

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1251342  
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: \_\_\_\_\_

1251342

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Culwell 'C' 2-10
Doc ID	1251342

All Electric Logs Run

DIL
DUCP
MEL
BHCS





*acct  
Prod-MG*

# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 148896

Invoice Date: Mar 9, 2015

Page: 1

Voice: (817) 546-7282

Fax: (817) 246-3361

Federal Tax I.D.#: 20-8651475

<b>Bill To:</b>
Murfin Drlg. Co., Inc. 250 N. Water STE #300 Wichita, KS 67202

<b>Customer ID</b>	<b>Field Ticket #</b>	<b>Payment Terms</b>	
Murfin	64154	Net 30 Days	
<b>Job Location</b>	<b>Camp Location</b>	<b>Service Date</b>	<b>Due Date</b>
KS1-01	Oakley	Mar 9, 2015	4/8/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Culwell C #2-10		
240.00	CEMENT MATERIALS	Class A Common	17.90	4,296.00
677.00	CEMENT MATERIALS	Chloride	1.10	744.70
252.00	CEMENT SERVICE	Cubic Feet Charge	2.48	624.96
1,103.90	CEMENT SERVICE	Ton Mileage Charge	2.75	3,035.73
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
95.00	CEMENT SERVICE	Pump Truck Mileage	7.70	731.50
1.00	CEMENT SERVICE	Swedge Manifold Rental	275.00	275.00
95.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	418.00
1.00	CEMENT SUPERVISOR	Paul Beaver		
1.00	EQUIPMENT OPERATOR	Darren Racette		
1.00	EQUIPMENT OPERATOR	Brandon Wilkinson		
1.00	OPERATOR ASSISTANT	George Grant		

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$  ✓

ONLY IF PAID ON OR BEFORE

Subtotal	11,638.14
Sales Tax	410.82
Total Invoice Amount	12,048.96
Payment/Credit Applied	
<b>TOTAL</b>	<b>12,048.96</b>

*Mike*

-5237.16  
6811.80

# ALLIED OIL & GAS SERVICES, LLC 064154

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley, KS

DATE <u>3-9-15</u>	SEC <u>10</u>	TWP. <u>1</u>	RANGE <u>37</u>	CALLED OUT	ON LOCATION <u>6:00 p.m.</u>	JOB START <u>6:00 p.m.</u>	JOB FINISH <u>6:30 p.m.</u>
LEASE <u>Culwell</u>	WELL # <u>2-10</u>	LOCATION <u>Bird City, N to AA, E to R332, 2N, E, N, EA, E, S, W into</u>		COUNTY <u>Cherokee</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one)							

CONTRACTOR <u>Murkin 2</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Surface</u>	CEMENT AMOUNT ORDERED <u>240 stks Com 3% CC</u>
HOLE SIZE <u>12 1/4</u>	T.D. <u>222'</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>221.61</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>13 bbl 1420</u>	

EQUIPMENT	
PUMP TRUCK CEMENTER <u>Paul Beaver / Darren Racette</u>	<u>Material Total 0 @ 5,046.70</u>
# <u>451</u> HELPER <u>Brandon Wilkerson</u>	<u>(2268.32 / 45%)</u>
BULK TRUCK	
# <u>890/211</u> DRIVER <u>George Grant</u>	
BULK TRUCK	
#	
DRIVER	
HANDLING <u>252 ft<sup>3</sup></u>	<u>@ 2.48 624.96</u>
MILEAGE <u>11.62 tons x 95 mi x 2.75</u>	<u>3035.73</u>
TOTAL _____	

REMARKS:  
mix 240 stks  
Displace w/ water  
cement did c/c

CHARGE TO: Murkin Drlg  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE	
DEPTH OF JOB <u>222'</u>	
PUMP TRUCK CHARGE <u>1512.25</u>	
EXTRA FOOTAGE @ _____	
MILEAGE <u>mi 11.62</u> <u>95 @ 7.70</u>	<u>731.50</u>
MANIFOLD <u>Susedge</u> @ _____	<u>275.00</u>
<u>micv</u> <u>95 @ 4.40</u>	<u>418.00</u>
TOTAL <u>6,597.44</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 Arno P. [Signature]  
SIGNATURE Arno P. [Signature]

SALES TAX (If Any) \_\_\_\_\_  
TOTAL CHARGES 11,638.14  
DISCOUNT 5,237.16 (45%) IF PAID IN 30 DAYS  
6,400.97 Net.



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



# Invoice

DATE	INVOICE #
3/16/2015	27057

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661
USED FOR <u>AC 123</u>
APPROVED <u>TT</u>

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#2-10	Culwell C	Cheyenne	Company Rig	Oil	Development	Cement Top To ...	Don
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				160	Miles	5.00	800.00
579D	Pump Charge - Top To Bottom LongString				1	Job	1,700.00	1,700.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
290	D-Air				5	Gallon(s)	42.00	210.00T
403-5	5 1/2" Cement Basket				3	Each	250.00	750.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	225.00	225.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	300.00	300.00T
409-5	5 1/2" Turbolizer				15	Each	75.00	1,125.00T
413-5	5 1/2" Roto Wall Scratcher				10	Each	35.00	350.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				200	Sacks	12.25	2,450.00T
276	Flocele				50	Lb(s)	2.25	112.50T
283	Salt				1,000	Lb(s)	0.20	200.00T
284	Calseal				10	Sack(s)	30.00	300.00T
285	CFR-1				141	Lb(s)	4.50	634.50T
330	Swift Multi-Density Standard (MIDCON II)				300	Sacks	15.75	4,725.00T
276	Flocele				75	Lb(s)	2.25	168.75T
581D	Service Charge Cement				500	Sacks	1.50	750.00
583D	Drayage				4,062.72	Ton Miles	0.75	3,047.04
	Subtotal							18,772.79
	Sales Tax Cheyenne County						8.15%	1,016.77
<b>We Appreciate Your Business!</b>							<b>Total</b>	<b>\$19,789.56</b>



CHARGE TO: Martin Dols, Co.  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

TICKET 27057

PAGE 1 OF 2

1. <u>Hess, KS</u>	WELL/PROJECT NO. <u>2-10</u>	LEASE <u>Culwell 'C'</u>	COUNTY/PARISH <u>Cheyenne</u>	STATE <u>KS</u>	CITY _____	DATE <u>3-16-15</u>	OWNER _____
2. <u>Ness City, KS</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>CS</u>	RIG NAME/NO. <u>#2</u>	SHIPPED VIA _____	DELIVERED TO <u>W/A @ Dwell, KS</u>	ORDER NO. _____	WELL LOCATION _____
3. _____	WELL TYPE _____	WELL CATEGORY <u>1/1 Field</u>	JOB PURPOSE <u>Cement Top To Bottom L.S.</u>	WELL PERMIT NO. _____	WELL LOCATION _____	WELL PERMIT NO. _____	WELL LOCATION _____
4. _____	REFERRAL LOCATION _____	INVOICE INSTRUCTIONS _____					

