



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1108499  
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: \_\_\_\_\_



1108499

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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

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

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

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

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

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

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

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

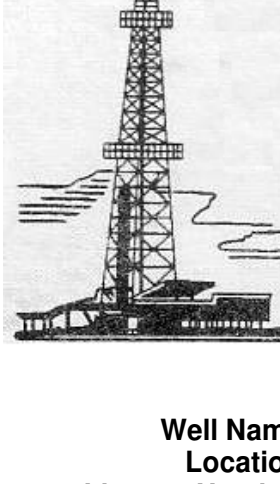
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD 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> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Sinclair 1-11
Doc ID	1108499

Tops

Name	Top	Datum
Heebner	3894	-1028
Lansing	3932	-1066
Stark Sh	4205	-1339
Marmaton	4327	-1461
Pawnee	4403	-1537
Ft. Scott	4455	-1589
Cherokee Sh	4479	-1613
Mississippi	4543	-1677



# WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG  
CONSULTANT GEOLOGIST



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

**Well Name:** SINCLAIR #1-11  
**Location:** NE SE NW SEC. 11-18s-30w  
**Licence Number:** API: 15-101-22407  
**Spud Date:** November 03, 2012  
**Surface Coordinates:** 1927' FSL & 1319' FWL

**Region:** Lane Co., KS  
**Completed:** November 16, 2012  
**Completion:** Oil

**Bottom Hole Coordinates:**  
**Ground Elevation (ft):** 2859'      **K.B. Elevation (ft):** 2866'  
**Logged Interval (ft):** 3800'      **To: RTD Total Depth (ft):** 4646'  
**Formation:** Mississippian  
**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 (#33935)**

**DP 4.5" XH (16.6#); DC 6.25" x 2.25" x 560'; Kelly 40.30'; Tool Joint 5.5" ; Bit: JZ-QX21 down to 4036', 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 278'  
 5-1/2" production casing

### CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60 spm, Chemical, premix, displaced about 3400'; earth pits, Morgan Mud, Inc., David Lines, 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, Jerrod Long, Log total depth (4646') was equal to rotary total depth (4646').

### DRILL STEM TEST #1:

Lansing "D" thru "F". Interval: 3980-4036 (56'); Blow: BOB 3 min IFF, no RB, BOB 3.25 min, no RB; Times: 5-15-30-60; Recovery: 604' TF: 174' OWCW (2%G, 12%W, 86%M), 124' OWCW (3%G, 25%W, 72%M), 186' OWCW (2%G, 4%O, 30%W, 68%M) & 120' MCW (35%G, 65%W, 84%O, Grav: 30 API), 682' GO (21%G, 79%O), 496' GO (19%G, 81%O), 60' MGO (23%M, 32%G, 45%O); Pressures: HP: 2001-1967; SIP: 779-767; FP: 397-417, 490-605; BHT: 121 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #2:

Kans. City "H": Interval: 4107-4130 (23'); Blow: BOB 22 sec IFF, RB 3.75", BOB 28 sec FFP, RB 1.25"; Time Periods: 5-15-30-60; Recovery: 310' GIP, 1546' TF: 308' GO (18%G, 82%O, Grav: 30 API), 682' GO (21%G, 79%O), 496' GO (19%G, 81%O), 60' MGO (23%M, 32%G, 45%O); Pressures: HP: 2001-1967; SIP: 779-767; FP: 397-417, 490-605; BHT: 121 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #3:

Kans. City "I": Interval: 4146-4176 (30'); Blow: BOB 4.5 min IFF, RB 1"; BOB 3.75 min FFP, RB 1/2"; Time Periods: 5-15-30-60; Recovery: 248' GIP, 430' TF: 248' GO (18%G, 82%O, Grav: 30 API), 122' GMO (24%G, 26%W, 50%O), 60' WCGMO (2%W, 22%G, 20%M, 56%O); Pressures: HP: 2046-1921, SIP: 1063-1050; FP: 32-91, 98-180; BHT: 121 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #4:

Kans. City "J": Interval: 4174-4191 (17'); Blow: incr to 2" IFF, no RB, incr to 8.25" FFP, no RB; Times: 5-15-30-60; Recovery: 212' TF: 30' WCM w/scum of oil (19%W, 81%M), 62' WCM (38%W, 62%M), 120' MW (65%W, 32%M, Rw 0.318 at 54 F, chlorides 27k); Pressures: HP: 2058-1929; SIP: 774-774; FP: 19-42, 44-111; BHT: 115 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #5:

Kans. City "K": Interval: 4204-4227 (23'); Blow: incr to 4" IFF, no RB, incr to BOB 21 min IFF, no RB in 18 min FSIP; Times: 5-15-30-60; Recovery: 57' GIP, 311' TF: 25' GO (2%G, 98%O, grav 36 API), 42' GWOCM (2%G, 4%O, 30%W, 91%M), 62' WCM (30%W, 70%M), 182' MW (42%M, 58%W, Rw 0.287 at 49 F, chlorides 33k); Pressures: HP: 2064-1974, SIP: 876-859, FP: 22-63, 70-151; BHT: 118 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #6:

Kans. City Middle Creek & Upper "L": Interval: 4244-4257 (13'); Blow: weak surf IFF, no RB, weak surf died 12 min FFP, no RB; Times: 5-15-30-60; Recovery: 2' mud w/foe oil spots; Pressure: HP: 2097-1994; SIP: 24-24; FP: 17-18, 17-18; BHT: 103 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #7:

Kans. City "L": Interval: 4252-4262 (10'); Blow: weak surf IFF, no RB, weak incr to 1/2" FFP, no RB; Times: 5-15-30-60; Recovery: 3' mud w/oil spots in tool; Pressures: HP: 2086-1930; SIP: 56-773; FP: 17-17, 18-18; BHT: N/A; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #8:

Pleasanton Top: Interval: 4280-4305 (25'); Blow: weak incr to 1/2" IFF, no RB, weak incr to 3/4" FFP, no RB; Times: 5-15-30-60; Recovery: 5' TF: 1' oil (100%O, grav N/A), 4' OCM (20%O); Pressures: HP: 2125-1954, SIP: 592-956; FP: 19-18, 21-23; BHT: 105 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #9:

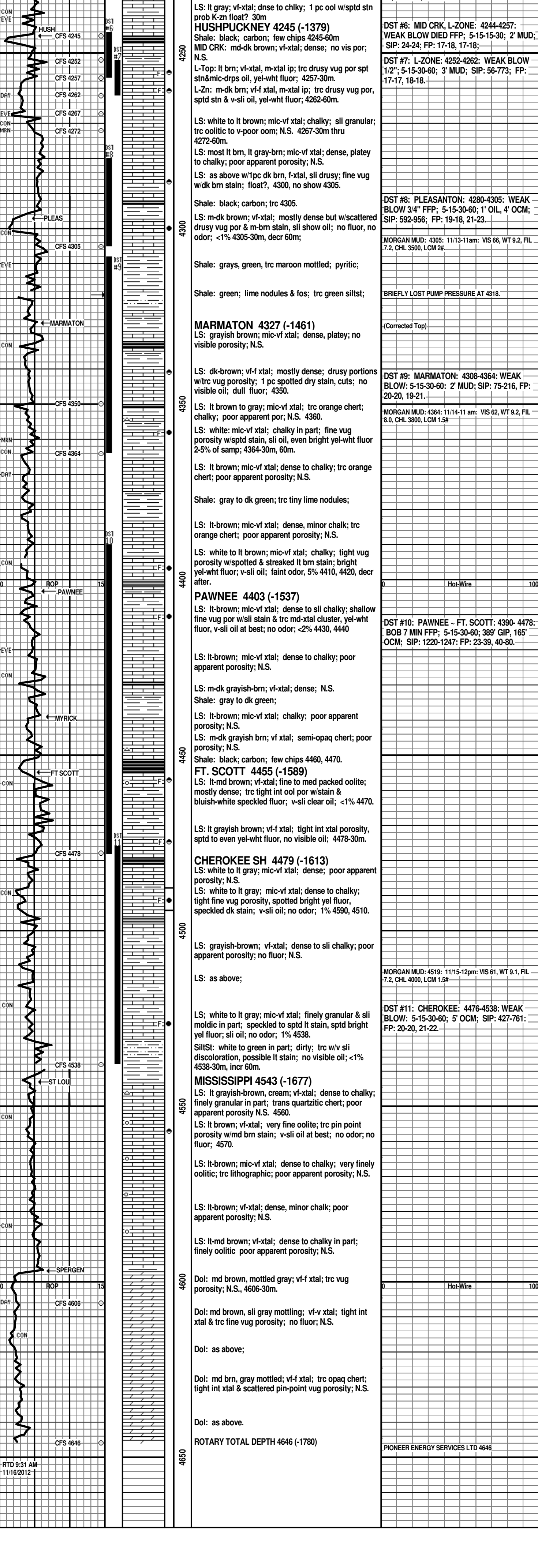
Marmaton, Altamont: Interval: 4308-4364 (56'); Blow: weak incr 1/2" IFF, no RB, weak 1/4" FFP, no RB; Times: 5-15-30-60; Recovery: 2' mud w/oil spots (100%M); Pressures: HP: 2175-1993; SIP: 75-216; FP: 20-20, 19-21; BHT: 100 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #10:

Pawnee thru Ft. Scott: Interval: 4390-4478 (88'); Blow: weak incr 3.25" IFF, no RB, weak incr BOB 7.5 min FFP, no RB; Times: 5-15-30-60; Recovery: 389' GIP, 165' TF: 45' GOCM (6%G, 36%O, 58%M), 60' GOCM (35%G, 25%O, 40%M), 60' GOCM (52%G, 28%O, 20%M, API Grav N/A); Pressures: HP: 2231-2045; SIP: 1220-1247; FP: 23-39, 40-80; BHT: 107 F; dual packers (w/shale packer), jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

### DRILL STEM TEST #11:

Cherokee/Johnson: Interval: 4476-4538 (62'); Blow: weak 1/2" IFF, no RB, weak surf blow FFP, no RB; Times: 5-15-30-60; Recovery: 5' OCM (4%O, 96%M); Pressures: HP: 2264-2096; SIP: 427-761; FP: 20-20, 21-22; BHT: 105 F; dual packers, jars, joints, 147' DC; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.





CHARGE TO: **LARSON ENGINEERING**  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

TICKET No 23705

PAGE 1 OF

SERVICE LOCATIONS: 1. **NESS CITY, KS**  
 WELL/PROJECT NO.: **SINCLAIR 1-11** LEASE: **LANE** COUNTY/PARISH: **KS** STATE: **KS** CITY: **Amy, KS** DATE: **20 Nov 12** OWNER:  
 TICKET TYPE:  SERVICE  SALES CONTRACTOR: **FRITZLER TRUCKING** RIG NAME/NO.: SHIPPED VIA: DELIVERED TO: ORDER NO.:  
 WELL TYPE: **OIL** WELL CATEGORY: **DEVELOPMENT** JOB PURPOSE: **CEMENT PORT COLLAR** WELL PERMIT NO.: WELL LOCATION: **12W, 1/4N, E TWD**  
 REFERRAL LOCATION: INVOICE INSTRUCTIONS:

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE	40	MIL			6.00	240.00
576D					PUMP CHARGE					1250.00	1250.00
276					FLOCELE	50	lbs.			2.00	100.00
290					D-AIR	2	pac			35.00	70.00
330					SWIFT MULTI DENSITY	195	sq			16.50	3217.50
581					CEMENT SERVICE CHARGE	235	sq			2.00	470.00
583					DRAYAGE	23320	lbs	46.64	TM	1.00	4666.40

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X  
 DATE SIGNED: **20 Nov 12** TIME SIGNED: **1330**  A.M.  P.M.

REMIT PAYMENT TO:  
**SWIFT SERVICES, INC.**  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				5813	.90
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Lane TAX 6.3%	213.41
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO		TOTAL	6027.31
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR: *[Signature]*

APPROVAL: *[Signature]* Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 20 Nov 12 PAGE NO.

CUSTOMER LARSON ENGINEERING

WELL NO.

LEASE SINCLAIR F-11

JOB TYPE CEMENT PORT COLLAR

TICKET NO. 23705

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1140							ON LOCATION
								PORT COLLAR @ 2166
	1204				✓		1000	TEST - HELD
	1206	3			✓		300	OPEN PORT COLLAR - INT. RATE
	1210	4½	108		✓		600	MIX 195 SX SMD
		3	7½		✓		300	DISPLACE CEMENT
								CIRCULATE 20SX TO FIT
	1239				✓		1000	CLOSE PORT COLLAR - TEST - HELD
								RUN 3 CTS.
	1248	3	18		✓		300	REVERSE CEMENT OUT OF TUBING
	1258							WASH TRUCK
	1330							JOB COMPLETE
								THANKS #115
								JASON JEFF JEREMY



CHARGE TO: Larson Engineering  
 ADDRESS \_\_\_\_\_  
 CITY, STATE, ZIP CODE \_\_\_\_\_

TICKET  
 N° 23470

PAGE 1 OF 2

SERVICE LOCATIONS: 1. Ness City KS  
 WELL/PROJECT NO. 1-11 LEASE Sinclair COUNTY/PARISH Lane STATE KS CITY Dighton DATE 11-17-12 OWNER Same  
 2. TICKET TYPE  SERVICE  SALES CONTRACTOR H-D Drilling RIG NAME/NO. #3 SHIPPED VIA CT DELIVERED TO Location ORDER NO. \_\_\_\_\_  
 3. WELL TYPE Oil WELL CATEGORY Development JOB PURPOSE Cement 5 1/2" Longstring WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION Dighton KS 2w 14 1/2 E 1/4  
 4. REFERRAL LOCATION \_\_\_\_\_ INVOICE INSTRUCTIONS \_\_\_\_\_

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF								
525		1			MILEAGE					45 mi	6.00	270.00
578		1			Pump Charge					1 job	1500.00	1500.00
419		1			Rotating Head Rental					5 1/2 in 1 ea	200.00	200.00
280		1			Flocheck 21					500 gal	2.50	1250.00
221		1			Liquid KCL					2 gal	25.00	50.00

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MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X  
 DATE SIGNED 11-17-12 TIME SIGNED 09:00  A.M.  P.M.

REMIT PAYMENT TO:  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				#1	3270.00
WE UNDERSTOOD AND MET YOUR NEEDS?				#2	5293.68
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Subtotal	8563.68
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				TAX	383.91
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES <input type="checkbox"/> NO			TOTAL	8947.59
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.  
 SWIFT OPERATOR David Kuehn APPROVAL [Signature] Thank You!



PO Box 466  
Ness City, KS 67560  
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 23470

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		DATE	PAGE				
		LOC	ACCT	DF			QTY	UM		QTY	UM	OF	OF	
									UNIT PRICE	AMOUNT				
325		1				Standard Cement		155	sk	13	50	2072	50	
284		1				Calseal	5	%	7	sk	35	00	245	00
283		1				Salt	10	%	800	lbs	00	20	160	00
292		1				Habal 322	1	%	150	lbs	7	75	1162	50
277		1				Coal Seal (Gilsomite)	7	lbs	1085	lbs	00	75	813	75
276		1				Flocele	1/4	lbs	25	lbs	2	00	50	00
290		1				D-Air			2	gal	35	00	70	00
581		1				SERVICE CHARGE		CUBIC FEET	155		2	00	310	00
583		1				MILEAGE CHARGE		TOTAL WEIGHT	12330		1	00	389	93
						LOADED MILES		45						
						TON MILES		389.93						
											CONTINUATION TOTAL		5293.68	



**JOB LOG**

**SWIFT Services, Inc.**

DATE 11-17-12 PAGE NO. 1

CUSTOMER Larson Engineering WELL NO. 1-11 LEASE Sinclair JOB TYPE Cement 5 1/2" Longstring TICKET NO. 23470

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								SJ #1 43.35 PC 2167
								TP 4646 TD 4646
								Set @ 4645 5 1/2" 15.5 #
								155 stks EA-2 w/ 1/4" Floeete + 7" Coal seal
	0400							on Location running 5 1/2" casing
	0530							Drop ball Circulate - Rotate -
	0635	6 3/4	15		✓		300	Pump 15 bbl KCL Flash
		6 3/4	12		✓		300	Pump 500 gal Flocheck
		6 3/4	5		✓		300	Pump 5 bbl KCL Spacer
			7					Plug RH (30 stks)
	0647	4 1/2	30		✓		200	mix 125 stks EA-2 w/ 1/4" Flo + 7" coal seal
								wash out Pump + Lines
								Release Latch Down Plug
	0705	6 3/4	0		✓		0	Start Displacement
		6 3/4	86		✓		400	Lift PSI
		6 3/4	109.4		✓		800	Max Lift PSI
	0730	6 3/4	109.5				1500	Land Latch Down Plug
								Release PSI Hold
								wash up truck
	0800							Job Complete
								Thank you
								Dave Blaine JS Russ





## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.08 @ 13:32:00

End Date: 2012.11.08 @ 19:00:09

Job Ticket #: 49906                      DST #: 1

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

Printed: 2012.11.21 @ 10:07:13



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**  
**Sinclair #1-11**  
 Job Ticket: 49906 **DST#: 1**  
 Test Start: 2012.11.08 @ 13:32:00

## GENERAL INFORMATION:

Formation: **LKC " F "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:24:55  
 Time Test Ended: 19:00:09  
 Interval: **3980.00 ft (KB) To 4036.00 ft (KB) (TVD)**  
 Total Depth: 4036.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Will MacLean  
 Unit No: 40  
 Reference Elevations: 2866.00 ft (KB)  
 2859.00 ft (CF)  
 KB to GR/CF: 7.00 ft

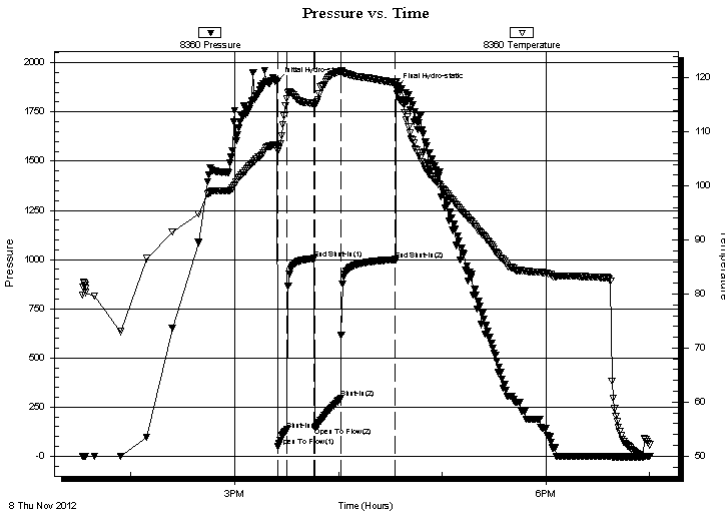
## Serial #: 8360

Inside

Press @ Run Depth: 295.31 psig @ 3981.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.08 End Date: 2012.11.08 Last Calib.: 2012.11.08  
 Start Time: 13:32:00 End Time: 19:00:09 Time On Btm: 2012.11.08 @ 15:24:40  
 Time Off Btm: 2012.11.08 @ 16:33:25

TEST COMMENT: IF- Surface Blow Built to BOB in 3 min  
 IS- No Blow  
 FF- Surface Blow Built to BOB in 3 1/4 min  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1904.55	107.45	Initial Hydro-static
1	48.34	106.43	Open To Flow (1)
6	134.55	116.20	Shut-In(1)
22	1005.41	115.25	End Shut-In(1)
22	146.16	114.88	Open To Flow (2)
37	295.31	121.13	Shut-In(2)
69	999.71	119.09	End Shut-In(2)
69	1872.21	119.34	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 35%oil 65%w Skim of Oil	0.59
186.00	OMCW 2%oil 30%m 68%w	2.36
124.00	OWCM 3%oil 25%w 72%m	1.74
174.00	OWCM 2%oil 12%w 86%m	2.44

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49906

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2012.11.08 @ 13:32:00

## Tool Information

Drill Pipe:	Length: 3830.00 ft	Diameter: 3.80 inches	Volume: 53.72 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: 26000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 54.44 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3980.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	83.00 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			3954.00	
Shut In Tool	5.00			3959.00	
Hydraulic tool	5.00			3964.00	
Jars	5.00			3969.00	
Safety Joint	2.00			3971.00	
Packer	5.00			3976.00	27.00 Bottom Of Top Packer
Packer	4.00			3980.00	
Stubb	1.00			3981.00	
Recorder	0.00	8360	Inside	3981.00	
Recorder	0.00	8353	Outside	3981.00	
Perforations	15.00			3996.00	
Change Over Sub	1.00			3997.00	
Drill Pipe	31.00			4028.00	
Change Over Sub	1.00			4029.00	
Perforations	4.00			4033.00	
Bullnose	3.00			4036.00	56.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>83.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49906

