

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1240574
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: _____

1240574

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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

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

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

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Commingled <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Kacirek Trust 4-5
Doc ID	1240574

All Electric Logs Run

DIL
DUCP
MEL
BHCS

ALLIED OIL & GAS SERVICES, LLC 064268

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Ockley

DATE <u>10-11-14</u>	SEC. <u>5</u>	TWR. <u>2</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>4:00 PM</u>	JOB START <u>8:00 PM</u>	JOB FINISH <u>8:30 PM</u>
LEASE <u>KOCirek</u> WELL # <u>4-5</u>			LOCATION <u>McDonald</u>		COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR <u>Martini 2</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Surface</u>	CEMENT
HOLE SIZE <u>12 1/4</u> T.D.	AMOUNT ORDERED <u>220 SKS LCM 3 1/2 CC</u>
CASING SIZE <u>8 5/8</u> DEPTH <u>262.98</u>	
TUBING SIZE DEPTH	
DRILL PIPE DEPTH	
TOOL DEPTH	
PRES. MAX MINIMUM	
MEAS. LINE SHOE JOINT	
CEMENT LEFT IN CSG. <u>15'</u>	
PERFS.	
DISPLACEMENT <u>15.79 BBL</u>	

COMMON <u>220 SKS</u>	@ <u>12.90</u>	<u>2838.00</u>
POZMIX	@	
GEL	@	
CHLORIDE <u>6.20#</u>	@ <u>1.10</u>	<u>682.00</u>
ASC	@	
<u>Material total</u>		<u>4620.00</u>
<u>(1617.00 / 35%)</u>		

PUMP TRUCK # <u>431</u>	CEMENTER <u>Andrew Farnlund</u>
BULK TRUCK # <u>890</u>	HELPER <u>Brandon Wilkinson</u>
BULK TRUCK #	DRIVER <u>George Grant</u>
BULK TRUCK #	DRIVER

HANDLING <u>2.31 cu/ft</u>	@ <u>2.48</u>	<u>572.88</u>
MILEAGE <u>2.25 miles</u>	@ <u>1.65/mi</u>	<u>371.25</u>
TOTAL		

REMARKS:
Cement did circulate

Thank you

CHARGE TO: Martini
STREET _____
CITY _____ STATE _____ ZIP _____

SERVICE		
DEPTH OF JOB		
PUMP TRUCK CHARGE		<u>1512.25</u>
EXTRA FOOTAGE	@	
MILEAGE <u>80 miles</u>	@ <u>7.20</u>	<u>576.00</u>
MANIFOLD <u>Sawedge</u>	@	<u>225.00</u>
Light vehicle	@ <u>4.40</u>	<u>352.00</u>
<u>(1984.89 / 35%)</u>		
TOTAL		<u>3611.13</u>

PLUG & FLOAT EQUIPMENT		
	@	
	@	
	@	
	@	
	@	
TOTAL		

To: Allied Oil & Gas Services, 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 Andrew Farnlund
SIGNATURE Andrew Farnlund

SALES TAX (If Any)	
TOTAL CHARGES <u>10,291.13</u>	
DISCOUNT <u>3,606.89 / 35%</u>	IF PAID IN 30 DAYS
<u>6,684.23 Net.</u>	



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



Invoice

DATE	INVOICE #
10/20/2014	26863

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661
USED FOR <u>Ic 103</u>
APPROVED <u>FH R</u>

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#4-5	Kacirek Trust	Rawlins	Murfin Drilling	Oil	Development	Cement 5-1/2" Pr...	Roger
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				150	Miles	6.00	900.00
579D	Pump Charge - Top To Bottom LongString				1	Job	2,000.00	2,000.00
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	375.00	375.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	275.00	275.00T
409-5	5 1/2" Turbolizer				15	Each	90.00	1,350.00T
403-5	5 1/2" Cement Basket				3	Each	300.00	900.00T
413-5	5 1/2" Roto Wall Scratcher				20	Each	40.00	800.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
290	D-Air				5	Gallon(s)	42.00	210.00T
325	Standard Cement				200	Sacks	14.50	2,900.00T
284	Calseal				10	Sack(s)	35.00	350.00T
283	Salt				1,082	Lb(s)	0.20	216.40T
285	CFR-1				94	Lb(s)	4.50	423.00T
276	Flocele				125	Lb(s)	2.50	312.50T
330	Swift Multi-Density Standard (MIDCON II)				300	Sacks	18.50	5,550.00T
581D	Service Charge Cement				500	Sacks	2.00	1,000.00
583D	Drayage				3,811.5	Ton Miles	1.00	3,811.50
Subtotal								22,298.40
Sales Tax Rawlins County							7.90%	1,152.37
We Appreciate Your Business!						Total		\$23,450.77



CHARGE TO: Murfin Drilling Co.
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 26863

PAGE 1 OF 2

1. <u>Hayes Dr</u>	WELL/PROJECT NO. <u>4-5</u>	LEASE <u>Raciner Trust</u>	COUNTY/PARISH <u>Rauvins</u>	STATE <u>K.</u>	CITY <u>Loc.</u>	DATE <u>10-20-14</u>	OWNER <u>Same</u>
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Murfin</u>	RIG NAME/NO.	SHIPPED <u>W/CIT</u>	DELIVERED TO	ORDER NO.	
3.	WELL TYPE <u>O:1</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>CR. 5 1/2" Prod. Cg.</u>	WELL PERMIT NO.	WELL LOCATION		
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	LOC	ACCT	DF	DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT	ACCOUNTING	
												ACCT	DF
575					MILEAGE #113	150	mil			6.00	900.00		
579					Pump Service	1	ea			2,000.00	2,000.00		
407					Insert Flat Shoe	1	ea		5 1/2 in	375.00	375.00		
406					Latch Down Plug + Baffle	1	ea			275.00	275.00		
409					Tubalizers	15	ea			90.00	1,350.00		
403					Baskets	3	ea			300.00	900.00		
413					Screeders	20	ea			40.00	800.00		
419					Rotating Head	1	ea			200.00	200.00		
281					Mud Flush	500	gal			1.25	625.00		
221					KCL	4	gal			25.00	100.00		
290					D-Air	5	gal			42.00	210.00		

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

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

DATE SIGNED: Mrs. Johnson TIME SIGNED: A.M. P.M.

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	WE UNDERSTOOD AND MET YOUR NEEDS?	OUR SERVICE WAS PERFORMED WITHOUT DELAY?	WE OPERATED THE EQUIPMENT AND PERFORMED JOB SATISFACTORILY?	ARE YOU SATISFIED WITH OUR SERVICE?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CUSTOMER DID NOT WISH TO RESPOND
 YES NO

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]

TOTAL: 23,456.77

Thank You!



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

TICKET CONTINUATION

TICKET No. 26863 PAGE 2 OF 2

CUSTOMER: *Morgan Dtg Co* WELL: *Racine? Trust* DATE: *10-20-14*

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		DATE		UNIT PRICE	AMOUNT		
		LOC	ACCT	DF			QTY	U/M	QTY	U/M				
325						Standard Cement	200	SKS			14	50	2,900	00
284						Celso	10	SKS			35	00	350	00
283						Salt	1,022	#			12	00	216	40
285						CFR-1	94	#			4	50	423	00
276						Flocele	125	#			2	50	312	50
330						SMD Cement	300	SKS			18	50	5,550	00
581						SERVICE CHARGE					2	00	1,000	00
583						INTEGRITY TOTAL WEIGHT CHANGE					1	00	3,811	50
							CUBIC FEET	50058						
							TON MILES	3,811.5						
							LOADED MILES	150						
CONTINUATION TOTAL												14,563	40	

JOB LOG

SWIFT Services, Inc.

DATE 10-20-14 PAGE NO. 7

CUSTOMER *Murphy Oils Co.* WELL NO. *4-5* LEASE *Kacirek Trust* JOB TYPE *Long String* TICKET NO. *26863*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	15:15							on loc.
	15:30							Start in hole 5 1/2" 15.5 # Csg. T.C. = 4837' TD = 4840' Shoe Joint = 20' Baffle @ 4817' Insert Float Shoe Latch down Baffle Turbolizers 1 Thru 9, 12, 14, 16, 20, 39, 65 Basket #21, 40, 66 100' Screens on Bottom
	16:30							65 Jts in hole Circulate 30 min.
	17:30							Drop Ball
	19:45							Circulate & Rotate Csg.
	18:30		12					Pump 12" Mud Flush
			20					20" KCL Flush
		6	160					Mix 250 sk SMO Cement
		5	48					200 sk EA-2 Cmt
		9						Finish mixing wash out pump & Line Start Displ. Latch down Plug
								1st tank Displ. KCL water
	20:00		114.5					1200/1650 Plug down 1650 pot Cir. 15% to Pit Release held
								Plug Rat hole Mouse Hole 30 sk + 20 sk wash & Rack up toward
	20:45							Job Complete

[Signature]

Roger, Don, Steve, Rob, ~~Paul~~ Craig



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



Invoice

DATE	INVOICE #
11/17/2014	26966

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#4-5	Kacirek <i>TAUST</i>	Rawlins	Company Tools	Oil	Development	Squeeze Perfs	Don
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				150	Miles	6.00	900.00
578D-D	Pump Charge - Deep Squeeze (> 1500 Ft.) - 4366 Feet				1	Job	1,500.00	1,500.00
290	D-Air				3	Gallon(s)	42.00	126.00T
325	Standard Cement				300	Sacks	14.50	4,350.00T
278	Calcium Chloride				6	Sack(s)	50.00	300.00T
581D	Service Charge Cement				300	Sacks	2.00	600.00
583D	Drayage				2,151	Ton Miles	1.00	2,151.00
	Subtotal							9,927.00
	Sales Tax Rawlins County						7.90%	377.30
USED FOR <u>LC 103</u>								
APPROVED <u>JS, FH R</u>								
We Appreciate Your Business!							Total	\$10,304.30



CHARGE TO: Missouri Drilling Co.
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 26966

PAGE 1 OF 1

SERVICE LOCATIONS
 1. Haystack, KS
 2. Ness City, KS
 3. _____
 4. _____

WELL/PROJECT NO. 4-5
 LEASE Kacinek
 COUNTY/PARISH Rainier
 STATE KS
 CITY _____

TICKET TYPE SERVICE SALES
 CONTRACTOR Co. #101
 RIG NAME/NO. _____
 SHIPPED VIA CT
 DELIVERED TO W McDonald, KS
 ORDER NO. _____

WELL TYPE _____
 WELL CATEGORY In Field
 WELL PERMIT NO. _____

JOB PURPOSE Squeeze Tests
 WELL LOCATION _____

REFERRAL LOCATION _____
 INVOICE INSTRUCTIONS _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575		1			MILEAGE # 113	152	mi				400	90000
578		1			Pump Change - Deep Squeeze	1 ea		436	ft		1500	150000
290		1			D-Air	3 gal					4200	12600
325		2			Standard Cement (2% cc)	300	SKS	3800	lbs		1450	435000
278		2			Coleman Chloride	6	SKS	480	lbs		5000	30000
581		2			Service Charge - Cement	300	SKS	2880	lbs		200	60000
583		2			Drayage	2151	mi	150	mi		100	215100

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

DATE SIGNED 11-17-14 TIME SIGNED 09:30 A.M. P.M.

