



1167542

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

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

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

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

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

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

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

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

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

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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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

November 08, 2013

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

Re: ACO1
API 15-153-20928-00-00
Doris 1-22
SE/4 Sec.22-04S-31W
Rawlins 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

Doris #1-22
 430' FSL 2200' FEL
 Sec. 22-4S-31W
 2919' KB

Gly #1-27
 1320' FNL 2310' FWL
 Sec. 27-4S-31W
 2937' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	2679	+240	-8	2677	+242	-6	2689	+248
B/Anhydrite	2711	+208	-7	2709	+210	-5	2722	+215
Topeka	3742	-823	-6	3742	-823	-6	3754	-817
Heebner	3912	-993	-10	3909	-990	-7	3920	-983
Lansing	3960	-1041	-10	3956	-1037	-6	3968	-1031
Stark	4127	-1208	-10	4123	-1204	-6	4135	-1198
BKC	4176	-1257	-15	4176	-1257	-10	4184	-1247
Pawnee	4285	-1366	-12	4284	-1365	-11	4291	-1354
Cherokee	4372	-1453	-13	4370	-1451	-11	4377	-1440
Mississippi	4484	-1565	-10	4282	-1363	-8	4492	-1555
RTD	4538						4560	
LTD				4538			4560	

Jeff Christian
PETROLEUM GEOLOGIST
Michigan, Kansas

GEOLOGISTS' REPORT
DRILLING TIME AND SAMPLE LOG

OPERATOR: **MUSEFTEN DRILLING COMPANY**
LEASE: **DORIS # 1-22**
LOCATION: **4301 FSL & 22001 FEL**

SEC: **22** TWP: **4 S** RANG: **31 W**
COUNTY: **RAWLINS** STATE: **KANSAS**
FIELD: **DAISY**

API: **15-153-20928**

CONTRACTOR: **COMPANY TOOLS** FIG. NO. **2**
DRILLING STARTED: **07/13/2013** COMPLETED: **07/20/2013**
MUD DISPLACED: **3431** MUD TYPE: **CHEMICAL**
DRILLING TIME KEPT FROM: **3640** TO: **RTD**
SAMPLES SAVED FROM: **3640** TO: **RTD**
SAMPLES EXAMINED FROM: **3640** TO: **RTD**
GEOLOGICAL SUPERVISION FROM: **3620** TO: **RTD**

MEASUREMENTS FROM: **KB**
CASINO RECORD: **CONDUCTOR NONE**
SURFACE: **8.5/8" @ 225'**
W/ 1/95 SX
Production S/W: **5.1/2" @ 2781'**

FORMATION LOG

FORMATION NAME	LOG	TOP DATUM	TOP	SAMPLE DATUM
ANHYDRITE	2676'	(+243)	2678'	(+241)
TOPEKA	3742'	(-823)	2742'	(-823)
HEBNER	3909'	(-903)	3912'	(-993)
LANING	3956'	(-1037)	3960'	(-1041)
STARK	4123'	(-1204)	4127'	(-1208)
BKC	4176'	(-1257)	4176'	(-1257)
PAWNEE	4284'	(-1365)	4285'	(-1366)
CHEROKEE	4370'	(-1451)	4372'	(-1453)
MISSISSIPPIAN	4480'	(-1551)	4484'	(-1555)
TOTAL DEPTH	4538'	(-1619)	4538'	(-1619)

ELEVATIONS
KB: **2919'**
GL: **2908'**

22

DATE	7:00 AM DEPTH	REMARKS
7/13/13	MIRT	SPUD 3:45 pm. DO plug @ 3:30 am
7/14/13	660'	DRLG. dev. 3/4 deg. @ 225'
7/15/13	2905'	DRLG.
7/16/13	3841'	DRLG.
7/17/13	4014'	CFS
7/18/13	4035'	TIH after DST # 3
7/19/13	4180'	TOH for DST # 5
7/20/13	4475'	DRLG. RTD 4538' @ 11:30 am dev. 3/4 deg. FINISHED LOGGING @ 8:30 pm

Remarks

The Doris # 1-22 was declared dry and abandoned.
All sample shows of oil were condemned by drill stem tests.

