



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

Well Name: # 1 IMEL 5 C
Location: 35' N. & 70' E. - SW - NE - SW of SEC. 5 - 26 S. - 22 W.
License Number: A.P.I. # 15-057-20,886-00-00
Spud Date: 04/03/2013
Surface Coordinates: SPOT: 1685' FSL & 1720' FWL

Region: FORD CO., KS.
Drilling Completed: 04/13/2013

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 2431' **K.B. Elevation (ft):** 2441'
Logged Interval (ft): 363' **To:** 5008' **Total Depth (ft):** 5010'
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: RITCHIE EXPLORATION, INC.
Address: P.O. BOX 783188
WICHITA, KANSAS 67278-3188

GEOLOGIST

Name: DAVID P. WILLIAMS, P.G.
Company: DW Energy, LLC (DWE)
Address: 312 North Broadview Street
Wichita, Kansas 67208

Casing & Deviation

Ran 7 jts new 24# 8-5/8" surface casing. Tally at 351', set at 363'. Cemented with 225 sacks Class A, 3% cc, 2% gel. Allied Cementing. Cement did circulate. Plug down at 5:45 P.M. on 04/03/2013.

Deviation Survey's Taken: @ 363' = 1 degree; @ 4160' = 1 degree; @ 4734' = 1 degree; @ 5010' = 1 degree;

DSTs

~~~DST #1 4132'-4160'. Miss-Run. At 1100' Hit Bridge on TIH & Could Not Get DST Tool To Bottom.

~~~DST #2 4132'-4760'. Times: 30"-45"-30"-45". Blow: IF= Weak Surface Blow/1/2"; FF= Weak Surface Blow Died/ 20" (Flushed Tool w/Surge Blowback But No Help).

Recovery:1' Mud (100%).

Pressures: IH=1977#; FH= 1967#; IF=4-6#; FF=5-7#; ISIP=14#; FSIP= 14#; Temp.=101 degrees F.

~~~DST #3 4654'-4734-. Times: 30"-45"-60". Blow: IF= Weak Surface Blow/3/4"; FF= Weak Surface Blow . Recovery:10' Mud (100%).

Pressures: IH = 2234#; FH= 2229#; IF= 9-10#; FF=11-11#; ISIP=39#; FSIP=27#; Temp.=108 degrees F.

~~~DST #4 4795'-4894'-. Times: 30"-45"-45"-60". Blow:

IF= Weak Surface Blow/ 3/4"; FF= Weak Surface Blow/ 1 1/2".

Recover:15' Mud With Tr. Oil (100%M).

Pressures: IH=2320#; FH=2308#; IF=8-11#; FF=10-12#; ISIP=149#; FSIP=88#; Temp. =108 degrees F.


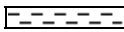

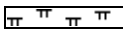
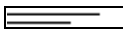
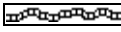




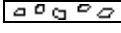







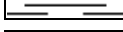
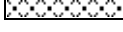
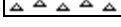


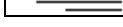
Comments

After review of all geologic samples as examined, structural correlation to offsetting prior drilled wells, combined with the fluid and pressures results from the drill stem test taken, 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 |  Hvymin |  Belm |  Pellet |
|  Arggrn |  Kaol |  Bioclst |  Pisolite |
|  Arg |  Marl |  Brach |  Plant |
|  Bent |  Minxl |  Bryozoa |  Strom |
|  Bit |  Nodule |  Cephal | |
|  Brecfrag |  Phos |  Coral | STRINGER |
|  Calc |  Pyr |  Crin |  Anhy |
|  Carb |  Salt |  Echin |  Arg |
|  Chtdk |  Sandy |  Fish |  Bent |
|  Chtlt |  Silt |  Foram |  Coal |
|  Dol |  Sil |  Fossil |  Dol |
|  Feldspar |  Sulphur |  Fuss |  Gyp |
|  Ferrpel |  Tuff |  Gastro |  Ls |
|  Ferr | FOSSIL |  Oolite |  Mrst |
|  Glau |  Algae |  Oomold |  Sltstn |
|  Gyp |  Amph |  Ostra |  Sltstrg |
| | |  Pelec |  Ssstrg |
| | | | TEXTURE |
| | | |  Boundst |
| | | |  Chalky |
| | | |  Cryxln |
| | | |  Earthy |
| | | |  Finexln |
| | | |  Grainst |
| | | |  Lithogr |
| | | |  Microxln |
| | | |  Mudst |
| | | |  Packst |
| | | |  Wackest |

OTHER SYMBOLS

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

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

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

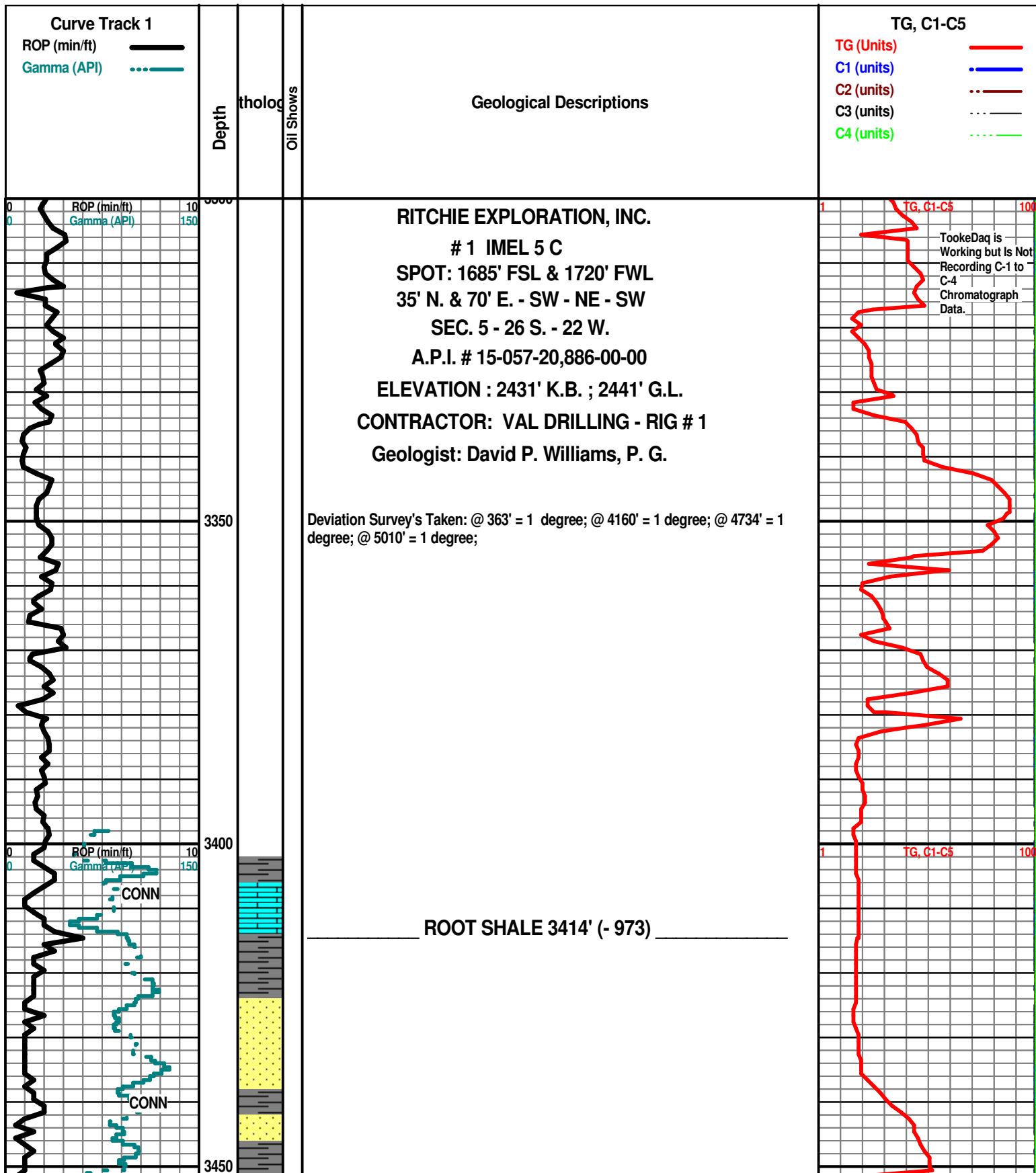
- [●] Even
- [◉] Spotted
- [○] Ques
- [◻] Dead

