



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1152525  
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: \_\_\_\_\_



1152525

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

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

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

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*  
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*  
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

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

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Geyer 4-35
Doc ID	1152525

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3729 - 2732 Toronto	250 gal 15% MCA, 750 gal 15% NEFE	
4	3747 - 3750 LKC A	250 gal 15% MCA	
4	3776 - 3781 LKC B	400 gal 15% MCA (B&D), 750 gal 15% NEFE (B&D)	
4	3786 - 3790 LKC D		
4	3904 - 3908 LKC I	250 gal 20% MCA, 750 gal 15% NEFE	
4	3926 - 3933 LKC J		

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 22, 2013

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

Re: ACO1  
API 15-065-23916-00-00  
Geyer 4-35  
NW/4 Sec.35-10S-24W  
Graham 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

Geyer #4-35 1980' FNL 2310' FWL Sec. 35-T10S-R24W 2400' KB							Geyer #1-35 990' FNL 990' FWL Sec. 35-T10S-R24W 2385' KB	
Formation	Sample tops	Datum	Ref	Log Tops	Datum	Ref	Log Tops	Datum
Anhydrite	2016	+384	+7	2016	+384	+7	2008	+377
B/Anhydrite	2058	+342	-1	2058	+342	-1	2042	+343
Topeka	3490	-1090	+3	3489	-1089	+4	3478	-1093
Heebner	3708	-1308	+4	3707	-1307	+5	3697	-1312
Toronto	3729	-1329	+4	3728	-1328	+5	3718	-1333
Lansing	3744	-1344	+3	3743	-1343	+4	3732	-1347
BKC	3980	-1580	+3	3974	-1574	+9	3968	-1583
RTD	4030	-1630					4303	-1618
LTD				4029	-1629		4300	-1915

# Saman Sharifaie

## Petroleum Geologist

### GEOLOGIST'S REPORT

#### DRILLING TIME AND SAMPLE LOG

COMPANY: **Murfin Drilling Co., Inc.**

LEASE: **Geyer #4-35**

FIELD: **Geyer**

LOCATION: **1980 FNL & 2296 FWL**

SEC: **35 TWPSP 10S R9E 24W**

COUNTY: **Graham STATE Kansas**

CONTRACTOR: **Murfin Drilling #21**

SPUD: **04/03/13 COMP 04/10/13**

RTD: **4030' LTD 4029'**

MUD UP: **3000' TYPE MUD Chemical**

SAMPLES SAVED FROM: **3395' TO RTD**

DRILLING TIME KEPT FROM: **3395' TO RTD**

SAMPLES EXAMINED FROM: **3400' TO RTD**

GEOLOGICAL SUPERVISION FROM: **3095'**

REFERENCE WELL: **Geyer #1-35**

FORMATION: **Sample Tops**

Base Anhydrite: **2057 (-343)**

Deer Creek: **3492 (-1092)**

Oread: **3657 (-1257)**

Heebner: **3708 (-1308)**

Toronto: **3729 (-1329)**

Lansing: **3744 (-1344)**

BKC: **3980 (-1580)**

ELEVATIONS: **KB, 2400'**

DF: **2389'**

GL: **2389'**

Measurements Are All From Kelly Bushing

CASING: **CONDUCTION SURFACE 8.5/8" at 221' PRODUCTION 5.1/2" at 4029'**

ELECTRICAL: **CND: DIL. METL. Sonic Power Mfr/line**

REMARKS: **Due to fair to good shows of oil in multiple pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.**

Respectfully Submitted,

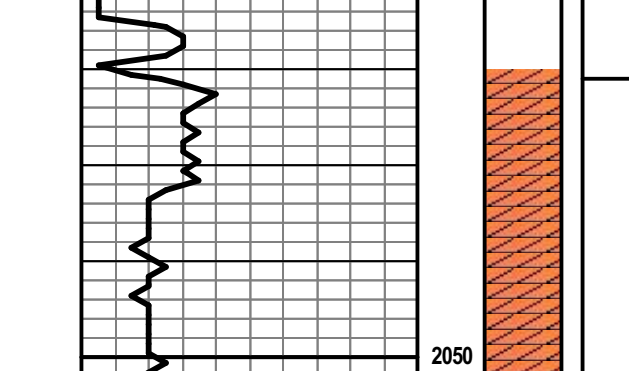
Saman Sharifaie

Petroleum Geologist

API #15-065-23916

\*Tops have been adjusted to electric logs

Formation	Sample Tops	E-log Tops	Struct
Anhydritic	2020 (-380)	2021 (-379)	+2
Base Anhydrite	2057 (-343)	2059 (-341)	+2
Topeka	3490 (-1090)	3490 (-1090)	+3
Deer Creek	3492 (-1092)	3546 (-1146)	+3
Oread	3657 (-1257)	3656 (-1256)	+3
Heebner	3708 (-1308)	3707 (-1307)	+4
Toronto	3729 (-1329)	3729 (-1329)	+4
Lansing	3744 (-1344)	3743 (-1343)	+4
BKC	3980 (-1580)	3978 (-1578)	+4



Geological Descriptions	Engineering Data
<b>Anhydrite 2021 (+379)</b>	
<b>Base Anhydrite 2059 (+341)</b>	

Geological Descriptions	Engineering Data
<b>DAILY PENETRATION @ 7:00 AM</b> 04/02/13 - Spudded at 3:15 PM 04/03/13 - Set Surface Casing 04/04/13 - Drilling at 2483' 04/05/13 - Drilling at 3447' 04/06/13 - Testing at 3763' 04/07/13 - Testing at 3809' 04/08/13 - Testing at 3920' 04/09/13 - Drilling at 3940'	

Geological Descriptions	Engineering Data
Ls., gry/crm, sing, rr intbn por, Tr foss, si, chky IP, n/s	
Ls., a.a, sli mott, Tr dk gry Sh	
Ls., crm/tanvgr, mott IP, foss, sli chky, Tr Stbst, n/s	
Sh., gry/blkg, gummy IP	
Ls., gry/crm, f xln, pr vis por, foss IP, scat rd/lt gry Stbst, n/s	
Ls., a.a, deer Stbst, scat Chk	
Sh., gry, stly	
Ls., gry/bl/crm, mott IP, sli fri, pr intbn & foss por, shly, stly IP, n/s	
<b>Topeka 3490 (-1090)</b>	
Ls., crm, sing, hd, blk, NWP, scat Chk, n/s	
Ls., gry/brn, foss, pr por, sli fri, chky, stly IP, n/s	
Ls., a.a	
Sh., dk gry/blk carb	
Ls., crm/tan, sing to sli mott, f gr, v pr xln por, dnse, scat Chk, n/s	
Sh., dk gry/blk carb, chky	
<b>Deer Creek 3546 (-1146)</b>	
Ls., crm/brn, sing, pr xln por, si, v chky, n/s	
Ls., crm/tan/whit, f xln, pr intbn por, fri, v chky, brecc IP, Tr blk Sh, v fnt G odr, pr Shw O	
Sh., dk gry/blk carb	
Ls., a.a, Tr micr Ool por, no odr, n/s	
Ls., tan/brn, mott IP, foss por, scat Ool, fri, brecc, n/s	
Sh., blk carb	
Sh., rd, gummy, stly IP	
<b>Lecompton 3614 (-1214)</b>	
Ls., crm, sing, f xln, pr vis por, sli fri, chky, n/s	
Ls., crm, foss por, Ool, chky, fri, Tr blk Sh, n/s	
Sh., rd/gry, gummy, stly IP	
Ls., crm/tan, sing, pr foss & intbn por, dnse, fri IP, Tr rd/blk Sh, n/s	
<b>Oread 3656 (-1256)</b>	
Ls., crm/tan, f xln, foss por, Ool, calc, glauc IP, brecc IP, chky, fri to sli, hd, n/s	
Chk, whit/tan, frs, foss, brecc w Crin, hd, chky, Tr gry/blk Sh, n/s	
Sh., blk carb	
Ls. & Chk., a.a	
Sh., gn/rd/gry, stly, chky	
Ls., crm/brn, mott IP, f to m xln, intbn por, calc, chky, n/s	
<b>Heebner 3707 (-1307)</b>	
Sh., blk carb	
Ls., crm/tanvgr, pr xln por, hd to sli fri, dnse, Tr Chk, n/s	
Sh., blk carb	
<b>Toronto 3729 (-1329)</b>	
Ls., crm/whitan, scat foss por, irid OCW, fr int infoss FO sat, no beads, rr G Bubl, scat LO stn, v fnt odr, pr Shw Sh, rd/gn, mdy	
<b>Lansing 3743 (-1343)</b>	
Ls., whit/crm, f xln, gd intbn & foss por, Ool, slo bid pp beads FO, pt to hvy O sat, scat G Bubl, gd odr, gd Shw LFO	
Ls., a.a, scat Chk, deer Shw abund	
Ls., crm/whit, f xln, rr intbn por, dnse, hd, blk, scat Chk, Tr irid, rr lt brn LO stn, v fnt odr, v pr Shw LO	
Sh., gry/gn, stly	
Ls., crm/brn, f xln, intbn & foss por, Ool IP, xln incl w lt brn stn, G Bubl, scat pp beads FO, pt to rr mod sat, abund odr Chk, fr odr, pr Shw LFO	
Ls., a.a, Tr irid, scat Chk	
Ls., crm/tan, f xln, infoss & intbn por, Ool, fri to sli fri, xln incl w LO stn, lt to mod O sat, rr hvy sat, irid, Tr Chk, scat G Bubl, slo bid pp beads FO, fr odr, fr to gd Shw LFO	
Ls., crm, sing, f xln, intbn por w lt brn stn, hd, si, scat xln incl, calc IP, chky, Tr irid, fnt odr, pr to fr Shw LO	
Sh., blk/varic, mdy	
Ls., crm/whit/brn, f xln, fr intbn & foss por, micr Ool IP, sli fri, scat pos w hvy LO sat, rr mod sat, irid, rr G Bubl, chky, fr to gd odr, fr Shw LO	
Ls., whit/crm/brn, f xln, micr Ool, gd infoss por, rr intbn por, fri, abund G Bubl, mod LO sat, chky, chky, fr Shw LO	
Ls., crm/brn, intbn por, scat Ool por, fri, pt LO sat, v chky, scat infoss xln incl w lt O sat, fnt to fr odr, pr to fr Shw LO	
Ls., crm/tan, f to m xln, dnse, hd, blk, v chky, scat xln incl w dk brn/blk LO stn, Tr irid, fnt odr, pr Shw LO	
Ls., whit/lt gry/crm, dnse, v pr vis por, hd to sli fri, frac, sub-chky to chky, n/s	
Sh., blk carb	
Sh., gry/lt gn, mdy IP	
Ls., whit/crm, f to m xln, pr vis por, scat foss, rr pt stn, hd, si, Tr irid, no odr, v pr Shw	
Ls., crm/tan/lt gry, f xln, Tr foss & intbn por, Ool IP, dnse, sli fri, rr pt stn, Tr gills, chky, v fnt odr, pr Shw LO	
Sh., gry/brn, stly	
Ls., crm/brn, f xln, embd foss, intbn por w mod to hvy LO sat, micr Ool IP, calc, chky, fri, rr G Bubl, scat irid, fr odr, fr to gd Shw LO	
Ls., a.a, mott IP, incr foss por, incr G Bubl, slo bid FO, scat rd mdy Sh, irid, gd odr, gd Shw LFO	
Sh., gry/blk carb/rd	
Ls., crm, f xln, gd infoss & fr xln por, micr Ool to Ool, xln incl w LO stn, pt to mod sat, fri, slo bid pp beads FO, abund G Bubl, irid OCW, gd odr, gd Shw LFO	
Sh., gry/rd/blk carb	
Ls., crm/lt gry, sing, f xln, dnse, blk, rr intbn incl w sub/pt LO stn, Tr Ool, pr vis por, v fnt odr, pr Shw	
Sh., gry/rd/blk carb	
Ls., whit/crm, rr micr Ool por, lt pt O stn, Tr intbn Surf stn, fri IP, chky, no odr, pr Shw LO	
Ls., a.a, incr foss	
<b>BKC 3978 (-1578)</b>	
Sh., gry/rd, mdy	
Ls., whit/crm, sing, micr Ool, hd, si, chky, n/s	
Sh., rd, mdy	
<b>RTD 4030 (-1630)</b>	
Deviation Survey @ 4030: 0.2 deg	

