Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1107845

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 # 3842
Name: Larson Engineering, Inc. dba Larson Operating Company
Address 1: 562 W STATE RD 4
Address 2:
City: OLMITZ State: KS Zip: 67564 + 8561
Contact Person: Thomas Larson
Phone: (620) 653-7368
CONTRACTOR: License # 33935
Name: H. D. Drilling, LLC
Wellsite Geologist: Robert Lewellyn
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 #:

9/17/2012	9/30/2012	1/4/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-101-22400-00-00
Spot Description:
NW NW SW NW Sec. 11 Twp. 19 S. R. 29 ☐ East ☑ West
1360 Feet from ☑ North / ☐ South Line of Section
122 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Lane
Lease Name: Riemann-Suppes Well #: 1-11
Field Name:
Producing Formation: Marmaton
Elevation: Ground: 2809 Kelly Bushing: 2816
Total Vertical Depth: 4658 Plug Back Total Depth: 4550
Amount of Surface Pipe Set and Cemented at: 260 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 2129 Feet
If Alternate II completion, cement circulated from: 2129
feet depth to: 0 w/ 195 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 8000 ppm Fluid volume: 1400 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 01/14/2013
☑ **Confidential Release Date:** 01/15/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 01/14/2013

1107845

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: Riemann-Suppes Well #: 1-11

Sec. 11 Twp. 19 S. R. 29 ☐ East ☑ West County: Lane

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

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

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Dual Induction
Dual Comp Porosity
Microresistivity

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name Attached Top Attached Datum Attached

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	20	260	Class A	175	2% gel, 3% CC
Production	7.875	5.5	15.5	4657	EA-2	125	7#/sk gilsonite , 1/4#/sk flocele

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	0-2129	SMD	195	1/4#/sk flocele
	-			

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 *(Amount and Kind of Material Used)*	Depth
4	4588.5-91.5	250 gal 15% RWR	4588.5-91.5
4	4431-34	250 gal 15% MCA	4431-34
	4550 CIBP		

TUBING RECORD: Size: 2.375 Set At: 4539 Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 1/4/2013

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	85	0	45	0	37

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)*

PRODUCTION INTERVAL: 4431 - 4434

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Riemann-Suppes 1-11
Doc ID	1107845

Tops

Name	Top	Datum
Anhydrite	2157	+659
Bse Anhydrite	2184	+632
Heebner Sh	3950	-1134
Lansing - KC	3992	-1176
Stark Sh	4272	-1456
Base KC	4350	-1534
Altamont	4431	-1615
Pawnee	4471	-1655
Fort Scott	4520	-1704
Cherokee	4545	-1729
Mississippian	4612	-1796

CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 37201
LOCATION Oakley, Ks
FOREMAN Walt Dinkel

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

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
9-17-12	4802	Riemann-Suppes 1-11	11	19S	29W	Lane

CUSTOMER: Larson Engineering
MAILING ADDRESS:
CITY: STATE: ZIP CODE:

Dighton
2S
2W
2½S
6.5.

TRUCK #	DRIVER	TRUCK #	DRIVER
399	Damon Miller		
528-T127	Wes Flinn		

JOB TYPE Surface HOLE SIZE 12¼ HOLE DEPTH 263' CASING SIZE & WEIGHT 8⅝ - 23#
CASING DEPTH 263' DRILL PIPE TUBING OTHER
SLURRY WEIGHT 15.2 SLURRY VOL WATER gal/sk CEMENT LEFT In CASING 15-20'
DISPLACEMENT 15½ DISPLACEMENT PSI MIX PSI RATE 5 BPM

REMARKS: Safety Meeting, rig up on HD #3, circ casing on bottom mixed 175 sks com, 3%cc - 2%Gel, Displace 15½ BBL H2O, Shut in. Cement Did Circ. Approx 5 BBL to Pit

Thank You
Walt + Crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401S	1	PUMP CHARGE	1,085.00	1,085.00
5406	35	MILEAGE	5.00	175.00
1104S	175 SKs	class A Cement	17.65	3,088.75
1102	495	Calcium Chloride	.89	440.55
1118B	330	Gel	.25	82.50
5407	8.23	Ton Mileage Delivery	1.65	410.00
				5,281.80
				-528.18
				4,753.62
			SALES TAX	204.79
			ESTIMATED TOTAL	4958.41

Ravin 3737

AUTHORIZTION Rubyne Turner TITLE Owner DATE 9-17-12

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

252972

SWIFT Services, Inc.

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

TICKET Nº 23418

PAGE 1 OF 2

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. NESS CITY, KS	1-11	RIEMAN SUPPES	LANE	KS.	DIGHTON, KS.	30 Sep 12	
2.	TICKET TYPE ☐ SERVICE ☐ SALES — CONTRACTOR: HD DRILLING RIG #3		RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.	WELL TYPE: OIL	WELL CATEGORY: DEVELOPMENT	JOB PURPOSE: 5½ LONGSTRING		WELL PERMIT NO.	WELL LOCATION: 25, 2W, 2½S, E into	
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575					MILEAGE #110	40	MIL			6.00	240.00
578					PUMP CHARGE	1	JOB			1500.00	1500.00
280					FLOCHECK 21	500	LB			2.50	1250.00
221					LIQUID KCL	2	GAL			25.00	50.00
419					ROTATING HEAD RENTAL	1	JOB			200.00	200.00
										PAGE TOTAL 1	3240.00
										2	5183.35
										subtotal	8423.35
										Lane TAX 6.3%	379.65
										TOTAL	8803.00

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 [signature]

DATE SIGNED: 30 Sep 12 | TIME SIGNED: 1300 ☐ 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
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ 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

Thank You!

SWIFT Services, Inc.

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

TICKET CONTINUATION

TICKET No. 23418

CUSTOMER: LARSON ENGINEERING | WELL: RIEMAN Suppes 1-11 | DATE: 30SEP12 | PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCOUNTING ACCT	ACCOUNTING DF	TIME	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
276						FLOCELE	40	lbs.			2.00	80.00
283						SALT	800	lbs			.20	160.00
284						CALSEAL	7	SX			35.00	245.00
277						GILSONITE	1100	lbs.			.75	825.00
292						HALAD 322	145	lbs.			7.75	1123.75
325						STANDARD CEMENT EA2	155	SX			13.50	2092.50
581						SERVICE CHARGE	CUBIC FEET 155 SX				2.00	310.00
583						MILEAGE CHARGE TOTAL WEIGHT 17355 LOADED MILES 40	TON MILES 347.10				1.00	347.10
											CONTINUATION TOTAL	5183.35

JOB LOG

SWIFT Services, Inc.

DATE 30 Sep 12 | PAGE NO.

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
LARSON ENGINEERING		RIEMAN SUPPES 1-11	5 1/2 LONGSTRING	23418

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	0930							ON LOCATION
								RTDC 4655 LTDC 4658
								SHOE JT 42.15 PC @ 2129
								SET @ 4657
	1150							DROP BALL CIRCULATE
	1143	6	15		↘		300	Pump 15 Bbl KCL
		6	12		↘		300	Pump 500 gal MUD FLUSH
		6	5		↘		300	Pump 5 Bbl KCL
	1150		7					PLUG RH (30sx)
	1154	4	30		↘			MIX 125sx EA2
	1207							WASH OUT PUMP & LINES
	1209	6			↘			START DISPLACING PLUG
	1227	Ø	110		↘		1,500	PLUG DOWN PSI up LATCH PLUG IN
	1229							RELEASE PSI - DRY
	1231							WASH TRUCK
	1300							JOB COMPLETE
								THANKS # 110
								JASON JEFF JEREMY

SWIFT Services, Inc.

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

TICKET Nº 23424

PAGE 1 OF

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. NESS CITY, KS.	1-11	RIEMAN-SUPPES	LANE	KS.	DIGHTON, KS.	8 OCT 12	
2.	TICKET TYPE ☐ SERVICE ☐ SALES — CONTRACTOR: WILD WEST WELL SERV.	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO		ORDER NO.	
3.	WELL TYPE: OIL	WELL CATEGORY: DEVELOPMENT	JOB PURPOSE: CEMENT PORT COLLAR	WELL PERMIT NO.		WELL LOCATION: 25, 2W, 1 1/4S, E INTO	
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575					MILEAGE # 115	35	mi			6.00	210.00
576D					Pump CHARGE	1	JOB			1250.00	1250.00
276					FLOCELE	50	lbs			2.00	100.00
290					D-AIR	2	gal			35.00	70.00
330					SWIFT MULTI DENSITY	195	SX			16.50	3217.50
581					SERVICE CHARGE CEMENT	235	SX			2.00	470.00
583					DRAYAGE	23320	lbs.	408.10	TM	1.00	408.10

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 8 OCT 12 | TIME SIGNED 1600 ☒ 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
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL	5725.60
Lane TAX 6.3%	213.41
TOTAL	5939.01

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

SWIFT OPERATOR | APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 8 OCT 12 | PAGE NO.

CUSTOMER: LARSON ENGINEERING | WELL NO.: 1-11 | LEASE: RIEMAN-SUPPES | JOB TYPE: CEMENT PORT COLLAR | TICKET NO.: 23424

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	0900							ON LOCATION
								PORT COLLAR @ 2129
	0927				↘		1000	TEST - HELD
	0934	3			↘		600	OPEN PORT COLLAR - TAKE INJ. RATE.
	0944	4½	108	↘	↘	500		MIX 195 SX SMD
		3	72	↘		300		DISPLACE CEMENT
								CIRCULATE 20 SX TO PIT
	1008			↘		1000		CLOSE PORT COLLAR - TEST - HELD
								RUN 5 JTS.
	1020	4	20		↘		400	REVERSE CEMENT OUT OF TUBING.
	1023							WASH TRUCK
	1100							JOB COMPLETE
								THANKS B 115
								JASON JEFF DOUG

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

Riemann-Suppes #1-11

11-19s-29w Lane,KS

Start Date: 2012.09.24 @ 11:32:41
End Date: 2012.09.24 @ 17:04:35
Job Ticket #: 50076 DST #: 1

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

Printed: 2012.10.02 @ 08:59:24

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lew ellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50076 **DST#: 1**

Test Start: 2012.09.24 @ 11:32:41

GENERAL INFORMATION:

Formation: **Lansing H**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:30:36
Time Test Ended: 17:04:35

Test Type: Conventional Bottom Hole (Initial)
Tester: Brandon Turley
Unit No: 60

Interval: 4164.00 ft (KB) To 4194.00 ft (KB) (TVD)
Total Depth: 4194.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

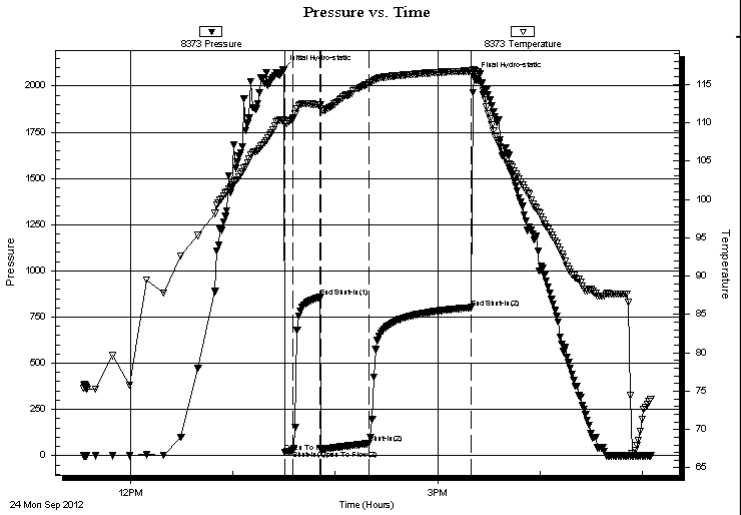
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 65.05 psig @ 4165.00 ft (KB)
Start Date: 2012.09.24 End Date: 2012.09.24
Start Time: 11:32:41 End Time: 17:04:35

Capacity: 8000.00 psig
Last Calib.: 2012.09.24
Time On Btm: 2012.09.24 @ 13:29:06
Time Off Btm: 2012.09.24 @ 15:21:06

TEST COMMENT: IF: Surface blow built to 1".
IS: No return.
FF: Surface blow built to 5".
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2090.01	110.33	Initial Hydro-static
2	17.81	109.83	Open To Flow (1)
6	27.40	110.53	Shut-In(1)
22	856.29	112.31	End Shut-In(1)
23	30.81	111.84	Open To Flow (2)
51	65.05	115.12	Shut-In(2)
111	801.23	116.73	End Shut-In(2)
112	2050.56	116.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	ocm 50%o 50%m	0.59

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lew ellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50076 **DST#: 1**

Test Start: 2012.09.24 @ 11:32:41

GENERAL INFORMATION:

Formation: **Lansing H**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:30:36
Time Test Ended: 17:04:35

Test Type: Conventional Bottom Hole (Initial)
Tester: Brandon Turley
Unit No: 60

Interval: 4164.00 ft (KB) To 4194.00 ft (KB) (TVD)
Total Depth: 4194.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

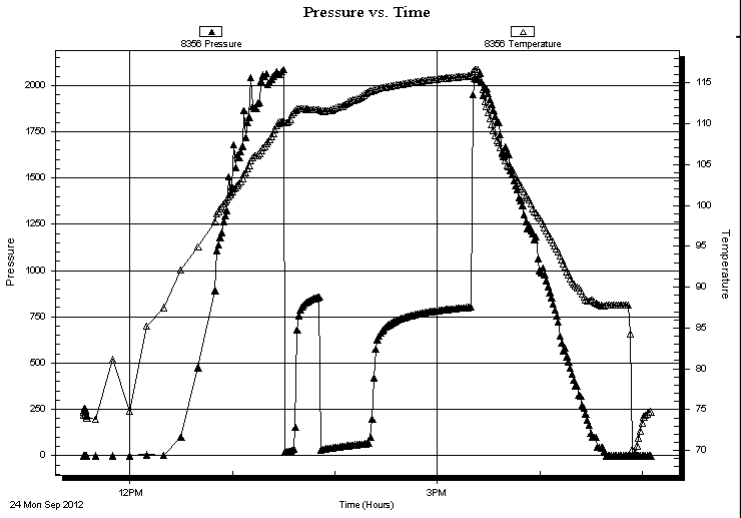
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8356 **Outside**

Press@RunDepth: psig @ 4165.00 ft (KB)
Start Date: 2012.09.24 End Date: 2012.09.24
Start Time: 11:32:50 End Time: 17:04:44

Capacity: 8000.00 psig
Last Calib.: 2012.09.24
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Surface blow built to 1".
IS: No return.
FF: Surface blow built to 5".
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	ocm 50%o 50%m	0.59

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50076 **DST#: 1**

Test Start: 2012.09.24 @ 11:32:41

Tool Information

Drill Pipe:	Length:	4012.00 ft	Diameter:	3.80	inches	Volume:	56.28	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	148.00 ft	Diameter:	2.25	inches	Volume:	0.73	bbl	
						Total Volume:	57.01	bbl	

Drill Pipe Above KB:	24.00 ft
Depth to Top Packer:	4164.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	30.00 ft
Tool Length:	58.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		22000.00 lb
Weight to Pull Loose:		85000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	62000.00 lb
	Final	62000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Stubb	1.00			4137.00		
Shut In Tool	5.00			4142.00		
Hydraulic tool	5.00			4147.00		
Jars	5.00			4152.00		
Safety Joint	3.00			4155.00		
Packer	5.00			4160.00	28.00	Bottom Of Top Packer
Packer	4.00			4164.00		
Stubb	1.00			4165.00		
Recorder	0.00	8373	Inside	4165.00		
Recorder	0.00	8356	Outside	4165.00		
Perforations	24.00			4189.00		
Bullnose	5.00			4194.00	30.00	Bottom Packers & Anchor
Total Tool Length:	**58.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50076 **DST#: 1**

Test Start: 2012.09.24 @ 11:32:41

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	58.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.14 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	1.00 inches				

