



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1151391
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: _____



1151391

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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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

July 12, 2013

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

Re: ACO1
API 15-051-26496-00-00
Gottschalk 1-28
NW/4 Sec.28-14S-18W
Ellis 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

MDCI Gottschalk #1-28 335' FNL 1050' FWL Sec. 28-T14S-R18W 2059' KB							Tengasco, Inc Kraus AA #3 SE SW NE Sec. 28-T14S-R18W 2068' KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	1275	+784	-23	1273	+786	-21	1231	+807
B/Anhydrite	1317	+742	-23	1316	+743	-22	1303	+765
Topeka	3052	-993	-12	3051	-992	-11	3049	-981
Heebner	3309	-1250	-13	3308	-1249	-12	3305	-1237
Toronto	3329	-1270	-13	3328	-1269	-12	3325	-1257
Lansing	3357	-1298	-14	3356	-1297	-13	3352	-1284
Stark	3545	-1486	-12	3544	-1485	-11	3542	-1474
BKC	3589	-1530	-4	3589	-1530	-4	3594	-1526
Arbuckle	3687	-1628	-30	3693	-1634	-36	3666	-1598
RTD	3755						3740	
LTD				3756			3738	



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202 + 1216

ATTN: Shauna Gunzelman

Gottschalk #1-28

28-14s-18w Ellis,KS

Start Date: 2013.03.22 @ 19:33:13

End Date: 2013.03.23 @ 03:31:22

Job Ticket #: 48509 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.27 @ 11:42:16

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

Gottschalk #1-28

DST # 1

Oread-Lans B

2013.03.22



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202 + 1216
ATTN: Shauna Gunzelman

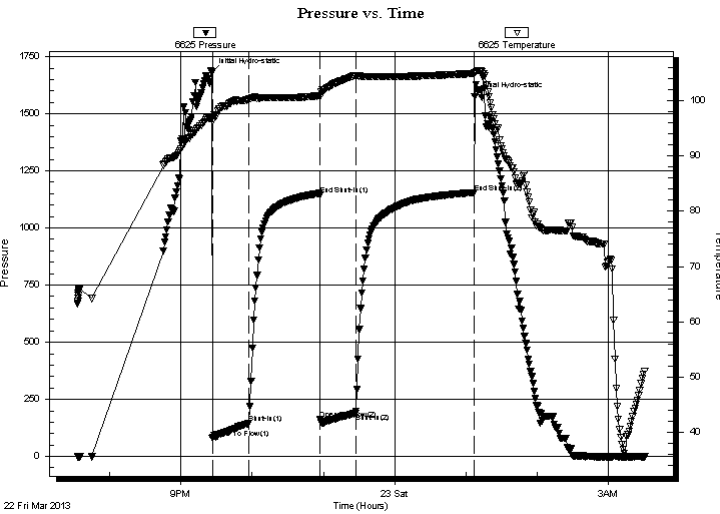
28-14s-18w Ellis,KS
Gottschalk #1-28
Job Ticket: 48509 **DST#: 1**
Test Start: 2013.03.22 @ 19:33:13

GENERAL INFORMATION:

Formation: **Oread-Lans B**
Deviated: No Whipstock: ft (KB) Test Type: Conventional (Initial)
Time Tool Opened: 21:26:33 Tester: Jeff
Time Test Ended: 03:31:22 Unit No: 67
Interval: 3257.00 ft (KB) To 3393.00 ft (KB) (TVD) Reference Elevations: 2059.00 ft (KB)
Total Depth: 3393.00 ft (KB) (TVD) 2054.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 6625 Outside
Press @ Run Depth: 188.44 psig @ 3361.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.03.22 End Date: 2013.03.23 Last Calib.: 2013.03.23
Start Time: 19:33:14 End Time: 03:30:23 Time On Btm: 2013.03.22 @ 21:26:23
Time Off Btm: 2013.03.23 @ 01:07:13

TEST COMMENT: IFP=Strong blow BOB in 4 min
ISI=Weak surface blow back built to 1 1/2" died back to 3/4"
FFP=Strong blow BOB in 3 min
FSI=Fair blow back built to 6"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1681.34	96.75	Initial Hydro-static
1	80.44	96.26	Open To Flow (1)
31	144.44	100.27	Shut-In(1)
91	1143.95	100.90	End Shut-In(1)
91	161.94	100.77	Open To Flow (2)
121	188.44	104.59	Shut-In(2)
221	1153.88	104.92	End Shut-In(2)
221	1574.94	105.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	SOCGWM 10%G 10%O 10%W 70%M	1.50
189.00	GOCM 30%G 20%O 50%M	2.65
0.00	819-GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48509

DST#: 1

ATTN: Shauna Gunzelman

Test Start: 2013.03.22 @ 19:33:13

Tool Information

Drill Pipe:	Length: 3233.00 ft	Diameter: 3.80 inches	Volume: 45.35 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 45.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3257.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	136.00 ft			
Tool Length:	156.00 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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Change Over Sub	1.00			3238.00	
Shut In Tool	5.00			3243.00	
Hydraulic tool	5.00			3248.00	
Packer	4.00			3252.00	20.00 Bottom Of Top Packer
Packer	5.00			3257.00	
Stubb	1.00			3258.00	
Perforations	6.00			3264.00	
Change Over Sub	1.00			3265.00	
Drill Pipe	95.00			3360.00	
Change Over Sub	1.00			3361.00	
Recorder	0.00	6625	Outside	3361.00	
Recorder	0.00	8679	Inside	3361.00	
Perforations	29.00			3390.00	
Bullnose	3.00			3393.00	136.00 Bottom Packers & Anchor

Total Tool Length: 156.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48509

DST#: 1

ATTN: Shauna Gunzelman

Test Start: 2013.03.22 @ 19:33:13

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: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
126.00	SOCGWM 10%G 10%O 10%W 70%M	1.503
189.00	GOCM 30%G 20%O 50%M	2.651
0.00	819-GIP	0.000

Total Length: 315.00 ft Total Volume: 4.154 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

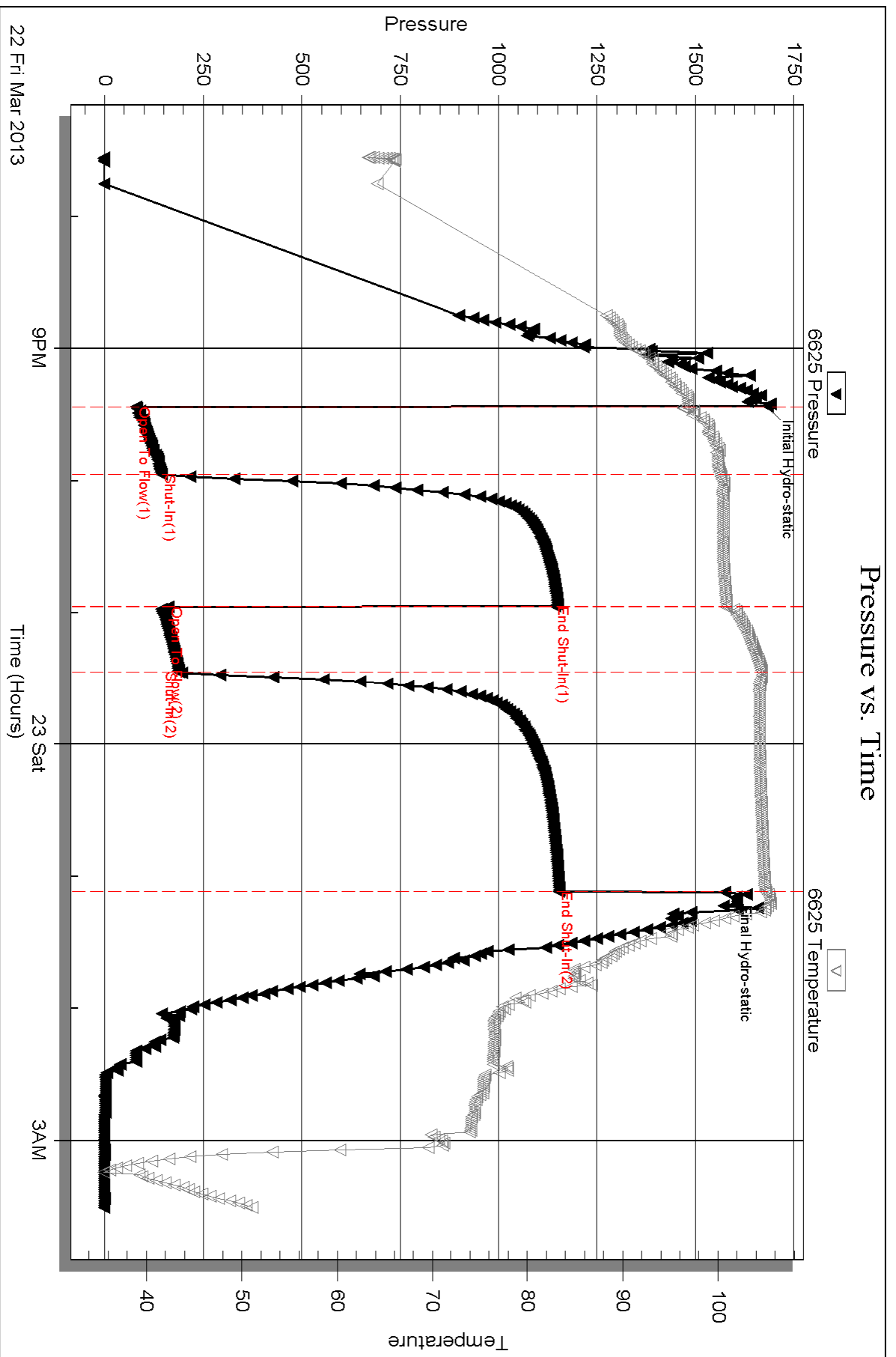
Recovery Comments:

