DWE

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

Well Name: # 1 Scott 25C
Location: SEC. 25- 29 S. - 24 W.
License Number: A.P. I. 15-057-20,793-00-00 **Region:** FORD CO., KANSAS
Spud Date: 4/19/12 **Drilling Completed:** 5/6/12
Surface Coordinates: SPOT: 1260' FSL & 1600' FWL
60' S. & 50 W. - W/2 - E/2 - SW
Bottom Hole Coordinates:

Ground Elevation (ft): 2590' **K.B. Elevation (ft):** 2601'
Logged Interval (ft): NA **To:** NA **Total Depth (ft):** 6013'
Formation: MISSISSIPPIAN "OSAGE"
Type of Drilling Fluid: Chemical Mud

Printed by WellSight Log Viewer 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
Address: 312 North Broadview Street
Wichita, Kansas 67208

CASING & DEVIATION SURVEY:

Surface Casing 8 5/8" 24# set at 648' (15 Jts). Cemented w/ 225 sx Lite and 150 Sx Common Tailed In. Allied Cementing Did Service & Cement Did Circulate to Surface. Ticket # 037964.

Deviation Survey's Taken: @ 655' = 1/2 degree; @ 1190' = 1/2 degree; @ 1700' = 1 1/4 degree; @ 2759' = 1/2 degree; @ 3260' = 1/2 degree; @ 3758' = 1 degree: @ 4256' = 3/4 degree; @ 5200' = 1 degree; @ 5581' = 1 degree.

DSTs

DST # 1 5110'-5200'. Times: 30"-45"-30"-45" Blow: IF= Weak 1 1/2" Surface Blow; FF = Weak Surface Blow. Recovery: 60' Mud (with Gas Odor). Pressures: IH= 2495#; FH= 2534#; IF= 22-74#; FF= 40-85#; ISIP= 1446#; FSIP=1362#; Temp= 112 Deg. F.

DST # 2 5296'-5327'. Times: 30"-45"-30"-45" Blow: IF= Weak Surface Blow; FF = Weak Surface Blow. Recovery: 40' Mud. Pressures: IH= 2662#; FH= 2526#; IF= 26-28#; FF= 29-30#; ISIP= 53#; FSIP=39#; Temp= 114 Deg. F.

DST # 3 5323'-5388'. Times: 30"-45"-30"-45" Blow: IF = Weak Surface Blow/1". FF = Weak Surface Blow/2". Recovery: 90' Mud (5% Gas;1% Oil.90% Mud). Pressures: IH = 2719#; FH = 2505#; IF = 34-48#; FF = 46-51#; ISIP = 90#; FSIP = 74#; Temp = 110 Deg. F.

DST # 4 5470'-5581'. Times: 30"-45"-30"-45" Blow: IF = Fair Blow/6". FF = Fair Blow/7.5". Recovery: 430' TF: 70' Mud (100% M); 360' MW (75% SW; 25% M). Pressures: IH = 2783#;
FH = 2587#; IF=38-109#; F=127-197#; ISIP=1608#; FSIP=1562#;
Temp= 120 Degrees F. Chl=200000. Rw=.04@74 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 specifically, due to lost circulation as encountered during drilling and that could not be regained, 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

David P. Williams, P.G

DAVID P. WILLIAMS
LICENSED
5-7-12
88
KANSAS
GEOLOGIST

ROCK TYPES

- ▨ Anhy
- ≈ Bent
- ◇ Brec
- ■ Carb sh
- △ Cht
- ┄ Clyst
- ■ Coal
- 🟨 Congl
- 🟥 Dol
- 🟩 Grn sh
- ▬ Gry shale
- 🟥 Gyp
- 🟥 Igne
- 🟦 Lmst
- ▨ Meta
- ┬ Mrlst
- 🟫 Red shale
- 🟩 Salt
- ☐ Shale
- ☐ Shcol
- ☐ Shgy
- 🟥 Slst
- 🟨 Ss
- ☐ Till

ACCESSORIES

MINERAL
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Fuss
- Gastro
- Oolite
- Oomold
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

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

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

OTHER SYMBOLS

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

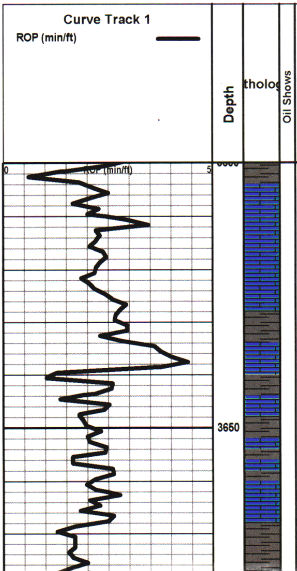
SORTING
- Well
- Moderate
- Poor

ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW
- Gas show
- Even
- Spotted
- Ques
- Dead

INTERVAL
- Core
- Dst
- Dst_alt

EVENT
- Rft
- Sidewall



Geological Descriptions

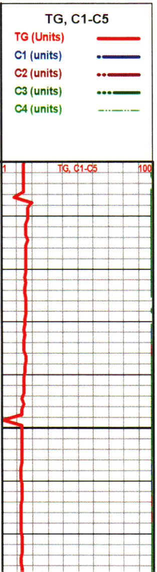
RITCHIE EXPLORATION, INC.
# 1 SCOTT 25C
SPOT: 1260' FSL & 1600' FWL
60' S. & 50 W. - W/2 - E/2 - SW
SEC. 25 - 29 S. - 24 W.
FORD CO., KANSAS
ELEVATION : 2601' K.B. ; 2590' G.L.
CONTRACTOR: DUKE DRILLING-RIG # 10

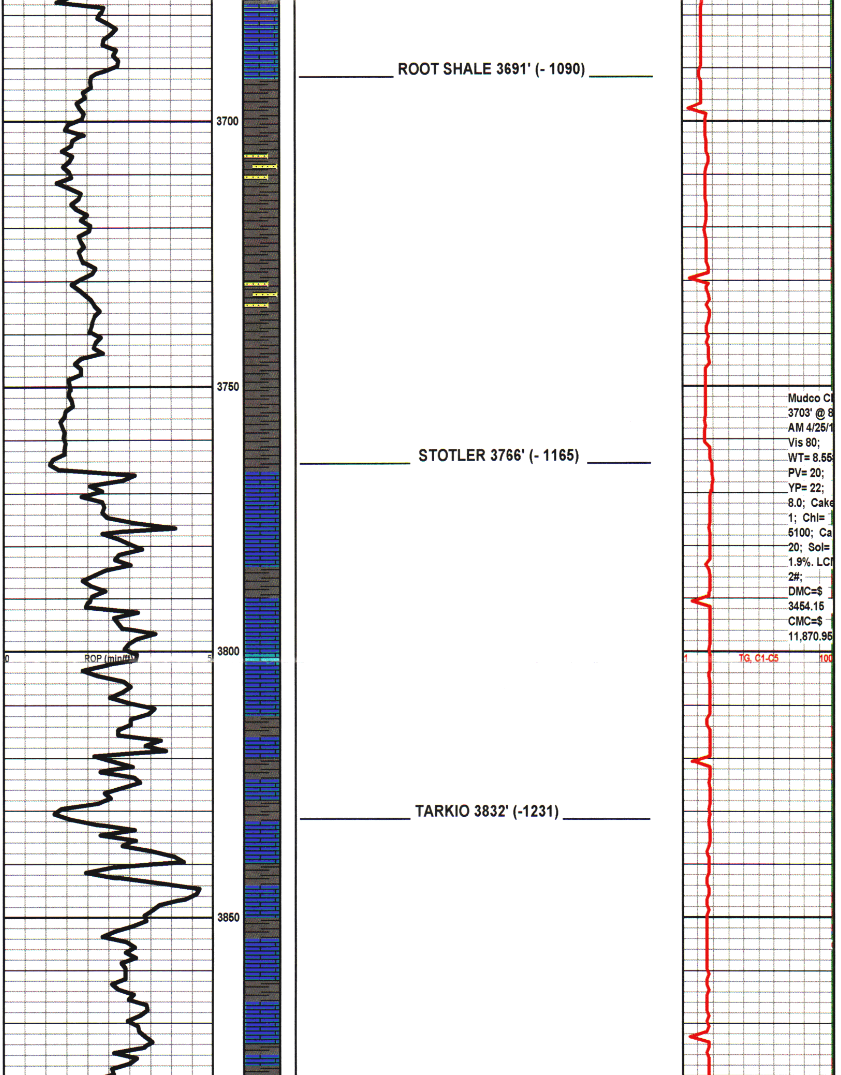
WABAUNSEE 3634' (- 1033)

Geologist: David P. Williams, P. G., on location @ 2:30 PM 4-24-12

Stone Coral Anhydrite Sample Top = 1590' (+1011);
Stone Coral Anhydrite Sample Base = 1600' (+1001).

Deviation Survey's Taken: @ 655' = 1/2 degree; @ 1190' = 1/2 degree; @ 1700' = 1 1/4 degree; @ 2759' = 1/2 degree; @ 3260' = 1/2 degree; @ 3758' = 1 degree: @ 4256' = 3/4 degree; @ 5200' = 1 degree; @ 5581' = 1 degree.



