



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

Well Name: MTPRC B #1-22
Location: E/2 -SE - SE of Sec. 22 - T. 30 S. - R. 19 W.
License Number: A.P.I. #15-097-21,778-00-00
Spud Date: 12/03/2013
Surface Coordinates: 660' FSL & 330' FEL

Region: KIOWA CO., KS.
Drilling Completed: 12/11/2013

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 2218' **K.B. Elevation (ft):** 2229'
Logged Interval (ft): 601' **To:** **Total Depth (ft):** 5200'
Formation: MISSISSIPPIAN 'WARSAW'
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

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

GEOLOGIST

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

Casing & Deviation Surveys:

Spud at 8:30 pm on 12/03/13 . Ran 6 joints of 54.5# ; 13-3/8" surface casing. Tallied 254.78', landed at 268' KB, (254' GL). Strapped guide shoe and bottom 3 joints. Welded collars on top 2 joints. Cemented with 325 sks Common; 2% Gel; 3% CC; 1/4# CF. Cement did circulate. Plug down at 7:00 am on 12/04/13. Quality Well Service ticket #6053.

2nd Casing String: Drilled 12-1/4" hole to 609'. Ran 14 joints of new 24# 8-5/8" surface casing. Tallied 587.39'. Landed at 601' KB. Strapped guide shoe and bottom 3 joints, tacked collars on all, then welded collar on top 2 joints. Cemented bottom with 100 sks Common; 2% Gel, 3% CC, 1/4# CF. Then cemented from top through 1" tubing at 220' in annulus with 120 sks Common; 3% CC, 2% Gel 1/4# CF. Cement did circulate to surface. Basket at 248' KB = 237' GL. Plug down at 4:15 am on 12/05/13. Quality Well Svc cementing ticket #6054.

DSTs

~~ DST # 1~~ 5055' - 5105'. Times: 5"- 60"- 90"- 90";

Blow: IF=Strong/ BOB/30 Sec.. BOB Blow back /22" on ISIP. FF= BOB/10 Sec. & GTS @ 7"/ TSTM. Blow Back During FSIP BOB/30".

Recovery: 4728' GIP: 631' TF: 5' GOCM (20% G; 20% O; 60% M); 495' GO (10% G; 90% O); 131' GOCM (10% G; 40% O; 50% M). No SW.

Pressures: IH = 2896#; FH = 2553#; IF = 95-77#; FF = 88-209#;
 ISIP = 1094#; FSIP = 573#; T.= 118 degrees. F.; API Grv.
 (Corrected @ 60 degrees F.) = 34.9 degrees F.


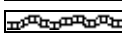
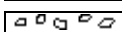

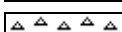
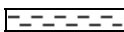
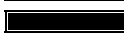

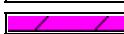






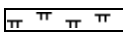


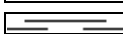
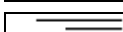
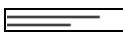



Comments

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






















































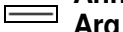



















Respectfully submitted,

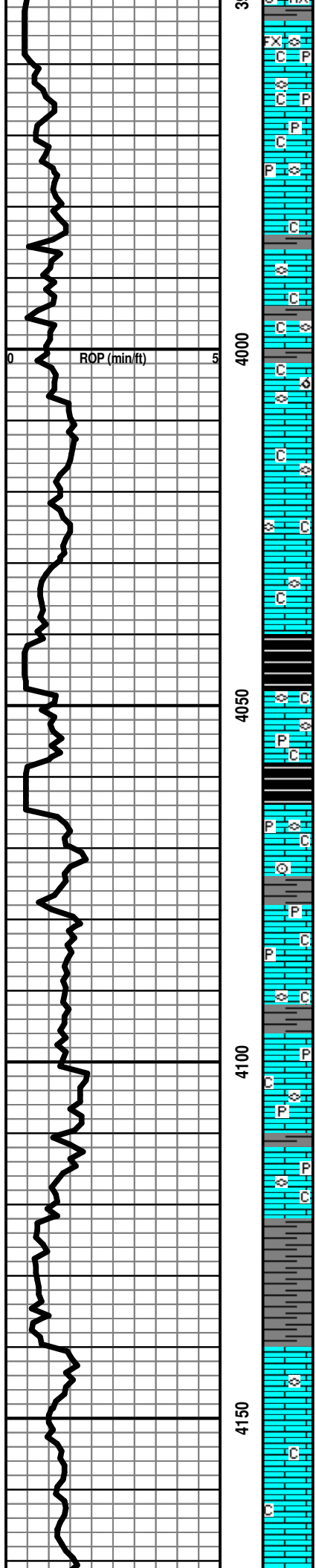
David P. Williams, P.G

ROCK TYPES

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

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp	 Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff FOSSIL  Algae  Amph	 Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Fuss  Gastro  Oolite  Oomold  Ostra  Pelec	 Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst  Sltstrg  Ssstrg	TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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Ls Gry-Crm-Wht Fxln-Microxln Dns Micrite Fos (Brach, Fuss) Pyr Mass Chalky Sh Gry Soft "Gummy" No Odor No Flor No Stn NS

