



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

Well Name: HAMMER A # 1-17
Location: 18' S. & 18' E. OF SE - NW - SW of Sec. 17 - T. 30 S. - R. 31 W.
License Number: A.P.I. # 15 - 081 - 22,044 - 00 - 00
Spud Date: 01/14/2014
Surface Coordinates: SPOT: 1632' FSL & 1008' FWL

Region: HASKELL CO., KS.
Drilling Completed: 01/29/2014

Bottom Hole Coordinates:
Ground Elevation (ft): 2843' **K.B. Elevation (ft):** 2854'
Logged Interval (ft): 1863' SURFTo:E 5675' **Total Depth (ft):** 5675'
Formation: MISSISSIPPIAN "ST. LOUIS"
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL. & MUD DISPLACEMENT @ 3016'.
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: McCOY PETROLEUM CORPORATION KCC LIC. NO. # 5003
Address: 8080 E. CENTRAL, STE. 300
WICHITA, KANSAS 67206-2366

GEOLOGIST

Name: DAVID P. WILLIAMS, P.G.
Company: DW ENERGY, LLC
Address: 312 N. BROADVIEW STREET
WICHITA, KANSAS 67208

CASINGS & DEVIATION

Surface Casing: Spud at 8:45 pm on 01/14/14. Drilled 12-1/4" to 1838'. Ran 44 joints of new 24#, 8-5/8" casing. Tallied 1816.' Set at 1833' KB. Welded straps on shoe, bottom 3 joints and top 2 joints. Tacked collars on the remainder. (4) Centralizers on joints 1-3-5-27. Basket at 741'. Float insert in top of 1st joint. Cemented with 670 sks lass A; 6% Gel; 3% CC; 1/4# FS. Plus tailed with 200 sks Class A; 3% CC, & 1/4# FS. Cement did circulate. Plug down at 5:00 pm on 01/16/14. Allied Cementing ticket #53059. NOTE: After 2 hours cement had fallen to 48' below GL. Cemented from top with 110 sks Class A Neat; 3% CC.

Deviation Survey's: @ 1838' = 1/2 degree; @ 4004' = 3/4 degree; @ 4720' = 3/4 degree; @ 5235' = 1 degree; @ 5675' = 3/4 degree.

DSTs

~~DST # 1~~ Interval = 4689' - 4720'. Times: 5"- 60"- 90"-120";

Blow: IF= Weak Surface/1.5". No Blow Back. FF= Weak Building To Fair/9.5". No Blow Back.

Recovery: 60' GIP; 120' TF: 60' SWCM (w/Scum O & 18% W, 85% M, & 60' MCW w/Scum O & 75% W, & 25% M).

Pressures: IH=2328#; FH=2274#; IF=25-52#; FF=52-70#; ISIP =1076#; FSIP=1020#; Temp=117 degrees F.

~~DST # 2~~ Interval: 4938'-4996'. Times: 5"-90"-90"-120";

Blow: IF= Strong BOB/3". FF= Strong BOB/1". Blow Back = 3"/ Died in 98".

Recovery: 1980' GIP; 300' TF: 60' GSWCM (5% G & Hvy O Scum; 85% M & 10% W); 60' GSMCW. (10% G, Scum O, 50% W. 40% M) & 180 GSMCW (10% G, Scum O, 80% Wtr, & 10% M).

Pressures: IH = 2409#; FH = 2351#; IF= 36-50#; FF =56-150#; ISIP =1492#; FSIP =1397#; Temp =122 degrees F.

API RW= 0.141 @ 55 degrees F.; Chl.= 65,000 Ppm.

~~DST # 3~~ Interval: 5161'- 5235'. Times: 5"-60"-90"-120".

Blow: IF= Strong BOB/3". No Blow Back. FF= Strong BOB/At Open. No Blow Back.

Recovery: 4371' GIP & 150' TF: 30' GMCO (20% G 50% O, & 30% M) & 120' GSMCO (35% G, 55% O & 10% M).

Pressures: IH = 2614#; FH= 2572#; IF=37-34#; FF=27-75#; ISIP =1407#; FSIP=1348#; Temp = 120 degrees F.

~~DST # 4~~ Interval: 5530'-5340'. Times: 5"-60"-60"-60".

Blow: IF= Weak Surface/1.5". No Blow Back. FF= Weak Surface/Died in 22". No Blow Back.

Recovery: 60' Mud.

Pressures: IH =2712#; FH =2573#; IF=30-39#; FF =43-47#; ISIP=151#; FSIP=69#;Temp =122 degrees F.

~~DST # 5~~Interval: 5540'- 5604'. Times: 5"-60"-90"-120".

Blow: IF= Strong BOB/3". No Blow Back. FF= Strong BOB/6". Built 1.5"/40" Blow Back.

Recovery: 164' GIP; 950' TF: (144' GMCW (w/Tr Oil) (10% G, 50% W & 40% M,); 248' GSMCW (w/Tr O)(10% G, 80% W & 10% M); & 558' GW (15% G & 85% W).

Pressures: IH= 2845#; FH= 2732#; IF=136-159#; FF=198-617#; ISIP=1605#; FSIP=1552#; Temp =138 degrees F.; API RW=0.237 @ 35 degrees F.; Chl.= 59,000 Ppm.

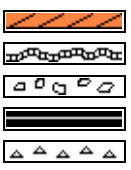
Comments

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.

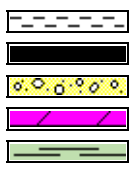
Respectfully submitted,

David P. Williams, P.G

ROCK TYPES



Anhy
Bent
Brec
Carb sh
Cht



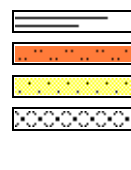
Clyst
Coal
Congl
Dol
Grn sh



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

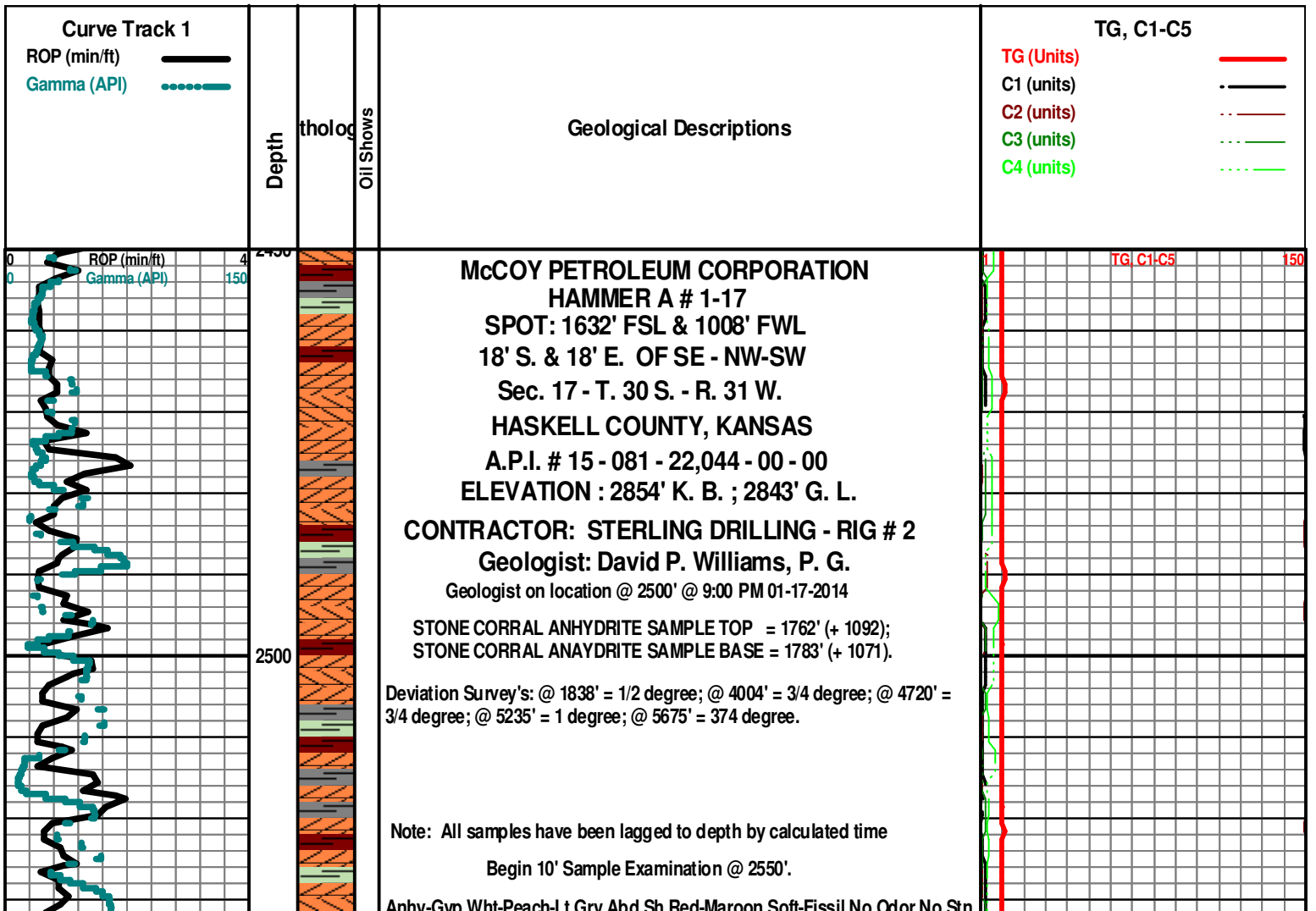
- ROUNDING**
- Rounded
 - Subrnd
 - Subang
 - Angular

- OIL SHOW**
- Gas show

- Even
- Spotted
- Ques
- Dead

- INTERVAL**
- Dst
 - Dst_alt

- EVENT**
- Rft
 - Sidewall



2550

2600

2650

2700

2750

Anhy-Gyp Wht-Peach-Lt Gry Abd Sh Red-Maroon Soft-Fissil No Odor No Stn No Flor NS

Anhy-Gyp Wht-Peach-Lt Gry Abd Sh Red-Maroon Soft-Fissil No Odor No Stn No Flor NS

Anhy-Gyp Wht-Lt Gry Abd Sh Red-Maroon Soft-Fissil No Odor No Stn No Flor NS

Anhy-Gyp Wht-Lt Gry Abd Sh Red-Maroon Soft-Fissil No Odor No Stn No Flor NS

Anhy-Gyp Wht-Lt Gry Abd Dolo Lt Gry Microxln Dns Sh Red-Maroon Soft-Fissil No Odor No Stn No Flor NS

HOLLENBERG 2588' (+266)

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red-Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red-Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red-Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red-Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red-Gry Soft-Fissil No Odor No Stn No Flor NS

HERRINGTON 2646' (+ 208)

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red Abd -Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red Abd -Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red Abd -Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red Abd -Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red Abd -Gry Soft-Fissil No Odor No Stn No Flor NS

KRIDER 2702' (+ 156)

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red Abd -Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry Microxln Dns Micrite Anhy/Gyp AA Sh Red Abd -Gry Soft-Fissil No Odor No Stn No Flor NS

Sh Gry-Red-Char (Wash Red) Dolo AA Anhy/Gyp AA No Odor No Flor No Stn NS

WINFIELD 2728' (+ 126)

Dolo Crm Microxln-Fxln Dns Micrite Grad Poor Sucrosic Ixln Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Dolo Crm Microxln-Fxln Dns Micrite Grad Poor Sucrosic Ixln Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

@ 2562' GAS TEST AT EXTRACTOR. & GEOTRAILER.

