KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1065256

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:

Designate Type of Completion:

- [x] New Well
- [ ] Re-Entry
- [ ] Workover

- [ ] Oil
- [ ] WSW
- [ ] SWD
- [ ] SIOW
- [ ] Gas
- [x] 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 #:

7/26/2011	8/8/2011	8/8/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-171-20823-00-00
Spot Description:
S2 - S2 - N2 - NE Sec. 13 Twp. 16 S. R. 31 [ ] East [x] West
1162 Feet from [x] North / [ ] South Line of Section
1320 Feet from [x] East / [ ] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[x] NE [ ] NW [ ] SE [ ] SW
County: Scott
Lease Name: York Well #: 1-13
Field Name:
Producing Formation: none
Elevation: Ground: 2843 Kelly Bushing: 2850
Total Depth: 4600 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 252 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

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

Chloride content: 1200 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: 11/22/2011
- [x] **Confidential Release Date:** 11/21/2013
- [x] **Wireline Log Received**
- [ ] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [ ] I [x] II [ ] III **Approved by:** NAOMI JAMES **Date:** 11/28/2011

Side Two

[redacted]

1065256

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: York Well #: 1-13

Sec. 13 Twp. 16 S. R. 31 ☐ East ☑ West County: Scott

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	175	Class A	175	2% gel, 3% CC

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
-			
-			

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

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

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

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

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)* D & A

PRODUCTION INTERVAL:

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	York 1-13
Doc ID	1065256

Tops

Name	Top	Datum
Anhydrite	2227	+623
Base Anhydrite	2284	+566
Heebner Sh	3889	-1039
Lansing-KC	3927	-1077
Stark Sh	4192	-1342
Base KC	4273	-1423
Marmaton	4302	-1452
Altamont	4324	-1474
Pawnee	4397	-1547
Fort Scott	4449	-1599
Cherokee	4475	-1625
Mississippian	4575	-1725

CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 28117
LOCATION Oakley
FOREMAN Kelly Gabel

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

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-8-11	4802	Yorkl-13	13	16	31	Scott

CUSTOMER: Larsen Eng.
MAILING ADDRESS: 502 West State RD 4
CITY: Olmitz | STATE: KS | ZIP CODE: 67564

TRUCK #	DRIVER	TRUCK #	DRIVER
399	Miles S		
460	Cory D		

JOB TYPE PTA HOLE SIZE 7 7/8 HOLE DEPTH 4600 CASING SIZE & WEIGHT
CASING DEPTH DRILL PIPE TUBING OTHER
SLURRY WEIGHT SLURRY VOL WATER gal/sk CEMENT LEFT in CASING
DISPLACEMENT DISPLACEMENT PSI MIX PSI RATE

REMARKS: Safety meeting rigged upon H-D drilling rig #2. Pumped cement plugs. Washed up truck and pumps. Rigged down and left location.

50sks @ 2280'
80sks @ 1590'
60sks @ 740'
50sks @ 270'
20sks @ 60'
30sks RH

Thank You
Kelly & Crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5405N	1	PUMP CHARGE	1250.00	1250.00
5406	60	MILEAGE	5.00	300.00
1131	290sks	60/40 POZ	14.35	4161.50
11183	1000#	Bentonite	.24	240.00
1107	50#	celloflake	2.66	133.00
5407A	12.47	Ton mileage delivery	1.58	1182.00
4432	1	8 5/8 wooden Plug	96.00	96.00
		243207		7362.50
		Less	15% disc.	1104.38
				6258.12
		8.39%	SALES TAX	326.68
			ESTIMATED TOTAL	6584.80

Ravin 3737

AUTHORIZTION [signature] TITLE DATE 8-8-11

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

ALLIED CEMENTING CO., LLC. 039995

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Oakley KS

DATE 7/26/11	SEC. 12	TWP. 16	RANGE 31	CALLED OUT	ON LOCATION	JOB START 12:00	JOB FINISH 12:30p
LEASE York	WELL # 1-13		LOCATION Healy W TO Bison N-W-W-N			COUNTY Scott	STATE KS
OLD OR NEW (Circle one)			W TO Rig				

CONTRACTOR HD #3
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 255'
CASING SIZE 8 5/8 DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 15.288

OWNER Same

CEMENT
AMOUNT ORDERED 175 SKs Com 3%CC 2% gel

COMMON	175	@ 16.25	2843.75
POZMIX		@	
GEL	3	@ 21.25	63.75
CHLORIDE	6	@ 58.20	349.20
ASC		@	
HANDLING	184	@ 2.25	414.00
MILEAGE 114 SK/mile			1153.68
		TOTAL	4824.38

EQUIPMENT

PUMP TRUCK CEMENTER Alan
422 HELPER Wayne
BULK TRUCK
DRIVER Terry
BULK TRUCK
DRIVER

REMARKS:

Drill, Run Csg, Circulate, Mix Cement, Displace Cement.
Cement Did Circulate
Thank You
Alan, Wayne, Terry Cellflake 57 x 2

SERVICE

DEPTH OF JOB 255'

PUMP TRUCK CHARGE			1125.00
EXTRA FOOTAGE		@	
MILEAGE	57 x 2	@ 7.00	798.00
MANIFOLD		@	
Cellflake	57 x 2	@ 4.00	456.00
		@	
		TOTAL	2379.00

CHARGE TO: Larson Engineering
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 LE WAYNE TRESLER

SIGNATURE LeWayne Tresler

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43232 **DST#: 1**

Test Start: 2011.07.31 @ 08:05:00

GENERAL INFORMATION:

Formation: **Lansing "B"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:58:45
Time Test Ended: 13:37:15

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 3940.00 ft (KB) To 3968.00 ft (KB) (TVD)
Total Depth: 3968.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

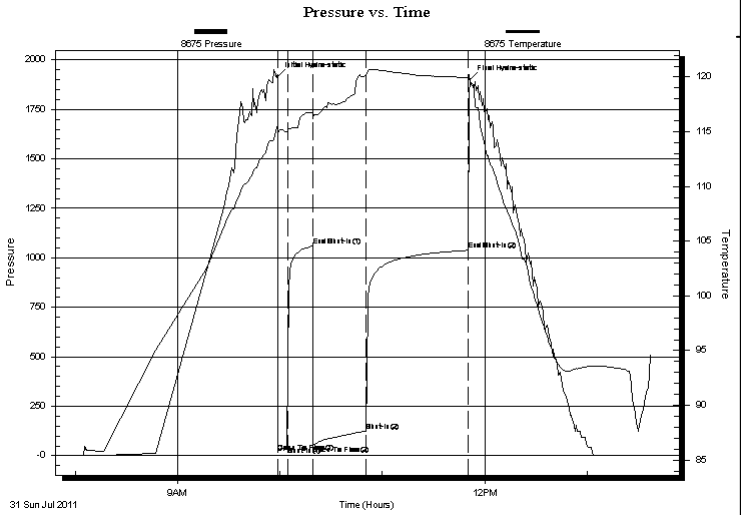
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 124.44 psig @ 3941.00 ft (KB)
Start Date: 2011.07.31 End Date: 2011.07.31
Start Time: 08:05:01 End Time: 13:37:15

Capacity: 8000.00 psig
Last Calib.: 2011.07.31
Time On Btm: 2011.07.31 @ 09:58:30
Time Off Btm: 2011.07.31 @ 11:51:15

TEST COMMENT: Built to 2 1/2 Blow
No return blow
B.O.B. in 28 min.
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1914.38	115.52	Initial Hydro-static
1	19.92	114.34	Open To Flow (1)
6	48.91	115.03	Shut-In(1)
21	1060.81	116.78	End Shut-In(1)
21	53.02	116.22	Open To Flow (2)
52	124.44	120.16	Shut-In(2)
112	1038.65	119.99	End Shut-In(2)
113	1901.72	119.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	mcw 10%M 90%W	0.30
180.00	w cm 40%W 60%M	1.80

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

York 1-13

13-16-31

Job Ticket: 43232 **DST#: 1**

Test Start: 2011.07.31 @ 08:05:00

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:	60000 ppm
Viscosity:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 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

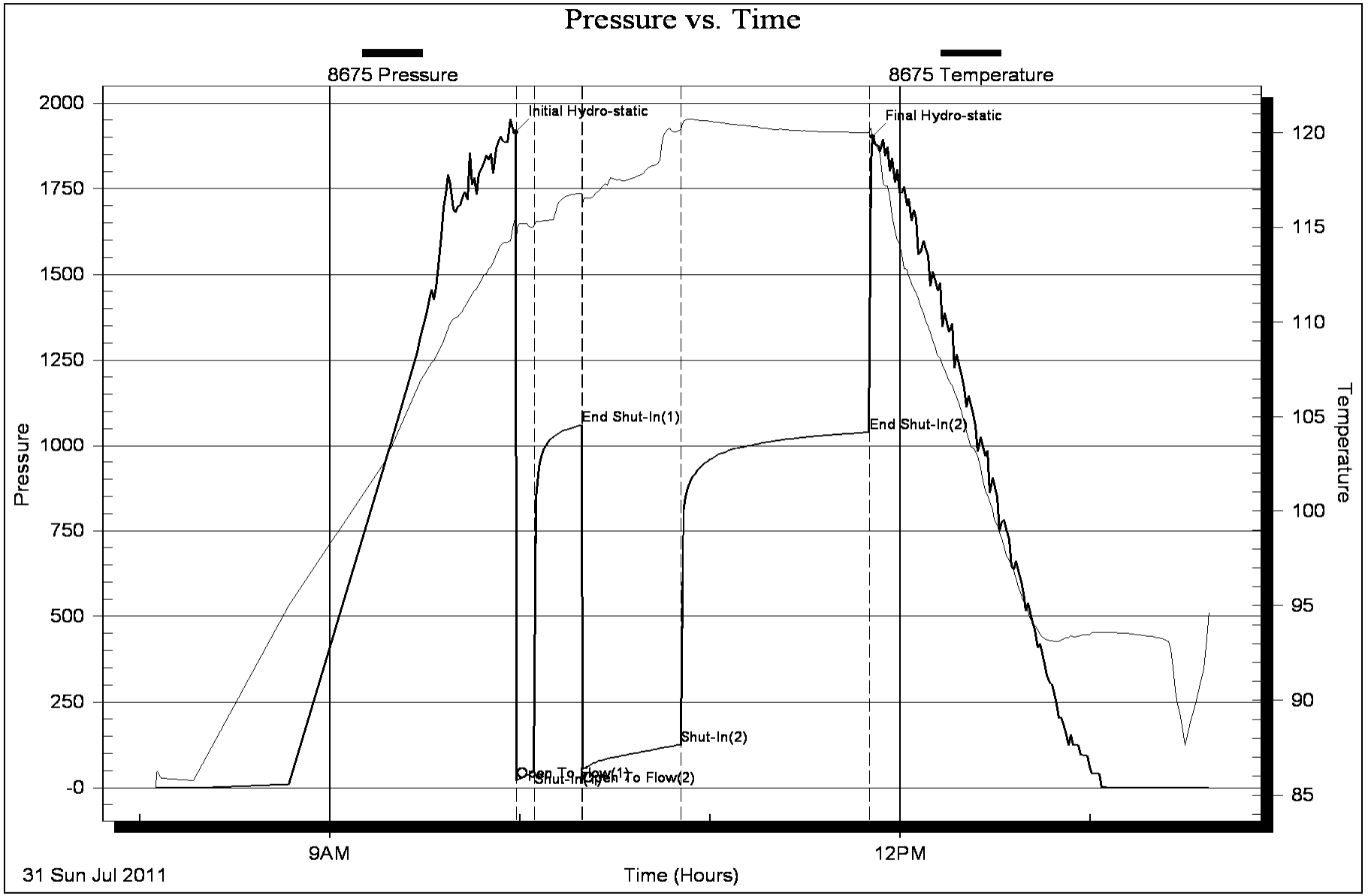
Length ft	Description	Volume bbl
60.00	mcw 10%M 90%W	0.295
180.00	w cm 40%W 60%M	1.796

