Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1155354

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 #:

4/19/2013	04/25/2013	04/26/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-039-21170-00-00
Spot Description:
NW NE SE SW Sec. 14 Twp. 2 S. R. 29 ☐ East ☑ West
1150 Feet from ☐ North / ☑ South Line of Section
2070 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: Pollnow Well #: 1-14
Field Name: NA
Producing Formation: NA
Elevation: Ground: 2705 Kelly Bushing: 2710
Total Vertical Depth: 3990 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 220 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: 1800 ppm Fluid volume: 1400 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: 08/15/2013
☑ **Confidential Release Date:** 08/15/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 08/15/2013

1155354

Operator Name: Murfin Drilling Co., Inc. Lease Name: Pollnow Well #: 1-14

Sec. 14 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	220	Common	195	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 15, 2013

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

Re: ACO1
API 15-039-21170-00-00
Pollnow 1-14
SW/4 Sec.14-02S-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 Pollnow #1-14 1150’ FSL 2070’ FWL Sec. 14-T2S-R29W 2710’ KB						Abercrombie Urban #1 C SE SW Sec. 16-T2S-R29W 2678’ KB	
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	2433	+277	+19	2434	+276	+18	2420	+258
B/Anhydrite	2465	+245	+18	2466	+244	+17	2451	+227
Neva	3114	-404	+8	3115	-405	+7	3090	-412
Topeka	3502	-792	+12	3502	-792	+12	3482	-804
Heebner	3670	-960	+4	3665	-955	+9	3642	-964
Lansing	3707	-997	+11	3710	-1000	+8	3686	-1008
Stark	3870	-1160	+11	3870	-1160	+11	3849	-1171
BKC	3922	-1212	+10	3923	-1213	+9	3900	-1222
RTD	3990	-1280					3930	
LTD				3986	-1276		3930	

ROBERT STOLZLE

CONSULTING PETROLEUM GEOLOGIST

AAPG Cert. # 2244

6211 S. 29th ST, W. Oakland, KS 67002 - 8240 (913) 724 - 8400

DRILLING TIME AND SAMPLE LOG

OPERATOR: Murfin Drilling Co., Inc.

LEASE: Pollnow WELL NO.: 1-14

FIELD: Wildcat

LOCATION: 1150'FSL, 2070'FWL (NW/NE/SE/SW)

SEC.: 14 TWP.: 2S RANGE: 29W

COUNTY: Decatur STATE: KS

API NO.: 15-039-21170-00-00

CONTRACTOR: Murfin Drilling Co., Rig #8

COMMENCED: 3pm, April 19, 2013 COMPLETED: 4/26/13

ROTARY TOTAL DEPTH: 3990' LOG TOTAL DEPTH: 3986'

GEOLOGICAL SUPERVISION FROM: 3,000' to: T.D.

MUD-UP DEPTH: 2916' MUD TYPE: Chemical/Polymer

ELEVATIONS

KB 2710'

GL 2705'

Measurements are all from KB

CASING RECORD

SURFACE: 8 5/8" @ 220' w/ 195sx.

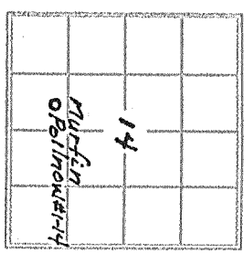
PRODUCTION: None-P&A

FORMATION	SAMPLE TOP	SAMPLE SUBSEA	LOG TOP	LOG SUBSEA	STRUCTURAL COMPARISON
Stone Corral/Anhy. Base of Anhydrite	2433 (+277) 2466 (+245)		2434 (+276) 2466 (+245)		+24' +22'
Neva Ls.	3114 (-404)		3115 (-405)		+14'
Foraker Ls.	3236 (-526)		3234 (-524)		+12'
Stotler Ls.	3387 (-677)		3387 (-677)		+16'
Topeka Fm.	3502 (-792)		3502 (-792)		+11'
Oread Ls.	3649 (-939)		3649 (-939)		+15'
Heebner Shale	3665 (-955)		3665 (-955)		+10'
Lansing Group	3710 (-1000)		3710 (-1000)		+12'
Stark Shale	3870 (-1160		3870 (-1160)		+17'
Base KC/City Gp.	3922 (-1212)		3923 (-1213)		+16'
Total Depth	3990'				
* Probably Cuttings Fill on bottom			3986'*		

Reference Well For Structural Comparison: Murfin Erma #1-15 SE NW SE SE Sec. 15

Comments and Recommendations: Recommended well be plugged and abandoned.

LOCATION MAP



WIRELINE SURVEYS

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

DST # 1 ZONE: Lansing 'A' Zone

INTERVAL: 3664'-3720'

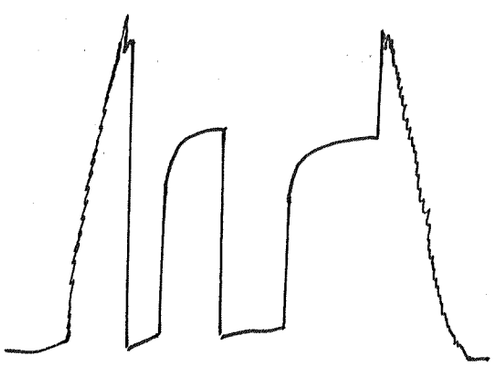
Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1755 psi	72' Oil spotted Mud
2. Initial Flow: Start	0	18 psi	(100% Mud)
3. Initial Flow: End	30	81 psi	186' Muddy Water
4. Initial Shut-in: End	60	1233 psi	(30% Mud)
5. Final Flow: Start	0	86 psi	Blow Desc:
6. Final Flow: End	60	136 psi	I.F.-Built to 5 3/4"
7. Final Shut-in: End	90	1204 psi	I.S.I.-No blow
8. Final Hydrostatic		1734 psi	F.F.-Built to 9"
			F.S.I.-No blow

BHT: 111°F

Rw: .4@55°F
Chl. 22,000 ppm

DST # 1 6799 Chart

Interval: 3664'-3720' Depth: 3665'



DST # 2 ZONE: Lansing 'D' & 'G' Zones

INTERVAL: 3720'-3815'

DST # 2 6799 Chart

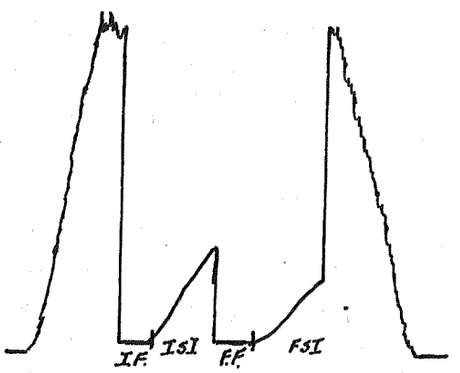
Interval: 3720'-3815' Depth: 3721'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic	____	1829 psi	70' Oil spotted Mud
2. Initial Flow: Start	0	47 psi	(100' Mud)
3. Initial Flow: End	30	51 psi	____
4. Initial Shut-in: End	60	583 psi	Blow Desc:
5. Final Flow: Start	0	51 psi	I.F.-built to 1"
6. Final Flow: End	30	52 psi	I.S.I.-No blow
7. Final Shut-in: End	60	426 psi	F.F.-No blow
8. Final Hydrostatic	____	1847 psi	F.S.I.-No blow

BHT: 109°F.

Rw: _____

Note: Tool slid 7' to bottom



DST # 3 ZONE: LKC 'H' & 'J' Zones

INTERVAL: 3806'-3880'

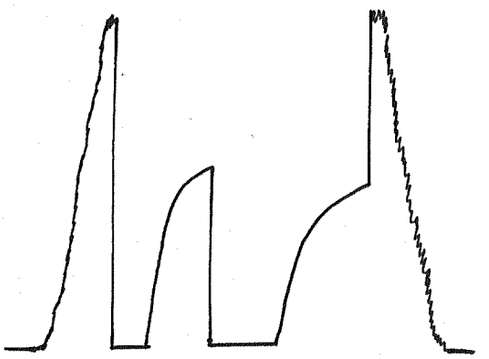
Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic	____	1824 psi	65' Oil spotted Mud
2. Initial Flow: Start	0	17 psi	(100% Mud)
3. Initial Flow: End	30	30 psi	____
4. Initial Shut-in: End	60	1013 psi	Blow Desc:
5. Final Flow: Start	0	33 psi	I.F.-built to 2"
6. Final Flow: End	60	50 psi	I.S.I.-No blow
7. Final Shut-in: End	90	931 psi	F.F.-built to ½"
8. Final Hydrostatic	____	1845 psi	F.S.I.-No blow

BHT: 108°F.

Rw: _____

DST # 3 6799 Chart

Interval: 3806-80' Depth: N.A.



DST # 4 ZONE: Kansas City 'K' Zone

INTERVAL: 3867'-3910'

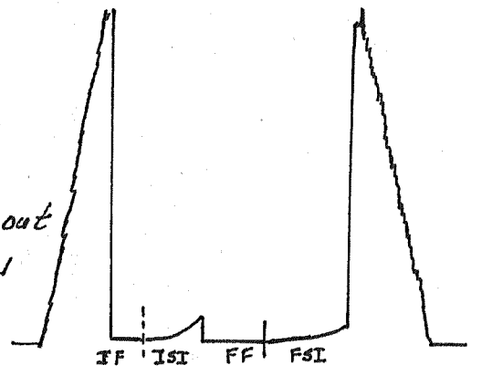
Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic	____	1903 psi	10' Oil spotted Mud
2. Initial Flow: Start	0	18 psi	(100% Mud-
3. Initial Flow: End	30	20 psi	trace oil in tool)
4. Initial Shut-in: End	60	151 psi	Blow Desc:
5. Final Flow: Start	0	20 psi	I.F.-built to 1"
6. Final Flow: End	60	21 psi	I.S.I.-No blow
7. Final Shut-in: End	90	87 psi	F.F.-Surface blow throughout
8. Final Hydrostatic	____	1863 psi	F.S.I.-Weak Surface blow

BHT: 108°F.

Rw: _____

DST # 4 6799 Chart

Interval: 3867'-3910' Depth: 3868



ABBREVIATIONS USED

ROCK TYPES: FABRIC: MODIFIERS:

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

COLOR:

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

HARDNESS:

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

Fn.grn - finegrained
VFG - Very fine grained
Med - Medium
Crs - Coarse
Det - Detrital
Foss - fossiliferous
Xln - Crystalline
Mxln - Microcrystalline
Ool - Oolitic
Dom - Dolomitic
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
Gy - gassity
NSFOC - no stain, fluorescence, odor, or cut (of oil)
smpl - sample
perm - permiability
F.O. - free oil
vug - vugular
tr - trace
w/ - with

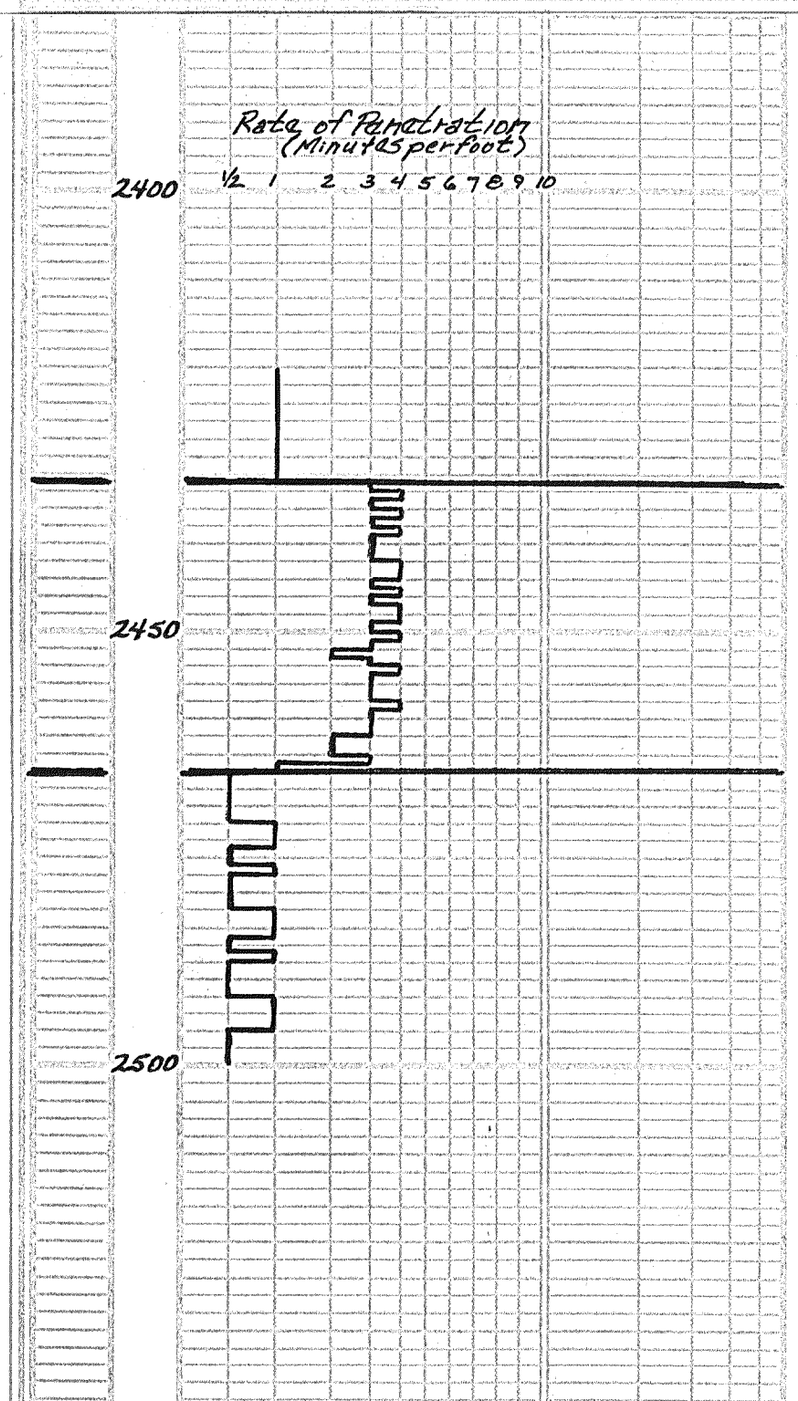
gd - Good
fr - Fair
pr - Poor
ex - excellent
v - very
w - well
tr - trace
acc - accasional
vis - visible
N - no
gran - granular
intgran - intergranular
pp - pinpoint
dd - dead
osy - oosay

TEXTURE:

Dns - Dense
Cly - Clayey
Fri - Friable
Earth - Earthy
Deck - Deckly
Flos - Floccile
Vit - Vitreous
Vug - Vugular
Mic - Micritic

