

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM

ORIGINAL

Form ACO-1
October 2008
Form Must Be Typed

WELL HISTORY - DESCRIPTION OF WELL & LEASE

5/10/12

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: ROBERT 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. _____

1/10/2010 1/22/2010 4/12/2010

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

API No. 15 - 101-22209-00-00

Spot Description: _____

S2 - NW - NW - SW Sec. 22 Twp. 17 S. R. 30 East West

2280 feet from SOUTH Line of Section

330 feet from WEST Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: LANE

Lease Name: CRAMER Well #: 1-22

Field Name: WILDCAT

Producing Formation: CHEROKEE, MARMATON, L-KC

Elevation: Ground: 2863' Kelly Bushing: 2873'

Total Depth: 4620' Plug Back Total Depth: 4576'

Amount of Surface Pipe Set and Cemented at: 261 Feet

Multiple State Cementing Collar Used? Yes No

If yes, show depth set: 2248 Feet

If Alternate II completion, cement circulated from: 2248

feet depth to: SURFACE w/ 175 sx cmt.

Drilling Fluid Management Plan *AK INJ 574-10*
(Data must be collected from the Reserve Pit)

Chloride content: 10500 ppm Fluid volume: 780 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: Cerol Sun

Title: SECRETARY/TREASURER Date: 5/7/2010

Subscribed and sworn to before me this 7TH day of MAY

2010. Notary Public: Debra J Ludwig

Date Commission Expires: MAY 5, 2012

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

KCC Office Use ONLY

Letter of Confidentiality Received

If Denied, Yes Date: _____

Wireline Log Received

Geologist Report Received

UIC Distribution

RECEIVED
KANSAS CORPORATION COMMISSION

MAY 11 2010

CONSERVATION DIVISION
WICHITA, KS

KCC
MAY 10 2010
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Operator Name: LARSON ENGINEERING, INC. Lease Name: CRAMER Well #: 1-22

Sec. 22 Twp. 17 S. R. 30 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 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Submit Copy)</i> List All E. Logs Run: DUAL INDUCTION DUAL COMP POROSISTY MICRORESISTIVITY	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Datum</th> </tr> </thead> <tbody> <tr><td>ANHYDRITE</td><td>2209</td><td>+664</td></tr> <tr><td>BASE ANHYDRITE</td><td>2267</td><td>+606</td></tr> <tr><td>HEEBNER SHALE</td><td>3903</td><td>-1030</td></tr> <tr><td>LANSING-KANSAS CITY</td><td>3939</td><td>-1066</td></tr> <tr><td>STARK SHALE</td><td>4211</td><td>-1338</td></tr> <tr><td>BASE KANSAS CITY</td><td>4287</td><td>-1414</td></tr> <tr><td>PAWNEE</td><td>4403</td><td>-1530</td></tr> <tr><td>FORT SCOTT</td><td>4452</td><td>-1579</td></tr> <tr><td>CHEROKEE</td><td>4477</td><td>-1604</td></tr> <tr><td>MISSISSIPPI</td><td>4543</td><td>-1670</td></tr> </tbody> </table>	Name	Top	Datum	ANHYDRITE	2209	+664	BASE ANHYDRITE	2267	+606	HEEBNER SHALE	3903	-1030	LANSING-KANSAS CITY	3939	-1066	STARK SHALE	4211	-1338	BASE KANSAS CITY	4287	-1414	PAWNEE	4403	-1530	FORT SCOTT	4452	-1579	CHEROKEE	4477	-1604	MISSISSIPPI	4543	-1670
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CASING RECORD <input checked="" type="checkbox"/> New <input checked="" 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"	8-58"	20#	261'	CLASS A	175	2% GEL, 3% CC
PRODUCTION	7-7/8"	4-1/2"	10.5#	4611'	SMD	100	1/4#/SK FLOCELE
					EA-2	125	7#/SK GILSONITE & 3/4% CFR

ADDITIONAL CEMENTING/SQUEEZE RECORD					
Purpose:	Depth Top Bottom		Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	SURF	2248'	SMD	200	1/4#/SK FLOCELE

Shots per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid. Fracture, Shot, Cement, Squeeze Record (Amount and Kind of Material Used)
	SEE ATTACHED	SEE ATTACHED
		RECEIVED KANSAS CORPORATION COMMISSION MAY 11 2010 CONSERVATION DIVISION WICHITA, KS

TUBING RECORD: Size: <u>2-3/8"</u> Set At: <u>4565'</u> Packer At: _____ Date of First, Resumed Production, SWD or Enhr. _____ Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____ Estimated Production Per 24 Hours: Oil <u>18</u> Bbls. Gas <u>1</u> Mcf Water <u>1</u> Bbls. Gas-Oil Ratio _____ Gravity <u>39</u>	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	--

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>4280 - 4520.5 OA</u>
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CHARGE TO: LARSON ENGINEERING

ADDRESS

CITY, STATE, ZIP CODE

TICKET

No 16697

MAY 10 2010
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PAGE 1 OF 2

SERVICE LOCATIONS 1. <u>HAYS</u>	WELL/PROJECT NO. <u>1-22</u>	LEASE <u>CRAMER</u>	COUNTY/PARISH <u>LANE</u>	STATE <u>KS</u>	CITY	DATE <u>01-22-10</u>	OWNER
2. <u>NESS</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	RIG NAME/NO. <u>H-D DRG # 2</u>	SHIPPED VIA <u>CIT</u>	DELIVERED TO <u>351 W. Van HORN</u>	ORDER NO.	
3.	WELL TYPE <u>OK</u>	WELL CATEGORY <u>Develop</u>	JOB PURPOSE <u>LONGSTRONG</u>	WELL PERMIT NO. <u>15-10-22209</u>	WELL LOCATION <u>S22, T17, R30</u>		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UM		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF								
575		1			MILEAGE #112	60		mi		5.00	300.00	00
578		1			Pump SERVICE	1		EA		1400.00	1400.00	00
221		1			LIN OIL	2		QTR		25.00	50.00	00
281		1			MUD FRESH	500		GAZ		1.00	500.00	00
290		1			D AIR	2		GAZ		35.00	70.00	00
419		1			ROTATING HEAD CENTER	1		EA	4 1/2 IN	150.00	150.00	00

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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, 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 01/22/10 TIME SIGNED 1845 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 TOTAL	2470 00
WE UNDERSTOOD AND MET YOUR NEEDS?				P62	5,064 48
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				sub TOTAL	7,534 48
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Lane TAX @ 5.3%	254 39
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO		TOTAL	7788 87
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

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

TICKET No. 16697

CUSTOMER LARSON WELL DATE 01-22-10 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		QTY	U/M	QTY	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF										
325		2				ST. DEAR			125	SH			11 00	1375 00
330		2				SMD			125	SH			14 00	1750 00
276		2				FLOCELE			30	LB			1 50	45 00
277		2				COAL SEAL			875	LB			40	350 00
283		2				SALT			625	LB			15	93 75
284		2				CHL SEAL			6	SH			30 00	180 00
285		2				CFR-1			59	LB			4 00	236 00
581		2				SERVICE CHRGMT			250	SH			1 50	375 00
583		2				DRAINAGE			659.73	TM			1 00	659 73

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SERVICE CHARGE CUBIC FEET
 MILEAGE CHARGE TOTAL WEIGHT LOADED MILES TON MILES

CONTINUATION TOTAL 5,064.48

JOB LOG

SWIFT Services, Inc.

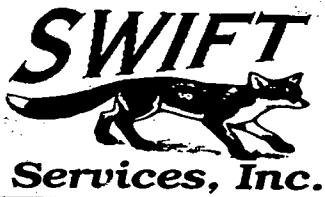
DATE 01-22-10 PAGE NO. 1

CUSTOMER LARSON WELL NO. 1-22 LEASE CRAMER JOB TYPE CONCRETE TICKET NO. 16697

CHART NO.	TIME	RATE (BPM)	VOLUME (BB) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	<u>1845</u>							<u>ON LOCATION</u> <u>CMT: 125945 SMD, 125 EA-2</u>
								<u>RTD 4615 Ser Pipe 4613 SJ 40.60 INSET 4523</u> <u>4 1/2 10.5" ET</u> <u>LARSONS FLUTTERU</u>
	<u>1940</u>							<u>BREAKING & ROTATE PLUG</u> <u>PLUG RH, STA 30, 15</u>
<u>2040</u>	<u>2045</u>	<u>6.5</u>	<u>8.6</u> <u>12</u> <u>20</u> <u>36.5</u> <u>30.5</u>		<u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u>		<u>200</u> <u>✓</u> <u>✓</u> <u>✓</u>	<u>MUD FLUSH SDCALS</u> <u>KCL FLUSH</u> <u>SMD CMT @ 12.7" SAZ</u> <u>EA-2 CMT @</u> <u>DROPLO PLUG, WASHOUT PL</u>
	<u>2100</u>	<u>6.0</u>	<u>0</u> <u>6.0</u> <u>60.0</u> <u>65.0</u> <u>70.0</u>		<u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u>		<u>300</u> <u>30</u> <u>600</u> <u>700</u> <u>800</u>	<u>START DISA</u> <u>CMT ON BOTTOM</u>
	<u>2115</u> <u>2120</u>	<u>4.5</u>	<u>70.7</u>		<u>✓</u>		<u>1400</u>	<u>LAND PLUG</u> <u>RELEASE - DRY</u>
	<u>2215</u>							<u>JOB COMPLETE</u>
								<u>THANK YOU!</u> <u>DAVE JOSH, JEFF</u>

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CONSERVATION DIVISION
WICHITA, KS



CHARGE TO: Larson Engineering
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET No. 16868

MAY 10 2010
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PAGE 1 OF 1

SERVICE LOCATIONS
 1. Hays, Ks.
 2. Ness City, Ks.
 3. _____
 4. _____

WELL/PROJECT NO. #1-22 LEASE Crane COUNTY/PARISH LANE STATE Ks CITY _____ DATE 1-28-10 OWNER same

TICKET TYPE SERVICE SALES CONTRACTOR WWWWS RIG NAME/NO. _____ SHIPPED VIA CTT DELIVERED TO Location ORDER NO. _____

WELL TYPE oil WELL CATEGORY development JOB PURPOSE Port Collar WELL PERMIT NO. _____ WELL LOCATION _____

REFERRAL LOCATION _____ INVOICE INSTRUCTIONS _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	DF		QTY.	U/M	QTY.	U/M	
575		1			MILEAGE #111	50	mi		5.00	250.00
576D		1			Pump Charge (Port Collar)	1	ea	2248	1100.00	1100.00
280		1			D-Air	2	gal		35.00	70.00
330		2			SMD Cement	200	shs		14.00	2800.00
276		2			Flocele	50	#		1.50	75.00
581		2			Cement Service Charge	325	shs		1.50	487.50
583		2			Drayage	794	TAM		1.00	794.00

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 CONSERVATION DIVISION
 WICHITA, KS

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

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

X
 DATE SIGNED 1-28-10 TIME SIGNED 12:45 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	5576.50
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Lane TAX 5.3%	156.09
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	5732.59
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

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

SWIFT OPERATOR [Signature] APPROVAL _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 1-28-10 PAGE NO. 1

