



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

Well Name: JM KOEHN # 1-7(SW)
API: # 15 - 069 - 20,489 - 00 - 00
Location: SW - NW - NE - SW of SEC. 7 - 28 S. - 29 W.
License Number: KCC # 5316
Spud Date: 11/13/2014
Surface Coordinates: SPOT: 2285' FSL & 1458' FWL

Region: Gray Co., Kansas
Drilling Completed: 11/26/2014

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 2805' **K.B. Elevation (ft):** 2816'
Logged Interval (ft): sURFACE To: 5434' **Total Depth (ft):** 5434'
Formation: MISSISSIPPIAN "SALEM (SPERGEN)"
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL

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OPERATOR

Company: FALCON EXPLORATION, INC.
Address: 125 N. Market, Ste. 1252
Wichita, Kansas 67202

GEOLOGIST

Name: David P. Williams, P. G. # 88 KSBTP
Company: DW Energy. LLC (DWE)
Address: 312 N. Broadview Street
Wichita, Kansas 67208

CASING & DEVIATION

Surface Casing: Spud at 11:00 pm on 11/13/14. Drilled 12-1/4" to 1843'. Ran 44 joints of new 24#, 8-5/8" casing. Tallied 1824'. Set at 1838' KB . Welded straps on GS & bottom 3 joints, then tack welded all collars. Cemented with 460 sks A-Conn; 3% CC, 1/4# FS. Tailed with 150 sks Class C, 2% CC, 1/4#PF. Cement did circulate. Plug down at 11:30 pm on 11/15/14 Basic Energy Svcs Cementing ticket #05081. Centralizers (5) 3;8;21;31;35. Baskets (3) on joints 5;18;20. Cement fell 50'. Topped off backside with 30 sks Class C.at 5:45 pm on 11/16/14.

Deviation Survey's Taken: @ 1843' =1 1/4 degrees; @ 1922'= 1 degree; @ 3560'=1 1/4 derees; @ 4300'= 1 3/4

DSTs

~~DST # 1~~ Interval: 3484'-3560'. Times: 5"-90"- 90"-180"; Blow: IF Strong Blow- BOB/1". FF BOB Instant (w/GTS @ 4" (See Gauge Report Below).

Recovery: 197' GM (2% G & 98% M).

Pressures: IH=1623#; FH =1612#; IF=28-44#; FF=45-121#; ISIP= 862#; FSIP=854#; Temp=102 degrees F.
 Gas Flow: FF=@ 15"=8.89 Mcf; @ 22"=16.9 Mcf; @ 27"=20.3 Mcf; @ 32"=20.3 Mcf; @ 37"=25.0 Mcf; @ 42"=26.8 Mcf; @ 47" =27.6 Mcf; @ 52"=28.0 Mcf; @ 57"=28.9 Mcf; @ 62"=29.3 Mcf; @ 67"=30.2 Mcf; @ 72"=31.0 Mcf; @ 77"=31.5 Mcf; @ 82"=31.9 Mcf; @ 87" =31.9 Mcf.

~~DST # 2~~ Interval: 3582'-3618'. Times: 5"-90"-90"-180"; Blow: IF Strong Blow- BOB/8". ISIP: No Blow Back. FF:BOB/7". FSIP: V Weak BB.

Recovery:556' GIP. TF =267': 80' WM (45% Wtr & 55% M); 187'Wtr (100% Wtr).

Pressures: IH=1674#; FH=1672#; IF=15-34#; FF=39-133#; ISIP= 945#; FSIP=926#; Temp.=102 degrees F.; Chl.=76,000 Ppm; RW=.16 @ 60 degrees F..

~~DST # 3~~ Interval: 4184-4300'. Times: 5"-90"-120"-180"; Blow: IF Strong Blow- BOB/1.5". FF BOB Instant (w/GTS @ 48" (See Gauge Report Below).

Recovery: 378' TF: 253' GWM (1% G; 8% Wtr & 91% M); 125' GMW (1% G; 62% Wtr & 37% M)..

Pressures: IH=2022#; FH=1985#; IF=22-38#; FF=39-135#; ISIP= 1234#; FSIP=1230#; Temp =115 degrees F.
 Gas Flow: FF= @ 60"=3.39 Mcf; @ 70"=6.89 Mcf; @ 80"=9.45 Mcf; @ 90"=14.0 Mcf; @ 100"=17.8 Mcf; @ 110"=20.1 Mcf; @ 120"=23.3 Mcf..

~~ DST # 4~~ Interval: 4800'-4845'. Times: 5"-60"-90"-180"; Blow: IF Weak Build to 1" Blow. ISIP: No Blow Back. FF: Weak Build to 3" Blow. FSIP: No Blow Back.

Recovery: <18' GIP. TF = 45' (6% G; 5% O & 89% M). Not Enough Oil To Get Grv. (w/Lt Grn Color.)

Pressures: IH= 2317#; FH=2256#; IF=26-28#; FF=30-52#; ISIP= 1285#; FSIP=1337#; Temp.=118 degrees F..

~~DST # 5~~Interval: 5008'-5062". Times: 5"-60"-45"-90"; Blow: IF Weak Build < 1" Blow. ISIP: No Blow Back. FF: Weak Build Died/11". Flushed Tool & Had Good Surge & Blow Died (No Help). FSIP: No Blow Back.

Recovery: TF = 20' VSGOSM (w/Few Spots Oil & Gassy Bubbles).

Pressures: IH =2377#; FH=2346#; IF=12-17#; FF=18-34#; ISIP= 97#; FSIP=81#; Temp.=120 degrees F..

~~DST #6~~ Interval: 5165'-5212". Times: 5"-60"-45"-90"; Blow: IF Weak Build < 1" Blow. ISIP: No Blow Back. FF: No Blow. Flushed Tool No Blow (No Help). FSIP: No Blow Back.


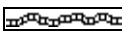
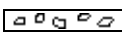
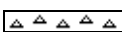
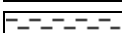
Recovery: TF = 10' GM (Gassy Bubbles).






Pressures:




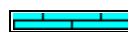

IH= 2491#; FH=22458#; IF=10-13#; FF=15-29#; ISIP=1504#; FSIP = 1419#; Temp.=119 degrees F..

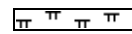

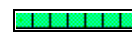
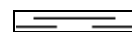
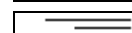
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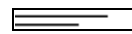



ROCK TYPES

 Anhy
 Bent
 Brec
 Cht
 Clyst

 Carb sh
 Coal
 Congl
 Dol
 Grn sh

 Gry sh
 Gyp
 Igne
 Lmst
 Meta

 Mrlst
 Red shale
 Salt
 Shale
 Shcol

 Shgy
 Sltst
 Ss
 Till

ACCESSORIES

- MINERAL**
- Anhy
 - Arggrn
 - Arg
 - Bent
 - Bit
 - Brecfrag
 - 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
- 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

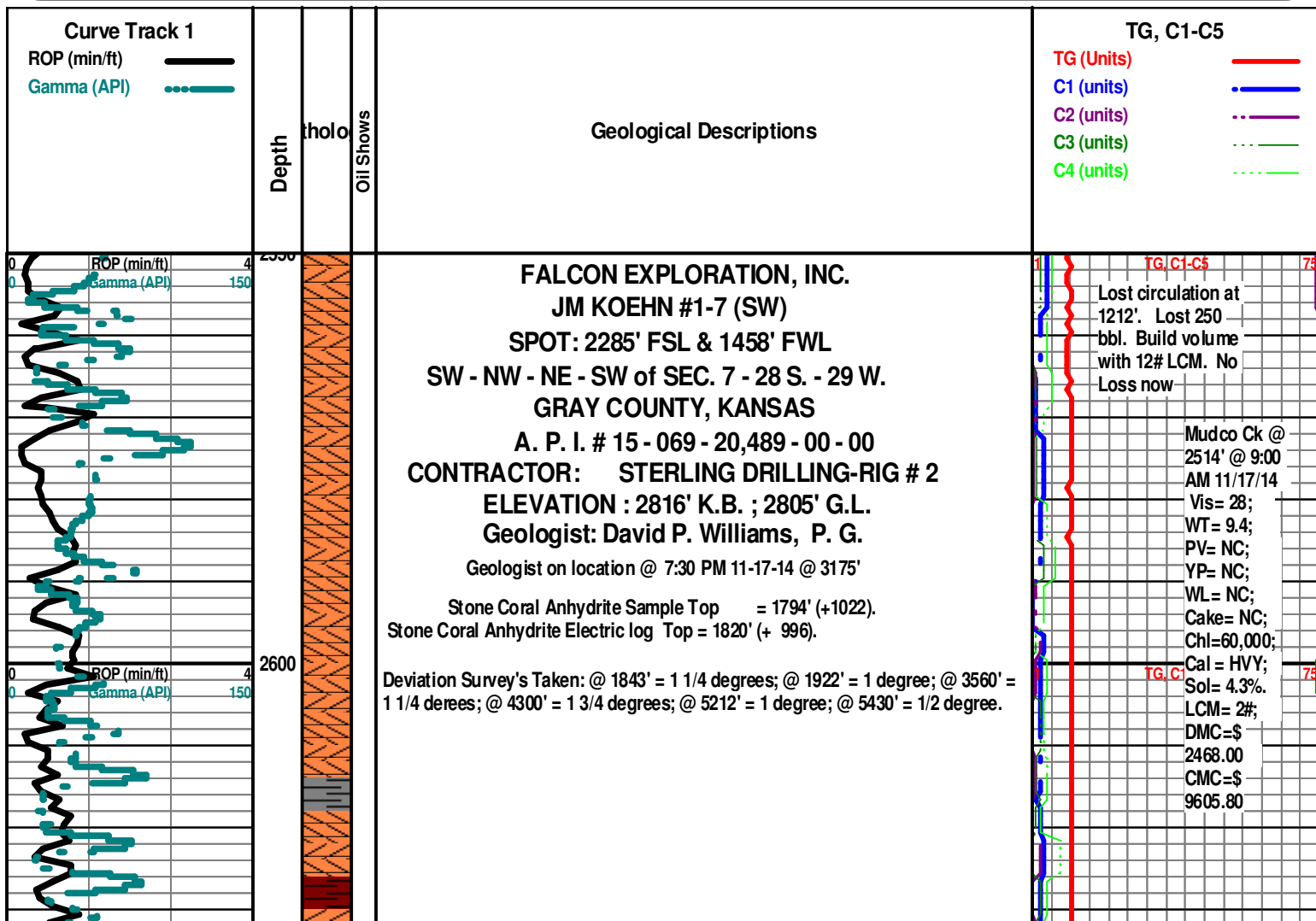
- ROUNDING**
- Rounded
 - Subrnd
 - Subang
 - Angular

