

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1
October 2008
Form Must Be Typed

CONFIDENTIAL

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

9/21/12

OPERATOR: License # 3842
Name: LARSON ENGINEERING, INC.
Address 1: 562 WEST STATE ROAD 4
Address 2: _____
City: OLMITZ State: KS Zip: 67564 + 8561
Contact Person: TOM LARSON
Phone: (620) 653-7368
CONTRACTOR: License # 33935
Name: H D DRILLING
Wellsite Geologist: BOB LEWELLYN
Purchaser: NCRA
Designate Type of Completion:
 New Well Re-Entry Workover
 Oil SWD SIOW
 Gas ENHR SIGW
 CM (Coal Bed Methane) Temp. Abd.
 Dry Other _____
(Core, WSW, Expl., Cathodic, 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./SWD
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Docket No. _____
 Dual Completion Docket No. _____
 Other (SWD or Enhr.?) Docket No. _____

<u>5/28/2010</u>	<u>6/9/2010</u>	<u>7/1/2010</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 101-22243-00-00
Spot Description: _____
NE - NW - NE - SE Sec. 24 Twp. 18 S. R. 27 East West
2495 feet from SOUTH Line of Section
841 feet from EAST Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: LANE
Lease Name: MCLEISH B Well #: 2-24
Field Name: WILDCAT
Producing Formation: CHEROKEE
Elevation: Ground: 2645' Kelly Bushing: 2652'
Total Depth: 4690' Plug Back Total Depth: 4634'
Amount of Surface Pipe Set and Cemented at: 251 Feet
Multiple State Cementing Collar Used? Yes No
If yes, show depth set: 1999 Feet
If Alternate II completion, cement circulated from: 1999
feet depth to: SURFACE w/ 175 sx cmt.

Drilling Fluid Management Plan AK JIN 9-27-10
(Data must be collected from the Reserve Pit)
Chloride content: 17600 ppm Fluid volume: 800 bbls
Dewatering method used: ALLOWED TO DRY
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License No.: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: _____ Docket No.: _____

INSTRUCTIONS: An original and two copies of this information shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.
Signature: [Signature]
Title: SECRETARY/TREASURER Date: 9/21/2010
Subscribed and sworn to before me this 21ST day of SEPTEMBER, 2010.
Notary Public: [Signature]
Date Commission Expires: MAY 5, 2012

A. DEBRA J. LUDWIG
Notary Public - State of Kansas
My Appt Expires 5/5/2012

KCC Office Use ONLY
 Letter of Confidentiality Received 9/21/10 - 9/21/12
If Denied, Yes Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
RECEIVED
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Operator Name: LARSON ENGINEERING, INC. Lease Name: MCLEISH B Well #: 2-24

Sec. 24 Twp. 18 S. R. 27 East West County: LANE

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copes of drill stem 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 copy of all Electric Wireline Logs surveyed. Attach final geologist well site report.

Drill Stem Tests Taken (Attach Additional Sheets)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	ANHYDRITE	2024	+628
Electric Log Run (Submit Copy)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	BASE ANHYDRITE	2053	+599
List All E. Logs Run:	DUAL INDUCTION	HEEBNER SH	3963	-1311
	DUAL COMP POROSITY	LANSING - KC	4001	-1349
	BOREHOLE COMP SONIC	STARK SH	4258	-1606
	MICRORESISTIVITY	BASE KC	4334	-1682
		ALTAMONT	4402	-1750
		PAWNEE	4466	-1814
		FORT SCOTT	4515	-1863
		CHEROKEE	4538	-1886
		MISSISSIPPIAN	4612	-1960

CASING RECORD <input checked="" 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
SURFACE	12-1/4	8-5/8"	23#	251'	CLASS A	175	2% GEL, 3% CC
PRODUCTION	7-7/8"	5-1/2"	15.5#	2680'	SMD	95	1/4#/SK FLOCELE
					ea-2	100	1/2% CFR-1, 7#/SK GILSONITE

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	SURF	1999'	SMD	175	1/4#/SK FLOCELE
<input type="checkbox"/> Plug Back TD					
<input type="checkbox"/> Plug Off Zone					

Shots per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid. Fracture, Shot, Cement, Squeeze Record (Amount and Kind of Material Used)	
		Amount	Depth
4	4591-97		

TUBING RECORD: Size: 2-3/8" Set At: 4630' Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or Enhr. 7/1/10 Producing Method: Flowing Pumping Gas Lift Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls. <u>40</u>	Gas Mcf	Water Bbls. <u>0</u>	Gas-Oil Ratio	Gravity <u>36</u>
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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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify)	PRODUCTION INTERVAL: <u>4591 - 4597</u>
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ALLIED CEMENTING CO., LLC. 041605

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

SERVICE POINT:
Russell KS

DATE <u>5-29-10</u>	SEC. <u>24</u>	TWP. <u>18</u>	RANGE <u>27</u>	CALLED OUT	ON LOCATION	JOB START <u>12:00am</u>	JOB FINISH <u>12:30am</u>
McLeish "B" LEASE		WELL # <u>2-24</u>		LOCATION <u>Ness & Lane county line</u>		COUNTY <u>Lane</u>	STATE <u>KS</u>
OLD OR <input checked="" type="radio"/> NEW (Circle one)			<u>1/4 West North into</u>				

CONTRACTOR H.D. Drilling
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 255'
 CASING SIZE 8 5/8 23# DEPTH 253.61'
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 15'
 PERFS. _____
 DISPLACEMENT 15.19 Bbl
 EQUIPMENT _____

PUMP TRUCK CEMENTER John Roberts
 # 417 HELPER John
 BULK TRUCK _____
 # 378 DRIVER Ron
 BULK TRUCK _____
 # _____ DRIVER _____

REMARKS:

Est. Circulation
Mix 175sk cement
Displace w/ 15.19 Bbl H2O
Cement Did Circulate!

CHARGE TO: Larson Engineering Inc.
 STREET _____
 CITY _____ STATE _____ ZIP _____

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 LEWAYNE TRESNER
 SIGNATURE Lewayne Tresner

OWNER _____
 CEMENT AMOUNT ORDERED 175 com 3% cc 2% Gel

COMMON	<u>175</u>	@	<u>13.50</u>	<u>2362.50</u>
POZMIX		@		
GEL	<u>3</u>	@	<u>20.25</u>	<u>60.75</u>
CHLORIDE	<u>5</u>	@	<u>51.50</u>	<u>257.50</u>
ASC		@		
HANDLING	<u>80</u>	@	<u>2.25</u>	<u>198.00</u>
MILEAGE	<u>SK mi / 10</u>	@		<u>300.00</u>
				TOTAL <u>3178.75</u>

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			<u>99.50</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>20</u>	@	<u>7.00</u> <u>140.00</u>
MANIFOLD		@	
		@	
		@	
TOTAL <u>1131.00</u>			

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
TOTAL _____		

SALES TAX (If Any) _____
 TOTAL CHARGES [scribble]
 DISCOUNT [scribble] IF PAID IN 30 DAYS



CHARGE TO: LARSON EDGEWATER
 ADDRESS _____
 CITY, STATE, ZIP CODE _____

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TICKET
18555

PAGE 1 OF 1

SERVICE LOCATIONS 1. <u>NESS CITY, KS</u>	WELL/PROJECT NO. <u>2-24</u>	LEASE <u>MCLEISH "B"</u>	COUNTY/PARISH <u>LANE</u>	STATE <u>Ks</u>	CITY	DATE <u>6-15-10</u>	OWNER <u>SAME</u>
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Wab West Well Services</u>	RIG NAME/NO.	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>LOCATION</u>	ORDER NO.	
3.	WELL TYPE <u>Oil</u>	WELL CATEGORY <u>DEVELOPMENT</u>	JOB PURPOSE <u>CEMENT PORT COLLAR</u>	WELL PERMIT NO.	WELL LOCATION <u>W/ REESEA KS - 2 1/2, N2W0</u>		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NO. ER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
<u>575</u>		<u>1</u>			MILEAGE # <u>110</u>	<u>25</u>	<u>MG</u>			<u>5.00</u>	<u>125.00</u>
<u>576D</u>		<u>1</u>			PUMP CHARGE	<u>1</u>	<u>1008</u>			<u>1100.00</u>	<u>1100.00</u>
<u>330</u>		<u>1</u>			SWIFT MULTZ-BENEFIT CEMENT	<u>175</u>	<u>SLS</u>			<u>15.00</u>	<u>2625.00</u>
<u>276</u>		<u>1</u>			FLOCELE	<u>56</u>	<u>URS</u>			<u>1.50</u>	<u>84.00</u>
<u>290</u>		<u>1</u>			D-AIR	<u>2</u>	<u>360</u>			<u>35.00</u>	<u>70.00</u>
<u>581</u>		<u>1</u>			SERVICE CHARGE CEMENT	<u>225</u>	<u>SLS</u>			<u>1.50</u>	<u>337.50</u>
<u>583</u>		<u>1</u>			DRAPAGE	<u>22326</u>	<u>URS</u>	<u>279.08</u>	<u>MM</u>	<u>1.00</u>	<u>279.08</u>