Serial #: 6625

Outside Murfin Drilling Co Inc

Gottschalk #1-28

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 48509

Printed: 2013.03.27 @ 11:42:18

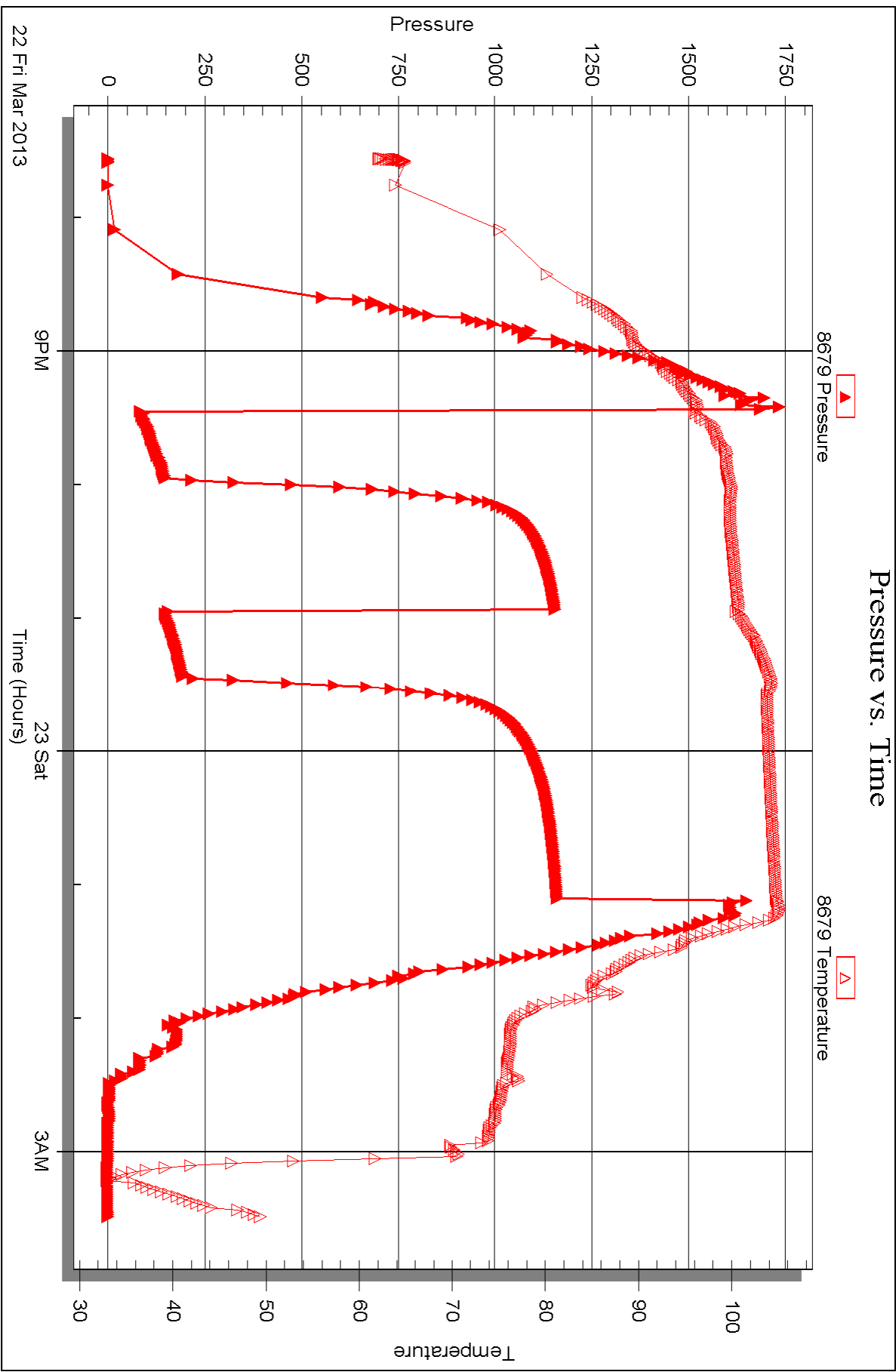
Serial #: 8679

Inside

Murfin Drilling Co Inc

Gottschalk #1-28

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202 + 1216

ATTN: Shauna Gunzelman

Gottschalk #1-28

28-14s-18w Ellis,KS

Start Date: 2013.03.23 @ 11:08:29

End Date: 2013.03.23 @ 18:10:08

Job Ticket #: 40510 DST #: 2

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

Printed: 2013.03.27 @ 11:41:33



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita KS 67202 + 1216
 ATTN: Shauna Gunzelman

28-14s-18w Ellis, KS
Gottschalk #1-28
 Job Ticket: 40510 **DST#: 2**
 Test Start: 2013.03.23 @ 11:08:29

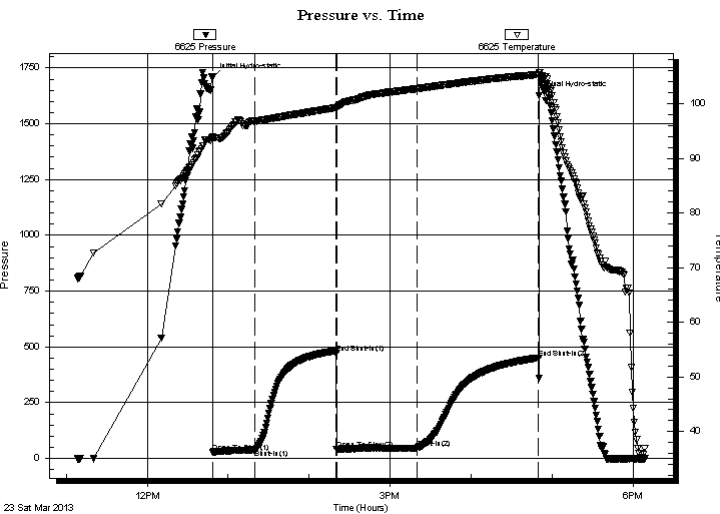
GENERAL INFORMATION:

Formation: **Lans-D-F**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:48:49
 Time Test Ended: 18:10:08
 Interval: **3391.00 ft (KB) To 3445.00 ft (KB) (TVD)**
 Total Depth: 3445.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional (Reset)
 Tester: Jeff
 Unit No: 67
 Reference Elevations: 2059.00 ft (KB)
 2054.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 46.73 psig @ 3427.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.23 End Date: 2013.03.23 Last Calib.: 2013.03.23
 Start Time: 11:08:30 End Time: 18:09:09 Time On Btm: 2013.03.23 @ 12:48:39
 Time Off Btm: 2013.03.23 @ 16:50:29

TEST COMMENT: IFP=Weak blow built to 2 3/4"
 ISI=Weak surface blow back
 FFP=Weak blow built to 2 1/4"
 FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1708.27	93.90	Initial Hydro-static
1	28.49	93.54	Open To Flow (1)
32	39.42	96.73	Shut-In(1)
92	471.25	99.28	End Shut-In(1)
92	41.50	99.22	Open To Flow (2)
152	46.73	102.73	Shut-In(2)
242	451.15	105.32	End Shut-In(2)
242	1625.24	105.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	V SOCGM 3%G 2%O 95%M	0.30

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 40510

DST#: 2

ATTN: Shauna Gunzelman

Test Start: 2013.03.23 @ 11:08:29

Tool Information

Drill Pipe:	Length: 3360.00 ft	Diameter: 3.80 inches	Volume: 47.13 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 47.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3391.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3372.00	
Shut In Tool	5.00			3377.00	
Hydraulic tool	5.00			3382.00	
Packer	4.00			3386.00	20.00 Bottom Of Top Packer
Packer	5.00			3391.00	
Stubb	1.00			3392.00	
Perforations	2.00			3394.00	
Change Over Sub	1.00			3395.00	
Drill Pipe	31.00			3426.00	
Change Over Sub	1.00			3427.00	
Recorder	0.00	6625	Outside	3427.00	
Recorder	0.00	8679	Inside	3427.00	
Perforations	15.00			3442.00	
Bullnose	3.00			3445.00	54.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 40510

DST#: 2

ATTN: Shauna Gunzelman

Test Start: 2013.03.23 @ 11:08:29

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: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	VSOCGM 3%G 2%O 95%M	0.297