- OIL SHOW**
- Gas show

- Even
- Spotted
- Ques
- Dead

- INTERVAL**
- Dst
 - Dst_alt

- EVENT**
- Rft
 - Sidewall



2650

CHASE GROUP 2666' (+ 150)

2700

KRIDER 2706' (+110)

2750

WINFIELD 2782' (+ 34)

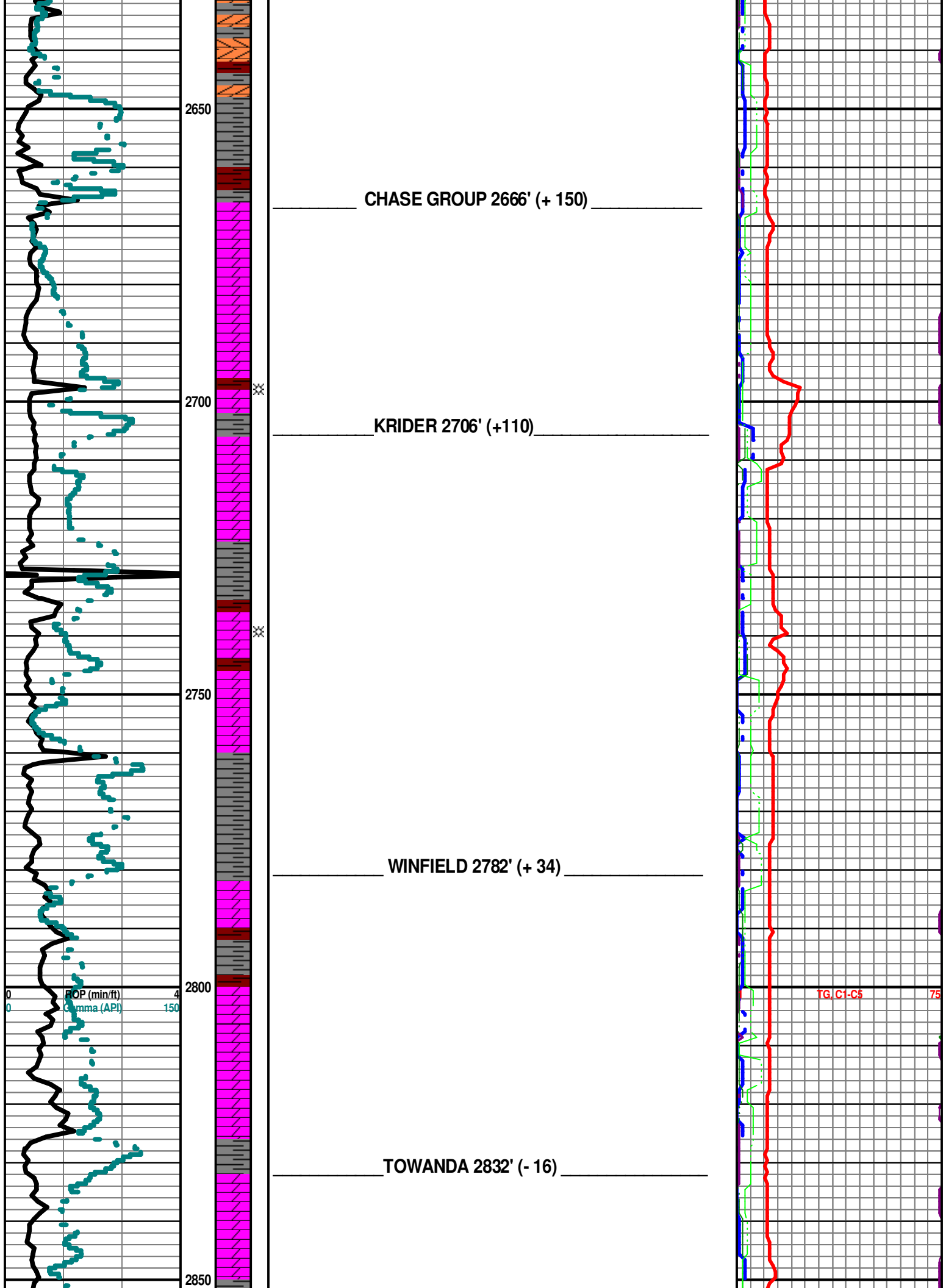
2800

TOWANDA 2832' (- 16)

2850

ROP (min/ft) 4
Gamma (API) 150

TG, C1-C5 75



FORT RILEY 2876' (- 60)

2900

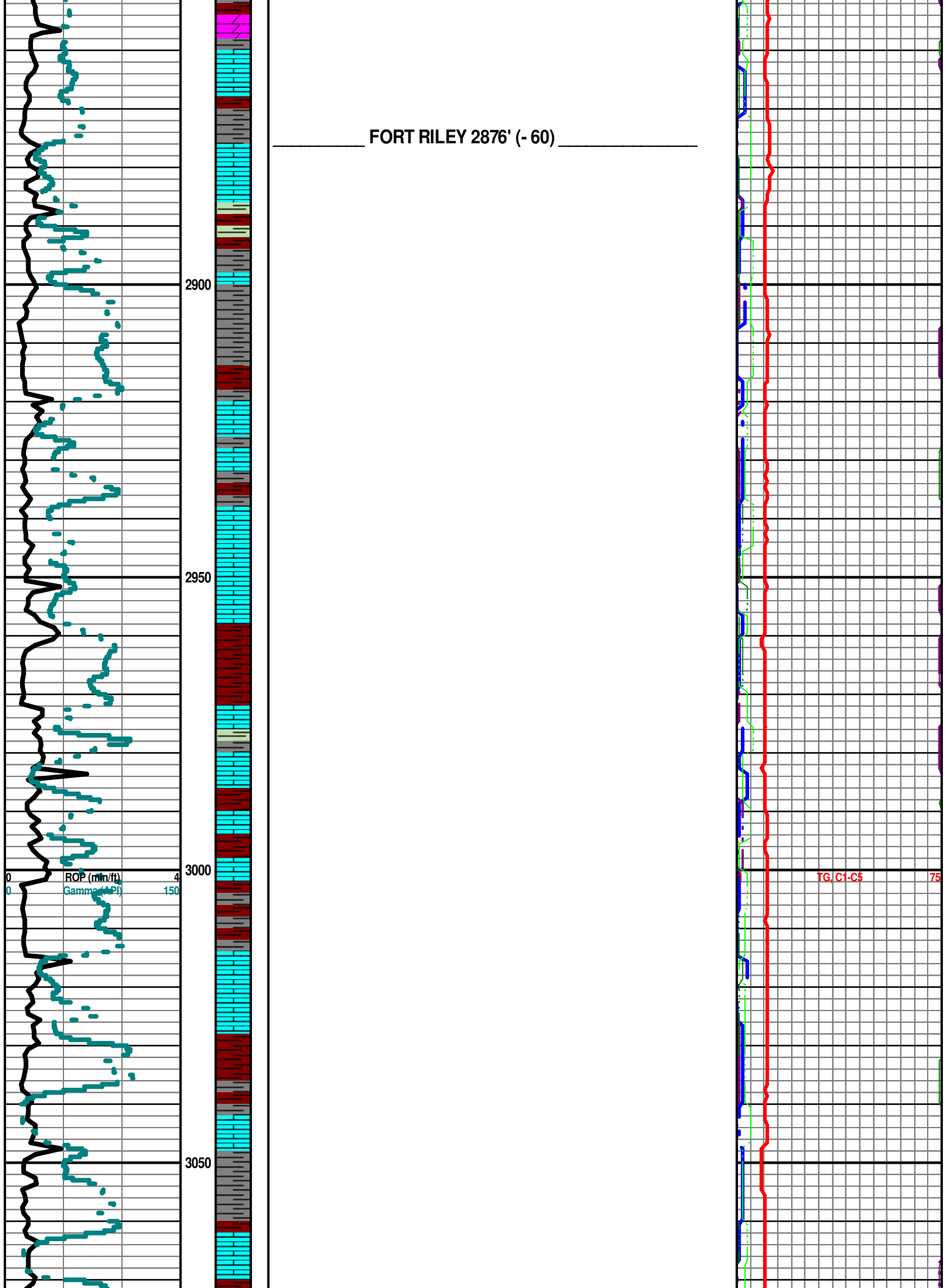
2950

3000

3050

ROP (min/ft)
Gamma (API)

TG, C1-C5 75



BADER 3078' (- 262)

COTTONWOOD 3122' (-306)

Note: All samples have been lagged to depth by calculated time.

