 00:46:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320- Great Bend-60

Interval: **3269.00 ft (KB) To 3345.00 ft (KB) (TVD)**

Reference Elevations: 1840.00 ft (KB)

Total Depth: 3345.00 ft (KB) (TVD)

1830.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6731

Press@RunDepth: 88.08 psia @ ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.20

End Date:

2013.08.21

Last Calib.:

2013.08.21

Start Time: 19:19:00

End Time:

00:46:30

Time On Btm:

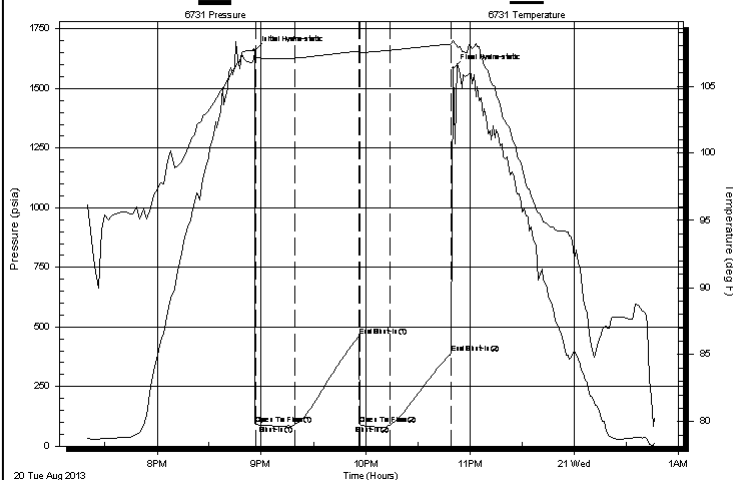
2013.08.20 @ 20:56:00

Time Off Btm:

2013.08.20 @ 22:50:30

TEST COMMENT: 1st Opening 20 Minutes-Weak blow died off 10 minutes into open
1st Shut-in 40 Minutes-No blow back
2nd Opening 15 Minutes-Very weak surge did not build
2nd Shut-in 30 Minutes-No blow back

Pressure vs. Time



PRESSURE SUMMARY

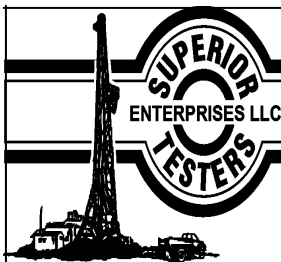
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1660.63	107.63	Initial Hydro-static
1	93.07	107.18	Open To Flow (1)
23	88.87	107.09	Shut-In(1)
60	459.92	107.61	End Shut-In(1)
61	90.11	107.53	Open To Flow (2)
78	88.08	107.67	Shut-In(2)
114	391.50	108.14	End Shut-In(2)
115	1583.62	108.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Oil cut mud 4%oil 96%mud	0.14

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 17025

DST#:2

Test Start: 2013.08.20 @ 19:19:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:57:00

Time Test Ended: 00:46:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320- Great Bend-60

Interval: **3269.00 ft (KB) To 3345.00 ft (KB) (TVD)**

Reference Elevations: 1840.00 ft (KB)

Total Depth: 3345.00 ft (KB) (TVD)

1830.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8159

Press@RunDepth: 401.72 psia @ ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.20

End Date:

2013.08.21

Last Calib.:

2013.08.21

Start Time: 19:19:00

End Time:

00:47:00

Time On Btm:

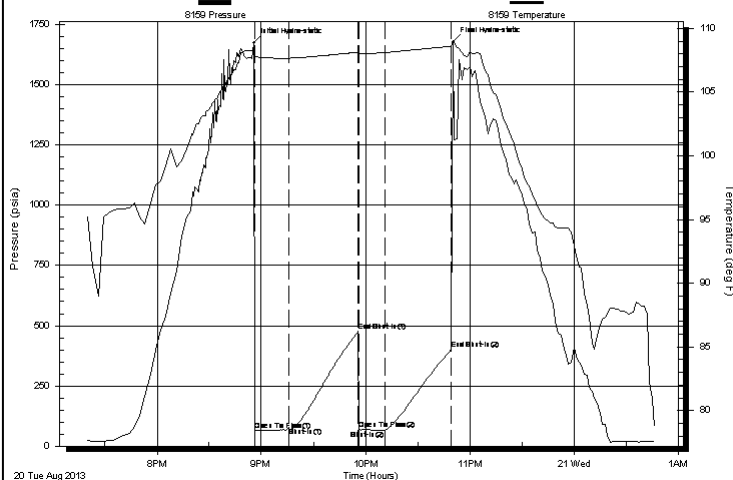
2013.08.20 @ 20:55:50

Time Off Btm:

2013.08.20 @ 22:50:30

TEST COMMENT: 1st Opening 20 Minutes-Weak blow died off 10 minutes into open
1st Shut-in 40 Minutes-No blow back
2nd Opening 15 Minutes-Very weak surge did not build
2nd Shut-in 30 Minutes-No blow back

Pressure vs. Time



PRESSURE SUMMARY

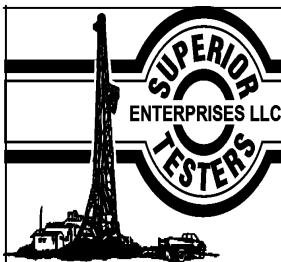
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1674.63	108.28	Initial Hydro-static
1	66.94	107.85	Open To Flow (1)
21	77.08	107.67	Shut-In(1)
60	475.54	108.14	End Shut-In(1)
61	68.47	107.93	Open To Flow (2)
76	67.28	108.11	Shut-In(2)
114	401.72	108.60	End Shut-In(2)
115	1678.19	109.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Oil cut mud 4%oil 96%mud	0.14

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

Job Ticket: 17025

DST#: 2

ATTN: Steven Petermann

Test Start: 2013.08.20 @ 19:19:00

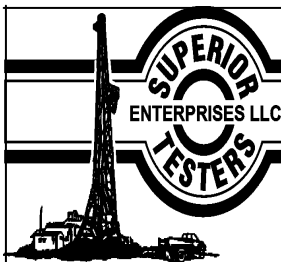
Tool Information

Drill Pipe:	Length: 3282.00 ft	Diameter: 3.80 inches	Volume: 46.04 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: 70000.00 lb
		Total Volume:	46.04 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3269.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter:	6.75 inches	
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-In Tool	5.00			3254.00	
Hydraulic Tool	5.00			3259.00	
Packer	5.00			3264.00	20.00 Bottom Of Top Packer
Packer	5.00			3269.00	
Anchor	10.00			3279.00	
Change Over Sub	0.75			3279.75	
Drill Pipe	31.50			3311.25	
Change Over Sub	0.75			3312.00	
Anchor	28.00			3340.00	
Recorder	1.00	6731	Inside	3341.00	
Recorder	1.00	8159	Outside	3342.00	
Bullnose	3.00			3345.00	76.00 Bottom Packers & Anchor

Total Tool Length: 96.00



DRILL STEM TEST REPORT

FLUID SUMMARY

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

Job Ticket: 17025

DST#: 2

ATTN: Steven Petermann

Test Start: 2013.08.20 @ 19:19:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 8.00 in³

Resistivity: ohm.m

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psia

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Oil cut mud 4%oil 96%mud	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:

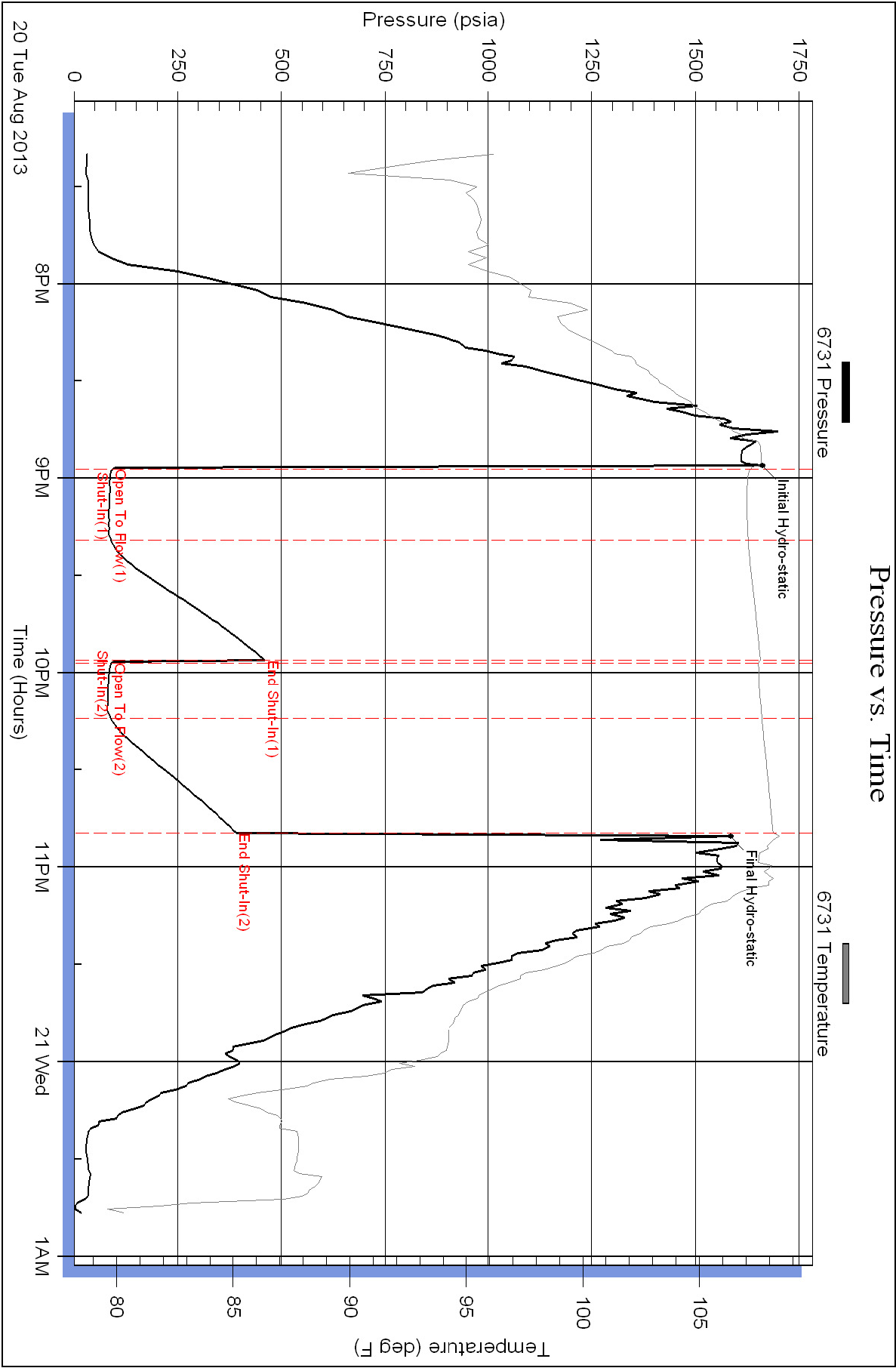
Recovery Comments: ruined packer

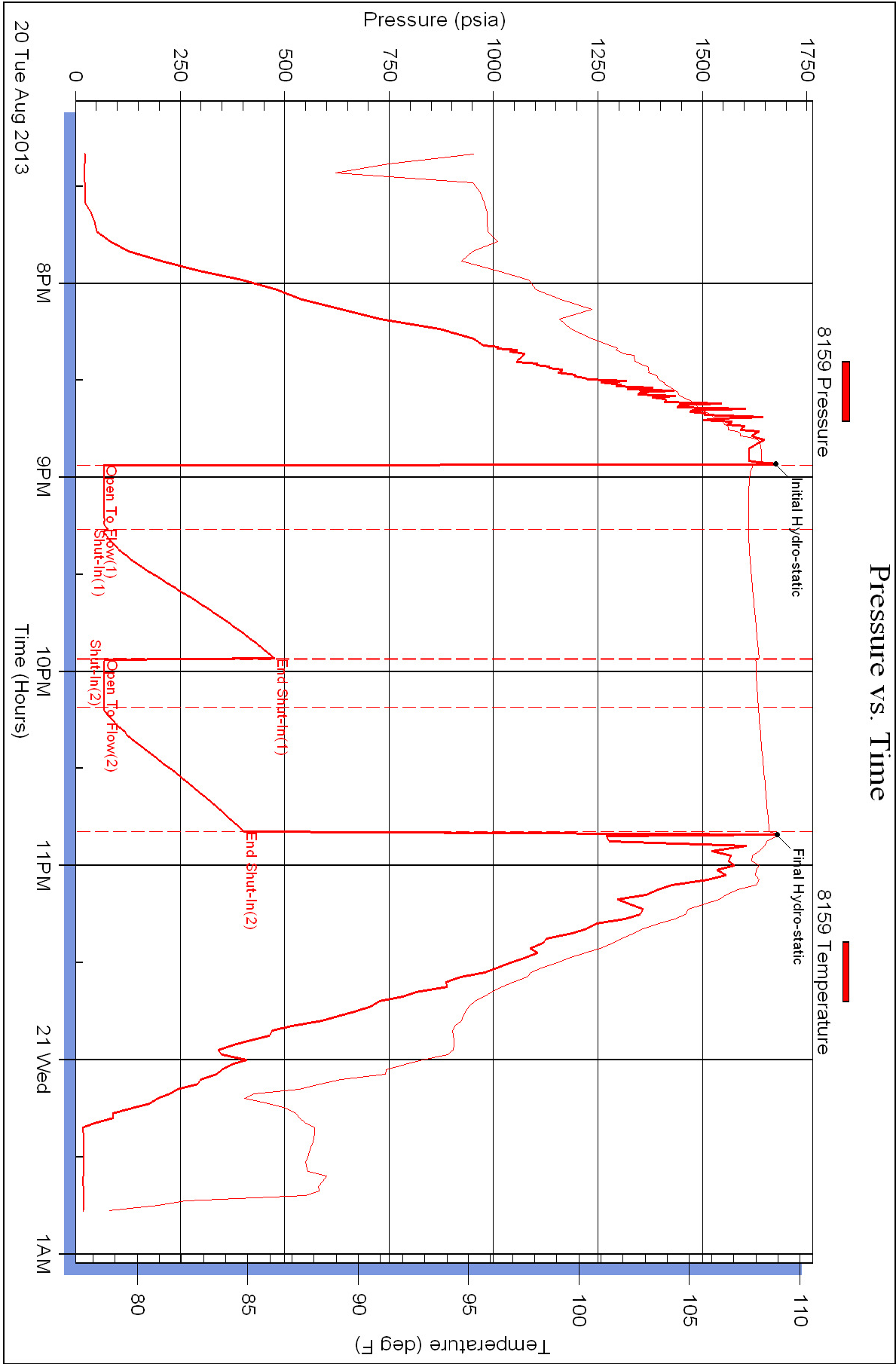
Serial #: 6731

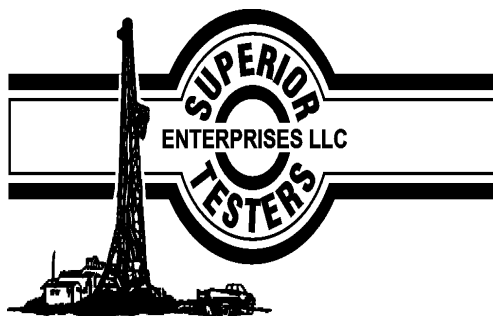
L B Exploration

Petermann 28 #1

DST Test Number: 2







DRILL STEM TEST REPORT

Prepared For: **L B Exploration**

2135 2nd Rd Holyrood KS 67450+9021

ATTN: Steven Petermann

Petermann 28 #1

28-17-10 Ellsworth

Start Date: 2013.08.21 @ 08:20:00

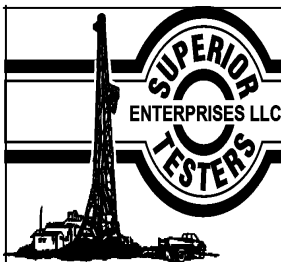
End Date: 2013.08.21 @ 14:40:30

Job Ticket #: 18426 DST #: 3

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

Printed: 2013.08.21 @ 14:59:41

L B Exploration
28-17-10 Ellsworth
Petermann 28 #1
DST # 3
Arbuckle
2013.08.21



DRILL STEM TEST REPORT

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 18426

DST#: 3

Test Start: 2013.08.21 @ 08:20:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:50:30

