



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

**Well Name:** PATTERSON-O'BRATE "A" # 1-17  
**Location:** N/2- SW - NW of Sec. 17 - T. 30 S. - R. 30 W.  
**License Number:** A.P.I. # 15 - 119 - 21,357 - 00 - 00  
**Spud Date:** 12/13/2013  
**Surface Coordinates:** SPOT: 1650' FNL & 660' FWL

**Region:** MEADE CO., KS.  
**Drilling Completed:** 12/30/2013

**Bottom Hole  
Coordinates:**  
**Ground Elevation (ft):** 2816'                      **K.B. Elevation (ft):** 2827'  
**Logged Interval (ft):** 1824'              **To:** 5708'              **Total Depth (ft):** 5708'  
**Formation:** MISSISSIPPIAN "ST. LOUIS" FORMATION  
**Type of Drilling Fluid:** CHEMICAL/POLYMER/GEL. & MUD DISPLACEMENT @ 3018'.  
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://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

**CASING & DEVIATION**

**Surface Casing:** Spud at 10:15 pm on 12/13/13. Drilled 12-1/4" to 1828'. Ran 44 joints of new 24#, 8-5/8" casing. Tallied 1810'. Set at 1824' KB. Welded straps on shoe, bottom 3 joints and top 2 joints. Tacked collars on the remainder. (5) Centralizers on joints 1-3-5-10-27. Float insert in top of 1st joint. Cemented with 10 bbl Stop Loss; and 670 sks ALWA; 3% CC, 1/4# FS. Then tailed with 200 sks Class A; 3% CC; 1/4# FS. Cement did circulate. Plug down at 4:15 pm on 12/16/13. Allied Cementing ticket #052125. Basket on Joint #28 at 682'. At 6:00 pm cement was down 20'. At 8:00 pm cement fell down to 70' below GL. Allied cemented from top top by pumping cement into cellar. Cemented with 100 sks Class A Neat. Completed at 1:00 am 12/17/13.

## DSTs

~~ DST # 1 ~~ 4736' - 4770' (Straddle). Miss-Run (Bottom Packer Failure).

~~ DST # 2 ~~ 5259'-5330'. Times: 5"-60"-90"-90";

Blow: IF= Good/11" . No Blow Back During ISIP. FF= Strong Blow BOB/Immed 10 Sec. Slight Blow Back During FSIP/15" & Died.

Recovery: 325' TF: 77' GOSM (5% G & 95% M); 124' GSOCM (25% G, 1% O, 74% M); 62' GOCM & EMUL (20% G, 5% O, 75% M); & 62' GOCM & EMUL (50% G, 15% O, 35% M).

Pressures: IH = 2756#; FH = 2673#; IF=137-97#; FF=169-146#; ISIP=1602#; FSIP=1333#; 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 # 88 Kansas

## ROCK TYPES

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

### STRINGER

|  |         |
|--|---------|
|  | Anhy    |
|  | Arg     |
|  | Bent    |
|  | Coal    |
|  | Dol     |
|  | Gryslt  |
|  | Grysh   |
|  | Gyp     |
|  | Ls      |
|  | Mrst    |
|  | Sltstrg |

