



**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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- 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

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1049796

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

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 Bbbs.	Gas Mcf	Water Bbbs.	Gas-Oil Ratio	Gravity
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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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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*Mark Parkinson, Governor  
Thomas E. Wright, Chairman  
Joseph F. Harkins, Commissioner  
Ward Loyd, Commissioner*

January 21, 2011

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

Re: ACO1  
API 15-101-22257-00-00  
Splitter-Hilgenberg 1-35  
NE/4 Sec.35-18S-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





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

TICKET  
19087

PAGE 1 OF 1

SERVICE LOCATIONS  
 1. **NESS CITY, KS** WELL/PROJECT NO. **1-35** LEASE **SPLITTER-HILGENBERG** COUNTY/PARISH **LANE** STATE **KS** CITY **DIGHTON, KS** DATE **14 OCT 10** OWNER  
 2. TICKET TYPE **SALES** CONTRACTOR **WILD WEST WELL SER.** RIG NAME/NO. SHIPPED VIA DELIVERED TO LOCATION ORDER NO.  
 3. WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **CEMENT PORT COLLAR** WELL PERMIT NO. WELL LOCATION **2S, 1W, 2S, W SIDE**  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF								
575					MILEAGE #110	35	mil			5.00	175	00
576D					Pump CHARGE	1	JOB	2108	FT	1100.00	1100	00
290		1			D-AIR	1 1/2	gal			35.00	52	50
276		1			FLOCELE	43	lbs			1.50	64	50
330		1			SWIFT MULTI DENSITY STANDARD	170	sk			15.00	2550	00
581		1			SERVICE CHARGE CEMENT	225	sk			1.50	337	50
583		1			DRAYAGE	22327	lbs	390.72	TM	1.00	390	72

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

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

X *[Signature]*  
 DATE SIGNED **14 OCT 10** TIME SIGNED  A.M.  P.M.

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				4670	22
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Lane TAX 6.3%	168.02
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	4838.24

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!





CHARGE TO: LARSON ENGINEERING.  
 ADDRESS \_\_\_\_\_  
 CITY, STATE, ZIP CODE \_\_\_\_\_

TICKET  
19079

PAGE 1 OF 2

SERVICE LOCATIONS  
 1. NESS CITY, KS. WELL/PROJECT NO. 1-35 LEASE SPLITTER-HILGENBERG LANE COUNTY/PARISH KS. CITY DIGHTON, KS. DATE 700110 OWNER \_\_\_\_\_  
 2. TICKET TYPE  SERVICE  SALES CONTRACTOR HD DRILLING. RIG NAME/NO. \_\_\_\_\_ SHIPPED VIA \_\_\_\_\_ DELIVERED TO LOCATION ORDER NO. \_\_\_\_\_  
 3. WELL TYPE OIL WELL CATEGORY DEVELOPMENT JOB PURPOSE 5 1/2 LONGSTRING. WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION 25, 1W, 25, W SIDE.  
 4. REFERRAL LOCATION \_\_\_\_\_ INVOICE INSTRUCTIONS \_\_\_\_\_

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE #110	35		MIL		5.00	175.00
578		1			Pump CHARGE	1		JOB		1400.00	1400.00
290		1			D-AIR	2		gal		35.00	70.00
221		1			LIQUID KCC	2		gal		25.00	50.00
281		1			MUD FLUSH	500		gal		1.00	500.00
283		1			SALT	500		lbs		15.00	75.00
284		1			CALSEAL	5	500	bx	lbs	30.00	150.00
285		1			CFR-1	50		lbs		4.00	200.00
276		1			FLOCELE	45		lbs		1.50	67.50
419		1			ROTATING HEAD RENTAL	1		JOB		150.00	150.00

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

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

x Doug Roberts  
 DATE SIGNED 700110 TIME SIGNED 1315  A.M.  P.M.

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE		
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				PAGE 1	2837.50
WE UNDERSTOOD AND MET YOUR NEEDS?				PAGE TOTAL	
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				PAGE 2	4104.75
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Subtotal	6942.25
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				Lane TAX 6.3%	290.90
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL	7233.15

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!



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

TICKET CONTINUATION

1-35

TICKET No. 19079

CUSTOMER LARSON ENGINEERING. WELL SPLITTER-HILGENBERG. DATE 7 OCT 10 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY.		QTY.		UNIT PRICE	AMOUNT
		LOC	ACCT	DF			WT	UM	WT	UM		
277		1				COAL SEAL	700	lbs			40	280.00
325		1				STANDARD CEMENT	100	sk			12.00	1200.00
330		1				SWIFT MULTI DENSITY STANDARD	125	sk			15.00	1875.00
581		1				SERVICE CHARGE						
583		1										
						MILEAGE CHARGE	TOTAL WEIGHT 235.55		LOADED MILES 35			
							CUBIC FEET 225 sk		TON MILES 412.21			

CONTINUATION TOTAL 4104.21



JOB LOG

SWIFT Services, Inc.

DATE 7 Oct 10 PAGE NO. 7

CUSTOMER  
LARSON ENGINEERING

WELL NO.  
1-35

LEASE  
SPLITTER-HILGENBERG

JOB TYPE  
5 1/2 LONGSTRING

TICKET NO.  
19079

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0910							ON LOCATION. RTD @ 4650 LTD @ 4653 SHADE ST - 43.48' PORI COLLAR @ 2108' 5 1/2" @ 15.5
	1041							CIRCULATE.
	1145	6	5		✓		200	Pump 5 BBL WATER
	1147	6	12		✓		200	Pump 500 gal MUD FLUSH
	1149	6	15		✓		200	Pump 15 BBL KCL FLUSH
	1153		7		✓			PLUG RH (30 SN)
	1156						200	MIX CEMENT
		4	36		✓			95 SK SMD @ 12.5 PPG
		4	24		✓			100 SK EA2 @ 15.5 PPG
	1216							WASH OUT Pump LINE.
	1219	6			✓		200	START DISPLACEMENT
	1240	8	109 1/2		✓		1500	PLUG DOWN PRESSURE UP LATCH PLUG IN.
	1242				✓			RELEASE PRESSURE TRY.
	1250							WASH TRUCK
	1315							JOB COMPLETE.
								THANKS # 110
								JASON JEFF LANE.



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

562 W. State Rd.4  
Olmitz Ks 67564

ATTN: Steve Davis

**Splitter-Hilgenberg #1-35**

**35-18-29 Lane Co KS**

Job Ticket: 38357

**DST#: 1**

Test Start: 2010.09.28 @ 00:10:15

## GENERAL INFORMATION:

Formation: **H-zone**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:36:45

Time Test Ended: 06:28:15

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 48

**Interval: 4164.00 ft (KB) To 4206.00 ft (KB) (TVD)**

Reference Elevations: 2806.00 ft (KB)

Total Depth: 4206.00 ft (KB) (TVD)

2799.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8358 Inside**

Press @ Run Depth: 32.95 psig @ 4165.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.09.28

End Date: 2010.09.28

Last Calib.: 2010.09.29

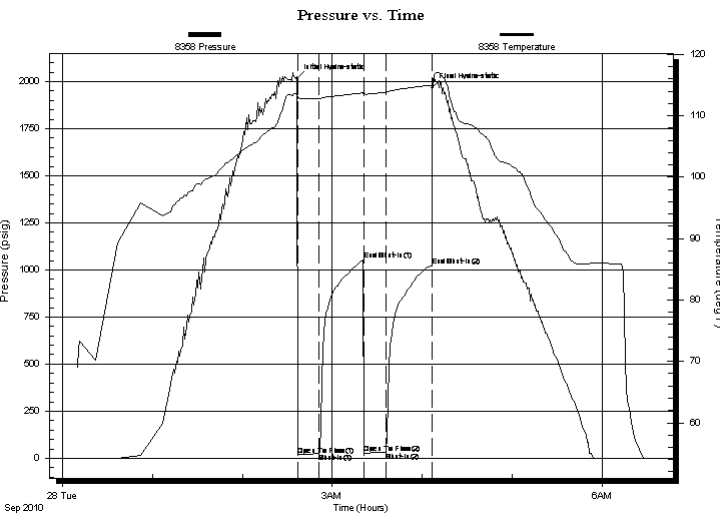
Start Time: 00:10:15

End Time: 06:28:15

Time On Btm: 2010.09.28 @ 02:36:30

Time Off Btm: 2010.09.28 @ 04:06:45

**TEST COMMENT:** IF: Built to surface blow  
IS: No return blow  
FF: No blow  
FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2015.73	113.58	Initial Hydro-static
1	18.36	112.83	Open To Flow (1)
15	27.13	112.77	Shut-In(1)
45	1053.13	113.75	End Shut-In(1)
45	28.20	113.22	Open To Flow (2)
59	32.95	113.82	Shut-In(2)
90	1021.87	115.01	End Shut-In(2)
91	1966.55	115.58	Final Hydro-static

## Recovery

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

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane Co KS**

Job Ticket: 38357

**DST#: 1**

ATTN: Steve Davis

Test Start: 2010.09.28 @ 00:10:15

## 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:

bbbl

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	m 100% m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