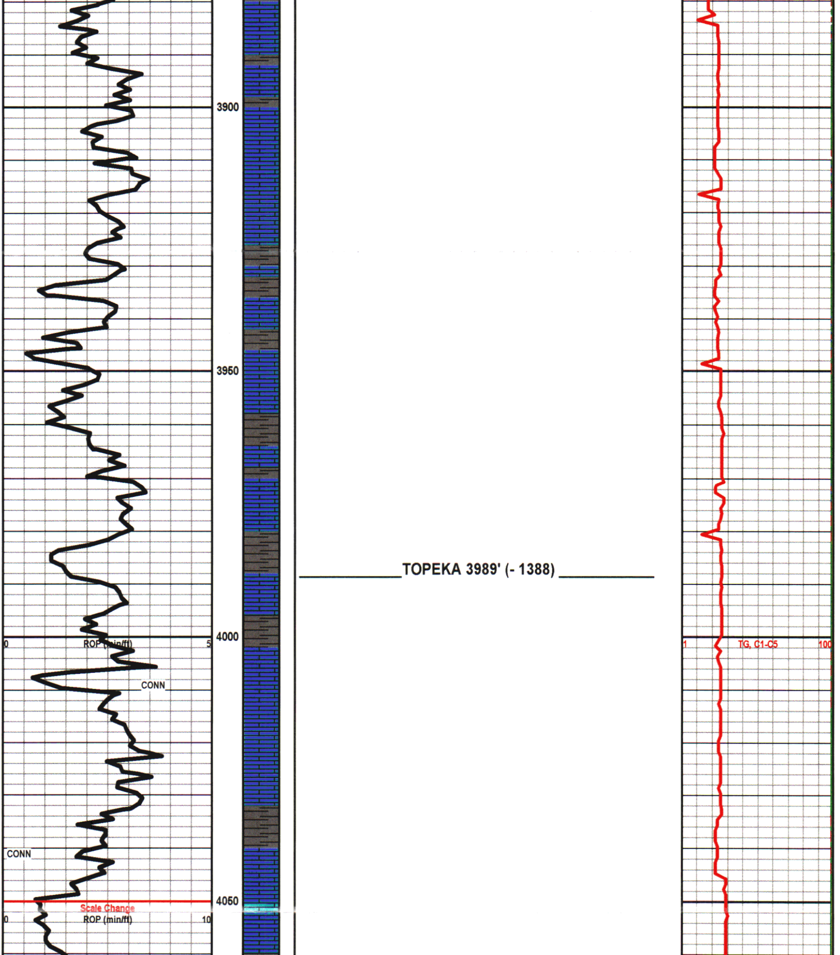


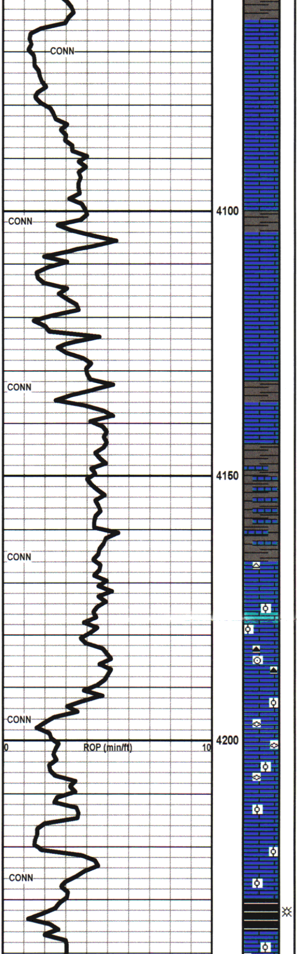
ROOT SHALE 3691' (- 1090)

STOTLER 3766' (- 1165)

TARKIO 3832' (-1231)

Mudco C
3703' @ 8
AM 4/25/1
Vis 80;
WT= 8.55
PV= 20;
YP= 22;
8.0; Cake
1; Chl=
5100; Ca
20; Sol=
1.9%. LC
2#;
DMC=$
3454.15
CMC=$
11,870.95





Note: All Samples Have Been Lagged To Depth By Calculated Time.

Begin 10' Sample Examination @ 4220'.

Ls Crm-Wht-Gry Fxln Micritic Chalk Wht Soft Sh Aqua-Char-Gry-Grn-Red Soft-Fissil No Odor No Stn No Flor NS

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

Ls Crm-Gry Fxln Micritic Tr OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Por Pooor Leaching Por Poor Develop Chalk Wht Soft Sh Char-Gry-Grn-Red Soft-Fissil No Odor No Stn No Flor NS

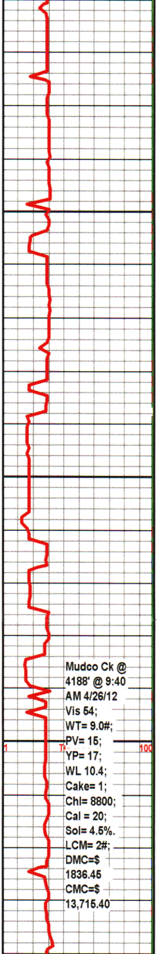
Ls Crm-Wht-Gry Fxln Micritic Cht Drk Char Op Shp Vit Chalk Wht Soft Fos (Crin) Sh Char-Gry-Grn-Red-Tr Blk Carb Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Fxln Micritic Grad Tr OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Por Pooor Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) Sh Char-Grn-Red- Soft-Fissil No Odor No Stn No Flor NS

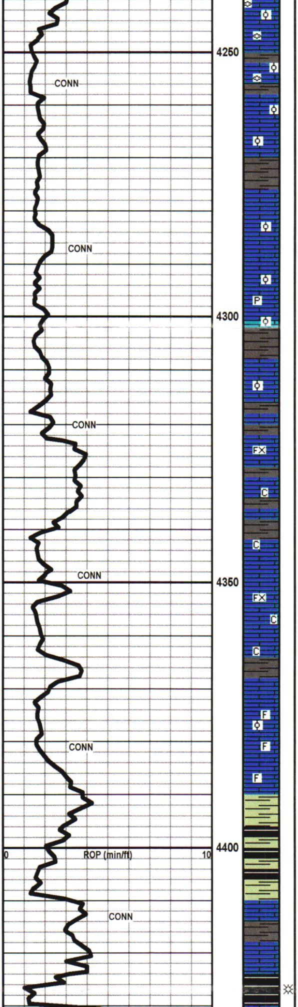
Ls Crm-Wht-Gry Fxln Micritic Grad Poor OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) Sh Char-Gry-Grn-Red-Tr Blk Carb Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Fxln Micritic Grad Poor OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) Sh Char-Gry-Grn-Red-Tr Blk Carb Soft-Fissil No Odor No Stn No Flor NS

Sh Char-Gry-Grn-Red-Tr Blk Carb Soft-Fissil w/SG (Under Heat in Wtr) Ls Crm-Wht-Gry Fxln Micritic Grad Poor OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) No Odor No Stn No Flor NS



**Mudco Ck @
4188' @ 9:40
AM 4/26/12
Vis 54;
WT= 9.0#;
PV= 15;
YP= 17;
WL 10.4;
Cake= 1;
Chl= 8800;
Cal = 20;
Sol= 4.5%.
LCM= 2#;
DMC=$
1836.45
CMC=$
13,715.40**



Ls Crm-Wht-Gry Fxln Micritic Grad Poor OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) Sh Char-Gry-Grn-Red-Tr Blk Carb Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Fxln Micritic Grad Poor OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) Sh Char-Gry-Grn-Red-Tr Blk Carb Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Fxln Micritic Grad Poor OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) Sh Blk Carb- Char-Gry-Grn-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Fxln Grad Micritic Chalk Wht Soft Sh Blk Carb- Char-Gry-Grn-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Fxln Micritic Grad Poor OOL Por (w/OOL in pl -Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Fos (Fuss) Sh Blk Carb- Char-Gry-Grn-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Fxln Micritic (w/Pyr Inclus) Grad Poor OOL Por (w/OOL in pl -V Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Abd Sh Char-Gry-Grn-Red Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Wht Fxln Micritic Grad Poor OOL Por (w/OOL in pl -V Small Ooids) Poor InterOOL Leaching Por Poor Develop Chalk Wht Soft Abd Sh Char-Gry-Grn-Red-Tr Blk Carb Soft-Fissil No Odor No Stn No Flor NS

Gelogist Mike Engelbrecht P.G.Releaved David P. Williams @ 4320' 6.00 PM 4/26/12

Crm-Lt Gry FN-Xln Ls Poor Por Soft NS

Crm-Lt Gry Sli Fos Ls Poor Por Sli Cky NS

Lt Crm- V Lt Tan Sli Fos Ls Poor Por Sli Cky NS No Odor

V Lt Blu-Gry Fxln Ls Sli Fos Ls Dns Cky Poor Por NS

Lots of Lt Crm-Cky Ls Poor Por NS No Odor

Lt Crm-Lt Tan Semi-Fos-OOL Ls P-F Por NS No Odor

Crm Buff-Lt Tan Semi-Fos Ls P-F Fos Por NS No Odor

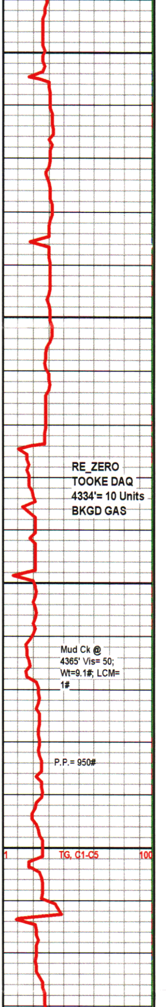
Crm-Lt Tan Fuss Ls Poor Por NS No Odor

Lt Gry-Grn Sh Few Silty & Lt Gry-Grn Mealy Sh LS

Sh AA & Blk Sh

HEEBNER 4424' (- 1823)

