



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1166325
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: _____



1166325

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

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

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

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

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

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

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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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> <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

October 31, 2013

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

Re: ACO1
API 15-153-20937-00-00
Wilkinson 'GC' 1-4
SE/4 Sec.04-02S-36W
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

MDCI Wilkinson 'GC' #1-4 1990' FSL 425'FEL Sec. 4-2S-36W 3332' KB							TransWestern Cahoj #1-9 NE SW NE NE Sec. 9-2S-36W 3347' KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	3231	+101	-11	3238	+94	-18	3235	+112
B/Anhydrite	3263	+69	-9	3268	+64	-14	3269	+78
Neva	3727	-395	----	3729	-397	NA	-----	-----
Stotler	3988	-656	-1	3992	-660	-5	4002	-655
Topeka	4058	-726	+3	4061	-729	----	4076	-729
Heebner	4232	-900	-2	4232	-900	-2	4245	-898
Lansing	4284	-952	Flat	4286	-954	-2	4299	-952
Stark	4503	-1171	+3	4508	-1176	-2	4521	-1174
BKC	4554	-1222	+3	4556	-1224	+1	4572	-1225
Pawnee	4678	-1346	+5	4681	-1349	+2	4698	-1351
Cherokee	4753	-1421	+5	4760	-1428	-3	4772	-1425
Mississippi	4990	-1658	----	4990	-1658	NA	NR	
RTD	5040	-1708					4920	
LTD				5045				

Remarks

The electric log measurements correlate from 2' to 5' lower to the drilling measurements.

Formation tops and lithology on this report have been corrected to the electric log.

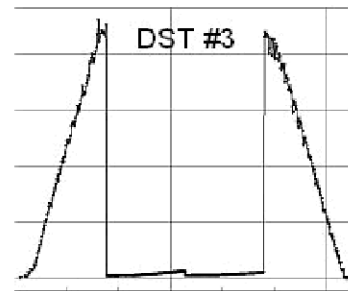
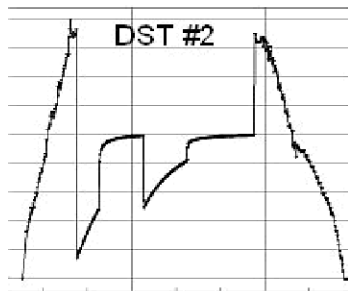
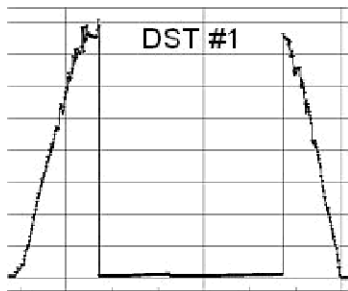
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

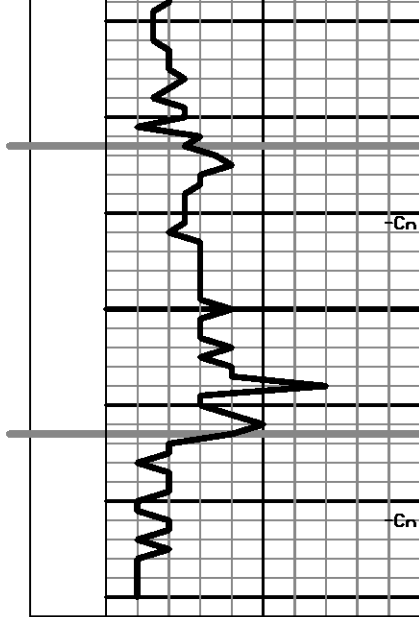
Robert L. Milford

Drill Stem Test Charts

Drill Stem Test by Trilobite Testing, Inc.



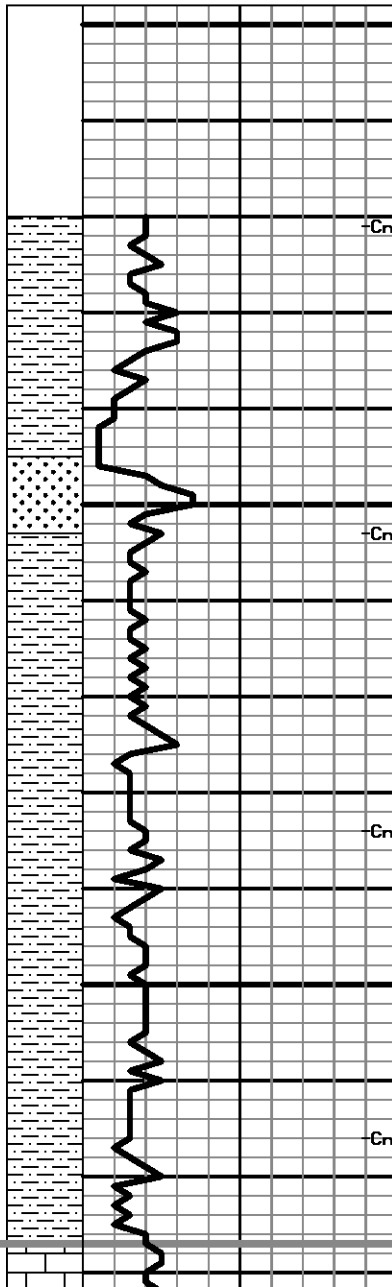
LITH.	0	DRILL TIME (MIN/FT)	10	DEPTH	SAMPLE DESCRIPTIONS	REMARKS
				3200		



3250

Stone Corral 3238' (+94) EL

B/Stone Corral 3268' (+64) EL



3600

3650

3700

Mud displaced from 3304' to 3318'
 Call depth 3320' @ 9:23 am on 8-22-13
 Morgan Mud check @ 3335': 67 Vis,
 8.6 Wt, 5.2 WL, 600 ppm Chl, trace LCM
 Samples start 3620' @ 7:15 pm on 8-22-13

Sdy Sh: red-brn, some soft & gummy, intermixed w/ small amnt of Sd: lt gry, fn-vry fn grain, sli calc, semi fri-brittle, pr vis por, NS

Sd: lt gry, fn-vry fn grain, some sli calc, semi fri-brittle, pr vis por, NS, w/ some Sdy Sh: red-brn
 Sdy Sh: red-brn, w/ some Sd: A.A.

Sdy Sh: red-brn, some soft & gummy, w/ small amnt of Sd: A.A.

Sdy Sh: red-brn, some soft & gummy, small amnt Sdy Sh: grn

Sdy Sh: red-brn, some soft & gummy, small amnt Sh: gry & Sdy Sh: grn

Sdy Sh: A.A. w/ some Sdy Sh-Shly Sd: lt grn, fn-vry fn grain, pr vis por, NS

LS: wh-crm, fxln, fos, sub chky-prtly dns w/ some chky-um-ghly, pr vis por, NS

Neva 3729' (-397) EL

chky-vry chky, pr vis por, NS

Sdy Sh: red-brn, some Sh: gry & grn

Cn 3750

Sdy Sh & Sh: A.A. w/ small amnt Sd: lt gry, fn-vry fn grain, semi fri, pr vis por, NS

Sdy Sh: red-brn, some soft & gummy w/ small amnt Sh & Sd: A.A.

