



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1152122
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: _____



1152122

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 18, 2013

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

Re: ACO1
API 15-153-20921-00-00
Gly 1-27
NW/4 Sec.27-04S-31W
Rawlins County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Leon Rodak

Gly #1-27 1320' FNL 2310' FWL Sec. 27-4S-31W 2937' KB						Daisy #1-27 2200' FNL 2200' FEL Sec. 27-4S-31W 2926' KB		
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	2691	+246	-1	2690	+247	Flat	2679	+247
B/Anhydrite	2722	+215	+1	2722	+215	-1	2712	+214
Topeka	3754	-817	+1	3754	-817	+1	3744	-818
Heebner	3923	-986	-4	3920	-983	-1	3908	-982
Lansing	3973	-1036	-4	3968	-1031	+1	3958	-1032
Stark	4135	-1198	+3	4135	-1198	+3	4127	-1201
BKC	4179	-1242	+3	4179	-1242	+3	4171	-1245
Pawnee	4288	-1351	+9	4291	-1354	+6	4286	-1360
Cherokee	4376	-1439	+6	4377	-1440	+5	4371	-1445
Mississippi	4488	-1551	+7	4489	-1552	+6	4484	-1558
RTD	4560	-1623					4550	
LTD				4560	-1623		4554	



GEOLOGIST'S REPORT

OPERATOR **MURFIN DRILLING COMPANY, INC.**

LEASE **GLY # 1-27**

LOCATION **1320 FNL & 2310 FWL**

SEC. **27** TWSP **4S** RGE **31W**

COUNTY **RAWLINS** STATE **KANSAS**

FIELD **DAISY**

CONTRACTOR **Murfin Drilling Company** RIG NO. **14**

COMMENCED **29 March 2013** COMPLETED **7 April 2013**

MUD DISPLACED **3111** MUD TYPE **Chemical**

DRILLING TIME KEPT FROM **3650** TO **4560**

SAMPLES SAVED FROM **3650** TO **4560**

SAMPLES EXAMINED FROM **3650** TO **4560**

GEOLOGICAL SUPERVISION FROM **3642** TO **4560**

GEOLOGIST ON WELL **Paul Gunzelman**

ELEVATIONS

KB **2937 Ft.**

GL **2927 Ft.**

ALL MEASUREMENTS
FROM K.B.

CASING RECORD

Conductor **None**

Surface **8 5/8" @ 223'**

Production **5 1/2" @ 4558'**

ELECTRICAL SURVEYS:

Pioneer Energy Services

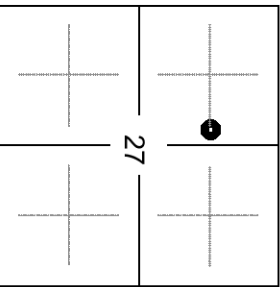
Comp. Neutron Density

Dual Induction

Micro-resistivity

Comp. Sonic

FORMATION NAME	LOG		SAMPLE	
	TOP	DATUM	TOP	DATUM
Stone Corral	2690	+247	2691	+246
Base/ Anhydrite	2722	+215	2722	+215
Topoka	3754	-817	3754	-817
Heebner Shale	3920	-983	3923	-986
Lansing	3968	-1031	3973	-1036
Stark Shale	4135	-1198	4135	-1198
Base/Kansas City	4179	-1242	4179	-1242
Cherokee	4377	-1440	4376	-1439
Mississippian	4489	-1552	4488	-1551
Total Depth	4560	-1623	4560	-1623

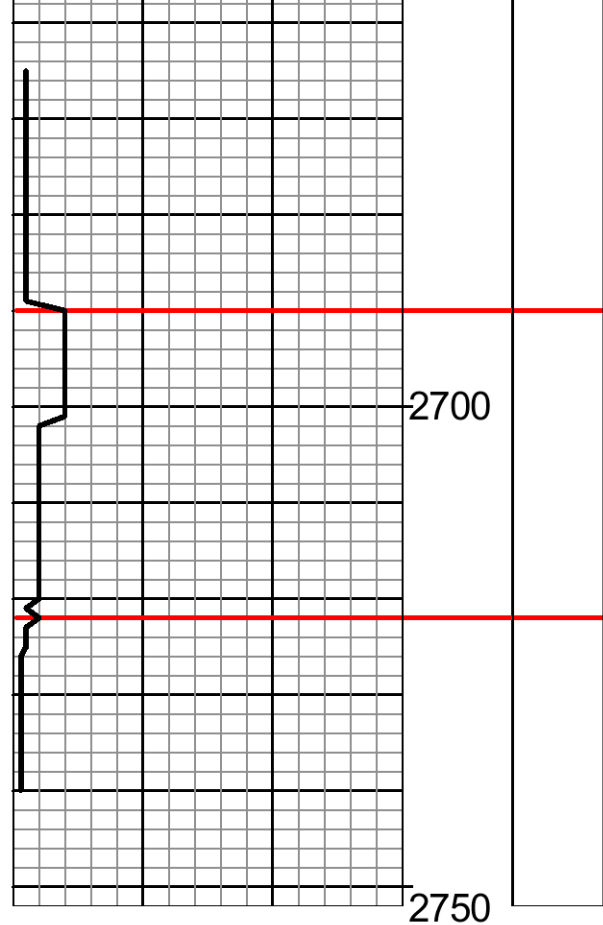


REMARKS

API 15-153-20921-00-00
 Drilling Fluids: Morgan Mud, Inc. (David Lines, engineer)
 Drill Stem Testing: Trilobite Testing, Inc.
 Gas Trailer: No Gas Trailer
 Reserve Pit Chlorides: 9,900 PPM

DRILL TIME (MIN/FT)	DEPTH	LITHOLOGY	SHOWS	SAMPLE DESCRIPTIONS	REMARKS
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2650

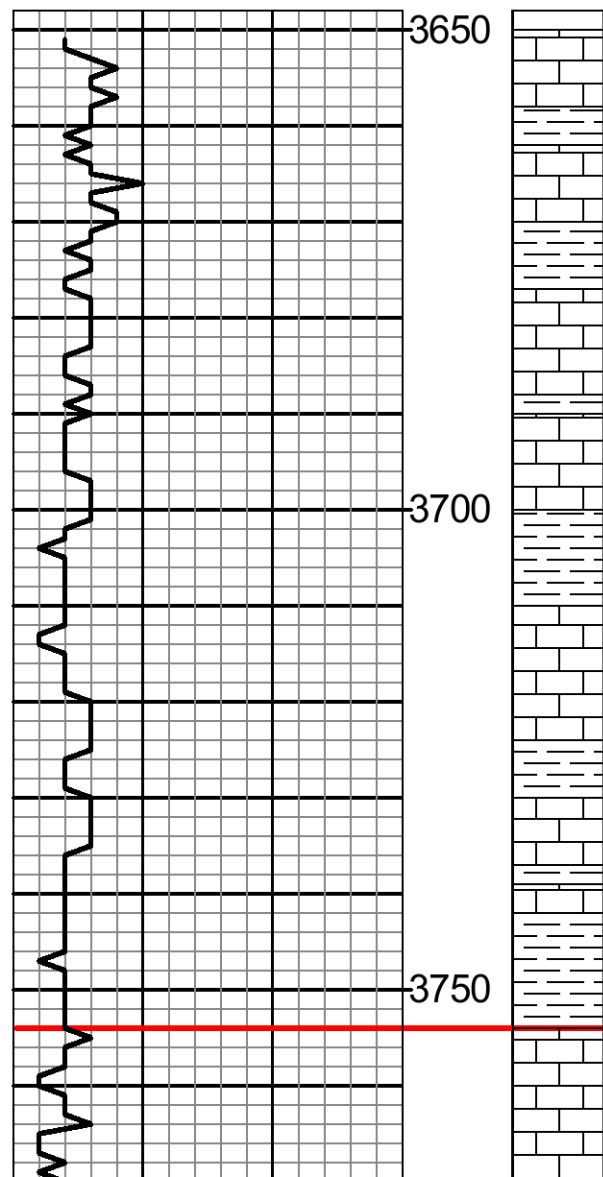


STONE CORRAL

2690 (+247)

BASE/ANHYDRITE

2722 (+215)



Ls: Crm, fxln, sli foss, cons spr calc.

9:19 AM, 1 April 2013

Ls: Crm, fxln, chky, foss (Fus) some lt yel sli pyr Ls, tr glauc.

Sh: Gy, gy-brn, lmy stly.

Ls: Crm, occ crm-tn, fxln-gran, sli ool, tr org rem, some gy-gn & arg-shly, n/s.

Ls: Crm, fxln-fnly gran, chky-sbchky, occ dol, fr intgran por, n/s.

Sh: Rd-brn, fis-blky, ea gum, some stly.

Ls: Crm, tr crm-lt gy, fxln, chky, occ v.fnly gran & dol, tr spr calc, n/s.

Sh: Rd-brn, blk gum & lt gn sly sli calc, cons crm-gy fxln arg chky Ls.

Ls: Crm-gy, occ lt yel fxln tr org rem, some arg-shly, intbd gy & gy-gn sh, n/s.

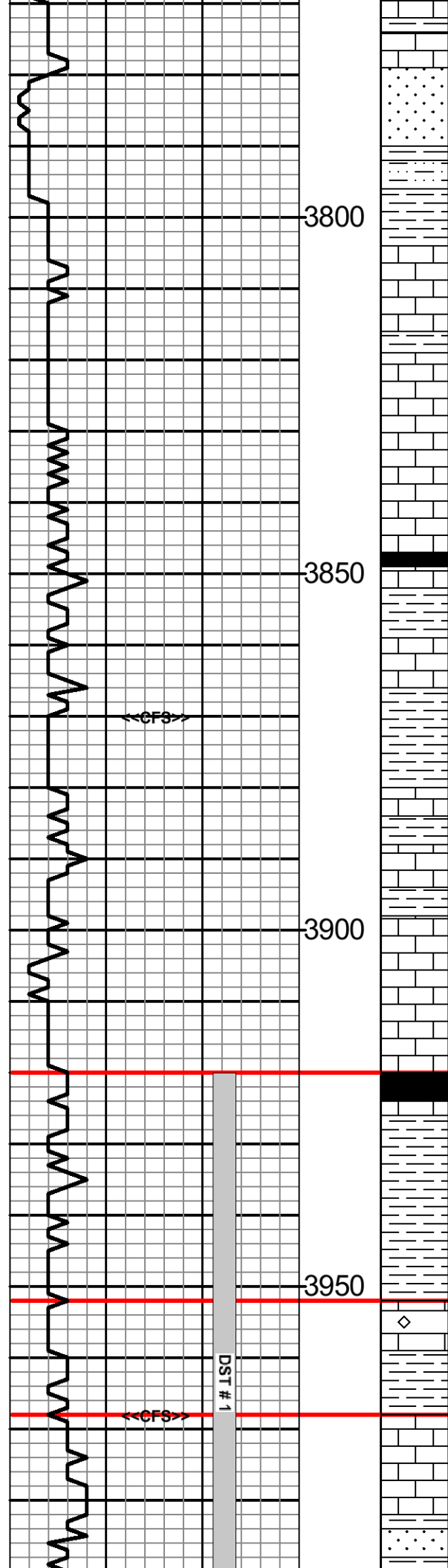
Sh: Rd-brn & v.lt rd-or, gum occ slty-sdy, some mar sdy sh.

Ls: Crm-tn, fxln-gran, v.chky, occ dol, tr amor calc, fr-gd intgran por, n/s.

TOPEKA

3754 (-817)

Ls: Crm-gy, gran, dol in pt, chky, occ arg, some intbd rd-brn sh, n/s.