CUSTOMER *Larson Engineering* WELL NO. *1-22* LEASE *Cramer* JOB TYPE *Part Cellar* TICKET NO. *16868*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	<i>1000</i>							<i>en loc set up Trks</i>
								<i>2 3/8" x 5 1/2"</i>
								<i>P.C. @ 2248</i>
								<i>Locate P.C. 2242' Top of Slips</i>
						<i>1000</i>		<i>Test Csg to 1000 Psi</i>
								<i>Open P.C.</i>
	<i>1150</i>	<i>3.5</i>	<i>4</i>			<i>200</i>		<i>Take injection rate/check for blow</i>
	<i>1158</i>	<i>3.5</i>	<i>0</i>			<i>250</i>		<i>Start Cement 200skts SMD</i>
		<i>3.5</i>	<i>95</i>			<i>350</i>		<i>circ Cement/raise weight</i>
	<i>12</i>	<i>3.5</i>	<i>100/0</i>			<i>350</i>		<i>End Cement/Start Displacement</i>
	<i>1230</i>		<i>8</i>			<i>400</i>		<i>Cement Displaced</i>
	<i>1232</i>							<i>Close P.C.</i>
	<i>1235</i>					<i>1000</i>		<i>Test Csg to 1000 Psi</i>
								<i>run 4jts</i>
	<i>1243</i>	<i>3</i>	<i>0</i>			<i>150</i>		<i>Reverse out</i>
	<i>1248</i>		<i>15</i>					<i>Hole Clean</i>
								<i>wash up Trk</i>

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Thank you

Mich, Josh F. & Lane

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CONSERVATION DIVISION
WICHITA, KS

ALLIED CEMENTING CO., LLC. 036202

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

SERVICE POINT:
Great Bend KS

DATE	1-10-10	SEC.	22	TWP.	17	RANGE	30	CALLED OUT	ON LOCATION	JOB START	8:30 PM	JOB FINISH	9:00 PM
LEASE	<u>Cramer</u>	WELL #	1-22		LOCATION	Amy 1 west 6 north		COUNTY	have	STATE	KS		
OLD OR	<u>NEW</u> (Circle one)		1 west south into										

CONTRACTOR H-D
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 265
 CASING SIZE 8 5/8 DEPTH 264
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 15
 PERFS. _____
 DISPLACEMENT 15.86 BBLS

OWNER hanson Engineering
 CEMENT
 AMOUNT ORDERED 170 SX class A
3% cc 2% gel

EQUIPMENT
 PUMP TRUCK CEMENTER Wayne-D
 # 181 HELPER Gallen-D
 BULK TRUCK
 # 347 DRIVER Jerry
 BULK TRUCK
 # _____ DRIVER _____

COMMON	<u>102</u>	@	<u>13.50</u>	<u>1377.00</u>
POZMIX	<u>68</u>	@	<u>7.55</u>	<u>513.40</u>
GEL	<u>3</u>	@	<u>20.25</u>	<u>60.75</u>
CHLORIDE	<u>6</u>	@	<u>51.50</u>	<u>309.00</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>170</u>	@	<u>2.25</u>	<u>382.50</u>
MILEAGE	<u>45 x 170 x .10</u>			<u>765.00</u>
TOTAL				<u>3407.65</u>

REMARKS:
Pipes on Bottom Break
Circulation
Mix 170 SX class A 3% cc 2% gel
Displace 15.86 BBLS fresh
water
Cement did circulate
wash up Rig Down

CHARGE TO: hanson Engineering
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB	<u>264</u>		
PUMP TRUCK CHARGE			<u>991.00</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>45</u>	@	<u>7.00</u> <u>315.00</u>
MANIFOLD		@	
		@	
		@	
TOTAL			<u>1306</u>

PLUG & FLOAT EQUIPMENT

1-10-10	@	
	@	
	@	
	@	
	@	
TOTAL		

To Allied Cementing Co., LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Doug Roberts
 SIGNATURE Doug Roberts

SALES TAX (If Any) _____
 TOTAL CHARGES ~~3407.65~~
 DISCOUNT _____ IF PAID IN 30 DAYS

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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.
Cramer No. 1-22
2280' FSL & 330 FWL Sec. 22-17S-30W
Lane County, Kansas

CONTRACTOR: HD Drilling, LLC
SPUDDED: January 10, 2010
DRILLING COMPLETED: January 22, 2010
SURFACE CASING: 8 5/8" @ 261 KBM/175 SX,
ELECTRIC LOGS: Log-Tech DIL CNL/CDL MEL
ELEVATIONS: 2873 KB 2863 GL

FORMATION TOPS (Electric Log):

Anhydrite	2209 (+ 664)
Base Anhydrite	2267 (+ 606)
Heebner Shale	3903 (-1030)
Lansing-Kansas City Group	3939 (-1066)
Muncie Creek Shale	4112 (-1239)
Stark Shale	4211 (-1338)
Hushpuckney shale	4248 (-1375)
Base Kansas City	4287 (-1414)
Altamont	4344 (-1467)
Pawnee	4403 (-1530)
Myrick Station	4428 (-1555)
Fort Scott	4452 (-1579)
Cherokee	4477 (-1604)
Mississippian	4543 (-1670)
Electric Log Total Depth	4620 (-1747)

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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:

3939-3948 (A Zone)

Limestone, buff, some cream, finely crystalline and oolitic, some chalky and dense, fair to good ooliticastic porosity, poor to fair spotted stain, fair show of free oil, fair to good odor, fair fluorescence, fair cut.

DST No. 1

3926-3960

15-30-30-60; quarter-inch blow built to two-inch blow on first flow, no blowback; quarter-inch blow built to three-inch blow on second flow, no blowback. Recovered 40 feet of mud with oil spots, 124 feet of mud cut water (60% water, 40% mud).
ISIP 1087# FSIP 1078# IFP 25-62# FFP 65-89# IHP 1917# FHP 1883# BHT 110 degrees.

3974-3976 (B Zone)

Limestone, buff, some tan, dense to finely crystalline, chalky in part, slightly fossiliferous, trace of poor scattered intercrystalline porosity, no show of oil.

3988-4020 (C/D Zone)

Limestone, buff, dense, with cream chalky, some finely crystalline and slightly fossiliferous, zone is mostly tight with no shows of oil. Some scattered light gray chert.

4023-4034 (E Zone)

Limestone, cream to buff, dense and chalky with buff finely crystalline, zone is mostly tight with no shows of oil. Trace of light gray chert.

4035-4048 (F Zone)

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

4049-4061 (G Zone)

Limestone, cream to buff, finely crystalline and partly oolitic, chalky with some dense, poor scattered ooliticastic porosity, no show of oil. Lower portion contains chalky and finely crystalline limestone that is mostly tight, some scattered white chert.

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4124-4127 (H Zone)

Limestone, buff to tan, dense to finely crystalline, poor to fair intercrystalline porosity, fair spotted stain, fair show of free oil, good odor, fair fluorescence, fair cut.

4162-4168 (I Zone)

Limestone, cream to buff, dense to finely crystalline, slightly cherty, slightly fossiliferous, fair intercrystalline and scattered vugular porosity, poor to fair spotted stain, fair show of free oil, good odor, poor fluorescence, fair cut.

Drill Stem Test No. 2 4100-4174

15-30-30-60; quarter-inch blow, built to two-inch blow on first flow, no blowback; blow did not return on second flow; recovered 30 feet of mud with oil spots. ISIP 1324# FSIP 1642# IFP 29-39# FFP 42-47# IHP 2072# FHP 2020# BHT 109 degrees.

4188-4199 (J Zone)

Limestone, cream to buff, oolitic and finely crystalline, fair to good oolitic and interoolitic porosity, fair spotted stain in part, fair show of free oil, good odor, fair fluorescence, fair cut, 70-80% barren porosity.

Drill Stem Test No. 3 4187-4196

15-30-30-60; quarter-inch blow, built to seven inches on first flow, no blowback; quarter-inch blow built to bottom of bucket in 15 minutes, no blowback. Recovered 129 feet of mud cut water (90% water, 10% mud) and 124 feet of mud cut water (95% water, 5% mud). ISIP 928# FSIP 927# IFP 15-78# FFP 79-140# IHP 2111# FHP 2020# BHT 117 degrees.

4226-4230 (K Zone)

Limestone, buff, dense to finely crystalline, some oolitic, some oolitic with scattered black oolites, considerable tarry stain, trace of live stain in poor intercrystalline and scattered vugular porosity, scattered tarry oil with slight traces of live free oil, good odor, no fluorescence, poor cut of tarry oil.

4252-4258 (Middle Creek Zone)

Limestone, gray-buff, finely crystalline and partly dense, poor intercrystalline porosity, few pieces with poor spotted stain, very slight show of free oil, faint odor, poor fluorescence, poor cut.

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4260-4263 (L Zone)

Limestone, buff, dense to finely crystalline with scattered chalky, some finely crystalline with poor intercrystalline porosity, poor spotted stain, very slight show of free oil, faint odor, no fluorescence, poor cut.

Drill Stem Test No. 4 4222-4273

15-30-30-60; surface blow, built to one-inch on first flow, no blowback; surface blow, built to four inches in 30 minutes, no blowback. Recovered one foot of clean oil, 30 feet of oil cut mud (20% oil, 80% mud), 62 feet of oil cut mud (10% oil, 90% mud). ISIP 938# FSIP 911# IFP 14-30# FFP 35-54# IHP 2118# FHP 2055# BHT 111 degrees.

4273-4275 & 4282-4284 (Lower L Zone)

These two zones exhibited microlog porosity and contained limestone, finely crystalline, poor intercrystalline porosity, poor spotted stain, very slight show of free oil, no fluorescence and poor cut. The zones carried a fair odor all the way to the base of the Kansas City and should be considered for production testing.

4287-4322 (Pleasanton)

This section consisted of limestone, gray-buff, dense to finely crystalline, fossiliferous, some chalky, scattered poor intercrystalline porosity, trace of poor spotted stain, very slight show of free oil, faint odor, no fluorescence, very poor cut, some dead stain.

4322-4330 (Marmaton)

Limestone, buff to tan, some brown, dense, some finely crystalline with trace of poor spotted stain, very slight show of free oil, faint fleeting odor, no fluorescence, no cut.

4344-4363 (Altamont Zone)

Limestone, cream to buff, some light grey, dense to finely crystalline, slightly fossiliferous, fair intercrystalline and interfossil porosity, fair spotted stain, fair to good show of free oil, faint to fair odor, poor fluorescence, fair cut.

Drill Stem Test No. 5 4282-4375

15-30-30-60; quarter-inch blow built to four-inch blow on first flow, no blowback; quarter-inch blow built to six-inch blow on second flow, no blowback. Recovered 61 feet of oil cut mud (2% oil, 98% mud), 124 feet of gassy oil cut mud (10% gas, 5% oil, 85% mud). ISIP 1133# FSIP 1065# IFP 20-75# FFP 81-100# IHP 2228# FHP 2133# BHT 110 degrees.

4403-4410 (Pawnee Zone)

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Limestone, cream to buff, finely crystalline and slightly fossiliferous, slightly chalky, poor to fair scattered intercrystalline porosity with some scattered small vug porosity, poor to fair spotted stain, fair show of free oil, fair odor, poor fluorescence, fair cut. Lower portion grades into tan to brown dense, tight limestone with scattered light gray fresh chert.

4436-4440 (Myrick Station Zone)

Limestone, buff, finely crystalline, fair intercrystalline porosity, fair spotted stain, fair to good show of free oil, faint to fair odor, fair fluorescence, fair to good cut.

