



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1181441
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: _____

1181441

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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MDCI Shaw-Albers Unit #1-6 1275 FSL 2185 FEL Sec. 6-T6S-R29W 2802' KB							MDCI R&T Shaw #1-32 1500 FNL 2310 FEL Sec. 32-T5S-R29W 2776' KB		
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum	
Anhydrite	2546	+256	+3	2548	+254	+1	2523	+253	
B/Anhydrite	2580	+222	+3	2583	+219	Flat	2557	+219	
Topeka	3684	-882	-6	3683	-881	-5	3652	-876	
Heebner	3860	-1058	-8	3862	-1060	-10	3826	-1050	
Toronto	3889	-1087	-7	3894	-1092	-12	3856	-1080	
Lansing	3906	-1104	-10	3908	-1106	-12	3870	-1094	
Stark	4063	-1261	-9	4066	-1264	-12	4028	-1252	
BKC	4110	-1308	-9	4113	-1311	-12	4075	-1299	
RTD	4220						4150		
LTD				4224			4151		



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Bob Stolze

Shaw-Albers #1-6

6 6s 29w Sheridan,KS

Start Date: 2013.09.24 @ 01:55:00

End Date: 2013.09.24 @ 10:13:30

Job Ticket #: 52743 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.09.27 @ 16:16:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N. Water Ste. 300
 Wichita KS 67202
 ATTN: Bob Stolzle

6 6s 29w Sheridan, KS
Shaw-Albers #1-6
 Job Ticket: 52743 **DST#: 1**
 Test Start: 2013.09.24 @ 01:55:00

GENERAL INFORMATION:

Formation: **Tor- LKC-A,B**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 04:23:30 Tester: Chuck Kreuzer Jr.
 Time Test Ended: 10:13:30 Unit No: 61
 Interval: **3858.00 ft (KB) To 3937.00 ft (KB) (TVD)** Reference Elevations: 2802.00 ft (KB)
 Total Depth: 3937.00 ft (KB) (TVD) 2792.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

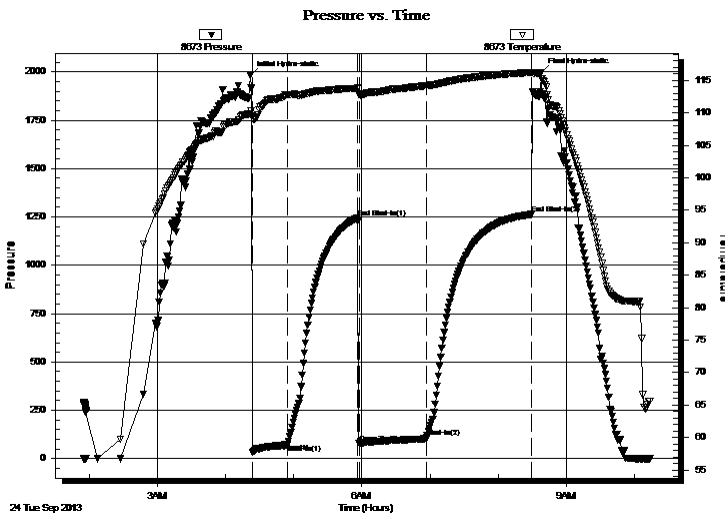
Serial #: 8673

Inside

Press @ Run Depth: 109.13 psig @ 3859.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.09.24 End Date: 2013.09.24 Last Calib.: 2013.09.24
 Start Time: 01:55:01 End Time: 10:13:30 Time On Btm: 2013.09.24 @ 04:21:30
 Time Off Btm: 2013.09.24 @ 08:38:00

TEST COMMENT: IF: Weak blow , Built to 4" over 30 mins.
 IS: No blow back
 FF: No blow
 FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1982.60	109.93	Initial Hydro-static
2	32.93	109.56	Open To Flow (1)
33	72.21	112.83	Shut-In(1)
95	1244.18	113.81	End Shut-In(1)
96	79.70	112.89	Open To Flow (2)
156	109.13	114.19	Shut-In(2)
248	1263.97	116.23	End Shut-In(2)
257	1996.84	115.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
117.00	Hocw m-30%w 20%m50%o	0.58
116.00	Hocw m-10%w 30%m60%o	0.57

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Bob Stolzle

6 6s 29w Sheridan, KS
Shaw-Albers #1-6
Job Ticket: 52743 **DST#: 1**
Test Start: 2013.09.24 @ 01:55:00

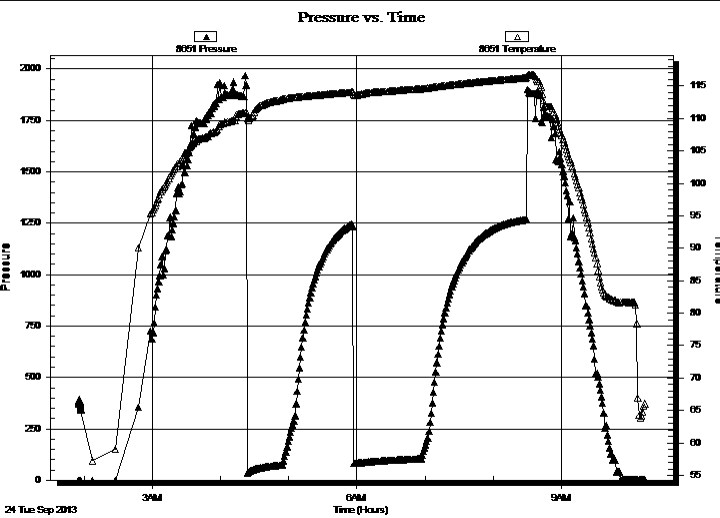
GENERAL INFORMATION:

Formation: **Tor- LKC-A,B**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 04:23:30 Tester: Chuck Kreuzer Jr.
Time Test Ended: 10:13:30 Unit No: 61

Interval: **3858.00 ft (KB) To 3937.00 ft (KB) (TVD)** Reference Elevations: 2802.00 ft (KB)
Total Depth: 3937.00 ft (KB) (TVD) 2792.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8651 Outside
Press @ Run Depth: psig @ 3859.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.09.24 End Date: 2013.09.24 Last Calib.: 2013.09.24
Start Time: 01:55:01 End Time: 10:14:00 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak blow , Built to 4" over 30 mins.
IS: No blow back
FF: No blow
FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
117.00	Hocw m-30%w 20%m50%o	0.58
116.00	Hocw m-10%w 30%m60%o	0.57

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

6 6s 29w Sheridan,KS

250 N. Water Ste. 300
Wichita KS 67202

Shaw-Albers #1-6

Job Ticket: 52743

DST#: 1

ATTN: Bob Stolzle

Test Start: 2013.09.24 @ 01:55:00

Tool Information

Drill Pipe:	Length: 3627.00 ft	Diameter: 3.80 inches	Volume: 50.88 bbl	Tool Weight: 2800.00 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: 233.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 52.03 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3858.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	79.00 ft			
Tool Length:	107.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3835.00	
Hydraulic tool	5.00			3840.00	
Jars	5.00			3845.00	
Safety Joint	3.00			3848.00	
Packer	5.00			3853.00	28.00 Bottom Of Top Packer
Packer	5.00			3858.00	
Stubb	1.00			3859.00	
Recorder	0.00	8673	Inside	3859.00	
Recorder	0.00	8651	Outside	3859.00	
Perforations	10.00			3869.00	
change Over Sub	1.00			3870.00	
Drill Pipe	63.00			3933.00	
Change Over Sub	1.00			3934.00	
Bullnose	3.00			3937.00	79.00 Bottom Packers & Anchor

Total Tool Length: 107.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

6 6s 29w Sheridan,KS

250 N. Water Ste. 300
Wichita KS 67202

Shaw-Albers #1-6

Job Ticket: 52743

DST#: 1

ATTN: Bob Stolzle

Test Start: 2013.09.24 @ 01:55:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 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
117.00	Hocw m-30%w 20%m50%o	0.575
116.00	Hocw m-10%w 30%m60%o	0.570

Total Length: 233.00 ft

Total Volume: 1.145 bbl

Num Fluid Samples: 0

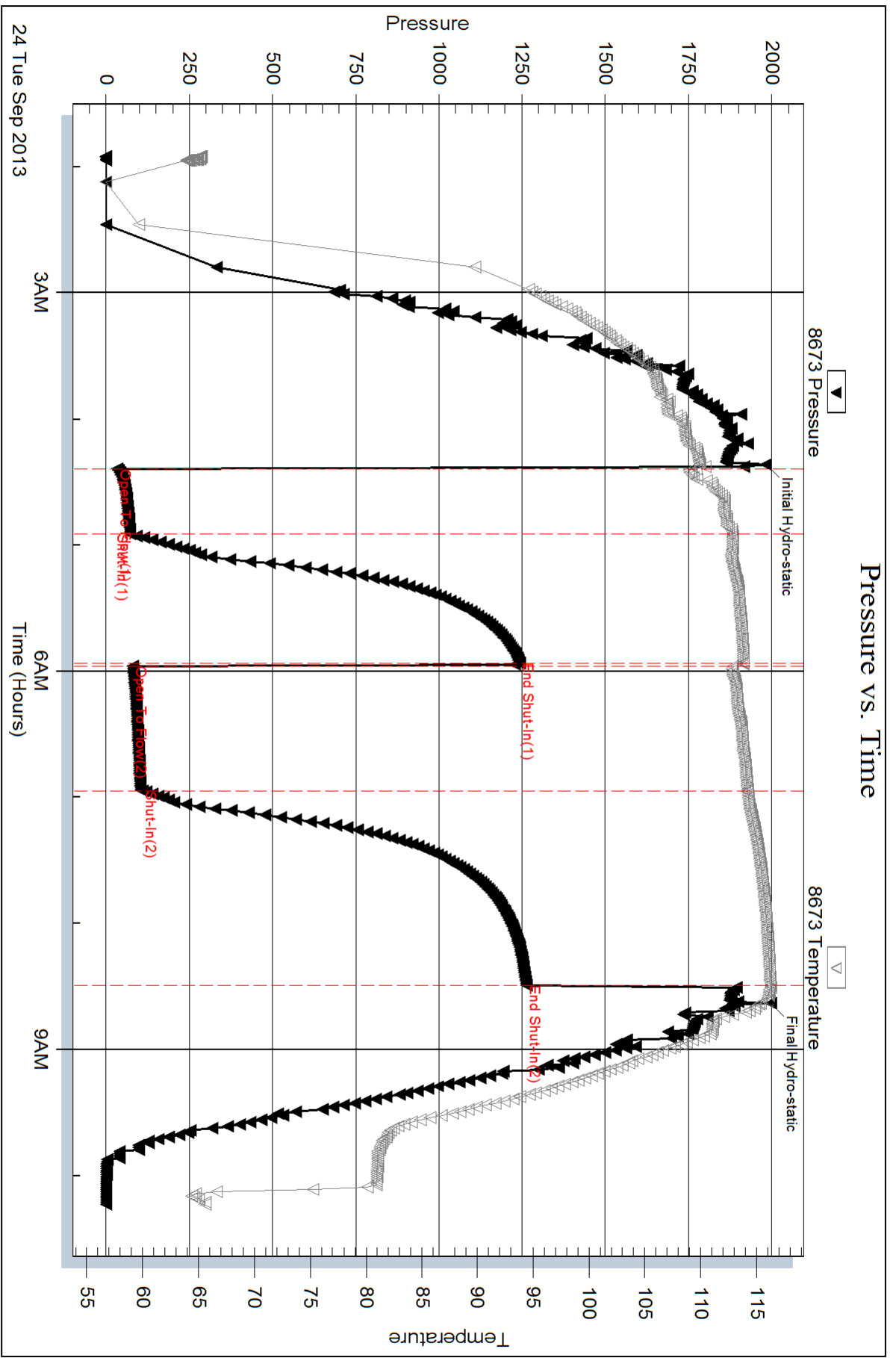
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