Ls Gry-Crm-Wht Fxln-Microxln Dns Micrite Fos (Fuss) Pyr Mass Chalky Sh Gry Soft "Gummy" No Odor No Flor No Stn NS

Ls Wht-Gry-Crm Fxln-Microxln Dns Micrite Grad Poor OOM Por Poor Leaching Poor Develop Fos (Fuss) Pyr Mass Chalky Sh Gry Soft "Gummy" No Odor No Flor No Stn NS

Geologist on location @ (3975') : 4:45 PM 12-08-13

Ls Wht-Gry-Crm Fxln-Microxln Dns Micrite Fos (Fuss) Chalky Sh Gry Soft "Gummy" No Odor No Flor No Stn NS

Ls Gry-Crm-Wht Fxln-Microxln Dns Micrite Fos (Fuss) Chalky Sh Gry Soft "Gummy" No Odor No Flor No Stn NS

LECOMPTON "B" 4002' (- 1773)

Ls Wht-Gry-Crm Fxln-Microxln Dns Micrite Grad Poor OOM Por Poor Leaching Poor Develop Fos (Fuss) Chalky Sh Gry Soft "Gummy" No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln-Microxln Dns Micrite Fos (Fuss) Chalky Sh Gry-Drk Gry-Aqua Soft "Gummy" No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln-Microxln Dns Micrite Fos (Fuss) Chalky Sh Gry-Drk Gry-Aqua Soft "Gummy" No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln-Microxln Dns Micrite Fos (Fuss) Chalky Sh Gry-Drk Gry-Aqua Soft "Gummy" No Odor No Flor No Stn NS

QUEEN HILL SHALE 4041' (-1812)

Sh Blk Carb- Char-Gry-Aqua Fissil-Soft Ls Wht Fxln Micrite Fos (Fuss) Pyr Mass Chalky No Odor No Flor No Stn NS

Sh Blk Carb- Char-Gry-Aqua Fissil-Soft Ls Wht Fxln Micrite Fos (Fuss) Pyr Mass Chalky No Odor No Flor No Stn NS

Sh Blk Carb- Char-Gry-Aqua Fissil-Soft Ls Wht Fxln Micrite Fos (Fuss) Pyr Mass Chalky No Odor No Flor No Stn NS

Sh Blk Carb- Char-Gry-Aqua Fissil-Soft Ls Wht Fxln Micrite Fos (Crin) Pyr Mass Chalky No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Pyr Mass Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Pyr Mass Fos (Fuss) Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Pyr Mass Fos (Fuss) Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Pyr Mass Fos (Fuss) Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS

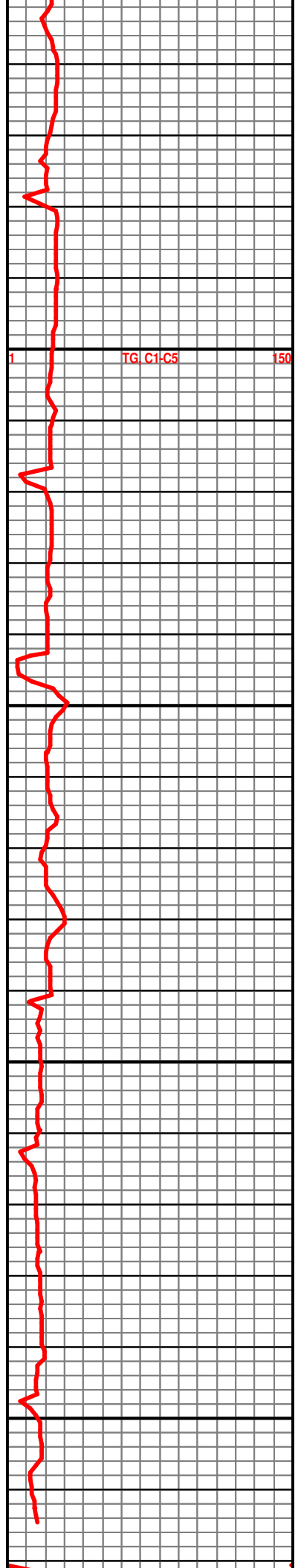
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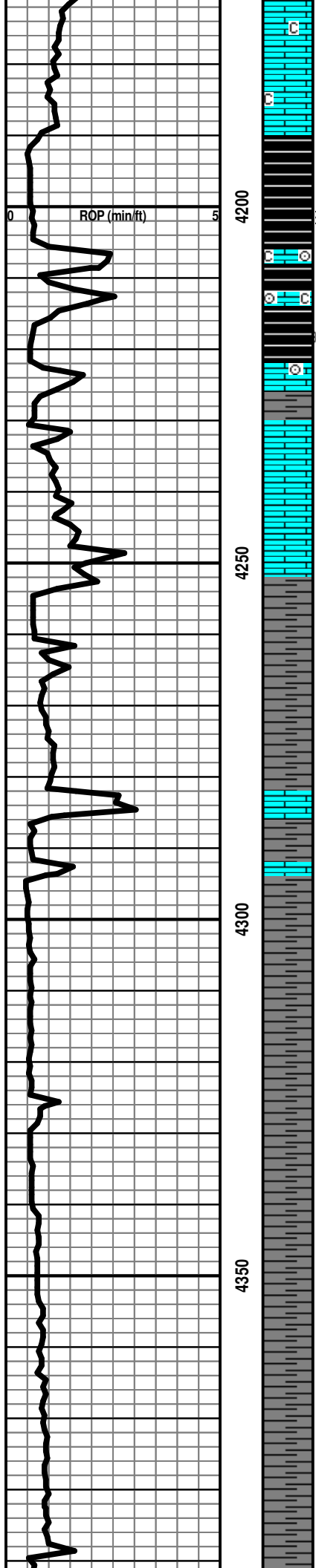
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Sh Char-Gry Soft Ls Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Fuss) Chalky No Odor No Flor No Stn NS