Total Length: 40.00 ft Total Volume: 0.297 bbl

Num Fluid Samples: 0

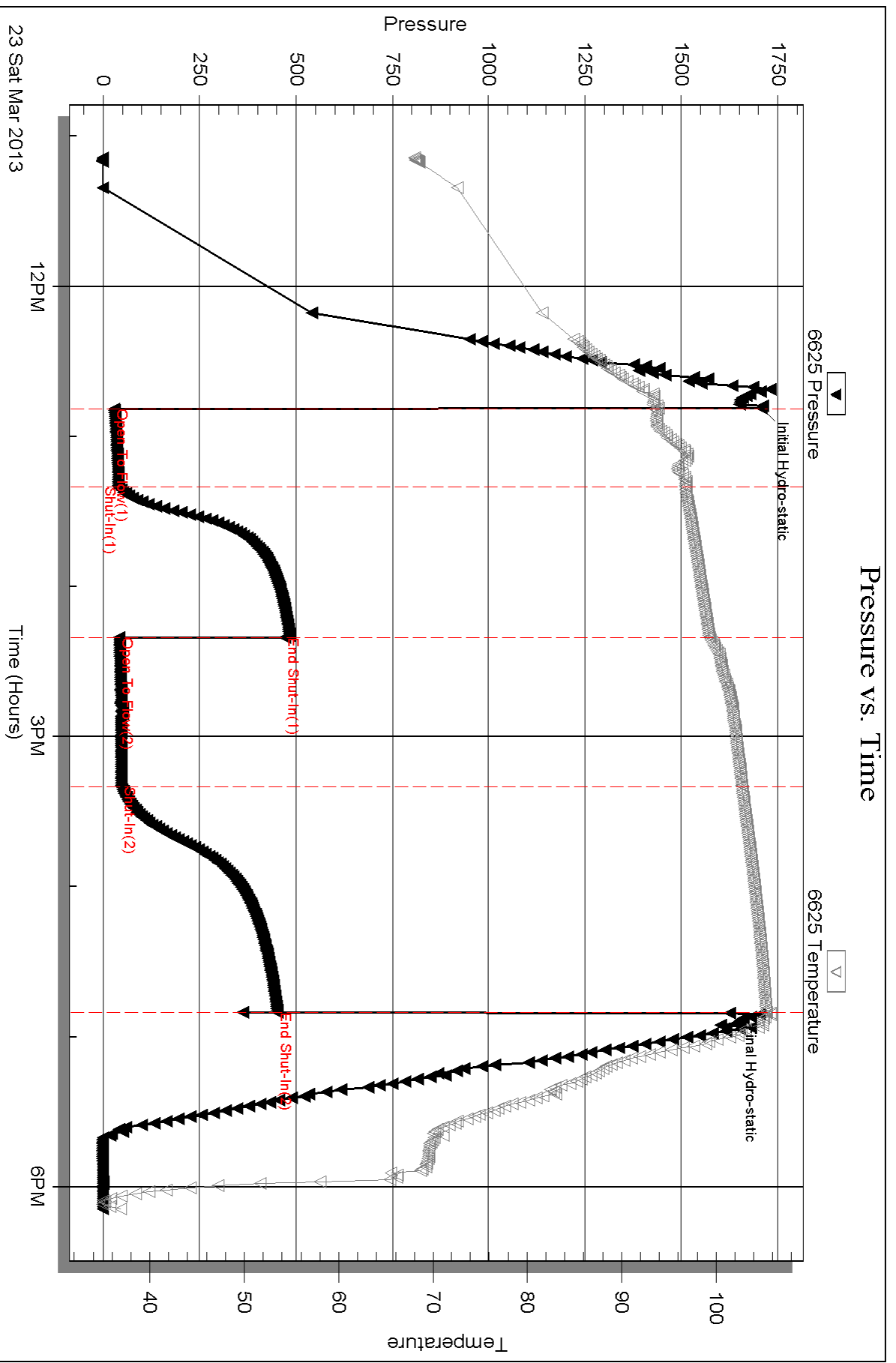
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



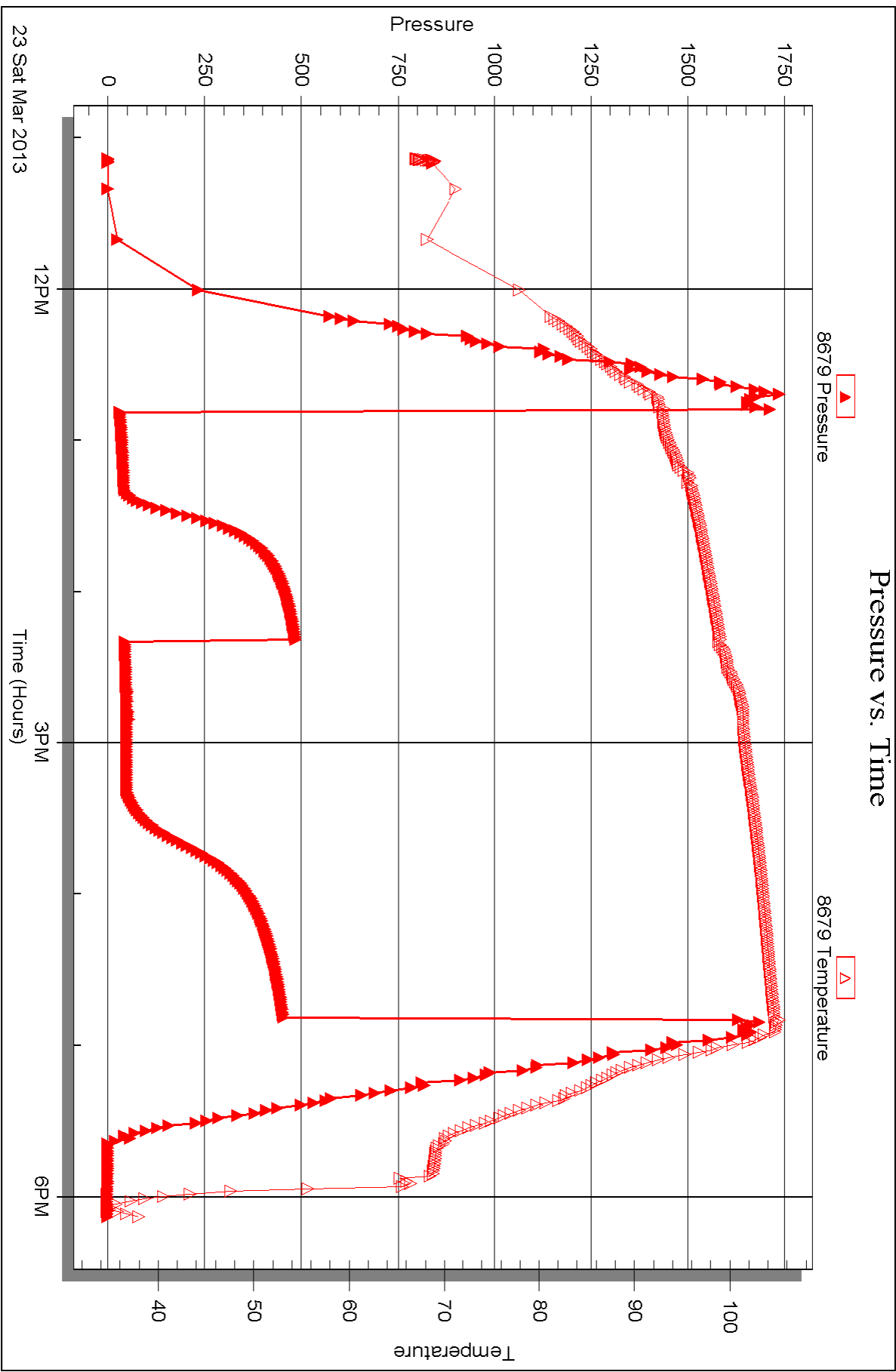
Serial #: 8679

Inside

Murfin Drilling Co Inc

Gottschalk #1-28

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202 + 1216

ATTN: Shauna Gunzelman

Gottschalk #1-28

28-14s-18w Ellis,KS

Start Date: 2013.03.24 @ 07:24:40

End Date: 2013.03.24 @ 14:18:40

Job Ticket #: 48511 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.27 @ 11:40:53



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita KS 67202 + 1216
 ATTN: Shauna Gunzelman

28-14s-18w Ellis, KS
Gottschalk #1-28
 Job Ticket: 48511 **DST#: 3**
 Test Start: 2013.03.24 @ 07:24:40

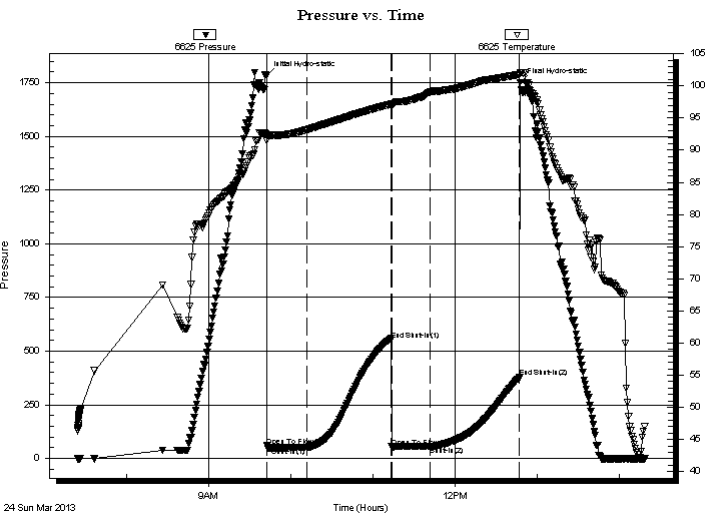
GENERAL INFORMATION:

Formation: **Lans-H-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:42:30
 Time Test Ended: 14:18:40
 Interval: **3473.00 ft (KB) To 3567.00 ft (KB) (TVD)**
 Total Depth: 3567.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional (Reset)
 Tester: Jeff
 Unit No: 67
 Reference Elevations: 2059.00 ft (KB)
 2054.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 57.69 psig @ 3541.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.24 End Date: 2013.03.24 Last Calib.: 2013.03.24
 Start Time: 07:24:41 End Time: 14:18:40 Time On Btm: 2013.03.24 @ 09:42:20
 Time Off Btm: 2013.03.24 @ 12:47:19

TEST COMMENT: IFP=Weak blow built to 2"
 ISI=Dead no blow back
 FFP=Weak blow built to 1/2"
 FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1782.77	92.45	Initial Hydro-static
1	59.00	91.46	Open To Flow (1)
30	52.60	93.15	Shut-In(1)
91	550.63	97.17	End Shut-In(1)
92	54.59	97.13	Open To Flow (2)
120	57.69	99.05	Shut-In(2)
185	377.42	101.76	End Shut-In(2)
185	1749.80	102.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud w ith a scum of oil	0.10

* 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

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48511

DST#: 3

ATTN: Shauna Gunzelman

Test Start: 2013.03.24 @ 07:24:40

Tool Information

Drill Pipe:	Length: 3456.00 ft	Diameter: 3.80 inches	Volume: 48.48 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 48.62 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3473.00 ft			Final	43000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	94.00 ft				
Tool Length:	114.00 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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Change Over Sub	1.00			3454.00	
Shut In Tool	5.00			3459.00	
Hydraulic tool	5.00			3464.00	
Packer	4.00			3468.00	20.00 Bottom Of Top Packer
Packer	5.00			3473.00	
Stubb	1.00			3474.00	
Perforations	2.00			3476.00	
Change Over Sub	1.00			3477.00	
Drill Pipe	63.00			3540.00	
Change Over Sub	1.00			3541.00	
Recorder	0.00	6625	Outside	3541.00	
Recorder	0.00	8679	Inside	3541.00	
Perforations	23.00			3564.00	
Bullnose	3.00			3567.00	94.00 Bottom Packers & Anchor