OIL SHOWS

○ Weak Oil Show
◔ Fair Oil Show
◑ Good Oil Show
○ Excellent Oil Show

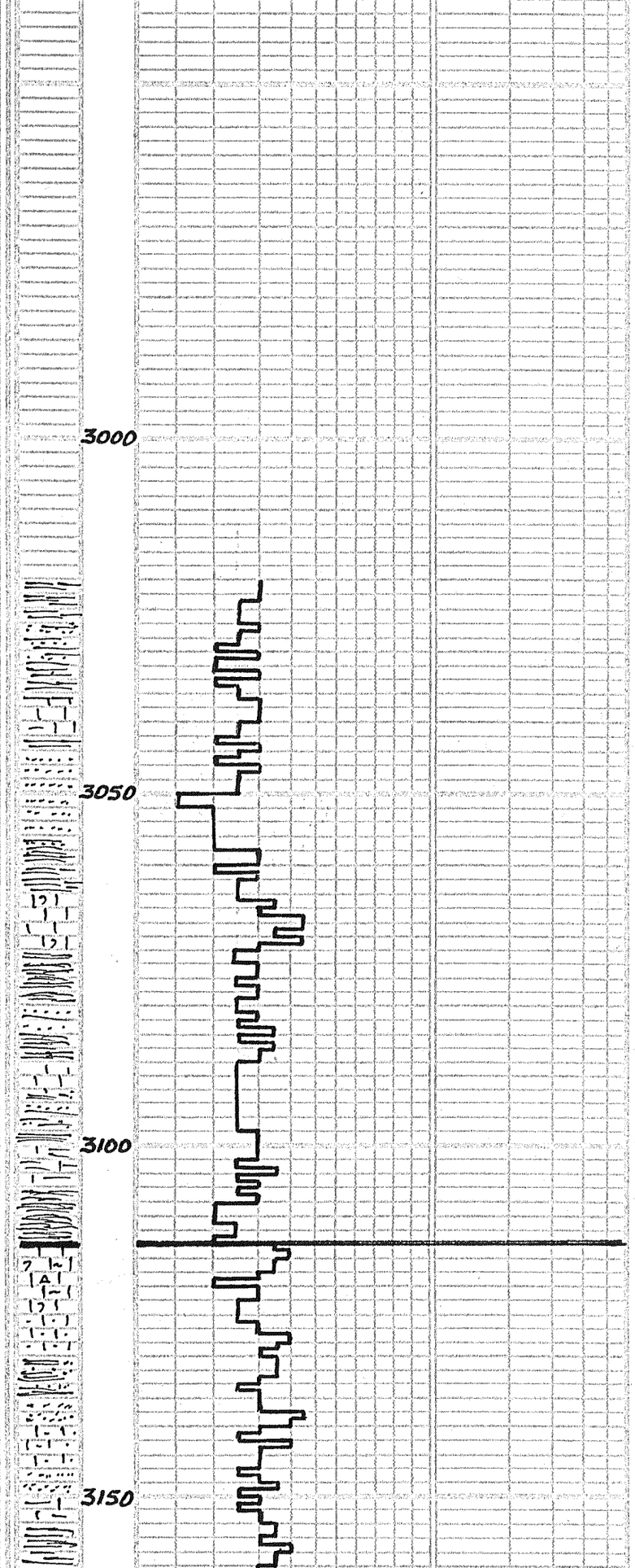


Stone Corral Anhydrite (+277')

Base of Anhydrite (+244')

Displace Native Mud System at 2916'

Mud Check @ 2927'
M.W. 8.6 lbs./gal.
Vis. 90 sec./qt.



W.L. 6.8cc./30Min.
Chl. 1,000P.P.M.
Solids 2.2%
L.C.M. 3.0lbs./bbl.

Sh: rd., sft., clay-earthy., occ. sndy-sh ly. Ss: rd., hrd., dNS., med-fN. gr. N.O. N Ø NSFOC

tr. Ls: crm., sft., chiky., N Ø NSFOC

Sh: rd., sft., clayey-earthy., sndy-v. sndy.

Sh: A.A., sft.-v. sft., sndy., clayey. tr. Ss: crm., hrd., dNS., fN-VFG., w. cmtd. mod.-w. srtd. N Ø NSFOC

Sh: rd. brn., v. sft., clayey., sndy. tr. Sh: blu-grn., m. sft., dNS., tr. sndy., hackly-cavings?

Ls: crm., hrd., dNS., fnxln., occ. sndy., rare foss., occ. rexlzd. N Ø NSFOC.

tr. Sh: rd. brn. A.A.

Ls: A.A. N Ø N SFOC

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

Sh: A.A.

occ. Ls: crm., hrd., dNS., VFG-mxln. sndy.-v. sndy.-calc. Ss: VFG. N Ø NSFOC

Sh: rd. brn., v. sft., clayey., tr. sndy

tr. Ls: A.A. N Ø NSFOC

Sh: rd. brn., v. sft., earthy.-clayey

Sh: A.A.

Ls: crm., hrd., dNS., VFG-mxln. sndy., rare foss. N Ø NSFOC

Nava Ls. (-404')

Ls: crm-dk. gry., sft. & chiky.-hrd., dNS., VFG-mxln., occ. chtz., abun. blk. sh. stnd., rare foss. N Ø N SFOC

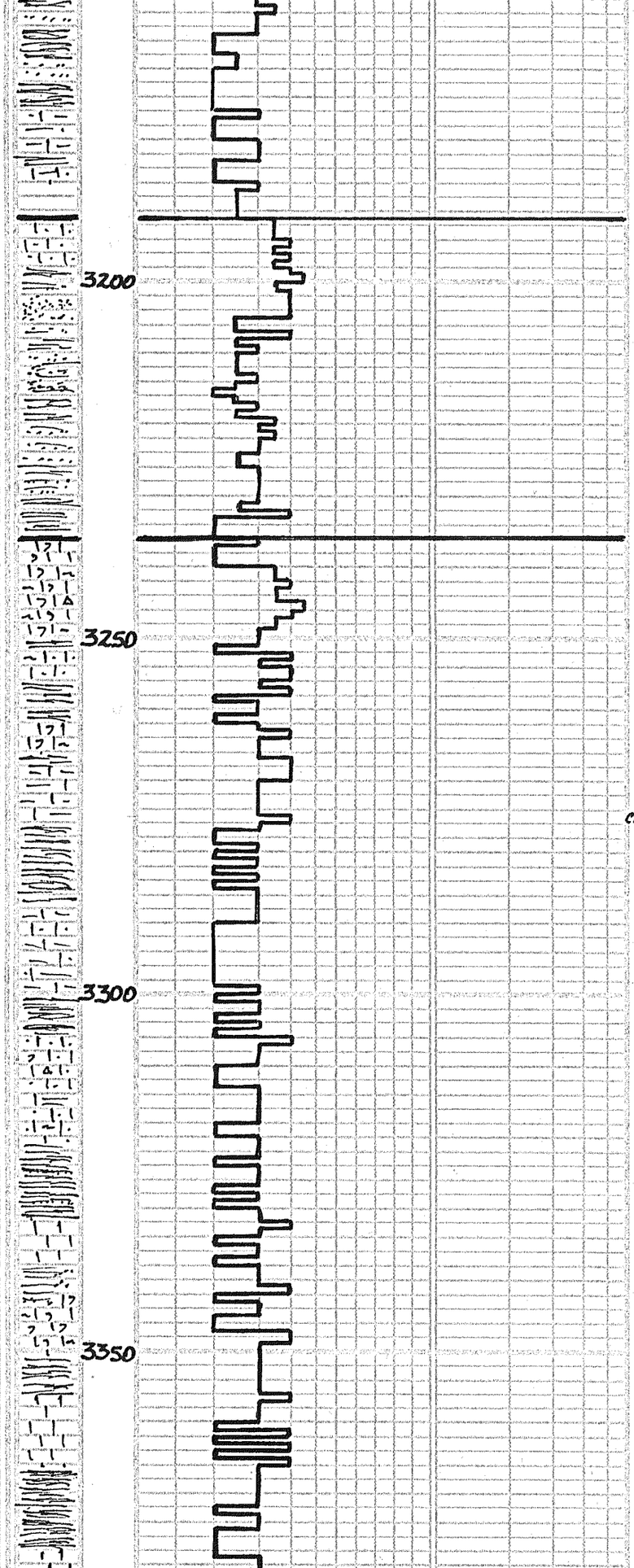
Ls: A.A.

w/ Ls: gry., hrd., dNS., VFG-mxln. v. sndy.-calc. Ss: gry., hrd., dNS., VFG., w. cmtd. N Ø NSFOC

Ls: calc. Ss: A.A. N Ø NSFOC

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

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



Sh: A.A.
occ. Ss: rd, m.hrd, dNS, fN.-VFG. pr.srtd., W.cmtd., ANG. NØNSFOC

Sh: A.A.
Ss: A.A.
Ls: crm., hrd.-sft, + chiky., occ. foss. w/ fr. int part Ø NSFOC
Ls: crm., sft. + chiky.-hrd., dNS., VFG x fN., SNdy.-V. SNdy. NØNSFOC

tr. Ls: A.A.
w/ Ls: gry.-dk. gry., hrd., dNS., VFG. x fN., tr. SNdy., ABUN. Sh. stN. NØNSFOC
Ls: A.A., SNdy.-V. SNdy.-calc. Ss. gry., hrd., dNS., VFG., W.cmtd. pr. srtg. NØNSFOC
Sh. gry., sft., slty., earthy.-clayey

Sh: rd. brn., V. sft., clayey., occ. SNdy. ptg. rd. Ss; m. hrd., dNS., pr. srtd., W. cmtd. NØNSFOC

Sh. rd. brn. - gry., sft., clayey. - m. sft., earthy., occ. SNdy

Ls. crm. - gry., sft. + chiky. - hrd., dNS., VFG - mx fN., SNdy. - V. SNdy. occ. Sh. stN. NØNSFOC

Ls: lt - dk. gry., m. sft - sft., dNS., foss - blk. foss. gNS., tr. sft. + chiky. NØNSFOC

Ls: crm. - dk. gry., sft. + chiky. - m. hrd. dNS., VFG x fN., foss. w/ dk. gry. foss. + pellets., Sh. stNd., tr. cht. NØNSFOC
Ls: crm - dk. gry., sft. - hrd., VFG x fN. occ. chiky., occ. foss., Sh. stNd. tr. SNdy. NØNSFOC
tr. Sh: dk. gry., m. sft., earthy
Ls: gry., hrd., dNS., VFG x fN., sh. stNd. foss. tr. chiky., occ. Sh. A.A. NØNSFOC
CFS
Ls: A.A. dk. gry. foss., tr. Sh: gry. - dk. gry., sft. - m. hrd., earthy. - hackly
Sh: rd. brn., sft., clayey., occ. slty. - SNdy
tr. Ls. gry., hrd., dNS., VFG - mx fN., occ. foss. NØNSFOC
Sh: rd brn., sft., clayey - earthy., SNdy. - slty. Ss: rd. pt. fN., m. sft. - m. hrd., dNS., VFG. NØNSFOC

Ls: crm., hrd., dNS., VFG - mx fN., occ. foss., tr. SNdy. NØNSFOC
tr. Sh: / SHs: A.A.

Ls: crm. - lt. gry., hrd., dNS., VFG - mx fN. mic., tr. cht., occ. SNdy. - V. SNdy. tr. foss. NØNSFOC

Ls: A.A., tr. sh. stNd., NØNSFOC
Sh: rd. - rd. brn., sft. - V. sft. + clayey earthy., occ. SNdy

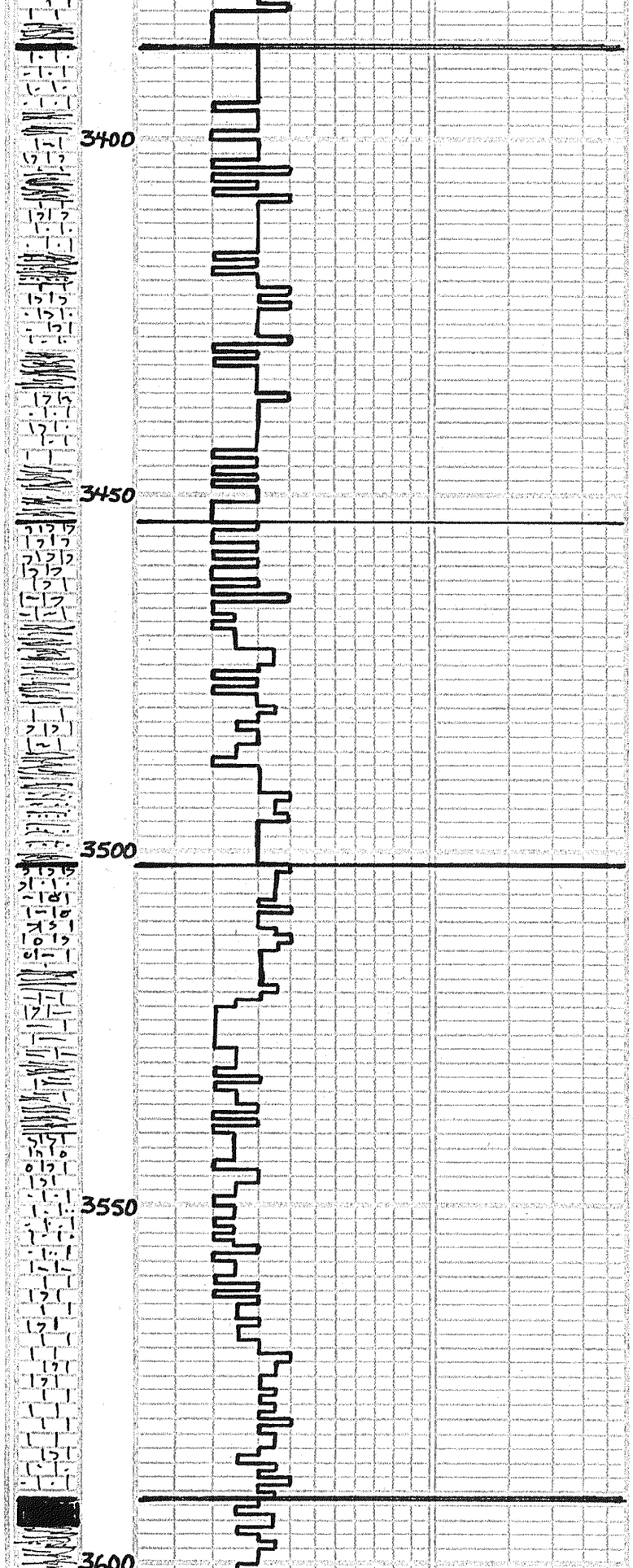
Sh. A.A., less. earthy.
Ls: gry. - crm. - ylw., hrd., dNS., VFG - mx fN., mic., occ. foss. - V. foss. NØNSFOC

Sh. - Shs: rd. brn., sft. - clayey. - m. hrd., dNS., SNdy. - shy. Ss. NØNSFOC
Ls: A.A. NØNSFOC
Ls. gry. - lt. gry., sft. + chiky. - hrd., dNS. VFG - mx fN., occ. foss. - V. foss. tr. sh. stNd. NØNSFOC
tr. Sh: A.A., tr. dk. gry. Sh.
Ls: A.A., tr. chiky. NØNSFOC
Sh: lt. - dk. gry., sft. + clayey. - m. hrd., dNS., earthy

Sh: A.A. w/ Sh: rd. brn., sft. + clayey. - m. sft., earthy., occ. SNdy.
occ. Ls. crm., hrd., dNS., VFG - mx fN. mic. NØNSFOC

Red Eagle Ls. (-481')

Foraker Ls. (-526')



Ls: H.gry, V.sft. & chiky - clayey - m. sft., dns, VFG - mxln. NØNSFOC

Sh: H. - dk. gry, sft. & clayey - m. sft. earthy

Stotler Ls. (-677')

Ls: crm - H. gry, hrd. dns, VFG x ln., occ. sndy - V. sndy. - calc. Ss: clr. gry, VFG, mod. srtd., V. w. cmtd. occ. Sh: A.A. NØNSFOC

Ls: A.A., less. sndy., occ. foss. fsh, stnd. NØNSFOC

Sh: rd. brn, sft., clayey, tr. sndy.