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2012.11.08 @ 13:32:00

## 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:

28000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.69 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	MCW 35%m 65%w Skim of Oil	0.590
186.00	OMCW 2%oil 30%m 68%w	2.363
124.00	OWCM 3%oil 25%w 72%m	1.739
174.00	OWCM 2%oil 12%w 86%m	2.441

Total Length: 604.00 ft      Total Volume: 7.133 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

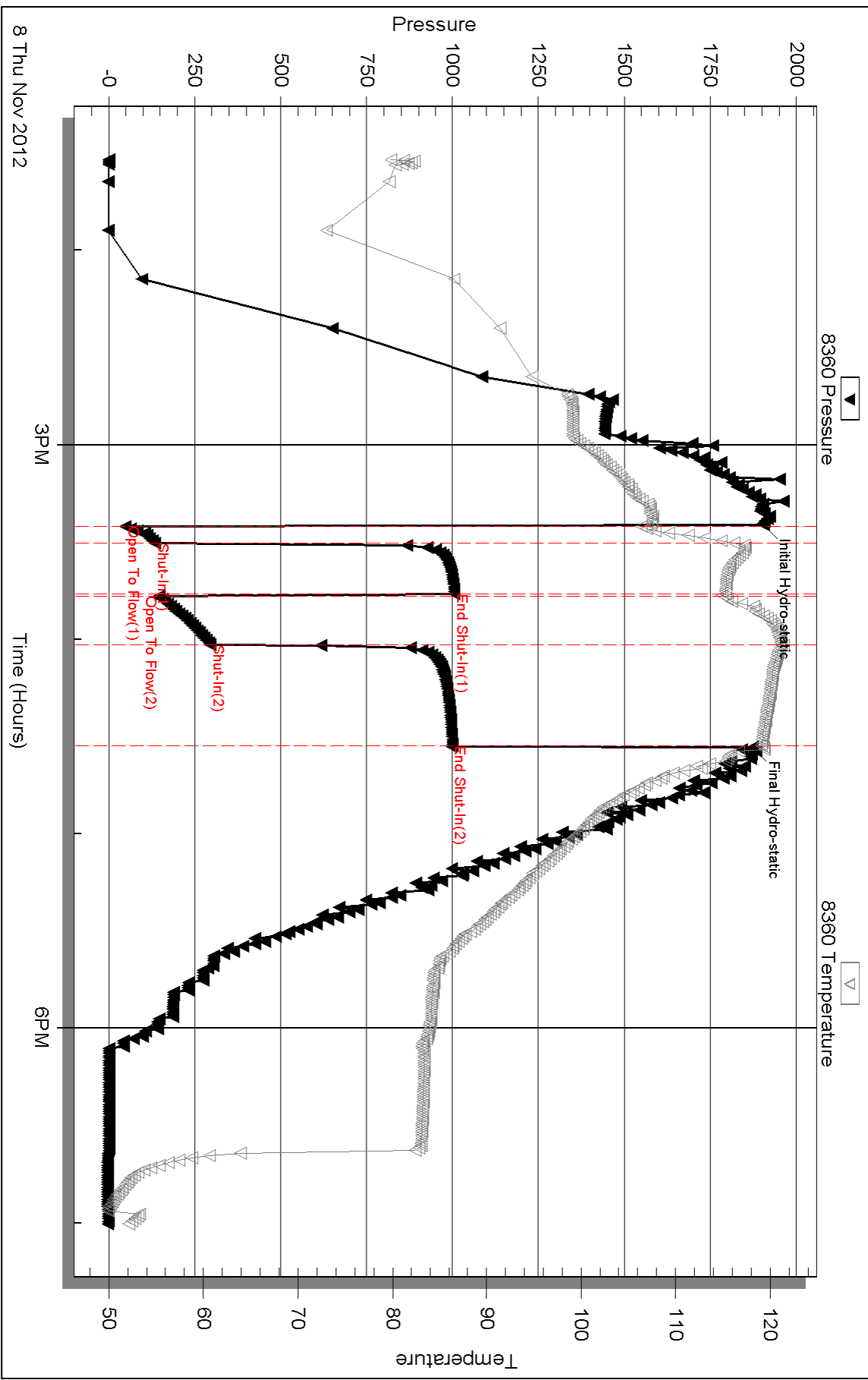
Serial #:

Laboratory Name:

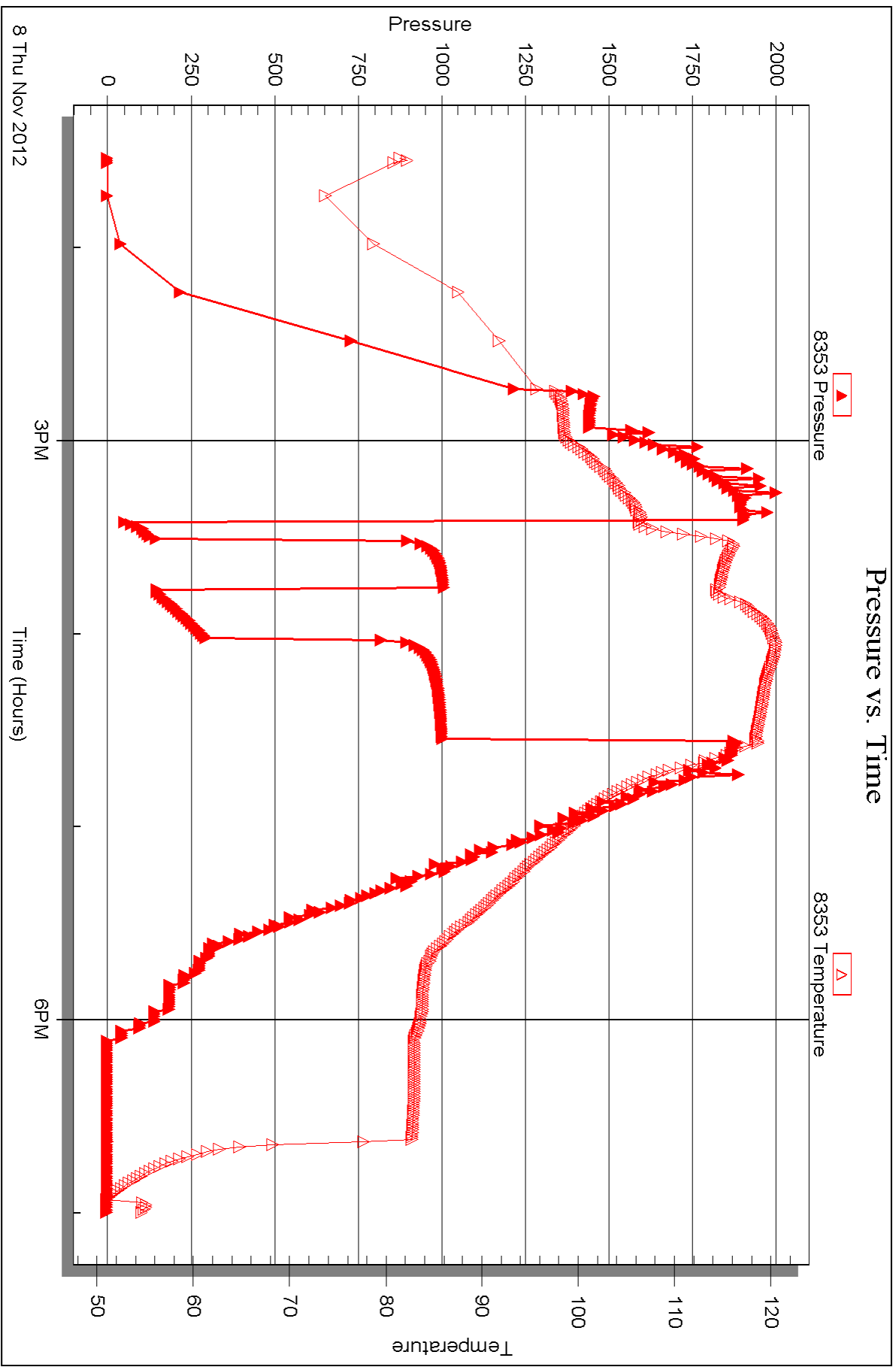
Laboratory Location:

Recovery Comments: RW is .299 @ 56f = 28000

### Pressure vs. Time









## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.09 @ 07:52:00

End Date: 2012.11.09 @ 14:12:09

Job Ticket #: 49907                      DST #: 2

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

Printed: 2012.11.21 @ 10:03:24



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**  
**Sinclair #1-11**  
 Job Ticket: 49907 **DST#: 2**  
 Test Start: 2012.11.09 @ 07:52:00

## GENERAL INFORMATION:

Formation: **LKC " H "**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 09:44:10 Tester: Will MacLean  
 Time Test Ended: 14:12:09 Unit No: 40  
 Interval: **4107.00 ft (KB) To 4130.00 ft (KB) (TVD)** Reference Elevations: 2866.00 ft (KB)  
 Total Depth: 4130.00 ft (KB) (TVD) 2859.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 7.00 ft

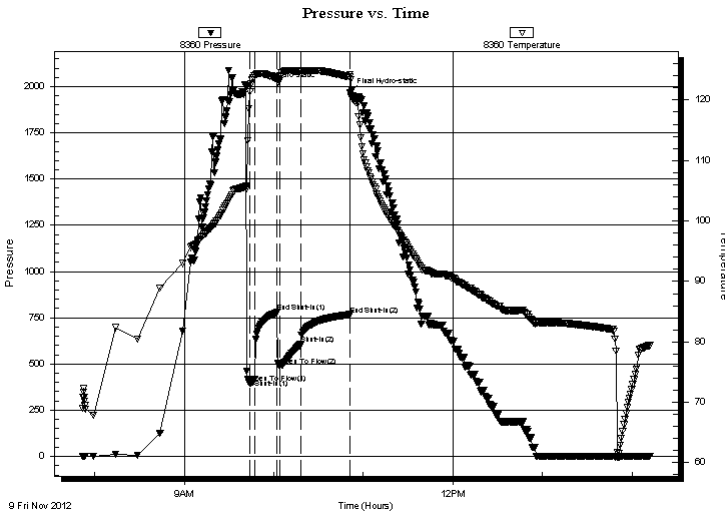
## Serial #: 8360

Inside

Press @ RunDepth: 605.21 psig @ 4108.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.09 End Date: 2012.11.09 Last Calib.: 2012.11.09  
 Start Time: 07:52:00 End Time: 14:12:09 Time On Btm: 2012.11.09 @ 09:41:40  
 Time Off Btm: 2012.11.09 @ 10:51:10

**TEST COMMENT:** IF- Strong Surface Blow Built to BOB in 22sec  
 IS- Weak Surface Blow Built to 3 3/4"  
 FF- Strong Surface Blow Built to BOB in 28sec  
 FS- Weak Surface Blow Built to 1 1/4"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2001.69	105.72	Initial Hydro-static
3	397.60	121.34	Open To Flow (1)
6	417.70	124.01	Shut-In(1)
21	779.09	123.41	End Shut-In(1)
23	490.21	123.79	Open To Flow (2)
37	605.21	124.80	Shut-In(2)
70	767.28	123.78	End Shut-In(2)
70	1967.96	124.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MGCO 23%g 32%g 45%oil	0.30
496.00	GO 19%g 81%oil	6.17
682.00	GO 21%g 79%oil	9.57
308.00	GO 16%g 84%oil	4.32
0.00	308' of GIP	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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49907

**DST#: 2**

ATTN: Vern Schrag

Test Start: 2012.11.09 @ 07:52:00

## Tool Information

Drill Pipe:	Length: 3953.00 ft	Diameter: 3.80 inches	Volume: 55.45 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: 26000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 4000.00 lb
			<u>Total Volume: 56.17 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4107.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4081.00	
Shut In Tool	5.00			4086.00	
Hydraulic tool	5.00			4091.00	
Jars	5.00			4096.00	
Safety Joint	2.00			4098.00	
Packer	5.00			4103.00	27.00 Bottom Of Top Packer
Packer	4.00			4107.00	
Stubb	1.00			4108.00	
Recorder	0.00	8360	Inside	4108.00	
Recorder	0.00	8353	Outside	4108.00	
Perforations	19.00			4127.00	
Bullnose	3.00			4130.00	23.00 Bottom Packers & Anchor

**Total Tool Length: 50.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49907

**DST#: 2**

ATTN: Vern Schrag

Test Start: 2012.11.09 @ 07:52:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.70 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MGCO 23%m 32%g 45%oil	0.295
496.00	GO 19%g 81%oil	6.165
682.00	GO 21%g 79%oil	9.567
308.00	GO 16%g 84%oil	4.320
0.00	308' of GIP	0.000

Total Length: 1546.00 ft      Total Volume: 20.347 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

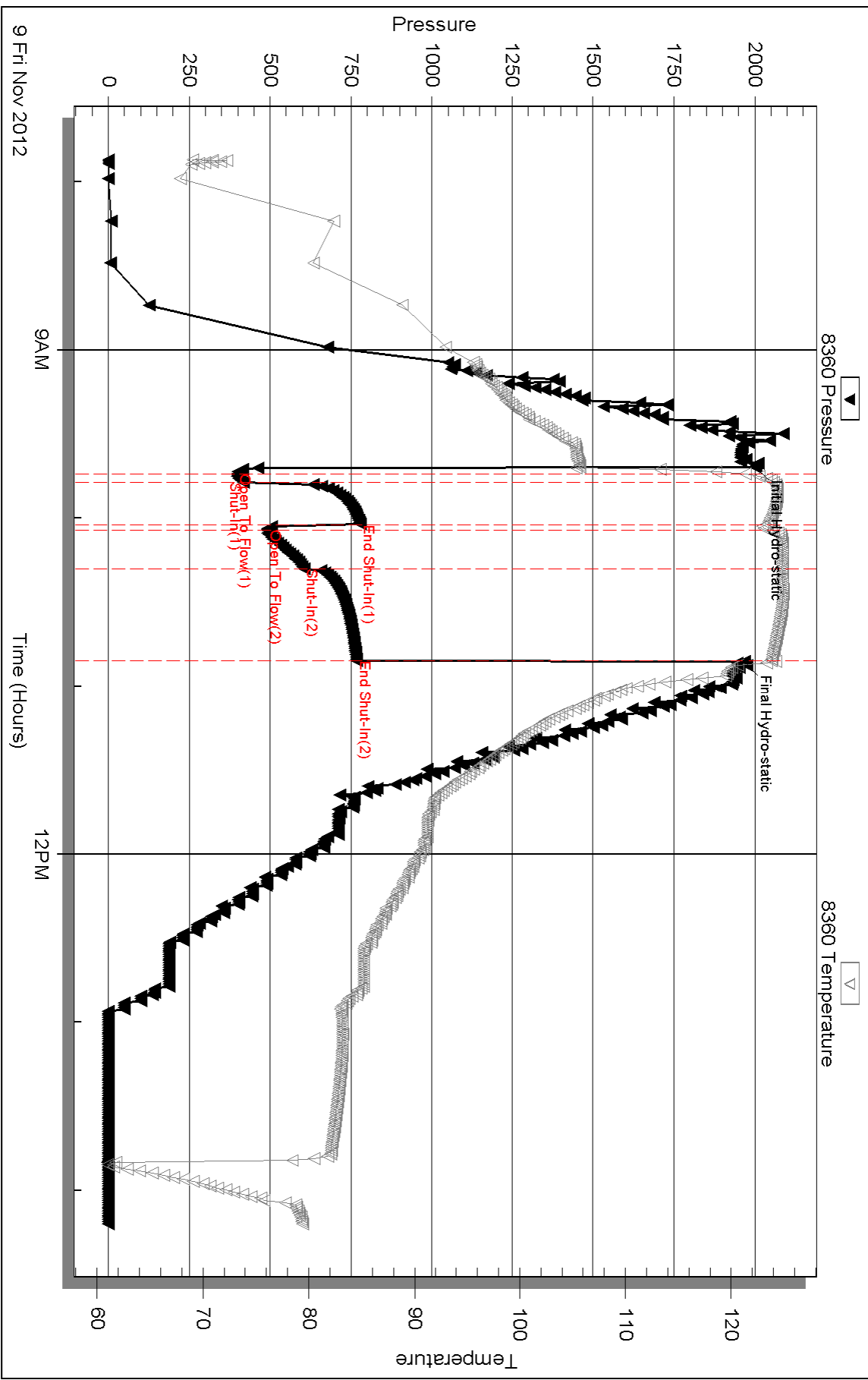
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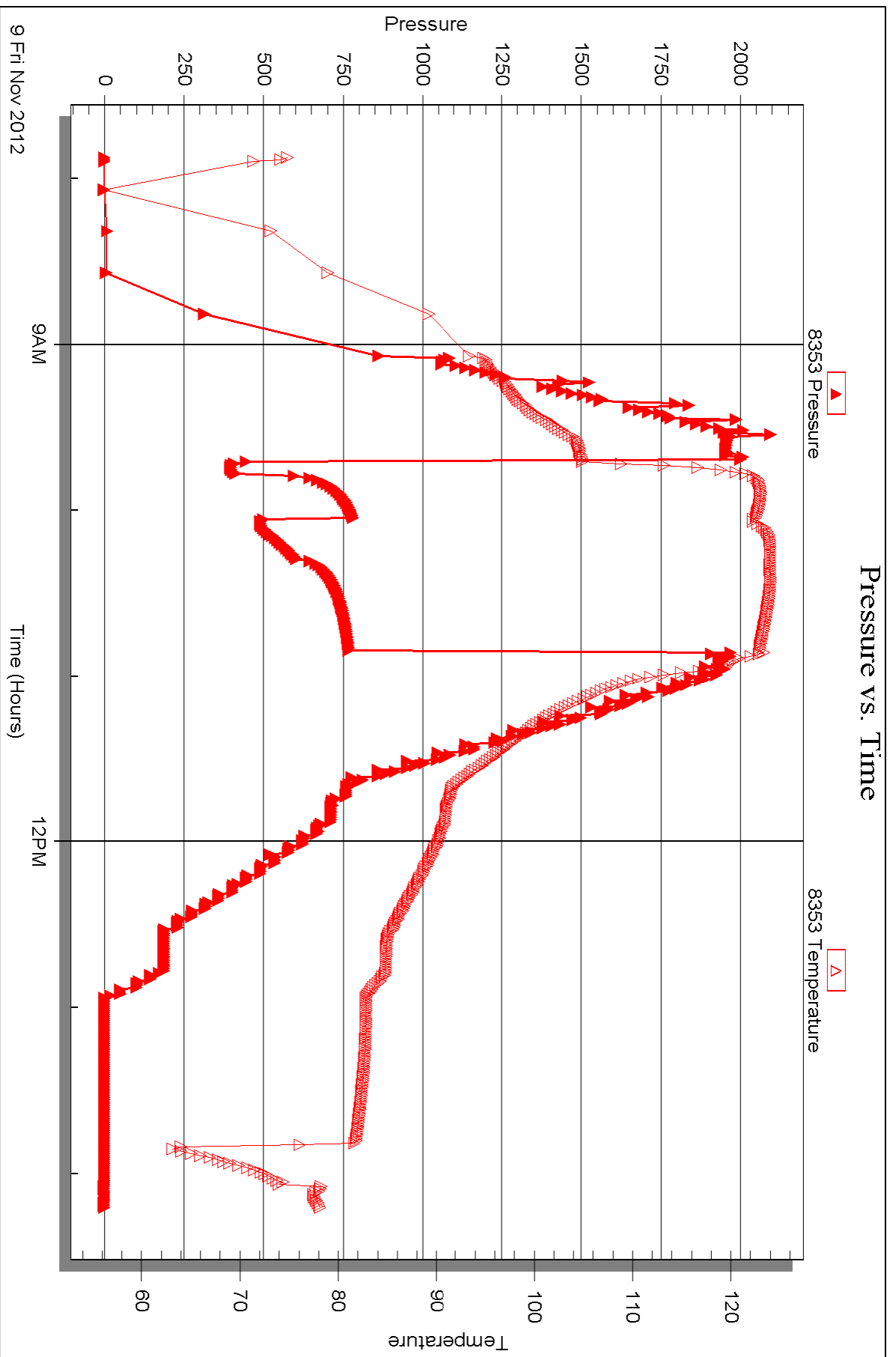
Laboratory Name:

Laboratory Location:

Recovery Comments: API is 31 @ 70f = 30

# Pressure vs. Time









## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.09 @ 23:22:00

End Date: 2012.11.10 @ 05:39:09

Job Ticket #: 49908                      DST #: 3

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

Printed: 2012.11.21 @ 10:02:26



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**

**Sinclair #1-11**

Job Ticket: 49908

**DST#: 3**

Test Start: 2012.11.09 @ 23:22:00

## GENERAL INFORMATION:

Formation: **LKC "I"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:37:10  
 Time Test Ended: 05:39:09  
 Interval: **4146.00 ft (KB) To 4176.00 ft (KB) (TVD)**  
 Total Depth: 4176.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Will MacLean  
 Unit No: 40  
 Reference Elevations: 2866.00 ft (KB)  
 2859.00 ft (CF)  
 KB to GR/CF: 7.00 ft

