

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1252217
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

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

1252217

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

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

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

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

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

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

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

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

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

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

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

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

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Buena Vista 1-18
Doc ID	1252217

Tops

Name	Top	Datum
Anhydrite	2220	+617
Base Anhydrite	2250	+587
Heebner	3924	-1087
Lansing	3962	-1125
Stark Sh	4221	-1384
Marmaton	4352	-1515
Paw Mkr	4415	-1578
Ft. Scott	4467	-1630
Cher Sh	4494	-1657



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

TICKET 28168

PAGE 1 OF 1

SERVICE LOCATIONS: Ness City KS
 1. WELL/PROJECT NO. 1-18 LEASE Buena Vista COUNTY/PARISH Lane STATE KS CITY Dighton DATE 11 Feb 15 OWNER
 2. TICKET TYPE SERVICE SALES CONTRACTOR RIG NAME/NO. 3 SHIPPED DELIVERED TO location ORDER NO.
 3. WELL TYPE oil WELL CATEGORY Development JOB PURPOSE concrete surface pipe WELL PERMIT NO. WELL LOCATION 18-17-29
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE	45	mi			5.00	225.00
576S		1			Pump Charge	1	hr			800.00	800.00
325		1			STANDARD cement	165	sk			12.25	2021.25
279		1			Bentonite gel	300	lb	3	sk	25.00	75.00
278		1			Calcium chloride			4	sk	40.00	160.00
290		1			D-A-R	2	gal			42.00	84.00
581		1			service charge	165	sk			1.50	247.50
583		1			Drayage	16160	lb	363.6	TM	0.25	27270

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 TIME SIGNED 1045 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?				3885.70 3885.45
WE UNDERSTOOD AND MET YOUR NEEDS?				
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Larson TAX @ 7.15%
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				4052.78

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR [Signature] APPROVAL [Signature]
 Thank You!

JOB LOG

SWIFT Services, Inc.

DATE: Feb 15 PAGE NO.

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Adam Engineering		1-18		Buna Vista		Cement surface pipe		28168	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
									165 sk STANDARD cement w/ 2% gel 3/6 CC 8 5/8 x 20" TD = 267' 6 jts 8 5/8"
	0820								on loc TRK 114
	0835								start 8 5/8 x 20" pipe in well
	0935								circulate well
	0940	4	40				250		mix 2 1/2" cement 2% gel @ 14.7ppg 165 sk
	0950	4	16 1/2				250		Displace w/ H ₂ O Cement to surface
	1000								shut in 8 5/8"
	1005								Wash truck
									Back up
	1045								job complete
									Fluks Airt, Blake & TYLER



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

TICKET 28352

SERVICE LOCATIONS: 1. Neosho KS
 2.
 3.
 4. REFERRAL LOCATION

WELL/PROJECT NO. 1-18 LEASE Buena Vista COUNTY/PARISH Lane STATE KS CITY Dighton DATE 22 Feb 15 OWNER
 TICKET TYPE SERVICE SALES CONTRACTOR HD RIG NAME/NO. 3 SHIPPED VIA location DELIVERED TO location ORDER NO.
 WELL TYPE oil WELL CATEGORY Development JOB PURPOSE cement long string 4 1/2" WELL PERMIT NO. WELL LOCATION 18-17-29
 INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE	40	mi			5.00	200.00
578		1			Pump Charge	1	hr			1250.00	1250.00
325		1			STANDARD cement (for 2-2)	165	sk			12.85	2120.25
284		1			cal scal	7	sk			30.00	210.00
283		1			silt	850	lb			0.20	170.00
292		1			hydrant - 322	150	lb			8.00	1200.00
276		1			Floccule	50	lb			2.25	112.50
277		1			Coal scal	1100	lb			0.75	825.00
419		1			Rotating head rental	4 1/2	hr	1	hr	200.00	200.00

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

X
 DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.
 6:00

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				1	6188.75
WE UNDERSTOOD AND MET YOUR NEEDS?				2	2156.75
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Subtotal	8345.50
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Lane TAX 7.15%	455.65
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	8801.15
<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 Byll APPROVAL _____

Thank You!



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

TICKET CONTINUATION

TICKET No. 28352

CUSTOMER Larson Engineering WEA Blue Vista 1-18 DATE 22 Feb 15 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		UNIT PRICE		AMOUNT
		LOC	ACCT	DF			QTY	U/M	QTY	U/M	
280		1				Flooded 21	500	gal	3.00		1500.00
221		1				KCL liquid	200	gal	25.00		5000.00
290		1				D-tir	200	gal	42.00		8400.00
581						SERVICE CHARGE				1.50	247.50
583						MILEAGE CHARGE				0.75	275.25
							TOTAL WEIGHT	18300			
							LOADED MILES	40			
							TON MILES	367			
										CONTINUATION TOTAL	2156.75

JOB LOG

SWIFT Services, Inc.

DATE 22 Feb 13 PAGE NO. 1

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
<u>Wilson Engineering</u>		<u>1-18</u>		<u>Buenavista</u>		<u>cement long string</u>		<u>28352</u>	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
						<u>CRSNG</u>		<u>165 sk 84-2 cement w/ floater & g/s waste</u> <u>4 1/2 x 10.5 # casing 4559' ID=4560'</u> <u>shoejt 4213 part collar 2198'</u>	
	<u>0400</u>							<u>on loc TRK 114</u>	
	<u>0415</u>							<u>Drop ball - circulate - ROTATE</u>	
	<u>0515</u>		<u>5</u>					<u>Pump 5 bbl KCL H₂O</u> <u>Pump 500 gal flocculant</u> <u>Pump 15 bbl KCL H₂O</u>	
			<u>12</u>						
			<u>15</u>						
			<u>6</u>					<u>Plug RTI 30 sk</u>	
	<u>0525</u>	<u>3 1/2</u>	<u>33</u>			<u>250</u>		<u>mix 84-2 cement 135 sk @ 15.3 ppg</u>	
								<u>Drop latch down plug</u> <u>wash out pup line</u>	
	<u>0548</u>	<u>6</u>				<u>250</u>		<u>Displace plug</u>	
		<u>6</u>	<u>67</u>			<u>650</u>			
	<u>0600</u>	<u>6</u>	<u>72</u>			<u>1500</u>		<u>Land plug</u> <u>Release pressure to truck - dried up</u>	
	<u>0620</u>							<u>wash truck</u> <u>Rack up</u>	
	<u>0650</u>							<u>job complete</u> <u>Funke</u> <u>Phat, Blaine, & JARED</u>	



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

TICKET 28290

PAGE 1 OF

SERVICE LOCATIONS
 1. **NESS CITY, KS**
 2.
 3.
 4. REFERRAL LOCATION

WELL/PROJECT NO.
 LEASE: **BUENA VISTA 1-18**
 COUNTY/PARISH: **LANE**
 STATE: **KS**
 CITY: **Amy, KS.**
 DATE: **26 FEB 15**
 OWNER:

TICKET TYPE: SERVICE SALES
 CONTRACTOR: **WILD WEST WELL SERV.**
 RIG NAME/NO.
 SHIPPED VIA
 DELIVERED TO
 ORDER NO.

WELL TYPE: **OIL**
 WELL CATEGORY: **DEVELOPMENT**
 JOB PURPOSE: **CEMENT PORT COLLAR**
 WELL PERMIT NO.
 WELL LOCATION: **1E, 6N, 13E, N1/20**

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE # 115	45		MIL		5 ⁰⁰	225 ⁰⁰
578 576					Pump CHARGE	1		JOB		1250 ⁰⁰	1250 ⁰⁰
276					FLOCEL	54		lbs		2 ²⁵	121 ⁵⁰
290					D-AIR	2 1/2		gal		42 ⁰⁰	105 ⁰⁰
330					SMD CEMENT	215		sk		15 ⁷⁵	3386 ²⁵
581					CEMENT SERVICE CHARGE	275		sk		1 ⁵⁰	412 ⁵⁰
583					DRAVAGE	27320	614.7	lbs	Tm	7 ⁵	461 ⁰³

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

X
 DATE SIGNED: **26 FEB 15** TIME SIGNED: **1430** A.M. P.M.

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				5961	28
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	6219 ⁵⁹

Lanc TAX 7.15%

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

SWIFT OPERATOR: *Jason K...* APPROVAL: _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 26 FEB 15 PAGE NO.

