Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1078035

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: NCRA

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 #:

1/11/2012	1/24/2012	2/29/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-101-22335-00-00
Spot Description:
_ - SE - SE - SE Sec. 10 Twp. 19 S. R. 29 ☐ East ☑ West
330 Feet from ☐ North / ☑ South Line of Section
330 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: SS Well #: 1-10
Field Name: Wildcat
Producing Formation: Marmaton, L-KC
Elevation: Ground: 2816 Kelly Bushing: 2823
Total Vertical Depth: 4659 Plug Back Total Depth: 4425
Amount of Surface Pipe Set and Cemented at: 262 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 2135 Feet
If Alternate II completion, cement circulated from: 2135
feet depth to: 0 w/ 215 sx cmt.

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

Chloride content: 7900 ppm Fluid volume: 800 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: 05/09/2012
☑ **Confidential Release Date:** 05/09/2014
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 05/09/2012

[redacted] 1078035

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: SS Well #: 1-10

Sec. 10 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	262	Class A	175	2% gel, 3% CC
production	7.875	5.5	15.5	4658	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	0-2135	SMD	215	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
Attached	Attached	Attached	Attached

TUBING RECORD: Size: 2.375 Set At: 4416 Packer At: Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 2/29/2012

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	40		55		

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:
4269 - 4376.5

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	SS 1-10
Doc ID	1078035

Tops

Name	Top	Datum
Anhydrite	2159	+664
Base Anhydrite	2185	+638
Heebner Sh	3955	-1132
Lansing-KC	3997	-1174
Stark Sh	4276	-1453
Base KC	4358	-1535
Marmaton	4381	-1558
Pawnee	4473	-1650
Fort Scott	4521	-1698
Cherokee	4545	-1722
Mississippian	4620	-1797

Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	SS 1-10
Doc ID	1078035

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	4587-89, 4594-96, 4435-38	250 gal 15% NEFe	4587-89, 4594-96
4	4374.5-76.5, 4311.5-13.5	250 gal 15% MCA	4374.5-76.5
		250 gal 15% MCA	4311.5-13.5
4	4269-4274	250 gal 15% MCA	4269-74
		250 gal 10% MCA	4269-74
	CIBP 4425		

SWIFT Services, Inc.

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

TICKET Nº 21563

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City KS	1-#10	S.S.	Lane	KS	Dighton	1 FEB 12	
2.	TICKET TYPE ☐ SERVICE ☐ SALES / CONTRACTOR: WILD WEST	RIG NAME/NO.	SHIPPED VIA CT	DELIVERED TO: location		ORDER NO.	
3.	WELL TYPE: 0;1	WELL CATEGORY: Development	JOB PURPOSE: cement port collar	WELL PERMIT NO.		WELL LOCATION: 10-19-29W	
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		1			MILEAGE TRK 114	30	mi			6 00	180 00
576D		1			Pump charge	1	ea			1250 00	1250 00
330		1			SMD cement	215	sk			16 50	3547 50
276		1			flocele	50	lb			2 00	100 00
290		1			D-AIR	2	gal			35 00	70 00
581		1			service charge	235	sk			2 00	470 00
583		1			Drayage	23384	lb	350.77	TM	1 00	350 77

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 | TIME SIGNED ☐ 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	5968 27
Lane TAX 6.3%	234 20
TOTAL	6202 47

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

SWIFT OPERATOR: RBC Hill | APPROVAL

Thank You!

JOB LOG — **SWIFT Services, Inc.** — DATE 1 FEB 12 — PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Lappon Engineering	1-#10	SS	cement port collar	21563

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								235 sks SMD w/ ¼# Flocele 2⅞ × 5½"
								2135' port collar
	0900							on loc TRK 114
	0920					1000	1000	~~open port~~ test to 1000 psi - held
	0925	3	3				400	open port collar - inj rate 3 @ 400
	0930	3¾					400	mix SMD w/ ¼# Flocele @ 11.2 ppg
		3¾	5				400	fluid to surface
	1005	3¾	115				450	cement to surface {215 sks mixed / 20 sks to pit}
			7½					7½ Displace w/ H_2O · close port collar
	1015						1070	test to 1000 - held
								Run 5 joints
	1025		20					Reverse hole clean
								2 cement flags
	1035							wash truck
								Rack up
	1110							job complete
								Thanks
								Doug, Dave & Blaine

SWIFT Services, Inc.

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

TICKET CONTINUATION

TICKET No. 21556

CUSTOMER Colson Engineering | WELL SS 1-10 | DATE 24 Jan 12 | PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	TIME	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
290		1				D-AIR	3	9a1			35 00	105 00
												310
581		1				SERVICE CHARGE 155			CUBIC FEET		2 00	~~340~~ 00
583		1				MILEAGE CHARGE TOTAL WEIGHT 17370 LOADED MILES 30			TON MILES 259.80		1 00	259 80
											CONTINUATION TOTAL	~~704~~. 80 674

SWIFT Services, Inc.

CHARGE TO: Lasson Engineering
ADDRESS
CITY, STATE, ZIP CODE

TICKET Nº 21556

PAGE 1 OF 2

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City KS	1-10	SS	Lane	KS	Dighton	24 Jan 12	
2.	TICKET TYPE ☐ SERVICE ☐ SALES / CONTRACTOR: HD		RIG NAME/NO.: 3	SHIPPED VIA: CT	DELIVERED TO: location	ORDER NO.	
3.	WELL TYPE: oil	WELL CATEGORY: Development	JOB PURPOSE: cement long string		WELL PERMIT NO.	WELL LOCATION: 10-19-29W	
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		1			MILEAGE TRK 114	30	mi			6 00	180 00
578		1			Pump Charge	1	ea			1500 00	1500 00
325		1			STANDARD cement (Foret 2)	155	sk			13 50	2092 50
284		1			Cal-Seal	700	lb	7	sk	35 00	245 00
283		1			salt	800	lb			0 20	160 00
286		1			Halad-1	100	lb			7 50	750 00
277		1			Gilsonite	1100	lb			0 75	825 00
276		1			Flocele	50	lb			2 00	100 00
280		1			Flocheck 21	500	gal			2 50	1250 00
221		1			KCL liquid	2	gal			25 00	50 00
					~~SALT~~						

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 | TIME SIGNED ☑ A.M. ☐ P.M.

DTW

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 1	7152 50
2	67 ~~34~~ 4 80
Subtotal 2	7857 30
Lane TAX 6.3%	351 38
TOTAL	8178 68

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

SWIFT OPERATOR: KRG/bll | APPROVAL

Thank You!

JOB LOG — **SWIFT Services, Inc.** — DATE 24 Jan 02 — PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Alton Engineering	1-10	SS	cement long string	21556

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								155 sk EA-2 w/ gilsonite & flocele
								5½" 15.5# casing - 110 joints
								LTD 9659' 42' shoejoint PortCollar-2135'
	2100							on loc TRK 114
	2245							drop ball - circulate
	2320	3	15				200	Pump 15 bbl KCL flush
		3	12				200	Pump 500 gel flocheck-21
		3	5				200	Pump 5 bbl KCL flush
	2330		7					Plug RH - 30 sks
	2340	4	30				250	mix EA-2 cmnt @ 15.3 ppg 125 sks
	2346							Drop latch down plug
								wash out pump & line
	2350	6					250	Displace plug
		6	91				800	
25 pcs	0015	6	110				1550	Land plug
	0020						0	Release pressure to truck - dried up
	0025							wash truck
								Rack up
	0050							Job complete
								thanks
								DAVID, DARE & Blaine

ALLIED CEMENTING CO., LLC. 037922

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Medicine Lodge, Ks

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
1-11-2012	10	19s	29w	12:30 pm	3:30pm	11:00pm	11:30pm

LEASE	WELL #	LOCATION	COUNTY	STATE
SS	1-10	Dighton, Ks 6 South 2 West, 1 North, W into	Lane	Ks

OLD OR (NEW) (Circle one)

CONTRACTOR HD #3
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 265'
CASING SIZE 8 5/8 DEPTH 265'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 20'
PERFS.
DISPLACEMENT 15 bbls of Fresh Water

OWNER Larson Engineering

CEMENT

AMOUNT ORDERED 175sx Class A + 3% cc 2% Gel

EQUIPMENT

PUMP TRUCK CEMENTER Orin F.
471-302 HELPER Jason T.
BULK TRUCK
341 DRIVER Kevin W.
BULK TRUCK
DRIVER

COMMON	175 SACKS	@ 16.25	2843.75
POZMIX		@	
GEL	3 SACKS	@ 21.25	63.75
CHLORIDE	6 SACKS	@ 58.20	349.20
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
to HANDLING	184	@ 2.25	414.00
to MILEAGE	184 x .11 x 22		445.28
		TOTAL	4,115.98

REMARKS:

Pipe on bottom & break Circulation Pump 3 bbls Water Sheez, mix 175sx Cement, displace 15 bbls, Shut in Cement did Circulate

SERVICE

DEPTH OF JOB 265'
PUMP TRUCK CHARGE 1125-
EXTRA FOOTAGE @
to MILEAGE 22 @ 7.00 154-
MANIFOLD @
to LV 22 @ 4.00 88-
@
TOTAL 1367-

CHARGE TO: Larson Engineering
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

None

TOTAL

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

SALES TAX (If Any)
TOTAL CHARGES $5482.98
DISCOUNT 70/20 IF PAID IN 30 DAYS

PRINTED NAME X LELAYNE FRESNER

SIGNATURE X

Nt $3835.00

Thank You !!!

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45051 **DST#: 1**

Test Start: 2012.01.18 @ 18:05:00

GENERAL INFORMATION:

Formation: **J 2 Zone**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:19:00
Time Test Ended: 23:23:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Jace McKinney
Unit No: 46

Interval: 4274.00 ft (KB) To 4283.00 ft (KB) (TVD)
Total Depth: 4283.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

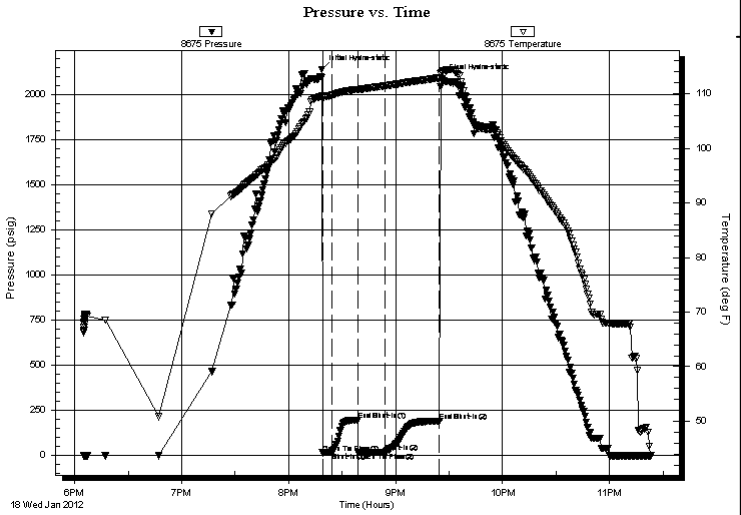
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 21.44 psig @ 4275.00 ft (KB)
Start Date: 2012.01.18 End Date: 2012.01.18
Start Time: 18:05:01 End Time: 23:23:15

