

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1250492
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: _____

1250492

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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Schmidt-Vap 'A' 1-26
Doc ID	1250492

All Electric Logs Run

DIL
DUCP
MEL
BHCS
CBL



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Rocky Milford

Schmidt-Vap'A' #1-26

26-4s-31w Rawlins,KS

Start Date: 2015.02.20 @ 14:12:00

End Date: 2015.02.20 @ 23:09:45

Job Ticket #: 62156 DST #: 1

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

Printed: 2015.02.25 @ 13:27:51



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62156

DST#: 1

ATTN: Rocky Milford

Test Start: 2015.02.20 @ 14:12:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:27:45
 Time Test Ended: 23:09:45
 Interval: **3922.00 ft (KB) To 4007.00 ft (KB) (TVD)**
 Total Depth: 4007.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2939.00 ft (KB)
 2934.00 ft (CF)
 KB to GR/CF: 5.00 ft

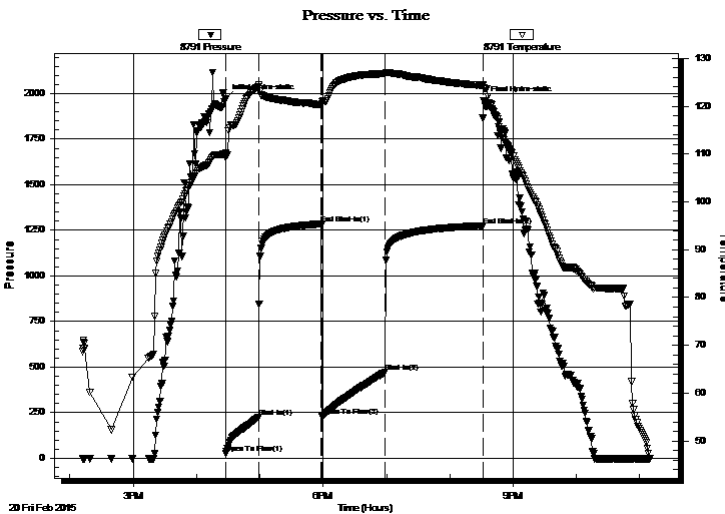
Serial #: 8791

Inside

Press@RunDepth: 471.09 psig @ 3923.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.20 End Date: 2015.02.20 Last Calib.: 2015.02.20
 Start Time: 14:12:05 End Time: 23:09:45 Time On Btm: 2015.02.20 @ 16:27:30
 Time Off Btm: 2015.02.20 @ 20:32:00

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 9 min.
 60 - IS: No blow back
 60 - FF: Blow built to BOB at 11 min.
 90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1973.55	110.12	Initial Hydro-static
1	24.93	109.22	Open To Flow (1)
32	226.61	124.13	Shut-In(1)
91	1285.50	120.28	End Shut-In(1)
92	231.67	120.46	Open To Flow (2)
151	471.09	126.82	Shut-In(2)
244	1275.31	124.31	End Shut-In(2)
245	1963.08	123.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
757.00	SMCW 96%w, 4%m	8.92
220.00	MW 50%m, 50%w	3.09

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

26-4s-31w Rawlins, KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62156

DST#: 1

ATTN: Rocky Milford

Test Start: 2015.02.20 @ 14:12:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "B"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:27:45
Time Test Ended: 23:09:45

Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 83

Interval: **3922.00 ft (KB) To 4007.00 ft (KB) (TVD)**
Total Depth: 4007.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

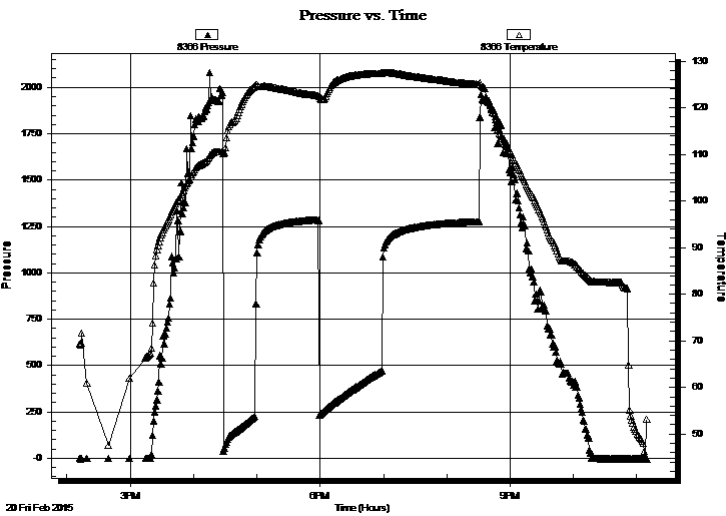
Reference Elevations: 2939.00 ft (KB)
2934.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: psig @ 3923.00 ft (KB)
Start Date: 2015.02.20 End Date: 2015.02.20
Start Time: 14:12:05 End Time: 23:09:15

Capacity: 8000.00 psig
Last Calib.: 2015.02.20
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 9 min.
60 - IS!: No blow back
60 - FF: Blow built to BOB at 11 min.
90 - FS!: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
757.00	SMCW 96%w, 4%m	8.92
220.00	MW 50%m, 50%w	3.09

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62156

DST#: 1

ATTN: Rocky Milford

Test Start: 2015.02.20 @ 14:12:00

Tool Information

Drill Pipe:	Length: 3737.00 ft	Diameter: 3.80 inches	Volume: 52.42 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: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 53.34 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3922.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	113.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3899.00	
Hydraulic tool	5.00			3904.00	
Jars	5.00			3909.00	
Safety Joint	3.00			3912.00	
Packer	5.00			3917.00	28.00 Bottom Of Top Packer
Packer	5.00			3922.00	
Stubb	1.00			3923.00	
Recorder	0.00	8791	Inside	3923.00	
Recorder	0.00	8366	Outside	3923.00	
Perforations	15.00			3938.00	
Blank Spacing	65.00			4003.00	
Perforations	1.00			4004.00	
Bullnose	3.00			4007.00	85.00 Bottom Packers & Anchor

Total Tool Length: 113.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62156

DST#: 1

ATTN: Rocky Milford

Test Start: 2015.02.20 @ 14:12:00

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:

29000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
757.00	SMCW 96%w , 4%m	8.915
220.00	MW 50%m, 50%w	3.086

Total Length: 977.00 ft Total Volume: 12.001 bbl

Num Fluid Samples: 0

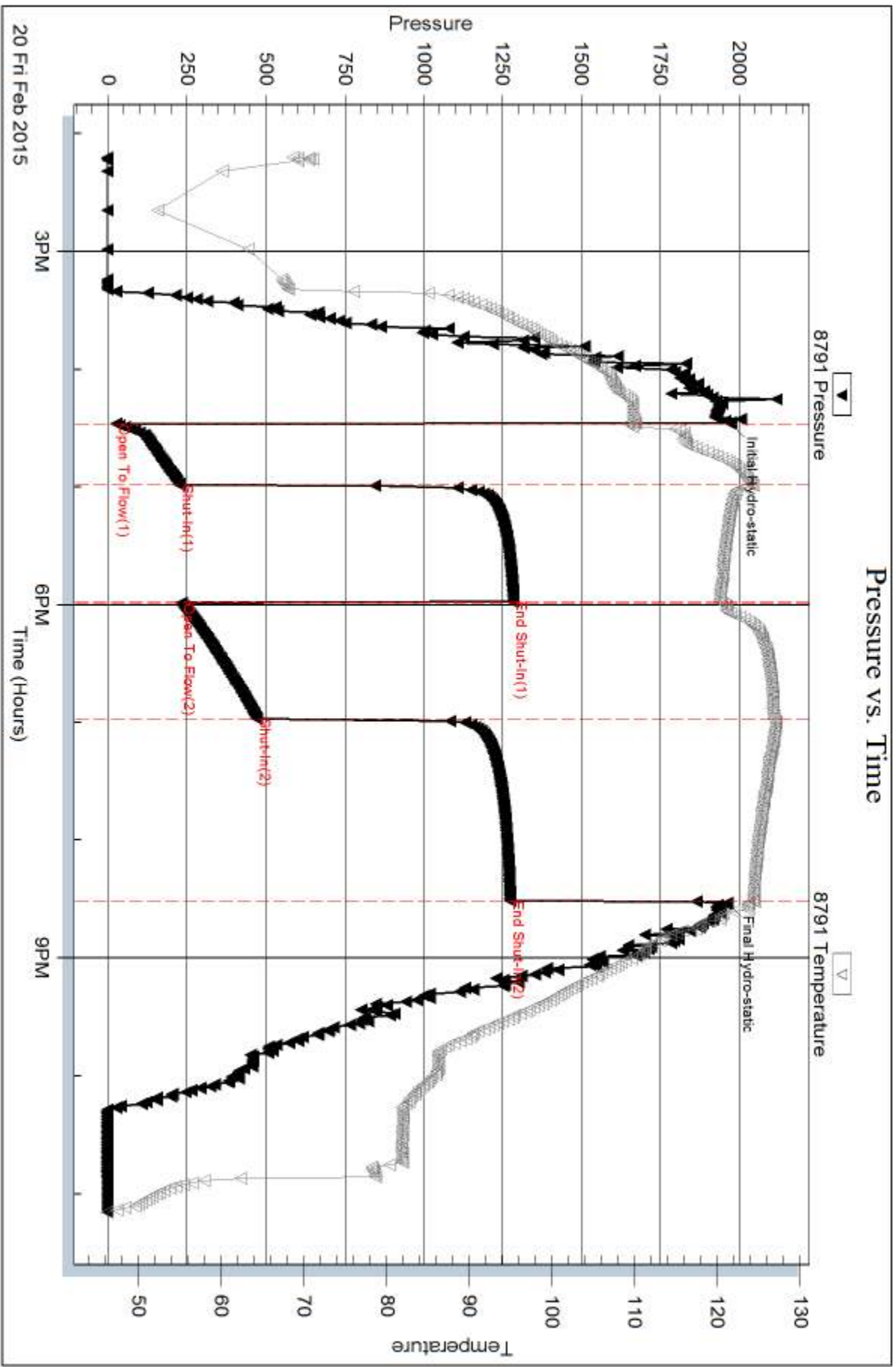
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .390 ohms @ 42.4 deg F

