



**Scale 1:240 (5"=100') Imperial
Measured Depth Log**

Well Name: SCHMIDT # 1-10 (SE)
Location: NE-SE-NW-SE of SEC. 10 -T. 28 S. - R. 30 W.
License Number: A.P.I. # 15-069-20,458-00-00
Spud Date: 01/07/2014
Surface Coordinates: 1850' FSL & 1450' FEL

Region: Gray County, Ks.
Drilling Completed: 1/20/2014

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 2807' **K.B. Elevation (ft):** 2817'
Logged Interval (ft): 1865' **To:** 5509' **Total Depth (ft):** 5509'
Formation: MISSISSIPPIAN "SALEM (SPERGEN)"
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL. & MUD DISPLACEMENT @ '.

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: FALCON EXPLORATION, INC. KCC LIC. # 5316
Address: 125 N. MARKET, STE. #1252
WICHITA, KANSAS 67202

GEOLOGIST

Name: DAVID P. WILLIAMS
Company: DW ENERGY, LLC (DWE)
Address: 312 NORTH BROADVIEW STREET
WICHITA, KANSAS 67208

CASING & DEVIATION

Spudded at 12:30 p.m on 01/07/2014.

Surface Casing: Ran 44 jts new 24# 8-5/8" surface casing. Set at 1862'. Basic Energy cemented with 460 sx A Conn, 3% CC, 1/4# pf, 8 5/8" set at 1865' with 150 sx premium plus, 2% CC, 1/4# pf. Cement did circulate. Plug down at 10:00 P.M.

Deviation Survey's Taken: @ 1865' = 1 3/4 degree; @ 3547' - 1 degree; @ 5320' = 3/4 degree; @ 5505' = 1

DSTs

~~ DST #1~~ 3477'-3547'. Times: 5"-90"-88"-120".

Blow: IF= Strong Blow- BOB/3"; FF BOB/Instant.

Recovery: 95' Mud.

Pressures: IH=11573#; FH=1571#; IF=14-14#; FF=18-47#; ISIP=847#; FSIP=878#; Temp = 100 degrees F..

~~ DST # 2~~ 3577'-3620'. Times: 5"-90"-120"-180".

Blow: IF= Weak Blow/1.5" Slow Build; FF= Weak Inc to BOB/96.5".

Recovery: 135' TF: 10' WCM & 125' MCW (81% W; 19% M).

Pressures: IH=1643 #; FH=1641#; IF= 6-12#; FF=13-81#; ISIP= 946#; FSIP=913#; Temp= 99 degrees F..

~~DST # 3~~ 5031'-5079'. Times: 5"-60"-60"-120"

Blow: IF V. Weak Surface= 1/4"; FF Weak Surface/1/4".

Recovery: 20' M;

Pressures: IH =2553#; FH =2552#; IF =7-9#; FF=11-20#; ISIP =1509#; FSIP=1408#; Temp = 120 degrees F.

Comments

After review of all geologic samples as examined, structural correlation to offsetting prior drilled wells, combined with the fluid and pressures results from the drill stem test taken and electric log analysis, it was determined by all parties that this well appears to be non-commercial and should be plugged and abandoned.

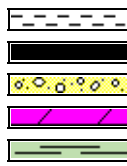
Respectfully submitted,

David P. Williams, P.G

ROCK TYPES



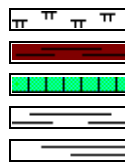
Anhy
Bent
Brec
Carb sh
Cht



Clyst
Coal
Congl
Dol
Grn sh



Gry shale
Gyp
Igne
Lmst
Meta



Mrlst
Red shale
Salt
Shale
Shcol



Shgy
Sltst
Ss
Till

ACCESSORIES

- MINERAL**
- Anhy
 - Arggrn
 - Arg
 - Bent
 - Bit
 - Breclfrag
 - Calc
 - Carb
 - Chtdk
 - Chtlt
 - Dol
 - Feldspar
 - Ferrpel
 - Ferr
 - Glau
 - Gyp

- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

- FOSSIL**
- Algae
 - Amph

- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Fuss
- Gastro
- Oolite
- Oomold
- Ostra
- Pelec

- Pellet
- Pisolite
- Plant
- Strom

- STRINGER**
- Anhy
 - Arg
 - Bent
 - Coal
 - Dol
 - Grysh
 - Gyp
 - Ls
 - Mrst
 - Sltstrg
 - Ssstrg

- TEXTURE**
- Boundst
 - Chalky
 - Cryxln
 - Earthy
 - Finexln
 - Grainst
 - Lithogr
 - Microxln
 - Mudst
 - Packst
 - Wackest

OTHER SYMBOLS

- POROSITY**
- Earthy
 - Fenest
 - Fracture
 - Inter
 - Moldic
 - Organic
 - Pinpoint

- Vuggy
- SORTING**
- Well
 - Moderate
 - Poor

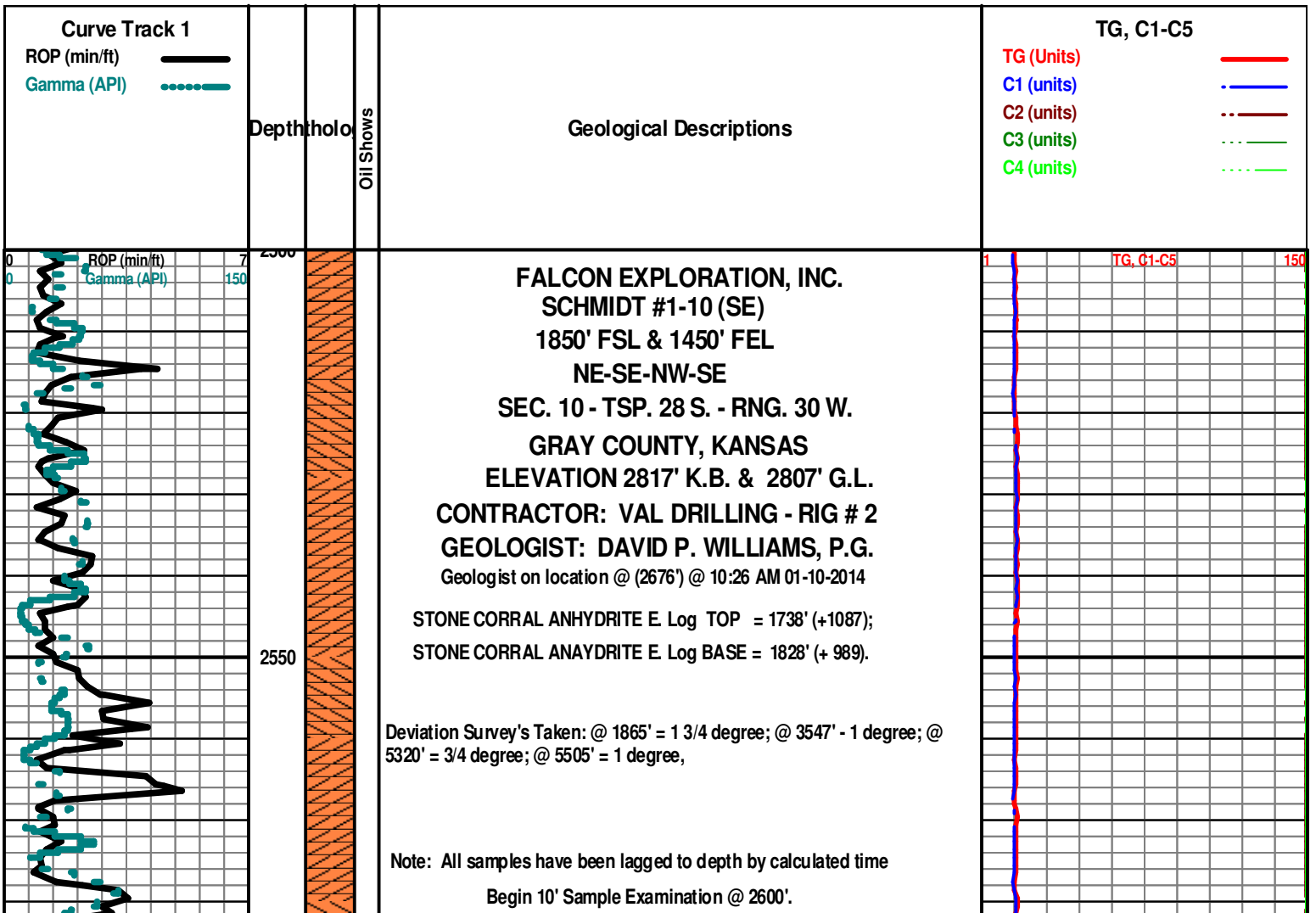
- ROUNDING**
- Rounded
 - Subrnd
 - Subang
 - Angular

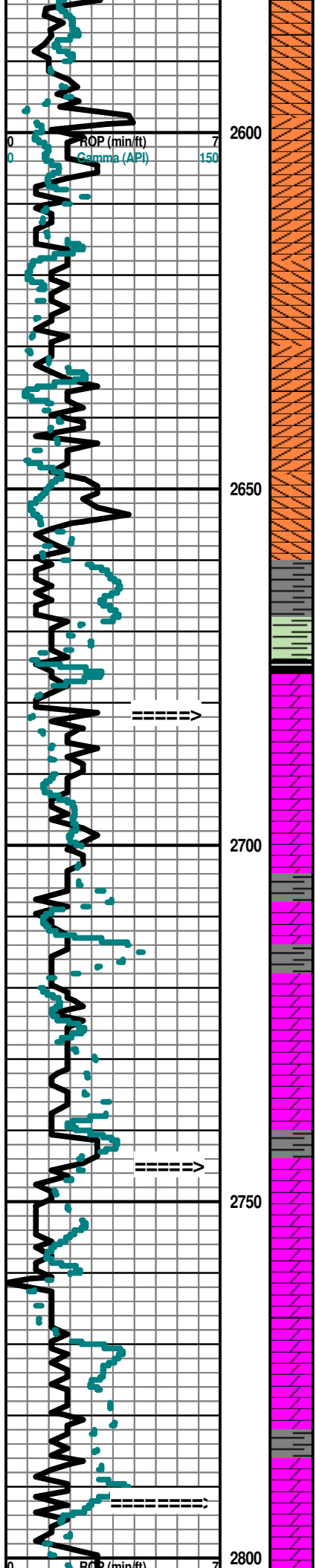
- Even
- Spotted
- Ques
- Dead

- EVENT**
- Rft
 - Sidewall

- OIL SHOW**
- Gas show

- INTERVAL**
- Dst
 - Dst_alt





2600

2650

2700

2750

2800

ROP (min/ft)
Gamma (API)

CHASE GROUP 2681' (+136)

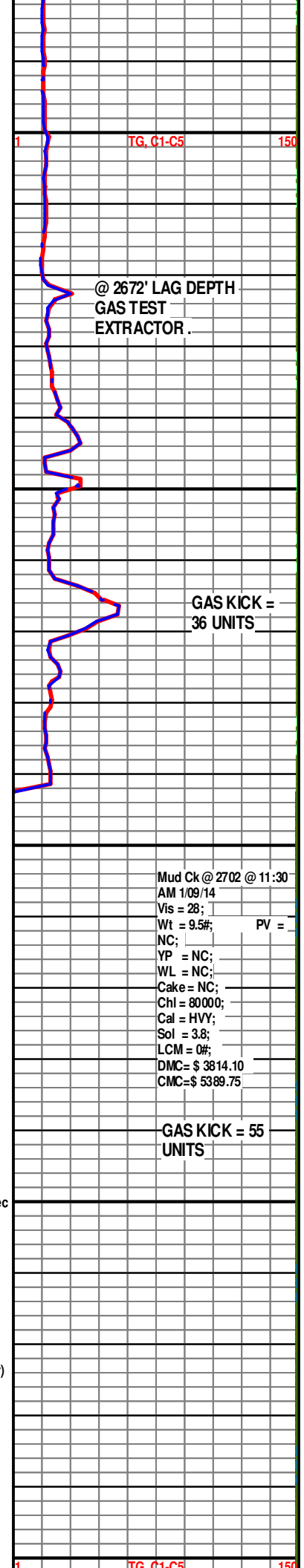
Dolo Wht-Crm FxIn Fair-Med Sucrosic Por w/ Sm-Med Vug Leaching w/ Fair-Good Show Gas Faint Scatt Flor (Pale-Lt Grn) tr ? Gilsonitic Residue No Odor ? Strn