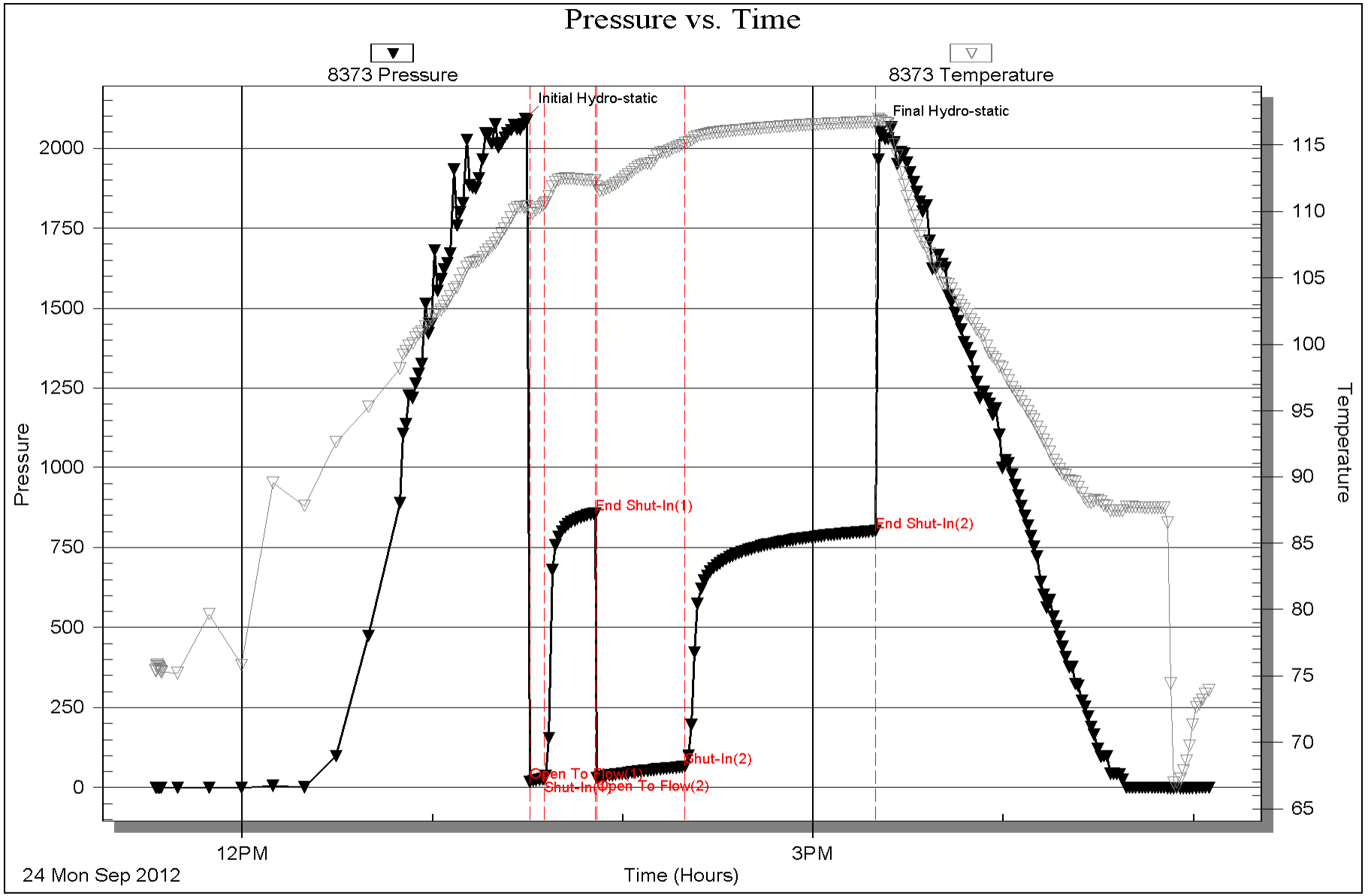
Recovery Information

Recovery Table

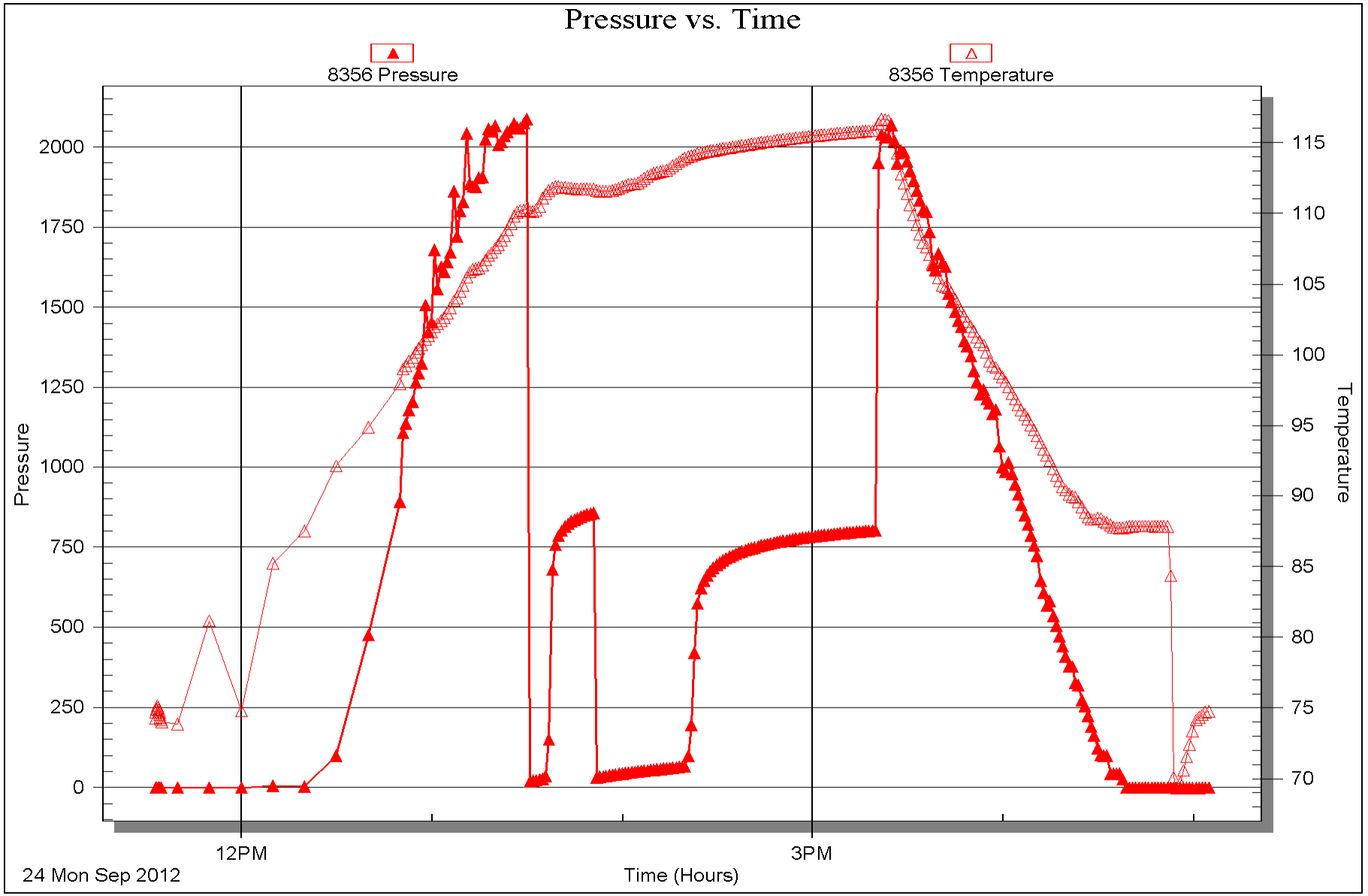
Length ft	Description	Volume bbl
120.00	ocm 50%o 50%m	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

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


Pressure vs. Time
8373 Pressure
8373 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Pressure
Temperature
2000
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
65
12PM
3PM
24 Mon Sep 2012
Time (Hours)

Serial #: 8356 **Outside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50076 Printed: 2012.10.02 @ 08:59:29

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

Riemann-Suppes #1-11

11-19s-29w Lane,KS

Start Date: 2012.09.25 @ 02:12:19
End Date: 2012.09.25 @ 08:49:49
Job Ticket #: 50016 DST #: 2

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

Printed: 2012.10.02 @ 08:58:39

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50016 **DST#: 2**

Test Start: 2012.09.25 @ 02:12:19

GENERAL INFORMATION:

Formation: **Lansing "I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:36:49
Time Test Ended: 08:49:49

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4211.00 ft (KB) To 4239.00 ft (KB) (TVD)
Total Depth: 4239.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

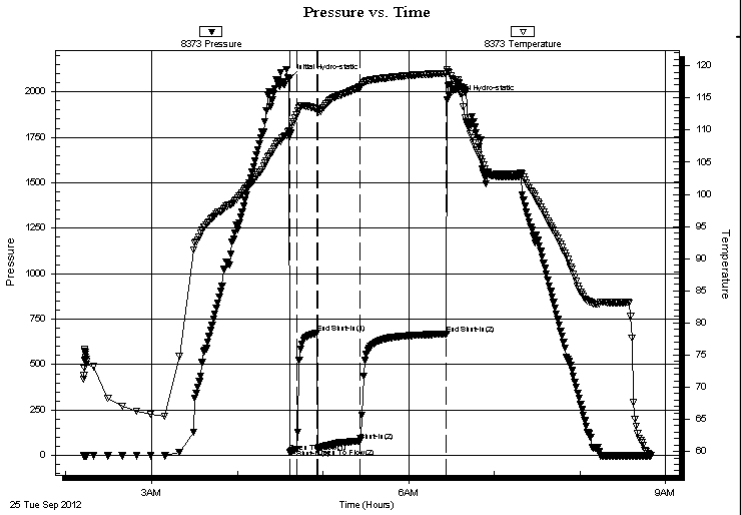
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 78.85 psig @ 4212.00 ft (KB)
Start Date: 2012.09.25 End Date: 2012.09.25
Start Time: 02:12:24 End Time: 08:49:48

Capacity: 8000.00 psig
Last Calib.: 2012.09.25
Time On Btm: 2012.09.25 @ 04:36:19
Time Off Btm: 2012.09.25 @ 06:26:49

TEST COMMENT: IF-Weak surface blow built to 1in.
ISI-Dead no return blow
FF-Fair surface blow built to 7in.
FSI-Dead no return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2072.89	109.90	Initial Hydro-static
1	19.33	109.40	Open To Flow (1)
5	34.82	112.35	Shut-In(1)
20	673.19	113.33	End Shut-In(1)
20	41.00	112.90	Open To Flow (2)
50	78.85	116.72	Shut-In(2)
110	668.85	118.81	End Shut-In(2)
111	1954.57	119.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gmco 20%G 20%M 60%O	0.61
50.00	muddy oil 50%M 50%O	0.48

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50016 **DST#: 2**

Test Start: 2012.09.25 @ 02:12:19

GENERAL INFORMATION:

Formation: **Lansing "I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:36:49
Time Test Ended: 08:49:49

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4211.00 ft (KB) To 4239.00 ft (KB) (TVD)
Total Depth: 4239.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

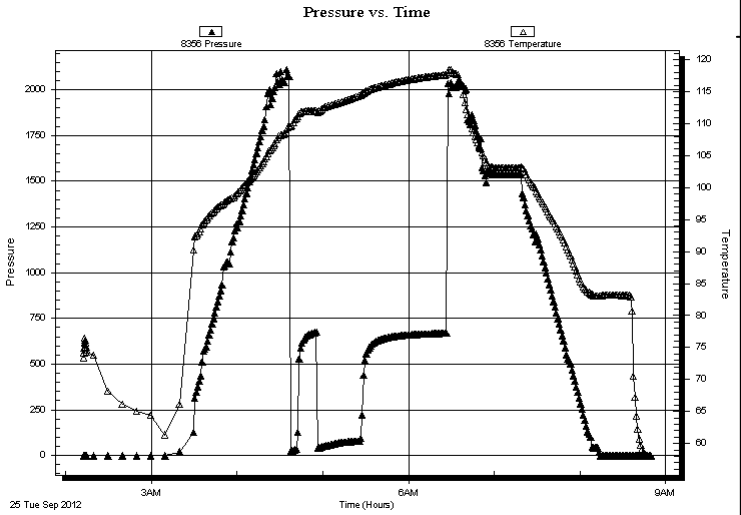
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8356 **Outside**

Press@RunDepth: psig @ 4212.00 ft (KB)
Start Date: 2012.09.25 End Date: 2012.09.25
Start Time: 02:12:29 End Time: 08:49:53

Capacity: 8000.00 psig
Last Calib.: 2012.09.25
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Weak surface blow built to 1in.
ISI-Dead no return blow
FF-Fair surface blow built to 7in.
FSI-Dead no return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gmco 20%G 20%M 60%O	0.61
50.00	muddy oil 50%M 50%O	0.48

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50016 **DST#: 2**

Test Start: 2012.09.25 @ 02:12:19

Tool Information

Drill Pipe:	Length:	4042.00 ft	Diameter:	3.80	inches	Volume:	56.70	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	148.00 ft	Diameter:	2.25	inches	Volume:	0.73	bbl	
						Total Volume:	57.43	bbl	

Drill Pipe Above KB:	7.00 ft
Depth to Top Packer:	4211.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	28.00 ft
Tool Length:	56.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2000.00 lb
Weight set on Packer:	20000.00 lb
Weight to Pull Loose:	74000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	64000.00 lb
Final	64000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Stubb	1.00			4184.00		
Shut In Tool	5.00			4189.00		
Hydraulic tool	5.00			4194.00		
Jars	5.00			4199.00		
Safety Joint	3.00			4202.00		
Packer	5.00			4207.00	28.00	Bottom Of Top Packer
Packer	4.00			4211.00		
Stubb	1.00			4212.00		
Recorder	0.00	8373	Inside	4212.00		
Recorder	0.00	8356	Outside	4212.00		
Perforations	22.00			4234.00		
Bullnose	5.00			4239.00	28.00	Bottom Packers & Anchor
Total Tool Length:	**56.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50016 **DST#: 2**

Test Start: 2012.09.25 @ 02:12:19

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:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.14 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2400.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

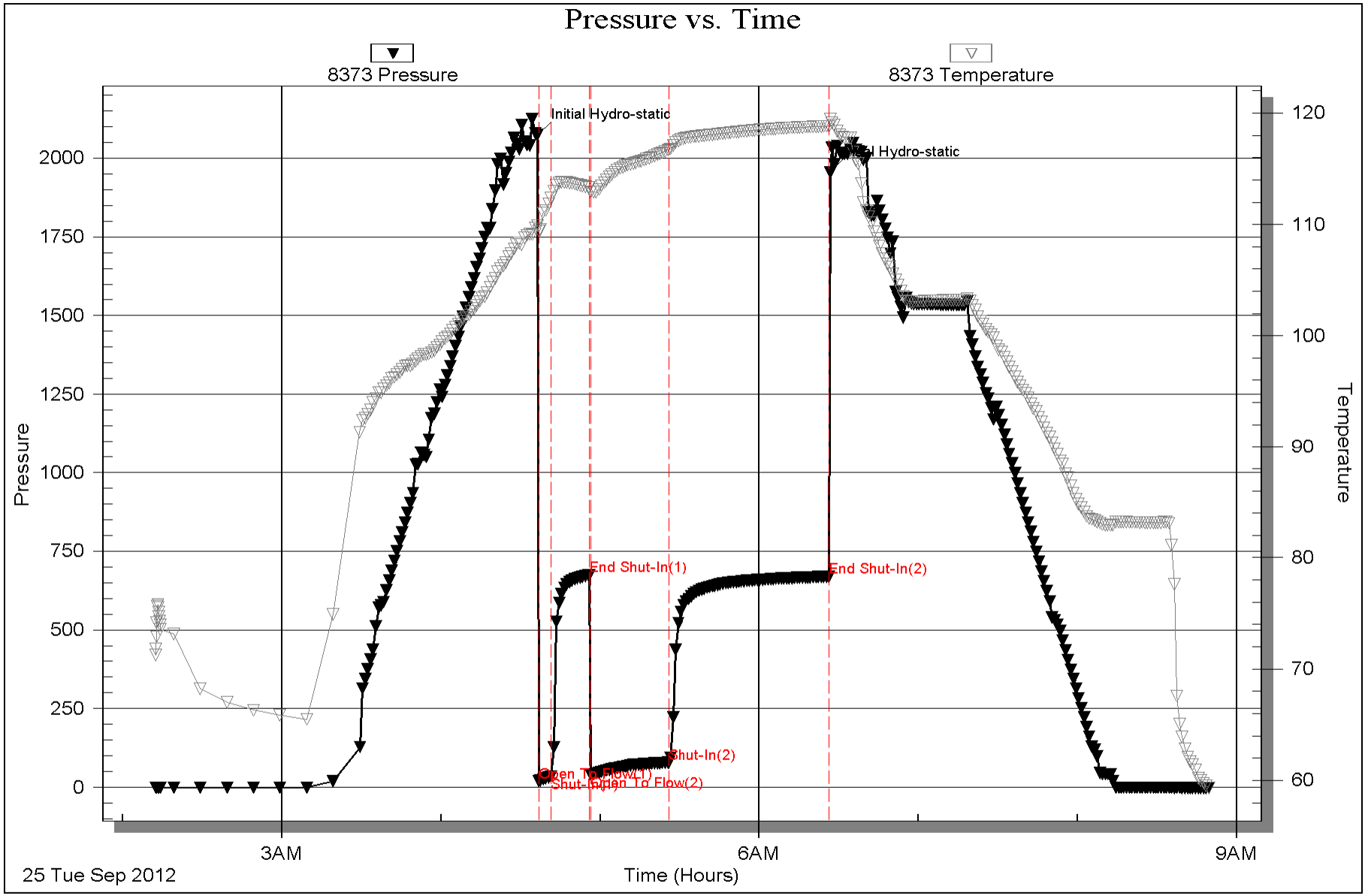
Recovery Table

Length ft	Description	Volume bbl
124.00	gmco 20%G 20%M 60%O	0.610
50.00	muddy oil 50%M 50%O	0.483

Total Length: 174.00 ft Total Volume: 1.093 bbl

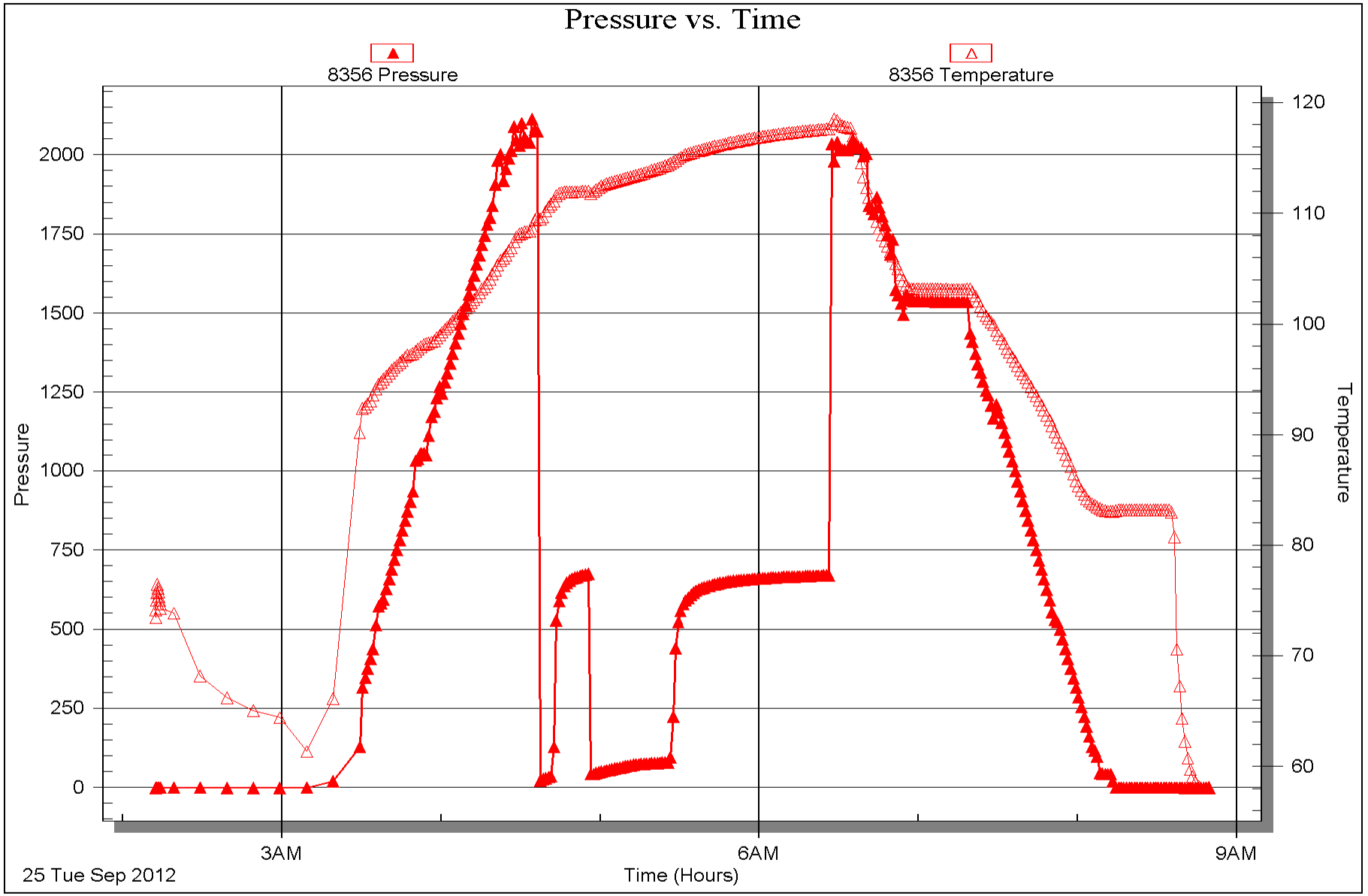
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8373 **Inside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50016 Printed: 2012.10.02 @ 08:58:43