**OTHER SYMBOLS**

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

[V] Vuggy

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

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

**OIL SHOW**

- [X] Gas show

- [●] Even
- [○] Spotted
- [○] Ques
- [□] Dead

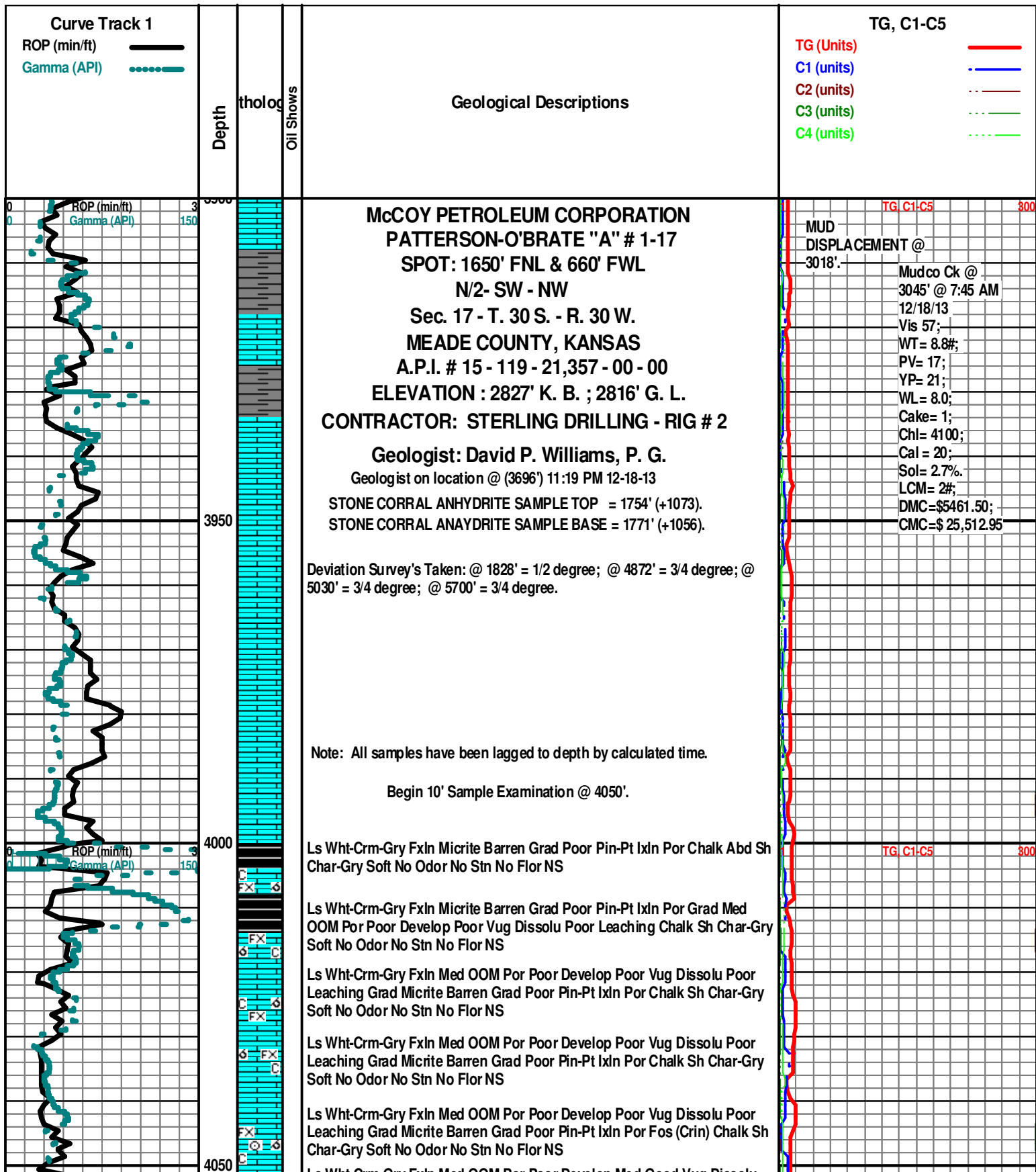
**INTERVAL**

- [■] Dst
- [■] Dst\_alt

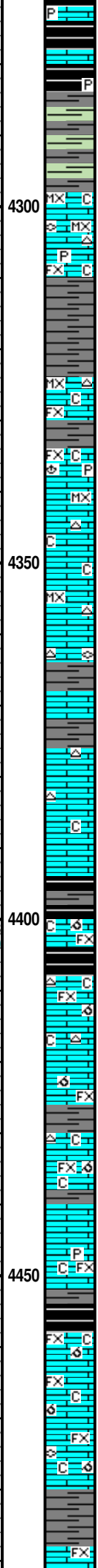
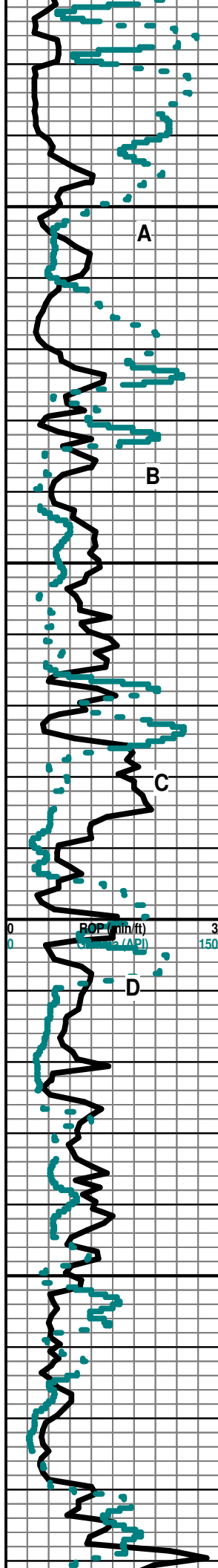
[■] Straddle test tail pi  
[■] Core

**EVENT**

- [▶] Rft
- [▶] Sidewall







Sh Char-Gry (w/Pyr Inklus) Maroon Soft-Fissil Ls Wht-Crm-Gry Fxln Dns Micrite Grad Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

Sh Char-Gry (w/Pyr Inklus) Soft-Fissil Ls Wht-Crm-Gry Fxln Dns Micrite Grad Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxln Dns Micritic Barren Chalk Abd Sh AA No Odor No Stn No Flor

**LANSING 4298' (- 1471)**

Ls Wht-Crm-Tan-Gry (w/Pyr & Fos (Fuss) Inklus) Microxln Dns Micritic Barren Grad Fxln Poor Pin-Pt Ixln Por Barren Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor

Ls Wht-Crm-Tan-Gry Microxln Dns Micritic Barren Grad Fxln Poor Pin-Pt Ixln Por Barren Fos (Fuss, Spiculitic Inklus) Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor

Ls Wht-Crm-Tan-Gry Microxln Dns Micritic Barren Grad Fxln Poor Pin-Pt Ixln Por Barren Fos (Fuss) Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Fos (Brach w/Pyr Inklus) Chalk Sh Char-Gry-Blk Carb-Maroon Fissil Soft No Odor No Stn No Flor NS

Ls Wht-Crm Microxln-Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk Sh Char-Gry Soft-Fissil Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk Sh Char-Gry-Blk Carb-Maroon Fissil Soft No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb Tr Soft- Fissil Ls Wht-Crm-Gry Microxln Dns Micrite Barren Grad Poor Ixln Por ht Wht-Tan Op Shp Vit Chalk Fos (Fuss) No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Barren Cht Wht-Tan Translu-Op Shp Vit Chalk Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Barren Cht Wht-Tan Translu-Op Shp Vit Chalk Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Barren Cht Wht-Tan Translu-Op Shp Vit Chalk Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

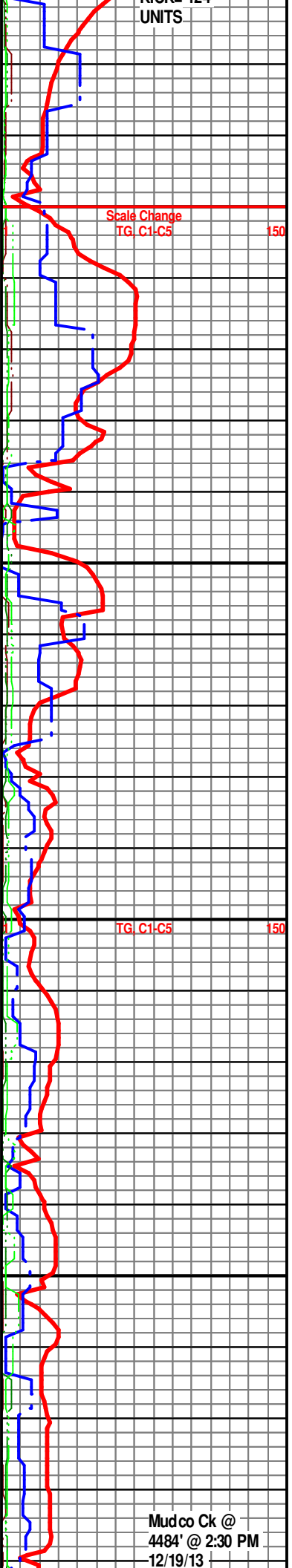
Ls Crm-Tan-Gry Fxln Dns Micrite Poor- Ixln Por Barren Chalky Sh Blk Carb-Char- Gry (w/Pyr Inklus) No Odor No Flor No Stn NS

