



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

**Well Name:** GILBERT NICKEL #1-25 (NW)  
**API:** #15 - 081 - 22,101 - 00 - 00  
**Location:** SE-SE-SE-NW 1/4 of SEC. 25 - 28 S. - 31 W.  
**License Number:** KCC #5316  
**Spud Date:** 02/04/2015  
**Surface Coordinates:** 2500' FNL & 2390' FWL

**Region:** HASKELL CO., KS.  
**Drilling Completed:** 02/17/2014

**Bottom Hole  
Coordinates:**  
**Ground Elevation (ft):** 2842'                      **K.B. Elevation (ft):** 2855'  
**Logged Interval (ft):** 1851'              **To:** 5551'              **Total Depth (ft):** 5551'  
**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.  
**Address:** 125 North Market Street, Ste. #1252  
Wichita, Kansas 67202

**GEOLOGIST**

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

**Casing & Deviation Survey's**

**Surface Casing:** Spud at 1:45 am on 02/05/15. Drilled 12-1/4" hole to 1834'. Ran 43 joints of new 24#, 8-5/8" casing. Tallied 1815.08', set at 1829.38' KB. Welded straps on GS & bottom 3 joints, tacked all collars. Float insert top 1st collar. Baskets (3), 1824', 1008', 1092' on #1, #24 and #26 jts. Centralizers (5) 1, 3, 6, 15, 25. Cemented with 400 sks A-Conn. Tailed with 150 sks Common plus 3% CC, 2% gel, 1/4# Cellflake, .2% WCA51. Plug down at 3:15 pm on 02/06/15 by Allied. Ticket #055652. Cement did circulate to surface.

**Production Casing:** Ran 132 joints new 15.5#, 5-1/2" casing. Tally 5522'. Set at 5534' KB. Guide shoe on bottom. Float shoe latch down baffle in 1st collar. Centralizers (5) on 2, 5, 19, 25, 37. Basket (2) on 6, 9. Cemented with 50 sks A-Conn Scavenger; Tailed with 150 sks A-Conn. Plug down at 2:15 pm on 02/17/15 by Basic Energy Svcs. Cementing ticket #05248. Plugged rathole with 30 sks and rathole with 20 sks of A-Conn. Sterling reported to KCC (Robert Dickerson) on 02/18/15.

**Deviation Survey's Taken:** @ 1834' = 3/4 degree; @ 5129' = 3 degrees; & Ran Another @ 5129' = 3 degrees; @ 5200 = 3 degrees; @ 5405' = 2 degrees; @ 5550' = 2 degrees.

## DST's

~~DST # 1~~ Interval: 5014'-5129'. Times: 5"-45"-90"-180"; Blow: IF = Weak Slowly Building/ 4.5". FF= BOB/ 78.5".

Recovery: 225' GIP & 30' M (100% M w/Tr. Oil in Tool Spl.).

Pressures: IH= 2330#; FH =2367#; IF=29-34#; FF=35-46#; ISIP = 501#; FSIP=611#; Temp.=120 degrees F.

~~ DST # 2~~ Interval: 5116'-5200'. Times: 5"-45"-40"-80";

Blow: IF = Weak Surface/ 1.2". No Blow Back on ISIP. FF= Very Weak & Died/3". Flush Tool - No Help. No Blow Back on FSIP.

Recovery: 60' M (100% M in Tool Spl.).

Pressures: IH=2487#; FH =2413#; IF=30-33#; FF=36-58#; ISIP= 113#; FSIP=96#; Temp.=118 degrees F.

~~ DST # 3~~ Interval: 5366'-5405'. Times: 5"-60"-75"-150";

Blow: IF = Weak Surface/ 1/2". No Blow Back on ISIP. FF=Good/ 3" Building BOB/ 19.5". No Blow Back on FSIP.

Recovery: 570 GIP; 70' TF: 10' OCM (24% O & 76% M); 60' GHMCO (7% G & 50% O & 43% M). Tool Spl.= 87% O & 13% M.

Pressures: IH=2559#; FH=2545#; IF=25-30#; FF=35-51#; ISIP=1477#; FSIP=1448#; Temp = 125 degrees F..


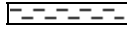

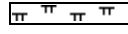
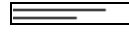
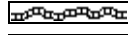




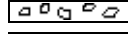







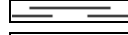

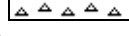


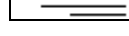
## Comments

After review of all geologic samples as examined, combined with the fluid and pressures results from all drill stem tests taken and analysis from the electric logs run, it was determined by all parties that production casing should be run in order to further evaluate this well.










































































Respectfully submitted,

David P. Williams, P.G

## ROCK TYPES

 Anhy	 Clyst	 Gry sh	 Mrlst	 Shgy
 Bent	 Coal	 Gyp	 Red shale	 Sltst
 Brec	 Congl	 Igne	 Salt	 Ss
 Carb sh	 Dol	 Lmst	 Shale	 Till
 Cht	 Grn sh	 Meta	 Shcol	

## ACCESSORIES

<b>MINERAL</b>			
 Anhy	 Hvymin	 Belm	 Pellet
 Arggrn	 Kaol	 Bioclst	 Pisolite
 Arg	 Marl	 Brach	 Plant
 Bent	 Minxl	 Bryozoa	 Strom
 Bit	 Nodule	 Cephal	
 Brecfrag	 Phos	 Coral	<b>STRINGER</b>
 Calc	 Pyr	 Crin	 Anhy
 Carb	 Salt	 Echin	 Arg
 Chtdk	 Sandy	 Fish	 Bent
 Chtlt	 Silt	 Foram	 Coal
 Dol	 Sil	 Fossil	 Dol
 Feldspar	 Sulphur	 Fuss	 Gyp
 Ferrpel	 Tuff	 Gastro	 Ls
 Ferr	<b>FOSSIL</b>	 Oolite	 Mrst
 Glau	 Algae	 Oomold	 Sltstrg
 Gyp	 Amph	 Ostra	 Ssstrg
		 Pelec	
			<b>TEXTURE</b>
			 Boundst
			 Chalky
			 Cryxln
			 Earthy
			 Finexln
			 Grainst
			 Lithogr
			 Microxln
			 Mudst
			 Packst
			 Wackest

**OTHER SYMBOLS**

- POROSITY**
- [E] Earthy
  - [B] Fenest
  - [F] Fracture
  - [X] Inter
  - [A] Moldic
  - [O] Organic
  - [P] Pinpoint

- Vuggy
- SORTING**
- [W] Well
  - [M] Moderate
  - [P] Poor

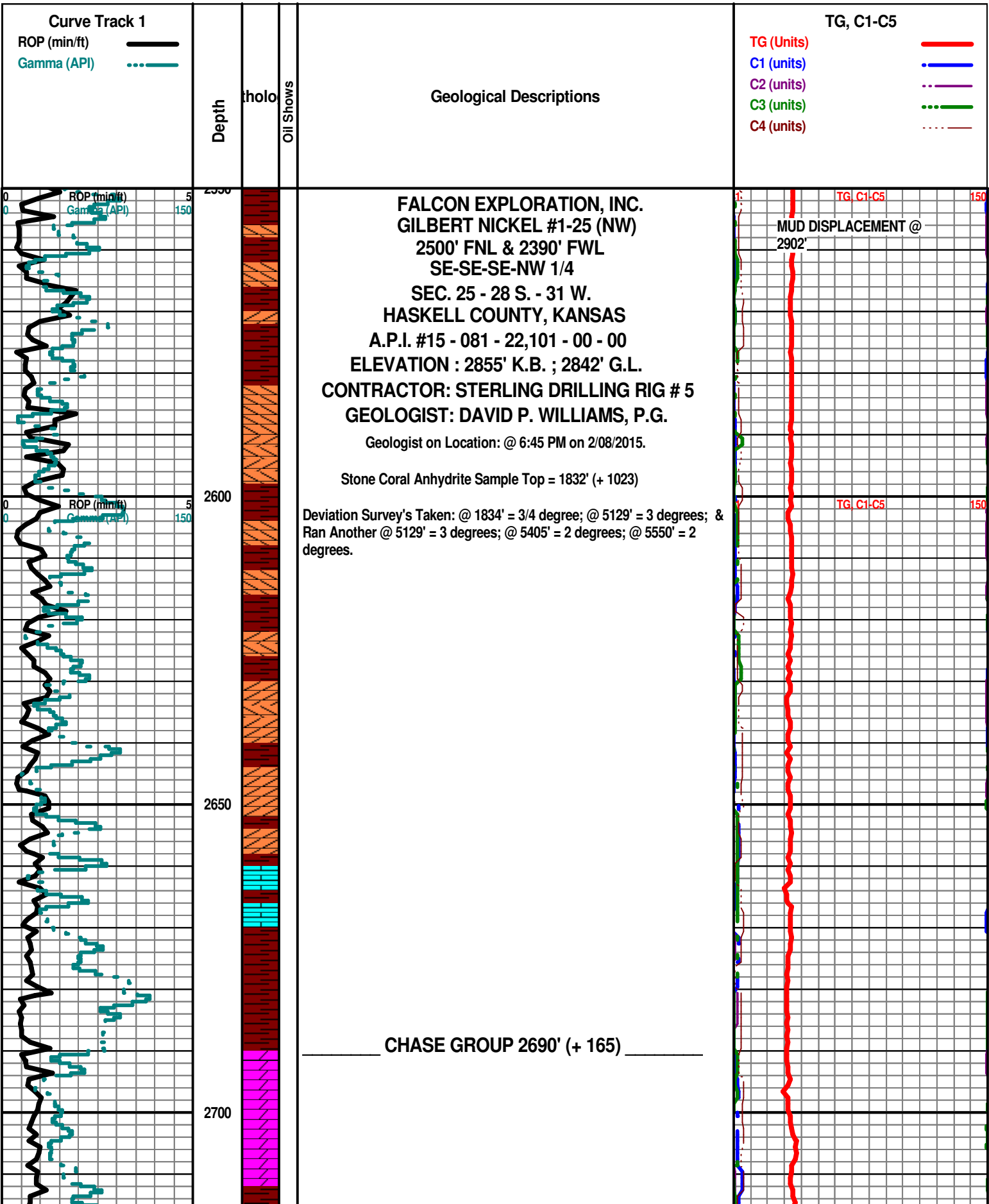
- ROUNDING**
- [R] Rounded
  - [r] Subrnd
  - [a] Subang
  - [A] Angular