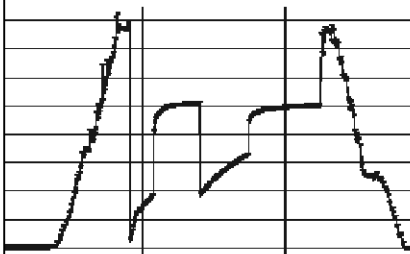


- Sd: Crm-v.lt gy, some v.lt gn-gy, vvf n wl-srt occ arg some calc, tr carb mat, intbd rd-brn gum sh, n/s.
- Sh: Rd-brn fis-blky, slty, occ gum, cons gy-gn fis sh.
- Ls: Wh-crm, fxln, occ medxln, sli ool, cons spr calc, chky, fr intxln & pp por, n/s.
- Ls: Crm-lt gy, fxln ool, tr org rem, cons spr calc, occ arg & sli pyr.
- Ls: Crm, tr crm-lt gy, fxln sli foss (Fus) cons spr calc, some sbchky, n.v.p, n/s.
- Ls: Tn, fn-vfxln, some org rem, tr spr calc, pr pp por, n/s.
- Sh: Blk & v.dk gy-brn, fis, carb.
- Sh: Gy-gn lt gn & dk gy, fis, some slty, sli pyr, occ calc.
- Ls: Crm, fxln-gran, sli foss, some sbchky, cons spr calc, pr-fr intgran por, n/s.
- Sh: Gy-gn lt gn & dk gy-brn, fis, tr calc, r.pyr & carb mat.
- Ls: Crm, fxln-gran, sli ool, some chk, fr amt spr calc, fr pp por, n/s.
- Ls: Crm-v.lt gy, fxln, sli foss, tr ool, occ sbchky, pr pp por, no odor, r. shw FO, tr blk asph res,
- Ls: Crm, fxln, tr gran, r.ool, some sbchky, fr-gd pp por, n/s.
- Ls: Wh-crm, fxln, v.chky & gum, tr org rem, occ lt gn & arg, n/s.
- Ls: Crm, fxln, chky, some wh-crm op cht, tr foss & amor calc, r.pyr, n/s.
- Sh: Blk, thn fis, carb.
- Ls: Tn & gy-brn, vfxln, tr org rem, cons dk gy fis gum sh, n.v.p.
- Sh: Gy-gn & lt rd-brn fis-blky, cons lt gn arg sltst.
- Sh: Rd-brn, blkly slty-sdy, some gum.
- Ls: Wh, fxln-frag, ool, sli pyr, tr chk pr-fr pp & intool por, tr fr vug por, sli odor, sli shw FO, spty dk brn-blk stn, some asph res.
- Sh: Lt gn, fis, sli pyr, some calc.
- Ls: Crm-v.lt gy, fn-vfxln, tr foss, gen dns w/some pr-fr pp por & fr scat vug por, no odor, fr shw dk brn FO, v.dk brn spty-sbsat stn.
- Ls: Crm, fn-vfxln, some sbchky, tr org rem, & pyr, n.v.p, n/s.
- Sh: V.lt gn & lt rd-brn w/tn-lt gn mott sli arg

DST # 1 3920 - 4007
 30"-60"-60"-90"
 IF: Strong blow BOB in 3 min.
 FF: Strong blow BOB in 3 min.

RECOVERY:
 125 Ft. Oil specked Mud
 576 Ft. Watery Mud
 960 Ft. Muddy Water
 (Chlor: 95,000 ppm)

IHP: 1908 psi. FHP: 1881 psi.
 IFP: 73-463 psi. ISIP: 1277 psi.
 FFP: 476-821 psi. FSIP: 1257 psi.
 BHT: 125 deg. F.

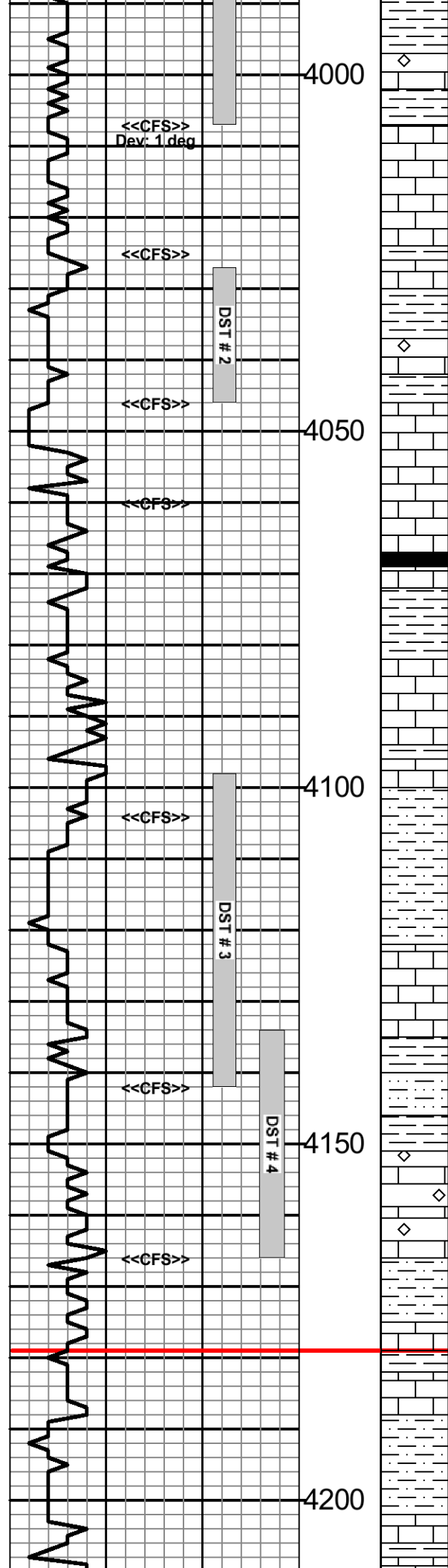


HEEBNER SHALE
 3920 (-983)

TORONTO
 3952 (-1015)

LANSING
 3968 (-1031)

Morgan Mud check @ 4007' (4/02/13)
 Vis: 56, Wt: 9.2, WL: 5.6
 Chlor: 1,200 ppm, LCM: 4#



Cr: V.lt gy & lt rd brn w/lt gn med arg slst, lt brn stn, no odor, no FO.

Ls: Wh-lt gy, fxln-frag, ool, tr dru calc, pr-fr pp & intool por, some fr vug por, sli shw v.dk brn-blk FO, spty-sbsat stn, no odor.

Sh: Lt gy-gn & lt gn, fis, sli calc.

Ls: V.lt gy, fxln, sli ool, tr org rem, some rexlzd, fr pp por, tr vug por, v.sli odor (crush) fr shw med brn O, med brn spty-sbsat stn.

Ls: Crm-v.lt gy, fxln, sbchky, tr pyr, n/s.

Sh: Lt gy-gn fis, sity, sli pyr, Ls: Crm, fxln, sbchky, tr pyr, n.v.p. Sh: Lt gn & gy-gn, fis, sli pyr, some sity, bcm rd-brn & lt rd-or ea occ gum.

Ls: Lt gy, frag-fxln, ool, cons spr calc, pr intool por, tr fr pp por, sli shw med brn FO, med brn sbsat-sat stn, some spty lt stn, no odor.

Sh: Rd-brn tr gy, thk fis ea.

Ls: V.lt gy, fn-vfxln, tr foss (Fus) fr-gd pp por, gd scat vug por, fr shw dk brn bleed O/G, dk brn spty stn-sbsat, v.sli odor.

Ls: Wh-crm, fn-vfxln, sbchky, tr pyr, occ v.lt gn & arg, n.v.p, n/s.

Sh: Blk, thn fis, carb.

Sh: Lt gy-gn lt olv gn, fis, occ calc, some gum, bcm rd-brn blk ea, tr gum.

Ls: Crm-v.lt gy, fn-vfxln, some spr calc, tr sbchky, pr pp por, no FO, v.dk brn-blk spty stn, no odor.

Ls: Tn-gy, vfxln, some rexlzd ool & spr calc, tr lt gy op cht, n.v.p.

Ls: Lt gy-gn occ mott w/tn, fxln, withd-sbchky, arg, tr org rem, n.v.p.

Sh: Rd-brn, blk ea, slty, occ gum, some mar v.arg slst, tr lt gn fis sh.

Ls: Tn, fn-vfxln, sli foss (Fus) pr intxn por, fr-gd scat vug por, fr shw med brn O, sbsat stn, sli odor.

Ls: Crm-tn, lt gy, fn-vfxln, sbchky, tr org rem, dns.

Sh: V.dk gy-blk, thn fis, some carb, bcm lt gn fis tr pyr.

Sh: V.lt gy-gn tr yel, fis, much rd-brn v.arg slst.

Ls: Crm-v.lt gy, fxln, ool, cons sec calc, pr pp & intool por, v.sli shw bleed O, dk brn spty stn, no odor.

Ls: Crm, fxln, tr sbchky, r.org rem, some v.lt gn & arg, n.v.p.

Sh: Dk gy, fis, some slty, tr carb mat, bcm rd-brn ea occ gum.

Ls: Crm mott w/rd-brn sh, bcm tn fxln tr org rem, some sbchky, n.v.p.

Sh: Gy & gy-gn, calc, occ gum.

Ls: Crm-gy, fxln sbchky, much arg-shly, n.v.p.

Sh: Lt gy, gy-gn & yel fis, slty, cons rd-brn fis-blky ea occ gum sh.

Ls: Lt gy, fxln-gran, sbchky, some slty, arg, n.v.p.

Ls: Lt gy-crm, fxln chky, some arg, cons gy-

Morgan Mud check @ 4007' (4/03/13)
 Vis: 74, Wt: 8.5, WL: 5.2
 Chlor: 800 ppm, LCM: 15#
 **Lost returns while pulling DST #1
 Could not fill the hole, Lost >600 Bbl.**

DST # 2 4027 - 4046
 30"-60"-30"-60"
 IF: Weak 1 1/2 inch blow
 FF: V.Weak 3/4 inch blow
RECOVERY:
 54 Ft. Mud Cut Oil (35% Mud, 65% Oil)
 96 Ft. Oil & Water Cut Mud (10%Oil, 30%Water, 60%Mud)
 IHP: 1882 psi. FHP: 1843 psi.
 IFP: 16-43 psi. ISIP: 395 psi.
 FFP: 54-74 psi. FSIP: 387 psi.
 BHT: 118 deg. F.

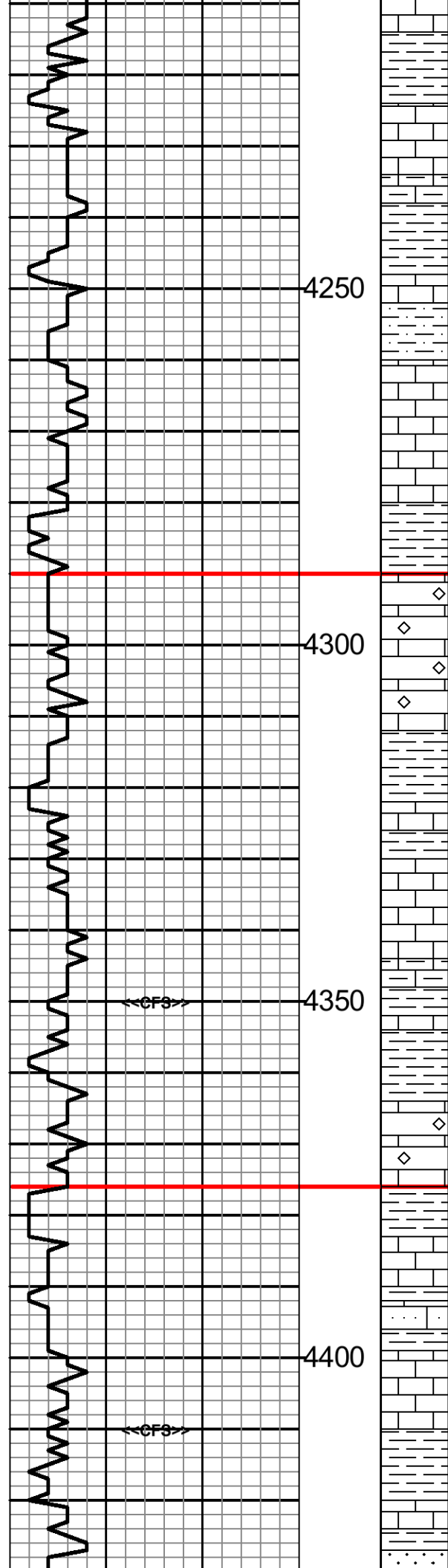
DST # 3 4098 - 4142
 30"-60"-30"-60"
 IF: V. Weak surface blow
 FF: No blow
RECOVERY:
 10 Ft. Oil Cut Mud (15%Oil, 85%Mud)
 IHP: 1942 psi. FHP: 1912 psi.
 IFP: 15-20 psi. ISIP: 36 psi.
 FFP: 21-22 psi. FSIP: 27 psi.
 BHT: 115 deg. F.

Morgan Mud check @ 4142'
 Vis: 59, Wt: 8.7, WL: 5.2
 Chlor: 1,100 ppm, LCM: 12#

Morgan Mud check @ 4166'
 Vis: 52, Wt: 8.9, WL: 5.6
 Chlor: 1,200 ppm, LCM: 10#

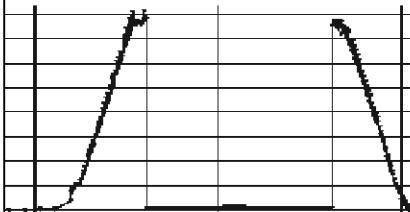
BASE/KANSAS CITY
4179 (-1242)

DST # 4 4134 - 4166
 30"-60"-30"-60"
 IF: V.Weak surface blow
 FF: No blow
RECOVERY:
 2 Ft. Mud
 IHP: 1015 psi. FHP: 1007 psi.