Ls: crm. - H. gry - ylw., hrd, dns, VFG - mxln, occ. foss, occ. sndy, tr. glauc. stnd. NØNSFOC

Ls: A.A, occ. sft. & chik. NØNSFOC

Sh: rd. brn. - gry., m. hrd. - V. sft. V clayey., earthy. tr. silty

Ls: crm. - gry., sft. & chik. - hrd., dns., VFG x ln, occ. foss., tr. sndy., tr. sh. stnd. NØNSFOC

tr. Sh: A.A.

Ls: crm., V. sft. & chiky. - clayey. - frd., dns, VFG - mxln., mic., tr. foss. NØNSFOC

Ls: A.A., more chiky. NØNSFOC

Bern Ls. (-754')

Sh: rd. brn., V. sft., clayey. - dk. gry. m. hrd, dns, earthy

Ls: crm., hrd., dns., VFG x ln, foss. - V. foss. - grnsty., tr. pr. VFG. PP. Vug. Φ, tr. sh. stnd. NSFOC

Ls: crm, hrd. - sft. & chik, VFG x ln., V. foss, occ. gd. moldic. Vug. Φ, occ. fn. p.p. Φ NSFOC

Ls: crm - lt. gry, hrd, dns, VFG - mxln. VFG - mxln, mic, occ. foss, tr. rd. sh, stnd. NØNSFOC

tr. rd. Sh:

Ls: A.A., tr. ool. NØNSFOC

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

tr. Sh: A.A.

Topeka Fm. (-792')

Ls: crm, hrd, dns, VFG - mxln, mic. occ. foss, Abun. rd. Sh. stnd. occ. pebb. surf. NØNSFOC

Ls: crm. - lt. gry, hrd, dns, VFG - mxln, mic, tr. chik, occ. foss. + ool., Abun. rd. Sh. stnd. NØNSFOC

Ls: A.A, tr. p.p. Vug. Φ NSFOC

Sh: rd. brn., sft., silty, earthy

Ls: wh - crm, sft. & chiky. - hrd, dns. mic, VFG - mxln, occ. foss, tr. sh. stnd. NØNSFOC

tr. rd. Sh: A.A.

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

Ls: wh - crm, V. sft. & chik. - hrd, dns VFG - mxln, occ. ool. + foss. w/ tr. fr. - p.c. moldic Φ NSFOC

Ls: A.A, tr. moldic ΦA.A. NSFOC

tr. Ss: gry, m. hrd, dns. fn. grnd., w. cmtd., w. tt. nd., No V. s. Φ NSFOC

Sh: gry. grn - rd. brn., earthy, silty

Ls: crm, sft. & chik. - hrd, dns, fn x ln. - mxln. sth. mic., occ. rexlzd., occ. foss. NØNSFOC

Ls: crm, hrd, dns, fn x ln - mxln., mic., occ. rexlzd., tr. foss. NØNSFOC

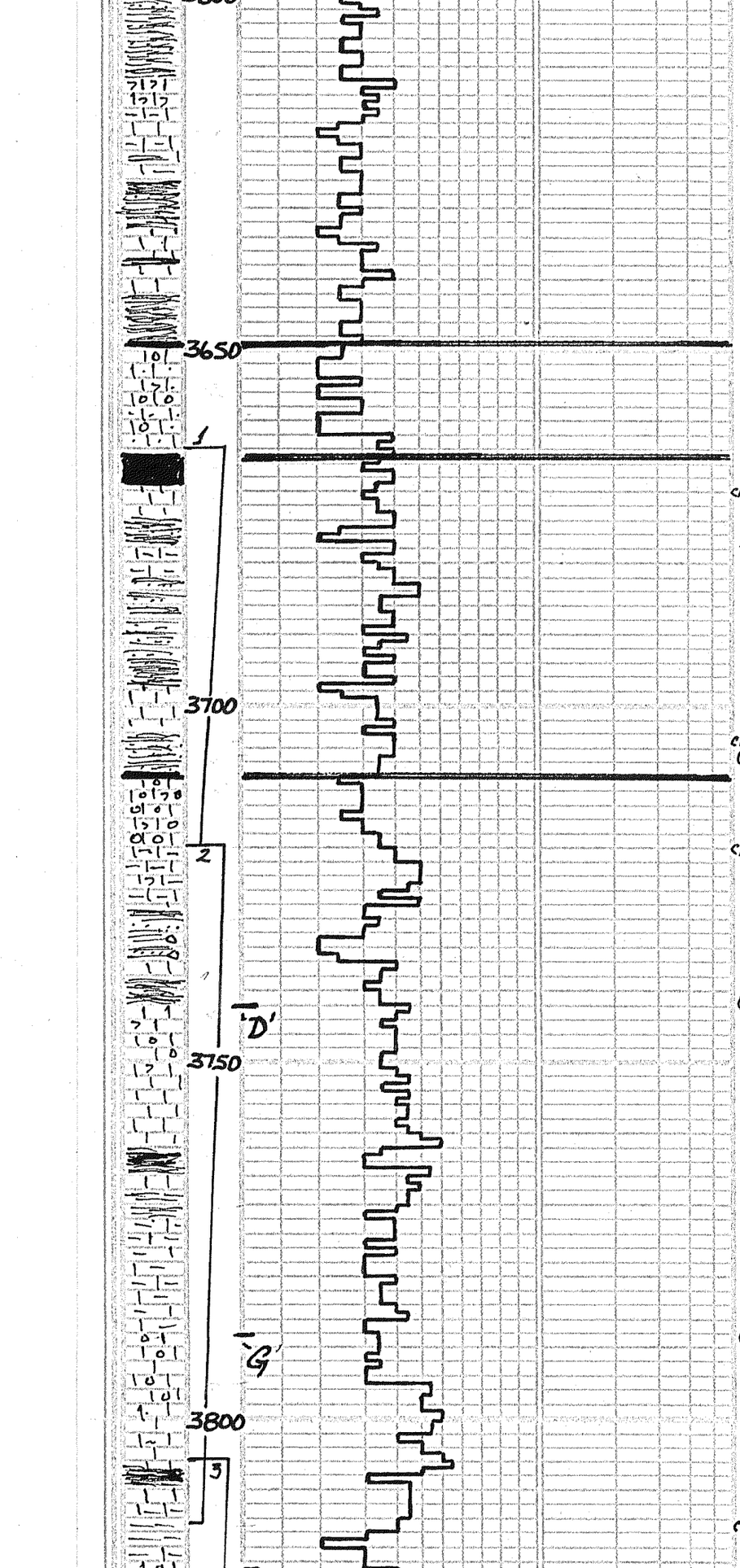
Ls: Crm, hrd, dns, fn x ln - mxln., tr. chiky., rare foss., tr. sndy. NØNSFOC

Ls: A.A., more foss., tr. sndy. NØNSFOC

King Hill Sh. (-881')

Sh: gry - grn - dk. gry, m. sft. - m. hrd. occ. sndy - silty, earthy

Mud Check @ 3507'
M.W. 8.9
Vis. 52
WL 6.4
Chl. 1,700
Solids 4.3%
LCM. 4.0 lbs.



Sh: rd. brn., sft., clayey, fr. sndy

Ls: crm.-gry., hrd., dns., fnx/n-mx/n. foss.-v. foss. rd.+gry. sh. stn., occ. pebb. surf. N Ø N S F O C

Sh: rd., fr. dk. gry., sft., earthy

Ls: A.A. N Ø N S F O C

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

Sh: A.A.

Ls: crm., hrd., dns., vfg x/n., occ. ool.+foss. N Ø N S F O C

Sh: rd. brn., v. sft., clayey.-cavings?

Sh: gry. grn.-dk. gry. m. hrd., earthy

Ls: crm., hrd., dns., vfg-mx/n., fr. mic. N Ø N S F O C

Ls: wh-crm., m., hrd., dns., fnx/n.) sndy-v. sndy., fr. foss., fr. pr. vug pp. Ø, occ. chiky. N S F O C

Oread Ls. (-939')

Ls: crm.-gry., hrd., dns., fn-mx/n., occ. fpss. w/fr. fr.-pr. vug. moldic Ø, occ. sndy. A.A. N S F O C

CFS

fr. Sh: gry. grn., m. sft., earthy-hackly

Sh: dk. gry.-blk., m. hrd., dns., fiss.

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

fr. Ls: crm., hrd., dns., vfg-mx/n. mic. N Ø N S F O C

Sh: rd brn., fr. gry., v. sft., clayey.-earthy., occ. sndy.

fr. Ls: crm., hrd., dns., vfg-mx/n mic. poss. pebb. surf. N Ø N S F O C

Heebner Sh. (-955')

DST #1 3664'-3720'
Rec. 72' OSM
186' M.W.

Deviation 1°
No strap-Wind + Snow

Sh: rd. brn., sft.-v. sft., earthy-clayey

Sh: A.A.

CFS

Ls: wh-crm., hrd., vfg x/n., foss. + ool. gd-fr., fn-vfg. vug. + int part. Ø dk. brn. stn., gd-ex. cut + fl., fr. sho. F. O., wk. odor, poss. perm.

Good Show

Lansing Gp. (-1000')

Ls: crm-wh., hrd.-sft. + chik., vfg-mx/n., occ. foss. N Ø N S F O C

CFS

Sh: rd. brn., sft. + clayey.-m. sft., sndy., earthy. w/ Sh: gry. grn-dk. gry., m. sft., earthy-hackly., occ. Ls. pebb.-frd., dns., mic.

Sh: rd-rd. brn., sft. + clayey.-m. sft. sndy.; earthy., w/ fr. Sh: gry. grn-dk. gry., m. sft., hack.-earthy., fr. Ls. pebb.

Mud Check @ 3720'
M.W. 9.0
Vis. 56
W.L. 6.4
Chl. 2,500
Solids 5%
LCM 3 lb.

O Ls: wh-crm., hrd., dns., vfg-mx/n., occ. foss. + opl. w/fr. fr.-pr. vug. moldic Ø + pp., in part. Ø, wk. cut + fl., ipc. bldg. oil, No odor, No F. O.

Weak Show

Ls: wh-crm., hrd., dns., vfg-mx/n., mic., fr. chiky., 1-2 pc. w/ pr. vug. moldic ? Ø-vfg-lt. oil stn., wk. cut + fl., No odor, No F. O. V. V. Weak Show

Ls: crm.-tan-gry., hrd., dns. vfg-mx/n., mic., rare foss. N Ø N S F O C

fr. Sh: rd. brn., sft., earthy

DST #2 3720-3815'
Rec. 70' OSM
Strap .41' short

Sh: rd. brn-gry. grn.-dk. gry., sft. + clayey-m. hrd. dns., earthy-hack. fr. sndy.

occ. Ls: A.A. N Ø N S F O C

Ls: crm.-gry., hrd., dns., vfg x/n., occ. foss., fr. ool. 3-4 pc. w/ pr. vug. moldic Ø-oom. + vfg. pp. vug. Ø, lt brn. stn., fr. cut + fl., No odor, No F. O. V. Wk. Show

O - Weak Show

Ls: crm.-lt gry., hrd., dns., vfg-mx/n., mic., occ. sft. + chiky., rare foss. + ool., 2 pc. w/ 1 oom. Ø + dk. stn., gd. cut + fl., No odor, No F. O. V. V. Wk. Show

- V. Wk. Show

Ls: crm-gry., hrd., dns., vfg-mx/n. mic., fr. sft. + chiky., occ. sh. stng. N Ø N S F O C

Mud Check @ 3815'
M.W. 9.2
Vis. 52
W.L. 6.8
Chl. 2,500
Solids 6.4%
LCM 3#

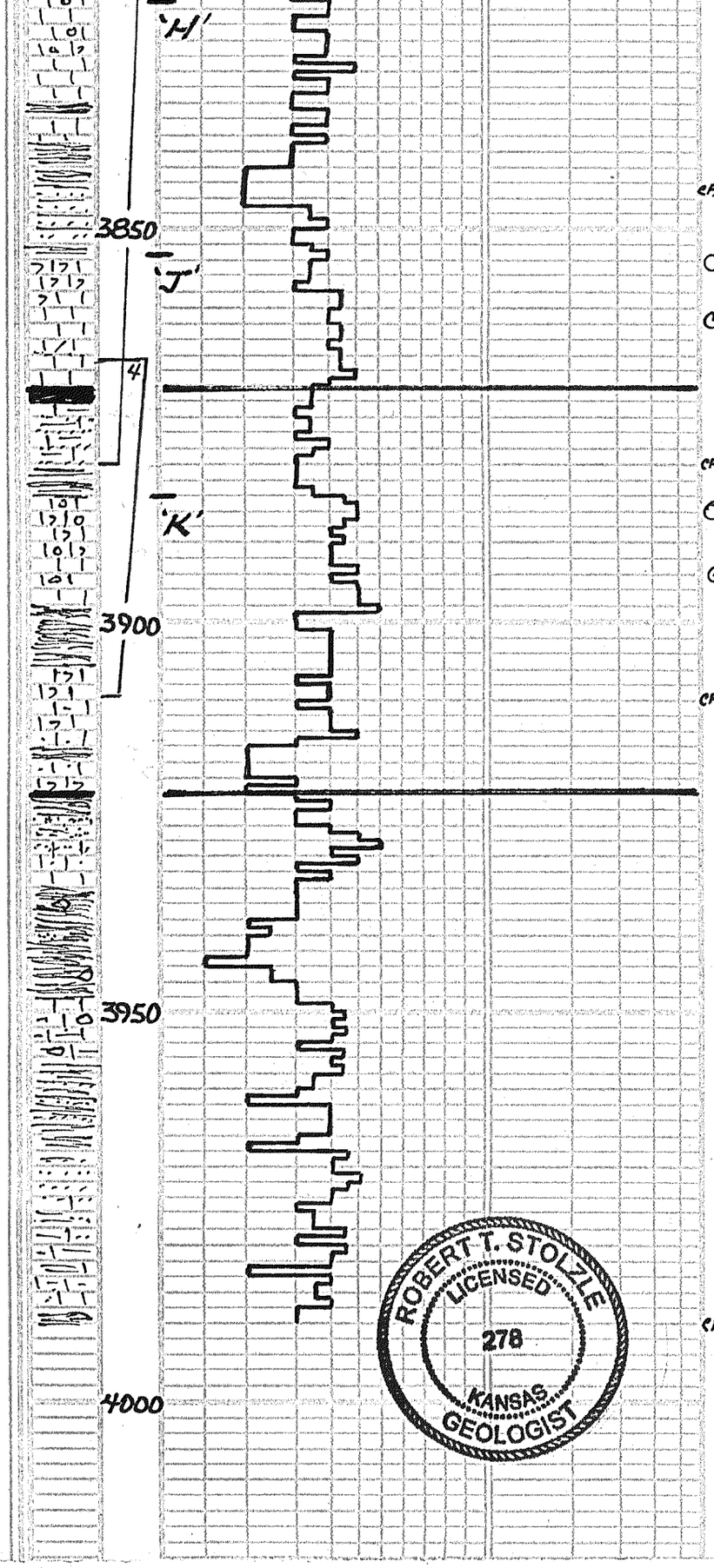
fr. rd. brn-gry. Sh:

Ls: A.A. N Ø N S F O C

CFS

Sh: rd.-gry., sft., earthy

Sh: rd.-rd. brn., sft., clayey.-m. hrd. dns., earthy., fr. dk. gry.



