



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1103967
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: _____



1103967

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

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

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

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

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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

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	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Smith 1-3
Doc ID	1103967

Tops

Name	Top	Datum
Anhydrite	2168	+657
Base Anhydrite	2195	+630
Heebner	3961	-1136
Lansing	4004	-1179
Stark Sh	4290	-1465
Marmaton	4403	-1578
Pawnee	4483	-1658
Ft Scott	4532	-1707
Cherokee Sh	4555	-1730
Mississippi	4621	-1796



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Smith #1-3

3-19s-29w Lane,KS

Start Date: 2012.08.26 @ 15:38:00

End Date: 2012.08.26 @ 20:51:45

Job Ticket #: 50129 DST #: 1

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

Printed: 2012.08.30 @ 09:40:02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 W State Rd 4
 Olmitz, KS 67564
 ATTN: Vern Schrag

3-19s-29w Lane, KS

Smith #1-3

Job Ticket: 50129

DST#: 1

Test Start: 2012.08.26 @ 15:38:00

GENERAL INFORMATION:

Formation: **Middle Creek**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:38:30

Time Test Ended: 20:51:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Sam Esparza

Unit No: 64

Interval: 4326.00 ft (KB) To 4335.00 ft (KB) (TVD)

Reference Elevations: 2825.00 ft (KB)

Total Depth: 4335.00 ft (KB) (TVD)

2818.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6772 Outside

Press @ Run Depth: 17.51 psig @ 4327.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.26

End Date:

2012.08.26

Last Calib.:

2012.08.26

Start Time: 15:38:05

End Time:

20:51:44

Time On Btm:

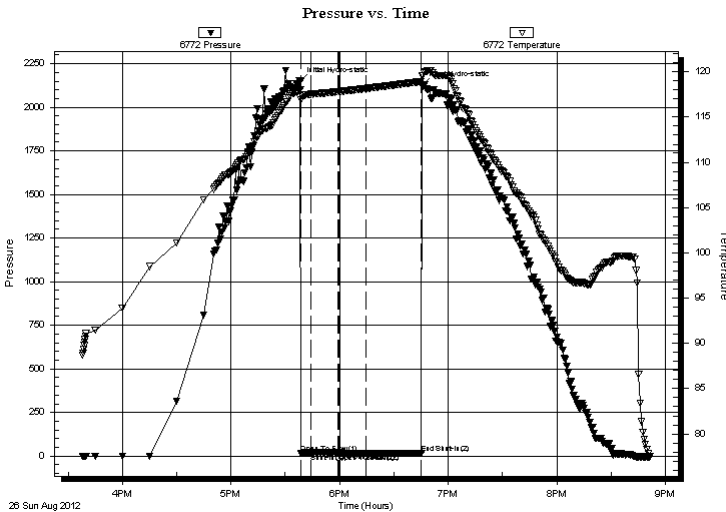
2012.08.26 @ 17:38:15

Time Off Btm:

2012.08.26 @ 18:45:30

TEST COMMENT: IF: Weak surface blow.
 IS: No return.
 FF: No blow.
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2147.55	118.03	Initial Hydro-static
1	17.77	116.89	Open To Flow (1)
6	18.41	117.52	Shut-In(1)
21	21.53	117.80	End Shut-In(1)
22	17.96	117.81	Open To Flow (2)
37	17.51	118.16	Shut-In(2)
67	17.31	118.93	End Shut-In(2)
68	2121.55	119.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100m	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50129

DST#: 1

ATTN: Vern Schrag

Test Start: 2012.08.26 @ 15:38:00

GENERAL INFORMATION:

Formation: **Middle Creek**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:38:30

Time Test Ended: 20:51:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Sam Esparza

Unit No: 64

Interval: 4326.00 ft (KB) To 4335.00 ft (KB) (TVD)

Reference Elevations: 2825.00 ft (KB)

Total Depth: 4335.00 ft (KB) (TVD)

2818.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6669 Outside

Press @ Run Depth: psig @ 4327.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.26

End Date: 2012.08.26

Last Calib.: 2012.08.26

Start Time: 15:38:05

End Time: 20:51:44

Time On Btm:

Time Off Btm:

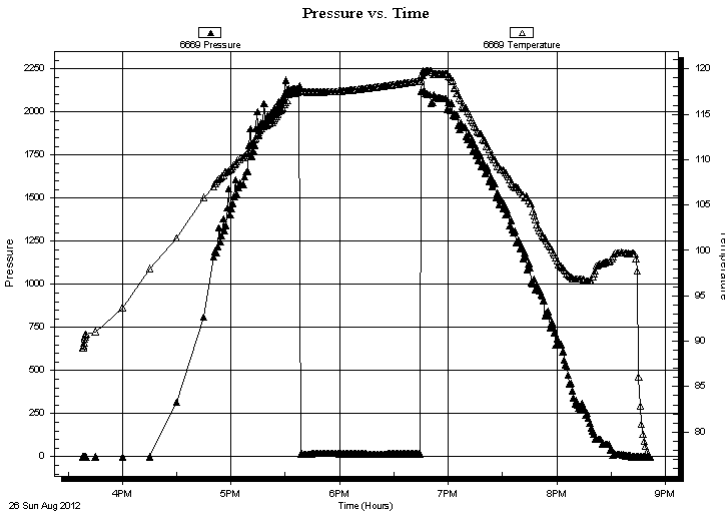
TEST COMMENT: IF: Weak surface blow .

IS: No return.

FF: No blow .

FS: No return.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100m	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50129

DST#: 1

ATTN: Vern Schrag

Test Start: 2012.08.26 @ 15:38:00

Tool Information

Drill Pipe:	Length: 4171.00 ft	Diameter: 3.80 inches	Volume: 58.51 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: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 59.23 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	63000.00 lb
Depth to Top Packer:	4326.00 ft			Final	63000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	9.00 ft				
Tool Length:	38.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4298.00	
Shut In Tool	5.00			4303.00	
Hydraulic tool	5.00			4308.00	
Jars	5.00			4313.00	
Safety Joint	3.00			4316.00	
Packer	5.00			4321.00	29.00 Bottom Of Top Packer
Packer	5.00			4326.00	
Stubb	1.00			4327.00	
Recorder	0.00	6669	Outside	4327.00	
Recorder	0.00	6772	Outside	4327.00	
Perforations	4.00			4331.00	
Bullnose	4.00			4335.00	9.00 Bottom Packers & Anchor

Total Tool Length: 38.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50129

DST#: 1

ATTN: Vern Schrag

Test Start: 2012.08.26 @ 15:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100m	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