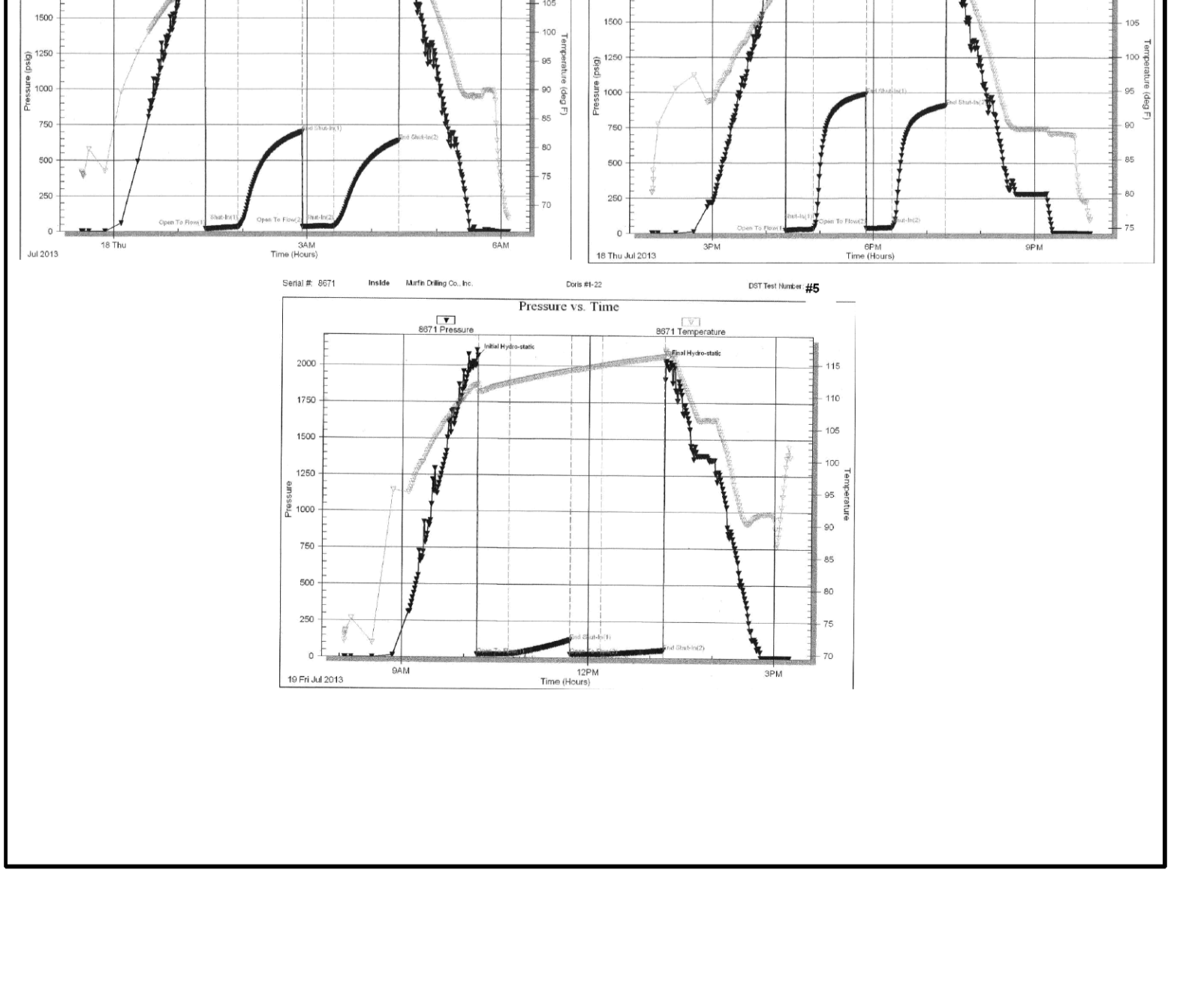
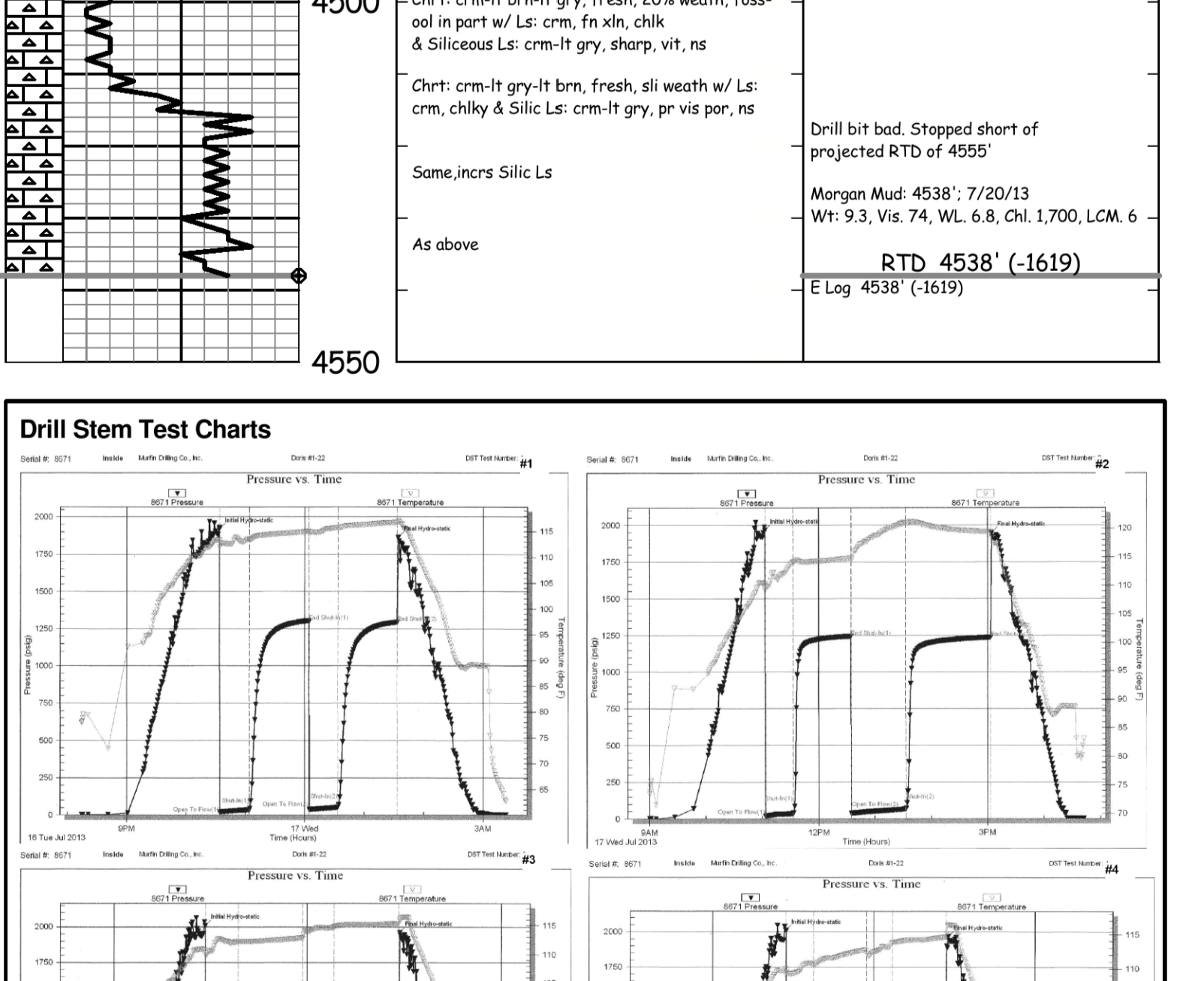
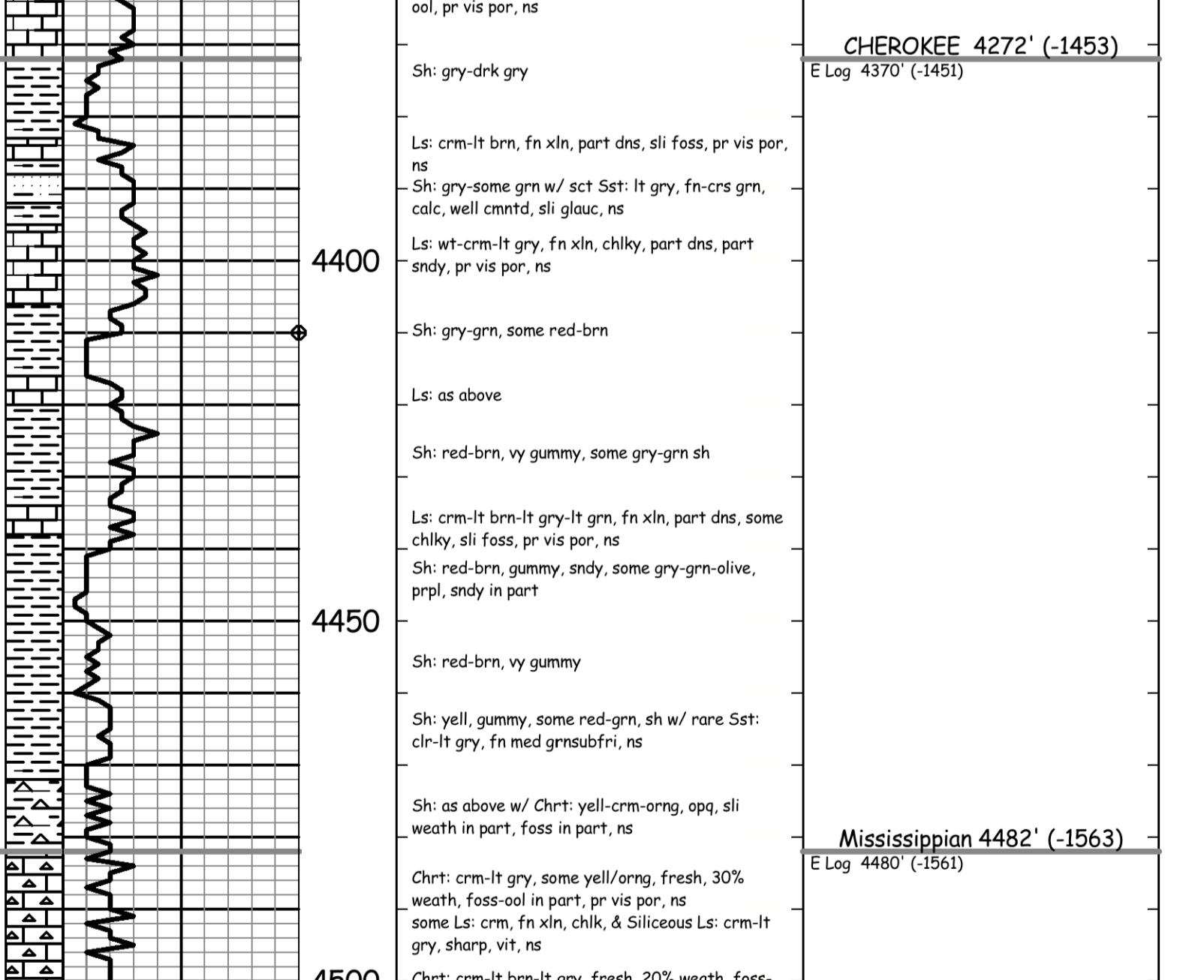
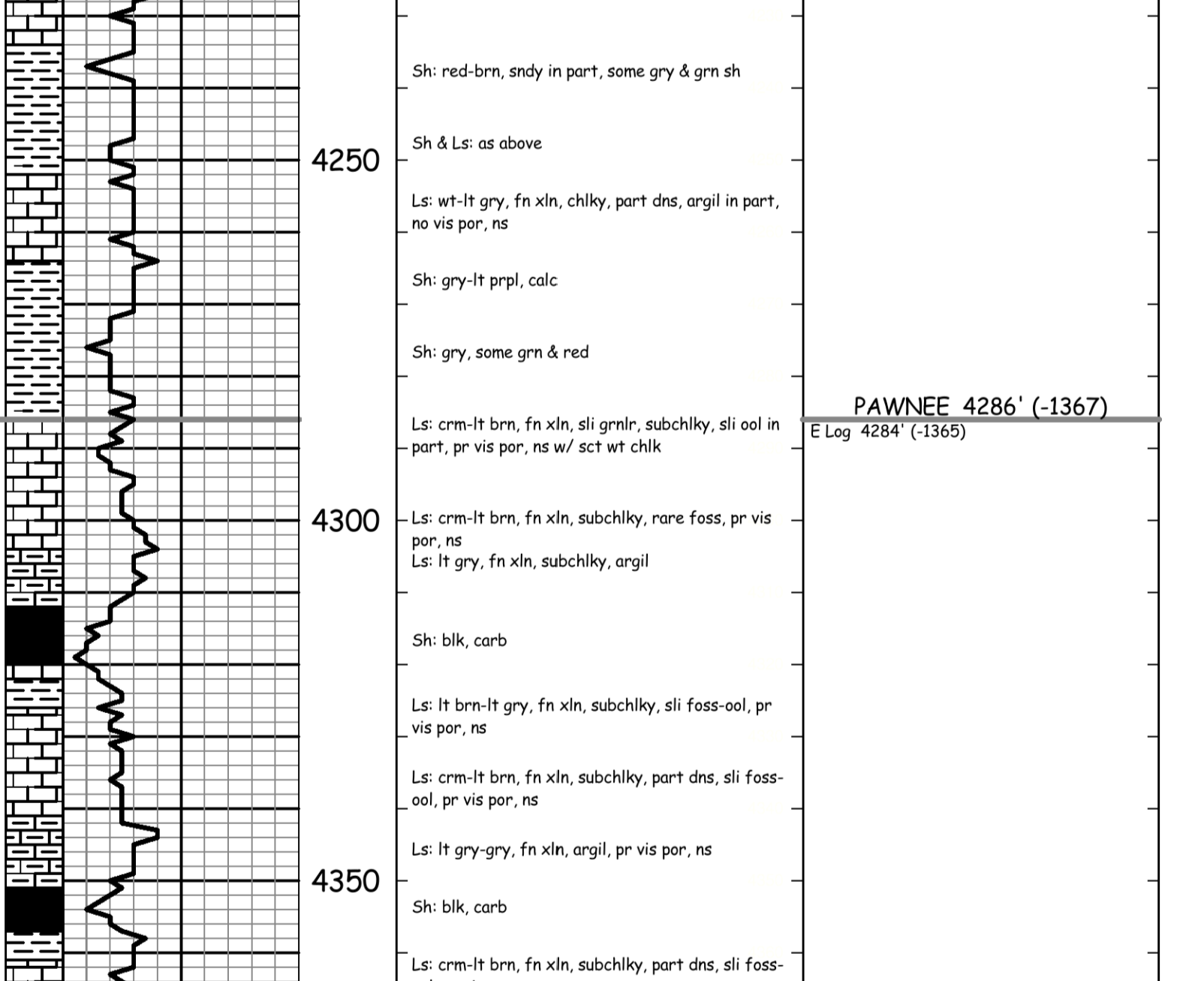
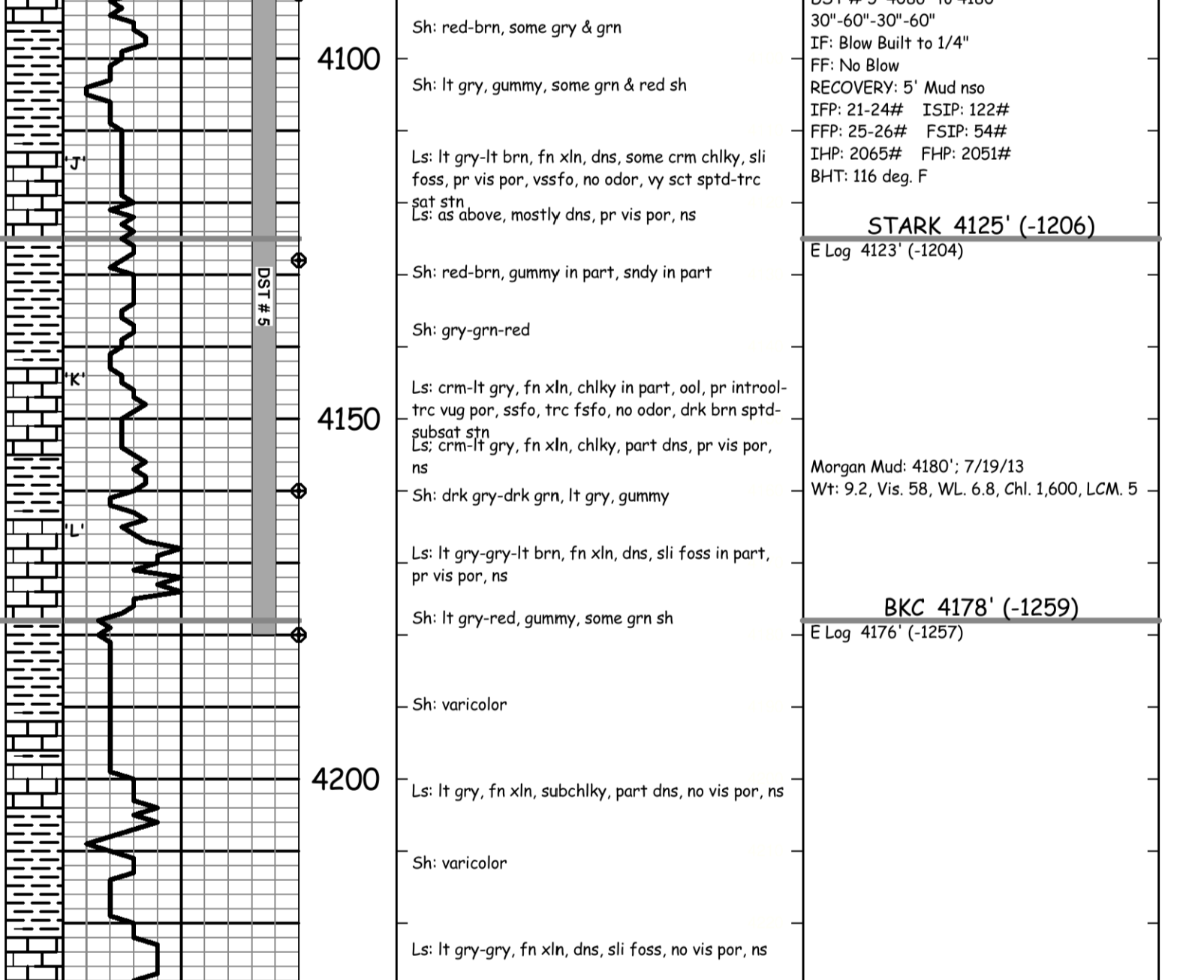
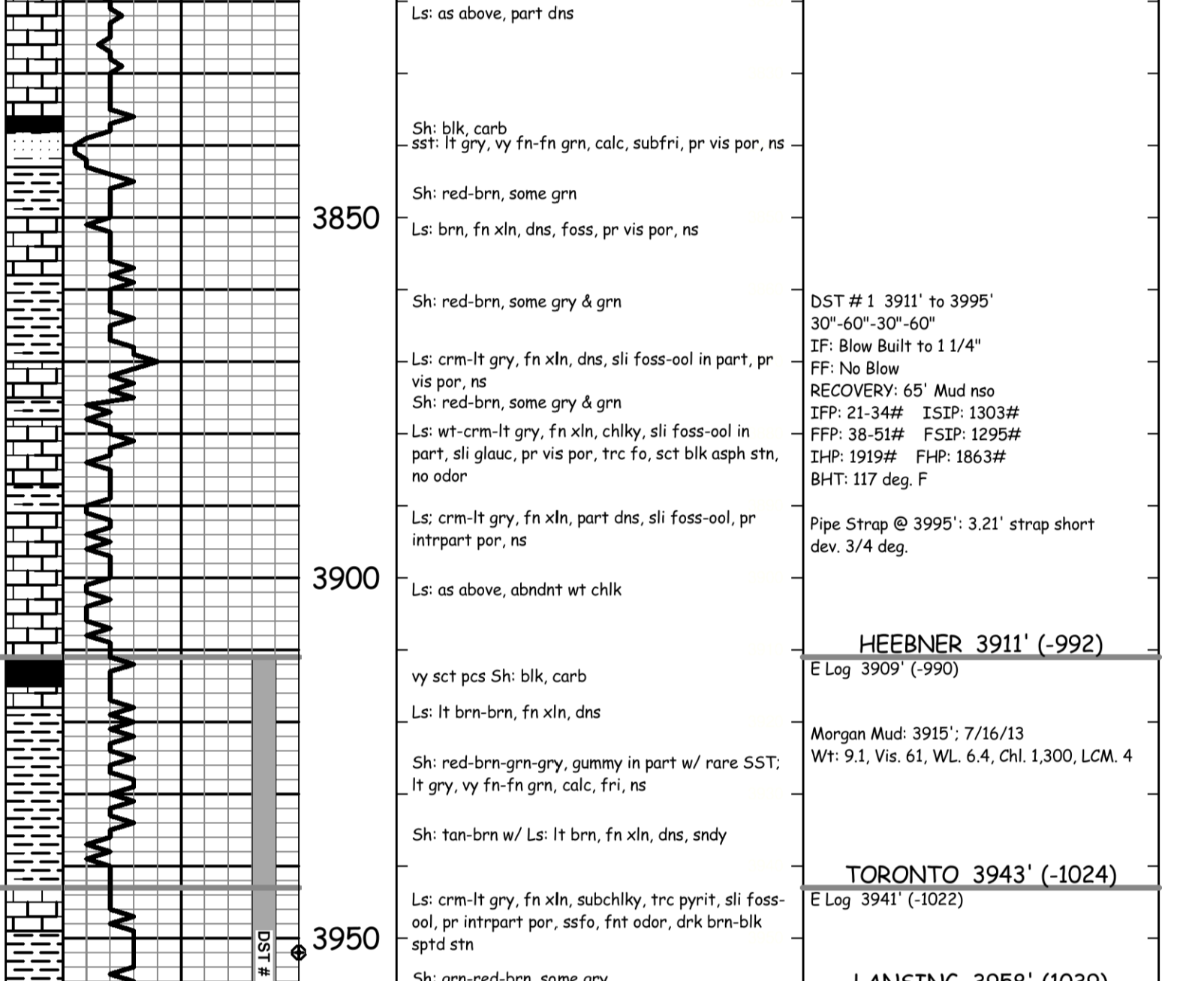
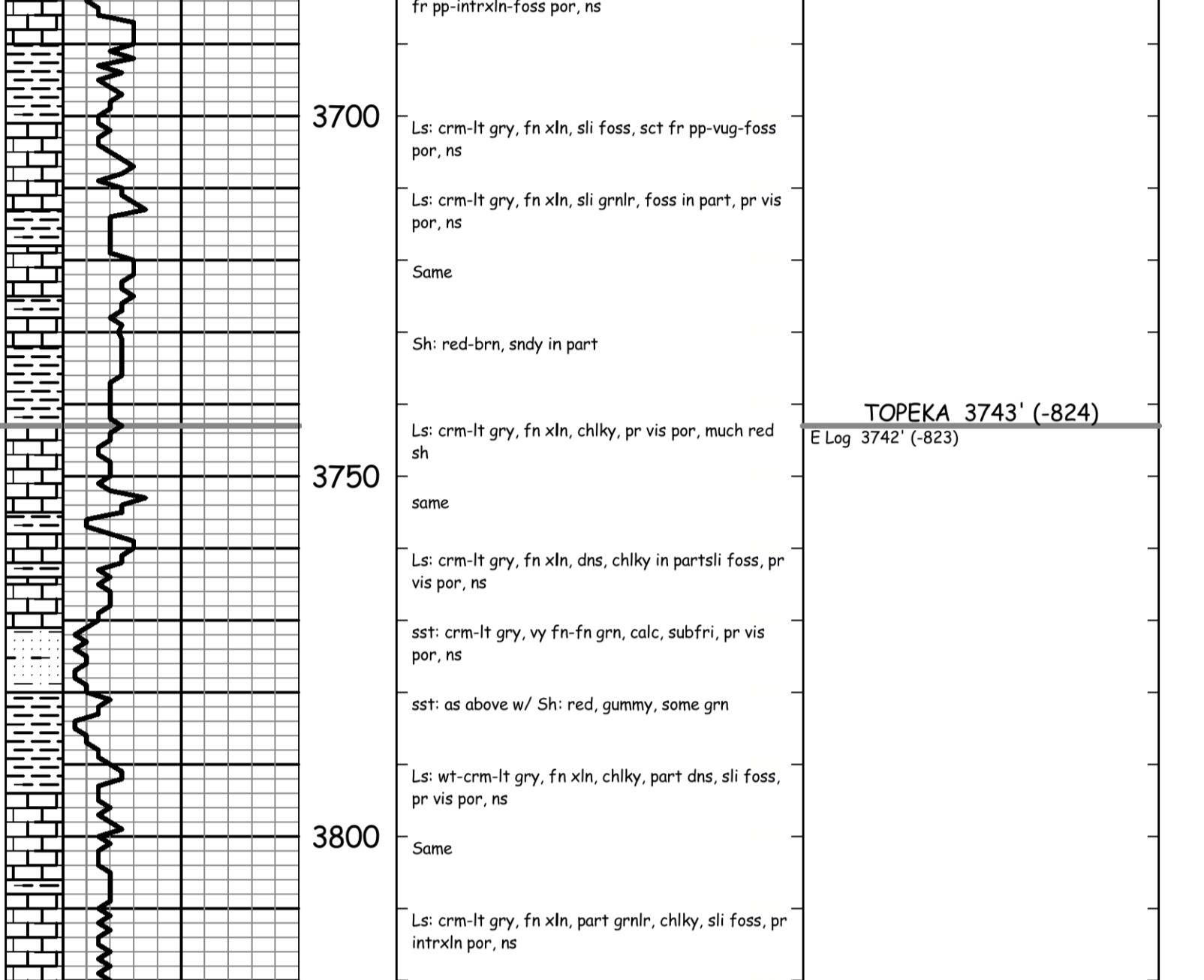
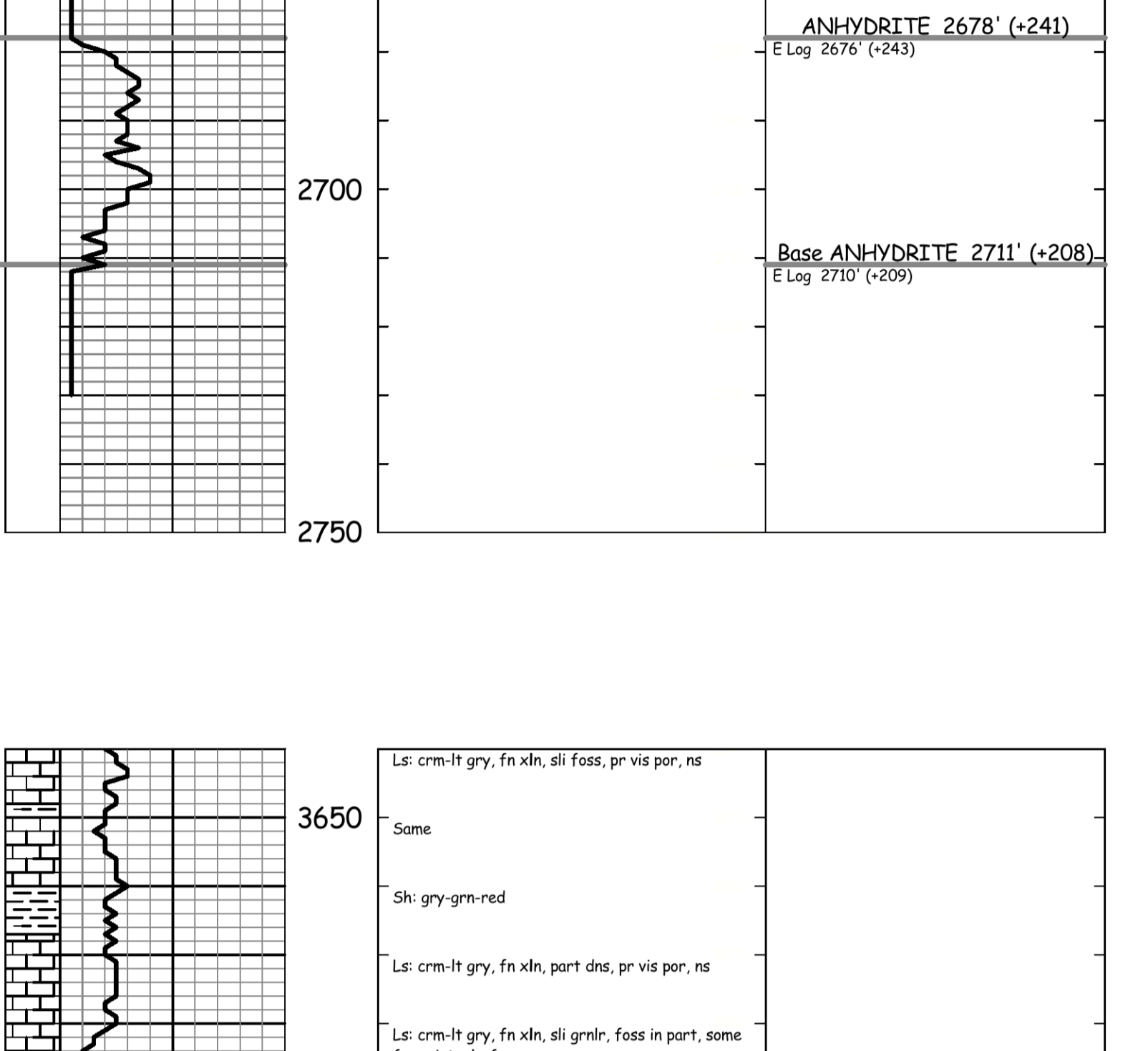
Electric log measurements correlate about 2' high compared to rotary measurements.

