



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1227601  
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: \_\_\_\_\_

1227601

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: <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> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

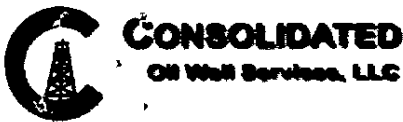
<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Shapland Trust 1-21
Doc ID	1227601

Tops

Name	Top	Datum
Anhydrite	2117	+632
Base Anhydrite	2147	+602
Heebner	3945	-1196
Lansing	3983	-1234
Stark Sh	4254	-1505
Marmaton	4267	-1618
Ft. Scott	4501	-1752
Cherokee	4526	-1777
Mississippi	4598	-1849





269284

TICKET NUMBER 46842  
 LOCATION Oalley KS  
 FOREMAN Miles Shaw

PO Box 884, Chanute, KS 66720  
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT  
**CEMENT**

US

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY	
7-2-14	4793	Shapland trust #1-21	21	18S	28W	Lane	
CUSTOMER Larson Engineering 4802		Dighton KS 2E to Muskog 1S E+W nb		TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS				731	Jeremy R		
CITY		STATE	ZIP CODE	603	Rob S		

JOB TYPE Surface HOLE SIZE 12 1/4" HOLE DEPTH 265' CASING SIZE & WEIGHT 8 5/8" 20 #  
 CASING DEPTH 265.70 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.8 SLURRY VOL 1.30 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 20'  
 DISPLACEMENT 15 1/2 bbls DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting and rig upon H D drilling 43, circulate casing  
mix 175 SLS Class A Cement with 39 calcium 29 gal. Displace 15 1/2 bbls  
Water shut in Cement did Circulate 5 bbls top it

Thanks Miles & Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401S	1	PUMP CHARGE	1150.00	1150.00 ✓
5406	25	MILEAGE	5.25	131.25 ✓
5407	8.22 Tons	Ton Mileage delivery	430.00	430.00 ✓
1102	423 #	Calcium Chloride	.94	463.42 ✓
1104S	175 SLS	Class A Cement	18.55	3246.25 ✓
1118B	329 #	Bentonite gel	1.27	88.83 ✓
			Subtotal	5509.75 ✓
			1.55 Mileage	560.98 ✓
			Subtotal	4958.77 ✓
			SALES TAX	244.49 ✓
			ESTIMATED TOTAL	5203.26 ✓

Completed

Ravin 3737

AUTHORIZATION Paul Spivey TITLE Pusher DATE 7-2-14

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



**CONSOLIDATED**  
Oil Well Services, LLC

269 421

TICKET NUMBER 46788

LOCATION Oakley KS

FOREMAN Dane Detloff

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	KS COUNTY
7-12-14	4802	Snapland Trust 1-21	21	18	28	Lane
CUSTOMER			Dighton 2 East to Mustang 20 1 south East into			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			399	Nike		
STATE			430	Cody		
ZIP CODE						

JOB TYPE PTA HOLE SIZE 7 7/8 HOLE DEPTH \_\_\_\_\_ CASING SIZE & WEIGHT \_\_\_\_\_  
 CASING DEPTH \_\_\_\_\_ DRILL PIPE 4.5 TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 13.8 SLURRY VOL 1.42 WATER gal/sk 6.7 CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting. Rig up. Plug as ordered.

- 2170 50 sks
- 1340 80 sks
- 690 40 sks
- 300 50 sks
- 60 20 sks
- RH 30 sks

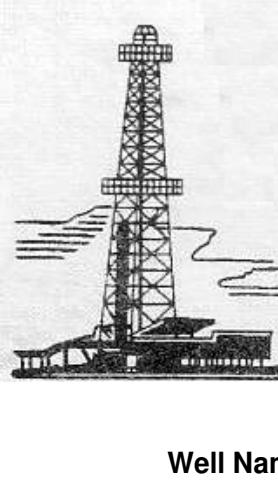
*Thanks Dane + crew*

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	1395.00	1395.00 ✓
5406	45	MILEAGE	5.25	236.25 ✓
5407a	11.61	Tom Mileage Delivery	1.75	914.40 ✓
<del>1184</del> 1131	270 SKS	60/40 Poz mix	15.86	4282.20 ✓
1184	929	Bentonite	.27	250.83 ✓
1107	67	Metal seal (cello flakes)	.297	198.99 ✓
4432	1	8 3/8 wooden Plug	100.75	100.75 ✓
			546	7378.42 ✓
			1090	737.85 ✓
		<input checked="" type="checkbox"/> Consolidated	Total	6640.57 ✓
			SALES TAX	310.99 ✓
			ESTIMATED TOTAL	6951.56 ✓

Revin 3737

AUTHORIZATION Dane Detloff TITLE Pusher DATE 7-13-14

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



# WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG  
CONSULTANT GEOLOGIST



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

Well Name: SHAPLAND TRUST #1-21  
Location: NE NW SW SE OF SEC. 21-18S-28W  
Licence Number: API: 15-101-22524  
Spud Date: July 02, 2014  
Surface Coordinates: 1037' FSL & 2104' FEL  
Region: Lane Co., KS  
Drilling Completed: July 12, 2014

Bottom Hole Coordinates:  
Ground Elevation (ft): 2742' K.B. Elevation (ft): 2749'  
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4625'  
Formation: D&A 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  
Olmitz, KS 67564-8561

### DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3 (Co. Tools)

DP 4.5" XH (16.6#); DC 6.25" x 2.25" x 556', Kelly 40.30', Tool Joint 5.5"; Bit: JZ-HA20-Q, 7-7/8", standard jets 15-15-15; rpm 80, WOB 35k; Kelly Bushing 7' above ground level; LeWayne "Lew" Tresner (tool pusher).

### CASING:

Set 8-5/8" casing at 263'

### CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, earth pits, Morgan Mud, Inc., Cade Lines.

### OPEN HOLE LOGS:

DN, DI (SP) (Run-1); ML (Run-2); No Sonic; 5" detail LTD-3600; 2" DI to surface casing; LogTech-Pioneer Wireline, Hays, KS, J. Hendrickson, Log total depth (4622') was three feet short to rotary total depth (4625').

### DRILL STEM TEST #1:

LKC (J-zone): Interval: 4216-4245 (29'); Blow: weak surf died 9 min FFP; Times: 5-15-30; Recovery: 5' mud (100%M); Pressures: HP: 2121-2008, SIP: 687-756, FP: 16-17, 18-19; BHT: 121 F; Trilobite Testing, Inc., Scott City, KS, Sam Esparza.

### DRILL STEM TEST #2:

LKC (K-zone): Interval: 4253-4265 (12'); Blow: IFP unknown due to broken nipple; no blow after 10 min FFP; Times: 5-15-30-60; Recovery: 5' mud w/oil spots (100%M); Pressures: HP: 2132-2102, SIP: 663-664, FP: 12-17, 15-22; BHT: 120 F; Trilobite Testing, Inc., Scott City, KS, Sam Esparza.

### DRILL STEM TEST #3:

LKC (K-zone): Interval: 4251-4269 (18'); Blow: 1/2" IFP, no RB, incr 1-1/2" FFP, no RB; Times: 5-15-30-60; Recovery: 70' WCM w/scum oil on top (15%W, 85%M); Pressures: HP: 2136-2094, SIP: 653-650; FP: 14-20, 21-47; BHT: 120 F; Trilobite Testing, Inc., Scott City, KS, Sam Esparza.

### DRILL STEM TEST #4:

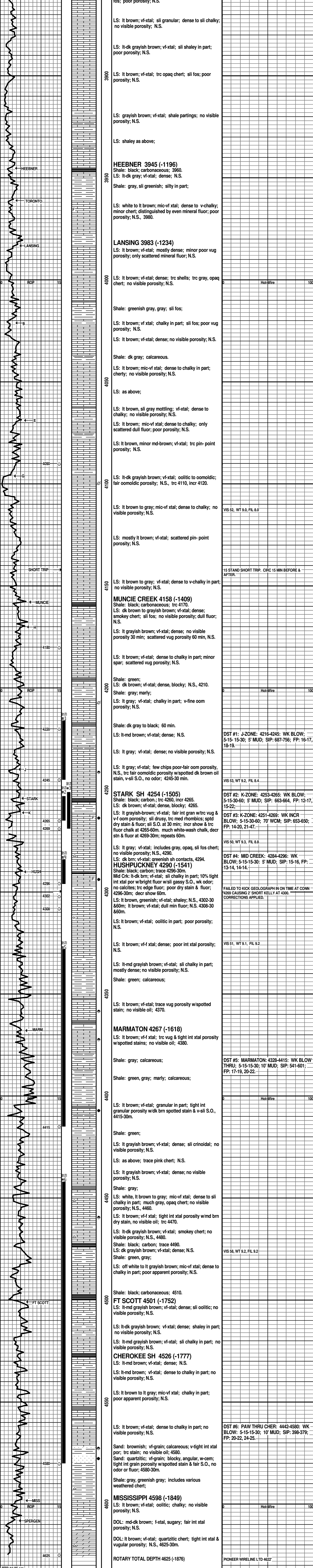
LKC (Middle Creek): Interval: 4284-4296 (12'); Blow: weak surf died 12 min FFP; Times: 5-15-30; Recovery: 5' mud (100%M); Pressures: HP: 2141-2119; SIP: 15-16; FP: 13-14, 14-14; BHT: 116 F; Trilobite Testing, Inc., Scott City, KS, Sam Esparza.

### DRILL STEM TEST #5:

Marmaton: Interval: 4328-4415 (87'); Blow: weak surf IFP, no RB, weak surf FFP, no RB; Times: 5-15-30-30; Recovery: 10' mud w/oil spots; Pressures: HP: 2217-2202, SIP: 541-601, FP: 17-19, 20-22; BHT: 117 F; Trilobite Testing, Inc., Scott City, KS, Sam Esparza.

### DRILL STEM TEST #6:

Pawnee thru Cherokee: Interval: 4442-4580 (138'); Blow: weak surf IFP, no RB, weak surf FFP, no RB; Times: 5-15-30-30; Recovery: 10' mud (100%M); Pressures: HP: 2327-2275, SIP: 398-379; FP: 20-22, 24-25; BHT: 121 F; Trilobite Testing, Inc., Scott City, KS, Sam Esparza.





## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 West State RD 4  
Olmitz, KS 67564

ATTN: Vern Schrag

### **Shapland #1-21**

#### **21-18s-28w Lane,KS**

Start Date: 2014.07.08 @ 05:31:00

End Date: 2014.07.08 @ 10:30:30

Job Ticket #: 57349                      DST #: 1

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

Printed: 2014.07.15 @ 10:36:16



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 57349

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 05:31:00

## GENERAL INFORMATION:

Formation: " J "

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:49:45

Time Test Ended: 10:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Samuel Esparza

Unit No: 71

**Interval: 4216.00 ft (KB) To 4245.00 ft (KB) (TVD)**

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4245.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8845 Outside**

Press@RunDepth: 18.57 psig @ 4217.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.08

End Date:

2014.07.08

Last Calib.:

2014.07.08

Start Time: 05:31:05

End Time:

10:30:29

Time On Btm:

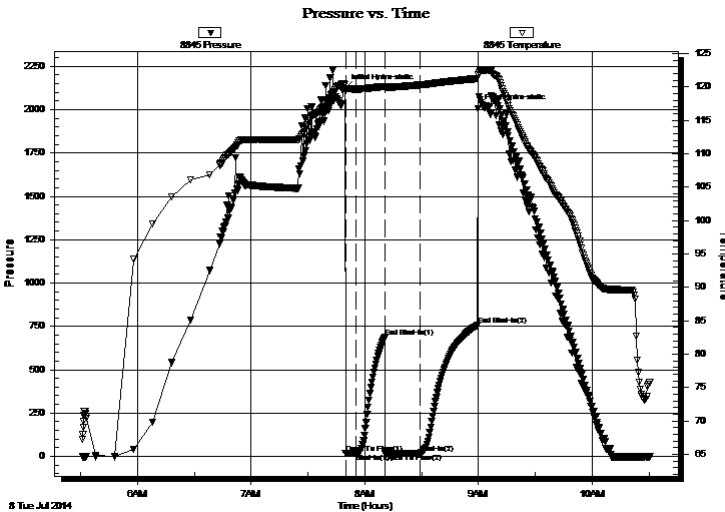
2014.07.08 @ 07:49:30

Time Off Btm:

2014.07.08 @ 08:59:45

TEST COMMENT: IF: Weak Surface Blow .  
IS: No Return.  
FF: Weak Surface Blow Died @ 9 min.  
FS: No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2121.12	120.31	Initial Hydro-static
1	16.06	119.53	Open To Flow (1)
6	17.23	119.67	Shut-In(1)
21	687.01	120.07	End Shut-In(1)
22	17.54	119.83	Open To Flow (2)
40	18.57	120.28	Shut-In(2)
70	755.89	121.23	End Shut-In(2)
71	2007.58	121.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 57349

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 05:31:00

## Tool Information

Drill Pipe:	Length: 4074.00 ft	Diameter: 3.80 inches	Volume: 57.15 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 57.76 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4216.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	57.00 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			4189.00	
Shut In Tool	5.00			4194.00	
Hydraulic tool	5.00			4199.00	
Jars	5.00			4204.00	
Safety Joint	3.00			4207.00	
Packer	5.00			4212.00	28.00 Bottom Of Top Packer
Packer	4.00			4216.00	
Stubb	1.00			4217.00	
Recorder	0.00	6772	Outside	4217.00	
Recorder	0.00	8845	Outside	4217.00	
Perforations	23.00			4240.00	
Bullnose	5.00			4245.00	29.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4  
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57349

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 05:31:00

### 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: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Mud 100m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbf

Num Fluid Samples: 0

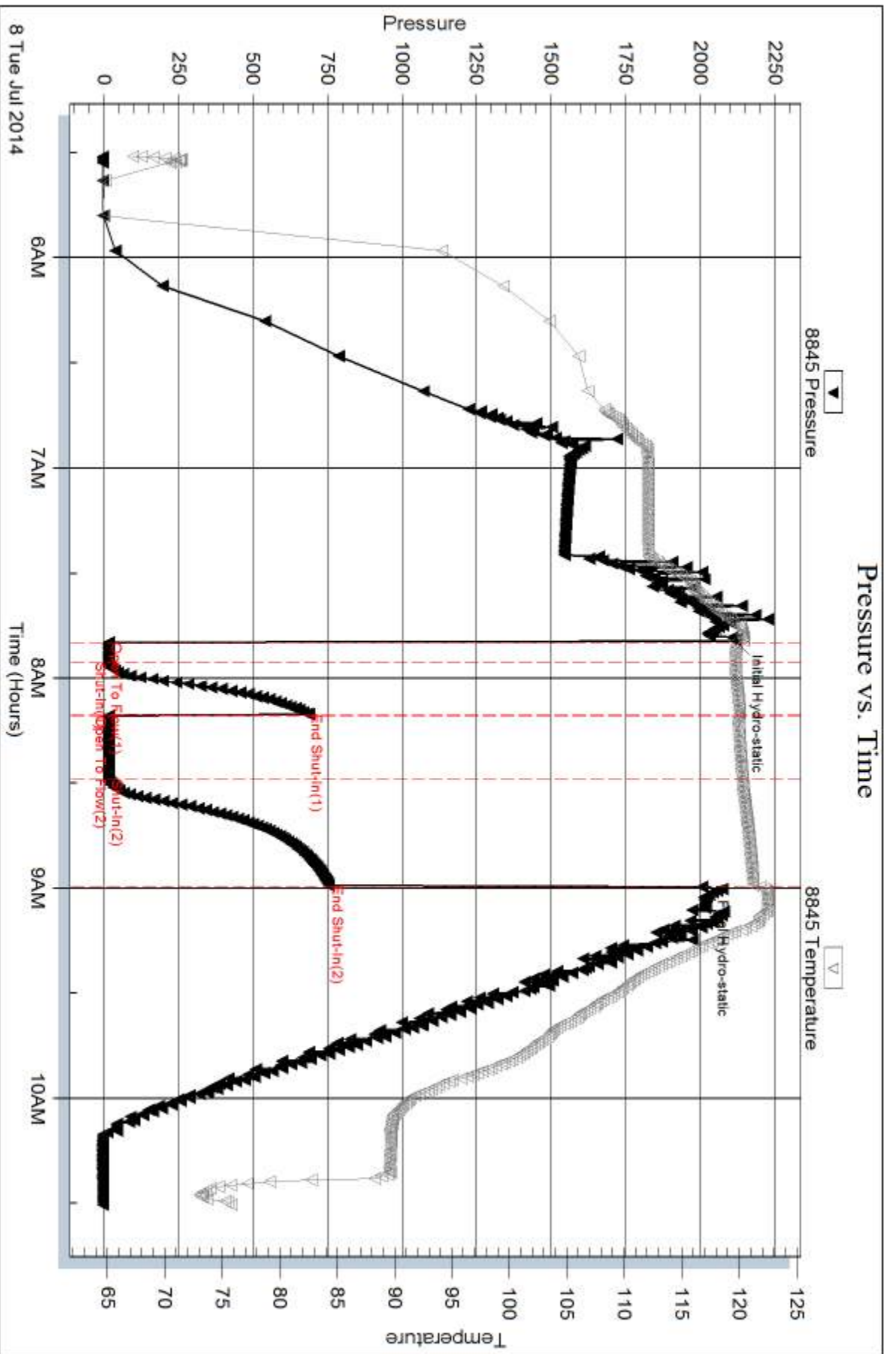
Num Gas Bombs: 0

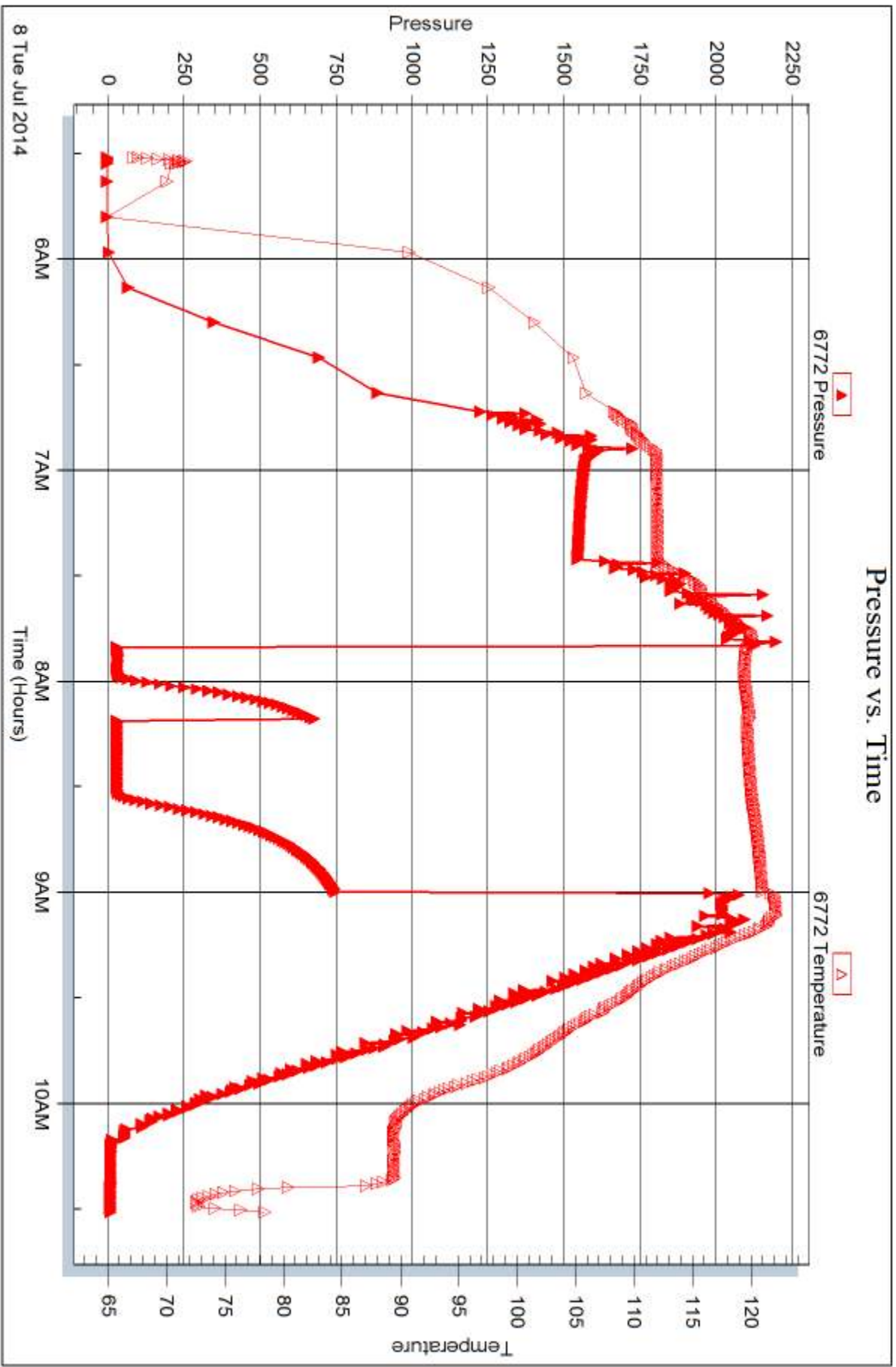
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 West State RD 4  
Olmitz, KS 67564

ATTN: Vern Schrag

### **Shapland #1-21**

#### **21-18s-28w Lane,KS**

Start Date: 2014.07.08 @ 17:56:00

End Date: 2014.07.08 @ 22:57:15

Job Ticket #: 57350                      DST #: 2

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

Printed: 2014.07.15 @ 10:35:29



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4  
Olmitz, KS 67564

Shapland #1-21

Job Ticket: 57350

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 17:56:00

## GENERAL INFORMATION:

Formation: " K "

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:24:30

Time Test Ended: 22:57:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

Interval: 4253.00 ft (KB) To 4265.00 ft (KB) (TVD)

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4265.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8845 Outside

Press@RunDepth: 21.59 psig @ 4254.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.08

End Date:

2014.07.08

Last Calib.:

2014.07.08

Start Time: 17:56:05

End Time:

22:57:14

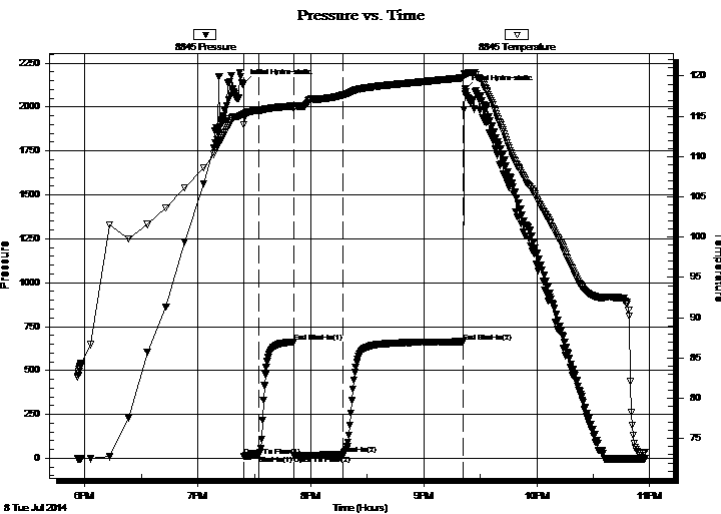
Time On Btm:

2014.07.08 @ 19:24:15

Time Off Btm:

2014.07.08 @ 21:22:00

TEST COMMENT: IF: Weak Surface Blow . 1/4" Nipple broke.  
IS: No Return.  
FF: No Blow . Thought we had 1/4" nipple fixed but broke again.  
FS: No Return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2132.21	115.30	Initial Hydro-static
1	12.19	113.96	Open To Flow (1)
8	16.93	115.68	Shut-In(1)
27	662.72	116.29	End Shut-In(1)
27	15.11	115.94	Open To Flow (2)
53	21.59	117.63	Shut-In(2)
117	664.22	119.77	End Shut-In(2)
118	2101.74	120.23	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m ( Oil Spots )	0.02

\* 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.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 57350

**DST#: 2**

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 17:56:00

## Tool Information

Drill Pipe:	Length: 4108.00 ft	Diameter: 3.80 inches	Volume: 57.62 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 58.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4253.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 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			4226.00	
Shut In Tool	5.00			4231.00	
Hydraulic tool	5.00			4236.00	
Jars	5.00			4241.00	
Safety Joint	3.00			4244.00	
Packer	5.00			4249.00	28.00 Bottom Of Top Packer
Packer	4.00			4253.00	
Stubb	1.00			4254.00	
Recorder	0.00	6772	Outside	4254.00	
Recorder	0.00	8845	Outside	4254.00	
Perforations	6.00			4260.00	
Bullnose	5.00			4265.00	12.00 Bottom Packers & Anchor

**Total Tool Length: 40.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 57350

**DST#: 2**

ATTN: Vern Schrag

Test Start: 2014.07.08 @ 17:56:00

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100m ( Oil Spots )	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

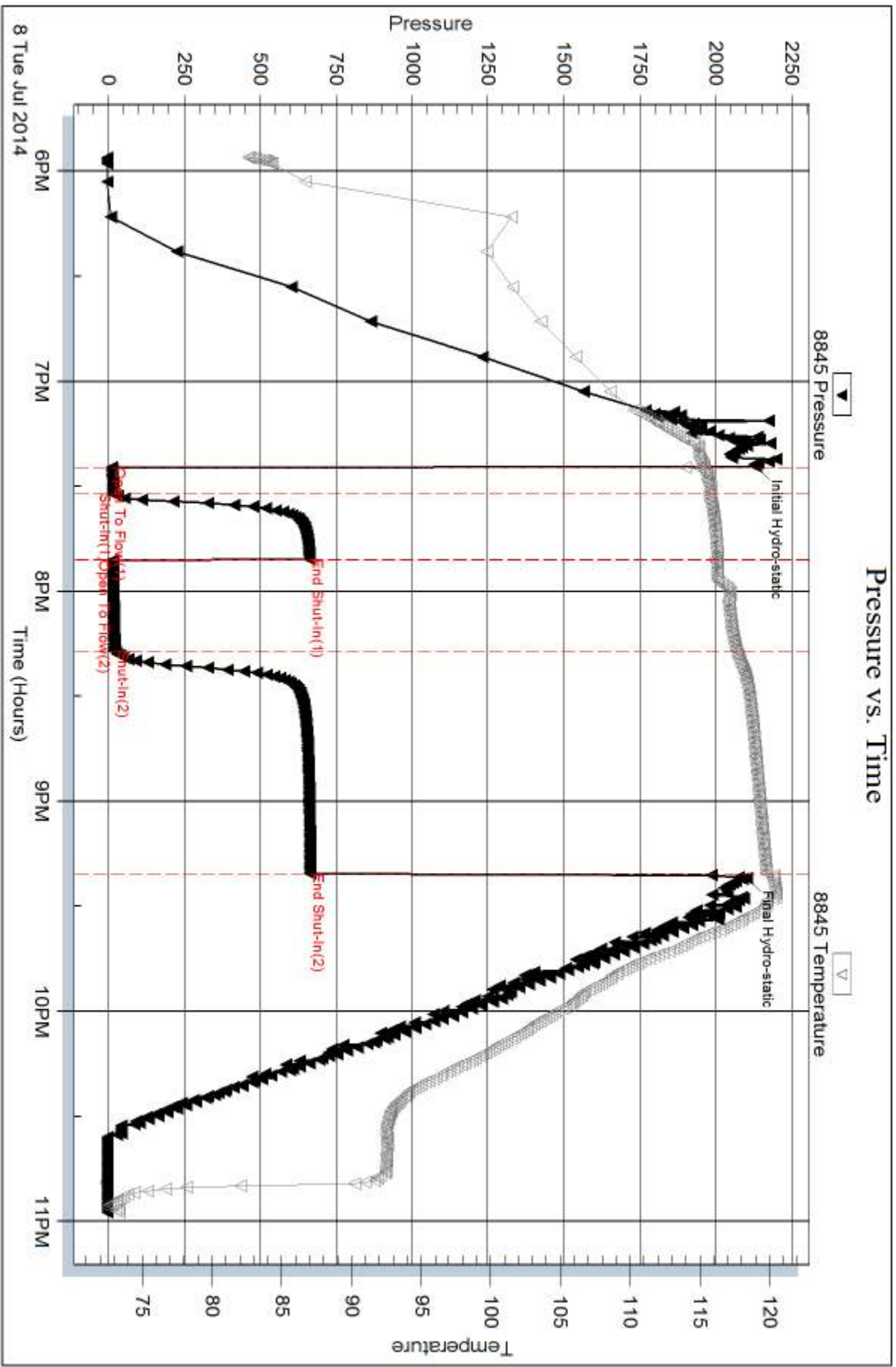
Num Gas Bombs: 0

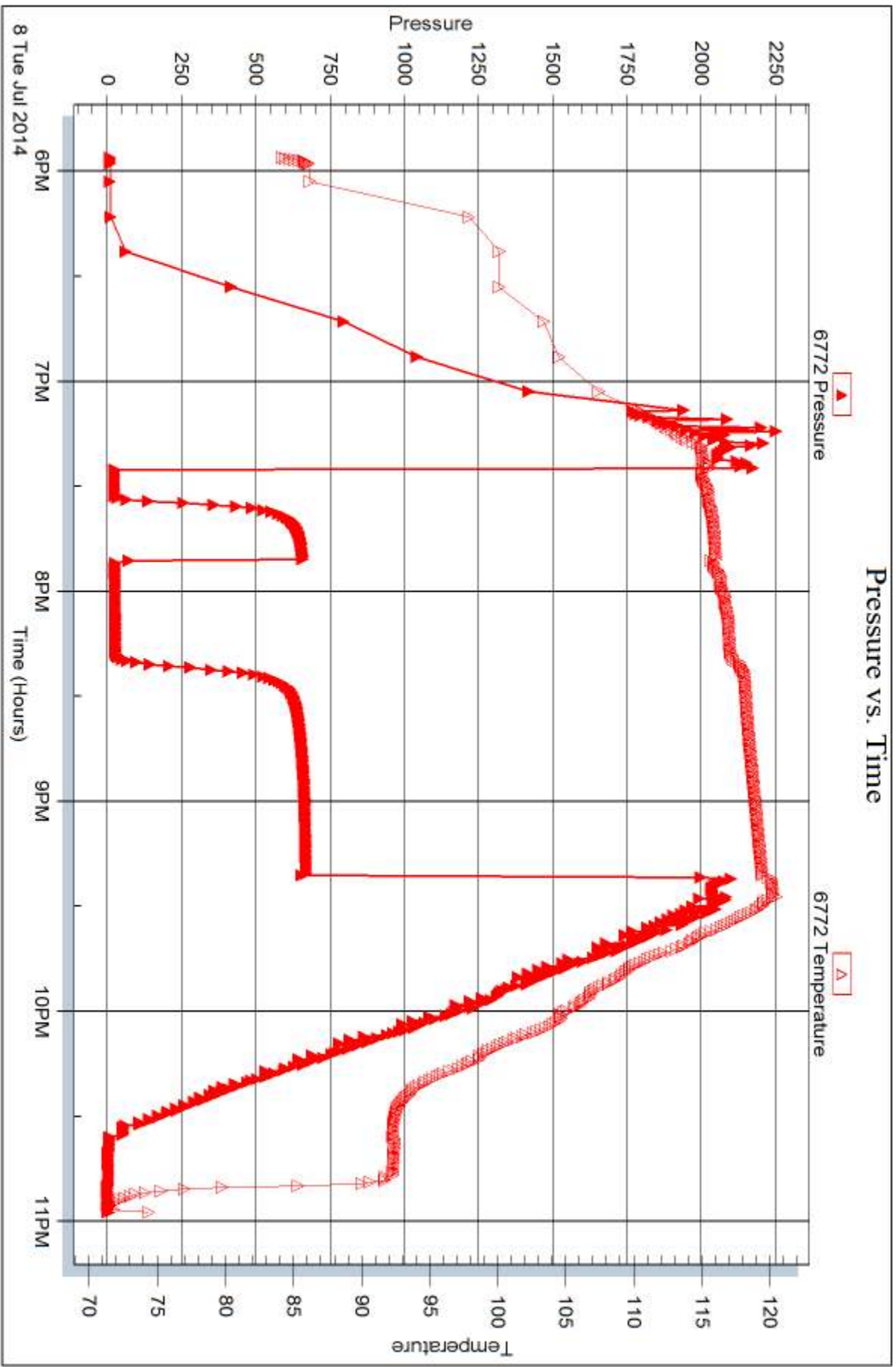
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 West State RD 4  
Olmitz, KS 67564

ATTN: Vern Schrag

### **Shapland #1-21**

#### **21-18s-28w Lane,KS**

Start Date: 2014.07.09 @ 07:02:00

End Date: 2014.07.09 @ 12:11:15

Job Ticket #: DST #: 3

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

Printed: 2014.07.15 @ 10:35:07



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

21-18s-28w Lane, KS

562 West State RD 4  
Olmitz, KS 67564

Shapland #1-21

Job Ticket: **DST#: 3**

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 07:02:00

## GENERAL INFORMATION:

Formation: " K "

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:35:15

Time Test Ended: 12:11:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

Interval: 4251.00 ft (KB) To 4269.00 ft (KB) (TVD)