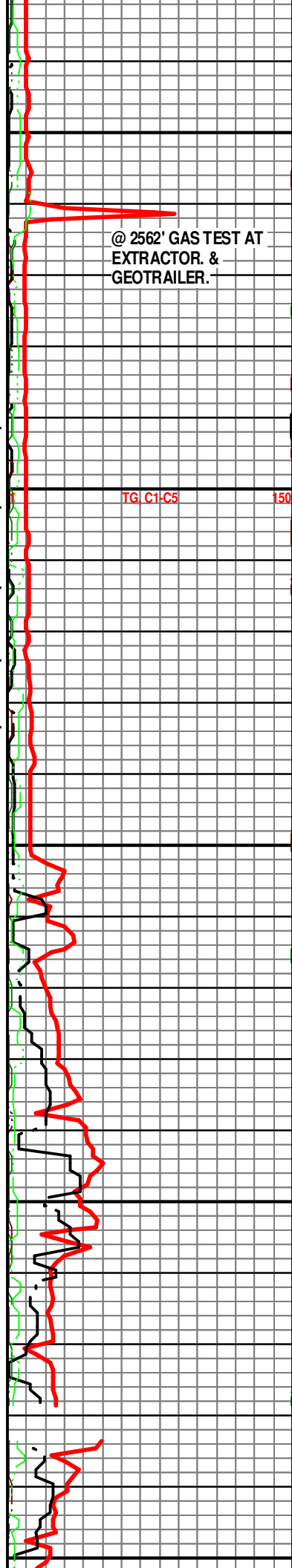
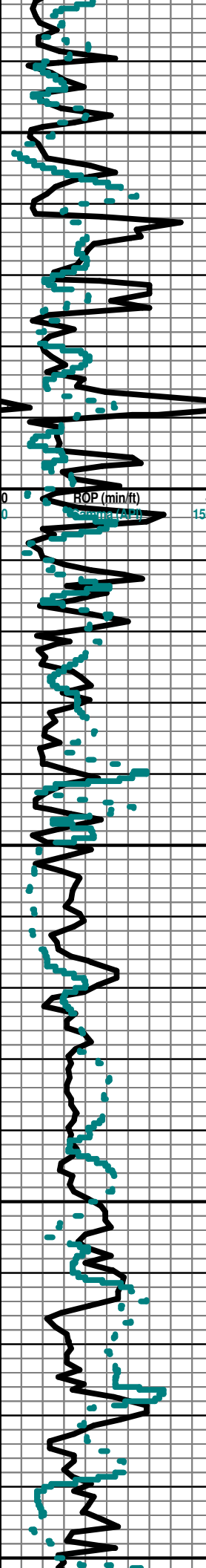
TG C1-C5

150

ROP (min/ft)

4

150



Sh Gry-Red-Char (Wash Red) Dolo AA Anhy/Gyp AA No Odor No Flor No Stn NS

Sh Gry-Red-Char (Wash Red) Dolo AA Anhy/Gyp AA No Odor No Flor No Stn NS

Sh Gry-Red-Char (Wash Red) Dolo AA Anhy/Gyp AA No Odor No Flor No Stn NS

TOWANDA 2766' (+ 88)

Dolo/Ls Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Dolo/Ls Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Dolo/Ls Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Dolo/Ls Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

FORT RILEY 2825' (+ 29)

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

FLORENCE 2862' (- 8)

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Cht Wht (w/Fos (Fuss)) Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Cht Wht (w/Fos (Fuss)) Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Cht Wht (w/Fos (Fuss)) Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Sh Gry-Red-Char (Wash Red) Dolo AA Anhy/Gyp AA No Odor No Flor No Stn NS

Sh Gry-Red-Char (Wash Red) Dolo AA Anhy/Gyp AA No Odor No Flor No Stn NS

Sh Gry-Red-Char (Wash Red) Dolo AA Anhy/Gyp AA No Odor No Flor No Stn NS

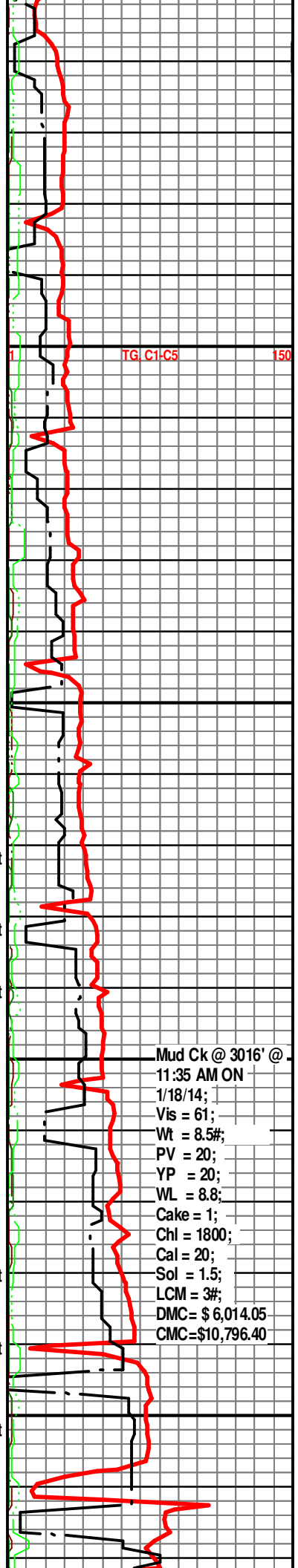
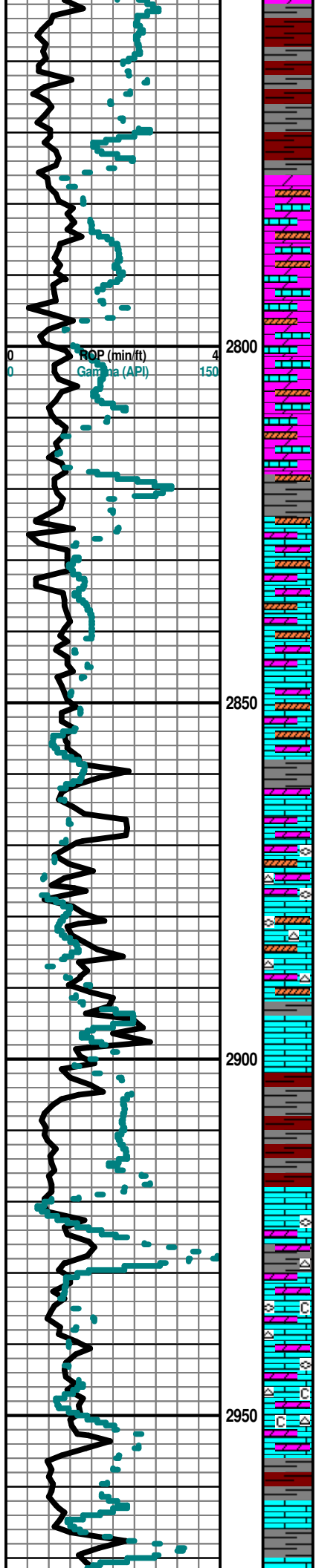
Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Cht Wht (w/Fos (Fuss)) Chalky (V Abd) Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Cht Wht (w/Fos (Fuss)) Chalky (V Abd) Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

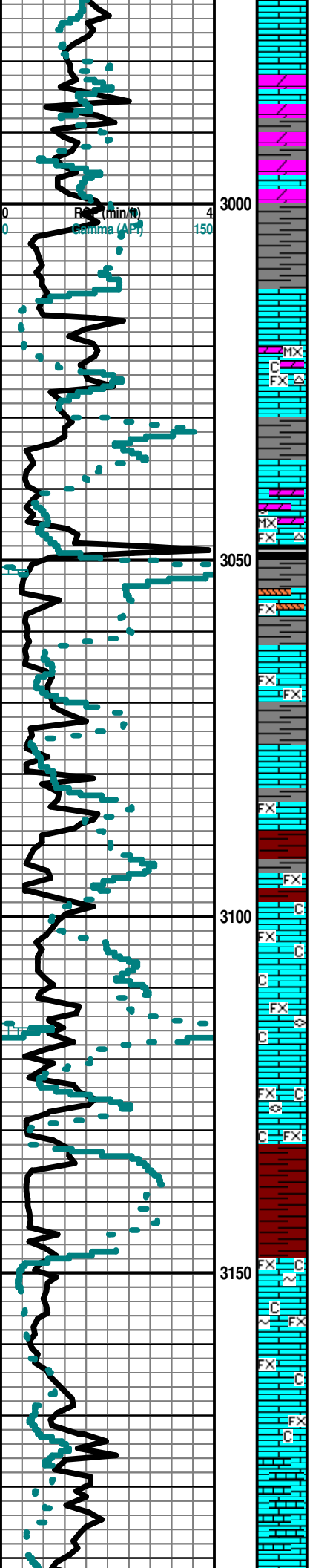
Ls/Dolo Crm MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Barren Cht Wht (w/Fos (Fuss)) Chalky (V Abd) Sh AA Anhy/Gyp AA No Odor No Stn No Flor NS

WREFORD 2964' (- 110)

No Sample Caught Stuck Drilling



Mud Ck @ 3016' @
11:35 AM ON
1/18/14;
Vis = 61;
Wt = 8.5#;
PV = 20;
YP = 20;
WL = 8.8;
Cake = 1;
Chl = 1800;
Cal = 20;
Sol = 1.5;
LCM = 3#;
DMC = \$ 6,014.05
CMC = \$10,796.40



No Sample Caught Stuck Drillpipe
 No Sample Caught Stuck Drillpipe
 No Sample Caught Stuck Drillpipe

COUNCIL GROVE GROUP 3012' (- 158)
MUD DISPLACEMENT @ 3016'
START 20' SAMPLE EXAMINATION AT 3020'

Ls/Dolo Crm-Gry Microxln-Fxln Dns Micrite Grad Poor Ixln-Intergran Por Barren Cht Wht Chalky Sh Maroon-Red-Char-Gry Soft-Fissil (Wash Red) No Odor No Stn No Flor NS

Ls Wht Fxln Dns Micrite Grad /Dolo Gry Microxln Dns Micrite Barren Cht Wht Chalky Fos (Fuss) Sh Maroon-Red-Char-Gry Soft-Fissil (Wash Red) No Odor No Stn No Flor NS

NEVA 3062' (- 208)

Ls Wht Fxln Dns Micrite Grad Poor Intergran Por Barren Chalky (V Abd) Sh Maroon-Red-Lt Aqua Soft-Fissil No Odor No Stn No Flor NS

FORAKER 3094' (- 240)

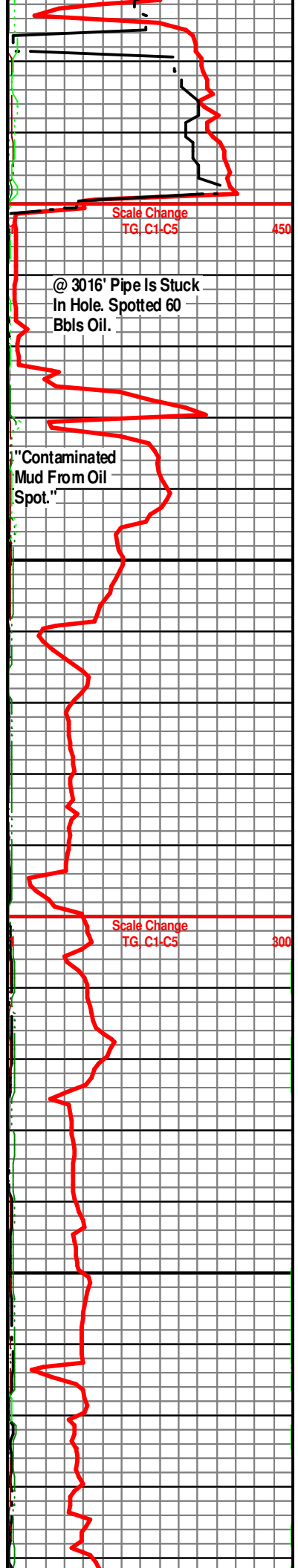
Ls Wht Fxln Dns Micrite Barren (w/Fos (Fuss) Includ) Chalky (V Abd) Sh Red -Maroon -Char Soft-Fissil No Odor No Stn No Flor NS