Total Length: 240.00 ft Total Volume: 2.091 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW: .08 @ 110 F = 60000


Pressure vs. Time
8675 Pressure
8675 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Pressure
Temperature
2000
1750
1500
1250
1000
750
500
250
-0
120
115
110
105
100
95
90
85
9AM
12PM
31 Sun Jul 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43233 **DST#: 2**

Test Start: 2011.07.31 @ 22:10:00

GENERAL INFORMATION:

Formation: **Kansas City "E"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:04:00
Time Test Ended: 03:19:15

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 3980.00 ft (KB) To 4015.00 ft (KB) (TVD)
Total Depth: 4015.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

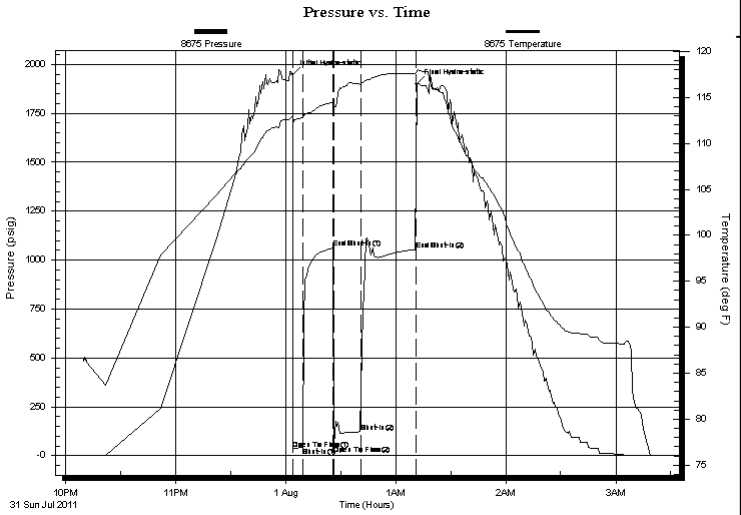
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 121.46 psig @ 3981.00 ft (KB)
Start Date: 2011.07.31 End Date: 2011.08.01
Start Time: 22:10:01 End Time: 03:19:15

Capacity: 8000.00 psig
Last Calib.: 2011.08.01
Time On Btm: 2011.08.01 @ 00:03:45
Time Off Btm: 2011.08.01 @ 01:11:30

TEST COMMENT: Built to 2" blow
No return blow
Built to 10" blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1950.40	112.88	Initial Hydro-static
1	32.48	111.95	Open To Flow (1)
6	43.17	112.83	Shut-In(1)
22	1060.22	114.45	End Shut-In(1)
23	51.71	114.00	Open To Flow (2)
38	121.46	116.43	Shut-In(2)
68	1054.36	117.56	End Shut-In(2)
68	1899.58	117.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	100%M	1.81

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

York 1-13

13-16-31

Job Ticket: 43233 **DST#: 2**

Test Start: 2011.07.31 @ 22:10:00

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:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.59 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

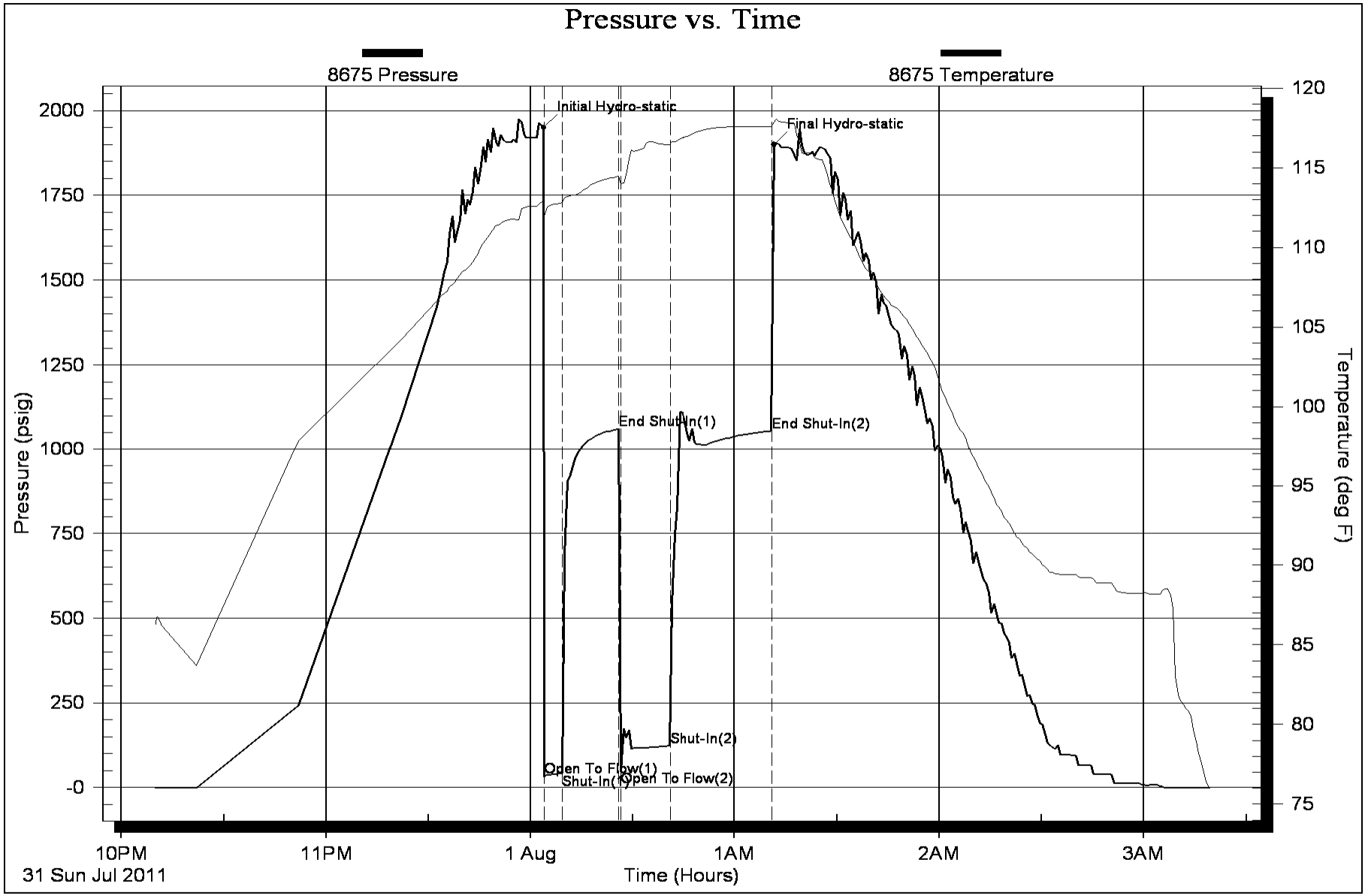
Length ft	Description	Volume bbl
220.00	100%M	1.811

Total Length: 220.00 ft Total Volume: 1.811 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)
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
120
115
110
105
100
95
90
85
80
75
10PM
31 Sun Jul 2011
11PM
1 Aug
1AM
2AM
3AM
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43234 **DST#: 3**

Test Start: 2011.08.01 @ 18:40:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:48:00
Time Test Ended: 23:45:15

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4096.00 ft (KB) To 4122.00 ft (KB) (TVD)
Total Depth: 4122.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

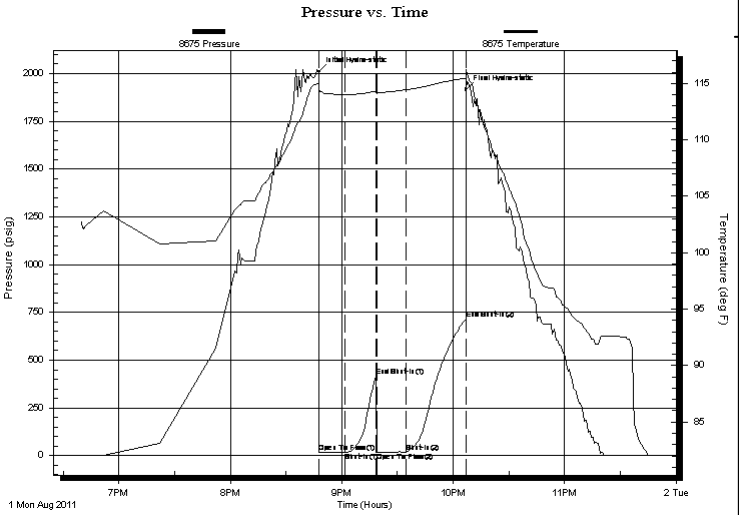
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 19.22 psig @ 4097.00 ft (KB)
Start Date: 2011.08.01 End Date: 2011.08.01
Start Time: 18:40:01 End Time: 23:45:15

Capacity: 8000.00 psig
Last Calib.: 2011.08.01
Time On Btm: 2011.08.01 @ 20:47:45
Time Off Btm: 2011.08.01 @ 22:07:00

TEST COMMENT: Weak surface blow died in 3 min.
No return blow
No blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2007.95	114.96	Initial Hydro-static
1	17.13	114.07	Open To Flow (1)
15	19.35	114.01	Shut-In(1)
31	414.79	114.31	End Shut-In(1)
31	18.33	114.11	Open To Flow (2)
47	19.22	114.44	Shut-In(2)
79	715.51	115.48	End Shut-In(2)
80	1915.92	116.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	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, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43234 **DST#: 3**

Test Start: 2011.08.01 @ 18:40:00

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:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3900.00 ppm				
Filter Cake:	2.00 inches				

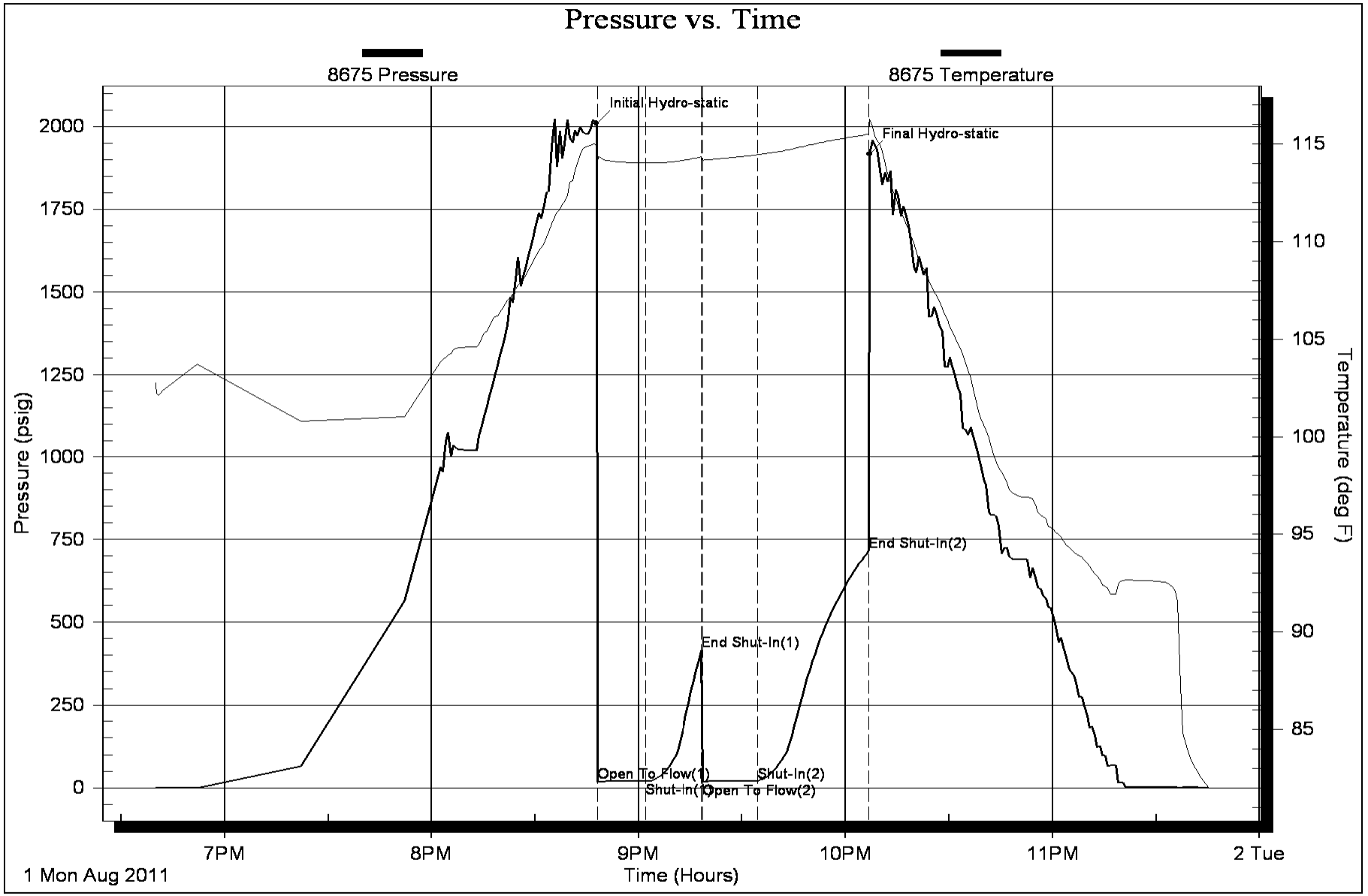
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100% M	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