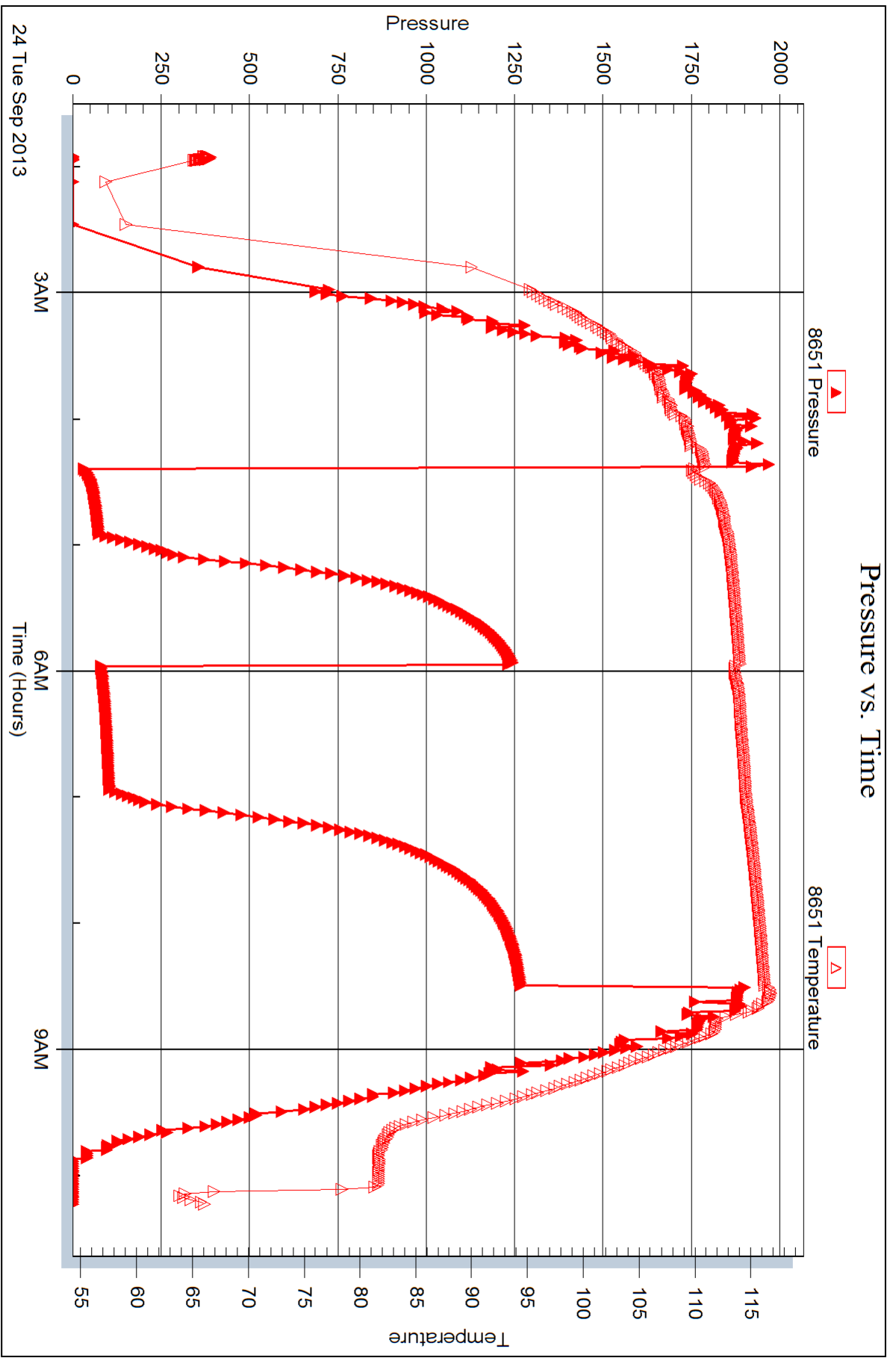


Serial #: 8651

Outside Murfin Drilling Co

Shaw-Albers #1-6

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Bob Stolze

Shaw-Albers #1-6

6 6s 29w Sheridan,KS

Start Date: 2013.09.24 @ 17:10:00

End Date: 2013.09.24 @ 22:53:30

Job Ticket #: 52744 DST #: 2

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

Printed: 2013.09.27 @ 16:15:39

Murfin Drilling Co
6 6s 29w Sheridan,KS
Shaw-Albers #1-6
DST # 2
LKC-E,F
2013.09.24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Bob Stolzle

6 6s 29w Sheridan, KS
Shaw-Albers #1-6
Job Ticket: 52744 **DST#: 2**
Test Start: 2013.09.24 @ 17:10:00

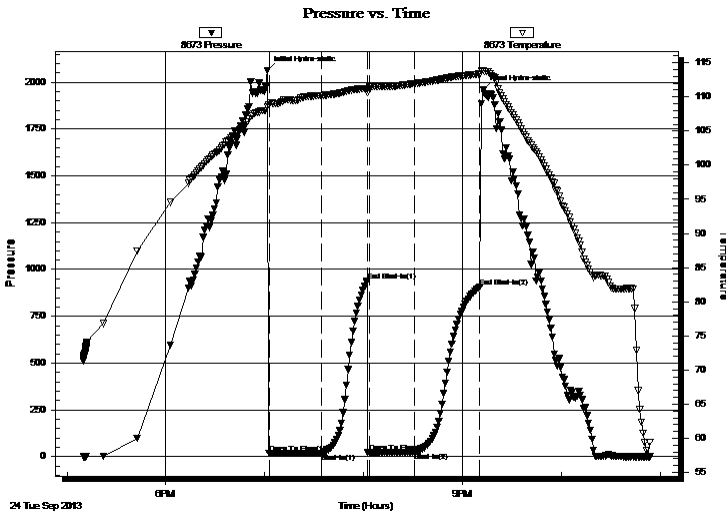
GENERAL INFORMATION:

Formation: **LKC-EF**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 19:02:30 Tester: Chuck Kreuzer Jr.
Time Test Ended: 22:53:30 Unit No: 61
Interval: 3956.00 ft (KB) To 3980.00 ft (KB) (TVD) Reference Elevations: 2802.00 ft (KB)
Total Depth: 3980.00 ft (KB) (TVD) 2792.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8673 Inside
Press @ Run Depth: 23.24 psig @ 3957.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.09.24 End Date: 2013.09.24 Last Calib.: 2013.09.24
Start Time: 17:10:01 End Time: 22:53:30 Time On Btm: 2013.09.24 @ 19:01:30
Time Off Btm: 2013.09.24 @ 21:12:30

TEST COMMENT: IF: Weak surface blow, started and stopped through out 30 mins.
IS: No blow bsck
FF: Weak surface blow, Died in secs.
FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2063.28	108.59	Initial Hydro-static
1	18.37	108.90	Open To Flow (1)
33	19.48	110.21	Shut-In(1)
61	938.90	111.26	End Shut-In(1)
62	21.88	111.43	Open To Flow (2)
90	23.24	111.95	Shut-In(2)
129	907.48	113.34	End Shut-In(2)
131	1958.14	113.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	ocm-40% m60%o	0.00
2.00	oil-100%o	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Bob Stolzle

6 6s 29w Sheridan, KS

Shaw-Albers #1-6

Job Ticket: 52744

DST#: 2

Test Start: 2013.09.24 @ 17:10:00

GENERAL INFORMATION:

Formation: **LKC-EF**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:02:30

Time Test Ended: 22:53:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3956.00 ft (KB) To 3980.00 ft (KB) (TVD)

Reference Elevations: 2802.00 ft (KB)

Total Depth: 3980.00 ft (KB) (TVD)

2792.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8651

Outside

Press @ RunDepth: psig @ 3957.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.24

End Date: 2013.09.24

Last Calib.: 2013.09.24

Start Time: 17:10:01

End Time: 22:53:30

Time On Btm:

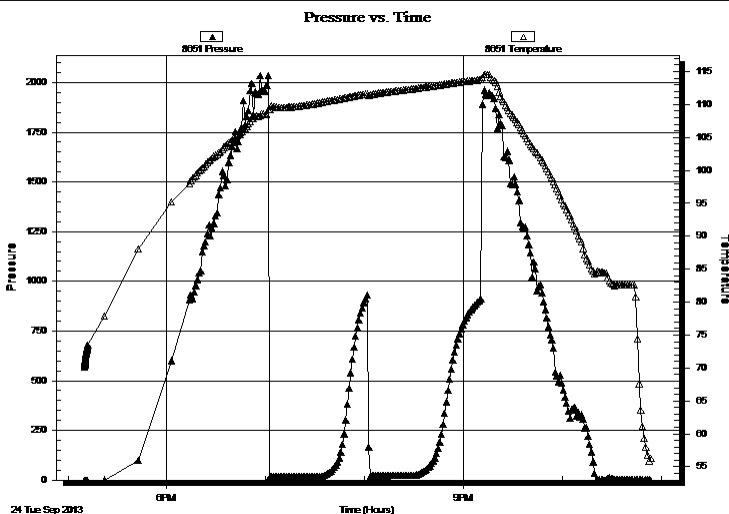
Time Off Btm:

TEST COMMENT: IF: Weak surface blow, started and stopped through out 30 mins.

IS: No blow bsck

FF: Weak surface blow, Died in secs.

FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	ocm-40%m60%o	0.00
2.00	oil-100%o	0.01

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
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Bob Stolzle

6 6s 29w Sheridan,KS
Shaw-Albers #1-6
Job Ticket: 52744 **DST#: 2**
Test Start: 2013.09.24 @ 17:10:00

Tool Information

Drill Pipe:	Length: 3715.00 ft	Diameter: 3.80 inches	Volume: 52.11 bbl	Tool Weight:	2800.00 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: 233.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume: 53.26 bbl</u>	Tool Chased	5.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3956.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	24.00 ft				
Tool Length:	52.00 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			3933.00	
Hydraulic tool	5.00			3938.00	
Jars	5.00			3943.00	
Safety Joint	3.00			3946.00	
Packer	5.00			3951.00	28.00 Bottom Of Top Packer
Packer	5.00			3956.00	
Stubb	1.00			3957.00	
Recorder	0.00	8673	Inside	3957.00	
Recorder	0.00	8651	Outside	3957.00	
Perforations	20.00			3977.00	
Bullnose	3.00			3980.00	24.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Bob Stolzle

6 6s 29w Sheridan,KS
Shaw-Albers #1-6
Job Ticket: 52744 **DST#: 2**
Test Start: 2013.09.24 @ 17:10:00

Mud and Cushion Information

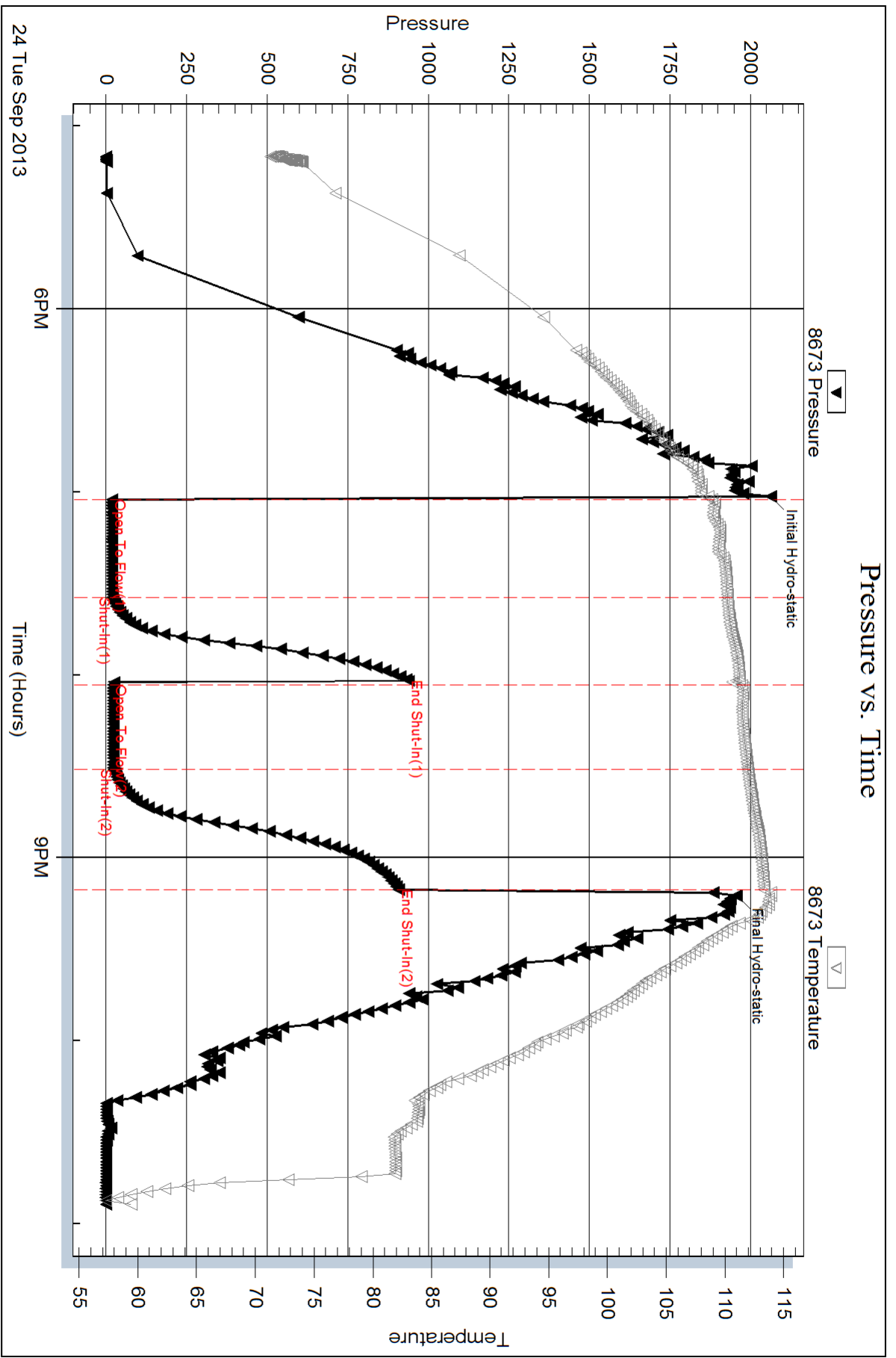
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1100.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	ocm-40% m60%o	0.005
2.00	oil-100%o	0.010

Total Length: 3.00 ft Total Volume: 0.015 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

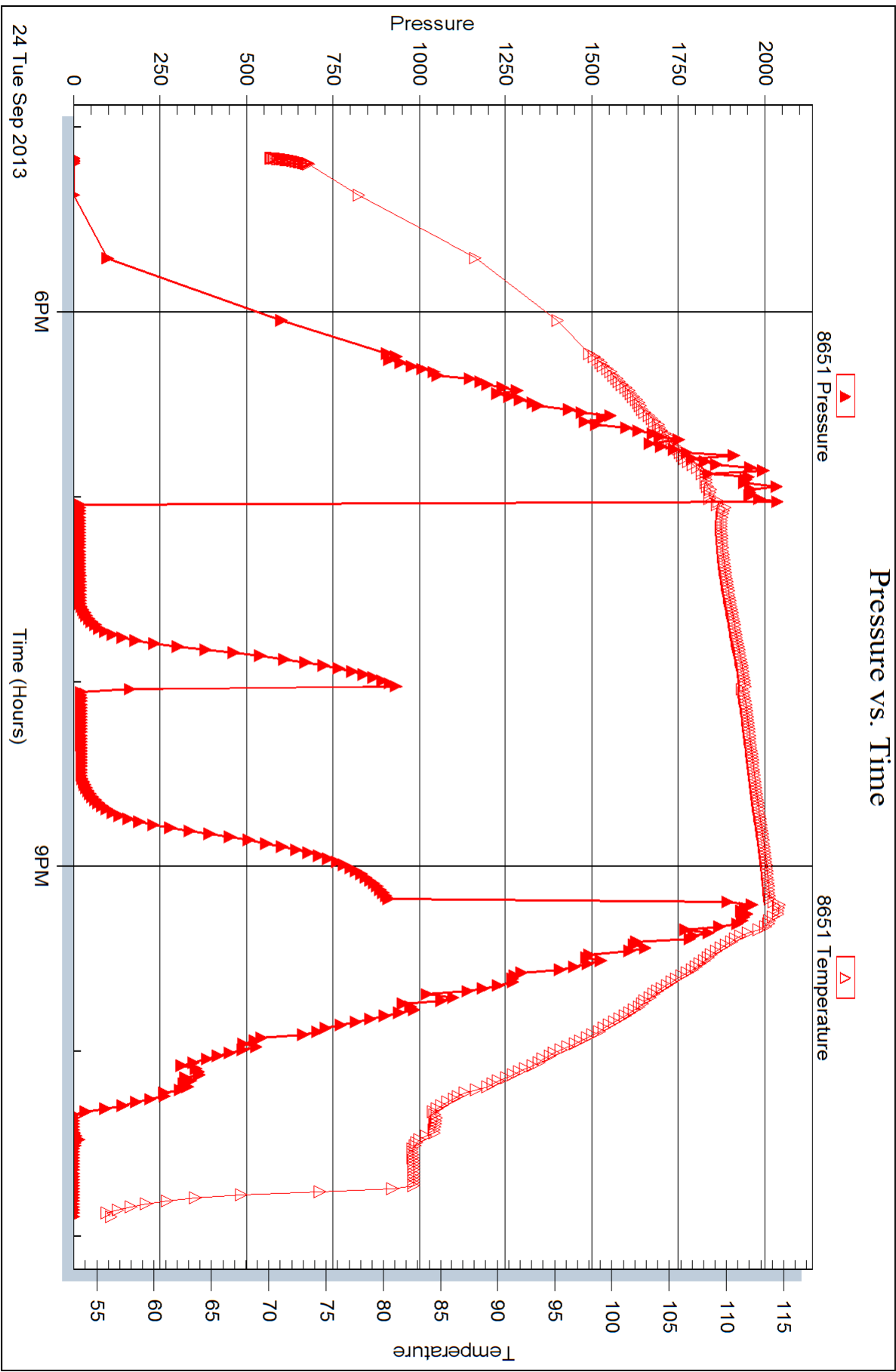


Serial #: 8651

Outside Murfin Drilling Co

Shaw-Albers #1-6

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Bob Stolze

Shaw-Albers #1-6

6 6s 29w Sheridan,KS

Start Date: 2013.09.25 @ 09:40:00

End Date: 2013.09.25 @ 16:02:30

Job Ticket #: 52745 DST #: 3

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

Printed: 2013.09.27 @ 16:14:31

Murfin Drilling Co
6 6s 29w Sheridan,KS
Shaw-Albers #1-6
DST # 3
LKC-J
2013.09.25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N. Water Ste. 300
 Wichita KS 67202
 ATTN: Bob Stolzle

6 6s 29w Sheridan, KS
Shaw-Albers #1-6
 Job Ticket: 52745 **DST#: 3**
 Test Start: 2013.09.25 @ 09:40:00

GENERAL INFORMATION:

Formation: **LKC-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:17:30
 Time Test Ended: 16:02:30
 Interval: **4030.00 ft (KB) To 4070.00 ft (KB) (TVD)**
 Total Depth: 4070.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Kreuzer Jr.
 Unit No: 61
 Reference Elevations: 2802.00 ft (KB)
 2792.00 ft (CF)
 KB to GR/CF: 10.00 ft

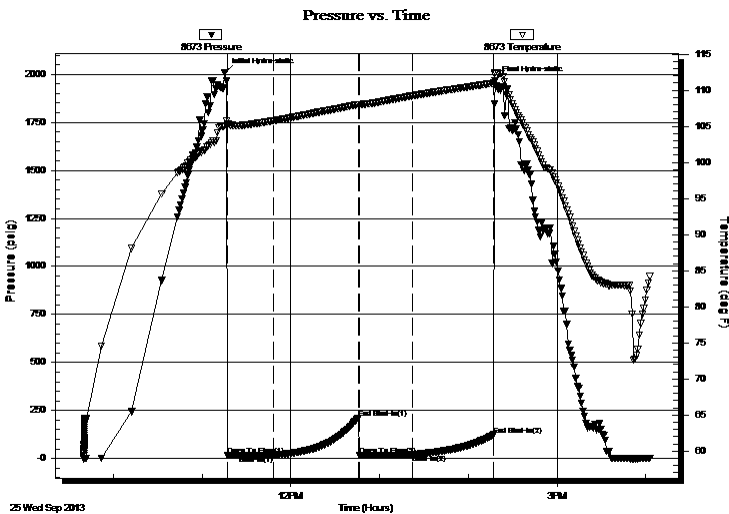
Serial #: 8673

Inside

Press @ Run Depth: 20.99 psig @ 4031.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.09.25 End Date: 2013.09.25 Last Calib.: 2013.09.25
 Start Time: 09:40:01 End Time: 16:02:30 Time On Btm: 2013.09.25 @ 11:15:30
 Time Off Btm: 2013.09.25 @ 14:18:00

TEST COMMENT: IF: Weak surface blow, Died in 20 mins.
 IS: No blow back
 FF: No blow.
 FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2009.78	105.11	Initial Hydro-static
2	18.18	105.33	Open To Flow (1)
33	17.64	105.76	Shut-In(1)
90	211.24	108.02	End Shut-In(1)
91	18.47	107.93	Open To Flow (2)
127	20.99	109.24	Shut-In(2)
182	124.18	110.99	End Shut-In(2)
183	1966.10	112.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud with oil specs	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co
 250 N. Water Ste. 300
 Wichita KS 67202
 ATTN: Bob Stolzle

