Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1156158

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 # 30606
Name: Murfin Drilling Co., Inc.
Address 1: 250 N WATER STE 300
Address 2:
City: WICHITA State: KS Zip: 67202 + 1216
Contact Person: Leon Rodak
Phone: (316) 267-3241
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Robert Stolzle
Purchaser: NA

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 #:

04/29/2013	05/05/2013	05/06/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-039-21172-00-00
Spot Description:
NE - SW - NE - NE Sec. 15 Twp. 2 S. R. 29 ☐ East ☑ West
970 Feet from ☑ North / ☐ South Line of Section
960 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)*, Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Decatur
Lease Name: Luetta Well #: 1-15
Field Name: NA
Producing Formation: NA
Elevation: Ground: 2674 Kelly Bushing: 2679
Total Vertical Depth: 3990 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 218 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: 3200 ppm Fluid volume: 1000 bbls
Dewatering method used: Evaporated
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: 08/23/2013
☑ **Confidential Release Date:** 08/23/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 08/26/2013

1156158

Operator Name: Murfin Drilling Co., Inc. Lease Name: Luetta Well #: 1-15

Sec. 15 Twp. 2 S. R. 29 ☐ East ☑ West County: Decatur

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Dual Induction
Dual Compensated
Microresistivity

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
See Attachment		

CASING RECORD ☑ New ☐ 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
Surface	12.2500	8.6250	23	218	Common	190	3% cc

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
____ Perforate ____ Protect Casing ____ Plug Back TD ____ 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 *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

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

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

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

August 23, 2013

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

Re: ACO1
API 15-039-21172-00-00
Luetta 1-15
NE/4 Sec.15-02S-29W
Decatur 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 Luetta #1-15 970’ FNL 960’ FEL Sec. 15-T2S-R29W 2679’ KB						MDCI Pollnow #1-14 1150’ FSL 2070’ FWL Sec. 14-T2S-R29W 2710’ KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	2414	+265	-11	2414	+265	-11	2434	+276
B/Anhydrite	2445	+234	-10	2445	+234	-10	2466	+244
Neva	3089	-410	-6	3089	-410	-6	3114	-404
Topeka	3473	-794	-2	3476	-797	-5	3502	-792
Heebner	3644	-961	-6	3638	-955	Flat	3665	-955
Lansing	3680	-1001	-1	3680	-1001	-1	3710	-1000
Stark	3848	-1169	-9	3848	-1169	-9	3870	-1160
BKC	3892	-1213	-7	3894	-1215	-9	3916	-1206
RTD	3990						3990	
LTD				3992			3986	

ROBERT STOLZLE

CONSULTING PETROLEUM GEOLOGIST
AAPG Cert. # 3244

5211 S. 231st ST, W. Bentonville, KS 67022 - 0240 (913) 794 - 3400

DRILLING TIME AND SAMPLE LOG

OPERATOR: Murfin Drilling Co., Inc.
LEASE: Luetta WELL NO.: 1-15
FIELD: Wildcat
LOCATION: 970'FNL, 960'FEL (NESWNENE)
SEC.: 15 TWP: 2S RANGE: 29W
COUNTY: Decatur STATE: KS
API NO.: 15-039-21172-00-00

CONTRACTOR: Murfin Drilling Co., Rig #8
COMMENCED: April 29, 2013 COMPLETED: 5/6/13
ROTARY TOTAL DEPTH: 3990' LOG TOTAL DEPTH: 3992'
GEOLOGICAL SUPERVISION FROM: 2985' to: T.D.
MUD-UP DEPTH: 2789' MUD TYPE: Chemical Polymer

ELEVATIONS

KB 2679'
GL 2674'
Measurements are all from KB

CASING RECORD

SURFACE: 8 5/8" 23# @218' w/190SK, Circ.
PRODUCTION: None-P&A.

WIRELINE SURVEYS

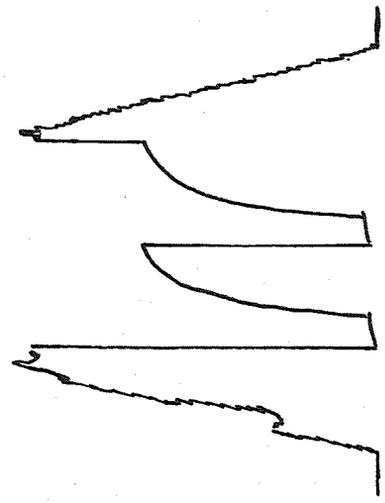
Pioneer Energy Services: Dual Comp. Porosity, Dual Induction, BHC Sonic and Micro-resistivity logs were run.

FORMATION	SAMPLE TOP	SAMPLE SUBSEA	LOG TOP	LOG SUBSEA	STRUCTURAL COMPARISON
Stone Corral Anhy.	2413	(+266)	2414	(+265)	-11'
Base of Anhydrite	2445	(+234)	2445	(+234)	-10'
Neva Ls.	3090	(-411)	3090	(-411)	-7'
Foraker Ls.	3207	(-528)	3207	(-528)	-4'
Stotler Ls.	3360	(-681)	3362	(-683)	-6'
Topeka Fm.	3473	(-794)	3476	(-797)	-5'
Dread Ls.	3623	(-944)	3623	(-944)	-5'
Heebner Sh.	3637	(-958)	3638	(-959)	-4'
Lansing Group	3680	(-1001)	3680	(-1001)	-1'
Stark Shale	3848	(-1169)	3848	(-1169)	-9'
Base KS City Gp.	3894	(-1215)	3894	(-1215)	-9'
Total Depth	3990		3992		

LOCATION MAP

Reference Well for Structural Comparison: MDC #1-14 Pollnow Sec. 14 T2S-R29W
Comments and Recommendations: Recommended well be plugged and abandoned.

DST # 1 Interval: 3639'-3705' Chart Depth: 3640' 8791



DST # 1 ZONE: Lansing 'A' Zone
INTERVAL: 3639'-3705'

Pressures:	Time	Press.
1. Initial Hydrostatic		1886 psi
2. Initial Flow: Start	0	19 psi
3. Initial Flow: End	30	49 psi
4. Initial Shut-in: End	60	1203 psi
5. Final Flow: Start	0	48 psi
6. Final Flow: End	30	62 psi
7. Final Shut-in: End	60	1191 psi
8. Final Hydrostatic		1814 psi

BHT: 110°F
Rw: ____

RECOVERY
124' Oil spotted Drilling Mud

Blow Desc.:
I.F.-1/4" died in 20 min.
I.S.I.-No blow
F.F.-No blow
F.S.I.-No blow

Deviation 1°

DST # 2 Interval: 3691'-3820' Chart Depth: 3692' 8791

DST # 2 ZONE: LKC 'D', 'G' + 'H' Zones
INTERVAL: 3691'-3820'

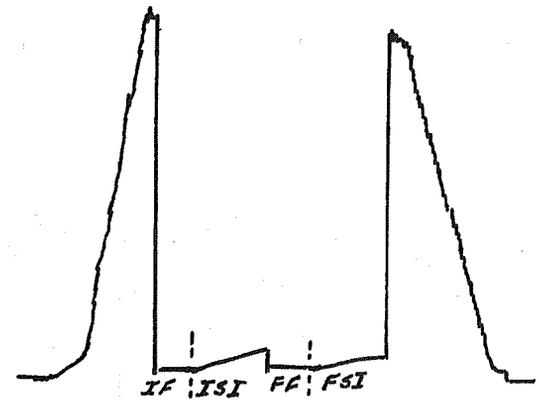
Pressures: Time Press.

RECOVERY

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1922 psi	20' Oil
2. Initial Flow: Start	0	36 psi	60' Oil cut Mud
3. Initial Flow: End	30	48 psi	(30%) oil
4. Initial Shut-in: End	60	155 psi	Blow Desc:
5. Final Flow: Start	0	51 psi	I.F.-1/4" died in 25 Min.
6. Final Flow: End	30	59 psi	I.S.I.-No blow
7. Final Shut-in: End	60	117 psi	F.F.-No blow
8. Final Hydrostatic		1903 psi	F.S.I.-No blow

BHT: 109°F

Rw:



Strap 1.49' long

DST # 3 ZONE: Ks. City 'J' & 'K' Zones

INTERVAL: 3809'-3885'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1963 psi	20' Drilling Mud
2. Initial Flow: Start	0	22 psi	
3. Initial Flow: End	30	31 psi	Blow Desc:
4. Initial Shut-in: End	30	563 psi	I.F.-surf. blow <1 Min.
5. Final Flow: Start	0	31 psi	I.S.I.-No blow
6. Final Flow: End	30	34 psi	F.F.-No blow
7. Final Shut-in: End	30	514 psi	F.S.I.-No blow
8. Final Hydrostatic		1959 psi	

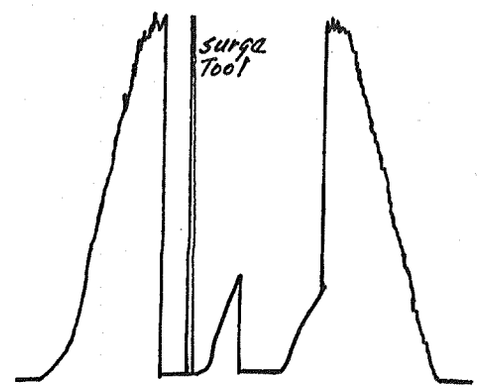
BHT: 107°F

Rw:

Surged tool to verify tool was open

DST # 3 8791 Chart

Interval: 3809'-3885' Depth: 3810'



ABBREVIATIONS USED

ROCK TYPES:

Ls - limestone
Sh - Shale
Ss - Sandstone
Slts - Siltstone
Cg - Conglomerate
Cht - Chert
Qtz - Quartzite
Gran - Granite
Dol - Dolomite
Chlk - chalky

COLOR:

Wh - White
Crm - Cream
Clr - Clear
Rd - Red
Grn - Green
Gry - Grey
Blk - Black
Mot - Mottled

HARDNESS:

Sft - Soft
M.Sft - Moderately soft
Hrd - Hard
V.Hrd - Very hard

FABRIC:

Fn.grn - finegrained
VFG - Very fine grained
Med - Medium
Crs - Coarse
Det - Detrital
Foss - Fossiliferous
Xln - Crystalline
Mxln - Microcrystalline
Ool - Oolitic
Oop - Oopoldic
Mat - Matrix

OTHER TERMS:

Fl - Fluorescence (of oil)
min fl - mineral fluorescence
pyr - pyritic
glau - glauconitic
carb - carbonaceous
stn - stain (of oil)
cut - oil cut
AA - as above
Ø - porosity
NSFOC - no stain, fluorescence, odor, or cut (of oil)
smpl - sample
perm - permeability
F.O. - free oil
vug - vugular
tr - trace
w/ - with

MODIFIERS:

gd - Good
fr - Fair
pr - Poor
ex - excellent
v - very
w - well
tr - trace
occ - occasional
vis - visible
N - no
gran - granular
intergran - intergranular
pp - pinpoint
dd - dead
away - away

TEXTURE:

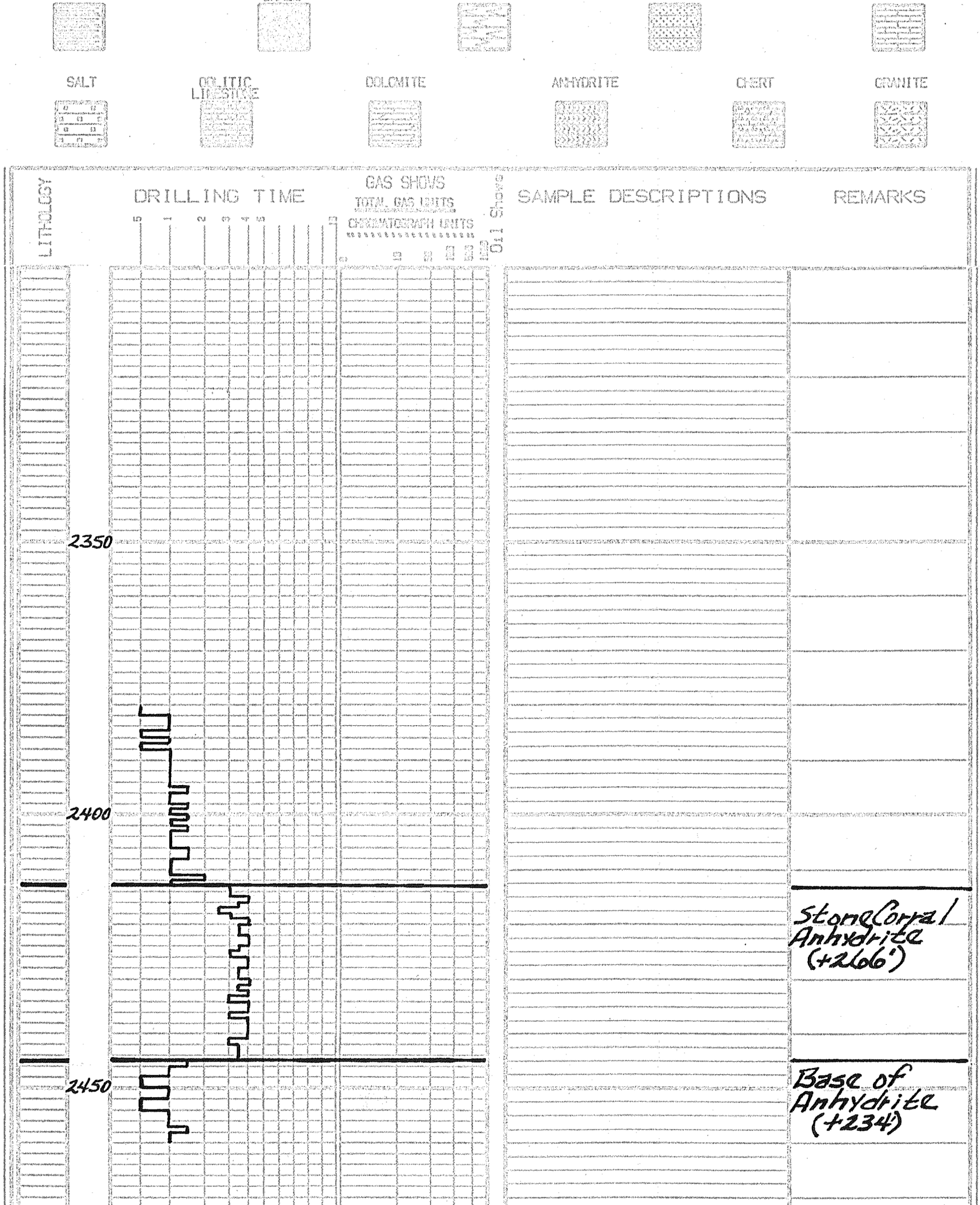
Dns - Dense
Cly - Clayey
Frl - Friable
Earth - Earthy
Hack - Hackly
Fiss - Fissile
Vit - Vitreous
Vug - Vugular
Mic - Micritic

