



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1154376  
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: \_\_\_\_\_



1154376

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

<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> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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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

August 06, 2013

Leon Rodak  
Murfin Drilling Co., Inc.  
250 N WATER STE 300  
WICHITA, KS 67202-1216

Re: ACO1  
API 15-039-21169-00-00  
Slavik 1-25  
SE/4 Sec.25-05S-30W  
Decatur 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,  
Leon Rodak

Slavik #1-25  
 2310' FSL 2310' FEL  
 Sec. 25-5S-30W  
 2858' KB

Davis E #1  
 NE/SE  
 Sec. 25-5S-30W  
 2841' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	2594	+264	+1	2596	+262	-1	2578	+263
B/Anhydrite	2630	+228	-2	2632	+226	-4	2611	+230
Topeka	3714	-856	-3	2716	-858	-5	3694	-853
Heebner	3887	-1029	-4	3888	-1030	-5	3866	-1025
Lansing	3934	-1076	-3	3935	-1077	-4	3914	-1073
Stark	4088	-1230	-6	4089	-1231	-7	4065	-1224
BKC	4133	-1275	-3	4136	-1278	-6	4113	-1272
Pawnee	4253	-1395	-8	4248	-1390	-3	4228	-1387
Ft Scott	4328	-1470	-8	4329	-1471	-9	4303	-1462
Cherokee	4341	-1483	-10	4342	-1484	-11	4314	-1473
Mississippi	4464	-1606	-10	4444	-1586	+10	4437	-1596
RTD	4495						4527	
LTD				4497				



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Slavik #1-25**

#### **25-5s-30w Decatur KS**

Start Date: 2013.04.14 @ 10:45:00

End Date: 2013.04.14 @ 19:46:15

Job Ticket #: 51164                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.04.23 @ 14:51:57



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

**25-5s-30w Decatur KS**

**Slavik #1-25**

Job Ticket: 51164

**DST#: 1**

Test Start: 2013.04.14 @ 10:45:00

## GENERAL INFORMATION:

Formation: **Toronto - LKC "B"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:26:00  
 Time Test Ended: 19:46:15  
 Interval: **3886.00 ft (KB) To 3965.00 ft (KB) (TVD)**  
 Total Depth: 3965.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: James Winder  
 Unit No: 57  
 Reference Elevations: 2858.00 ft (KB)  
 2847.00 ft (CF)  
 KB to GR/CF: 11.00 ft

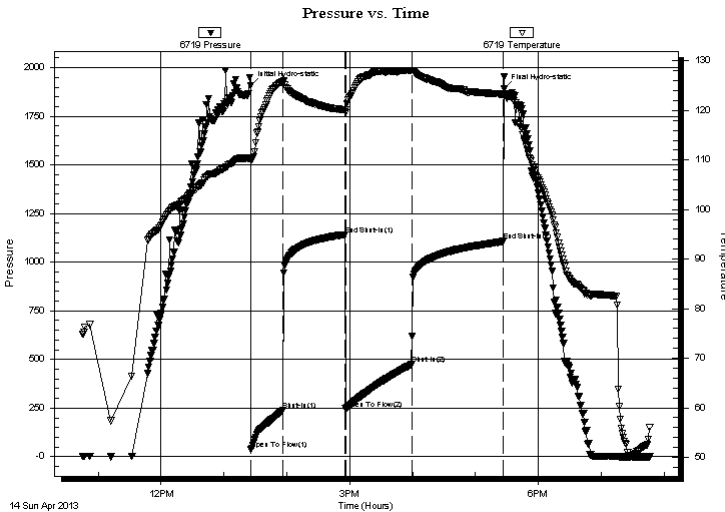
## Serial #: 6719

Inside

Press @ Run Depth: 474.40 psig @ 3887.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.04.14 End Date: 2013.04.14 Last Calib.: 2013.04.14  
 Start Time: 10:45:05 End Time: 19:46:15 Time On Btm: 2013.04.14 @ 13:25:15  
 Time Off Btm: 2013.04.14 @ 17:27:30

**TEST COMMENT:** 30 - IF: Blow built to BOB (11") in 8 1/2 min.  
 60 - IS: Bled off, No blow back  
 60 - FF: Blow built to BOB in 10 1/2 min.  
 90 - FS: Bled off, No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1906.74	110.53	Initial Hydro-static
1	38.49	110.15	Open To Flow (1)
32	239.94	125.83	Shut-In(1)
91	1141.94	120.09	End Shut-In(1)
91	246.05	119.61	Open To Flow (2)
154	474.40	128.02	Shut-In(2)
241	1107.33	123.29	End Shut-In(2)
243	1891.06	123.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
485.00	SMCW 92%w, 8%m	4.66
260.00	MCW 64%w, 36%m	3.65
255.00	WM 52%m, 48%w	3.58

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51164

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.04.14 @ 10:45:00

## Tool Information

Drill Pipe:	Length: 3657.00 ft	Diameter: 3.80 inches	Volume: 51.30 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: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 52.46 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3886.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	79.00 ft			
Tool Length:	107.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3863.00	
Hydraulic tool	5.00			3868.00	
Jars	5.00			3873.00	
Safety Joint	3.00			3876.00	
Packer	5.00			3881.00	28.00 Bottom Of Top Packer
Packer	5.00			3886.00	
Stubb	1.00			3887.00	
Recorder	0.00	6719	Inside	3887.00	
Recorder	0.00	8320	Outside	3887.00	
Perforations	8.00			3895.00	
Blank Spacing	65.00			3960.00	
Perforations	2.00			3962.00	
Bullnose	3.00			3965.00	79.00 Bottom Packers & Anchor

**Total Tool Length: 107.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51164

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2013.04.14 @ 10:45:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 80.00 sec/qt  
Water Loss: 5.58 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 1600.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 48000 ppm

## Recovery Information

Recovery Table

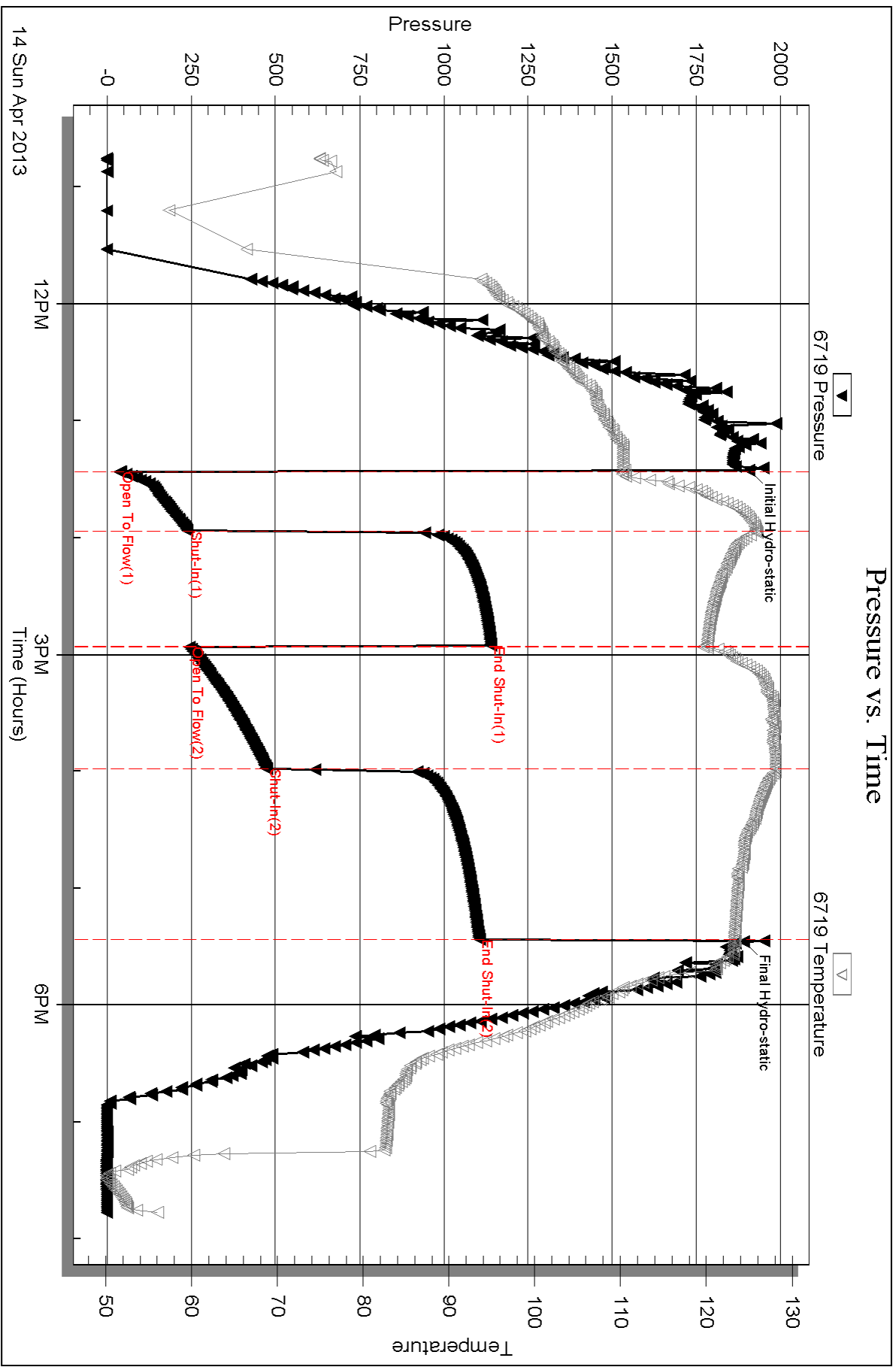
Length ft	Description	Volume bbl
485.00	SMCW 92%w , 8%m	4.663
260.00	MCW 64%w , 36%m	3.647
255.00	WM 52%m, 48%w	3.577

