



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1171607
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: _____



1171607

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

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

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

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

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

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

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Schwartzkopf Unit 1-33
Doc ID	1171607

All Electric Logs Run

CDL/CNL/PE
DIL
MEL
SONIC

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Schwartzkopf Unit 1-33
Doc ID	1171607

Tops

Name	Top	Datum
Anhydrite	1860	+ 619
B/Anhydrite	1896	+ 583
Heebner Shale	3836	- 1357
Lansing	3877	- 1398
Stark Shale	4100	- 1621
B/KC	4155	- 1676
Marmaton	4209	- 1730
Pawnee	4264	- 1785
Ft. Scott	4355	- 1876
Cherokee Shale	4378	- 1899
Upper Cherokee Sd	4429	- 1950
Lwr Cherokee Sd	4461	- 1982
Mississippian	4476	- 1997

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

December 05, 2013

Mark Shreve
Mull Drilling Company, Inc.
1700 N WATERFRONT PKWY
BLDG 1200
WICHITA, KS 67206-6637

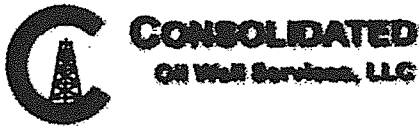
Re: ACO1
API 15-195-22876-00-00
Schwartzkopf Unit 1-33
SW/4 Sec.33-15S-23W
Trego County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Mark Shreve



261474

TICKET NUMBER 38069
 LOCATION Oakley
 FOREMAN Darren + Fuzzy

PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
 CEMENT

KS.

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8/16/13	5659	Schwartzkopf Unit 1-33	33	15	23	Trego
CUSTOMER Mull Drlg Co.		Wheaney 215 Einto	TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS			463	Cory		
CITY			529	Jermy R		
STATE				Steve Rude		
ZIP CODE						

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH _____ CASING SIZE & WEIGHT 8 5/8 20"
 CASING DEPTH _____ DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.8 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 20'
 DISPLACEMENT 12.91 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting rig up on Duke #10 Break Circulation with Big Pump
Hook up To pump Truck mix 165 SKs Com 3% CC 2% Gel Displace with 12.91 bbl
water Shut in Washup Pump + Lines Rig Down

Cement Did Circulate

Approx. 4 bbl To Pit

Thank Darren + Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	\$ 1150.00	\$ 1150.00
5406	25	MILEAGE	\$ 5.25	\$ 131.25
5407	7.76	Ton Mileage Delivery	\$ 1.75	\$ 430.00
11045	165 SKS	Com Class "A" Cement	\$ 18.55	\$ 3060.75
1102	465 *	Calcium Chloride	\$.94	\$ 437.10
1118B	310 *	Bentonite	\$.27	\$ 83.70
4106	1	Basket (I) 8 5/8	\$ 385.00	\$ 385.00
			Sub Total	\$ 5677.80
			Less 10%	\$ 567.78
			Sub Total	\$ 5110.02
			SALES TAX	273.10
			ESTIMATED TOTAL	5383.12

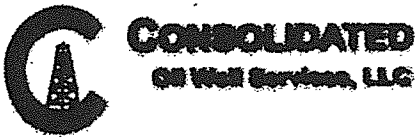
Completed

AUTHORIZATION [Signature]

TITLE Prog #10

DATE 8/16/13

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



261689

TICKET NUMBER 37999
 LOCATION Oakley Ks
 FOREMAN Jerry V Walt

PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
 CEMENT

Kansas

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-25-13	5659	Schwartzkopf 1-33	3.3	15S	23W	71990
CUSTOMER		Mull Drilg.		Wokeony		
MAILING ADDRESS		21ms E into		TRUCK #	DRIVER	TRUCK #
CITY		STATE	ZIP CODE	399	Cory D	
				397	Daniel D	

JOB TYPE long string HOLE SIZE 7 7/8 HOLE DEPTH 4550 CASING SIZE & WEIGHT 5 1/2 14#
 CASING DEPTH 4943 DRILL PIPE _____ TUBING _____ P.C OTHER jt 64 @ 188'
 SLURRY WEIGHT 14.1 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT IN CASING 42' 1
 DISPLACEMENT 109 3/4 bbl DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting and rig up on Duke 10 and run float eq. turbolizers on jts 42, 3, 4, 5, 7, 9, 11, 13, 16.5 basket bottom of 64 and part collar on top of jt 64 @ 188'
run pipe and break circulation w/rig pump, hook up to pump truck & pump 15 bbl KCL, flo check, 5 bbl KCL, mix 15 sks mh @ 30 rh @ 155 sks 50/50 poz 10 @ salt 28 gal down center
shut down release plug & wash up pump & lines and displace w/ 108 bbl fresh water released and float held plug landed @ 1200 psi with 850' final lift.

Thank you
 Jerry Walt & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54010	1	PUMP CHARGE	3175.00	3175.00 ✓
5406	25	MILEAGE	5.25	131.25 ✓
5407	8.4	ton mileage delivery (min)	430.00	430.00 ✓
1124	200 sks	50/50 poz mix	13.81	2762.00 ✓
1111	950	Salt	.50	475.00 ✓
11186	336 #	ben tonite	.27	90.72 ✓
1102	240	Calcium chloride	.94	225.60 ✓
111A	200	metasilicat	2.52	504.00 ✓
1142A	2	KCL	41.10	82.20 ✓
4203	1	5 1/2 guide shoe W	202.25	202.25 ✓
4178	1	5 1/2 float collar W	404.25	404.25 ✓
4136	10	5 1/2 turbolizers I	75.25	752.50 ✓
4104	1	5 1/2 basket W	290.00	290.00 ✓
4285	1	5 1/2 part collar T	2178.25	2178.25 ✓
4310	1	5 1/2 rotating head	100.00	100.00 ✓
4406	1	5 1/2 rubber plug	92.50	92.50 ✓
			Subtotal	11,901.52 ✓
			less 10% disc. 1190.15	10711.37 ✓
			SALES TAX	562.20 ✓
			ESTIMATED TOTAL	11273.57 ✓

AUTHORIZATION [Signature] TITLE Foreman DATE 8-26-13

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



Services, Inc.