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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, LEASE, 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 6-15-10 TIME SIGNED 11:30 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	
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					<u>4620.58</u>
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	<u>4767.87</u>

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

SWIFT OPERATOR
Wayne Wilson

APPROVAL _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 6-15-10 PAGE NO. 1

CUSTOMER LARSON ENGINEERING WELL NO. 2-24 LEASE MCLEISH "B" JOB TYPE CEMENT PORT COLLAR TICKET NO. 18555

CHART NO.	TIME	RATE (BPM)	VOLUME (BBLS) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1130							ON LOCATION
								2 3/8 x 5 1/2 PORT COLLAR = 2002' KCC SEP 22 2010 CONFIDENTIAL
	1145				✓		1000	PSI TEST CASING - HEAD
	1150	3	2	✓			400	OPEN PORT COLLAR - INT RATE
	1155	4 1/2	97	✓			400	MAX CEMENT 175 SKS SMD = 11.2 PPG
	1220	4 1/2	7	✓			600	DISPLACE CEMENT
	1225			✓			1000	CLOSE PORT COLLAR - PSI TEST - HEAD CIRCULATED 20 SKS CEMENT TO PSI
	1235	4	25	✓			500	RUN 4 JTS - CIRCULATE CLEAN WASH TRUCK RECEIVED SEP 22 2010 KCC WICHITA
	1330							JOB COMPLETE THANK YOU WAYNE, ROGER B., LANE



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

TICKET
17871

PAGE 1 OF 2

1. SERVICE LOCATIONS NESS CITY, KS	WELL/PROJECT NO. 2-24	LEASE MCLEISH "B"	COUNTY/PARISH LANE	STATE KS	CITY	DATE 6-9-10	OWNER SAME
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR H-D DRILLING #3	RIG NAME/NO.	SHIPPED VIA CT	DELIVERED TO LOCATION	ORDER NO.	
3.	WELL TYPE Oil	WELL CATEGORY DEVELOPMENT	JOB PURPOSE 5 1/2" LONGSTRING	WELL PERMIT NO.	WELL LOCATION W/BELER, KS - 2 1/2 W, NS		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UM		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE # 110		25	ME		5.00	125.00
578		1			PUMP CHARGE		1	JOB	4679 FT	1400.00	1400.00
221		1			LIQUID KCL		2	GAL		25.00	50.00
281		1			MUD FLUSH		500	GAL		1.00	500.00
419		1			ROTATING HEAD RENTAL		1	JOB		150.00	150.00

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

X **J.C. Carson**
 DATE SIGNED **6-9-10** TIME SIGNED **1700** 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	
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				#1	2225.00
WE UNDERSTOOD AND MET YOUR NEEDS?				#2	4557.00
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				subtotal	6782.00
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				TAX	245.13
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES <input type="checkbox"/> NO			Lane 5.3%	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL	7027.13

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

SWIFT OPERATOR **Wayne Watson** APPROVAL

Thank You!



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

TICKET CONTINUATION

TICKET No. 17871

CUSTOMER: LARSON ENGINEERING
WELL: MCLEISH 2-24 "8"
DATE: 6-9-10
PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
325		1				STANDARD CEMENT	EA-2	100	SKS		1200	1200.00
330		1				SWIFT MULT-DENSITY STANDARD		125	SKS		15100	1875100
276		1				FLOCELE		50	LBS		150	75100
277		1				GILSONDTE		700	LBS		40	28000
283		1				SALT		500	LBS		15	75100
284		1				CALSEAL		500	LBS	5 SKS	3000	15000
285		1				CFR-1		50	LBS		400	20000
290		1				D-ADR		2	GAL		3500	7000
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581		1				SERVICE CHARGE			CUBIC FEET	225	150	337.50
583		1				MILEAGE CHARGE	TOTAL WEIGHT	LOADED MILES	294.5	100	294.50	

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CONTINUATION TOTAL 4557.00

JOB LOG

SWIFT Services, Inc.

DATE 6-9-10 PAGE NO. 1

CUSTOMER **LARSON ENGINEERING** WELL NO. **2-24** LEASE **MCLEISH "B"** JOB TYPE **5 1/2" LONGSTRING** TICKET NO. **17871**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBLS (64e))	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1700							ON LOCATION
								TD-4685' SET= 4679
								TP-4679.91' 5 1/2" 15.5
								ST-42.42
								PORT COLLAR= 2002'
	1745							DROP BALL - CIRCULATE ROTATE
	1850	6	12		✓		350	PUMP 500 GAL MUDWASH "
	1852	6	20		✓		350	PUMP 20 BBLS KCL-FLUSH "
	1857		7					PLUG RH (30SKS)
	1902	6	37		✓		300	MIX CONCRT- LD- 95 SKS SMD e 12.5 PP6 "
		6	25		✓		150	TL- 100 SKS EA-2 e 15.2 PP6 "
	1915							WASH OUT PUMP - LINES
	1916							RELEASE CATCH DOWN PLUG
	1920	7	0		✓			DISPLACE PLUG
		7	100				750	SHUT OFF ROTATING
	1937	6 1/2	110.4				1500	PLUG DOWN - PSE UP CATCH ZW PLUG
	1940						OK	RELEASE PSE- HELD
								WASH TRUCK
								JOB COMPLETE
	2030							

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THANK YOU
WAVE, ROGER B., BOB

Robert C. Lewellyn

Consulting Petroleum Geologist

P. O. Box 375
Kechi, KS 67067-0375
Office 316-744-2567
Cell 316-518-0495
boblewellyn@yahoo.com

GEOLOGICAL REPORT

Larson Engineering, Inc.
McLeish No. 2-24
2495' FSL & 841' FEL Sec. 24-18S-27W
Lane County, Kansas

CONTRACTOR: H D Drilling, LLC, Rig 3
SPUDDED: May 28, 2010
DRILLING COMPLETED: June 09, 2010
SURFACE CASING: 8 5/8" @ 251 KBM/175 sx,
ELECTRIC LOGS: Log-Tech DIL CDN MEL
ELEVATIONS: 2652 KB 2645 GL

FORMATION TOPS (Electric Log):

Anhydrite	2024 (+ 628)
Base Anhydrite	2053 (+ 599)
Heebner Shale	3963 (-1311)
Lansing-Kansas City Group	4001 (-1349)
Muncie Creek Shale	4163 (-1511)
Stark Shale	4258 (-1606)
Hushpuckney shale	4295 (-1643)
Base Kansas City	4334 (-1682)
Altamont	4402 (-1750)
Pawnee	4466 (-1814)
Fort Scott	4515 (-1863)
Cherokee	4538 (-1886)
Cherokee sand	4590 (-1938)
Mississippian	4612 (-1960)
Electric Log Total Depth	4690 (-2038)

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Samples were examined microscopically from 3800 to Rotary Total Depth. Samples were examined wet and dry and samples from potentially productive zones were viewed under a fluoroscope and checked for oil cut. Following is a description of zones of interest, Drill Stem Tests, etc. For a complete lithologic description of all formations, refer to the sample log in the back pages of this report.

