



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1154355
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: _____



1154355

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

August 08, 2013

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

Re: ACO1
API 15-023-21363-00-00
Patti 2-10
SW/4 Sec.10-01S-37W
Cheyenne County, Kansas

Dear Production Department:

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

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

Respectfully,
Leon Rodak

MDCI Patti #2-10 1980' FSL 660' FWL Sec. 10-T1S-R37W 3176' KB							Berexco Mears 'A' #2-9 1970' FSL 635' FEL Sec. 9-T1S-R37W 3254' KB	
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3125	+51	+6	3123	+53	+7	3208	+46
B/Anhydrite	3158	+18	+4	3156	+20	+6	3240	+14
Neva	3578	-402	+6	3576	-400	+8	3662	-408
Red Eagle	3642	-466	+6	3640	-464	+8	3726	-472
Foraker	3689	-513	+6	3688	-512	+7	3773	-519
Topeka	3915	-739	+4	3912	-736	+7	3997	-743
Oread	4046	-870	+6	4044	-868	+8	4130	-876
Lansing	4125	-949	+7	4124	-948	+8	4210	-956
Stark	4344	-1168	+8	4341	-1165	+11	4430	-1176
BKC	4400	-1224	+7	4397	-1221	+10	4485	-1231
Pawnee	4519	-1343	+8	4518	-1342	+9	4605	-1351
Cherokee	4611	-1435	+5	4607	-1431	+9	4694	-1440
Mississippi				NDE			NDE	
RTD	4680						4754	
LTD				4680	-1504		4760	



GEOLOGIST'S REPORT

OPERATOR **MURFIN DRILLING COMPANY, INC.**

LEASE **PATTI # 2-10**

LOCATION **1980 FSL & 660 FWL**

SEC. **10** TWSP **1S** RGE **37W**

COUNTY **CHEYENNE** STATE **KANSAS**

FIELD **JONES CANYON SOUTHEAST**

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

COMMENCED **10 April 2013** COMPLETED **22 April 2013**

MUD DISPLACED **3301** MUD TYPE **Chemical**

DRILLING TIME KEPT FROM **3480** TO **4680**

SAMPLES SAVED FROM **3480** TO **4680**

SAMPLES EXAMINED FROM **3480** TO **4680**

GEOLOGICAL SUPERVISION FROM **3455** TO **4680**

GEOLOGIST ON WELL **Paul Gunzelman**

ELEVATIONS

KB **3176 Ft.**

GL **3166 Ft.**

ALL MEASUREMENTS FROM K.B.

CASING RECORD

Conductor **None**

Surface **8 5/8" @ 224'**

Production **5 1/2" @ 4679'**

ELECTRICAL SURVEYS:

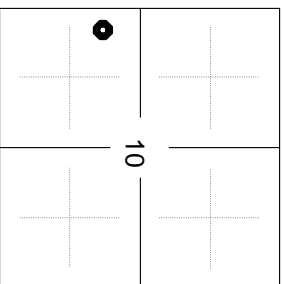
Pioneer Energy Services

Comp. Neutron Density

Dual Induction

Micro-resistivity

Comp. Sonic

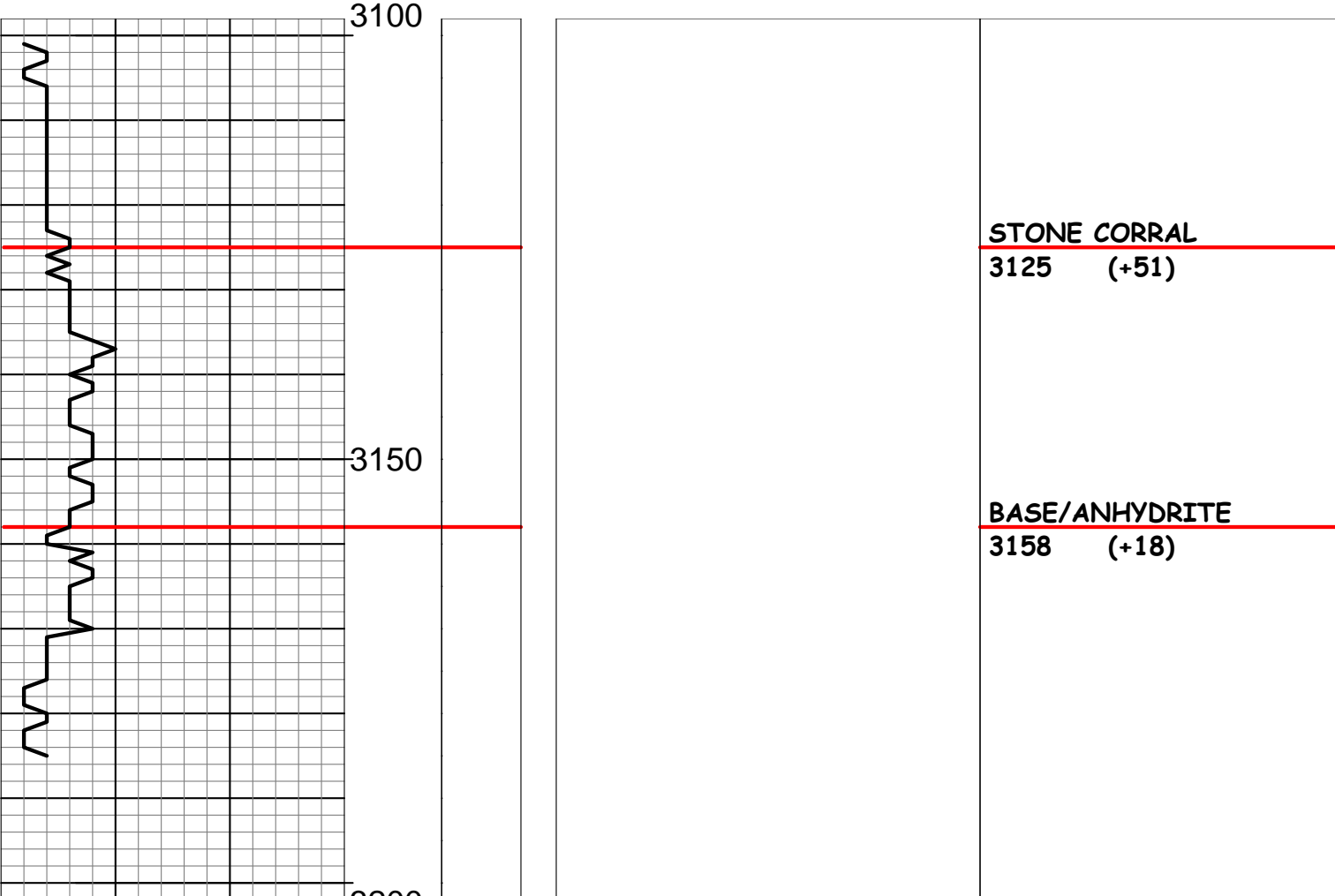


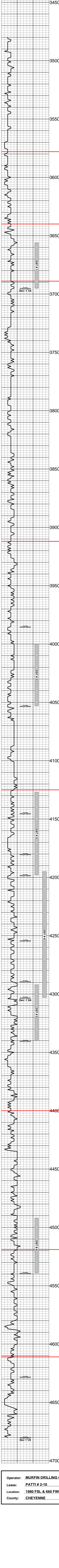
FORMATION NAME	LOG DATUM		SAMPLE DATUM	
	TOP	DATUM	TOP	DATUM
Stone Corral	3124	+52	3125	+51
Base/Anhydrite	3156	+20	3158	+18
Foraker	3688	-512	3689	-513
Topoka	3912	-736	3915	-739
Lansing	4124	-948	4125	-949
Stark Shale	4341	-1165	4344	-1168
Base/Kansas City	4398	-1222	4400	-1224
Pawnee	4518	-1342	4519	-1343
Cherokee	4607	-1431	4611	-1435
Total Depth	4680	-1504	4680	-1504

REMARKS

API 15-023-21363-00-00
 Drilling Fluids: Morgan Mud, Inc. (Mike Morgan, engineer)
 Drill Stem Testing: Trilobite Testing, Inc. (Ryan Nichols, tester)
 Gas Trailer: No Gas Trailer
 Reserve Pit Chlorides: 1,800 ppm.

REMARKS	SAMPLE DESCRIPTIONS	SHOWS	LITHOLOGY	DEPTH	DRILL TIME (MIN/FT)
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Stst: Rd-brn rd-or, v. arg-shly, some sdy, tr v. lt gnc calc slst.

Stst: V. lt gy & gy-gn, sli calc, occ arg.

Sh: Rd-or & lt rd-brn, blkly, sily, some gum.

Stst: Rd-brn, v. arg-shly, some sdy, tr calc & chky.

Sh: Rd-brn & lt rd-brn, blkly, v. sily, some gum, tr brn arg slst.

Sh: Rd-brn lt rd-brn tr rd-or, blkly gum occ sily.

Sh: Rd-brn, blkly, v. gum, tr sily.

Stst: Rd-brn, tr rd-or, v. arg-shly, occ sdy.

Ls: Crm-v. lt gy, dol, fnly gran, tr amor calc, tr intgran por, n/s.

Ls: Crm, gran-frag, ool, sbchky, some arg, n/s.

Sh: Rd-brn, blkly, sily, occ gum, some sdy.

Sd: Rd-brn, arg, v. sily & arg, tr mica, n/s.

Sd: Rd-brn, v. arg, some sily, intbd rd-brn blkly sh.

Sh: Rd-brn, blkly, gum, much sily-sdy.

Sh: Dk gy, fis, sli pyr.

Ls: Crm-v. lt gy, fn-vfxln, tr microxin, some arg, tr amor calc.

Ls: Lt gy, fn-vfxln, occ amor calc, cons rd-or rd & dk rd-brn op cht, intbd gn sily calc sh, n/s.

Ls: Tr-brn, fn-vfxln, sli ool, tr org rem, some arg, n.v.p.

Stst: Rd-brn, arg sdy in pt, intbd rd-brn & lt rd-brn blkly occ gum sh.

Sh: Rd-brn & tn, fis-biky, much gum, occ sily-sdy.

Ls: Gy, gran-frag, ool, tr sbchky, pr-fr intgran & intool por, gd shw dk brn-blk FO, v. dk brn sbst stn, sli odor.

Stst: Dk rd-brn brn-mar, arg-shly, some calc-lmy, occ sdy.

Ls: Dk gy-brn, tr crm, fxln foss (Fus) tr amor calc, some arg-shly, intbd dk gy fis sh.

Ls: Crm, occ crm-lt gy, fxln foss, tr ool, some arg, n.v.p.

Ls: Lt gy, fxln, pry arg-shly in pt, intbd dk gy fis sh.

Ls: Crm-in, fxln-gran, dol, sli chky, tr ool, fr intgran & pp por, n/s.

Sh: Dk gy, fis, pyr, tr org rem, some v. dk gy carb sh.

Sh: Rd-brn, blkly, ea, some sily, tr gum, v. lt rd-brn lmy sh in pt.

Ls: Crm, fxln, ool, cons sec calc, tr sbchky, some crm-in op frs cht, n.v.p.

Stst: Gy lt gy-gn v. lt rd-brn, tr yel, arg some calc-lmy, rd-brn & mar intbd sh.

Sh: Rd-brn prk & lt rd-brn, blkly, ea occ sily, tr gum, few pcs rd-brn vfxln arg Ls, some lt gn sbwgy sh.

Ls: V. lt gy, tr yel gran sli arg, sily, n/s.

Sh: Rd-brn & lt rd-brn, blkly, ea occ sily, tr gum, few pcs rd-brn vfxln arg Ls, some lt gn sbwgy sh.

Ls: Crm, fxln, ool, foss, cons spr calc, sli glauc, n.v.p.

Stst: Lt gy & gn-gy arg, some calc-lmy, sli pyr, intbd dk gy & gn-gy fis sh, tr carb mat.

Ls: Crm, fxln, ool, cons sec calc, occ sbchky, tr pyr, cons blk dd O res, no odor, n.v.p.

Sh: Lt rd-brn, blkly sily, some gum.

Ls: Crm, fxln, cons org rem, v. chky-sbchky, some spr calc, n.v.p.

Ls: Crm-lt gy, occ lt gn yel & rd-brn, fxln sli ool, some arg-shly, n/s.

Ls: Crm-lt gy, fxln, ool, sbchky, some spr calc & pyr, tr blk dd O res.

Sh: Rd-brn ea occ gum, tr sily.

Ls: Crm-v. lt gy, occ lt gn-gy tr yel, fxln foss, sli ool, some arg, n.v.p.

Sh: Rd-brn, blkly, sily, occ calc-lmy, tr gum.

Sh: Lt rd-brn, blkly, gum, some dk brn & dk rd-brn sily calc sh.

Ls: V. lt gy, some crm & yel, fxln, sli ool & foss, tr sbchky, occ mott wrd-brn sh, n.v.p, n/s.

Ls: Lt gy-crm, much rd-brn prk yel & lt purp, fn-vfxln, tr ool, arg, some sbchky, n/s.

Sh: Rd-brn thk fis, ea, some sily, tr calc.

Ls: Crm & lt gy, fn-vfxln, sbchky, sli foss, much mott wrd-brn sh, tr crm & prk op cht, n/s.

Ls: V. lt gy fn-vfxln, sbchky, tr org rem, some lt gy-gn & arg, intbd lt rd-brn gum sh.

Sh: V. dk gy, fis-biky sily, tr carb, bcm rd-brn dk rd-brn & yel biky ea occ sily sh.

Ls: Wh-crm, fxln ool sbchky-chky, cons spr calc, n.v.p, n/s.

Ls: Crm fxln-gran, sbchky, sli ool & foss, some spr calc, fr pp & intgran por, n/s.

Ls: Crm-v. lt gy, fxln, chky, some arg, n/s.

Sh: V. lt gy-gn, fis, calc, some gum, bcm rd-brn blkly ea sily occ calc sh, lt rd-brn gum sh.

Sh: Rd-brn fis-biky, v. gum, tr sily some v. dk gy fis sh & crm fxln sli foss Ls.

Sh: Lt gy & lt gy-gn sily v. gum, some dk gy fis occ carb sh, crm-in fxln foss Ls, n/s.

Ls: Crm tr v. lt gy, fn-vfxln, some v. amt ool, chky, sli pyr, pr-fr pp por, scat vug por, fr shw v. dk brn FO, sply dk stn, no odor.

Sh: Dk gy fis, some carb mat, cons rd-brn thk fis sh.

Ls: Crm, fxln, sli foss (Fus) sbchky, tr pyr, n/s.

Ls: Gy, some tr-gy fn-vfxln, chky, occ arg, gen dns, n/s.

Ls: Crm-gy, vfxln withd-sbchky in pt, n.v.p.

Stst: V. lt gy & lt gn, tr tn, occ arg-shly, some calc, cons blk dd O res, intbd v. lt gn gum sily sh.

Sh: Lt rd-brn ea gum, some rd-brn v. sily sh.

Sh: Rd-brn tr brn, thk fis-biky, sily, occ gum, some v. dk gy fis pyr sh.

Ls: V. lt gy, fxln, tr gran, pyr, tr spr calc, pr pp por, v. sli shw dk brn FO, sply-sbsat stn, no odor.

Ls: Crm-in, vfxln-microxin dns, tr frac, some withd, n/s.

Ls: Lt gy-in microxin, occ withd-sbchky, tr frac & spr calc, some intbd gn-gy fis calc sh, n/s.

Sh: Lt rd-brn ea gum, intbd crm-tn fxln sli foss withd Ls, tr pyr.

Stst: Rd-brn tr brn, v. arg-shly, some sdy.

Stst: Rd-brn dk rd-brn some sdy, v. arg, cons lt rd-brn gum sh, n/s.

Sh: Lt rd-brn v. gum & sft, some lt gn-gy calc-lmy arg slst w/blk dd O res, no FO, no odor.

Ls: V. lt gy, fxln, sli pyr, tr ool & org rem, some dru & spr calc, pr-fr pp por, scat fr vug por, gd shw blk FO, sply v. dk stn, no odor.

