

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1248665
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: _____

1248665

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Abell Ranch 'B' 3-31
Doc ID	1248665

All Electric Logs Run

DIL
DUCP
MEL
BHCS



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



Invoice

DATE	INVOICE #
1/10/2015	26979

BILL TO
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130
USED FOR <u>IC 103</u>
APPROVED <u>[Signature]</u>

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3-31	Abell Ranch B	Gove	Company Rig #21	Oil	Development	LongString	Nick
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				80	Miles	6.00	480.00
578D-L	Pump Charge - Long String - 4630 Feet				1	Job	1,500.00	1,500.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
280	Flocheck 21				500	Gallon(s)	3.00	1,500.00T
290	D-Air				2	Gallon(s)	42.00	84.00T
403-5	5 1/2" Cement Basket				1	Each	300.00	300.00T
404-5	5 1/2" Port Collar				1	Each	2,900.00	2,900.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	275.00	275.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	375.00	375.00T
409-5	5 1/2" Turbolizer				10	Each	90.00	900.00T
413-5	5 1/2" Roto Wall Scratcher				15	Each	40.00	600.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				225	Sacks	14.50	3,262.50T
276	Flocele				50	Lb(s)	2.50	125.00T
283	Salt				1,150	Lb(s)	0.20	230.00T
284	Calseal				11	Sack(s)	35.00	385.00T
285	CFR-1				150	Lb(s)	4.50	675.00T
581D	Service Charge Cement				225	Sacks	2.00	450.00
583D	Drayage				944	Ton Miles	1.00	944.00
	Subtotal							15,285.50
	Sales Tax Gove County						7.90%	941.01

Thank You For Your Business In 2014!
We Look Forward To Serving You In 2015!

Total \$16,226.51



CHARGE TO: Martin Dely Co. Inc.
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 26979

PAGE 1 OF 2

SERVICE LOCATIONS
 1. Hays, KS
 2. Ness City, KS
 3.
 4.

WELL/PROJECT NO. 43-31 LEASE Abell Ranch "B" COUNTY/PARISH Boone STATE KS CITY
 TICKET TYPE SERVICE CONTRACTOR Co Tools Rig #21 RIG NAME NO. ET DELIVERED TO Location
 SALES
 WELL TYPE oil WELL CATEGORY Development JOB PURPOSE longstring WELL PERMIT NO.
 INVOICE INSTRUCTIONS

DATE 1-10-15 ORDER NO. same
 WELL LOCATION

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.			UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY.	UM	QTY.		
575						4111	80	mi		6.00	480.00
578					Ramp Charge (Longstring)		1	ea	4630	1500.00	1500.00
221					KEL		4	pd		25.00	100.00
280					Flecheek-21		500	pd		3.00	1500.00
290					D-Air		2	gal		42.00	84.00
403					Basket		1	ea	5 1/2'	300.00	300.00
404					Port Collar		1	ea		2900.00	2900.00
406					LD Plug & Baffle		1	ea		275.00	275.00
407					Insert Float		1	ea		375.00	375.00
409					Turbolizers		10	ea		90.00	900.00
413					Rotomall Scraperbars		15	ea		40.00	600.00
419					Rotating Head		1	ea		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 1-10-15 TIME SIGNED 1800 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 CALCULATIONS SATISFACTORILY?
 ARE YOU SATISFIED WITH OUR SERVICE?
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 9219.00
 PAGE 2 6071.50
 Subtotal 15285.50
 G.V.E. TAX 7.99%
 TOTAL 16,226.51

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

SWIFT OPERATOR Martin Dely APPROVAL

Thank You!



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

TICKET CONTINUATION

TICKET No. 26979

CUSTOMER
Mun-Pin Dry Co Inc

WELL
Abell Ranch "B" 3-31

DATE 1-10-15
PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				UNIT PRICE	AMOUNT	
		LOG	ACCT	DF			QTY	U/M	QTY	U/M			
325						Standard Cement	225	SKS				14.50	3262.50
276						Flecke	50	#	10	1/4		2.50	125.00
283						Salt	1150	#	10	1/4		20	230.00
284						Calseal	11	SKS	5	1/4		35.00	385.00
285						CFR-1	150	#	3	1/4		4.50	675.00
581												2.00	450.00
583												1.00	944.90

SERVICE CHARGE
MILEAGE TOTAL WEIGHT CHARGE 23600

LOADED MILES 80

CUBIC FEET 225 SKS
TON MINES 944

CONTINUATION TOTAL

5988.80
6077.50

JOB LOG

SWIFT Services, Inc.

DATE: 7-10-15 PAGE NO. 7

CUSTOMER: Martin D. Ing Co. Inc. WELL NO. #3-31 LEASE: Abell Ranch "B" JOB TYPE: Longstring TICKET NO. 26979

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1215							on loc w/FE
								RTD 4630'
								5 1/2" X 15.5" # x 4628' x 21'
								Turbo, 1, 2, 3, 4, 6, 8, 10, 12, 14, 52
								Back 53
								P.C. 53 @ 2413'
	1300							start F.F.
	1410							1/2 way Circ 30 min
	1545							BHM Circ
	1700	5	0			200		start 15 bbl KCL flush
	1703	5	15/0			200		start 500 gal 100 Flocheck-21
	1705	5	12/0			200		start 5 bbl KCL flush
	1706	5	5/0			200		start 175 sks EA-2 Cement
	1715		43					End Cement
								Wash P&L
								Drop L D Plug
	1725	6	0			200		start Displacement 2% KCL in 1st Tank
	1739	5	82			250		Catch Cement
	1745		110			700 1500		Land Plug
								Released Pressure
								Float Held
	1755	2	7/5					Plug RH & MH 30/20 sks EA-2
								Thank you
								Nick Austin & Jared

MDCI
 Abell Ranch 'B' #3-31
 1650 FNL 1160' FWL
 Sec. 31-T12S-R30W
 2893' KB

Formation	Sample tops	Datum	Ref	Log Tops	Datum	Ref
Anhydrite	2380	+513	+1	2380	+513	+1
B/Anhydrite	2406	+487	+1	2406	+487	+1
Topeka	3693	-800	-4	3692	-799	-3
Heebner	3912	-1019	-3	3910	-1017	-1
Lansing	3956	-1063	-6	3954	-1061	-4
Stark	4180	-1287	-6	4176	-1283	-2
Marmaton	4305	-1412	-3	4300	-1407	+2
Fort Scott	4427	-1534	+3	4424	-1331	+6
Cherokee	4454	-1561	+2	4450	-1557	+6
Mississippi	4517	-1624	flat	4515	-1622	+2
RTD	4630					
LTD				4631		



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Larry Nicholson

Abell Ranch B #3-31

31 12s 30w Gove,KS

Start Date: 2015.01.05 @ 03:14:00

End Date: 2015.01.05 @ 12:59:45

Job Ticket #: 59558 DST #: 1

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

Printed: 2015.01.12 @ 09:33:19



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59558

DST#: 1

ATTN: Larry Nicholson

Test Start: 2015.01.05 @ 03:14:00

GENERAL INFORMATION:

Formation: **Toronto - LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:18:00

Time Test Ended: 12:59:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 69

Interval: 3911.00 ft (KB) To 4027.00 ft (KB) (TVD)

Reference Elevations: 2893.00 ft (KB)

Total Depth: 4027.00 ft (KB) (TVD)

2882.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8365

Inside

Press@RunDepth: 134.96 psig @ 3912.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.05

End Date: 2015.01.05

Last Calib.: 2015.01.05

Start Time: 03:14:05

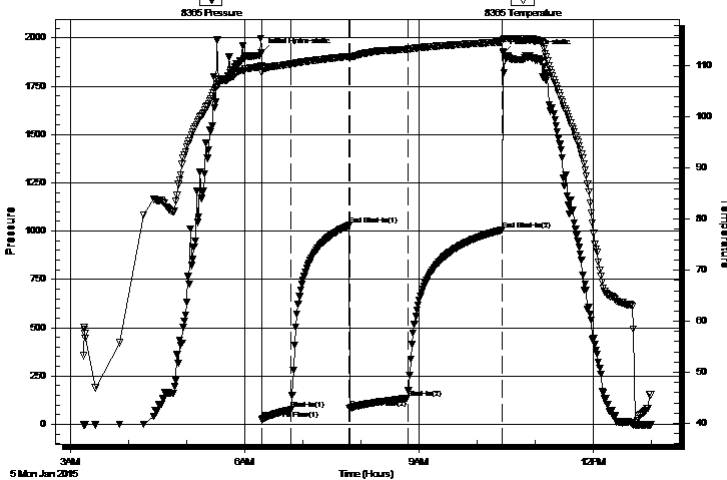
End Time: 12:59:45

Time On Btm: 2015.01.05 @ 06:17:30

Time Off Btm: 2015.01.05 @ 10:27:15

TEST COMMENT: IF: 1" blow.
IS: No return.
FF: 1 1/2" blow.
FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1923.57	110.01	Initial Hydro-static
1	23.57	108.72	Open To Flow (1)
31	75.36	110.39	Shut-In(1)
91	1029.57	111.88	End Shut-In(1)
91	81.08	111.53	Open To Flow (2)
151	134.96	113.29	Shut-In(2)
249	1006.29	114.74	End Shut-In(2)
250	1921.33	115.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	socm 2o 98m	1.18

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59558

DST#: 1

ATTN: Larry Nicholson

Test Start: 2015.01.05 @ 03:14:00

Tool Information

Drill Pipe:	Length: 3644.00 ft	Diameter: 3.80 inches	Volume: 51.12 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 52.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	38.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3911.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	116.00 ft			
Tool Length:	143.00 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			3885.00	
Shut In Tool	5.00			3890.00	
Hydraulic tool	5.00			3895.00	
Jars	5.00			3900.00	
Safety Joint	2.00			3902.00	
Packer	5.00			3907.00	27.00 Bottom Of Top Packer
Packer	4.00			3911.00	
Stubb	1.00			3912.00	
Recorder	0.00	8365	Inside	3912.00	
Recorder	0.00	8522	Outside	3912.00	
Perforations	15.00			3927.00	
Change Over Sub	1.00			3928.00	
Drill Pipe	95.00			4023.00	
Change Over Sub	1.00			4024.00	
Bullnose	3.00			4027.00	116.00 Bottom Packers & Anchor