- [■] Dst
- [■] Dst_alt

- EVENT**
- [◻] Rft
 - [▶] Sidewall

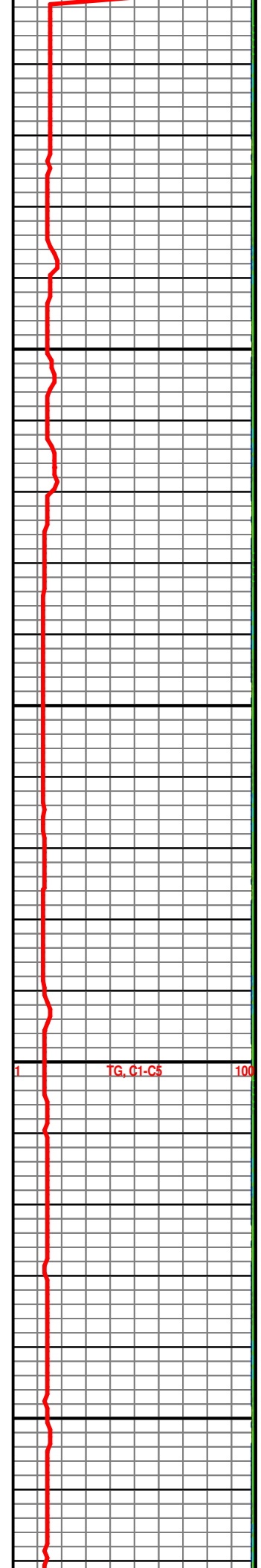
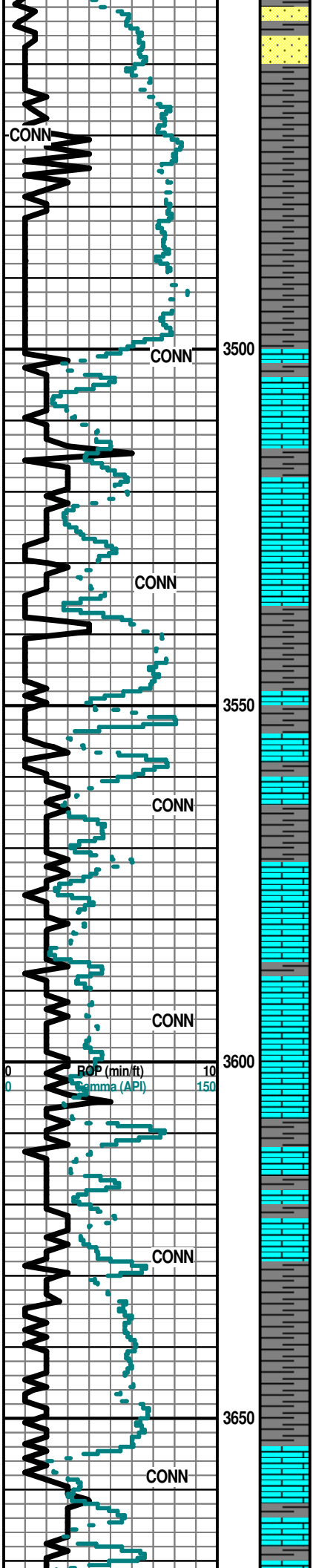
- OIL SHOW**
- [X] Gas show

- INTERVAL**
- [X] Gas show
 - [■] Core



START MUD DISPLACEMENT @ 3470'

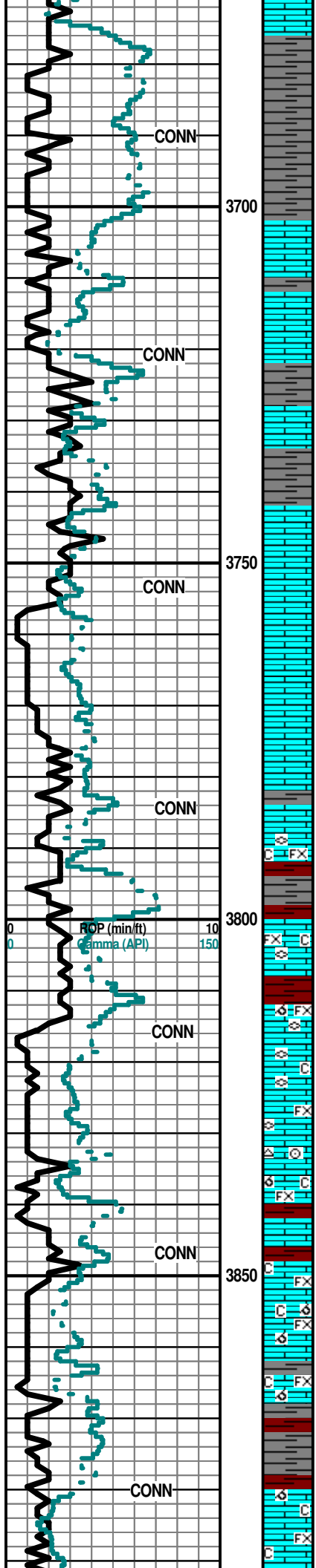
STOTLER 3501' (-1060)



TG, C1-C5

1

100



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

Begin 10' Sample Examination @ 3810'.

Ls Crm-Tan-Gry-Wht FxIn Fair Pin-Pt IxIn Por Grad Poor-Fair Granular IxIn Por Grad Dns Micrite Fos (Fuss) Chalk Wht Soft Sh Char -Gry -Maroon Soft No Odor No Stn No Flor NS

Ls Crm-Tan-Gry-Wht FxIn Fair Pin-Pt IxIn Por Grad Poor-Fair Granular IxIn Por Grad Dns Micrite Grad Poor OOM Por (1 Pcs) Poor Develop Poor Leaching Fos (Fuss) Chalk Wht Soft Sh Char -Gry -Maroon Soft No Odor No Stn No Flor NS

Ls Crm-Tan-Wht FxIn Fair Pin-Pt IxIn Por Grad Granular Fair IxIn Por Grad Dns Micrite Fos (Fuss) Chalk Wht Soft Sh Char-Gry-Maroon Soft No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Fair Pin-Pt IxIn Por Grad Granular Fair IxIn Por Grad Poor OOM Por Poor InterOOM Por Poor Develop Poor Leaching Fos (Fuss Abd) Chalk Wht Soft Sh Char-Gry-Maroon Soft No Odor No Stn No Flor NS

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

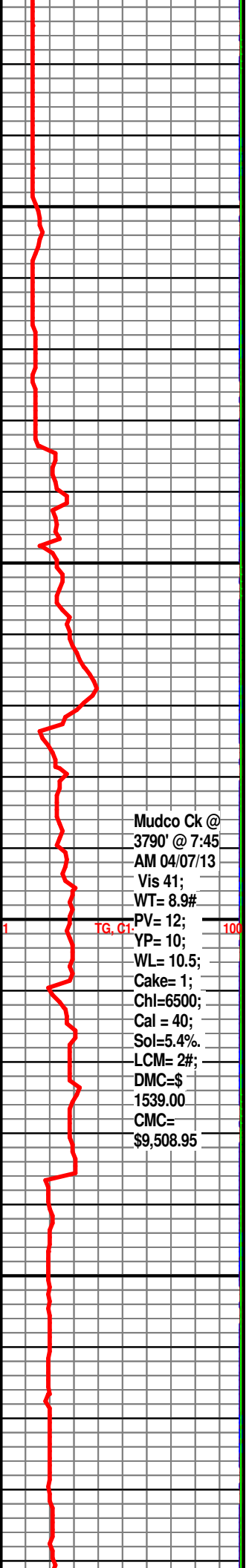
Ls Crm-Tan-Wht FxIn Fair Pin-Pt IxIn Por Grad Dns Micrite Chalk Wht Soft Sh Grn-Char-Gry-Maroon Soft No Odor No Stn No Flor NS