Total Tool Length: 114.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48511

DST#: 3

ATTN: Shauna Gunzelman

Test Start: 2013.03.24 @ 07:24:40

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
20.00	Mud with a scum of oil	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

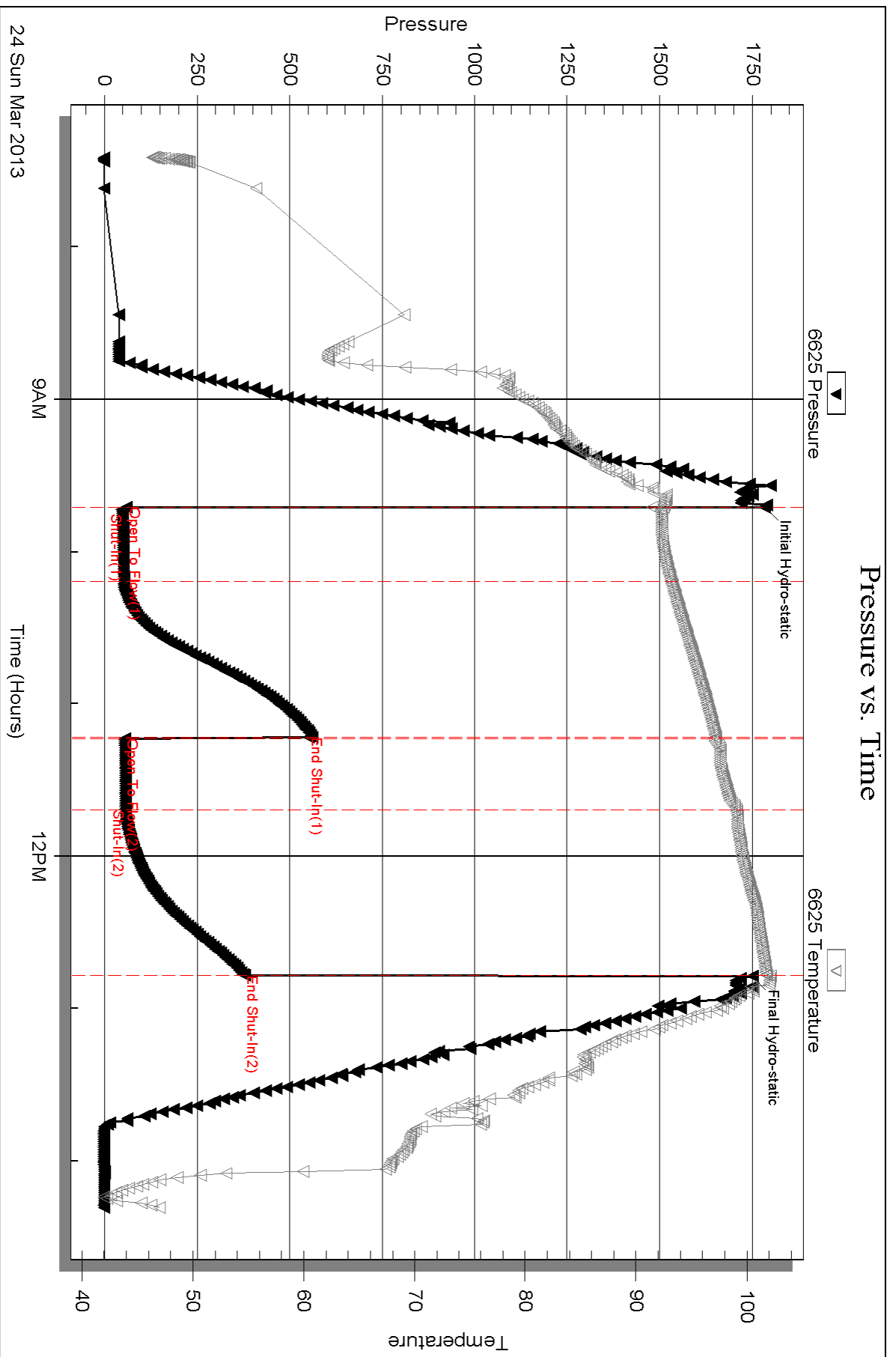
Recovery Comments:

Serial #: 6625

Outside Murfin Drilling Co Inc

Gottschalk #1-28

DST Test Number: 3



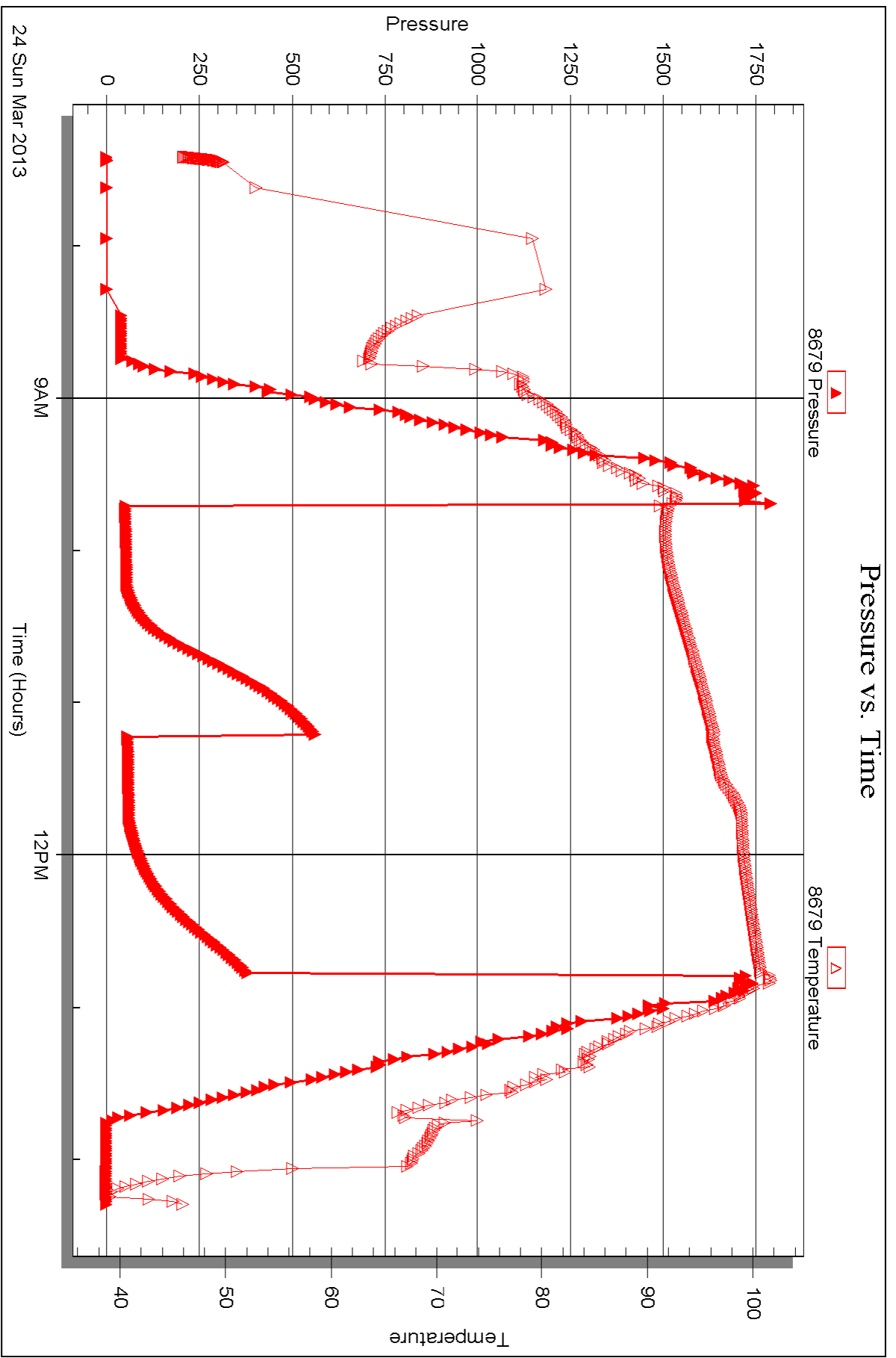
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Inside

Murfin Drilling Co Inc

Gottschalk #1-28

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202 + 1216

ATTN: Shauna Gunzelman

Gottschalk #1-28

28-14s-18w Ellis,KS

Start Date: 2013.03.25 @ 04:30:50

End Date: 2013.03.25 @ 11:05:10

Job Ticket #: 48512 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.27 @ 11:40:17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita KS 67202 + 1216
 ATTN: Shauna Gunzelman

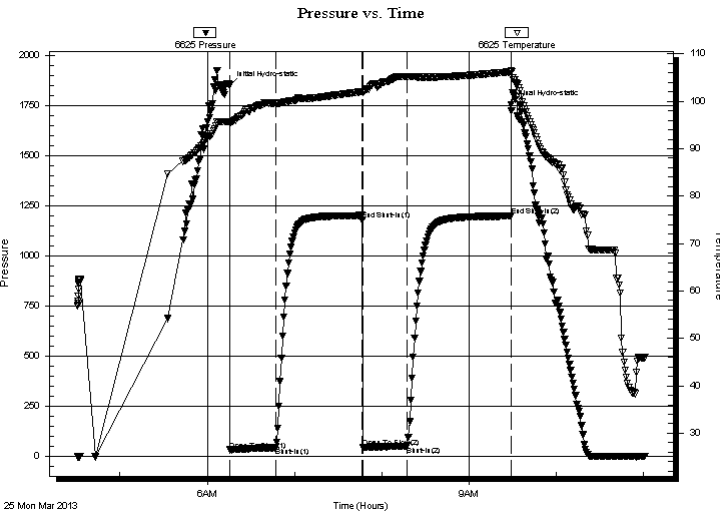
28-14s-18w Ellis, KS
Gottschalk #1-28
 Job Ticket: 48512 **DST#: 4**
 Test Start: 2013.03.25 @ 04:30:50