Samples deposited at the Kansas Geological Survey.

Respectfully Submitted,

Jeff Christian
Jeff Christian

LITH.	DRILL TIME (MIN/FT)	DEPTH (FEET)	SAMPLE DESCRIPTIONS	REMARKS
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DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.16 @ 20:14:00

End Date: 2013.07.17 @ 03:23:30

Job Ticket #: 52765 DST #: 1

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

Printed: 2013.07.22 @ 15:40:58



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Jeff Christian

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52765

DST#: 1

Test Start: 2013.07.16 @ 20:14:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A & B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:33:45

Time Test Ended: 03:23:30

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Interval: 3911.00 ft (KB) To 3995.00 ft (KB) (TVD)

Reference Elevations: 2919.00 ft (KB)

Total Depth: 3995.00 ft (KB) (TVD)

2908.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8671

Inside

Press @ Run Depth: 50.80 psig @ 3912.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.16

End Date:

2013.07.17

Last Calib.:

2013.07.17

Start Time: 20:14:05

End Time:

03:23:29

Time On Btm:

2013.07.16 @ 22:33:30

Time Off Btm:

2013.07.17 @ 01:34:15

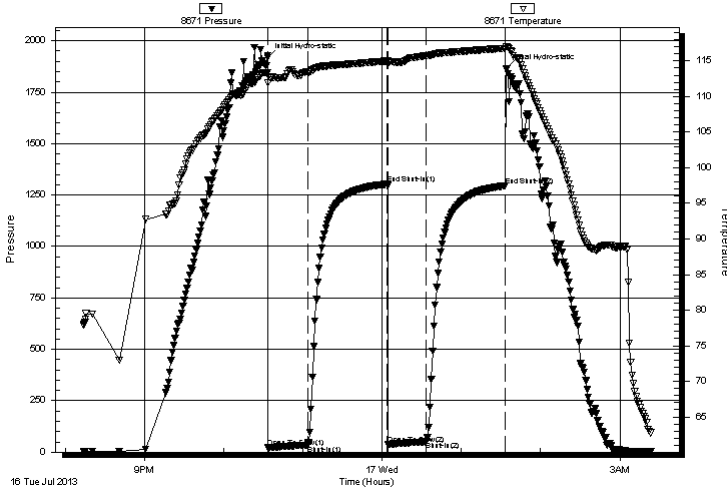
TEST COMMENT: 30 - IF: Blow slowly built to 1 1/4"

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1918.67	113.35	Initial Hydro-static
1	21.25	112.01	Open To Flow (1)
31	34.47	113.46	Shut-In(1)
91	1303.46	115.02	End Shut-In(1)
91	38.17	114.50	Open To Flow (2)
120	50.80	115.75	Shut-In(2)
180	1294.82	116.79	End Shut-In(2)
181	1862.51	117.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	Mud 100%	0.32

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52765

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.07.16 @ 20:14:00

Tool Information

Drill Pipe:	Length: 3656.00 ft	Diameter: 3.80 inches	Volume: 51.28 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 52.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3911.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	112.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3888.00	
Hydraulic tool	5.00			3893.00	
Jars	5.00			3898.00	
Safety Joint	3.00			3901.00	
Packer	5.00			3906.00	28.00 Bottom Of Top Packer
Packer	5.00			3911.00	
Stubb	1.00			3912.00	
Recorder	0.00	8671	Inside	3912.00	
Recorder	0.00	8320	Outside	3912.00	
Perforations	13.00			3925.00	
Blank Spacing	65.00			3990.00	
Perforations	2.00			3992.00	
Bullnose	3.00			3995.00	84.00 Bottom Packers & Anchor

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52765

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.07.16 @ 20:14:00

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	Mud 100%	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