Total Length: 1000.00 ft      Total Volume: 11.887 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW = .208 ohms @ 53.7 deg F  
Chlorides = 48,000 ppm

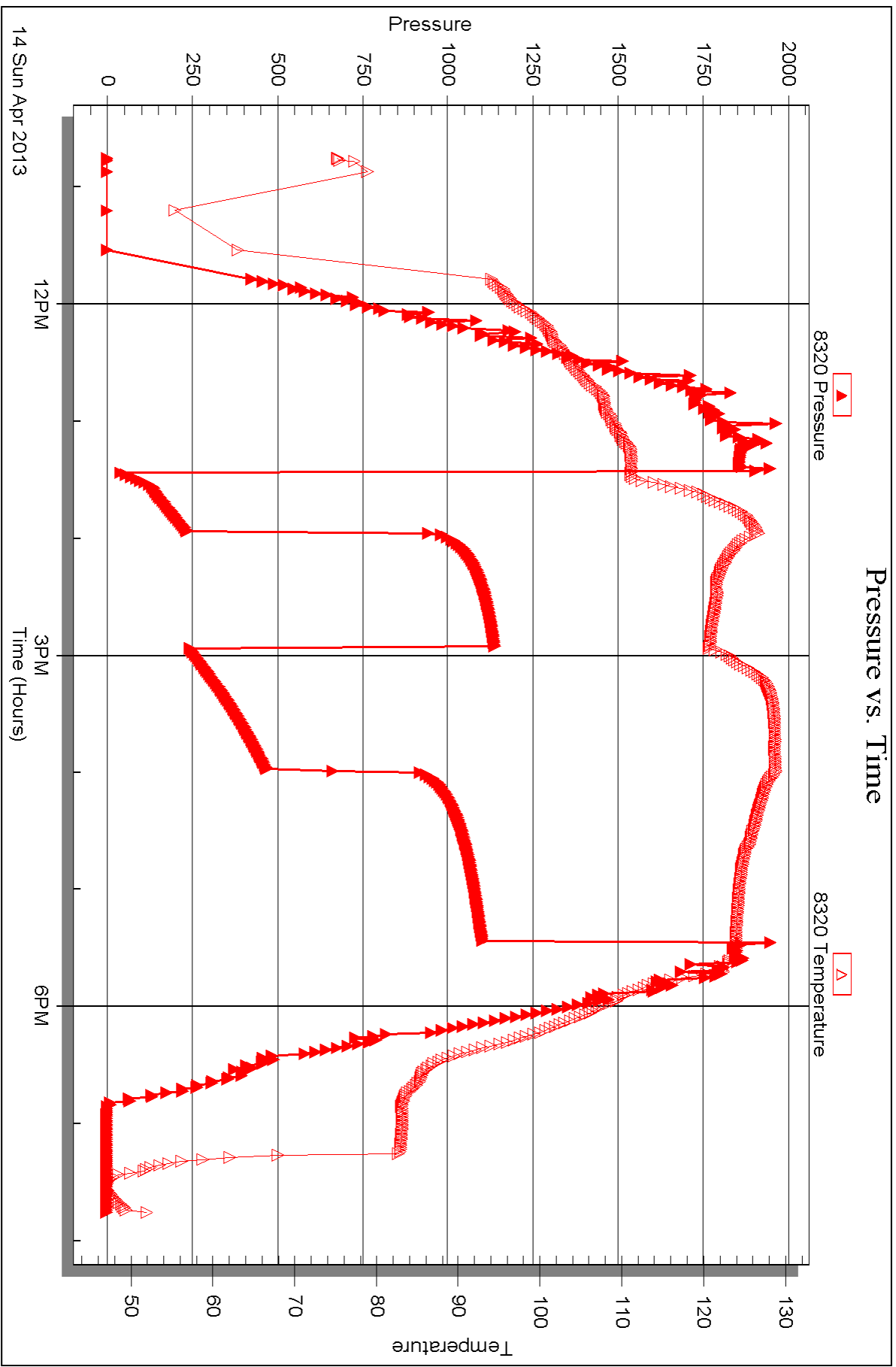


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Slavik #1-25

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 51164

Printed: 2013.04.23 @ 14:52:00



## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Slavik #1-25**

#### **25-5s-30w Decatur KS**

Start Date: 2013.04.15 @ 01:31:00

End Date: 2013.04.15 @ 09:36:30

Job Ticket #: 51165                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.04.23 @ 14:50:24



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51165

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.04.15 @ 01:31:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:18:15  
 Time Test Ended: 09:36:30  
 Interval: **3965.00 ft (KB) To 3982.00 ft (KB) (TVD)**  
 Total Depth: 3982.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 57  
 Reference Elevations: 2858.00 ft (KB)  
 2847.00 ft (CF)  
 KB to GR/CF: 11.00 ft

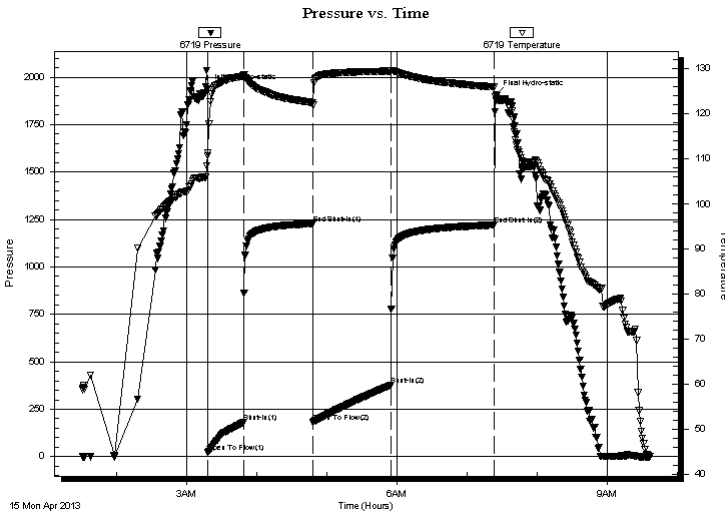
## Serial #: 6719

Inside

Press @ Run Depth: 376.99 psig @ 3966.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.04.15 End Date: 2013.04.15 Last Calib.: 2013.04.15  
 Start Time: 01:31:05 End Time: 09:36:29 Time On Btm: 2013.04.15 @ 03:18:00  
 Time Off Btm: 2013.04.15 @ 07:24:45