Ls Wht Fxln Dns Micrite Barren (w/Fos (Fuss) Includ) Chalky (V Abd) Sh Red-Maroon-Char Soft-Fissil No Odor No Stn No Flor NS

Ls Wht Fxln Dns Micrite Barren Chalky (V Abd) Sh Red-Maroon-Lt Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht Fxln Dns Micrite (Tr Glacu Includ) Barren Chalky Sh Red -Maroon -Lt Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht Fxln Dns Micrite Barren Chalky Sh Maroon -Red -Char -Gry -Lt Aqua Soft-Fissil No Odor No Stn No Flor NS

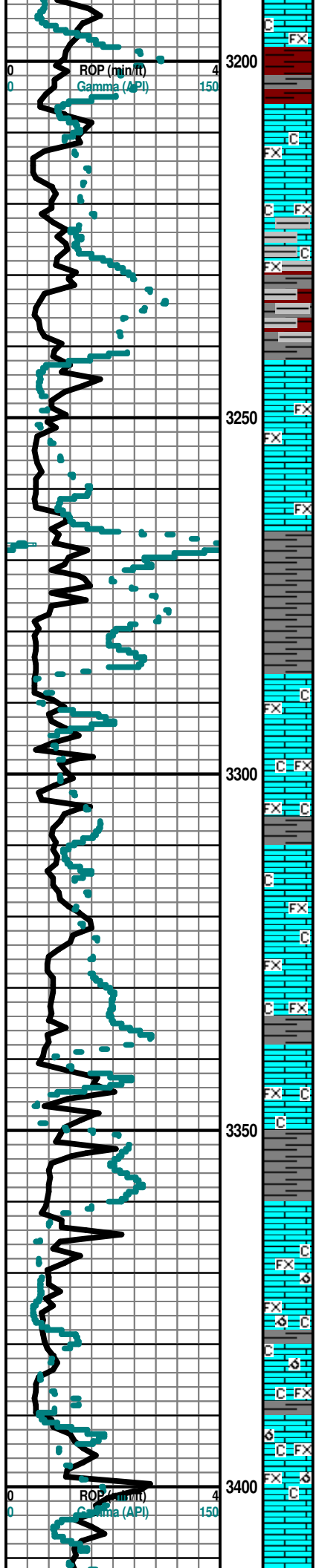


Scale Change TG, C1-C5 450

@ 3016' Pipe Is Stuck In Hole. Spotted 60 Bbls Oil.

"Contaminated Mud From Oil Spot."

Scale Change TG, C1-C5 800



Ls Wht FxIn Dns Micrite Barren Chalky Sh Maroon -Red -Char -Gry -Lt Aqua
Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Gry FxIn Dns Micrite Barren Chalky (V Abd) Sh Maroon -Red -Char
-Gry- Lt Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Gry FxIn Dns Micrite Barren Chalky (V Abd) Sh Maroon -Red- Char
-Gry- Lt Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Tan FxIn Dns Micrite AA Grad Good OOM Por Good Vug Leaching
Good Dissolu Sh Red-Maroon Soft No Odor No Stn No Flor NS

Ls Wht-Grn/Gry FxIn Dns Micrite (w/Fos Inklus) Sh Red -Maroon -Char -Gry
Soft No Odor No Stn No Flor NS

Ls Wht-Gry FxIn Dns Micrite Barren Chalky (V Abd) Sh Maroon -Red- Char-
Gry- Lt Aqua Soft-Fissil No Odor No Stn No Flor NS

Sh Char-Drk Gry-Maroon Soft-Fissil Ls Wht-Gry FxIn Dns Micrite Barren
Chalky No Odor No Stn No Flor NS

Sh Char-Drk Gry-Maroon Soft-Fissil Ls Wht-Gry FxIn Dns Micrite Barren
Chalky No Odor No Stn No Flor NS

Sh Char-Drk Gry-Lt Gry-Maroon Soft-Fissil Ls Wht-Gry FxIn Dns Micrite
Barren Chalky No Odor No Stn No Flor NS

Ls Wht-Gry FxIn Dns Micrite Barren Grad Good OOM Por Deep Vug
Leaching Good Dissolu Chalky Sh Char-Drk Gry- Lt Gry Soft-Fissil No Odor
No Stn No Flor NS

Ls Wht-Gry FxIn Dns Micrite Barren Grad Good OOM Por Deep Vug
Leaching Good Dissolu Chalky Sh Char-Drk Gry- Lt Gry Soft-Fissil No Odor
No Stn No Flor NS

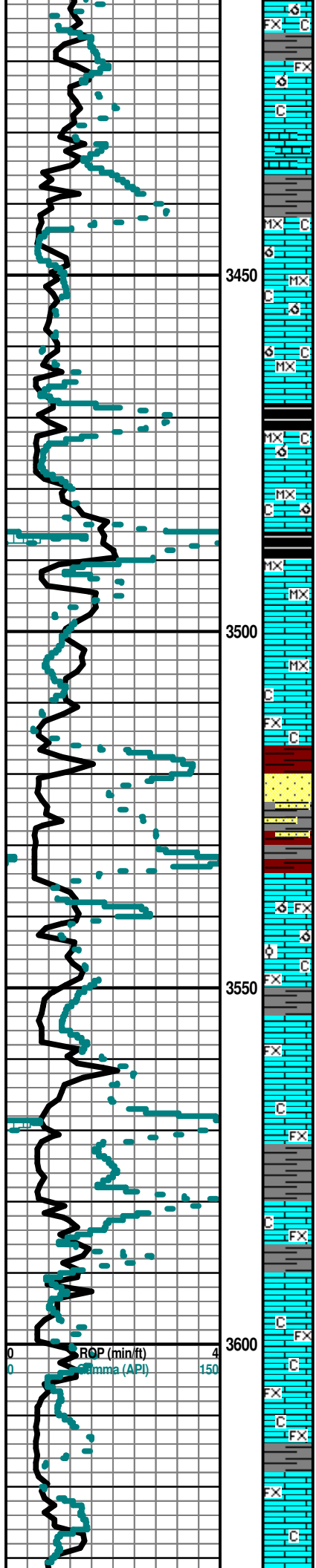
FALL CITY 3402' (- 548)

TG, C1-C5

800

TG, C1-C5

800



Sh Char-Drk Gry-Lt Gry-Maroon Soft-Fissil Ls Wht-Gry FxIn Dns Micrite
Barren Grad Good OOM Por Deep Vug Leaching Good Dissolu Chalky No
Odor No Stn No Flor NS

Ls Wht MicroxIn Dns Micrite Chalk (V Abd) Sh Char-Drk Gry-Lt Gry No Odor
No Stn No Flor NS

Ls Wht-Crm-Tan-Gry MicroxIn FxIn Dns Micrite Barren Grad Med-Good OOM
Por Med Vug Leaching Med Dissolu Chalky Sh Char-Drk Gry- Lt Gry
Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry MicroxIn FxIn Dns Micrite Barren Grad Med-Good OOM
Por Med Vug Leaching Med Dissolu Chalky Sh Char-Drk Gry- Lt Gry
Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Gry MicroxIn Dns Micrite Chalky (Abd) Sh Char -Gry - Maroon No
Odor No Stn Sli ? Min Flor NS

ROOT SHALE 3516' (- 662)

Sh Char-Gry-Maroon Soft-Fissil Ls Wht-Gry FxIn Dns Micrite AA Barren
Chalky No Odor Sli ? Min Flor No Stn NS

STOLER 3534' (- 680)

Ls Wht FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Grad Poor OOM Por
(w/Small OOids in pl) Poor Develop Poor Leaching Chalky Sh
Char-Gry-Maroon Sli ? Min Flor No Odor No Stn NS

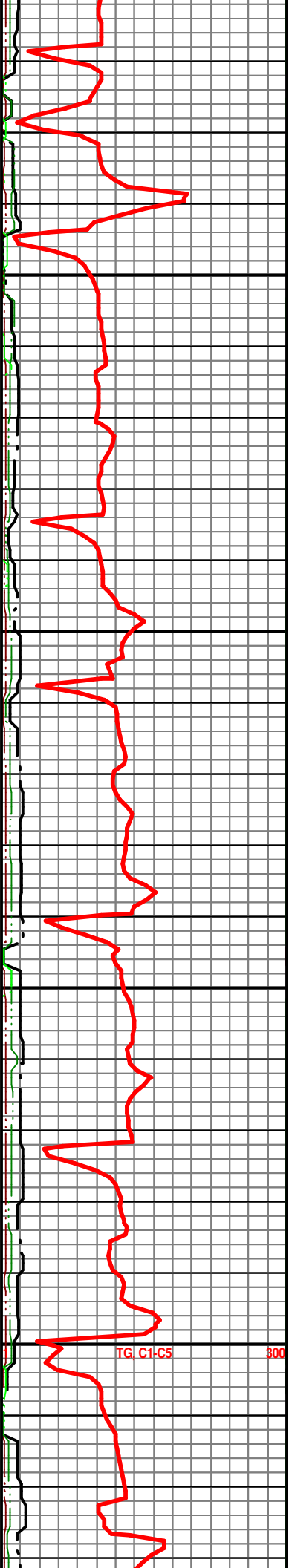
Ls Wht FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh Char-Gry
-Maroon Sli ? Min Flor No Odor No Stn NS

TARKIO 3582' (- 728)

Ls Wht FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh Char-Gry
-Maroon Sli ? Min Flor No Odor No Stn NS

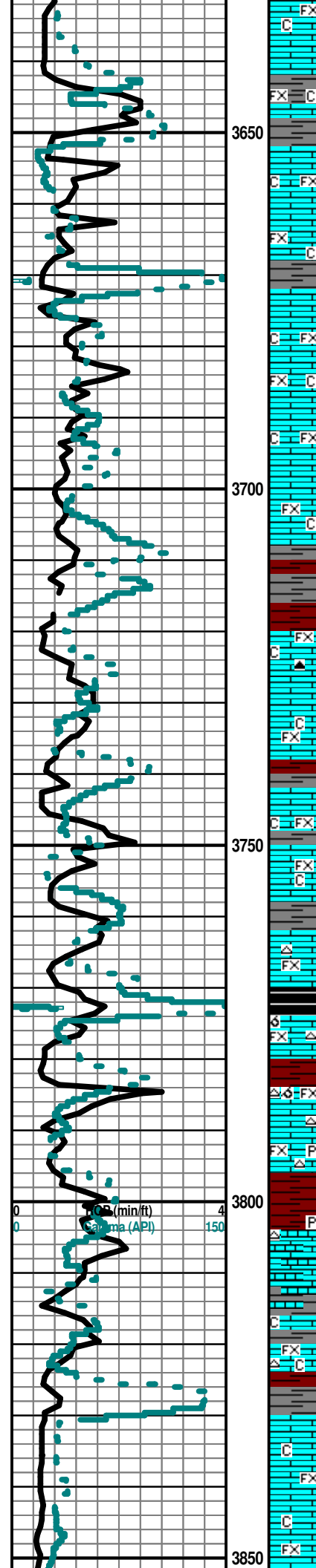
Ls Wht FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh Char-Gry
-Maroon Sli ? Min Flor No Odor No Stn NS

