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

Well Name:	#1 HORNUNG 34B
Location:	SEC. 34- 10 S. - 46 W.
License Number:	A.P.I. # 05-063-06344-00-00
Region:	KIT CARSON CO, CO.
Spud Date:	07/18/2012
Drilling Completed:	08/01/2012
Surface Coordinates:	SPOT: 710' FNL & 1481' FWL
Bottom Hole Coordinates:	
Ground Elevation (ft):	4488'
K.B. Elevation (ft):	4499'
Logged Interval (ft):	433' To: 5954'
Total Depth (ft):	5954'
Formation:	Mississippian "St. Joe."
Type of Drilling Fluid:	CHEMICAL MUD

OPERATOR

Company: RITCHIE EXPLORATION, INC.
Address: P.O. BOX 783188
WICHITA, KANSAS 67278-3188

GEOLOGIST

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

CASING's & LOST CIRC. & DEVIATION

Ran 10 Jts 8 5/8" (23#) Surface Casing Tallied @ 429' & set at 440'. Cemented w/ 285 sx Common 3% cc 2% Gel. Cement Did Circulate to Surface.

LOST CIRCULATION FROM: 1998' - 2156' = 600 Bbls; @ 3150' = 50 Bbls; @ 5954' = 750 Bbls.

Deviation Survey's Taken: @ 440' = 3/4 degree; @ 1000' = 1/4 degree; @ 1493' = 1 degree; @ 2630' = 1/4 degree; @ 3642' = 1 degree; @ 4168' = 1 1/4 degrees; @ 4496' = 1/4 degree; @ 5571'= 1/4 degree; @ 5738' = 1/2 degree;

DSTs

DST #1 5724'- 5738'. Times :10"-30:. Blow: Strong/ BOB/1.5". Packer Failure @ 10" First Open Flow Period. Recovery: 2997' DM. Pressures: IH= 2775#; FH= 2629#; IF= 202-272"; Packer Fairlure - Miss-Run.

DST #2 5698'-5738'. Times: 10"-30"-60"-60". Blow:IF= Strong / BOB / 1"; FF=Strong / 1.25". Recovery: 2002' TF; (355' WCM; 1530' MCW; 117' WCM).
Pressures: IH= 2982#; FH= 2569#; IF= 332-630#; FF=647-1016#; ISIP = 1019#; FSIP = 1019#; Temp= 151 degrees F.Chl= 52,000 Ppm; Rw= 0178 @ 68 degrees.

DST #3 5874'-5789'. Times: 10"-30"-60"-60". Blow: IF= Weak 1/4'"; FF= No Blow. Recovery: 5' M.
Pressures: IH= 23026#; FH = 2682#; IF = 21-19#; FF = 22-21#
ISIP = 1341#; FSIP = 766#; Temp= 144 degrees F.

Comments

After review of all geologic samples as examined, combined with the fluid and pressures results from all drill stem tests 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
Bent
Brec
Carb sh
Cht
Clyst
Coal
Congl
Dol
Grn sh
Gry shale
Gyp
Igne
Lms
Lmst
Meta
Mrlst
Red shale
Salt
Shale
Shcol
Shgy
Sltst
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
Oomold
Oolite
Ostra
Pelec
Pellet
Pisolite
Plant
Strom

STRINGER
Anhy
Arg
Bent
Coal
Dol
Grysh
Gyp
Ls
Mrst
Sltstrg
Ssstrg

TEXTURE
Boundst
Chalky
CryxIn
Earthy
FinexIn
Grainst
Lithogr
MicroxIn
Mudst
Packst
Wackest

OTHER SYMBOLS

POROSITY
- E Earthy
- Fenest
- F Fracture
- Inter
- Moldic
- Organic
- P Pinpoint