SWIFT OPERATOR [Signature] APPROVAL [Signature]

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

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

PAGE TOTAL 992700
 TAX 377
 TOTAL 10,307.30

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 11-17-14 PAGE NO. 7

CUSTOMER *Mechlin Drilling Co* WELL NO. *4-5* LEASE *Kacirek Trust* JOB TYPE *Squeeze Perfs* TICKET NO. *26966*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0930					2 7/8	5 1/2	On location Setup Tools CMT Returned @ 7.36.6
	10:00		7			2000		Perfs to Squeeze - 4377-84 / 4421-29 Tst Tbg Tool - Held
		1 1/4				800		String in - inj rate
		2 1/4				900		Start 150 strokes Stel. cont 2 1/2 CC
		2 1/4	32			400		Fin. cont - Start Displ
		2	20			800		@ 20 BBI - Slow Rate
		1/2	24			900		@ 24 BBI - Slow Rate
		0	24 1/2			1000		Stop Displ - String out - Press Red off
		2 1/2				400		Rev-out tbg
			.55			0		Fin Rev-out - all clean Wash up P.T.
	11:45							Rig Trip Tbg Rig Run PKR / tbg
	15:15					1500*		Tbg @ 4250' - Tst tools - Held Perfs 4218-22 PKR @ 4087 = Tbg 23.6 Csgs 3.1 500 Ann 500
		1 1/2				600		Inj rate - incr to 2 1/2 @ 800
		2 1/2				800		Start 150 strokes Stel. cont, 2 1/2 CC
		2 1/2	32			700		Fin. cont - Start Displ
		2 1/2	8			200		Press incr - 8 BBI Displ
		1	20			400		@ 20 BBI - slow rate to 1800
		1	21			900		Press slowly incr.
		1	21			800		@ 21 BBI slow rate
		1/2	23			900		shut down @ 24 BBI
	16:05					1000		Wash up P.T.
	16:25		23 1/2			1000		Pump 1/2 BBI - 1000 # / 750 #
	16:35		24			600		Pump 1/2 BBI - 1500 # - slow bleed
	16:45					1450		Bump press - Holding
						1500		Rev out - Tbg clear Fin Rev-out - Pull 5 strokes
	17:30					500*		Close in 500*
	18:00							Job Complete Non, Tom, Steve

Kacirek Trust #4-5
 Daily Drilling Report
 Page Two

- 10/18/14 Depth 4430'. Cut 134'. DT: None. CT: 17hrs. Dev.: None. **DST #4 4307-4360' (LKC G):** 30-60-60-90. IF: opened w/surf blw, didn't build. FF: no blw. Rec.: 2'M. HP: 2052-2061. FP: 21/21, 22/23. SIP: 71-49. BHT: 136°.
- 10/19/14 Depth 4590'. Cut 160'. DT: None. CT: 14½ hrs. Dev.: None. **LKC H:** Ls wht fxln, sl chalky, granular, foss, no vis por, 3 pcs lt spotty stn, nfo, no odr. **LKC J:** Ls wht, fxln, sl chalky, oolitic in part, mostly dense, 10% sample sl pp por, lt - drk sat stn, slsfo, fnt odr. **DST #5 4350-4440 (LKC H-J):** 30-60-60-90. IF: opened w/surf blw, built to 7". FF: blw built to 8". Rec.: 180'WM w/oil spts (80%W, 20%M), 152'WOCM (60%M, 20%W, 20%O). HP: 2161-2103. FP: 37/108, 115/168. SIP: 1253-1228. BHT: 143°.
- 10/20/14 RTD: 4840'. Cut 250'. DT: None. CT: 11hrs. Dev.: ¾° @ 4842'. HC @ 10:00PM 10/19. Pioneer started logging @ 4:00AM 10/20. LTD: 4842'
- 10/21/14 RTD: 4840'. CT: 17hrs. Ran 114jts of 5 ½" prod csg, set @ 4837'. Swift cmt w/450sxs (250SMD, 200EA2). PD @ 8:00PM 10/20. 30sxs RH, 20sxs MH. Circ 15sxs. RR @ 12:00AM 10/21. FINAL REPORT

		MDCI Kacirek Trust #4-5 1320' FNL 330'FWL Sec. 5-2S-36W 3279' KB				MDCI Kacirek Trust #1-5 2170' FNL 330'FWL Sec. 5-2S-36W 3252' KB			
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum	
Anhydrite	3195	+84	-20	3188	+91	-13	3148	+104	
B/Anhydrite	3220	+59	-14	3217	+62	-11	3179	+73	
Neva	3672	-393	-13	3668	-389	-9	3628	-380	
Stotler	3936	-657	-17	3935	-656	-16	3892	-640	
Topeka	4000	-721	-16	4000	-721	-16	3957	-705	
Oread	4131	-852	-19	4129	-850	-17	4085	-833	
Lansing	4217	-938	-20	4218	-939	-21	4170	-918	
Stark	4434	-1155	-19	4435	-1156	-20	4388	-1136	
BKC	4487	-1208	-22	4486	-1207	-21	4438	-1186	
Pawnee	4613	-1334	-22	4613	-1334	-22	4564	-1312	
Cherokee	4692	-1413	-26	4689	-1410	-23	4639	-1387	
Mississippi	NR			NR			4859	-1607	
RTD	4840						4945		
LTD				4842			4935		



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water, STE 300
Wichita, KS 67202

ATTN: Robert Hendrix

Kacirek Trust #4-5

5-2s-36w Rawlins,KS

Start Date: 2014.10.15 @ 06:51:00

End Date: 2014.10.15 @ 15:52:00

Job Ticket #: 60733 DST #: 1

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

Printed: 2014.10.22 @ 09:16:47



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

ATTN: Robert Hendrix

Job Ticket: 60733

DST#: 1

Test Start: 2014.10.15 @ 06:51:00

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:42:30

Time Test Ended: 15:52:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 48

Interval: 4081.00 ft (KB) To 4136.00 ft (KB) (TVD)

Reference Elevations: 3279.00 ft (KB)

Total Depth: 4136.00 ft (KB) (TVD)

3268.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8647

Inside

Press@RunDepth: 162.31 psig @ 4082.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.15

End Date:

2014.10.15

Last Calib.: 2014.10.15

Start Time: 06:51:01

End Time:

15:52:00

Time On Btm: 2014.10.15 @ 09:35:00

Time Off Btm: 2014.10.15 @ 13:50:00

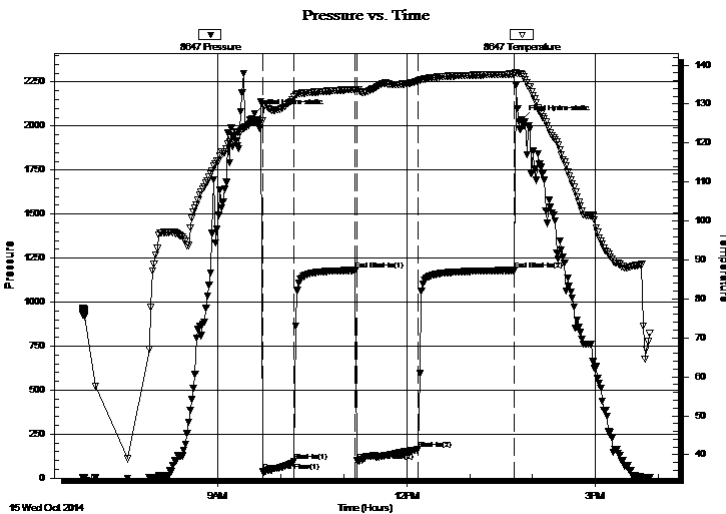
TEST COMMENT: 30 - IF - Opened w/ surface blow , built to 7 1/4"

60 - ISI - Surface return, didn't build

60 - FF - Blow built to B.o.B in 50 Min.

90 - FSI - Return built to 1 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2071.77	125.43	Initial Hydro-static
8	38.59	125.72	Open To Flow (1)
38	93.59	131.90	Shut-In(1)
96	1180.84	133.79	End Shut-In(1)
98	98.54	133.64	Open To Flow (2)
156	162.31	135.88	Shut-In(2)
248	1180.39	137.70	End Shut-In(2)
255	2035.56	137.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GWOCM 60% _m , 20% _g , 10% _w , 10% _o	0.59
120.00	OCM 90% _m , 10% _o	0.89
62.00	MCO 60% _o , 40% _m	0.87
10.00	100%FO	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60733

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.10.15 @ 06:51:00

Tool Information

Drill Pipe:	Length: 3877.00 ft	Diameter: 3.80 inches	Volume: 54.38 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.34 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4081.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Change Over Sub	1.00			4054.00	
Shut In Tool	5.00			4059.00	
Hydraulic tool	5.00		Inside	4064.00	
Jars	5.00			4069.00	
Safety Joint	3.00			4072.00	
Packer	5.00			4077.00	28.00 Bottom Of Top Packer
Packer	4.00			4081.00	
Stubb	1.00			4082.00	
Recorder	0.00	8647	Inside	4082.00	
Recorder	0.00	8372	Outside	4082.00	
Perforations	18.00			4100.00	
Change Over Sub	1.00			4101.00	
Drill Pipe	31.00			4132.00	
Change Over Sub	1.00			4133.00	
Bullnose	3.00			4136.00	55.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60733

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.10.15 @ 06:51:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GWOCM 60%m, 20%g, 10%w, 10%o	0.590
120.00	OCM 90%m, 10%o	0.888
62.00	MCO 60%o, 40%m	0.870
10.00	100%FO	0.140