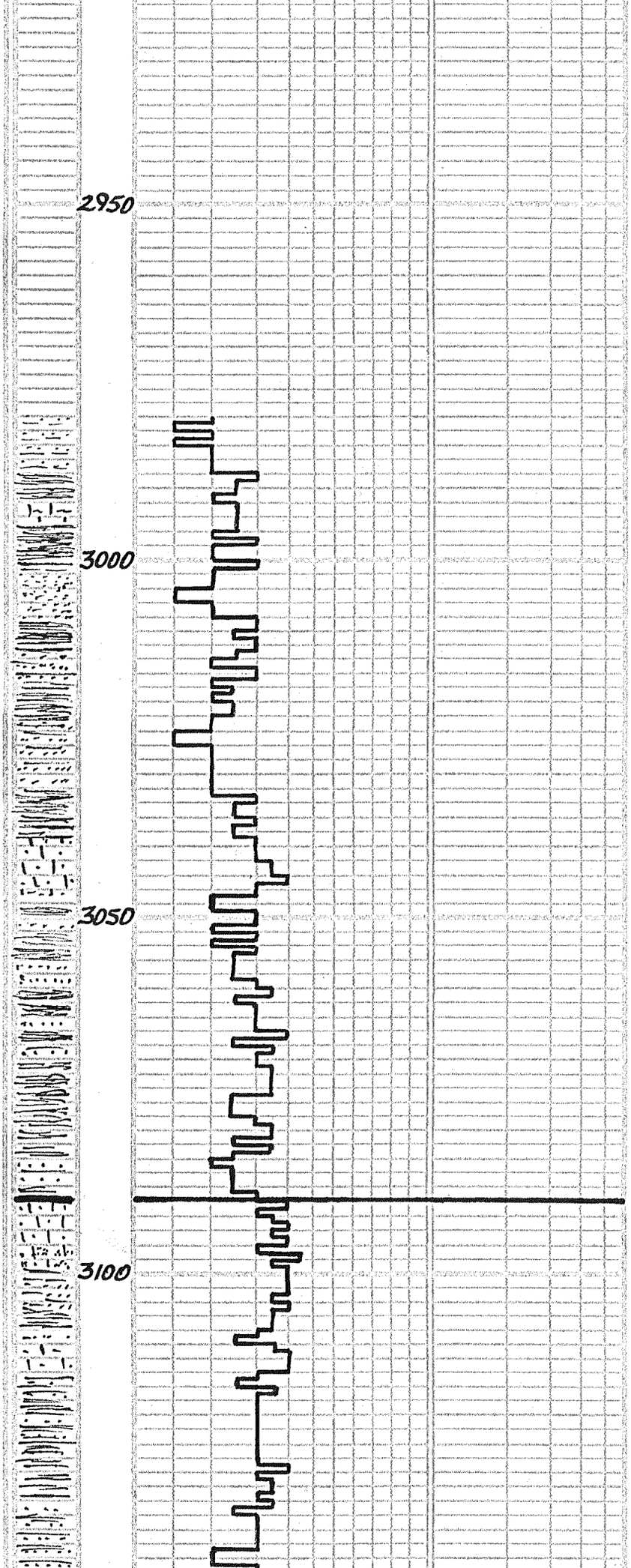
OIL SHOWS

- Weak Oil Show
- Fair Oil Show
- Good Oil Show
- Excellent Oil Show

ROCK TYPE SYMBOLS

SHALE | CARBONACEOUS SHALE | QUARTZITE | SANDSTONE | LIMESTONE


SALT
OOLITIC LIMESTONE
DOLOMITE
ANHYDRITE
CHERT
GRANITE
LITHOLOGY
DRILLING TIME
GAS SHOWS
TOTAL GAS UNITS
CHROMATOGRAPH UNITS
Oil Shows
SAMPLE DESCRIPTIONS
REMARKS
2350
2400
2450
Stone Corral Anhydrite (+266')
Base of Anhydrite (+234')



Start 1' drilling time and 10' wet and dry samples at 2980'

Sh: rd brn-lt gry, sft, clayey, occ. m. sft, earthy, occ. slty-sndy tr. Ss: gry, hrd, dns, vfg, w. cmtd. mod. srtd. NØ NSFOC

Sh: lt gry.-rd. brn, sft.-v. sft., clayey, sndy., tr. Ss: AA. NØ tr. Ls: gry, m. hrd, dns, sh. stnd. poss. pebbles NØ NSFOC

Sh: A.A.
Ss: gry.-rd. brn, m. sft, dns, vfg. pr. srtd. w. cmtd. NØ NSFOC

Sh: rd. brn, sft, slty-sndy, clay-earthy, occ. Ss:-slts: A.A., rd. brn., tr. gry NØ NSFOC

Sh: A.A.
Ss: crm-gry., hrd, -m. hrd, dns, fn-vfg., mod-pr. srtd, sub. Ang. w-v.w. cmtd. NØ NSFOC
Ss: A.A. NØ NSFOC

Sh: rd. brn.-dk. gry., m. sft.-sft., clayey-earthy
Ls: gry., hrd, dns., vfg, sndy-v. sndy-calc. Ss: fn grnd, tan, hrd, dns., mod. srtd., v.w. cmtd. NØ NSFOC
Ss: A.A. NØ NSFOC, tr. Ls: crm-tan, m. hrd, dns, vfg-mxln, mic, rare foss. NØ NSFOC
Sh: rd. brn., sft., clayey

Sh: rd. brn.-lt gry., v. sft. & clayey -sft., earthy, tr. sndy

Sh: rd. brn.-lt. lt. gry., v. sft., clayey, occ. sft. & earthy

Sh: rd. brn., sft.-v. sft., clayey, sndy., tr. blu-grn-gry. grn. earthy.

Ls: crm.-gry., hrd-m. hrd, dns., vfg-mxln, sh. stnd., sndy.-v. sndy-calc. Ss: fn-vfg., mod.-w. srtd., v.w. cmtd. NØ NSFOC

Nava Ls. (-411')

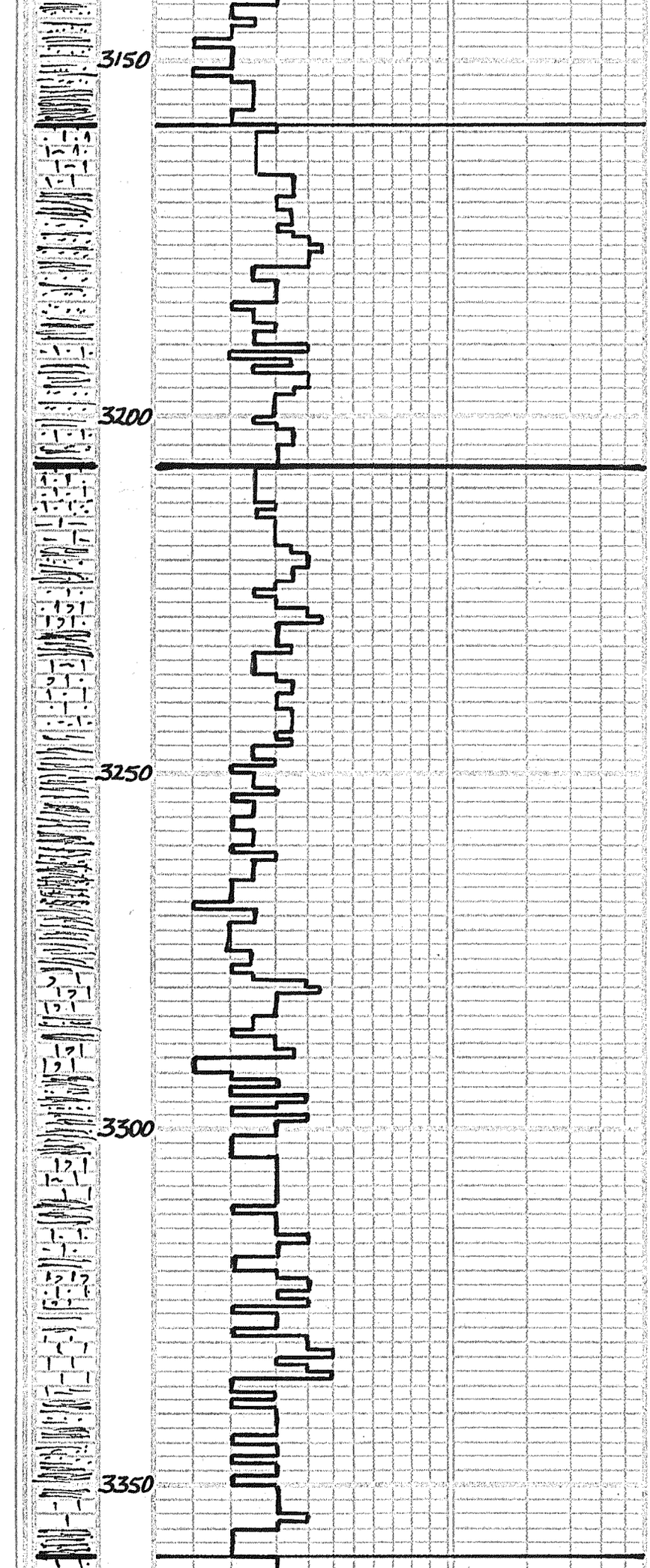
Ls: gry., hrd.-m. hrd, dns, vfg-mxln, occ. chky., occ. blk. foss. tr. sh. stnd, occ. sndy.-calc. Ss: A.A. NØ NSFOC

Ls: A.A., less sndy. NØ NSFOC
Sh: rd. brn., sft., clayey, occ. sndy.

Sh: rd. brn-gry. grn., sft. & clayey-m. sft., earthy, occ. sndy.

Sh: rd. brn, v. sft., clayey, occ. sft., earthy, occ. sli. sndy.

Sh: rd. brn-lt gry, v. sft., clayey



Sh: rd, brn-lt. gry., v. sft, clayey -sli. sndy., earth., tr. blu-gry., earthy

Sh: lt. gry.-gry., v. sft., clayey.- occ. rd. brn., less. sndy. tr. Ls. gry., hrd., dns., VFG-mxln., sndy NØ NSFOC

Ls: crm-dk. gry., hrd., dns., VFG-mxln., mic., occ. chiky., sndy-v. sndy.-w. cmtd., occ. sh. stnd. NØ NSFOC

Ls: A.A., sli. less. sndy., fn-VFG. Sd NØ NSFOC

Sh: rd. brn.-gry., sft., clayey., slty.-sndy.

Sh: lt. gry.-rd. brn., v. sft., clayey. tr. earthy., tr. slty.-sndy.

Sh: rd. brn.-lt.-dk. gry., sft., clayey., occ. m. sft., earthy. occ. sndy.

Ls: wh.-crm., sft., chiky., VFG-mxln. tr. sh. stnd., occ. sndy.-v. sndy -calc. Ss: crm., m. sft., VFG., pr. srtd., w. cmtd. NoVis ØNSFOC

Ls: gry.-dk. gry., m. hrd.-hrd., dns. VFG-mxln., occ. sft. + chiky., dk. gry. foss., sh. stnd., occ. sndy NØ NSFOC

Ls: gry.-dk. gry., sft. + chiky.-m. hrd., dns., VFG-mxln., foss.- dk. gry. foss., tr. sndy., tr. sh. stnd. NØ NSFOC

Ls: crm-dk. gry., sft. + chiky.-hrd. dns., VFG-mxln., dk. gry. foss., occ. sndy. + sh. stnd., occ. foss. NØ NSFOC

Ls: A.A. NØ NSFOC

Sh: dk. gry.-lt. gry., sft.-m. hrd. dns., clayey-earthy

Sh: rd. brn., sft., clayey.-earthy occ. slty.-sndy.