- Ls: Lt gy crm, fxln chky, some arg, some gy gn lt gy & rd-brn sh, n.v.p.
- Sh: Tn, v.lt rd-brn & rd-or, ea gum, occ slty, intbd mar-purp calc sltst & wh-crm chky Ls.
- Ls: Lt gy-wh, fxln, sbchky, some arg, tr ool, n.v.p.
- Sh: Gy-brn rd-brn, intbd purp arg sltst, tr gy med-co sbrnd cht.
- Ls: Lt gy tn tr yel & gy-brn, fxln-frag, arg, some slty, cons intbd rd-brn sh.
- Slst: Purp-gy, calc-lmy arg, tr sdy, intbd gy-brn & rd-brn sh, some gy fxln shly Ls, n/s.
- Ls: Gy-purp tr mar, slty, v.arg, intbd gy yel & olv gn fis slty sh.
- Ls: Crm-tn, fxln, tr ool, withd, n.v.p.
- Sh: Tn gy-gn brn olv gn & rd-brn, tr yel, some slty, tr sbwxy.
- Ls: Wh-crm, fxln-frag, ool, tr org rem, sbchky, some amor calc, pr intrfrag por, n/s.
- Ls: Wh-crm, fxln, tr gran, sbchky, tr org rem, r.pyr, n.v.p, n/s.
- Sh: Blk, thn fis carb, cons dk gy-brn gy-gn olv gn & gn fis sh, tr calc, r.slty.
- Ls: Crm-tn, fxln-frag, ool, withd, tr sec calc, n.v.p.
- Sh: Gy-gn olv gn & yel, fis, tr carb mat.
- Ls: Crm, fxln-frag, ool, withd-sbchky, some spr calc, tr lt gy op cht, n.v.p, n/s.
- Ls: Tn-gy gy-gn dk olv gn, arg-shly, tr org rem, some slty, n.v.p.
- Sh: Dk gy gy-brn & olv brn, fis, some carb mat, occ slty, tr vgt, intbd tn-brn arg Ls.
- Ls: Crm-tn, fn-vfxln, ool, some chky, cons sec calc, tr tn-brn vfxln dns Ls, n/s.
- Ls: Crm, fn-vfxln, sbchky, tr ool & org rem, some spr calc, n/s.
- Sh: Lt gy-gn & lt rd-brn, v.gum sft, some rd-brn & mar fis ea sh.
- Ls: Wh crm tn, fxln-vfxln, sbchky, tr ool, some pnk rd-brn & yel arg Ls, n/s.
- Ls: Wh-crm, some tn, fn-vfxln sbchky, occ frac, mott w/pnk lt gn & yel in pt, n/s.
- Sd: Brn & rd-brn, vfn-fn tr med, v.wl-cmt, calc-lmy in pt, arg, some sec qtz, n/s.
- Ls: Wh-v.lt gy, fxln, occ sbchky, some v.lt gn sh inc, tr sdy, intbd gy dk gy & gy-gn fis sh, n/s.
- Sh: Gn yel mar rd-brn, tr purp, sbwxy mott occ sdy.
- Sd: Wh pnk v.lt rd-brn, fn-vfn sbang sbfri calc org, rd intrfrag por, some gy gn lt gn & rd

IFP: 1919 psi. FFP: 1907 psi.
 IFP: 15-16 psi. ISIP: 33 psi.
 IFP: 15-16 psi. FSIP: 27 psi.
 BHT: 111 psi.

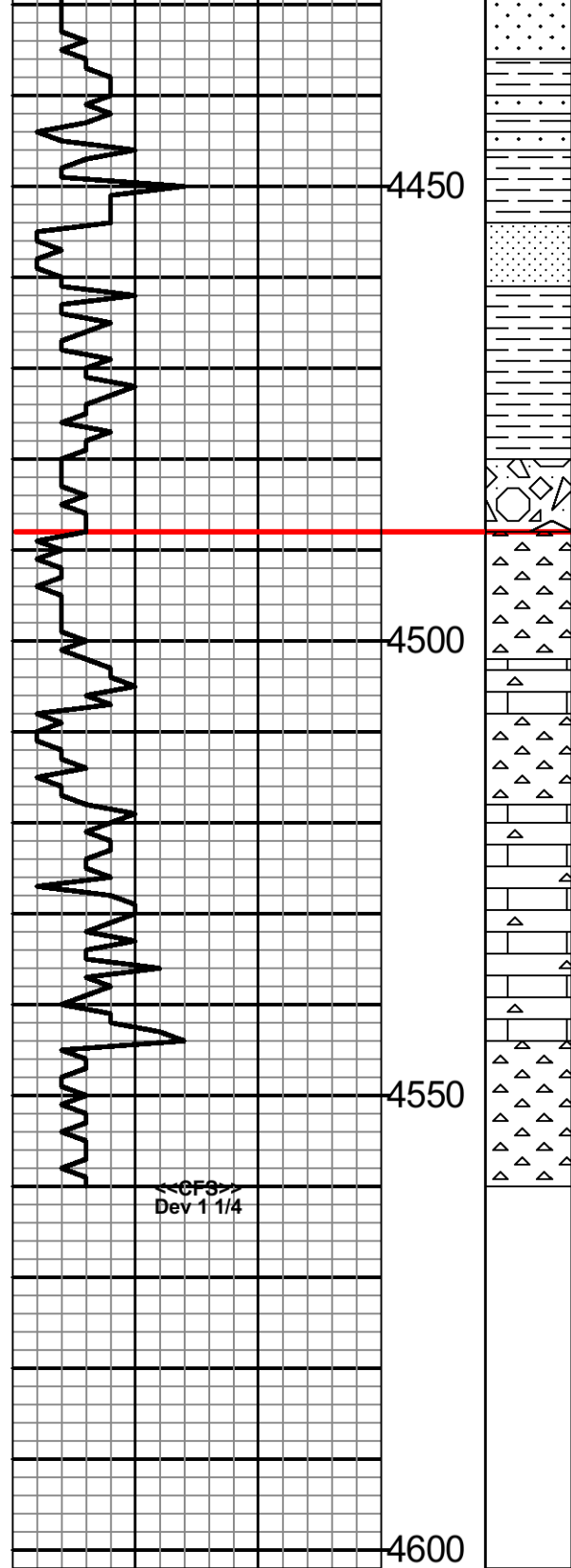


PAWNEE

4290 (-1353)

CHEROKEE

4376 (-1439)



arg, gu migran pot, cons gy-gn lt gn & rd-brn sh, n/s.

Sh: Rd-brn blk, sbwxy, much slty-sdy, cons dk rd-brn vvf-fn shly sd, n/s.

Sd: Wh-v.lt gy, vfn wl-srt sbang-sbrnd, calc in pt, n/s.

Sh: Rd-brn purp yel mar & lt gn, fis wxy some sdy, intbd lt gy fxln dns Ls.

Sd: Wh, vvf-fn sbang-sbrnd calc, sbfri, sli pyr, abd sh, some co ang qtz, n/s.

Sh: Yel mar & gn, fis, occ mott wxy, some yel & lt gy co ang qtz.

Sh: Yel dk rd-brn & mar, lt yel crm & wh op vit cht, tr sli wthd cht & co ang qtz.

Cht: Wh crm yel, tr rd-or, frs & devit. some ool, occ mott, n.v.p, n/s.

Cht: Wh-crm & yel, op frs & devit, some crm & lt yel fxln Ls, tr sbchky, pr por in cht, n/s.

Cht: Yel wh & crm, tr pnk, op vit, tr devit, some yel fxln wthd Ls, tr glauc, n/s.

Ls: Wh-crm, fn & vfxln, sbchky in pt, cons spr calc, occ silic, cons cht, n/s.

Ls: Wh-v.lt gy, tr v.lt yel, fxln rexld, some sbchky, cons wh & lt gy cht, n/s.

Cht: Wh-v.lt gy, tr crm lt yel & pnk, op vit, tr wthd, some wh-v.lt gy fxln occ silic Ls, tr sbchky, n/s.

MISSISSIPPIAN
4488 (-1551)

TOTAL DEPTH
4560 (-1623)

4:45 AM, 6 April 2013

Operator: MURFIN DRILLING COMPANY, INC.

Lease: GLY # 1-27

Location: 1320 FNL & 2310 FWL SEC. 27 TWSP 4S RGE 31W

County: RAWLINS State: KANSAS



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Paul Gunzelman

Gly #1-27

27-4s-31w Rawlins,KS

Start Date: 2013.04.02 @ 07:45:00

End Date: 2013.04.02 @ 18:31:15

Job Ticket #: 50641 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.10 @ 16:32:22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50641

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.04.02 @ 07:45:00

GENERAL INFORMATION:

Formation: **Tor-LKC A&B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:43:45

Time Test Ended: 18:31:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 3920.00 ft (KB) To 4007.00 ft (KB) (TVD)

Reference Elevations: 2937.00 ft (KB)

Total Depth: 4007.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: 821.48 psig @ 3921.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.02

End Date: 2013.04.02

Last Calib.: 2013.04.03

Start Time: 07:45:15

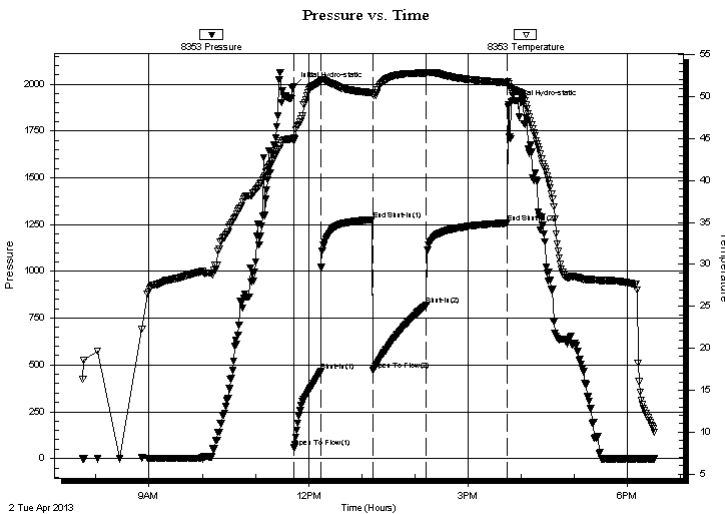
End Time: 18:31:15

Time On Btm: 2013.04.02 @ 11:43:00

Time Off Btm: 2013.04.02 @ 15:46:00

TEST COMMENT: 30 IF; BOB in 3 min
60 IS; Built to 3/8" in 40 min died back to Surface blow
60 FF; BOB in 3 min
90 FS; No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
0	1989.14	45.06	Initial Hydro-static
1	58.25	44.81	Open To Flow (1)
31	464.52	51.81	Shut-In(1)
90	1276.72	50.43	End Shut-In(1)
90	473.44	50.25	Open To Flow (2)
150	821.48	52.82	Shut-In(2)
242	1258.60	51.66	End Shut-In(2)
243	1890.03	51.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
960.00	MW 75%W 25%M	8.60
676.00	MW 60%W 40%M	9.48
125.00	OSM 100%M	1.75

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

27-4s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50641

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.04.02 @ 07:45:00

GENERAL INFORMATION:

Formation: **Tor-LKC A&B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:43:45

Time Test Ended: 18:31:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: **3920.00 ft (KB) To 4007.00 ft (KB) (TVD)**

Reference Elevations: 2937.00 ft (KB)

Total Depth: 4007.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360 Inside

Press@RunDepth: psig @ 3921.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.02

End Date:

2013.04.02

Last Calib.:

2013.04.03

Start Time:

07:45:05

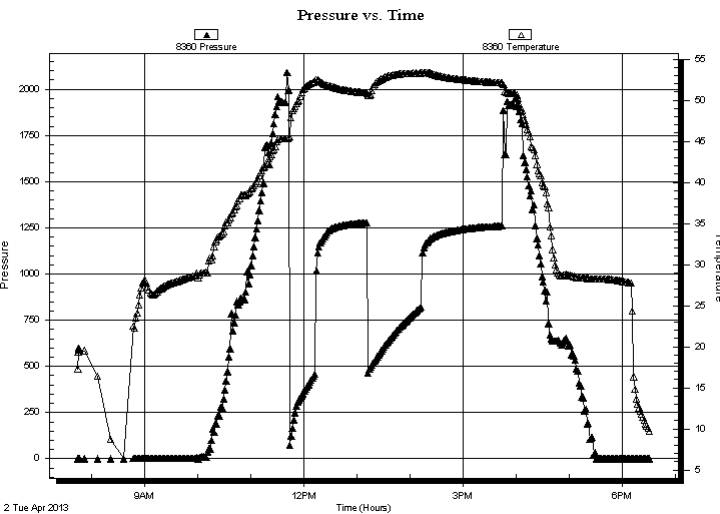
End Time:

18:32:00

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF; BOB in 3 min
60 IS; Built to 3/8" in 40 min died back to Surface blow
60 FF; BOB in 3 min
90 FS; No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
960.00	MW 75%W 25%M	8.60
676.00	MW 60%W 40%M	9.48
125.00	OSM 100%M	1.75

