KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1061801

Form ACO-1
June 2009
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:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] 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
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

4/30/2011	5/14/2011	5/31/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-101-22291-00-00
Spot Description:
NE - NW - SE - NW Sec. 21 Twp. 18 S. R. 29 [ ] East [x] West
1477 Feet from [x] North / [ ] South Line of Section
1766 Feet from [ ] East / [x] West Line of Section

Footages Calculated from Nearest Outside Section Corner:
[ ] NE [x] NW [ ] SE [ ] SW

County: Lane
Lease Name: Walker Well #: 2-21
Field Name: Wildcat
Producing Formation: Marmaton, L-KC
Elevation: Ground: 2812 Kelly Bushing: 2819
Total Depth: 4629 Plug Back Total Depth: 4581
Amount of Surface Pipe Set and Cemented at: 255 Feet
Multiple Stage Cementing Collar Used? [x] Yes [ ] No
If yes, show depth set: 2134 Feet
If Alternate II completion, cement circulated from: 2134
feet depth to: 0 w/ 160 sx cmt.

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

Chloride content: 4300 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

- [x] **Letter of Confidentiality Received**
  Date: 08/25/2011
- [x] **Confidential Release Date:** 08/24/2013
- [x] **Wireline Log Received**
- [x] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [ ] I [x] II [ ] III **Approved by:** NAOMI JAMES **Date:** 08/26/2011

Side Two

[redacted]

1061801

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: Walker Well #: 2-21

Sec. 21 Twp. 18 S. R. 29 ☐ East ☑ West County: Lane

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:

Dual Induction
Dual Comp Porosity
Microresistivity

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

Name	Top	Datum
Attached	Attached	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	255	Class A	175	2% gel, 3% CC
Production	7.875	5.5	15.5	4623	EA-2	145	7#/sk gilsonite, 1/4#/sk flocele, 3/4% Hali

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:
☐ Perforate
☐ Protect Casing
☐ Plug Back TD
☐ Plug Off Zone

Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
0-2134	SMD	160	1/4#/sk flocele
-			

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	4389-92, 4325-34, 4187-91	250 Gal 15% MCA	4325-34
		250 Gal 15% MCA	4187-91

TUBING RECORD: Size: 2.375 Set At: 4368 Packer At:

Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 5/31/2011

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	89		0		35

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:
4187 - 4392

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	Walker 2-21
Doc ID	1061801

Tops

Name	Top	Datum
Anhydrite	2161	+658
Base Anhydrite	2187	+632
Heebner Sh	3916	-1097
Lansing- KC	3962	-1143
Stark Sh	4236	-1417
Base Kansas City	4317	-1498
Altamont A	4389	-1570
Pawnee	4429	-1610
Fort Scott	4486	-1667
Cherokee	4510	-1691
Mississippian	4602	-1783

ALLIED CEMENTING CO., LLC. 043303

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Oakley

DATE 4-30-11	SEC. 21	TWP. 18	RANGE 29	CALLED OUT	ON LOCATION	JOB START 10:00	JOB FINISH 10:30pm
LEASE Walker	WELL # 2-21		LOCATION Dighton 3½w ½			COUNTY Lane	STATE KS
OLD OR NEW (Circle one)			w into				

CONTRACTOR H D Drilling Rig 3
TYPE OF JOB surface
HOLE SIZE 12¼ T.D. 258'
CASING SIZE 8⅝ DEPTH 255'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15
PERFS.
DISPLACEMENT 15.28 BBL

OWNER same

EQUIPMENT

PUMP TRUCK # 423-281 CEMENTER Andrew
HELPER Jerry
BULK TRUCK # 404 DRIVER mike
BULK TRUCK # DRIVER

CEMENT

AMOUNT ORDERED 125 sks 60/40 3%cc 2%gel

COMMON 125sks	@	16.25	2843.75
POZMIX	@		
GEL 3 sks	@	21.25	63.75
CHLORIDE 6 sks	@	58.20	349.20
ASC	@		
HANDLING 184 sks	@	2.25	414.00
MILEAGE 11¢ sk/mile			1012.00
		TOTAL	4682.70

REMARKS:

Cement did circulate

thank you

SERVICE

DEPTH OF JOB 258'
PUMP TRUCK CHARGE 1125.00
EXTRA FOOTAGE @
MILEAGE 50 X 2 @ 7.00 700.00
MANIFOLD head @ 200.00
Light vehicle @ 4.00 400.00
@
TOTAL 2425.00

CHARGE TO: Larson
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

@
@
@
@
@
TOTAL

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

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.

PRINTED NAME Doug Roberts

SIGNATURE Doug Roberts

SWIFT Services, Inc.

CHARGE TO: Larson
ADDRESS
CITY, STATE, ZIP CODE

TICKET 19498

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Hays, Ks	2-21	Walker	Lane	KS		5-17-11	
2. Ness City, Ks	TICKET TYPE ☑ SERVICE ☐ SALES	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.		Wiedwest		CT	Sw/Dighton, Ks		
4.	WELL TYPE	WELL CATEGORY	JOB PURPOSE		WELL PERMIT NO.	WELL LOCATION	
REFERRAL LOCATION	Oil	inField	Cement Port Collar @ 2135'				
	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 #113	40	Mi			5 00	200 00
576 D		1			Pump Charge - cmt Port collar	1	ea			1100 00	1100 00
290		1			D-Air	3	gal			35 00	105 00
330		2			SMD Cement	160	SKS			16 00	2480 00
276		2			Flocele	40	lbs			1 50	60 00
581		2			Service Charge - Cement	225	SKS			1 50	337 50
583		2			Drayage 40 Mi	447.8	TM	22390	lbs	1 00	447 80

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 John D. by Don L.

DATE SIGNED 5-17-11 | TIME SIGNED 1500 ☐ 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	4650 30
Lane TAX 6.3%	161 60
TOTAL	4811 90

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

SWIFT OPERATOR Don Lawman | APPROVAL

Thank You!

JOB LOG — SWIFT Services, Inc.

DATE 5-17-11 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Lacsoni Engineering	2-21	Walker	Cement Port Collar	19498

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1430					2 3/8"	5 1/2"	On location - Rig running 2 3/8 Tbg & P.C Tool
								P.C @ 2135' = Ann Vol = 66 BBl & Tbg vol 8 1/4 = 74 1/4
	1600					C	1200	Tst P.C. Closed - OK
		3	2			C	300	Open P.C - inj rate
								Hook to 2 3/8" Tbg
		3	2			300	C	Start H2O Ahead
		3	6			300	C	Have 6 Bbl Ahead cmt
		3	12			250	C	Have wtr/mud Returns to pit
		3	75				C	Have cmt cir to Pit - 135 SKS
		3	83			350	C	Tail in 25 SKS @ 13 ppg
		3	6			325	C	Fin cmt. Displ 6 BBl H2O
							C	Fin Displ.
						C	1200	Close P.C & Tst Closed - OK
								Rig run 4 Jts.
		3	8/10				400	Rev-out 2 bbls
			25				200	Fin rev-out clean
								Job Complete
								Washup
								& Rackup
								Thanks Ken, Doug, David
	1730							

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State Rd 4
Olmitz, Ks 67564

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042092 **DST#: 1**

Test Start: 2011.05.07 @ 02:08:55

GENERAL INFORMATION:

Formation: **Lansing H**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:44:05
Time Test Ended: 09:19:49

Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35

Interval: 4112.00 ft (KB) To 4140.00 ft (KB) (TVD)
Total Depth: 4140.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

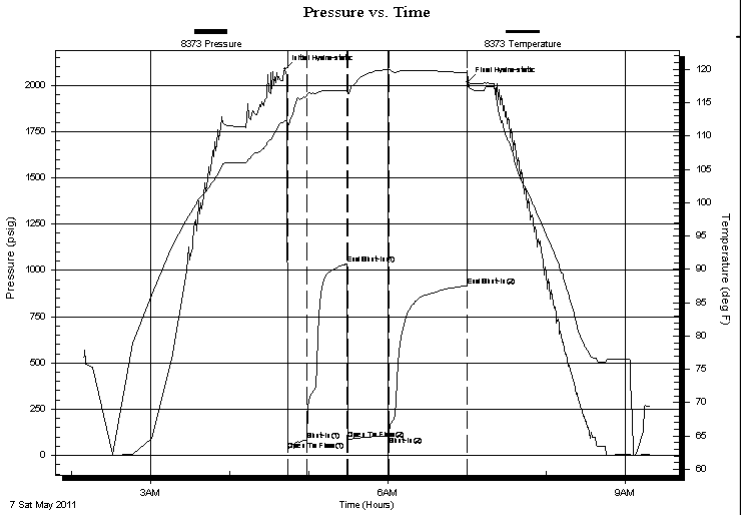
Reference Elevations: 2819.00 ft (KB)
2812.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 105.56 psig @ 4113.00 ft (KB)
Start Date: 2011.05.07 End Date: 2011.05.07
Start Time: 02:08:55 End Time: 09:19:49

Capacity: 8000.00 psig
Last Calib.: 2011.05.07
Time On Btm: 2011.05.07 @ 04:41:50
Time Off Btm: 2011.05.07 @ 07:00:34

TEST COMMENT: IF: 1/4 blow built to 6 in 15 min.
IS: No return.
FF: Surface blow built to 3 in 30 min.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2086.34	112.27	Initial Hydro-static
3	29.31	111.61	Open To Flow (1)
17	84.04	116.09	Shut-In(1)
48	1034.71	116.74	End Shut-In(1)
48	85.25	116.30	Open To Flow (2)
79	105.56	119.96	Shut-In(2)
138	917.56	119.54	End Shut-In(2)
139	2020.40	118.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
114.00	mcw 70%w 30%m	0.57
72.00	w cm 5%w 95%m	1.01

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

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042092 **DST#: 1**

Test Start: 2011.05.07 @ 02:08:55

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:	23000 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1600.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