CHARGE TO: MULL DRILLING

TICKET 25564

ADDRESS

CITY, STATE, ZIP CODE

PAGE 1 OF 1

1. SERVICE LOCATIONS <u>NESS CITY, KS</u>	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
		<u>SEWARDKOPF 1-33</u>	<u>TRECO</u>	<u>KS</u>	<u>RAUSOM, KS</u>	<u>3 SEP 13</u>	
2.	TICKET TYPE	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
	<input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	<u>FRITZLER TRUCKING</u>					
3.	WELL TYPE	WELL CATEGORY	JOB PURPOSE				
	<u>OIL</u>	<u>DEVELOPMENT</u>	<u>GENERAL PORT SOLAR</u>				
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS				WELL PERMIT NO.	WELL LOCATION
							<u>45 N E 15th</u>

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
<u>5765</u>					MILEAGE #115	<u>20</u>	<u>MIL</u>			<u>7.50</u>	<u>1500</u>
					Rump Charge	<u>1500</u>					<u>1500</u>
<u>276</u>					FUELE	<u>4</u>	<u>1/bs</u>			<u>2.25</u>	<u>9.00</u>
<u>290</u>					D-AIR	<u>13</u>	<u>per</u>			<u>4.20</u>	<u>54.60</u>
<u>330</u>					SMD GENERAL	<u>145</u>	<u>SX</u>			<u>1.15</u>	<u>166.75</u>
<u>581</u>					GENERAL SERVICE CHARGE	<u>200</u>	<u>SX</u>			<u>2.25</u>	<u>450.00</u>
<u>582</u>					MINIMUM SERVICE CHARGE	<u>19770</u>	<u>1/bs</u>	<u>199.7</u>	<u>TM</u>	<u>250</u>	<u>250.00</u>

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

SIGNED: [Signature] TIME SIGNED 11:30 A.M. P.M.

REMIT PAYMENT TO:

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

PAGE TOTAL 4878

TOTAL 5077.50

TAX 199.50

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

APPROVAL

Thank You!



DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co. Inc**

1700 N Waterfront Pkwy
Bldg 1200
Wichita, KS 67206

ATTN: Kevin Kessler

Schwartzkopf #1-33

33-15s-23w Trego,KS

Start Date: 2013.08.23 @ 13:57:00

End Date: 2013.08.23 @ 23:47:15

Job Ticket #: 54427 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.26 @ 15:24:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Co. Inc
 1700 N Waterfront Pkw y
 Bldg 1200
 Wichita, KS 67206
 ATTN: Kevin Kessler

33-15s-23w Trego, KS
Schwartzkopf #1-33
 Job Ticket: 54427 **DST#: 1**
 Test Start: 2013.08.23 @ 13:57:00

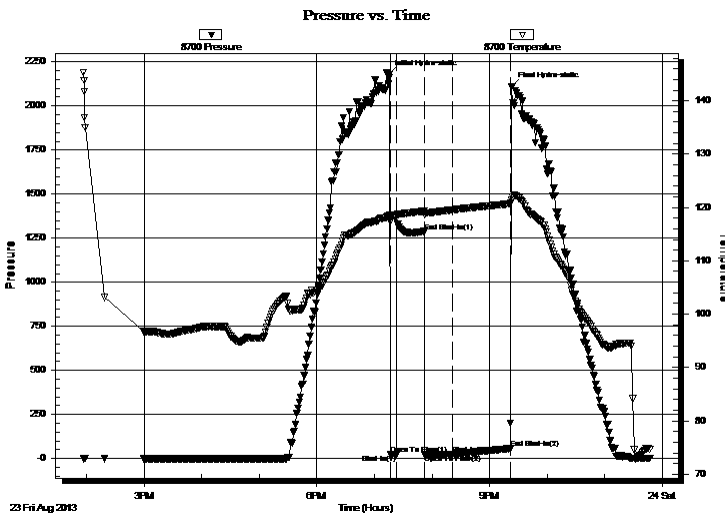
GENERAL INFORMATION:

Formation: **Ft. Scott**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 19:16:30 Tester: Brannan L
 Time Test Ended: 23:47:15 Unit No: 70
 Interval: **4330.00 ft (KB) To 4400.00 ft (KB) (TVD)** Reference Elevations: 2479.00 ft (KB)
 Total Depth: 4400.00 ft (KB) (TVD) 2468.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 8700 Outside
 Press @ Run Depth: 26.19 psig @ 4332.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.23 End Date: 2013.08.23 Last Calib.: 2013.08.23
 Start Time: 13:57:05 End Time: 23:47:15 Time On Btm: 2013.08.23 @ 19:15:00
 Time Off Btm: 2013.08.23 @ 21:23:00