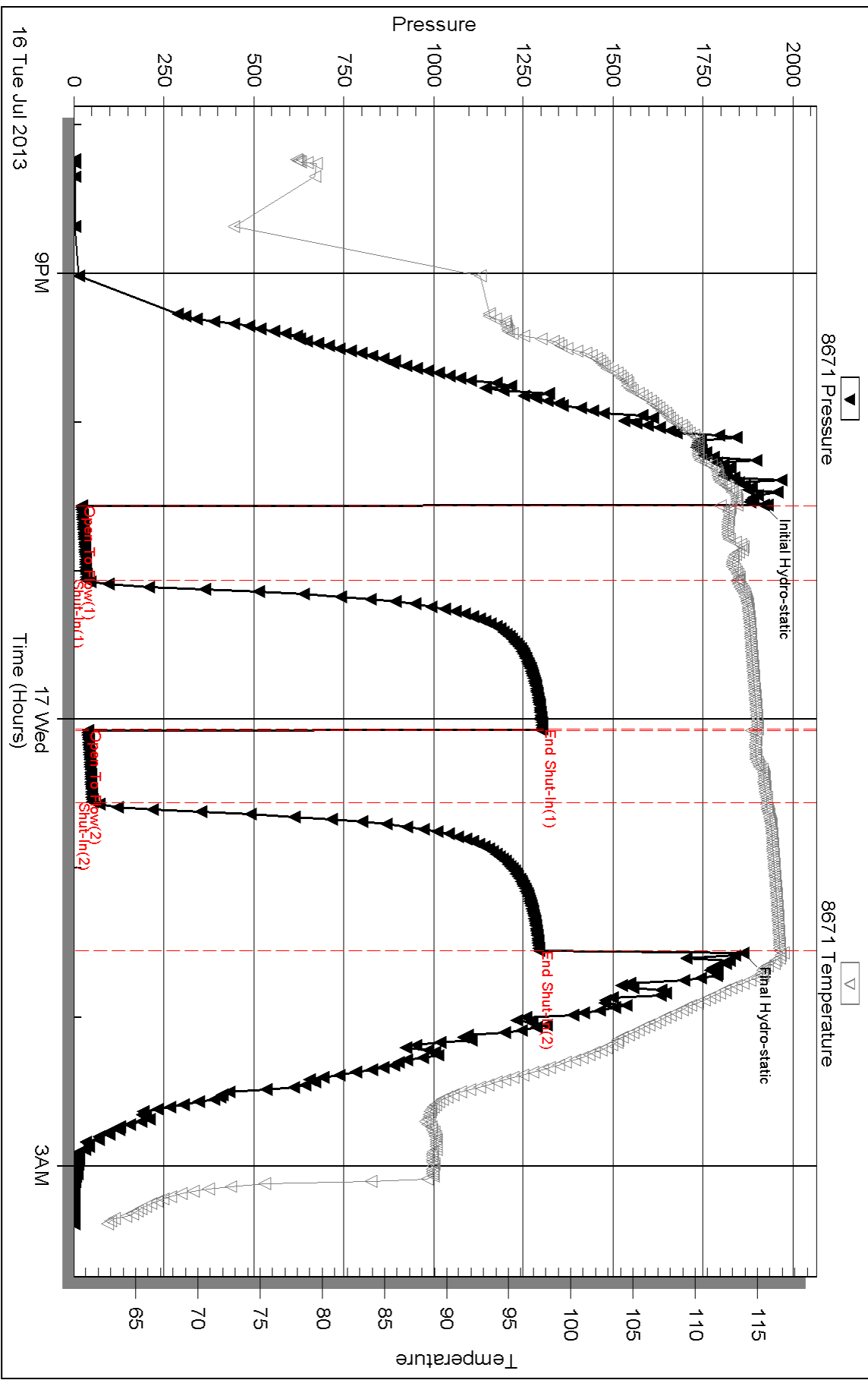
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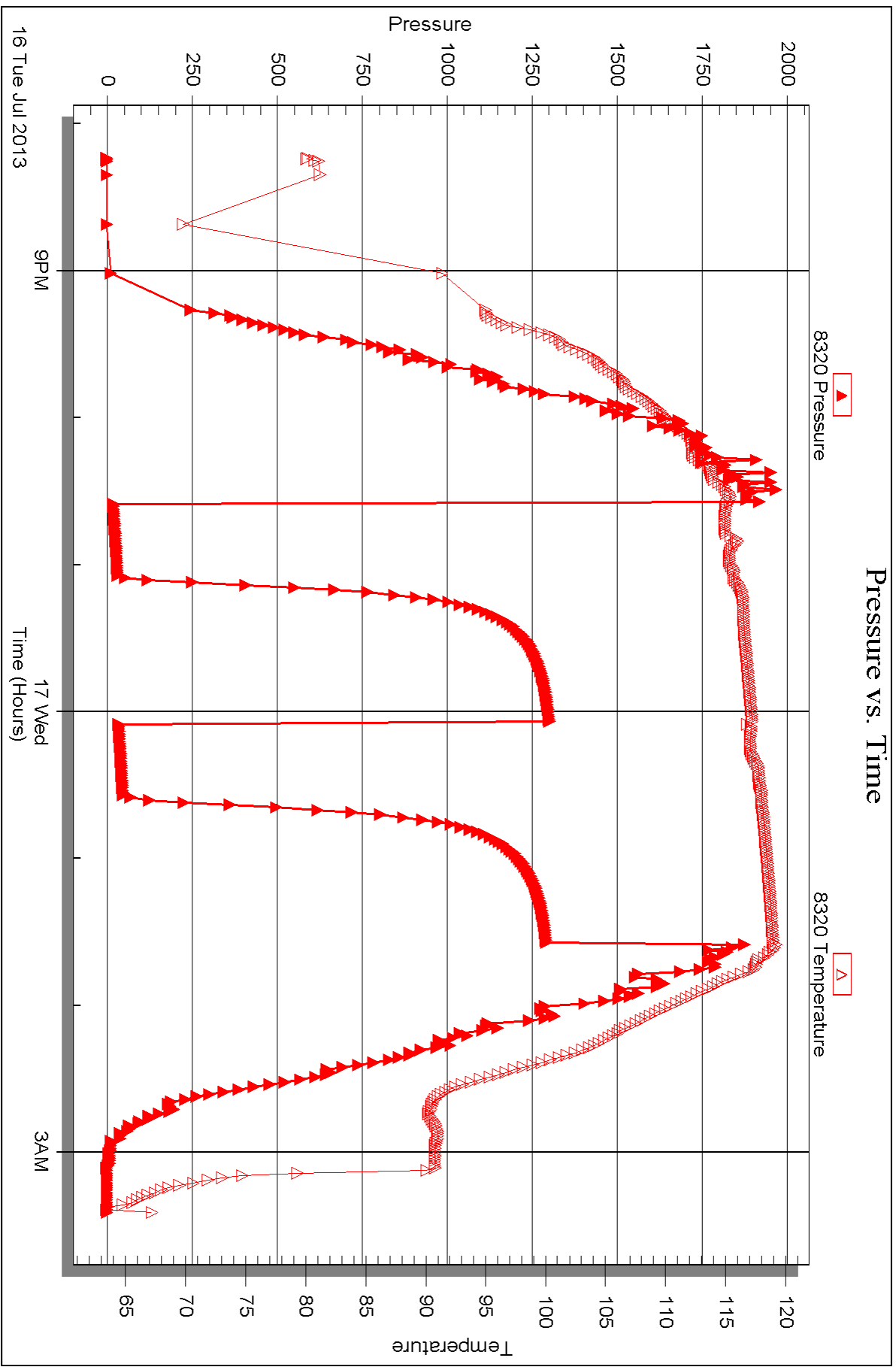
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.17 @ 09:00:00

End Date: 2013.07.17 @ 16:43:00

Job Ticket #: 52766 DST #: 2

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

Printed: 2013.07.22 @ 15:40:11

Murfin Drilling Co., Inc. 22-4s-31w Rawlins KS Doris #1-22 DST # 2 LKC "D" 2013.07.17



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Jeff Christian

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52766

DST#: 2

Test Start: 2013.07.17 @ 09:00:00

GENERAL INFORMATION:

Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:03:15
 Time Test Ended: 16:43:00
 Interval: **3992.00 ft (KB) To 4014.00 ft (KB) (TVD)**
 Total Depth: 4014.00 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: 2919.00 ft (KB)
 2908.00 ft (CF)
 KB to GR/CF: 11.00 ft

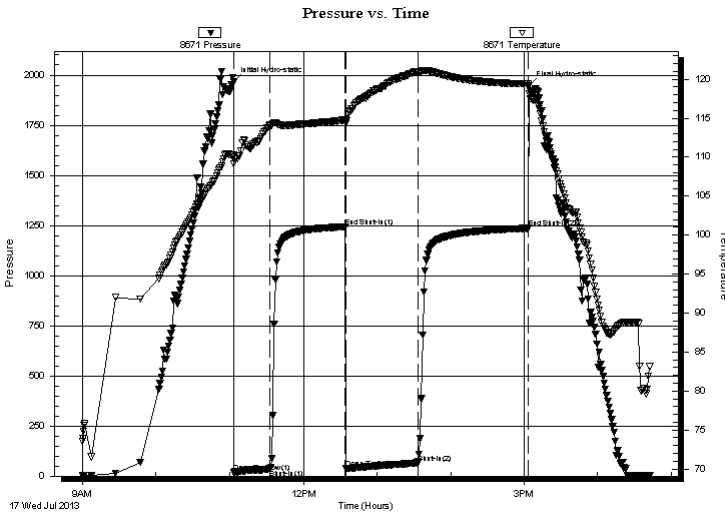
Serial #: 8671

Inside

Press @ Run Depth: 66.51 psig @ 3993.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.17 End Date: 2013.07.17 Last Calib.: 2013.07.17
 Start Time: 09:00:05 End Time: 16:42:59 Time On Btm: 2013.07.17 @ 11:03:00
 Time Off Btm: 2013.07.17 @ 15:04:15

TEST COMMENT: 30 - IF: Blow slowly built to 1 1/2"
 60 - IS: No blow back
 60 - FF: Blow started at 13 min., built to 2"
 90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.67	110.30	Initial Hydro-static
1	19.27	109.17	Open To Flow (1)
30	34.94	114.05	Shut-In(1)
92	1244.04	114.82	End Shut-In(1)
92	38.84	114.36	Open To Flow (2)
150	66.51	120.93	Shut-In(2)
241	1236.34	119.39	End Shut-In(2)
242	1948.16	118.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
58.00	Muddy Water w/trace oil 52%w , 48%m	0.29
45.00	WCM w/trace oil 76%m, 22%w , 2%g	0.22

* 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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52766

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 09:00:00

Tool Information

Drill Pipe:	Length: 3750.00 ft	Diameter: 3.80 inches	Volume: 52.60 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3992.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	50.00 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	
Jars	5.00			3979.00	
Safety Joint	3.00			3982.00	
Packer	5.00			3987.00	28.00 Bottom Of Top Packer
Packer	5.00			3992.00	
Stubb	1.00			3993.00	
Recorder	0.00	8671	Inside	3993.00	
Recorder	0.00	8320	Outside	3993.00	
Perforations	18.00			4011.00	
Bullnose	3.00			4014.00	22.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52766

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 09:00:00

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:

25000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
58.00	Muddy Water w/trace oil 52%w , 48%m	0.285
45.00	WCM w/trace oil 76%m, 22%w , 2%g	0.221

Total Length: 103.00 ft Total Volume: 0.506 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

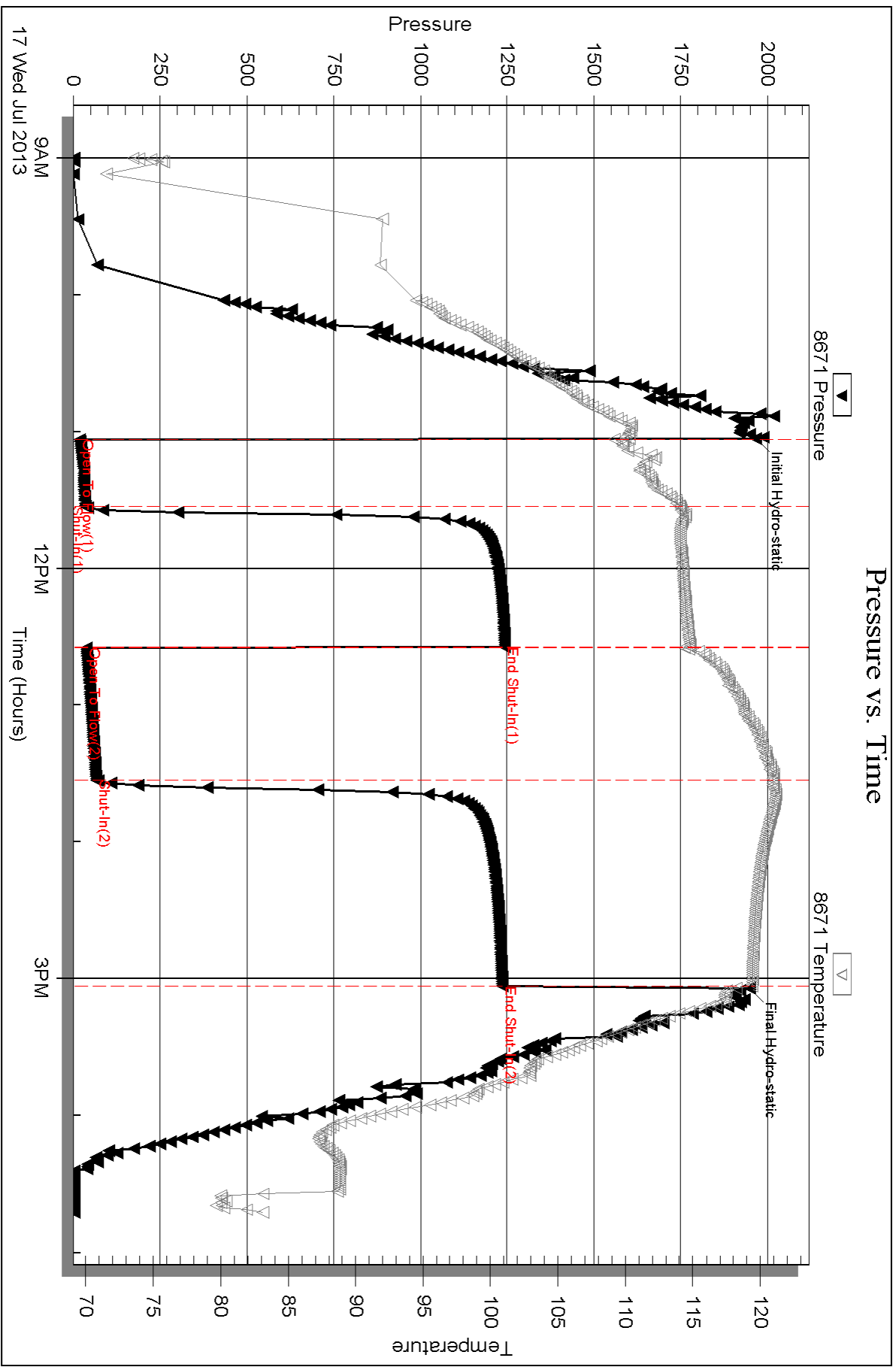
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .205 ohms @ 92.5 deg F

