

| | | |
|--|--|--|
| | | |
| | | |
| | | |
| | | |

Remarks

The Ken # 2-17 was declared dry and abandoned.
 All shows of free oil were drill stem tested and condemned.

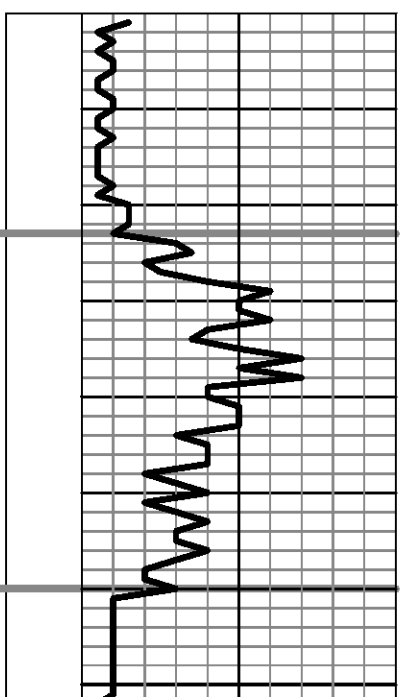
Electric log measurements correlate about 3' to 4' low compared to rotary measurements.

Drilling samples deposited at the Kansas Geological Survey.

Respectfully Submitted,

Jeff Christian
 Jeff Christian

| LITH. | 0 | DRILL TIME (MIN/FT) | 10 | DEPTH | SHW | SAMPLE DESCRIPTIONS | REMARKS |
|-------|---|---------------------|----|-------|-----|---------------------|---------|
|-------|---|---------------------|----|-------|-----|---------------------|---------|

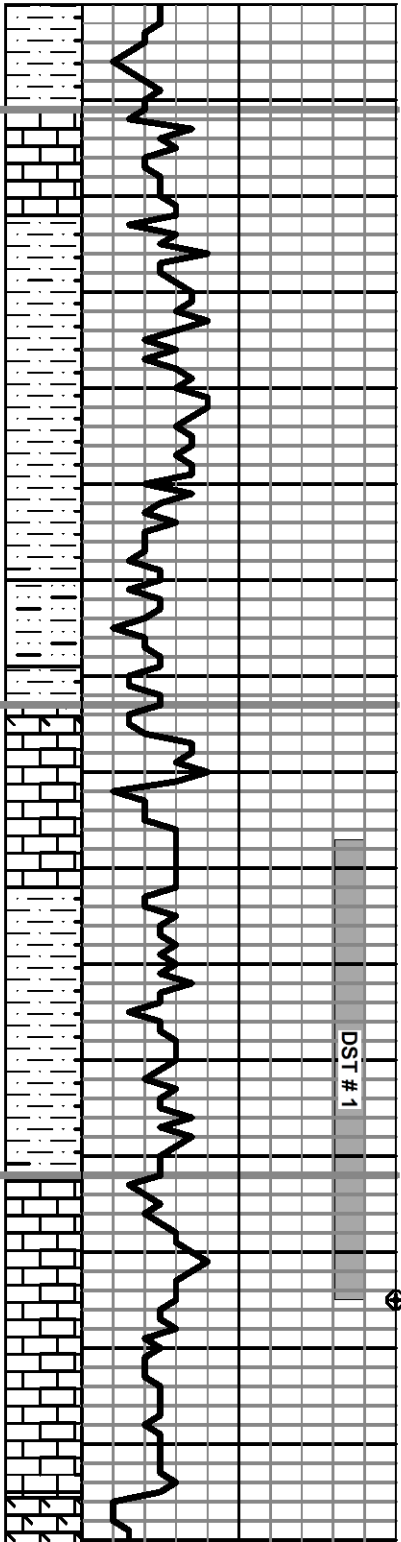


3100

3150

ANHYDRITE 3103' (+111)
 E Log 3107' (+107)

Base ANHYDRITE 3140' (+74)
 E Log 3144' (+70)



