



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

**Well Name:** SCHWAB "A" #1-7  
**Location:** E/2- NE - SE of Sec. 7 - T. 30 S. - R. 30 W.  
**License Number:** A.P.I. # 15 - 119 - 21,362 - 00 - 00  
**Spud Date:** 03/06/2014  
**Surface Coordinates:** SPOT: 1980' FSL & 330' FEL

**Region:** MEADE CO., KS.  
**Drilling Completed:** 03/14/2014

**Bottom Hole  
Coordinates:**  
**Ground Elevation (ft):** 2814'                      **K.B. Elevation (ft):** 2825'  
**Logged Interval (ft):** SURFACE (To: 5549'                      **Total Depth (ft):** 5550'  
**Formation:** MISSISSIPPIAN "STE. GEN"  
**Type of Drilling Fluid:** CHEMICAL/POLYMER/GEL. & MUD DISPLACEMENT @ 2984'.

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 (DWE)  
**Address:** 312 N. BROADVIEW STREET  
WICHITA, KANSAS 67208

**CASING & DEVIATION**

**Surface Casing:** Spud at 10:15 pm on 3/6/14. Drilled 12-1/4" to 1833'. Ran 44 joints of new 24#, 8-5/8" casing. Tallied 1811'. Set at 1829' KB. Welded straps on shoe, bottom 3 joints and top 2 joints. Tacked collars on the remainder. (5) Centralizers on joints 1-3-5-7-27. Float insert in top of 1st joint. Cemented with 650 sks 65/35 POZ 3% CC, 1/4# FS. Tailed with 200 sks Class A; 3% CC; 1/4# FS. Cement did circulate. Plug down at 2:45 pm on 3/8/14. Allied Cementing ticket #52529. Basket on Joint #28 at 699' KB.

**Deviation Survey's Taken:** @ 1830' = 3/4 degree; @ 5330' = 3/4 degree; @ 5550' = 1 degree.

## DSTs

~~ DST # 1 ~ Interval 5252'-5330'. Times: 5"-60"-90"-120";

Blow: IF= Good/8" . No Blow Back During ISIP. FF= Strong Blow BOB/Immed 10 Sec. No Blow Back During FSIP.

Recovery: 1060' GIP; 190' TF: 90' OCM (25% O, 75% M); & 100' GOCM (20% G, 25% O, 55% M).

Pressures: IH = 2641#; FH= 2594#; IF=28-36#; FF=54-71#; ISIP =773#; FSIP=529#; Temp.=125 degrees F..


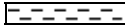

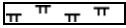
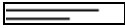
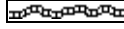




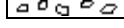



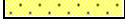



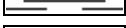
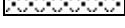
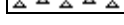


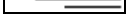
## Comments

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 4 1/2" 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	 Belm	 Pellet	<b>TEXTURE</b>
 Anhy	 Kaol	 Bioclst	 Pisolite	 Boundst
 Arggrn	 Marl	 Brach	 Plant	 Chalky
 Arg	 Minxl	 Bryozoa	 Strom	 Cryxln
 Bent	 Nodule	 Cephal		 Earthy
 Bit	 Phos	 Coral	<b>STRINGER</b>	 Finexln
 Brecfrag	 Pyr	 Crin	 Anhy	 Grainst
 Calc	 Salt	 Echin	 Arg	 Lithogr
 Carb	 Sandy	 Fish	 Bent	 Microxln
 Chtdk	 Silt	 Foram	 Coal	 Mudst
 Chtlt	 Sil	 Fossil	 Dol	 Packst
 Dol	 Sulphur	 Fuss	 Grysh	 Wackest
 Feldspar	 Tuff	 Gastro	 Gyp	
 Ferrpel	<b>FOSSIL</b>	 Oolite	 Ls	
 Ferr	 Algae	 Oomold	 Mrst	
 Glau	 Amph	 Ostra	 Sltstrg	
 Gyp		 Pelec	 Ssstrg	