Ls Wht FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh Char-Gry
-Maroon Sli ? Min Flor No Odor No Stn NS



TG C1-C5

800



Ls Wht FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh Char-Gry
-Maroon Sli ? Min Flor No Odor No Stn NS

Ls Wht FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh Char-Gry
-Maroon Sli ? Min Flor No Odor No Stn NS

BERN 3672' (- 818)

Ls Wht FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh Char-Gry
-Maroon Sli ? Min Flor No Odor No Stn NS

Ls Wht-Gry FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh
Char-Gry -Maroon Sli ? Min Flor No Odor No Stn NS

Ls Wht-Gry FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Cht Drk Gry-Blk
Op Shp Vit Chalky Sh Char-Gry -Maroon Sli ? Min Flor No Odor No Stn NS

Ls Wht-Gry FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky Sh
Char-Gry -Maroon Sli ? Min Flor No Odor No Stn NS

Ls Wht-Gry FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Cht Wht Op Shp
Vit Chalky Sh Char-Gry -Maroon Sli ? Min Flor No Odor No Stn NS

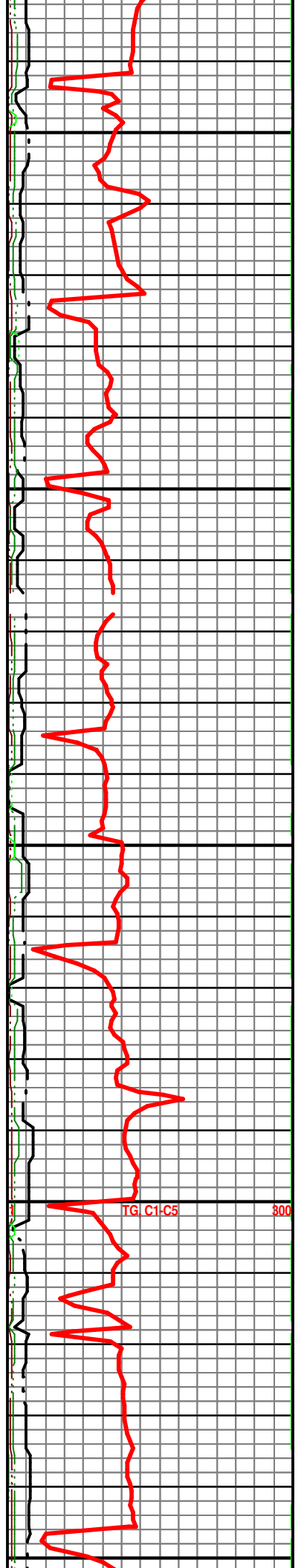
TOPEKA 3724' (- 870)

Ls Wht-Gry FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Grad Fair OOM
Por Fair-Med Develop Fair-Med Leaching Cht Wht Op Shp Vit Chalky Sh
Char-Gry -Maroon Sli ? Min Flor No Odor No Stn NS

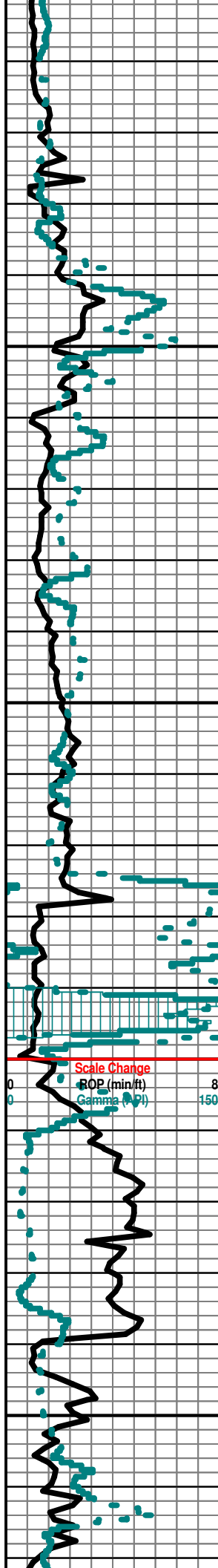
Ls Wht w/Pyr Includ-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren
Chalk Wht Abd Cht Wht-Gry Op Shp Vit Sh Char-Red Fissil Soft No Odor
No Flor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht V Abd
Cht Wht-Gry Transl- Op Shp Vit Sh Char-Gry-Red Fissil Soft No Odor No
Flor No Stn

Ls Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht
Abd Sh Char Fissil No Odor No Flor No Stn NS



TG C1-C5 800



Ls Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Fos (Fuss)
Chalk Wht Abd Sh Char-Grn Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Fos (Fuss)
Chalk Wht Abd Sh Char-Grn Fissil No Odor No Flor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht V Abd
Cht Tan- Drk Gry Transl-Op Shp Vit Fos (Fuss) Sh Char-Grn Fissil Soft No
Odor No Flor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht V Abd
Cht Tan- Drk Gry Transl-Op Shp Vit Sh Char-Grn Fissil Soft No Odor No
Flor No Stn NS

Ls Wht-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht V Abd
Cht Tan- Drk Gry Transl-Op Shp Vit Sh Char-Grn Fissil Soft No Odor No
Flor No Stn NS

Ls Wht-Crm FxIn-MicroxIn Poor IxIn Por Mostly Micritic Dsn Barren V Chalk
Wht V Abd Sh Char-Grn Fissil Soft No Odor No Flor No Stn NS

Sh Blk Carb (w/GSG)-Char-Gry Fissil Ls Wht-Gry FxIn Poor IxIn Por Mostly
Micritic Dsn Barren (w/Pry Incls) Chalk Wht Abd Cht Wht-Gry-Drk Gry Op
Shp Vit No Odor No Flor No Stn GSG in Blk Sh

LeCOMPTON 3998' (- 1144)

LS Wht-Crm FxIn Poor-Fair IxIn Por Grad Chalk V Abd Wht Abd Sh Char
Fissil No Odor No Flor No Stn NS

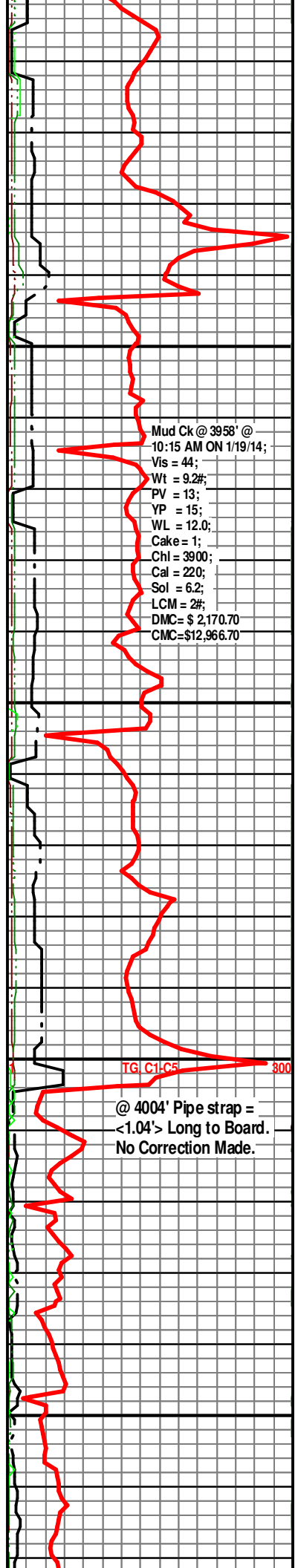
LS Wht-Gry FxIn Poor IxIn Por Grad MxIn GrnStone P-F IxIn Por Chalk Wht
Abd Sh Char Fissil No Odor No Flor No Stn NS

LS Wht-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd
Sh Char-Blk Char Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Gry FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Tr Sli Vug
IxIn Leached Por Barren Chalky (V Abd) Sh Blk Carb -Char -GrySoft-Fissil
No Odor No Flor No Stn NS

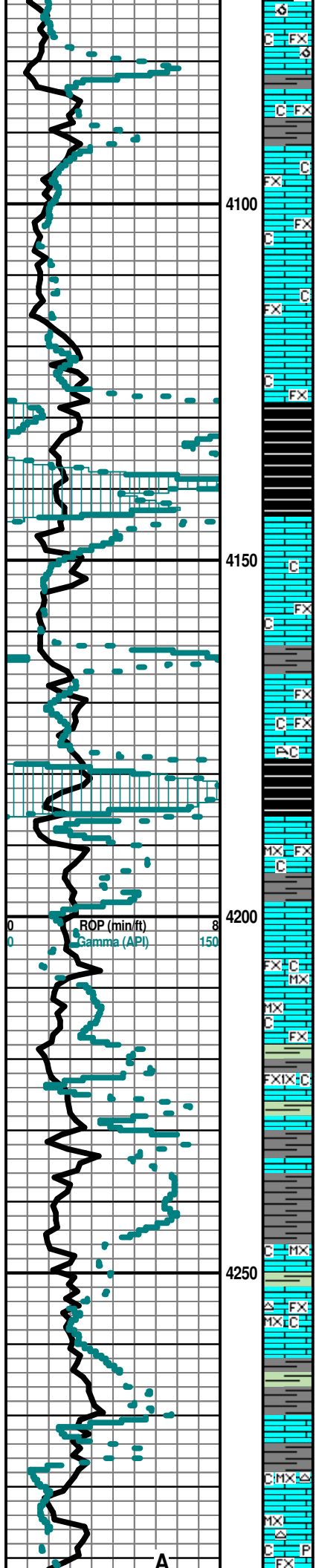
AT 4100' START 10' WET & DRY SAMPLES

Ls Crm-Tan FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Grad Poor OOM



Mud Ck @ 3958' @
10:15 AM ON 1/19/14;
Vis = 44;
Wt = 9.2#;
PV = 13;
YP = 15;
WL = 12.0;
Cake = 1;
ChI = 3900;
Cal = 220;
Sol = 6.2;
LCM = 2#;
DMC = \$ 2,170.70
CMC = \$12,966.70

TG C1-C5 800
@ 4004' Pipe strap =
<1.04'> Long to Board.
No Correction Made.