Chlorides = 25,000 ppm

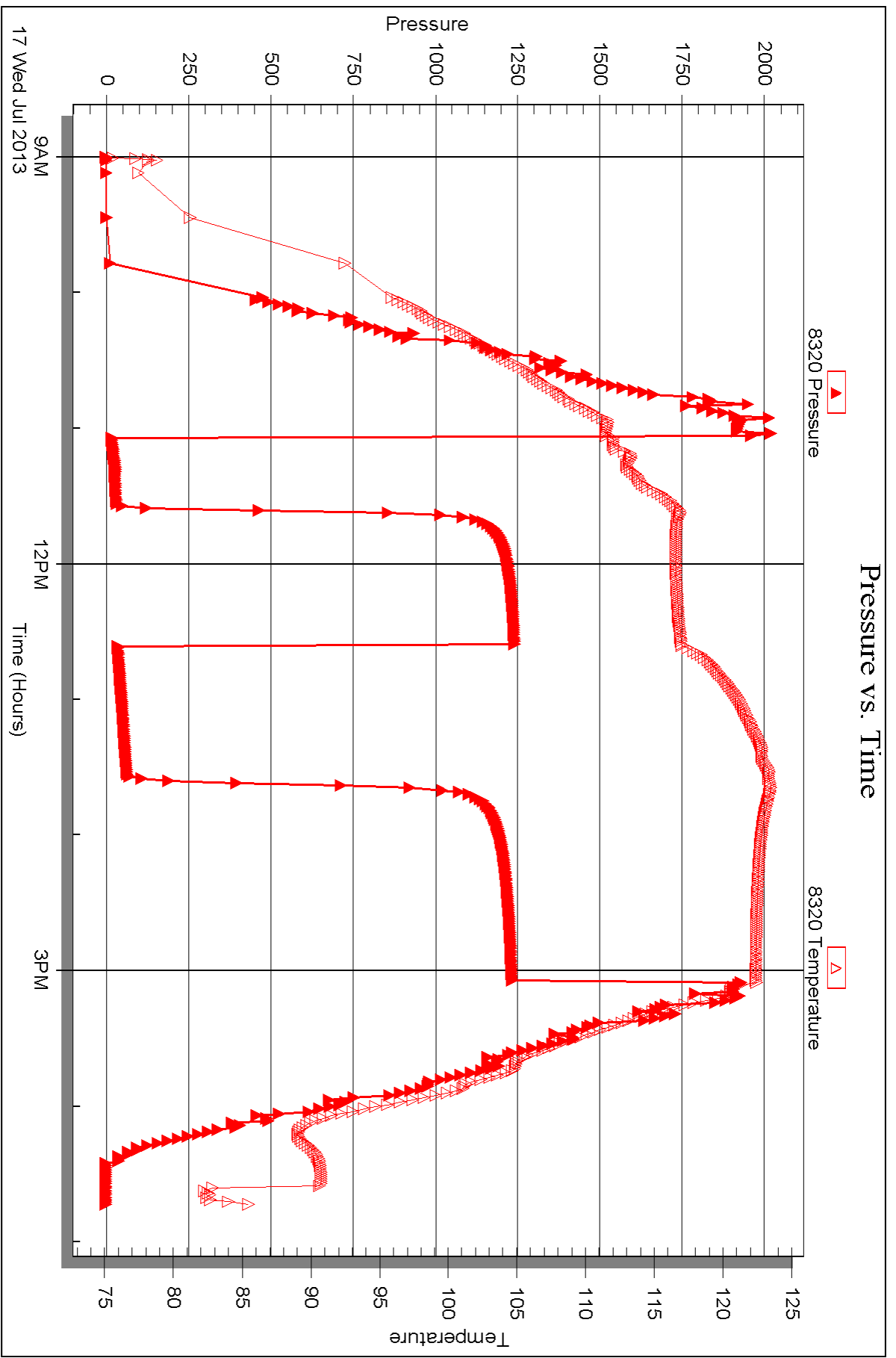


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.17 @ 23:30:00

End Date: 2013.07.18 @ 06:07:00

Job Ticket #: 52767 DST #: 3

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

Printed: 2013.07.22 @ 15:36:36



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water Suite 300
 Wichita, KS 67202
 ATTN: Jeff Christian

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52767

DST#: 3

Test Start: 2013.07.17 @ 23:30:00

GENERAL INFORMATION:

Formation: **LKC "F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:25:15
 Time Test Ended: 06:07:00
 Interval: **4011.00 ft (KB) To 4036.00 ft (KB) (TVD)**
 Total Depth: 4036.00 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: 2919.00 ft (KB)
 2908.00 ft (CF)
 KB to GR/CF: 11.00 ft

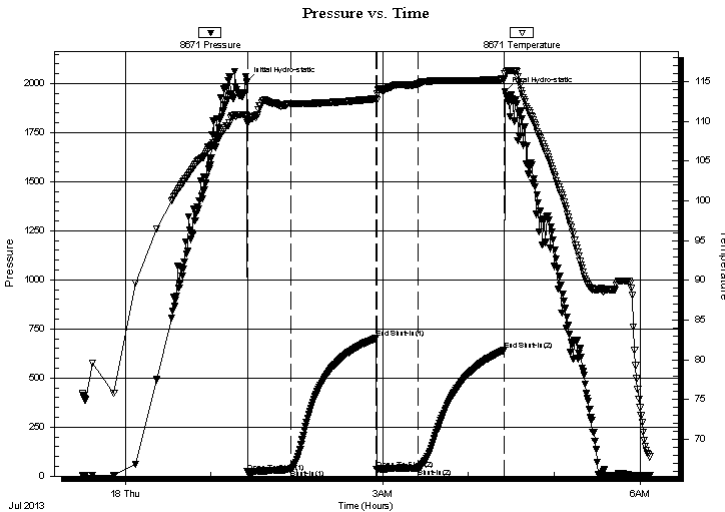
Serial #: 8671

Inside

Press@RunDepth: 39.51 psig @ 4012.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.17 End Date: 2013.07.18 Last Calib.: 2013.07.18
 Start Time: 23:30:05 End Time: 06:06:59 Time On Btm: 2013.07.18 @ 01:25:00
 Time Off Btm: 2013.07.18 @ 04:25:30

TEST COMMENT: 30 - IF: Blow slowly built to 1 1/4"
 60 - IS: No blow back
 30 - FF: No blow
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2009.00	110.65	Initial Hydro-static
1	21.16	109.79	Open To Flow (1)
31	32.94	112.26	Shut-In(1)
91	701.87	112.86	End Shut-In(1)
91	35.27	112.67	Open To Flow (2)
120	39.51	114.74	Shut-In(2)
180	640.52	115.33	End Shut-In(2)
181	1959.38	115.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	SOCM 97% m, 2% o, 1% g	0.22

* 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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52767

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 23:30:00

Tool Information

Drill Pipe:	Length: 3782.00 ft	Diameter: 3.80 inches	Volume: 53.05 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 54.19 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4011.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	25.00 ft				
Tool Length:	53.00 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			3988.00	
Hydraulic tool	5.00			3993.00	
Jars	5.00			3998.00	
Safety Joint	3.00			4001.00	
Packer	5.00			4006.00	28.00 Bottom Of Top Packer
Packer	5.00			4011.00	
Stubb	1.00			4012.00	
Recorder	0.00	8671	Inside	4012.00	
Recorder	0.00	8320	Outside	4012.00	
Perforations	21.00			4033.00	
Bullnose	3.00			4036.00	25.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52767

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.07.17 @ 23:30:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	SOCM 97% <i>m</i> , 2% <i>o</i> , 1% <i>g</i>	0.221

Total Length: 45.00 ft Total Volume: 0.221 bbl

Num Fluid Samples: 0

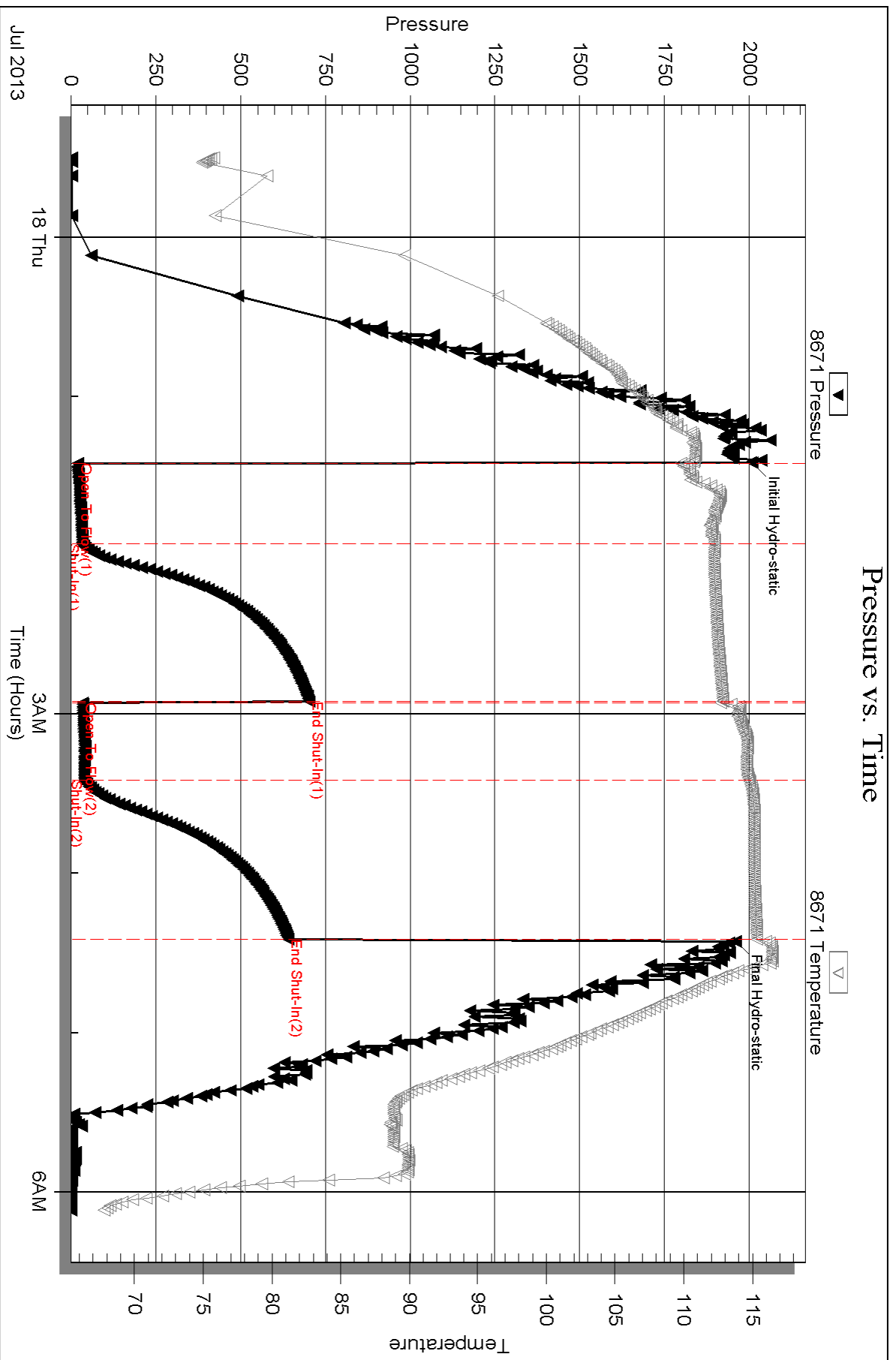
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