Sh: rd. brn.-gry., sft.-v. sft., clayey occ. slty.-sndy., tr. Ls. gry-lt. gry., sft., chiky. NØ NSFOC

Sh: A.A., occ. dk. gry., sft., clayey
Ls: crm.-gry., hrd-sft. + chiky., VFG-mxln., mic., NØ NSFOC

Ls: crm-gry., Abun. chiky., occ. hrd., dns., VFG-mxln., mic., tr. foss. w/dk. gry. foss. NØ NSFOC

Ls: A.A. NØ NSFOC
Sh: rd. brn-dk. gry., sft. + clay. -m. hrd., earthy-hackly., occ. sndy

Sh: A.A.
Ls: crm-tan, hrd., dns., VFG-mxln., mic., occ. foss., occ. rd. sh. stnd. NØ NSFOC
Sh: rd. brn., sft. + clayey.-m. sft., dns., earthy., occ. slty.-sndy.
Ls: gry.-dk. gry., hrd., dns., VFG xln. occ. sndy. + sh. stnd. NØ NSFOC

Sh: A.A.
Ls: crm.-lt. gry., m. hrd.-hrd., dns., VFG xln, occ. foss.-y wish. foss. occ. sndy NØ NSFOC
Ls: A.A. NØ NSFOC
Sh: gry.-rd. brn., sft., clayey occ. m. sft., earthy, slty

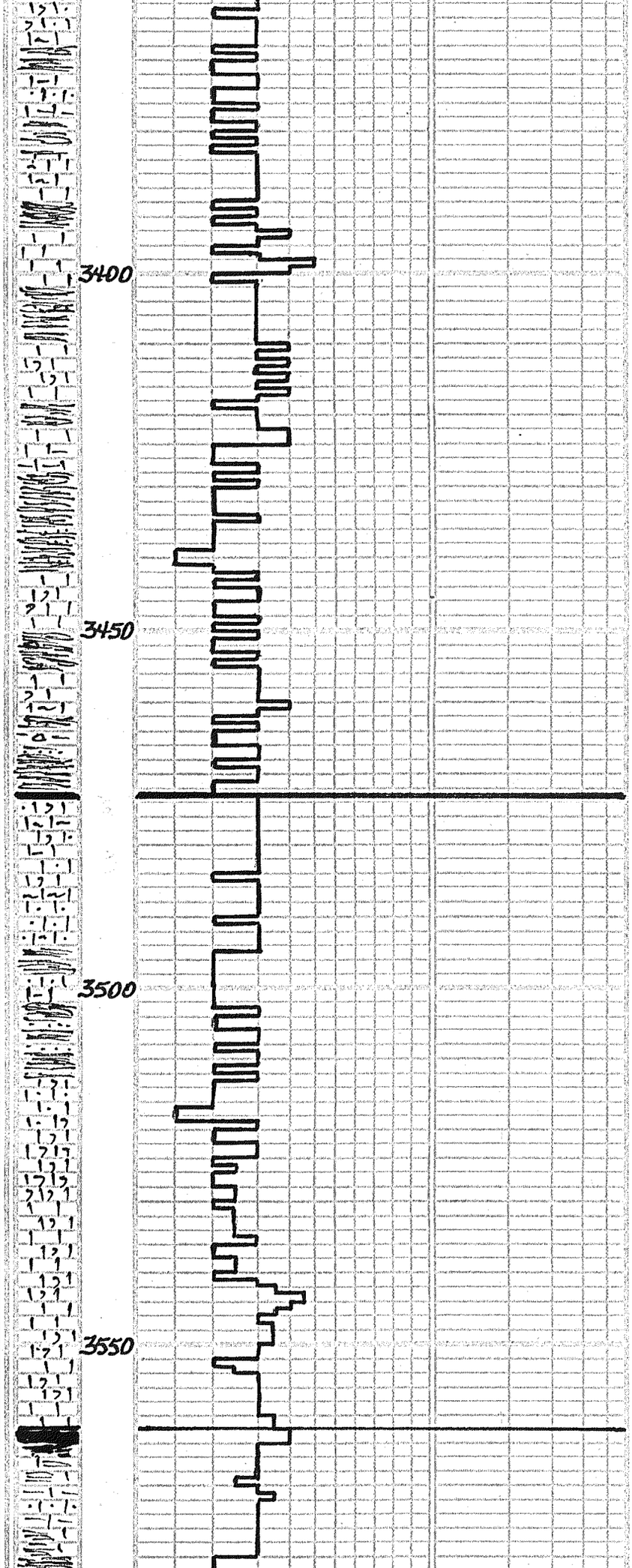
Sh: A.A., more slty.-sndy

Ls: crm.-gry., m. sft.-m. hrd., dns., VFG xln., occ. chiky. NØ NSFOC
Ls: A.A., more chiky. NØ NSFOC
Sh: rd. brn.-gry., sft. + clayey.- m. sft., dns., earthy., occ. slty.-sndy.

Red Eagle Ls (-480')

Foraker Ls. (-528')

Mud Check @ 3274'
M.W. 8.8 lb./gal.
Vis. 57 sec./qt.
W.L. 5.2 cc./30 min.
Chl. 1,000 PPM.
Solids 3.5%
LCM. 3 lb./bbl.



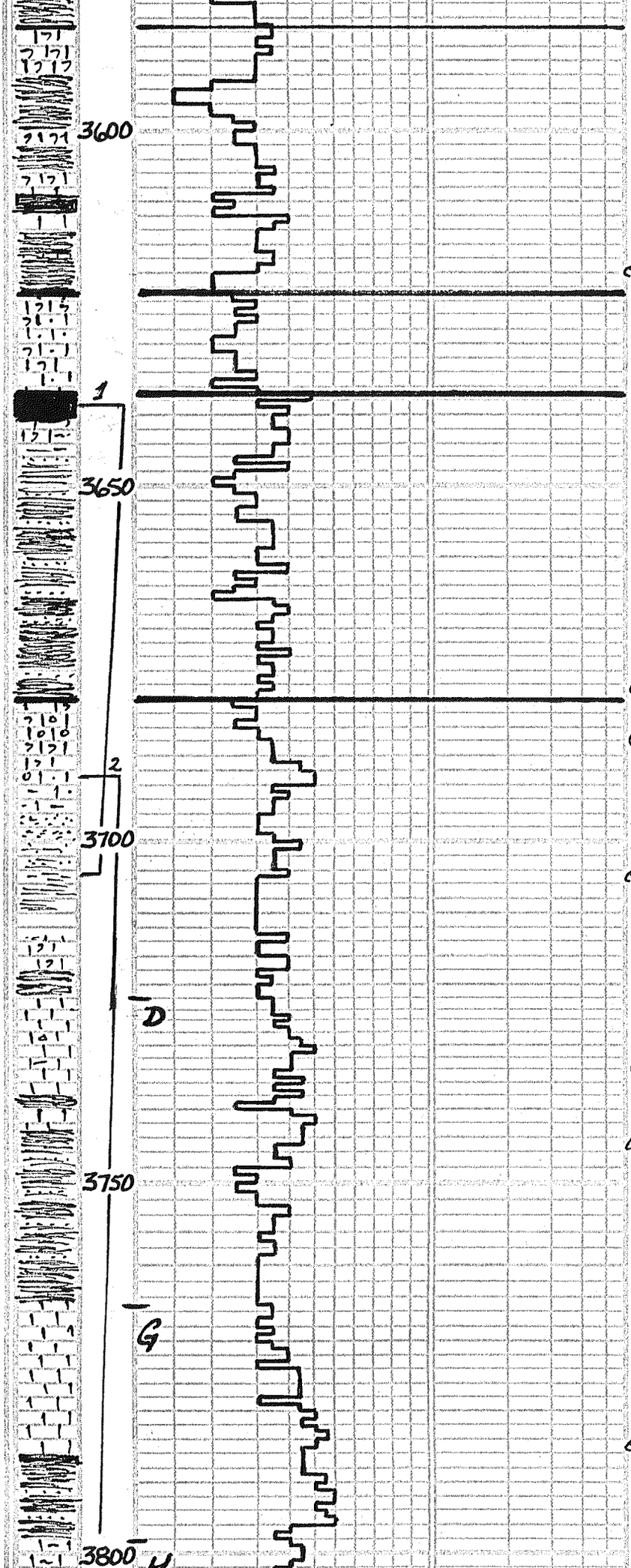
Sh: gry.-gry.-sft.-m.hrd.,dns. earthy-hackly.,occ.rd.brn.
Ls: gry.,hrd,dns.,vfg-mxln,occ chiky.,foss. NØNSFOC
tr. Sh: A.A. more rd. brn. clayey
Ls: crm.-gry.,hrd.,dns,vfgxln., foss.,occ.sndy.,occ.sh.stnd. NØNSFOC
tr. Sh: A.A.
Ls: crm.-gry.-occ,ylw,sh.stnd., hrd.,dns,vfg.-mxln.,mic., foss.,sndy. NØNSFOC
Sh: rd.brn-gry,mott.,sft,earthy
Ls: gry.-tr.ylw.,m.sft.-hrd.,dns. vfg-mxln.,mic.,foss.,sndy. NØNSFOC
Ls: A.A. NØNSFOC
Sh: gry.-ylw.brn.,sft.,earthy-clayey
Ls: wh.-crm.-lt.gry.,m.sft.,chiky -hrd.,dns.,vfg-mxln.,tr.mic. foss. NØNSFOC
Ls: A.A. NØNSFOC
Sh: gry.-gry.grn.-rd.brn.,sft.+ clayey.-m.hrd.,hackly
Sh: A.A.
Ls: crm-gry.,sft.+chiky.-hrd., dns.,mic.,vfg-mxln.,occ. foss.-v.foss. NØNSFOC
Sh: rd.brn-gry.grn,sft.,earthy-clayey,,tr.sndy.
Ls: crm-tan,hrd,dns.,occ.sft. +chiky.,mic.,occ.foss. NØNSFOC
Sh: A.A.
Ls: crm-tan.,hrd.,dns.,vfg,-mxln. mic.,occ.foss.,occ.pebb.surf. rd.sh.stnd. NØNSFOC
Sh: rd.brn,tr.gry.grn.,sft.clayey -m.sft.,earthy.,tr.sndy.,tr. Ls.pebb.
Ls: crm.,hrd.,dns.,occ.m.sft., chiky.,vfg-mxln.,tr.mic.,occ. foss.,sh.stnd. NØNSFOC

Topeka Fm. (-794')

Ls: crm.,hrd.-sft.+chiky.,dns., vfg-mxln.,mic.,occ.foss.) rd.sh.stnd.,tr.sndy NØNSFOC
Ls: crm.,hrd.,dns.,vfg-mxln., mic.,occ.sft.+chiky.,occ.foss. occ.sh.stnd.,tr.sndy. NØNSFOC
Ls: A.A.,occ.sndy. NØNSFOC
Sh: rd.,sft.,clayey.,slty.-sndy
Ls: wh.-crm.,sft.,chiky.-hrd.) dns,mic.,vfg-mxln.,occ.foss. occ.sndy.,tr.rd.sh.stnd. NØNSFOC
Ls: wh.-crm.,sft.+chiky.,-hrd., dns.,vfg-mxln.,mic.,occ. foss.-v.foss. NØNSFOC
Ls: wh.-crm,sft.+chik.-hrd., dns.,mic.,vfg-mxln.,occ. foss. NØNSFOC
Ls: crm.-wh.,hrd.,dns.,occ.sft. +chiky.,vfg-mxln.,occ.foss. w/1-2pc.tr.-pr.intpart.Ø NSFOC
Ls: crm.,hrd.,dns.,vfg-mxln., occ.,sft.+chiky.,tr.mic.,foss -v.foss.+ool.,tr.pr.intpart.Ø tr.v.pr.vug.moldicØ NSFOC
tr. Sh: gry.-blk,m.sft.,dns.earthy
Ls: crm-gry.,m.sft.-hrd.,dns.,tr- vfgxln.,foss.,abun.dk.sh.stn. looks like oil stn. NØNSFOC

King Hill Sh. (-883')

Sh: rd.brn.,sft.,clayey.w/sh: gry.-blk,m.hrd.carb.,hack.
Ls: crm.-ltgry,hrd.,dns,vfg-mxln.,tr.sndy., NØNSFOC
Ls: crm.,tan,hrd.,dns,vfg-