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50641

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.04.02 @ 07:45:00

Tool Information

Drill Pipe:	Length: 3393.00 ft	Diameter: 3.80 inches	Volume: 47.59 bbl	Tool Weight: 25000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 50.22 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3920.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 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
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3898.00	
Hydraulic tool jars	5.00			3903.00	
safety Joint	3.00			3911.00	
Packer	5.00			3916.00	27.00 Bottom Of Top Packer
Packer	4.00			3920.00	
Stubb	1.00			3921.00	
Recorder	0.00	8360	Inside	3921.00	
Recorder	0.00	8353	Outside	3921.00	
Perforations	17.00			3938.00	
Change Over Sub	1.00			3939.00	
Blank Spacing	64.00			4003.00	
Change Over Sub	1.00			4004.00	
Bullnose	3.00			4007.00	87.00 Bottom Packers & Anchor

Total Tool Length: 114.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50641

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.04.02 @ 07:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 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 bbl
960.00	MW 75%W 25%M	8.602
676.00	MW 60%W 40%M	9.483
125.00	OSM 100%M	1.753

Total Length: 1761.00 ft Total Volume: 19.838 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

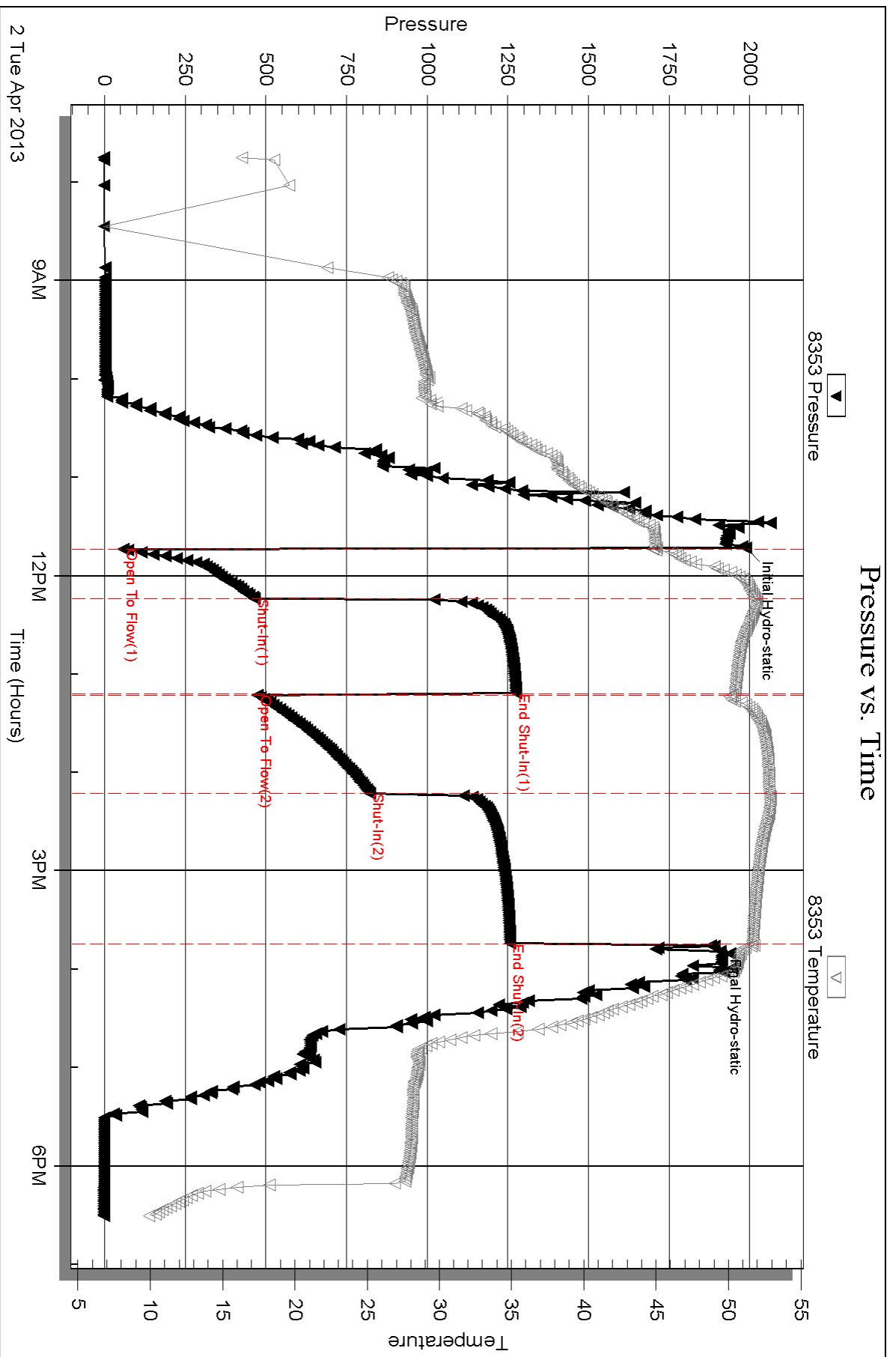
Recovery Comments: RW .115@53 DEG F=95000

Serial #: 8353

Outside Murfin Drilling Co.

Gly #1-27

DST Test Number: 1



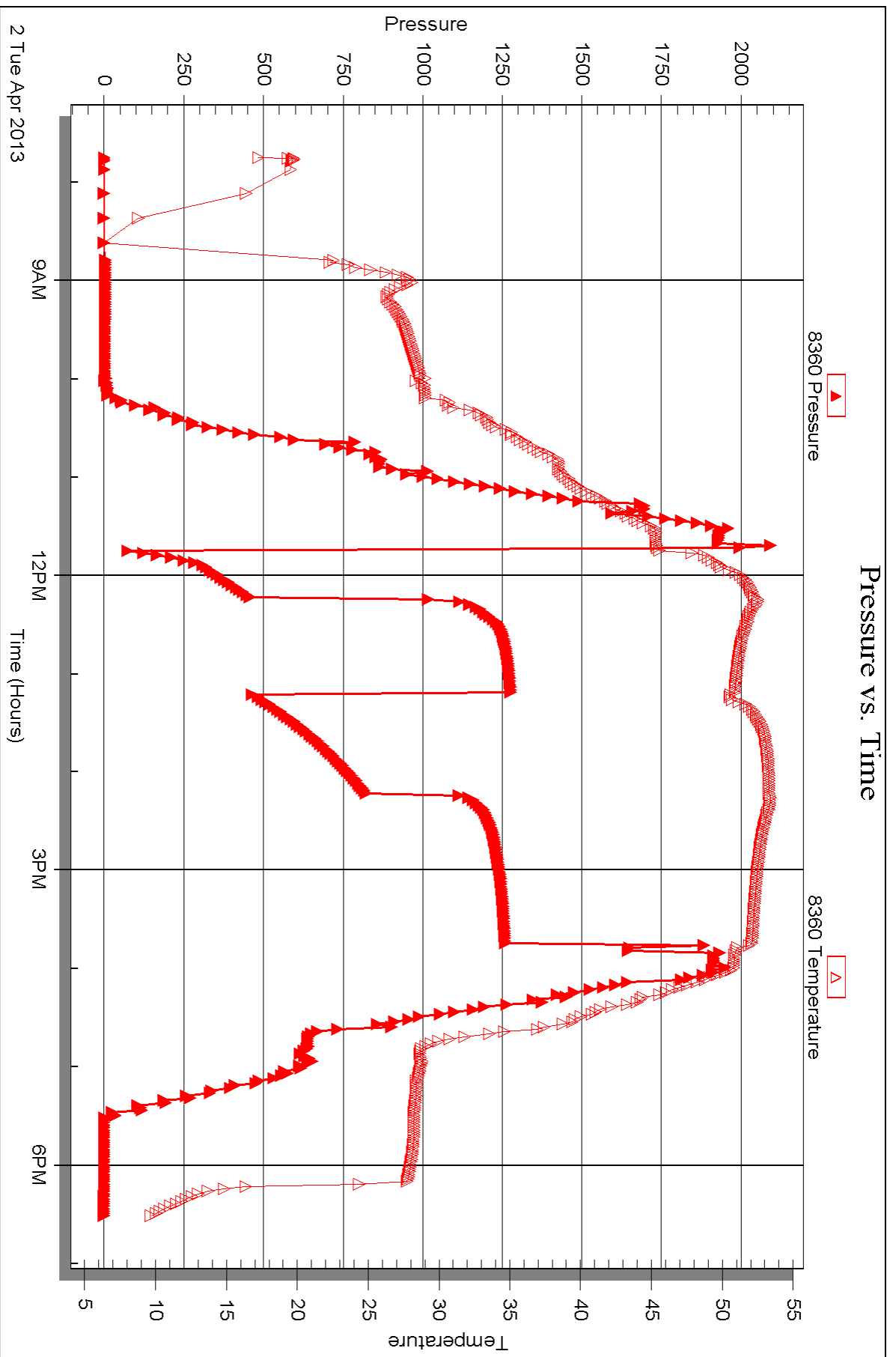
Serial #: 8360

Inside

Murfin Drilling Co.

Gly #1-27

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Paul Gunzelman

Gly #1-27

27-4s-31w Rawlins,KS

Start Date: 2013.04.03 @ 13:30:00

End Date: 2013.04.03 @ 20:35:00

Job Ticket #: 50642 DST #: 2

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

Printed: 2013.04.10 @ 16:31:05

Murfin Drilling Co. 27-4s-31w Rawlins,KS Gly #1-27 DST # 2 LKC F 2013.04.03



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

27-4s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50642

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.04.03 @ 13:30:00

GENERAL INFORMATION:

Formation: **LKC F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:53:00

Time Test Ended: 20:35:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 4027.00 ft (KB) To 4046.00 ft (KB) (TVD)

Reference Elevations: 2937.00 ft (KB)

Total Depth: 4046.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: 74.26 psig @ 4028.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.03

End Date: 2013.04.03

Last Calib.: 2013.04.03

Start Time: 13:30:15

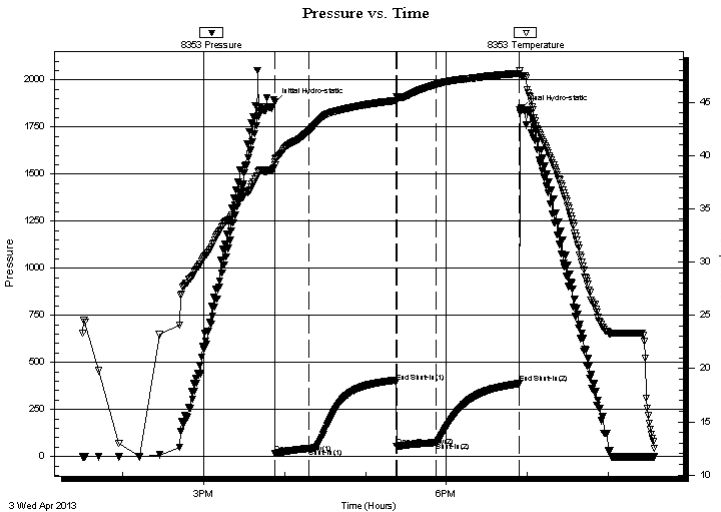
End Time: 20:35:00

Time On Btm: 2013.04.03 @ 15:52:30

Time Off Btm: 2013.04.03 @ 18:54:30

TEST COMMENT: 30 IF; Built to 1 1/2"
60 IS; No Blow
30 FF; Built to 3/4"
60 FS; No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
0	1882.17	39.40	Initial Hydro-static
1	15.96	39.11	Open To Flow (1)
26	42.96	42.30	Shut-In(1)
90	394.54	45.16	End Shut-In(1)
91	53.59	45.48	Open To Flow (2)
120	74.26	46.67	Shut-In(2)
182	387.43	47.71	End Shut-In(2)
182	1842.66	47.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
96.00	OWCM 10%O 30%W 60%M	0.47
54.00	MCO 35%M 65%O	0.27

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

27-4s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50642

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.04.03 @ 13:30:00

GENERAL INFORMATION:

Formation: **LKC F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:53:00

Time Test Ended: 20:35:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 4027.00 ft (KB) To 4046.00 ft (KB) (TVD)

Reference Elevations: 2937.00 ft (KB)

Total Depth: 4046.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360

Inside

Press @ Run Depth: psig @ 4028.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.03

End Date:

2013.04.03

Last Calib.:

2013.04.03

Start Time: 13:30:05

End Time:

20:35:29

Time On Btm:

Time Off Btm:

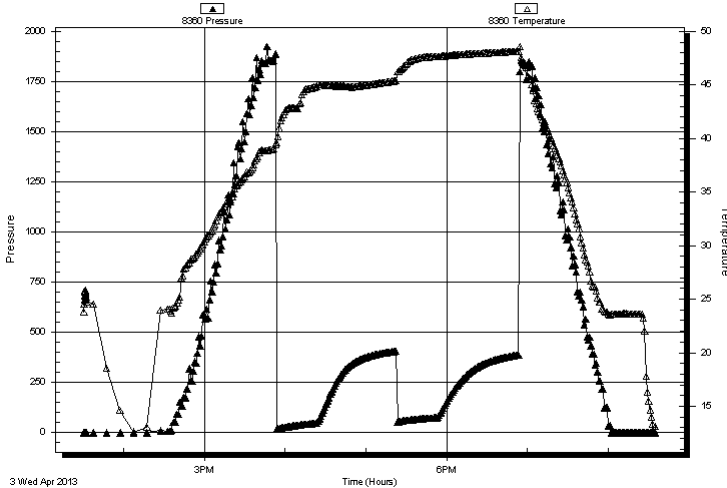
TEST COMMENT: 30 IF; Built to 1 1/2"

60 IS; No Blow

30 FF; Built to 3/4"

60 FS; No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
96.00	OWCM 10%O 30%W 60%M	0.47
54.00	MCO 35%M 65%O	0.27

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50642

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.04.03 @ 13:30:00

Tool Information

Drill Pipe:	Length: 3489.00 ft	Diameter: 3.80 inches	Volume: 48.94 bbl	Tool Weight:	25000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 51.57 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	4027.00 ft			Final	70000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	19.00 ft				
Tool Length:	46.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Shut In Tool	5.00			4005.00	
Hydraulic tool	5.00			4010.00	
jars	5.00			4015.00	
safety Joint	3.00			4018.00	
Packer	5.00			4023.00	27.00 Bottom Of Top Packer
Packer	4.00			4027.00	
Stubb	1.00			4028.00	
Recorder	0.00	8360	Inside	4028.00	
Recorder	0.00	8353	Outside	4028.00	
Perforations	15.00			4043.00	
Bullnose	3.00			4046.00	19.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50642

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.04.03 @ 13:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 74.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
96.00	OWCM 10%O 30%W 60%M	0.472
54.00	MCO 35%M 65%O	0.266

Total Length: 150.00 ft Total Volume: 0.738 bbl

Num Fluid Samples: 0

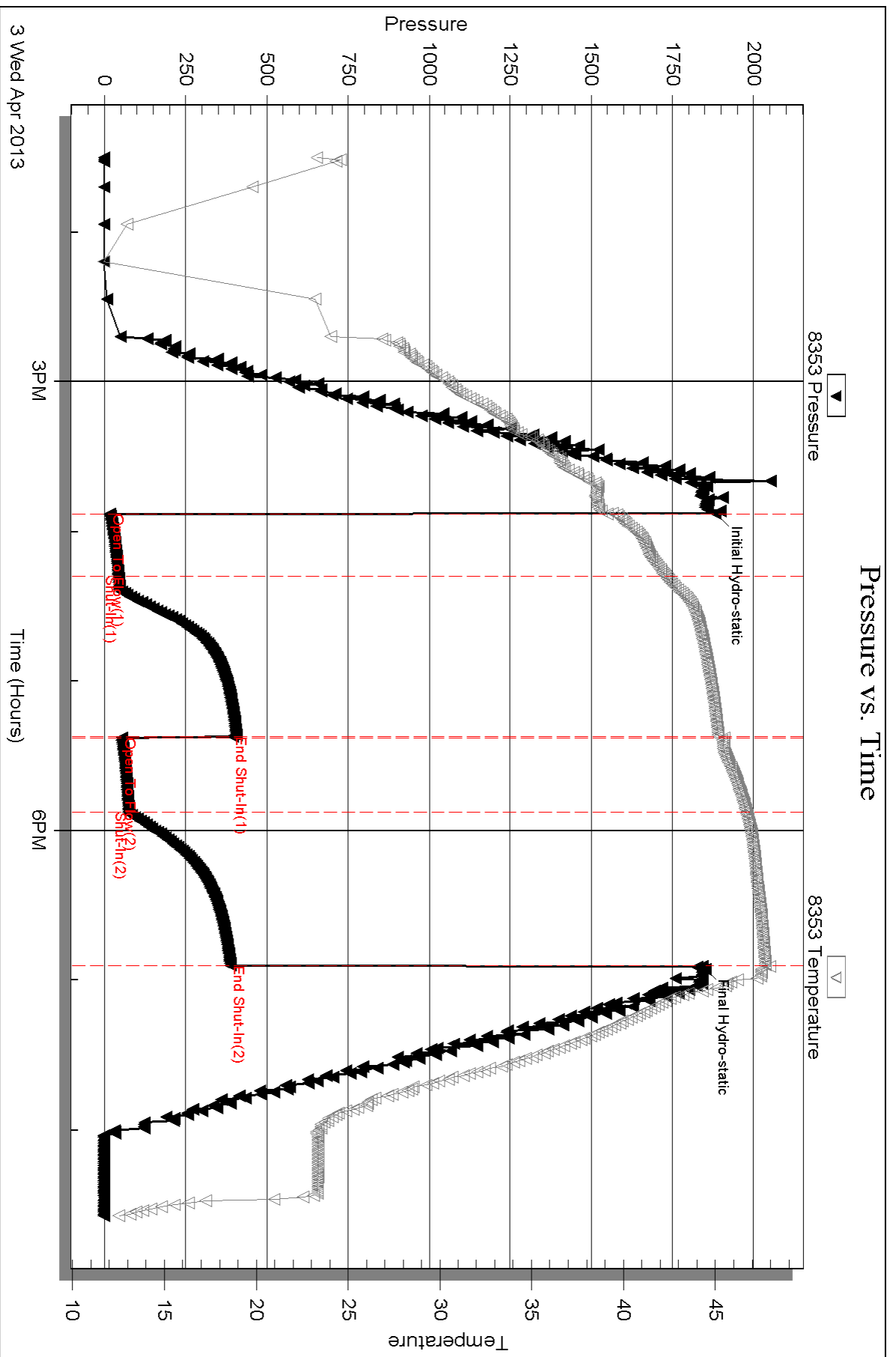
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity 28.2@58 DEG F=28.4



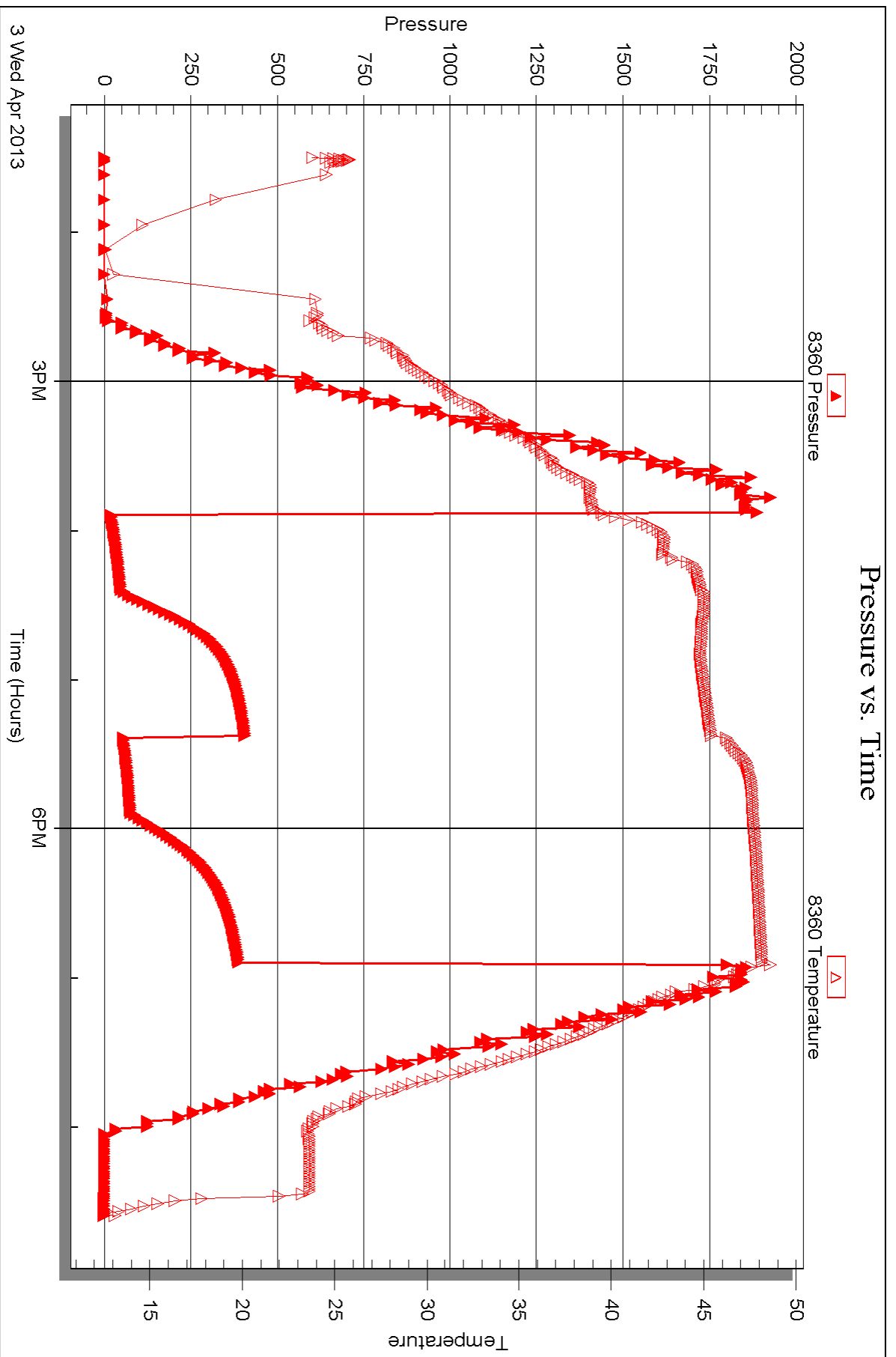
Serial #: 8360

Inside

Murfin Drilling Co.

Gly #1-27

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 50642

Printed: 2013.04.10 @ 16:31:08



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Paul Gunzelman

Gly #1-27

27-4s-31w Rawlins,KS

Start Date: 2013.04.04 @ 09:40:00

End Date: 2013.04.04 @ 16:25:45

Job Ticket #: 50643 DST #: 3

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

Printed: 2013.04.10 @ 16:30:28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

27-4s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50643

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.04.04 @ 09:40:00

GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:45:00

Time Test Ended: 16:25:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 4098.00 ft (KB) To 4142.00 ft (KB) (TVD)

Reference Elevations: 2937.00 ft (KB)

Total Depth: 4142.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: 21.75 psig @ 4099.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.04

End Date:

2013.04.04

Last Calib.:

2013.04.04

Start Time: 09:40:15

End Time:

16:25:45

Time On Btm:

2013.04.04 @ 11:44:30

Time Off Btm:

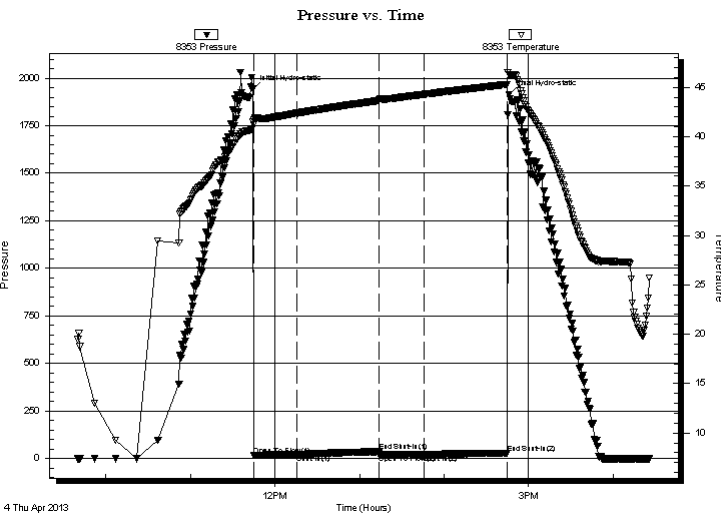
2013.04.04 @ 14:46:00

TEST COMMENT: 30 IF; Weak surface blow through out

60 IS; No Blow

30 FF; No Blow

60 FS; No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
0	1941.64	41.52	Initial Hydro-static
1	15.22	41.20	Open To Flow (1)
31	20.33	42.38	Shut-In(1)
89	35.52	43.65	End Shut-In(1)
90	20.64	43.75	Open To Flow (2)
121	21.75	44.29	Shut-In(2)
180	27.45	45.29	End Shut-In(2)
182	1912.17	46.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 15%O 85%M	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

27-4s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50643

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.04.04 @ 09:40:00

GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:45:00

Time Test Ended: 16:25:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 4098.00 ft (KB) To 4142.00 ft (KB) (TVD)