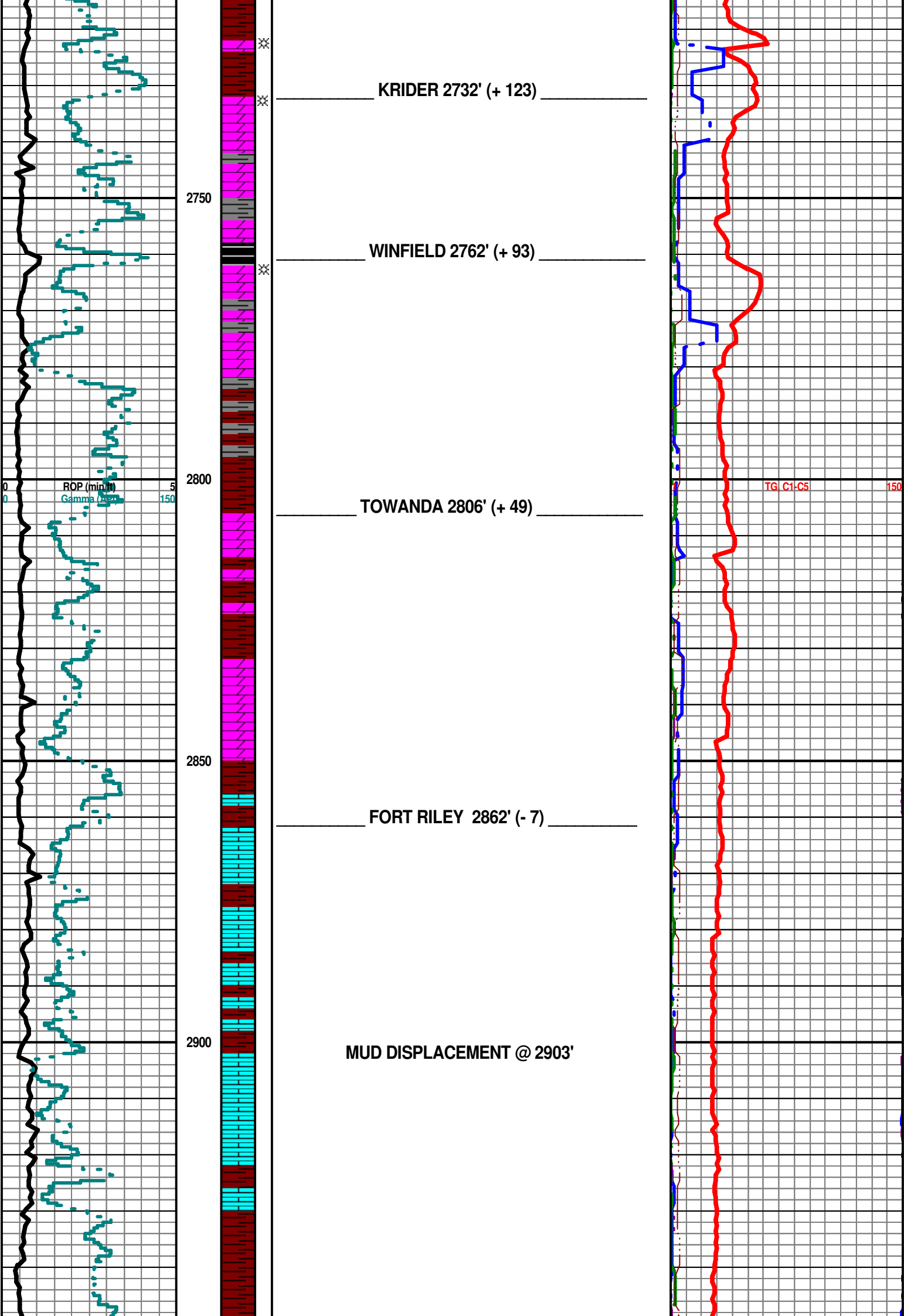
- [●] Even
- [◐] Spotted
- [◑] Ques
- [◒] Dead

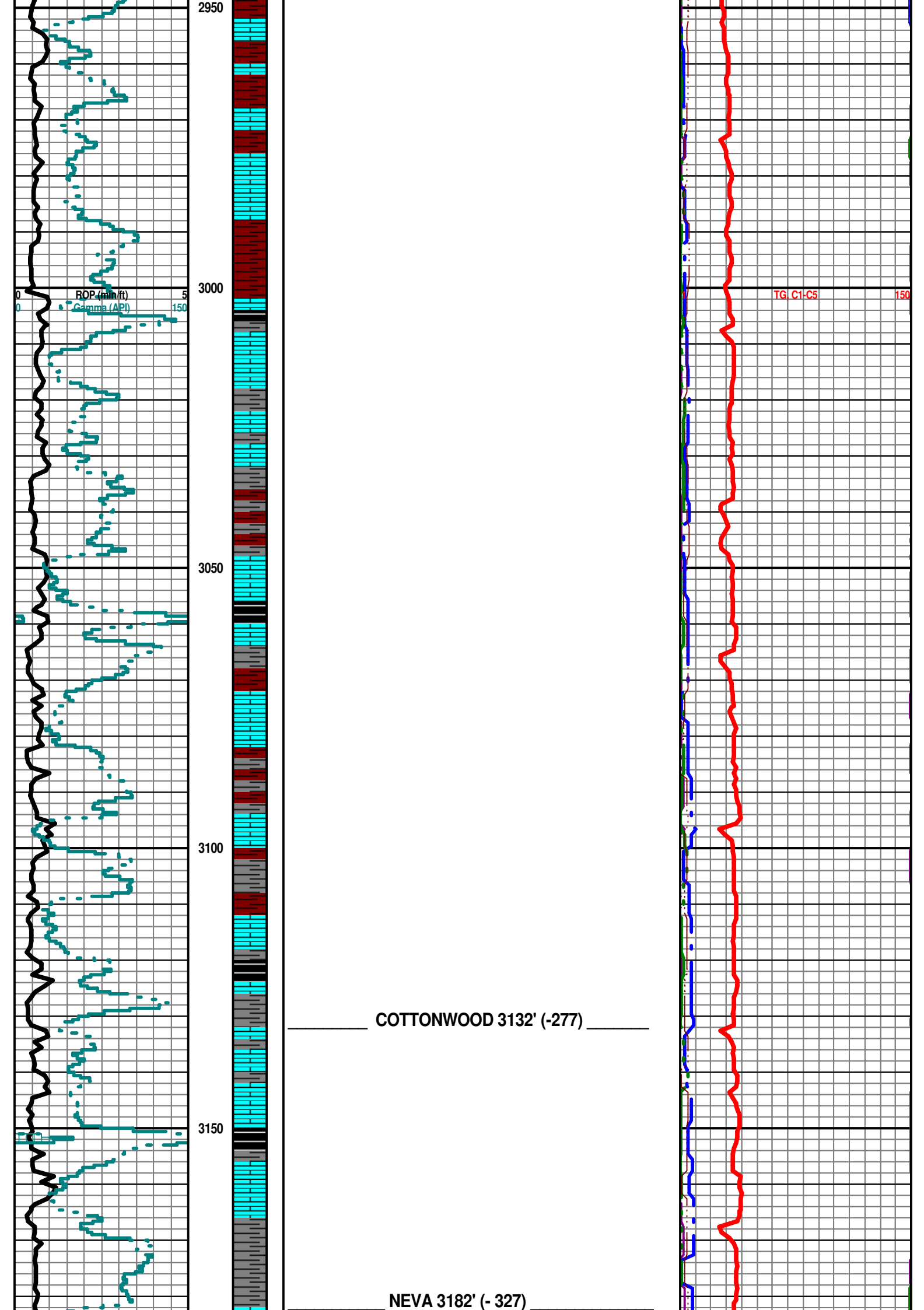
- EVENT**
- [▽] Rft
  - [◼] Sidewall

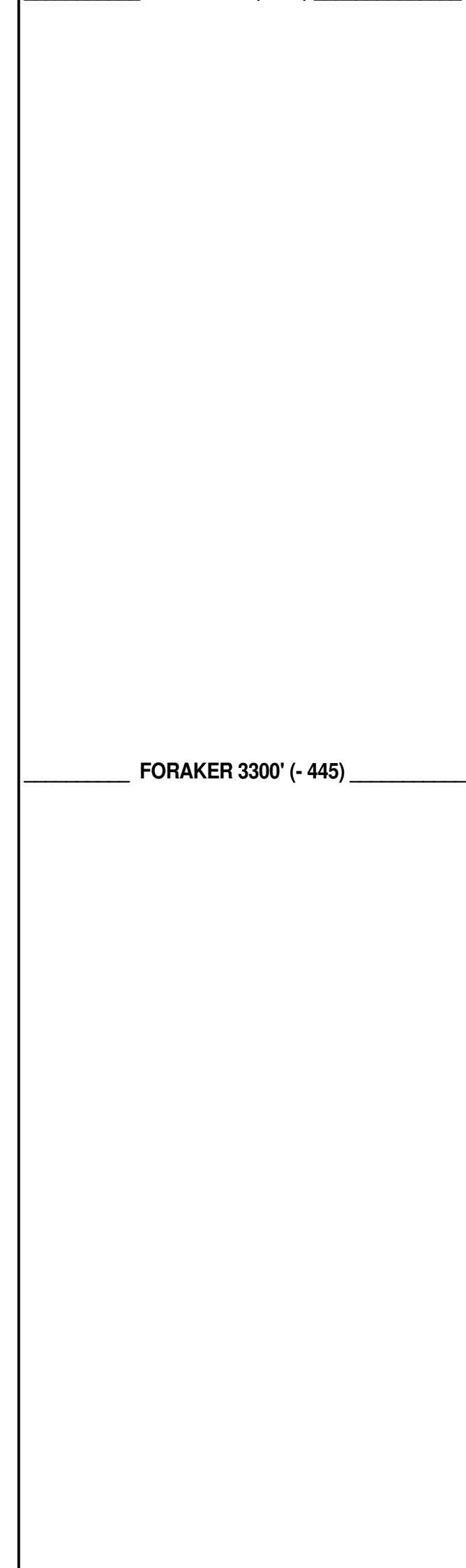
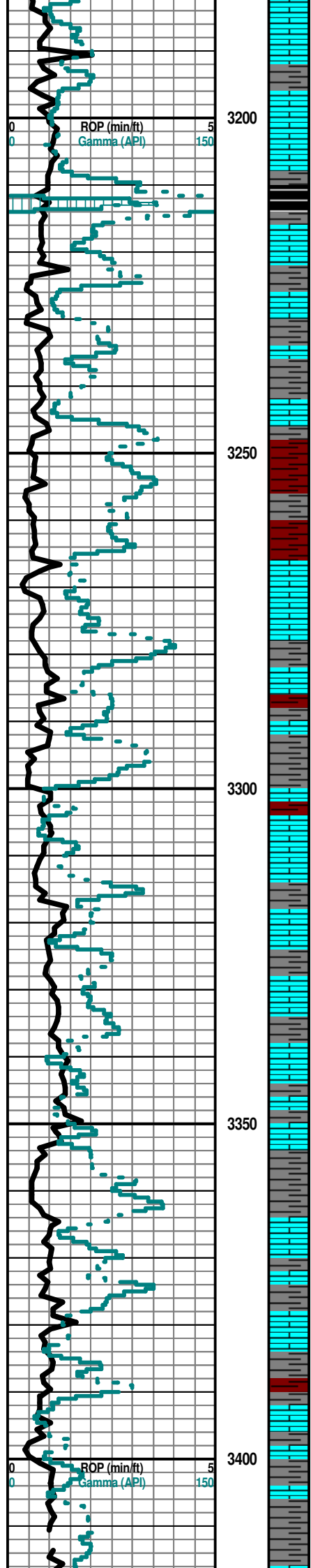
- OIL SHOW**
- [\*] Gas show