Sd: lt gry, fn-vry fn grain, sli calc, semi fri-brittle, pr vis por, NS

Cn

Sdy Sh: red-brn, some soft & gummy, w/ small amnt Sh: grn & gry

Red Eagle 3789' (-457) EL

Dol: crm, fxln, sli fos, sli sub chky, pr por, NS & LS: lt-med gry, fxln, sli chty (crm-org), sli shly in prt, sub chky-prtly dns, pr por, NS

3800

LS: lt gry, fxln, sli dolomitic in prt, sub chky-prtly dns, pr por, NS

Sdy Sh: red-brn, some soft & gummy, w/ some Sh: red-brn, grn, gry

Cn

Sdy Sh & Sh: A.A. w/ some Sdy Sh: lt-med gry

Foraker 3841' (-509) EL

Cn

• Dol-Dol LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns, pr por, scat blk (some tarry) sptd-sub sat stn, NSFO, no odor

3850

• LS: crm-tan, fxln, fos in prt, some sli shly, sub chky-prtly dns, pr por, vry scat blk sptd-sub sat stn, NSFO, no odor

• LS: crm-lt gry, fxln, sub chky-prtly dns w/ some chky, pr por, tr blk sptd-sub sat stn, NSFO, no odor
Shly LS: med gry, fxln, gritty, pr por, NS

Cn

Dol-Dol LS: wh-lt tan, fxln, sub chky-prtly dns w/ some chky-vry chky, pr vis por, NS

Dol LS: brn, fxln, prtly dns-gritty, pr por, NS

Sh: med gry

Sh: red-brn, w/ gry & some grn

30" 3900

3900

Sh: A.A. w/ some drk gry

Cn

• Dol-Dol LS: crm-tan, fxln, fos in prt, sli chty (crm), sub chky-prtly dns, tr blk patchy stn, NSFO, no odor

Sh: red-brn & purple, tr grn & gry

Cn

Dol & LS: wh-lt gry, fxln, fos in prt, sub chky-prtly dns, pr por, NS

Sh: red-brn, med-drk gry, some grn

3950

Sh: red-brn, some gry & grn

Morgan Mud check @ 3948': 52 Vis, 9.0 Wt. 6.4 WL. 600 ppm Chl. 0# LCM

Sh: red-brn, some gry & grn

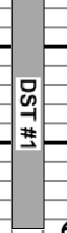
Dol & LS: crm-med gry, fxln, sli fos, some sli dol, sub chky-prtly dns, pr por, NS
Sh: red-brn & gry, some grn

LS: crm-lt gry, fxln, fos-ool, some sli dol, sub chky-prtly dns, pr por, NS
LS: A.A., pr por, NS
Sh: red-brn & gry, some grn

4000

• LS: wh-lt gry, fxln, fos, sub chky-prtly dns w/ some chky-vry chky, pr por, vry scat blk dead sptd-sub sat w/ tr sat stn, NSFO, no odor
Sh: red-brn, some gry & grn

• LS: crm-tan, fxln, fos-ool, sub chky-prtly dns, pr por, tr blk dead sptd-sub sat stn, NSFO, no odor



4050

• LS: crm-lt gry, fxln, ool-fos, tr calcite, sub chky-prtly dns, pr intrprtcal w/ tr small vug por, fr amnt lt-drk brn sptd-sub sat w/ tr sat stn, S-FSFO (pin point-small beads), no odor
• Sdy LS: crm-red-brn, fxln, vry fn grain sd, shly in prt, pr por, tr blk asph sptd stn, NSFO, no odor
Sh: red-brn, some grn

• LS: crm, fxln, fos-ool in prt, some shly (red-brn, mottled), sub chky-prtly dns, pr por, few pcs w/ blk sptd-patchy stn, NSFO, no odor
Sh: red-brn, some gry-grn

LS: wh-crm, fxln, fos-ool in prt, some shly (red-brn, mottled), sub chky-prtly dns w/ some chky, pr por, NS
LS: A.A., incrs chky-vry chky, pr por, NS

4100

Sh: red-brn, gry, grn
Sdy Sh-Shly Sd: red-brn, calc, w/ tr Sd: lt gry, fn-vry fn grain, calc, fri, pr vis por, NS

Sh: red-brn, some gry & grn

• LS: wh-tan, fxln, ool in prt, sub chky-prtly dns w/ some chky-vry chky, tr moldic por, cpl pcs w/ blk dead-tarry stn, NSFO, no odor
LS: crm-tan, fxln, sub chky-dns, pr por, NS

4150

Calc Sh: lt red-brn to lt purple, some lt gry

Calc Sh: A.A. w/ small amnt Sh: grn & red-brn

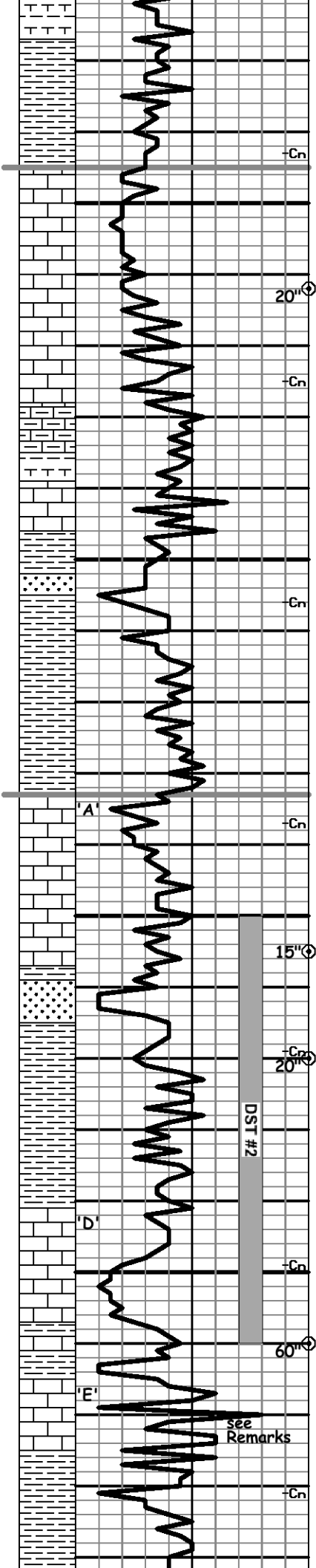
Calc Sh: lt gry, w/ some Sh: red-brn

Stotler 3992' (-660) EL

DST #1 4025'-4049' Stotler
IF: surface blow FF: blow built to 0.75"
Rec: 45' Mud w/ oil spots
IFP: 13-14#/30" ISIP: 30#/60"
FFP: 15-17#/60" FSIP: 25#/90"
Ran 25 stand short trip prior to DST #1
Pipe Strap @ 4049': Strap short 0.34'
Straight Hole Survey @ 4049': 1.25° Dev.
Morgan Mud check @ 4049': 69 Vis, 8.9 Wt, 5.6 WL, 600 ppm Chl, 0# LCM

Topeka 4061' (-729) EL

Caught smpl @ 4145'. No circ smpl caught



Calc Sh: med gry, w/ some red-brn & tr drk gry

Sh: gry, red-brn, grn

4200

• LS: crm, fxl, ool in prt, sub chk-prt dns, pr por, few pcs w/ brn-blk sptd stn, NSFO, no odor

LS: wh-crm, fxl, sli ool, sub chky-prtly dns w/ some chky, pr introol por, NS

20"

LS: crm-tan, fxl, sub chky-dns w/ some chky, pr por, NS

Shly LS: gry, fxl, gritty, pr por, NS

Calc Sh: med-drk gry, w/ some Sh: grn

LS: tan-brn, fxl, prtly dns-dns, pr por, NS

4250

Sh: red-brn, gry, grn

Sd: crm-lt gry, fn-vry fn grain, some glauc, fri-brittle, pr vis por, scat blk dead-asph spkld-sub sat stn, NSFO, no odor

Sh: red-brn, gry, grn

Sh: A.A.