**TEST COMMENT:** 30 - IF: Blow built to BOB (11") in 13 min.  
 60 - IS: Bled off, No blow back  
 60 - FF: Blow built to BOB in 16 min.  
 90 - FS: Bled off, No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1940.12	111.30	Initial Hydro-static
1	22.78	110.82	Open To Flow (1)
31	180.50	128.44	Shut-In(1)
90	1227.75	122.55	End Shut-In(1)
91	180.04	121.97	Open To Flow (2)
157	376.99	129.56	Shut-In(2)
246	1220.44	126.01	End Shut-In(2)
247	1906.16	123.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
490.00	Water 98%w , 2%m	4.73
310.00	MCW 89%w , 11%m	4.35

\* 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., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51165

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.04.15 @ 01:31:00

### Tool Information

Drill Pipe:	Length: 3721.00 ft	Diameter: 3.80 inches	Volume: 52.20 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: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.36 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	3965.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3947.00	
Hydraulic tool	5.00			3952.00	
Safety Joint	3.00			3955.00	
Packer	5.00			3960.00	23.00 Bottom Of Top Packer
Packer	5.00			3965.00	
Stubb	1.00			3966.00	
Recorder	0.00	6719	Inside	3966.00	
Recorder	0.00	8320	Outside	3966.00	
Perforations	13.00			3979.00	
Bullnose	3.00			3982.00	17.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>40.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51165

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2013.04.15 @ 01:31:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 70.00 sec/qt  
Water Loss: 5.57 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 1600.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 50000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
490.00	Water 98%w , 2%m	4.733
310.00	MCW 89%w , 11%m	4.348

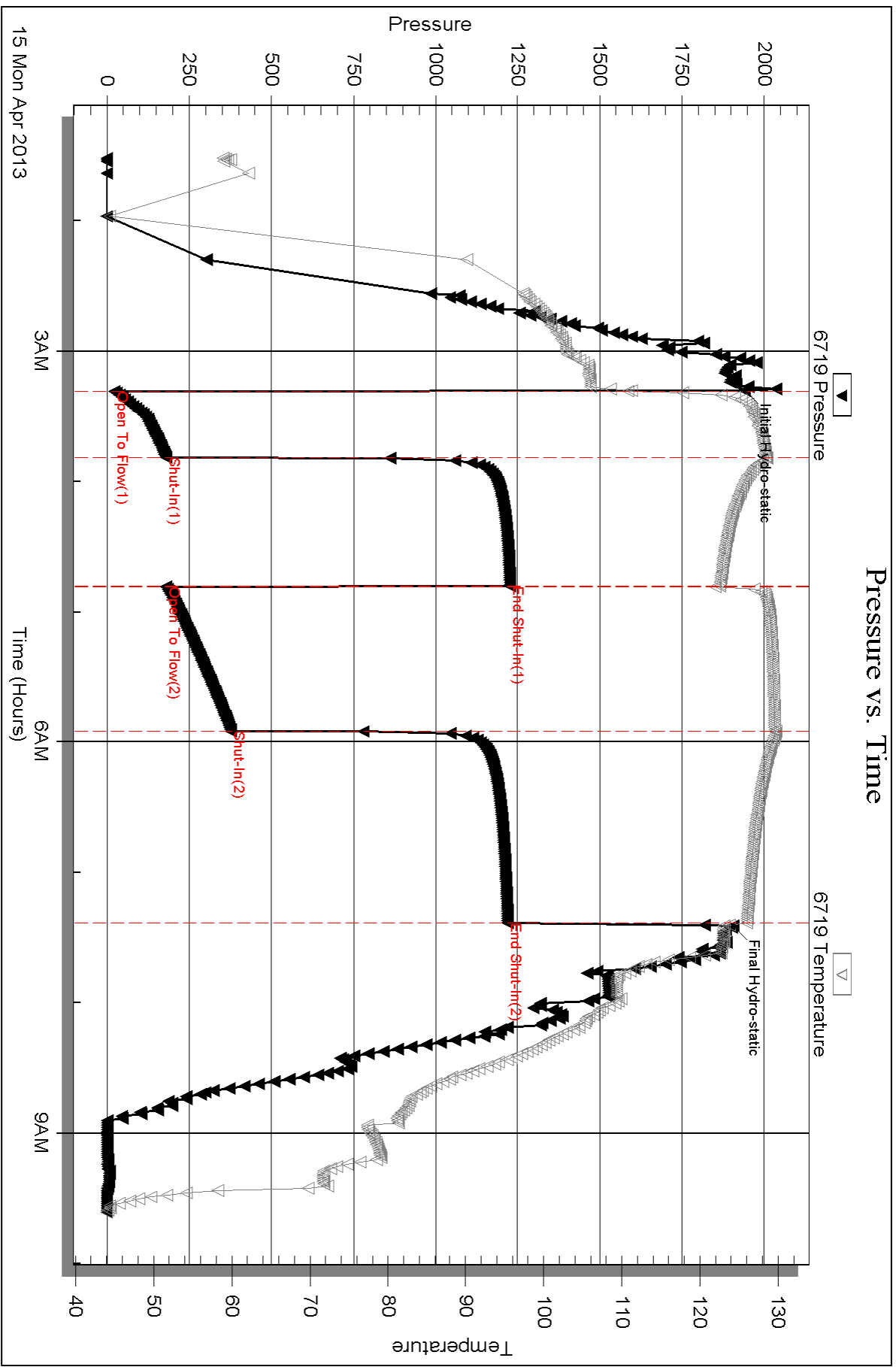
Total Length: 800.00 ft      Total Volume: 9.081 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW = .249 ohms @ 43.2 deg F  
Chlorides = 50,000 ppm