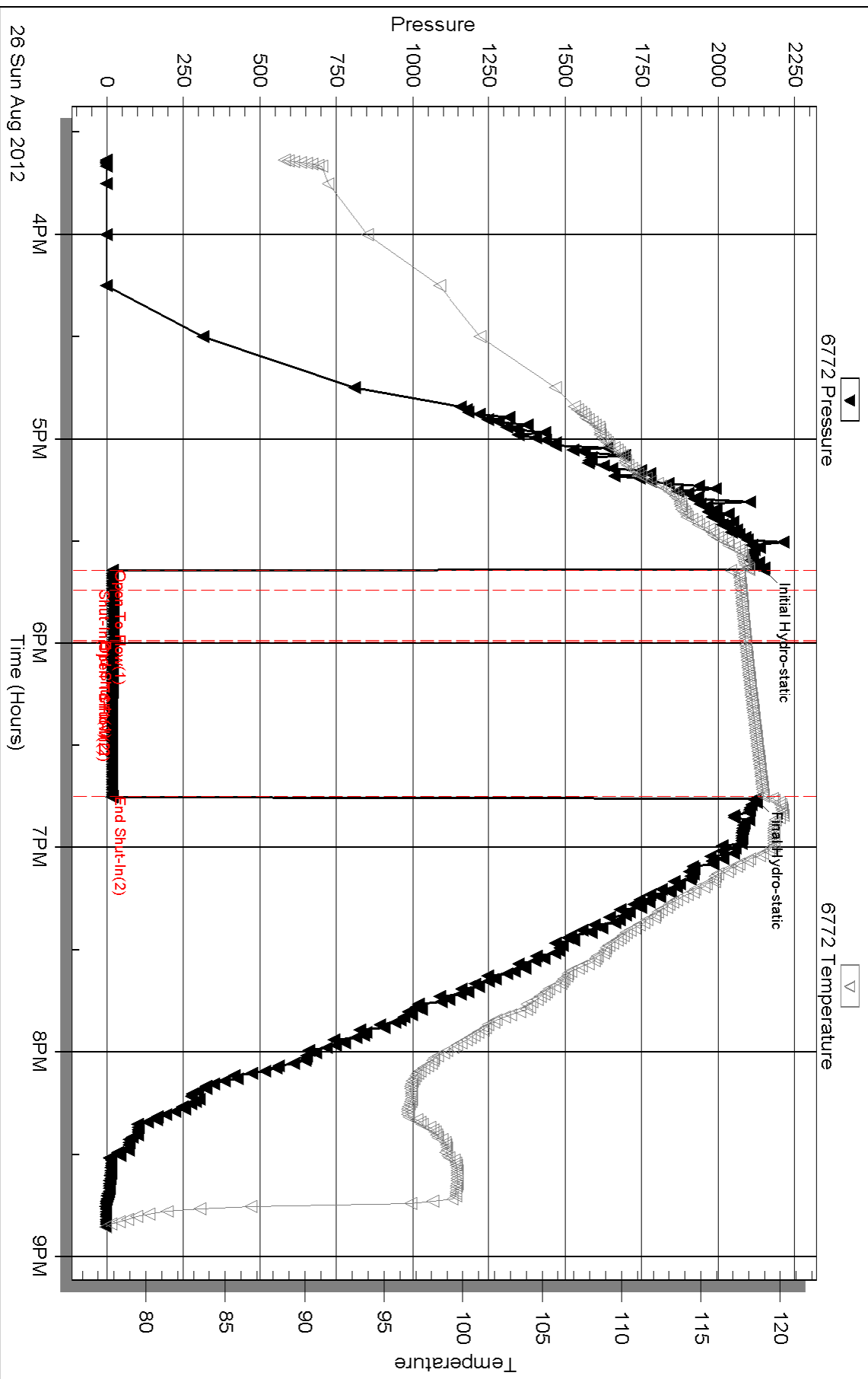
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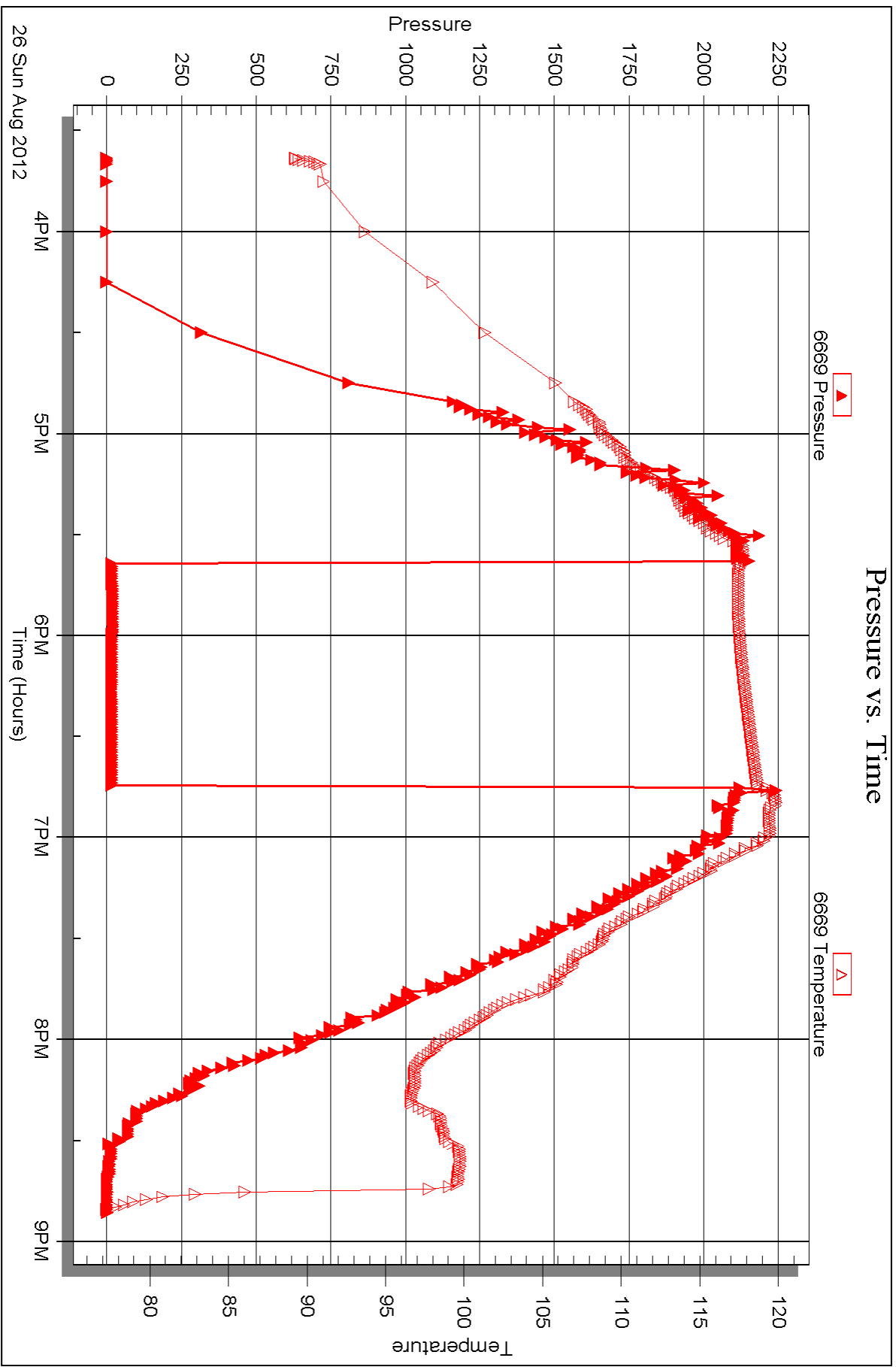
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Smith #1-3