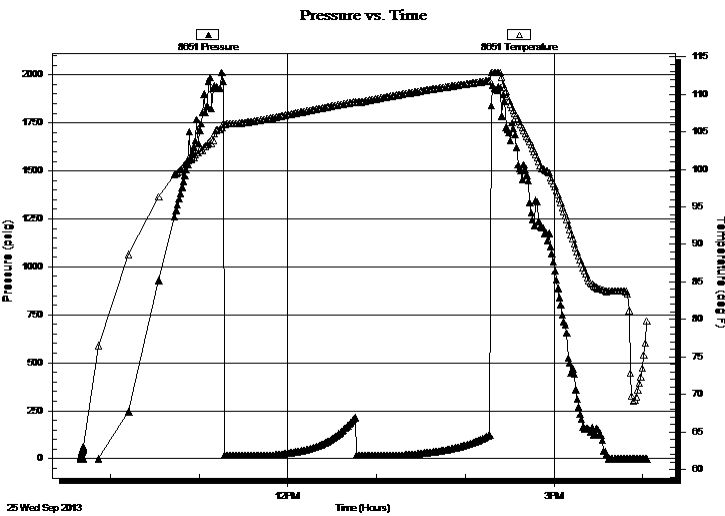
6 6s 29w Sheridan,KS
 Shaw-Albers #1-6
 Job Ticket: 52745 **DST#: 3**
 Test Start: 2013.09.25 @ 09:40:00

GENERAL INFORMATION:

Formation: **LKC-J**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 11:17:30 Tester: Chuck Kreuzer Jr.
 Time Test Ended: 16:02:30 Unit No: 61
 Interval: **4030.00 ft (KB) To 4070.00 ft (KB) (TVD)** Reference Elevations: 2802.00 ft (KB)
 Total Depth: 4070.00 ft (KB) (TVD) 2792.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8651 Outside
 Press @ Run Depth: psig @ 4031.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.09.25 End Date: 2013.09.25 Last Calib.: 2013.09.25
 Start Time: 09:40:01 End Time: 16:02:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak surface blow , Died in 20 mins.
 IS: No blow back
 FF: No blow .
 FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud w ith oil specs	0.01

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
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Bob Stolzle

6 6s 29w Sheridan,KS
Shaw-Albers #1-6
Job Ticket: 52745 **DST#: 3**
Test Start: 2013.09.25 @ 09:40:00

Tool Information

Drill Pipe:	Length: 3781.00 ft	Diameter: 3.80 inches	Volume: 53.04 bbl	Tool Weight:	2800.00 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: 233.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	66000.00 lb
			<u>Total Volume: 54.19 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4030.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	68.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

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	8673	Inside	4031.00	
Recorder	0.00	8651	Outside	4031.00	
Perforations	36.00			4067.00	
Bullnose	3.00			4070.00	40.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

6 6s 29w Sheridan,KS

250 N. Water Ste. 300
Wichita KS 67202

Shaw-Albers #1-6

Job Ticket: 52745

DST#: 3

ATTN: Bob Stolzle

Test Start: 2013.09.25 @ 09:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud w ith oil specs	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

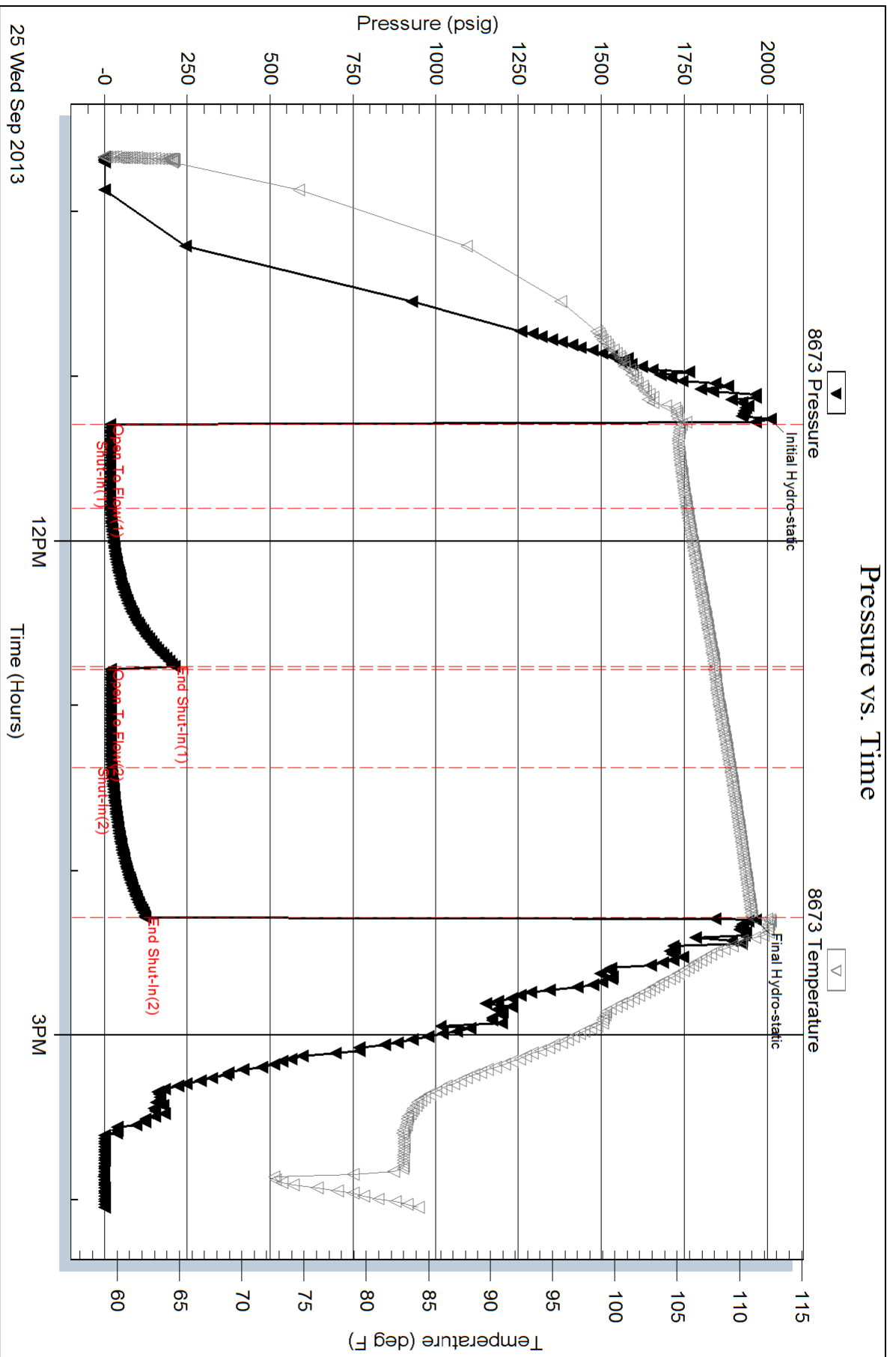
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

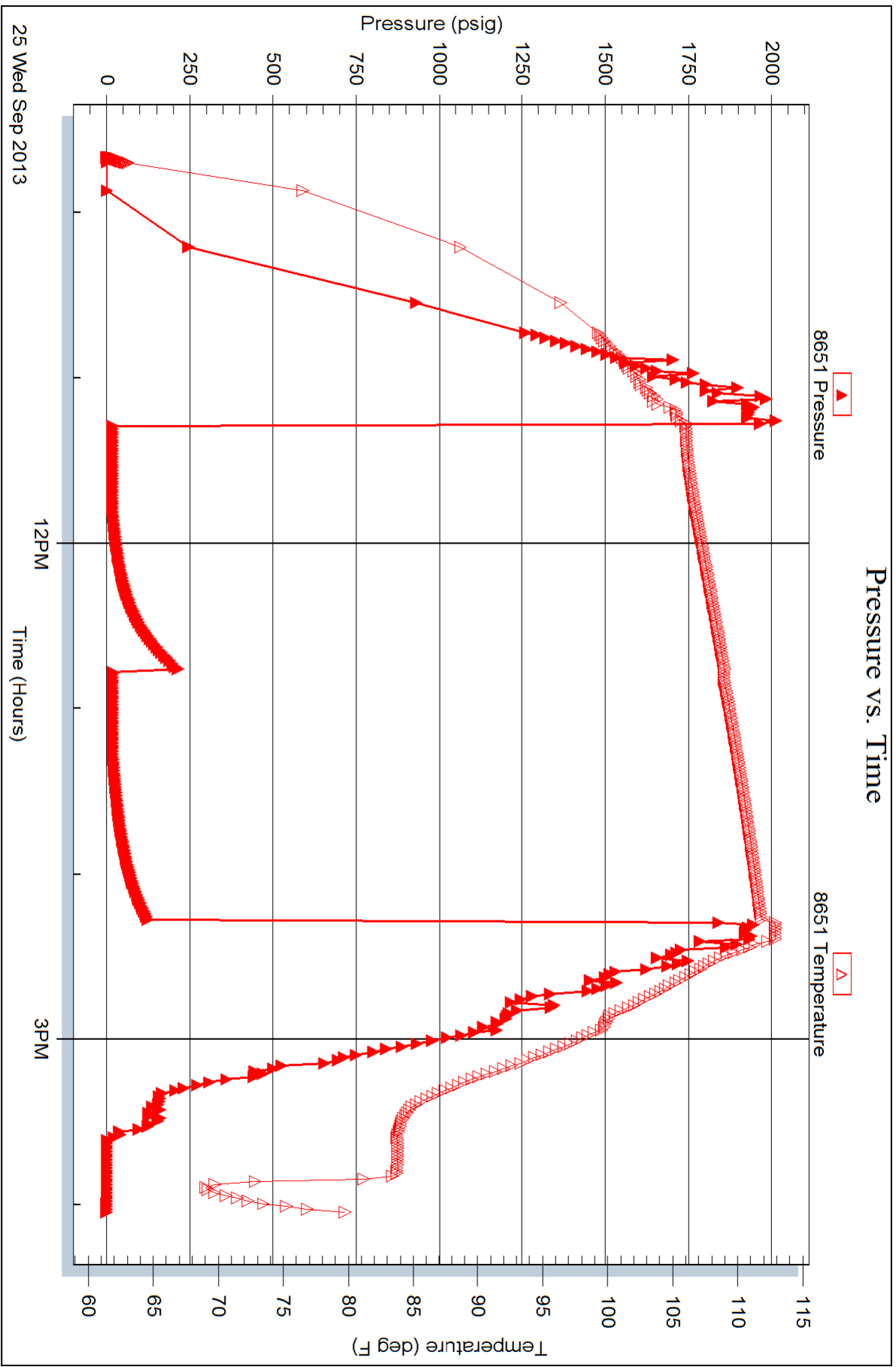


Serial #: 8651

Outside Murfin Drilling Co

Shaw-Albers #1-6

DST Test Number: 3

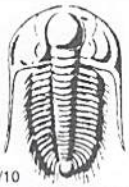


25 Wed Sep 2013

Trilobite Testing, Inc

Ref. No: 52745

Printed: 2013.09.27 @ 16:14:33



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52743

Well Name & No. Shaw-Alberts # 1-6 Test No. 1 Date 9-24-2013
 Company Murfin Drilling Co. Elevation 2802 KB 2892 GL
 Address 250 N. Water Ste. 300 Wichita Ks 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #2
 Location: Sec. 6 Twp. 6S Rge. 29W Co. Shenandoah State Ks

Interval Tested 3858 3937 Zone Tested Tadrono - LRC, A, B
 Anchor Length 79 Drill Pipe Run 3627 Mud Wt. 8.9
 Top Packer Depth 3853 Drill Collars Run 233 Vis 54
 Bottom Packer Depth 3858 Wt. Pipe Run 0 WL 6.0
 Total Depth 3937 Chlorides 1,300 ppm System LCM 6#