CUSTOMER LARSON ENGINEERING WELL NO. 1-18 LEASE BUENA VISTA JOB TYPE CEMENT PORT COLLAR TICKET NO. 28290

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1200							ON LOCATION.
	1306						1000	TEST-HELD
	1310							OPEN PORT COLLAR
	1313	4	119	✓		400		MIX 2153x5MD
		3	8	✓		400		DISPLACE CEMENT
								CIRCULATE 20SX TO PIT
	1347						1000	CLOSE PORT COLLAR-TEST-HELD
								RUN LUTS.
	1359	3 1/2	20				1000	REVERSE CLEAN
	1410							WASH TRUCK
	1430							JOB COMPLETE.
								THANKS # 115
								JASON DAVE COLE ISAAC



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Buena Vista #1-18

18-17s-29w Lane,KS

Start Date: 2015.02.17 @ 16:30:27

End Date: 2015.02.17 @ 22:30:42

Job Ticket #: 61467 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.02.23 @ 10:52:52



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc
 562 W State Rd 4
 Olmitz, KS 67564
 ATTN: Vern Schrag

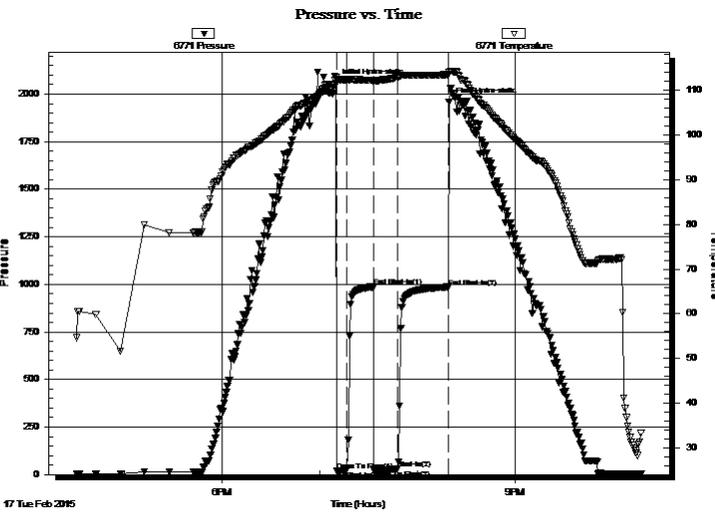
18-17s-29w Lane, KS
Buena Vista #1-18
 Job Ticket: 61467 **DST#: 1**
 Test Start: 2015.02.17 @ 16:30:27

GENERAL INFORMATION:

Formation: **LKC J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:10:12
 Time Test Ended: 22:30:42
 Interval: **4189.00 ft (KB) To 4210.00 ft (KB) (TVD)**
 Total Depth: 4210.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane McBride
 Unit No: 84
 Reference Elevations: 2837.00 ft (KB)
 2829.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 6771 Outside
 Press@RunDepth: 29.85 psig @ 4190.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.17 End Date: 2015.02.17 Last Calib.: 2015.02.17
 Start Time: 16:30:27 End Time: 22:17:42 Time On Btm: 2015.02.17 @ 19:09:57
 Time Off Btm: 2015.02.17 @ 20:19:27

TEST COMMENT: Surface blow
 No return
 Weak surface blow in 5 min.
 No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2055.55	112.97	Initial Hydro-static
1	18.24	112.28	Open To Flow (1)
7	19.96	112.28	Shut-In(1)
23	986.78	112.29	End Shut-In(1)
24	22.53	111.91	Open To Flow (2)
38	29.85	113.00	Shut-In(2)
70	985.48	113.54	End Shut-In(2)
70	1958.16	114.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud w/oil spots 100%m	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

18-17s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61467

DST#: 1

ATTN: Vern Schrag

Test Start: 2015.02.17 @ 16:30:27

Tool Information

Drill Pipe:	Length: 4046.00 ft	Diameter: 3.80 inches	Volume: 56.75 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: 25000.00 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: 57.36 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4189.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	49.00 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			4162.00	
Shut In Tool	5.00			4167.00	
Hydraulic tool	5.00			4172.00	
Jars	5.00			4177.00	
Safety Joint	3.00			4180.00	
Packer	5.00			4185.00	28.00 Bottom Of Top Packer
Packer	4.00			4189.00	
Stubb	1.00			4190.00	
Recorder	0.00	6771	Outside	4190.00	
Recorder	0.00	8844	Inside	4190.00	
Perforations	15.00			4205.00	
Bullnose	5.00			4210.00	21.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

18-17s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61467

DST#: 1

ATTN: Vern Schrag

Test Start: 2015.02.17 @ 16:30:27

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud w /oil spots 100%m	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