Ls Tan-Crm-Wht FxIn Fair Pin-Pt IxIn Por Grad Poor OOL/OOM Por (w/OOL in pl) Poor InterOOL/OOM Por Poor Develop Poor Leaching Cht Wht-Gry Translu-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Maroon Soft No Odor No Stn No Flor NS

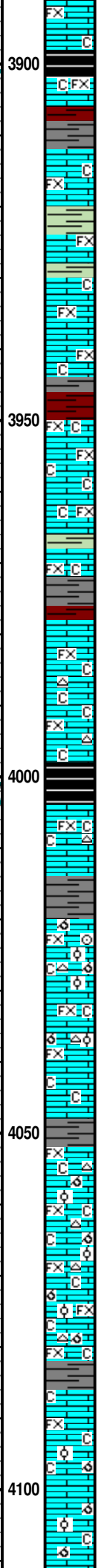
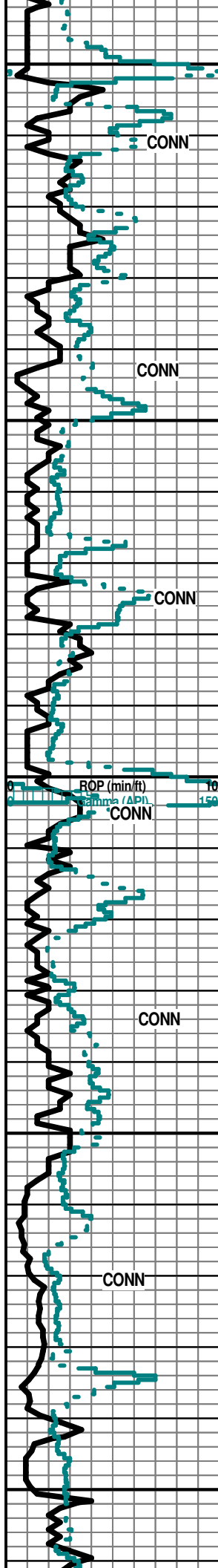
Ls Tan-Crm-Wht FxIn Fair Pin-Pt IxIn Por Grad Poor OOL/OOM Por (w/OOL in pl) Poor InterOOL/OOM Por Poor Develop Poor Leaching Cht Wht-Gry Op Shp Vit Chalk Wht Soft Sh Char-Gry-Maroon Soft No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Fair Pin-Pt IxIn Por Grad Poor OOM Por Poor Develop Poor Leaching Cht Wht-Gry Op Shp Vit Chalk Inc Sh Char-Gry-Maroon Soft No Odor No Stn No Flor NS

Sh Char-Gry-Maroon Fissil Ls Wht-Crm FxIn Fair Pin-Pt IxIn Por Grad Poor OOM Por Poor Develop Poor Leaching Grad Dns Micrite Cht Wht- Gry Op Shp Vit Chalk Inc No Odor No Stn No Flor NS



Mudco Ck @
 3790' @ 7:45
 AM 04/07/13
 Vis 41;
 WT= 8.9#
 PV= 12;
 YP= 10;
 WL= 10.5;
 Cake= 1;
 ChI=6500;
 Cal = 40;
 Sol=5.4%
 LCM= 2#;
 DMC=\$
 1539.00
 CMC=
 \$9,508.95



Ls Wht-Crm Fxln Fair Pin-Pt Ixln Por Grad Dns Micrite Chalk Wht Soft Sh
 InterOOL/OOM Por Poor Develop Poor Leaching Fos (Crin) Cht Wht-Gry Op Shp
 Vit Chalk Wht Soft Sh Blk Carb-Char-Gry-Maroon Soft No Odor No Stn No Flor NS

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

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

Ls Wht-Crm Fxln Mostly Dns Micrite Cht Wht-Gry Op Shp Vit Chalk Sh
 Char-Gry-Grn-Maroon-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Mostly Dns Micrite Cht Wht-Gry Op Shp Vit Chalk Sh
 Char-Gry-Grn-Maroon-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Mostly Dns Micrite Cht Wht-Gry Op Shp Vit Chalk V Abd Sh
 Char-Gry-Maroon-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Mostly Dns Micrite Cht Wht-Gry Op Shp Vit Chalk V Abd Sh
 Char-Gry-Maroon-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Mostly Dns Micrite Cht Wht-Gry Op Shp Vit Chalk V Abd Sh
 Char-Gry-Maroon-Red Soft-Fissil No Odor No Stn No Flor NS

Geologist on location @ (3990') 2:45 PM 4-7-13

Ls Wht-Crm Fxln Mostly Dns Micrite Cht Wht-Gry Op Shp Vit Chalk V Abd Sh
 Char-Gry-Maroon-Red Soft-Fissil No Odor No Stn No Flor NS

QUEEN HILL 3998' (- 1557)

Ls Wht-Crm Fxln Mostly Dns Micrite Cht Wht-Gry Op Shp Vit Chalk V Abd Sh
 Char-Gry-Maroon-Red Soft-Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry-Maroon Soft-Fissil Ls Wht-Crm Microxln Dns Micrite Fos
 (Crin) Cht Wht-Gry Op Shp Vit Chalk Wht Soft V Abd No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Poor OOL/OOM Por Poor Inter-OOL/OOM Por Poor Develop Poor
 Leaching Grad Dns Micrite Cht Wht-Gry Op Shp Vit Chalk Wht Soft V Abd Sh Blk
 Carb-Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Poor OOL/OOM Por Poor Inter-OOL/OOM Por Poor Develop
 Poor Leaching Grad Dns Micrite Cht Wht-Gry Op Shp Vit Chalk Wht Soft V Abd
 Sh Blk Carb-Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Mostly Dns Micrite Poor OOL/OOM AA Cht AA Chalk AA V Abd
 Sh AA No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Fair Pin-Pt Ixln Por Grad OOL/OOM Por Poor Inter - OOL/OOM
 Por Poor Develop Poor Leaching Grad Dns Micrite Cht Wht Op Shp Vit Chalk Wht
 Soft Sh Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

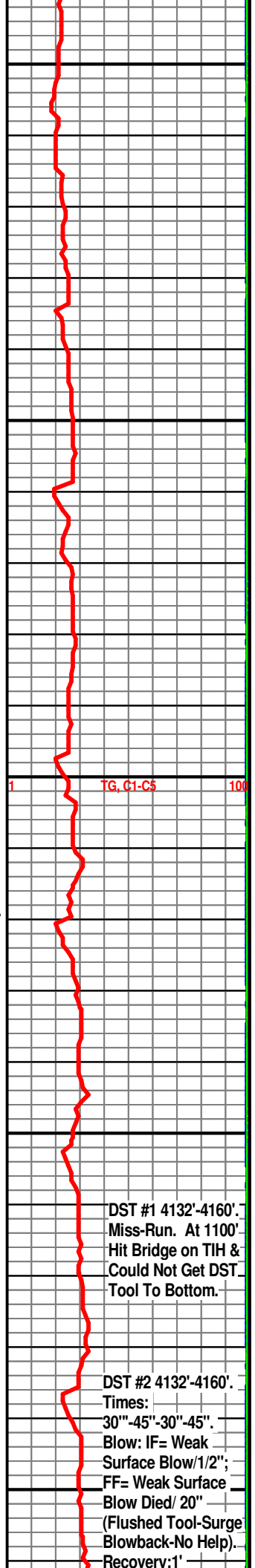
Ls Wht-Crm Fxln Poor OOL/OOM Por Poor Inter-OOL/OOM Por AA Poor Develop
 Poor Leaching Grad Dns Micrite Cht Wht Op Shp Vit Chalk Wht Soft V Abd Sh
 Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Fair Pin-Pt Ixln Por Grad OOL/OOM Por Poor Inter - OOL/OOM
 Por Poor Develop Poor Leaching Grad Dns Micrite Cht Wht Op Shp Vit Chalk V
 Abd Wht Soft Sh Char-Gry-Grn-Maroon Soft-Fissil No Odor No Stn No Flor NS