Blow Description IF: Weak blow, Built to 4 in. over 30 mins -

ISE: No blow back

FF: No blow

FSE: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>116</u>	<u>HOCWM</u>		<u>60</u>	<u>10</u>	<u>30</u>
<u>117</u>	<u>HOCWM</u>		<u>50</u>	<u>30</u>	<u>20</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 233 BHT 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1983 Test 1150 T-On Location 1:20
 (B) First Initial Flow 33 Jars 250 T-Started 1:55
 (C) First Final Flow 72 Safety Joint 75 T-Open 4:23
 (D) Initial Shut-In 1244 Circ Sub _____ T-Pulled 8:25
 (E) Second Initial Flow 80 Hourly Standby _____ T-Out 10:13
 (F) Second Final Flow 109 Mileage 30x2 = 60x1.55 93 Comments _____
 (G) Final Shut-In 1264 Sampler _____
 (H) Final Hydrostatic 1997 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 1568
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1568

Approved By _____ Our Representative Chris [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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52744

4/10

Well Name & No. Shaw-Alberts #1-6 Test No. 2 Date 9-24-2013
 Company Murfin Drilling Co. Elevation 2802 KB 2792 GL
 Address 250 N. Water Ste. 300 Wichita KS. 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #2
 Location: Sec. 6 Twp. 6S Rge. 29W Co. Sheridan State KS

Interval Tested 3956 3980 Zone Tested LKC-E, F
 Anchor Length 24 Drill Pipe Run 3715 Mud Wt. 9.0
 Top Packer Depth 3951 Drill Collars Run 233 Vis 56
 Bottom Packer Depth 3956 Wt. Pipe Run 0. WL 6.0
 Total Depth 3980 Chlorides 1,100 ppm System LCM 6*

Blow Description IF: Weak blow, Blow started and stopped through out 30mins
ISS: No blow back

FF: Weak surface blow, Died in Secs.

FSS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Free oil</u>		<u>100</u>		
<u>1</u>	<u>OCM</u>		<u>60</u>		<u>40</u>

Rec Total 3 BHT 112 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2063</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>18:43</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>17:10</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>19:02</u>
(D) Initial Shut-In <u>939</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>21:00</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>22:53</u>
(F) Second Final Flow <u>23</u>	<input checked="" type="checkbox"/> Mileage <u>30x2 = 60x.55 = 93</u>	Comments _____
(G) Final Shut-In <u>907</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1458</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1568</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1568</u>	

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52745

Well Name & No. Shaw-Albers #1-6 Test No. 3 Date 9-25-2013
 Company Murfin Drilling Co. Elevation 2800 KB 2792 GL
 Address 250 N. Water Ste. 300 Wichita Ks. 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #2
 Location: Sec. 6 Twp. 6S Rge. 29W Co. Sheridan State Ks.

Interval Tested 4030 4070 Zone Tested LKC-J
 Anchor Length 40 Drill Pipe Run 3781 Mud Wt. 9.0
 Top Packer Depth 4025 Drill Collars Run 233 Vis 58
 Bottom Packer Depth 4030 Wt. Pipe Run -0- WL 6.0
 Total Depth 4070 Chlorides 1,100 ppm System LCM 4#

Blow Description IF: Weak surface blow, Dead in 20 mins.
ISI: No blow back
FF: No blow
FS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud with oil specs</u>				

Rec Total 2 BHT 109 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2010</u> 2020	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>9:10</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>9:40</u>
(C) First Final Flow <u>18</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>11:17</u>
(D) Initial Shut-In <u>211</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>14:15</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:02</u>
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>30x2=60x1.56</u> 186	Comments <u>Loaded tools on 9-26-at 6:00 A.M.</u>
(G) Final Shut-In <u>124</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1966</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1761</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1761</u>	

Approved By _____ Our Representative Chuck Hager
 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.

Acct
LH



INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 138721
Invoice Date: Sep 20, 2013
Page: 1

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

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

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Murfin	61154	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Sep 20, 2013	10/20/13

Quantity	Item	Description	Unit Price	Amount
		Shaw-Albers Unit #1-6		
200.00	CEMENT MATERIALS	Class A Common	17.90	3,580.00
7.00	CEMENT MATERIALS	Chloride	64.00	448.00
210.00	CEMENT SERVICE	Cubic Feet	2.48	520.80
387.28	CEMENT SERVICE	Ton Mileage	2.60	1,006.93
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
40.00	CEMENT SERVICE	Pump Truck Mileage	7.70	308.00
1.00	CEMENT SERVICE	Manifold Rental	275.00	275.00
40.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	176.00
1.00	CEMENT SUPERVISOR	Alan Ryan		
1.00	OPERATOR ASSISTANT	Kevin Ryan		

OKD

Subtotal	7,826.98
Sales Tax	288.00
Total Invoice Amount	8,114.98
Payment/Credit Applied	
TOTAL	8,114.98

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

\$ 2,739.44

ONLY IF PAID ON OR BEFORE
Oct 15, 2013

ALLIED OIL & GAS SERVICES, LLC 061154

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTH LAKE, TEXAS 76092

SERVICE POINT:
Dealey, K7

DATE <u>9/20/10</u>	SEC. <u>30</u>	TWP. <u>4</u>	RANGE <u>30</u>	CALLED OUT	ON LOCATION	JOB START <u>9:30 AM</u>	JOB FINISH <u>10:00 PM</u>
LEASE <u>Shaw - Albers</u>	WELL# <u>1-6</u>	LOCATION <u>Soldan N 20 Rd 90 1 1/4 N</u>			COUNTY <u>Beckham</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>Ec. N. into</u>			

CONTRACTOR Murphy Drilling OWNER Same

TYPE OF JOB Surface
HOLE SIZE 12 1/4 T.D. 265' CEMENT AMOUNT ORDERED 200 Com 370 CC

CASING SIZE 8 5/8 DEPTH 265'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH

PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 15 92 BBL

EQUIPMENT

PUMP TRUCK CEMENTER Alan Ryan
423-291 HELPER Kevin Ryan

BULK TRUCK # 396 DRIVER Alex (TWS)

BULK TRUCK # DRIVER

COMMON	<u>200</u>	@ <u>17.00</u>	<u>3500.00</u>
POZMIX		@	
GEL		@	
CHLORIDE	<u>7</u>	@ <u>64.00</u>	<u>448.00</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>210 CC</u>	@ <u>2.48</u>	<u>520.80</u>
MILEAGE	<u>265</u> ton/mile <u>9.682</u>	TON	<u>2566.93</u>
			TOTAL <u>5555.73</u>

REMARKS:
Run Coy, Circulate, Mix Cement, Displace Cement
Shut in

Cement Drill Circulate
Frank
Alan, Kevin, Alex

SERVICE

DEPTH OF JOB	<u>265'</u>	
PUMP TRUCK CHARGE	<u>1512.25</u>	
EXTRA FOOTAGE	@	
MILEAGE	<u>40 miles</u>	@ <u>7.20</u> <u>308.00</u>
MANIFOLD	@	<u>25.00</u>
CIT Vehicle	<u>40 miles</u>	@ <u>4.40</u> <u>176.00</u>
	@	

CHARGE TO: Murphy Drilling
STREET
CITY STATE ZIP

TOTAL 2221.25

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	

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.

TOTAL

PRINTED NAME Alan Cabral
SIGNATURE

SALES TAX (If Any)
TOTAL CHARGES 7,826.98
DISCOUNT 2,739.44 IF PAID IN 30 DAYS
5,087.53 Net.

*acct.
Prod.-LH*

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 138845

Invoice Date: Sep 26, 2013

Voice: (817) 546-7282

Page: 1

Fax: (817) 246-3361

Bill To:

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

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Murfin	54793	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Russell	Sep 26, 2013	10/26/13

Quantity	Item	Description	Unit Price	Amount
		Shaw-Albers Unit #1-6		
132.00	CEMENT MATERIALS	Class A Common	17.90	2,362.80
88.00	CEMENT MATERIALS	Pozmix	9.35	822.80
7.57	CEMENT MATERIALS	Gel	23.40	177.14
50.00	CEMENT MATERIALS	Flo Seal	2.97	148.50
277.00	CEMENT SERVICE	Cubic Feet	2.48	686.96
402.94	CEMENT SERVICE	Ton Mileage	2.60	1,047.64
1.00	CEMENT SERVICE	Plug to Abandon	2,483.59	2,483.59
35.00	CEMENT SERVICE	Pump Truck Mileage	7.70	269.50
35.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	154.00
1.00	CEMENT SUPERVISOR	Robert Yakubovich		
1.00	EQUIPMENT OPERATOR	Woody O'Neil		
1.00	OPERATOR ASSISTANT	Jesse Cozart		

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

\$ 2,853.52

ONLY IF PAID ON OR BEFORE
Oct 21, 2013

Subtotal	8,152.93
Sales Tax	644.08
Total Invoice Amount	8,797.01
Payment/Credit Applied	
TOTAL	8,797.01

SR

ALLIED OIL & GAS SERVICES, LLC 054793

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Russell KS

DATE <u>9-26-13</u>	SEC <u>6</u>	TWP <u>6</u>	RANGE <u>29</u>	CALLED OUT	ON LOCATION	JOB START <u>8:30 pm</u>	JOB FINISH <u>9:00 pm</u>
LEASE <u>Unit</u>		WELL# <u>1-6</u>	LOCATION <u>Selden KS 1W 1/2 N E into</u>	COUNTY <u>Rawlins</u>	STATE <u>KS</u>		
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR Murfin Drilling #2
 TYPE OF JOB PTA
 HOLE SIZE 7 7/8 T.D. 4220
 CASING SIZE DEPTH
 TUBING SIZE DEPTH
 DRILL PIPE 4 1/2 16.6 DEPTH 2575
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG.
 PERFS.
 DISPLACEMENT

OWNER
 CEMENT
 AMOUNT ORDERED 220 6 3/4 420 gal 1/4 #10

EQUIPMENT
 PUMP TRUCK CEMENTER Robert Y
 # 417 HELPER Woody O
 BULK TRUCK
 # 473 DRIVER Jesse
 BULK TRUCK
 # DRIVER

COMMON	<u>132</u>	@ <u>17.90</u>	<u>2362.80</u>
POZMIX	<u>88</u>	@ <u>9.35</u>	<u>822.80</u>
GEL	<u>7.57</u>	@ <u>23.40</u>	<u>177.14</u>
CHLORIDE		@	
ASC		@	
<u>9/16 seal</u>	<u>2.5x</u>	@ <u>2.97</u>	<u>148.50</u>
<u>50#</u>		@	
		@	
		@	
		@	
		@	
HANDLING	<u>277</u> <u>ft</u>	@ <u>2.48</u>	<u>686.96</u>
MILEAGE	<u>402.9</u> <u>mi</u>	@ <u>2.60</u>	<u>1047.64</u>
			TOTAL <u>5245.84</u>

REMARKS:

p1 25sk @ 2575
p2 10sk @ 1721
p3 40sk @ 315
p4 10sk @ 40
30sk @ Rat hole
15sk @ Mouse hole

Thank you!!!