Geological Descriptions	Engineering Data
<b>Morgan Mud @ 3515'</b> Wt: 9.1 Vis: 52 Chl: 2.600 LCM: 2#	
<b>DST #1</b> (Toronto, LKC A) 3713'-3763' 30-60-30-90 FF: BOB in 12.5 mins Rec: 640' GIP, 242' GO (20%G, 80%O), 62' HOCGM (20%G, 40%O, 40%M)	
IFP: 40 - 96 FFP: 107 - 148 ISIP: 1167 FSIP: 1154 IHP: 1852 FHP: 1796 BHT: 112	
<b>DST #2</b> (LKC B-D) 3765'-3809' 30-60-30-90 IF: BOB in 14 mins FF: BOB in 12 mins Rec: 555' GIP, 10' HOCGM (25%G, 50%O, 25%M), 124' HOCGM (30%G, 30%O, 40%M)	
IFP: 29 - 49 FFP: 55 - 68 ISIP: 987 FSIP: 998 IHP: 1885 FHP: 1845 BHT: 114	
<b>DST #3</b> (LKC E-F) 3806'-3828' 30-60-60-90 IF: Weak, building to 7" FF: BOB in 51 mins Rec: 50' GIP, 5' FO (100%O) 68' MW (80%W, 20%M), 125' MW (70%W, 30%M)	
IFP: 23 - 62 FFP: 66 - 111 ISIP: 855 FSIP: 851 IHP: 1912 FHP: 1877 BHT: 117	

Geological Descriptions	Engineering Data
<b>Morgan Mud @ 3777'</b> Wt: 9.0 Vis: 57 Chl: 3.000 LCM: 3#	
<b>DST #4</b> (LKC G-H) 3863'-3920' 30-60-30-90 IF: BOB in 9 mins FF: BOB in 5 mins Rec: 1048' GIP, 60' GO (10%G, 90%O), 83' HOCGM (20%G, 40%O, 40%M), 82' HOCGM (20%G, 20%O, 60%M)	
IFP: 24 - 69 FFP: 83 - 96 ISIP: 1432 FSIP: 1420 IHP: 1928 FHP: 1883 BHT: 116	

Geological Descriptions	Engineering Data
<b>Morgan Mud @ 3920'</b> Wt: 9.1 Vis: 59 Chl: 2.800 LCM: 5#	

Geological Descriptions	Engineering Data
<b>Morgan Mud @ 3971'</b> Wt: 9.2 Vis: 62 Chl: 4.000 LCM: 5#	

Geological Descriptions	Engineering Data
<b>DST #5</b> (LKC J) 3910'-3934' 30-60-30-90 IF: BOB in 10 mins FF: BOB in 10 mins Rec: 806' GIP, 50' GO (10%G, 90%O), 55' HOCGM (10%G, 30%O, 60%M), 25' SOCGWM (30%G, 10%O, 30%W, 30%M)	
IFP: 22 - 44 FFP: 55 - 65 ISIP: 1065 FSIP: 1058 IHP: 1994 FHP: 1856 BHT: 116	

Geological Descriptions	Engineering Data
<b>DST #1</b>	
<b>DST #2</b>	
<b>DST #3</b>	
<b>DST #4</b>	
<b>DST #5</b>	

Geological Descriptions	Engineering Data
<b>Curve Track 1</b> ROP (MinFt) Gamma (API) Caliper (inches)	

Geological Descriptions	Engineering Data
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<b>Curve Track 1</b> ROP (MinFt) Gamma (API) Caliper (inches)	

Geological Descriptions	Engineering Data
<b>Curve Track 1</b> ROP (MinFt) Gamma (API) Caliper (inches)	

Geological Descriptions	Engineering Data
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Geological Descriptions	Engineering Data
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Geological Descriptions	Engineering Data
<b>Curve Track 1</b> ROP (MinFt) Gamma (API) Caliper (inches)	

Geological Descriptions	Engineering Data
<b>Curve Track 1</b> ROP (MinFt) Gamma (API) Caliper (inches)	

Geological Descriptions	Engineering Data
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## DRILL STEM TEST REPORT

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

250 N. Water Ste. #300  
Wichita, KS 67202

ATTN: Saman Sharifaie

**Geyer #4-35**

**35-10s-24w Graham,KS**

Start Date: 2013.04.06 @ 04:52:30

End Date: 2013.04.06 @ 12:51:00

Job Ticket #: 52104                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.12 @ 11:14:22

Murfin Drilling Co., Inc.

35-10s-24w Graham,KS

Geyer #4-35

DST # 1

Toronto-LKC "A"

2013.04.06



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-10s-24w Graham, KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52104

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2013.04.06 @ 04:52:30

## GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:02:30

Time Test Ended: 12:51:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash/Daniel F

Unit No: 66

**Interval: 3713.00 ft (KB) To 3764.00 ft (KB) (TVD)**

Reference Elevations: 2400.00 ft (KB)

Total Depth: 3764.00 ft (KB) (TVD)

2389.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8520 Outside**

Press @ Run Depth: 148.43 psig @ 3751.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.06

End Date: 2013.04.06

Last Calib.: 2013.04.06

Start Time: 05:02:30

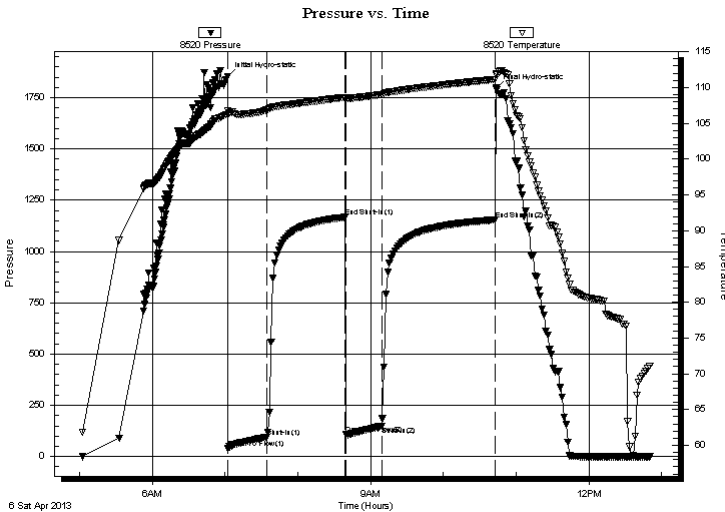
End Time: 12:51:00

Time On Btm: 2013.04.06 @ 07:02:00

Time Off Btm: 2013.04.06 @ 10:43:30

**TEST COMMENT:** IF-Fair building blow . BOB @ 12 minutes 30 seconds.  
ISI-Return @ 2 minutes. Built to 7 inches.  
FF-Fair building blow . BOB @ 12 minutes.  
FSI-Return @ 30 seconds. BOB 1 hour 5 minutes.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1851.89	106.69	Initial Hydro-static
1	39.50	106.20	Open To Flow (1)
32	95.52	106.86	Shut-In(1)
97	1167.02	108.64	End Shut-In(1)
98	106.60	108.44	Open To Flow (2)
127	148.43	109.03	Shut-In(2)
221	1154.15	111.16	End Shut-In(2)
222	1795.85	111.78	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	20%Gas/40%Oil/40%Mud	0.60
242.00	20%Gas/80%Oil	3.39
0.00	640' G.I.P.	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.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52104

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2013.04.06 @ 04:52:30

## Tool Information

Drill Pipe:	Length: 3675.00 ft	Diameter: 3.80 inches	Volume: 51.55 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 51.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	3713.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3686.00	
Shut In Tool	5.00			3691.00	
Hydraulic tool	5.00			3696.00	
Jars	5.00			3701.00	
Safety Joint	3.00			3704.00	
Packer	5.00			3709.00	28.00 Bottom Of Top Packer
Packer	4.00			3713.00	
Stubb	1.00			3714.00	
Perforations	4.00			3718.00	
Change Over Sub	1.00			3719.00	
Drill Pipe	31.00			3750.00	
Change Over Sub	1.00			3751.00	
Recorder	0.00	8354	Inside	3751.00	
Recorder	0.00	8520	Outside	3751.00	
Perforations	10.00			3761.00	
Bullnose	3.00			3764.00	51.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>79.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52104

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2013.04.06 @ 04:52:30

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

18 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	20%Gas/40%Oil/40%Mud	0.596
242.00	20%Gas/80%Oil/	3.395
0.00	640' G.I.P.	0.000

Total Length: 304.00 ft

Total Volume: 3.991 bbl

Num Fluid Samples: 0

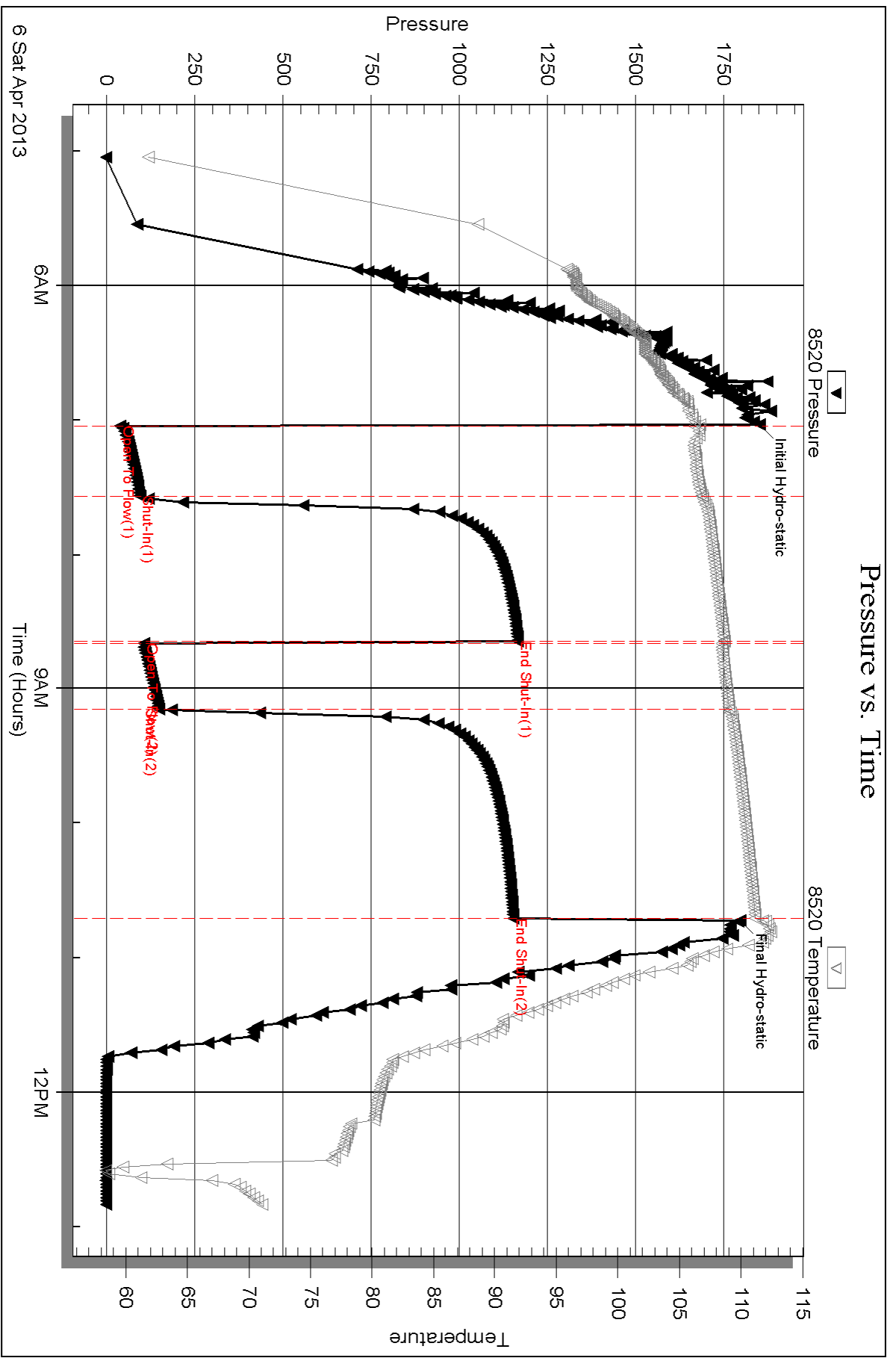
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