Total Depth: 4269.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2749.00 ft (KB)

2742.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8845 Outside

Press@RunDepth: 47.01 psig @ 4252.00 ft (KB)

Start Date: 2014.07.09

End Date: 2014.07.09

Start Time: 07:02:05

End Time: 12:11:14

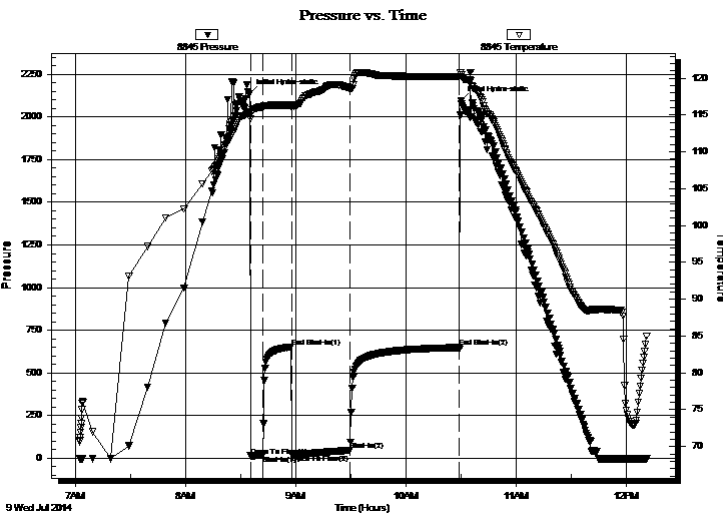
Capacity: 8000.00 psig

Last Calib.: 2014.07.09

Time On Btm: 2014.07.09 @ 08:35:00

Time Off Btm: 2014.07.09 @ 10:30:00

TEST COMMENT: IF: 1/2" Blow .  
IS: No Return.  
FF: 1 1/2" Blow .  
FS: No Return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.70	115.39	Initial Hydro-static
1	14.35	114.48	Open To Flow (1)
7	20.11	116.06	Shut-In(1)
23	652.68	116.33	End Shut-In(1)
23	20.53	115.96	Open To Flow (2)
55	47.01	118.61	Shut-In(2)
114	649.61	120.26	End Shut-In(2)
115	2093.52	120.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	WCM 15w 85m ( Oil Scum On Top)	0.34

## 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.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket:

**DST#: 3**

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 07:02:00

## Tool Information

Drill Pipe:	Length: 4107.00 ft	Diameter: 3.80 inches	Volume: 57.61 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 58.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4251.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 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			4224.00	
Shut In Tool	5.00			4229.00	
Hydraulic tool	5.00			4234.00	
Jars	5.00			4239.00	
Safety Joint	3.00			4242.00	
Packer	5.00			4247.00	28.00 Bottom Of Top Packer
Packer	4.00			4251.00	
Stubb	1.00			4252.00	
Recorder	0.00	6772	Outside	4252.00	
Recorder	0.00	8845	Outside	4252.00	
Perforations	12.00			4264.00	
Bullnose	5.00			4269.00	18.00 Bottom Packers & Anchor

**Total Tool Length: 46.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket:

**DST#: 3**

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 07:02:00

### 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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	WCM 15w 85m ( Oil Scum On Top)	0.344

Total Length: 70.00 ft      Total Volume: 0.344 bbl

Num Fluid Samples: 0

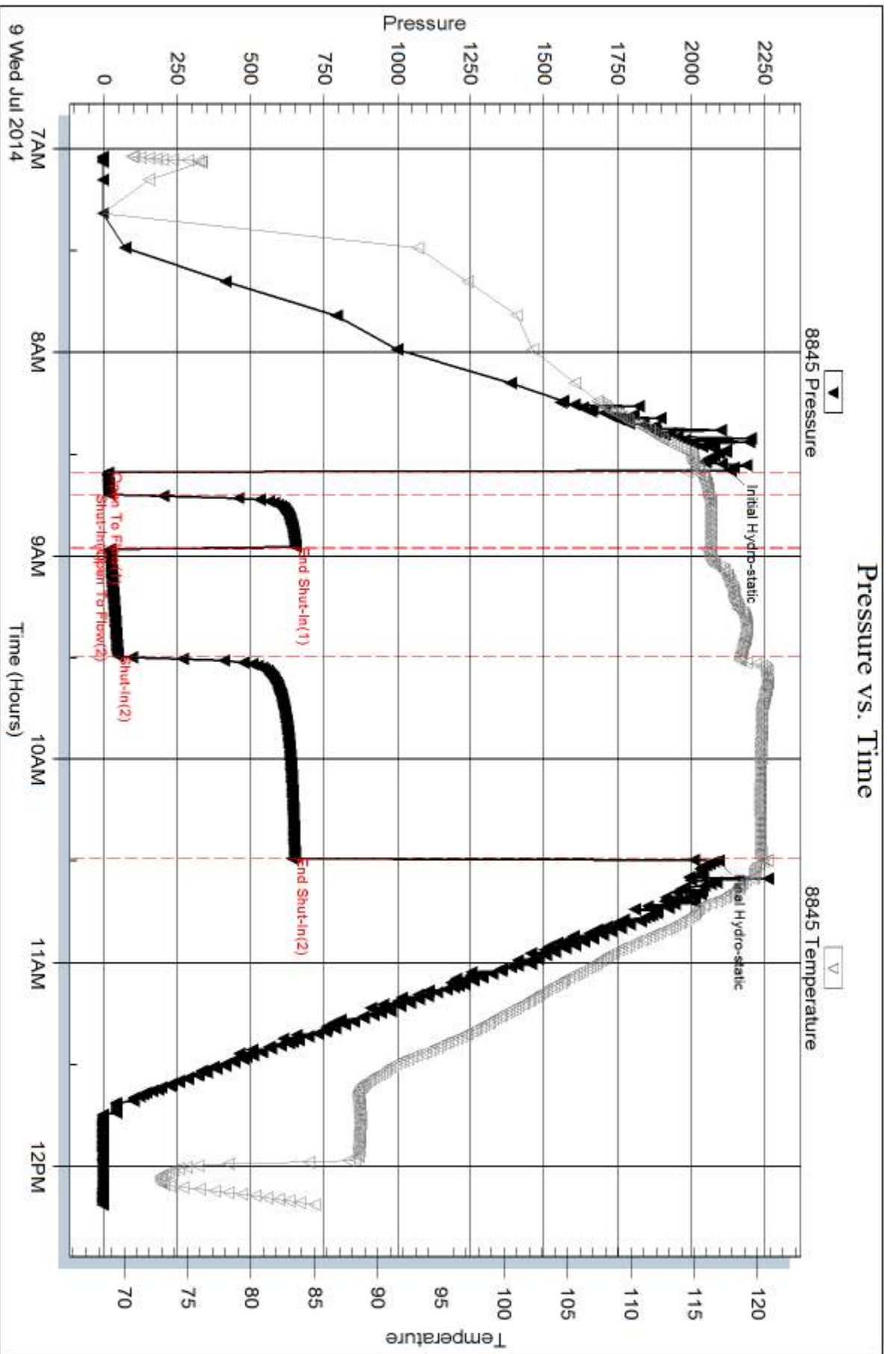
Num Gas Bombs: 0

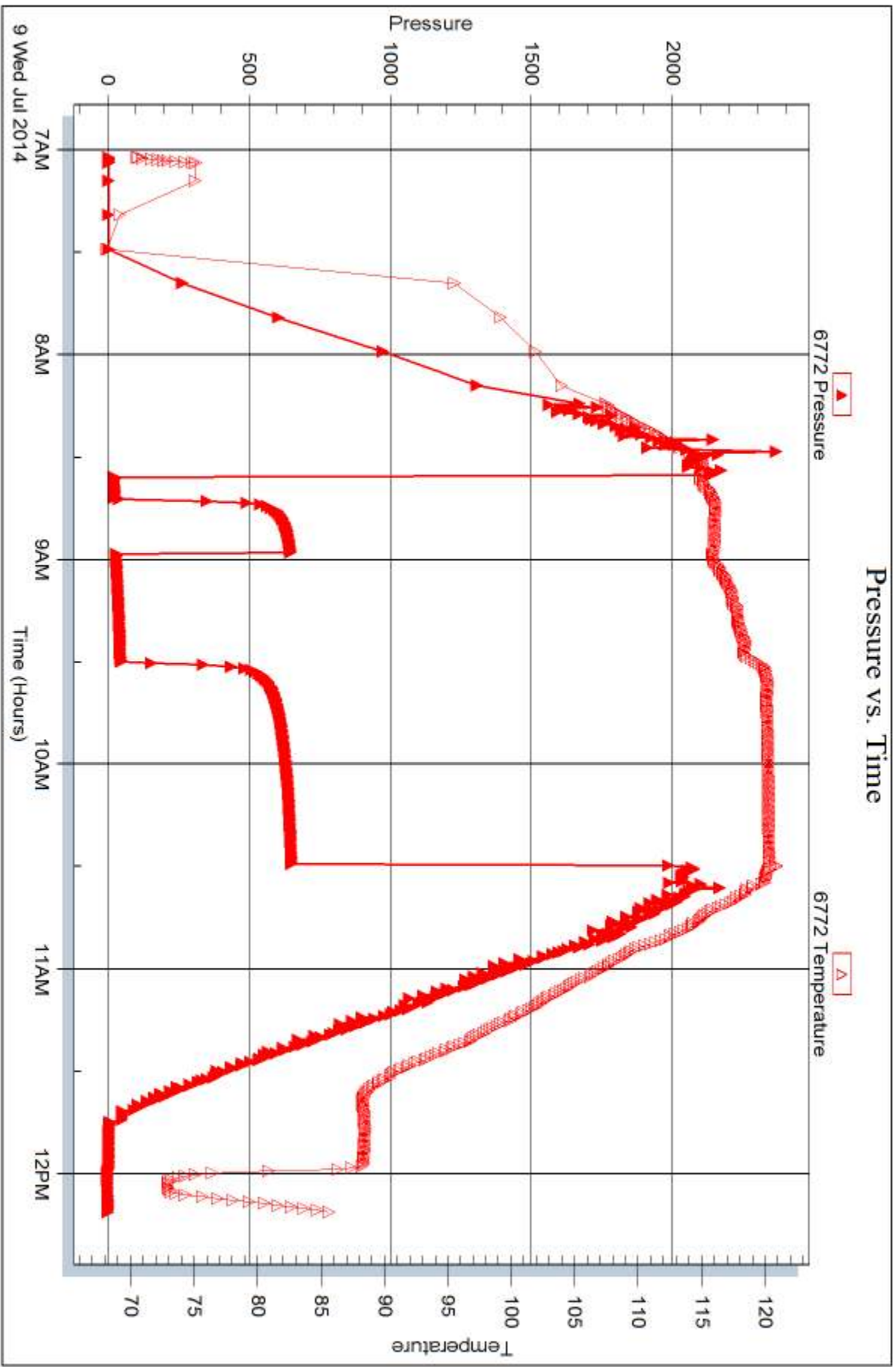
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 West State RD 4  
Olmitz, KS 67564