Por Crm-Dissolu Poor Leaching Chalky (Abd) Sh Char-Gry-Blk Carb-Maroon Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Tan FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky (Abd) Sh Char-Gry-Blk Carb-Maroon Soft-Fissil No Odor No Flor No Stn

Ls Crm-Tan FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky (Abd) Sh Char-Gry-Blk Carb-Maroon Soft-Fissil No Odor No Flor No Stn

Ls Crm-Tan FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky (V Abd "Gummy") Sh Char-Gry-Blk Carb Inc Soft-Fissil No Odor No Flor No Stn

Ls Crm-Tan FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky (V Abd "Gummy") Sh Char-Gry-Blk Carb Inc Soft-Fissil No Odor No Flor No Stn

Ls Crm-Tan FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky (V Abd "Gummy") Sh Char-Gry-Blk Carb Inc Soft-Fissil No Odor No Flor No Stn

Ls Crm-Tan FxIn Dns Micrite Grad Poor-Fair Pin-Pt IxIn Por Chalky (V Abd "Gummy") Sh Char-Gry-Blk Carb Inc Soft-Fissil No Odor No Flor No Stn

PLATTSMOUTH 4145' (- 1290)

Sh Blk Carb-Char-Gry (w/GSG) Ls Crm-Tan FxIn Dns Micrite Grad Tr Fair Pin-Pt IxIn Por (w/SSG) No Odor No Stn No Flor GSG in Blk Carb Sh

Ls Wht-Crm-Gry FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Chalky (Abd) Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Chalky (Abd) Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Fos (Coral ?) Chalky (Abd) Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

HEEBNER 4178' (-1324)

Sh Blk Carb (w/GSG)-Drk Gry (w/ GSG) Fissil Ls AA Cht AA No Odor No Flor No Stn GSG in Blk Sh

Ls Wht-Crm-Gry FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Gm-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

TORONTO 4198' (- 1344)

Ls Wht-Crm-Gry FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Gm-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Gm-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

DOUGLAS 4226' (- 1372)

Ls Wht-Crm-Tan FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Gm-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Gm-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Gm-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Gm-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

IATAN (BROWN LIME) 4271' (- 1417)

LANSING 4287' (- 1433)

Ls Wht-Crm-Tan FxIn/MicroxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm MicroxIn Dns Micrite (w/Pyr Inclus) Grad Poor FxIn Pin-Pt IxIn Por Cht Wht-Tan Op Shp Vit Chalky Sh Grv-Char-Blk Carb Fissil No Odor No

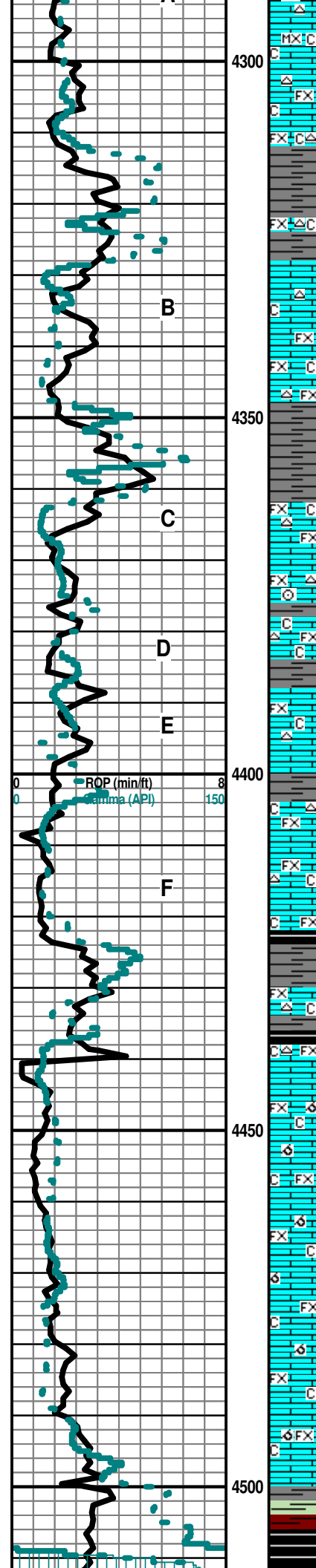
SH GAS KICK = 118 UNITS.

Spl. Trap Left Open.

TG C1-C5 800

Mud Ck @ 4261' @
 6:55 AM ON
 1/20/14;
 Vis = 56;
 Wt = 8.9#;
 PV = 18;
 YP = 18;
 WL = 8.8;
 Cake = 1;
 Chl = 1750;
 Cal = 20;
 Sol = 4.3;
 LCM = 3.5#;
 DMC = \$2,532.45

A



Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Cht Wht-Tan Op Shp Vit Chalky Sh Gry (w/Grn Includ)-Char-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn Dns Micrite Cht Wht-Tan Op Shp Vit Chalky Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Cht Wht-Tan (Banded w/ Fos Includ) Op Shp Vit Chalky Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Crm-Gry FxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Grn-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Dns Micrite Cht Wht-Tan (Banded) Op Shp Vit Chalky Sh Grn-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Cht Wht-Gry Translu-Op Shp Vit Chalky Sh Grn-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Cht Wht-Tan (Banded w/Fos Includ) Op Shp Vit Chalky Sh Grn-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Cht Wht-Tan (Banded w/Fos Includ) Op Shp Vit Fos (Crin) Chalky Sh Grn-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Cht Wht-Crm-Amber (Banded w/Fos Includ) Translu-Op Shp Vit Chalky Sh Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Cht Wht-Tan-Gry (Banded w/Fos Includ) Op Shp Vit Chalky (Abd) Sh Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Cht Wht-Tan (Banded w/Fos Includ) Op Shp Vit Chalky (Abd) Sh Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Cht Wht-Tan (Banded w/Fos Includ) Op Shp Vit Chalky (Abd) Sh Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Cht Tan Op Shp Vit Chalky (Abd) Sh Carb-Gry Fissil No odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Chalky (V Abd) Sh Blk Carb- Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Med-Good OOM Por Med-Good Vug Leaching Med-Good Develop Barren Chalk (V Abd) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor (" Sli ? Min Flor) NS

Ls Crm-Tan-Gry FxIn Med-Good OOM Por Med-Good Vug Leaching Med-Good Develop Barren Chalk (V Abd) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor (" Sli ? Min Flor) NS

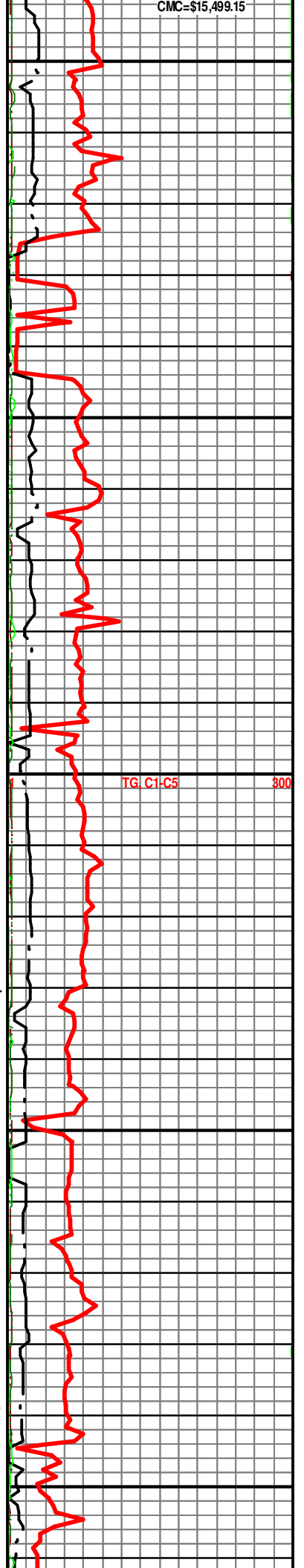
Ls Crm-Tan-Gry FxIn Med-Good OOM Por Med-Good Vug Leaching Med-Good Develop Barren Chalk (V Abd) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor (" Sli ? Min Flor) NS

Ls Crm-Tan-Gry FxIn Med-Good OOM Por Med-Good Vug Leaching Med-Good Develop Barren Chalk (V Abd) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor (" Sli ? Min Flor) NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Grad Tr OOM Por AA Cht Wht-Crm-Amber (Banded) Op Shp Vit Chalky Sh Carb-Gry Fissil No Odor No Stn No Flor NS

MUNCIE CREEK SHALE 4500' (- 1646)

Sh Char-Gry/Grn-Maroon Soft Fissil Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Cht Wht-Crm-Amber (Banded) Op Shp Vit Chalky No Odor No Stn No Flor NS



LANSING "G" 4514' (- 1660)

Sh Blk Carb-Gry/Grn-Maroon Fissil Ls Crm-Tan-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Baren Chalky (Abd) No Odor No Stn No Flor NS
 Ls Crm-Tan-Gry FxIn Med-Good OOM Por Med-Good Vug Leaching Med-Good Develop Barren Chalk (V Abd) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor (" Sli ? Min Flor) NS
 Ls Crm-Tan-Gry FxIn Med-Good OOM Por Med-Good Vug Leaching Med-Good Develop Barren Chalk (V Abd) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor (" Sli ? Min Flor) NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Grad Tr OOM Por AA Fos (Brach) Chalky Sh Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Chalky (V Abd) Sh Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry FxIn Dns Micrite Chalky (V Abd) Sh Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Tan MicroxIn Dns Micrite Chalky (Abd) Cht Wht (w/ Fos (Spicule) Includ) Sh Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry MicroxIn Dns Micrite Grad Poor OOM Por Poor Deelop Poor Leaching Vug Por Barren Chalky (Abd) Cht Wht (w/ Fos (Spicule) Includ) Sh Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry MicroxIn Dns Micrite Barren Chalky (Abd) Cht Gry-Drk Gry-Blk Sh Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Tan-Gry MicroxIn Dns Micrite Barren Chalky (Abd) Cht Amber -Gry Sh Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor OOM Por Poor Develop Poor Leaching Vug Por Barren Chalky (V Abd) Cht Gry Sh Blk Carb-Char-Grn/Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor OOM Por Poor Develop Poor Leaching Vug Por Barren Chalky (V Abd) Cht Gry Sh Blk Carb-Char-Grn/Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor OOM Por Poor Develop Poor Leaching Vug Por Barren Chalky (V Abd) Cht Drk Gry Sh Blk Carb-Char-Grn/Gry Fissil No Odor No Stn No Flor NS

Ls Tan-Gry MicroxIn Dns Micrite (w/Fos (Spicule) Includ) Barren Chalky (Abd) Cht Drk Gry Op Shp Vit Sh Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor-Fair OOM Por Poor Develop Poor Leaching Vug Por Barren Chalky (Dec) Cht Wht-Gry (Banded) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor-Fair OOM Por Poor Develop Poor Leaching Vug Por Barren Chalky (Dec) Cht Wht-Gry (Banded) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry MicroxIn Dns Micrite Barren Chalky (Dec) Cht Wht-Gry (Banded) Fos (Crin) Sh Char-Grn/Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Brn MicroxIn Dns Micrite Barren Chalky (Dec) Sh Char-Gry Fissil No Odor No Stn No Flor NS

STARK 4686' (- 1832)

30" CFS @ 4715' Sh- Blk Carb-Char Fissil Ls Wht-Crm-Tan FxIn Dns Micrite (w/Tr Pyr Includ) Grad Poor Pin-Pt IxIn Por Cht Amber-Tan Op Shp Vit Chalk (V Abd) Good Odor Sli ? Flor Sli ? Stn (Lt Grn) ? SSG