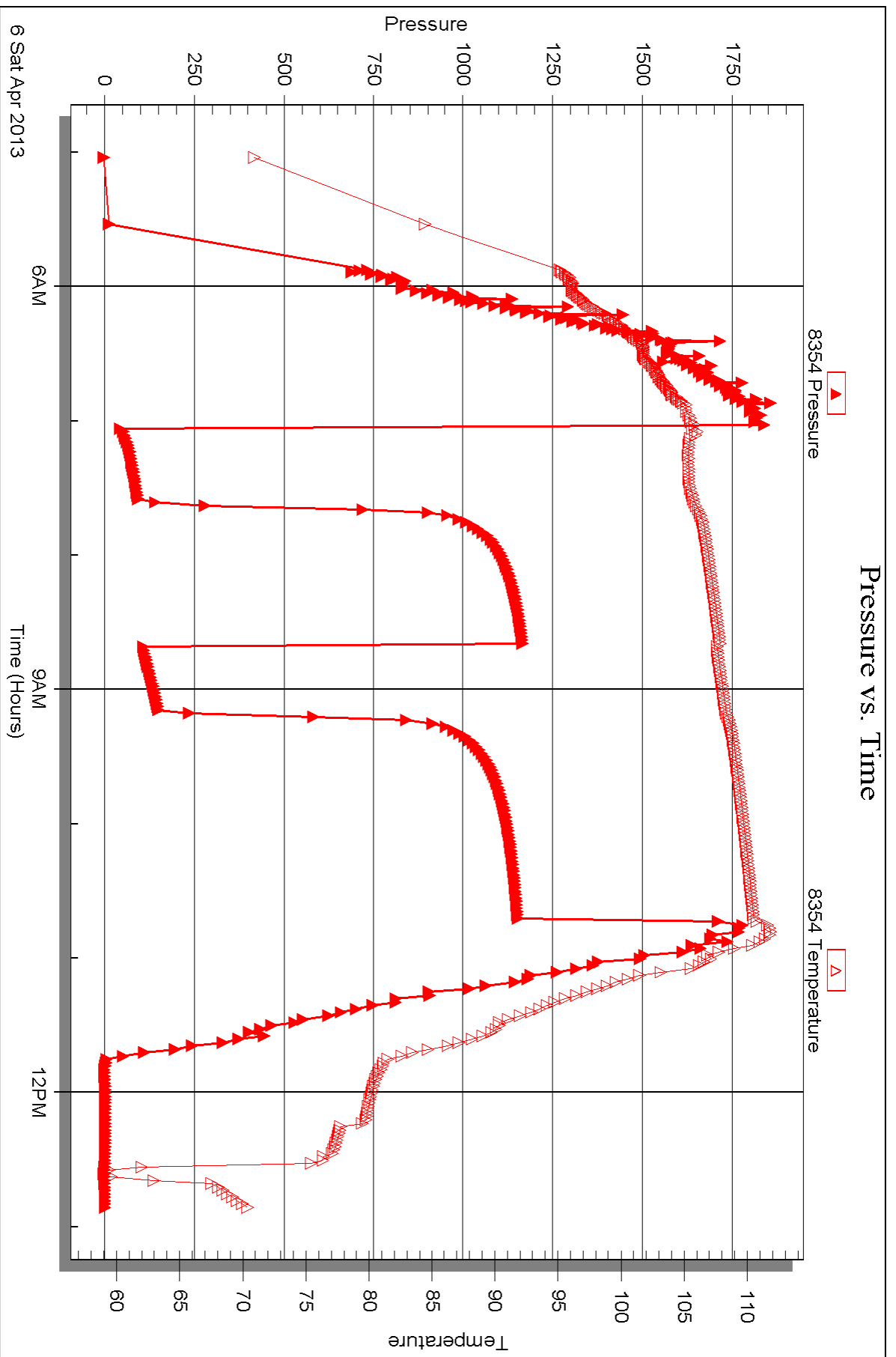
Serial #: 8354

Inside

Murfin Drilling Co., Inc.

Geyer #4-35

DST Test Number: 1





## DRILL STEM TEST REPORT

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

250 N. Water Ste. #300  
Wichita, KS 67202

ATTN: Saman Sharifaie

**Geyer #4-35**

**35-10s-24w Graham,KS**

Start Date: 2013.04.06 @ 21:25:45

End Date: 2013.04.07 @ 04:27:15

Job Ticket #: 52105                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.12 @ 11:13:27



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-10s-24w Graham, KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52105

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2013.04.06 @ 21:25:45

## GENERAL INFORMATION:

Formation: **LKC "B-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:56:05

Time Test Ended: 04:27:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Daniel Fertig/Dustin

Unit No: 66

**Interval: 3765.00 ft (KB) To 3809.00 ft (KB) (TVD)**

Reference Elevations: 2400.00 ft (KB)

Total Depth: 3809.00 ft (KB) (TVD)

2389.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8520 Outside**

Press @ Run Depth: 67.60 psig @ 3801.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.06

End Date:

2013.04.07

Last Calib.:

2013.04.07

Start Time:

21:25:45

End Time:

04:27:15

Time On Btm:

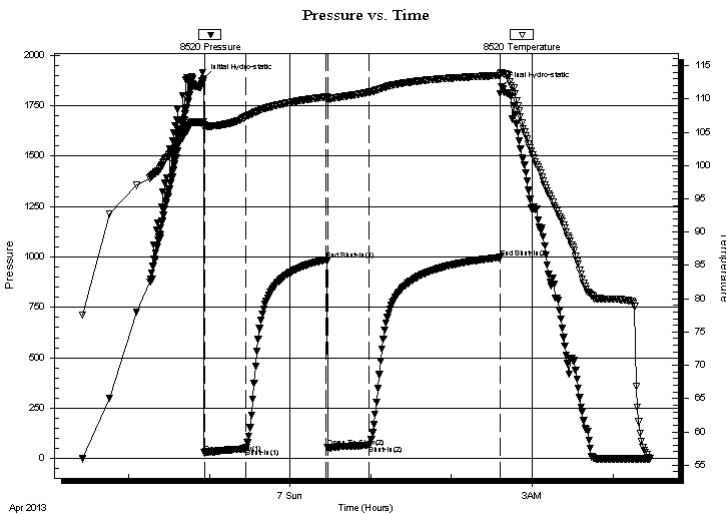
2013.04.06 @ 22:55:55

Time Off Btm:

2013.04.07 @ 02:37:15

**TEST COMMENT:** IF- Fair building blow . BOB @ 14 minutes.  
IS- No return.  
FF- Fair building blow . BOB @ 12 minutes.  
FS- Returned 30 seconds. Died @ 19 minutes.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1884.94	106.55	Initial Hydro-static
1	28.77	105.88	Open To Flow (1)
31	49.35	107.29	Shut-In(1)
91	987.04	110.29	End Shut-In(1)
92	55.24	110.00	Open To Flow (2)
123	67.60	111.00	Shut-In(2)
220	997.55	113.53	End Shut-In(2)
222	1844.80	113.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
124.00	30% gas / 30% oil / 40% mud	1.47
10.00	25% gas / 50% oil / 25% mud	0.14
0.00	555' G.I.P.	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.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52105

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2013.04.06 @ 21:25:45

### Tool Information

Drill Pipe:	Length: 3737.00 ft	Diameter: 3.80 inches	Volume: 52.42 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	25000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3765.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	44.00 ft				
Tool Length:	72.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

### Tool Description

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

Change Over Sub	1.00			3738.00	
Shut In Tool	5.00			3743.00	
Hydraulic tool	5.00			3748.00	
Jars	5.00			3753.00	
Safety Joint	3.00			3756.00	
Packer	5.00			3761.00	28.00 Bottom Of Top Packer
Packer	4.00			3765.00	
Stubb	1.00			3766.00	
Perforations	2.00			3768.00	
Change Over Sub	1.00			3769.00	
Drill Pipe	31.00			3800.00	
Change Over Sub	1.00			3801.00	
Recorder	0.00	8354	Inside	3801.00	
Recorder	0.00	8520	Outside	3801.00	
Perforations	5.00			3806.00	
Bullnose	3.00			3809.00	44.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>72.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52105

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2013.04.06 @ 21:25:45

## 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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	30% gas / 30% oil / 40% mud	1.466
10.00	25% gas / 50% oil / 25% mud	0.140
0.00	555' G.I.P.	0.000

Total Length: 134.00 ft

Total Volume: 1.606 bbl

Num Fluid Samples: 0

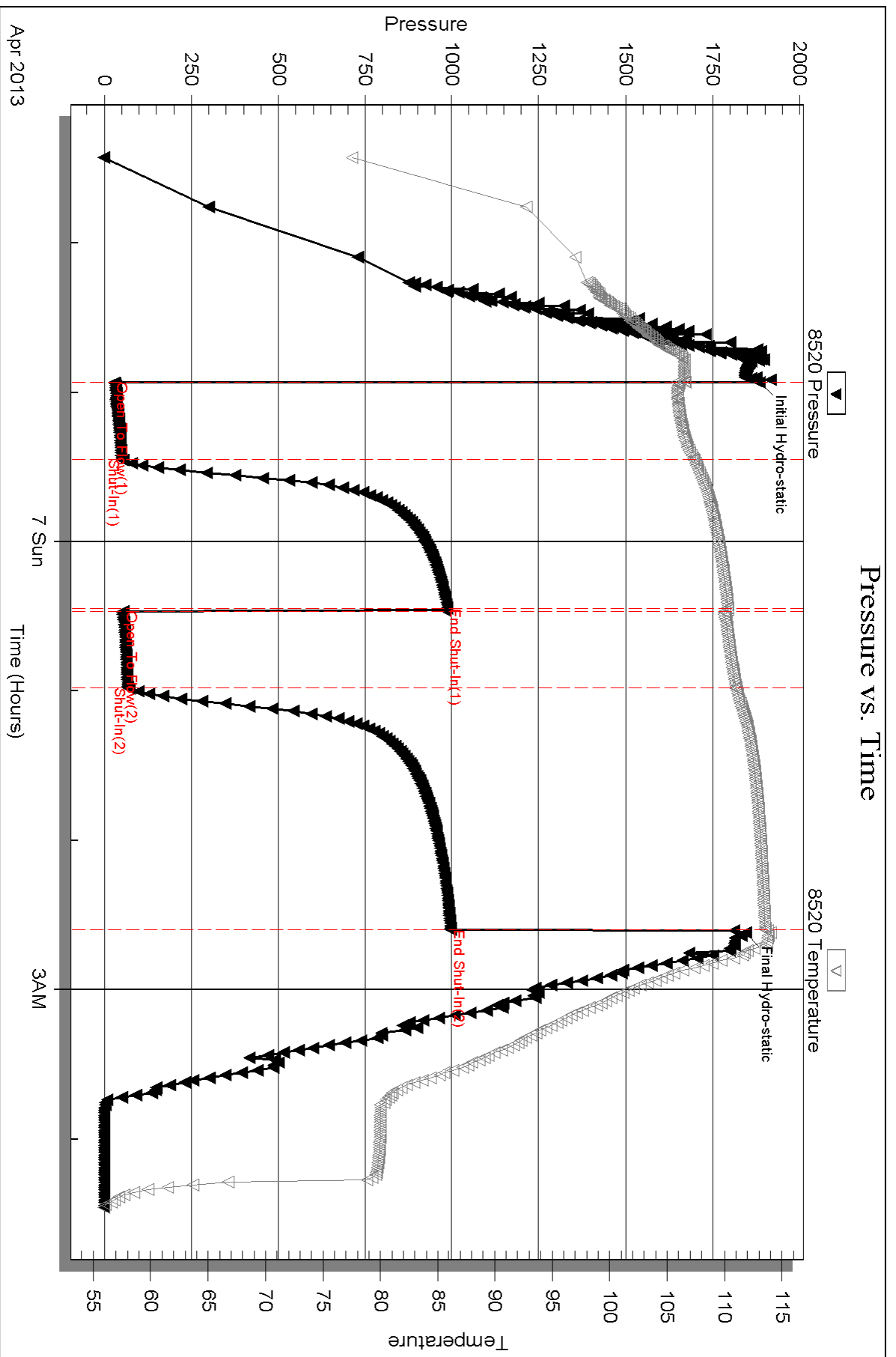
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