Capacity: 8000.00 psig
Last Calib.: 2012.01.18
Time On Btm: 2012.01.18 @ 20:18:45
Time Off Btm: 2012.01.18 @ 21:25:45

TEST COMMENT: Weak surface blow
No return blow
Weak surface blow 12 min. into open
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2140.76	109.71	Initial Hydro-static
1	16.22	108.90	Open To Flow (1)
6	19.94	109.69	Shut-In(1)
20	197.46	110.79	End Shut-In(1)
21	19.41	110.72	Open To Flow (2)
36	21.44	111.43	Shut-In(2)
66	192.16	112.89	End Shut-In(2)
67	2088.85	113.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	ocm 30%O 70%M	0.07

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45051 **DST#: 1**

Test Start: 2012.01.18 @ 18:05:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

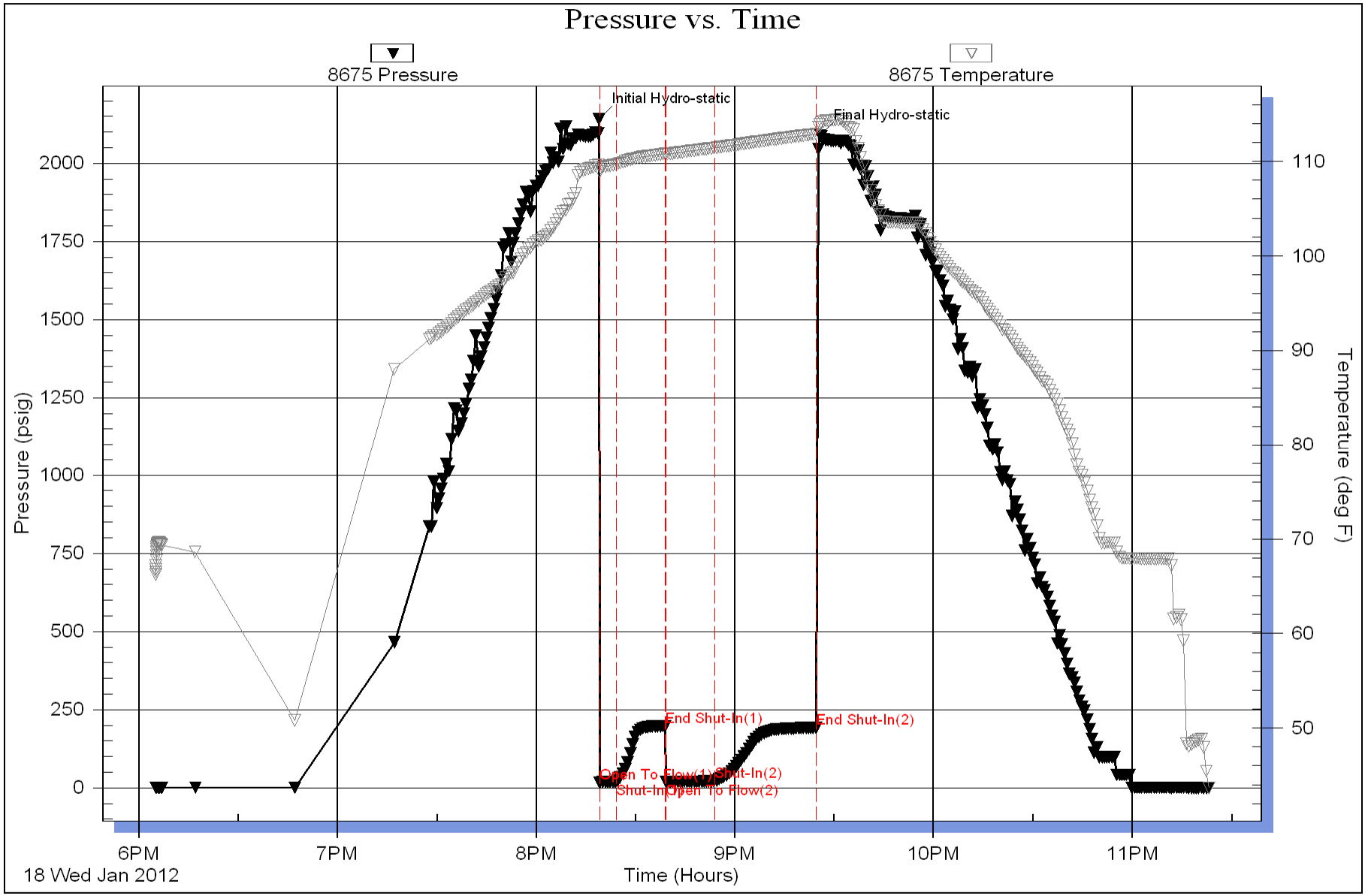
Recovery Table

Length ft	Description	Volume bbl
15.00	ocm 30%O 70%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

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

Serial #: 8675 **Inside** Larson Engineering Inc SS 1-10 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 45051 Printed: 2012.01.19 @ 08:21:19

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lew ellyn

10-19s-29w

SS 1-10

Job Ticket: 45052 **DST#: 2**

Test Start: 2012.01.19 @ 06:00:00

GENERAL INFORMATION:

Formation: **Kansas City "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:39:45
Time Test Ended: 11:49:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4283.00 ft (KB) To 4289.00 ft (KB) (TVD)
Total Depth: 4289.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

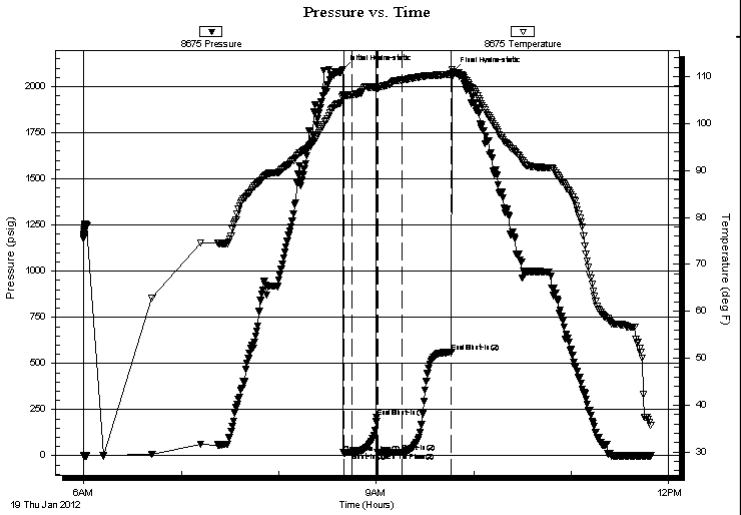
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 18.02 psig @ 4284.00 ft (KB)
Start Date: 2012.01.19 End Date: 2012.01.19
Start Time: 06:00:01 End Time: 11:49:15

Capacity: 8000.00 psig
Last Calib.: 2012.01.19
Time On Btm: 2012.01.19 @ 08:39:30
Time Off Btm: 2012.01.19 @ 09:47:15

TEST COMMENT: Built to 1/4" blow
No return blow
No blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2091.49	106.18	Initial Hydro-static
1	15.72	105.35	Open To Flow (1)
6	17.26	106.15	Shut-In(1)
21	207.68	107.81	End Shut-In(1)
22	17.65	107.76	Open To Flow (2)
36	18.02	109.29	Shut-In(2)
67	561.17	110.56	End Shut-In(2)
68	2080.93	110.96	Final Hydro-static

Recovery

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

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45052 **DST#: 2**

Test Start: 2012.01.19 @ 06:00:00

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:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	2.00 inches				

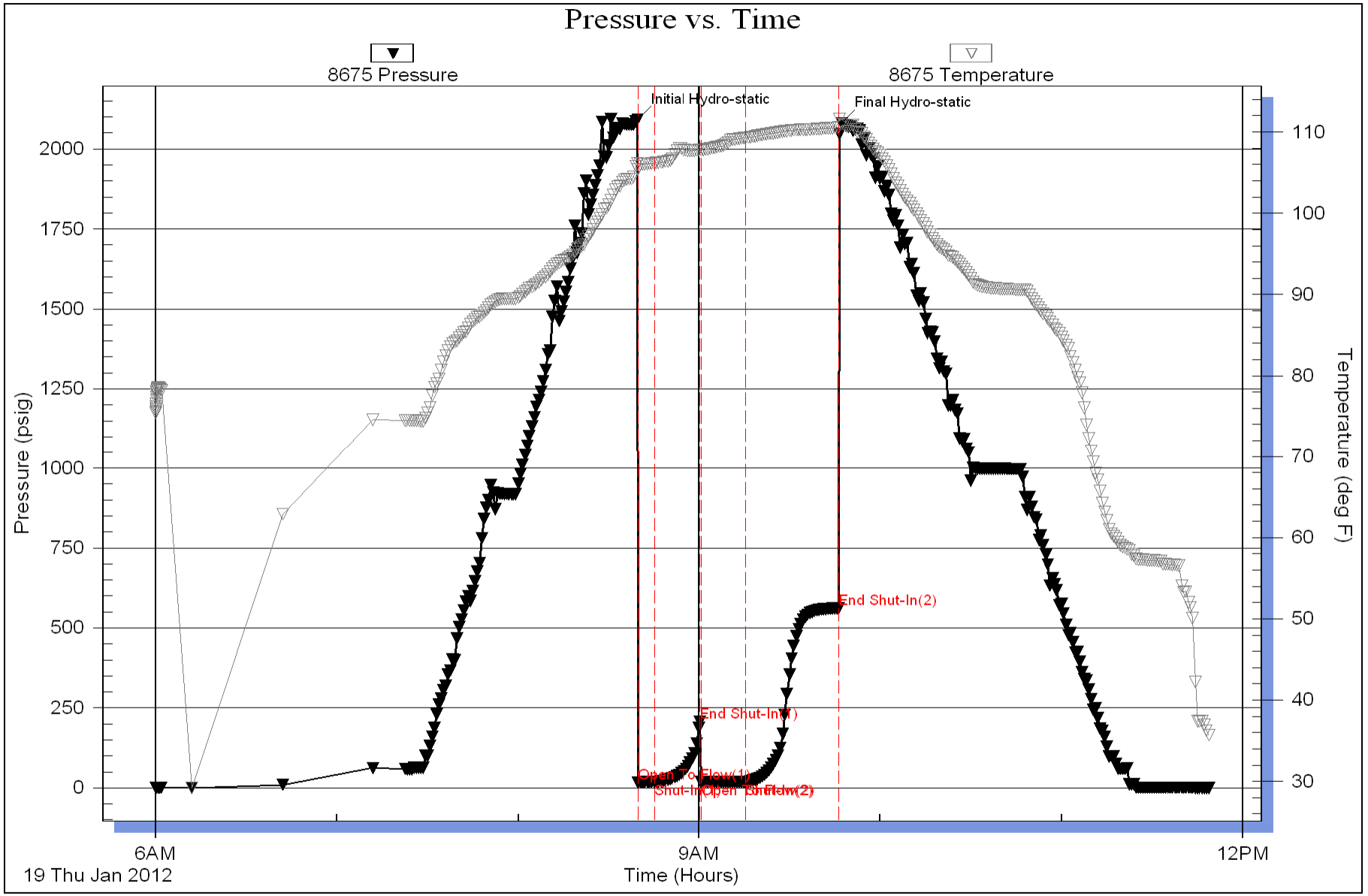
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% Mud	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:


Pressure vs. Time
8675 Pressure
8675 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
110
100
90
80
70
60
50
40
30
6AM
19 Thu Jan 2012
9AM
Time (Hours)
12PM

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45053 **DST#: 3**

Test Start: 2012.01.19 @ 21:00:00

GENERAL INFORMATION:

Formation: **Middle Creek**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:58:45
Time Test Ended: 03:56:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4307.00 ft (KB) To 4323.00 ft (KB) (TVD)
Total Depth: 4323.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

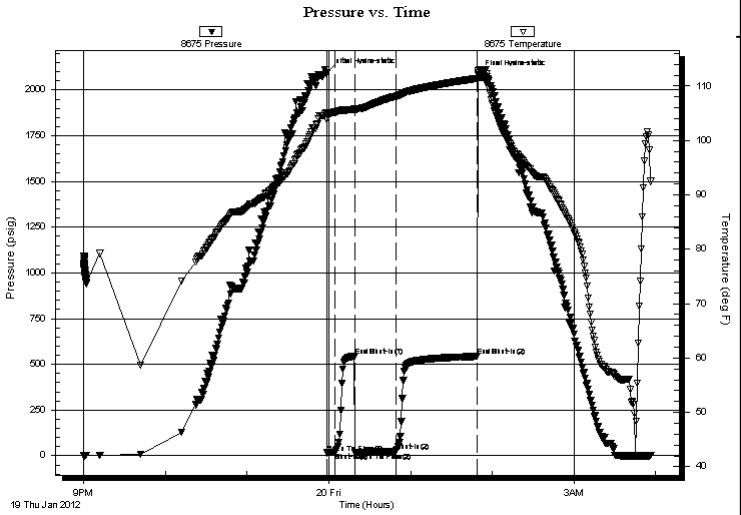
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 23.13 psig @ 4308.00 ft (KB)
Start Date: 2012.01.19 End Date: 2012.01.20
Start Time: 21:00:01 End Time: 03:56:15

Capacity: 8000.00 psig
Last Calib.: 2012.01.20
Time On Btm: 2012.01.19 @ 23:58:30
Time Off Btm: 2012.01.20 @ 01:49:45

TEST COMMENT: Built to 3/4" blow
Weak surface return blow
Built to 3/4" blow
Built to 1/4" return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2094.00	105.07	Initial Hydro-static
1	15.67	103.77	Open To Flow (1)
6	18.18	105.17	Shut-In(1)
21	544.45	105.73	End Shut-In(1)
21	18.73	105.53	Open To Flow (2)
51	23.13	108.06	Shut-In(2)
111	543.25	111.41	End Shut-In(2)
112	2085.88	112.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	100% Mud with oil scum	0.10

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45053 **DST#: 3**

Test Start: 2012.01.19 @ 21:00:00

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:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	2.00 inches				

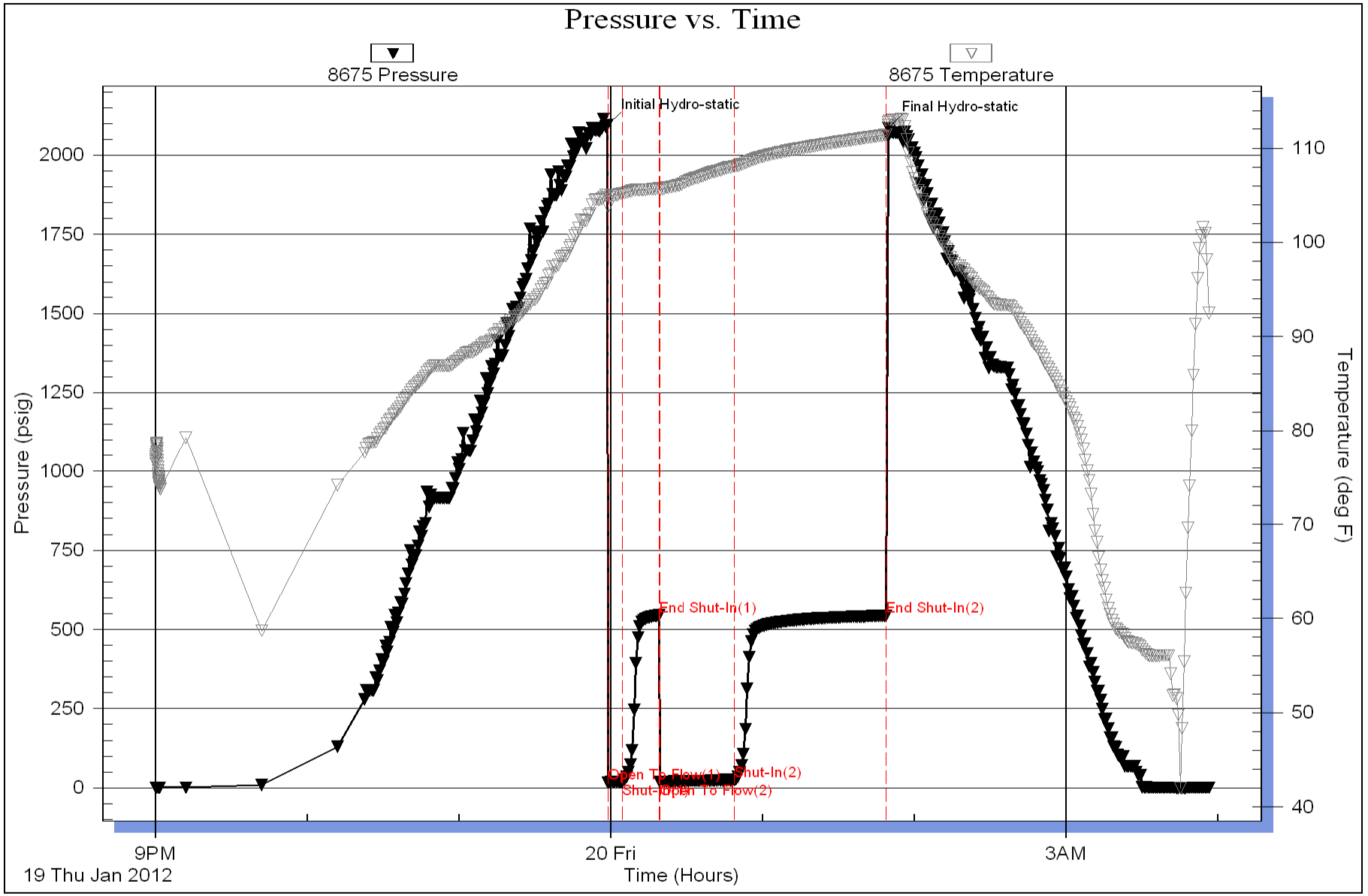
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	100% Mud with oil scum	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

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


Pressure vs. Time
8675 Pressure
8675 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(2)
Shut-In(1)
Open To Flow(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
110
100
90
80
70
60
50
40
9PM
19 Thu Jan 2012
20 Fri
3AM
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45054 **DST#: 4**

Test Start: 2012.01.20 @ 12:00:00

GENERAL INFORMATION:

Formation: **Kansas City "L"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:55:15
Time Test Ended: 17:31:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4319.00 ft (KB) To 4330.00 ft (KB) (TVD)
Total Depth: 4330.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

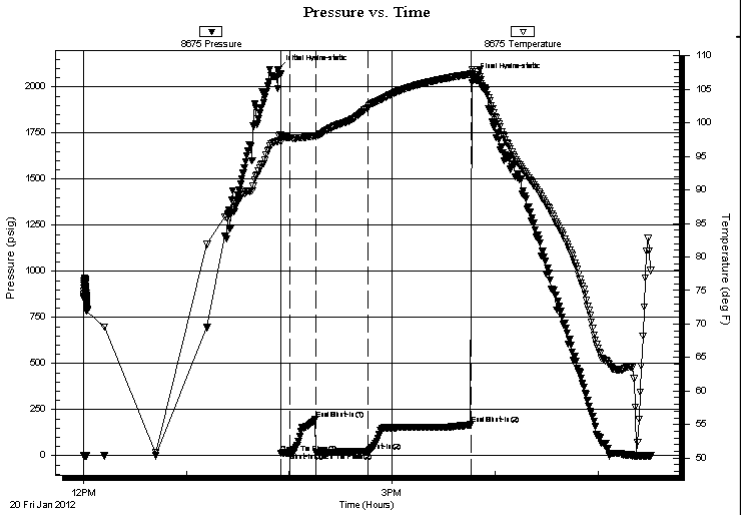
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 24.34 psig @ 4320.00 ft (KB)
Start Date: 2012.01.20 End Date: 2012.01.20
Start Time: 12:00:01 End Time: 17:31:00

Capacity: 8000.00 psig
Last Calib.: 2012.01.20
Time On Btm: 2012.01.20 @ 13:53:30
Time Off Btm: 2012.01.20 @ 15:47:15

TEST COMMENT: Weak surface blow
No return blow
Very weak surface blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2095.27	97.38	Initial Hydro-static
2	14.45	97.25	Open To Flow (1)
7	16.49	97.77	Shut-In(1)
22	196.46	98.11	End Shut-In(1)
22	17.52	98.03	Open To Flow (2)
53	24.34	102.30	Shut-In(2)
113	168.31	107.31	End Shut-In(2)
114	2052.73	107.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100%Mud with oil scum	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45054 **DST#: 4**

Test Start: 2012.01.20 @ 12:00:00

GENERAL INFORMATION:

Formation: **Kansas City "L"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:55:15
Time Test Ended: 17:31:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4319.00 ft (KB) To 4330.00 ft (KB) (TVD)
Total Depth: 4330.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

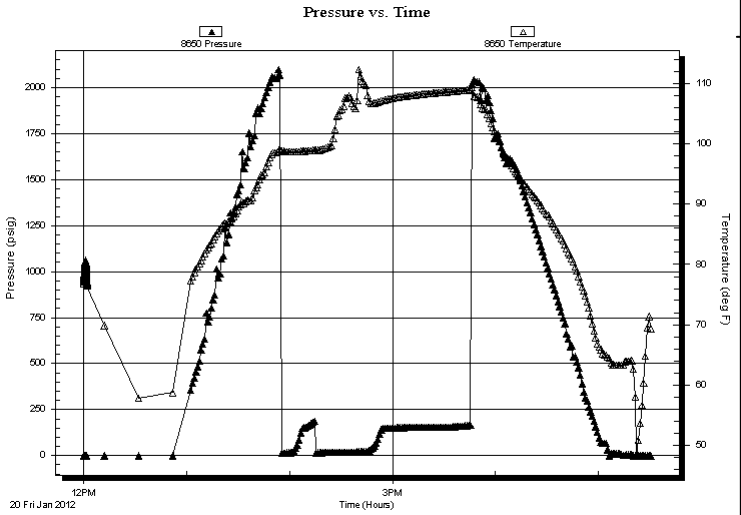
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4320.00 ft (KB)
Start Date: 2012.01.20 End Date: 2012.01.20
Start Time: 12:00:01 End Time: 17:31:00

Capacity: 8000.00 psig
Last Calib.: 2012.01.20
Time On Btm:
Time Off Btm:

TEST COMMENT: Weak surface blow
No return blow
Very weak surface blow
No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100%Mud with oil scum	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45054 **DST#: 4**

Test Start: 2012.01.20 @ 12:00:00

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:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

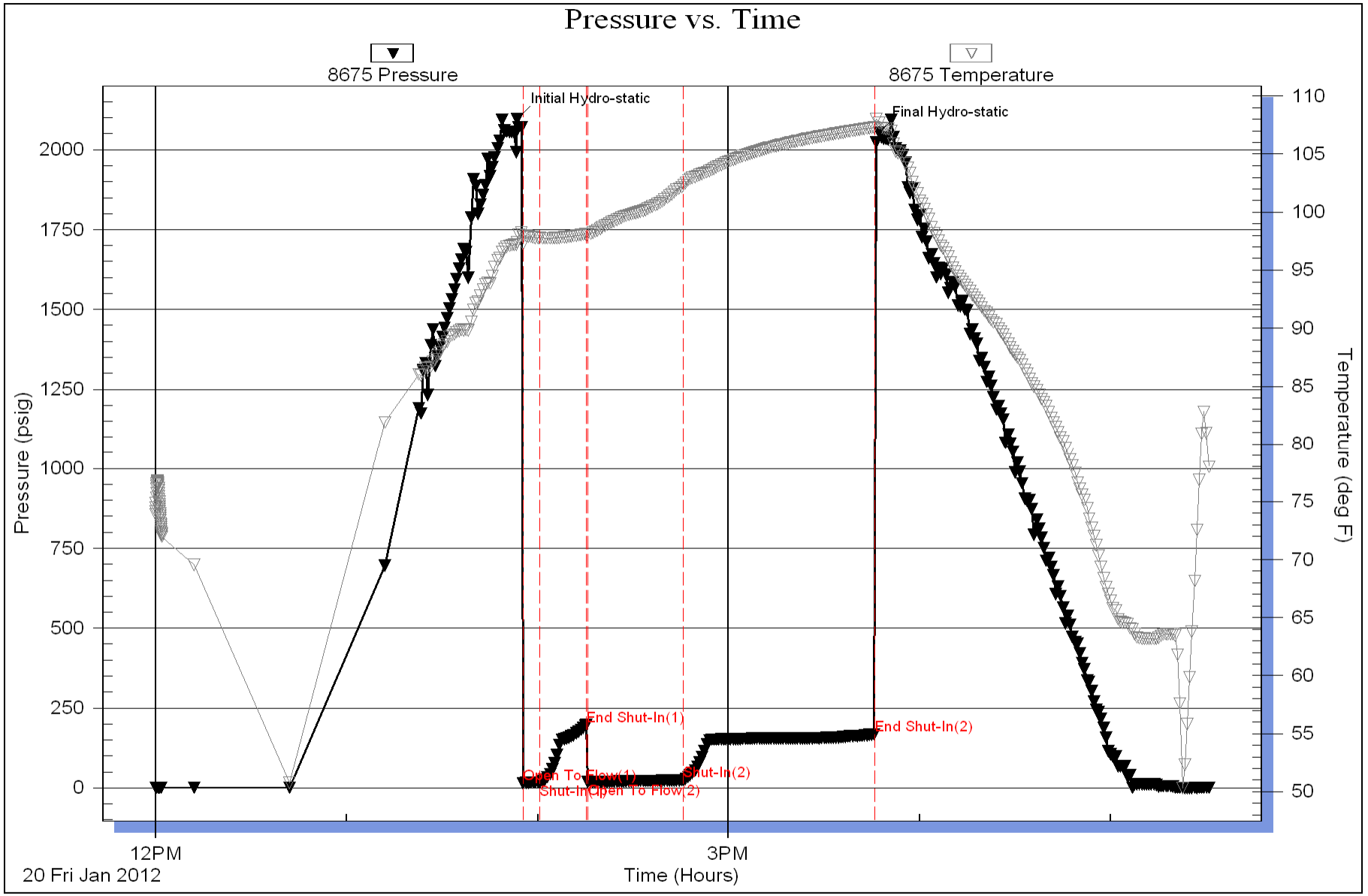
Recovery Table

Length ft	Description	Volume bbl
10.00	100%Mud with oil scum	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

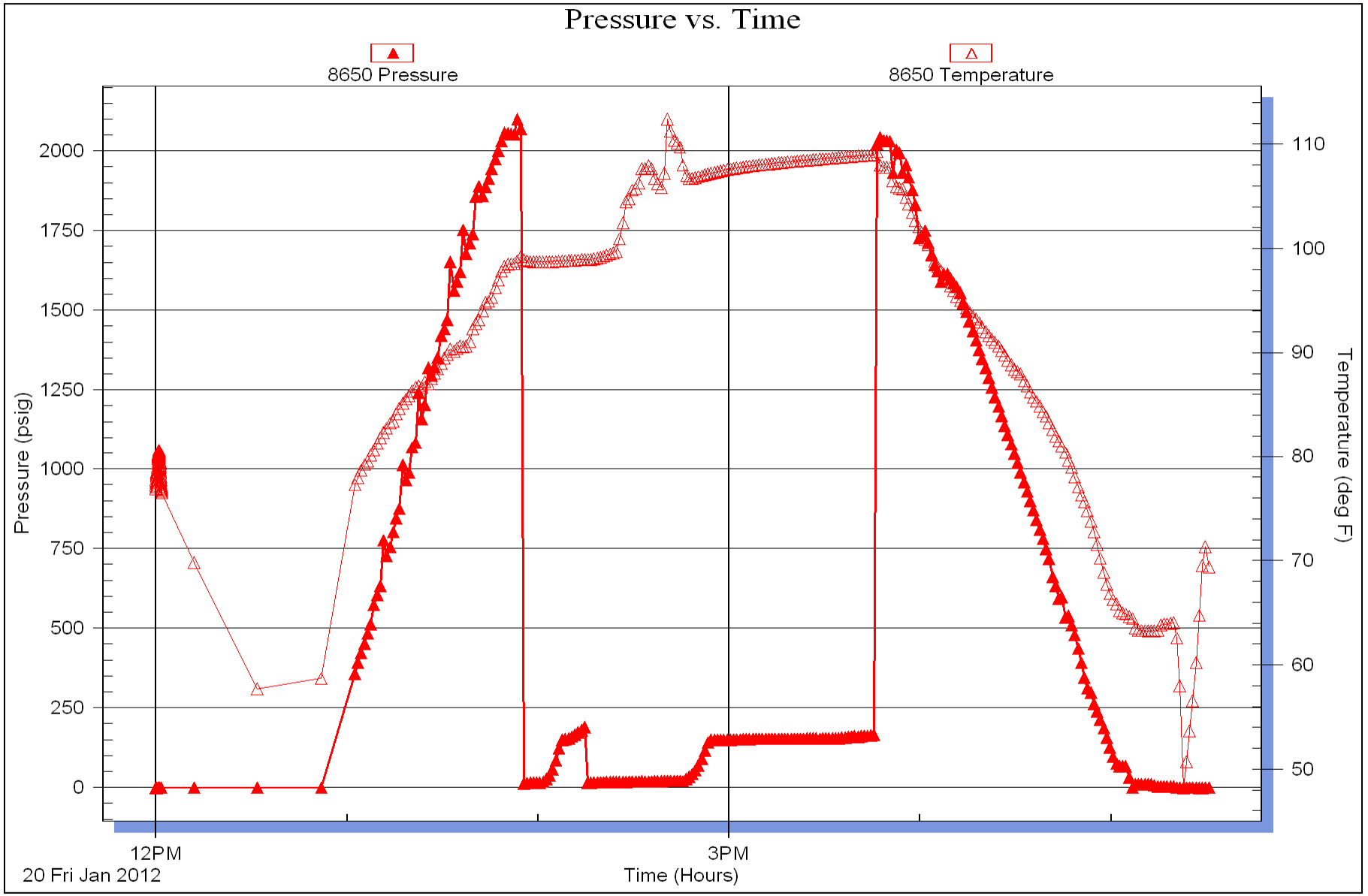
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8675 **Inside** Larson Engineering Inc SS 1-10 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 45054 Printed: 2012.01.21 @ 09:40:25

Serial #: 8650 **Outside** Larson Engineering Inc SS 1-10 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 45054 Printed: 2012.01.21 @ 09:40:25

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lew ellyn

10-19s-29w

SS 1-10

Job Ticket: 45055 **DST#: 5**

Test Start: 2012.01.21 @ 09:20:00

GENERAL INFORMATION:

Formation: **Pleasanton & Marmato**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:25:00
Time Test Ended: 15:17:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4348.00 ft (KB) To 4390.00 ft (KB) (TVD)
Total Depth: 4390.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

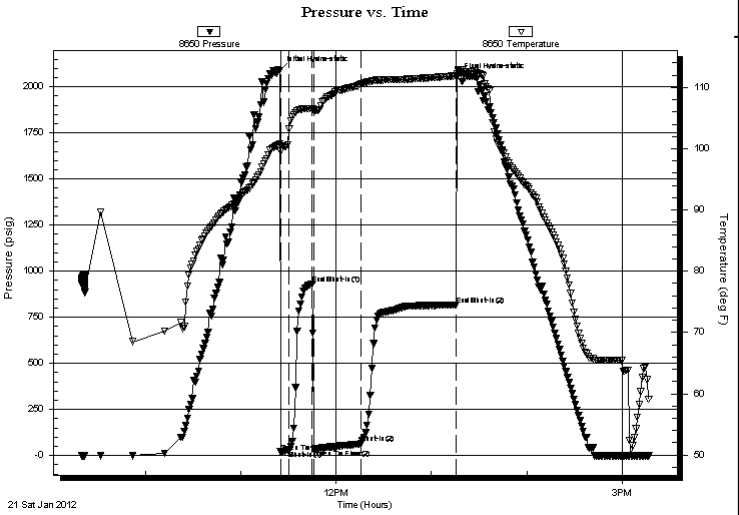
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: 64.14 psig @ 4349.00 ft (KB)
Start Date: 2012.01.21 End Date: 2012.01.21
Start Time: 09:20:01 End Time: 15:17:00

Capacity: 8000.00 psig
Last Calib.: 2012.01.21
Time On Btm: 2012.01.21 @ 11:24:30
Time Off Btm: 2012.01.21 @ 13:16:00

TEST COMMENT: Built to 2" blow
Weak surface return blow
Built to 7" blow
Weak surface return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2086.76	100.79	Initial Hydro-static
1	19.82	99.59	Open To Flow (1)
6	30.12	103.28	Shut-In(1)
21	931.06	106.55	End Shut-In(1)
22	34.27	106.35	Open To Flow (2)
51	64.14	110.54	Shut-In(2)
111	815.24	111.91	End Shut-In(2)
112	2048.17	112.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	ocm 30%O 70%M	0.44

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45055 **DST#: 5**

Test Start: 2012.01.21 @ 09:20:00

GENERAL INFORMATION:

Formation: **Pleasanton & Marmato**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:25:00
Time Test Ended: 15:17:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4348.00 ft (KB) To 4390.00 ft (KB) (TVD)
Total Depth: 4390.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

