



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

Well Name: HILL "A" #4-23
Location: NW - SW of Sec. 23 - T. 30 S. - R. 19 W.
License Number: A.P.I. #15-097-21,761-00-00
Spud Date: 06/16/2013
Surface Coordinates: 1980' FSL & 660' FWL

Region: IOWA CO., KS.
Drilling Completed: 06/25/2013

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 2228' **K.B. Elevation (ft):** 2239'
Logged Interval (ft): 608' **To:** 5186' **Total Depth (ft):** 5200' RTD
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

Cores

Surface Casing Data: Spud at 4:15 am on 06/16/13. Drilled 12-1/4" hole to 616'. Ran 15 joints of new 24# 8-5/8" surface casing, Tallied 597.92', set at 610' KB. Welded straps on bottom 3 and top 2 joints. Tacked collars on remainder. Cemented with 190 sks 60/40 POZ; 3% Gel; 2% CC; 1/4# FS, tailed with 100 sks Class A; 3% CC. Plug down at 5:00 pm 06/16/13. Allied Cementing ticket #59509. Basket at 120'. Cement did circulate.

Production Casing: Ran 123 joints new 10.5 #, 4-1/2" casing. Tallied 5202', set at 5199' RTD. Cemented with 225 sks ASC "McCoy Blend" with 750 gal mud flush. Centralizers (5) 1,3,5,7,10. Baskets (2) 12 & 14. Plug down at 2:15 am on 06/26/13. Allied Cementing ticket #50513. Plugged Rathole with 30 sks and mousehole with 20 sks, using 60/40 Poz. SDC reported to KCC on 06/26/13 to (Michelle Pennington).

Deviation Survey's Taken: @ 618' = 3/4 degree; @ 4945' = 3/4 degree; @ 5105' = 1 1/2 degrees; @ 5200' = 3/4 degree.

DSTs

~~ DST # 1 ~~ 5064'-5105'. Times: 30"- 60"- 60"- 90"; Blow: IF=Strong/ BOB/30 Sec. & GTS @ 30" (See Gauge Report). No Blow Back During ISIP. FF= Strong Blow BOB/ Instant. No Blow Back During FSIP.

Recovery: 4791' GIP: 270' TF:150' GCM (5% G; 95% M); 120 SOWCM (35% G; 2% O; 15% Wtr; 48% M).

Pressures: IH= 2629#; FH= 2434#; IF = 45-68#; FF = 75-109#;
ISIP = 1089#; FSIP = 1047#; T.= 121 degrees. F.; WTR= 125,000 Ppm Chl.; RW= .055 @ 85 degrees F.

Gas Gauge FF= @ 10"= 7.5 Mcf; @ 20"= 8.2 Mcf; @ 30"= 8.6 Mcf; @ 40"= 9.6 Mcf; @ 50"= 9.9 Mcf; @ 60"=10.3 Mcf.

~~ DST # 2 ~~ 5105'-5125'. Times: 30"- 60"- 60"- 90"; Blow: IF=Weak Build/1/4". No Blow Back During ISIP. FF= Weak Build// 1 1/2". No Blow Back During FSIP.

Recovery: 630' GIP: 65' VSOCMW (1% O; 40% W & 59% M).

Pressures: IH= 2556#; FH= 2481#; IF= 19-33#; FF= 35-52#; ISIP= 1052#; FSIP= 1052#; T.= 116 degrees. F.; WTR= 110,000 Ppm Chl.; RW= .06 @ 86 degrees F..

Comments


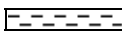

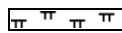

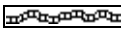


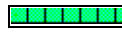

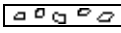


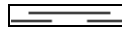




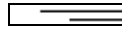
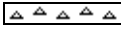


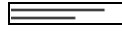
After review of all geologic samples as examined, combined with the fluid and pressures results from all drill stem tests taken and analysis from the electric logs run, it was determined by all parties that production casing be run in order to further evaluate this well.

It should be noted that the electric logs depths appear to be approximately 14' shallow to the geological sample tops, the drillers pipe strap and the actual production casing tally as set, Therefore, it is my opinion that the electric log tops should be corrected to adjust for this discrepancy.

Respectfully submitted,

David P. Williams, P.G

ROCK TYPES

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

ACCESSORIES

- MINERAL**
- Anhy
 - Arggrn
 - Arg
 - Bent
 - Bit
 - Brecrefrag
 - Calc
 - Carb
 - Chtdk
 - Chtlt
 - Dol
 - Feldspar
 - Ferrpel
 - Ferr
 - Glau
 - Gyp

- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

- FOSSIL**
- Algae
 - Amph

- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Fuss
- Gastro
- Oolite
- Oomold
- Ostra
- Pelec

- Pellet
- Pisolite
- Plant
- Strom

- STRINGER**
- Anhy
 - Arg
 - Bent
 - Coal
 - Dol
 - Gyp
 - Ls
 - Mrst
 - Sltstrg
 - Ssstrg

- TEXTURE**
- Boundst
 - Chalky
 - Cryxln
 - Earthy
 - Finexln
 - Grainst
 - Lithogr
 - Microxln
 - Mudst
 - Packst
 - Wackest

OTHER SYMBOLS

- POROSITY**
- Earthy
 - Fenest
 - Fracture
 - Inter
 - Moldic
 - Organic
 - Pinpoint