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

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





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

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

Sh Blk Carb-Char-Gry Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Fuss) Chalky No Odor No Flor No Stn NS

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

HEEBNER 4214' (-1985)

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

TORONTO 4231' (- 2002)

Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Cht Wht-Gry Translu-Op Shp Vit Pyr Mass Fos (Fuss) Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS

DOUGLAS 4254' (-2025)

Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Fuss) Chalky No Odor No Flor No Stn NS

Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Fuss) Chalky No Odor No Flor No Stn NS

Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Fuss) Chalky No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Fuss) Chalky Sh Char-Gry-Grn Fissil-Soft No Odor No Flor No Stn NS

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

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

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

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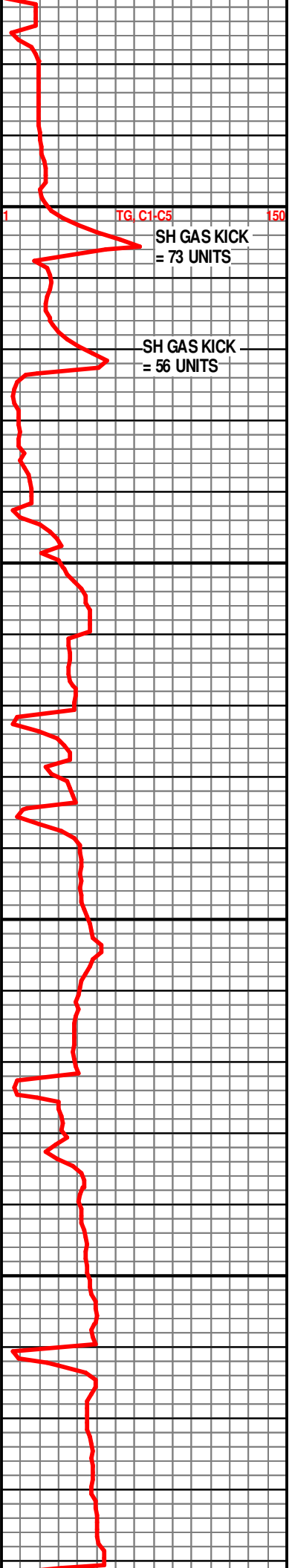
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Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Cht Wht-Gry Translu-Op Shp Vit Qtz Ss Gry V-FGrn Well Sort Carb Poor IGran Por Dns-Friable (w/Pyr Includ) Chalky No Odor No Flor No Stn NS

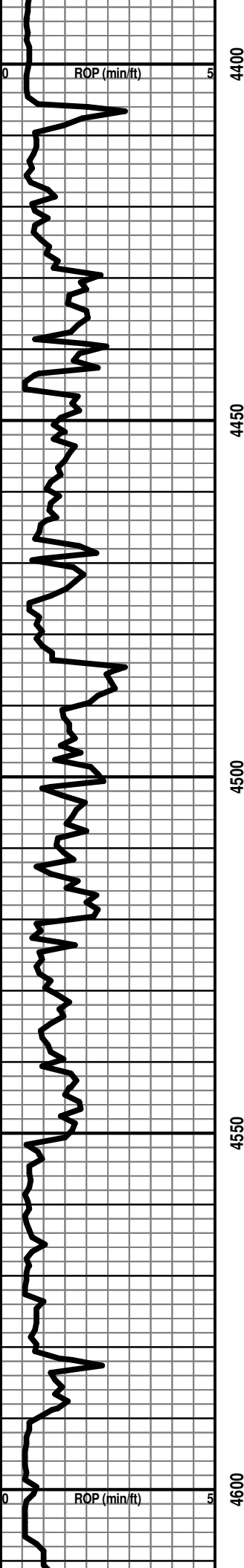
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Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Cht Wht-Gry Translu-Op Shp Vit Qtz Ss Gry V-FGrn Well Sort Carb Poor IGran Por Dns-Friable (w/Pyr Includ) Chalky No Odor No Flor No Stn NS