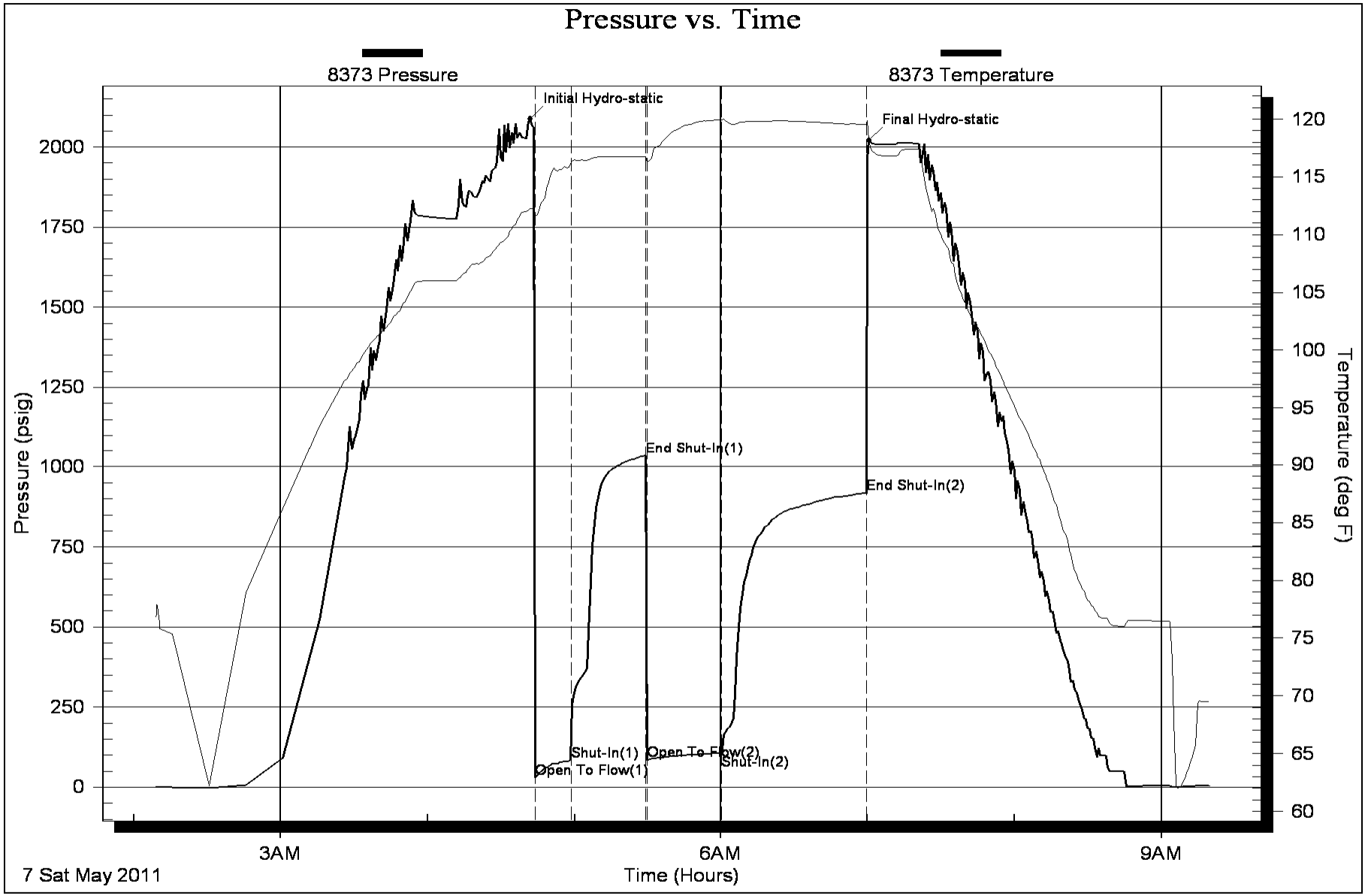
Length ft	Description	Volume bbl
114.00	mcw 70%w 30%m	0.570
72.00	w cm 5%w 95%m	1.010

Total Length: 186.00 ft Total Volume: 1.580 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: .32@64=23000


Pressure vs. Time
8373 Pressure
8373 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
120
115
110
105
100
95
90
85
80
75
70
65
60
3AM
6AM
9AM
7 Sat May 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State Rd 4
Olmitz, Ks 67564

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042093 **DST#: 2**

Test Start: 2011.05.07 @ 20:26:03

GENERAL INFORMATION:

Formation: **Lansing I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:31:43
Time Test Ended: 03:41:12

Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35

Interval: 4146.00 ft (KB) To 4186.00 ft (KB) (TVD)
Total Depth: 4186.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

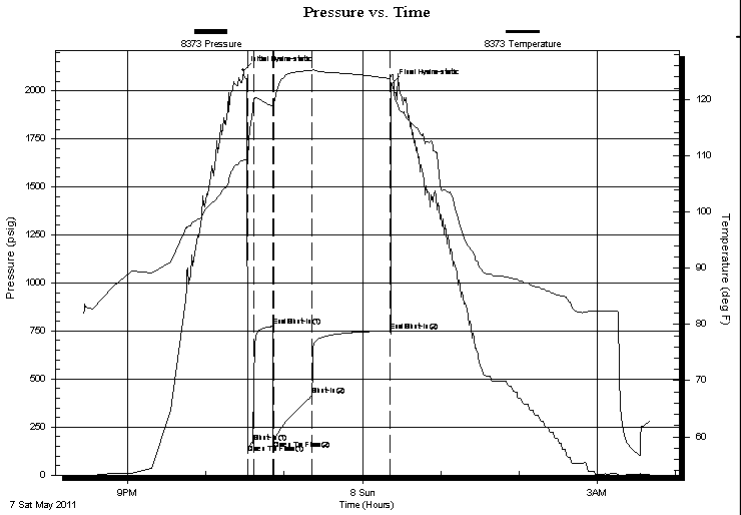
Reference Elevations: 2819.00 ft (KB)
2812.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 415.30 psig @ 4147.00 ft (KB)
Start Date: 2011.05.07 End Date: 2011.05.08
Start Time: 20:26:03 End Time: 03:41:12

Capacity: 8000.00 psig
Last Calib.: 2011.05.08
Time On Btm: 2011.05.07 @ 22:28:28
Time Off Btm: 2011.05.08 @ 00:22:28

TEST COMMENT: IF: 1/4 blow BOB in 2 min.
IS: Surface blow built to 1 in 15 min.
FF: BOB in 2 min.
FS: Surface blow built to 2 1/2 in 60 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2106.76	109.08	Initial Hydro-static
4	112.09	108.86	Open To Flow (1)
8	169.79	119.15	Shut-In(1)
23	774.68	118.78	End Shut-In(1)
24	183.36	118.67	Open To Flow (2)
53	415.30	125.19	Shut-In(2)
113	751.24	123.66	End Shut-In(2)
114	2035.92	124.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	gocm 20%g 10%o 70%m	1.58
496.00	mcgo 30%g 60%o 10%m	6.96
465.00	mcgo 10%g 85%o 5%m	6.52
0.00	341 GIP	0.00

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

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042093 **DST#: 2**

Test Start: 2011.05.07 @ 20:26:03

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	35 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1600.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

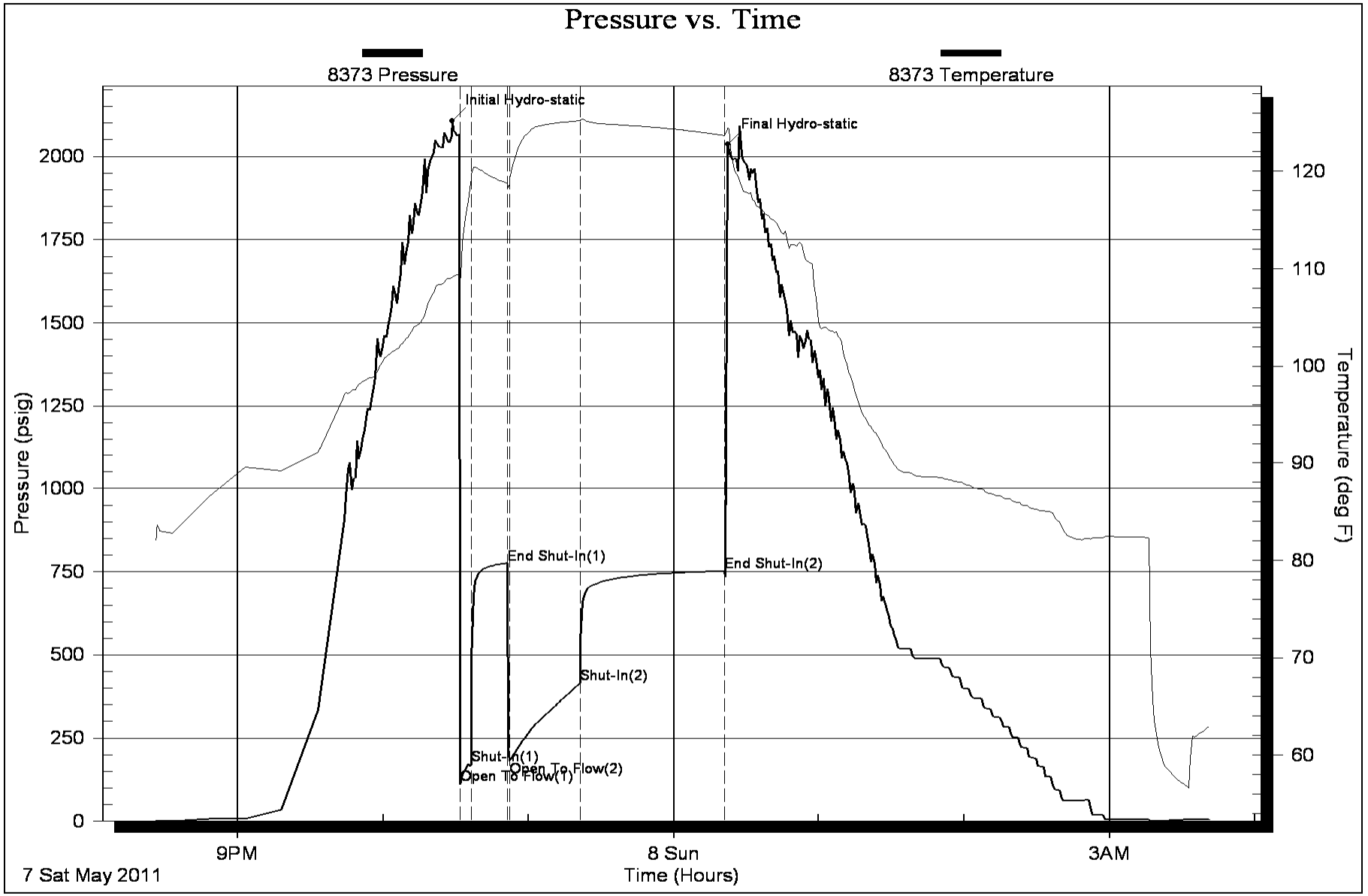
Length ft	Description	Volume bbl
186.00	gocm 20%g 10%o 70%m	1.580
496.00	mcgo 30%g 60%o 10%m	6.958
465.00	mcgo 10%g 85%o 5%m	6.523
0.00	341 GIP	0.000