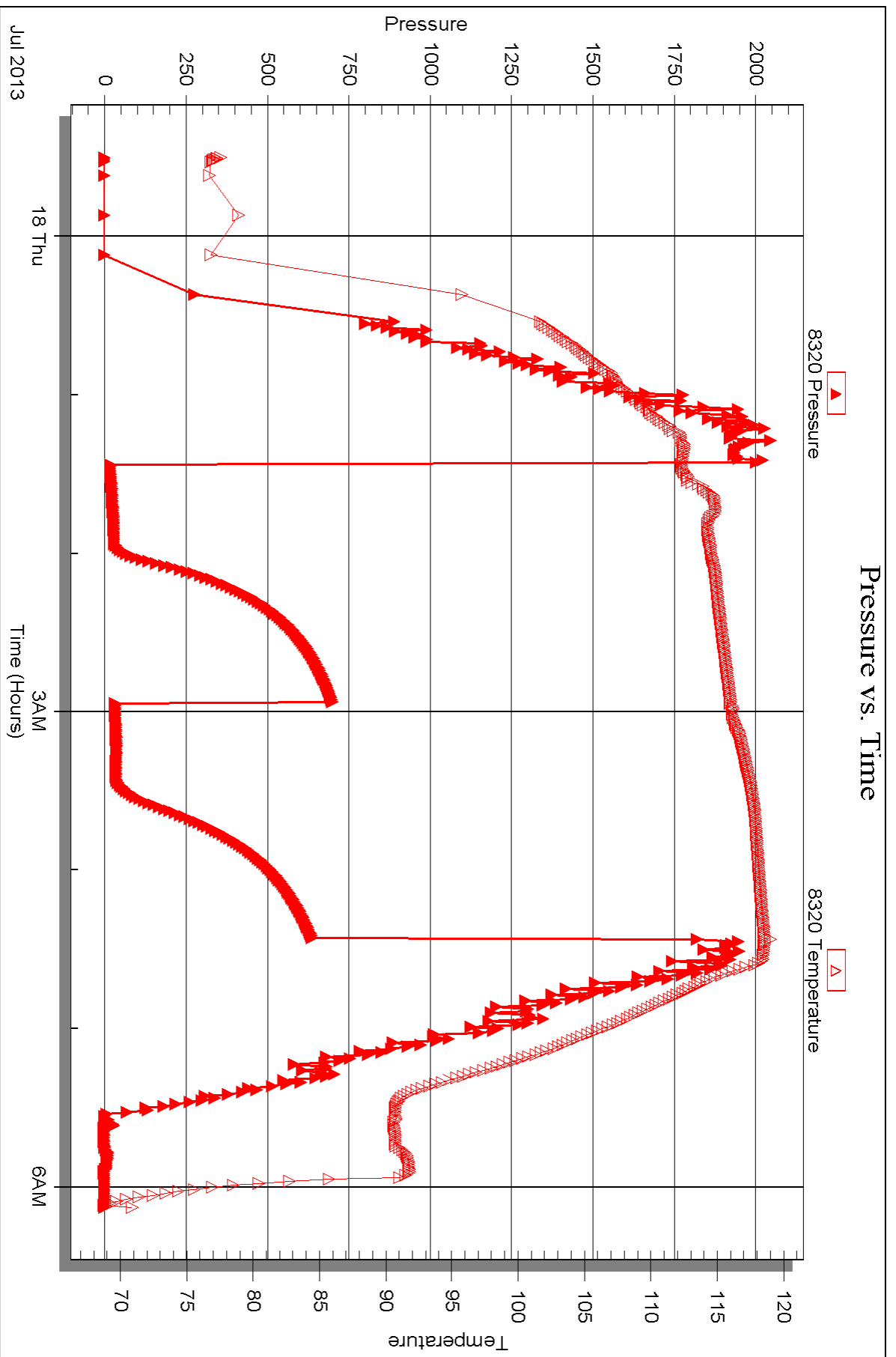


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.18 @ 13:52:00

End Date: 2013.07.18 @ 22:03:00

Job Ticket #: 52768 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.07.22 @ 15:35:20



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Jeff Christian

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 52768

DST#: 4

Test Start: 2013.07.18 @ 13:52:00

GENERAL INFORMATION:

Formation: **LKC "G - H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:21:45
 Time Test Ended: 22:03:00
 Interval: **4030.00 ft (KB) To 4091.00 ft (KB) (TVD)**
 Total Depth: 4091.00 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: 2919.00 ft (KB)
 2908.00 ft (CF)
 KB to GR/CF: 11.00 ft

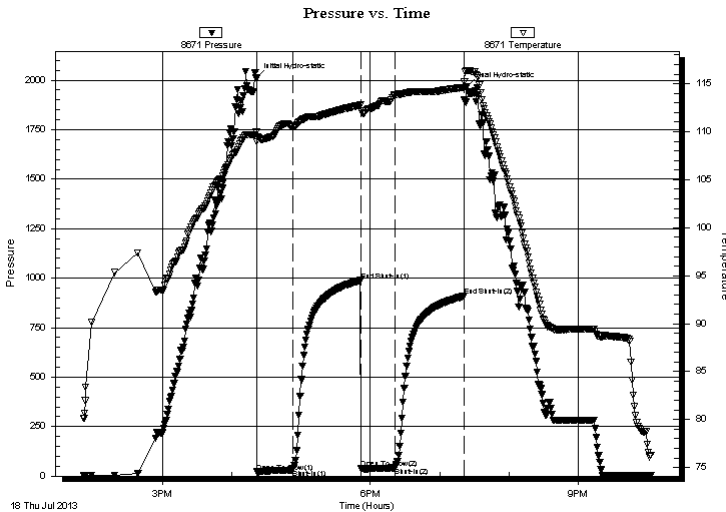
Serial #: 8671

Inside

Press @ Run Depth: 41.83 psig @ 4031.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.18 End Date: 2013.07.18 Last Calib.: 2013.07.18
 Start Time: 13:52:05 End Time: 22:02:59 Time On Btm: 2013.07.18 @ 16:21:30
 Time Off Btm: 2013.07.18 @ 19:23:15

TEST COMMENT: 30 - IF: Blow built to 1 3/4"
 60 - IS: No blow back
 30 - FF: Blow started at 12 min., built to 1/4"
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2010.93	109.98	Initial Hydro-static
1	21.31	108.93	Open To Flow (1)
31	32.40	110.50	Shut-In(1)
90	987.74	112.77	End Shut-In(1)
91	37.63	112.21	Open To Flow (2)
120	41.83	113.83	Shut-In(2)
180	908.83	114.63	End Shut-In(2)
182	1968.29	116.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
53.00	SWCM w /trace oil 95%w, 5%w	0.26

* 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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52768

DST#: 4

ATTN: Jeff Christian

Test Start: 2013.07.18 @ 13:52:00

Tool Information

Drill Pipe:	Length: 3781.00 ft	Diameter: 3.80 inches	Volume: 53.04 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4030.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 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			4007.00	
Hydraulic tool	5.00			4012.00	
Jars	5.00			4017.00	
Safety Joint	3.00			4020.00	
Packer	5.00			4025.00	28.00 Bottom Of Top Packer
Packer	5.00			4030.00	
Stubb	1.00			4031.00	
Recorder	0.00	8671	Inside	4031.00	
Recorder	0.00	8320	Outside	4031.00	
Perforations	21.00			4052.00	
Blank Spacing	33.00			4085.00	
Perforations	3.00			4088.00	
Bullnose	3.00			4091.00	61.00 Bottom Packers & Anchor

Total Tool Length: 89.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 52768

DST#: 4

ATTN: Jeff Christian

Test Start: 2013.07.18 @ 13:52:00

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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
53.00	SWCM w/trace oil 95% _m , 5% _w	0.261

Total Length: 53.00 ft Total Volume: 0.261 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

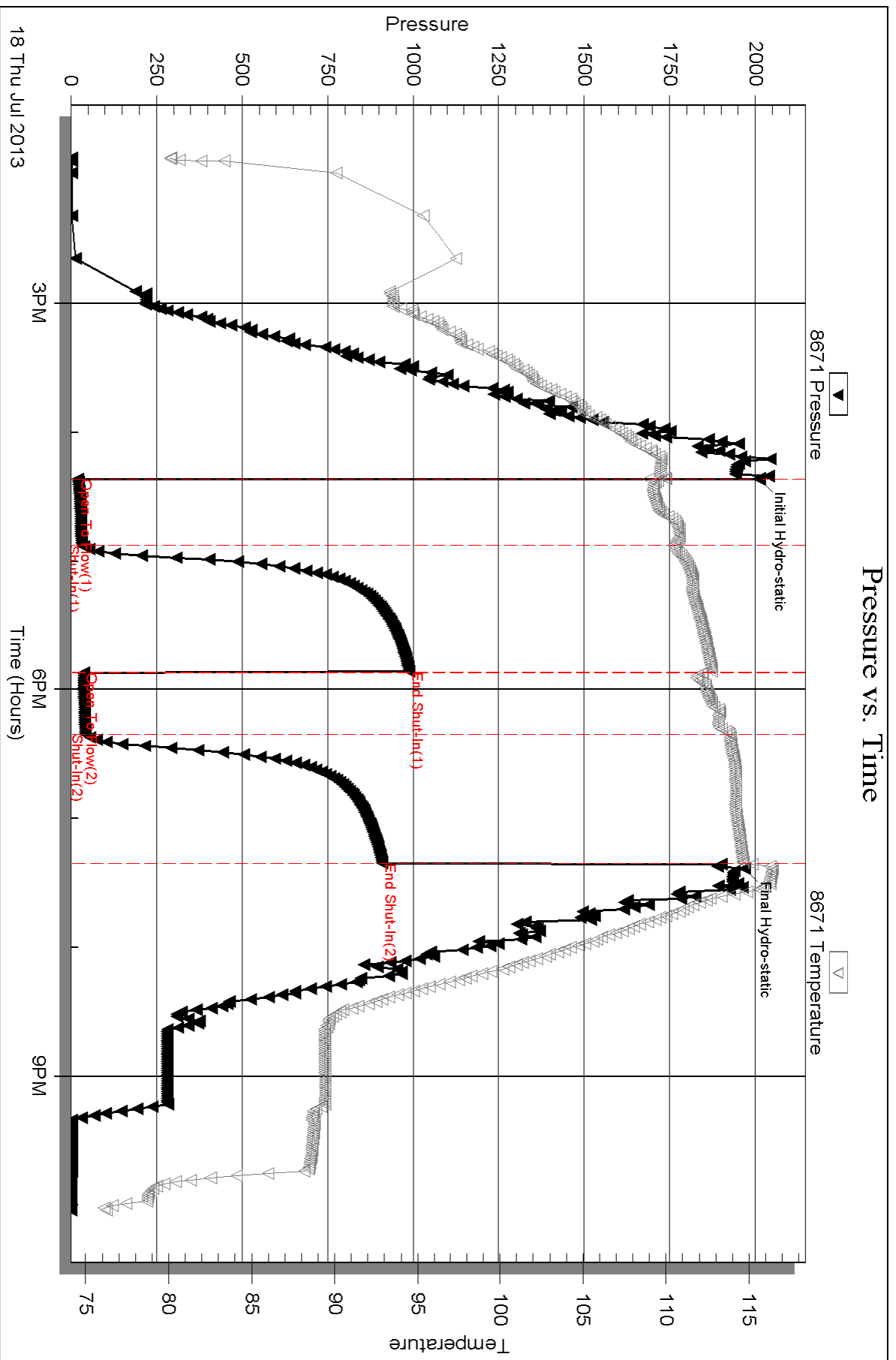
Serial #: 8671

Inside

Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 4

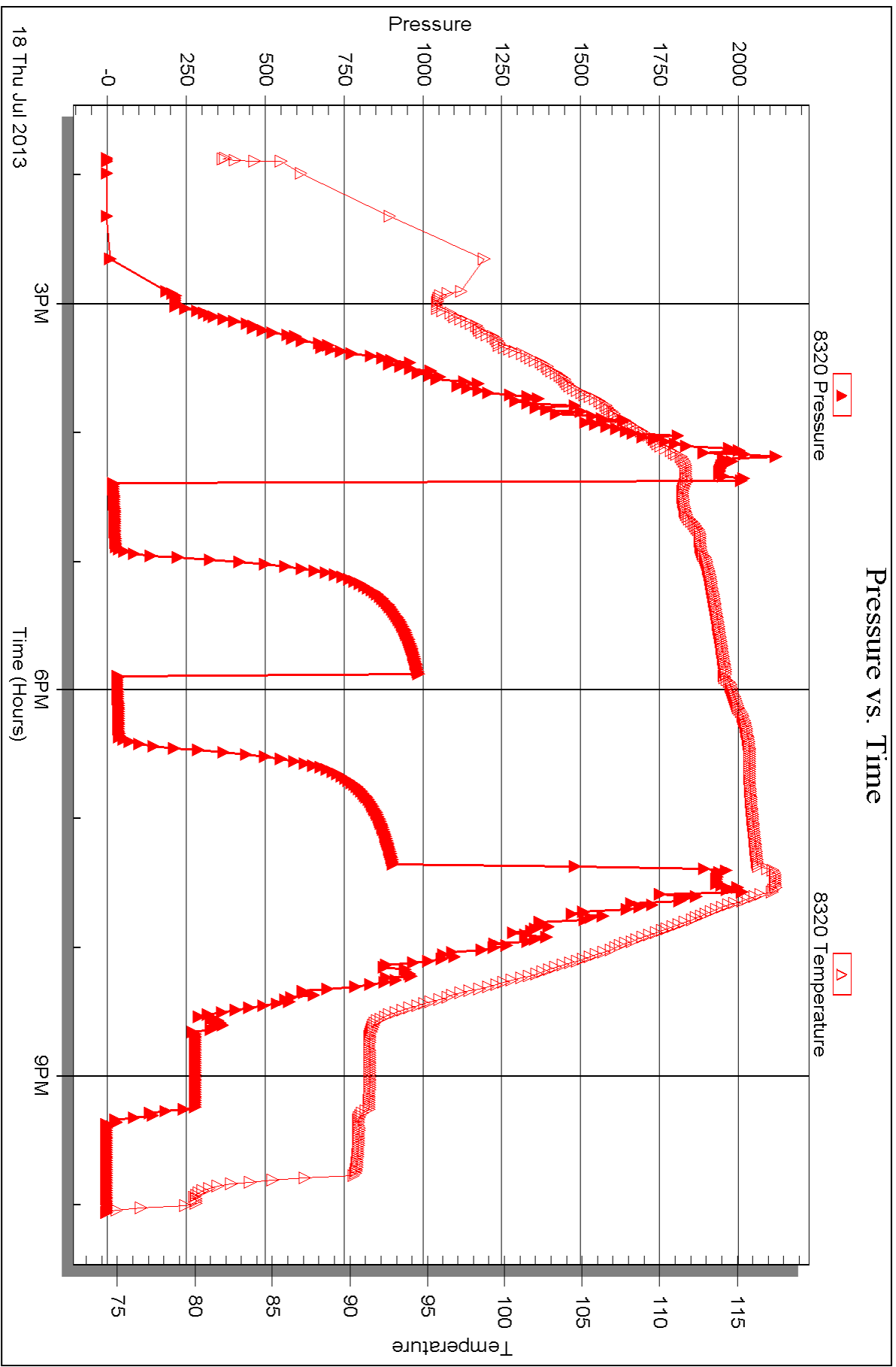


Serial #: 8320

Outside Murfin Drilling Co., Inc.