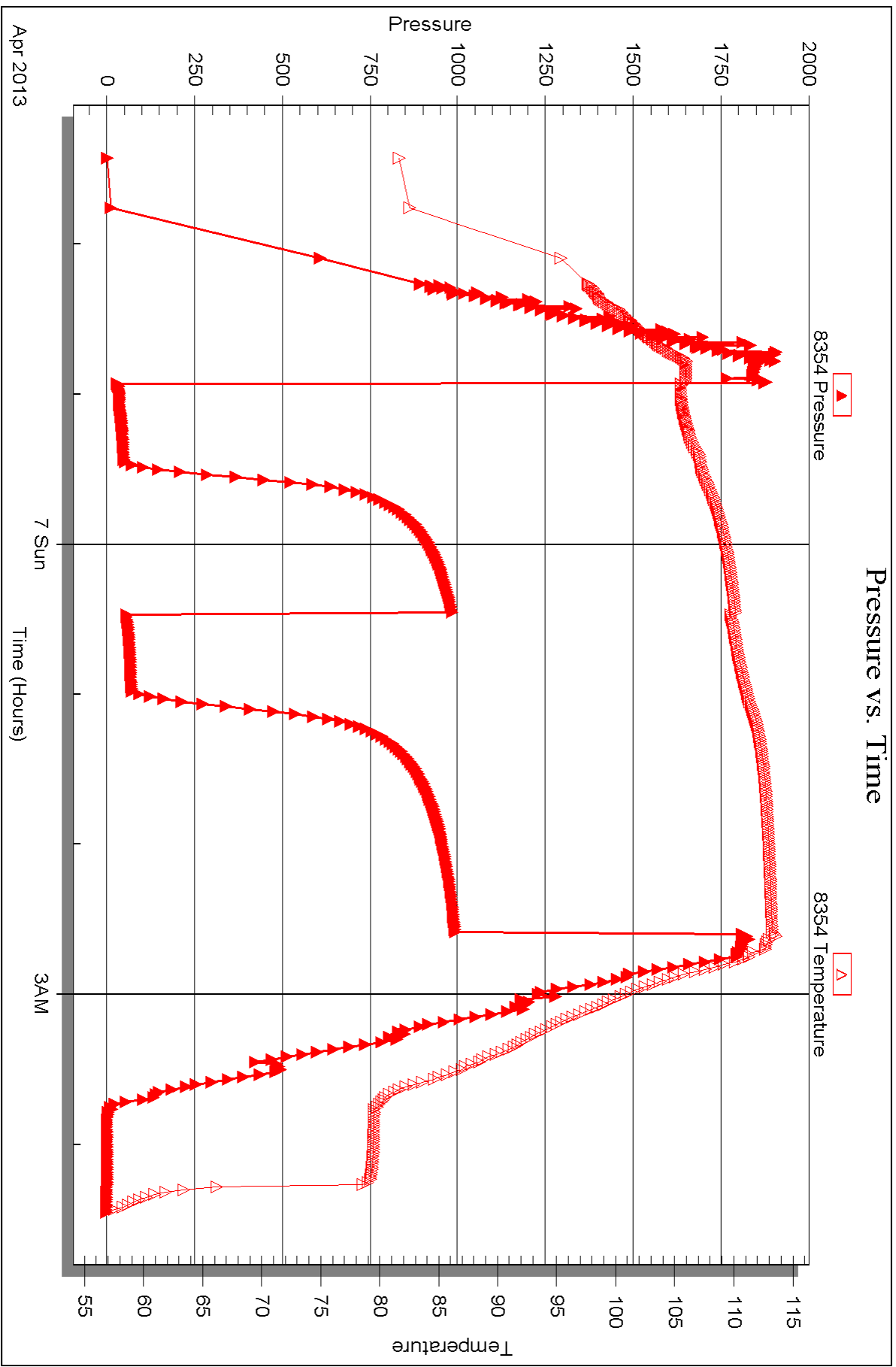
Serial #: 8354

Inside

Murfin Drilling Co., Inc.

Geyer #4-35

DST Test Number: 2





## DRILL STEM TEST REPORT

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

250 N. Water Ste. #300  
Wichita, KS 67202

ATTN: Saman Sharifaie

**Geyer #4-35**

**35-10s-24w Graham,KS**

Start Date: 2013.04.07 @ 10:48:30

End Date: 2013.04.07 @ 17:59:00

Job Ticket #: 52106                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.12 @ 11:12:44



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-10s-24w Graham, KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52106

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2013.04.07 @ 10:48:30

## GENERAL INFORMATION:

Formation: **LKC "E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:10:30

Time Test Ended: 17:59:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Daniel Fertig/Dustin

Unit No: 66

**Interval: 3806.00 ft (KB) To 3828.00 ft (KB) (TVD)**

Reference Elevations: 2400.00 ft (KB)

Total Depth: 3828.00 ft (KB) (TVD)

2389.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8520 Outside**

Press @ Run Depth: 111.16 psig @ 3808.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.07 End Date: 2013.04.07

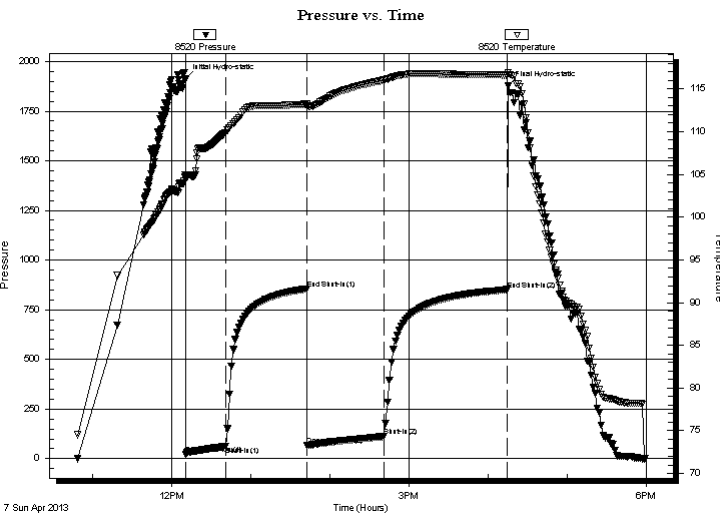
Last Calib.: 2013.04.07

Start Time: 10:48:30 End Time: 17:59:00

Time On Btm: 2013.04.07 @ 12:10:10

Time Off Btm: 2013.04.07 @ 16:15:00

**TEST COMMENT:** IF- Weak building bbw . built to 7 inches.  
IS- No return.  
FF- Weak building blow . BOB @ 51 minutes.  
FS- Weak surface return @ 2 minutes. Died @ 26 minutes.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1912.14	104.90	Initial Hydro-static
1	22.54	104.38	Open To Flow (1)
31	61.78	109.89	Shut-In(1)
92	854.89	113.21	End Shut-In(1)
93	65.74	112.98	Open To Flow (2)
151	111.16	116.03	Shut-In(2)
244	850.97	116.63	End Shut-In(2)
245	1877.15	116.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
125.00	70% water / 30% mud	1.48
68.00	80% water / 20% mud	0.95
5.00	100% oil	0.07
0.00	50' G.I.P.	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.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52106

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2013.04.07 @ 10:48:30

## Tool Information

Drill Pipe:	Length: 3768.00 ft	Diameter: 3.80 inches	Volume: 52.86 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	25000.00 lb
			<u>Total Volume: 53.01 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3806.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 ft				
Tool Length:	50.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Change Over Sub	1.00			3779.00	
Shut In Tool	5.00			3784.00	
Hydraulic tool	5.00			3789.00	
Jars	5.00			3794.00	
Safety Joint	3.00			3797.00	
Packer	5.00			3802.00	28.00 Bottom Of Top Packer
Packer	4.00			3806.00	
Stubb	1.00			3807.00	
Perforations	1.00			3808.00	
Recorder	0.00	8354	Inside	3808.00	
Recorder	0.00	8520	Outside	3808.00	
Perforations	17.00			3825.00	
Bullnose	3.00			3828.00	22.00 Bottom Packers & Anchor

**Total Tool Length: 50.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52106

**DST#: 3**

ATTN: Saman Sharifaie

Test Start: 2013.04.07 @ 10:48:30

## 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:

6500 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.83 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
125.00	70% water / 30% mud	1.480
68.00	80% water / 20% mud	0.954
5.00	100% oil	0.070
0.00	50' G.I.P.	0.000

Total Length: 198.00 ft

Total Volume: 2.504 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

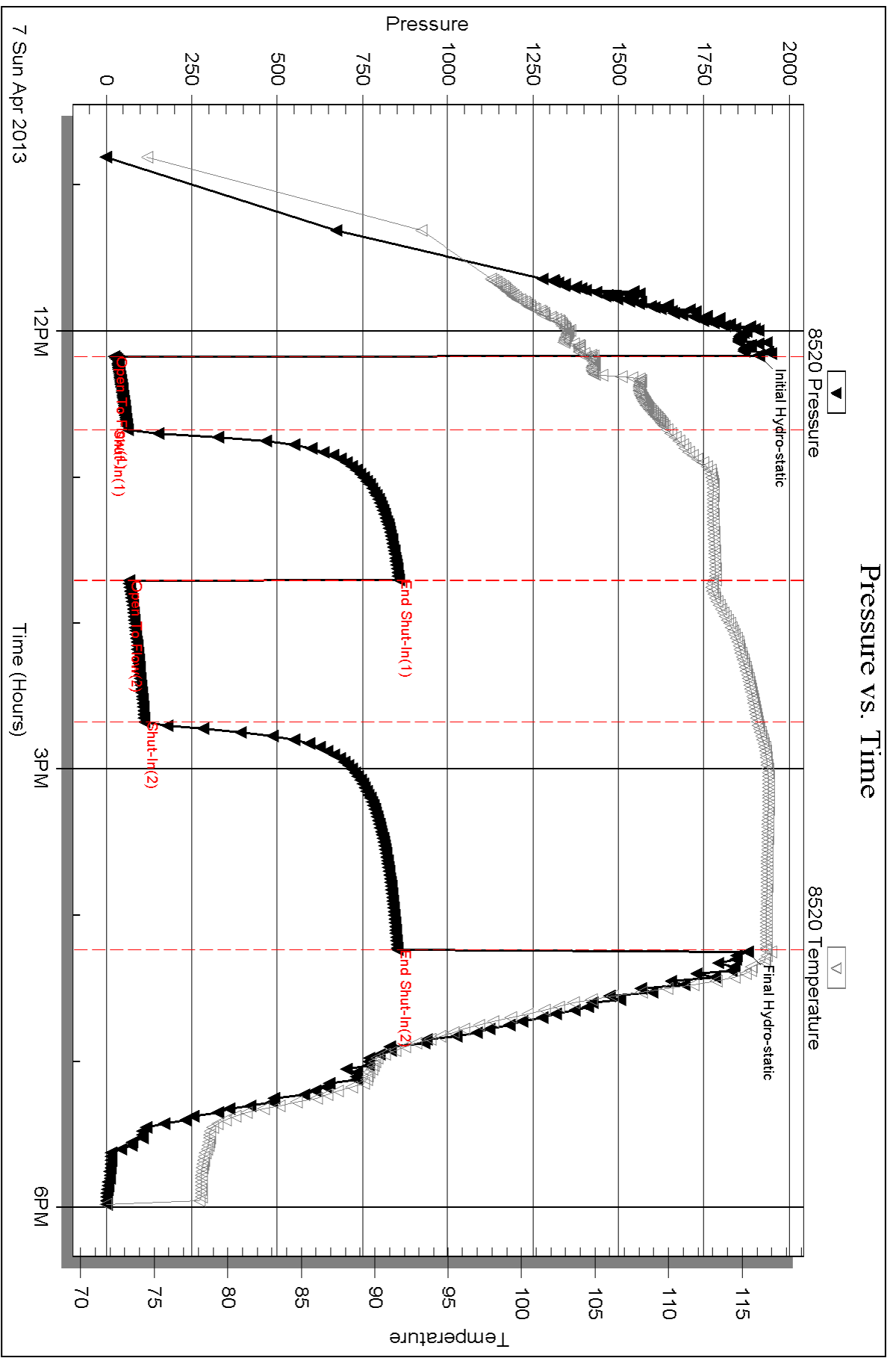
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Serial #: 8520

Outside Murfin Drilling Co., Inc.