Begin 31' Sample Examination @ 3200'.

LS Wht-Tan Fxn Fair OOM Por (w/Poor Develop Sh Red-Char-Gry- Grn V Soft
(Wash Red) No Odor No Flor No Stn NS

NEVA 3183' (- 367)

Ls Wht-Tan Fxn Inc Poor OOM Por Poor Dissolu Poor Develop Chalk Sh Red V
Abd-Char-Gry-Grn No Odor No Stn No Flor NS

DISPLACE MUD SYSTEM @ 3200'

RED EAGLE 3204' (- 388)

Ls Wht-Tan Fxn Poor OOM Por Poor Develop Chalk Sh Red-Char-Gry - Grn No
Odor No Stn No Flor NS

RE-ZERO TOOKE DAQ
@ 3176 LAG DEPTH.
BKGD GAS SET = 12
UNITS.

TG, C1-C5 78

CHANGEOUT
EXTRACTOR
FILTER @ 3240'
LAG DEPTH.

GAS TEST = 88
UNITS.

Sh Red-Char-Gry Soft-Fissil Ls Crm-Gry Fxn Poor-Fair-Med Pin-Pt lxn Grad
Micritic Chalk Abd No Odor No Stn No Flor NS

FORAKER 3270' (- 454)

3100

3150

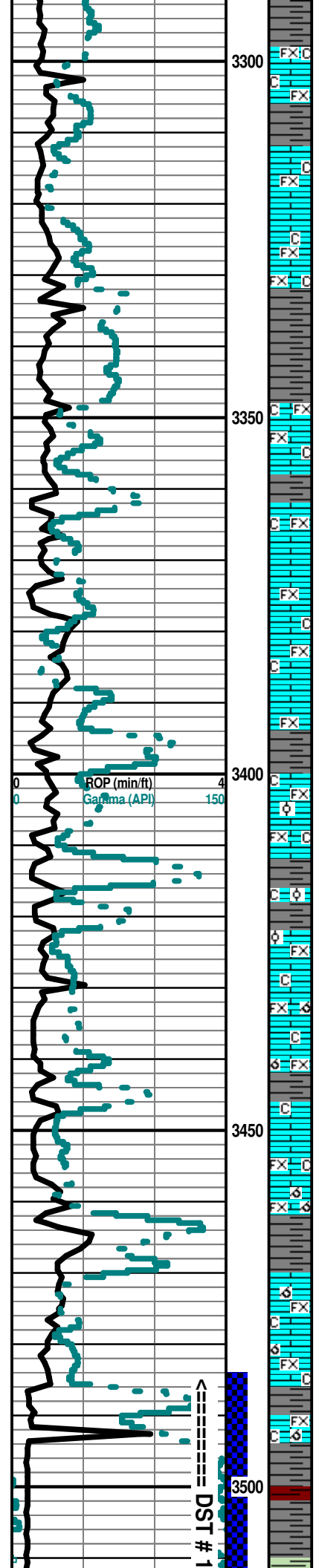
3200

3250

ROP (min/ft)
Gamma (API)

4
150

4
150



Ls Wht-Crm-Gry FxIn Poor Pin-Pt IxIn Por Chalk Sh Char-Gry-Red No Odor No Stn No Flor NS

Ls Gry FxIn Poor Pin-Pt IxIn Grad Chalk Abd Sh Char-Gry No Odor No Stn No Flor NS

Ls Gry FxIn Poor Pin-Pt IxIn Grad Dns Micrite Chalk Abd Sh Char-Gry No Odor No Stn No Flor NS

Ls Cmm-Wht FxIn Poor Small Pin-Pt OOL Por Poor-Fair Leaching Grad Micritic Fos (Fuss) Chalk Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Poor Pin-Pt IxIn Micritic Grad OOM Por Fair Develop Poor Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

ROOT SHALE 3486' (- 670)

Sh Char-Gry Fissil Ls Cmm-Gry FxIn Poor Pin-Pt IxIn Micritic Grad Poor OOM Por Poor Develop Chalk No Odor No Stn No Flor NS

Mudco Ck @ 3560' @ 11:50 AM 11/18/14
Vis 50; WT= 8.95; PV= 16; YP= 14; WL= 6.8; Cake= 1; Chl= 3300; Cal = 20; Sol= 4.2%; LCM= 2#; DMC=\$ 4824.00 CMC=\$ 14,430.70

~DST # 1~
Interval: 3484'-3560'.
Times: 5"-90" - 90"-180";
Blow: IF Strong Blow-
BOB/1". FF BOB Instant (w/GTS @ 4" (See Gauge Report Below).
Recovery: 197 GM (2% G & 98% M).
Pressures:
IH = 1623#;
FH = 1612#;
IF = 28-44#;
FF = 45-121#;
JSIP = 862#;
FSIP = 854#;
Temp = 102 degrees F.

Gas Flow: FF=
@ 15" = 8.89 Mcf;
@ 22" = 16.9 Mcf;
@ 27" = 20.3 Mcf;
@ 32" = 20.3 Mcf;

STOTLER 3516' (- 700)

30" CFS @ 3560' Ls Wht-Crm Fxln lXln Pin-Pt Por Chalk Sh Char-Gry No Odor No Stn No Flor

60" CFS @ 3560' Ls Wht-Crm-Tan-Gry Fxln Poor lXln Pin-Pt Por (w/? SSG) Grad Poor OOM Por Poor Develop Devel Fos (Crin) Chalk Sh Char- Gry No Odor Sli Stn Flor (Lt Grn) SSG

Ls Wht-Crm Fxln Micritic Grad Poor Sucrosic Pin-Pt Por Grad Dns Micrite Chalk Abd Sh Char Fissil No Odor No Stn No Flor NS

TARKIO 3590' (- 774)

30" CFS @ 3618' Ls Wht-Crm Fxln Micritic Grad Poor-Fair Sucrosic Pin-Pt Por Grad Dns Micrite Grad Tr Poor OOM Por Chalk Abd Sh Char Fissil No Odor ? Scat Poor Stn Flor (Lt Grn) SSG

60" CFS @ 3618' Ls Wht-Crm Fxln Poor Pin-Pt Sucrosic Por Grad Poor OOM Por (w/Small OOids in pl) Cht Wht-Tan Op Shp Vit Chalk Abd Sh Char Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micritic Dns Poor lXln Gran Por Chalky Sh Char- Red-Aqua Fissil No Odor No Stn Flor NS

BERN 3692' (- 876)

Ls Wht-Crm-Gry Fxln Pin-Pt Por Poor-Fair lXln Gran Por Fos (Fuss) V Abd Chalky (Abd) Sh Blk Caarb-Char Fissil No Odor No Stn No Flor NS

- @ 37" = 25.0 Mcf;
- @ 42" = 26.8 Mcf;
- @ 47" = 27.6 Mcf;
- @ 52" = 28.0 Mcf;
- @ 57" = 28.9 Mcf;
- @ 62" = 29.3 Mcf;
- @ 67" = 30.2 Mcf;
- @ 72" = 31.0 Mcf;
- @ 77" = 31.5 Mcf;
- @ 82" = 31.9 Mcf;
- @ 87" = 31.9 Mcf.

GAS KICK = 30 UNITS.

Mudco Ck @ 3616' @ 10:50 AM 11/19/14
 Vis 44; WT= 8.95; PV= 13; YP= 13; WL= 7.6; Cake= 1; Chl= 3300; Cal= 20; Sol= 4.2%; LCM= 1.5#; DMC=\$ 1000.35 CMC=\$ 15,431.05

GAS KICK = 38 UNITS.