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


Pressure vs. Time
8675 Pressure
8675 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(2)
End Shut-In(1)
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
115
110
105
100
95
90
85
7PM
8PM
9PM
10PM
11PM
2 Tue
1 Mon Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43235 **DST#: 4**

Test Start: 2011.08.02 @ 10:35:00

GENERAL INFORMATION:

Formation: **Kansas City "I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:04:00
Time Test Ended: 14:45:00

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4120.00 ft (KB) To 4161.00 ft (KB) (TVD)
Total Depth: 4161.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

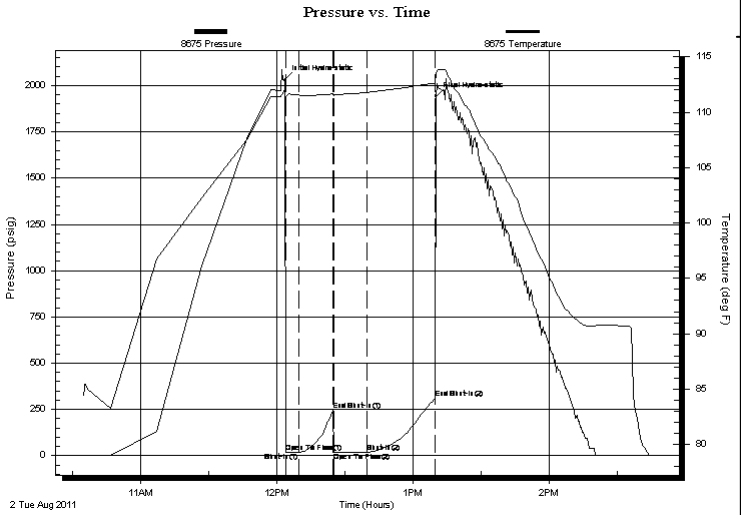
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 18.68 psig @ 4121.00 ft (KB)
Start Date: 2011.08.02 End Date: 2011.08.02
Start Time: 10:35:01 End Time: 14:45:00

Capacity: 8000.00 psig
Last Calib.: 2011.08.02
Time On Btm: 2011.08.02 @ 12:03:45
Time Off Btm: 2011.08.02 @ 13:10:15

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2029.57	111.96	Initial Hydro-static
1	17.40	110.74	Open To Flow (1)
7	17.52	111.53	Shut-In(1)
21	246.25	111.66	End Shut-In(1)
22	17.65	111.49	Open To Flow (2)
37	18.68	111.79	Shut-In(2)
66	310.34	112.63	End Shut-In(2)
67	1940.76	113.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	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, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43235 **DST#: 4**

Test Start: 2011.08.02 @ 10:35:00

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:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3900.00 ppm				
Filter Cake:	2.00 inches				

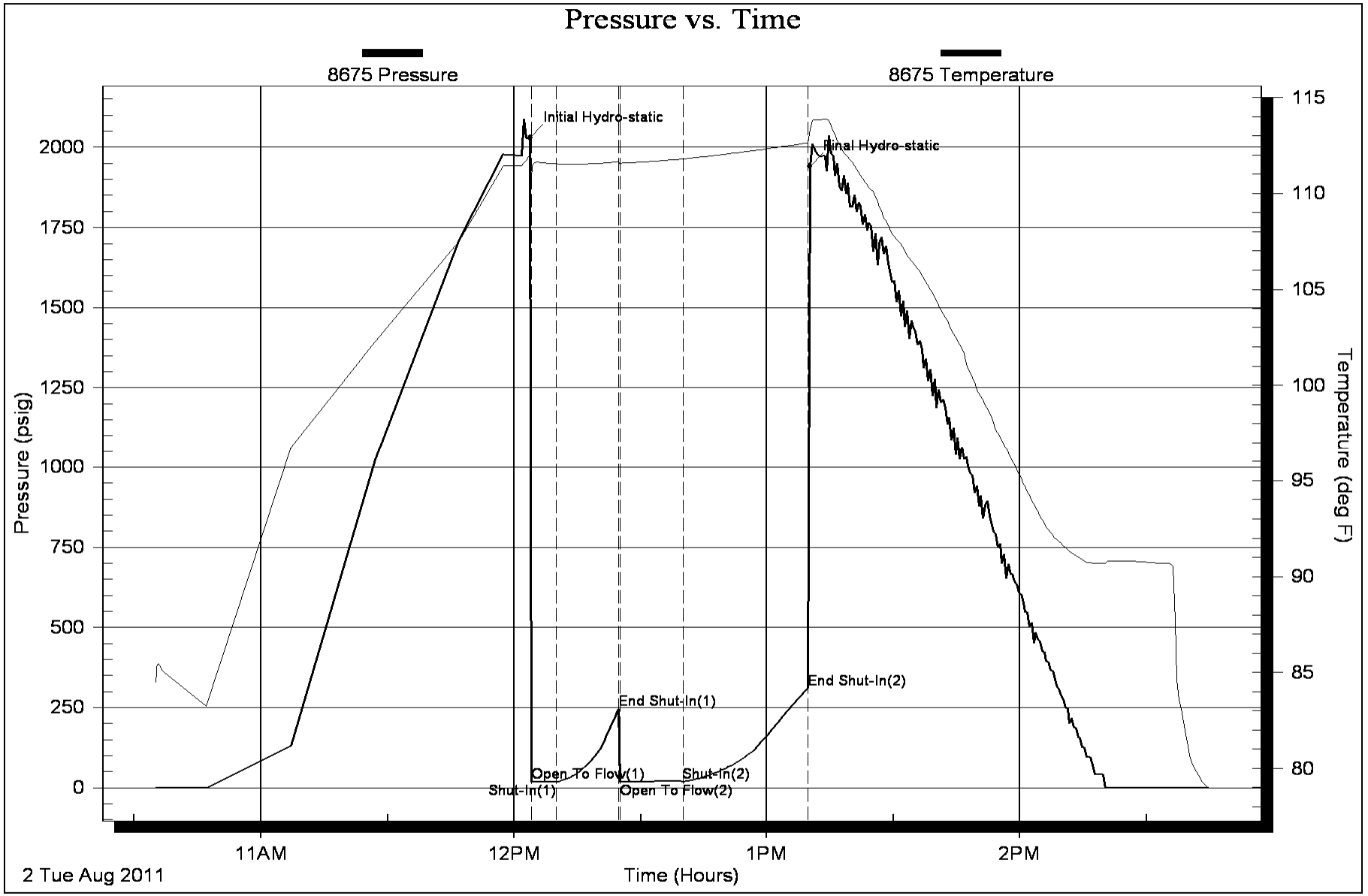
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100% M	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

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


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(1)
Shut-In(2)
Open To Flow(2)
Pressure (psig)
Temperature (deg F)
Time (Hours)
2 Tue Aug 2011
11AM
12PM
1PM
2PM
2000
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43236 **DST#: 5**

Test Start: 2011.08.03 @ 01:40:00

GENERAL INFORMATION:

Formation: **Kansas City "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:06:45
Time Test Ended: 07:11:15

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4187.00 ft (KB) To 4214.00 ft (KB) (TVD)
Total Depth: 4214.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

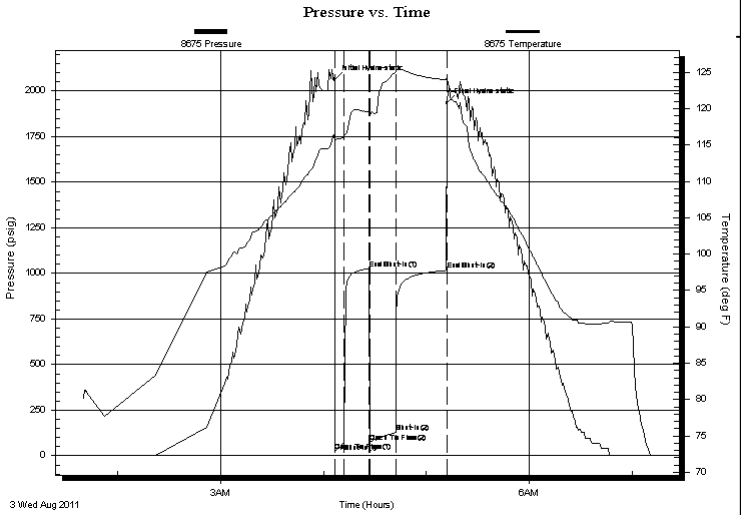
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 129.24 psig @ 4188.00 ft (KB)
Start Date: 2011.08.03 End Date: 2011.08.03
Start Time: 01:40:01 End Time: 07:11:15

Capacity: 8000.00 psig
Last Calib.: 2011.08.03
Time On Btm: 2011.08.03 @ 04:06:30
Time Off Btm: 2011.08.03 @ 05:12:00

TEST COMMENT: Built to 3" blow
No return blow
Built to 10" blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2062.92	116.39	Initial Hydro-static
1	25.29	115.57	Open To Flow (1)
6	70.75	116.11	Shut-In(1)
21	1026.52	119.56	End Shut-In(1)
21	76.82	119.14	Open To Flow (2)
36	129.24	125.05	Shut-In(2)
66	1016.40	123.91	End Shut-In(2)
66	1934.43	124.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	mcw 30%M 70%W	0.62
124.00	mcw 50%M 50%W	1.61

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

York 1-13

13-16-31

Job Ticket: 43236 **DST#: 5**

Test Start: 2011.08.03 @ 01:40:00

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:	47000 ppm
Viscosity:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.20 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3400.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