3-19s-29w Lane,KS

Start Date: 2012.08.27 @ 18:28:00

End Date: 2012.08.28 @ 01:08:15

Job Ticket #: 50130 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.30 @ 09:39:15



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering, Inc
562 W State Rd 4
Olmitz, KS 67564
ATTN: Vern Schrag

3-19s-29w Lane, KS

Smith #1-3

Job Ticket: 50130

DST#: 2

Test Start: 2012.08.27 @ 18:28:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:35:15

Time Test Ended: 01:08:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Sam Esparza

Unit No: 64

Interval: 4367.00 ft (KB) To 4485.00 ft (KB) (TVD)

Reference Elevations: 2825.00 ft (KB)

Total Depth: 4485.00 ft (KB) (TVD)

2818.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6772 Outside

Press @ Run Depth: 42.49 psig @ 4368.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.27

End Date:

2012.08.28

Last Calib.:

2012.08.28

Start Time: 18:28:05

End Time:

01:08:14

Time On Btm:

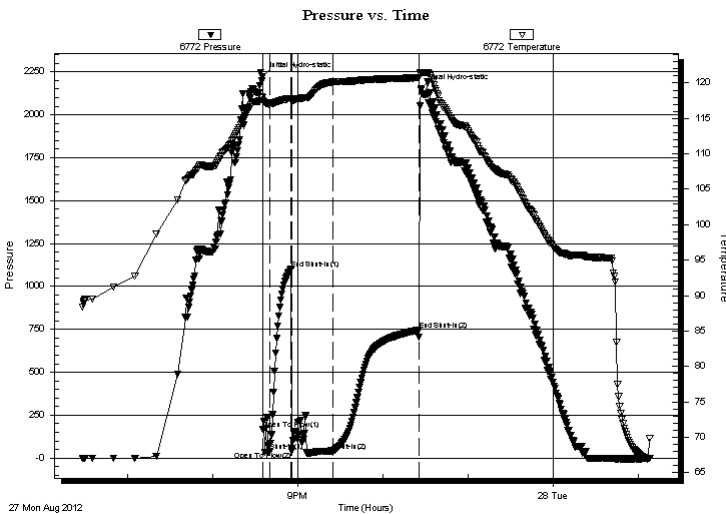
2012.08.27 @ 20:35:00

Time Off Btm:

2012.08.27 @ 22:26:45

TEST COMMENT: IF: 1/4" Blow.
IS: No Return.
FF: 1 3/4" Blow.
FS: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2223.67	117.96	Initial Hydro-static
1	169.55	117.46	Open To Flow (1)
5	41.44	117.04	Shut-In(1)
21	1100.93	117.84	End Shut-In(1)
21	37.83	117.54	Open To Flow (2)
50	42.49	120.16	Shut-In(2)
111	747.19	120.77	End Shut-In(2)
112	2151.66	121.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 15o 85m	0.10

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50130

DST#: 2

ATTN: Vern Schrag

Test Start: 2012.08.27 @ 18:28:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:35:15

Time Test Ended: 01:08:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Sam Esparza

Unit No: 64

Interval: 4367.00 ft (KB) To 4485.00 ft (KB) (TVD)

Reference Elevations: 2825.00 ft (KB)

Total Depth: 4485.00 ft (KB) (TVD)

2818.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6669 Outside

Press @RunDepth: psig @ 4368.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.27

End Date: 2012.08.28

Last Calib.: 2012.08.28

Start Time: 18:28:05

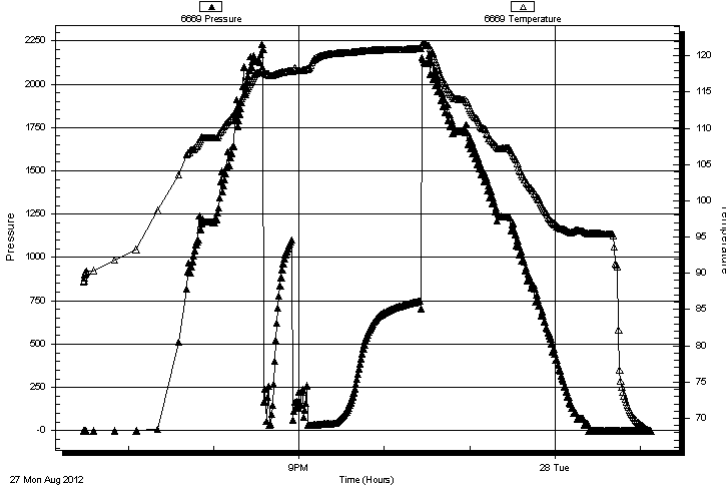
End Time: 01:07:59

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/4" Blow .
IS: No Return.
FF: 1 3/4" Blow .
FS: No Return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 15o 85m	0.10