Ls: Wh-crm, fxln, tr microxin, sli pyr, occ sbchky, n.v.p, n/s.

Sh: Rd-brn thk fis-biky, ea.

Ls: Crm-in, fxln, sbchky, dns, n/s.

Sh: Dk gy & gy-gn, fis, occ calc, much rd-brn ea sh.

Sh: Rd-brn blkly, some gum tr lt gy-gn gum sh & gy-in v. calc foss sily sh.

Ls: Crm, tr v. lt gy, sli ool, r. pyr, pr pp por, v. sli shw FO, dk spty stn, no odor.

Ls: Crm-wh, fxln, tr pyr & ool, sbchky in pt, n.v.p.

Ls: Crm-gy, fxln, chky-sbchky, some lt gy-gn v. arg-shly, n.v.p.

Sh: V. lt gy & v. lt gn-gy calc gum, v. sft, tr dk gy fis smwt carb sh.

Sh: Rd-brn blkly, sily, some gum, cons lt gn-gy calc gum sh, intbd crm-brn mott arg Ls, n.v.p., blk dd O res, no FO.

Ls: Crm, fxln sbchky, tr foss (Fus) & spr calc, n.v.p, n/s.

Ls: Crm, fxln, tr pyr occ sbchky, bcm tr-gy fxln dns, n.v.p, n/s.

Ls: Dk gy-gn-gy fis, some calc.

Ls: Crm, fxln, some org rem, sbchky, pr pp por, r. shw blk O, v. spty stn, no odor, some blk asph res.

Sh: Rd-brn, thk fis-biky ea occ gum, intbd dk gy fis sh, gn & gy-gn sli pyr sh & gy-lt gn sli calc slst.

Sh: Rd-brn & dk rd-brn blkly sily.

Ls: Wh-crm, fxln, v. chky, r. org rem, tr pp por, fr v. dk brn FO, some blk dd O res, no odor.

Ls: Crm-v. lt gy-gn & arg, n.v.p.

Sh: V. dk gy, fis, sli pyr, some carb, bcm gy-gn & olv gn fis occ sily.

Sh: Rd-brn blkly ea cons rd-brn brn & gy v. arg mica slst.

Ls: Crm lt gy-gn mott wrd-brn sh, fxln, n.v.p.

Ls: Crm lt gy tr tn, fxln, some mott w/lt gn sh, tr foss.

Sh: Dk gy-brn dk gy-gn, fis-thk fis, bcm rd-brn rd-or & brn, fis-biky sily, occ sily.

Ls: Crm-v. lt gy, fxln, sli ool, tr spr calc, much mott wrd-brn sh, n.v.p.

Ls: V. lt gy, fxln pyr, tr sbchky.

Sh: Dk gy, fis, occ sily, cons rd-brn ea sh.

Ls: Crm-in, fxln, tr vfxln, withd-sbchky in pt, tr org rem, gen dns, n/s.

Sh: Rd-brn, thk fis, tr blkly & sily, much gum.

Ls: Lt gy & purp mott, vfxln, frac tr amor calc some tn & yel vfxln ool Ls, dns, n/s.

Sh: V. dk rd-brn purp mar & gy-brn, thk fis, tr v. dk gy fis sh, some crm-lt gy fxln-gran sbchky sily Ls, tr foss (Brach).

Sh: Rd-brn fis, occ sily, tr gum.

Sh: Lt rd-brn blkly sily, some gum.

Stst: Rd-brn blkly v. arg, intbd olv gn gy & dk gy fis sh, tr lt gn sbwgy sh.

Ls: Wh v. lt gy & crm, fn-vfxln, some mott w/ purp & v. dk mar sh, tr sbchky, dns, n/s.

Sh: Gy blkly gran v. calc-lmy chky sily.

Sh: Gy-brn med gy, blkly, calc-lmy intbd crm fxln sbchky Ls, n/s.

Sh: Rd-brn ea gum, tr sily.

Ls: Wh-v. lt gy, frag ool, cons chk, tr spr calc, fr intool por, fr shw FO, lt brn spty-sbsat stn, no odor.

Ls: Trn-gy, fxln, r. org rem, smwt arg, tr withd, n.v.p, n/s.

Ls: Gy-brn gy-gn, fxln, arg-shly, some chky, tr foss (Brach) occ sily, n/s.

Ls: Trn, occ tn-gy, fxln sli ool, some arg, n.v.p.

Sh: Gy-gn fis calc, occ lmy, some v. dk gy-bk thn fis carb sh.

Ls: Trn-gy & gy-brn fxln-gran, some withd-chky occ arg, n.v.p, n/s.

Ls: Gy, some crm-gy brn-gran, tr withd, occ arg, n.v.p, n/s.

Ls: Crm-gy tr gn-gy, fxln sli chky, tr org rem, n.v.p.

Sh: Blk, some v. dk gy-brn fis carb.

Sh: Gy-gn & gn-gy fis-biky pyr tr carb mat, intbd crm-in vfxln-chky Ls, n/s.

Ls: Crm, fxln-gran, tr ool & org rem, occ sbchky, pr intgran por, n/s.

Ls: Crm fxln, much sbchky, tr org rem, n.v.p.

Sh: Dk gy & dk gy-brn, fis, some carb, bcm gy-gn fis sli calc.

Ls: Crm, tr crm-in fxln sli foss, some sbchky, bcm crm-v. lt purp gran, aren, some spr calc, n/s.

Sd: Crm lt gy, vfn-fn wl-cmt, sli mica, cons or & brn inc, n/s.

Ls: Lt gy-in fxln sbchky, tr org rem, some mott w/amar & pyr sh, n.v.p, n/s.

Sh: Dk rd-brn, some purp dk gy & yel, tr sbwgy.

Ls: Trn-v. lt gy, fxln occ sbchky, n.v.p.

Sh: Rd-brn dk gy & yel, blkly, some wxy tr sdy, intbd crm-lt gy vfn-fn wl-srt sbfrl Sd clus, occ calc glauc & arg, n/s.

Ls: Crm-v. lt gy, some tn & lt yel, fxln sbchky, tr org rem, occ arg, n/s.

Sh: Dk rd-brn mar & dk brn, some yel & gy-gn wxy occ sdy, tr purp & rd-brn arg Ls, n/s.

6:20 PM, 14 April 2013

NEVA
3578 (-402)

RED EAGLE
3640 (-464)

Morgan Mud check @ 3695'
Vis: 64, Wt: 8.9, WL: 5.6
Chlor: 1,000 ppm, LCM: 4#

FORAKER
3689 (-513)

DST # 1 3656 - 3695
30°-60°-30°-90°
IF: Weak 3/4 inch blow
FF: No blow
RECOVERY:
5 Ft. Gas & Oil Cut Mud
(5%Gas, 35%Oil, 60%Mud)
IHP: 1848 psi. FHP: 1733 psi.
IFP: 16-19 psi. ISIP: 1002 psi.
FFP: 18-20 psi. FSIP: 1065 psi.
BHT: 124 deg. F.

TOPEKA
3912 (-736)

Morgan Mud check @ 3966'
Vis: 60, Wt: 9.5, WL: 8.0
Chlor: 1,000 ppm, LCM: 6#

DST # 2 4000 - 4053
30°-60°-30°-90°
IF: Very weak surface blow
FF: No blow
RECOVERY:
2 Ft. Oil Cut Mud
(25% Oil, 75% Mud)
IHP: 1986 psi. FHP: 1972 psi.
IFP: 16-17 psi. ISIP: 160 psi.
FFP: 17-17 psi. FSIP: 223 psi.
BHT: 129 deg. F.

LANSING
4125 (-949)

DST # 3 4127 - 4198
30°-60°-60°-90°
IF: Fair blow incr. to 6 1/4 inches
FF: No blow
RECOVERY:
120 Ft. Gas Cut Muddy Oil
(5%Gas, 45%Mud, 50%Oil)
IHP: 2031 psi. FHP: 1984 psi.
IFP: 34-45 psi. ISIP: 1288 psi.
FFP: 50-62 psi. FSIP: 1293 psi.
BHT: 131 deg. F.

DST # 4 4195 - 4303
30°-60°-30°-90°
IF: Very weak 1/2 inch blow
FF: No blow
RECOVERY:
2 Ft. Mud
IHP: 2151 psi. FHP: 2093 psi.
IFP: 18-21 psi. ISIP: 190 psi.
FFP: 21-23 psi. FSIP: 133 psi.
BHT: 129 deg. F.

Morgan Mud check @ 4289'
Vis: 51, Wt: 9.3, WL: 6.0
Chlor: 900 ppm, LCM: 6#

DST # 5 4292 - 4340
30°-60°-30°-60°
IF: Very weak 1/2 inch blow
FF: No blow
RECOVERY:
5 Ft. Mud
IHP: 2178 psi. FHP: 2142 psi.
IFP: 18-25 psi. ISIP: 1020 psi.
FFP: 23-35 psi. FSIP: 843 psi.
BHT: 130 deg. F.

BASE/KANSAS CITY
4400 (-1224)

Morgan Mud check @ 4539'
Vis: 68, Wt: 9.3, WL: 6.0
Chlor: 900 ppm, LCM: 4#

PAWNEE
4519 (-1343)

DST # 6 4492 - 4539
30°-60°-30°-90°
IF: Fair blow incr. to 7 inches
FF: Fair blow incr to 80B in 35 min.
RECOVERY:
50 Ft. Gas In Pipe
170 Ft. Clean Oil
(37 Gas, API)
(20%Gas, 30%Mud, 50%Oil)
IHP: 2168 psi. FHP: 2198 psi.
IFP: 18-51 psi. ISIP: 786 psi.
FFP: 52-103 psi. FSIP: 768 psi.
BHT: 141 deg. F.

CHEROKEE
4611 (-1435)

TOTAL DEPTH
4680 (11504)

5:04 AM, 21 April 2013

Operator: MURFIN DRILLING COMPANY, INC.
Lease: PATTI # 2-10
Location: 1980 FSL & 660 FWL SEC. 10 TWP. 1S RGE 37W
County: CHEYENNE State: KANSAS



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Paul Gunzelman

Patti #2-10

10-1s-37w Cheyenne,KS

Start Date: 2013.04.15 @ 08:34:00

End Date: 2013.04.15 @ 15:54:00

Job Ticket #: 50730 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 14:02:29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 50730

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.04.15 @ 08:34:00

GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:49:30

Time Test Ended: 15:54:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols

Unit No: 44

Interval: 3656.00 ft (KB) To 3695.00 ft (KB) (TVD)

Reference Elevations: 3176.00 ft (KB)

Total Depth: 3695.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8360 Inside

Press @ Run Depth: 20.12 psig @ 3657.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.15

End Date:

2013.04.15

Last Calib.: 2013.04.15

Start Time: 08:34:05

End Time:

15:53:59

Time On Btm: 2013.04.15 @ 10:49:00

Time Off Btm: 2013.04.15 @ 14:18:30

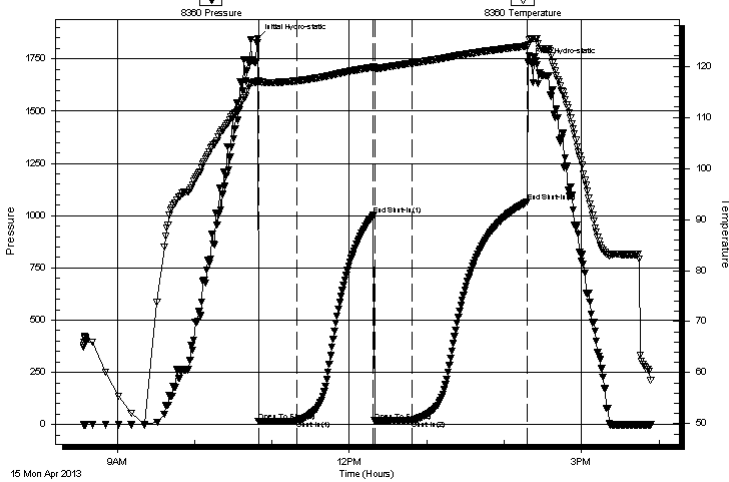
TEST COMMENT: 30 IF - 1/4" blow built to 3/4"

60 ISI - No return

30 FF - No blow

90 FSI - No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1848.18	117.19	Initial Hydro-static
1	15.86	117.08	Open To Flow (1)
30	18.64	117.13	Shut-In(1)
90	1002.13	119.81	End Shut-In(1)
91	18.39	119.54	Open To Flow (2)
120	20.12	120.60	Shut-In(2)
209	1065.09	123.93	End Shut-In(2)
210	1733.37	124.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	GOCM - 5%G - 35%O - 60%M	0.02

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.
 250 N Water STE 300
 Wichita, KS 67202
 ATTN: Paul Gunzelman

10-1s-37w Cheyenne, KS

Patti #2-10

Job Ticket: 50730

DST#: 1

Test Start: 2013.04.15 @ 08:34:00

GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:49:30

Time Test Ended: 15:54:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols

Unit No: 44

Interval: 3656.00 ft (KB) To 3695.00 ft (KB) (TVD)

Total Depth: 3695.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3176.00 ft (KB)

3166.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: psig @ 3657.00 ft (KB)

Start Date: 2013.04.15

End Date:

2013.04.15

Start Time: 08:34:45

End Time:

15:54:30

Capacity: 8000.00 psig

Last Calib.:

2013.04.15

Time On Btm:

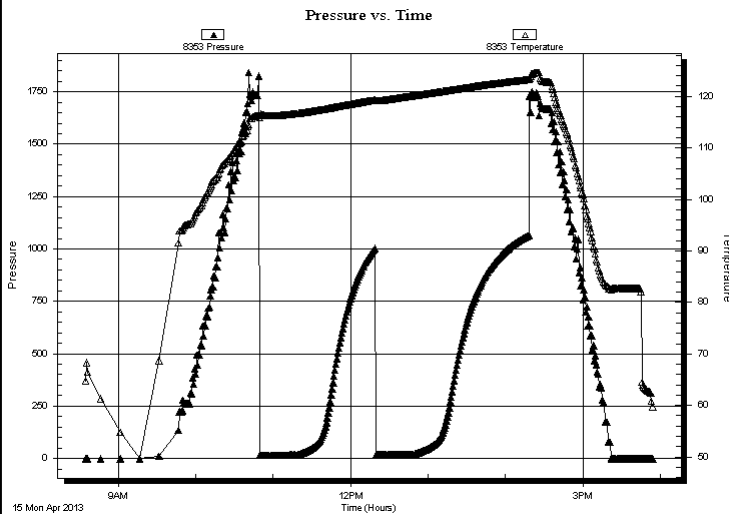
Time Off Btm:

TEST COMMENT: 30 IF - 1/4" blow built to 3/4"

60 ISI - No return

30 FF - No blow

90 FSI - No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	GOCM - 5%G - 35%O - 60%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 50730

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.04.15 @ 08:34:00

Tool Information

Drill Pipe:	Length: 3066.00 ft	Diameter: 3.80 inches	Volume: 43.01 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 574.00 ft	Diameter: 2.25 inches	Volume: 2.82 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 45.83 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3656.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	66.00 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			3634.00	
Hydraulic tool	5.00			3639.00	
Jars	5.00			3644.00	
Safety Joint	3.00			3647.00	
Packer	5.00			3652.00	27.00 Bottom Of Top Packer
Packer	4.00			3656.00	
Stubb	1.00			3657.00	
Recorder	0.00	8360	Inside	3657.00	
Recorder	0.00	8353	Outside	3657.00	
Perforations	35.00			3692.00	
Bullnose	3.00			3695.00	39.00 Bottom Packers & Anchor

Total Tool Length: 66.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 50730

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.04.15 @ 08:34:00

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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	GOCM - 5%G - 35%o - 60%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