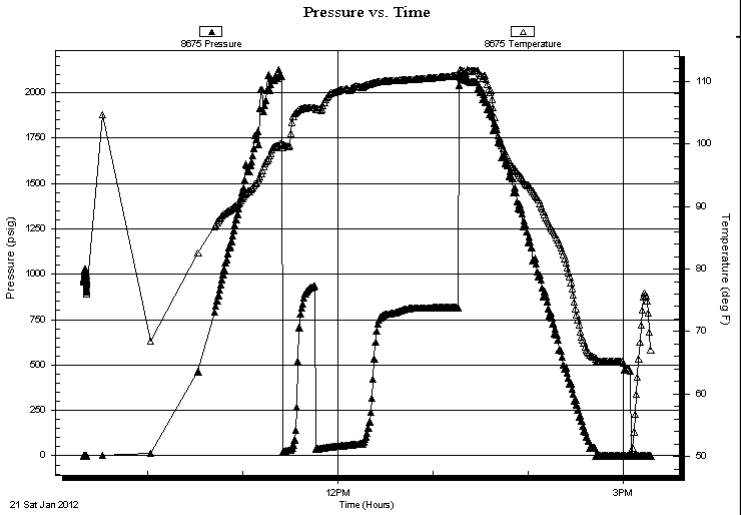
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: psig @ 4349.00 ft (KB)
Start Date: 2012.01.21 End Date: 2012.01.21
Start Time: 09:20:01 End Time: 15:17:15

Capacity: 8000.00 psig
Last Calib.: 2012.01.21
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 2" blow
Weak surface return blow
Built to 7" blow
Weak surface return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
90.00	ocm 30%O 70%M	0.44

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45055 **DST#: 5**

Test Start: 2012.01.21 @ 09:20:00

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:	41.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1700.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

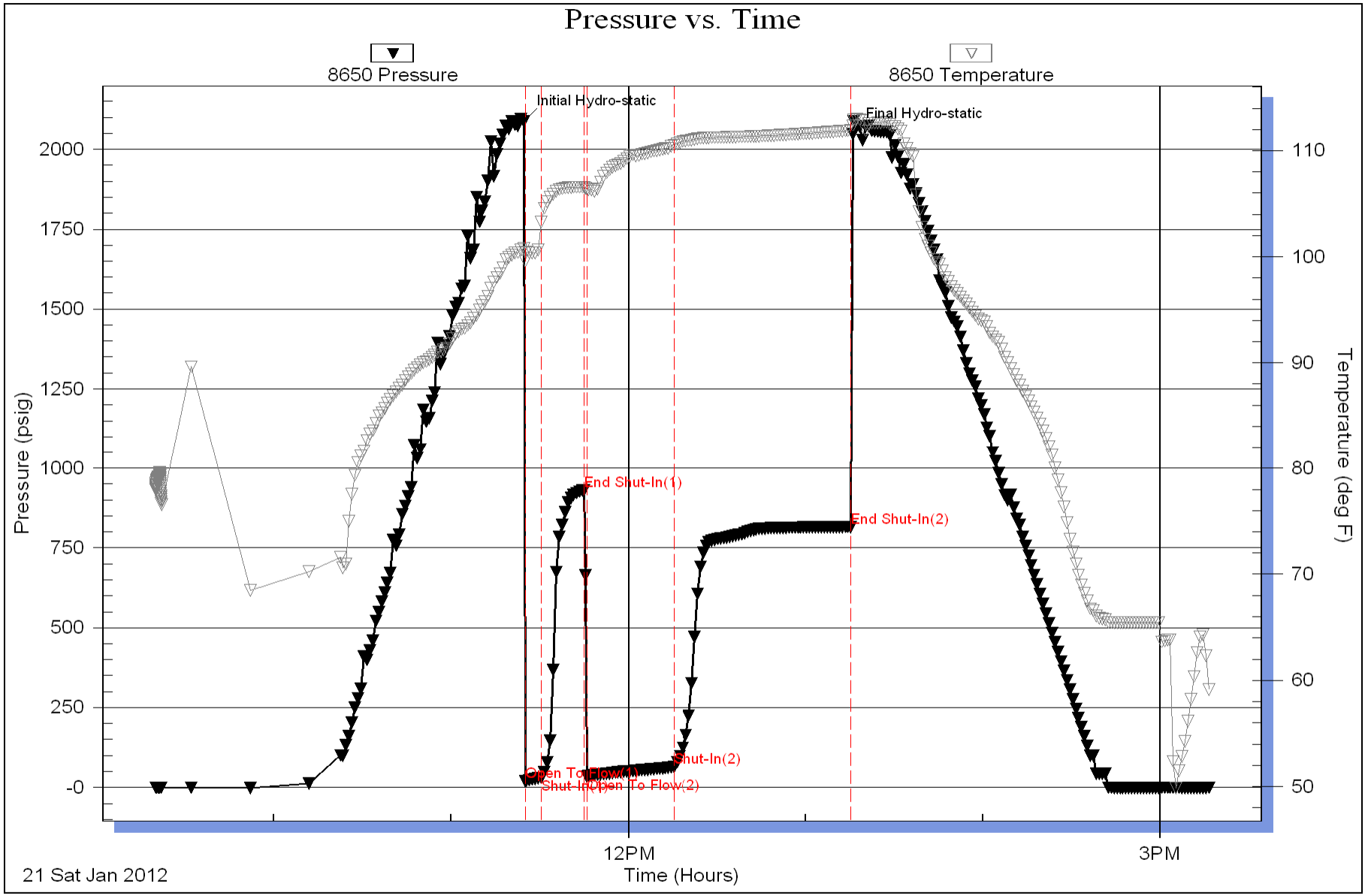
Recovery Table

Length ft	Description	Volume bbl
90.00	ocm 30%O 70%M	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

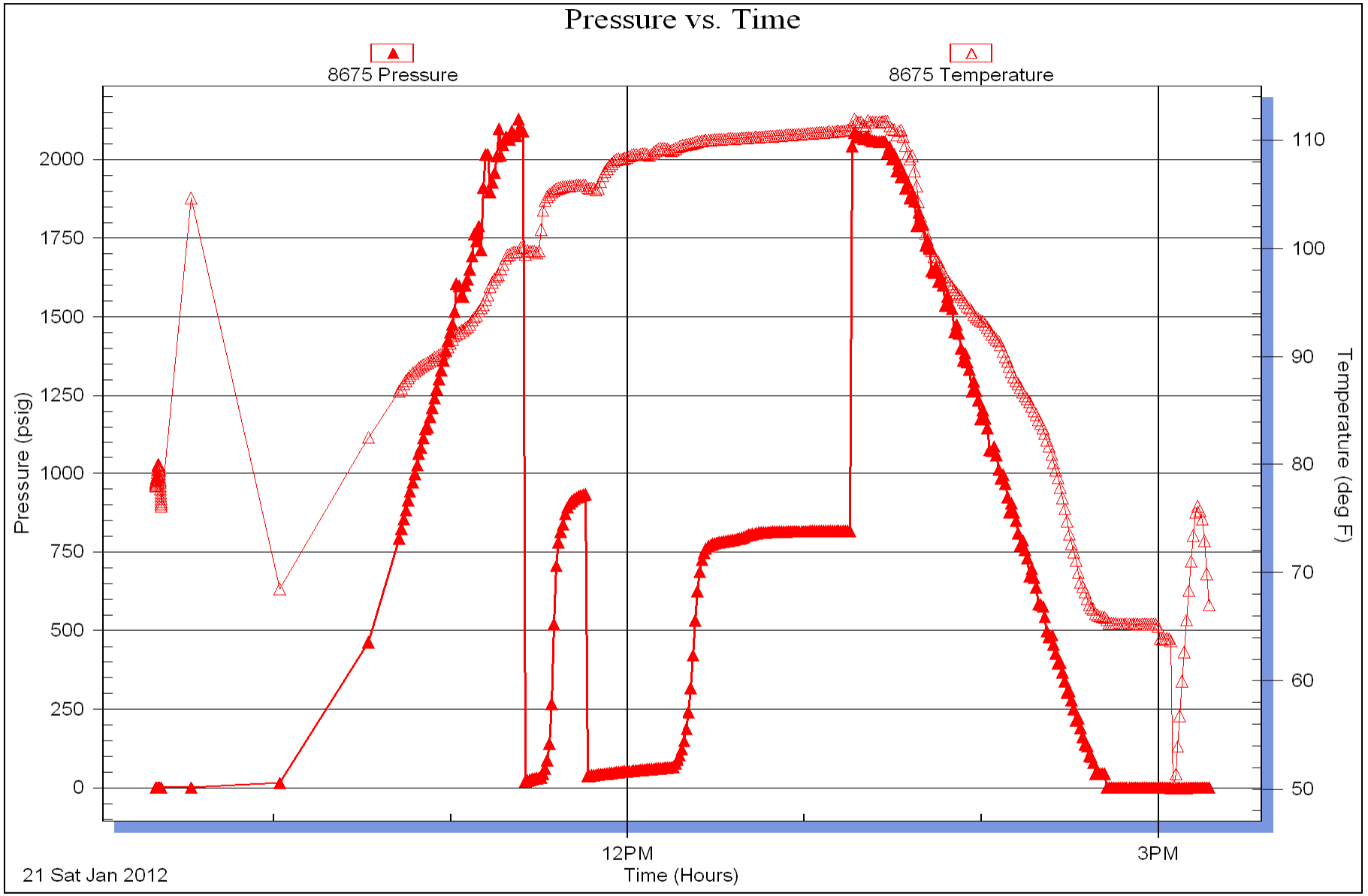
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8650 **Outside** Larson Engineering Inc SS 1-10 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 45055 Printed: 2012.01.21 @ 22:16:04

Serial #: 8675 **Inside** Larson Engineering Inc SS 1-10 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 45055 Printed: 2012.01.21 @ 22:16:04

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45056 **DST#: 6**

Test Start: 2012.01.22 @ 01:20:00

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:42:00
Time Test Ended: 09:35:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4428.00 ft (KB) To 4442.00 ft (KB) (TVD)
Total Depth: 4442.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

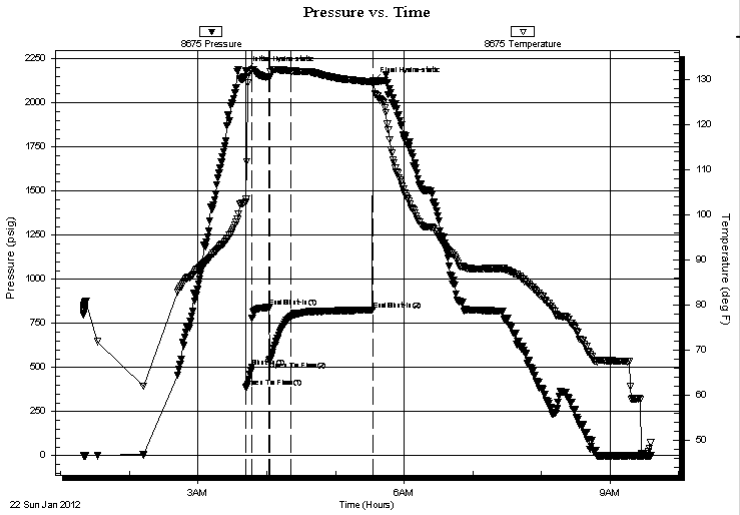
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 788.56 psig @ 4429.00 ft (KB)
Start Date: 2012.01.22 End Date: 2012.01.22
Start Time: 01:20:01 End Time: 09:35:45