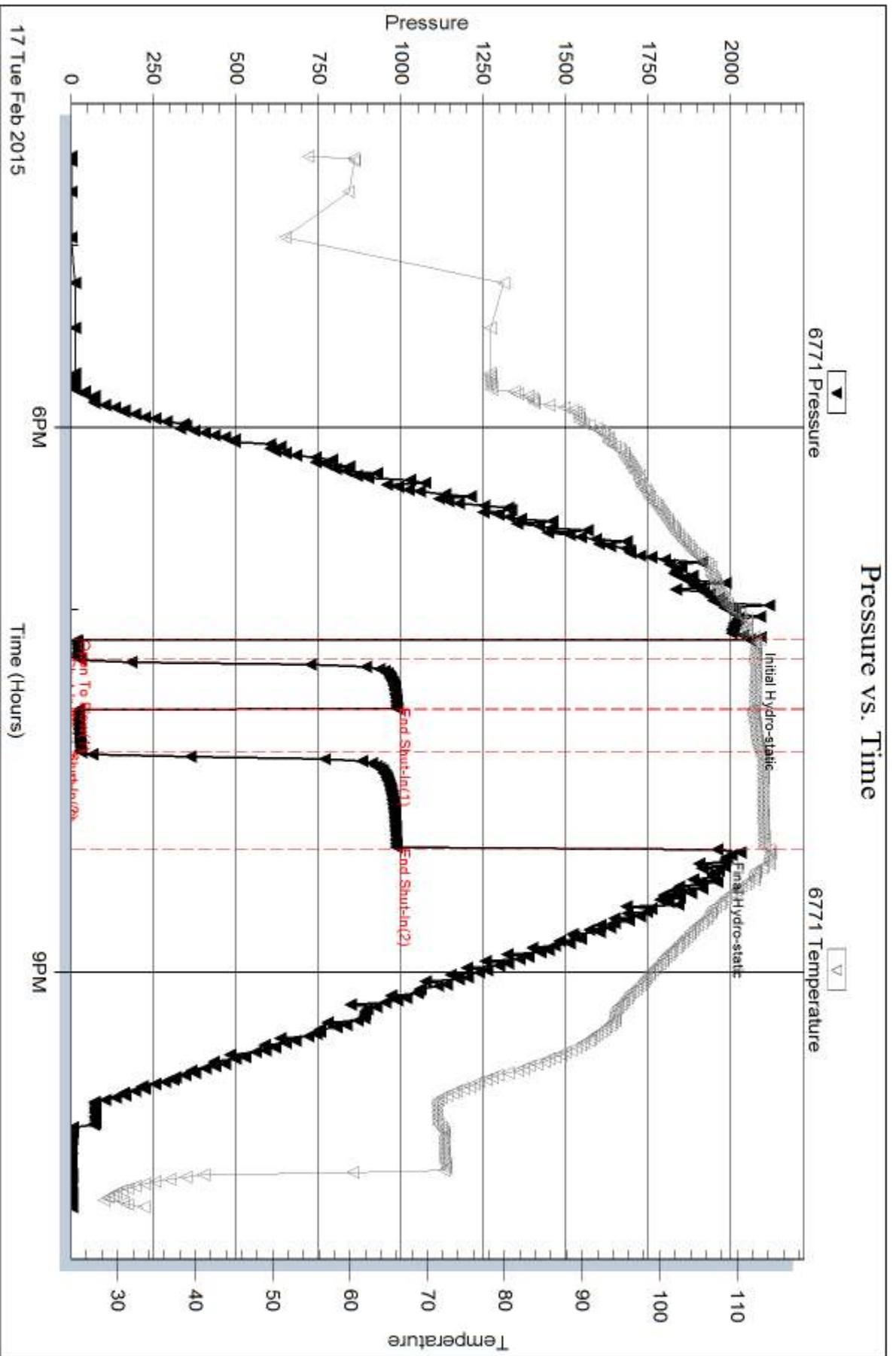
Num Gas Bombs: 0

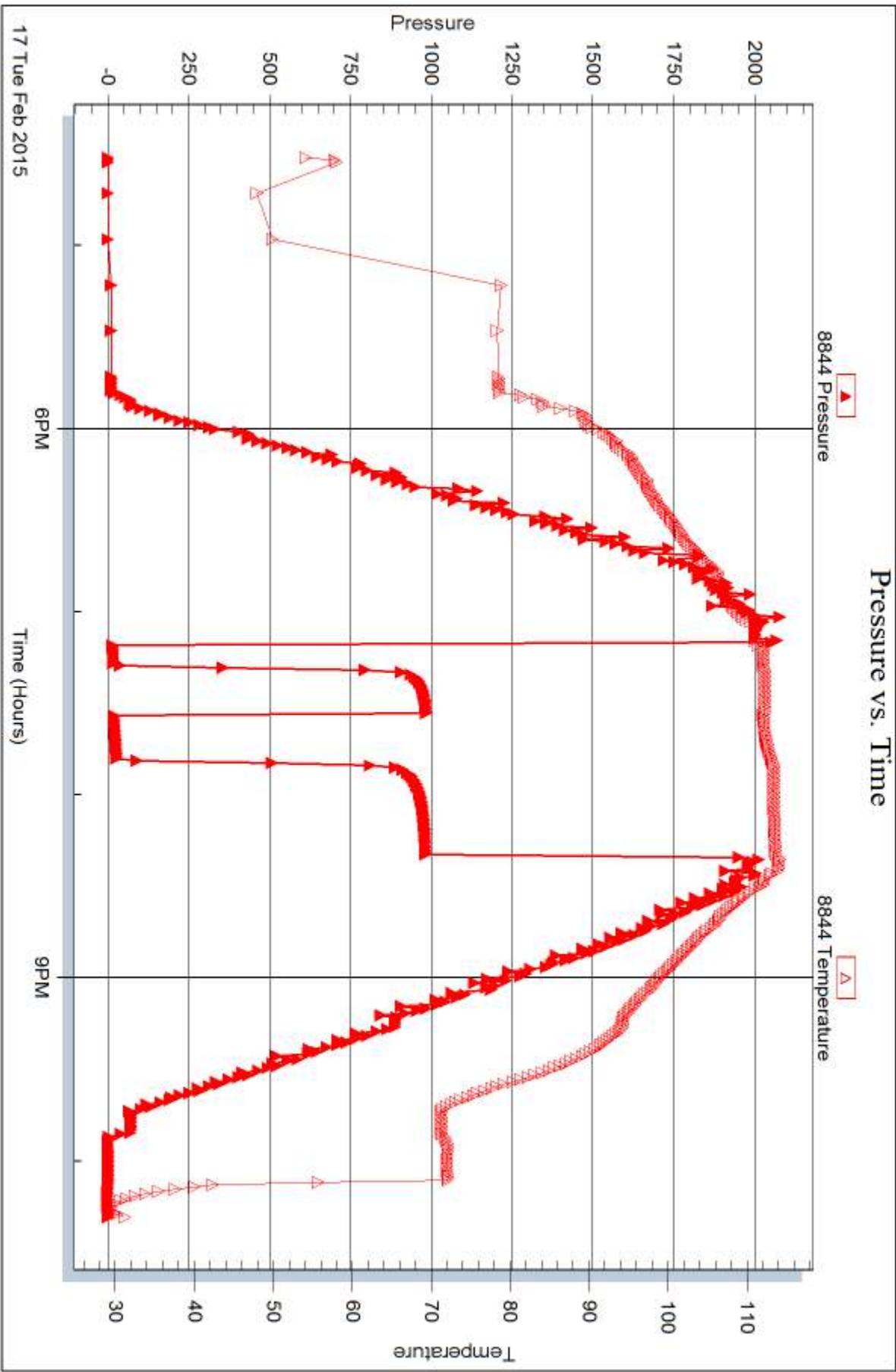
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Buena Vista #1-18

18-17s-29w Lane,KS

Start Date: 2015.02.18 @ 09:10:34

End Date: 2015.02.18 @ 14:30:19

Job Ticket #: 61468 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.02.23 @ 10:49:25



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering Inc

18-17s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

ATTN: Vern Schrag

Job Ticket: 61468

DST#: 2

Test Start: 2015.02.18 @ 09:10:34

GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:14:34

Time Test Ended: 14:30:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 84

Interval: 4220.00 ft (KB) To 4232.00 ft (KB) (TVD)

Reference Elevations: 2837.00 ft (KB)

Total Depth: 42132.00 ft (KB) (TVD)

2829.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6771 Outside

Press@RunDepth: 19.68 psig @ 4221.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.18

End Date:

2015.02.18

Last Calib.:

2015.02.18

Start Time: 09:10:34

End Time:

14:18:19

Time On Btm:

2015.02.18 @ 11:14:19

Time Off Btm:

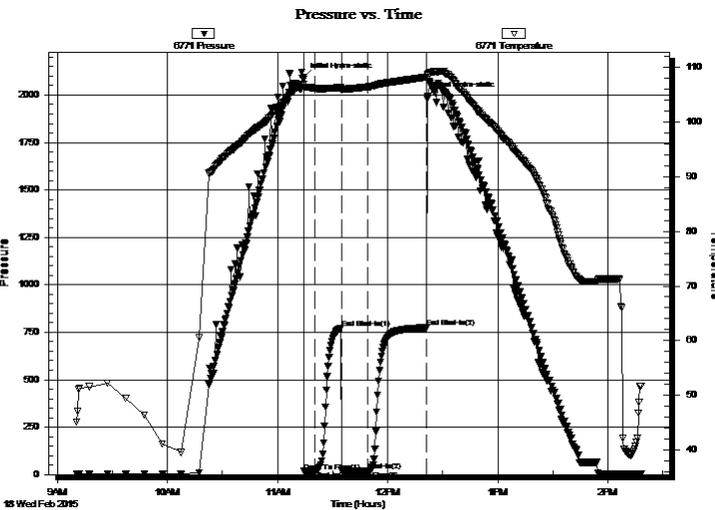
2015.02.18 @ 12:21:49

TEST COMMENT: Surface blow died in 5 min.

No return

No blow

No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2094.21	106.99	Initial Hydro-static
1	17.17	106.33	Open To Flow (1)
6	19.26	106.21	Shut-In(1)
21	772.85	106.33	End Shut-In(1)
21	18.12	105.92	Open To Flow (2)
35	19.68	106.49	Shut-In(2)
67	774.59	108.26	End Shut-In(2)
68	1992.69	108.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud 100% m	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

18-17s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61468

DST#: 2

ATTN: Vern Schrag

Test Start: 2015.02.18 @ 09:10:34

Tool Information

Drill Pipe:	Length: 4078.00 ft	Diameter: 3.80 inches	Volume: 57.20 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: 25000.00 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: 57.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4220.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 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			4193.00	
Shut In Tool	5.00			4198.00	
Hydraulic tool	5.00			4203.00	
Jars	5.00			4208.00	
Safety Joint	3.00			4211.00	
Packer	5.00			4216.00	28.00 Bottom Of Top Packer
Packer	4.00			4220.00	
Stubb	1.00			4221.00	
Recorder	0.00	6771	Outside	4221.00	
Recorder	0.00	8844	Inside	4221.00	
Perforations	6.00			4227.00	
Bullnose	5.00			4232.00	12.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

18-17s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61468

DST#: 2

ATTN: Vern Schrag

Test Start: 2015.02.18 @ 09:10:34

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud 100%m	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