Serial #: 8356 **Outside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50016 Printed: 2012.10.02 @ 08:58:43

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

Riemann-Suppes #1-11

11-19s-29w Lane,KS

Start Date: 2012.09.25 @ 16:38:52
End Date: 2012.09.25 @ 22:02:52
Job Ticket #: 50017 DST #: 3

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

Printed: 2012.10.02 @ 08:57:54

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lew ellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50017 **DST#: 3**

Test Start: 2012.09.25 @ 16:38:52

GENERAL INFORMATION:

Formation: **Lansing "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:35:22
Time Test Ended: 22:02:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4250.00 ft (KB) To 4261.00 ft (KB) (TVD)
Total Depth: 4261.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

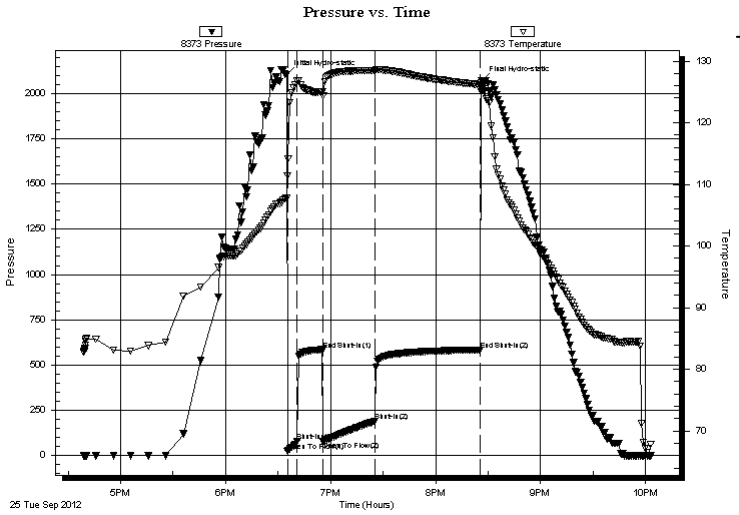
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 189.49 psig @ 4251.00 ft (KB)
Start Date: 2012.09.25 End Date: 2012.09.25
Start Time: 16:38:57 End Time: 22:02:51

Capacity: 8000.00 psig
Last Calib.: 2012.09.25
Time On Btm: 2012.09.25 @ 18:34:52
Time Off Btm: 2012.09.25 @ 20:26:22

TEST COMMENT: IF-Fair blow built to 4 1/2"
ISI-Dead no return blow.
FF-B.O.B. in 15 mins.
FSI-Dead no retrun blow.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2104.12	107.73	Initial Hydro-static
1	23.99	111.43	Open To Flow (1)
6	77.54	126.83	Shut-In(1)
21	584.84	124.99	End Shut-In(1)
21	76.07	124.45	Open To Flow (2)
51	189.49	128.49	Shut-In(2)
111	584.20	126.17	End Shut-In(2)
112	2071.03	126.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
335.00	vsmcw 5%M 95%w	3.35

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lew ellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50017 **DST#: 3**

Test Start: 2012.09.25 @ 16:38:52

GENERAL INFORMATION:

Formation: **Lansing "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:35:22
Time Test Ended: 22:02:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4250.00 ft (KB) To 4261.00 ft (KB) (TVD)
Total Depth: 4261.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

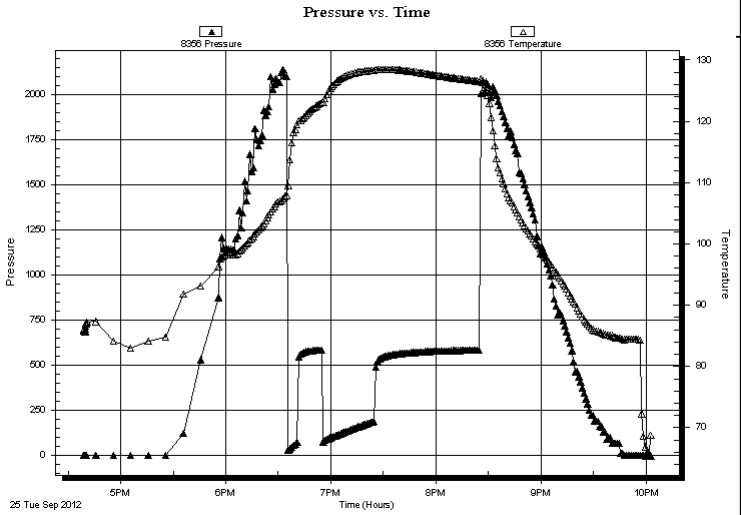
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8356 **Outside**

Press@RunDepth: psig @ 4251.00 ft (KB)
Start Date: 2012.09.25 End Date: 2012.09.25
Start Time: 16:38:47 End Time: 22:02:41

Capacity: 8000.00 psig
Last Calib.: 2012.09.25
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Fair blow built to 4 1/2"
ISI-Dead no return blow.
FF-B.O.B. in 15 mins.
FSI-Dead no retrun blow.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
335.00	vsmcw 5%M 95%w	3.35

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50017 **DST#: 3**

Test Start: 2012.09.25 @ 16:38:52

Tool Information

Drill Pipe:	Length:	4078.00 ft	Diameter:	3.80	inches	Volume:	57.20	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	148.00 ft	Diameter:	2.25	inches	Volume:	0.73	bbl	
						Total Volume:	57.93	bbl	

Drill Pipe Above KB:	4.00 ft
Depth to Top Packer:	4250.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	11.00 ft
Tool Length:	39.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		76000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	64000.00 lb
	Final	65000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Stubb	1.00			4223.00		
Shut In Tool	5.00			4228.00		
Hydraulic tool	5.00			4233.00		
Jars	5.00			4238.00		
Safety Joint	3.00			4241.00		
Packer	5.00			4246.00	28.00	Bottom Of Top Packer
Packer	4.00			4250.00		
Stubb	1.00			4251.00		
Recorder	0.00	8373	Inside	4251.00		
Recorder	0.00	8356	Outside	4251.00		
Perforations	5.00			4256.00		
Bullnose	5.00			4261.00	11.00	Bottom Packers & Anchor
Total Tool Length:	**39.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50017 **DST#: 3**

Test Start: 2012.09.25 @ 16:38:52

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:	31000 ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.55 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
335.00	vsmcw 5%M 95%w	3.351

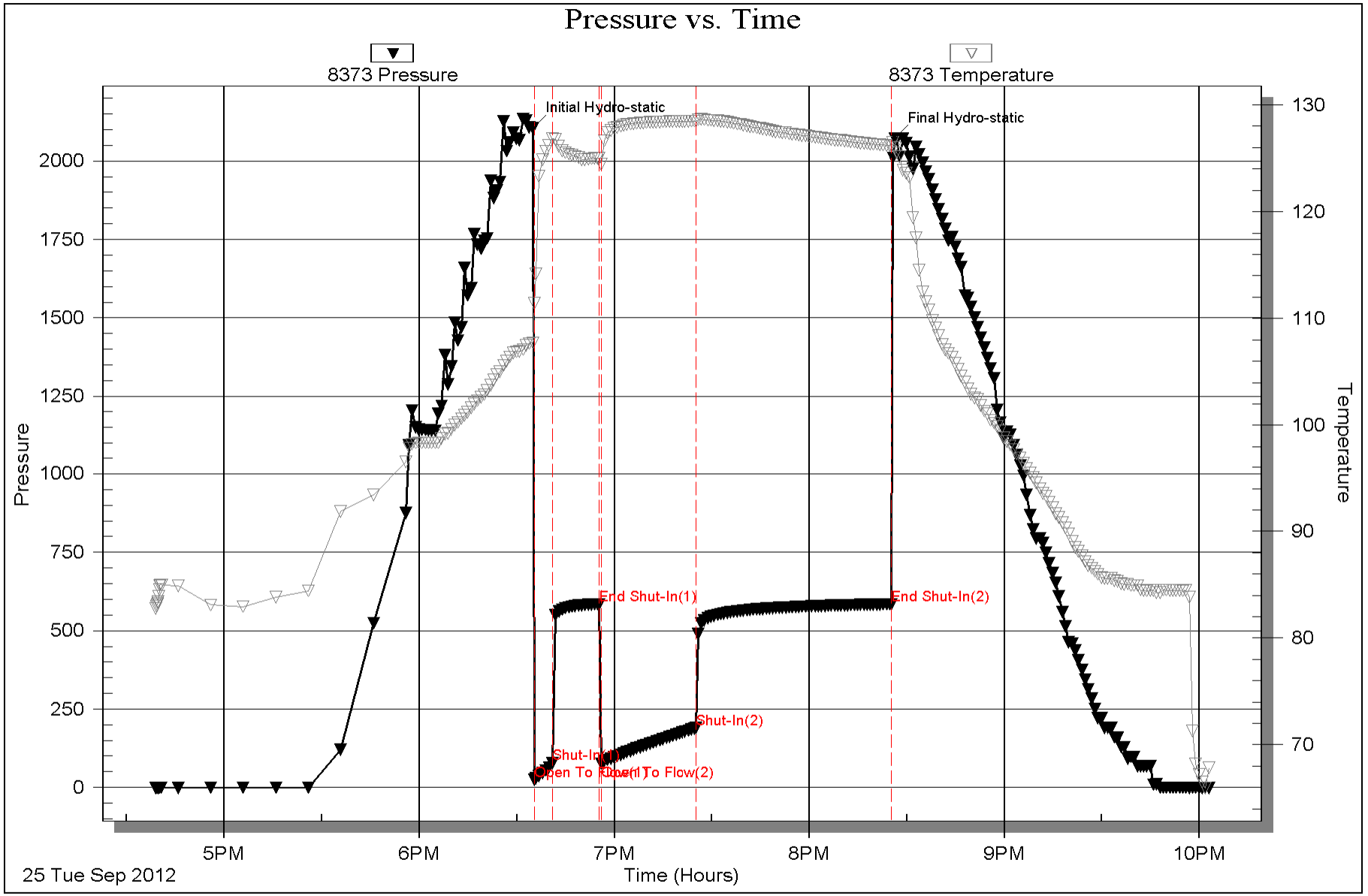
Total Length: 335.00 ft Total Volume: 3.351 bbl

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

Laboratory Name: Laboratory Location:

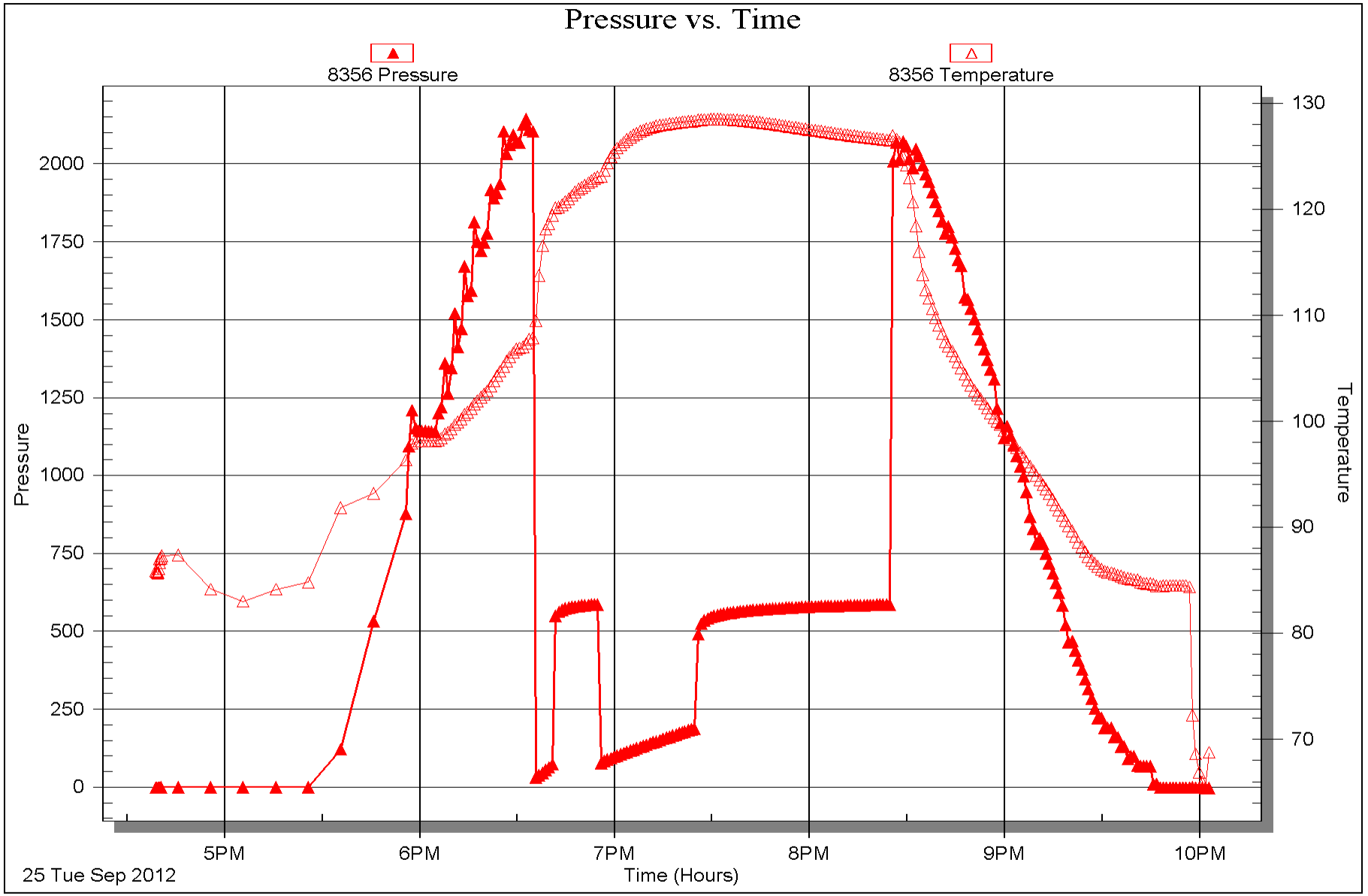
Recovery Comments: .228/70

Serial #: 8373 **Inside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 50017 Printed: 2012.10.02 @ 08:57:58

Serial #: 8356 **Outside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 3



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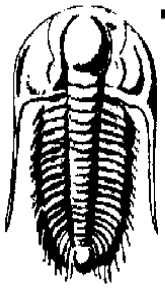


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

Riemann-Suppes #1-11

11-19s-29w Lane,KS

Start Date: 2012.09.26 @ 04:28:33
End Date: 2012.09.26 @ 09:23:33
Job Ticket #: 50018 DST #: 4

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

Printed: 2012.10.02 @ 08:57:09

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lew ellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50018 **DST#: 4**

Test Start: 2012.09.26 @ 04:28:33

GENERAL INFORMATION:

Formation: **Lansing "J 2 Zone"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:26:33
Time Test Ended: 09:23:33

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4262.00 ft (KB) To 4270.00 ft (KB) (TVD)
Total Depth: 4270.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

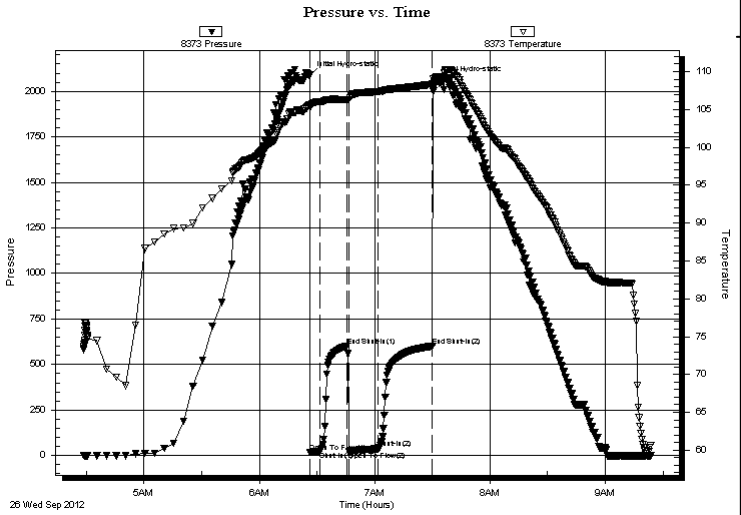
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 38.27 psig @ 4263.00 ft (KB)
Start Date: 2012.09.26 End Date: 2012.09.26
Start Time: 04:28:38 End Time: 09:23:32

Capacity: 8000.00 psig
Last Calib.: 2012.09.26
Time On Btm: 2012.09.26 @ 06:26:03
Time Off Btm: 2012.09.26 @ 07:31:03