Lansing-Kansas City Zones:

4012-4020 (A Zone)

Limestone, buff, some cream, dense with scattered finely crystalline and chalky, slightly fossiliferous, scattered poor intercrystalline porosity, no show of oil.

4044-4047 (B Zone)

Limestone, cream to buff, some tan, dense to finely crystalline with considerable chalk, trace of oolitic, poor scattered intercrystalline and interoolitic porosity, no show of oil.

4060-4066 (C/D Zone)

Limestone, buff, dense with cream chalky, some buff finely crystalline, scattered poor to fair intercrystalline and small vug porosity, no show of oil. Some scattered light gray chert, fresh, opaque.

4083-4091 (E Zone)

Limestone, buff, some tan to brown, dense to finely crystalline, trace of fossiliferous, some sub-lithographic, some cream chalky limestone, zone is mostly tight with no shows of oil.

4095-4111 (F Zone)

Limestone, buff, finely crystalline and partly oolitic, trace of very poor intercrystalline and interoolitic porosity with scattered traces of dead stain, no shows of live oil, trace of scattered chert.

4114-4128 (G Zone)

Limestone, cream to buff, finely crystalline and coarsely oolitic, fair to good ooliticastic porosity, partly chalky, no show of oil. Zone becomes finely crystalline and chalky in base with scattered white chert.

4173-4177 (H Zone)

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Limestone, buff to tan and brown, trace of mottled, dense to finely crystalline with some scattered cream chalky, zone is mostly tight with only a trace of very poor intercrystalline porosity, zone becomes dense in lower part, no show of oil.

4201-4229 (I Zone)

Limestone, cream to buff, some tan, finely crystalline and chalky, some dense, zone is mostly tight with no show of oil.

4241-4246 (J Zone)

Limestone, buff to tan, finely crystalline and coarsely oolitic, good ooliticastic porosity, no show of oil.

4269-4295 (K Zone)

Limestone, buff to tan, some brown to mottled, trace of grey, dense to finely crystalline, slightly fossiliferous, partly oolitic, trace of poor scattered intercrystalline porosity, no show of oil. Lower portion contains some cream, chalky, tight limestone.

4303-4309 (L Zone)

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

4334-4379 (Pleasanton Zone)

The Pleasanton section consisted of limestones, cream to buff, some tan and brown, dense to finely crystalline with some chalky lime, trace of fossiliferous, rare trace of very poor intercrystalline porosity, no show of oil. Lower portion is mostly tight.

4379-4395 (Lenapah Zone)

Limestone, buff to medium gray, dense with some scattered finely crystalline, section is mostly tight with no shows of oil.

4424-4429 (Altamont Zone)

Limestone, cream to buff, some tan, finely crystalline and fossiliferous, partly oolitic, scattered pieces with poor to fair intercrystalline and interfossil porosity, poor to fair spotted stain, slight show of free oil, fair to good odor, poor fluorescence, poor to fair cut.

Drill Stem Test No. 1

4422-4460

15-30-45-90; weak blow, built to three-inch blow on first flow, no blowback; weak blow, built to 10 inches in 45 minutes, no blowback; recovered 30 feet of mud with a skim of

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oil. ISIP 203# FSIP 450# IFP 28-25# FFP 27-34# IHP 2148# FHP 2125# BHT 122 degrees.

4466-4510 (Pawnee Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, some slightly oolitic, some scattered pieces in upper portion with poor intercrystalline and interoolitic porosity, trace of poor spotted stain, very slight show of free oil, questionable odor, poor fluorescence, poor cut.

4515-4538 (Fort Scott Zone)

Limestone, buff to tan, dense to finely crystalline, slightly cherty, slightly oolitic, partly fossiliferous, poor to fair intercrystalline porosity, scattered fair spotted stain, slight show of free oil, faint odor, poor fluorescence, poor to fair cut. Lower portion is tan and brown limestone, finely crystalline and partly oolitic, poor intercrystalline and small vug porosity, trace of poor spotted stain, very slight show of free oil, faint odor, poor fluorescence, poor cut.

Drill Stem Test No. 2 4458-4545

15-30-30-60; blew off bottom of bucket in four minutes of first flow, no blowback; blow off bottom in 10 minutes of second flow, no blowback; recovered 90 feet of oil cut gassy mud (5% gas, 5% oil, 90% mud). ISIP 107# FSIP 111# IFP 44-50# FFP 57-59# IHP 2216# FHP 2098# BHT 120 degrees.

4570-4588 (Johnson Zone)

Limestone, buff to tan, dense to finely crystalline, trace of scattered chalky, fair intercrystalline porosity, fair spotted stain, slight to fair show of free oil, poor fluorescence, fair cut.

Drill Stem Test No. 3 4536-4588

15-30-15-30; weak surface blow, built to quarter-inch blow in 15 minutes, on first flow, no blowback; blow did not return on second flow; recovered five feet of mud. ISIP 53# FSIP 35# IFP 28-22# FFP 24-23# IHP 2177# FHP 2142# BHT 117 degrees.

4590-4597 (Cherokee Sand)

Sand, dolomitic, light gray to buff, fine to medium grained, subangular, fairly well sorted, fairly well cemented to friable, fair to good intergranular porosity, good spotted stain, some saturated stain, good show of free oil, good odor, good fluorescence, good streaming cut.

Drill Stem Test No. 4 4578-4600

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15-30-30-60; blow off bottom of bucket in 10 minutes of first flow, no blowback; blow off bottom of bucket in 12 minutes of second flow, no blowback; recovered 130 feet of clean oil (100% oil), 180 feet of heavily oil cut gassy mud (10% gas, 60% oil, 30% mud). ISIP 1197# FSIP 1183# IFP 30-98# FFP 89-128# IHP 2169# FHP 2170# BHT 128 degrees.

4599-4606 (Cherokee sand)

Sand, as above, with influx of new sand, white to buff to mottled, very fine grained to fine grained, well cemented, some partly friable, poor porosity, some poor spotted stain with traces of dead stain, very slight show of free oil, fair odor, poor to fair fluorescence, poor to fair cut. Slight influx of white, fresh to slightly weathered chert

4606-4612 (Detrital Zone)

Various and varicolored shales, cherts, and carbonates. This section is tight and no reservoir quality is present throughout this section.

4612-4620 (Mississippian Zone)

Limestone, dolomitic, buff, dense to finely crystalline, brittle, mostly tight, no show of oil, some scattered light grey chert.

4620-4642

Dolomitic limestone and dolomite, buff, some grey, dense to finely crystalline, some slightly chalky, trace of poor scattered intercrystalline porosity, one or two pieces with poor spotted stain, no free oil, no odor, no fluorescence and no cut.

4642-4685

Limestone, buff to tan, dense to finely crystalline with trace of slightly chalky, section is mostly tight with only a trace of poor intercrystalline porosity. No shows of oil were present in the section.

4685

Rotary Total Depth

Conclusions and Recommendations:

The Cherokee sand should be productive of oil and or gas. The No. 2-24 Mcleish should be completed as per Tom Larson as necessary to facilitate production.