Total Length: 1147.00 ft Total Volume: 15.061 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 35@60=35


Pressure vs. Time
8373 Pressure
8373 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
120
110
100
90
80
70
60
9PM
8 Sun
3AM
7 Sat May 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State Rd 4
Olmitz, Ks 67564

ATTN: Bob Lew ellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042094 **DST#: 3**

Test Start: 2011.05.08 @ 12:40:30

GENERAL INFORMATION:

Formation: **Lansing J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:18:10
Time Test Ended: 18:23:39

Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35

Interval: 4202.00 ft (KB) To 4210.00 ft (KB) (TVD)
Total Depth: 4210.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

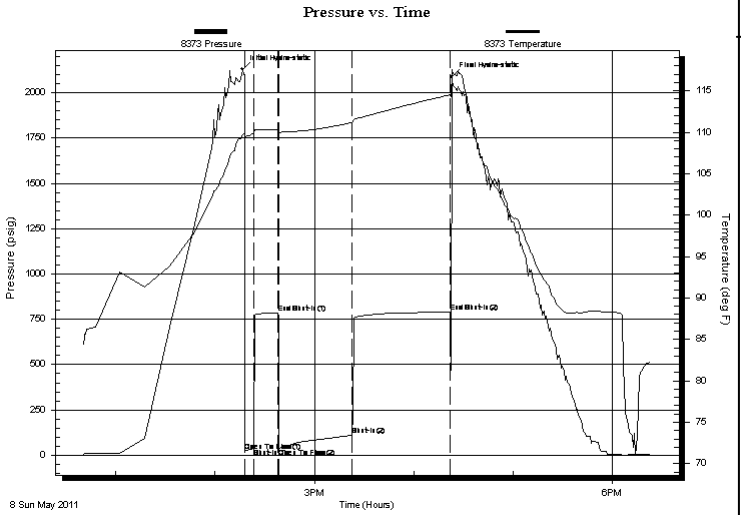
Reference Elevations: 2819.00 ft (KB)
2812.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 111.19 psig @ 4207.00 ft (KB)
Start Date: 2011.05.08 End Date: 2011.05.08
Start Time: 12:40:30 End Time: 18:23:39

Capacity: 8000.00 psig
Last Calib.: 2011.05.08
Time On Btm: 2011.05.08 @ 14:16:25
Time Off Btm: 2011.05.08 @ 16:22:55

TEST COMMENT: IF: Surface blow built to 1 in 5 min.
IS: No return.
FF: Surface blow BOB in 36 min.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2128.24	109.68	Initial Hydro-static
2	24.04	109.23	Open To Flow (1)
7	36.84	109.82	Shut-In(1)
22	784.75	110.31	End Shut-In(1)
22	39.00	109.94	Open To Flow (2)
67	111.19	111.18	Shut-In(2)
126	788.66	114.51	End Shut-In(2)
127	2088.08	117.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mcw 90%w 10%m	0.71
93.00	mcw 80%w 20%m	1.30

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

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042094 **DST#: 3**

Test Start: 2011.05.08 @ 12:40:30

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:	26000 ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1600.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

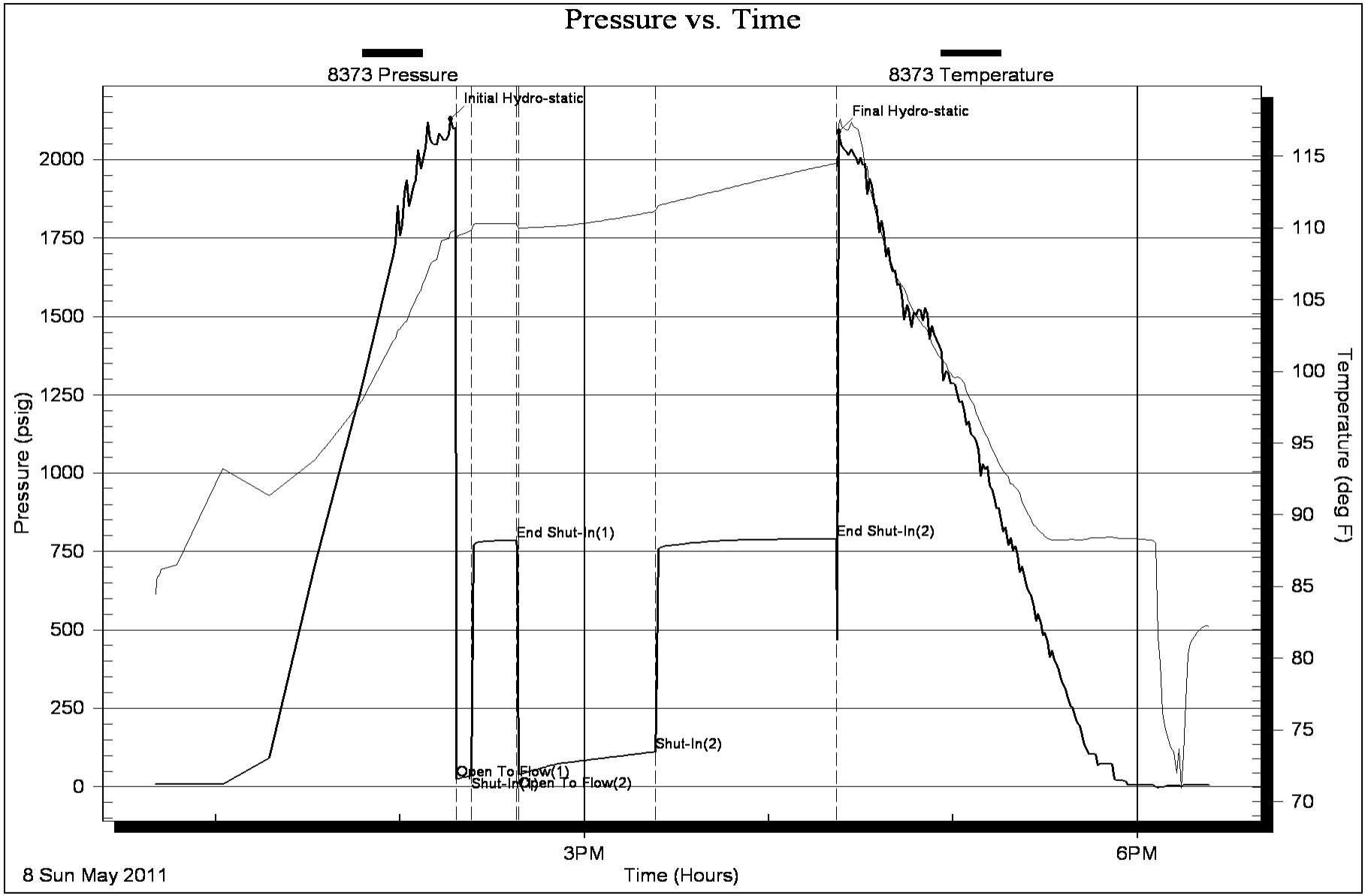
Length ft	Description	Volume bbl
124.00	mcw 90%w 10%m	0.710
93.00	mcw 80%w 20%m	1.305

Total Length: 217.00 ft Total Volume: 2.015 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: .19@99=26000


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 (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
3PM
6PM
8 Sun May 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State Rd 4
Olmitz, Ks 67564

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042095 **DST#: 4**

Test Start: 2011.05.09 @ 04:06:05

GENERAL INFORMATION:

Formation: **Lansing K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:48:30
Time Test Ended: 11:25:14

Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35

Interval: 4214.00 ft (KB) To 4256.00 ft (KB) (TVD)
Total Depth: 4256.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

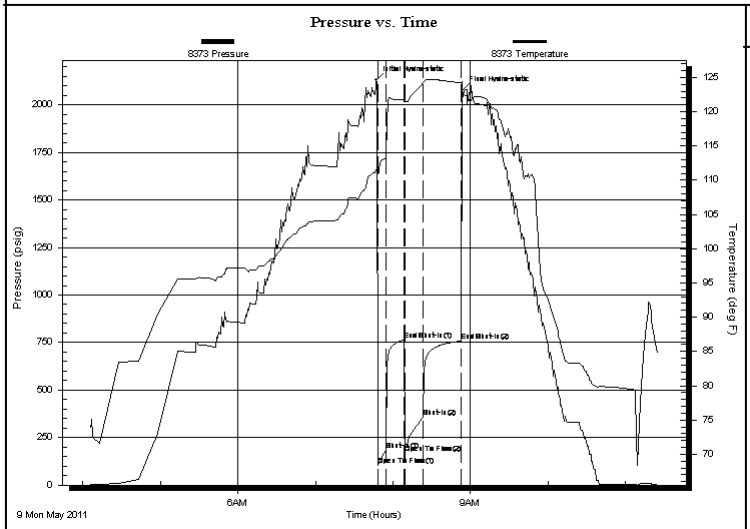
Reference Elevations: 2819.00 ft (KB)
2812.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 358.24 psig @ 4219.00 ft (KB)
Start Date: 2011.05.09 End Date: 2011.05.09
Start Time: 04:06:05 End Time: 11:25:14

Capacity: 8000.00 psig
Last Calib.: 2011.05.09
Time On Btm: 2011.05.09 @ 07:47:00
Time Off Btm: 2011.05.09 @ 08:53:44

TEST COMMENT: IF: BOB in 2 min.
IS: No return.
FF: BOB in 3 min.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2129.23	111.51	Initial Hydro-static
2	105.34	111.07	Open To Flow (1)
8	182.01	113.21	Shut-In(1)
22	765.79	121.70	End Shut-In(1)
22	217.14	121.41	Open To Flow (2)
37	358.24	124.23	Shut-In(2)
66	758.34	124.18	End Shut-In(2)
67	2077.13	122.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	MCW 80%W 20%M	3.32
310.00	MCW 60%W 40%M	4.35
114.00	WCM 10%W 90%M	1.60

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

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042095 **DST#: 4**

Test Start: 2011.05.09 @ 04:06:05

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:	29000 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1900.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