Total Length: 312.00 ft

Total Volume: 2.488 bbl

Num Fluid Samples: 0

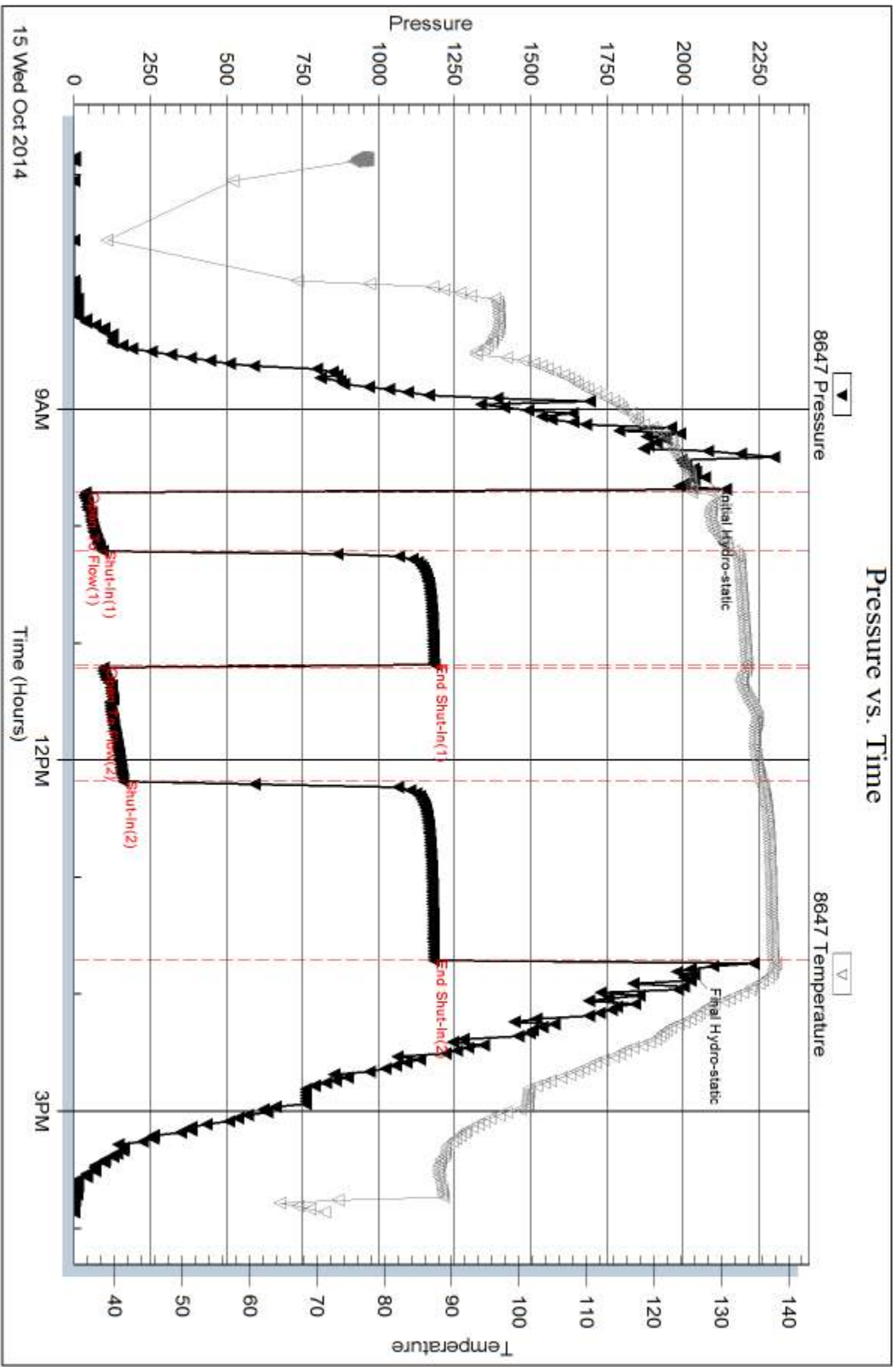
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

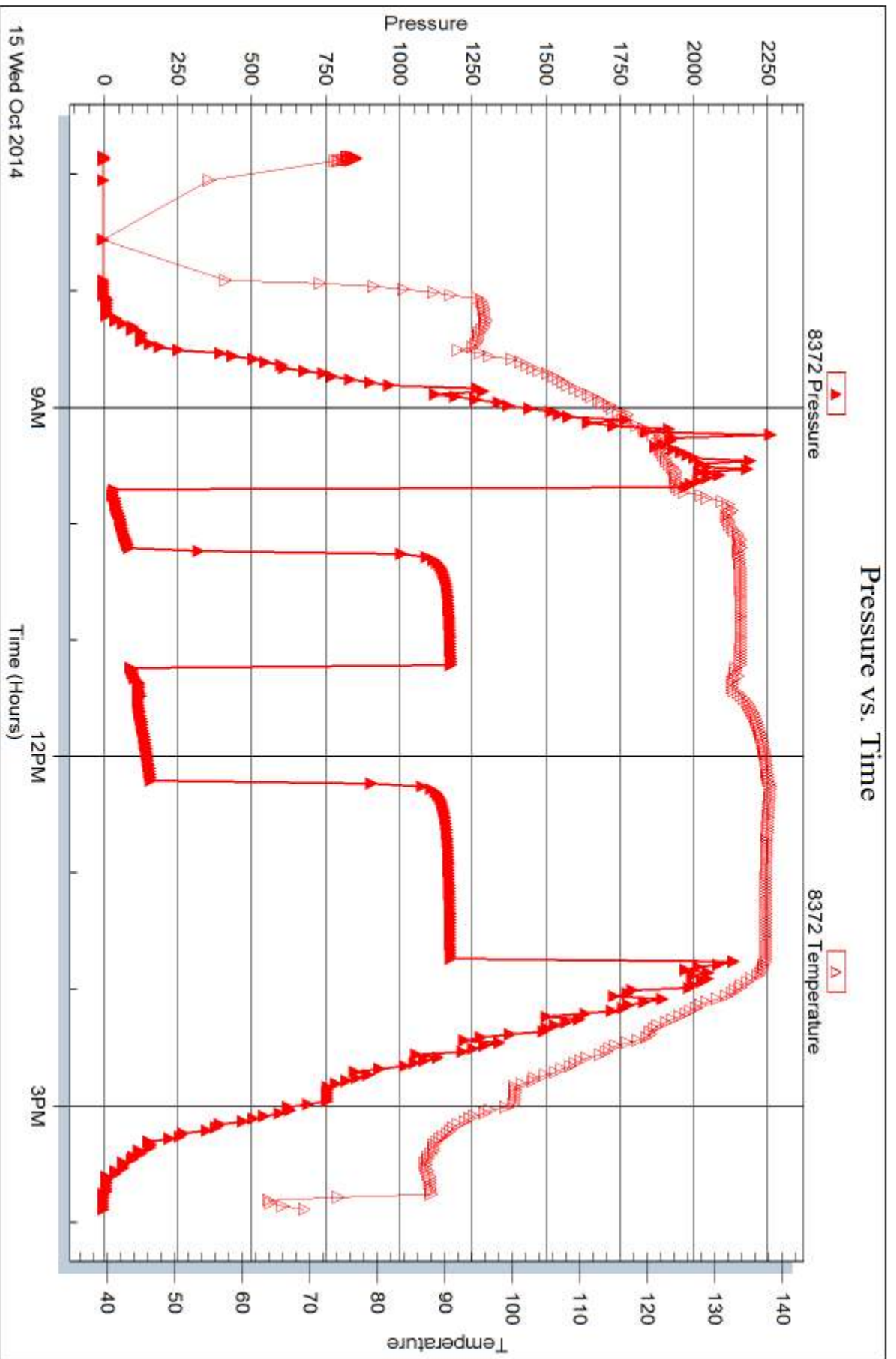


Serial #: 8372

Outside Murfin Dtg. Co., Inc.

Kacirek Trust #4-5

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60733

Printed: 2014, 10, 22 @ 09:16:48



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water, STE 300
Wichita, KS 67202

ATTN: Robert Hendrix

Kacirek Trust #4-5

5-2s-36w Rawlins,KS

Start Date: 2014.10.16 @ 03:37:00

End Date: 2014.10.16 @ 13:23:30

Job Ticket #: 60734 DST #: 2

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

Printed: 2014.10.22 @ 09:16:24

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

Kacirek Trust #4-5

DST # 2

LKC "A"

2014.10.16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60734

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 03:37:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:24:00

Time Test Ended: 13:23:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 48

Interval: 4161.00 ft (KB) To 4253.00 ft (KB) (TVD)

Reference Elevations: 3279.00 ft (KB)

Total Depth: 4253.00 ft (KB) (TVD)

3268.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8647

Inside

Press@RunDepth: 272.53 psig @ 4162.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.16

End Date: 2014.10.16

Last Calib.: 2014.10.16

Start Time: 03:37:01

End Time: 13:23:30

Time On Btm: 2014.10.16 @ 06:13:30

Time Off Btm: 2014.10.16 @ 10:48:00

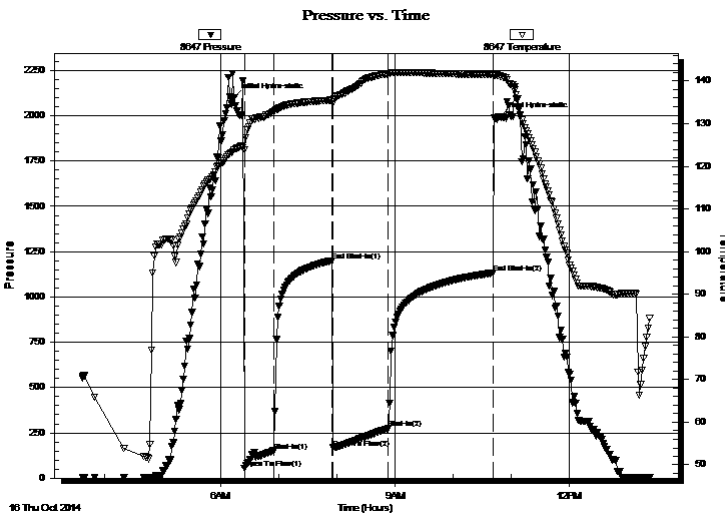
TEST COMMENT: 30 - IF - Opened w/ surface blow , built to B.o.B in 9 min.