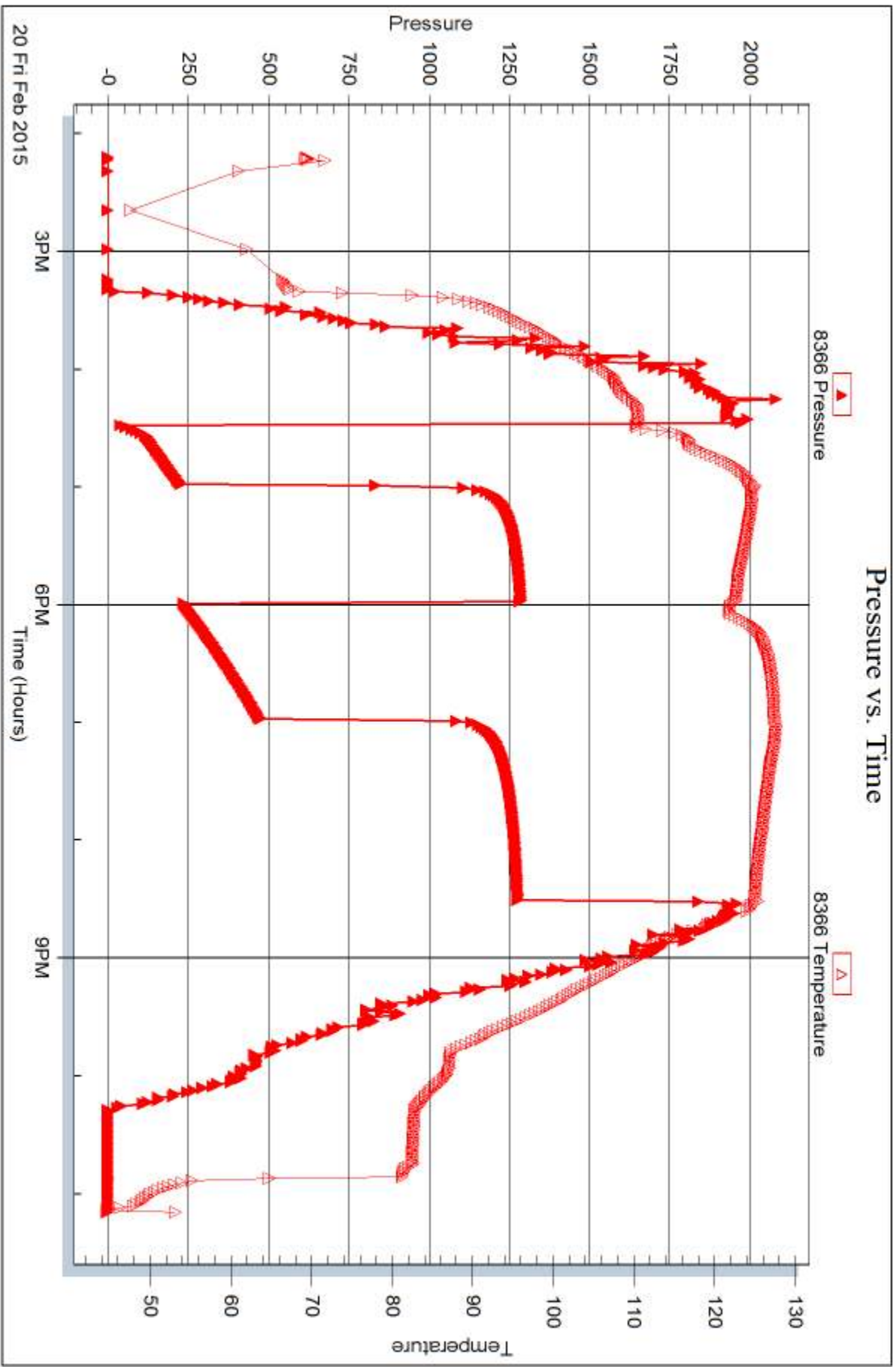


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Schmidt-Vap'A #1-26

DST Test Number: 1





DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Rocky Milford

Schmidt-Vap'A' #1-26

26-4s-31w Rawlins,KS

Start Date: 2015.02.21 @ 09:35:00

End Date: 2015.02.21 @ 17:56:00

Job Ticket #: 62157 DST #: 2

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

Printed: 2015.02.25 @ 13:27:28



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water STE 300
Wichita, KS 67202
ATTN: Rocky Milford

26-4s-31w Rawlins, KS

Schmidt-Vap'A' #1-26

Job Ticket: 62157 **DST#: 2**
Test Start: 2015.02.21 @ 09:35:00

GENERAL INFORMATION:

Formation: **LKC "E - G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:23:15
 Time Test Ended: 17:56:00
 Interval: **4024.00 ft (KB) To 4075.00 ft (KB) (TVD)**
 Total Depth: 4075.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2939.00 ft (KB)
 2934.00 ft (CF)
 KB to GR/CF: 5.00 ft

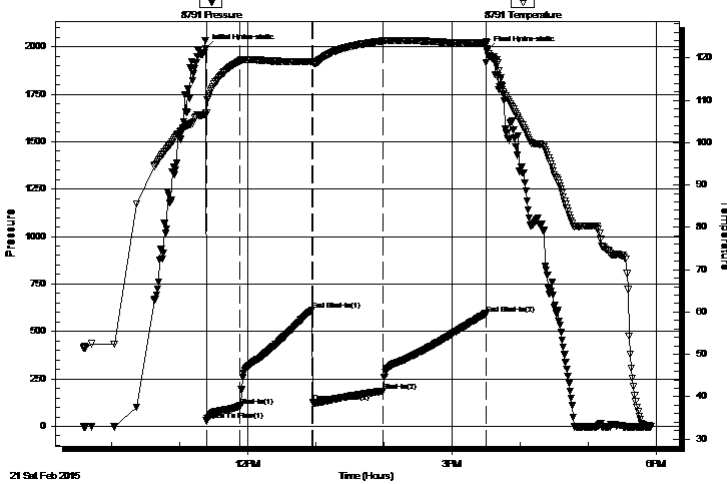
Serial #: 8791

Inside

Press@RunDepth: 186.26 psig @ 4025.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.21 End Date: 2015.02.21 Last Calib.: 2015.02.21
 Start Time: 09:35:05 End Time: 17:55:59 Time On Btm: 2015.02.21 @ 11:22:45
 Time Off Btm: 2015.02.21 @ 15:30:45

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 6 1/2 min.
 60 - IS: Blow back built to 9 1/4"
 60 - FF: Blow built to BOB at 9 1/2 min.
 90 - FS: Blow back built to 5 1/2"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1991.80	107.05	Initial Hydro-static
1	29.87	106.97	Open To Flow (1)
31	106.90	119.27	Shut-In(1)
94	613.21	119.07	End Shut-In(1)
95	126.15	118.81	Open To Flow (2)
157	186.26	123.96	Shut-In(2)
247	593.76	123.46	End Shut-In(2)
248	1980.97	123.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	GOCM 44% m, 35% g, 21% o	0.69
343.00	CGO 69% o, 30% g, 1% m	4.38
0.00	GIP = 710'	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water STE 300
Wichita, KS 67202

ATTN: Rocky Milford

26-4s-31w Rawlins, KS

Schmidt-Vap'A' #1-26

Job Ticket: 62157

DST#: 2

Test Start: 2015.02.21 @ 09:35:00

GENERAL INFORMATION:

Formation: **LKC "E - G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:23:15

Time Test Ended: 17:56:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4024.00 ft (KB) To 4075.00 ft (KB) (TVD)

Total Depth: 4075.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2939.00 ft (KB)

2934.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: psig @ 4025.00 ft (KB)

Start Date: 2015.02.21

End Date:

2015.02.21

Start Time: 09:35:05

End Time:

17:55:14

Capacity: 8000.00 psig

Last Calib.:

2015.02.21

Time On Btm:

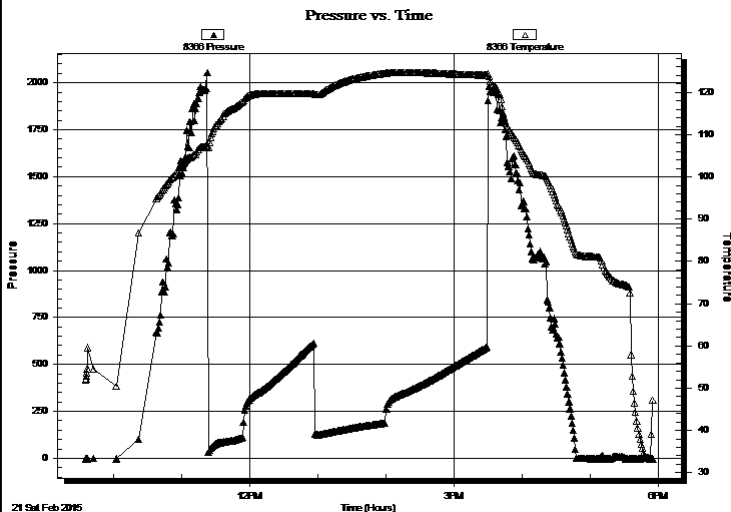
Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 6 1/2 min.

60 - IS: Blow back built to 9 1/4"

60 - FF: Blow built to BOB at 9 1/2 min.