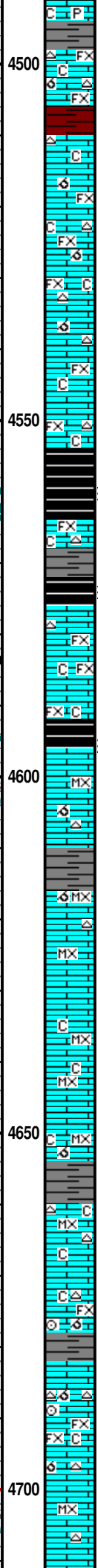
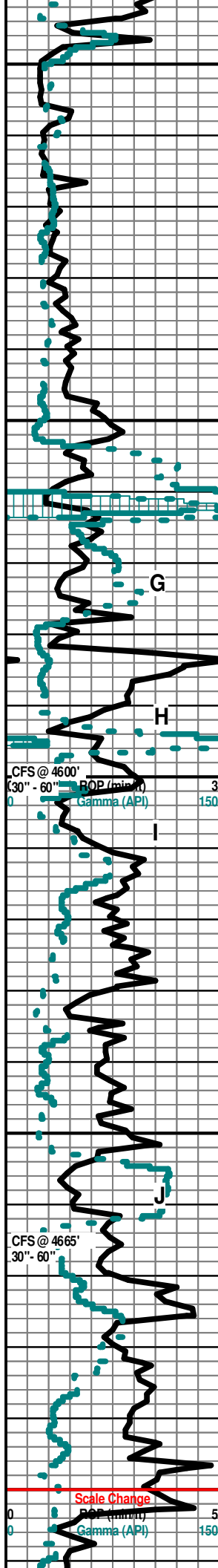
Ls Crm-Tan-Gry Fxln Poor- Ixln Por Barren (w/Fos (Crin) Inklus) Grad Poor OOM Por Poor Leaching Poor Develop Chalk Abd Sh Char-Gry-Aqua Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan Fxln Fair-Med OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Fair-Med OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Dns Micrite Poor Ixln Por Barren Fos (Fuss) Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS





Ls Crm-Tan-Gry FxIn Dns Micrite Poor IxIn Por Barren Pyr Mass Cht Wht Op Shp Vit Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan FxIn Med-Good OOM Por Poor-Fair InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb - Char - Gry- Red Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn Med-Good OOM Por Poor-Fair InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb - Char - Gry-Maroon Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn Med-Good OOM Por Poor-Fair InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb - Char - Gry-Maroon Fissil-Soft No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Med-Good OOM Por Poor-Fair InterOOM Vug Por (w/Small-Med OOids in pl) Barren Cht Wht Op Shp Vit Sh AA No Odor No Flor No Stn NS

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

30" CFS @ 4600' Ls Crm-Tan-Gry FxIn Dns Micrite Poor IxIn Por Barren Cht Wht -Gry Translu-Op Shp Vit Pyr Mass ChalkSh Blk Carb-Char-Gry-Maroon Fissil-Soft y No Odor No Flor No Stn NS

**LANSING "G" 4576' (- 1749)**

60" CFS @ 4600' Ls Crm-Tan-Gry FxIn Dns Micrite Poor IxIn Por Barren Cht Wht -Gry Translu-Op Shp Vit Pyr Mass ChalkSh Blk Carb-Char-Gry-Maroon Fissil-Soft y No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Dns Micrite Grad Fair Granular IxIn Por Barren Grad Poor OOM Por Poor Develop Poor Leaching Cht Wht Op Shp Vit Sh AA No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Dns Micrite Cht Wht Op Shp Vit Sh AA No Odor No Flor No Stn NS

30" CFS @ 4665' Ls Crm-Tan FxIn Soft Chalk V Abd Grad Dns Micrite Sh Char Tr Only Soft No Odor No Flor No Stn NS

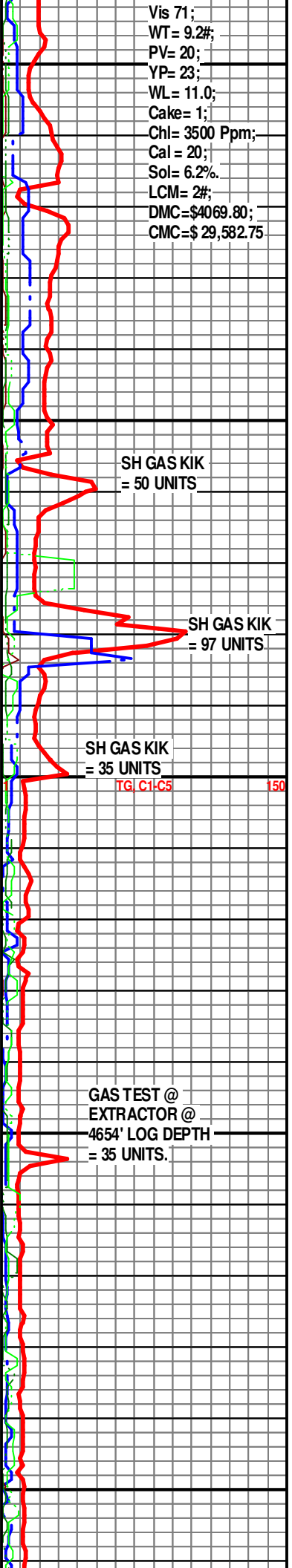
60" CFS @ 4665' Ls Wht-Crm MicroxIn Dns Micrite Grad Fair OOM Por Poor Develop Poor Leaching Soft Chalk Abd AA Cht Gry Translu-Op Shp Vit Sh AA No Odor No Flor No Stn NS