- INTERVAL**
- [■] Dst
  - [■] Dst\_alt

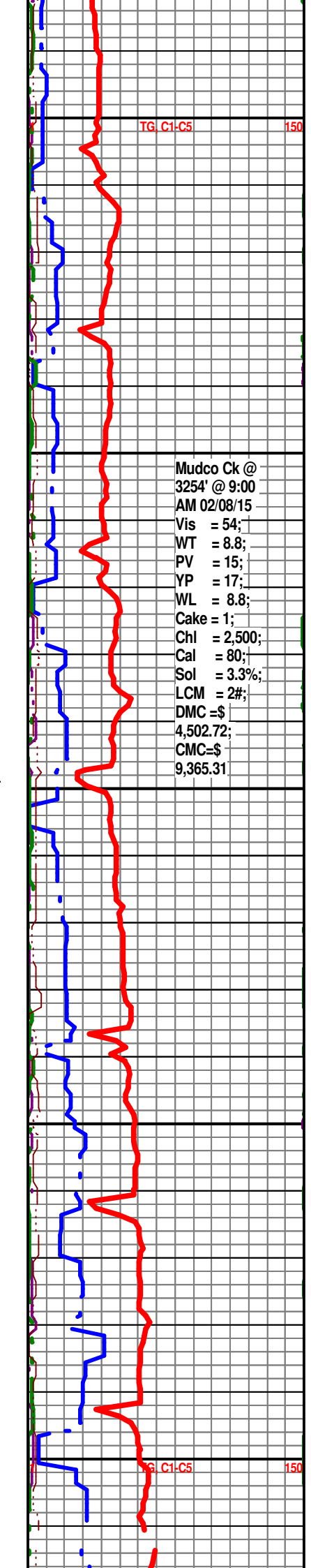








FORAKER 3300' (- 445)



Mudco Ck @  
3254' @ 9:00  
AM 02/08/15  
Vis = 54;  
WT = 8.8;  
PV = 15;  
YP = 17;  
WL = 8.8;  
Cake = 1;  
Chl = 2,500;  
Cal = 80;  
Sol = 3.3%;  
LCM = 2#;  
DMC = \$  
4,502.72;  
CMC = \$  
9,365.31

FALL CITY 3425' (- 570)

3450

3500

3550

3600

3650

ROOT SHALE 3522' (- 667)

STOTLER 3539' (- 684)

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

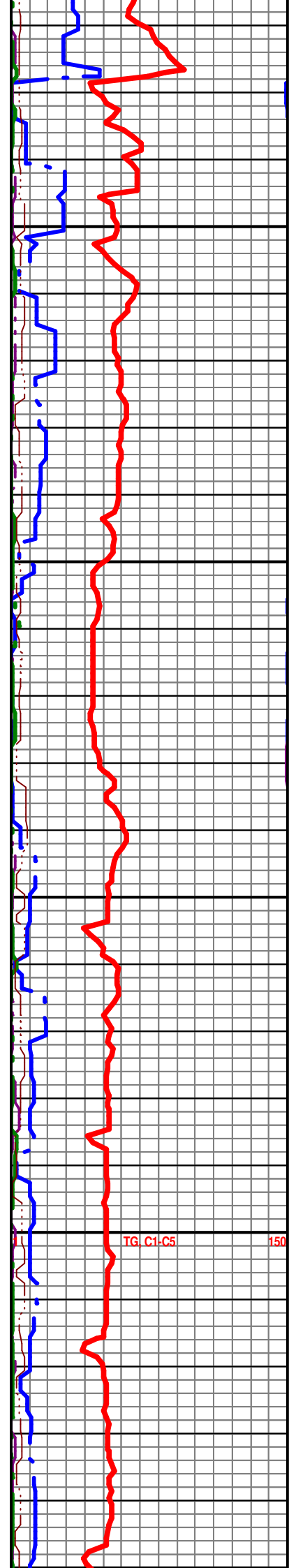
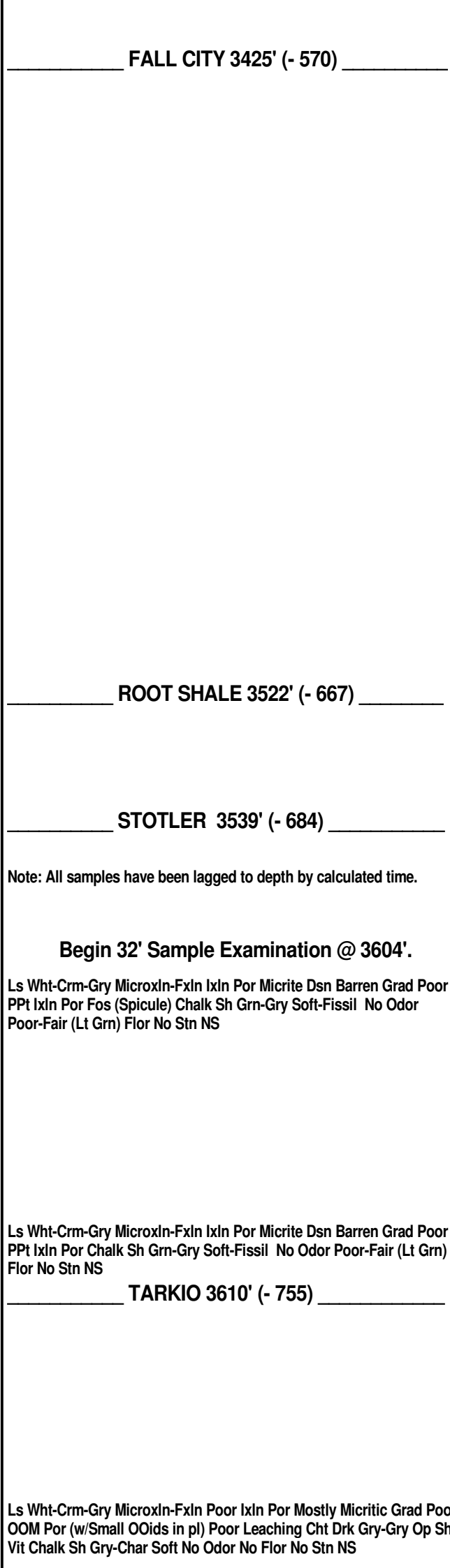
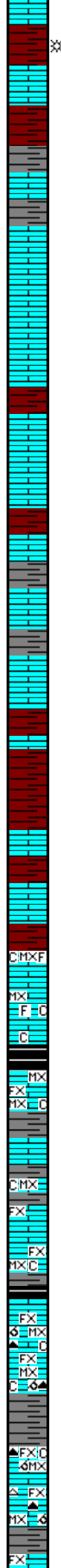
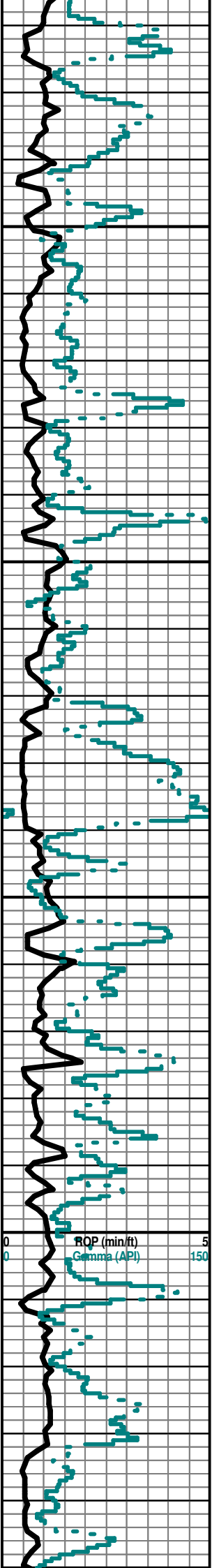
**Begin 32' Sample Examination @ 3604'.**

Ls Wht-Crm-Gry MicroIn-FxIn IxIn Por Micrite Dsn Barren Grad Poor  
PPT IxIn Por Fos (Spicule) Chalk Sh Grn-Gry Soft-Fissil No Odor  
Poor-Fair (Lt Grn) Flor No Stn NS

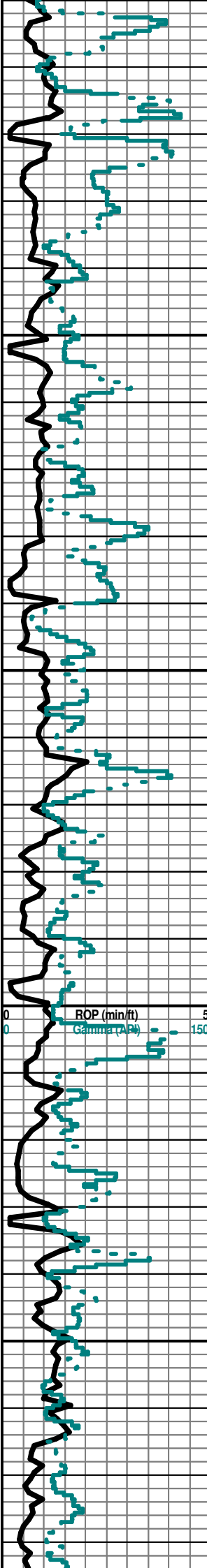
Ls Wht-Crm-Gry MicroIn-FxIn IxIn Por Micrite Dsn Barren Grad Poor  
PPT IxIn Por Chalk Sh Grn-Gry Soft-Fissil No Odor Poor-Fair (Lt Grn)  
Flor No Stn NS