Ls: crm., hrd-sft. + chiky., dns, vfg-mx/n., mic., pare vug. moldic ϕ-fn-vfg ϕ-brn-blk. stn., tr.-pr. cut + fl., No F.O., No odor., ? perm — V. Weak Show

Ls: crm.-gry., hrd., dns, vfg-mx/n., mic., tr. chiky., rare foss. w/ 1-2 pc. fr. moldic ϕ w/ dk. brn. stn., gd cut + fl., No F.O., No odor., V. thin zone — V. Weak Show

Ls: A.A. N ϕ NSFOC

CFS — Sh: rd. brn-gry., m. sft., dns., earthy

DST #3 3806-3880 Rec. 65' OSM

Sh: rd. brn-dk. gry., sft. + clayey-m. hrd., dns., earthy, sandy

Ls: wh-crm., hrd., dns., vfg-mx/n., mic., occ. chiky., rare foss., tr. fn-vfg. vug. moldic ? ϕ. poss. frac. ϕ, No odor, No F.O., fr. cut + fl., ? perm. — Weak Show

Ls: crm., hrd., dns., vfg-mx/n., mic., occ. sft. + chiky., occ. foss., tr. fr.-pr. vfg. vug. ϕ 1-2 pc. gd. vug ϕ poss. frac. No odor, No F.O. fr.-gd. cut + fl. — Weak-Fair Show

Ls: A.A. w/ tr. ϕ + stn. A.A., occ. pebb. surf. — Stark Shale (-1160')

CFS — Sh: rd brn-gry. grn., sft. + clayey.-m. sft. + earthy., occ. sndy, tr. dk gry-blk.

Sh: A.A.

Ls: crm.-lt. gry., hrd., dns., vfg-mx/n mic., occ. pel. w/ tr. fr.-pr. int. gd. + vug. moldic. ϕ, dk. stn., No F.O. No odor — Weak Show

Ls: A.A., occ. sft. + chiky., tr. pr.-gd. moldic vug. ϕ w/ occ. pc. lg. vug. ϕ gd cut + fl., No-v. wk. odor, No F.O., V. thin zone — Fair-Weak Show

Ls: A.A. N ϕ NSFOC

Sh: rd. brn-gry., m. sft., dns., earthy

CFS — DST #4 3867-3910' Rec. 10' OSM

Ls: crm., hrd., dns, vfg-mx/n. occ. foss., tr. sndy., sh. stnd. N ϕ NSFOC

Sh: rd. brn.-dk. gry., sft.-m. sft., earthy-hackly

Sh: varicolored., m. sft., occ. sndy., occ. Ls. pebbles., earthy-hackly — Base of Kansas City Group (-1212')

Ss: wh., frn. grn., w. rnd., mod. srtd., calc. cmt. N ϕ NSFOC

Sh: A.A w/ tr. Ss: A.A. N ϕ NSFOC

Ls: crm., hrd., dns., vfg-mx/n., mic., rare foss., occ. sh: stnd. N ϕ NSFOC

Sh: rd. brn., sft., clayey-earthy., sndy., occ. gry., m. sft. earthy., abun. Ls: pebbles, tr. Ss: A.A N ϕ NSFOC

Mud Check @ 3910'
M.W. 9.1 lb./gal.
Vis. 63 sec./qt.
W.L. 6.4 ml. 30 min.
Chl. 2,200 ppm
Solids 5.7%
LCM 5#

Ls: crm, hrd., dns., vfg-mx/n., mic., occ. sh. stnd., pebbles? N ϕ NSFOC

Sh: rd. brn-dk. gry., mott., m. sft.-m. frd., dns., earthy

Sh: rd. brn, sft. + clayey, w/ Sh: rd-gry, mp tr.) m sft., dns., sndy earthy

tr. Ls: A.A. N ϕ NSFOC

Sh: A.A.

occ. Ss: gry., hrd., dns., fn-vfg., mod-pr. srtd., w. cmtd. N ϕ NSFOC

Sh: rd. brn. - dk. gry., mott., sft. + clayey-m. hrd., dns., earthy

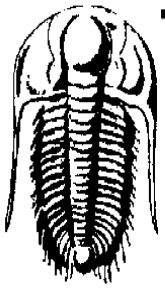
tr. Ls: crm., hrd., dns, vfg mx/n. mic. N ϕ NSFOC

CFS

D.T.D. 3990'
L.T.D 3986'
Deviation 1½°

Robert Stolzle
4/26/13

ROBERT T. STOLZLE LICENSED 278 KANSAS GEOLOGIST



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

Pollnow #1-14

14-2s-29w Decatur,KS

Start Date: 2013.04.23 @ 08:06:00
End Date: 2013.04.23 @ 16:05:45
Job Ticket #: 50709 DST #: 1

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

Printed: 2013.04.29 @ 13:45:59

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50709 **DST#: 1**

Test Start: 2013.04.23 @ 08:06:00

GENERAL INFORMATION:

Formation: **LKC "A"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:59:45
Time Test Ended: 16:05:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3664.00 ft (KB) To 3720.00 ft (KB) (TVD)
Total Depth: 3720.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

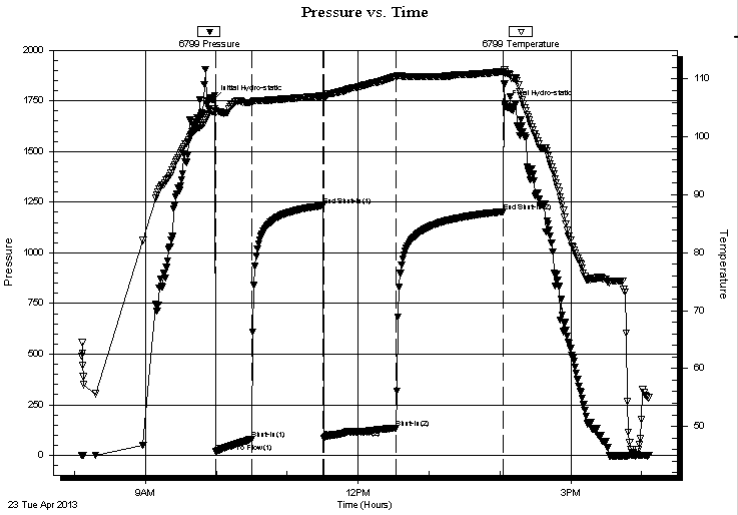
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 135.72 psig @ 3665.00 ft (KB)
Start Date: 2013.04.23 End Date: 2013.04.23
Start Time: 08:06:05 End Time: 16:05:44

Capacity: 8000.00 psig
Last Calib.: 2013.04.23
Time On Btm: 2013.04.23 @ 09:58:00
Time Off Btm: 2013.04.23 @ 14:04:00

TEST COMMENT: 30 - IF- Blow built to 5 3/4"
60 - ISI- No Return
60 - FF- Blow started at 5 min. Built to 9"
90 - FSI- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1755.02	104.41	Initial Hydro-static
2	17.88	104.54	Open To Flow (1)
32	81.28	105.94	Shut-In(1)
92	1232.81	107.08	End Shut-In(1)
93	86.33	106.80	Open To Flow (2)
154	135.72	110.43	Shut-In(2)
245	1203.46	111.27	End Shut-In(2)
246	1733.65	111.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	MW 70W 30M	0.91
72.00	OSM 100M (oil spots)	1.01

Gas Rates

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

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50709 **DST#: 1**

Test Start: 2013.04.23 @ 08:06:00

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Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3664.00 ft (KB) To 3720.00 ft (KB) (TVD)
Total Depth: 3720.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

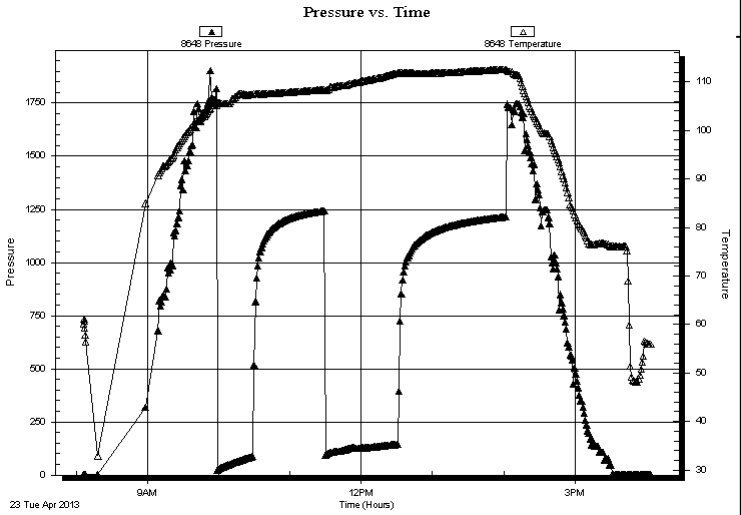
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: psig @ 3665.00 ft (KB)
Start Date: 2013.04.23 End Date: 2013.04.23
Start Time: 08:06:05 End Time: 16:03:59

Capacity: 8000.00 psig
Last Calib.: 2013.04.23
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF- Blow built to 5 3/4"
60 - ISI- No Return
60 - FF- Blow started at 5 min. Built to 9"
90 - FSI- No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
186.00	MW 70W 30M	0.91
72.00	OSM 100M (oil spots)	1.01

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50709 **DST#: 1**

Test Start: 2013.04.23 @ 08:06:00

Tool Information

Drill Pipe:	Length:	3477.00 ft	Diameter:	3.80 inches	Volume:	48.77 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	186.00 ft	Diameter:	2.25 inches	Volume:	0.91 bbl	Weight to Pull Loose:		65000.00 lb
					Total Volume:	49.68 bbl	Tool Chased		ft
Drill Pipe Above KB:		28.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		3664.00 ft						Final	55000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		56.00 ft							
Tool Length:		85.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3636.00		
Shut In Tool	5.00			3641.00		
Hydraulic tool	5.00			3646.00		
Jars	5.00			3651.00		
Safety Joint	3.00			3654.00		
Packer	5.00			3659.00	29.00	Bottom Of Top Packer
Packer	5.00			3664.00		
Packer - Shale	0.00			3664.00		
Stubb	1.00			3665.00		
Recorder	0.00	6799	Inside	3665.00		
Recorder	0.00	8648	Inside	3665.00		
Perforations	17.00			3682.00		
Change Over Sub	1.00			3683.00		
Drill Pipe	31.00			3714.00		
Change Over Sub	1.00			3715.00		
Bullnose	5.00			3720.00	56.00	Bottom Packers & Anchor
Total Tool Length:	**85.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50709 **DST#: 1**

Test Start: 2013.04.23 @ 08:06:00

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:	22000 ppm
Viscosity:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.39 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1700.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	MW 70W 30M	0.915
72.00	OSM 100M (oil spots)	1.010

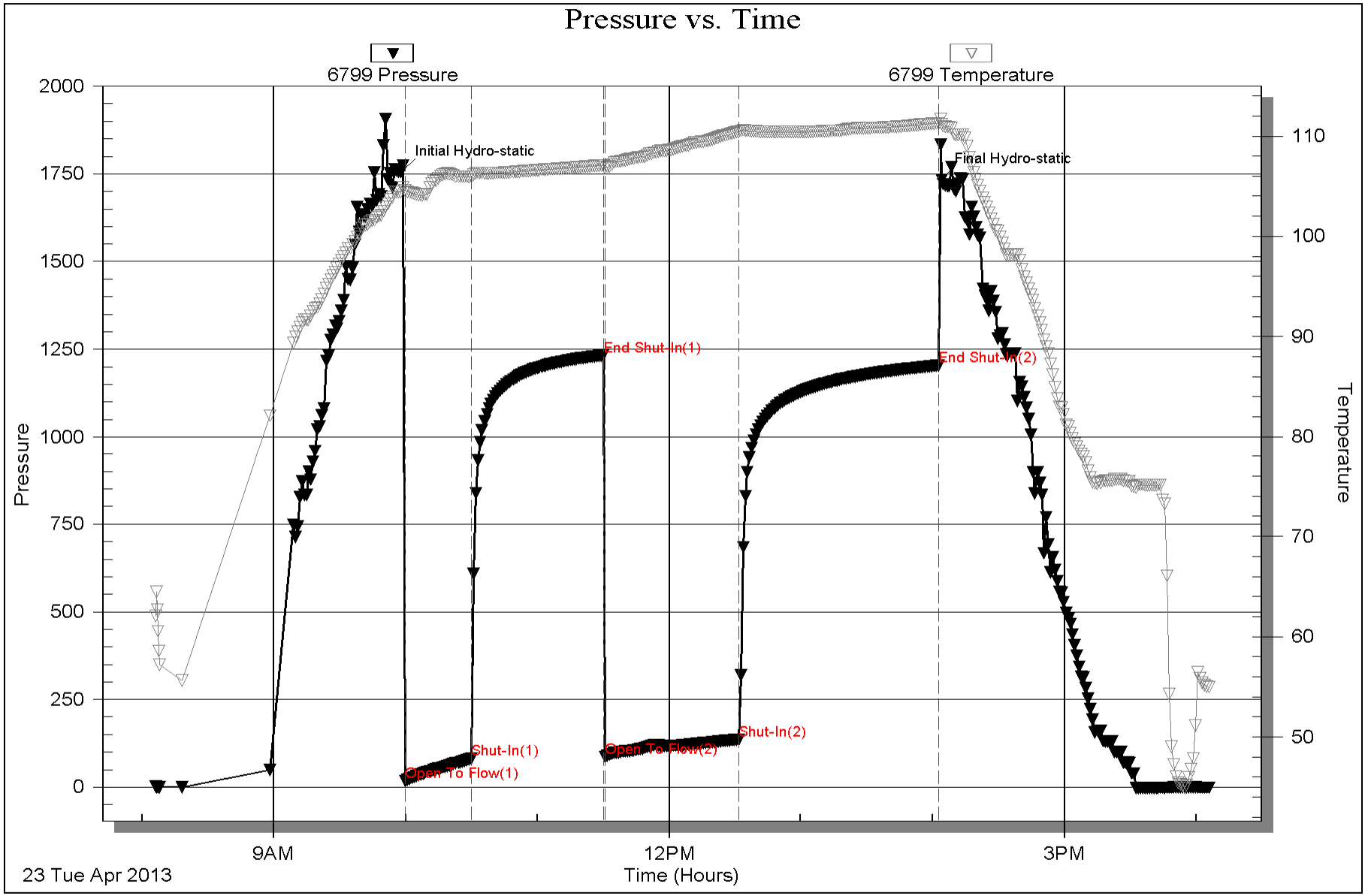
Total Length: 258.00 ft Total Volume: 1.925 bbl

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

Laboratory Name: Laboratory Location:

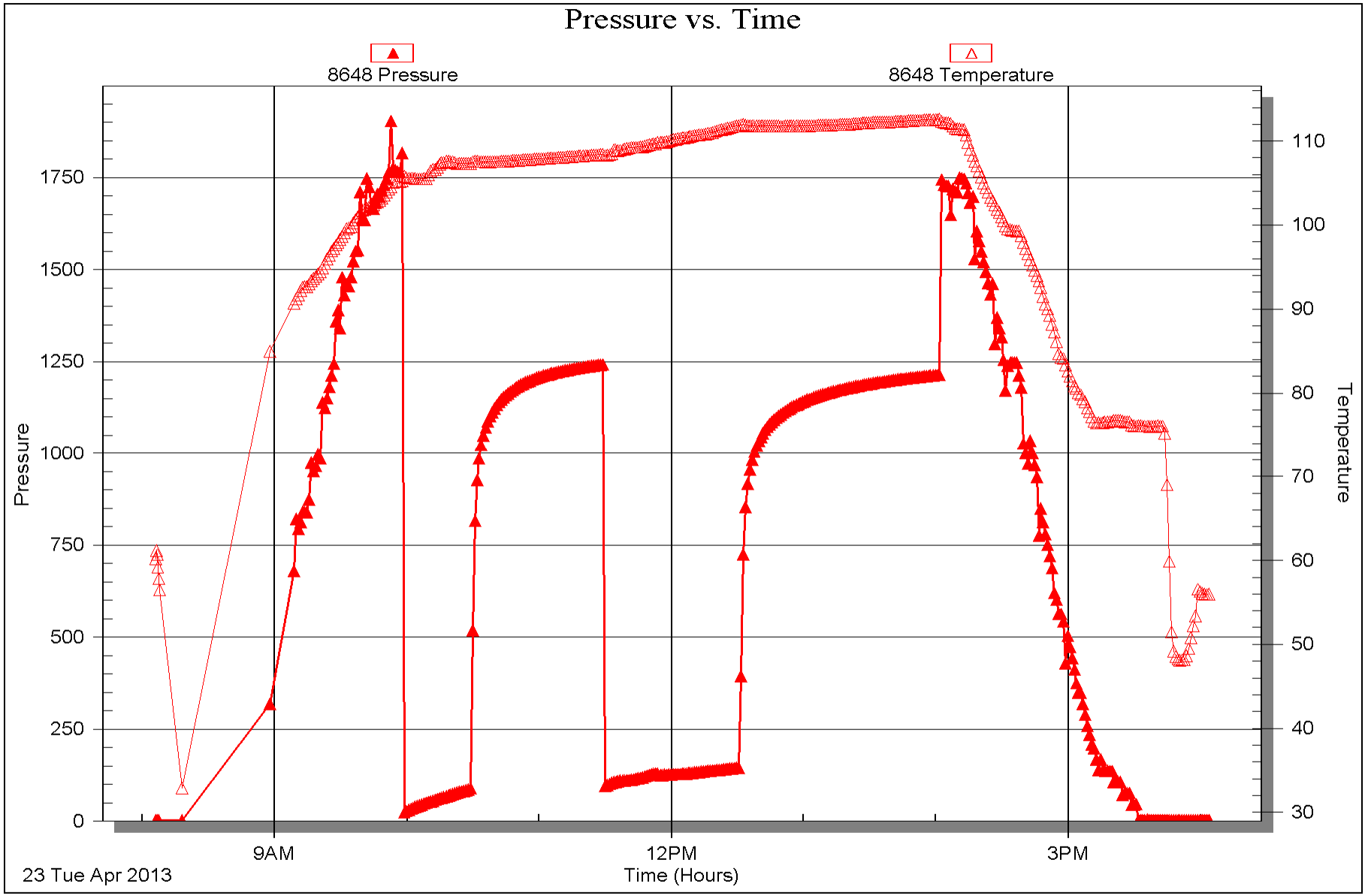
Recovery Comments: RW = .4 @ 55 deg = 22,000ppm

Serial #: 6799 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50709 Printed: 2013.04.29 @ 13:46:02

Serial #: 8648 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 1



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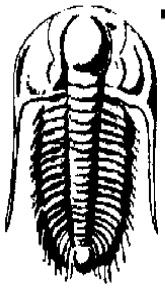


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

Pollnow #1-14

14-2s-29w Decatur,KS

Start Date: 2013.04.24 @ 02:10:00
End Date: 2013.04.24 @ 09:49:00
Job Ticket #: 50710 DST #: 2

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

Printed: 2013.04.29 @ 13:45:11

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50710 **DST#: 2**

Test Start: 2013.04.24 @ 02:10:00

GENERAL INFORMATION:

Formation: **LKC "D-G"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:45:45
Time Test Ended: 09:49:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3720.00 ft (KB) To 3815.00 ft (KB) (TVD)
Total Depth: 3815.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

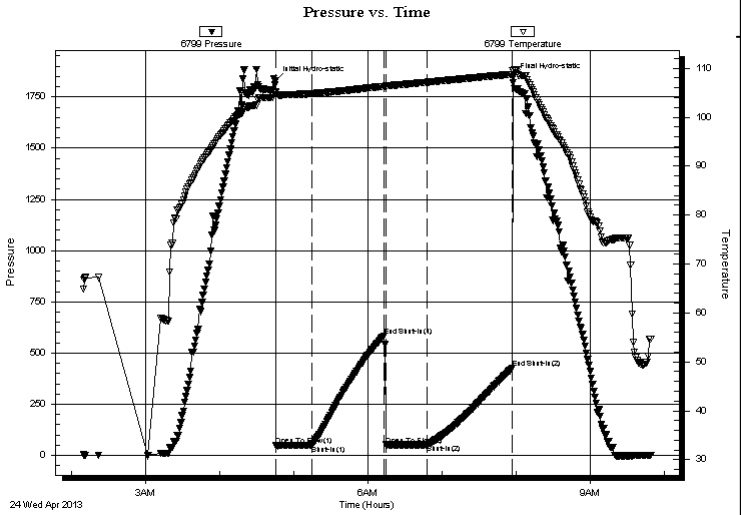
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 51.74 psig @ 3721.00 ft (KB)
Start Date: 2013.04.24 End Date: 2013.04.24
Start Time: 02:10:05 End Time: 09:48:59

Capacity: 8000.00 psig
Last Calib.: 2013.04.24
Time On Btm: 2013.04.24 @ 04:45:15
Time Off Btm: 2013.04.24 @ 07:57:15

TEST COMMENT: 30 - IF- 1/2" Blow built to 1"
60 - ISI- No Return
30 - FF- No Blow
60 - FSI- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1828.61	105.10	Initial Hydro-static
1	46.82	104.63	Open To Flow (1)
30	50.99	104.82	Shut-In(1)
88	583.34	106.31	End Shut-In(1)
90	50.93	106.41	Open To Flow (2)
123	51.74	107.13	Shut-In(2)
192	425.50	108.78	End Shut-In(2)
192	1846.73	109.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	OSM 100M (oil spots)	0.34

Gas Rates

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

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50710 **DST#: 2**

Test Start: 2013.04.24 @ 02:10:00

GENERAL INFORMATION:

Formation: **LKC "D-G"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:45:45
Time Test Ended: 09:49:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3720.00 ft (KB) To 3815.00 ft (KB) (TVD)
Total Depth: 3815.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

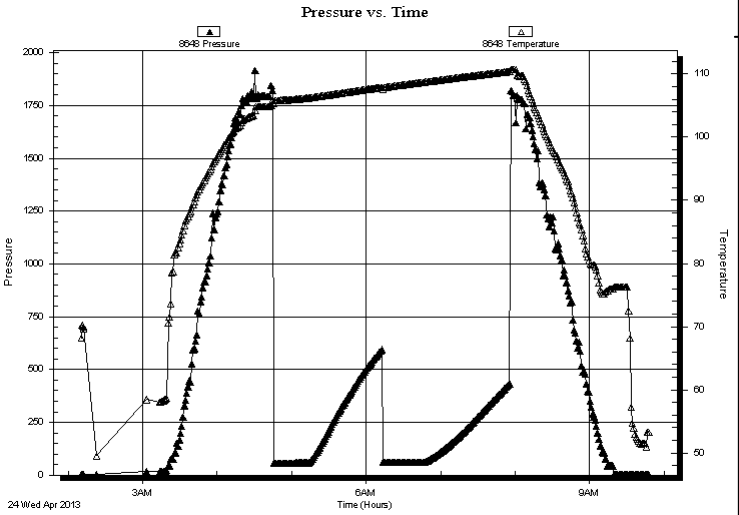
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: psig @ 3721.00 ft (KB)
Start Date: 2013.04.24 End Date: 2013.04.24
Start Time: 02:10:50 End Time: 09:47:59

Capacity: 8000.00 psig
Last Calib.: 2013.04.24
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF- 1/2" Blow built to 1"
60 - ISI- No Return
30 - FF- No Blow
60 - FSI- No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
70.00	OSM 100M (oil spots)	0.34

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50710 **DST#: 2**

Test Start: 2013.04.24 @ 02:10:00

Tool Information

Drill Pipe:	Length:	3537.00 ft	Diameter:	3.80 inches	Volume:	49.61 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	186.00 ft	Diameter:	2.25 inches	Volume:	0.91 bbl	Weight to Pull Loose:		65000.00 lb
					Total Volume:	50.52 bbl	Tool Chased		15.00 ft
Drill Pipe Above KB:		32.00 ft					String Weight:	Initial	56000.00 lb
Depth to Top Packer:		3720.00 ft						Final	56000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		95.00 ft							
Tool Length:		124.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments: Tool opened early and had to be chased apporx. 15' to bottom. Bled off surge blow and reset tool before initial flow period.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3692.00		
Shut In Tool	5.00			3697.00		
Hydraulic tool	5.00			3702.00		
Jars	5.00			3707.00		
Safety Joint	3.00			3710.00		
Packer	5.00			3715.00	29.00	Bottom Of Top Packer
Packer	5.00			3720.00		
Packer - Shale	0.00			3720.00		
Stubb	1.00			3721.00		
Recorder	0.00	6799	Inside	3721.00		
Recorder	0.00	8648	Inside	3721.00		
Perforations	25.00			3746.00		
Change Over Sub	1.00			3747.00		
Drill Pipe	62.00			3809.00		
Change Over Sub	1.00			3810.00		
Bullnose	5.00			3815.00	95.00	Bottom Packers & Anchor
Total Tool Length:	**124.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50710 **DST#: 2**

Test Start: 2013.04.24 @ 02:10:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.39 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

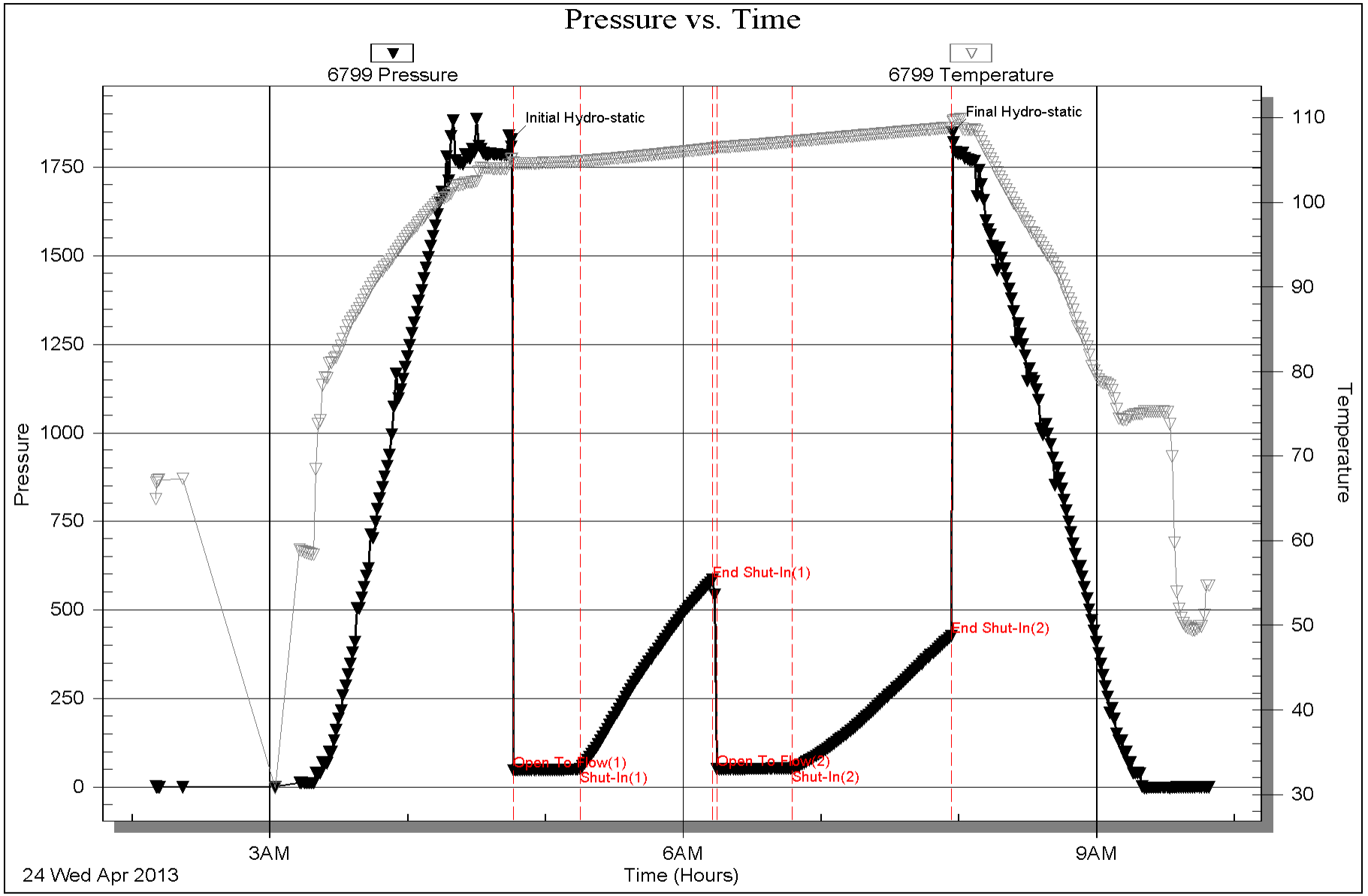
Recovery Table

Length ft	Description	Volume bbl
70.00	OSM 100M (oil spots)	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