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

SERVICE

DEPTH OF JOB	<u>2575</u>	
PUMP TRUCK CHARGE	<u>2483.59</u>	
EXTRA FOOTAGE	@	
MILEAGE <u>35</u> <u>HUMI</u>	@ <u>7.70</u>	<u>269.50</u>
MANIFOLD	@	<u>154.00</u>
<u>35</u> <u>LUMI</u>	@ <u>4.40</u>	<u>176.00</u>
	@	
		<u>2907.09</u>
		TOTAL <u>2929.09</u>

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 ~~8152.93~~ 8152.93
 DISCOUNT ~~2853.52~~ 2853.52 IF PAID IN 30 DAYS
\$5299.41 net

PRINTED NAME Arno Cabras

SIGNATURE Arno Cabras

ROBERT STOLZLE

CONSULTING PETROLEUM GEOLOGIST

APO Cert # 3244

6211 G. 201st St, W.

Grand Rapids, MI 49502-0240

(616) 704-3400

DRILLING TIME AND SAMPLE LOG

OPERATOR: Murfin Drilling Co., Inc.

LEASE: Shaw-Albers Well No. 1-6

FIELD: Wildcat

LOCATION: 1275' FSL, 2185' FSL (NE, NW, SW, SE)

SEC.: 6 TYP.: 6S RANGE: 29W

COUNTY: Sheridan STATE: KS

API NO.: 15-179-21341-00-00

CONTRACTOR: Murfin Drilling Co., Inc., Rig #2

COMPLETED: September-20, 2013 LOG TOTAL DEPTH: 4224'

ROTARY TOTAL DEPTH: 4220 LOG TOTAL DEPTH: 4224'

LOG TOTAL DEPTH: 4220 LOG TOTAL DEPTH: 4224'

LOG TOTAL DEPTH: 4220 LOG TOTAL DEPTH: 4224'

LOG TOTAL DEPTH: 4220 LOG TOTAL DEPTH: 4224'

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LOG TOTAL DEPTH: 4220 LOG TOTAL DEPTH: 4224'

LOG TOTAL DEPTH: 4220 LOG TOTAL DEPTH: 4224'

LOG TOTAL DEPTH: 4220 LOG TOTAL DEPTH: 4224'

ELEVATIONS

KB 2802'

GL 2791'

Measurements are all from KB

CASING RECORD

SIZE: 8 5/8", 23#

@265' c/c.

PRODUCTION: None-FAA

WIRE LINE SURVEYS

Pioneer-Energy Services (Log Tech), Dual Comp. Porosity, Dual Induction, BHC Sonic and Microlog

LOCATION MAP

6	Location
	Murfin
	Shaw-Albers Unit
	#1-6

Reference Well for Structural Comparison: MDC RTI Shaw #1-32 (1532-55-29W)

Comments and Recommendations: Recommended Well be plugged and abandoned.

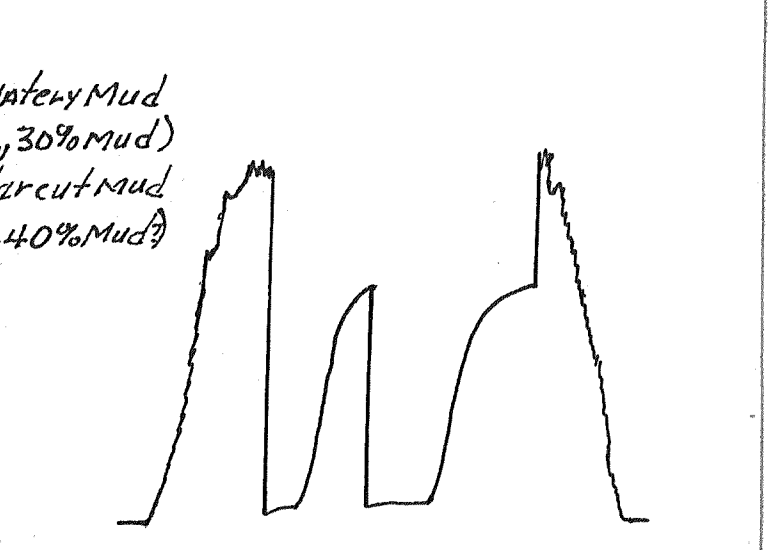
DST # 1 ZONE: Toronto, Lansing A & B Zones
 INTERVAL: 3858'-3937'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1983 psi	116' Hvy. Oil cut watery Mud
2. Initial Flow: Start	0	33 psi	(60% oil, 10% SW, 30% Mud)
3. Initial Flow: End	30	72 psi	117' Hvy. Oil & water cut mud
4. Initial Shut-in: End	60	1244 psi	(50% oil, 20% SW, 40% Mud)
5. Final Flow: Start	0	80 psi	Blow Desc.
6. Final Flow: End	60	109 psi	I.F. - 4" IN 30 MIN.
7. Final Shut-in: End	90	1264 psi	I.S.I. - No blow
8. Final Hydrostatic		1997 psi	F.F. - No blow

BHT: 116°F
 Rv: N.A.

Strap 1.15 long. Deviation 3/4°

DST # 1 8673 Chart
 Interval: 3858'-3937' Depth: 3859'



DST # 2 ZONE: Lansing E & F Zones
 INTERVAL: 3956'-3980'

DST # 2 8673 Chart
 Interval: 3956'-80' Depth: 3957'

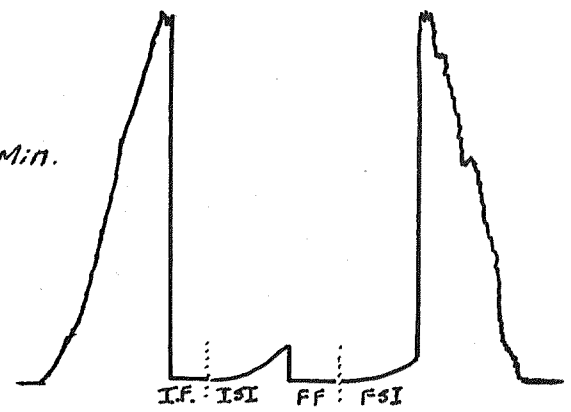
Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		2063 psi	2' Clean Oil
2. Initial Flow: Start	0	18 psi	1' Oil cut Mud
3. Initial Flow: End	30	19 psi	(60% oil)
4. Initial Shut-in: End	30	939 psi	
5. Final Flow: Start	0	22 psi	Blow Desc:
6. Final Flow: End	30	23 psi	I.F. - Surf. Blow - Died 4 min.
7. Final Shut-in: End	30	907 psi	ISI - No blow
8. Final Hydrostatic		1958 psi	F.F. - Surf. - Died 30 sec.
BHT:	114°F		F.SI - No blow



DST # 3 ZONE: Kansas City J Zone
 INTERVAL: 4030'-4070'

DST # 3 8673 Chart
 Interval: 4030'-4070' Depth: 4031'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		2010 psi	2' Oil spotted Mud
2. Initial Flow: Start	0	18 psi	
3. Initial Flow: End	30	18 psi	
4. Initial Shut-in: End	60	211 psi	Blow Desc:
5. Final Flow: Start	0	18 psi	I.F. - Surf. blow, died 20 min.
6. Final Flow: End	30	21 psi	ISI - No blow
7. Final Shut-in: End	60	124 psi	F.F. - No blow
8. Final Hydrostatic		1966 psi	F.SI - No blow
BHT:	111°F		



ROCK TYPES:

- ls - Limestone
- sh - Shale
- sa - Sandstone
- silt - Siltstone
- cp - Conglomerate
- cht - Chert
- qtz - Quartzite
- gran - Granite
- dol - Dolomite
- chk - chalky

COLOR:

- wh - White
- crm - Cream
- clr - Clear
- rd - Red
- grn - Green
- gry - Gray
- blk - Black
- mat - Mottled

HARDNESS:

- sft - Soft
- M.Sft - Moderately soft
- hrd - Hard
- V.Hrd - Very hard

FABRIC:

- Fr.grn - Finegrained
- VFG - Very fine grained
- Med - Medium
- Gr - Coarse
- Det - Detrital
- Co - Coarsely crystalline
- Cr - Crystalline
- Mic - Microcrystalline
- Ool - Oolitic
- Om - Omalitic
- Mat - Matrix

OTHER TERMS:

- fl - Fluorescence (of oil)
- min fl - mineral fluorescence
- pyr - pyritic
- glau - glauconitic
- carb - carbonaceous
- str - stain (of oil)
- cut - oil cut
- aa - as above
- g - gas
- NSFOC - no stain, fluorescence, odor, or cut (of oil)
- sepl - seepage
- perm - permeability
- F.O. - Free oil
- vug - vugular
- tr - trace
- w/ - with

MODIFIERS:

- gd - Good
- fr - Fair
- pr - Poor
- ex - excellent
- v - very
- w - well
- tr - trace
- occ - occasional
- vis - visible
- N - no
- gran - granular
- intgran - intergranular
- pp - pinpoint
- dd - dead
- gcy - gassy

OIL SHOWS

- One - One
- Two - Two
- Three - Three
- Four - Four
- Five - Five
- Six - Six
- Seven - Seven
- Eight - Eight
- Nine - Nine
- Ten - Ten
- Eleven - Eleven
- Twelve - Twelve
- Thirteen - Thirteen
- Fourteen - Fourteen
- Fifteen - Fifteen
- Sixteen - Sixteen
- Seventeen - Seventeen
- Eighteen - Eighteen
- Nineteen - Nineteen
- Twenty - Twenty

Rate of Penetration
(Minutes per foot)

.5 1 2 3 4 5 6 7 8 9 10

2500

Drilling with PDC Bit

2550



Stone Coral
Anhydrite
(+254')
(log top)

Base of
Anhydrite
(+220')

2600

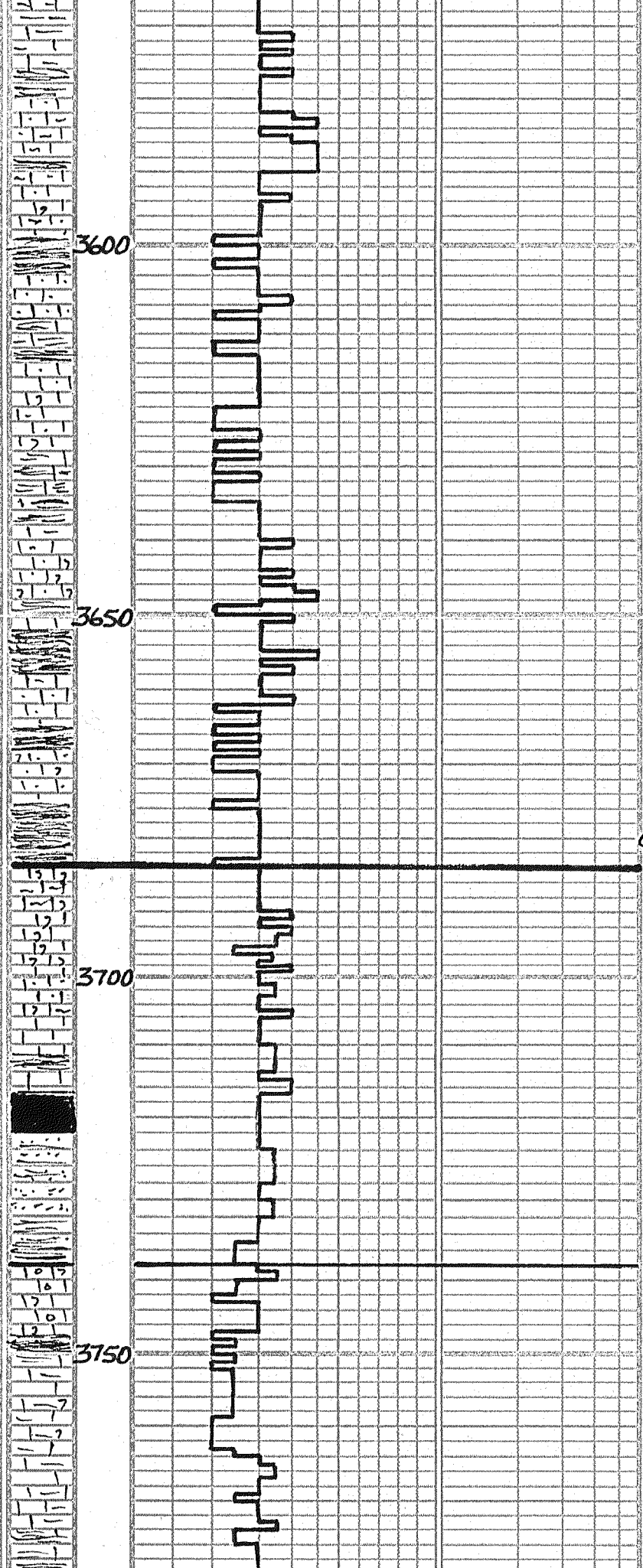
Displace Mud
System at 3307'