**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

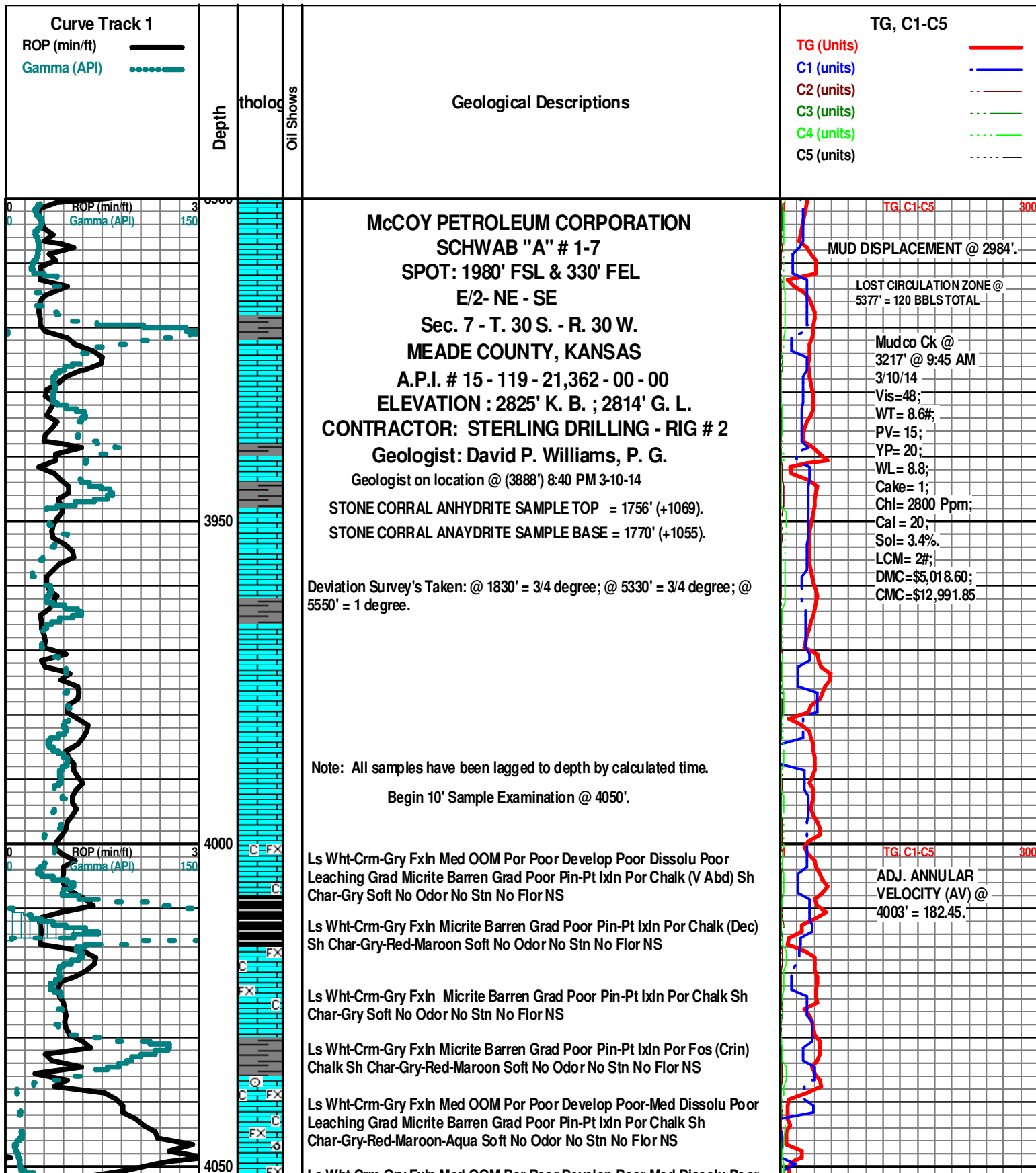
- [●] Even
- [◉] Spotted
- [○] Ques
- [◻] Dead

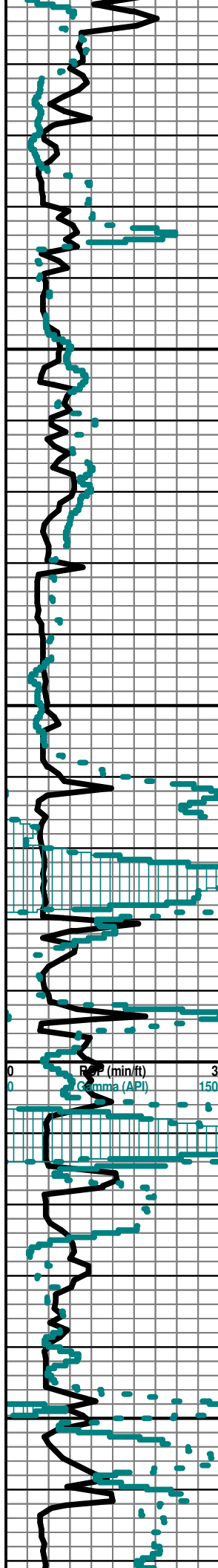
[■] Core

- EVENT**
- [◻] Rft
  - [▶] Sidewall

- OIL SHOW**
- [✖] Gas show

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





Ls Wht-Crm-Gry Fxln Por Med Dissolu Poor Leaching Grad Micrite Barren Grad Poor Pin-Pt Ixln Por Chalk Sh Char-Gry-Red-Maroon-Aqua Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Chalk Sh Char-Gry-Red-Maroon Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Fair OOM Por Poor Develop Poor Dissolu Poor Leaching Chalk Sh Char-Gry-Red-Maroon Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Tr Poor OOM Por Chalk Sh Char-Gry-Tr Red (Dec) Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Poor OOM Por Poor Dissolu Poor Leaching Chalk Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Poor OOM Por Poor Dissolu Poor Leaching Cht Wht (Interbedded in Ls) Op Vit Shp Chalk Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Tr Poor OOM Por Chalk Abd Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Tr Poor OOM Por AA Dec Chalk Abd Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Poor OOM Por Poor Dissolu Poor Leaching Cht Wht (Interbedded in Ls) Op Vit Shp Chalk Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Tr Poor OOM Por AA Dec Chalk Abd Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