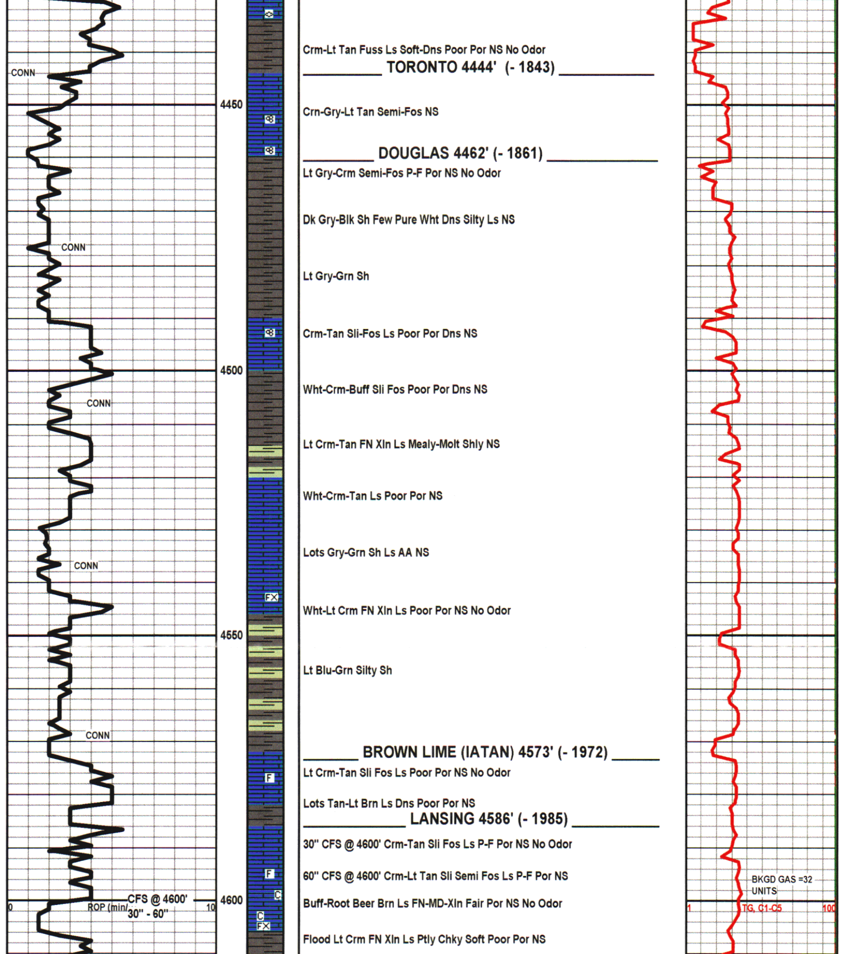
Inc Blk Carb Sh Tr Gas



RE_ZERO
TOOKE DAQ
4334'= 10 Units
BKGD GAS

Mud Ck @
4365' Vis= 50;
Wt=9.1#; LCM=
1#

P.P.= 950#



Crm-Lt Tan Fuss Ls Soft-Dns Poor Por NS No Odor

TORONTO 4444' (- 1843)

Crn-Gry-Lt Tan Semi-Fos NS

DOUGLAS 4462' (- 1861)

Lt Gry-Crm Semi-Fos P-F Por NS No Odor

Dk Gry-Blk Sh Few Pure Wht Dns Silty Ls NS

Lt Gry-Grn Sh

Crm-Tan Sli-Fos Ls Poor Por Dns NS

Wht-Crm-Buff Sli Fos Poor Por Dns NS

Lt Crm-Tan FN Xln Ls Mealy-Molt Shly NS

Wht-Crm-Tan Ls Poor Por NS

Lots Gry-Grn Sh Ls AA NS

Wht-Lt Crm FN Xln Ls Poor Por NS No Odor

Lt Blu-Grn Silty Sh

BROWN LIME (IATAN) 4573' (- 1972)

Lt Crm-Tan Sli Fos Ls Poor Por NS No Odor

Lots Tan-Lt Brn Ls Dns Poor Por NS

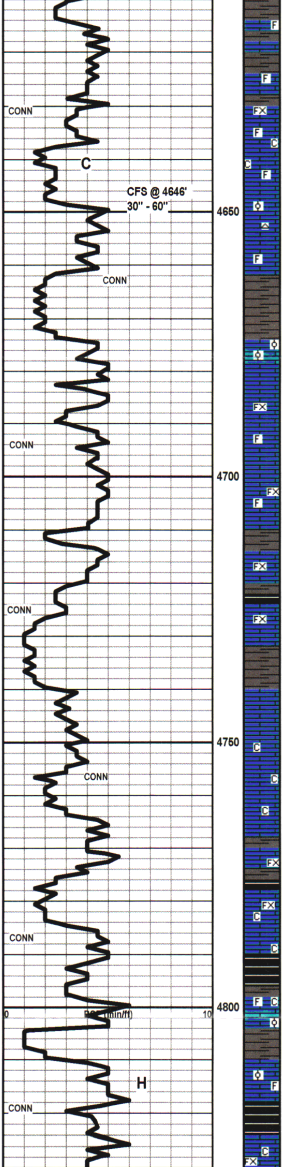
LANSING 4586' (- 1985)

30" CFS @ 4600' Crm-Tan Sli Fos Ls P-F Por NS No Odor

60" CFS @ 4600' Crm-Lt Tan Sli Semi Fos Ls P-F Por NS

Buff-Root Beer Brn Ls FN-MD-Xln Fair Por NS No Odor

Flood Lt Crm FN Xln Ls Ptly Chky Soft Poor Por NS



Lt Gry-Lt Tan Sli Fos Ls Poor Por NS Ptly Chky Mealy

Pred Lt Tan-Lt Buff Sli Fos Ls Poor Por NS

LANSING "C" 4630' (- 2029)

Lt Crm-V Lt Tan FN Xln Ls Poor Por NS No Odor

30" CFS @ 4646' Wht-Lt Crm Sli Fos Ls Poor Por Lots Chky NS No Odor

60" CFS @ 4646' Flood Lt Crm Sli Fos Ls Mostly Chky NS No Odor

Crm Fos Tiny OOL Ls P-F Por NS No Odor Ptly Chky

Lt Crm-Lt Gry Cht Gran Ls Poor Por NS No Odor

Crm-Lt Tan Sli Semi Fos Ls P-F Por NS No Odor Inc Gry Sh

Lt Crm-Lt Tan Semi-Fos OOL Ls P-F Por NS No Odor

Lt Tan-Buff FN Xln Dns Ls Poor Por NS

Tan Fos Gran Ls w/Fair Fos Por NS No Odor

Flood Lt Gry FN Xln Dns Ls V Poor Por NS No Odor

Gry Mealy FN Xln Ls Poor Por NS & Inc Gry Sh

Ls & Sh AA & Few Blk Sh

Buff-Lt Tan Mealy Shly Ls Poor Por NS

Mealy Tan-Gry Ls Poor Por NS No Odor

Wht-Lt Crm Chky Ls Soft Por NS

Few Drk Gry Chty Ls V Poor Por Gry-Tan FN Xln Dns Chky Ls NS

Flood Lt Tan-Gry Fn Xln Ls P-F Interxln Por NS

Blu Grn Sh & Few Blk Sh Lt Crm-Tan FN Xln Ls Lots Soft Cky NS

MUNCIE CREEK 4790' (- 2189)

Inc Blk Sh Lt Crm FN Xln Cky Ls NS

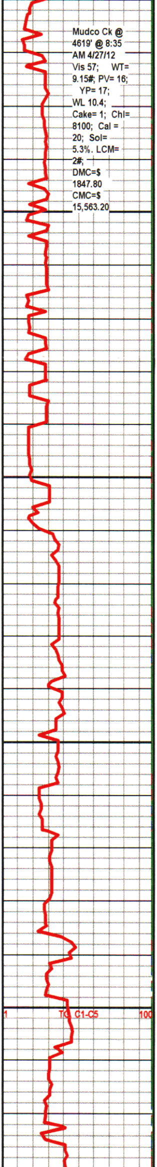
Lt Tan Semi-Fos-OOL Ls Poor Por NS No Odor

KANSAS CITY "DRUM" (H) 4810' (- 2209)

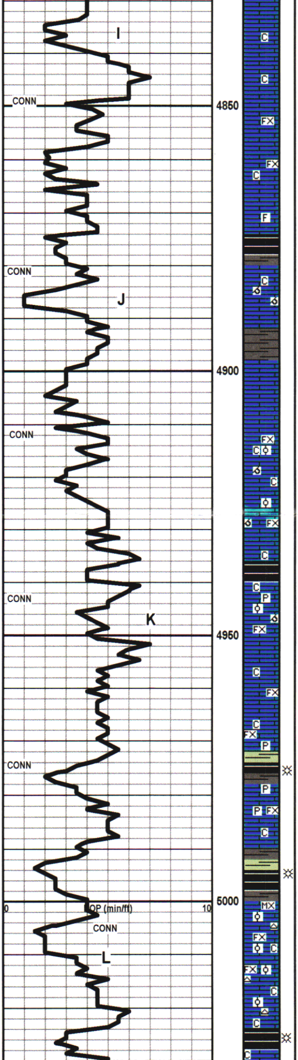
Lt Tan-Crm Fos-OOL Ls P-F OOL-Fos Por NS