90 - FS: Blow back built to 5 1/2"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
140.00	GOCM 44% m, 35% g, 21% o	0.69
343.00	CGO 69% o, 30% g, 1% m	4.38
0.00	GIP = 710'	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., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62157

DST#: 2

ATTN: Rocky Milford

Test Start: 2015.02.21 @ 09:35:00

Tool Information

Drill Pipe:	Length: 3832.00 ft	Diameter: 3.80 inches	Volume: 53.75 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: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 54.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4024.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	79.00 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			4001.00	
Hydraulic tool	5.00			4006.00	
Jars	5.00			4011.00	
Safety Joint	3.00			4014.00	
Packer	5.00			4019.00	28.00 Bottom Of Top Packer
Packer	5.00			4024.00	
Stubb	1.00			4025.00	
Recorder	0.00	8791	Inside	4025.00	
Recorder	0.00	8366	Outside	4025.00	
Perforations	13.00			4038.00	
Blank Spacing	34.00			4072.00	
Bullnose	3.00			4075.00	51.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62157

DST#: 2

ATTN: Rocky Milford

Test Start: 2015.02.21 @ 09:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38.4 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
140.00	GOCM 44%m, 35%g, 21%o	0.688
343.00	CGO 69%o, 30%g, 1%m	4.383
0.00	GIP = 710'	0.000

Total Length: 483.00 ft Total Volume: 5.071 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

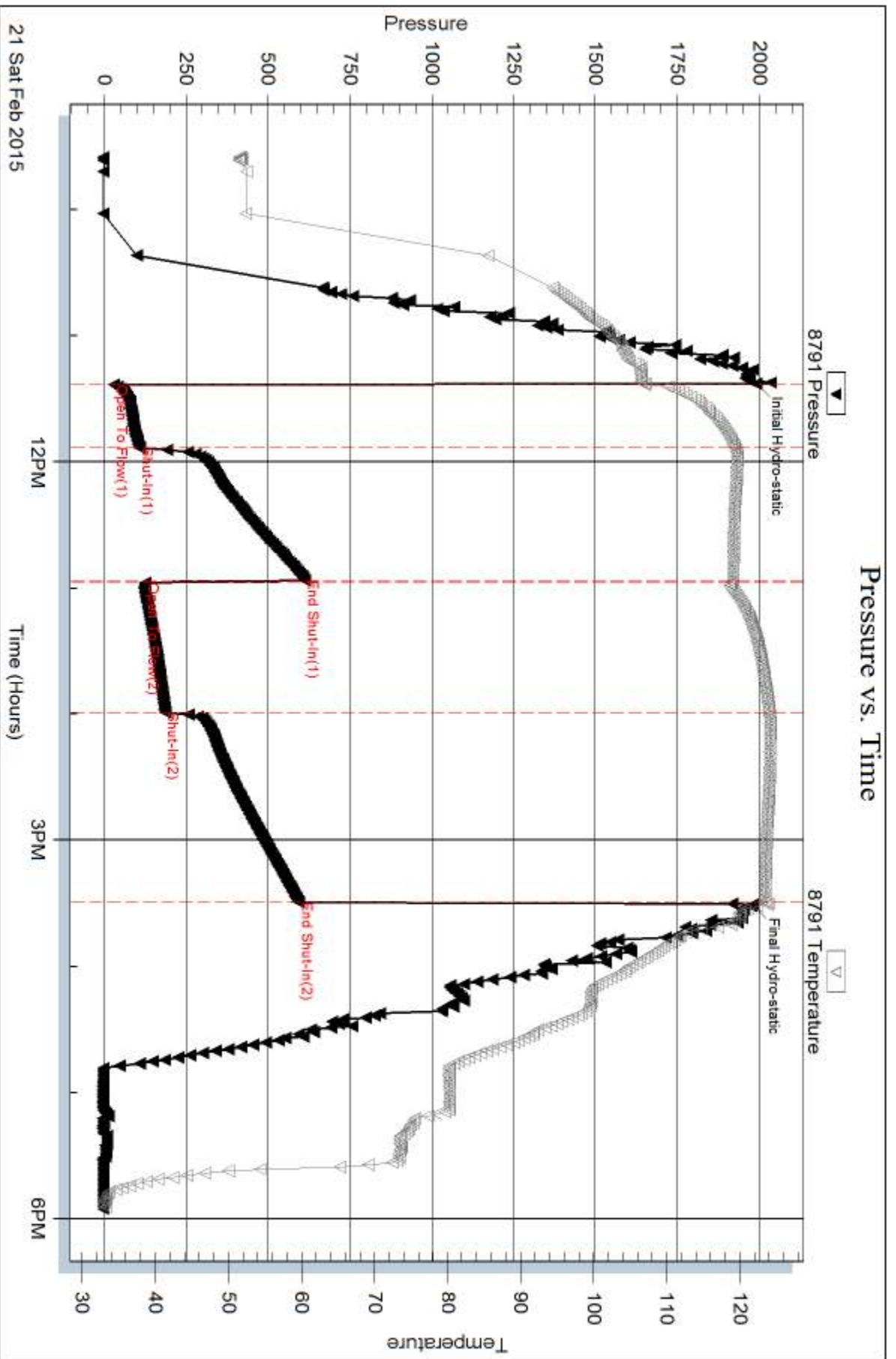
Serial #:

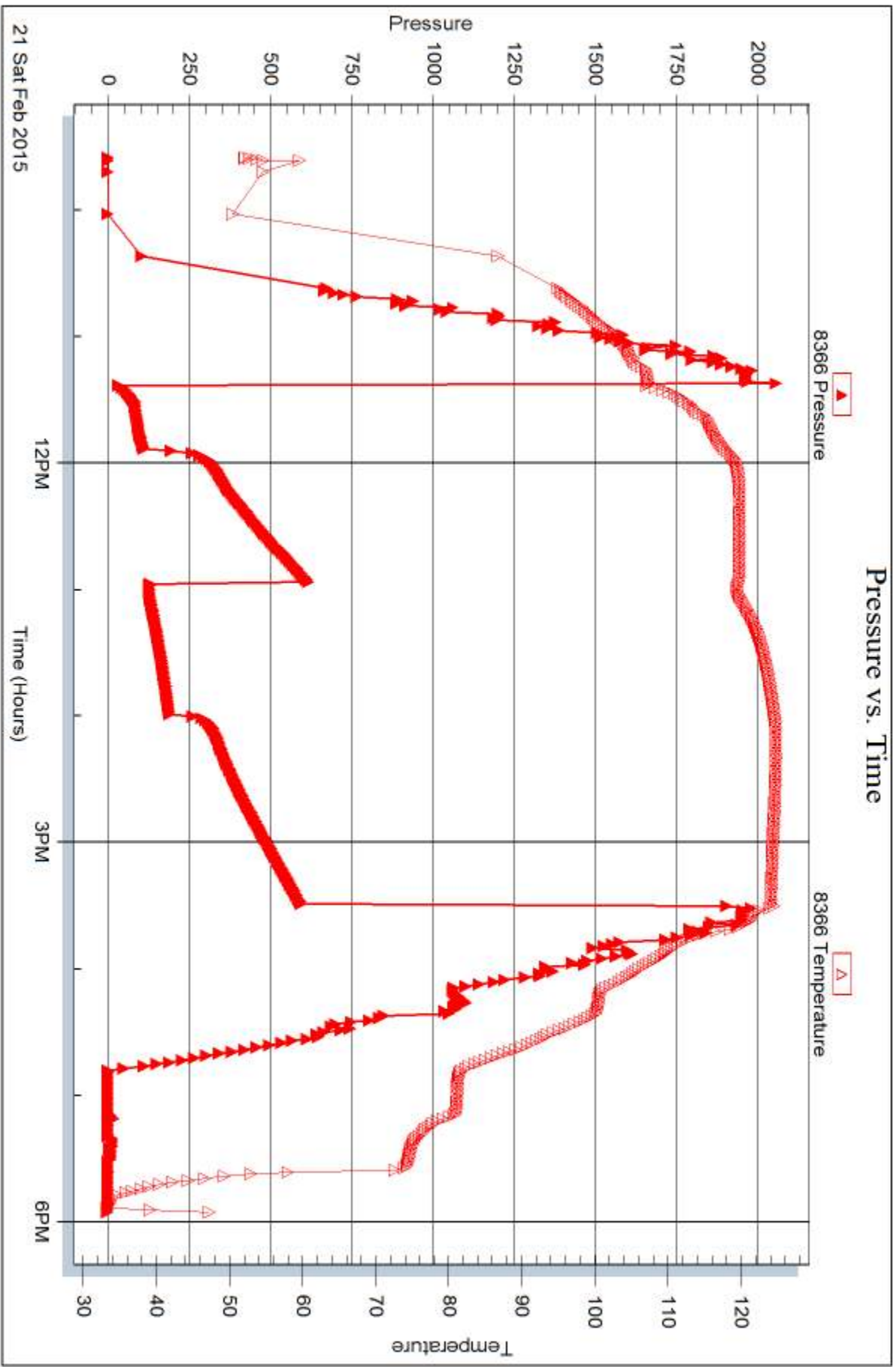
Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 36 api @ 36 deg F

Corrected Gravity = 38.4 api







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Rocky Milford

Schmidt-Vap'A' #1-26

26-4s-31w Rawlins,KS

Start Date: 2015.02.22 @ 04:12:00

End Date: 2015.02.22 @ 13:47:45

Job Ticket #: 62158 DST #: 3

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

Printed: 2015.02.25 @ 13:22:49

Murfin Drilling Co., Inc.

26-4s-31w Rawlins,KS

Schmidt-Vap'A' #1-26

DST # 3

LKC "H - J"

2015.02.22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water STE 300
 Wichita, KS 67202
 ATTN: Rocky Milford

26-4s-31w Rawlins, KS

Schmidt-Vap'A' #1-26

Job Ticket: 62158 **DST#: 3**
 Test Start: 2015.02.22 @ 04:12:00

GENERAL INFORMATION:

Formation: **LKC "H - J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:08:30
 Time Test Ended: 13:47:45
 Interval: **4069.00 ft (KB) To 4140.00 ft (KB) (TVD)**
 Total Depth: 4140.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2939.00 ft (KB)
 2934.00 ft (CF)
 KB to GR/CF: 5.00 ft

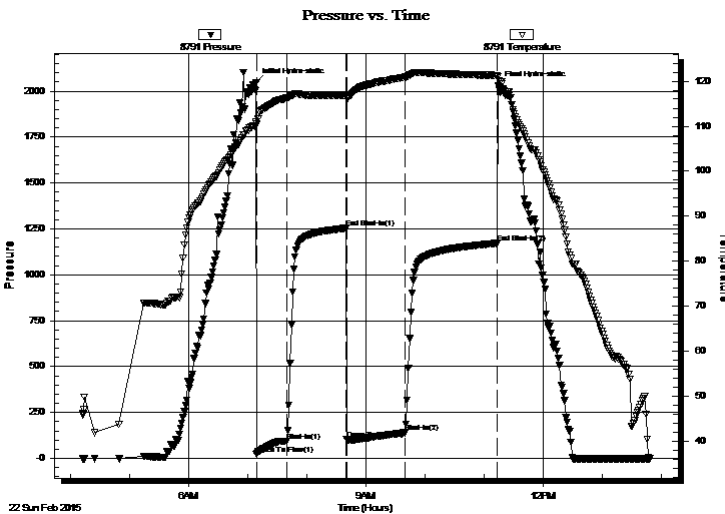
Serial #: 8791

Inside

Press@RunDepth: 140.38 psig @ 4070.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.22 End Date: 2015.02.22 Last Calib.: 2015.02.22
 Start Time: 04:12:05 End Time: 13:47:45 Time On Btm: 2015.02.22 @ 07:08:15
 Time Off Btm: 2015.02.22 @ 11:14:00