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

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

Ls Wht-Crm-Gry Fxln Dns Micrite Grad Pin-Pt Ixln Por Chalk Fos (Crin) Sh Blk Carb-Char-Gry-Maroon Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Dns Micrite Grad Pin-Pt Ixln Por Chalk Sh Blk Carb-Char-Gry-Maroon Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Dns Micrite Grad Pin-Pt Ixln Por Chalk Sh Blk Carb-Char-Gry-Maroon Fissil No Odor No Stn No Flor NS

**HEEBNER 4206' (- 1381)**

Sh Blk Carb-Char-Gry 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 Fxln Dns Micrite Grad Pin-Pt Ixln Por Chalk No Odor No Stn No Flor NS

**TORONTO 4225' (- 1400)**

Ls Wht-Crm-Tan Fxln Dns Micrite Grad Fair Pin-Pt Ixln Por Cht Wht-Tan Op Shp Vit Chalk No Odor No Stn No Flor NS

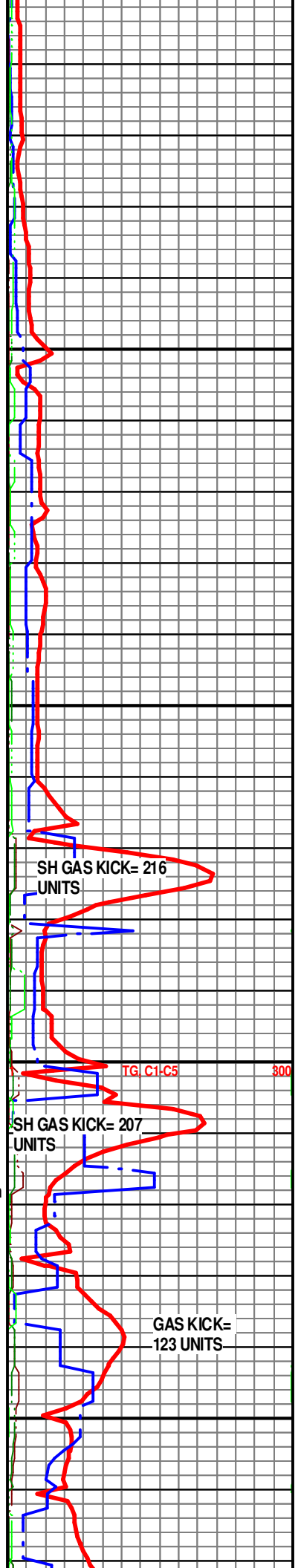
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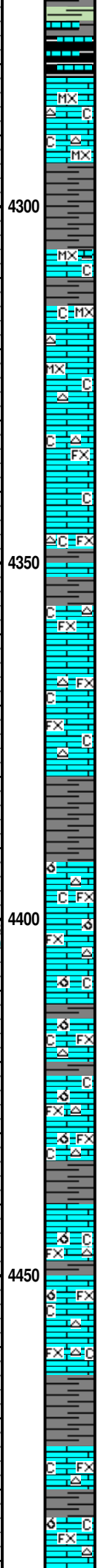
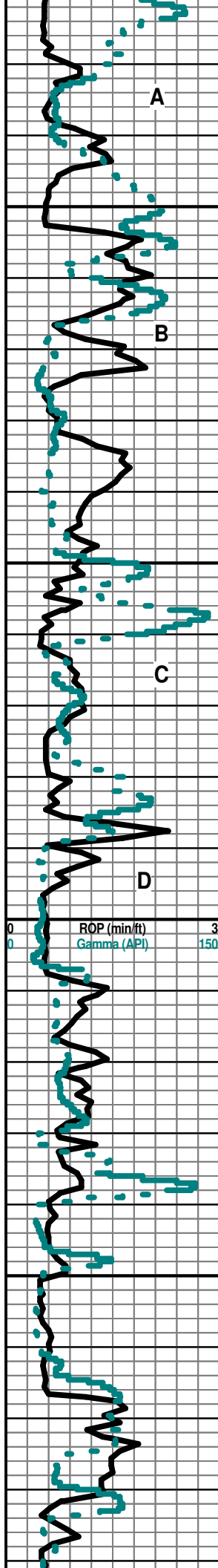
Ls Wht-Crm-Tan Fxln Dns Micrite Grad Fair Pin-Pt Ixln Por Chalk No Odor No Stn No Flor NS

**DOUGLAS 4268' (- 1441)**

Sh Char-Gry-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 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