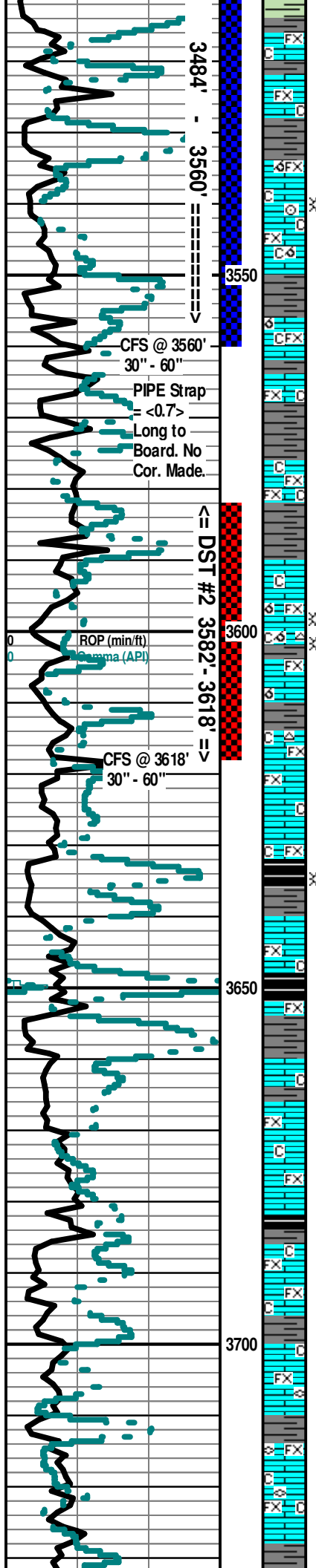
Scale Change TG, C1-C5 150

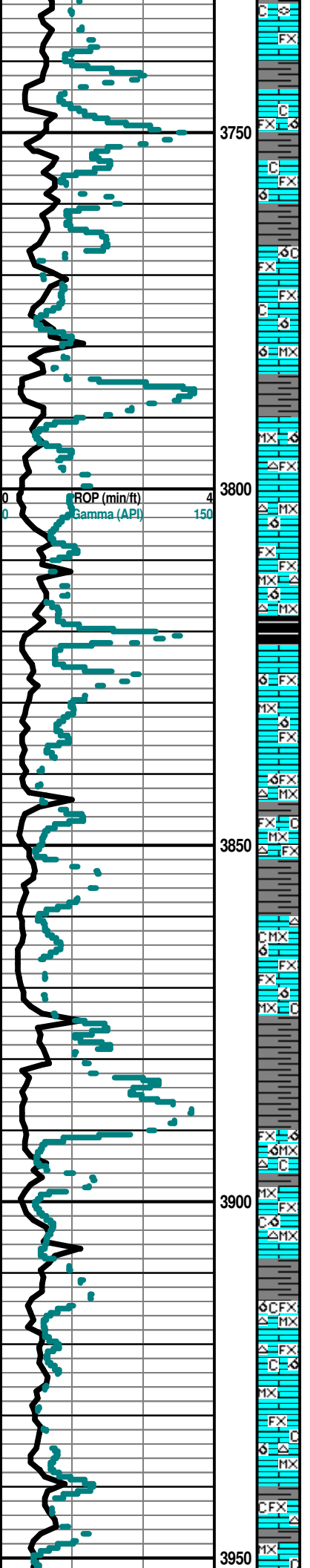
SH GAS KICK= 137 UNITS.

~ DST # 2 ~

Interval: 3582'-3618';
 Times: 5"-90"-90"-180";
 Blow: IF Strong Blow- BOB/8". ISIP: No Blow Back. FF: BOB/7". FSIP: V Weak Blow Back.
 Recovery: 556' GIP. TF = 267'; 80' WM (45% Wtr & 55% M); 187 Wtr (100% Wtr).

Pressures:
 IH = 1674#;
 FH = 1672#;
 IF = 15-34#;
 FF = 39-133#;
 ISIP = 945#;
 FSIP = 926#;
 Temp. = 102 degrees F.;
 Chl. = 76,000 Ppm;
 RW = .16 @ 60 degrees F..





Ls Crm-Tan Fxln Gran Poor Ixln Pin-Pt Por Grad Fair OOM Vug Por (Small-Med-Good Vug Leaching) Barren Chalky Sh Char-Grn Fissil No Odor No Stn Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Pin-Pt Por Grad Fair OOM Vug Por (Small-Med Vug Leaching) Barren Chalky Sh Char-Grn Fissil No Odor No Stn Min Flor NS

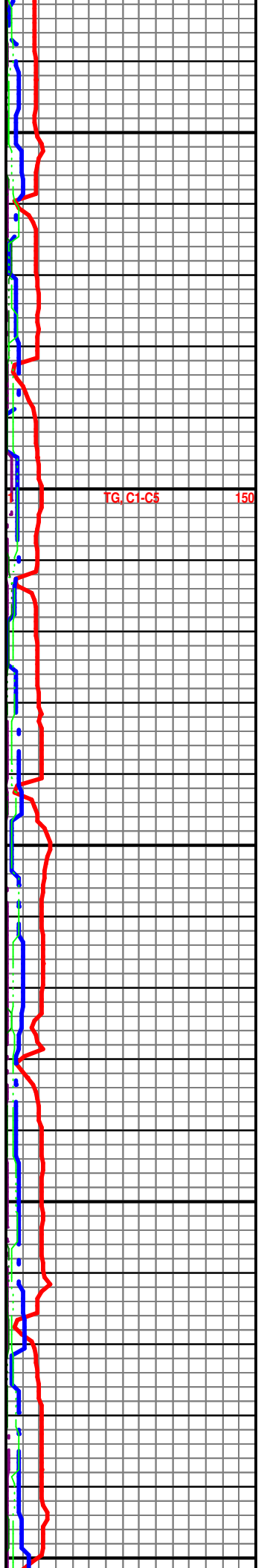
TOPEKA 3790' (- 974)

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por (Small-Med Vug Leaching) Barren Cht Wht-Tan Op Shp Vit Chalky (V Abd) Sh Blk Carb-Char-Grn Fissil No Odor No Stn Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por (Small-Med Vug Leaching) Barren Grad Micrite Cht Wht-Tan Op Shp Vit Chalky (V Abd) Sh Blk Carb-Char-Grn Fissil No Odor No Stn Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por (Small-Med Vug Leaching) Barren Grad Micrite Cht Wht-Tan Op Shp Vit Chalky (V Abd) Sh Blk Carb-Char-Grn Fissil No Odor No Stn Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por (Small-Med Vug Leaching) Barren Grad Micrite Cht Wht-Tan Op Shp Vit Chalky (V Abd) Sh Char-Grn Fissil No Odor No Stn Min Flor NS



LECOMPTON 3957' (- 1141)

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por
(Small-Med Vug Leaching) Barren Grad Micrite Cht Wht-Tan Op Shp Vit Fos (Crin)
Chalky (V Abd) Sh Blk Carb-Char-Grn Fissil No Odor No Stn Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por
(Small-Med Vug Leaching) Barren Grad Micrite Cht Wht-Tan Op Shp Vit Fos (Crin)
Chalky (V Abd) Sh Blk Carb-Char-Grn Fissil No Odor No Stn Min Flor NS

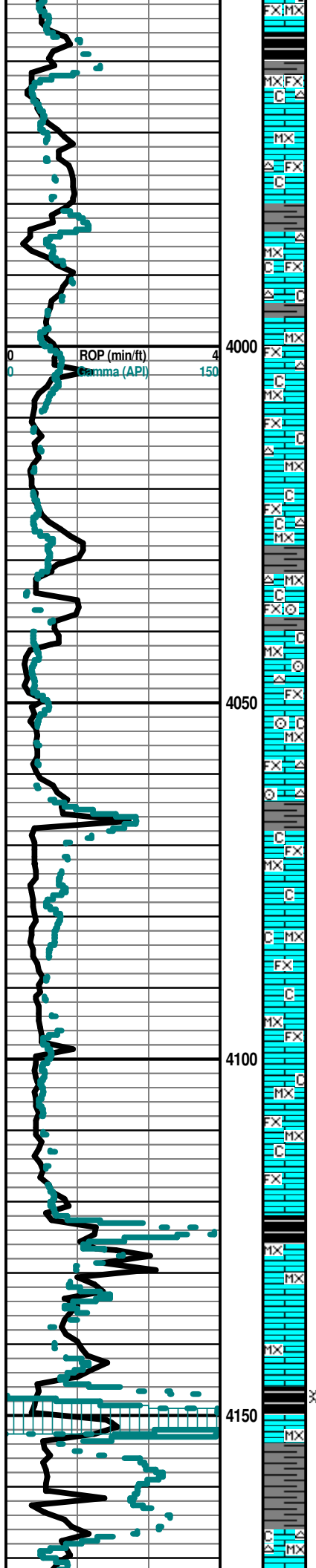
Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por
(Small-Med Vug Leaching) Barren Grad Micrite Cht Wht-Tan Op Shp Vit Fos (Crin)
Chalky (V Abd) Sh Blk Carb-Char-Grn Fissil No Odor No Stn Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por
(Small-Med Vug Leaching) Barren Grad Micrite Cht Wht-Tan Op Shp Vit Fos (Crin)
Chalky (V Abd) Sh Blk Carb-Char-Grn Fissil No Odor No Stn Min Flor NS