4452-4457 (Fort Scott Zone)

Limestone, buff to tan, oolitic with medium gray to brown oolites, trace of dark gray to black oolitic lime, zone has very poor intercrystalline porosity with trace of very poor interoolitic porosity, trace of poor spotted stain, very light show of free oil, faint odor, no fluorescence, poor cut. Lower portion of Fort Scott is buff to tan, dense to finely crystalline limestone, scattered poor intercrystalline porosity, scattered poor spotted stain, faint questionable odor, very slight show of free oil, no fluorescence, no cut.

Drill Stem Test No. 6 4395-4480

15-30-45-90; surface blow built to one inch on first flow period, no blowback; blow did not return on second flow. Recovered 20 feet of mud with oil spots. ISIP 1037# FSIP 1091# IFP 16-23# FFP 24-32# IHP 2227# FHP 2189# BHT 110 degrees.

4480-4510 (Cherokee Lime section)

This interval consisted of limestones, buff to tan, some brown, dense to finely crystalline. The interval from 4480-4496 contained scattered poor intercrystalline porosity, trace of poor vugular porosity, trace of poor spotted stain, very slight show of free oil, no fluorescence, poor cut.

4510-4540 (Johnson Zone)

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

Drill Stem Test No. 7 4478-4540

15-30-30-60; quarter-inch blow, died in 10 minutes of first flow, did not return on second flow. Recovered one foot of free oil and five feet of mud with oil spots. ISIP 1058# FSIP 1076# IFP 16-18# FFP 20-23# IHP 2298# FHP 2250# BHT 111 degrees.

4543-4615 (Mississippian Zone)

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The Mississippian section consisted of limestones, dolomitic, buff to tan, dense, brittle and flaky, partly chalky, generally tight with no shows of oil. Considerable light grey chert was present in the section. Section warrants no further consideration.

4615

Rotary Total Depth

Conclusions and Recommendations:

Numerous thin zones of potential production exist in the No. 1-22 Cramer. These zones should be selected in accordance with Tom Larson and Kyle Carter and should be perforated and production tested.

Respectfully submitted,

Robert C. Lewellyn
Petroleum Geologist

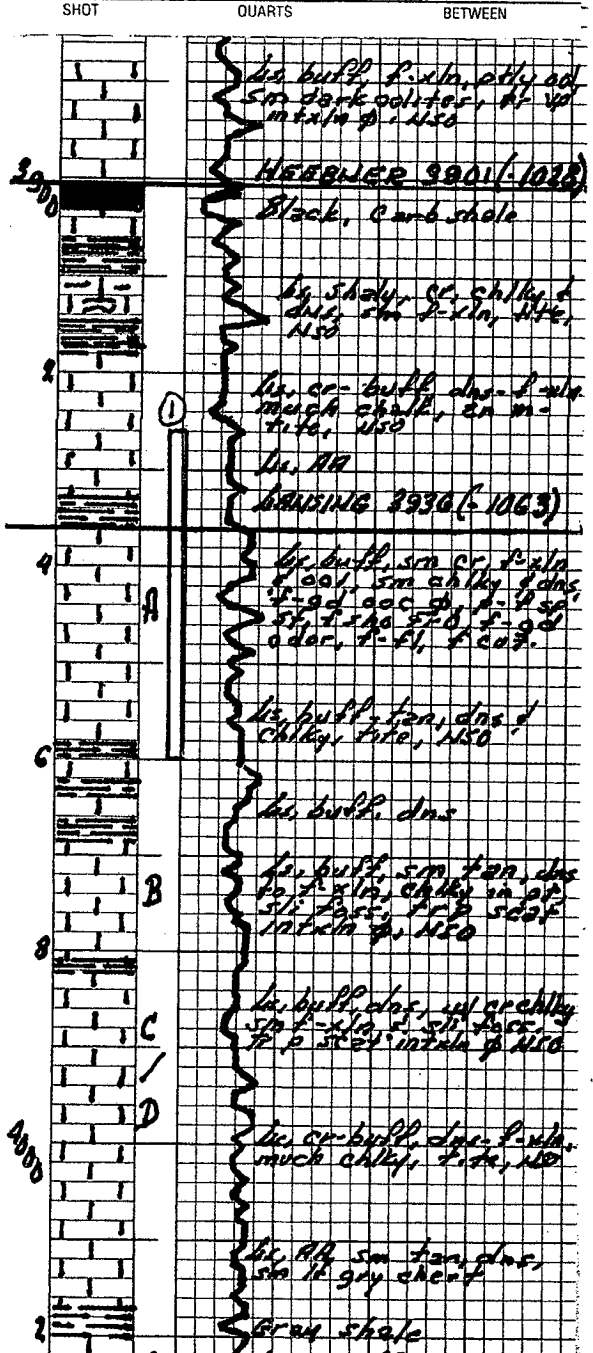
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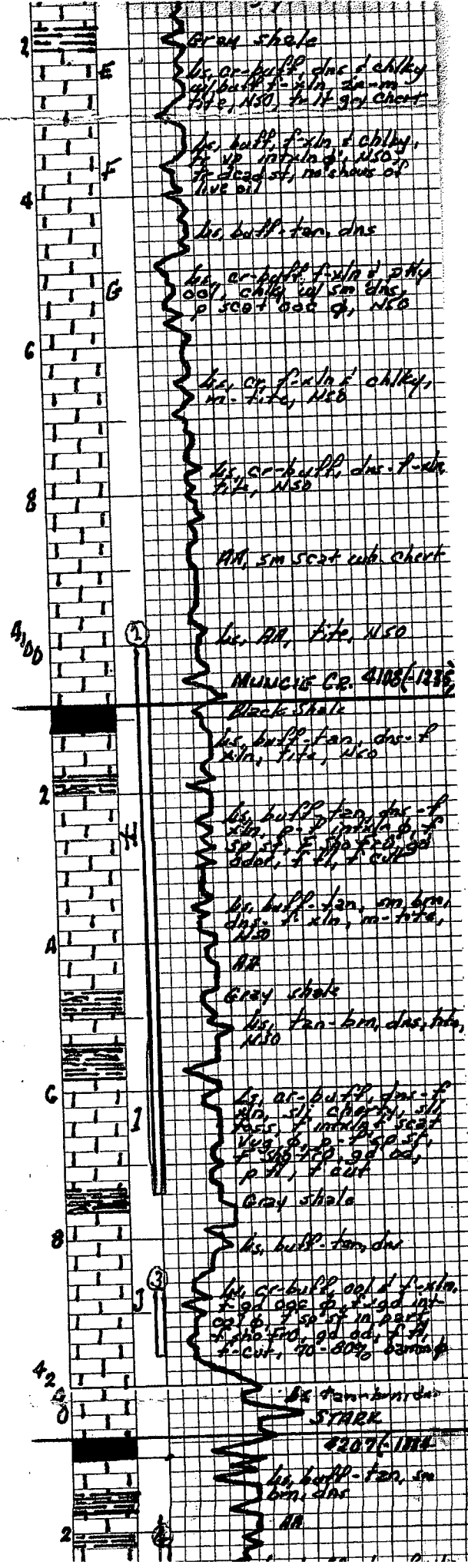
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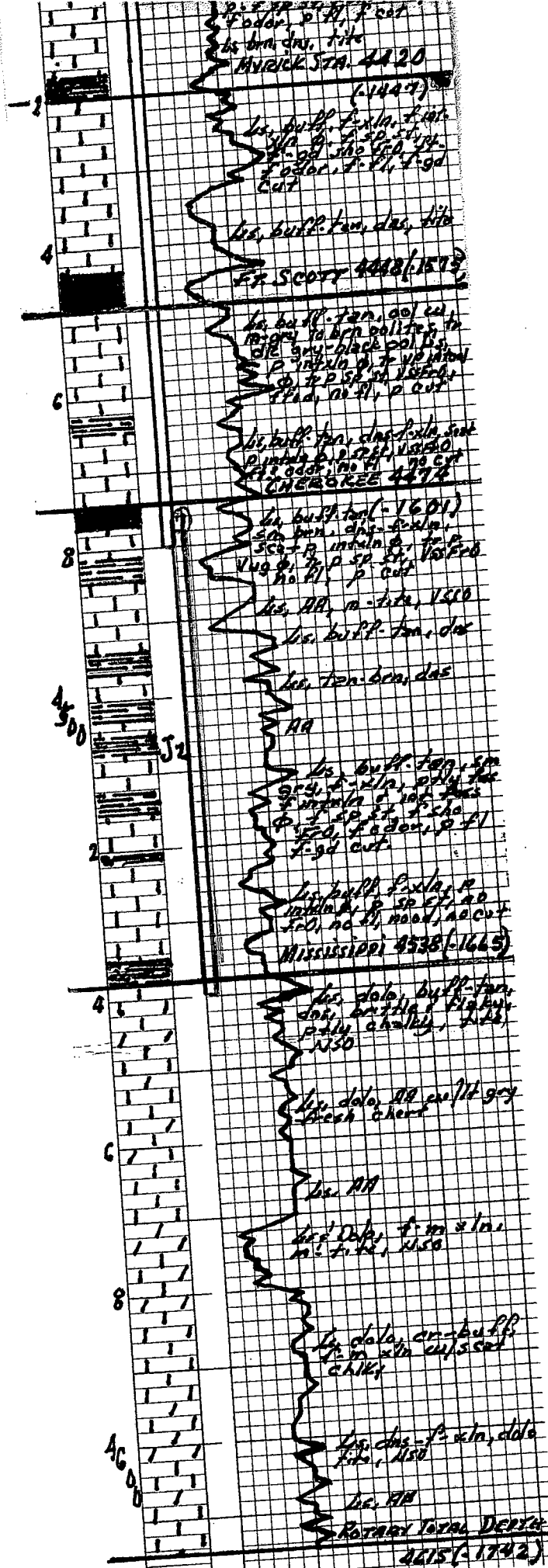
STATE KANSAS		COMPANY LARSON ENGINEERING, INC.	
COUNTY LANE	FARM CORNER	WELL NO. 1-22	
BLOCK	SURVEY 2280' FSL & 330' FWL		
SEC. 22			
T. 17S	R. 30W	TOTAL DEPTH 4615	
CONTRACTOR H.D. DRILLING, LLC		COMMENCED 01-10-10	
COMPLETED 01-22-10		REMARKS	
ALTIMETER 2873 KB			
PRODUCTION Oil			
Robert C. Lowellum, Geol.			
CASING RECORD			
8 5/8" @ 261 KBM / 175 sx			



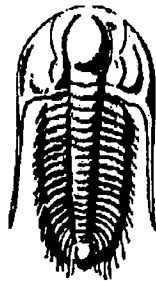
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

22 17S30W Lane KS

Cramer 1-22

Start Date: 2010.01.16 @ 01:21:09

End Date: 2010.01.16 @ 08:17:18

Job Ticket #: 37033 DST #: 1

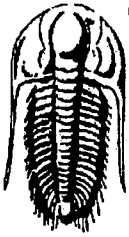
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WICHITA, KS

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
 562 W State Rd 4
 Olmitz, KS 67564
 ATTN: Bob Lewellyn