**LANSING 4282' (- 1457)**

Ls Wht-Crm-Tan-Gry MicroIn Dns Micritic Barren Grad Poor Pin-Pt IxIn Por Barren Cht Wht Op Shp Vit Chalk Sh Char-Gry Soft-Fissil No Odor No Stn No Flor

Ls Wht-Crm-Tan-Gry MicroIn Dns Micritic Barren Grad Poor Pin-Pt IxIn Por Barren Cht Wht-Lt Tan Op Shp Vit Chalky Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry MicroIn Dns Micritic Barren Grad Poor Pin-Pt IxIn Por Barren Cht Wht-Lt Tan Op Shp Vit Chalky Sh Char- Gry- Aqua Soft-Fissil No Odor No Stn No Flor NS

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

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

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

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

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

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

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

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

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

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Fair-Med Pin-Pt IxIn Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Cht Wht-Tan-Gry Translu-Op Shp Vit Fos (Crin) Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

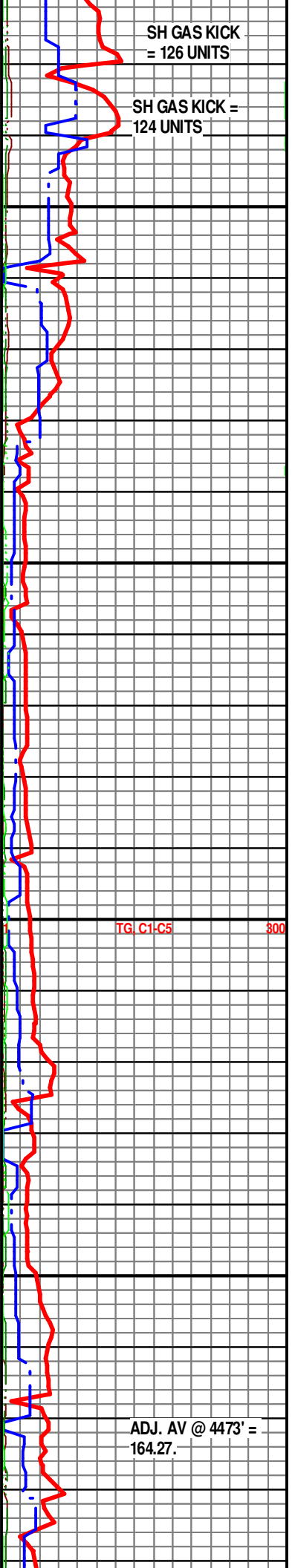
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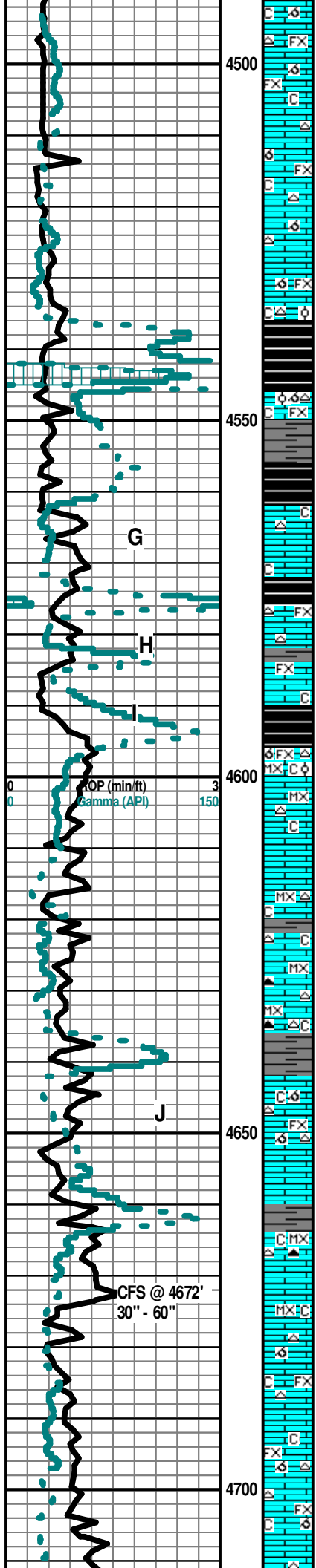
Ls Wht-Crm-Tan FxIn Fair-Med OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb-Char- Gry Fissil-Soft No Odor No Stn No Flor NS

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

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

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Fair-Med Pin-Pt IxIn Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Cht Wht-Tan-Gry Translu-Op Shp Vit Fos (Crin) Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS





Ls Wht-Crm-Tan FxIn Med-Good OOM Por Med-Good InterOOM Vug Por  
 Med-Good Dissolu Good Leaching Barren Chalk Cht Wht-Tan Translu-Op  
 Shp Vit Sh Char-Gry 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 Poor OOM Por Poor InterOOM Por Barren Chalk Cht  
 Wht Translu-Op Shp Vit Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Poor OOM Por Poor InterOOM Por Barren Cht Wht Op  
 Shp Vit Sh Char-Gry Soft-Fissil No Odor No Flor No Stn 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 Char-Gry  
 Soft-Fissil No Odor No Flor No Stn 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 Chalky Sh Char-Gry  
 Soft-Fissil No Odor No Flor No Stn NS

Sh Char-Gry-Blk Carb Soft-Fissil 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

**LANSING "G" 4563' (- 1738)**

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 Chalk No Odor No Flor No Stn NS

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

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

Ls Wht-Crm-Tan MicroxIn Dns Micrite Grad FxIn Med-Good Vug InterOOM  
 Por (w/Med OOids in pl) Fair-Med Dissolu Fair-Med Leaching Cht Wht Op  
 Shp Vit Sh Char-Gry-Blk Carb Soft-Fissil No Odor No Flor No Stn NS

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

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

Ls Wht-Crm-Tan MicroxIn Dns Micrite Chalky Cht Gry-Tan-Lt Org Translu-Op  
 Shp Vit Sh Char-Gry Soft No Odor No Flor No Stn NS

Ls Wht-Crm-Tan MicroxIn Dns Micrite Chalky Cht Gry-Tan-Lt Org Translu-Op  
 Shp Vit Sh Char-Gry Soft No Odor No Flor No Stn NS

30" CFS @ 4672' Ls Crm-Tan-Gry FxIn Poor OOM Por Poor InterOOM Por  
 Poor Dissolu Poor Leaching Grad Dns Micrite Chalky Sh Char-Gry Fissil No  
 Odor No Flor No Stn NS

60" CFS @ 4672' Ls Wht-Crm-Tan MicroxIn Dns Micrite Cht Wht-Lt Org  
 Translu-Op Shp Vit Chalky (V Abd) Sh Char-Gry Fissil No Odor No Flor No  
 Stn NS

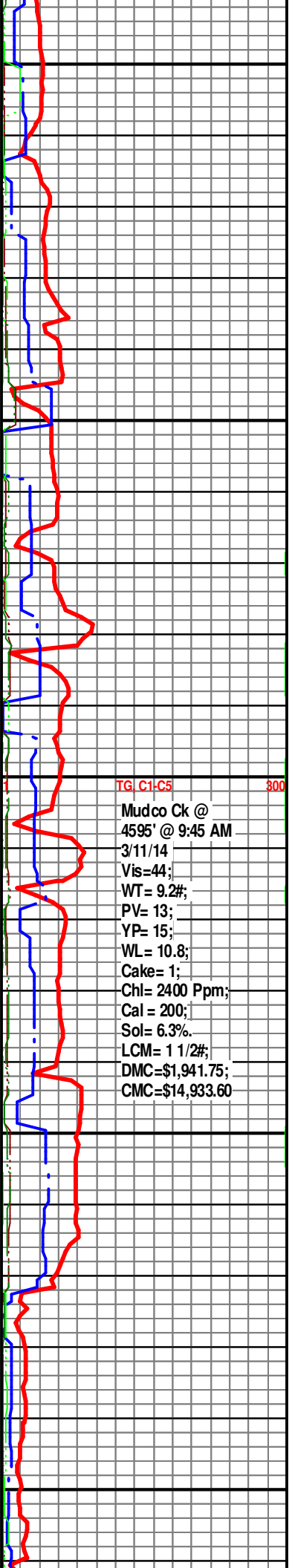
Trip Debris Ls Wht-Crm MicroxIn Dns Micrite AA Cht Gry Translu-Op Shp Vit  
 AA Sh Char- Gry Soft AA No Odor No Stn No Flor NS

Trip Debris Ls Crm-Tan FxIn Poor OOM Por AA Grad Dns Micrite Cht Wht  
 Op Shp Vit AA Chalky Sh Blk Carb-Char-Gry Fissil AA No Odor No Flor No  
 Stn NS

Trip Debris Ls Crm-Tan FxIn Poor OOM Por AA Grad Dns Micrite Cht Wht  
 Op Shp Vit AA Chalky Sh Blk Carb-Char-Gry Fissil AA No Odor No Flor No  
 Stn NS

Trip Debris Ls Crm-Tan FxIn Poor OOM Por AA Grad Dns Micrite Cht Wht  
 Op Shp Vit AA Chalky Sh Blk Carb-Char-Gry Fissil AA No Odor No Flor No  
 Stn NS

Trip Debris Ls Crm-Tan FxIn Poor OOM Por AA Grad Dns Micrite Cht Wht



TG C1-C5 800

Mudco Ck @  
 4595' @ 9:45 AM  
 3/11/14  
 Vis=44;  
 WT= 9.2#;  
 PV= 13;  
 YP= 15;  
 WL= 10.8;  
 Cake= 1;  
 Chl= 2400 Ppm;  
 Cal = 200;  
 Sol= 6.3%.  
 LCM= 1 1/2#;  
 DMC=\$1,941.75;  
 CMC=\$14,933.60