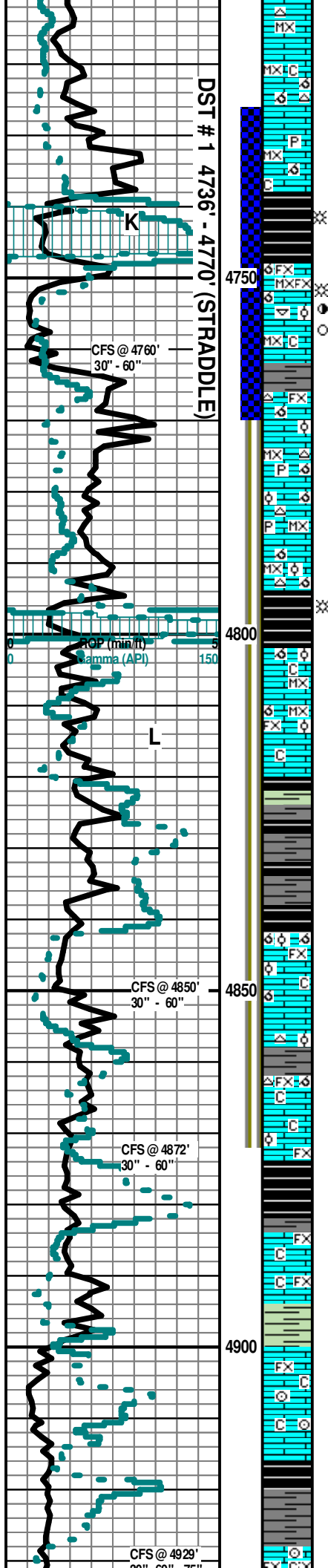
Ls Crm-Tan FxIn Poor OOM Por Poor InterOOM Por Poor Dissolu Poor Leaching Grad Dns Mirite Cht Wht Op Shp Vit Fos (Crin) Chalky Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan FxIn Poor OOM Por Poor InterOOM Por Poor Dissolu Poor Leaching Cht Wht Op Shp Vit Fos (Crin) Chalky Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan FxIn Poor OOM Por Poor InterOOM Por Poor Dissolu Pooe Leaching Grad Dns Micrite Cht Wht Op Shp Vit Fos (Crin) Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Dns Micrite Cht Gry Translu-Op Shp Vit Sh Char- Gry Soft (Tr Only) No Odor No Stn No Flor NS





Ls Wht-Crm MicroIn Dns Micrite Cht Gry Translu-Op Shp Vit Sh Char- Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry MicroIn Dns Micrite Cht Gry Translu-Op Shp Vit Sh Blk Carb- Char- Gry Soft No Odor No Stn No Flor NS

**STARK SHALE 4740' (- 1913)**

30" CFS @ 4760' Sh Blk Carb-Char Fissil (w/SG) V Abd Ls Wht-Crm-Tan-Brn MicroIn Dns Micrite (w/Pyr Inclus) Grad M/G-OOM Por (w/Small OOids in pl) G- Develop G-Leaching Pyr Mass Chalky ? Faint Odor No Stn No Flor SG

**KANSAS CITY "SWOPE" (K) 4748' (-1921)**

60" CFS @ 4760' Ls Wht-Crm-Tan MicroIn-FxIn Dns Micrite Grad FxIn Fair-Med Vug InterOOM Por (w/Small-Med OOids in pl) Med-Good Leaching Med Develop (w/SSG & SSO in Heated Wtr & Sli Lt Brn Stn on Edges of OOids (10% in Tray) (SSG & SSO W/Broken in Wtr Under Heat & Both Gas & Oil Do Sli Flor) ? Faint Odor Cht Wht-Gry Op Shp Vit Fos (Pelec) Chalky Sh Blk Carb Fissil Sat Flor SSG & SS Stn SSG & SSFO

Ls Wht-Crm FxIn Med OOM Por (w/ Med OOids in pl) Med-Good Leaching AA Med-Good Dissolu Barren Grad MicroIn Dns Micrite Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn MicroIn Dns Micrite & Med OOM Por AA Dec Fair Leaching AA Fair Dissolu Barren Grad Chalky Sh Char-Gry (w/Pry Inclus) Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn MicroIn Dns Micrite & Med OOM Por AA Dec Fair Leaching AA Fair Dissolu Barren Grad Chalky Sh Char-Gry (w/Pry Inclus) Fissil No Odor No Stn No Flor NS

**HUSHPUCKNEY SHALE 4796' (- 1969)**

**KANSAS CITY "HERTHA (L)" 4802' (- 1975)**

Ls Crm-Tan MicroIn Dns Micrite Chalk Sh Blk arb Fissil No Odor No Stn No Flor NS

**KANSAS CITY "HERTHA Ø" 4813' (-1997)**

Ls Wht-Crm FxIn Med OOM Por (w/ Med OOids in pl) Med-Good Leaching ? Sli Min Flor Med-Good Dissolu Grad MicroIn Dns Micrite Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry Fissil Ls AA Chalky No Odor No Stn No Flor NS

30" CFS @ 4850' Ls Tan FxIn Micritic Grad Fair-Med OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Barren Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

60" CFS @ 4850' Ls Tan-Crm FxIn Micritic Grad Fair-Med OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Barren Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

30" CFS @ 4872' Ls Tan-Crm FxIn Fair OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Grad Dns Micritic Barren Cht Wht Op Shp Vit Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

60" CFS @ 4872' Ls Tan-Crm FxIn Fair OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Grad Dns Micritic Barren Cht Wht Op Shp Vit Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

Sh Blk Carb-Char-Gry-Maroon-Aqua Soft-Fissil Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Chalk I No Odor No Flor No Stn NS

**MARMATON 4884' (- 2057)**

Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Chalk Sh Char-Gry-Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS

30" CFS @ 4929' Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Chalk Sh Char-Gry-Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS

60" CFS @ 4929' Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Fos (Crin) V Abd Chalk Sh Blk Carb-Char-Gry- Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS

**MARMATON "B" 4927' (- 2100)**

75" CFS @ 4929' Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Fos (Crin) V Abd Chalk Sh Blk Carb-Char-Gry- Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS

SH GAS KIK = 92 UNITS  
 ~DST # 1 ~  
**4736' - 4770'**  
**(Straddle)**  
**Miss-Run**  
**(Bottom Packer Failure).**

Mudco Ck @  
 4872' @ 7:45 AM  
 12/20/13  
 Vis 51;  
 WT= 9.2#;  
 PV= 16;  
 YP= 18;  
 WL= 7.2#;  
 Cake= 1;  
 Chl= 2600 Ppm;  
 Cal= 20;  
 Sol= 6.3%.  
 LCM= 6#;  
 DMC=\$3,602.75;  
 CMC=\$ 33,185.50.