- V Vuggy

SORTING
- W Well
- M Moderate
- P Poor

ROUNDING
- R Rounded
- r Subrnd
- a Subang
- A Angular

OIL SHOW
- Gas show

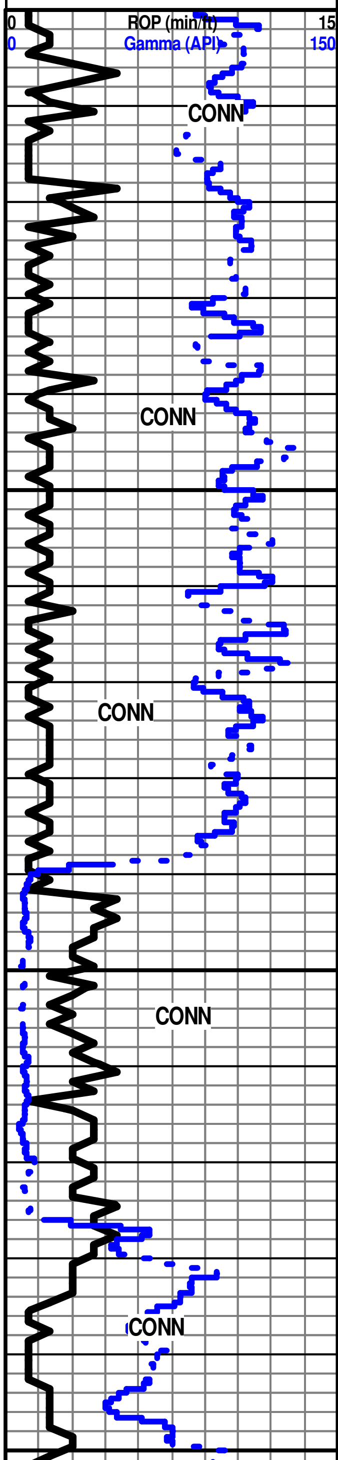
- Even
- Spotted
- Ques
- Dead

INTERVAL
- Core
- Dst_alt

- Dst

EVENT
- Rft
- Sidewall

Curve Track 1	Depth	Lithology	Oil Shows	Geological Descriptions	TG, C1-C5
ROP (min/ft) Gamma (API)					TG (Units) C1 (units) C2 (units) C3 (units) C4 (units)



3650

3700

3750

RITCHIE EXPLORATION, INC.

1 HORNUNG 34 B

SPOT: 710' FNL & 1481' FWL

SEC. 34- 10 S. - 46 W.

KIT CARSON COUNTY, COLORADO

ELEVATION : 4499' K.B. ; 4488' G.L.

CONTRACTOR: MURFIN DRILLING - RIG # 20

Geologist: David P. Williams, P. G.

Deviation Survey's Taken: @ 440' = 3/4 degree; @ 1000' = 1/4 degree; @ 1493' = 1 degree; @ 2630' = 1/4 degree; @ 3642' = 1 degree; @ 4168' = 1 1/4 degrees; @ 4496' = 1/4 degree; @ 5571'= 1/4 degree; @ 5738' = 1/2 degree.

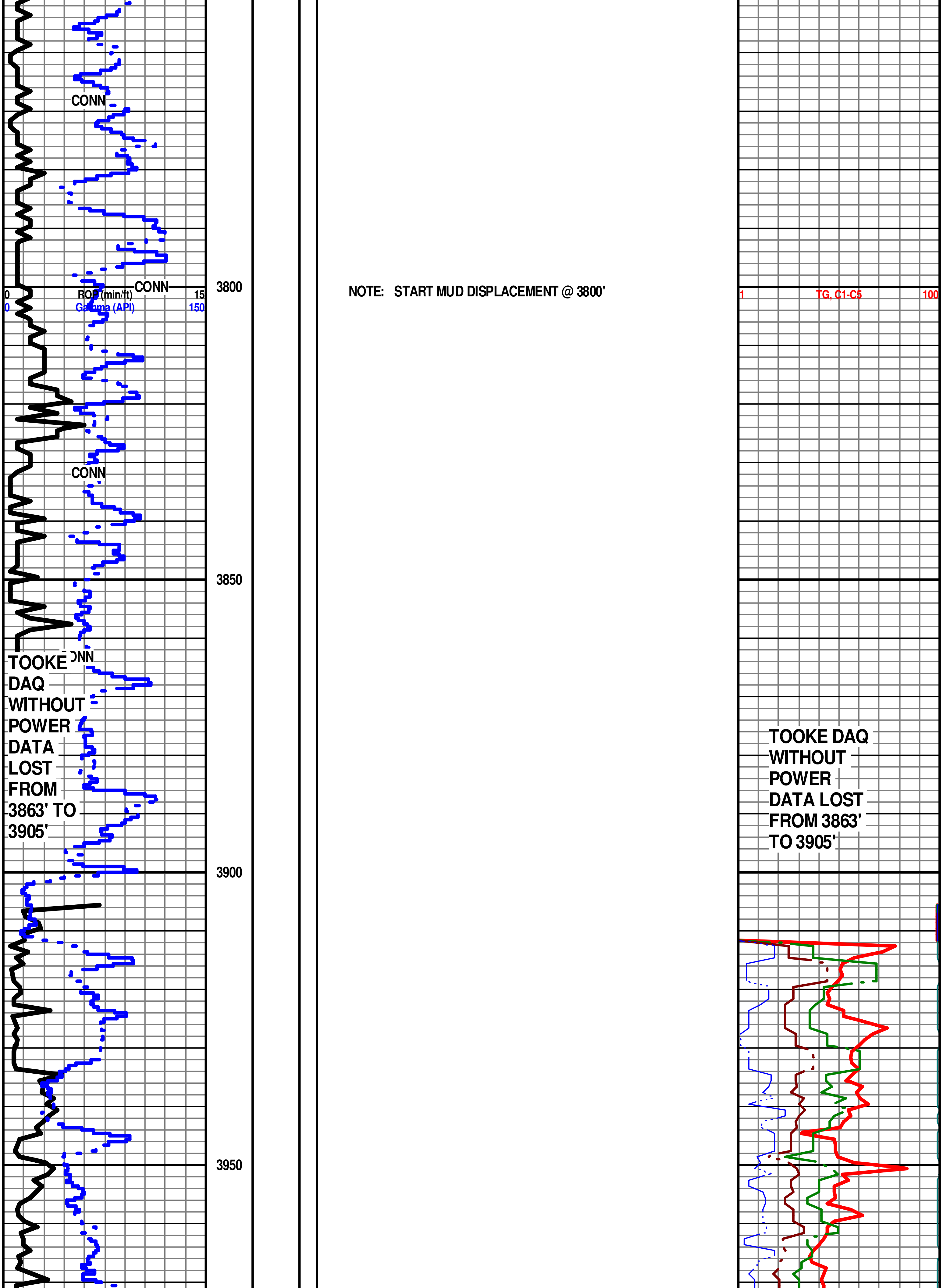
LOST CIRCULATION FROM: 1998' - 2156' = 600 Bbls; @ 3150' = 50 Bbls; @ 5954' = 750 Bbls.