ATTN: Vern Schrag

### **Shapland #1-21**

#### **21-18s-28w Lane,KS**

Start Date: 2014.07.09 @ 23:16:00

End Date: 2014.07.10 @ 04:02:30

Job Ticket #: 59577                      DST #: 4

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

Printed: 2014.07.15 @ 10:34:33



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59577

**DST#: 4**

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 23:16:00

## GENERAL INFORMATION:

Formation: **Middle Creek**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:52:00

Time Test Ended: 04:02:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

**Interval: 4282.00 ft (KB) To 4294.00 ft (KB) (TVD)**

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4294.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8845 Outside**

Press@RunDepth: 14.38 psig @ 4283.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.09

End Date:

2014.07.10

Last Calib.:

2014.07.10

Start Time: 23:16:05

End Time:

04:02:29

Time On Btm:

2014.07.10 @ 00:51:45

Time Off Btm:

2014.07.10 @ 02:07:30

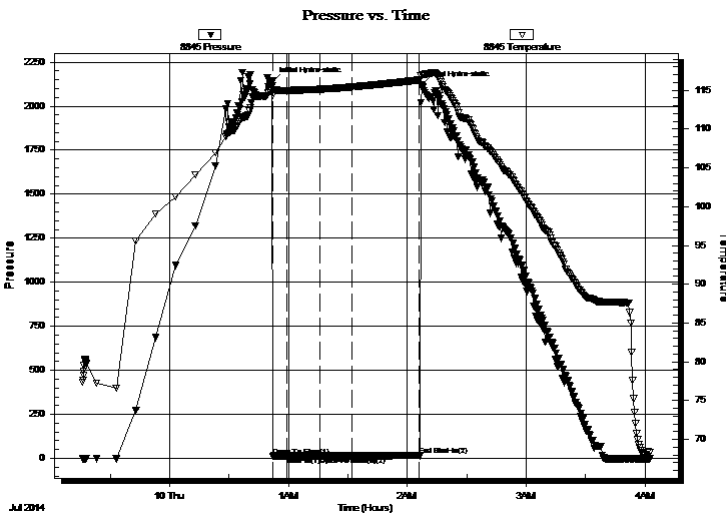
TEST COMMENT: IF: Weak Surface Blow .

IS: No Return.

FF: Weak Surface Blow died @ 12 min.

FS: No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2141.10	115.54	Initial Hydro-static
1	12.99	114.36	Open To Flow (1)
8	13.96	114.98	Shut-In(1)
24	14.88	115.13	End Shut-In(1)
25	14.22	115.13	Open To Flow (2)
40	14.38	115.41	Shut-In(2)
75	15.93	116.33	End Shut-In(2)
76	2119.37	116.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

\* 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.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59577

**DST#: 4**

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 23:16:00

## Tool Information

Drill Pipe:	Length: 4140.00 ft	Diameter: 3.80 inches	Volume: 58.07 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4282.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 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			4255.00	
Shut In Tool	5.00			4260.00	
Hydraulic tool	5.00			4265.00	
Jars	5.00			4270.00	
Safety Joint	3.00			4273.00	
Packer	5.00			4278.00	28.00 Bottom Of Top Packer
Packer	4.00			4282.00	
Stubb	1.00			4283.00	
Recorder	0.00	6772	Outside	4283.00	
Recorder	0.00	8845	Outside	4283.00	
Perforations	6.00			4289.00	
Bullnose	5.00			4294.00	12.00 Bottom Packers & Anchor

**Total Tool Length: 40.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59577

**DST#: 4**

ATTN: Vern Schrag

Test Start: 2014.07.09 @ 23:16:00

### 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: 58.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 3600.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

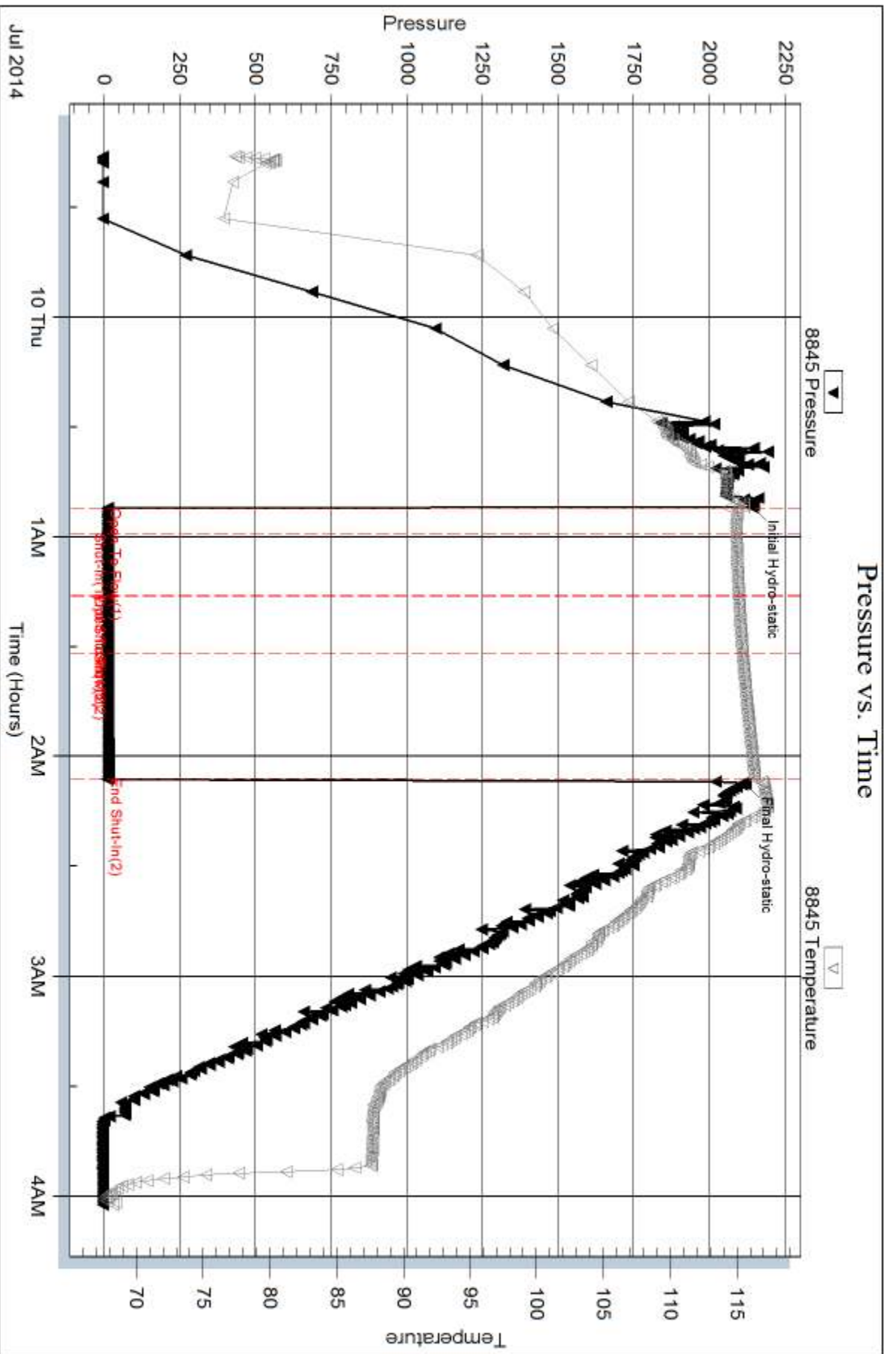
Num Gas Bombs: 0

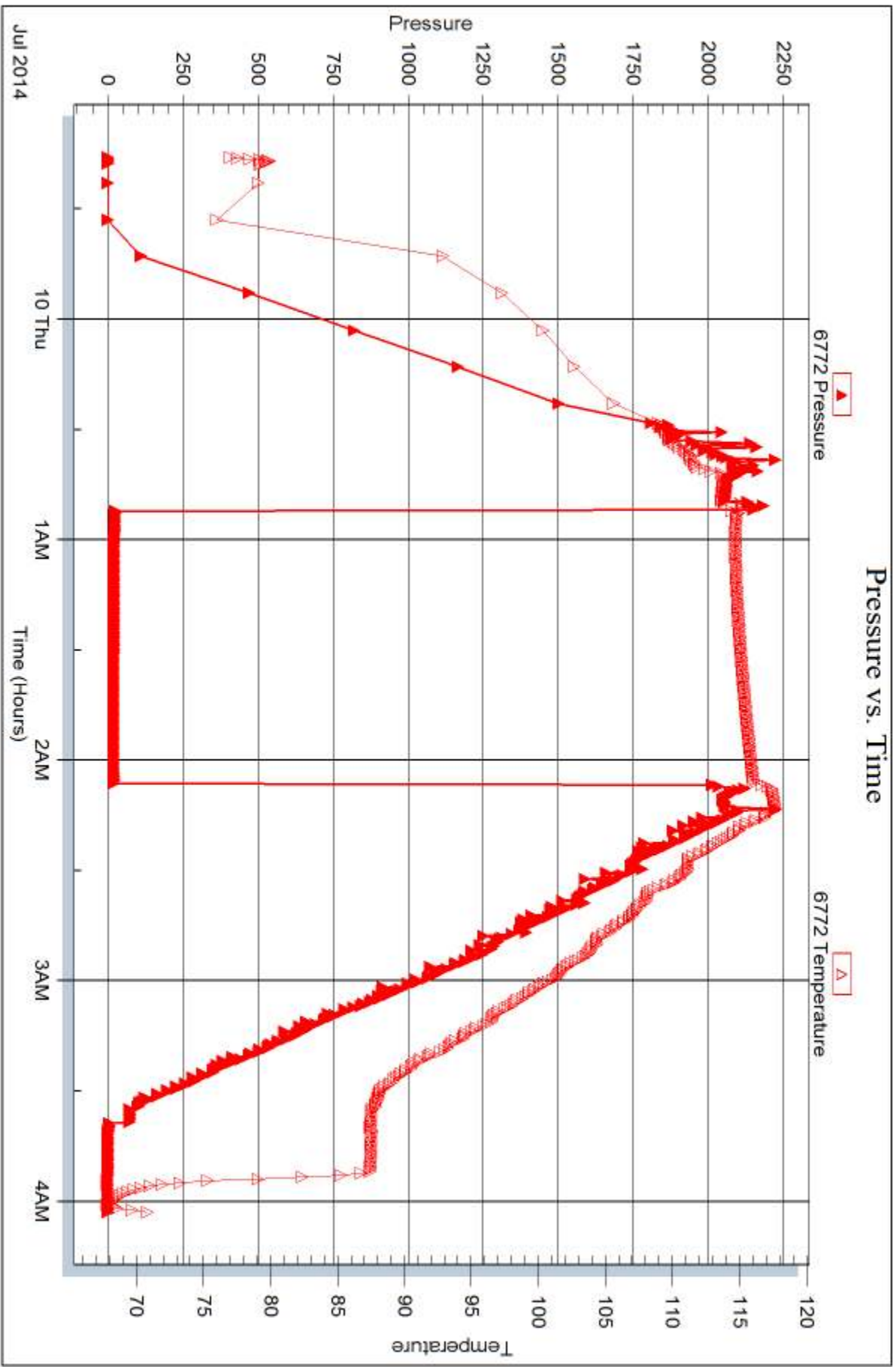
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 West State RD 4  
Olmitz, KS 67564