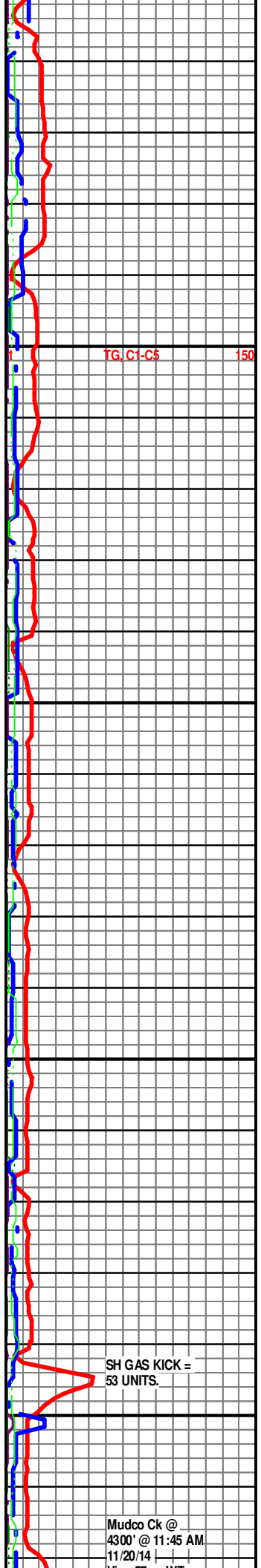
HEEBNER 4146' (- 1330)

Sh Blk Carb-Char Fissil (w/ SG) Ls Wht-Crm Microxln Dns Micrite Grad Ppt Por AA
Cht Wht Op Shp Vit Chalky No Odor No Stn SG in Blk Sh

TORONTO 4167' (- 1351)



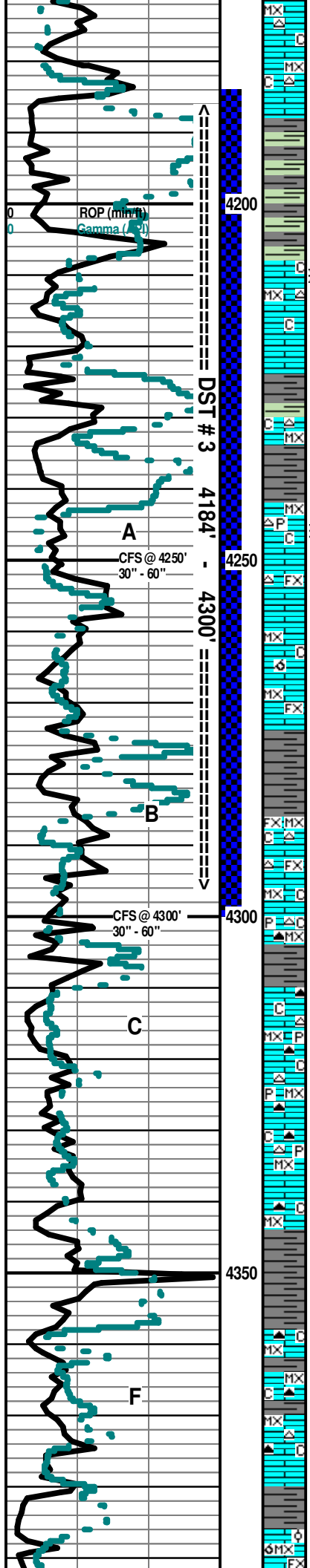
4000
4050
4100
4150



TG, C1-C5 150

SH GAS KICK = 53 UNITS.

Mudco Ck @
4300' @ 11:45 AM
11/20/14



DOUGLAS SHALE 4188' (- 1372)

Ls Wht-Crm MicroIn Dns Micrite Grad Ppt Por AA Cht Wht Op Shp Vit Chalky (V Abd) Sh Blk Carb-Char Fissil No Odor No Stn NS

DOUGLAS LIMESTONE 4208' (- 1392)

30" CFS @ 4250' Ls Wht-Crm MicroIn Dns Micrite Grad Poor Ixln Ppt Por AA Cht Wht Op Shp Vit Chalky (V Abd) Sh Char-Gry Fissil No Odor No Stn Sli ? Min Flor NS

IATAN (BROWN LIME) 4232' (- 1416)

LANSING 4242' (- 1426)

60" CFS @ 4250' Ls Wht-Crm MicroIn Dns Micrite Grad Poor Ixln Ppt Por AA Cht Wht Op Shp Vit Chalky (V Abd) Pyr Mass Sh Char-Gry Fissil ? Sli Faint Odor No Stn Sli ? Min Flor ? SSG

Ls Wht-Crm Fxln-MicroIn Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por (Small-Med Vug Leaching) Barren Grad Micrite Cht Tan Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

30" CFS @ 4300' Ls Wht-Crm-Gry Fxln-MicroIn Gran Poor Ixln Ppt Por Grad Fair OOM Vug Por (Small-Med Vug Leaching) Barren Grad Micrite Cht Wht Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

60" CFS @ 4300' Ls Wht-Crm-Gry Fxln-MicroIn Gran Poor Ixln Ppt Por Barren Grad Micrite Cht Wht-Gry Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry MicroIn Poor Ixln Por Grad Micritic (w/Pyr Includ) Cht Wht-Gry-Drk Char Op Shp Vit Chalk Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

Ls Gry-Crm-Tan MicroIn Poor Ixln Por Grad Micritic Cht Wht-Drk Char Op Shp Vit Chalk Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

Vis= 57; Wl= 9.2; PV= 16; YP= 18; WL= 8.4; Cake= 1; Cht= 2400; Cal= 20; Sol= 6.3%; LCM= 2#; DMC=\$1098.25; CMC=\$ 16,529.30

TG, CI-C5 150

GAS KICK = 155 UNITS.

~DST # 3~

Interval: 4184-4300'. Times: 5"-90"-120"-180"; Blow: IF Strong Blow- BOB/1.5". FF BOB Instant (w/GTS @ 48" (See Gauge Report Below).

GAS KICK = 49 UNITS.

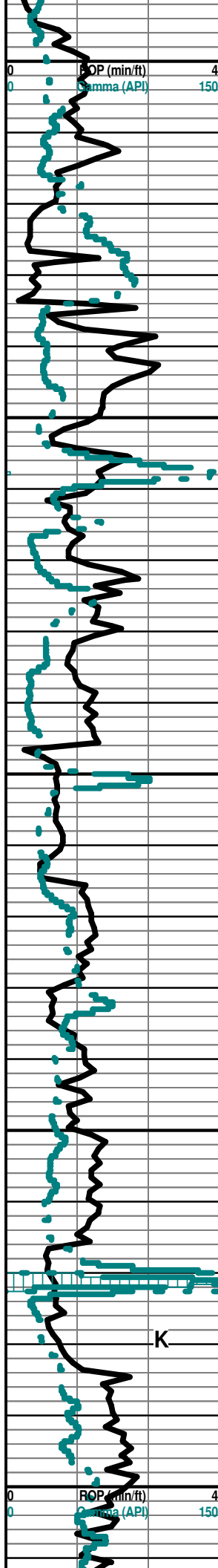
Recovery: 378' TF: 253' GWM (1% G; 8% Wtr & 91% M); 125' GMW (1% G; 62% Wtr & 37% M)..

Pressures:
 IH = 2022#;
 FH = 1985#;
 IF = 22-38#;
 FF = 39-135#;
 ISIP = 1234#;
 FSIP = 1230#;
 Temp = 115 degrees F.

@ 4280' GAS TEST : Gas Flow: FF=
 @ 60" = 3.399 Mcf;
 EXTRACTOR @ 70" = 6.89 Mcf;
 OBSERVED @ 80" = 9.45 Mcf;
 @ 90" = 14.0 Mcf;
 @ 100" = 17.8 Mcf;
 @ 110" = 20.1 Mcf;
 @ 120" = 23.3 Mcf.

TRIP GAS KICK

TOOKE DAQ @ 4341' DEPTH GEOTRAILER POWER PANEL LOST POWER. RECOVERED TOOKE DAQ DATA



Ls Wht-Crm-Tan-Gry MicroIn-FxIn Dns Micritic (w/Pyr Inclus) Grad Med-Good InterOOL/OOM (w/Med-Lg OOids & Indiv OOids in pl) Por Med-Good Leaching Med-Good Develop Barren Cht Drk Char Op Shp Vit Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Cmm-Tan-Wht MicroIn-FxIn Dns Micritic Grad Med-Good Inter- OOL/OOM (w/Med-Lg OOids & Indiv OOids in pl) Por Med-Good Leaching Med-Good Develop Barren Cht Drk Char Op Shp Vit Chalky Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Cmm-Tan-Wht MicroIn-FxIn Dns Micritic Grad Med-Good Inter- OOL/OOM (w/Med-Lg OOids & Indiv OOids in pl) Por Med-Good Leaching Med-Good Develop Barren Cht Wht-Drk Char Op Shp Vit Chalky Sh Char-Gry-Aqua Soft-Fissil No Odor No Flor No Stn NS

