



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

Well Name: IRISH FLATS #1-4 (NE)
Location: N2-SW-NW-NE 1/4 SEC. 4 - 28 S. - 30 W.
License Number: A.P.I. #15-069-20396-00-00
Spud Date: 09/21/12
Surface Coordinates: 860' FNL & 2310' FEL

Region: GRAY CO., KS.
Drilling Completed: 10/01/12

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 2793' **K.B. Elevation (ft):** 2806'
Logged Interval (ft): sURFACE To: 5401' **Total Depth (ft):** 5422' LTD
Formation: MISSISSIPPIAN
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL

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

OPERATOR

Company: Falcon Exploration, Inc.
Address: 125 North Market Street, Ste. #1252
Wichita, Kansas 67202

GEOLOGIST

Name: David P. Williams
Company: DW Energy, LLC
Address: 312 North Broadview Street
Wichita, Kansas 67208

CASING & DEVIATION

Drilled 12-1/4" to 1864'. Ran 44 joints of new 24#, 8-5/8" casing. Tallied 1839'. Set at 1859' KB. Welded straps on GS & bottom 3 joints, then tack welded all collars. Float insert in 1st collar. Centralizers (4) 1,3,22 & 40. Basket (3) 1,39 & 41'. Cemented with 450 sks Class A 2% Gel, 2% Gyp, 2% METSA & 1/4# FS. Tailed with 150 sks Class A; 2% CC. Cement did circulate to surface. Plug down at 12:30 pm on 09/23/12. Allied Cementing. Ticket #52470.

Deviation Survey's Taken: @ 1864' = 3/4 degree; @ 5000' = 3/4 degree; @ 5000' = 3/4 degree;

DSTs

DST # 1 5268'-5296'. Times: 5"-90"-30"-60".

Blow: IF= Weak 1/4" Surface Blow; FF Weak 1/4" Blow/ Died@ 10". Flushed Tool @ 20". Had Surge & Blow Died.

Recovery: 10' VSOCM (1% O & 99% M).

Pressures: IH = 2495#; FH = 2493#; IF = 6-7#; FF= 7-12#; ISIP = 1231#; FSIP = 1136#; Temp = 124 Degrees F.


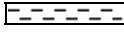

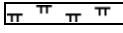
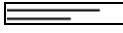
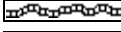




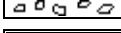



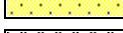
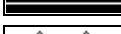


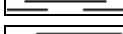
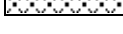
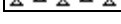


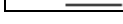
Comments

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 this well appears to be non-commercial and should be plugged and abandoned.











































































Respectfully submitted,

David P. Williams, P.G
























ROCK TYPES

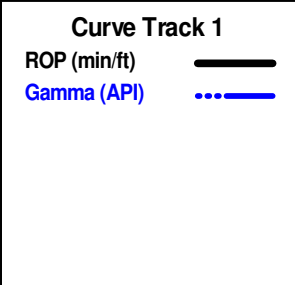
| | | | | |
|--|--|---|--|---|
|  Anhy |  Clyst |  Gry shale |  Mrlst |  Shgy |
|  Bent |  Coal |  Gyp |  Red shale |  Sltst |
|  Brec |  Congl |  Igne |  Salt |  Ss |
|  Carb sh |  Dol |  Lmst |  Shale |  Till |
|  Cht |  Grn sh |  Meta |  Shcol | |

ACCESSORIES

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

OTHER SYMBOLS

| | | | |
|---|--|--|---|
| POROSITY |  Vuggy | ROUNDING |  Even |
|  Earthy | |  Rounded |  Spotted |
|  Fenest | SORTING |  Subrnd |  Ques |
|  Fracture |  Well |  Subang |  Dead |
|  Inter |  Moderate |  Angular | |
|  Moldic |  Poor | | EVENT |
|  Organic | | OIL SHOW |  Rft |
|  Pinpoint | |  Gas show |  Sidewall |
| | | | INTERVAL |
| | | |  pipesymbol |
| | | |  Core |



Depth (ft)

25

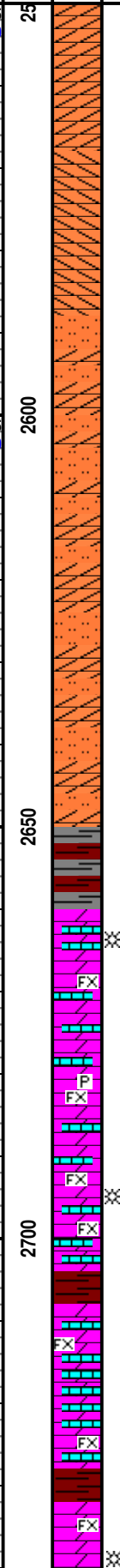
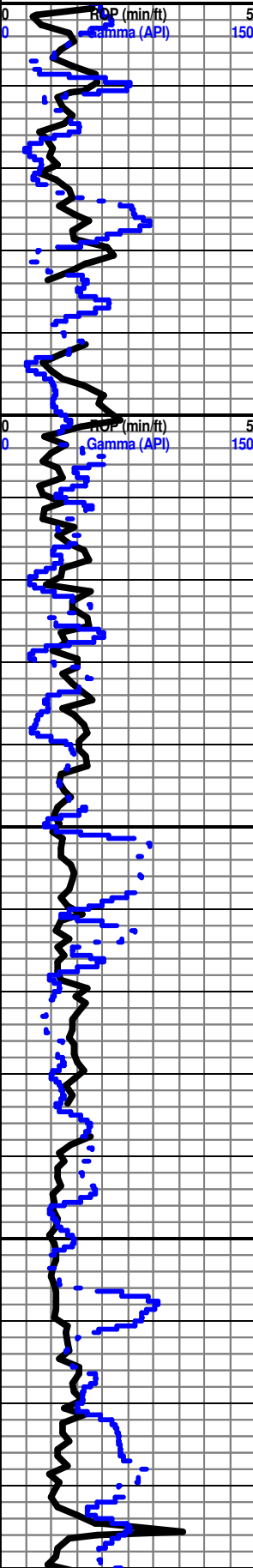
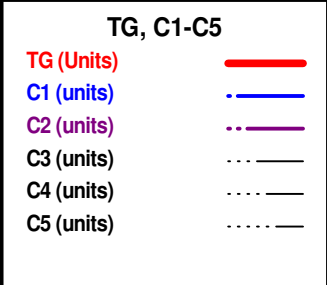
2600

2650

2700

Oil Shows

Geological Descriptions



FALCON EXPLORATION, INC.

IRISH FLATS #1-4 (NE)

860' FNL & 2310' FEL (N2-SW-NW-NE 1/4)

SEC. 4 - 28 S. - 30 W.

GRAY COUNTY, KANSAS

A.P.I. #15-069-20396-00-00

ELEVATION : 2806' K.B. ; 2793' G.L.

CONTRACTOR: STERLING DRILLING RIG # 5

GEOLOGIST: DAVID P. WILLIAMS, P.G.

Stone Coral Anhydrite Sample Top = 1811' (+995) Base = 1825' (+981).

Deviation Survey's Taken: @ 1864' = 3/4 degree; @ 5000' = 3/4 degree; @ 5296' = 3/4 degree.

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

Begin 20' Sample Examination @ 2640'.

Anhy/Gyp Wht-Translu-Op Ls Wht FxIn Micrite Sh Red-Maroon V Abd-Gry
Soft-Fissil No Odor No Stn No Flor NS

CHASE GROUP 2660' (+ 146)

Dolo Wht-Gry FxIn Micrite Sh Red-Maroon-Gry Soft-Fissil No Odor No Stn No Flor NS

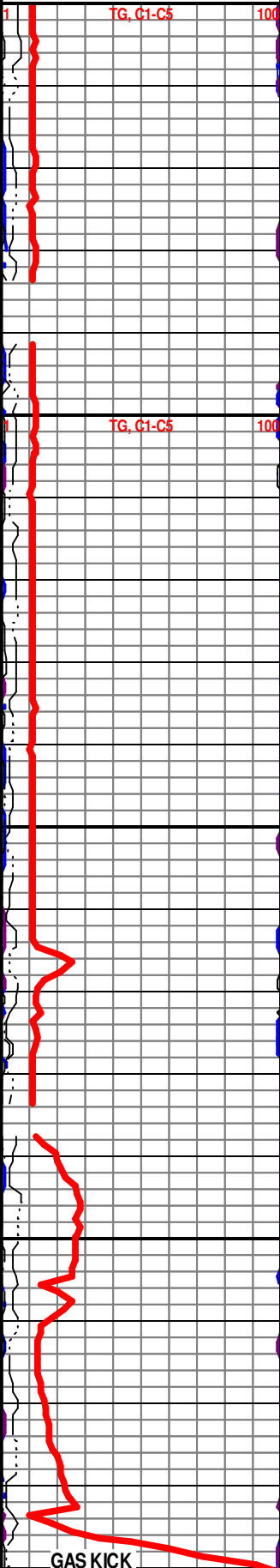
Dolo Wht-Gry FxIn Micrite Pyr Mass Sh Red-Maroon-Gry Soft-Fissil No Odor No Stn No Flor NS
Geologist: David P. Williams on location @ 10:45 PM 9-24-12 @ 2685'