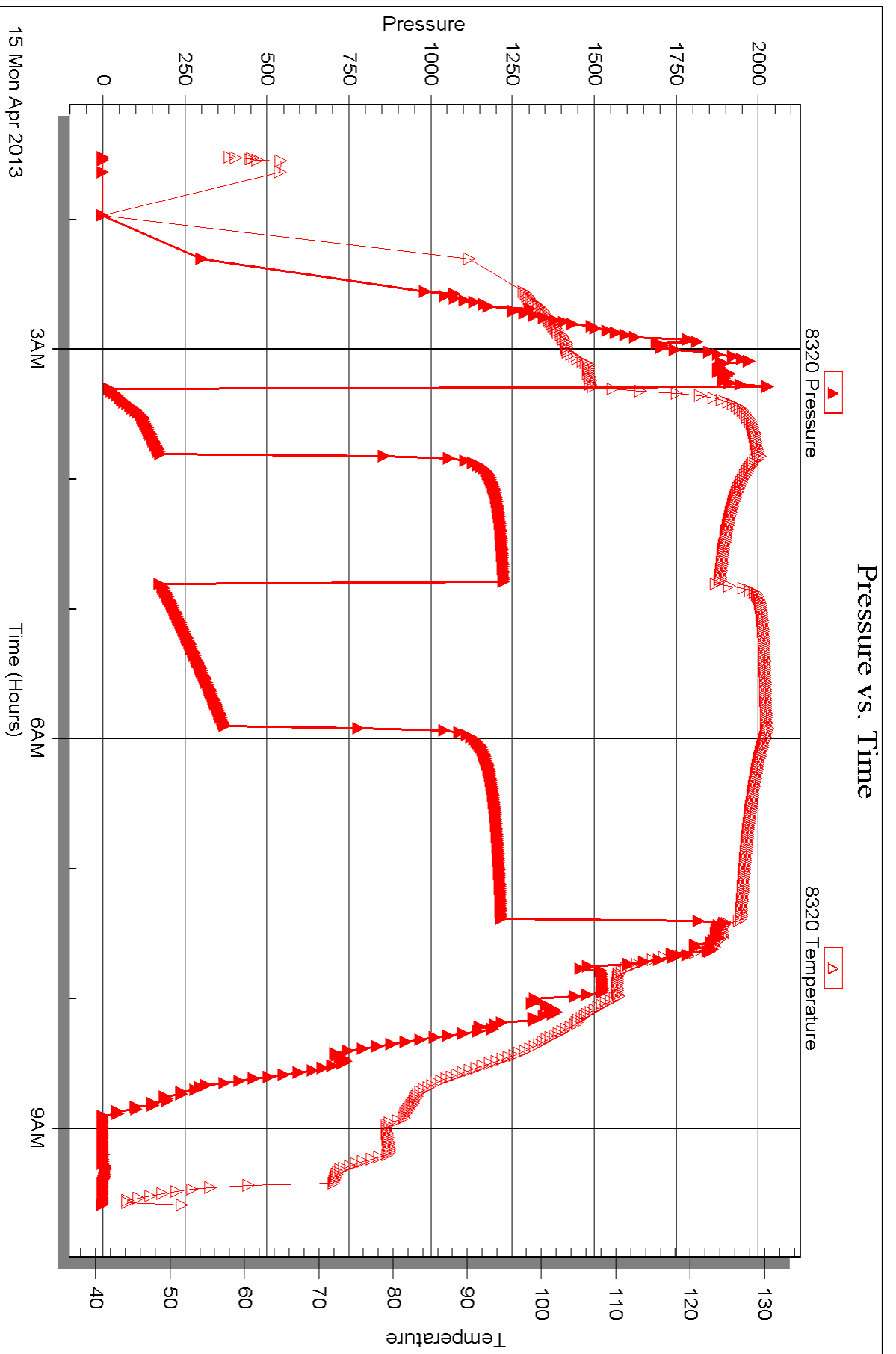


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Slavik #1-25

DST Test Number: 2





## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Slavik #1-25**

#### **25-5s-30w Decatur KS**

Start Date: 2013.04.15 @ 16:50:00

End Date: 2013.04.15 @ 23:31:00

Job Ticket #: 51166                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.04.23 @ 14:19:01



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51166

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.04.15 @ 16:50:00

## GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:44:30

Time Test Ended: 23:31:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

**Interval: 3987.00 ft (KB) To 4007.00 ft (KB) (TVD)**

Reference Elevations: 2858.00 ft (KB)

Total Depth: 4007.00 ft (KB) (TVD)

2847.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6719**

**Inside**

Press @ Run Depth: 26.13 psig @ 3988.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.15 End Date: 2013.04.15

Last Calib.: 2013.04.15

Start Time: 16:50:05 End Time: 23:30:59

Time On Btm: 2013.04.15 @ 18:44:15

Time Off Btm: 2013.04.15 @ 21:46:15

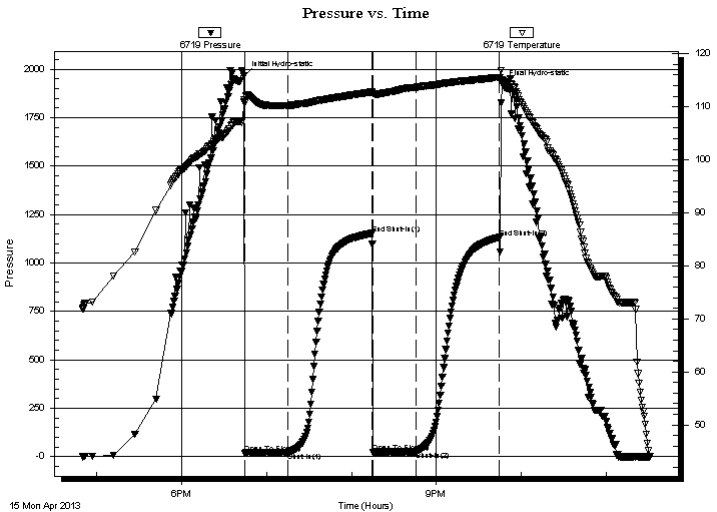
**TEST COMMENT:** 30 - IF: Blow built to 1" in 10 min., blew at just under 1" till close

60 - IS: Bled off, No blow back

30 - FF: No blow

60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1964.46	111.24	Initial Hydro-static
1	16.68	110.70	Open To Flow (1)
31	23.06	110.20	Shut-In(1)
91	1152.23	112.81	End Shut-In(1)
91	23.98	112.56	Open To Flow (2)
121	26.13	113.69	Shut-In(2)
181	1131.68	115.58	End Shut-In(2)
182	1922.78	115.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud w /oil spots 99%m, 1%o	0.15

\* 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., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51166

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.04.15 @ 16:50:00

## Tool Information

Drill Pipe:	Length: 3752.00 ft	Diameter: 3.80 inches	Volume: 52.63 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: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose:	88000.00 lb
			<u>Total Volume: 53.79 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	76000.00 lb
Depth to Top Packer:	3987.00 ft			Final	76000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	43.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Shut In Tool	5.00			3969.00	
Hydraulic tool	5.00			3974.00	
Safety Joint	3.00			3977.00	
Packer	5.00			3982.00	23.00 Bottom Of Top Packer
Packer	5.00			3987.00	
Stubb	1.00			3988.00	
Recorder	0.00	6719	Inside	3988.00	
Recorder	0.00	8320	Outside	3988.00	
Perforations	16.00			4004.00	
Bullnose	3.00			4007.00	20.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>43.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51166

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2013.04.15 @ 16:50:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2300.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud w /oil spots 99% <sub>m</sub> , 1% <sub>o</sub>	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl

Num Fluid Samples: 0

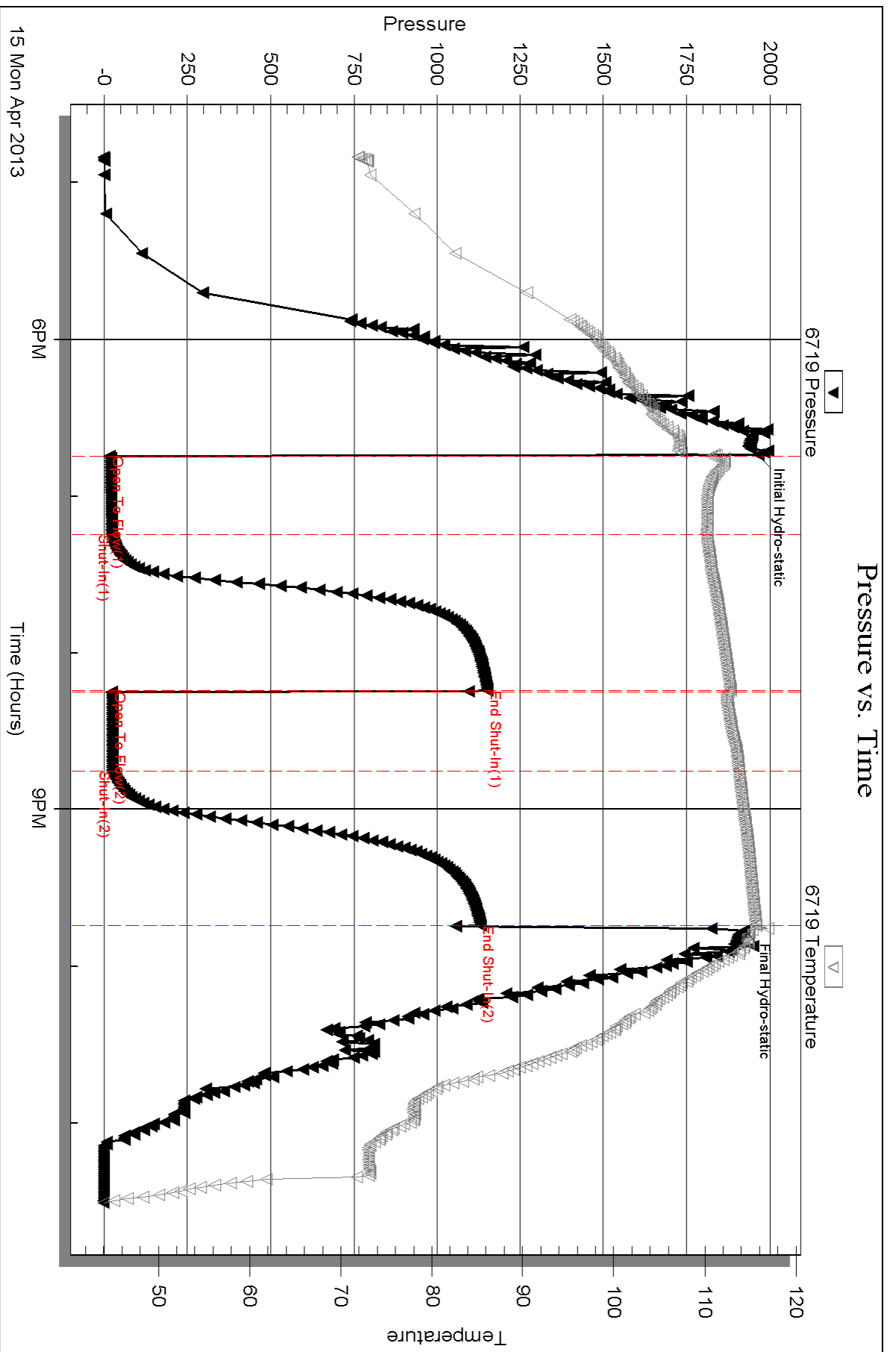
Num Gas Bombs: 0

Serial #:

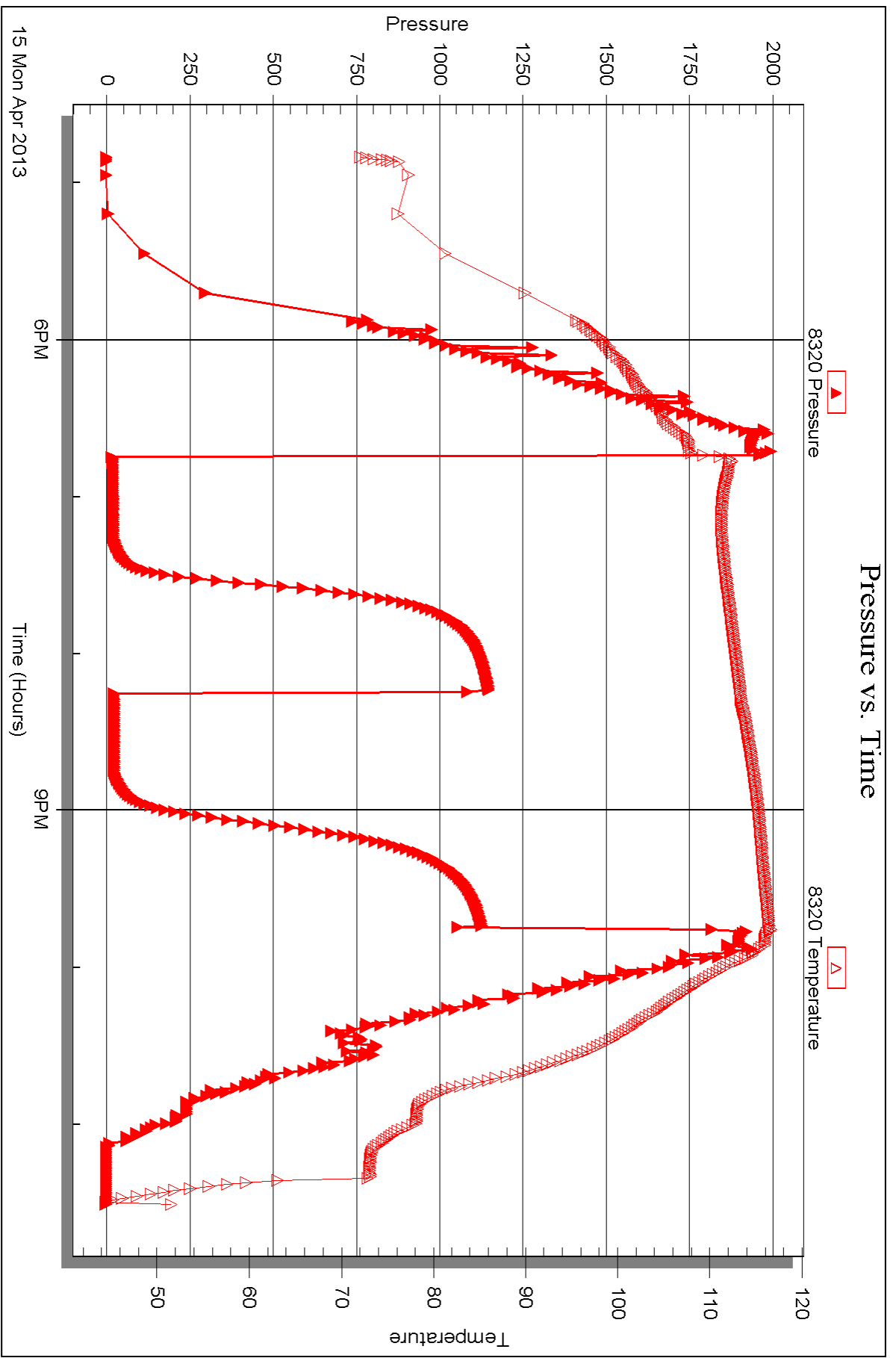
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

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

250 N. Water STE 300  
Wichita, KS 67202

ATTN: Robert Hendrix

### **Slavik #1-25**

#### **25-5s-30w Decatur KS**

Start Date: 2013.04.16 @ 13:30:00

End Date: 2013.04.16 @ 21:18:30

Job Ticket #: 51167                      DST #: 4

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.04.23 @ 14:12:44



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51167

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.04.16 @ 13:30:00

## GENERAL INFORMATION:

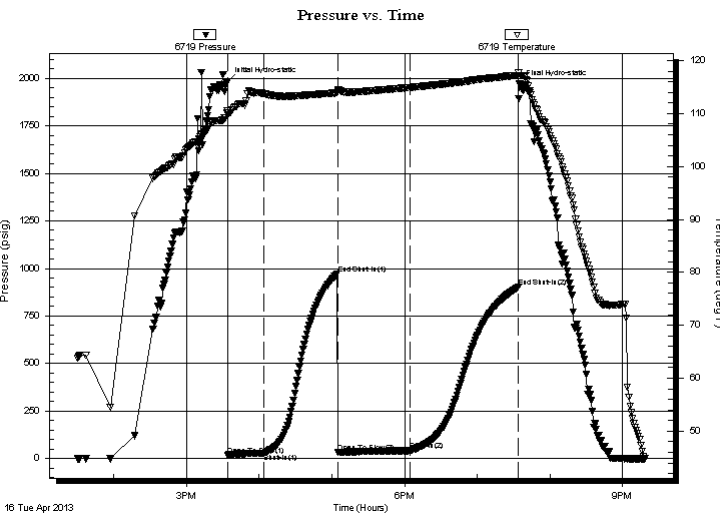
Formation: **LKC "H - K"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:34:00  
 Time Test Ended: 21:18:30  
 Interval: **4027.00 ft (KB) To 4110.00 ft (KB) (TVD)**  
 Total Depth: 4110.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 57  
 Reference Elevations: 2858.00 ft (KB)  
 2847.00 ft (CF)  
 KB to GR/CF: 11.00 ft

## Serial #: 6719

Inside

Press @ Run Depth: 42.25 psig @ 4028.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.04.16 End Date: 2013.04.16 Last Calib.: 2013.04.16  
 Start Time: 13:30:05 End Time: 21:18:29 Time On Btm: 2013.04.16 @ 15:33:45  
 Time Off Btm: 2013.04.16 @ 19:35:00

**TEST COMMENT:** IF: Blow built to 2 1/2"  
 IS: Bled off, Blow back built to 1/2"  
 FF: Blow built to 3"  
 FS: Bled off, Surface blow back, did not build



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1980.89	110.57	Initial Hydro-static
1	18.19	110.19	Open To Flow (1)
31	29.78	113.76	Shut-In(1)
91	971.78	113.93	End Shut-In(1)
92	32.34	114.31	Open To Flow (2)
151	42.25	114.94	Shut-In(2)
240	900.76	117.21	End Shut-In(2)
242	1968.05	117.15	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 70% m, 28% o, 2% g	0.30

\* 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., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51167

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.04.16 @ 13:30:00

## Tool Information

Drill Pipe:	Length: 3783.00 ft	Diameter: 3.80 inches	Volume: 53.07 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: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 54.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4027.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	106.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4009.00	
Hydraulic tool	5.00			4014.00	
Safety Joint	3.00			4017.00	
Packer	5.00			4022.00	23.00 Bottom Of Top Packer
Packer	5.00			4027.00	
Stubb	1.00			4028.00	
Recorder	0.00	6719	Inside	4028.00	
Recorder	0.00	8320	Outside	4028.00	
Perforations	13.00			4041.00	
Blank Spacing	65.00			4106.00	
Perforations	1.00			4107.00	
Bullnose	3.00			4110.00	83.00 Bottom Packers & Anchor