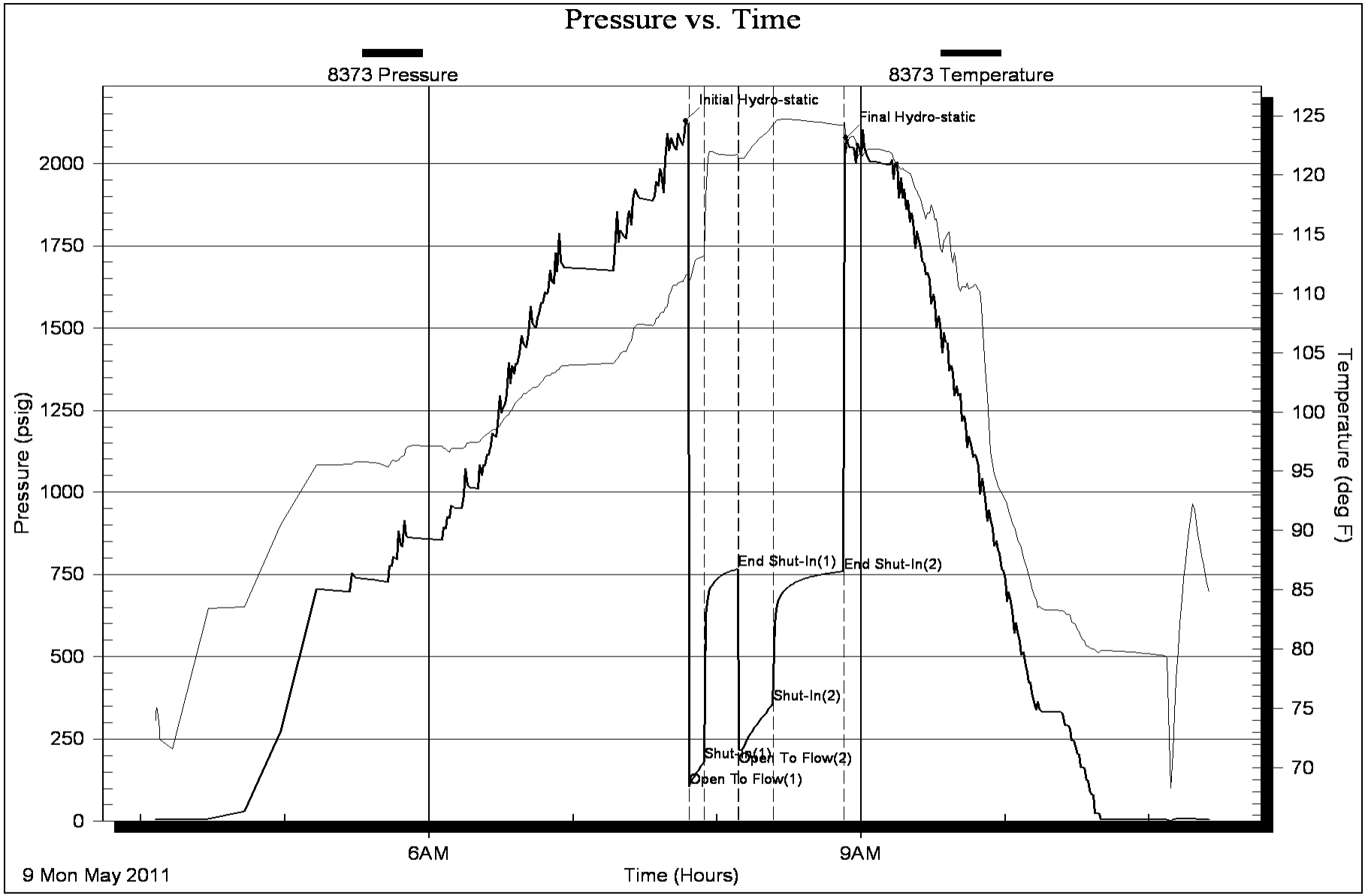
Length ft	Description	Volume bbl
310.00	MCW 80%W 20%M	3.319
310.00	MCW 60%W 40%M	4.348
114.00	WCM 10%W 90%M	1.599

Total Length: 734.00 ft Total Volume: 9.266 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: .22@85=29000


Pressure vs. Time
8373 Pressure
8373 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Shut-In(1)
Open To Flow(2)
Open To Flow(1)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
125
120
115
110
105
100
95
90
85
80
75
70
6AM
9AM
9 Mon May 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State Rd 4
Olmitz, Ks 67564

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042096 **DST#: 5**

Test Start: 2011.05.10 @ 01:03:02

GENERAL INFORMATION:

Formation: **Lansing L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:58:57
Time Test Ended: 06:15:41

Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35

Interval: 4265.00 ft (KB) To 4280.00 ft (KB) (TVD)
Total Depth: 4280.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

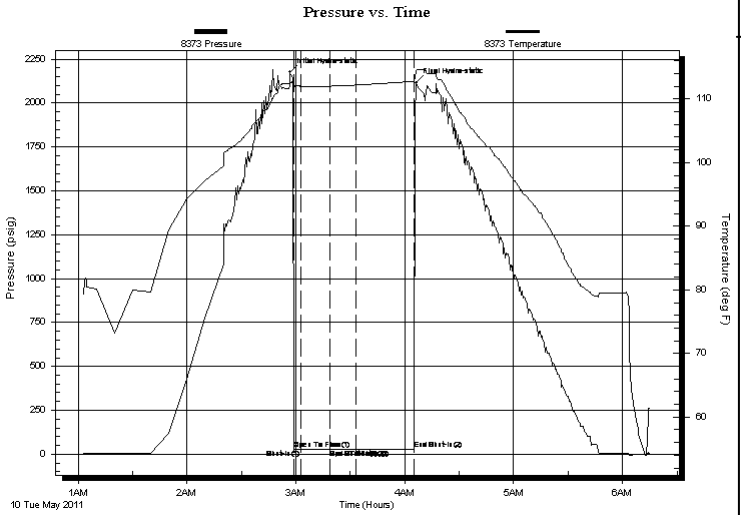
Reference Elevations: 2819.00 ft (KB)
2812.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 26.76 psig @ 4270.00 ft (KB)
Start Date: 2011.05.10 End Date: 2011.05.10
Start Time: 01:03:02 End Time: 06:15:41

Capacity: 8000.00 psig
Last Calib.: 2011.05.10
Time On Btm: 2011.05.10 @ 02:56:42
Time Off Btm: 2011.05.10 @ 04:06:12

TEST COMMENT: IF:Surface blow died in 1min
IS:No return
FF:No blow
FS:No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2173.86	112.66	Initial Hydro-static
3	30.56	111.40	Open To Flow (1)
6	27.08	112.01	Shut-In(1)
22	27.30	112.01	End Shut-In(1)
23	26.54	112.01	Open To Flow (2)
37	26.76	112.19	Shut-In(2)
69	27.01	112.79	End Shut-In(2)
70	2114.54	114.37	Final Hydro-static

Recovery

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

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

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042096 **DST#: 5**

Test Start: 2011.05.10 @ 01:03:02

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:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2100.00 ppm				
Filter Cake:	1.00 inches				

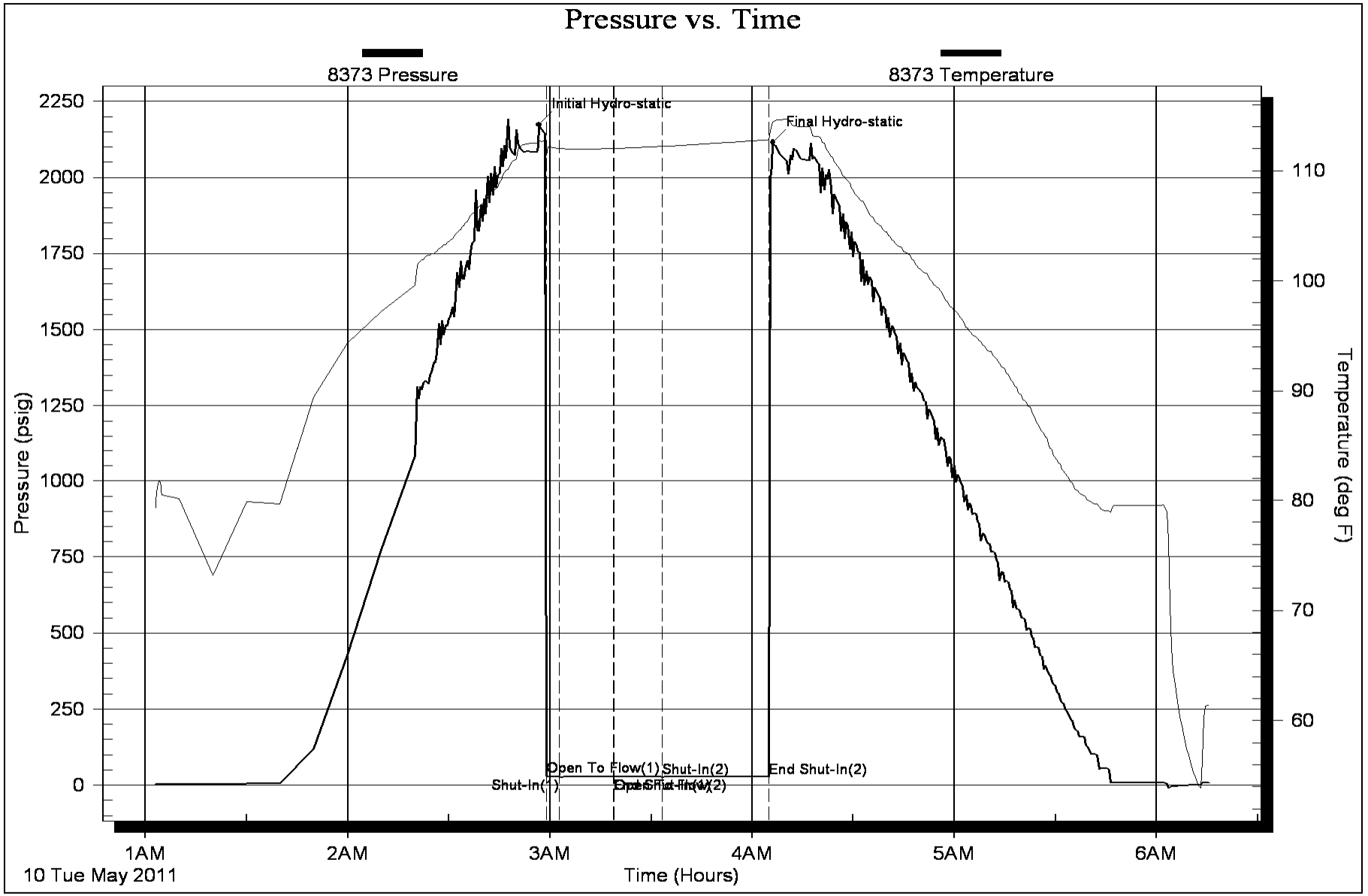
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 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:


Pressure vs. Time
8373 Pressure
8373 Temperature
Initial Hydro-static
Final Hydro-static
Open To Flow(1)
Shut-In(2)
End Shut-In(2)
Pressure (psig)
Temperature (deg F)
2250
2000
1750
1500
1250
1000
750
500
250
0
110
100
90
80
70
60
1AM
2AM
3AM
4AM
5AM
6AM
10 Tue May 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State Rd 4
Olmitz, Ks 67564

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042097 **DST#: 6**

Test Start: 2011.05.10 @ 22:55:44

GENERAL INFORMATION:

Formation: **Pleasington**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:01:29
Time Test Ended: 05:16:14

Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35

Interval: 4308.00 ft (KB) To 4332.00 ft (KB) (TVD)
Total Depth: 4332.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

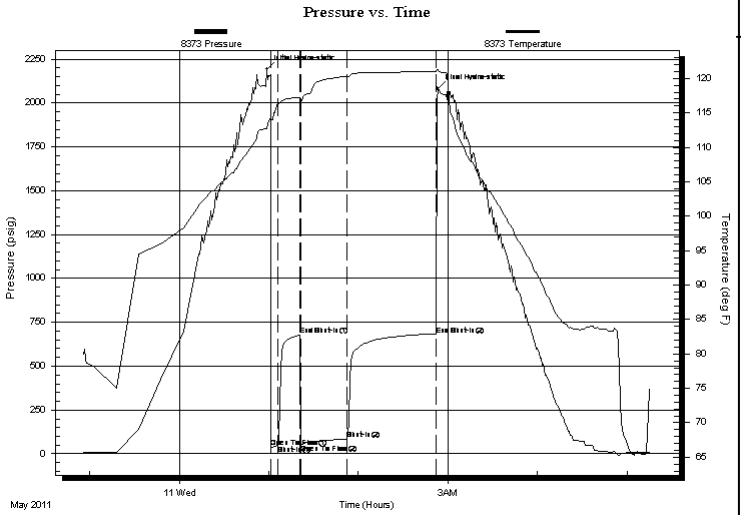
Reference Elevations: 2819.00 ft (KB)
2812.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 83.76 psig @ 4313.00 ft (KB)
Start Date: 2011.05.10 End Date: 2011.05.11
Start Time: 22:55:49 End Time: 05:16:13

Capacity: 8000.00 psig
Last Calib.: 2011.05.11
Time On Btm: 2011.05.11 @ 00:58:44
Time Off Btm: 2011.05.11 @ 02:53:14

TEST COMMENT: IF:1/4 blow built to 1 1/2 in 5min
IS:No return
FF:Surface blow BoB in 25min
FSNo return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2192.18	112.77	Initial Hydro-static
3	35.45	113.84	Open To Flow (1)
8	49.70	116.31	Shut-In(1)
22	676.04	117.18	End Shut-In(1)
23	52.99	116.84	Open To Flow (2)
54	83.76	120.24	Shut-In(2)
114	680.24	121.01	End Shut-In(2)
115	2083.11	121.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	GOCM 10%G 40%O 50%M	0.30
62.00	OCM 50%O 50%M	0.41
50.00	GO 10G 90%O	0.70

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

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042097 **DST#: 6**

Test Start: 2011.05.10 @ 22:55:44

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	33 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 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:	2200.00 ppm				
Filter Cake:	2.00 inches				

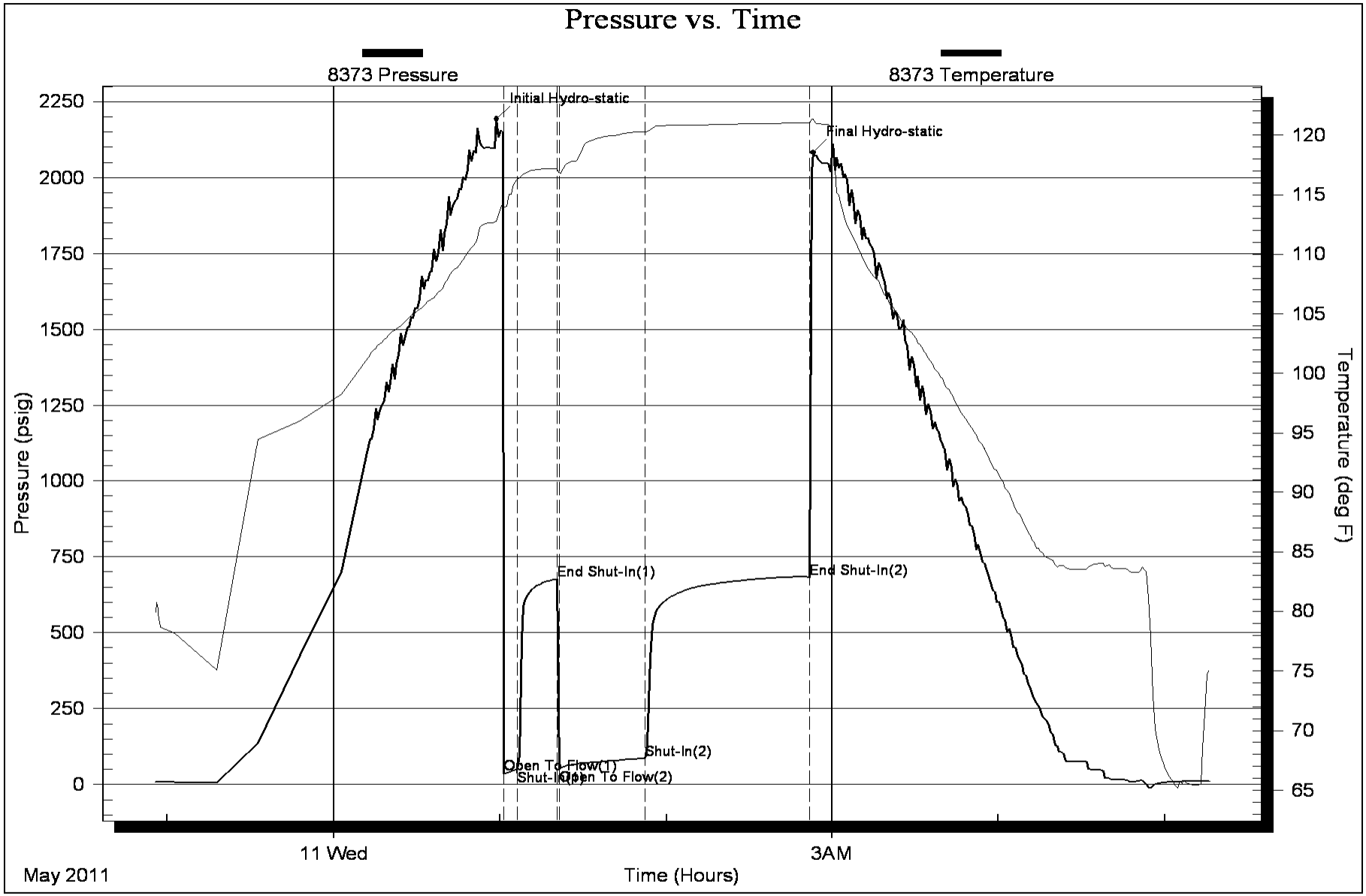
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	GOCM 10%G 40%O 50%M	0.305
62.00	OCM 50%O 50%M	0.405
50.00	GO 10G 90%O	0.701

Total Length: 174.00 ft Total Volume: 1.411 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 34@70=33


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 (psig)
Temperature (deg F)
2250
2000
1750
1500
1250
1000
750
500
250
0
120
115
110
105
100
95
90
85
80
75
70
65
11 Wed
3AM
May 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc

562 W State Rd 4
Olmitz, Ks 67564

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042098 **DST#: 7**

Test Start: 2011.05.11 @ 19:50:43

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:41:13
Time Test Ended: 02:53:28

Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35

Interval: 4331.00 ft (KB) To 4394.00 ft (KB) (TVD)
Total Depth: 4394.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

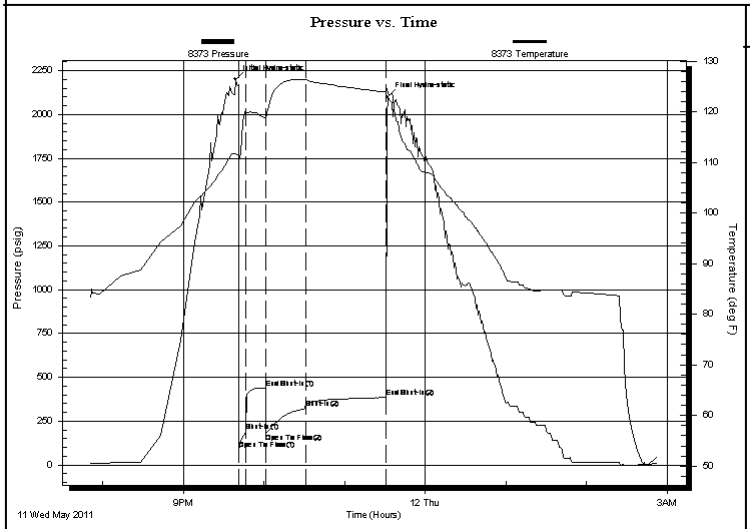
Reference Elevations: 2819.00 ft (KB)
2812.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8373 **Inside**

Press@RunDepth: 321.74 psig @ 4336.00 ft (KB)
Start Date: 2011.05.11 End Date: 2011.05.12
Start Time: 19:50:48 End Time: 02:53:27

Capacity: 8000.00 psig
Last Calib.: 2011.05.12
Time On Btm: 2011.05.11 @ 21:38:43
Time Off Btm: 2011.05.11 @ 23:31:58