KANSAS CITY "BLOCK" (I) 4826' (- 2225)

Crm-Lt Tan FN Xln Ls Poor Por NS No Odor Sli Cky



Mudco Ck @ 4619' @ 8:35 AM 4/27/12
Vis 57; WT= 9.15#; PV= 16; YP= 17;
WL 10.4;
Cake= 1; Chl= 8100; Cal = 20; Sol= 5.3%. LCM= 2#;
DMC=$ 1847.80
CMC=$ 15,563.20



Lt Crm-Lt Tan Sli Fos LS Poor Por NS Ptly Cky

Lt Crm-Lt Tan Sli Fos LS Poor Por NS Ptly Cky

Wht-Lt Crm FN Xln Ls Poor Por NS No Odor

Wht-Lt Crm FN Xln Ls Dns Cky NS No Odor Inc Gry-Blu-Grn Sh

Crm-Lt Tan Sli Semi Fos Ls Poor Por NS

KANSAS CITY DENNIS "J" 4880' (- 2279)

Lt Crm-Tan Semi-OOC Ls P-F Por NS No Odor few Pure Wht Loose Cky

Lots Gry-Blu Sh

Crm-Lt tan FN Xln Ls Poor Por NS No Odor

Ls Crm-Tan-Lt Brn-Grn-Gry Fxln-Microxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) Poor InterOOL Leaching Poor Develop Cht Wht Op Shp Vit Chalk Wht Soft Sh Char Carb-Lt Blu-Grn Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Lt Brn-Grn-Gry Fxln Dns Micrite Grad Poor OOL/OOM Por (w/OOL in pl) Poor InterOOL/OOM Leaching Poor Develop Grad Pin-Pt Por Poor Ixln Por Cht Gry Transl Shp Vit Chalk Wht Soft Sh Char Carb-Lt Blu-Grn Fissil No Odor No Stn No Flor NS

STARK SHALE 4936' (- 2335)

KANSAS CITY SWOPE "K" 4940' (- 2341)

Ls Crm-Tan-Lt Brn-Grn-Gry Fxln Dns Micrite (w/Tr Pyr Inclus) Grad Poor OOL/OOM Por (w/OOL in pl) Poor InterOOL/OOM Leaching Poor Develop Cht Wht-Lt Brn Transl-Op Shp Vit Chalk Wht Soft Sh Blk Carb-Char-Lt Blu-Grn Fissil No Odor No Stn No Flor NS

Gelogist David P. Williams P.G. Releaved Mike Engelbrecht @ 4955' 11:30 AM 4/28/12

Ls Crm-Tan-Wht-Gry Fxln Dns Micrite Cht Wht-Gry Transp-Op Shp Vit Chalk Wht Soft Sh Blk Carb-Char-Drk Blu-Grn Fissil No Odor No Stn No Flor NS

Sh Blk Carb (w/Tr SG)-Char-Drk Blu-Grn Fissil Ls Crm-Tan-Wht-Gry Fxln Dns Micrite (w/Tr Pyr Inclus) Cht Amber-Gry Op Shp Vit Chalk Wht Soft No Odor No Stn No Flor NS

Ls Crm-Tan-Wht-Gry Fxln Dns Micrite (w/Tr Pyr Inclus) Cht Amber-Gry Op Shp Vit Chalk Wht Soft Sh Blk Carb (w/Tr SG)-Char-Drk Blu-Grn Fissil No Odor No Stn No Flor NS

HUSHPUCKNEY SHALE 4990' (- 2389)

Sh Blk Carb (w/Tr SG)-Char-Drk Blu-Grn Fissil Ls Crm-Tan-Wht-Gry Fxln Dns Micrite Cht Wht-Gry Transp-Op Shp Vit Chalk Wht Soft No Odor No Stn No Flor NS

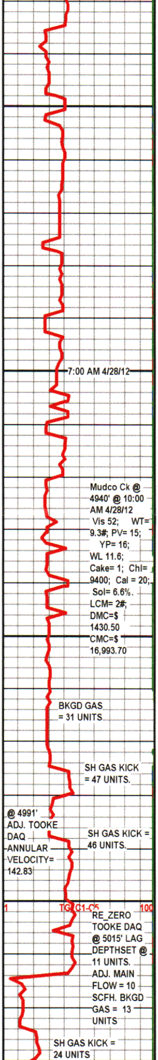
KANSAS CITY HERTHA "L" 5000' (- 2399)

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Wht Transp-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Grn Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Wht Transp-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Grn Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Wht Transp-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Grn Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Wht Transp-Op Shp Vit Chalk Wht Soft Sh Blk Carb-Char-Gry-Grn Fissil No Odor No Stn No Flor NS



7:00 AM 4/28/12

Mudco Ck @ 4940' @ 10:00 AM 4/28/12 Vis 52; WT= 9.3#; PV= 15; YP= 16; WL 11.6; Cake= 1; Chl= 9400; Cal = 20; Sol= 6.6%. LCM= 2#; DMC=$ 1430.50 CMC=$ 16,993.70

BKGD GAS = 31 UNITS

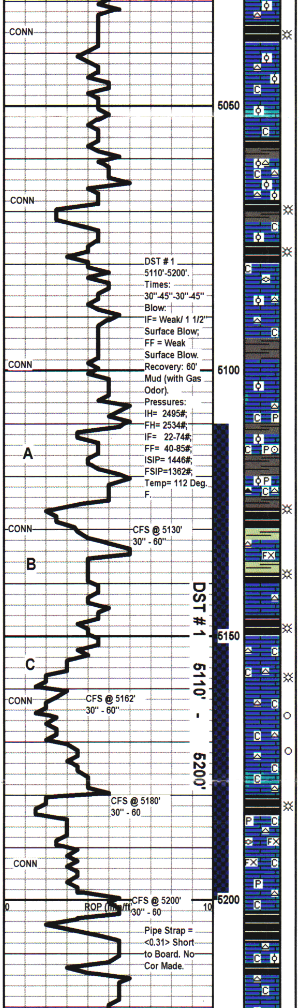
SH GAS KICK = 47 UNITS.

@ 4991' ADJ. TOOKE DAQ ANNULAR VELOCITY= 142.83

SH GAS KICK = 46 UNITS.

RE_ZERO TOOKE DAQ @ 5015' LAG DEPTHSET @ 11 UNITS. ADJ. MAIN FLOW = 10 SCFH. BKGD GAS = 13 UNITS

SH GAS KICK = 24 UNITS



BASE KANSAS CITY 5034' (- 2433)

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Wht Transp-Op Shp Vit Chalk Wht Soft Sh Blk Carb-Char-Gry-Grn Fissil No Odor No Stn No Flor NS

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Smoky Gry Transp-Op Shp Vit Chalk Wht Soft Sh Blk Carb-Char-Gry-Grn Fissil No Odor No Stn No Flor NS

MARMATON 5060' (- 2459)

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Smoky Gry Transp-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Grn Tr Blk Carb- Fissil No Odor No Stn No Flor NS

Sh Char-Gry-Grn (w/Pyr Inclus) Fissil Ls Crm-Tan Fxln Micrite Grad Poor OOL Por (w/Small OOL in pl) Poor Develop Poor Dissolu Poor Leaching Cht Wht Translu-Op Shp Vit Pyr Mass Fos (Crin) No Odor No Stn No Flor NS

Ls Crm-Tan Fxln Dns Micrite AA Cht Wht Transp-Op Shp Vit Pyr Mass Fos (Fuss) Chalk Wht Soft Sh Char-Gry-Grn -Aqua Fissil No Odor No Stn No Flor NS

Ls Crm-Tan Fxln Dns Micrite AA Cht Wht Transp-Op Shp Vit Pyr Mass Chalk Wht Soft Sh Char-Gry-Grn -Aqua Fissil No Odor No Stn No Flor NS

ALTAMONT 5102' (- 2501)

Ls Crm-Tan-Wht-Fxln Dns Micrite Grad Poor OOL Por (w/OOL in pl) (V Small Ooids) Poor Develop Poor Dissolu Poor Leaching Cht Smoky Gry Transp-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Grn Tr Blk Carb- Fissil No Odor No Stn No Flor NS

Sh Char-Gry-Grn (w/Pyr Inclus) Fissil Ls Crm-Tan Fxln Micrite Grad Poor OOL Por (w/Small OOL in pl) Poor Develop Poor Dissolu Poor Leaching Cht Wht Translu-Op Shp Vit Pyr Mass Fos (Crin) No Odor No Stn No Flor NS

30" CFS @ 5130' Sh Char-Gry-Grn (w/Pyr Inclus) Fissil Ls Crm-Tan Fxln Micrite Grad Poor OOL Por (w/Small OOL in pl) Poor Develop Poor Dissolu Poor Leaching Cht Wht Translu-Op Shp Vit No Odor No Stn No Flor NS

60" CFS @ 5130' Sh Char-Gry-Grn (w/Pyr Inclus) Fissil Ls Crm-Tan Fxln Micrite AA Cht Wht-Drk Blk Translu-Op Shp Vit No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Fair Ixln Gran Por Cht Wht Op Shp Vit Sh Char-Aqua-Grn-Tr Blk Carb Fissil No Odor No Stn No Flor NS