ATTN: Vern Schrag

### **Shapland #1-21**

#### **21-18s-28w Lane,KS**

Start Date: 2014.07.10 @ 23:53:00

End Date: 2014.07.11 @ 04:36:45

Job Ticket #: 59578                      DST #: 5

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

Printed: 2014.07.15 @ 10:34:06



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59578

**DST#: 5**

ATTN: Vern Schrag

Test Start: 2014.07.10 @ 23:53:00

## GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:40:45

Time Test Ended: 04:36:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

**Interval: 4328.00 ft (KB) To 4415.00 ft (KB) (TVD)**

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4415.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8845 Inside**

Press@RunDepth: 22.45 psig @ 4329.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.10

End Date:

2014.07.11

Last Calib.: 2014.07.11

Start Time: 23:53:05

End Time:

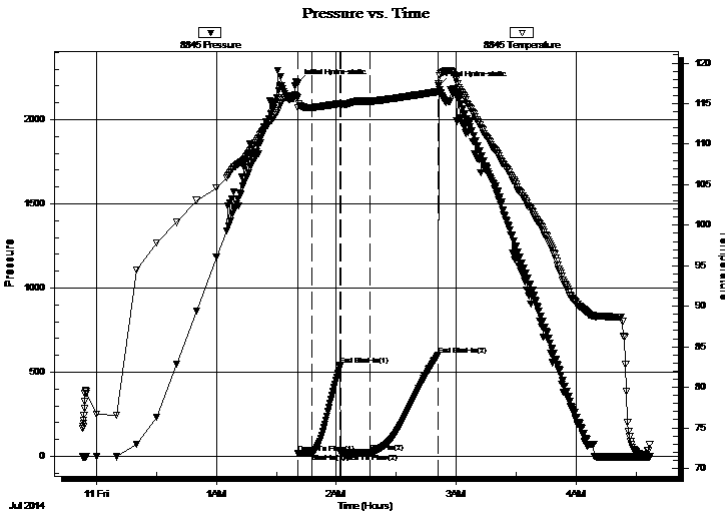
04:36:44

Time On Btm: 2014.07.11 @ 01:40:30

Time Off Btm: 2014.07.11 @ 02:51:15

TEST COMMENT: IF: Weak Surface Blow .  
IS: No Return.  
FF: Weak Surface Blow .  
FS: No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2216.77	115.75	Initial Hydro-static
1	16.66	114.48	Open To Flow (1)
8	19.23	114.53	Shut-In(1)
22	541.30	115.01	End Shut-In(1)
22	20.10	114.70	Open To Flow (2)
37	22.45	115.31	Shut-In(2)
71	601.11	116.47	End Shut-In(2)
71	2201.67	117.47	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100m ( Oil Spots )	0.05

\* 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.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59578

**DST#: 5**

ATTN: Vern Schrag

Test Start: 2014.07.10 @ 23:53:00

## Tool Information

Drill Pipe:	Length: 4201.00 ft	Diameter: 3.80 inches	Volume: 58.93 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 59.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4328.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	115.00 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			4301.00	
Shut In Tool	5.00			4306.00	
Hydraulic tool	5.00			4311.00	
Jars	5.00			4316.00	
Safety Joint	3.00			4319.00	
Packer	5.00			4324.00	28.00 Bottom Of Top Packer
Packer	4.00			4328.00	
Stubb	1.00			4329.00	
Recorder	0.00	6772	Outside	4329.00	
Recorder	0.00	8845	Inside	4329.00	
Perforations	16.00			4345.00	
Change Over Sub	1.00			4346.00	
Drill Pipe	63.00			4409.00	
Change Over Sub	1.00			4410.00	
Bullnose	5.00			4415.00	87.00 Bottom Packers & Anchor

**Total Tool Length: 115.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Larson Engineering, Inc.

**21-18s-28w Lane,KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59578

**DST#: 5**

ATTN: Vern Schrag

Test Start: 2014.07.10 @ 23:53:00

### 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100m ( Oil Spots )	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

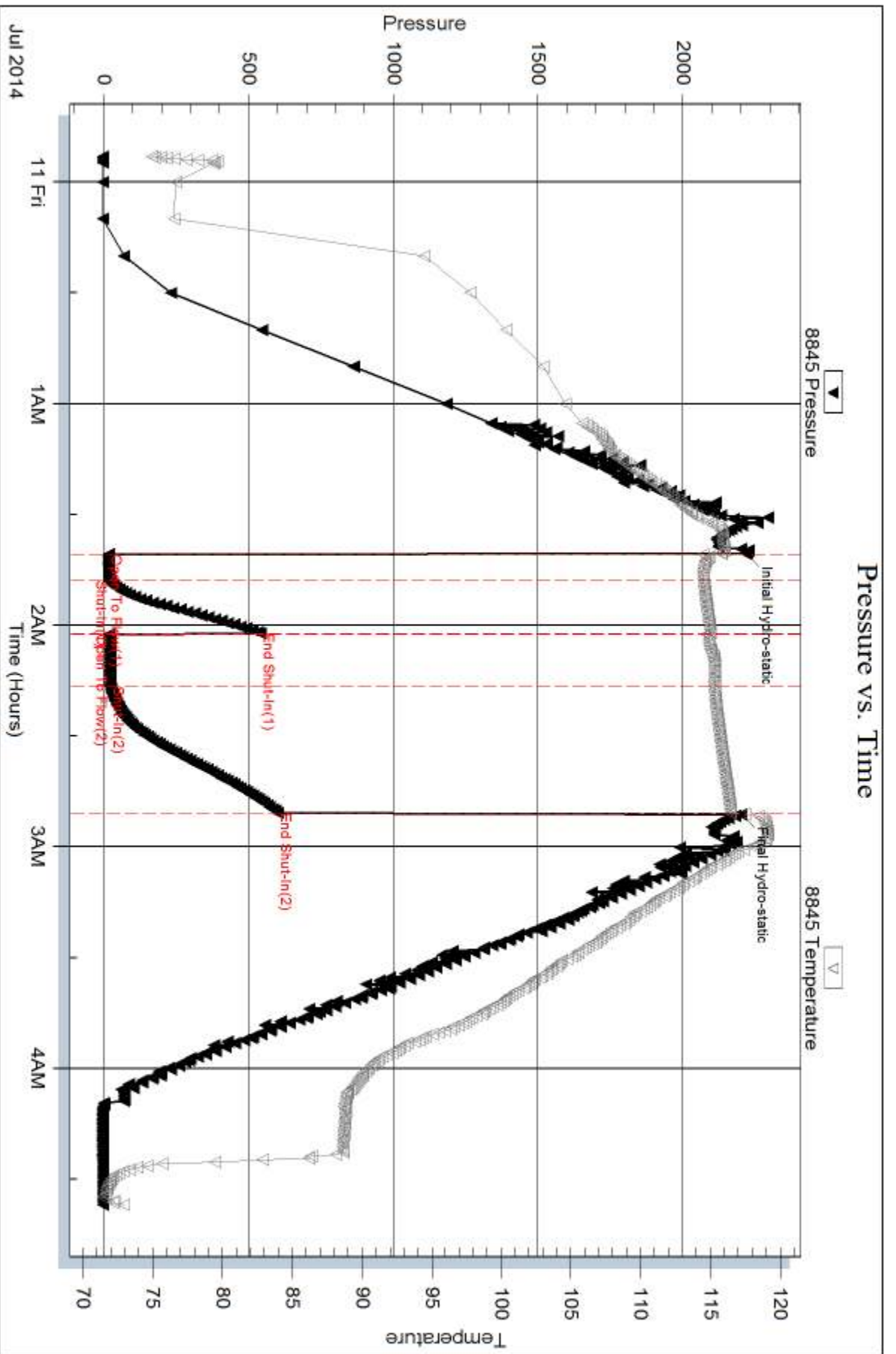
Num Gas Bombs: 0

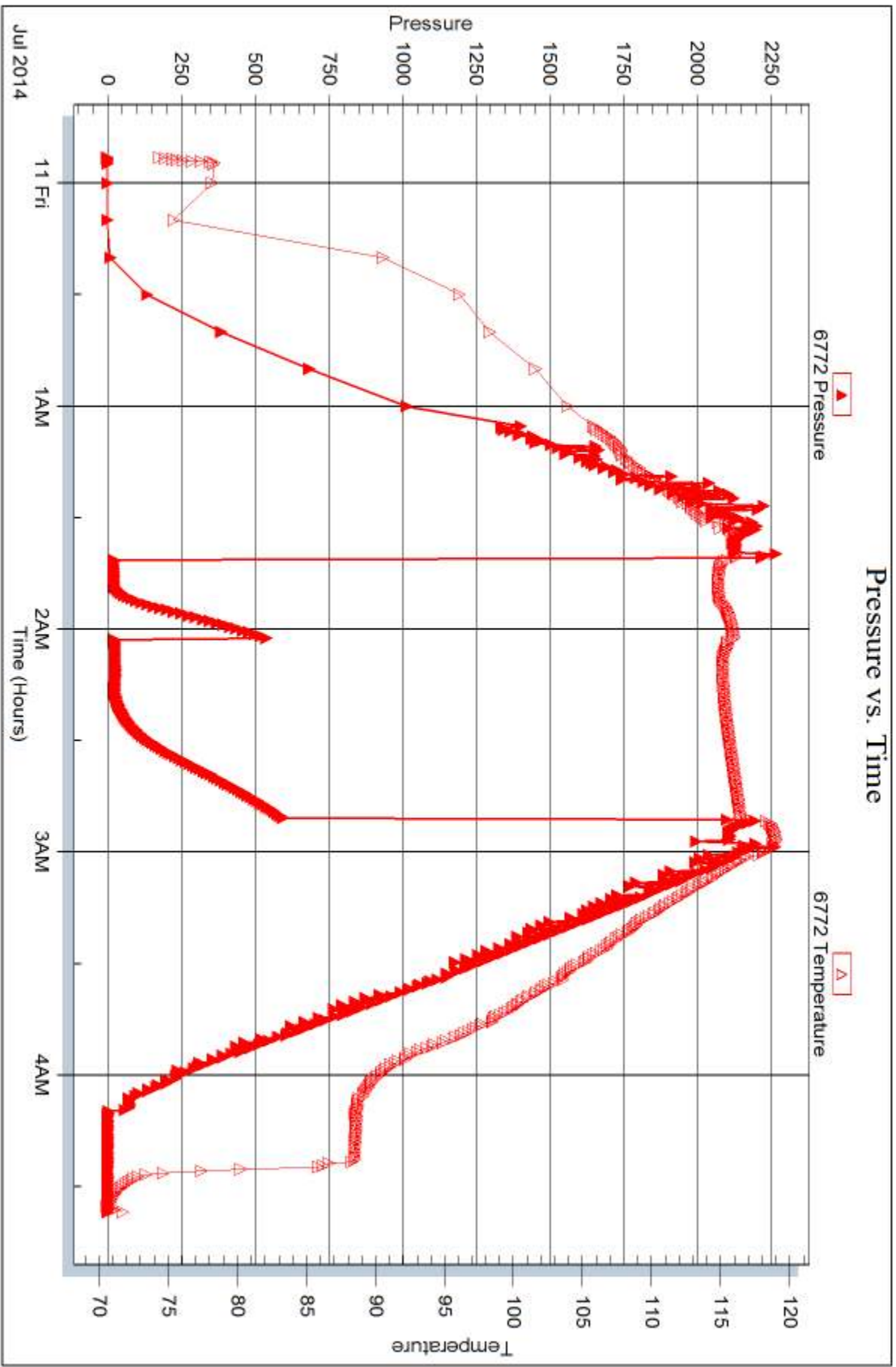
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 West State RD 4  
Olmitz, KS 67564