SH GAS KICK = 73 UNITS

SH GAS KICK = 56 UNITS



Sh Chk Gry Tan Fossil Cht Ls Wht Crm FxIn Micro Grad Poor Cht Gry Op Shp Vit Chalky Sh Char- Gry- Grn- Blk Carb- Aqua Fissil No Odor No Stn No Flor NS

IATAN (BROWN LIME) 4406' (- 21)

Ls Crm-Tan MicroxIn Dns Micrite Cht Amber-Tan Translu-Op Shp Vit Chalky Fos (Fuss) Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

LANSING 4422' (- 2193)

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

LANSING "B" 4446' (- 2217)

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Fos (Crin) Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

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Ls Wht-Crm-Tan-Gry FxIn-MicroxIn Dns Micrite Grad Poor IxIn Por Fos (Crin) Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

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

LANSING "F" 4538' (- 2309)

Ls Wht-Crm-Tan FxIn-MicroxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Cht Gry Op Shp Vit Chalky Sh Blk Carb-Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic Grad Poor-Fair OOM Por Poor InterOOM Por (Small OOids in pl) V Poor Leaching Poor Develop Cht Gry Op Shp Vit Chalky Sh Char- Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic Grad Poor-Fair OOM Por Poor InterOOM Por (Small OOids in pl) V Poor Leaching Poor Develop Cht Wht-Gry Op Shp Vit Chalky Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic Grad Tr Poor OOM Por AA Cht Lt Tan Op Shp Vit Chalky Sh Char- Gry- Grn- Blk Carb- Aqua Fissil No Odor No Stn No Flor NS

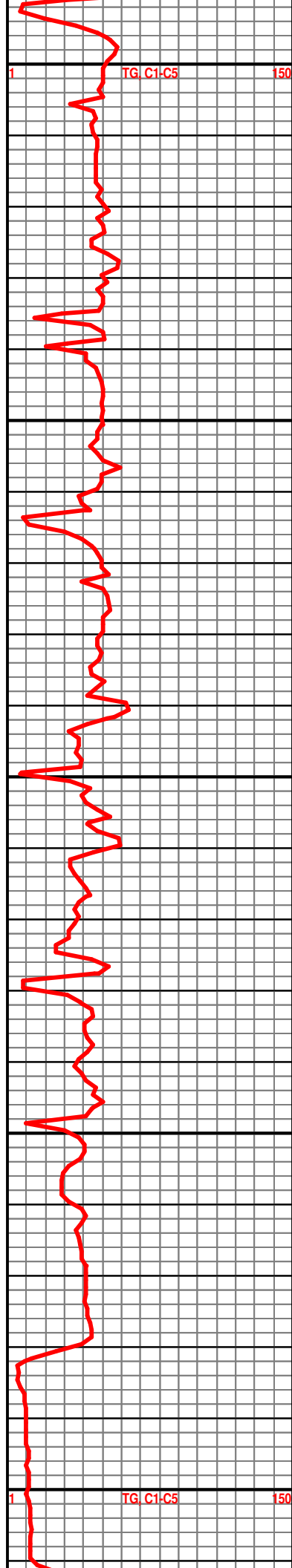
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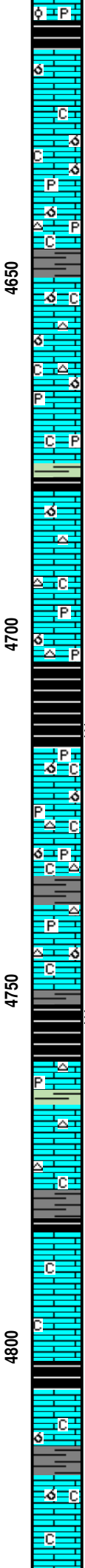
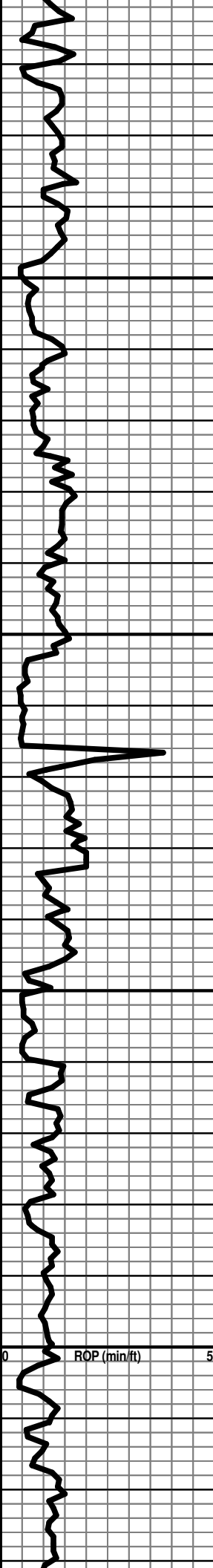
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KANSAS CITY "H" DRUM 4599' (-2370)