Reference Elevations: 2937.00 ft (KB)

Total Depth: 4142.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360

Inside

Press @ Run Depth: psig @ 4099.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.04

End Date:

2013.04.04

Last Calib.:

2013.04.04

Start Time: 09:40:05

End Time:

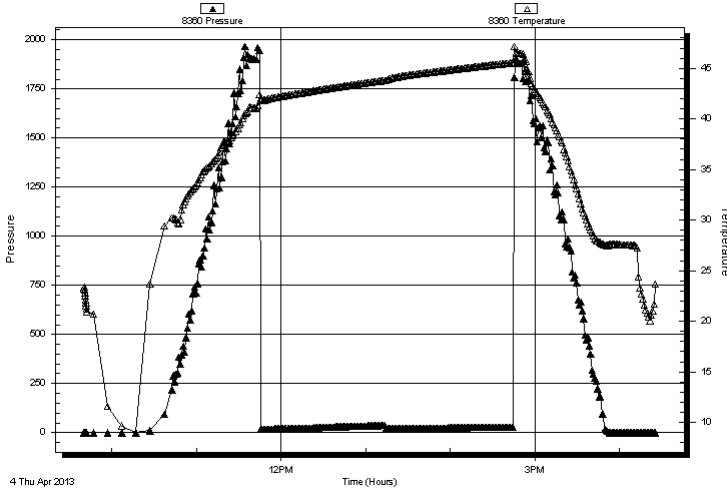
16:25:59

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF; Weak surface blow through out
60 IS; No Blow
30 FF; No Blow
60 FS; No Blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
-------------	-----------------	--------------	------------

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 15%O 85%M	0.05

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50643

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.04.04 @ 09:40:00

Tool Information

Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 bbl	Tool Weight: 25000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 52.46 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4098.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4076.00	
Hydraulic tool jars	5.00			4081.00	
safety Joint	3.00			4089.00	
Packer	5.00			4094.00	27.00 Bottom Of Top Packer
Packer	4.00			4098.00	
Stubb	1.00			4099.00	
Recorder	0.00	8360	Inside	4099.00	
Recorder	0.00	8353	Outside	4099.00	
Perforations	6.00			4105.00	
Change Over Sub	1.00			4106.00	
Blank Spacing	32.00			4138.00	
Change Over Sub	1.00			4139.00	
Bullnose	3.00			4142.00	44.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50643

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.04.04 @ 09:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 15%O 85%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

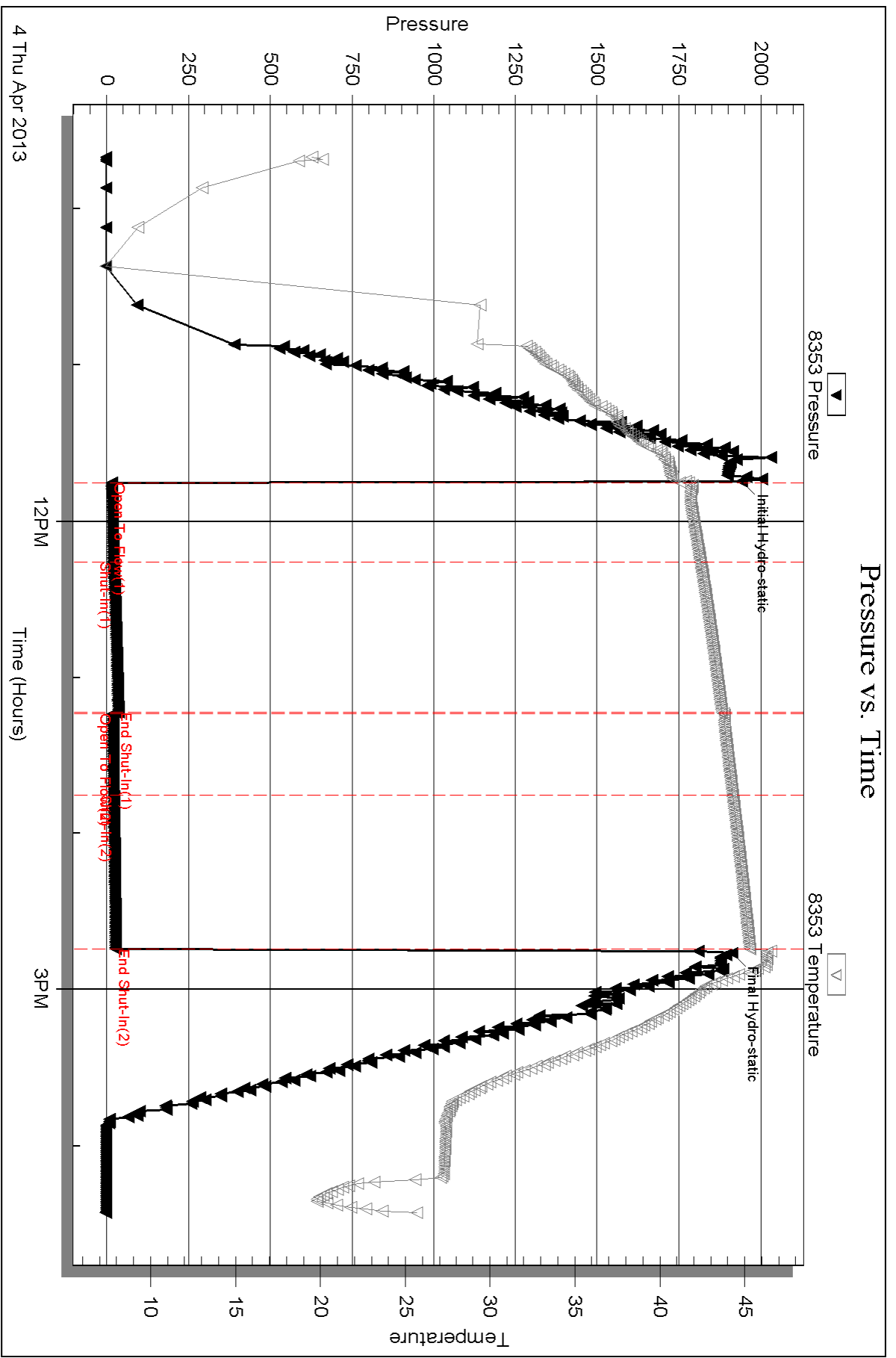
Recovery Comments:

Serial #: 8353

Outside Murfin Drilling Co.

Gly #1-27

DST Test Number: 3



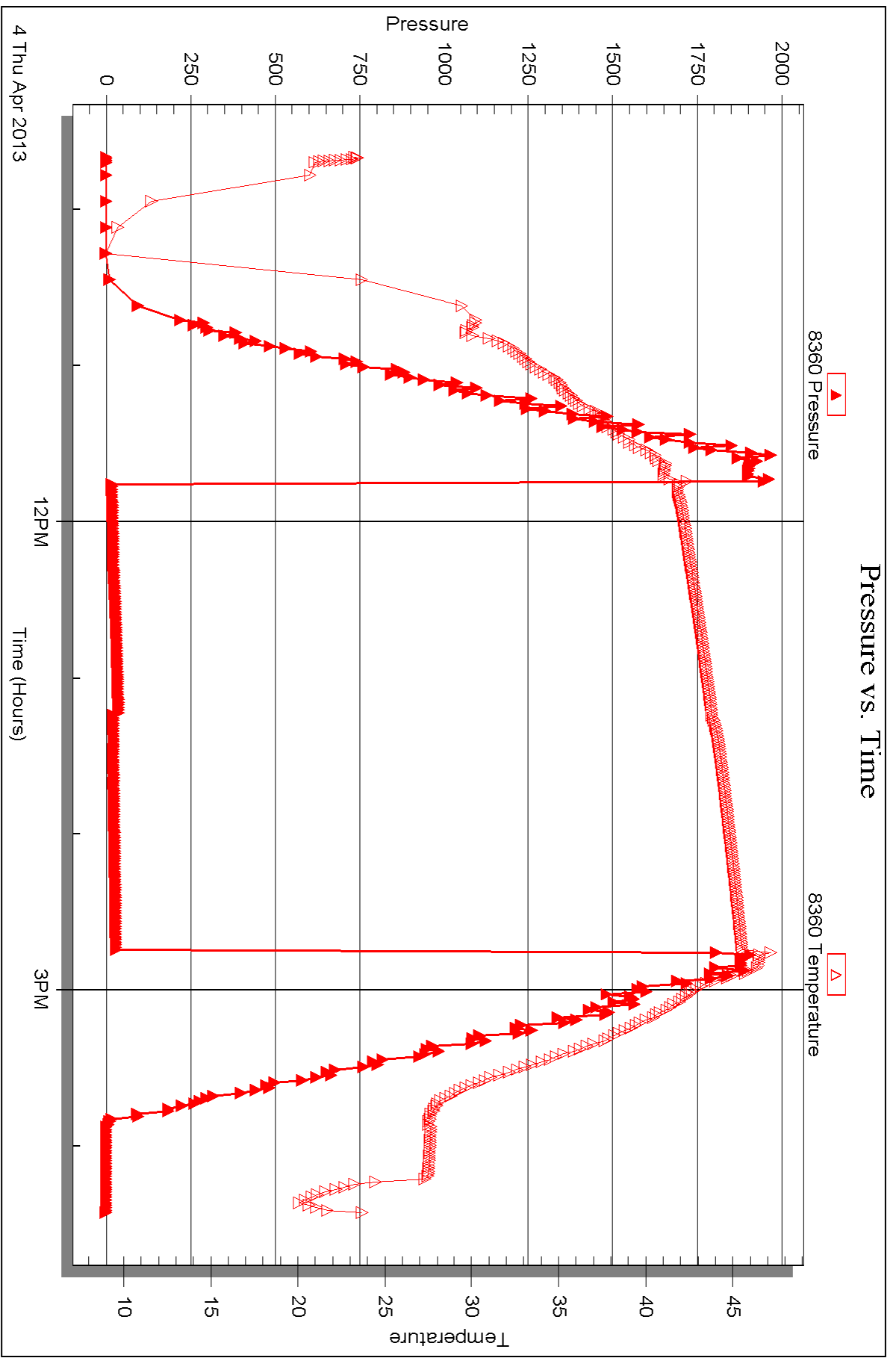
Serial #: 8360

Inside

Murfin Drilling Co.

Gly #1-27

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 50643

Printed: 2013.04.10 @ 16:30:31



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Paul Gunzelman

Gly #1-27

27-4s-31w Rawlins,KS

Start Date: 2013.04.04 @ 23:23:00

End Date: 2013.04.05 @ 06:32:30

Job Ticket #: 50644 DST #: 4

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

Printed: 2013.04.10 @ 16:28:42



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

27-4s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50644

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.04.04 @ 23:23:00

GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:50:00

Time Test Ended: 06:32:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 4134.00 ft (KB) To 4166.00 ft (KB) (TVD)

Reference Elevations: 2937.00 ft (KB)

Total Depth: 4166.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ RunDepth: 15.60 psig @ 4135.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.04

End Date:

2013.04.05

Last Calib.: 2013.04.05

Start Time: 23:23:15

End Time:

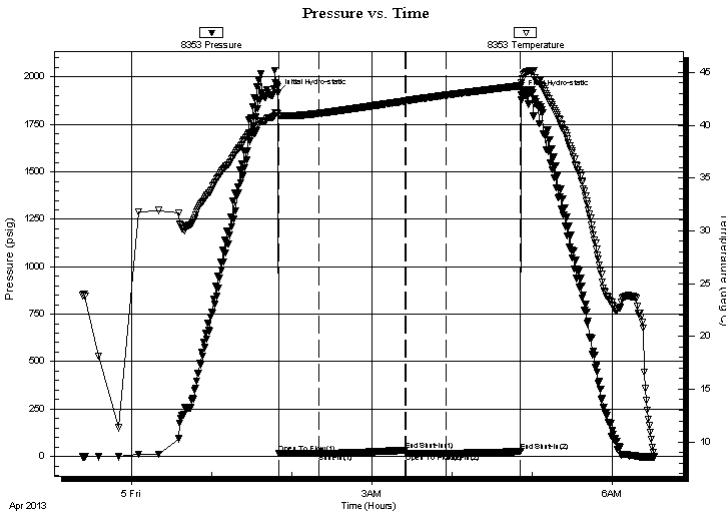
06:32:30

Time On Btm: 2013.04.05 @ 01:49:30

Time Off Btm: 2013.04.05 @ 04:52:00

TEST COMMENT: 30 IF; Weak Surface blow
60 ISI; No Blow
30 FF; No Blow
60 FSI; No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg C)	Annotation
0	1914.60	41.08	Initial Hydro-static
1	15.27	40.89	Open To Flow (1)
31	15.84	41.12	Shut-In(1)
96	33.12	42.29	End Shut-In(1)
96	15.22	42.29	Open To Flow (2)
127	15.60	42.85	Shut-In(2)
182	26.58	43.74	End Shut-In(2)
183	1906.81	43.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50644