Dolo Wht-Gry FxIn Micrite Sh Red-Maroon-Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Wht-Gry FxIn Micrite Sh Red-Maroon-Gry Soft-Fissil No Odor No Stn No Flor NS

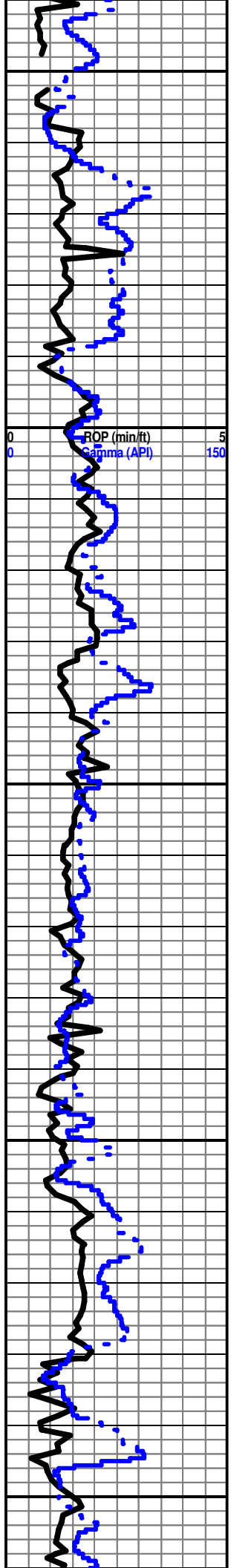
WINFIELD 2734' (+ 72)

Dolo Wht-Gry FxIn Micrite Sh Red-Maroon-Gry Soft-Fissil No Odor No Stn No Flor NS



GAS KICK

2750
2800
2850
2900
2950



NS

Dolo Wht-Gry Fxln Micrite Sh Red-Maroon-Gry Soft-Fissil No Odor No Stn No Flor NS

Dolo Gry-Wht Fxln AA Fine Ixln Por Cht Gry Op Vit Shp Sh Dec Gry-Red-Char AA No Odor No Flor No Stn NS

TOWANDA 2789' (+ 17)

Dolo Gry-Crm Fxln AA Fine Ixln Por Micritic Sh Dec Gry-Red AA No Odor No Flor No Stn NS

Dolo Gry-Crm Fxln AA Fine Ixln Por Micritic Sh Dec Gry-Red AA No Odor No Flor No Stn NS

FORT RILEY 2838' (- 32)

Dolo Gry-Wht Fxln AA Fine Ixln Por Cht Gry Op Vit Shp Sh Gry-Red AA No Odor No Flor No Stn NS

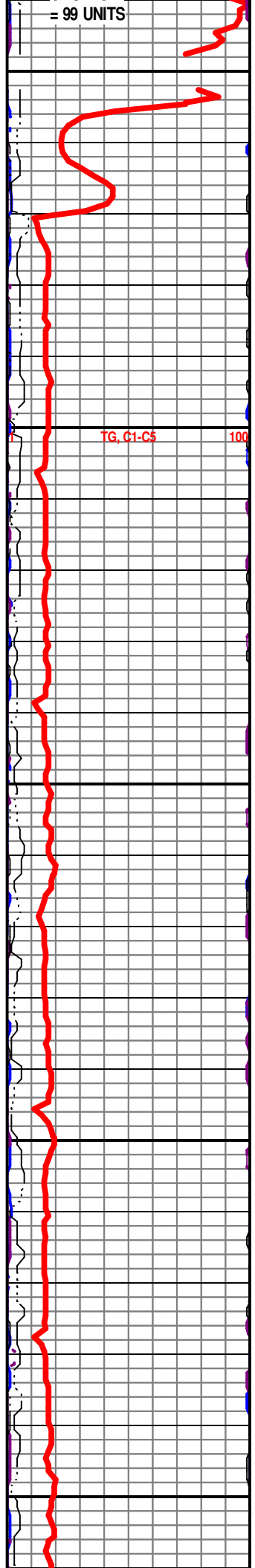
Dolo Gry-Wht Fxln AA Fine Ixln Por Cht Gry Op Vit Shp Sh Gry-Red AA No Odor No Flor No Stn NS

Dolo Gry-Wht Fxln AA Fine Ixln Por Cht Gry Op Vit Shp Sh Abd Gry-Red AA No Odor No Flor No Stn NS

Sh Gry-Red Abd Tr Dolo Gry-Wht Fxln AA Fine Ixln Por No Odor No Flor No Stn NS

Sh Gry-Red Abd Tr Dolo Gry-Wht Fxln AA Fine Ixln Por No Odor No Flor No Stn NS

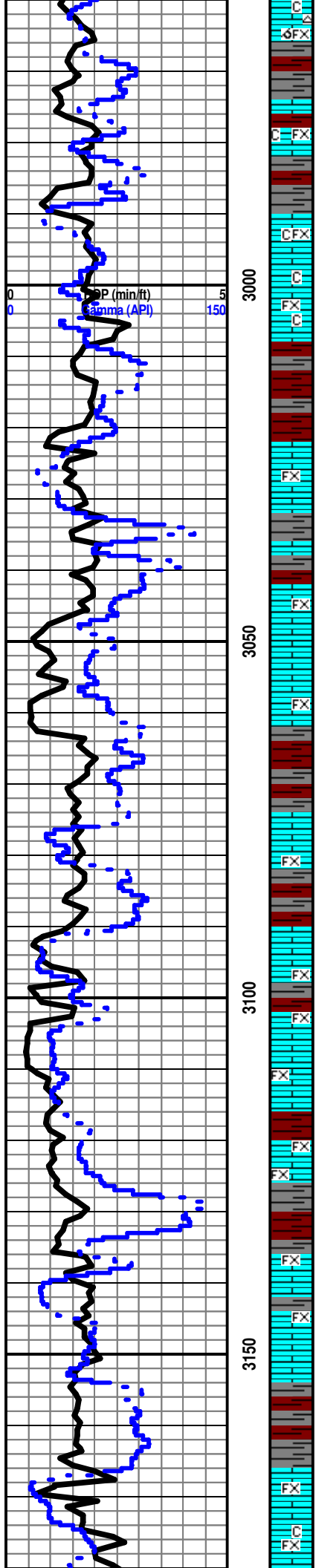
Ls Wht Fxln F Ixln Por Micritic Tr Poor OOM Por w/ Poor Small Vug Dis No InterOOM Por Cht Wht Transl- Op Vit Shp Chalk Sh Dec Gry-Red No Odor No Flor No Stn NS



= 99 UNITS

TG, C1-C5

100



Ls Wht Fxln F Ixln Por Tr Poor OOM Por w/ Poor Small Vug Dis Poor Develop No InterOOM Por Grad Ls Gry Igran Poor Cht Wht-Gry Transl-Op Vit Shp Chalk Sh Dec Gry-Red No Odor No Flor No Stn NS

Sh Gry-Red Abd Fissil Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln F Ixln Por Grad Ls Gry Gran w/ Poor Igran Ixln Por Tr Chalk Sh Dec Red-Gry Fissil No Odor No Flor No Stn NS

WREFORD 3023' (- 217)

Sh Red Abd Dec Gry Fissil AA Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

BASE CHASE GROUP 3044' (-238)

Sh Red Abd Dec Gry Fissil AA Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

Sh Red Abd Dec Gry Fissil Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

DISPLACE MUD SYSTEM @ 3101'.

COTTONWOOD 3101' (- 295)

Sh Red Abd Inc Gry Fissil Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

Sh Red Abd Inc Gry Fissil Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

Sh Red Abd Inc Gry Fissil Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

Sh Red Abd Inc Gry Fissil Tr Ls AA Gry-Wht Fxln AA F Ixln Por No Odor No Flor No Stn NS

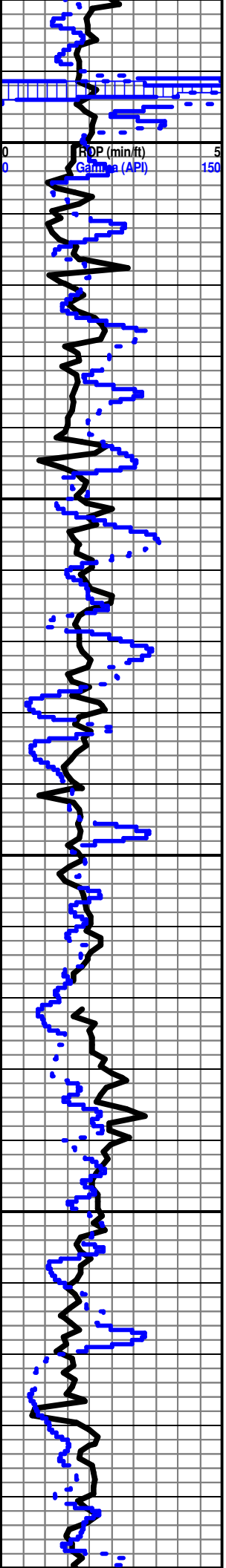
NEVA 3166' (- 360)

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por

TG, C1-C5 100

Mudco Ck @ 3185'
@ 12:00 PM 9/25/12

Vis 55;
WT = 8.65;
PV= 17;
YP= 18;
WL= 10.4;
Cake= 1;
Chl= 2500;
Cal = 20;
Sol= 2.0%.
LCM= 2#;
DMC=\$ 3735.40;
CMC=\$ 10152.75



Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren V Abd Chalk Inc Sh Red-Gry-Char-Blk Carb Soft-Fissil No Odor V Sli Dec Tr Scatt Min ? Flor (Lt Grn) (Few Pcs) NS

RED EAGLE 3196' (- 390)

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren V Abd Chalk Inc Sh DecRed-Gry-Char-Blk Carb AA Soft-Fissil No Odor V Sli Dec Tr Scatt Min ? Flor (Lt Grn) (Few Pcs) NS

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren V Abd Chalk Inc Sh Gry-Char-Blk Carb Soft-Fissil No Odor V Sli Dec Tr Scatt Min ? Flor (Lt Grn) (Few Pcs) NS

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren V Abd Chalk Sh Gry-Char-Red Soft No Odor V Sli Tr Scatt Min ? Flor (Lt Grn) (Few Pcs) NS

Ls Wht-Crm Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren Cht Wht Gry Op Shp Vit Abd Chalk Fos (Brach) Sh Gry-Char-Red Soft No Odor Tr Scatt Min ? Flor (Lt Grn) (Few Pcs) NS

FORAKER 3276' (- 470)

Ls Wht-Crm Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren Cht Wht Gry Op Shp Vit Abd Chalk Sh Gry-Char Soft No Odor Scatt Min ? Flor (Lt Grn) NS

Ls Wht-Crm Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren Cht Wht Gry Op Shp Vit Abd Chalk Sh Gry-Char Soft No Odor Scatt Min ? Flor (Lt Grn) NS

Ls Wht-Crm Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren Abd Chalk Sh Gry-Char Soft No Odor Scatt Min ? Flor (Lt Grn) NS

ADMIRE GROUP 3340' (- 534)

Ls Wht-Gry-Crm Fxln Poor-Fair Ixln Micritic Por Grad Gran Poor Intergran Por Barren Fos (Crin) Cht Drk Gry Op Shp Vit Chalk Sh Gry-Char Soft No Odor Scatt Min ? Flor (Lt Grn) No NS

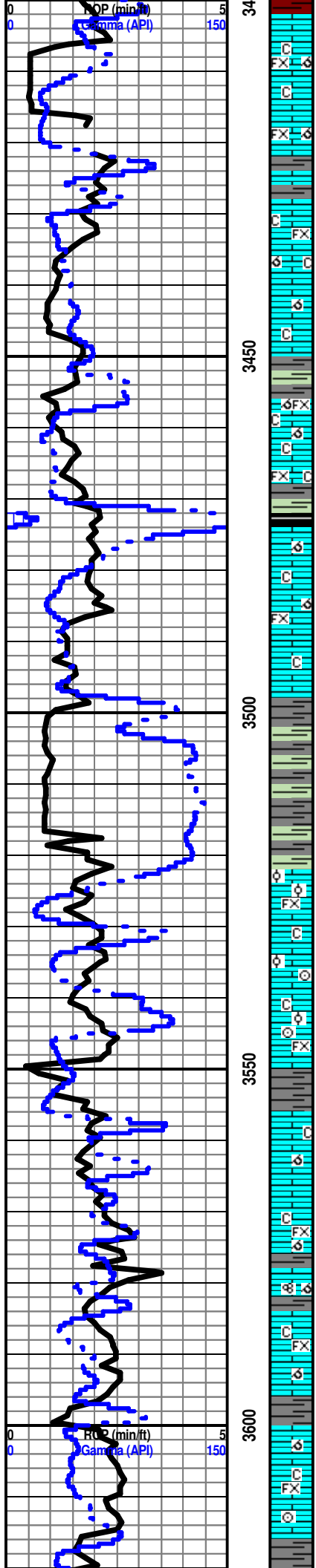
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Ls Crm-Wht-Gry Fxln Poor Ixln Micritic Por Grad Gran Poor Intergran Por Barren Chalk Sh Gry-Char Soft No Odor Scatt Min ? Flor (Lt Grn) NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Grad Fair OOM Por w/Poor InterOOM Por Fair

TG, C1-C5 100

REZERO TOOKE
DAQ @ 3215' = 12
UNITS BKGD GAS.



Dis Fair Develop Barren Chalk Sh Gry-Char Soft No Odor Scat Min ? Flor (Lt Grn) NS

? ONAGA 3410' (- 604)

Ls Crm-Wht-Gry Fxln Poor Ixln Por Grad Fair OOM Por w/Poor InterOOM Por Fair Dis Fair Develop Barren Chalk Sh Gry-Char Soft No Odor Scat Min ? Flor (Lt Grn) NS

Ls Crm-Wht- Fxln Poor Ixln Por Grad Poor OOM Por w/Poor InterOOM Por Poor Dis Poor Develop Barren Chalk Sh Gry-Char Soft No Odor No Stn NS

Ls Crm-Wht- Fxln Poor Ixln Por Grad Poor OOM Por w/Poor InterOOM Por Poor Dis Poor Develop Barren Chalk Sh Gry-Char Soft No Odor No Stn NS

Ls Crm-Wht- Fxln Poor Ixln Por Tr Poor-Fair OOM Por Poor-Fair Dis Poor-Fair Develop Barren Chalk Sh Gry-Char Inc Soft No Odor No Stn NS

ROOT SHALE 3498' (- 692)

Sh Gry-Char Inc Soft Tr Ls Crm-Wht AA- Fxln Poor Ixln Por Tr Poor-Fair OOM Por Poor-Fair Dis Poor-Fair Develop Barren Chalk No Odor No Flor No Stn NS

STOTLER 3524' (- 718)

Ls Crm Fxln Poor Ixln Por w/ Tr/OOL in pl Poor Dis Poor Develop Sh Gry-Char AA No Odor Scat Min ? Flor (Lt Grn) NS

Ls Crm-Wht- Fxln Poor Ixln Por Grad V Soft Barren Chalk Fos Abd Crin Cht Char-Gry-Blk Op Vit Shp No Stn ? Min Flor Cht Wht Op Shp Vit Sh Gry-Char Soft No Odor No Stn NS

Ls Gry-Crm Fxln Dns Micritic Barren Tr Poor OOM Por No Dis Chalk Sh Gry-Char-Red Soft V Sli Tr ? Min Flor No Odor NS

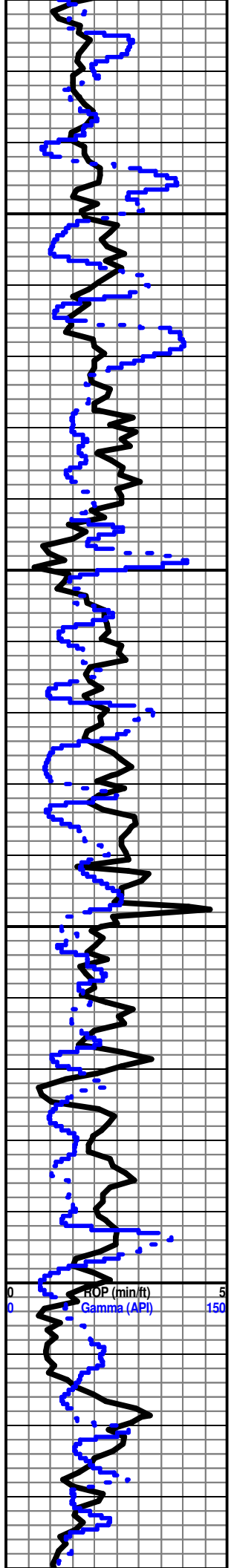
TARKIO 3584' (- 778)

Ls Wht-Crm-Gry Fxln Dns Micritic Barren Tr Poor OOM Por No Dis Fos (Foram) Chalk Sh Grn-Gry Soft V Sli Tr ? Min Flor No Odor NS

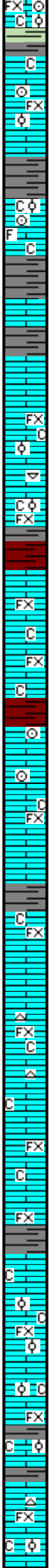
Ls Wht-Crm-Gry Fxln Dns Micritic Barren Tr Poor OOM Por Poor Dis Poor Develop (1 Pc) Chalk Sh Grn-Gry Soft V Sli Tr ? Min Flor No Odor NS

TG, C1-C5 100

TG, C1-C5 100



3650
3700
3750
3800



Ls Wht-Crm-Gry FxIn Dns Micritic Barren Tr Poor OOL Por AA Poor Dis Poor Develop Fos Abd Crin Chalk Sh Inc Grn-Gry Soft V Sli Tr ? Min Flor No Odor NS

Ls Wht-Crm-Gry FxIn Dns Micritic Barren w/Tr Poor OOL Por Poor Dis Poor Develop Fos Crin Chalk Sh Inc Gry-Red Soft No Flor No Odor NS

Ls Crm-Gry FxIn Dns Micritic Grad Gran FxIn Gran Por Barren Fos (Spic) Chalk Inc Sh Red-Gry Soft Scatt ? Min Flor No Odor NS

Ls Wht-Crm-Gry FxIn Dns Micritic Barren w/Tr Poor OOL Por Poor Dis Poor Develop Fos (Pelec) Chalk Abd Sh Gry-Red-Char-Blk Carb Soft Scatt ? Min Flor No Odor NS