WINFIELD 2745' (+72)

Dolo Wht-Crm FxIn Fair-Med Sucrosic Por w/ Sm-Med Vug Leaching w/ Fair-Dec Show Gas Faint Scatt Flor (Pale-Lt Grn) Tr ? Gilsonitic Fos Plant Residue No Odor ? Stn Lt Grn Scatt Dec Flor

Dolo Wht-Crm FxIn Poor-Fair Sucrosic Por w/ Tr. Sm-Med Vug Leaching w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? Dec Gilsonitic Fos Plant Residue No Odor ? V Sli Stn (Lt Gr) Inc Barron FxIn NS

TOWANDA 2792' (+37)



TG, C1-C5

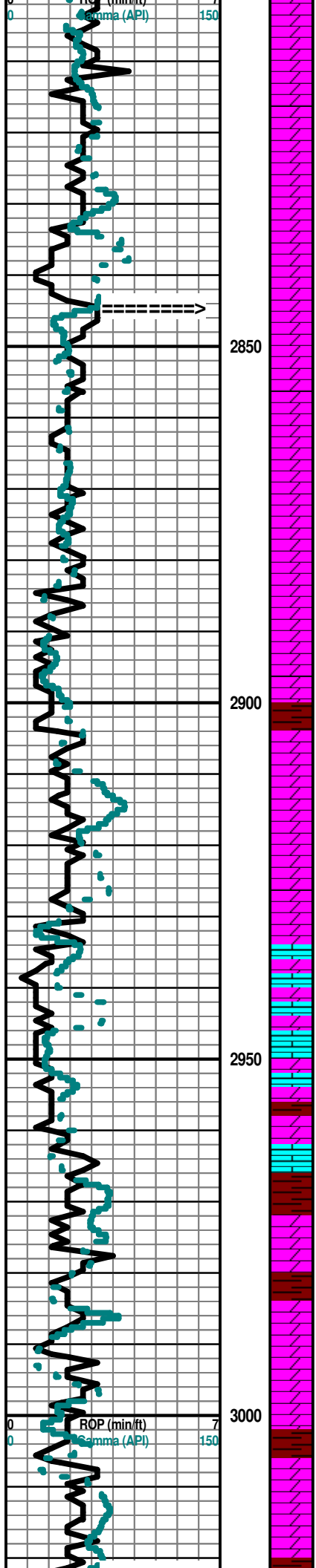
@ 2672' LAG DEPTH
GAS TEST
EXTRACTOR .

GAS KICK =
36 UNITS

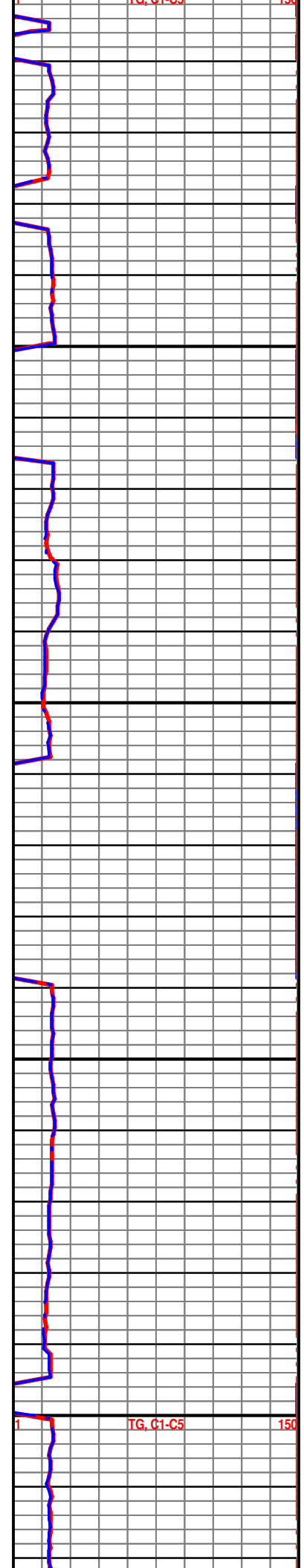
Mud Ck @ 2702 @ 11:30
AM 1/09/14
Vis = 28;
Wt = 9.5#; PV =
NC;
YP = NC;
WL = NC;
Cake = NC;
Chl = 80000;
Cal = HVY;
Sol = 3.8;
LCM = 0#;
DMC = \$ 3814.10
CMC = \$ 5389.75

GAS KICK = 55
UNITS

TG, C1-C5



FORT RILEY 2844' (+ 29')



WREFOED 3022 (-205)

BASE CHASE GROUP 3046' (-229)

BADER 3074' (-257)

COTTONWOOD 3088' (-271)

NEVA 3168' (-351)

@ 3220' Start Sample Examination - 20' Interval Wet & Dry

Poor Sample Ls Wht FxIn Tr Poor Gran lXIn Por Micrite Dns Sh Abd
Red-Gry-Grn Fissil No Odor No Stn No Flor NS

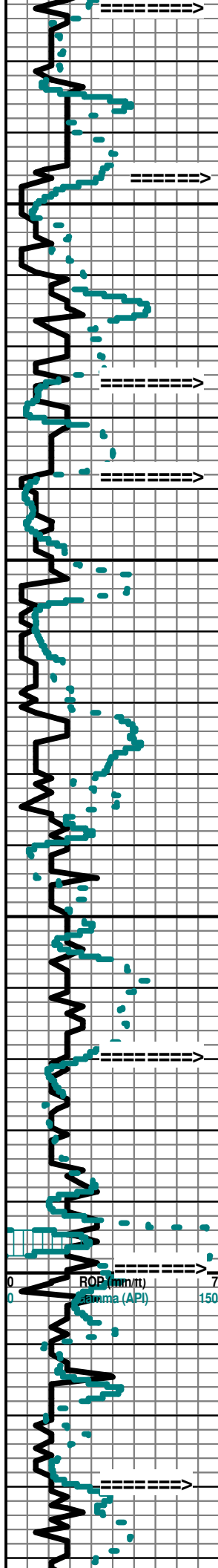
DISPLACE MUD SYSTEM @ 3200'

RED EAGLE 3199' (-382')

Poor Sample Ls Wht FxIn Tr Poor Gran lXIn Por Micrite Dns Sh Abd
Red-Gry-Grn Fissil No Odor No Stn No Flor NS

BASE COUNCIL GROVE 3230' (-413)

Ls Wht-Crm-Gry FxIn Tr Poor lXIn-lgran Por Chalk Abd Sh Red-Gry-Grn
Fissil Dec No Odor No Stn NS



3050

3100

3150

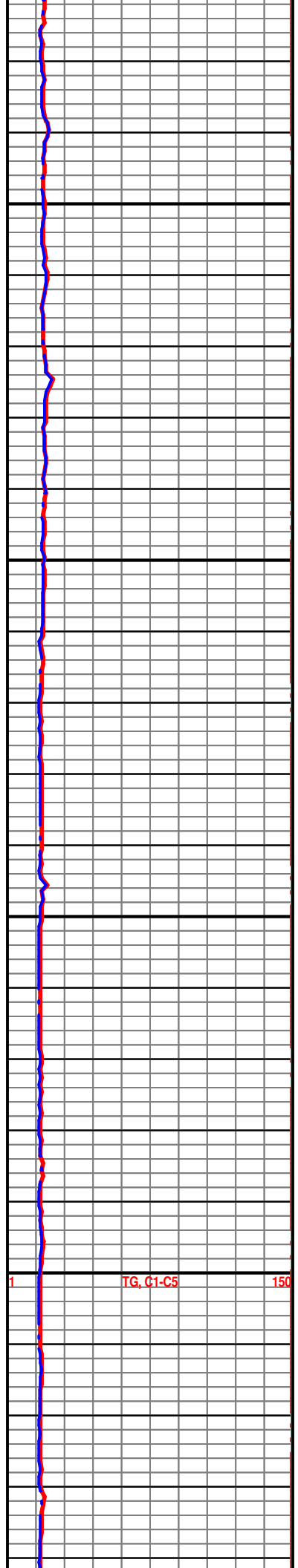
3200

FX

FX

FX

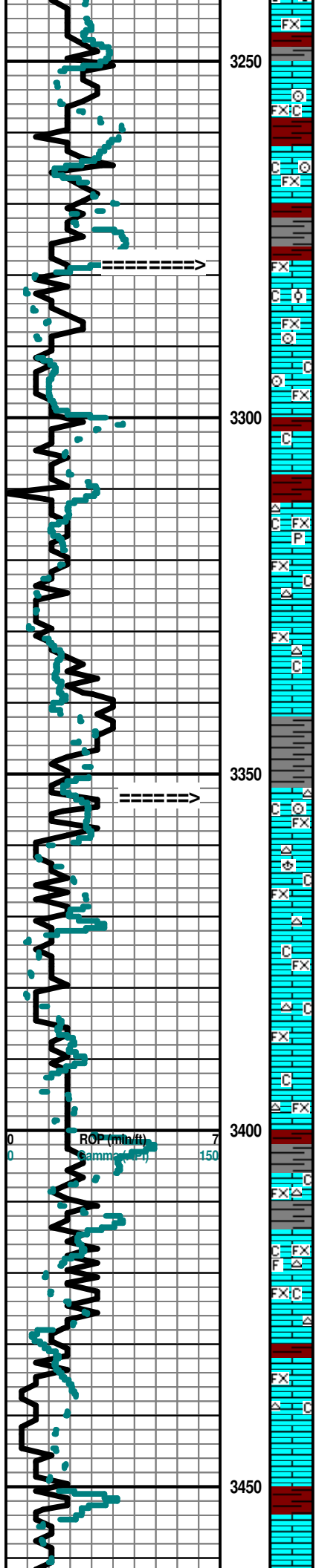
FX



1

TG, C1-C5

150



Ls Wht-Crm-Gry Fxln Tr Poor lxn-Igran Por Cht Wht Op Vit Shp Fos (Crin)
Chalk Abd Sh Red-Gry-Grn-Aqua Soft-Fissil Dec No Odor No Stn NS

Ls Wht-Crm-Gry Fxln Tr Poor lxn-Igran Por Cht Wht Op Vit Shp Fos (Crin)
Chalk Abd Sh Red-Gry-Grn Soft-Fissil Dec No Odor No Stn NS

FORAKER 3278' (- 461)

Ls Wht-Crm-Gry Fxln Tr Poor lxn-Igran Por Grad Tr Fair OOL Por (w/Small
OOids in pl) Poor-Fair Dissolu Poor-Fair Develop Cht Wht Op Vit Shp Fos
(Crin) Chalk Abd Sh Red-Gry-Grn Soft-Fissil Dec No Odor No Stn NS

Ls Wht-Crm-Tan Fxln Tr Poor lxn Por Cht Wht-Peach Translu-Op Vit Shp
Chalk Abd Sh Maroon (w/Pyr Includ)-Gry-Grn Soft-Fissil Dec No Odor No
Stn NS

Ls Wht-Crm-Tan Fxln Tr Poor lxn-Igran Por Grad Fair OOL Por (w/Small
OOids in pl) Poor-Fair Dissolu Poor-Fair Develop Cht Wht Op Vit Shp Chalk
Abd Sh Red-Gry-Grn Soft-Fissil No Odor No Stn NS