Respectfully submitted,

Robert C. Lewellyn
Petroleum Geologist

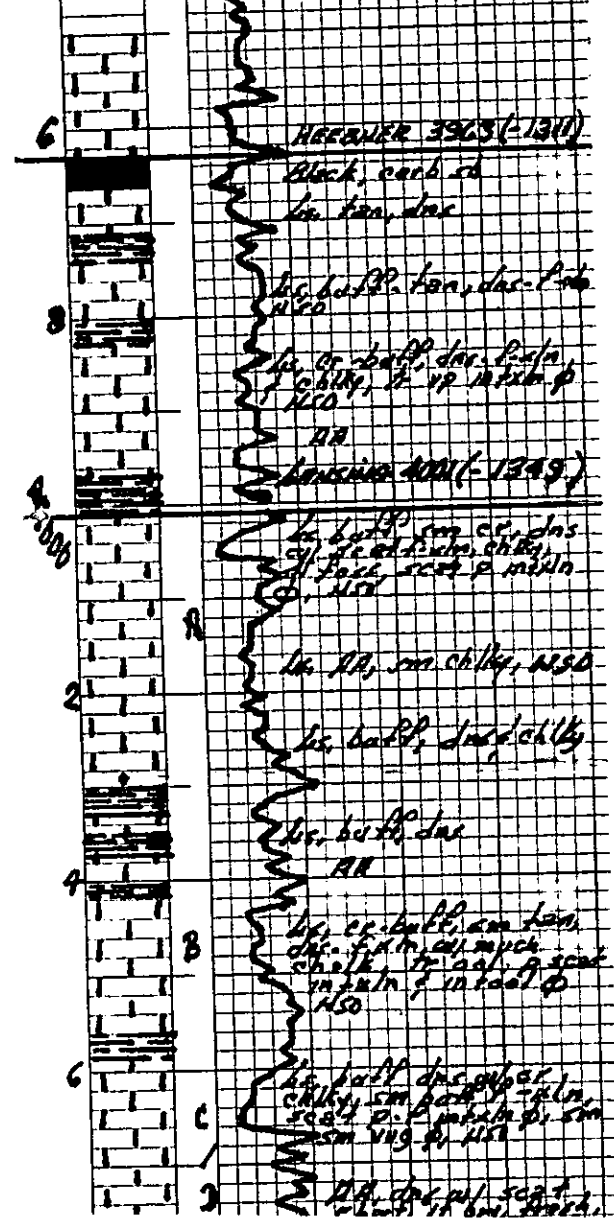
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STATE KANSAS	COMPANY LARSON ENGINEERING Inc.
COUNTY LANE	FARM McLISH "B"
BLOCK	WELL NO. 2-24
SEC. 24	SURVEY 2495 ESL & 841 FEL
T. 18S R. 27W	TOTAL DEPTH 4685
	CONTRACTOR HD Drilling - Rig 3
	COMMENCED 06-28-10
	COMPLETED
	REMARKS
ALTITUDE 2652 KB	
PRODUCTION	Robert C. Lewellen - Geol

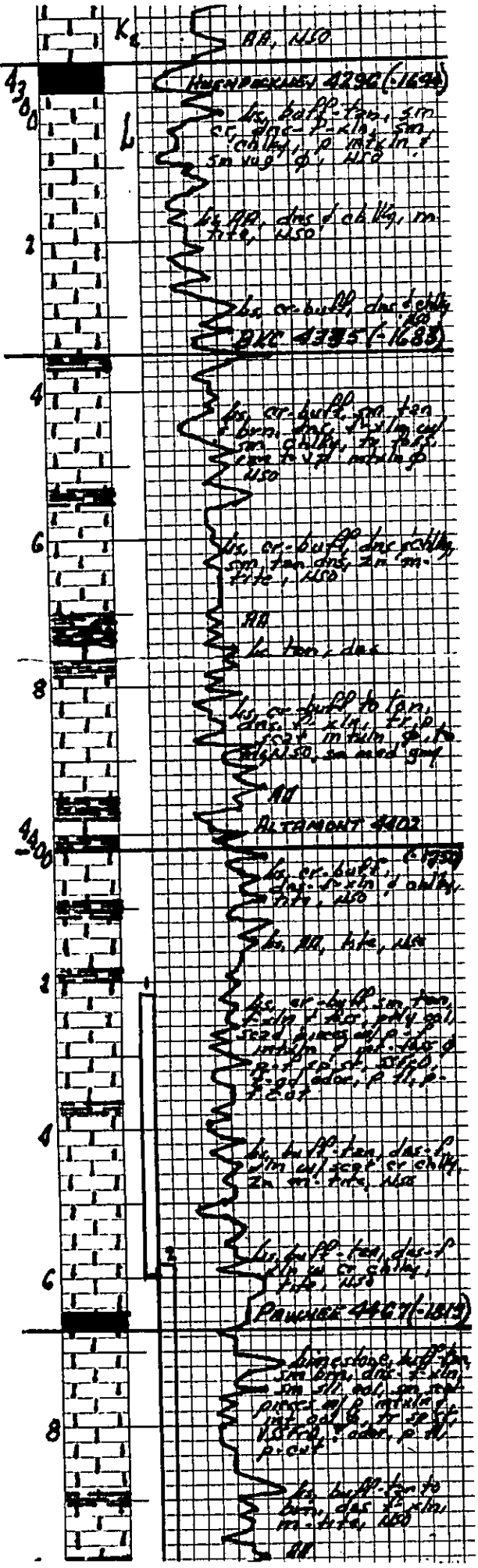
CASING RECORD
8 5/8" @ 251 KBM / 175 SX

SHOT QUARTS BETWEEN

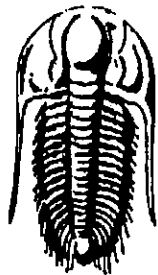
TIME RATE SCALE: 1/10" = MINUTES
 1-800-331-7290
Krafft Bit 450-A



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**TRILOBITE
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DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W ST RD4
Olmitz KS, 67564

ATTN: Bob Lewellyn

24 18S 27W Lane KS

McLeish'B' #2-24

Start Date: 2010.06.05 @ 17:30:35

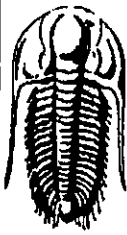
End Date: 2010.06.06 @ 01:12:35

Job Ticket #: 37355 DST #: 1

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Trilobite Testing, Inc
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ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Olmritz KS, 67564

24 18S 27W Lane KS

ATTN: Bob Lew elyn

Job Ticket: 37355

DST#: 1

Test Start: 2010.06.05 @ 17:30:35

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:51:50

Time Test Ended: 01:12:35

Test Type: Conventional Bottom Hole

Tester: Mike Slernp

Unit No: 28

Interval: 4422.00 ft (KB) To 4460.00 ft (KB) (TVD)

Reference Elevations: 2852.00 ft (KB)

Total Depth: 4460.00 ft (KB) (TVD)

2845.00 ft (CF)

Hole Diameter: 7.78 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8356

Inside

Press@RunDepth: 33.98 psig @ 4424.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.06.05

End Date:

2010.06.06

Last Calib.:

2010.06.06

Start Time: 17:30:36

End Time:

01:12:35

Time On Btm

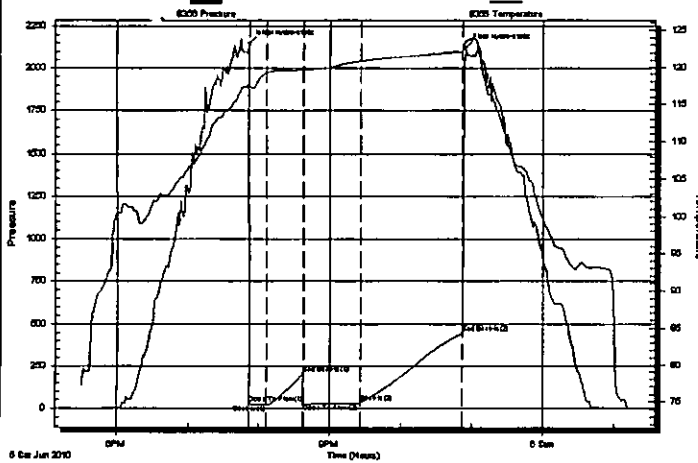
2010.06.05 @ 19:50:50

Time Off Btm

2010.06.05 @ 22:53:50

TEST COMMENT: IF- Weak blow , 3 inches in 15 min
IS- No blow back
FF- Weak blow 10 inches in 45 min
FS- No blow back

Pressure vs. Time



PRESSURE SUMMARY

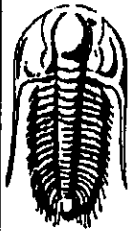
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2147.57	117.75	Initial Hydro-static
1	27.62	117.47	Open To Flow (1)
15	24.59	119.11	Shut-In(1)
46	203.49	119.56	End Shut-In(1)
47	27.18	119.54	Open To Flow (2)
95	33.98	120.84	Shut-In(2)
181	449.50	122.23	End Shut-In(2)
183	2125.40	123.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	100% mud W/ skim of oil	0.15