**Total Tool Length: 106.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**25-5s-30w Decatur KS**

250 N. Water STE 300  
Wichita, KS 67202

**Slavik #1-25**

Job Ticket: 51167

**DST#: 4**

ATTN: Robert Hendrix

Test Start: 2013.04.16 @ 13:30:00

## 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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

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
60.00	OCM 70% <sub>m</sub> , 28% <sub>o</sub> , 2% <sub>g</sub>	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

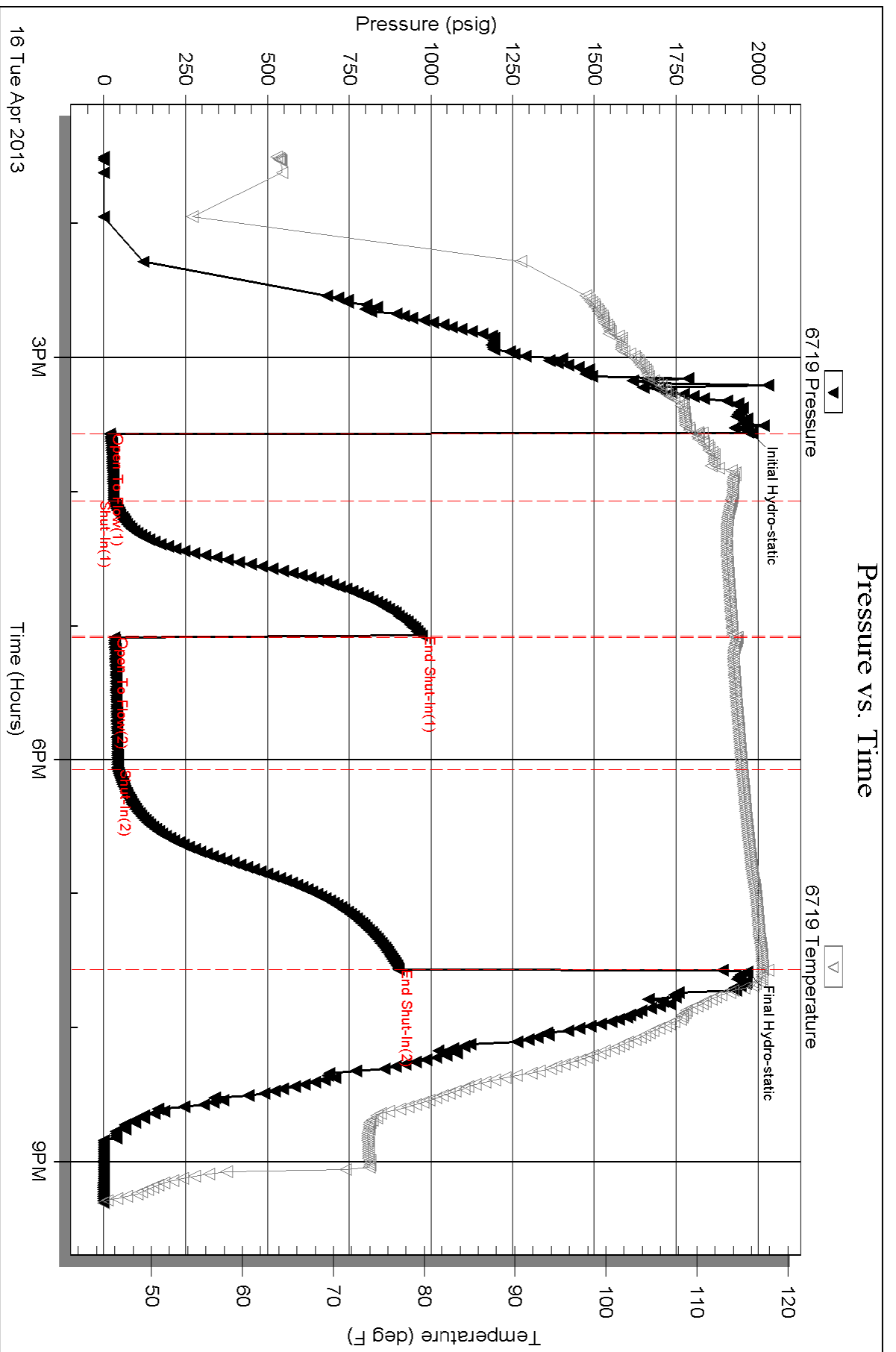
Num Gas Bombs: 0

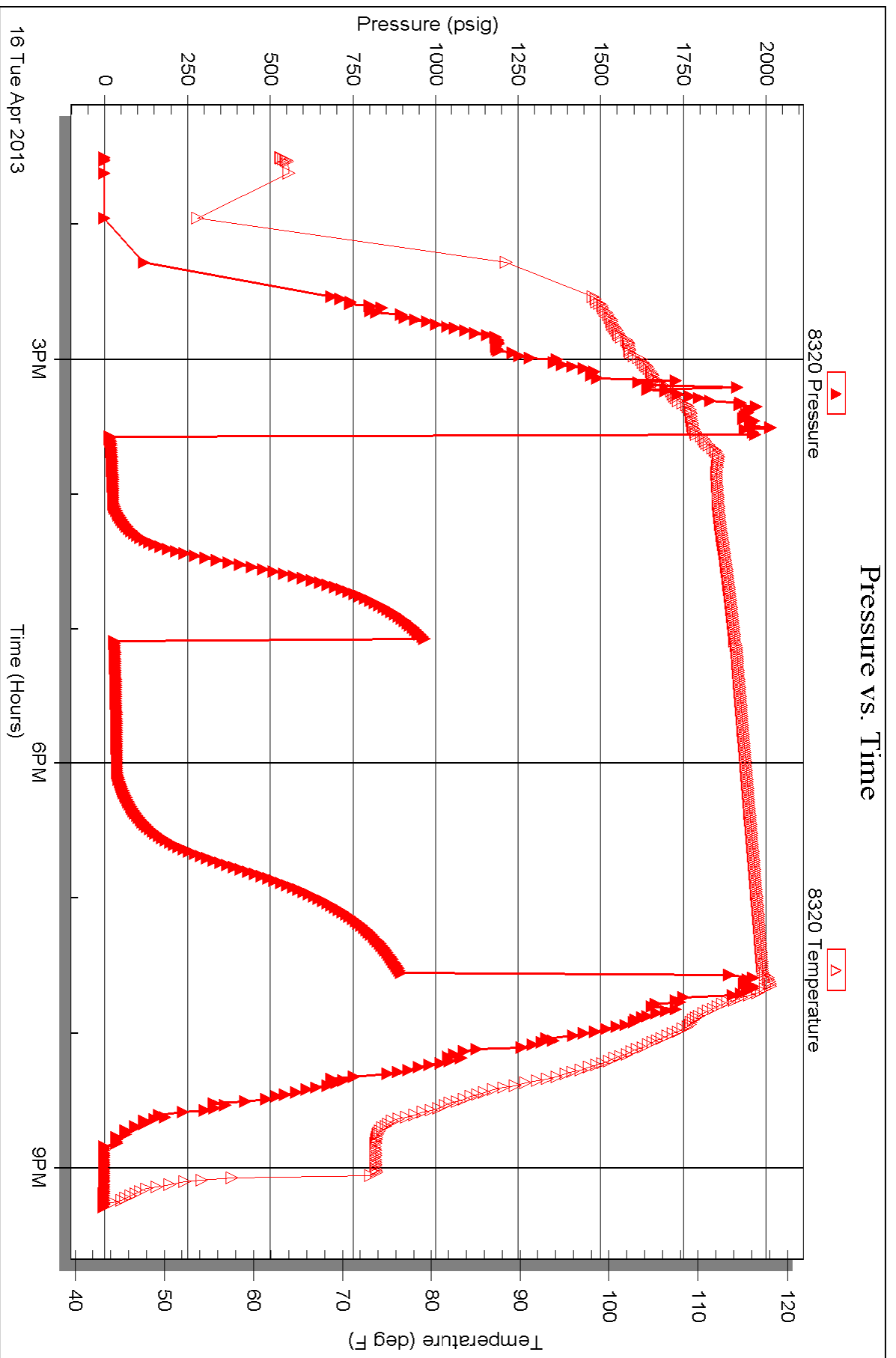
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51164