Ls Wht-Crm-Tan Fxln Tr Poor lxn-Igran Por Cht Wht-Peach-Gry Translu-Op Vit Shp Fos (Crin)
Chalk Abd Sh Red-Gry-Grn Soft-Fissil No Odor No Stn NS

ADMIRE GROUP 3353' (- 536)

Ls Wht-Crm-Gry Fxln Tr Poor lxn-Igran Por Cht Wht-Peach Translu-Op Vit
Shp Fos (Brach) Chalk Sh Red-Gry-Grn Soft-Fissil No Odor No Stn NS

Ls Crm AA Tr Poor OOM Por w/OOL in pl Poor- No Dis Poor Devel Mostly
Fxln Chalk Cht GrySH Gry- Char Soft No Odor Sli Tr Min Flor AA No Stn NS

Ls Wht-Crm-Gry Fxln Tr Poor lxn-Igran Por Dns Micrite Cht Wht-Gry Fos
(w/Spicule Includ) Translu-Op Vit Shp Chalk Sh Red-Gry-Grn Soft-Fissil No
Odor No Stn NS

30" CFS @ 3460' Ls Wht-Crm-Gry Fxln Tr Poor lxn Dns Micrite grad Poor OOM Por (w.Small
OOL in pl) Cht Wht-Peach-Amber Translu-Op Vit Shp Fos (Fuss) Chalk Sh Char-Gry-Grn
Soft-Fissil No Odor ? Min Flor No Stn NS

60" CFS @ 3460' Sh Char-Gry-Grn Soft-Fissil "Ls Wht-Crm-Gry Fxln Tr Poor
lxn Dns Micrite grad Poor OOM Por (w.Small OOL in pl) Cht
Wht-Peach-Amber Translu-Op Vit Shp Fos (Fuss) Chalk No Odor ? Min Flor
No Stn NS

Bloodhound Gas
Detection Unit Not
working Properly. Gas
Data Lost.

Mud Ck @ 3376' @
10:00 AM 1/10/14
Vis = 45 ;
Wt = 8.8#; PV =
14;
YP = 16;
WL = 8.8;
Cake = 1;
Chl = 1800;
Cal = 20;
Sol = 3.5;
LCM = 0#;
DMC = \$ 2,168.20
CMC = \$ 7,557.95

Mud Ck @ 3547' @ 11:00
AM ON 1/10/14;
Vis = 48 ;
Wt = 9.0#; PV =
14;
YP = 12;
WL = 10.0;
Cake = 1;
Chl = 3000;
Cal = 20;
Sol = 4.8;
LCM = 2#;
DMC = \$739.50
CMC = \$ 8,297.45

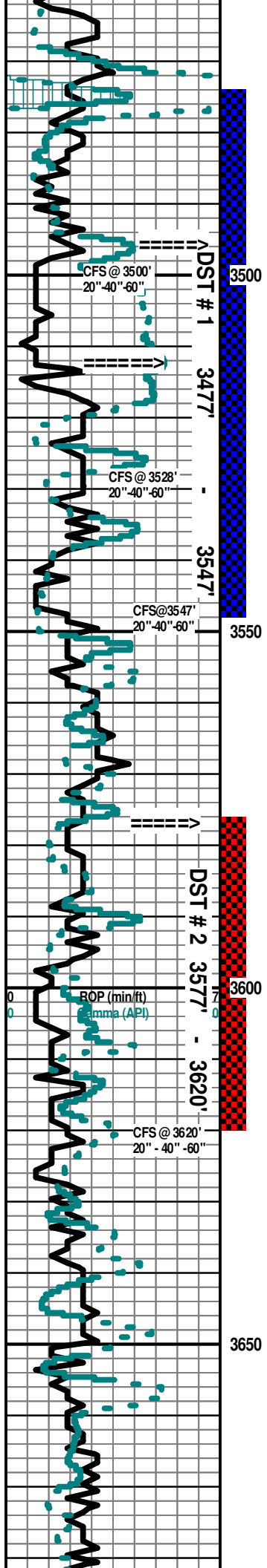
TG, C1-C5 150

GAS KICK - 17 UNITS

GAS KICK - 23 UNITS

GAS KICK - 27 UNITS

@ 3460' SHORT TRIP 27
STANDS



Ls Crm FxIn Poor IxIn Por Micritic Grad Ls FxIn Poor IxIn Por Fos (Fuss, Crin) Chalk ? Min Flor Sh Tr Red (Wash Red)-Char-Gry No Odor No Stn NS

ROOT SHALE 3495' (-665')

Sh Red- Gry-Char Abd Soft AA (Wash Red) Ls Crm AA Tr Poor OOM Por Poor Dis Poor Devel Chalk No Odor Sli Tr Min Flor AA No Stn NS

STOTLER 3515' (-678)

20" CFS @ 3547' Ls Crm FxIn Poor IxIn Por Micritic Ls Crm FxIn Poor IxIn Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No Stn NS

40" CFS @ 3547' Ls Crm FxIn Poor IxIn Por Micritic Grad Ls Gry (w/Small OOL in pl) Poor Dissolu Poor Develop Chalk Good Scat Flor (Lt Grn) Sh Red-Char-Gry No Odor No Stn NS

60" CFS @ 3547' Ls Wht FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Poor-Fair IxIn Por Good Scat Flor (Lt Grn) No Odor No Stn ? SG

Ls Wht-Gry FxIn Poor IxIn Por Micritic Abd Chalk Scat Flor (Lt Grn) No Odor No Stn Sli Flor NS

TARKIO 3576' (-759)

Ls Wht-Gry FxIn Poor IxIn Por Micritic Abd Chalk Scat Flor (Lt Grn) No Odor No Stn Sli Flor NS

20" CFS @ 3620' Ls Wht-Gry FxIn Poor IxIn Por Micritic Grad FxIn-MicroxIn Por (w/Glacu Includ) Fos (Crin) Chalk Cht Wht-Gry Op Shp Vit Scat Flor (Lt Grn) No Odor Sli Flor ? SSG

40" CFS @ 3620' Ls Wht-Gry FxIn Poor IxIn Por Micritic Grad FxIn-MicroxIn Por (w/Glacu Includ) Fos (Crin) Chalk Cht Wht-Gry Op Shp Vit Scat Flor (Lt Grn) No Odor Sli Flor ? SSG

60" CFS @ 3620' Ls Wht-Gry FxIn Poor IxIn Por Micritic Grad FxIn-MicroxIn Por (w/Glacu Includ) Fos (Crin) Chalk Cht Wht-Gry Op Shp Vit Scat Flor (Lt Grn) No Odor Sli Flor ? SSG

START 10' WET & DRY SAMPLE EXAMINATION @ 3620'

Sh Char-Gry Soft Grad Fissil Ls Crm FxIn Dns Micritic V Abd Chalk No Odor No Flor No Stn NS

Ls Crm-Gry FxIn Poor IxIn Por Grad MicroxIn Cht Wht-Drk Gry Op Shp Vit Fos (Bry) Chalk Sh Char-Gry- Maroon Soft-Fissil No Flor No Odor No Flor No Stn NS

Ls Crm-Gry FxIn Poor IxIn Por Grad MicroxIn Chalk Sh Char-Gry- Maroon Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Gry FxIn Poor IxIn Por Grad MicroxIn Chalk Sh Char-Gry- Maroon Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Gry FxIn Poor IxIn Por Grad MicroxIn Chalk Sh Char-Gry- Maroon Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Gry FxIn Poor IxIn Por Grad MicroxIn Chalk Sh Char-Gry- Maroon Soft-Fissil No Odor No Flor No Stn NS

~ DST #1 ~
3477'-3547'

Times:
5'-90"-88"-120"
Blow: IF= Strong
Blow- BOB/3"; FF
BOB/Instant.
Recovery: 95' Mud.

Pressures:
IH = 11573#; FH
= 1571#;
IF = 14-14#;
FF = 18-47#;
ISIP = 847#;
FSIP = 878#;
Temp = 100
degrees F..

PIPE STRAP = <0.40>
SHORT TO BOARD.

? TRIP GAS

Mud Ck @ 3620' @
6:30 AM ON 1/11/14;

Vis = 45;
Wt = 9.0#; PV
= 14;
YP = 14;
WL = 10.8;
Cake = 1;
Chl = 4000;
Cal = 40;
Sol = 6.2;
LCM = 2#;
DMC = \$ 542.60
CMC = \$ 8,840.05

GAS
KICK =
47 UNITS

GAS KICK = 47
UNITS

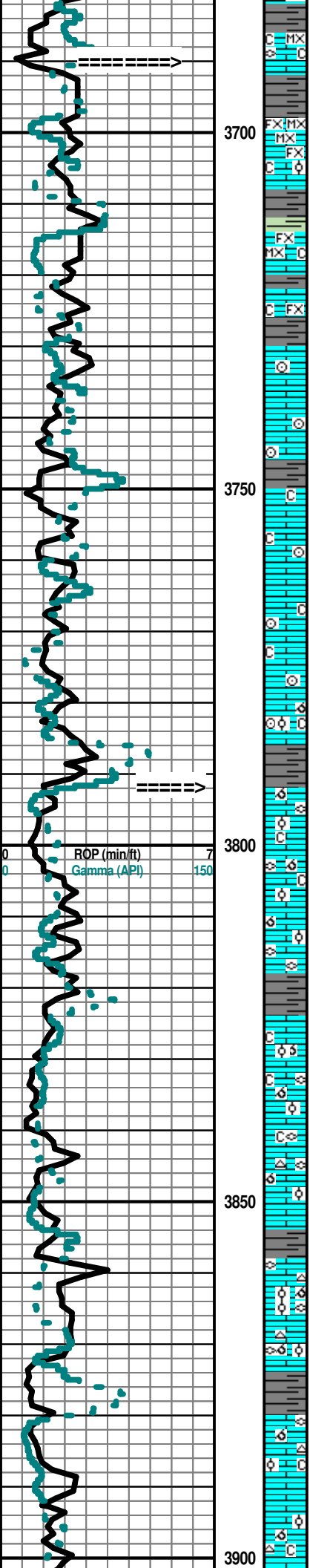
GAS KICK = 43
UNITS

GAS KICK = 43
UNITS

~ DST #2 ~
3577'-3620'

Times:
5'-90"-120"-180"
Blow: IF= Weak
Blow/1.5" Slow
Build; FF= Weak
Inc to BOB/96.5".
Recovery: 135' TF:
10' WCM & 125'
MCW (81% W; 19%
M).