ATTN: Vern Schrag

### **Shapland #1-21**

### **21-18s-28w Lane,KS**

Start Date: 2014.07.12 @ 00:24:00

End Date: 2014.07.12 @ 05:32:00

Job Ticket #: 59579                      DST #: 6

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

Printed: 2014.07.15 @ 10:33:26



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59579

**DST#: 6**

ATTN: Vern Schrag

Test Start: 2014.07.12 @ 00:24:00

## GENERAL INFORMATION:

Formation: **Pawnee- Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:27:15

Time Test Ended: 05:32:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

**Interval: 4442.00 ft (KB) To 4580.00 ft (KB) (TVD)**

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4580.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8845 Inside**

Press@RunDepth: 25.06 psig @ 4443.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.12

End Date:

2014.07.12

Last Calib.:

2014.07.12

Start Time: 00:24:05

End Time:

05:31:59

Time On Btm:

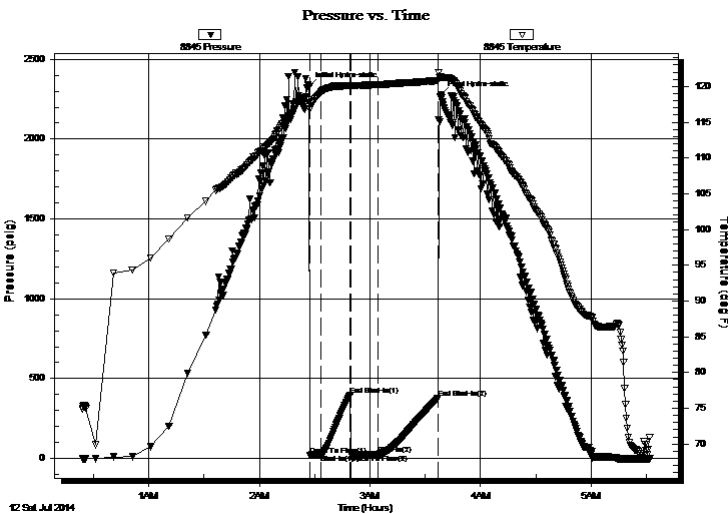
2014.07.12 @ 02:27:00

Time Off Btm:

2014.07.12 @ 03:38:30

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

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2326.90	118.12	Initial Hydro-static
1	19.88	116.79	Open To Flow (1)
7	22.29	119.24	Shut-In(1)
23	397.96	120.12	End Shut-In(1)
23	23.52	119.95	Open To Flow (2)
38	25.06	120.25	Shut-In(2)
70	379.32	120.82	End Shut-In(2)
72	2275.01	121.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100m	0.05

\* Recovery from multiple tests

## Gas Rates

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



# DRILL STEM TEST REPORT

Larson Engineering, Inc.  
 562 West State RD 4  
 Olmitz, KS 67564  
 ATTN: Vern Schrag

**21-18s-28w Lane, KS**

**Shapland #1-21**

Job Ticket: 59579

**DST#: 6**

Test Start: 2014.07.12 @ 00:24:00

## GENERAL INFORMATION:

Formation: **Pawnee- Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:27:15

Time Test Ended: 05:32:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Samuel Esparza

Unit No: 71

**Interval: 4442.00 ft (KB) To 4580.00 ft (KB) (TVD)**

Reference Elevations: 2749.00 ft (KB)

Total Depth: 4580.00 ft (KB) (TVD)

2742.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 6772**

**Outside**

Press@RunDepth: psig @ 4443.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.12

End Date: 2014.07.12

Last Calib.: 2014.07.12

Start Time: 00:24:05

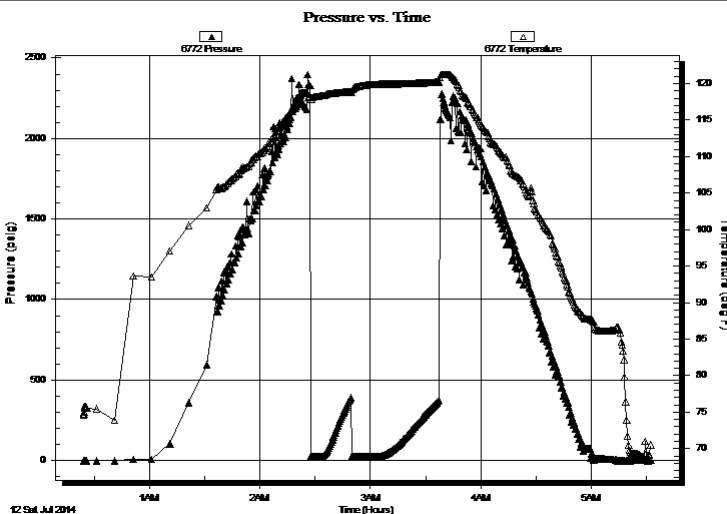
End Time: 05:32:14

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: 1/4" Blow .  
 IS: No Return.  
 FF: Weak Surface Blow .  
 FS: No Return.

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100m	0.05

## 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.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59579

**DST#: 6**

ATTN: Vern Schrag

Test Start: 2014.07.12 @ 00:24:00

## Tool Information

Drill Pipe:	Length: 4295.00 ft	Diameter: 3.80 inches	Volume: 60.25 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4442.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	138.00 ft			
Tool Length:	166.00 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			4415.00	
Shut In Tool	5.00			4420.00	
Hydraulic tool	5.00			4425.00	
Jars	5.00			4430.00	
Safety Joint	3.00			4433.00	
Packer	5.00			4438.00	28.00 Bottom Of Top Packer
Packer	4.00			4442.00	
Stubb	1.00			4443.00	
Recorder	0.00	6772	Outside	4443.00	
Recorder	0.00	8845	Inside	4443.00	
Perforations	4.00			4447.00	
Change Over Sub	1.00			4448.00	
Drill Pipe	126.00			4574.00	
Change Over Sub	1.00			4575.00	
Bullnose	5.00			4580.00	138.00 Bottom Packers & Anchor

**Total Tool Length: 166.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**21-18s-28w Lane, KS**

562 West State RD 4  
Olmitz, KS 67564

**Shapland #1-21**

Job Ticket: 59579

**DST#: 6**

ATTN: Vern Schrag

Test Start: 2014.07.12 @ 00:24:00

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100m	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