Ls.-tan, hrd., gns., v.f.-f.gss.
-v.f.gss., occ. sndy. N Ø NSFOC
Sh: rd. brn-gry. grn., sft. + clayey-
m.sft. + earthy
Sh: A.A., occ. pebb.
Ls: crm.-tan, tr. ylw., hrd., dns., vfg
-mxln., f.gss.-v.f.oss., sh. stnd.
rd. pebb. surf. N Ø NSFOC
Sh: rd. brn., sft., clayey-earthy.
Tr. Sh: dk. gry.-blk., m.sft. carb., earth.
Ls: crm.-tan, hrd., dns., foss.-v.foss.
Abun. rd. sh. stn. N Ø NSFOC
Ls: A.A. N Ø NSFOC
Sh: rd. brn., sft., clayey.-earthy
occ. v. sndy.-slty. Ss: rd.,
m. hrd., dns., fn. grn. @ N Ø NSFOC
CFS
Ls: wh.-crm.-lt. gry., sft. + chiky.-
hrd., dns., f-mxln-mxln., occ.
pr. intxln Ø w/tr. fr. vug. Ø, tr.
foss., occ. sndy N S FOC
Ls: A.A., mory hrd., dns., mic.
1-2 pc. w/dd. gilsonite on
frac. surface, No vis. Ø
N F OC
Ls: crm., hrd., dns., vfg-mxln.,
mic., occ. foss. + sh. stnd.
N Ø NSFOC
Sh: dk. gry.-blk., m.sft., earthy
Ls: A.A. N Ø NSFOC
Sh: rd. brn.-gry., mott., sft.-
m.sft., clayey-earthy,
sndy.
Sh: rd. brn., sft., clayey.-m.sft.
sndy., earthy
Sh: A.A. occ. gry.
Tr. Ls: crm., m.sft., vfg-xln., foss. +
ool. w/gd.-ex. vug. Ø-some moldic
wk. odor, tr. F.O., gd. stn, cut + fl.
Ls: crm.-tan, m. hrd-hrd., f-xln-mxln
occ. foss. + ool. w/tr.-pr. vug. Ø-
sh, smaller vugs., gd. stn, cut + fl
gd. odor, SFO., sl. less Ø, pyr.
Ls: A.A. tr. pr. Ø + shows. A.A. ? perm.
Ss: brn., m.sft., fria., vfg., calc. cmt.,
mod. srtd., subrnd., ? Ø, gd. sat.
stn., ex. cut + fl., tr. F.O., ? perm.
Tr. Ss: A.A. Sh: rd. brn, sft., clayey
-earthy
CFS
Sh: rd. brn., sft., clayey-earthy
Sh: rd. brn-gry. grn.-dk. gry., sft. +
clayey-m. hrd. dns., earthy-
hackly., occ. Ls: pebb., tr.
sndy
Ls: crm.-lt. gry., hrd., dns., vfg-mxln.
mic., occ. sft. + chiky, tr. foss. +
opl., occ. tr.-pr. vug. Ø w/lt. brn. stn.
tr-wk. cut + fl., tr. dd oil, wk. odor.
Ls: wh.-crm., hrd., dns., vfg-mxln.
mic., occ. tr.-pr. vug Ø-g. vugs.
w/lt. brn stn., tr. cut + fl., No F.O.
wk. odor., ? perm.
Ls: crm-tan, hrd., vfg-mxln N Ø NSFOC
occ. sh. gry., m.sft., dns., earthy
CFS
Sh: rd. brn.-gry., mott., sft. + clayey
-m.sft., earthy. occ. sndy
Sh: rd. brn., sft., clayey-m.sft.,
earthy., occ. sndy., tr. gry-
grn.
Ls: lt. gry., hrd., dns., vfg-mxln.,
mic., occ. chiky., tr (2-3 pc) tan
pr. vug. Ø w/brn stn., No odor, No
F.O., wk. cut + fl. v. ? perm, thin zn.
Ls: crm-lt. gry., hrd., dns., mxln.,
mic., occ. sft. + chiky N Ø NSFOC
Sh: rd. brn-gry., m.sft., earthy.
occ. sndy.-cavings ?
Ls: crm-lt. gry., hrd., dns., vfg-mxln.
mic., occ. chiky., rare foss. N Ø NSFOC
CFS
Ls: A.A. N Ø NSFOC
Sh: sft-m.sft., clayey-earthy
Sh: rd. brn., m.sft., earthy, sndy
Ls: crm-lt. gry., hrd., dns., vfg-mxln.
mic., tr. sh. stnd. N Ø NSFOC
tr. chiky
Ls: crm-lt. gry., hrd., dns., vfg-mxln

Lecompton Ls.
(-906')

Oread Ls.
(-944')

Heebner Sh.
(-958')

DST #1
3639'-3705'
Rec. 124' OSM
Deviation 1°

Good Show
(thin zone)
Lansing Grp.
Fair Show
(-1001')
Fair Show

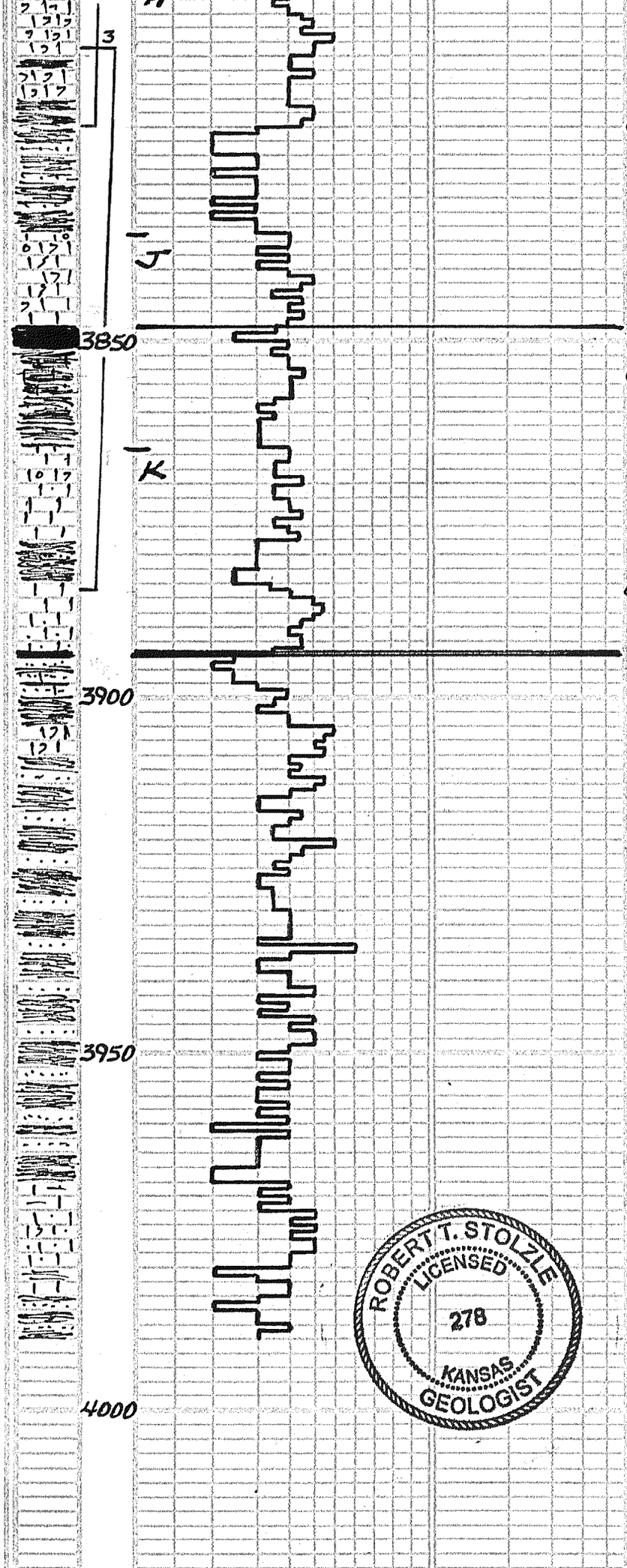
Mud Check @ 3705'
M.W. 9.1 chl. 1,300
Vis. 50 LCM. 6#
W.L. 6.0
Solids 5.7%

Weak Show

Weak Show

DST #2
3691'-3820'
Rec. 20' oil
60' OCM
Strap 1.49' long
(No Correction)

Very Weak Show



mic, tr. chiky., 2pc. pr. pp vug ⊕ w/ lt. brn. stn., wk. cut + fl., No F.O. No odor Very V. weak show

DST #3
3809-3885'
Rec. 20' Mud

Ls: crm.-ylw. stnd., hrd., dns., vfg-mxln, mic., occ. chiky., foss-v. foss. NO NSFOC

CFS Sh: rd. brn-gry., sft., clayey

Sh: rd. brn-gry. grn., sft.-m. sft., clayey-earthy., occ. sndy

Ls: crm., hrd., dns. vfg-mxln., occ. mic., occ. chiky, tr. foss. dol, w/ pr.-fr. int. part ⊕ + pp. vug. ⊕ tr. mo/dic., dk. brn. stn., fr. cut + fl. No F.O.

Weak Show (-1169')

Ls: crm-lt. gry. A.A., occ. fn. pp. vug ⊕ around. foss. grns., tr. frac., dk. brn. stn., No odor, 1-2 drops F.O. fr. cut + fl., ? perm., tr. pyr.

Stark Shale
Fair-Weak Show

Sh. dk. gry.-blk. m. sft., earthy, carb

CFS w/ Sh. rd. brn-lt. gry., sft, clay-earth.

Sh: rd. brn-gry. grn.-dk. gray., m., sft.-sft., clayey-earthy., sndy

Mud Check @ 3843'
M.W. 9.0
Vis. 62
W.L. 6.4
Chl. 1,700
Solids 5.0%
LCM. 5#

Sh. A.A., freedom. rd. brn., earthy

Ls: crm.-gry., hrd., dns., vfg-mxln. mic., rare foss., tr. pyr. tr. chiky NO NSFOC

Ls. wh-crm.-lt. gry., hrd.-sft. + chiky, vfg-mxln., mic., rare foss dol., 4-5pc, w/ pr., pp ⊕. dk. stn. wk. cut + fl., No odor, No F.O.

Very weak Show

Ls: A.A. 2-3pc. w/ ⊕ + show A.A. v.v. wk show

CFS Sh: rd. brn., m. sft., earthy

Sh: rd. brn-mar.-dk. gry., m. sft.-sft., earthy, sndy-v. sndy

Ls. wh.-crm., hrd.-m. sft., vfg xln. sndy.-v. sndy.-calc. Ss: vfg., mod. std., w. cmtd., sub rnd., frib. tr. Sh: A.A. NO NSFOC

Base of Kansas City Group (-1215')

calc. Ss: A.A. occ. hrd, w. cmtd. NO NSFOC

Ls: crm-lt. gry., hrd.-sft. + chiky. occ. foss, vfg-mxln. NO NSFOC

Sh. A.A.

Ls: A.A. NO NSFOC

Sh: rd. brn-gry. grn., sft. + clayey.-m. sft., earthy, sndy.

Sh: rd. brn-mar.-gry. grn., sft. + clay.-m. sft., earthy., sndy.

Sh: vari c., A.A., more sft. + clayey, sndy.

Sh: vari c., sft.-m. sft., clay-earth. occ. v. sndy-slty., tr. ls. pebb.

Sh: A.A.-occ. ylw., sndy

Sh: A.A, tr. cht. + ls. pebb.

Sh: rd. brn., v. sft., clayey., occ. sft. + sndy., tr. lt. gry., earthy

Sh.-slts: rd. brn.-mar.-ylw. m. sft., sndy.-v. sndy., earthy.

Ls: lt. gry., hrd., dns., occ. sndy. rare foss. NO NSFOC

tr. Ls: A.A. NO NSFOC

Sh: rd. brn.-mar., v. sft. clayey.-m. sft., earthy, sndy

D.T.D. 3990'
L.T.D. 3992

Deviation 1¼°
Robert Stolzle
4/5/13

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

Luetta #1-15

15-2s-29w Decatur,KS

Start Date: 2013.05.03 @ 04:50:00

End Date: 2013.05.03 @ 12:54:00

Job Ticket #: 50667 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.14 @ 08:45:52

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50667 **DST#: 1**

Test Start: 2013.05.03 @ 04:50:00

GENERAL INFORMATION:

Formation: **LKC-A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:47:30
Time Test Ended: 12:54:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Chuck Kreutzer Jr.
Unit No: 61

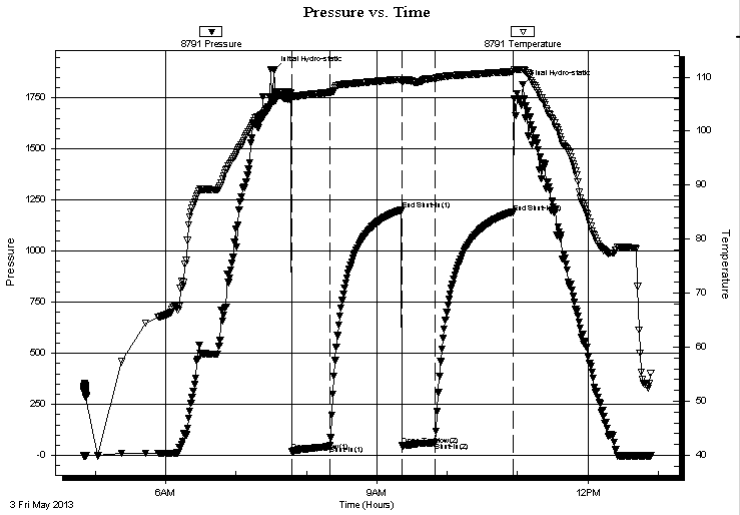
Interval: 3639.00 ft (KB) To 3705.00 ft (KB) (TVD)
Total Depth: 3705.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2679.00 ft (KB)
2674.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8791 **Inside**

Press@RunDepth:	62.35 psig @	3640.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2013.05.03	End Date:	2013.05.03	Last Calib.:	2013.05.03
Start Time:	04:50:01	End Time:	12:54:00	Time On Btm:	2013.05.03 @ 07:32:30
				Time Off Btm:	2013.05.03 @ 11:04:30

TEST COMMENT: IF: Weak blow , 1/4" after 5 mins. blow started to die after 10 mins. Dead in 20 mins.
ISI: No blow back.
FF: No blow
FSI: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1886.44	105.55	Initial Hydro-static
15	18.96	106.24	Open To Flow (1)
48	49.00	107.18	Shut-In(1)
109	1203.19	109.60	End Shut-In(1)
109	47.65	109.21	Open To Flow (2)
137	62.35	109.77	Shut-In(2)
204	1190.57	111.02	End Shut-In(2)
212	1814.35	111.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud with oil specks	0.61