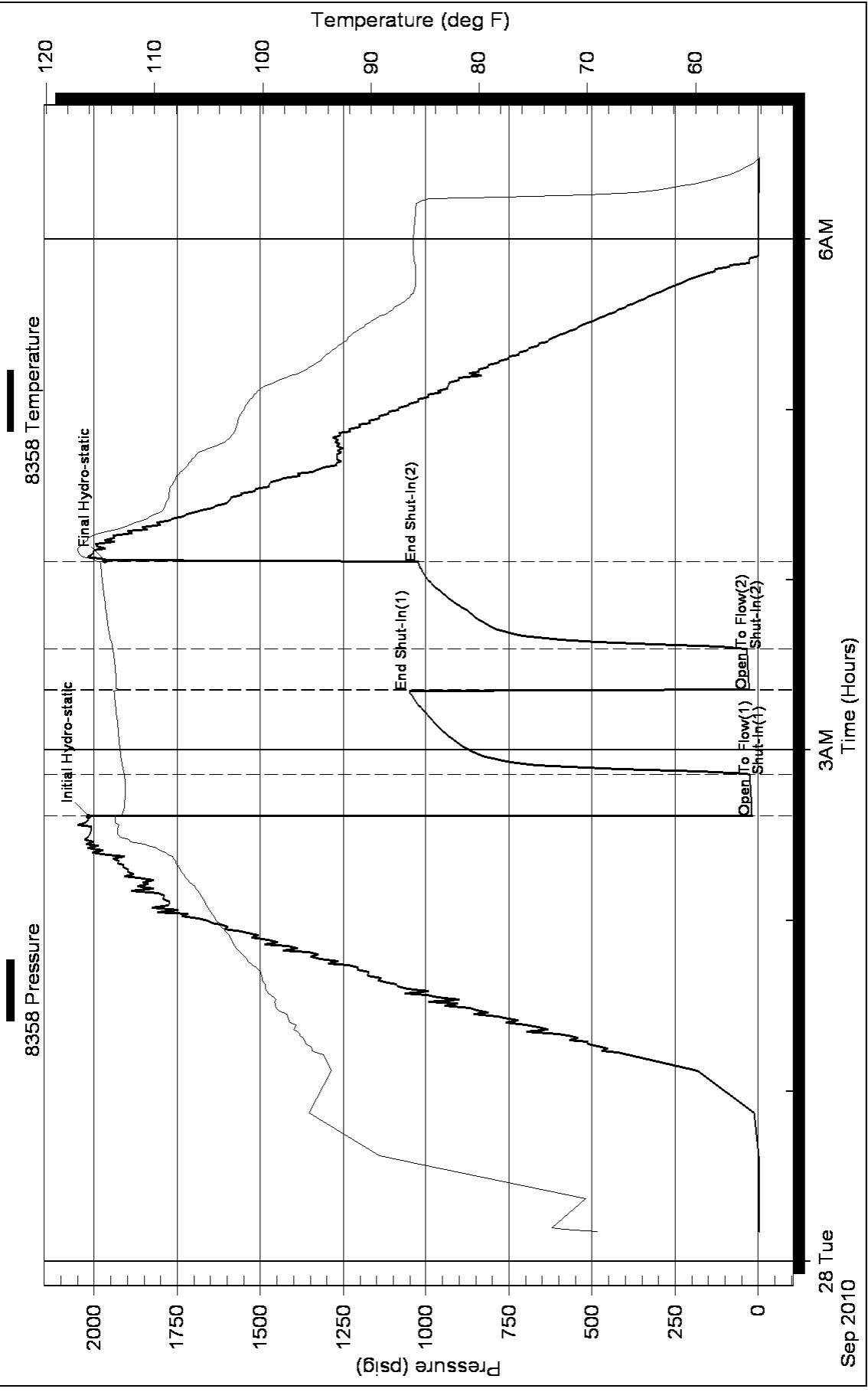
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane KS**

Job Ticket: 38358

**DST#: 2**

ATTN: Steve Davis

Test Start: 2010.09.29 @ 18:22:15

## GENERAL INFORMATION:

Formation: **I zone**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:22:15

Time Test Ended: 00:48:00

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 48

**Interval: 4211.00 ft (KB) To 4246.00 ft (KB) (TVD)**

Reference Elevations: 2806.00 ft (KB)

Total Depth: 4246.00 ft (KB) (TVD)

2799.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8358**

**Inside**

Press @ Run Depth: 187.48 psig @ 4212.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.09.29

End Date: 2010.09.30

Last Calib.: 2010.09.30

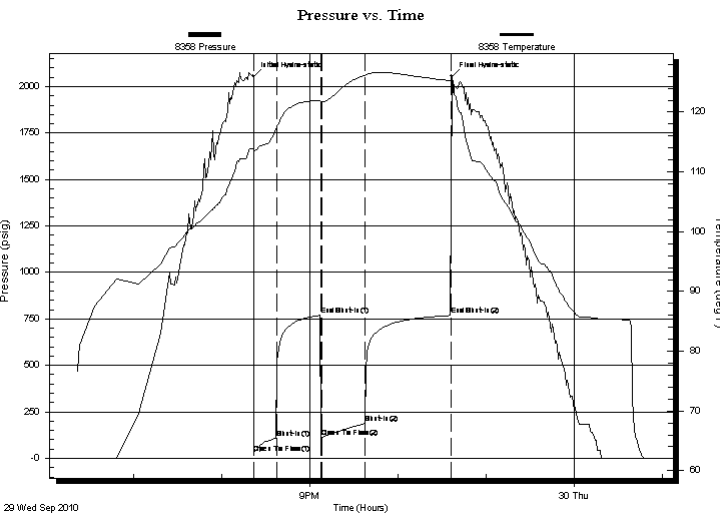
Start Time: 18:22:15

End Time: 00:48:00

Time On Btm: 2010.09.29 @ 20:22:00

Time Off Btm: 2010.09.29 @ 22:36:30

**TEST COMMENT:** IF: Built to 8" blow  
IS: No return blow  
FF: BOB in 27 min.  
FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2055.53	113.82	Initial Hydro-static
1	26.42	113.13	Open To Flow (1)
16	109.49	117.34	Shut-In(1)
46	769.83	121.95	End Shut-In(1)
46	113.41	121.82	Open To Flow (2)
76	187.48	126.20	Shut-In(2)
134	768.40	125.28	End Shut-In(2)
135	2054.12	125.71	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
216.00	mw with oil spots 50%w 50%m	1.74
204.00	mw 10%m 90%w	2.86

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane KS**

Job Ticket: 38358

**DST#: 2**

ATTN: Steve Davis

Test Start: 2010.09.29 @ 18:22:15

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

40000 ppm

Viscosity: 42.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
216.00	mw with oil spots 50%w 50%m	1.736
204.00	mw 10%m 90%w	2.862

Total Length: 420.00 ft      Total Volume: 4.598 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

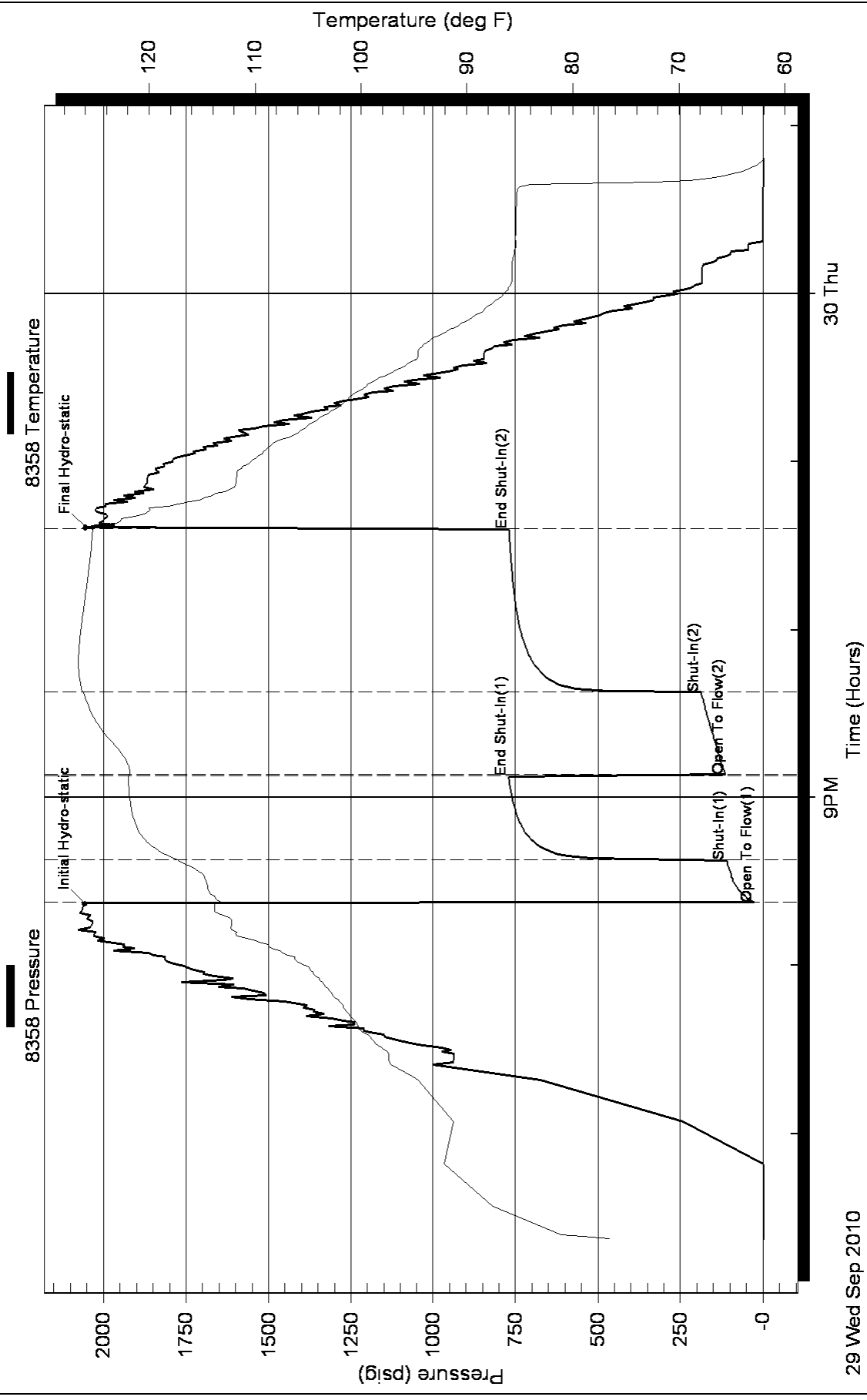
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= 65.3@.180=40,000 ppm

# Pressure vs. Time





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.  
 562 W. State Rd.4  
 Olmitz Ks 67564  
 ATTN: Steve Davis

**Splitter-Hilgenberg #1-35**

**35-18-29 Lane Co KS**

Job Ticket: 38359 **DST#: 3**  
 Test Start: 2010.09.30 @ 08:52:15

## GENERAL INFORMATION:

Formation: **J**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: 10:56:15 Tester: **Mike Roberts**  
 Time Test Ended: 14:56:15 Unit No: **48**  
**Interval: 4245.00 ft (KB) To 4264.00 ft (KB) (TVD)** Reference Elevations: **2806.00 ft (KB)**  
 Total Depth: **4264.00 ft (KB) (TVD)** **2799.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **7.00 ft**