3600

3650

3700

3750

Sh: red/orng-some brn & gry, sndy-slty

Ls: crm-lt gry, fn xln, sli grnlr, part chlky, ool-sli foss, pr intrpart por, ns

Ls: as above, part dns

Sh: red/brn, slty & sndy

Sh: red/brn, sli gummy, slty-sndy

Sh: as above, some gry & grn sh

Sst: lt gry, vy fn grn, sli calc, hard-subfri, pr vis por, ns

Dolo Ls: fn xln, chlky, sli foss, chrty, pr vis por, ns

Ls: lt gry, fn xln, part dns, sli foss, chrty (orng), pr vis por, ns

Ls: gry-brn, fn xln, dns, sli grnlr, sli foss, sct orng chrt, pr vis por, ns

Sh: red/brn, sndy-slty, some gry & grn sh

Same

Ls: crm-lt gry, fn xln, grnlr, subchlky, sli foss, pr intrxln, trc pp-vug por, sli-fr sfo, sli odor, dull brn subsat-sat stn

Ls: lt gry, fn xln, dns, vy foss-ool, pr vis por, ns

Ls: crm-gry, fn xln, grnlr in part, dns in part, foss, argil in part, pr vis por, ns

Ls: lt brn-lt gry, fn xln, grnlr, dolo in part, sli foss, pr-fr intrxln-pp por, ns

NEVA 3601' (-387)

E Log 3604' (-390)

RED EAGLE 3663' (-449)

E Log 3667' (-453)

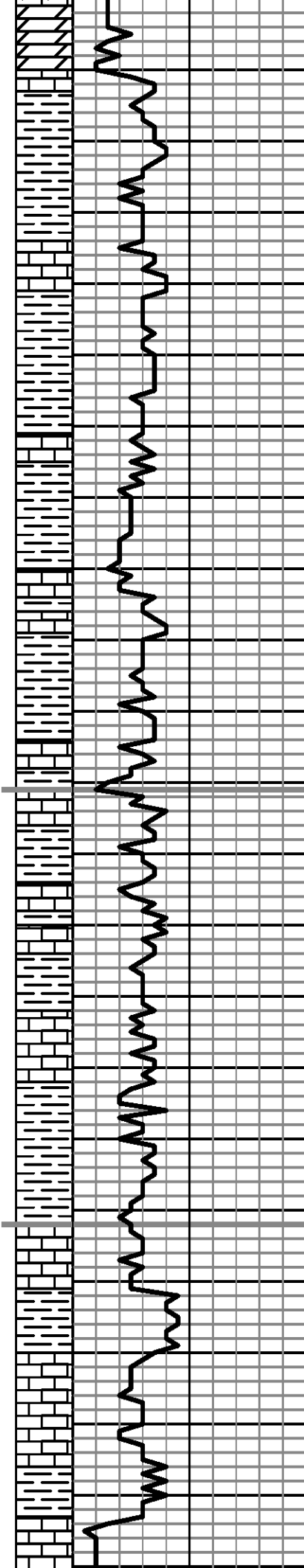
DST # 1 3677' to 3725'
 30"-60"-30"-60"
 IF: Blow Built to 2.5"; Died Back to 1.5"
 FF: No Blow
 RECOVERY: 60' Mud oil spts in tool
 IFP: 40-42# ISIP: 985#
 FFP: 40-43# FSIP: 903#
 IHP: 1801# FHP: 1760#
 BHT: 121 deg. F
 Note: Tool Slid 5'. Lost 2'-3' of mud

Pipe Strap @ 3725': .25' short to board

FORAKER 3712' (-498)

E log 3716' (-502)

Morgan Mud: 3725'; 10/13/15
 Wt. 9.0, Vis. 51, WL. 6.4, Chl. 700, LCM. 7



3750

Dolo: brn, fn xln, suc, sli foss, fr intrxln-vug por, ns

Ls: crm-lt gry, fn xln, dns, sli foss, pr pp-vug por, vy sct blk tarry oil stn, nsfo, no odor

Sh: red/brn, slty, calc, some gry

3800

Ls: crm-lt gry, fn xln, part dns, sli foss-ool, pr vis por, sct blk sptd asph stn, nsfo, no odor