Gas Rates

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

DRILL STEM TEST REPORT

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50667 **DST#: 1**

Test Start: 2013.05.03 @ 04:50:00

GENERAL INFORMATION:

Formation: **LKC-A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:47:30
Time Test Ended: 12:54:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Chuck Kreutzer Jr.
Unit No: 61

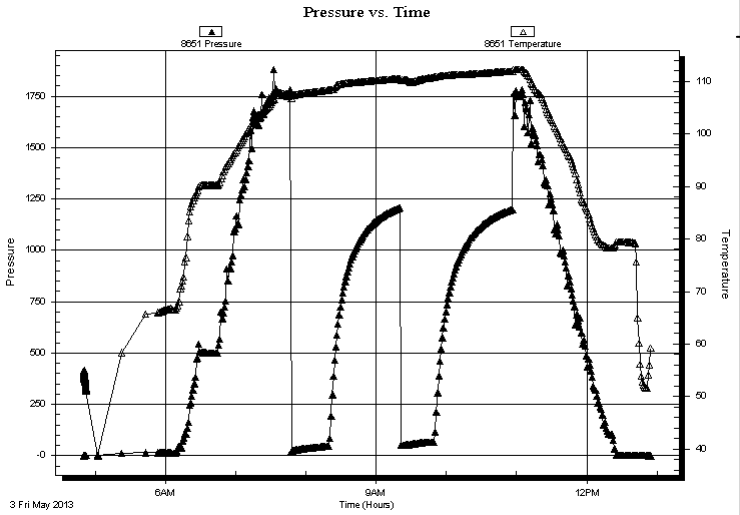
Interval: 3639.00 ft (KB) To 3705.00 ft (KB) (TVD)
Total Depth: 3705.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2679.00 ft (KB)
2674.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8651 **Outside**

Press@RunDepth:	psig @	3640.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2013.05.03	End Date:	2013.05.03	Last Calib.:	2013.05.03
Start Time:	04:50:01	End Time:	12:54:30	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF: Weak blow , 1/4" after 5 mins. blow started to die after 10 mins. Dead in 20 mins.
ISI: No blow back.
FF: No blow
FSI: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud with oil specks	0.61

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50667 **DST#: 1**

Test Start: 2013.05.03 @ 04:50:00

Tool Information

Drill Pipe:	Length:	3443.00 ft	Diameter:	3.80	inches	Volume:	48.30	bbl	Tool Weight:	2400.00 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:	186.00 ft	Diameter:	2.25	inches	Volume:	0.91	bbl	Weight to Pull Loose:	65000.00 lb
						Total Volume:	49.21	bbl	Tool Chased	2.00 ft
Drill Pipe Above KB:		18.00 ft							String Weight: Initial	58000.00 lb
Depth to Top Packer:		3639.00 ft							Final	58000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		66.00 ft								
Tool Length:		94.00 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			3616.00		
Hydraulic tool	5.00			3621.00		
Jars	5.00			3626.00		
Safety Joint	3.00			3629.00		
Packer	5.00			3634.00	28.00	Bottom Of Top Packer
Packer	5.00			3639.00		
Stubb	1.00			3640.00		
Recorder	0.00	8791	Inside	3640.00		
Recorder	0.00	8651	Outside	3640.00		
Perforations	3.00			3643.00		
change Over Sub	1.00			3644.00		
Drill Pipe	32.00			3676.00		
Change Over Sub	1.00			3677.00		
Perforations	25.00			3702.00		
Bullnose	3.00			3705.00	66.00	Bottom Packers & Anchor

Total Tool Length: 94.00

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50667 **DST#: 1**

Test Start: 2013.05.03 @ 04:50:00

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:	57.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	5.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

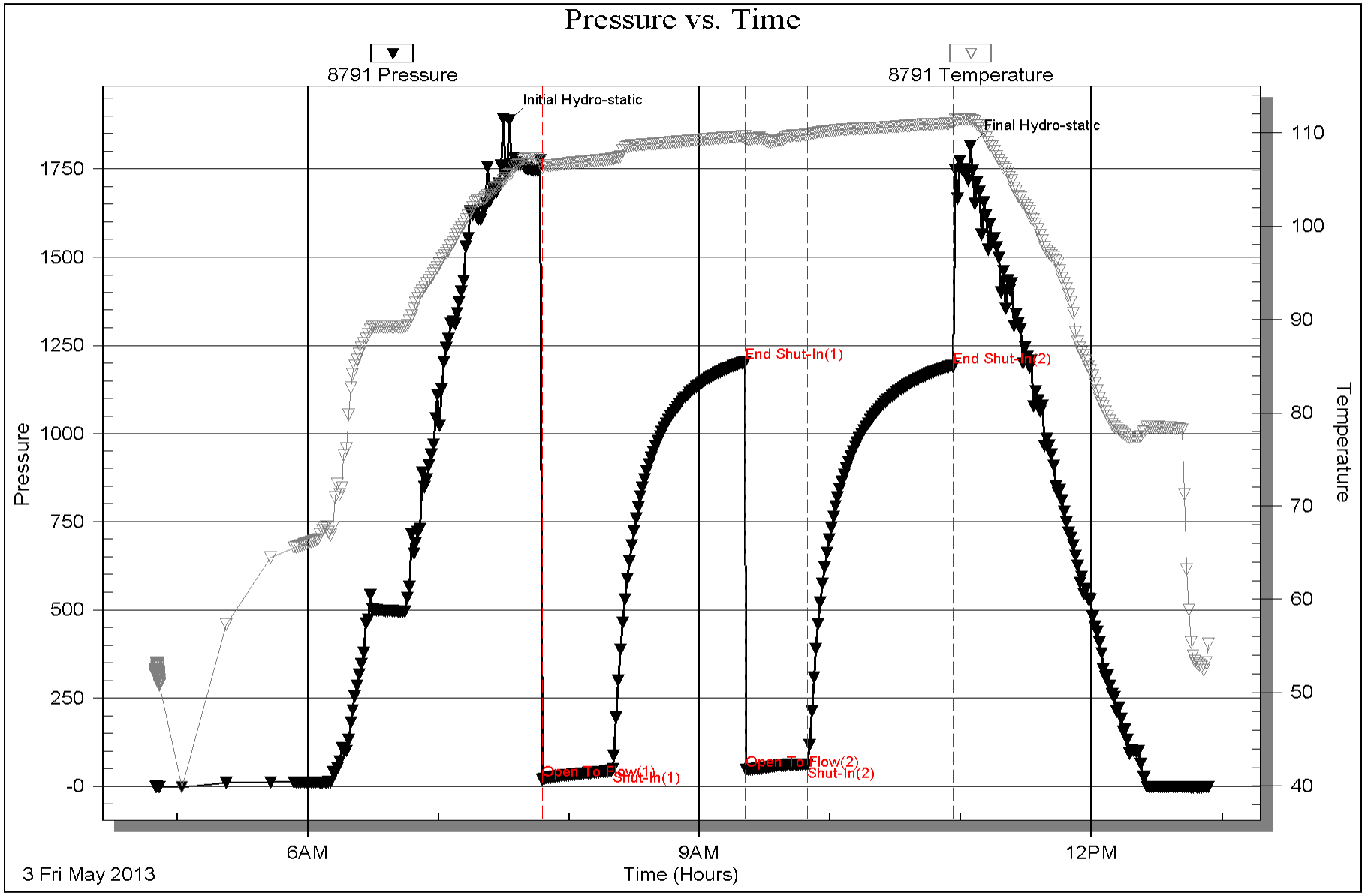
Length ft	Description	Volume bbl
124.00	mud with oil specks	0.610

Total Length: 124.00 ft Total Volume: 0.610 bbl

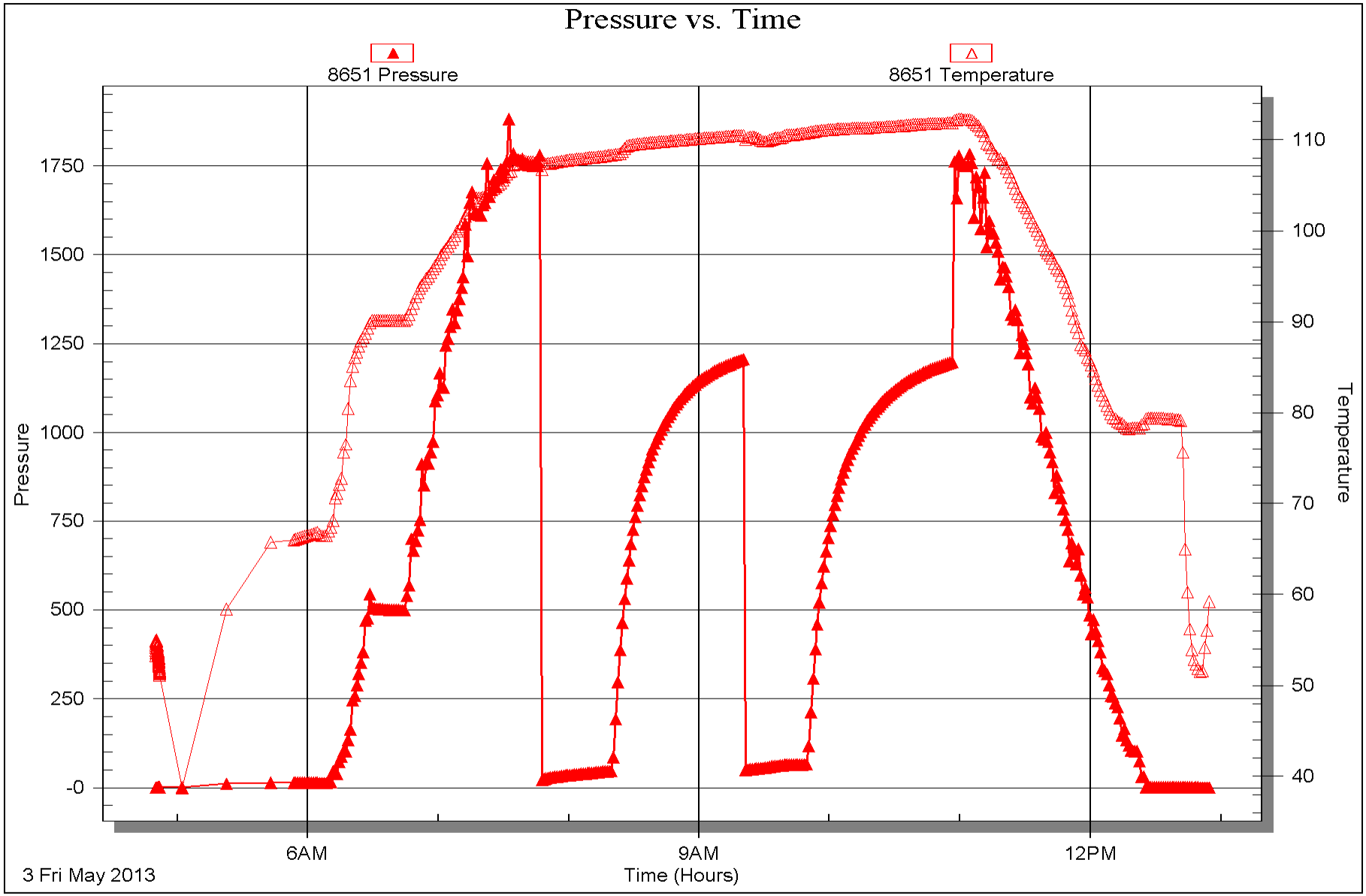
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8791 Pressure
8791 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
1750
1500
1250
1000
750
500
250
-0
110
100
90
80
70
60
50
40
6AM
9AM
12PM
3 Fri May 2013
Time (Hours)

Serial #: 8651 **Outside** Murfin Drilling Co. Luetta #1-15 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50667 Printed: 2013.05.14 @ 08:45:56

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

Luetta #1-15

15-2s-29w Decatur,KS

Start Date: 2013.05.04 @ 04:20:00

End Date: 2013.05.04 @ 11:19:00

Job Ticket #: 50668 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.14 @ 08:44:59

DRILL STEM TEST REPORT

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50668 **DST#: 2**

Test Start: 2013.05.04 @ 04:20:00

GENERAL INFORMATION:

Formation: **LKC D-H**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:11:30
Time Test Ended: 11:19:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreutzer Jr.
Unit No: 61

Interval: 3691.00 ft (KB) To 3820.00 ft (KB) (TVD)
Total Depth: 3820.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

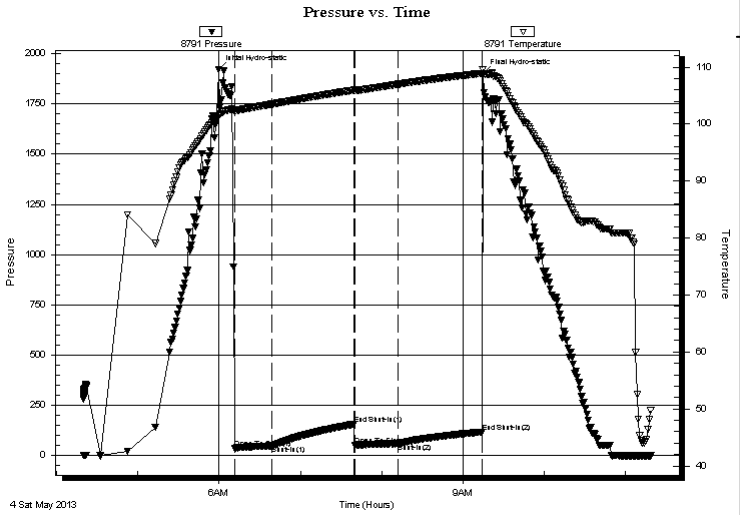
Reference Elevations: 2679.00 ft (KB)
2674.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8791 **Inside**