TEST COMMENT: 05- IF- Weak surface blow
 30- IS- No blow
 30- FF- No blow
 60- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2177.74	118.39	Initial Hydro-static
2	22.58	117.34	Open To Flow (1)
8	21.69	118.26	Shut-In(1)
38	1288.04	119.33	End Shut-In(1)
38	24.43	118.74	Open To Flow (2)
66	26.19	119.54	Shut-In(2)
127	56.02	120.69	End Shut-In(2)
128	2111.90	121.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M, 100%M	0.02

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Co. Inc
 1700 N Waterfront Pkw y
 Bldg 1200
 Wichita, KS 67206
 ATTN: Kevin Kessler

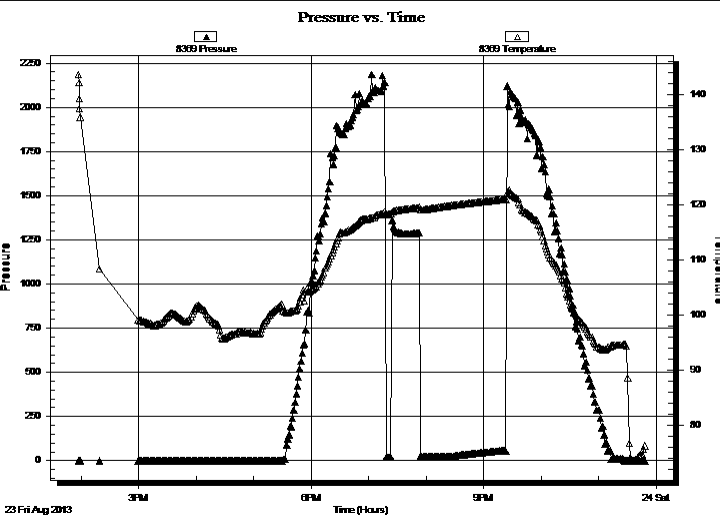
33-15s-23w Trego, KS
Schwartzkopf #1-33
 Job Ticket: 54427 **DST#: 1**
 Test Start: 2013.08.23 @ 13:57:00

GENERAL INFORMATION:

Formation: **Ft. Scott**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 19:16:30 Tester: Brannan L
 Time Test Ended: 23:47:15 Unit No: 70
Interval: 4330.00 ft (KB) To 4400.00 ft (KB) (TVD) Reference Elevations: 2479.00 ft (KB)
 Total Depth: 4400.00 ft (KB) (TVD) 2468.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 8369 Inside
 Press @ Run Depth: psig @ 4332.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.23 End Date: 2013.08.23 Last Calib.: 2013.08.23
 Start Time: 13:57:05 End Time: 23:48:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: 05- IF- Weak surface blow
 30- IS- No blow
 30- FF- No blow
 60- FSI- No blow



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

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	M, 100%M	0.02

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co. Inc
1700 N Waterfront Pkwy
Bldg 1200
Wichita, KS 67206
ATTN: Kevin Kessler

33-15s-23w Trego,KS
Schwartzkopf #1-33
Job Ticket: 54427 **DST#: 1**
Test Start: 2013.08.23 @ 13:57:00

Tool Information

Drill Pipe:	Length: 4285.00 ft	Diameter: 3.80 inches	Volume: 60.11 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	90000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	75000.00 lb
Depth to Top Packer:	4330.00 ft			Final	75000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	70.00 ft				
Tool Length:	98.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4303.00	
Shut In Tool	5.00			4308.00	
Hydraulic tool	5.00			4313.00	
Jars	5.00			4318.00	
Safety Joint	2.00			4320.00	
Packer	5.00			4325.00	28.00 Bottom Of Top Packer
Packer	5.00			4330.00	
Stubb	1.00			4331.00	
Perforations	1.00			4332.00	
Recorder	0.00	8369	Inside	4332.00	
Recorder	0.00	8700	Outside	4332.00	
Change Over Sub	1.00			4333.00	
Drill Pipe	63.00			4396.00	
Change Over Sub	1.00			4397.00	
Bullnose	3.00			4400.00	70.00 Bottom Packers & Anchor

Total Tool Length: 98.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co. Inc

33-15s-23w Trego,KS

1700 N Waterfront Pkwy
Bldg 1200
Wichita, KS 67206
ATTN: Kevin Kessler

Schwartzkopf #1-33

Job Ticket: 54427

DST#: 1

Test Start: 2013.08.23 @ 13:57:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.99 in³

Resistivity: ohm.m

Salinity: 2000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	M, 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