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mc/d)



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Olmritz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37355

DST#: 1

ATTN: Bob Lewellyn

Test Start: 2010.06.05 @ 17:30:35

Tool Information

Drill Pipe:	Length: 4250.00 ft	Diameter: 3.80 inches	Volume: 59.62 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 168.00 ft	Diameter: 2.25 inches	Volume: 0.83 bbl	Weight to Pull Loose: 65000.00 lb
			Total Volume: 60.45 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4422.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

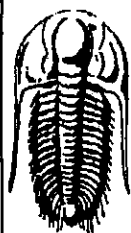
Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4401.00		
Shut In Tool	5.00			4406.00		
Hydraulic tool	5.00			4411.00		
Safety Joint	2.00			4413.00		
Packer	5.00		Fluid	4418.00	22.00	Bottom Of Top Packer
Packer	4.00			4422.00		
Stubb	1.00			4423.00		
Perforations	1.00			4424.00		
Recorder	0.00	8356	Inside	4424.00		
Recorder	0.00	8678	Inside	4424.00		
Perforations	33.00			4457.00		
Bullnose	3.00			4460.00	38.00	Bottom Packers & Anchor

Total Tool Length: 60.00

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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Olmritz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37355

DST#: 1

ATTN: Bob Lewellyn

Test Start: 2010.06.05 @ 17:30:35

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:

bbf

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
30.00	100% mud w/ skim of oil	0.148

Total Length: 30.00 ft

Total Volume: 0.148 bbf

Num Fluid Samples: 0

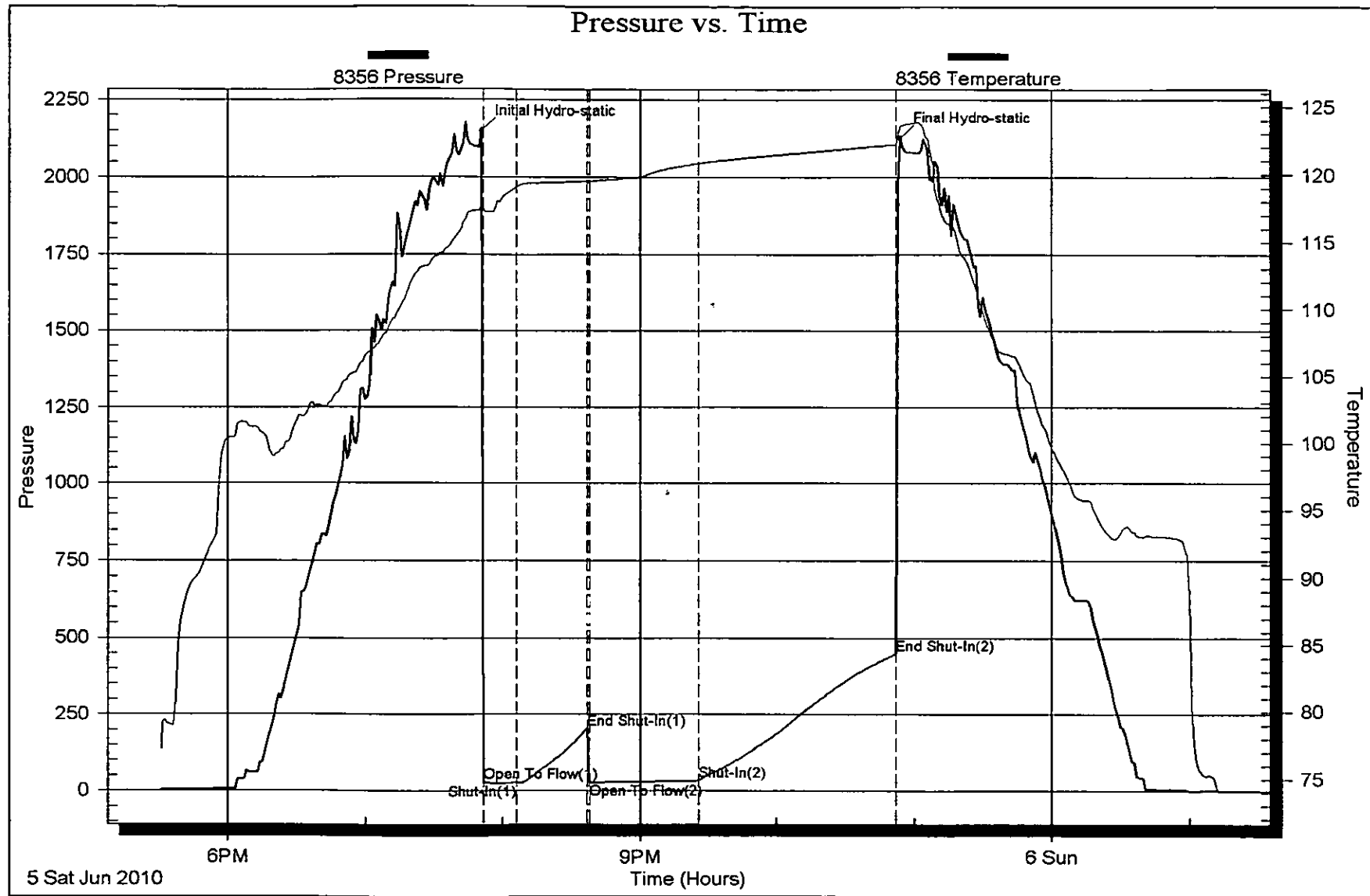
Num Gas Bombs: 0

Serial #:

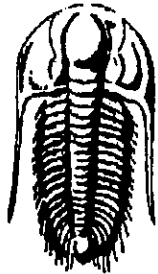
Laboratory Name:

Laboratory Location:

Recovery Comments:



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DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W ST RD4
Olmitz KS, 67564

ATTN: Bob Lewellyn

24 18S 27W Lane KS

McLeish'B' #2-24

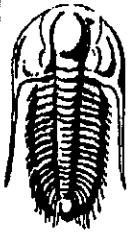
Start Date: 2010.06.06 @ 14:10:09

End Date: 2010.06.06 @ 22:27:54

Job Ticket #: 37356 DST #: 2

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ph: 785-625-4778 fax: 785-625-5620

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DRILL STEM TEST REPORT

Larson Engineering

562 W ST RD4
Olmritz KS, 67564

ATTN: Bob Lewellyn

McLeish'B' #2-24

24 18S 27W Lane KS

Job Ticket: 37356

DST#: 2

Test Start: 2010.06.06 @ 14:10:09

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:50:09

Time Test Ended: 22:27:54

Test Type: Conventional Bottom Hole

Tester: Mike Stemp

Unit No: 28

Interval: **4458.00 ft (KB) To 4545.00 ft (KB) (TVD)**

Total Depth: 4545.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 2852.00 ft (KB)

2845.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8356

Inside

Press@RunDepth: 58.97 psig @ 4460.00 ft (KB)

Start Date: 2010.06.06

End Date:

2010.06.06

Start Time: 14:10:10

End Time:

22:27:54

Capacity: 8000.00 psig

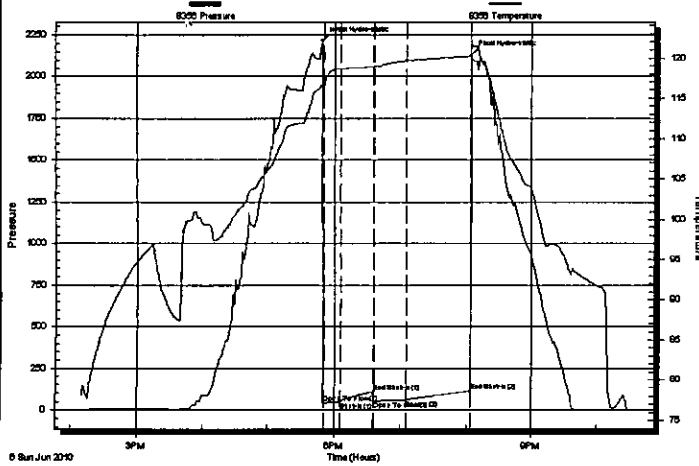
Last Calib.: 2010.06.06

Time On Btm: 2010.06.06 @ 17:48:39

Time Off Btm: 2010.06.06 @ 20:04:39

TEST COMMENT: IF- BOB in 4 min
ISI- No blow back
FF- BOB in 10 min
FSI- No blow back