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic (w/Pry Includ) Grad Fair-Med OOM Por Poor-Fair InterOOM Por (Small OOids in pl) V Poor-Fair Leaching (Tr Fair Vug) Poor Develop Cht Wht Op Shp Vit Chalky Sh Char- Gry (w/Pry Includ)-Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic (w/Pry Includ) Grad Fair-Med OOM Por Poor-Fair





Ls Wht-Crm-Lt Tan Microxn-Fxn (w/OOL (Small Ooids in pl) V Poor-Fair Leaching (Tr Fair Vug) InterOOM Por (Tr/OOL (Small Ooids in pl) V Poor-Fair Leaching (Tr Fair Vug) Pyr Mass Chalky Sh Blk Carb-Char- Gry- Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxn-Fxn Micritic Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Dec Chalky Sh Blk Carb- Char- Gry- Grn- AquaFissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxn-Fxn Mostly Micrite Tr Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Dec AA Chalky Sh Blk Carb -Char-Gry (w/Pyr Inclus)-Grn-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxn-Fxn Mostly Micrite Tr Poor OOM Por AA Cht- Amber-Lt Brn Op Shp Vit Chalky Pyr Mass Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxn-Fxn Mostly Micrite Grad Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Cht Wht Op Shp Vit Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxn-Fxn Mostly Micrite Grad Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Cht Wht Op Shp Vit Chalky Sh Char-Gry (w/Pyr Inclus)-Aqua Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry (w/Pyr Inclus) Fissil Ls Wht-Crm-Lt Tan Microxn-Fxn Mostly Micrite Grad Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Chalky No Odor No Stn No Flor NS

Sh Char-Gry (w/Pyr Inclus)-Blk Carb Fissil Ls Wht-Crm-Lt Tan Microxn-Fxn Mostly Micrite Grad Tr Fair OOM Por Poor InterOOM Por Poor Leaching Poor Develop Dec Cht Wht Op Shp Vit Chalky No Odor No Stn No Flor NS

Ls Crm-Lt Tan-Wht Microxn-Fxn Mostly Micrite Tr Poor OOM Por AA Cht- Wht Op Shp Vit Chalky Pyr Mass Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Lt Tan-Wht Microxn-Fxn Mostly Micrite Poor OOM Por AA (Tr Only) Cht- Wht Op Shp Vit Chalky Sh Blk Carb (w/Pyr Inclus) Char-Gry (w/Pyr Inclus) Fissil No Odor No Stn No Flor NS

KANSAS CITY "J" DENNNIS 4716' (- 2487)

Ls Lt Tan-Wht VFxn Mostly Micrite Poor OOMPoor Grad Poor OOMPoor Poor InterOOM Por Poor Leaching Poor Develop Chalky Sh Blk Carb (w/Pyr Inclus) Char-Gry (w/Pyr Inclus) Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht VFxn Mostly Micrite Poor OOMPoor Grad Poor OOMPoor Poor InterOOM Por Poor Leaching Poor Develop Grad Pin-Pt Ixln Por Cht Gry Op Shp Vit Pyr Mass Chalky Sh Blk Carb (w/Pyr Inclus) Char-Gry (w/Pyr Inclus) Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht VFxn Mostly Micrite Poor OOMPoor Grad Poor OOMPoor Poor InterOOM Por Poor Leaching Poor Develop Grad Pin-Pt Ixln Por Cht Gry Op Shp Vit Chalky Sh Blk Carb (w/Pyr Inclus) Char-Gry (w/Pyr Inclus) Fissil No Odor No Stn No Flor NS

STARK SHALE 4750' (- 2521)

Sh Blk Carb-Char-Gry Fissil (w/SG Abd in Blk Sh) Ls Lt Tan-Wht Fxn Mostly Micrite Grad Fair Pin-Pt Ixln Por No Vis Por Chalky No Odor No Stn No Flor NS

KANSAS CITY "K" SWOPE 4760' (-2531)

Ls Lt Tan-Wht Fxn Mostly Micrite Grad Fair Pin-Pt Ixln Por Inc No Vis Por Cht Wht Op Shp Vit Chalky Pyr Mass Sh Blk Carb- Char- Gry- Aqua Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht Fxn Mostly Micrite Dns Grad Fair Pin-Pt Ixln Por Cht Gry-Wht Op Shp Vit Chalky Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht Fxn Mostly Micrite Dns Grad Fair Pin-Pt Ixln Por Chalk Sh Char - Gry- Fissil No Odor No Stn No Flor NS