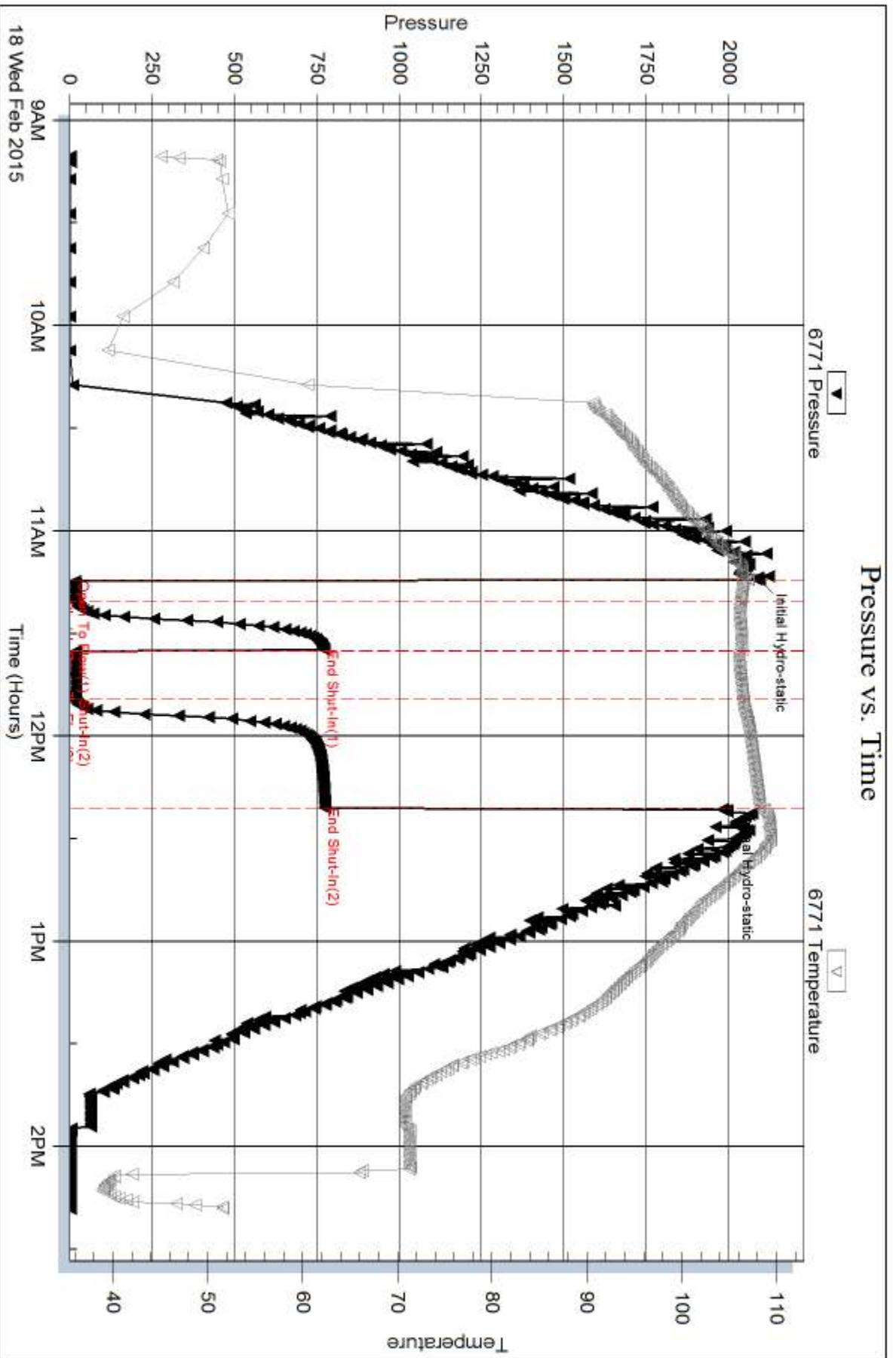
Num Gas Bombs: 0

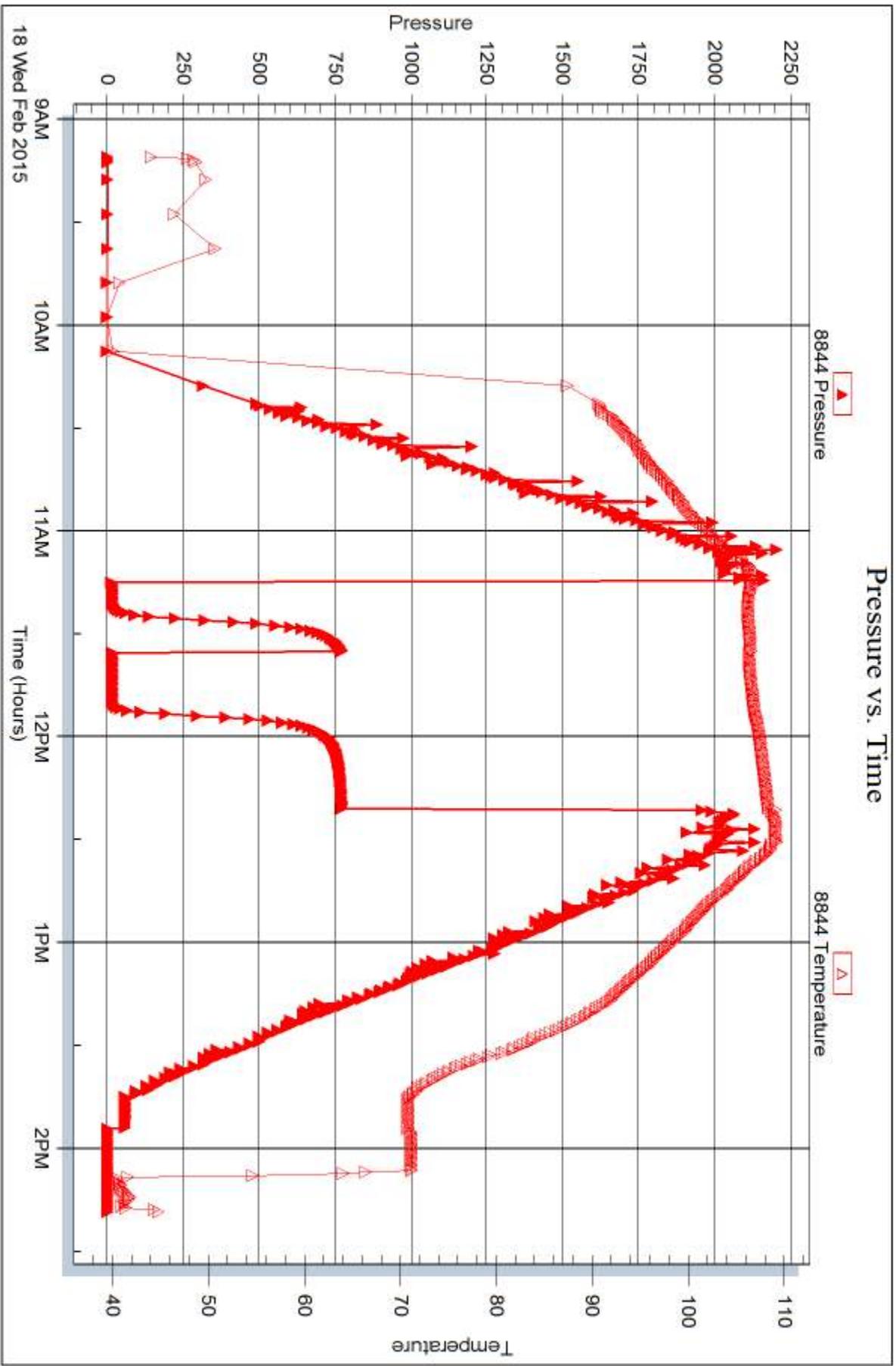
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Buena Vista #1-18

18-17s-29w Lane,KS

Start Date: 2015.02.19 @ 21:51:02

End Date: 2015.02.20 @ 04:30:02

Job Ticket #: 61469 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.02.23 @ 10:48:25



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering Inc

18-17s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

ATTN: Vern Schrag

Job Ticket: 61469

DST#: 3

Test Start: 2015.02.19 @ 21:51:02

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:02:02

Time Test Ended: 04:30:02

Interval: 4299.00 ft (KB) To 4400.00 ft (KB) (TVD)

Total Depth: 4400.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 84

Reference Elevations: 2837.00 ft (KB)

2829.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8844 Inside

Press@RunDepth: 365.25 psig @ 4300.00 ft (KB)

Start Date: 2015.02.19

End Date:

2015.02.20

Start Time: 21:51:02

End Time:

04:17:02

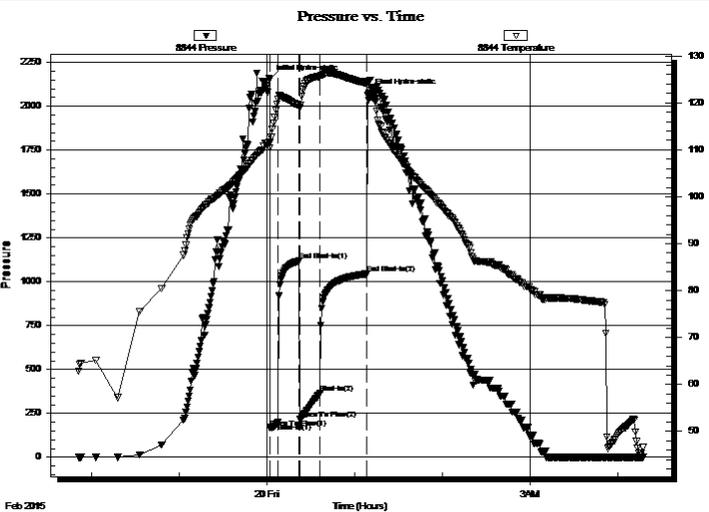
Capacity: 8000.00 psig

Last Calib.: 2015.02.20

Time On Btm: 2015.02.20 @ 00:01:47

Time Off Btm: 2015.02.20 @ 01:09:17

TEST COMMENT: B.O.B. in 2 min.
3" return blow
B.O.B. in 1 min
10" return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2154.07	111.56	Initial Hydro-static
1	166.12	110.36	Open To Flow (1)
6	197.87	120.70	Shut-In(1)
20	1119.58	119.46	End Shut-In(1)
21	218.59	118.95	Open To Flow (2)
35	365.25	125.66	Shut-In(2)
67	1045.78	124.16	End Shut-In(2)
68	2073.75	124.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	g m c o 30g 30m 40o	0.59
120.00	g s m c o 30g 10m 60o	1.65
615.00	c g o 25g 75o	8.63
0.00	1125' gas in pipe	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