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50130

DST#: 2

ATTN: Vern Schrag

Test Start: 2012.08.27 @ 18:28:00

Tool Information

Drill Pipe:	Length: 4202.00 ft	Diameter: 3.80 inches	Volume: 58.94 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: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 59.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4367.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	118.00 ft			
Tool Length:	147.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4339.00	
Shut In Tool	5.00			4344.00	
Hydraulic tool	5.00			4349.00	
Jars	5.00			4354.00	
Safety Joint	3.00			4357.00	
Packer	5.00			4362.00	29.00 Bottom Of Top Packer
Packer	5.00			4367.00	
Stubb	1.00			4368.00	
Recorder	0.00	6669	Outside	4368.00	
Recorder	0.00	6772	Outside	4368.00	
Perforations	17.00			4385.00	
Change Over Sub	1.00			4386.00	
Drill Pipe	94.00			4480.00	
Change Over Sub	1.00			4481.00	
Bullnose	4.00			4485.00	118.00 Bottom Packers & Anchor

Total Tool Length: 147.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50130

DST#: 2

ATTN: Vern Schrag

Test Start: 2012.08.27 @ 18:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	OCM 15o 85m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

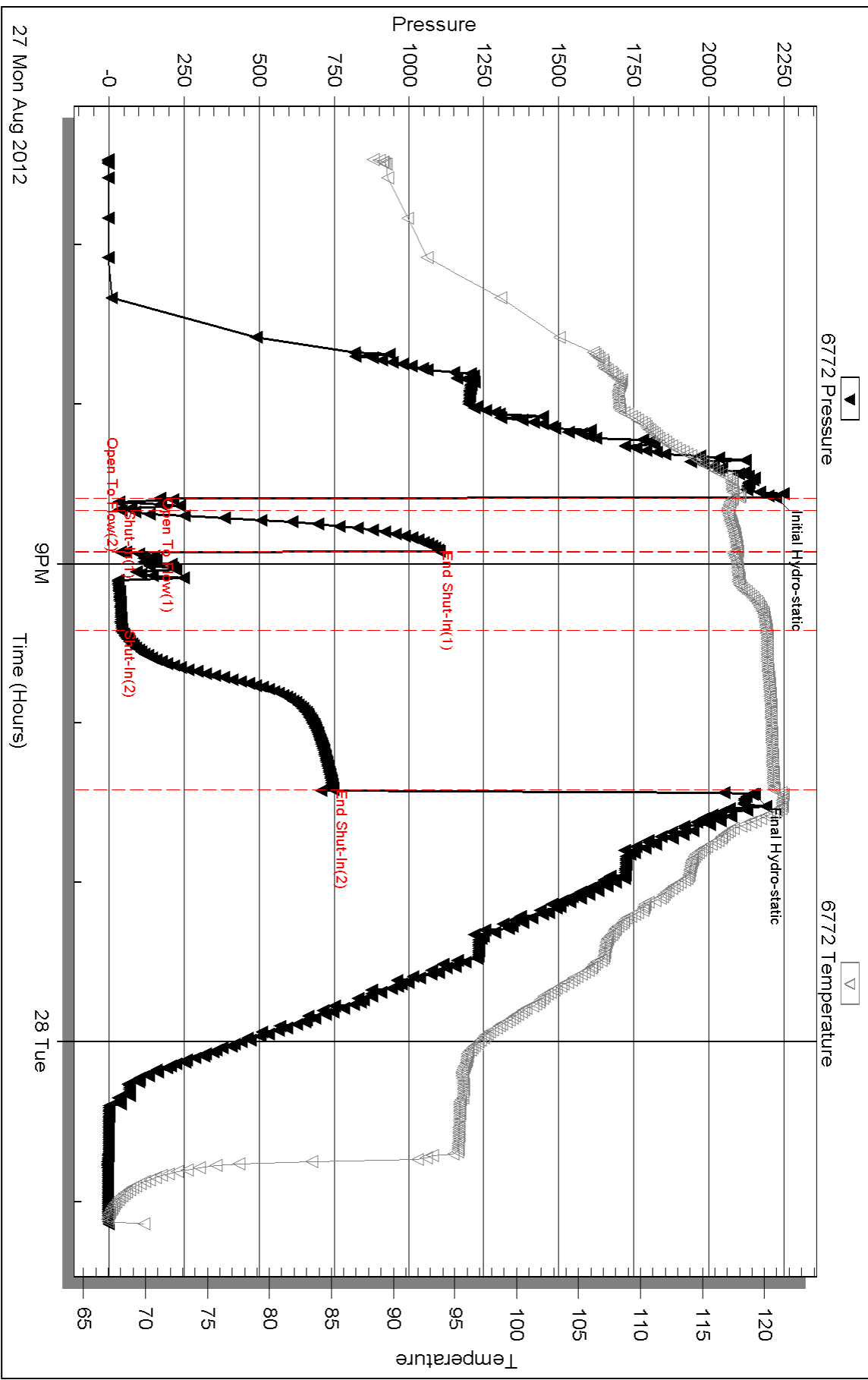
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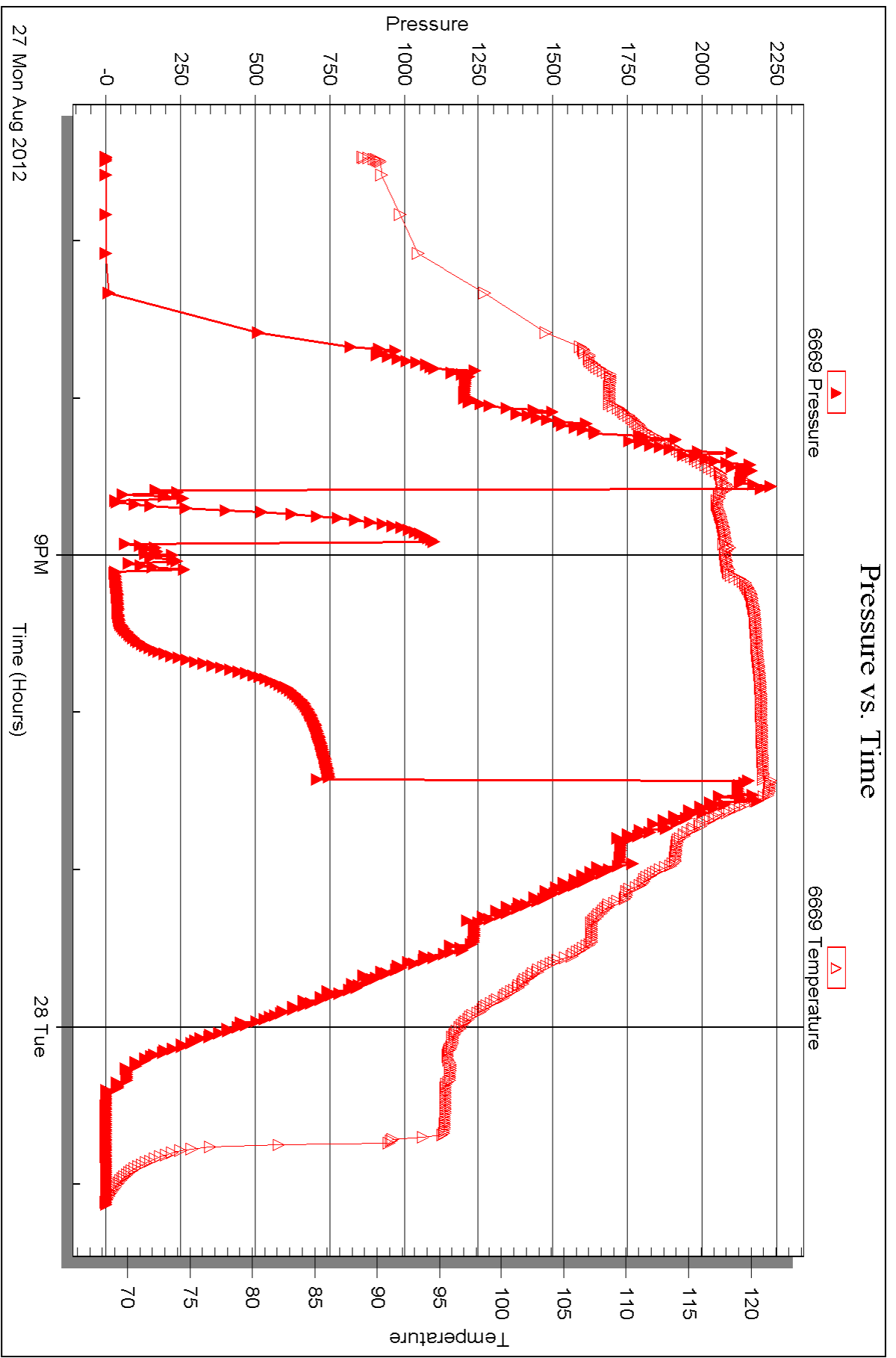
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Smith #1-3