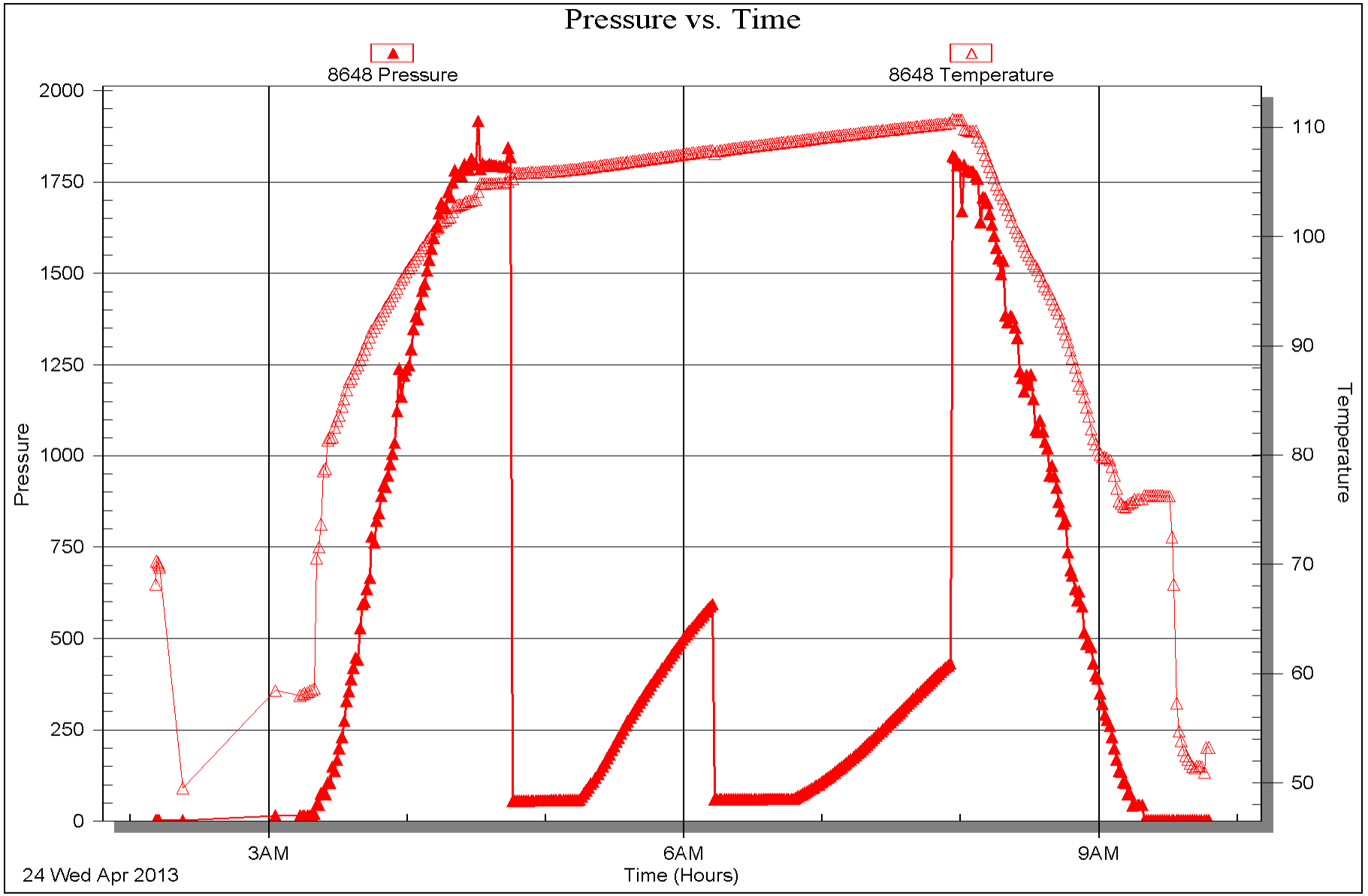
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6799 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50710 Printed: 2013.04.29 @ 13:45:14

Serial #: 8648 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 2



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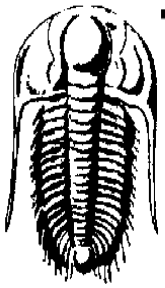


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

Pollnow #1-14

14-2s-29w Decatur,KS

Start Date: 2013.04.24 @ 19:10:00
End Date: 2013.04.25 @ 03:02:30
Job Ticket #: 50711 DST #: 3

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

Printed: 2013.04.29 @ 13:44:11

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50711 **DST#: 3**

Test Start: 2013.04.24 @ 19:10:00

GENERAL INFORMATION:

Formation: **LKC "H-J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:06:45
Time Test Ended: 03:02:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3806.00 ft (KB) To 3880.00 ft (KB) (TVD)
Total Depth: 3880.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

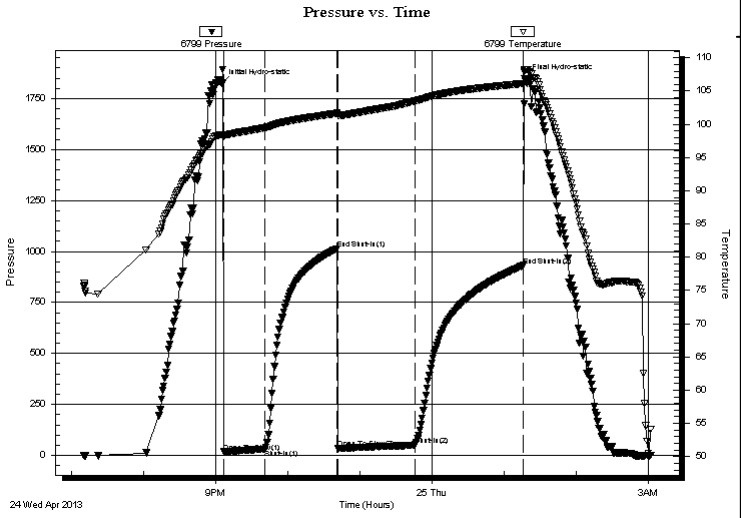
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 50.56 psig @ 3807.00 ft (KB)
Start Date: 2013.04.24 End Date: 2013.04.25
Start Time: 19:10:05 End Time: 03:02:29

Capacity: 8000.00 psig
Last Calib.: 2013.04.25
Time On Btm: 2013.04.24 @ 21:05:15
Time Off Btm: 2013.04.25 @ 01:17:00

TEST COMMENT: 30 - IF - 1/2" Blow built to 2"
60 - ISI - No Return
60 - FF - Weak Surface Blow started at 30 min. Built to 1/2"
90 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1824.28	98.41	Initial Hydro-static
2	17.15	98.33	Open To Flow (1)
36	30.56	99.47	Shut-In(1)
96	1013.89	101.65	End Shut-In(1)
97	33.37	101.35	Open To Flow (2)
161	50.56	103.46	Shut-In(2)
251	931.22	106.13	End Shut-In(2)
252	1845.11	108.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	OSM 100M (oil spots)	0.32

Gas Rates

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

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50711 **DST#: 3**

Test Start: 2013.04.24 @ 19:10:00

GENERAL INFORMATION:

Formation: **LKC "H-J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:06:45
Time Test Ended: 03:02:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3806.00 ft (KB) To 3880.00 ft (KB) (TVD)
Total Depth: 3880.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

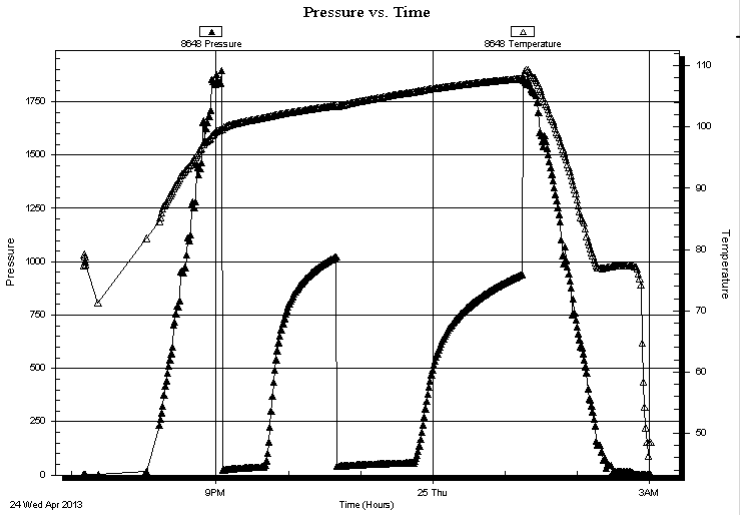
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: psig @ 3807.00 ft (KB)
Start Date: 2013.04.24 End Date: 2013.04.25
Start Time: 19:10:05 End Time: 03:00:44

Capacity: 8000.00 psig
Last Calib.: 2013.04.25
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF - 1/2" Blow built to 2"
60 - ISI - No Return
60 - FF - Weak Surface Blow started at 30 min. Built to 1/2"
90 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
65.00	OSM 100M (oil spots)	0.32

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50711 **DST#: 3**

Test Start: 2013.04.24 @ 19:10:00

Tool Information

Drill Pipe:	Length:	3602.00 ft	Diameter:	3.80 inches	Volume:	50.53 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	186.00 ft	Diameter:	2.25 inches	Volume:	0.91 bbl	Weight to Pull Loose:		75000.00 lb
					Total Volume:	51.44 bbl	Tool Chased		ft
Drill Pipe Above KB:		11.00 ft					String Weight:	Initial	55000.00 lb
Depth to Top Packer:		3806.00 ft						Final	55000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		74.00 ft							
Tool Length:		103.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments: Tool slid approx 7' to bottom.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3778.00		
Shut In Tool	5.00			3783.00		
Hydraulic tool	5.00			3788.00		
Jars	5.00			3793.00		
Safety Joint	3.00			3796.00		
Packer	5.00			3801.00	29.00	Bottom Of Top Packer
Packer	5.00			3806.00		
Stubb	1.00			3807.00		
Recorder	0.00	6799	Inside	3807.00		
Recorder	0.00	8648	Inside	3807.00		
Perforations	3.00			3810.00		
Change Over Sub	1.00			3811.00		
Drill Pipe	63.00			3874.00		
Change Over Sub	1.00			3875.00		
Bullnose	5.00			3880.00	74.00	Bottom Packers & Anchor
Total Tool Length:	**103.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50711 **DST#: 3**

Test Start: 2013.04.24 @ 19:10:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.79 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

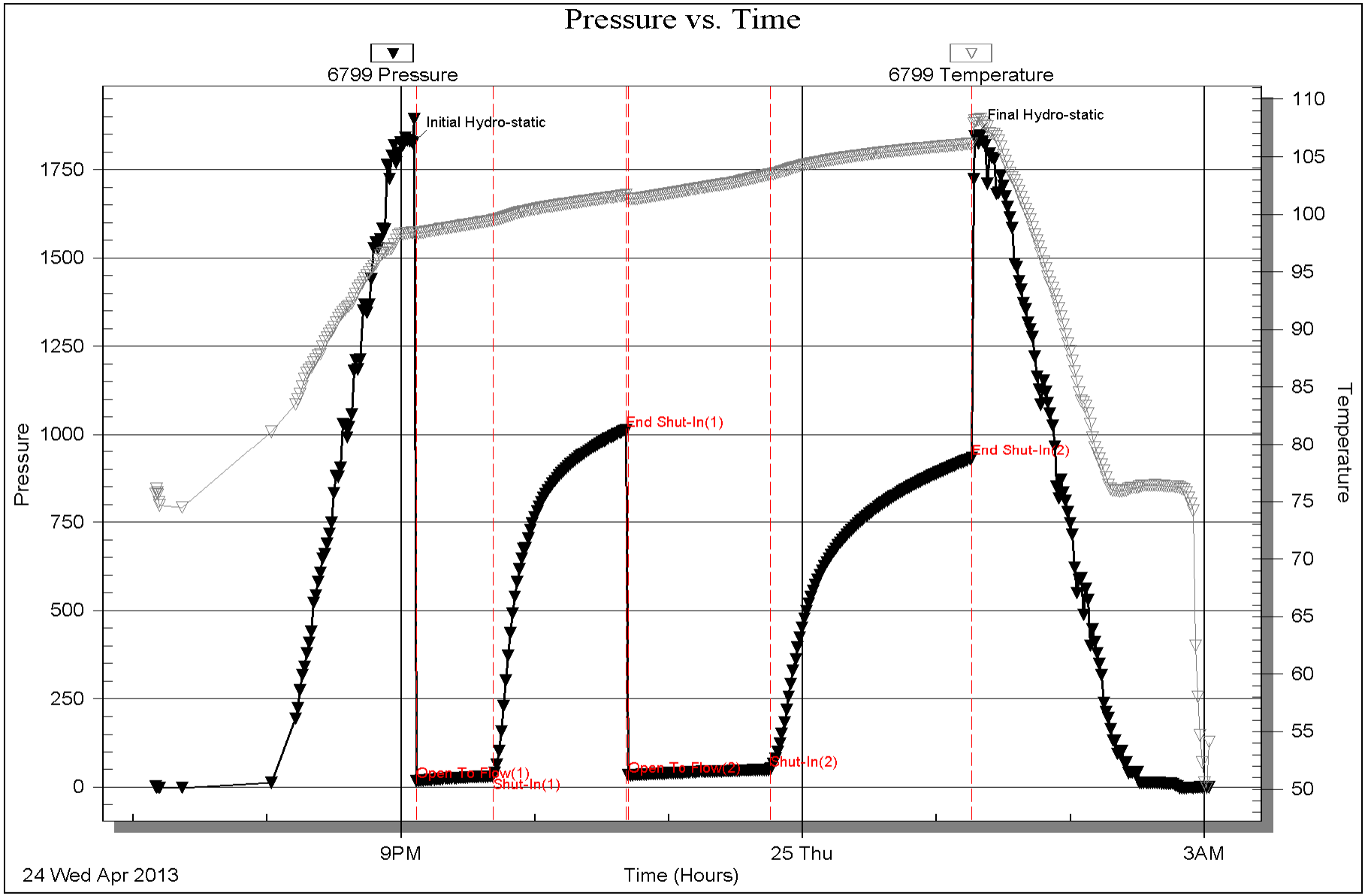
Recovery Table

Length ft	Description	Volume bbl
65.00	OSM 100M (oil spots)	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

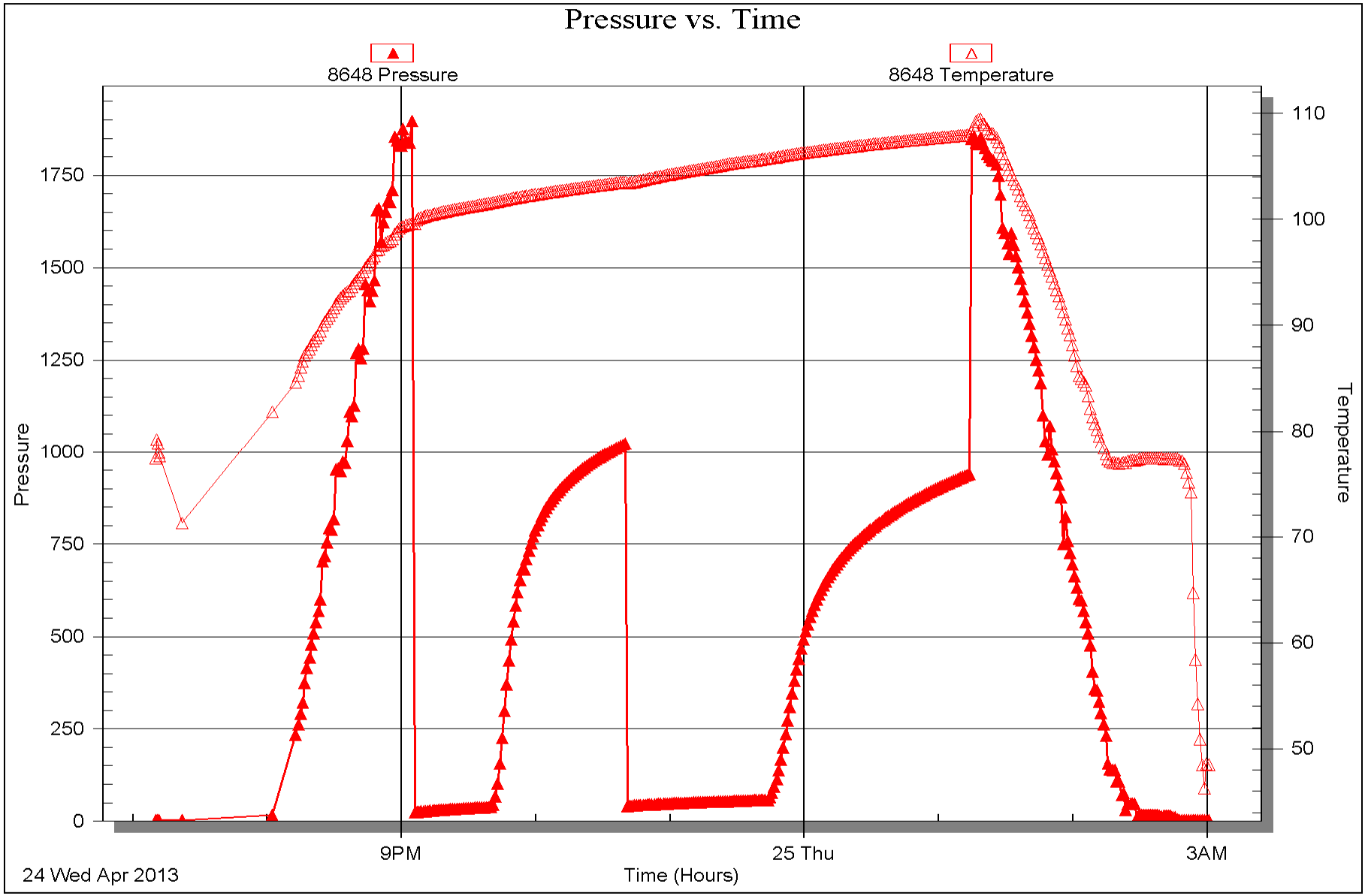
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6799 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 50711 Printed: 2013.04.29 @ 13:44:14