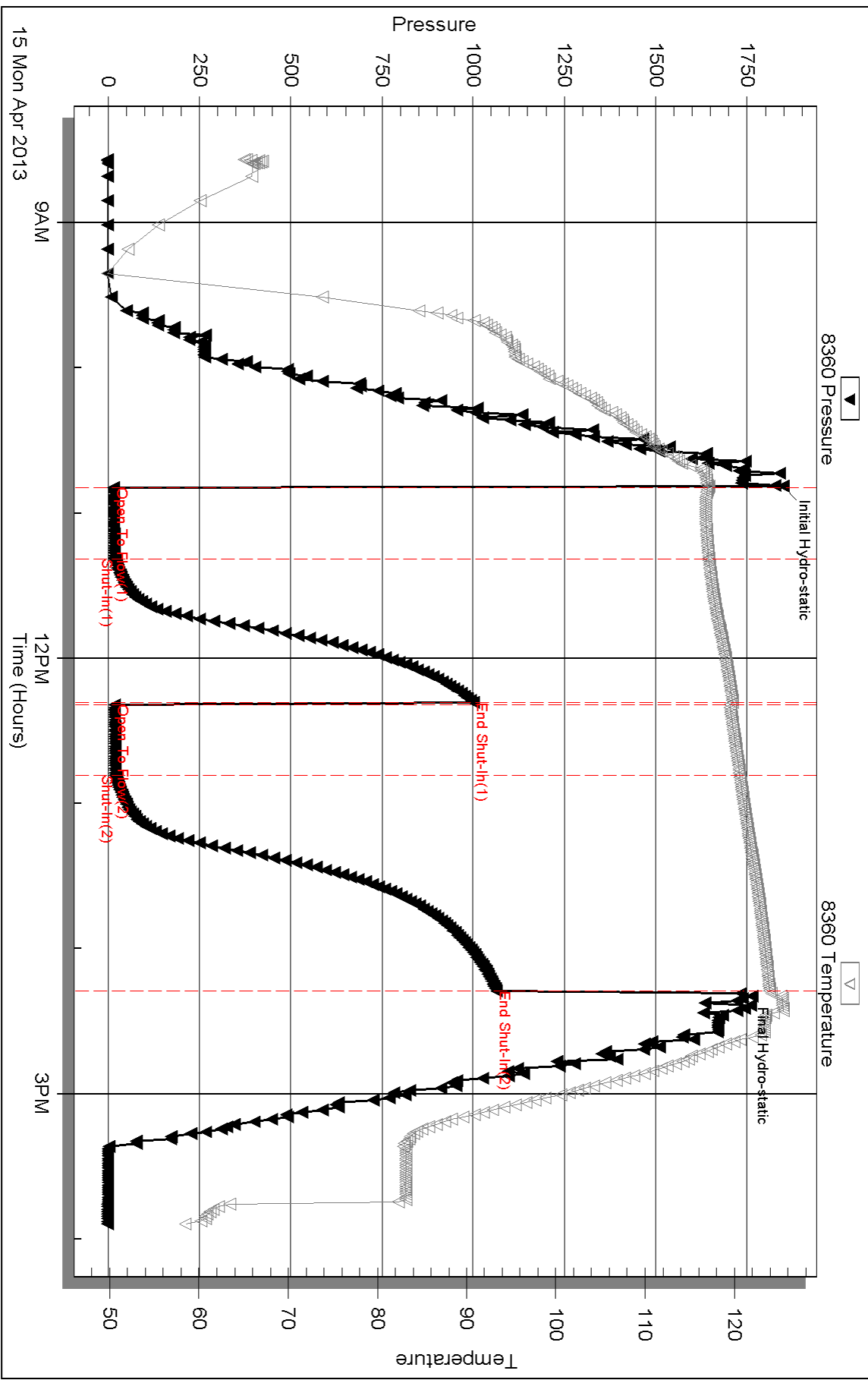
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

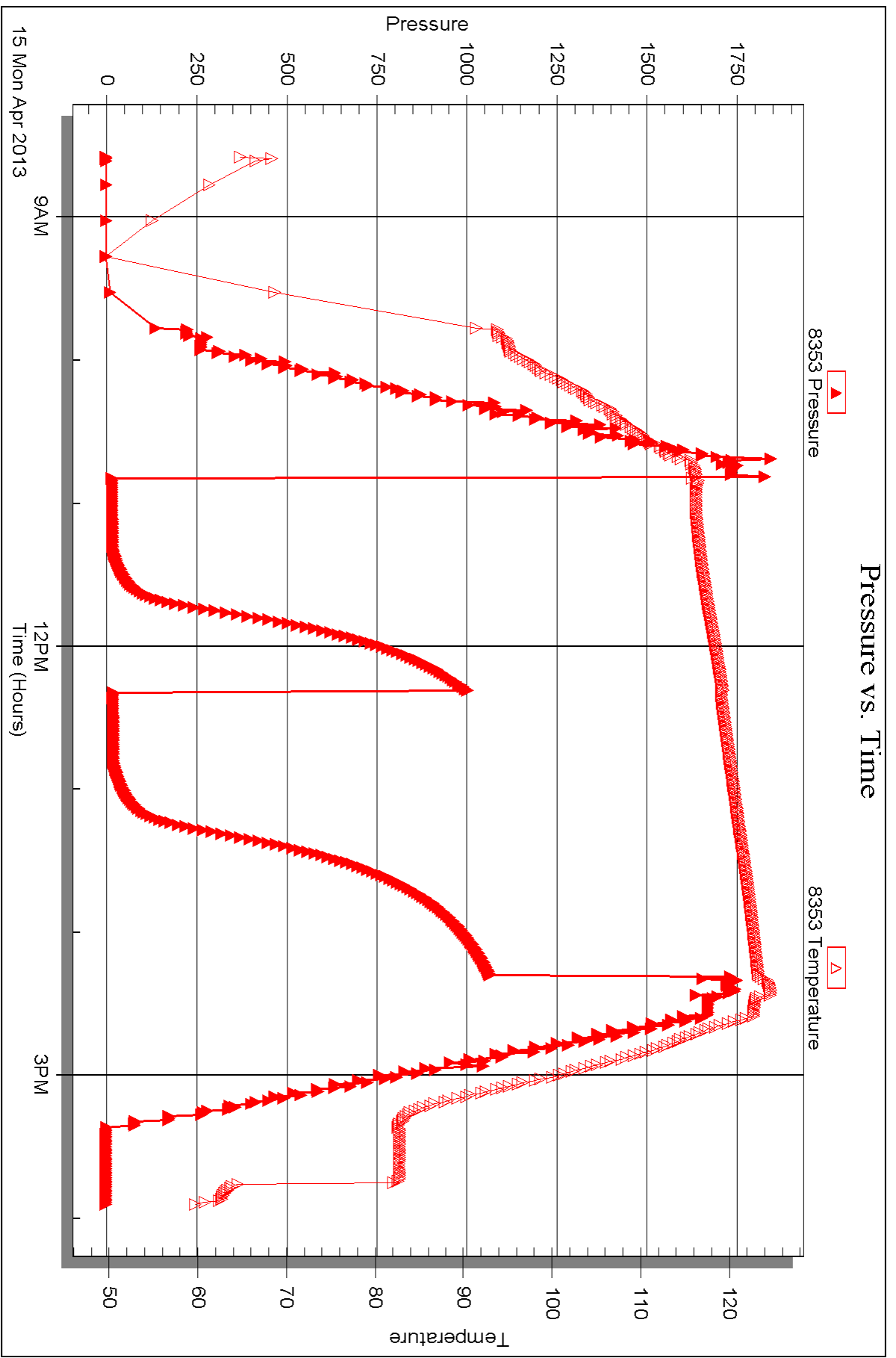


Serial #: 8353

Outside Murfin Drilling Company Inc.

Pat# #2-10

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 50730

Printed: 2013.04.24 @ 14:02:32



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Paul Gunzelman

Patti #2-10

10-1s-37w Cheyenne,KS

Start Date: 2013.04.16 @ 17:10:00

End Date: 2013.04.17 @ 00:45:45

Job Ticket #: 50650 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 14:01:46



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 50650

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.04.16 @ 17:10:00

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:27:00

Time Test Ended: 00:45:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 44

Interval: 4000.00 ft (KB) To 4053.00 ft (KB) (TVD)

Reference Elevations: 3176.00 ft (KB)

Total Depth: 4053.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: 16.57 psig @ 4001.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.16

End Date: 2013.04.17

Last Calib.: 2013.04.17

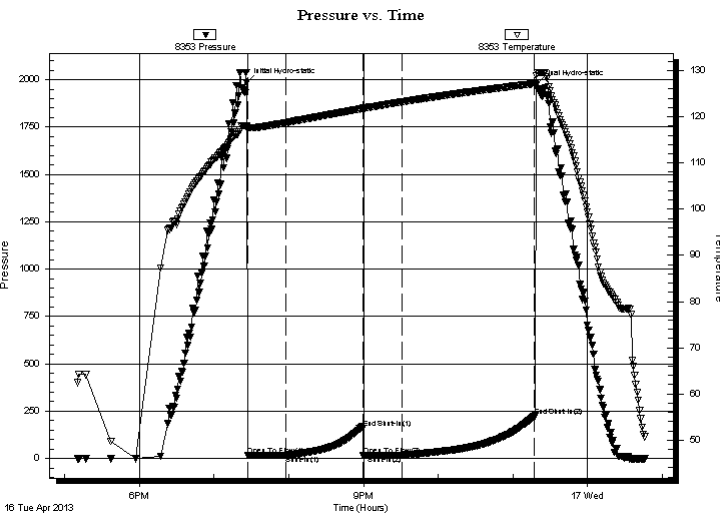
Start Time: 17:10:15

End Time: 00:45:45

Time On Btm: 2013.04.16 @ 19:26:15

Time Off Btm: 2013.04.16 @ 23:18:45

TEST COMMENT: 30 IF: Built to 1/4" Died back to surface blow after 20 min
60 IS: No Blow
30 FF: No Blow
90 FS: No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1986.32	117.88	Initial Hydro-static
1	16.14	117.64	Open To Flow (1)
32	16.93	118.74	Shut-In(1)
93	159.50	121.78	End Shut-In(1)
94	17.00	121.92	Open To Flow (2)
125	16.57	123.22	Shut-In(2)
231	222.73	127.19	End Shut-In(2)
233	1972.25	128.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM 25%O 75%M	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.
 250 N Water STE 300
 Wichita, KS 67202
 ATTN: Paul Gunzelman

10-1s-37w Cheyenne, KS

Patti #2-10

Job Ticket: 50650

DST#: 2

Test Start: 2013.04.16 @ 17:10:00

GENERAL INFORMATION:

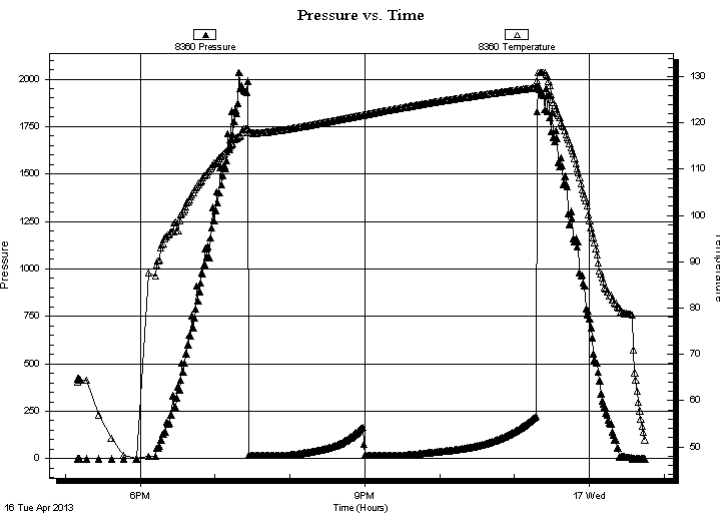
Formation: **Oread**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:27:00
 Time Test Ended: 00:45:45
 Interval: **4000.00 ft (KB) To 4053.00 ft (KB) (TVD)**
 Total Depth: 4053.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Wilbur Steinbeck
 Unit No: 44
 Reference Elevations: 3176.00 ft (KB)
 3166.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8360

Inside

Press @ Run Depth: psig @ 4001.00 ft (KB)
 Start Date: 2013.04.16 End Date: 2013.04.17
 Start Time: 17:09:50 End Time: 00:44:44
 Capacity: 8000.00 psig
 Last Calib.: 2013.04.17
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 IF: Built to 1/4" Died back to surface blow after 20 min
 60 IS: No Blow
 30 FF: No Blow
 90 FS: No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM 25%O 75%M	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 50650

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.04.16 @ 17:10:00

Tool Information

Drill Pipe:	Length: 3416.00 ft	Diameter: 3.80 inches	Volume: 47.92 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 574.00 ft	Diameter: 2.25 inches	Volume: 2.82 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 50.74 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4000.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	80.00 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			3978.00	
Hydraulic tool jars	5.00			3983.00	
safety Joint	3.00			3988.00	
Packer	5.00			3991.00	
					27.00 Bottom Of Top Packer
Packer	4.00			3996.00	
Stubb	1.00			4000.00	
Recorder	0.00	8360	Inside	4001.00	
Recorder	0.00	8353	Outside	4001.00	
Perforations	15.00			4017.00	
change Over Sub	1.00			4016.00	
Blank spacing	32.00			4017.00	
Change Over Sub	1.00			4049.00	
Bullnose	3.00			4050.00	
					53.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 50650

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.04.16 @ 17:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	OCM 25%O 75%M	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

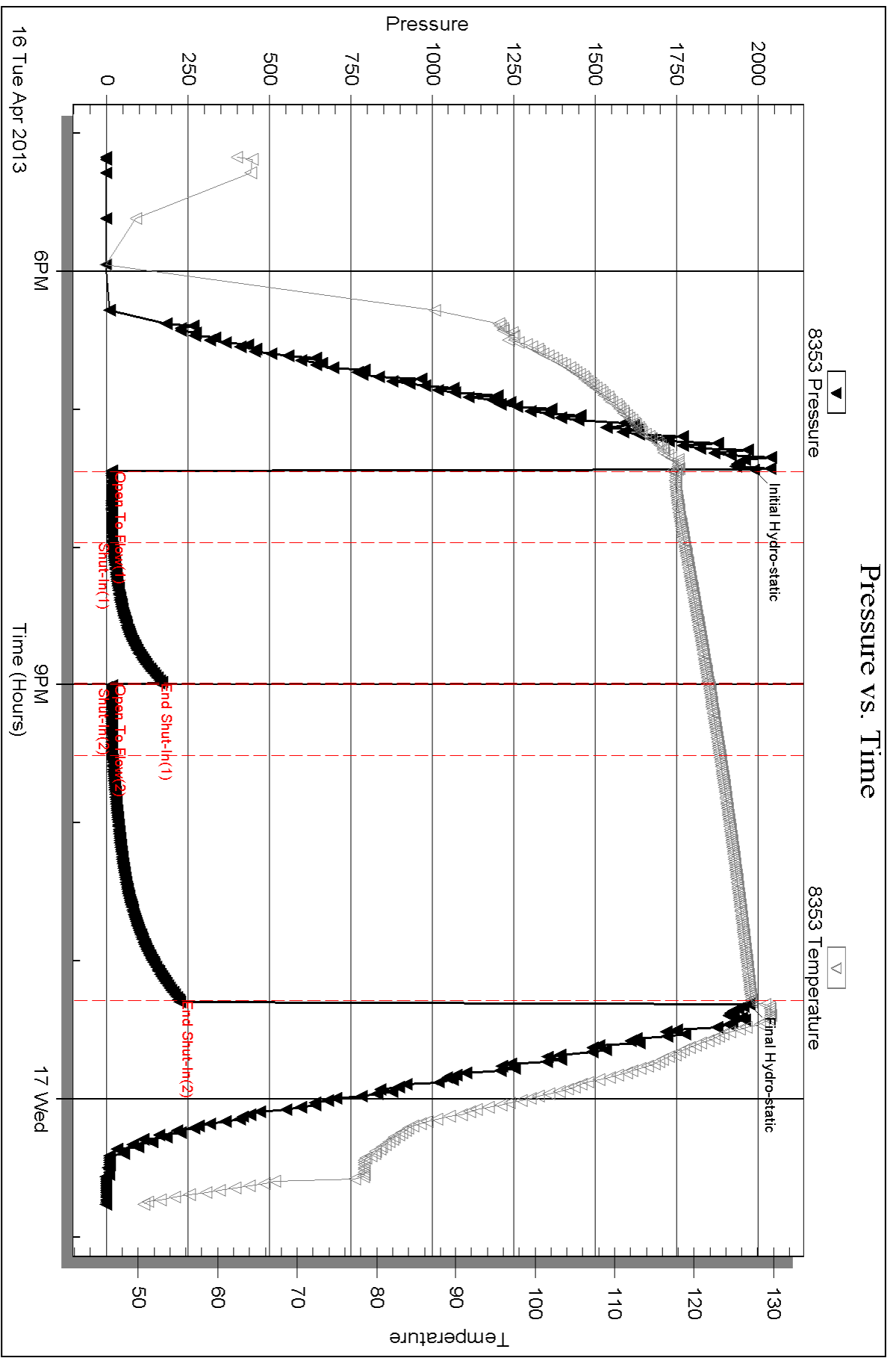
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



