



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1076532
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
-----------------------------------	-----------------	---

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1076532

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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

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

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

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

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

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Sara 2-33
Doc ID	1076532

Tops

Name	Top	Datum
Anhydrite	2155	+675
Base Anhydrite	2185	+645
Heebner	3934	-1104
Lansing	3973	-1143
Stark Sh	4253	-1423
Pawnee	4446	-1616
Cherokee SH	4527	-1697
Mississippi	4589	-1759
Spergen	4612	-1782

ALLIED CEMENTING CO., LLC. 037420

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
West Bend, KS

DATE <u>11-17-11</u>	SEC <u>33</u>	TWP <u>18</u>	RANGE <u>29</u>	CALLED OUT	ON LOCATION	JOB START <u>7:15 PM</u>	JOB FINISH <u>11:45 PM</u>
LEASE <u>SARA</u>	WELL # <u>2-33</u>	LOCATION <u>Dighton, KS 3 West</u>		COUNTY <u>Jayne</u>	STATE <u>KS</u>		
OLD OR (NEW) (Circle one)		<u>2 1/2 south west 14 to</u>					

CONTRACTOR <u>H-D #3</u>	OWNER <u>Jarson Engineering</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>222</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>222</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH

PRES. MAX	MINIMUM	COMMON <u>175</u>	@ <u>16.25</u>	<u>2,843.75</u>
MEAS. LINE	SHOE JOINT	POZMIX	@	
CEMENT LEFT IN CSG. <u>15 ft.</u>		GEL <u>4</u>	@ <u>21.25</u>	<u>85.00</u>
PERFS.		CHLORIDE <u>6</u>	@ <u>58.20</u>	<u>349.20</u>
DISPLACEMENT		ASC	@	

EQUIPMENT		HANDLING <u>185</u>			@ <u>2.25</u>	<u>416.25</u>
PUMP TRUCK # <u>398</u>	CEMENTER <u>Steve L.</u>	MILEAGE <u>185 x 36 x .11</u>				
	HELPER <u>Shane K</u>					
BULK TRUCK # <u>341</u>	DRIVER <u>Jim Job</u>					
BULK TRUCK #	DRIVER					

REMARKS:
Pipe in bottom - Break circulation
with 1/2 inch Hook up mix 175 SKS
Class A 30% cc 20% gel Displace
with 13.19 DD's. Freshwater
shooting
Cement did circulate
Plug lower @. Done

CHARGE TO <u>Jarson Engineering</u>	SERVICE
STREET	DEPTH OF JOB <u>222</u>
CITY	PUMP TRUCK CHARGE <u>1125.00</u>
STATE	EXTRA FOOTAGE @
ZIP	MILEAGE <u>HVM 80</u> @ <u>7.00</u> <u>560.00</u>
	MANIFOLD @
	TOTAL <u>1475.00</u>

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 X LEWRYNE TRESNER
 SIGNATURE [Signature]
Thank You

PLUG & FLOAT EQUIPMENT	
	@
	@
	@
	@
	@
TOTAL	
SALES TAX (If Any) <u>5677.95</u>	
TOTAL CHARGES <u>5677.95</u>	
DISCOUNT <u>70% 23%</u> <u>1709.53</u>	IF PAID IN 30 DAYS
<u>3968.42</u>	



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

TICKET No 22535

SERVICE LOCATIONS: 1. **NESS CITY, KS.** WELL/PROJECT NO.: LEASE **SARA 2-33** COUNTY/PARISH **LANE** STATE **KS.** CITY **DIGHTON, KS.** DATE **1 DEC 11** OWNER
 2. TICKET TYPE SERVICE SALES CONTRACTOR **HJD DRILLING RIG #3** RIG NAME/NO. SHIPPED VIA DELIVERED TO ORDER NO.
 3. WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **S LONG STRING** WELL PERMIT NO. WELL LOCATION **3W, 2 1/4 S, W INTO**
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UM		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE #110	40	mil			6.00	240.00
578					Pump CHARGE					1500.00	1500.00
280					FLOCHECK-21	500	gal			2.50	1250.00
280 221					LIQUID RCL	2	gal			25.00	50.00
419					ROTATING HEAD RENTAL					200.00	200.00
290					D-AIR	1 1/2	gal			35.00	52.50

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 *Robbie Turner*
 DATE SIGNED **1 Dec 11** TIME SIGNED **0900** A.M. P.M.

REMIT PAYMENT TO:

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				1	3292.50
WE UNDERSTOOD AND MET YOUR NEEDS AND OUR SERVICE WAS PERFORMED WITHOUT DELAY?				2	4808.92
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?					
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO			
				subtotal	8101.40
				Lane TAX 6.3%	359.42
				TOTAL	8460.82

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

SWIFT OPERATOR *Joe Rattley* APPROVAL

Thank You!



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

TICKET CONTINUATION

TICKET No. 22535

CUSTOMER LARSON ENGINEERING WELL SARA 2-33 DATE 1 DEC 11 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY.	U/M	QTY.	U/M		
276						FLUCELE	40	lbs			2.00	80.00
283						SALT	800	lbs			0.20	160.00
284						CAUSEAL	7	SK			35.00	245.00
286						HALAD-1	100	lbs			7.50	750.00
277						GILSONITE	1100	lbs			0.75	825.00
330	325					STANDARD CEMENT	155	BX			13.50	2092.50
581						SERVICE CHARGE					2.00	310.00
583						MILEAGE CHARGE	11320	TOTAL WEIGHT	40	LOADED MILES	1.00	346.40

CONTINUATION TOTAL 4808.90

JOB LOG

SWIFT Services, Inc.

DATE / DEC 11 PAGE NO.

CUSTOMER
LARSON ENGINEERING

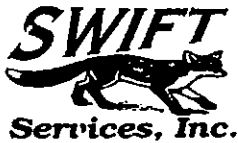
WELL NO.

LEASE
SARA 2-33

JOB TYPE
5 1/2 LONGSTRING

TICKET NO.
22535

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0430							ON LOCATION 5 1/2-15.5#
								RTD @ 4650 LTD @ 4646 SET @ 4645 SHOE ST 42, 42 PORT COLLAR @ 2113'
	0630							DROP BALL CIRCULATE.
	0733	6	15		✓		300	Pump 15 Bbl KCL FLUSH
	0735	6	12		✓		300	Pump 500 gal FLOCHECK
	0737	6	5		✓		300	Pump 5 Bbl KCL FLUSH
	0742		7					PLUG RH (30sx)
	0745	4	30		✓			MIX 125sx EA2
	0759							WASH OUT PUMPING LINES.
	0801	6			✓			RELEASE PLUG START DISPLACEMENT
	0820	8	109 1/2		✓		1500	PLUG DOWN PSI up LATCH PLUG IN.
	0822							RELEASE PSI - DRY
	0824							WASH TRUCK
	0900							JOB COMPLETE
								THANKS BIRD
								JASON JEFF DAVID



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

TICKET No. **21532**

PAGE 1 OF

1. SERVICE LOCATIONS NESS CITY, KS	WELL/PROJECT NO.	LEASE SARA 2-33	COUNTY/PARISH LANE	STATE KS	CITY DIGHTON, KS	DATE 4 JAN 12	OWNER
2.	TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR WILDWEST WELL SERV.	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
3.	WELL TYPE OIL	WELL CATEGORY DEVELOPMENT	JOB PURPOSE PERF SQUEEZE	WELL PERMIT NO.	WELL LOCATION 3W, 2'45, WINTO		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	OF			UM		UM	
575					MILEAGE #110	40	mi	6	100	240
578					Pump CHARGE	1500	1000 FT.	1500	100	1500
288					SAND 20/40 BRADY	1	SK	22	100	22
290					D-AIR	1	SK	35	100	35
325					STANDARD CEMENT	50	SK	13	100	675
581					SERVICE CHARGE CEMENT	50	SK	2	100	100
582					MINIMUM DRAINAGE	4700	115	94	100	250

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.

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	2822
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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO			
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL	2868 12

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

X *[Signature]*
 DATE SIGNED **4 JAN 12** TIME SIGNED **1400** A.M. P.M.

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

SWIFT OPERATOR *[Signature]* APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE: JAN 12 PAGE NO.

CUSTOMER: LARSON ENGINEERING

WELL NO.

LEASE: SARA 2-33

JOB TYPE: PERFORM SQUEEZE

TICKET NO. 21532

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0850							ON LOCATION
	1010			✓		2000		TEST TOOLS HELD
	1028		6	✓				SPOT 1 SX SAND
	1120							Pull PACKER TO 4145
	1125	2	11	✓		600		TAKE INJECTION RATE
	1130		38	✓			570	LOAD ANNULUS PSI UP SHUT IN.
	1151	2	10 1/2	✓		600		MIX 50 SX STANDARD
	1159							WASH OUT PUMPING LINES
	1200	3		✓				START DISPLACEMENT
		2	8	✓		600		
		1/2	10			1500		
	1215		12			1200		STAGING.
	1229							RELEASE PSI - DRY
	1235		25	✓				RELEASE PACKER - WASH THROUGH SQUEEZE
			30	✓				WASH SAND OFF PLUG.
								WASH TRUCK
	1345			✓		300		PSI UP WELL SHUT IN.
	1400							JOB COMPLETE
								THANKS #110
								JASON JEFF LANE



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

TICKET No 22542

PAGE 1 OF

SERVICE LOCATION: 1. NESS CITY, KS WELL/PROJECT NO.: SARA 2-33 LEASE: LANE COUNTY/PARISH: DIGHTON, KS STATE: KS CITY: DIGHTON, KS DATE: 7 DEC 11 OWNER:
 2. TICKET TYPE: SERVICE SALES CONTRACTOR: WILD WEST WELL SER. RIG NAME/NO.: SHIPPED VIA: DELIVERED TO: ORDER NO.:
 3. WELL TYPE: OIL WELL CATEGORY: DEVELOPMENT JOB PURPOSE: CEMENT PORT COLLAR WELL PERMIT NO.: WELL LOCATION: 3W, 2 1/4 S, W INTO
 4. REFERRAL LOCATION: INVOICE INSTRUCTIONS:

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		QTY.		UNIT PRICE	AMOUNT
		LOC	ACCT	DF		UM	UM				
575					MILEAGE # 110	40	mi			6.00	240.00
576D					Pump CHARGE	1	job	2113	ft		1257.00
276					FLOCCLE	42	lbs			2.00	84.00
290					D AIR	2	sq			35.00	70.00
330					SWIFT MULTI DENSITY	165	sq			16.50	2722.50
581					SERVICE CHARGE CEMENT	225	sq			2.00	450.00
583					DRAYAGE	22327	lbs	446	54 Tm	1.00	446.54

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

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

X
 DATE SIGNED: 7 DEC 11 TIME SIGNED: 1200 A.M. P.M.

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

PAGE TOTAL	5263	04
Lane TAX 6.3%	181	22
TOTAL	5444	26

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

SWIFT OPERATOR: [Signature] APPROVAL: [Signature]

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 7 DEC 11 PAGE NO.