TARKIO 3610' (- 755)

Ls Wht-Crm-Gry MicroIn-FxIn Poor IxIn Por Mostly Micritic Grad Poor  
OOM Por (w/Small OOids in pl) Poor Leaching Cht Drk Gry-Gry Op Shp  
Vit Chalk Sh Gry-Char Soft No Odor No Flor No Stn NS



TG, C1-C5 150



Ls Wht-Gry FxIn Poor IxIn Ppt Por Grad Micritic Dsn Barren Cht Gry Op Shp Vit Chalk Sh Gry-Char Fissil No Odor No Flor No Stn NS

**BERN 3689' (- 834)**

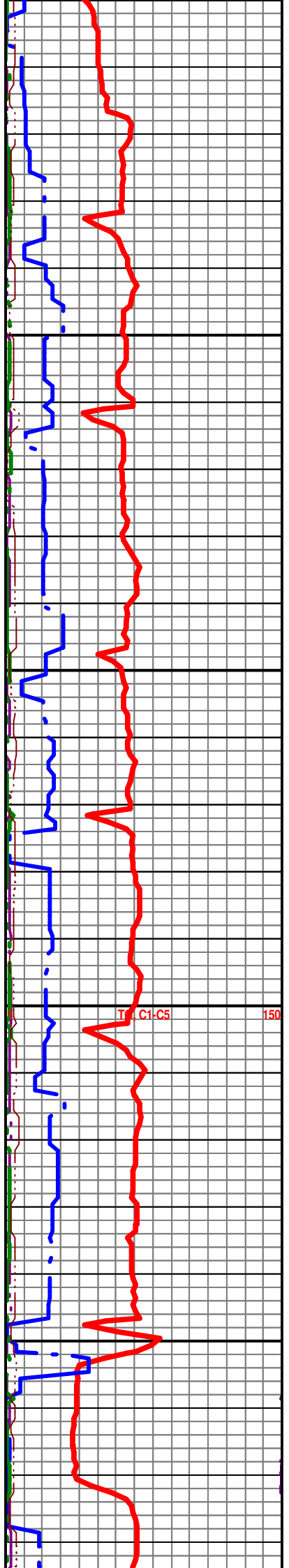
Ls Wht-Crm-Gry MicroIn-FxIn Poor IxIn PorGrad Micritic Cht Wht-Brn Op Shp Vit Chalk Sh Gry-Char Soft No Odor No Flor No Stn NS

Sh Blk Carb-Gry Fissil Fissil Ls Wht-Crm-Gry MicroIn-FxIn Poor IxIn Por Grad Micritic Cht Wht Op Shp Vit Chalk Sh Gry-Char Soft No Odor No Flor No Stn NS

**TOPEKA 3808' (- 953)**

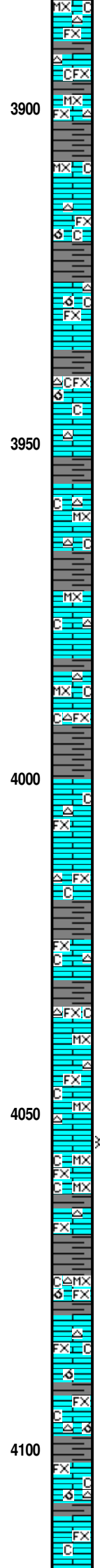
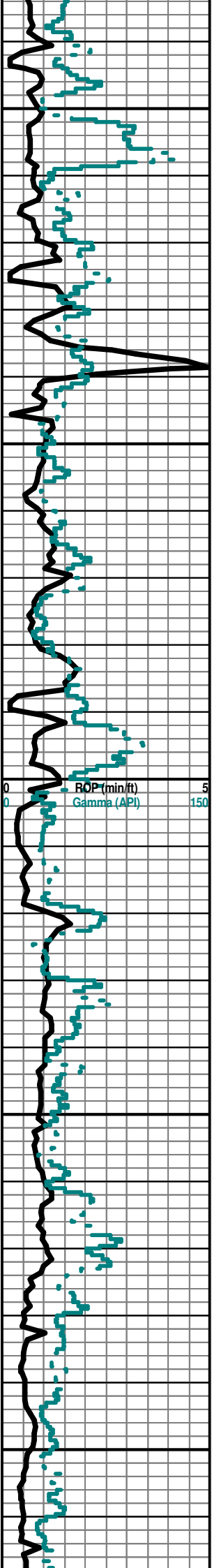
Ls Wht-Crm FxIn Poor IxIn Por Grad Micritic Dsn Barren Cht Wht-Gry Op Shp Vit Chalk Sh Char-Red Fissil Soft No Odor No Flor No Stn NS

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



T C1-C5 150





Ls Wht-Crm MicroIn-FxIn IxIn Por Micritic Dsn Barren Cht Wht Op Shp Vit Chalk Sh Char-Gry No Odor No Flor No Stn NS

Ls Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Grad Poor OOM Por (Poor Leaching Poor Develop Chalk Cht Gry Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Flor No Stn NS

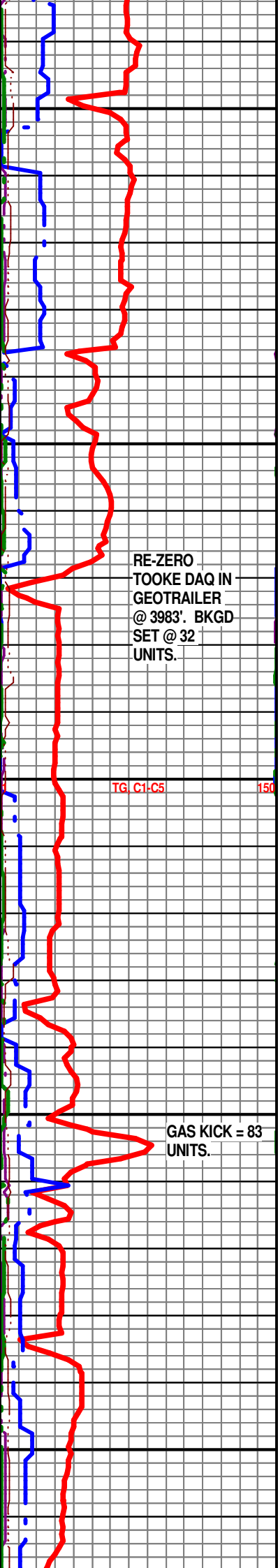
Ls Wht-Crm-Gry MicroIn Dns Micrite Grad Poor Ppt IxIn Por Cht Tan Op Shp Vit Chalk Sh Gry-Char-Aqua Soft-Fissil No Odor No Flor No Stn NS

**LeCOMPTON 4000' (- 1145)**

Ls Wht-Crm-Gry FxIn Dns Micrite Grad Poor Ppt IxIn Por Cht Drk Gry-Tan Translu-Op Shp Vit Chalk Sh Blk Carb-Gry Char Soft- Fissil No Odor No Flor No Stn NS

Ls Crm-Gry MicroIn-FxIn Dns Micrite Grad Poor-Fair IxIn Por Cht Tan Op Shp Vit Chalk Sh Char-Grn Fissil No Odor No Stn No Flor NS

Ls Crm-Gry FxIn Dns Micrite Grad Poor-Fair IxIn Por Grad Poor OOM Por Barren Cht Tan-Drk Gry Op Shp Vit Chalk Sh Char-Grn Fissil No Odor No Stn No Flor NS



RE-ZERO  
TOOKE DAQ IN  
GEOTRAILER  
@ 3983'. BKGD  
SET @ 32  
UNITS.

TG C1-C5 150

GAS KICK = 83  
UNITS.

QUEEN HILL SHALE 4126' (- 1271)  
OREAD 4130' (- 1275)

HEEBNER 4154' (- 1299)

4210' Wet & Dry Spl. Sh Blk Carb-Gry-Char Soft-Fissil Ls Wht-Crm-Gry  
FxIn Dns Micrite Grad Poor Ppt IxIn Por Cht Wht Op Shp Vit Chalk No  
Odor No Flor No Stn SG in Blk Sh

SH GAS  
KICK = 69  
UNITS.

TORONTO 4176' (- 1321)

DOUGLAS 4190' (- 1335)

? RE-CYCLE  
GAS KICK =  
71 UNITS.

4242' Wet & Dry Spl. Sh Blk Carb-Char-Drab Grn-Aqua-Gry Soft-Fissil Ls  
Wht-Gry MicroIn-FxIn Dns Micrite Poor IxIn Ppt Por Grad Poor OOM  
Por Poor Leaching Poor Develop Chalky Cht Wht Op Shp Vit No Odor  
No Stn No Flor NS

TG C1-C5 150

GAS KICK =  
65 UNITS.

Ls Crm-Gry FxIn Dns Micrite Poor IxIn Por Chalk Cht Wht Translu-Op  
Shp Vit Sh Char-Drab Grn/Gry Fissil No Odor No Stn No Flor NS

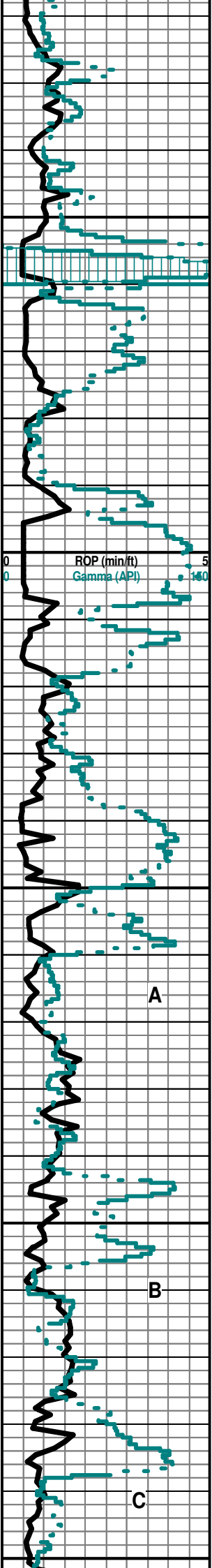
IATAN (BROWN LIME) 4250' (- 1395)

LANSING 4260 (- 1405)

Ls Crm-Gry FxIn Dns Micrite Poor IxIn Por Cht Gry Translu-Op Shp Vit  
Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

Sh Char-Gry Fissil Ls Crm-Gry MicroIn-FxIn Dns Micritic Grad Poor-Fair  
IxIn Ppt Por Cht Wht Op Shp Vit Chalk Wht No Odor No Stn ? Sii Min  
Flor NS