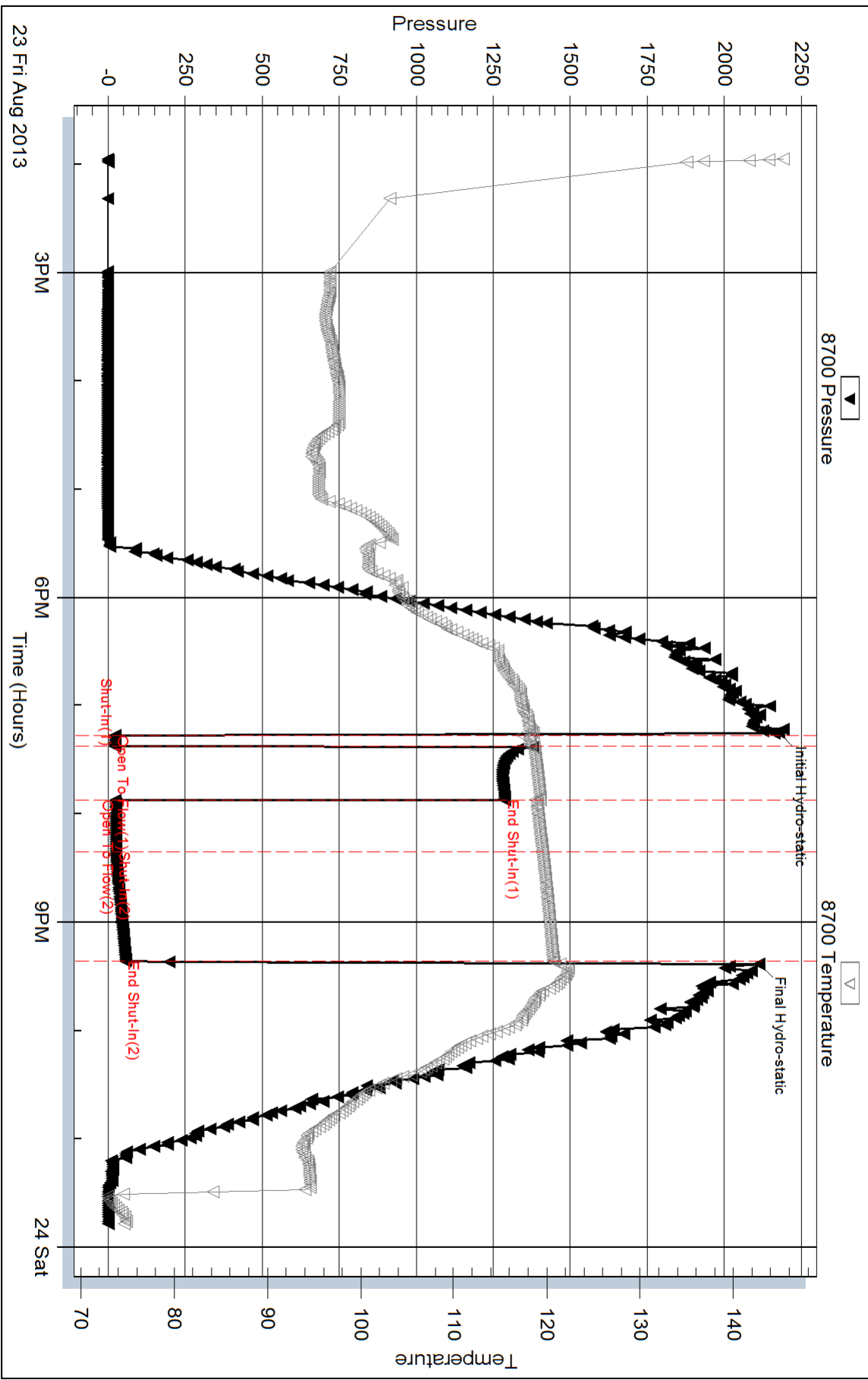
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