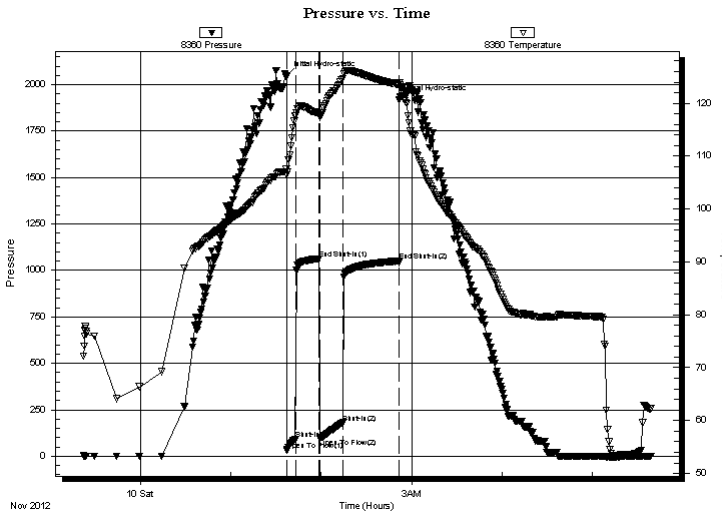
## Serial #: 8360

Inside

Press @ RunDepth: 180.62 psig @ 4149.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.09 End Date: 2012.11.10 Last Calib.: 2012.11.10  
 Start Time: 23:22:00 End Time: 05:39:09 Time On Btm: 2012.11.10 @ 01:36:55  
 Time Off Btm: 2012.11.10 @ 02:51:55

**TEST COMMENT:** IF- Surface Blow Built to BOB in 4 1/4 min  
 IS- Weak Surface Blow Built to 1"  
 FF- Surface Blow Built to BOB in 3 3/4 min  
 FS- Weak Surface Blow Built to 1/2"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2046.20	107.56	Initial Hydro-static
1	32.25	106.49	Open To Flow (1)
6	91.43	117.72	Shut-In(1)
22	1063.55	118.18	End Shut-In(1)
22	98.81	117.61	Open To Flow (2)
38	180.62	124.67	Shut-In(2)
75	1050.72	123.52	End Shut-In(2)
75	1921.22	123.96	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	WMGCO 2%w 20%m 22%g 56%oil	0.30
122.00	GMCO 24%g 26%m 50%oil	0.92
248.00	GO 18%g 82%oil	3.48
0.00	248' of GIP	0.00

## 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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49908

**DST#: 3**

ATTN: Vern Schrag

Test Start: 2012.11.09 @ 23:22:00

## Tool Information

Drill Pipe:	Length: 3986.00 ft	Diameter: 3.80 inches	Volume: 55.91 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:	24000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	4000.00 lb
			<u>Total Volume: 56.63 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	62000.00 lb
Depth to Top Packer:	4146.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 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			4120.00	
Shut In Tool	5.00			4125.00	
Hydraulic tool	5.00			4130.00	
Jars	5.00			4135.00	
Safety Joint	2.00			4137.00	
Packer	5.00			4142.00	27.00 Bottom Of Top Packer
Packer	4.00			4146.00	
Stubb	1.00			4147.00	
Perforations	2.00			4149.00	
Recorder	0.00	8360	Inside	4149.00	
Recorder	0.00	8353	Outside	4149.00	
Perforations	24.00			4173.00	
Bullnose	3.00			4176.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49908

**DST#: 3**

ATTN: Vern Schrag

Test Start: 2012.11.09 @ 23:22:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.31 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	WMGCO 2%w 20%m 22%g 56%oil	0.295
122.00	GMCO 24%g 26%m 50%oil	0.919
248.00	GO 18%g 82%oil	3.479
0.00	248' of GIP	0.000

Total Length: 430.00 ft      Total Volume: 4.693 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

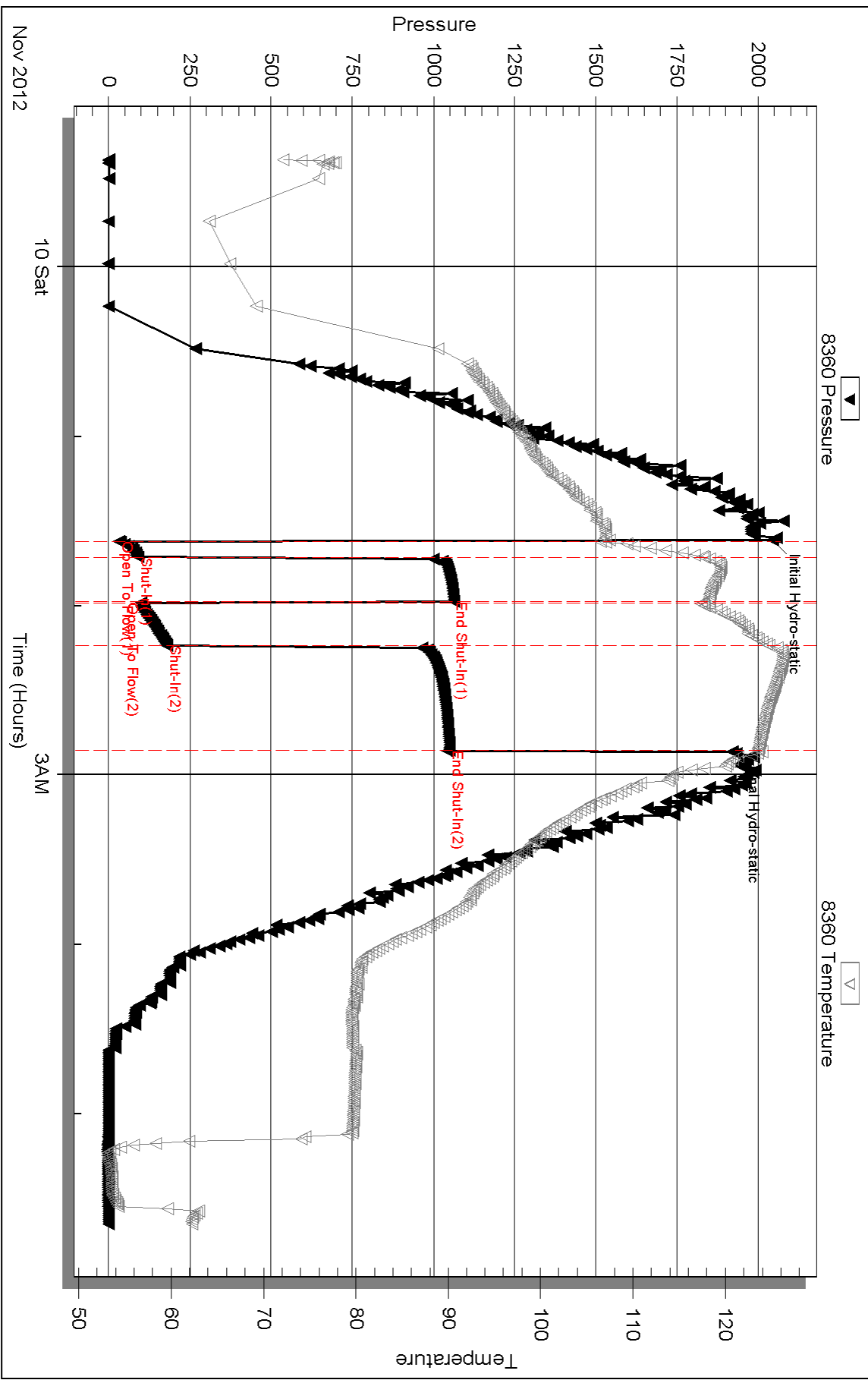
Serial #:

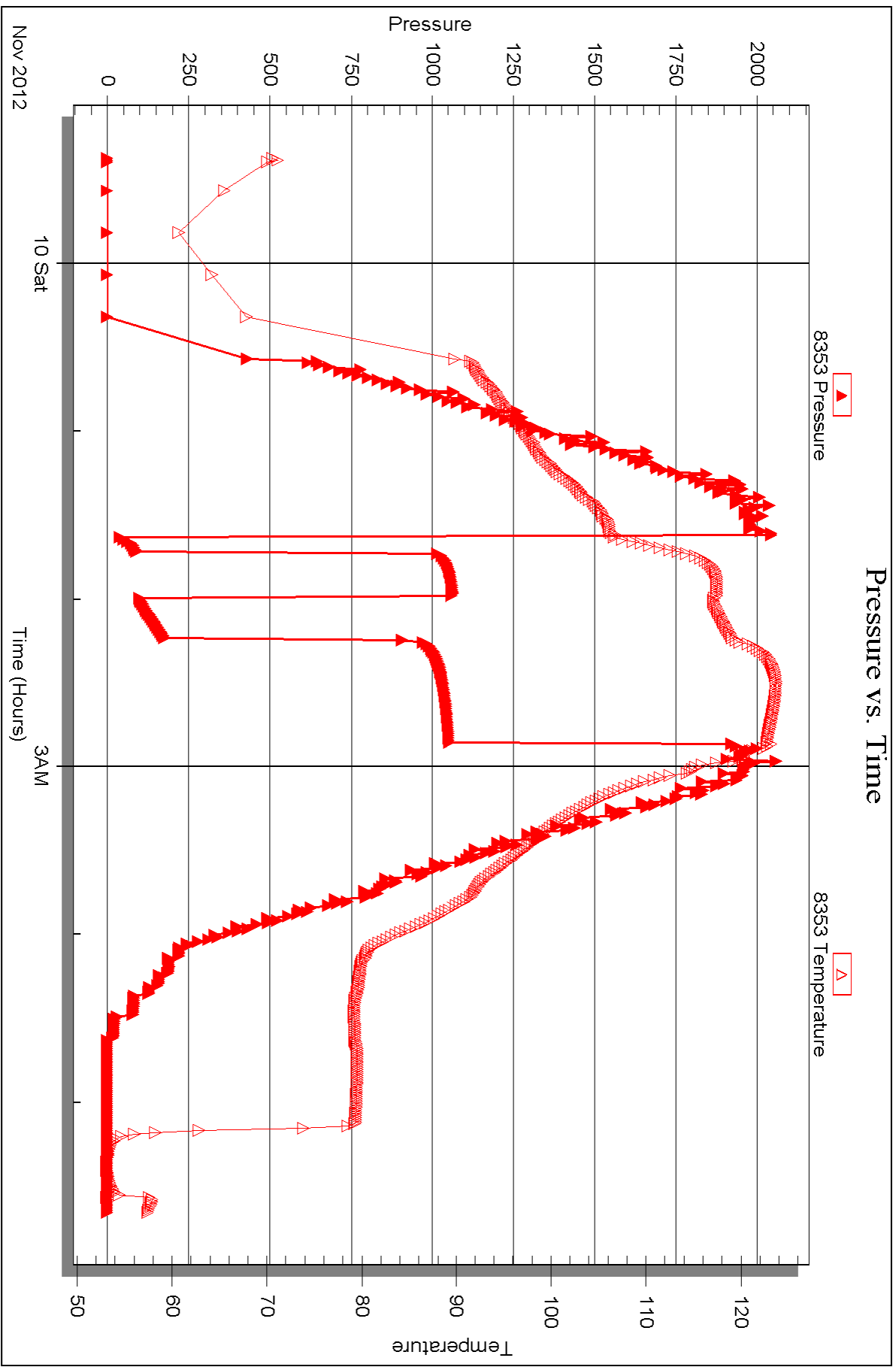
Laboratory Name:

Laboratory Location:

Recovery Comments: API is 34 @ 60f = 34

# Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.10 @ 15:24:00

End Date: 2012.11.10 @ 21:40:09

Job Ticket #: 49909                      DST #: 4

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

Printed: 2012.11.21 @ 10:01:37





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**  
**Sinclair #1-11**  
 Job Ticket: 49909 **DST#: 4**  
 Test Start: 2012.11.10 @ 15:24:00

## GENERAL INFORMATION:

Formation: **LKC " J "**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 17:47:25 Tester: Will MacLean  
 Time Test Ended: 21:40:09 Unit No: 40  
 Interval: **4174.00 ft (KB) To 4191.00 ft (KB) (TVD)** Reference Elevations: 2866.00 ft (KB)  
 Total Depth: 4191.00 ft (KB) (TVD) 2859.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 7.00 ft

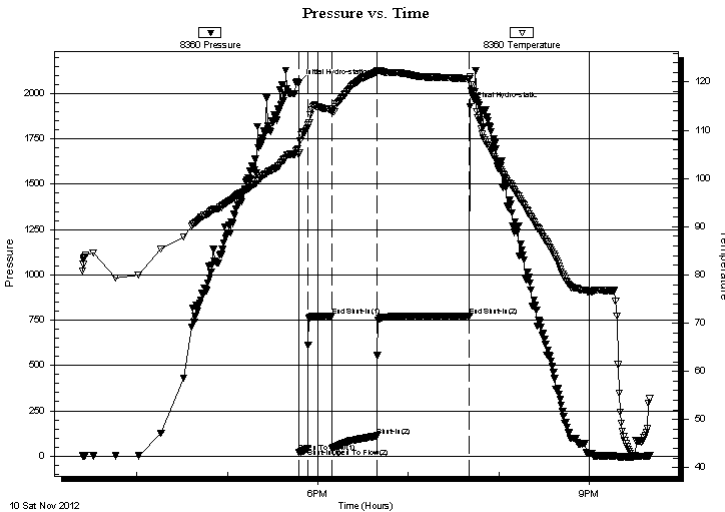
## Serial #: 8360

Inside

Press @ Run Depth: 111.55 psig @ 4175.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.10 End Date: 2012.11.10 Last Calib.: 2012.11.10  
 Start Time: 15:24:00 End Time: 21:40:09 Time On Btm: 2012.11.10 @ 17:47:10  
 Time Off Btm: 2012.11.10 @ 19:40:54

TEST COMMENT: IF- Weak Surface Blow Built to 2"  
 IS- No Blow  
 FF- Weak Surface Blow Built to 8 1/4"  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2058.01	106.12	Initial Hydro-static
1	19.54	104.85	Open To Flow (1)
7	42.70	110.59	Shut-In(1)
22	774.39	114.35	End Shut-In(1)
23	44.74	113.92	Open To Flow (2)
52	111.55	122.11	Shut-In(2)
114	774.62	120.67	End Shut-In(2)
114	1929.97	121.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 32%w 68%m	0.59
62.00	WCM 38%w 62%m	0.62
30.00	WCM 19%w 81%m with Skim of Oil on	0.42

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49909

**DST#: 4**

ATTN: Vern Schrag

Test Start: 2012.11.10 @ 15:24:00

## Tool Information

Drill Pipe:	Length: 4016.00 ft	Diameter: 3.80 inches	Volume: 56.33 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:	26000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	6000.00 lb
			<u>Total Volume: 57.05 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4174.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	17.00 ft				
Tool Length:	44.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Change Over Sub	1.00			4148.00	
Shut In Tool	5.00			4153.00	
Hydraulic tool	5.00			4158.00	
Jars	5.00			4163.00	
Safety Joint	2.00			4165.00	
Packer	5.00			4170.00	27.00 Bottom Of Top Packer
Packer	4.00			4174.00	
Stubb	1.00			4175.00	
Recorder	0.00	8360	Inside	4175.00	
Recorder	0.00	8353	Outside	4175.00	
Perforations	13.00			4188.00	
Bullnose	3.00			4191.00	17.00 Bottom Packers & Anchor

**Total Tool Length: 44.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49909

**DST#: 4**

ATTN: Vern Schrag

Test Start: 2012.11.10 @ 15:24:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.29 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MCW 32% <sub>m</sub> 68% <sub>m</sub>	0.590
62.00	WCM 38% <sub>w</sub> 62% <sub>m</sub>	0.624
30.00	WCM 19% <sub>w</sub> 81% <sub>m</sub> with Skim of Oil on Top	0.421

Total Length: 212.00 ft

Total Volume: 1.635 bbl

Num Fluid Samples: 0

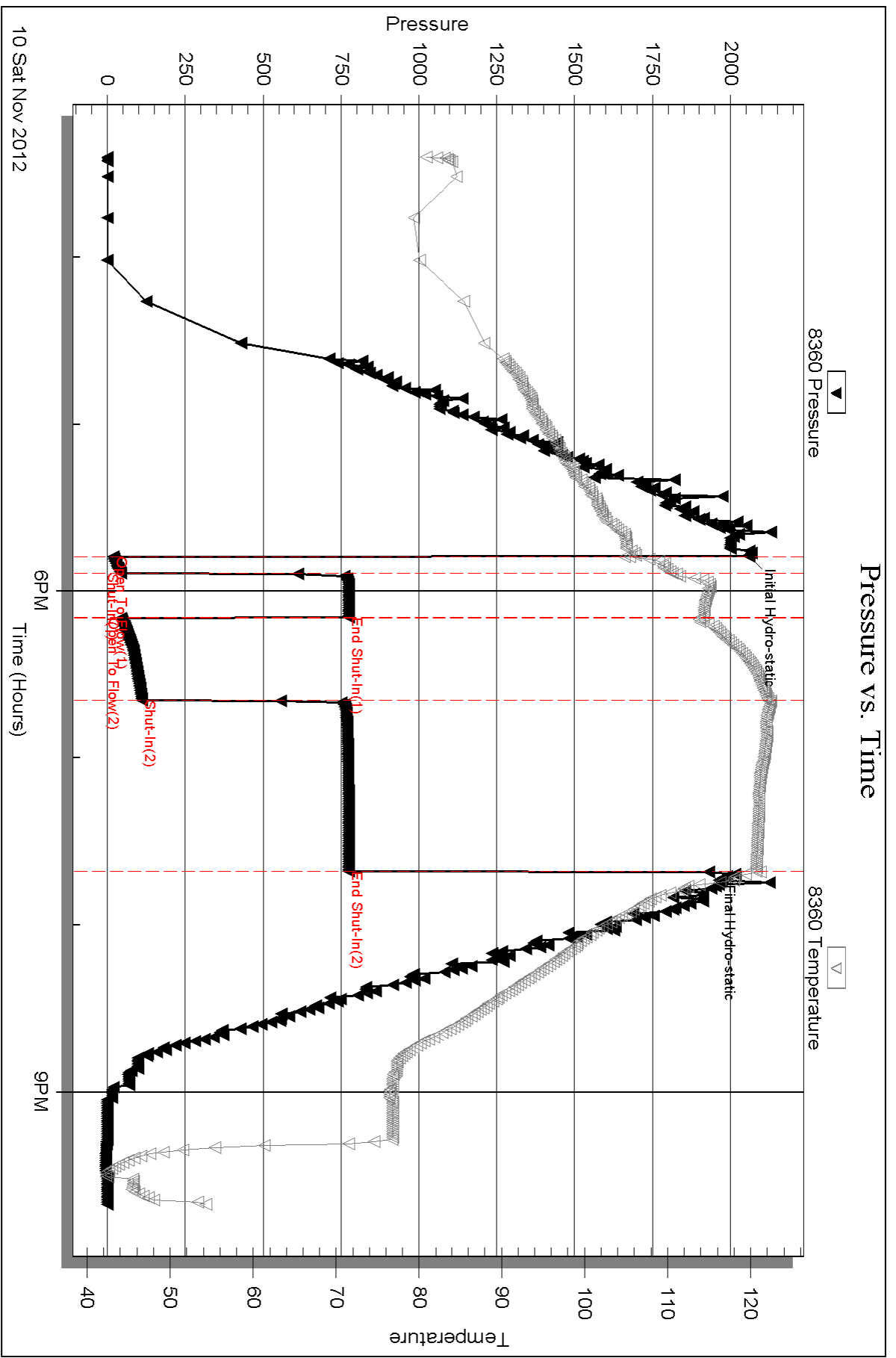
Num Gas Bombs: 0

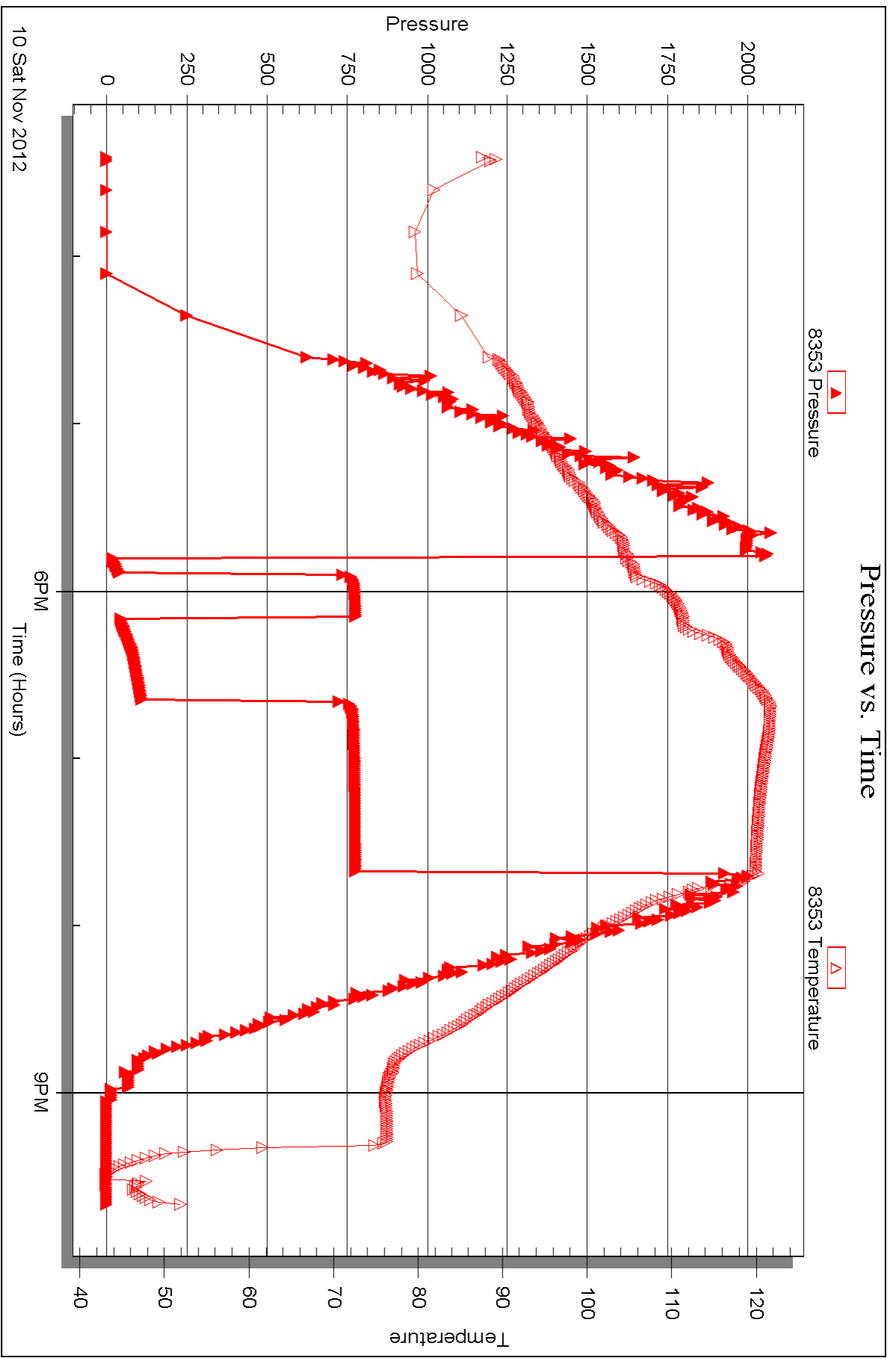
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.11 @ 06:32:00