Sh: red/brn, slty, lt prpl, calc

Ls: crm-lt brn-lt gry, fn xln, dns, sli foss, trc asph stn, nsfo, no odor

Sh: red/brn, slty, some gry & grn

Ls: crm-lt gry, fn xln, dns, foss-sli ool, pr vis por, ns

Ls: gry-olive/gry, fn xln, dns, foss, pr vis por, ns

3850

Sh: red/brn, slty, sli gummy, some gry & grn

Ls: off wt-lt gry, fn flx, part chlky, part dns, foss, sptd blk asph stn, nsfo, no odor

Ls: as above

Sh: red/brn, slty, gummy

Ls: crm-lt gry, fn xln, part dns, foss-sli ool, pr vis por, ns

Ls: as above, few pcs asph stn, nsfo, no odor

3900

Ls: off wt-lt gry, fn xln, part chlky, foss, argil, pr vis por, ns

Sh: red/brn, slty, gummy in part w/ Ls: as above

3950

Ls: off wt-crm-lt gry, fn xln, sli chlky, sndy (vy fn grn), sct foss, trc ool, pr vis por, ns

Sh: red/brn, slty, gummy w/ Ls: off wt-crm, fn xln, part chlky, foss, argil, pr vis por, ns

Ls: off wt-lt gry, fn xln, part dns, part chlky, sli foss, pr vis por, ns

Same

Sh: red/brn-mar-lt prpl, calc in part

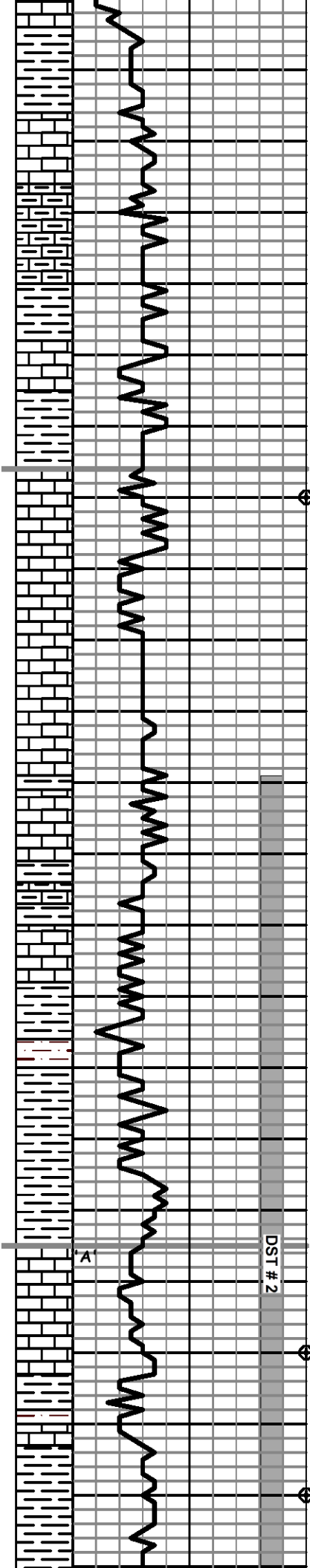
Ls: crm-lt gry, fn xln, sli chlky, foss-ool, pr-sm fr intrpart-vug por, sct blk sptd asph stn, nsfo, no

STOTLER 3861' (-647)

E Log 3865' (-651)

TOPEKA 3922' (-708)

E Log 3926' (-712)



odor
Sh: red/brn, slty-sndy, some gry & grn

Ls: lt gry, fn xln, dns, sli foss, pr vis por, ns

4000

Sh: lt prpl, slty, calc

Sh: as above, incrs sh: red/brn, soft to gummy

Ls: off wt-lt gry, fn xln, part chlky, ool-sli foss, pr intrpart por, blk sptd asph stn, nsfo, no odor

Sh: red/brn, gummy

Morgan Mud: 4026'; 10/14/15
Wt. 9.3, Vis. 50, WL. 6.8, Chl. 700, LCM. 6

OREAD 4036' (-822)

E Log 4040' (-826)

Ls: off wt-crm, fn xln, chlky in part, blk, sli foss-ool, sli pyrit, pr vis por, vy sct blk sptd stn, nsfo, no odor

4050

Ls: wt-lt gry, fn xln, chlky, part dns, w/ chrt: tan, vit-sli grnlr, pr vis por, ns

Ls: lt grgry, vy fn-fn xln, dns, no vis por, ns

Same

Sh: drk gry, calc w/ Ls: drk gry, micro-vy fn xln, dns, argil, no vis por, ns, sli odor