60 - ISI - Return built to 6"

60 - FF - Blow built to 9"

90 - FSI - Return built to 6"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2099.63	123.98	Initial Hydro-static
11	53.61	123.89	Open To Flow (1)
41	150.65	132.83	Shut-In(1)
101	1199.18	135.51	End Shut-In(1)
102	166.65	134.76	Open To Flow (2)
159	272.53	141.72	Shut-In(2)
267	1132.00	141.49	End Shut-In(2)
275	1996.24	141.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GWOCM 60% <i>m</i> , 20% <i>g</i> , 10% <i>w</i> , 10% <i>o</i>	0.59
182.00	MCO 38% <i>o</i> , 34% <i>m</i> , 28% <i>g</i>	1.76
344.00	100%FO	4.83
620.00	100%GIP	8.70

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60734

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 03:37:00

Tool Information

Drill Pipe:	Length: 3940.00 ft	Diameter: 3.80 inches	Volume: 55.27 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
			- bbl	String Weight: Initial	69000.00 lb
Drill Pipe Above KB:	14.34 ft			Final	70000.00 lb
Depth to Top Packer:	4161.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	92.00 ft				
Tool Length:	120.00 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			4134.00	
Shut In Tool	5.00			4139.00	
Hydraulic tool	5.00		Inside	4144.00	
Jars	5.00			4149.00	
Safety Joint	3.00			4152.00	
Packer	5.00			4157.00	28.00 Bottom Of Top Packer
Packer	4.00			4161.00	
Stubb	1.00			4162.00	
Recorder	0.00	8647	Inside	4162.00	
Recorder	0.00	8372	Outside	4162.00	
Perforations	23.00			4185.00	
Change Over Sub	1.00			4186.00	
Drill Pipe	63.00			4249.00	
Change Over Sub	1.00			4250.00	
Bullnose	3.00			4253.00	92.00 Bottom Packers & Anchor

Total Tool Length: 120.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60734

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 03:37:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
120.00	GWOCM 60%m, 20%g, 10%w , 10%o	0.590
182.00	MCO 38%o, 34%m, 28%g	1.757
344.00	100%FO	4.825
620.00	100%GIP	8.697

Total Length: 1266.00 ft Total Volume: 15.869 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

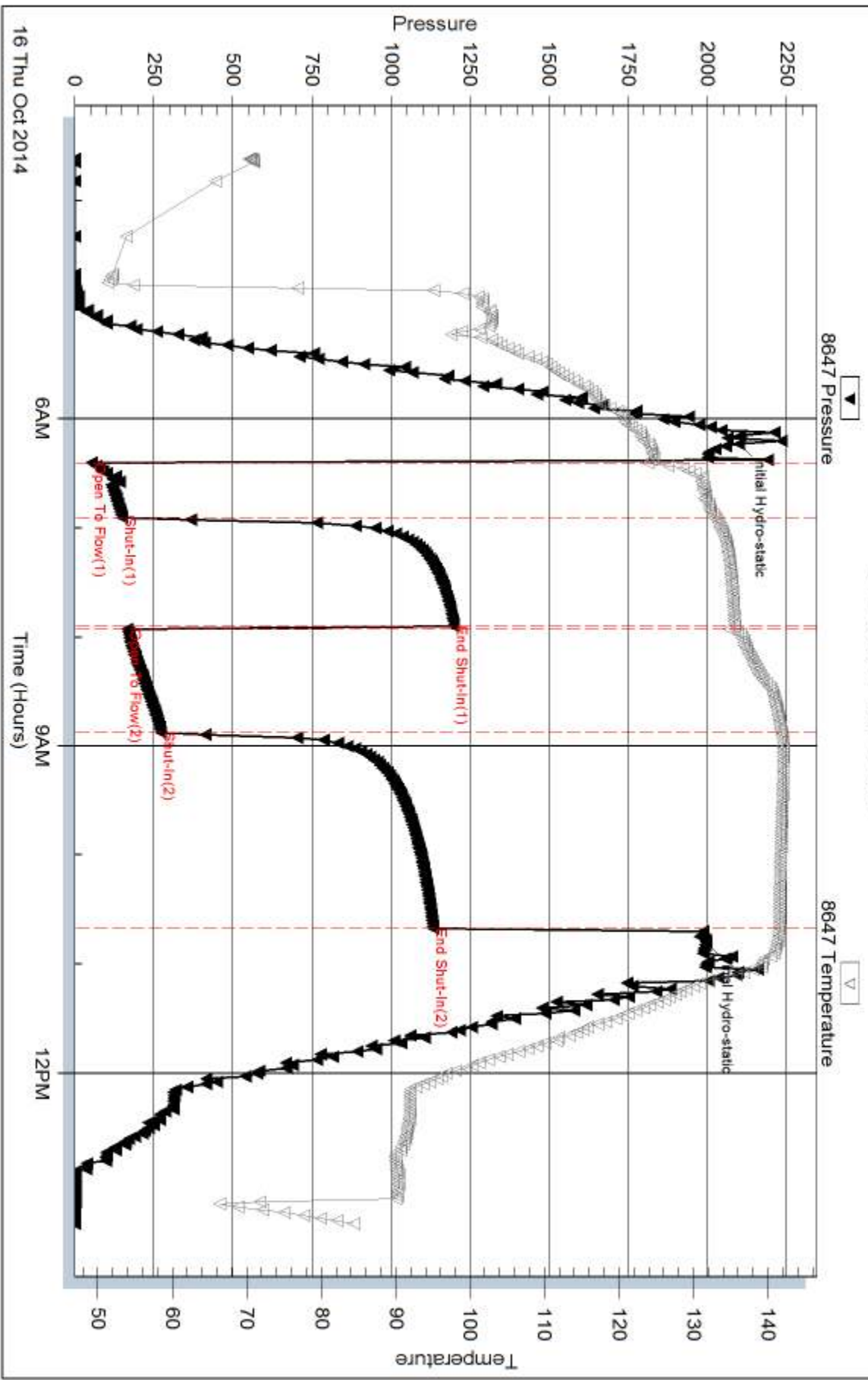
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity 37 @ 80 Corrected = 39

Pressure vs. Time

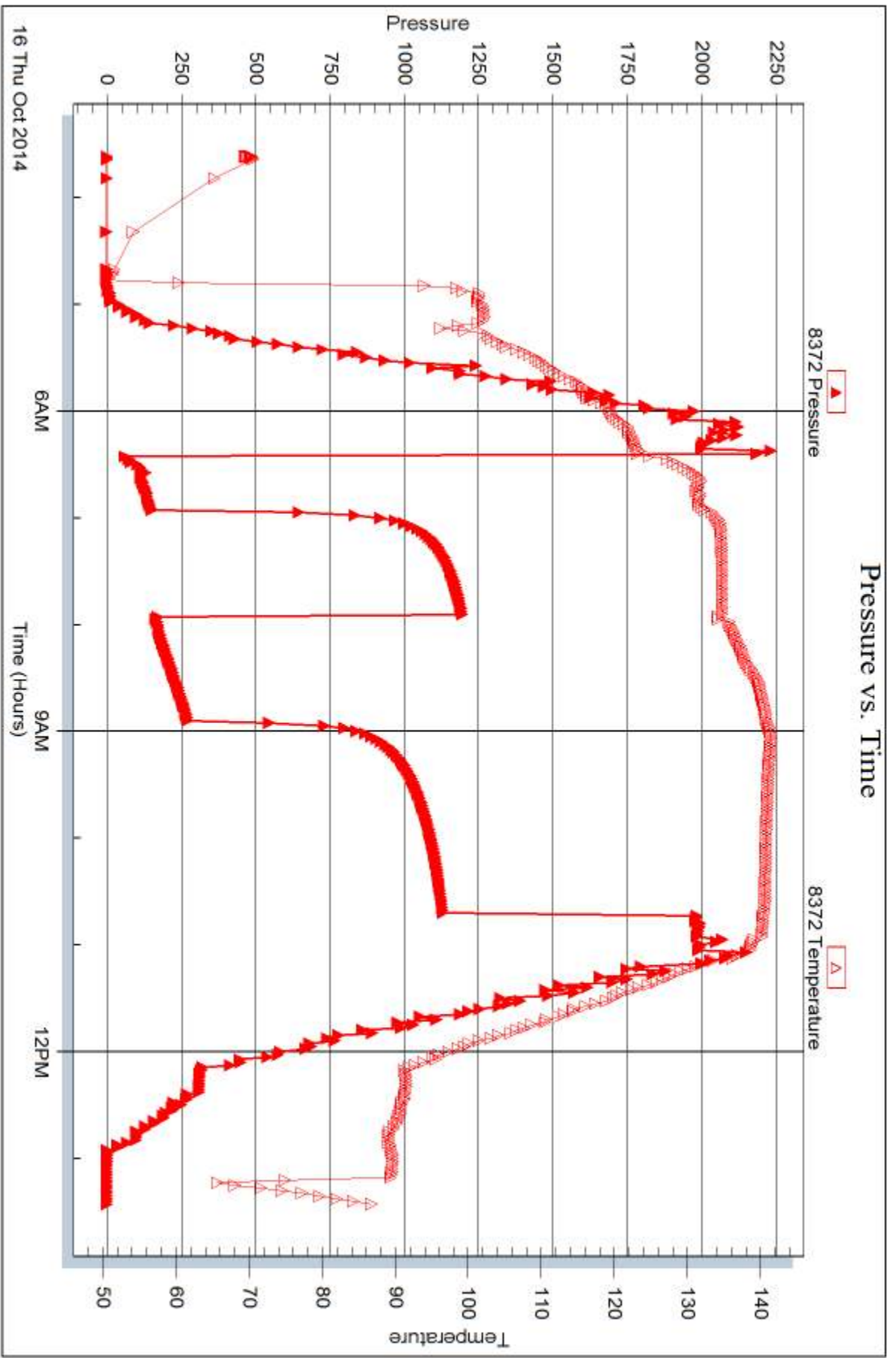


Serial #: 8372

Outside Murfin Drtg. Co., Inc.

Kacirek Trust #4-5

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 60734

Printed: 2014, 10, 22 @ 09:16:25



DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water, STE 300
Wichita, KS 67202

ATTN: Robert Hendrix

Kacirek Trust #4-5

5-2s-36w Rawlins,KS

Start Date: 2014.10.16 @ 22:24:00

End Date: 2014.10.17 @ 05:49:30

Job Ticket #: 60735 DST #: 3

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

Printed: 2014.10.22 @ 09:15:02



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.
 250 N. Water, STE 300
 Wichita, KS 67202
 ATTN: Robert Hendrix

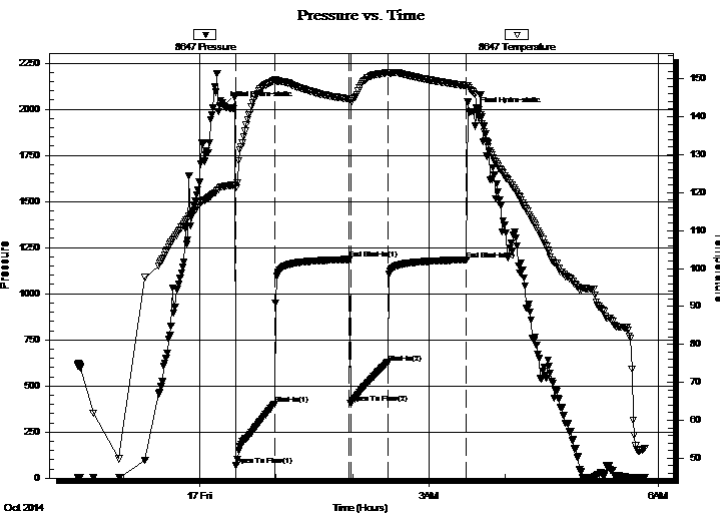
5-2s-36w Rawlins,KS
Kacirek Trust #4-5
 Job Ticket: 60735 **DST#: 3**
 Test Start: 2014.10.16 @ 22:24:00