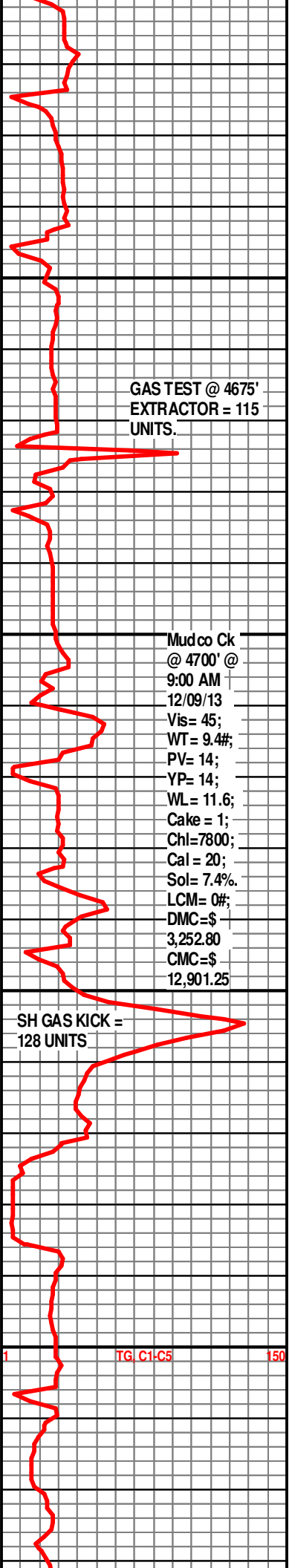
Ls Lt Tan-Wht-Gry Fxn Mostly Micrite Dns Grad Fair Pin-Pt Ixln Por Chalk Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

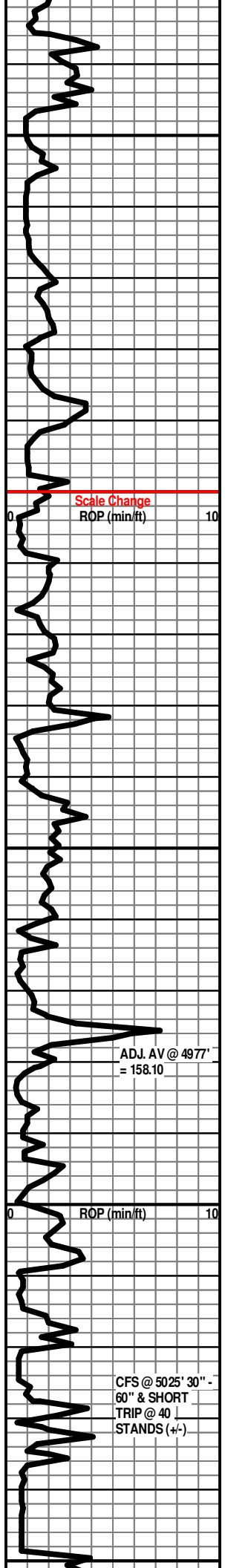
HUSHPUCKNEY 4802' (- 2573)

Ls Wht-Gry-Lt Tan Fxn Mostly Micrite Dns Grad Poor Pin-Pt Ixln Por Chalk Sh Char-Gry-Blk Carb-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Gry-Lt Tan Fxn Mostly Micrite Dns Grad Poor Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Poor Leaching Chalk Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry-Lt Tan Fxn Mostly Micrite Dns Grad Poor Pin-Pt Ixln Por Chalk Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS





Ls Wht-Gry-Lt Tan FxIn Mostly Micrite Dns Grad Poor Pin-Pt IxIn Por Chalk Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

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

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

Ls Wht-Crm FxIn Micrite Grad Fair-Med Pin-Pt IxIn Por Barren Fos (Fuss) Chalky Sh Blk Carb-Gry-Lt Brn-Aqua/Grn-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Micrite Grad Fair-Med Pin-Pt IxIn Por Barren Chalky Sh Blk Carb-Gry-Lt Brn-Aqua/Grn-Red Soft-Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Gry-Lt Brn-Aqua/Grn-Red Soft-Fissil Ls Wht-Crm FxIn Micrite Grad Fair-Med Pin-Pt IxIn Por Barren Chalky No Odor No Stn No Flor NS

MARMATON 4898' (- 2669)

Ls Wht MicroIn-FxIn Dns Micrite Grad Poor OOM Por Grad Poor OOM Por Poor InterOOM Por Poor Leaching Poor Develop Por Cht Wht Op Shp Vit Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht MicroIn-FxIn Dns Micrite Chalky Abd Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm MicroIn-FxIn Dns Micrite Poor IxIn Por Chalk Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

PAWNEE 4931' (- 2702)

Ls Wht MicroIn-FxIn Dns Micrite No Vis Por Grad Poor Pin-Pt IxIn Por Barren Fos (Crim) Chalk Sh Blk Carb-Char-Gry Fissil AA No Odor No Stn No Flor NS

Ls Wht MicroIn-FxIn Dns Micrite No Vis Por Barren Grad Fair OOM Por Fair Leaching Fair Develop Chalk Sh Blk Carb-Char-Gry Fissil AA No Odor No Stn No Flor NS

Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt Por Cht Amber-Tan Translu-Op Shp Vit Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS

FORT SCOTT 4973' (- 2744)

Sh Blk Carb-Char Fissil Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite Grad Poor Pin-Pt Por Cht Wht-Crm Op Shp Vit Chalky No Odor No Stn No Flor NS

CHEROKEE SHALE 4974' (- 2745)

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

Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite Cht Wht-Crm Op Shp Vit Fos (Pelec) Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry-Drab Grn-Aqua Fissil Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite (w/Pyr Includ) Grad Poor IxIn Pin-Pt Por Barren No Odor No Stn No Flor NS

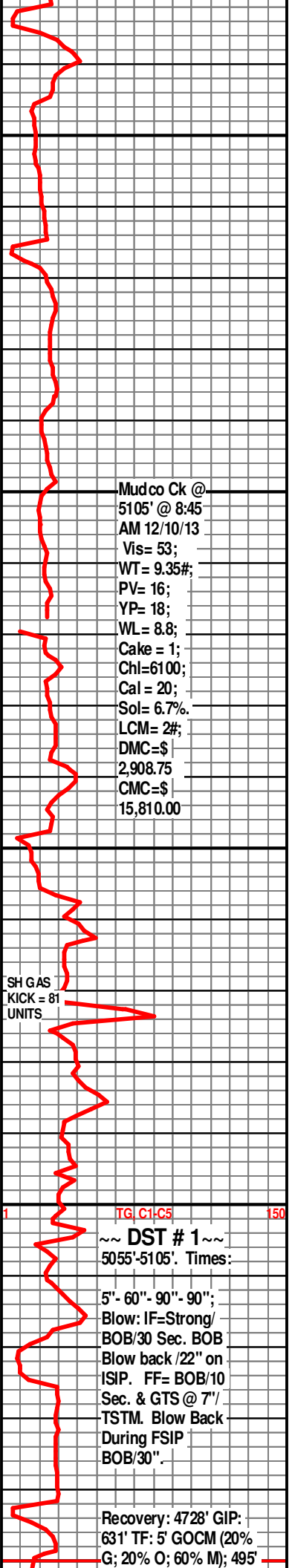
30" CFS @ 5025' Sh Blk Carb-Char-Gry-Drab Grn-Aqua Fissil Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Cht Wht-Gry Op Shp Vit No Odor No Stn No Flor NS

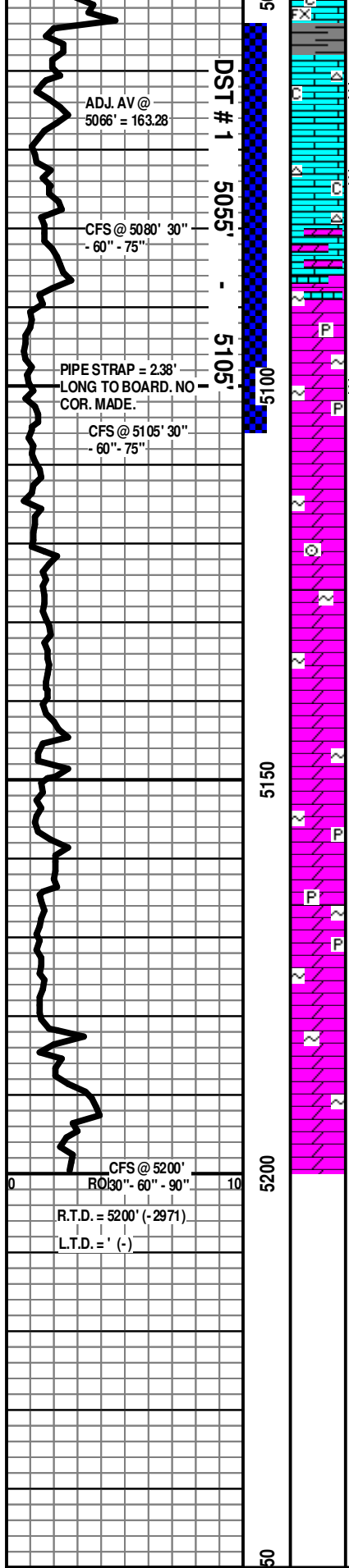
60" CFS @ 5025' Sh Blk Carb-Char-Gry-Drab Grn-Aqua Fissil Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Cht Wht-Gry Op Shp Vit No Odor No Stn No Flor NS

Ls Wht-Lt Tan MicroIn-FxIn (w/Pyr Includ) Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Sh Char-Gry-Drab Grn-Aqua-Blk Carb Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Char-Drab Grn/Gry-Aqua (w/Pyr Includ) Fissil Ls Wht-Lt Tan MicroIn-FxIn (w/Pyr Includ) Dns Micrite Grad Poor IxIn Pin-Pt Por Barren No Odor No Stn No Flor NS

MISSISSIPPIAN 5049' (- 2820)