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

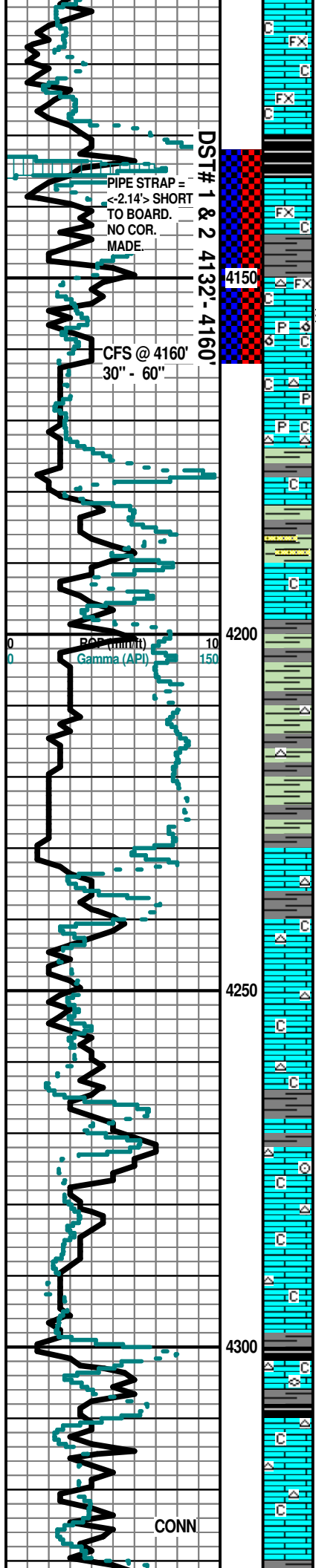
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 Por Poor Develop Poor Leaching Grad Dns Micrite Chalk V Abd Wht Soft Sh
 Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

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



DST #1 4132'-4160'.
 Miss-Run. At 1100'.
 Hit Bridge on TIH &
 Could Not Get DST
 Tool To Bottom.

DST #2 4132'-4160'.
 Times:
 30"-45"-30"-45".
 Blow: IF= Weak
 Surface Blow/1/2";
 FF= Weak Surface
 Blow Died/ 20"
 (Flushed Tool-Surge
 Blowback-No Help).
 Recoverv:1'



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

Ls Crm-Tan-Wht FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Chalk Wht Abd No Odor No Stn No Flor NS

HEEBNER 4130' (- 1689)

0" CFS @ 4160' Sh Blk Carb-Char-Gry-Maroon Fissil Ls Wht-Crm-Tan FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Fos (Brach) Chalk Abd No Odor No Stn No Flor NS

TORONTO 4150' (- 1709)

30" CFS @ 4160' Ls Wht-Crm-Tan FxIn Dns Micrite Grad Poor IxIn Pin-Pt Por Barren Cht Wht-Gry Op Shp Vit Chalk Abd Sh Blk Carb -Char- Gry -Grn-Maroon Fissil No Odor No Stn No Flor NS

60" CFS @ 4160' Ls Wht-Crm-Tan FxIn Dns Micrite Grad Poor Pin-Pt IxIn Por Grad Poor OOM Por (w/Pyr Includ) Poor Leaching Poor Develop (w/SSG in 1 Pc w/2 Droplets SG Under Heat in Wtr) Pyr Mass Chalky Abd Sh AA No Stn Scat Tr Flor (Lt Grn) No Odor ? SSG

Ls Crm-Tan FxIn Poor-Fair Pin-Pt IxIn Por Grad Dns Micrite Cht Wht Op Shp Vit Chalk Wht Soft Sh Blk Carb-Char-Grn/Gry (w/Pyr Includ)-Maroon Soft-Fissil No Odor No Stn No Flor NS

DOUGLAS 4178' (- 1737)

Ls Wht-Crm FxIn Poor-Fair Pin-Pt IxIn Por Grad Dns Micrite Cht Wht Op Shp Vit Fos (Brach) Chalk Wht Soft Sh Blk Carb-Char-Grn/Gry (w/Pyr Includ)-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Poor-Fair Pin-Pt IxIn Por Grad Dns Micrite Cht Wht Op Shp Vit Fos (Brach) Chalk Wht Soft Sh Blk Carb-Char-Grn/Gry (w/Pyr Includ)-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Poor-Fair Pin-Pt IxIn Por Grad Dns Micrite Qt Ss Crm Small FGrn Clusters (w/Pyr Includ & CaCO3 Cmt Matrix Well Sort Well Rd Friable Pyr Mass Chalk Wht Soft Sh -Char-Grn/Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Poor-Fair Pin-Pt IxIn Por Grad Dns Micrite Chalk Wht Soft Sh Grn/Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Sh Char-Gry/Grn-Maroon Soft-Fissil Ls Crm-Tan-Gry FxIn Dns Micrite No Odor No Stn No Flor NS

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

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

IATAN 4230' (- 1789)

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

LANSING 4240' (- 1799)

Ls Wht-Crm-Tan FxIn Fair-Poor Pin-Pt IxIn Por Grad Dns Micrite Cht Crm-Tan-Gry (Banded Wht) Op Shp Vit Chalk Wht Soft Sh Char- Grn/Gry -Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn Fair-Poor Pin-Pt IxIn Por Grad Dns Micrite Cht Crm-Tan-Gry (Banded Wht) Op Shp Vit Chalk Wht Soft Sh Char- Grn/Gry- Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn Fair-Poor Pin-Pt IxIn Por Grad Dns Micrite Cht Crm-Tan-Gry (Banded Wht) Op Shp Vit Chalk Wht Soft Sh Char-Grn/Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

LANSING "C" 4268' (- 1827)

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

Ls Wht-Crm FxIn Fair-Poor Pin-Pt IxIn Por Grad Dns Micrite Cht Wht -Amber Transl-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Fair-Poor Pin-Pt IxIn Por Grad Dns Micrite Cht Amber- Gry Translu-Op Shp Vit Chalk Wht Soft Sh Char- Gry- Aqua Tr-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn Fair-Poor Pin-Pt IxIn Por Grad Dns Micrite Cht Amber-Gry (w/Fos (Fuss) Includ) Translu-Op Shp Vit Chalk Wht Soft Sh Char-Grn/Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

LANSING "D" 4310' (- 1869)

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

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

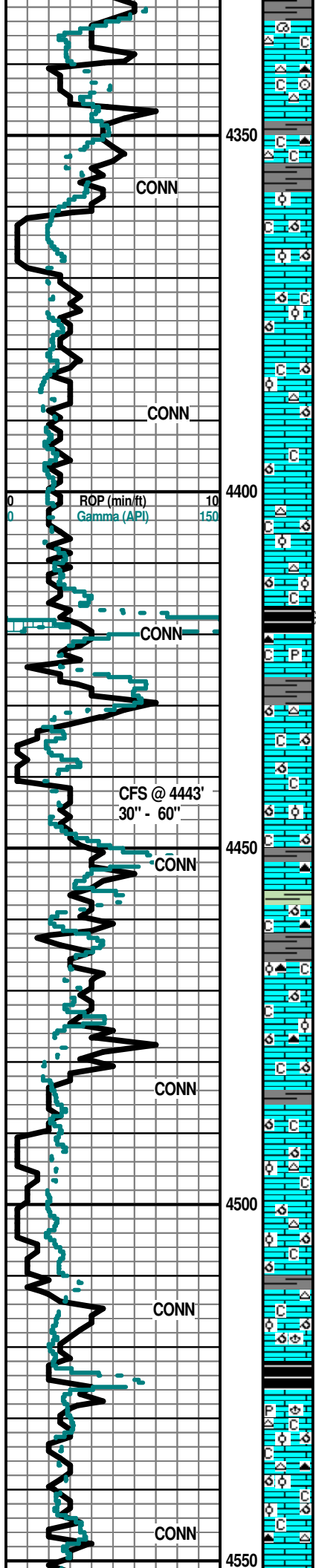
Mud(100%).
 Pressures:
 IH = 1977#;
 FH = 1967#;
 IF = 4-6#;
 FF = 5-7#;
 ISIP = 14#;
 FSIP = 14#;
 Temp.= 101 degrees F.