TEST COMMENT: IF-Weak surface blow died in 4 mins.
ISI-Dead no return blow
FF-Weak surface blow died in 12 mins
FSI-Dead no return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.10	105.58	Initial Hydro-static
1	17.95	105.30	Open To Flow (1)
6	21.62	106.03	Shut-In(1)
20	602.39	106.31	End Shut-In(1)
21	24.66	106.27	Open To Flow (2)
36	38.27	107.33	Shut-In(2)
64	601.36	108.33	End Shut-In(2)
65	2059.96	108.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	vsgocm 2%G 48%O 50%M	0.30
5.00	100%O	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50018 **DST#: 4**

Test Start: 2012.09.26 @ 04:28:33

GENERAL INFORMATION:

Formation: **Lansing "J 2 Zone"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:26:33
Time Test Ended: 09:23:33

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4262.00 ft (KB) To 4270.00 ft (KB) (TVD)
Total Depth: 4270.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

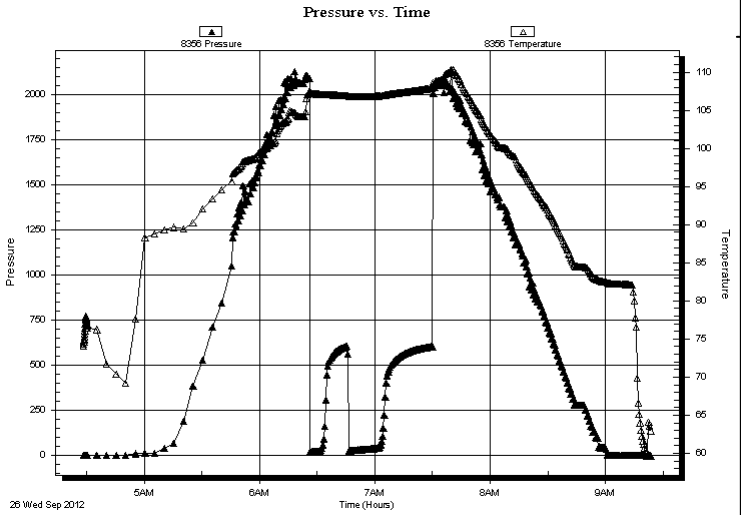
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8356 **Outside**

Press@RunDepth: psig @ 4263.00 ft (KB)
Start Date: 2012.09.26 End Date: 2012.09.26
Start Time: 04:28:32 End Time: 09:23:26

Capacity: 8000.00 psig
Last Calib.: 2012.09.26
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Weak surface blow died in 4 mins.
ISI-Dead no return blow
FF-Weak surface blow died in 12 mins
FSI-Dead no return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	vsgocm 2%G 48%O 50%M	0.30
5.00	100%O	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50018 **DST#: 4**

Test Start: 2012.09.26 @ 04:28:33

Tool Information

Drill Pipe:	Length:	4107.00 ft	Diameter:	3.80	inches	Volume:	57.61	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	148.00 ft	Diameter:	2.25	inches	Volume:	0.73	bbl	
						Total Volume:	58.34	bbl	

Drill Pipe Above KB:	21.00 ft
Depth to Top Packer:	4262.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	8.00 ft
Tool Length:	36.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		78000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	64000.00 lb
	Final	64000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Stubb	1.00			4235.00		
Shut In Tool	5.00			4240.00		
Hydraulic tool	5.00			4245.00		
Jars	5.00			4250.00		
Safety Joint	3.00			4253.00		
Packer	5.00			4258.00	28.00	Bottom Of Top Packer
Packer	4.00			4262.00		
Stubb	1.00			4263.00		
Recorder	0.00	8373	Inside	4263.00		
Recorder	0.00	8356	Outside	4263.00		
Perforations	2.00			4265.00		
Bullnose	5.00			4270.00	8.00	Bottom Packers & Anchor
Total Tool Length:	**36.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50018 **DST#: 4**

Test Start: 2012.09.26 @ 04:28:33

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:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.57 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	vsgocm 2%G 48%O 50%M	0.305
5.00	100%O	0.025

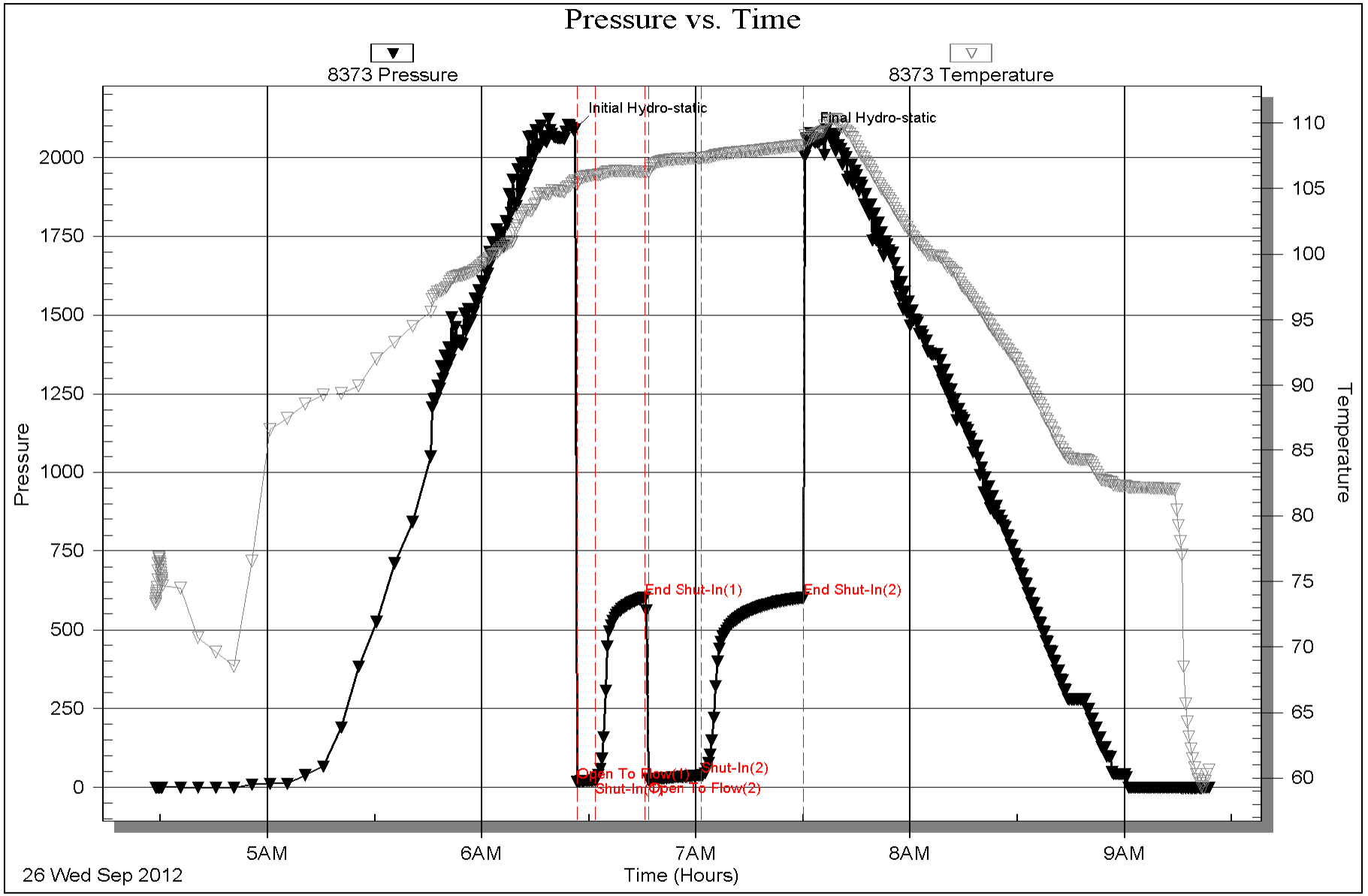
Total Length: 67.00 ft Total Volume: 0.330 bbl

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

Laboratory Name: Laboratory Location:

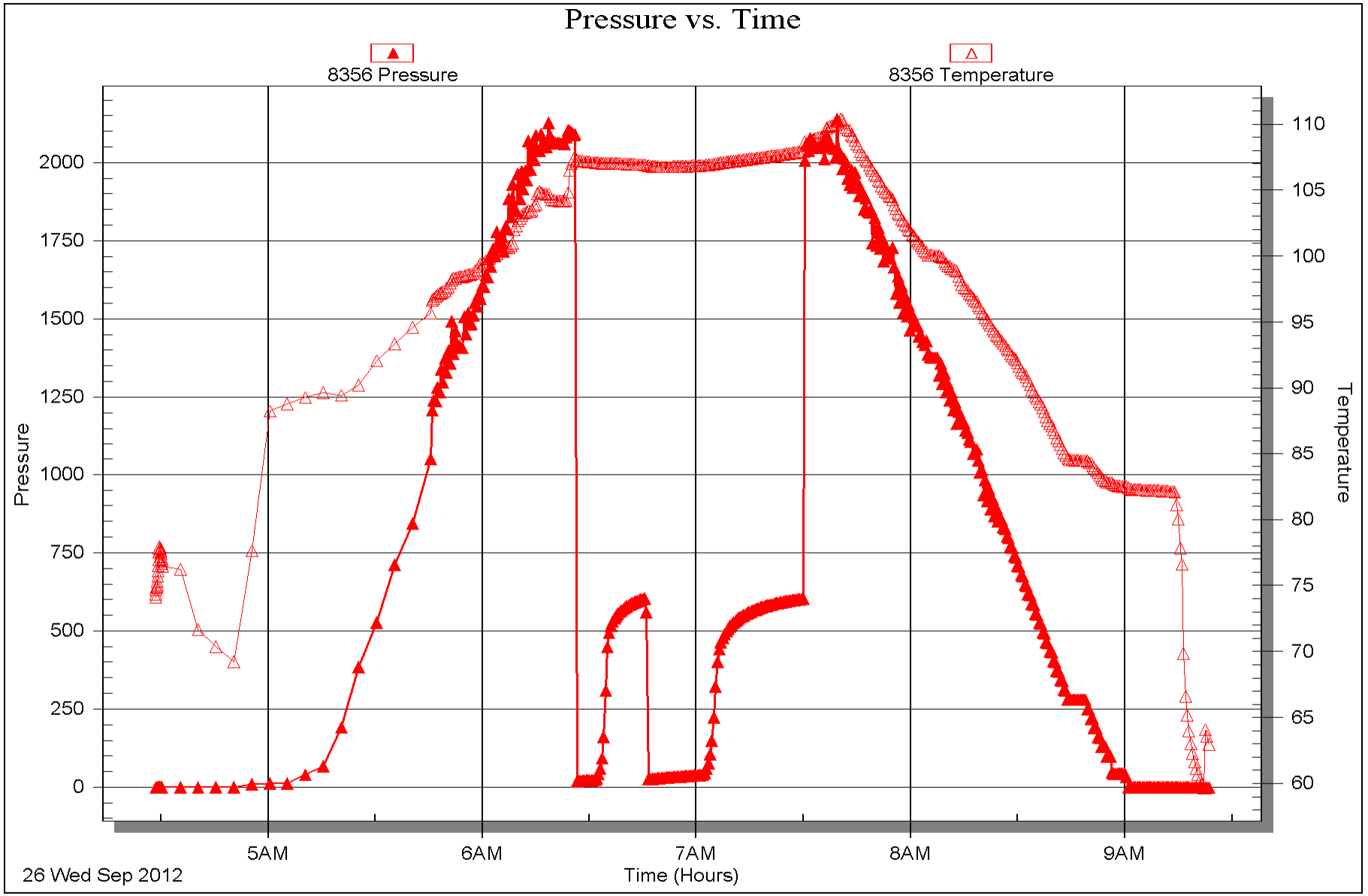
Recovery Comments:

Serial #: 8373 **Inside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 50018 Printed: 2012.10.02 @ 08:57:13

Serial #: 8356 **Outside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 50018 Printed: 2012.10.02 @ 08:57:14

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

Riemann-Suppes #1-11

11-19s-29w Lane,KS

Start Date: 2012.09.26 @ 16:27:41
End Date: 2012.09.26 @ 22:43:41
Job Ticket #: 50019 DST #: 5

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

Printed: 2012.10.02 @ 08:56:12

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50019 **DST#: 5**

Test Start: 2012.09.26 @ 16:27:41

GENERAL INFORMATION:

Formation: **Lansing "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:23:11
Time Test Ended: 22:43:41

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4268.00 ft (KB) To 4282.00 ft (KB) (TVD)
Total Depth: 4282.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

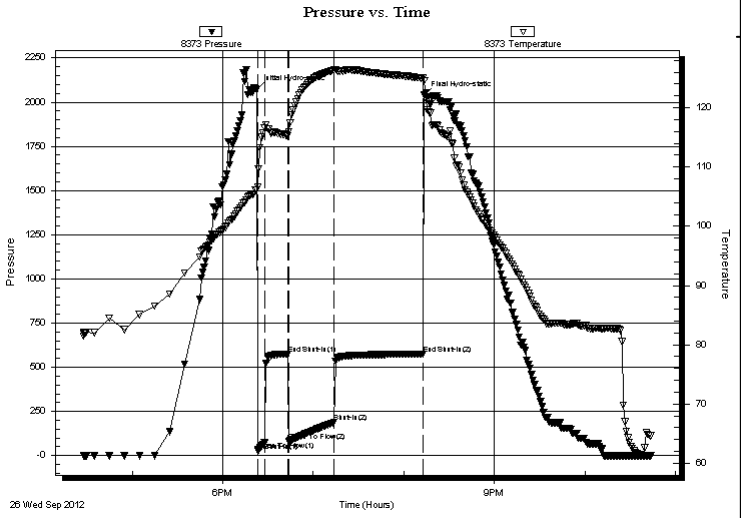
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 187.20 psig @ 4269.00 ft (KB)
Start Date: 2012.09.26 End Date: 2012.09.26
Start Time: 16:27:46 End Time: 22:43:40

Capacity: 8000.00 psig
Last Calib.: 2012.09.26
Time On Btm: 2012.09.26 @ 18:22:41
Time Off Btm: 2012.09.26 @ 20:13:41

TEST COMMENT: IF-Fair blow built to 5 1/2"
ISI-Dead No return blow
FF-B.O.B. in 11 mins.
FSI-Weak Surface blow back built to 2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2070.37	106.19	Initial Hydro-static
1	28.02	106.57	Open To Flow (1)
5	73.02	116.61	Shut-In(1)
21	575.13	115.29	End Shut-In(1)
21	82.66	115.98	Open To Flow (2)
51	187.20	126.36	Shut-In(2)
110	574.52	124.99	End Shut-In(2)
111	2039.36	124.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	GOCMW 5%G 5%O 5%M 85%W	1.26
124.00	VSGOCM 5%G 5%O 35%W 55%W	1.74
112.00	GO 20%G 80%O	1.57
0.00	496 GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lew ellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50019 **DST#: 5**

Test Start: 2012.09.26 @ 16:27:41

GENERAL INFORMATION:

Formation: **Lansing "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:23:11
Time Test Ended: 22:43:41

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4268.00 ft (KB) To 4282.00 ft (KB) (TVD)
Total Depth: 4282.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

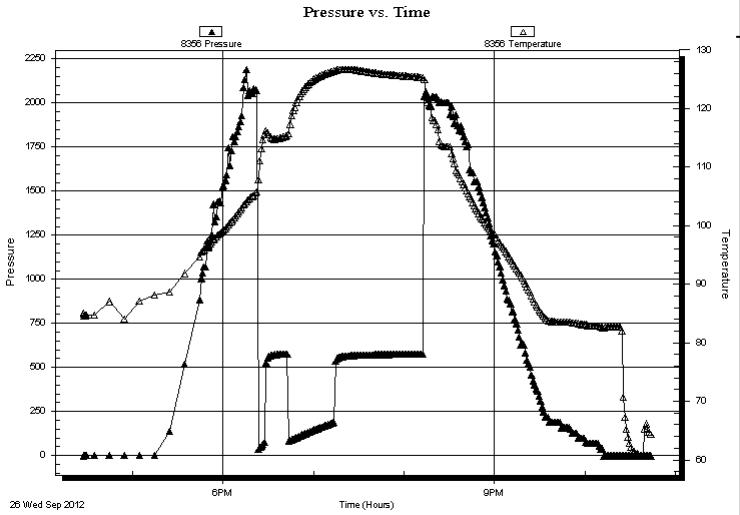
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8356 **Outside**

Press@RunDepth: psig @ 4269.00 ft (KB)
Start Date: 2012.09.26 End Date: 2012.09.26
Start Time: 16:27:34 End Time: 22:43:28

Capacity: 8000.00 psig
Last Calib.: 2012.09.26
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Fair blow built to 5 1/2"
ISI-Dead No return blow
FF-B.O.B. in 11 mins.
FSI-Weak Surface blow back built to 2"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
186.00	GOCMW 5%G 5%O 5%M 85%W	1.26
124.00	VSGOCM 5%G 5%O 35%W 55%W	1.74
112.00	GO 20%G 80%O	1.57
0.00	496 GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50019 **DST#: 5**

Test Start: 2012.09.26 @ 16:27:41

Tool Information

Drill Pipe:	Length:	4108.00 ft	Diameter:	3.80	inches	Volume:	57.62	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	148.00 ft	Diameter:	2.25	inches	Volume:	0.73	bbl	
						Total Volume:	58.35	bbl	

Drill Pipe Above KB:	16.00 ft
Depth to Top Packer:	4268.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	14.00 ft
Tool Length:	42.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		74000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	62000.00 lb
	Final	64000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Stubb	1.00			4241.00		
Shut In Tool	5.00			4246.00		
Hydraulic tool	5.00			4251.00		
Jars	5.00			4256.00		
Safety Joint	3.00			4259.00		
Packer	5.00			4264.00	28.00	Bottom Of Top Packer
Packer	4.00			4268.00		
Stubb	1.00			4269.00		
Recorder	0.00	8373	Inside	4269.00		
Recorder	0.00	8356	Outside	4269.00		
Perforations	8.00			4277.00		
Bullnose	5.00			4282.00	14.00	Bottom Packers & Anchor
Total Tool Length:	**42.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50019 **DST#: 5**

Test Start: 2012.09.26 @ 16:27:41

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	58.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.35 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2800.00 ppm				
Filter Cake:	2.00 inches				