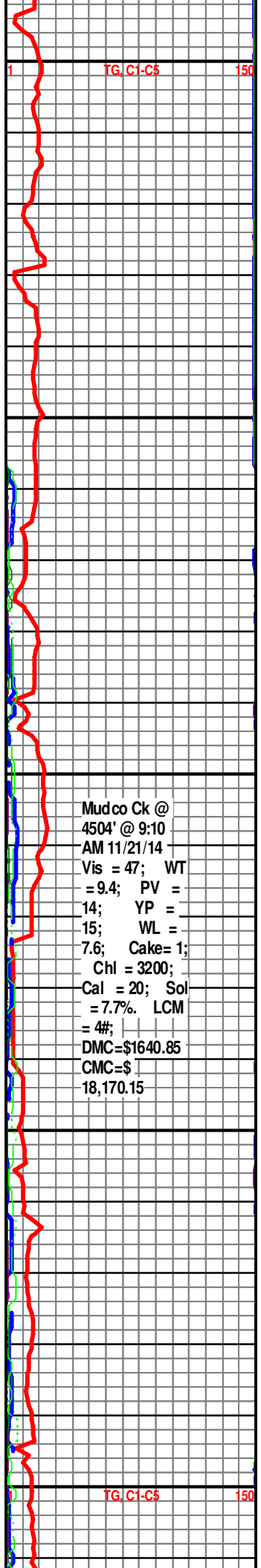
Ls Cmm-Tan-Wht MicroIn-FxIn Dns Micritic Grad Med-Good Inter- OOL/OOM (w/Med-Lg OOids & Indiv OOids in pl) Por Med-Good Leaching Med-Good Develop Barren Cht Drk Char Op Shp Vit Chalky Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

STARK 4570' (-1754)

KANSAS CITY "SWOPE" (K) 4576' (- 1760)

Ls Cmm-Tan-Wht MicroIn-FxIn Med-Good Inter OOL/OOM Por AA Med-Good Leaching Med-Good Develop Barren Dns Micritic Cht Drk Char Op Shp Vit Chalky Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Mudco Ck @
4504' @ 9:10
AM 11/21/14
Vis = 47; WT = 9.4; PV = 14; YP = 15; WL = 7.6; Cake= 1; Chl = 3200; Cal = 20; Sol = 7.7%. LCM = 4#; DMC=\$1640.85 CMC=\$18,170.15



HUSHPUCKNEY 4616' (- 1800)

SH GAS KICK = 33 UNITS.

Ls Crm-Tan-Wht MicroxIn Dns Micritic Cht Drk Char Op Shp Vit Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Gry MicroxIn Dns Micrite Grad Poor IxIn Ppt Pt Por Grad OOL (w/Small OOids in pl) Fos (Crin) Chalky (Abd) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Gry MicroxIn Dns Micrite Chalky (Abd) Sh Char-Gry Fissil No Odor No Stn No Flor NS

MARMATON 4732' (- 1619)

Ls Crm-Gry MicroxIn Dns Micrite Fos (Crin) Chalky (Abd) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Gry MicroxIn Dns Micrite Fos (Crin) Chalky (Abd) Sh Char-Gry Fissil No Odor No Stn No Flor NS

DST # 4

Interval: 4800'-4845'. Times: 5"-60"-90"-180"; Blow: IF Weak Build to 1" Blow. ISIP: No Blow Back. FF: Weak Build to 3" Blow. FSIP: No Blow Back.

Recovery: <18' GIP. TF = 45' (6% G; 5% O & 89% M). Not Enough Oil To Get Grv (w/Lt Grn Color.)

Pressures: IH = 2317#; FH = 2256#; IF = 26-28#; FF = 30-52#; ISIP = 1285#; FSIP = 1337#; Temp. = 118 degrees F..

TG, C1-C5 150

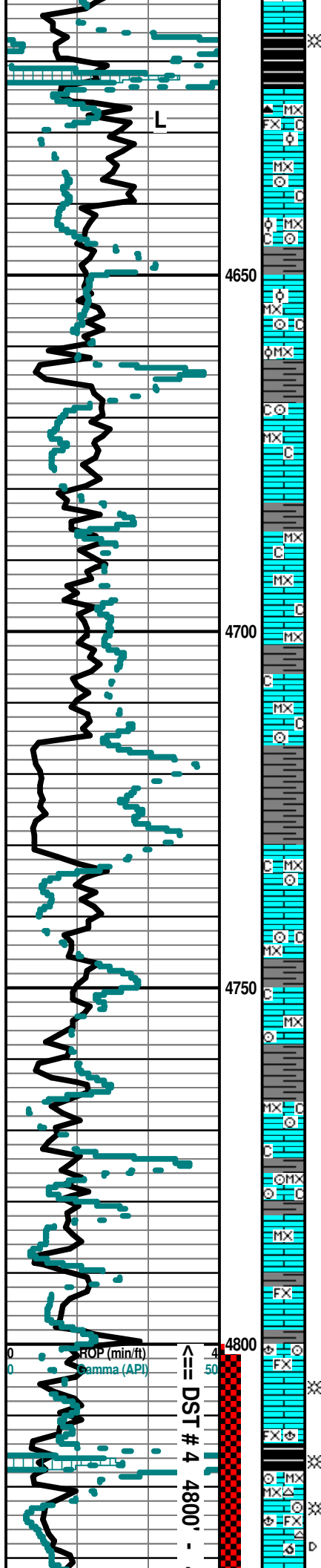
SH GAS KICK = 60 UNITS.

GAS KICK = 55 UNITS. Mudco Ck @ 4845' @ 10:10 AM 11/22/14 Vis = 50; WT

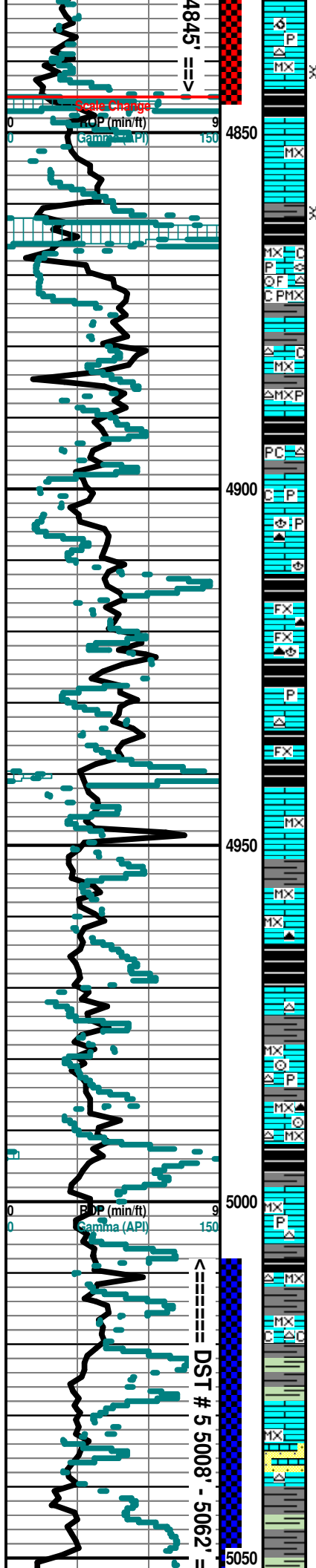
PAWNEE 4816' (- 2000)

30" CFS @ 4845' Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Fxn Chalk (Abd) Fair-Med Ppt IxIn Por (w/Med-Good SG (Gas Does Not Flor) Cht Wht Op Shp Vit Fos (Brach, Crin, Spicule) Fair Inc Odor Med Scat Flor (Lt Grn) Med SG

60" CFS @ 4845' Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Fxn Chalk (Abd) Fair-Med Ppt IxIn Por (w/Med-Good SG Gas Does Not Flor) Grad Fair OOM Por Poor Vug Leaching Cht Wht Op Shp Vit Fos



DST # 4 4800' -



90" @ 4845' Sh Blk Carb Fissil (w/SSG) Ls Wht-Crm MicroxIn Dns Micrite (w/Pyr Inklus) Grad FxIn Poor-Fair IxIn Ppt Pt Por Grad Poor OOM Por Poor Vug Leaching Cht Wht Op Shp Vit Fos (Brach, Crin) Chalky ? Faint-No Odor Tr Scat Flor (Lt Grn) AA ? SG

Begin 10' Sample Examination @ 4850'.