Capacity: 8000.00 psig
Last Calib.: 2012.01.22
Time On Btm: 2012.01.22 @ 03:41:45
Time Off Btm: 2012.01.22 @ 05:32:45

TEST COMMENT: B.O.B. in 45 sec.
Bled off for 5 min. Very weak surface return blow
B.O.B. in 1 min.
Bled off for 5 min. Built to 6 1/2" return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2183.95	102.85	Initial Hydro-static
1	388.53	103.51	Open To Flow (1)
6	504.04	132.23	Shut-In(1)
21	841.22	130.75	End Shut-In(1)
21	538.48	130.59	Open To Flow (2)
40	788.56	132.06	Shut-In(2)
111	824.94	129.56	End Shut-In(2)
111	2120.78	129.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1112.00	100% Water	14.22
186.00	100%Water with oil scum	2.61
372.00	gcow m 10%G 10%O 40%W 40%M	5.22
124.00	w com 30%W 30%O 40%M	1.74
0.00	186 feet gas in pipe	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45056 **DST#: 6**

Test Start: 2012.01.22 @ 01:20:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	21 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	30000 ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1800.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1112.00	100% Water	14.223
186.00	100%Water with oil scum	2.609
372.00	gcow m 10%G 10%O 40%W 40%M	5.218
124.00	w com 30%W 30%O 40%M	1.739
0.00	186 feet gas in pipe	0.000

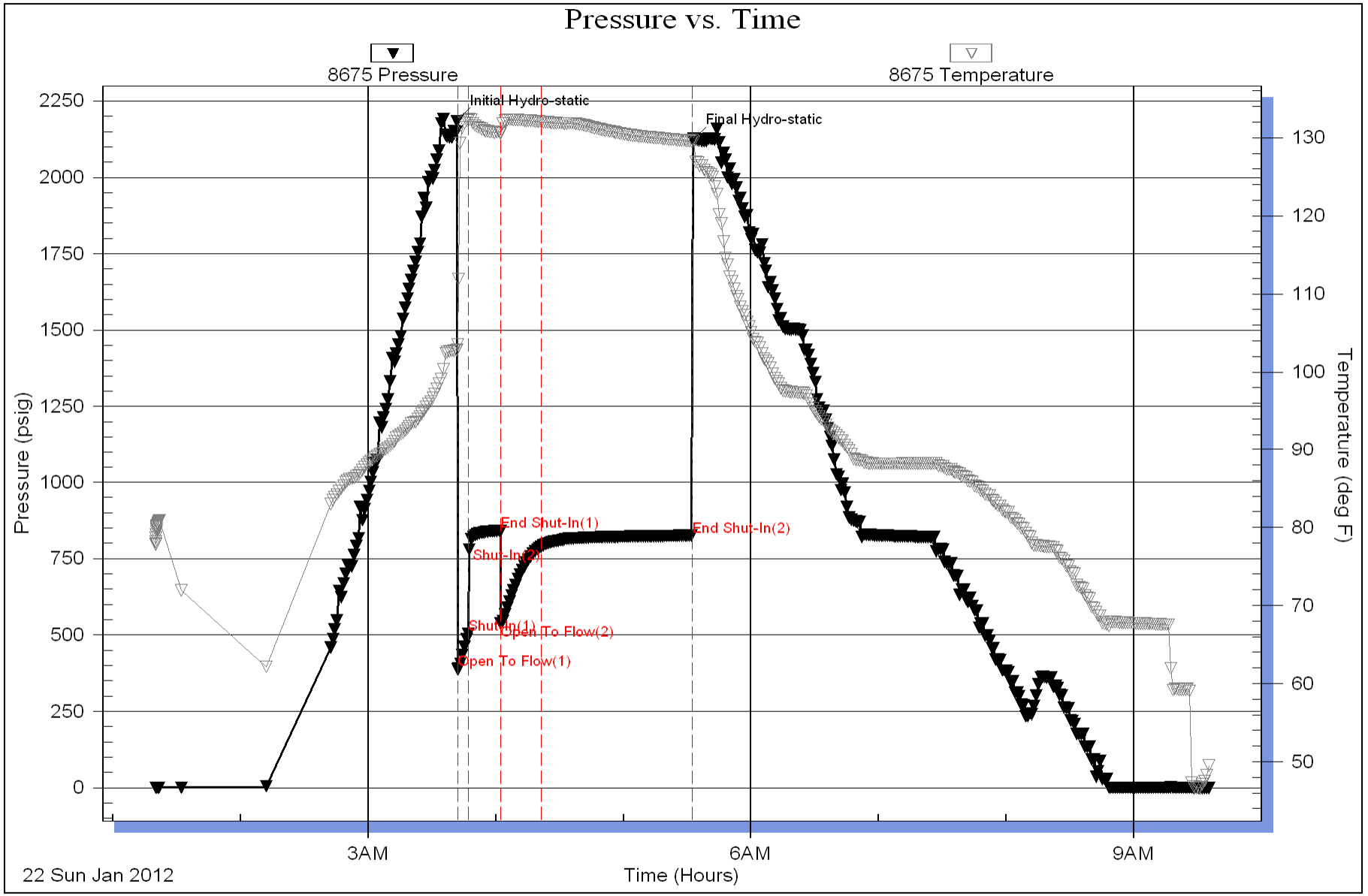
Total Length: 1794.00 ft Total Volume: 23.789 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: API: 21 @ 60 F= 21
RW: .3 @ 45 F= 30,000

Serial #: 8675 **Inside** Larson Engineering Inc SS 1-10 DST Test Number: 6



Trilobite Testing, Inc Ref. No: 45056 Printed: 2012.01.23 @ 08:29:38

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45057 **DST#: 7**

Test Start: 2012.01.23 @ 01:20:00

GENERAL INFORMATION:

Formation: **Pawnee & Fort Scott**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:54:30
Time Test Ended: 08:13:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46

Interval: 4452.00 ft (KB) To 4560.00 ft (KB) (TVD)
Total Depth: 4560.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

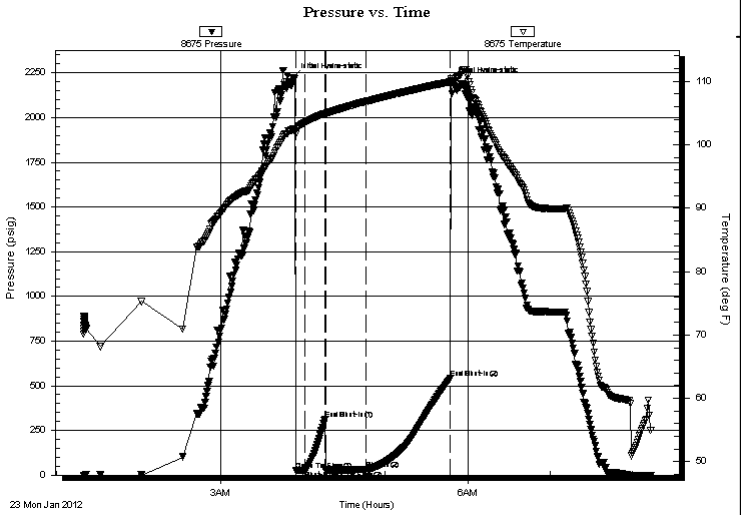
Reference Elevations: 2823.00 ft (KB)
2817.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 30.53 psig @ 4463.00 ft (KB)
Start Date: 2012.01.23 End Date: 2012.01.23
Start Time: 01:20:01 End Time: 08:13:30

Capacity: 8000.00 psig
Last Calib.: 2012.01.23
Time On Btm: 2012.01.23 @ 03:52:45
Time Off Btm: 2012.01.23 @ 05:47:45

TEST COMMENT: Built to 1" blow
No return blow
Weak surface blow , Died in 15 min.
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2224.02	102.42	Initial Hydro-static
2	26.13	101.63	Open To Flow (1)
9	27.02	103.46	Shut-In(1)
23	312.97	104.91	End Shut-In(1)
24	28.11	104.83	Open To Flow (2)
54	30.53	106.82	Shut-In(2)
115	541.67	109.92	End Shut-In(2)
115	2204.62	110.36	Final Hydro-static

Recovery

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

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

562 W State RD 4
Olmitz KS 67564-8561

ATTN: Bob Lewellyn

10-19s-29w

SS 1-10

Job Ticket: 45057 **DST#: 7**

Test Start: 2012.01.23 @ 01:20:00

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:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

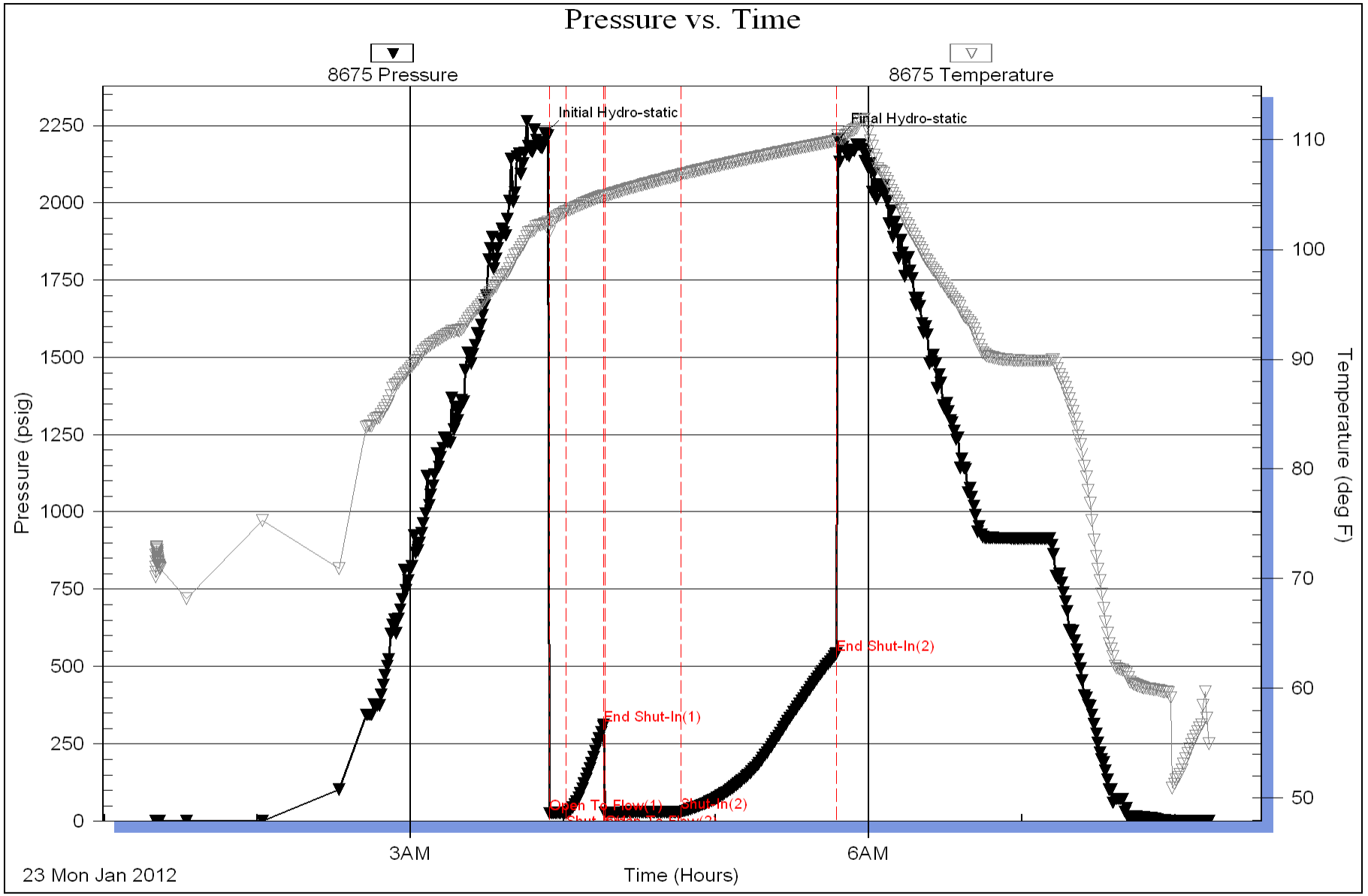
Recovery Table

Length ft	Description	Volume bbl
10.00	100%Mud	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