Same, cpl pcs foss w/ pr vug por, vssfo, fnt odor

4100

Ls: lt gry-gry, fn xln, subchlky, part dns, few pcs edge stn, pr vug por, vssfo, fnt odor

Sh: lt gry-gry, gummy

Sh: gry w/ Slstst: lt gry, vy fn grn, calc, trc asph stn, nsfo, no odor
few pcs Ls: brn, fn xln, foss, pr-fr vug por, blk asph stn, nsfo, no odor

Sh: red/brn, slty, some gry & grn

LANSING 4145' (-931)

E Log 4148' (-934)

4150

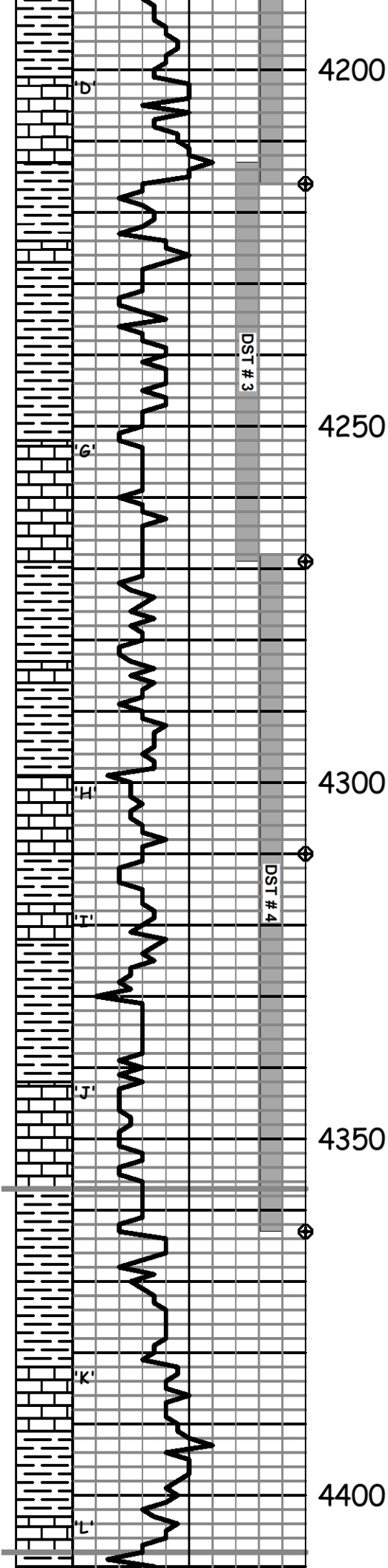
Ls: lt gry-yell/brn, crypto-micro xln, no vis por, trc dead stn, nsfo, no odor

Same

Ls: crm-lt gry, fn xln, subchlky, part dns, sli foss, pr vug por, sct blk asph stn, vssfo, no odor
w/ Slstst: lt gry-lt grn, vy fn grn, calc, pr vis por, trc asph stn

Sh: red/brn, slty, some gry & grn

DST # 2 4079' to 4216'
30"-60"-30"-60"
IF: Blow Built to 1.75"
FF: No Blow
RECOVERY: 100' Mud trc oil in bottom
IFP: 18-40# ISIP: 593#
FFP: 42-63# FSIP: 528#
IHP: 2048# FHP: 1976#
BHT: 128 deg. F



Same

4200

Ls: crm-lt gry, fn xln, dns, sli foss, pr pp-vug por, trc fo, fnt odor, brn-blk sptd stn

Ls: crm-lt gry, fn xln, dns, sli foss, sli pyrit, pr-trc fr pp-vug por, trc fo, fnt odor, lt brn sptd stn

Sh: red/brn- gry & grn

Ls: lt gry-gry, fn xln, dns, sli foss, pr vis por, few pcs w/ edge stn, nsfo, no odor

Sh: red/brn, some grn

Sh: red/brn, gummy, some mar-gry-grn

4250

Ls: lt gry, fn xln, fosspr-fr foss-vug por, fr-sm gd sfo, sli odor, lt brn-brn mostly sat stn