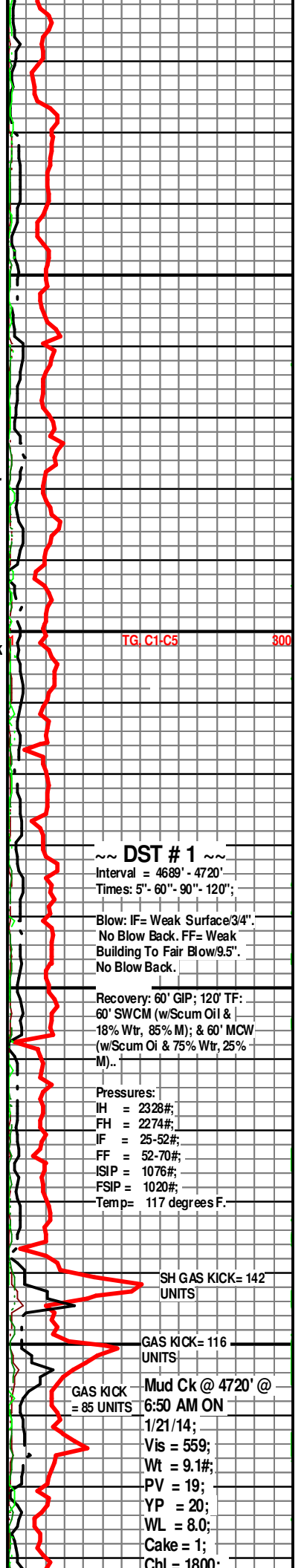
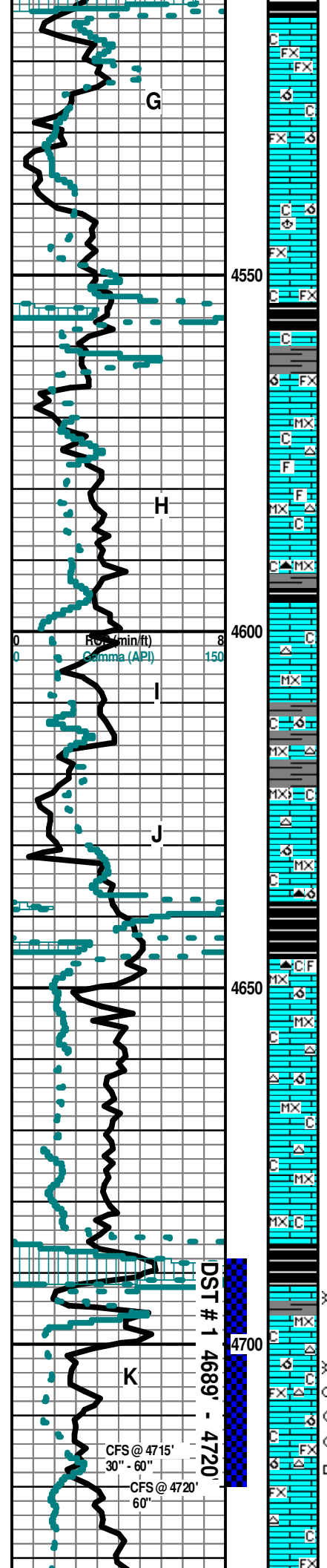
KANSAS CITY "SWOPE" (K) Ø 4700' (- 1846)

60" CFS @ 4715' Ls Wht-Crm-Tan FxIn Dns Micrite (w/Tr Pyr Includ) Grad Poor Pin-Pt IxIn Por Grad Poor OOM Por Poor InterOOM Develop Poor Leaching Cht Tan Op Shp Vit Chalk (Abd) Med-Good Odor Sli ? Flor Sli ? Stn (Lt Grn) ? SSG

60" CFS @ 4720' Ls Wht-Crm-Tan FxIn Dns Micrite (w/Tr Pyr Includ) Grad Poor Pin-Pt IxIn Por Grad Fair OOM Por Poor-Fair InterOOM Develop Poor-Fair Leaching Cht Wht-Gry Op Shp Vit Chalk (Abd) Med-Good Odor Sli ? Flor Sli ? SG Drk Brn Stn (? Dead) ? SSG

Ls Wht-Crm-Tan FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Cht Wht-Gry Op Shp Vit Chalk (Abd) No Odor No Flor No Stn NS

Ls Wht-Crm-Tan FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Cht Wht-Gry Op



~ DST # 1 ~
 Interval = 4689' - 4720'
 Times: 5" - 60" - 90" - 120";

Blow: IF= Weak Surface 3/4"
 No Blow Back. FF= Weak
 Building To Fair Blow 9.5"
 No Blow Back.

Recovery: 60' GIP; 120' TF;
 60' SWCM (w/Scum Oil &
 18% Wtr, 85% M); & 60' MCW
 (w/Scum Oi & 75% Wtr, 25%
 M)..

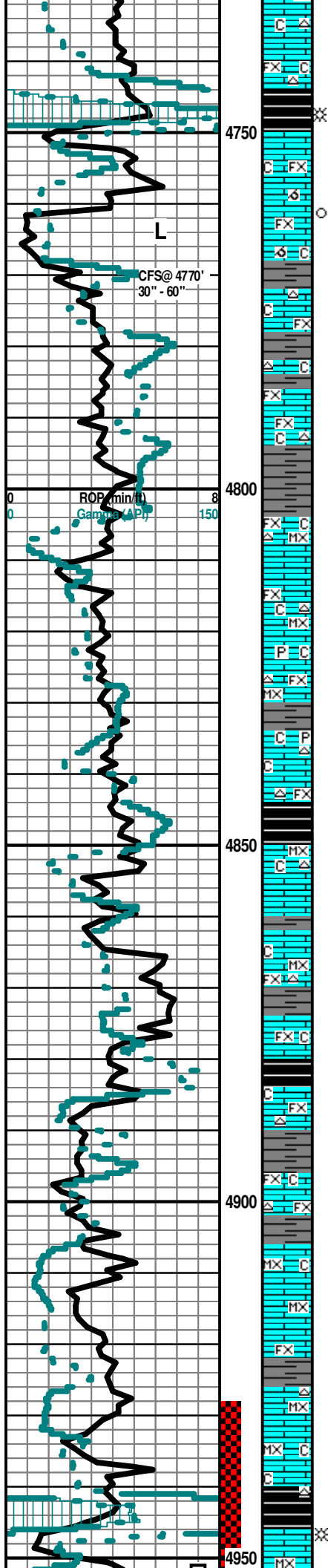
Pressures:
 IH = 2328#;
 FH = 2274#;
 IF = 25-52#;
 FF = 52-70#;
 ISIP = 1076#;
 FSIP = 1020#;
 Temp= 117 degrees F.

SH GAS KICK = 142 UNITS

GAS KICK = 116 UNITS

GAS KICK = 85 UNITS

Mud Ck @ 4720' @ 6:50 AM ON
 1/21/14;
 Vis = 559;
 Wt = 9.1#;
 PV = 19;
 YP = 20;
 WL = 8.0;
 Cake = 1;
 Cht = 1800



Shp Vit Chalk (Abd) No Odor No Flor No Stn NS

Ls Wht-Crm-Tan FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Cht Wht-Gry Op
 Shp Vit Chalk (Abd) No Odor No Flor No Stn NS
HUSHPUCKNEY SHALE 4744' (- 1890)

KANSAS CITY "HERTHA" (L) 4750' (- 1896)

30" CFS@ 4770' Sh Blk Carb-Char Fissil Ls Wht-Crm FxIn Good OOM Por (w/Med-OOids in pl)
 Med-Good Develop Med Dissolu Tr Vup Leached InterOOM Por Barren Grad Dns Micrite
 Chalky No Odor No Stn No Flor NS

HERTHA Ø 4761' (- 1907)

60" CFS@ 4770' Ls Wht-Crm-Tan FxIn Good OOM Por (w/ Med - OOids in pl) Med - Good
 Develop Med Dissolu Tr Vup Leached InterOOM Por Barren Grad Dns Micrite Chalky Sh Blk
 Carb-Char Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Good OOM Por (w/ Med - OOids in pl) Med - Good Develop Med Dissolu
 Tr Vup Leached InterOOM Por Barren Grad Dns Micrite Cht Gry Op Shp Vit Chalky Sh Blk
 Carb-Char Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/ Med-Small OOids in pl) Med Develop Med Dissolu
 Barren Grad Dns Micrite Cht Gry Op Shp Vit Chalky Sh Blk Carb-Char Fissil No Odor No Stn
 No Flor NS

BASE KANSAS CITY 4794' (- 1940)

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/ Med-Small OOids in pl) Med Develop Med Dissolu
 Barren Grad Dns Micrite Cht Gry Op Shp Vit Chalky Sh Gry-Char- Blk Carb Fissil No Odor No
 Stn No Flor NS

Ls Tan-Gry FxIn-MicroIxIn Dns Micrite Cht Gry Op Shp Vit Sh Char- Gry -Blk
 Carb Fissil No Odor No Flor No Stn NS

Ls Tan-Gry FxIn-MicroIxIn Dns Micrite Cht Gry Op Shp Vit Sh Char- Gry -Blk
 Carb Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Gry (w/Pyr Incls) FxIn-MicroIxIn Dns Micrite Cht Gry Op Shp Vit
 Sh Char- Gry -Blk Carb Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Gry (w/Pyr Incls) FxIn-MicroIxIn Dns Micrite Cht Gry Op Shp Vit
 Sh Char- Gry -Blk Carb Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/ Med-Small OOids in pl) Med Develop Med Dissolu
 Barren Grad Dns Micrite Cht Gry Op Shp Vit Chalky Sh Gry-Char- Blk Carb Fissil No Odor No
 Stn No Flor NS

MARMATON 4852' (- 1998)

Ls Wht-Crm-Tan-Gry MicroIxIn-FxIn Dns Micrite Sh Blk Carb-Char Fissil No Flor No Stn -No
 Odor NS

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/ Med-Small OOids in pl) Med Develop Med Dissolu
 Barren Grad Dns Micrite Cht Gry Op Shp Vit Chalky Sh Gry-Char- Blk Carb Fissil No Odor No
 Stn No Flor NS

Ls Wht-Crm-Tan-Gry MicroIxIn-FxIn Dns Micrite Sh Blk Carb-Char Fissil No
 Flor No Stn No Odor NS

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/Small-Med OOids in pl) Poor Develop Poor Dissolu
 Poor Leaching Barren Grad Dns Micrite Cht Gry Op Shp Vit Chalky Sh Gry-Char- Blk Carb
 Fissil No Odor No Stn No Flor NS

MARMATON "B" 4884' (- 2030)

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/Small-Med OOids in pl) Poor Develop Poor Dissolu
 Poor Leaching Barren Grad Dns Micrite Cht Gry Op Shp Vit Chalky Sh Gry-Char- Blk Carb
 Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/Small-Med OOids in pl) Poor Develop Poor Dissolu
 Poor Leaching Barren Grad Dns Micrite Cht Wht-Gry Op Shp Vit Fos (Crin) Chalky Sh
 Gry-Char- Blk Carb Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Poor OOM Por (w/Small-Med OOids in pl) Poor Develop Poor Dissolu
 Poor Leaching Barren Grad Dns Micrite Cht Wht-Gry Op Shp Vit Chalky Sh Gry-Char- Blk Carb
 Fissil No Odor No Stn No Flor NS

Sh Char-Gry/Grn-Aqua Fissil Ls Wht-Crm-Tan-Gry MicroIxIn-FxIn Dns Micrite
 Cht Gry- Drk-Tan Op Shp Vit No Flor No Stn No Odor NS

Sh Char-Gry-Drab Grn-Aqua Fissil Ls Crm-Tan-Brn MicroIxIn-FxIn Dns
 Micrite Cht Gry- Drk-Tan Op Shp Vit No Flor No Stn No Odor NS

Sh Char-Gry-Drab Grn-Aqua Fissil Ls Crm-Tan-Brn MicroIxIn-FxIn Dns
 Micrite Cht Gry- Drk-Tan Op Shp Vit No Flor No Stn No Odor NS

Sh Blk Carb (w/GSG)-Lt Grn-Aqua Fissil Ls Wht-Crm FxIn Dns Micrite Cht
 Tan-Amber Op Shp Vit Chalky No Odor No Stn No Flor GSG in Blk Sh

PAWNEE 4946' (- 2092)

CM = 1000;
 Cal = 20;
 Sol = 5.3;
 LCM = 2#;
 DMC = \$ 2,377.60
 CMC = \$17,876.75

SH GAS KICK = 109
 UNITS
 GAS KICK = 94
 UNITS

AT 4786' LAG DEPTH
 CHANGE OUT
 EXTRACTOR FILTER
 AND GAS TEST = 116
 UNITS.