18-17s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61469

DST#: 3

ATTN: Vern Schrag

Test Start: 2015.02.19 @ 21:51:02

Tool Information

Drill Pipe:	Length: 4171.00 ft	Diameter: 3.80 inches	Volume: 58.51 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:	25000.00 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: 59.12 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	66000.00 lb
Depth to Top Packer:	4299.00 ft			Final	69000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	101.00 ft				
Tool Length:	129.00 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			4272.00	
Shut In Tool	5.00			4277.00	
Hydraulic tool	5.00			4282.00	
Jars	5.00			4287.00	
Safety Joint	3.00			4290.00	
Packer	5.00			4295.00	28.00 Bottom Of Top Packer
Packer	4.00			4299.00	
Stubb	1.00			4300.00	
Recorder	0.00	6771	Outside	4300.00	
Recorder	0.00	8844	Inside	4300.00	
Perforations	30.00			4330.00	
Change Over Sub	1.00			4331.00	
Drill Pipe	63.00			4394.00	
Change Over Sub	1.00			4395.00	
Bullnose	5.00			4400.00	101.00 Bottom Packers & Anchor

Total Tool Length: 129.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

18-17s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61469

DST#: 3

ATTN: Vern Schrag

Test Start: 2015.02.19 @ 21:51:02

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	g m c o 30g 30m 40o	0.590
120.00	g s m c o 30g 10m 60o	1.647
615.00	c g o 25g 75o	8.627
0.00	1125' gas in pipe	0.000

Total Length: 855.00 ft

Total Volume: 10.864 bbl

Num Fluid Samples: 0

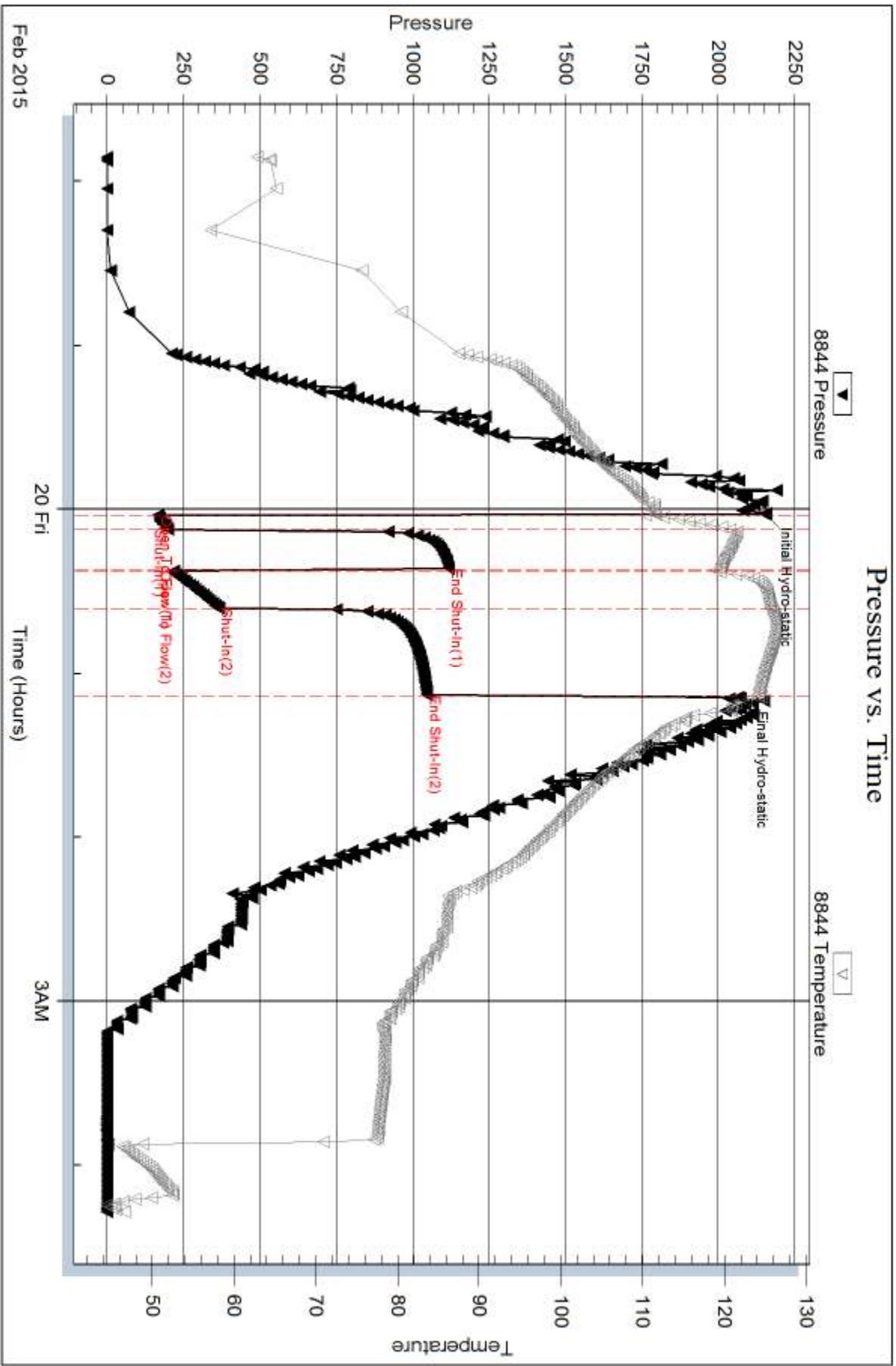
Num Gas Bombs: 0

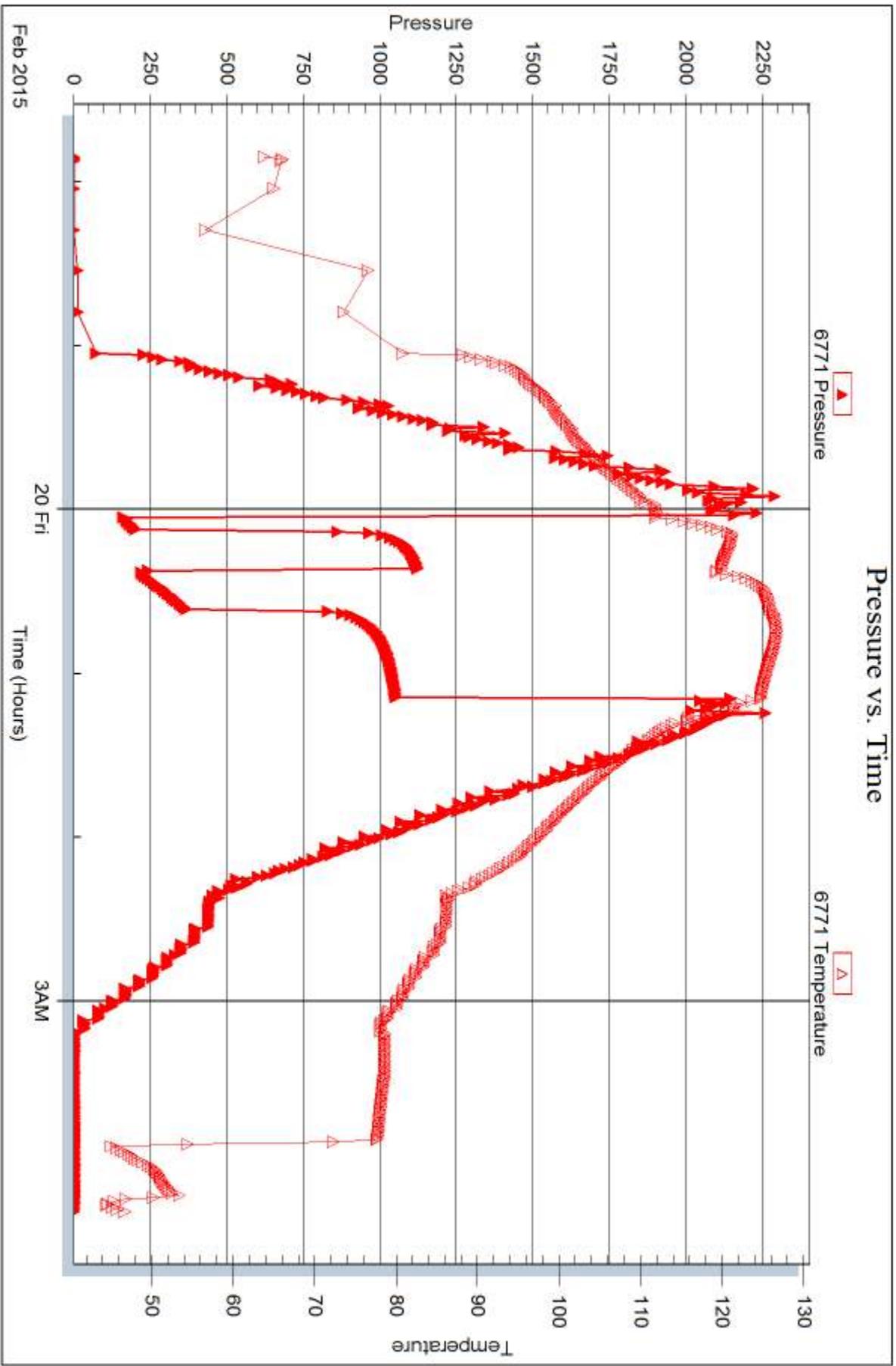
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Vern Schrag