Time Test Ended: 14:40:30

Interval: **3268.00 ft (KB) To 3354.00 ft (KB) (TVD)**

Total Depth: 3354.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Great Bend -60

Reference Elevations: 1840.00 ft (KB)

1830.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6731

Press@RunDepth: 169.89 psia @ ft (KB)

Start Date: 2013.08.21

End Date:

2013.08.21

Start Time: 08:20:00

End Time:

14:40:30

Capacity: psia

Last Calib.:

1899.12.30

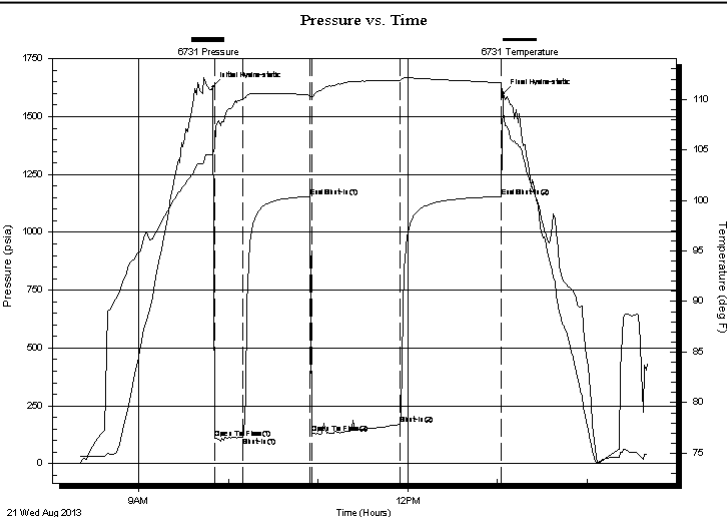
Time On Btm:

2013.08.21 @ 09:49:30

Time Off Btm:

2013.08.21 @ 13:04:00

TEST COMMENT: 1st Opening 20 Minutes-Fair blow built 7 inches into water in 20 minutes
1st Shut-in 45 Minutes-No blow back
2nd Opening 60 Minutes-Fair blow built bottom of bucket in 45 minutes
2nd Shut-in 60 Minutes-No blow back



PRESSURE SUMMARY

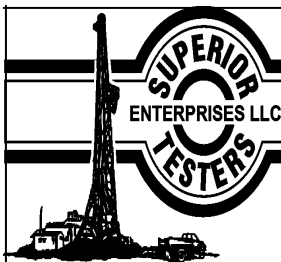
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1629.79	104.61	Initial Hydro-static
1	111.16	105.20	Open To Flow (1)
20	113.73	110.03	Shut-In (1)
65	1155.54	110.39	End Shut-In (1)
66	130.80	110.15	Open To Flow (2)
125	169.89	111.89	Shut-In (2)
193	1154.36	111.64	End Shut-In (2)
195	1598.41	108.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	oil cut mud 1%oil 99%mud	1.96
60.00	oil w ater cut mud 1 %oil 29%w ater 70%r0.84	
0.00	chlorides 28,000 resistivity .15@70degre0.00	

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 18426

DST#: 3

Test Start: 2013.08.21 @ 08:20:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:50:30

Time Test Ended: 14:40:30

Interval: **3268.00 ft (KB) To 3354.00 ft (KB) (TVD)**

Total Depth: 3354.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Great Bend -60

Reference Elevations: 1840.00 ft (KB)

1830.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8159

Press@RunDepth: 1153.86 psia @ ft (KB)

Start Date: 2013.08.21

End Date:

2013.08.21

Start Time: 08:20:00

End Time:

14:40:30

Capacity: psia

Last Calib.:

1899.12.30

Time On Btm:

2013.08.21 @ 09:49:20

Time Off Btm:

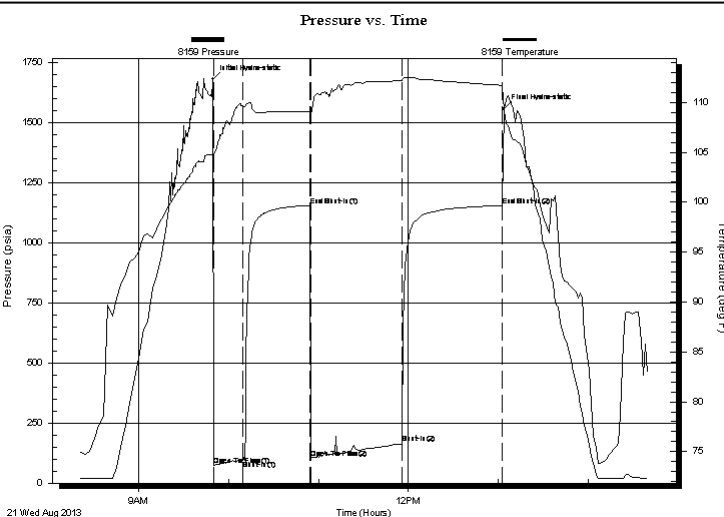
2013.08.21 @ 13:04:00

TEST COMMENT: 1st Opening 20 Minutes-Fair blow built 7 inches into water in 20 minutes

1st Shut-in 45 Minutes-No blow back

2nd Opening 60 Minutes-Fair blow built bottom of bucket in 45 minutes

2nd Shut-in 60 Minutes-No blow back



PRESSURE SUMMARY

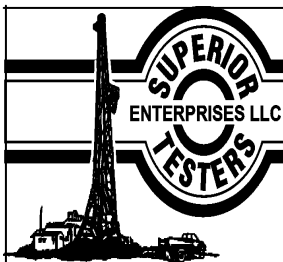
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1679.47	104.72	Initial Hydro-static
1	75.00	104.67	Open To Flow (1)
21	96.60	109.63	Shut-In (1)
65	1154.88	109.11	End Shut-In (1)
66	101.36	108.81	Open To Flow (2)
127	163.68	112.16	Shut-In (2)
194	1153.86	111.71	End Shut-In (2)
195	1556.23	109.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	oil cut mud 1%oil 99% mud	1.96
60.00	oil w ater cut mud 1 %oil 29%w ater 70%r0.84	
0.00	chlorides 28,000 resistivity .15@70degre0.00	

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

ATTN: Steven Petermann

Job Ticket: 18426

DST#: 3

Test Start: 2013.08.21 @ 08:20:00

Tool Information

Drill Pipe:	Length:	3279.00 ft	Diameter:	3.80 inches	Volume:	46.00 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:	60000.00 lb
					Total Volume:	46.00 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		31.00 ft					String Weight: Initial	46000.00 lb
Depth to Top Packer:		3268.00 ft					Final	47000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		86.00 ft						
Tool Length:		106.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				

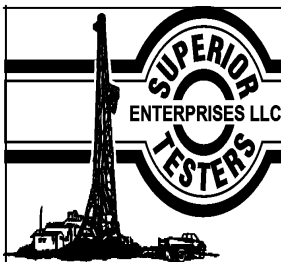
Tool Comments: ruined packer

Tool Description

Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-In Tool	5.00		3253.00	
Hydraulic Tool	5.00		3258.00	
Packer	5.00		3263.00	20.00 Bottom Of Top Packer
Packer	5.00		3268.00	
Anchor	15.00		3283.00	
Change Over Sub	0.75		3283.75	
Drill Pipe	63.50		3347.25	
Change Over Sub	0.75		3348.00	
Anchor	1.00		3349.00	
Recorder	1.00	6731 Inside	3350.00	
Recorder	1.00	8159 Outside	3351.00	
Bullnose	3.00		3354.00	86.00 Bottom Packers & Anchor

Total Tool Length: 106.00



DRILL STEM TEST REPORT

FLUID SUMMARY

L B Exploration

28-17-10 Ellsworth

2135 2nd Rd Holyrood KS 67450+9021

Petermann 28 #1

Job Ticket: 18426

DST#: 3

ATTN: Steven Petermann

Test Start: 2013.08.21 @ 08:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 8.80 in³

Resistivity: ohm.m

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psia

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
140.00	oil cut mud 1%oil 99%mud	1.964
60.00	oil water cut mud 1 %oil 29%water 70%mud	0.842
0.00	chlorides 28,000 resistivity .15@70deg	0.000

Total Length: 200.00 ft

Total Volume: 2.806 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: ruined packer

Pressure vs. Time