Well Name & No. Slavik #1-25 Test No. 1 Date 4-14-13  
 Company Murfin Drilling Co. Inc. Elevation 2858 KB 2847 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 25 Twp. 5s Rge. 30w Co. Decatur State KS

Interval Tested 3886 - 3965 Zone Tested Toronto - LKC "B"  
 Anchor Length 79 Drill Pipe Run 3657 Mud Wt. 9.2  
 Top Packer Depth 3881 Drill Collars Run 235 Vis 80  
 Bottom Packer Depth 3886 Wt. Pipe Run - WL 5.6  
 Total Depth 3965 Chlorides 1600 ppm System LCM 4

Blow Description IF: Blow built to BOB (11") in 8 1/2 min.  
ISI: Bled off, No blowback  
FF: Blow built to BOB in 10 1/2 min.  
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>255</u>	<u>WM</u>	-	-	<u>48</u>	<u>52</u>
<u>260</u>	<u>MCW</u>	-	-	<u>64</u>	<u>36</u>
<u>485</u>	<u>SMCW</u>	-	-	<u>92</u>	<u>8</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

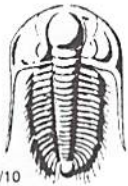
Rec Total 1000 BHT 123 Gravity - API RW .208 @ 53.7 °F Chlorides 48,000 ppm

(A) Initial Hydrostatic <u>1907</u>	<input type="checkbox"/> Test <u>*</u> 1150	T-On Location <u>8:30</u>
(B) First Initial Flow <u>38</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>10:45</u>
(C) First Final Flow <u>240</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>13:26</u>
(D) Initial Shut-In <u>1142</u>	<input checked="" type="checkbox"/> Circ Sub <u>ANA</u>	T-Pulled <u>17:26</u>
(E) Second Initial Flow <u>246</u>	<input type="checkbox"/> Hourly Standby <u>* Star 2hr</u> 200	T-Out <u>19:30</u>
(F) Second Final Flow <u>474</u>	<input type="checkbox"/> Mileage <u>48RT</u> 74.40	Comments _____
(G) Final Shut-In <u>1107</u>	<input checked="" type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1891</u>	<input checked="" type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer _____	<input checked="" type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer _____	<input checked="" type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Day Standby _____	Total <u>1749.40</u>
	<input checked="" type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1749.40</u>	

Approved By [Signature]

Our Representative James Winder

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. 51165

4/10

Well Name & No. Slavik #1-25 Test No. 2 Date 4-15-13  
 Company Murfin Drilling Co., Inc Elevation 2858 KB 2847 GL  
 Address 250 N. Water STE 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 25 Twp. 5s Rge. 30w Co. Decatur State KS

Interval Tested 3965 - 3982 Zone Tested LKC "D"  
 Anchor Length 17 Drill Pipe Run 3721 Mud Wt. 9.1  
 Top Packer Depth 3960 Drill Collars Run 235 Vis 70  
 Bottom Packer Depth 3965 Wt. Pipe Run - WL 5.6  
 Total Depth 3982 Chlorides 1600 ppm System LCM 4

Blow Description IF: Blow built to BOB (11") in 13 min.  
ISI: Bled off, No blowback  
FF: Blow built to BOB in 16 min  
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>MCW</u>		<u>89</u>	<u>11</u>	
<u>490</u>	<u>Water</u>	<u>-</u>	<u>98</u>	<u>2</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 800 BHT 126 Gravity - API RW .249 @ 43.2 °F Chlorides 50,000 ppm

(A) Initial Hydrostatic <u>1940</u>	<input type="checkbox"/> Test <u>*</u> 1150	T-On Location <u>1:15</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars	T-Started <u>1:31</u>
(C) First Final Flow <u>181</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>3:18</u>
(D) Initial Shut-In <u>1228</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>7:23</u>
(E) Second Initial Flow <u>180</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>9:30</u>
(F) Second Final Flow <u>380</u>	<input type="checkbox"/> Mileage <u>48RT</u> 74.40	Comments
(G) Final Shut-In <u>1220</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1906</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer

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

Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

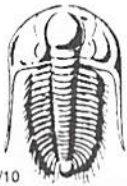
Sub Total 1299.40

Total 1299.40  
 MP/DST Disc't

Approved By [Signature] Our Representative James Winde

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. 51166

4/10

Well Name & No. Slavik #1-25 Test No. 3 Date 4-15-13  
 Company Murfin Drilling Co. Inc Elevation 2858 KB 2847 GL  
 Address 250 N. Water STE 300 Wichita KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 25 Twp. 5s Rge. 30w Co. Decatur State KS

Interval Tested 3987 - 4007 Zone Tested LKC "F"  
 Anchor Length 20 Drill Pipe Run 3752 Mud Wt. 9.1  
 Top Packer Depth 3982 Drill Collars Run 235 Vis 65  
 Bottom Packer Depth 3987 Wt. Pipe Run - WL 5.6  
 Total Depth 4007 Chlorides 2300 ppm System LCM 4

Blow Description IF: Blow built to 1" in 10 min., blew at just under 1" till close  
ISI: Bled off, No blow back  
FF: No blow  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Mud w/oil spots</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>99</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 30 BHT 116 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1964</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>16:15</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars	T-Started <u>16:50</u>
(C) First Final Flow <u>23</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>18:44</u>
(D) Initial Shut-In <u>1152</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>21:44</u>
(E) Second Initial Flow <u>24</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>23:30</u>
(F) Second Final Flow <u>26</u>	<input type="checkbox"/> Mileage <u>48RT</u> 74.40	Comments
(G) Final Shut-In <u>1132</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1923</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer

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

Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Sub Total 1399.40

Sub Total 1399.40

Approved By [Signature] Our Representative James Winder

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. 51167

Well Name & No. Slavik #1-25 Test No. 4 Date 4-16-13  
 Company Murfin Drilling Co. Inc. Elevation 2858 KB 2847 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2  
 Location: Sec. 25 Twp. 5s Rge. 30w Co. Decatur State KS

Interval Tested 4027 - 4110 Zone Tested LKC "H-K"  
 Anchor Length 83 Drill Pipe Run 3783 Mud Wt. 9.2  
 Top Packer Depth 4022 Drill Collars Run 235 Vis 58  
 Bottom Packer Depth 4027 Wt. Pipe Run - WL 6.0  
 Total Depth 4110 Chlorides 2500 ppm System LCM 3

Blow Description IF: Blow built to 2 1/2"  
ISI: Bled off, Blowback built to 1/2"  
FF: Blow built to 3"  
FSI: Bled off, Surface blowback, did not build

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>OCM</u>	<u>2</u>	<u>28</u>	<u>-</u>	<u>70</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 60 BHT 117 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1981</u>	<input type="checkbox"/> Test <u>X</u> 1250	T-On Location <u>13:00</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars	T-Started <u>13:30</u>
(C) First Final Flow <u>30</u>	<input type="checkbox"/> Safety Joint <u>X</u> 75	T-Open <u>15:34</u>
(D) Initial Shut-In <u>972</u>	<input checked="" type="checkbox"/> Circ Sub <u>ANA</u>	T-Pulled <u>19:33</u>
(E) Second Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>21:15</u>
(F) Second Final Flow <u>42</u>	<input type="checkbox"/> Mileage <u>48RT x2</u> 148.80	Comments
(G) Final Shut-In <u>901</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1968</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer

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

Extra Packer  
 Extra Recorder  
 Day Standby X Released 10:00  
 1d 12.75h 4/18/13  
 Accessibility

Sub Total 1473.80

Sub Total 800  
 Total 2273.80  
 MP/DST Disc't

Approved By [Signature] Our Representative James Nindler

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.