CUSTOMER LARSON ENGINEERING WELL NO. LEASE SARA 2-33 JOB TYPE CEMENT PORT COLLAR TICKET NO. 22542

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1000							ON LOCATION
								PORT COLLAR @ 2113
	1053				✓		1000	TEST HELD
	1055	3			✓		400	OPEN PORT COLLAR TAKE INJECTION RATE
	1058	4	291	✓			800	MIX 11.5 SX SMD
		3 1/2	7	✓			1000	DISPLACE CEMENT
								CIRCULATE CEMENT TO SURFACE
	1124				✓		1000	CLOSE PORT COLLAR PSI UP HELD
	1127							RUN 4 JTS.
	1135	3 1/2	19		✓		300	REVERSE CLEAN
	1140							WASH TRUCK
	1200							JOB COMPLETE
								THANKS B 110
								JASON JEFF DOWG



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering Inc.
562 W State RD 4 Olmitz
KS 67564-8561
ATTN: Vern Schrag

33-18s-29w

Sara 2-33

Job Ticket: 44350

DST#: 1

Test Start: 2011.11.23 @ 20:20:00

GENERAL INFORMATION:

Formation: **Kansas City "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:52:00

Time Test Ended: 02:45:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Jace McKinney

Unit No: 46

Interval: 4056.00 ft (KB) To 4080.00 ft (KB) (TVD)

Reference Elevations: 2830.00 ft (KB)

Total Depth: 4080.00 ft (KB) (TVD)

2823.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 392.39 psig @ 4057.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.23

End Date:

2011.11.24

Last Calib.:

2011.11.24

Start Time: 20:20:01

End Time:

02:45:15

Time On Btm:

2011.11.23 @ 22:51:30

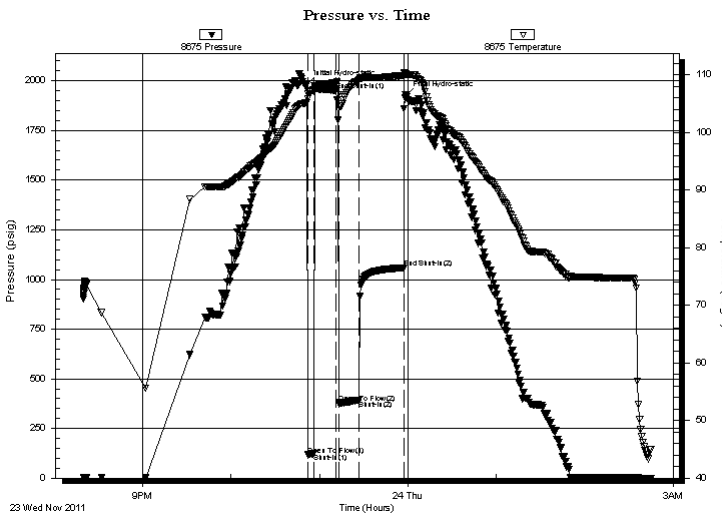
Time Off Btm:

2011.11.23 @ 23:58:30

TEST COMMENT:

Built to 8" blow
Bled off for 3 min. No return blow
B.O.B. in 1 min.
Bled off for 5 min. No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1982.96	105.14	Initial Hydro-static
1	116.79	105.86	Open To Flow (1)
5	124.97	107.39	Shut-In(1)
20	1952.72	108.57	End Shut-In(1)
22	376.73	104.56	Open To Flow (2)
36	392.39	109.10	Shut-In(2)
66	1058.87	109.88	End Shut-In(2)
67	1927.41	110.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
512.00	mcw 30%M 70%W	5.81
248.00	w cm 20%W 80%M	3.48

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

33-18s-29w

562 W State RD 4 Olmitz
KS 67564-8561

Sara 2-33

Job Ticket: 44350

DST#: 1

ATTN: Vern Schrag

Test Start: 2011.11.23 @ 20:20:00

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:

40000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 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
512.00	mcw 30%M 70%W	5.806
248.00	w cm 20%W 80%M	3.479

Total Length: 760.00 ft

Total Volume: 9.285 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

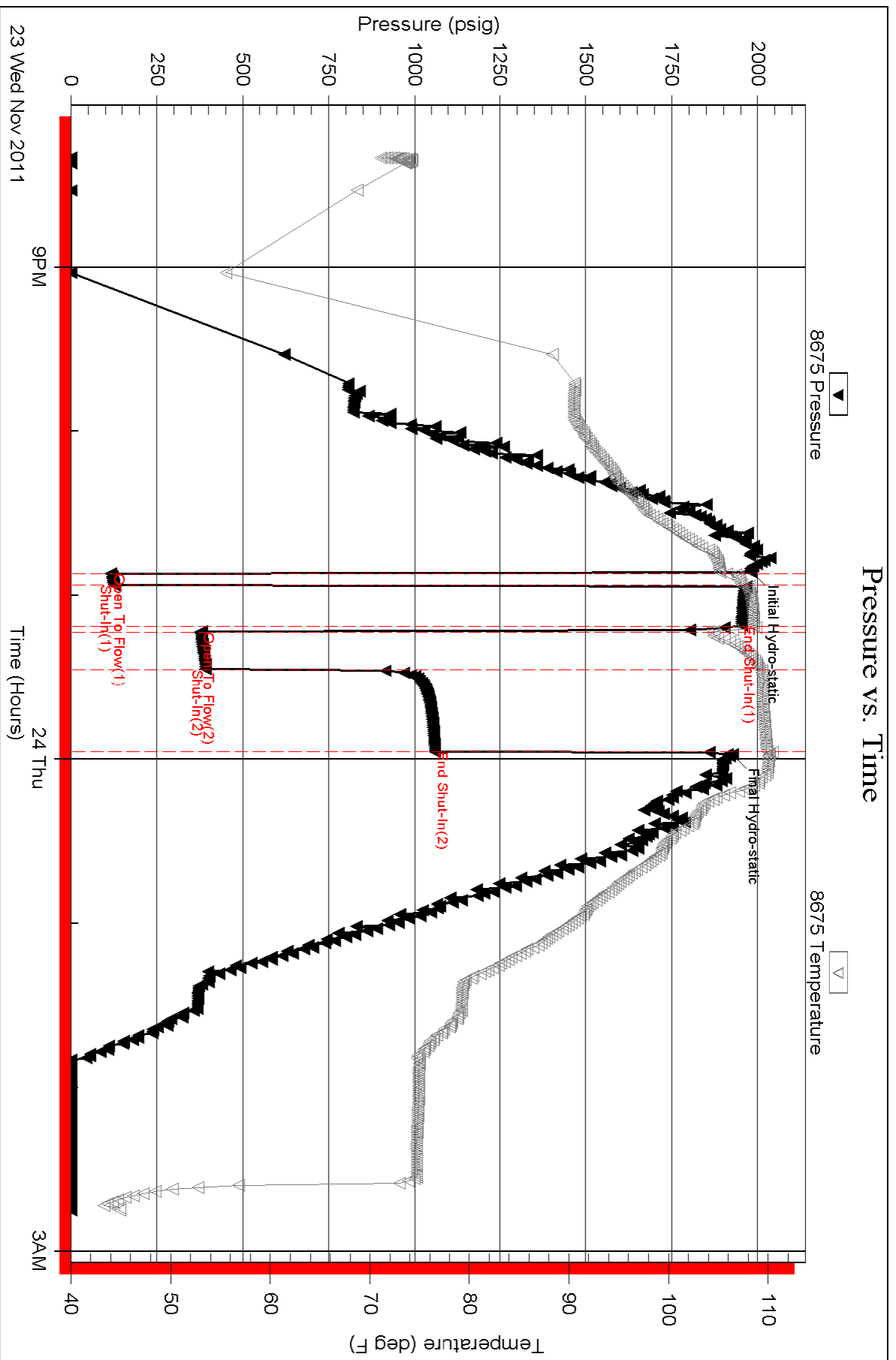
Serial #:

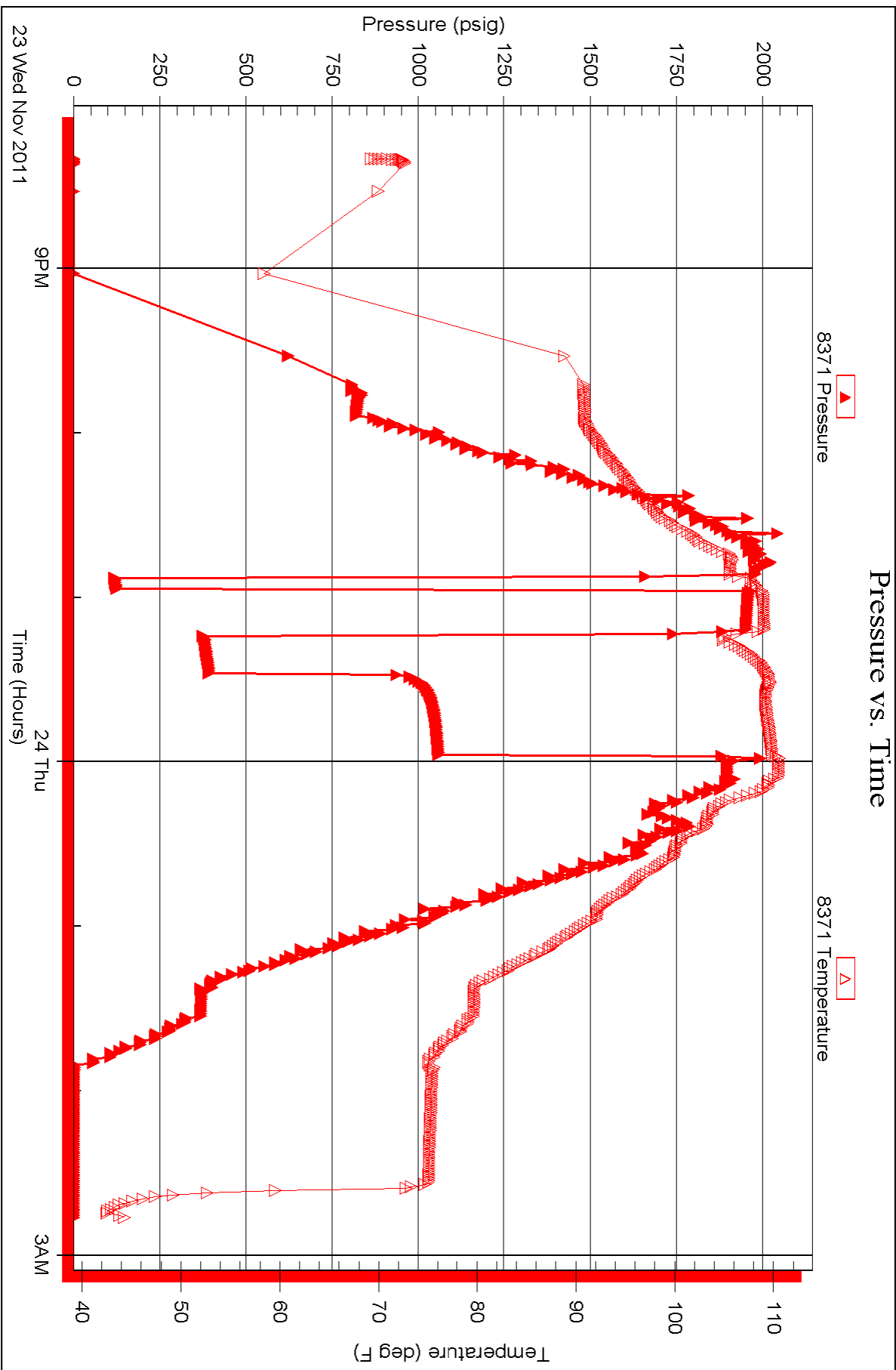
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering Inc.
562 W State RD 4 Olmitz
KS 67564-8561
ATTN: Vern Schrag