30" CFS @ 5162' Ls Wht-Crm Fxln Micrite Grad Fair Ixln Gran Por AA Cht Wht Transl-Op Shp Vit Sh Aqua-Grn-Tr Blk Carb (w/ SG) Fissil Inc No Odor No Stn No Flor SG in SH Blk Carb

60" CFS @ 5162' Ls Crm-Tan Fxln Micrite AA Cht Wht Translu-Op Shp Vit Fos (Plant Residue ?) Chalk Wht Abd Sh Blk Carb (w/SG)-Gry-Aqua-Grn Fissil ? Faint Odor No Stn Tr Scat ? Min Flor SG in Blk Carb Sh

30" CFS @ 5180' Ls Crm-Tan Microxln Micrite AA Cht Wht Translu-Op Shp Vit Chalk Wht Abd Sh Blk Carb-Gry-Aqua-Grn Fissil ? Faint Odor AA No Stn Tr Scat ? Min Flor (10% Spl.) ? Show

60" CFS @ 5180' Ls Crm-Tan Microxln Micrite Grad Fxln Pin-Pt Por W/Tr "Dead" HC Stn (1 Pc) Cht Wht-Tan Translu-Op Shp Vit Chalk Wht Abd Sh Blk Carb-Gry-Aqua-Grn Fissil AA ? V Faint Odor ? Stn Tr Scat ? Min Flor (< 5% Spl.) ?/NoShow

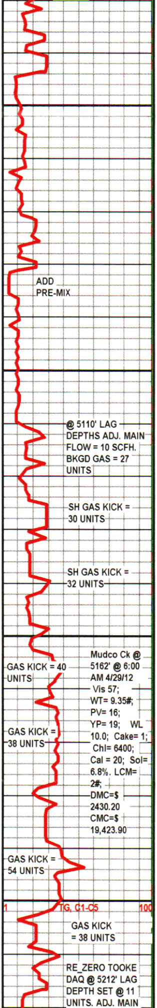
PAWNEE 5184' (- 2587)

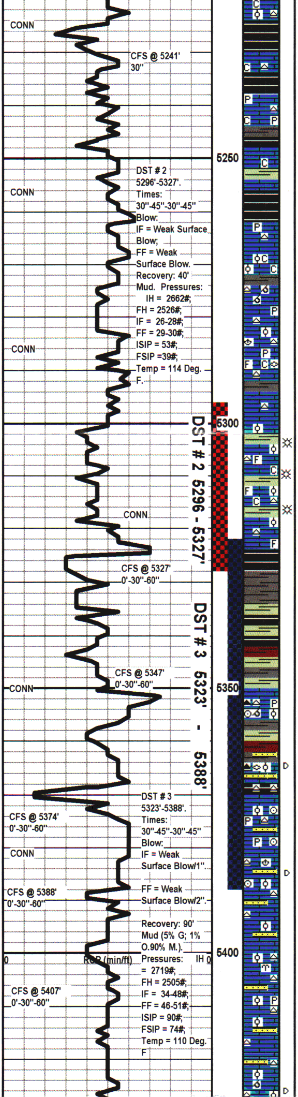
30" CFS @ 5200' Ls Crm-Tan Fxln Micrite Grad Fxln Poor-Fair Pin-Pt Por Barren Cht Wht Translu-Op Shp Vit Chalk Wht Abd Fos (Fuss) Pyr Mass Sh Blk Carb (w/SG)-Gry-Grn Fissil No Odor No Flor SG in Sh Blk Carb

60" CFS @ 5200' Ls Crm-Tan Fxln Micrite Grad Fxln Poor-Fair Pin-Pt Por Barren Cht Wht Translu-Op Shp Vit Chalk Wht Abd Sh Blk Carb (w/SG AA)-Gry-Grn (w/ Pyr Inclus) Fissil No Odor No Flor SG in Sh Blk Carb

FORT SCOTT SHALE 5203' (- 2602)

30" CFS @ 5241' Ls Wht-Crm-Gry Fxln Dns Micritic Grad Poor OOL Por (w/OOL in pl) Poor Dissolu-Poor Develop Poor Leaching Fos Cht Wht (w/Brn OOL Inclus) Op-Translu Shp Vit Chalk Wht Sh Blk Carb Abd-Char-Gry-Grn Soft-Fissil No Odor No Flor No Stn NS





DST # 2
5296'-5327'.
Times:
30"-45"-30"-45"
Blow:
IF = Weak Surface Blow;
FF = Weak Surface Blow.
Recovery: 40' Mud.
Pressures:
IH = 2662#;
FH = 2526#;
IF = 26-28#;
FF = 29-30#;
ISIP = 53#;
FSIP =39#;
Temp = 114 Deg. F.

DST # 3
5323'-5388'.
Times:
30"-45"-30"-45"
Blow:
IF = Weak Surface Blow/1".
FF = Weak Surface Blow/2".
Recovery: 90' Mud (5% G; 1% O.90% M.).
Pressures:
IH = 2719#;
FH = 2505#;
IF = 34-48#;
FF = 46-51#;
ISIP = 90#;
FSIP = 74#;
Temp = 110 Deg. F

UPPER CHEROKEE SHALE 5225' (- 2624)

Ls Crm-Gry fxln Dns Micritic Fos Cht Wht (w/Brn OOL Inclus) Op-Translu Shp Vit Chalk Wht Sh Blk Carb Abd-Char-Gry-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry fxln Dns Micritic Fos Cht Wht (w/Brn OOL Inclus) Op-Translu Shp Vit Chalk Wht Sh Blk Carb-Char-Gry-Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Fxln Dns Micritic Grad Tr Vug Por Fair-Med Leaching Por (w/OOL in pl) Cht Wht (w/Brn OOL Inclus) Op-Translu Shp Vit Chalk Wht Sh Char-Gry Tr Blk Carb Dec Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Fxln Dns Micritic Grad Tr Vug Por Fair-Med Leaching Por (w/OOL in pl) Cht Wht (w/Brn OOL Inclus) Op-Translu Shp Vit Chalk Wht Sh Char-Gry Tr Blk Carb Dec Fissil No Odor No Flor No Stn NS

LOWER CHEROKEE SHALE 5256' (- 2655)

Ls Crm-Tan Fxln Dns Micritic (w/Pyr Inclus) Grad Tr/OOL Por Poor (w/OOL in pl) Poor Dissolu Poor Develop Poor Leaching Fos Cht Wht (w/Brn OOL Inclus) Op-Translu Shp Vit Chalk Wht Sh Blk Carb-Gry-Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Fxln Dns Micritic (w/Pyr Inclus) Grad Tr/OOL/OOM Por Poor (w/OOL in pl) Poor-Tr Dissolu Poor-Tr Develop Poor-Tr Leaching Cht Wht (w/Brn OOL Inclus)-Gry Op-Translu Shp Vit Chalk Wht Sh Blk Carb-Gry-Grn Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Gry Fxln Dns Mostly Micritic (w/Pyr Inclus) Grad Tr/OOL Por Poor (w/OOL in pl) No Vis Leaching Poor-No Dissolu Poor- Cht Wht (w/Brn OOL Inclus)-Gry Op-Translu Shp Vit Chalk Wht Fos (Brach, Fuss, Spicule) Sh Blk Carb-Gry-Grn Fissil No Odor No Flor No Stn NS

HUCK 5301' (- 2700)

0" CFS @ 5327' Ls Crm-Tan-Brn V Fxln Fair Pin-Pt Por w/ Scatt Flor (Lt Gtn) Stn w/FSG in ? Frac Por Grad Poor OOL Por w/OOL in pl Poor Develop Poor Leaching (? Crushed Small Ooids) (< 5% Spl & w/Flor & Gas Does Not Flor) Friable Cht AA Chalk in pt Sh Blu-Grn-Blk Carb Fissil No Odor Sli Scat Stn Flor SSG

30" CFS @ 5327' Ls Crm-Tan-Brn V Fxln Fair Pin-Pt Por w/ Scatt Flor (Lt rn) Stn w/FSG in ? Frac Por Grad Poor OOL Por w/OOL in pl Poor Develop Poor Leaching (? Crushed Small Ooids) (< 15% Spl w/Flor & Gas Does Not Flor) Friable Fos (Sponge) Chalky in pt Cht Wht Op Shp Vit Sh Blu-Grn-Blk Carb Fissil No Odor Sli Scat Stn Flor (Fair SG Under Heat in Wtr)

ATOKA SHALE 5325' (- 2724)

60" CFS @ 5327' Sh Blu-Grn-Blk Carb Fissil Ls AA (w/Dec Stn Flor) SSG AA Grad Microxln tr Fos Por Poor (Few Pcs) Chalky in pt No Odor Sli Scat Tr Flor Stn AA TrSG

0" CFS @ 5347' Sh Blu-Aqua-Char-Gry w/Qtz Ss VFG in Blu Sh Matrix Well-Rounded Fair Sort Ls Crm-Tan Fxln Micrite AA Cht Wht-Yell-Op-Shp-Vit ? Tr Trip w/Drk Gillsonitic Stn in Frac Por No Odor No Flor NS

30" CFS @ 5347' Sh Blu-Aqua-Char-Gry-Tr Blk Carb Fissil Ls Crm-Tan Fxln Micrite AA Cht Wht-Yell-Op-Shp-Vit ? Tr Trip w/Drk Gillsonitic Stn in Frac Por No Odor No Flor NS

60" CFS @ 5347' Sh AA Blu-Char Js AA Qtz Ss Lt Brn VFG V Well Sort Dns CaCo3 Matrix (4 Pcs) Barren Cht Wht-Blu/Yell AA Op Shp Vit No Odor No Flor No Stn NS