Ls Wht-Crm FxIn Dns Micritic Barren Chalk Abd Sh Gry-Red-Char Soft Scatt ? Min Flor No Odor NS

Ls Wht-Crm FxIn Dns Micritic Barren Fos Crin Chalk Cht Drk Gry Op shp Vip Sh Gry-Red-Char Soft Tr Scatt ? Min Flor No Odor NS

Ls-Gry-Crm FxIn Dns Micrite Barren V Abd Chalk Sh Gry-Char-Red Soft Tr Scatt ? Min Flor No Odor NS

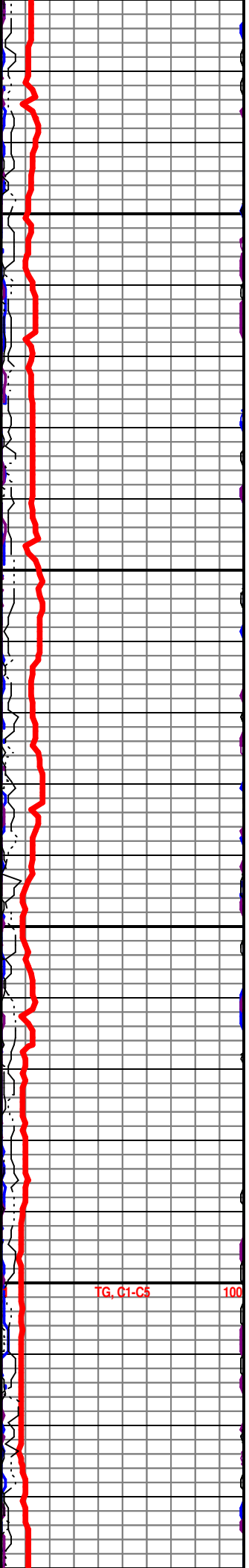
Ls Crm-Wht FxIn Dns Micritic Barren V Abd Chalk Cht Tan Op shp Vip Sh Gry-Char Soft Tr Scatt ? Min Flor No Odor NS

Ls Crm-Wht FxIn Dns Micrite Barren Dec Chalk Char Soft Tr Scatt ? Min Flor No Odor NS

_____ TOPEKA 3792' (- 986) _____

Ls Wht-Crm-Gry FxIn Dns Micritic Barren Grad Poor OOL Por Poor InterOOM Por Poor Dis Poor Develop Dec Chalk Sh Char Soft Scatt ? Min Flor No Odor NS

Ls Wht-Crm-Gry FxIn Dns Micritic Barren Grad Poor OOL Por Poor InterOOM Por Poor Dis Poor Develop Dec Chalk Sh Char Soft Scatt ? Min Flor No Odor NS



TG, C1-C5 100

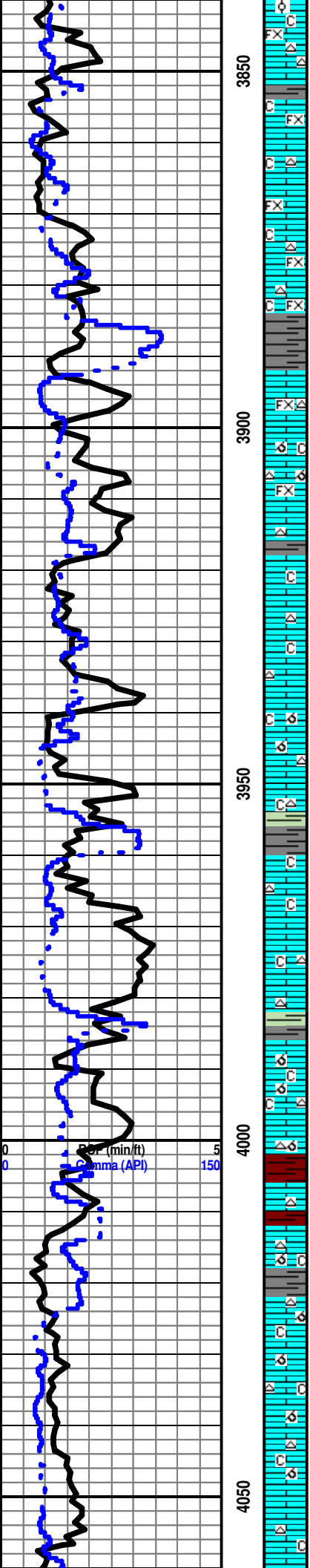
3850

3900

3950

4000

4050



Ls Wht-Crm-Gry Fxln Dns Micritic Barren Grad Poor OOL Por Poor InterOOM Por
Poor Dis Poor Develop Cht Wht-Tan Op Shp Vit Chalk Sh Char Soft Scatt ? Min
Flor No Odor NS

Ls Crm-Wht Fxln Dns Micritic Barren Cht Wht-Tan Op Shp Vitn Tr Chalk Shar Char
Soft Sli Scatt ? Min Flor No Odor NS

Ls Crm-Wht Fxln Dns Micritic Barren Cht Wht-Tan Op Shp Vitn Tr Chalk Shar Char
Soft Sli Scatt ? Min Flor No Odor NS

Ls Crm-Wht Fxln Dns Micrite Grad V Poor OOM Por w/Poor Leach Dis Poor
Develop Poor InterOOM Por Cht Gry-Wht Op Shp Vit Chalk Sh Char-Red Soft-Fissil
V Sli Tr-No Scatt Min Flor No Odor NS

Ls Crm-Wht Fxln Dns Micrite Cht Wht Op Shp Vit Chalk Sh Char-Grn Fissil V Sli
Tr-No Scatt Min Flor No Odor NS

Ls Crm-Wht Fxln Dns Micrite Grad Poor OOM Por w/Poor leach Dis Poor Develop
Poor InterOOM Por Cht Gry-Wht Op Shp Vit Chalk Sh Char-Grn Fissil V Sli Tr-No
Scatt Min Flor No Odor NS

LeCOMPTON 3960' (- 1154)

Ls Crm-Wht Fxln Dns Micrite ? Trip w/ Pin-Pt Leached Por Cht Wht Op Shp Vit
Chalk Sh Char-Grn Fissil V Sli Tr-No Scatt Min Flor No Odor NS

Ls Crm-Wht Fxln Dns Micrite Grad Poor OOM Por w/Poor Leach Dis Poor Develop
Poor InterOOM Por Cht Gry-Wht Op Shp Vit Chalk Sh Char-Grn Fissil V Sli Tr-No
Scatt Min Flor No Odor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor OOM Por w/Poor Leach Dis Poor Develop
Poor InterOOM Por V Abd Chalk Cht Gry-Wht Op Shp Vit Tr Sh Red Fissil V Sli
Tr-No Scatt Min Flor No Odor NS

Ls Wht-Crm-Gry Fxln Dns Micrite Grad Poor OOM Por w/Poor Leach Dis Poor
Develop Poor InterOOM Por V Abd Chalk Cht Gry-Wht Op Shp Vit Tr Sh Red Fissil
V Sli Tr-No Scatt Min Flor No Odor NS

Ls Wht-Crm-Gry Fxln Dns Micrite Grad Poor OOM Por w/Poor Leach Dis Poor
Develop Poor InterOOM Por V Abd Chalk Cht Tan Op Shp Vit Tr Sh Red Fissil V Sli
Tr-No Scatt Min Flor No Odor NS

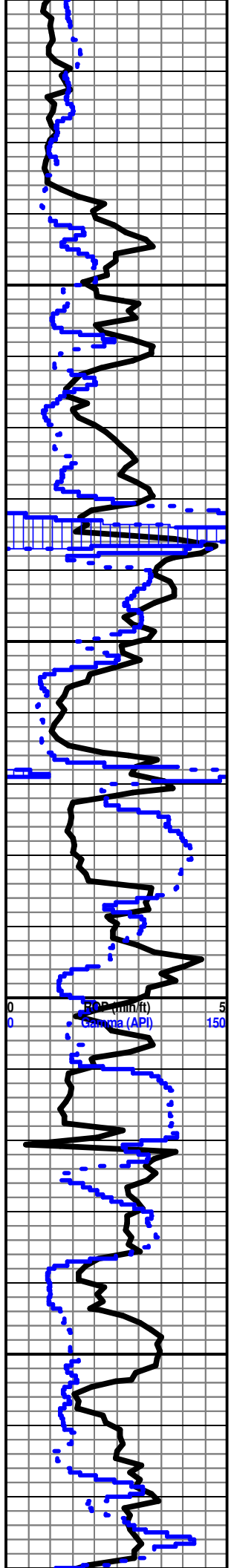
Mudco Ck @ 3900'
@ 11:20 AM 9/26/12

Vis 51;
WT= 9.1;
PV= 16;
YP= 18;
WL= 10.0;
Cake= 1;
Chl= 3900;
Cal = 20;
Sol= 5.5%
LCM= 2#;
DMC=\$ 2318.80;
CMC=\$ 12471.55

REZERO TOOKE
DAQ @ 3890' = 12
UNITS BKGD GAS.

GAS TEST
EXTRACTOR @
3911' = 132 UNITS.