Doris #1-22

DST Test Number: 4





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Jeff Christian

Doris #1-22

22-4s-31w Rawlins KS

Start Date: 2013.07.19 @ 08:04:00

End Date: 2013.07.19 @ 15:15:00

Job Ticket #: 53461 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.07.22 @ 15:31:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water Suite 300
 Wichita, KS 67202
 ATTN: Jeff Christian

22-4s-31w Rawlins KS

Doris #1-22

Job Ticket: 53461

DST#: 5

Test Start: 2013.07.19 @ 08:04:00

GENERAL INFORMATION:

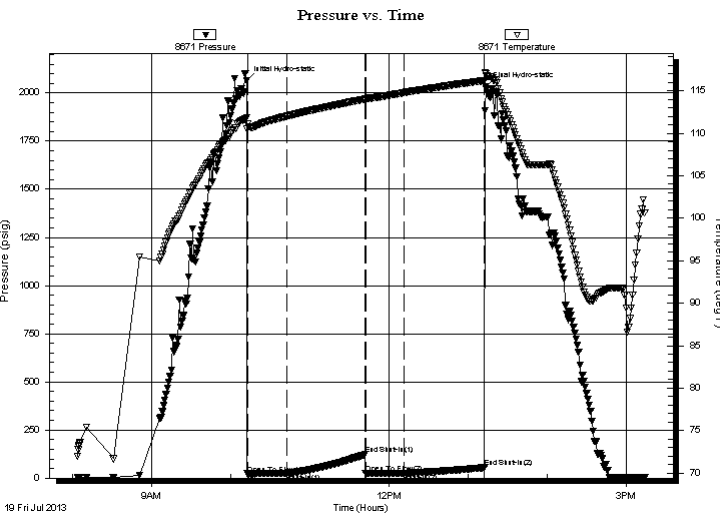
Formation: **LKC " H - L "**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 10:12:45
 Tester: Ryan Nichols
 Time Test Ended: 15:15:00
 Unit No: 57
 Interval: **4086.00 ft (KB) To 4180.00 ft (KB) (TVD)**
 Reference Elevations: 2919.00 ft (KB)
 Total Depth: 4180.00 ft (KB) (TVD)
 2908.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 11.00 ft

Serial #: 8671

Inside

Press @ Run Depth: 25.69 psig @ 4087.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.19 End Date: 2013.07.19 Last Calib.: 2013.07.19
 Start Time: 08:04:05 End Time: 15:14:59 Time On Btm: 2013.07.19 @ 10:12:30
 Time Off Btm: 2013.07.19 @ 13:13:45

TEST COMMENT: 30 IF - Surface blow built to 1/4" @ 3 mins died back to surface blow
 60 ISI - No return
 30 FF - No blow
 60 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2064.64	111.85	Initial Hydro-static
1	21.33	110.50	Open To Flow (1)
31	23.91	112.03	Shut-In(1)
90	122.31	114.03	End Shut-In(1)
90	24.77	113.98	Open To Flow (2)
120	25.69	114.80	Shut-In(2)
181	54.29	116.22	End Shut-In(2)
182	2031.49	117.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud - 100%	0.02

* 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.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 53461

DST#: 5

ATTN: Jeff Christian

Test Start: 2013.07.19 @ 08:04:00

Tool Information

Drill Pipe:	Length: 3846.00 ft	Diameter: 3.80 inches	Volume: 53.95 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: 231.00 ft	Diameter: 2.25 inches	Volume: 1.14 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 55.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4086.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	94.00 ft			
Tool Length:	122.00 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			4063.00	
Hydraulic tool	5.00			4068.00	
Jars	5.00			4073.00	
Safety Joint	3.00			4076.00	
Packer	5.00			4081.00	28.00 Bottom Of Top Packer
Packer	5.00			4086.00	
Stubb	1.00			4087.00	
Recorder	0.00	8671	Inside	4087.00	
Recorder	0.00	8320	Outside	4087.00	
Perforations	25.00			4112.00	
Change Over Sub	1.00			4113.00	
Blank Spacing	63.00			4176.00	
Change Over Sub	1.00			4177.00	
Bullnose	3.00			4180.00	94.00 Bottom Packers & Anchor

Total Tool Length: 122.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

22-4s-31w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Doris #1-22

Job Ticket: 53461

DST#: 5

ATTN: Jeff Christian

Test Start: 2013.07.19 @ 08:04:00

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: 6.79 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 - 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

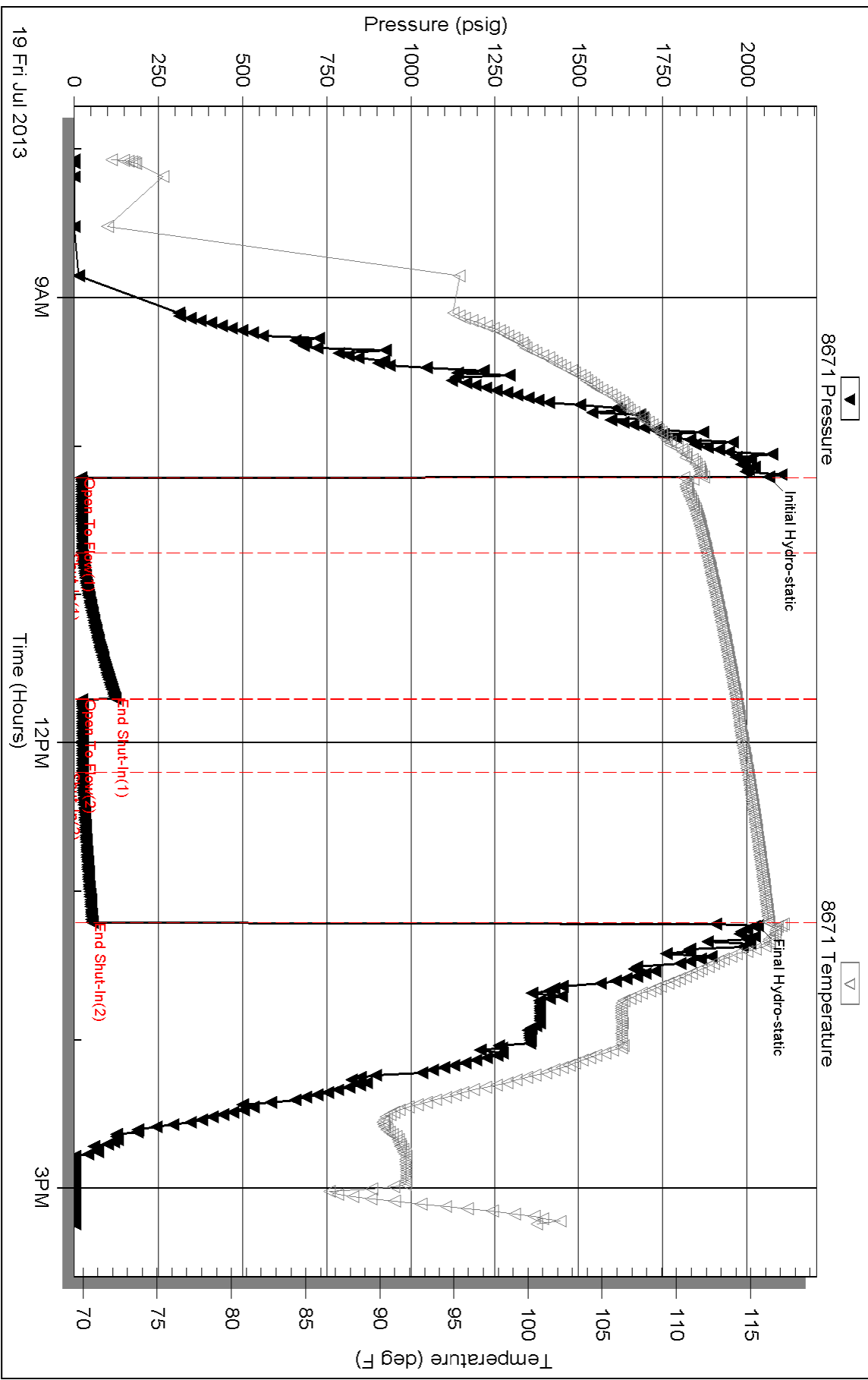
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52765

Well Name & No. Doris #1-22 Test No. 1 Date 7-16-13
 Company Murfin Drilling Co. Inc. Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4s Rge. 31w Co. Rawlins State KS

Interval Tested 3911 - 3995 Zone Tested Toronto - LKC "A4B"
 Anchor Length 84 Drill Pipe Run 3656 Mud Wt. 9.1
 Top Packer Depth 3906 Drill Collars Run 231 Vis 61
 Bottom Packer Depth 3911 Wt. Pipe Run - WL 6.4
 Total Depth 3995 Chlorides 1300 ppm System LCM 4

Blow Description IF: Blow built slowly to 1 1/4"
ISI: No blowback
FF: No blow
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>mud</u>				<u>100%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

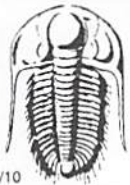
Rec Total 65 BHT 117 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1919 Test * 1150 T-On Location 19:30 7/16
 (B) First Initial Flow 21 Jars * 250 T-Started 20:14
 (C) First Final Flow 34 Safety Joint * 75 T-Open 22:33
 (D) Initial Shut-In 1303 Circ Sub ANA T-Pulled 1:33
 (E) Second Initial Flow 38 Hourly Standby _____ T-Out 3:15 7/17
 (F) Second Final Flow 51 Mileage 48RT 74.40 Comments _____
 (G) Final Shut-In 1295 Sampler _____
 (H) Final Hydrostatic 1863 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1549.40
 Final Flow 30 Accessibility 3 MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1549.40

Approved By Jeff Christian

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. 52766

Well Name & No. Doris #1-22 Test No. 2 Date 7-17-13
 Company Murfin Drilling Co. Inc. Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4s Rge. 31w Co. Rawlins State KS

Interval Tested 3992 - 4014 Zone Tested LKC "D"
 Anchor Length 22 Drill Pipe Run 3750 Mud Wt. 9.1
 Top Packer Depth 3987 Drill Collars Run 231 Vis 56
 Bottom Packer Depth 3992 Wt. Pipe Run - WL 6.4
 Total Depth 4014 Chlorides 1300 ppm System LCM 5

Blow Description IF: Blow built slowly to 1 1/2"
ISI: No blowback
FF: Blow started at 13 min., built to 2"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>Feet of wcm w/trace of oil</u>	<u>2</u>	<u>trace</u>	<u>22</u>	<u>76</u>
<u>58</u>	<u>Feet of Muddy Water w/trace of oil</u>	<u>-</u>	<u>trace</u>	<u>52</u>	<u>48</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

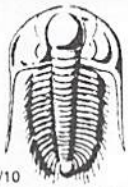
Rec Total 103 BHT 119 Gravity - API RW -205 @ 92.5 °F Chlorides 25000 ppm

(A) Initial Hydrostatic <u>1966</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>8:40</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>9:00</u>
(C) First Final Flow <u>35</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>11:03</u>
(D) Initial Shut-In <u>1244</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>15:03</u>
(E) Second Initial Flow <u>38</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>16:40</u>
(F) Second Final Flow <u>67</u>	<input type="checkbox"/> Mileage <u>48RT</u> 74.40	Comments
(G) Final Shut-In <u>1236</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1948</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer

Initial Open 30 Shale Packer
 Initial Shut-In 60 Extra Packer
 Final Flow 60 Extra Recorder
 Final Shut-In 90 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1649.40