GENERAL INFORMATION:

Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 00:28:30 Tester: Brandon Quintana
 Time Test Ended: 05:49:30 Unit No: 48
 Interval: **4241.00 ft (KB) To 4296.00 ft (KB) (TVD)** Reference Elevations: 3279.00 ft (KB)
 Total Depth: 4296.00 ft (KB) (TVD) 3268.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 8647 Inside
 Press@RunDepth: 626.45 psig @ 4242.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.16 End Date: 2014.10.17 Last Calib.: 2014.10.17
 Start Time: 22:24:01 End Time: 05:49:30 Time On Btm: 2014.10.17 @ 00:18:30
 Time Off Btm: 2014.10.17 @ 03:34:30

TEST COMMENT: 30 - IF - Opened w/ surface blow , built to B.o.B in 4 min
 60 - ISI - No Return
 30 - FF - Blow built to B.o.B in 4 min.
 60 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2020.94	121.62	Initial Hydro-static
10	70.28	121.35	Open To Flow (1)
40	401.74	149.45	Shut-In(1)
99	1186.16	144.65	End Shut-In(1)
100	405.75	144.22	Open To Flow (2)
129	626.45	151.56	Shut-In(2)
191	1184.02	148.23	End Shut-In(2)
196	1986.94	146.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
860.00	MW 90%w, 10%m	10.17
479.00	60%m, 40%w	6.72

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60735

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 22:24:00

Tool Information

Drill Pipe:	Length: 4036.00 ft	Diameter: 3.80 inches	Volume: 56.61 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.34 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	4241.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4214.00	
Shut In Tool	5.00			4219.00	
Hydraulic tool	5.00		Inside	4224.00	
Jars	5.00			4229.00	
Safety Joint	3.00			4232.00	
Packer	5.00			4237.00	28.00 Bottom Of Top Packer
Packer	4.00			4241.00	
Stubb	1.00			4242.00	
Recorder	0.00	8647	Inside	4242.00	
Recorder	0.00	8372	Outside	4242.00	
Perforations	18.00			4260.00	
Change Over Sub	1.00			4261.00	
Drill Pipe	31.00			4292.00	
Change Over Sub	1.00			4293.00	
Bullnose	3.00			4296.00	55.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60735

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.10.16 @ 22:24:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

83000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
860.00	MW 90%w , 10%m	10.175
479.00	60%m, 40%w	6.719

Total Length: 1339.00 ft Total Volume: 16.894 bbl

Num Fluid Samples: 0

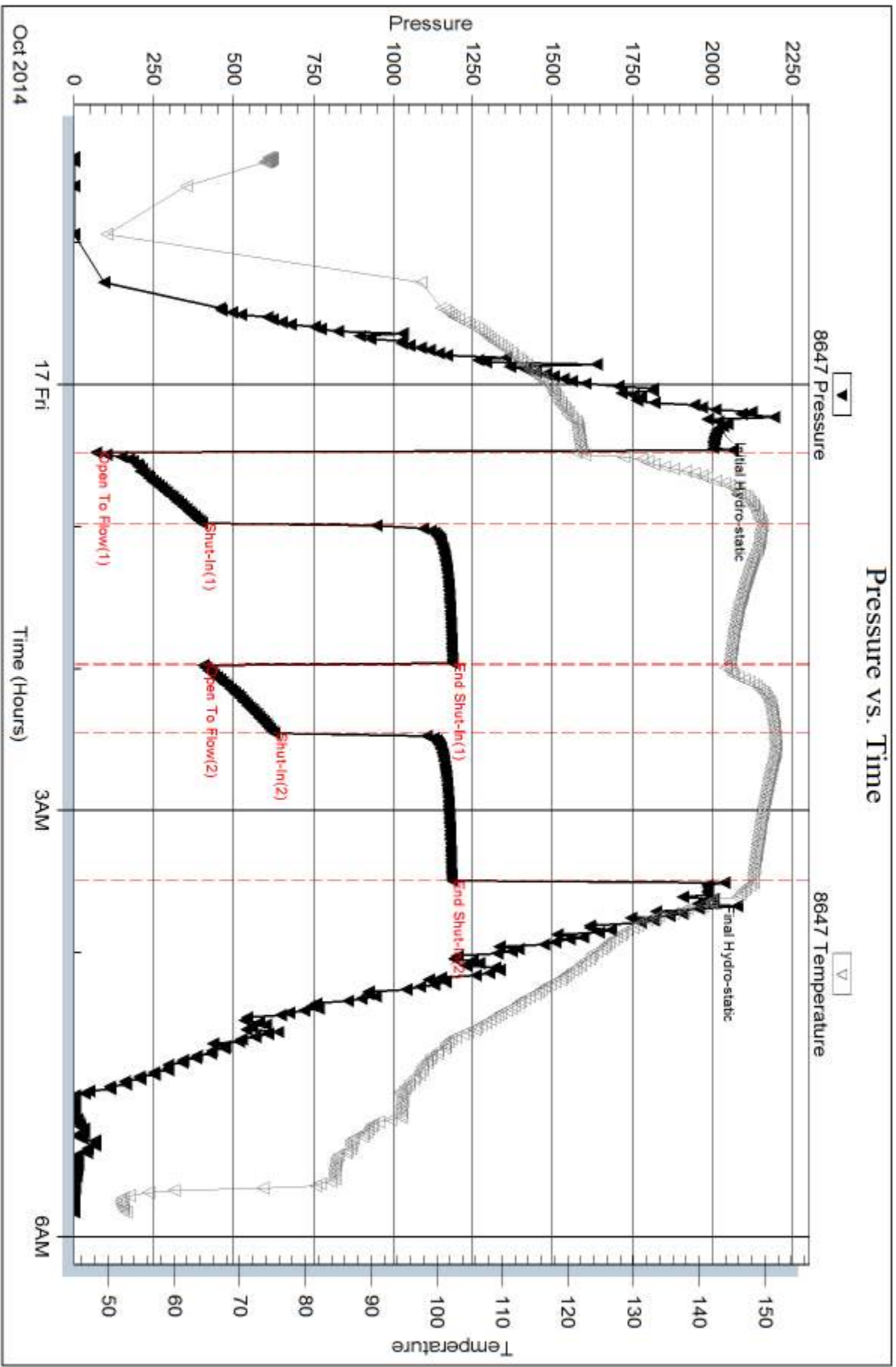
Num Gas Bombs: 0

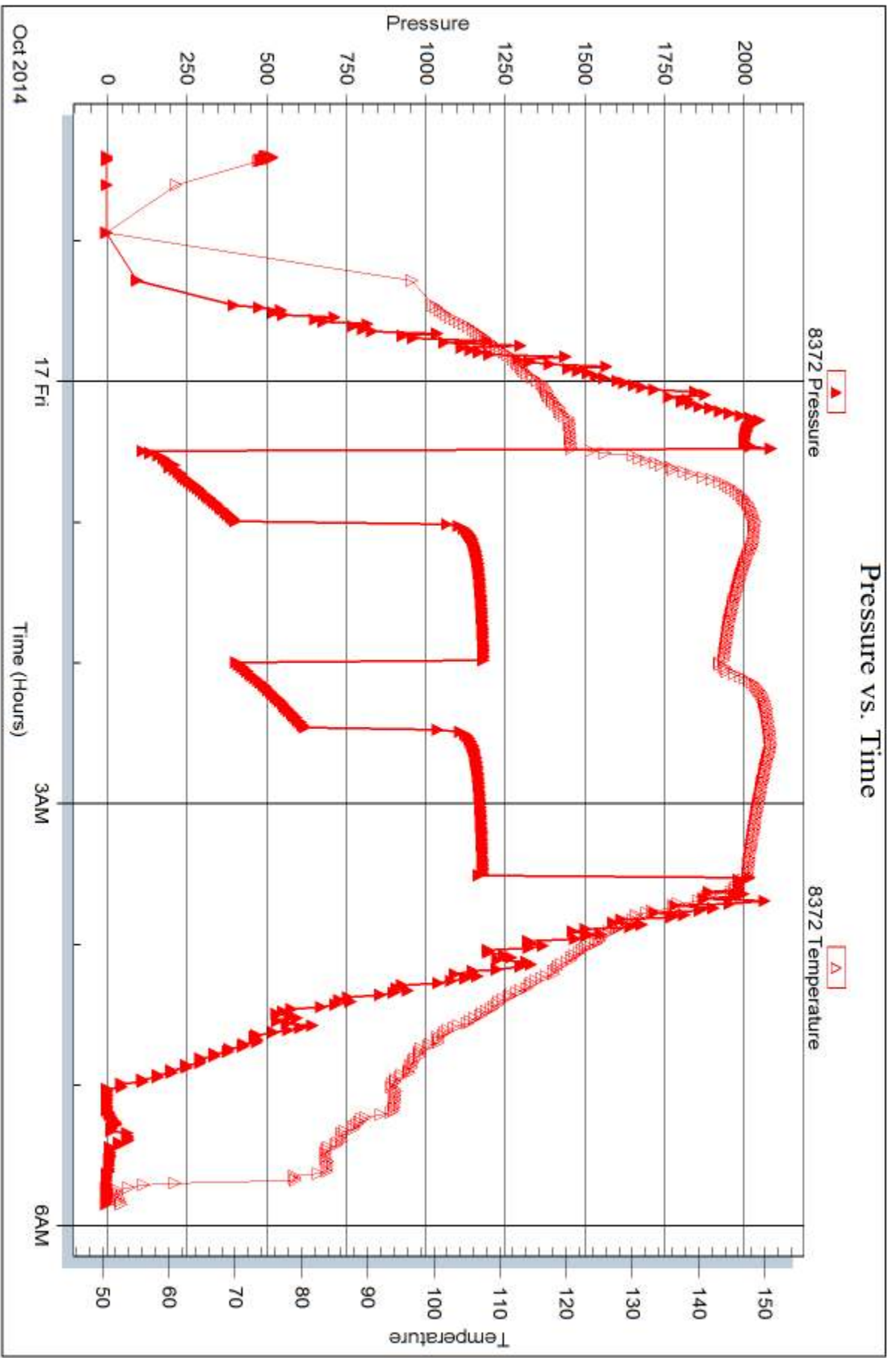
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .14 @ 50F Chlorides 83000ppm







DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water, STE 300
Wichita, KS 67202