Total Tool Length: 143.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31 12s 30w Gove,KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59558

DST#: 1

ATTN: Larry Nicholson

Test Start: 2015.01.05 @ 03:14:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

dbl

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume dbl
240.00	socm 2o 98m	1.180

Total Length: 240.00 ft Total Volume: 1.180 dbl

Num Fluid Samples: 0

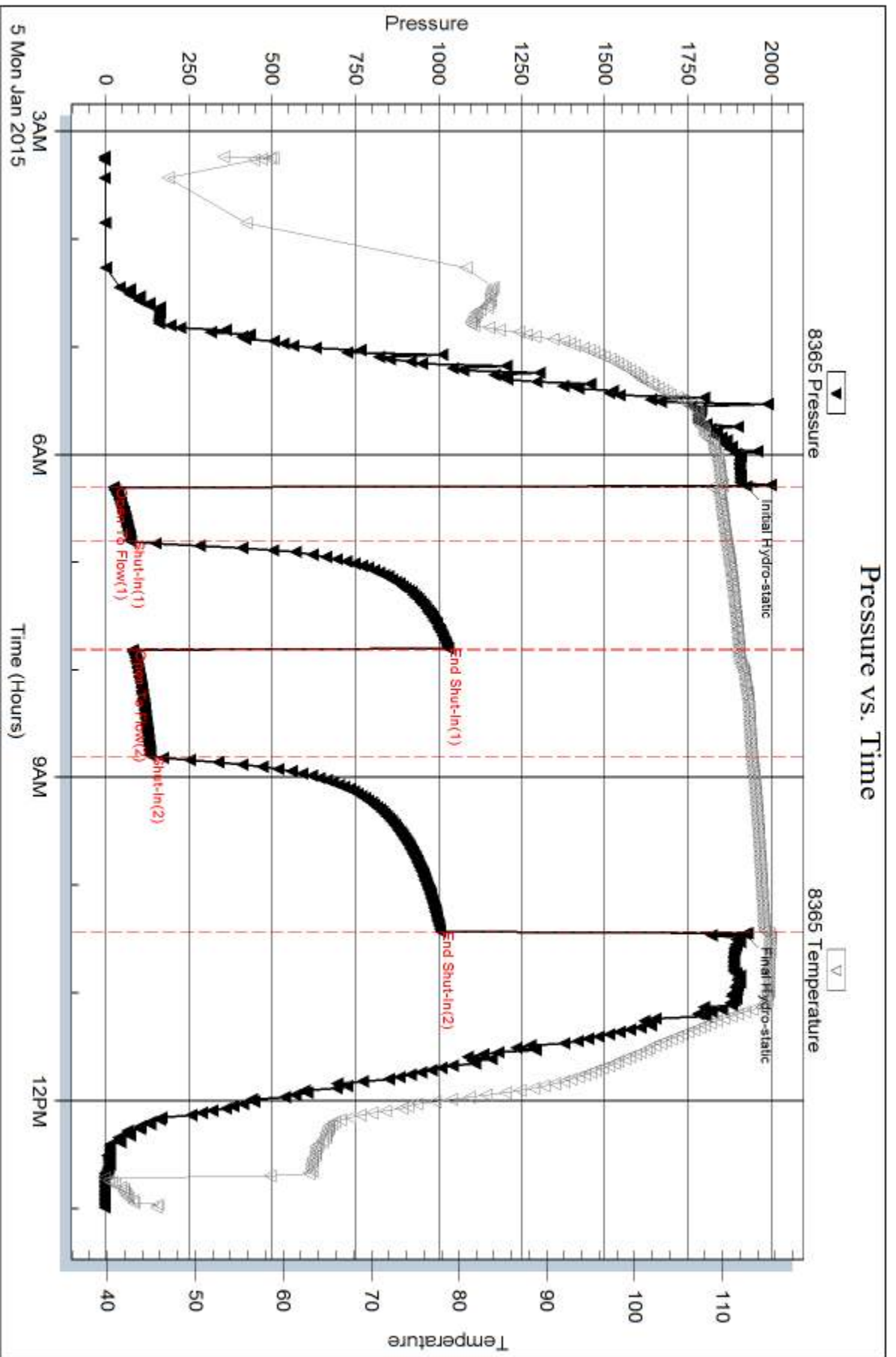
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

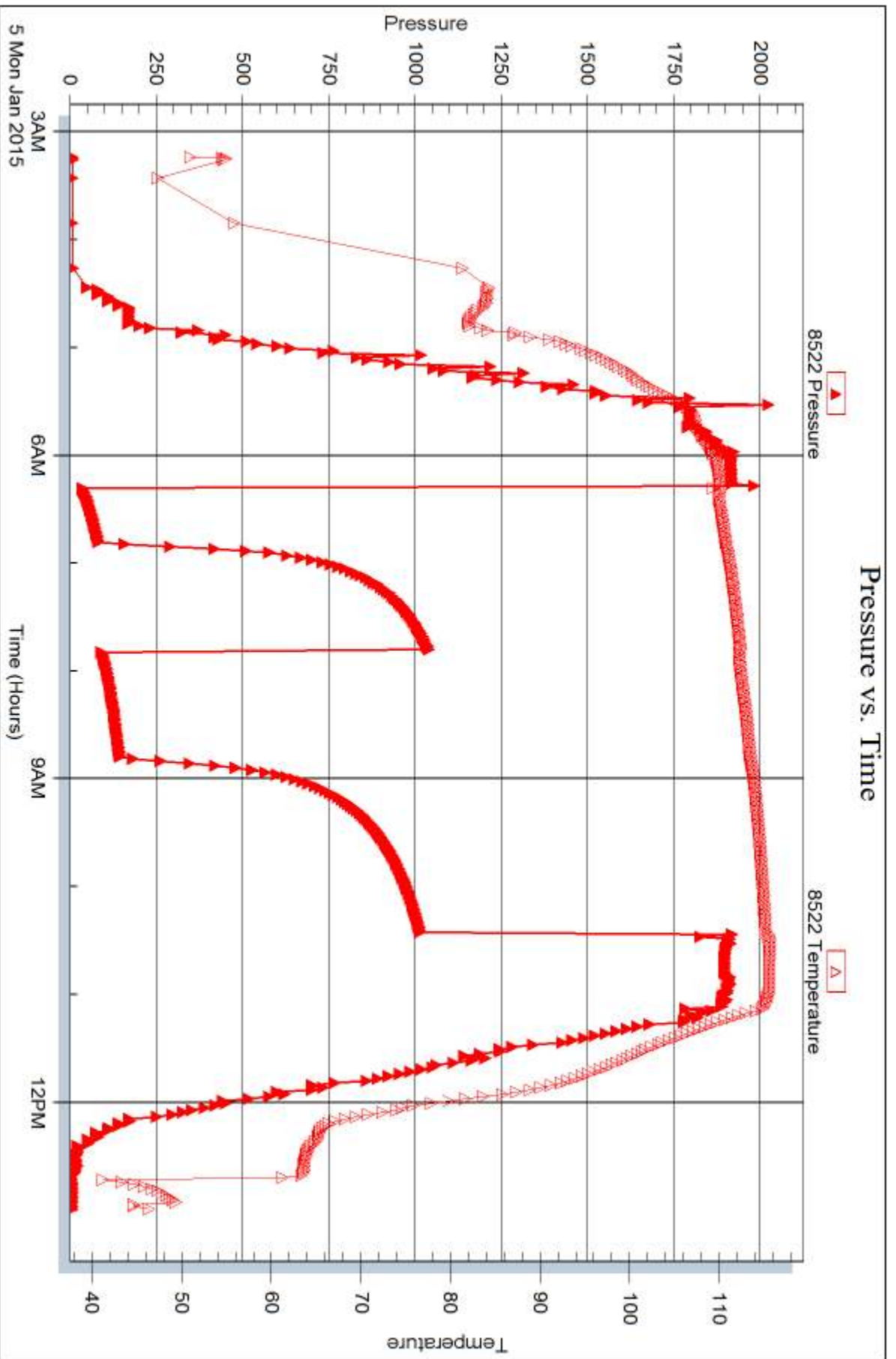


Serial #: 8522

Outside Murfin Drilling Co.

Abell Ranch B #3-31

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 59558

Printed: 2015.01.12 @ 09:33:20



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Larry Nicholson

Abell Ranch B #3-31

31 12s 30w Gove,KS

Start Date: 2015.01.05 @ 19:56:00

End Date: 2015.01.06 @ 06:50:00

Job Ticket #: 59559 DST #: 2

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

Printed: 2015.01.12 @ 09:32:58

Murfin Drilling Co.
31 12s 30w Gove,KS
Abell Ranch B #3-31
DST # 2
LKC - E & F
2015.01.05



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59559

DST#: 2

ATTN: Larry Nicholson

Test Start: 2015.01.05 @ 19:56:00

GENERAL INFORMATION:

Formation: **LKC - E & F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:39:15

Time Test Ended: 06:50:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4025.00 ft (KB) To 4052.00 ft (KB) (TVD)

Reference Elevations: 2893.00 ft (KB)

Total Depth: 4052.00 ft (KB) (TVD)

2882.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8365

Inside

Press@RunDepth: 73.36 psig @ 4026.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.05

End Date:

2015.01.06

Last Calib.:

2015.01.06

Start Time: 19:56:05

End Time:

06:50:00

Time On Btm:

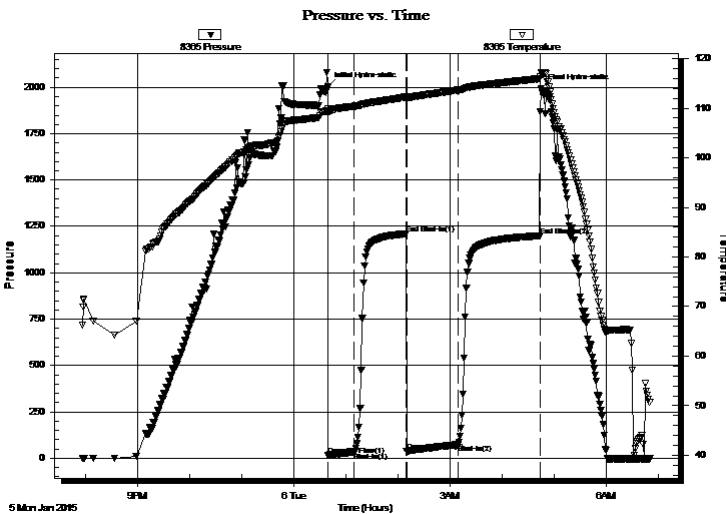
2015.01.06 @ 00:39:00

Time Off Btm:

2015.01.06 @ 04:45:00

TEST COMMENT: IF: 8" blow.
IS: No return.
FF: 6" blow.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2002.48	109.87	Initial Hydro-static
1	15.37	109.03	Open To Flow (1)
30	33.04	110.37	Shut-In(1)
91	1210.02	112.26	End Shut-In(1)
91	37.53	112.04	Open To Flow (2)
151	73.36	113.65	Shut-In(2)
245	1198.82	115.96	End Shut-In(2)
246	1992.00	117.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	gmco 25g 25m 50o	0.30
90.00	gmco 10g 5m 85o	0.44
0.00	340' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59559

DST#: 2

ATTN: Larry Nicholson

Test Start: 2015.01.05 @ 19:56:00

Tool Information

Drill Pipe:	Length: 3750.00 ft	Diameter: 3.80 inches	Volume: 52.60 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 53.97 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	4025.00 ft			Final	70000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	27.00 ft				
Tool Length:	54.00 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			3999.00	
Shut In Tool	5.00			4004.00	
Hydraulic tool	5.00			4009.00	
Jars	5.00			4014.00	
Safety Joint	2.00			4016.00	
Packer	5.00			4021.00	27.00 Bottom Of Top Packer
Packer	4.00			4025.00	
Stubb	1.00			4026.00	
Recorder	0.00	8365	Inside	4026.00	
Recorder	0.00	8522	Outside	4026.00	
Perforations	23.00			4049.00	
Bullnose	3.00			4052.00	27.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31 12s 30w Gove,KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59559

DST#: 2

ATTN: Larry Nicholson

Test Start: 2015.01.05 @ 19:56:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	gmco 25g 25m 50o	0.295
90.00	gmco 10g 5m 85o	0.443
0.00	340' GIP	0.000

Total Length: 150.00 ft Total Volume: 0.738 bbl

Num Fluid Samples: 0

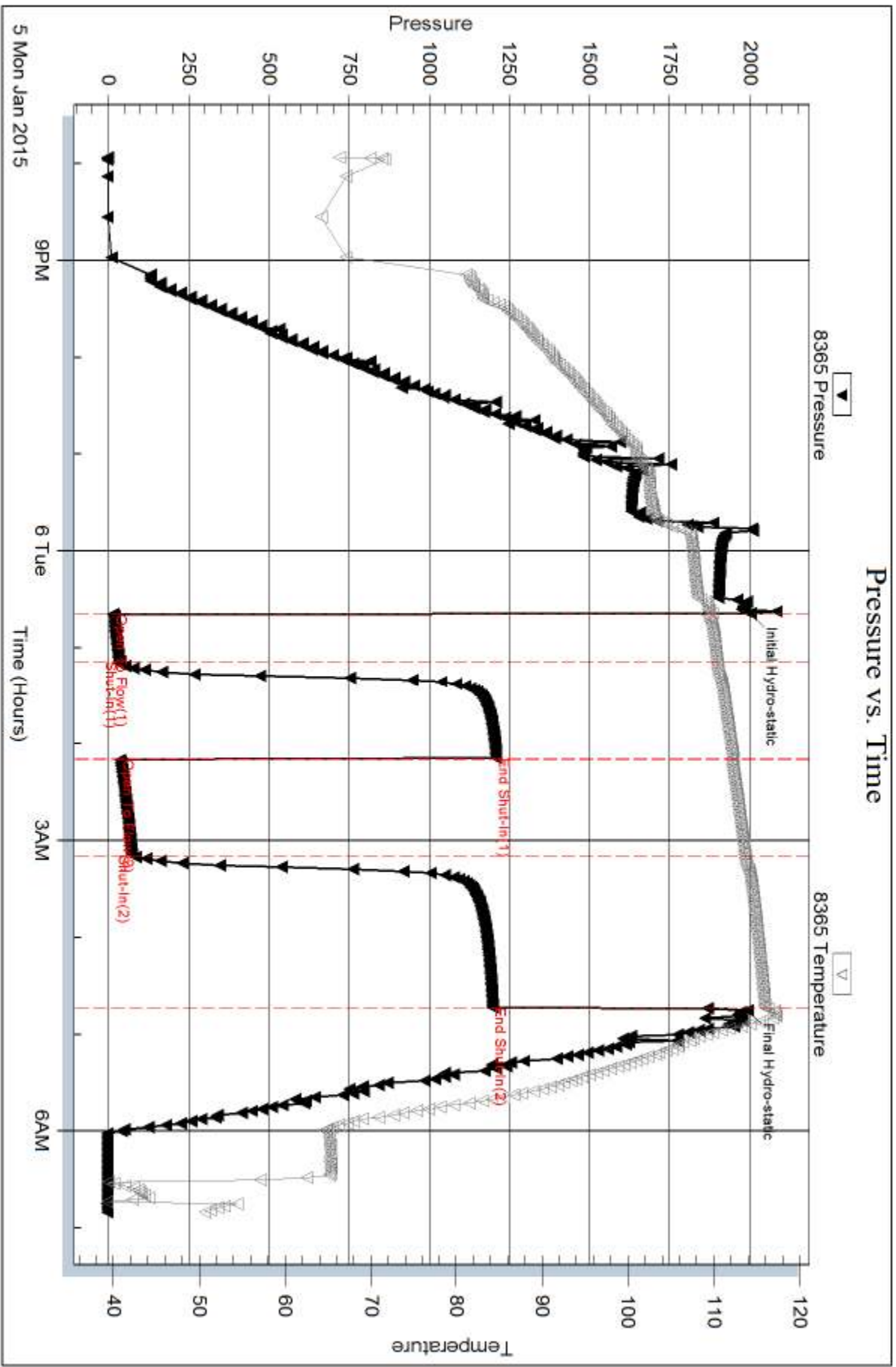
Num Gas Bombs: 0

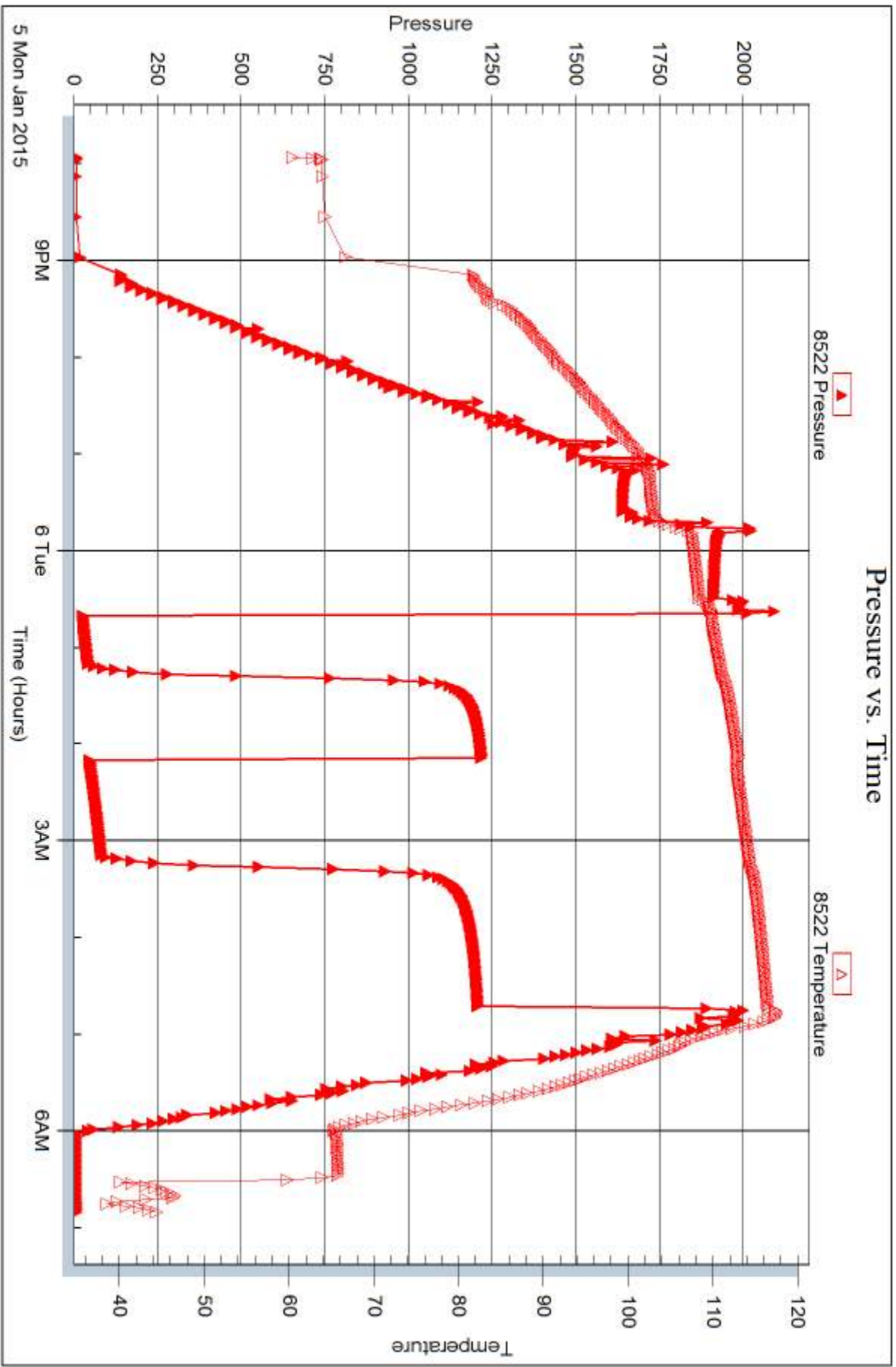
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Larry Nicholson

Abell Ranch B #3-31

31 12s 30w Gove,KS

Start Date: 2015.01.07 @ 01:03:00

End Date: 2015.01.07 @ 10:20:15

Job Ticket #: 59560 DST #: 3

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

Printed: 2015.01.12 @ 09:32:34



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59560

DST#: 3

ATTN: Larry Nicholson

Test Start: 2015.01.07 @ 01:03:00

GENERAL INFORMATION:

Formation: **LKC H - K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:53:30

Time Test Ended: 10:20:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4091.00 ft (KB) To 4218.00 ft (KB) (TVD)

Reference Elevations: 2893.00 ft (KB)

Total Depth: 4218.00 ft (KB) (TVD)

2882.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8365

Inside

Press@RunDepth: 57.92 psig @ 4092.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.07

End Date:

2015.01.07

Last Calib.: 2015.01.07

Start Time: 01:03:05

End Time:

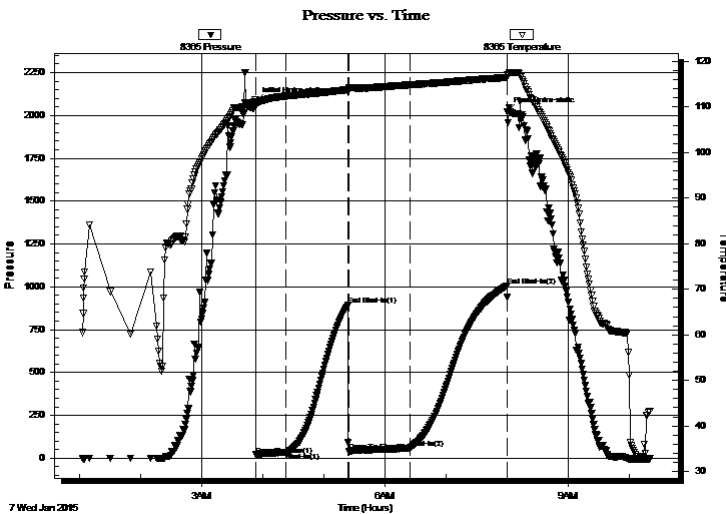
10:20:15

Time On Btm: 2015.01.07 @ 03:53:00

Time Off Btm: 2015.01.07 @ 08:00:15

TEST COMMENT: IF: 2" blow.
IS: No return.
FF: 3" blow.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2081.51	111.71	Initial Hydro-static
1	19.56	110.42	Open To Flow (1)
30	36.79	112.37	Shut-In(1)
91	891.49	113.76	End Shut-In(1)
92	40.34	114.02	Open To Flow (2)
151	57.92	114.82	Shut-In(2)
247	1005.64	116.45	End Shut-In(2)
248	2021.79	117.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	socm 1o 99m	0.39
0.00	160' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59560

DST#: 3

ATTN: Larry Nicholson

Test Start: 2015.01.07 @ 01:03:00

Tool Information

Drill Pipe:	Length: 3803.00 ft	Diameter: 3.80 inches	Volume: 53.35 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 54.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4091.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	127.00 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
Change Over Sub	1.00			4065.00	
Shut In Tool	5.00			4070.00	
Hydraulic tool	5.00			4075.00	
Jars	5.00			4080.00	
Safety Joint	2.00			4082.00	
Packer	5.00			4087.00	27.00 Bottom Of Top Packer
Packer	4.00			4091.00	
Stubb	1.00			4092.00	
Recorder	0.00	8365	Inside	4092.00	
Recorder	0.00	8522	Outside	4092.00	
Perforations	26.00			4118.00	
Change Over Sub	1.00			4119.00	
Drill Pipe	95.00			4214.00	
Change Over Sub	1.00			4215.00	
Bullnose	3.00			4218.00	127.00 Bottom Packers & Anchor

Total Tool Length: 154.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59560

DST#: 3

ATTN: Larry Nicholson

Test Start: 2015.01.07 @ 01:03:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	socm 1o 99m	0.393
0.00	160' GIP	0.000

Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

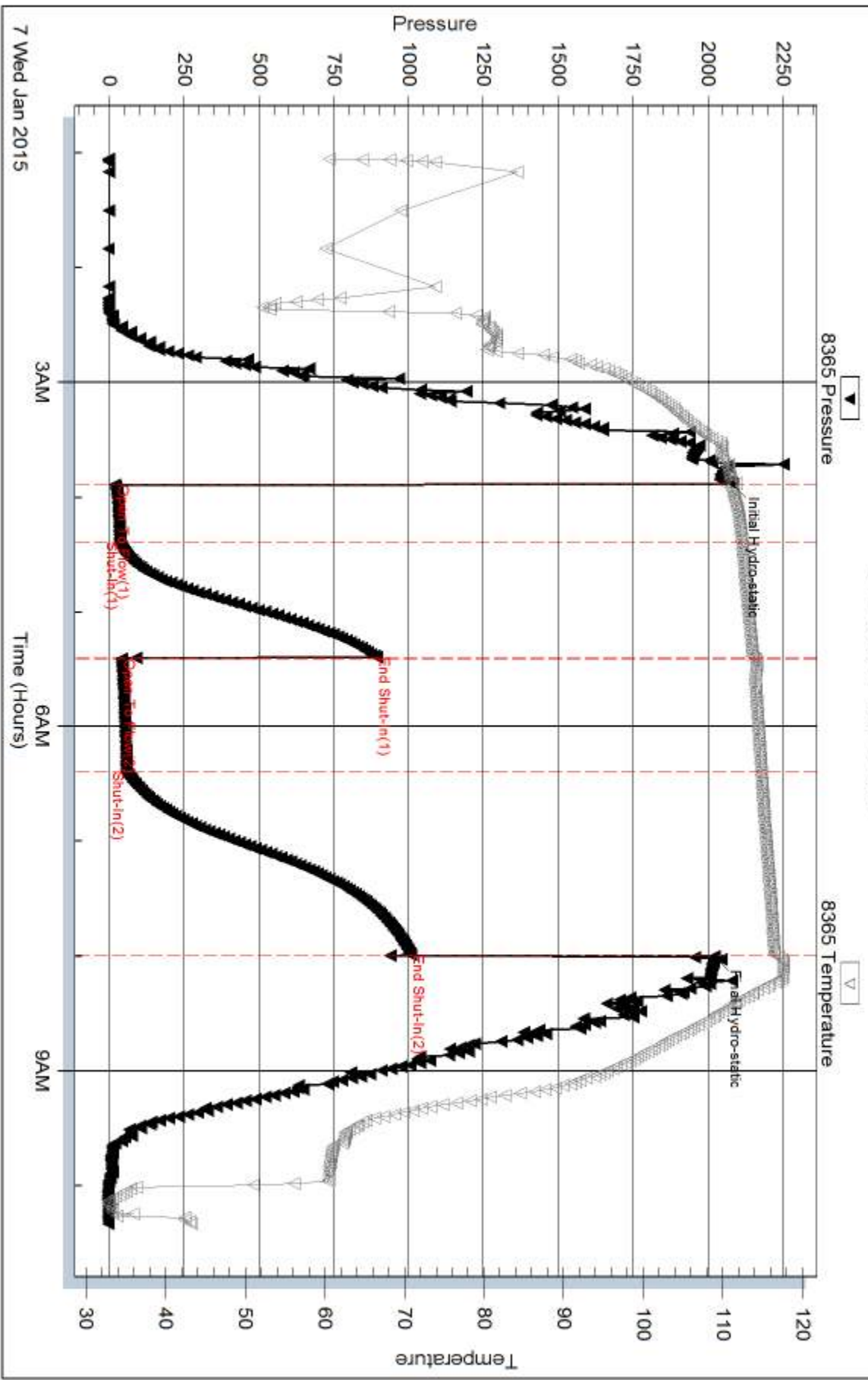
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

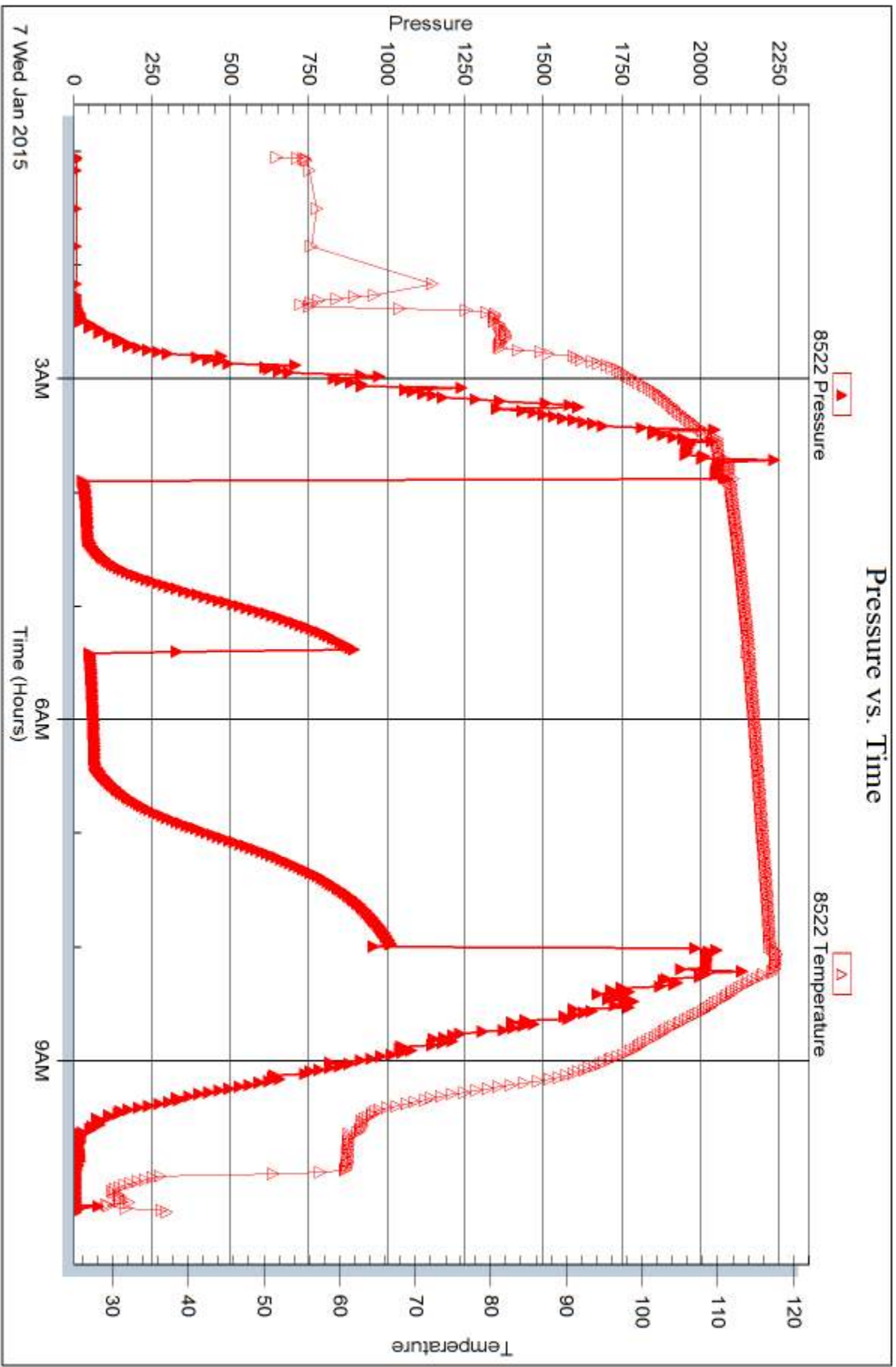


Serial #: 8522

Outside Murfin Drilling Co.