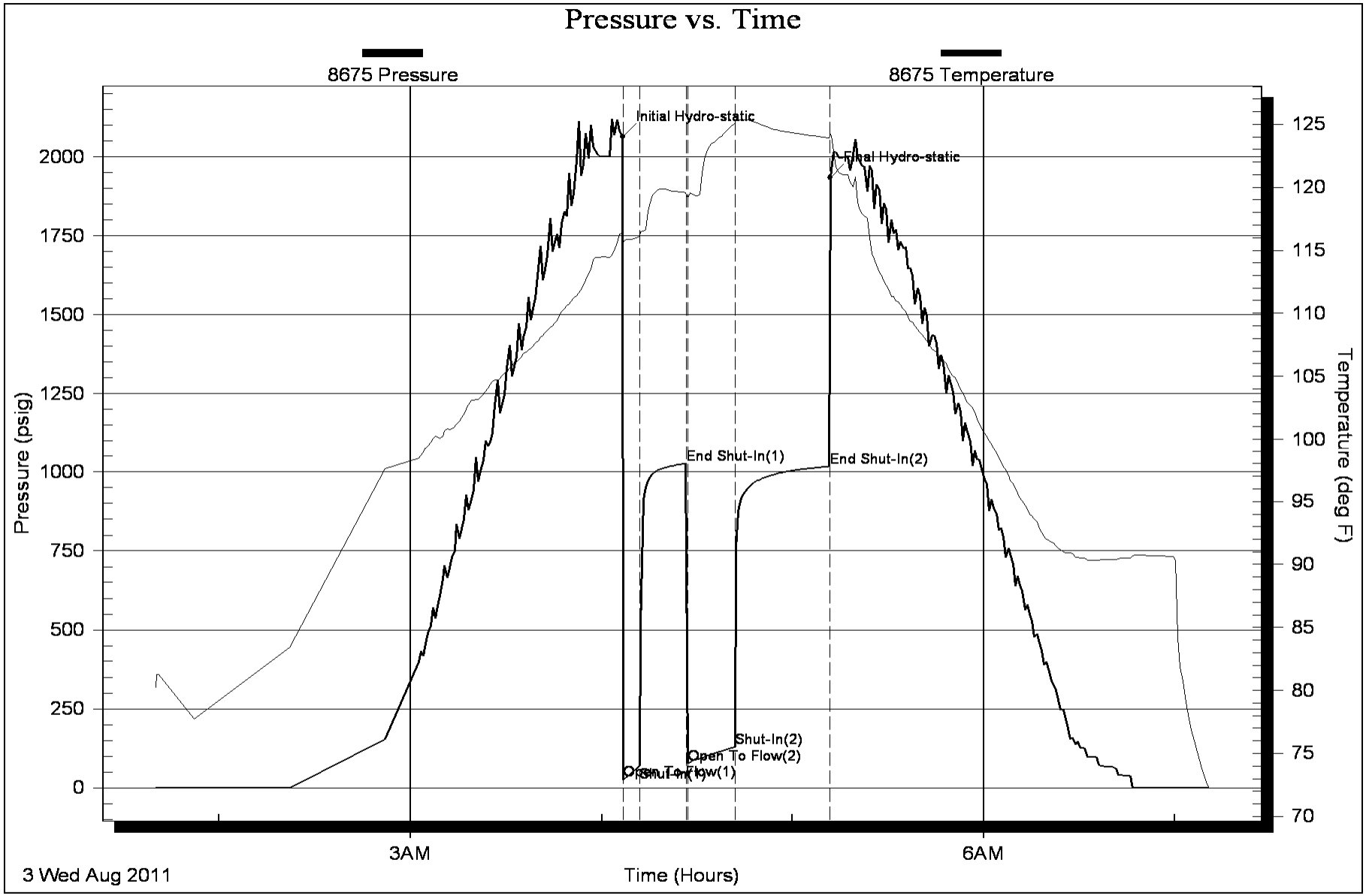
Length ft	Description	Volume bbl
126.00	mcw 30%M 70%W	0.620
124.00	mcw 50%M 50%W	1.612

Total Length: 250.00 ft Total Volume: 2.232 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW: .17 @ 68 F = 47,000


Pressure vs. Time
8675 Pressure
8675 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Open To Flow(2)
Shut-In(1)
Open To Flow(1)
Pressure (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
3AM
6AM
3 Wed Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43237 **DST#: 6**

Test Start: 2011.08.03 @ 16:20:00

GENERAL INFORMATION:

Formation: **Middle Creek**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:21:30
Time Test Ended: 21:01:30

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4228.00 ft (KB) To 4238.00 ft (KB) (TVD)
Total Depth: 4228.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

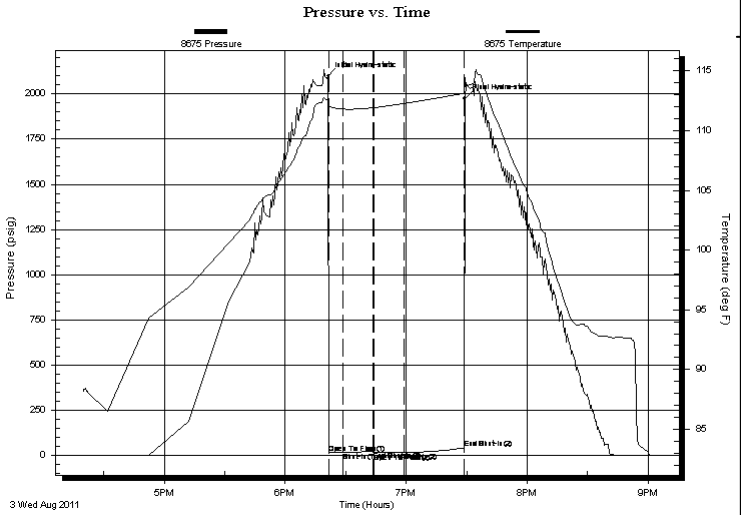
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 17.43 psig @ 4229.00 ft (KB)
Start Date: 2011.08.03 End Date: 2011.08.03
Start Time: 16:20:01 End Time: 21:01:30

Capacity: 8000.00 psig
Last Calib.: 2011.08.03
Time On Btm: 2011.08.03 @ 18:21:15
Time Off Btm: 2011.08.03 @ 19:29:00

TEST COMMENT: No blow
No return blow
No blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2098.33	112.54	Initial Hydro-static
1	15.48	111.72	Open To Flow (1)
8	17.19	111.81	Shut-In(1)
23	26.09	111.92	End Shut-In(1)
23	15.49	111.92	Open To Flow (2)
38	17.43	112.27	Shut-In(2)
68	42.75	113.13	End Shut-In(2)
68	1974.03	114.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	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, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43237 **DST#: 6**

Test Start: 2011.08.03 @ 16:20:00

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:	8.75 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1800.00 ppm				
Filter Cake:	2.00 inches				

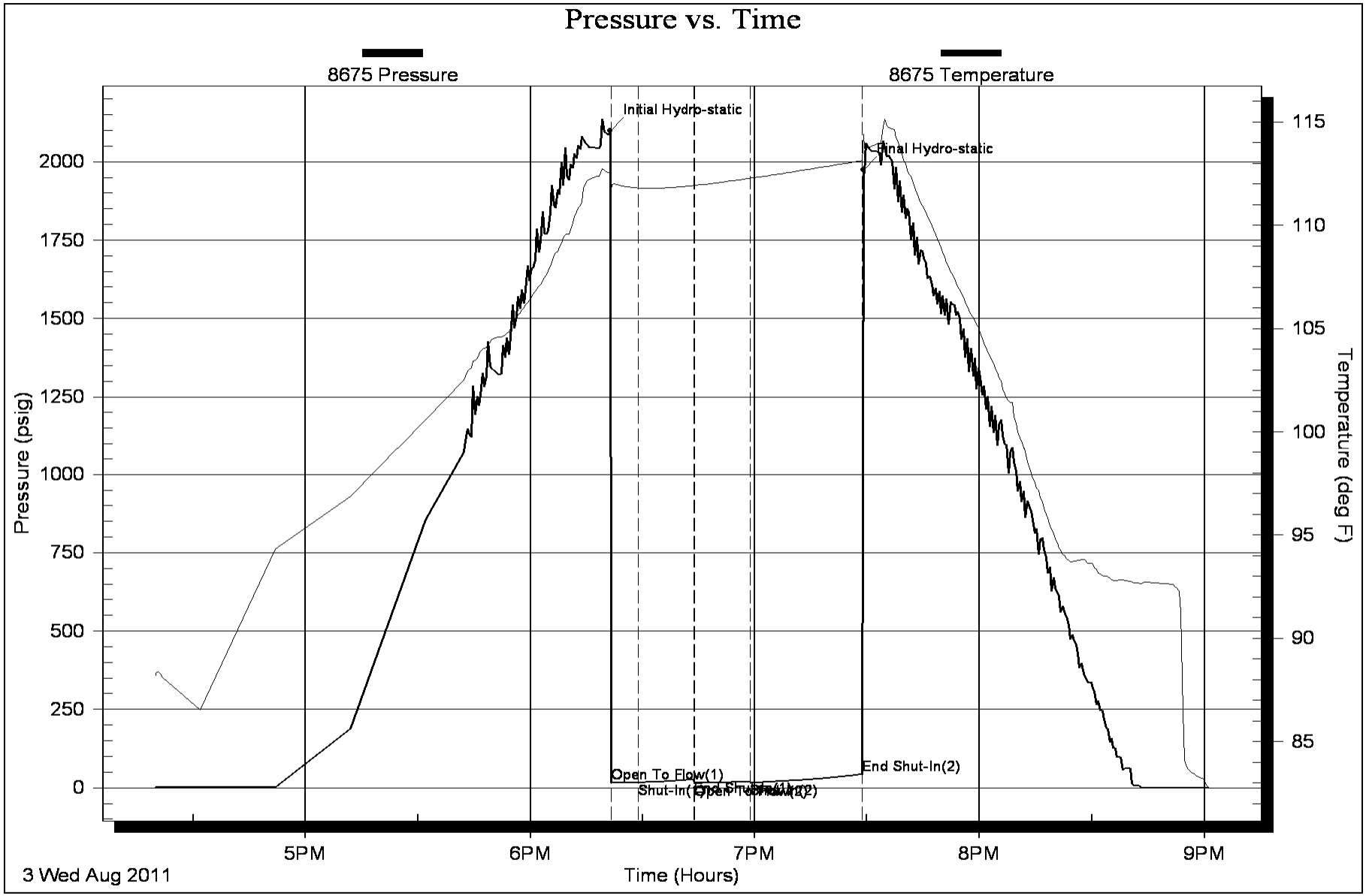
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100% M	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

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


Pressure vs. Time
8675 Pressure
8675 Temperature
Initial Hydro-static
Final Hydro-static
Open To Flow(1)
End Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
5PM
6PM
7PM
8PM
9PM
3 Wed Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43238 **DST#: 7**

Test Start: 2011.08.04 @ 04:30:00

GENERAL INFORMATION:

Formation: **Kansas City "L"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:17:00
Time Test Ended: 09:10:30

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4227.00 ft (KB) To 4245.00 ft (KB) (TVD)
Total Depth: 4245.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

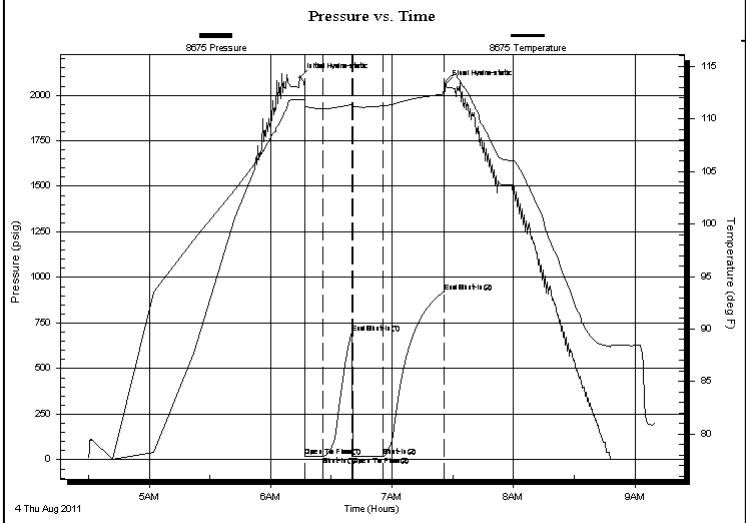
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 19.17 psig @ 4228.00 ft (KB)
Start Date: 2011.08.04 End Date: 2011.08.04
Start Time: 04:30:01 End Time: 09:10:30