Serial #: 8648 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 3



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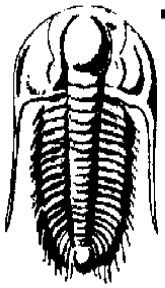


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

Pollnow #1-14

14-2s-29w Decatur,KS

Start Date: 2013.04.25 @ 10:05:00
End Date: 2013.04.25 @ 18:24:15
Job Ticket #: 50712 DST #: 4

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

Printed: 2013.04.29 @ 13:43:19

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50712 **DST#: 4**

Test Start: 2013.04.25 @ 10:05:00

GENERAL INFORMATION:

Formation: **LKC "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:07:45
Time Test Ended: 18:24:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3867.00 ft (KB) To 3910.00 ft (KB) (TVD)
Total Depth: 3910.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

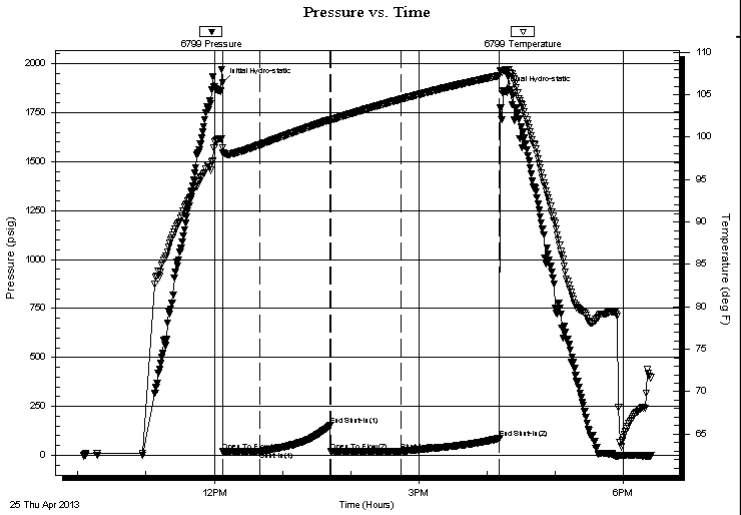
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 21.23 psig @ 3868.00 ft (KB)
Start Date: 2013.04.25 End Date: 2013.04.25
Start Time: 10:05:05 End Time: 18:24:14

Capacity: 8000.00 psig
Last Calib.: 2013.04.25
Time On Btm: 2013.04.25 @ 12:07:15
Time Off Btm: 2013.04.25 @ 16:14:15

TEST COMMENT: 30 - IF- 1/4" Blow built to 1"
60 - ISI- No Return
60 - FF- Surface Blow did not build or die
90 - FSI- Weak Surface Return started at 15 min. Did not build or die.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1902.92	98.79	Initial Hydro-static
1	18.41	98.19	Open To Flow (1)
33	19.75	99.07	Shut-In(1)
95	151.16	102.05	End Shut-In(1)
96	20.15	102.06	Open To Flow (2)
158	21.23	104.47	Shut-In(2)
244	87.06	107.25	End Shut-In(2)
247	1863.45	107.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.05
0.00	Show of free oil in tool	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50712 **DST#: 4**

Test Start: 2013.04.25 @ 10:05:00

GENERAL INFORMATION:

Formation: **LKC "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:07:45
Time Test Ended: 18:24:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 43

Interval: 3867.00 ft (KB) To 3910.00 ft (KB) (TVD)
Total Depth: 3910.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

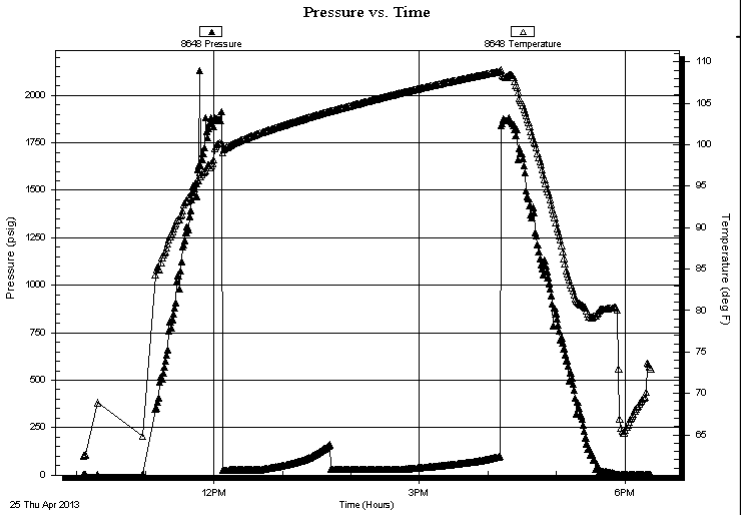
Reference Elevations: 2710.00 ft (KB)
2705.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: psig @ 3868.00 ft (KB)
Start Date: 2013.04.25 End Date: 2013.04.25
Start Time: 10:05:50 End Time: 18:22:59

Capacity: 8000.00 psig
Last Calib.: 2013.04.25
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF- 1/4" Blow built to 1"
60 - ISI- No Return
60 - FF- Surface Blow did not build or die
90 - FSI- Weak Surface Return started at 15 min. Did not build or die.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.05
0.00	Show of free oil in tool	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50712 **DST#: 4**

Test Start: 2013.04.25 @ 10:05:00

Tool Information

Drill Pipe:	Length:	3662.00 ft	Diameter:	3.80 inches	Volume:	51.37 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	186.00 ft	Diameter:	2.25 inches	Volume:	0.91 bbl	Weight to Pull Loose:		90000.00 lb
					Total Volume:	52.28 bbl	Tool Chased		ft
Drill Pipe Above KB:		10.00 ft					String Weight:	Initial	58000.00 lb
Depth to Top Packer:		3867.00 ft						Final	60000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		43.00 ft							
Tool Length:		72.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3839.00		
Shut In Tool	5.00			3844.00		
Hydraulic tool	5.00			3849.00		
Jars	5.00			3854.00		
Safety Joint	3.00			3857.00		
Packer	5.00			3862.00	29.00	Bottom Of Top Packer
Packer	5.00			3867.00		
Stubb	1.00			3868.00		
Recorder	0.00	6799	Inside	3868.00		
Recorder	0.00	8648	Inside	3868.00		
Perforations	3.00			3871.00		
Change Over Sub	1.00			3872.00		
Drill Pipe	32.00			3904.00		
Change Over Sub	1.00			3905.00		
Bullnose	5.00			3910.00	43.00	Bottom Packers & Anchor
Total Tool Length:	**72.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc

250 N Water STE #300
Wichita, KS 67202

ATTN: Bob Stolzle

14-2s-29w Decatur,KS

Pollnow #1-14

Job Ticket: 50712 **DST#: 4**

Test Start: 2013.04.25 @ 10:05:00

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:	63.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.39 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2200.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

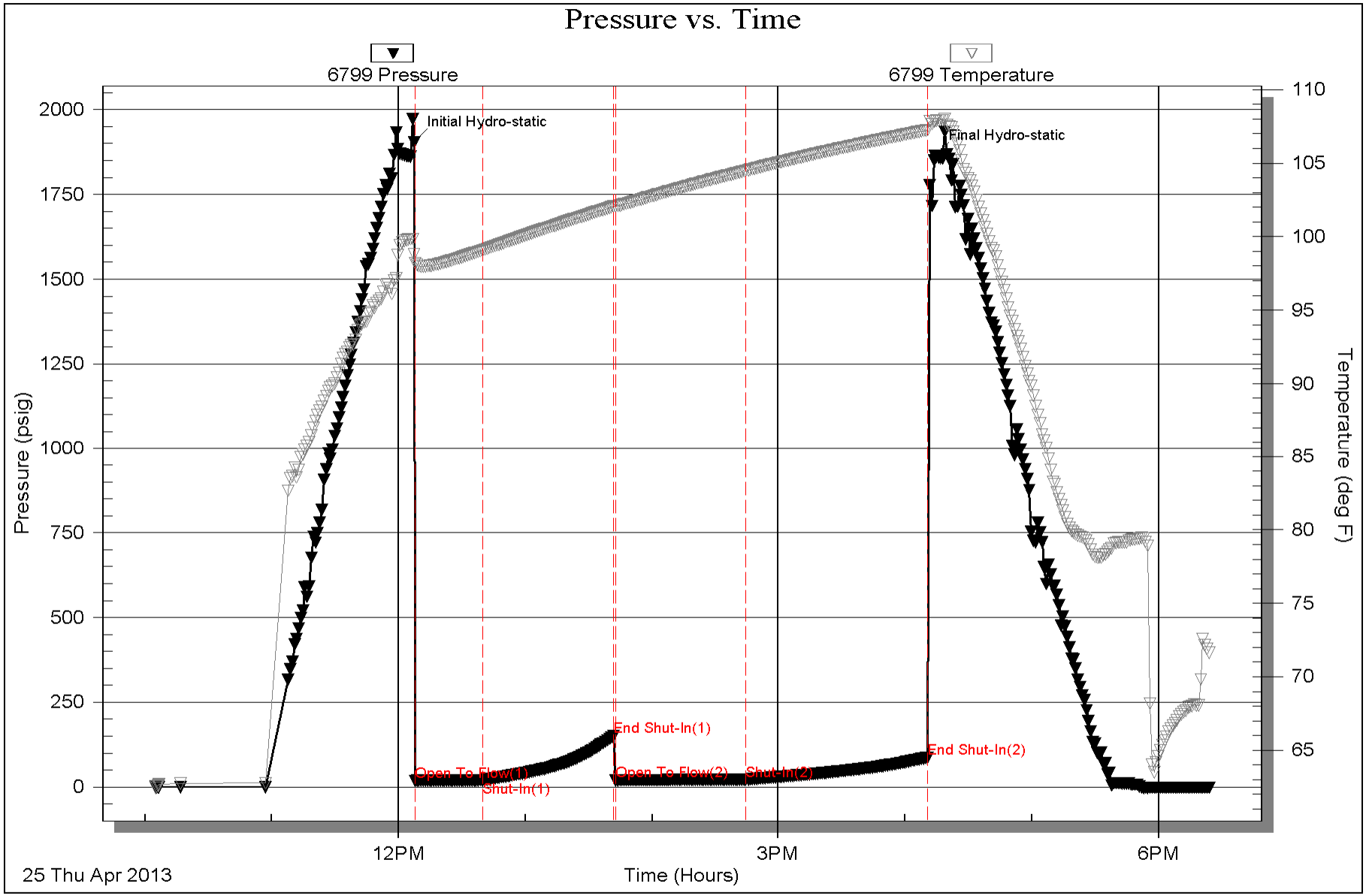
Recovery Table

Length ft	Description	Volume bbl
10.00	OSM 100M (oil spots)	0.049
0.00	Show of free oil in tool	0.000

Total Length: 10.00 ft Total Volume: 0.049 bbl

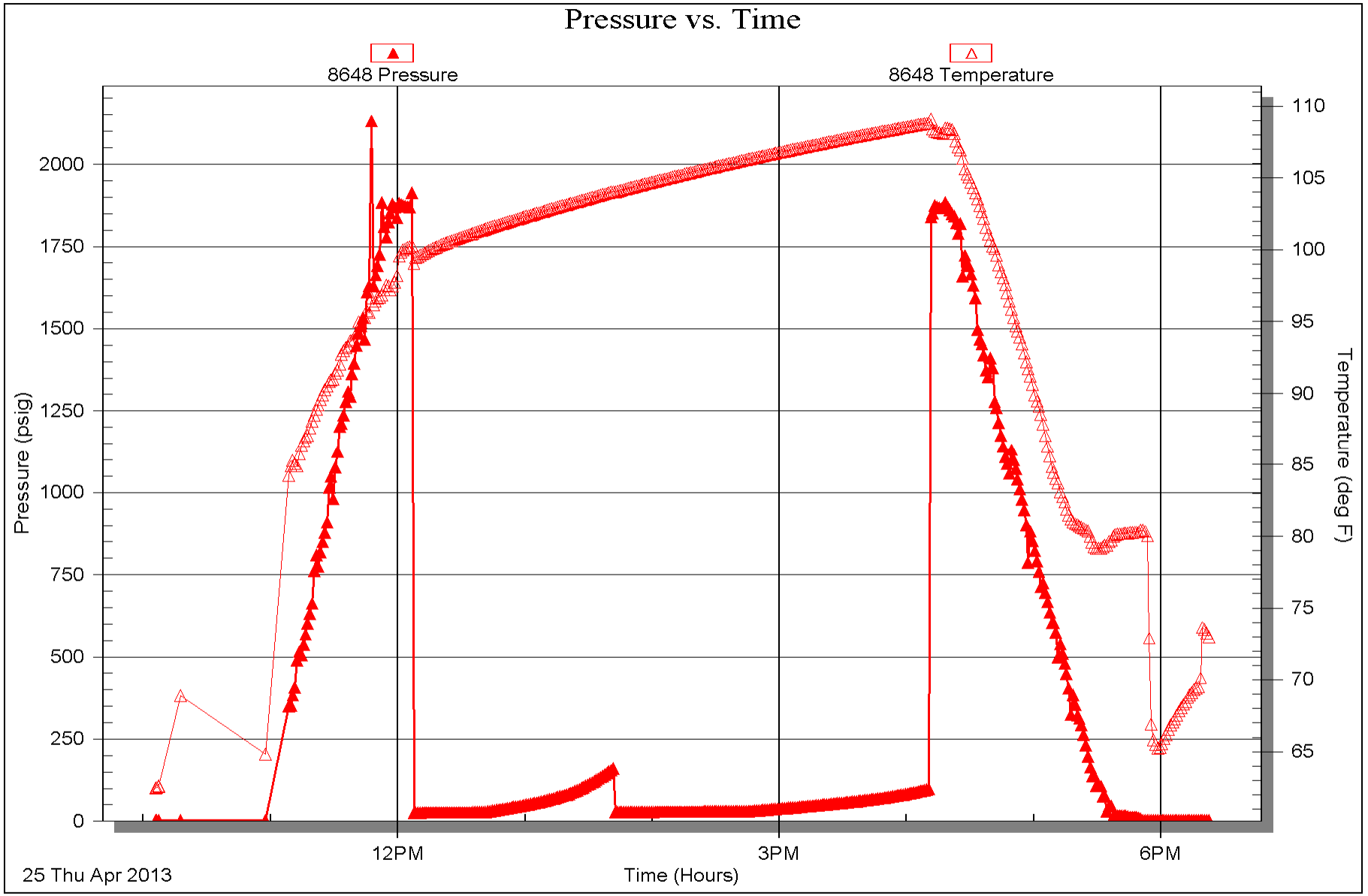
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6799 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 50712 Printed: 2013.04.29 @ 13:43:21