Abell Ranch B #3-31

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 59560

Printed: 2015.01.12 @ 09:32:35



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Larry Nicholson

Abell Ranch B #3-31

31 12s 30w Gove,KS

Start Date: 2015.01.08 @ 10:37:00

End Date: 2015.01.08 @ 19:28:00

Job Ticket #: 59561 DST #: 4

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

Printed: 2015.01.12 @ 09:32:10



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59561

DST#: 4

ATTN: Larry Nicholson

Test Start: 2015.01.08 @ 10:37:00

GENERAL INFORMATION:

Formation: **Pawnee - Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:08:00

Time Test Ended: 19:28:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4360.00 ft (KB) To 4458.00 ft (KB) (TVD)

Reference Elevations: 2893.00 ft (KB)

Total Depth: 4458.00 ft (KB) (TVD)

2882.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8365

Inside

Press@RunDepth: 144.27 psig @ 4361.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.08

End Date:

2015.01.08

Last Calib.: 2015.01.08

Start Time: 10:37:05

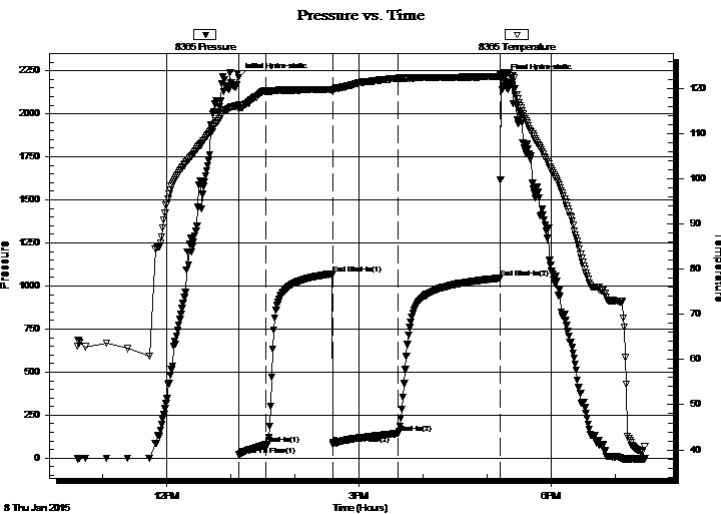
End Time:

19:28:00

Time On Btm: 2015.01.08 @ 13:07:45

Time Off Btm: 2015.01.08 @ 17:16:00

TEST COMMENT: IF: 2 1/2" blow .
IS: No return.
FF: 3" blow .
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2208.88	116.40	Initial Hydro-static
1	19.90	115.38	Open To Flow (1)
26	82.86	119.42	Shut-In(1)
88	1070.86	119.77	End Shut-In(1)
89	81.26	119.58	Open To Flow (2)
149	144.27	122.22	Shut-In(2)
245	1045.80	122.61	End Shut-In(2)
249	2202.14	123.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	socm 1o 99m	0.44
180.00	socm 3o 97m	0.89

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59561

DST#: 4

ATTN: Larry Nicholson

Test Start: 2015.01.08 @ 10:37:00

Tool Information

Drill Pipe:	Length: 4080.00 ft	Diameter: 3.80 inches	Volume: 57.23 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 58.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4360.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	125.00 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			4334.00	
Shut In Tool	5.00			4339.00	
Hydraulic tool	5.00			4344.00	
Jars	5.00			4349.00	
Safety Joint	2.00			4351.00	
Packer	5.00			4356.00	27.00 Bottom Of Top Packer
Packer	4.00			4360.00	
Stubb	1.00			4361.00	
Recorder	0.00	8365	Inside	4361.00	
Recorder	0.00	8522	Outside	4361.00	
Perforations	28.00			4389.00	
Change Over Sub	1.00			4390.00	
Drill Pipe	64.00			4454.00	
Change Over Sub	1.00			4455.00	
Bullnose	3.00			4458.00	98.00 Bottom Packers & Anchor

Total Tool Length: 125.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 59561

DST#: 4

ATTN: Larry Nicholson

Test Start: 2015.01.08 @ 10:37:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	socm 1o 99m	0.443
180.00	socm 3o 97m	0.885

Total Length: 270.00 ft Total Volume: 1.328 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

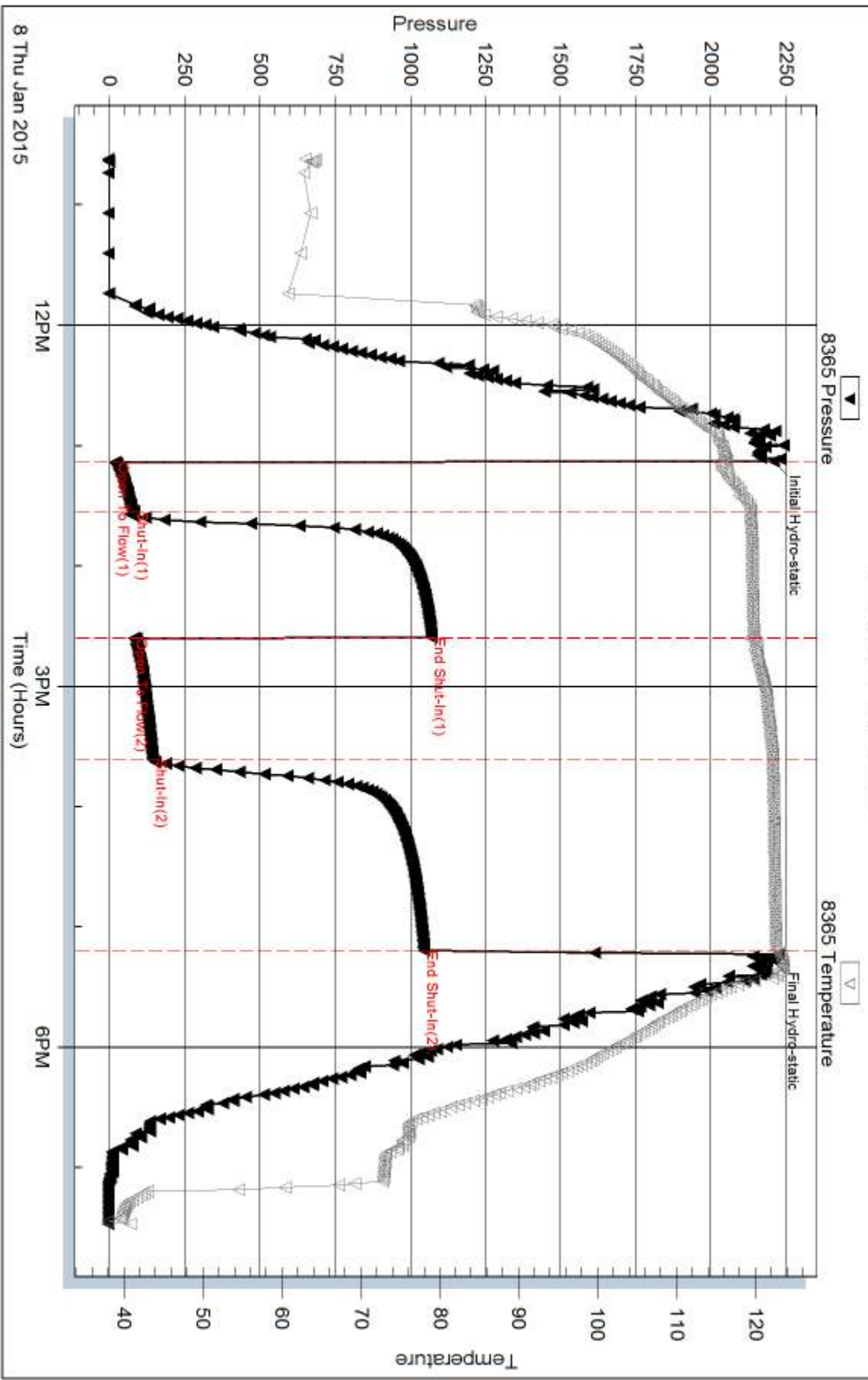
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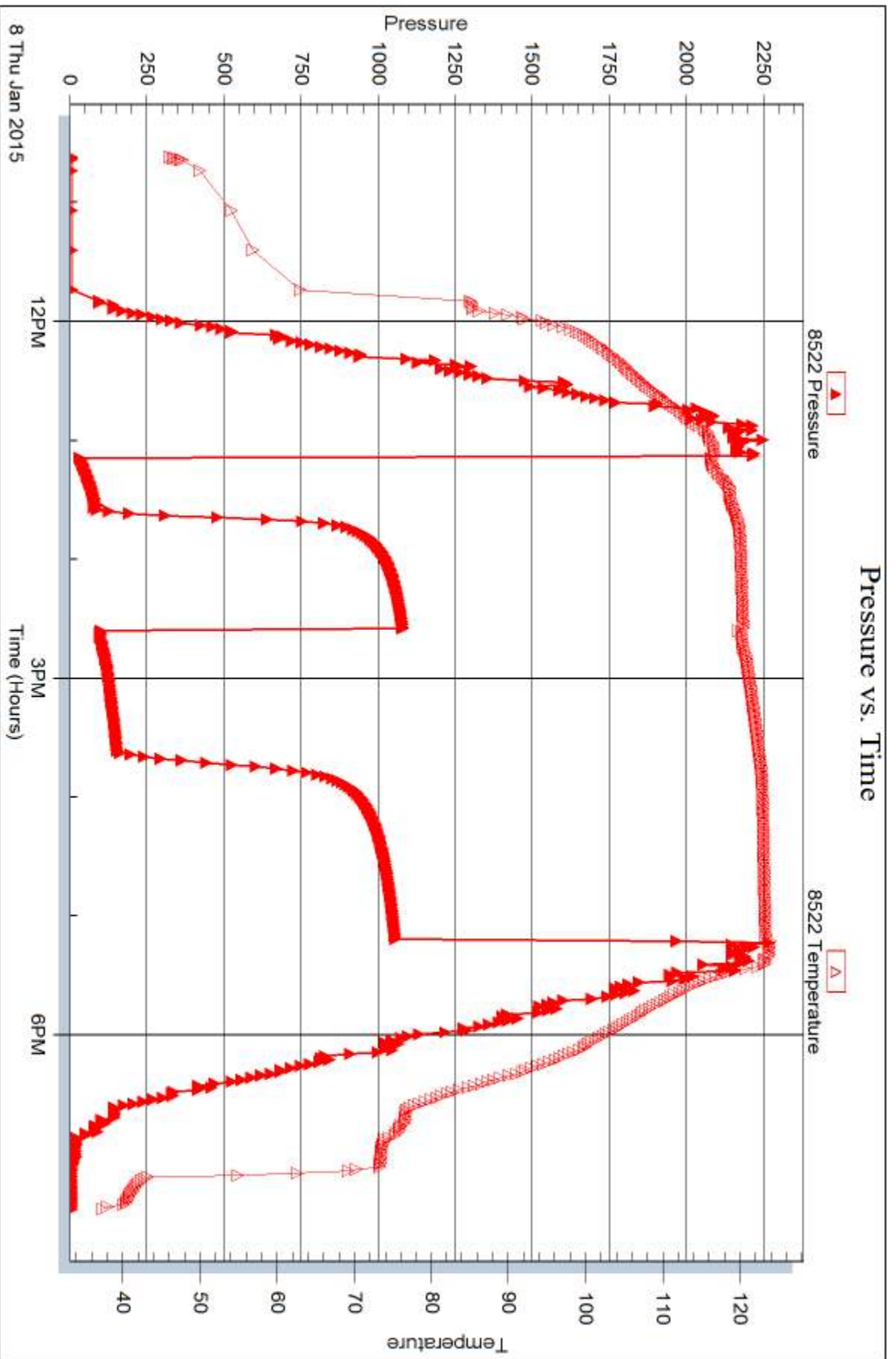
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Larry Nicholson