Ls: crm-lt gry-grn/gry, fn xln, dns, subchlky in part, pr vis por, ns

Sh: red/brn-gry, some grn, calc in part

Sh: as above w/ Ls: brn, vy fn-fn xln, dns, no vis por, ns

Sh: red/brn, some gry & grn

4300

Ls: crm-lt gry, fn xln, foss, pr-sm fr pp-vug por, ssfo, fnt odor, drk brn sptd-subsat stn, sct blk asph stn

Ls: off wt-lt gry, fn xln, sli chlky, sli foss-subool, pr vis por, blk sptd asph stn, nsfo, no odor

Sh: red/brn, slty in part, some gry & grn

Sh: as above

Ls: off wt-crm-lt gry, fn xln, sli chlky, part dns, sli foss-ool in part, pr vis por, ns, no odor

Ls: as above, incrs dns ls

4350

Sh: red/brn-gry

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

Ls: crm-lt gry, fn xln, part dns, ool-sli foss, pr vis por, ns, no odor

Ls: as above, some lt gry-grn/gry, fn xln, dns, ns

Sh: red/brn-gry

4400

Ls: crm-lt gry, fn xln, subchlky, part dns, sli foss-ool, pr vis por, ns, no odor

Morgan Mud: 4216'; 10/15/15
Wt. 9.1, Vis. 57, WL. 5.6, Chl. 700, LCM. 8

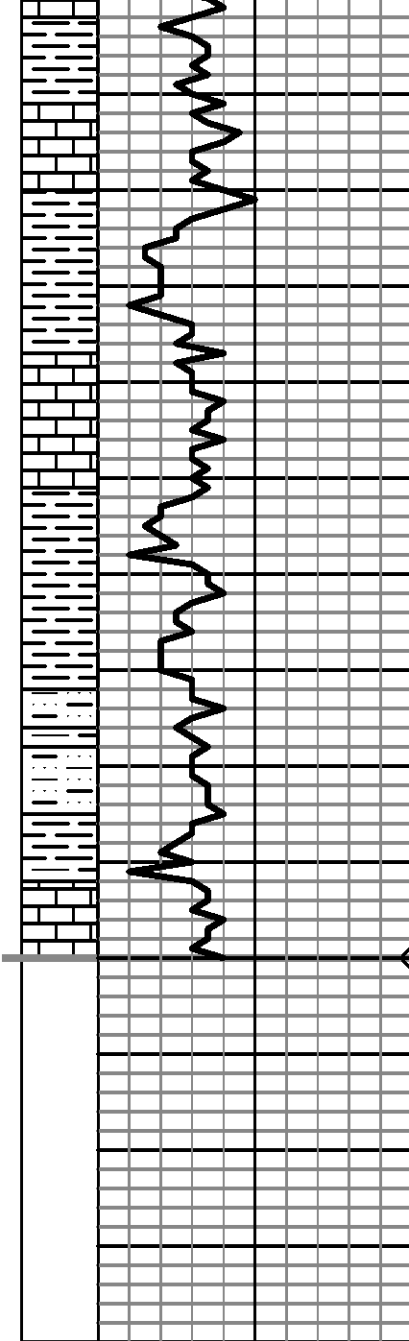
DST # 3 4213' to 4269'
30"-60"-30"-60"
IF: Blow Built to .25"; Dead/25"
FF: No Blow
RECOVERY: 20' OCM (13%O, 87%M)
IFP: 16-22# ISIP: 215#
FFP: 26-28# FSIP: 89#
IHP: 2139# FHP: 2093#
BHT: 127 deg. F

DST # 4 4268' to 4363'
30"-60"-30"-60"
IF: Blow Built to 1.5"
FF: No Blow
RECOVERY: 45' total fluid
15' GIP
45' OCM (1%G, 17%O, 82%M)
IFP: 19-27# ISIP: 1094#
FFP: 31-36# FSIP: 1000#
IHP: 2201# FHP: 2081#
BHT: 129 deg. F

Morgan Mud: 4363'; 10/16/15
Wt. 9.4, Vis. 54, WL. 6.0, Chl. 900, LCM. 6

STARK 4357' (-1143)
E Log 4360' (-1146)

BKC 4408' (-1194)
E Log 4412' (-1198)