Op Shp Vit AA Chalky Sh Blk Carb-Char-Gry Fissil AA No Odor No Flor No Stn NS

**STARK SHALE 4722' (- 1897)**

30" CFS @ 4749' Sh Blk Carb-Char Fissil (w/SG) V Abd Ls Wht-Crm-Tan-Brn Microxln Dns Micrite Grad Fair OOM Por Fair-Med Develop Fair Leaching Chalky No Odor No Stn No Flor SG in Blk Sh

**KANSAS CITY "SWOPE" (K) 4730' (-1915)**

60" CFS @ 4749' Ls Wht-Crm Fxln Med OOM Por (w/ Med OOids in pl) Med-Good Leaching AA Med-Good Dissolu Barren Grad Microxln Dns Micrite Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

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

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

**HUSHPUCKNEY SHALE 4777' (- 1952)**

**KANSAS CITY "HERTHA" (L) 4783' (- 1958)**

Ls Crm-Tan Microxln Dns Micrite Chalk Sh Blk Carb Fissil No Odor No Stn No Flor NS

**KANSAS CITY "HERTHA Ø" 4796' (-1971)**

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

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

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

Ls Tan-Crm Fxln Micritic Grad Poor OOM Por (w/Small-Med OOL in pl) Poor Dissolu Poor Develop Poor Leaching Barren Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

Ls Tan-Crm Fxln Micritic Grad Poor OOM Por (w/Small-Med OOL in pl) Poor Dissolu Poor Develop Poor Leaching Barren Cht Amber Op Shp Vit Fos (Crin) Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

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

**MARMATON 4864' (- 2039)**

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

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

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

Sh Blk Carb-Char-Gry- Maroon-Aqua Soft-Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Grad Fxln Fos (Crin) V Abd Chalk No Odor No Flor No Stn NS

**MARMATON "B" 4900' (- 2075)**

Sh Blk Carb-Char-Gry- Maroon-Aqua Soft-Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Grad Fxln Fos (Crin) V Abd Chalk No Odor No Flor No Stn NS

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

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 Wht-Crm-Gry Fxln Poor Ixln Pin-Pt Por Micritic Dns Barren Cht

SH GAS KICK = 206 UNITS.

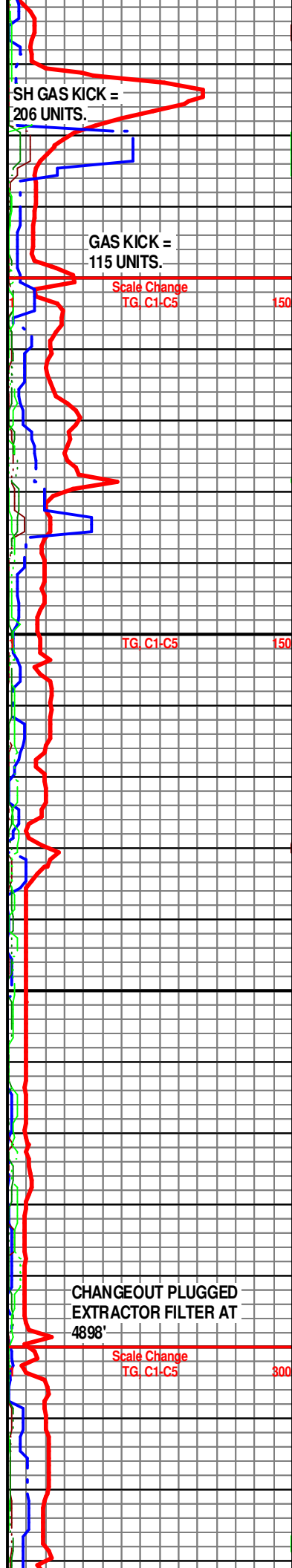
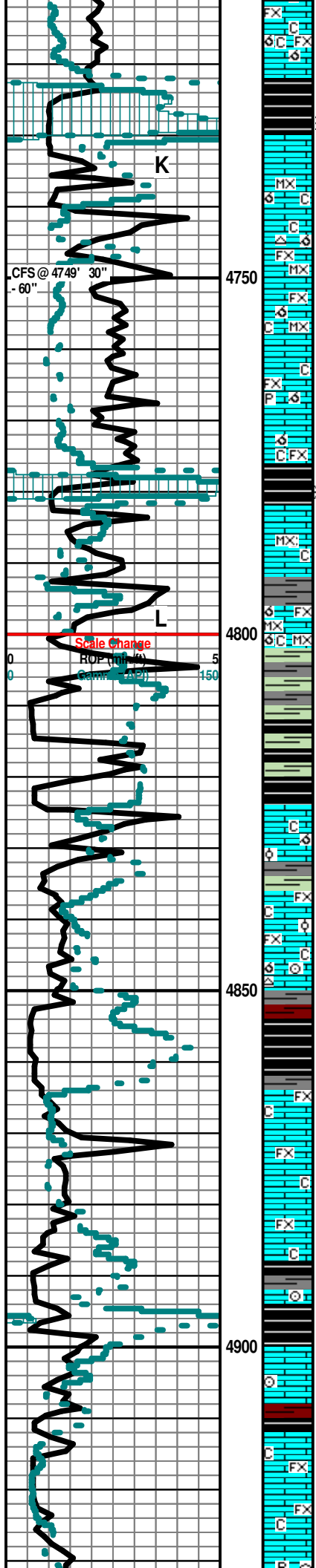
GAS KICK = 115 UNITS.