Geyer #4-35

DST Test Number: 3



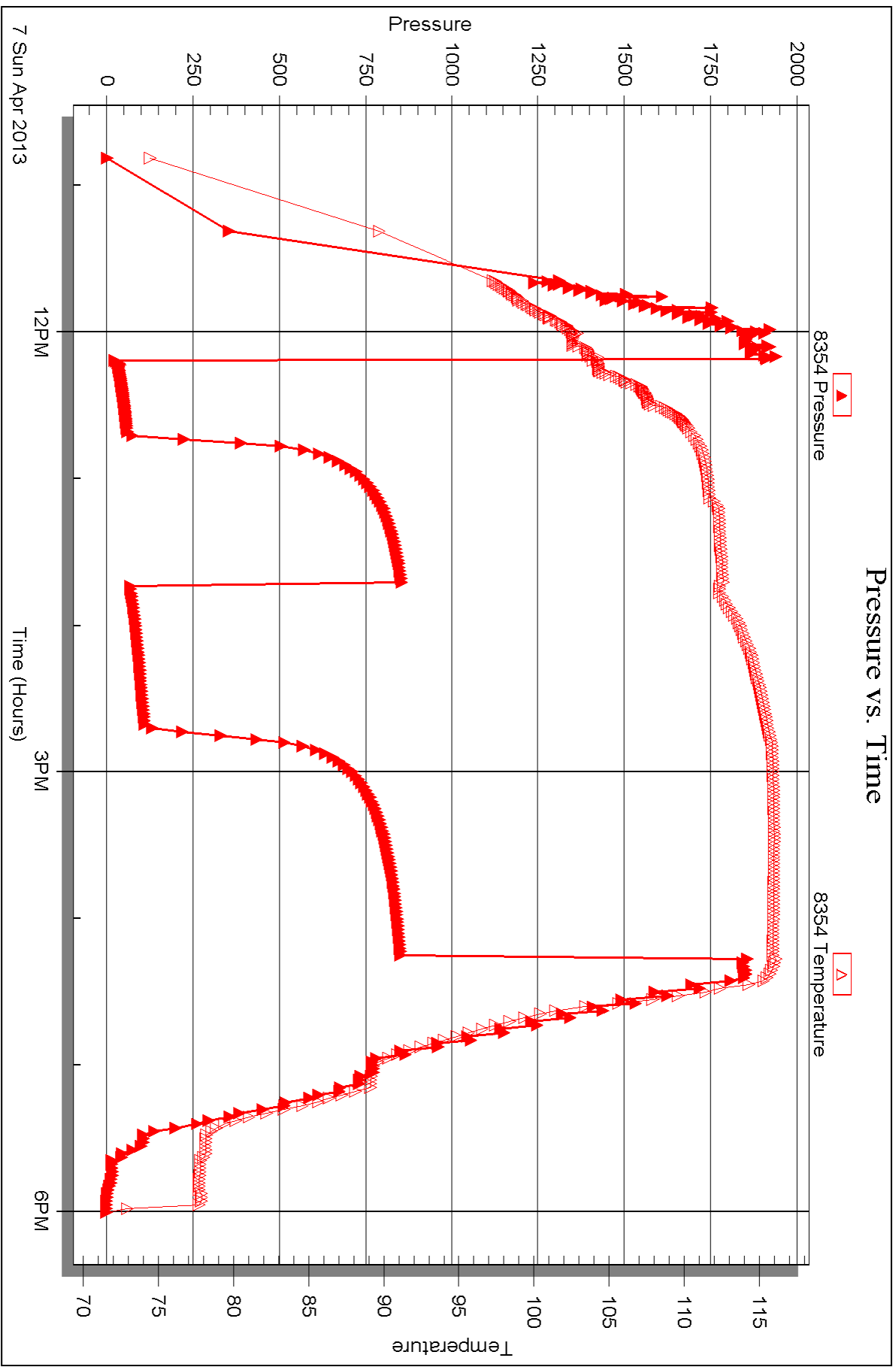
Serial #: 8354

Inside

Murfin Drilling Co., Inc.

Geyer #4-35

DST Test Number: 3





## DRILL STEM TEST REPORT

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

250 N. Water Ste. #300  
Wichita, KS 67202

ATTN: Saman Sharifaie

**Geyer #4-35**

**35-10s-24w Graham,KS**

Start Date: 2013.04.08 @ 06:52:15

End Date: 2013.04.08 @ 13:38:45

Job Ticket #: 52107                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.12 @ 11:12:07



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52107

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2013.04.08 @ 06:52:15

## GENERAL INFORMATION:

Formation: **LKC "H-I"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:16:15  
 Time Test Ended: 13:38:45  
 Interval: **3863.00 ft (KB) To 3920.00 ft (KB) (TVD)**  
 Total Depth: 3920.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Daniel Fertig/Dustin  
 Unit No: 66  
 Reference Elevations: 2400.00 ft (KB)  
 2389.00 ft (CF)  
 KB to GR/CF: 11.00 ft

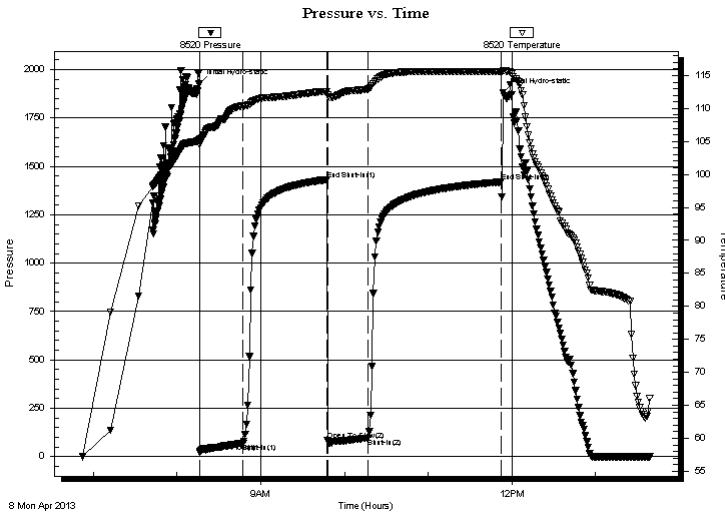
## Serial #: 8520

**Outside**

Press @ Run Depth: 96.44 psig @ 3902.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.04.08 End Date: 2013.04.08 Last Calib.: 2013.04.08  
 Start Time: 06:52:15 End Time: 13:38:45 Time On Btm: 2013.04.08 @ 08:16:05  
 Time Off Btm: 2013.04.08 @ 11:53:45

**TEST COMMENT:** IF- Strong building blow . BOB @ 9 minutes.  
 IS- No return  
 FF- Strong building blow . BOB @ 5 minutes.  
 FS- Return @ 30 seconds built to 10 inches.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1928.09	105.36	Initial Hydro-static
1	23.66	104.55	Open To Flow (1)
32	69.22	110.41	Shut-In(1)
92	1431.92	112.60	End Shut-In(1)
92	83.26	111.99	Open To Flow (2)
121	96.44	112.92	Shut-In(2)
217	1419.74	115.56	End Shut-In(2)
218	1882.67	115.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	20% gas / 20% oil / 60% mud	0.60
83.00	20% gas / 40% oil / 40% mud	1.16
60.00	10% gas / 90% oil	0.84
0.00	1048' G.I.P	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.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52107

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2013.04.08 @ 06:52:15

## Tool Information

Drill Pipe:	Length: 3829.00 ft	Diameter: 3.80 inches	Volume: 53.71 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 25000.00 lb
			<u>Total Volume: 53.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3863.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	85.00 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			3836.00	
Shut In Tool	5.00			3841.00	
Hydraulic tool	5.00			3846.00	
Jars	5.00			3851.00	
Safety Joint	3.00			3854.00	
Packer	5.00			3859.00	28.00 Bottom Of Top Packer
Packer	4.00			3863.00	
Stubb	1.00			3864.00	
Perforations	5.00			3869.00	
Change Over Sub	1.00			3870.00	
Drill Pipe	31.00			3901.00	
Change Over Sub	1.00			3902.00	
Recorder	0.00	8354	Inside	3902.00	
Recorder	0.00	8520	Outside	3902.00	
Perforations	15.00			3917.00	
Bullnose	3.00			3920.00	57.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>85.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52107

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2013.04.08 @ 06:52:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	20% gas / 20% oil / 60% mud	0.596
83.00	20% gas / 40% oil / 40% mud	1.164
60.00	10% gas / 90% oil	0.842
0.00	1048' G.I.P	0.000

Total Length: 205.00 ft

Total Volume: 2.602 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

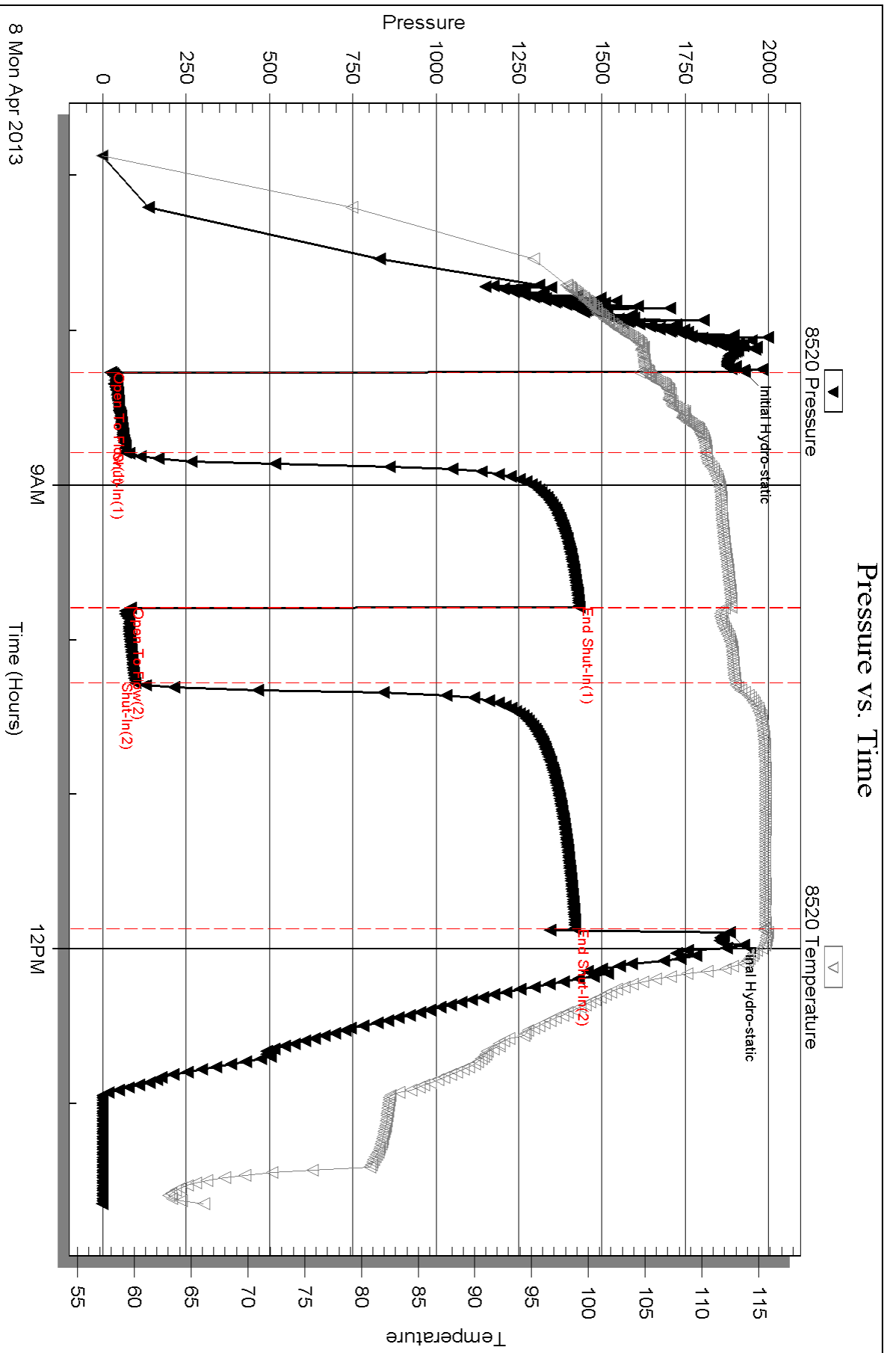
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