Ls Wht-Crm MicroIn-FxIn Poor IxIn Por Cht Wht-Yell-Gry-Drk Gry On



4150

4200

4250

4300

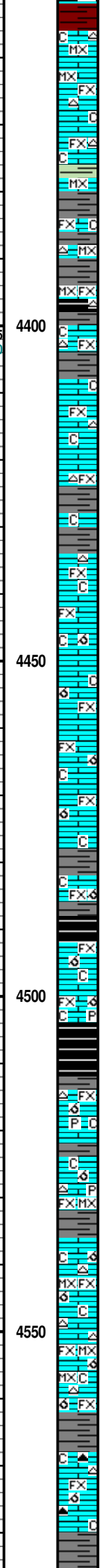
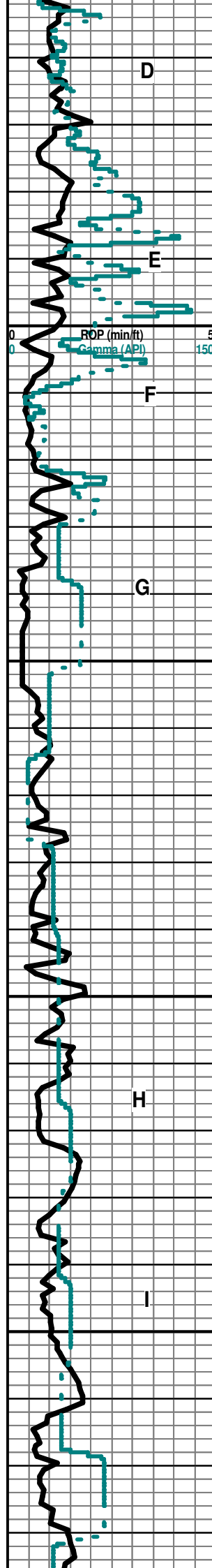
4350

A

B

C

ROP (min/ft)  
Gamma (API)



LS Wht-Crm MicroXln-Fxln Poor Ixln Por Cht Wht-Tan-Gry-Drk Gry Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Stn Sli ? Min Flor (Lt Grn) NS

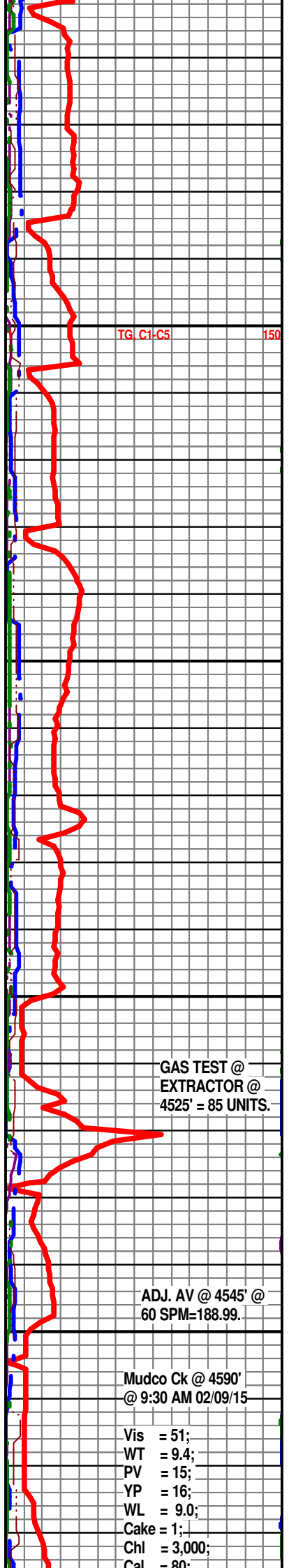
Ls Wht-Crm MicroXln-Fxln Dns Micritic Grad Poor Ixln Por Cht Wht Op Shp Vit Chalk Sh Blk Char-Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Gry-Crm-Tan Fxln Dns Micrite Cht Wht Op Shp Vit Chalky Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Gry Fxln Dns Micrite Grad Poor-Fair Ixln Vug Por Grad Poor OOM Por (w/Small OOids in pl) Chalky Sh Gry-Grn-Aqua Fissil No Odor No Stn No Flor NS

Ls Crm-Tan Fxln Micritic Grad Med OOM (w/Small OOL in pl) Fair Vug InterOOM Dissolu Barren Cht Wht Op Shp Vit Pyr Mass Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm MicroXln-Fxln Dns Micrite Grad Med-Good OOM Por Med-Good Vug Dissolu Barren Cht Wht Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil No Odor No Flor No Stn NS



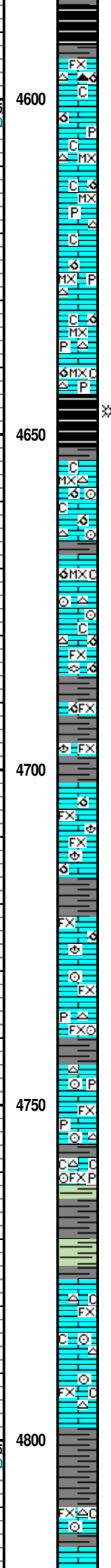
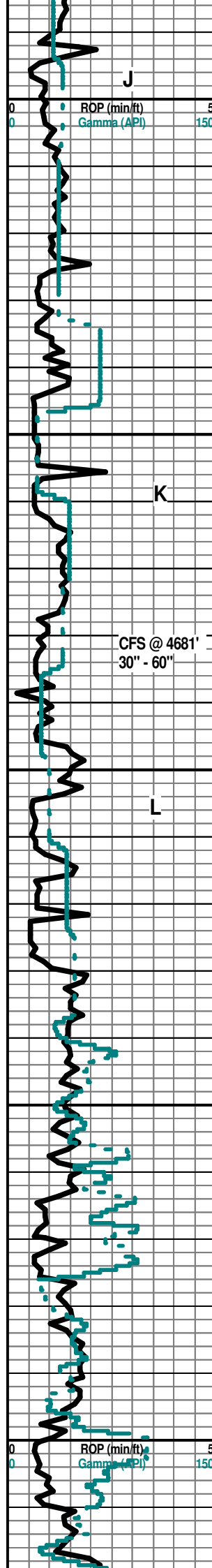
GAS TEST @  
EXTRACTOR @  
4525' = 85 UNITS.

ADJ. AV @ 4545' @  
60 SPM=188.99.

Mudco Ck @ 4590'  
@ 9:30 AM 02/09/15

- Vis = 51;
- WT = 9.4;
- PV = 15;
- YP = 16;
- WL = 9.0;
- Cake = 1;
- Chl = 3,000;
- Cal = 80;

Cur = 00;  
Sol = 7.7%  
LCM = 2#;  
DMC = \$2,306.55;  
CMC = \$11,671.36



Ls Wht-Crm FxIn Micrite Grad Fair-Med Vug OOM Por Cht Wht-Drk Gry  
Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS

**STARK SHALE 4644' (- 1789)**

30" CFS @ 4681' Sh Blk Carb Fissil (w/GSG) Ls Wht-Crm-Gry MicroxIn (w/Pyr Inclus) Dns  
Micrite Chalky (V Abd) ? Faint Odor No Flor No Stn NS

**KANSAS CITY "SWOPE" (K) Ø 4655' (-1800)**

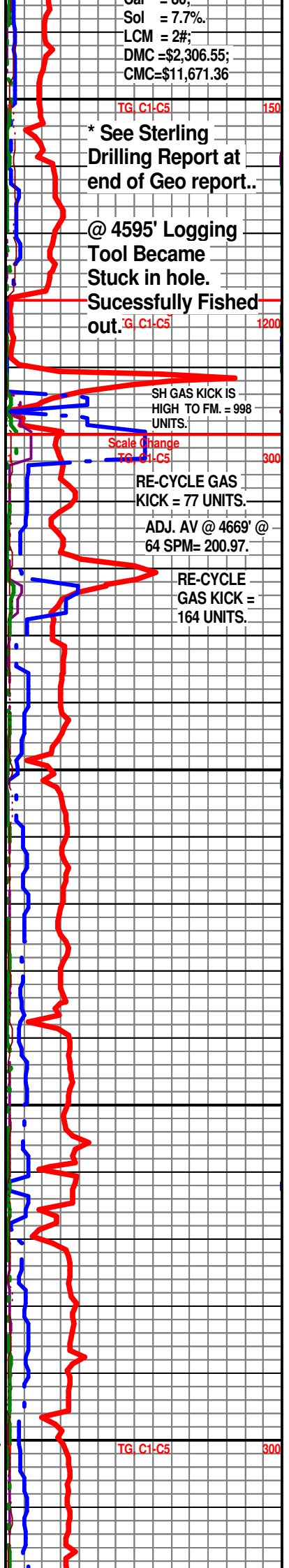
60" CFS @ 4681' Ls Wht-Crm-Gry MicroxIn (w/Pyr Inclus) Dns Micrite  
Grad Med OOM Vug Por Med Leaching Good Develop Cht Wht op Shp  
Vit Fos (Crin) Chalky (V Abd) Sh Blk Carb Fissil (w/GSG) No Odor No  
Flor No Stn NS

Sh Char-Gry Fissil Ls Crm-Tan-Gry FxIn Poor IxIn Por Micritic Dns  
Barren (w/Pyr & Chlorite Inlus) Grad Good OOM (w/Small-Med OOids  
in pl) Por Good Leaching Good Develop Chalk Fos (Brach) No Odor No  
Flor No Stn NS

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

**MARMATON 4776' (- 1921)**

Ls Wht-Crm FxIn Poor IxIn Por Micritic Dns Barren Grad Fair PPT IxIn Por  
Grad Good OOM Por (w/Small OOids in pl (Indiv OOL) Good Leaching  
Good Develop Cht Wht-Gry Op Shp Vit Sh Blk Carb-Char-Gry Fissil No  
Odor No Flor No Stn NS



\* See Sterling  
Drilling Report at  
end of Geo report..

@ 4595' Logging  
Tool Became  
Stuck in hole.  
Sucessfully Fished  
out.

SH GAS KICK IS  
HIGH TO FM. = 998  
UNITS.