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

Serial #: 8675 **Inside** Larson Engineering Inc SS 1-10 DST Test Number: 7



Trilobite Testing, Inc Ref. No: 45057 Printed: 2012.01.23 @ 08:47:34

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. 1-10 SS
330 FSL & 330 FEL (SE SE SE)
Sec. 10-19S-29W
Lane County, Kansas

CONTRACTOR:	H D Drilling, LLC Rig 3
SPUDDED:	January 11, 2012
DRILLING COMPLETED:	January 24, 2012
SURFACE CASING:	8 5/8" @ 262 KBM/175 sx.
ELECTRIC LOGS:	DIL CNL/CDL MEL
ELEVATIONS:	2823 KB 2816 GL

FORMATION TOPS: (Electric Log)

Anhydrite	2159 (+ 664)
Base Anhydrite	2185 (+ 638)
Heebner Shale	3955 (-1132)
Lansing-Kansas City Group	3997 (-1174)
Muncie Creek Shale	4176 (-1353)
Stark Shale	4276 (-1453)
Hushpuckney Shale	4316 (-1493)
Base Kansas City	4358 (-1535)
Marmaton	4381 (-1558)
Altamont	4404 (-1581)
Pawnee	4473 (-1650)
Myrick Station	4495 (-1672)
Fort Scott	4521 (-1698)
Cherokee	4545 (-1722)
Mississippian	4620 (-1797)
Electric Log Total Depth	4659 (-1836)

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:

4005-4013 (A Zone)

Limestone, cream to buff, some scattered gray, dense to finely crystalline and chalky, slightly fossiliferous, broken streaks of poor intercrystalline and interfossil porosity, no show of oil.

4040-4044 (B Zone)

Limestone, buff, dense to finely crystalline, partly chalky, slightly fossiliferous, scattered poor intercrystalline and interfossil porosity, trace of scattered dead stain, no show of live oil.

4056-4085 (C/D Zone)

Limestone, cream to buff, dense and chalky with some finely crystalline, trace of light gray fresh chert, zone is mostly tight with no show of oil.

4088-4101 (E Zone)

Limestone, partly shaly, buff, some tan, dense to finely crystalline, partly fossiliferous, scattered poor to fair intercrystalline and interfossil porosity with traces of scattered dead stain, no show of live oil in this interval.

4103-4116 (F Zone)

Limestone, buff to tan, some gray, some scattered brown, dense to finely crystalline, some scattered cream chalky, zone is mostly tight with a trace of dead stain, no show of live oil.

4118-4125 (G Zone)
Limestone, cream to buff, some scattered gray, finely crystalline and oolitic, fair ooliticastic porosity, no show of oil. Lower portion of this G section becomes cream, chalky and dense limestone, some finely crystalline, mostly tight with no shows of oil.

4189-4218 (H Zone)

Limestone, buff to gray to brown, dense to finely crystalline, partly oolitic, some dense-oolitic, trace of poor scattered intercrystalline and interoolitic porosity, no show of oil.

4227-4234 (I Zone)

Limestone, buff to tan, some scattered brown, dense to finely crystalline, partly chalky, slightly fossiliferous, scattered poor intercrystalline and interfossil porosity, some poor vugular porosity, no show of oil.

4256-4266 (J Zone)

Limestone, buff to tan, dense to finely crystalline, partly oolitic, trace of scattered very poor interoolitic

and small vug porosity, rare trace of very poor spotted stain, no free oil, no odor, no fluorescence, no cut. Zone warrants no further evaluation.

4269-4276 (J-2 Zone)

Limestone, buff to tan and brown, dense to finely crystalline and oolitic, partly fossiliferous, fair intercrystalline, interoolitic, and ooliticastic porosity, scattered poor to fair spotted stain, fair show of free oil, good odor, fair fluorescence, fair cut.

Drill Stem Test No. 1 4274-4283
5-15-15-30; weak surface blow on first flow period, no blowback; no blow on open of second flow period, weak surface blow returned 12 minutes into second flow period, no blowback. Recovered 15 feet of oil cut mud (30% oil, 70% mud). ISIP 197# FSIP 192# IFP 16-20# FFP 19-21# IHP 2141# FHP 2089# BHT 113 degrees F.

4286-4294 (K Zone)

Limestone, cream to buff, some gray, some brown, dense to finely crystalline, partly fossiliferous, trace of oolitic, poor to fair intercrystalline and vugular "edge" porosity, trace of poor interoolitic and interfossil porosity, scattered fair spotted stain, slight show of free oil, fair to good odor, fair fluorescence, fair cut.

Drill Stem Test No. 2 4283-4289
5-15-15-30; built to quarter-inch blow on first flow, no blowback; blow did not return on second flow period. Recovered five feet of mud. ISIP 208# FSIP 561# IFP 16-17# FFP 18-18# IHP 2091# FHP 2081# BHT 110 degrees F.

4219-4224 (Middle Creek Zone)

Limestone, buff to tan, some gray, dense to finely crystalline, partly fossiliferous, poor to fair intercrystalline and vugular porosity, some "edge" porosity, fair spotted stain, some good spotted stain, fair show of free oil, good odor, fair fluorescence, fair cut, trace of scattered dead stain interspersed with live stain.

Drill Stem Test No. 3 4307-4323
5-15-30-60; built to ¾ inch blow on first flow period, weak surface return blow; built to ¾ inch blow on second flow, built to ¼ inch return blow. Recovered 20 feet of mud with oil scum (100% mud). ISIP 549# FSIP 543# IFP 16-18# FFP 19-23# IHP 2094# FHP 2086# BHT 111 degrees F.

4327-4337 (L Zone)

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

Drill Stem Test No. 4 4319-4330
5-15-30-60; weak surface on first flow, no return blow; weak surface blow on second flow, no return blow. Recovered 10 feet of mud with an oil scum. ISIP 196# FSIP 168# IFP 14-16# FFP 18-24# IHP 1095# FHP 2053# BHT 107 degrees F.

4358-4381 (Pleasanton Zone)

Limestone, buff to tan, dense to finely crystalline, some mealy, scattered poor intercrystalline and vugular porosity, some poor light spotted stain, trace of fair spotted stain, show of free oil, faint to fair odor, poor fluorescence, poor to fair cut.

4381-4393 (Marmaton)

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

Drill Stem Test No. 5 4348-4390
5-15-30-60; blow built to two inches on first flow period, weak surface return blow; blow built to seven inches on second flow, weak surface return blow. Recovered 90 feet of oil cut mud (30% oil, 70% mud). ISIP 931# FSIP 815# IFP 20-30# FFP 34-64# IHP 2087# FHP 2048# BHT 112 degrees F.

4434-4437 (Altamont "A" Zone)

Limestone, cream to buff, dense to finely crystalline, some mealy, fair intercrystalline and vugular porosity, scattered fair spotted stain, fair show of free oil, fair to good odor, poor to fair fluorescence, poor to fair cut.

Drill Stem Test No. 6 4428-4442
5-15-30-60; blow off bottom of bucket in 45 seconds, very weak surface return blow; blow of bottom of bucket in one minute, bled off for 5 minutes, built to 6 ½ inch return blow. Recovered 1794 feet of fluid: 186 feet of gas in drill pipe, 124 feet of water cut and oil cut mud (30% oil, 30% water, 40% mud), 372 feet of gas cut, oil cut, water cut mud (10% gas, 10% oil, 40% water, 40% mud), 186 feet of water with oil scum, 1112 feet of water (chlorides 30,000 ppm., system 1,800 ppm). ISIP 841# FSIP 825# IFP 389-504# FFP 538-789# IHP 2184# FHP 2121# BHT 130 degrees F.

4473-4493 (Pawnee Zone)

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

4495-4516 (Myrick Station Zone)

Limestone, buff to tan to brown, dense to finely crystalline, zone is mostly tight with a trace of very poor intercrystalline porosity, rare trace of poor spotted stain, very slight show of free oil, faint fleeting odor, no fluorescence, poor cut.

4521-4524 (Upper Fort Scott Zone)

Limestone, buff to tan to brown, dense to finely crystalline and mealy, trace of medium and trace of large crystal overgrowth in section. Section is mostly tight with only a trace of poor vugular porosity and no shows of oil.

4537-4545 (Lower Fort Scott Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, poor to fair intercrystalline porosity with fair show of free oil, fair spotted stain, fair fluorescence, faint odor, fair cut.

Drill Stem Test No. 7 4462-4560
5-15-30-60; built to one-inch blow on first flow, no blowback; surface blow on second flow, died in 15 minutes, no blowback. Recovered 10 feet of mud. ISIP 313# FSIP 542# IFP 26-27# FFP 28-31# IHP 2224# FHP 2205 BHT 110 degrees F.

4576-4594 (Johnson Zone)

Limestone, buff to tan to medium gray, dense to finely crystalline, some oolitic and dense oolitic, zone is mostly tight with one or two pieces with a trace of poor spotted stain, no free oil, no odor, no fluorescence, no cut. Zone warrants no further evaluation.

4620-4659 (Mississippian Zone)

Limestone, tan, dense, some sub-lithographic, some fine to medium crystalline, soft, friable, slightly chalky, zone is mostly tight with a few scattered small, elongated vugs, no show of oil.

Conclusions and recommendations:

Production casing was set on the SS No. 1-10 to produce the Altamont "A" zone, and evaluate other shows encountered in the drilling of this well. A disposal well is available nearby to accommodate any water produced from the SS No. 1-10.