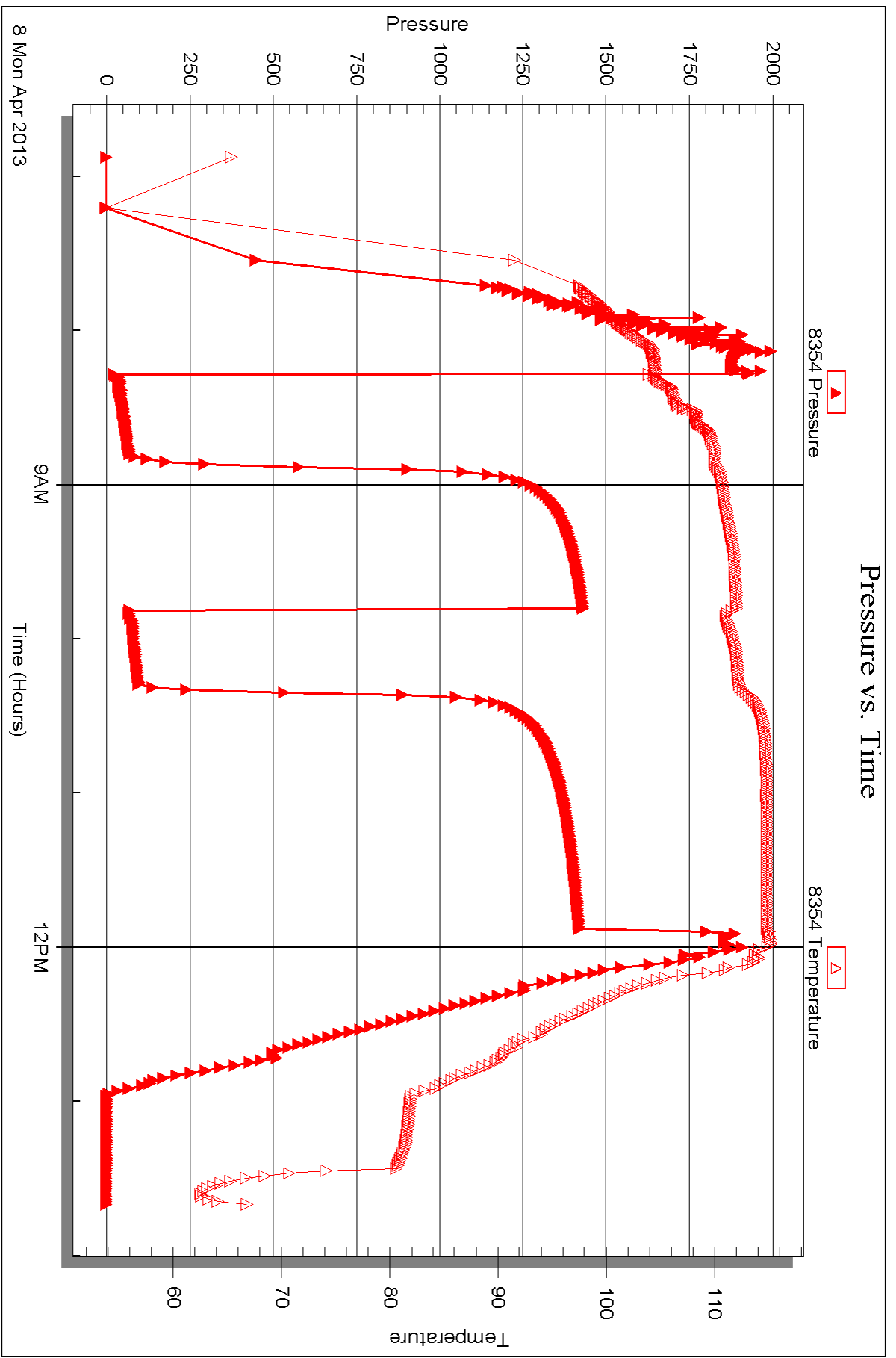
Serial #: 8354

Inside

Murfin Drilling Co., Inc.

Geyer #4-35

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 52107

Printed: 2013.04.12 @ 11:12:10



## DRILL STEM TEST REPORT

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

250 N. Water Ste. #300  
Wichita, KS 67202

ATTN: Saman Sharifaie

**Geyer #4-35**

**35-10s-24w Graham,KS**

Start Date: 2013.04.08 @ 19:32:30

End Date: 2013.04.09 @ 03:32:00

Job Ticket #: 52108                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.12 @ 11:11:23



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52108

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2013.04.08 @ 19:32:30

## GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:39:30

Time Test Ended: 03:32:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Daniel Fertig/Dustin

Unit No: 66

**Interval: 3910.00 ft (KB) To 3934.00 ft (KB) (TVD)**

Reference Elevations: 2400.00 ft (KB)

Total Depth: 3934.00 ft (KB) (TVD)

2389.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8520 Outside**

Press @ Run Depth: 65.16 psig @ 3912.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.08

End Date:

2013.04.09

Last Calib.:

2013.04.09

Start Time: 19:32:30

End Time:

03:32:00

Time On Btm:

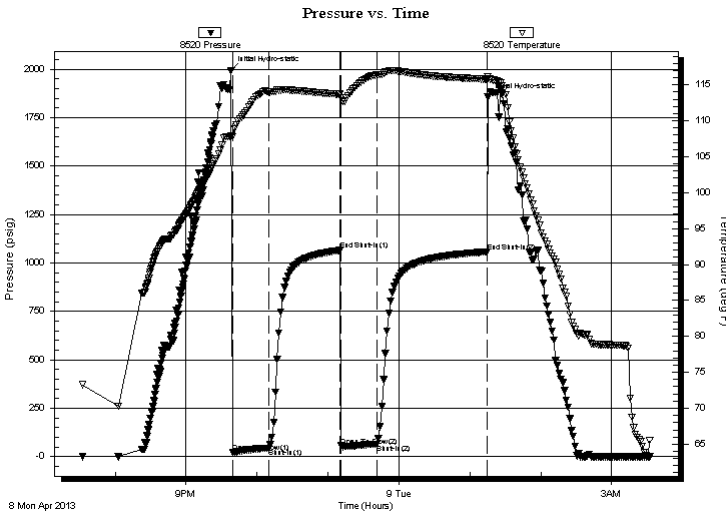
2013.04.08 @ 21:38:00

Time Off Btm:

2013.04.09 @ 01:15:00

**TEST COMMENT:** IF- Strong building blow . BOB @ 10 mintues.  
IS- No return.  
FF- Strong building blow . BOB @ 10 mintues  
FS- Surface return @ 2 minutes. Died @ 27 minutes.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1993.82	107.94	Initial Hydro-static
2	21.69	107.75	Open To Flow (1)
32	44.09	114.00	Shut-In(1)
92	1065.12	113.69	End Shut-In(1)
93	54.92	113.23	Open To Flow (2)
123	65.16	116.42	Shut-In(2)
217	1057.59	115.79	End Shut-In(2)
217	1855.80	116.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	30% gas / 10% oil / 30% water / 30% mud	0.12
55.00	10% gas / 30% oil / 60% mud	0.73
50.00	10% gas / 90% oil	0.70
0.00	806 G.I.P.	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.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52108

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2013.04.08 @ 19:32:30

## Tool Information

Drill Pipe:	Length: 3862.00 ft	Diameter: 3.80 inches	Volume: 54.17 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3910.00 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
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3883.00	
Shut In Tool	5.00			3888.00	
Hydraulic tool	5.00			3893.00	
Jars	5.00			3898.00	
Safety Joint	3.00			3901.00	
Packer	5.00			3906.00	28.00 Bottom Of Top Packer
Packer	4.00			3910.00	
Stubb	1.00			3911.00	
Perforations	1.00			3912.00	
Recorder	0.00	8354	Inside	3912.00	
Recorder	0.00	8520	Outside	3912.00	
Perforations	19.00			3931.00	
Bullnose	3.00			3934.00	24.00 Bottom Packers & Anchor

**Total Tool Length: 52.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**35-10s-24w Graham,KS**

250 N. Water Ste. #300  
Wichita, KS 67202

**Geyer #4-35**

Job Ticket: 52108

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2013.04.08 @ 19:32:30

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
25.00	30% gas / 10% oil / 30% water / 30% mud	0.123
55.00	10% gas / 30% oil / 60% mud	0.726
50.00	10% gas / 90% oil	0.701
0.00	806 G.I.P.	0.000