Serial #: 8648 **Inside** Murfin Drilling Co., Inc Pollnow #1-14 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 50712 Printed: 2013.04.29 @ 13:43:22

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50709

Well Name & No. Pollnow #1-14 Test No. 1 Date 4-23-13

Company Murfin Drilling Co., Inc. Elevation 2710 KB 2705 GL

Address 250 N Water STE #300 ~~Wichita, KS 67202~~ Wichita, KS 67202

Co. Rep / Geo. Bob Stolzle Rig Murfin #3

Location: Sec. 14 Twp. 2S Rge. 29W Co. Decatur State KS

Interval Tested 3604-3720 Zone Tested LKC "A"

Anchor Length 56' Drill Pipe Run 3477 Mud Wt. 8.9

Top Packer Depth 3660 Drill Collars Run 186' Vis 52

Bottom Packer Depth 3664 Wt. Pipe Run 0 WL 6.4

Total Depth 3720 Chlorides 1,700 ppm System LCM 4#

Blow Description IF - ½" Blow built to 5 ¾"

ISI - NO Return

FF - Blow started at 5 min. Built to 9"

FSI - NO Return

Rec 72	Feet of OSM	%gas spots	%oil	%water 100	%mud	
Rec 186	Feet of MW	%gas ~~0~~	%oil 70	%water 30	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 258 BHT 111 Gravity — API RW .4 @ 55 °F Chlorides 23,000 ppm

(A) Initial Hydrostatic	1755	☒ Test	1150	T-On Location	7:20 AM
(B) First Initial Flow	17	☒ Jars	250	T-Started	8:06 AM
(C) First Final Flow	81	☒ Safety Joint	75	T-Open	10:00 AM
(D) Initial Shut-In	1232	☒ Circ Sub	N/C	T-Pulled	2:00 PM
(E) Second Initial Flow	86	☐ Hourly Standby		T-Out	4:10 PM
(F) Second Final Flow	135	☒ Mileage	1 RT 15.50	Comments	
(G) Final Shut-In	1203	☐ Sampler			
(H) Final Hydrostatic	1733	☐ Straddle		☐ Ruined Shale Packer	
		☒ Shale Packer	250	☐ Ruined Packer	
Initial Open	30	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	60	☐ Extra Recorder		Sub Total	0
Final Flow	60	☐ Day Standby		Total	1740.50
Final Shut-In	90	☐ Accessibility		MP/DST Disc't	
		Sub Total	1740.50		

Approved By _____ Our Representative _____

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

Test Ticket

NO. 50710

Well Name & No. Pollnow #1-14 Test No. 2 Date 4-24-13
Company Murfin Drilling Co., Inc Elevation 2710 KB 2705 GL
Address 250 N Water STE #300 Wichita, KS 67202
Co. Rep / Geo. Bob Stolzle Rig Murfin #3
Location: Sec. 14 Twp. 2S Rge. 29W Co. Decatur State KS

Interval Tested 3720-3815 Zone Tested LKC "D-G"
Anchor Length 95' Drill Pipe Run 3537 Mud Wt. 9.0
Top Packer Depth 3716 Drill Collars Run 186' Vis 56
Bottom Packer Depth 3720 Wt. Pipe Run 0 WL 6.4
Total Depth 3815 Chlorides 25000 ppm System LCM 3#

Blow Description IF - ½" Blow built to 1"
ISI - No Return
FF - No Blow
FSI - No Return

Rec 70	Feet of OSM	%gas spots	%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 70 BHT 109 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	1828	☒ Test 1150	T-On Location 1:20 AM
(B) First Initial Flow	46	☒ Jars 250	T-Started 2:10 AM
(C) First Final Flow	50	☒ Safety Joint 75	T-Open 4:45 AM
(D) Initial Shut-In	583	☒ Circ Sub N/C	T-Pulled 7:45 AM
(E) Second Initial Flow	50	☐ Hourly Standby	T-Out 10:30 AM
(F) Second Final Flow	51	☒ Mileage 1% RT 15.50	Comments Chased tool approx 15' to Bottom after opening, then Reset tool.
(G) Final Shut-In	425	☐ Sampler	
(H) Final Hydrostatic	1846	☐ Straddle	☐ Ruined Shale Packer
		☒ Shale Packer 250	☐ Ruined Packer
Initial Open	30	☐ Extra Packer	☐ Extra Copies
Initial Shut-In	60	☐ Extra Recorder	Sub Total 0
Final Flow	30	☐ Day Standby	Total 1740.50
Final Shut-In	60	☐ Accessibility	MP/DST Disc't
		Sub Total 1740.50	

Approved By _____ Our Representative _____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50711

Well Name & No. Pollnow # 1-14 Test No. 3 Date 4-24-13

Company Murfin Drilling Co., Inc. Elevation 2710 KB 2705 GL

Address 250 N Water STE #300 Wichita, KS 67202

Co. Rep / Geo. Bob Stolzle Rig Murfin #3

Location: Sec. 14 Twp. 2S Rge. 29W Co. Decatur State KS

Interval Tested 3806-3880 Zone Tested LKC "H-J"

Anchor Length 74' Drill Pipe Run 3602 Mud Wt. 9.2

Top Packer Depth 3802 Drill Collars Run 186' Vis 52

Bottom Packer Depth 3806 Wt. Pipe Run 0 WL 6.8

Total Depth 3880 Chlorides 2,5000 ppm System LCM 3#

Blow Description TF - ½" Blow built to 2"
ISI- NO Return
FF - Weak surface blow started at 38 min. Built to ½"
FSI-NO Return

Rec 65	Feet of OSM	%gas	Spots %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 65 BHT 106 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	1824	☒ Test	1150	T-On Location	6:50 PM
(B) First Initial Flow	17	☒ Jars	250	T-Started	7:10 PM
(C) First Final Flow	30	☒ Safety Joint	75	T-Open	9:00 PM
(D) Initial Shut-In	1013	☒ Circ Sub	N/C	T-Pulled	1:00 AM
(E) Second Initial Flow	33	☐ Hourly Standby		T-Out	3:00 AM
(F) Second Final Flow	50	☒ Mileage	10RT 15.50	Comments	
(G) Final Shut-In	931	☐ Sampler			
(H) Final Hydrostatic	1845	☐ 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	60	☐ Day Standby		Total	1490.50
Final Shut-In	90	☐ Accessibility		MP/DST Disc't	
		Sub Total	1490.50		

Approved By _____ Our Representative _____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50712

Well Name & No. Pollnow # 1-14 Test No. 4 Date 4-25-13

Company Murfin Drilling Co., Inc Elevation 2718 KB 2705 GL

Address 250 N Water STE #300 Wichita, KS 67202

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

Location: Sec. 14 Twp. 2S Rge. 29W Co. Decatur State KS

Interval Tested 3867-3910 Zone Tested LKC "K"

Anchor Length 43' Drill Pipe Run 3662 Mud Wt. 9.1

Top Packer Depth 3863 Drill Collars Run 186' Vis 63

Bottom Packer Depth 3867 Wt. Pipe Run 0 WL 6.4

Total Depth 3910 Chlorides 2,200 ppm System LCM 5#

Blow Description IF- 1/4" Blow built to 1"

ISI- No Return

FF- Surface Blow did not build or die.

FSI- Weak Surface Return started at 15 min. Did not build or die.

Rec 10	Feet of OSM	%gas	Spots %oil	%water 100	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec 0	Feet of Show of Free Oil in Tool	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 10 BHT — Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	1903	☒ Test	1150	T-On Location	9:40 AM
(B) First Initial Flow	18	☒ Jars	250	T-Started	10:05 AM
(C) First Final Flow	20	☒ Safety Joint	75	T-Open	12:10 PM
(D) Initial Shut-In	151	☒ Circ Sub	N/C	T-Pulled	4:10 PM
(E) Second Initial Flow	20	☐ Hourly Standby		T-Out	6:30 PM
(F) Second Final Flow	21	☒ Mileage	10 RT 15.50	Comments	Loaded tools at end of test
(G) Final Shut-In	87	☐ Sampler			
(H) Final Hydrostatic	1863	☐ 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	60	☐ Day Standby		Total	1490.50
Final Shut-In	90	☐ Accessibility		MP/DST Disc't	
		Sub Total	1490.50		

Approved By _____ Our Representative _____

acct. Prod.-LH

ALLIED OIL & GAS SERVICES, LLC

PROD COPY **INVOICE**

PO Box 93999
Southlake, TX 76092

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

Invoice Number: 135939
Invoice Date: Apr 26, 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	60245	Net 30 Days	
Job Location	**Camp Location**	**Service Date**	**Due Date**
KS1-03	Oakley	Apr 26, 2013	5/26/13

Quantity	Item	Description	Unit Price	Amount
		Pollnow #1-14		
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
236.28	SER	Cubic Feet	2.48	585.97
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	LaRene Wentz		
1.00	OPER ASSIST	Paul Beaver		
1.00	OPER ASSIST	Darrin Hoeb		

Account ID203 6491.87 PTA Pollnow #1-14
3 6236.0001

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

$ 3,142.67 (25%)

ONLY IF PAID ON OR BEFORE

May 21, 2013

Subtotal	8,979.07
Sales Tax	655.47
Total Invoice Amount	9,634.54
Payment/Credit Applied	
TOTAL	**9,634.54**

- 3142.67

6,491.87

ALLIED OIL & GAS SERVICES, LLC 060245

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley, KS

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
4-26-13	14	2	29		1:30pm	3:00pm	4:00pm

LEASE	WELL #	LOCATION	COUNTY	STATE
Pollnow	1-14	Oberlin 3W Y2W	Decatur	KS

OLD OR (NEW) (Circle one) North

CONTRACTOR Murfin 8
TYPE OF JOB PTA
HOLE SIZE 2 1/8 T.D. 3790'
CASING SIZE DEPTH
TUBING SIZE DEPTH
DRILL PIPE 4 1/2 DEPTH 2425'
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT 30.93 661

OWNER Same

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

EQUIPMENT

PUMP TRUCK CEMENTER LaRene E. Wentz
#423/281 HELPER Paul Beaver
BULK TRUCK
347 DRIVER Darrin Hoeb
BULK TRUCK
DRIVER

COMMON	132 sks	@ 12.90	2362.80
POZMIX	88 sks	@ 9.35	822.80
GEL	8 sks	@ 23.40	187.20
CHLORIDE		@	
ASC		@	
Flo-seal	53#	@ 2.97	163.35
HANDLING	236.28 sks	@ 2.48	585.97
MILEAGE	9.87 ton x 60 x	2.60	1539.72
		TOTAL	5661.84

REMARKS:

mix 25 sks 2425'
mix 100 sks 1205'
mix 40 sks 270'
mix 10 sks w/plug 40'
plug M.H. 15 sks
plug R.H. 30 sks

Thank you

SERVICE

DEPTH OF JOB	2425'		
PUMP TRUCK CHARGE			2485.57
EXTRA FOOTAGE		@	
MILEAGE	MIPU 60	@ 2.70	462.00
MANIFOLD		@	
MIPU	60	@ 4.40	264.00
		@	
		TOTAL	3209.57

CHARGE TO: Murfin Drilling
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

wooden plug		@	102.64
		@	
		@	
		@	
		@	
		TOTAL	102.64

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.

SALES TAX (If Any)
TOTAL CHARGES 8,979.07
DISCOUNT 3,142.67 IF PAID IN 30 DAYS
5,836.39 Net

PRINTED NAME Travis Martin

SIGNATURE Travis W. Martin

acct. Prod.-LH

ALLIED
OIL & GAS SERVICES, LLC

PO Box 93999
Southlake, TX 76092

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

INVOICE

Invoice Number: 135818
Invoice Date: Apr 19, 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	58991	Net 30 Days	
Job Location	**Camp Location**	**Service Date**	**Due Date**
KS1-01	Oakley	Apr 19, 2013	5/19/13

Quantity	Item	Description	Unit Price	Amount
		Pollnow #1-14		
195.00	MAT	Class A Common	17.90	3,490.50
7.00	MAT	Chloride	64.00	448.00
204.75	SER	Cubic Feet	2.48	507.78
565.80	SER	Ton Mileage	2.60	1,471.08
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	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	Kevin Ryan		

0502

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF 5% on

$ 2,950.71

ONLY IF PAID ON OR BEFORE
May 14, 2013

Subtotal	8,430.61
Sales Tax	287.51
Total Invoice Amount	8,718.12
Payment/Credit Applied	
TOTAL	**8,718.12**

-2950.71
5,767.41

ALLIED OIL & GAS SERVICES, LLC 058991

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Oakley

ATE 4-19-13	SEC. 14	TWP. 2S	RANGE 29W	CALLED OUT	ON LOCATION	JOB START 6:00pm	JOB FINISH 6:30pm
EASE Pollnow	WELL # 1-14		LOCATION Oberlin 3W ½N			COUNTY Decatur	STATE KS
LD OR (NEW) (Circle one)			Minto				

CONTRACTOR Murfin 8
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 220'
CASING SIZE 8⅝ DEPTH 220'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 13.05 BAL

OWNER Same

CEMENT
AMOUNT ORDERED 195 sks com 3%cc

EQUIPMENT

PUMP TRUCK CEMENTER Andrew Farstund
431 HELPER Dane Retzloff
BULK TRUCK
347 DRIVER Kevin Ryan
BULK TRUCK
DRIVER

COMMON	195 sks	@ 17.90	3490.50
POZMIX		@	
GEL		@	
CHLORIDE	7 sks	@ 64.00	448.00
ASC		@	
HANDLING	204.75 cuft	@ 2.48	507.78
MILEAGE	216 Ton/mile	9.60	1471.08
TOTAL			5917.36

REMARKS:

Cement D.& Circulate

Thank you

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			1512.25
EXTRA FOOTAGE	@	@	
MILEAGE	60 miles	@ 7.70	462.00
MANIFOLD	head	@	225.00
Light vehicle		@ 4.40	264.00
		@	
TOTAL			2513.25

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.

SALES TAX (If Any)
TOTAL CHARGES 8430.61
DISCOUNT 2,950.71 IF PAID IN 30 DAYS
5,479.89 Net.

PRINTED NAME Rodney Farr
SIGNATURE