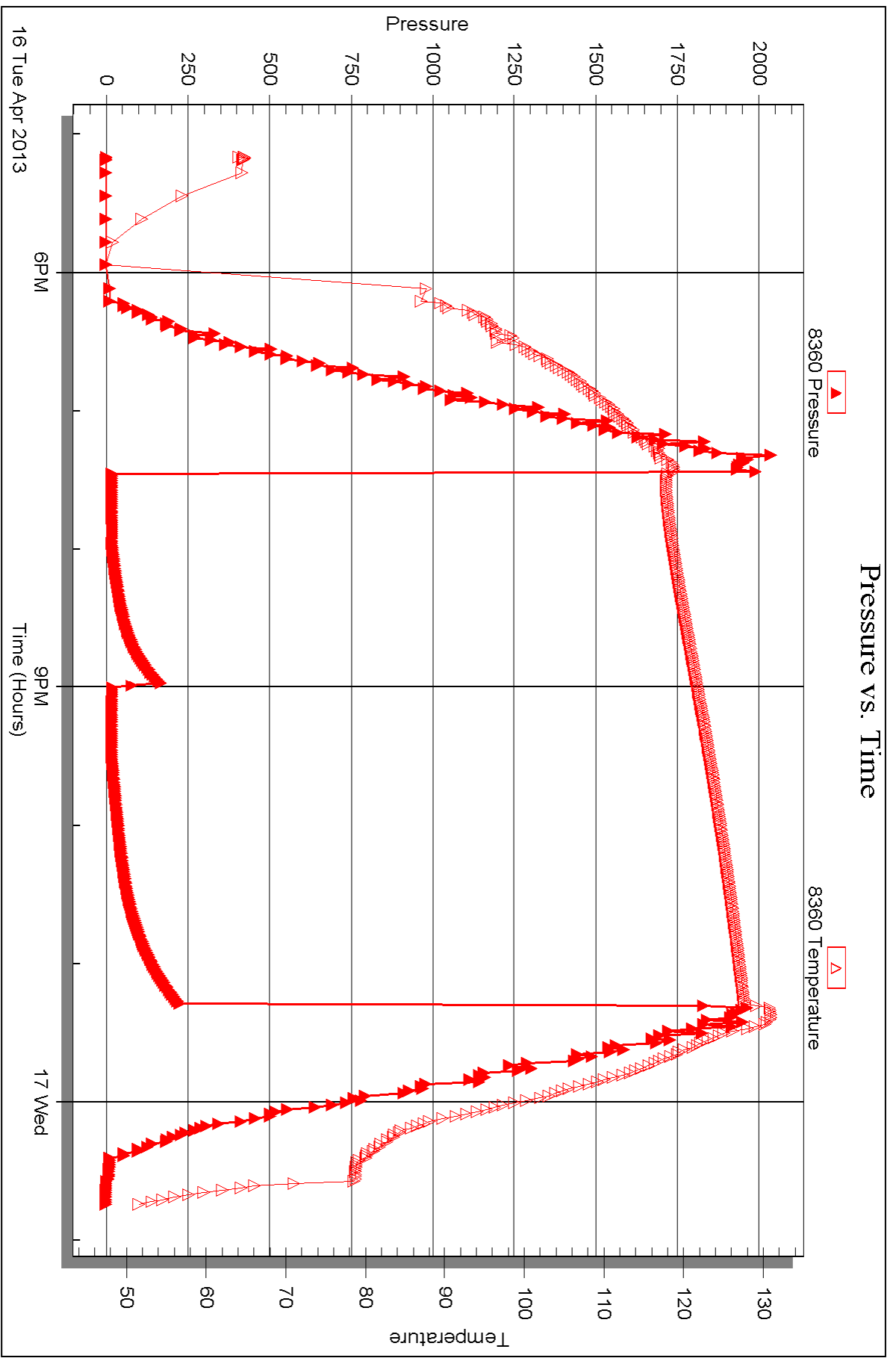
Serial #: 8360

Inside

Murfin Drilling Company Inc.

Patti #2-10

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Paul Gunzelman

Patti #2-10

10-1s-37w Cheyenne,KS

Start Date: 2013.04.17 @ 15:45:00

End Date: 2013.04.17 @ 23:06:45

Job Ticket #: 52576 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 14:00:56



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52576

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.04.17 @ 15:45:00

GENERAL INFORMATION:

Formation: **LKC A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:42:30

Time Test Ended: 23:06:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 44

Interval: 4127.00 ft (KB) To 4198.00 ft (KB) (TVD)

Reference Elevations: 3176.00 ft (KB)

Total Depth: 4198.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: 61.67 psig @ 4128.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.17

End Date:

2013.04.17

Last Calib.:

2013.04.17

Start Time: 15:45:15

End Time:

23:06:45

Time On Btm:

2013.04.17 @ 17:42:00

Time Off Btm:

2013.04.17 @ 21:13:00

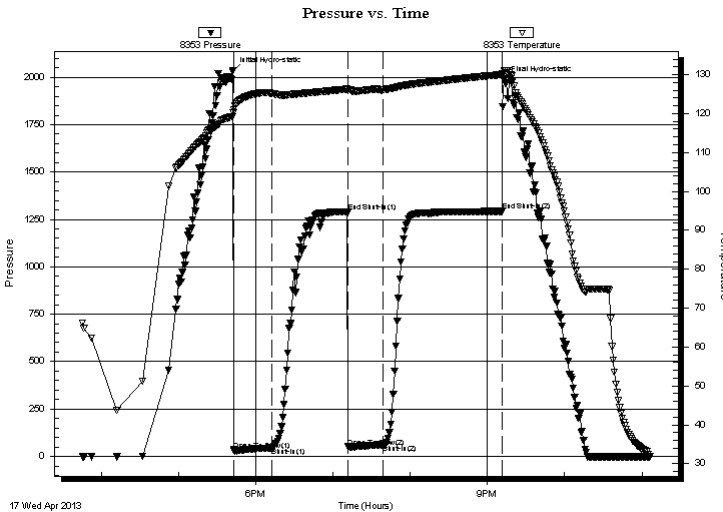
TEST COMMENT: 30 IF; Built to 6 1/2"

60 IS; No Blow

30 FF; No Blow

90 FS; No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2030.92	119.37	Initial Hydro-static
1	34.42	120.22	Open To Flow (1)
31	45.37	125.18	Shut-In(1)
89	1288.15	126.30	End Shut-In(1)
90	50.20	125.98	Open To Flow (2)
117	61.67	126.13	Shut-In(2)
210	1292.88	130.04	End Shut-In(2)
211	1984.29	130.95	Final Hydro-static

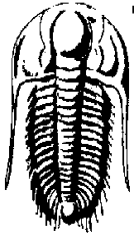
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 5%G 45%M 50%O	0.59

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

ATTN: Paul Gunzelman

Job Ticket: 52576

DST#: 3

Test Start: 2013.04.17 @ 15:45:00

GENERAL INFORMATION:

Formation: **LKC A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:42:30

Time Test Ended: 23:06:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 44

Interval: 4127.00 ft (KB) To 4198.00 ft (KB) (TVD)

Reference Elevations: 3176.00 ft (KB)

Total Depth: 4198.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360 Inside

Press@RunDepth: psig @ 4128.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.17

End Date:

2013.04.17

Last Calib.:

2013.04.17

Start Time: 15:45:05

End Time:

23:06:29

Time On Btm:

Time Off Btm:

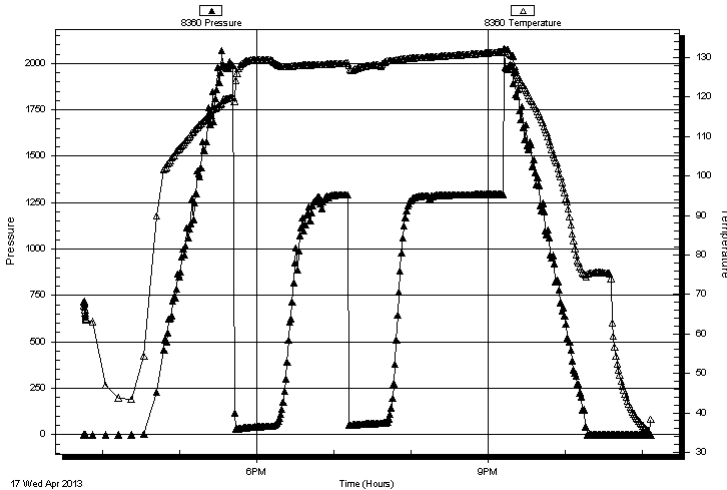
TEST COMMENT: 30 IF; Built to 6 1/2"

60 IS; No Blow

30 FF; No Blow

90 FS; No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 5%G 45%M 50%O	0.59

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 Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52576

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.04.17 @ 15:45:00

Tool Information

Drill Pipe:	Length: 3581.00 ft	Diameter: 3.80 inches	Volume: 50.23 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 52.86 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4127.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	71.00 ft			
Tool Length:	98.00 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			4105.00	
Hydraulic tool jars	5.00			4110.00	
safety Joint	3.00			4115.00	
Packer	5.00			4123.00	27.00 Bottom Of Top Packer
Packer	4.00			4127.00	
Stubb	1.00			4128.00	
Recorder	0.00	8360	Inside	4128.00	
Recorder	0.00	8353	Outside	4128.00	
Perforations	33.00			4161.00	
change Over Sub	1.00			4162.00	
Blank Spacing	32.00			4194.00	
change Over Sub	1.00			4195.00	
Bullnose	3.00			4198.00	71.00 Bottom Packers & Anchor

Total Tool Length: 98.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52576

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.04.17 @ 15:45:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GMCO 5%G 45%M 50%O	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

Num Fluid Samples: 0

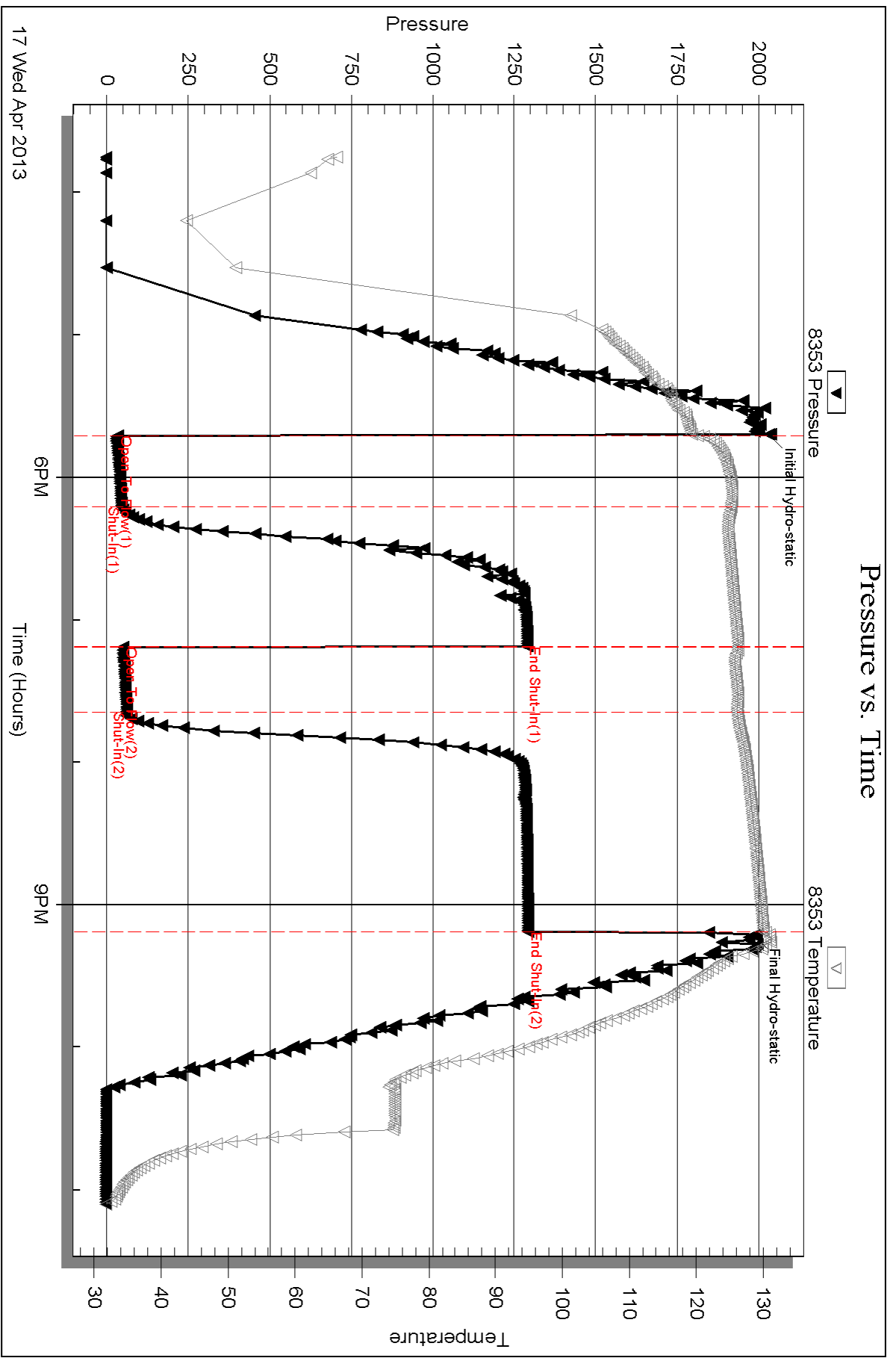
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