Abell Ranch B #3-31

31 12s 30w Gove,KS

Start Date: 2015.01.09 @ 07:41:15

End Date: 2015.01.09 @ 15:40:00

Job Ticket #: 58565 DST #: 5

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

Printed: 2015.01.12 @ 09:31:39



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

ATTN: Larry Nicholson

Job Ticket: 58565

DST#: 5

Test Start: 2015.01.09 @ 07:41:15

GENERAL INFORMATION:

Formation: **Johnson-Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:26:00

Time Test Ended: 15:40:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: 4498.00 ft (KB) To 4538.00 ft (KB) (TVD)

Reference Elevations: 2893.00 ft (KB)

Total Depth: 4027.00 ft (KB) (TVD)

2882.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8846

Inside

Press@RunDepth: 131.33 psig @ 4500.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.09

End Date: 2015.01.09

Last Calib.: 2015.01.09

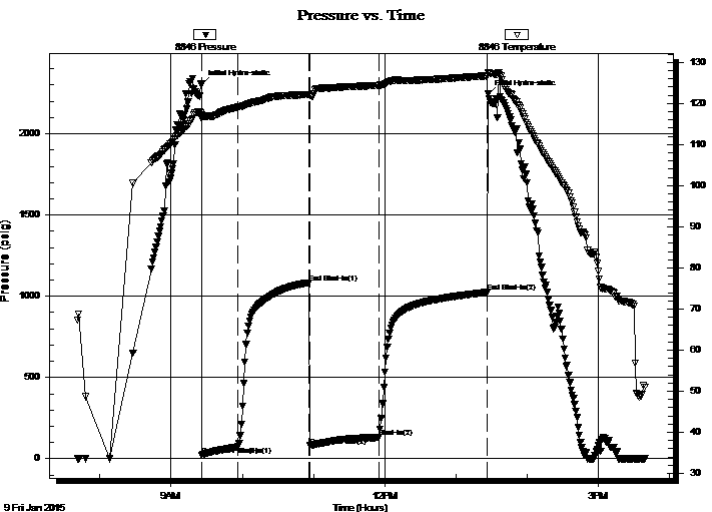
Start Time: 07:41:15

End Time: 15:40:00

Time On Btm: 2015.01.09 @ 09:25:45

Time Off Btm: 2015.01.09 @ 13:27:15

TEST COMMENT: IF: Built to 7" blow
IS: No return blow
FF: BOB in 40 min.
FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2304.36	117.35	Initial Hydro-static
1	21.03	116.25	Open To Flow (1)
31	73.98	119.13	Shut-In(1)
91	1083.35	122.17	End Shut-In(1)
92	79.44	121.84	Open To Flow (2)
150	131.33	124.39	Shut-In(2)
241	1023.59	126.69	End Shut-In(2)
242	2242.93	127.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	gcmo 20%g 40%o 40%m	0.34
140.00	gcmo 20%g 30%m 50%o	0.69
70.00	gcmo 5%g 15%m 80%o	0.36
70.00	mco 10%m 90%o	0.98
0.00	GIP= 372 feet	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

31 12s 30w Gove, KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 58565

DST#: 5

ATTN: Larry Nicholson

Test Start: 2015.01.09 @ 07:41:15

Tool Information

Drill Pipe:	Length: 4210.00 ft	Diameter: 3.80 inches	Volume: 59.06 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.43 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4498.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 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			4471.00	
Shut In Tool	5.00			4476.00	
Hydraulic tool	5.00			4481.00	
Jars	5.00			4486.00	
Safety Joint	3.00			4489.00	
Packer	5.00			4494.00	28.00 Bottom Of Top Packer
Packer	4.00			4498.00	
Stubb	1.00			4499.00	
Perforations	1.00			4500.00	
Recorder	0.00	8846	Inside	4500.00	
Recorder	0.00	8737	Outside	4500.00	
Change Over Sub	1.00			4501.00	
Drill Pipe	31.00			4532.00	
Change Over Sub	1.00			4533.00	
Bullnose	5.00			4538.00	40.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31 12s 30w Gove,KS

250 N Water STE 300
Wichita, KS 67202

Abell Ranch B #3-31

Job Ticket: 58565

DST#: 5

ATTN: Larry Nicholson

Test Start: 2015.01.09 @ 07:41:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	gcmo 20%g 40%o 40%m	0.344
140.00	gcmo 20%g 30%m 50%o	0.688
70.00	gcmo 5%g 15%m 80%o	0.362
70.00	mco 10%m 90%o	0.982
0.00	GIP= 372 feet	0.000