4450

4500

4550

Sh: red/brn-gry
 Ls: lt gry-gry, fn xln, dns, sli foss, pr vis por, ns
 Sh: red/brn, gummy, some gry & grn
 Ls: lt gry-red/gry-prpl/gry, fn-sm med xln, foss in part, argil in part, pr vis por, ns
 Ls: gry, fn xln, slty, sli foss, pr vis por, ns
 Sh: red/brn-gry-lt prpl, calc
 Sh: red/brn
 Sst-Sltst: lt gry, vy fn-fn grn, calc, subfri, pr vis por, ns
 Sh: red/brn
 Ls: lt gry, fn xln, dns, sli foss, pr vis por, ns, no odor

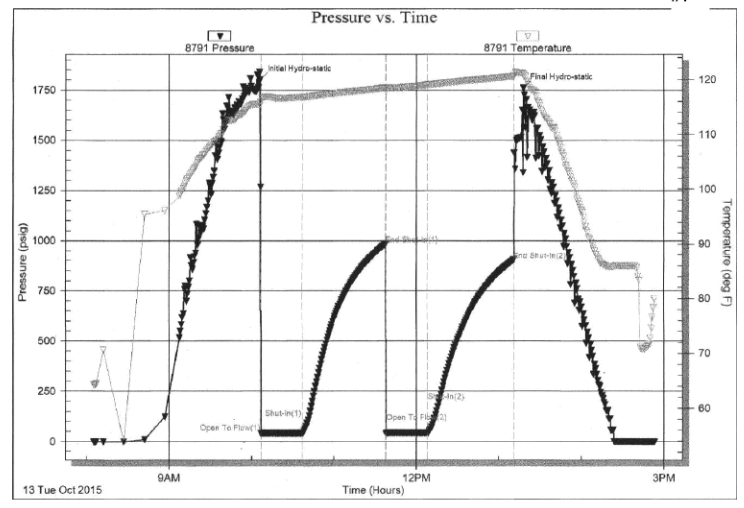
Morgan Mud: 4510'; 10/17/15
 Wt. 9.1, Vis. 64, WL. 5.6, Chl. 700, LCM. 15

RTD 4510' (1296)

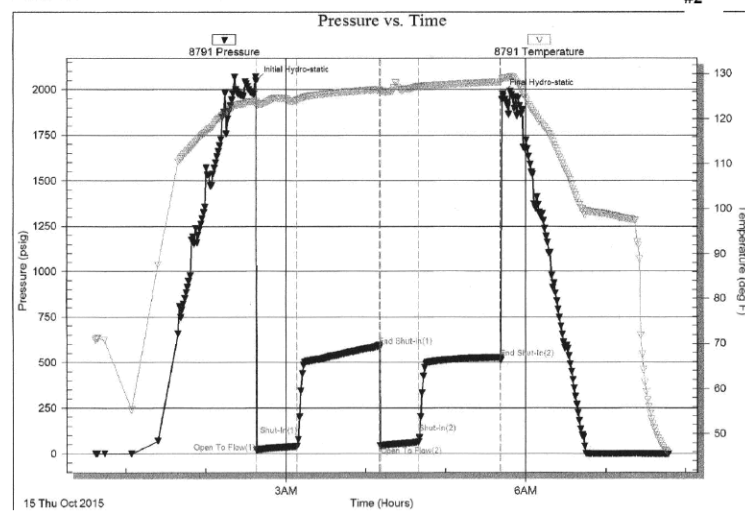
E Log 4514' (-1300)

Drill Stem Test Charts

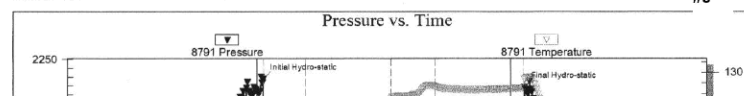
Serial #: 8791 Inside Murfin Drilling Co., Inc. Ken #2-17 DST Test Number: #1



Serial #: 8791 Inside Murfin Drilling Co., Inc. Ken #2-17 DST Test Number: #2



Serial #: 8791 Inside Murfin Drilling Co., Inc. Ken #2-17 DST Test Number: #3



Serial #: 8791 Inside Murfin Drilling Co., Inc. Ken #2-17 DST Test Number: #4