Buena Vista #1-18

18-17s-29w Lane,KS

Start Date: 2015.02.21 @ 01:11:04

End Date: 2015.02.21 @ 07:00:34

Job Ticket #: 61470 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.02.23 @ 10:41:51



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc
 562 W State Rd 4
 Olmitz, KS 67564
 ATTN: Vern Schrag

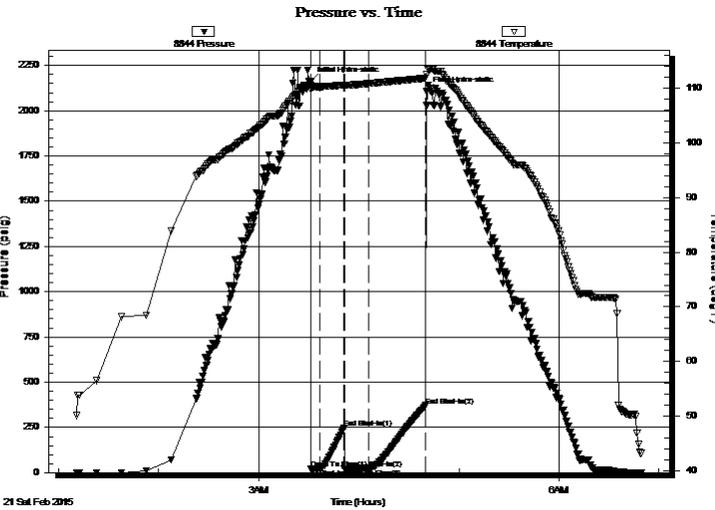
18-17s-29w Lane, KS
Buena Vista #1-18
 Job Ticket: 61470 **DST#: 4**
 Test Start: 2015.02.21 @ 01:11:04

GENERAL INFORMATION:

Formation: **Cherokee**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:31:19
 Time Test Ended: 07:00:34
 Interval: **4408.00 ft (KB) To 4560.00 ft (KB) (TVD)**
 Total Depth: 4560.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Shane McBride
 Unit No: 84
 Reference Elevations: 2837.00 ft (KB)
 2829.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8844 **Inside**
 Press@RunDepth: 22.95 psig @ 4409.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.21 End Date: 2015.02.21 Last Calib.: 2015.02.21
 Start Time: 01:11:04 End Time: 06:49:34 Time On Btm: 2015.02.21 @ 03:31:04
 Time Off Btm: 2015.02.21 @ 04:40:34

TEST COMMENT: 3/4" blow died back to 1/4"
 No return
 Weak surface blow died in 4 min.
 No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2161.17	110.63	Initial Hydro-static
1	19.95	109.75	Open To Flow (1)
6	21.14	110.30	Shut-In(1)
20	244.52	110.59	End Shut-In(1)
21	21.20	110.48	Open To Flow (2)
35	22.95	110.87	Shut-In(2)
69	370.70	111.86	End Shut-In(2)
70	2109.97	112.48	Final Hydro-static

Recovery

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

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

18-17s-29w Lane,KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61470

DST#: 4

ATTN: Vern Schrag

Test Start: 2015.02.21 @ 01:11:04

Tool Information

Drill Pipe:	Length: 4266.00 ft	Diameter: 3.80 inches	Volume: 59.84 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: 25000.00 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: 60.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4408.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	152.00 ft			
Tool Length:	180.00 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			4381.00	
Shut In Tool	5.00			4386.00	
Hydraulic tool	5.00			4391.00	
Jars	5.00			4396.00	
Safety Joint	3.00			4399.00	
Packer	5.00			4404.00	28.00 Bottom Of Top Packer
Packer	4.00			4408.00	
Stubb	1.00			4409.00	
Recorder	0.00	6771	Outside	4409.00	
Recorder	0.00	8844	Inside	4409.00	
Perforations	19.00			4428.00	
Change Over Sub	1.00			4429.00	
Drill Pipe	125.00			4554.00	
Change Over Sub	1.00			4555.00	
Bullnose	5.00			4560.00	152.00 Bottom Packers & Anchor