Pressure vs. Time



PRESSURE SUMMARY

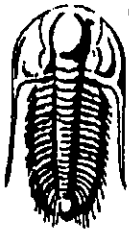
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2216.36	116.45	Initial Hydro-static
2	44.35	115.56	Open To Flow (1)
17	49.59	118.67	Shut-In(1)
47	107.42	118.89	End Shut-In(1)
48	51.46	118.95	Open To Flow (2)
77	58.97	119.69	Shut-In(2)
135	111.23	120.28	End Shut-In(2)
136	2132.81	122.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	OCCGM 95% mud 5% oil 5% gas	0.44

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

McLeish'B' #2-24

562 WST RD4
Olmritz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37356

DST#: 2

ATTN: Bob Lewellyn

Test Start: 2010.06.06 @ 14:10:09

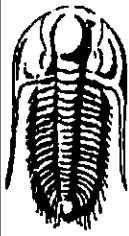
Tool Information

Drill Pipe:	Length: 4278.00 ft	Diameter: 3.80 inches	Volume: 60.01 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 168.00 ft	Diameter: 2.25 inches	Volume: 0.83 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.84 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4458.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	114.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4432.00	
Shut In Tool	5.00			4437.00	
Hydraulic tool	5.00			4442.00	
Jars	5.00			4447.00	
Safety Joint	2.00			4449.00	
Packer	5.00			4454.00	27.00 Bottom Of Top Packer
Packer	4.00			4458.00	
Stubb	1.00			4459.00	
Perforations	1.00			4460.00	
Recorder	0.00	8353	Inside	4460.00	
Recorder	0.00	8678	Inside	4460.00	
Perforations	18.00			4478.00	
Change Over Sub	1.00			4479.00	
Drill Pipe	62.00			4541.00	
Change Over Sub	1.00			4542.00	
Bullnose	3.00			4545.00	87.00 Bottom Packers & Anchor
Total Tool Length:	114.00				

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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Olmritz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37356

DST#: 2

ATTN: Bob Lew ellyn

Test Start: 2010.06.06 @ 14:10:09

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: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	OCGM 95% mud 5% oil 5% gas	0.443

Total Length: 90.00 ft

Total Volume: 0.443 bbl

Num Fluid Samples: 0

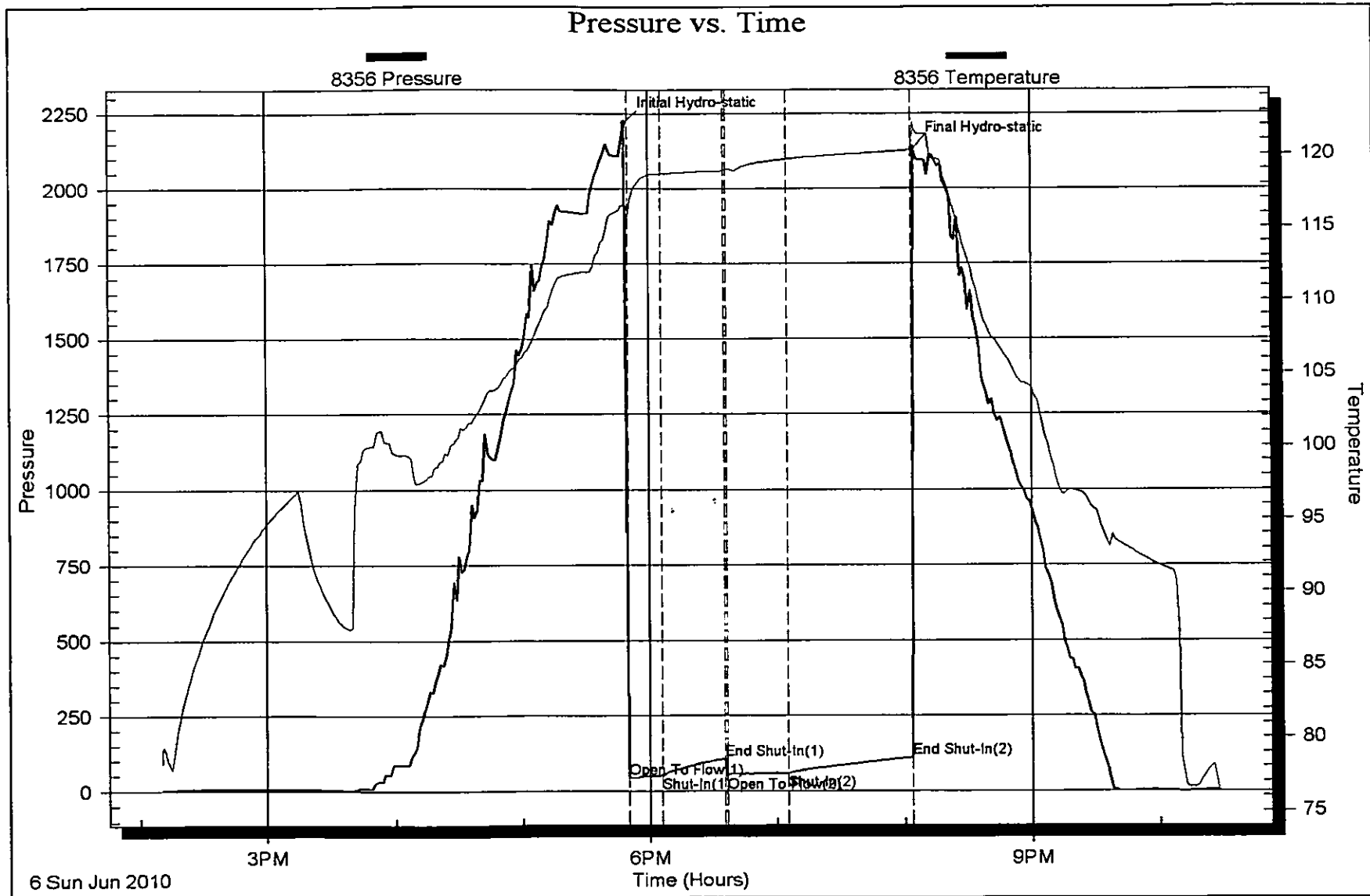
Num Gas Bombs: 0

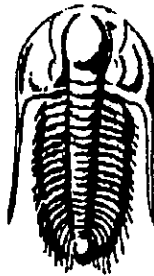
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
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DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W ST RD4
Olmitz KS, 67564

ATTN: Bob Lewellyn

24 18S 27W Lane KS

McLeish'B' #2-24

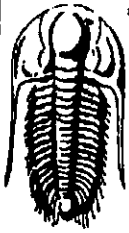
Start Date: 2010.06.07 @ 08:25:21

End Date: 2010.06.07 @ 15:10:21

Job Ticket #: 37357 DST #: 3

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ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Olmritz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37357

DST#: 3

ATTN: Bob Lewellyn

Test Start: 2010.06.07 @ 08:25:21

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: **No Whipstock:** ft (KB)

Time Tool Opened: 11:41:36

Time Test Ended: 15:10:21

Test Type: **Conventional Bottom Hole**

Tester: **Mke Slerrp**

Unit No: **28**

Interval: **4536.00 ft (KB) To 4588.00 ft (KB) (TVD)**

Reference Elevations: **2852.00 ft (KB)**

Total Depth: **4588.00 ft (KB) (TVD)**

2845.00 ft (CF)

Hole Diameter: **7.78 inches** Hole Condition: **Fair**

KB to GR/CF: **7.00 ft**

Serial #: **8356**

Inside

Press@RunDepth: **22.61 psig @ 4538.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.06.07**

End Date:

2010.06.07

Last Calib.:

2010.06.07

Start Time: **08:25:22**

End Time:

15:10:21

Time On Btm:

2010.06.07 @ 11:40:21

Time Off Btm:

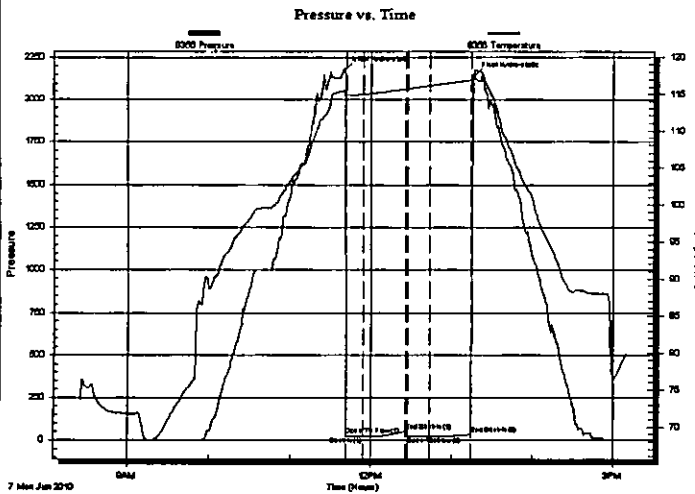
2010.06.07 @ 13:16:36

TEST COMMENT: IF- Weak blow 1/4 inch in 15 min

ISI- No blow back

FF- No blow

FSl- No blow back



PRESSURE SUMMARY

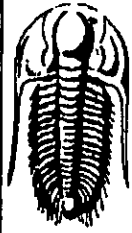
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2177.27	115.29	Initial Hydro-static
2	28.04	114.95	Open To Flow (1)
15	22.46	115.03	Shut-In(1)
46	52.85	115.74	End Shut-In(1)
48	24.38	115.79	Open To Flow (2)
64	22.61	116.21	Shut-In(2)
95	34.92	116.94	End Shut-In(2)
97	2141.95	118.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Otritz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37357

DST#: 3

ATTN: Bob Lewellyn

Test Start: 2010.06.07 @ 08:25:21

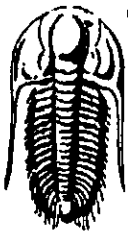
Tool Information

Drill Pipe:	Length: 4370.00 ft	Diameter: 3.80 inches	Volume: 61.30 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 168.00 ft	Diameter: 2.25 inches	Volume: 0.83 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 62.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4536.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4510.00	
Shut In Tool	5.00			4515.00	
Hydraulic tool	5.00			4520.00	
Jars	5.00			4525.00	
Safety Joint	2.00			4527.00	
Packer	5.00		Fluid	4532.00	27.00 Bottom Of Top Packer
Packer	4.00			4536.00	
Stubb	1.00			4537.00	
Perforations	1.00			4538.00	
Recorder	0.00	8356	Inside	4538.00	
Recorder	0.00	8678	Inside	4538.00	
Perforations	14.00			4552.00	
Change Over Sub	1.00			4553.00	
Drill Pipe	31.00			4584.00	
Change Over Sub	1.00			4585.00	
Bullnose	3.00			4588.00	52.00 Bottom Packers & Anchor
Total Tool Length:	79.00				

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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Olmitz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37357

DST#: 3

ATTN: Bob Lewellyn

Test Start: 2010.06.07 @ 08:25:21

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf

Total Length: ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

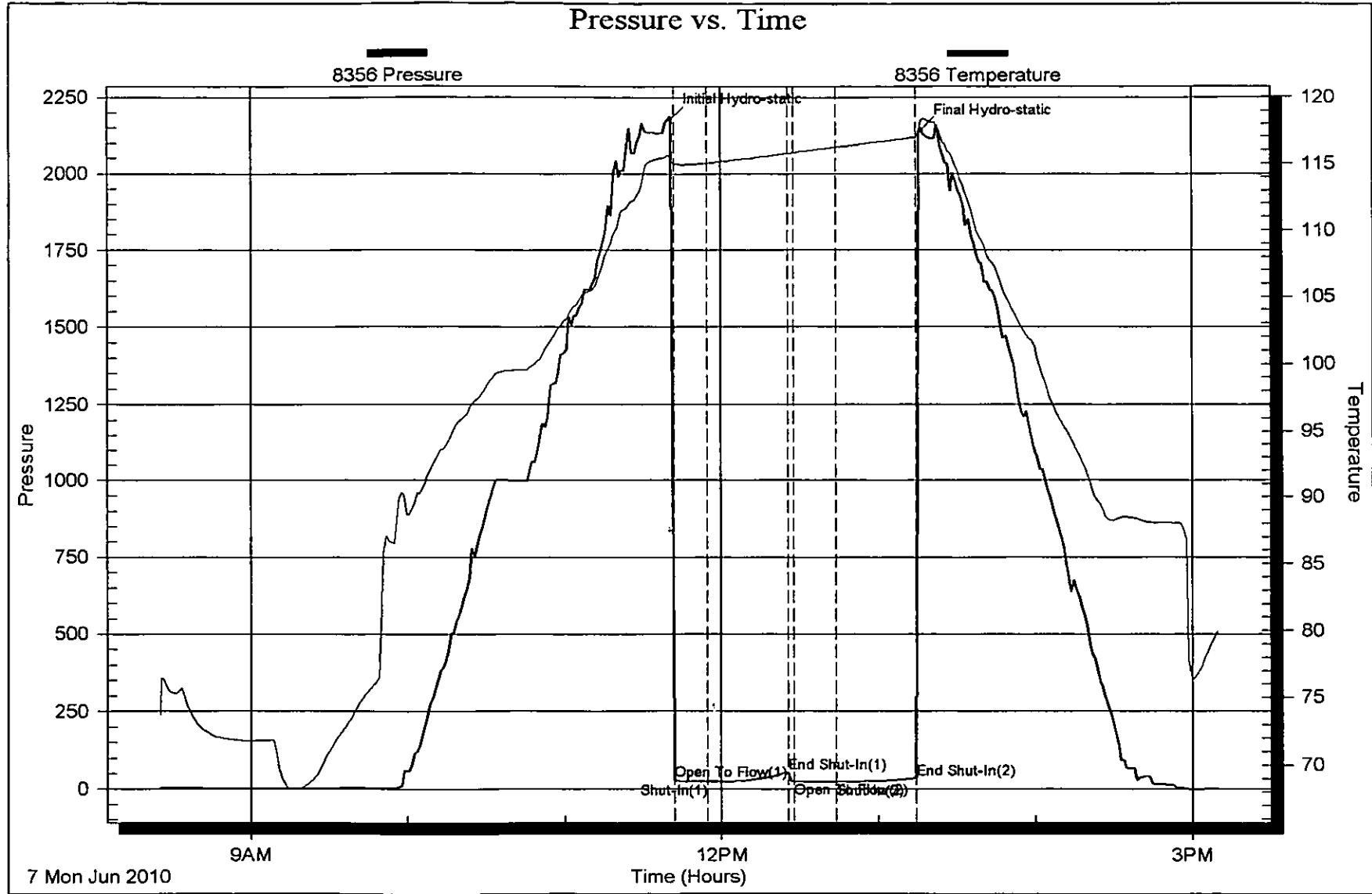
Num Gas Bombs: 0

Serial #:

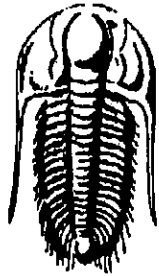
Laboratory Name:

Laboratory Location:

Recovery Comments:



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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W ST RD4
Olmitz KS, 67564

ATTN: Bob Lewellyn

24 18S 27W Lane KS

McLeish'B' #2-24

Start Date: 2010.06.07 @ 23:55:43

End Date: 2010.06.08 @ 08:26:58

Job Ticket #: 37358 DST #: 4

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Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering

McLeish'B' #2-24

562 W ST RD4
Olmitz KS, 67564

24 18S 27W Lane KS

ATTN: Bob Lewellyn

Job Ticket: 37358

DST#: 4

Test Start: 2010.06.07 @ 23:55:43

GENERAL INFORMATION:

Formation: **Cherokee Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:07:58
 Time Test Ended: 08:26:58