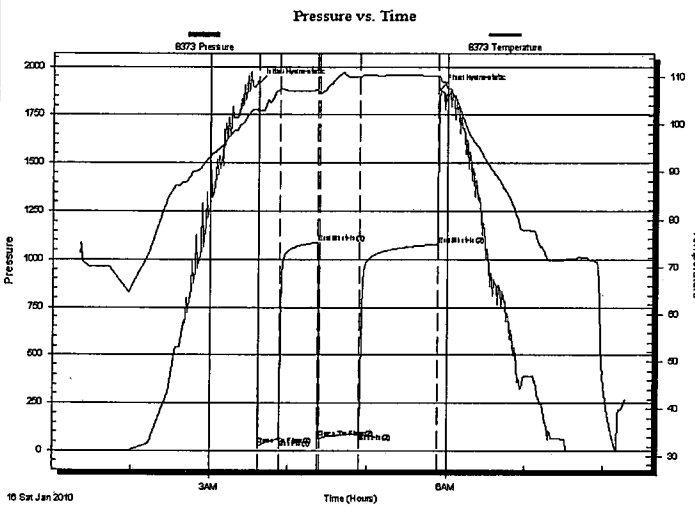
Cramer 1-22
22 17S30W Lane KS
 Job Ticket: 37033 **DST#: 1**
 Test Start: 2010.01.16 @ 01:21:09

GENERAL INFORMATION:

Formation: **Lansing A**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole
 Time Tool Opened: 03:37:04 Tester: Brandon Turley
 Time Test Ended: 08:17:18 Unit No: 35
 Interval: **3926.00 ft (KB) To 3960.00 ft (KB) (TVD)** Reference Elevations: 2873.00 ft (KB)
 Total Depth: 3960.00 ft (KB) (TVD) 2863.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8373 Inside
 Press@RunDepth: 89.72 psig @ 3927.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.01.16 End Date: 2010.01.16 Last Calib.: 2010.01.16
 Start Time: 01:21:09 End Time: 08:17:18 Time On Btm: 2010.01.16 @ 03:36:49
 Time Off Btm: 2010.01.16 @ 05:54:18

TEST COMMENT: IF: 1/4 blow built to 2 in 15 min.
 IS: No return.
 FF: 1/4 blow built to 3 in 30 min.
 FS: No return.



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1917.27	103.27	Initial Hydro-static
1	27.88	102.22	Open To Flow (1)
16	62.35	107.26	Shut-In(1)
46	1087.29	107.21	End Shut-In(1)
47	65.88	106.75	Open To Flow (2)
77	89.72	109.96	Shut-In(2)
137	1078.45	110.27	End Shut-In(2)
138	1883.70	109.80	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
124.00	mcw 60%w 40%m	0.61
40.00	mud oil spots 100%m	0.56

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37033

DST#: 1

ATTN: Bob Lewellyn

Test Start: 2010.01.16 @ 01:21:09

Tool Information

Drill Pipe:	Length: 3789.00 ft	Diameter: 3.80 inches	Volume: 53.15 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.76 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3926.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

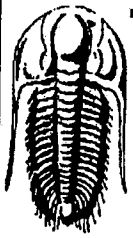
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			3899.00	
Shut In Tool	5.00			3904.00	
Hydraulic tool	5.00			3909.00	
Jars	5.00			3914.00	
Safety Joint	3.00			3917.00	
Packer	5.00			3922.00	28.00 Bottom Of Top Packer
Packer	4.00			3926.00	
Stubb	1.00			3927.00	
Recorder	0.00	8373	Inside	3927.00	
Recorder	0.00	6772	Outside	3927.00	
Perforations	16.00			3943.00	
Change Over Sub	1.00			3944.00	
Drill Pipe	30.00			3974.00	
Change Over Sub	1.00			3975.00	
Bullnose	5.00			3980.00	54.00 Bottom Packers & Anchor

Total Tool Length: 82.00

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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37033

DST#: 1

ATTN: Bob Lewellyn

Test Start: 2010.01.16 @ 01:21:09

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:

50000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.55 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	mcw 60%w 40%m	0.610
40.00	mud oil spots 100%m	0.561

Total Length: 164.00 ft Total Volume: 1.171 bbl

Num Fluid Samples: 0

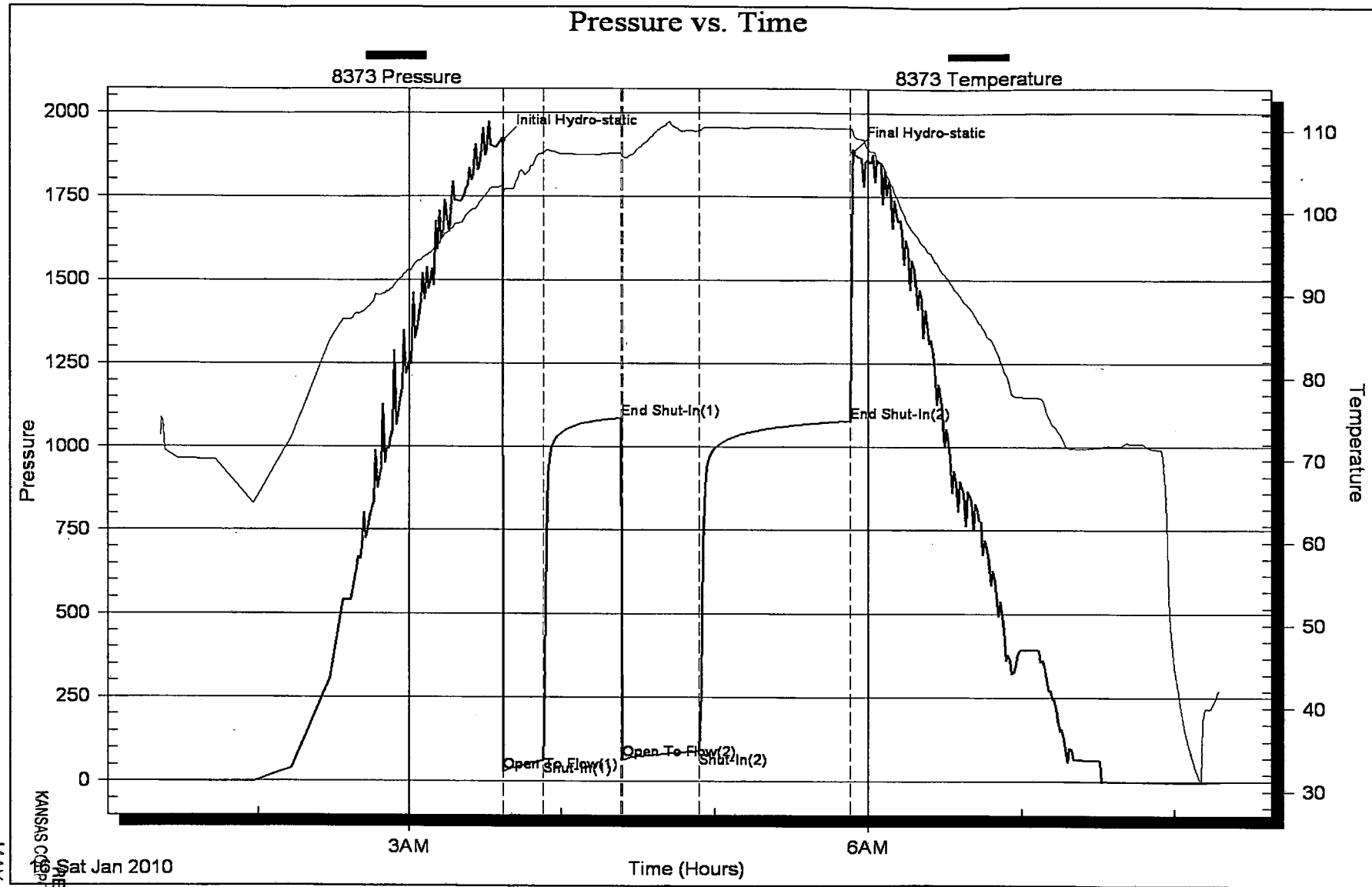
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .17@63=50000



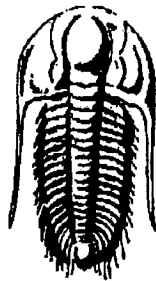
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Trillite Testing, Inc

Ref. No: 37033



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

22 17S30W Lane KS

Cramer 1-22

Start Date: 2010.01.17 @ 05:31:44

End Date: 2010.01.17 @ 11:36:53

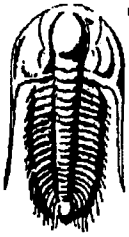
Job Ticket #: 37034 DST #: 2

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WICHITA, KS

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37034

DST#: 2

ATTN: Bob Lewellyn

Test Start: 2010.01.17 @ 05:31:44

GENERAL INFORMATION:

Formation: **Lansing H-I**
 Deviated: **No Whipstock** ft (KB)
 Time Tool Opened: 07:28:54
 Time Test Ended: 11:36:53

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

Interval: **4100.00 ft (KB) To 4174.00 ft (KB) (TVD)**
 Total Depth: **4174.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2873.00 ft (KB)**
2863.00 ft (CF)
 KB to GR/CF: **10.00 ft**

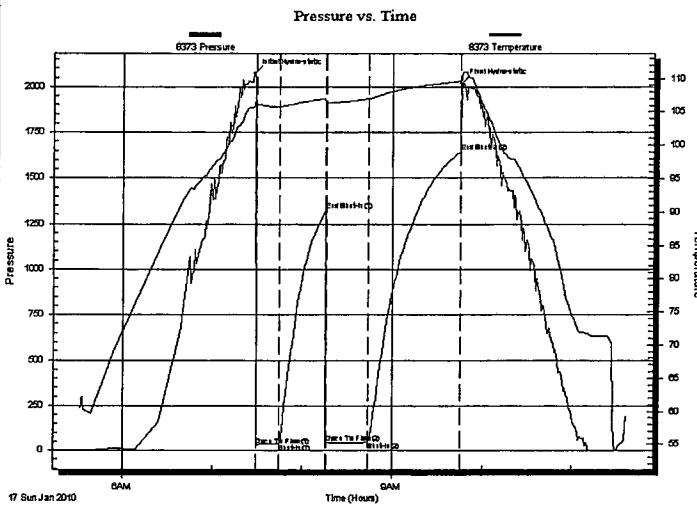
Serial #: 8373

Inside

Press@RunDepth: **47.59 psig @ 4101.00 ft (KB)**
 Start Date: **2010.01.17** End Date: **2010.01.17**
 Start Time: **05:31:44** End Time: **11:36:53**

Capacity: **8000.00 psig**
 Last Calib.: **2010.01.17**
 Time On Btm: **2010.01.17 @ 07:27:24**
 Time Off Btm: **2010.01.17 @ 09:45:24**

TEST COMMENT: IF: 1/4 blow built to 2 in 15 min.
 IS: No return.
 FF: No blow.
 FS: No return.