3-19s-29w Lane,KS

Start Date: 2012.08.28 @ 13:05:00

End Date: 2012.08.28 @ 18:05:45

Job Ticket #: 50131 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.30 @ 09:37:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 W State Rd 4
 Olmitz, KS 67564
 ATTN: Vern Schrag

3-19s-29w Lane, KS

Smith #1-3

Job Ticket: 50131

DST#: 3

Test Start: 2012.08.28 @ 13:05:00

GENERAL INFORMATION:

Formation: **Pawnee- Ft. Scott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:04:15
 Time Test Ended: 18:05:45
 Interval: **4480.00 ft (KB) To 4555.00 ft (KB) (TVD)**
 Total Depth: 4555.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Sam Esparza
 Unit No: 64
 Reference Elevations: 2825.00 ft (KB)
 2818.00 ft (CF)
 KB to GR/CF: 7.00 ft

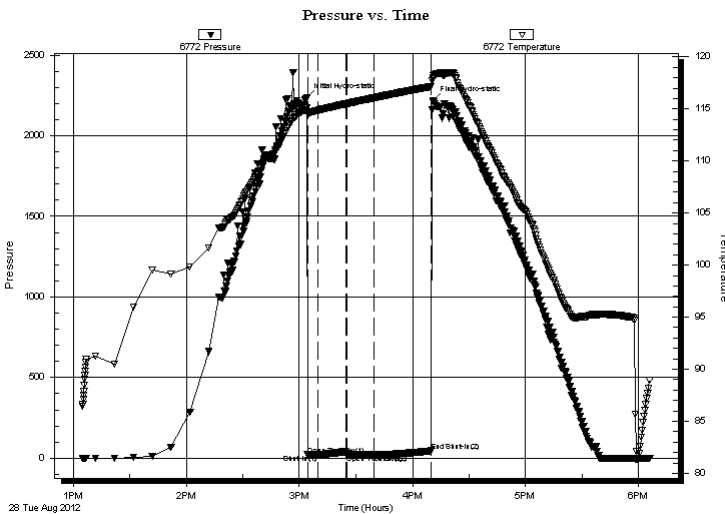
Serial #: 6772

Outside

Press @ Run Depth: 20.77 psig @ 4481.00 ft (KB)
 Start Date: 2012.08.28 End Date: 2012.08.28
 Start Time: 13:05:05 End Time: 18:05:44
 Capacity: 8000.00 psig
 Last Calib.: 2012.08.28
 Time On Btm: 2012.08.28 @ 15:04:00
 Time Off Btm: 2012.08.28 @ 16:11:00

TEST COMMENT: IF: Weak surface blow.
 IS: No return.
 FF: No blow.
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2233.94	115.11	Initial Hydro-static
1	21.03	114.55	Open To Flow (1)
6	20.73	114.87	Shut-In(1)
21	41.63	115.49	End Shut-In(1)
21	20.73	115.50	Open To Flow (2)
36	20.77	116.07	Shut-In(2)
66	44.73	117.15	End Shut-In(2)
67	2214.89	118.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100m (Oil Spots)	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering, Inc

3-19s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

ATTN: Vern Schrag

Job Ticket: 50131

DST#: 3

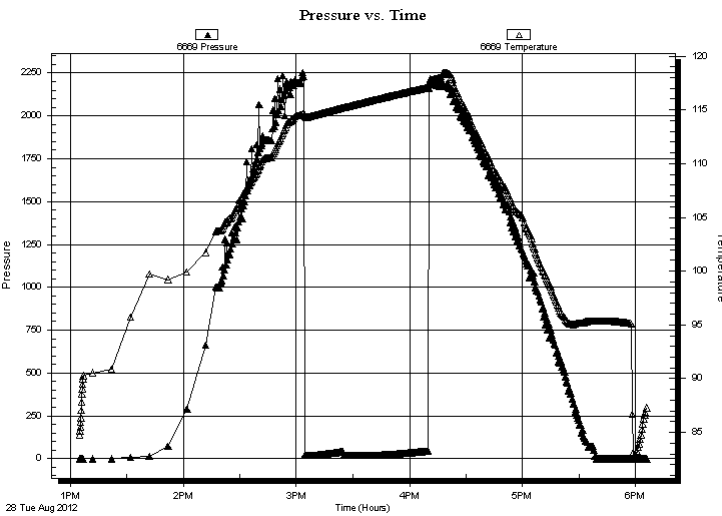
Test Start: 2012.08.28 @ 13:05:00

GENERAL INFORMATION:

Formation: Pawnee- Ft. Scott
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 15:04:15 Tester: Sam Esparza
 Time Test Ended: 18:05:45 Unit No: 64
Interval: 4480.00 ft (KB) To 4555.00 ft (KB) (TVD) Reference Elevations: 2825.00 ft (KB)
 Total Depth: 4555.00 ft (KB) (TVD) 2818.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 7.00 ft

Serial #: 6669 Outside
 Press @ Run Depth: psig @ 4481.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.08.28 End Date: 2012.08.28 Last Calib.: 2012.08.28
 Start Time: 13:05:05 End Time: 18:05:44 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak surface blow.
 IS: No return.
 FF: No blow.
 FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100m (Oil Spots)	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50131

DST#: 3

ATTN: Vern Schrag

Test Start: 2012.08.28 @ 13:05:00

Tool Information

Drill Pipe:	Length: 4327.00 ft	Diameter: 3.80 inches	Volume: 60.70 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: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 61.42 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	66000.00 lb
Depth to Top Packer:	4480.00 ft			Final	66000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	75.00 ft				
Tool Length:	104.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4452.00	
Shut In Tool	5.00			4457.00	
Hydraulic tool	5.00			4462.00	
Jars	5.00			4467.00	
Safety Joint	3.00			4470.00	
Packer	5.00			4475.00	29.00 Bottom Of Top Packer
Packer	5.00			4480.00	
Stubb	1.00			4481.00	
Recorder	0.00	6669	Outside	4481.00	
Recorder	0.00	6772	Outside	4481.00	
Perforations	5.00			4486.00	
Change Over Sub	1.00			4487.00	
Drill Pipe	63.00			4550.00	
Change Over Sub	1.00			4551.00	
Bullnose	4.00			4555.00	75.00 Bottom Packers & Anchor

Total Tool Length: 104.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

3-19s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Smith #1-3

Job Ticket: 50131

DST#: 3

ATTN: Vern Schrag

Test Start: 2012.08.28 @ 13:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100m (Oil Spots)	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