ATTN: Robert Hendrix

Kacirek Trust #4-5

5-2s-36w Rawlins,KS

Start Date: 2014.10.17 @ 15:29:00

End Date: 2014.10.17 @ 23:31:30

Job Ticket #: 60736 DST #: 4

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

Printed: 2014.10.22 @ 09:14:35

Murfin Drlg. Co., Inc.
5-2s-36w Rawlins,KS
Kacirek Trust #4-5
DST # 4
LKC "G"
2014.10.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60736

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.10.17 @ 15:29:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:30

Time Test Ended: 23:31:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 48

Interval: 4307.00 ft (KB) To 4306.00 ft (KB) (TVD)

Reference Elevations: 3279.00 ft (KB)

Total Depth: 4360.00 ft (KB) (TVD)

3268.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8647

Inside

Press@RunDepth: 23.34 psig @ 4308.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.17

End Date:

2014.10.17

Last Calib.:

2014.10.17

Start Time: 15:29:01

End Time:

23:31:30

Time On Btm:

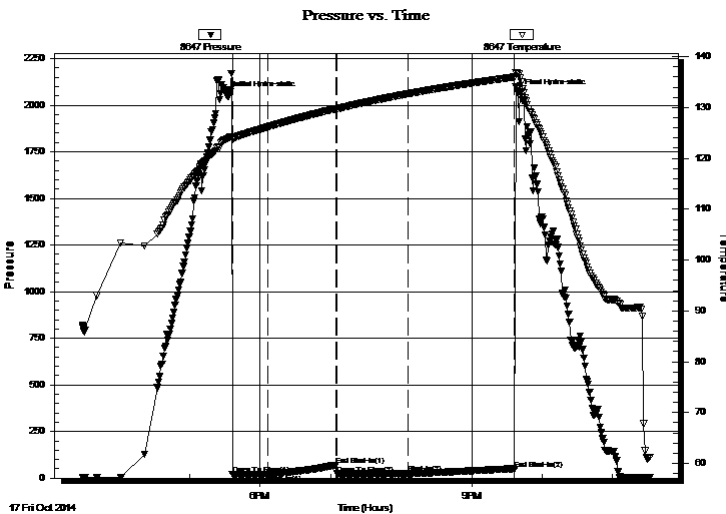
2014.10.17 @ 17:31:30

Time Off Btm:

2014.10.17 @ 21:39:30

TEST COMMENT: 30 - IF - Opened w/ surface blow , didn't build
60 - ISI - No Return
60 - FF - No Blow
90 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2051.81	123.81	Initial Hydro-static
5	20.91	123.64	Open To Flow (1)
35	20.81	126.17	Shut-In(1)
93	70.57	129.76	End Shut-In(1)
94	22.08	129.74	Open To Flow (2)
154	23.34	132.67	Shut-In(2)
245	48.93	136.00	End Shut-In(2)
248	2060.59	136.70	Final Hydro-static

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60736

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.10.17 @ 15:29:00

Tool Information

Drill Pipe:	Length: 4098.00 ft	Diameter: 3.80 inches	Volume: 57.48 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.34 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4307.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	81.00 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			4280.00	
Shut In Tool	5.00			4285.00	
Hydraulic tool	5.00		Inside	4290.00	
Jars	5.00			4295.00	
Safety Joint	3.00			4298.00	
Packer	5.00			4303.00	28.00 Bottom Of Top Packer
Packer	4.00			4307.00	
Stubb	1.00			4308.00	
Recorder	0.00	8647	Inside	4308.00	
Recorder	0.00	8372	Outside	4308.00	
Perforations	16.00			4324.00	
Change Over Sub	1.00			4325.00	
Drill Pipe	31.00			4356.00	
Change Over Sub	1.00			4357.00	
Bullnose	3.00			4360.00	53.00 Bottom Packers & Anchor

Total Tool Length: 81.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60736

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.10.17 @ 15:29:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	100%m	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

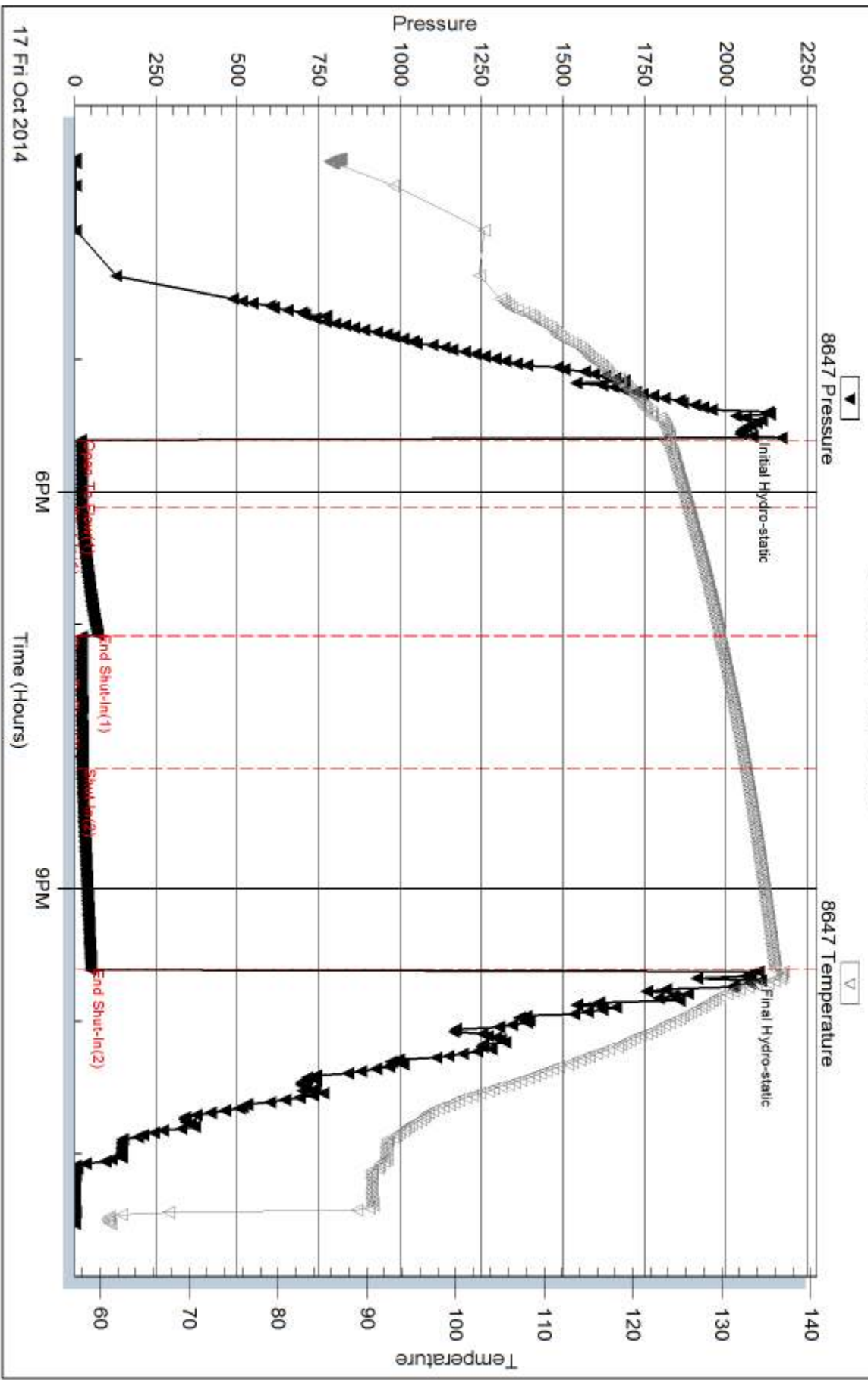
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co., Inc.**

250 N. Water, STE 300
Wichita, KS 67202

ATTN: Robert Hendrix

Kacirek Trust #4-5

5-2s-36w Rawlins,KS

Start Date: 2014.10.18 @ 10:23:00

End Date: 2014.10.18 @ 18:37:30

Job Ticket #: 60737 DST #: 5

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

Printed: 2014.10.22 @ 09:09:56

Murfin Drlg. Co., Inc. 5-2s-36w Rawlins,KS Kacirek Trust #4-5 DST # 5 LKC "H-J" 2014.10.18



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

ATTN: Robert Hendrix

Job Ticket: 60737

DST#: 5

Test Start: 2014.10.18 @ 10:23:00

GENERAL INFORMATION:

Formation: **LKC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:27:30

Time Test Ended: 18:37:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 48

Interval: 4350.00 ft (KB) To 4440.00 ft (KB) (TVD)

Reference Elevations: 3279.00 ft (KB)

Total Depth: 4440.00 ft (KB) (TVD)

3268.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8647

Inside

Press@RunDepth: 168.24 psig @ 4351.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.18

End Date:

2014.10.18

Last Calib.: 2014.10.18

Start Time: 10:23:01

End Time:

18:37:30

Time On Btm: 2014.10.18 @ 12:21:30

Time Off Btm: 2014.10.18 @ 16:32:30

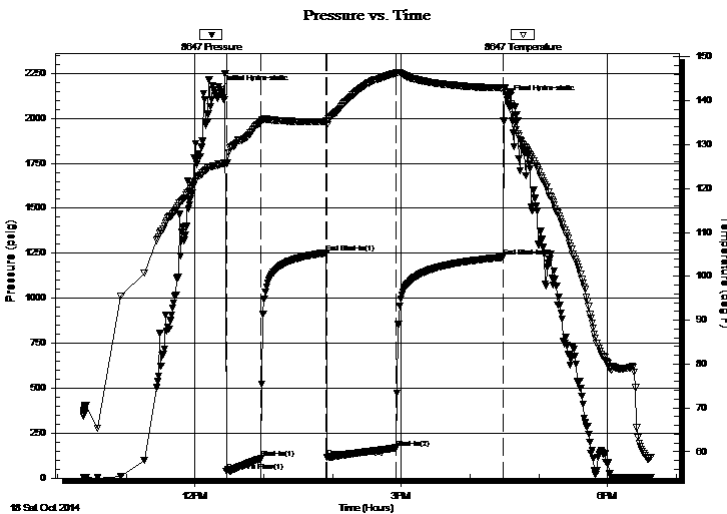
TEST COMMENT: 30 - IF - Opened w/ surface blow , built to 7"

60 - ISI - No Return

60 - FF - Blow built to 8"

90 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2161.18	125.55	Initial Hydro-static
6	37.20	125.58	Open To Flow (1)
36	108.35	135.13	Shut-In(1)
93	1252.97	135.30	End Shut-In(1)
94	115.22	134.62	Open To Flow (2)
154	168.24	146.28	Shut-In(2)
247	1227.90	142.89	End Shut-In(2)
251	2102.85	141.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	WM w / oil spots 80%w , 20%m	0.89
152.00	WOCM 60%m, 20%w , 20%o	1.88

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60737

DST#: 5

ATTN: Robert Hendrix

Test Start: 2014.10.18 @ 10:23:00

Tool Information

Drill Pipe:	Length: 4131.00 ft	Diameter: 3.80 inches	Volume: 57.95 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 207.34 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.34 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4350.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	118.00 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			4323.00	
Shut In Tool	5.00			4328.00	
Hydraulic tool	5.00		Inside	4333.00	
Jars	5.00			4338.00	
Safety Joint	3.00			4341.00	
Packer	5.00			4346.00	28.00 Bottom Of Top Packer
Packer	4.00			4350.00	
Stubb	1.00			4351.00	
Recorder	0.00	8647	Inside	4351.00	
Recorder	0.00	8372	Outside	4351.00	
Perforations	22.00			4373.00	
Change Over Sub	1.00			4374.00	
Drill Pipe	62.00			4436.00	
Change Over Sub	1.00			4437.00	
Bullnose	3.00			4440.00	90.00 Bottom Packers & Anchor

Total Tool Length: 118.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drlg. Co., Inc.