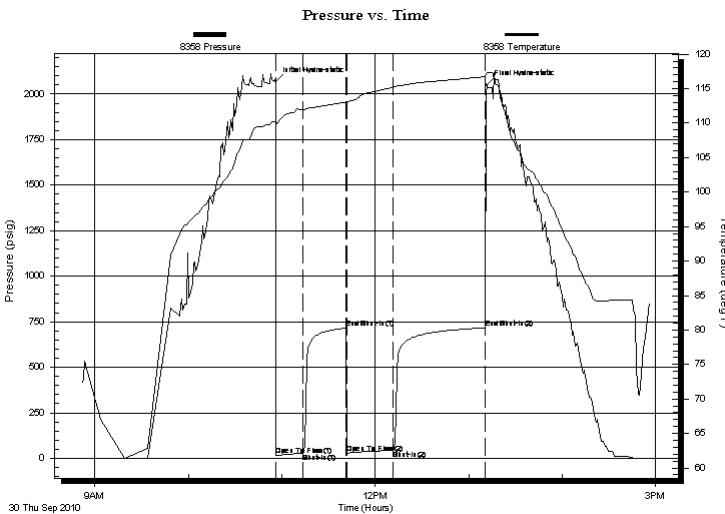
## Serial #: 8358

**Inside**

Press @ Run Depth: **44.98 psig @ 4246.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2010.09.30** End Date: **2010.09.30** Last Calib.: **2010.09.30**  
 Start Time: **08:52:15** End Time: **14:56:15** Time On Btm: **2010.09.30 @ 10:56:00**  
 Time Off Btm: **2010.09.30 @ 13:11:30**

TEST COMMENT: IF: Built to 1/8" blow  
 IS: No return blow  
 FF: Weak surface blow  
 FS: No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2070.22	110.33	Initial Hydro-static
1	16.34	109.66	Open To Flow (1)
18	28.38	112.00	Shut-In(1)
45	715.30	113.05	End Shut-In(1)
46	29.45	112.90	Open To Flow (2)
76	44.98	115.21	Shut-In(2)
135	716.46	116.76	End Shut-In(2)
136	2051.56	117.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	m 100% m w ith oil spots	0.30

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane Co KS**

Job Ticket: 38359

**DST#: 3**

ATTN: Steve Davis

Test Start: 2010.09.30 @ 08:52:15

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
60.00	m 100% m w ith oil spots	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

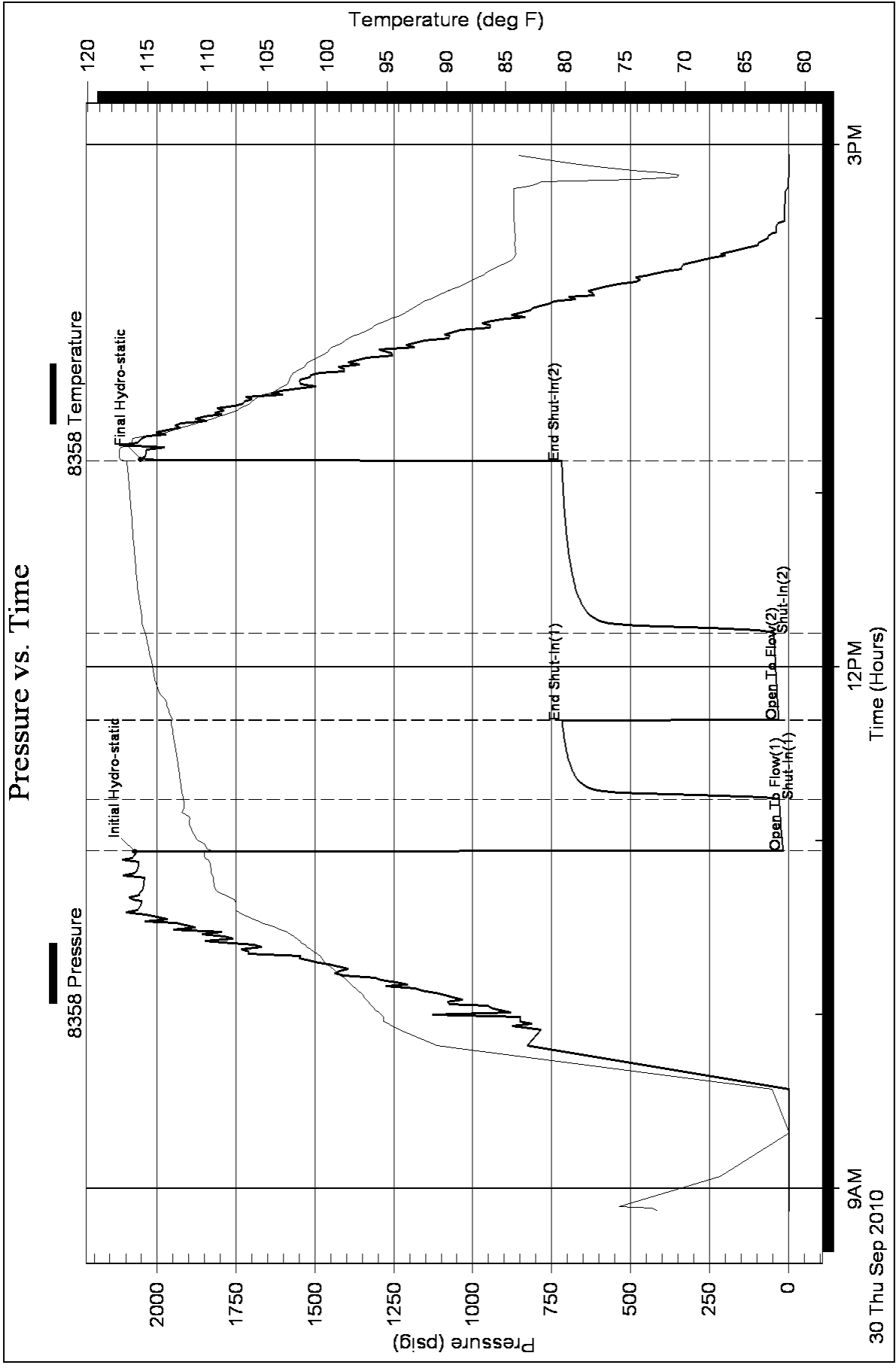
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.  
 562 W. State Rd.4  
 Olmitz Ks 67564  
 ATTN: Steve Davis

**Splitter-Hilgenberg #1-35**  
**35-18-29 Lane Co KS**  
 Job Ticket: 38360 **DST#: 4**  
 Test Start: 2010.10.01 @ 00:05:15

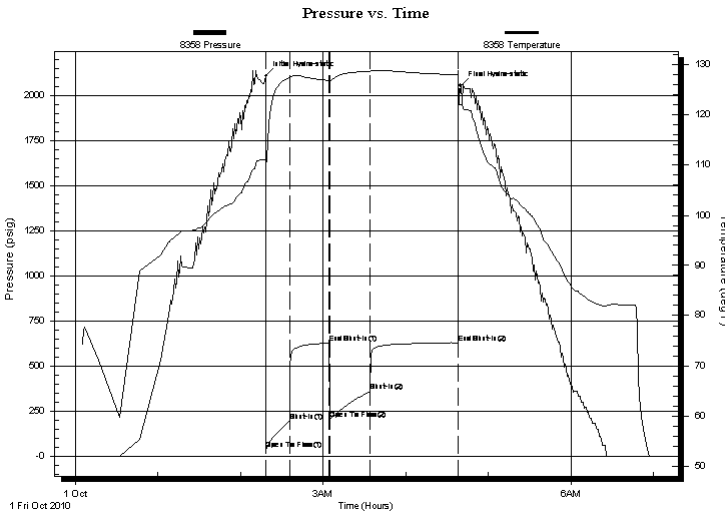
## GENERAL INFORMATION:

Formation: **K**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: **02:18:30** Tester: **Mike Roberts**  
 Time Test Ended: **06:57:30** Unit No: **48**  
**Interval: 4275.00 ft (KB) To 4290.00 ft (KB) (TVD)** Reference Elevations: **2806.00 ft (KB)**  
 Total Depth: **4290.00 ft (KB) (TVD)** **2799.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **7.00 ft**

**Serial #: 8358** **Inside**  
 Press @ Run Depth: **361.37 psig @ 4276.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2010.10.01** End Date: **2010.10.01** Last Calib.: **2010.10.01**  
 Start Time: **00:05:15** End Time: **06:57:30** Time On Btm: **2010.10.01 @ 02:18:15**  
 Time Off Btm: **2010.10.01 @ 04:39:45**

TEST COMMENT: IF: BOB in 5 min  
 FF: No return blow  
 FF: BOB in 7 min  
 FS: No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2109.25	111.15	Initial Hydro-static
1	37.10	110.13	Open To Flow (1)
18	196.95	127.53	Shut-In(1)
46	627.57	126.92	End Shut-In(1)
47	203.81	126.80	Open To Flow (2)
76	361.37	128.75	Shut-In(2)
140	629.30	128.04	End Shut-In(2)
142	2056.25	121.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	free oil 100% o	0.02
744.00	100% sw	9.19

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane Co KS**

Job Ticket: 38360

**DST#: 4**

ATTN: Steve Davis

Test Start: 2010.10.01 @ 00:05:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

41000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	free oil 100% o	0.025
744.00	100% sw	9.188

Total Length: 749.00 ft      Total Volume: 9.213 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