TG C1-C5 300
 Mud Ck @ 4792' @ 7:15
 AM ON 1/22/14;
 Vis = 56;
 Wt = 9.2#;
 PV = 17;
 YP = 18;
 WL = 7.2;
 Cake = 1;
 Chl = 2300;
 Cal = 20;
 Sol = 6.3#
 LCM = 2.5#;
 DMC = \$ 807.95
 CMC = \$18,684.70

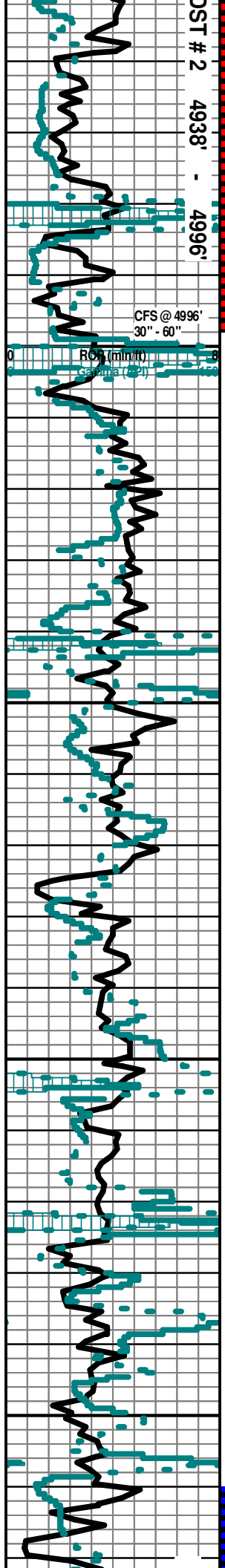
Mud Ck @ 4996' @ 7:00
 AM ON 1/23/14;
 Vis = 55;
 Wt = 9.15#;
 PV = 17;
 YP = 21;
 WL = 7.2;
 Cake = 1;
 Chl = 2000;
 Cal = 20;
 Sol = 5.6;
 LCM = 3#;
 DMC = \$1,208.30
 CMC = \$19,893.00

~DST # 2~
 Interval: 4938'-4996'.
 Times: 5"-90"-90"-120";
 Blow: IF= Strong BOB/3".
 FF= Strong BOB/1". Blow
 Back = 3"/Died in 98".

Recovery: 1980' GiP; 300' TF:
 60' GSWCM (5% G & Hvy Oil
 Scum; 85% M & 10% Wtr); 60'
 GSMCW. (10% G, Scum Oil,
 50% Wtr & 40% M); & 180;
 GSMCW (10% G, Scum Oil,
 80% Wtr, & 10% M).

Pressures:
 IH = 2409#;
 FH = 2351#;
 IF = 36-50#;
 FF = 56-150#;
 ISIP = 1492#;
 FSIP = 1397#;
 Temp = 122 degrees F.
 API RW = .141 @ 55
 degrees F.
 Chl = 65,000 Ppm.

SH GAS KICK = 124
 UNITS



Ls Crm-Ian-Brn Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Fair SG & Gas Does Flor (Lt Grn) Cht Wht-Gry Op Shp Vit Sh Char-Gry-Aqua Med-Good Odor Sli Flor (Lt Grn) No Stn SG

Ls Wht Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Cht Wht-Gry Op Shp Vit Sh Char-Gry-Aqua Faint Odor No Flor No Stn NS

30" CFS @ 4996' Ls Wht Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Cht Wht-Gry Op Shp Vit Sh Char-Gry-Aqua Faint Odor No Flor No Stn NS

LABETT SHALE 4980' (- 2126)

FORT SCOTT 4984' (- 2130)

60" CFS @ 4996' Ls Wht Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Cht Wht-Gry Op Shp Vit Sh Char-Gry-Aqua Faint Odor No Flor No Stn NS

Ls Wht Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Cht Crm-Amber Translu-Op Shp Vit (w/Wht Fos Inklus) Sh Blk Carb-Char Fissil No Odor Sli ? Min Flor No Stn NS

CHEROKEE SHALE 5000' (- 2146)

Ls Wht Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Cht Wht- Crm-Amber Translu-Op Shp Vit (w/Wht Fos Inklus) Sh Blk Carb-Char Fissil No Odor ? Min Flor No Stn NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Sh Char-Gry Fissil No Odor No Flor No Stn NS

Sh Char-Gry Fissil Ls Wht Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Grad Poor-Fair OOM Por (w/Small Ooids inpl) Poor InterOOM Por Barren Poor Develop Poor Leaching No Odor No Flor No Stn NS

SECOND CHEROKEE SHALE 5048' (- 2194)

Sh Blk Carb (w/GSG) -Char-Gry Fissil Ls Wht Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Cht Wht Op Shp Vit Chalk No Odor No Flor No Stn GSG in Blk Sh

Ls Crm-Tan-Gry Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Gry Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Sh Blk Carb (w/GSG)-Char-Gry Fissil Ls Crm-Tan-Gry Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Cht Wht Op Shp Vit Chalky No Odor No Flor No Stn GSG in Blk Sh

Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Gry Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Chalky Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Qtz Ss Gry VFGm Well Sort Poor IGrn Por Dns Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Qtz Ss Gry VFGm Well Sort Poor IGrn Por Dns Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

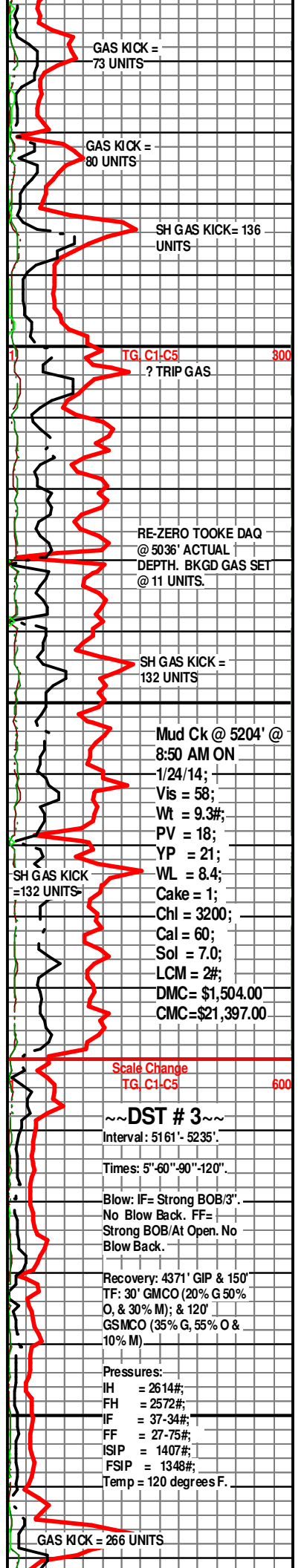
Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Qtz Ss Gry VFGm Well Sort Poor IGrn Por Dns Barren Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

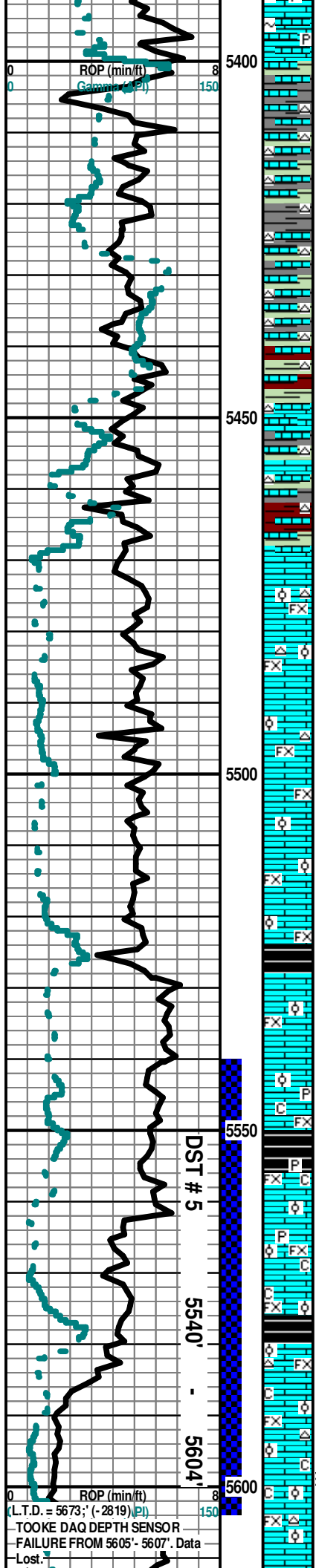
Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por (w/Pyr Inklus) Barren Cht Blk Op Shp Vit Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Barren Cht Blk Op Shp Vit Chalky Sh Blk Carb -Char-Gry Fissil No Odor No Flor No Stn NS

Sh Blk Carb -Char-Gry Fissil Ls Crm-Tan Microxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por (w/SSG & SSO) Cht Blk Op Shp Vit Chalky Fair Odor Sli Flor (Lt Grn) No Stn NS

Ls Crm-Tan Fxln Dns Micrite Grad Poor-Fair Pin-Pt Ixln Por Grad Poor-Fair OOMPor (w/SSG & SSO) Fair Leaching Fair Develop Cht Blk Op Shp Vit Chalky Fair Odor Sli Flor (Both Gas & Oil Do Flor Lt Grn) Sli Lt Brn Stn SSG & SSO





Sh Char-Lt Gry-Drk Gry- Blk Carb-Aqual Fissil (w/Pyr Inklus) Ls Wht-Crm MicroxIn Micrite Dns Barren Qtz Ss Wht Ang-SubAng FGrM Well-Sort Poor-Fair Intergran Por Clusters (with / CaCO3 Cmt Matrix) Barren Dec No Odor No Flor No Stn NS

Sh Char-Lt Gry-Drk Gry- Blk Carb-Aqua-Yell Fissil (w/Pyr Inklus) Qtz Ss Wht Ang-SubAng FGrM Well-Sort Poor-Fair Intergran Por Clusters (with / CaCO3 Cmt Matrix) Barren Ls Wht-Crm MicroxIn Micrite Dns Barren No Odor No Flor No Stn NS

Sh Varicolored Char-Lt Gry-Drk Gry- Blk Carb- Aqua-Yell- Maroon- Red Fissil Cht Tan-Yell Op Shp Vit Ls Wht-Crm MicroxIn Micrite Dns Barren Qtz Ss AA Barren No Odor No Flor No Stn NS

Sh Varicolored Char-Lt Gry-Drk Gry- Blk Carb- Aqua-Yell- Maroon- Red Fissil Cht Tan-Yell Op Shp Vit Ls Wht-Crm MicroxIn Micrite Dns Barren Qtz Ss AA Barren No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Micrite Dns Cht Tan-Yell Op Shp Vit Sh Varicolored Char-Lt Gry-Drk Gry-Blk Carb-Aqua-Yell-Maroon-Red (Wash Red) Fissil Qtz Ss AA Barren Fos (Brach) No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Micrite Dns Cht Tan-Yell Op Shp Vit Sh Varicolored Char-Lt Gry-Drk Gry-Blk Carb-Aqua-Yell-Maroon-Red (Wash Red) Fissil Qtz Ss AA Barren Fos (Brach) No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Micrite Dns Cht Tan-Yell Op Shp Vit Sh Varicolored Char-Lt Gry-Drk Gry-Blk Carb-Aqua-Yell-Maroon-Red (Wash Red) Fissil Qtz Ss AA Barren Fos (Brach) No Odor No Flor No Stn NS

MISSISSIPPIAN STE. GEN 5468' (- 2614)

Ls Wht-Crm MicroxIn Micrite Dns Grad OOLPor (with/VFn Ooids "Sandy Ls" in pl) Poor IxIn-InterOOL Por Cht Wht-Lt Grn Op Shp Vit Sh Varicolored Char --Aqua--Lt Gry-Maroon-Red- Blk Carb Fissil No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Micrite Dns Grad OOLPor (with/VFn Ooids "Sandy Ls" in pl) Poor IxIn-InterOOL Por Cht Wht-Lt Grn Op Shp Vit Sh Varicolored Char --Aqua-Lt Gry- Maroon-Red-Blk Carb Fissil No Odor No Flor No Stn N