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE # 113	160	mi			500	800.00
579					Repair Charge - Cut-top To Bottom L.S.	1	ea			1700.00	1700.00
281					Liquid Key	4	gal			25.00	100.00
290					Mud Flush	500	gal			1.25	625.00
403					D-Air	5	gal			42.00	210.00
406					Cement Baskets	3	ea		5 1/4 in	250.00	750.00
407					Latch Down Plug to Baffle	1	ea		5 1/2 in	225.00	225.00
409					Insert Flat Shoe w/ Hook End	1	ea		5 1/2 in	300.00	300.00
413					Turnbolizers	15	ea		5 1/2 in	75.00	1125.00
419					Roto Drill Scrubbers	10	ea		5 1/4 in	35.00	350.00
					Rotating Head Rental	1	ea		5 1/2 in	200.00	200.00

**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 3-16-15 TIME SIGNED 8:00  A.M.  P.M.  
 X Alan Waldman

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				
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 checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		
<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 Alan Waldman APPROVAL \_\_\_\_\_  
 TOTAL 19,789.56  
 Thank You!





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

TICKET CONTINUATION

CUSTOMER  
Munich Dr. Co

WELL  
2-10 Caldwell #1

DATE  
3-16-15

PAGE  
2 OF 2

TICKET No. 27057

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				UNIT PRICE	AMOUNT
		LOC.	ACCT.	DE.			QTY.	U/M.	QTY.	U/M.		
285		2				Stuccoed Cement EA-2	200	SKS	18800	Lbs	1285	2450.00
276		2				Floccle 1/4 #15K	50	Lbs			285	142.50
283		2				Salt 15%	1200	Lbs			20	200.00
284		2				Calseed 5%	940	Lbs	10	SKS	3000	300.00
285		2				CFR-1 3/4 #1	141	Lbs			450	634.50
330		2				SMD Cement	300	SKS	29978	Lbs	1575	4785.00
276		2				Floccle	75	Lbs			285	168.75
581		2				Service Charge Cement	500	SKS			150	750.00
583		2				Mileage Charge	50784	TOTAL WEIGHT	160	LOADED MILES	75	3047.04

CONTINUATION TOTAL 12387.79

**JOB LOG**

**SWIFT Services, Inc.**

DATE 3-16-15 PAGE NO. 1

CUSTOMER Mesa Petroleum Co. WELL NO. \_\_\_\_\_ LEASE \_\_\_\_\_ JOB TYPE Cement Top To Bottom L.S. TICKET NO. 29757

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		TO 4675'	DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING		
3/16	2300						15.5 #/in	5 1/2"	DN location - Fleet Equip.
	2310								Start 5 1/2" - 15.5 #/in casing to KB-46666'
									Inspect Fleet Shoe w/ Auto Bell
									L.D. Baffle - 55-21' = 4645' = (110 1/2 BBL)
									Cont 1 thru 10-12-14-16-37-60
									Cement Baskets 17-38-61
3/17	0010								Circulate 20 min #60
	0030								Drop Bell-up ball to float
	0115								Rig finish running casing
	0130								Start Circ/Rotate Casing
	0230								Fin CIR.
			9						Plug RH 30 SKS SMD Cont
			6						WH 20 SKS SMD Cont
									Hook to casing
		5	12					500	Pump 50 gal Mud Flush
		6	20					500	Pump 20 BBL KCC Flush
			160					450	Start 250 SKS SMD cont
			49					400	Start 200 SKS FH-2 cont
								300	Fin cont
									Wash out pump & lines
									Drop L.D. Plug
		9						400	Start Disp
		9	40					500	Caught L.P.
		8						800	Slow rate
		7						1000	Slow rate
		6						1500	Plug down - Held - Release & Held
	0400		110 1/2					1900	Job Complete
									Wash up & Pack-up
									Thanks Don Tom Steve
									Isaac & Tyler
									25 SKS SMD cont circulated

MDCI  
 Culwell 'C' #2-10  
 2000' FSL 2080' FWL  
 Sec. 10-T1S-R37W  
 3152' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3097	+55	+3	3092	+60	+8
B/Anhydrite	3128	+24	+2	3124	+28	+6
Neva	3548	-396	+3	3547	-395	+4
Red Eagle	3612	-460	+3	3612	-460	+3
Foraker	3658	-506	+2	3656	-504	+4
Topeka	3882	-730	+2	3880	-728	+4
Oread	4012	-860	+4	4013	-861	+3
Lansing	4092	-940	+4	4094	-942	+2
Stark	4310	-1158	+2	4312	-1160	Flat
BKC	4366	-1214	Flat	4365	-1213	+1
Pawnee	4487	-1335	+1	4487	-1335	+1
Cherokee	4574	-1422	+1	4577	-1425	-2
RTD	4675	-1523				
LTD				4676	-1524	



## DRILL STEM TEST REPORT

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

250 N Water, Ste 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Culwell #2-10**

#### **10-1s-37w Cheyenne,KS**

Start Date: 2015.03.13 @ 03:32:00

End Date: 2015.03.13 @ 11:17:30

Job Ticket #: 62256                      DST #: 1

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

Printed: 2015.03.17 @ 11:37:25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62256

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.03.13 @ 03:32:00

## GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:35:30

Time Test Ended: 11:17:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 57

**Interval: 4034.00 ft (KB) To 4160.00 ft (KB) (TVD)**

Reference Elevations: 3152.00 ft (KB)

Total Depth: 4160.00 ft (KB) (TVD)

3141.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 162.35 psig @ 4035.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.13

End Date:

2015.03.13

Last Calib.: 2015.03.13

Start Time: 03:32:01

End Time:

11:17:30

Time On Btm: 2015.03.13 @ 05:33:30

Time Off Btm: 2015.03.13 @ 09:04:30

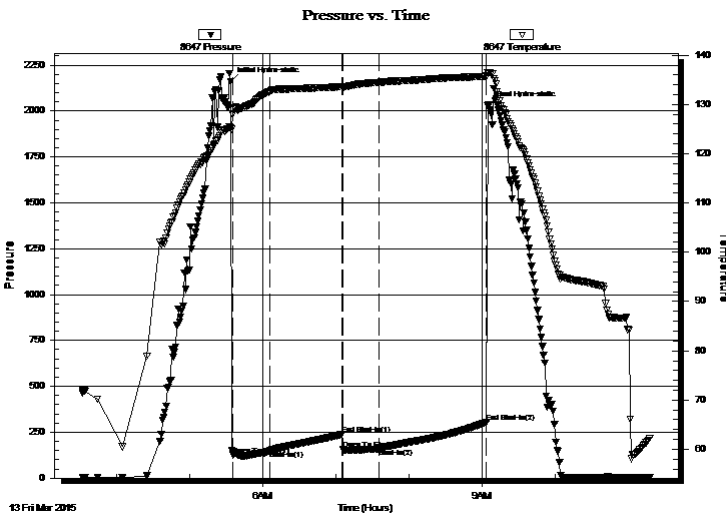
**TEST COMMENT:** 30 - IF - Opened w/ surface blw o, built to B.o.B in 4 min.