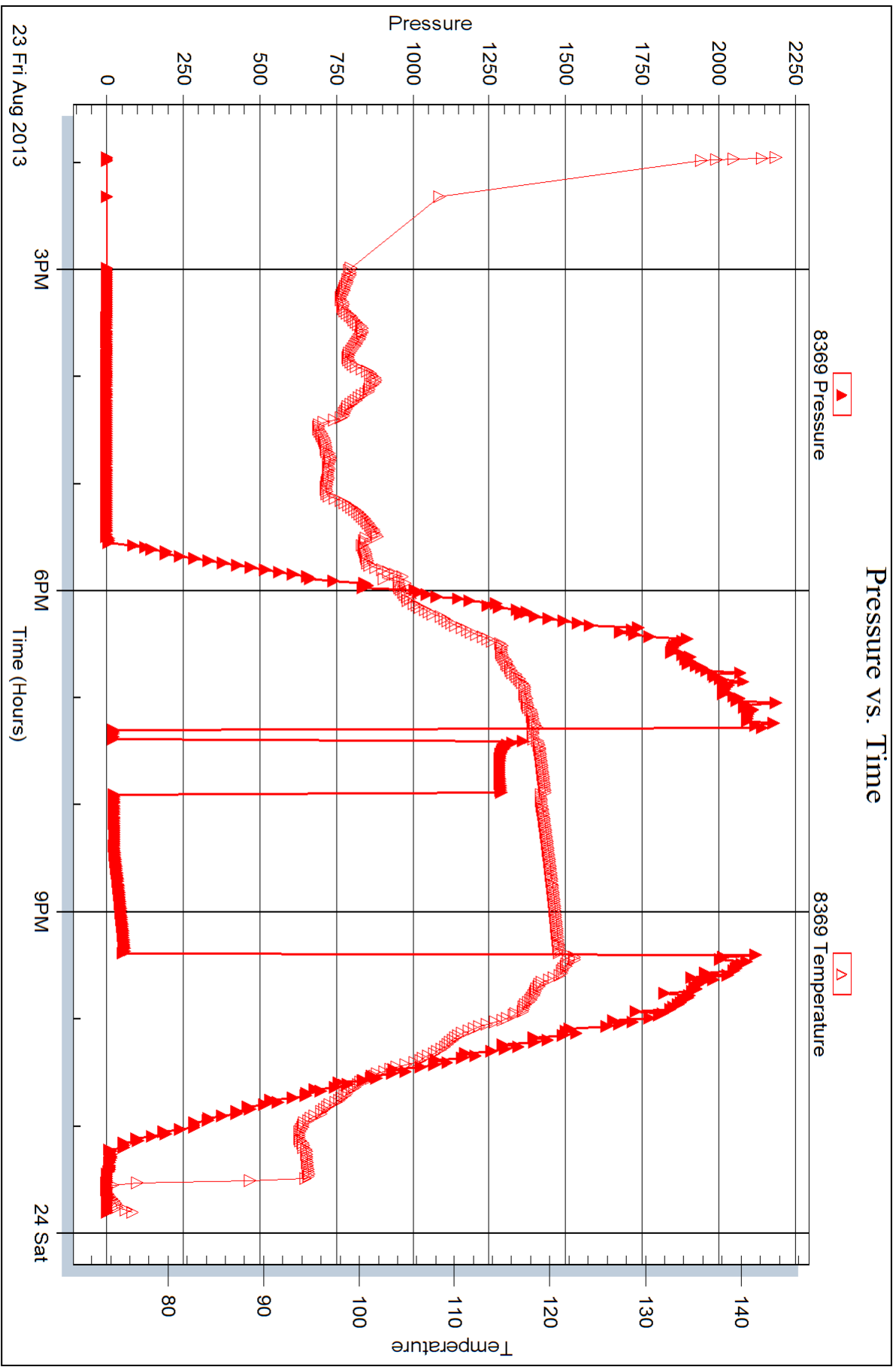
Serial #: 8369

Inside

Mull Drilling Co. Inc

Schw artzkopf #1-33

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co. Inc**

1700 N Waterfront Pkwy
Bldg 1200
Wichita, KS 67206

ATTN: Kevin Kessler

Schwartzkopf #1-33

33-15s-23w Trego,KS

Start Date: 2013.08.24 @ 09:04:06

End Date: 2013.08.24 @ 18:49:21

Job Ticket #: 54428 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.26 @ 15:25:54



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Co. Inc
 1700 N Waterfront Pkw y
 Bldg 1200
 Wichita, KS 67206
 ATTN: Kevin Kessler

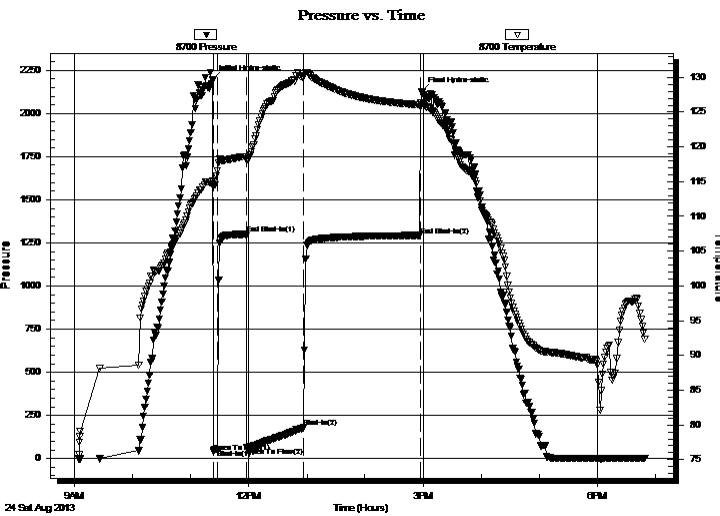
33-15s-23w Trego, KS
Schwartzkopf #1-33
 Job Ticket: 54428 **DST#: 2**
 Test Start: 2013.08.24 @ 09:04:06

GENERAL INFORMATION:

Formation: **Cherokee Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:23:06
 Time Test Ended: 18:49:21
 Interval: **4380.00 ft (KB) To 4435.00 ft (KB) (TVD)**
 Total Depth: 4435.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan L
 Unit No: 70
 Reference Elevations: 2479.00 ft (KB)
 2468.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8700 Outside
 Press @ Run Depth: 179.09 psig @ 4399.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.24 End Date: 2013.08.24 Last Calib.: 2013.08.24
 Start Time: 09:04:11 End Time: 18:49:21 Time On Btm: 2013.08.24 @ 11:22:51
 Time Off Btm: 2013.08.24 @ 14:58:36

TEST COMMENT: 05- IF- 3 1/2"
 30- IS- No blow
 60- FF- BOB 12 mins
 120- FS- 1/2" blow that died after 60 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2197.00	115.04	Initial Hydro-static
1	39.52	114.23	Open To Flow (1)
5	55.34	116.58	Shut-In(1)
35	1300.62	118.60	End Shut-In(1)
35	64.10	118.14	Open To Flow (2)
94	179.09	130.01	Shut-In(2)
214	1293.77	126.05	End Shut-In(2)
216	2127.71	126.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
190.00	GO, 15%G 85%O	2.40
220.00	GMCO, 15%G 25%M 60%O	3.09
0.00	245 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

Mull Drilling Co. Inc
1700 N Waterfront Pkwy
Bldg 1200
Wichita, KS 67206
ATTN: Kevin Kessler

33-15s-23w Trego,KS
Schwartzkopf #1-33
Job Ticket: 54428 **DST#: 2**
Test Start: 2013.08.24 @ 09:04:06

Tool Information

Drill Pipe:	Length: 4348.00 ft	Diameter: 3.80 inches	Volume: 60.99 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 71000.00 lb
Depth to Top Packer:	4380.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4353.00	
Shut In Tool	5.00			4358.00	
Hydraulic tool	5.00			4363.00	
Jars	5.00			4368.00	
Safety Joint	2.00			4370.00	
Packer	5.00			4375.00	28.00 Bottom Of Top Packer
Packer	5.00			4380.00	
Stubb	1.00			4381.00	
Perforations	18.00			4399.00	
Recorder	0.00	8369	Inside	4399.00	
Recorder	0.00	8700	Outside	4399.00	
Change Over Sub	1.00			4400.00	
Drill Pipe	31.00			4431.00	
Change Over Sub	1.00			4432.00	
Bullnose	3.00			4435.00	55.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co. Inc