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Wht Op Shp Vit Chalk Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

CHEROKEE SHALE 4854' (- 2036)

Ls Cmm-Tan MicroxIn Dns Micrite Barren Cht Tan (w/Fos (Fuss) & Pyr Inklus) Op Shp Vit Chalk Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Tan-Gry (w/Fos (Crin, Spicule) Inklus) Translu-Op Shp Vit Chalk Sh Blk Carb-Char-Gry (w/Pyr Inklus) Fissil No Odor No Stn No Flor NS

Sh Char-Gry Fissil Ls Wht-Crm MicroxIn Dns Micrite Cht Tan Op Shp Vit Fos (Porifera) Pyr Mass Chalk No Odor No Stn No Flor NS

Sh Blk Carb (w/Pyr Inklus)-Char-Gry Fissil Ls Crm-Gry MicroxIn Dns Micrite Chalk No Odor No Stn No Flor NS

Ls Tan-Gry FxIn Dns Micrite Grad Poor Ppt Pt IxIn Gran Por Barren Cht Drk Gry Op Shp Vit Chalk Fos (Brach) Pyr Mass Sh Char-Gry Fissil No Odor No Stn No Flor NS

SECOND CHEROKEE SHALE 4912' (- 2096)

Ls Cmm-Tan FxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Gry-Drk Gry Op Shp Vit Chalk Fos (Brach) Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Cmm-Tan FxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Tan Op Shp Vit Chalk Fos (Brach) Pyr Mass Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

THIRD CHEROKEE SHALE 4938' (- 2122)

Ls Cmm-Tan FxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Sh Char-Gry Fissil No Odor No Stn No Flor NS

FOURTH CHEROKEE SHALE 4964' (- 2148)

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Drk Brn (w/Small OOid Inklus) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Barren Cht Wht-Tan Op Shp Vit Fos (Brach) Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Drk Gry (w Small OOid Inklus) Op Shp Vit Pyr Mass Fos (Crin) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Barren Cht Wht-Tan Op Shp Vit Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Wht Op Shp Vit Chalk Sh Char-Gry-Tr/Drab Grn (w/Pyr Inklus) Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Tan Op Shp Vit Chalk Sh Blk Carb-Char-Gry-Tr/Drab Grn-Aqua Fissil No Odor No Stn No Flor NS

MORROW SHALE 5022' (- 2206)

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Cht Crm-Tan Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad Poor Ppt Pt IxIn Por Barren Qtz Ss Brn- Gry FGrn Sub Ang-Rd-Well Rd WellSort Fair IGran Por Dns (w/Lt & Drk Brn Stn & SSG (Under Heat in Wtr) (No Glau) No Flor No Odor Cht Wht-Crm-Tan Op Shp Vit Sh Char-Gry Fissil Poor-Fair SSG Sh Char-Gry Fissil No Odor No Stn No Flor SSG

30" CFS @ 5062' Qtz Ss Brn-Gry FGrn Sub Ang-Rd-Well Rd Well Sort Fair-Med IGran Por (No Glau) Friable (w Lt & Drk Brn Stn (w/Carb Inklus) & Med-Good SG (Under Heat in Wtr) No Flor Med-Good Odor Ls Wht FxIn (w/Fos (Porifera) Inklus (w/ Lt Brn Stn & Med SG) Cht Wht Op Shp Vit Sh Char-Gry

= 9.35; PV = 16; YP = 17; WL = 8.0; Cake= 1; Chl = 2200; Cal = 20; Sol = 7.0%. LCM = 2#; DMC=\$1763.30 CMC=\$ 19,933.45

Mudco Ck @ 5062' @ 7:25 AM 11/23/14 Vis = 56; WT = 9.1; PV = 16; YP = 18; WL = 9.2; Cake= 1; Chl = 3600; Cal = 20; Sol = 5.5%. LCM = 3.5#; DMC=\$1158.00 CMC=\$ 21,091.45

~ DST # 5 ~ Interval : 5008'-5062". Times: 5"-60"-45"-90"; Blow: IF Weak Build < 1" Blow. ISIP: No Blow Back. FF: Weak Build Died/11". Flushed Tool & Had Good Surge & Blow Died (No Help). FSIP: No Blow Back. Recovery: TF = 20' VSGOSM (w/Few Spots Oil & Gassy Bubbles). Pressures: IH = 2377#; FH = 2346#; IF = 12-17#; FF = 18-34#; ISIP = 97#; FSIP = 81#; Temp. = 120 degrees F..

GAS KICK =

LOWER CHESTER SAND 5044' (- 2228)

60" CFS @ 5062' Qtz Ss Brn-Gry FGrn Ang-Sub Ang-Rd Well Sort Fair-Med IGrn Por (Tr CaCO3 Matrix) (No Glau) Friable (w/GSG & SFO (w/ Lt & Drk Brn Stn (w/Carb Inklus) & Med-Good SG (Under Heat in Wtr) No Flor Med-Good Odor Ls Wht Fxln (w/Fos (Porifera) Inklus (w/ Lt Brn Stn & Med SG) Cht Wht-Op Shp Vit Sh Char-Drk Gry Fissil Med-Good SG & SFO

MISSISSIPPIAN "STE. GEN" 5072' (- 2256)

Ls Crm-Tan-Wht-Sli Grn Microxln-Fxln Dns Micrite Grad V FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por Cht Amber-Gry-Tan Op Shp Vit Chalk Tr Qtz Ss AA (w/ Hvy Gillsontic Residue & SSG/SSO) Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Wht Microxln-Fxln Dns Micrite Grad V FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Wht Microxln-Fxln Dns Micrite Grad V FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Wht Microxln-Fxln Dns Micrite Grad V FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Wht Microxln-Fxln Dns Micrite Grad V FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn (Inc) Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Microxln-Fxln Dns Micrite Grad FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Microxln-Fxln Dns Micrite Grad FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por (Grn Size Inc w/Lg Tan OOid (1 Pc) Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Microxln-Fxln Dns Micrite Grad FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang Inklus App. 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por (Grn Size Inc w/Lg Tan OOid (1 Pc) Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Microxln-Fxln Dns Micrite Grad FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por (Grn Size Inc w/Lg Tan OOid (1 Pc) Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Microxln-Fxln Dns Micrite Grad FGrn Poor Ppt Pt Ixln Gran Por (w/Qtz Ss Clear Ang-Sub Ang (vfl 62-88 Microns) Inklus < 5% in Ls Matrix) "Sandy Gran Ls" Poor IGrn Por (Grn Size Inc w/Lg Tan OOid (1 Pc) Cht Amber-Gry-Tan Op Shp Vit Chalk Sh Char-Gry/Grn Fissil No Odor No Flor No Stn NS

MISSISSIPPIAN "ST. LOUIS" 5174' (- 2358)

Ls Wht Mostly Microxln-Fxln Dns Micrite Grad Fair-Med OOL (w/Med-Sized OOids) Por (6 Pcs-w/SG & SFO Sli-Fair Lt-Li-Drk Brn Stn) Friable Cht Wht-Gry-Peach/Org Translu-Op Shp Vit Chalk (V Abd) No Odor No Flor SSG & SSO

30" CFS @ 5203' Ls Wht Microxln-Fxln Dns Micrite Grad Fair-Med-Good OOL Por (w/Med-Lg OOids in pl w/MSG & MSFO Fair-Med Lt-Li-Drk BrnStn on OOid Edges) V Friable Cht Wht-Gry-Peach/Org Translu-Op Shp Vit Chalk (V Abd) Strong Odor Med-Good Lt Brn Stn Med-Good InterOOL Por (Good Leaching Around OOids) GSG & GSO

60" CFS @ 5203' Ls Wht Microxln-Fxln Dns Micrite Grad Fair-Med-Good OOL Por (w/Med-Lg OOids (w/? Pyr Inklus in pl & w/MSG & MSFO Fair-Med Lt-Li-Drk BrnStn on OOid Edges) V Friable Cht Wht-Gry-Peach/Org Translu-Op Shp Vit Chalk (V Abd) Strong Odor Med-Good Lt Brn Stn Med-Good InterOOL Por (Good Leaching Around OOids) GSG & GSO

60" CFS @ 5212' Ls Wht Microxln-Fxln Dns Micrite Grad Tr Only Fair OOL Por (w/Tr OOids in pl) Grad Microxln Dns Micrite Pyr Mass Chalk (V Abd) Cht Wht-Gry Translu-Op Shp Vit Chalk ? Faint Odor ? VSSG & VSSO

Ls Wht Microxln Dns Micrite Grad Poor OOL Por (w/Tr V Small OOids in pl) Tr "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Inklus (vfl 62-88 Microns) Inklus < 10% (? Ste. Gen Sluff)) Pyr Mass Chalk Cht Gry Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht Microxln Dns Micrite Grad Poor OOL Por (w/Tr V Small OOids in pl) Tr "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Inklus (vfl 62-88 Microns) Inklus < 10% AA) Pyr Mass Chalk Cht Gry Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht Microxln Dns Micrite Grad Poor OOL Por (w/Tr V Small OOids in pl) Tr "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Inklus < 5% (vfl 62-88 Microns) < 5% AA) Pyr Mass Chalk Cht Wht-Tan-Gry-Peach Translu-Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht Microxln Dns Mostly Micrite Grad Poor OOL Por (w/Tr V Small OOids in pl) Tr "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Inklus (vfl 62-88 Microns) Inklus < 5% AA) Pyr Mass Chalk Cht Wht-Tan-Gry-Peach Translu-Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht Microxln Dns Micrite Grad Poor OOL Por (w/Tr V Small OOids in pl) "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Inklus (vfl 62-88 Microns) Inklus < 5% AA) Pyr Mass Chalk Cht Wht-Tan-Gry-Peach Translu-Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht Microxln Dns Mostly Micrite Grad Poor OOL Por (w/Tr V Small OOids in pl) "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Inklus (vfl 62-88 Microns) Inklus < 5% AA) Pyr Mass Chalk Cht Wht-Tan-Gry-Peach Translu-Op Shp Vit Chalk No Odor No Stn No Flor NS

Scale Change
TG.C1-C5 75

@ 5183' LAG
DEPTH-GAS TEST @
EXTRACTOR. 132
UNITS OBSERVED.