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.04.04 @ 23:23:00

Tool Information

Drill Pipe:	Length: 3585.00 ft	Diameter: 3.80 inches	Volume: 50.29 bbl	Tool Weight: 25000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 52.92 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4134.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	59.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4112.00	
Hydraulic tool	5.00			4117.00	
jars	5.00			4122.00	
safety Joint	3.00			4125.00	
Packer	5.00			4130.00	27.00 Bottom Of Top Packer
Packer	4.00			4134.00	
Stubb	1.00			4135.00	
Recorder	0.00	8360	Inside	4135.00	
Recorder	0.00	8353	Outside	4135.00	
Perforations	28.00			4163.00	
Bullnose	3.00			4166.00	32.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

27-4s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Gly #1-27

Job Ticket: 50644

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.04.04 @ 23:23:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

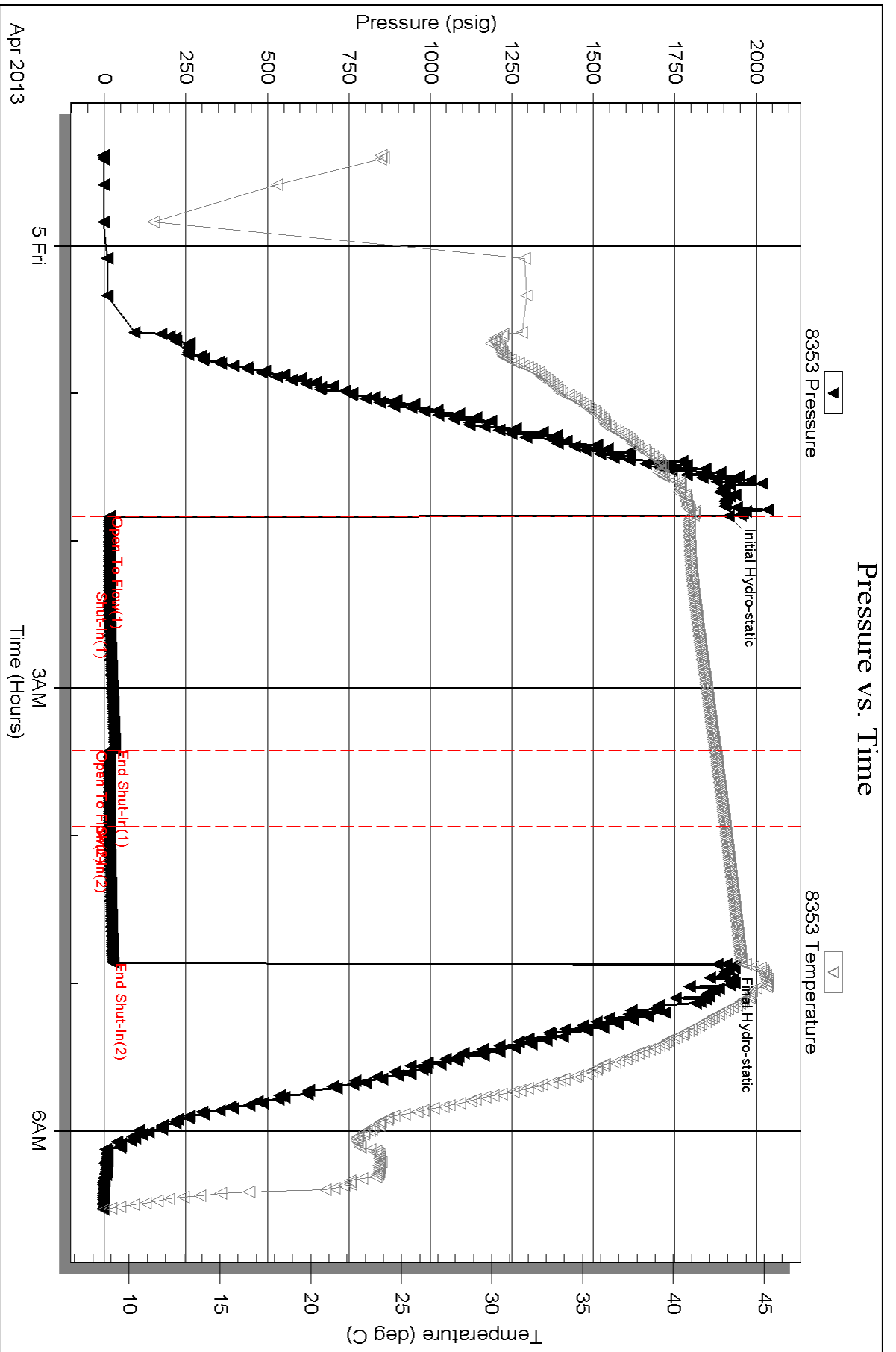
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



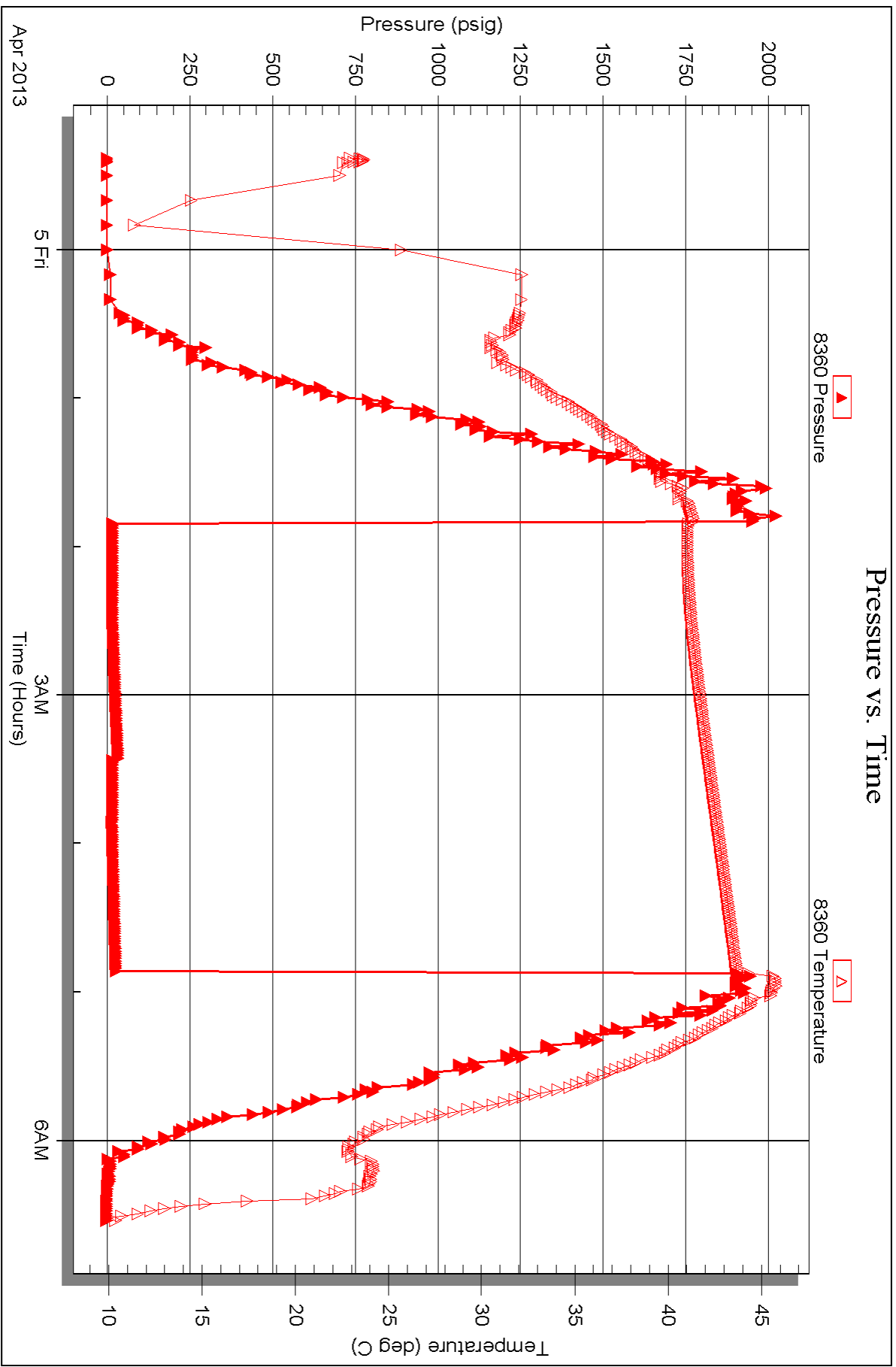
Serial #: 8360

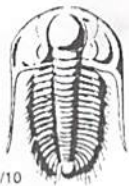
Inside

Murfin Drilling Co.

Gly #1-27

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50641

4/10

Well Name & No. Gly 1-27 Test No. 1 Date 4-2-13
 Company Murfin Drilling Co. Elevation 2937 KB 2927 GL
 Address 250 N Water Stc 300 Wichita KS 67202
 Co. Rep / Geo. Paul Gunzelman Rig Murfin 14
 Location: Sec. 27 Twp. 4s Rge. 31w Co. Rawlins State KS

Interval Tested 3920 4007 Zone Tested Tor - LKC A+B
 Anchor Length 87 Drill Pipe Run _____ Mud Wt. 9.2
 Top Packer Depth 3915 Drill Collars Run 534 Vis 56
 Bottom Packer Depth 3920 Wt. Pipe Run 0 WL 5.6
 Total Depth 4007 Chlorides 1200 ppm System LCM 4

Blow Description IF; BOB in 3min
IS; built to 3/8" in 40min dec back to surface Blow
FF; BOB in 3min
FS; No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>OSM</u>			<u>100</u>	
<u>676</u>	<u>WM</u>		<u>60</u>	<u>40</u>	
<u>960</u>	<u>MW</u>		<u>75</u>	<u>25</u>	
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

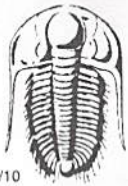
Rec Total 1761 BHT 125° Gravity _____ API RW 115 @ 53 °F Chlorides 95000 ppm

(A) Initial Hydrostatic 1908 Test 1250 T-On Location 5:00
 (B) First Initial Flow 73 Jars 250 T-Started 7:45
 (C) First Final Flow 463 Safety Joint 75 T-Open 11:15
 (D) Initial Shut-In 1277 Circ Sub NA T-Pulled 15:45
 (E) Second Initial Flow 476 Hourly Standby _____ T-Out 18:30
 (F) Second Final Flow 821 Mileage 55 RT 85.25 Comments waited 1/4 hr
 (G) Final Shut-In 1257 Sampler _____ on diff shut-in
 (H) Final Hydrostatic 1881 Straddle _____ tool

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1660.25
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1660.25

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50642

Well Name & No. GLY #1-27 Test No. 2 Date 4-3-13
 Company Murfin Drilling Co. Elevation 2937 KB 2927 GL
 Address 250 N Wakar Stc 300 Wichita Ks 67202
 Co. Rep / Geo. Paul Gunzelman Rig Murfin 14
 Location: Sec. 27 Twp. 4s Rge. 31w Co. Rawlins State Ks

Interval Tested 4027 4046 Zone Tested LKC F
 Anchor Length 19 Drill Pipe Run 3489 Mud Wt. 8.5
 Top Packer Depth 4022 Drill Collars Run 534 Vis 74
 Bottom Packer Depth 4027 Wt. Pipe Run 0 WL 5.2
 Total Depth 4046 Chlorides 800 ppm System LCM 16
 Blow Description IF; Bit to 1 1/2"
ISI; No blow
FF; Bit to 3/4"
FSI; No blow

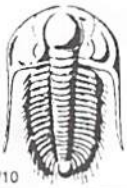
Rec	Feet of	%gas	%oil	%water	%mud
54 54	MCO	65		35	
96	OWCM	10	30	60	

Rec Total 150 BHT 118° Gravity 28.2 @ 58° = 28.4 API RW @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 4882 Test 1250 T-On Location 13:10
 (B) First Initial Flow 16 Jars 250 T-Started 13:30
 (C) First Final Flow 43 Safety Joint 75 T-Open 15:50
 (D) Initial Shut-In 395 Circ Sub NA T-Pulled 18:50
 (E) Second Initial Flow 54 Hourly Standby _____ T-Out 20:30
 (F) Second Final Flow 74 Mileage 55 RT 85.25 Comments _____
 (G) Final Shut-In 387 Sampler _____
 (H) Final Hydrostatic 1843 Straddle _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer 320
 Extra Recorder _____ Extra Copies _____
 Initial Open 30 Day Standby _____ Sub Total 320
 Initial Shut-In 60 Accessibility _____ Total 1980
 Final Flow 30 Sub Total 1660.25 MP/DST Disc't _____
 Final Shut-In 60