4300

• LS: crm-tan, fxl, ool (small) in prt, sub chky-dns, some fr ooc por, tr brn-blk dead sptd stn, NSFO, no odor

LS: tan, fxl, prtly dns-dns, pr por, NS

15"

Sh: red-brn, gry, grn. intermixed w/ some amnt of

• Sd: lt gry, fn-vry fn grain, sli calc, fri-brittle, pr vis por, tr blk dead-asph spkld-sub sat stn, NSFO, no odor

20"

Sh: red-brn, gry, grn

Sh: A.A.

4350

• LS: wh-crm, fxl, fos-ool (crs, granular) in prt, tr pyr, sub chky-prtly dns & becoming chky-vry chky w/ depth, pr-fr w/ some gd intrprt & vug por, fr amnt drk brn-blk patchy-sub sat w/ some sat stn, FSFO (some thick-hvy beads), sli odor

LS: tan-med gry, fxl, prly dns, pr por, NS

Sh: red-brn, w/ some gry & grn

LS: crm-lt gry, fxl, sli chty (tan), sub chky-prtly dns, pr por, NS

60"

Sh: red-brn, grn, gry

Sh: A.A.

Oread 4198' (-866) EL

Lansing 4286' (-954) EL

DST #2 4300'-4360' LKC 'D' zn

IF: BOB in 3" ISI: no blow back

FF: BOB in 5" FSI: no blow back

Rec: 2050' TOTAL FLUID:

690' MCW (70% W, 30% M)

1,360' MCW (95% W, 5% M)

Chl ppm: 30,000 DST: 700 Mud

IFP: 173-588#/30" ISIP: 1239#/60"

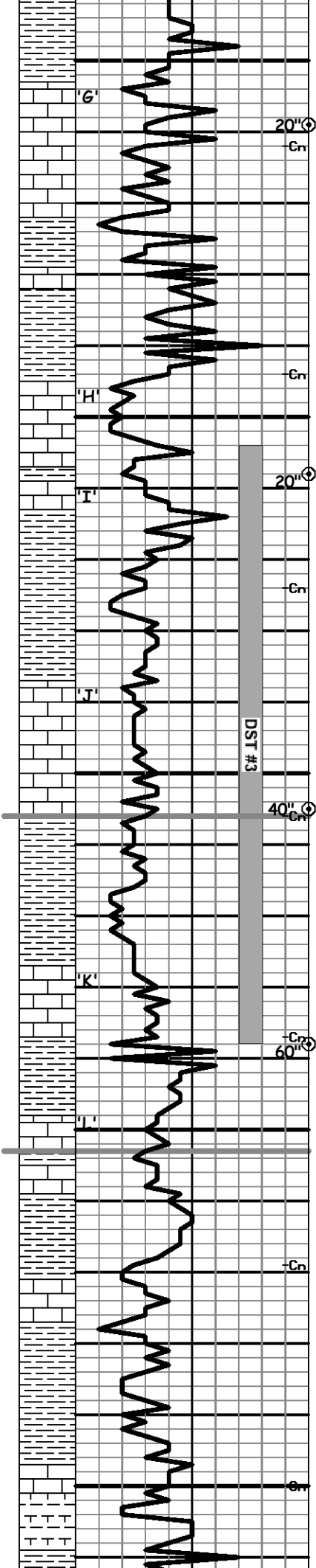
FFP: 612-1019#/60" FSIP: 1243#/90"

Ran 6 stand short trip prior to DST #2. On trip out of hole after short trip, pulled very tight on 10th stand out, worked free, went back to bottom and conditioned another hour before trip out for DST

Morgan Mud check @ 4360': 60 Vis, 9.2 Wt, 6.0 WL, 700 ppm Chl, 0# LCM

On again-off again problems with Automatic Driller until repaired at about 4615'

see Remarks



4400

20" Gn

4450

20" Gn

40" Cr

60" Cr

4500

4550

4600

Sh: red-brn, gry-grn

LS: crm-lt gry, fxln, sli fos, shly in prt (red-brn, mottled), sub chky-prtly dns, pr por, NS

LS: crm-tan, fxln, sli fos, sub chky-dns w/ some chky, pr por, NS

Sh: red-brn, gry, grn

LS: drk gry-brn, fxln, sli fos, sli shly, prtly dns, pr por, NS

Sh: red-brn, gry, grn, brn

LS: crm-tan, fxln, sli fos, sli shly in prt (red-brn, mottled), sub chky-prtly dns w/ some chky, pr w/ tr pin point por, tr brn-blk dead sptd stn, NSFO, no odor

LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns, pr por, NS

Sh: red-brn, gry, grn

Sh: A.A. w/ some red-brn, silty, & Sdy Sh: gry-grn

Sh: red-brn, gry, grn

LS: crm-lt gry, fxln, ool-fos in prt, sub chky-prtly dns w/ some chky-vry chky, pr w/ some fr intrprtical & tr small vug por, scat med brn-blk sptd-sub sat & tr sat stn, S-FSFO, no odor

Sh: red-brn (some sdy), gry (some silty), & grn

Sh: A.A. w/ small amnt of Shly Sd: lt gry, fn grain, pr vis por, NS

LS: crm-lt gry, fxln, sli fos, sub chky-prtly dns

Sh: red-brn, gry, grn

LS: crm-lt gry, fxln, sli fos-ool, sub chky-prtly dns, pr por, NS

LS: A.A.

Sh: red-brn, gry, grn

LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS

Sh: red-brn, gry, grn

Sh: red-brn, gry, grn w/ some Calc Sh: lt gry

LS: crm-tan, fxln, fos-ool in prt, sub chky-dns, pr por, tr brn-blk dead sptd stn, NSFO, no odor