33-18s-29w

Sara 2-33

Job Ticket: 45426

DST#: 2

Test Start: 2011.11.24 @ 18:05:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:16:15

Time Test Ended: 00:25:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4147.00 ft (KB) To 4175.00 ft (KB) (TVD)

Reference Elevations: 2830.00 ft (KB)

Total Depth: 4175.00 ft (KB) (TVD)

2823.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8371 Outside

Press @ Run Depth: 77.51 psig @ 4148.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.24

End Date:

2011.11.25

Last Calib.:

2011.11.25

Start Time: 18:05:01

End Time:

00:25:15

Time On Btm:

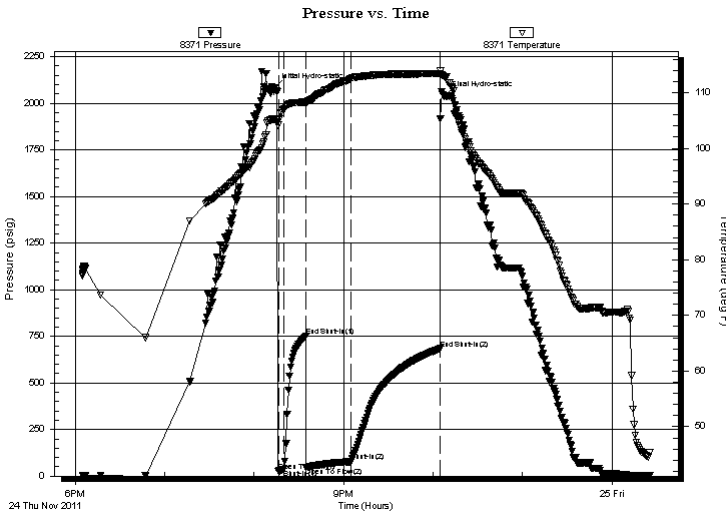
2011.11.24 @ 20:13:45

Time Off Btm:

2011.11.24 @ 22:07:45

TEST COMMENT: Built to 1 1/2" blow
No return blow
Built to 6" blow
No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2083.22	105.19	Initial Hydro-static
3	24.78	104.18	Open To Flow (1)
7	37.87	107.14	Shut-In(1)
21	750.80	108.30	End Shut-In(1)
22	46.26	108.03	Open To Flow (2)
51	77.51	112.51	Shut-In(2)
111	683.76	113.41	End Shut-In(2)
114	2040.86	112.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	ocm 40%O 60%M	0.25
40.00	100% Clean oil	0.20
60.00	mcw (Drop the sample)	0.30

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

33-18s-29w

562 W State RD 4 Olmitz
KS 67564-8561

Sara 2-33

Job Ticket: 45426

DST#: 2

ATTN: Vern Schrag

Test Start: 2011.11.24 @ 18:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
50.00	ocm 40%O 60%M	0.246
40.00	100% Clean oil	0.197
60.00	mcw (Drop the sample)	0.295

Total Length: 150.00 ft Total Volume: 0.738 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

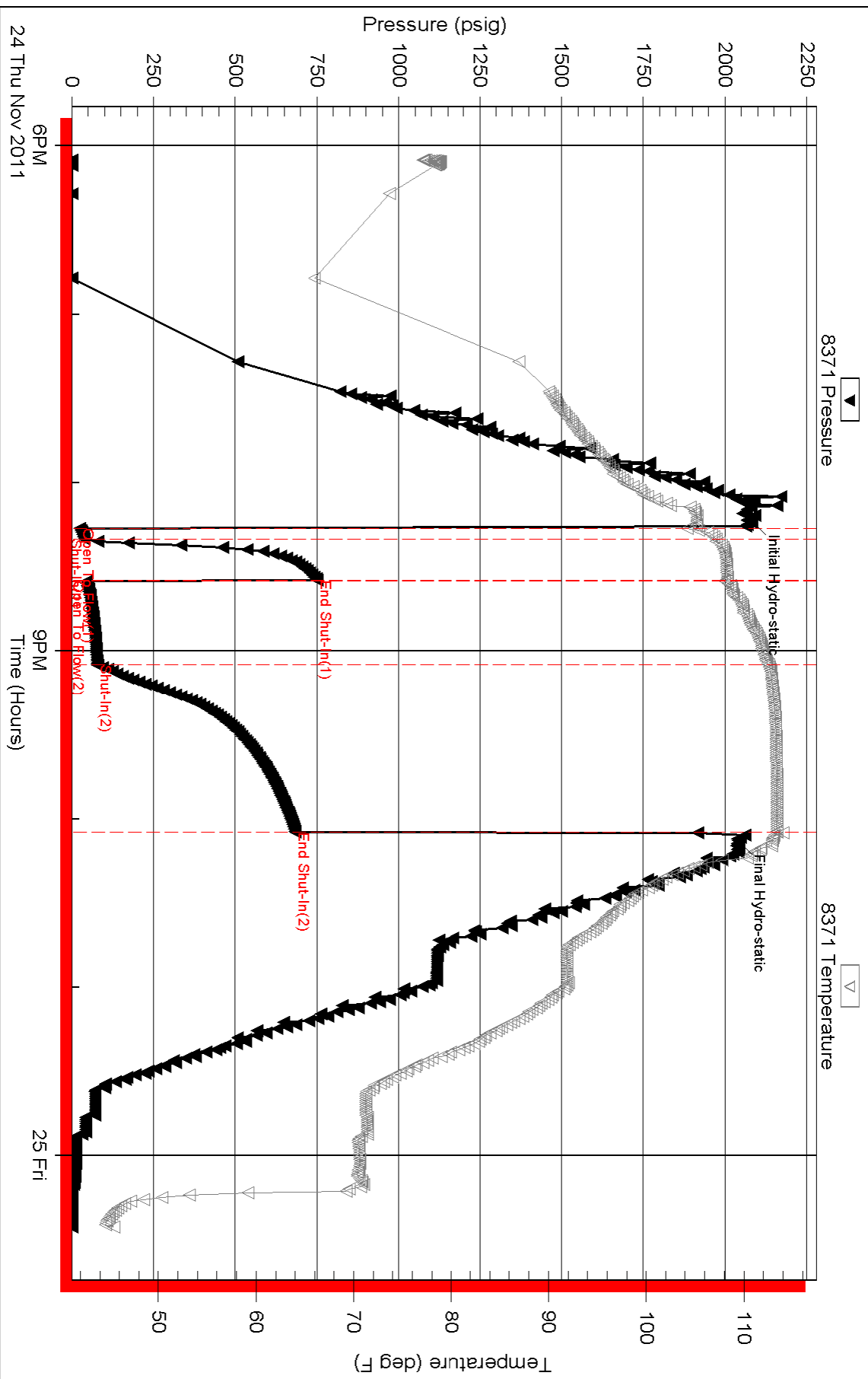
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 30 @ 40 F = 32

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

33-18s-29w

562 W State RD 4 Olmitz
KS 67564-8561

Sara 2-33

Job Ticket: 45427

DST#: 3

ATTN: Vern Schrag

Test Start: 2011.11.25 @ 10:05:00

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:

35000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 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 bbbl
180.00	mcw 30%M 70%W	1.149
130.00	ocw m 5%O 35%W 60%M	1.824
20.00	100% Free Oil	0.281

Total Length: 330.00 ft Total Volume: 3.254 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

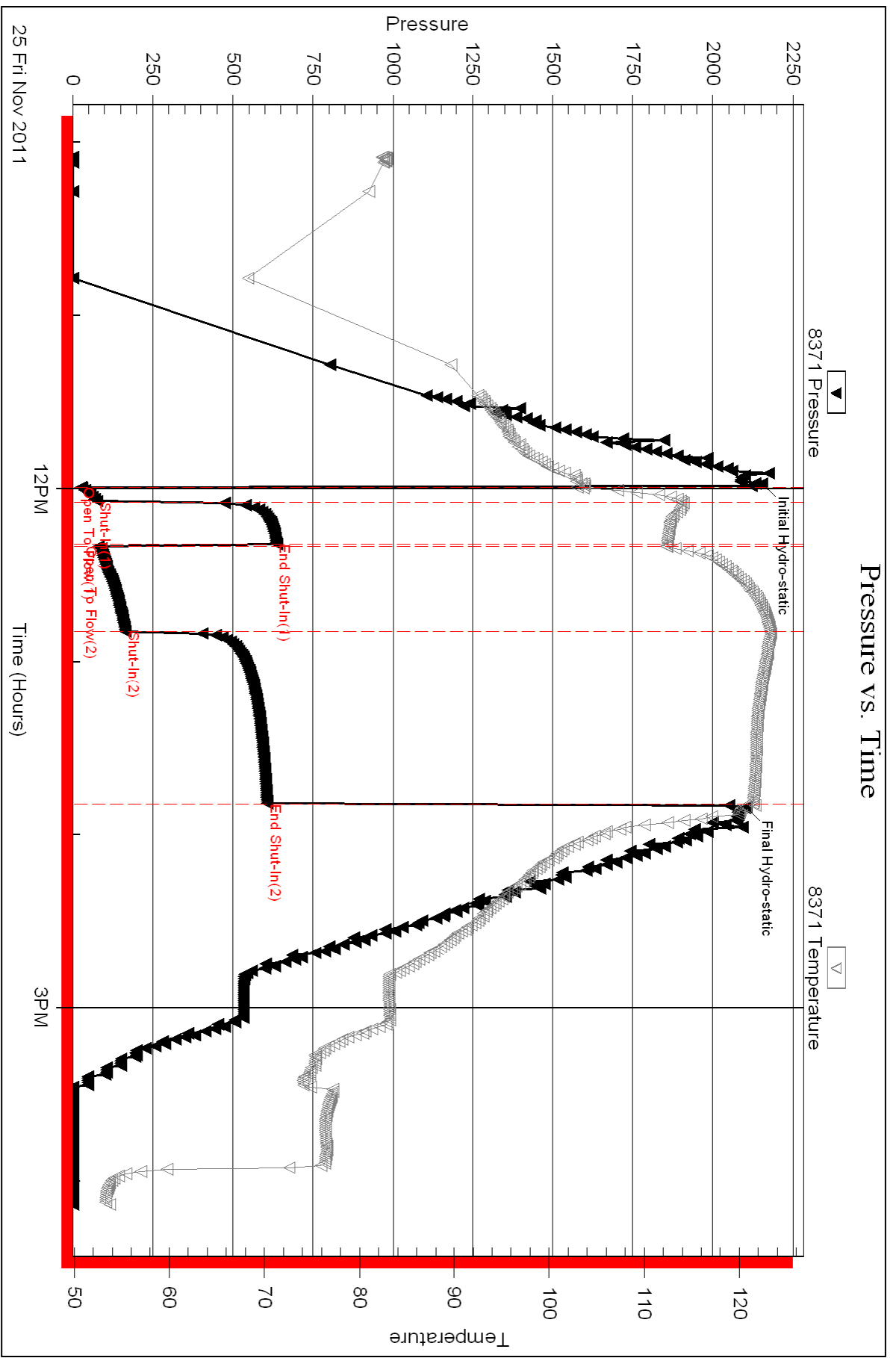
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .22 @ 60 F = 35,000