- Vuggy
- SORTING**
- Well
 - Moderate
 - Poor

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

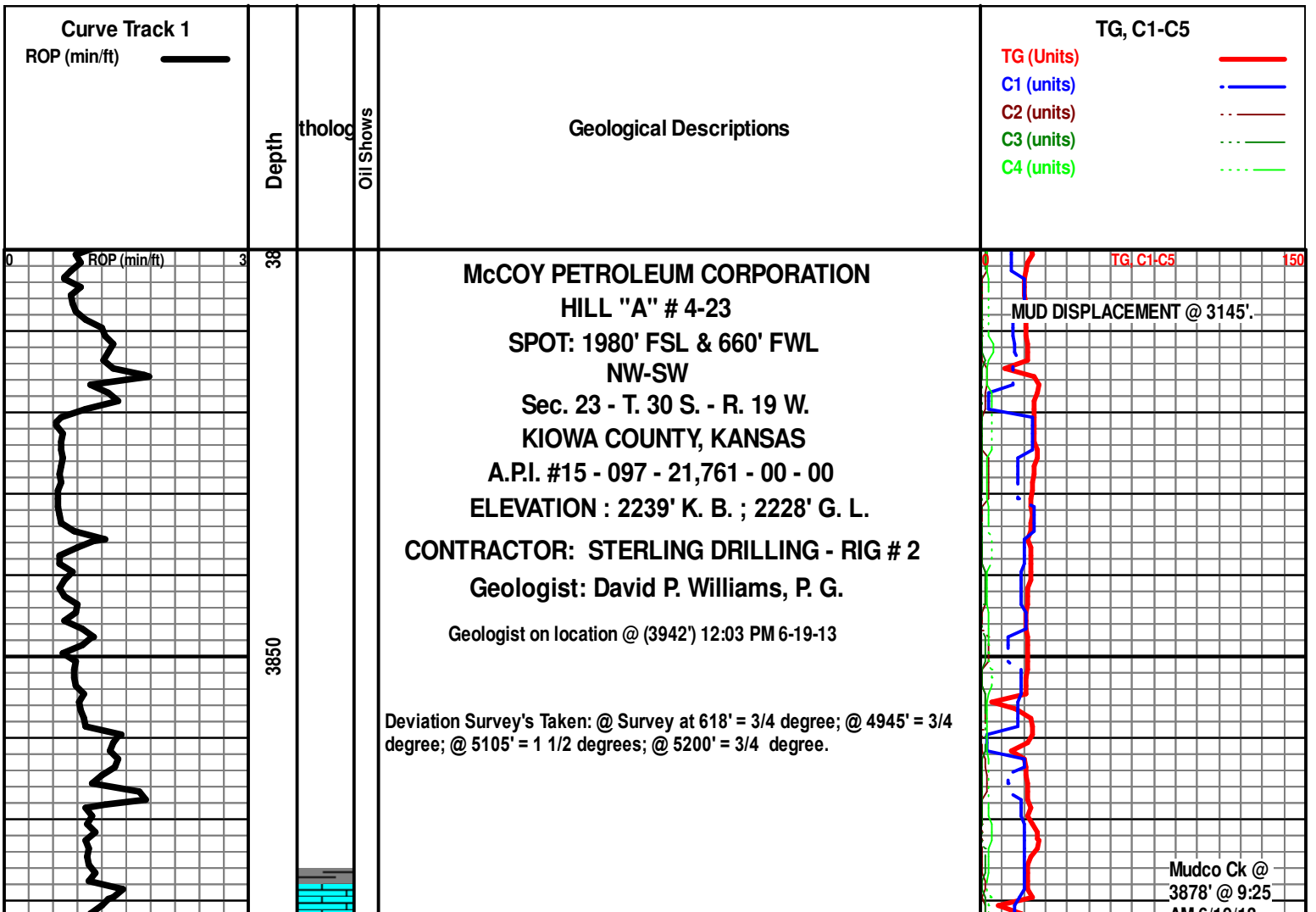
- OIL SHOW**
- Gas show

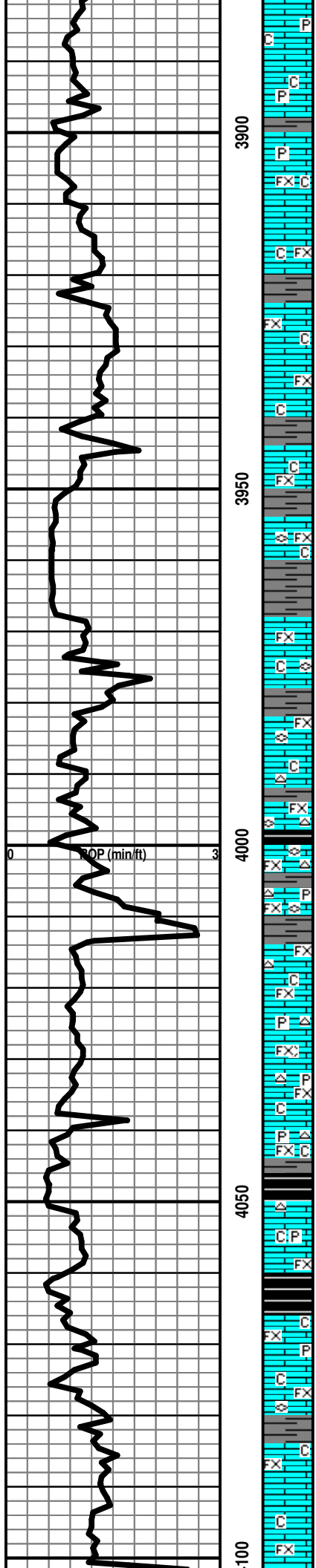
- Even
- Spotted
- Ques
- Dead

- INTERVAL**
- Core
 - Dst

- Dst_alt

- EVENT**
- Rft
 - Sidewall





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

Begin 31' Kelly Sample Examination @ 3942'