Sh: red-brn, gry, grn w/ some Calc Sh: lt gry

Morgan Mud check @ 4488': 62 Vis, 9.2 Wt, 6.0 WL, 700 ppm Chl, 0# LCM

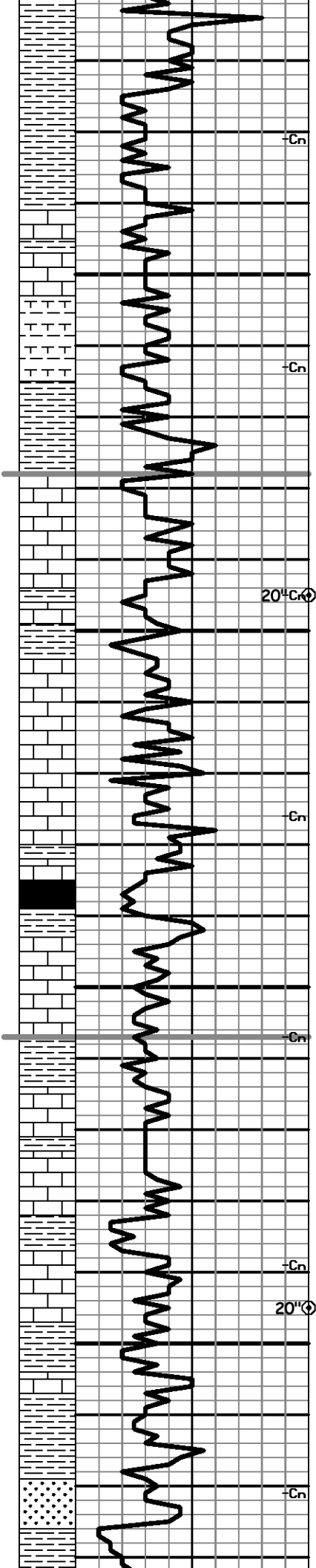
Stark 4509' (-1177) EL

DST #3 4454'-4538' LKC 'J'-'K' zns
 IF: surface blow died in 5" FF: no blow
 Rec: 5' Mud (100% M)
 IFP: 18-20#/30" ISIP: 61#/60"
 FFP: 20-22#/30" FSIP: 45#/60"

Ran 15 stand short trip prior to DST #3

B/KC 4556' (-1224) EL

Morgan Mud check @ 4586': 78 Vis, 9.1 Wt, 6.0 WL, 800 ppm Chl, 2# LCM



4650

4700

4750

4800

Sh: red-brn, gry, grn w/ some brn

Sh: red-brn, gry, grn

• LS: crm-lt gry, fxln, ool in prt, sub chky-prtly dns, pr por, tr brn-blk dead sptd stn, NSFO, no odor

LS: A.A.

Calc Sh: lt gry

Sh: red-brn w/ tr drk gry, & Calc Sh: lt-med gry

Sh: red-brn, gry, grn

LS: wh-tan, fxln, ool in prt w/ some fos, some brn mineralization, sub chky-prtly dns w/ some chky-vry chky, some pr-fr dvlpd moldic por, NS, no fluor (on brn mineralization), no cut, no odor

Sh: gry (some drk gry), red-brn, grn

LS: crm, fxln, sli fos, sli chty (wh-tan), sub chky-prtly dns w/ some chky, pr por, NS

LS: lt gry, fxln, sli shly, sub chky-prtly dns, pr por, NS

Sh: Black Carb w/ med-drk gry, & small amnt red-brn & grn

LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns w/ some chky-vry chky, pr por, NS

• LS: crm-tan, fxln, fos in prt, sub chky-prtly dns, pr por, tr brn-blk dead sptd stn, NSFO, no odor

LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS

Sh: grn (some sdy), red-brn, gry, some mottled red-brn & grn

LS: wh-crm, fxln, sli fos, chky-prtly dns w/ some vry chky, pr por, NS

Sh: red-brn, gry, grn

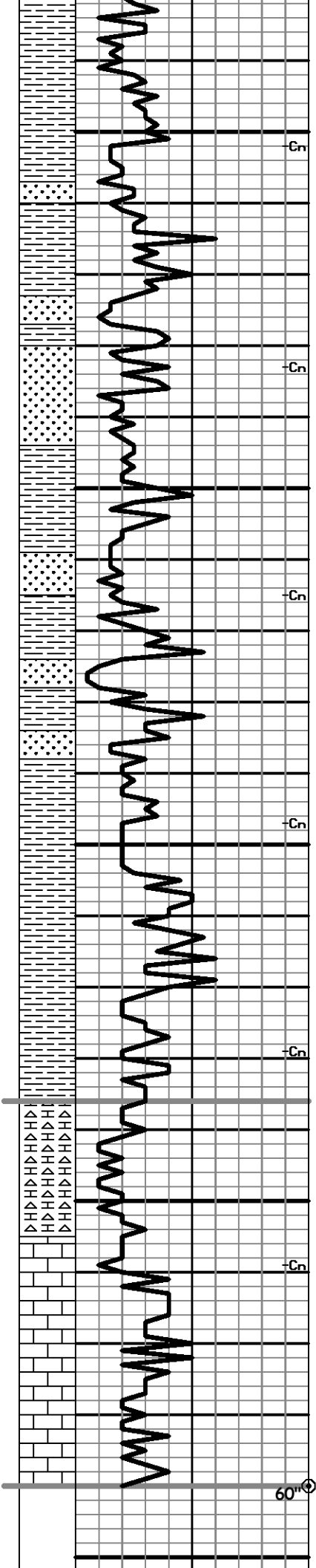
LS: A.A.

Sh: red-brn & grn, w/ small amnt Sd: wh-lt gry, fn-med grain, sli calc, semi fri-brittle, pr vis por, NS

Sh: A.A. w/ some Sd: crm-med gry, fn-med grain, sli calc, semi fri-brittle, pr vis por, NS w/ some loose Sd grains, clr, crs, sub rnd-sub ang, NS

Pawnee 4681' (-1349) EL

Cherokee 4760' (-1428) EL



4850

Sh: red-brn, gry, grn, brn, w/ some Sd: A.A. & some Shly Sd: red-brn, fn-med grain, sli calc, semi fri-brittle, pr vis por, NS

Sh: A.A. w/ some Sdy Sh: grn, & some Sd & Shly Sd: A.A.

Sh: red-brn, grn, gry, w/ some Sdy Sh: red-brn, & Sd: clr-gry, fn-crs grain, sli calc, some sli shly (red-brn), semi fri-brittle, pr vis por, NS, & some loose Sd grains, clr, crs, sub rnd-sub ang, NS

Sh: A.A. w/ some yell, & Sd: A.A., NS

Sh: red-brn, gry, grn, w/ some Sd: clr-wh, fn-med w/ some crs grain, semi fri-brittle, pr vis por, NS

4900

Sh: A.A. w/ some yell, w/ Sd: A.A., NS

Sh: A.A. w/ some Sd: clr-wh, fn-med grain, some shly (red-brn), semi fri-brittle, pr vis por, NS

Sd: clr-wh, crs loose grains, mstly frosted, sub rnd-sub ang, NS

Sh: red-brn, gry, grn w/ tr yell, & some Sd: clr-crm, fn-med grain, semi fri-semi brittle, pr vis por, NS, w/ small amnt loose crs grains, A.A.

4950

Sh: A.A. w/ small amnt Sd: A.A., NS

Sh: red-brn, gry, grn

Sh: gry, red-brn, grn, w/ tr Cht: crm-tan, fresh & weathered

5000

A.A.

Chert: wh-crm, fresh & weathered, NS, w/ some Dol: tan-lt brn, fxl, sli suc, pr por, NS

Cht & Dol: A.A., w/ some glauc & pyr

LS-Dol: tan-lt brn, fxl, some sli suc, mstly prtly dns, pr por, NS

LS: crm-tan, fxl, sli fos, sub chky-prtly dns w/ some chky, pr por, NS

LS: crm-lt brn, fxl, fos in prt, chky-prtly dns, pr por, NS

5050

Mississippian 4990' (-1658) EL

Morgan Mud check @ 5004': 59 Vis, 9.4 Wt, 6.8 WL, 800 ppm Chl, 2# LCM

Recommended 10 stand short trip after CFS. Pulled tight and ran 15 stands. Had to ream hole 40' to bottom after short trip.