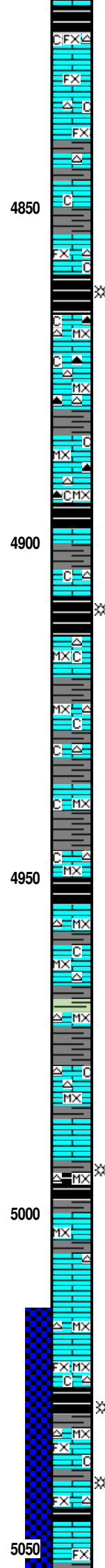
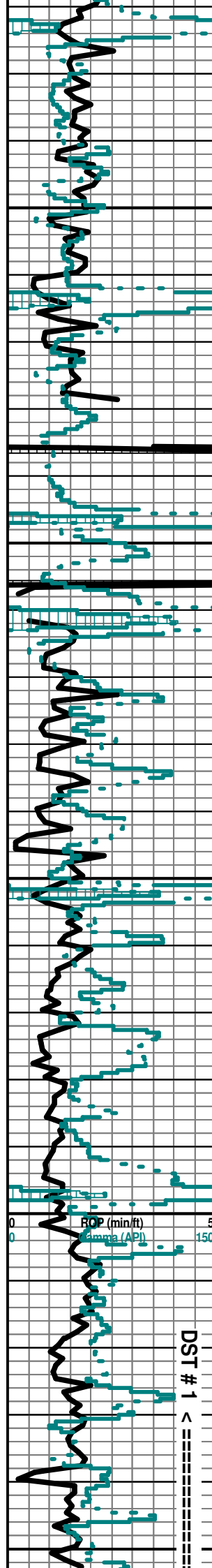
Scale Change  
TG, C1, C5

RE-CYCLE GAS  
KICK = 77 UNITS.

ADJ. AV @ 4669' @  
64 SPM = 200.97.

RE-CYCLE  
GAS KICK =  
164 UNITS.

TG, C1, C5 300



Ls Wht-Crm Fxln Poor Ixln Por Micritic Dns Barren Grad Fair PPT Ixln Por  
Cht Tan Op Shp Vit Chalk Sh Char-Gry-Aqua Fissil No Odor No Flor No  
Stn NS

**PAWNEE 4862' (- 2007)**

Sh Blk Carb (V Abd)-Char-Gry Fissil Ls Wht-Crm MicroIxln Dns Micrite  
Grad Poor Ixln Por Barren Cht Tan-Drk Gry Translu-Op Shp Vit Chalk No  
Odor Sli ? Min Flor No Stn NS

**CHEROKEE 4908' (- 2053)**

Ls Wht-Crm MicroIxln Dns Micrite Grad Poor Ixln Por Barren Cht Tan Op  
Shp Vit Chalk Sh Blk Carb-Char-Gry-Drab Grn Fissil No Odor Sli ? Min  
Flor No Stn NS

**SECOND CHEROKEE SHALE 4951' (- 2096)**

Ls Wht-Crm MicroIxln Dns Micrite Grad Poor Ixln Por Barren Cht Tan Op  
Shp Vit Chalk Sh Blk Carb-Char-Gry-Drab Grn Fissil No Odor Sli ? Min  
Flor No Stn NS

**THIRD CHEROKEE SHALE 4992' (- 2137)**

Ls Wht-Crm MicroIxln Dns Micrite Grad Poor Ixln Por Barren Cht Tan Op  
Shp Vit Chalk Sh Blk Carb-Char-Gry-Drab Grn Fissil No Odor ? Sli Flor (Lt Grn) No Stn SSG

5070' Spl. Ls Crm-Tan MicroIxln-Fxln Dns Micrite Grad Poor-Fair Pin-Pt  
Sli "Tight" Vug Por ( 1 Pc w/SSG) Cht Tan Op Shp Vit Chalk Sh Blk  
Carb-Char-Gry-Drab Grn Fissil No Odor ? Sli Flor (Lt Grn) No Stn SSG

SH GAS KICK IS  
HIGH TO FM. = 234  
UNITS.

SH GAS  
KICK = 168  
UNITS

TOOKE DAQ DRILLING  
COMPUTER LOCKED UP &  
ROP & GAS T1 - C4 DATA  
WAS LOST 4829' - 4912'

ADJ. AV @ 4905' @  
62 SPM = 193..78

SH GAS KICK =  
213 UNITS

SH GAS KICK =  
201 UNITS

Mudco Ck @  
5129' @ 6:50  
AM 02/10/15  
Vis = 65;  
WT = 9.3;  
PV = 18;  
YP = 20;  
WL = 7.6;  
Cake = 1;  
Chl = 3,400;

SH GAS  
KICK = 163  
UNITS

SH GAS  
KICK = 219  
UNITS

Cal = 20;  
Sol = 7.0%.  
LCM = 3#;  
DMC =  
\$2,788.64;  
CMC =  
\$14,455.00

Scale Chg  
TG, C:11 450

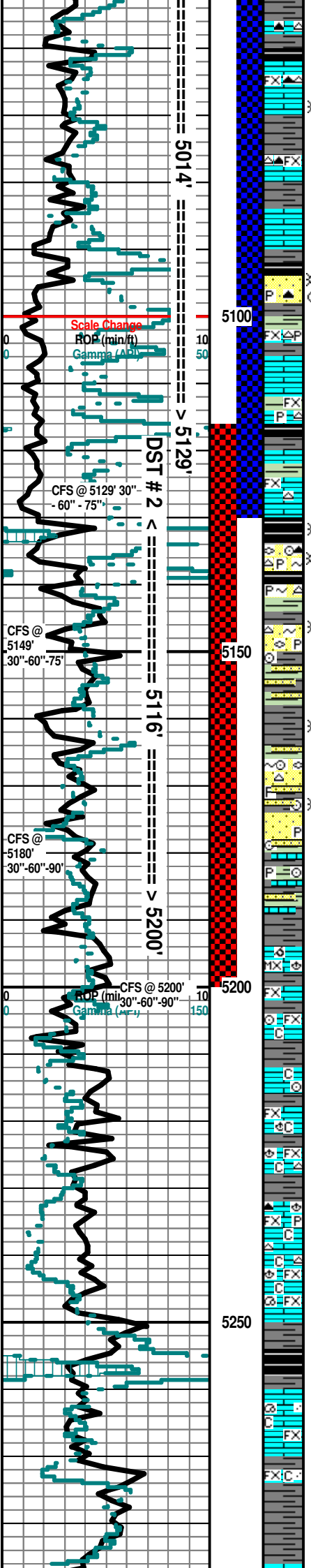
SH GAS KICK = 274  
UNITS

DST # 1 <

~ ~ DST #1 ~ ~

@ 5108' Interval: 5014'-5129'





**Begin 10' Samples Wet @ 5112'**

5112' Spl. Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Cht Wht- Drk Gry Op Shp Vit Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Cht Amber-Tan-Gry Translu-Op Shp Vit Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

**ATOKA SHALE 5090' (- 2235)**

30" CFS @ 5129' Qtz Ss (6 Pcs in Tray) Gry-Lt Brn VFGrn Ang-Sub Ang mL = 250-350 Microns = 2.0-1.5 Ø Well Sort V Friable (w/GSG & FSO (Lt Brn) in Wtr Under Heat) (No Glacu Includ) Sli CaCO3 Cmt Matrix Ls Crm- Wht- Tan Fxln Poor Ixln Por Micritic Dns Barren Cht Amber Translu Shp Vit Sh Blk Carb-Char-Gry-Aqua Fissil Fair-Med Odor No Flor (Gas & Oil Does Not Flor) Pyr Mass Fair-Med Odor No Flor Fair Sat Stn (Lt Brn) GSG & FSO

60" CFS @ 5129' Qtz Ss AA (2 Pcs in Tray) Lt Brn VFGrn Ang-Sub Ang mL = 250-350 Microns = 2.0-1.5 Ø Well Sort V Friable (w/GSG & FSO (Lt Brn) in Wtr Under Heat) (No Glacu Includ) Sli CaCO3 Cmt Matrix Ls AA Cht AA Sh Blk Carb-Char-Gry-Aqua Fissil Fair-Med Odor No Flor (Gas & Oil Does Not Flor) Pyr Mass ? Faint Odor No Flor Fair Sat Stn (Lt Brn) SG & SO AA

75" CFS @ 5129' Sh Blk Carb-Char-Gry-Aqua Fissil Ls AA Qtz Ss (1 Pcs) (w/SSG & SSO AA) Cht AA Faint Odor Stn AA No Flor ? SG & SO

**MORROW SHALE 5130' (- 2275)**

**MORROW SAND 5134' (- 2279)**

30" CFS @ 5149' Qtz Ss Lt Brn-Tan VFGrn-FGrn Ang-Sub Ang Clusters Poor-Fair IGran Por Well-Sort Friable (w/Glacu & Lt Org Cht Includ) Lt Cmt (CaCO3 Matrix) SG Gas Does Not Flor Cht Amber-Gry-Org Translu-Op Shp Vit Ls AA Fos (Crin, Fuss) Pyr Mass Sh Char-Gry-Lt Grn Fissil No Odor Lt Brn Stn No Flor SSG

60" & 75" CFS @ 5149' Qtz Ss Lt Brn-Gry VFGrn-FGrn Ang-Sub Ang Clusters Poor-Fair IGran Por Well-Sort Friable (w/Glacu & Gillsoritnic Includ) Lt Cmt AA SSG Gas Does Not Flor Cht Wht (w/Fos (Fuss)-Gry Translu-Op Shp Vit Ls AA Fos (Fuss, Crin) Pyr Mass Sh Char-Gry-Lt Grn-Aqua Fissil No Odor Lt Brn Stn No Flor SSG

Sh Char-Gry-Drab en/Gry-Aqua Fissil V Abd Ls AA Cht AA Qtz Ss Lt Brn-Gry (8 Pcs) VFGrn (w/Pyr Includ) Grad FGrn Ang-Sub Ang Fair Sort (w/Glacu Includ) Med CaCO3 Matrix Fos (Crln, Fuss) SSG & NSO No Odor No Flor Lt Brn Stn (Few Pcs) SSG

30" CFS @ 5180' Sh Char-Gry-Drab Grn/Gry-Aqua Fissil V Abd Ls AA Cht AA Qtz Ss Lt Brn-Gry (Tr. Only 3 Pcs) VFGrn (w/Pyr Includ) Grad FGrn Ang-Sub Ang Fair Sort (w/Glacu Includ) Med CaCO3 Matrix Fos (Crln, Fuss) SSG & NSO No Odor No Flor Lt Brn Stn (Few Pcs) SSG

60" CFS @ 5180' Sh Char-Gry-Drab Grn/Gry-Aqua Fissil V Abd Ls AA Cht AA Qtz Ss Gry (1 Pc Sluff) VFGrn Ang-Sub Ang Fair Sort (w/Glacu Includ) Med CaCO3 Matrix Fos (Crln, Fuss) SSG & NSO No Odor No Flor No Stn SSG

75" CFS @ 5180' Sh Char-Gry-Drab Grn/Gry-Aqua Fissil V Abd Ls AA Cht AA Qtz Ss AA Lt Brn-Gry (5 Pcs) FGrn Well Sort (w/SSG) No Odor No Flor No Stn NS