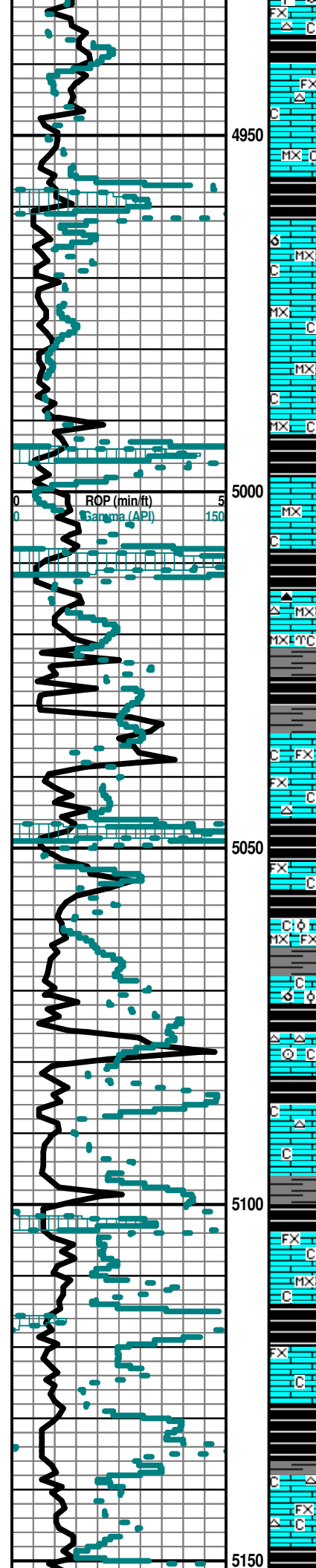
Scale Change TG C1-C5 150

TG C1-C5 150

CHANGEOUT PLUGGED EXTRACTOR FILTER AT 4898'

Scale Change TG C1-C5 300





Amber-Gry Translu-Op Shp Vit Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

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

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

**BANDERA SHALE 4966' (- 2141)**

**PAWNEE 4962' (- 2137)**

Sh Blk Carb-Char- Grn/Gry Fissil Ls Wht-Crm-Gry MicroIn-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 MicroIn Micrite Chalky Sh Blk Carb-Aqua No Odor No Flor No Stn NS

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

**LABETTE SHALE 4992' (- 2167)**

**FORT SCOTT 4998' (-2173)**

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

**CHEROKEE SHALE 5008' (- 2183)**

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

Ls Wht-Crm-Tan MicroIn Micrite Grad Fxln Poor Pin-Pt Ixln Por Fos (Bry) Chalk Sh Blk Carb Abd-Char-Gry No Odor No Flor No Stn NS

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

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

**SECOND CHEROKEE SHALE 5046' (- 2221)**

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 MicroIn-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 MicroIn-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

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 5100' (- 2275)**

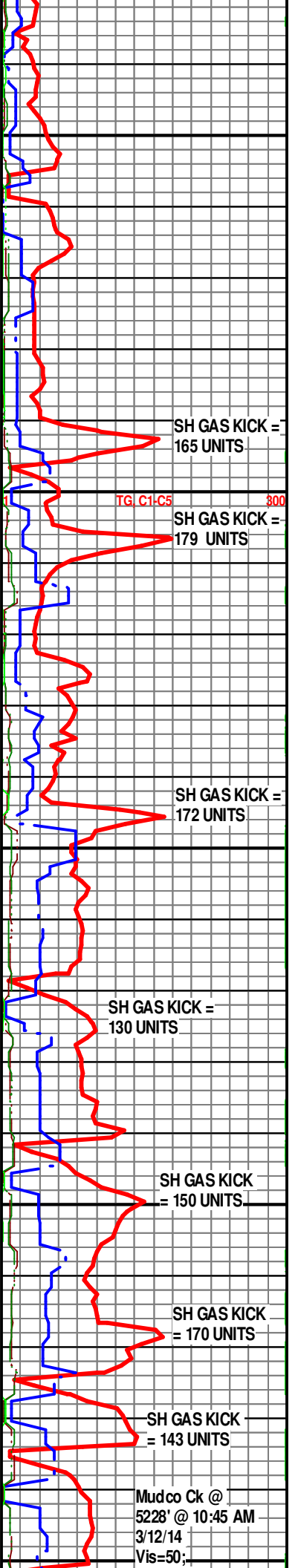
Sh Blk Carb-Gry Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk No Odor No Flor No Stn NS