R.T.D. 5040' (-1708)

L.T.D. 5045' (-1713)

Straight Hole Survey @ 5040': 1.25° Dev.





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

Wickinson #1-9

250 N. Water
Ste. 300
Wichita, KS 67202
ATTN: Kevin Davis

9 1 35

Job Ticket: 35796

DST#: 1

Test Start: 2009.02.21 @ 12:15:00

GENERAL INFORMATION:

Formation: **LKC-A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:09:30

Time Test Ended: 18:21:00

Test Type: Conventional Bottom Hole

Tester: Chuck Kreuzer

Unit No: 30

Interval: 4080.00 ft (KB) To 4151.00 ft (KB) (TVD)

Reference Elevations: 3142.00 ft (KB)

Total Depth: 4151.00 ft (KB) (TVD)

3137.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Inside

Press@RunDepth: 80.51 psig @ 4083.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2009.02.21

End Date:

2009.02.21

Last Calib.:

2009.02.21

Start Time: 12:15:05

End Time:

18:20:59

Time On Btm:

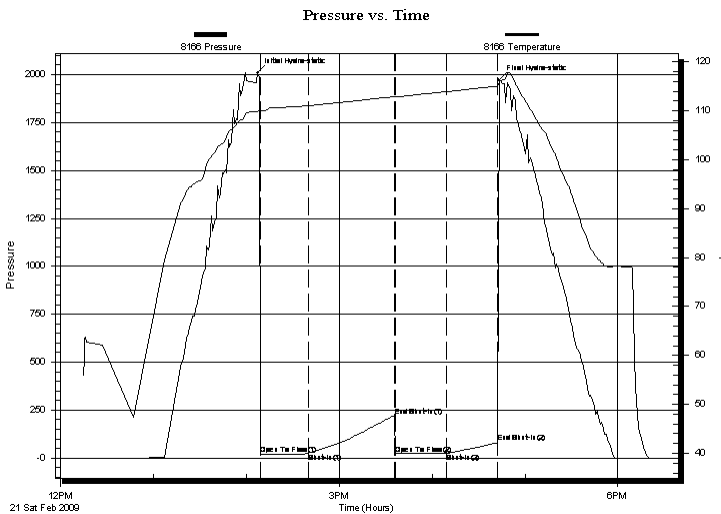
2009.02.21 @ 14:07:30

Time Off Btm:

2009.02.21 @ 16:43:30

TEST COMMENT: IF: Weak blow built to 1 1/2 over 30 mins.
IS: No blow back.
FF: Weak blow, surface died 15 mins. into final open
FSI: No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2009.45	109.83	Initial Hydro-static
2	17.88	109.86	Open To Flow (1)
33	25.77	111.05	Shut-In(1)
88	219.39	112.90	End Shut-In(1)
89	21.55	112.85	Open To Flow (2)
122	24.17	113.92	Shut-In(2)
155	80.51	115.05	End Shut-In(2)
156	1971.43	115.87	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
10.00	mco-80% m20%	0.05
3.00	oil	0.01

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

Wickinson #1-9

250 N. Water
Ste. 300
Wichita, KS 67202
ATTN: Kevin Davis

9 1 35

Job Ticket: 35796

DST#: 1

Test Start: 2009.02.21 @ 12:15:00

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: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
10.00	mco-80% m20%o	0.049
3.00	oil	0.015

Total Length: 13.00 ft Total Volume: 0.064 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

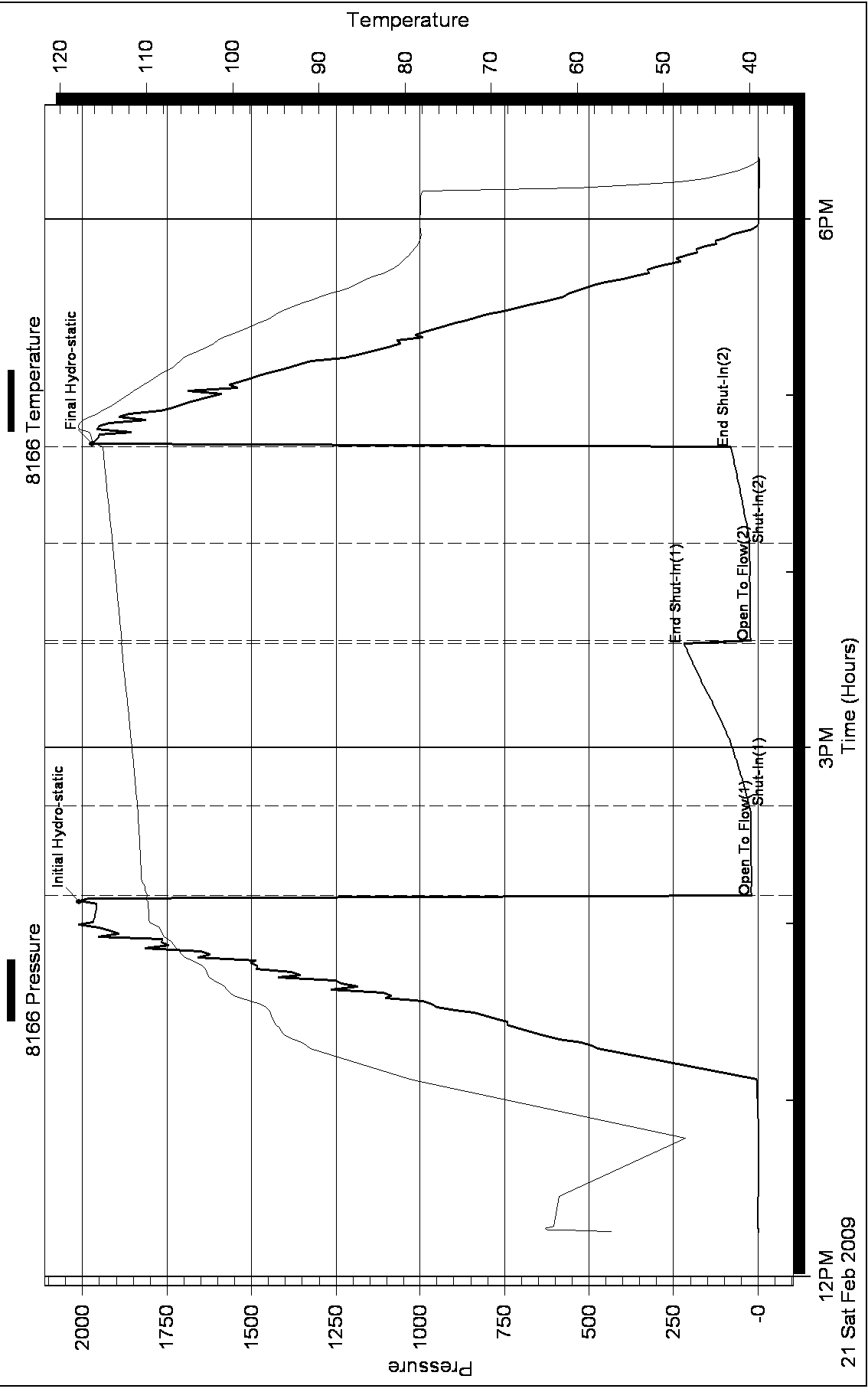
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