Ls Wht-Crm FxIn Micrite Grad Poor Pin-Pt IxIn Por Fos (Brach) Chalky Pyr
Mass Sh Gry Soft No Odor No Flor No Stn NS

Ls Wht-Crm FxIn Micrite Grad Poor Pin-Pt IxIn Por Chalky Sh Gry- Red
Soft No Odor No Flor No Stn NS

Ls Wht FxIn Micrite Grad Poor IxIn Pin-Pt Por Fos (Fos) Chalky Sh
Char-Gry- Red Fissil-Soft No Odor No Flor No Stn NS

Ls Wht FxIn Micrite Grad Poor IxIn Pin-Pt Por Cht Amber Op Shp Vit Fos
(Fuss) Chalky Sh Char (w/Pyr Includ) Gry- Red-Blk Carb Fissil-Soft No
Odor No Flor No Stn NS

LECOMPTON B 4014' (- 1775)

QUEEN HILL SHALE 4045' (-1806)

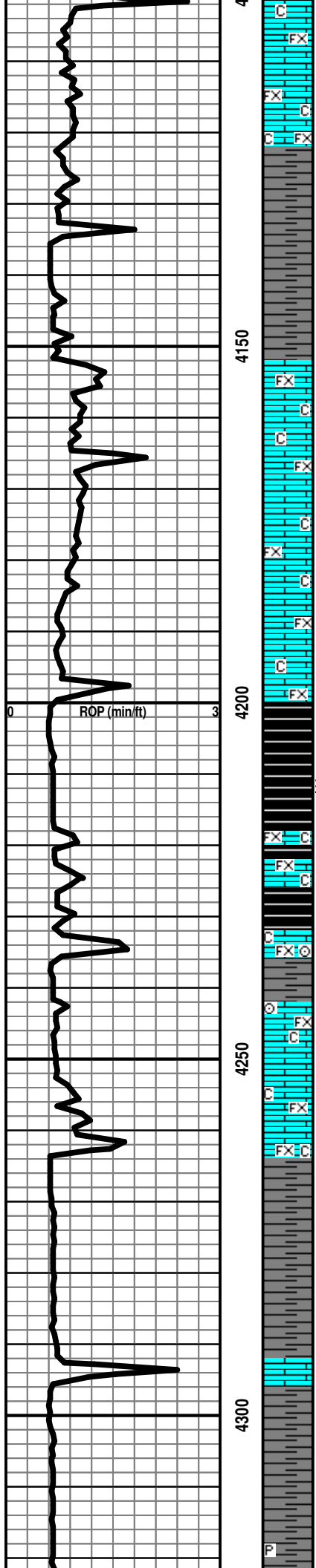
Sh Blk Carb- Char-Gry Fissil-Soft Ls Wht FxIn Micrite Grad Poor IxIn
Pin-Pt Por Cht Amber Fos (Fuss) Pyr Mass Chalky No Odor No Flor No Stn
NS

Ls Wht FxIn Micrite Grad Poor IxIn Pin-Pt Por Pyr Mass Fos (Fuss) Chalky
Sh Char-Gry Fissil-Soft No Odor No Flor No Stn NS

AM 6/19/13
Vis 62;
WT=9.1#;
PV=16;
YP= 16;
WL=12.4;
Cake=1;
Chl=7100;
CaI =60;
Sol=5.3%.
LCM= 0#;
DMC=\$
3,197.75
CMC=\$
11,000.40

TG C1-C5 150

ADJ. ANNULAR
VELOCITY (AV) @
4006' = 169.03.



Ls Wht-Crm FxIn Micrite Grad Poor IxIn Pin-Pt Por Chalky Sh Blk
Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS

Ls Wht-Crm FxIn Micrite Grad Poor IxIn Pin-Pt Por Chalky Sh Blk
Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS

Sh Blk Carb-Char-Gry Fissil-Soft Ls Wht-Crm FxIn Micrite Grad Poor IxIn
Pin-Pt Por Chalky No Odor No Flor No Stn NS

HEEBNER 4226' (-1987)