End Date: 2012.11.11 @ 12:42:09

Job Ticket #: 49910                      DST #: 5

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

Printed: 2012.11.21 @ 10:00:38



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**  
**Sinclair #1-11**  
 Job Ticket: 49910 **DST#: 5**  
 Test Start: 2012.11.11 @ 06:32:00

## GENERAL INFORMATION:

Formation: **LKC " K "**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 08:31:55 Tester: Will MacLean  
 Time Test Ended: 12:42:09 Unit No: 40  
 Interval: **4204.00 ft (KB) To 4227.00 ft (KB) (TVD)** Reference Elevations: 2866.00 ft (KB)  
 Total Depth: 4036.00 ft (KB) (TVD) 2859.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 7.00 ft

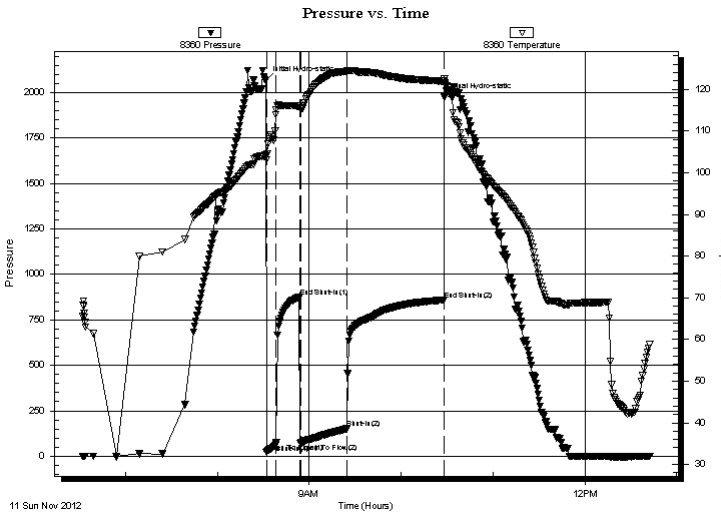
## Serial #: 8360

Inside

Press @ Run Depth: 151.53 psig @ 4206.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.11 End Date: 2012.11.11 Last Calib.: 2012.11.11  
 Start Time: 06:32:00 End Time: 12:42:09 Time On Btm: 2012.11.11 @ 08:31:40  
 Time Off Btm: 2012.11.11 @ 10:28:10

TEST COMMENT: IF- Weak Surface Blow Built to 4"  
 IS- No Blow  
 FF- Weak Surface Blow Built to BOB in 21 1/4 min  
 FS- Weak Surface Blow in 18 3/4 min

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2064.06	104.14	Initial Hydro-static
1	22.40	103.14	Open To Flow (1)
7	63.88	114.01	Shut-In(1)
22	876.57	116.00	End Shut-In(1)
23	70.04	115.57	Open To Flow (2)
53	151.53	124.37	Shut-In(2)
117	859.04	121.99	End Shut-In(2)
117	1974.70	122.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
182.00	MCW 42%w 58%w	1.21
62.00	WCM 30%w 70%m	0.87
42.00	GWOCM 2%g 3%w 4%oil 91%m	0.59
25.00	GO 2%g 98%oil	0.35
0.00	57' of GIP	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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49910

**DST#: 5**

ATTN: Vern Schrag

Test Start: 2012.11.11 @ 06:32:00

## Tool Information

Drill Pipe:	Length: 4048.00 ft	Diameter: 3.80 inches	Volume: 56.78 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: 28000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 57.50 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4204.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	50.00 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			4178.00	
Shut In Tool	5.00			4183.00	
Hydraulic tool	5.00			4188.00	
Jars	5.00			4193.00	
Safety Joint	2.00			4195.00	
Packer	5.00			4200.00	27.00 Bottom Of Top Packer
Packer	4.00			4204.00	
Stubb	1.00			4205.00	
Perforations	1.00			4206.00	
Recorder	0.00	8360	Inside	4206.00	
Recorder	0.00	8353	Outside	4206.00	
Perforations	18.00			4224.00	
Bullnose	3.00			4227.00	23.00 Bottom Packers & Anchor

**Total Tool Length: 50.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49910

**DST#: 5**

ATTN: Vern Schrag

Test Start: 2012.11.11 @ 06:32:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

33000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.28 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
182.00	MCW 42%m 58%w	1.214
62.00	WCM 30%w 70%m	0.870
42.00	GWOCM 2%g 3%w 4%oil 91%m	0.589
25.00	GO 2%g 98%oil	0.351
0.00	57' of GIP	0.000

Total Length: 311.00 ft      Total Volume: 3.024 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

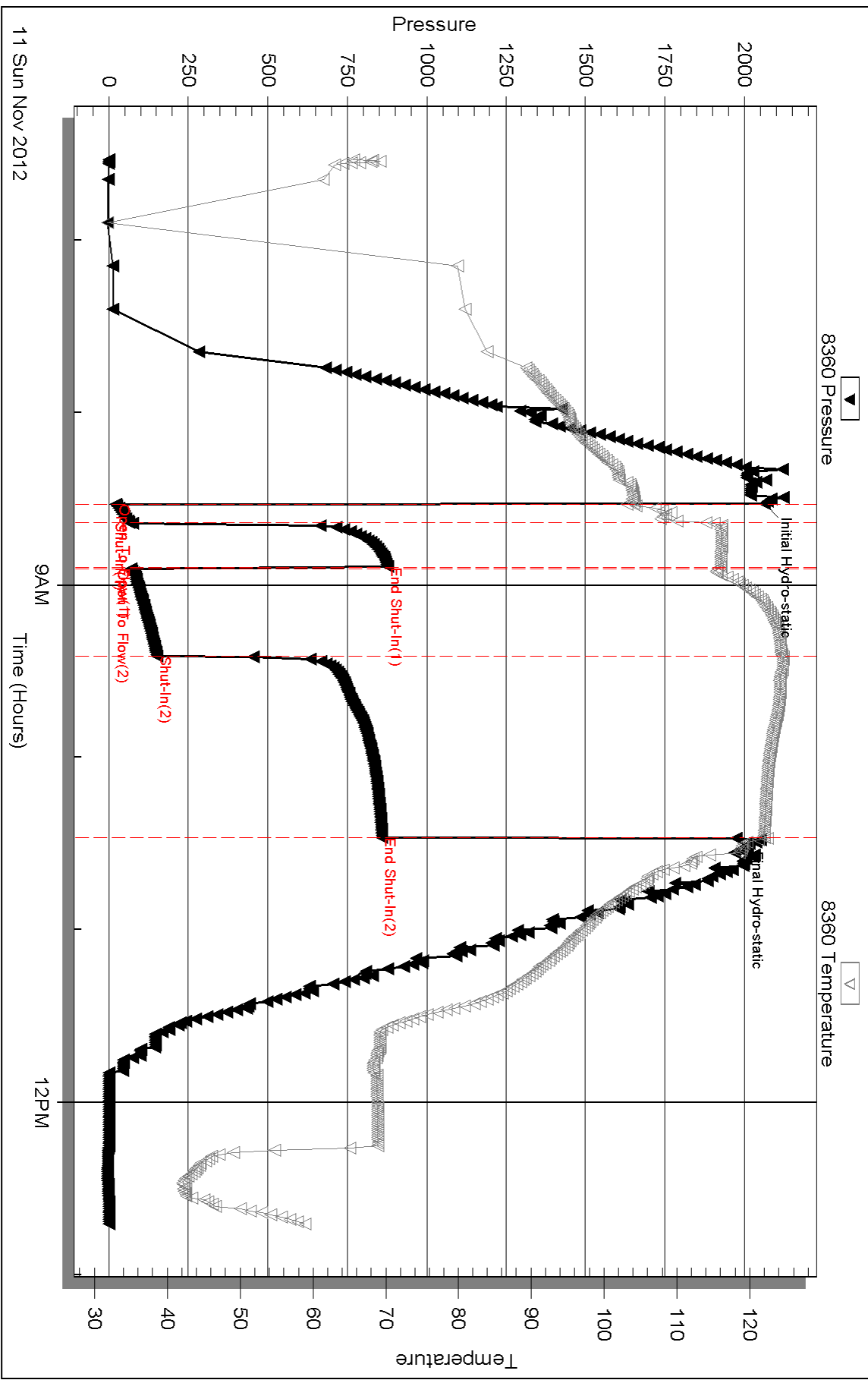
Laboratory Name:

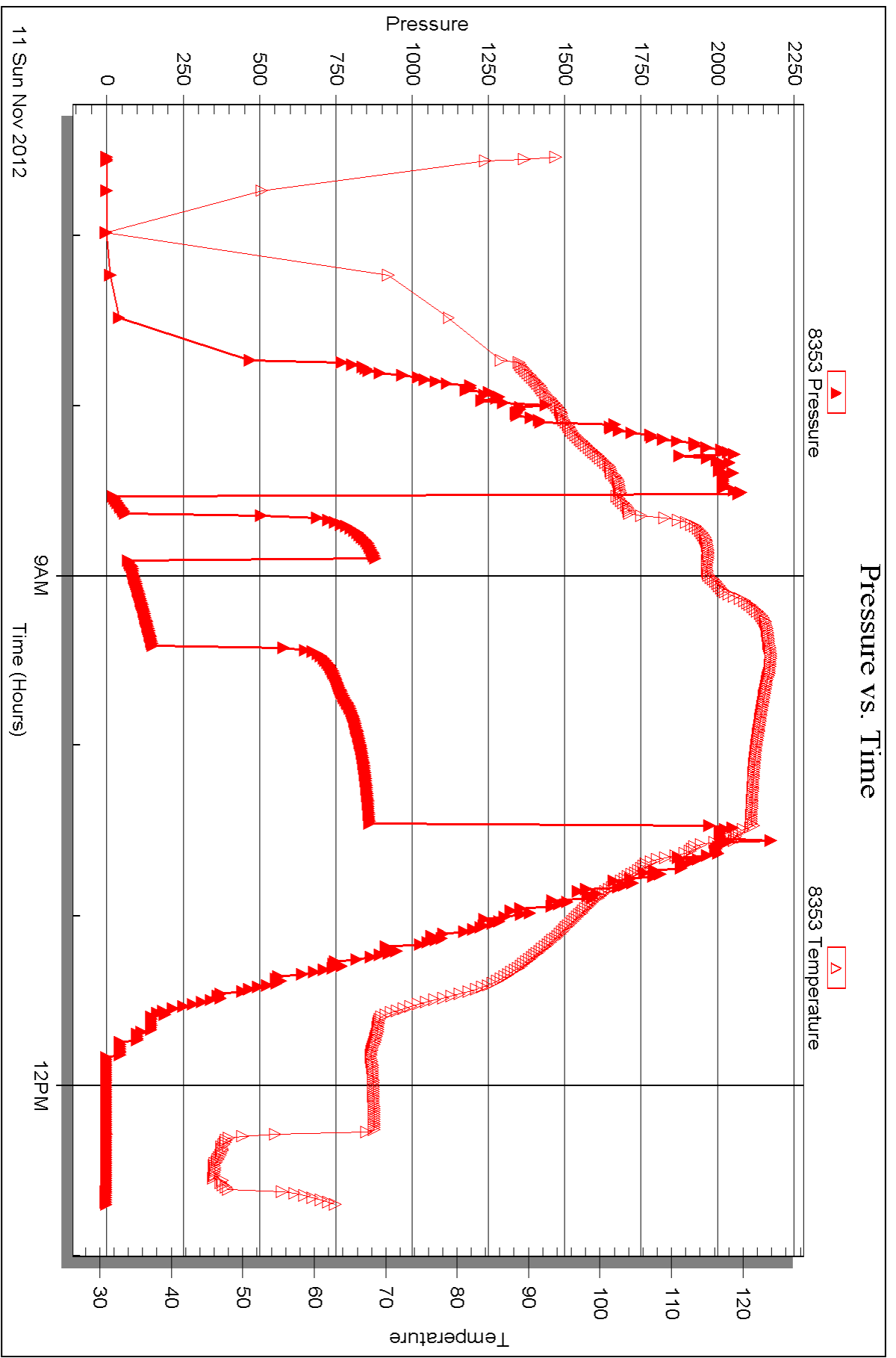
Laboratory Location:

Recovery Comments: API is 35 @ 50f = 36

RW is .287 @ 49f = 33000

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.11 @ 23:38:00

End Date: 2012.11.12 @ 04:37:54

Job Ticket #: 49911                      DST #: 6

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

Printed: 2012.11.21 @ 09:59:54



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Engineering Inc

11-18s-30w Lane, KS

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49911

**DST#: 6**

ATTN: Vern Schrag

Test Start: 2012.11.11 @ 23:38:00

## GENERAL INFORMATION:

Formation: **LKC " L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:34:25

Time Test Ended: 04:37:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 40

**Interval: 4244.00 ft (KB) To 4257.00 ft (KB) (TVD)**

Reference Elevations: 2866.00 ft (KB)

Total Depth: 4257.00 ft (KB) (TVD)

2859.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8360**

**Inside**

Press @ Run Depth: 18.06 psig @ 4245.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.11

End Date:

2012.11.12

Last Calib.: 2012.11.12

Start Time: 23:38:00

End Time:

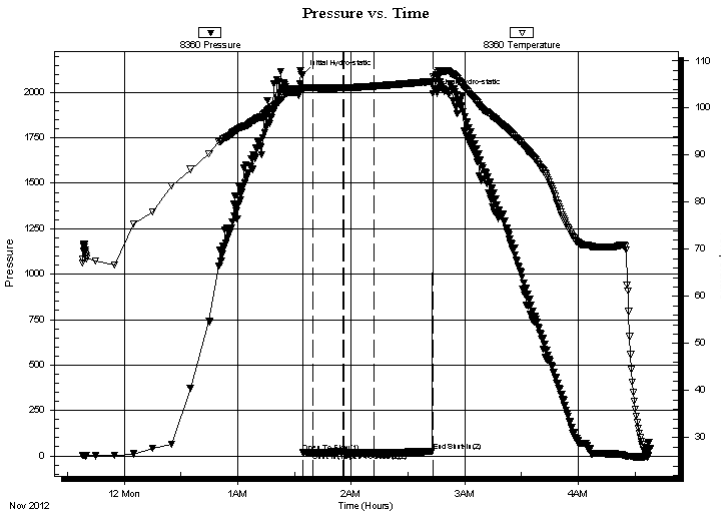
04:37:54

Time On Btm: 2012.11.12 @ 01:34:10

Time Off Btm: 2012.11.12 @ 02:43:10

**TEST COMMENT:** IF- Weak Surface Blow  
IS- No Blow  
FF- Weak Surface Blow Died in 12 min  
FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2097.15	104.32	Initial Hydro-static
1	17.09	103.66	Open To Flow (1)
6	18.36	104.32	Shut-In(1)
22	24.57	104.30	End Shut-In(1)
22	17.77	104.31	Open To Flow (2)
38	18.06	104.67	Shut-In(2)
69	24.03	105.66	End Shut-In(2)
69	1994.26	106.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	100% Few Oil Spots in Tool	0.01

\* 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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49911

**DST#: 6**

ATTN: Vern Schrag

Test Start: 2012.11.11 @ 23:38:00

## Tool Information

Drill Pipe:	Length: 4078.00 ft	Diameter: 3.80 inches	Volume: 57.20 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:	26000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	12000.00 lb
			<u>Total Volume: 57.92 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4244.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	13.00 ft				
Tool Length:	40.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Change Over Sub	1.00			4218.00	
Shut In Tool	5.00			4223.00	
Hydraulic tool	5.00			4228.00	
Jars	5.00			4233.00	
Safety Joint	2.00			4235.00	
Packer	5.00			4240.00	27.00 Bottom Of Top Packer
Packer	4.00			4244.00	
Stubb	1.00			4245.00	
Recorder	0.00	8360	Inside	4245.00	
Recorder	0.00	8353	Outside	4245.00	
Perforations	9.00			4254.00	
Bullnose	3.00			4257.00	13.00 Bottom Packers & Anchor

**Total Tool Length: 40.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49911

**DST#: 6**

ATTN: Vern Schrag

Test Start: 2012.11.11 @ 23:38:00

## 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: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.31 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4700.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	100%m Few Oil Spots inTool	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

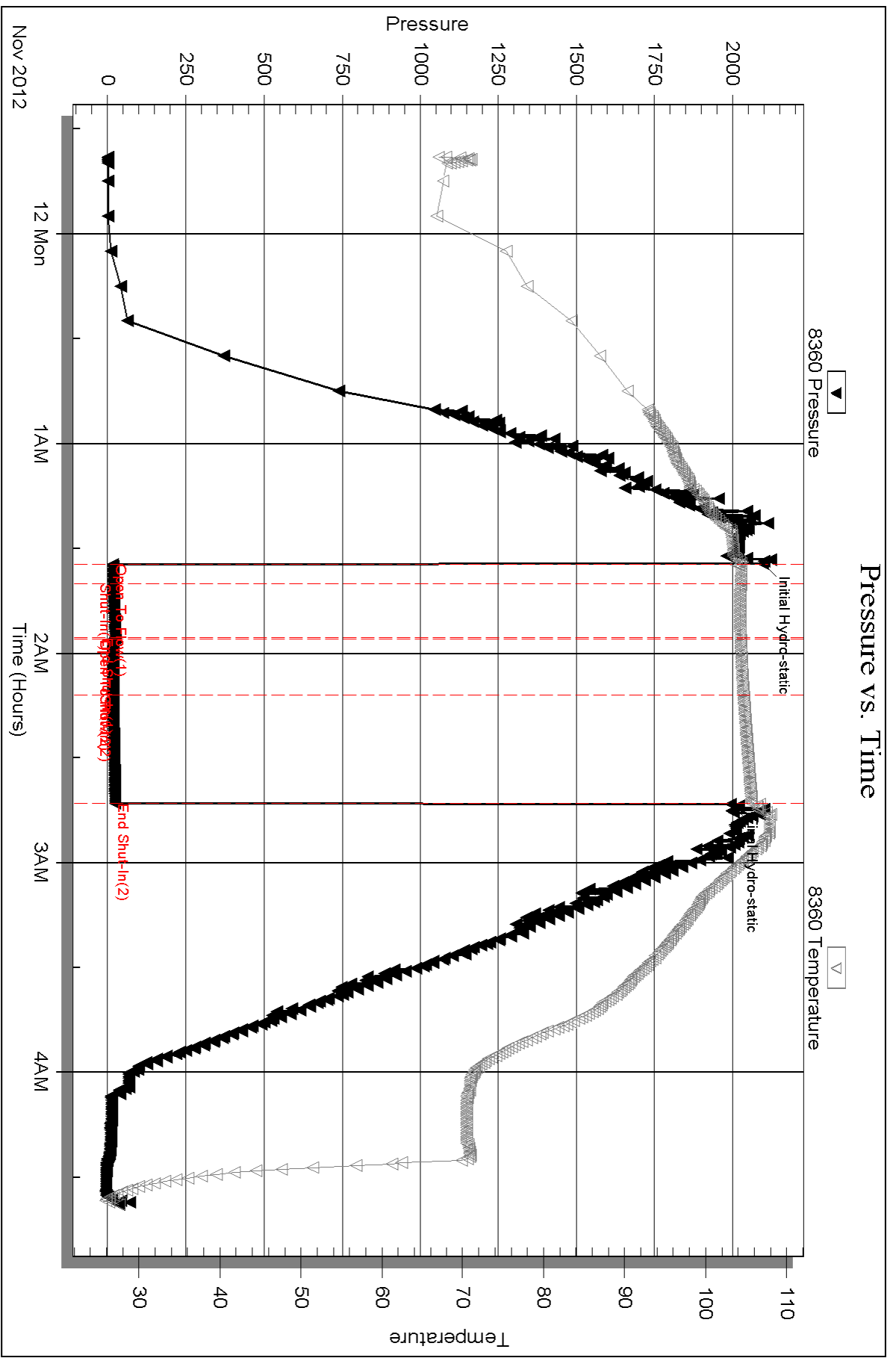
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