30" CFS @ 5200' Sh Char-Gry-Drab Grn/Gry-Aqua Fissil V Abd Ls AA Cht AA Fos (Crin) Pvr Mass No Odor No Flor No Stn NS

**MISSISSIPPIAN "CHESTER" 5194' (- 2339)**

60" CFS @ 5200' Sh Char-Gry-Drab Grn/Gry-Aqua Fissil V Abd Ls AA Cht AA Qtz Ss Gry (1 Pc ? Sluff) VFGrn Ang-Sub Ang Fair Sort (w/SSG AA) Lt CaCO3 Matrix Fos (Crin) Pyr Mass No Odor No Flor No Stn NS

90" CFS @ 5200' Ls Wht-Crm Microxln-Fxln Dns Micrite Grad Poor OOM Por Poor Leaching Poor Develop Fos (Brach) Sh AA (V Abd) Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Dns Micrite Grad Poor-Fair Ixln PPT Por Barren Fos (Crin) Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Dns Micrite Grad Poor-Fair Ixln PPT Por Barren Fos (Crin) Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht (w/Tr Chlorite (Grn) Includ)-Gry Fxln Dns Micrite Grad Poor-Fair Ixln PPT Por Barren Cht Yell-Peach Translu Shp Vit Fos (Brach) Chalk Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht (w/Tr Chlorite (Grn) Includ)-Gry Fxln Dns Micrite Grad Poor-Fair Ixln PPT Por Barren Cht Yell-Peach-Lt Red Translu-Op Shp Vit Fos (Brach) Pyr Mass Chalk Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht (w/Tr Chlorite (Grn) Includ)-Gry Fxln Dns Micrite Grad Poor-Fair Ixln PPT Por Barren Cht Yell-Peach Translu Shp Vit Fos (Brach) Chalk Sh Char-Gry Fissil No Odor No Stn No Flor NS

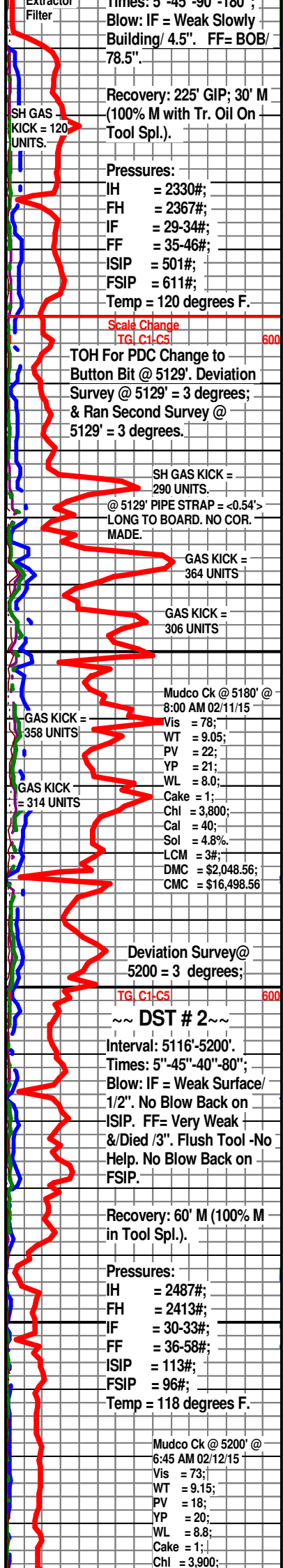
Ls Wht (w/Tr Chlorite (Grn) Includ)-Crm-Lt Grn Fxln Dns Micrite Grad Poor-Fair Ixln PPT Por Barren Fos (Gastro) Chalky Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht (w/Tr Chlorite (Grn) Includ)-Crm-Lt Grn Fxln Dns Micrite Grad Poor-Fair Ixln PPT Por Barren Grad Poor Lt Grn Gran PPT Por (w/? Qtz Ss Includ) Fos (Gastro) Chalky Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

**MISSISSIPPIAN "STE. GEN" 5270' (- 2415)**

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm- Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Barren Grad Crm-Tan-Gry Fxln Dns Micrite Chalky Sh Char-Blk Carb-Gry-Drab Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Barren Grad Crm-Tan-Gry Fxln Dns Micrite



Blow: IF = Weak Slowly Building/ 4.5". FF= BOB/ 78.5".

Recovery: 225' GIP; 30' M (100% M with Tr. Oil On Tool Spl.).

Pressures:  
 IH = 2330#;  
 FH = 2367#;  
 IF = 29-34#;  
 FF = 35-46#;  
 ISIP = 501#;  
 FSIP = 611#;  
 Temp = 120 degrees F.

Scale Change TGI, C1, C5 600

TOH For PDC Change to Button Bit @ 5129'. Deviation Survey @ 5129' = 3 degrees; & Ran Second Survey @ 5129' = 3 degrees.

SH GAS KICK = 290 UNITS.  
 @ 5129' PIPE STRAP = <0.54"> LONG TO BOARD. NO COR. MADE.

GAS KICK = 364 UNITS

GAS KICK = 306 UNITS

Mudco Ck @ 5180' @ 8:00 AM 02/11/15  
 Vis = 78;  
 WT = 9.05;  
 PV = 22;  
 YP = 21;  
 WL = 8.0;  
 Cake = 1;  
 Chl = 3,800;  
 Cal = 40;  
 Sol = 4.8%.  
 LCM = 3#;  
 DMC = \$2,048.56;  
 CMC = \$16,498.56

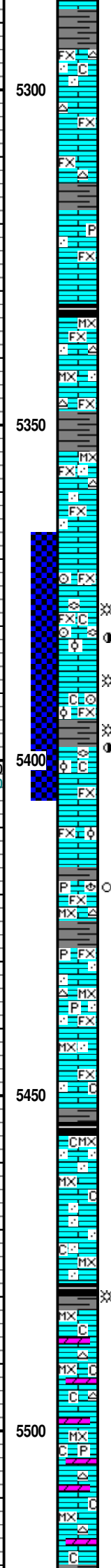
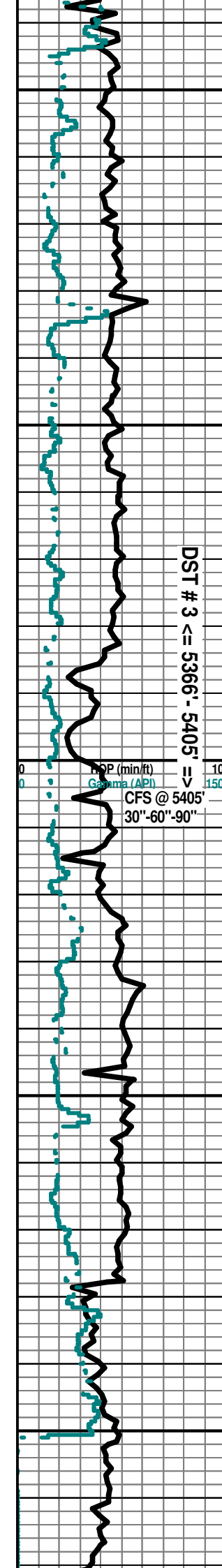
Deviation Survey @ 5200 = 3 degrees;  
 TGI, C1, C5 600

~ ~ DST # 2 ~ ~  
 Interval: 5116'-5200'.  
 Times: 5"-45"-40"-80";  
 Blow: IF = Weak Surface/ 1/2". No Blow Back on ISIP. FF= Very Weak & Died /3". Flush Tool -No Help. No Blow Back on FSIP.

Recovery: 60' M (100% M in Tool Spl.).

Pressures:  
 IH = 2487#;  
 FH = 2413#;  
 IF = 30-33#;  
 FF = 36-58#;  
 ISIP = 113#;  
 FSIP = 96#;  
 Temp = 118 degrees F.

Mudco Ck @ 5200' @ 6:45 AM 02/12/15  
 Vis = 73;  
 WT = 9.15;  
 PV = 18;  
 YP = 20;  
 WL = 8.8;  
 Cake = 1;  
 Chl = 3,900;



Sh Char-Blk Carb-Gry-Drab Grn-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Barren Grad Crm-Tan-Gry Fxln Dns Micrite Cht Tan Translu Shp Vit Sh Char-Blk Carb-Gry-Drab Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Barren Grad Crm-Tan-Gry Fxln Dns Micrite Cht Amber-Tan Translu Shp Vit Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Barren Grad Crm-Tan-Gry Fxln Dns Micrite Cht Wht-Peach Translu Shp Vit Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Barren Grad Crm-Tan-Gry Fxln Dns Micrite Pyr Mass Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

**MISSISSIPPIAN "ST. LOUIS" 5334' (- 2479)**

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (mL=250-350 Microns= 2.0-1.5 Ø) Barren Grad Gry Microxin Dns Micrite Cht Wht-Peach Translu Shp Vit Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan Fine-Med Grn Ang-Sub Ang Includ (mL=250-350 Microns= 2.0-1.5 Ø) Barren Grad Crm Fxln Dns Micrite Cht Yell-Peach Translu Shp Vit Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

**MISS. ST. LOUIS UPPER B Ø 5354'(-2499)**

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan Fine-Med Grn Ang-Sub Ang Includ (mL=250-350 Microns= 2.0-1.5 Ø) Barren Grad Crm Fxln Dns Micrite Cht Amber Translu Shp Vit Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Gry Fxln Poor "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan Fine-Med Grn Ang-Sub Ang Includ (mL=250-350 Microns= 2.0-1.5 Ø) Barren Grad Crm Fxln Dns Micrite Sh Char (w/Carb Includ)-Gry-Aqua Fissil No Odor No Stn No Flor NS

**MISS. ST. LOUIS LWR B Ø 5380' (-2525)**

30" CFS @ 5405' Ls Wht Fxln Small-Med OOL Por (w/Small-Med-Lg Free OOids in Pl & in CaCO3 Matrix(w/Lt Cmt)) Friable Med-Good InterOOL Por (w/Tr Lt Brn Stn in Pin-Pt InterOOL Por) Med Leaching Med Develop FSG & SFO Lt Brn (in Wtr Under Heat) Gas & Oil Do Not Flor Fos (? Crin, Fuss) Pyr Mass Tr Chalk ? Faint Odor No Flor FSG & SSFO