Wickinson #1-9

250 N. Water
Ste. 300
Wichita, KS 67202
ATTN: Kevin Davis

9 1 35

Job Ticket: 35797

DST#: 2

Test Start: 2009.02.22 @ 02:50:00

GENERAL INFORMATION:

Formation: **LKC-E-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:55:00

Time Test Ended: 11:41:30

Test Type: Conventional Bottom Hole

Tester: Chuck Kreuzer

Unit No: 30

Interval: 4150.00 ft (KB) To 4213.00 ft (KB) (TVD)

Reference Elevations: 3142.00 ft (KB)

Total Depth: 4151.00 ft (KB) (TVD)

3137.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8166

Inside

Press@RunDepth: 306.15 psig @ 4153.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2009.02.22

End Date:

2009.02.22

Last Calib.:

2009.02.22

Start Time:

02:50:05

End Time:

11:41:30

Time On Btm:

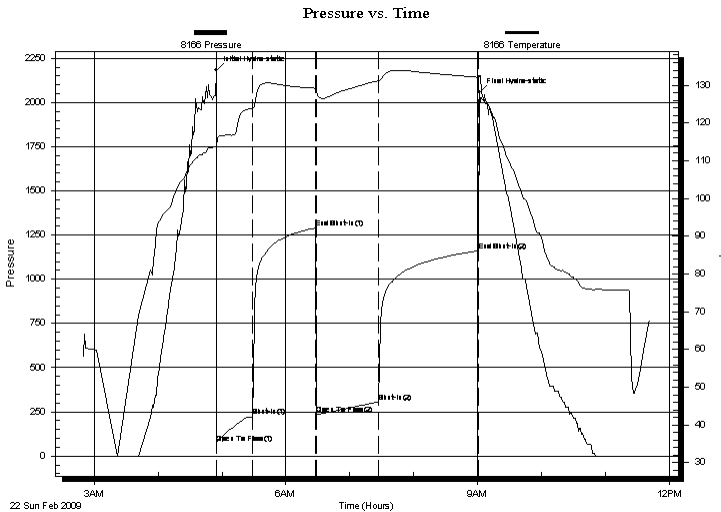
2009.02.22 @ 04:54:30

Time Off Btm:

2009.02.22 @ 09:02:00

TEST COMMENT: IF: Strong blow, B.O.B in 5 mins.
IS: Bled off, fair blow 7 in. over 60 mins.
FF: Bled off, strong blow B.O.B in 7 mins.
FS: Bled off, fair blow built to 6 in. over 90 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2181.80	113.77	Initial Hydro-static
1	75.06	114.12	Open To Flow (1)
34	223.67	123.97	Shut-In(1)
93	1289.99	129.24	End Shut-In(1)
94	235.92	128.45	Open To Flow (2)
152	306.15	131.17	Shut-In(2)
246	1160.97	132.14	End Shut-In(2)
248	2056.76	132.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	gmco-20%g30%m50%o	0.91
620.00	go-20%g80%o	5.42
763.00	gas in pipe	10.70

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

Wickinson #1-9

250 N. Water
Ste. 300
Wichita, KS 67202
ATTN: Kevin Davis

9 1 35

Job Ticket: 35797

DST#: 2

Test Start: 2009.02.22 @ 02:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	gmco-20%g30%m50%o	0.915
620.00	go-20%g80%o	5.418
763.00	gas in pipe	10.703

Total Length: 1569.00 ft Total Volume: 17.036 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

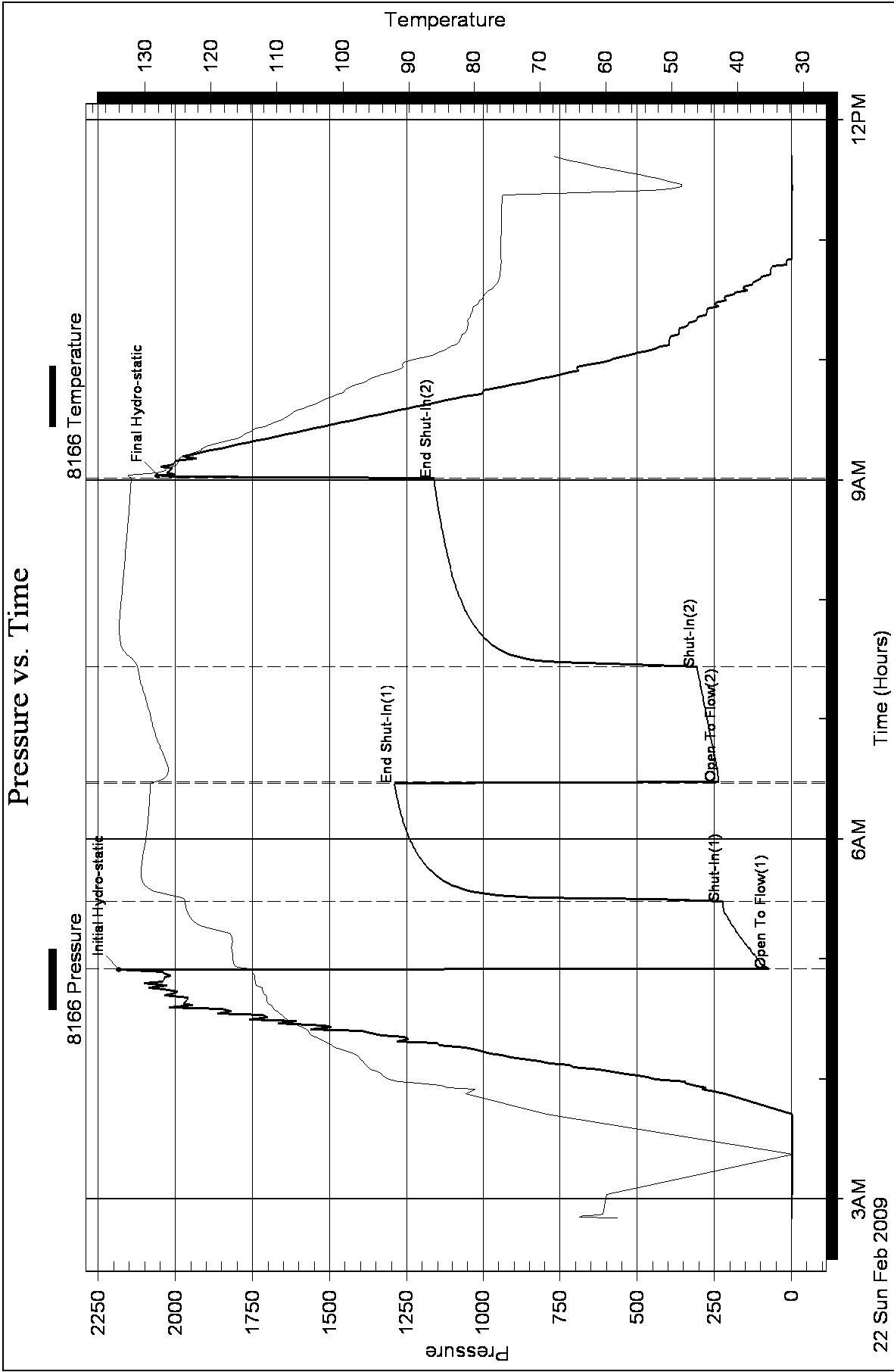
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