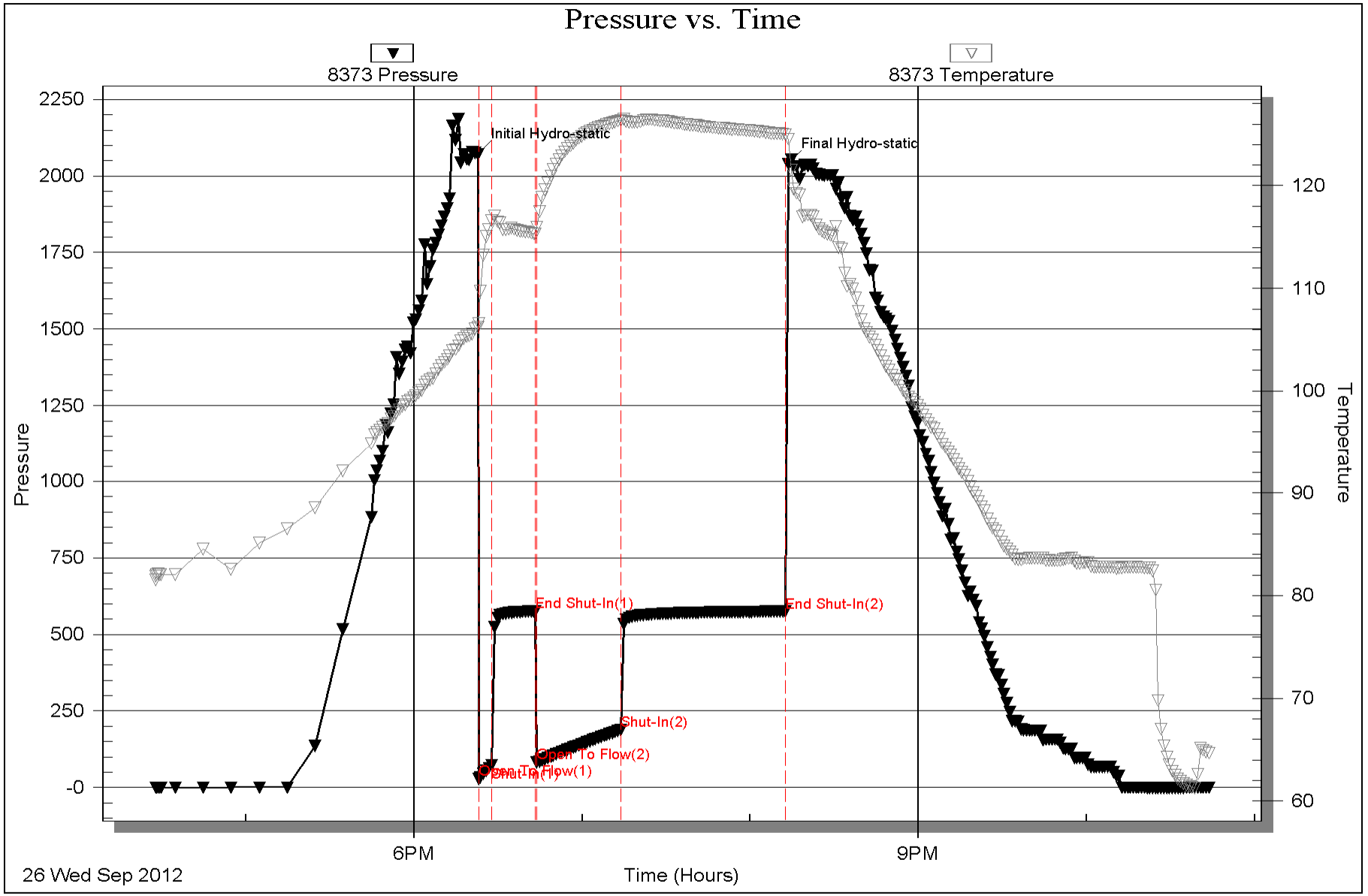
Recovery Information

Recovery Table

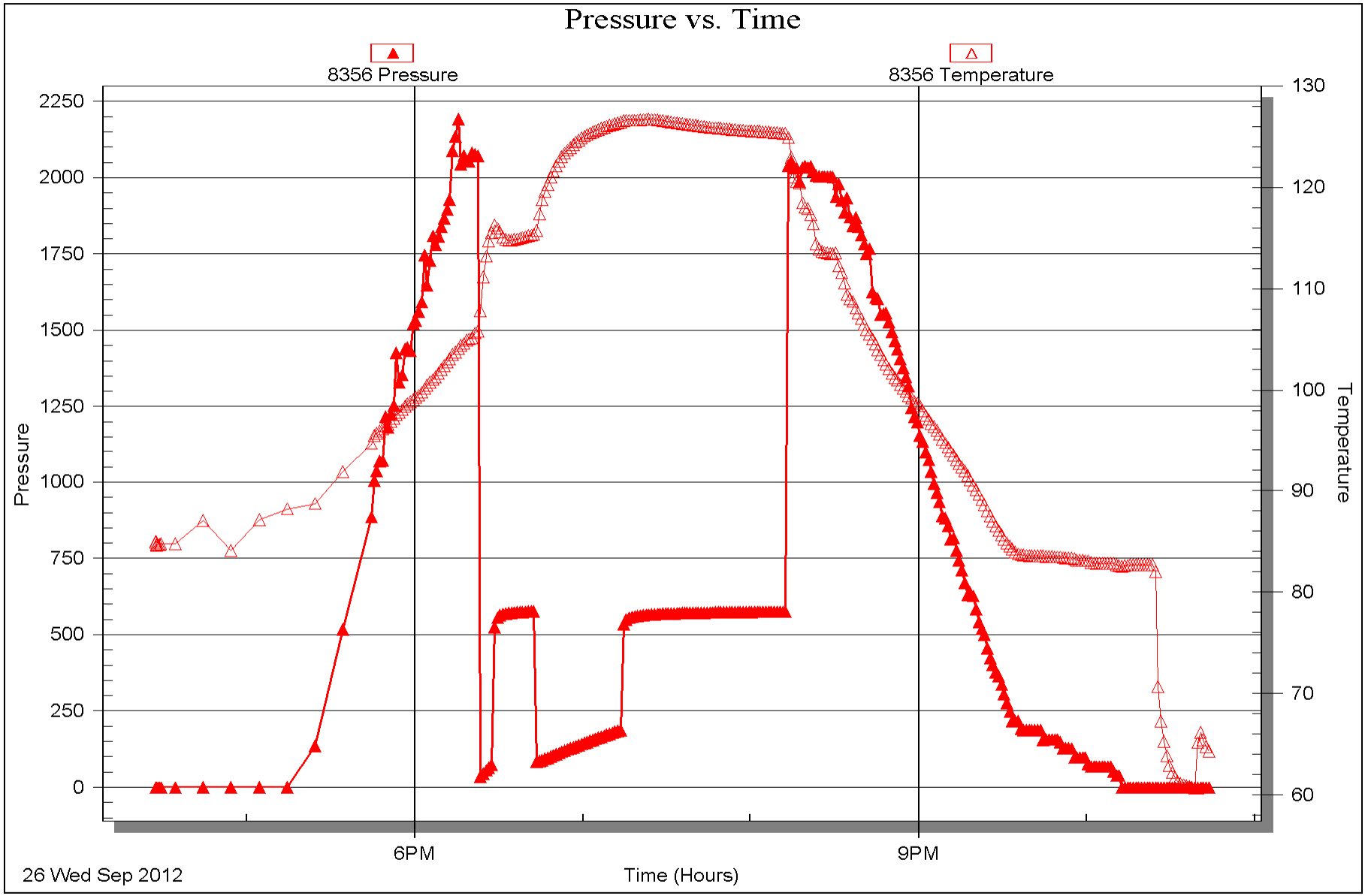
Length ft	Description	Volume bbl
186.00	GOCMW 5%G 5%O 5%M 85%W	1.261
124.00	VSGOCM 5%G 5%O 35%W 55%W	1.739
112.00	GO 20%G 80%O	1.571
0.00	496 GIP	0.000

Total Length: 422.00 ft Total Volume: 4.571 bbl

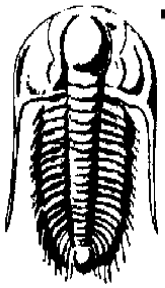
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:


Pressure vs. Time
8373 Pressure
8373 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Open To Flow(2)
Shut-In(1)
Open To Flow(1)
Pressure
Temperature
Time (Hours)
6PM
9PM
26 Wed Sep 2012
2250
2000
1750
1500
1250
1000
750
500
250
-0
120
110
100
90
80
70
60

Serial #: 8356 **Outside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 50019 Printed: 2012.10.02 @ 08:56:17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

Riemann-Suppes #1-11

11-19s-29w Lane,KS

Start Date: 2012.09.27 @ 06:30:29
End Date: 2012.09.27 @ 11:19:59
Job Ticket #: 50020 DST #: 6

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

Printed: 2012.10.02 @ 08:55:18

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lew ellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50020 **DST#: 6**

Test Start: 2012.09.27 @ 06:30:29

GENERAL INFORMATION:

Formation: **Middle Creek**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:39:29
Time Test Ended: 11:19:59

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4304.00 ft (KB) To 4314.00 ft (KB) (TVD)
Total Depth: 4314.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

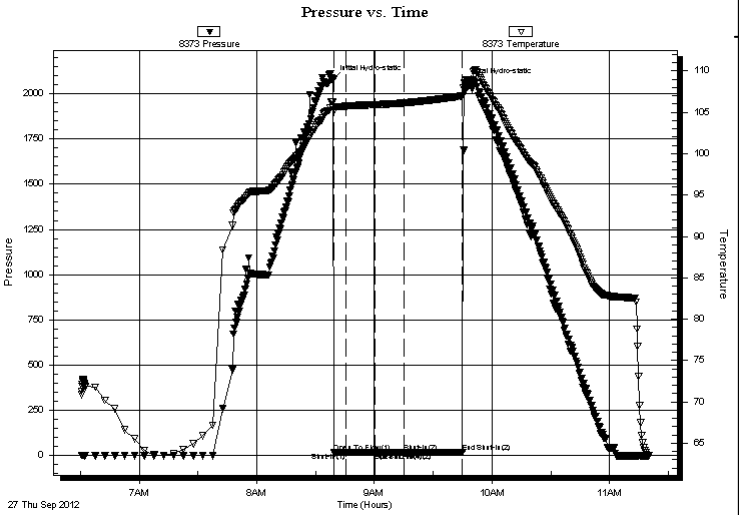
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 16.98 psig @ 4305.00 ft (KB)
Start Date: 2012.09.27 End Date: 2012.09.27
Start Time: 06:30:34 End Time: 11:19:58

Capacity: 8000.00 psig
Last Calib.: 2012.09.27
Time On Btm: 2012.09.27 @ 08:38:59
Time Off Btm: 2012.09.27 @ 09:45:59

TEST COMMENT: IF-Weak surface blow died in 4 mins.
ISI-No return
FF-Dead no blow
FSI-No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2077.55	106.25	Initial Hydro-static
1	15.79	105.28	Open To Flow (1)
7	16.30	105.75	Shut-In(1)
21	16.73	105.92	End Shut-In(1)
22	16.82	105.93	Open To Flow (2)
36	16.98	106.13	Shut-In(2)
66	17.84	106.98	End Shut-In(2)
67	2060.35	107.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	100%M	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50020 **DST#: 6**

Test Start: 2012.09.27 @ 06:30:29

GENERAL INFORMATION:

Formation: **Middle Creek**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:39:29
Time Test Ended: 11:19:59

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4304.00 ft (KB) To 4314.00 ft (KB) (TVD)
Total Depth: 4314.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

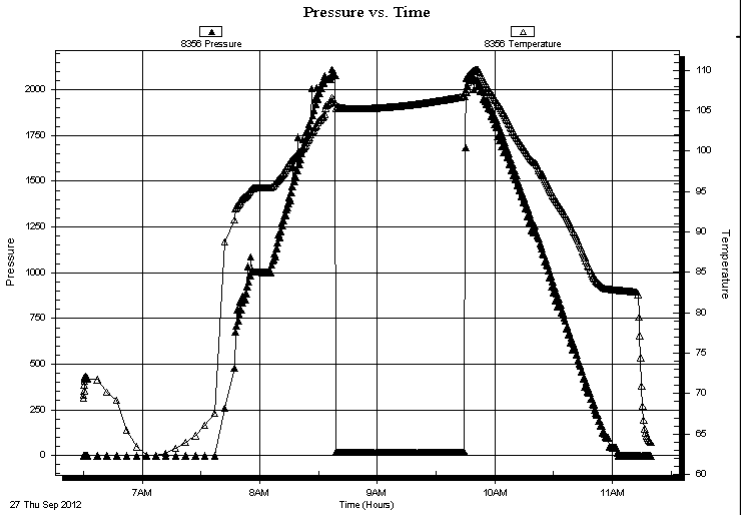
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8356 **Outside**

Press@RunDepth: psig @ 4305.00 ft (KB)
Start Date: 2012.09.27 End Date: 2012.09.27
Start Time: 06:30:09 End Time: 11:19:33

Capacity: 8000.00 psig
Last Calib.: 2012.09.27
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Weak surface blow died in 4 mins.
ISI-No return
FF-Dead no blow
FSI-No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	100%M	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50020 **DST#: 6**

Test Start: 2012.09.27 @ 06:30:29

Tool Information

Drill Pipe:	Length:	4139.00 ft	Diameter:	3.80	inches	Volume:	58.06	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	148.00 ft	Diameter:	2.25	inches	Volume:	0.73	bbl	
						Total Volume:	58.79	bbl	

Drill Pipe Above KB:	11.00 ft
Depth to Top Packer:	4304.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	10.00 ft
Tool Length:	38.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		76000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	64000.00 lb
	Final	64000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Stubb	1.00			4277.00		
Shut In Tool	5.00			4282.00		
Hydraulic tool	5.00			4287.00		
Jars	5.00			4292.00		
Safety Joint	3.00			4295.00		
Packer	5.00			4300.00	28.00	Bottom Of Top Packer
Packer	4.00			4304.00		
Stubb	1.00			4305.00		
Recorder	0.00	8373	Inside	4305.00		
Recorder	0.00	8356	Outside	4305.00		
Perforations	4.00			4309.00		
Bullnose	5.00			4314.00	10.00	Bottom Packers & Anchor
Total Tool Length:	**38.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50020 **DST#: 6**

Test Start: 2012.09.27 @ 06:30:29

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	58.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.37 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2800.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

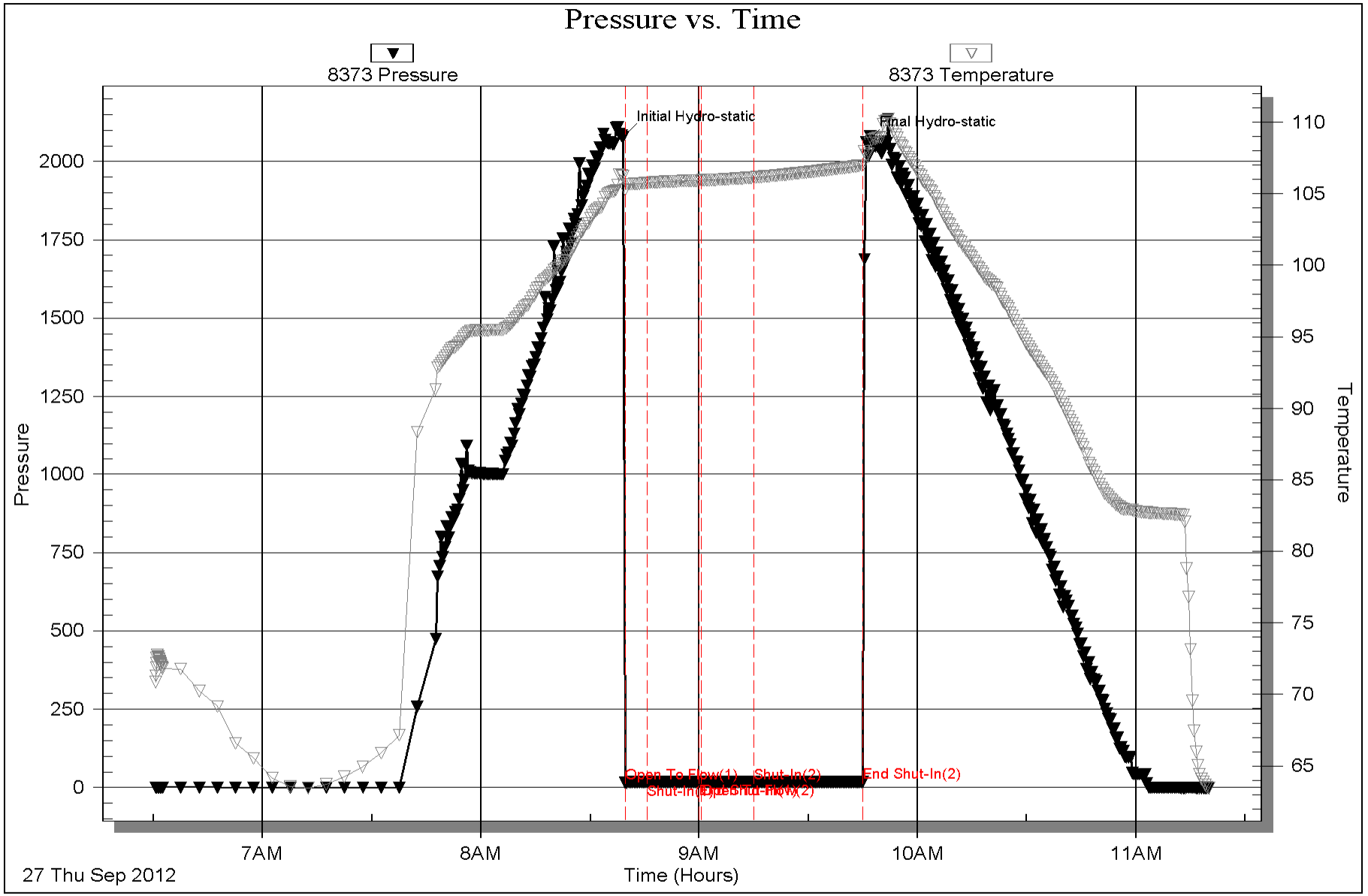
Recovery Table

Length ft	Description	Volume bbl
1.00	100%M	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