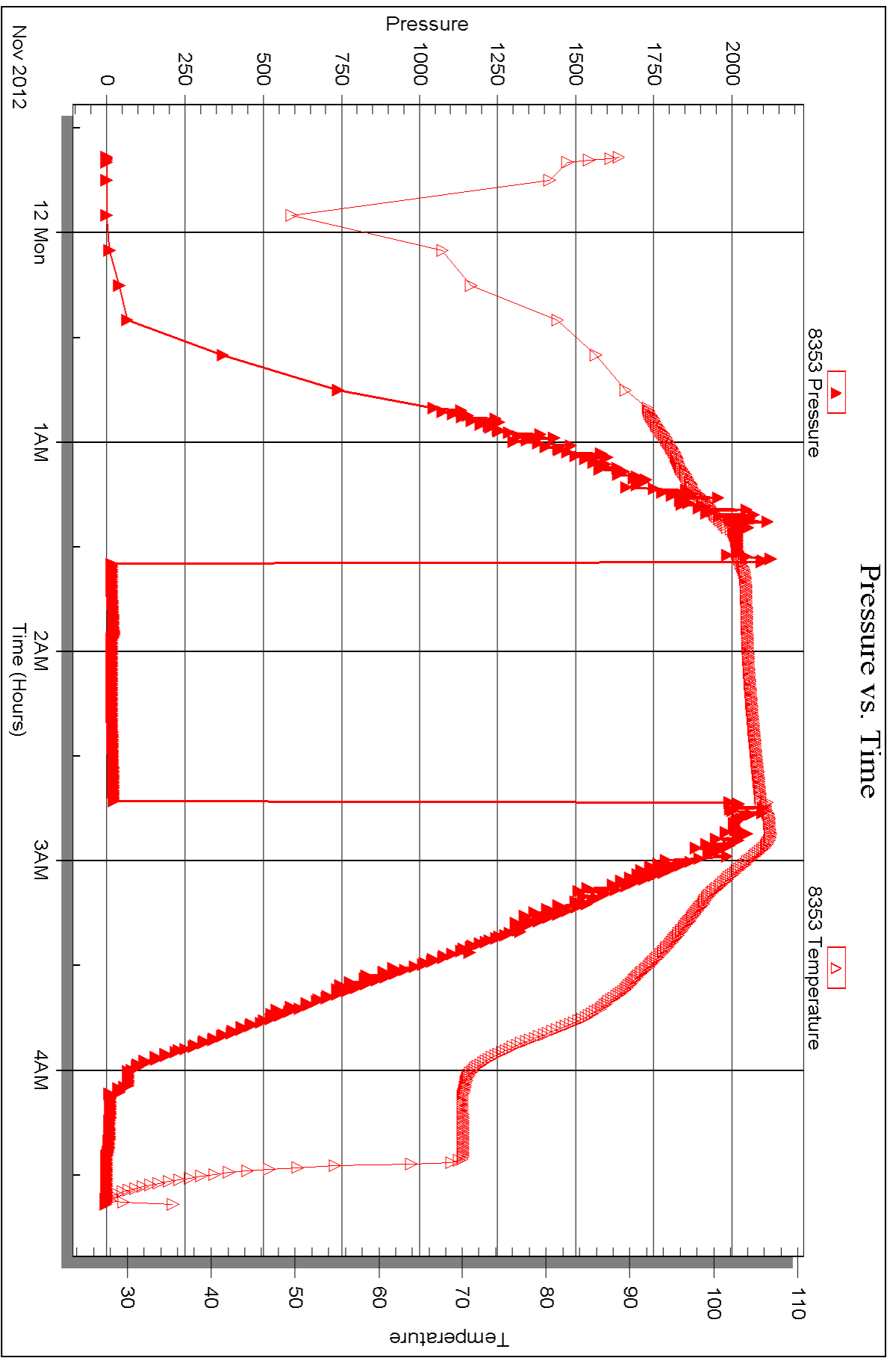


Serial #: 8353

Outside Larson Engineering Inc

Sinclair #1-11

DST Test Number: 6





## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.12 @ 11:52:00

End Date: 2012.11.12 @ 17:03:09

Job Ticket #: 49912                      DST #: 7

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

Printed: 2012.11.21 @ 09:59:07



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**

**Sinclair #1-11**

Job Ticket: 49912

**DST#: 7**

Test Start: 2012.11.12 @ 11:52:00

## GENERAL INFORMATION:

Formation: **LKC " L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:23:10

Time Test Ended: 17:03:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 40

**Interval: 4252.00 ft (KB) To 4262.00 ft (KB) (TVD)**

Reference Elevations: 2866.00 ft (KB)

Total Depth: 4262.00 ft (KB) (TVD)

2859.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8360**

**Inside**

Press @ Run Depth: 18.99 psig @ 4254.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.12

End Date:

2012.11.12

Last Calib.:

2012.11.12

Start Time: 11:52:00

End Time:

17:03:09

Time On Btm:

2012.11.12 @ 13:22:55

Time Off Btm:

2012.11.12 @ 15:14:55

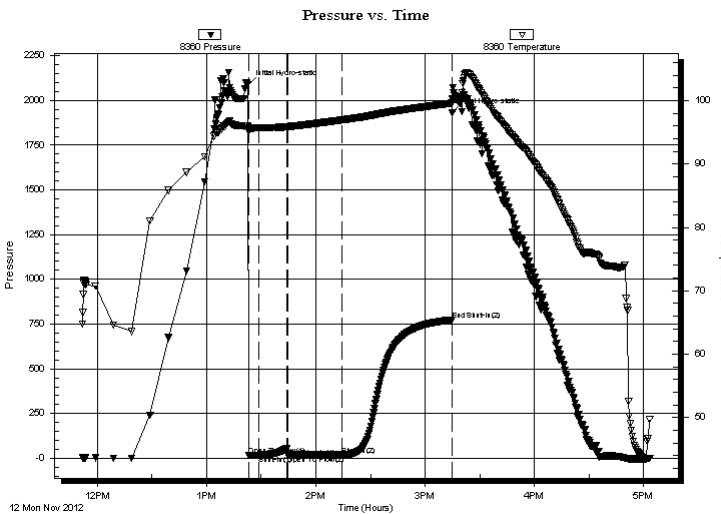
**TEST COMMENT:** IF- Weak Surface Blow

IS- No Blow

FF- Weak Surface Blow Built to 1/2"

FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2086.99	95.97	Initial Hydro-static
1	17.17	95.10	Open To Flow (1)
6	17.66	95.69	Shut-In(1)
21	56.77	95.90	End Shut-In(1)
22	18.27	95.89	Open To Flow (2)
52	18.99	96.96	Shut-In(2)
112	773.08	99.62	End Shut-In(2)
112	1930.97	100.36	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud w / oil spots in tool	0.01

\* 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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49912

**DST#: 7**

ATTN: Vern Schrag

Test Start: 2012.11.12 @ 11:52:00

## 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:	24000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	4000.00 lb
			<u>Total Volume: 58.34 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4252.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	37.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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	2.00			4243.00	
Packer	5.00			4248.00	27.00 Bottom Of Top Packer
Packer	4.00			4252.00	
Stubb	1.00			4253.00	
Perforations	1.00			4254.00	
Recorder	0.00	8360	Inside	4254.00	
Recorder	0.00	8353	Outside	4254.00	
Perforations	5.00			4259.00	
Bullnose	3.00			4262.00	10.00 Bottom Packers & Anchor

**Total Tool Length: 37.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49912

**DST#: 7**

ATTN: Vern Schrag

Test Start: 2012.11.12 @ 11:52:00

## 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: 6.75 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud w / oil spots in tool	0.015

Total Length: 3.00 ft      Total Volume: 0.015 bbl

Num Fluid Samples: 0

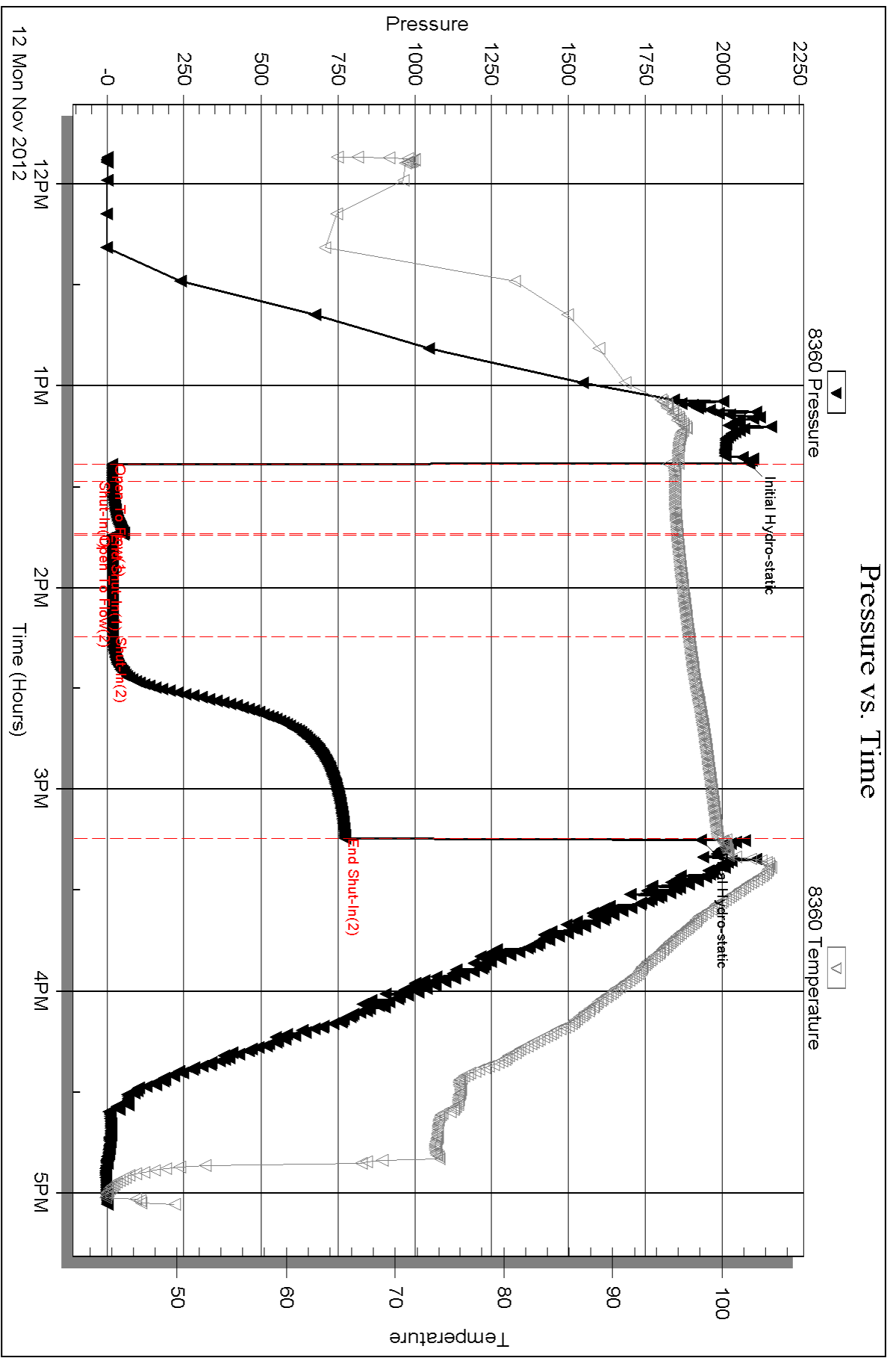
Num Gas Bombs: 0

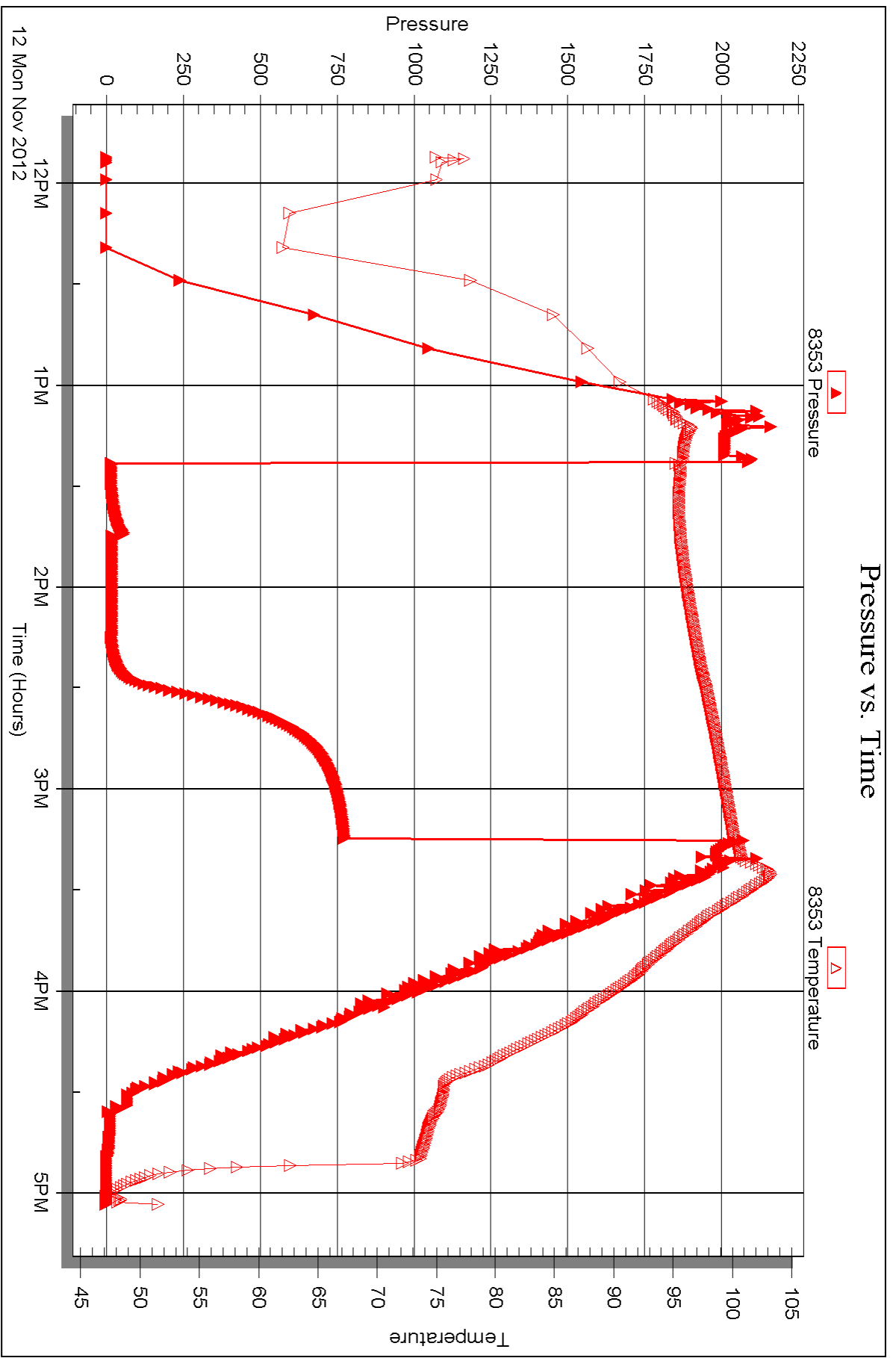
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.13 @ 06:26:00

End Date: 2012.11.13 @ 12:26:24

Job Ticket #: 49913                      DST #: 8

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

Printed: 2012.11.21 @ 09:58:22



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**

**Sinclair #1-11**

Job Ticket: 49913

**DST#: 8**

Test Start: 2012.11.13 @ 06:26:00

## GENERAL INFORMATION:

Formation: **Pleasanton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:36:25

Time Test Ended: 12:26:24

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 40

**Interval: 4280.00 ft (KB) To 4305.00 ft (KB) (TVD)**

Reference Elevations: 2866.00 ft (KB)

Total Depth: 4305.00 ft (KB) (TVD)

2859.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8360**

**Inside**

Press @ Run Depth: 23.99 psig @ 4282.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.13

End Date:

2012.11.13

Last Calib.: 2012.11.13

Start Time: 06:26:00

End Time:

12:26:24

Time On Btm: 2012.11.13 @ 08:36:10

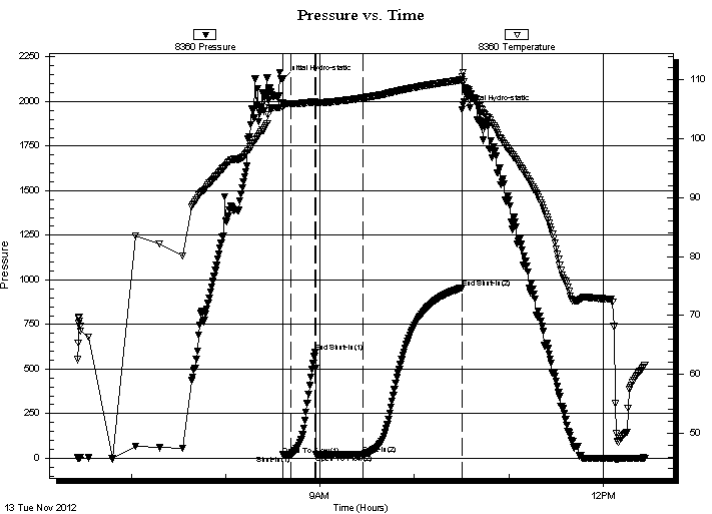
Time Off Btm: 2012.11.13 @ 10:30:25

TEST COMMENT: IF- Weak Surface Blow Built to 1/2"

IS- No Blow

FF- Weak Surface Blow Built to 3/4"

FS- No Blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2125.71	106.12	Initial Hydro-static
1	19.27	105.27	Open To Flow (1)
6	18.59	105.92	Shut-In(1)
21	592.85	106.26	End Shut-In(1)
22	21.08	106.03	Open To Flow (2)
51	23.99	106.89	Shut-In(2)
114	956.60	109.95	End Shut-In(2)
115	1954.12	110.56	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
4.00	OCM 20%oil 80%m	0.02
1.00	100%oil	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

**11-18s-30w Lane, KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49913

**DST#: 8**

ATTN: Vern Schrag

Test Start: 2012.11.13 @ 06:26:00

## Tool Information

Drill Pipe:	Length: 4110.00 ft	Diameter: 3.80 inches	Volume: 57.65 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: 28000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 58.37 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4280.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4254.00	
Shut In Tool	5.00			4259.00	
Hydraulic tool	5.00			4264.00	
Jars	5.00			4269.00	
Safety Joint	2.00			4271.00	
Packer	5.00			4276.00	27.00 Bottom Of Top Packer
Packer	4.00			4280.00	
Stubb	1.00			4281.00	
Perforations	1.00			4282.00	
Recorder	0.00	8360	Inside	4282.00	
Recorder	0.00	8353	Outside	4282.00	
Perforations	20.00			4302.00	
Bullnose	3.00			4305.00	25.00 Bottom Packers & Anchor