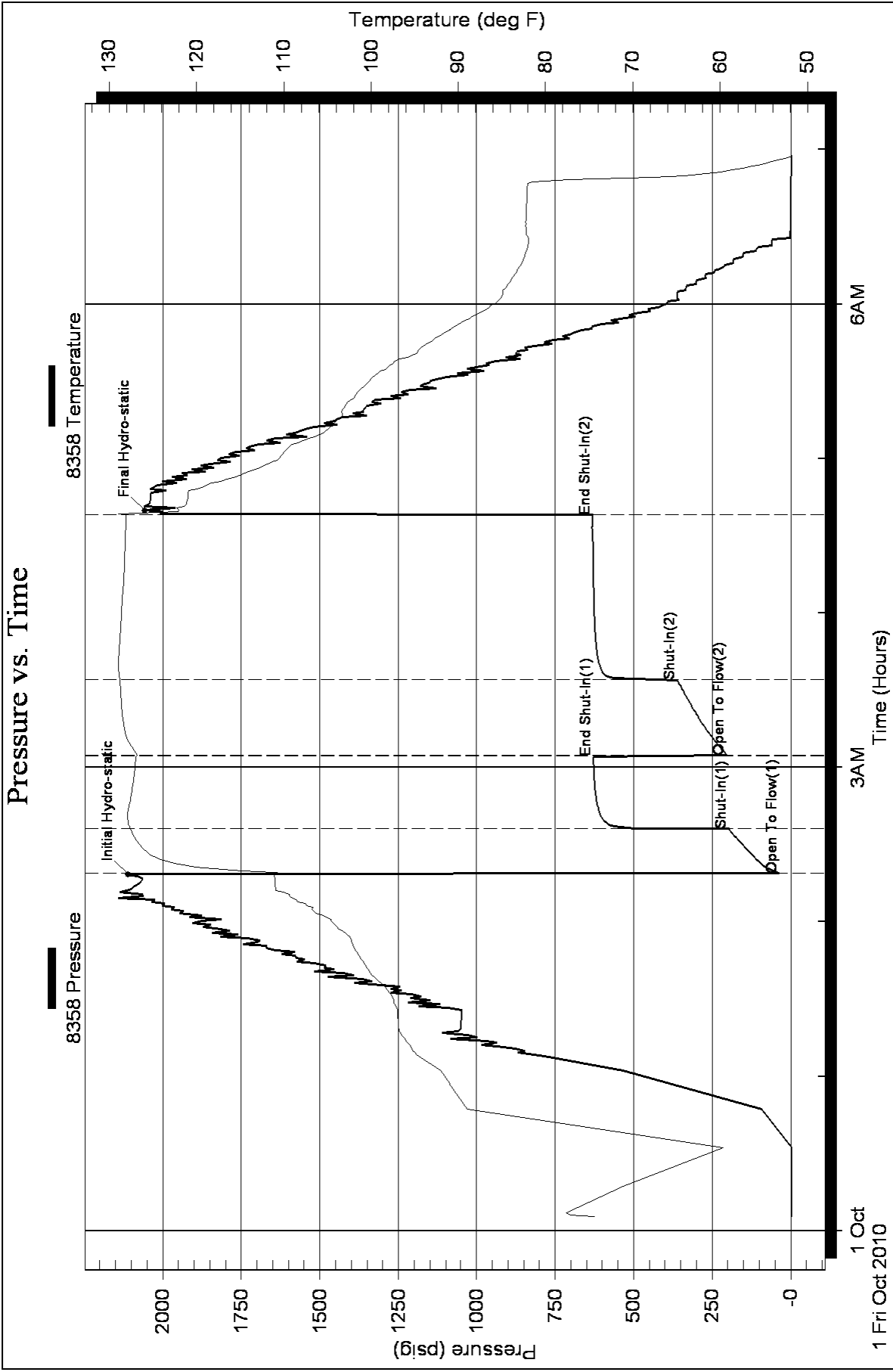
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .261@51\*=41,000 ppm

### Pressure vs. Time





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

562 W. State Rd.4  
Olmitz Ks 67564

ATTN: Steve Davis

**Splitter-Hilgenberg #1-35**

**35-18-29 Lane Co KS**

Job Ticket: 38361

**DST#: 5**

Test Start: 2010.10.01 @ 16:41:15

## GENERAL INFORMATION:

Formation: **Middle Creek**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:38:45

Time Test Ended: 22:22:15

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 48

**Interval: 4315.00 ft (KB) To 4324.00 ft (KB) (TVD)**

Reference Elevations: 2806.00 ft (KB)

Total Depth: 4324.00 ft (KB) (TVD)

2799.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8358**

**Inside**

Press @ Run Depth: 14.89 psig @ 4316.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.01

End Date:

2010.10.01

Last Calib.: 2010.10.01

Start Time: 16:41:15

End Time:

22:22:15

Time On Btm: 2010.10.01 @ 18:38:30

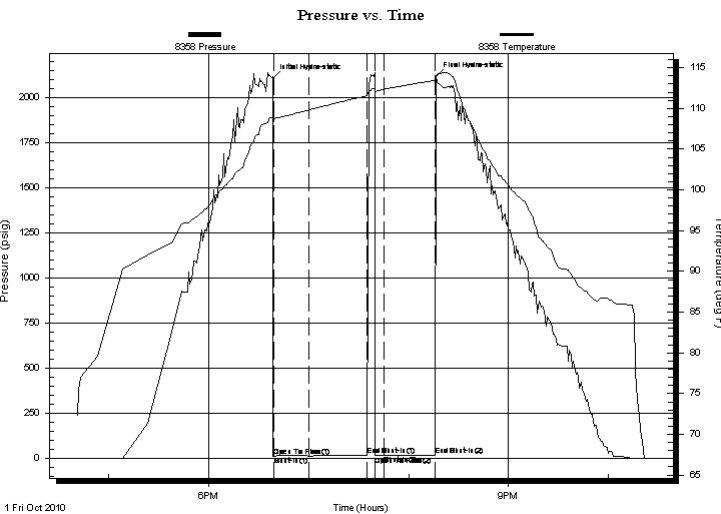
Time Off Btm: 2010.10.01 @ 20:16:30

TEST COMMENT: IF No blow :

IS: No return blow

FF: No blow ---- flushed tool no blow

FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2104.39	108.92	Initial Hydro-static
1	13.58	107.95	Open To Flow (1)
22	13.67	109.82	Shut-In(1)
57	15.08	111.56	End Shut-In(1)
62	14.46	111.99	Open To Flow (2)
67	14.89	112.36	Shut-In(2)
98	17.73	113.46	End Shut-In(2)
98	2111.56	114.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	m 100%	0.01

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane Co KS**

Job Ticket: 38361

**DST#: 5**

ATTN: Steve Davis

Test Start: 2010.10.01 @ 16:41:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 81.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	m 100%	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

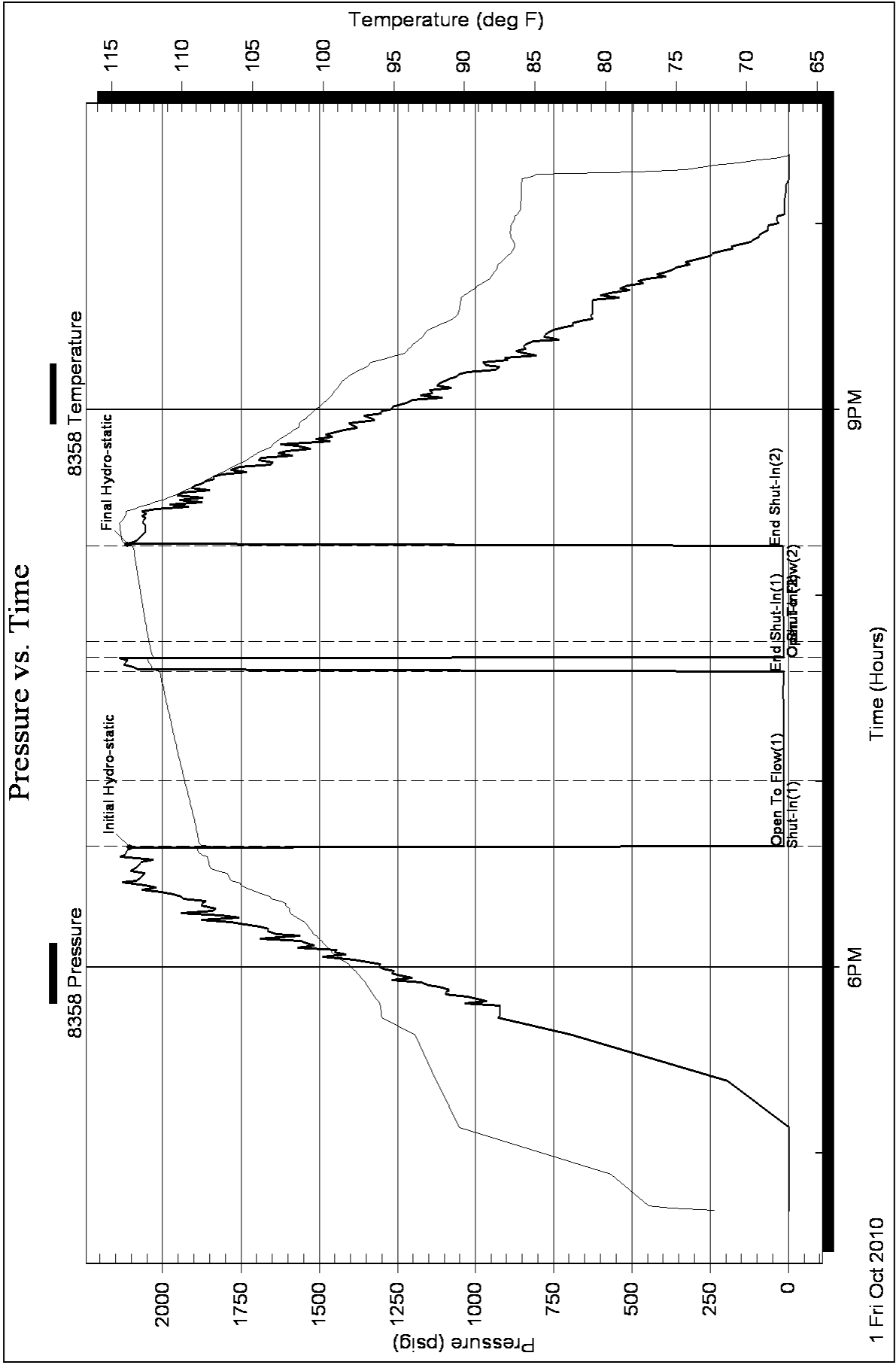
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

562 W. State Rd.4  
Olmitz Ks 67564

ATTN: Steve Davis

**Splitter-Hilgenberg #1-35**

**35-18-29 Lane Co KS**

Job Ticket: 38362

**DST#: 6**

Test Start: 2010.10.01 @ 08:42:15

## GENERAL INFORMATION:

Formation: "L"

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 23:37:30

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 48

**Interval: 4314.00 ft (KB) To 4334.00 ft (KB) (TVD)**

Reference Elevations: 2806.00 ft (KB)

Total Depth: 4206.00 ft (KB) (TVD)

2799.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8358**

**Inside**

Press @ Run Depth: psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.01

End Date:

2010.10.01

Last Calib.:

2010.10.03

Start Time:

08:42:15

End Time:

23:37:30

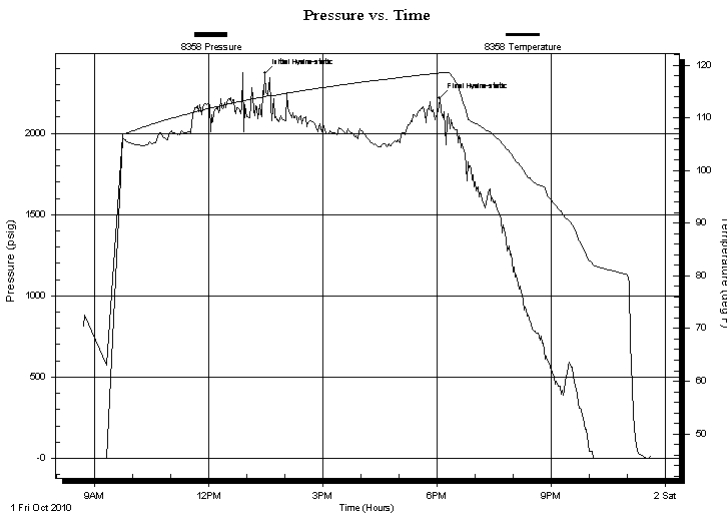
Time On Btm:

2010.10.01 @ 13:28:30

Time Off Btm:

2010.10.01 @ 18:05:00

**TEST COMMENT:** Fishing---- set slips, unlatched elevators, elevators snagged against pipe picked up pipe from table slips came out of hole about the time the elevators unsnagged causing the pipe to fall down hole



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2368.39	114.12	Initial Hydro-static
277	2217.87	118.56	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00		0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane Co KS**

Job Ticket: 38362

**DST#: 6**

ATTN: Steve Davis

Test Start: 2010.10.01 @ 08:42:15

**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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
0.00		0.000

Total Length:                      ft      Total Volume:                      bbl

Num Fluid Samples: 0

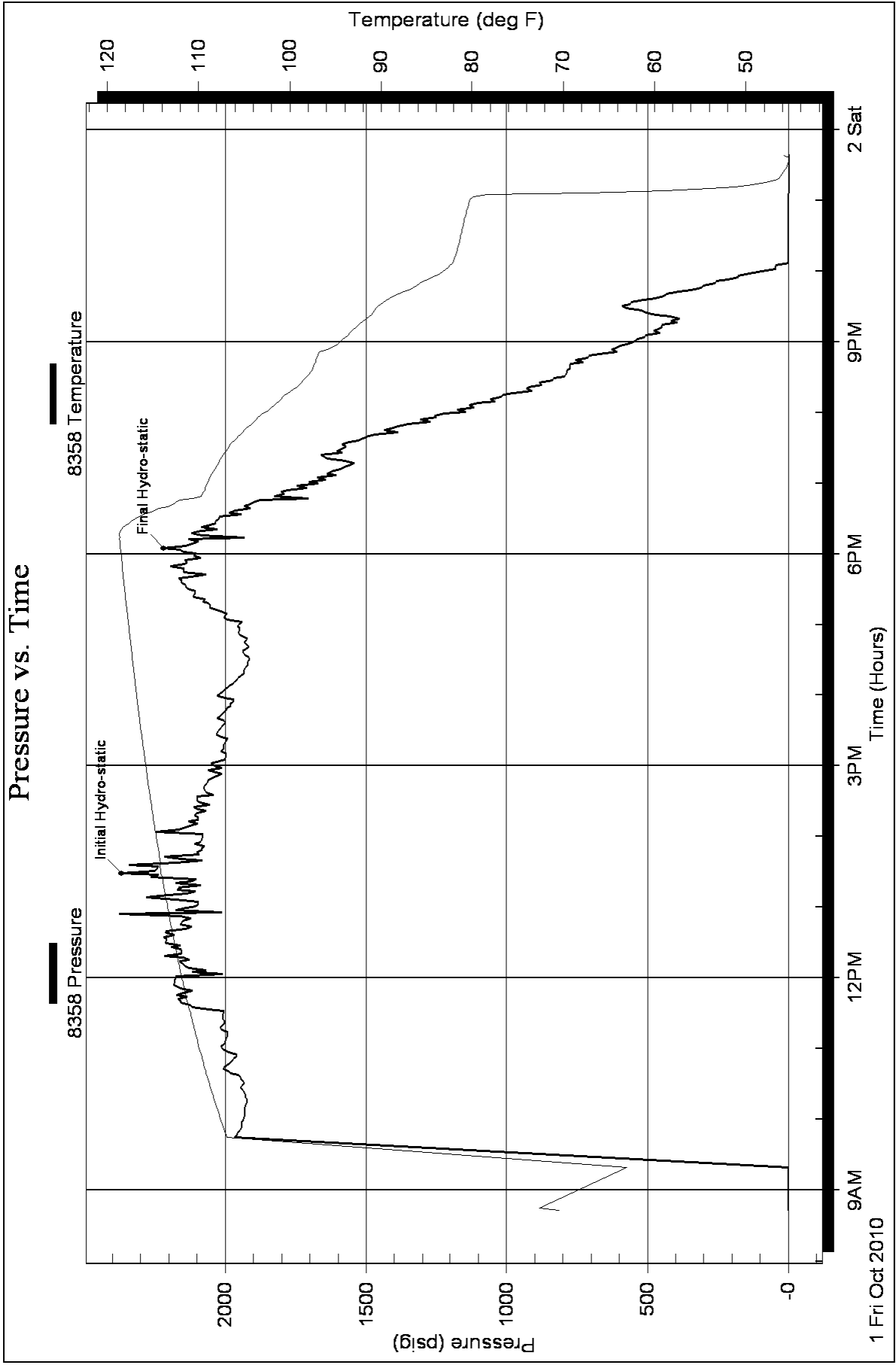
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: MISRUN-----FISHING





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

562 W. State Rd.4  
Olmitz Ks 67564

ATTN: Steve Davis

**Splitter-Hilgenberg #1-35**

**35-18-29 Lane Co KS**

Job Ticket: 38363

**DST#: 7**

Test Start: 2010.10.03 @ 06:52:15

## GENERAL INFORMATION:

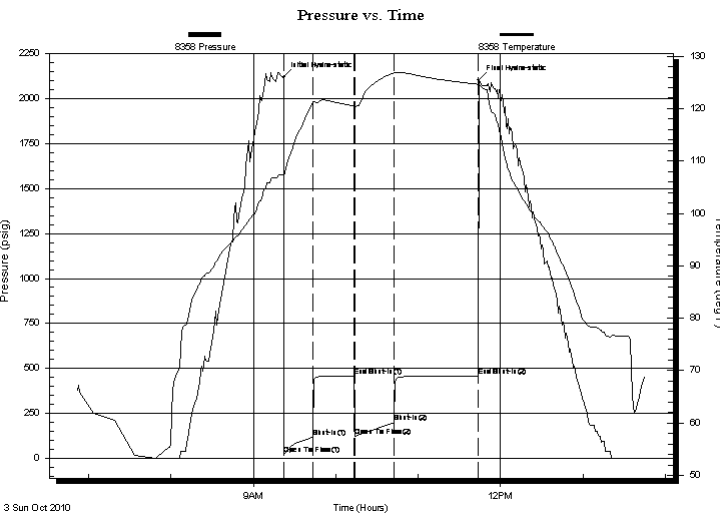
Formation: **L**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: **09:22:30** Tester: **Mike Roberts**  
 Time Test Ended: **13:45:00** Unit No: **48**  
**Interval: 4314.00 ft (KB) To 4336.00 ft (KB) (TVD)** Reference Elevations: **2806.00 ft (KB)**  
 Total Depth: **4336.00 ft (KB) (TVD)** **2799.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **7.00 ft**

## Serial #: 8358

**Inside**

Press @ Run Depth: **198.23 psig @ 4315.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2010.10.03** End Date: **2010.10.03** Last Calib.: **2010.10.03**  
 Start Time: **06:52:15** End Time: **13:45:00** Time On Btm: **2010.10.03 @ 09:22:15**  
 Time Off Btm: **2010.10.03 @ 11:44:15**

**TEST COMMENT:** IF: Built to 5" blow  
 IS: No return blow  
 FF: BOB in 24 min.  
 FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2122.20	107.40	Initial Hydro-static
1	21.15	106.95	Open To Flow (1)
21	118.88	121.04	Shut-In(1)
52	459.00	120.47	End Shut-In(1)
52	121.72	120.30	Open To Flow (2)
81	198.23	126.79	Shut-In(2)
142	458.23	124.64	End Shut-In(2)
142	2104.38	124.63	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	sw with oil spots	2.19

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane Co KS**

Job Ticket: 38363

**DST#: 7**

ATTN: Steve Davis

Test Start: 2010.10.03 @ 06:52:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	sw with oil spots	2.185

Total Length: 248.00 ft      Total Volume: 2.185 bbl

Num Fluid Samples: 0

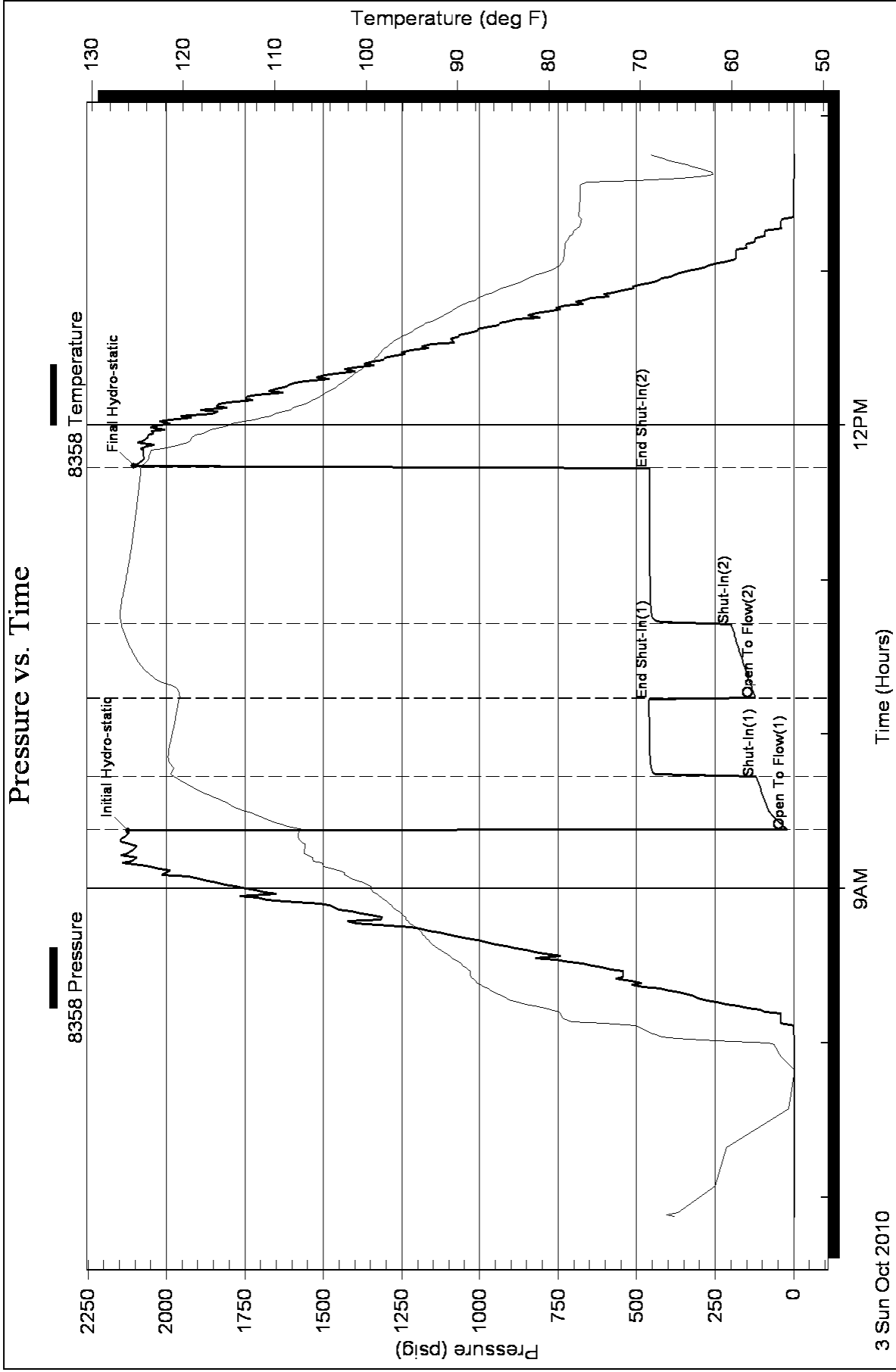
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .218@73.6=30,000 ppm