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:15:50
 Time Test Ended: 11:05:10
 Interval: **3630.00 ft (KB) To 3694.00 ft (KB) (TVD)**
 Total Depth: 3694.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional (Reset)
 Tester: Jeff
 Unit No: 67
 Reference Elevations: 2059.00 ft (KB)
 2054.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6625 Outside
 Press @ Run Depth: 49.79 psig @ 3668.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.25 End Date: 2013.03.25 Last Calib.: 2013.03.25
 Start Time: 04:30:51 End Time: 11:01:10 Time On Btm: 2013.03.25 @ 06:15:40
 Time Off Btm: 2013.03.25 @ 09:29:10

TEST COMMENT: IFP=Weak blow built to 2 1/2"
 ISI=Dead no blow back
 FFP=Weak blow built to 1/4"
 FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1852.14	95.76	Initial Hydro-static
1	31.94	95.39	Open To Flow (1)
32	44.52	99.64	Shut-In(1)
92	1180.00	102.03	End Shut-In(1)
92	45.69	101.87	Open To Flow (2)
122	49.79	105.24	Shut-In(2)
194	1199.33	106.20	End Shut-In(2)
194	1756.36	106.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud w ith oil spots	0.23

* 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

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48512

DST#: 4

ATTN: Shauna Gunzelman

Test Start: 2013.03.25 @ 04:30:50

Tool Information

Drill Pipe:	Length: 3614.00 ft	Diameter: 3.80 inches	Volume: 50.69 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 50.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3630.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	84.00 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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Change Over Sub	1.00			3611.00	
Shut In Tool	5.00			3616.00	
Hydraulic tool	5.00			3621.00	
Packer	4.00			3625.00	20.00 Bottom Of Top Packer
Packer	5.00			3630.00	
Stubb	1.00			3631.00	
Perforations	4.00			3635.00	
Change Over Sub	1.00			3636.00	
Drill Pipe	31.00			3667.00	
Change Over Sub	1.00			3668.00	
Recorder	0.00	6625	Outside	3668.00	
Recorder	0.00	8679	Inside	3668.00	
Perforations	23.00			3691.00	
Bullnose	3.00			3694.00	64.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48512

DST#: 4

ATTN: Shauna Gunzelman

Test Start: 2013.03.25 @ 04:30:50

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: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	Mud w ith oil spots	0.227

Total Length: 35.00 ft Total Volume: 0.227 bbl

Num Fluid Samples: 0

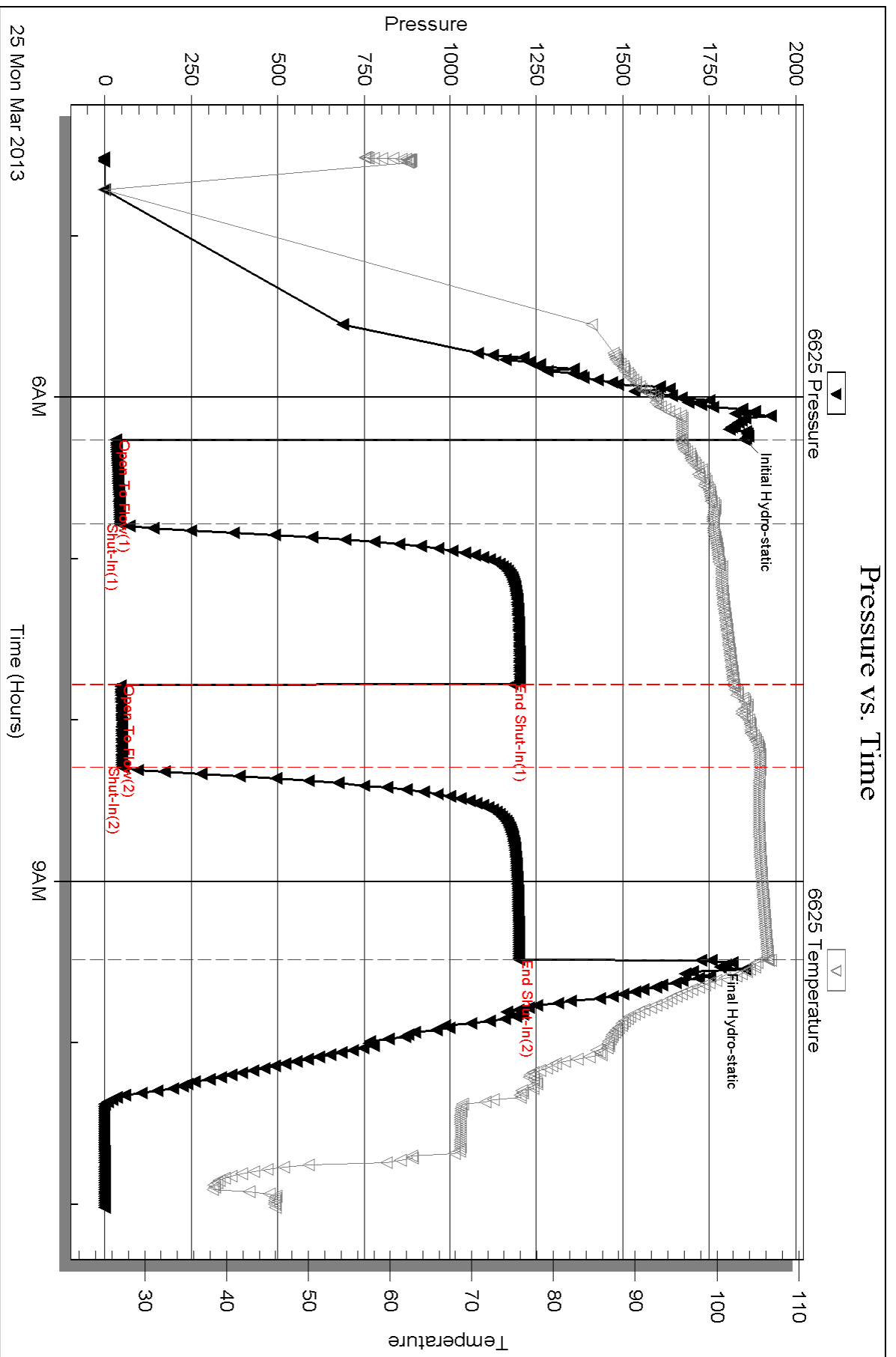
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



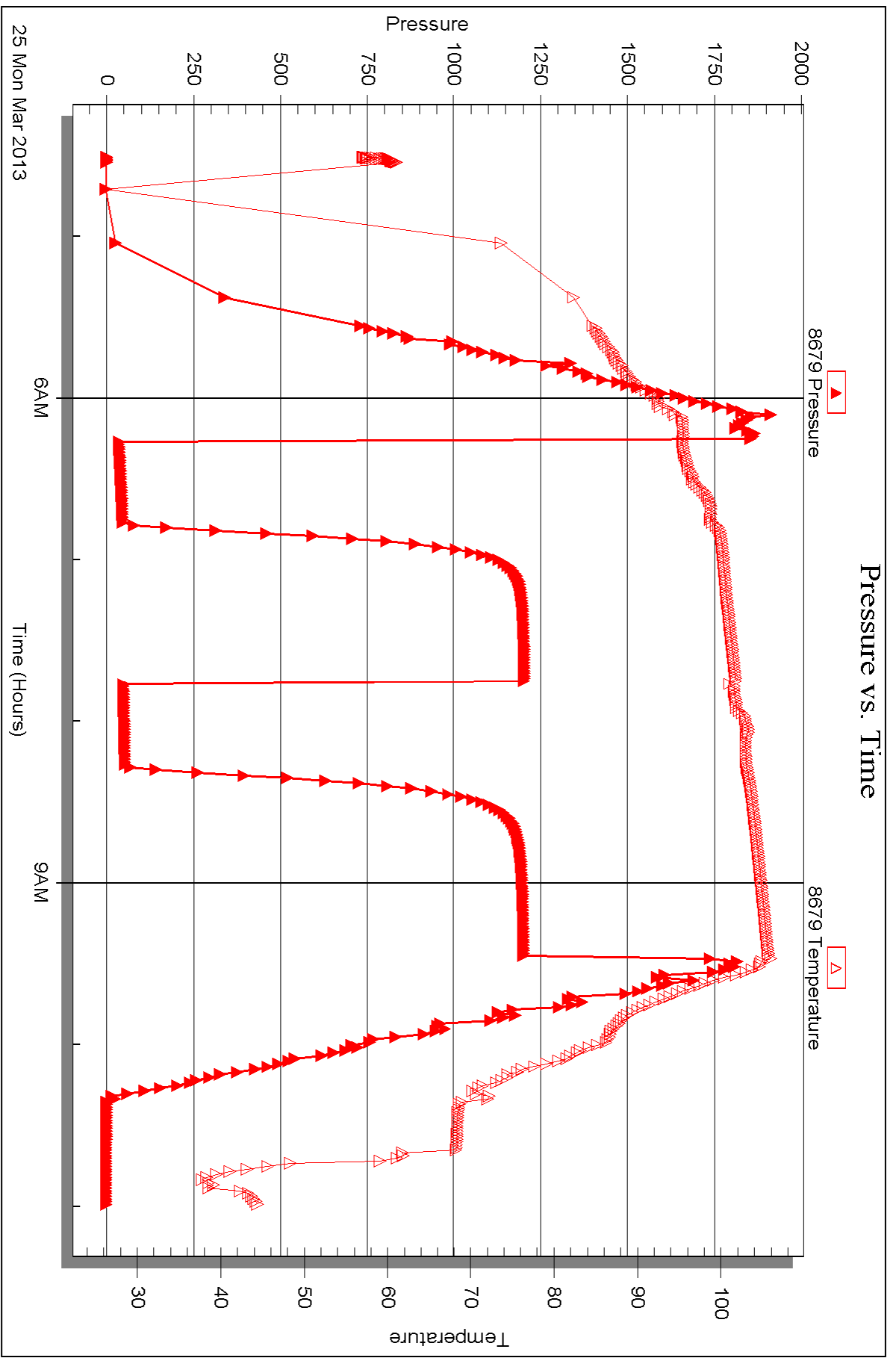
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Inside