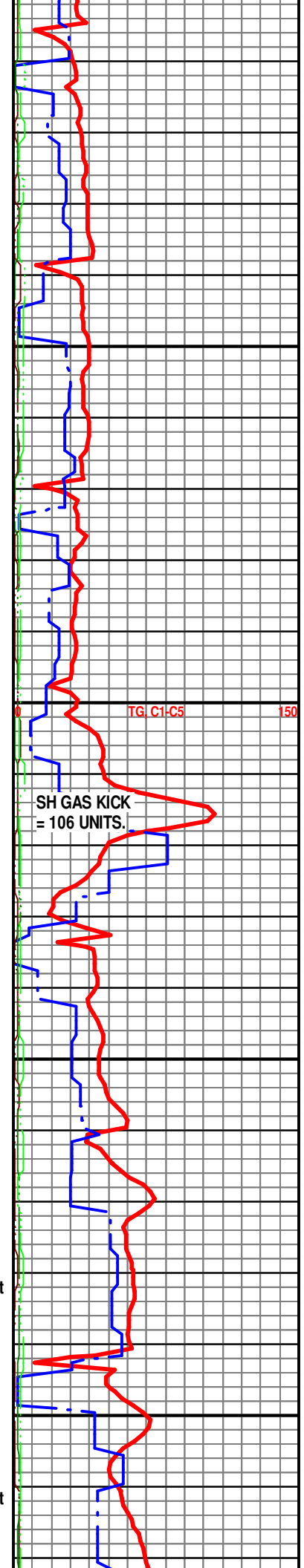
TORONTO 4242' (- 2003)

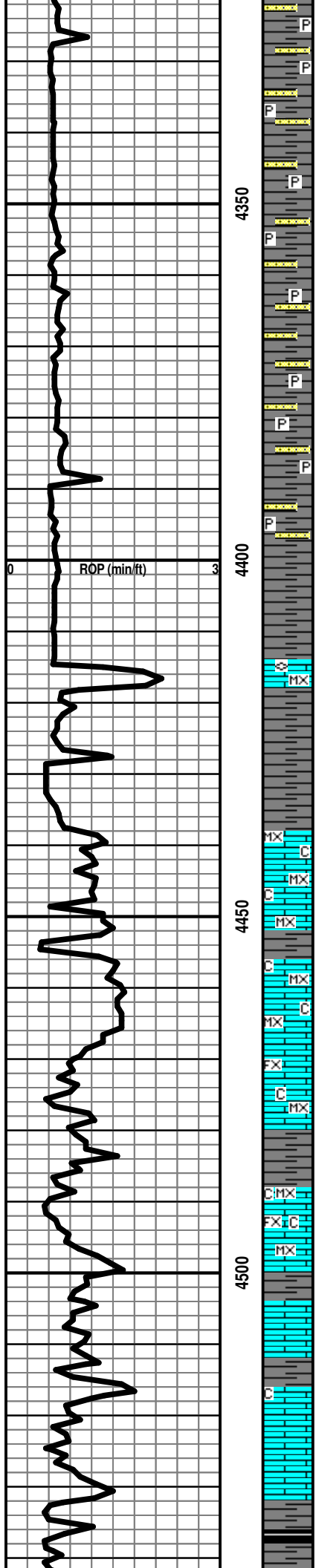
Ls Wht-Crm FxIn Micrite Grad Poor IxIn Pin-Pt Por Fos (Crin) Chalky Sh Blk Carb-Char-Gry
Fissil-Soft No Odor No Flor No Stn NS

DOUGLAS 4263' (-2024)

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

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





Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm FxIn Micrite Grad Poor IxIn 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 Inclus) Chalky No Odor No Flor No Stn
 NS

Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm FxIn Micrite Grad Poor IxIn 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 Inclus) Chalky No Odor No Flor No Stn
 NS

IATAN (BROWN LIME) 4415' (- 2176)

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 4438' (- 2199)

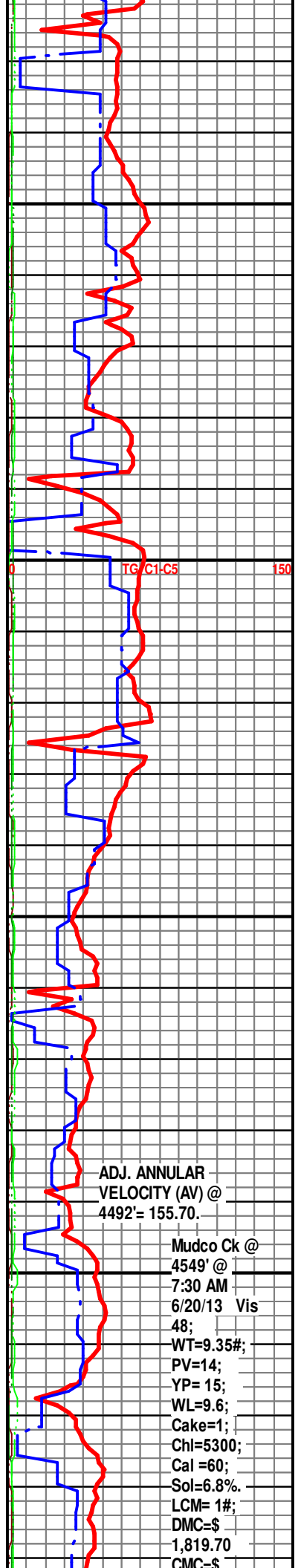
LANSING "B" 4455' (- 2216)

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

No Sample Caught

Begin 10' Sample Examination @ 4550'.



ADJ. ANNULAR
 VELOCITY (AV) @
 4492' = 155.70.

Mudco Ck @
 4549' @
 7:30 AM
 6/20/13 Vis
 48;
 WT=9.35#;
 PV=14;
 YP= 15;
 WL=9.6;
 Cake=1;
 ChI=5300;
 Cal =60;
 Sol=6.8%.
 LCM= 1#;
 DMC=\$
 1,819.70
 CMC=\$

LANSING "F" 4548' (- 2309)

Ls Wht-Crm-Tan FxIn-MicroxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Cht Amber-Gry Translu 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 Pyr Mass 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 Pyr Mass Chalky Sh Char- Gry- Grn- Blk Carb- Aqua Fissil No Odor No Stn No Flor NS

No Sample Caught.