Wickinson #1-9

250 N. Water
Ste. 300
Wichita, KS 67202
ATTN: Kevin Davis

9 1 35

Job Ticket: 35798

DST#: 3

Test Start: 2009.02.22 @ 23:20:00

GENERAL INFORMATION:

Formation: **LKC-H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:13:00

Time Test Ended: 07:18:00

Test Type: Conventional Bottom Hole

Tester: Chuck Kreuzer

Unit No: 30

Interval: 4218.00 ft (KB) To 4300.00 ft (KB) (TVD)

Reference Elevations: 3142.00 ft (KB)

Total Depth: 4151.00 ft (KB) (TVD)

3137.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Inside

Press@RunDepth: 56.13 psig @ 4221.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2009.02.22

End Date:

2009.02.23

Last Calib.:

2009.02.23

Start Time: 23:20:05

End Time:

07:17:59

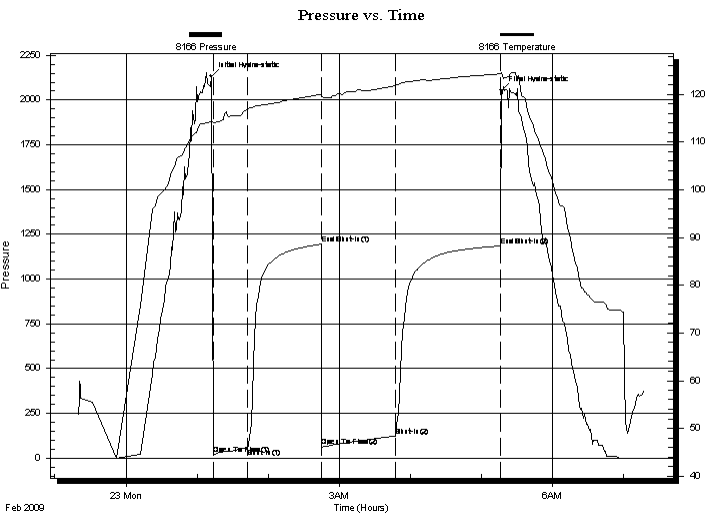
Time On Btm:

2009.02.23 @ 01:12:00

Time Off Btm:

2009.02.23 @ 05:16:29

TEST COMMENT: IF: Weak surface blow, built to 3 in. over 30 mins.
 IS: Bled off, Weak surface blow after 15 mins. Never built passed surface.
 FF: Weak blow built to 3 in. over 50 mins.
 IS: Bled off, Weak surfac



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2132.86	114.24	Initial Hydro-static
2	20.65	114.01	Open To Flow (1)
31	56.13	116.98	Shut-In(1)
93	1194.81	120.02	End Shut-In(1)
93	66.33	119.48	Open To Flow (2)
155	123.94	121.95	Shut-In(2)
244	1185.52	124.29	End Shut-In(2)
245	2054.74	124.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	ghocm-10%g40%o50%m	0.61
62.00	gmco-10%g60%o30%m	0.30
62.00	go-10%g90%o	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

Wickinson #1-9

250 N. Water
Ste. 300
Wichita, KS 67202
ATTN: Kevin Davis

9 1 35

Job Ticket: 35798

DST#: 3

Test Start: 2009.02.22 @ 23:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	ghocm-10%g40%o50%m	0.610
62.00	gmco-10%g60%o30%m	0.305
62.00	go-10%g90%o	0.305

Total Length: 248.00 ft

Total Volume: 1.220 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

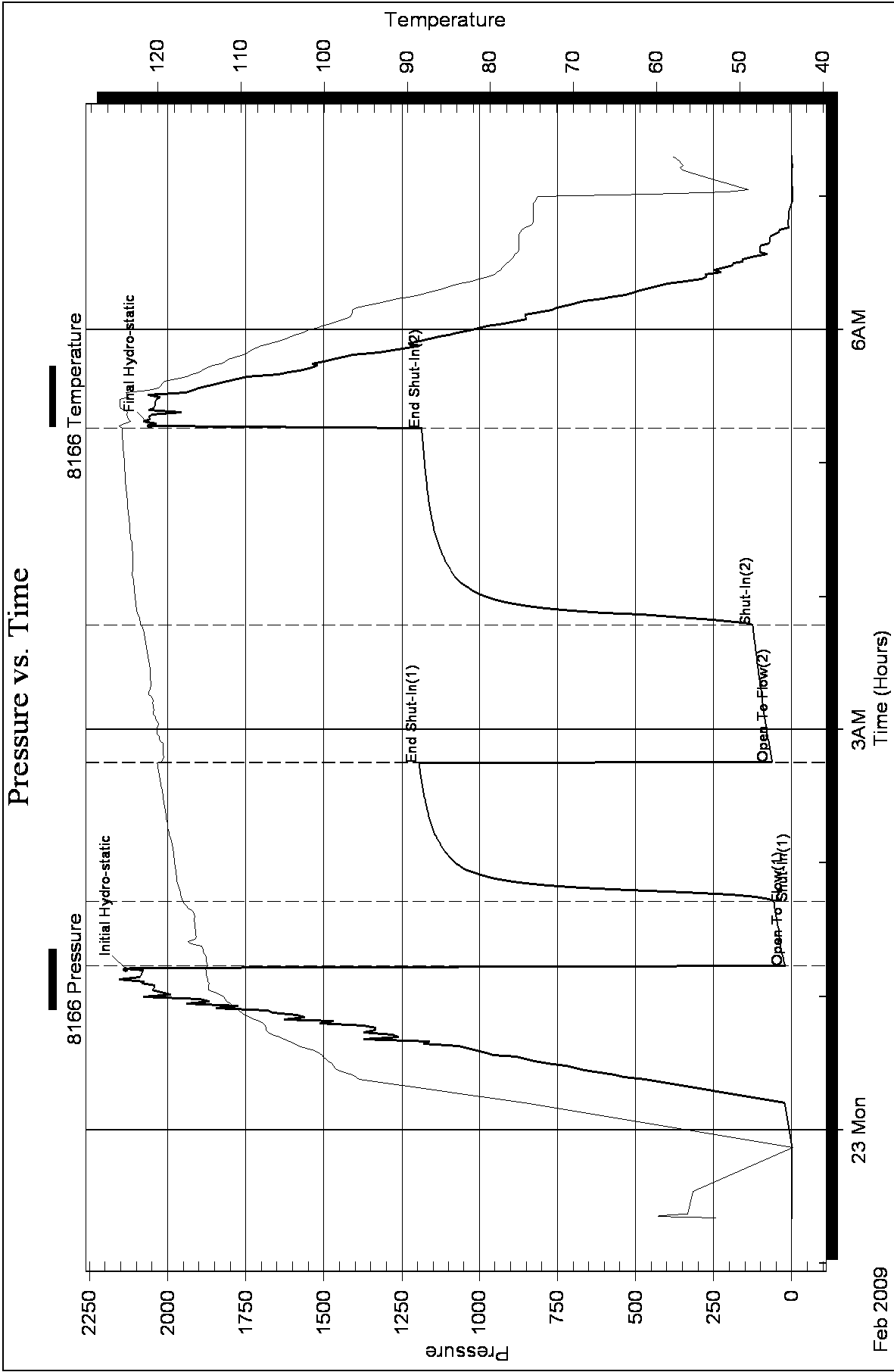
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