GAS KICK = 90 UNITS
 RECYCLE GAS KICK = 53 UNITS

Mudco Ck @ 4160' @
 8:30 AM
 04/08/13
 Vis 50;
 WT= 9.4#
 PV= 12;
 YP= 14;
 WL= 11.2;
 Cake= 1;
 Chl=7000;
 Cal = 40;
 Sol= 7.4%.
 LCM= 2#;
 DMC=\$ 937.60
 CMC=\$ 10,446.55

CONN

LANSING "E" 4334' (- 1909)



Ls Wht-Crm Fxln Fair-Poor Pin-Pt Ixln Por Grad Dns Micrite Cht Wht- Tan- Gry Translu-Op Shp Vit Fos (Gastro/Turritella) Chalk Wht Soft Sh Blk Carb- Char- Gry- Maroon Soft-Fissil No Odor No Stn No Flor NS
 Ls Wht-Crm Fxln Fair-Poor Pin-Pt Ixln Por Grad Dns Micrite (w/Frac Por) Cht Amber Gry Translu-Op Shp Vit Fos (Crim) Chalk Wht Soft Sh Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

LANSING "F" 4351' (- 1910)

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

LANSING "G" 4358' (- 1917)

Ls Wht-Crm Fxln Fair-Poor Pin-Pt Ixln Por Grad Poor-Fair OOL/OOM Por (w/OOL in PI) Poor Develop Poor Leaching Chalk Wht V Abd Soft Sh Char-Gry-Maroon Soft - Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Poor-Fair OOL/OOM Por (w/OOL in PI) Poor Develop Poor Leaching Grad Fair-Poor Pin-Pt Ixln Por Chalk Wht V Abd Soft Sh Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Fair OOL/OOM Por (w/OOL in PI) Poor Develop Poor Leaching Grad Fair-Poor Pin-Pt Ixln Por Dns Micrite Cht Amber Gry Translu-Op Shp Vit Chalk Wht V Abd Soft Sh Char-Gry-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Fair-Poor Pin-Pt Ixln Por Dns Micrite Grad Tr OOM Por AA Chalk Wht Soft Sh Char-Gry-Maroon Soft - Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Fair-Poor Pin-Pt Ixln Por Grad Poor-Fair OOL/OOM Por (w/OOL in PI) Poor Develop Poor Leaching Cht Wht Op Shp Vit Fos (Fuss) Chalk Wht Soft Sh Char-Gry-Maroon Soft - Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Fair-Poor Pin-Pt Ixln Por Grad Poor-Fair OOL/OOM Por (w/OOL in PI) Poor Develop Poor Leaching Cht Wht Op Shp Vit Chalk Wht V Abd Soft Sh Char-Gry-Maroon Soft - Fissil No Odor No Stn No Flor NS

MUNCIE CREEK 4416' (- 1975)

30" CFS @ 4443' Sh Blk Carb Fissil Ls Crm-Tan-Wht Fxln Abd Good OOM Por (Tr OOL in pl) Good Develop Good Vug Leaching Grad Dns Micrite (w/Pyr Includ) Barren Cht Wht-Drk Gry Translu-Op Shp Vit Chalky ? Min Flor No Odor No Stn NS

KANSAS CITY (DRUM) "H" 4431' (- 1990)

60: CFS @ 4443' Ls Crm-Tan-Wht Fxln Good OOM Por (Tr OOL in pl) Med-Good Develop Poor-Good Vug Leaching/Dissolu V Abd Grad Dns Micrite Chalky Barren Scat ? Min Flor (Lt Grn) No Odor No Stn NS

Ls Crm-Tan-Wht Fxln Good OOM Por (Tr OOL in pl) Med-Good Develop Poor-Good Vug Leaching/Dissolu V Abd Grad Dns Micrite Chalky Barren Scat ? Min Flor (Lt Grn) No Odor No Stn NS

Ls Crm-Tan-Wht Fxln Dns Micrite Barren Grad Tr/Good OOM Por AA Good Develop Good Vug Leaching Cht Gry-Amber Translu-Op Shp Vit Sh Gry-Grn-Char Fissil ? Min Flor No Odor No Stn NS

Ls Crm-Tan-Wht Fxln Dns Micrite Barren Grad Tr/Good OOM Por AA Good Develop Good Vug Leaching Cht Gry Op Shp Vit Sh Gry-Grn-Char Fissil ? Min Flor No Odor No Stn NS

KANSAS CITY (BLOCK) "I" 4466' (- 2025)

Ls Crm-Tan-Wht Fxln Dns Micrite Barren Grad Tr/Good OOM Por AA Good Develop Good Vug Leaching Cht Gry Op Shp Vit Sh Char-Gry-Grn Fissil ? Min Flor No Odor No Stn NS

Ls Crm-Tan-Wht Fxln Dns Micrite Barren Grad Tr/Good OOM Por AA Good Develop Good Vug Leaching Cht Gry Op Shp Vit Sh Char-Gry-Grn Fissil ? Min Flor No Odor No Stn NS

KANSAS CITY (DENNIS) "J" 4486' (- 2045)

Ls Tan-Crm-Wht Fxln Fair-Med OOM Por (Tr Med Ooids in pl w/ Tr Pyr Includ) Fair-Med Develop Fair-Med Leaching (Tr Good Vug Leaching) Barren Cht Wht Op Shp Vit Chalk Abd Sh Blk Carb-Gry-Grn Soft-Fissil ? Min Flor No Odor No Stn NS

Ls Tan-Crm-Wht Fxln Fair-Med OOM Por (Tr Med Ooids in pl) Fair-Med Develop Fair-Med Leaching (Tr Good Vug Leaching) Barren Cht Wht Op Shp Vit Chalk Abd Sh Blk Carb-Gry-Grn Soft-Fissil ? Min Flor No Odor No Stn NS

Ls Tan-Crm-Wht Fxln Fair-Med OOM Por (Tr Med Ooids in pl) Fair-Med Develop Fair-Med Leaching (Tr Good Vug Leaching) Barren Cht Wht Op Shp Vit Chalk Abd Sh Blk Carb-Gry-Grn Soft-Fissil ? Min Flor No Odor No Stn NS

Ls Tan-Crm-Wht Fxln Fair-Med OOM Por (Tr Med Ooids in pl) Fair-Med Develop Fair-Med Leaching (Tr Good Vug Leaching) Barren Cht Wht Op Shp Vit Chalk Abd Sh Blk Carb-Gry-Grn Soft-Fissil ? Min Flor No Odor No Stn NS

STARK SHALE 4523' (- 2082)

KANSAS CITY "SWOPE" (K) 4526' (- 2085)

Sh Blk Carb (w/Pyr Includ)-Gry Fissil (w/SSG) Ls Ls Crm-Tan-Wht Fxln Fair OOM Por AA Cht AA Fos (Brach) Chalk Abd ? Min Flor No Odor No Stn NS

Ls Wht-Crm Fxln Poor-Good OOM Por (Tr Small-Med-Lg Ooids in pl) Poor-Good Develop Poor-Good Vug Leaching Cht Wht-Gry Translu-Op Shp Vit Chalky Sh Char-Gry Fissil ? Min Flor No Odor No Stn NS

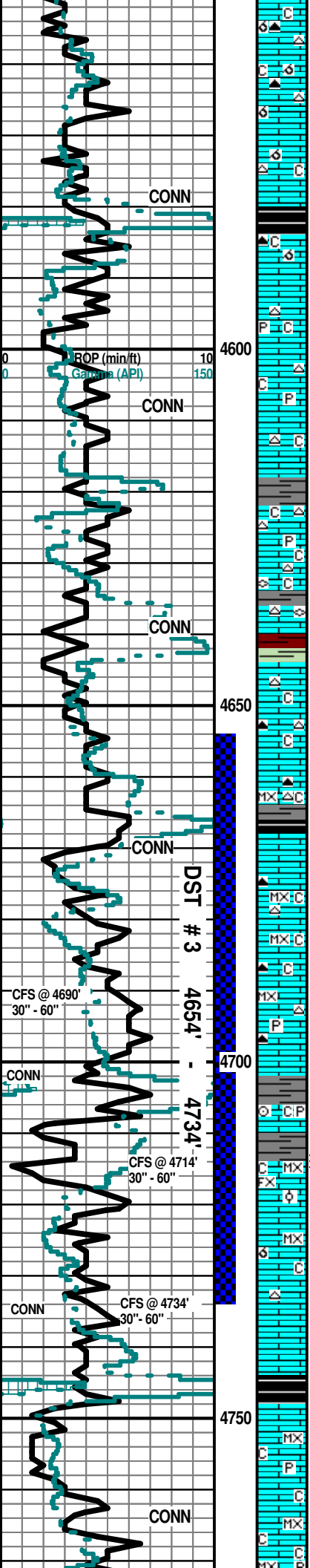
Ls Wht-Crm Fxln Poor-Good OOM Por (Tr Small-Med-Lg Ooids in pl) Poor-Good Develop Poor-Good Vug Leaching Grad Dns Micrite (w/Pyr Includ) Barren Cht Wht-Gry Translu-Op Shp Vit Chalky Sh Char-Grn/Gry Fissil ? Min Flor No Odor No Stn NS

Mudco Ck @
 4421' @ 2:45
 PM 04/09/13
 Vis 58; WT=
 9.2#
 PV= 22; YP=
 18; WL= 6.4;
 Cake= 1;
 Chl=7000; Cal

SHALE GAS KICK
 = 29 UNITS.