Pressures:
IH = 1643 #;
FH = 1641#;
IF = 6-12#;
FF = 13-81#;
ISIP = 946#;
FSIP = 913#;
Temp = 99 degrees



BERN 3690' (- 873)

Ls Gry FxIn Poor IxIn Por Grad MicroxIn Fos (Fuss) Abd Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Gry-Crm FxIn-MicroxIn Poor IxIn Por Micrite Grad Pin-Pt IxIn Por Barren Grad Poor OOL Por (w/Small OOLs in p) Poor Develop Poor leaching Barren Chalk Sh Char-Gry Soft-Fissil No Flor No Odor No Flor No Stn NS

Ls Wht-Gry FxIn Poor IxIn Por Grad MicroxIn Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Gry FxIn Poor IxIn Por Grad MicroxIn Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Wht FxIn Poor IxIn Por Dns Micritic (w/Fos (Crin) Includ) Sh Char-Gry Tr ? Min Flor (Dull Gm-Wht) No Odor NS

Ls Wht FxIn Poor IxIn Por Dns Micritic (w/Fos (Crin) Includ) Sh Char-Gry Tr ? Min Flor (Dull Gm-Wht) No Odor NS

Ls Wht FxIn Poor IxIn Por Dns Micritic (w/Fos (Crin) Includ) Sh Char-Gry Tr ? Min Flor (Dull Gm-Wht) No Odor NS

Ls Wht FxIn Poor IxIn Por Dns Micritic (w/Fos (Crin) Includ) Sh Char-Gry Tr ? Min Flor (Dull Gm-Wht) No Odor NS

Ls Wht FxIn Poor IxIn Por Dns Micritic (w/Fos (Crin) Includ) Sh Char-Gry Tr ? Min Flor (Dull Gm-Wht) No Odor NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Crin) Includ) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Sh Char-Gry Dec ? Min Flor (Dull Gm-Wht) No Odor No Stn NS

TOPEKA 3792' (- 975)

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Cht Gry Op Shp Vit Chalk Dec Sh Char-Gry No Flor No Odor No Stn NS

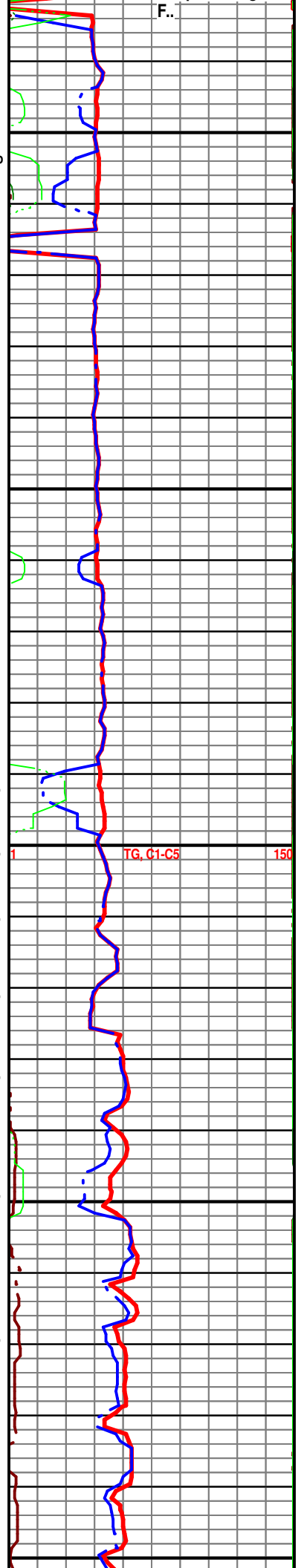
Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS

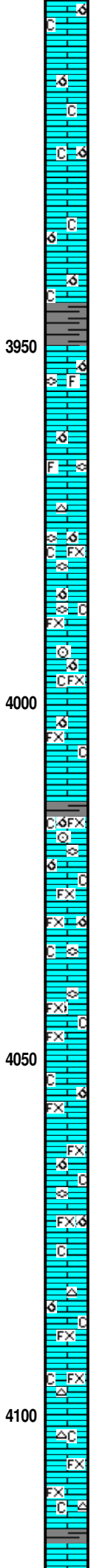
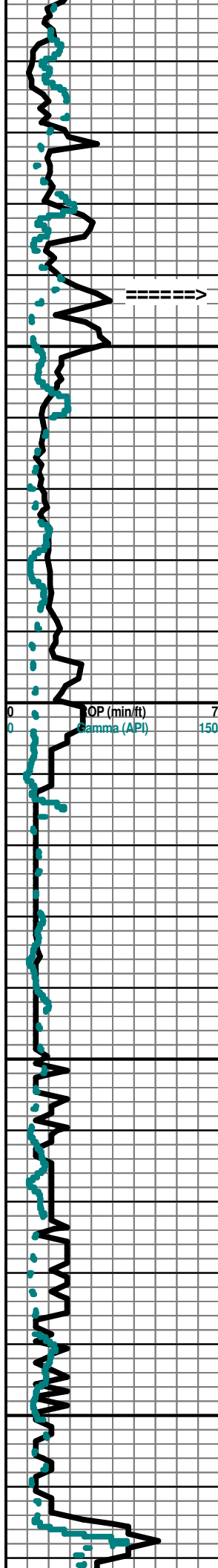
Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic (w/Fos (Fuss) Grad Fair OOM Por (w/Small OOL in p) Poor Dissolu Poor Develop Cht Gry Op Shp Vit Chalk V Abd Sh Char-Gry No Flor No Odor No Stn NS





Ls Wht FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dis Poor Devel) Chalk Sh Red-Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dis Poor Devel) Chalk Sh Red-Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dis Poor Devel) Chalk Sh Red-Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dis Poor Devel) Chalk Sh Red-Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

LECOMPTON 3942 (- 1125)

Ls Wht FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dis Poor Devel) Chalk Sh Red-Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Fos (Fuss, Spicule) Chalk Sh Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Fos (Fuss, Spicule) Chalk Sh Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Cht Wht Op Shp Vit (w/ Fos (Fuss) Includ) Sh Char-Gry Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Fos (Fuss) Chalk Sh Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Fos (Crin) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Fos (Crin) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Fos (Crin) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu & Poor Develop) Fos (Fuss) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu Poor Develop) Fos (Fuss) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu Poor Develop) Fos (Fuss) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu Poor Develop) Fos (Fuss) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

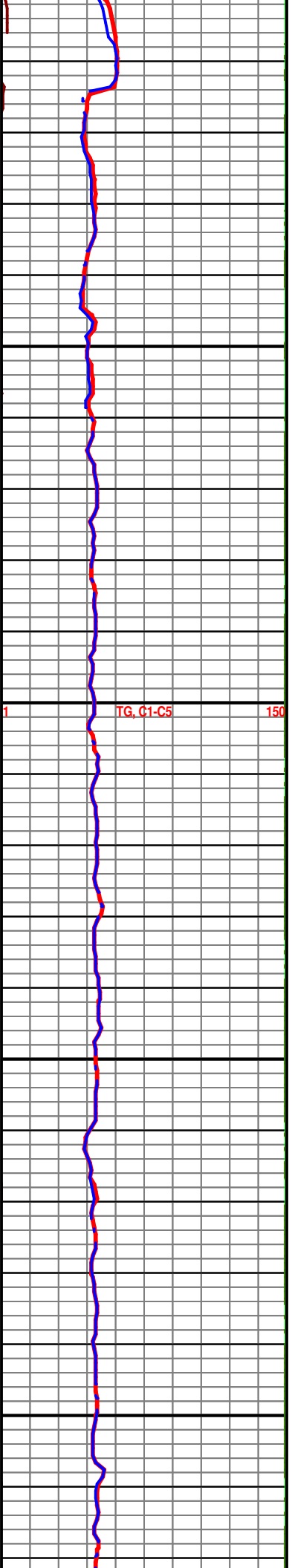
Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu Poor Develop) Fos (Fuss) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

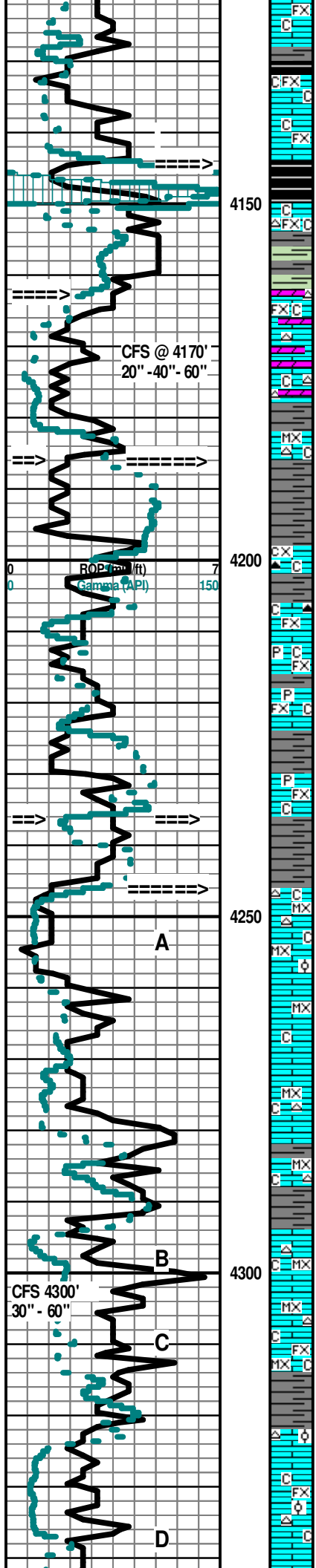
Ls Wht-Gry FxIn Fair-Med IxIn Gran Por Grad Fair-Med OOM Por (w/Poor-Fair Dissolu Poor Develop) Fos (Fuss) Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Crm-Gry FxIn Poor Gran IxIn Por Cht Wht-Gry Op Shp Vit Chalk Sh Char-Gry Soft Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Poor Gran IxIn Por Cht Wht-Gry Op Shp Vit Chalk Sh Char-Gry Soft Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Poor Gran IxIn Por Cht Wht-Gry Op Shp Vit Chalk Sh Char-Gry Soft Fissil No Odor No Stn No Flor NS





Ls Wht-Crm-Gry FxIn Poor Gran IxIn Por Chalk Sh Blk Carb (1r Only)
 Char-Gry-Aqua Soft Fissil No Odor No Stn No Flor NS

20" CFS @ 4170' Ls Wht-Crm-Gry FxIn Poor Gran IxIn Por Chalk Sh Blk
 Carb-Char-Gry-Aqua Soft Fissil No Odor No Stn No Flor NS

HEEBNER 4144' (-1327)

40" CFS @ 4170' Sh Blk Carb Fissil Abd Ls Wht-Lt Gry FxIn Poor IxIn Por
 Grad Micrite Barreen Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

TORONTO 4162' (-1345')

60" CFS @ 4170' Ls Wht/Dolo Lt Gry FxIn-MicroIxIn Poor IxIn Por Grad
 Micrite Barren Cht Wht-Gry Op Shp Vit Chalk Sh Char Fissil Abd No Odor
 No Stn No Flor NS

30" CFS @ 4195' Ls Wht/Dolo Lt Gry FxIn-MicroIxIn Poor IxIn Por Grad
 Micrite Barren Cht Wht-Gry Op Shp Vit Chalk Sh Char Fissil Abd No Odor
 No Stn No Flor NS

DOUGLAS 4184' (-1367)

60" CFS @ 4195' Ls Tan/Dolo Lt Gry FxIn-MicroIxIn Poor IxIn Por Grad
 Micrite Barren Cht Gry Op Shp Vit Chalk Sh Char (wPyr Includ) Fissil Abd
 No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb Fissil Ls Tan-Lt Gry MicroIxIn Poor IxIn Por Grad
 Micrite Barren Cht Drk-Gry Op Shp Vit Chalk Fissil Abd No Odor No Stn No
 Flor NS

Ls Wht-Crm-Lt Gry FxIn Poor IxIn Granu Por Grad Micrite Barren Cht Gry Op
 Shp Vit Chalk Sh Char Fissil (Tr Only) No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry FxIn Poor IxIn Granu Por Grad Micrite Barren Cht Gry Op
 Shp Vit Chalk Sh Char (w/Pyr Includ) Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry FxIn Poor IxIn Granu Por Grad Micrite Barren Chalk Sh
 Char (w/Pyr Includ) Fissil No Odor No Stn No Flor NS

IATAN 4280' (-1413)

Ls Wht-Crm-Lt Gry FxIn Poor IxIn Granu Por Grad Micrite Barren Chalk Abd Sh Char (w/Pyr
 Includ)-Gry-Aqua Fissil No Odor No Stn No Flor NS

LANSING 4246' (-1429)

Ls Wht-Crm MicroIxIn-FxIn Poor IxIn Por Grad Micrite Barren Cht
 Wht-Crm-Tan-Gry (Banded) Op Shp Vit Chalk Sh Char-Gry Fissil No Odor
 No Stn No Flor NS

Ls Wht-Crm MicroIxIn-FxIn Poor IxIn Por Micritic Grad Poor OOL Por
 (w/Small OOL in pl) Poor Dissolu Poor Develop Poor Leaching Barren Cht
 Wht-Crm-Tan-Gry (Banded) Op Shp Vit Chalk Sh Char-Gry-Aqua Fissil No
 Odor No Stn No Flor NS