API: 33 @ 60 F = 33





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering Inc.
562 W State RD 4 Olmitz
KS 67564-8561
ATTN: Vern Schrag

33-18s-29w
Sara 2-33
Job Ticket: 45428 **DST#: 4**
Test Start: 2011.11.25 @ 23:15:00

GENERAL INFORMATION:

Formation: **Kansas City "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:56:15
Time Test Ended: 08:23:30
Interval: **4220.00 ft (KB) To 4233.00 ft (KB) (TVD)**
Total Depth: 4233.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46
Reference Elevations: 2830.00 ft (KB)
2823.00 ft (CF)
KB to GR/CF: 7.00 ft

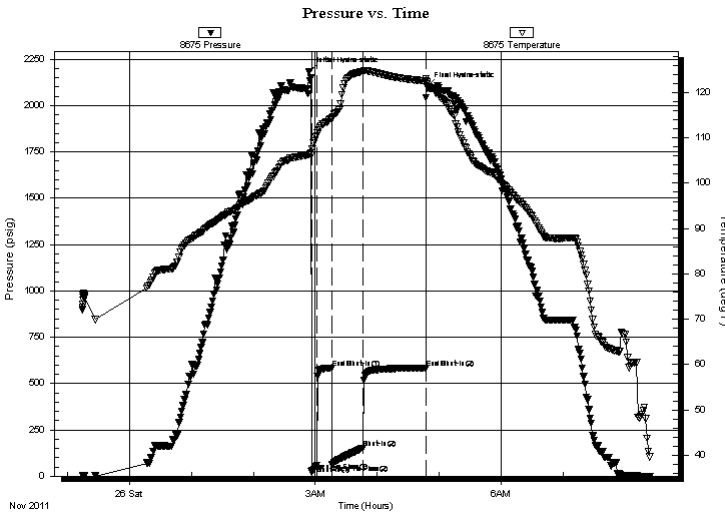
Serial #: 8675

Inside

Press @ Run Depth: 151.84 psig @ 4221.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.11.25 End Date: 2011.11.26 Last Calib.: 2011.11.26
Start Time: 23:15:01 End Time: 08:23:30 Time On Btm: 2011.11.26 @ 02:54:15
Time Off Btm: 2011.11.26 @ 04:47:45

TEST COMMENT: Built to 3" blow
No return blow
B.O.B. in 15 min.
Bled off for 5 min. Weak return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2184.99	106.32	Initial Hydro-static
2	23.37	106.27	Open To Flow (1)
7	58.15	110.44	Shut-In(1)
22	583.45	114.35	End Shut-In(1)
22	63.87	113.98	Open To Flow (2)
52	151.84	124.70	Shut-In(2)
113	581.54	122.54	End Shut-In(2)
114	2103.17	122.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
225.00	mcw 10%M 90%W	1.78
80.00	Free Oil 100% O	1.12

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

33-18s-29w

562 W State RD 4 Olmitz
KS 67564-8561

Sara 2-33

Job Ticket: 45428

DST#: 4

ATTN: Vern Schrag

Test Start: 2011.11.25 @ 23:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

22 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

40000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 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
225.00	mcw 10%M 90%W	1.781
80.00	Free Oil 100% O	1.122

Total Length: 305.00 ft Total Volume: 2.903 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

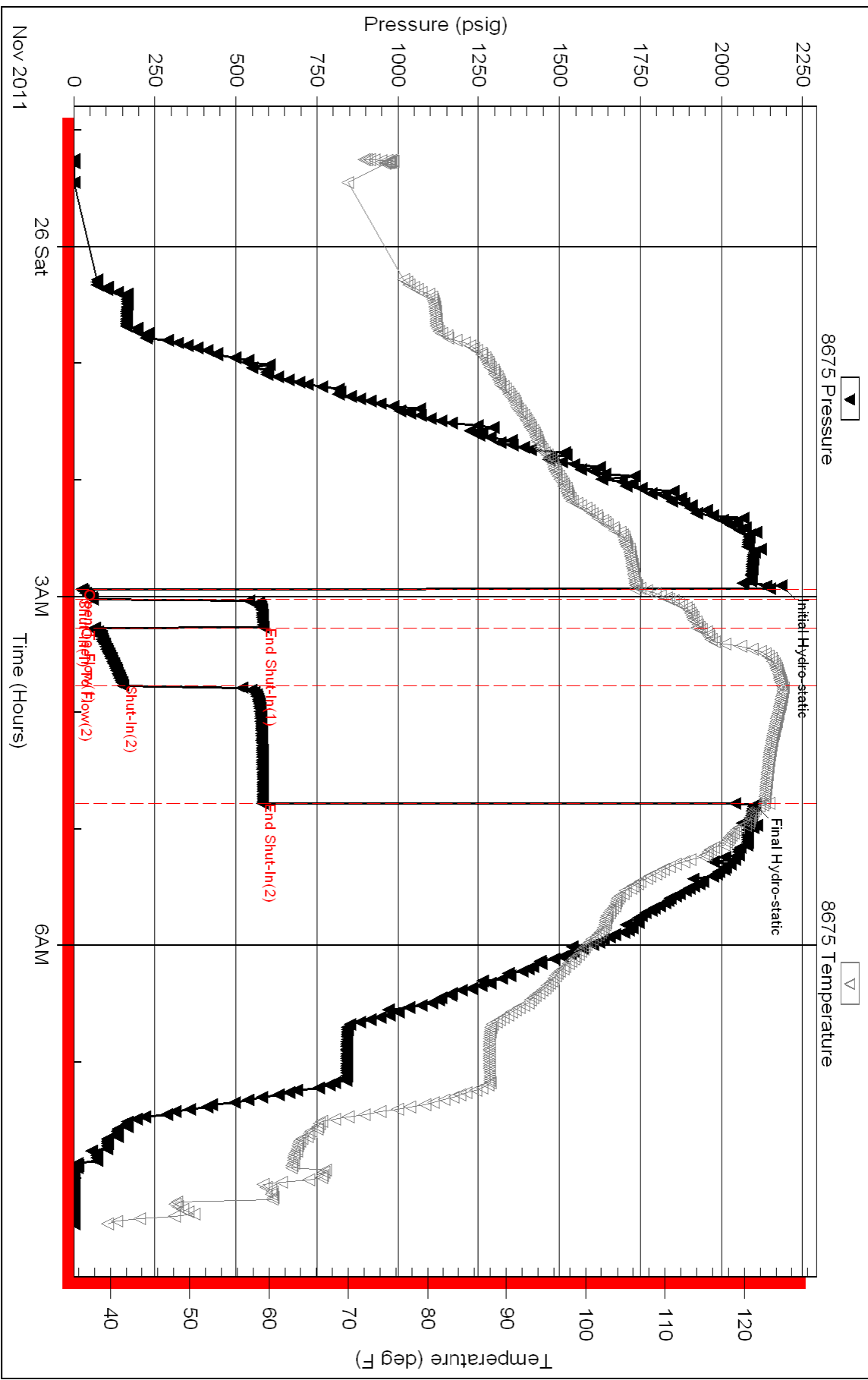
Laboratory Name:

Laboratory Location:

Recovery Comments: API: .21 @ 50 F= 22

RW: .28 @ 40 F= 40,000

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

33-18s-29w

562 W State RD 4 Olmitz
KS 67564-8561

Sara 2-33

Job Ticket: 45429

DST#: 5

ATTN: Vern Schrag

Test Start: 2011.11.26 @ 22:40:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.60 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	100% Mud with oil scum	0.305

Total Length: 62.00 ft Total Volume: 0.305 bbl

Num Fluid Samples: 0

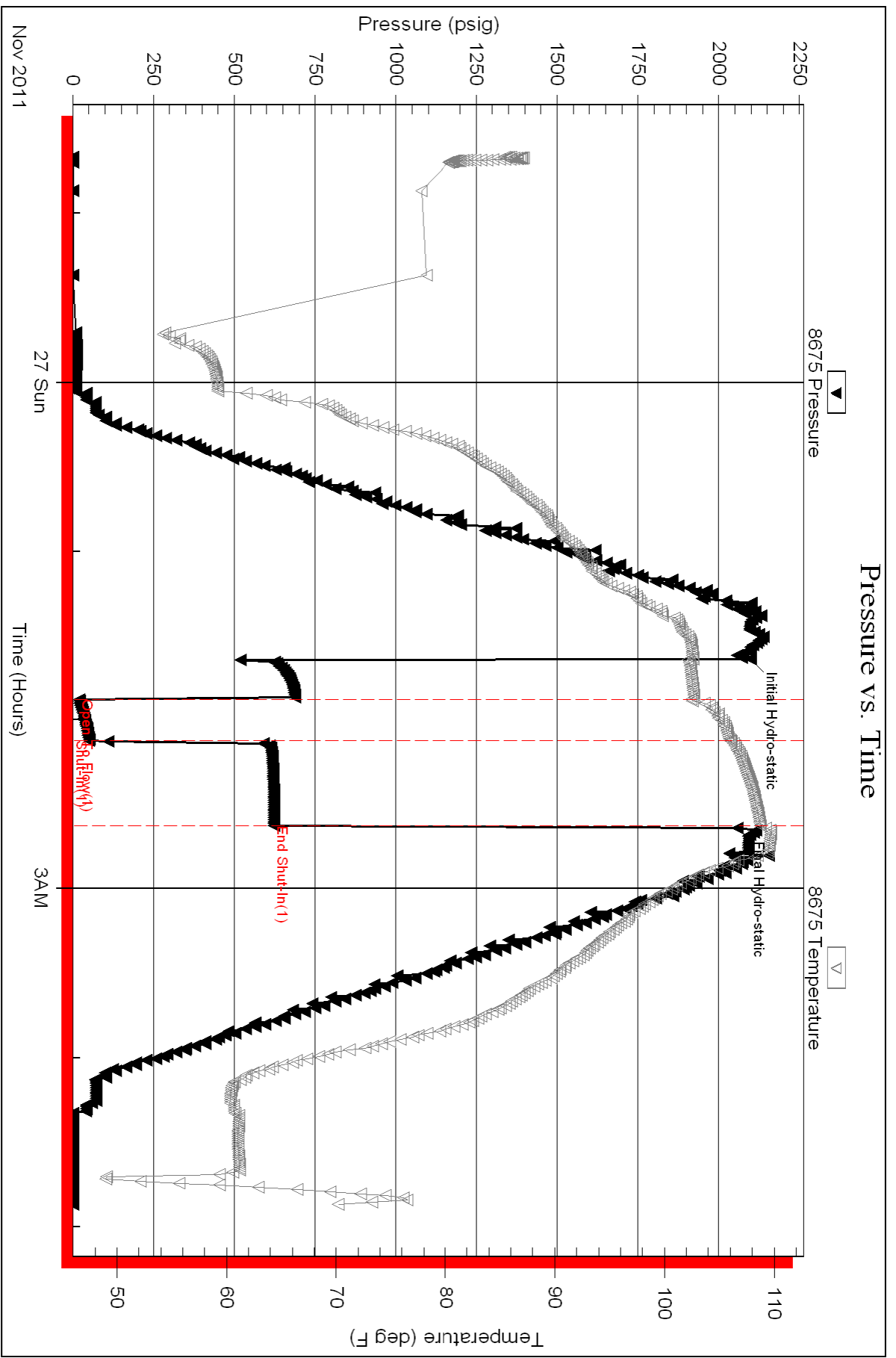
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