33-15s-23w Trego,KS

1700 N Waterfront Pkwy
Bldg 1200
Wichita, KS 67206
ATTN: Kevin Kessler

Schwartzkopf #1-33

Job Ticket: 54428

DST#: 2

Test Start: 2013.08.24 @ 09:04:06

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
190.00	GO, 15%G 85%O	2.401
220.00	GMCO, 15%G 25%M 60%O	3.086
0.00	245 GIP	0.000

Total Length: 410.00 ft Total Volume: 5.487 bbl

Num Fluid Samples: 0

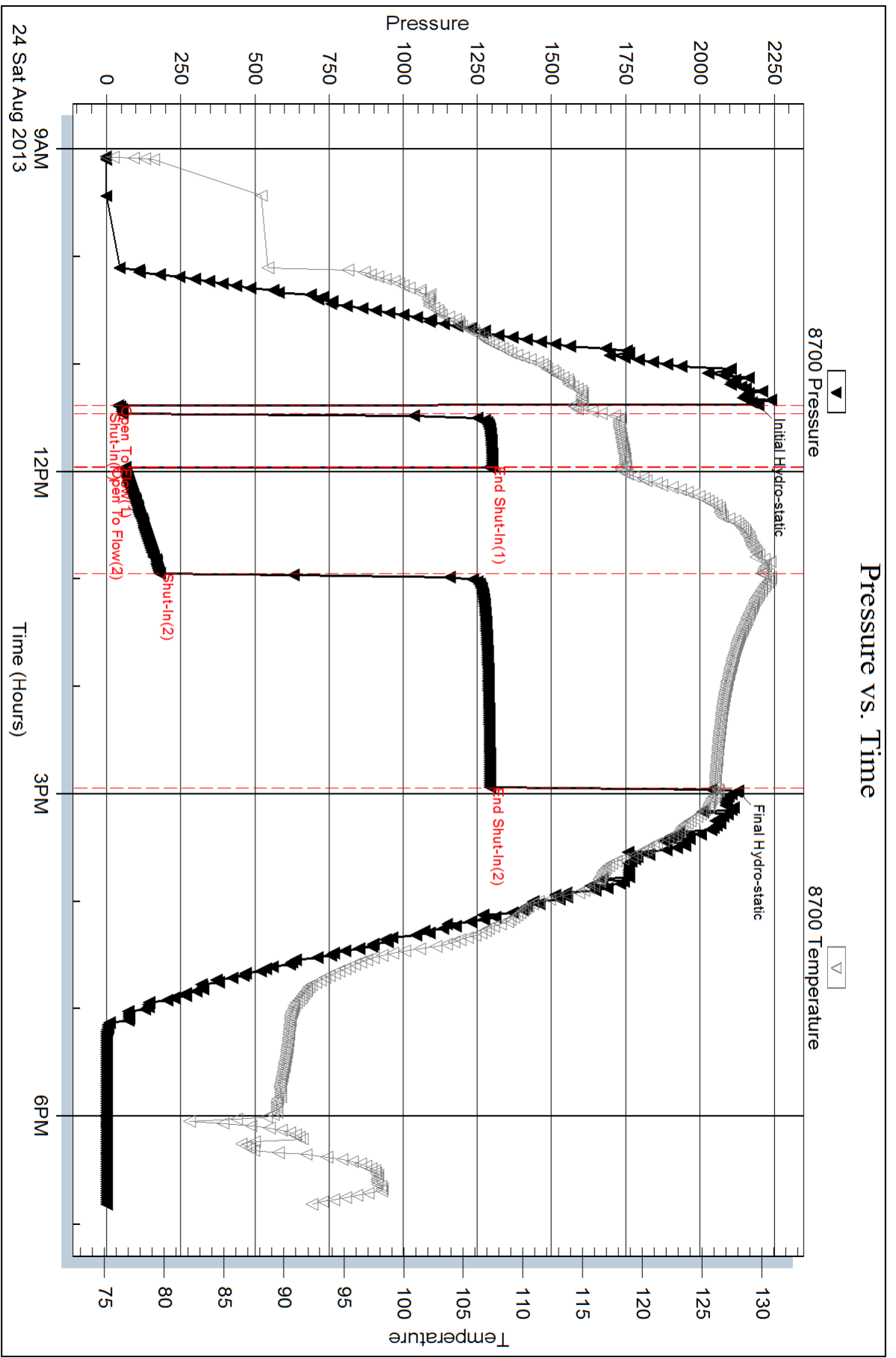
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