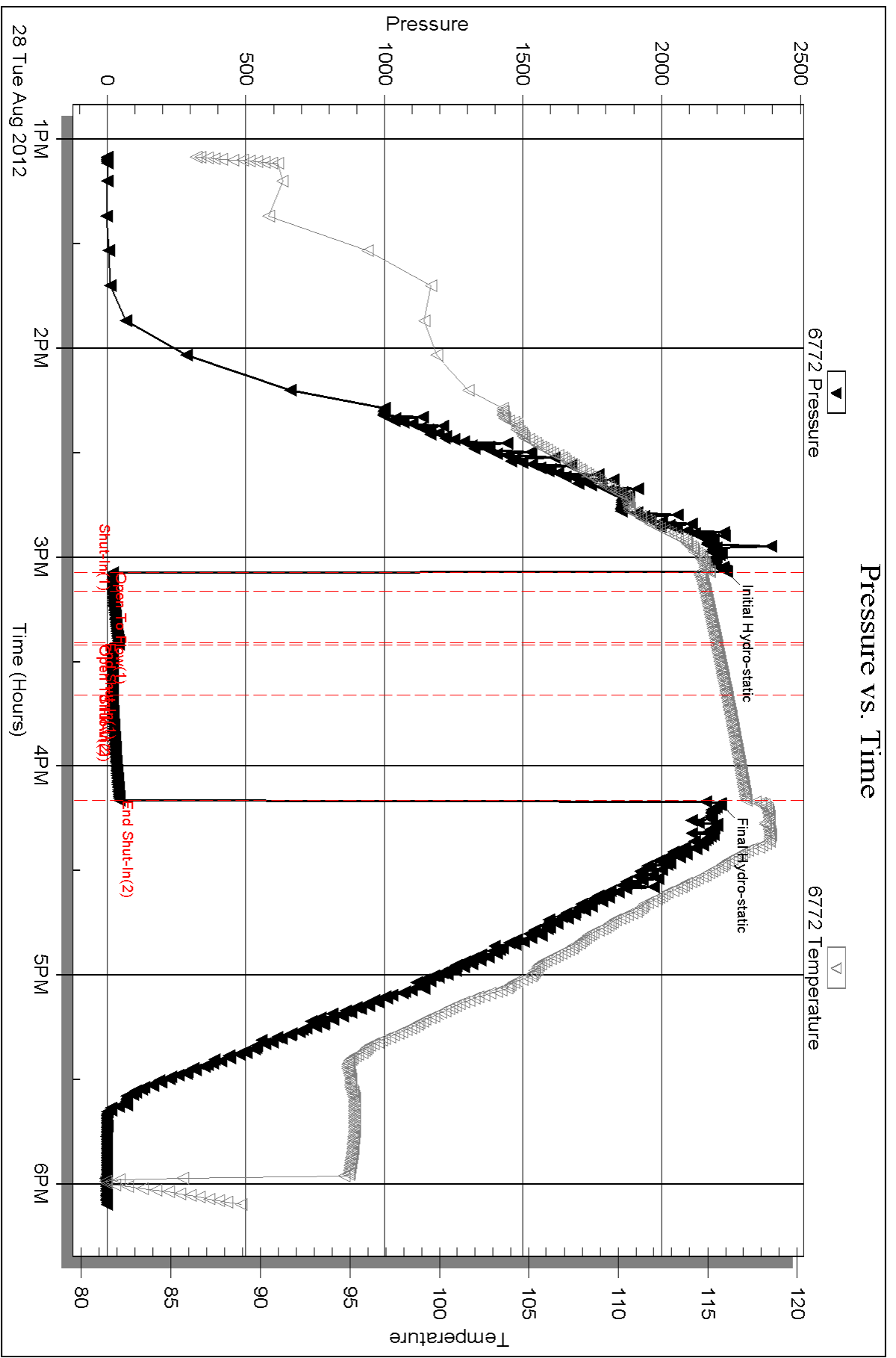
Num Gas Bombs: 0

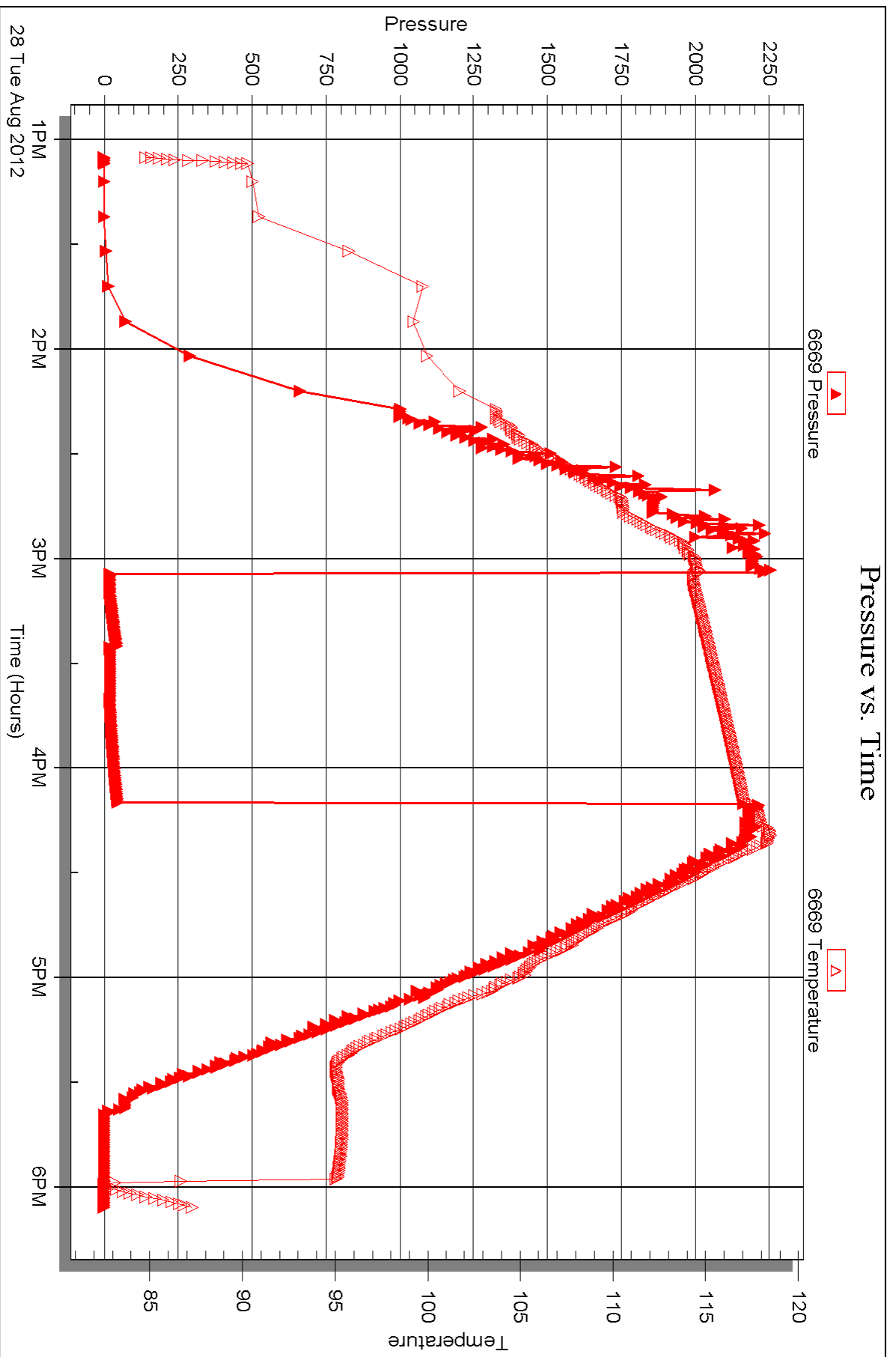
Serial #:

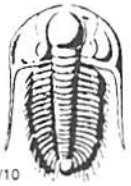
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50129

Well Name & No. Smith #1-3 Test No. 1 Date 8/26/12
 Company Larson Engineering, Inc Elevation 2825 KB 2818 GL
 Address 562 W State rd4 Olmitz, Ks 67564
 Co. Rep / Geo. Vern Schrag Rig HD 3
 Location: Sec. 3 Twp. 19S Rge. 29W Co. Lane State Ks

Interval Tested 4326-4335 Zone Tested Middle Creek
 Anchor Length 9 Drill Pipe Run 4171 Mud Wt. 9.2
 Top Packer Depth 4322 Drill Collars Run 147 Vis 56
 Bottom Packer Depth 4326 Wt. Pipe Run Ø WL 7.6
 Total Depth 4335 Chlorides 2100 ppm System LCM Ø 1

Blow Description Weak surface blow.
No Return.
No blow.
No Return.

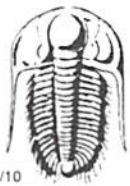
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 119 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2148</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>14:00</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>15:38</u>
(C) First Final Flow <u>18</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>17:39</u>
(D) Initial Shut-In <u>22</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/c</u>	T-Pulled <u>18:45</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>20:52</u>
(F) Second Final Flow <u>18</u>	<input checked="" type="checkbox"/> Mileage <u>54 R/T</u> 83.70	Comments
(G) Final Shut-In <u>17</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2122</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>5</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>15</u>	<input type="checkbox"/> Day Standby	Total <u>1658.70</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1658.70</u>	

Approved By Vern Schrag Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50130

Well Name & No. Smith #1-3 Test No. 2 Date 8/27/12
 Company Larson Engineering, Inc Elevation 2825 KB 2818 GL
 Address 562 W State rd4 Olinite, KS 67564
 Co. Rep / Geo. Vern Schrag Rig HD 3
 Location: Sec. 3 Twp. 19S Rge. 29W Co. Lane State KS

Interval Tested 4367-4485 Zone Tested Marmaton
 Anchor Length 118 Drill Pipe Run 4202 Mud Wt. 9.2
 Top Packer Depth 4363 Drill Collars Run 147 Vis 56
 Bottom Packer Depth 4367 Wt. Pipe Run Ø WL 7.2
 Total Depth 4485 Chlorides 2000 ppm System LCM 1
 Blow Description 1/4" Blow.
No Return.
1 3/4" Blow.
No Return

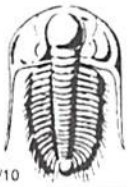
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>OCM</u>	<u>15</u>		<u>85</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 121 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>2024</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>18:00</u>
(B) First Initial Flow <u>170</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>18:28</u>
(C) First Final Flow <u>41</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>20:35</u>
(D) Initial Shut-In <u>1101</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>22:25</u>
(E) Second Initial Flow <u>38</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1:08</u>
(F) Second Final Flow <u>42</u>	<input checked="" type="checkbox"/> Mileage <u>54 R/T</u> 83.70	Comments _____
(G) Final Shut-In <u>747</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>2152</u>	<input type="checkbox"/> Straddle	_____
Initial Open <u>5</u>	<input checked="" type="checkbox"/> Shale Packer 250	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1908.70</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1908.70</u>	