TG, C1-C5 100



Ls Crm-Wht Fxln Dns Micrite Abd Chalk Cht Wht Op Spp Vit Sh Char Fissil V Sli Tr-V Sli Tr Scatt Min Flor No Odor NS

Sh Blk Carb Char-Gry Fissil Ls Crm-Wht-Gry Fxln Dns Micrite Cht Blk Op Shp Vit Dec Chalk V Sli Tr-V Sli Tr Scatt Min Flor No Odor NS

Ls Crm-Gry Fxln Dns Micrite Chalk Cht Gry-Wht Op Shp Vit Sh Blk Carb Fissil V Sli Tr-No Scatt Min Flor No Odor NS

Ls Crm-Gry Fxln Dns Micrite Chalk Cht Gry-Blk Op Shp Vit Sh Blk Carb Fissil V Sli Tr-No Scatt Min Flor No Odor NS

HEEBNER 4131' (-1325)

Sh Blk Carb Fissil Ls Crm-Gry Fxln Dns Micrite Chalk Cht Gry-Blk Op Shp Vit Sh Blk Carb AA Fissil No Flor No Odor NS

TORONTO 4148' (- 1342)

Ls Wht Fxln Dns Micrite V Hvy Abd Chalk Sh Blk-Char Fissil V Sli Tr-V Sli Tr Scatt Min Flor No Odor NS

DOUGLAS 4166' (- 1360)

Ls Wht Fxln Dns Micrite Abd Chalk Cht Wht Op Shp Vit Sh Char-Gry Grn Fissil V Sli Tr-V Sli Tr Scatt Min Flor No Odor NS

BEGIN 10' SAMPLES @ 4230'

Ls Bm Fxln Dns Micrite Tr Chalk Sh Grn Fissil No Flor No Odor NS

Ls Bm-Crm-Wht Fxln Dns Micrite Tr Chalk Sh Grn-Gry Fissil No Flor No Odor NS

IATAN (BROWN LIME) 4224' (- 1418)

Sh Grn-Gry Fissil "Gummy" Soft Ls Crm-Gry Fxln Dns Micrite Abd Chalk No Flor No Odor NS

LANSING 4236' (- 1430)

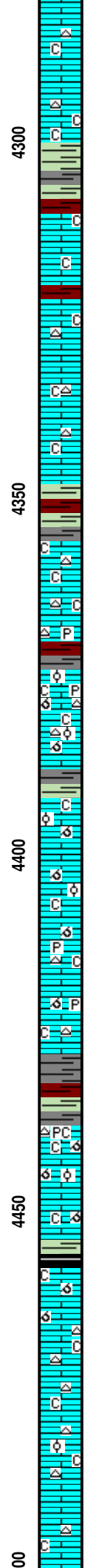
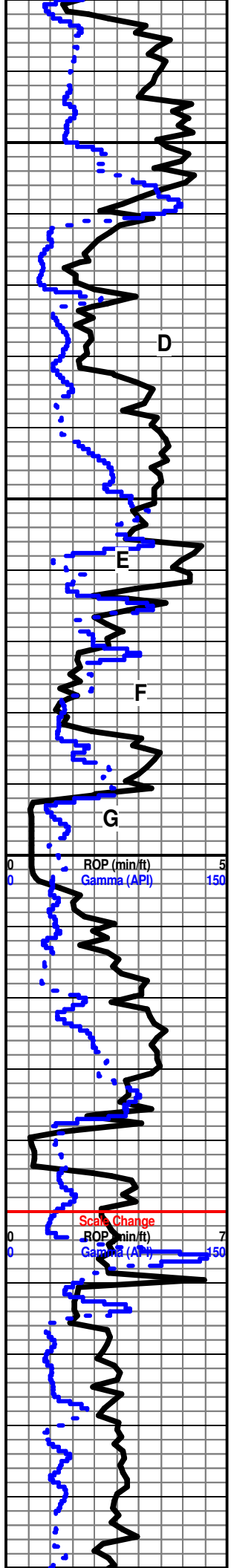
Ls Wht-Crm Wht Fxln Dns Micritic Poor Ixln Por Barren Fos (Pelecyc) Cht Wht Op shp Vit Chalk Sh Char Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm Wht Fxln Dns Micritic Poor Ixln Por Barren Grad Poor Gran Por w/Poor Igran Por Tr Sm OOL in pl Poor Dis Poor Develop Cht Wht Op shp Vit Chalk Sh Char Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm Wht Fxln Dns Micritic Poor Ixln Por Barren Grad Poor Gran Por w/Poor Igran Por (Sm OOL in pl) Poor Dis Poor Develop Cht Wht Op shp Vit Chalk Sh Char Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm Wht Fxln Dns Micritic Poor Ixln Por Cht Wht-Tan Op shp Vit Pyr Mass Dec Chalk Inc Sh Char-Grn Carb Fissil No Odor Scatt ? Min Flor NS

TG, C1-C5 100



Ls Wht-Crm-Wht Fxln Dns Micritic Poor Ixln Por Cht Wht-Tan Inc Op shp Vit Dec Chalk Sh Char-Grn Carb Fissil No Odor Sli Dec Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por Cht Wht-Tan Dec Op shp Vit Chalk Inc Sh Char-Grn Carb Fissil No Odor Sli Dec Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por Chalk Inc Sh Char-Grn Carb Fissil No Odor Sli Dec Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por Chalk Inc Sh Char-Grn Carb Fissil No Odor Sli Dec Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por Cht Wht-Tan Dec Op shp Vit Chalk Inc Fos Crin Sh Char-Grn Fissil No Odor Sli Inc Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por Barren Cht Wht-Tan Dec Op shp Vit Chalk Inc Fos Crin Sh Char-Blk Carb Fissil No Odor Sli Inc Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por Grad Por (w/ Poor Intergran Por) Cht Wht-Tan Dec Op Shp Vit Chalk Dec Sh Char-Blk Carb Inc Fissil No Odor Sli Inc Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por Grad Por (w/ Poor Intergran Por) Cht Wht-Tan Dec Op Shp Vit Inc Chalk Sh Char-Grn-Tr Red Fissil No Odor Sli-No Scatt ? Min Flor NS

Ls Wht-Crm-Tan Fxln Dns Micritic Poor Ixln Por (w/ Poor Intergran Por) Barren Cht Wht-Tan Op Shp Vit Chalk Sh Char-Grn-Red Fissil No Odor Sli-No Scatt ? Min Flor NS

Ls Crm-Tan-Gry Fxln w/ Pry Includ Dns Micritic Poor Ixln Por (w/ Poor Intergran Por) Pyr Mass Cht Wht Op Shp Vit Chalk Sh Char-Grn Fissil No Odor Sli Scatt ? Min Flor NS

Ls Crm-Wht Fxln Dns Micritic Poor Ixln Por Barren Grad Good Med-Lg OOM Por Fair-Good Dis w/ OOL in pl Fair-Good Develop Fair-Good InterOOM Por Fair Leaching Por Barren Abd Chalk Sh Gry-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Crm-Wht Fxln Dns Micritic Poor Ixln Por Grad Good Med-Lg OOM Por Fair-Good Dis (w/ OOL in p) Med-Good Develop Med-Good InterOOM Por Med Leaching Por Chalk Sh Gry-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Crm-Tan-Gry Fxln w/ Pry Includ Dns Micritic Poor Ixln Por Tr OOM Por Cht Wht-Gry Op Shp Vit Chalk Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Crm-Tan-Gry Fxln w/ Pry Includ Dns Micritic Poor Ixln Por OOM por AA Cht Wht-Gry Op Shp Vit Chalk Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

Sh V Abd Char-Grn-Aqua Fissil w/Pry Includ Ls Dec Crm-Tan-Gry Fxln w/ Pry Includ Dns Micritic Poor Ixln Por Barren Cht Wht-Gry Op Shp Vit Tr Chalk No Odor Tr Scatt ? Min Flor NS

Ls Wht-Crm Fxln Dns Micritic Poor Ixln Por Grad Good-Lg OOM Por Good Dissolu (w/ OOL in p) Good Develop Good InterOOM Por Good Leaching Por Chalky Sh Gry-Grn Fissil No Odor Scatt ? Min Flor NS

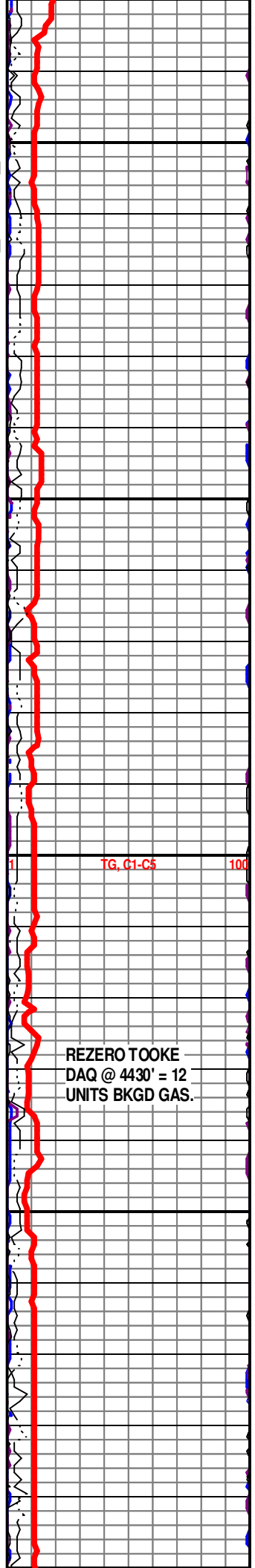
Ls Wht-Crm AA Fxln Dns Micritic Poor Ixln Por Grad Good Lg OOM Por Fair-Good Dis (w/ OOL in p) Good Develop Good InterOOM Por Good Leaching OOL Por Abd Chalk Sh Gry-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln w/Pry Includ Dns Micritic Poor Ixln Por Barren Cht Wht-Gry Op Shp Vit Tr Chalk Sh Char-Grn Fissil No Odor Tr Scatt ? Min Flor NS