Press@RunDepth: 59.16 psig @ 3692.00 ft (KB)
Start Date: 2013.05.04 End Date: 2013.05.04
Start Time: 04:20:01 End Time: 11:19:00

Capacity: 8000.00 psig
Last Calib.: 2013.05.04
Time On Btm: 2013.05.04 @ 05:59:30
Time Off Btm: 2013.05.04 @ 09:14:30

TEST COMMENT: IF: Weak blow 1/4" Died in 25 mins.
ISI: No blow back
FF: No blow .
FSI: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1921.83	101.43	Initial Hydro-static
12	35.56	102.31	Open To Flow (1)
40	48.08	103.50	Shut-In(1)
100	154.95	105.96	End Shut-In(1)
101	51.41	105.90	Open To Flow (2)
133	59.16	107.00	Shut-In(2)
195	116.51	108.92	End Shut-In(2)
195	1902.76	109.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	ocm-30%o70M	0.30
20.00	oil-100%o	0.10

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50668 **DST#: 2**

Test Start: 2013.05.04 @ 04:20:00

GENERAL INFORMATION:

Formation: **LKC D-H**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:11:30
Time Test Ended: 11:19:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreutzer Jr.
Unit No: 61

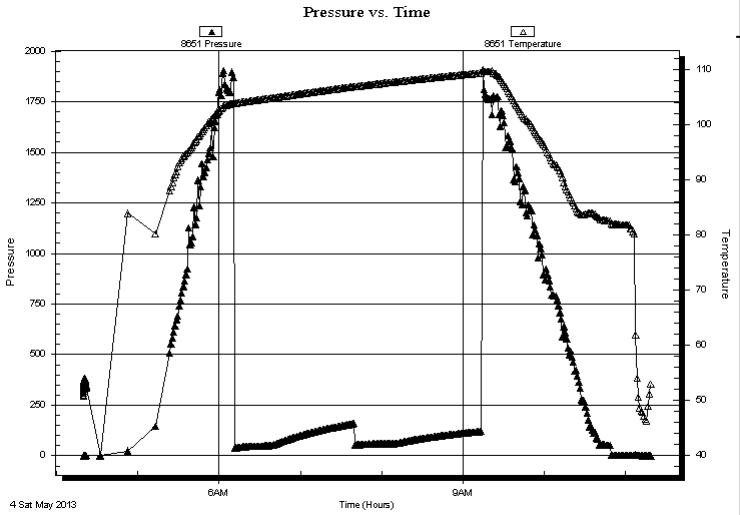
Interval: 3691.00 ft (KB) To 3820.00 ft (KB) (TVD)
Total Depth: 3820.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2679.00 ft (KB)
2674.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8651 **Outside**

Press@RunDepth:	psig @	3692.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2013.05.04	End Date:	2013.05.04	Last Calib.:	2013.05.04
Start Time:	04:20:01	End Time:	11:19:00	Time On Btm:	
				Time Off Btm:	

TEST COMMENT:
IF: Weak blow 1/4" Died in 25 mins.
ISI: No blow back
FF: No blow .
FSI: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	ocm-30%o70M	0.30
20.00	oil-100%o	0.10

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50668 **DST#: 2**

Test Start: 2013.05.04 @ 04:20:00

Tool Information

Drill Pipe:	Length:	3497.00 ft	Diameter:	3.80	inches	Volume:	49.05 bbl	Tool Weight:		2400.00 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:	186.00 ft	Diameter:	2.25	inches	Volume:	0.91 bbl	Weight to Pull Loose:		55000.00 lb
						Total Volume:	49.96 bbl	Tool Chased		2.00 ft
Drill Pipe Above KB:		20.00 ft						String Weight:	Initial	52000.00 lb
Depth to Top Packer:		3691.00 ft							Final	52000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		129.00 ft								
Tool Length:		157.00 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			3668.00		
Hydraulic tool	5.00			3673.00		
Jars	5.00			3678.00		
Safety Joint	3.00			3681.00		
Packer	5.00			3686.00	28.00	Bottom Of Top Packer
Packer	5.00			3691.00		
Stubb	1.00			3692.00		
Recorder	0.00	8791	Inside	3692.00		
Recorder	0.00	8651	Outside	3692.00		
Perforations	25.00			3717.00		
change Over Sub	1.00			3718.00		
Drill Pipe	93.00			3811.00		
Change Over Sub	1.00			3812.00		
Perforations	5.00			3817.00		
Bullnose	3.00			3820.00	129.00	Bottom Packers & Anchor
Total Tool Length:	**157.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50668 **DST#: 2**

Test Start: 2013.05.04 @ 04:20:00

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:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	5.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1300.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	ocm-30%o70M	0.295
20.00	oil-100%o	0.098

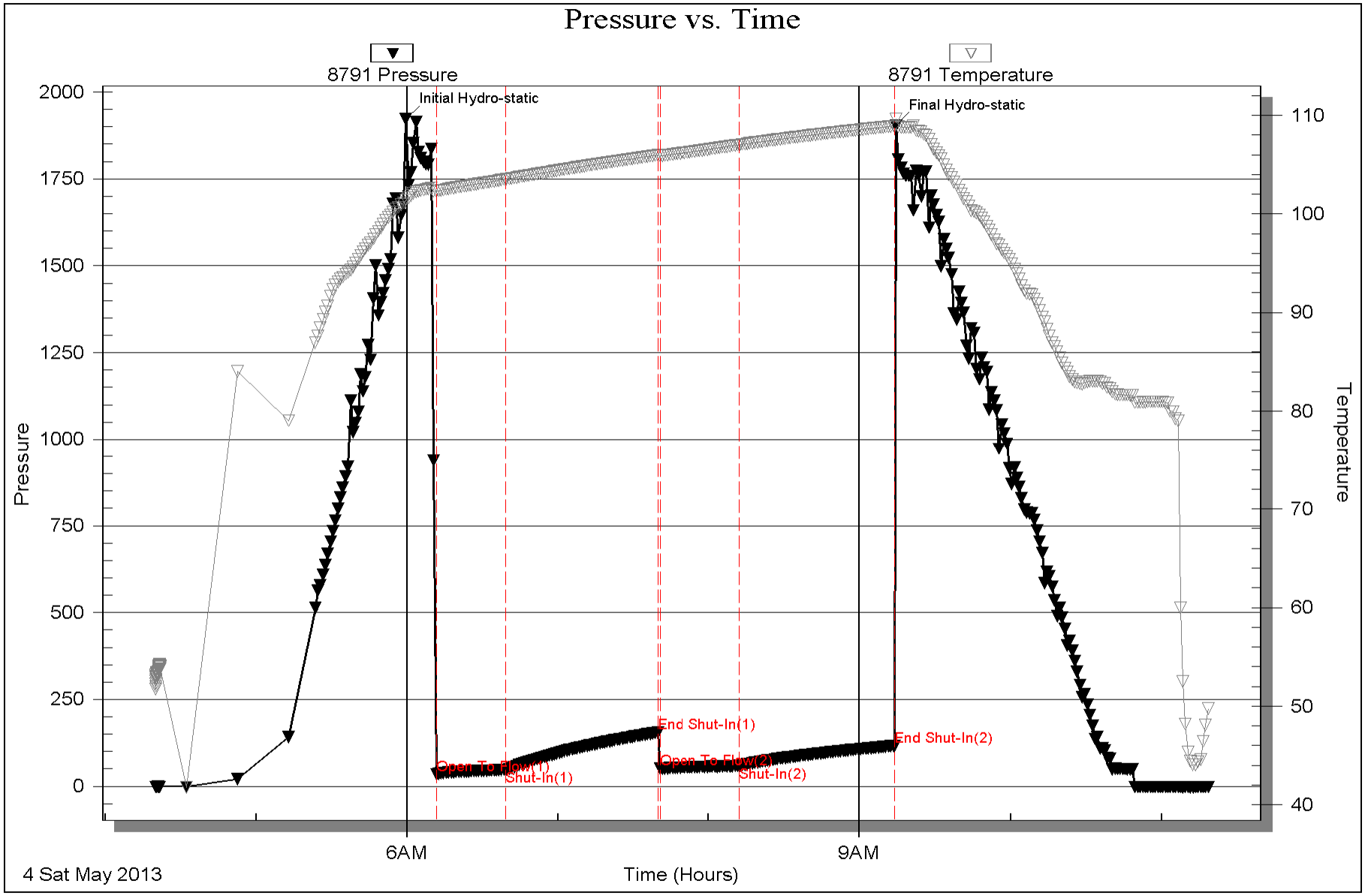
Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

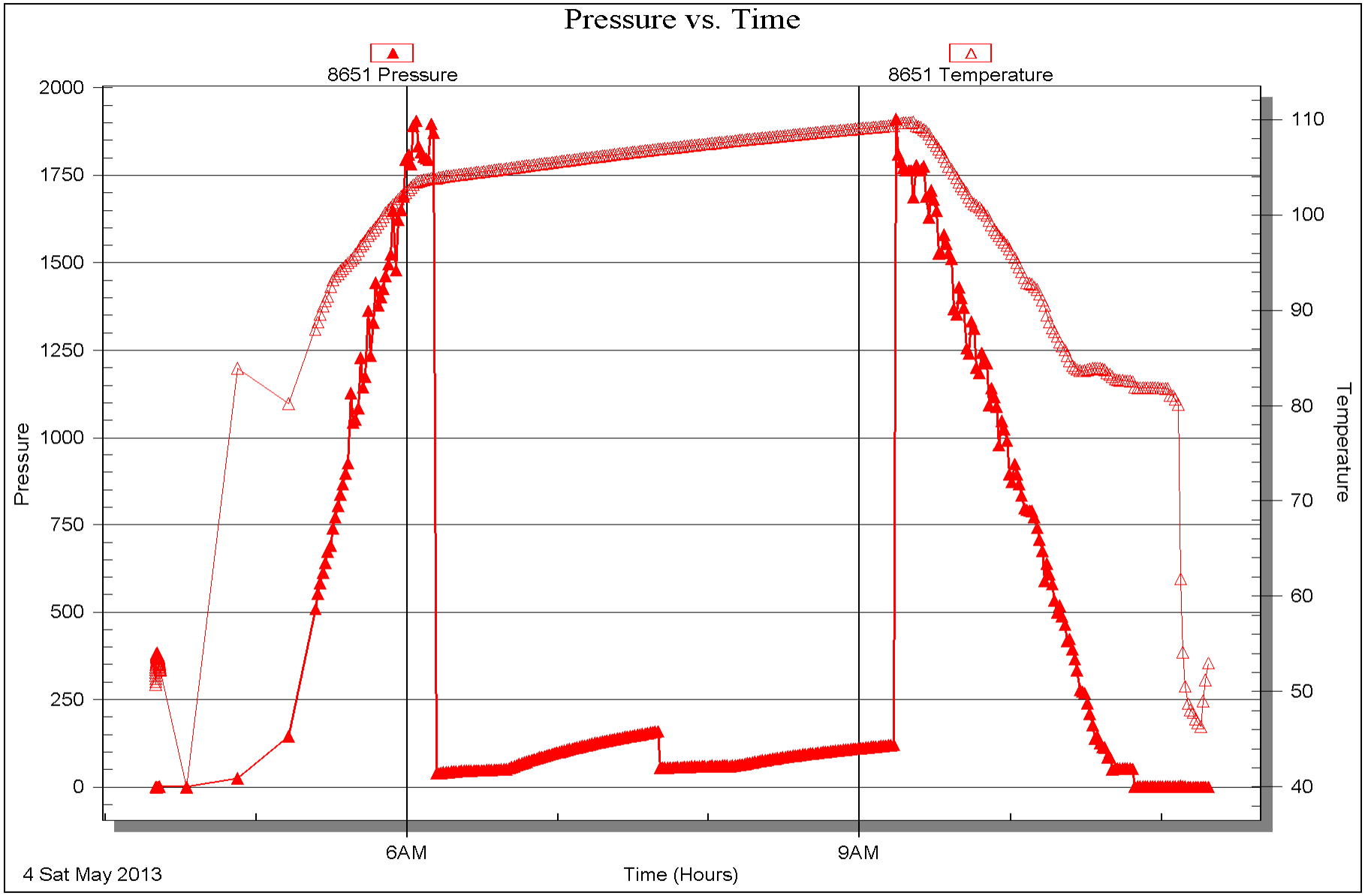
Recovery Comments:

Serial #: 8791 **Inside** Murfin Drilling Co. Luetta #1-15 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50668 Printed: 2013.05.14 @ 08:45:02

Serial #: 8651 **Outside** Murfin Drilling Co. Luetta #1-15 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50668 Printed: 2013.05.14 @ 08:45:03

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

Luetta #1-15

15-2s-29w Decatur,KS

Start Date: 2013.05.04 @ 20:15:00

End Date: 2013.05.05 @ 02:40:00

Job Ticket #: 50669 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.14 @ 08:44:11

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50669 **DST#: 3**

Test Start: 2013.05.04 @ 20:15:00

GENERAL INFORMATION:

Formation: **LKC J-K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:18:30
Time Test Ended: 02:40:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreutzer Jr.
Unit No: 61

Interval: 3809.00 ft (KB) To 3885.00 ft (KB) (TVD)
Total Depth: 3885.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