5-2s-36w Rawlins,KS

250 N. Water, STE 300
Wichita, KS 67202

Kacirek Trust #4-5

Job Ticket: 60737

DST#: 5

ATTN: Robert Hendrix

Test Start: 2014.10.18 @ 10:23:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
180.00	WM w / oil spots 80%w , 20%m	0.885
152.00	WOCM 60%m, 20%w , 20%o	1.883

Total Length: 332.00 ft Total Volume: 2.768 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .13 @ 75F Chlorides 64000ppm

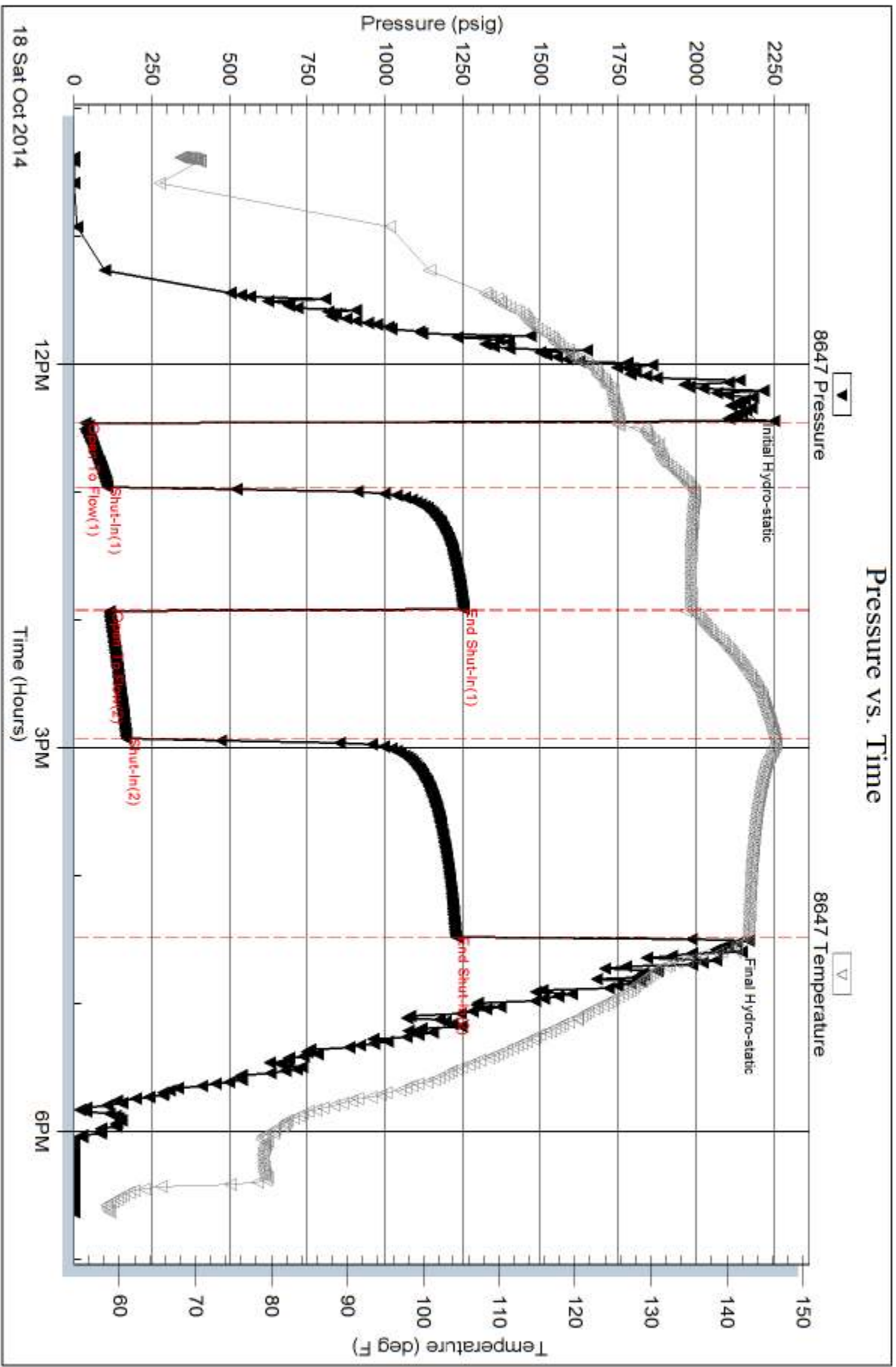
Serial #: 8647

Inside

Murfin Drtg. Co., Inc.

Kacirek Trust #4-5

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 60737

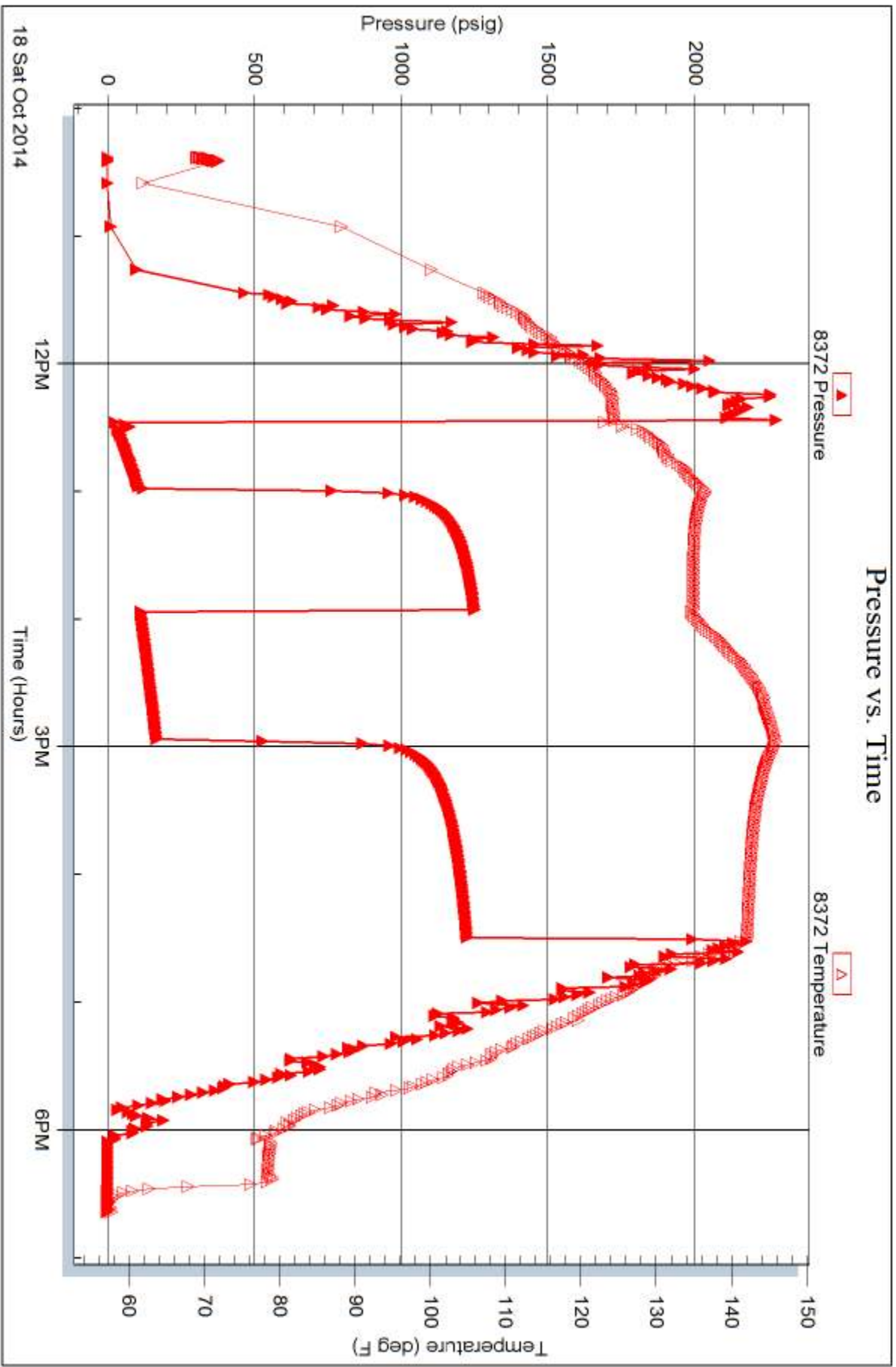
Printed: 2014, 10, 22 @ 09:09:57

Serial #: 8372

Outside Murfin Drfg. Co., Inc.