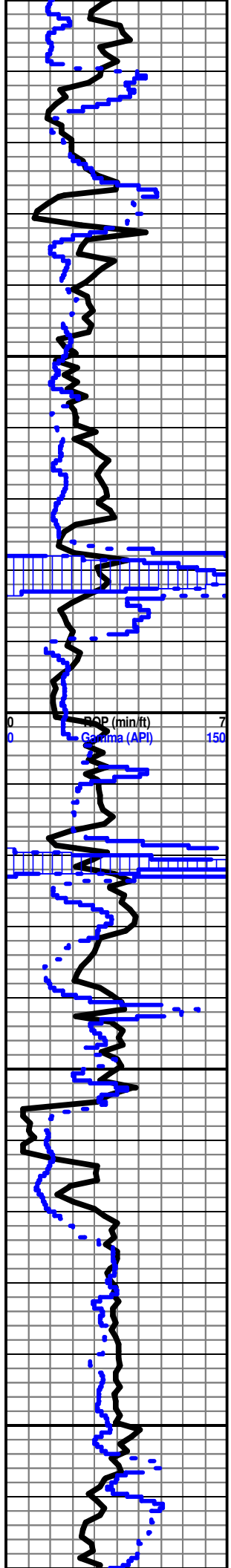
Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Barren Cht Wht-Gry Op Shp Vit (w/OOL in pl) Chalky Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Cht Wht-Gry Op Shp Vit Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Barren Grad Good Lg OOM Por



45
4550
4600
4650
4700



Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Barren Grad Good Med OOM Por Good Dis (w/ OOL in pl) Good Develop Good InterOOM Por Med-Good Leaching OOM Por Cht Wht-Gry Op Shp Vit Chalky Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Barren Grad Good Med OOM Por Fair Dissolu (w/ OOL in pl) Med Develop Med InterOOM Por Med Leaching OOM Por Cht Wht-Gry Op Shp Vit Chalky Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Barren Tr OOM Por AA Sh Char-Grn Fissil No Odor Tr Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Barren Tr OOM Por AA Sh Char-Grn Fissil No Odor Tr Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Grad OOM Por Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Grad Poor OOM Por Sh Char-Grn Fissil No Odor Tr Scatt ? Min Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritic Poor Ixln Por Cht Gry Op Shp Vit Sh Char-Grn Fissil No Odor Scatt ? Min Flor NS

STARK SHALE 4576' (- 1770)

KANSAS CITY "SWOPE (K)" 4584' (- 1778)
Ls Wht Fxln Poor Ixln Pin-Pt Por Poor Leaching Por w/Poor Leached Por Cht Gry-Wht (w/Fos (Spicule) Inclus Op Shp Vit Sh Blk Carb Fissil No Odor No Flor NS

Ls Wht Fxln w/Poor Ixln Pin-Pt Por Poor-Fair Leaching Por w/Poor Leached Por Faint Odor Sli Flor (Lt Grn) No Stn Poor ? SSO/SSG

Ls Wht-Gry Fxln Poor Ixln Por Micritic Chalky Cht AA Sh Blk Carb Fissil No Flor No Odor NS

HUSHPUCKNEY 4620' (- 1824)

Sh Blk Carb Fissil Ls Wht-Gry Fxln Poor Ixln Por Micritic Chalk Cht AA No Flor No Odor NS

Ls Wht-Gry Fxln Poor Ixln Por Micritic Chalk Cht Sh Blk Carb Fissil No Flor No Odor NS

Ls Wht-Gry Fxln Poor Ixln Por Micritic Chalk Cht Wht-Brn Op Shp Vit Char Sh Blk Carb -Char Abd Fissil Scatt ? Min Flor No Odor NS

Sh Blk Carb -Char Abd Fissil Ls Wht-Gry Fxln Poor Ixln Por Micritic Chalky Cht Wht-Brn Op Shp Vit Char Sh Blk Char Fissil Scatt ? Min Flor No Odor NS

Ls Crm-Tan Fxln Dns Micritic Poor Ixln Por Barren Grad Tr Poor OOM Por Poor Dis w/ OOL in pl Poor Develop Poor-No InterOOM Por Poor-No Leaching OOM Por Chalk Sh Char Fissil No Odor Tr Scatt ? Min Flor NS

Ls Wht-Gry Fxln Poor Ixln Por Micritic Chalk Sh Char Abd Fissil Tr Scatt ? Min Flor No Odor NS

BASE KANSAS CITY 4674' (- 1868)

Sh Char Abd Fissil Ls Gry Fxln Poor Ixln Por Mricritic Chalk Tr Scatt ? Min Flor No Odor NS

Sh Char Abd Fissil Ls Gry Inc Fxln Poor Ixln Por Micritic Chalk Tr Scatt ? Min Flor No Odor NS

Sh Char Abd Fissil Ls Gry Inc Fxln Poor Ixln Por Micritic Chalk Tr Scatt ? Min Flor No Odor NS

MARMATON 4708' (- 1902)

Sh Char-Gry Fissil Abd Ls Wht-Crm Fxln Poor Pin-Pt Ixln Por Mostly Micritic Chalk No Flor No Odor NS

Sh Char AA Fissil Ls Wht-Crm Fxln Poor Ixln Por Micritic Grad Poor Small OOM Por Fair Dissolu Fair InterOOM Por Chalky Cht -Wht Op Shp Vit No Flor No Odor NS

Mud co Ck @ 4550' @ 10:15 AM 9/27/12

Vis 54;
WT= 9.1;
PV= 18;
YP= 20;
WL= 8.8;
Cake= 1;
Chl= 2000;
Cal= 20;
Sol= 5.6%.
LCM= 2#;
DMC=\$ 2530.55;
CMC=\$ 15002.10

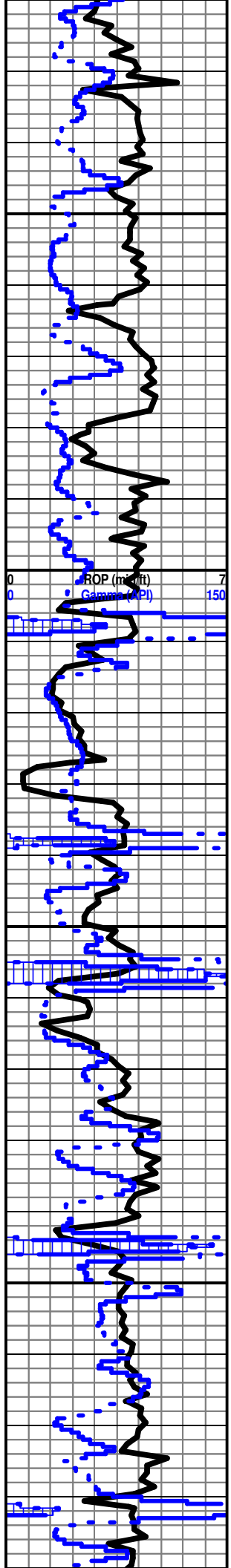
SH GAS KICK @ 4577' = 26 UNITS.

GAS KICK @ 4592' = 31 UNITS

TG, C1-C5 100

SH GAS KICK @ 4618' = 39 UNITS

SH GAS KICK @ 4646' = 28 UNITS



4750

4800

4850

4900

Sh Char AA Fissil Ls Wht-Crm Fxln Poor Ixln Por Micritic Grad Poor Small OOM Por Fair Dissolu Fair InterOOM Por Fos (Crin) Chalky Cht -Wht Op Shp Vit No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Grad Poor Small OOM Por (w/Tr OOL in pl) Fair-Good Dis Fair Inter OOL Por Chalk Sh Char AA Fissil No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Grad Poor Small OOM Por Barren w/Tr OOL in pl Fair-Good Dis Fair Inter OOL Por Chalk Sh Char AA Fissil No Flor No Odor NS

Sh Char-Gry V Abd Fissil Ls Wht-Crm Fxln Poor Ixln Por Micritic Grad Poor Small OOM Por Poor InterOOM Por Chalk No Flor No Odor NS

Ls Tan-Crm Fxln Poor Ixln Por Micritic Fos (Crin) Chalky Sh Char-Gry Dec Fissil No Flor No Odor NS

Ls Wht-Crm-Tan Fxln Poor Ixln Por Micritic Chalky Sh Char -Gry -Aqua- Blk Carb Fissil No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Grad Poor Small OOM Por (w/Tr OOL in pl) Poor-Fair Dissolu Poor-Fair Inter OOM Por Chalk Sh Char-Gry-Blk Carb Fissil No Flor No Odor NS

Ls Wht-Gry Fxln Poor Ixln Por Micritic w/ Tr Poor OOM Por (w/OOL in pl) Poor Dissolu Por Develop Chalky Cht Gry (w/OOL Includ) Op Shp Vit Sh Char-Gry (w/Pyr Includ)-Blk Carb Soft- Fissil No Flor No Odor NS