Total Tool Length: 180.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

18-17s-29w Lane, KS

562 W State Rd 4
Olmitz, KS 67564

Buena Vista #1-18

Job Ticket: 61470

DST#: 4

ATTN: Vern Schrag

Test Start: 2015.02.21 @ 01:11:04

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

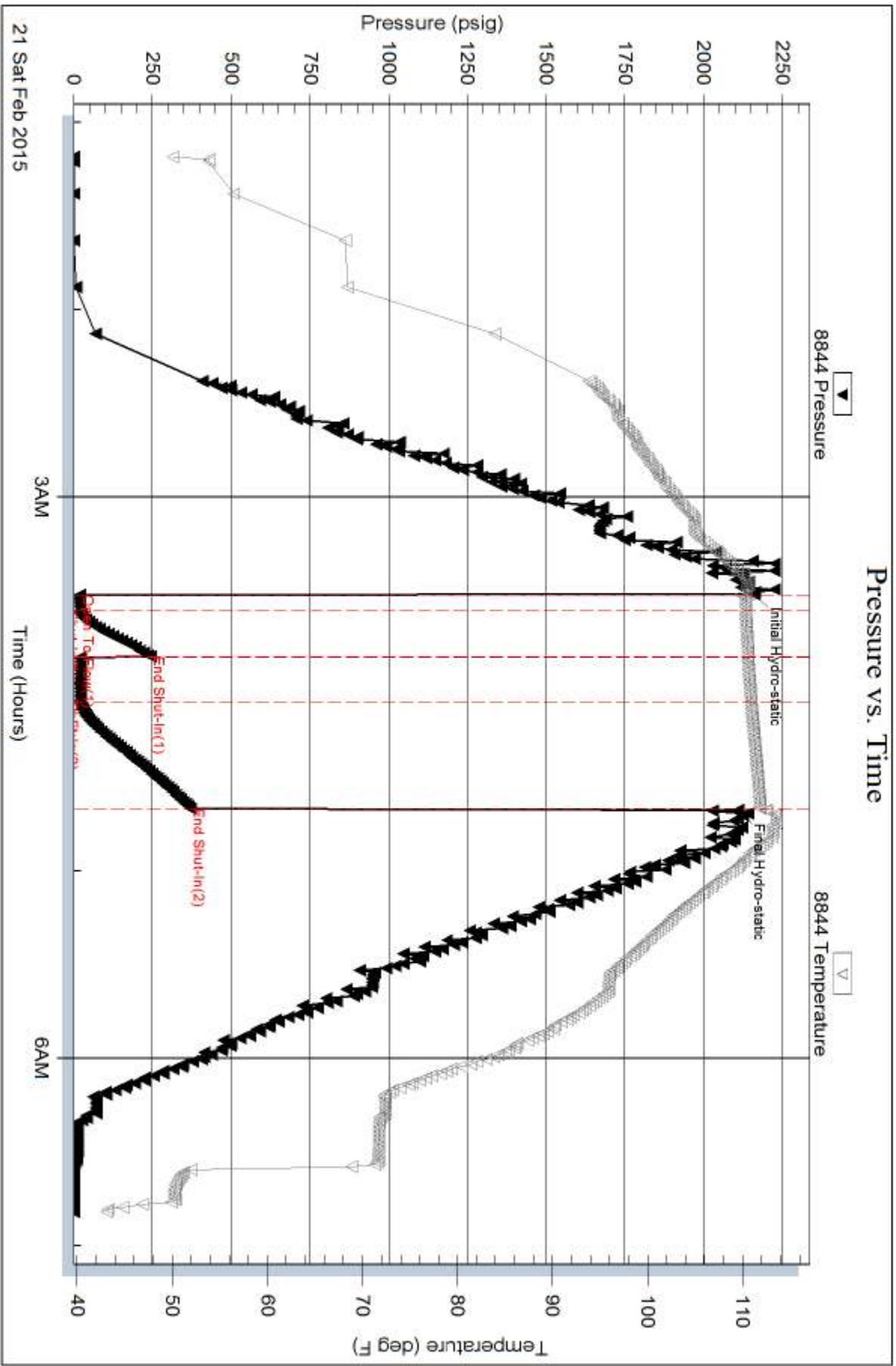
Num Gas Bombs: 0

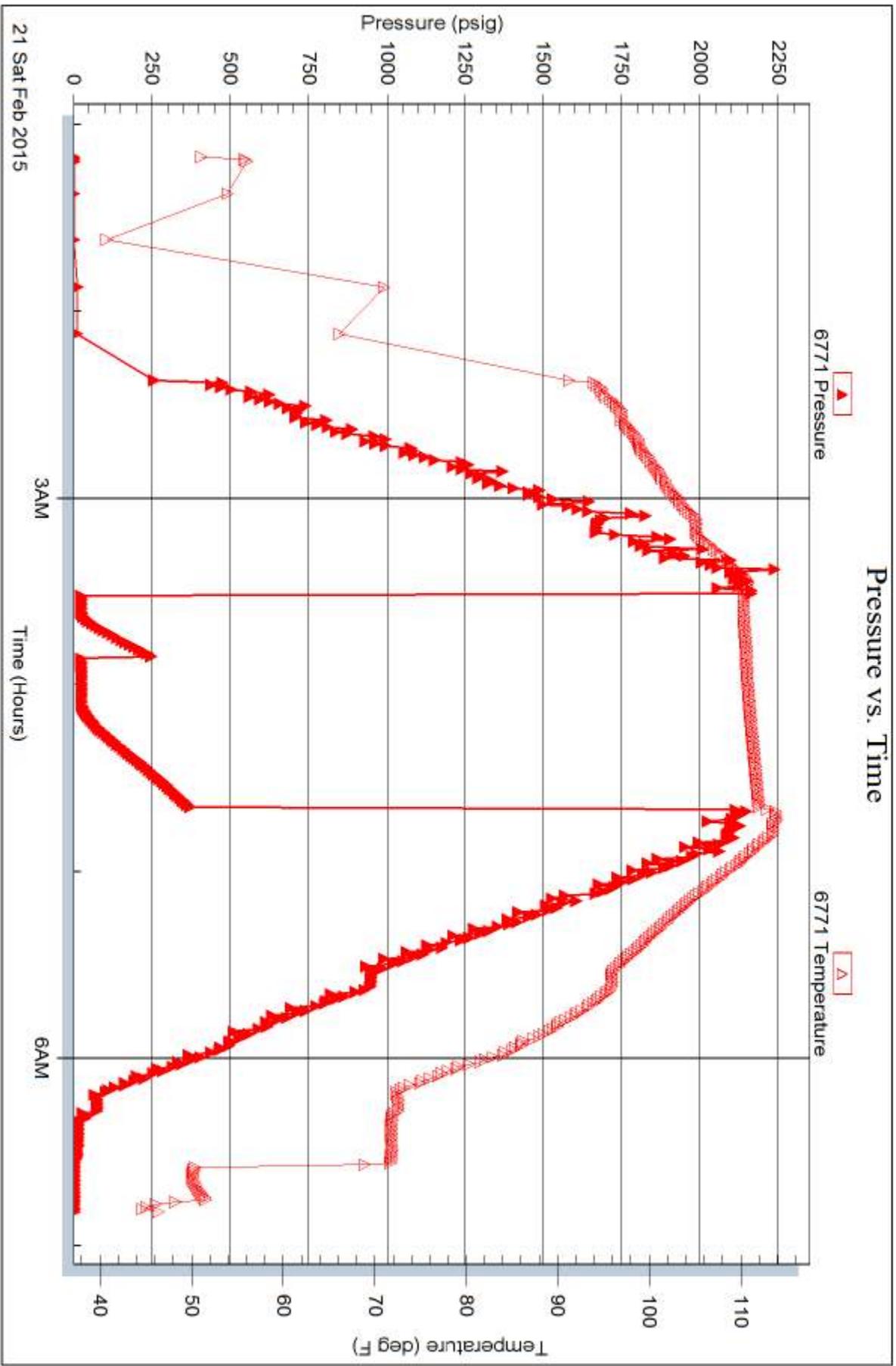
Serial #:

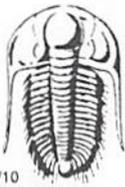
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61467

Well Name & No. Buena Vista #1-18 Test No. #1 Date 2/17/15
 Company Parson Engineering Inc Elevation 2837 KB 2829 GL
 Address 562 W State Rd #1, Okmütz KS
 Co. Rep / Geo Ken Schrag Rig HD #3
 Location: Sec. 18 Twp. 17S Rge. 29W Co. Dane State KS

Interval Tested 4189 - 4210 Zone Tested J
 Anchor Length 21 Drill Pipe Run 4046 Mud Wt. 9.2
 Top Packer Depth 4184 Drill Collars Run 124 Vis 50
 Bottom Packer Depth 4189 Wt. Pipe Run _____ WL 8.0
 Total Depth 4210 Chlorides 2000 ppm System LCM #1

Blow Description Surface blow
No return
Weak surface blow at 3 min.
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>Mud w/ oil spots</u>	<u>spots</u>		<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

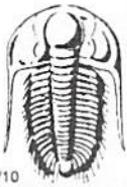
Rec Total 3' BHT 114° Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2055 Test 1150 T-On Location 15:25
 (B) First Initial Flow 18 Jars 250 T-Started 16:30
 (C) First Final Flow 19 Safety Joint 75 T-Open 19:00
 (D) Initial Shut-In 986 Circ Sub N/A T-Pulled 20:15
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out _____
 (F) Second Final Flow 29 Mileage 50 RT 50 Comments _____
 (G) Final Shut-In 985 Sampler _____
 (H) Final Hydrostatic 1958 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1525
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1525

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30

Approved By James C Schrag Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or person of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61468

Well Name & No. Buena Vista #1-18 Test No. #2 Date 2/18/15
 Company Hanson Engineering Inc. Elevation 2937 KB 2829 GL
 Address 562 W State Rd 4 Chautauk, KS
 Co. Rep / Geo. Vern Schrag Rig H.D. #3
 Location: Sec. 18 Twp. 17S Rge. 29W Co. Law State KS

Interval Tested 4220 4232 Zone Tested R
 Anchor Length _____ Drill Pipe Run 4078 Mud Wt. 9.1
 Top Packer Depth 4213 Drill Collars Run 124 Vis 54
 Bottom Packer Depth 4220 Wt. Pipe Run _____ WL 6.0
 Total Depth 4232 Chlorides 2400 ppm System LCM #2

Blow Description Surface blow dried at 5min
No return
No blow
No return

Rec	Feet of	%gas	%oil	%water	%mud
1	Mud			100	

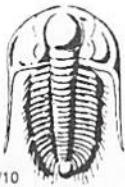
Rec Total 1 BHT 109 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2094 Test 1150 T-On Location 08:15
 (B) First Initial Flow 17 Jars 250 T-Started 09:00
 (C) First Final Flow 19 Safety Joint 75 T-Open 11:14
 (D) Initial Shut-In 772 Circ Sub N/C T-Pulled 12:21
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out _____
 (F) Second Final Flow 19 Mileage 300 50 Comments _____
 (G) Final Shut-In 774 Sampler _____
 (H) Final Hydrostatic 1992 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30
 Sub Total 0
 Total 1525
 MP/DST Disc't _____
 Sub Total 1525

Approved By Vernon C Schrag Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61469