33-18s-29w

562 W State RD 4 Olmitz
KS 67564-8561

Sara 2-33

Job Ticket: 45430

DST#: 6

ATTN: Vern Schrag

Test Start: 2011.11.28 @ 07:45:00

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:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	62 feet gas in pipe	0.000
120.00	ocm 20%O 80%M	0.590

Total Length: 120.00 ft

Total Volume: 0.590 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

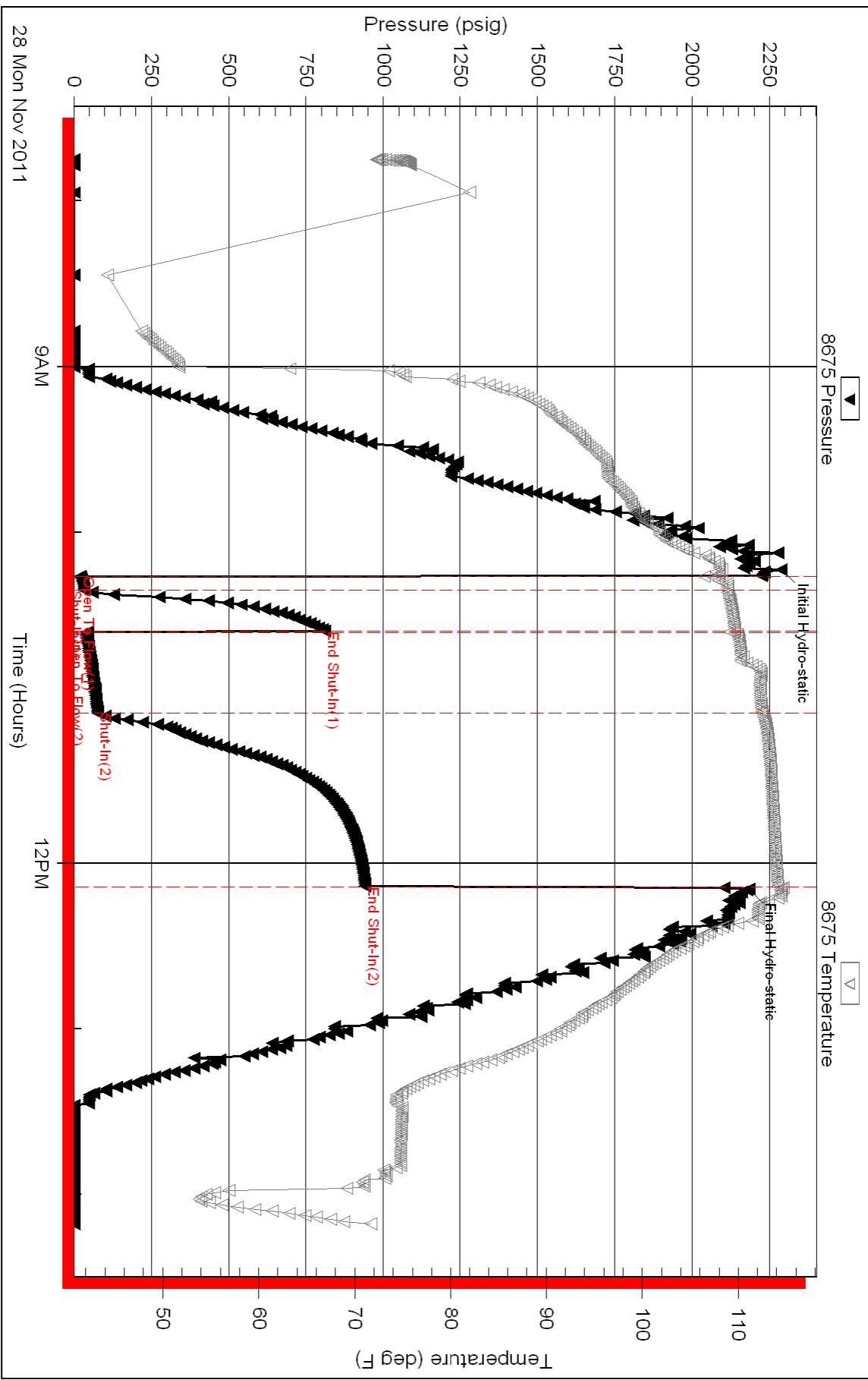
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering Inc.
562 W State RD 4 Olmitz
KS 67564-8561
ATTN: Vern Schrag

33-18s-29w

Sara 2-33

Job Ticket: 45431

DST#: 7

Test Start: 2011.11.29 @ 08:20:00

GENERAL INFORMATION:

Formation: **Fort Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:36:45

Time Test Ended: 13:38:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4420.00 ft (KB) To 4525.00 ft (KB) (TVD)

Total Depth: 4525.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2830.00 ft (KB)

2823.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 52.72 psig @ 4422.00 ft (KB)

Start Date: 2011.11.29

End Date:

2011.11.29

Start Time: 08:20:01

End Time:

13:38:15

Capacity: 8000.00 psig

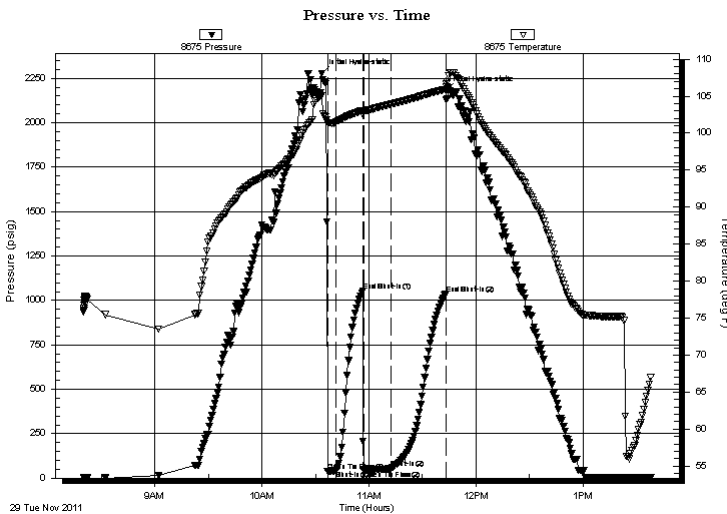
Last Calib.: 2011.11.29

Time On Btm: 2011.11.29 @ 10:33:30

Time Off Btm: 2011.11.29 @ 11:43:30

TEST COMMENT: Built to 2" blow
No return blow
Built to 1 1/2" blow
No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2277.73	105.07	Initial Hydro-static
4	37.27	101.41	Open To Flow (1)
9	42.27	101.56	Shut-In(1)
23	1051.19	103.07	End Shut-In(1)
24	44.97	102.79	Open To Flow (2)
39	52.72	103.91	Shut-In(2)
70	1035.44	105.92	End Shut-In(2)
70	2181.81	106.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	100%M with oil scum	0.32

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

33-18s-29w

562 W State RD 4 Olmitz
KS 67564-8561

Sara 2-33

Job Ticket: 45431

DST#: 7

ATTN: Vern Schrag

Test Start: 2011.11.29 @ 08:20:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 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
65.00	100%M with oil scum	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

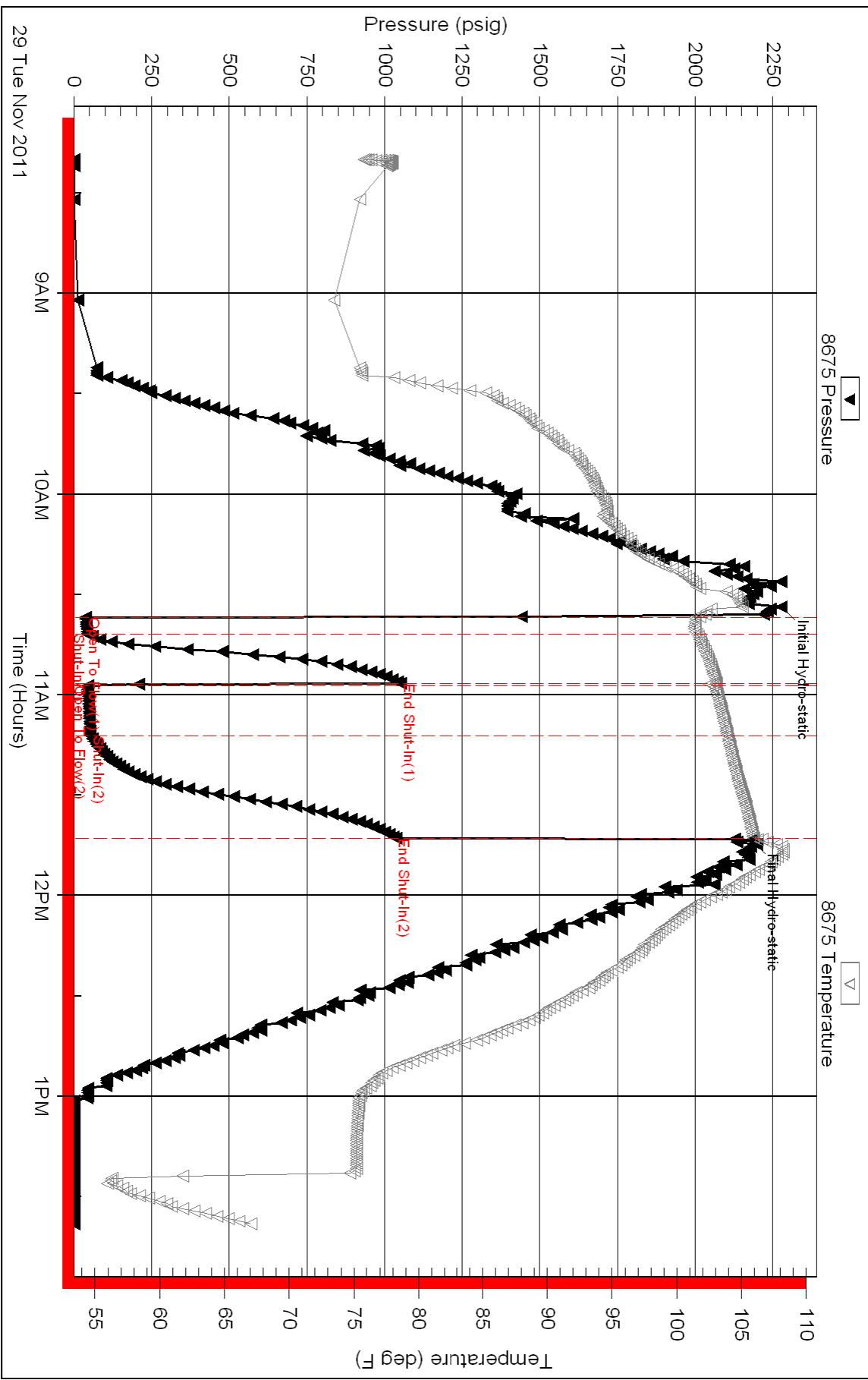
Serial #:

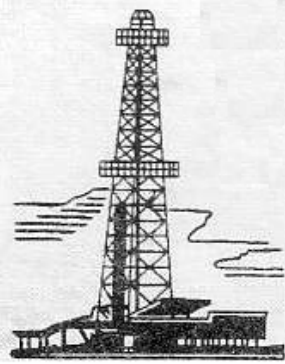
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: SARA #2-33
Location: SE SE NW NE Sec 33-18S-29W
Licence Number: API: 15-063-22326
Spud Date: November 17, 2011
Surface Coordinates: 1162' FNL & 1490' FEL

Region: Lane Co., KS
Drilling Completed: November 30, 2011

Bottom Hole Vertical Hole
Coordinates:
Ground Elevation (ft): 2823 K.B. Elevation (ft): 2830
Logged Interval (ft): 3600' To: RTD Total Depth (ft): 4650'
Formation: Mississippi
Type of Drilling Fluid: Chemical Premix (Displaced)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: LARSON ENGINEERING, INC.
Address: 562 West State Road 4
Olmitz, KS 67564-8561

DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3

DP 4.5" XH (16.6#); DC 6.25" x 2-1/4" (ave) x 574.87', Kelly + Bit 41.30', Tool Joint 5.5" ; Bit: JZ QX20, 7-7/8", jets 14-14-14; rpm 80, WOB 35k; Kelly Bushing 7' above ground level; LeWayne "Lew" Tresner (tool pusher).

SURFACE CASING:

8-5/8" (20#) at 220'

CIRCULATION SYSTEM:

Pump: EMSCO D-300, duplex, 6 x 14, 2" rod, 54 spm, SPP: 725-900 psi; Chemical, premix, displaced about 3600'; Morgan Mud, Inc., McCook, Nebraska, David Lines, Cade Lines.

GAS DETECTION SYSTEM:

USB-1208LS-213 portable hot-wire, Delphian 3.0 volt catalytic bead combustible gas detector.

DRILL STEM TEST #1:

Zone: Lansing "F": Test Interval: 4056-4080' (24' anchor); Blow: weak incr 8" IFP, no RB, BOB 1 min FFP, no RB; Time Periods: 5-15-15-30; Total Recovery: 760' MW, no GIP; Grindouts: 248' MCW (20%W, 80%M), 512' MCW (30%M, 70%W, Rw 0.28 at 30 F, Chl 40k); Pressures: HP: 1983-1927; SIP: 1953-1059 (hit bridge hard on T.I.H.); FP: 117-125, 377-392; BHT: 110 F; dual packers, jars, joints, 151' collars; Trilobite Testing, Inc., Jace McKinney.

DRILL STEM TEST #2:

Zone: Kans. City "H": Test Interval: 4147-4175 (28' anchor); Blow: weak incr 1-1/2" IFP, no RB, weak incr 6" FFP, no RB; Time Periods: 5-15-30-60; Total Recovery: 150' fluid, no GIP; Grindouts: 50' CO (100% O, 32 Grav), 40' OCM (40% O, 60% M), 60' MW or WM (no sample, no Rw, no Chl); Pressures: HP: 2083-2041; SIP: 751-684; FP: 25-38, 46-78; BHT: 113 F; dual packers, jars, joints, 151' collars; Trilobite Testing, Inc., Jace McKinney.

DRILL STEM TEST #3:

Zone: Kans. City "I": Test Interval: 4189-4216 (27' anchor); Blow: weak incr 4" IFP, no RB, BOB 14 min FFP, no RB; Time Periods: 5-15-30-60; Recovery: no GIP, 330' total fluid; Grindout: 20' clean oil (100% O, 33 Grav), 130' OCWM (5% O, 35% W, 60% M), 180' MCW (30% M, 70% W, Rw 0.22 at 60 F, chl 35k); Pressures: HP: 2154-2104; SIP: 637-607; FP: 26-76, 81-164; BHT: 123 F; dual packers, jars, joints, 151' collars; Trilobite Testing, Inc., Jace McKinney.

DRILL STEM TEST #4:

Zone: Kans. City "J": Test Interval: 4220-4233 (13' anchor); Blow: weak incr 3" IFP, no RB, BOB 15 min FFP, weak surf RB; Time Periods: 5-15-30-60; Recovery: no GIP, 305' total fluid; Grindouts: 80' oil (100%O, 32 grav), 225' MCW (10%M, 90%W, Rw 0.28 at 40 F, chl 40k); Pressures: HP: 2185-2103, SIP: 583-582, FP: 23-58, 64-152; BHT: 123; dual packers, jars, joints, 151' collars; Trilobite Testing, Inc., Jace McKinney.

DRILL STEM TEST #5:

Zone: Kans. City "K": Test Interval: 4249-4275 (26' anchor); Blow: weak surf IFP, no RB, weak incr 2" FFP, no RB; Time Periods: 5-15-15-30; Recovery: no GIP, 62' mud w/oil scum (100% M); Pressures: HP: 2098-2059, SIP: 687-622; FP: no initial (both charts, hydraulic tool failed to open completely), 20-51; BHT: 109 F; dual packers, jars, joints, 151' collars; Trilobite Testing, Inc., Jace McKinney.

DRILL STEM TEST #6:

Zone: Marmaton: Test Interval: 4355-4415 (60' anchor); Blow: weak incr 1.5" IFP, no RB, weak incr 4" FFP, no RB; Time Periods: 5-15-30-60; Recovery: 62' GIP, 120' OCM (20% O, 80%M); Pressures: HP: 2288-2183; SIP: 810-941; FP: 21-34, 39-77; BHT: 114; dual packers (w/shale packer), jars, joints, 151' collars; Trilobite Testing, Inc., Jace McKinney.

DRILL STEM TEST #7:

Zone: Lower Marmaton thru Ft. Scott: Test Interval: 4420-4525 (105' anchor); Blow: weak incr 2" IFP, no RB, weak incr 1.5" FFP, no RB; Time Periods: 5-15-15-30; Recovery: 65' mud with oil scum (100%M); Pressures: HP: 2278-2182; SIP: 1051-1035; FP: 37-42, 45-53; BHT: 106 F; dual packers (w/shale packer), jars, joints, 151' collars; Trilobite Testing, Inc., Jace McKinney.

OPEN HOLE LOGS:

DN (DGA), DI (SP) (Run-1); ML (Run-2); 5" detail LTD-3600; 2" DI to surface casing; No Sonic Log; LogTech-Pioneer Wireline, Hays, KS, Chris Desaire & D. Martin, Log total depth (4646') was four feet high to rotary total depth (4650').

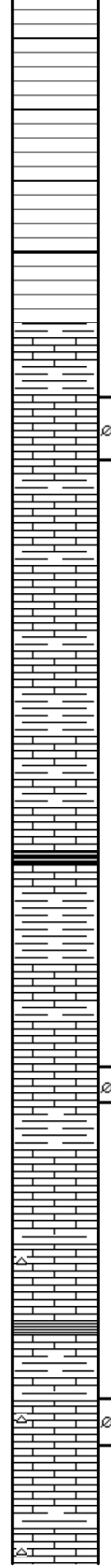
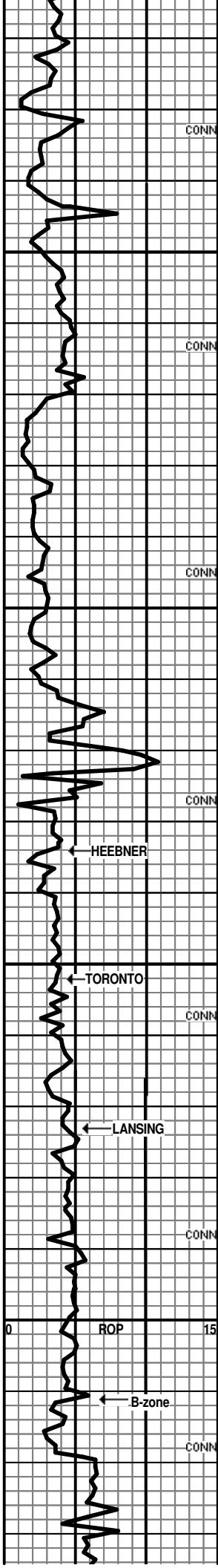
COMPLETION:

Set 5-1/2" production casing for further testing.