RE-ZERO TOOKE
 DAQ @ 4426'.
 BKGD GAS = 12
 UNITS.

ADJUST MAIN
 SAMPLE FLOW
 BACK UP FROM
 3-4 SCFH @ 4549'.



Ls Wht-Crm Fxln Poor OOM Por Dec Poor Develop Poor Vug Leaching Tr Grad Dns Micrite Barren Cht Wht-Gry Translu-Op Shp Vit Chalky Sh Char-Gry Fissil ? Min Flor No Odor No Stn NS

Ls Wht-Crm Fxln Poor OOM Por Dec Poor Develop Poor Vug Leaching Tr Grad Dns Micrite Barren Cht Wht-Gry Translu-Op Shp Vit Inc Chalky Sh Char-Gry-Maroon Fissil ? Min Flor No Odor No Stn NS

HUSHPUCKNEY SHALE 4580' (- 2139)

KANSAS CITY "HERTHA" (L) 4583' (- 2142)

Ls Wht-Crm Fxln Dns Micrite Barren Grad Poor OOM Por Dec Tr Poor Develop Poor Vug Leaching Cht Wht-Gry Translu-Op Shp Vit Inc Chalky Sh Char-Gry-Maroon Fissil ? Min Flor No Odor No Stn NS

Ls Wht-Crm Fxln Dns Micrite Barren Cht Amber Translu Shp Vit Pyr Mass Sh Blk Carb-Gry-Char-Aqua Tr Fissil ? Min Flor No Odor No Stn NS

Ls Wht-Crm Fxln Dns Micrite Barren Cht Wht-Amber Translu Shp Vit Pyr Mass Sh Blk Carb-Gry-Char-Aqua Tr Fissil ? Min Flor No Odor No Stn NS

Ls Wht-Crm Fxln Dns Micrite Barren Cht Wht-Amber Translu Shp Vit Pyr Mass Sh Blk Carb-Gry-Char-Aqua Tr Fissil ? Min Flor No Odor No Stn NS

BASE KANSAS CITY SHALE 4618' (- 2177)

Sh Char-Gry Fissil Ls Wht-Crm Fxln Dns Micrite Barren Cht Wht Op Shp Vit Chalky ? Min Flor No Odor No Stn NS

Ls Wht-Crm-Tan Fxln Dns Micrite Barren Cht Wht-Amber Translu Shp Vit Pyr Mass Chalky Sh Carb-Gry-Char-Aqua Tr Fissil ? Min Flor No Odor No Stn NS

Ls Wht-Crm-Tan Fxln Dns Micrite Barren Cht Wht Translu Shp Vit Chalky Sh Char-Maroon Fissil ? Min Flor No Odor No Stn NS

MARMATON 4643' (- 2202)

Ls Wht-Crm-Tan Fxln Dns Micrite Barren Cht Wht-Amber Translu-Op Shp Vit Chalky Fos (Fuss) Sh Char-Gry Fissil ? Min Flor No Odor No Stn NS

Ls Wht-Crm-Tan-Gry Fxln Dns Micrite Barren Cht Wht Translu Shp Vit Chalky Inc Abd Sh Char-Maroon Fissil ? Min Flor No Odor No Stn NS

Ls Tan-Crm-Gry Fxln Dns Micrite Barren Cht Wht-Lt-Gry-Drk Gry Translu-Op Shp Vit Chalky Sh Char-Maroon Fissil ? Min Flor No Odor No Stn NS

Ls Tan-Crm-Gry Microxln Dns Micrite Barren Cht Wht-Lt-Gry-Drk Gry Translu Op Shp Vit Chalky Sh Char Fissil ? Min Flor No Odor No Stn NS

ALTAMONT "A" 4678' (- 2237)

Ls Tan-Crm-Gry Fxln Dns Micrite Barren Cht Wht-Lt-Gry-Drk Gry Translu Op Shp Vit Chalky Sh Char Fissil ? Min Flor No Odor No Stn NS

30" CFS @ 4690' Ls Tan-Crm-Gry Microxln Dns Micrite Barren Grad Fxln Fair Ixln Vug Leached Por Barren Chalk Pyr Mass Sh Char- Gry- Grn -Red Soft-Fissil ? Min Flor No Stn No Odor NS

60" CFS @ 4690' Ls Tan-Crm-Gry Microxln Dns Micrite Barren Grad Fxln Fair Ixln Por Barren Cht Drk-Gry Translu-Op Shp Vit Chalk Sh Char- Gry- Grn -Red Soft-Fissil ? Min Flor No Stn No Odor NS

Ls Gry-Tan-Crm Microxln Dns Micrite Barren Grad Fxln Poor Ixln Por Barren Cht Lt Gry-Drk-Gry Translu-Op Shp Vit Pyr Mass Chalk Sh Char- Gry Soft-Fissil ? Min Flor No Stn No Odor NS

30" CFS @ 4714' Ls Tan-Crm Microxln Dns Micrite Barren Grad Fxln Fair Ixln Por Barren Chalk V Abd Fos (Crin) Sh Char-Gry (w/Pyr Inclus) Maroon Soft-Fissil ? Min Flor (Lt Grn) No Stn Faint Odor NS

ALTAMONT "B" 4708' (- 2267)

60" CFS @ 4714' Ls Wht-Tan-Crm Microxln Dns Micrite Barren Grad Fxln Fair Ixln Por Barren Grad Fair OOM Por (1 Pc) Poor-Fair Leaching w/Vug Por Barren Chalk Abd Fos (Crin) Sh Blk Carb-Char-Gry AA ? Min Flor (Lt Grn) No Stn No Odor NS

ALTAMONT "C" 4718' (- 2277)

Ls Tan-Crm Microxln-Fxln Fair Pin-Pt "Salt & Pepper" Ixln Por (w/SG & SFO in Wtr Under Heat) Pt Friable (w/Gillsonitic Blk Stn (12 Pcs) Tr Fair Ixln Vug Por Grad Poor OOL Por (w/Small OOids in pl) Poor-Fair Dissolu Poor Leaching Sh AA No Odor Sli Tr Scat Flor (Lt Grn) (Gas & Oil Do Not Flor) Scatt Lt Brn Stn SG & SFO

30" CFS @ 4734' Ls Wht-Tan-Crm Microxln Dns Micrite Barren Grad Fair OOM Por (4 Pcs) Poor-Fair Leaching Por Poor Develop Barren Cht Wht-Amber Translu-Op Shp Vit Chalk Sh Char-Gry AA ? Min Flor (Lt Grn) No Stn ? Faint Odor NS

60" CFS @ 4734' Ls AA Microxln Dns Micrite Grad Fair OOM Por AA Poor Leaching Poor Develop Barren Cht Wht-Amber AA Chalk AA Sh Char-Gry AA ? Min Flor (Lt Grn) No Stn No Odor NS

PAWNEE 4748' (- 2307)

Ls Wht-Crm-Tan Microxln Dns Micrite Grad Fair OOM Por Poor Leaching Poor Develop Barren Chalk Sh Blk Carb-Char-Gry-Maroon Fissil ? Min Flor (Lt Grn) No Stn No Odor NS

Ls Wht-Crm-Tan Microxln Dns Micrite Grad Fair OOM Por (w/Med OOids in pl) Poor - Fair Leaching Poor-Fair Develop Barren Chalk Abd Pyr Mass Sh Blk Carb - Char - Gry-Maroon Fissil ? Min Flor (Lt Grn) No Stn No Odor NS

Ls Wht-Crm-Tan Microxln Dns Micrite Barren Chalk V Abd Sh Blk Carb- Char- Gry (w/Pyr Inclus) Fissil ? Min Flor (Lt Grn) No Stn No Odor NS

SHALE GAS
KICK= 36
UNITS.