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50643

Well Name & No. GLY #1-27 Test No. 3 Date 4-4-13
 Company Murfin Drilling Co. Elevation 2937 KB 2927 GL
 Address 250 N Water STE 300 Website Ks 67202
 Co. Rep / Geo. Paul Gunzclman Rig Murfin 14
 Location: Sec. 27 Twp. 4s Rge. 31w Co. Rawlins State Ks

Interval Tested 4098 4142 Zone Tested LKC J
 Anchor Length 44 Drill Pipe Run 3552 Mud Wt. 8.7
 Top Packer Depth 4093 Drill Collars Run 534 Vis 59
 Bottom Packer Depth 4098 Wt. Pipe Run 0 WL 5.2
 Total Depth 4142 Chlorides 1,100 ppm System LCM 12

Blow Description IF; Weak surface blow Through out
ISI; No blow
FF; No blow
PSI; No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>0CM</u>	<u>15</u>		<u>85</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 10 BHT 115° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 1942
- (B) First Initial Flow 15
- (C) First Final Flow 20
- (D) Initial Shut-In 36
- (E) Second Initial Flow 21
- (F) Second Final Flow 22
- (G) Final Shut-In 27
- (H) Final Hydrostatic 1912

- Test 1250
- Jars 250
- Safety Joint 75
- Circ Sub NA
- Hourly Standby
- Mileage 55 RT 85.25
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1660.25

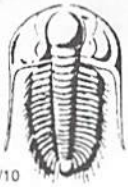
- T-On Location 9:15
- T-Started 9:40
- T-Open 11:45
- T-Pulled 14:45
- T-Out 16:25

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

Comments _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1660.25
 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. 50644

Well Name & No. GLY 1-27 Test No. 4 Date 4-4-13
 Company Martin Drilling Co. Elevation 2937 KB 2927 GL
 Address 250 N Water STE 300 Wichita Ks 67202
 Co. Rep / Geo. Paul Gunczelman Rig Martin 14
 Location: Sec. 27 Twp. 4S Rge. 31w Co. Rawlins State Ks

Interval Tested 4134 4166 Zone Tested LKC K
 Anchor Length 32 Drill Pipe Run 3585 Mud Wt. 8.7
 Top Packer Depth 4129 Drill Collars Run 534 Vis 59
 Bottom Packer Depth 4134 Wt. Pipe Run 0 WL 5.2
 Total Depth 4166 Chlorides 1100 ppm System LCM 12

Blow Description IF: Weak surface
IS: No blow
FF: No blow
PSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2 BHT 111° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1,915 Test 1250 T-On Location 23:00
 (B) First Initial Flow 15 Jars 250 T-Started 23:23
 (C) First Final Flow 16 Safety Joint 75 T-Open 1:50
 (D) Initial Shut-In 33 Circ Sub NA T-Pulled 4:50
 (E) Second Initial Flow 15 Hourly Standby T-Out 6:30
 (F) Second Final Flow 16 Mileage 55 RTX2 170.50 Comments Loaded tools
 (G) Final Shut-In 27 Sampler 3:30pm 4-6-13
 (H) Final Hydrostatic 1907 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 30 Extra Recorder Sub Total 800
 Initial Shut-In 60 Day Standby 1d 9h Total 2545.50
 Final Flow 30 Accessibility MP/DST Disc't
 Final Shut-In 60 Sub Total 1745.50

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.

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 135467

Invoice Date: Mar 29, 2013

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

PROD COPY

Page: 1

Now Includes:



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

Customer ID	Field Ticket #	Payment Terms	
Murfin	60193	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Mar 29, 2013	4/28/13

Quantity	Item	Description	Unit Price	Amount
190.00	MAT	Gly #1-27		
		Class A Common	17.90	3,401.00
7.00	MAT	Chloride	64.00	448.00
199.50	SER	Cubic Feet	2.48	494.76
441.60	SER	Ton Mileage	2.60	1,148.16
1.00	SER	Surface	1,512.25	1,512.25
48.00	SER	Pump Truck Mileage	7.70	369.60
1.00	SER	Manifold Swedge Rental	275.00	275.00
48.00	SER	Light Vehicle Mileage	4.40	211.20
1.00	CEMENTER	Darren Racette		
1.00	EQUIP OPER	Tyler Flipse		
1.00	OPER ASSIST	David Scariano		

Account	Qty	Rate	Amount	Description
10203	3	2727.000	548.86	Comment S. C. Sg # 1-27

Subtotal	7,859.97
Sales Tax	309.84
Total Invoice Amount	8,169.81
Payment/Credit Applied	
TOTAL	8,169.81

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

\$ 2,750.95

ONLY IF PAID ON OR BEFORE
Apr 23, 2013

3-7%
0127

all

2,750.95
548.86



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



Invoice

DATE	INVOICE #
4/15/2013	24044

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

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-27	Gly	Rawlins		Oil	Development	5-1/2" Port Collar	Josh
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				120	Miles	6.00	720.00
576D-D	Pump Charge - Port Collar				1	Job	1,250.00	1,250.00
290	D-Air				2	Gallon(s)	35.00	70.00T
276	Flocele				100	Lb(s)	2.00	200.00T
330	Swift Multi-Density Standard (MIDCON II)				190	Sacks	16.50	3,135.00T
581D	Service Charge Cement				350	Sacks	2.00	700.00
583D	Drayage				2,091.6	Ton Miles	1.00	2,091.60
	Subtotal							8,166.60
	Sales Tax Rawlins County						8.05%	274.10
USED FOR <u>16103</u> APPROVED <u>JT</u>								
We Appreciate Your Business!							Total	\$8,440.70



Services, Inc.

CHARGE TO: Murkin
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET
 No 24044

PAGE 1 OF 1

1. SERVICE LOCATIONS	<u>Hays ks</u>	WELL/PROJECT NO.	<u>1-27</u>	LEASE	<u>6LY</u>	COUNTY/PARISH	<u>Rawlins</u>	STATE	<u>ks</u>	CITY	<u>Rawlins</u>	DATE	<u>4-15-13</u>	OWNER	
2.	<u>Ness Long ks</u>	TICKET TYPE	<u>SALES</u>	CONTRACTOR		RIG NAME/NO.		SHIPPED VIA CT	<u>CT</u>	DELIVERED TO	<u>Location</u>	ORDER NO.			
3.		WELL TYPE	<u>Oil</u>	WELL CATEGORY	<u>Develop</u>	JOB PURPOSE	<u>5 1/2 part coker</u>	WELL PERMIT NO.		WELL LOCATION	<u>Rawlins ks 701 1st St. SW. 5400 Spn</u>				
4. REFERRAL LOCATION		INVOICE INSTRUCTIONS													

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT								
575		1			112	120	m.			6.00	720.00
576D		1		Pump Charge Part Coker		1	ea			1250.00	1250.00
290		1		Do Atty		2	gal			35.00	70.00
276		2		Flo cele		100	lbs			2.00	200.00
330		2		Swifl Multi-Density		150	SS			16.50	3135.00
581		2		Service Charge Lement		350	SS			2.00	700.00
583		2		Drayage		2091	hr			1.00	2091.00

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

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

DATE SIGNED 4-15-13 TIME SIGNED 0845 A.M. P.M.

SWIFT OPERATOR Moh

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? YES NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL	8166	60
TOTAL	8440	70

Rawlins TAX 274 10
 8,059.00

Thank You!

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

APPROVAL

Acidizing

re: 161
re: 162
re: 161



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



Invoice

DATE	INVOICE #
4/6/2013	23966

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

- Acidizing
- Cement
- Tool Rental

APPROVED FOR IC 103
APPROVED [Signature]

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-27	Gly	Rawlins	Company Tools R...	Oil	Development	LongString	Nick
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				120	Miles	6.00	720.00
578D-L	Pump Charge - Long String - 4560 Feet				1	Job	1,500.00	1,500.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
280	Flocheck 21				500	Gallon(s)	2.50	1,250.00T
290	D-Air				2	Gallon(s)	35.00	70.00T
409-5	5 1/2" Turbolizer				15	Each	90.00	1,350.00T
403-5	5 1/2" Cement Basket				2	Each	250.00	500.00T
404-5	5 1/2" Port Collar				1	Each	2,400.00	2,400.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	250.00	250.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	350.00	350.00T
413-5	5 1/2" Roto Wall Scratcher				10	Each	40.00	400.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				225	Sacks	13.50	3,037.50T
276	Flocele				50	Lb(s)	2.00	100.00T
283	Salt				1,150	Lb(s)	0.20	230.00T
284	Calseal				11	Sack(s)	35.00	385.00T
285	CFR-1				150	Lb(s)	4.00	600.00T
581D	Service Charge Cement				225	Sacks	2.00	450.00
583D	Drayage				1,416	Ton Miles	1.00	1,416.00
	Subtotal							15,308.50
	Sales Tax Rawlins County						8.05%	903.41
We Appreciate Your Business!							Total	\$16,211.91



Services, Inc.

CHARGE TO: Martin Drury Co. Inc
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET No 23966

PAGE 1 OF 2

1. SERVICE LOCATIONS <u>Haysks</u>	WELL/PROJECT NO. <u>21-27</u>	LEASE <u>Gly</u>	COUNTY/PARISH <u>Rawlins</u>	STATE <u>Ks</u>	CITY	DATE <u>4-6-13</u>	OWNER <u>Same</u>
2. <u>Ness City Ks.</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Co Tools Rig 8</u>	RIG NAME/NO.	SHIPPED VIA <u>AT Location</u>	DELIVERED TO	ORDER NO.	
3. <u>WELL TYPE</u>	WELL CATEGORY <u>development</u>	JOB PURPOSE <u>longstring</u>		WELL PERMIT NO.		WELL LOCATION	
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575		1			MILEAGE #111	120	mi				6.00	720.00
578		1			Pump Charge (Longstring)	1	ea			4560'	1500.00	1500.00
221		1			KCL	4	gal				25.00	100.00
280		1			Flochecks-21	580	gal				2.50	1450.00
290		1			D-Air	5	gal				35.00	175.00
403		1			Turbobinders	15	ea			5 1/2"	90.00	1350.00
404		1			Baskets	2	ea				250.00	500.00
406		1			Part Collar	1	ea				2400.00	2400.00
407		1			LD Plug + Baffle	1	ea				250.00	250.00
413		1			Insert float shoe w/ B11	1	ea				350.00	350.00
419		1			Rotowall scrapers	10	ea				40.00	400.00
					Rotating Hrd	1	ea				200.00	200.00

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

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

DATE SIGNED 4-6-13 TIME SIGNED 0330 A.M. P.M.

SWIFT OPERATOR Martin Drury

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?
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

SWIFT OPERATOR Martin Drury APPROVAL

TOTAL 16,211.91

Thank You!



Services, Inc.

PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 23966

CUSTOMER
Murtin Dly Co Inc

WEIGHT
#1-27 G/L

DATE
4-6-13

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	LOC	ACCOUNTING		TIME	DESCRIPTION	QTY	UNIT	QTY	UNIT	UNIT PRICE	AMOUNT
			ACCT	DE								
325		2				Standard Cement	225	SK			13.50	3037.50
276		2				Flocele	50	#	1/4	SK	2.00	100.00
283		2				Salt	1150	00	10	%	20	230.00
284		2				Calceol	11	SK	5	%	35.00	385.00
285		2				CFR-1	150	#	3/4	%	4.00	600.00
SERVICE CHARGE MILEAGE CHANGE TOTAL WEIGHT 23600 LOADED MILES 120 CUBIC FEET 1416 TON MILES 1416												
581		2									2.00	450.00
583		2									1.98	1416.00

CONTINUATION TOTAL 6218.50

JOB LOG

SWIFT Services, Inc.

DATE 4-6-13 PAGE NO. 1

CUSTOMER
Murphy Drilling Co Inc

WELL NO. #1-27

LEASE Gly # ~~1-27~~

JOB TYPE Longstring

TICKET NO. 23966

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2145							on loc w/FE
								RTD 4560'
								5 1/2" x 15.5" x 4558' x 21'
								Turbo 1-13, 42, 43
								Basket 43, 44
								P.C. 44 @ 2689'
	2320							Start FE
	0020							5+54 Break Circ.
	0130							Btm Break Circ.
	0235	5	0			300		Start KCL flush 15 bbl
		5	15/0			300		Start 500gal Flocheck-21
		5	12/0			300		Start KCL flush 5 bbl
		5	5/0			300		Start EA-2 Cement
	0250		43					End Cement
								Wash P&L
								Drop LD Plug
	0257	6	0			150		Start Displacement
	0309	5	75			200		Catch Cement
	0315		108			850/1500		Land Plug
								Release Pressure
								Float Held
	0320	2.5	7 1/4					Plug RH & MH 30/15 sks EA-2

Thank you

Nick, David E & Isaac