Approved By Vernon C Schrag Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50131

Well Name & No. Smith #1-3 Test No. 3 Date 8/28/12
 Company Lorson Engineering, Inc Elevation 2825 KB 2818 GL
 Address 562 W state rd 4 Olmitz, KS 67564
 Co. Rep / Geo. Vern Schweg Rig HD 3
 Location: Sec. 3 Twp. 19S Rge. 29W Co. Lane State KS

Interval Tested 4480 - 4555 Zone Tested Pawnee - Ft. Scott
 Anchor Length 75' Drill Pipe Run 4327 Mud Wt. 9.3
 Top Packer Depth 4476 Drill Collars Run 147 Vis 48
 Bottom Packer Depth 4480 Wt. Pipe Run Ø WL 8.8
 Total Depth 4555 Chlorides 2200 ppm System LCM 1

Blow Description Weak surface blow.
No return.
No blow.
No return.

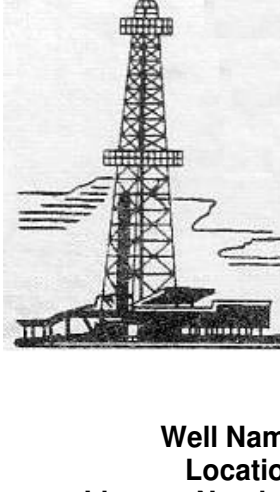
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud (oil spots)</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 117 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2234</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>12:45</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>13:05</u>
(C) First Final Flow <u>21</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>15:05</u>
(D) Initial Shut-In <u>42</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>16:10</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>18:06</u>
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>54 R/T X 2</u> 167.40	Comments <u>picked up tools @ 8:00 am 8/29/12</u>
(G) Final Shut-In <u>45</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2215</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1742.40</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1742.40</u>	

Approved By [Signature] Our Representative [Signature]

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WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



Scale 1:240 (5"=100') Imperial

Well Name: SMITH #1-3
Location: SE SW SW SE SEC. 3-19S-29W
Licence Number: API: 15-101-22397
Spud Date: August 20, 2012
Surface Coordinates: 65' FSL & 2200' FEL
Region: Lane Co., KS
Drilling Completed: D&A, August 29, 2012

Bottom Hole Coordinates:
Ground Elevation (ft): 2818' K.B. Elevation (ft): 2825'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4680'
Formation: Mississippi
Type of Drilling Fluid: Chemical Premix (Displaced)
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: Larson Engineering Inc.
Address: 562 West State Road 4
Olmits, KS 67564-8561

DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3 (#33935)

DP 4.5" XH (16.6#); DC 560.97' (6.25" x 2.25"), Kelly 40.30', Tool Joint 5.5" ; Bit: JZ-QX21 down to 4025', JZ-QX20 to RTD, 7-7/8", jets 15-15-15; rpm 80, WOB 35k; Kelly Bushing 7' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

8-5/8" (20#) casing at 262'

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60 spm, Chemical, premix, displaced about 3600'; earth pits, Morgan Mud, Inc., McCook, Nebraska, Cade Lines.

OPEN HOLE LOGS:

DN (DGA), DI (SP) (Run-1); ML (Run-2); 5" detail LTD-3600; 2" DI to surface casing; Pioneer Well Services (LogTech), Hays, KS, D. Kerr, Log total depth (4680') was equal to rotary total depth (4680').

DRILL STEM TEST #1:

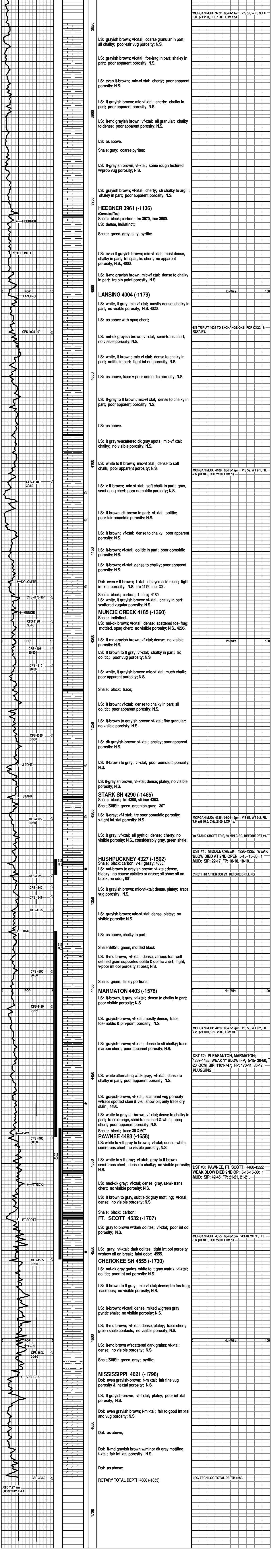
Middle Creek Lime: 4326-4335 (9'), Blow: weak surf IFP, no RB, no blow 2nd open; Times: 5-15-15-30; Recovery: 1' mud w/oil spots; Pressures: HP: 2234-2215, SIP: 22-17; FP: 18-18, 18-18; BHT: 119 F; dual packers, jars, joints, 147' DC, Trilobite Testing, Inc., Scott City, KS, Samuel Esparza.

DRILL STEM TEST #2:

Pleasanton, Marmaton: Interval: 4367-4485 (118'), Blow: weak incr 1" IFP, no RB, weak incr 1-3/4" FFP, no RB; Times: 5-15-30-60; Recovery: 20' OCM (15%O, 85%M); Pressures: HP: 2224-2152; SIP: 1101-747; FP: 170-41, 38-42; BHT: 121 F; dual packers (w/shale packer), jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Samuel Esparza.

DRILL STEM TEST #3:

Pawnee thru Ft. Scott: 4480-4555 (75'); Blow: weak surf IFP, no RB, no blow FFP; Times: 5-15-15-30; Recovery: 1' mud w/oil spots; Pressures: HP: 2234-2215, SIP: 42-45, FP: 21-21, 21-21; BHT: 117 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Samuel Esparza.



LOG-TECH LOG TOTAL DEPTH 4680

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

December 18, 2012

Thomas Larson
Larson Engineering, Inc. dba Larson Operating
Company
562 W STATE RD 4
OLMITZ, KS 67564-8561

Re: ACO1
API 15-101-22397-00-00
Smith 1-3
SE/4 Sec.03-19S-29W
Lane 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,
Thomas Larson