Total Length: 130.00 ft

Total Volume: 1.550 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

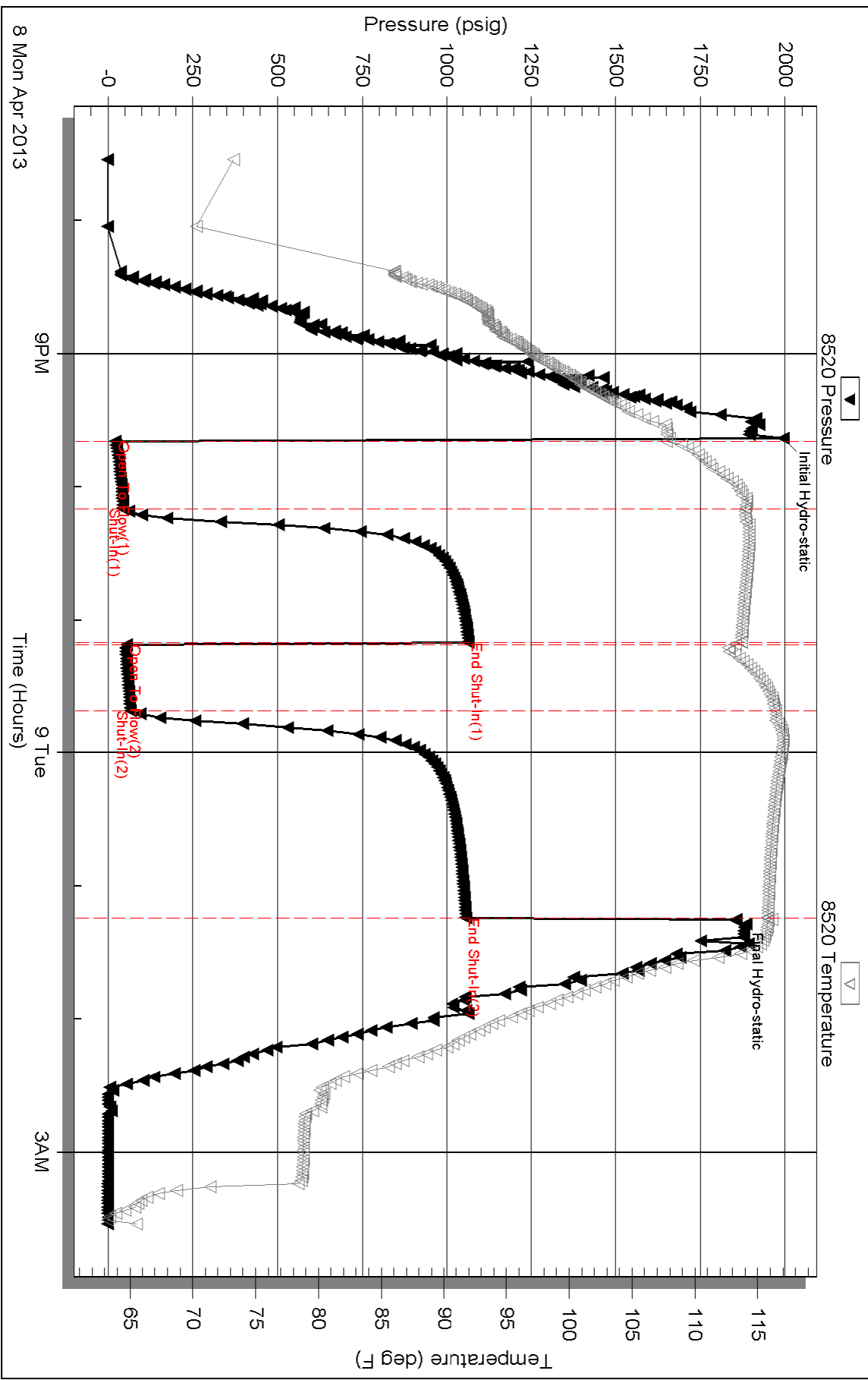
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52104

Well Name & No. Geyer #4-35 Test No. 1 Date 4-6-13  
 Company Mulnix Drilling Co., Inc. Elevation 2400 KB 2389 GL  
 Address 250 N. Water St., #300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharifare Rig Mulnix 21  
 Location: Sec. 35 Twp. 10S Rge. 24W Co. Graham State KS

Interval Tested 3713-3763.5 Zone Tested TORONTO-LKCA  
 Anchor Length 50.5 Drill Pipe Run 3675 Mud Wt. 9.1  
 Top Packer Depth 3708 Drill Collars Run 29.78 Vis 52  
 Bottom Packer Depth 3713 Wt. Pipe Run 0 WL 7.2  
 Total Depth 3763.5 Chlorides 2600 ppm System LCM 2.0

Blow Description IF - Fair building blow, BOB @ 12 minutes 30 seconds,  
ISI - Return @ 2 minutes, Built to Tricks,  
FF - Fair building blow, BOB @ 12 minutes,  
FBI - Return @ 30 seconds, BOB @ 1 hour 5 minutes,

Rec	Feet of	%gas	%oil	%water	%mud
242	Gassy Oil	20	80		
62	HOCGM	20	40		40

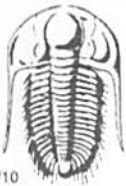
Rec Total 304 BHT \_\_\_\_\_ Gravity 18 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1852  Test 1150 T-On Location 0.330  
 (B) First Initial Flow 40  Jars 250 T-Started 0.530  
 (C) First Final Flow 96  Safety Joint 75 T-Open 0.703  
 (D) Initial Shut-In 1167  Circ Sub T-Pulled 10.40  
 (E) Second Initial Flow 107  Hourly Standby T-Out 12.45  
 (F) Second Final Flow 148  Mileage 104RT 161.20 Comments Batt-0452  
 (G) Final Shut-In 1154  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1796  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 90  Day Standby \_\_\_\_\_ Total 1636.20  
 Accessibility \_\_\_\_\_ MP/DST Disc \_\_\_\_\_  
 Sub Total 1636.20

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. 52105

Well Name & No. Geyer #4-35 Test No. 2 Date 4-6-13  
 Company Mulvan Drilling Co., Inc. Elevation 2400 KB 2389 GL  
 Address 250 N. Water St. #300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Shaitare Rig Mulvan 21  
 Location: Sec. 35 Twp. 10S Rge. 24W Co. Crawford State KS

Interval Tested 3765-3809 Zone Tested LKC "B-D"  
 Anchor Length 44 Drill Pipe Run 3737 Mud Wt. 9.1  
 Top Packer Depth 3760 Drill Collars Run 29.78 Vis 52  
 Bottom Packer Depth 3765 Wt. Pipe Run Ø WL 7.2  
 Total Depth 3809 Chlorides 2600 ppm System LCM 2.0

Blow Description TF- Fair building blow, BOB @ 14 minutes,  
TSE- No Return,  
FF- Fair building blow, BOB @ 12 minutes,  
FSE- Return @ 30 seconds, Died @ 19 minutes,

Rec	Feet of	%gas	%oil	%water	%mud
10'	HOCGM	25	50	25	
<del>124'</del>	HOCGM	30	30	40	
	555 ft gip				

Rec Total 134' BHT 114°F Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1885</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>2045</u>
(B) First Initial Flow <u>29</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2130</u>
(C) First Final Flow <u>49</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2256</u>
(D) Initial Shut-In <u>987</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0230</u>
(E) Second Initial Flow <u>55</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0430</u>
(F) Second Final Flow <u>68</u>	<input checked="" type="checkbox"/> Mileage <u>104RT</u> 161.20	Comments <u>Best 2/15</u>
(G) Final Shut-In <u>998</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1845</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

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

Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Sub Total 1636.20

Sub Total 0  
 Total 1636.20  
 MP/DST Disc't \_\_\_\_\_

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. 52106

Well Name & No. Geyer #4-35 Test No. 3 Date 4-7-13  
 Company Murfin Drilling Co., Inc. Elevation 2400 KB 2389 GL  
 Address 250 N. Water St. #300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Sharfate Rig Murfin 21  
 Location: Sec. 35 Twp. 10S Rge. 24W Co. Graham State KS

Interval Tested 3806-3828 Zone Tested LKC "E-F"  
 Anchor Length 22' Drill Pipe Run 3768 Mud Wt. 9.0  
 Top Packer Depth 3801 Drill Collars Run 29.78 Vis 59  
 Bottom Packer Depth 3806 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3828 Chlorides 3000 ppm System LCM 5.0

Blow Description IF - Weak building blow. Built to Traces.  
ISI - No Return.  
FF - Weak building blow. BOB @ 51 minutes.  
FSE - Weak surface return @ 2 minutes. Died @ 26 minutes.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Free oil</u>		<u>100</u>		
<u>68'</u>	<u>Muddy water</u>			<u>80</u>	<u>20</u>
<u>125'</u>	<u>Muddy water</u>			<u>70</u>	<u>30</u>
	<u>50' G.I.P.</u>				

Rec Total 198' BHT 117 Gravity 1150 API RW, 834 @ 77 °F Chlorides 6500 ppm

(A) Initial Hydrostatic 1912  Test 1150 T-On Location 1000  
 (B) First Initial Flow 23  Jars 250 T-Started 1045  
 (C) First Final Flow 62  Safety Joint 75 T-Open 1210  
 (D) Initial Shut-In 855  Circ Sub T-Pulled 1615  
 (E) Second Initial Flow 66  Hourly Standby T-Out 1755  
 (F) Second Final Flow 111  Mileage 104 RT 161.20 Comments Bar 1038  
 (G) Final Shut-In 851  Sampler  
 (H) Final Hydrostatic 1877  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder  
 Day Standby  
 Accessibility

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

Sub Total 1636.20  
 Total 1636.20  
 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52107

Well Name & No. Geyer #4-35 Test No. 4 Date 4-8-13  
 Company Murphy Drilling Co., Inc. Elevation 2400 KB 2389 GL  
 Address 250 N. Water St. #300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Shaitaie Rig Murphy 21  
 Location: Sec. 35 Twp. 10S Rge. 24W Co. Graham State KS

Interval Tested 3863-3920 Zone Tested LKC "H-I"  
 Anchor Length 57' Drill Pipe Run 3829 Mud Wt. 9.2  
 Top Packer Depth 3858 Drill Collars Run 29.78 Vis 57  
 Bottom Packer Depth 3863 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3920 Chlorides 3400 ppm System LCM 4.0

Blow Description IF - Strong building blow, BOB @ 9 minutes.  
ISI - No Return  
FF - Strong building blow, BOB @ 5 minutes.  
FSI - Return @ 30 seconds, Built to 10 inches.

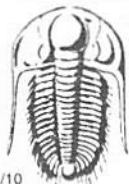
Rec	Feet of	%gas	%oil	%water	%mud
<u>60"</u>	<u>Gas oil</u>	<u>10</u>	<u>90</u>		
<u>85"</u>	<u>HOCCM</u>	<u>20</u>	<u>40</u>	<u>40</u>	<u>40</u>
<u>62"</u>	<u>OCGM</u>	<u>10</u>	<u>20</u>		<u>60</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>1048 G.I.P</u>	%gas	%oil	%water	%mud

Rec Total 205 BHT 116 Gravity 41 API RW @ 65 ° F Chlorides ppm

(A) Initial Hydrostatic 1928  Test 1150 T-On Location 0600  
 (B) First Initial Flow 24  Jars 250 T-Started 0645  
 (C) First Final Flow 69  Safety Joint 75 T-Open 0817  
 (D) Initial Shut-In 1432  Circ Sub T-Pulled 1150  
 (E) Second Initial Flow 89  Hourly Standby T-Out 1345  
 (F) Second Final Flow 96  Mileage 104 RT 161.20 Comments Best-0642  
 (G) Final Shut-In 1420  Sampler  
 (H) Final Hydrostatic 1883  Straddle  Ruined Shale Packer

Initial Open 30  Extra Packer  Extra Copies  
 Initial Shut-In 60  Extra Recorder Sub Total 0  
 Final Flow 30  Day Standby Total 1636.20  
 Final Shut-In 90  Accessibility MP/DST Disc't  
 Sub Total 1636.20

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. 52108

Well Name & No. Geyer #4-35 Test No. 5 Date 4-8-13  
 Company Muffin Drilling Co., Inc. Elevation 2400 KB 2389 GL  
 Address 250 N. Ward St. #300 Wichita, KS 67202  
 Co. Rep / Geo. Saman Shaitare Rig Muffin 21  
 Location: Sec. 35 Twp. 10S Rge. 24W Co. Osage State KS

Interval Tested 3910-3934 Zone Tested LKC "J"  
 Anchor Length 24' Drill Pipe Run 3862 Mud Wt. 9.1  
 Top Packer Depth 3905 Drill Collars Run 29.78 Vis 59  
 Bottom Packer Depth 3910 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3934 Chlorides 2800 ppm System LCM 5.0

Blow Description IF - Strong building blow, BOB @ 10 minutes,  
FSI - No return,  
FF - Strong building blow, BOB @ 10 minutes,  
FST - Surface return @ 2 minutes, Died @ 27 minutes,

Rec	Feet of	%gas	%oil	%water	%mud
<u>50'</u>	<u>Gassy oil</u>	<u>10</u>	<u>90</u>		
<u>55'</u>	<u>HOCCM</u>	<u>10</u>	<u>30</u>		<u>60</u>
<u>25'</u>	<u>SOCCWM</u>	<u>30</u>	<u>10</u>	<u>30</u>	<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>806 G.I.P.</u>	%gas	%oil	%water	%mud

Rec Total 130 BHT 116 Gravity 41 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>1994</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>1815</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>1945</u>
(C) First Final Flow <u>44</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>2140</u>
(D) Initial Shut-In <u>1065</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0115</u>
(E) Second Initial Flow <u>55</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0330</u>
(F) Second Final Flow <u>65</u>	<input checked="" type="checkbox"/> Mileage <u>104RT X2</u> 322.40	Comments <u>Part-1922</u>
(G) Final Shut-In <u>1058</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1856</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