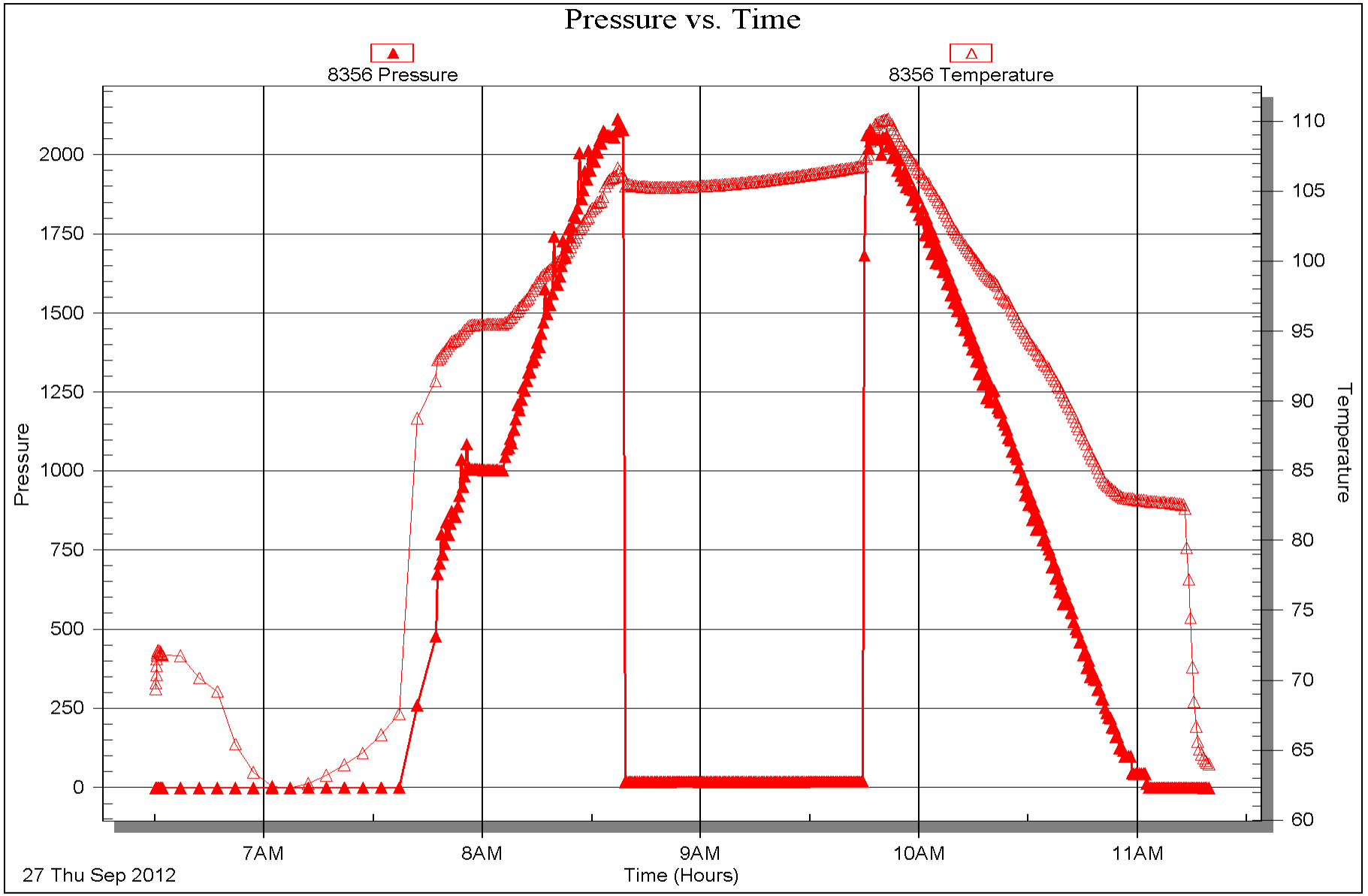
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8373 **Inside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 6



Trilobite Testing, Inc Ref. No: 50020 Printed: 2012.10.02 @ 08:55:22

Serial #: 8356 **Outside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 6



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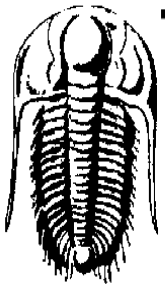


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

Riemann-Suppes #1-11

11-19s-29w Lane,KS

Start Date: 2012.09.28 @ 08:30:02
End Date: 2012.09.28 @ 15:16:02
Job Ticket #: 50021 DST #: 7

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

Printed: 2012.10.02 @ 08:54:33

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50021 **DST#: 7**

Test Start: 2012.09.28 @ 08:30:02

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:47:02
Time Test Ended: 15:16:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4410.00 ft (KB) To 4440.00 ft (KB) (TVD)
Total Depth: 4440.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

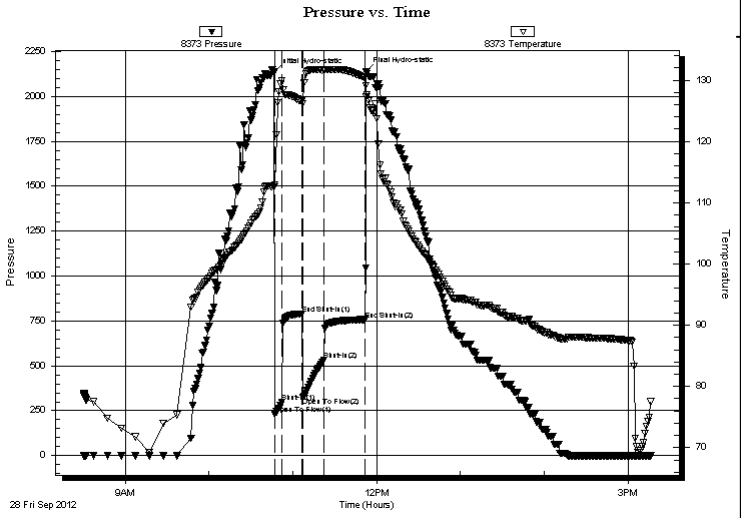
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 530.49 psig @ 4411.00 ft (KB)
Start Date: 2012.09.28 End Date: 2012.09.28
Start Time: 08:30:07 End Time: 15:16:01

Capacity: 8000.00 psig
Last Calib.: 2012.09.28
Time On Btm: 2012.09.28 @ 10:46:32
Time Off Btm: 2012.09.28 @ 11:52:32

TEST COMMENT: IF-B.O.B. 1 min
ISI-B.O.B. 10 mins
FF-B.O.B. 1 min
FSI-B.O.B. 8 mins.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.67	112.63	Initial Hydro-static
1	230.96	112.88	Open To Flow (1)
6	298.65	129.98	Shut-In(1)
20	789.99	126.54	End Shut-In(1)
21	324.84	126.18	Open To Flow (2)
36	530.49	131.56	Shut-In(2)
65	758.26	130.44	End Shut-In(2)
66	2140.69	127.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1260.00	GO 25%G 75%O	16.33
124.00	VSMCGO 5%M 35%G 60%O	1.74
0.00	3008' GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50021 **DST#: 7**

Test Start: 2012.09.28 @ 08:30:02

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:47:02
Time Test Ended: 15:16:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang
Unit No: 60

Interval: 4410.00 ft (KB) To 4440.00 ft (KB) (TVD)
Total Depth: 4440.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

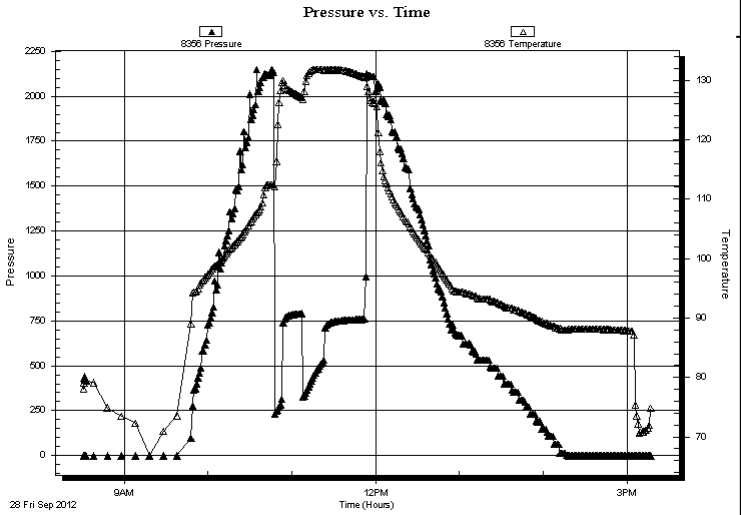
Reference Elevations: 2816.00 ft (KB)
2809.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8356 **Outside**

Press@RunDepth: psig @ 4411.00 ft (KB)
Start Date: 2012.09.28 End Date: 2012.09.28
Start Time: 08:30:51 End Time: 15:16:45

Capacity: 8000.00 psig
Last Calib.: 2012.09.28
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-B.O.B. 1 min
ISI-B.O.B. 10 mins
FF-B.O.B. 1 min
FSI-B.O.B. 8 mins.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1260.00	GO 25%G 75%O	16.33
124.00	VSMCGO 5%M 35%G 60%O	1.74
0.00	3008' GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50021 **DST#: 7**

Test Start: 2012.09.28 @ 08:30:02

Tool Information

Drill Pipe:	Length:	4266.00 ft	Diameter:	3.80	inches	Volume:	59.84	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	148.00 ft	Diameter:	2.25	inches	Volume:	0.73	bbl	
						Total Volume:	60.57	bbl	

Drill Pipe Above KB:	32.00 ft
Depth to Top Packer:	4410.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	30.00 ft
Tool Length:	58.00 ft
Number of Packers:	2
Diameter:	6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		80000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	67000.00 lb
	Final	70000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Stubb	1.00			4383.00		
Shut In Tool	5.00			4388.00		
Hydraulic tool	5.00			4393.00		
Jars	5.00			4398.00		
Safety Joint	3.00			4401.00		
Packer	5.00			4406.00	28.00	Bottom Of Top Packer
Packer	4.00			4410.00		
Stubb	1.00			4411.00		
Recorder	0.00	8373	Inside	4411.00		
Recorder	0.00	8356	Outside	4411.00		
Perforations	24.00			4435.00		
Bullnose	5.00			4440.00	30.00	Bottom Packers & Anchor
Total Tool Length:	**58.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

11-19s-29w Lane,KS

Riemann-Suppes #1-11

Job Ticket: 50021 **DST#: 7**

Test Start: 2012.09.28 @ 08:30:02

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:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2300.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1260.00	GO 25%G 75%O	16.326
124.00	VSMCGO 5%M 35%G 60%O	1.739
0.00	3008' GIP	0.000

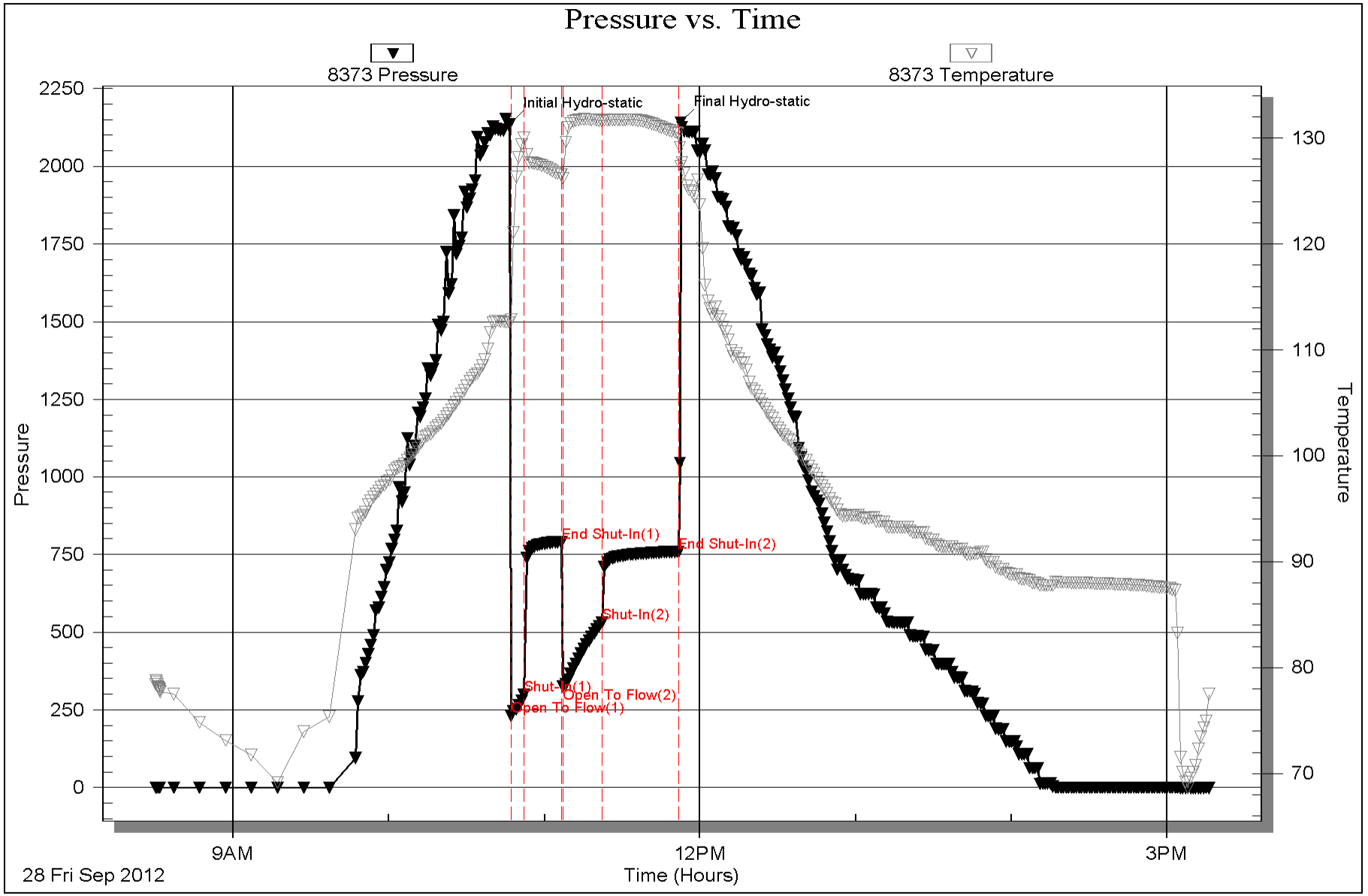
Total Length: 1384.00 ft Total Volume: 18.065 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8373 **Inside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 7



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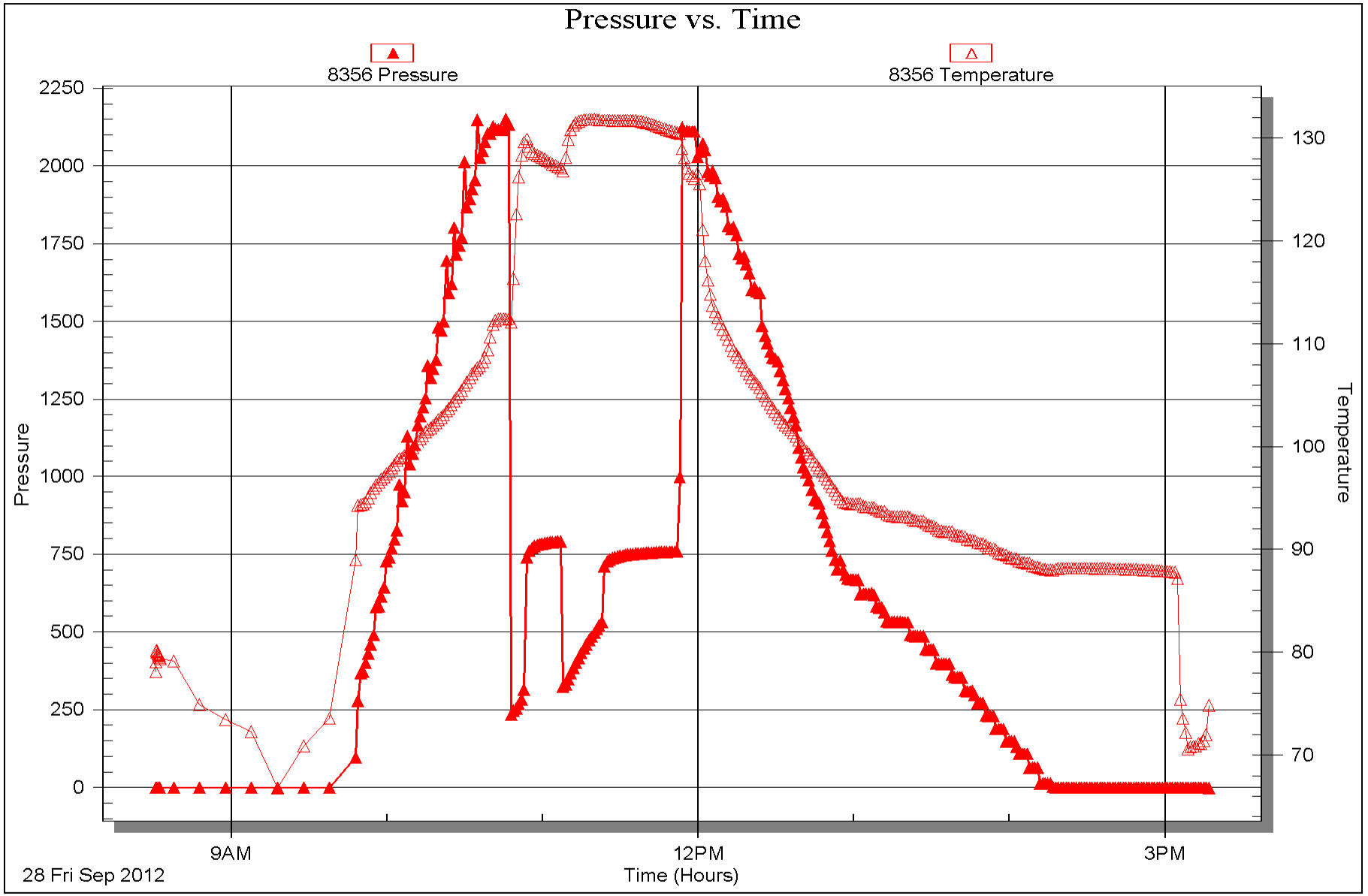
Serial #: 8356 **Outside** Larson Engineering Riemann-Suppes #1-11 DST Test Number: 7



Trilobite Testing, Inc Ref. No: 50021 Printed: 2012.10.02 @ 08:54:38

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50076

Well Name & No. Riemann-Suppes 1-11 Test No. 1 Date 9-24-12

Company Larson Engineering Elevation 2816 KB 2809 GL

Address 562 W State Rd 4 Olmitz, KS 67564

Co. Rep / Geo. Bob Lewellyn Rig HD #3

Location: Sec. 11 Twp. 19S Rge. 29W Co. Lane State KS

Interval Tested 4164 4194 Zone Tested Lansing H

Anchor Length 30 Drill Pipe Run 4012 Mud Wt. 8.7

Top Packer Depth 4159 Drill Collars Run 148 Vis 58

Bottom Packer Depth 4164 Wt. Pipe Run — WL 7.2

Total Depth 4194 Chlorides 2000 ppm System LCM 1

Blow Description IF: Surface blow built to 1.