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 10 1/2 min.
 60 - IS: Blow back built to 2"
 60 - FF: Blow built to BOB at 6 1/2 min.
 90 - FS: Blow back built to 5 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2048.82	110.94	Initial Hydro-static
1	20.66	110.42	Open To Flow (1)
31	94.01	116.24	Shut-In(1)
91	1253.40	116.84	End Shut-In(1)
92	105.21	116.21	Open To Flow (2)
152	140.38	120.89	Shut-In(2)
245	1171.40	121.29	End Shut-In(2)
246	2030.10	121.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	GOCM 55%o, 27%g, 18%g	0.69
200.00	CGO 75%o, 24%g, 1%m	2.38
0.00	GIP = 665'	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

26-4s-31w Rawlins, KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62158

DST#: 3

ATTN: Rocky Milford

Test Start: 2015.02.22 @ 04:12:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:08:30

Time Test Ended: 13:47:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4069.00 ft (KB) To 4140.00 ft (KB) (TVD)

Total Depth: 4140.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2939.00 ft (KB)

2934.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: psig @ 4070.00 ft (KB)

Start Date: 2015.02.22

End Date: 2015.02.22

Start Time: 04:12:05

End Time: 13:47:00

Capacity: 8000.00 psig

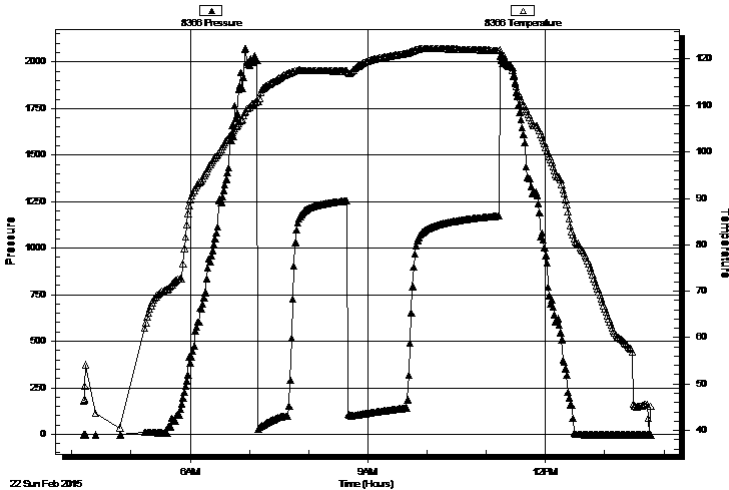
Last Calib.: 2015.02.22

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 10 1/2 min.
60 - IS: Blow back built to 2"
60 - FF: Blow built to BOB at 6 1/2 min.
90 - FS: Blow back built to 5 1/2"

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
140.00	GOCM 55% _m , 27% _o , 18% _g	0.69
200.00	CGO 75% _o , 24% _g , 1% _m	2.38
0.00	GIP = 665'	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., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62158

DST#: 3

ATTN: Rocky Milford

Test Start: 2015.02.22 @ 04:12:00

Tool Information

Drill Pipe:	Length: 3865.00 ft	Diameter: 3.80 inches	Volume: 54.22 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: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 55.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4069.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	71.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4046.00	
Hydraulic tool	5.00			4051.00	
Jars	5.00			4056.00	
Safety Joint	3.00			4059.00	
Packer	5.00			4064.00	28.00 Bottom Of Top Packer
Packer	5.00			4069.00	
Stubb	1.00			4070.00	
Recorder	0.00	8791	Inside	4070.00	
Recorder	0.00	8366	Outside	4070.00	
Perforations	29.00			4099.00	
Blank Spacing	34.00			4133.00	
Perforations	4.00			4137.00	
Bullnose	3.00			4140.00	71.00 Bottom Packers & Anchor

Total Tool Length: 99.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62158

DST#: 3

ATTN: Rocky Milford

Test Start: 2015.02.22 @ 04:12:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 56.00 sec/qt
Water Loss: 5.98 in³
Resistivity: ohm.m
Salinity: 1400.00 ppm
Filter Cake: 2.00 inches

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

Oil API: 41 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
140.00	GOCM 55% <i>m</i> , 27% <i>o</i> , 18% <i>g</i>	0.688
200.00	CGO 75% <i>o</i> , 24% <i>g</i> , 1% <i>m</i>	2.377
0.00	GIP = 665'	0.000

Total Length: 340.00 ft Total Volume: 3.065 bbl

Num Fluid Samples: 0

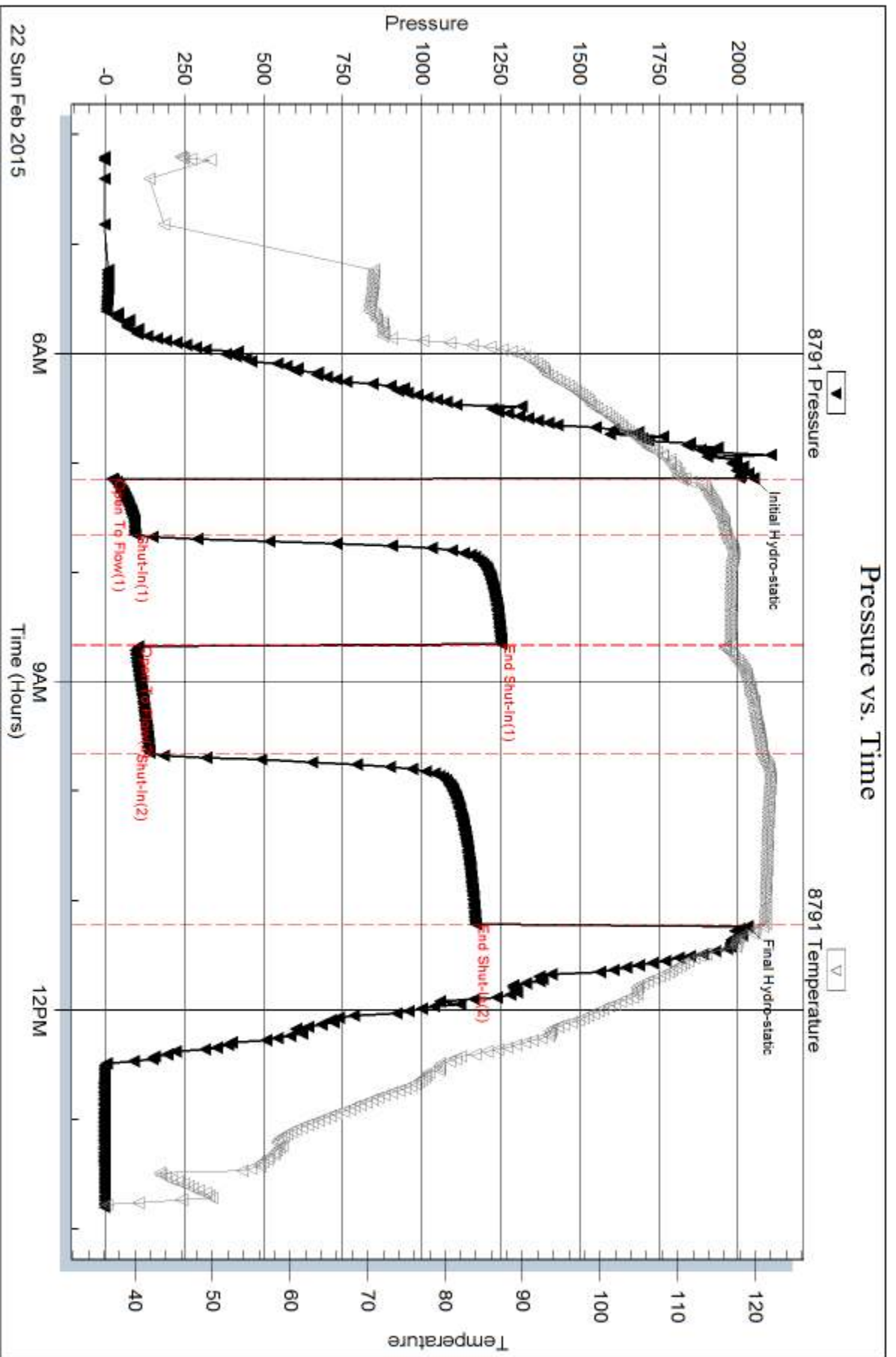
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 38 api @ 30 deg F
Corrected Gravity = 41 api