TG.C1-C5 75
@ 5203' Clean Out Extractor
Lines.

~ ~ DST # 6 ~ ~
Interval: 5165'-5212".
Times: 5'-60" 45"-90";
Blow: IF Weak Build < 1"
Blow. ISIP: No Blow
Back. FF: No Blow.
Flushed Tool-No Blow
(No Help). FSIP: No Blow
Back.

Recovery:
TF = 10' GM (w/Gas
Bubbles).

Pressures:
IH = 2491#;
FH = 22458#;
IF = 10-13#;
FF = 15-29#;
ISIP = 1504#;
FSIP = 1419#;
Temp. = 119 degrees F.

Mudco Ck @
5235' @ 11:40
AM 11/25/14
Vis = 47; WT
= 9.3#; PV =

CFS @ 5062'
30" - 60"

====DST # 6 5165'-5212'====

ROP (min/ft)
gammaCFS @ 5203'
30" 60"

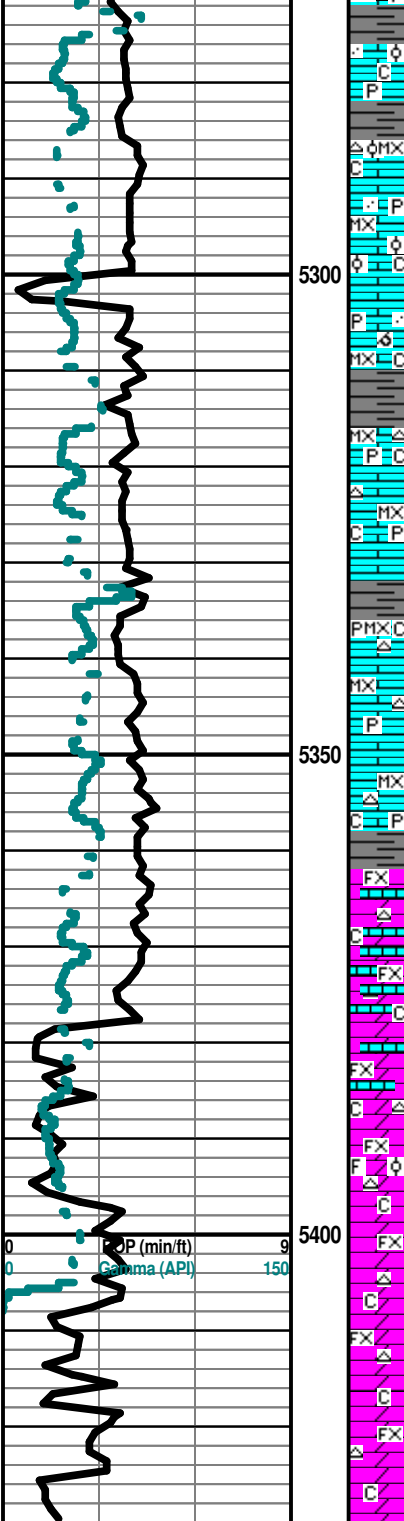
CFS @ 5212'
30" 60"

5100

5150

5200

5250



Ls Wht MicroIn Dns Mostly Micrite Grad Poor OOL Por (w/Tr V Small OOids in pl) Tr "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Includ (vfl 62-88 Microns) Includ <5% AA) Pyr Mass Chalk Cht Wht-Gry Translu-Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite Grad Tr Poor OOL Por (w/Tr V Small OOids in pl) Tr "Sandy OOL Ls" (w/Qtz Ss Clear Ang-Sub Ang Grains Includ (vfl 62-88 Microns) Includ <5% AA) Pyr Mass Chalk Cht Wht-Tan-Gry Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite Grad Tr Poor OOL Por (w/Tr V Small OOids in pl) Tr "Sandy OOL Ls" Pyr Mass Chalk Cht Wht-Gry Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite (w/Pyr Includ) Grad Tr Poor Vug OOL Por (w/Tr Lg OOM Por w/1 Pc w/Drk Blk "Dead" Stn/in OOM) NSG & NSFO Pyr Mass Chalk No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite (w/Pyr Includ) Cht Wht Op Shp Vit Chalk Inc No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite (w/Pyr Includ) Cht Wht Op Shp Vit Chalk Inc No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite (w/Pyr Includ) Cht Wht Op Shp Vit Chalk Inc No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite (w/Pyr Includ) Cht Wht Op Shp Vit Chalk Inc No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite (w/Pyr Includ) Cht Wht Op Shp Vit Chalk Inc No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Dns Mostly Micrite (w/Pyr Includ) Cht Wht Op Shp Vit Chalk Inc No Odor No Stn No Flor NS

Ls Dolo Crm-Tan-Gry FxIn Dns Micrite Grad Pin-Ppt IxIn Por Tr Poor OOL Por (w/Tr V Small OOids in pl) "Sandy OOL Ls" (w/Qtz Ss Ang-Sub Ang Grains Includ (vfl 62-88 Microns) Includ <5% AA) Cht Wht-Tan-Gry Op Shp Vit Chalk No Odor No Stn No Flor NS

Dolo/Ls FxIn Dns Micrite Grad Poor Pin-Ppt OOL Por Poor Leaching AA Cht Tan Op Shp Vit Chalky No Odor No Stn No Flor NS

MISSISSIPPIAN SALEM (SPERGEN) Ø 5378' (- 2562)

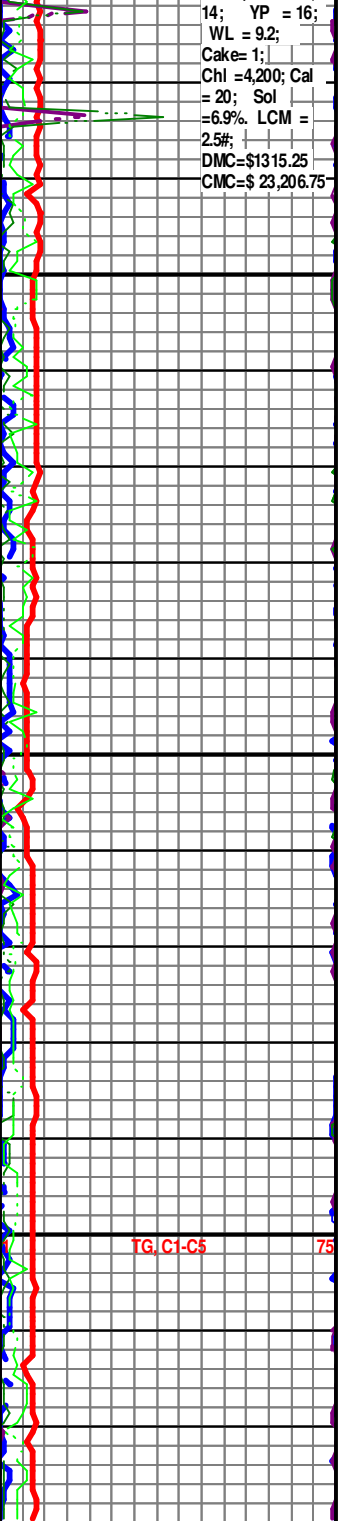
Dolo/Ls Crm-Tan-Lt Brn FxIn Fair-Med Pin-Ppt IxIn Por Grad Fair IxIn Por Barren Cht Wht- Tan Op Shp Vit Chalk No Odor No Stn No Flor NS

Dolo Brn-Tan-Crm MicroIn-FxIn Med-Good Pin-Ppt IxIn Por (Tr Vug Dissolu) Grad Fair IxIn Por Barren Grad Poor OOL Por (w/Small-Med OOids in pl) Poor Leaching Cht Wht-Tan(Banded w/? Fos Includ) Op Shp Vit Chalk No Odor No Stn No Flor NS

Dolo Brn-Tan-Crm FxIn Fair-Med Pin-Ppt IxIn Por Grad Fair IxIn Por Barren Grad Poor Sucrosic Ppt Pt Por Barren Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

30" CFS @ 5430' Dolo Brn-Tan-Crm FxIn Fair-Med Pin-Ppt IxIn Por Grad Fair IxIn Por Barren Grad Poor Sucrosic Ppt Pt Por Barren Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

60" CFS @ 5430' Dolo Brn-Tan-Crm FxIn Fair-Med Pin-Ppt IxIn Por Grad Fair IxIn Por Barren Grad Poor Sucrosic Ppt Pt Por Barren Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS



14; YP = 16;
 WL = 9.2;
 Cake= 1;
 Chl = 4.200; Cal = 20;
 Sol = 6.9%; LCM = 2.5#;
 DMC=\$1315.25
 CMC=\$ 23,206.75

TG, C1-C5 75

R.T.D. = 5430' (- 2614)
 L.T.D. = 5434' (-2618)

Electric Logs Run: By Pioneer (LogTech) Logging:
 Dual Induction; Compensated Density-Neutron; Sonic;
 Microresistivity & Cased Hole Gamma Ray-Nutron Logs.
 Geologist Left Location At : AM on 11/26/2014

5450

5500

5550

5600