Sh Char-Gry-Aqua Fissil Ls Wht-Crm MicroIxIn-FxIn Poor IxIn Por Micritic
 Barren Cht Wht-Crm-Tan-Gry (Banded) Op Shp Vit Chalk No Odor No Stn
 No Flor NS

30" CFS @ 4300' Ls Csm-Lt Gry MicroIxIn Dns Micrite Grad Poor IxIn OOM
 Por (w/ Tr (2 Pcs) Scatt Lt Bm Stn in Frac Por) No-Poor Vis Por Cht Wht Op
 Shp Vit Sh Char-Gry Fissil Chalk No Odor No Flor ? Min Flor (6 Pcs in Tray)
 NS

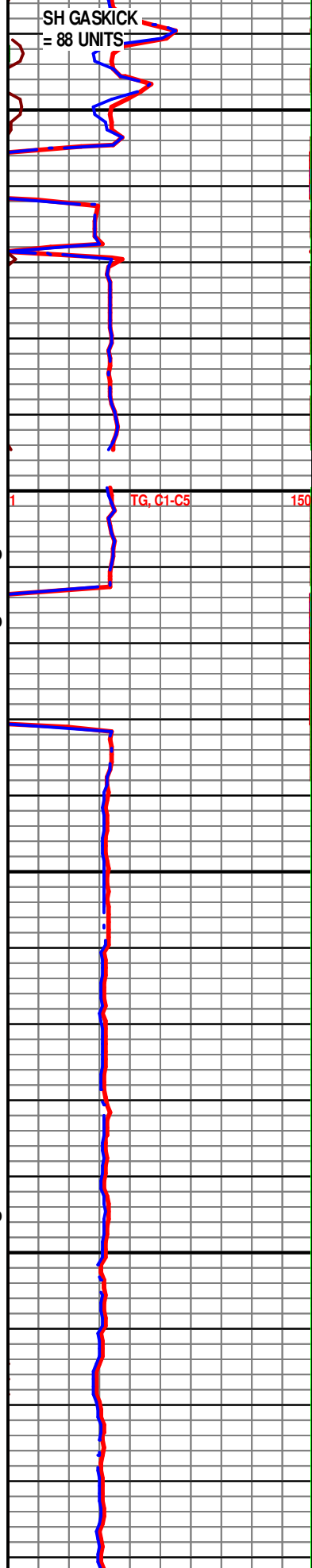
60" CFS @ 4300' Ls Csm-Lt Gry MicroIxIn Dns Micrite Grad Poor IxIn Gran
 Pin-Pt Por Barren Cht Wht Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No
 Flor ? Min Flor NS

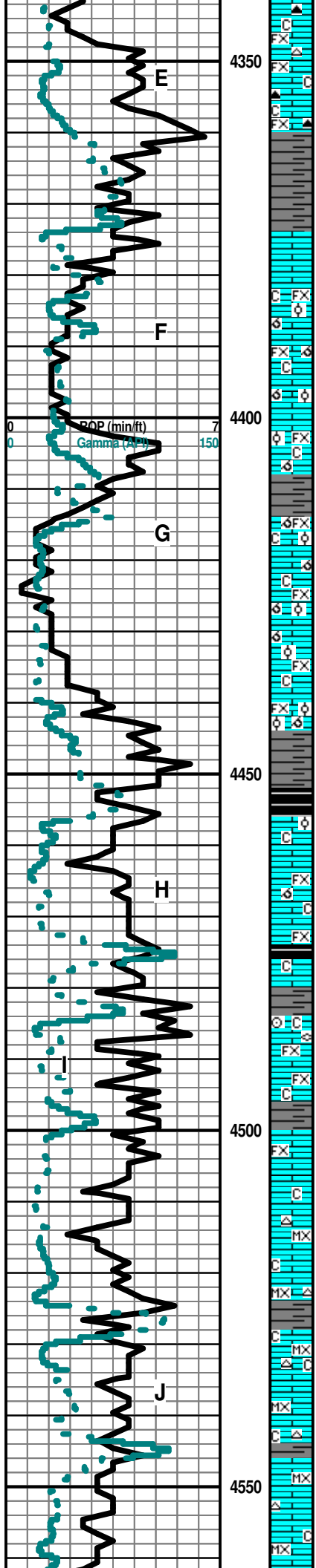
Ls Csm-Lt Gry MicroIxIn Dns Micrite Grad Poor IxIn Gran Pin-Pt Por Barren
 Cht Wht Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Flor ? Min Flor NS

Ls Csm-Lt Gry MicroIxIn Dns Micrite Grad Poor IxIn Gran Pin-Pt Por Barren
 Cht Wht Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Flor ? Min Flor NS

Ls Csm-Gry FxIn Poor IxIn Por Micritic (w/Tr Pyr Includ) Chalk Cht Wht (w/
 OOL Includ) Op Shp Op Vit Sh Char No Odor No Flor NoStn NS

Ls Csm-Gry FxIn Poor IxIn Por Micritic (w/Tr Pyr Includ) Chalk Cht Wht (w/
 OOL Includ) Op Shp Op Vit Sh Char No Odor No Flor NoStn NS





Ls Crm-Gry FxIn Poor IxIn Por Micritic Chalk Cht Wht- Blk-Gry (w/ OOL Includ) Op Shp Op Vit Sh Char No Odor No Flor NoStn NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Chalk Cht Blk-Gry Wht (w/ OOL Includ) Op Shp Op Vit Sh Char No Odor No Flor NoStn NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Chalk Cht Blk-Gry Wht (w/ OOL Includ) Op Shp Op Vit Sh Char No Odor No Flor NoStn NS

Sh Char-Blk Carb Fissil Ls Wht FxIn Poor-Fair IxIn Gran Por (w/Poor OOM Por w/Poor Dissolu Poor Devellop) Chalk Poor ? Min Flor (Dull Wht-Grn) No Odor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Gran Por (w/Tr Poor OOM Por w/Poor Dissolu Poor Devellop) Chalk ABD Sh Char-Blk Carb Fissil No Flor No Odor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Gran Por Grad Poor-Fair OOM Por (w/Small OOids in pl & Poor Dissolu Poor Devellop) Chalk Sh Char-Gry Fissil No Flor No Odor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Gran Por Grad Poor-Fair OOM Por (w/Small OOids in pl & Poor Dissolu Poor Devellop) Chalk Sh Char-Gry Fissil No Flor No Odor No Stn NS

Ls Crm-Brn Abd FxIn Med-Good OOM Por (w/ Med OOL in pl) Med-Good Dissolu Med-Good Develop Good Vug Leaching Por Barren Chalk Dec Sh Char No Flor No Odor No Stn NS

Ls Crm-Brn Abd FxIn Med-Good OOM Por (w/ Med OOL in pl) Med-Good Dissolu Med-Good Develop Good Vug Leaching Por Barren Chalk Dec Sh Char No Flor No Odor No Stn NS

Ls Crm-Brn Abd FxIn Med-Good OOM Por (w/ Med OOL in pl) Med-Good Dissolu Med-Good Develop Good Vug Leaching Por Barren Chalk Dec Sh Char No Flor No Odor No Stn NS

Ls Wht V FxIn w/Poor IxIn Por Micritic Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Crm -Gry FxIn (w/ Med-Good OOM Por w/ OOL in pl) Med-Good Dissolu Med-Good Develop Good Vug Leaching Por Grad Mostly FxIn Por (w/Poor IxIn Por) Barren Chalk Abd Sh Char-Grn-Gry Fissil No Flor No Odor No Stn NS

Ls Wht FxIn w/Poor IxIn Por Micritic Grad Ls Gry w/Poor OOM Por Poor-No Dissolu Poor Develop Cht Char-Gry-Blk Op Shp Vit Chalk Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Wht V FxIn w/Poor IxIn Por Micritic Grad Ls Gry Poor OOM Por Poor-No Dissolu Poor Develop Cht Char-Gry-Blk Op Shp Vit Chalk Sh Char -Grn-Gry No Odor No Flor NoStn NS

Ls Wht V FxIn Poor IxIn Por Micritic Grad Ls Gry w/ (Few Pcs) OOL Fair Por (w/ Abd OOL in pl) Poor Dissolu Poor-Fair InterOOL Por (w/ Poor-Fair Leaching Por Fair-Good Develop) Cht Gry-Smokey-Gry Op Vit Shp Fos (Crin, Fuss) Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Wht V FxIn w/Poor IxIn Por Micritic Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Wht V FxIn w/Poor IxIn Por Micritic Sh Char-Grn-Gry No Odor No Flor NoStn NS

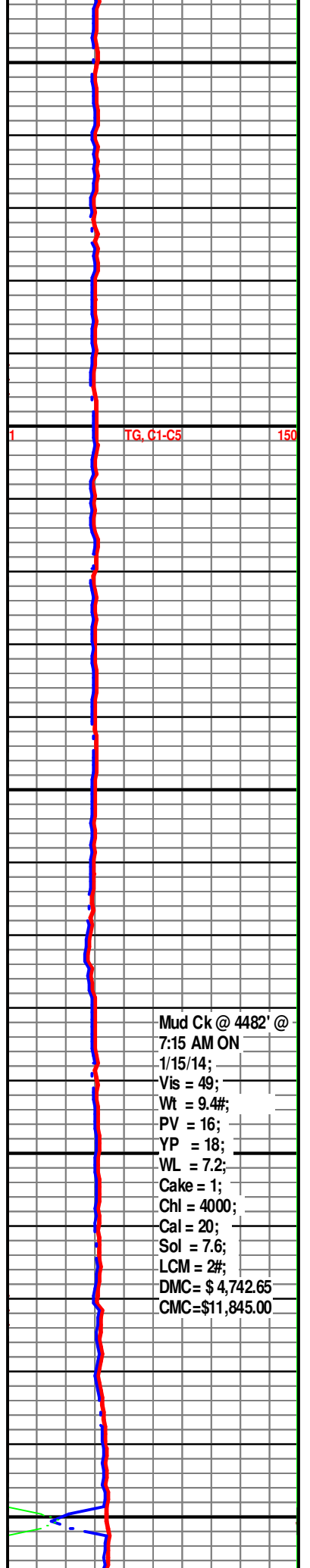
Ls Crm-Tan MicroxIn Poor IxIn Por Micritic Cht Gry Op Shp Vit Chalk Abd Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Crm-Tan MicroxIn Poor IxIn Por Micritic Cht Gry Op Shp Vit Chalk Abd Sh Char-Grn-Gry No Odor No Flor NoStn NS

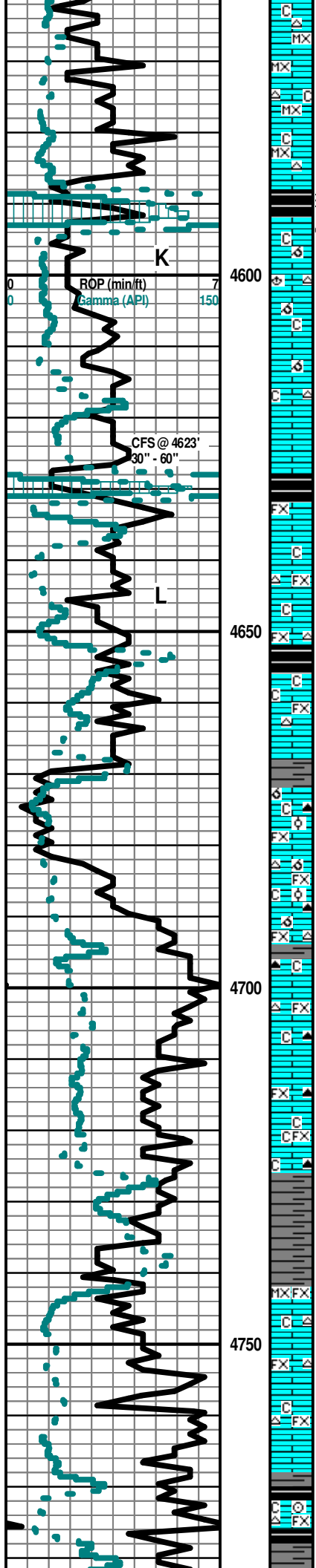
Ls Crm-Tan MicroxIn Poor IxIn Por Micritic Cht Gry Translu-Op Shp Vit Chalk Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Crm-Tan MicroxIn Poor IxIn Por Micritic Cht Gry Op Shp Vit Chalk Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Crm-Tan MicroxIn Poor IxIn Por Micritic Cht Gry Op Shp Vit Chalk Sh Char-Grn-Gry No Odor ? Sli Faint Flor (1 Pc w/ Sli ? Min Flor) NoStn NS