Murfin Drilling Co Inc

Gottschalk #1-28

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 48512

Printed: 2013.03.27 @ 11:40:20



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita KS 67202 + 1216

ATTN: Shauna Gunzelman

Gottschalk #1-28

28-14s-18w Ellis,KS

Start Date: 2013.03.25 @ 16:06:55

End Date: 2013.03.25 @ 22:35:34

Job Ticket #: 48513 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.27 @ 11:39:32



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita KS 67202 + 1216
ATTN: Shauna Gunzelman

28-14s-18w Ellis, KS
Gottschalk #1-28
Job Ticket: 48513 **DST#: 5**
Test Start: 2013.03.25 @ 16:06:55

GENERAL INFORMATION:

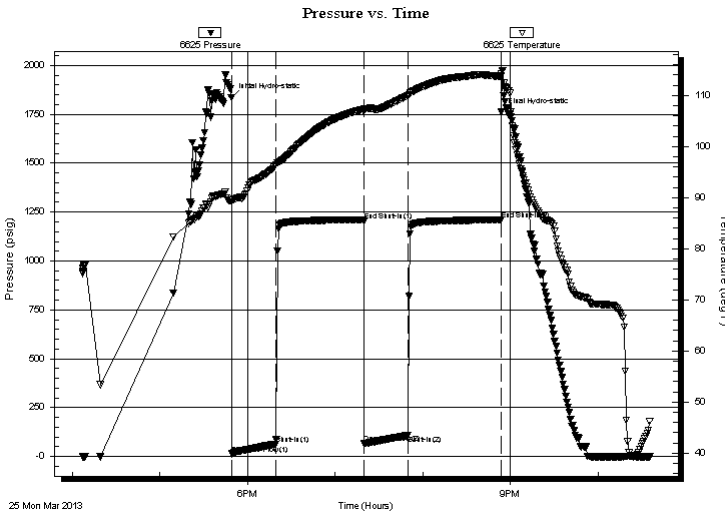
Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:48:55
Time Test Ended: 22:35:34
Interval: **3694.00 ft (KB) To 3704.00 ft (KB) (TVD)**
Total Depth: 3704.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional (Reset)
Tester: Jeff
Unit No: 67
Reference Elevations: 2059.00 ft (KB)
2054.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 108.56 psig @ 3695.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.03.25 End Date: 2013.03.25 Last Calib.: 2013.03.25
Start Time: 16:06:56 End Time: 22:35:35 Time On Btm: 2013.03.25 @ 17:48:45
Time Off Btm: 2013.03.25 @ 20:53:45

TEST COMMENT: IFP=Good blow BOB in 20 min
ISI=Weak surface blow back
FFP=Good blow BOB 23 1/2 min
FSI=Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1836.95	89.45	Initial Hydro-static
1	13.76	89.22	Open To Flow (1)
31	64.05	96.38	Shut-In(1)
91	1202.92	107.30	End Shut-In(1)
91	67.74	106.85	Open To Flow (2)
121	108.56	109.97	Shut-In(2)
185	1208.82	113.75	End Shut-In(2)
185	1760.68	114.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	MW 10%M 90%W	1.50
94.00	WM 45%W 55%M	1.32

* 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

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48513

DST#: 5

ATTN: Shauna Gunzelman

Test Start: 2013.03.25 @ 16:06:55

Tool Information

Drill Pipe:	Length: 3677.00 ft	Diameter: 3.80 inches	Volume: 51.58 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 51.72 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3694.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	30.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3675.00	
Shut In Tool	5.00			3680.00	
Hydraulic tool	5.00			3685.00	
Packer	4.00			3689.00	20.00 Bottom Of Top Packer
Packer	5.00			3694.00	
Stubb	1.00			3695.00	
Recorder	0.00	6625	Outside	3695.00	
Recorder	0.00	8679	Inside	3695.00	
Perforations	6.00			3701.00	
Bullnose	3.00			3704.00	10.00 Bottom Packers & Anchor
Total Tool Length:	30.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

28-14s-18w Ellis,KS

250 N Water Ste 300
Wichita KS 67202 + 1216

Gottschalk #1-28

Job Ticket: 48513

DST#: 5

ATTN: Shauna Gunzelman

Test Start: 2013.03.25 @ 16:06:55

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:

bbf

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
126.00	MW 10%M 90%W	1.503
94.00	WM 45%W 55%M	1.319

Total Length: 220.00 ft Total Volume: 2.822 bbf

Num Fluid Samples: 0

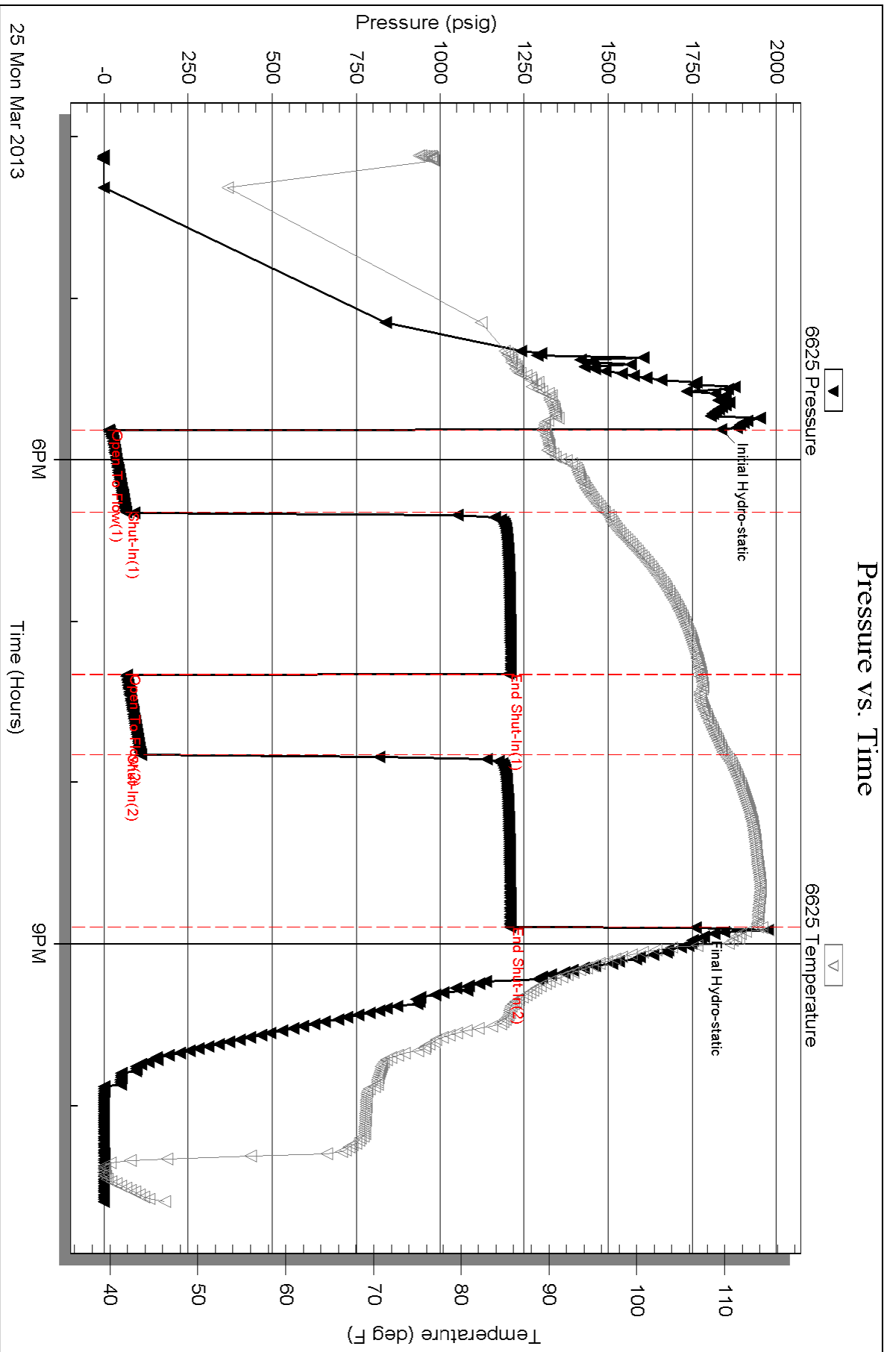
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