4/10

Well Name & No. Buena Vista #1-18 Test No. #3 Date 2/20/15
 Company Larson Engineering Inc. Elevation 2837 KB 2829 GL
 Address 562 West State Rd 4, Okm #2, Ks
 Co. Rep / Geo. Vern Schrag Rig H.D. #3
 Location: Sec. 18 Twp. 17s Rge. 29w Co. Lane State Ks

Interval Tested 4299 4400 Zone Tested Marmaton
 Anchor Length 101 Drill Pipe Run 4171' Mud Wt. 9.1
 Top Packer Depth 4294 Drill Collars Run 124' Vis 55
 Bottom Packer Depth 4299 Wt. Pipe Run --- WL 4.0
 Total Depth 4400 Chlorides 1700 ppm System LCM #1

Blow Description B.O.B. in 2 min
3" in Return
B.O.B. in 1 min
10" in Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>615'</u>	<u>CGO</u>	<u>25%</u>	<u>75%</u>		
<u>120'</u>	<u>gsmco</u>	<u>30%</u>	<u>60%</u>	<u>10%</u>	
<u>120'</u>	<u>gmc0</u>	<u>30%</u>	<u>40%</u>	<u>30%</u>	

Rec Total 855' BHT Gravity 30 API RW --- @ --- °F Chlorides --- ppm

(A) Initial Hydrostatic 2154 Test 1150 T-On Location 21:05 2/19
 (B) First Initial Flow 166 Jars 250 T-Started 21:50
 (C) First Final Flow 197 Safety Joint 75 T-Open 00:01
 (D) Initial Shut-In 1119 Circ Sub N/C T-Pulled 01:06
 (E) Second Initial Flow 218 Hourly Standby _____ T-Out 04:30
 (F) Second Final Flow 365 Mileage 3000 50 Comments _____
 (G) Final Shut-In 1045 Sampler _____
 (H) Final Hydrostatic 2073 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30
 Day Standby 1d 9.75h
 Accessibility _____
 Sub Total 1525 MP/DST Disc't _____

Approved By Vern Schrag Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **61470**

Well Name & No. Buena Vista #1-18 Test No. #4 Date 2/21/13
 Company Larson Engineering Inc. Elevation 2837 KB 2829 GL
 Address 362 West State Rd N, Chmitz, KS
 Co. Rep / Geo. Verd Schrag Rig A.D. #3
 Location: Sec. 18 Twp. 17S Rge. 29W Co. Lane State KS

Interval Tested 4408 4560 Zone Tested Chero Ree
 Anchor Length 152 Drill Pipe Run 4266' Mud Wt. 9.1'
 Top Packer Depth 4403 Drill Collars Run 124 Vis 53
 Bottom Packer Depth 4408 Wt. Pipe Run --- WL 6.0
 Total Depth 4560 Chlorides 1700 ppm System LCM #1

Blow Description 3/4" blow died back to 1/4" w.
No return
Weak surface blow died w 4 min w
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 112° Gravity --- API RW --- @ --- °F Chlorides --- ppm

(A) Initial Hydrostatic <u>2161</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>00:40</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>01:10</u>
(C) First Final Flow <u>21</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>03:30</u>
(D) Initial Shut-In <u>244</u>	<input checked="" type="checkbox"/> Circ Sub <u>w/c</u>	T-Pulled <u>04:35</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>07:00</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>50 RT</u> <u>50</u>	Comments <u>Auto Released</u>
(G) Final Shut-In <u>370</u>	<input type="checkbox"/> Sampler	<u>3 Loaded Tool</u>
(H) Final Hydrostatic <u>2109</u>	<input type="checkbox"/> Straddle	<u>2/21/13 @ 07:00 AM.</u>

Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1525</u>

Approved By Jermol Ashby Sub Total 1525 Our Representative [Signature]

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WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: Buena Vista #1-18
Location: C S/2 SEC. 18-17S-29 (Irregular Section)
Licence Number: API: 15-101-22553
Spud Date: February 10, 2015
Surface Coordinates: 1220' FSL & 2532' FWL
Region: Lane Co., KS
Drilling Completed: February 21, 2015

Bottom Hole Coordinates:
Ground Elevation (ft): 2828' K.B. Elevation (ft): 2837'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4560'
Formation: Post Mississippi Conglomerate
Type of Drilling Fluid: Chemical Premix (Displaced)
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: Larson Engineering Inc.
Address: 562 West State Road 4
Olmits, KS 67564-8561

DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3 (Co. Tools)

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 556', Kelly 40.30', Tool Joint 5.5"; Bit: JZ-HA20Q, 7-7/8", standard jets 15-15-15; rpm 80, WOB 35k; Kelly Bushing 9' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

Set 8-5/8" casing at 264'
Set 4-1/2" production casing 4559'

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, earth pits, Morgan Mud, Inc., Cade Lines.

OPEN HOLE LOGS:

DN, DI (SP) (Run-1); ML (Run-2); No Sonic; 5" detail LTD-3600; 2" DI to surface casing; LogTech-Pioneer Wireline, Hays, KS, Chris Desaire, Log total depth (4556') was four feet short to rotary total depth (4560').

DRILL STEM TEST #1:

LKC (J-zone): Interval: 4189-4210 (21'): Blow: surf blow IFF, no RB, surf blow FFP, no RB; Times: 5-15-15-30; Recovery: 3' mud w/oil spots; Pressures: HP: 2055-1958, SIP: 986-985, FP: 18-19, 22-29; BHT: 114 F; Trilobite Testing, Inc., Scott City, KS, Shane McBride.

DRILL STEM TEST #2:

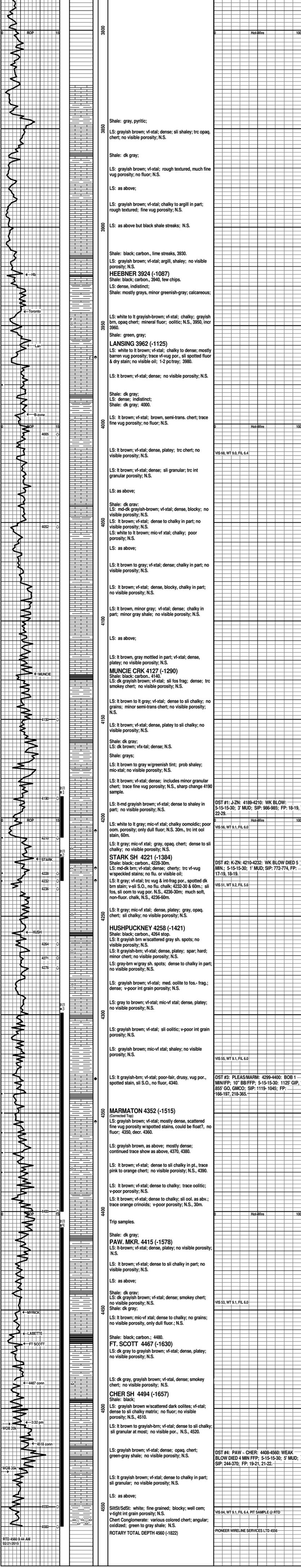
LKC (K-zone): Interval: 4210-4232 (12'): Blow: weak blow died 5 min IFF; Times: 5-15-15-30; Recovery: 1' mud; Pressures: HP: 2094-1992, SIP: 772-774, FP: 17-19, 18-19; BHT: 109 F; Trilobite Testing, Inc., Scott City, KS, Shane McBride.

DRILL STEM TEST #3:

Pleasanton, Marmaton: Interval: 4299-4400 (101'): Blow: BOB in 2 min. IFF, 3" RB ISIP, BOB in 1 min FFP, 10" RB FSIP; Times: 5-15-15-30; Recovery: 1125' GIP, 855' TF; Grindouts: 615' CGO (25%G, 75%O, 30 grav.), 120' GMCO (30%G, 60%O, 10%M), 120' GMCO (30%G, 40%O, 30%M); Pressures: HP: 2154-2073, SIP: 1119-1045, FP: 166-197, 218-365; BHT: 128 F; Trilobite Testing, Inc., Scott City, KS, Shane McBride.

DRILL STEM TEST #4:

Pawnee thru Cherokee: Interval: 4408-4560 (152'): Blow: 3/4" decr 1/4" IFF, no RB, weak surf died 4 min FFP, no RB; Times: 5-15-15-30; Recovery: 5' mud (100%M); Pressures: HP: 2161-2109, SIP: 244-370, FP: 19-21, 21-22; BHT: 112 F; Trilobite Testing, Inc., Scott City, KS, Shane McBride.



RTD 4560 9:44 AM
02/21/2015

PIONEER WIRELINE SERVICES LTD 4556