TEST COMMENT: IF: 1/4 blow BOB in 3min
IS No return
FF: BOB in 4min
FS: No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2200.60	111.74	Initial Hydro-static
3	87.94	110.84	Open To Flow (1)
8	193.55	120.15	Shut-In(1)
23	439.16	118.76	End Shut-In(1)
23	178.85	118.56	Open To Flow (2)
52	321.74	126.36	Shut-In(2)
113	386.50	123.93	End Shut-In(2)
114	2102.29	123.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mcw trace of oil 80% w 20%m	0.71
186.00	gocmw 10%g 10%o 50%w 30%m	2.61
186.00	gocwm 10%g 20%o 20%w 50%m	2.61
186.00	ocm 10%o 90%m	2.61
31.00	oil 100%o	0.43

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

ATTN: Bob Lewellyn

Walker 2-21

21-18s-29w Lane, Ks

Job Ticket: 042098 **DST#: 7**

Test Start: 2011.05.11 @ 19:50:43

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	31 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	26000 ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2200.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

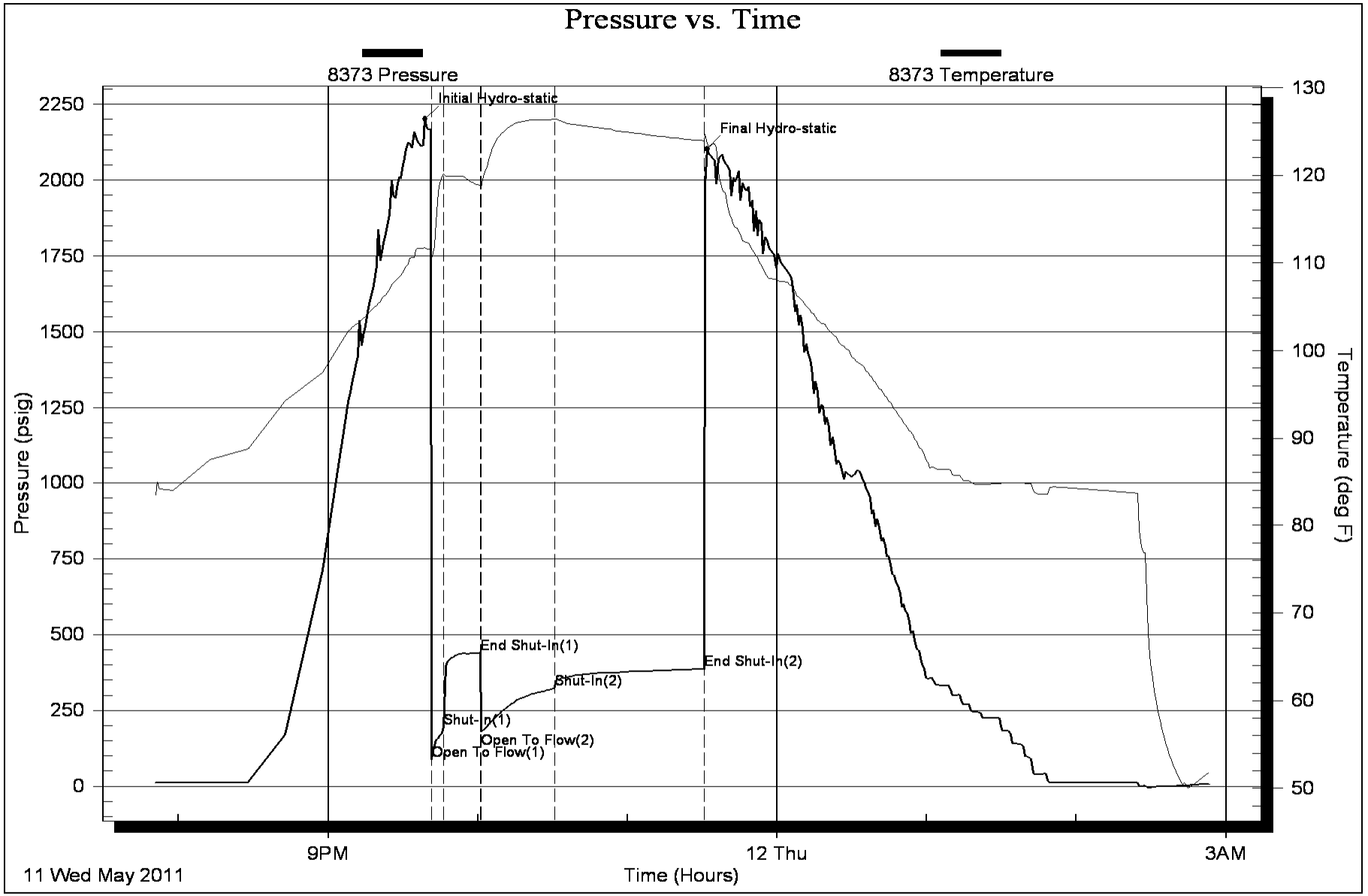
Length ft	Description	Volume bbl
124.00	mcw trace of oil 80% w 20%m	0.710
186.00	gocmw 10%g 10%o 50%w 30%m	2.609
186.00	gocwm 10%g 20%o 20%w 50%m	2.609
186.00	ocm 10%o 90%m	2.609
31.00	oil 100%o	0.435

Total Length: 713.00 ft Total Volume: 8.972 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 30@50=31 .38@48=26000


Pressure vs. Time
8373 Pressure
8373 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Shut-In(1)
Open To Flow(2)
Open To Flow(1)
Pressure (psig)
Temperature (deg F)
2250
2000
1750
1500
1250
1000
750
500
250
0
130
120
110
100
90
80
70
60
50
9PM
12 Thu
3AM
11 Wed May 2011
Time (Hours)

Robert C. Lewellyn

Consulting Petroleum Geologist

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

GEOLOGICAL REPORT

Larson Engineering, Inc.
No. 2-21 Walker
1477' FNL & 1766' FWL Sec. 21-18S-29W
Lane County, Kansas

CONTRACTOR:	H D Drilling, LLC, Rig 3
SPUDDED:	April 30, 2011
DRILLING COMPLETED:	May 13, 2011
SURFACE CASING:	8 5/8" @ 255 KBM/175 sx.
ELECTRIC LOGS:	DIL CNL/CDL MEL
ELEVATIONS:	2819 KB 2812 GL

FORMATION TOPS: (Electric Log)

Anhydrite	2161 (+ 658)
Base Anhydrite	2187 (+ 632)
Heebner Shale	3916 (-1097)
Lansing-Kansas City Group	3962 (-1143)
Muncie Creek Shale	4132 (-1313)
Stark Shale	4236 (-1417)
Hushpuckney Shale	4276 (-1457)
Base Kansas City	4317 (-1498)
Marmaton	4344 (-1525)
Altamont "A"	4389 (-1570)
Pawnee	4429 (-1610)
Myrick Station	4456 (-1637)
Fort Scott	4486 (-1667)
Cherokee	4510 (-1691)
Detrital Zone	4572 (-1753)
Mississippian	4602 (-1783)
Electric Log Total Depth	4629 (-1810)

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. The electric log revealed a nine foot error in the pipe tally. Depths have been corrected *downhole* nine feet to correct the error and to correlate with electric log depths. 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:

3962-3966 (A Zone)

Limestone, cream to buff, some tan, dense to finely crystalline and chalky, trace of scattered poor intercrystalline porosity, no show of oil.

3995-4001 (B Zone)

Limestone, cream to buff, some tan, trace of gray, finely crystalline with dense and chalky, some scattered poor intercrystalline porosity, no show of oil.

4013-4044 (C Zone)

Limestone, cream, some buff to tan, trace of light gray, dense, scattered finely crystalline, chalky, zone is mostly tight with no shows of oil.

4046-4056 (E Zone)

Limestone, cream to buff, dense to tinely crystalline, partly fossiliferous, scattered poor intercrystalline and interfossil porosity, trace of scattered dead stain, no shows of live oil.

4058-4067 (F Zone)

Limestone, cream to buff, some tan, some brown, dense to finely crystallline, slightly fossiliferous and oolitic, scattered poor intercrystalline and interfossil porosity, trace interoolitic porosity, trace of dead stain, no shows of live oil.

4072-4079 (G Zone)

Limestone, cream to buff, finely crystalline and partly oolitic, some chalky, scattered very poor ooliticastic porosity, no show of oil. Lower section becomes dense and chalky, mostly tight limestone.

4144-4149 (H Zone)

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

Drill Stem Test No. 1 4121-4149
15-30-30-60; first flow quarter-inch blow built to six inches in 15 minutes; second flow surface blow

built to three inches in 30 minutes. Recovered 186 feet of total fluid: 72 feet of water cut mud (5% water, 95% mud), 114 feet of mud cut water (70% water, 30% mud). ISIP 1034# FSIP 917# IFP 29-84# FFP 85-105# IHP 2086# FHP 2020# BHT 119 degrees F.

4186-4190 (I Zone)

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

Drill Stem Test No. 2 4155-4195
5-15-30-60; first flow surface blow built to one inch in five minutes; second flow built to bottom of bucket in two minutes, final shut in blowback surface blow built to 2 ½ inches in 60 minutes. Recovered 341 feet of gas in pipe and 1147 feet of fluid: 465 feet of mud cut gassy oil (10% gas, 85% oil, 5% mud), 496 feet of mud cut gassy oil (30% gas, 60% oil, 10% mud), 186 feet of gassy oil cut mud (20% gas, 10% oil, 70% mud). ISIP 774# FSIP 751# IFP 112-169 FFP 183-415# IHP 2106# FHP 2035# BHT 123 degrees F.

4214-4224 (J Zone)

Limestone, buff, fine to medium crystalline and oolitic, fair to good ooliticastic, interoolitic, and intercrystalline porosity, scattered fair spotted stain, good show of free oil, good odor, fair fluorescence, good cut, porosity is approximately 65% barren.

Drill Stem Test No. 3 4211-4219
5-15-45-60; first flow surface blow built to one inch in five minutes; second flow surface blow built to bottom of bucket in 36 minutes. Recovered 217 feet of total fluid: 93 feet of mud cut water (80% water, 20% mud), 124 feet of mud cut water (90% water, 10% mud). ISIP 784# FSIP 788# IFP 24-36# FFP 39-111# IHP 2128# FHP 2088# BHT 114 degrees F.

4244-4259 (K Zone)

Limestone, white to cream, finely crystalline and finely oolitic, fair to good intercrystalline and interoolitic porosity, good spotted stain, fair to good show of free oil, good odor, fair fluorescence, fair to good cut.