3550

Start 1' drilling firm at 3560'

Start 10' wet and dry samples
at 3580'

Sh. gray - blk. m. silt. d/s. earthy



3600

3650

3700

3750

Ls: erm - gry, hrd, dns, fn - vfg x/n.
foss - v. foss, tr. sandy. NØNSFOC
Sh: m. hrd - m. sft, dns, earthy, occ. p.
Ls: erm - gry, hrd, dns, fn x/n, sh. std.
occ. foss, tr. v. pr. in part. Ø
NSFOC

Ls: erm - fan - gry, hrd, dns, fn -
vfg x/n, occ. foss, occ. sandy, tr.
sh. std. NØNSFOC

Ls: gry - erm, sft - hrd, dns, vfg x/n.
sh. std, occ. foss, tr. sandy.
NØNSFOC

Ls: erm - lt. gry, hrd, dns, vfg, mx/n.
tr. foss, occ. sandy - v. sandy, tr.
gry. sh. std. NØNSFOC

Ls: erm - lt. gry, m. sft - sh. chky. -
hrd, dns, tr. vfg x/n, occ. foss.
occ. sandy. NØNSFOC

Ls: erm - gry, hrd - m. sft, occ. sh. chky.
occ. foss, occ. sandy. NØNSFOC
tr. sh. gry - dk. gry, m. sft - m. hrd,
dns, earthy - hackly, tr. pr.

Sh: A.A., occ. rd. brn., hrd - sft +
clay, earthy
Ls: erm - lt. gry, hrd, dns, vfg x/n,
foss - v. foss, tr. sandy. NØNSFOC

Ls: erm - gry, hrd, dns, vfg - mx/n.
mic. occ. foss, v. foss, tr. sandy,
tr. sh. std - rd. NØNSFOC

Sh: lt. dk. gry, m. sft - m. hrd, dns,
earthly - hackly, tr. sandy - sh.
Ls: gry - erm, hrd, dns, vfg - mx/n, mic.
sh. std, occ. foss. NØNSFOC

Ls: gry - erm, hrd, dns, m. sft - sft.
chky, occ. foss, tr. sandy.
NØNSFOC

Ls: gry - erm, hrd - m. sft, dns, tr.
foss, sandy - v. sandy - calc. ss.
gry - v. gry, hrd, dns, tr. std -
tr. chky. A.A. NØNSFOC

Sh: gry - dk. gry, m. sft - m. hrd, dns,
hackly
Ls: erm - gry, hrd - m. sft + chky, foss -
v. foss, vfg - mx/n, mic. NØNSFOC

Ls: erm - lt. gry, hrd - m. hrd, dns, vfg
- mx/n, mic. foss - v. foss, Abun.
rd. sh. std. NØNSFOC

Ls: erm, hrd - sft + chky, vfg - mx/n.
occ. foss, tr. sh. std, tr. mic.
tr. occ. sandy. NØNSFOC

Ls: A.A., occ. v. sandy - calc. ss. gry -
hrd, dns, vfg, tr. v. v. chky.
Novis. Ø NSFOC

SS: A.A., occ. fr. A. Novis. Ø NSFOC
Sh: rd. brn. - dk. gry, m. sft - dns,
occ. sandy, earthy.

Ls: erm, hrd, dns, occ. foss. NØNSFOC
Ls: erm, hrd - sft + chky, vfg -
mx/n, foss - v. foss - gnstn, occ.
vfg p.p. moldie - oom. ? Ø, fr - pr.
NSFOC

Ls: erm, hrd - sft + chky, vfg - mx/n.
foss - v. foss + ool. v. tr. pr. vug
Ø NSFOC

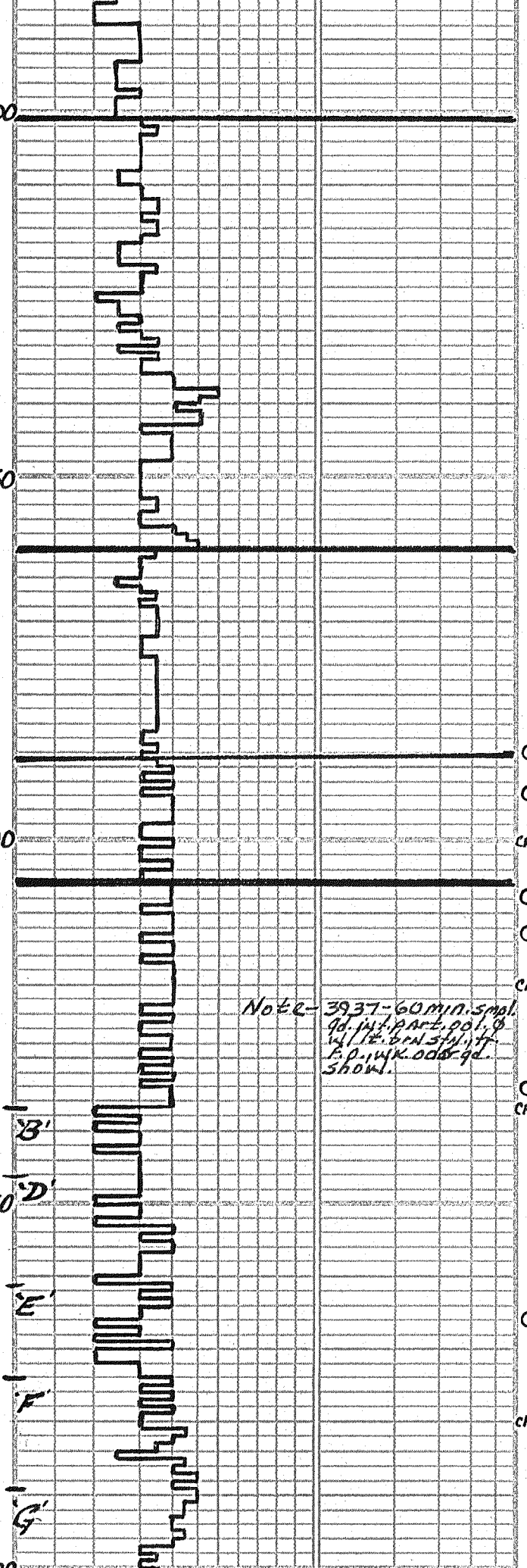
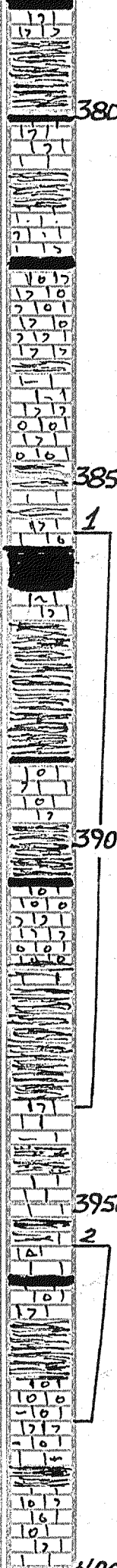
Ls: A.A., more foss, tr. fr - pp. vug
oom. Ø A.A. NSFOC
Sh: gry - gm. dk. gry - rd. brn. m. sft.
dns, earthy - hackly

Ls: erm - wh. hrd, dns, mic - sft +
chky, vfg - mx/n, tr. foss.
NØNSFOC

Ls: erm - gry, hrd, dns, vfg - mx/n.
mic, occ. foss, sh. std.
NØNSFOC
Sh: gry - blk, m. hrd, dns, hack.
Sh: gry - blk, m. sft - m. hrd, dns,
Ø

Topocka Fm.
(-882')

Deer Creek Ls.
(-936')



Note - 3937-60 min. small
 qd. int. carb. ool. &
 w/rd. brn. stn. int.
 f.p. w/rd. odor qd.
 show.

occ. carb., earthy - hackly
 Ls. crm. tan - gry., hrd. - sft. + chiky., VEG
 VEG - mxln., occ. foss. NΦNSFOC
 Ls. crm., hrd. - sft. + chiky., VEG - mxln.,
 fr. mic., fr. foss. NΦNSFOC
 Sh. gry. - rd. brn., m. sft., earthy

Ls. crm. - wh., hrd. - sft. + chiky., VEG
 XIN - mxln., occ. foss. NΦNSFOC
 fr. Sh. A.A.

Ls. crm., hrd. - sft. + chiky., VEG -
 mxln., foss. fr. sndy NΦNSFOC
 Sh. gry. - blk., m. sft., m. hrd., dns.
 occ. carb., earthy
 fr. Sh. gry., m. sft., earthy
 Ls. crm. sft. + chiky. - hrd., dns.,
 mic., VEG - mxln., occ. V. foss.
 +ool - grn. stn. NΦNSFOC
 Sh. dk. gry., m. sft., earthy
 Ls. crm., hrd. - m. sft., VEG - mxln.,
 mic., fr. chl., fr. chiky., occ.
 sh. stn., foss. ool., NΦNSFOC
 Ls. A.A., fr. pr. int. ool. NΦNSFOC
 fr. Sh. gry., m. sft., dns., earthy

Ls. crm. - gry., sft. + chiky. - hrd.,
 dns., fr. mic., occ. foss. +ool.
 fr. sh. stn. NΦNSFOC

Sh. blk., m. hrd. - m. sft., dns., carb.
 Ls. tan - brn., hrd., dns., VEG XIN,
 fr. foss. + sh. stn. NΦNSFOC
 fr. Ls. A.A. NΦNSFOC