Approved By Jeff Christian 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. 52767

Well Name & No. Doris #1-22 Test No. 3 Date 7-18-13
 Company Murfin Drilling Co. Inc Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4S Rge. 31w Co. Rawlins State KS

Interval Tested 4011 - 4036 Zone Tested LKC "F"
 Anchor Length 25 Drill Pipe Run 3782 Mud Wt. 9.1
 Top Packer Depth 4006 Drill Collars Run 231 Vis 56
 Bottom Packer Depth 4011 Wt. Pipe Run - WL 6.4
 Total Depth 4036 Chlorides 1300 ppm System LCM 5

Blow Description IF: Blow built slowly to 1 1/4"
ISI: No blowback
FF: No blow
FSI: No blowback

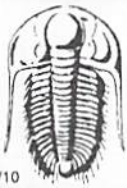
Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>50cm</u>	<u>1</u>	<u>2</u>	<u>97</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 45 BHT 115 Gravity - API RW - @ - ° F Chlorides - ppm
 (A) Initial Hydrostatic 2009 Test * 1250 T-On Location 23:00 7/17
 (B) First Initial Flow 21 Jars * 250 T-Started 23:30
 (C) First Final Flow 33 Safety Joint * 75 T-Open 1:25
 (D) Initial Shut-In 702 Circ Sub *NA T-Pulled 4:24
 (E) Second Initial Flow 35 Hourly Standby T-Out 6:00
 (F) Second Final Flow 40 Mileage 48RT 74.40 Comments
 (G) Final Shut-In 641 Sampler
 (H) Final Hydrostatic 1959 Straddle Ruined Shale Packer

Initial Open 30 Shale Packer Ruined Packer
 Initial Shut-In 60 Extra Packer Extra Copies
 Final Flow 30 Extra Recorder Sub Total 0
 Final Shut-In 60 Day Standby Total 1649.40
 Accessibility MP/DST Disc't
 Sub Total 1649.40

Approved By Jeff Cht 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 of 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. 52768

Well Name & No. Doris #1-22 Test No. 4 Date 7-18-13
 Company Murfin Drilling Co, Inc. Elevation 2919 KB 2908 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #2
 Location: Sec. 22 Twp. 4s Rge. 31w Co. Rawlins State KS

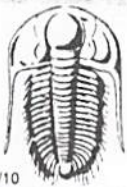
Interval Tested 4030 - 4091 Zone Tested LKC "G-H"
 Anchor Length 61 Drill Pipe Run 3781 Mud Wt. 9.0
 Top Packer Depth 4025 Drill Collars Run 231 Vis 62
 Bottom Packer Depth 4030 Wt. Pipe Run - WL 6.4
 Total Depth 4091 Chlorides 1500 ppm System LCM 5#
 Blow Description IF: Blow built to 1 3/4"
ISI: No blowback
FF: Blow started at 12 min., built to 1/4"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>53</u>	<u>swcm w/trace of oil</u>	<u>-</u>	<u>trace</u>	<u>5</u>	<u>95</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 53 BHT 115 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2011 Test * 1250 T-On Location 13:30
 (B) First Initial Flow 21 Jars * 250 T-Started 13:52
 (C) First Final Flow 32 Safety Joint * 75 T-Open 16:21
 (D) Initial Shut-In 988 Circ Sub *NA T-Pulled 19:20
 (E) Second Initial Flow 38 Hourly Standby T-Out 22:00
 (F) Second Final Flow 42 Mileage 48RT 74.40 Comments _____
 (G) Final Shut-In 909 Sampler _____
 (H) Final Hydrostatic 1968 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1649.40
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1649.40

Approved By Jeff Christian 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. 53461

Well Name & No. Doris #1-22 Test No. 5 Date 7/19/13
 Company Murfin Drilling Co. Elevation 2919 KB 2908 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christianson Rig Murfin #2
 Location: Sec. 22 Twp. 4S Rge. 31W Co. Rawlins State KS

Interval Tested 4086-4180 Zone Tested LKC "H-L"
 Anchor Length 94' Drill Pipe Run 3846' Mud Wt. 9.2
 Top Packer Depth 4081 Drill Collars Run 231' Vis 56
 Bottom Packer Depth 4086 Wt. Pipe Run 0' WL 6.8
 Total Depth 4180 Chlorides 1600 ppm System LCM 5

Blow Description IF - @ Surface blow built to 1/4" @ 3 mins died back to surface
blow
ISI - No return
FF - No blow
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
5'	Mud			100	

Rec Total 5' BHT 116° Gravity — API RW — @ — F Chlorides — ppm

(A) Initial Hydrostatic <u>2065</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>07:30</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>08:04</u>
(C) First Final Flow <u>24</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:13</u>
(D) Initial Shut-In <u>122</u>	<input checked="" type="checkbox"/> Circ Sub <u>NL</u>	T-Pulled <u>13:13</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>15:15</u>
(F) Second Final Flow <u>26</u>	<input checked="" type="checkbox"/> Mileage <u>48 RT x 2</u> <small>148.80</small>	Comments <u>Loaded tools</u>
(G) Final Shut-In <u>54</u>	<input type="checkbox"/> Sampler	<u>@ 22:15 7/20/13</u>
(H) Final Hydrostatic <u>2031</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Extra Recorder	Sub Total <u>800</u>
	<input type="checkbox"/> Day Standby <u>1d 7h</u>	Total <u>2523.80</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1723.80</u>	

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

Approved By _____ Our Representative [Signature]
 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.



PO Box 93999
Southlake, TX 76092

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

INVOICE

acct, prod = LH

Invoice Number: 1373 12
Invoice Date: Jul 13, 2013
Page: 1

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

Now Includes:



Customer-ID	Field Ticket #	Payment Terms	
Murfin	60345	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Jul 13, 2013	8/12/13

Quantity	Item	Description	Unit Price	Amount
195.00	MAT	Doris #1-22	17.90	3,490.50
7.00	MAT	Class A Common Chloride	64.00	448.00
204.75	SER	Cubic Feet	2.48	507.78
472.00	SER	Ton Mileage	2.60	1,227.20
1.00	SER	Surface	1,512.25	1,512.25
50.00	SER	Pump Truck Mileage	7.70	385.00
1.00	SER	Manifold Rental	275.00	275.00
50.00	SER	Light Vehicle Mileage	4.40	220.00
1.00	CEMENTER	LaRene Wentz		
1.00	EQUIP OPER	Tyler Flipse		
1.00	OPER ASSIST	Kevin Ryan		

Subtotal	8,065.73
Sales Tax	311.14
Total Invoice Amount	8,376.87
Payment/Credit Applied	
TOTAL	8,376.87

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

\$ 2,823.00 *35%*

ONLY IF PAID ON OR BEFORE
Aug 7, 2013

AD

= 2823.00
5553.87

ALLIED OIL & GAS SERVICES, LLC 060345

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
Oakley, KS

DATE <u>7-13-13</u>	SEC. <u>22</u>	TWP. <u>4</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>5:30pm</u>	JOB START <u>7:00pm</u>	JOB FINISH <u>7:30pm</u>
LEASE <u>Doris</u>	WELL # <u>1-22</u>	LOCATION <u>Rexford 20, 10, 20, 20,</u>	COUNTY <u>Rawlins</u>	STATE <u>KS</u>			
OLD OR <u>NEW</u> (Circle one)		<u>6.0, Y&E</u>					

CONTRACTOR Murfin 2
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4" T.D. 225'
 CASING SIZE 8 7/8" DEPTH 225'
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 15 ST
 PERFS. _____
 DISPLACEMENT 13.44 bbl

OWNER same
 CEMENT AMOUNT ORDERED 195 sks com 38 cc

EQUIPMENT _____
 PUMP TRUCK # 120 CEMENTER Lakene E. Wente
 HELPER Tyler Flippe
 BULK TRUCK # 600 DRIVER Kevin Ryan
 BULK TRUCK # _____ DRIVER _____

COMMON 195 sks @ 17.90 3490.50
 POZMIX _____ @ _____
 GEL _____ @ _____
 CHLORIDE 7.55 @ 64.00 498.00
 ASC _____ @ _____
 HANDLING 204.75 @ 2.48 507.78
 MILEAGE 2.44 mi X 50 X 2.60 1277.20
 TOTAL 5673.48

REMARKS:

Mix 1.95 sks cement
Displace with water
Cement did circulate.

SERVICE

DEPTH OF JOB _____
 PUMP TRUCK CHARGE 1512.25
 EXTRA FOOTAGE _____ @ _____
 MILEAGE MTHU 50 @ 7.70 385.00
 MANIFOLD _____ @ _____
MTHU 50 @ 4.40 220.00

CHARGE TO: Murfin Drilling
 STREET _____
 CITY _____ STATE _____ ZIP _____

TOTAL 2392.25

PLUG & FLOAT EQUIPMENT

_____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____

TOTAL _____

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

SALES TAX (If Any) _____
 TOTAL CHARGES 2,065.73
 DISCOUNT 2,823.00 IF PAID IN 30 DAYS

PRINTED NAME Ahmed C. Abou
 SIGNATURE Ahmed C. Abou

5,242.72 Net.



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



Invoice

DATE	INVOICE #
7/21/2013	24459

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661

- Acidizing
- Cement
- Tool Rental

SWD

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-22	Doris	Rawlins		SWD	Development	5-1/2" LongString	Josh
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				120	Miles	6.00	720.00
578D-L	Pump Charge - Long String				1	Job	1,500.00	1,500.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
290	D-Air				4	Gallon(s)	42.00	168.00T
403-5	5 1/2" Cement Basket				2	Each	285.00	570.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	275.00	275.00T
409-5	5 1/2" Turbolizer				12	Each	90.00	1,080.00T
405-5	5 1/2" Formation Packer Shoe				1	Each	1,650.00	1,650.00T
330	Swift Multi-Density Standard (MIDCON II)				425	Sacks	17.00	7,225.00T
276	Flocele				100	Lb(s)	2.00	200.00T
581D	Service Charge Cement				425	Sacks	2.00	850.00
583D	Drayage				2,539.8	Ton Miles	1.00	2,539.80
	Subtotal							17,502.80
	Sales Tax Rawlins County						7.90%	939.55
We Appreciate Your Business!							Total	\$18,442.35

USED FOR *IC 103*
APPROVED *ST R*



CHARGE TO: Mudfln
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET
 No 24459

PAGE 1 OF 2

SERVICE LOCATIONS

1. <u>Kays Ks</u>	WELL/PROJECT NO. <u>122</u>	LEASE <u>Doris</u>	COUNTY/PARISH <u>Nowlin</u>	STATE <u>KS</u>	CITY	DATE <u>7-21-13</u>	OWNER
2. <u>Ness City Ks</u>	TICKET TYPE <u>CONTRACTOR</u>	RIG NAME NO.	SHIPPED VIA CT	DELIVERED TO <u>location</u>	WELL PERMIT NO.	ORDER NO.	WELL LOCATION <u>Sec 22, Twp 4s, R 31w</u>
3. <u>SWD</u>	WELL TYPE	WELL CATEGORY <u>Develop</u>	JOB PURPOSE <u>5 1/2 Long string</u>				
4. <u>SWD</u>	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE	120	mi			6.00	720.00
578					Pump Charge	1	ea			1500.00	1500.00
221					Liquid KLL	4	gal			25.00	100.00
281					Mud Flush	500	gal			1.25	625.00
290					O-Air	4	gal			42.00	168.00
403					Leopener Basket	2	ea			285.00	570.00
406					Latch Oawa Plug + Baffle	1	ea			275.00	275.00
409					Turbolizer	12	ea			90.00	1080.00
405					Basket Shoe	1	ea			1650.00	1650.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED 7-21-13 TIME SIGNED 0245 A.M. P.M.

SIGNED Alan Robinson

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 92 TOTAL 18,442.35

Subtotal 17,502.80
 Williams Tax 939.55
 Total 18,442.35

SWIFT OPERATOR AW APPROVAL

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

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 7-21-13 PAGE NO.

CUSTOMER Murkin WELL NO. 1-22 LEASE Dorris JOB TYPE 5 1/2 Long string TICKET NO. 24459

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0245							on location LDDP
								TD 4538 SS 42
								TP 2780 Insert 2738
								5 1/2 x 15.5"
								centralizer 1,3,5,7,9,11,13,15,17,19,21,34
								Basket 18, 35
	0500							Start Pipe
	0600							Break Circulation
	0625							Drop Ball Set Triplex Shoe
	0700	5	12		✓		300	Start Mud flush
		5	20		✓		300	Start KCL flush
	0710	5	138		✓		200	Start cement 250 sks @ 11.2*
		5	27		✓		200	75 sks @ 12.7*
		5	14		✓		200	50 sks @ 14*
	0755							Drop Plug wash out Pump + Lines
	0758		20		✓			Start Displacement w/20661 KCL
					✓			Finish w/H ₂ O
			37		✓			Circulate Cement circulated
	0810		65.1		✓			50 sks @ = pit
								Lead Plug
								Release Dry
	0815		7/5					Plug RH 30 sks MH 20 sks
								wash up back VP
	0900							Job complete
								Thank You
								Josh, Brian, John