SHUT DOWN FOR CHRISTMAS BREAK  
 ON 12/21/13 @ 3:45 AM,  
 START-UP DRILLING @ 10:00 P.M.  
 12/26/13.

Mudco Ck @  
 4872' @ 7:00 PM  
 12/26/13  
 Vis 58;  
 WT= 8.8#;  
 PV= 19;  
 YP= 21;  
 WL= 12.0#;  
 Cake= 1;  
 Chl= 6900 Ppm;  
 Cal= 120;  
 Sol= 3.2%.  
 LCM= 6#;  
 DMC=\$1,192.95;  
 CMC=\$ 36,110.60.

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Tan-Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Brach, Crin) Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Poor Ixln Pin-Pt Por Micritic (w/Pyr Includ) Dns Barren Cht Wht Translu-Op Shp Vit Fos (Fuss) Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

30" CFS @ 5000' Sh-Blk Carb (w/SSG)-Char-Gry-Aqua-Maroon Fissil Ls Wht Crm-Tan Fxln Poor Ixln Por Micritic Dns Baren Chalk Wht Cht Wht-Gry Translu-Op (w/Fos Includ) Shp Vit ? Faint Odor No Flor No Stn SSG in Blk Carb Sh

**BANDERA SHALE 4978' (- 2151)**

**PAWNEE 4984' (- 2157)**

60" CFS @ 5000' Ls Wht-Crm-Gry Microxln-Fxln Micrite Dns Grad Poor Ixln Gran Por Cht Wht Translu-Op Shp Vit Sh Blk Carb-Char- Grn/Gry Fissil No Odor No Flor No Stn NS

75" CFS @ 5000' Sh Blk Carb-Char- Grn/Gry Fissil Ls Wht-Crm-Gry Microxln-Fxln Micrite Dns Grad Poor Ixln Gran Por Grad Poor OOM Por Poor InterOOM Por Poor Leaching Poor Develop (Tr Only) No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Microxln Micrite Chalky Sh Blk Carb-Aqua No Odor No Flor No Stn NS

**LABETTE SHALE 5016' (- 2189)**

**FORT SCOTT 5021' (-2194)**

Sh Blk Carb-Char-Gry Fissil Ls Wht-Crm-Tan Microxln Micrite Chalky No Odor No Flor No Stn NS

**CHEROKEE SHALE 5030' (- 2203)**

Sh Blk Carb Abd-Char-Gry Fissil Ls Wht-Crm-Tan Microxln Micrite Grad Fxln Poor Pin-Pt Ixln Por Cht Amber-Wht-Tan Translu-Op Shp Vit Fos (Crin, Fuss) Chalk No Odor No Flor No Stn NS

30" CFS @ 5075' Ls Wht-Crm-Tan Microxln Micrite Grad Fxln Poor Pin-Pt Ixln Por Cht Amber-Wht-Tan Translu-Op Shp Vit Fos (Crin, Fuss) Chalk Sh Blk Carb Abd-Char-Gry No Odor No Flor No Stn NS

60" CFS @ 5075' Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS

**SECOND CHEROKEE SHALE 5067' (- 2240)**

75" CFS @ 5075' Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS

Sh Blk Carb-Char-Gry Fissil Ls Crm-Tan Microxln-Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOL Por (w Small OOids in pl) Cht Wht Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS

Sh Blk Carb-Char-Gry Fissil Ls Crm-Tan Microxln-Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOM Por (w Small OOids in pl) Cht Wht Op Shp Vit Chalk Fos (Crin) Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Dns (w/Pyr Includ) Barren Chalk Cht Amber Op Shp Vit Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

**THIRD CHEROKEE SHALE 5114' (- 2287)**

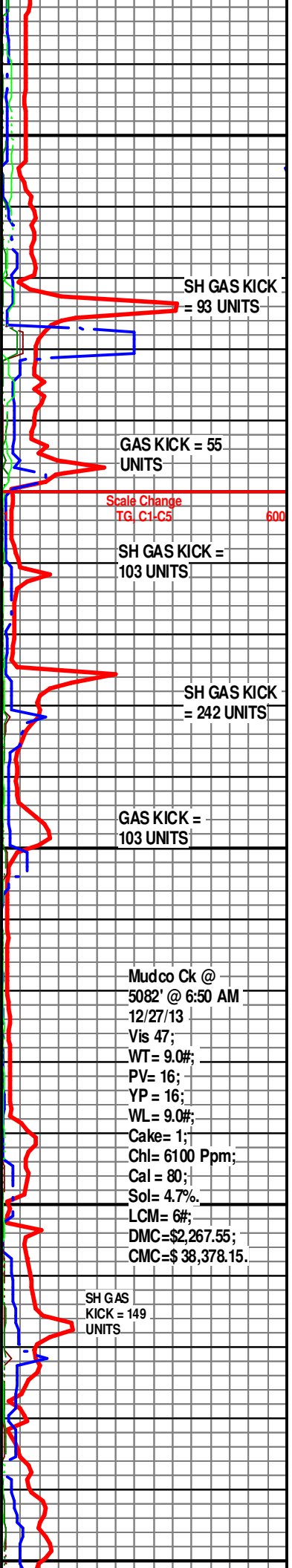
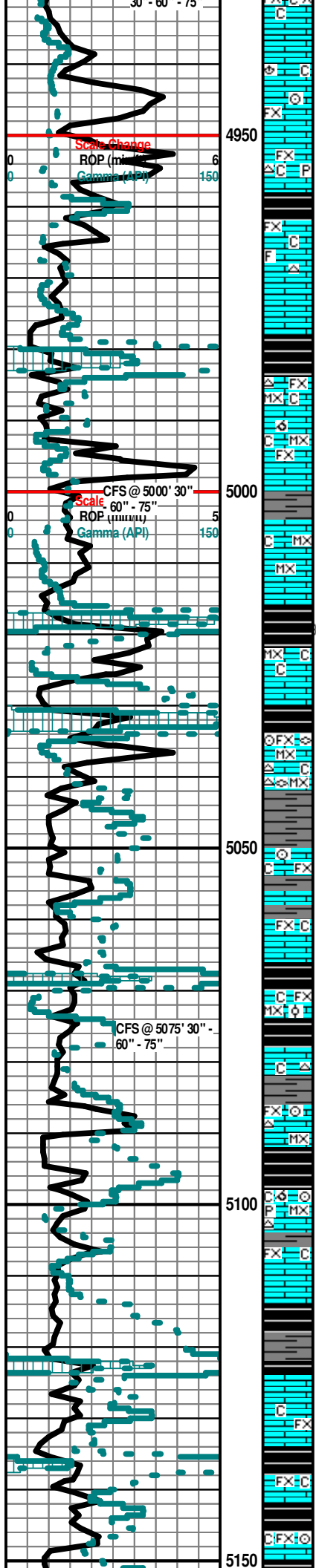
Sh Blk Carb-Gry Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Baren Chalk No Odor No Flor No Stn NS