PRESSURE SUMMARY

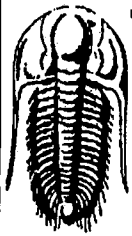
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2072.64	106.12	Initial Hydro-static
2	29.64	106.19	Open To Flow (1)
18	39.74	105.78	Shut-In(1)
48	1324.49	107.03	End Shut-In(1)
49	42.32	106.50	Open To Flow (2)
77	47.59	106.97	Shut-In(2)
138	1642.74	109.61	End Shut-In(2)
138	2020.31	109.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud oil spots 100% _m	0.15

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37034

DST#: 2

ATTN: Bob Lewellyn

Test Start: 2010.01.17 @ 05:31:44

Tool Information

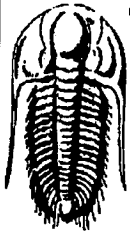
Drill Pipe:	Length: 3953.00 ft	Diameter: 3.80 inches	Volume: 55.45 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
		<u>Total Volume:</u>	<u>56.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4100.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	102.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4073.00	
Shut In Tool	5.00			4078.00	
Hydraulic tool	5.00			4083.00	
Jars	5.00			4088.00	
Safety Joint	3.00			4091.00	
Packer	5.00			4096.00	28.00 Bottom Of Top Packer
Packer	4.00			4100.00	
Stubb	1.00			4101.00	
Recorder	0.00	8373	Inside	4101.00	
Recorder	0.00	6772	Outside	4101.00	
Perforations	5.00			4106.00	
Change Over Sub	1.00			4107.00	
Drill Pipe	61.00			4168.00	
Change Over Sub	1.00			4169.00	
Bullnose	5.00			4174.00	74.00 Bottom Packers & Anchor

Total Tool Length: 102.00

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**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37034

DST#: 2

ATTN: Bob Lewellyn

Test Start: 2010.01.17 @ 05:31:44

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: 55.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.55 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
30.00	mud oil spots 100%m	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

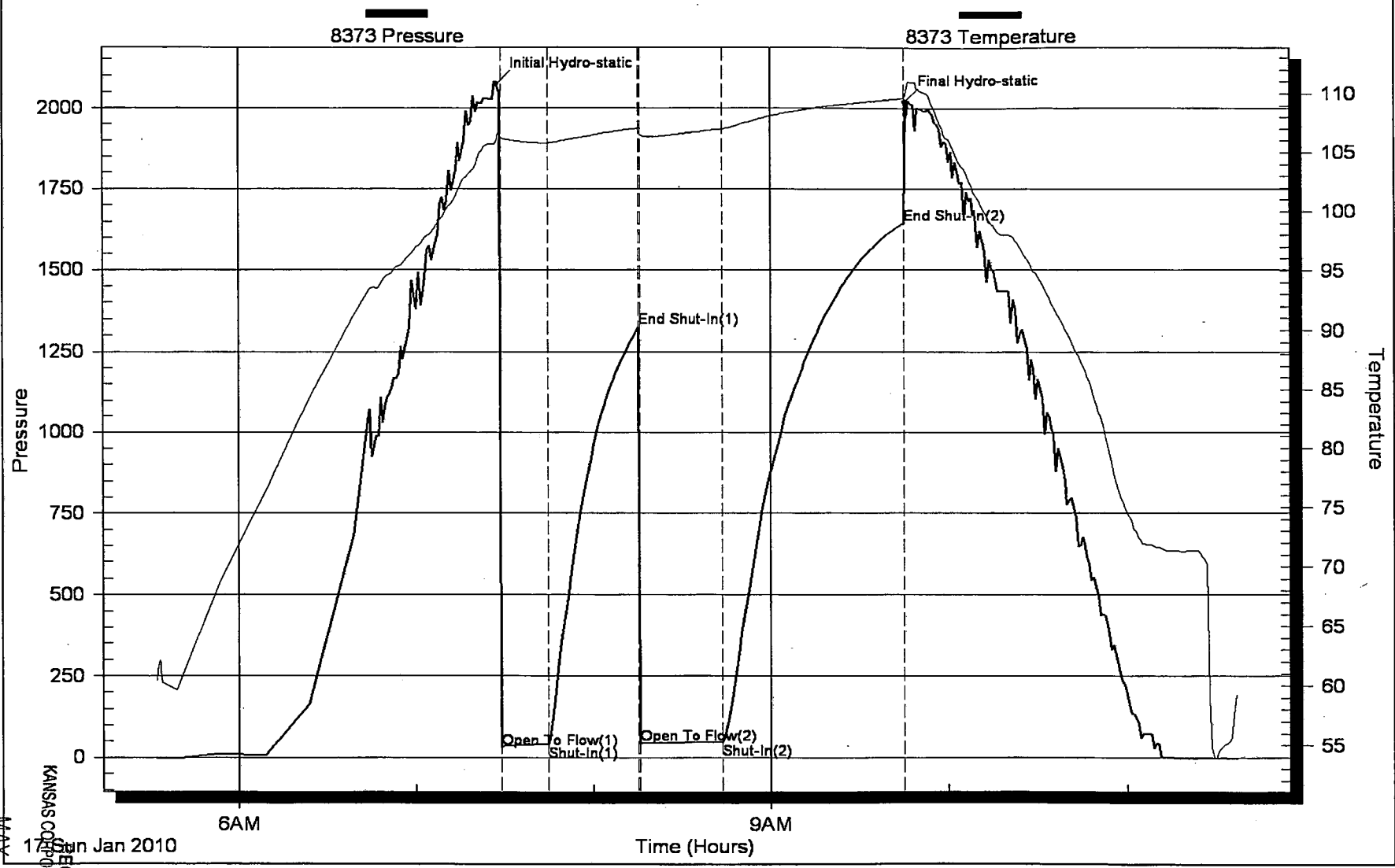
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

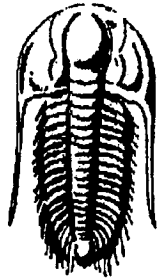


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Trilobite Testing, Inc

Ref. No: 37034

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

22 17S30W Lane KS

Cramer 1-22

Start Date: 2010.01.17 @ 18:45:48

End Date: 2010.01.18 @ 01:07:42

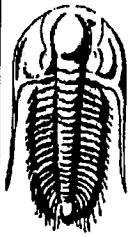
Job Ticket #: 37035 DST #: 3

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

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CONSERVATION DIVISION
WICHITA, KS



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37035

DST#: 3

ATTN: Bob Lew ellyn

Test Start: 2010.01.17 @ 18:45:48

GENERAL INFORMATION:

Formation: **Lansing J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:38:28

Time Test Ended: 01:07:42

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: **4187.00 ft (KB) To 4196.00 ft (KB) (TVD)**

Reference Elevations: 2873.00 ft (KB)

Total Depth: 4196.00 ft (KB) (TVD)

2863.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8373 Inside

Press@RunDepth: 140.48 psig @ 4188.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.01.17

End Date:

2010.01.18

Last Calib.: 2010.01.18

Start Time: 18:45:48

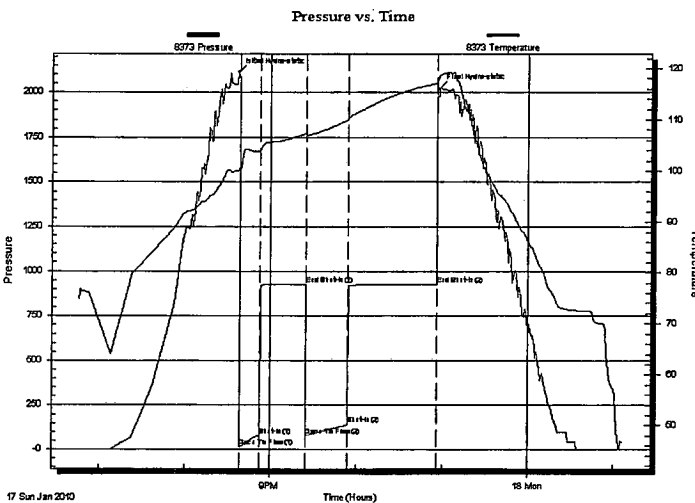
End Time:

01:07:42

Time On Btm: 2010.01.17 @ 20:36:58

Time Off Btm: 2010.01.17 @ 22:56:58

TEST COMMENT: IF: 1/4 blow built to 7 in 15 min.
IS: No return.
FF: 1/4 blow BOB in 25 min.
FS: No return.



PRESSURE SUMMARY

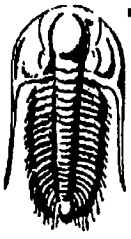
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2111.43	100.03	Initial Hydro-static
2	15.61	100.17	Open To Flow (1)
16	78.09	103.84	Shut-In(1)
48	928.25	107.39	End Shut-In(1)
48	79.73	106.95	Open To Flow (2)
77	140.48	110.03	Shut-In(2)
139	927.66	117.15	End Shut-In(2)
140	2020.97	118.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mcw 95%w 5%m	0.61
129.00	mcw 90%w 10%m	1.81

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37035

DST#: 3

ATTN: Bob Lew ellyn

Test Start: 2010.01.17 @ 18:45:48

Tool Information

Drill Pipe:	Length: 4045.00 ft	Diameter: 3.80 inches	Volume: 56.74 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4187.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

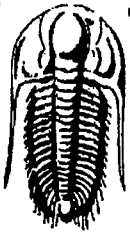
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4160.00	
Shut In Tool	5.00			4165.00	
Hydraulic tool	5.00			4170.00	
Jars	5.00			4175.00	
Safety Joint	3.00			4178.00	
Packer	5.00			4183.00	28.00 Bottom Of Top Packer
Packer	4.00			4187.00	
Stubb	1.00			4188.00	
Recorder	0.00	8373	Inside	4188.00	
Recorder	0.00	6772	Outside	4188.00	
Perforations	3.00			4191.00	
Bullnose	5.00			4196.00	9.00 Bottom Packers & Anchor

Total Tool Length: 37.00

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WICHITA, KS



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37035

DST#: 3

ATTN: Bob Lewellyn

Test Start: 2010.01.17 @ 18:45:48

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: 44000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.36 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2300.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	mcw 95%w 5%m	0.610
129.00	mcw 90%w 10%m	1.810