Sh. gry. - gry. grn., sft., sndy.
 sft. - V. sft., earthy - clayey
 Ls. wh. - crm., hrd., dns., VEG XIN,
 occ. foss. +ool. w/ occ. pr. fr. moldic
 Vug. φ - most VEG dk. brn - blk. oil
 stn. ex. cut fl. w/ k. odor, No F.O.
 Ls. A.A., Vug. + pp. Vug. φ around foss.
 qd. N.S. ? Perm., dk. brn., stal. ex
 cut fl., VSSFO, No odor
 Sh. gry. grn., m. sft., dns., earthy
 Sh. A. occ. rd. brn., sft., earthy
 Ls. wh. - crm., hrd., dns., VEG XIN, occ.
 foss. +ool. w/ fr. - pr. fr. VEG +ool
 Vug. φ, dk. stn., No odor, No F.O. qd. cut
 Ls. A.A., occ. qd. show A.A. 1-2
 pc. w/ qd., int. ool. w/ k. stn.
 No odor, No F.O., ex. cut fl. 7 perm
 Sh. rd. brn., sft. - m. sft., earthy
 Sh. rd. brn. - gry. - blk., m. sft. - m. hrd.,
 earthy, occ. sft., fr. hackly
 Ls. crm. - gry., hrd., dns., VEG - mxln.,
 mic., fr. foss., fr. sh. stn. NΦNSFOC
 Sh. A.A., Ls. crm., hrd., dns., VEG - mxln.,
 mic., rare pc. w/ pp. Vug. φ, show's
 A.A., V? perm. Very weak show

Sh. gry. grn. - rd. brn., m. sft., dns.,
 occ. sft., sndy
 Ls. crm., hrd., dns., VEG - mxln., w/ fr.
 pr. Vug. φ, blk. ool. stn. V.V. w/ k. show
 Sh. A.A.
 Ls. crm. - lt. gry., hrd., dns., VEG -
 mxln. mic., abun. org. chl., rare
 foss. NΦNSFOC
 Ls. crm., hrd., dns., VEG XIN, occ.
 foss. +ool. w/ occ. fr. - pr. Vug.
 φ, some moldic, brn. oil stn. qd.
 cut fl., No F.O., No odor, 7 perm.
 Ls. crm. - lt. gry., hrd., dns., fr. XIN - mxln.
 + chiky., fr. rex. qd., 1-2 pc. fr. tray
 w/ Vug. ool. φ + fr. int. ool. Vug. φ dk.
 brn. stn. qd. cut fl., No odor, No F.O.
 Sh. rd. brn. - gry., m. sft., dns., earthy
 Ls. crm. - lt. gry., hrd., dns., fr. XIN -
 mxln., mic., fr. chiky., occ. foss.
 +ool., fr. sh. stn. NΦNSFOC
 Ls. A.A., more chiky., occ. wh. chl.
 fr. pr. moldic φ NΦNSFOC
 Sh. rd. brn. - dk. gry., m. sft., dns.
 earthy
 Sh. rd. brn. - blk. m. sft., dns. carb. earthy

Lacompton Ls.
 (-999')

DST # 1
 3958'-3937'
 REC. 233' HDCWM
 APPROX 50% O.I
 Deviation 3/4°
 Strip 1.15' long

Heebner Shale
 (-1058')

Mud Check @ 3900'
 M.W. 8.9 Chl. 1,300
 Vis. 54 Solids 4.3%
 WL 6.0 LCM 6#

Toronto Ls. (-1087')
 Fair Show

Weak Show

Lansing Group
 (-1104')

Weak Show

Weak Show

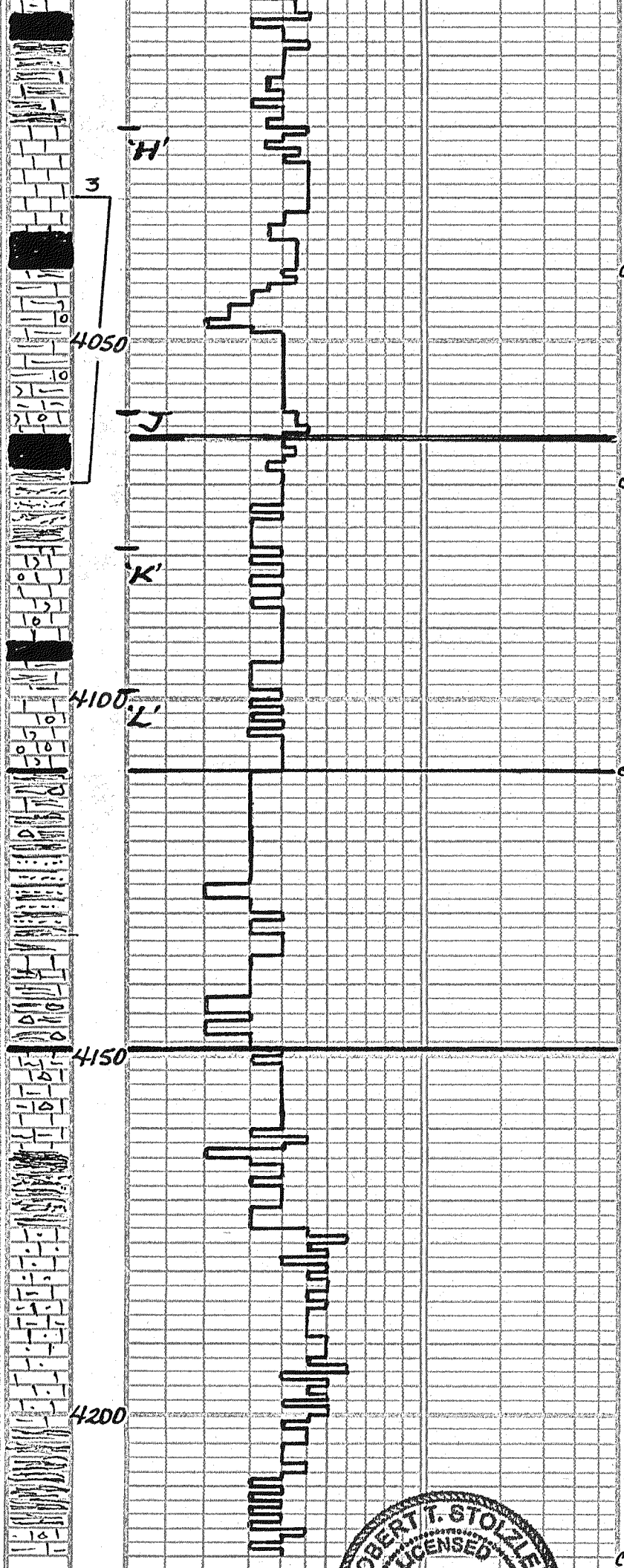
Good Show - 60 min.

Mud Check @ 3937'
 M.W. 9.0 Solids 5%
 Vis. 56 Chl. 1,100 ppm
 WL 6.0 LCM 6#

DST # 2
 3956'-3980'
 REC. 2' CO
 1' OCM

Weak Show

Weak Show



Ls: crm. - tan-brn., hrd., dns., VEG - mxln., mic., tr. chert, tr. chert, tr. foss. w/ pr. moldic ϕ NSFDC
 Ls: crm. - tan, hrd., dns., VEG - mxln., mic., occ. VEG dol. + foss. w/ pr. fr. VEG int part. ϕ NSFDC, 1 pc w/ brn. oil stain, fr. cutt. fl. V. WK. show
 Ls: crm. - tan, hrd., dns., VEG - mxln., mic., fr. v. red, fr. - rare foss. + dol. A.A. w/ fr. - pr. VEG int part. ϕ A.A. NSFDC
 Ls: crm. - lt. gry., hrd., dns., VEG - mxln., mic., tr. chert, tr. chert, occ. foss. w/ fr. VEG ϕ A.A. NSFDC
 Sh: gry. - blk., sft., m. hrd., carb. earth. sh. + rd. brn. - gry., m. sft., s. sdy. - sft., earthy
 Ls: crm. - gry., hrd., dns., sft. - mxln., mic. occ. foss. sh. stnd. pebb. surf. NSFDC
 Ls: crm., hrd. - m. hrd., dns., VEG - mxln., foss. + dol. w/ fr. - gd. fr. VEG int part. ϕ fr. moldic ϕ , dk. brn. stn., ex. cutt. fl., gd. ool., S.F.O.
 Ls: A.A., less ϕ tr. rd. stn. w/ shows A.A., wk. odor, SSFO
 Sh: gry. - blk., m. sft., dns., carb., earthy sh. + rd. brn. - dk. gry., m. hrd., dns., occ. sft. - sdy. - sft. - ss. - gry., m. hrd., dns., mod. sft., fr. gnd., w. cm. rd. No. 12 NSFDC
 Ls: crm. - gry., hrd., dns., VEG - mxln., mic., tr. foss. + dol. w/ pr. fr. int part. VEG ϕ , dk. brn. stn., fr. cutt. fl. - Epc. - V. thin zone, VEG ϕ
 Ls: A.A. rare foss. + dol. occ. sh. stnd. NSFDC
 Sh: rd. brn. - gry., m. sft. - m. hrd. dns., occ. sft., earthy
 Sh: A.A. occ. dk. gry. - blk., earthy
 Ls: crm. - lt. gry., hrd., dns., fr. mxln. - mxln., mic., occ. foss. + dol. occ. sh. stnd. NSFDC
 Ls: A.A. NSFDC
 Sh: rd. brn. - gry., sft. + clayey - m. sft., dns., earthy, occ. sdy. - v. sdy.
 Sh: A.A.
 ss: rd. brn., m. hrd., dns., sh. ly. fr. gnd., pr. sft., sub. rd., v. w. cm. rd. NSFDC
 Sh: lg. rd. brn. - gry. - ylw. mott., m. hrd. - m. sft., sdy., earthy
 Ls: crm., hrd., dns., VEG - mxln., mic., rare foss. pebb. surf. NSFDC
 Cg: Sh: A.A., Ls: crm. - ylw. sft., foss. pellets, occ. sh. stnd. rd. brn., occ. pebb. surf. NSFDC
 Cg: Sh: rd. brn. - m. pr. - gry., m. sft., earthy, sdy.
 Ls: crm., hrd. - m. sft., VEG - mxln., rd. sh. stnd., occ. pebb. NSFDC
 Cg: Sh: m. pr. - rd. brn. - gry., sft. + clayey - m. sft., earthy, sdy.
 Ls: crm. - tan, hrd., dns., VEG - mxln., rd. sh. stnd. NSFDC
 Sh: gry. - m. hrd., dns., sdy. - v. sdy. earthy
 Ls: crm. - gry., hrd., dns., VEG - mxln., occ. sdy., rare foss. NSFDC
 Ls: gry. - crm., hrd., dns., VEG - mxln., sdy. - v. sdy. NSFDC
 Ls: crm. - gry., hrd., dns., VEG - mxln., mic., occ. sdy., rare foss. NSFDC
 Ls: crm. - gry., hrd. - m. sft., VEG - mxln., occ. cherty, occ. sdy. NSFDC
 Sh: gry. - m. pr. - rd. brn., m. sft., sft., sdy. - sft., earthy
 Sh: gry. - rd. brn. - m. pr., m. sft. - sft. + clayey, sdy. - v. sdy., earthy
 Ls: crm. - gry., hrd., dns., VEG - mxln., mic., sh. stnd., pebb. surf. NSFDC

DST #3
4030-4070'
Rec: 2' OSM

Good Show
Fair Show
Stark Shale
(-1261')

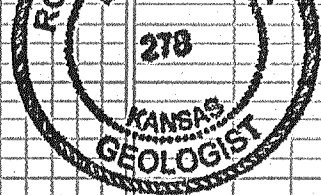
Very Weak Show
Mud Check @ 4070'
M.W. 9.0 solids 5%
W.L. 6.0 Chl. 1,100
V.S. 58 LCM. 4#

Base of
Kansas City
Group
(-1308')

Lempach Ls.
(-1347')

D.T.D 4220'





L.T.D. 4224
Deviation $3/4^{\circ}$
Robert Stohle
9/26/30