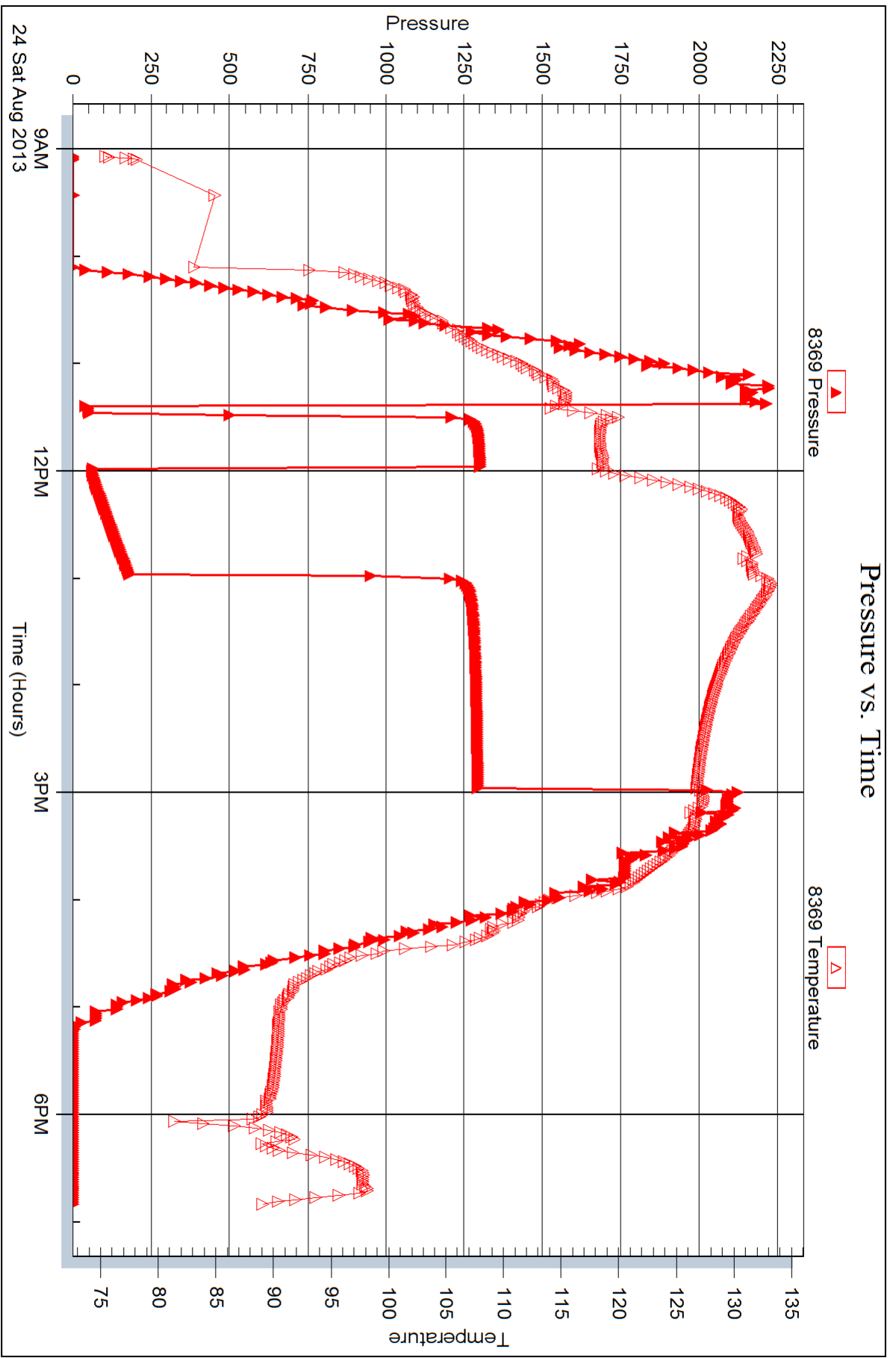
Serial #: 8369

Inside

Mull Drilling Co. Inc

Schw artzkopf #1-33

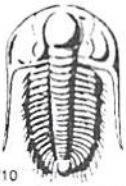
DST Test Number: 2



Triobite Testing, Inc

Ref. No: 54428

Printed: 2013.08.26 @ 15:25:55



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54427

Well Name & No. ~~111~~ Schwartzkopf 1-33 Test No. 1 Date 8/23/13
 Company MWH Drilling Co. Inc Elevation 2479 KB 2468 GL
 Address 1700 N Waterfront Pkwy, Bldg 1200 Wichita, KS 67206
 Co. Rep / Geo. Kevin Kessler Rig Duke 10
 Location: Sec. 33 Twp. 15 Rge. 23 Co. Trego State KS

Interval Tested 4330-4400 Zone Tested Ft. Scott
 Anchor Length 70 Drill Pipe Run 4285 Mud Wt. 9.2
 Top Packer Depth 4325 Drill Collars Run 29 Vis 50
 Bottom Packer Depth 4330 Wt. Pipe Run WL 8.0
 Total Depth 4400 Chlorides 2000 ppm System LCM 1#

Blow Description IF - Weak surface blow
 ISI - No blow
 FF - No blow
 FSI - No blow

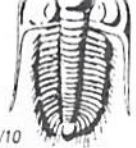
Rec	Feet of	%gas	%oil	%water	%mud
5	M			100	

Rec Total 5' BHT 121° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2178	<input checked="" type="checkbox"/> Test 1250	T-On Location 1215
(B) First Initial Flow 23	<input checked="" type="checkbox"/> Jars 250	T-Started 1357
(C) First Final Flow 22	<input checked="" type="checkbox"/> Safety Joint 75	T-Open 1917
(D) Initial Shut-In 1288	<input type="checkbox"/> Circ Sub _____	T-Pulled 2122
(E) Second Initial Flow 24	<input type="checkbox"/> Hourly Standby _____	T-Out 2349
(F) Second Final Flow 26	<input checked="" type="checkbox"/> Mileage 116 RT 179.80	Comments _____
(G) Final Shut-In 56	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic 2112	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open 5	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In 30	<input type="checkbox"/> Extra Recorder _____	Sub Total 0
Final Flow 30	<input type="checkbox"/> Day Standby _____	Total 1754.80
Final Shut-In 60	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total 1754.80	