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

Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Sub Total 1797.40

MP/DST Disc

Approved By \_\_\_\_\_ Our Representative D. Kash

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



PO Box 93999  
Southlake, TX 76092

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

# INVOICE

Invoice Number: 135584  
Invoice Date: Apr 2, 2013  
Page: 1

acct.  
Prod-CH

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

OPERATOR PAY MDC  
LEASE: BR



Customer ID	Field Ticket #	Payment Terms	
Murfin	60149	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-01	Oakley	Apr 2, 2013	5/2/13

Quantity	Item	Description	Unit Price	Amount
185.00	MAT	<u>Geyer #4-35</u> Class A Common	17.90	3,311.50
7.00	MAT	Chloride	64.00	448.00
194.24	SER	Cubic Feet	2.48	481.72
501.76	SER	Ton Mileage	2.60	1,304.58
1.00	SER	Surface	1,512.25	1,512.25
56.00	SER	Pump Truck Mileage	7.70	431.20
1.00	SER	Manifold Rental	275.00	275.00
56.00	SER	Light Vehicle Mileage	4.40	246.40
1.00	CEMENTER	Alan Ryan		
1.00	EQUIP OPER	Wayne McGhghy		
1.00	OPER ASSIST	Kevin Ryan		

Subtotal	8,010.65
Sales Tax	283.84
Total Invoice Amount	8,294.49
Payment/Credit Applied	
<b>TOTAL</b>	<b>8,294.49</b>

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

\$ 2,803.72 *25%*

ONLY IF PAID ON OR BEFORE  
**Apr 27, 2013**

*PD*

*- 2803.72*  
*5490.77*







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



# Invoice

DATE	INVOICE #
4/19/2013	24195

BILL TO
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130
USED FOR _____
APPROVED _____

- Acidizing
- Cement
- Tool Rental

IC/04  
J.T. [Signature]

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#4-35	Geyer	Graham	Company Tools	Oil	Development	Cement Port Collar	Wayne
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				50	Miles	6.00	300.00
576D-D	Pump Charge - Port Collar				1	Job	1,250.00	1,250.00
330	Swift Multi-Density Standard (MIDCON II)				175	Sacks	16.50	2,887.50T
276	Flocele				75	Lb(s)	2.00	150.00T
279	Bentonite Gel				5	Sack(s)	25.00	125.00T
290	D-Air				3	Gallon(s)	35.00	105.00T
581D	Service Charge Cement				250	Sacks	2.00	500.00
583D	Drayage				641.88	Ton Miles	1.00	641.88
	Subtotal							5,959.38
	Sales Tax Graham County						7.55%	246.70
<b>We Appreciate Your Business!</b>							<b>Total</b>	\$6,206.08



Services, Inc.

CHARGE TO: MURKIN DRUG Co., Inc.  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

TICKET No 24195

PAGE 1 OF 1

SERVICE LOCATIONS  
 1. Ness City, KS  
 2.  
 3.  
 4. REFERRAL LOCATION

WEL/PROJECT NO. 4-35  
 LEASE Geyer  
 COUNTY/PARISH Graham  
 STATE KS  
 CITY LOCATION  
 DATE 4-19-13  
 OWNER SAME

TICKET TYPE CONTRACTOR  
 SERVICE SALES  
 RIG NAME/NO. GOTOOLS  
 WEL CATEGORY Development  
 JOB PURPOSE Cement Port Cover  
 WEL PERMIT NO.

WEL LOCATION Walsley, Ke-9m, bu, ls,  
 12E, STATE

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE # 111					6.00	300.00
576b					Pump Charge	1	JOB			1250.00	1250.00
330					Super Mulet - Dasher Standard	175	SYS			16.50	2887.50
276					Floccle	75	lbs			2.00	150.00
279					Refractory Gel	5	SYS			25.00	125.00
290					D-ADD	3	gal			35.00	105.00
581					SEWAGE CHARGE CEMST	250	SYS			2.00	500.00
583					DEWAGE	25675	lbs			641.88/m	641.88

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.  
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED 4-19-13  
 TIME SIGNED 1030  
 A.M.  P.M.

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

**SURVEY**  
 OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?  
 WE UNDERSTOOD AND MET YOUR NEEDS?  
 OUR SERVICE WAS PERFORMED WITHOUT DELAY?  
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?  
 ARE YOU SATISFIED WITH OUR SERVICE?

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 5959.38  
 TOTAL 6206.08  
 GRAND TOTAL 7.55% TAX 246.70

SWIFT OPERATOR: Dave Johnson  
 APPROVAL:

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

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 4-19-13 PAGE NO. 1

CUSTOMER MURPHY DRILLING CO. INC.

WELL NO. 4-35

LEASE GEYER

JOB TYPE CEMENT PORT COLLAR

TICKET NO. 24195

CHART NO.	TIME	RATE (BPM)	VOLUME (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1030							ON LOCATION
								TUBING - 2 3/8 CASING - 5 1/2 PORT COLLAR # 2039
	1020				✓		1000	PSI TEST CASING - HELD
	1025	3 1/2	3	✓		500		OPEN PORT COLLAR - LOW RATE
	1030	3 1/2	15	✓		500		MIX GEL 5 SKS
	1035	4	97	✓		500		MIX CEMENT 175 SKS SMD @ 11.2 PPG
	1100	4	7	✓		650		DISPLACE CEMENT
	1110			✓		1000		CLOSE PORT COLLAR - PSI TEST - HELD CIRCULATED 15 SKS CEMENT TO BIT
	1120	4	25	✓		500		RUN 5 OTS CIRCULATE CLEAN @ 2206' WASH TRUCK
	1200							JOB COMPLETE

THANK YOU  
WAYNE, NICK, ROSSIE, JOHN



**CONSOLIDATED**  
Oil Well Services, LLC

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

*Acctg -*  
*cc: wt*  
*cc: Liz*  
*cc: bwl*

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

INVOICE

Invoice # 258027

Invoice Date: 04/15/2013 Terms: 10/10/30,n/30 Page 1

MURFIN DRILLING  
P.O. BOX 288  
RUSSELL KS 67665  
( ) -

GEYER 4-35 USED FOR IC 103  
39431  
35-10-24  
04-10-2013 APPROVED [Signature]  
KS

Part Number	Description	Qty	Unit Price	Total
1126	OIL WELL CEMENT	200.00	22.5500	4510.00
4310	5 1/2 ROTATING HEAD	1.00	150.0000	150.00
1107	FLO-SEAL (25#)	50.00	2.8200	141.00
1135A	FL- 115 (FLUID LOSS)	94.00	10.5500	991.70
1146	CAF - 38	28.00	9.7200	272.16
1215	KCL SUB MB6875 CC3107	2.00	35.7000	71.40
1111A	SODIUM METASILICATE	200.00	2.4000	480.00
1102	CALCIUM CHLORIDE (50#)	240.00	.8900	213.60
4159	FLOAT SHOE AFU 5 1/2"	1.00	413.0000	413.00
4104	CEMENT BASKET 5 1/2"	1.00	276.0000	276.00
4454	5 1/2" LATCH DOWN PLUG	1.00	303.0000	303.00
4315	ROTATING SCRATCHERS	25.00	90.0000	2250.00
4285	5 1/2" PORT COLLAR	1.00	2075.0000	2075.00
4130	CENTRALIZER 5 1/2"	10.00	58.0000	580.00

Sublet Performed	Description	Total
9996-130	CEMENT MATERIAL DISCOUNT	-1265.55
9996-130	CEMENT MATERIAL DISCOUNT	-7.14
9995-130	CEMENT EQUIPMENT DISCOUNT	-405.50

Description	Hours	Unit Price	Total
T-118 SINGLE PUMP	1.00	3020.00	3020.00
T-118 EQUIPMENT MILEAGE (ONE WAY)	50.00	5.00	250.00
T-129 TON MILEAGE DELIVERY	1.00	785.00	785.00

Amount Due 17737.37 if paid after 05/15/2013

Parts:	12726.86	Freight:	.00	Tax:	859.96	AR	15963.63
Labor:	.00	Misc:	.00	Total:	15963.63		
Sublt:	-1678.19	Supplies:	.00	Change:	.00		

Signed \_\_\_\_\_

Date \_\_\_\_\_



**CONSOLIDATED**  
Oil Well Services, LLC

258027

TICKET NUMBER 39431

LOCATION Dallas KS

FOREMAN Miles Shaw

Fuzzy McCullough

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

**FIELD TICKET & TREATMENT REPORT**

**CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY												
4-10-13	5406	Geyer # 4-35	35	10S	24W	Graham												
CUSTOMER			<table border="1"> <thead> <tr> <th>TRUCK #</th> <th>DRIVER</th> <th>TRUCK #</th> <th>DRIVER</th> </tr> </thead> <tbody> <tr> <td>42118</td> <td>Deman M</td> <td></td> <td></td> </tr> <tr> <td>5307129</td> <td>Traut W</td> <td></td> <td></td> </tr> </tbody> </table>				TRUCK #	DRIVER	TRUCK #	DRIVER	42118	Deman M			5307129	Traut W		
TRUCK #	DRIVER	TRUCK #	DRIVER															
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MAILING ADDRESS			<table border="1"> <thead> <tr> <th>CITY</th> <th>STATE</th> <th>ZIP CODE</th> </tr> </thead> <tbody> <tr> <td>Wahman</td> <td>KS</td> <td>67486</td> </tr> </tbody> </table>				CITY	STATE	ZIP CODE	Wahman	KS	67486						
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CITY	STATE	ZIP CODE																
Wahman	KS	67486																

JOB TYPE Long String HOLE SIZE 7 7/8" HOLE DEPTH 4030' CASING SIZE & WEIGHT 5 1/2" 15.5 #  
 CASING DEPTH 4025' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER PCJ @ 2035'  
 SLURRY WEIGHT 13.8 SLURRY VOL 1.42 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 22'  
 DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety Meeting and rig up on Murfin that float equipment 125' scratches  
Centralizers @ 1, 2, 3, 4, 6, 8, 10, 12, 14, 46. Basket on battery 47 Port collar tool  
on top of joint 47 @ 2035' Run casing to bottom circulate casing for 1hr  
Pump 5 bbls water 300 gal calcium chloride 300 gal mtsu silicate caustic flush  
5 bbls water. Pump 150 sks OWC w/ 1 1/4" St. 115 & CFL 115 fluid loss. CFL de-water  
Shut down Clear pump lines release plug displace 95 bbls water w/ 1/4" KCL  
in the first 20 bbls displacement lift pressure 900 \* land @ 1500 \*  
Flow held

Thanks Miles & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	3020.00	3020.00
5406	50	MILEAGE	5.00	250.00
5407A	9.4 Tons	Ton mileage delivery	167.00	785.00
1126	200 S45	OWC	22.55	4510.00
4310	1	5 1/2 - Rotating Head	150.00	150.00
1107	50 #	fluid	2.82	141.00
1135A	94 #	CFL 115	10.33	991.00
1146	28 #	CAF DeSomer (CAF 38)	9.22	272.16
1215	2 gal	KCL	35.70	71.40
1111A	200 #	Sodium metasilicate	2.40	480.00
1102	240 #	Calcium chloride	1.89	213.60
4159	1	5 1/2 - AFU float shoe (w)	413.00	413.00
4104	1	5 1/2 - Basket (w)	276.00	276.00
4454	1	5 1/2 - Laydown Assy	303.00	303.00
4315	25	5 1/2 - Scratchers - Rotating	90.00	2250.00
4285	1	5 1/2 - Port Collar	2075.00	2075.00
4130	10	5 1/2 - Centralizers	58.00	580.00
		loss 10% discount 1678.19		1678.19
		Subtotal	15103.67	15103.67
		SALES TAX		859.96
		ESTIMATED TOTAL		15963.63

Revin 3737

AUTHORIZATION Wade King TITLE \_\_\_\_\_ DATE \_\_\_\_\_

**completed**

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.