Capacity: 8000.00 psig
Last Calib.: 2011.08.04
Time On Btm: 2011.08.04 @ 06:14:30
Time Off Btm: 2011.08.04 @ 07:26:15

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2096.57	111.83	Initial Hydro-static
3	17.24	110.96	Open To Flow (1)
11	17.71	110.98	Shut-In(1)
26	694.73	111.36	End Shut-In(1)
26	18.37	110.99	Open To Flow (2)
41	19.17	111.24	Shut-In(2)
71	921.09	112.39	End Shut-In(2)
72	2057.22	113.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	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, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43238 **DST#: 7**

Test Start: 2011.08.04 @ 04:30:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	32000.00 ppm				
Filter Cake:	2.00 inches				

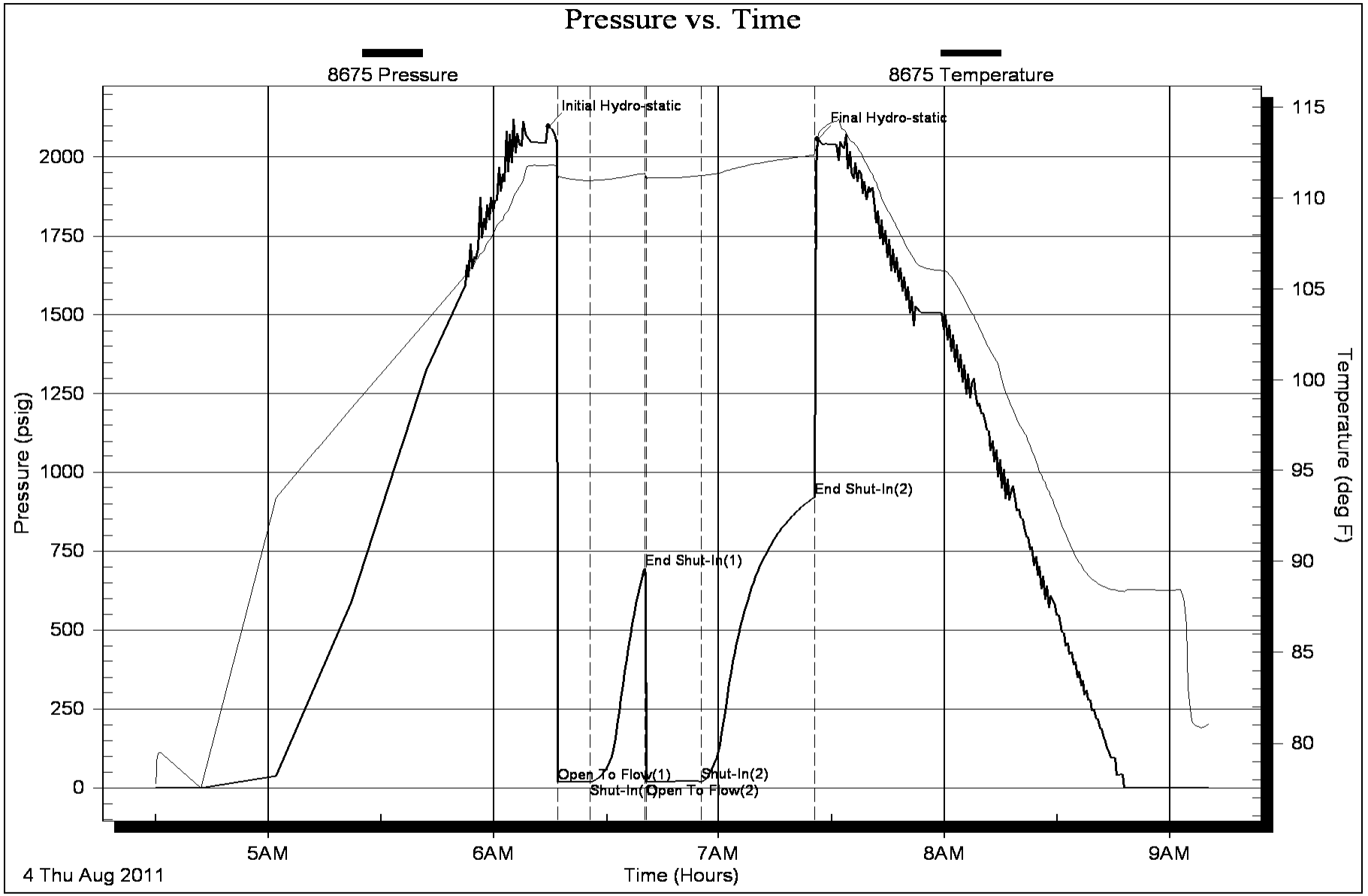
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100% M	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

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


Pressure vs. Time
8675 Pressure
8675 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(2)
End Shut-In(1)
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
115
110
105
100
95
90
85
80
5AM
6AM
7AM
8AM
9AM
4 Thu Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43239 **DST#: 8**

Test Start: 2011.08.05 @ 03:40:00

GENERAL INFORMATION:

Formation: **Marmaton & Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:47:45
Time Test Ended: 09:24:30

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4262.00 ft (KB) To 4355.00 ft (KB) (TVD)
Total Depth: 4355.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

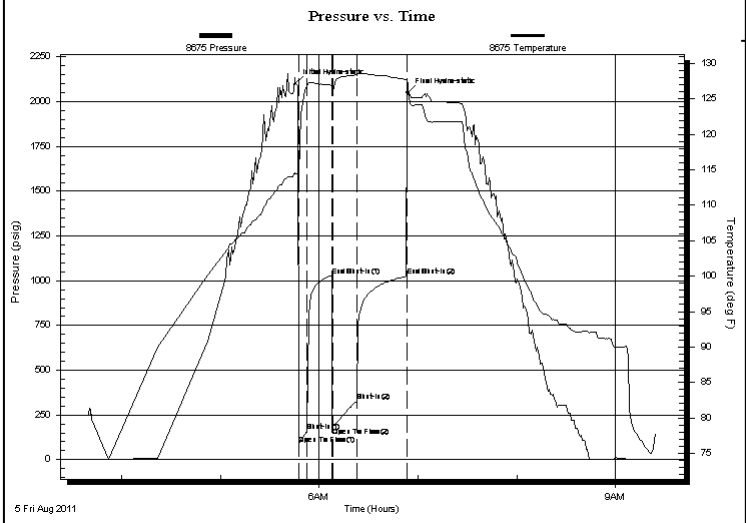
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 329.13 psig @ 4263.00 ft (KB)
Start Date: 2011.08.05 End Date: 2011.08.05
Start Time: 03:40:01 End Time: 09:24:30

Capacity: 8000.00 psig
Last Calib.: 2011.08.05
Time On Btm: 2011.08.05 @ 05:45:30
Time Off Btm: 2011.08.05 @ 06:53:45

TEST COMMENT: B.O.B. in 3 min.
Weak surface return blow
B.O.B. in 3 min.
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2100.05	114.47	Initial Hydro-static
3	85.94	114.42	Open To Flow (1)
8	159.82	126.81	Shut-In(1)
23	1028.47	126.94	End Shut-In(1)
23	183.55	126.44	Open To Flow (2)
38	329.13	128.37	Shut-In(2)
68	1024.10	127.73	End Shut-In(2)
69	2051.33	126.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
375.00	osw 100%W	3.98
310.00	osmcw 30%M 70%W	4.35

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

York 1-13

13-16-31

Job Ticket: 43239 **DST#: 8**

Test Start: 2011.08.05 @ 03:40:00

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:	60000 ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.20 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3300.00 ppm				
Filter Cake:	0.50 inches				

Recovery Information

Recovery Table

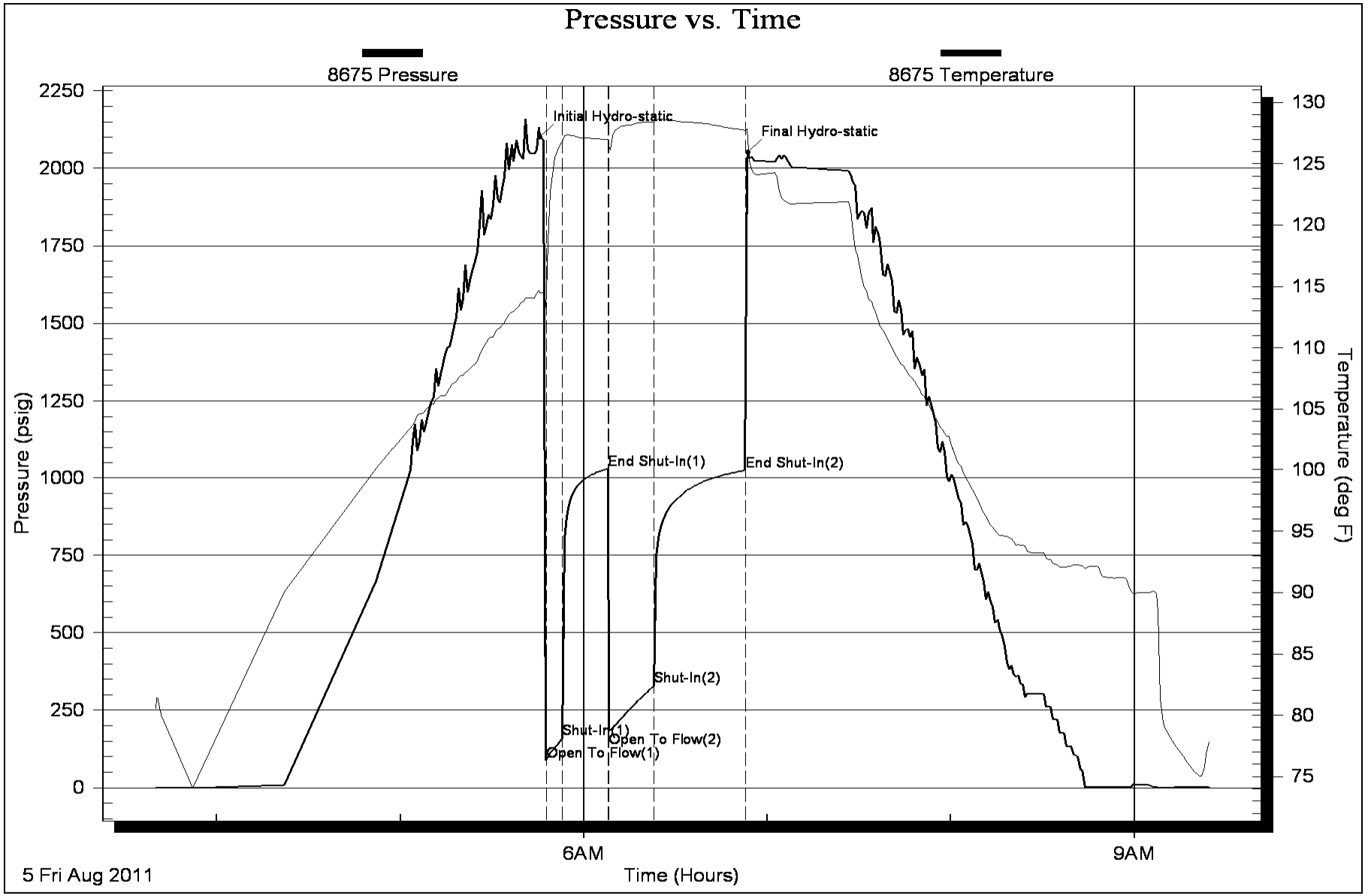
Length ft	Description	Volume bbl
375.00	osw 100%W	3.985
310.00	osmcw 30%M 70%W	4.348