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.

562 W. State Rd.4  
Olmitz Ks 67564

ATTN: Steve Davis

**Splitter-Hilgenberg #1-35**

**35-18-29 Lane Co KS**

Job Ticket: 38364

**DST#: 8**

Test Start: 2010.10.04 @ 08:15:00

## GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:05:30

Time Test Ended: 13:33:30

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 48

**Interval: 4387.00 ft (KB) To 4445.00 ft (KB) (TVD)**

Reference Elevations: 2806.00 ft (KB)

Total Depth: 4445.00 ft (KB) (TVD)

2799.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8358**

**Inside**

Press @ Run Depth: 38.28 psig @ 4388.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.04

End Date:

2010.10.04

Last Calib.: 2010.10.04

Start Time: 08:15:15

End Time:

13:33:30

Time On Btm: 2010.10.04 @ 10:05:15

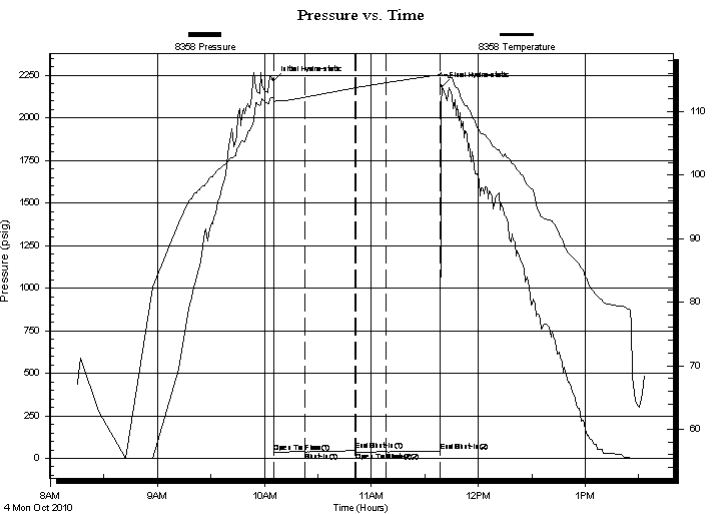
Time Off Btm: 2010.10.04 @ 11:39:30

**TEST COMMENT:** IF: weak surface blow died in 10 min.

IS: No return blow

FF: No blow

FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2221.17	112.17	Initial Hydro-static
1	37.26	111.41	Open To Flow (1)
18	38.40	112.26	Shut-In(1)
46	45.91	113.77	End Shut-In(1)
46	36.86	113.77	Open To Flow (2)
63	38.28	114.57	Shut-In(2)
94	44.07	115.84	End Shut-In(2)
95	2186.40	115.86	Final Hydro-static

## Recovery

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

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**Splitter-Hilgenberg #1-35**

562 W. State Rd.4  
Olmitz Ks 67564

**35-18-29 Lane Co KS**

Job Ticket: 38364

**DST#: 8**

ATTN: Steve Davis

Test Start: 2010.10.04 @ 08:15:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.39 in<sup>3</sup>

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 bbf
5.00	m 100% m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

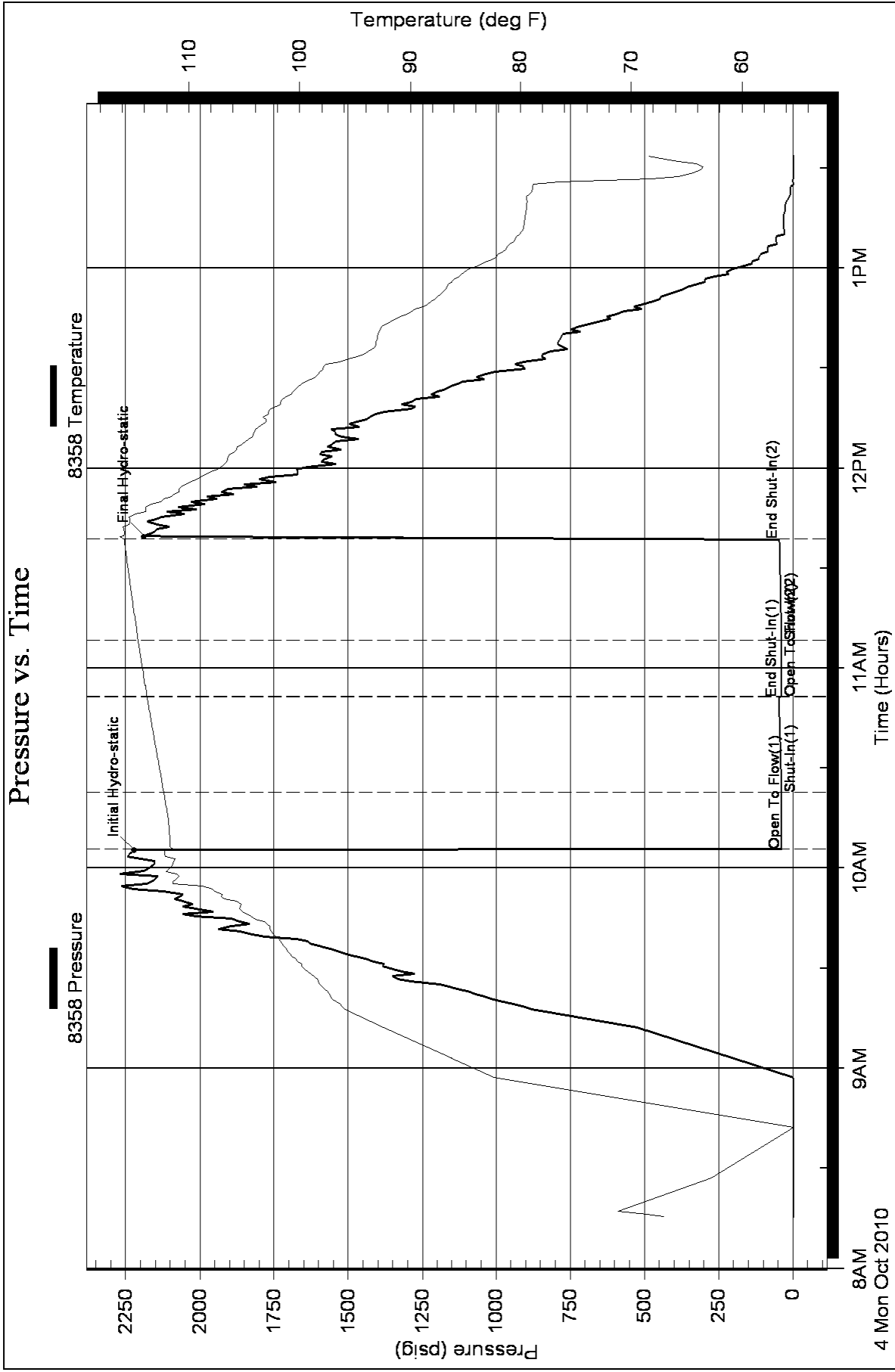
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





# RICHARD S. (Steve) DAVIS JR.

## Petroleum Geologist

212 N. Market

Wichita, Kansas 67202

Phone (316) 267-9115

# GEOLOGIST'S REPORT

## DRILLING TIME AND SAMPLE LOG

<p>COMPANY <u>LARSON ENGINEERING, INC</u></p> <p>LEASE <u>SPLITTER-HILGENBERG #1-35</u></p> <p>FIELD <u>DIGHTON SW EXT</u></p> <p>LOCATION <u>1802' ENL &amp; 62' FEL</u></p> <p>SEC <u>35</u> TWSP <u>18S</u> RGE <u>R29W</u></p> <p>COUNTY <u>CANE</u> STATE <u>KANSAS</u></p>	<p style="text-align: center;">ELEVATIONS</p> <p>KB <u>2806</u></p> <p>DF <u>          </u></p> <p>GL <u>2799</u></p> <p>Measurements Are All From <u>KB 2806</u></p>
<p>CONTRACTOR <u>H.D. DRILLING #3</u></p> <p>SPUD <u>9-22-2010</u> COMP <u>10-07-2010</u></p> <p>RTD <u>4650(-1844)</u> LTD <u>4653(-1847)</u></p> <p>MUD UP <u>3800</u> TYPE MUD <u>CHEMICAL</u></p>	<p style="text-align: center;">CASING</p> <p>SURFACE <u>8 5/8" @ 262'</u></p> <p>PRODUCTION <u>5 1/2"</u></p> <p style="text-align: center;">ELECTRICAL SURVEYS</p> <p>Log Tech: <u>CDL/CNL, D.I.L &amp; Micro.</u></p>