60" CFS @ 5405' Ls Wht Fxln Small-Med-Lg OOL Por (w/Abd Small-Med-Lgw/Free OOids in Pl & w/Lt CaCO3 Cmt Matrix( V Friable Med-Good InterOOL Por (w/Tr Lt Brn Stn in Med-Good Pin-Pt InterOOL Por) Med-Good Leaching Med-Good Develop Fair SG & SFO Lt Brn (in Wtr Under Heat) Gas & Oil Do Not Flor Fos (? Crin, Fuss) Pyr Mass Tr Chalk Sh Char-Gry-Aqua Fissil Faint Inc Odor No Flor MSG & SFO

90" CFS @ 5405' Ls Wht AA Small-Med-Lg OOL Por (w/Abd Med-Lg in pl w/CmtAA (V Friable Med-Good InterOOL Por (w/Tr Lt Brn Stn in Med-Good Pin-Pt InterOOL Por) Med Leaching Med Develop Fair SG & SFO Lt Brn AA Pyr Mass Tr Chalk Sh Char-Gry-Aqua Fissil Inc Odor No Flor MSG & SFO

Ls Wht AA (? Sluff w/1 Pcs) Med OOL Por (w/Med OOids in pl & Friable AA & PPT InterOOL Por) Fair SG & SO AA Grad Microxin Dns Micrite Fos (Brach) Pyr Mass Tr Chalk Sh Char-Gry-Aqua Fissil (V Abd Trip Debris) No Odor No Flor ? SG & SFO

Ls Wht Microxin-Fxln Dns Micrite Grad Poor PPT lxn Granular Por Barren Cht Peach-Org Translu-Op Shp Vit Pyr Mass Sh Char-Gry-Aqua Fissil No Odor No Flor No Stn NS

Ls Wht Microxin-Fxln Dns Micrite Grad Poor PPT lxn Granular Por Barren Cht Peach-Org Translu-Op Shp Vit Pyr Mass Sh Char-Gry-Aqua Fissil No Odor No Flor No Stn NS

Ls Wht-Crm Fxln "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Poor lxn Por Grad Dns Micritic Barren Cht Wht-Peach Translu-Op Shp Vit Chalk Sh Vari- Colored Blk-Carb-Char-Drab Grn-Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Poor lxn Por Grad Dns Micritic Barren Cht Wht-Peach Translu-Op Shp Vit Chalk Sh Vari- Colored Blk-Carb-Char-Drab Grn-Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln "Sandy Ls" (w/Small Qtz Ss Includ) Wht-Crm-Tan VFGrn Ang-Sub Ang Includ (fL=125-177 Microns= 3.0-2.25 Ø) Poor lxn Por Grad Dns Micritic Barren Cht Wht-Peach Translu-Op Shp Vit Chalk Sh Vari- Colored Blk-Carb-Char-Drab Grn-Aqua Soft-Fissil No Odor No Stn No Flor NS

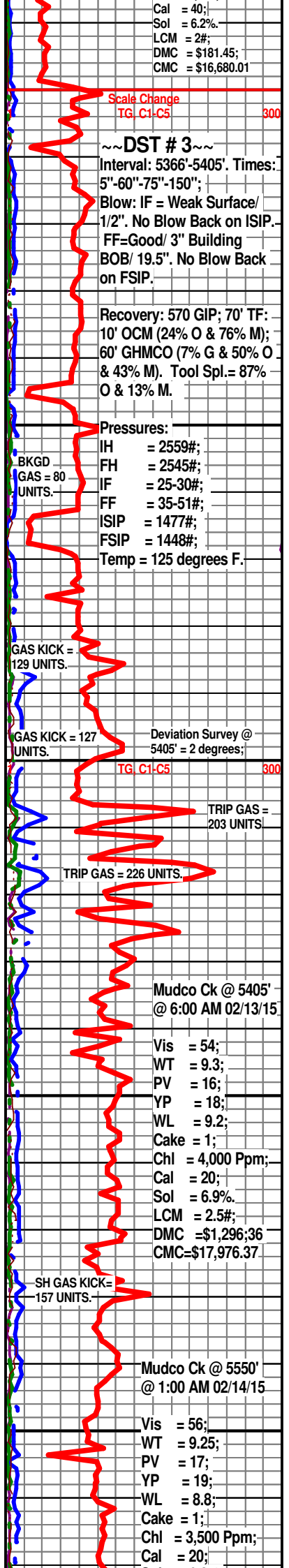
**MISS. SALEM (SPERGEN) 5482' (- 2627)**

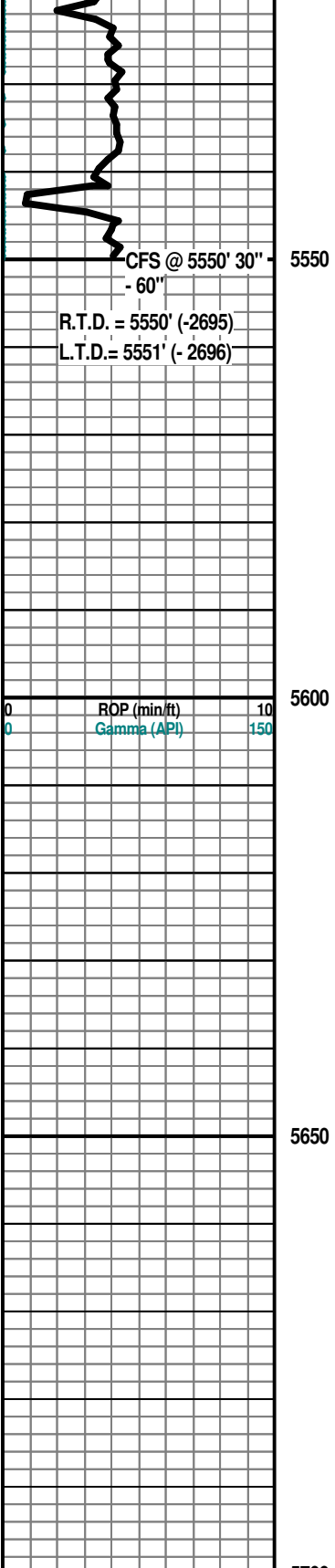
Ls/Dolo Wht-Gry Microxin Dns Micrite Barren Grad Poor lxn Por Cht Wht- Gry Translu-Op Shp Vit Cht Wht-Peach Translu-Op Shp Vit Chalk Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls/Dolo Wht-Gry-Tan Microxin Dns Micrite Barren Grad Poor lxn Por Cht Wht-Gry Translu-Op Shp Vit Chalk Sh Char-Gry- Aqua Fissil No Odor No Stn No Flor NS

Ls/Dolo Wht-Crm-Tan Microxin Dns Micrite Barren Grad Poor lxn Por Cht Wht-Gry Translu-Op Shp Vit Chalk Sh Char (w/Pyr Includ)-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls/Dolo Wht-Crm-Tan Microxin Dns Micrite Barren Grad Poor lxn Por Cht Wht-Gry Translu-Op Shp Vit Chalk Sh Char-Gry- Aqua Fissil No Odor No Stn No Flor NS





Ls/Dolo Wht-Crm-Tan MicroxIn Dns Micrite Barren Grad Poor IxIn Por  
 Cht Wht-Gry Translu-Op Shp Vit Chalk Sh Blk Carb-Char (Abd)-Aqua  
 Fissil No Odor No Stn No Flor NS  
 30" CFS @ 5550' Ls/Dolo Wht-Crm-Tan MicroxIn Dns Micrite Barren Grad Poor IxIn Por  
 Cht Wht-Gry Translu-Op Shp Vit Chalk Sh Blk Carb-Char (Abd)-Aqua Fissil No Odor No  
 Stn No Flor NS  
 60" CFS @ 5550' Ls/Dolo Wht-Crm-Tan MicroxIn Dns Micrite Barren Grad Poor IxIn Por  
 Cht Wht-Gry Translu-Op Shp Vit Pyr Mass Chalk Sh Blk Carb-Char (Abd)-Aqua Fissil No  
 Odor No Stn No Flor NS  
 75" CFS Ls/Dolo Wht-Crm-Tan MicroxIn Dns Micrite Barren Grad Poor IxIn Por Cht  
 Wht-Gry Translu-Op Shp Vit Chalk Sh Blk Carb-Char (Abd)-Aqua Fissil No Odor No Stn  
 No Flor NS

Electric Logs Run By: ReCon Logging (Dual  
 Induction; Compensated Density-Neutron; Di-Pole Sonic;  
 Microresistivity Logs).

Geologist left Location @ 6:30 PM on 02/14/2015

\* 2/15/2015 Per Sterling Drilling Report: While making the their run with  
 logging tool that contained the source, the tool became stuck on the  
 way up at 4595'. As per RECON, they had just started to register an  
 increase in drag. They halted their pull, folded the caliper, and  
 attempted to go down with tool. Tool will not go down. And can't go  
 up. RECON has pulled 5300 Lbs trying to pull free. At 7300 lb pull, the  
 cable would pull out of tool. Tool at 4595'. The tool is 72' long and  
 source in in middle of the tool. Cable has a netting for 20" above the  
 tool that is 2.31" diameter. Logging tool head is 3.50" OD. Kansas  
 Fishing tool was not available. As per Weatherford: They have the tool  
 and fisherman needed. It is in use on a Tomcat rig near Sublette. As  
 Per RECON; That is also a RECON logging tool and it is also stuck  
 around 4500'. Hope to have tools and fisherman on location by early  
 this afternoon.

2/16/2015 Fisherman with AA (Andrew) on location at 6:00 pm  
 Weatherford tool (side door overshot) on location at 6:40 pm When tool  
 20 feet above fish it hit a small bridge. Washed down to 10 foot above  
 logging tool and at that point communication between logging tool and  
 logging truck was lost. Reached the calculated depth of the top of the  
 fish with overshot. Never took weight or pressured up to indicate that  
 the fish was in the overshot. Have continued working tool and fish to  
 bottom. Thought is that fish is inside overshot and the wireline cable is  
 severed but hung up in the overshot. Will push fish to bottom with plan  
 that that will shove the fish tighter up into the overshot. Will then chain  
 out of the hole.

2/17/2015 Tripped out and had logging tool in the overshot Wireline  
 cable was still in hole. Pulled on cable with logging truck but unable to  
 free cable. Hooked cable into the sidedoor overshot and tripped in hole  
 (Stripping the cable away from the wellbore wall). With sidedoor  
 overshot at 3500' the wireline cable came free and was retracted into  
 logging truck. No cable was lost.

Sol = 6.2%  
 LCM = 3#;  
 DMC = \$1,206;28  
 CMC = \$19,182.65  
 SH GAS KICK= 128  
 UNITS.

Deviation Survey @  
5550' = 2 degrees.

0	ROP (min/ft)	10
0	Gamma (API)	150

1	TG, CI, C5	300
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