30" CFS @ 5080' Ls Wht-Lt Tan Microxn-Fxn Micritic Grad Poor-Fair Pin-Pt Ixn Por (w/SG) Tr Scat Stn (Lt Brn) Cht Wht Trip Op Shp Vit Chalky Sh Char-Gry Fissil Faint Inc Odor Sli Flor (Lt Grn) Sli SG

60" CFS @ 5080' Ls Wht-Lt Tan Microxn-Fxn Micritic Grad Poor-Fair Pin-Pt Ixn Por (w/SG) Tr Scat Stn (Lt Brn w/SSFO in 5% of Tray) Cht Wht Trip Op Shp Vit Chalky Sh Char-Gry Fissil Faint Inc Odor Sli Flor (Lt Grn) SSG & SSSO

Ls Wht-Lt Tan Microxn-Fxn Micritic Grad Poor-Fair Pin-Pt Ixn Por (w/SG) Sli Scat Stn (Lt Brn) Cht AA Chalk Sh Char-Gry Fissil Med Odor Inc Sli Flor (Lt Grn) SSG

SALEM (SPERGEN) Ø 5087' (- 2858)

30" CFS @ 5105' Dolo/Ls Gry-Crm Fxn Med-Good Pin-Pt Ixn "Salt & Pepper" SucrosicPor (w/GSG & Tr SSO) (w/Gillsonitic Drk Blk Residue & Glacu & Pyr Includ) Brittle Good Odor (Both Gas & Oil Do Flor Lt Grn & Oil is Transp/Clear) Fair Scatt Stn Drk Blk Med Flor Med-Good SG & SSO

60" CFS @ 5105' Dolo Gry-Tan Fxn Med-Good Pin-Pt Ixn "Salt & Pepper" Sucrosic Por Grad Good Vug Leaching (w/GSG & GSO) (w/Gillsonitic Drk Blk Residue & Glacu & Pyr Includ) Brittle Cht Drk Gry (w/Fos Includ) Translu-Op Shp Vit Good Inc Odor Med-Good (Lt Brn) Stn Fair Med Flor Med-Good SG & SFO

MISS. WARSAW 5115' (- 2886)

Dolo Gry-Crm Fxn-Microxn Dns Micritic Grad Poor Pin-Pt Ixn Por (w/Tr Glacu Includ) Cht-Drk Gry Translu-Op Shp Vit Stn Drk Blk Stn (Tr Only) Fos (Crin) Sh Char -Gry -Aqua Fissil No Odor No Flor No Stn NS

Dolo Gry-Crm Microxn Dns Micritic Grad Poor Pin-Pt Ixn Por (w/Tr Glacu Includ) Stn Drk Blk Stn (Tr Only) Sh Char -Gry -Aqua Fissil No Odor No Flor No Stn NS

Dolo Gry-Crm Microxn Dns Micritic Grad Poor Pin-Pt Ixn Por (w/Tr Glacu Includ) Stn Drk Blk Stn (Tr Only) Sh Char -Gry -Aqua Fissil No Odor No Flor No Stn NS

Dolo Gry-Crm Microxn Dns Micritic Grad Poor-Fair Pin-Pt Ixn Por (w/Tr Glacu Includ) Tr SSG & SSO ? Sluff (1 Pc) Stn Drk Blk Stn (Tr Only) Sh Char-Gry-Aqua Fissil No Odor No Flor No Stn NS

Dolo Gry-Crm Microxn Dns Micritic Grad Poor Pin-Pt Ixn Por (w/Tr & Pyr Glacu Includ) Stn Drk Blk Stn (Tr Only) Sh Char -Gry -Aqua Fissil No Odor No Flor No Stn NS

30" CFS @ 5200' Dolo Gry-Crm Microxn Dns Micritic Grad Poor Pin-Pt Ixn Por (w/Tr Glacu & Pyr Includ) Stn Drk Blk Stn (Tr Only) Sh Char -Gry -Aqua Fissil No Odor No Flor No Stn NS

60" CFS @ 5200' Dolo Gry-Crm Microxn Dns Micritic Grad Poor Pin-Pt Ixn Por (w/Tr Glacu Includ) Stn Drk Blk Stn (Tr Only) Sh Char -Gry -Aqua Fissil No Odor No Flor No Stn NS

90" CFS @ 5200' Dolo Gry-Crm Microxn Dns Micritic Grad Poor Pin-Pt Ixn Por (w/Tr Glacu Includ) Stn Drk Blk Stn (Tr Only) Sh Char -Gry -Aqua Fissil No Odor No Flor No Stn NS

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

Geologist Left Location at: : AM on 12/11/2013

GO (10% G; 90% O); 131' GOCM (10% G; 40% O; 50% M). No Salt Wtr.

Pressures:
 IH = 2896#;
 FH = 2553#;
 IF = 95-77#;
 FF = 88-209#;
 ISIP = 1094#;
 FSIP = 573#;
 T. = 118 degrees. F.
 API Grv. (Corrected) = 34.9 degrees F.

GAS KICK = 230 UNITS

TG C1-C5 250