BIT TRIP @ 4549'.
Fish For Parts of Bit.

@ 4566' GAS TEST
EXTRACTOR. 112
UNITS OBSERVED.

KANSAS CITY "H" DRUM 4606' (-2367)

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic No Vis Por Cht Lt Tan Op Shp Vit Pyr Mass Chalky Sh Char- Gry- Grn- Blk Carb- Aqua Fissil No Odor No Stn No Flor NS

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

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic (w/Pry Inklus) Grad Fair-Med OOM Por Poor- Fair InterOOM Por (Tr/OOL (Small OOids in pl) V Poor-Fair Leaching (Tr Fair Vug) Poor Develop Pyr Mass Chalky Sh Blk Carb-Char- Gry- Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Micritic Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Dec Chalky Sh Char- Gry- Grn- Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Mostly Micrite Tr Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Dec AA Chalky Sh Char -Gry Grn-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Mostly Micrite Tr Poor OOM Por AA Cht Wht-Amber Op Shp Vit Chalky Fos (Crin) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb Fissil Ls Wht-Crm-Lt Tan MicroxIn-FxIn Mostly Micrite Grad Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Cht Wht Op Shp Vit Chalky Pyr Mass No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Mostly Micrite Cht Wht- Amber- Gry Op Shp Vit Chalky Fos (Gastro (Turritella)) Pyr Mass Abd Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan MicroxIn-FxIn Mostly Micrite Cht Wht Op Shp Vit Chalky Fos (Crin) Sh Char-Gry Fissil No Odor No Stn No Flor NS

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

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

KANSAS CITY "J" DENNIS 4722' (- 2483)

Ls Lt Tan-Wht VFxIn Mostly Micrite Poor OOM Por Grad Poor OOM Por Poor InterOOM Por Poor Leaching Poor Develop Chalky Sh Blk Carb (w/Pry Inklus) Char-Gry (w/Pry Inklus) Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht FxIn Mostly Micrite Grad Por Pin-Pt IxIn Por Cht Wht -Lt Tan Translu-Op Shp Vit Chalky Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht FxIn Mostly Micrite Grad Por Pin-Pt IxIn Por Cht Wht -Lt Tan Translu-Op Shp Vit Chalky Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

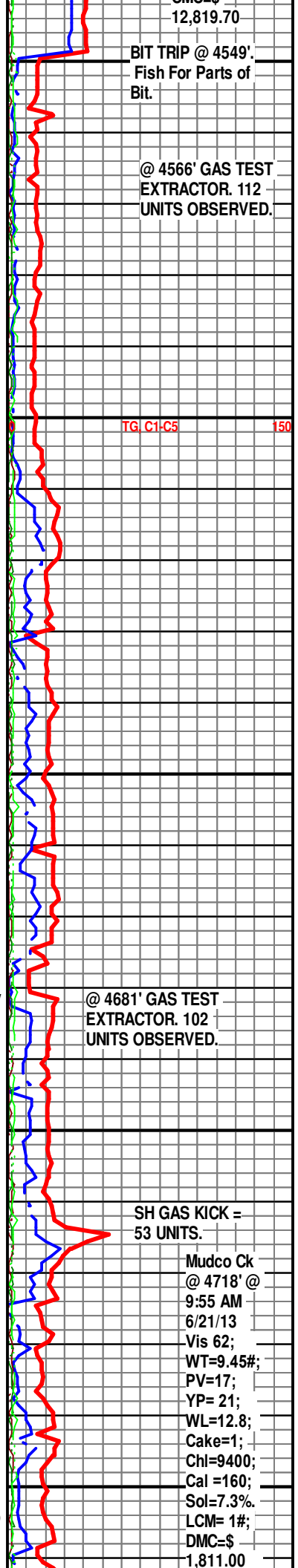
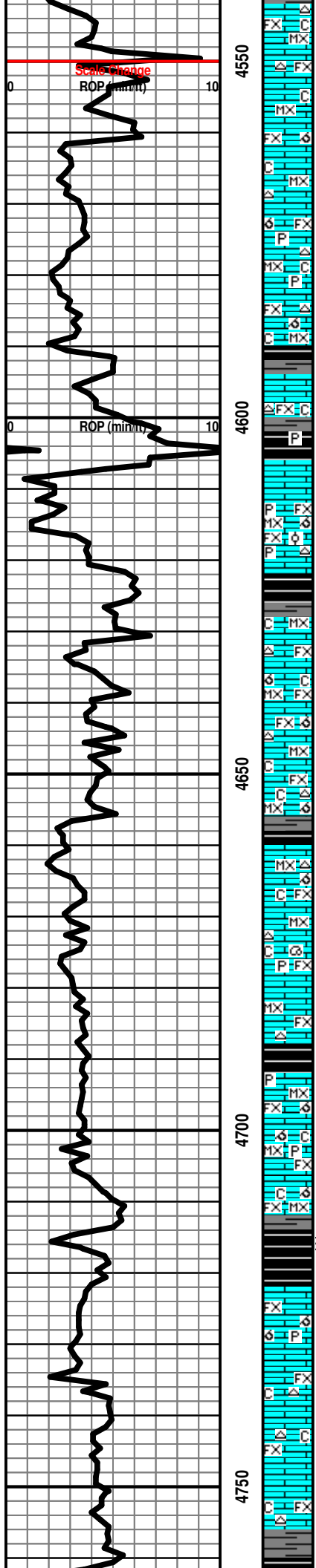
Ls Lt Tan-Wht FxIn Mostly Micrite Grad Por Pin-Pt IxIn Por Cht Wht Op Shp Vit Chalky Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

STARK SHALE 4762' (- 2523)

SH GAS KICK =
53 UNITS.