Drill Stem Test No. 4 4223-4265
5-15-15-30; initial flow blow off bottom of bucket in two minutes, no blowback; final flow blow off bottom of bucket in three minutes, no blowback. Recovered 734 feet of total fluid: 114 feet of water cut mud (10% water, 90% mud), 310 feet of mud cut water (60% water, 40% mud), 310 feet of mud cut water (80% water, 20% mud). ISIP 765# FSIP 758# IFP 105-182# FFP 217-358# IHP 2129# FHP 2077# BHT 124 degrees F.

4279-4282 (Middle Creek Zone)

Limestone, buff to tan, dense to finely crystalline, slightly fosiliferous, zone is mostlly tight with no shows of oil.

4285-4298 (L Zone)

Limestone, buff to tan, finely crystalline, slightly oolitic and fossiliferous, poor to fair intercrystalline and interfossil porosity, fair spotted stain, fair show of free oil, fair odor, poor to fair fluorescence, fair cut, few scattered overgrowth calcite crystals bonded to fragments.

Drill Stem Test No. 5 4274-4289
5-15-15-30; first flow surface blow died in one minute, no blowback; second flow blow did not return. Recovered one foot of mud. ISIP 27# FSIP 27# IFP 30-27# FFP 26-26# IHP 2173# FHP 2114# BHT 112 degres F.

4301-4309 (Lower L Zone)

Limestone, buff to tan, dense to finely crystalline, trace of slightly oolitic, trace of poor intercrystalline porosity, scattered poor spotted stain, very slight show of free oil, faint fleeting odor, poor fluorescence, poor cut.

4326-4335 (Pleasanton Zone)

Limestone, white to cream to buff, finely crystalline and finely oolitic, partly fossiliferous, fair to good intercrystalline, interoolitic, and interfossil porosity, good spotted stain, fair to good show of free oil, good odor, fair fluorescence, good cut.

Drill Stem Test No. 6 4317-4341
5-15-30-60; initial flow quarter-inch blow built to 1 ½ inches in five minutes, no blowback; final flow surface blow built to bottom of bucket in 25 minutes, no blowback. Recovered 174 feet of fluid: 50 feet of gassy oil (10% gas, 90% oil), 62 feet of oil cut mud (50% oil, 50% mud), 62 feet of gassy oil cut mud (10% gas, 40k% oil, 50% mud). ISIP 676# FSIP 680# IFP 35-49# FFP 52-83# IHP 2192# FHP 2083# BHT 121 degrees F.

4344-4359 (Marmaton Zone)

Limestone, tan to brown, dense, some finely crystalline, trace of poor scattered intercrystalline porosity with trace of very poor spotted stain, no free oil, no odor, no fluorescence, no cut.

4389-4392 (Altamont "A" Zone)

Limestone, buff to tan, some brown and gray, dense to finely crystalline, partly fossilliferous and oolitic, fair intercrystalline and vugular porosity, some interfossil and interoolitic porosity, fair spotted stain, fair to good show of free oil, good odor, fair fluorescence, good cut.

Drill Stem Test No. 7 4340-4403
5-15-30-60; first flow quarter-inch blow off bottom of bucket in three minutes, no blowback; second flow blow off bottom of bucket in four minutes, no blowback. Recovered 713 feet of fluid: 31 feet of oil (100% oil), 186 feet of oil cut mud (10% oil, 90% mud), 186 feet of gassy oil and water cut mud (10% gas, 20% oil, 20% water, 50% mud), 186 feet of gassy oil cut muddy water (10% gas, 10% oil, 50% water, 20% mud), 124 feet of mud cut water with a trace of oil (80% water, 20% mud). ISIP 439# FSIP 386# IFP 87-193# FFP 178-321# IHP 2200# FHP 2102# BHT 123 degrees F.

4429-4453 (Pawnee Zone)

Limestone, tan to brown, dense to finely crystalline, trace of very poor intercrystalline porosity to tight, rare trace of spotted stain, no free oil, no odor, no fluorescence, no cut.

4456-4482 (Myrick Station Zone)

Limestone, tan to brown, trace of mottled, dense, some scattered finely crystalline, zone is mostly tight with no shows of oil.

4486-4510 (Fort Scott Zone)

Limestone, buff to tan to brown, dense to finely crystalline, some oolitic, partly fossiliferous, trace of scattered poor vugular and intercrystalline porosity, rare trace of scattered spotted stain, no free oil, no odor, no fluorescence, no cut. Lower portion is buff, finely crystalline and oolitic limestone that is mostly tight with a trace of dead stain, no shows of live oil. Section contains some tan oolitic limestone with dark to black oolites.

4513-4539 (Cherokee Lime Zones)

Limestone, brown, dense with some finely cyrstalline, partly fossiliferous, rare very poor intercrystalline porosity with scattered dead stain. No shows of live oil.

4542-4572 (Johnson Zone)

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

4572-4602 (Detrital Zone)

This interval contains various and varicolored shales and cherts with traces of very fine grained white to buff sand, calcareous, tight, well cemented, well sorted. Some glauconitic shale and a trace of scattered glauconitic limestone is present along with considerable white to light gray chert, fresh, opaque to sub-translucent. The entire interval appears to have poor reservoir quality and contained no shows of oil.

4602-4629 (Mississippian)

Limestone, buff, some light gray, dense to finely crystalline, some chalky, soft, flaky, brittle, mostly tight with no shows of oil. Some scattered glaulconitic limestone. Some scattered chert, fresh, light gray, opaque.

Limestone becomes dolomitic in lowert portion of Mississippian section. Some poor intercrystalline and vugular porosity is present in the section. No shows of oil were present.

4629 Electric Log Total Depth

Conclusions and Recommendations:

Casing was cemented in the No. 2-21 Walker to test the various oil shows encountered during the drilling process. It is recommended that the well be completed as necessary to facilitate production as per Tom Larson and Kyle Carter.

Respectfully submitted,

Robert C. Lewellyn
Petroleum Geologist

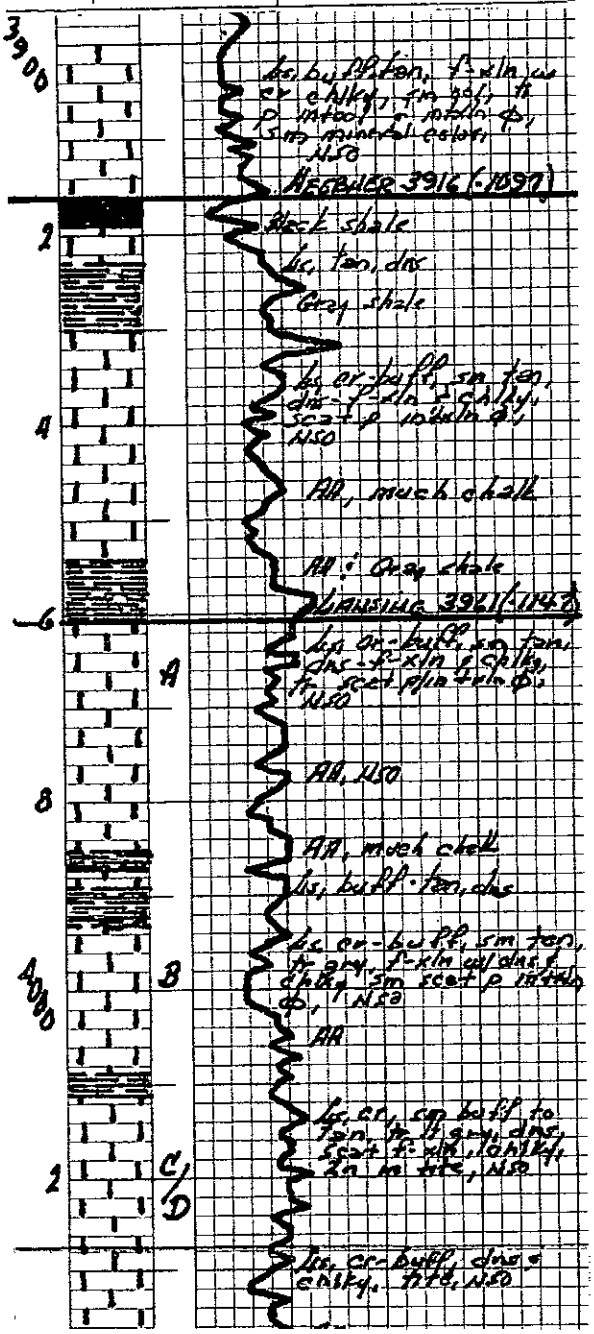
RCL:me

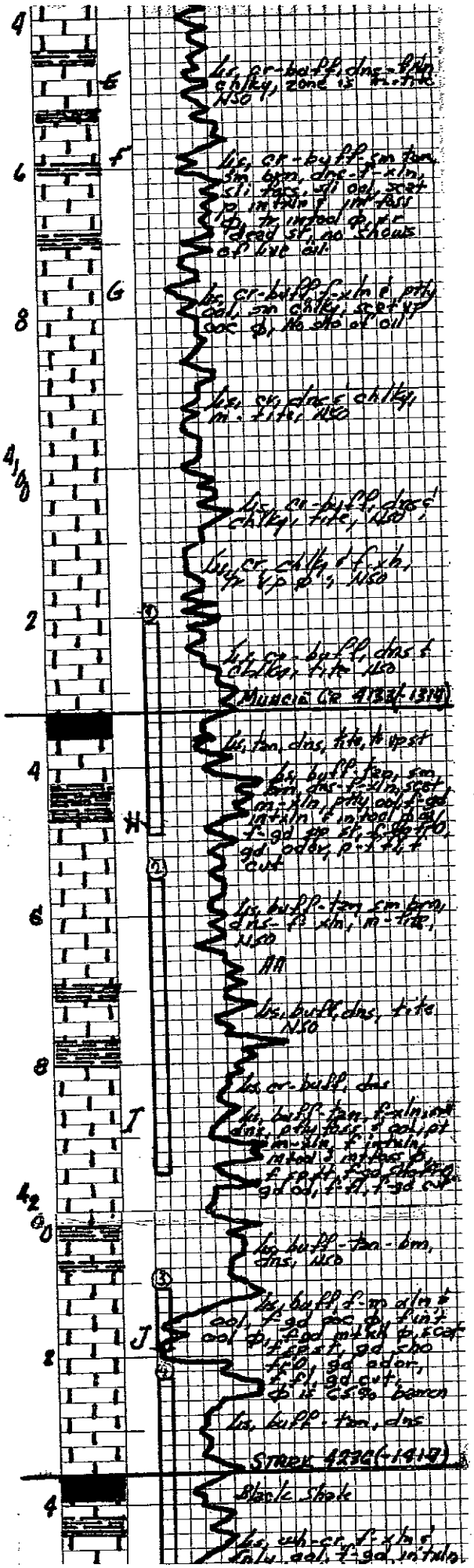
STATE: KANSAS
COUNTY: LANE
BLOCK:
SEC.: 21
T.: 18S
R.: 29W
ALTITUDE: 2819 KB
PRODUCTION: Oil