Sh Blk Carb (w/SG)-Char-Gry Fissil Ls Wht-Crm-Tan Microxln-Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft No Odor No Flor No Stn NS

Sh Blk Carb-Gry Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk No Odor No Flor No Stn NS

Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk Fos (Crin) Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft



SH GAS KICK = 93 UNITS

GAS KICK = 55 UNITS

Scale Change TG C1C5 600

SH GAS KICK = 103 UNITS

SH GAS KICK = 242 UNITS

GAS KICK = 103 UNITS

Mudco Ck @ 5082' @ 6:50 AM 12/27/13 Vis 47; WT= 9.0#; PV= 16; YP= 16; WL= 9.0#; Cake= 1; Chl= 6100 Ppm; Cal= 80; Sol= 4.7%; LCM= 6#; DMC=\$2,267.55; CMC=\$ 38,378.15.

SH GAS KICK = 149 UNITS



ES Crm-Wht-Tan Fxln Por Ixln Por Micritic Dns Barren Chalk Cht Drk Blk Cht-Wht-Amber Op Shp Vit Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft No Odor No Flor No Stn NS

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

Sh Char-Gry-Tr Blk Carb Fissil Abd Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOM Por (w/Small OOids in pl) Poor Dissolu Poor Leaching Chalk Cht Drk Blk (w/Wht Fos Includ) Op Shp Vit Fos (Fuss) No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOM Por (w/Small OOids in pl) Poor Dissolu Poor Leaching Chalk Cht Drk Blk (w/Wht Fos Includ) Op Shp Vit Fos (Fuss) No Odor No Flor No Stn NS

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

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Cht Wht (Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht (w/Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht (w/Fos (Fuss) Includ) Op Shp Vit Sh Char-Gry-Tr Blk Carb Fissil No Odor No Flor No Stn NS

### ATOKA SHALE 5240' (- 2413)

30" CFS @ 5265' Sh Char-Gry-Tr Blk Carb-Brn Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht (w/Fos (Fuss) Includ) Op Shp Vit Faint Odor No Flor No Stn NS

60" CFS @ 5265' Sh Char-Gry-Blk Carb (w/SSG) Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit No Odor ? Min Flor (2 Pcs) No Stn NS

75" CFS @ 5265' Sh Char-Gry-Blk Carb Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

30" CFS @ 5290' Sh Char-Gry-Blk Carb Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

60" CFS @ 5290' Ls Crm-Wht-Tan MicroIn-Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit Sh Char-Gry-Blk Carb Soft-Fissil No Odor No Flor No Stn NS

### MORROW SHALE 5288' (- 2457) MISSISSIPPIAN CHESTER 5292' (- 2465)

75" CFS @ 5290' Ls Crm-Wht-Tan MicroIn-Fxln Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit Sh Char-Gry-Blk Carb Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Fxln Fair-Med OOL Vug Por (w/Small-Med OOids in pl) Grad Med-Good Ixln Pin-Pt Por (w/Pyr Includ) (V Soft) (w/Matted Fos Includ (Brach, Crin, Fuss, Spicule) Por Med-Good SG & SO (Gas & Oil Do Not Flor) (GSG & GSFO w/Broken In Wtr Under Heat & SFO in tray) Med-Good Inc Odor Drk Brn Gillsonitic Stn No Flor GSG & GSO

30" CFS @ 5330' Ls Crm-Tan Fxln Fair-Med OOL Vug Por (w/Small-Med OOids in pl) Grad Med-Good Ixln Pin-Pt Por (w/Pyr Includ) (V Soft) (w/Matted Fos Includ (Brach, Bry, Crin, Fuss, Spicule) Por Med-Good SG & SO (Gas & Oil Do Not Flor) (GSG & GSFO w/Broken In Wtr Under Heat & SFO in tray) ? Glacu (Tr Only) Med-Good Inc Odor Drk Brn Hvy Gillsonitic Stn No Flor GSG & GSO

60" CFS @ 5330' Ls Crm-Tan Fxln Fair-Med OOL Vug Por (w/Small-Med OOids in pl) Grad Med-Good Ixln Pin-Pt Por (w/Pyr Includ) (w/Matted Fos Includ (Lg Crin V Abd, Pelec) Por Med-Good GSG & GSO Sh Blk Carb-Char-Aqua Fissil Inc. Good Odor Good Sat Sm (Lt Brn-Hvy Gillsonitic) No Flor GS

75" CFS @ 5330' Ls AA Sh Blk Carb-Char-Gry Fissil Inc. GS AA

? Trip Debris Sh Char- Gry- Drab Grn- Blk Carb Fissil Ls Wht- Crm- Gry MicroIn-Fxln Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Streaks Pyr Includ) Pyr Mass Fos (Brach) No Odor No Flor NS

? Trip Debris Sh Char- Gry- Drab Grn- Blk Carb Fissil Ls Wht- Crm- Gry MicroIn-Fxln Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Streaks Pyr Includ) Pyr Mass No Odor No Flor NS

? Trip Debris Sh Char- Gry- Drab Grn- Blk Carb Fissil Ls Wht- Crm- Gry MicroIn-Fxln Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Streaks Pyr Includ) Pyr Mass No Odor No Flor NS

? Trip Debris Ls Wht-Fxln Dns Micrite Grad Fair Pin-Pt Ixln Por (w/streaks

SH GAS KICK = 144 UNITS

~ DST # 2 ~  
5259'-5330'

Times:  
5'-60"-90"-90";  
Blow: IF=  
Good/11" . No  
Blow Back During  
ISIP.  
FF= Strong Blow  
BOB/Immed 10  
Sec. Slight Blow  
Back During  
FSIP/15" & Died.