Respectfully submitted,

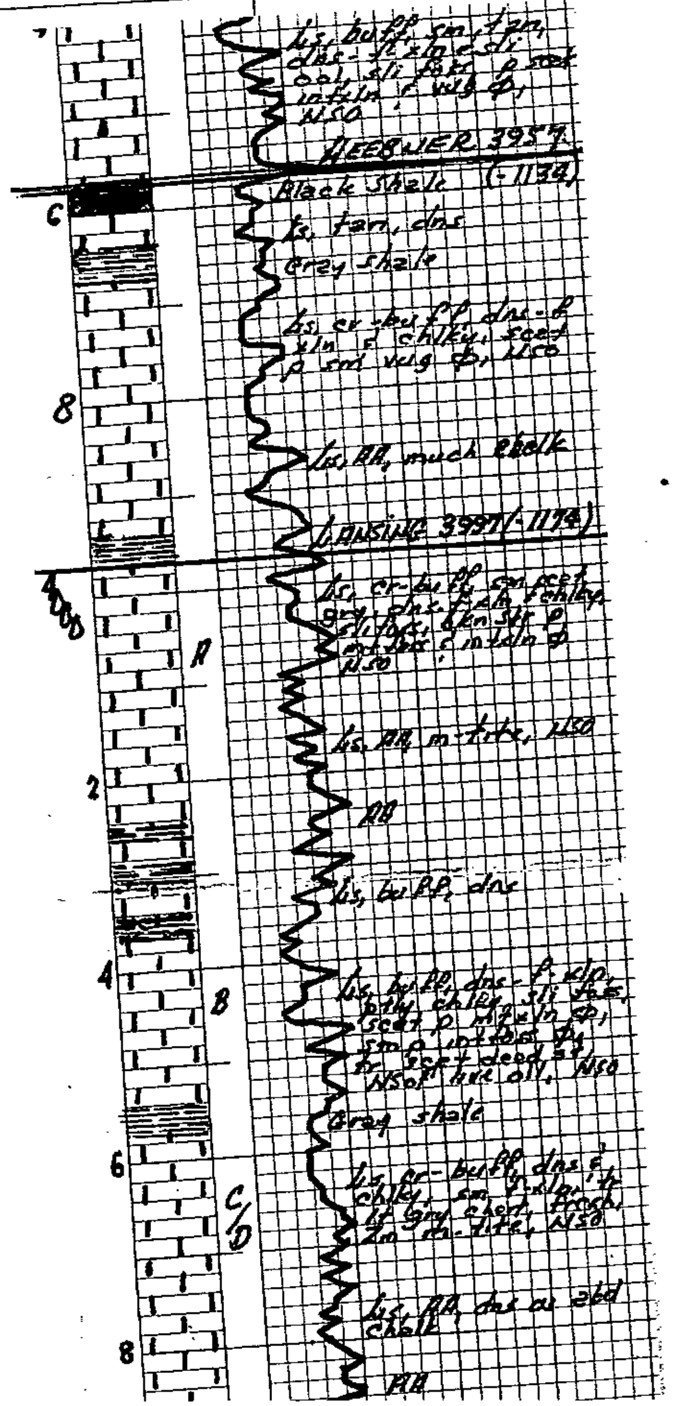
Robert C. Lewellyn
Petroleum Geologist

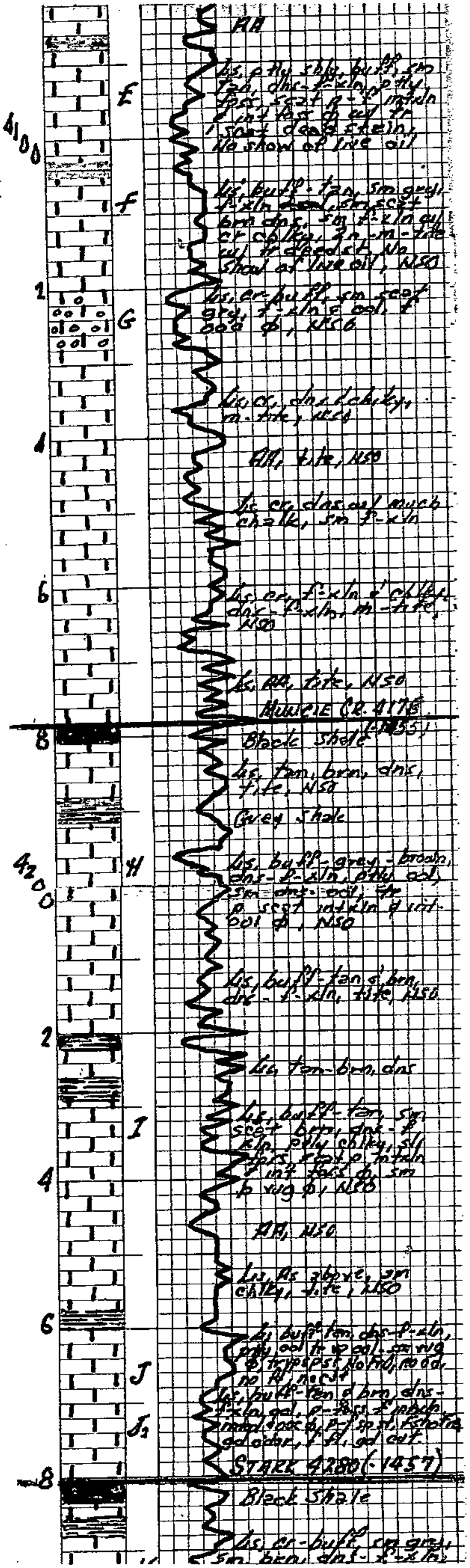
RCL:me

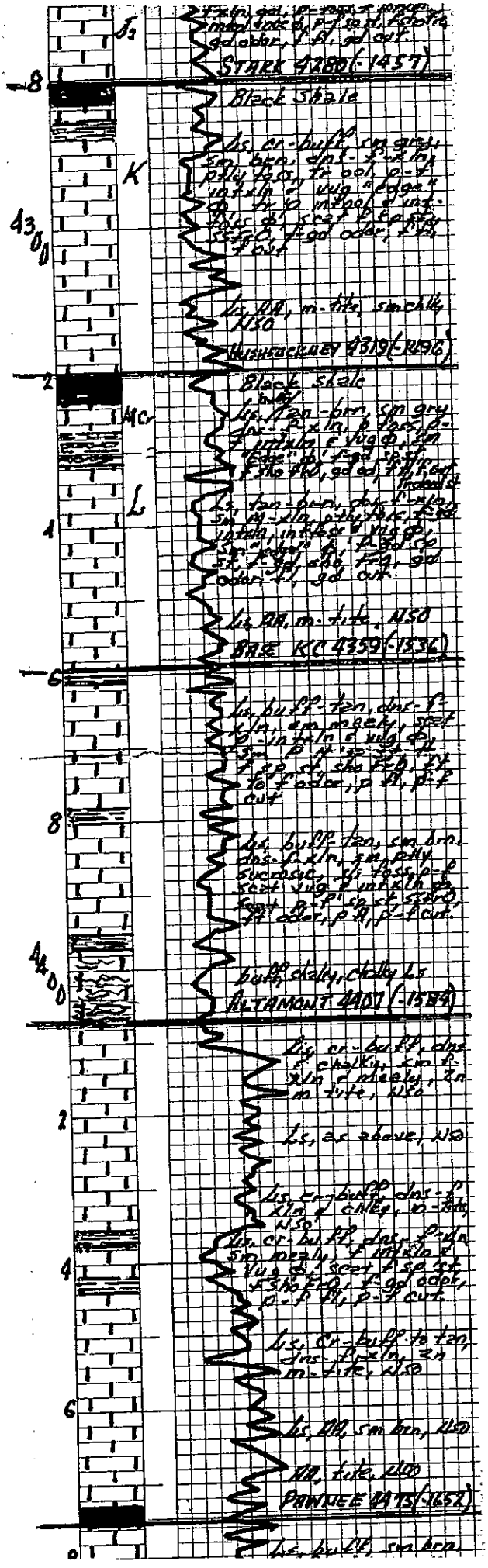
STATE: KANSAS
COMPANY: Larson Engineering, Inc.
COUNTY: Lane
FARM: SS
WELL NO.: 1-10
BLOCK:
SURVEY: 330' FSL & 330' FEL
SEC.: 10
SESESE
T.: 19 S
R.: 29 W
TOTAL DEPTH: 4660
CONTRACTOR: HD Drilling, LLC
COMMENCED: 01-11-2012
COMPLETED: 01-24-2012
REMARKS:
ALTITUDE: 2823 KB
PRODUCTION: Oil
Robert C. Lewellyn-Geol

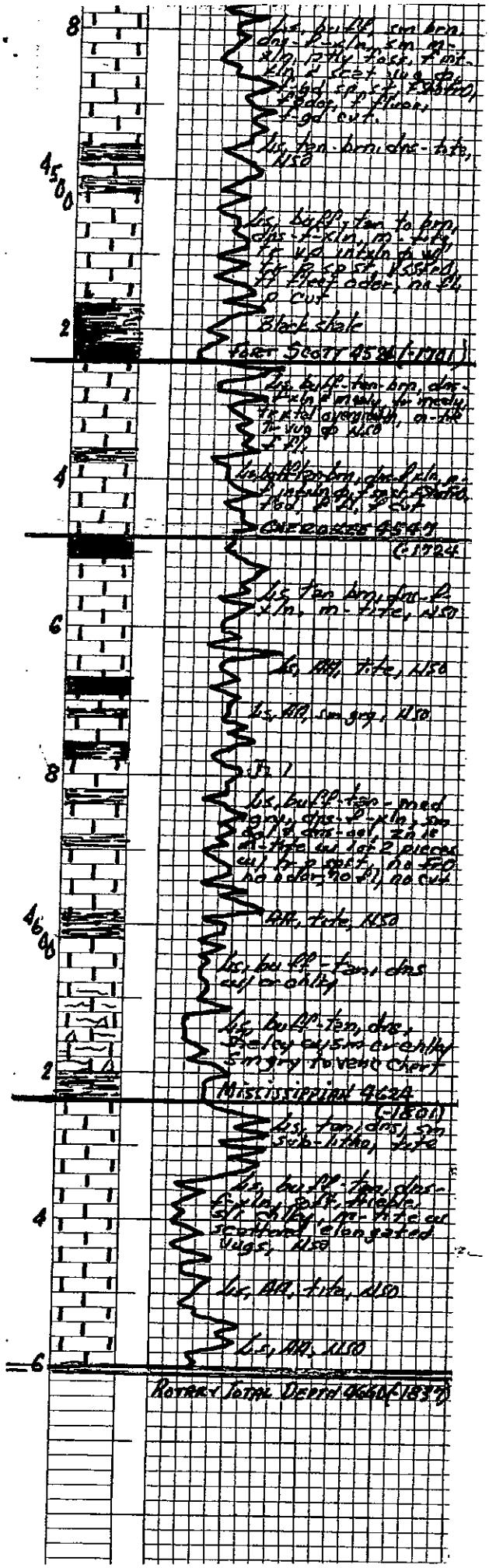
CASING RECORD

8 5/8" @ 262 KBM/175 sx




AA
No show of live oil
E
4100
F
Show of live oil, NSO
G
AA, tite, NSO
Ls, AA, tite, NSO
MUNCIE CR. 4175
Black Shale
Ls, tan, brn, dns, tite, NSO
Grey Shale
H
4200
I
AA, NSO
Ls, As above, sm chlky, tite, NSO
J
STARK 4280 (-1457)
Black Shale


STARK 4280 (-1457)
Black Shale
HUSHPUCKNEY 4319 (-1496)
Black Shale
BASE KC 4359 (-1536)
ALTAMONT 4401 (-1578)
PAWNEE 4473 (-1652)


Black shale
Mississippian 9624 (-1801)
Rotary Total Depth 9650 (-1827)

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/

May 09, 2012

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

Re: ACO1
API 15-101-22335-00-00
SS 1-10
SE/4 Sec.10-19S-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