PO Box 93999
Southlake, TX 76092

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

INVOICE

Invoice Number: 138301

Invoice Date: Aug 29, 2013

Page: 1

ACCT
L.H

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

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Murfin	61326	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Oakley	Aug 29, 2013	9/28/13

Quantity	Item	Description	Unit Price	Amount
		Wilkinson GC #1-4		
132.00	CEMENT MATERIALS	Class A Common	17.90	2,362.80
88.00	CEMENT MATERIALS	Pozmix	9.35	822.80
8.00	CEMENT MATERIALS	Gel	23.40	187.20
55.00	CEMENT MATERIALS	Flo Seal	2.97	163.35
236.28	CEMENT SERVICE	Cubic Feet	2.48	585.97
740.24	CEMENT SERVICE	Ton Mileage	2.60	1,924.65
1.00	CEMENT SERVICE	Plug to Abandon	2,600.47	2,600.47
75.00	CEMENT SERVICE	Pump Truck Mileage	7.70	577.50
75.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	330.00
1.00	EQUIPMENT SALES	8-5/8 Wooden Plug	107.64	107.64
1.00	CEMENT SUPERVISOR	LaRene Wentz		
1.00	EQUIPMENT OPERATOR	Paul Beaver		
1.00	OPERATOR ASSISTANT	Chris Helpingstine		

Subtotal	9,662.38
Sales Tax	763.33
Total Invoice Amount	10,425.71
Payment/Credit Applied	
TOTAL	10,425.71

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

\$ 3,381.83

ONLY IF PAID ON OR BEFORE
Sep 23, 2013

ALLIED OIL & GAS SERVICES, LLC 061326

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
Oakley, KS

DATE <u>8-29-13</u>	SEC. <u>4</u>	TWP. <u>2</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>10:30 am</u>	JOB START <u>1:00 pm</u>	JOB FINISH <u>2:00 pm</u>
LEASE <u>Willkinson</u>	WELL.# <u>1-4</u>		LOCATION <u>McDonald, 7N, 1E, 1W,</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>
OLD OR NEW (Circle one) <u>NEW</u>			<u>red w/bo</u>				

CONTRACTOR Merfin 8

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. 5040'

CASINO SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE 4 1/2 DEPTH 3245'

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT 42.59 bbl

OWNER same

CEMENT AMOUNT ORDERED 220 sks 60/40 4% gel
1/4 # flo seal

EQUIPMENT

PUMP TRUCK CEMENTER Lakem E. Eubank

423/281 HELPER Paul Beaver

BULK TRUCK # 347 DRIVER Chris Helpingstine

BULK TRUCK # _____ DRIVER _____

COMMON	<u>132 sks</u>	@ <u>17.70</u>	<u>2362.80</u>
POZMIX	<u>88 sks</u>	@ <u>7.35</u>	<u>647.20</u>
GEL	<u>8 sks</u>	@ <u>23.40</u>	<u>187.20</u>
CHLORIDE		@	
ASC		@	
<u>Flo seal</u>	<u>55 #</u>	@ <u>2.97</u>	<u>163.35</u>
HANDLING	<u>286.28 sks</u>	@ <u>2.48</u>	<u>710.97</u>
MILEAGE	<u>7.82 mi X 75 X 2.60</u>		<u>1924.63</u>
TOTAL			<u>6046.77</u>

REMARKS:

MIX 25 sks 3245'

MIX 100 sks 2975'

MIX 40 sks 400'

MIX 10 sks w/ plug 40'

Plug M.F. 15 sks

PLUG RH 30 sks

SERVICE

DEPTH OF JOB	<u>3245'</u>		
PUMP TRUCK CHARGE			<u>2600.97</u>
EXTRA FOOTAGE		@	
MILEAGE <u>MTH</u>	<u>75</u>	@ <u>7.70</u>	<u>577.50</u>
MANIFOLD		@	
<u>MTH</u>	<u>75</u>	@ <u>4.40</u>	<u>330.00</u>
TOTAL			<u>3502.97</u>

CHARGE TO: Merfin Drilling

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

<u>Wooden plug</u>	@	<u>107.64</u>
	@	
	@	
	@	
	@	
TOTAL		<u>107.64</u>

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 9,662.38

DISCOUNT 3,381.83 IF PAID IN 30 DAYS

6,280.54 Net.

PRINTED NAME _____

SIGNATURE [Signature]



acct.
Prod - LH

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 138134
Invoice Date: Aug 19, 2013
Page: 1

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

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

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Murfin	61305	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Aug 19, 2013	9/18/13

Quantity	Item	Description	Unit Price	Amount
300.00	CEMENT MATERIALS	Wilkinson GC #1-4		
6.00	CEMENT MATERIALS	Class A Common	17.90	5,370.00
11.00	CEMENT MATERIALS	Gel -- No Charge		
315.00	CEMENT SERVICE	Chloride	64.00	704.00
1,089.00	CEMENT SERVICE	Cubic Feet	2.48	781.20
1.00	CEMENT SERVICE	Ton Mileage	2.60	2,831.40
75.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
1.00	CEMENT SERVICE	Pump Truck Mileage	7.70	577.50
75.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
1.00	CEMENT SUPERVISOR	Light Vehicle Mileage	4.40	330.00
1.00	EQUIPMENT OPERATOR	Andrew Forslund		
		D J Gray		

DM

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

\$ 4,333.47

ONLY IF PAID ON OR BEFORE

Sep 13, 2013

Subtotal	12,381.35
Sales Tax	479.85
Total Invoice Amount	12,861.20
Payment/Credit Applied	
TOTAL	12,861.20

ALLIED OIL & GAS SERVICES, LLC 061305

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
oakley

DATE <u>8-19-0</u>	SEC. <u>4</u>	TWP. <u>2</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION	JOB START <u>8:00am</u>	JOB FINISH <u>8:30am</u>
LEASE <u>Wilkinson</u>	WELL# <u>1-4</u>	LOCATION <u>McDonald 7116 Van</u>			COUNTY <u>Rawlins</u>	STATE <u>K.S.</u>	
OLD OR NEW (Circle one)							

CONTRACTOR Murfin 8

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 345'

CASING SIZE 8 5/8 DEPTH 345'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 21.02

OWNER same

CEMENT

AMOUNT ORDERED 300 sks com 396.00

296 gel

COMMON 300 sks @ 17.90 5370.00

POZMIX @

GEL 6 sks @ N/C

CHLORIDE 11 sks @ 64.00 704.00

ASC @

EQUIPMENT

PUMP TRUCK CEMENTER Andrew Farolund

422 HELPER D.J. Gray

BULK TRUCK

396 DRIVER Alex (JWS)

BULK TRUCK

DRIVER

HANDLING 315 cy/ft @ 2.48 781.20

MILBAGE 2.60 14.52/mile 2831.40

TOTAL 9686.60

REMARKS:

Cement did circulate

Thank you

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE @

MILEAGE 25 miles @ 7.00 522.50

MANIFOLD head @ 225.00

Light Vehicle @ 4.40 330.00

TOTAL 2694.25

CHARGE TO: Murfin

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

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

PRINTED NAME Rodney Farr

SIGNATURE Rodney Farr

SALES TAX (if Any)

TOTAL CHARGES 12,381.35

DISCOUNT 4,333.47 IF PAID IN 30 DAYS

8,047.87 Net.