Test Type: Conventional Bottom Hole
 Tester: Mike Slemp
 Unit No: 28

Interval: **4578.00 ft (KB) To 4600.00 ft (KB) (TVD)**
 Total Depth: 4600.00 ft (KB) (TVD)
 Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 2852.00 ft (KB)
 2845.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8356

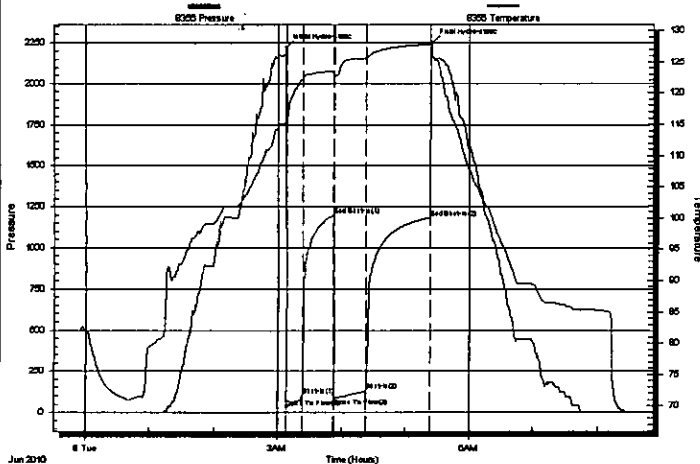
Inside

Press@RunDepth: 127.66 psig @ 4580.00 ft (KB)
 Start Date: 2010.06.07 End Date: 2010.06.08
 Start Time: 23:55:44 End Time: 08:26:58

Capacity: 8000.00 psig
 Last Calib.: 2010.06.08
 Time On Btm: 2010.06.08 @ 03:06:58
 Time Off Btm: 2010.06.08 @ 05:24:58

TEST COMMENT: IF- BOB in 10 min
 IS- No blow back
 FF- BOB in 12 min
 FS- No blow back

Pressure vs. Time



PRESSURE SUMMARY

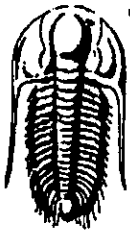
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2222.27	115.31	Initial Hydro-static
1	30.32	114.77	Open To Flow (1)
16	97.96	122.11	Shut-In(1)
45	1196.93	123.49	End Shut-In(1)
46	89.23	123.13	Open To Flow (2)
76	127.66	125.67	Shut-In(2)
136	1182.79	127.70	End Shut-In(2)
138	2250.48	126.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	100%oil	0.99
130.00	100%oil	1.82

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

McLeish'B' #2-24

562 WST RD4
Olmritz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37358

DST#: 4

ATTN: Bob Lewellyn

Test Start: 2010.06.07 @ 23:55:43

Tool Information

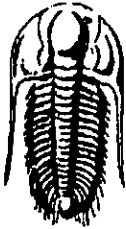
Drill Pipe:	Length: 4399.00 ft	Diameter: 3.80 inches	Volume: 61.71 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 168.00 ft	Diameter: 2.25 inches	Volume: 0.83 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 62.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4578.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4552.00	
Shut In Tool	5.00			4557.00	
Hydraulic tool	5.00			4562.00	
Jars	5.00			4567.00	
Safety Joint	2.00			4569.00	
Packer	5.00		Fluid	4574.00	27.00 Bottom Of Top Packer
Packer	4.00			4578.00	
Stubb	1.00			4579.00	
Perforations	1.00			4580.00	
Recorder	0.00	8356	Inside	4580.00	
Recorder	0.00	8678	Inside	4580.00	
Perforations	17.00			4597.00	
Bullnose	3.00			4600.00	22.00 Bottom Packers & Anchor

Total Tool Length: 49.00

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FLUID SUMMARY

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562 W ST RD4
Olmitz KS, 67564

24 18S 27W Lane KS

Job Ticket: 37358

DST#: 4

ATTN: Bob Lewellyn

Test Start: 2010.06.07 @ 23:55:43

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Gas Cushion Pressure:

psig

Resistivity: ohm.m

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	100%oil	0.995
130.00	100%oil	1.824

Total Length: 310.00 ft

Total Volume: 2.819 bbl

Num Fluid Samples: 0

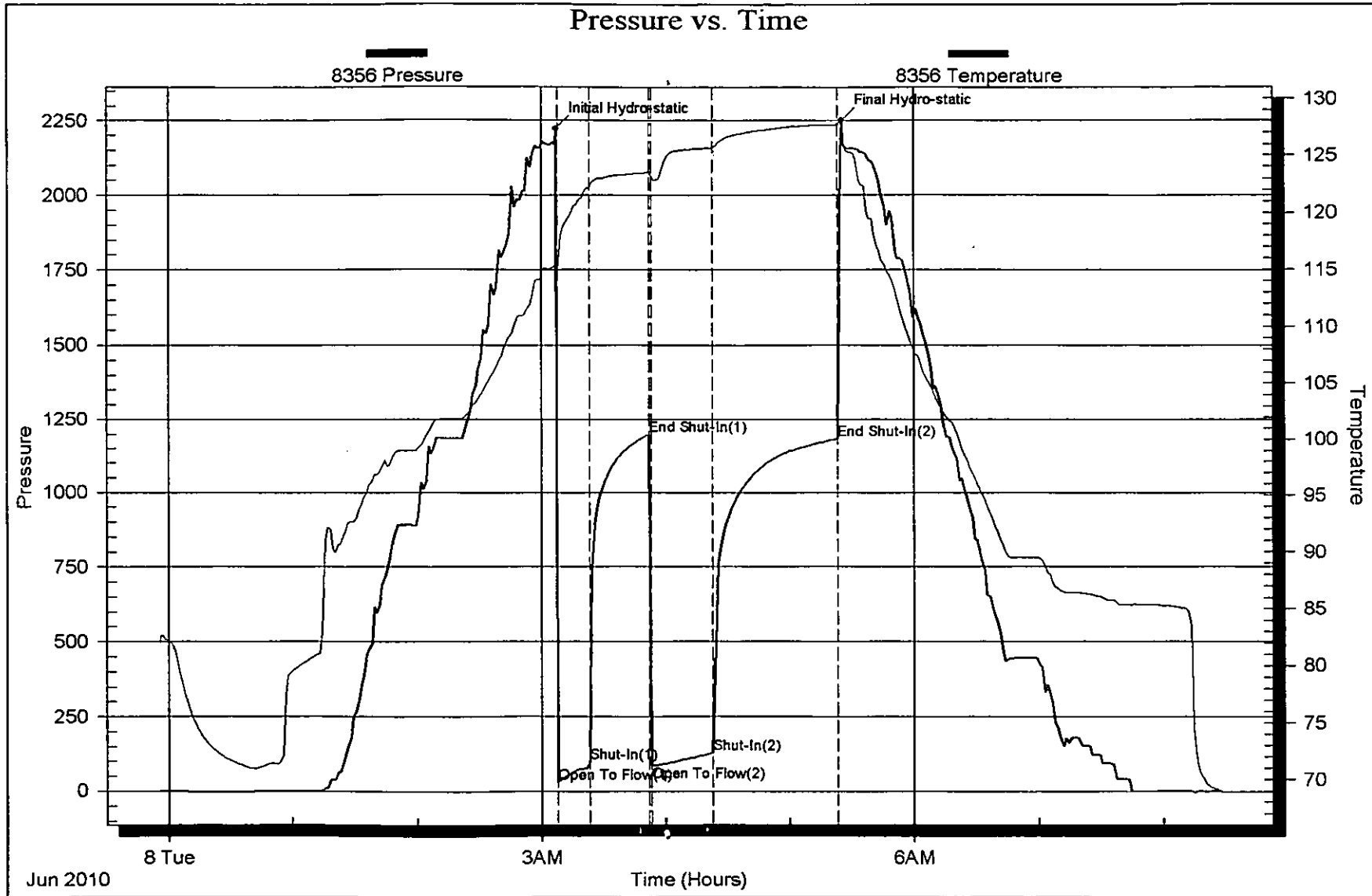
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



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