BKGD GAS = 30
UNITS.

SHALE GAS
KICK= 36 UNITS.

Mudco Ck @
4690' @ 6:50
AM 04/10/13
Vis 53; WT=
9.35#
PV= 15; YP=
15; WL= 9.2;
Cake= 1; Chl=
5300; Cal = 20;
Sol= 6.8%
LCM= 4#;
DMC=\$
1611.30
CMC=\$
14,780.30

RE-ZERO
TOOKE DAQ 2
4650'. BKGD
GAS SET @ 12
UNITS.

ADJUST MAIN SAMPLE
FLOW BACK UP FROM 5-4
SCFH @ 4650'.

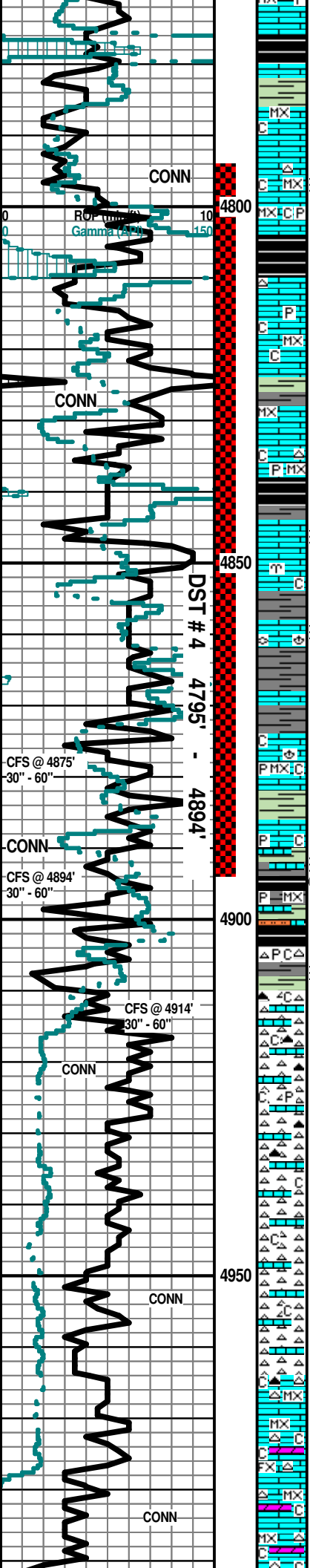
EARTHTECH ADJUST
ANTIBOUNCE @ 60. Ck C1-C4
SETTINGS TookeDaq is
Working but Is Not Recording
Chromatograph Data.

Mudco Ck @
4734' @ 6:50
AM 04/11/13
Vis 76; WT=
9.35#
PV= 23; YP=
22; WL= 8.8;
Cake= 1; Chl=
6800; Cal = 20;
Sol= 6.7%
LCM= 3.5#;
DMC=\$
412.30
CMC=\$
15,192.60

DST #3 4654'-4734'.
Times: 30"-45"-45"-60".
Blow: IF= Weak Surface
Blow/3/4";
FF= Weak Surface Blow

Recovery: 10' Mud
(100%).
Pressures:
IH = 2234#;
FH = 2229#;
IF = 9-10#;
FF = 11-11#;
ISIP = 39#;
FSIP = 27#;
Temp.= 108 degrees F.

RE-ZERO
TOOKE DAQ @ 4765'.
BKGD GAS SET = 12
UNITS. ADJ.
ANNULAR VELOCITY



Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Barren Chalk V Abd Sh Blk Carb (w/SG)- Char -Gry -Aqua Soft-Fissil ? Min Flor (Lt Grn) No Stn No Odor NS

FORT SCOTT 4780' (- 2339)

Ls Crm-Tan-Gry Microxln Dns Micrite Barren Cht Lt Gry Op Shp Vit Chalk V Abd Sh Blk Carb (w/SG)-Char-Gry-Aqua Soft-Fissil ? Min Flor (Lt Grn) No Stn No Odor NS

Ls Wht-Crm Microxln Dns Micrite (w/Pyr Includ) Barren Grad Poor-Fair Pin-Pt Ixln Por (w/SG (Gas Does Not Flor & Sli Sat Brn Stn) Cht Lt Gry Op Shp Vit Chalk Abd Sh Blk Carb-Char-Fissil Scat ? Min Flor (Lt Grn) Dec Tr Stn No Odor SSG

CHEROKEE SHALE 4804' (- 2363)

Sh Blk Carb-Char (w/Pyr Includ) (w/SG) Fissil V Abd Ls Wht-Crm Microxln Dns Micrite Scat ? Min Flor (Lt Grn) Dec No Stn No Odor NS

Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Barren Chalk Sh Blk Carb -Char -Gry Soft-Fissil Scat ? Min Flor (Lt Grn) Dec No Stn No Odor NS

Ls Crm-Tan-Brn Microxln Dns Micrite Barren Cht Lt Gry Op Shp Vit Chalk Pyr Mass Sh Blk Carb -Char -Gry Soft-Fissil Scat ? Min Flor (Lt Grn) Tr No Stn No Odor NS

LOWER CHEROKEE SHALE 4840' (- 2399)

Sh Blk Carb-Char-Fissil Ls Crm-Tan Microxln Dns Micrite (w/Pyr Includ) Grad Poor Pin-Pt Ixln Por (w/SG (Gas Does Not Flor & Sli Sat Brn Stn) Cht Lt Gry Op Shp Vit Fos (Bry) Chalk Abd Scat Flor (Lt Grn) Dec Tr Stn Faint Inc Odor SSG

30" CFS @ 4875' Ls Crm-Tan Microxln Dns Micrite (w/Pyr Includ) Grad Poor-Fair Pin-Pt Ixln Fair Vug Por (10 Pcs w/SG & SFO (Lt Brn in Heat Under Wtr (Gas & Oil Do Flor & Sli Sat Brn Stn) Fos (Fuss, Brach) Chalk Sh AA Dec Scat Flor (Lt Grn) Dec Tr Stn Faint Inc Odor Fair-SSG & SFO

60" CFS @ 4875' Ls Crm-Tan Microxln Dns Micrite (w/Pyr Includ) Grad Poor-Fair Pin-Pt "Salt & Pepper" Ixln Med Vug Por (15 Pcs w/SG & Inc SFO in Tray (FO is Lt Brn in Heat Under Wtr (Gas & Oil Do Flor w/Sli Sat Brn Stn) Frac Por Fos (Brach) Chalk Scat Inc Flor (Lt Grn) Faint Odor Fair-Med SG & SFO

HUCK 4873' (- 2432)

Ls Wht-Crm-Tan Microxln Dns Micrite (w/Pyr Includ) Cht Wht Op Shp Vit Chalk Sh Char -Gry Fissil Scat ? Min Flor (Lt Grn) Tr No Stn No Odor NS

30" CFS @ 4894' Ls Wht-Crm-Tan Microxln Dns Micrite (w/Pyr Includ) Chalk Sh Char -Grn/Gry Fissil Scat ? Min Flor (Lt Grn) Tr No Stn No Odor NS

ATOKA 4888' (- 2447)

60" CFS @ 4894' Ls Wht-Crm Microxln-Fxln Fair Ixln Pin-Pt Por (w/Pyr Includ) (w/SG & SO Under Heat in Wtr & Tr Gillsonitic Drk Blk Stn) SFO & SG w/Bkn (Oil & Gas Does Not Flor) Chalky Sh Aqua-Grn/Gry-Char-Fissil No Odor ? Sli Flor Sli Stn SG & SO;

30" CFS @ 4914' Ls Crm Microxln Dns Micrite (Tr w/Pyr Includ) Cht Varicolored Wht-Yell-Gry-Lt Org Op Shp Vit Abd Chalk Siltstone Gry VF Grn (w/Pyr Includ) Sh Varicolored Blk Carb-Char-Drab Grn-Aqua-Olive-Maroon Soft-Fissil No Odor No Stn No Flor NS