SH GAS KICK = 118 UNITS

TG C1:C5 600

Recovery: 325' TF:  
77' GOSM (5% G  
& 95% M);  
124' GSOCM (25%  
G, 1% O, 74% M);  
62' GOCM & EMUL  
(20% G, 5% O, 75%  
M); & 62' GOCM &  
EMUL (50% G, 15%  
O, 35% M).

SH GAS KICK = 218 UNITS

Pressures:  
IH = 2756#;  
FH = 2673#;  
IF = 137.97#;  
FF = 169-146#;  
ISIP = 1602#;  
FSIP = 1333#;  
Temp.= 125  
degrees F.

Mudco Ck @  
5330' @ 8:20 AM  
12/28/13  
Vis 50;  
WT= 9.35#;  
PV= 16;  
YP = 17;  
WL = 10.4#;  
Cake= 1;  
Chl= 7000 Ppm;  
Cal = Hvy;  
Sol= 6.7%.  
LCM= 7#;  
DMC=\$720.25;  
CMC=\$ 39,098.40.

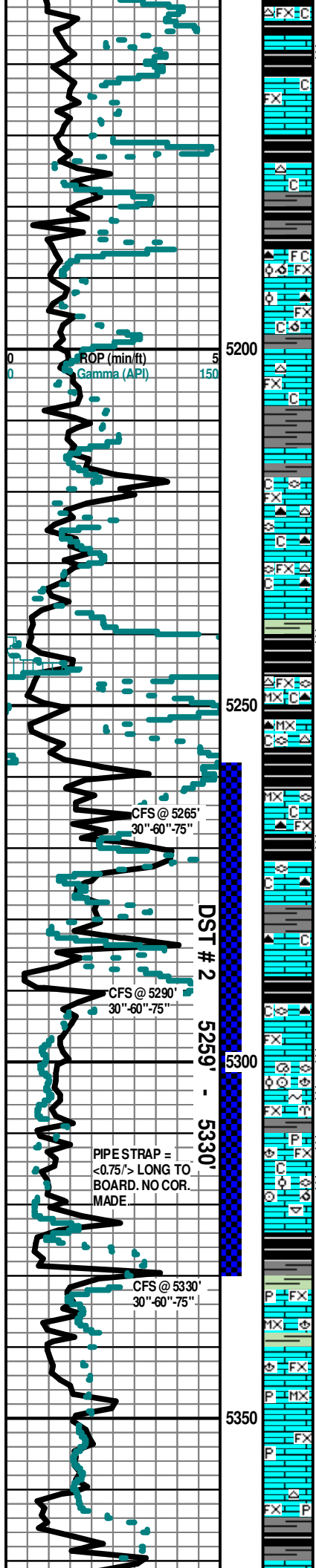
GAS KICK = 419 UNITS.

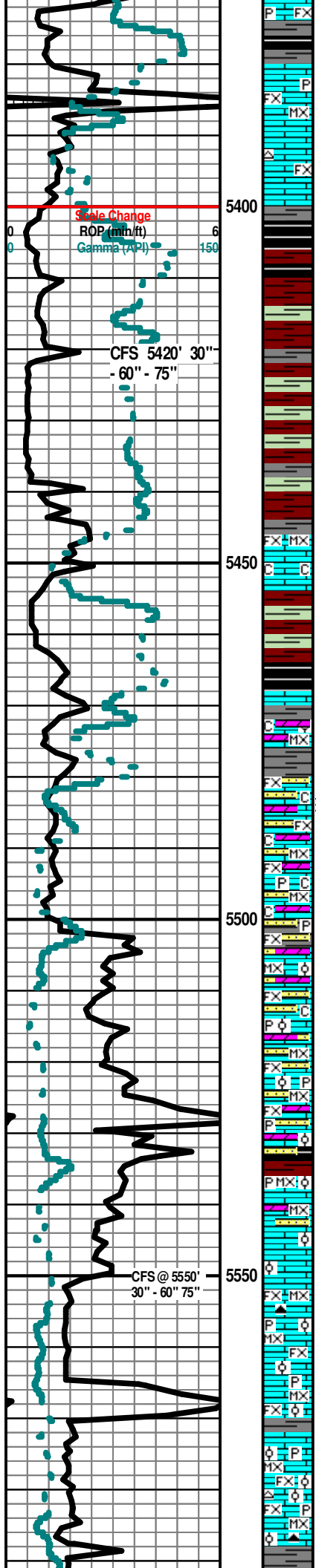
GAS KICK = 599 UNITS.

? TRIP GAS= 203 UNITS

RE-ZERO TOOKE DAQ @  
5362' DEPTH. BKGD GAS = 14 UNITS.

? GAS KICK = 199 UNITS





Pyr Incl) Pyr Mass Abd Sh Char-Gry- Drab Grn-Blk Carb Fissil No Odor No Flor NS

? Trip Debris Sh Char- Gry-Drab Grn- Blk Carb- Fissil Ls Wht-Fxn Dns Micrite Grad Fair Pin-Pt IxIn Por (w/Streaks Pyr Inclus) Pyr Mass Abd Sh Char-Gry-Drab Grn-Blk Carb Fissil No Odor No Flor NS

Ls Wht-Crm Fxn Micrite Grad Fair IxIn Por Barren Cht Amber Translu Vit Shp Sh Maroon-Yell-Purp-Char-Blk Carb Soft-Fissil Abd No Odor No Stn No Flor

30" CFS @ 5420' Sh Maroon-Yell-Purp-Char-Blk Carb Soft-Fissil Abd Ls Wht-Crm Fxn Micrite Grad Fair IxIn Por Barren Cht Amber Translu Vit Shp No Odor No Stn No Flor

60" CFS @ 5420' Sh Maroon-Yell-Purp-Char-Blk Carb Soft-Fissil Abd Ls Wht-Crm Fxn Micrite Grad Fair IxIn Por Barren Cht Amber Translu Vit Shp No Odor No Stn No Flor

75" CFS @ 5420' Sh Varicolored AA Ls AA (1 Pc w/ Good Fxn Fos Mat IxIn Por w/Hvy Brn Stn W/ Good SG & SO ? Trip Debris Likely From Top Chester) No Odor (1 Pc Stn) No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