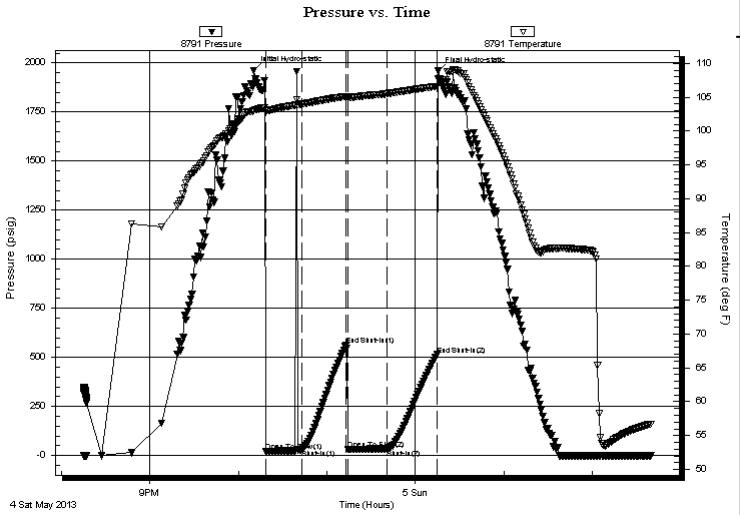
Reference Elevations: 2679.00 ft (KB)
2674.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8791 **Inside**

Press@RunDepth: 33.74 psig @ 3810.00 ft (KB)
Start Date: 2013.05.04 End Date: 2013.05.05
Start Time: 20:15:01 End Time: 02:40:00

Capacity: 8000.00 psig
Last Calib.: 2013.05.05
Time On Btm: 2013.05.04 @ 22:10:30
Time Off Btm: 2013.05.05 @ 00:15:30

TEST COMMENT:
IF: Weak blow , Dead in 5 mins.
ISI: No blow back
FF: No blow over 30 mins
FSI: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1962.56	103.02	Initial Hydro-static
8	21.65	102.96	Open To Flow (1)
33	30.77	103.99	Shut-In(1)
63	562.50	105.14	End Shut-In(1)
64	31.45	104.95	Open To Flow (2)
90	33.74	105.52	Shut-In(2)
124	513.76	106.60	End Shut-In(2)
125	1958.64	107.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud -100%m	0.10

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50669 **DST#: 3**

Test Start: 2013.05.04 @ 20:15:00

GENERAL INFORMATION:

Formation: **LKC J-K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:18:30
Time Test Ended: 02:40:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreutzer Jr.
Unit No: 61

Interval: 3809.00 ft (KB) To 3885.00 ft (KB) (TVD)
Total Depth: 3885.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

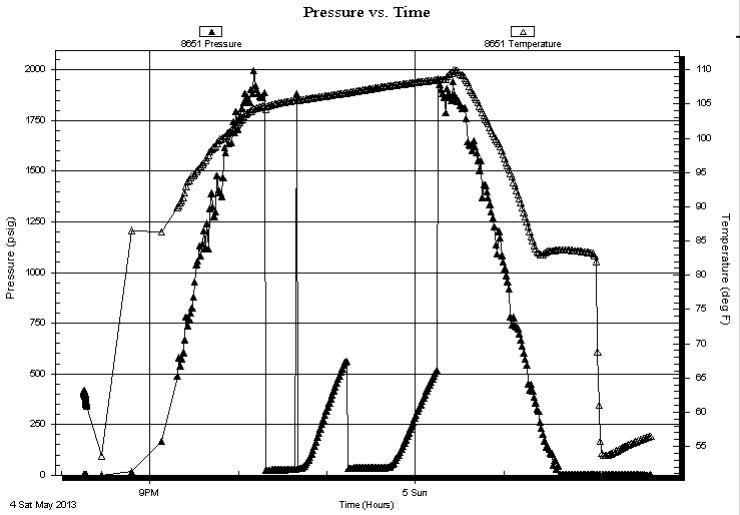
Reference Elevations: 2679.00 ft (KB)
2674.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8651 **Outside**

Press@RunDepth: psig @ 3810.00 ft (KB)
Start Date: 2013.05.04 End Date: 2013.05.05
Start Time: 20:15:01 End Time: 02:40:00

Capacity: 8000.00 psig
Last Calib.: 2013.05.05
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak blow , Dead in 5 mins.
ISI: No blow back
FF: No blow over 30 mins
FSI: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud -100%m	0.10

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50669 **DST#: 3**

Test Start: 2013.05.04 @ 20:15:00

Tool Information

Drill Pipe:	Length:	3629.00 ft	Diameter:	3.80	inches	Volume:	50.91 bbl	Tool Weight:		2400.00 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:	186.00 ft	Diameter:	2.25	inches	Volume:	0.91 bbl	Weight to Pull Loose:		55000.00 lb
						Total Volume:	51.82 bbl	Tool Chased		2.00 ft
Drill Pipe Above KB:		34.00 ft						String Weight:	Initial	52000.00 lb
Depth to Top Packer:		3809.00 ft							Final	52000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		76.00 ft								
Tool Length:		104.00 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			3786.00		
Hydraulic tool	5.00			3791.00		
Jars	5.00			3796.00		
Safety Joint	3.00			3799.00		
Packer	5.00			3804.00	28.00	Bottom Of Top Packer
Packer	5.00			3809.00		
Stubb	1.00			3810.00		
Recorder	0.00	8791	Inside	3810.00		
Recorder	0.00	8651	Outside	3810.00		
Perforations	5.00			3815.00		
change Over Sub	1.00			3816.00		
Drill Pipe	63.00			3879.00		
Change Over Sub	1.00			3880.00		
Perforations	2.00			3882.00		
Bullnose	3.00			3885.00	76.00	Bottom Packers & Anchor
Total Tool Length:	**104.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

250 N. Water Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

15-2s-29w Decatur,KS

Luetta #1-15

Job Ticket: 50669 **DST#: 3**

Test Start: 2013.05.04 @ 20:15:00

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:	62.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1700.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

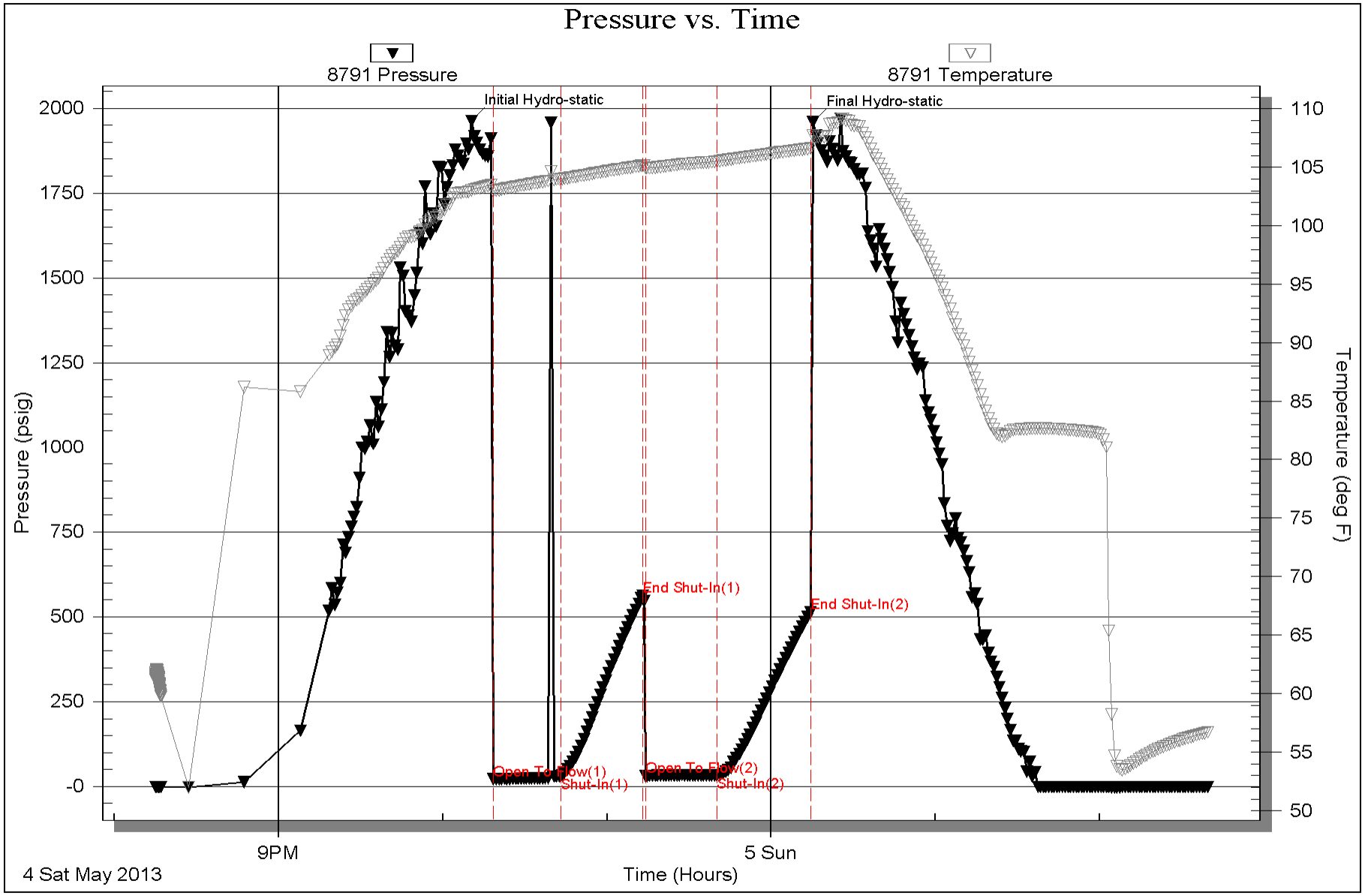
Length ft	Description	Volume bbl
20.00	mud -100%m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

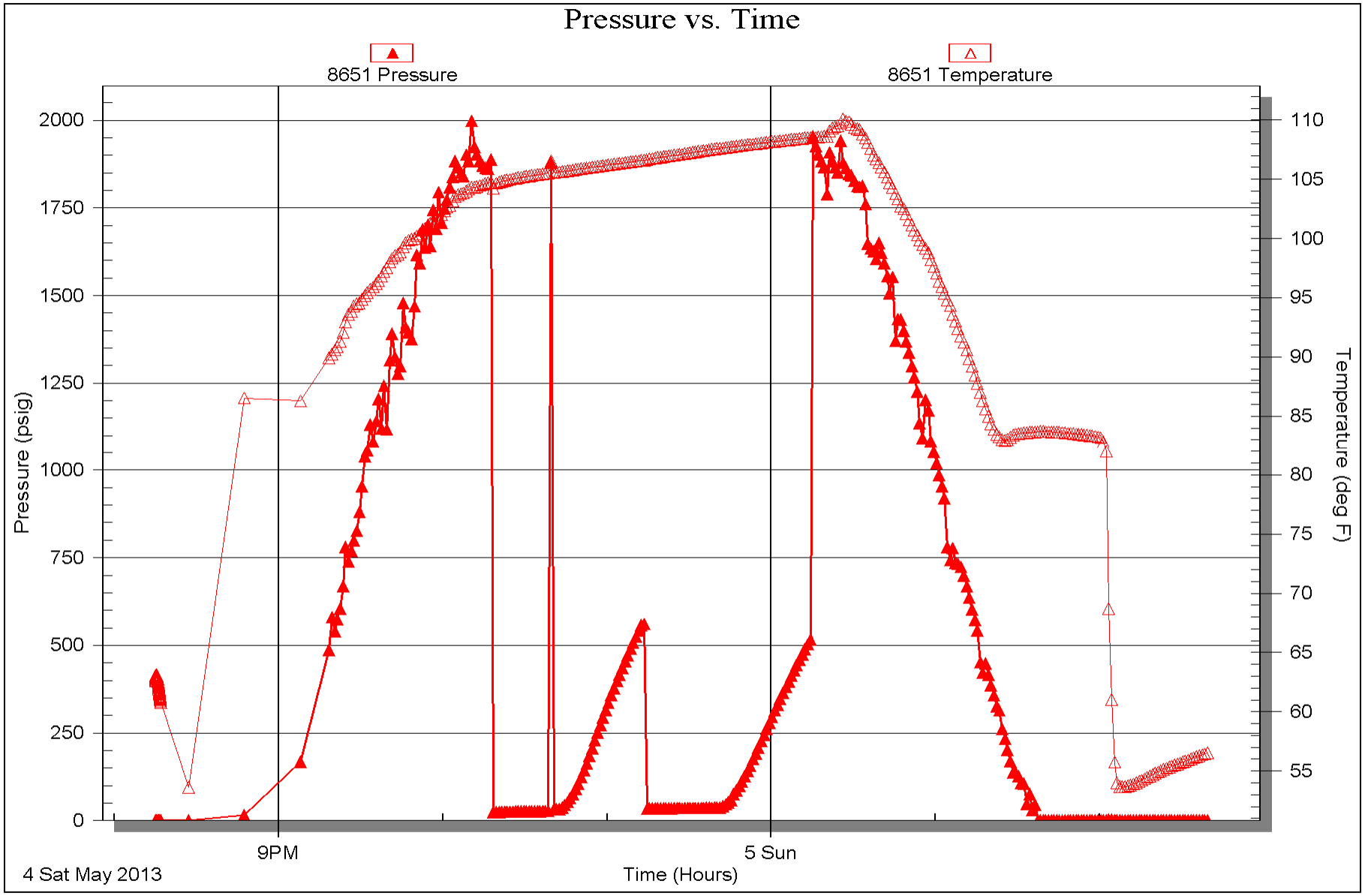
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8791 Pressure
8791 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
-0
110
105
100
95
90
85
80
75
70
65
60
55
50
9PM
5 Sun
4 Sat May 2013
Time (Hours)