IS: No return.

FF: Surface blow built to 5.

FS: No return.

Rec 120	Feet of OCM	%gas 50	%oil	%water 50	%mud	
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 120 BHT — Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2090

(B) First Initial Flow 17

(C) First Final Flow 27

(D) Initial Shut-In 856

(E) Second Initial Flow 30

(F) Second Final Flow 65

(G) Final Shut-In 801

(H) Final Hydrostatic 2050

Initial Open 5

Initial Shut-In 15

Final Flow 30

Final Shut-In 60

- ☑ Test 1250
- ☑ Jars 250
- ☑ Safety Joint 75
- ☑ Circ Sub N/C
- ☐ Hourly Standby
- ☑ Mileage 62 - 96.10
- ☐ Sampler
- ☐ Straddle
- ☐ Shale Packer
- ☐ Extra Packer
- ☐ Extra Recorder
- ☐ Day Standby
- ☐ Accessibility

Sub Total 1671.10

T-On Location 10:30

T-Started 11:32

T-Open 13:29

T-Pulled 15:19

T-Out 17:10

Comments

- ☐ Ruined Shale Packer
- ☐ Ruined Packer
- ☐ Extra Copies

Sub Total 0

Total 1671.10

MP/DST Disc't

Approved By

Our Representative

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50016

Well Name & No. Riemann-Suppes 1-11 Test No. 2 Date 9-25-12

Company Larson Engineering Elevation 2816 KB 2809 GL

Address 562 W State RD 4 Olmitz 67564

Co. Rep / Geo. Bob Lewellyn Rig HD #3

Location: Sec. 11 Twp. 19s Rge. 29w Co. Lane State KS

Interval Tested 4211 - 4239 Zone Tested Lansing "I"

Anchor Length 28 Drill Pipe Run 4042 Mud Wt. 9.4

Top Packer Depth 4207 Drill Collars Run 148 Vis 59

Bottom Packer Depth 4211 Wt. Pipe Run 0 WL 7.2

Total Depth 4239 Chlorides 2400 ppm System LCM 1

Blow Description IF - Weak Surface Blow Built to 1 in.

ISI - Dead No Return Blow

FF - Fair Surface Blow Built to 7 in.

FSI - Dead No Return Blow

Rec 124	Feet of GMCO	20 %gas	60 %oil	%water	20 %mud
Rec 50	Feet of Muddy Oil	%gas	50 %oil	%water	50 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 174 BHT 118 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2073

(B) First Initial Flow 19

(C) First Final Flow 35

(D) Initial Shut-In 673

(E) Second Initial Flow 41

(F) Second Final Flow 79

(G) Final Shut-In 669

(H) Final Hydrostatic 1955

Initial Open 5

Initial Shut-In 15

Final Flow 30

Final Shut-In 60

- [X] Test 1250
- [X] Jars 250
- [X] Safety Joint 75
- [X] Circ Sub N/C
- [ ] Hourly Standby
- [X] Mileage 62 R/T 96.10
- [ ] Sampler
- [ ] Straddle
- [ ] Shale Packer
- [ ] Extra Packer
- [ ] Extra Recorder
- [ ] Day Standby
- [ ] Accessibility

Sub Total 1671.10

T-On Location 1:52

T-Started 2:12

T-Open 4:35

T-Pulled 6:25

T-Out 8:50

Comments

- [ ] Ruined Shale Packer
- [ ] Ruined Packer
- [ ] Extra Copies

Sub Total 0

Total 1671.10

MP/DST Disc't

Approved By

Our Representative

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50017

Well Name & No. Riemann-Suppes 1-11 Test No. 3 Date 9-25-12

Company Larson Engineering Elevation 2816 KB 2809 GL

Address

Co. Rep / Geo. Bob Lewellyn Rig HD #3

Location: Sec. 11 Twp. 19S Rge. 29W Co. Lane State KS

Interval Tested 4250-4261 Zone Tested Lansing "J"

Anchor Length 11' Drill Pipe Run 4078 Mud Wt. 9.3

Top Packer Depth 4246 Drill Collars Run 148 Vis 59

Bottom Packer Depth 4250 Wt. Pipe Run 0 WL 7.6

Total Depth 4261 Chlorides 2500 ppm System LCM 1#

Blow Description IF- Fair Blow Built to 4½ in.
ISI- Dead No Return Blow
FF- B.O.B. in 5 mins.
FSI Dead No Return Blow

Rec 335	Feet of VSMCW	%gas	%oil 95	%water 5	%mud		
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 335 BHT 128 Gravity — API RW 228 @ 70 °F Chlorides 5,000 ppm

(A) Initial Hydrostatic 2104	☑ Test 1250	T-On Location 15:45
(B) First Initial Flow 24	☑ Jars 250	T-Started 16:38
(C) First Final Flow 78	☑ Safety Joint 75	T-Open 18:35
(D) Initial Shut-In 585	☑ Circ Sub N/C	T-Pulled 20:25
(E) Second Initial Flow 76	☐ Hourly Standby	T-Out 22:02
(F) Second Final Flow 189	☑ Mileage 62 R/T 96.10	Comments
(G) Final Shut-In 584	☐ Sampler	
(H) Final Hydrostatic 2071	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 5	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 15	☐ Extra Recorder	Sub Total 0
Final Flow 30	☐ Day Standby	Total 1671.10
Final Shut-In 60	☐ Accessibility	MP/DST Disc't
	Sub Total 1671.10	

Approved By [signature] Our Representative [signature]

4/10

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50018

Well Name & No. Riemann - Suppes 1-11 Test No. 4 Date 9-26-12

Company Larson Engineering Elevation 2816 KB 2809 GL

Address

Co. Rep / Geo. Bob Lewellyn Rig HD #3

Location: Sec. 11 Twp. 19S Rge. 29W Co. Lane State KS

Interval Tested 4262 4270 Zone Tested Lansing "J2 Zone"

Anchor Length 8 Drill Pipe Run Mud Wt. 9.3

Top Packer Depth 4258 Drill Collars Run 148 Vis 59

Bottom Packer Depth 4262 Wt. Pipe Run 0 WL 7.6

Total Depth 4270 Chlorides 2500 ppm System LCM 1#

Blow Description IF - Weak Surface Blow Died in 4 mins
ISI - No Return
FF - Weak Surface Blow Died in [redacted] 12 mins
FSI - No Return

Rec 62	Feet of KSGCOM	2 %gas	48 %oil	%water	50 %mud	
Rec 5	Feet of O,I	%gas	100 %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 67' BHT 110 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2089	☒ Test 1250	T-On Location 4:10	
(B) First Initial Flow 18	☒ Jars 250	T-Started 4:28	
(C) First Final Flow 22	☒ Safety Joint 75	T-Open 6:26	
(D) Initial Shut-In 602	☒ Circ Sub N/C	T-Pulled 7:31	
(E) Second Initial Flow 25	☐ Hourly Standby	T-Out 9:33	
(F) Second Final Flow 38	☒ Mileage 62 R/T 96.10	Comments	
(G) Final Shut-In 601	☐ Sampler		
(H) Final Hydrostatic 2060	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☒ Ruined Packer 320	
Initial Open 5	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 15	☐ Extra Recorder	Sub Total 320	
Final Flow 15	☐ Day Standby	Total 1991.10	
Final Shut-In 30	☐ Accessibility	MP/DST Disc't	
	Sub Total 1671.10		

Approved By [signature] Our Representative [signature]

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50019

Well Name & No. Riemann-Suppes 1-11 Test No. 5 Date 9-26-12

Company Larson Engineering Elevation 2816 KB 2809 GL

Address

Co. Rep / Geo. Bob Lewellyn Rig H.I. #3

Location: Sec. 11 Twp. 19S Rge. 29W Co. Lane State KS

Interval Tested 4268 4282 Zone Tested Lansing "K"

Anchor Length 14 Drill Pipe Run 4108 Mud Wt. 9.3

Top Packer Depth 4264 Drill Collars Run 148 Vis 58

Bottom Packer Depth 4268 Wt. Pipe Run 0 WL 8.4

Total Depth 4282 Chlorides 2800 ppm System LCM 1#

Blow Description IF - Fair Blow Built to 5 1/2in
ISI - Dead No Return
FF - B.O.B. In 11mins.
FSI - Weak Surface Blow Back Built to 2in

Rec 186	Feet of GOCMW	5 %gas	5 %oil	85 %water	5 %mud	
Rec 124	Feet of VSGOCMW	5 %gas	5 %oil	35 %water	55 %mud	
Rec 172	Feet of GO	20 %gas	80 %oil	%water	%mud	
Rec 496	Feet of GIP	100 %gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 422 BHT 125 Gravity 31 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2070	☒ Test 1250	T-On Location 15:33	
(B) First Initial Flow 28	☒ Jars 250	T-Started 16:27	
(C) First Final Flow 73	☒ Safety Joint 75	T-Open 18:22	
(D) Initial Shut-In 575	☒ Circ Sub N/C	T-Pulled 20:12	
(E) Second Initial Flow 83	☐ Hourly Standby	T-Out 22:42	
(F) Second Final Flow 187	☒ Mileage 62 R/T 96.10	Comments	
(G) Final Shut-In 575	☐ Sampler		
(H) Final Hydrostatic 2039	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 5	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 15	☐ Extra Recorder	Sub Total 0	
Final Flow 30	☐ Day Standby	Total 1671.10	
Final Shut-In 60	☐ Accessibility	MP/DST Disc't	
	Sub Total 1671.10		

Approved By [signature] Our Representative [signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss sustained 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

4/10

Test Ticket

NO. 50020

Well Name & No. Riemann-Suppes 1-11 Test No. 6 Date 9-27-12

Company Larson Engineering Elevation 2816 KB 2809 GL

Address

Co. Rep / Geo. Bob Lewellyn Rig HD #3

Location: Sec. 11 Twp. 19s Rge. 29w Co. Lane State KS

Interval Tested 4304 4314 Zone Tested Middle Creek

Anchor Length 10' Drill Pipe Run 4139 Mud Wt. 9.3

Top Packer Depth 4300 Drill Collars Run 148 Vis 58

Bottom Packer Depth 4304 Wt. Pipe Run 0 WL 8.4

Total Depth 4314 Chlorides 2800 ppm System LCM 1

Blow Description IF- Weak Surface Blow Died in 4mins
ISI- Dead No Return
FF- Dead No Blow
FSI- Dead No Return

Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec 1	Feet of Mudd	%gas	%oil	%water 100	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 1 BHT 108 Gravity ( ) API RW ( ) @ ( ) °F Chlorides ( ) ppm

(A) Initial Hydrostatic	2078	☒ Test	1250	T-On Location	5:40
(B) First Initial Flow	16	☒ Jars	250	T-Started	6:30
(C) First Final Flow	16	☒ Safety Joint	75	T-Open	8:40
(D) Initial Shut-In	17	☒ Circ Sub	N/C	T-Pulled	9:45
(E) Second Initial Flow	17	☐ Hourly Standby		T-Out	11:20
(F) Second Final Flow	17	☒ Mileage	62R/T 96.10	Comments	
(G) Final Shut-In	18	☐ Sampler			
(H) Final Hydrostatic	2060	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	5	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	15	☐ Extra Recorder		Sub Total	0
Final Flow	15	☐ Day Standby		Total	1671.10
Final Shut-In	30	☐ Accessibility		MP/DST Disc't	
		Sub Total	1671.10		

Approved By [signature] Our Representative [signature]

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50021

Well Name & No. Riemann-Supres 1-11 Test No. 1 Date 9-28-12

Company Larson Engineering Elevation 2816 KB 2809 GL

Address

Co. Rep / Geo. Bob Lowellyn Rig 40 #3

Location: Sec. 11 Twp. 19S Rge. 29W Co. Lane State KS

Interval Tested ~~4410~~ 4410 - 4440 Zone Tested Altamont

Anchor Length 30 Drill Pipe Run 4266 Mud Wt. 9.1

Top Packer Depth 4406 Drill Collars Run 148 Vis 50

Bottom Packer Depth 4410 Wt. Pipe Run 0 WL 8.8

Total Depth 4440 Chlorides 2800 ppm System LCM 1#

Blow Description IF - BOB 1 min

ISI - BOB 10 mins

FF - BOB 1 min

FSI - BOB 8 mins

Rec 1260	Feet of GO	25 %gas	75 %oil	%water	%mud	
Rec 124	Feet of VSMCGO	35 %gas	60 %oil	%water	5 %mud	
Rec 3008	Feet of GIP	100 %gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 1384 BHT Gravity 29 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2136	☒ Test 1250	T-On Location 7:34
(B) First Initial Flow 231	☒ Jars 250	T-Started 8:30
(C) First Final Flow 299	☒ Safety Joint 75	T-Open 10:47
(D) Initial Shut-In 790	☒ Circ Sub N/C	T-Pulled 11:52
(E) Second Initial Flow 325	☐ Hourly Standby	T-Out
(F) Second Final Flow 530	☒ Mileage 62 RT 96.10	Comments Load tools 9-28-12 3:40 p.m.
(G) Final Shut-In 758	☐ Sampler	
(H) Final Hydrostatic 2141	☐ Straddle	☐ Ruined Shale Packer
	☒ Shale Packer 250	☐ Ruined Packer
Initial Open ~~15~~ 5	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 15	☐ Extra Recorder	Sub Total 0
Final Flow 15	☐ Day Standby	Total 1921.10
Final Shut-In 30	☐ Accessibility	MP/DST Disc't
	Sub Total 1921.10	

Approved By Our Representative

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.

Robert C. Lewellyn

Consulting Petroleum Geologist

P. O. Box 375
Kechi, Kansas 67067-0375
316-518-0495
boblewellyn@yahoo.com

GEOLOGICAL REPORT

Larson Engineering, Inc.
No. 1-11 Riemann-Suppes
1360' FNL & 122' FWL Sec. 11-19S-29W
Lane County, Kansas

CONTRACTOR:	H D Drilling, LLC Rig 3
SPUDDED:	September 17, 2012
DRILLING COMPLETED:	September 30, 2012
SURFACE CASING:	8 5/8" @ 260 KBM/175 sx.
ELECTRIC LOGS:	DIL CNL/CDL MEL
ELEVATIONS:	2816 KB 2809 GL

FORMATION TOPS: (Electric Log)

Anhydrite	2157 (+ 659)
Base Anhydrite	2184 (+ 632)
Heebner Shale	3950 (-1134)
Lansing-Kansas City Group	3992 (-1176)
Muncie Creek Shale	4170 (-1354)
Stark Shale	4272 (-1456)
Hushpuckney Shale	4308 (-1492)
Base Kansas City	4350 (-1534)
Marmaton	4378 (-1562)
Altamont "A"	4431 (-1615)
Pawnee	4471 (-1655)
Myrick Station	4494 (-1678)
Fort Scott	4520 (-1704)
Cherokee	4545 (-1729)
Mississippian	4612 (-1796)
Electric Log Total Depth	4658 (-1842)

Samples were examined microscopically from 3800 to Rotary Total Depth. Samples were examined wet and dry and samples from potentially productive zones were viewed under a fluoroscope and checked for oil cut. Following is a description of zones of interest, Drill Stem Tests, etc. For a complete lithologic description of all formations refer to the sample log in the back pages of this report.

Lansing-Kansas City Zones:

3992-4006 (A Zone)

Limestone, buff to tan, some mottled, dense to finely crystalline, some medium crystalline, some poorly developed crystal overgrowth, fossiliferous in part, zone is mostly tight with no shows of oil.

4028-4032 (B Zone)

Limestone, cream to buff, dense to finely crystalline and chalky, partly fossiliferous, scattered dark gray shale and round to elongated shale or biotite flakes, rare trace of very poor intercrystalline porosity, some dead stain, no shows of live oil, some scattered chert, light gray, fresh, opaque.

4048-4078 (C/D Zone)

Limestone, cream to buff, dense to finely crystalline and chalky with scattered fossil shells, oolites, and flakes as above, some chert as above, zone is tight with no shows of oil.

4080-4091 (E Zone)

Limestone, buff to tan, some brown, some medium gray, dense to finely crystalline, some cream chalky, some oolitic with scattered small dark gray oolites, zone is mostly tight with no shows of oil.

4093-4103 (F Zone)

Limestone, buff to tan, some brown, dense to finely crystalline with scattered cream chalky, scattered oolitic limestone as above, trace of very poor vugular and interoolitic porosity, scattered dead stain, no shows of live oil.

4110--4121 (G Zone)

Limestone, buff to tan, finely crystalline and oolitic, fair to good ooliticastic and interoolitic porosity, no shows of oil.

4186-4192 (H Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, some medium crystalline, partly fossiliferous, fair intercrystalline and scattered vugular porosity, fair spotted stain, fair show of free oil, good odor, fair fluorescence, fair cut.

Drill Stem Test No. 1 4164-4194
5-15-30-60; surface blow built to 1 inch, no blowback; surface blow built to 5 inches, no blowback. Recovered 120 feet of oil cut mud (50% oil, 50% mud). ISIP 856# FSIP 801# IFP 17-27# FFP 30-65# IHP 2090# FHP 2050# BHT N/A.

4224-4228 (I Zone)

Limestone, buff to tan to medium gray, some mottled, dense to finely crystalline, trace of medium crystalline, fossiliferous in part, soft and friable, fair vugular and "edge" porosity with fair

intercrystalline porosity, poor to fair spotted stain, trace of saturated stain, fair show of free oil, fair fluorescence, fair to good cut.