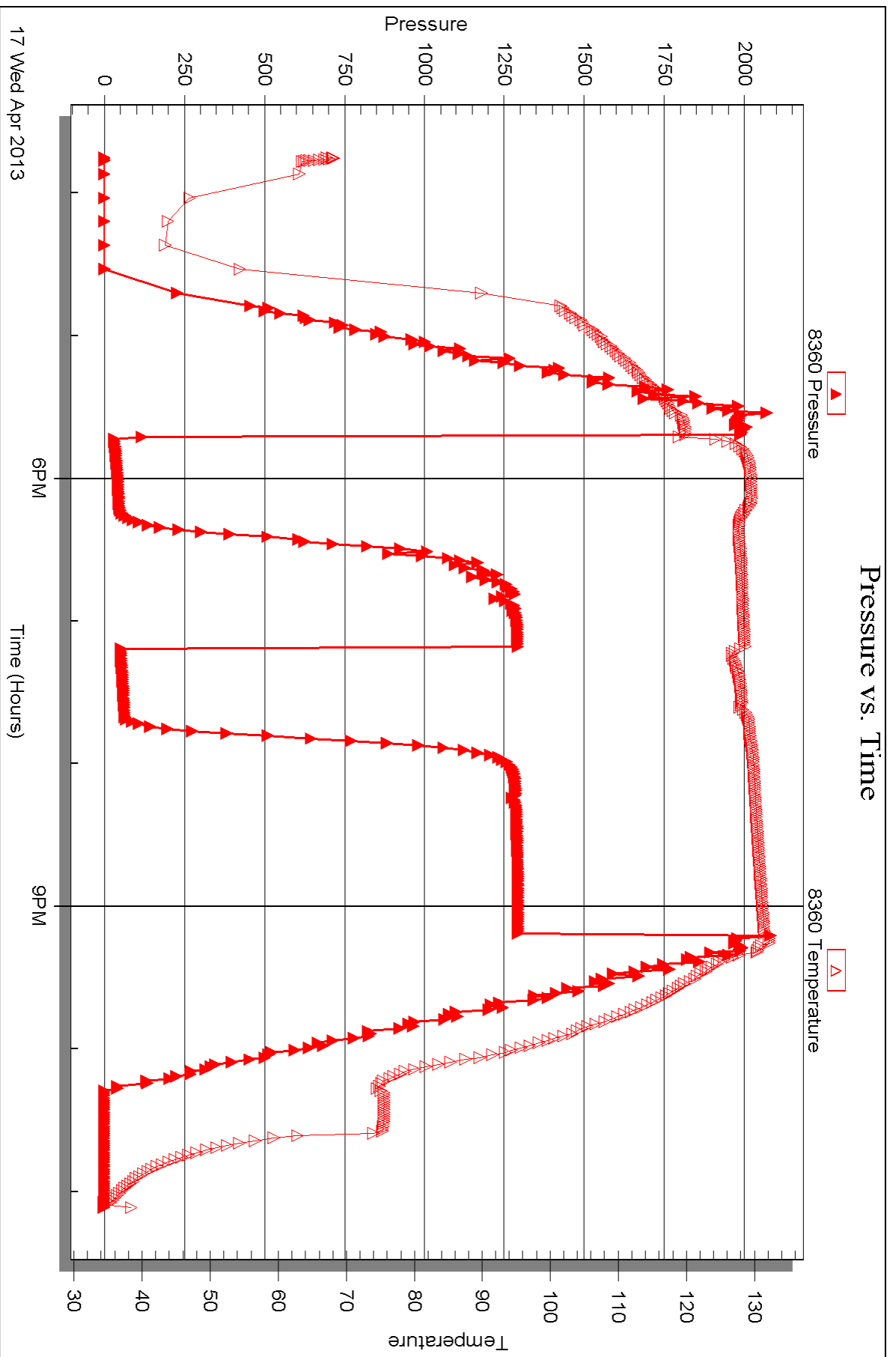
Serial #: 8360

Inside

Murfin Drilling Company Inc.

Pat# #2-10

DST Test Number: 3



17 Wed Apr 2013

Triobite Testing, Inc

Ref. No: 52576

Printed: 2013.04.24 @ 14:00:59



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Paul Gunzelman

Patti #2-10

10-1s-37w Cheyenne,KS

Start Date: 2013.04.18 @ 13:20:00

End Date: 2013.04.18 @ 20:30:15

Job Ticket #: 52577 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 14:00:18



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52577

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.04.18 @ 13:20:00

GENERAL INFORMATION:

Formation: **LKC G-H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:25:45

Time Test Ended: 20:30:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 44

Interval: 4195.00 ft (KB) To 4303.00 ft (KB) (TVD)

Reference Elevations: 3176.00 ft (KB)

Total Depth: 4303.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ RunDepth: 23.23 psig @ 4196.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.18

End Date: 2013.04.18

Last Calib.: 2013.04.18

Start Time: 13:20:15

End Time: 20:30:15

Time On Btm: 2013.04.18 @ 15:25:15

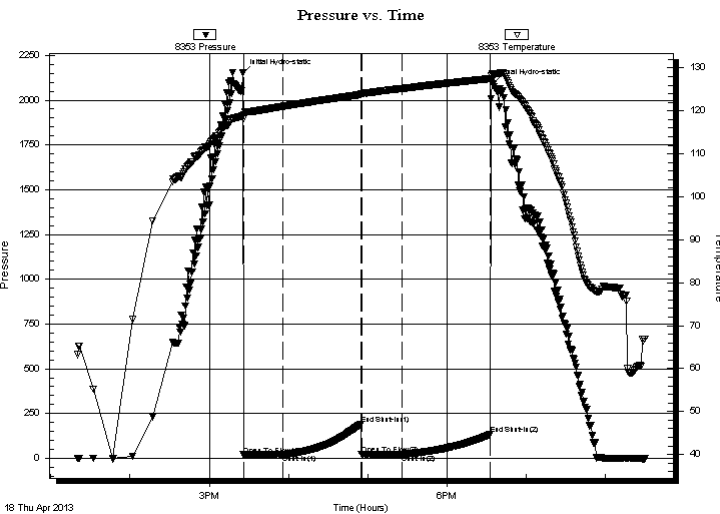
Time Off Btm: 2013.04.18 @ 18:34:45

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

60 IS; No Blow

30 FF; No Blow

60 FS; No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2150.97	118.79	Initial Hydro-static
1	18.47	118.18	Open To Flow (1)
31	20.64	121.04	Shut-In(1)
90	189.87	123.80	End Shut-In(1)
90	21.45	124.00	Open To Flow (2)
121	23.23	125.21	Shut-In(2)
188	132.93	127.52	End Shut-In(2)
190	2092.82	128.68	Final Hydro-static

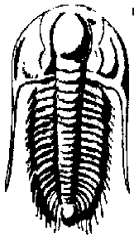
Recovery

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

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52577

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.04.18 @ 13:20:00

GENERAL INFORMATION:

Formation: **LKC G-H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:25:45

Time Test Ended: 20:30:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 44

Interval: 4195.00 ft (KB) To 4303.00 ft (KB) (TVD)

Reference Elevations: 3176.00 ft (KB)

Total Depth: 4303.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8360 Inside

Press @ Run Depth: psig @ 4196.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.18

End Date: 2013.04.18

Last Calib.: 2013.04.18

Start Time: 13:20:05

End Time: 20:30:29

Time On Btm:

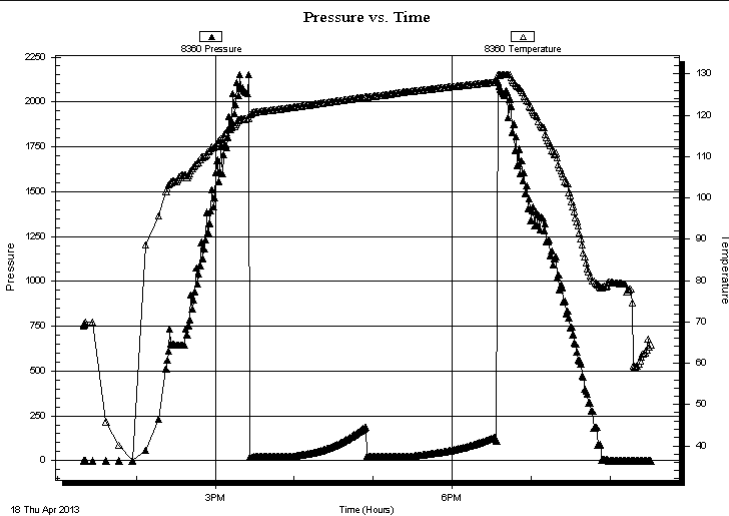
Time Off Btm:

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

60 IS; No Blow

30 FF; No Blow

60 FS; No Blow



PRESSURE SUMMARY

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

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 Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52577

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.04.18 @ 13:20:00

Tool Information

Drill Pipe:	Length: 3645.00 ft	Diameter: 3.80 inches	Volume: 51.13 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 53.76 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4195.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	108.00 ft			
Tool Length:	135.00 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			4173.00	
Hydraulic tool	5.00			4178.00	
jars	5.00			4183.00	
safety Joint	3.00			4186.00	
Packer	5.00			4191.00	27.00 Bottom Of Top Packer
Packer	4.00			4195.00	
Stubb	1.00			4196.00	
Recorder	0.00	8360	Inside	4196.00	
Recorder	0.00	8353	Outside	4196.00	
Perforations	7.00			4203.00	
change Over Sub	1.00			4204.00	
blank spacing	95.00			4299.00	
change Over Sub	1.00			4300.00	
Bullnose	3.00			4303.00	108.00 Bottom Packers & Anchor

Total Tool Length: 135.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52577

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.04.18 @ 13:20:00

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: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 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

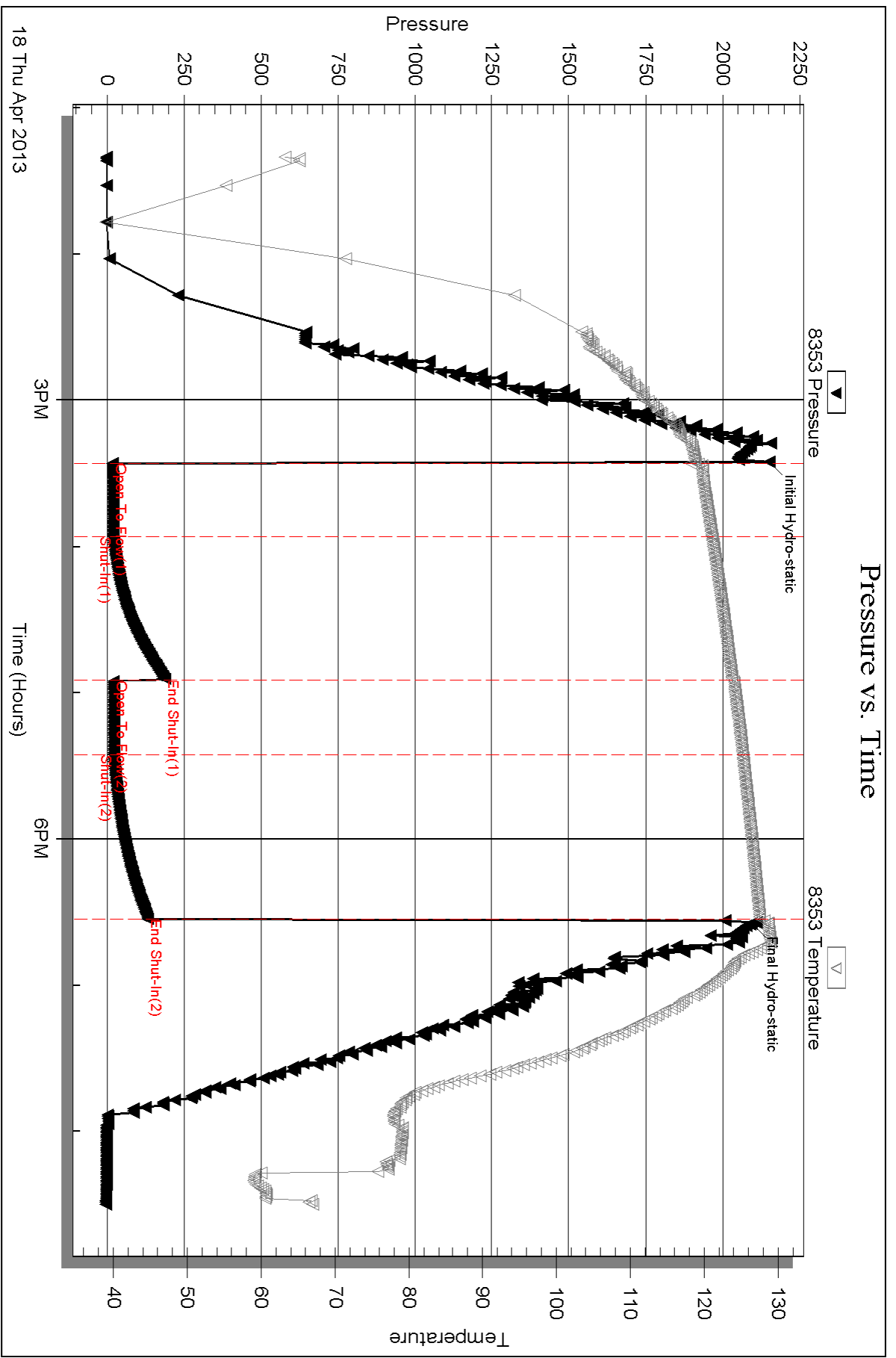
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



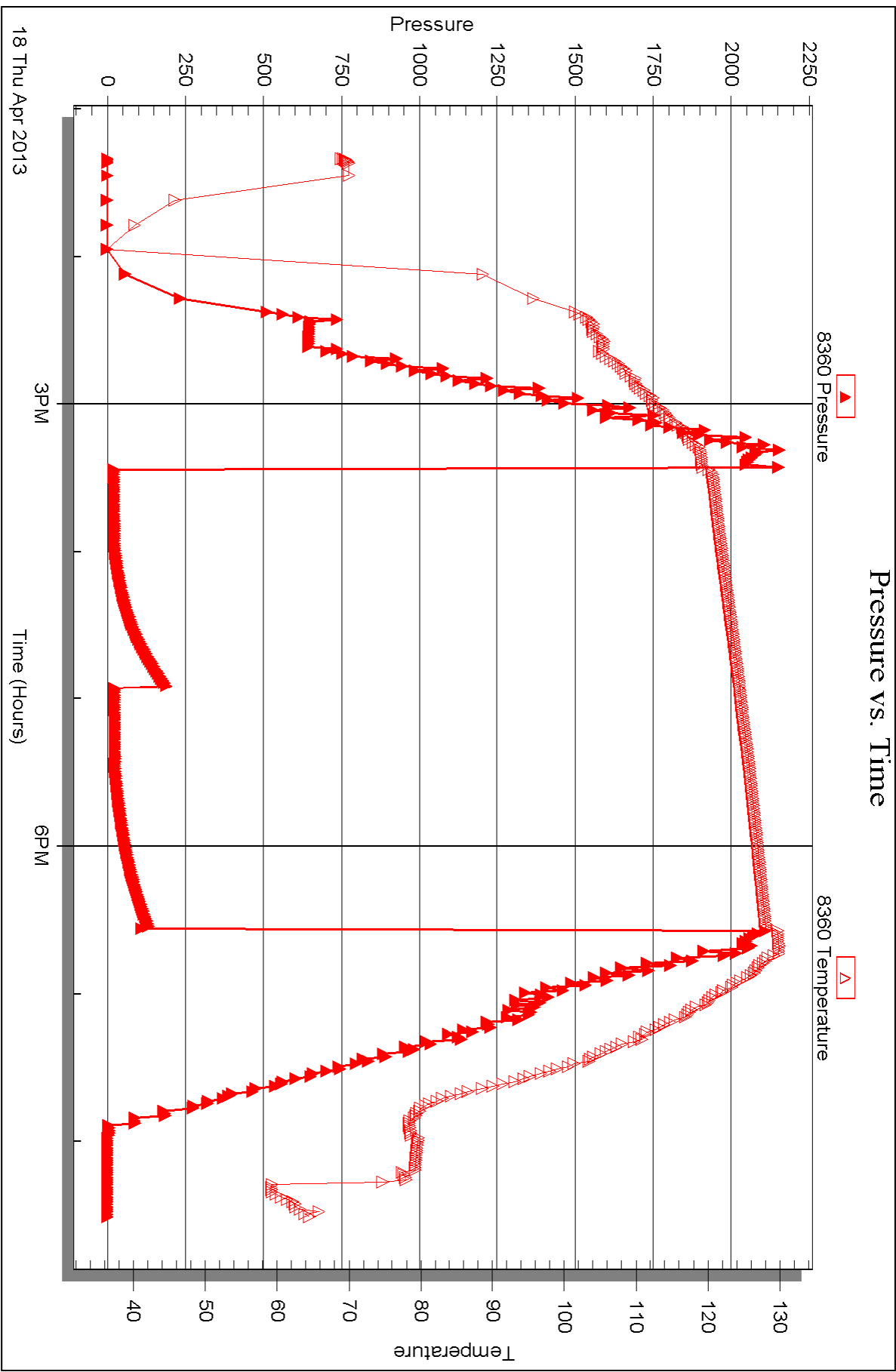
Serial #: 8360

Inside

Murfin Drilling Company Inc.