Serial #: 8651 **Outside** Murfin Drilling Co. Luetta #1-15 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 50669 Printed: 2013.05.14 @ 08:44:15

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50667

Well Name & No. Luetta # 1-15 Test No. 1 Date 5-3-2013

Company Murfin Drilling Co. Elevation 2679 KB 2674 GL

Address 250 N. Water Ste 300 Wichita Ks. 67202

Co. Rep / Geo. Bob Stalzle Rig Murfin #8

Location: Sec. 15 Twp. 2S Rge. 29W Co. Decatur State KS

Interval Tested 3639 3705 Zone Tested LKC-A

Anchor Length 66 Drill Pipe Run 3443 Mud Wt. 8.8

Top Packer Depth 3634 Drill Collars Run 186 Vis 57

Bottom Packer Depth 3639 Wt. Pipe Run -0- WL 5.2

Total Depth 3705 Chlorides 1,000 ppm System LCM 3#

Blow Description IF: Weak blow, 1/4 in. after 5 mins. Blow died to surface after 10 mins. Dead in 20 mins

ISI: No blow back

FF: No blow

FSI: No blow back

Rec 124	Feet of mud with oil specs	%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	Feet of	%gas	%oil	%water	%mud

Rec Total 124 BHT 109 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	1886	☑ Test	1150	T-On Location	3:10
(B) First Initial Flow	19	☑ Jars	250	T-Started	4:50
(C) First Final Flow	49	☑ Safety Joint	75	T-Open	7:47
(D) Initial Shut-In	1203	☐ Circ Sub		T-Pulled	10:45
(E) Second Initial Flow	48	☐ Hourly Standby		T-Out	12:45
(F) Second Final Flow	62	☑ Mileage	5X2=10X1.55= 15.50	Comments	
(G) Final Shut-In	1191	☐ Sampler			
(H) Final Hydrostatic	1814	☐ 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	1490.50
Final Shut-In	60	☐ Accessibility		MP/DST Disc't	
		Sub Total	1490.50		

Approved By ____ Our Representative Chuck Kuger

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50668

Well Name & No. Luetta #1-15 Test No. 2 Date 5-4-2013

Company MurFin Drilling Co. Elevation 2674 KB 2674 GL

Address 250 N. Water ste. 300 Wichita Ks. 67202

Co. Rep / Geo. Bob Stolzle Rig MurFin #8

Location: Sec. 15 Twp. 2S Rge. 24W Co. Decatur State Ks.

Interval Tested 3691 3820 Zone Tested LKC - D, G, H

Anchor Length 129 Drill Pipe Run 3497 Mud Wt. 9.1

Top Packer Depth 3686 Drill Collars Run 186 Vis 50

Bottom Packer Depth 3691 Wt. Pipe Run - 0 - WL 6.0

Total Depth 3820 Chlorides 1,300 ppm System LCM 6#

Blow Description IF: Weak blow 1/4 in. Died in 25 mins.

ISI: No blow back

FF: No blow

FSI: No blow back

Rec 20	Feet of Oil	%gas	100 %oil	%water	%mud
Rec 60	Feet of OCM	%gas	30 %oil	%water	70 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 80 BHT 107 Gravity 31 API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	1922	☑ Test	1150	T-On Location	4:20
(B) First Initial Flow	36	☑ Jars	250	T-Started	4:20
(C) First Final Flow	48	☑ Safety Joint	75	T-Open	6:11
(D) Initial Shut-In	155	☐ Circ Sub		T-Pulled	9:15
(E) Second Initial Flow	51	☐ Hourly Standby		T-Out	11:19
(F) Second Final Flow	59	☑ Mileage 5x2=10 x 1.55	15.50	Comments	
(G) Final Shut-In	117	☐ Sampler			
(H) Final Hydrostatic	1903	☐ 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	1490.50
Final Shut-In	60	☐ Accessibility		MP/DST Disc't	
		Sub Total	1490.50		

Approved By ____ Our Representative Chris Hyde

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50669

Well Name & No. Luetta # 1-15 Test No. 3 Date 9-4-2013
Company Murfin Drilling Co. Elevation 2679 KB 2674 GL
Address 250 N. water ste. 300 wichita Ks 67202
Co. Rep / Geo. Bob Stolzle Rig Murfin #8
Location: Sec. 15 Twp. 25 Rge. 29w Co. Decatur State Ks.

Interval Tested 3809 3885 Zone Tested LKC-JEK
Anchor Length 76 Drill Pipe Run 3629 Mud Wt. 9.0
Top Packer Depth 3804 Drill Collars Run 186 Vis 62
Bottom Packer Depth 3809 Wt. Pipe Run -0- WL 6.4
Total Depth 3885 Chlorides 1,700 ppm System LCM 5#

Blow Description IF: Weak blow Dead in 5 mins. Flushed tool 25 mins in. Weak blow Died in secs.
ISI: No blow back
FF: No blow
FSI: No blow back

Rec 20	Feet of mud	%gas	%oil	%water	100 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 106 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	1963	☑ Test	1150	T-On Location	20:00
(B) First Initial Flow	22	☑ Jars	250	T-Started	20:15
(C) First Final Flow	31	☑ Safety Joint	75	T-Open	22:18
(D) Initial Shut-In	563	☐ Circ Sub		T-Pulled	00:15
(E) Second Initial Flow	31	☐ Hourly Standby		T-Out	2:40
(F) Second Final Flow	34	☑ Mileage 5x2=10x1.55=	15.50	Comments	
(G) Final Shut-In	514	☐ Sampler			
(H) Final Hydrostatic	1959	☐ Straddle			
		☐ Shale Packer		☐ Ruined Shale Packer	
Initial Open	30	☐ Extra Packer		☐ Ruined Packer	
Initial Shut-In	30	☐ Extra Recorder		☐ Extra Copies	
Final Flow	30	☐ Day Standby		Sub Total	0
Final Shut-In	30	☐ Accessibility		Total	1490.50
		Sub Total	1490.50	MP/DST Disc't	

Approved By ____ Our Representative [signature]

ALLIED
OIL & GAS SERVICES, LLC

acct. Prod-LH

INVOICE

PO Box 93999
Southlake, TX 76092

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

Invoice Number: 135997
Invoice Date: Apr 29, 2013
Page: 1

Now Includes:

Treat-Em-Rite Pressure Pumping Service, LLC

Bill To:

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	58996	Net 30 Days	
Job Location	**Camp Location**	**Service Date**	**Due Date**
KS1-01	Oakley	Apr 29, 2013	5/29/13

Quantity	Item	Description	Unit Price	Amount
		Luetta #1-15		
190.00	MAT	Class A Common	17.90	3,401.00
7.00	MAT	Chloride	64.00	448.00
199.50	SER	Cubic Feet	2.48	494.76
551.40	SER	Ton Mileage	2.60	1,433.64
1.00	SER	Surface	1,512.25	1,512.25
60.00	SER	Pump Truck Mileage	7.70	462.00
1.00	SER	Manifold Head Rental	275.00	275.00
60.00	SER	Light Vehicle Mileage	4.40	264.00
1.00	CEMENTER	Andrew Forslund		
1.00	EQUIP OPER	Dane Retzloff		
1.00	OPER ASSIST	Darrin Hoeb		

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF 35%

$ 2,901.72

ONLY IF PAID ON OR BEFORE

May 24, 2013

Subtotal	8,290.65
Sales Tax	280.98
Total Invoice Amount	8,571.63
Payment/Credit Applied	
TOTAL	**8,571.63**

-2901.72
5,669.91

ALLIED OIL & GAS SERVICES, LLC 058996

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Oakley

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
4-29-13	15	2	29			4:30	5:00 PM
LEASE Lyetta	WELL # 1-15		LOCATION Oberlin 4N 1 1/4 W			COUNTY Decatur	STATE KS
OLD OR NEW (Circle one)			S into				

CONTRACTOR Murfin 8
TYPE OF JOB Surface
HOLE SIZE 12 1/4 T.D. 218'
CASING SIZE 8 5/8 DEPTH 218'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 12.83 BBL

OWNER Same.

CEMENT

AMOUNT ORDERED 190 sks com 3%cc

COMMON	190 sks	@ 12.90	3401.00
POZMIX		@	
GEL		@	
CHLORIDE	7 sks	@ 64.00	448.00
ASC		@	
HANDLING	199.5 cu/ft	@ 2.48	494.76
MILEAGE	2.60 ton/mile 9.18 ton		1430.68

TOTAL 5772.40

EQUIPMENT

PUMP TRUCK # 421 CEMENTER Andrew Forshund
HELPER Dane Potzloff
BULK TRUCK # 540 DRIVER Darrin Hoeb.
BULK TRUCK # DRIVER

REMARKS:

Cement Did Circulate

Thank you

CHARGE TO: Murfin
STREET
CITY STATE ZIP

SERVICE

DEPTH OF JOB 218'

PUMP TRUCK CHARGE			1512.25
EXTRA FOOTAGE		@	
MILEAGE	6.0 miles	@ 2.20	462.00
MANIFOLD	head	@	225.00
Light vehicle		@	264.00

TOTAL 2513.25

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 8,290.65
DISCOUNT 2,901.72 IF PAID IN 30 DAYS
5388.92 Net

ALLIED
OIL & GAS SERVICES, LLC

acct
Prod-LH

INVOICE

PO Box 93999
Southlake, TX 76092

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

Invoice Number: 136164
Invoice Date: May 5, 2013
Page: 1

Now Includes:

Treat-Em-Rite Pressure Pumping Service, LLC

Bill To:

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	60286	Net 30 Days	
Job Location	**Camp Location**	**Service Date**	**Due Date**
KS1-03	Oakley	May 5, 2013	6/4/13

Quantity	Item	Description	Unit Price	Amount
		Luetta #1-15		
132.00	MAT	Class A Common	17.90	2,362.80
88.00	MAT	Pozmix	9.35	822.80
8.00	MAT	Gel	23.40	187.20
55.00	MAT	Flo Seal	2.97	163.35
236.29	SER	Cubic Feet	2.48	586.00
592.20	SER	Ton Mileage	2.60	1,539.72
1.00	SER	Plug to Abandon	2,483.59	2,483.59
60.00	SER	Pump Truck Mileage	7.70	462.00
60.00	SER	Light Vehicle Mileage	4.40	264.00
1.00	EQP	8.5/8 Wooden Plug	107.64	107.64
1.00	CEMENTER	Darren Racette		
1.00	EQUIP OPER	Tyler Flipse		
1.00	OPER ASSIST	Chris Helpingstine		

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF 35%

$ 3,142.68

ONLY IF PAID ON OR BEFORE
May 30, 2013

Subtotal	8,979.10
Sales Tax	655.47
Total Invoice Amount	9,634.57
Payment/Credit Applied	
TOTAL	**9,634.57**

- 3142.68
6491.89

OKM

ALLIED OIL & GAS SERVICES, LLC 060286

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
5/5/13	15	2	29			1:30 Am	2:30 Am

5/6/13

LEASE	WELL #	LOCATION	COUNTY	STATE
Luetta	1-15	Oberlin 4N 1¼W S into	Decatur	Ks.

OLD OR NEW (Circle one)

CONTRACTOR Murfin 8

OWNER Same

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D.

CASING SIZE DEPTH

TUBING SIZE DEPTH

DRILL PIPE 4½ DEPTH 2430'

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT 31.28

EQUIPMENT

PUMP TRUCK # 120 — CEMENTER Dawen Racette
HELPER Tyler Flipse

BULK TRUCK #566-585 — DRIVER Chris Helpingstine

BULK TRUCK # — DRIVER

REMARKS:

mix 25 sks Cement 2430'
mix 100 sks Cement 1500'
mix 40 sks Cement 270'
mix 10 sks Cement 40'

Plug Mousehole 15 sks Cement
Plug Rathole 30 sks Cement
Thank You

CHARGE TO: Murfin

STREET

CITY STATE ZIP

CEMENT

AMOUNT ORDERED 220 sks 60/40 4% Gel 1/4# Flosea/

COMMON	120 sks	@ $17.90	$2148.80
POZMIX	88 sks	@ $9.35	$822.80
GEL	8 sks	@ $23.40	$187.20
CHLORIDE		@	
ASC		@	
Floseal	55#	@ $2.97	$163.35
HANDLING	236.29 cf x	@ $2.48	$586.00
MILEAGE	9.87 x 60 x	$2.40	$1539.72

TOTAL $5661.87

SERVICE

DEPTH OF JOB 2430

PUMP TRUCK CHARGE			$2483.59
EXTRA FOOTAGE		@	
MILEAGE	60	@ $7.70	$462.00
MANIFOLD		@	
LV mileage		@ $4.40	$264.00

TOTAL $3209.59

PLUG & FLOAT EQUIPMENT

1 Wooden Plug		@	$107.64

TOTAL $107.64

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

SIGNATURE Robert W. Murfin

SALES TAX (If Any)

TOTAL CHARGES 8,979.10

DISCOUNT 3,142.68 IF PAID IN 30 DAYS

5,836.41 Net.