7am DAILY ACTIVITY:

- 11/17: MIRT
- 11/18: 343' Drilling
- 11/19: 1639' Drilling
- 11/20: 2620' Drilling
- 11/21: 3120' Drilling, 3400' Call 9:04 pm
- 11/22: 3600' Drilling
- 11/23: 4001' Drilling
- 11/24: 4096' Drilling
- 11/25: 4214' Drilling
- 11/24: 4096' Drilling
- 11/25: 4214' Drilling
- 11/26: 4233' DST #4
- 11/27: 4275' DST #5
- 11/28: 4415' DST #6
- 11/29: 4525' DST #7
- 11/30: 4628' Drilling, RTD 4650 at 8:31 am
- 11/30: Released 7:30 pm

ROP ROP (min/ft)	DST	Lithology	Porosity and Show	Depth	Geological Descriptions	TG, C1-C4 / REMARKS TG (units)
				<p>3750</p> <p>3800</p>	<p>ANYHDRITE 2155 (+675) B/ANHY 2185 (+645)</p>	<p>Hot-Wire</p> <p>REFERENCE LOG: LARSON OPERATING CO., SARA #1-33, NE NE 33-18S-29W, KB 2827.</p> <p>MORGAN MUD: 3670: 11/22-11am: VIS 54, WT 8.7, WL 7.6, CHL 1200, LCM 1.</p> <p>Hot-Wire</p> <p>GAS TEST 69 UNITS</p>



3850
3900
3950
4000

LS: lt-med brown; vf-xtal; rough; poor apparent porosity; no shows;

LS: lt-med grayish brown; vf xtal, scattered fine-med spar; poor apparent porosity; no shows;

LS: as above;

LS: lt-med brown, dk brown specks; vf-xtal; shaley in part; poor apparent porosity; no shows;

HEEBNER 3934 (-1104)
Shale: black, carbonaceous, trace 3940.
Shale: greens, grays

LS: white, lt brown; mic-vf xtal; no visible porosity; no shows;

LS: white, lt brown; mic-vf xtal; trc fos; chalky & crumbly in part; very poor apparent porosity; no shows;

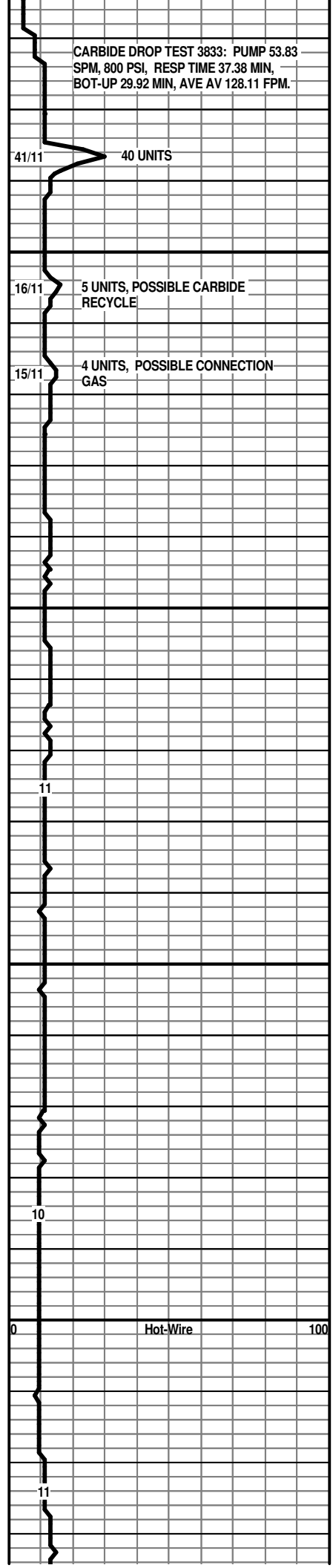
LANSING 3973 (-1143)
(Corrected Top)

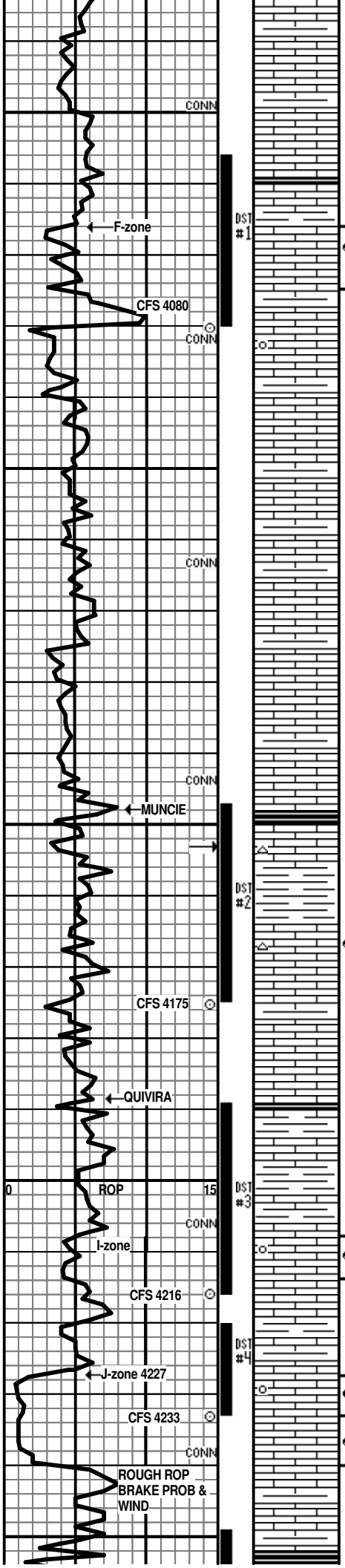
LS: lt brown; vf-xtal; dense; no visible porosity; no shows;

LS: lt brown; vf-xtal; dense, platey; includes minor white, semi-opaq chert; no visible porosity; no shows; 4000.

LS: white, lt brown; mic-vf xtal; mostly dense but chalky & somewhat crumbly in part; includes mostly white, opaq chert; no visible porosity; no shows; 4030.

LS: white, lt brown; mic-vf xtal; dense; includes semi-translucent chert; no visible porosity; no





shows; 4040.

LS: white, lt brown; mic-vf xtal; crumbly chalk in part; no apparent porosity; no shows;

LS: white, lt brown; mic-vf xtal; dense; platey; no visible porosity; no shows;

LS: lt brown; vf-xtal; finely oolitic in part; few chips fine vugular porosity, dk brown spotted stain, crush few micro-drops drab oil; no odor; only dull fluor; 4080, seems to decr 30 min.

LS: white; mic-xtal; soft chalk; with finely granular, finely oolitic, trc white, opa q chert; tight, no shows; 4100.

LS: med - dk brown; vf-xtal; coarse oolitic; poor oomoldic porosity; no shows; 4110.

LS: white, lt brown; vf-xtal; chalky in part; dense; trc chert; no visible porosity; no shows;

LS: lt brown; vf-f xtal; trc chert; tight int xtal por; no shows;

LS: lt-brown; vf-xtal; dense; trc scattered vugular porosity; no shows; 4150.

LS: lt-med gray w/trc lt brn contact; mic-vf xtal; dense; platey; trc fine blk sh inclusions; no visible porosity; no shows; 4160.

MUNCIE CREEK 4148 (-1318)
Shale: black; carbon; tiny chips; trc 4160.

LS: med-dk grayish brown, vf-xtal; dense; same color opa q chert; sli fos; no visible por; no shows; trc 4160, nice incr 4170.

Shale: greenish gray;

H-ZONE: LS: lt grayish brn to med brn; vf-xtal; cherty; few chips pin-point vug w/dk brn stain & sli micro-drops oil, trc fine vug w/sucrosic druse & good int xtal w/sat stain; trc edge fluor; some soft chalk w/bright fluor but no visible show; only trc spotted stain dry; no odor; 4175, 30 & 60 min

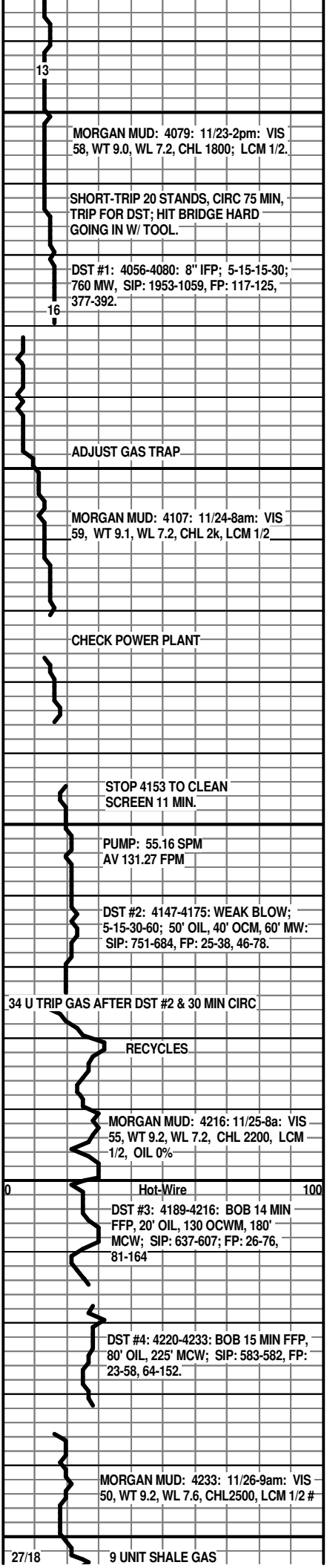
LS: grayish brn; vf-xtal; dense to chalky; poor apparent porosity; no shows.

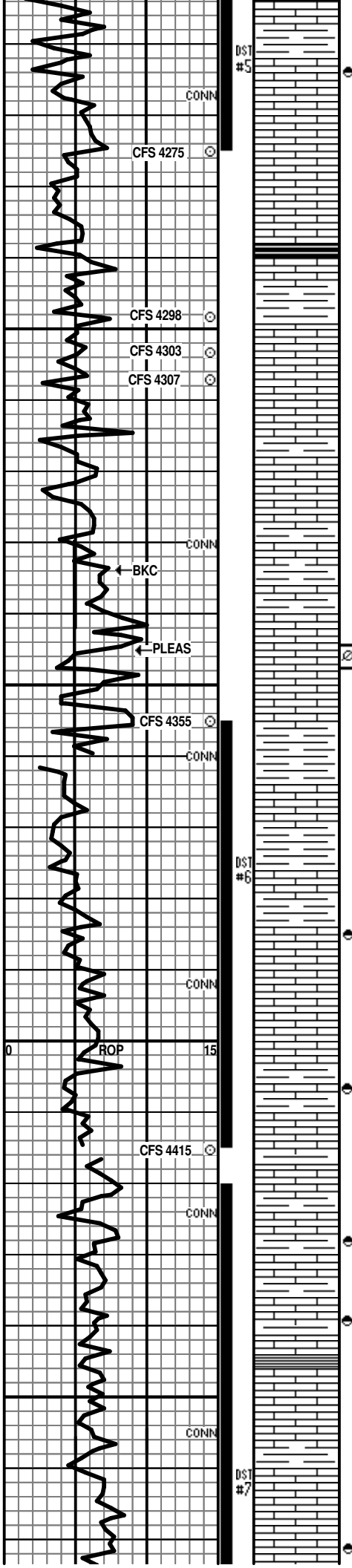
LS: med-dk brown; vf-xtal; dense; sli fos; no visible porosity; no shows; 4200.