Total Length: 253.00 ft Total Volume: 2.420 bbl

Num Fluid Samples: 0

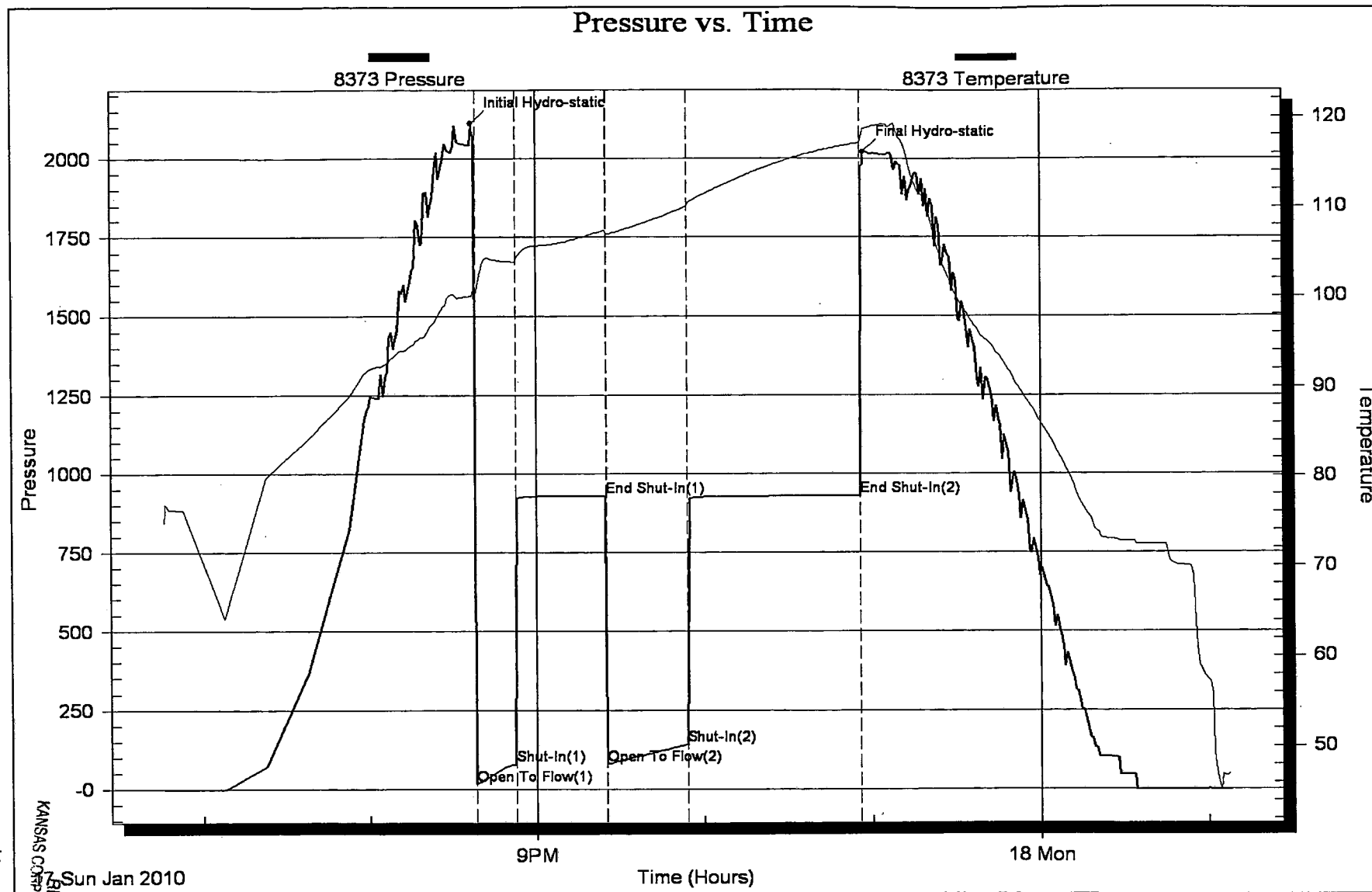
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .20@ 60= 44000



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WICHITA, KS

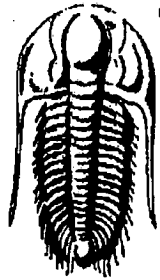
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Robite Testing, Inc

Ref. No: 37035

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

22 17S30W Lane KS

Cramer 1-22

Start Date: 2010.01.18 @ 17:02:55

End Date: 2010.01.18 @ 22:42:19

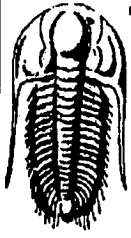
Job Ticket #: 37036 DST #: 4

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37036

DST#: 4

ATTN: Bob Lewellyn

Test Start: 2010.01.18 @ 17:02:55

Tool Information

Drill Pipe:	Length: 4075.00 ft	Diameter: 3.80 inches	Volume: 57.16 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 57.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4222.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4195.00	
Shut In Tool	5.00			4200.00	
Hydraulic tool	5.00			4205.00	
Jars	5.00			4210.00	
Safety Joint	3.00			4213.00	
Packer	5.00			4218.00	28.00 Bottom Of Top Packer
Packer	4.00			4222.00	
Stubb	1.00			4223.00	
Recorder	0.00	8373	Inside	4223.00	
Recorder	0.00	6772	Outside	4223.00	
Perforations	13.00			4236.00	
Change Over Sub	1.00			4237.00	
Drill Pipe	30.00			4267.00	
Change Over Sub	1.00			4268.00	
Bullnose	5.00			4273.00	51.00 Bottom Packers & Anchor

Total Tool Length: 79.00

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**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37036

DST#: 4

ATTN: Bob Lewellyn

Test Start: 2010.01.18 @ 17:02:55

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.57 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
62.00	ocm 10%o 90%m	0.305
30.00	ocm 20%o 80%m	0.148
1.00	free oil 100%o	0.005

Total Length: 93.00 ft Total Volume: 0.458 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

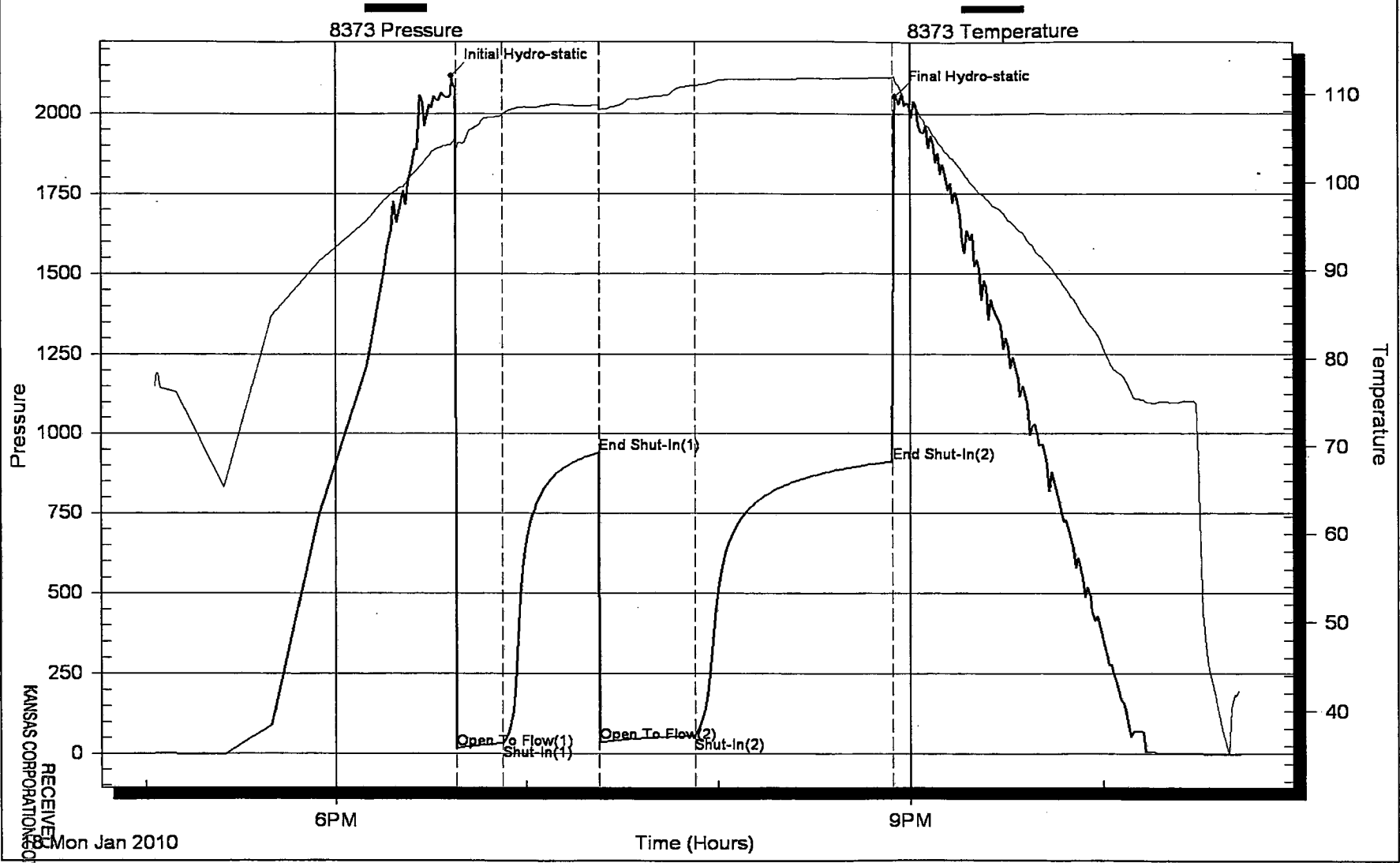
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

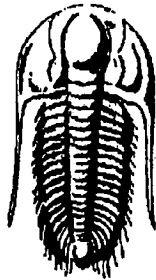
Pressure vs. Time



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DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

22 17S30W Lane KS

Cramer 1-22

Start Date: 2010.01.19 @ 18:26:17

End Date: 2010.01.20 @ 00:59:11

Job Ticket #: 37037 DST #: 5

Trilobite Testing, Inc

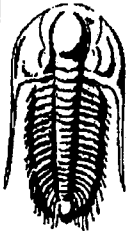
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**TRILOBITE
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DRILL STEM TEST REPORT

Larson Engineering
562 W State Rd 4
Olmitz, KS 67564
ATTN: Bob Lewellyn

Cramer 1-22
22 17S30W Lane KS
Job Ticket: 37037 DST#: 5
Test Start: 2010.01.19 @ 18:26:17

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:15:42
Time Test Ended: 00:59:11
Interval: **4282.00 ft (KB) To 4375.00 ft (KB) (TVD)**
Total Depth: 4375.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35
Reference Elevations: 2873.00 ft (KB)
2863.00 ft (CF)
KB to GR/CF: 10.00 ft

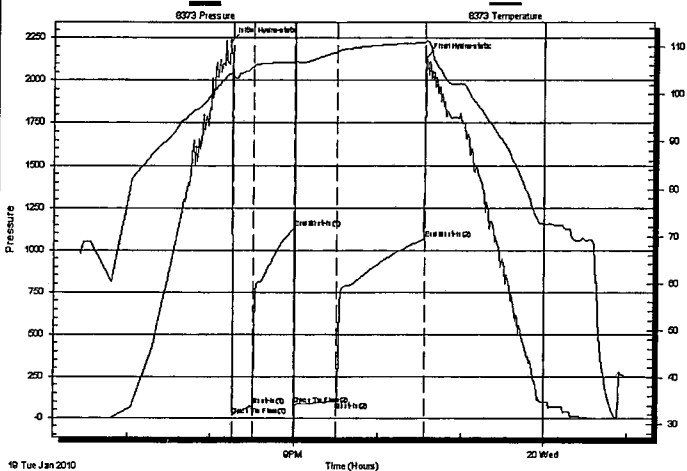
Serial #: 8373

Inside

Press@RunDepth: 100.97 psig @ 4287.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2010.01.19 End Date: 2010.01.20 Last Calib.: 2010.01.20
Start Time: 18:26:17 End Time: 00:59:11 Time On Btm: 2010.01.19 @ 20:13:57
Time Off Btm: 2010.01.19 @ 22:33:57

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

Pressure vs. Time



PRESSURE SUMMARY

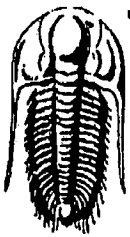
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2228.59	104.32	Initial Hydro-static
2	20.23	103.94	Open To Flow (1)
17	75.41	105.77	Shut-In(1)
46	1133.55	106.82	End Shut-In(1)
46	81.60	106.15	Open To Flow (2)
77	100.97	108.92	Shut-In(2)
139	1065.19	110.91	End Shut-In(2)
140	2133.14	111.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gocm 10%g 5%o 85%m	0.61
61.00	ocm 2%o 98%m	0.86