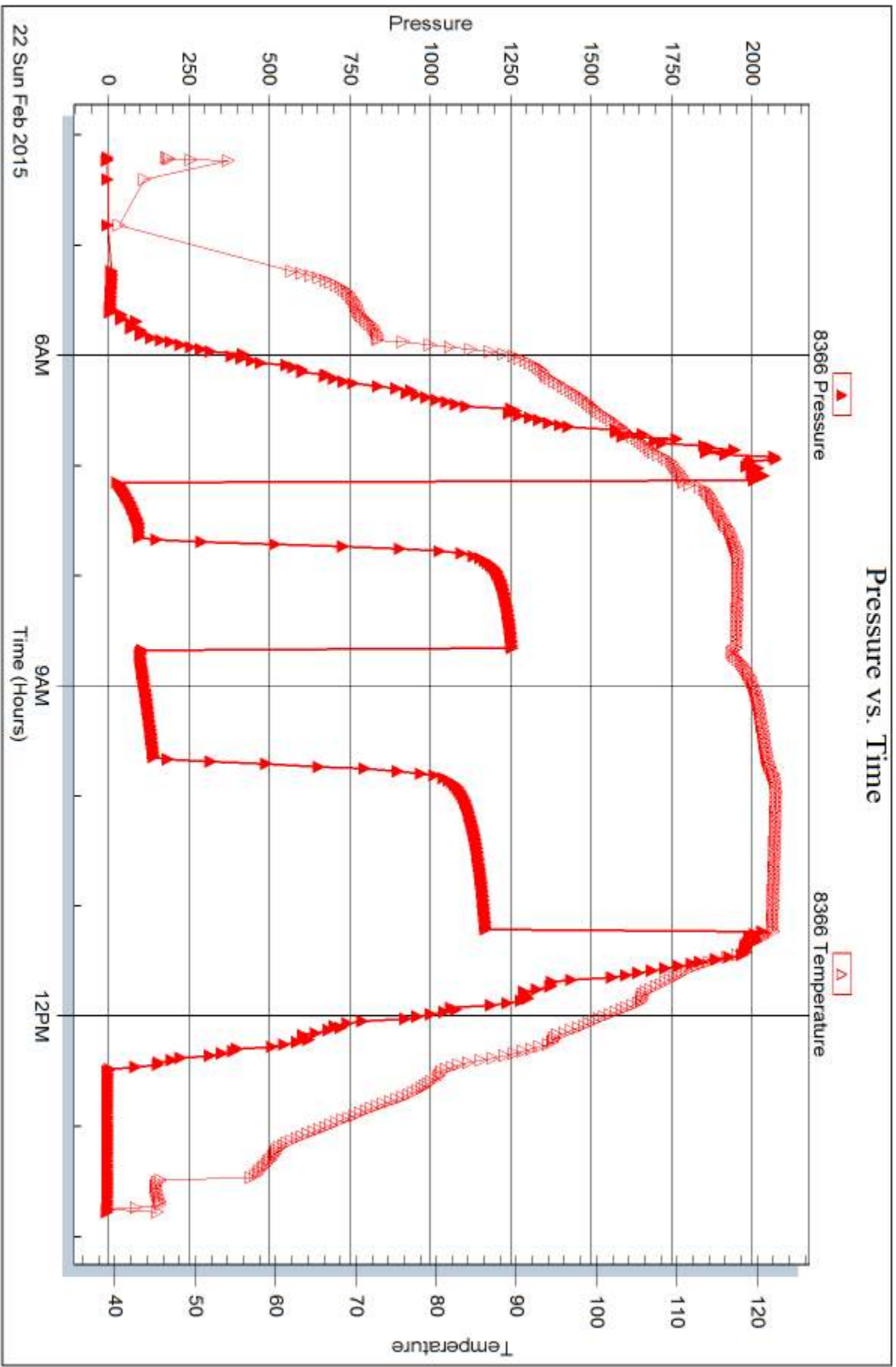


Serial #: 8366

Outside Murfin Drilling Co., Inc.

Schmidt-Vap'A #1-26

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62158

Printed: 2015.02.25 @ 13:22:50



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita, KS 67202

ATTN: Rocky Milford

Schmidt-Vap'A' #1-26

26-4s-31w Rawlins,KS

Start Date: 2015.02.23 @ 01:10:00

End Date: 2015.02.23 @ 09:08:30

Job Ticket #: 62159 DST #: 4

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

Printed: 2015.02.25 @ 13:20:01



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water STE 300
Wichita, KS 67202
ATTN: Rocky Milford

26-4s-31w Rawlins, KS

Schmidt-Vap'A' #1-26

Job Ticket: 62159 **DST#: 4**
Test Start: 2015.02.23 @ 01:10:00

GENERAL INFORMATION:

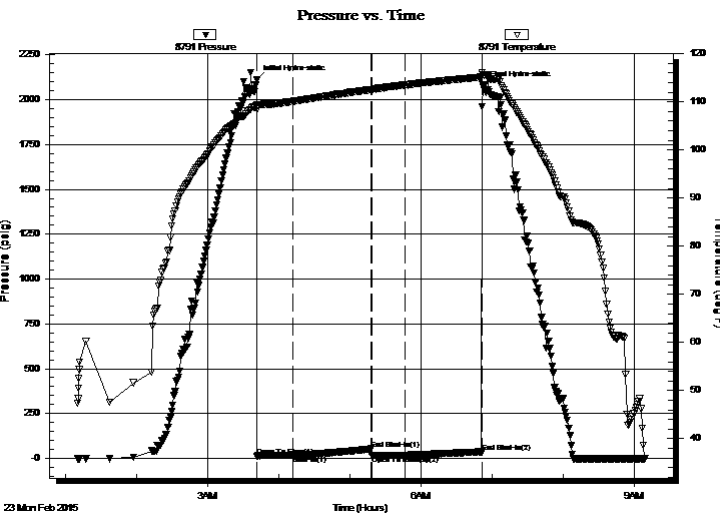
Formation: **LKC "K - L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:41:30
 Time Test Ended: 09:08:30
 Interval: **4137.00 ft (KB) To 4195.00 ft (KB) (TVD)**
 Total Depth: 4195.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 2939.00 ft (KB)
 2934.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press@RunDepth: 18.66 psig @ 4138.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.02.23 End Date: 2015.02.23 Last Calib.: 2015.02.23
 Start Time: 01:10:05 End Time: 09:08:29 Time On Btm: 2015.02.23 @ 03:41:15
 Time Off Btm: 2015.02.23 @ 06:51:45

TEST COMMENT: 30 - IF: 3/4" Blow at open, built to 1 1/4" at 10 min., 1 1/4" blow till close
 60 - ISI: No blow back
 30 - FF: No blow
 60 - FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2110.26	109.43	Initial Hydro-static
1	13.40	108.51	Open To Flow (1)
31	16.31	110.11	Shut-In(1)
97	52.95	112.56	End Shut-In(1)
97	17.68	112.45	Open To Flow (2)
126	18.66	113.55	Shut-In(2)
190	36.73	115.17	End Shut-In(2)
191	2080.85	115.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil spots 99%m, 1%o	0.02

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water STE 300
 Wichita, KS 67202
 ATTN: Rocky Milford

26-4s-31w Rawlins, KS

Schmidt-Vap'A' #1-26

Job Ticket: 62159

DST#: 4

Test Start: 2015.02.23 @ 01:10:00

GENERAL INFORMATION:

Formation: **LKC "K - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:41:30

Time Test Ended: 09:08:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 83

Interval: 4137.00 ft (KB) To 4195.00 ft (KB) (TVD)

Reference Elevations: 2939.00 ft (KB)

Total Depth: 4195.00 ft (KB) (TVD)

2934.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8366 Outside

Press@RunDepth: psig @ 4138.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.23

End Date:

2015.02.23

Last Calib.:

2015.02.23

Start Time:

01:10:05

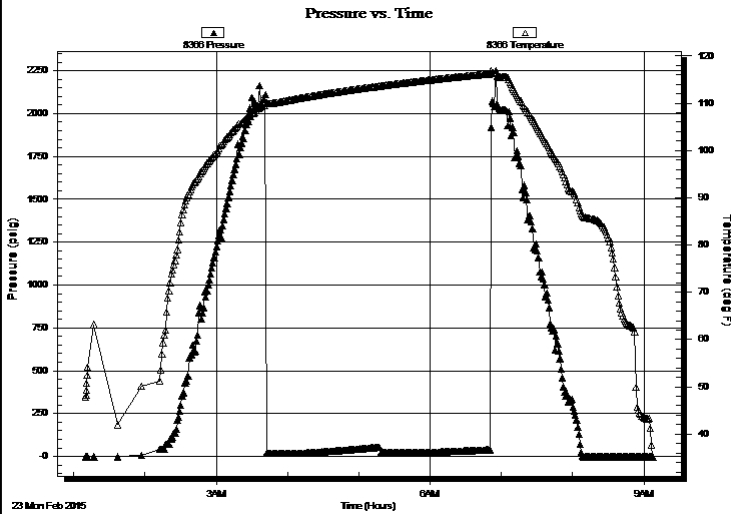
End Time:

09:07:59

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: 3/4" Blow at open, built to 1 1/4" at 10 min., 1 1/4" blow till close
 60 - IS!: No blow back
 30 - FF: No blow
 60 - FS!: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/oil spots 99%m, 1%o	0.02

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., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62159

DST#: 4

ATTN: Rocky Milford

Test Start: 2015.02.23 @ 01:10:00

Tool Information

Drill Pipe:	Length: 3928.00 ft	Diameter: 3.80 inches	Volume: 55.10 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: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 56.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4137.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4114.00	
Hydraulic tool	5.00			4119.00	
Jars	5.00			4124.00	
Safety Joint	3.00			4127.00	
Packer	5.00			4132.00	28.00 Bottom Of Top Packer
Packer	5.00			4137.00	
Stubb	1.00			4138.00	
Recorder	0.00	8791	Inside	4138.00	
Recorder	0.00	8366	Outside	4138.00	
Perforations	18.00			4156.00	
Blank Spacing	34.00			4190.00	
Perforations	2.00			4192.00	
Bullnose	3.00			4195.00	58.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

26-4s-31w Rawlins,KS

250 N. Water STE 300
Wichita, KS 67202

Schmidt-Vap'A' #1-26

Job Ticket: 62159

DST#: 4

ATTN: Rocky Milford

Test Start: 2015.02.23 @ 01:10:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w /oil spots 99% _m , 1% _o	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