60 - ISI - No Return

30 - FF - Blow built to 6 1/2"

90 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2159.70	125.18	Initial Hydro-static
2	127.25	128.01	Open To Flow (1)
32	150.40	132.67	Shut-In(1)
91	238.12	133.60	End Shut-In(1)
92	157.44	133.56	Open To Flow (2)
122	162.35	134.50	Shut-In(2)
210	305.59	135.74	End Shut-In(2)
211	2026.38	136.51	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
241.00	GOCM 70% m, 20% o, 10% g	1.50
103.00	SGO 86% o, 14% g	1.44
0.00	186' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62256

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.03.13 @ 03:32:00

## Tool Information

Drill Pipe:	Length: 3816.00 ft	Diameter: 3.80 inches	Volume: 53.53 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: 205.92 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.92 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4034.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	126.00 ft			
Tool Length:	154.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4011.00	
Hydraulic tool	5.00			4016.00	
Jars	5.00			4021.00	
Safety Joint	3.00			4024.00	
Packer	5.00			4029.00	28.00 Bottom Of Top Packer
Packer	5.00			4034.00	
Stubb	1.00			4035.00	
Recorder	0.00	8647	Inside	4035.00	
Recorder	0.00	8372	Outside	4035.00	
Perforations	25.00			4060.00	
Change Over Sub	1.00			4061.00	
Drill Pipe	95.00			4156.00	
Change Over Sub	1.00			4157.00	
Bullnose	3.00			4160.00	126.00 Bottom Packers & Anchor

**Total Tool Length: 154.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62256

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2015.03.13 @ 03:32:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
241.00	GOCM 70% <sub>m</sub> , 20% <sub>o</sub> , 10% <sub>g</sub>	1.505
103.00	SGO 86% <sub>o</sub> , 14% <sub>g</sub>	1.445
0.00	186' GIP	0.000

Total Length: 344.00 ft      Total Volume: 2.950 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity 31 @ 68F Corrected = 32

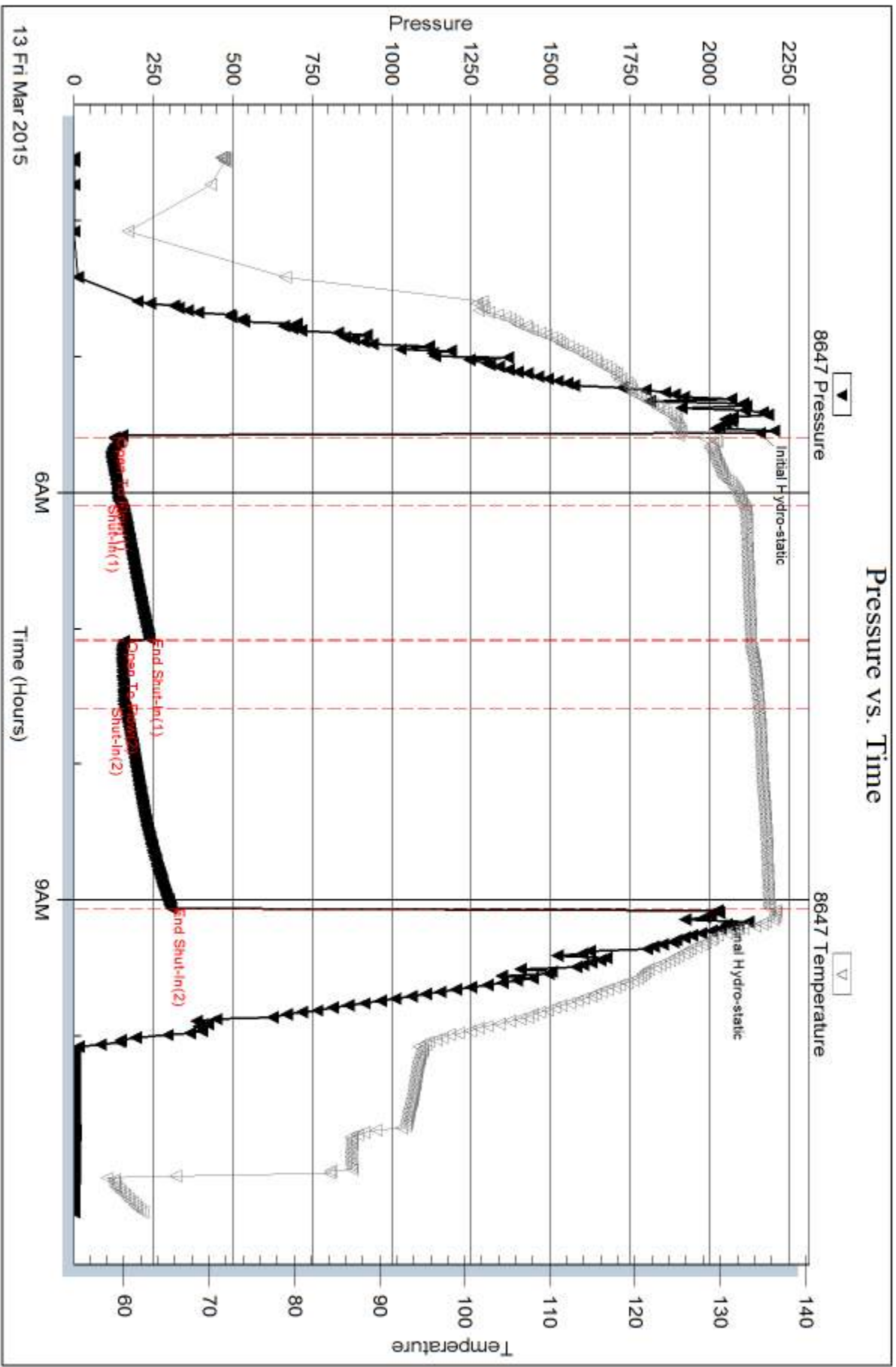
Serial #: 8647

Inside

Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 1







## DRILL STEM TEST REPORT

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

250 N Water, Ste 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Culwell #2-10**

#### **10-1s-37w Cheyenne,KS**

Start Date: 2015.03.14 @ 04:18:00

End Date: 2015.03.14 @ 11:08:00

Job Ticket #: 62257                      DST #: 2

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

Printed: 2015.03.17 @ 11:36:54



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62257

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.03.14 @ 04:18:00

## GENERAL INFORMATION:

Formation: **LKC "G-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:14:30

Time Test Ended: 11:08:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 57

**Interval: 4157.00 ft (KB) To 4310.00 ft (KB) (TVD)**

Reference Elevations: 3152.00 ft (KB)