SAMPLES SAVED FROM 3800 TO RTD

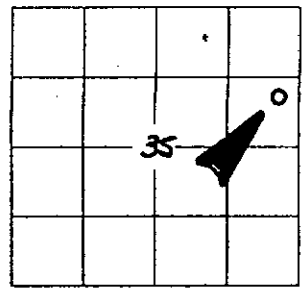
DRILLING TIME KEPT FROM 3800 TO RTD

SAMPLES EXAMINED FROM 3800 TO RTD

GEOLOGICAL SUPERVISION FROM 3850 TO RTD

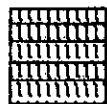
GEOLOGIST ON WELL STEVE DAVIS

FORMATION TOPS	LOG	SAMPLES
<u>ANHYDRITE</u>	<u>2151 +655</u>	<u>2151</u>
<u>B/ANHYDRITE</u>	<u>2176 +630</u>	<u>2177</u>
<u>HEBNER</u>	<u>3960 -1154</u>	<u>3957</u>
<u>LANSING</u>	<u>4003 -1197</u>	<u>3999</u>
<u>MUNDIE CREEK</u>	<u>4178 -1372</u>	<u>4174</u>
<u>STARK</u>	<u>4278 -1472</u>	<u>4278</u>
<u>PANNEE</u>	<u>4476 -1670</u>	<u>4483</u>
<u>CHEROKEE SH</u>	<u>4548 -1742</u>	<u>4551</u>
<u>JOHNSON ZONE</u>	<u>4580 -1774</u>	<u>4584</u>
<u>MISSISSIPPI</u>	<u>4618 -1812</u>	<u>4615</u>

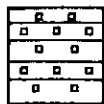


API# 15.101-22257

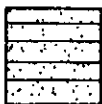
# LEGEND



Anhydrite



Salt



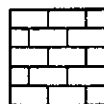
Sandstone



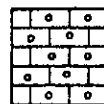
Shale



Carb sh



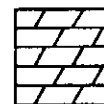
Limestone



Ool. Lime



Chert



Dolomite

SCALE " = 100'

DAV103-6.

DRILLING TIME		DEPTH	SAMPLE DESCRIPTION	REMARKS				
In Minutes								
0	5	10	15	15				
[Grid with wavy lines]		50	ANHYDRITE 2151 (1655)					
[Grid with wavy lines]			ANHYDRITE 2177 (1629)					
[Grid with wavy lines]		2200						

3800

Vis SG WT 86 Fl 72  
Chl. 1.000 PH 11.5 ccm. S#  
(9-27-10)

50

Smp's 99% vaci calc shale

AA

Smp's most vaci calc shale

3900

CS brownish white dense mud &  
shale AA

CS cream gray fine foss. ool P. mold  
N.S. chky IP

CS tan cream fine foss. ool IP  
chky IP dense mud

50

HEEDNER  
3957(1151)

shale black carb

shale gray green & rust some  
silty

CS cream-olt white fine fine foss.  
ool, chky IP P. mold N.S.  
About shale AA

shale gray & green

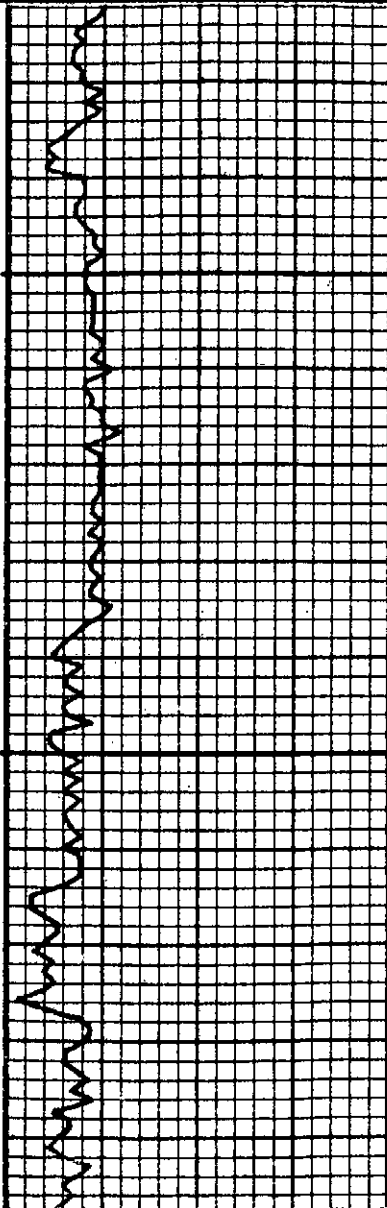
Bit Trip @ 3994  
Pipe Strap @ 3994  
2.96 long

ZANSTALG  
3999(1193)

4000

CS gray-tan white dense mud

AA + CS cream-olt white fine fine  
ool-ool IP P. mold N.S.



50

shale gray-green

LS cream - all white f. ls. ool.  
P. ool. mold & few pr's f. ls. N.S.

LS cream - all white v. fine micro  
dense

shale black-gray + LS tan cream  
all white f. ls. silty, mass chky IP  
dense N.S.

Vis. 58 Wt. 8.8 Fil. 6.8  
CN. 1.600 PH 11.5 CCM. 5#  
(9.28.10)

shale black-gray

4100

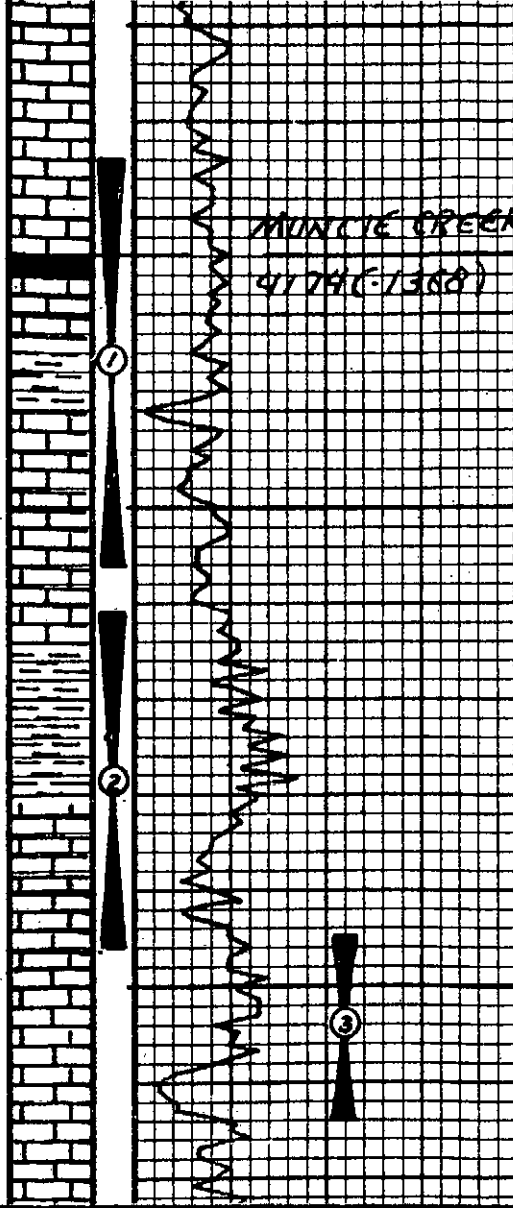
shale black-gray + LS cream  
all white f. ls. ool. ool. IP  
P. ool. mold & some chky N.S.

LS tan, gray white dense silty  
mass - ool

LS cream - tan f. ls. ool. f. ls. ool. mold  
N.S.

LS cream - tan f. ls. ool. IP dense  
N.S.

LS tan - all white v. fine micro



MUNCIE CREEK  
4174(-1388)

50

4200

420

50

50

dense  
CS gray-tan f. v. l. a silty loss  
not dense v. d.  
AA + CS brown micro v. l. dense  
shale black sub carb. & pyr  
CS tan-gray v. l. a silty loss  
dense same chky, v. d.  
AA + shale black gray green  
CS tan, brown f. v. l. a silty loss  
P. v. l. a v. s. f. a rare spid sta  
w. fluor. plat odor  
CS brown-gray f. v. l. a dense  
v. d.  
CS AA w/abst shale gray, black &  
green  
shale gray, black & green  
CS tan-white f. v. l. a silty  
loss f. v. l. a s. f. s. f. a spid sta  
dull spid fluor. lat odor  
same chky  
CS gray-tan f. v. l. a not f. v. l. a  
F. P. v. l. a s. f. s. f. a rare spid sta  
dull spid fluor. lat odor  
CS, tan, all white f. v. l. a silty

OST #1 4164-4206

15-30-15-30

BLOW:

I.F. Weak surface  
F.F. No blow

RECOVERY: 5'M

I.H.P. 2015#

I.F.P. 18-27#

I.S.I.P. 1053#

F.F.P. 28-32#

F.S.I.P. 1021#

F.H.P. 1966# B.H.T. 115°F

Vis. 52 wt. 9.1 Fil. 7.2  
CN. 1,900 PH 10.5 CCM. 5#  
(9-29-10)

OST #2 4211-4246

15-30-30-60

BLOW:

I.F. Built 8"

F.F. BOB. 27 min.

(No return I.S.I. or F.S.I.)