Mud Ck @ 4482' @
 7:15 AM ON
 1/15/14;
 Vis = 49;
 Wt = 9.4#;
 PV = 16;
 YP = 18;
 WL = 7.2;
 Cake = 1;
 Chl = 4000;
 Cal = 20;
 Sol = 7.6;
 LCM = 2#;
 DMC = \$ 4,742.65
 CMC = \$11,845.00



Ls Crm-Tan MicroxIn Poor IxIn Por Micritic Cht Gry Op Shp Vit Chalk Abd Sh Char-Grn-Gry No Odor No Flor NoStn NS

Ls Crm-Tan MicroxIn Poor IxIn Por Micritic Cht Gry Op Shp Vit Chalk Abd Sh Char-Grn-Gry No Odor No Flor NoStn NS

STARK SHALE 4588' (- 1771)

KANSAS CITY "SWOPE (K)" 4592' (-1775)

Sh Blk Carb Fissil Ls Crm-Brn FxIn (w/Poor OOM Por & Poor-Fair InterOOM Por) Poor Leaching Por Chalky No Flor Faint Odor ? Sli SG

30" CFS @ 4623' Ls Crm-Brn FxIn (w Poor OOM Por Poor-Fair Inter OOM Por) Poor Leaching Poor Develop Grad Micritic Cht Lt Gry Op Shp Vit Fos (Brach) Chalky Sh Blk Carb Fissil (w/GSG) ? Faint Odor No Flor No Stn Sli SG in Blk Sh

60" CFS @ 4623' Ls Crm-Brn FxIn (w Poor OOM Por Poor-Fair Inter OOM Por) Poor Leaching Poor Develop Grad Micritic Cht Wht-Lt Gry Op Shp Vit Chalky Sh Blk Carb Fissil ? Faint Odor No Flor No Stn NS

HUSHPUCKNEY SHALE 4628 (-1811)

KANSAS CITY "HERTHA (L)" 4631' (- 1814)

Sh Blk Carb Fissil Ls Crm-Gry FxIn Grad Micritic Chalky V Abd No Odor No Flor No Stn NS

Ls Wht FxIn Poor IxIn Por Micritic Gran Por Poor Igran Por Dns Micrite Barren Chalk Cht Smoky Gry Op Vit Shp Sh Char Fissil No Stn No Flor No Odor NS

Ls Wht FxIn Poor IxIn Por Micritic Gran Por Poor Igran Por Dns Micrite Barren Chalk Cht Smoky Gry Op Vit Shp Sh Char Fissil No Stn No Flor No Odor NS

Ls Wht FxIn Poor IxIn Por Micritic Gran Por Poor Igran Por Dns Micrite Barren Chalk Cht Smoky Gry Op Vit Shp Sh Char Fissil No Stn No Flor No Odor NS

Ls Wht-Gry FxIn Poor IxIn Por Micritic Grad Med-Good OOM Por (w/ Fair-Med InterOOM Por (w/Small-Med OOids in pl) Chalk Cht Char-Drk Gry Op Vit Shp No Stn No Flor No Odor NS

Ls Wht-Gry FxIn Poor IxIn Por Micritic Grad Good OOM Por (w/ Good InterOOM Por (w/Large OOids in pl) Chalk Cht Drk-Gry Op Vit Shp No Stn No Flor No Odor NS

Ls Wht-Gry FxIn Poor IxIn Por Micritic G) Chalk Cht Drk-Gry (w/OOL Includ) Op Vit Shp No Stn No Flor No Odor NS

Sh Char-Gry-Blk Carb Abd Fissil Ls Wht-Gry FxIn Poor IxIn Por Micritic Cht Char Op Vit Shp No Stn No Flor No Odor NS

Sh Char-Gry Abd Fissil Ls Wht-Gry FxIn Poor IxIn Por Micritic Cht Char Op Vit Shp No Stn No Flor No Odor NS

BASE KANSAS CITY 4726' (- 1909)

Sh Char-Gry-Aqua Fissil V Abd Fissil Ls Wht-Gry MicroxIn Poor IxIn Por Dns Micritic Cht Char Op Vit Shp No Stn No Flor No Odor NS

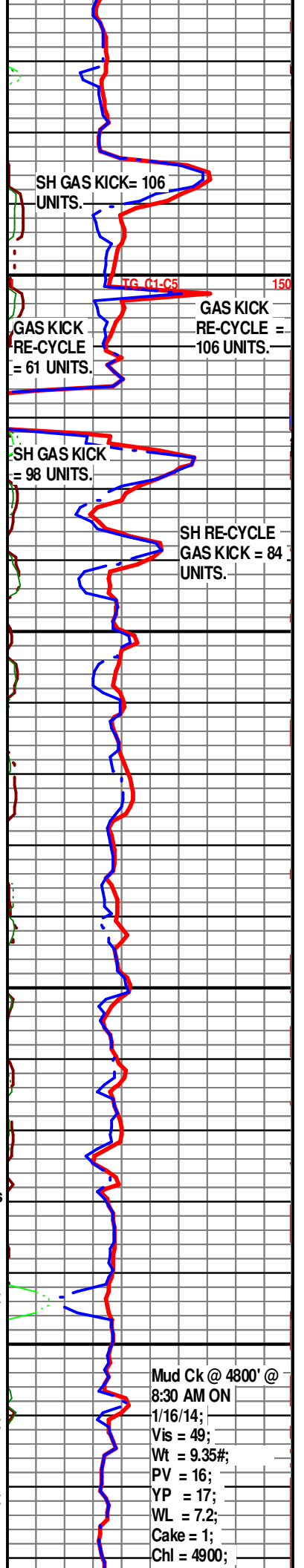
MARMATON 4742' (- 1925)

Ls Wht-Crm FxIn Poor IxIn Por Dns Micritic Chalk Cht Wht-Tan Transl-Op Vit Shp Sh Char-Gry-Aqua Fissil No Flor No Stn No Odor NS

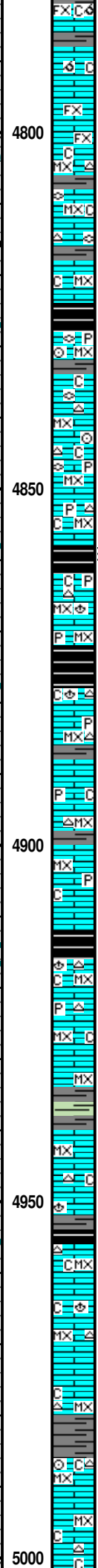
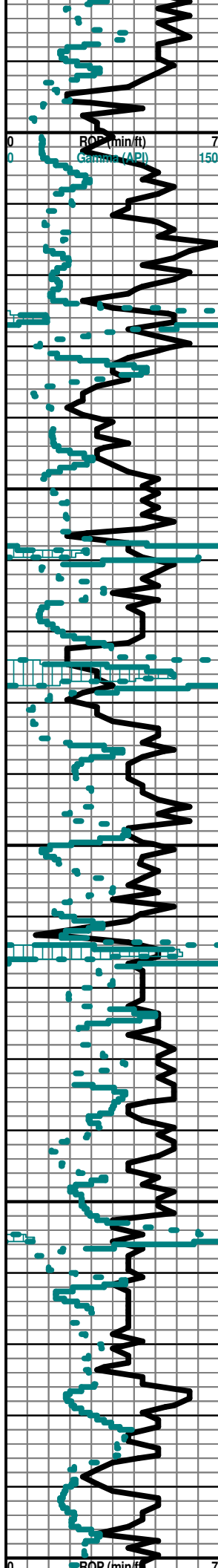
LLs Wht-Crm FxIn Poor IxIn Por Dns Micritic Chalk Cht Wht-Tan Transl-Op Vit Shp Sh Char-Gry-Aqua Fissil No Flor No Stn No Odor NS

Ls Wht-Crm FxIn Poor IxIn Por Dns Micritic Chalk Cht Wht-Tan Transl-Op Vit Shp Sh Blk Carb Char-Gry-Aqua Fissil No Flor No Stn No Odor NS

Ls Wht-Crm FxIn Poor IxIn Por Dns Micritic Chalk Cht Wht-Tan Transl-Op Vit Shp Fos (Crin Abd) Sh Char-Gry-Aqua Fissil No Flor No Stn No Odor NS



Mud Ck @ 4800' @
8:30 AM ON
1/16/14;
Vis = 49;
Wt = 9.35#;
PV = 16;
YP = 17;
WL = 7.2;
Cake = 1;
Chl = 4900;



Ls Wht-Crm Fxln Poor Ixln Por Micritic Grad OOM Por Poor InterOOM Por (w/Smal OOL in pl & Poor Dissolu Poor Develop No Leaching) Chalk Abd Sh Char-Gry-Aqua Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Tan Fxln-Microxln Dns Barren Micrite Cht-Lt Gry Op Shp Vit Fos (Fuss) Chalky Sh Blk Carb-Char Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Dns Barren Micrite (w/Pyr Includ) Grad Fxln Poor-Fair Pin-Pt Inter Gran Por Cht-Lt Gry Op Shp Vit Fos (Fuss) Chalky Sh Blk Carb-Char Soft-Fissil No Odor No Stn Fair ? Min Flor NS

Ls Wht-Crm-Tan-Lt Gry Microxln Dns Barren Micrite Cht-Lt Gry Op Shp Vit Fos (Fuss) Chalky Sh Blk Carb-Char Soft-Fissil No Odor No Stn ? Min Flor Dec NS

PAWNEE 4825' (- 2008)

Ls Wht-Crm-Tan-Lt Gry Microxln Dns Barren Micrite Cht Wht-Lt Gry Op Shp Vit Fos (Crin, Fuss) Chalky Sh Blk Carb-Char-Grn (w/Pyr Includ) Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Lt Gry Microxln Dns Barren Micrite Cht Wht-Lt Gry Op Shp Vit Fos (Crin, Fuss) Chalky Sh Blk Carb-Char-Grn (w/Pyr Includ) Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Lt Gry Microxln Dns Barren Micrite Cht Wht-Gry (w/Wht Includ) Op Shp Vit Fos (Brach) Chalky Sh Blk Carb-Char-Grn (w/Pyr Includ) Soft-Fissil No Odor No Stn No Flor NS

FORT SCOTT 4859' (- 2042)

Sh Blk Carb-Char-Aqua/Grn (w/Pyr Includ) Ls Wht-Crm-Gry Microxln Dns Micrite Cht Wht-Lt Gry-Tan (w/Wht OOid Includ) Fos (Brach) Chalk No Odor No Stn No Flor NS

CHEROKEE SHALE 4872' (- 2055)

Sh Blk Carb-Char-Aqua/Grn (w/Pyr Includ) Ls Wht-Crm-Gry Microxln Dns Micrite Cht Wht-Lt Gry-Tan (w/Wht OOid Includ) Fos (Brach) Chalk No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxln Dns Micrite Cht Wht-Lt Gry-Tan (w/Wht OOid Includ) Chalk Sh Blk Carb-Char-Aqua/Grn (w/Pyr Includ) No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxln Dns Micrite Cht Wht-Lt Gry-Tan (w/Wht OOid Includ) Chalk Sh Blk Carb-Char-Aqua/Grn (w/Pyr Includ) No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxln Dns Micrite Cht Wht-Lt Gry-Tan (w/Wht OOid Includ) Chalk Sh Blk Carb-Char-Aqua/Grn (w/Pyr Includ) No Odor No Stn No Flor NS