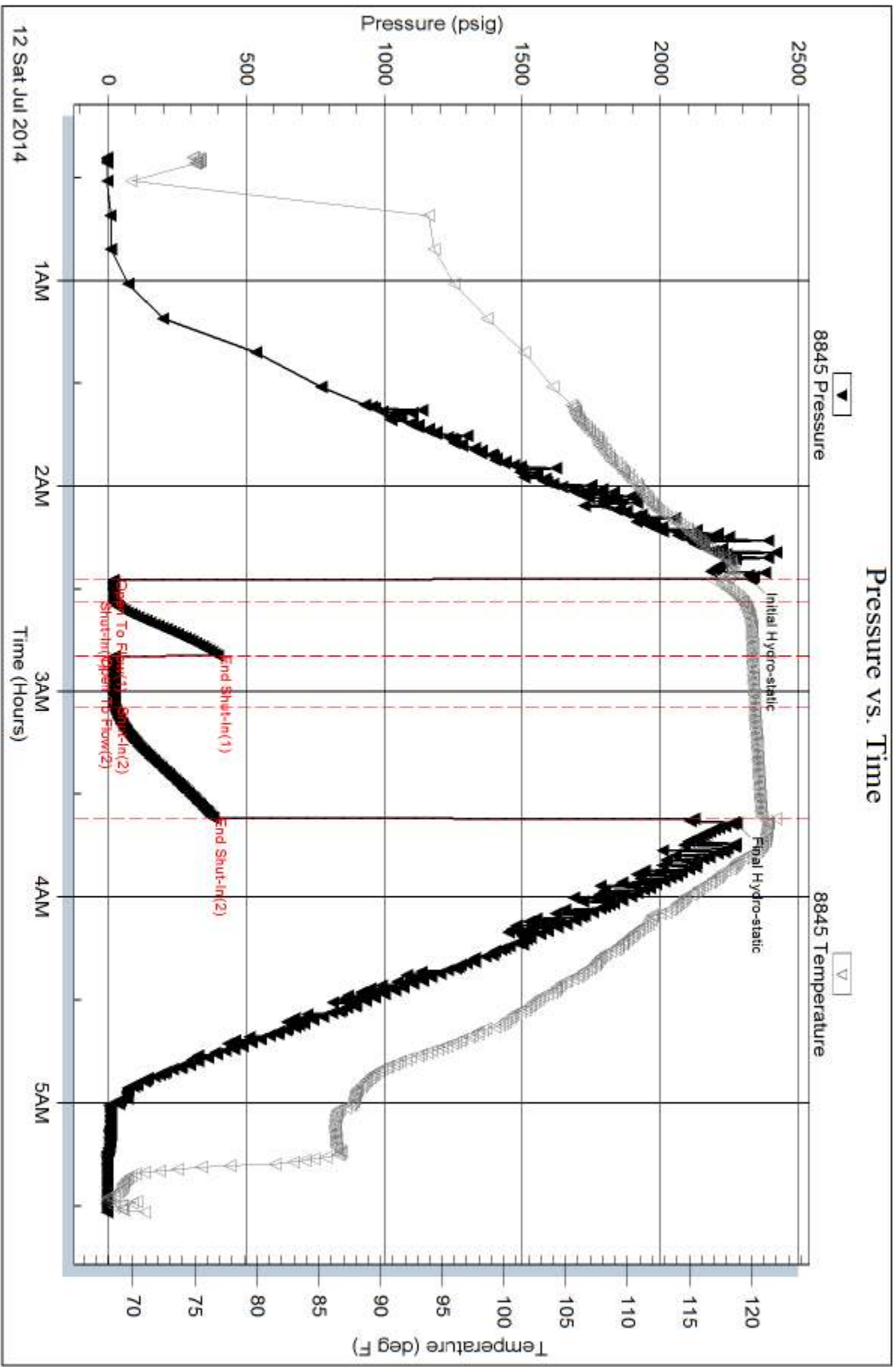
Num Gas Bombs: 0

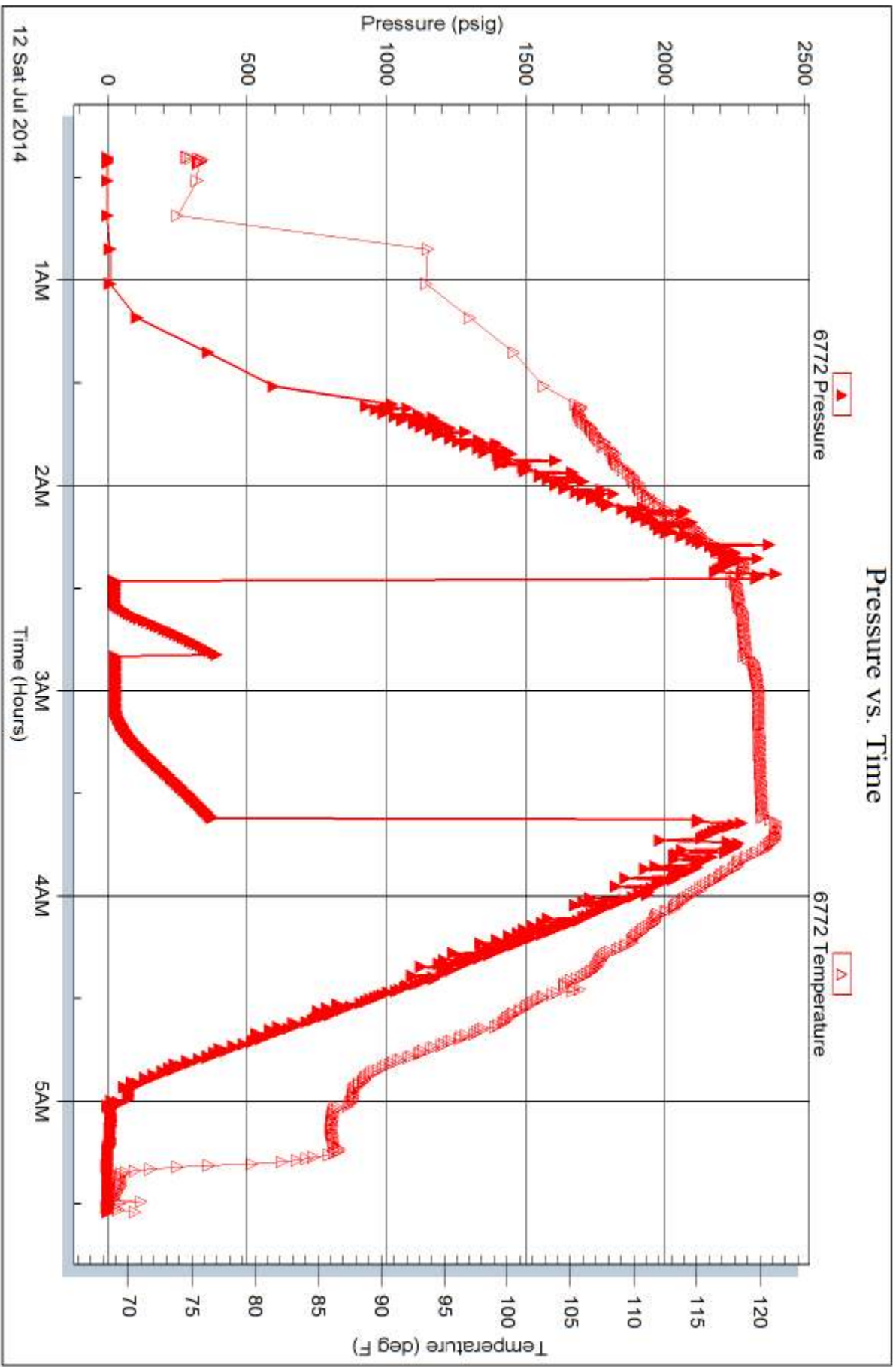
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 57349

Well Name & No. Shapland Trust #1-21 Test No. 1 Date 7/8/14  
 Company Larson Engineering, Inc. Elevation 2749 KB 2742 GL  
 Address 562 West state RD 4 Olmitz, KS 67564  
 Co. Rep / Geo. Vern Schrag Rig HD #3  
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4216 - 4245 Zone Tested "J"  
 Anchor Length 29 Drill Pipe Run 4074 Mud Wt. 9.1  
 Top Packer Depth 4212 Drill Collars Run 124 Vis 50  
 Bottom Packer Depth 4216 Wt. Pipe Run Ø WL 8.0  
 Total Depth 4245 Chlorides 3000 ppm System LCM 1

Blow Description IF: Weak surface Blow.  
TST: No Return.  
FF: Weak surface Blow died @ 9 min.  
FST: No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</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 5 BHT 121 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic	<u>2121</u>	<input checked="" type="checkbox"/> Test	<u>1250</u>	T-On Location	<u>04:45</u>
(B) First Initial Flow	<u>16</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>0531</u>
(C) First Final Flow	<u>17</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>0750</u>
(D) Initial Shut-In	<u>687</u>	<input checked="" type="checkbox"/> Circ Sub	<u>N/C</u>	T-Pulled	<u>0900</u>
(E) Second Initial Flow	<u>18</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>1031</u>
(F) Second Final Flow	<u>19</u>	<input checked="" type="checkbox"/> Mileage	<u>62 R/T</u> 96.10	Comments	
(G) Final Shut-In	<u>756</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>2008</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>1671.10</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1671.10</u>		

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 57350

4/10

Well Name & No. Shapland Trust #1-21 Test No. 2 Date 7/8/14  
 Company Larson Engineering, Inc. Elevation 2749 KB 2742 GL  
 Address 562 West State RD 4 Olinite, KS 67564  
 Co. Rep / Geo. Vern Schwag Rig AD#3  
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4253-4265 Zone Tested "K"  
 Anchor Length 12 Drill Pipe Run 4108 Mud Wt. 9.2  
 Top Packer Depth 4249 Drill Collars Run 124 Vis 56  
 Bottom Packer Depth 4253 Wt. Pipe Run Ø WL 8.4  
 Total Depth 4265 Chlorides 300 ppm System LCM 3

Blow Description IP: weak surface Blow, 4" Nipple Broke  
IS: No Return  
FF: No Blow. Thought we had 4" nipple fixed but broke again  
RST: No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</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 5 BHT 120 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>2132</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u><del>5000</del> 1740</u>
(B) First Initial Flow <u>12</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1756</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1925</u>
(D) Initial Shut-In <u>663</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/E</u>	T-Pulled <u>2119</u>
(E) Second Initial Flow <u>15</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2257</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>62 R/T</u> 96.10	Comments <u>Sorry about my 4" nipple breaking work happen again?</u>
(G) Final Shut-In <u>664</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2102</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1671.10</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1671.10</u>	

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59576

4/10

Well Name & No. Shipland Tract #1-21 Test No. 3 Date 7/9/14  
 Company Larson Engineering Inc Elevation 2749 KB 2742 GL  
 Address 582 West State RD4 Olmitz, KS 67564  
 Co. Rep / Geo. Vern Shrage Rig AA 43  
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4251-4269 Zone Tested "K"  
 Anchor Length 18 Drill Pipe Run 4107 Mud Wt. 9.2  
 Top Packer Depth 4247 Drill Collars Run 124 Vis 49  
 Bottom Packer Depth 4251 Wt. Pipe Run 0 WL 8.4  
 Total Depth 4269 Chlorides 7000 ppm System LCM 1  
 Blow Description IP: 1/2" Blw.  
FSI: No Return.  
PF: 1 1/2" Blw.  
FSI No Rdn

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>Wcm SW8sm (oil cement top)</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 70 BHT 120 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2136</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>0645</u>
(B) First Initial Flow <u>14</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0722</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0846</u>
(D) Initial Shut-In <u>653</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>1035</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1211</u>
(F) Second Final Flow <u>47</u>	<input checked="" type="checkbox"/> Mileage <u>62 RT</u> 96.10	Comments _____
(G) Final Shut-In <u>650</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2094</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>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>1671.10</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1671.10</u>	

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **59577**

Well Name & No. Shipland Trust # 1-21 Test No. 4 Date 7/9/14  
 Company Larson Engineering, Inc. Elevation 2709 KB 2742 GL  
 Address 562 West State Rd 4 Olmito, KS 67564  
 Co. Rep / Geo. Vern Shroy Rig AD #3  
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4282-4294 Zone Tested Middle Creek  
 Anchor Length 12 Drill Pipe Run 4140 Mud Wt. 9.1  
 Top Packer Depth 4278 Drill Collars Run 124 Vis 58  
 Bottom Packer Depth 4282 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4294 Chlorides 3600 ppm System LCM 1

Blow Description IF: Weak surface Blow  
ISF: No Return  
FF: weak surface Blow lost @ 12 min.  
FSD: No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</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 5 BHT 116 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2141</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>2300</u>
(B) First Initial Flow <u>13</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2316</u>
(C) First Final Flow <u>14</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2250</u>
(D) Initial Shut-In <u>15</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>202</u>
(E) Second Initial Flow <u>14</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>403</u>
(F) Second Final Flow <u>14</u>	<input checked="" type="checkbox"/> Mileage <u>62 R/T</u> 96.10	Comments
(G) Final Shut-In <u>16</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2119</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>20</u>	<input type="checkbox"/> Day Standby	Total <u>1671.10</u>
	<input type="checkbox"/> Accessibility	MP/DST/Disc't
	Sub Total <u>1671.10</u>	

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59578

Well Name & No. Sheplard Trust #1-21 Test No. 5 Date 7/10/14  
 Company Loren Engineering, Inc. Elevation 2749 KB 2742 GL  
 Address 562 West State Rd 4 Okmiz, KS 67564  
 Co. Rep / Geo. Vern Schroy Rig HD #3  
 Location: Sec. 21 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4328-4415 Zone Tested Altamab  
 Anchor Length 87 Drill Pipe Run 4201 Mud Wt. 9.2  
 Top Packer Depth 4324 Drill Collars Run 24 Vis 60  
 Bottom Packer Depth 4328 Wt. Pipe Run 7 WL 8.4  
 Total Depth 4415 Chlorides 3500 ppm System LCM 1

Blow Description IF: weak surface Blow.  
FST: No Return.  
FF: weak surface Blow.  
FST: No Return.

Rec	Feet of	%gas	%oil	%water	%mud
10	Mud (oil spots)			100	

Rec Total 10 BHT 117 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2217</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>2330</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2353</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0141</u>
(D) Initial Shut-In <u>541</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>0248</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0437</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>62 RTT</u> 96.10	Comments
(G) Final Shut-In <u>601</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2202</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>13</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1671.10</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1671.10</u>	

Approved By \_\_\_\_\_ 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. 59579

Well Name & No. Shapland Trust #1-21 Test No. 6 Date 7/12/14  
 Company Larson Engineering, Inc Elevation 2749 KB 2742 GL  
 Address 562 West State RD 4 Olmsted, KS 67564  
 Co. Rep / Geo. Vern Schrag Rig AD #3  
 Location: Sec. 21 Twp. 18S Rge. 28 W Co. Lane State KS

Interval Tested 4442-4580 Zone Tested Packer - Cherokee  
 Anchor Length 138' Drill Pipe Run 4295 Mud Wt. 9.1  
 Top Packer Depth 4438 Drill Collars Run 124 Vis 60  
 Bottom Packer Depth 4442 Wt. Pipe Run Ø WL 9.2  
 Total Depth 4580 Chlorides 3500 ppm System LCM 1

Blow Description IP: 1/4" Blow.  
IST: NO Return.  
FF: Weak surface Blow.  
FSS: NO Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</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 10 BHT 121 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2327</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>0010</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0024</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0230</u>
(D) Initial Shut-In <u>398</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>0339</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0534</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>62 R/T</u> 96.10	Comments <u>Lost Tools</u>
(G) Final Shut-In <u>379</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2275</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>1671.10</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1671.10</u>	

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

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