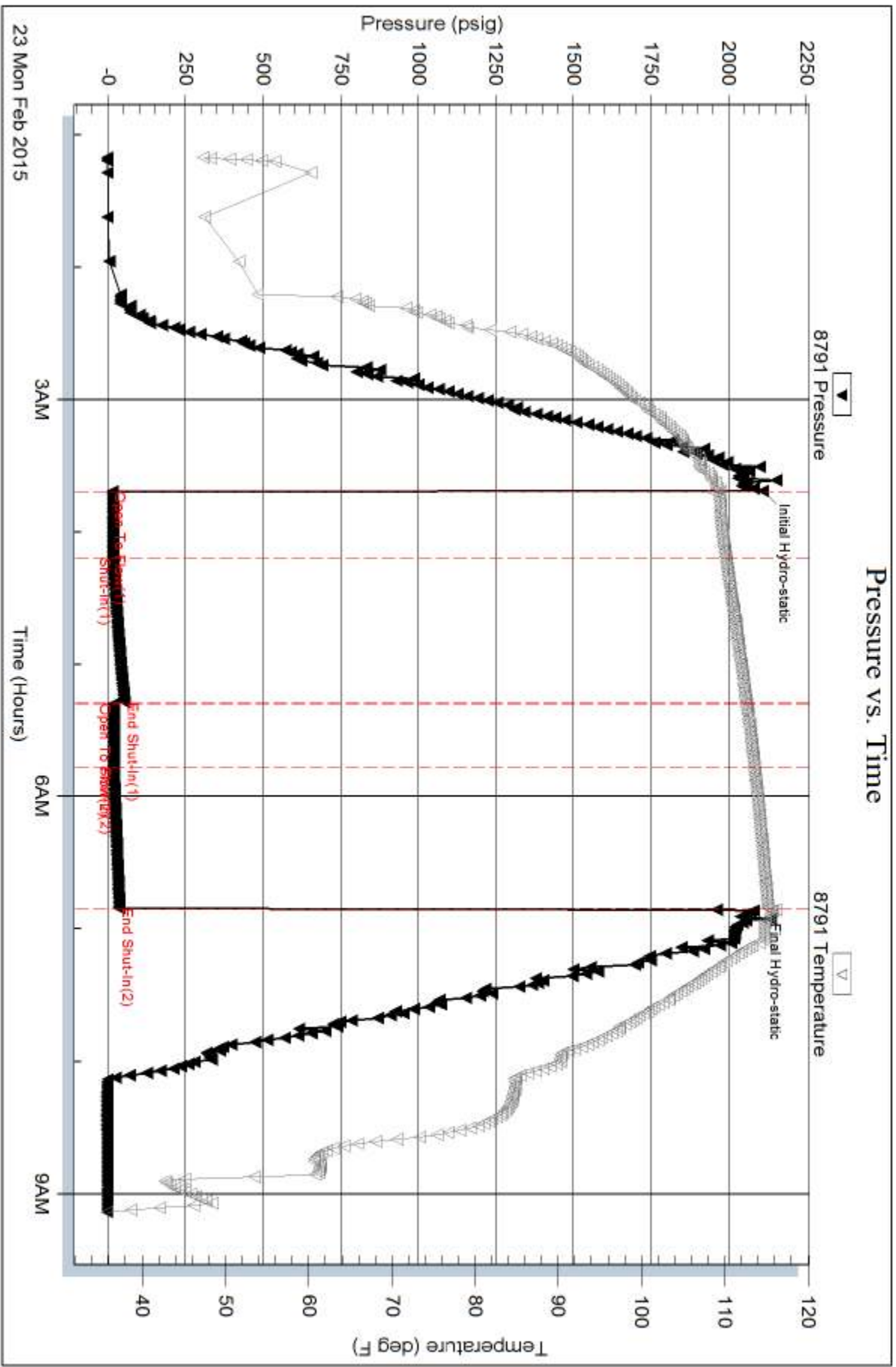
Num Gas Bombs: 0

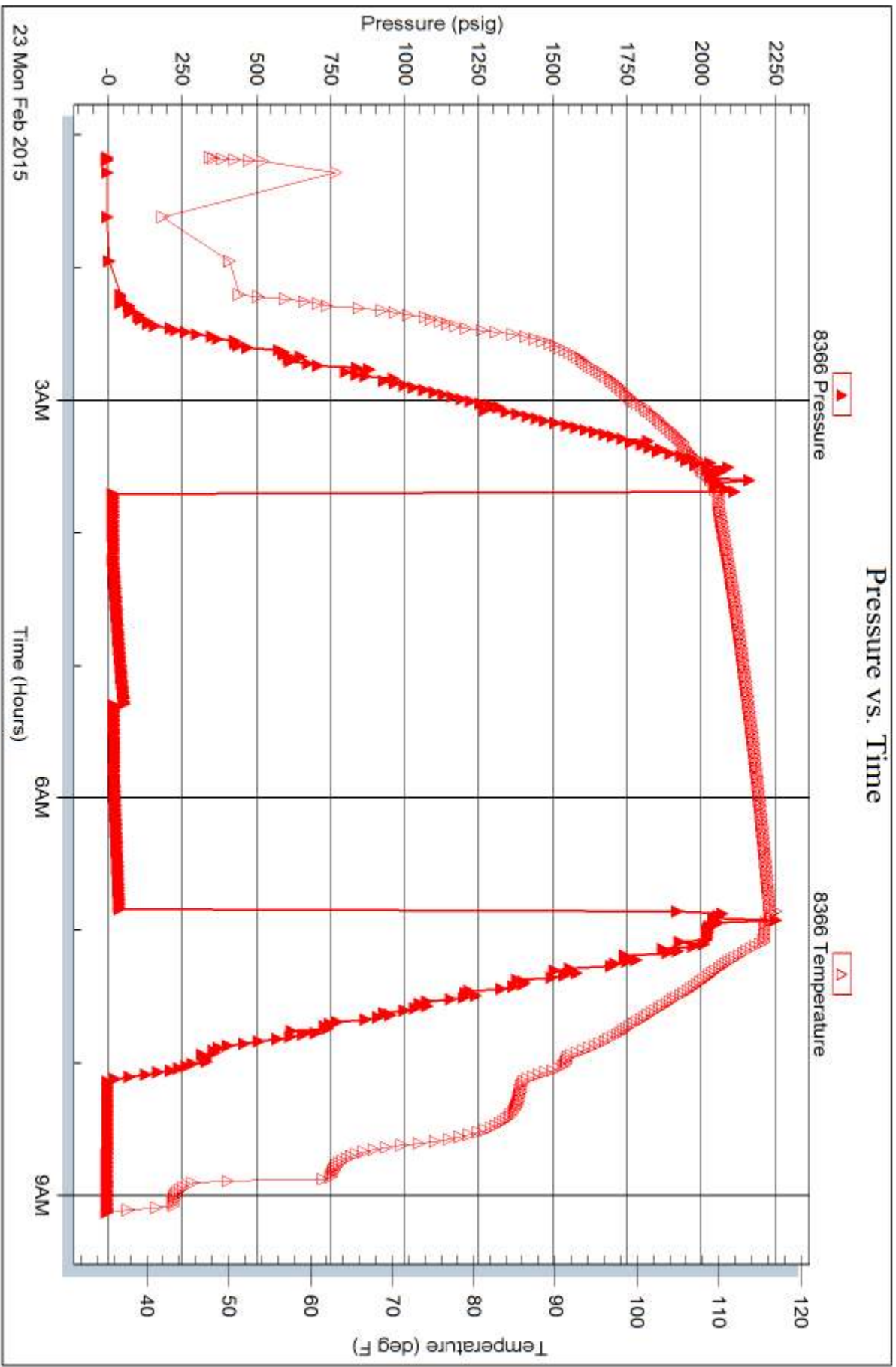
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62156

Well Name & No. Schmidt - Vap "A" #1-26 Test No. 1 Date 2-20-15
 Company Murfin Drilling Co. Inc. Elevation 2939 KB 2934 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #7
 Location: Sec. 26 Twp. 4S Rge. 31w Co. Rawlins State KS

Interval Tested 3922 - 4007 Zone Tested Toronto - LKC "B"
 Anchor Length 85 Drill Pipe Run 3737 Mud Wt. 9.3
 Top Packer Depth 3917 Drill Collars Run 187 Vis 51
 Bottom Packer Depth 3922 Wt. Pipe Run - WL 6.4
 Total Depth 4007 Chlorides 800 ppm System LCM 6

Blow Description IF: Blow built to BOB (11") at 9 min.
ISI: No blowback
FF: Blow built to BOB at 11 min.
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>220</u>	<u>MW</u>		<u>50</u>	<u>50</u>	
<u>757</u>	<u>SMCW</u>		<u>96</u>	<u>4</u>	

Rec Total 977 BHT 124 Gravity _____ API RW .390 @ 42.4 °F Chlorides 29,000 ppm

(A) Initial Hydrostatic 1974 Test 1150 T-On Location 13:40
 (B) First Initial Flow 25 Jars 250 T-Started 14:12
 (C) First Final Flow 227 Safety Joint 75 T-Open 16:27
 (D) Initial Shut-In 1286 Circ Sub _____ T-Pulled 20:31
 (E) Second Initial Flow 232 Hourly Standby _____ T-Out 23:05
 (F) Second Final Flow 471 Mileage 48 RT 48
 (G) Final Shut-In 1275 Sampler _____
 (H) Final Hydrostatic 1963 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1523
 Sub Total 1523
 Sub Total 0
 Total 1523
 MP/DST Disc't _____

Approved By Rocky Milford Our Representative James Winder

TriLOBite Testing Inc. shall not be liable for damaged or any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **62157**

Well Name & No. Schmidt-Vap 'A' #1-26 Test No. 2 Date 2-21-15
 Company Murfin Drilling Co. Inc. Elevation 2939 KB 2934 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #7
 Location: Sec. 26 Twp. 4s Rge. 31w Co. Rawlins State KS

Interval Tested 4024-4075 Zone Tested LKC "E-6"
 Anchor Length 51 Drill Pipe Run 3832 Mud Wt. 9.3
 Top Packer Depth 4019 Drill Collars Run 187 Vis 55
 Bottom Packer Depth 4024 Wt. Pipe Run - WL 6.0
 Total Depth 4075 Chlorides 1400 ppm System LCM 6

Blow Description IF: Blow built to BOB (11") at 6 1/2 min.
ISI: Blowback built to 9 1/4"
FF: Blow built to BOB at 9 1/2 min.
FBI: Blowback built to 5 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>343</u>	<u>C60</u>	<u>30</u>	<u>69</u>	<u>-</u>	<u>1</u>
<u>140</u>	<u>GOCM</u>	<u>35</u>	<u>21</u>	<u>-</u>	<u>44</u>
<u> </u>	<u>GIP=710'</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Rec Total 483 BHT 124 Gravity 38.4 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1992 Test 1150 T-On Location 9:00
 (B) First Initial Flow 30 Jars 250 T-Started 9:35
 (C) First Final Flow 107 Safety Joint 75 T-Open 11:23
 (D) Initial Shut-In 613 Circ Sub _____ T-Pulled 15:29
 (E) Second Initial Flow 126 Hourly Standby _____ T-Out 17:45
 (F) Second Final Flow 186 Mileage 48RT 48 Comments _____
 (G) Final Shut-In 594 Sampler _____
 (H) Final Hydrostatic 1981 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1523
 Sub Total _____
 Sub Total 0
 Total 1523
 MP/DST Disc't _____

Approved By Rocky Milford 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. 62158

Well Name & No. Schmidt - Vap 'A' #1-26 Test No. 3 Date 2-22-15
 Company Murfin Drilling Co Inc Elevation 2939 KB 2934 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #7
 Location: Sec. 26 Twp. 4s Rge. 31w Co. Rawlins State KS

Interval Tested 4069 - 4140 Zone Tested KC "H-J"
 Anchor Length 71 Drill Pipe Run 3865 Mud Wt. 9.3
 Top Packer Depth 4064 Drill Collars Run 187 Vis 56
 Bottom Packer Depth 4069 Wt. Pipe Run - WL 6.0
 Total Depth 4140 Chlorides 1400 ppm System LCM 6