**Total Tool Length: 52.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49913

**DST#: 8**

ATTN: Vern Schrag

Test Start: 2012.11.13 @ 06:26:00

## 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: 6.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
4.00	OCM 20%oil 80%m	0.020
1.00	100%oil	0.005

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

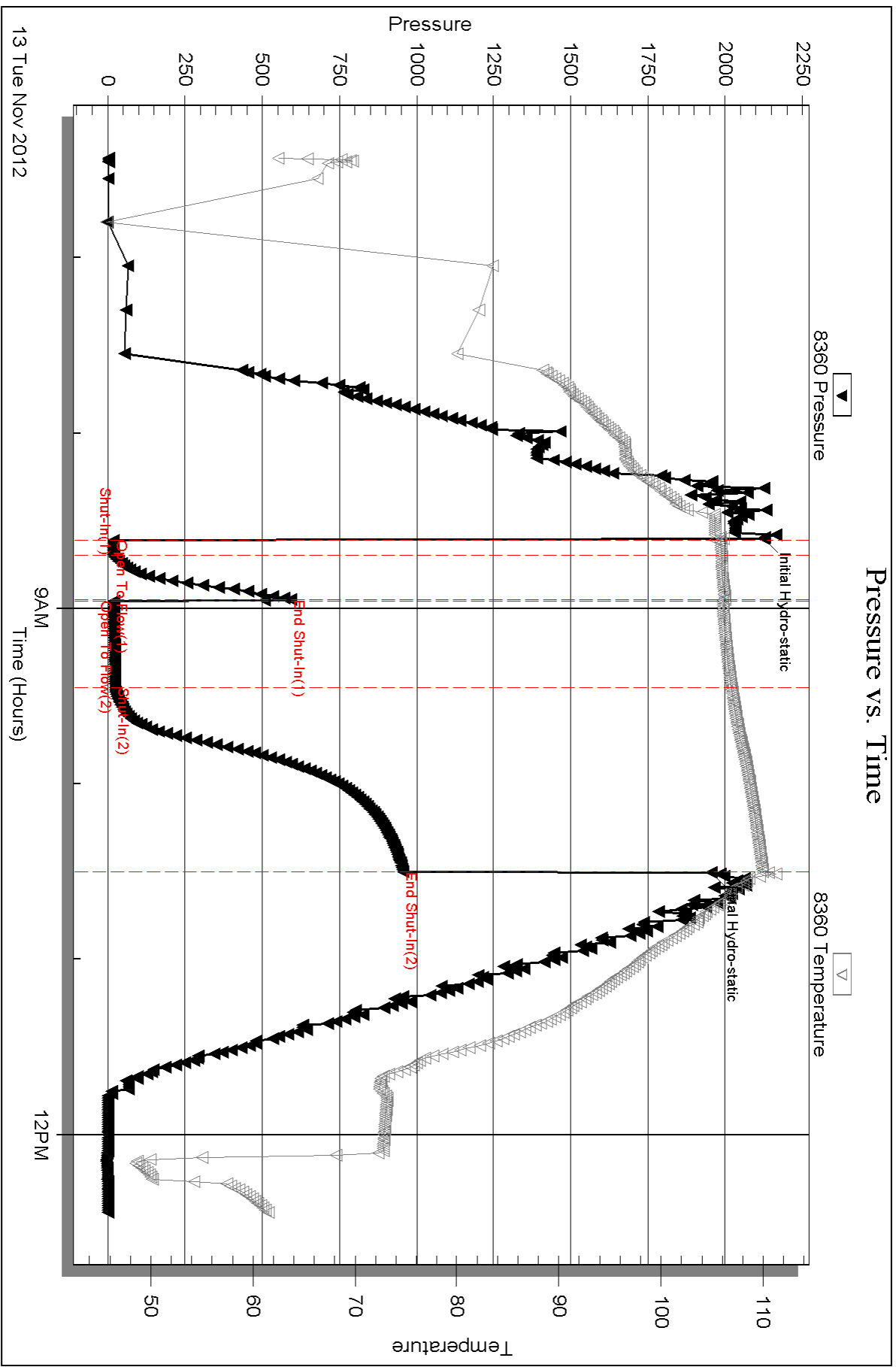
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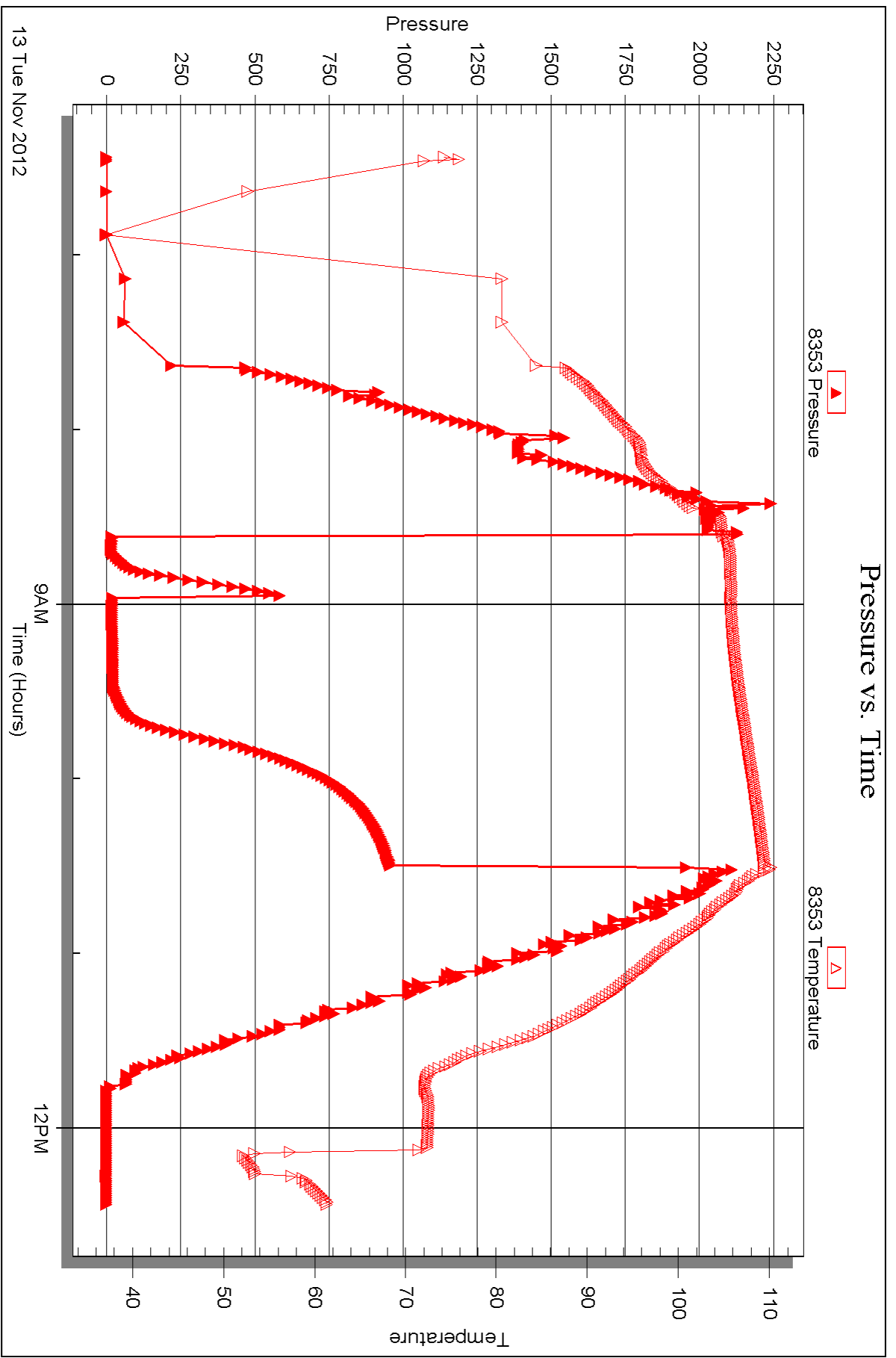
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.14 @ 00:54:00

End Date: 2012.11.14 @ 06:50:09

Job Ticket #: 49914                      DST #: 9

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.21 @ 09:57:27



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**11-18s-30w Lane, KS**

**Sinclair #1-11**

Job Ticket: 49914

**DST#: 9**

Test Start: 2012.11.14 @ 00:54:00

## GENERAL INFORMATION:

Formation: **Marmaton**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:52:10  
 Time Test Ended: 06:50:09  
 Interval: **4308.00 ft (KB) To 4364.00 ft (KB) (TVD)**  
 Total Depth: 4364.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Will MacLean  
 Unit No: 40  
 Reference Elevations: 2866.00 ft (KB)  
 2859.00 ft (CF)  
 KB to GR/CF: 7.00 ft

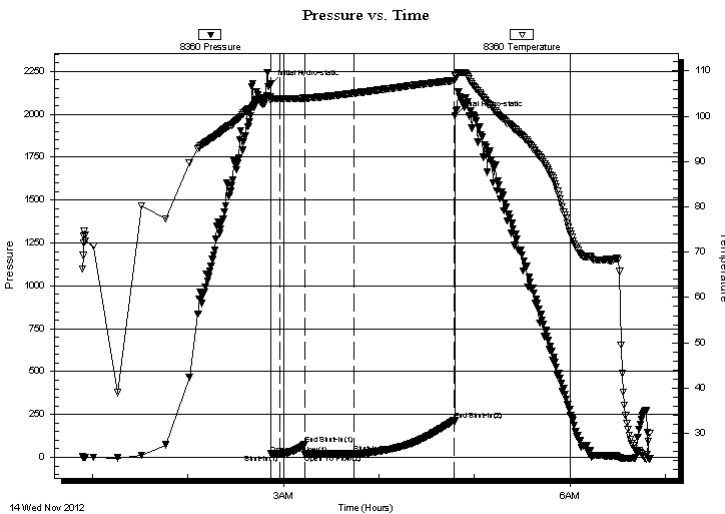
## Serial #: 8360

Inside

Press @ Run Depth: 21.18 psig @ 4309.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.11.14 End Date: 2012.11.14 Last Calib.: 2012.11.14  
 Start Time: 00:54:00 End Time: 06:50:09 Time On Btm: 2012.11.14 @ 02:51:55  
 Time Off Btm: 2012.11.14 @ 04:47:55

TEST COMMENT: IF- Weak Surface Blow 1/2"  
 IS- No Blow  
 FF- Weak Surface Blow 1/4"  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2175.41	104.33	Initial Hydro-static
1	20.08	103.43	Open To Flow (1)
6	20.32	103.89	Shut-In(1)
22	75.77	104.02	End Shut-In(1)
22	19.49	104.00	Open To Flow (2)
53	21.18	105.09	Shut-In(2)
116	216.71	107.94	End Shut-In(2)
116	1993.34	108.94	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	100% m with Oil Spots	0.01

\* 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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49914

**DST#: 9**

ATTN: Vern Schrag

Test Start: 2012.11.14 @ 00:54:00

## Tool Information

Drill Pipe:	Length: 4142.00 ft	Diameter: 3.80 inches	Volume: 58.10 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: 28000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 58.82 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4308.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	83.00 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			4282.00	
Shut In Tool	5.00			4287.00	
Hydraulic tool	5.00			4292.00	
Jars	5.00			4297.00	
Safety Joint	2.00			4299.00	
Packer	5.00			4304.00	27.00 Bottom Of Top Packer
Packer	4.00			4308.00	
Stubb	1.00			4309.00	
Recorder	0.00	8360	Inside	4309.00	
Recorder	0.00	8353	Outside	4309.00	
Perforations	15.00			4324.00	
Change Over Sub	1.00			4325.00	
Drill Pipe	31.00			4356.00	
Change Over Sub	1.00			4357.00	
Perforations	4.00			4361.00	
Bullnose	3.00			4364.00	56.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>83.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49914

**DST#: 9**

ATTN: Vern Schrag

Test Start: 2012.11.14 @ 00:54:00

## 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: 7.16 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	100% m with Oil Spots	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

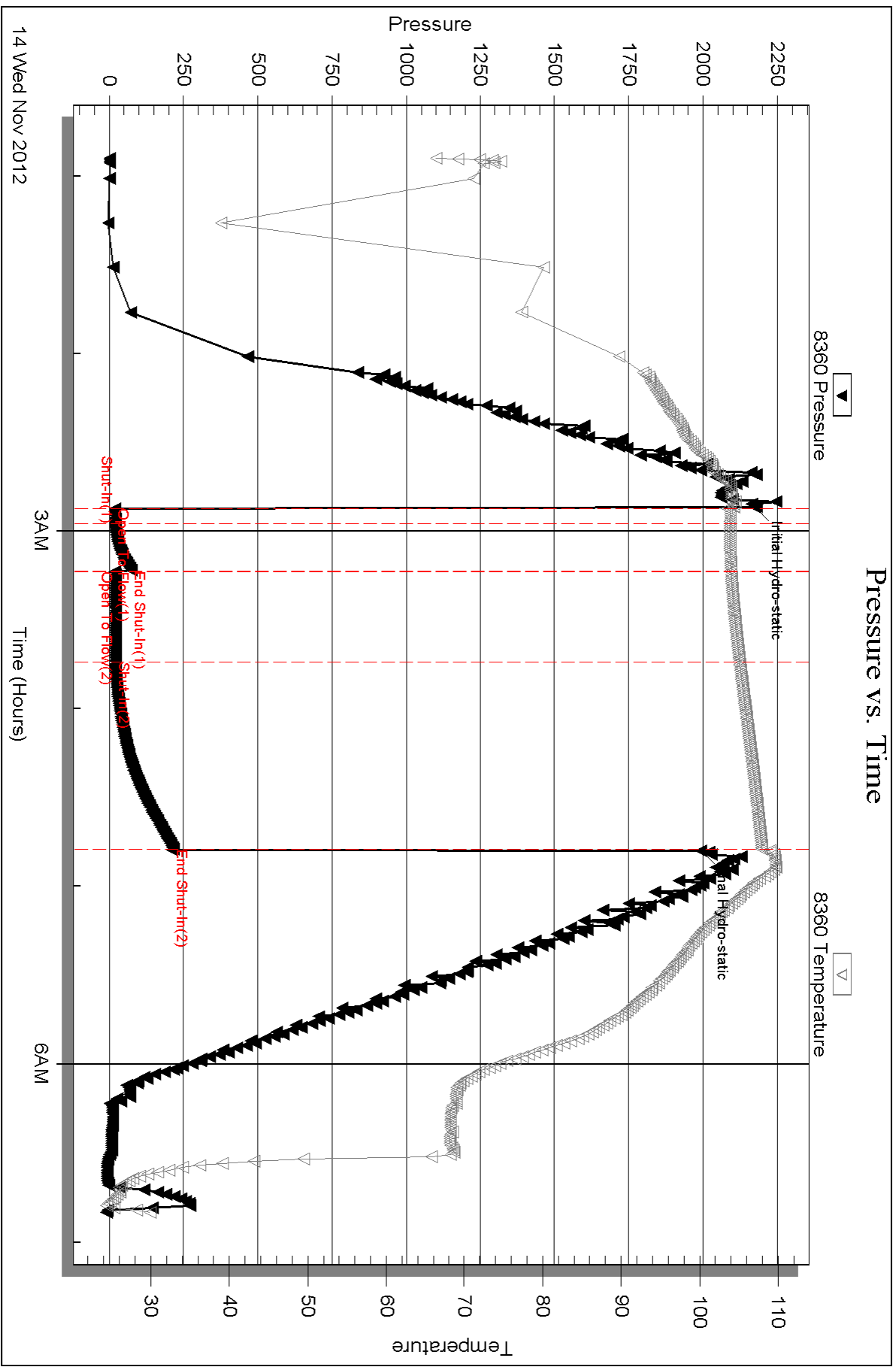
Num Gas Bombs: 0

Serial #:

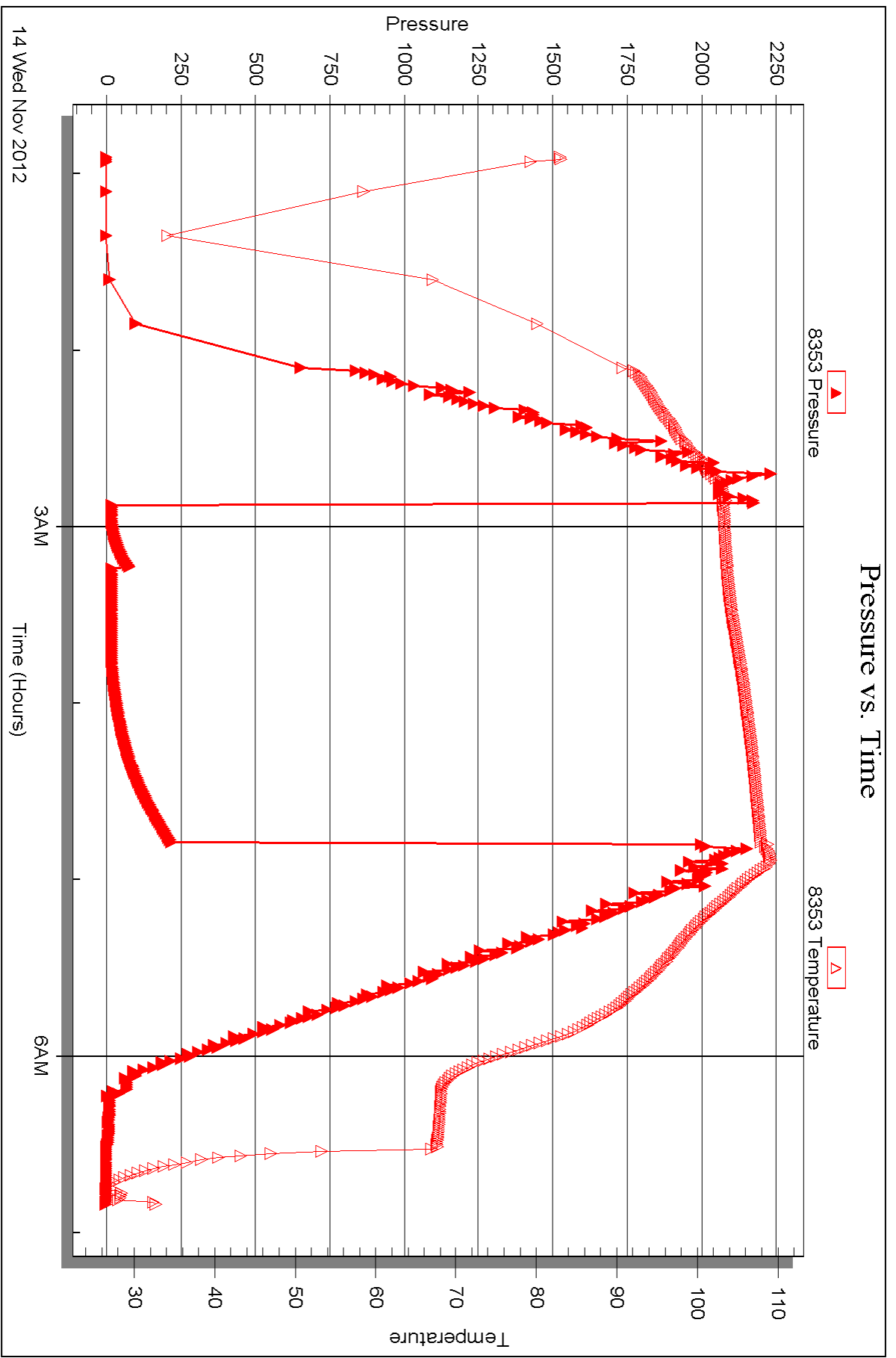
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.14 @ 23:20:00

End Date: 2012.11.15 @ 05:19:54

Job Ticket #: 49915                      DST #: 10

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.21 @ 09:56:30



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Engineering Inc

**11-18s-30w Lane, KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49915

**DST#: 10**

ATTN: Vern Schrag

Test Start: 2012.11.14 @ 23:20:00

## GENERAL INFORMATION:

Formation: **Pawnee / Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:11:25

Time Test Ended: 05:19:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 40

**Interval: 4390.00 ft (KB) To 4478.00 ft (KB) (TVD)**

Reference Elevations: 2866.00 ft (KB)

Total Depth: 4036.00 ft (KB) (TVD)

2859.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8360 Inside**

Press @ Run Depth: 80.55 psig @ 4391.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.14

End Date:

2012.11.15

Last Calib.: 2012.11.15

Start Time: 23:20:00

End Time:

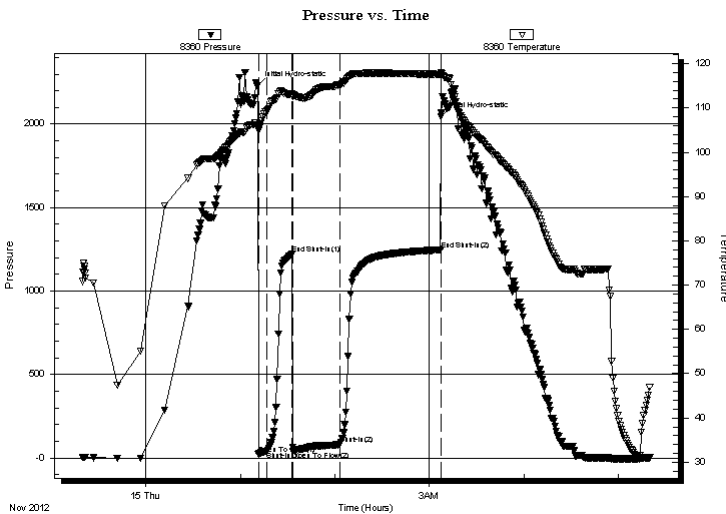
05:19:54

Time On Btm: 2012.11.15 @ 01:11:10

Time Off Btm: 2012.11.15 @ 03:07:25

**TEST COMMENT:** IF- Weak Surface Blow Built to 3 1/4"  
IS- No Blow  
FF- Weak Surface Blow Built to BOB in 7 1/2 min  
FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2231.18	105.99	Initial Hydro-static
1	23.20	104.95	Open To Flow (1)
6	39.87	109.36	Shut-In(1)
22	1220.92	113.14	End Shut-In(1)
23	40.72	112.78	Open To Flow (2)
52	80.55	115.27	Shut-In(2)
116	1247.34	117.59	End Shut-In(2)
117	2045.95	118.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MOCG 20%oil 28%oil 52%g	0.30
60.00	OGCM 25%oil 35%g 40%m	0.30
45.00	GOCM 6%g 36%oil 58%m	0.39
0.00	389' of GIP	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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49915

**DST#: 10**

ATTN: Vern Schrag

Test Start: 2012.11.14 @ 23:20:00

## Tool Information

Drill Pipe:	Length: 4238.00 ft	Diameter: 3.80 inches	Volume: 59.45 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: 28000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 4000.00 lb
			<u>Total Volume: 60.17 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4390.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	88.00 ft			
Tool Length:	115.00 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			4364.00	
Shut In Tool	5.00			4369.00	
Hydraulic tool	5.00			4374.00	
Jars	5.00			4379.00	
Safety Joint	2.00			4381.00	
Packer	5.00			4386.00	27.00 Bottom Of Top Packer
Packer	4.00			4390.00	
Stubb	1.00			4391.00	
Recorder	0.00	8360	Inside	4391.00	
Recorder	0.00	8353	Outside	4391.00	
Perforations	20.00			4411.00	
Change Over Sub	1.00			4412.00	
Drill Pipe	62.00			4474.00	
Change Over Sub	1.00			4475.00	
Bullnose	3.00			4478.00	88.00 Bottom Packers & Anchor

**Total Tool Length: 115.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49915

**DST#: 10**

ATTN: Vern Schrag

Test Start: 2012.11.14 @ 23:20:00

## 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: 62.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	MOCG 20%m 28%oil 52%g	0.295
60.00	OGCM 25%oil 35%g 40%m	0.295
45.00	GOCM 6%g 36%oil 58%m	0.385
0.00	389' of GIP	0.000

Total Length: 165.00 ft

Total Volume: 0.975 bbl

Num Fluid Samples: 0

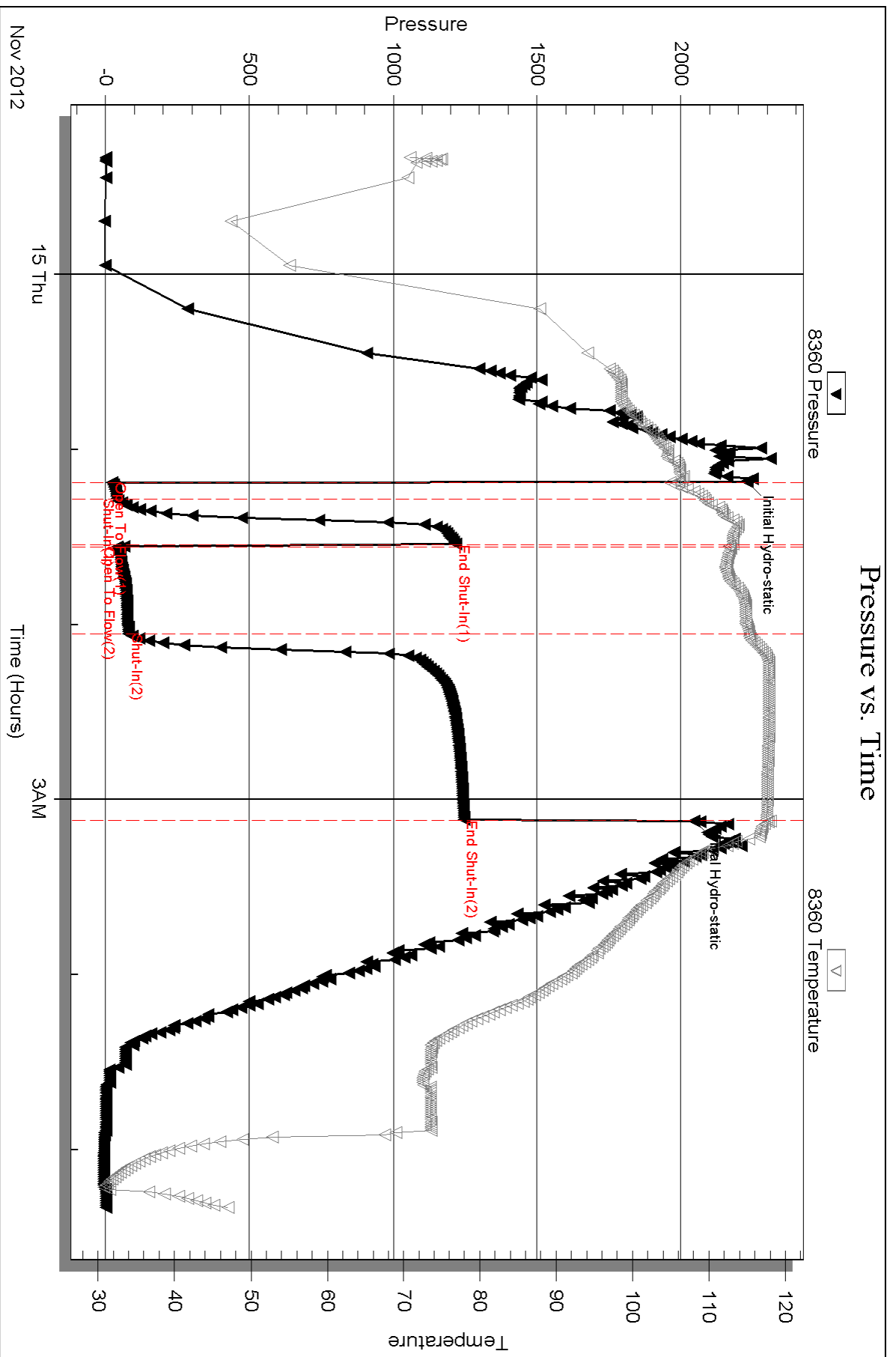
Num Gas Bombs: 0

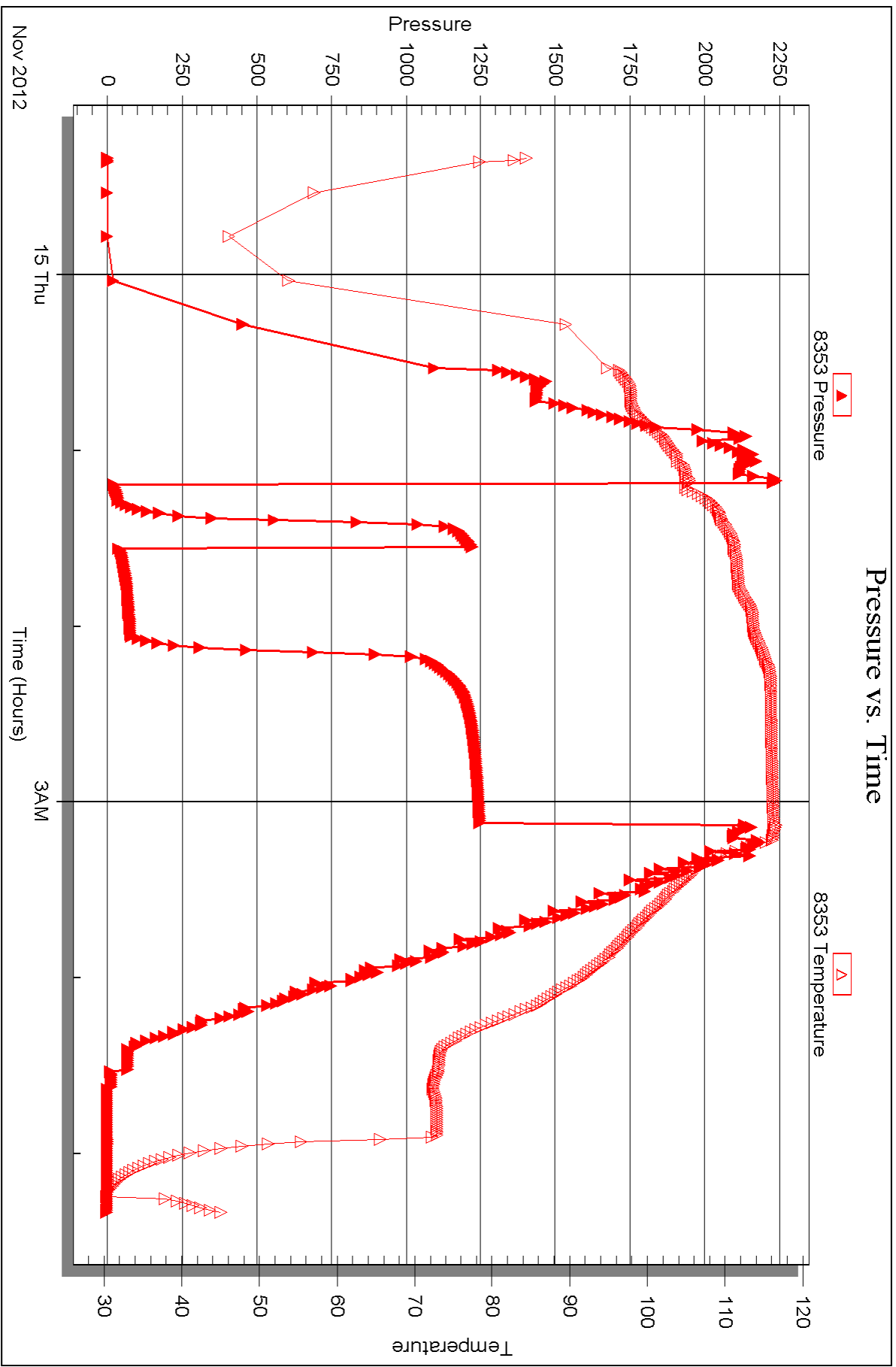
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4  
Olmitz KS 67564

ATTN: Vern Schrag

**Sinclair #1-11**

**11-18s-30w Lane,KS**

Start Date: 2012.11.15 @ 17:04:00

End Date: 2012.11.15 @ 23:03:39

Job Ticket #: 49916                      DST #: 11

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

Printed: 2012.11.21 @ 09:55:43



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Engineering Inc

**11-18s-30w Lane, KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49916

**DST#: 11**

ATTN: Vern Schrag

Test Start: 2012.11.15 @ 17:04:00

## GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:02:10

Time Test Ended: 23:03:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 40

**Interval: 4476.00 ft (KB) To 4538.00 ft (KB) (TVD)**

Reference Elevations: 2866.00 ft (KB)

Total Depth: 4538.00 ft (KB) (TVD)

2859.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8360 Inside**

Press @ Run Depth: 22.39 psig @ 4477.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.15

End Date: 2012.11.15

Last Calib.: 2012.11.15

Start Time: 17:04:00

End Time: 23:03:39

Time On Btm: 2012.11.15 @ 19:01:40

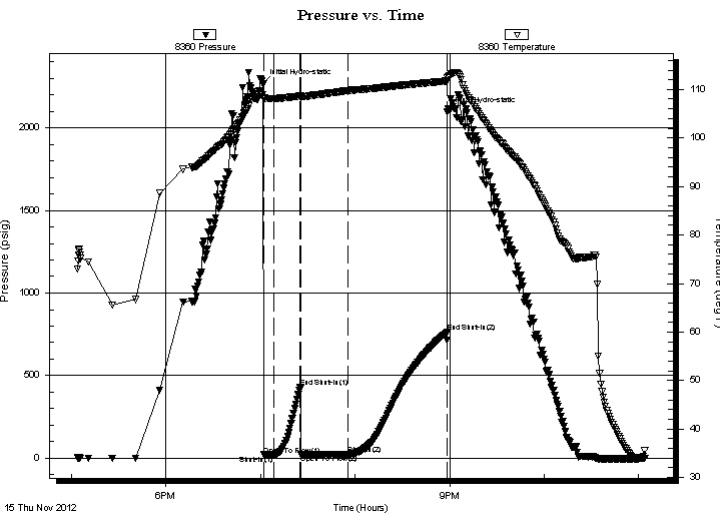
Time Off Btm: 2012.11.15 @ 20:58:40

TEST COMMENT: IF- Weak Surface Blow 1/2"

IS- No Blow

FF- Weak Surface Blow

FS- No Blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2264.96	108.87	Initial Hydro-static
1	20.87	108.09	Open To Flow (1)
7	20.29	108.10	Shut-In(1)
24	427.90	108.63	End Shut-In(1)
24	21.30	108.43	Open To Flow (2)
54	22.39	109.76	Shut-In(2)
117	761.13	111.73	End Shut-In(2)
117	2096.66	112.40	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM 4%oil 96%m	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

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49916

**DST#: 11**

ATTN: Vern Schrag

Test Start: 2012.11.15 @ 17:04:00

## Tool Information

Drill Pipe:	Length: 4332.00 ft	Diameter: 3.80 inches	Volume: 60.77 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: 28000.00 lb
Drill Collar:	Length: 147.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 61.49 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4476.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	89.00 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			4450.00	
Shut In Tool	5.00			4455.00	
Hydraulic tool	5.00			4460.00	
Jars	5.00			4465.00	
Safety Joint	2.00			4467.00	
Packer	5.00			4472.00	27.00 Bottom Of Top Packer
Packer	4.00			4476.00	
Stubb	1.00			4477.00	
Recorder	0.00	8360	Inside	4477.00	
Recorder	0.00	8353	Outside	4477.00	
Perforations	20.00			4497.00	
Change Over Sub	1.00			4498.00	
Drill Pipe	31.00			4529.00	
Change Over Sub	1.00			4530.00	
Perforations	5.00			4535.00	
Bullnose	3.00			4538.00	62.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>89.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering Inc

**11-18s-30w Lane,KS**

562 W State Rd 4  
Olmitz KS 67564

**Sinclair #1-11**

Job Ticket: 49916

**DST#: 11**

ATTN: Vern Schrag

Test Start: 2012.11.15 @ 17:04:00

## 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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OCM 4%oil 96%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

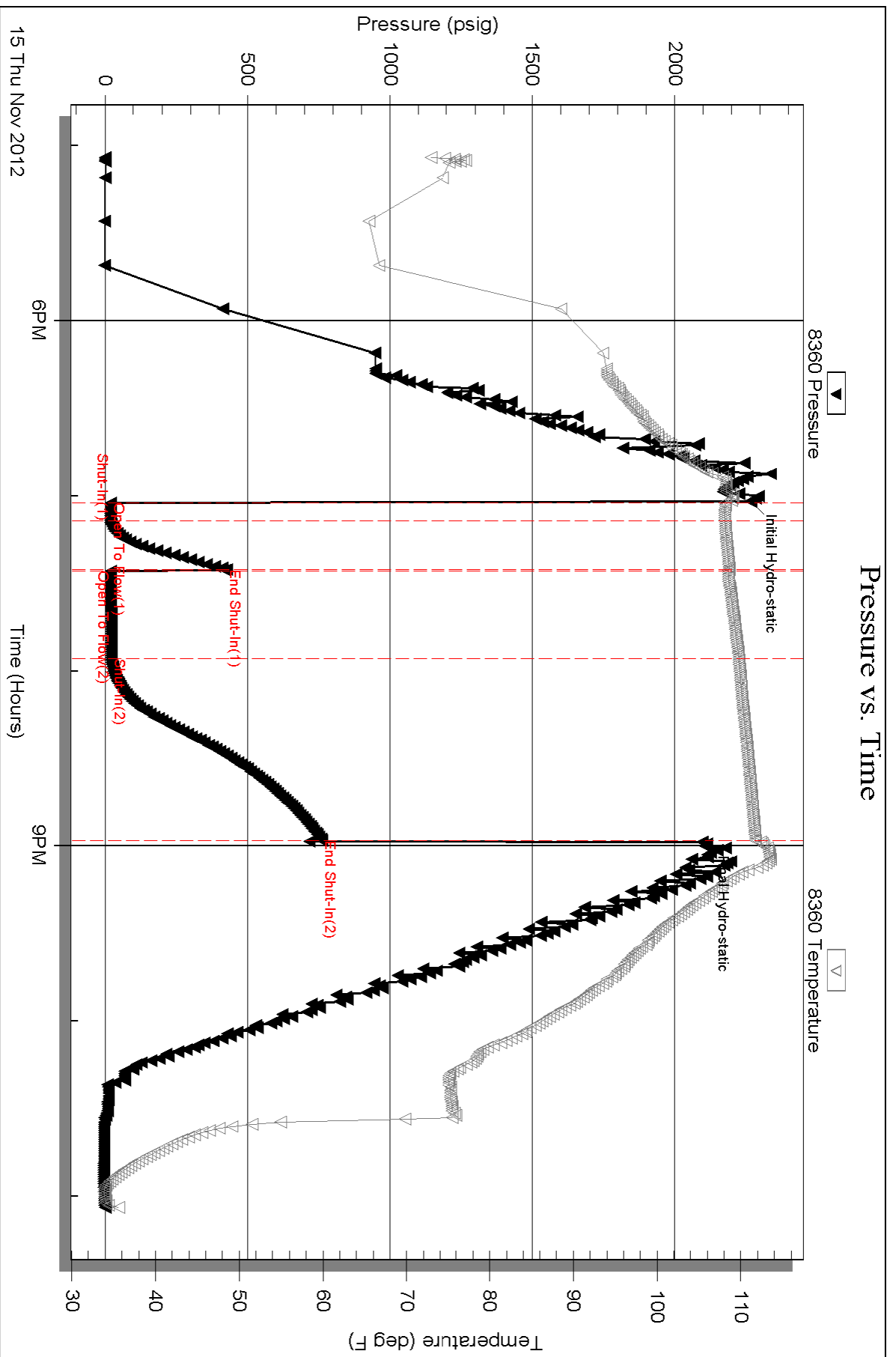
Num Gas Bombs: 0

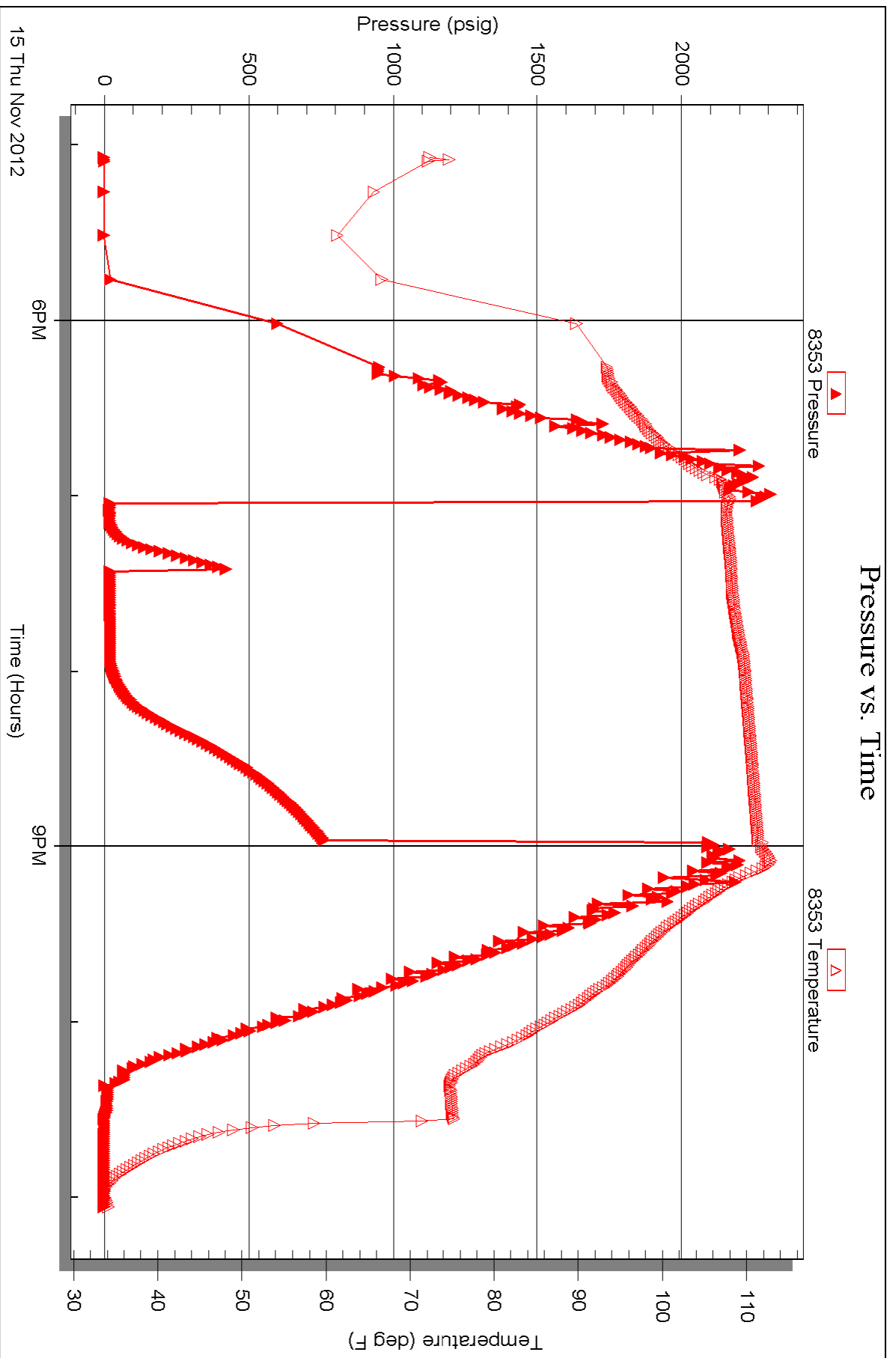
Serial #:

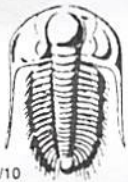
Laboratory Name:

Laboratory Location:

Recovery Comments:







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49906

Well Name & No. Sinclair #1-11 Test No. DST #1 Date 11-8-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W. State Rd 4 Off Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18s Rge. 30W Co. Lane State KS

Interval Tested 3980 - 4036 Zone Tested LKC "F"  
 Anchor Length 56 Drill Pipe Run 3830 Mud Wt. 9.0  
 Top Packer Depth 3976 Drill Collars Run 147 Vis 52  
 Bottom Packer Depth 3980 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4036 Chlorides 2500 ppm System LCM 316  
 Blow Description IF- Surface Blow Built to BOB in 3min  
ISI- No Blow  
FF- Surface Blow Built to BOB in 3/4 min  
FSL- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>174</u>	<u>OWCM</u>		<u>2</u>	<u>12</u>	<u>86</u>
<u>124</u>	<u>OWCM</u>		<u>3</u>	<u>25</u>	<u>72</u>
<u>186</u>	<u>OMCW</u>		<u>2</u>	<u>68</u>	<u>30</u>
<u>120</u>	<u>MCM w/ thin skin of oil on top</u>		<u>65</u>	<u>35</u>	
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 604 BHT 118 Gravity \_\_\_\_\_ API RW 299 @ 56 °F Chlorides 28000 ppm

(A) Initial Hydrostatic <u>1904</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>13:00</u>
(B) First Initial Flow <u>48</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>13:32</u>
(C) First Final Flow <u>134</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:24</u>
(D) Initial Shut-In <u>1005</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>16:33</u>
(E) Second Initial Flow <u>146</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>19:00</u>
(F) Second Final Flow <u>295</u>	<input checked="" type="checkbox"/> Mileage <u>34 R/T</u> 52.70	Comments _____
(G) Final Shut-In <u>999</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1872</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>1627.70</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1627.70</u>	

Approved By Vernon C Schrag Our Representative Will Mc

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. 49907

Well Name & No. Sinclair #1-11 Test No. ~~#1-11~~ DST #2 Date 11-9-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W State Rd 4 Olmitz, KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18s Rge. 30w Co. Lane State KS

Interval Tested 4107-4130 Zone Tested LRC "H"  
 Anchor Length 23 Drill Pipe Run 3953 Mud Wt. 9.0  
 Top Packer Depth 4103 Drill Collars Run 147 Vis 52  
 Bottom Packer Depth 4107 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4130 Chlorides 2500 ppm System LCM 316

Blow Description IF - Strong Surface Blow Built to BOB in 22 sec  
ISI - Weak Surface Blow Built to 3 3/4"  
FF - Strong Surface Blow Built to BOB in 28 sec  
FSI - Weak Surface Blow Built to 1 1/4"

Rec	Feet of	%gas	%oil	%water	%mud
308	G-O	16	84		
682	G-O	21	79		
496	G-O	19	81		
60	MGCO	32	45		23
	310' of G-IP				

Rec Total 1546 BHT 121 Gravity 30 API RW @      °F Chlorides      ppm

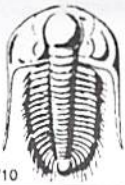
(A) Initial Hydrostatic 2001  Test 1250 T-On Location 7:04  
 (B) First Initial Flow 397  Jars 250 T-Started 7:52  
 (C) First Final Flow 417  Safety Joint 75 T-Open 9:44  
 (D) Initial Shut-In 779  Circ Sub NIC T-Pulled 10:51  
 (E) Second Initial Flow 490  Hourly Standby T-Out 14:12  
 (F) Second Final Flow 605  Mileage 34 R/T 52.70 Comments API is 31 @ 70 + = 30  
 (G) Final Shut-In 767  Sampler  
 (H) Final Hydrostatic 1967  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1627.70  
 Accessibility MP/DST Disc't

Initial Open 5  
 Initial Shut-In 15  
 Final Flow 15  
 Final Shut-In 30  
 Sub Total 1627.70

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49908

Well Name & No. Sinclair 1-11 Test No. DST #3 Date 11-9-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W. State Rd 4 Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18S Rge. 30W Co. Lane State KS

Interval Tested 4146 - 4176 Zone Tested LKC "I"  
 Anchor Length 30 Drill Pipe Run 3986 Mud Wt. 9.1  
 Top Packer Depth 4142 Drill Collars Run 147 Vis 66  
 Bottom Packer Depth 4146 Wt. Pipe Run 0 WL 6.4  
 Total Depth 4176 Chlorides 2900 ppm System LCM 316

Blow Description IF - Surface Blow Built to BOB in 4 1/4 min  
ISI - Weak Surface Blow Built to 1"  
FF - Surface Blow Built to BOB in 3 3/4 min  
FSD - Weak Surface Blow Built to 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>248</u>	<u>G-O</u>	<u>18</u>	<u>82</u>		
<u>122</u>	<u>G-MCO</u>	<u>24</u>	<u>50</u>		<u>26</u>
<u>60</u>	<u><del>WGMCO</del> WMGCO</u>	<u>22</u>	<u>56</u>	<u>2</u>	<u>20</u>
	<u>248' of G-IP</u>				

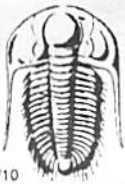
Rec Total 430 BHT 121 Gravity 34 API RW @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2046  Test 1250 T-On Location 22:34  
 (B) First Initial Flow 32  Jars 250 T-Started 23:22  
 (C) First Final Flow 91  Safety Joint 75 T-Open 1:37  
 (D) Initial Shut-In 1063  Circ Sub NIC T-Pulled 2:51  
 (E) Second Initial Flow 98  Hourly Standby T-Out 5:39  
 (F) Second Final Flow 180  Mileage 34 R/T 52.70 Comments API is 34 @ 60f = 34  
 (G) Final Shut-In 1050  Sampler  Ruined Shale Packer  
 (H) Final Hydrostatic 1921  Straddle  Ruined Packer

Initial Open 5  Shale Packer  Extra Copies  
 Initial Shut-In 15  Extra Packer  Sub Total 0  
 Final Flow 15  Extra Recorder  Total 1627.70  
 Final Shut-In 30  Day Standby  MP/DST Disc't  
 Accessibility  Sub Total 1627.70

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49909

Well Name & No. Simclair #1-11 Test No. DST #4 Date 11-10-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W. State Rd 4 Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18S Rge. 30W Co. Lane State KS

Interval Tested 4174 - 4191 Zone Tested LRC "J"  
 Anchor Length 17 Drill Pipe Run 4016 Mud Wt. 9.0  
 Top Packer Depth 4170 Drill Collars Run 147 Vis 57  
 Bottom Packer Depth 4174 Wt. Pipe Run 0 WL 8.4  
 Total Depth 4191 Chlorides 3600 ppm System LCM 215  
 Blow Description IF - Weak Surface Blow Built to 2"  
ISI - No Blow  
FF - Weak Surface Blow Built to 8 1/4"  
F-SI - No Blow

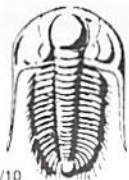
Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>WCM with SKin of Oil on Top</u>		<u>19</u>	<u>81</u>	
<u>62</u>	<u>WCM</u>		<u>38</u>	<u>62</u>	
<u>120</u>	<u>MCW</u>		<u>68</u>	<u>32</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 212 BHT 115 Gravity \_\_\_\_\_ API RW 318 @ 54 °F Chlorides 27000 ppm  
 (A) Initial Hydrostatic 2058  Test 1250 T-On Location 13:56  
 (B) First Initial Flow 19  Jars 250 T-Started 15:24  
 (C) First Final Flow 42  Safety Joint 75 T-Open 17:47  
 (D) Initial Shut-In 774  Circ Sub NIC T-Pulled 19:40  
 (E) Second Initial Flow 44  Hourly Standby \_\_\_\_\_ T-Out 21:40  
 (F) Second Final Flow 111  Mileage 34 R/T 52.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 774  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1929  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1627.70

Initial Open 5  
 Initial Shut-In 15  
 Final Flow 30  
 Final Shut-In 60  
 Approved By Vern Schrag Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49910

Well Name & No. Sinclair #1-11 Test No. DST #5 Date 11-11-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W State Rd Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D R<sub>s</sub> #3  
 Location: Sec. 11 Twp. 18S Rge. 30W Co. Lane State KS

Interval Tested 4204-4227 Zone Tested LKC "K"  
 Anchor Length 23 Drill Pipe Run 4048 Mud Wt. 9.0  
 Top Packer Depth 4200 Drill Collars Run 147 Vis 57  
 Bottom Packer Depth 4204 Wt. Pipe Run 0 WL 8.4  
 Total Depth 4227 Chlorides 3600 ppm System LCM 216  
 Blow Description IF - Weak Surface Blow Built to 4"  
ISI - No Blow  
FF - Weak Surface Blow Built to BOB in 2 1/4 min  
FSI - Weak Surface Blow in 18 3/4 min

Rec	Feet of	%gas	%oil	%water	%mud
25	60	2	98		
42	G-WOCM	2	4	3	91
62	WCM			30	70
182	MCW			58	42
	57' of GIP				

Rec Total 311 BHT 118 Gravity 36 API RW 287 @ 49 °F Chlorides 33000 ppm  
 (A) Initial Hydrostatic 2064  Test 1250 T-On Location 6:18  
 (B) First Initial Flow 22  Jars 250 T-Started 6:32  
 (C) First Final Flow 63  Safety Joint 75 T-Open 8:31  
 (D) Initial Shut-In 876  Circ Sub NIC T-Pulled 10:28  
 (E) Second Initial Flow 70  Hourly Standby T-Out 12:42  
 (F) Second Final Flow 151  Mileage 34 R/T 52.70 Comments API is 35 e 50f = 36  
 (G) Final Shut-In 859  Sampler  
 (H) Final Hydrostatic 1974  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder  
 Day Standby  
 Accessibility

Initial Open 5  
 Initial Shut-In 15  
 Final Flow 30  
 Final Shut-In 60

Sub Total 1627.70  
 Total 1627.70  
 MP/DST Disc't \_\_\_\_\_

Approved By Vern Schrag Our Representative Will [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 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. 49911

Well Name & No. Sinclair #1-11 Test No. DST #6 Date 10-11-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W State Rd 4 Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D R.s #3  
 Location: Sec. 11 Twp. 18S Rge. 30W Co. Lane State KS

Interval Tested 4244-4257 Zone Tested LRC "L"  
 Anchor Length 13 Drill Pipe Run 4078 Mud Wt. 9.1  
 Top Packer Depth 4240 Drill Collars Run 147 Vis 44  
 Bottom Packer Depth 4244 Wt. Pipe Run 0 WL 8.4  
 Total Depth 4257 Chlorides 4700 ppm System LCM 216

Blow Description IF- Weak Surface Blow  
ISI- No Blow  
FF- Weak Surface Blow Died in 12min  
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud Few Oil Spots in Tail</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 2 BHT 103 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2097  Test 1250 T-On Location 22:40  
 (B) First Initial Flow 17  Jars 250 T-Started 23:38  
 (C) First Final Flow 18  Safety Joint 75 T-Open 1:34  
 (D) Initial Shut-In 24  Circ Sub NIC T-Pulled 2:43  
 (E) Second Initial Flow 17  Hourly Standby \_\_\_\_\_ T-Out 4:37  
 (F) Second Final Flow 18  Mileage 34 R/T 52.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 24  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1994  Straddle \_\_\_\_\_

Initial Open 5  Shale Packer \_\_\_\_\_  
 Initial Shut-In 15  Extra Packer \_\_\_\_\_  
 Final Flow 15  Extra Recorder \_\_\_\_\_  
 Final Shut-In 30  Day Standby \_\_\_\_\_  
 Sub Total 1627.70  Accessibility \_\_\_\_\_  
 Sub Total 1627.70  Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1627.70  
 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49912

4/10

Well Name & No. Sinclair #1-11 Test No. DST #7 Date 11-12-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W. State Rd 4 Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18s Rge. 30w Co. Lanc State KS

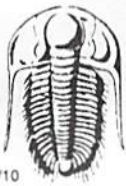
Interval Tested 4252 - 4262 Zone Tested LKC "L"  
 Anchor Length 10 Drill Pipe Run 4108 Mud Wt. 9.1  
 Top Packer Depth 4248 Drill Collars Run 147 Vis 60  
 Bottom Packer Depth 4252 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4262 Chlorides 3600 ppm System LCM 216  
 Blow Description IF - Weak Surface Blow  
ISI - No Blow  
FF - Weak Surface Blow Built to 1/2"  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>Mud with Few Oil Spots in Tool</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 3 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2086</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>11:12</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:52</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:23</u>
(D) Initial Shut-In <u>56</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>15:14</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>17:03</u>
(F) Second Final Flow <u>18</u>	<input checked="" type="checkbox"/> Mileage <u>34 RIT</u> 52.70	Comments _____
(G) Final Shut-In <u>773</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1930</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>1627.70</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1627.70</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. 49913

4/10

Well Name & No. Sindarr #1-11 Test No. DST #8 Date 11-13-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W. State Rd 4 Olm. tz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18s Rge. 30w Co. Lane State KS

Interval Tested 4280-4305 Zone Tested Pleasanton  
 Anchor Length 25 Drill Pipe Run 4110 Mud Wt. 9.1  
 Top Packer Depth 4276 Drill Collars Run 147 Vis 60  
 Bottom Packer Depth 4280 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4305 Chlorides 3600 ppm System LCM 216  
 Blow Description IF - Weak Surface Blow Built to 1/2"  
ISI - No Blow  
FF - Weak Surface Blow Built to 3/4"  
FSI - No Blow

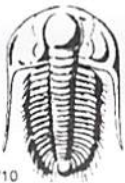
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Oil</u>		<u>100%</u>		
<u>4</u>	<u>OCM</u>		<u>20%</u>		<u>80%</u>

Rec Total 5 BHT 105 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2125</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>6:04</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>6:26</u>
(C) First Final Flow <u>18</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>8:36</u>
(D) Initial Shut-In <u>592</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>10:30</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:26</u>
(F) Second Final Flow <u>23</u>	<input checked="" type="checkbox"/> Mileage <u>34 R/T</u> 52.70	Comments _____
(G) Final Shut-In <u>956</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1954</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>30</u>	<input type="checkbox"/> Day Standby	Total <u>1627.70</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1627.70</u>	

Approved By [Signature] Our Representative Will Ma  
 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. 49914

Well Name & No. Sinclair #1-11 Test No. DST #9 Date 7-14-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W. State Rd 4 Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18S Rge. 30W Co. Lane State KS

Interval Tested 4308-4364 Zone Tested Marmaton  
 Anchor Length 56 Drill Pipe Run 4142 Mud Wt. 9.2  
 Top Packer Depth 4304 Drill Collars Run 147 Vis 50  
 Bottom Packer Depth 4308 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4364 Chlorides 3500 ppm System LCM 216

Blow Description IF - Weak Surface Blow 1/2"  
TSI - No Blow  
FF - Weak Surface Blow 1/4"  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud with Oil Spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2 BHT 100 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2175  Test 1250 T-On Location 00:10  
 (B) First Initial Flow 20  Jars 250 T-Started 00:54  
 (C) First Final Flow 20  Safety Joint 75 T-Open 2:52  
 (D) Initial Shut-In 75  Circ Sub NIC T-Pulled 4:47  
 (E) Second Initial Flow 19  Hourly Standby \_\_\_\_\_ T-Out 6:50  
 (F) Second Final Flow 21  Mileage 34 RIT 52.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 216  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1993  Straddle \_\_\_\_\_

Initial Open 5  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 15  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Packer \_\_\_\_\_  
 Final Shut-In 60  Extra Recorder \_\_\_\_\_  
 Sub Total 0  
 Total 1627.70  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1627.70

Approved By Vern C Schrag Our Representative Will M...

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 49915

Well Name & No. Sinclair #1-11 Test No. DST #10 Date 11-14-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W State Rd 4 Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3  
 Location: Sec. 11 Twp. 18s Rge. 30W Co. Lane State KS

Interval Tested 4390 - 4478 Zone Tested Pawnee / Ft. Scott  
 Anchor Length 88 Drill Pipe Run 4238 Mud Wt. 9.2  
 Top Packer Depth 4386 Drill Collars Run 147 Vis 62  
 Bottom Packer Depth 4390 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4478 Chlorides 3800 ppm System LCM 1 1/2  
 Blow Description IF - Weak Surface Blow Built to 3 1/4"  
TSI - No Blow  
FF - Weak Surface Blow Built to BOB in 7 1/2 min  
FSI

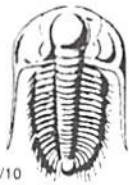
Rec	Feet of	%gas	%oil	%water	%mud
45	0-0 CM	6	36	58	
60	0-0 CM	35	25	40	
60	MOCG	52	28	20	
	389' of GIP				

Rec Total 165 BHT 107 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2231  Test 1250 T-On Location 22:22  
 (B) First Initial Flow 23  Jars 250 T-Started 23:20  
 (C) First Final Flow 39  Safety Joint 75 T-Open 1:11  
 (D) Initial Shut-In 1220  Circ Sub NIC T-Pulled 3:07  
 (E) Second Initial Flow 40  Hourly Standby \_\_\_\_\_ T-Out 5:19  
 (F) Second Final Flow 80  Mileage 34 R/T 52.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 1247  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2045  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1877.70  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1877.70

Approved By [Signature] Our Representative Will M...

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. 49916

Well Name & No. Sinclair #1-11 Test No. DST #11 Date 11-15-12  
 Company Larson Engineering Inc Elevation 2866 KB 2859 GL  
 Address 562 W. State Rd 4 Olmitz KS 67564  
 Co. Rep / Geo. Vern Schrag Rig H-D Rk #3  
 Location: Sec. 11 Twp. 18S Rge. 30W Co. Lane State KS

Interval Tested 4476-4538 Zone Tested Chero Rec  
 Anchor Length 62 Drill Pipe Run 4332 Mud Wt. 9.1  
 Top Packer Depth 4472 Drill Collars Run 147 Vis 61  
 Bottom Packer Depth 4476 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4538 Chlorides 4000 ppm System LCM 1 1/2  
 Blow Description IF- Weak Surface Blow 1/2'  
ISI- No Blow  
FF- Weak Surface Blow  
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>OCM</u>		<u>4</u>		<u>96</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 105 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2264  Test 1250 T-On Location 15:30  
 (B) First Initial Flow 20  Jars 250 T-Started 17:04  
 (C) First Final Flow 20  Safety Joint 75 T-Open 19:02  
 (D) Initial Shut-In 427  Circ Sub NIC T-Pulled 20:58  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 23:03  
 (F) Second Final Flow 22  Mileage 34 R/T 52.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 761  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2096  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1627.70  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1627.70

Initial Open 5  
 Initial Shut-In 15  
 Final Flow 30  
 Final Shut-In 60

Approved By [Signature] Our Representative [Signature]

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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

February 28, 2013

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

Re: ACO1  
API 15-101-22407-00-00  
Sinclair 1-11  
SW/4 Sec.11-18S-30W  
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