Total Depth: 4310.00 ft (KB) (TVD)

3141.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 70.03 psig @ 4158.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.14

End Date:

2015.03.14

Last Calib.: 2015.03.14

Start Time: 04:18:01

End Time:

11:08:00

Time On Btm: 2015.03.14 @ 06:13:30

Time Off Btm: 2015.03.14 @ 09:15:30

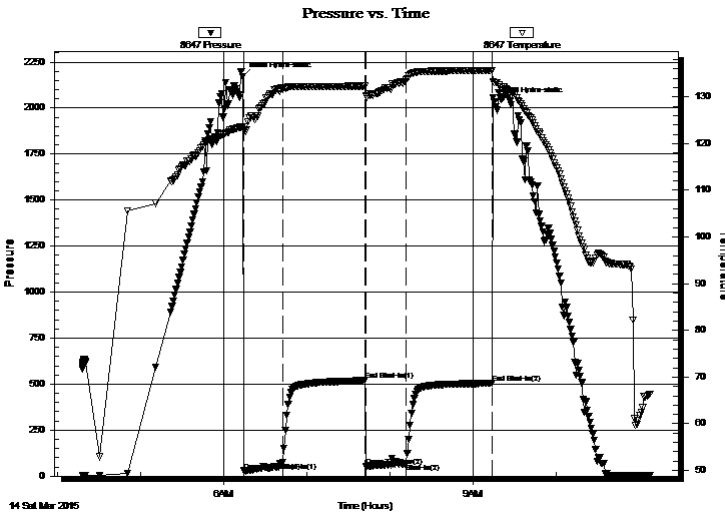
**TEST COMMENT:** 30 - IF - Opened w/ surface blow , built to 3/4"

60 - ISI - No Return

30 - FF - No Blow

60 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2171.69	123.60	Initial Hydro-static
1	27.91	122.89	Open To Flow (1)
29	76.51	132.00	Shut-In(1)
88	521.30	132.31	End Shut-In(1)
89	53.19	130.21	Open To Flow (2)
118	70.03	133.70	Shut-In(2)
180	504.32	135.66	End Shut-In(2)
182	2034.09	133.05	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	100% mud w/ oil spots in tool	0.32

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62257

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.03.14 @ 04:18:00

## Tool Information

Drill Pipe:	Length: 3937.00 ft	Diameter: 3.80 inches	Volume: 55.23 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: 205.92 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.92 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4157.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	153.00 ft			
Tool Length:	181.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4134.00	
Hydraulic tool	5.00			4139.00	
Jars	5.00			4144.00	
Safety Joint	3.00			4147.00	
Packer	5.00			4152.00	28.00 Bottom Of Top Packer
Packer	5.00			4157.00	
Stubb	1.00			4158.00	
Recorder	0.00	8647	Inside	4158.00	
Recorder	0.00	8372	Outside	4158.00	
Perforations	21.00			4179.00	
Change Over Sub	1.00			4180.00	
Drill Pipe	126.00			4306.00	
Change Over Sub	1.00			4307.00	
Bullnose	3.00			4310.00	153.00 Bottom Packers & Anchor

**Total Tool Length: 181.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62257

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2015.03.14 @ 04:18:00

### 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: 52.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
65.00	100% mud w / oil spots in tool	0.320

Total Length: 65.00 ft      Total Volume: 0.320 bbl

Num Fluid Samples: 0

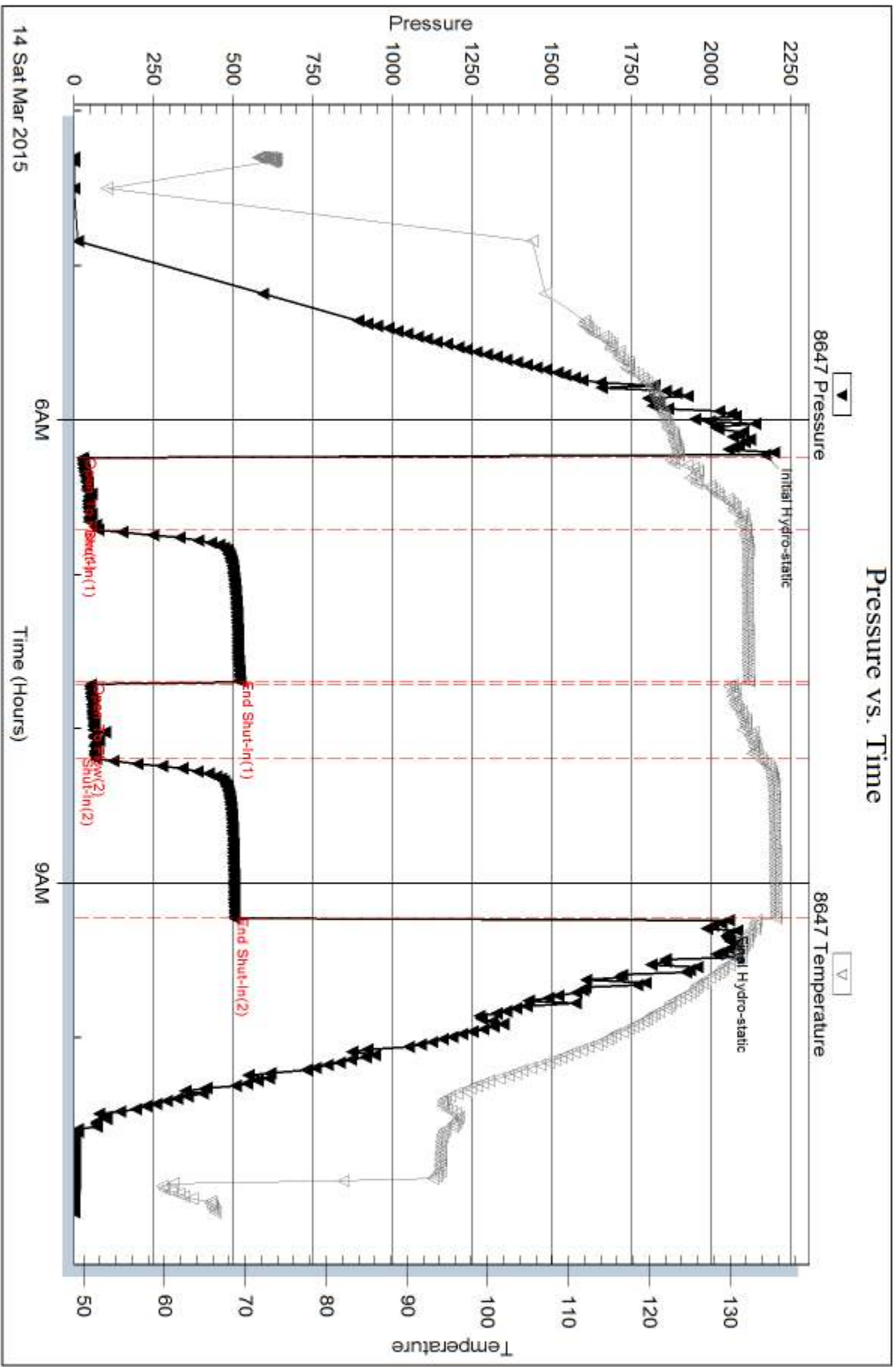
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