Total Length: 350.00 ft

Total Volume: 2.376 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

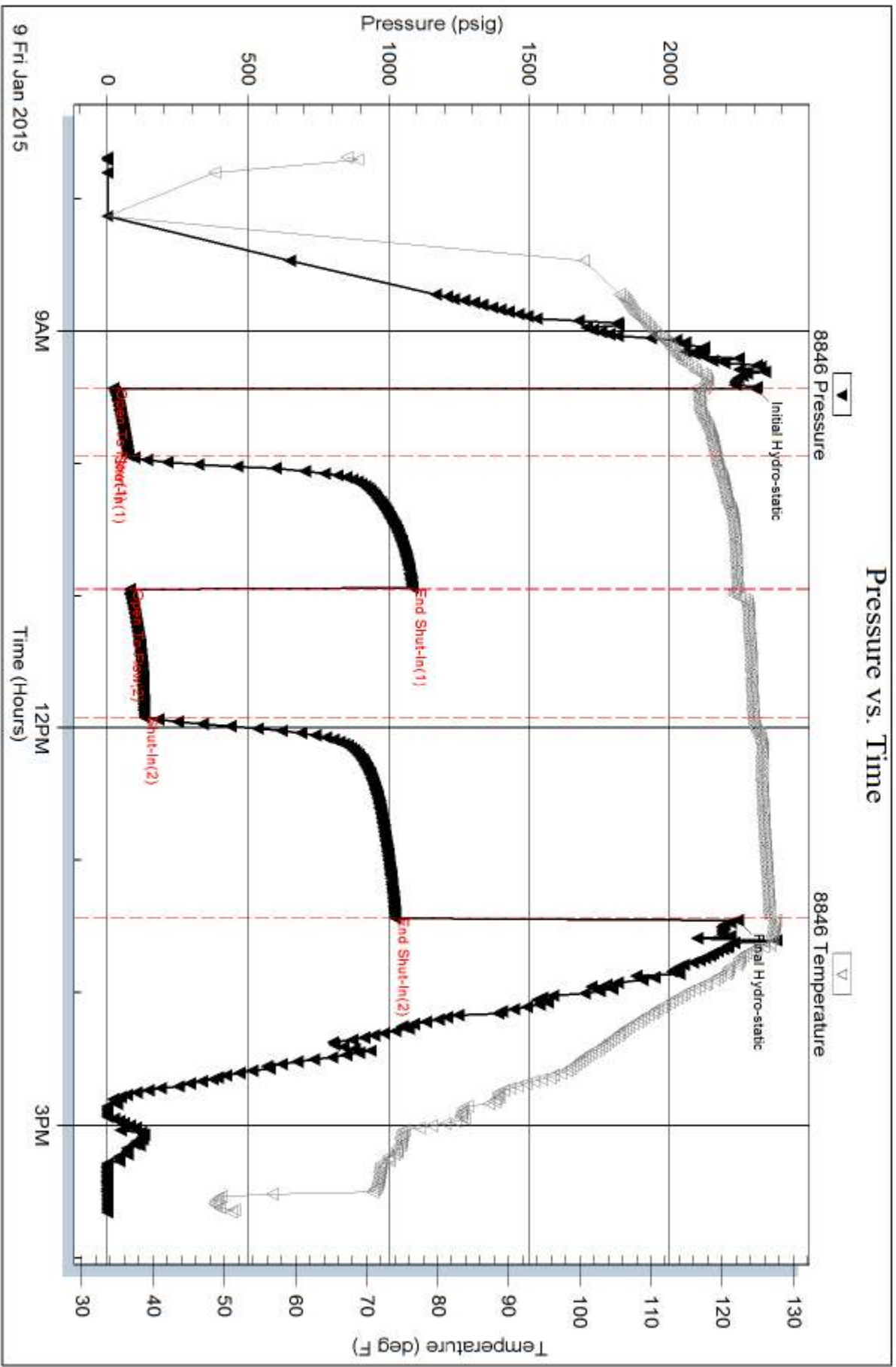
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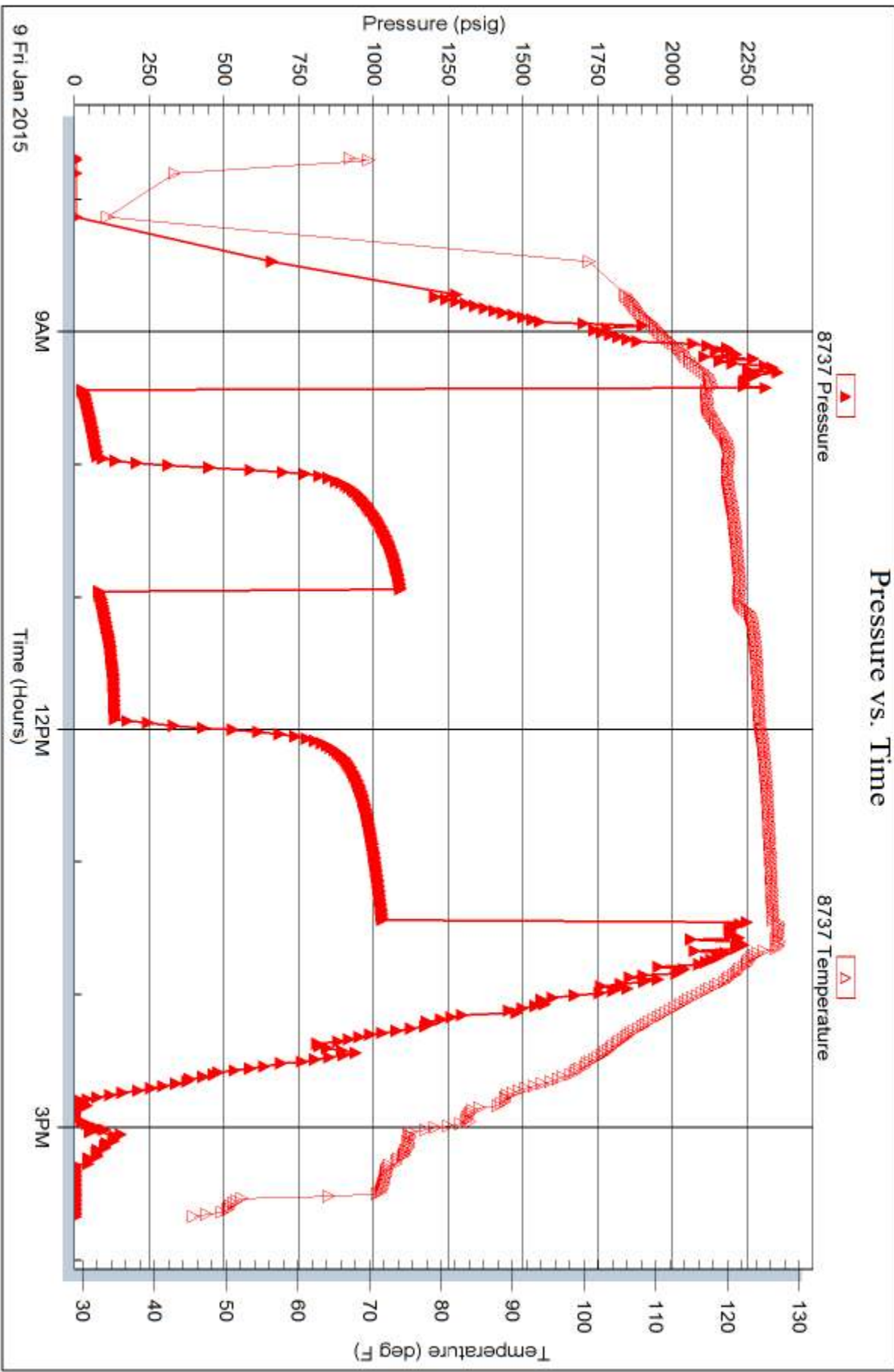
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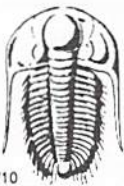
Murfin Drilling Co.

Abell Ranch B #3-31

DST Test Number: 5







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **59558**

4/10

Well Name & No. Abell Ranch B #3-31 Test No. 1 Date 1/5/2015
 Company Martin Drilling Co, Inc Elevation 2893 KB 2882 GL
 Address 250 N Water STE 300 Wichita, Ks 67202
 Co. Rep / Geo. Larry Nicholson Rig Martin 21
 Location: Sec. 31 Twp. 12s Rge. 30w Co. Gore State Ks

Interval Tested 3911 - 2882 4027 Zone Tested Toronto - LKC "D"
 Anchor Length 116 Drill Pipe Run 3644 Mud Wt. 9.1
 Top Packer Depth 3906 Drill Collars Run 247 Vis 54
 Bottom Packer Depth 3911 Wt. Pipe Run 0 WL 5.2
 Total Depth 4027 Chlorides 2700 ppm System LCM 2#

Blow Description IF: 1" blow.
TSI: No return
FF: 1 1/2" blow
FSI: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>248</u>	<u>SOCM</u>	<u>2</u>		<u>98</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

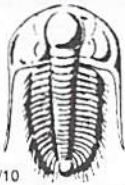
Rec Total 240 BHT 115 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1924</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0200</u>
(B) First Initial Flow <u>24</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0314</u>
(C) First Final Flow <u>75</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0618</u>
(D) Initial Shut-In <u>1030</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>1018</u>
(E) Second Initial Flow <u>81</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1300</u>
(F) Second Final Flow <u>135</u>	<input checked="" type="checkbox"/> Mileage <u>91 RT</u> <u>91</u>	Comments
(G) Final Shut-In <u>1006</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1921</u>	<input type="checkbox"/> Straddle	

Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1816</u>
	Sub Total <u>1816</u>	MP/DST Disc't

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59559

Well Name & No. Abell Ranch B #3-31 Test No. 2 Date 1/6/2015
 Company Martin Drilling Co, Inc Elevation 2893 KB 2882 GL
 Address 250 N Walker STE 300 Wichita, Ks 67202
 Co. Rep / Geo. Larry Nicholson Rig Martin 21
 Location: Sec. 31 Twp. 12s Rge. 30w Co. Gove State Ks

Interval Tested 4025 - 4052 Zone Tested LKC E&F
 Anchor Length 27' Drill Pipe Run 3770 Mud Wt. 9.1
 Top Packer Depth 4020 Drill Collars Run 247 Vis 56
 Bottom Packer Depth 4025 Wt. Pipe Run 0 WL 206.0
 Total Depth 4052 Chlorides 2,000 ppm System LCM 2,000
 Blow Description IF: 8" blow.
ISI: No return.
FF: 6" blow.
FSI: No return.

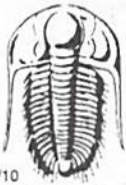
Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>60cm</u>	<u>10</u>	<u>85</u>	<u>5</u>	
<u>60</u>	<u>60cm</u>	<u>25</u>	<u>50</u>	<u>25</u>	
	<u>340' GIP</u>				

Rec Total 150 BHT 116 Gravity 40 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2002 Test 1150 T-On Location 1915
 (B) First Initial Flow 15 Jars 250 T-Started 1956
 (C) First Final Flow 33 Safety Joint 75 T-Open 0039
 (D) Initial Shut-In 1210 Circ Sub NC T-Pulled 0439
 (E) Second Initial Flow 38 Hourly Standby _____ T-Out 0650
 (F) Second Final Flow 73 Mileage 91 RT 91 Comments _____
 (G) Final Shut-In 1199 Sampler _____
 (H) Final Hydrostatic 1992 Straddle _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 0
 Accessibility _____ Total 1816
 Sub Total 1/816 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **59560**

4/10

Well Name & No. Abell Ranch B #3-31 Test No. 3 Date 1/7/2014
 Company Murkin Drilling Co, Inc Elevation 2593 KB 2582 GL
 Address 250N Water Ste 300 Wichita, ks 67202
 Co. Rep / Geo. Larry Nicholson Rig Murkin 21
 Location: Sec. 31 Twp. 12s Rge. 30w Co. Gove State Ks

Interval Tested 4091 - 4218 Zone Tested LKC H-K
 Anchor Length 127 Drill Pipe Run 3803 Mud Wt. 9.5
 Top Packer Depth 4086 Drill Collars Run 278 Vis 56
 Bottom Packer Depth 4091 Wt. Pipe Run 8 WL 5.6'
 Total Depth 4218 Chlorides 2500 ppm System LCM 2#

Blow Description IF: 2" blow.
ISI: No return.
FF: 3" blow.
FBI: No Return.