Ls Crm-Tan Fxln Dns Mostly Micritic (w/Pyr Inclus) Cht Wht-Yell/Blu AA Op-Translu Shp Vit Chalk Wht Sh Blu-Grn-Gry/Red-Blk Carb Fissil No Odor No Flor No Stn NS

30" CFS @ 5374' Ls Crm-Tan-Wht Fxln Dns Mostly Micritic Grad Tr/Poor-Fair OOL/OOM Por (w/OOL in pl w/ Scat "Dead" HC Stn Around Ooids (2 Pcs)) Poor-No Leaching Por Cht Wht-Yell/Blu (w/Frac Gillsonitic Stn)-Gry-Org OpShp Vit Fos (Fusx) Qtz Ss Wht-Lt Brn VFG Well Sort (No Glacu) Barren Sh Varicolored Blu-Grn-Gry/Red-Olive--Blk Carb Fissil No Odor Scat ? Min Flor (<10% of Spl) NS

MISSISSIPPIAN 5371' (- 2770)

60" CFS @ 5374' Ls AA Cht AA Qtz Ss AA Friable Fos (Pyr Crin) Sh AA No Odor Scat ? Min Flor Tr Stn AA NS

0" CFS @ 5388' Ls AA Grad Fxln w/Fair Ixln Por (w/ Cht Wht Inclus) Cht Wht-Org Inc Qtz Ss AA Friable Fos (Brach) Sh AA Abd No Odor Scat ? Min Flor Dec (Few Pcs) NS

30" CFS @ 5388' Ls Crm-Tan Fxln Dns Mostly Micritic (w/Pyr Inclus) Grad Poor OOL Por (w/OOL in pl) Poor Develop P Leaching Cht Wht-Yell (w/OOL in pl Op-Translu Shp Vit Fos (Crin) Sh Blu-Grn-Gry-Blk Carb Fissil AA No Odor No Flor No Stn NS

60" CFS @ 5388' Ls AA Cht AA Qtz Ss AA Sh AA No Odor No Stn No Flor NS

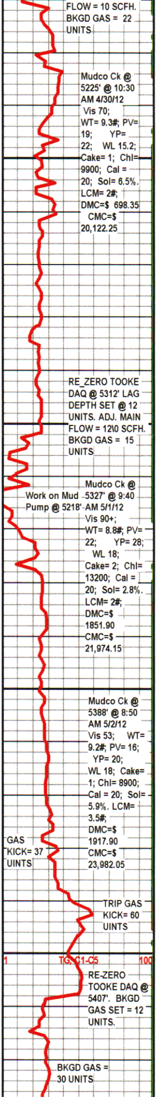
0" CFS @ 5407' Ls Wht Fxln Pin-Pt Por w/Tr Vug Por Barren (1 Pc w/ "Dead" HC Stn) Grad Tr OOL Poor InterOOL Por Cht AA Qts Ss AA Sh AA No Odor ? Sli Tr Scat Min Flor NS

30" CFS @ 5407' Ls Wht Fxln Poor Pin-Pt Por w/ Sli Tr Vug Por Barren Grad Sli Tr OOL Poor InterOOL Por Fos (? Bry) Cht AA Qts Ss AA Sh AA No Odor ? Sli Scat Min Flor (< 5% of Spl) NS

60" CFS @ 5407' Ls Wht Fxln Poor Pin-Pt Por w/ Pyr Inclus Barren (w/Tr Glacu Inclus) Grad Poor OOL Poor InterOOL Por Cht AA Qts Ss AA Sh AA No Odor ? Sli Scat Min Flor (< 5% of Spl) NS

0" CFS @ 5440' Ls Wht-Crm Fxln Poor Pin-Pt Por (w/ Pyr Inclus) Barren Grad Poor OOL Poor InterOOL Por Grad Dns Micritic Cht Wht Op Shp Vit Tr/Qts Ss AA Sh AA No Odor ? Sli Scat Min Flor (< 5% of Spl) NS

30" CFS @ 5440' Ls Wht-Crm Fxln Micrite Barren Grad Med-Good OOL/OOM Por Med-Good InterOOL/OOM Por (3 Pcs) Med-Good Leaching Por Deep Vugs Barren Cht Wht-Redish Op Shp Vit w(w/Hvy Gillsonitic Stn on Edges ? Trip) Tr/Qts Ss AA Sh AA No Odor ? Sli Scat Min Flor (< 5% of Spl) NS



FLOW = 10 SCFH.
BKGD GAS = 22 UNITS

Mudco Ck @ 5225' @ 10:30 AM 4/30/12
Vis 70;
WT= 9.3#; PV= 19;
YP= 22;
WL 15.2;
Cake= 1;
Chl= 9900;
Cal = 20;
Sol= 6.5%.
LCM= 2#;
DMC=$ 698.35
CMC=$ 20,122.25

RE_ZERO TOOKE DAQ @ 5312' LAG DEPTH SET @ 12 UNITS. ADJ. MAIN FLOW = 12\0 SCFH.
BKGD GAS = 15 UNITS

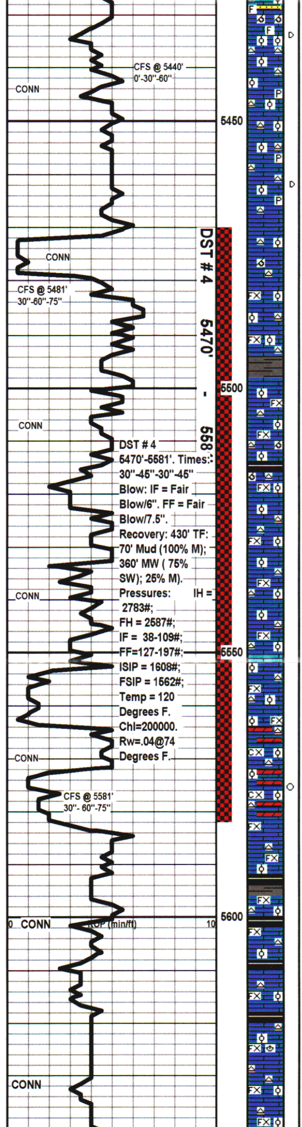
Work on Mud Pump @ 5218'

Mudco Ck @ 5327' @ 9:40 AM 5/1/12
Vis 90+;
WT= 8.8#; PV= 22;
YP= 28;
WL 18;
Cake= 2;
Chl= 13200;
Cal = 20;
Sol= 2.8%.
LCM= 2#;
DMC=$ 1851.90
CMC=$ 21,974.15

Mudco Ck @ 5388' @ 8:50 AM 5/2/12
Vis 53;
WT= 9.2#; PV= 16;
YP= 20;
WL 18;
Cake= 1;
Chl= 8900;
Cal = 20;
Sol= 5.9%.
LCM= 3.5#;
DMC=$ 1917.90
CMC=$ 23,982.05

RE-ZERO TOOKE DAQ @ 5407'. BKGD GAS SET = 12 UNITS.

BKGD GAS = 30 UNITS



DST # 4
5470'-5581'. Times:
30"-45"-30"-45"
Blow: IF = Fair
Blow/6". FF = Fair
Blow/7.5".
Recovery: 430' TF:
70' Mud (100% M);
360' MW (75%
SW); 25% M).
Pressures: IH =
2783#;
FH = 2587#;
IF = 38-109#;
FF=127-197#;
ISIP = 1608#;
FSIP = 1562#;
Temp = 120
Degrees F.
Chl=200000.
Rw=.04@74
Degrees F.

60" CFS @ 5440' Ls Wht-Crm-Gry Fxln Micrite Barren Grad Med-Good OOL/OOM Por Med-Good InterOOL/OOM Por (6 Pcs) Med-Good Leaching Por Deep Vugs (1 Pc Ls Gry w//OOLin pl w/Hvy Gillsonitic Stn in Frac Por "Dead Oil" Cht AA Tr/Qts Ss AA Sh AA No Odor ? Sli Scat Min Flor (< 2% of Spl) NS

Ls Wht-Crm Fxln Tr Pin-Pt Sli Vug Por AA Grad Micrite Barren Cht Wht Transl-Op Shp Vit V Abd Pyr Mass Sh Char-Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Micrite No Vis Por Barren Gtad Tr Poor OOL Por AA Barren Cht Wht Transl-Op Shp Vit V Abd Pyr Mass Sh Char-Grn Fissil No Odor No Stn No Flor

30" CFS @ 5481' Ls Wht Fxln Poor-Fair Pin-Pt Por (w/ Pyr Inclus) Barren Grad Tr Poor OOL Poor InterOOL Por Grad Frac Por Edge (3 Pcs)-Gry Op Shp Vit V Abd Sh Char-Grn Fissil No Odor No Flor NS

60" CFS @ 5481' Ls Wht-Crm-Fxln Pin-Pt Por Fair-Good Ixln Por Grad Med-Good OOL/OOM Por Med-Good InterOOL/OOM Por Med-Good Leaching Por w/ Deep Vugs (<10% of Spl) Cht AA Sh AA No Odor Scat ? Min Flor Inc (> 35% of Spl) No Stn NS

75" CFS @ 5481' Ls AA Cht AA Pyr AA Sh AA No Odor Scat ? Min Flor Inc (< 30% of Spl) NS