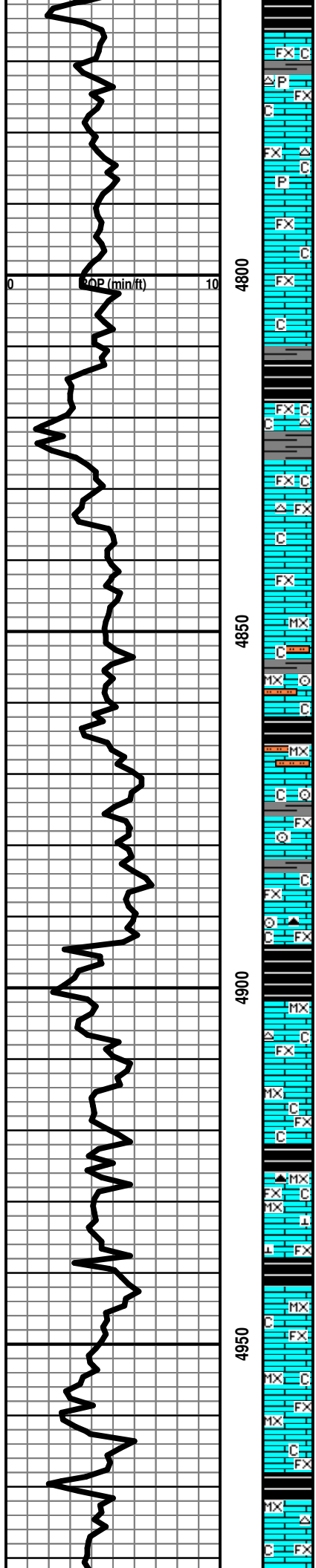
Mudco Ck
@ 4718' @
9:55 AM
6/21/13
Vis 62;
WT=9.45#;
PV=17;
YP= 21;
WL=12.8;
Cake=1;
Chl=9400;
Cal =160;
Sol=7.3%.
LCM= 1#;
DMC=\$
1,811.00

TG C1-C5 150



KANSAS CITY "K" SWOPE 4765' (-2526)

CMC=\$
14,630.70



Ls Lt Tan-Wht FxIn Mostly Micrite Dns Grad Fair Pin-Pt IxIn Por Cht Gry Op Shp Vit Chalky Sh Char (w/Pyr Inclus)-Gry-Blk Carb Aqua Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht FxIn Mostly Micrite Dns Grad Fair Pin-Pt IxIn Por Cht Gry Op Shp Vit Chalky Sh Char (w/Pyr Inclus)-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

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

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

HUSHPUCKNEY 4810' (- 2571)

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

Ls Wht-Gry-Lt Tan FxIn Mostly Micrite Dns Grad Poor Pin-Pt IxIn Por Cht Wht Op Shp Vit Pyr Mass Chalky 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 Cht Amber Op Shp Vit Pyr Mass Chalky 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

Ls Crm-Wht MicroIn Dns Micrite Chalky Fos (Crin) Sh Char-Gry-Fissil Siltstn Gry-Lt Brn No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry-Lt Brn Carb Fissil Siltstn Gry-Lt Brn 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 (Crin) 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 Cht Amber-Drk Brn Op Shp Vit Chalky Fos (Crin) No Odor No Stn No Flor NS

MARMATON 4901' (- 2662)

Ls Wht MicroIn-FxIn Dns Micrite 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 MicroIn-FxIn Dns Micrite No Vis Por Cht Amber Translu- Op Shp Vit Chalk Abd Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht MicroIn-FxIn Dns Micrite (w/Tr Calc) No Vis Por Chalk Abd Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

PAWNEE 4938' (- 2699)

Ls Wht MicroIn-FxIn Dns Micrite No Vis Por Grad Poor Pin-Pt IxIn Por Barren Chalk V Abd Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht MicroIn-FxIn Dns Micrite No Vis Por Barren Chalk V Abd 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 Wht-Crm Op Shp Vit Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS

FORT SCOTT 4971' (- 2732)

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

TG, C1-C5 150

Mudco Ck @ 5026' @ 2:25 PM 6/22/13
Vis 53;
WT=9.2#;
PV=17;
YP= 17;
WL=14.4;
Cake=1;
Chl=10500;
Cal=240;
Sol=5.7%
LCM= 2#;
DMC=\$ 3,400.80
CMC=\$ 18,031.50

Mudco Ck @ 5105' @ 1:15 PM 6/23/13
Vis 68;
WT=9.35#;
PV= 20;
YP= 25;
WL=15.6;
Cake= 2;
Chl= 12400; Cal =200; Sol= 6.4%

SH GAS KICK = 79 UNITS

CHEROKEE SHALE 4986' (- 2747)

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

30" CFS @ 5020' Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS

60" CFS @ 5020' Ls Wht-Lt Tan MicroIn-FxIn Dns Micrite Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS

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

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

MISSISSIPPIAN 5054' (- 2815)

Ls Wht-Lt Tan-Yell Tr MicroIn-FxIn Micritic Grad Poor-Fair Pin-Pt IxIn Por Cht Wht-Gry-Amber Translu-Op Shp Vit Pyr Mass Chalky Sh Char-Gry (w/Pyr Includ) -Drab Grn-Aqua Fissil No Odor No Flor No Stn NS

Ls Wht-Lt Tan MicroIn-FxIn Micritic Grad Poor Pin-Pt IxIn Por Cht Op Shp Vit Chalky Sh Char-Gry Fissil ? No Odor ? Sil Flor No Stn ? NS

Ls Wht-Lt Tan MicroIn-FxIn Micritic Grad Poor-Fair Pin-Pt IxIn Por (w/? SG) Cht Op Shp Vit Fos (Crin) Chalky Sh Char-Gry Fissil ? V Faint Odor Sil Flor No Stn ? SG

Ls Wht-Lt Tan MicroIn-FxIn Micritic Grad Poor-Fair Pin-Pt IxIn Por (w/SG & Drk Blk Gillsontic Stn Cht Wht-Tan Translu-Op Shp Vit Fos (Crin & Gastro (Turritella)) Chalky Sh Char-Gry-Olive-Maroon Fissil Faint Odor No Flor Sil Stn ? SG

30" CFS @ 5105' Ls Wht-Lt Tan MicroIn-FxIn Micritic Grad Poor-Fair Pin-Pt IxIn Por (w/SG & Drk Blk Gillsontic Stn & Tr Glacu) Cht Wht-Tan Translu-Op Shp Vit Fos (Gastro) Chalky Sh Char-Gry-Olive-Maroon Fissil Faint Odor No Flor Sil Stn ? SG

60" CFS @ 5105' 60" CFS Ls/Dolo Wht-Lt Tan-Tan FxIn Micritic Grad Fair Pin-Pt IxIn Por (w/Tr Glacu Includ & SSG) Cht Amber-Wht Trip (w/Tr Gillsontic Stn Drk Blk Stn) Translu Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Fair Odor Poor-Fair Lt Grn Flor (6 Pcs) Tr Brn Stn SG & VSSO

75" CFS @ 5105' Ls/Dolo AA Cht Wht AA Pyr Mass Fair Inc Odor Sil Inc Flor (Lt Grn) SSG & ? VSSO

60" CFS @ 5116' Ls/Dolo Tan-Wht MicroIn-FxIn Fair IxIn Pin-Pt Por (w/Lt Brn Stn & SG) Grad Poor Sucrosic Poor-Fair VFxIn (w/SG & SSO) Cht Wht AA Fos (Crin) Odor Fair Flor (Lt Grn) SSG & VSSO

MISS. WARSAW 5116' (- 2877)

75" CFS @ 5116' Dolo/Ls Tan-Wht MicroIn-FxIn Fair IxIn Pin-Pt Por Grad Poor-Fair Vug Leached Pin-Pt Por (w/Lt Brn Stn & SG) Grad Sucrosic Poor-Fair VFxIn (w/SG & SSFO Under Heat in Wtr w/ Lt Grn Flor) Cht Wht AA Fos (Crin) Odor Fair Flor (Lt Grn) SG & SSO

60" CFS @ 5125' Dolo Tan-Wht FxIn Poor Pin-Pt IxIn Por (w/Scatt Lt Grn Flor & w/SG & SSO Under Heat in Wtr) Pry Mass Sh AA Faint Odor Sil Flor Sil Lt Brn Stn SSG & VSSO

75" CFS @ 5125' Dolo/Ls Tan-Wht FxIn AA Ls AA Faint Odor Sil Flor Sil Lt Brn Stn VSSO

Dolo Tan-Wht-Lt Tan FxIn Poor Pin-Pt IxIn Por (w/Glacu Includ) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

Dolo Tan-Wht-Lt Tan FxIn Poor Pin-Pt IxIn Por (w/Glacu Includ) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

Dolo Tan-Wht-Lt Tan FxIn Poor Pin-Pt IxIn Por (w/Glacu Includ) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

Dolo Tan-Wht-Lt Tan FxIn Poor Pin-Pt IxIn Por (w/Glacu Includ) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

Dolo Gry Inc-Tan-Wht-Lt Tan MicroIn-FxIn Poor Pin-Pt IxIn Por (w Glacu Includ) Grad Dns Micritic Cht Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

30" CFS @ 5200' Dolo Gry Abd-Tan-Wht-Lt Tan MicroIn-FxIn Poor Pin-Pt IxIn Por (w Glacu Includ) Grad Dns Micritic Cht Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

60" CFS @ 5200' Dolo Gry Abd-Tan-Wht-Lt Tan MicroIn-FxIn Poor Pin-Pt IxIn Por (w Glacu Includ) Grad Dns Micritic Cht Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

0.4%
LCM=2#;
DMC=\$
870.30
CMC=\$
18,901.80

TG C1-C5 150
DST # 1 ~
5064'-5105'. Times:
30" - 60" - 60" - 90";
Blow: IF=Strong/
BOB/30 Sec. & GTS @
30" (See Gauge
Report). No Blow Back
During ISIP.
FF= Strong Blow BOB/
Instant. No Blow Back
During FSIP.