Second Cherokee Shale 4913 (- 2096)

Sh Blk Carb-Char-Aqua/Grn Ls Crm-Tan Microxln Dns Micrite Cht Wht Op Shp Vit Fos (Brach) Chalk Sh Blk Carb-Char-Aqua/Grn (w/Pyr Includ) No Odor No Stn No Flor NS

Ls Crm-Tan Microxln Dns Micrite (w/Pyr Includ) No Vis Por Cht Wht Op Shp Vit Chalk Sh Blk Carb-Char-Aqua/Grn (w/Pyr Includ) No Odor No Stn No Flor NS

Ls Crm-Tan Microxln Dns Micrite No Vis Por Chalk Sh Blk Carb-Char-Aqua No Odor No Stn No Flor NS

Ls Crm-Tan Microxln Dns Micrite No Vis Por Grad Fxln Poor Igran Por Cht Amber-Wht-Tan Translu-Op Shp Vit Chalk Sh Blk Carb - Char- Aqua No Odor No Stn No Flor NS

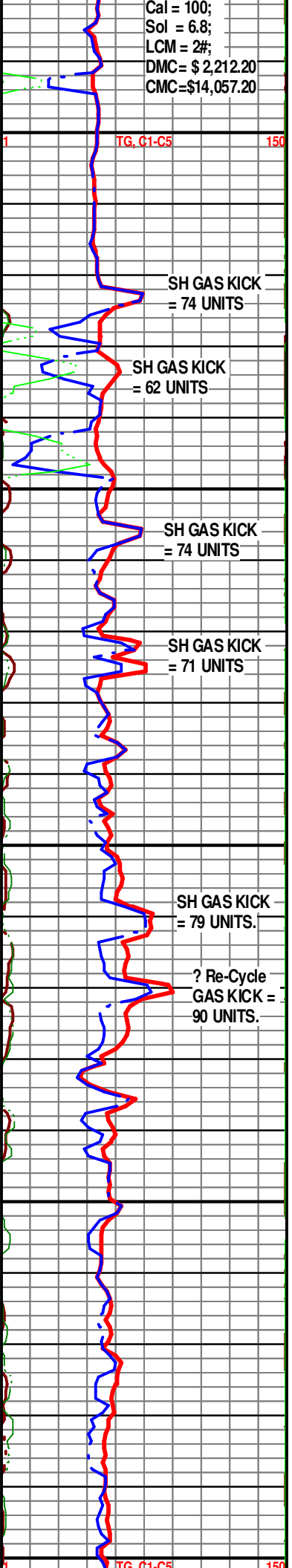
Ls Crm-Tan Microxln Dns Micrite No Vis Por Cht Amber-Wht-Tan Translu-Op Shp Vit Fos (Brach) Chalk Sh Char (Tr Only) No Odor No Stn No Flor NS

Ls Crm-Tan Microxln Dns Micrite No Vis Por Fos (Brach) Chalk Sh Blk Carb (Tr Only) No Odor No Stn No Flor NS

Ls Tan-Crm Microxln Dns Micrite No Vis Por Cht Tan-Amber Translu-Op Shp Vit Chalk Sh Char (Tr Only) No Odor No Stn No Flor NS

Ls Tan-Crm Microxln Dns Micrite No Vis Por Cht Tan-Amber Translu-Op Shp Vit Fos (Crin) Chalk Sh Blk Carb-Char (Tr Only) No Odor No Stn No Flor NS

Ls Tan-Crm Microxln Dns Micrite No Vis Por Cht Tan-Amber Translu-Op Shp Vit Chalk Sh Blk Carb-Char (Tr Only) No Odor No Stn No Flor NS



Cal = 100;
Sol = 6.8;
LCM = 2#;
DMC = \$ 2,212.20
CMC = \$14,057.20

TG, C1-C5 150

SH GAS KICK = 74 UNITS

SH GAS KICK = 62 UNITS

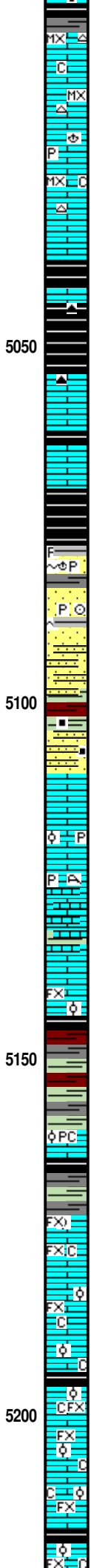
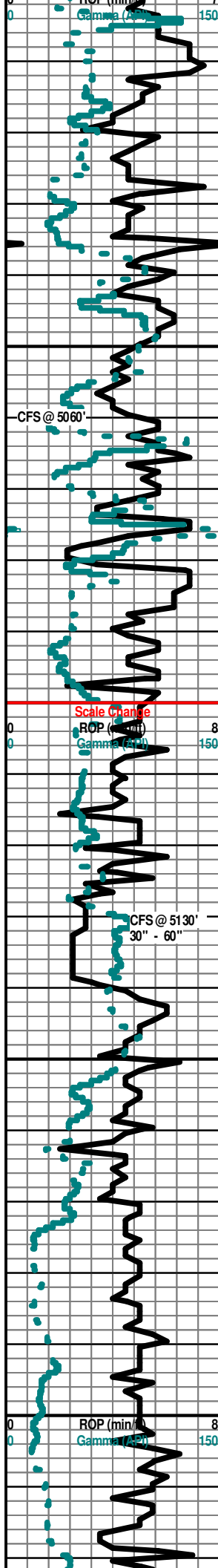
SH GAS KICK = 74 UNITS

SH GAS KICK = 71 UNITS

SH GAS KICK = 79 UNITS.

? Re-Cycle GAS KICK = 90 UNITS.

TG, C1-C5 150



Ls Tan-Crm Microxn Dns Micrite No Vis Por Cht Tan-Amber Translu-Op Shp Vit Chalk Sh Blk Carb-Char (Tr Only) No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry-Aqua (All w/Pyr Includ) Soft-Fissil Ls Tan-Crm Microxn Dns Micrite Cht Amber-Wht (Banded) Drk-Gry Fos (Brach) Chalk Pyr Mass No Odor No Stn No Flor NS

Ls Tan-Crm Microxn Dns Micrite No Vis Por Cht Tan-Amber Translu-Op Shp Vit Chalk Sh Blk Carb-Char (Tr Only) No Odor No Stn No Flor NS

ATOKA SHALE 5028' (-2211)

Sh Blk Carb-Char-Drab Grn/Gry-Aqua Soft-Fissil Ls Tan-Crm Microxn Dns Micrite Cht Amber-Wht (Banded) Drk-Gry) Chalk No Odor No Stn No Flor NS

30" CFS @ 5060' Sh Blk Carb-Char-Gry Soft-Fissil V Abd Ls Crm- Gry Microxn Dns Micrite Cht Drk-Gry Op Shp Vit No odor No Stn No Flor NS

60" CFS @ 5060' Sh Blk Carb-Char-Gry Soft-Fissil V Abd Ls Crm- Gry Microxn Dns Micrite Inc Cht Drk-Gry Op Shp Vit No Odor No Stn No Flor NS

MORROW SHALE 5070' (-2253)

Sh Blk Carb-Char-Gry-Drab Grn Soft-Fissil V Abd Ls Crm- Gry Microxn Dns Micrite Inc Cht Drk-Gry Op Shp Vit No Odor No Stn No Flor NS

MORROW SAND 5076' (- 2259)

Qtz Ss Stringers Wht-Brn-Gry VFGm Ang-Sub Ang Poor-Fair Igran Clusters Clear-Sli Frosted Grns (w/ Gillsonitic & Pyr Includ) Friable Well Sorted Hvy CaCO3 Matrix (w/SSG & SSO Under Heat in Wtr) Fos (Brach, Crin) Cht Amber Translu Shp Vit Sh Blk Carb -Char- Gry- Drab Grn- Aqua Abd Soft-Fissil No Flor No Odor Sli Lt Brn Stn Sli SG/SO

Ls Wht-Crm FxIn Dns Micrite Sh Varicolord Char- Drab Grn- Gry- Aqua - Olive Fissil Fos (Brach, Crin) Cht Gry Op Shp Vit Qts Ss Gry-Lt Brn (w/ Glacu Includ) Friable AA Pyr Mass No Odor No Flor No Stn NS

Sh Char-Gry (w/ Carb Includ) Drab Grn-Aqua-Olive Fissil V Abd Ls Crm-Wht Microxn Dns Micrite Pyr Mass No Odor No Stn No Flor NS

30" CFS @ 5130' Ls Wht FxIn Poor Igran OOL (w/Small OOL in pl) Por "Sandy Gran Por" Soft Grad Granular FxIn Poor-Fair Igran Por Sh Char-Red-Aqua Soft-Fissil Pry Mass (Sh Wash Red) No Odor No Flor No Stn NS

60" CFS @ 5130' Ls Wht FxIn Dns Micrite Grad Poor Igran OOL (w/Small OOL in pl) Por AA Pyr Mass Fos (Coral) (? Conglomerati Debris ?) Sh AA No Odor No Flor No Stn NS

Sh Char-Gry-Drab Grn-Red-Aqua Soft-Fissil V Abd Ls Crm-Gry Microxn Dns Micrite No Odor No Stn No Flor NS

MISSISSIPPIAN STE. GEN 5140' (-2323')

Ls Wht FxIn Poor Igran (w/V Small OOL in pl) Por "Sandy Gran Por" Poor IntOOL Por Soft Chalk Sh Char-Gry-Maroon-Aqua Abd Soft-Fissil No Odor No Flor No Stn NS

Ls Wht FxIn Poor Igran (w/V Small OOL in pl) Por "Sandy Gran Por" Poor IntOOL Por Soft Chalk Sh Char-Gry-Maroon-Aqua Abd Soft-Fissil No Odor No Flor No Stn NS

Ls Wht FxIn Poor Igran (w/V Small OOL & Pyr Includ in pl) Por "Sandy Gran Por" Poor IntOOL Por (w/Tr Lt Brn "Salt & Pepper" Poor Igran Por Tr/VSSO w/Broken) Mostly Barren Soft Chalk Pyr Mass Red Sil stone Sh Char -Gry -Maroon -Aqua -Olive Soft-Fissil No Odor No Flor ? Sli Lt Brn Stn VSSG & VSSO

Ls Wht-Lt Gry FxIn Poor Igran (w/V Small OOL & Pyr Includ in pl) Por "Sandy Gran Por" Poor IntOOL Por (w/Tr Only Lt Brn "Salt & Pepper" Poor Igran Por Tr/VSSO w/Broken) Barren Soft Chalk Sh Aqua-Char-Maroon Dec Soft-Fissil No Odor No Flor ? Sli Lt Brn Stn Dec VSSG & VSSO

Ls Wht-Lt Gry FxIn Poor Igran (w/V Small OOL in pl) Por "Sandy Gran Por" Poor IntOOL Por Barren Soft Chalk Sh Aqua-Char-Maroon Dec Soft-Fissil No Odor No Flor No Stn NS