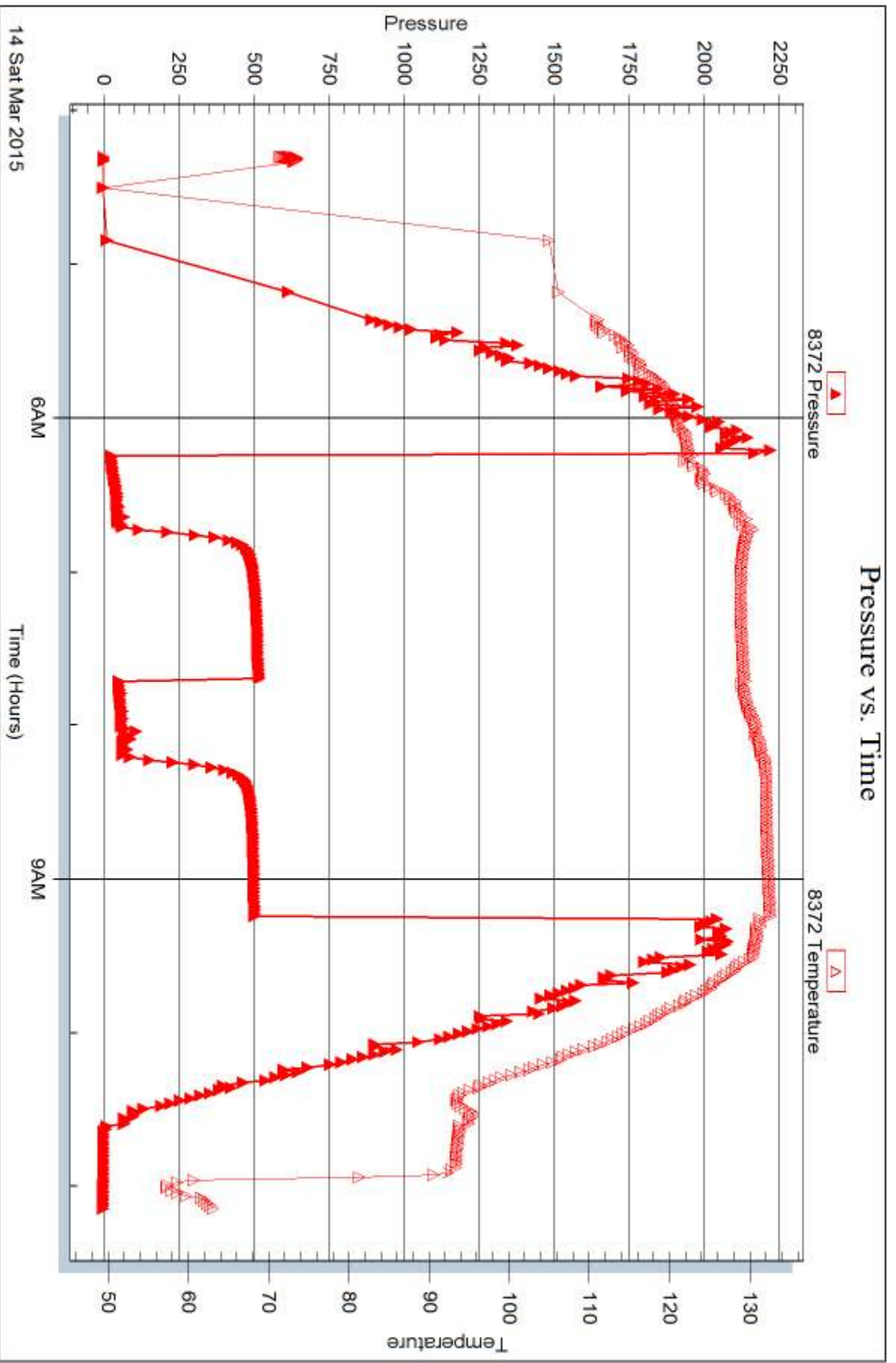


Serial #: 8372

Outside Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 62257

Printed: 2015.03.17 @ 11:36:56



## DRILL STEM TEST REPORT

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

250 N Water, Ste 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

### **Culwell #2-10**

#### **10-1s-37w Cheyenne,KS**

Start Date: 2015.03.15 @ 08:47:00

End Date: 2015.03.15 @ 16:39:30

Job Ticket #: 62258                      DST #: 3

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

Printed: 2015.03.17 @ 11:36:11





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.03.15 @ 08:47:00

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:46:30

Time Test Ended: 16:39:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Quintana

Unit No: 57

**Interval: 4462.00 ft (KB) To 4510.00 ft (KB) (TVD)**

Reference Elevations: 3152.00 ft (KB)

Total Depth: 4510.00 ft (KB) (TVD)

3141.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 26.38 psig @ 4463.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.15

End Date:

2015.03.15

Last Calib.:

2015.03.15

Start Time:

08:47:01

End Time:

16:39:30

Time On Btm:

2015.03.15 @ 10:45:00

Time Off Btm:

2015.03.15 @ 14:48:30

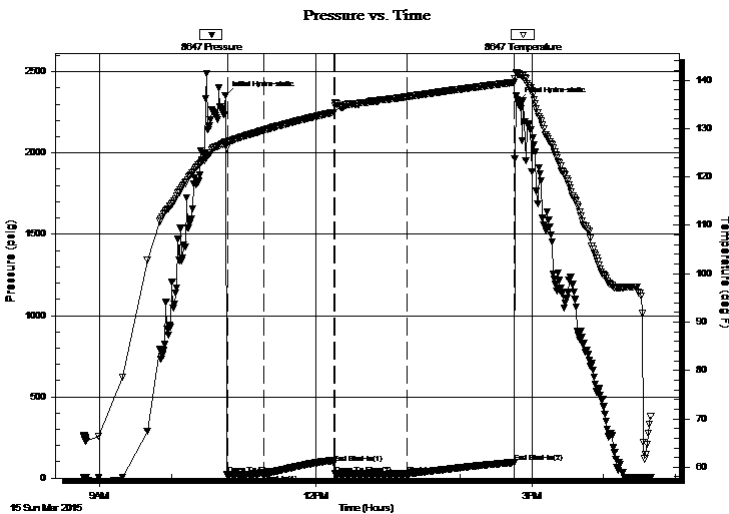
TEST COMMENT: 30 - IF - Opened w/ surface blow , died back to nothing

60 - ISI - No Return

60 - FF - No Blow

90 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2352.48	127.15	Initial Hydro-static
2	21.48	127.02	Open To Flow (1)
32	26.29	129.62	Shut-In(1)
91	91.09	133.35	End Shut-In(1)
92	26.28	135.25	Open To Flow (2)
152	26.38	136.59	Shut-In(2)
241	94.69	139.54	End Shut-In(2)
244	2314.89	141.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% mud w/ oil spots	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drlg Co., Inc.