Kacirek Trust #4-5

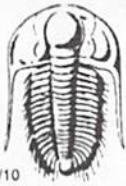
DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 60737

Printed: 2014, 10, 22 @ 09:09:57



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60733**

Well Name & No. Kacirek Trust #4-5 Test No. 1 Date 10-15-14
 Company Murfin Drlg. Co., Inc. Elevation ~~3279~~ 3268 GL
 Address 250 N. Water, STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4081 - 4136 Zone Tested Oread
 Anchor Length 55' Drill Pipe Run 3877 Mud Wt. 9.2
 Top Packer Depth 4076 Drill Collars Run 207.34 Vis 65
 Bottom Packer Depth 4081 Wt. Pipe Run — WL 8.4
 Total Depth 4136 Chlorides 600 ppm System LCM 10

Blow Description IF - Opened w/ surface blow, built to 7'1/4"
ISI - Surface return, didn't build
FF - Blow built to B.O.B in 50 min.
FBI - Return built to 1'1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>FO</u>		<u>100%</u>		
<u>62</u>	<u>MCO</u>		<u>60%</u>		<u>40%</u>
<u>120</u>	<u>OCM</u>		<u>10%</u>		<u>90%</u>
<u>120</u>	<u>GWOCM</u>	<u>20%</u>	<u>10%</u>	<u>6%</u>	<u>60%</u>

Rec Total 312 BHT 137 Gravity — API RW @ ° F Chlorides ppm
 (A) Initial Hydrostatic 2071 Test 1250 T-On Location 6:31 AM
 (B) First Initial Flow 38 Jars 250 T-Started 6:51 AM
 (C) First Final Flow 93 Safety Joint 75 T-Open 9:43 AM
 (D) Initial Shut-In 1180 Circ Sub _____ T-Pulled 1:43 PM
 (E) Second Initial Flow 98 Hourly Standby _____ T-Out 3:54 PM
 (F) Second Final Flow 162 Mileage 113 R.T. 175.15 Comments _____
 (G) Final Shut-In 1180 Sampler _____
 (H) Final Hydrostatic 2035 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1750.15

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Sub Total 0
 Total 1750.15
 MP/DST Disc't _____

Approved By [Signature] Our Representative Bud O't

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60734**

Well Name & No. Kacirek Trust #4-5 Test No. 2 Date 10-16-14
 Company Murfin Drilg. Co., Inc. Elevation 3279 KB 3268 GL
 Address 250 N. Water, STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4161 - 4253 Zone Tested LSG "A"
 Anchor Length 92' Drill Pipe Run 3940 Mud Wt. 9.3
 Top Packer Depth 4156 Drill Collars Run 207.34 Vis 75
 Bottom Packer Depth 4161 Wt. Pipe Run - WL 8.4
 Total Depth 4253 Chlorides 600 ppm System LCM 8

Blow Description IF - Opened w/ surface blow, built to B.o.B in 9 min
ISI - Return built to 6"
FF - Blow built to B.o.B in 9 min
FBI - Return built to 6"

Rec	Feet of	%gas	%oil	%water	%mud
344	FO		100%		
182	GMCO	28%	38%		34%
120	GWOCM	20%	10%	10%	60%
620	GIP	100%			
Rec Total	646'	BHT	141	Gravity	39

(A) Initial Hydrostatic 2099 Test 1250 T-On Location 3:20 AM
 (B) First Initial Flow 53 Jars 250 T-Started 3:37 AM
 (C) First Final Flow 150 Safety Joint 75 T-Open 6:25 AM
 (D) Initial Shut-In 1199 Circ Sub _____ T-Pulled 10:25 AM
 (E) Second Initial Flow 166 Hourly Standby _____ T-Out 1:25 PM
 (F) Second Final Flow 272 Mileage 113 R.T. 175.15 Comments _____
 (G) Final Shut-In 1132 Sampler _____
 (H) Final Hydrostatic 1996 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1750.15
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1750.15

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60735**

4/10

Well Name & No. Kacirek Trust #4-5 Test No. 3 Date 10-16-14
 Company Murfin Drly. Co., Inc. Elevation 3279 KB 3268 GL
 Address 250 N. Water, STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4241 - 4296 Zone Tested LSG "D"
 Anchor Length 55' Drill Pipe Run 4036 Mud Wt. 9.3
 Top Packer Depth 4236 Drill Collars Run 207.34 Vis 59
 Bottom Packer Depth 4241 Wt. Pipe Run — WL 10.4
 Total Depth 4296 Chlorides 600 ppm System LCM 10

Blow Description IF - Opened w/ surface blow, built to B.o.B in 4 min
ISI - No Return
FF - Blow built to B.o.B in 4 min.
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>479</u>	<u>WM</u>			<u>40</u>	<u>60</u>
<u>860</u>	<u>MW</u>			<u>90</u>	<u>10</u>

Rec Total 1339 BHT 148 Gravity _____ API RW 14@ 50 °F Chlorides 83000 ppm

(A) Initial Hydrostatic 2020 Test 1250 T-On Location 9:50 PM
 (B) First Initial Flow 70 Jars 250 T-Started 10:24 PM
 (C) First Final Flow 401 Safety Joint 75 T-Open 12:29 AM
 (D) Initial Shut-In 1186 Circ Sub _____ T-Pulled 3:29 AM
 (E) Second Initial Flow 405 Hourly Standby _____ T-Out 5:50 AM
 (F) Second Final Flow 626 Mileage 113 R.T. 170.15 Comments _____
 (G) Final Shut-In 1184 Sampler _____
 (H) Final Hydrostatic 1986 Straddle _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 60 Shale Packer _____ Ruined Packer _____
 Final Flow 30 Extra Packer _____ Extra Copies _____
 Final Shut-In 60 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1750.15
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1750.15

Approved By Rh P. Hill Our Representative Bnd at

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60736**

4/10

Well Name & No. Kacirek Trust #4-5 Test No. 4 Date 10-17-14
 Company Murfin Drlg. Co., Inc. Elevation 3279 KB 3268 GL
 Address 250 N. Water, STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 5 Twp. 25 Rge. 36w Co. Rawlins State KS

Interval Tested 4307-4360 Zone Tested LSG "6"
 Anchor Length 53' Drill Pipe Run 4098 Mud Wt. 9
 Top Packer Depth 4302 Drill Collars Run 207.34 Vis 61
 Bottom Packer Depth 4307 Wt. Pipe Run — WL 8
 Total Depth 4360 Chlorides 600 ppm System LCM 10

Blow Description IF - Opened w/ surface blow, didn't build
ISI - No Return
FF - No Blow
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</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 2 BHT 136 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 20SI Test 1250 T-On Location 3:20 PM
 (B) First Initial Flow 20 Jars 250 T-Started 3:29 PM
 (C) First Final Flow 20 Safety Joint 75 T-Open 5:37 PM
 (D) Initial Shut-In 70 Circ Sub _____ T-Pulled 9:37 PM
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 11:34 PM
 (F) Second Final Flow 23 Mileage 113 R.T. 170.15 Comments _____
 (G) Final Shut-In 48 Sampler _____
 (H) Final Hydrostatic 2060 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1750.15
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 1750.15

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged or 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. **60737**

Well Name & No. Kacirek Trust #4-5 Test No. 5 Date 10-18-14
 Company Murfin Drilg. Co., Inc. Elevation 3279 KB 3268 GL
 Address 250 N. Water, STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 5 Twp. 2S Rge. 36w Co. Rawlins State KS

Interval Tested ~~4350-4360~~ 4350-4440 Zone Tested LSG "H-5"
 Anchor Length 90 Drill Pipe Run 4131 Mud Wt. 9.3
 Top Packer Depth 4345 Drill Collars Run 207.34 Vis 59
 Bottom Packer Depth 4350 Wt. Pipe Run — WL 10.4
 Total Depth 4440 Chlorides 600 ppm System LCM 10
 Blow Description IF- Opened w/ surface blow, built to 7"
ISI- No Return
FF- Blow built to 8"
FSI- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>152</u>	<u>WOCM</u>		<u>20%</u>	<u>20%</u>	<u>60%</u>
<u>180</u>	<u>WM w/ oil spots</u>			<u>80%</u>	<u>20%</u>

Rec Total 332 BHT 142 Gravity _____ API RW .13 @ 75 °F Chlorides 64000 ppm
 (A) Initial Hydrostatic 2161 Test 1250 T-On Location 10:14 AM
 (B) First Initial Flow 37 Jars 250 T-Started 10:23 AM
 (C) First Final Flow 108 Safety Joint 75 T-Open 12:27 PM
 (D) Initial Shut-In 1252 Circ Sub _____ T-Pulled 4:27 PM
 (E) Second Initial Flow 115 Hourly Standby _____ T-Out 6:39 PM
 (F) Second Final Flow 168 Mileage 113 R.T. 170.15 Comments _____
 (G) Final Shut-In 1227 Sampler _____
 (H) Final Hydrostatic 2102 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1750.15
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1750.15

Approved By Rh D. [Signature] Our Representative Bruce [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. 60738

4/10

Well Name & No. Kacirek Trust #4-5 Test No. — Date 10-19-14
 Company Murfin Drlg. Co., Inc. Elevation 3279 KB 3268 GL
 Address 250 N. Water, STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 5 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested _____ Zone Tested _____
 Anchor Length _____ Drill Pipe Run _____ Mud Wt. _____
 Top Packer Depth _____ Drill Collars Run _____ Vis _____
 Bottom Packer Depth _____ Wt. Pipe Run _____ WL _____
 Total Depth _____ Chlorides _____ ppm System LCM _____

Blow Description _____
NO TEST

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	Feet of	%gas	%oil	%water	%mud

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

(A) Initial Hydrostatic _____ Test _____ T-On Location _____
 (B) First Initial Flow _____ Jars _____ T-Started _____
 (C) First Final Flow _____ Safety Joint _____ T-Open _____
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled _____
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 6:39 PM on 10-18-14
 (F) Second Final Flow _____ Mileage 113 R.T. 170.15 Comments Picked up tool @ 8:50 PM on 10-19-14
 (G) Final Shut-In _____ Sampler _____ Ruined Shale Packer _____
 (H) Final Hydrostatic _____ Straddle _____ Ruined Packer _____
 Initial Open _____ Extra Packer _____ Extra Copies _____
 Initial Shut-In _____ Extra Recorder _____ Sub Total _____
 Final Flow _____ Day Standby X2 Total _____
 Final Shut-In _____ Accessibility _____ MP/DST Disc't _____
 Sub Total _____

Approved By _____ Our Representative Brdt At

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Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Co. Inc.**

LEASE **Kacirek Trust #4-5**

FIELD **Brummen Northeast**

LOCATION **13201w1 & 3307fw1**

COUNTY **Rawlins** STATE **Kansas**

CONTRACTOR **Murfin Drilling Co. Inc. Rig #2**

RTD **4840** LTD **4842**

MUD UP **3257** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3530' TO 1D**

DRILLING TIME KEPT FROM **3530' TO 1D**

SAMPLES EXAMINED FROM **3530' TO 1D**

GEOLOGICAL SUPERVISION FROM **3648'**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMATION TOPS

ANhydrite **3177 (-102)**

NEva **3668 (-388)**

TOpeka **3999 (-720)**

LANsing **4129 (-850)**

STark **4434 (-1155)**

BKC **4485 (-1208)**

PAwnee **4611 (-1332)**

CHerokee Shale **4688 (-1408)**

ELEVATIONS

KB **3279**

DF

GL **3268**

Measurements Are All From **Kelly Bushing**

CASING

CONDUCTOR SURFACE **5.12" at 292'**

PRODUCTION **5.12" at 4837'**

ELECTRICAL SURVEYS

DeandryIndustries/Arcadis/Alstom/Geomatics
Powerline Services



REMARKS:

LEGEND