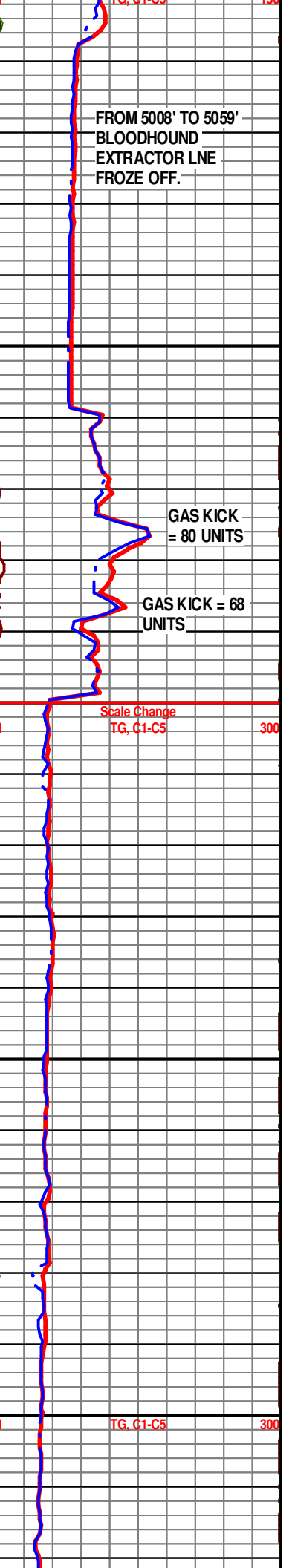
MISSISSIPPIAN ST. LOUIS 5195' (- 2378)

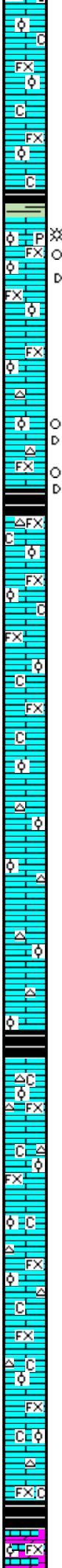
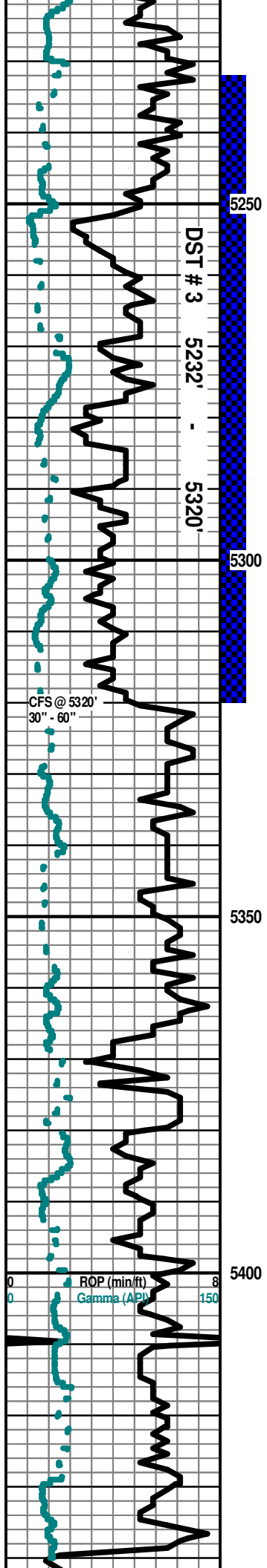
Ls Wht FxIn Poor-Fair Igran (w/Small-Med OOL in pl) Por "Sandy Gran Por" Poor-Fair IntOOL Por Barren Soft Chalk Sh Aqua-Char-Maroon Soft-Fissil No Odor No Flor No Stn NS

Ls Wht FxIn Poor-Fair Igran (w/Small-Med OOL in pl) Por "Sandy Gran Por" Poor-Fair IntOOL Por Barren Soft Chalk Sh Aqua- Char- Maroon Soft-Fissil No Odor No Flor No Stn NS

MISS. ST. LOUIS UPPER B 5218' (-2401)

Ls Wht FxIn Poor-Fair Igran (w/Small-Med OOL in pl) Por Poor InterOOL Por





Por Fair-Med InterOOL Por Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor No Stn NS

Ls Wht FxIn Poor-Fair Igran (w/Small-Med OOL in pl) Por Poor InterOOL Por Poor Fair-Med Develop Poor Leaching Baren Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor No Stn NS

Ls Wht FxIn Poor-Fair Igran (w/Small-Med OOL in pl) Por Fair InterOOL Por Baren Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor No Stn NS

St. Louis Lwr B Dense Cor. Marker 5252' (-2435)

Ls Wht FxIn Poor-Fair Igran (w/Med OOL in pl) Por Fair-Med InterOOL Por (w/Pyr inclus) Good Develop Poor Leaching Por (w/SSG When Broken & Lt Stn (Lt Brn)) Soft Chalk Sh Aqua-Char-Maroon Soft-Fissil Faint Odor Sli ? Min Flor (5% of Tray) VSSG & Lt Brn Stn

Ls Wht FxIn Poor-Fair Igran (w/Med OOL in pl) Por Fair-Med InterOOL Por (w/Pyr inclus) Good Develop Poor Leaching Por (w/Tr "Dead Oil Stn) Soft Chalk Sh Aqua-Char-Blk Carb Soft-Fissil ? Odor No Flor Lt Brn "Dead" Stn

Ls Wht FxIn Poor-Fair Igran (w/Med OOL in pl) Por Fair-Med InterOOL Por (w/Pyr inclus) Good Develop Poor Leaching Por Cht Wht-Tan-Peach Transp-Op Shp Vit Soft Chalk Sh Aqua-Char-Blk Carb Soft-Fissil No Odor No Flor No Stn NS

Ls Wht FxIn Poor-Fair Igran (w/Med-Lg OOL in pl) Por Med-Good InterOOL Por Good Develop Poor Leaching Por (w/Lt Stn (Lt-Drk Brn)) Soft Chalk Sh Aqua-Char Soft-Fissil Faint Odor No Flor VSS Stn

MISS. ST. LOUIS LOWER B 5290' (-2473)

Ls Wht FxIn Poor-Fair Igran (w/Med-Lg OOL in pl) Por Med-Good InterOOL Por Good Develop Poor Leaching Por (w/Lt Stn (Lt-Drk Brn)) Soft Chalk Sh Aqua-Char Soft-Fissil Faint Odor No Flor VSS Stn

30" CFS @ 5320' Ls Wht FxIn Poor-Fair Igran (w/Med-Lg OOL in pl) Por Med-Good InterOOL Por Good Develop Poor Leaching Por Soft Chalk Sh Aqua-Blk Carb Soft-Fissil No Odor No Flor NS

60" CFS @ 5320' Ls Wht FxIn Poor-Fair Igran (w/Med-Lg OOL in pl) Por Med-Good InterOOL Por Good Develop Poor Leaching Por Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor NS

Ls Wht FxIn Poor-Fair Igran (w/Med-Lg OOL in pl) Por Med-Good InterOOL Por Good Develop Poor Leaching Por Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor NS

Ls Wht FxIn Poor-Fair Igran OOL Por Grad Dns Micrite Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor NS

Ls Wht FxIn Poor-Fair Igran OOL Por Grad Dns Micrite Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor NS

Ls Wht FxIn Poor-Fair Igran OOL Por Grad Dns Micrite Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor NS

Ls Wht FxIn Poor-Fair Igran OOL Por Grad Dns Micrite Soft Chalk Sh Aqua-Char Soft-Fissil No Odor No Flor NS

MISSISSIPPIAN ST. LOUIS C 5372' (-2555)

Ls Wht- Crm FxIn Micritic Grad Poor OOL Por Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil No Odor No Flor No Stn NS

Ls Wht- Crm FxIn Micritic Grad Poor OOL Por Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil No Odor No Flor No Stn NS

Ls Wht- Crm FxIn Micritic Grad Poor OOL Por Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil No Odor No Flor No Stn NS

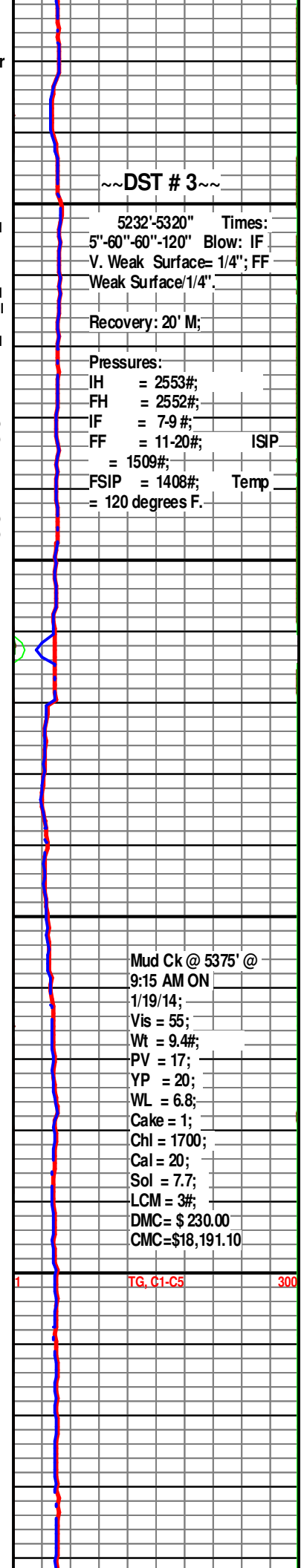
Ls Wht- Crm FxIn Micritic Grad Poor OOL Por Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil No Odor No Flor No Stn NS

Ls Wht- Crm FxIn Micritic Grad Poor OOL Por Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil No Odor No Flor No Stn NS

Ls Wht- Crm FxIn Micritic Grad Poor OOL Por Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil No Odor No Flor No Stn NS

MISSISSIPPIAN SALEM 5439' (-2622)

Dolo Gry FxIn Dns Micritic Grad Poor OOL Por Baren Chalk Cht Wht Op Shp Vit Sh Char-Fissil No Odor No Flor No Stn NS



~DST # 3~

5232'-5320" Times:
5"-60"-60"-120" Blow: IF
V. Weak Surface= 1/4"; FF
Weak Surface/1/4".

Recovery: 20' M;

Pressures:
IH = 2553#;
FH = 2552#;
IF = 7-9 #;
FF = 11-20#; ISIP
= 1509#;
FSIP = 1408#; Temp
= 120 degrees F.

Mud Ck @ 5375' @
9:15 AM ON
1/19/14;
Vis = 55;
Wt = 9.4#;
PV = 17;
YP = 20;
WL = 6.8;
Cake = 1;
Chl = 1700;
Cal = 20;
Sol = 7.7;
LCM = 3#;
DMC = \$ 230.00
CMC = \$18,191.10

TG, C1-C5 300

5450

5500

5550

5600



Dolo Gry FxIn Dns Micritic Grad Good Vug IxIn OOL Por Barren Chalk Cht
Wht Op Shp Vit Sh Char (w/Carb Inklus)-Aqua Fissil No Odor No Flor No
Stn NS

Dolo Gry FxIn Dns Micritic Grad Good Vug IxIn OOL Por Barren Chalk Cht
Wht Op Shp Vit Sh Aqua-Fissil No Odor No Flor No Stn NS

Dolo Gry FxIn Dns Micritic Grad Good Vug IxIn OOL Por Barren Chalk Cht
Wht Op Shp Vit Sh Aqua-Fissil No Odor No Flor No Stn NS

Dolo Tan FxIn Dns Micritic Grad Good Vug IxIn OOL Por Barren Chalk Cht
Wht-Gry Op Shp Vit Sh Aqua-Fissil No Odor No Flor No Stn NS

30" CFS @ 5505' Dolo Gry FxIn Dns Micritic Grad Good Vug IxIn OOL Por
Barren Chalk Cht Wht-Gry Op Shp Vit Sh Aqua-Fissil No Odor No Flor No
Stn NS

60" CFS @ 5505' Dolo Gry FxIn Dns Micritic Grad Good Vug IxIn OOL Por
Barren Chalk Cht Wht-Gry Op Shp Vit Sh Aqua-Fissil No Odor No Flor No
Stn NS

R.T.D. = 5505' (- 2866)
L.T.D. = 5509' (-2871)

Electric Logs Run: By Pioneer (LogTech) Logging:
Dual Induction; Compensated Density-Neutron; Sonic;
Microresistivity & Cased Hole Gamma Ray-Nutron Logs.

Geologist left Location @ 10:00 AM on 1-20-14