250 N Water, Ste 300  
Wichita, KS 67202

ATTN: Saman Sharifaie

**10-1s-37w Cheyenne,KS**

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

Test Start: 2015.03.15 @ 08:47:00

## GENERAL INFORMATION:

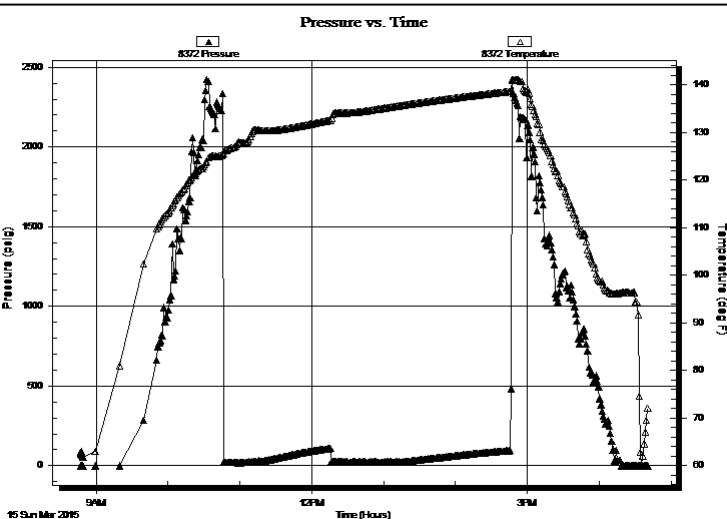
Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:46:30  
 Time Test Ended: 16:39:30  
**Interval: 4462.00 ft (KB) To 4510.00 ft (KB) (TVD)**  
 Total Depth: 4510.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brandon Quintana  
 Unit No: 57  
 Reference Elevations: 3152.00 ft (KB)  
 3141.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8372**

**Outside**

Press@RunDepth: psig @ 4463.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.15 End Date: 2015.03.15 Last Calib.: 2015.03.15  
 Start Time: 08:47:01 End Time: 16:41:00 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30 - IF - Opened w/ surface blow , died back to nothing  
 60 - ISI - No Return  
 60 - FF - No Blow  
 90 - FSI - No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% mud w/ oil spots	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.03.15 @ 08:47:00

## Tool Information

Drill Pipe:	Length: 4258.00 ft	Diameter: 3.80 inches	Volume: 59.73 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: 205.92 ft	Diameter: 2.25 inches	Volume: 1.01 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.92 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4462.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	76.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4439.00	
Hydraulic tool	5.00			4444.00	
Jars	5.00			4449.00	
Safety Joint	3.00			4452.00	
Packer	5.00			4457.00	28.00 Bottom Of Top Packer
Packer	5.00			4462.00	
Stubb	1.00			4463.00	
Recorder	0.00	8647	Inside	4463.00	
Recorder	0.00	8372	Outside	4463.00	
Perforations	10.00			4473.00	
Change Over Sub	1.00			4474.00	
Drill Pipe	32.00			4506.00	
Change Over Sub	1.00			4507.00	
Bullnose	3.00			4510.00	48.00 Bottom Packers & Anchor

**Total Tool Length: 76.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drlg Co., Inc.

**10-1s-37w Cheyenne,KS**

250 N Water, Ste 300  
Wichita, KS 67202

**Culwell #2-10**

Job Ticket: 62258

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2015.03.15 @ 08:47:00

## 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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% mud w / oil spots	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:

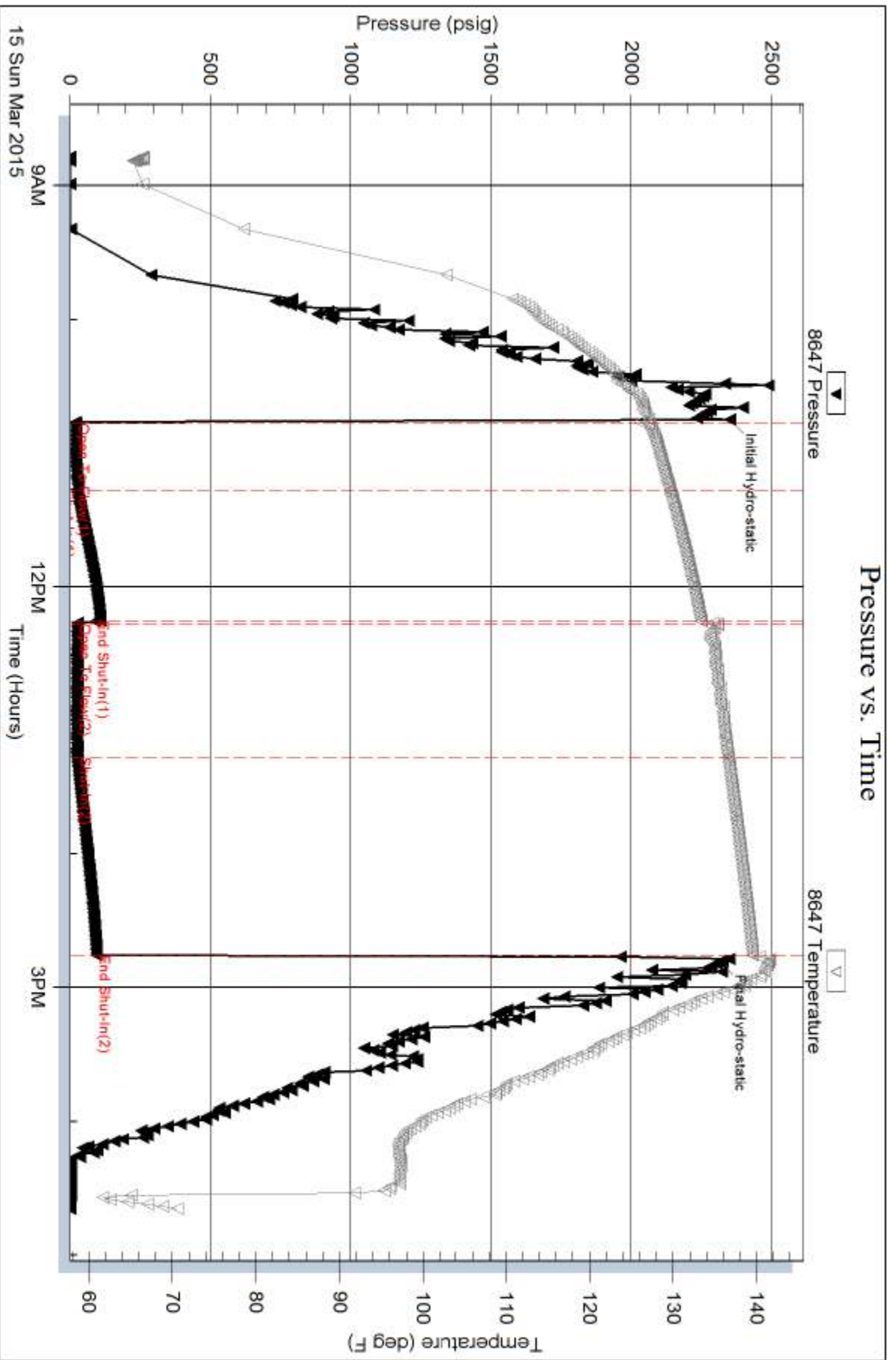
Serial #: 8647

Inside

Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62258

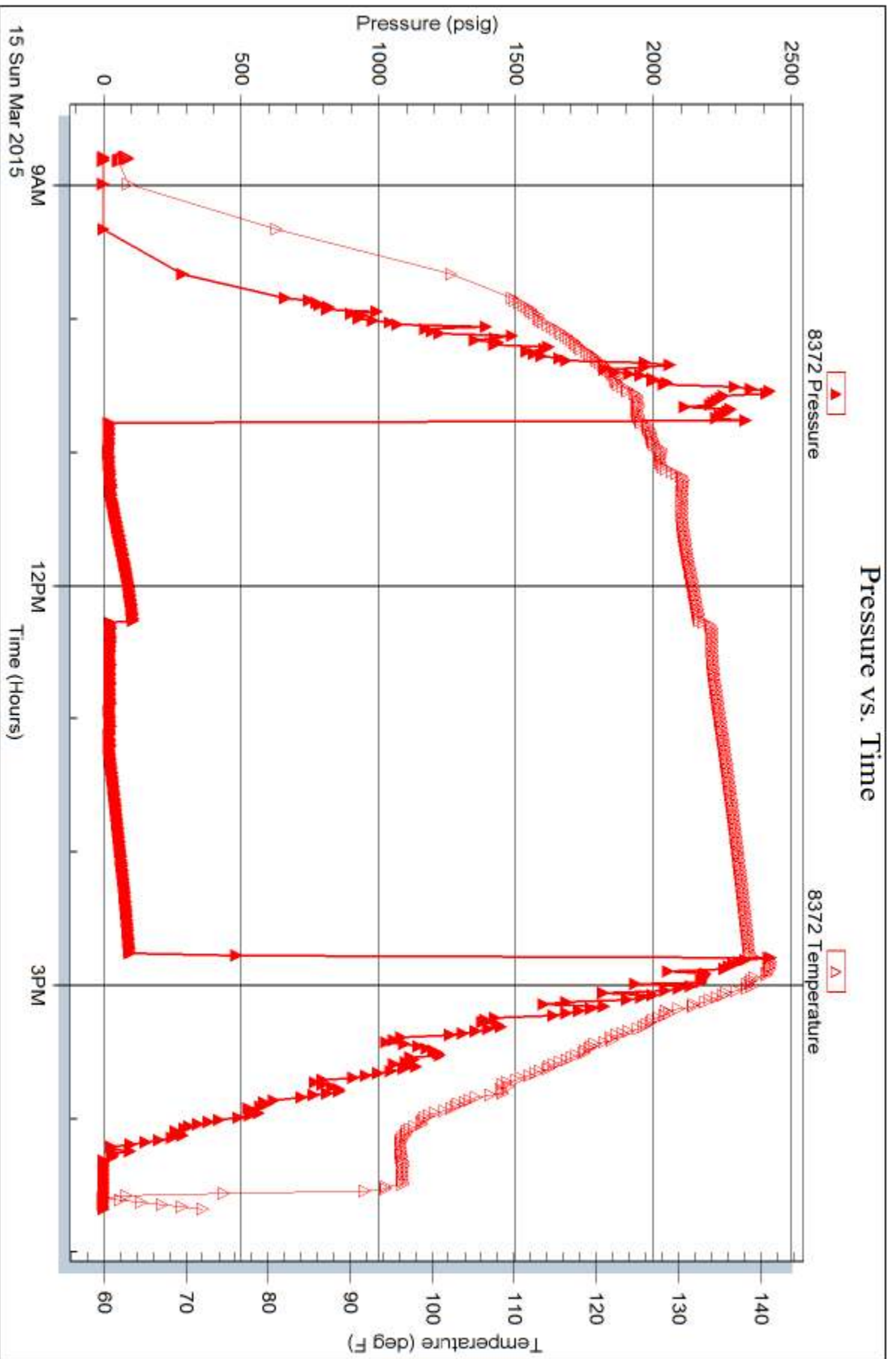
Printed: 2015.03.17 @ 11:36:13

Serial #: 8372

Outside Murfin Drtg Co., Inc.

Oilwell #2-10

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62258

Printed: 2015.03.17 @ 11:36:13



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **62256**

Well Name & No. Culwell 'C' #2-10 Test No. 1 Date 3-13-15  
 Company Murfin Drilg. Co., Inc. Elevation 3152 KB 3141 GL  
 Address 250 N Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #2  
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4034 - 4160 Zone Tested LKC "A-D"  
 Anchor Length 126' Drill Pipe Run 3816 Mud Wt. 9.1  
 Top Packer Depth 4029 Drill Collars Run 205.92 Vis 53  
 Bottom Packer Depth 4034 Wt. Pipe Run - WL 8.8  
 Total Depth 4160 Chlorides 1000 ppm System LCM 11

Blow Description IF - Opened w/ surface blow, built to B.O.B in 4 min.  
IST - No Return  
FF - Blow built to B 1/2"  
FSI No Return

Rec	Feet of	%gas	%oil	%water	%mud
103	560	14	86		
241	600m	10	20		70
186	GIP	100			

Rec Total 344 BHT 135 Gravity 32 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2159  Test 1150 T-On Location 3:05 AM  
 (B) First Initial Flow 127  Jars 250 T-Started 3:32 AM  
 (C) First Final Flow 150  Safety Joint 75 T-Open 5:36 AM  
 (D) Initial Shut-In 238  Circ Sub  T-Pulled 9:06 AM  
 (E) Second Initial Flow 157  Hourly Standby  T-Out 11:20 AM  
 (F) Second Final Flow 162  Mileage 146 R.T. 146 Comments   
 (G) Final Shut-In 305  Sampler   
 (H) Final Hydrostatic 2026  Straddle