Ls Wht-Crm-Tan Fxln Poor Ixln Por Micritic w/ Tr Poor OOM Por Fos (Brach) Chalk Cht Gry Op Shp Vit (Tr Only) Sh Char-Gry Grn Soft- Fissil No Flor No Odor NS

PAWNEE 4810' (- 2004)

Ls Wht-Crm Fxln Poor Ixln Por Micritic w/ Tr Poor OOM Por Chalky Sh Char-Gry-Blk Carb Soft- Fissil No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic w/ Tr Poor OOM Por (Dec) Chalky Sh Char-Gry-Blk Carb Soft- Fissil No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Chalky Sh Char-Gry-Blk Carb Soft- Fissil No Flor No Odor NS

FORT SCOTT 4837' (- 2031)

Ls Wht-Crm-Tan Fxln Poor Ixln Por Micritic w/ Tr Poor OOM Por Chalk Cht Tan Op Shp Vit (Tr Only) Sh Char-Gry-Blk Carb Fissil No Flor No Odor NS

CHEROKEE SHALE 4854' (- 2045)

Sh Blk Carb-Gry-Char Fissil Abd Ls Crm-Tan-Wht Fxln Poor Ixln Por Micrite Cht Wht (w/Fos ? Includ) Op Shp Vit Chalky No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Poor Ixln Por Micrite Grad Poor Pin-Pt Ixln Por Cht Tan (w/Fos ? Includ) Op Shp Vit Chalky Sh Blk Carb-Gry-Char-Aqua Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Gry-Char-Aqua Fissil Ls Wht-Crm Fxln Poor Ixln Por Micrite Cht Wht Op Shp Vit Fos (Bry, Brach Abd) Chalky No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Poor Ixln Por Micrite Cht Gry Op Shp Vit Chalky Sh Blk Carb-Gry-Char Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Poor Ixln Por Micrite Cht Gry Op Shp Vit Chalky Fos (Bry Abd) Sh Blk Carb-Gry-Char Fissil No Odor No Stn No Flor NS

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

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

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

Ls Crm-Tan-Gry Fxln Poor Ixln Por Micrite Cht Tan Translu-Op Shp Vit Chalky Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

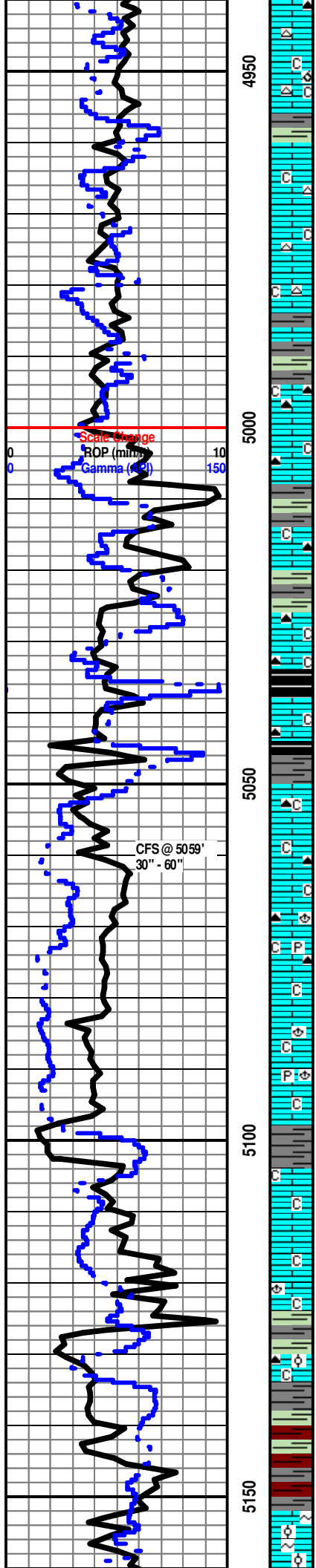
Mudco Ck @ 4880' @ 8:55 AM 9/28/12

Vis 54;
WT = 9.2;
PV = 18;
YP = 19;
WL = 8.0;
Cake = 1;
Chl = 2000;
Cal = 20;
Sol = 5.6%
LCM = 2#;
DMC = \$ 3195.45;
CMC = \$ 18197.55

SH GAS KICK @ 4840' = 48 UNITS

SH GAS KICK @ 4858' = 38 UNITS

SH GAS KICK @ 4693' = 32 UNITS



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

Ls Crm-Tan Fxln Poor Ixln Por Micritic (w/ Tr Poor-Fair OOM Por) Poor InterOOM Por Fair Develop Fair Leaching Chalk Cht Tan Op Shp Vit (Tr Only) Sh Char-Gry Fissil No Flor No Odor NS

Ls Crm-Tan Fxln Poor Ixln Por Micritic Chalk Cht Tan Op Shp Vit (Tr Only) Sh Char-Gry-Blk Carb Fissil No Flor No Odor NS

Ls Crm-Tan Fxln Poor Ixln Por Micritic Chalk Cht Tan Op Shp Vit (Tr Only) Sh Char-Gry-Blk Carb Fissil No Flor No Odor NS

Ls Crm-Tan Fxln Poor Ixln Por Micritic Chalk Cht Tan-Amber Translu- Op Shp Vit (Inc) Sh Char-Gry-Blk Carb Fissil No Flor No Odor NS

Ls Crm-Tan Fxln Poor Ixln Por Micritic Chalk Cht Blk-Amber-Tan Op Shp Vit (Tr Only) Sh Char-Gry-Blk Carb Fissil No Flor No Odor NS

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

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

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

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

MORROW SHALE 5036' (- 2230)

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

30" CFS @ 5059' Ls Crm-Tan Fxln Poor Ixln Por Micritic Chalk Cht Amber-Tan Translu-Op Shp Vit Sh Char-Gry-Blk Carb-Aqua-Red Fissil No Stn No Flor No Odor NS

60" CFS @ 5059' Sh Blk Carb-Char-Gry Fissil Ls Wht-Crm-Tan Fxln Poor Ixln Por Micritic Grad Fxln Chalk Cht Wht-Amber-Tan Translu-Op Shp Vit No Stn No Flor No Odor NS

Ls Wht-Crm-Tan-Gry Fxln Poor Ixln Por Micritic Chalk Fos (Brach) Cht Amber Translu Shp Vit Sh Char-Gry-Blk Carb-Aqua Fissil No Flor No Stn No Odor NS

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

Ls Wht-Crm Fxln Poor Ixln Por Micritic Chalk Inc Abd Fos (Brach) Sh Char-Gry-Blk Carb-Aqua Fissil No Flor No Stn No Odor NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Chalk Inc Abd Fos (Brach) Sh Char-Gry-Blk Carb-Aqua (w/Pyr Includ) Inc Fissil No Flor No Stn No Odor NS

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

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Chalky Sh Char-Gry-Blk Carb-Aqua Fissil No Flor No Stn No Odor NS

Sh Char-Gry-Blk Carb-Aqua (Abd) Fissil Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Fos (Brach) Chalky No Stn No Flor No Odor NS

? PROBABLE CHESTER 5131' (- 2325)

Ls Wht-Crm Fxln Micrite AA Grad Poor Igran OOL Aqua/Grn "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix (w/Clay Matrix) Cht Drk Brn Op Shp Vit Sh Char-Gry-Aqua Fissil No Flor No Stn No Odor NS

Sh Red-Char-Gry-Blk Carb-Aqua Fissil (Wash Red) Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor Igran OOL Aqua/Grn/Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix (w/Clay Matrix) Cht Drk Brn Op Shp Vit Chalky No Stn No Flor No Odor NS

MISSISSIPPIAN STE. GEN 5152' (- 2346)

Sh Red-Char-Gry-Blk Carb-Aqua (Abd) Fissil (Wash Red) Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor Igran OOL Aqua/Grn (Glacu) Grad Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Chalky No Stn Sli ? Min Flor (Tr Only) No Odor NS

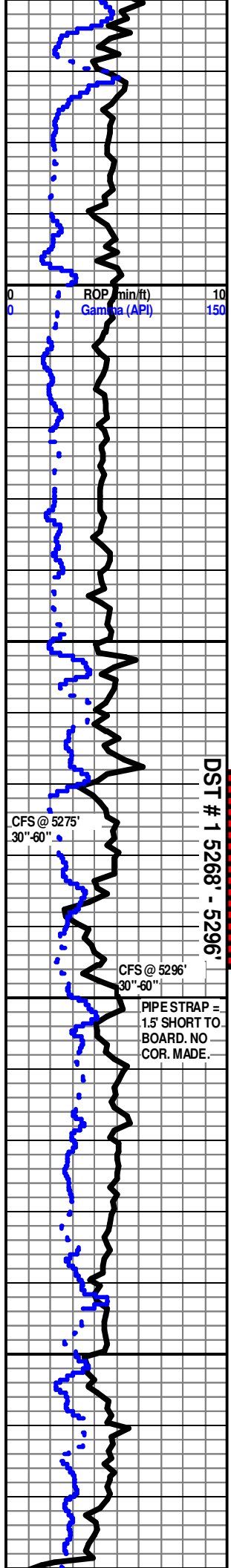
BIT TRIP @ 5000'
TG, C1-C5 100

CHANGE OUT GAS
FILIMENT @ 5000' &
GAS TEST= 154 UNITS

SH GAS KICK
= 34 UNITS.