Drill Stem Test No. 2 4211-4237
5-15-30-60; weak blow, built to 1 inch blow, no blowback; surface blow built to 7 inches, no blowback. Recovered 124 feet of gassy mud cut oil (20% gas, 60% oil, 20% mud), 50 feet of muddy oil (50% oil, 50% mud). ISIP 673# FSIP 669# IFP 19-35# FFP 41-79# IHP 2073# FHP 2955# BHT 118 degrees F.

4252-4260 (J Zone)

Limestone, buff to tan, some brown, finely crystalline and oolitic, good ooliticastic porosity with fair to good spotted to saturated stain, good show of free oil, good odor, fair to good fluorescence, good cut, porosity is 50% barren.

Drill Stem Test No. 3 4250-4261
5-15-30-60; fair blow built to 4 ½ inches, no blowback; blow off bottom of bucket in 15 minutes, no blowback. Recovered 335 feet of very slightly mud cut water (95% water, 5% mud). ISIP 585# FSIP 584# IFP 24-78# FFP 76-189# IHP 2104# FHP 2071# BHT 128 degrees F.

4264-4267 (J-2 Zone)

Limestone, buff to tan, some gray, dense to finely crystalline, trace of medium crystalline, trace of oolitic, scattered poor to fair intercrystalline and vugular porosity, fair spotted stain, fair show of free oil, good odor, fair fluorescence, fair to good cut.

Drill Stem Test No. 4 4262-4270
5-15-15-30; weak surface blow, died in 4 minutes, no blowback; weak surface blow, died in 12 minutes, no blowback. Recovered 5 feet of clean oil, 62 feet of very slightly gas cut oily mud (2% gas, 48% oil, 50% mud). ISIP 602# FSIP 601# IFP 18-22# FFP 25-38# IHP 2089# FHP 2060# BHT 110 degrees F.

4274-4282 (K Zone)

Limestone, buff to tan, finely crystalline, some microcrystalline, partly fossiliferous, fair intercrystalline and vugular porosity, fair spotted stain, slight show of free oil, good odor, fair fluorescence, good cut.

Drill Stem Test No. 5 4268-4282
5-15-30-60; fair blow, built to 5 ½ inches, no blowback; blow off bottom of bucket in 11 minutes; weak surface blowback to 2 inches. Recovered 496 feet of gas in drill pipe and 422 feet of fluid: 112 feet of gassy oil (20% gas, 80% oil), 124 feet of very slightly gas and oil cut muddy water (5% gas, 5% oil, 35% water, 55% mud), 186 feet of gas and oil cut muddy water (5% gas, 5% oil, 85% water, 5% mud). ISIP 575# FSIP 575# IFP 28-73# FFP 83-187# IHP 2070# FHP 2039# BHT 125 degrees F.

4310-4314 (Middle Creek Zone)

Limestone, tan to brown, trace of gray, partly dolomitic, dense to finely crystalline, some medium crystalline rhombic limestone, fair vugular porosity, fair spotted stain, fair to good show of free oil,

good odor, fair to good fluorescence, good cut.

Drill Stem Test No. 6 4304-4314
5-15-15-30; weak surface blow, died in 4 minutes, no blowback; blow did not return on second flow. Recovered one foot of mud. ISIP 17# FSIP 17# IFP 16-16# FFP 17-17# IHP 2078# FHP 2060# BHT 108 degrees F.

4317-4334 (L Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, slightly fossiliferous, trace of very poor intercrystalline porosity, some scattered dead stain, no shows of live oil.

4363-4367 (Pleasanton Zone)

Limestone, tan, some brown, dense to finely crystalline, some oolitic, poor intercrystalline and interoolitic porosity, few pieces with very poor spotted stain, slight show of free oil, faint fleeting odor, poor fluorescence, very poor cut, scattered dead stain and gilsonite.

4378-4385 (Marmaton Zone)

Limestone, buff to tan and brown, dense to finely crystalline, partly fossiliferous and slightly oolitic, poor to fair intercrystalline, interoolitic, and interfossil porosity, poor spotted stain, slight show of free oil, fair odor, poor fluorescence, poor to fair cut. It was elected not to test this zone because of pressure depletion concerns.

4431-4436 (Altamont "A" Zone)

Limestone, cream to buff, dense to finely crystalline and fossiliferous, slightly oolitic, fair intercrystalline and interfossil porosity, some vugular porosity, poor to fair spotted stain, slight show of free oil, fair odor, poor fluorescence, fair cut.

Drill Stem Test No. 7 4410-4440
5-15-15-30; blow off bottom of bucket in one minute, blowback off bottom of bucket in 10 minutes; blow off bottom of bucket in one minute, blowback off bottom of bucket in eight minutes. Recovered 3008 feet of gas in drill pipe, 1280 feet of clean gassy oil (25% gas, 75% oil), 124 feet of very slightly mud cut gassy oil (35% gas, 60% oil, 5% mud). ISIP 790# FSIP 758# IFP 231-299# FFP 325-530# IHP 2136# FHP 2141# BHT N/A (29 gravity API).

4471-4475 (Pawnee Zone)

Limestone, buff to tan, dense, some finely crystallline, some scattered cream chalky, zone is mostly tight with a trace of questionable stain, no free oil, no odor, no fluorescence, no cut, some scattered chert, light gray, fresh, opaque.

4501-4509 (Myrick Station Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, some microcrystalline, slightly fossiliferous, trace of cream chalky, zone is mostly tight with scattered traces of light spotted stain and a very slight show of free oil, questionable odor, no fluorescence, no cut, some scattered dead stain.

4520-4545 (Fort Scott Zone)

Limestone, cream to buff to tan, dense, some finely crystalline and chalky, some fossiliferous and oolitic, zone is mostly tight, few pieces with very poor spotted stain, no free oil, no odor, no fluorescence, no cut, some oolitic limestone with dark gray oolites.

4547-4575 (Cherokee Lime Zones)

Limestone, tan to brown, mostly dense with some finely crystalline, very slightly fossiliferous, section is mostly tight with no shows of oil.

4577-4595 (Johnson Zone)

Limestone, tan to brown, dense to finely crystalline, zone is mostly tight with rare traces of questionable stain, no free oil, no odor, no fluorescence, no cut.

4595-4612 (Detrital Zone)

Various and varicolored shales and cherts with scattered limestone, some very fine grained white sand, tight, well-cemented, well sorted, calcareous, scattered asphalltic stain, no show of live oil.

4612-4658 (Mississipipi Zone)

Limestone, dolomitic, buff to tan with scatterted gray, dense to finely crystalline and slightly fossiliferous, partly chalky, mostly tight, no show of oil.

4680 Electric Log Total Depth

Conclusions and Recommendations:

Numerous zones in this well appear to be capable of producing oil in commercial quantities. Completion operations should be conducted as per Tom Larson and Kyle Carter.

Respectfully submitted,

Robert C. Lewellyn
Consulting Petroleum Geologist

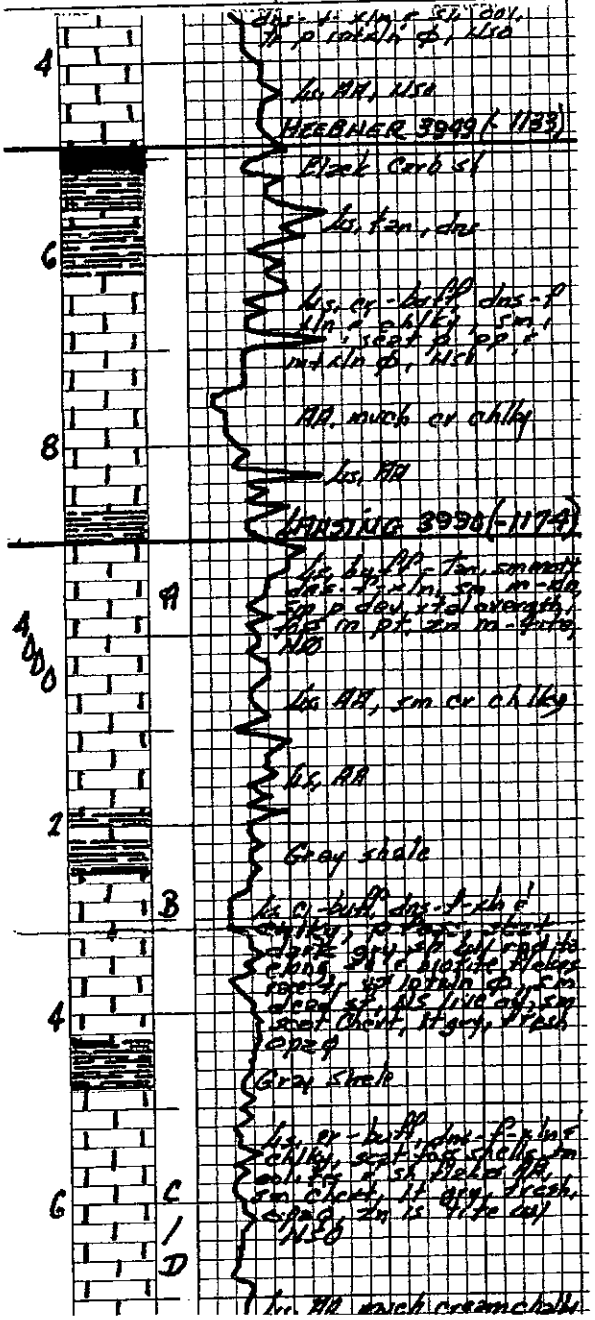
RCL:me

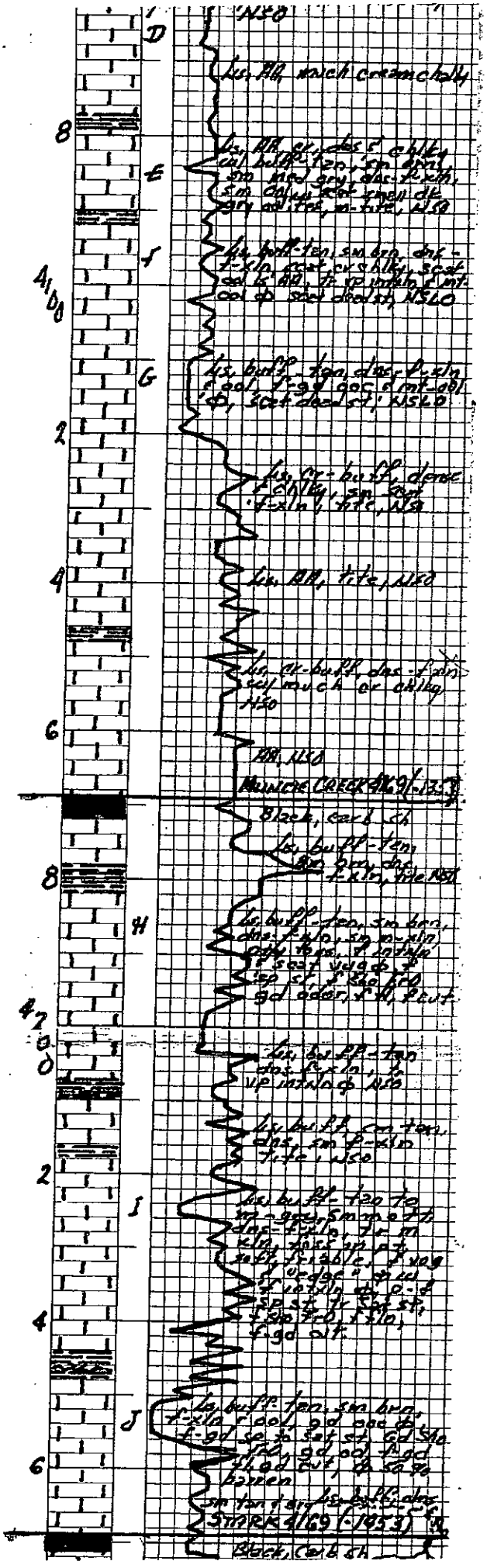
STATE: KANSAS
COUNTY: LANE
BLOCK:
SEC. 11
T 19S R 29W
ALTITUDE 2816 KB
PRODUCTION Oil

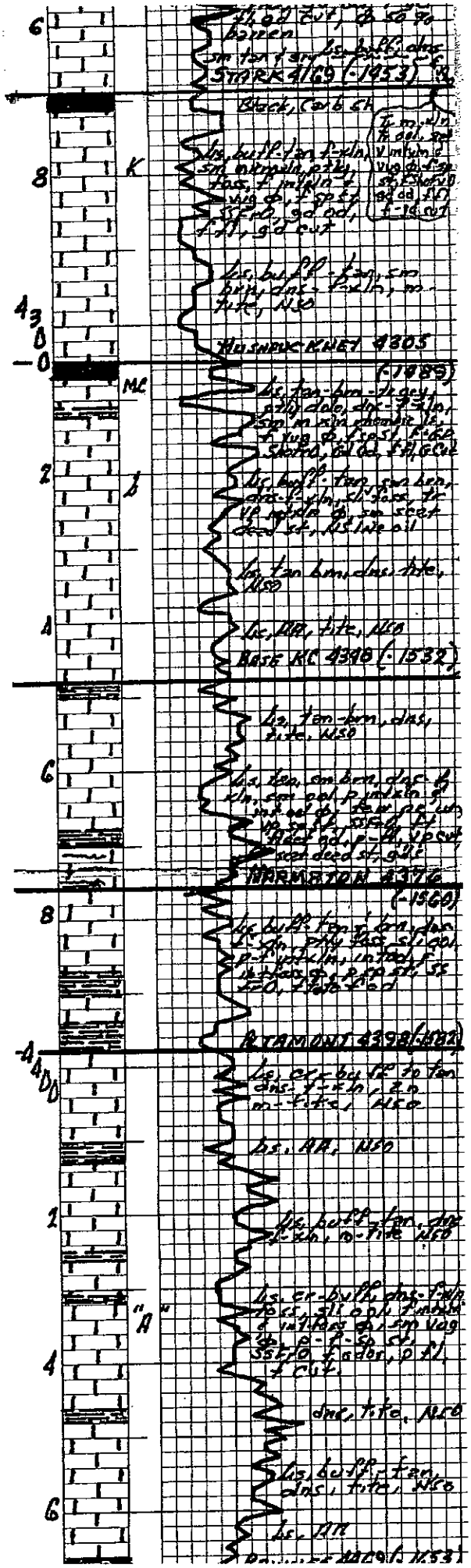
COMPANY LARSON ENGINEERING INC.
FARM RIEMANN-SUPPES WELL NO. 1-11
SURVEY 1360' FNL & 122' FWL
TOTAL DEPTH 4655
CONTRACTOR MD Drilling, LLC
COMMENCED 09-17-2012
COMPLETED 09-30-2012
REMARKS
Robert C. Lewellyn - Geologist

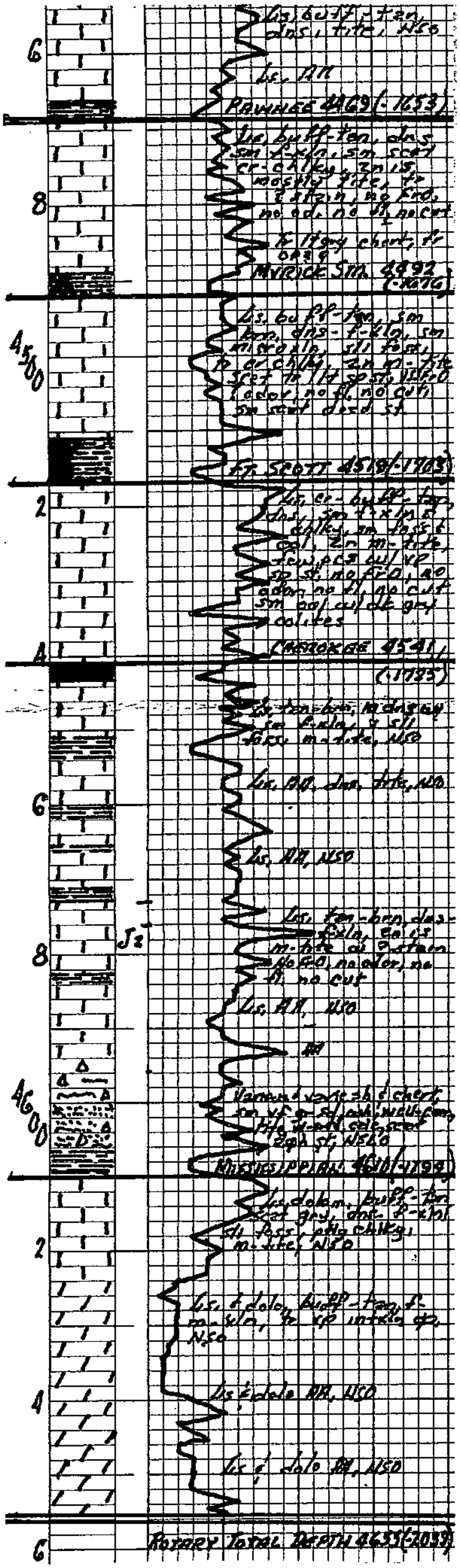
CASING RECORD

8 5/8" @ 260 KBM/175 sx.




D
E
F
G
H
I
J
MUNCIE CREEK
STARK


STARK 4169 (-1953)
Black, Carb sh
K
HUSHPUCKNEY 4305 (-1089)
ML
J
ROSE HL 4396 (-1532)
I
HARRISTON 4476 (-1560)
H
RAYMOND 4598 (-1682)
G
"A"


6
Ls. AA
PAWNEE 4469(-1653)
8
MYRICK SM. 4492 (-1676)
4500
FT. SCOTT 4519(-1703)
2
4
CHEROKEE 4541 (-1725)
6
Ls. AA, NSO
J2
8
Ls. AA, NSO
4600
MISSISSIPPIAN 4610(-1794)
2
4
Ls. & dolo AA, NSO
Ls. & dolo AA, NSO
6
ROTARY TOTAL DEPTH 4655(-2039)

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

Kansas
Corporation Commission

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

January 14, 2013

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

Re: ACO1
API 15-101-22400-00-00
Riemann-Suppes 1-11
NW/4 Sec.11-19S-29W
Lane County, Kansas

Dear Production Department:

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

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

Respectfully,
Thomas Larson