Total Length: 685.00 ft Total Volume: 8.333 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW: .12 @ 74 F = 60,000


Pressure vs. Time
8675 Pressure
8675 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
125
120
115
110
105
100
95
90
85
80
75
6AM
9AM
5 Fri Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43240 **DST#: 9**

Test Start: 2011.08.06 @ 06:00:00

GENERAL INFORMATION:

Formation: **Pawnee & Fort Scott**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:06:15
Time Test Ended: 10:56:30

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4386.00 ft (KB) To 4480.00 ft (KB) (TVD)
Total Depth: 4480.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

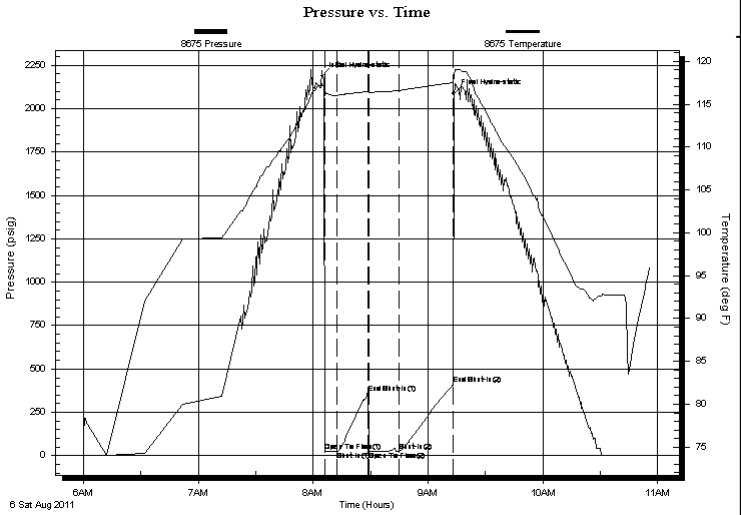
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 26.80 psig @ 4387.00 ft (KB)
Start Date: 2011.08.06 End Date: 2011.08.06
Start Time: 06:00:01 End Time: 10:56:30

Capacity: 8000.00 psig
Last Calib.: 2011.08.06
Time On Btm: 2011.08.06 @ 08:04:30
Time Off Btm: 2011.08.06 @ 09:13:30

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	2188.53	117.27	Initial Hydro-static
2	24.95	115.98	Open To Flow (1)
8	26.62	116.03	Shut-In(1)
25	363.28	116.49	End Shut-In(1)
25	25.73	116.33	Open To Flow (2)
41	26.80	116.58	Shut-In(2)
69	409.73	117.53	End Shut-In(2)
69	2087.65	118.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	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, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43240 **DST#: 9**

Test Start: 2011.08.06 @ 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:	62.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.20 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2800.00 ppm				
Filter Cake:	2.00 inches				

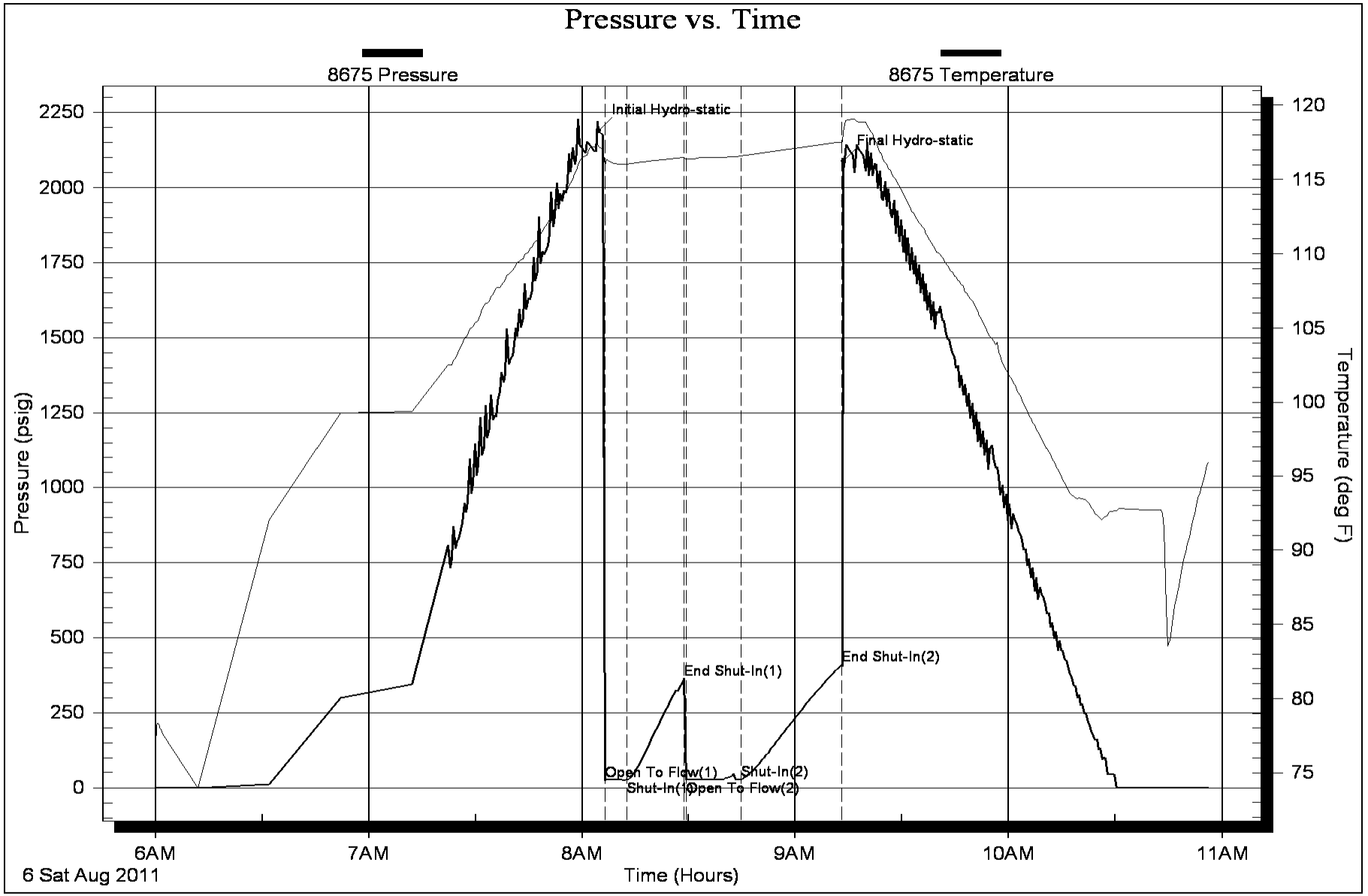
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100% M	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

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


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)
2250
2000
1750
1500
1250
1000
750
500
250
0
120
115
110
105
100
95
90
85
80
75
6AM
7AM
8AM
9AM
10AM
11AM
6 Sat Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Larson Engineering Inc.

562 W State RD 4
Olmitz KS, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43241 **DST#: 10**

Test Start: 2011.08.06 @ 21:25:00

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:51:00
Time Test Ended: 03:15:45

Test Type: Conventional Bottom Hole
Tester: Jace McKinney
Unit No: 28

Interval: 4470.00 ft (KB) To 4532.00 ft (KB) (TVD)
Total Depth: 4532.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

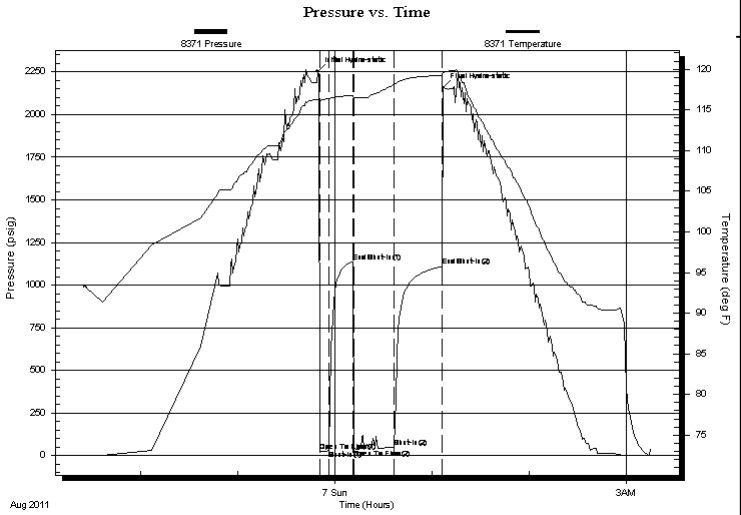
Reference Elevations: 2850.00 ft (KB)
2843.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8371 **Outside**

Press@RunDepth: 50.17 psig @ 4471.00 ft (KB)
Start Date: 2011.08.06 End Date: 2011.08.07
Start Time: 21:25:01 End Time: 03:15:45

Capacity: 8000.00 psig
Last Calib.: 2011.08.07
Time On Btm: 2011.08.06 @ 23:49:30
Time Off Btm: 2011.08.07 @ 01:07:15

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2252.62	116.32	Initial Hydro-static
2	25.09	115.59	Open To Flow (1)
8	31.27	116.37	Shut-In(1)
22	1138.63	116.78	End Shut-In(1)
23	35.57	116.45	Open To Flow (2)
48	50.17	118.12	Shut-In(2)
77	1110.04	119.29	End Shut-In(2)
78	2157.26	119.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	100% M	0.30

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, 67564-8561

ATTN: Bob Lewellyn

York 1-13

13-16-31

Job Ticket: 43241 **DST#: 10**

Test Start: 2011.08.06 @ 21:25:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	58.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2600.00 ppm				
Filter Cake:	2.00 inches				

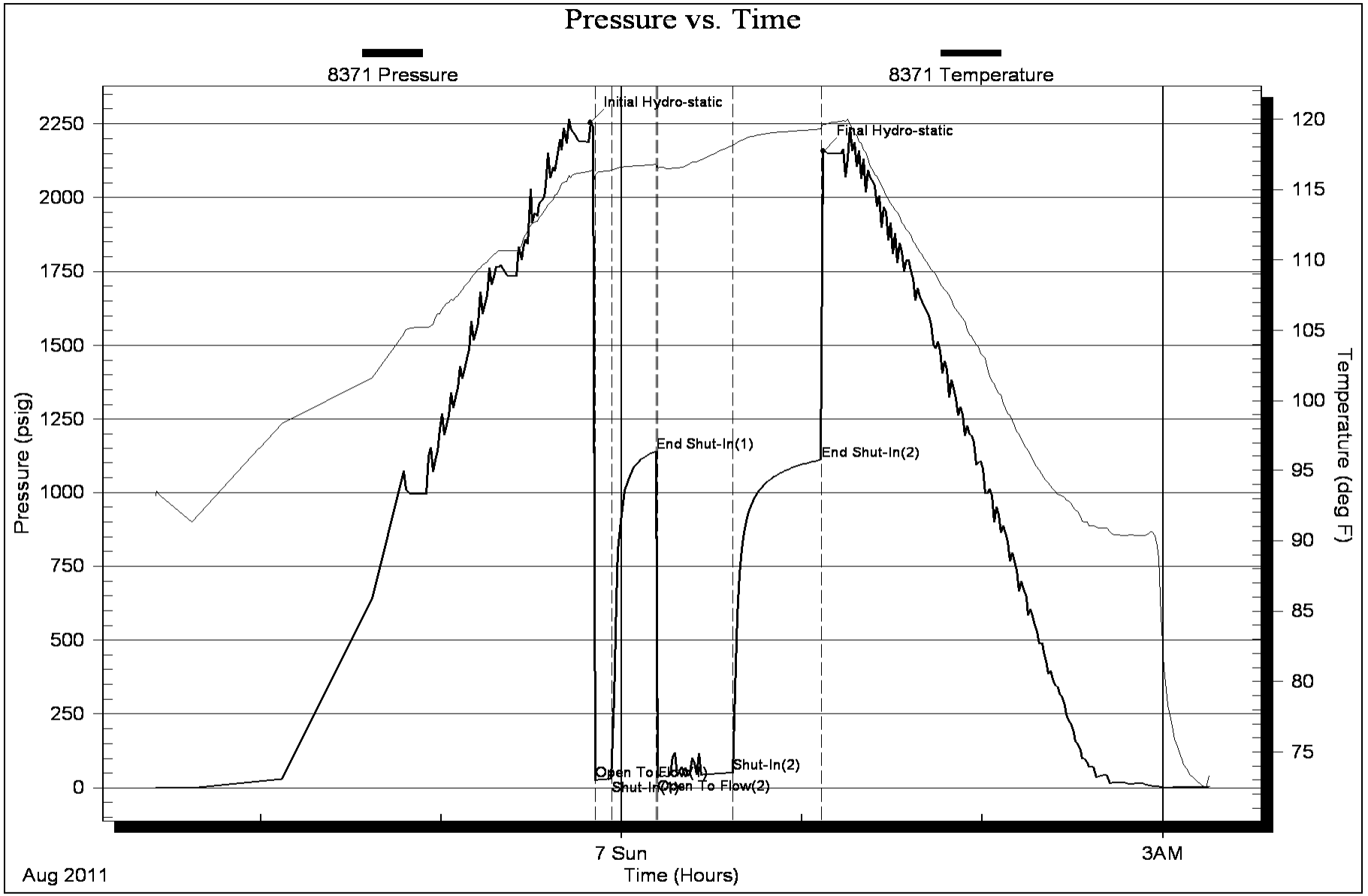
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	100% M	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