Patti #2-10

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Paul Gunzelman

Patti #2-10

10-1s-37w Cheyenne,KS

Start Date: 2013.04.19 @ 05:15:00

End Date: 2013.04.19 @ 12:48:45

Job Ticket #: 52578 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 13:59:41

Murfin Drilling Company Inc.
10-1s-37w Cheyenne,KS
Patti #2-10
DST # 5
LKC J
2013.04.19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52578

DST#: 5

ATTN: Paul Gunzelman

Test Start: 2013.04.19 @ 05:15:00

GENERAL INFORMATION:

Formation: **LKC J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:02:15
 Time Test Ended: 12:48:45
 Interval: **4292.00 ft (KB) To 4390.00 ft (KB) (TVD)**
 Total Depth: 4390.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Wilbur Steinbeck
 Unit No: 44
 Reference Elevations: 3176.00 ft (KB)
 3166.00 ft (CF)
 KB to GR/CF: 10.00 ft

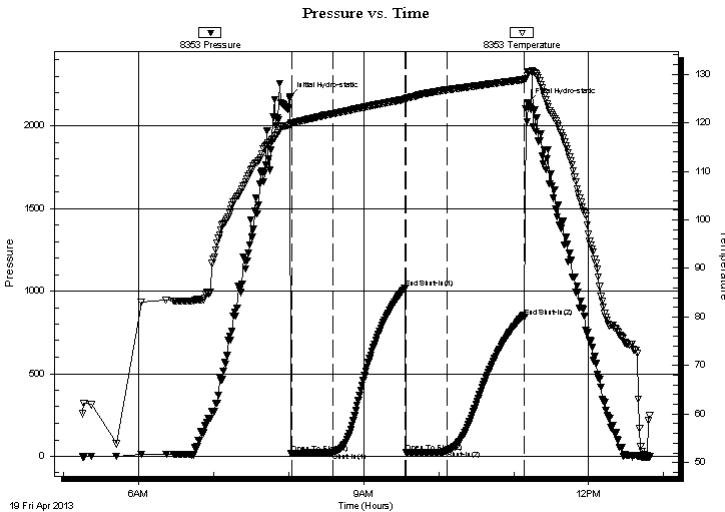
Serial #: 8353

Outside

Press @ Run Depth: 34.62 psig @ 4293.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.04.19 End Date: 2013.04.19 Last Calib.: 2013.04.19
 Start Time: 05:15:15 End Time: 12:48:45 Time On Btm: 2013.04.19 @ 08:01:15
 Time Off Btm: 2013.04.19 @ 11:11:15

TEST COMMENT: 30 IF; Built to 3/4"
 60 ISI; No Blow
 30 FF; No Blow
 60 FSI; No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2177.93	119.63	Initial Hydro-static
1	18.28	120.05	Open To Flow (1)
35	25.40	121.87	Shut-In(1)
92	1019.96	124.84	End Shut-In(1)
93	22.73	124.83	Open To Flow (2)
126	34.62	126.78	Shut-In(2)
188	842.83	128.90	End Shut-In(2)
190	2141.51	130.31	Final Hydro-static

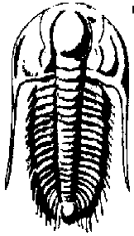
Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

ATTN: Paul Gunzelman

Job Ticket: 52578

DST#: 5

Test Start: 2013.04.19 @ 05:15:00

GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:02:15

Time Test Ended: 12:48:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 44

Interval: **4292.00 ft (KB) To 4390.00 ft (KB) (TVD)**

Reference Elevations: 3176.00 ft (KB)

Total Depth: 4390.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360 Inside

Press @ Run Depth: psig @ 4293.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.19

End Date:

2013.04.19

Last Calib.:

2013.04.19

Start Time: 05:15:05

End Time:

12:48:59

Time On Btm:

Time Off Btm:

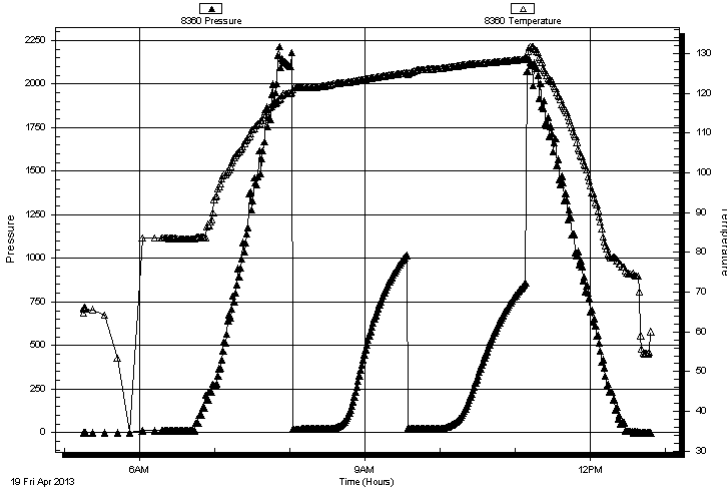
TEST COMMENT: 30 IF; Built to 3/4"

60 ISI; No Blow

30 FF; No Blow

60 FSI; No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52578

DST#: 5

ATTN: Paul Gunzelman

Test Start: 2013.04.19 @ 05:15:00

Tool Information

Drill Pipe:	Length: 3741.00 ft	Diameter: 3.80 inches	Volume: 52.48 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 55.11 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4292.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	75.00 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			4270.00	
Hydraulic tool jars	5.00			4275.00	
safety Joint	3.00			4280.00	
Packer	5.00			4288.00	27.00 Bottom Of Top Packer
Packer	4.00			4292.00	
Stubb	1.00			4293.00	
Recorder	0.00	8360	Inside	4293.00	
Recorder	0.00	8353	Outside	4293.00	
Perforations	10.00			4303.00	
change Over Sub	1.00			4304.00	
Blank spacing	32.00			4336.00	
change Over Sub	1.00			4337.00	
Bullnose	3.00			4340.00	48.00 Bottom Packers & Anchor

Total Tool Length: 75.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52578

DST#: 5

ATTN: Paul Gunzelman

Test Start: 2013.04.19 @ 05:15:00

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: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

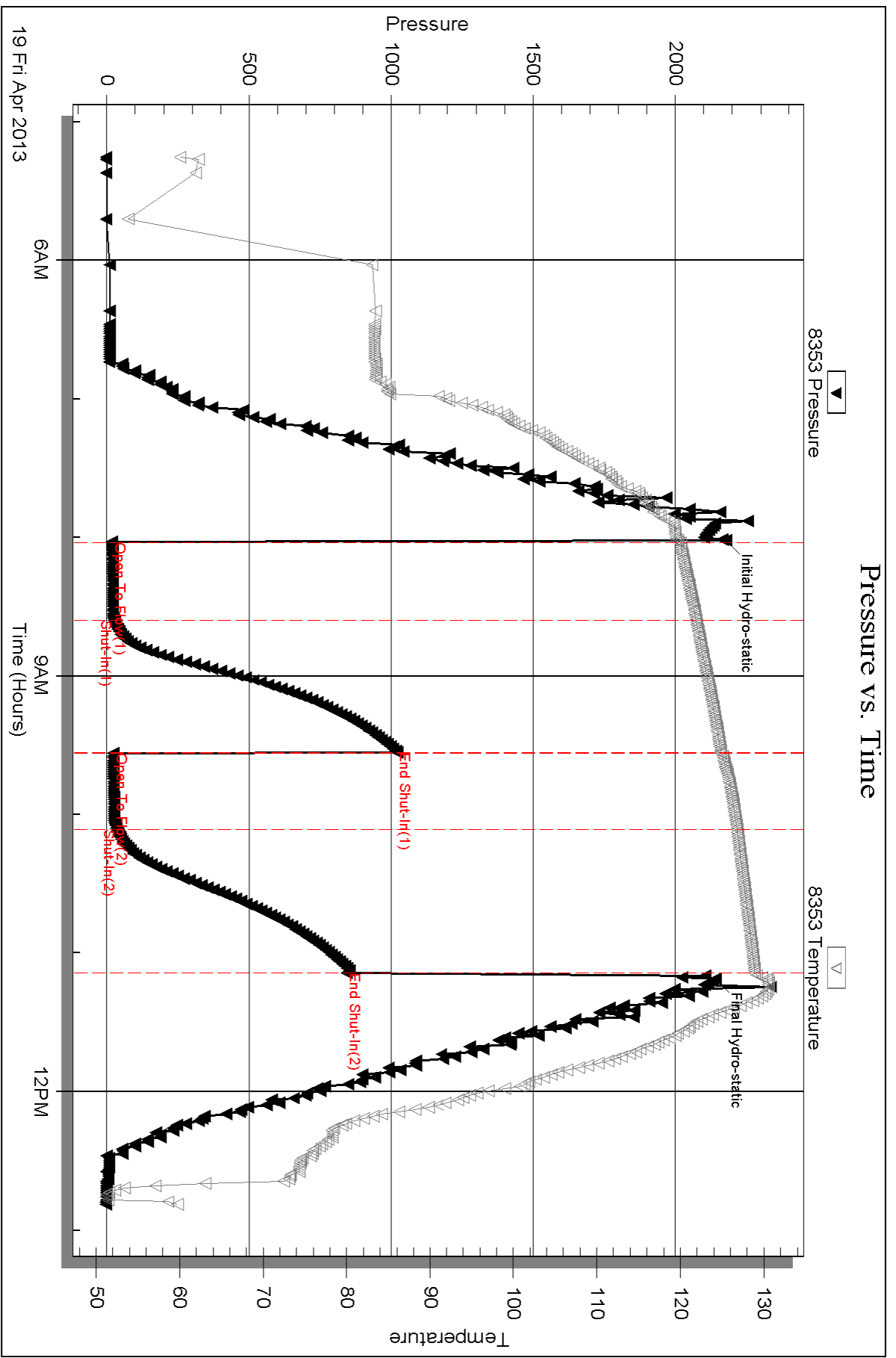
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



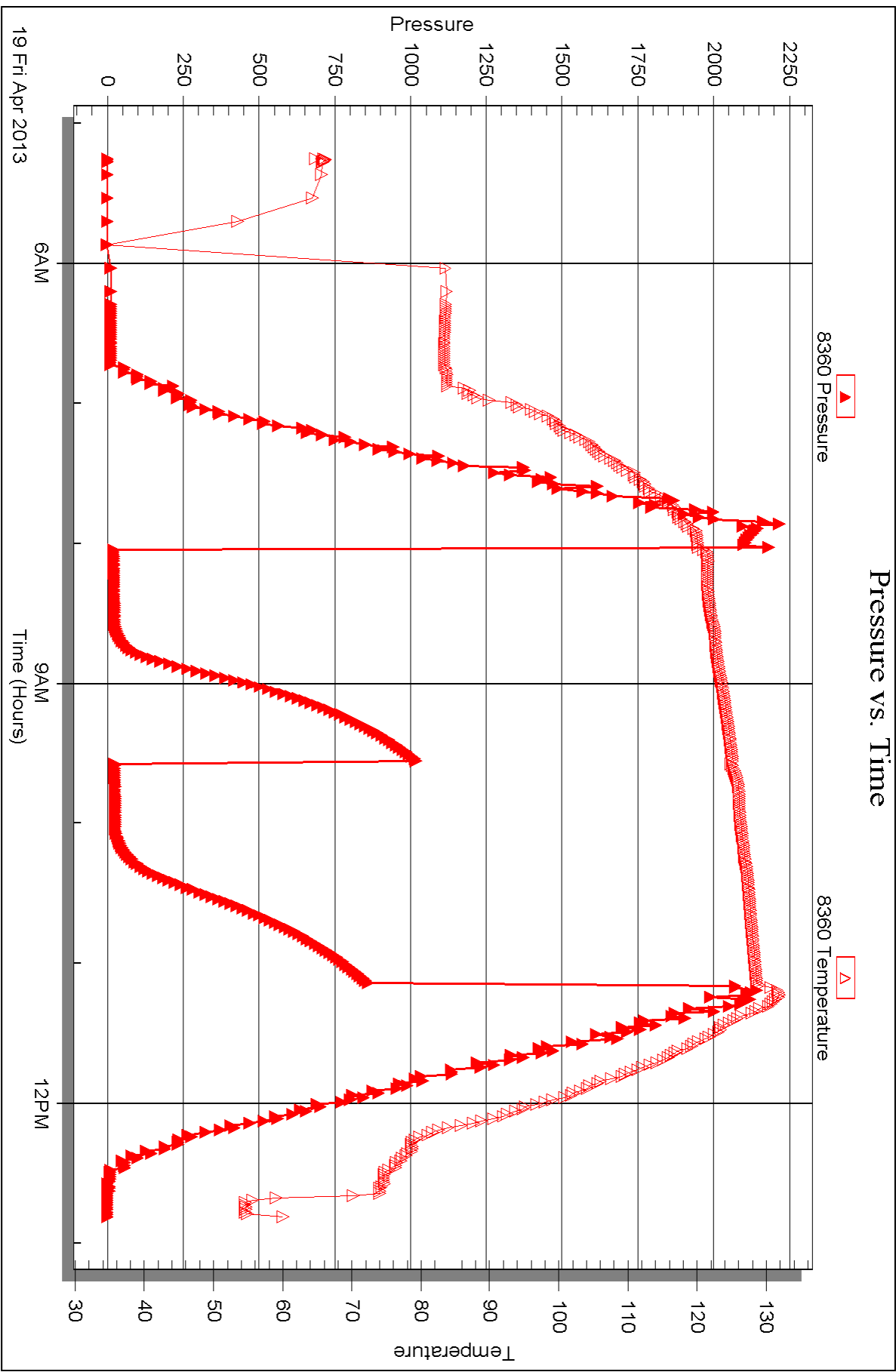
Serial #: 8360

Inside

Murfin Drilling Company Inc.