MISSISSIPPIAN 4910' (- 2469)

60" CFS @ 4914' Cht Varicolored Wht-Yell-Lt Org-Gry Op Shp Vit Fresh Abd Ls Wht - Crm Microxln Dns Micrite Chalk Sh Varicolored Char-Drab Grn-Aqua Fissil No Odor No Stn ? Tr Scat Min Flor Flor ? NS

Cht Varicolored Wht-Bone Wht-Yell-Lt Org-Gry Op Shp Vit Fresh Abd Ls Wht-Crm Microxln Dns Micrite (w/Pyr Includ) Chalk Sh Varicolored Char-Drab Grn-Aqua-Blk Carb Fissil No Odor No Stn ? Tr Scat Min Flor Flor NS

Cht Varicolored Wht-Bone Wht-Yell-Lt Org-Gry Op Shp Vit Fresh Abd Ls Wht-Crm Microxln Dns Micrite (w/Pyr Includ) Chalk Sh Varicolored Char-Drab Grn-Aqua-Blk Carb Fissil No Odor No Stn ? Tr Scat Min Flor Flor NS

Cht Wht-Bone Wht (w/Pyr Includ)-Yell-Lt Org-Gry Translu-Op Shp Vit Fresh Abd Ls Wht-Crm Microxln Dns Micritesoft Chalk Sh Varicolored Char-Drab Grn-Aqua-Blk Carb- Olive-Maroon Fissil No Odor No Stn ? Tr Scat Min Flor Flor NS

Cht Wht-Bone Wht (w/Pyr Includ)-Peach Translu-Op Shp Vit Fresh Abd Ls Wht-Crm Microxln Dns Micritesoft Chalk Sh Varicolored Char-Drab Grn-Aqua-Blk Carb- Olive-Maroon Fissil No Odor No Stn ? Tr Scat Min Flor Flor NS

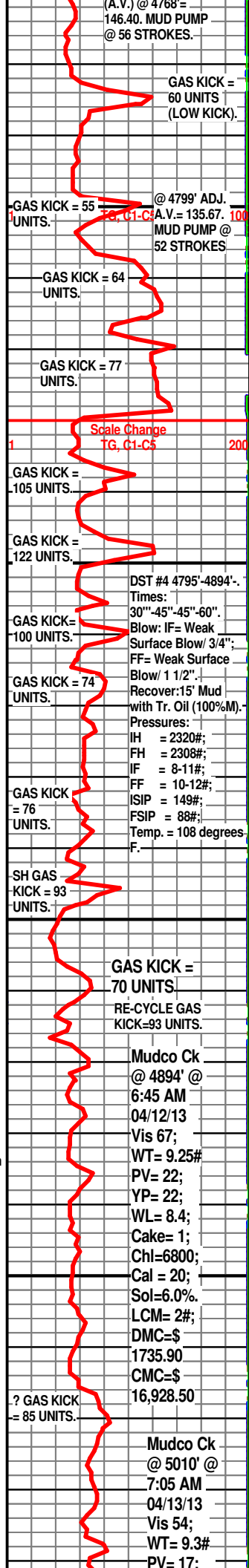
Cht Wht-Bone Wht (w/Pyr Includ)-Peach Translu-Op Shp Vit Fresh Abd Ls Wht-Crm Microxln Dns Micritesoft Chalk Sh Varicolored Char-Drab Grn-Aqua-Blk Carb- Olive-Maroon Fissil No Odor No Stn ? Tr Scat Min Flor Flor NS

Ls Wht -Crm Microxln Dns Micritic (45% of Spl) Cht Bone Wht -Peach-Org Op Shp Vit Fresh (25% of Spl) Chalk (15% of Spl) Sh Blk Carb-Char-Gry-Aqua (15% of Spl) No Odor Tr ? Min flor (Dolo) No Stn NS

Ls/Dolo Bone Wht Microxln-Fxln Dns Barren Cht Wht Op Shp Vit Chalk Abd Sh Char-Blk Carb (w/SG) -Gry Soft-Fissil No Odor No Flor (No Stn NS

Ls/Dolo Bone Wht Microxln-Fxln Dns Barren Cht Wht Op Shp Vit Chalk Abd Sh Char-Gry Soft-Fissil No Odor No Flor (No Stn NS

Ls/Dolo Bone Wht Microxln-Fxln Dns Barren Cht Wht Op Shp Vit Chalk Abd Sh Char-Gry Soft-Fissil



(A.V.) @ 4768' = 146.40. MUD PUMP @ 56 STROKES.

GAS KICK = 60 UNITS (LOW KICK)

GAS KICK = 55 UNITS @ 4799' ADJ. For C1-C5 A.V. = 135.67. 100 MUD PUMP @ 52 STROKES

GAS KICK = 64 UNITS

GAS KICK = 77 UNITS

Scale Change TG, C1-C5

GAS KICK = 105 UNITS

GAS KICK = 122 UNITS

DST #4 4795'-4894'- Times: 30"-45"-45"-60". Blow: IF= Weak Surface Blow/ 3/4"; FF= Weak Surface Blow/ 1 1/2". Recover:15' Mud with Tr. Oil (100%M).

GAS KICK = 100 UNITS

GAS KICK = 74 UNITS

GAS KICK = 76 UNITS

SH GAS KICK = 93 UNITS

GAS KICK = 70 UNITS

RE-CYCLE GAS KICK=93 UNITS

Mudco Ck @ 4894' @ 6:45 AM

04/12/13 Vis 67;

WT= 9.25# PV= 22; YP= 22;

WL= 8.4; Cake= 1;

Chl=6800; Cal = 20;

Sol=6.0%. LCM= 2#;

DMC=\$ 1735.90 CMC=\$

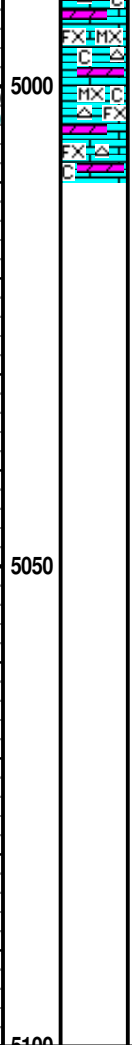
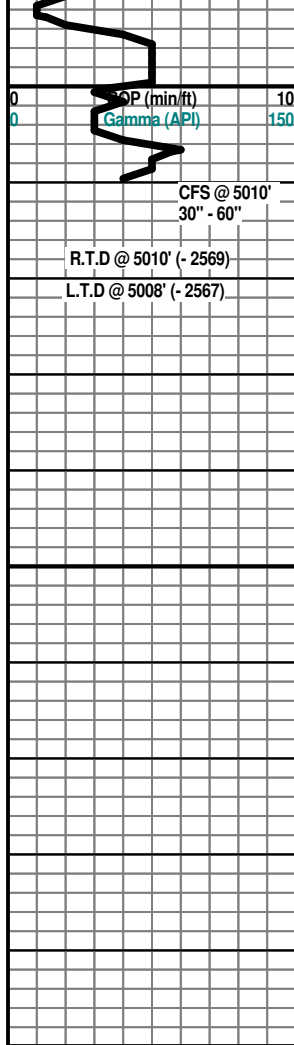
16,928.50

? GAS KICK = 85 UNITS

Mudco Ck @ 5010' @ 7:05 AM

04/13/13 Vis 54;

WT= 9.3# PV= 17:



No Odor No Flor (No Stn NS)

30" CFS @ 5010' Ls/Dolo Bone Wht MicroIn-FxIn Dns Barren Cht Wht Op Shp Vit Chalk Abd Sh
Char-Gry Soft-Fissil No Odor No Flor (No Stn NS)

60" CFS @ 5010' Ls/Dolo Bone Wht MicroIn-FxIn Dns Barren Cht Wht Op Shp Vit Chalk Abd Sh
Char-Gry Soft-Fissil No Odor No Flor (No Stn NS)

Electric Logs Run: By Nabors Logging:
Dual Induction and Compensated Density-Neutron Logs.

Geologist Left Location at 7:30 PM on 4/13/2013.