Blow Description IF: Blow built to BOB (11") at 10 1/2 min. (Diesel in bucket)
ISI: Blowback built to 2"
FF: Blow built to BOB at 6 1/2 min.
FSI: Blowback built to 5 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>CGO</u>	<u>24</u>	<u>75</u>	<u>-</u>	<u>1</u>
<u>140</u>	<u>GOcm</u>	<u>18</u>	<u>27</u>	<u>-</u>	<u>55</u>
<u>Rec</u>	<u>Feet of GIP = 665"</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

Rec Total 340 BHT 121 Gravity 41 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2049 Test 1150 T-On Location 3:20
 (B) First Initial Flow 21 Jars 250 T-Started 4:12
 (C) First Final Flow 94 Safety Joint 75 T-Open 7:08
 (D) Initial Shut-In 1253 Circ Sub _____ T-Pulled 11:13
 (E) Second Initial Flow 105 Hourly Standby _____ T-Out 13:45
 (F) Second Final Flow 140 Mileage 48RT 48 Comments _____
 (G) Final Shut-In 1171 Sampler _____
 (H) Final Hydrostatic 2030 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1523

Approved By Rocky Milford 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. 62159

Well Name & No. Schmidt - Vap 'A' #1-26 Test No. 4 Date 2-23-15
 Company Murfin Drilling Co. Inc Elevation 2939 KB 2934 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #7
 Location: Sec. 26 Twp. 4s Rge. 3lw Co. Rawlins State KS

Interval Tested 4137 - 4195 Zone Tested LKC "K-L"
 Anchor Length 58 Drill Pipe Run 3928 Mud Wt. 9.4
 Top Packer Depth 4132 Drill Collars Run 187 Vis 56
 Bottom Packer Depth 4137 Wt. Pipe Run - WL 6.0
 Total Depth 4195 Chlorides 1600 ppm System LCM 5 1/2

Blow Description IF: 3/4" Blow at open, built to 1/4" at 10 min., 1/4" Blow till close
ISI: No blowback (Diesel in bucket)
FF: No blow
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud w/oil spots</u>		<u>1</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 5 BHT 115 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2110 Test 1150 T-On Location 23:55 2/22
 (B) First Initial Flow 13 Jars 250 T-Started 1:10
 (C) First Final Flow 16 Safety Joint 75 T-Open 3:41
 (D) Initial Shut-In 53 Circ Sub _____ T-Pulled 6:50
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 9:05
 (F) Second Final Flow 19 Mileage 48RT x2 48+48 Comments _____
 (G) Final Shut-In 37 Sampler _____
 (H) Final Hydrostatic 2081 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 1571
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1571

Approved By Rocky Milford Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damaged or any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Robert L. Milford

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGISTS' REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR: **Murfin Drilling Company, Inc.**
LEASE: **Schmidt-Vogel 'A' #1-26**
LOC. SPOT: **80'S & 110'E OF E2 W6 NW**

LOC. FOOTAGE: **1,400' FNL 1,100' FWL**
SEC: **26** TWP: **4S** RANG: **31W**
COUNTY: **Rawlins** STATE: **Kansas**

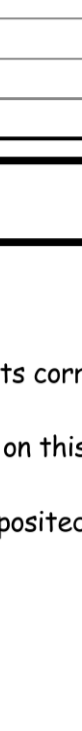
CONTRACTOR: **Murfin Drilling Co., Inc.** RIG NO.: **7**
DRILLING STARTED: **2-11-2015** COMPLETED: **2-24-2015**
MUD DISPLACED: **3,070** MUD TYPE: **Chemical**
DRILLING TIME (HEFT FROM): **3,650'** TO: **RTD**
SAMPLES SAVED FROM: **3,650'** TO: **RTD**
SAMPLES EXAMINED FROM: **3,650'** TO: **RTD**
GEOLOGICAL SUPERVISION FROM: **3,650'** TO: **RTD**

MESS/REMARKS FROM B
CASING RECORD
CONDUIT
Surface: **8.5/8" @ 220'**
w/ 200 sacks cement
w/ 450 sacks cement
Production: **5.1/2" @ 4491'**
w/ 450 sacks cement

ELEVATIONS
KB: **2,939'**
GL: **2,934'**

FORMATION NAME	LOG TOP DATUM	SAMPLE TOP DATUM
Stone Corral	2,691' +248'	3,758' -819'
Lopaka	3,756' -817'	3,758' -819'
Heebner	3,921' -982'	3,924' -985'
Lansing	3,969' -1030'	3,972' -1033'
Stark	4,137' -1198'	4,140' -1201'
B/KC	4,185' -1246'	4,187' -1248'
Pawnee	4,291' -1352'	4,293' -1354'
Cherokee	4,381' -1442'	4,383' -1444'
Mississippi	not on log	4,495' -1556'
Total Depth	4,514'	4,515'

Porosity Log
Microresistivity Log
Borehole Compensated-Sonic Log



DATE	7:00 AM DEPTH	REMARKS
2-17-15	0'	Spud @ 2:30 pm. Plug down @ 6:15 pm. Drilled out plug @ 2:15 am on 2-18-15 w/ PDC bit
2-18-15	800'	Cut 800' in last 24 hrs. Cut 580' in 4.75 hrs w/ PDC bit.
2-19-15	3,450'	Cut 2,650' in last 24 hrs. 22.25 hrs drlg. Bit trip @ 3609' (ran button bit)
2-20-15	3,975'	Cut 525' in last 24 hrs; 16.5 hrs drlg. DST #1 @ 4007'
2-21-15	4,075'	Cut 100' in last 24 hrs; 3.5 hrs drlg. DST #2 @ 4075', DST #3 @ 4140'
2-22-15	4,140'	Cut 65' in last 24 hrs; 3.25 hrs drlg. DST #4 @ 4195'
2-23-15	4,195'	Cut 55' in last 24 hrs; 3.5 hrs drlg. RTD 4515' @ 4:15 am on 2-24-15
2-24-15	4,515'	Cut 320' in last 24 hrs; 15.25 hrs drlg. Ran production casing.

Remarks

The electric log measurements correlate from 2' to 3' higher to the drilling measurements.

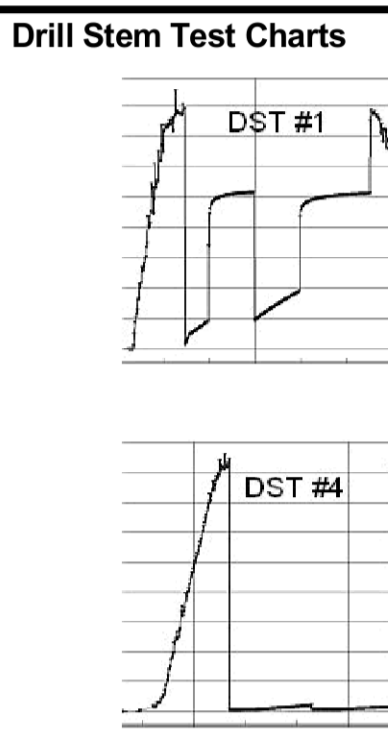
Formation tops and lithology on this report have been corrected to the electric log.

The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

Robert L. Milford

Drill Stem Test Charts



LITH.	DRILL TIME (MIN/FT)	DEPTH	SAMPLE DESCRIPTIONS	REMARKS
		2650		Stone Corral 2691' (+248) EL
		2700		Stone Corral drilled with PDC bit and I cannot confidently correlate the top and base drill time depths to the electric log
		2750		B/Stone Corral 2724' (+215) EL
		3650	Sh: gry, some red-brn LS: crm-lt gry, fxl, fos in prt, sub chky-pty d, pr por, NS LS: crm-gry, fxl, sli fos, some shly, sub chky-pty d, pr por, NS Sh: red-brn (some calc), some gry & grn LS: crm-lt gry, fxl, fos in prt, sub chky-pty d, w/ some chky, pr por, NS LS: crm-tan, fxl, fos-ool in prt, some calcite, sub chky-pty d, w/ some chky, pr w/ some fr-gd intrprtcal-vug por, NS Sh: grn, gry, red-brn LS: wh-lt gry, fxl, fos-ool in prt, some sli shly, sub chky-pty d, w/ some chky-vry chky, pr w/ some fr-gd intrprtcal-vug por, NS Sh: red-brn, w/ some Calc Sh-Shly LS: red-brn LS: crm-lt gry, fxl, sli fos, some shly (red-brn, mottled), sub chky-pty d, pr por, NS Sh: red-brn (some soft & gummy), w/ some gry-grn Sh: red-brn (mstly soft & gummy, some silty)	
		3700		Topeka 3756' (-817) EL
		3750		
		3800		
		3850		
		3900		
		3950		Heebner 3921' (-982) EL DST #1 3922'-4007' Tor-LK 'B' zns IF: BOB in 9" ISI: 9.25" blow back FF: BOB in 11" FSI: 5.5" blow back Rec: 977' TOTAL FLUID: 220' MW (96% W, 50% M) 757' SMCW (96% W, 4% M) Chl ppm: 29,000 DST: 800 Mud IFP: 25-227#/30" ISIP: 1286#/60" FFP: 232-471#/60" FSIP: 1275#/90" Toronto 3953' (-1014) EL
		4000		Lansing 3969' (-1030) EL Morgan Mud check @ 3990': 46 Vis, 9.3 Wt, 6.4 WL, 800 ppm Chl, 6# LCM Ran 20 stand short trip prior to DST #1 Pipe Strap @ 4007': Strap short 0.88' Straight Hole Survey @ 4007': 0.75' Dev.
		4050		DST #2 4024'-4075' LKC 'E'-'G' zns IF: BOB in 6.5" FSI: 9.25" blow back FF: BOB in 9.5" FSI: 5.5" blow back Rec: 665' GIP & 340' TOTAL FLUID: 200' GOC (24% G, 75% O, 1% M) 140' GOCM (18% G, 27% O, 55% M) Oil Gravity 41° API IFP: 21-94#/30" ISIP: 1253#/60" FFP: 30-107#/30" FSIP: 613#/90" FFP: 126-186#/60" FSIP: 594#/90"
		4100		Morgan Mud check @ 4075': 55 Vis, 9.4 Wt, 6.0 WL, 1,600 ppm Chl, 6# LCM (8:45 am, while TOH for DST)
		4150		DST #3 4069'-4140' LKC 'H'-'J' zns IF: BOB in 10.5" FSI: 9.25" blow back FF: BOB in 6.5" FSI: 5.5" blow back Rec: 665' GIP & 340' TOTAL FLUID: 343' GOC (24% G, 75% O, 1% M) 140' GOCM (18% G, 27% O, 55% M) Oil Gravity 41° API IFP: 21-94#/30" ISIP: 1253#/60" FFP: 105-140#/60" FSIP: 1171#/90"
		4200		Morgan Mud check @ 4195': 54 Vis, 9.4 Wt, 6.0 WL, 1,600 ppm Chl, 6# LCM (8:30 am, during ISIP on DST #3) Stark 4137' (-1198) EL DST #4 4137'-4195' LKC 'K'-'L' zns IF: blow built to 125" FF: no blow Rec: 5' Mud w/ oil spots (1% O, 99% M) IFP: 13-16#/30" ISIP: 53#/60" FFP: 18-19#/30" FSIP: 37#/60"
		4250		B/KC 4185' (-1246) EL Morgan Mud check @ 4195': 54 Vis, 9.4 Wt, 6.0 WL, 1,600 ppm Chl, 6# LCM (8:30 am, while TOH w/ DST #4) Ran another bit (re-run) @ 4195'
		4300		Pawnee 4291' (-1352) EL
		4350		
		4400		
		4450		
		4500		Miss. 4495' (-1556) DT Top of Miss. is below start of most log curves drilled Sli Rough to Rough from 4502'-14'
				L.T.D. 4514' (-1575) R.T.D. 4515' (-1576) Ran 10 stand short trip @ 4515' after CFS Straight Hole Survey @ 4515': 1° Dev.