Pat# #2-10

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Paul Gunzelman

Patti #2-10

10-1s-37w Cheyenne,KS

Start Date: 2013.04.20 @ 06:40:00

End Date: 2013.04.20 @ 15:57:15

Job Ticket #: 52579 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.24 @ 13:59:00



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52579

DST#: 6

ATTN: Paul Gunzelman

Test Start: 2013.04.20 @ 06:40:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:28:15

Time Test Ended: 15:57:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 44

Interval: 4492.00 ft (KB) To 4539.00 ft (KB) (TVD)

Reference Elevations: 3176.00 ft (KB)

Total Depth: 4539.00 ft (KB) (TVD)

3166.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: 102.71 psig @ 4493.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.20

End Date: 2013.04.20

Last Calib.: 2013.04.20

Start Time: 06:40:15

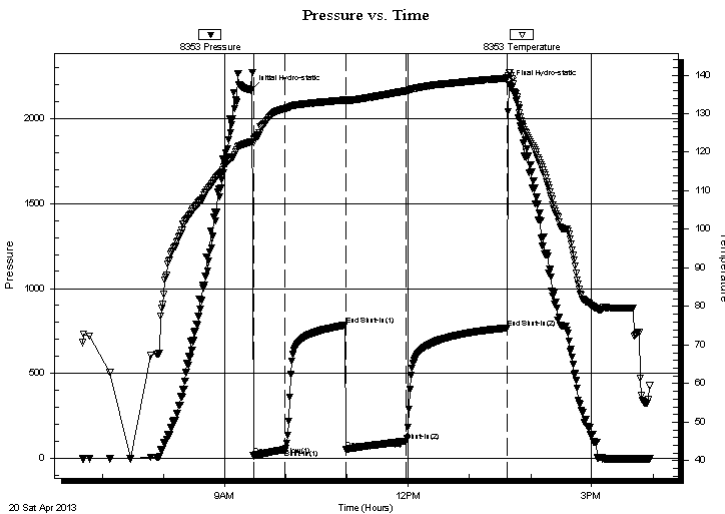
End Time: 15:57:15

Time On Btm: 2013.04.20 @ 09:26:00

Time Off Btm: 2013.04.20 @ 13:38:45

TEST COMMENT: 30 IF; Built to 7 1/4"
60 ISI; No Blow
60 FF; BOB in 35 min
90 FSI; No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2167.53	122.64	Initial Hydro-static
3	17.58	123.59	Open To Flow (1)
33	51.25	131.27	Shut-In(1)
93	785.89	133.53	End Shut-In(1)
93	52.45	133.39	Open To Flow (2)
152	102.71	135.88	Shut-In(2)
251	767.72	139.19	End Shut-In(2)
253	2198.04	140.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
170.00	GMCO 20%G 30%M 50%O	0.84
50.00	FREE OIL & GAS 25%G 75%O	0.25
0.00	540 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

10-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52579

DST#: 6

ATTN: Paul Gunzelman

Test Start: 2013.04.20 @ 06:40:00

GENERAL INFORMATION:

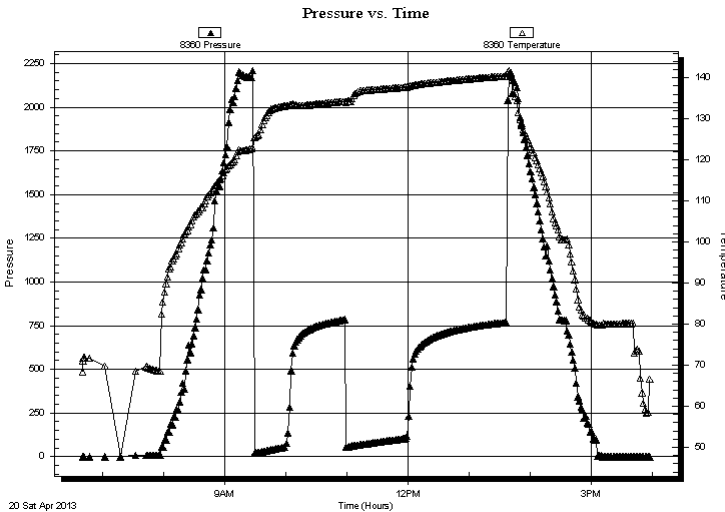
Formation: Pawnee	Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)	Tester: Wilbur Steinbeck
Time Tool Opened: 09:28:15	Unit No: 44
Time Test Ended: 15:57:15	
Interval: 4492.00 ft (KB) To 4539.00 ft (KB) (TVD)	Reference Elevations: 3176.00 ft (KB)
Total Depth: 4539.00 ft (KB) (TVD)	3166.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair	KB to GR/CF: 10.00 ft

Serial #: 8360 Inside

Press @ Run Depth: psig @ 4493.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.04.20 End Date: 2013.04.20	Last Calib.: 2013.04.20
Start Time: 06:40:05 End Time: 15:57:30	Time On Btm:
	Time Off Btm:

TEST COMMENT: 30 IF; Built to 7 1/4"
60 IS; No Blow
60 FF; BOB in 35 min
90 FS; No Blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
170.00	GMCO 20%G 30%M 50%O	0.84
50.00	FREE OIL & GAS 25%G 75%O	0.25
0.00	540 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52579

DST#: 6

ATTN: Paul Gunzelman

Test Start: 2013.04.20 @ 06:40:00

Tool Information

Drill Pipe:	Length: 3964.00 ft	Diameter: 3.80 inches	Volume: 55.60 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4492.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4470.00	
Hydraulic tool jars	5.00			4475.00	
safety Joint	3.00			4480.00	
Packer	5.00			4483.00	
					27.00 Bottom Of Top Packer
Packer	4.00			4488.00	
Stubb	1.00			4492.00	
Recorder	0.00	8360	Inside	4493.00	
Recorder	0.00	8353	Outside	4493.00	
Perforations	9.00			4502.00	
change Over Sub	1.00			4503.00	
blank spacing	32.00			4535.00	
change Over Sub	1.00			4536.00	
Bullnose	3.00			4539.00	47.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

10-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Patti #2-10

Job Ticket: 52579

DST#: 6

ATTN: Paul Gunzelman

Test Start: 2013.04.20 @ 06:40:00

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: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
170.00	GMCO 20%G 30%M 50%O	0.836
50.00	FREE OIL & GAS 25%G 75%O	0.246
0.00	540 GIP	0.000

Total Length: 220.00 ft Total Volume: 1.082 bbl

Num Fluid Samples: 0

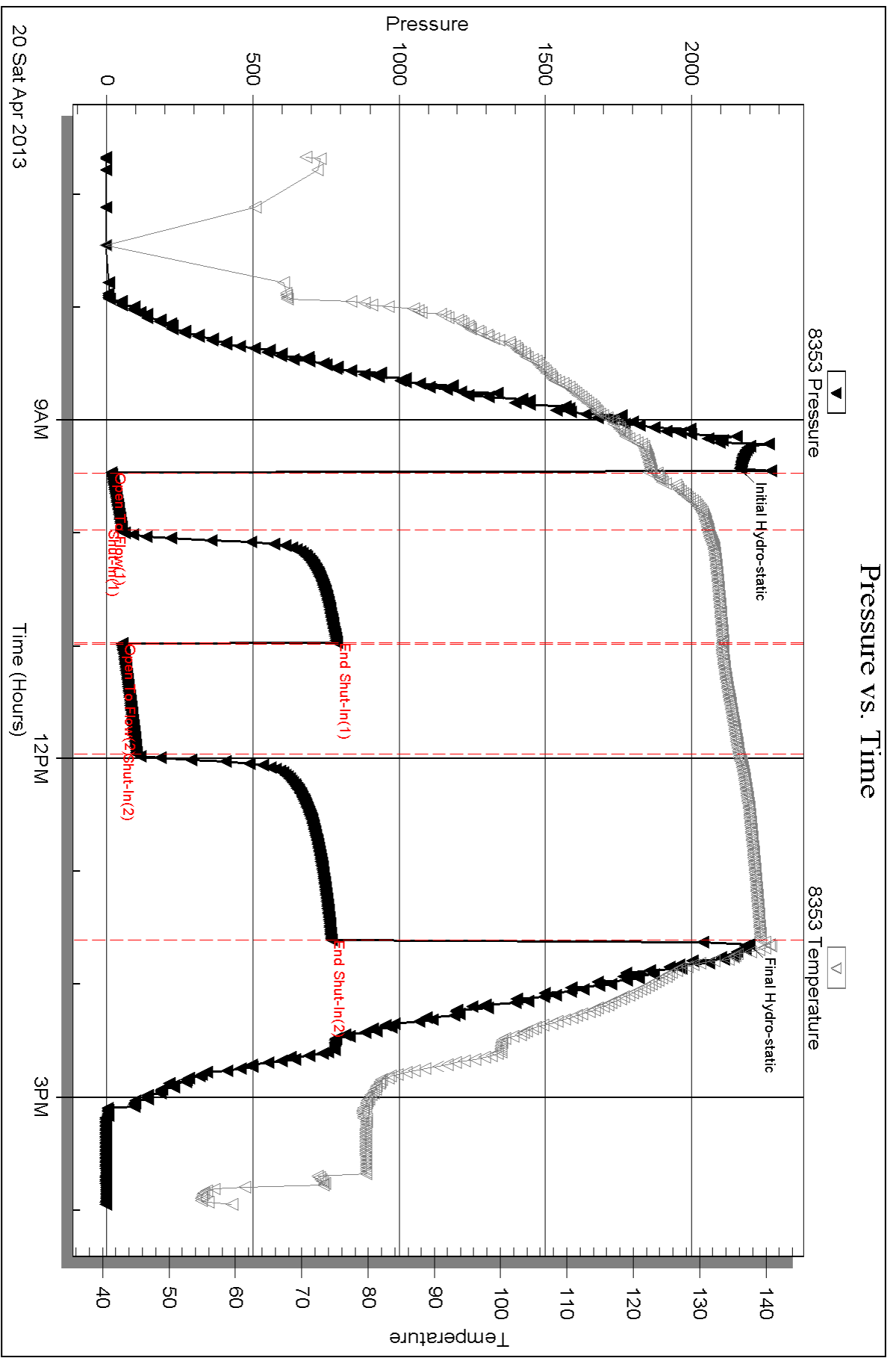
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



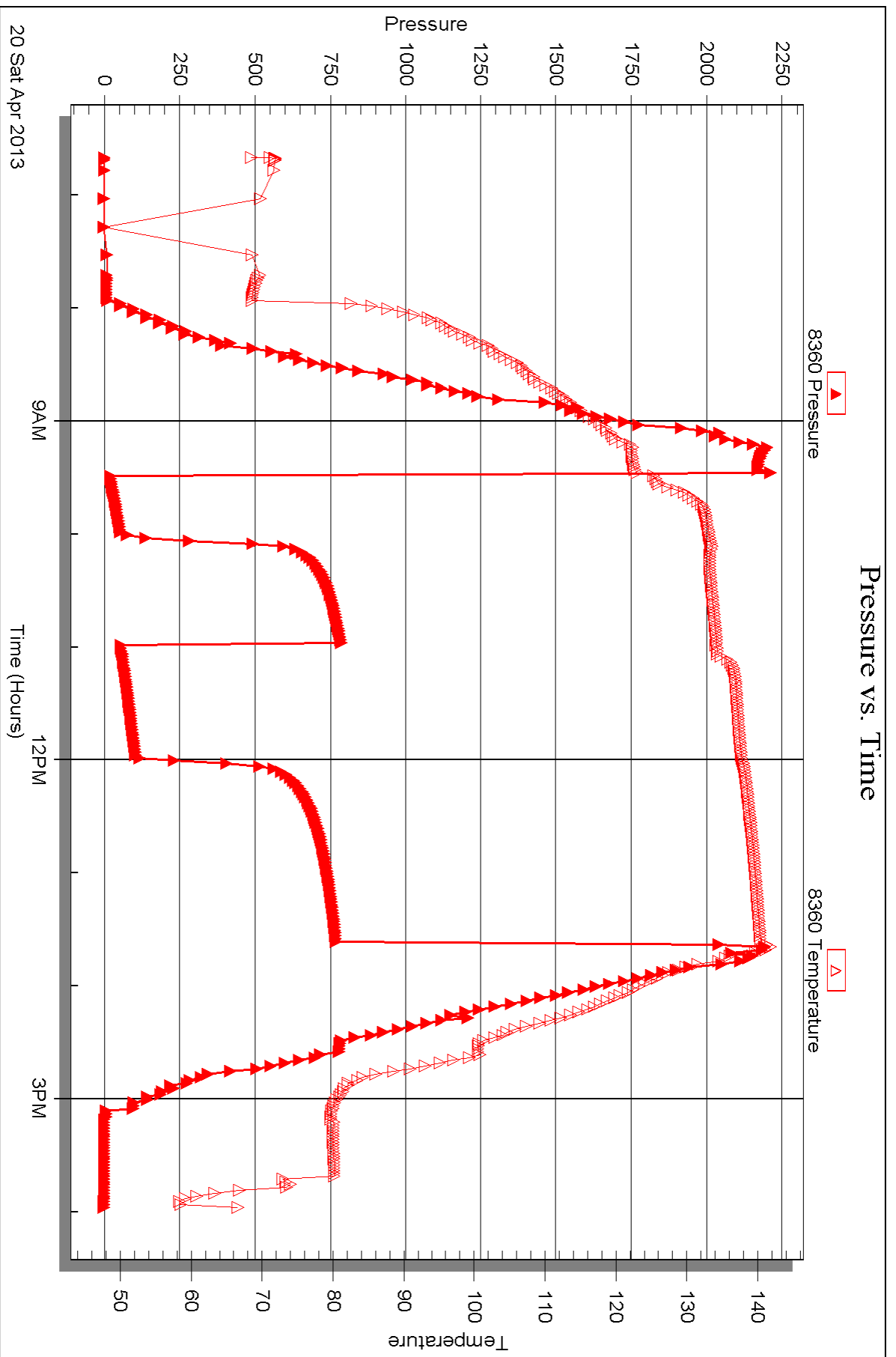
Serial #: 8360

Inside

Murfin Drilling Company Inc.

Pat# #2-10

DST Test Number: 6



Triobite Testing, Inc

Ref. No: 52579

Printed: 2013.04.24 @ 13:59:04



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50730

4/10

Well Name & No. Patti # 2-10 Test No. 1 Date 4/15/13
 Company Murfin Drilling Company Inc. Elevation 3176 KB 3166 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Paul Gunzelman Rig Murfin #14
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyene State KS

Interval Tested 3656 - 3695 Zone Tested Foraker
 Anchor Length ~~39~~ 39' Drill Pipe Run 3066' Mud Wt. 8.9
 Top Packer Depth 3651 Drill Collars Run ~~534~~ 534' Vis 64
 Bottom Packer Depth 3656 Wt. Pipe Run 0' WL 5.6
 Total Depth 3695 Chlorides 1000 ppm System LCM 4
 Blow Description IF - 1/4" blow built to 3/4"
ISI - No return
FF - No blow
FBI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>100 GOCM</u>	<u>5</u>	<u>35</u>	<u>60</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 5' BHT 124° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1848 Test 1150 T-On Location 07:45
 (B) First Initial Flow 16 Jars 250 T-Started 08:35
 (C) First Final Flow ~~19~~ 19 Safety Joint 75 T-Open 10:49
 (D) Initial Shut-In 1002 Circ Sub NC T-Pulled 14:19
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 15:55
 (F) Second Final Flow ~~20~~ 20 Mileage 154 RT 238.70 Comments _____
 (G) Final Shut-In 1065 Sampler _____
 (H) Final Hydrostatic 1733 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1713.70

Sub Total 1713.70

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50650

Well Name & No. Patti #2-10 Test No. 2 Date 4/16/13
 Company Martin Drilling Co. Elevation 3176 KB 3166 GL
 Address 250 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Paul G. Gurdeman Rig Martin #14
 Location: Sec. 10 Twp. 1s Rge. 32w Co. Cheyenne State KS

Interval Tested 4000 4053 Zone Tested Oread
 Anchor Length 53 Drill Pipe Run 3416 Mud Wt. 8.9
 Top Packer Depth 3995 Drill Collars Run 534 Vis 64
 Bottom Packer Depth 4000 Wt. Pipe Run 0 WL 5.6
 Total Depth 4053 Chlorides 1000 ppm System LCM

Blow Description 1F; Drill to 1/4" did back to surface after 20min
1st; NO Blow
FP; NO Blow
FSL; NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>OCM</u>	<u>25</u>		<u>75</u>	
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 129° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1986 Test 1250 T-On Location 17:00
 (B) First Initial Flow 16 Jars 250 T-Started 17:10
 (C) First Final Flow 17 Safety Joint 75 T-Open 19:27
 (D) Initial Shut-In 160 Circ Sub NA T-Pulled 22:57
 (E) Second Initial Flow 17 Hourly Standby _____ T-Out 02:45
 (F) Second Final Flow 17 Mileage 154 RT 238.70 Comments _____
 (G) Final Shut-In 223 Sampler _____
 (H) Final Hydrostatic 1972 Straddle _____ Ruined Shale Packer _____

Initial Open 30 Ruined Packer 320
 Initial Shut-In 60 Extra Copies _____
 Final Flow 30 Extra Recorder _____ Sub Total 0
 Final Shut-In 90 Day Standby _____ Total 2133.70
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1813.70

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52576

Well Name & No. Patt; 2-10 Test No. 3 Date 4-17-13
 Company Murfin Drilling Co. Elevation 3176 KB 3166 GL
 Address 250 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Paul Gunzelman Rig Murfin 14
 Location: Sec. 10 Twp. 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 4127 4198 Zone Tested LKC A-D
 Anchor Length 71 Drill Pipe Run 3581 Mud Wt. 9.1
 Top Packer Depth 4122 Drill Collars Run 534 Vis 60
 Bottom Packer Depth 4127 Wt. Pipe Run 0 WL 6.0
 Total Depth 4198 Chlorides 800 ppm System LCM 6