Approved By _____ Our Representative Brannan L

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. 54428

Well Name & No. Schwartzkopf 1-33 Test No. 2 Date 8/24/13
 Company Mull Drilling Co. Inc Elevation 2479 KB 2468 GL
 Address 1700 N Waterfront Pkwy, Bldg 1200 Wichita, KS 67206
 Co. Rep / Geo. Kevin Kessler Rig Duke 10
 Location: Sec. 33 Twp. 15 Rge. 23 Co. Trego State KS

Interval Tested 4380-4435 Zone Tested Cherokee Sand
 Anchor Length 55' Drill Pipe Run 4348 Mud Wt. 9.2
 Top Packer Depth 4375 Drill Collars Run 29 Vis 50
 Bottom Packer Depth 4380 Wt. Pipe Run _____ WL 8.0
 Total Depth 4435 Chlorides 1800 ppm System LCM 1#

Blow Description IF-3 1/2"
ISI - No blow
FF - BOB 2 mins
FSI - 1/2" blow that died after 1 hour

Rec	Feet of	%gas	%oil	%water	%mud
<u>190</u>	<u>90</u>	<u>15</u>	<u>85</u>		
<u>220</u>	<u>GMCO</u>	<u>15</u>	<u>60</u>		<u>25</u>
<u>245</u>	<u>GIP</u>	<u>100</u>			
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 410' BHT 126° Gravity 35 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2197 Test 1250 T-On Location 0839
 (B) First Initial Flow 40 Jars 250 T-Started 0904
 (C) First Final Flow 55 Safety Joint 75 T-Open 1123
 (D) Initial Shut-In 1301 Circ Sub _____ T-Pulled 1458
 (E) Second Initial Flow 64 Hourly Standby _____ T-Out 1851
 (F) Second Final Flow 179 Mileage 116 RT x2 359.60 Comments _____
 (G) Final Shut-In 1294 Sampler _____ loaded tools 8/25 1:15
 (H) Final Hydrostatic 2128 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 5 Extra Packer _____ Extra Copies _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1934.60
 Final Shut-In 120 Accessibility _____ MP/DST Disc't _____
 Sub Total 1934.60

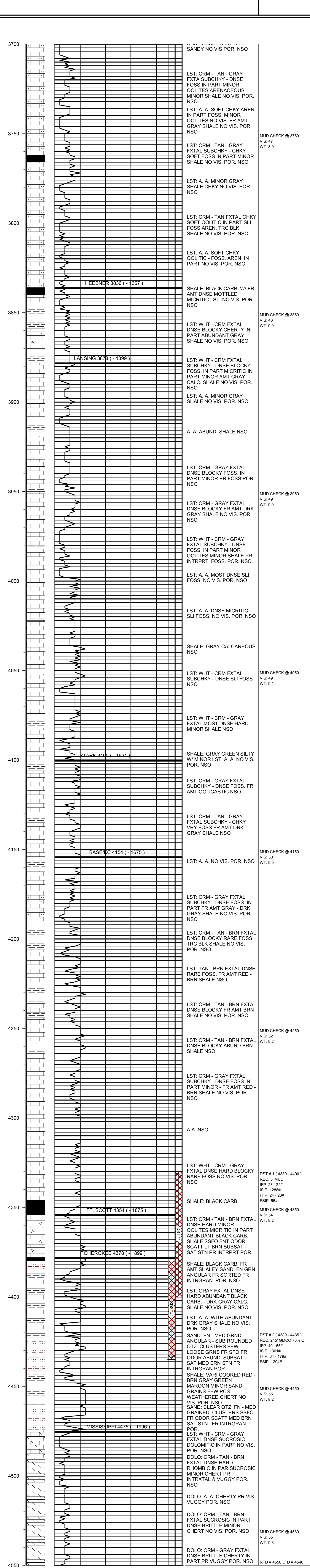
Approved By _____ Our Representative Brannan L

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KEVIN L. KESSLER
CONSULTING PETROLEUM GEOLOGIST
 (316) 522-7338

OPERATOR : MULL DRILLING COMPANY, INC.	ELEVATION
LEASE : SCHWARTZKOPF UNIT WELL # : 1 - 33	KB : 2479'
LOCATION : 1985' FSL & 71' FWL	GL : 2468'
SEC: 33 TWP : 15 S RGE : 23 W	MEASUREMENTS FROM KB
COUNTY : TREGO STATE : KANSAS	CASING RECORD
CONTRACTOR : DUKE DRILLING RIG # 10	SURFACE :
COMM : 08 / 14 / 2013	8 5/8" @ 219'
RTD : 4550	PRODUCTION :
SAMPLES SAVED FROM : 3700	5 1/2" @ 4550'
TO : RTD	ELECTRICAL SURVEYS :
LOG TD : 4546	CDL/CNL
TO : RTD	DIL
TYPE MUD : CHEMICAL	MICRO
	SONIC

REFERENCE WELL FOR STRUCTURAL COMPARISON :
RITCHIE EXPLORATION # 1 - 33 SCHWARTZKOPF SEC 33 - T 15 S - R 23 W TREGO COUNTY KANSAS



COMMENTS:

5 1/2" PRODUCTION CASING WAS SET
 TO FURTHER EVALUATE
 THE PRODUCTIVITY OF THIS WELL

KEVIN L. KESSLER