PO Box 93999
Southlake, TX 76092

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

*acct
Prod-mg*

INVOICE

Invoice Number: 148668
Invoice Date: Feb 17, 2015
Page: 1

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	64822	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Feb 17, 2015	3/19/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Schmidt Vap A #1-26		
200.00	CEMENT MATERIALS	Class A Common	17.90	3,580.00
564.00	CEMENT MATERIALS	Chloride	1.10	620.40
210.00	CEMENT SERVICE	Cubic Feet Charge	2.48	520.80
484.00	CEMENT SERVICE	Ton Mileage Charge	2.75	1,331.00
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
50.00	CEMENT SERVICE	Pump Truck Mileage	7.70	385.00
1.00	CEMENT SERVICE	Swedge Manifold Rental	275.00	275.00
50.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	220.00
1.00	CEMENT SUPERVISOR	Paul Beaver		
1.00	EQUIPMENT OPERATOR	Brandon Wilkinson		
1.00	EQUIPMENT OPERATOR	Darren Racette		

Subtotal	8,444.45
Sales Tax	331.83
Total Invoice Amount	8,776.28
Payment/Credit Applied	
TOTAL	8,776.28

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

\$ 3,800.00 ✓

ONLY IF PAID ON OR BEFORE

Mar 19, 2015

OK JR
- 3800.00
4976.28

ALLIED OIL & GAS SERVICES, LLC 064822

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley KS

DATE <u>2-17-15</u>	SEC <u>26</u>	TWP. <u>4</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>5:00pm.</u>	JOB START <u>5:45am</u>	JOB FINISH <u>6:15pm</u>
Schmidt Vap 'A' LEASE				WELL# <u>1-26</u>	LOCATION <u>Rexford 11 to Curves, 2W, 2N,</u>	COUNTY <u>Rawlins</u>	STATE <u>KS</u>
OLD OR NEW (Circle one) <u>NEW</u>				<u>1 3/4W, 6N, 1E, 1/2 S, Einta</u>			

CONTRACTOR Murfin 7 OWNER Same

TYPE OF JOB Surface

HOLE SIZE 12 1/4 TD. 218' CEMENT AMOUNT ORDERED 200 sks Cem 3' l. cc

CASING SIZE 8 5/8 DEPTH 218'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 1366 160

EQUIPMENT

PUMP TRUCK CEMENTER Paul Beaver

431 HELPER Brandon Wilkinson

BULK TRUCK DRIVER Darren Racette

373/306

BULK TRUCK DRIVER

#

REMARKS:

Mix 200 sks Cem 3' l. cc

Displace w/ water

cement dial circ

plug down @ 6:15pm

cement in cellar only

Thank You Paul & Crew

CHARGE TO: Murfin Drlg

STREET

CITY STATE ZIP

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Brandon Wilkinson

SIGNATURE [Signature]

COMMON 200 sks @ 17.90 3580.00

POZMIX @

GEL @

CHLORIDE 564 # @ 1.10 620.40

ASC @

Material total @ 4200.40

(1890.18/35%)

HANDLING 210 # @ 2.48 520.80

MILEAGE 9.68 hrs @ 50mi @ 2.75 1331.00

TOTAL

SERVICE

DEPTH OF JOB 218'

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE @

MILEAGE MLV 50 @ 7.70 385.00

MANIFOLD swedge @ 275.00

MLV 50 @ 4.40 220.00

(1909.82/35%) TOTAL 4244.05

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

SALES TAX (If Any)

TOTAL CHARGES 8,444.45

DISCOUNT 3,800.00 (45%) IF PAID IN 30 DAYS

4644.44 Net



CONSOLIDATED
Oil Well Services, LLC

REMIT TO
Consolidated Oil Well Services, LLC
Dept:970
P.O.Box 4346
Houston, TX 77210-4346

MAIN OFFICE
P.O.Box 884
Chanute, KS 66720
620/431-9210, 1-800/467-8676
Fax 620/431-0012

Invoice

Invoice#

803496

Invoice Date: 02/27/15

Terms: C.O.D.

Page 1

MURFIN DRILLING

P.O. BOX 288
RUSSELL KS 67665
USA

USED FOR IC 103 R SCHMIDT-VAP 'A' 1-26
APPROVED JD FH

Part No	Description	Quantity	Unit Price	Discount(%)	Total
5401C	Single Pump	1.000	3,175.0000	20.000	2,540.00
5406	Mileage Charge	35.000	5.2500	20.000	147.00
5407A	Ton Mileage Delivery Charge	1.000	1,365.8700	20.000	1,092.70
1104D	CLASS A CEMENT CMD	300.000	27.9200	20.000	6,700.80
1107	Flo-Seal	75.000	2.9700	20.000	178.20
1126-0130	Oil Well Cement	200.000	23.7000	20.000	3,792.00
1110A	Kol Seal (50# BAG)	1,000.000	0.5600	20.000	448.00
4454	5 1/2 Latch Down Plug	1.000	567.0000	20.000	453.60
4136	Turbolizer 5 1/2	14.000	75.7500	20.000	848.40
4104	Cement Basket 5 1/2	3.000	290.0000	20.000	696.00
4159	Float Shoe AFU 5 1/2	1.000	433.7500	20.000	347.00
4314	Reciprocating Scratchers	6.000	82.0000	20.000	393.60
1142A	KCL Sub 1/1000	2.000	41.1000	20.000	65.76
1144G-0130	Mud Flush - Oakley	500.000	1.0000	20.000	400.00

Subtotal 22,628.82
Discounted Amount 4,525.76
SubTotal After Discount 18,103.06

Amount Due 24,043.25 If paid after 02/27/15

Tax: 1,131.55
Total: 19,234.61



CONSOLIDATED
Oil Well Services, LLC

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

2181
Invoice # 803496

TICKET NUMBER 49403
LOCATION Cokeley KS
FOREMAN Dane Petzloff

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
2-24-14	5406	Schmidt - Vop A 1-26	26	4	31	Rawlins
CUSTOMER			REDFORD KS North to Y E TN to RD 105 3 miles west South Side			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			722	MIKE		
STATE			456	Rob		
ZIP CODE			560	Colin		

JOB TYPE Production HOLE SIZE 7 7/8 HOLE DEPTH 4515 CASING SIZE & WEIGHT 5 1/2 15.5 LBS
 CASING DEPTH 4491.79 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 11.0/14.2 SLURRY VOL 3.00/1.56 WATER gal/sk 21.0/6.97 CEMENT LEFT in CASING 21.68
 DISPLACEMENT 106.38 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting. Rig up. Run float equip. Turbos on 1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 13, 14, 17, 41
 Baskets on 15, 72, 70. Circulate on bottom 1 hr. mix KCL and mud flush. Plug BH. mix 250 SKS
 of CMD 1/4 flo seal tailed in with 200 SKS of OWC. 5" Kel seal. Release Plug. Displace 8815
 Final lift pressure was 1600 psi. Plug landed at 1500 psi. Rig down.
 Circulate on joint 52 30 mins. Lost circulation at 10 BBIs out. 60 BBIs out gained some. Cement did
 RH 30 SKS
 MH 20 SKS

Thanks Dane & crew.

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5406	1	PUMP CHARGE	3175.00	3175.00
5406	35	MILEAGE	5.25	183.75
5407A	22.3	Ton Mileage Delivery	1.75	1365.67
1104D	3300 300 SKS	CMD cement	27.92	8376.00
1107	75	Flo-Seal	2.97	222.75
1126	3301 200 SKS	OWC cement	23.70	4740.00
1108A	1000	Kel-Seal	.56	560.00
4454	1	Hatchelzon Plug assembly	567.00	567.00
4136	14	Turbolizers 5 1/2	75.75	1060.50
4109	3	Baskets 5 1/2	290.00	870.00
4159	1	Float shoe 5 1/2	433.75	433.75
4314	6	Reciprocating Scratchers 5 1/2	82.00	492.00
1142A	3302 2 gal	KCL	41.10	82.20
1144G	3303 500 gal	Mud flush	1.00	500.00
			546	22628.82
			1225 20%	4525.76
			Total	18103.06
			SALES TAX	1131.55
			ESTIMATED TOTAL	19234.61

Ravin 3737

AUTHORIZATION [Signature] TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's

Schmidt-Vap 'A' #1-26
 1400' FNL 1100' FWL
 Sec. 26-4S-31W
 2939' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	2685	+254	Flat	2691	+248	-6
B/Anhydrite	2715	+224	+1	2724	+215	-8
Topeka	3758	-819	-10	3756	-817	-8
Heebner	3924	-985	-11	3920	-981	-7
Lansing	3973	-1034	-8	3969	-1030	-4
Stark	4140	-1201	-8	4137	-1198	-5
BKC	4185	-1246	-6	4185	-1246	-6
Pawnee	4295	-1356	Flat	4292	-1353	+3
Cherokee	4382	-1443	-2	4381	-1442	-1
Mississippi	4495	-1556	+3			
RTD	4515	-1576				
LTD				4514		