Blow Description IF; Built to 6'1/2"
1st; No Blow
FP; No Blow
PSI; No Blow

Rec	Feet of	%gas	%oil	%water	%mud
120		5	50	45	
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 120 BHT 131° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2031 Test 1250 T-On Location 15:00
 (B) First Initial Flow 34 Jars 250 T-Started 15:45
 (C) First Final Flow 45 Safety Joint 75 T-Open 18:40
 (D) Initial Shut-In 1288 Circ Sub T-Pulled 21:10
 (E) Second Initial Flow 50 Hourly Standby T-Out 22:50
 (F) Second Final Flow 62 Mileage 154 RT 238.70 Comments _____
 (G) Final Shut-In 1293 Sampler _____
 (H) Final Hydrostatic 1984 Straddle _____
 Shale Packer _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____

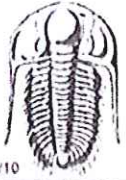
Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 90

Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1813.70

Sub Total 1813.70
 Total 1813.70
 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. 52577

Well Name & No. Patd; 2-10 Test No. 4 Date 4-18-13
 Company Murfin Drilling Co. Elevation 3176 KB 3166 GL
 Address 260 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Paul Gonzelman Rig Murfin 14
 Location: Sec. 10 Twp. 1s Rge. 31w Co. Cheyenne State KS

Interval Tested 4195 4305 Zone Tested LRC G-H
 Anchor Length 108 Drill Pipe Run 3645 Mud Wt. 9.3
 Top Packer Depth 4190 Drill Collars Run 534 Vis 68
 Bottom Packer Depth 4195 Wt. Pipe Run 0 WL 5.6
 Total Depth 4303 Chlorides 900 ppm System LCM 6

Blow Description 1F; Built to 1/2"
1st; No blow
FF; No blow
1st; No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mod</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 129° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2,151 Test 1250 T-On Location 12:45
 (B) First Initial Flow 18 Jars 250 T-Started 13:20
 (C) First Final Flow 21 Safety Joint 75 T-Open 15:25
 (D) Initial Shut-In 190 Circ Sub NA T-Pulled 18:25
 (E) Second Initial Flow 21 Hourly Standby T-Out 20:25
 (F) Second Final Flow 23 Mileage 154 RT 238.70 Comments _____
 (G) Final Shut-In 133 Sampler _____
 (H) Final Hydrostatic 2,093 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 1813.70
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1813.70

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52578

Well Name & No. Patti #2-10 Test No. 5 Date 4-19-13
 Company Murkin Drilling Co. Elevation 3176 KB 3166 GL
 Address 250 N Water- Ste 300 White KS 67202
 Co. Rep / Geo. Paul Guncelmann Rig Murkin 14
 Location: Sec. 10 Twp. 1s Rge. 37w Co. Cherokee State Ks

Interval Tested 4292 4340 Zone Tested LKC 'J'
 Anchor Length 48 Drill Pipe Run 3741 Mud Wt. 9.3
 Top Packer Depth 4287 Drill Collars Run 534 Vis 68
 Bottom Packer Depth 4292 Wt. Pipe Run 0 WL 5.6
 Total Depth 4340 Chlorides 900 ppm System LCM 6

Blow Description IF; Bail to 3/4"
ISI; No Blow
FF; No Blow
FST; No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</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

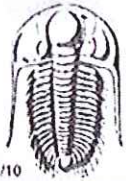
Rec Total 5 BHT 130° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2178 Test 1250 T-On Location 5:00
 (B) First Initial Flow 18 Jars 250 T-Started 5:15
 (C) First Final Flow 25 Safety Joint 75 T-Open 8:05
 (D) Initial Shut-In 1020 Circ Sub NA T-Pulled 11:05
 (E) Second Initial Flow 23 Hourly Standby T-Out 12:50
 (F) Second Final Flow 35 Mileage 154 RT 238.70 Comments _____
 (G) Final Shut-In 843 Sampler _____
 (H) Final Hydrostatic 2142 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1813.70
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1813.70

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 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. 52579

Well Name & No. Patti 2-10 Test No. 6 Date 4-20-13
 Company Morton Drilling Co Elevation 3176 KB 3166 GL
 Address 250 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Paul Gonzalez Rig Morton 14
 Location: Sec. 10 Twp. 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 4492 4539 Zone Tested Pounce
 Anchor Length 47 Drill Pipe Run 3964 Mud Wt. 9.3
 Top Packer Depth 4487 Drill Collars Run 534 Vis 69
 Bottom Packer Depth 4492 Wt. Pipe Run 0 WL 6.0
 Total Depth 4539 Chlorides 1700 ppm System LCM 4

Blow Description IF; Built to 7'4"
1st; No blow
FF; BOB in 35 min
FSL; No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Free oil + GRS</u>	<u>25</u>	<u>75</u>		
<u>270</u>	<u>G.M.C.O</u>	<u>20</u>	<u>50</u>	<u>0</u>	<u>30</u>
	<u>540' GIP</u>				

Rec Total ~~270~~ 20 BHT 141° Gravity 38.2018 = 37 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 2168 Test 1250 T-On Location 6:10
 (B) First Initial Flow 18 Jars 250 T-Started 6:40
 (C) First Final Flow 51 Safety Joint 75 T-Open 9:50
 (D) Initial Shut-In 786 Circ Sub T-Pulled 13:30
 (E) Second Initial Flow 52 Hourly Standby T-Out 16:00
 (F) Second Final Flow 103 Mileage 154 RT 238.70 Comments
 (G) Final Shut-In 768 Sampler
 (H) Final Hydrostatic 2198 Straddle Ruined Shale Packer

Initial Open 30 Shale Packer Ruined Packer
 Initial Shut-In 60 Extra Packer Extra Copies
 Final Flow 60 Extra Recorder Sub Total 0
 Final Shut-In 90 Day Standby Total 1813.70
 Accessibility MP/DST Disc't
 Sub Total 1813.70

Approved By _____ Our Representative [Signature]

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PO Box 93999
Southlake, TX 76092

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

INVOICE

*acct
prod - LH*

Invoice Number: 135660
Invoice Date: Apr 11, 2013
Page: 1

OPERATOR PAY MDC
LEASE: B M

Now Includes:



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

Customer ID	Field Ticket #	Payment Terms	
Murfin	58987	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Apr 11, 2013	5/11/13

Quantity	Item	Description	Unit Price	Amount
235.00	MAT	Patti #2-10 Class A Common	17.90	4,206.50
8.00	MAT	Chloride	64.00	512.00
246.75	SER	Cubic Feet	2.48	611.94
1,080.15	SER	Ton Mileage	2.60	2,808.39
1.00	SER	Surface	1,512.25	1,512.25
95.00	SER	Pump Truck Mileage	7.70	731.50
95.00	SER	Light Vehicle Mileage	4.40	418.00
1.00	SER	Credit Rig Time	900.00	-900.00
1.00	CEMENTER	Andrew Forslund		
1.00	EQUIP OPER	Wayne Mc Ghghy		
1.00	EQUIP OPER	Dane Retzloff		
1.00	OPER ASSIST	Kevin Ryan		
1.00	OPER ASSIST	David Scariano		

ALL PRICES ARE NET, PAYABLE
30 DAYS FOLLOWING DATE OF
INVOICE. 1 1/2% CHARGED
THEREAFTER. IF ACCOUNT IS
CURRENT, TAKE DISCOUNT OF *5%*
\$ 3,465.26 *on*
ONLY IF PAID ON OR BEFORE
May 6, 2013

Subtotal	9,900.58
Sales Tax	391.64
Total Invoice Amount	10,292.22
Payment/Credit Applied	
TOTAL	10,292.22

Deduct

kw
DD
- 3465.26
6826.96

ALLIED OIL & GAS SERVICES, LLC 058987

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:

Oakley

DATE <i>4-11-13</i>	SEC. <i>10</i>	TWP. <i>1</i>	RANGE <i>37</i>	CALLED OUT	ON LOCATION	JOB START <i>2:30pm</i>	JOB FINISH <i>8:00pm</i>
LEASE <i>Patti</i>	WELL# <i>2-10</i>	LOCATION <i>Bird city 12N 3E 2N</i>			COUNTY <i>Cheyenne</i>	STATE <i>KS</i>	
OLD OR NEW (Circle one)		<i>NE info</i>					

CONTRACTOR *MucFin 74* OWNER *same*

TYPE OF JOB *surface*

HOLE SIZE *12 1/4* T.D. *227'* CEMENT AMOUNT ORDERED *2.35 sks com*

CASING SIZE *8 1/4* DEPTH *227'* 306cc

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM COMMON *2.35 sks @ 12.90 4306.50*

MEAS. LINE SHOE JOINT POZMIX @

CEMENT LEFT IN CSG. *15'* GEL @

PERFS. CHLORIDE *8.5 sks @ 64.00 512.00*

DISPLACEMENT *13.50 bbl* ASC @

EQUIPMENT @

PUMP TRUCK CEMENTER *Forstland Mesby* @

322 HELPER *Dane Kretzloff* @

BULK TRUCK DRIVER *Kevin Ryan* @

600 DRIVER *David Scarnon* @

BULK TRUCK @

323 @

HANDLING *246.25 @ 2.48 611.94*

MILEAGE *2.60 ton/mile 11.37 @ 28.08 319*

TOTAL *8138.83*

REMARKS:

Compressor on 600 would not work. Waited 2 hours on 323 to show up.

Cement did circulate

thank you

SERVICE

DEPTH OF JOB *220'* ~~152.25~~

PUMP TRUCK CHARGE *1572.25*

EXTRA FOOTAGE @

MILEAGE *9.5 miles @ 2.20 231.50*

MANIFOLD @

Light vehicle @ 4.40 418.00

TOTAL *2661.75*

CHARGE TO: *MucFin*

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

Owe Rig wait time for 2 hrs.

@ *450.00 900.00*

@

@

@

TOTAL *\$ 900.00*

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

SALES TAX (If Any) _____

TOTAL CHARGES *9,900.48*

DISCOUNT *3,465.16* IF PAID IN 30 DAYS

6,435.31

PRINTED NAME *Coraco Amador*

SIGNATURE *Coraco Amador*



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



Invoice

DATE	INVOICE #
4/21/2013	24322

BILL TO
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661
USED FOR <u>IC 103</u>
APPROVED <u>ST</u>

- Acidizing
- Cement
- Tool Rental

Chynoweth, KS

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#2-10	Patti	Dunay, NE		Oil	Development	Cement LongStri...	Don
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				150	Miles	6.00	900.00
578D-L	Pump Charge - Long String - 4679 Feet				1	Job	1,500.00	1,500.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
290	D-Air				5	Gallon(s)	35.00	175.00T
403-5	5 1/2" Cement Basket				3	Each	250.00	750.00T
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
409-5	5 1/2" Turbolizer				15	Each	90.00	1,350.00T
413-5	5 1/2" Roto Wall Scratcher				15	Each	40.00	600.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				200	Sacks	13.50	2,700.00T
276	Flocele				50	Lb(s)	2.00	100.00T
283	Salt				1,000	Lb(s)	0.20	200.00T
284	Calseal				10	Sack(s)	35.00	350.00T
285	CFR-1				141	Lb(s)	4.00	564.00T
330	Swift Multi-Density Standard (MIDCON II)				300	Sacks	16.50	4,950.00T
276	Flocele				150	Lb(s)	2.00	300.00T
581D	Service Charge Cement				500	Sacks	2.00	1,000.00
583D	Drayage				3,814.43	Ton Miles	1.00	3,814.43
	Subtotal							20,778.43
	Out-Of-State Sale, Exempt From Sales Tax						0.00%	0.00

We Appreciate Your Business!

Total

\$20,778.43



Services, Inc.

CHARGE TO: Albion Dairy Co.
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET NO: **24322**

PAGE 1 OF 2

1. <u>Neos Ks</u>	WELLPROJECT NO. <u>2-113</u>	LEASE <u>R2 441</u>	COUNTY/PARISH <u>Dorchester</u>	STATE <u>NE</u>	CITY _____	DATE <u>7-21-13</u>	OWNER _____
2. <u>Ness City, KS</u>	TICKET TYPE <u>RESERVE</u>	CONTRACTOR <u>Co</u>	RIG NAME NO. <u>#14</u>	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>SE/Berkshires, NE</u>	ORDER NO. _____	WELL LOCATION _____
3. _____	WELL TYPE <u>Oil</u>	WELL CATEGORY <u>in field</u>	JOB PURPOSE <u>Cement Logging</u>	WELL PERMIT NO. _____	_____	_____	_____
4. _____	INVOICE INSTRUCTIONS _____	_____	_____	_____	_____	_____	_____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE #113	150	mi			1.00	150.00
578					Ramp Charge - cement logging	1	ea	5679	EA	1500.00	1500.00
281					Liquid RCL	4	gal			2500.00	10000.00
281					Mud Flush	500	gal			1.25	625.00
281					D-Air	5	gal			3500.00	17500.00
281					Cement Baskets	3	ea	5 1/2 in		2500.00	7500.00
413					Lotul Drain Plug & Bottle	1	ea	5 1/2 in		2500.00	2500.00
413					Fusort Elast Stone w/ 1/2 in cup	1	ea	5 1/2 in		3500.00	3500.00
413					Turbulizers	15	ea	5 1/2 in		9000.00	135000.00
413					Roto Level Scraper	1	ea	5 1/2 in		4000.00	4000.00
419					Rotating Head Rod	1	ea	5 1/2 in		2000.00	2000.00

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.

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

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

DATE SIGNED: 7-21-13 TIME SIGNED: 2:30 A.M. P.M.

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	6800.00
TOTAL	20,778.43

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

SWIFT OPERATOR: Alan Saunders APPROVAL: _____

Thank You!



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

TICKET CONTINUATION

TICKET No. 3-1822

CUSTOMER
Mud Pie Dr. Co.

WELL
2-10 F2H

DATE
1-31-13

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE	ACCOUNTING	TIME	DESCRIPTION	QTY		UNIT PRICE		AMOUNT
					LOG	AGE	DR	DR	
325		2		Standard Cement	200	SKS	18800	105	270000
274		2		Flavel	50	lbs	200		10000
283		2		Sell	1000	lbs	20		20000
284		2		Calssal	940	lbs	3500		35000
285		2		CFR-1	141	lbs	400		56400
325		2		SUD	300	SKS	29700	105	495000
296		2		Flavel	150	lbs	200		30000
583		2							
587		2							
583		2							

SERVICE CHARGE
MESSAGE TOTAL WEIGHT
CHANGE 50859 (150) 150

CUBIC FEET
500 SKS
3814.485

UNIT PRICE
200
100
3814.48

CONTINUATION TOTAL
13978.48

JOB LOG

SWIFT Services, Inc.

DATE 1-21-13 PAGE NO. 1

CUSTOMER Merlin Dig Co. WELL NO. 2-10 LEASE Patti JOB TYPE Cement Logging TICKET NO. 27322

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
4/21	2120 2240							TD-4680' description of operation and materials On location - Rig L.D. Rat Hole Start 5 1/2 15.5 #/ft casing Insert Float Shoe w/ F. 71-40 L.D. Baffle - SJ- 21 1/4 EF. = 4658' (111,000) Cent. 1 thru 13 - 34 + 44 Bskt Pin end #10 - 35 - 45 CIR @ #56
4/22	0100							Fin run casing - Drop ball start CIR & Baffle casing Fin CIR Phos RH - 30 SKS SAND ALT - 20 SKS SAND
		6	12				700	Pump 500 gal Mud Flush
		5	20				300	Pump 20 BBL KCL Flush
		5 1/2	140				300	Start 250 SKS SAND @ 11.2 #/gal
							300	Start 200 SKS EDT @ 15.5 #/gal
			48				100	Fin cut - Wash Pump & Lines Drop L.D. Plug, Start Dropl - 20 KCL and 91 H2O
		9	50				350 700	Casht cut left
		9					500 600	Psi slowly incr
		8	90				900	Slow rate
		7	100				1100	" "
		6	105				1200	" "
	0330	—	111				1350 1500	Plug Down - Hold - Release & Hold Job Complete Washes & Reaps
								20 SKS SAND @ 11.2 #/gal circulate to bit <u>100</u>