# INVOICE

*acct. prod-LH*

PO Box 93999  
Southlake, TX 76092

Invoice Number: 135659

Invoice Date: Apr 10, 2013

Page: 1

Voice: (817) 546-7282  
Fax: (817) 246-3361

Now Includes:



**Bill To:**  
Murfin Drlg. Co., Inc.  
250 N. Water  
STE #300  
Wichita, KS 67202

OPERATOR PAY MDC  
LEASE: *B...*

Customer ID	Field Ticket #	Payment Terms	
Murfin	58986	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Apr 10, 2013	5/10/13

Quantity	Item	Description	Unit Price	Amount
185.00	MAT	Slavik #1-25 Class A Common	17.90	3,311.50
7.00	MAT	Chloride	64.00	448.00
194.00	SER	Cubic Feet	2.48	481.12
358.00	SER	Ton Mileage	2.60	930.80
1.00	SER	Surface	1,512.25	1,512.25
40.00	SER	Pump Truck Mileage	7.70	308.00
1.00	SER	Manifold Head Rental	275.00	275.00
40.00	SER	Light Vehicle Mileage	4.40	176.00
1.00	CEMENTER	Andrew Forslund		
1.00	EQUIP OPER	Dane Retzloff		
1.00	OPER ASSIST	Kevin Ryan		

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF *5%*

\$  *ok*

ONLY IF PAID ON OR BEFORE

Subtotal	7,442.67
Sales Tax	274.44
Total Invoice Amount	7,717.11
Payment/Credit Applied	
<b>TOTAL</b>	<b>7,717.11</b>

*Deduct*

*- 2604.93*  
*5,112.18*

*DD*

*Handwritten signature*





PO Box 93999  
Southlake, TX 76092

Voice: (817) 546-7282  
Fax: (817) 246-3361

# INVOICE

*acct - Prod-LH*

Invoice Number: 135826  
Invoice Date: Apr 19, 2013  
Page: 1

OPERATOR PAY MDC  
LEASE: \$1901K

*1-25 / Bm*

Now Includes:



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

Customer ID	Field Ticket #	Payment Terms	
Murfin	60240	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Oakley	Apr 19, 2013	5/19/13

Quantity	Item	Description	Unit Price	Amount
		Slavik #1-25		
132.00	MAT	Class A Common	17.90	2,362.80
88.00	MAT	Pozmix	9.35	822.80
8.00	MAT	Gel	23.40	187.20
55.00	MAT	Flo Seal	2.97	163.35
236.28	SER	Cubic Feet	2.48	585.97
394.80	SER	Ton Mileage	2.60	1,026.48
1.00	SER	Plug to Abandon	2,483.59	2,483.59
40.00	SER	Pump Truck Mileage	7.70	308.00
40.00	SER	Light Vehicle Mileage	4.40	176.00
1.00	EQP	8.5/8 Wooden Plug	107.64	107.64
1.00	CEMENTER	LaRene Wentz		
1.00	OPER ASSIST	Paul Beaver		
1.00	OPER ASSIST	Darrin Hoeb		

*DD*

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

\$ 2,878.34

ONLY IF PAID ON OR BEFORE  
May 14, 2013

Subtotal	8,223.83
Sales Tax	600.34
Total Invoice Amount	8,824.17
Payment/Credit Applied	
<b>TOTAL</b>	<b>8,824.17</b>

*Deduct*

# ALLIED OIL & GAS SERVICES, LLC 060240

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:  
Oakley, KS

DATE <u>4-19-13</u>	SEC. <u>25</u>	TWP. <u>5</u>	RANGE <u>30</u>	CALLED OUT	ON LOCATION <u>7:00am</u>	JOB START <u>6:00am</u>	JOB FINISH <u>7:00am</u>
CASE <u>Slavik</u>	WELL # <u>1-25</u>	LOCATION <u>Rexford 6E, 5N, 12E</u>			COUNTY <u>Decatur</u>	STATE <u>KS</u>	
LD <input checked="" type="radio"/> NEW <input type="radio"/> (Circle one)				<u>Winto</u>			

CONTRACTOR Murfin 2 OWNER same

TYPE OF JOB PTA

PIPE SIZE 7 7/8 TD. 4495' CEMENT AMOUNT ORDERED 220 sks 60/40 4% gel

PIPELINE SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_ 1/4 # flow cap

RILL PIPE 4.12 DEPTH 2510'

COL \_\_\_\_\_ DEPTH \_\_\_\_\_

RES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

EAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

ELEMENT LEFT IN CSG. \_\_\_\_\_

SRFS. \_\_\_\_\_

DISPLACEMENT \_\_\_\_\_

EQUIPMENT \_\_\_\_\_

JMP TRUCK CEMENTER Karane Edwards

423/281 HELPER Paul Beaver

ULK TRUCK \_\_\_\_\_

396/306 DRIVER Darrin Hoek

ULK TRUCK \_\_\_\_\_

DRIVER \_\_\_\_\_

COMMON 132 sks @ 17.90 2362.80

POZMIX 88 sks @ 9.35 822.80

GEL 8 sks @ 23.40 187.20

CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_

ASC \_\_\_\_\_ @ \_\_\_\_\_

Flow cap 53 # @ 2.97 163.35

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING 236.28 ft<sup>3</sup> @ 2.48 585.99

MILEAGE 9.87 hr X 40 X 2.60 1026.48

TOTAL 5148.60

REMARKS:

Mix 25 sks at 2510'  
Mix 100 sks at 1780'  
Mix 40 sks at 310'  
Mix 10 sks w/ plug 40'  
Plug M.H. 15 sks  
Oldy Kit 30 sks

Thank you

CHARGE TO: Murfin Drilling

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

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CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB 2510'

PUMP TRUCK CHARGE \_\_\_\_\_ 2483.59

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE M.H. 40 @ 7.70 308.00

MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_

M.H. 40 @ 4.40 176.00

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL 2962.59

PLUG & FLOAT EQUIPMENT

Wooden plug @ 182.64

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL 182.64

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 8,223.83

DISCOUNT 2,870.34 IF PAID IN 30 DAYS

5,345.48 Net.

PRINTED NAME Seniage Montano

SIGNATURE \_\_\_\_\_



# Robert D. Hendrix

Petroleum Geologist

## GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Co. Inc.**

LEASE **Slavik #1-25**

FIELD **Prairie Dog Northwest**

LOCATION **2310fsl & 2310fel**

SEC **25** TWP **5s** RGE **30w**

COUNTY **Decatur** STATE **Kansas**

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

SPUD **4/10/2013** COMP **4/18/3013**

RTD **4495'** LTD **4497'**

MUD UP **3430'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3610'** TO **4495'**

DRILLING TIME KEPT FROM **3610'** TO **4495'**

SAMPLES EXAMINED FROM **3610'** TO **4495'**

GEOLOGICAL SUPERVISION FROM **3611'**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMATION TOPS

ANHYDRITE **2592 (+266)**

TOPEKA **3714 (-856)**

HEEBNER SHALE **3887 (-1029)**

LANSING **3935 (-1072)**

STARK SHALE **4088 (-1230)**

BKC **4133 (-1245)**

PAWNEE **4252 (-1394)**

MISSISSIPPIAN **4444 (-1588)**

ELEVATIONS

KB **2858'**

DF

GL **2847'**

Measurements Are All From **Kelly Bushing**

CASING

CONDUCTOR SURFACE **8.56" at 265'**

PRODUCTION **None**

ELECTRICAL SURVEYS

Micro / Sonic

Pioneer Energy Services

AP# 15-039-21169

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	2596 (+262)	2592 (+266)
Topeka	3271 (-859)	3714 (-856)
Heebner Shale	3887 (-1029)	3887 (-1029)
Lansing	3935 (-1072)	3934 (-1076)
Stark Shale	4088 (-1230)	4088 (-1230)
BKC	4136 (-1278)	4133 (-1275)
Pawnee	4248 (-1380)	4252 (-1394)
Cherokee Shale	4342 (-1484)	4341 (-1483)
Mississippian	4444 (-1588)	4446 (-1588)

REMARKS:

Due to negative results on the drillstem tests and lack of structure it is recommended that this test be plugged and abandoned.

### LEGEND

	Anhydrite		Sandstone		Limestone		Shale		Carb Sh		Cherty LS		Chert		Dolomite
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