Ls Wht-Crm Fxln Pin-Pt Por Fair-Good Ixln Por Grad Poor OOL Por Poor InterOOL Por Poor Leaching Por Cht Wht-Smoky Gry Transl-Op Shp Vit Sh Char-Gry Fissil No Odor Sli Scat ? Min Flor Inc (> 10% of Spl) No Stn NS

Ls Wht-Crm Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Poor OOL Por Poor InterOOL Por Poor Leaching Por Cht Wht-Smoky Gry Transl-Op Shp Vit Sh Char-Gry Fissil No Odor Sli Scat ? Min Flor Inc (> 10% of Spl) No Stn NS

Ls Wht-Crm Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Poor OOL Por Poor InterOOL Por Poor Leaching Por Cht Wht-Smoky Gry Transl-Op Shp Vit Sh Char-Gry Fissil No Odor Sli Scat ? Min Flor Inc (> 10% of Spl) No Stn NS

Ls Wht-Crm-Tan Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Poor OOL/OOM Por Poor InterOOL/OOM Por Poor Leaching Por Cht Wht-Smoky Gry Transl-Op Shp Vit Tr Qtz Ss VFg (V Small w/ Pyr Inclus) Well Sorted Well Roumded Sh Char-Gry-Blk Carb Fissil No Odor Sli Scat ? Min Flor Inc (> 10% of Spl) No Stn NS

Ls Wht-Crm-Tan Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Med OOL Por (w/OOL in pl) F-M InterOOL Por F-M Leaching Por Cht Wht-Lt Gry-Tan Transl-Op Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Med OOL Por (w/OOL in pl) F-M InterOOL Por F-M Leaching Por Cht Wht-Lt Gry-Tan Transl-Op Shp Vit Sh Char-Gry Fissil No Odor No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Med OOL Por (w/OOL in pl) F-M InterOOL Por F-M Leaching Por Cht Wht-Lt Gry-Tan Transl-Op Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Med OOL Por (w/OOL in pl) F-M InterOOL Por F-M Leaching Por Cht Wht-Lt Gry-Tan Transl-Op Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

30" CFS @ 5581' Ls Wht-Crm-Tan Fxln Micrite Grad Pin-Pt Por AA Fair Ixln Por Grad Fair OOL Por (w/OOL in pl) P-F InterOOL Por P-F Leaching Por Cht Wht-Lt Gry (Tr Brn OOL Inclus) Transl-Op Shp Vit Sh Char-Gry-Blk Carb Fissil No Odor No Flor No Stn NS

60" CFS @ 5581' Dolo/Ls Wht-Crm-Tan Fxln Med -Good Sucrosic Por Med-Good Ixln Por (w/1 Pcs ? Brn HC Stn) Grad Med-OOL Por (w/OOL in pl) F-M InterOOL Por F-M Leaching Por Cht Wht (w/OOL in pl) Transl-Op Shp Vit Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

75" CFS @ 5581' Dolo/Ls Wht-Crm-Tan Fxln Med -Good Sucrosic Por Med-Good Ixln Por Grad Med-OOL Por (w/OOL in pl) F-M InterOOL Por F-M Leaching Por Cht Wht-Gry-Org Tr (w/OOL in pl) Transl-Op Shp Vit Qtz SS vfg Well Sort Ang Grns in CaCo3 Matrix V Friable Barren Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

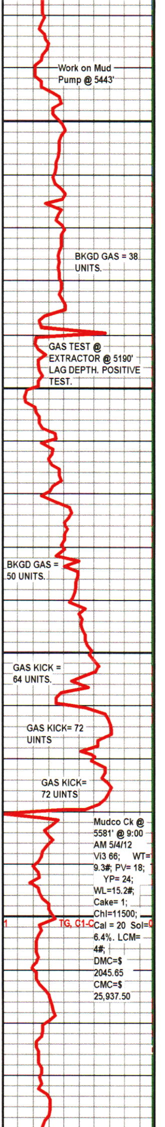
Ls Wht-Crm-Gry Fxln Micrite Grad Fxln Por Poor Ixln Por Grad Poor OOL Por (w/OOL in pl) Poor InterOOL Por Poor Leaching Cht Wht-Gry Transl-Op Shp Vit Sh Char-Gry-Grn-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Grad Fxln Por Poor Ixln Por Grad Poor OOL Por (w/OOL in pl) Poor InterOOL Por Poor Leaching Cht Wht-Gry Transl-Op Shp Vit Sh Char-Gry-Grn-Blk Carb Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Micrite Grad Fxln Por Poor Ixln Por Grad Poor OOL Por (w/OOL in pl) Poor InterOOL Por Poor Leaching Cht Wht-Gry Transl-Op Shp Vit Sh Char-Gry-Grn-Blk Carb Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Micrite Grad Fxln Por Poor Ixln Por Grad Tr Poor OOL Por (w/OOL in pl) Poor InterOOL Por Poor Leaching Dec Fos (Brach) Cht Wht-Gry Transl-Op Shp Vit Sh Char-Gry-Grn--Aqua Blk Carb Inc Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Grad Fxln Por Poor Ixln Por Cht Wht-Gry Transl-Op Shp Vit Sh Char Inc-Gry-Grn--Aqua- Blk Carb Dec Fissil No Stn No Odor No Flor NS



Work on Mud Pump @ 5443'

BKGD GAS = 38 UNITS.

GAS TEST @ EXTRACTOR @ 5190' LAG DEPTH. POSITIVE TEST.

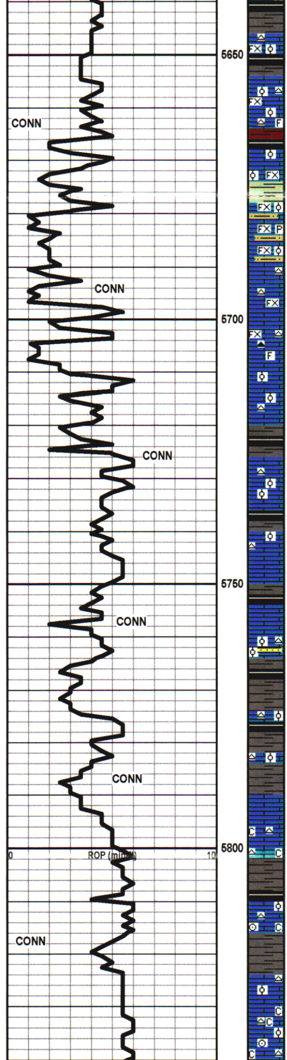
BKGD GAS = 50 UNITS.

GAS KICK = 64 UNITS.

GAS KICK= 72 UINTS

GAS KICK= 72 UINTS

Mudco Ck @ 5581' @ 9:00 AM 5/4/12
Vi3 66; WT=
9.3#; PV= 18;
YP= 24;
WL=15.2#;
Cake= 1;
Chl=11500;
Cal = 20 Sol=
6.4%. LCM=
4#;
DMC=$
2045.65
CMC=$
25,937.50



Sh Char Inc-Gry-Grn- Blk Carb Dec Fissil Ls Wht-Crm-Gry Fxln Micrite Grad Fxln Por Poor Ixln Por Grad Tr Poor OOL Por (w/OOL in pl) Poor InterOOL Por Poor Leaching Dec Cht Wht-Gry Transl-Op Shp Vit No Stn No Odor No Flor NS

Sh Char Inc-Gry-Grn-Blk Carb Dec Fissil Ls Wht-Crm-Tan Fxln Micrite Grad Fxln Por Poor Ixln Por Grad Tr Poor OOL Por (w/OOL in pl) Poor InterOOL Por Poor Leaching Cht Wht-Gry Transl-Op Shp Vit No Stn No Odor No Flor NS

Ls Wht-Crm-tan Fxln Micrite Grad Fxln Por Poor Ixln Por Grad Tr Poor OOL Por (w/OOL in pl) Poor InterOOL Por Poor Leaching Cht Wht-Gry Transl-Op Shp Vit Fos (? inclus) Sh Char Inc - Gry - Grn -Red - Blk Carb Fissil No Stn No Odor No Flor NS

Sh Grn (w/Pyr Inclus)-Char-Gry-Fissil Ls Wht-Crm-Tan Fxln Micrite Mostly Grad Fxln Por Poor Ixln Por Cht Wht-Gry Transl-Op Shp Vit DecNo Stn No Odor No Flor NS

Sh Grn (w/Pyr Inclus Siltstone)-Char-Gry-Fissil Ls Wht-Crm-Tan Fxln Micrite Mostly Grad Fxln Por Poor Ixln Por Cht Wht-Gry Transl-Op Shp Vit Tr No Stn No Odor No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Mostly Grad Fxln Por Poor Ixln Por Cht Wht-Gry Transl-Op Shp Vit Tr Sh Grn -Char-Gry-Fissil No Stn No Odor No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Mostly Poor Ixln Por Cht Wht-Gry (Banded Drk-Gry-w/Fos Inclus) Transl-Op Shp Vit Tr Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Poor Ixln Por Grad Poor-Fair OOL Por Fair-Med Dissoul Fair-Med Leaching w/Small Vugs Present Barren Cht Wht-Gry Transl-Op Shp Vit Tr Sh Grn-Char-Gry-Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Micrite Mostly Poor Ixln Por Tr OOL Por Poor InterOOL Por AA Cht Wht-Gry Transl-Op Shp Vit Tr Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Micrite Mostly Poor Ixln Por Tr OOL Por Poor InterOOL Por AA Cht Wht-Gry Transl-Op Shp Vit Tr Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Micrite Mostly Poor Ixln Por Tr OOL Por Poor InterOOL Por AA Cht Wht-Gry Transl-Op Shp Vit Tr Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Micrite Mostly Poor Ixln Por Tr OOL Por Poor InterOOL Por AA Cht Wht-Gry Transl-Op Shp Vit Tr Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Micrite Mostly Poor Ixln Por Tr OOL Por Poor InterOOL Por AA Cht Wht-Gry Transl-Op Shp Vit Tr Qtz Ss Gry-Brn FGrn Well Sort CacO3 Matrix Clay Inclus Friable Barren Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Sh Gry-Char-Grn-Blk Carb Fissil Ls Wht-Crm Fxln Micrite Mostly Poor Ixln Por Tr OOL Por Poor InterOOL Por AA Cht Wht-Gry Transl-Op Shp Vit I No Stn No Odor No Flor NS