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37037

DST#: 5

ATTN: Bob Lewellyn

Test Start: 2010.01.19 @ 18:26:17

Tool Information

Drill Pipe:	Length: 4135.00 ft	Diameter: 3.80 inches	Volume: 58.00 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
		Total Volume:	58.61 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	1.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4282.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	97.00 ft			
Tool Length:	121.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

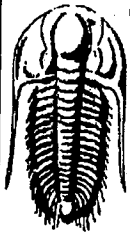
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4259.00	
Shut In Tool	5.00			4264.00	
Hydraulic tool	5.00			4269.00	
Jars	5.00			4274.00	
Safety Joint	3.00			4277.00	
Packer	5.00			4282.00	24.00 Bottom Of Top Packer
Packer - Shale	4.00			4286.00	
Stubb	1.00			4287.00	
Recorder	0.00	8373	Inside	4287.00	
Recorder	0.00	6772	Outside	4287.00	
Perforations	24.00			4311.00	
Change Over Sub	1.00			4312.00	
Drill Pipe	61.00			4373.00	
Change Over Sub	1.00			4374.00	
Bullnose	5.00			4379.00	97.00 Anchor Tool

Total Tool Length: 121.00

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WICHITA, KS



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37037

DST#: 5

ATTN: Bob Lewellyn

Test Start: 2010.01.19 @ 18:26:17

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: 46.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
124.00	gocm 10%g 5%o 85%m	0.610
61.00	ocm 2%o 98%m	0.856

Total Length: 185.00 ft

Total Volume: 1.466 bbf

Num Fluid Samples: 0

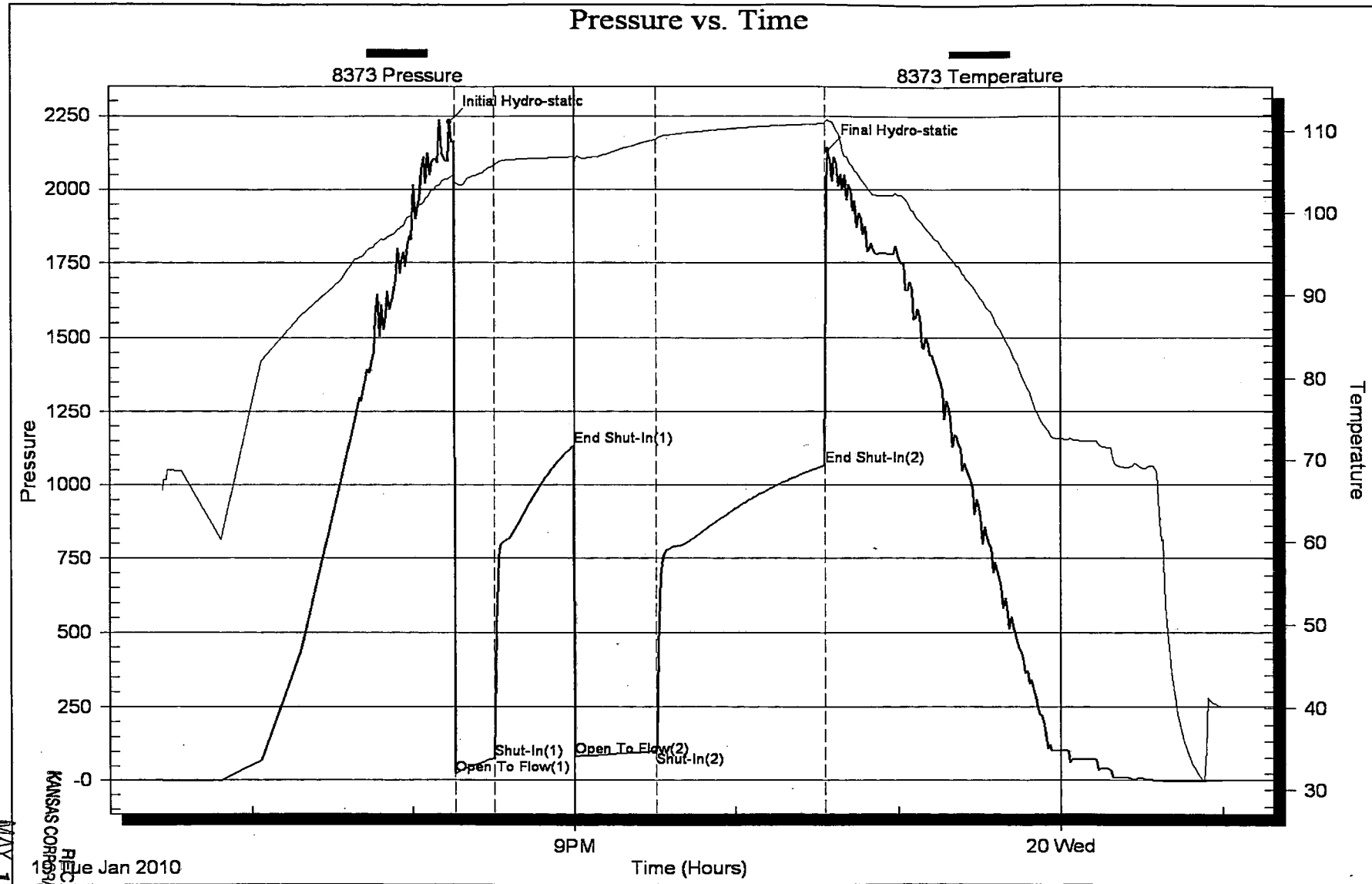
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



CONSERVATION DIVISION
WICHITA, KS

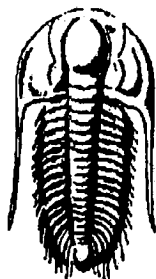
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Ref. No: 37037

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

22 17S30W Lane KS

Cramer 1-22

Start Date: 2010.01.20 @ 16:26:04

End Date: 2010.01.20 @ 23:00:13

Job Ticket #: 37038 DST #: 6

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

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WICHITA, KS

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Larson Engineering

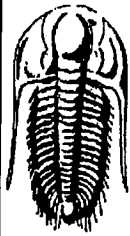
Cramer 1-22

22 17S30W Lane KS

DST # 6

Pawnee- Ft Scott

2010.01.20



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

ATTN: Bob Lewellyn

Job Ticket: 37038

DST#: 6

Test Start: 2010.01.20 @ 16:26:04

GENERAL INFORMATION:

Formation: **Pawnee- Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:08:59

Time Test Ended: 23:00:13

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: 4395.00 ft (KB) To 4480.00 ft (KB) (TVD)

Reference Elevations: 2873.00 ft (KB)

Total Depth: 4480.00 ft (KB) (TVD)

2863.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: 32.67 psig @ 4400.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.01.20

End Date:

2010.01.20

Last Calib.: 2010.01.20

Start Time: 16:26:04

End Time:

23:00:13

Time On Btm: 2010.01.20 @ 18:07:44

Time Off Btm: 2010.01.20 @ 21:07:58

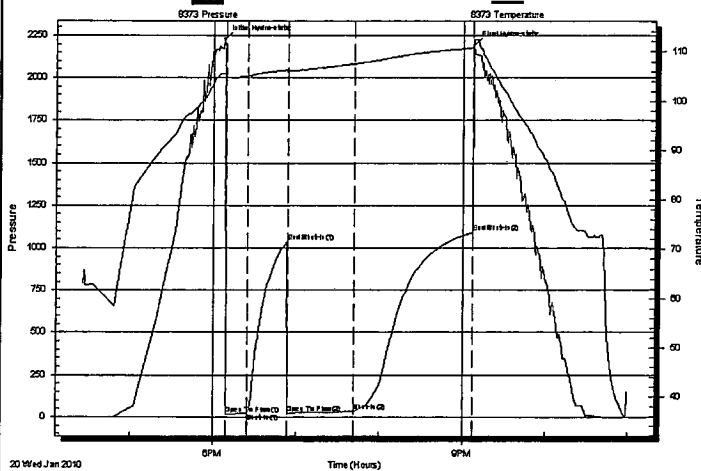
TEST COMMENT: IF: Surface blow built to 1 in 15 min.

IS: No reutr.

FF: No blow.

FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

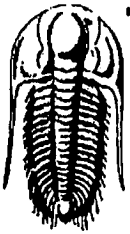
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2227.23	105.52	Initial Hydro-static
2	16.72	104.37	Open To Flow (1)
17	23.63	104.99	Shut-In(1)
46	1037.70	106.27	End Shut-In(1)
46	24.14	105.96	Open To Flow (2)
94	32.67	107.52	Shut-In(2)
180	1091.36	110.82	End Shut-In(2)
181	2189.51	112.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud some oil spots 100%m	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37038

DST#: 6

ATTN: Bob Lewellyn

Test Start: 2010.01.20 @ 16:26:04

Tool Information

Drill Pipe:	Length: 4255.00 ft	Diameter: 3.80 inches	Volume: 59.69 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
			Total Volume: 60.30 bbl	Tool Chased: 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4395.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	89.00 ft			
Tool Length:	113.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

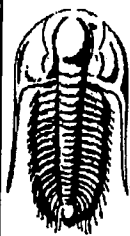
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4372.00	
Shut In Tool	5.00			4377.00	
Hydraulic tool	5.00			4382.00	
Jars	5.00			4387.00	
Safety Joint	3.00			4390.00	
Packer	5.00			4395.00	24.00 Bottom Of Top Packer
Packer - Shale	4.00			4399.00	
Stubb	1.00			4400.00	
Recorder	0.00	8373	Inside	4400.00	
Recorder	0.00	6772	Outside	4400.00	
Perforations	16.00			4416.00	
Change Over Sub	1.00			4417.00	
Drill Pipe	61.00			4478.00	
Change Over Sub	1.00			4479.00	
Bullnose	5.00			4484.00	89.00 Anchor Tool

Total Tool Length: 113.00

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WICHITA, KS



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37038

DST#: 6

ATTN: Bob Lewellyn

Test Start: 2010.01.20 @ 16:26:04

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: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3300.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud some oil spots 100%m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