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


Pressure vs. Time
8371 Pressure
8371 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
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
7 Sun
3AM
Aug 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. 1-13 York
1162' FNL & 1320 FEL Sec. 13-16S-31W
Scott County, Kansas

CONTRACTOR:	H D Drilling, LLC
SPUDDED:	July 26, 2011
DRILLING COMPLETED:	August 08, 2011
SURFACE CASING:	8 5/8" @ 252 KBM/175 sx.
ELECTRIC LOGS:	DIL CNL/CDL MEL
ELEVATIONS:	2850 KB 2843 GL

FORMATION TOPS: (Electric Log)

Anhydrite	2227 (+ 623)
Base Anhydrite	2284 (+ 566)
Heebner Shale	3889 (-1039)
Lansing-Kansas City Group	3927 (-1077)
Muncie Creek Shale	4102 (-1252)
Stark Shale	4192 (-1342)
Hushpuckney Shale	4230 (-1380)
Base Kansas City	4273 (-1423)
Marmaton	4302 (-1452)
Altamont	4324 (-1474)
Pawnee	4397 (-1547)
Myrick Station	4424 (-1574)
Fort Scott	4449 (-1599)
Cherokee	4475 (-1625)
Cherokee Sand	4559 (-1709)
Detrital Zone	4567 (-1717)
Mississippian	4575 (-1725)
Electric Log Total Depth	4600 (-1750)

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:

3930-3934 (A Zone)

Limestone, cream to buff, dense to finely crystalline with much white to cream chalky, zone is mostly tight with trace of scattered poor intercrystalline porosity, no show of oil.

3962-3966 (B Zone)

Limestone, cream to buff, some tan, finely crystallilne and mealy, slightly fossiliferous, fair intercrystalline porosity with scattered poor spotted stain, slight show of free oil, faint fleeting odor, poor fluorescence, poor to fair cut.

Drill Stem Test No. 1 3940-3968
5-15-30-60; built to 2 ½ inch blow on first flow period, no blowback; blow off bottom of bucket in 28 minutes of second flow, no blowback. Recovered 180 feet of water cut mud (40% water, 60% mud), and 60 feet of mud cut water (90% water, 10% mud). ISIP 1061# FSIP 1039# IFP 20-49# FFP 53-124# IHP 1914# FHP1902# BHT 120 degrees F.

3976-4008 (C/D Zone)

Limestone, cream, some buff, dense to finely crystalline with much chalky, slightly fossiliferous, zone is mostly tight with no shows of oil in this interval.

4010-4014 (E Zone)

Limestone, white to cream, some buff, dense to finely crystalline and partly fossiliferous, poor to fair intercrystalline and interfossil porosity, poor to fair spotted stain, show of free oil, faint sustaining odor, poor fluorescence, fair cut.

Drill Stem Test No. 2 3980-4015
5-15-15-30; built to two-inch blow on first flow period, no blowback; built to 10 inch blow on second flow, no blowback. Recovered 220 feet of mud (100% mud). ISIP 1060# FSIP 1054# IFP 32-43# FFP 52-121# IHP 1950# FHP 1900# BHT 118 degrees F.

4027-4040 (F Zone)

Limestone, buff, finely crystalline and dense, partly fossiliferous, trace of very poor scattered intercrystalline porosity, considerable dead stain with rare trace of poor live stain, no free oil, no odor, no fluorescence, no cut. Zone warrants no further evaluation.

4042-4050 (G Zone)

Limestone, cream to buff, finely crystalline and partly oolitic, some chalky, fair to good ooliticastic porosity, no show of oil. Lower portion of G zone is dense and chalky, mostly tight, no show of oil.

4114-4120 (H Zone)

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

Drill Stem Test No. 3 4091-4122
5-15-15-30; weak surface blow, died in three minutes; blow did not return on second flow. Recovered one foot of mud. ISIP 415# FSIP 716# IFP 17-19# FFP 18-19# IHP 2008# FHP 1916# BHT 115 degrees F.

4149-4152 (I Zone)

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

Drill Stem Test No. 4 4120-4161
5-15-15-30; weak surface blow on first flow period; blow did not return on second flow period. Recovered one foot of mud. ISIP 246# FSIP 310# IFP 17-18# FFP 18-19# IHP 2030# FHP 1941# BHT 113 degrees F.

4171-4192 (J Zone)

Limestone, tan to brown, 10% oolitic, finely crystalline with some dense, trace of very poor ooliticastic porosity with zone being mostly tight, no show of oil.

4201-4203 & 4211-4215 (K Zone)

Limestone, buff, some tan, dense to finely crystalline and oolitic, poor to fair vugular and scattered interoolitic porosity, trace of poor ooliticastic porosity, scattered poor spotted stain, slight show of free oil, faint to fair odor, poor to fair fluorescence, poor to fair cut.

Drill Stem Test No. 5 4187-4214
5-15-15-30; built to three-inch blow on first flow period, no blowback; built to 10 inch blow on second flow period, no blowback. Recovered 124 feet of mud cut water (50% water, 50% mud), 126 feet of mud cut water (70% water, 30% mud). ISIP 1027# FSIP 1016# IFP 26-71# FFP 77-129# IHP 2063# FHP 1934# BHT 124 degrees F.

4234-4238 (Middle Creek Zone)

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

Drill Stem Test No. 6 4228-4238
5-15-15-30; weak surface blow, died almost immediately; blow did not return on second flow. Recovered one foot of mud. ISIP 26# FSIP 43# IFP 15-17# FFP 15-17# IHP 2098# FHP 1974# BHT 113 degrees F.

4240-4245 (L Zone)

Limestone, buff to tan, trace of brown, dense to finely crystalline with trace of calcite crystal overgrowth on one or two fragments, poor intercrystalline and vugular porosity, poor spotted stain, show of free oil, faint odor, poor fluorescence, poor to fair cut.

Drill Stem Test No. 7 4227-4245
5-15-15-30; weak surface blow through first flow period, no blowback; blow did not return on second flow period. Recovered one foot of mud. ISIP 695# FSIP 921# IFP 17-18# FFP 18-19# IHP 2097# FHP 2057# BHT 112 degrees F.

4345-4273 (Lower L Zone)

Limestone, buff to tan, trace of brown and gray, dense to finely crystalline, some buff oolitic with dark greenish-gray oolites, rare trace of calcite crystal overgrowth, zone is mostly tight with traces of dead stain, no live oil shows are present in this interval.

4273-4302 (Pleasanton Zone)

Limestone, slightly dolomitic, buff, finely crystalline with some dense, trace of poor intercrystalline porosity, rare fragment with very poor spotted stain, rare trace of free oil, no odor, very poor fluorescence, no cut.

4302-4324 (Marmaton)

Limestone, buff to tan, some brown, dense, some finely crystalline, trace of scattered poor vugular porosity, some poor intercrystalline porosity, trace of scattered poor spotted stain, trace of free oil, faint sustaining odor, poor fluorescence, poor cut, some traces of scattered dead stain.

4349-4355 (Altamont "A" Zone)

Limestone, cream to buff, some tan, dense to finely crystalline and slightly fossiliferous, slightly chalky, poor to fair intercrystalline and small vug porosity, scattered poor spotted stain with scattered poor stain on fracture faces of dense fragments, very slight show of free oil, faint odor, poor fluorescence, poor cut.

Drill Stem Test No. 8 4262-4355
5-15-15-30; blow off bottom of bucket in three minutes of first flow, weak surface blowback; blow off bottom of bucket in three minutes of second flow period, no blowback. Recovered 310 feet of oil spotted muddy water (70% water, 30% mud), 375 feet of oil spotted water (100% water). ISIP 1028# FSIP 1024# IFP 86-160# FFP 184-329# IHP 2100# FHP 1051# BHT 128 degrees F.

4397-4402 (Pawnee Zone)

Limestone, tan to brown, dense to finely crystalline, slightly fossiliferous, scattered poor vugular and intercrystalline porosity, very poor spotted stain, very slight show of free oil, questionable odor, poor fluorescence, poor cut.

4424-4444 (Myrick Station Zone)

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

4449-4475 (Fort Scott Zone)

Limestone, buff to tan, some brown, finely crystalline and partly oolitic, some poor intercrystalline and interoolitic porosity, scattered poor spotted stain, trace of free oil, faint odor, poor flourescence, poor cut.

Drill Stem Test No 9 4386-4480
5-15-15-30; built to quarter-inch blow on first flow, no blowback; blow did not return on second flow. Recovered one foot of mud. ISIP 363# FSIP 410# IFP 25-27# FFP 26-27# IHP 2189# FHP 2088# BHT 118 degrees F.

4478-4508 (Lower Cherokee Limestones)

This interval consisted of limestone, tan to brown, dense to sub-lithographic with scattered finely crystalline, trace of very poor intercrystalline porosity and questionable stain, no free oil, no odor, no fluorescence, questionable cut.

4508-4550 (Johnson Zone)

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

Drill Stem Test No. 10 4470-4532
5-15-15-30; built to quarter-inch blow on first flow, no blowback; built to quarter-inch blow on second flow, no blowback. Recovered 60 feet of mud. ISIP 1139# FSIP 1110# IFP 25-31# FFP 36-50# IHP 2253# FHP 2157# BHT 119 degrees F.

4559-4567 (Cherokee sand)

Sand, buff, very fine grained to fine grained, calcareous, subround, well sorted and very well cemented, hard, tight, no show of oil.

4567-4575 (Detrital Zone)

Various and Varicolored shales, limestones, and cherts, zone has a high shale content and has no reservoir quality. No shows of oil were present in this interval.

4575-4600 (Mississiippian Section)

Limestone, cream to buff to tan, dense and chalky with scatterred finely crystalline, partly fossiliferous, some scattered glauconitic limestone and scattered sub-lithographic limestone, section is mostly tight with no shows of oil.

Conclusions and Recommendations:

Sample examination, drill stem testing, and electric logging failed to reveal any zones of possible commercial production in the No. 1-13 York. It was recommended, and permission granted, for the No. l-12 York to be plugged and abandoned.