Sh Gry-Char-Grn-Aqua-Blk Carb Fissil Ls Wht-Crm Fxln Micrite Grad Poor Ixln Por Tr/OOL Por Poor InterOOL Por AA Cht Wht-Gry Transl-Op Shp Vit I No Stn No Odor No Flor NS

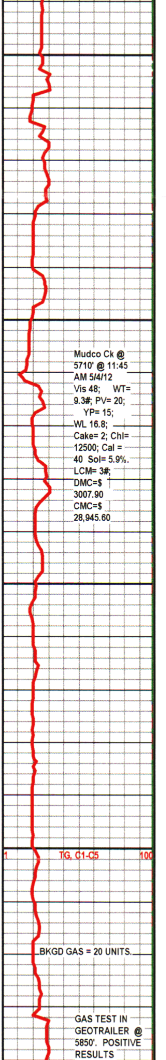
Sh Gry-Char-Grn-Aqua-Blk Carb Fissil Ls Wht-Crm Fxln Micrite Cht Wht-Gry Transl-Op Shp Vit Tr Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Micrite Mostly Poor Ixln Por Cht Wht-Gry Transl-Op Shp Vit Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Micrite Poor Ixln Por Grad Poor-Fair Inter OOL Por w/ Small Vug Por Fair Dissolu Fair Develop Barrren Cht Wht-Gry Transl-Op Shp Fos (Crin) Vit Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm-Gry Fxln Micrite (w/Pyr Inclus) Poor Ixln Por Grad Poor Inter OOL Por w/ Small Vug Por AA Poor Dissolu Poor Develop Barrren Cht Wht-Gry Transl-Op Shp Vit Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

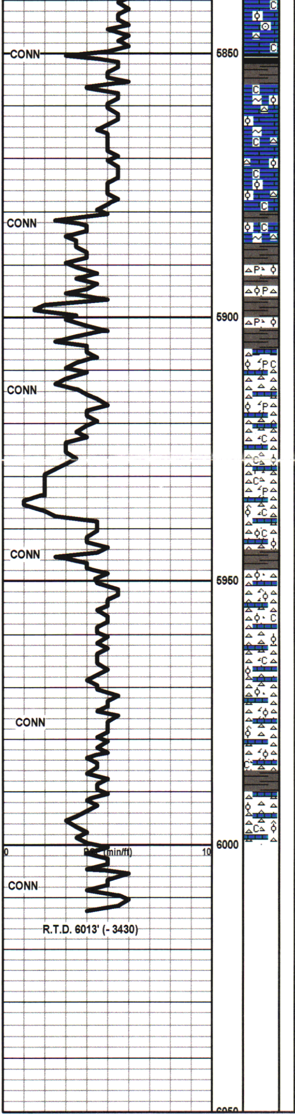
Ls Wht-Gry Fxln Micrite Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Cht Wht-Gry-Sli Grn (Glassy w/ Glacu & OOL Inclus) Transl-Op Shp Vit Fos (Crin) Chalk Wht Soft Sh Gry-Char-Grn-Red-Blk Carb Fissil No Stn No Odor No Flor NS



Mudco Ck @
5710' @ 11:45
AM 5/4/12
Vis 48; WT=
9.3#; PV= 20;
YP= 15;
WL 16.8;
Cake= 2; Chl=
12500; Cal =
40 Sol= 5.9%.
LCM= 3#;
DMC=$
3007.90
CMC=$
28,945.60

BKGD GAS = 20 UNITS.

GAS TEST IN
GEOTRAILER @
5850'. POSITIVE
RESULTS



Ls Wht-Gry Fxln Micrite Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Cht Wht-Gry-Sli Grn (Glassy w/ Glacu & OOL Inclus) Transl-Op Shp Vit Fos (Crin) Qtz Ss Wht- Lt Brn VFg Well Sort Well Rounded Barren Chalk Wht Soft Sh Gry-Char-Grn-Maroon-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Gry Fxln Micrite Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Cht Wht-Gry-Sli Grn (Glassy w/ Glacu & OOL Inclus) Transl-Op Shp Vit Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Gry Fxln Micrite Poor Ixln Por (w/Glacu Inclus) Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Cht Wht-Gry-Tan-Sli Grn (Glassy w/ Glacu & OOL Inclus) Transl-Op Shp Vit Chalk Wht Soft Sh Gry-Char-Grn-Maroon-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Cht Wht-Gry-Tan-Sli Grn (Glassy w/ Glacu & OOL Inclus) Transl-Op Shp Vit Abd Chalk Wht Soft Sh Gry-Char-Grn-Maroon-Blk Carb Fissil No Stn No Odor No Flor N

Ls Wht-Crm-Gry Fxln Micrite Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Cht Wht-Gry-Tan-Sli Grn (Glassy w/ Glacu & OOL Inclus) Transl-Op Shp Vit Abd Chalk Wht Soft Sh Gry-Char-Grn-Maroon-Blk Carb Fissil No Stn No Odor No Flor N

Mississippian "Osage" 5890' (- 3289)

Cht Wht-Gry Transl-Op Shp Vit Abd Ls Wht-Crm-Gry Fxln Micrite (w Pyr Inclus) Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Chalk Wht Soft Sh Gry-Char-Grn-Maroon-Blk Carb Fissil No Stn No Odor No Flor NS

Cht Bright-Wht-Gry Transl-Op Shp Vit Abd Ls Wht-Crm-Gry Fxln Micrite (w Pyr Inclus) Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Cht Bright-Wht-Gry Transl-Op Shp Vit Abd Ls Wht-Crm-Gry Fxln Micrite (w Pyr Inclus) Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Cht Bright-Wht-Gry Transl-Op Shp Vit Abd Ls Wht-Crm-Gry Fxln Micrite (w Pyr Inclus) Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Cht Bright-Wht-Gry Transl-Op Shp Vit Abd Ls Wht-Crm-Gry Fxln Micrite (w Pyr Inclus) Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Cht Bright-Wht-Gry Transl-Op Shp Vit Abd Ls Wht-Crm-Gry Fxln Micrite (w Pyr Inclus) Poor Ixln Por Grad Tr Poor Inter OOL Por AA Poor Dissolu Poor Develop Barrren Chalk Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm-Tan Fxln Dns Micrite (w/Pyr Inclus) Grad Tr Poor OOL Por P-F InterOOL Por Barren Cht Brite Wht AA Transl-Op Shp Vit Chalk Wht Soft Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil Abd No Stn No Odor No Flor NS

Ls Wht-Crm-Tan Fxln Dns Micrite (w/Pyr Inclus) Grad Tr Poor OOL Por P-F InterOOL Por Barren Cht Brite Wht AA Transl-Op Shp Vit Chalk Wht Soft Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil Abd No Stn No Odor No Flor NS

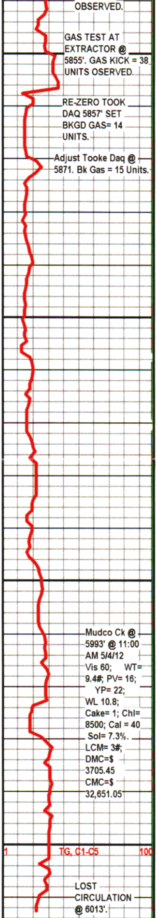
Ls Wht-Crm-Tan Fxln Dns Micrite Grad Tr Poor OOL Por P-F InterOOL Por Barren Cht Brite Wht AA Transl-Op Shp Vit Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor OOL Por P-F InterOOL Por Barren Cht Brite Wht AA Transl-Op Shp Vit Chalk Wht Soft Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor OOL Por P-F InterOOL Por Barren Cht Brite Wht AA Transl-Op Shp Vit Chalk Wht Soft Wht Soft Sh Gry-Char-Grn-Blk Carb Fissil No Stn No Odor No Flor NS

@ 6013' Lost Circulation Returns - No Samples 6000'-6013'

GEOLOGIST LEFT LOCATION @ 8:00 AM 5/6/12



OBSERVED.

GAS TEST AT EXTRACTOR @ 5855'. GAS KICK = 38 UNITS OSERVED.

RE-ZERO TOOK DAQ 5857' SET BKGD GAS= 14 UNITS.

Adjust Tooke Daq @ 5871. Bk Gas = 15 Units.

Mudco Ck @ 5993' @ 11:00 AM 5/4/12 Vis 60; WT= 9.4#; PV= 16; YP= 22; WL 10.8; Cake= 1; Chl= 8500; Cal = 40 Sol= 7.3%. LCM= 3#; DMC=$ 3705.45 CMC=$ 32,651.05

LOST CIRCULATION @ 6013'.

DAVID P. WILLIAMS
LICENSED
5-7-12
88
KANSAS
GEOLOGIST