Initial Open 30  Shale Packer   Ruined Shale Packer   
 Initial Shut-In 60  Extra Packer   Ruined Packer   
 Final Flow 30  Extra Recorder   Extra Copies   
 Final Shut-In 90  Day Standby  Sub Total 0  
 Sub Total 1621  Accessibility  Total 1621  
 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Bnd Qit  
 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. 62257

Well Name & No. Culwell 'C' #2-10 Test No. 2 Date 3-14-15  
 Company Murfin Drlg. Co., Inc. Elevation 3152 KB 3141 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharfaic Rig Murfin #2  
 Location: Sec. 10 Twp. 19 Rge. 37W Co. Cheyenne State KS

Interval Tested 4157-4310 Zone Tested LKC "G-5"  
 Anchor Length 153' Drill Pipe Run 3937 Mud Wt. 9.3  
 Top Packer Depth 4152 Drill Collars Run 205.92 Vis 5Z  
 Bottom Packer Depth 4157 Wt. Pipe Run - WL 8.4  
 Total Depth 4310 Chlorides 1800 ppm System LCM 14

Blow Description IF - Opened w/ surface blow, built to 3/4"  
ISI - No Return  
FF - No Blow  
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>Mud w/ oil spots in tool</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	Feet of	%gas	%oil	%water	%mud

Rec Total 65 BHT 135 Gravity 1150 API RW @ °F Chlorides 1800 ppm  
 (A) Initial Hydrostatic 2171  Test 1150  
 (B) First Initial Flow 27  Jars 250  
 (C) First Final Flow 67  Safety Joint  
 (D) Initial Shut-In 521  Circ Sub  
 (E) Second Initial Flow 53  Hourly Standby  
 (F) Second Final Flow 70  Mileage 146 R.T.  
 (G) Final Shut-In 504  Sampler  
 (H) Final Hydrostatic 2034  Straddle

T-On Location 4:05 AM  
 T-Started 4:18 AM  
 T-Open 6:18 AM  
 T-Pulled 9:13 AM  
 T-Out 11:09 AM

Comments \_\_\_\_\_  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1621  
 MP/DST Disc't \_\_\_\_\_

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

Sub Total 1621

Our Representative Bud Ot

Approved By \_\_\_\_\_  
 I am 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 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. 62258

Well Name & No. Culwell C' #2-10 Test No. 3 Date 3-15-15  
 Company Murfin Drlg. Co., Inc. Elevation 3152 KB 3141 GL  
 Address 250 N. Water, STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #2  
 Location: Sec. 16 Twp. 15 Rge. 37W Co. Cheyenne State KS

Interval Tested 4462-4510 Zone Tested Pawnee  
 Anchor Length 48 Drill Pipe Run 4258 Mud Wt. 9.3  
 Top Packer Depth 4457 Drill Collars Run 205.92 Vis 51  
 Bottom Packer Depth 4462 Wt. Pipe Run - WL 8  
 Total Depth 4510 Chlorides 900 ppm System LCM 17  
 Blow Description IF- Opened w/ surface blow, died back to nothing  
ISI- No Return  
FF- No Blow  
FSI- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud w/ oil 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 5 BHT 139 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2352  Test 1150 T-On Location 8:38 AM  
 (B) First Initial Flow 21  Jars 250 T-Started 8:47 AM  
 (C) First Final Flow 26  Safety Joint 75 T-Open 10:47 AM  
 (D) Initial Shut-In 91  Circ Sub \_\_\_\_\_ T-Pulled 2:47 PM  
 (E) Second Initial Flow 26  Hourly Standby \_\_\_\_\_ T-Out 4:42 PM  
 (F) Second Final Flow 26  Mileage 146 R.T. 146 Comments \_\_\_\_\_  
 (G) Final Shut-In 94  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2314  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_  
 Final Shut-In 90  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1621 Sub Total 1621 Total 1621 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Burd Out  
 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.

# Saman Sharifaie

## Petroleum Geologist

### GEOLOGIST'S REPORT

#### DRILLING TIME AND SAMPLE LOG

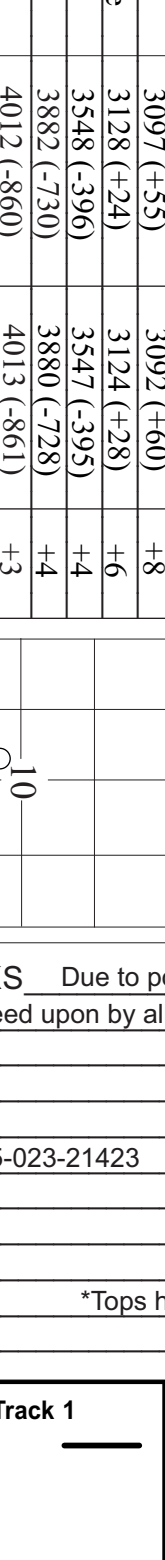
COMPANY: **Martin Drilling Co, Inc.**  
 LEASE: **Cidwell "C" #2-10**  
 FIELD: **Jones Canyon Southeast**  
 LOCATION: **2000 FSL & 2080 FWL**  
 SEC: **10 TWP 1S RGE 37W**  
 COUNTY: **Cheyenne STATE Kansas**  
 OPERATOR: **Martin Drilling #2**  
 RUD: **03/09/15 COMP 03/17/15**  
 SPUD: **4/6/15** TYPE MUD: **Chemical**  
 MUD UP: **3:00'** TD: **4675'**

ELEVATIONS: **KB 3152'**  
 DE: \_\_\_\_\_  
 GL: **3141'**  
 Measurements Are All From Kelly Bushing

CASING  
 CONDUCTOR: **8-5/8" at 222'**  
 SURFACE: **8-5/8" at 222'**  
 PRODUCTION: **5-1/2" at 4664'**

ELECTRICAL SUPPLIES  
 CND: **D.L. MELI**  
 GEOLOGICAL SUPERVISION FROM: **3150'**  
 REFERENCE WELL: **MDCT - Cidwell "C" #3-10**  
*Pioneer Well*

Formation	Sample Tops	E-log Tops	Strat Pos.
Anhydrite	3097 (-55)	3092 (+60)	-8
Base Anhydrite	3128 (-24)	3124 (+28)	-6
Neva	3348 (-306)	3347 (-305)	-4
TOPEKA	3382 (-220)	3380 (-220)	-4
Oread	4012 (-860)	4013 (-861)	-3
Stark	4092 (-940)	4094 (-942)	-2
Stark	4310 (-1158)	4312 (-1160)	FH1
Pawnee	4487 (-1335)	4487 (-1335)	-1
Cherokee	4574 (-1422)	4577 (-1425)	-2



REMARKS: Due to poor to fair shows of oil in multiple pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,  
 API #15-023-21423  
 Saman Sharifaie  
 Petroleum Geologist

\*Tops have been adjusted to electric logs