COMPANY: LARSON ENGINEERING, INC.
FARM: WALKER
WELL NO.: 2-21
SURVEY: 1977' FNL & 1766' FWL
TOTAL DEPTH: 4629
CONTRACTOR: HD DRLG, LLC
COMMENCED: 04-30-2011
COMPLETED: 05-13-2011
REMARKS:
Robert C. Llewellyn - Geologist

CASING RECORD

8 5/8" @ 255/KBM/175 sx




4
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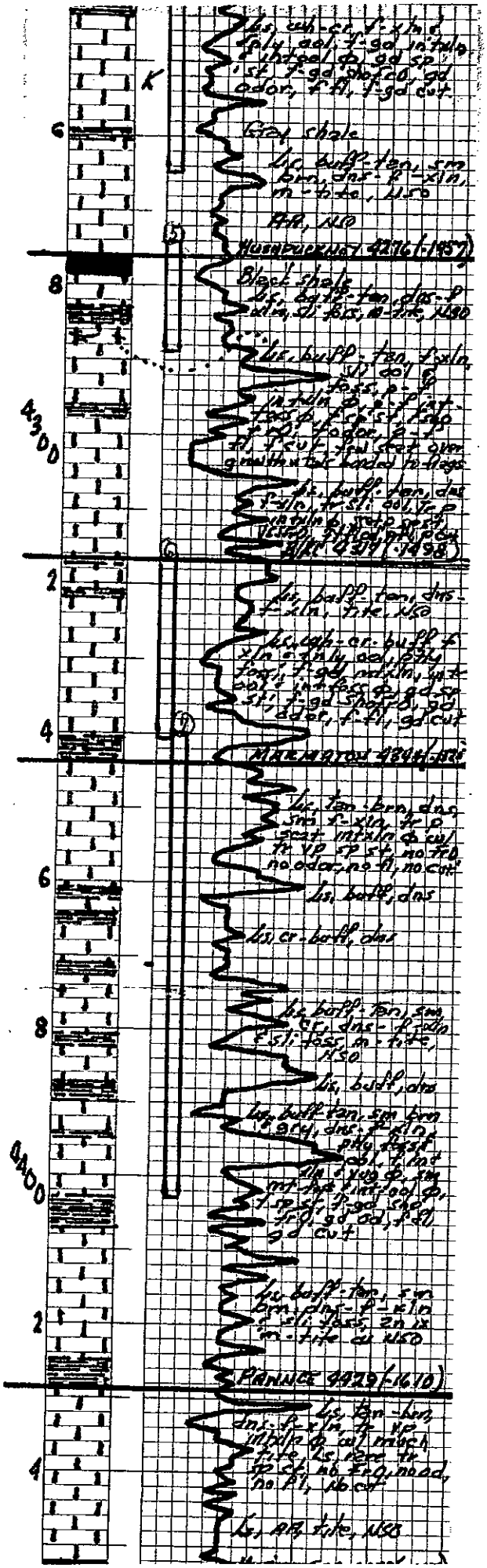
G
8
4 1/2 0
2
MUNCIE CR 4134 (+1314)
4
H
6
8
J
4 2 0 0
J
2
STOUX 4226 (+1417)
4


K
6
8
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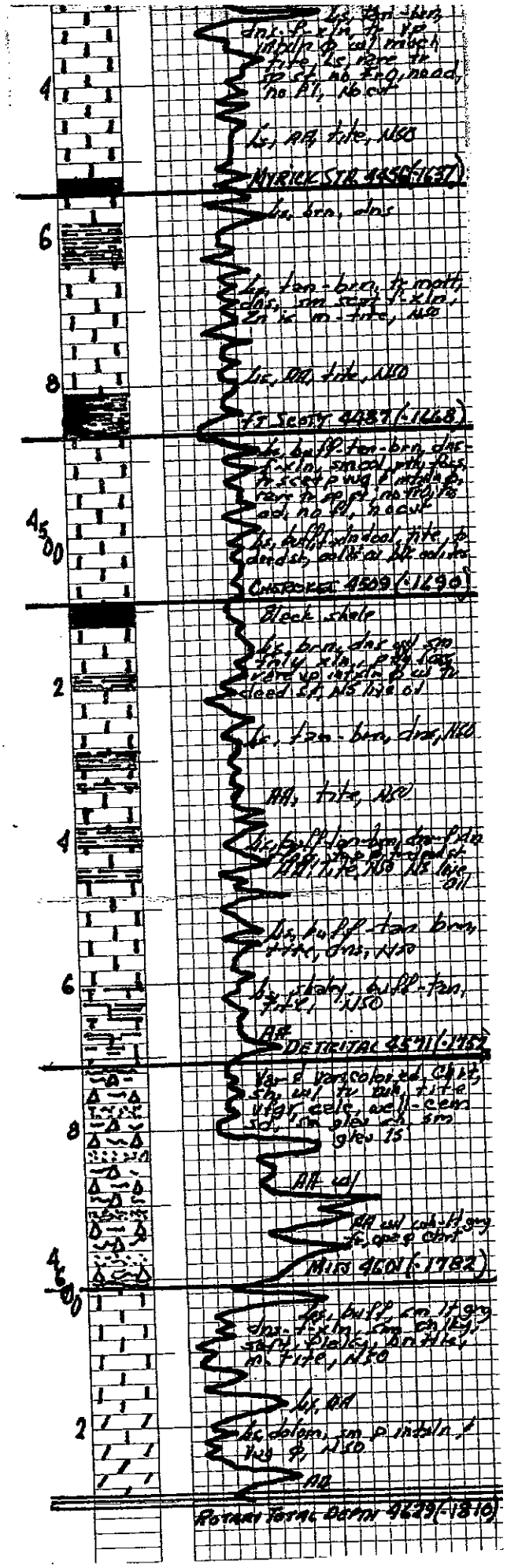
HUNTSVILLE 4216 (-1957)
MARMATON 4284 (-1825)
PAWNEE 4429 (-1670)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4500
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4600
2
MYRICK STR. 4456 (-1637)
FT SCOTT 4487 (-1668)
CHEROKEE 4509 (-1690)
Black shale
AA, tr lse, NSO
DETRITAL 4571 (-1752)
AA
MIS 4601 (-1782)
AA
Roman Torn. Barn 4629 (-1810)

SWIFT Services, Inc.

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

TICKET 18834

PAGE 1 OF #1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City, Ks	2-21	Walker	Lane	Ks.	Ness City, Ks	5-14-2011	Same
2.	TICKET TYPE: ☒ SERVICE ☐ SALES	CONTRACTOR: H-D Drlg rig #3	RIG NAME/NO.: rig #3	SHIPPED VIA: PT	DELIVERED TO: West of Dighton	ORDER NO.	
3.	WELL TYPE: oil	WELL CATEGORY: Development	JOB PURPOSE: new well - Long string	WELL PERMIT NO.		WELL LOCATION	
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 110	40	mi			5 00	200 00
578		1			Pump Charge	1	ea			1400 00	1400 00
221		1			Liquid KCL	2	gal			25 00	50 00
280		1			Flechek 21	500	gal			2 50	1250 00
325		1			Standard cmt	175	sk			12 00	2100 00
284		1			Calseal 5%	8	sks	100	#/sk	30 00	240 00
283		1			Salt 10%	~~800~~	lbs			.15	135 00
286		1			Halad-1 ¾%	125	lbs			7 00	~~875~~ 875 00
277		1			Gilsonite 7#/sk	1225	lbs			.60	~~735~~ 735 00
276		1			Flocele	44	lbs			1 50	66 00
419		1			Rotating Head	1	ea	5½	in	150 00	150 00
581 583		1			Service Charge Drayage	175	sk			1 50	262 50
						390	sk	ton mi		1 00	390 88

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 T.C. Larson

DATE SIGNED: 5-14-2011 TIME SIGNED: 2:00 ☒ A.M. ☐ P.M.

REMIT PAYMENT TO:

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
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	7854 ~~8609~~ 38
Lane TAX 6.3%	352 86
TOTAL	8207 24

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

SWIFT OPERATOR: Lee Funk

APPROVAL

Thank You!

JOB LOG — **SWIFT Services, Inc.** — DATE 5-14-2011 — PAGE NO. #1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Larson Engineering	2-21	Walker	Long String	18834

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
5-13	10:00							Called out
5-14	02:00							On Location / set up ~~Hard~~ Tks
	02:15							Rig running Csg. 5½
	04:30							Csg on botton / Customers F-E
	04:40							Hook up - to circulate
	05:00							Start circulating & rotating.
	06:00	Av	—			----		Done Circulating
	06:05				X			Start Cmt Job
	06:08	5	1.5		X	~~250~~	200	Pump 15 bbl KCL water
	06:11	4	12		X	~~20~~	200	Pump 500gal Flocheck 21
	06:12	5	5		X			Pump 5 bbl KCL water
	06:13				X			Release in a well head
	06:14				X			Plug rat hole
	06:17				X	200	200	Open well & Start mixing cmt - down hole
		5	46		X			150 sks EA-2 w/ Halad & gilsonite
	06:27				X	0	0	Done mixing cmt
	06:28				X			Drop plug & wash out pump & lines
	06:30	6			X	0		Start displacement (Rotating)
	06:50	6	109		X	800	900	Done w/ displacement
					X	1600	1600	Landed plug at 1600PSI
	06:55				X	0	0	Release Pressure - Float held
	07:00							Washed up trk
	07:10							Rack up trks.
	07:30							Job completed
								Thank you
								Jeff & crew
								Ted Fuchs 3½ to trk
								Jeff Dean " 3 " trk
								Rob McKenna - # 315 Trk
								Portcollar at 2137 ft
								Shoe Jt Length = 42 ft
								Total csg = 4624
								T.D. = 4620

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/

August 25, 2011

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

Re: ACO1
API 15-101-22291-00-00
Walker 2-21
NW/4 Sec.21-18S-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