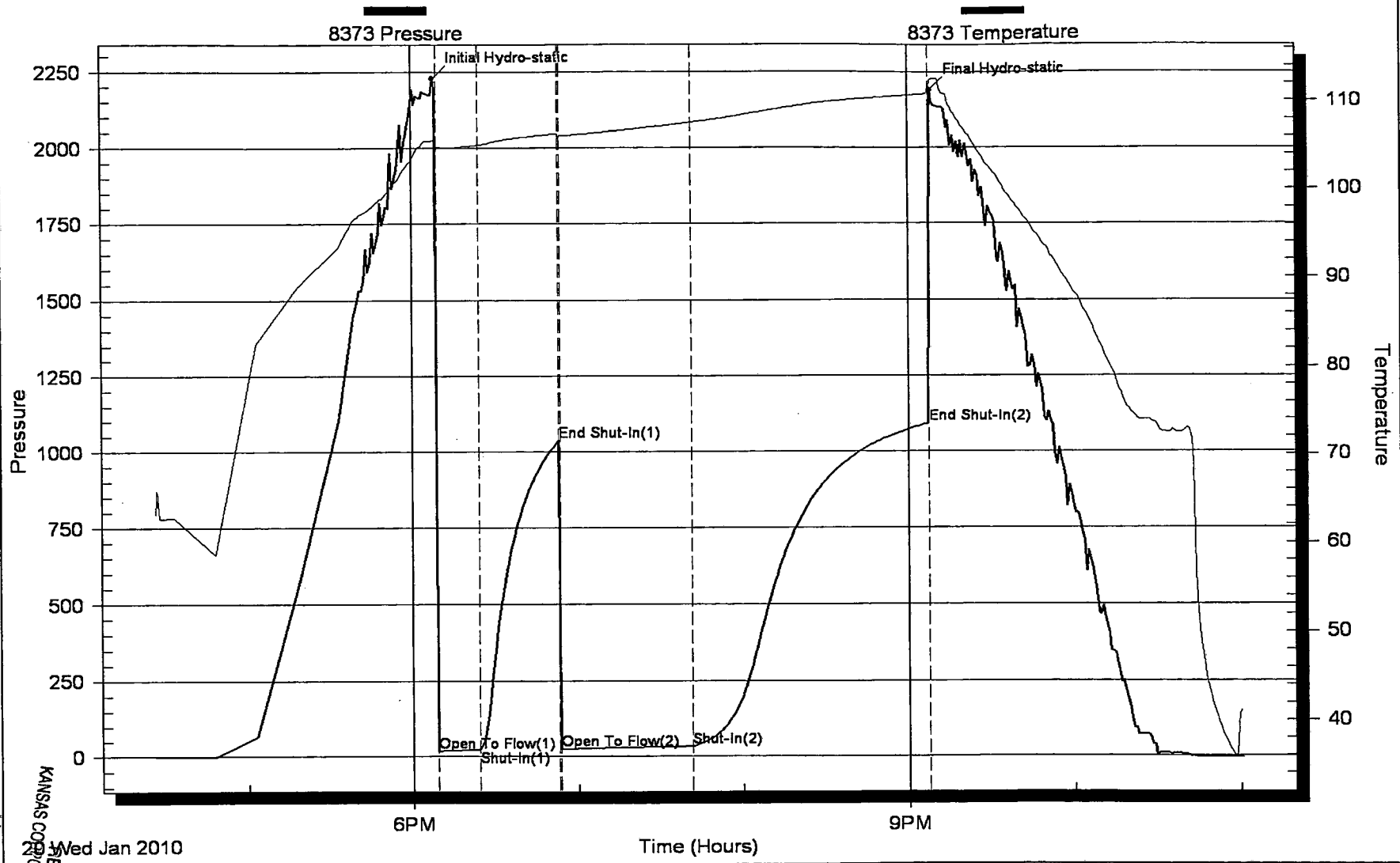
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



CONSERVATION DIVISION
WICHITA, KS

MAY 11 2010

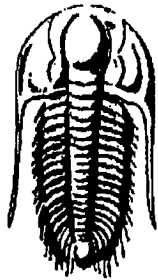
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Wed Jan 2010

Robite Testing, Inc

Ref. No: 37038

Printed: 2010.01.26 @ 13:54:45 Page 5



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Bob Lewellyn

22 17S30W Lane KS

Cramer 1-22

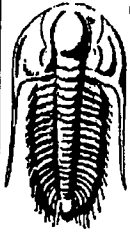
Start Date: 2010.01.21 @ 09:20:27

End Date: 2010.01.21 @ 15:50:21

Job Ticket #: 37039 DST #: 7

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

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CONSERVATION DIVISION
WICHITA, KS



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering

562 W State Rd 4
Olmitsz, KS 67564

ATTN: Bob Lew ellyn

Cramer 1-22

22 17S30W Lane KS

Job Ticket: 37039

DST#: 7

Test Start: 2010.01.21 @ 09:20:27

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:12:07

Time Test Ended: 15:50:21

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: **4478.00 ft (KB) To 4540.00 ft (KB) (TVD)**

Reference Elevations: 2873.00 ft (KB)

Total Depth: 4540.00 ft (KB) (TVD)

2863.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8373 Inside

Press@RunDepth: 23.56 psig @ 4483.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.01.21

End Date: 2010.01.21

Last Calib.: 2010.01.21

Start Time: 09:20:27

End Time: 15:50:21

Time On Btm: 2010.01.21 @ 11:10:22

Time Off Btm: 2010.01.21 @ 13:29:52

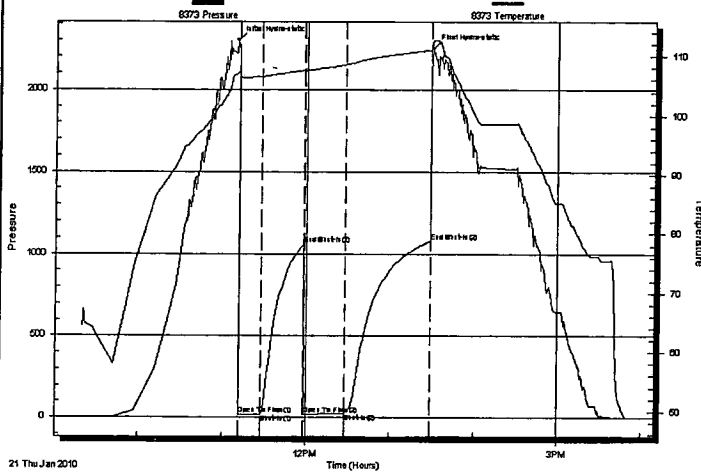
TEST COMMENT: IF: 1/4 blow died in 10 min.

IS: No return.

FF: No blow.

FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

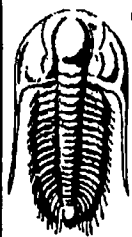
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2298.89	107.24	Initial Hydro-static
2	16.06	106.64	Open To Flow (1)
17	18.42	106.58	Shut-In(1)
48	1058.33	107.69	End Shut-In(1)
49	20.72	107.35	Open To Flow (2)
78	23.56	108.66	Shut-In(2)
139	1076.53	111.11	End Shut-In(2)
140	2250.86	112.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud oil spots 100%m	0.02
1.00	free oil 100%o	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37039

DST#: 7

ATTN: Bob Lew ellyn

Test Start: 2010.01.21 @ 09:20:27

Tool Information

Drill Pipe:	Length: 4350.00 ft	Diameter: 3.80 inches	Volume: 61.02 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 90000.00 lb
		<u>Total Volume:</u>	<u>61.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4478.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

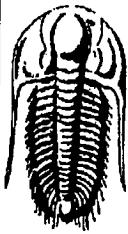
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4455.00	
Shut In Tool	5.00			4460.00	
Hydraulic tool	5.00			4465.00	
Jars	5.00			4470.00	
Safety Joint	3.00			4473.00	
Packer	5.00			4478.00	24.00 Bottom Of Top Packer
Packer - Shale	4.00			4482.00	
Stubb	1.00			4483.00	
Recorder	0.00	8373	Inside	4483.00	
Recorder	0.00	6772	Outside	4483.00	
Perforations	24.00			4507.00	
Change Over Sub	1.00			4508.00	
Drill Pipe	30.00			4538.00	
Change Over Sub	1.00			4539.00	
Bullnose	5.00			4544.00	66.00 Anchor Tool

Total Tool Length: 90.00

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Larson Engineering

Cramer 1-22

562 W State Rd 4
Olmitz, KS 67564

22 17S30W Lane KS

Job Ticket: 37039

DST#: 7

ATTN: Bob Lew ellyn

Test Start: 2010.01.21 @ 09:20:27

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.17 in³

Gas Cushion Type:

Gas Cushion Pressure:

psig

Resistivity: 0.00 ohm.m

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud oil spots 100%m	0.025
1.00	free oil 100%o	0.005

Total Length: 6.00 ft Total Volume: 0.030 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

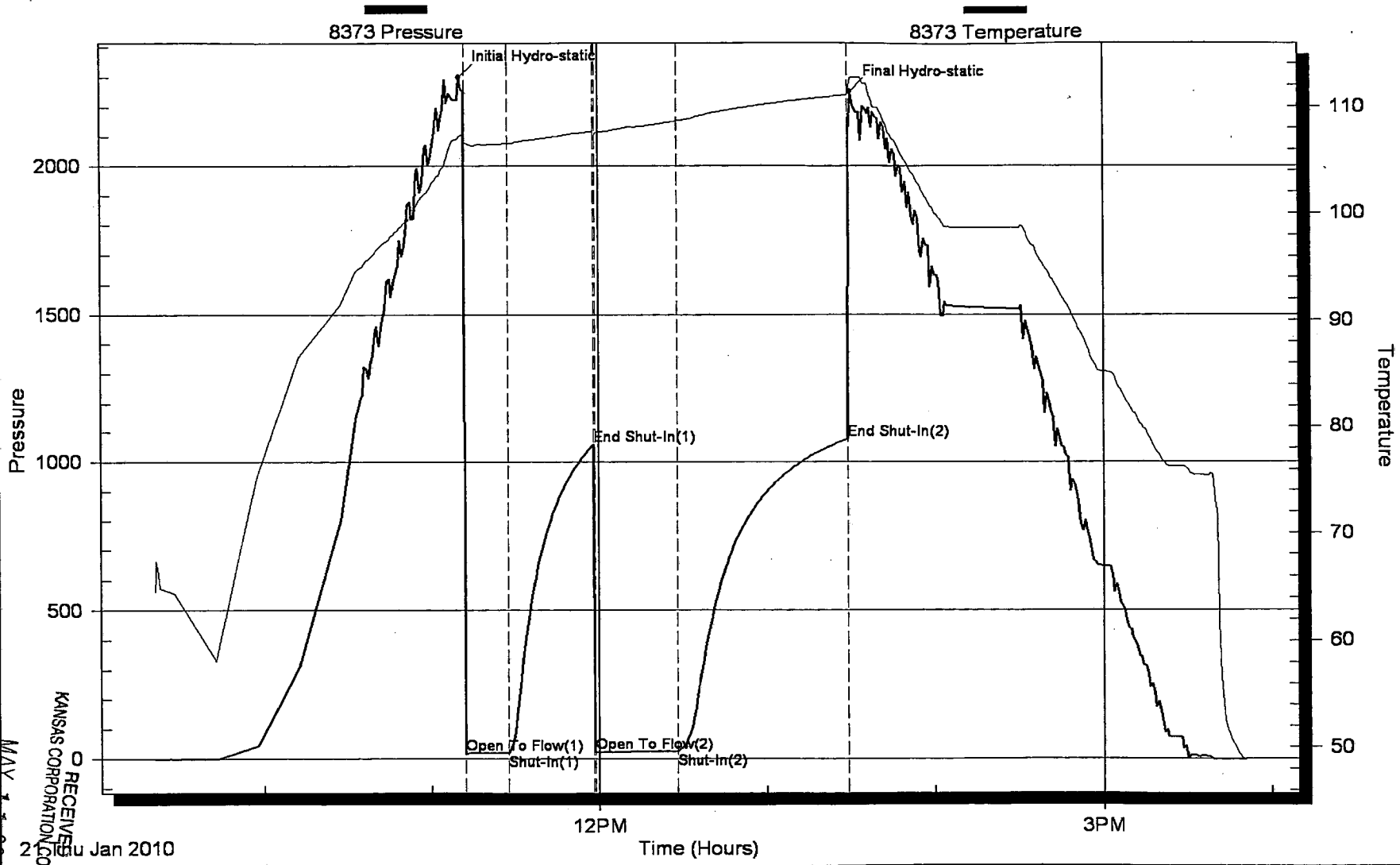
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



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WICHITA, KS

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