Ls Wht-Crm MicroxIn Micrite Dns Grad OOLPor (with/VFn Ooids "Sandy Ls" in pl) Poor IxIn-InterOOL Por Cht Wht-Lt Grn Op Shp Vit Sh VaricoloredFissil No Odor No Flor No Stn NS

Ls Wht-Lt Crm- Grn FxIn OOL Por (with/Small-Med Ooids "Sandy Ls" in pl) Poor InterOOL Por Sh Varicolored AA Fissil No Odor No Flor No Stn NS

Ls Wht-Lt Crm- Gry FxIn OOL Por (with/Small-Med Ooids "Sandy Ls" in pl) Poor InterOOL Por Sh Varicolored AA Fissil No Odor No Flor No Stn NS

Ls Wht-Lt Crm- Gry FxIn OOL Por (with/Small-Med Ooids "Sandy Ls" in pl) Poor InterOOL Por Sh Varicolored AA Char --Aqua-Lt Gry Maroon-Red- Blk Carb-Purple Fissil No Odor No Flor No Stn NS

Ls Wht-Lt Crm- Gry FxIn OOL Por (with/Small-Med Ooids "Sandy Ls" in pl) Poor InterOOL Por Chalky Sh Varicolored AA (w/Pyr Inklus) Fissil No Odor No Flor No Stn NS

Ls Wht-Lt Crm- Gry FxIn OOL Por (with/Small-Med Ooids "Sandy Ls" in pl) Poor InterOOL Por Chalky Sh Varicolored AA (w/Pyr Inklus) Fissil No Odor No Flor No Stn NS

MISS. ST. LOUIS "A" 5557' (- 2703)

Ls Wht-Lt Crm- Gry FxIn OOL Por (with/Small-Med Ooids "Sandy Ls" in pl) Poor InterOOL Por Chalky Sh Varicolored Blk Carb-Char (w/Pyr Inklus) Fissil No Odor No Flor No Stn NS

Ls Wht-Lt Crm- Gry FxIn OOL Por (with/Small-Med Ooids "Sandy Ls" in pl) Poor InterOOL Por Chalky Sh Varicolored AA (w/Pyr Inklus) Fissil No Odor No Flor No Stn NS

MISS. ST. LOUIS "B" 5632' (- 2778)

30" CFS @ 5604' Ls Wht FxIn Dns Micrite AA Grad Med-Lg OOL Por (w/ Med-Lg OOids in pl) Abd "Free Loose OOids in Tray" V Friable Fair Leaching Good Develop Fair-Med Dissolu Cht Wht-Tan Op Shp Vit Chalky Fair-Med SG & SSO Good Odor No Flor (Gas & Oil Do Not Flor Lt Brn-Blk Stn Med-Good SG & SSO

60" CFS @ 5604' Ls Wht-Crm FxIn Dns Micrite AA Grad Med-Lg OOL Por (w/ Med-Lg OOids in pl) Abd "Free Loose OOids in Tray" V Friable Fair Leaching Good Develop Fair-Med Dissolu Cht Wht-Tan Op Shp Vit Fos (Brach) Chalky Fair-Med SG & SSO Good Odor No Flor (Gas & Oil Do Not Flor Lt Brn-Blk Stn Med-Good SG & SSO

75" CFS @ 5604' Ls Wht-Crm FxIn Med-Lg OOL Por (w/ Med-Lg OOids in pl) Abd V Friable Good Leaching Good Develop Fair-Med Dissolu Cht Wht-Gry-Blu Op Shp Vit Chalky Abd Med-Good SG & SSO Good-Strong Odor No Flor Lt Brn Stn Med-Good SG & SSO

ROP = 150
 LCM = 1#;
 DMC = \$ 92.00
 CMC = \$21,581.00

TG C1-C5 800

~DST #5~
 Interval: 5540' - 5604'.
 Times: 5"-60"-90"-120".
 Blow: IF= Strong BOB/3".
 No Blow Back. FF= Strong BOB/6". Built 1.5"/40" Blow Back.
 Recovery: 164' GIP; 950'
 TF: (144' GMCW (w/Tr Oil) (10% G, 50% W & 40% M.); 248' GSMCW (w/Tr Oil) (10% G, 0% W & 10% M); & 558' GW (15% G, & 85% W).
 Pressures:
 IH = 2845#;
 FH = 2732#;
 IF = 136-159#;
 FF = 198-617#;
 iSIP = 1605#;
 FSIP = 1552#;
 Temp = 138 degrees F.;
 API RW = 0.237 @ 35 degrees F.;
 Chl. = 59000 Ppm.

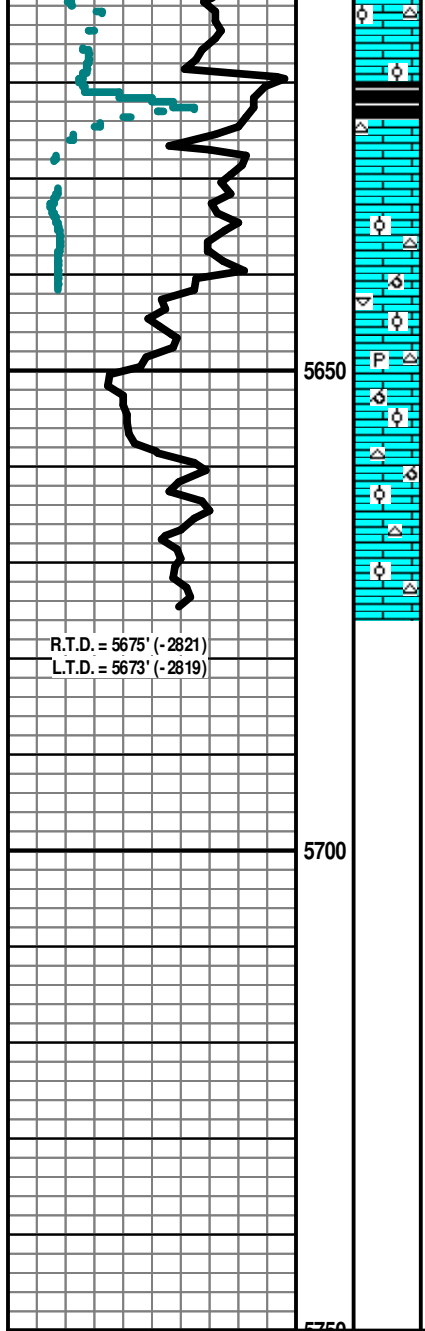
GAS TEST EXTRACTOR @ 5554' LAG DEPTH = 115 UNITS.

Mud Ck @ 5548' @ 8:45 AM ON 1/27/14;
 Vis = 55;
 Wt = 9.2#;
 PV = 17;
 YP = 21;
 WL = 7.8;
 Cake = 1;
 Chl = 1750;
 Cal = 20;
 Sol = 6.3%;
 LCM = 3#;
 DMC = \$ 1,018.20
 CMC = \$22,599.20

GAS KICK = 122 UNITS
 GAS KICK = 124 UNITS

Scale Change
 TOOKE DAQ DEPTH SENSOR FAILURE FROM 5605' - 5607'. Data Lost.
 Mud Ck @ 5604' @

ROP (min/ft)
 L.T.D. = 5673; (- 2819) Pl
 -TOOKE DAQ DEPTH SENSOR FAILURE FROM 5605' - 5607'. Data Lost.



Ls Wht-Crm FxIn Fair OOL Por (w/Small OOids in pl) Friable Fair Leaching Fair Develop Fair Dissolu Grad Dns "Sandy OOL Ls" Cht Wht-Gry Op Shp Vit Chalk Sh Varicolored Char--Aqua-Lt Gry- Blk Carb-Purple Fissil No Odor No Flor No Stn NS

Ls Wht-Crm FxIn Fair OOL Por (w/Small OOids in pl) Friable Fair Leaching Fair Develop Fair Dissolu Grad Dns "Sandy OOL Ls" Cht Wht-Gry Op Shp Vit Chalk Sh Varicolored Char--Aqua-Lt Gry- Blk Carb-Purple Fissil No Odor No Flor No Stn NS

Ls Wht-Crm FxIn Fair OOL Por (w/Small OOids in pl) Friable Fair Leaching Fair Develop Fair Dissolu Grad Dns Micrite Cht Wht-Gry Op Shp Vit Chalk Sh Varicolored Char--Aqua-Lt Gry- Blk Carb-Purple Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry FxIn Micrite Grad VFn OOL (with V Small-Med OOids in pl) Fair InterOOL/OOM Por Cht Wht Op Shp Vit Fos (Pelcc) Sh Blk Carb-Char-Gry No Flor No Odor No Stn NS

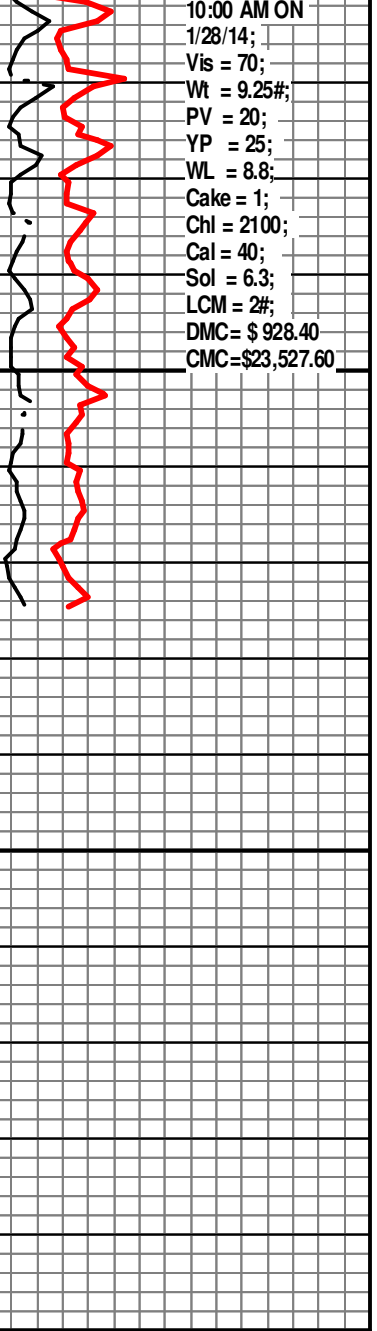
Ls Wht-Crm-Gry FxIn Micrite Grad VFn OOL (with V Small-Med OOids in pl) Fair InterOOL/OOM Por Cht Wht Op Shp Vit Fos (Pelcc) Sh Blk Carb-Char-Gry No Flor No Odor No Stn NS

60" CFS @ 5675' Ls Wht-Crm-Gry FxIn Micrite Grad VFn OOL (with V Small-Med OOids in pl) Fair InterOOL/OOM Por Cht Wht Op Shp Vit Fos (Pelcc) Sh Blk Carb-Char-Gry No Flor No Odor No Stn NS

75" CFS @ 5675' Ls Wht-Crm-Gry FxIn Micrite Grad VFn OOL (with V Small-Med OOids in pl) Fair InterOOL/OOM Por Cht Wht Op Shp Vit Fos (Pelcc) Sh Blk Carb-Char-Gry No Flor No Odor No Stn NS

Electric Logs Run: By Weatherford Logging: Array Induction Shallow Focused Electric Log ; Compact Photo Density Compensated Neutron; Microresistivity Log.

Geologist Left Location @ 10:30 AM on 1-29-14



R.T.D. = 5675' (-2821)
L.T.D. = 5673' (-2819)