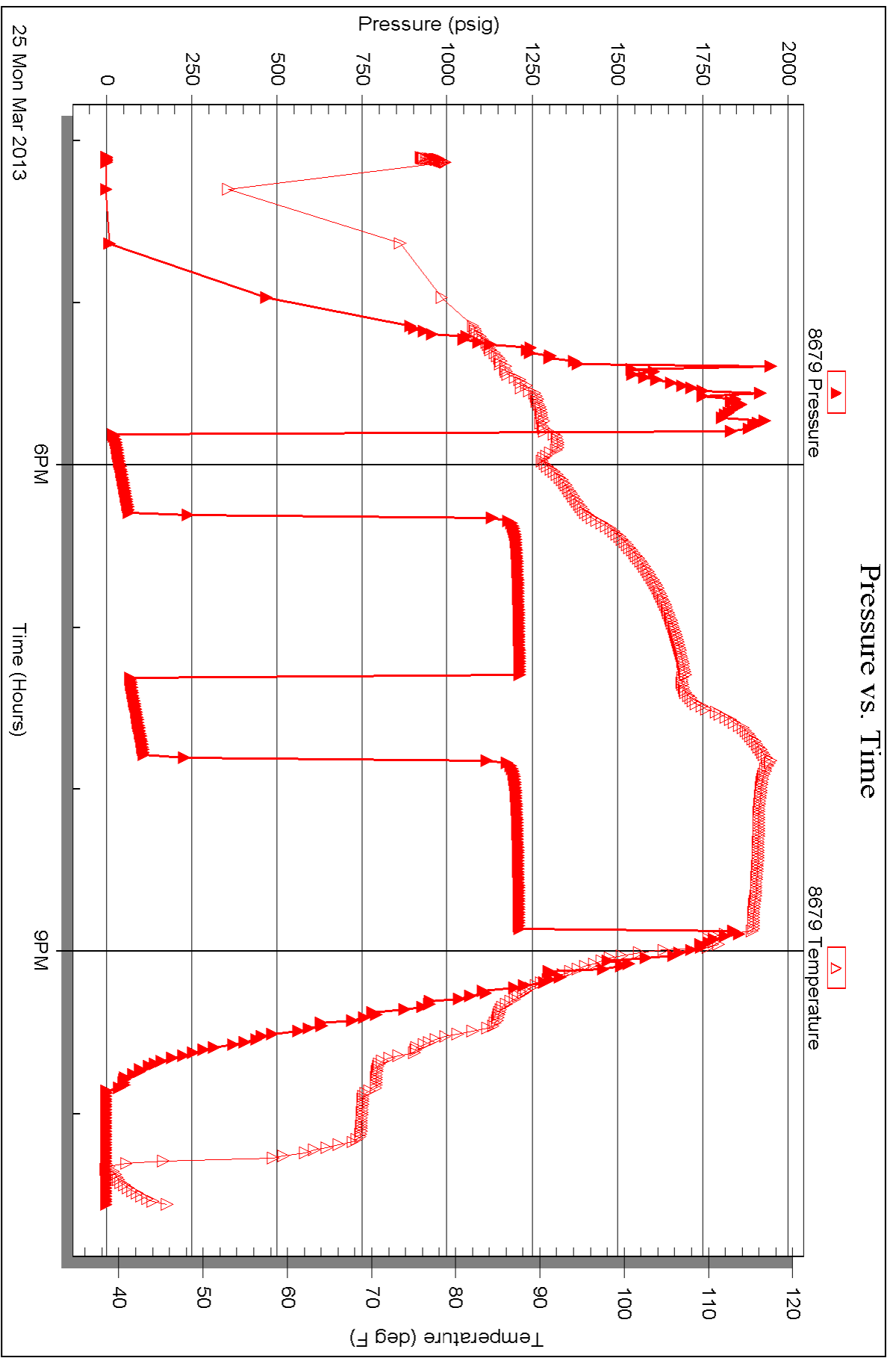
Serial #: 8679

Inside

Murfin Drilling Co Inc

Gottschalk #1-28

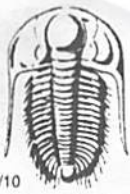
DST Test Number: 5



Triobite Testing, Inc

Ref. No: 48513

Printed: 2013.03.27 @ 11:39:35



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48509

Well Name & No. Gottschalk 1-28 Test No. 1 Date 3-22-13
 Company Murfin Drilling Co Inc Elevation 2059 KB 2054 GL
 Address 250 N Water Ste 300 Wichita KS 67202 + 1214
 Co. Rep / Geo. Rocky Milford Rig Murfin 14
 Location: Sec. 28 Twp. 14S Rge. 18W Co. ELLIS State KS

Interval Tested 3257 - 3393 Zone Tested Oread - Lans B
 Anchor Length 134 Drill Pipe Run 3233 Mud Wt. 89
 Top Packer Depth 3252 Drill Collars Run 29 Vis 70
 Bottom Packer Depth 3257 Wt. Pipe Run 0 WL 64
 Total Depth 3393 Chlorides 1200 ppm System LCM 1

Blow Description IP-Strong Blow Bob IN 4 min
1st-Weak surface Blow Back Built to 1 1/2 IN Died Back to 3/4 IN
IP-Strong Blow Bob IN 3 min
ISI-Fair Blow ~~Bob IN~~ Back Built to 6 IN

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>Soc Gwm</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>70</u>
<u>189</u>	<u>Gocm</u>	<u>30</u>	<u>20</u>		<u>50</u>
	<u>819-GIP</u>				

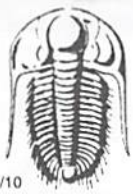
Rec Total 315 BHT _____ Gravity _____ API RW 285 @ 56.6°F Chlorides 31,000 ppm

(A) Initial Hydrostatic 11681 Test 1150 T-On Location 18:32
 (B) First Initial Flow 80 Jars _____ T-Started 19:33
 (C) First Final Flow 144 Safety Joint _____ T-Open 21:28
 (D) Initial Shut-In 1144 Circ Sub _____ T-Pulled 00:58
 (E) Second Initial Flow 1162 Hourly Standby _____ T-Out 3:31
 (F) Second Final Flow 188 Mileage 14 RT 24.80
 (G) Final Shut-In 1154 Sampler _____
 (H) Final Hydrostatic 1575 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 60 Ruined Packer _____
 Final Flow 30 Extra Copies _____
 Final Shut-In 90 Sub Total 0
 Total 1174.80
 Sub Total 1174.80 MP/DST Disc't _____

Approved By _____ Our Representative Jeff Brown

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48510

Well Name & No. GOTTschalk 1-28 Test No. 2 Date 3-23-13
 Company Murfin Drilling Co INC Elevation 2059 KB 2054 GL
 Address 250 N Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #16
 Location: Sec. 28 Twp. 14S Rge. 18W Co. ELLIS State KS

Interval Tested 3391 - 3445 Zone Tested Lens Δ-F
 Anchor Length 54 Drill Pipe Run 3360 Mud Wt. 9.1
 Top Packer Depth 3386 Drill Collars Run 29 Vis 58
 Bottom Packer Depth 3391 Wt. Pipe Run 0 WL 7.2
 Total Depth 3445 Chlorides 1300 ppm System LCM 1

Blow Description FF-Weak Blow Built to 2 3/4 IN
IS-Weak surface Blow Back
FF-Weak Blow Built to 2 1/4 IN
SI-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>USOC Gm</u>	<u>3</u>	<u>2</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 40 BHT 105 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1708 Test 1150 T-On Location 10:40
 (B) First Initial Flow 28 Jars _____ T-Started 11:08
 (C) First Final Flow 39 Safety Joint _____ T-Open 12:50
 (D) Initial Shut-In 471 Circ Sub _____ T-Pulled 16:50
 (E) Second Initial Flow 42 Hourly Standby _____ T-Out 18:10
 (F) Second Final Flow 47 Mileage 24.80 Comments _____
 (G) Final Shut-In 451 Sampler _____
 (H) Final Hydrostatic 1625 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 60 Ruined Packer _____
 Final Flow 60 Extra Copies _____
 Final Shut-In 90 Sub Total 0
 Total 1174.80
 MP/DST Disc't _____
 Sub Total 1174.80

Approved By _____ Our Representative Jeff Brown

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48511

Well Name & No. GOTTschalk 1-28 Test No. 3 Date 3-24-13
 Company Murfin Drilling Co INC Elevation 2059 KB 2054 GL
 Address 250 N Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #16
 Location: Sec. 28 Twp. 14s Rge. 18 W Co. ELLIS State KS

Interval Tested 3473 - 3567 Zone Tested Lansing - H - K
 Anchor Length 94 Drill Pipe Run 3456 Mud Wt. 9.1
 Top Packer Depth 3468 Drill Collars Run 29 Vis 51
 Bottom Packer Depth 3473 Wt. Pipe Run 0 WL 7.4
 Total Depth 3567 Chlorides 1300 ppm System LCM 1

Blow Description FP-Weak Blow Built to 2 IN
ISI-Dead No Blow Back
FP-Weak Blow Built to 1/2 IN
ISI-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Mud with a scum of oil</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 20 BHT 102 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 1783
- (B) First Initial Flow 59
- (C) First Final Flow 53
- (D) Initial Shut-In 551
- (E) Second Initial Flow 55
- (F) Second Final Flow 58
- (G) Final Shut-In 377
- (H) Final Hydrostatic 1750

- Test 1150
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby
- Mileage 24.80
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

- T-On Location 7:07
- T-Started 7:24
- T-Open 9:42
- T-Pulled 12:42
- T-Out 14:18

- Comments _____
- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 0
- Total 1174.80
- MP/DST Disc't _____

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

Approved By _____ Our Representative Jeff Brown

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48512

Well Name & No. GOTTschalk 1-28 Test No. 4 Date 3-25-13
 Company Murfin Drilling Co INC Elevation 2059 KB 2054 GL
 Address 250 N Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #14
 Location: Sec. 28 Twp. 14S Rge. 18W Co. ELLIS State KS

Interval Tested 3430-3494 Zone Tested ArBuckle
 Anchor Length 64 Drill Pipe Run 3414 Mud Wt. 9.3
 Top Packer Depth 3425 Drill Collars Run 29 Vis 560
 Bottom Packer Depth 3430 Wt. Pipe Run 0 WL 7.6
 Total Depth 3494 Chlorides 1500 ppm System LCM 2
 Blow Description FP-Weak Blow Built to 2 1/2 IN
IS-Dead No Blow Back
FP-Weak Blow Built to 1/4 IN
IS-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Mud with Oil Spots</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 20 BHT 106 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

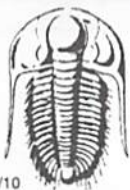
(A) Initial Hydrostatic 1852 Test 1150 T-On Location 4:12
 (B) First Initial Flow 32 Jars _____ T-Started 4:30
 (C) First Final Flow 45 Safety Joint _____ T-Open 6:16
 (D) Initial Shut-In 1180 Circ Sub _____ T-Pulled 9:16
 (E) Second Initial Flow 46 Hourly Standby _____ T-Out 11:05
 (F) Second Final Flow 50 Mileage 24.80 Comments _____
 (G) Final Shut-In 1199 Sampler _____
 (H) Final Hydrostatic 1756 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1174.80

Approved By _____ Our Representative Jeff Brown

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48513

Well Name & No. GOTTschalk 1-28 Test No. 5 Date 3-25-13
 Company Murfin Drilling Co INC Elevation 2059 KB 2054 GL
 Address 250 N Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #16
 Location: Sec. 28 Twp. 14s Rge. 18 W Co. ELLIS State KS

Interval Tested 3694-3704 Zone Tested ArBuckle
 Anchor Length 10 Drill Pipe Run 3677 Mud Wt. 9.3
 Top Packer Depth 3689 Drill Collars Run 29 Vis 56
 Bottom Packer Depth 3694 Wt. Pipe Run 0 WL 7.6
 Total Depth 3704 Chlorides 1500 ppm System LCM 2
 Blow Description FF-Good Blow BoB IN 20 min
IST-Meak Surface Blow Back
FF-Good Blow BoB IN 23 1/2 min
FF-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>mW</u>			<u>90</u>	<u>10</u>
<u>94</u>	<u>WM</u>			<u>45</u>	<u>55</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 220 BHT 114 Gravity _____ API RW .372 @ 43.3 °F Chlorides 30,000 ppm

(A) Initial Hydrostatic 1837 Test 1150 T-On Location 15:44
 (B) First Initial Flow 14 Jars _____ T-Started 16:06
 (C) First Final Flow 64 Safety Joint _____ T-Open 17:49
 (D) Initial Shut-In 1203 Circ Sub _____ T-Pulled 20:49
 (E) Second Initial Flow 68 Hourly Standby _____ T-Out 22:35
 (F) Second Final Flow 109 Mileage 24.80 Comments _____
 (G) Final Shut-In 1209 Sampler _____
 (H) Final Hydrostatic 1761 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 1174.80
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1174.80

Approved By _____ Our Representative Jeff Brown

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.