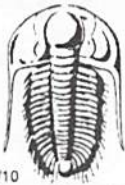
Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>AD 50cm</u>		<u>1</u>	<u>99</u>	
	<u>160' Gassy Odor</u>				

Rec Total 80 BHT 117 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2082</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0045</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0103</u>
(C) First Final Flow <u>37</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0354</u>
(D) Initial Shut-In <u>891</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>0754</u>
(E) Second Initial Flow <u>40</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1020</u>
(F) Second Final Flow <u>58</u>	<input checked="" type="checkbox"/> Mileage <u>91RT</u> <u>91</u>	Comments
(G) Final Shut-In <u>1006</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2022</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1816</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1816</u>	

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59561

4/10

Well Name & No. Abell Ranch B # 3-31 Test No. 4 Date 1/8/2015
 Company Murkin Drilling Co, Inc Elevation 2893 KB 2882 GL
 Address 250 N Water Ste 300 Wichita, ks 67202
 Co. Rep / Geo. Larry Nicholson Rig Murkin 21
 Location: Sec. 31 Twp. 12s Rge. 30w Co. Gove State KS

Interval Tested 4360 4458 Zone Tested Pawnee - Ft Scott
 Anchor Length 98 Drill Pipe Run 4080 Mud Wt. 9.3
 Top Packer Depth 4355 ~~436~~ Drill Collars Run 278 Vis 55
 Bottom Packer Depth 4360 Wt. Pipe Run 0 WL 6.0
 Total Depth 4458 Chlorides 2200 ppm System LCM 2#
 Blow Description IF! 2 1/2" blow
TSI! No return
FF! 3" blow.
FSI! No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>50cm</u>	<u>3</u>		<u>97</u>	
<u>90</u>	<u>50cm</u>	<u>1</u>		<u>99</u>	

Rec Total 270 BHT 126 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2209 Test 1150 T-On Location 1015
 (B) First Initial Flow 20 Jars 250 T-Started 1037
 (C) First Final Flow ~~1074~~ 83 Safety Joint 75 T-Open 1305
 (D) Initial Shut-In ~~85~~ 1071 Circ Sub 1/4 T-Pulled 1705
 (E) Second Initial Flow ~~144~~ 81 Hourly Standby _____ T-Out 1928
 (F) Second Final Flow ~~1046~~ 144 Mileage 91 RT 91 Comments _____
 (G) Final Shut-In 1046 Sampler _____
 (H) Final Hydrostatic 2202 Straddle _____ Ruined Shale Packer 350
 Shale Packer 250 Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 2166
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1816

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58565

Well Name & No. Abell Ranch B #3-31 Test No. 5 Date 1-9-15
 Company Murfin Drilling Co. Elevation 2893 KB 2882 GL
 Address 250 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Larry Nicholson Rig Murfin 21
 Location: Sec. 31 Twp. 12S Rge. 30W Co. Gove State KS

Interval Tested 4498-4538 Zone Tested Johnson - Miss
 Anchor Length 40 Drill Pipe Run 4210 Mud Wt. 9.3
 Top Packer Depth 4493 Drill Collars Run 278 Vis 55
 Bottom Packer Depth 4498 Wt. Pipe Run φ WL 6.0
 Total Depth 4538 Chlorides 2200 ppm System LCM 3

Blow Description IF: Built to 7" Blow
IS: No Return Blow
FF: BOB in 40 Min
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
372	GIP	100			
70	MCO DP		90	10	
70	gcmo Collars	5	80	15	
140	gcmo	20	50	30	
70	gcmo	20	40	40	

Rec Total BHT 128 Gravity 34 API RW - @ - ° F Chlorides - ppm
 (A) Initial Hydrostatic 2304 Test 1150 T-On Location 07:05
 (B) First Initial Flow 21 Jars 250 T-Started 07:41
 (C) First Final Flow 73 Safety Joint 75 T-Open 09:26
 (D) Initial Shut-In 1083 Circ Sub NC T-Pulled 13:26
 (E) Second Initial Flow 79 Hourly Standby T-Out 15:40
 (F) Second Final Flow 131 Mileage 91 RT 91 Comments _____
 (G) Final Shut-In 1023 Sampler _____
 (H) Final Hydrostatic 2242 Straddle _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1816
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1816

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

Approved By

Our Representative

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GEOLOGICAL REPORT

Larry A. Nicholson

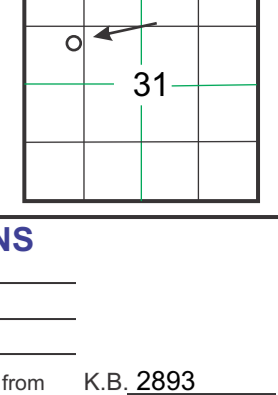
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-100.699721

COMPANY & WELL
Murfur Drilling
Abell Ranch 'B' #3-31

LOCATION
1650 FNL 1160 FWL E2 NE SW NW

SEC 31 TWP 12S RGE 30W
COUNTY Gove STATE Ks

COMPANY Murfur Drilling Company, Inc.		FIELD Gaeland West	
API # 15-063-22239	LEASE Abell Ranch 'B'	WELL # #3-31	
LOCATION E2 NE SW NW	SURVEY 1650 FNL 1160 FWL	COUNTY Gove STATE Kansas	
SECTION 31	TWP 12S	RGE 30W	
CONTRACTOR Murfur Drilling Company, Inc. Rig # 21.		ELEVATIONS	
SPUD 5:30 pm 12-29-14	COMP RTD	K.B. 2893	
RTD 4:30 8:10 pm 01/08/2015	LTD 4631	D.F. _____	
MUD UP AT _____	MUD TYPE Chemical, Morgan Mud	G.L. 2881	
All measurements from _____		K.B. 2893	
SAMPLING SAVED FROM 3600 TO _____ RTD		CASING RECORD	
DRILLING TIME FROM 3600 TO _____ RTD	Conductor _____ of _____ wf _____ sx		
SAMPLES EXAMINED FROM 3600 TO _____ RTD	Surface 221' of 8 5/8 23# wf 170 _____ sx		
GEOLOGICAL SUPERVISION FROM 3600 TO _____ RTD	Production _____ of _____ wf _____ sx		
WELL SITE GEOLOGIST LARRY A. NICHOLSON			



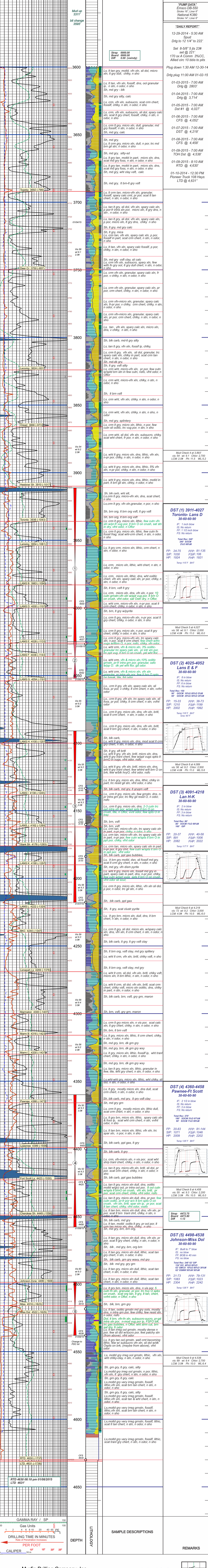
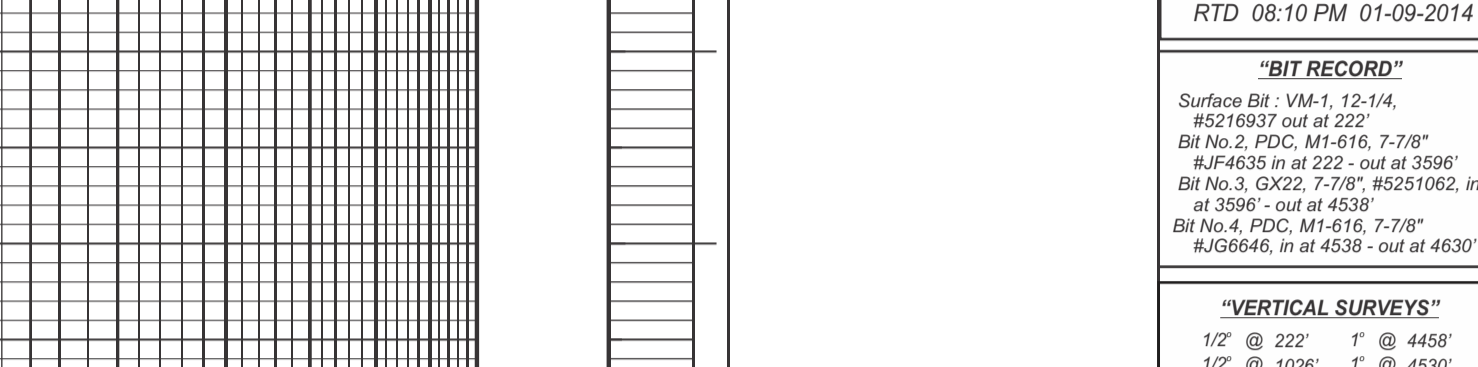
FORMATION TOPS & STRUCTURAL POSITION			
FORMATION	SAMPLE TOPS	SUBSEA DATUM	ELEC LOG TOPS
Anhydrite	2380	+513	2380 +513 2395 +512 +1
Bi/Anhydrite	2406	+487	2406 +487 2421 +486 +1
Topeka	3692	-799	3692 -799 3703 -796 -3
Heebner Sh	3910	-1017	3910 -1017 3923 -1016 -1
Lansing	3954	-1061	3954 -1061 3964 -1057 -4
Stark Sh	4176	-1283	4176 -1283 4188 -1281 -2
Pawnee	4366	-1473	4366 -1473 4386 -1479 +6
Fort Scott Ls	4423	-1530	4423 -1530 4444 -1537 +7
Johnson Zone	4499	-1606	4499 -1606 4514 -1607 +1
Miss	4516	-1623	4516 -1623 4531 -1624 +1
Miss Dol	4522	-1629	4522 -1629 4546 -1639 +10
RTD	4630	-1737	4630 -1737 4625 -1718
LTD			4631 -1738 4627 -1720

REFERENCE WELLS
A: Murfur Drilling Abell Ranch "B" #1-3', 330' FNL 330' FWL, Sec 31 T12S R30W KB 2907'
B: _____

REMARKS & RECOMMENDATIONS:
 Based on sample shows and dst results csg was set.
 *NOTE: ROP & DST are roughly 1' low to e log curves.
 Formation tops have been corrected to Log tops

LAN 7892, Modified 5/05, 11/11, 4/12 Hanover, KS 66945 1inch = 25.4mm 8.5 x 97.5 216 mm x 2460 mm

LEGEND



COMPANY Murfur Drilling Company, Inc.		ELEVATIONS	
LEASE Abell Ranch 'B' #3-31 E2 NE SW NW	RTD 4631	K.B. 2893	
LOCATION 1650 FNL 1160 FWL SEC. 31 TWP 12S RGE 30W		D.F. _____	
COUNTY Gove STATE Ks		G.L. 2881	
All measurements from _____		K.B. 2893	