SH GAS KICK =
36 UNITS.

Mudco Ck @ 5042'
@ 6:50 AM 9/29/12
Vis 53;
WT= 9.0;
PV= 16;
YP= 18;
WL= 8.0;
Cake= 1;
Chl= 1200;
Cal= 20;
Sol= 4.9%.
LCM= 3#;
DMC=\$ 1184.10;
CMC=\$ 19381.65



Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in Gm (Glacu) CaCO3 Matrix Chalky Sh Red-Char-Gry-Blk Carb-Aqua (Abd) Fissil No Stn Sli ? Min Flor (Tr Only) Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Chalky Sh Red-Char-Gry-Blk Carb-Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

Ls Wht Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Chalky Sh Red-Char-Gry-Blk Carb-Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

Ls Wht Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in Grm (Glacu) CaCO3 Matrix Chalky Sh Char-Gry-Blk Carb-Maroon Fissil No Stn No Flor No Odor NS

ST. LOUIS 5200' (- 2394)

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Cht Wht-Amber Translu-Op Shp Vit Pyr Mass Chalky Sh Red-Char-Gry-Blk Carb-Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Cht Wht (Frosted) Translu-Op Shp Vit Chalky Sh Red-Char-Gry-Blk Carb-Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Chalky Sh Red-Char-Gry-Blk Carb-Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Cht Org-Red (w/OOL Includ) -Yell-Tan Translu-Op Shp Vit Chalky Sh Red-Char-Gry-Blk Carb- Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Cht Org-Red (w/OOL Includ) Inc Drk Char (w/OOL in pl) Translu-Op Shp Vit Chalky Pyr Mass Sh Red-Char-Gry-Blk Carb- Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Poor Ixln Pin-Pt Por Micritic Grad Poor-Fair Igran OOL Wht "Sandy" Por (w/Small OOL in pl) in CaCO3 Matrix Cht Org-Red (w/OOL Includ) Inc Drk Char (w/OOL in pl) Translu-Op Shp Vit Chalky Pyr Mass Sh Red-Char-Gry-Blk Carb- Aqua (Tr Only) Fissil No Stn No Flor No Odor NS

ST. LOUIS UPPER B POR 5260' (- 2454)

30" CFS @ 5275' Ls Wht-Crm Fxln Poor-Fair Igran OOL Wht "Sandy" Por (w/Small-Med OOL in pl) in CaCO3 Matrix Cht Org-Red-Tan (w/OOL Includ) Inc Char (w/OOL in pl) Translu-Op Shp Vit Chalky Sh Red-Char-Gry-Blk Carb- Aqua (Tr Only) Fissil No Stn Faint Odor Tr Sli Flor (Dull Wht) NS

60" CFS @ 5275' Ls Wht-Crm Fxln Poor-Fair Igran OOL Wht "Sandy" Por (w/Small-Med OOL in pl) in CaCO3 Matrix Cht Org-Red-Tan (w/OOL ? Fos (Bry) Includ) Inc Char (w/OOL in pl) Translu-Op Shp Vit Chalky Sh Red-Char-Gry-Blk Carb- Aqua (Tr Only) Fissil No Stn Faint Odor Tr Sli Flor (Dull Wht) NS

ST. LOUIS LOWER B POR 5283' (-2477)

30" CFS @ 5296' Ls Wht Mxln Med Good OOL Por (w/OOL in pl) w/Med-Good InterOOL Por (w/Med-Good MSG/MSO in Wtr Under Heat) Soft Friable (w/Scat Drk Brn Stn Around OOL Edges) Free OOL (Med-Lg Ooids in Spl) Cht AA Chalk AA Sh AA Fissil Fair Odor No Flor (G & O Do Not Flor) Med-Good SO/SG

60" CFS @ 5296' Ls Wht Mxln Med Good OOL Por (w/OOL in pl) w/Med-Good InterOOL Por (w/Med-Good SG/SO (GSFG/GSFO in Wtr Under Heat) Soft Friable (w/Scat Drk Brn Stn Around OOL Edges) Free OOL (Med-Lg Ooids in Spl) Cht AA Chalk AA Sh AA Fissil Fair-Med Odor No Flor (G & O Do Not Flor) Good SO/SG

Ls Wht-Crm Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Org Transl-Op Shp Vit Tr Chalk Fos (Brach) Sh Gry-Char-Aqua Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Org Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua-Blk Carb Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Org Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Org Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua Fissil No Stn No Flor No Odor NS

Ls Wht-Crm Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Org Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Org Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua-Maroon Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Org Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua-Maroon Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu (Tr 1 Pxs Good Lg OOM Por (w/Lg OOL in pl) Good Dissolu good Develop Good Leaching w/ SG & SG " Sluff From Above) Cht Gry-Org Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua-Maroon Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu Cht Gry-Tan Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua-Maroon Fissil No Stn No Flor No Odor NS

CHANGE OUT EXTRACTOR FILTER @ 5170'

ADJUST AV= 143.30 @ 5182 LAG DEPTH @ 7.5 BBL/MIN.

TG, C1-C5 100

CHANGE OUT EXTRACTOR FILTER @ 5134'

Mudco Ck @ 5296' @ 6:45 AM 9/30/12
 Vis 60;
 WT= 9.1;
 PV= 20;
 YP= 21;
 WL= 8.4;
 Cake= 1;
 Chl= 2400;
 Cal = 20;
 Sol= 456%
 LCM= 3 1/2#;
 DMC=\$ 1192.60;
 CMC=\$ 20574.65

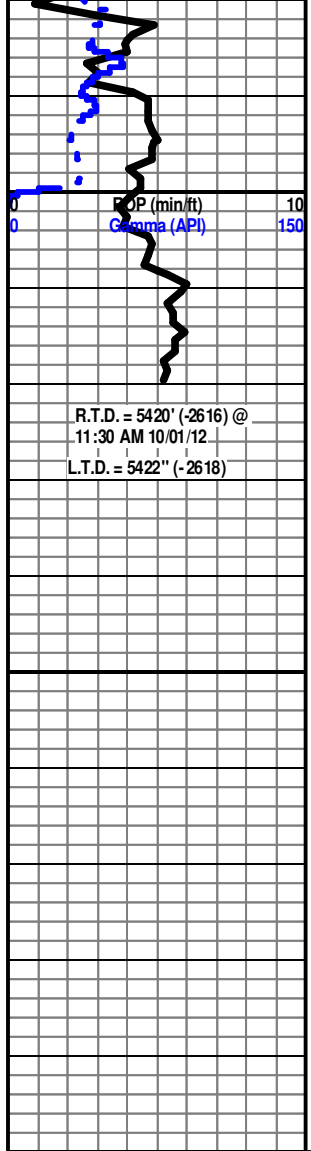
GAS KICK = 15 UNITS

GAS TEST @ EXTRACTOR = 40 UNITS.

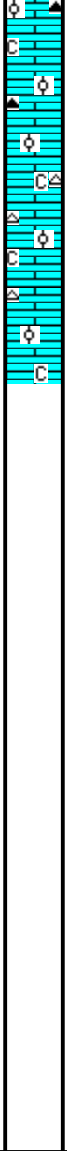
DST # 1 5268'-5296'
 Times: 5"-90"-30"-60".
 Blow: IF= Weak 1/4" Surface Blow; FF Weak 1/4" Blow/ Died @ 10".
 Flushed Tool @ 20". Had Surge & Blow Died.
 Recovery: 10' VSOCM (1% O & 99% M).
 Pressures: IH = 2495#; FH = 2493#; IF = 6-7#; FF = 7-12#; ISIP = 1231#; FSIP = 1136#; Temp = 124 Degrees F.

DST # 1 5268' - 5296'

PIPE STRAP = 1.5' SHORT TO BOARD. NO COR. MADE.



5400
5450
00



Ls Wht-Crm-Gry FxIn Micrite Barren Tr Gran AA w/Tr Small OOL Por-Poor InterOOL Por No Dissolu (Tr 1 Pxs Good Lg OOM Por (w/Lg OOL in pl) Good Dissolu good Develop Good Leaching w/ SG & SG)
" Sluff From Above) Cht Gry-Tan Transl-Op Shp Vit Tr Chalk Sh Aqua-Gry-Char-Maroon Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Tr Gran AA w/Tr Small OOL Por -Poor InterOOL Por No Dissolu Cht Gry-Tan Transl-Op Shp Vit Tr Chalk Sh Aqua-Gry-Char-Maroon Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Tr Gran AA w/Tr Small OOL Por -Poor InterOOL Por Poor Dissolu Cht Wht-Tan Transl-Op Shp Vit Tr Chalk Sh Aqua-Gry-Char-Blk Carb Fissil No Stn No Flor No Odor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Tr Gran AA w/Tr Small OOL Por -Poor InterOOL Por Poor Dissolu Cht Wht-Tan Transl-Op Shp Vit Tr Chalk Sh Aqua-Gry-Char-Blk Carb Fissil No Stn No Flor No Odor NS

**Electric Logs Run: By Pioneer (LogTech) Logging:
Dual Induction; Compensated Density-Neutron; Sonic;
Microresistivity & Cased Hole Gamma Ray-Nutron Logs.**

Geologist left Location @ 11: PM on 10-01-12