Sh Blk Carb (w/SG)-Char-Gry Fissil Ls Wht-Crm-Tan MicroIn-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 Wht Soft Cht-Wht-Amber Op Shp Vit 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 Cht-Wht-Amber Op Shp Vit Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS



SH GAS KICK = 165 UNITS

SH GAS KICK = 179 UNITS

SH GAS KICK = 172 UNITS

SH GAS KICK = 130 UNITS

SH GAS KICK = 150 UNITS

SH GAS KICK = 170 UNITS

SH GAS KICK = 143 UNITS

Mudco Ck @ 5228' @ 10:45 AM 3/12/14 Vis=50;





CFS @ 5377'  
30" - 60" - 90"  
LOST  
CIRCULATION @  
5377'

ROP (min/ft)

5400

5450

5500

5550

CFS @ 5550' 30"  
- 60" 75"

R.T.D. = 5550' (-2725)  
L.T.D. = 5549' (-2724)

90" CFS @ 5377' Lost Circulation Sample Ls Wht-Crm-Gry-Lt Grn Microxln-Fxln Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Streaks Pyr Inclus) Pyr Mass Fos (Crin) Abd Sh Char-Gry-Drab Grn-Blk Carb Fissil No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Micrite Grad Fair Ixln Por Barren Cht Amber-Wht Translu Vit Shp Fos (Crin) Sh Char-Gry-Drab Grn-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Micrite Grad Fair Ixln Por Barren Cht Amber Translu Vit Shp Sh Char-Gry-Drab Grn-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Micrite Grad Fair Ixln Por Barren Cht Amber Translu Vit Shp Sh Char-Gry-Drab Grn-Blk Carb Fissil No Odor No Stn No Flor NS

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

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

**LOWER CHESTER 5430' (-2605)**

Qtz Ss Wht-Lt Gry VFGrn Med-Well-Rd Med-Well-Sorted Fair IGrn Por (Hvy Wht CaCO3 Matrix) Barren Ls AA Cht Wht Op Shp Vit Sh Varicolored AA (Wash Red) No Odor No Stn No Flor NS

Qtz Ss Wht-Lt Gry VFGrn Med-Well-Rd Med-Well-Sorted Fair IGrn Por (Hvy Wht CaCO3 Matrix) Barren Ls AA Cht Wht Op Shp Vit Sh Varicolored AA (Wash Red) No Odor No Stn No Flor NS

Sh Varicolored AA (Wash Red) Qtz Ss Wht-Lt Gry VFGrn Med-Well Rd Med-Well Sorted Fair IGrn Por (Hvy Wht CaCO3 Matrix) Barren Ls AA Cht Wht Op Shp Vit No Odor No Stn No Flor NS

**MISSISSIPPIAN "Ste. GEN" 5472' (- 2647)**

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

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

Ls Wht-Lt Aqua-Lt Gry Fxln Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Friable Grad Ls/Dolo Gry Microxln Dns Micrite Chalk Sh Varicolored AA Soft- Fissil No Odor No Flor No Stn NSNS

Ls Wht-Lt Aqua-Lt Gry Fxln Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Friable Grad Ls/Dolo Gry Microxln Dns Micrite Chalk Sh Varicolored AA Soft- Fissil No Odor No Flor No Stn NSNS

30" CFS @ 5550' Ls Wht-Lt Aqua-Lt Gry Fxln Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Friable Grad Ls/Dolo Gry Microxln Dns Micrite Chalk Sh Varicolored AA Soft- Fissil No Odor No Flor No Stn NS NS

60" CFS @ 5550' Ls Wht-Lt Aqua-Lt Gry Fxln Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Friable Grad Ls/Dolo Gry Microxln Dns Micrite Chalk Sh Varicolored AA Soft- Fissil No Odor No Flor No Stn NS NS

75" CFS @ 5550' Ls Wht-Lt Aqua-Lt Gry Fxln Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Friable Grad Ls/Dolo Gry Microxln Dns Micrite Chalk Sh Varicolored AA Soft- Fissil No Odor No Flor No Stn NS NS

TG C1-C5 150

Mudco Ck @  
5550' @ 9:30 AM  
3/14/14  
Vis=60;  
WT= 9.1#;  
PV= 20;  
YP= 24;  
WL= 8.0;  
Cake= 1;  
Chl= 2000 Ppm;  
Cal = 40;  
Sol= 5.4%.  
LCM= 10#;  
DMC=\$4,131.15;  
CMC=\$25,480.85.

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

Geologist Left Location At: 1:00 PM on 3/14/2014