Recovery: 4791' GIP:
270' TF:150' GCM (5%
G: 95% M); 120
SOWCM (35% G; 2% O;
15% Wtr; 48% M).
Pressures:
IH= 2629#;
FH= 2434#;
IF = 45-68#;
FF = 75-109#;
ISIP = 1089#;
FSIP = 1047#;
T.= 121 degrees. F.
WTR= 125,000 Ppm
Chl.; RW=.055 @ 85
degrees F.

GAS KICK = 60 UNITS.
Gas Gauge FF=
@ 10"= 7.5 Mcf;
@ 20"= 8.2 Mcf;
@ 30"= 8.6 Mcf;
@ 40"= 9.6 Mcf;
@ 50"= 9.9 Mcf;
@ 60"=10.3 Mcf.

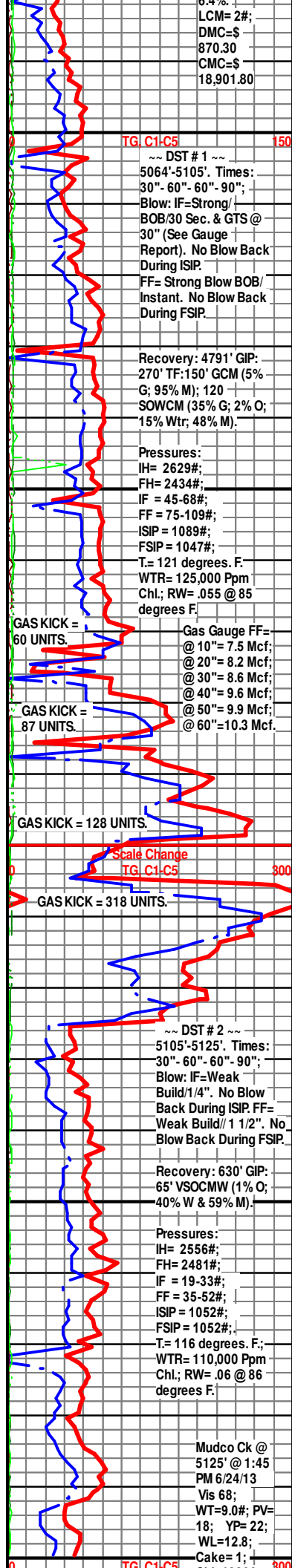
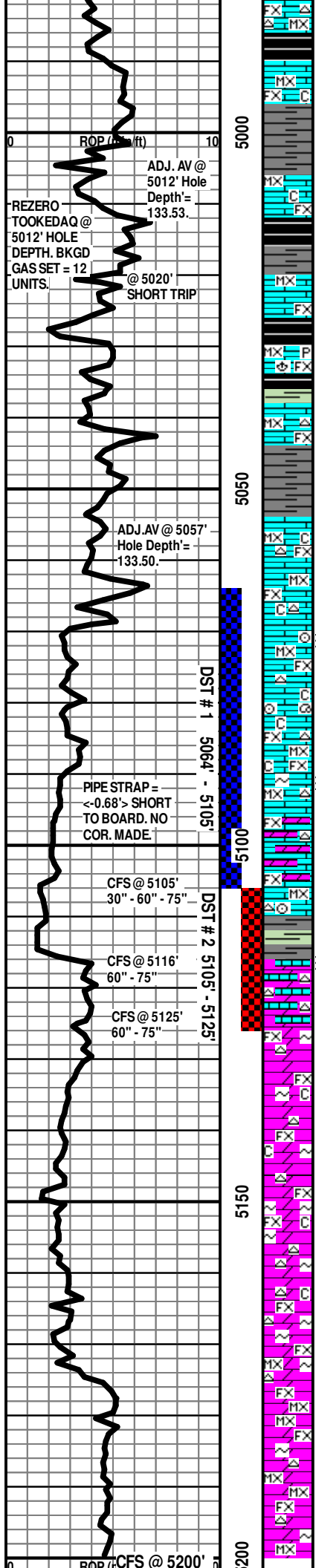
GAS KICK = 87 UNITS.
GAS KICK = 128 UNITS.

Scale Change
TG C1-C5 800
GAS KICK = 318 UNITS.

DST # 2 ~
5105'-5125'. Times:
30" - 60" - 60" - 90";
Blow: IF=Weak
Build/1/4". No Blow
Back During ISIP. FF=
Weak Build/ 1 1/2". No
Blow Back During FSIP.

Recovery: 630' GIP:
65' VSOCMW (1% O;
40% W & 59% M).
Pressures:
IH= 2556#;
FH= 2481#;
IF = 49-33#;
FF = 35-52#;
ISIP = 1052#;
FSIP = 1052#;
T.= 116 degrees. F.;
WTR= 110,000 Ppm
Chl.; RW=.06 @ 86
degrees F.

Mudco Ck @
5125' @ 1:45
PM 6/24/13
Vis 68;
WT=9.0#; PV=
18; YP= 22;
WL=12.8;
Cake= 1;
TG C1-C5 800



30" - 60"

R.T.D. = 5200' (-2961)

L.T.D. = 5186' (-2947)

50

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

Geologist Left Location at: 9:00 AM on 06/25/2013

Chi=12800;
Cal=20; Sol=
4.3% LCM=
2#;
DMC=\$
866.80
CMC=\$
19,768.60