RECOVERY:

216 M.W. w/oil spots (50% w 50% m)

204 M.W. (90% w 10% m)

420 TOTAL FLUID chl. 40,000

I.H.P. 2055#

I.F.P. 26-109#

I.S.I.P. 769#

F.F.P. 113-187#

F.S.I.P. 768#

F.H.P. 2054# B.H.T. 125°F

STARTER  
42706 (4272)



4300  
-c/s  
-c/s  
-c/s  
-c/s  
-c/s

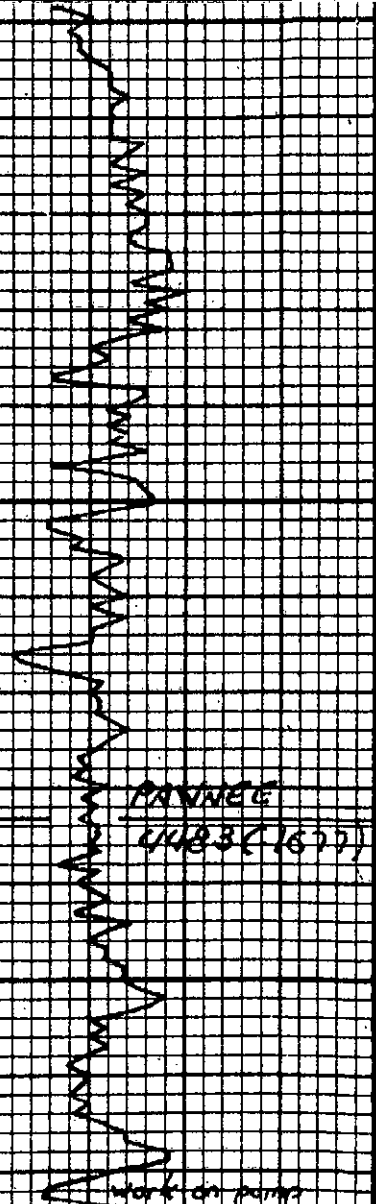
Vis. 9.2 Wt. 9.2 F.P. 29  
Chl. 2,500 PH 10.5 CCM. 5.8  
(9.3-10)

50

oil. L. v. l. dense NVA some chky  
shale black carb  
LS. con. off white f. v. l. silty  
ool. f. v. l. & F.P. ool. mold. & S.S.F.O.  
spid. sta. spid. blue. lat. odor  
LS. tan. off white f. v. l. silty  
lacc. chky. IP. dense. mid. & ool.  
gray. app.  
LS. con. off white f. v. l. ool. lacc.  
chky. race. P. mold. & S.S.F.O. +  
ool. gray. app.  
shale black carb  
Abat. shale + LS. con. white low pr. c.  
f. v. l. chky. P. mold. & S.S.F.O. +  
oil. spid. in. sta. d. blue. lat. odor  
LS. tan. gray. lacc. lacc. ool. P. mold. &  
P. mold. & S.S.F.O. + S.S. res. secondary  
oil. spid. sta. dull. blue. N. odor  
99% shale after fishing for  
ool.  
Most shale (trip sample)  
LS. gray. tan. v. l. silty lacc.  
dense. mid.  
LS. gray-brown f. v. l. silty lacc.  
NVA some chky  
LS. AA. v. l. shale black sub.  
carb  
Abat. shale black gray & green  
LS. gray-brown f. v. l. dense  
mid.  
LS. brown. micro. v. l. dense. mid. &  
shale AA

DST #3 4245-4264  
15-30-30-60  
BLOW:  
I.F. Surface blow  
F.F. Surface blow  
RECOVERY:  
60' M w/oil spots  
I.H.P. 2070#  
I.F.P. 16-28#  
I.S.I.P. 715#  
F.F.P. 29-44#  
F.S.I.P. 716#  
F.H.P. 2051# B.H.T. 116°F  
@4264 Vis. 50 Wt. 9.2 Fil. 7.6  
Chl. 2,400 PH 10.5 CCM. 5.8  
(9.3-10)  
Pipe Strap @4290  
4.31 long  
DST #4 4275-4290  
15-30-30-60  
BLOW:  
I.F. B.O.B. 5 min.  
F.F. B.O.B. 7 min.  
(No return I.S.I. or F.S.I.)  
RECOVERY:  
S.F.O. (100% O)  
7/4 S.W. (100% W)  
749' TOTAL FLUID  
I.H.P. 2109# Chl. 4,000  
I.F.P. 37-196#  
I.S.I.P. 627#  
F.F.P. 203-361#  
F.S.I.P. 629#  
F.H.P. 2056# B.H.T. 122°F  
@4324 Vis. 81 Wt. 9.2 Fil. 6.8





4100

405

403

50

400

4500

work on pump

CS. AA + Shale gray, black green rust

CS brown-gray f. l. in flow  
foss frag dense v.p. v. g. d. v. s. s. f. a.  
rare spots dk. sh. n. blue n. odor

CS tan-gray f. l. in flow  
dense mud + Abat. shale black,  
gray, green & rust

shale AA

CS. cyan-gray f. l. in silty foss. ool  
chky. IP P. in v. s. s. f. o. n. sh.  
n. blue, v. l. t. odor CS tan  
gray v. l. in dense mud

CS. tan-gray v. l. in mica v. l. dense  
mud. Most shale gray, black &  
green

CS. tan; white f. l. in foss. ool, chky.  
P. in d. n. s.

shale black sub ool

CS. white-tan f. l. in silty foss.  
ool chky. mud & ch. white-gray  
silty base

CS. tan-gray v. l. in few foss frag.  
v. l. dense

shale black ool

CS. tan-gray v. l. in ool IP some  
chky. rare P. ool ool d. n. s.  
Abat. shale vari. ool

shale most shale

chl. 2.500 PH 10.0 CCM 1#  
(10-1-10)

DST #5 4315-4324  
15-30-15-30  
BLOW:  
I.F. No blow  
F.F. No blow (flushed no help)  
RECOVERY: 2'M  
I.H.P. 2104#  
I.F.P. 13.13#  
I.S.I.P. 15#  
F.F.P. 14.14#  
F.S.I.P. 17#  
F.H.P. 2111# B.H.T. 113°F

DST #6 4314-4334  
Lost tool, had to fish.

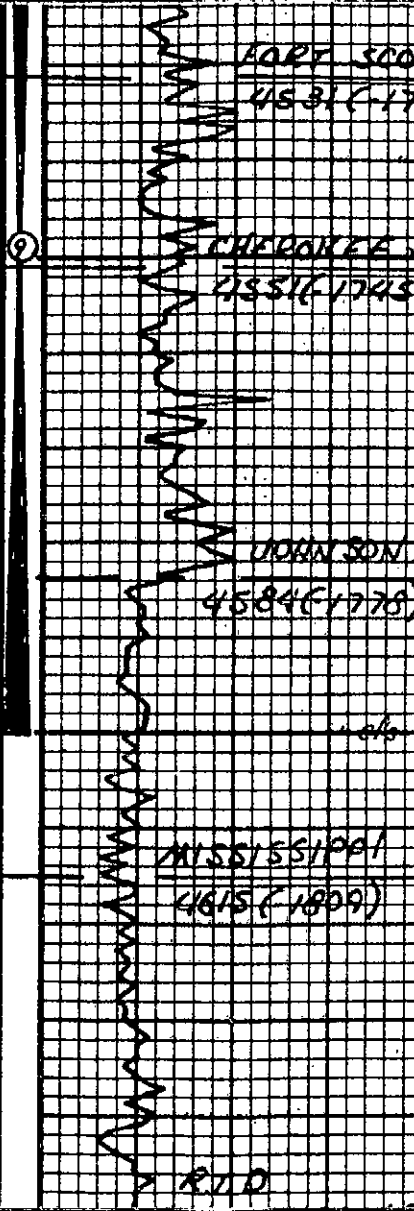
DST #7 4314-4336  
15-30-30-60  
BLOW:  
I.F. Built to 5"  
F.F. B.O.B. 24 min.  
(No return I.S.I. or F.S.I.)  
248' SW w/ oil spots (100%W)  
chl. 30.000

I.H.P. 2122#  
I.F.P. 21-118#  
I.S.I.P. 459#  
F.F.P. 121-198#  
F.S.I.P. 458#  
F.H.P. 2104# B.H.T. 124°F

@4445 vis 52 wt. 9.3 fl. 8.0  
chl. 2.900 PH 10.5 CCM 1#  
(10-4-10)

DST #8 4387-4445  
15-30-15-30  
BLOW:  
I.F. Surface died 10 min.

PANNEG  
4483 (1677)



after repairs

HORT SCOTT  
4531 (1725)

50

CHEROKEE SH.  
4551 (1745)

JOHNSON ZONE  
4584 (1775)

4600

MISSISSIPPI  
4615 (1809)

R.T.D.

Shale black carb

CS brown, con. v. l. dense mud + ch. brown

CS con. gray l. l. ool. Purple some chky. v. s. s. f. o. v. sta. n. fluor. nodar

Shale black carb

CS gray con. l. l. ool. chky. - chky. l. P. n. v.

CS con. gray l. l. ool. chky. l. P. n. v. + CS brown - gray l. l. ool. silty. l. s. ool. dense mud

Shale black sub. carb. & gray. + CS brown - gray micro. v. l. dense mud

CS con. tan l. l. ool. l. s. ool. Purple s. s. f. o. con. solid l. l. sta. dull fluor. v. l. nodar + Shale gray - black

Shale black, gray, green, rust & tan. Silty w/ ch. tan, yellow, orange, l. s. ool. s. s. white ulgea. oil well salt. F.P. g. d. s.

CS tan - all white l. l. ool. ool. l. P. dense some chky. mud

CS tan - all white l. l. ool. ool. chky. l. P. mud

CS AA + CS tan - brown white ool. l. s. ool. dense mud

CS con. gray l. l. ool. ool. l. P. same chky. mud

FF No blow

RECOVERY: S.M

I.H.P. 2221#

I.F.P. 37-38#

I.S.I.P. 45#

F.F.P. 36-38#

F.S.I.P. 44#

F.N.P. 2186# B.N.T. 115°F

Vis. 62 Wt. 9.2 Fl. 8.0

Chl. 3.200 PH 10.5 CCM. 5#

(10.5-10)

O.S.T. #9 4498. 4600

15.30.30-60

BLOW:

I.F. Built 7"

I.S.I. surface return

F.F. Built 9"

F.S.I. no return

RECOVERY:

30' F.O.

124' G.C.O.M. (5% G. 45% 30% M)

112' G.C.M.O. (10% A. 50% 40% M)

60' G.C.O.M. (10% A. 30% 60% M)

326' TOTAL FLUID

I.H.P. 2358#

I.F.P. 59. 115#

I.S.I.P. 1143#

F.F.P. 120-154#

F.S.I.P. 1126#

F.N.P. 2312# B.N.T. 123°F

Vis. 62 Wt. 9.2 Fl. 8.0

4650 (RR47)  
10-6-2010  
1:00 PM

50

4700

CH. 3.200 PH 11.0 CCM .5#  
(10-6-10)  
SURVEY @ 4650 1°

In Minutes

0 5 10 15 15

DRILLING TIME

DEPTH

SAMPLE DESCRIPTION

REMARKS



*Mark Parkinson, Governor  
Thomas E. Wright, Chairman  
Joseph F. Harkins, Commissioner  
Ward Loyd, Commissioner*

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January 24, 2011

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

Re: ACO-1  
API 15-101-22257-00-00  
Splitter-Hilgenberg 1-35  
NE/4 Sec.35-18S-29W  
Lane County, Kansas

Dear Thomas Larson:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 9/22/2010 and the ACO-1 was received on January 21, 2011 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department