Respectfully submitted,

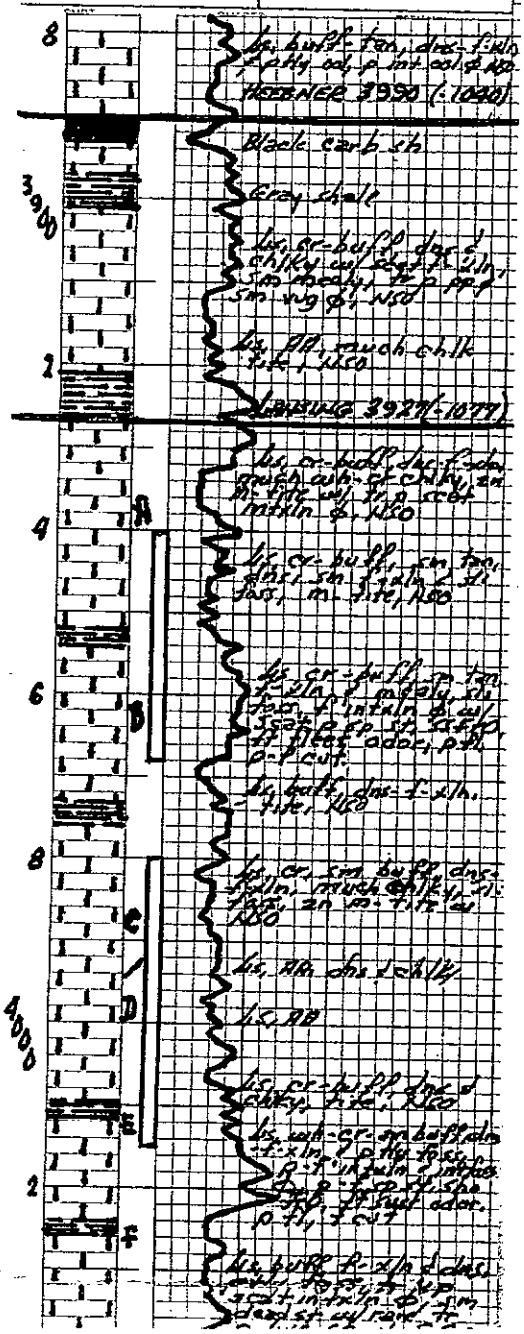
Robert C. Lewellyn
Consulting Petroleum Geologist

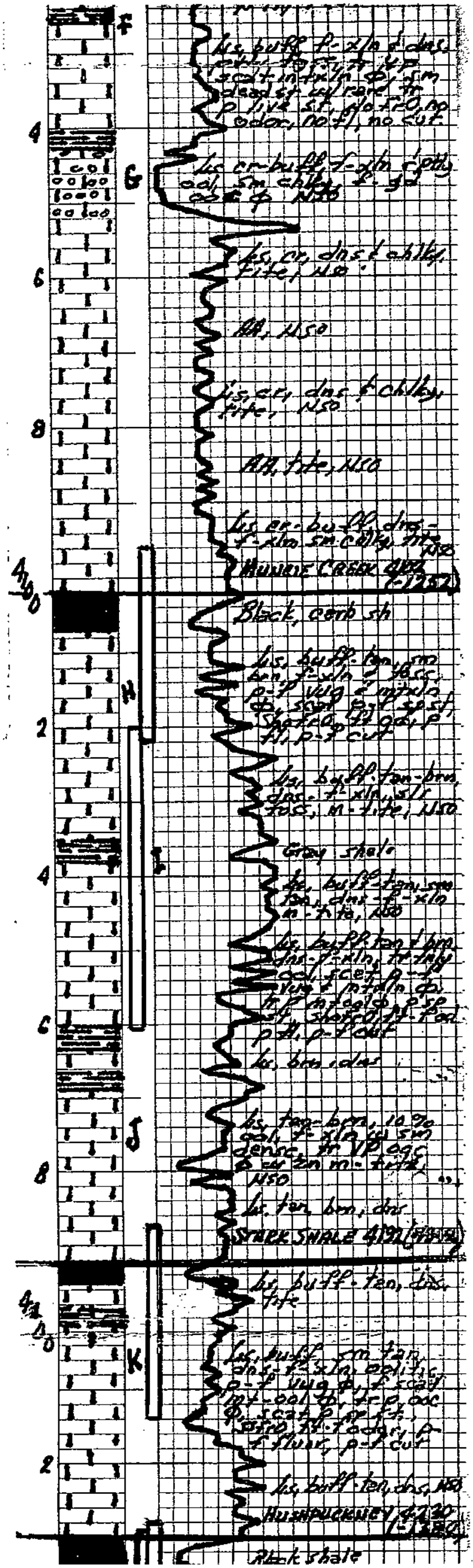
RCL:me

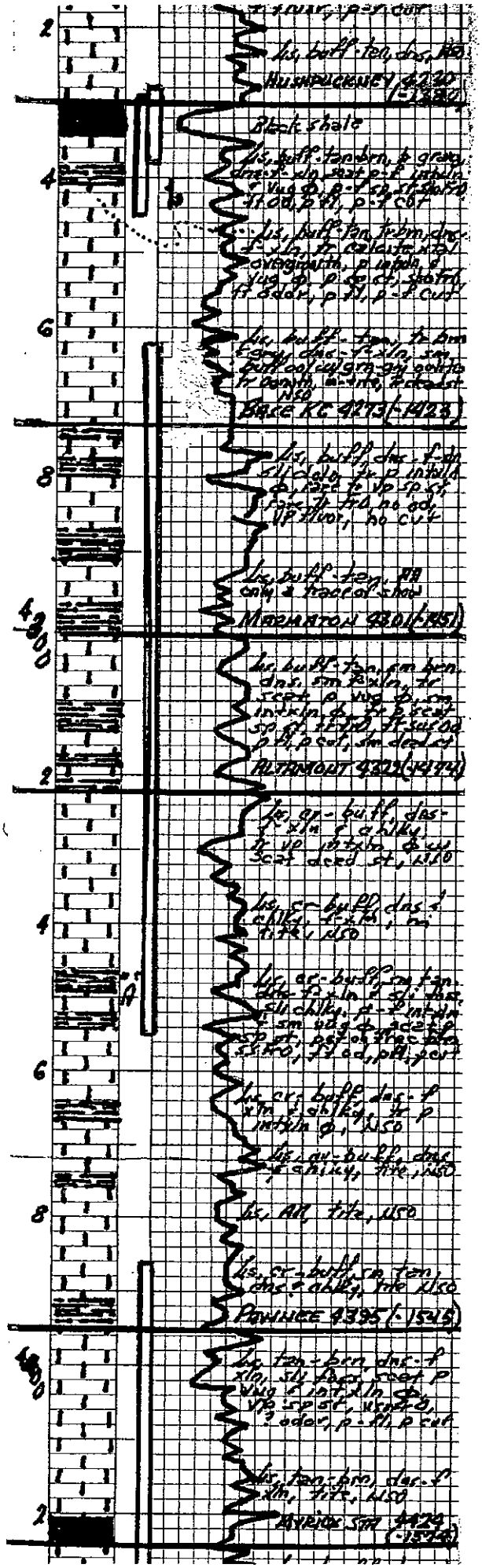
STATE: KANSAS
COUNTY: Scott
BLOCK:
SEC.: 13
T.: 16S
R.: 31W
ALTITUDE: 2850 KB
PRODUCTION: D & A

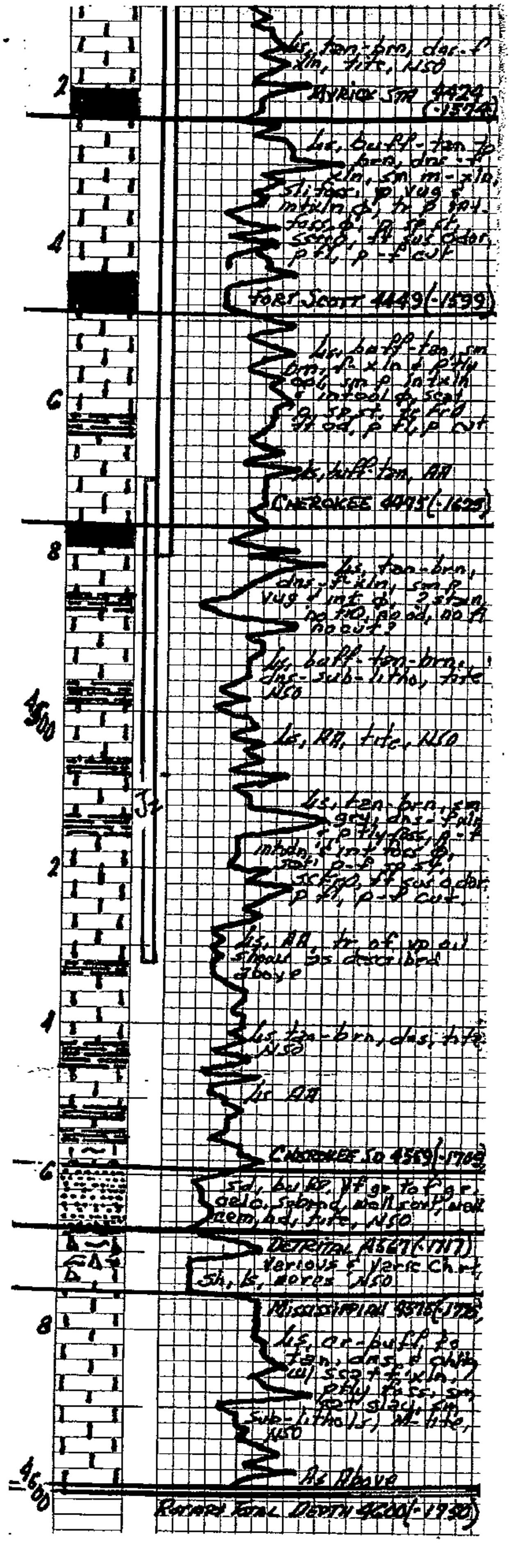
COMPANY: Larson Engineering, Inc
FARM: Yoek
WELL NO.: 1-13
SURVEY: 1162' FNL & 1320 FEL
1162 FNL & 1320 FEL
TOTAL DEPTH: 4600
CONTRACTOR: HD Drilling, LLC
COMMENCED: 07-26-2011
COMPLETED: 08-08-2011
REMARKS:
Robert C. Iscrall, Jr. Geol

CASING RECORD
8 5/8" @ 252 KBM / 125 sx




F
G
H
I
J
K
4
6
8
2
4
6
8
2
Black, carb sh
Gray shale
STARK SHALE 4192
HUSHPUCKNEY 4230
Black shale


HUMPHREYSEY 4220 (-1332)
Black shale
BASE KC 4273 (-1423)
MARMATON 4301 (-1451)
ALTAMONT 4322 (-1474)
POWELL 4395 (-1545)
MYRICK STA 4429 (-1579)


2
Ls, tan-brn, dns-f xln, tite, NSO
MYRICK STA 4424 (-1574)
4
FORT SCOTT 4449 (-1599)
6
Ls, buff-tan, AA
CHEROKEE 4475 (-1625)
8
Ls, buff-tan-brn, dns-sub-litho, tite, NSO
4500
Ls, AA, tite, NSO
Jx
2
Ls, AA, tr of sp oil show as described above
4
Ls, tan-brn, dns, tite, NSO
Ls AA
CHEROKEE Sd 4559 (-1709)
6
DETRITAL 4567 (-1717)
MISSISSIPPIAN 4575 (-1725)
8
As Above
4600
ROTARY TOTAL DEPTH 4600 (-1750)

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/

November 22, 2011

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

Re: ACO1
API 15-171-20823-00-00
York 1-13
NE/4 Sec.13-16S-31W
Scott 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