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 3/25/2013
 Invoice # 6589
 P.O.#:
 Due Date: 4/24/2013
 Division: Russell

acct.
 Prod-LH

Invoice

Contact:
 Murfin Drilling Company
Address/Job Location:
 Murfin Drilling Company
 P.O. Box 288
 Russell Ks 67665

USED FOR Drilling
 APPROVED _____

Reference:
 GOTTSCHAK 1-28

Description of Work:
 SURFACE JOB

OPERATOR PAY MDC
 LEASE: Gottschalk 1-28

Services / Items Included:

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	No				
Common-Class A	165	\$ 2,246.45	Yes				
Bulk Truck Matl-Material Service Charge	173	\$ 375.66	No				
Calcium Chloride	5	\$ 258.73	Yes				
Premium Gel (Bentonite)	3	\$ 53.03	Yes				
Pump Truck Mileage-Job to Nearest Camp	5	\$ 54.18	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	5	\$ 31.70	No				

Invoice Terms:

Net 30

SubTotal: \$ 4,011.13
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (601.67)

SubTotal for Taxable Items: \$ 2,174.47
 SubTotal for Non-Taxable Items: \$ 1,234.99
 Total: \$ 3,409.46
 Tax: \$ 136.99

6.30% Ellis County Sales Tax

Thank You For Your Business!

Amount Due: \$ 3,546.45
Applied Payments:
Balance Due: \$ 3,546.45

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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QKJ
[Signature]

acct.
Prod- Ltt



QUALITY OILWELL CEMENTING, INC.
PO Box 32 - 740 West Wichita Ave, Russell KS 67665
Phone: 785-324-1041 fax: 785-483-1087
Email: cementing@ruraltel.net

Date: 3/25/2013
Invoice # 6589
P.O.#:
Due Date: 4/24/2013
Division: Russell

Invoice

Contact:
Murfin Drilling Company
Address/Job Location:
Murfin Drilling Company
P.O. Box 288
Russell Ks 67665

USED FOR Drilling
APPROVED _____

Reference:
GOTTSCHAK 1-28

Description of Work:
SURFACE JOB

OPERATOR PAY MDC
LEASE: Gottschalk 1-28

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	No				
Common-Class A	165	\$ 2,246.45	Yes				
Bulk Truck Matl-Material Service Charge	173	\$ 375.66	No				
Calcium Chloride	5	\$ 258.73	Yes				
Premium Gel (Bentonite)	3	\$ 53.03	Yes				
Pump Truck Mileage-Job to Nearest Camp	5	\$ 54.18	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	5	\$ 31.70	No				

Invoice Terms:
Net 30

SubTotal:	\$	4,011.13
Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:	\$	(601.67)
SubTotal for Taxable Items:	\$	2,174.47
SubTotal for Non-Taxable Items:	\$	1,234.99
Total:	\$	3,409.46
Tax:	\$	136.99
Amount Due:	\$	3,546.45
Applied Payments:		
Balance Due:	\$	3,546.45

6.30% Ellis County Sales Tax

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QKJ
[Signature]

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6589

Date	3-19-13	Sec.	28	Twp.	14	Range	18	County	Ellis	State	KS	On Location		Finish	8.5pm
------	---------	------	----	------	----	-------	----	--------	-------	-------	----	-------------	--	--------	-------

Lease Gottschalk Location hays Sto man 30R RD 3/4 W Sinto
 Well No. 1-28 Owner

Contractor	<u>Martin 16</u>	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Type Job	<u>Surface</u>	Charge To	<u>Martin Doly</u>
Hole Size	<u>12 1/4</u>	T.D.	<u>220</u>
Csg.	<u>8 3/8</u>	Depth	
Tbg. Size		Depth	
Tool		Depth	

Cement Left in Csg. 20ft Shoe Joint 20 ft Cement Amount Ordered 165 396cc 240gal
 Meas Line Displace 12.5 BBL

EQUIPMENT				Common
Pumptrk	<u>5</u>	No.	Cementor Helper <u>Matt</u>	<u>165</u>
Bulktrk	<u>4</u>	No.	Driver <u>Brett</u>	Poz. Mix
Bulktrk	<u>pu</u>	No.	Driver <u>Heath</u>	Gel. <u>3</u>
				Calcium <u>5</u>

JOB SERVICES & REMARKS		Hulls
Remarks:		Salt
Rat Hole		Flowseal
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
<u>Cement did</u>		Handling <u>173</u>
<u>Circulate</u>		Mileage

FLOAT EQUIPMENT	
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Pumptrk Charge Surface
 Mileage 5

Signature <u>Aq Doh</u>	Tax
	Discount
	Total Charge

acct.
Prod-LH

Date: 3/29/2013
Invoice # 6597

P.O.#:

Due Date: 4/28/2013

Division: Russell



QUALITY OILWELL CEMENTING, INC.
PO Box 32 - 740 West Wichita Ave, Russell KS 67665
Phone:785-324-1041 fax:785-483-1087
Email: cementing@ruraltel.net

Invoice

Contact:
Murfin Drilling Company
Address/Job Location:
Murfin Drilling Company
P.O. Box 288
Russell Ks 67665

USED FOR DEA
APPROVED [Signature]

OPERATOR PAY MDC
LEASE: Goettschalk 1-28
[Signature]

Reference:
GOTTCHALK 1-28

Description of Work:
PLUG JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	Yes				
Common-Class A	162	\$ 2,205.61	Yes				
Bulk Truck Matl-Material Service Charge	280	\$ 608.00	Yes				
POZ Mix-Standard	108	\$ 539.38	Yes				
Premium Gel (Bentonite)	10	\$ 176.75	Yes				
Flo Seal	67	\$ 145.49	Yes				
Pump Truck Mileage-Job to Nearest Camp	6	\$ 65.01	Yes				
<u>Dry Hole Plug</u>	1	\$ 60.80	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	6	\$ 38.04	Yes				

Invoice Terms:	SubTotal:	\$ 4,830.47
Net 30	Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:	\$ (724.57)
	SubTotal for Taxable Items:	\$ 4,105.90
	SubTotal for Non-Taxable Items:	\$ -
	Total:	\$ 4,105.90
	Tax:	\$ 258.67
	6.30% Ellis County Sales Tax	

Thank You For Your Business!

Amount Due: \$ 4,364.57
Applied Payments:
Balance Due: \$ 4,364.57

Past Due Invoices are subject to a service charge (annual rate of 24%)
This does not include any applicable taxes unless it is listed.
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[Signature]
[Signature]

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6597

Date	3-26-13	Sec.	28	Twp.	14	Range	18	County	Ellis	State	KS	On Location	Finish	3:05pm
------	---------	------	----	------	----	-------	----	--------	-------	-------	----	-------------	--------	--------

Location **Hays 45 to mch. 206 Rd 3/4 W**

Lease Gottchalk	Well No. 1-28	Owner SINTO
------------------------	----------------------	--------------------

Contractor **Murfin 16**
Type Job **plug 206**

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 7 7/8	T.D. 3755	Charge To Murfin Drly
------------------------	------------------	------------------------------

Csg. Dill pipe	Depth	Street
-----------------------	-------	--------

Tbg. Size	Depth	City State
-----------	-------	------------

Tool _____ Depth _____

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg.	Shoe Joint	Cement Amount Ordered 270 @ 40 4% gel
---------------------	------------	--

Meas Line	Displace	V4 flow
-----------	----------	---------

EQUIPMENT

Pumptrk	5	No.	Cementer	No.	Helper	Common	162
						Poz. Mix	108
Bulktrk	14	No.	Driver		Brett	Gel.	10
Bulktrk	pa	No.	Driver		David L	Calcium	

JOB SERVICES & REMARKS

Remarks:	Salt
----------	------

Rat Hole 30 SKS	Flowseal 67#
------------------------	---------------------

Mouse Hole 15 SKS	Kol-Seal
--------------------------	----------

Centralizers	Mud CLR 48
--------------	------------

Baskets	CFL-117 or CD110 CAF 38
---------	-------------------------

D/V or Port Collar	Sand
--------------------	------

1st 366 ft	Handling 280
-------------------	---------------------

2nd 1300 ft	Mileage
--------------------	---------

3rd 575 ft	
-------------------	--

4th 275 ft	
-------------------	--

5th 40 ft	
------------------	--

FLOAT EQUIPMENT

Guide Shoe	
------------	--

Centralizer	
-------------	--

Baskets	
---------	--

AFU Inserts	
-------------	--

Float Shoe	
------------	--

Latch Down	
------------	--

Wood plug	
-----------	--

Pumptrk Charge plug	
----------------------------	--

Mileage 6	
------------------	--

	Tax	
	Discount	
	Total Charge	

X Signature **Ay Schul**