**MISSISSIPPIAN "Ste. GEN" 5474' (- 2647)**

Ls Wht-Lt Aqua (in Aqua CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Char-Blk Carb-Gry-Grn-Aqua-Maroon Soft- Fissil No Odor No Flor No Stn NS NS

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por (w/SSG & SSO (Drk Brn) Under Heat in Wtr) Friable (Gas & Oil Do Not Flor) Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli Stn (Lt Brn) SSG & SSO

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls"(w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls"(w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls"(w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

30" CFS @ 5550' Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls"(w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

60" CFS @ 5550' Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls"(w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

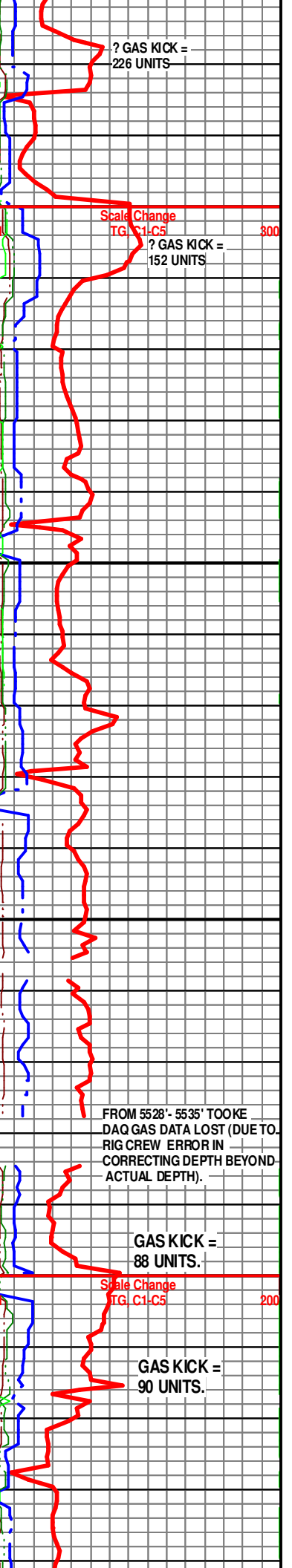
75" CFS @ 5550' Ls AA Qtz Ss AA Dolo AA Sh AA Inc Maroon No Odor No Flor No Stn NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Cht Org - Peach Translu-Op Shp Vit Sh Char-Blk Carb-Lt Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Glacu (Tr Only) Sh Char-Blk Carb-Lt Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Sh Char-Blk Carb-Gry-Olive-Maroon Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Sh Char-Blk Carb-Gry-Olive-Maroon Fissil No Odor No Stn No Flor NS



? GAS KICK = 226 UNITS

Scale Change TG C1:C5 300

? GAS KICK = 152 UNITS

FROM 5528' - 5535' TOOKE DAQ GAS DATA LOST (DUE TO RIG CREW ERROR IN CORRECTING DEPTH BEYOND ACTUAL DEPTH).

GAS KICK = 88 UNITS.

Scale Change TG C1:C5 200

GAS KICK = 90 UNITS.

Ls Wht-Crm-Lt Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Sh Char-Blk Carb-Gry-Olive-Maroon Fissil No Odor No Stn No Flor NS

### MISS. "ST. LOUIS" POROSITY 5604' (- 2777)

Ls Wht-Crm-Lt Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Cht Wh t- Clear Translu Shp Vit Sh Char-Blk Carb-Gry-Yell-Maroon Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) ? VSSO ( 1 Pc) Cht Tan Op Shp Vit Chalky Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor ? ( 1 Pc) NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Wht-Peach Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Wht-Peach Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Peach-Org Inc Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Peach-Org Inc Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

30" CFS @ 5700' Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Blk Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

60" CFS @ 5700' Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Blk Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

Electric Logs Run: By Weatherford Logging: Dual Induction; Compensated Density-Neutron; Sonic; & Microresistivity Logs.

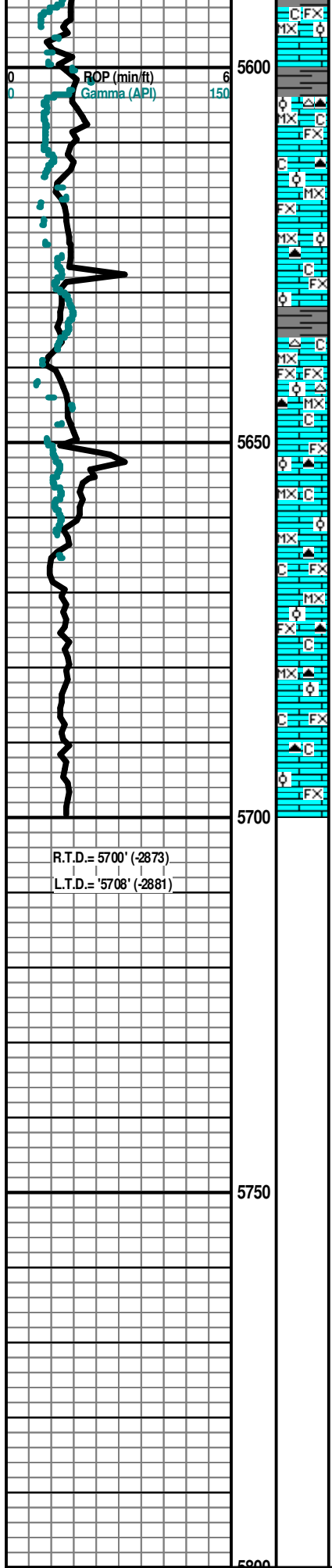
Geologist Left Location At: 8:30 AM on 12/30/2013

TG C1-C5 200

GAS KICK = 64 UNITS

Mudco Ck @  
5596' @ 6:50 AM  
12/29/13  
Vis 69;  
WT= 9.25#;  
PV= 20;  
YP= 23;  
WL= 7.6;  
Cake= 1;  
Chl= 2800 Ppm;  
Cal= 40;  
Sol= 6.3%  
LCM= 6.5#;  
DMC=\$2,229.40;  
CMC=\$ 41,327.80.

CHANGEOUT EXTRACTOR FILTER @ 5700';  
GAS TEST EXTRACTOR = 100 UNITS.



R.T.D.= 5700' (-2873)  
L.T.D.= 5708' (-2881)