I-ZONE: LS: lt grayish-brn; vf-xtal; fine- med oolite; chalky & fragile in part, tiny chips; tight int ool por, pin point dk brn stain, trc micro- drops drab oil, speckled yel fluor; no odor; some bright fluor chalk w/no vis show; few chips spotted lt brn stain dry; trace 4216, 30 & 60 min

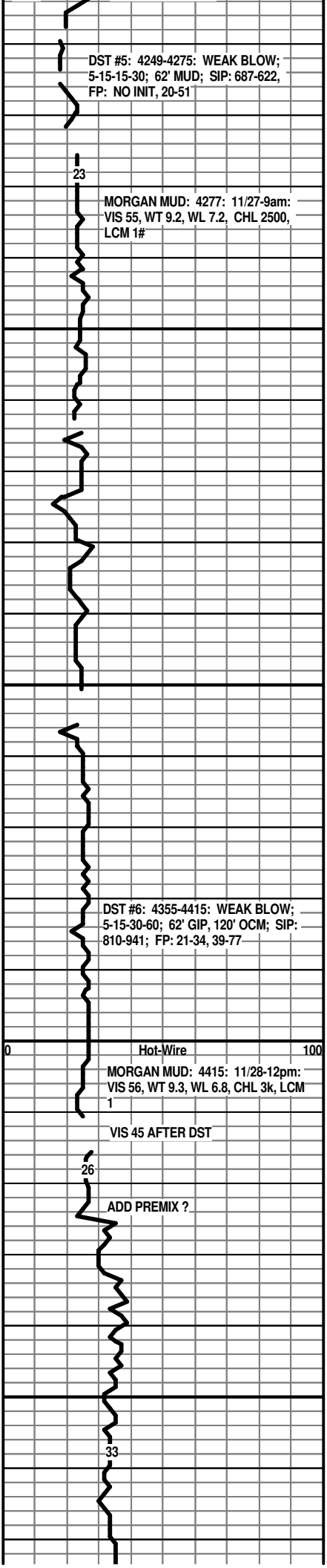
J-ZONE: LS: lt gray, lt brn; vf-xtal; med-crs ool-oom; fair-good oomoldic por w/spotted dk-brn to black stain (wet) & sli show oil; dull fluor; faint odor (30m); spotted- even stain (dry); 1/3 w/show, 2/3 barren, show seems to follow best por; % much improved 60 min but no odor;

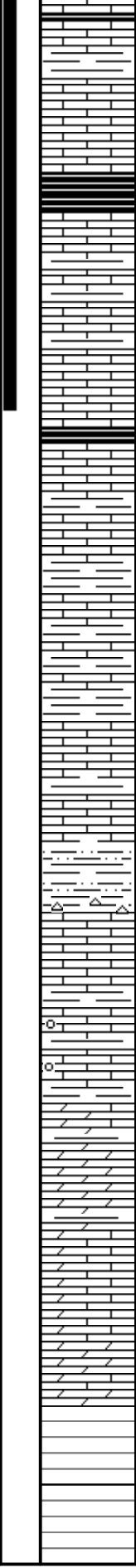
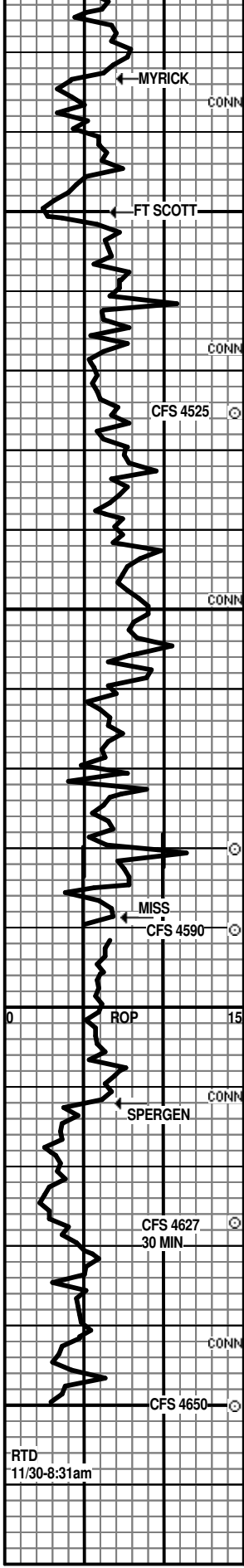
STARK SH 4253 (-1423)
(Corrected Top)
Shale: black: carbon: sli aas: 10-20% of 4270.





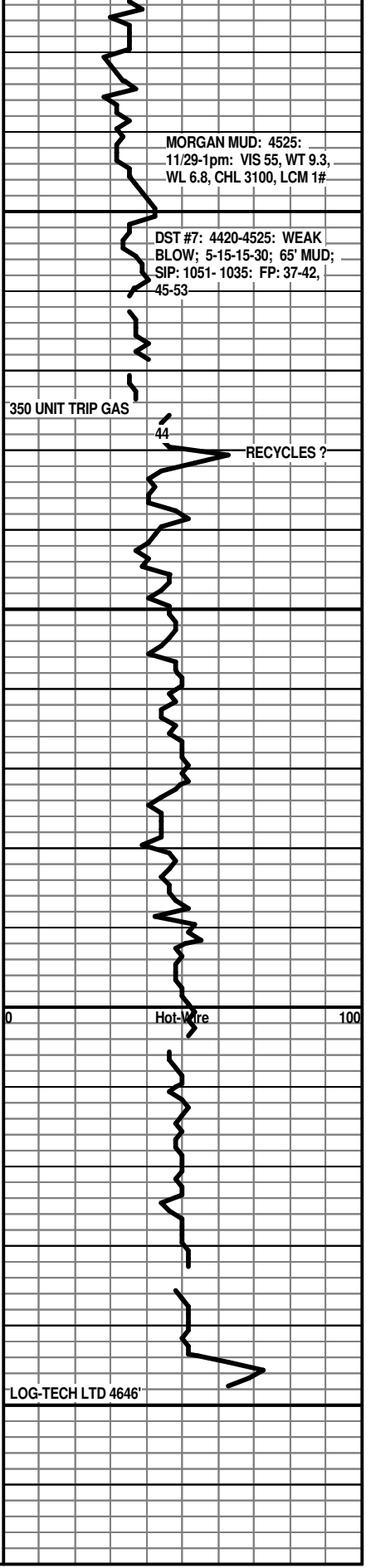
LS: med-dk brn; vf-xtal; dense; no show.
 Shale: gray, greenish gray;
 K-ZONE: LS: lt grayish brown; vf-xtal; sli fos; trc finely ool-oom; few chips fine vug w/ med- dk brn stain, crush few mic-drops oil, 1 chip fair vug, crush dk brn oil & odor; sli fluor; still considerable J-zone float; 30 & 60 min.
 LS: white, lt gray; mic-vf xtal; chalky; opa chert; no visible porosity; no shows;
HUSHPUCKNEY 4288 (-1458)
 Shale: black; carbon; few chips 4298 sample.
 MID CRK: LS: med-dk brn; vf-xtal; sli fos; dense; blocky; no vis por; no calcites; N.S.
 Shale: gray; v-calc 30 min.
 LS: lt-med grayish-brn; vf-xtal; dense to chalky in part; no visible porosity; no shows;
 LS: white, lt brown; mic-vf xtal; much soft chalk; no vis por; no show; 4307-30 & 60 min.
 LS: white, lt brn; mic-vf xtal; dense & much chalk; dense is sli fos; hard; no vis porosity; no shows;
 LS: lt-med grayish-brn; vf-xtal; mostly dense; chalky in part; sli fos, sli cherty; trc oolitic; no visible porosity; no shows;
 LS: lt grayish-brown; vf-xtal; mostly dense to chalky in part; trc crinoidal; trc tight oolite; very poor porosity; no fluor or shows;
MARMATON 4366 (-1536)
 LS: lt brn, lt grayish brn; vf-xtal; dense; no visible porosity; no shows;
 Shale: green, grays;
 LS: lt grayish brn; vf-xtal; few chips fine vug & tight int xtal porosity; spotted dk brn stain wet & dry; v-sli show oil; no odor or fluor; trc 4390, incr 4400.
 LS: grayish brn; vf-xtal; dense to chalky in part; no apparent porosity; no shows;
 LS: grayish brn; vf-xtal; 1 chip coarse drusy vug or fos moldic (?) porosity; black, saturated stain; no oil or odor; 4415-30 min.
 LS: wht, lt grayish brn; mic-vf xtal; dense- chalky IP, much f-c tan & orange-red, semi- trans, crinoidal chert; trc 30m incr 60m.
 LS: lt brown; mic-vf xtal; dense to chalky in part; chert as above; 1-2 chips/tray fine vug w/ spotted stain; no oil show; 4430 ... 4460.
 LS: w/ chert as above.
PAWNEE 4446 (-1616)
 LS: white, lt brn; mic-vf xtal; dense; sli oolitic; cherty; no visible porosity; no shows; 4470.
 LS: white, lt gray; vf-xtal; dense oolite; trans chert; no visible porosity; no shows; 4480.
 LS: as above w/ 1 chip fine vug & spotted stain, possible float ? 4490





4500
4550
4600
4650

Shale: black; carbon; <1% 4490.
 LS: lt-med brn; vf-xtal; dense; cherty; N.S.
 Shale: gray, dk-gray, green, trc maron, mot;
 LS: white, lt brown; mic-vf xtal; dense to chalky; oolitic in part; trc semi-opaq chert; trc fine vug w/ pin point por & spotted stain, 4500.
 Shale: black; carbon; small chips; poor returns ?; <1% 4500.
 LS: med-brown; vf-xtal; trc oolite, dense; no visible porosity; no show.
 LS: lt-med brown; mic-vf xtal; chalky in part; sli oolitic; no visible porosity; no shows;
 LS: lt-med grayish brown; mic-vf xtal; dense; somewhat argill in part; no visible porosity; no shows;
L. CHER SH 4527 (-1697)
 Shale: black; carbonaceous; 4540.
 LS: lt-med brown; vf-xtal; dense to chalky; sli oolitic; no visible porosity; no shows;
 LS: mixed browns; vf-xtal; dense; with green & black shales; fos and/or oolitic in part; no visible porosity; no shows;
 LS: lt-med brown; vf-xtal; dense to chalky in part; no visible porosity; no shows;
 LS: lt-med brown; vf-xtal; dense; 1 chip fine vugular porosity w/med brown spotted stain; no oil show; no odor; 4580-60 min.
B/ JOHNSON 4579 (-1749)
 Shale: green, gray, vari-color; finely pyritic in part; with Siltst: white & green mixed; tight; no shows; also Chert: various, reddish & oxidized in part;
MISSISSIPPI 4589 (-1759)
 LS: lt brown, cream; vf-xtal; medium grain supported oolite; chalky; v-poor int ool por; no shows; 4610.
SPERGEN 4612 (-1782)
 Dol: lt brown; vf-xtal; sli sucrosic but tight; scattered pin point vugs; no shows; 4627-30 min, washes white;
 LS: lt-med brown, sli gray mottling; vf-xtal; v- tight int xtal porosity; no shows;
 LS: lt-med brn, lt gray; vf-xtal; fos; minor gray, opaq chert; dolomitic portions; no shows.
ROTARY TOTAL DEPTH 4650 (-1820)



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



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

Mark Sievers, Chairman
Ward Loyd, Commissioner
Thomas E. Wright, Commissioner

Sam Brownback, Governor

March 15, 2012

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

Re: ACO1
API 15-101-22326-00-00
Sara 2-33
NE/4 Sec.33-18S-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