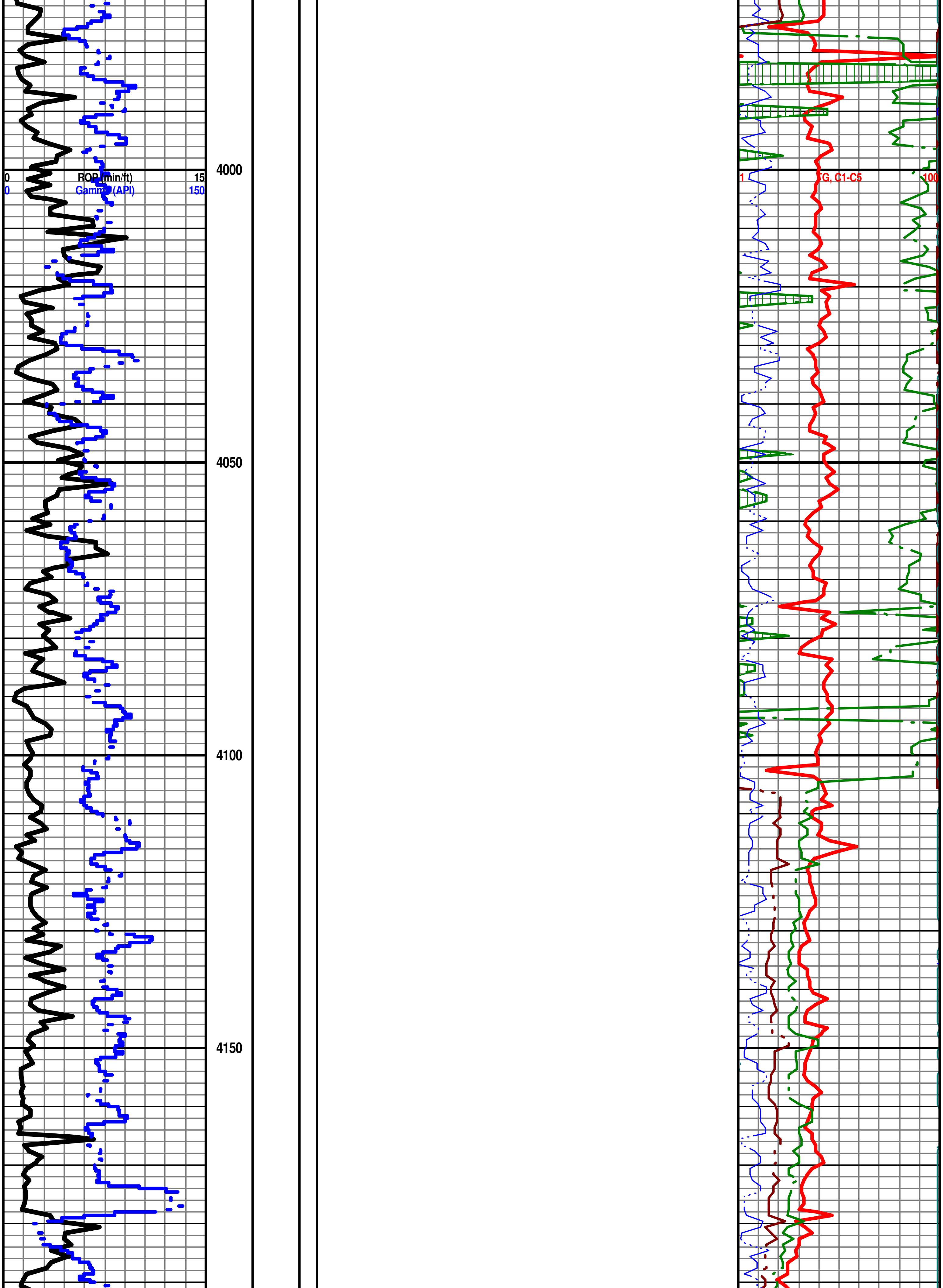
_______ STONE CORRAL 3692' (+ 807) _________

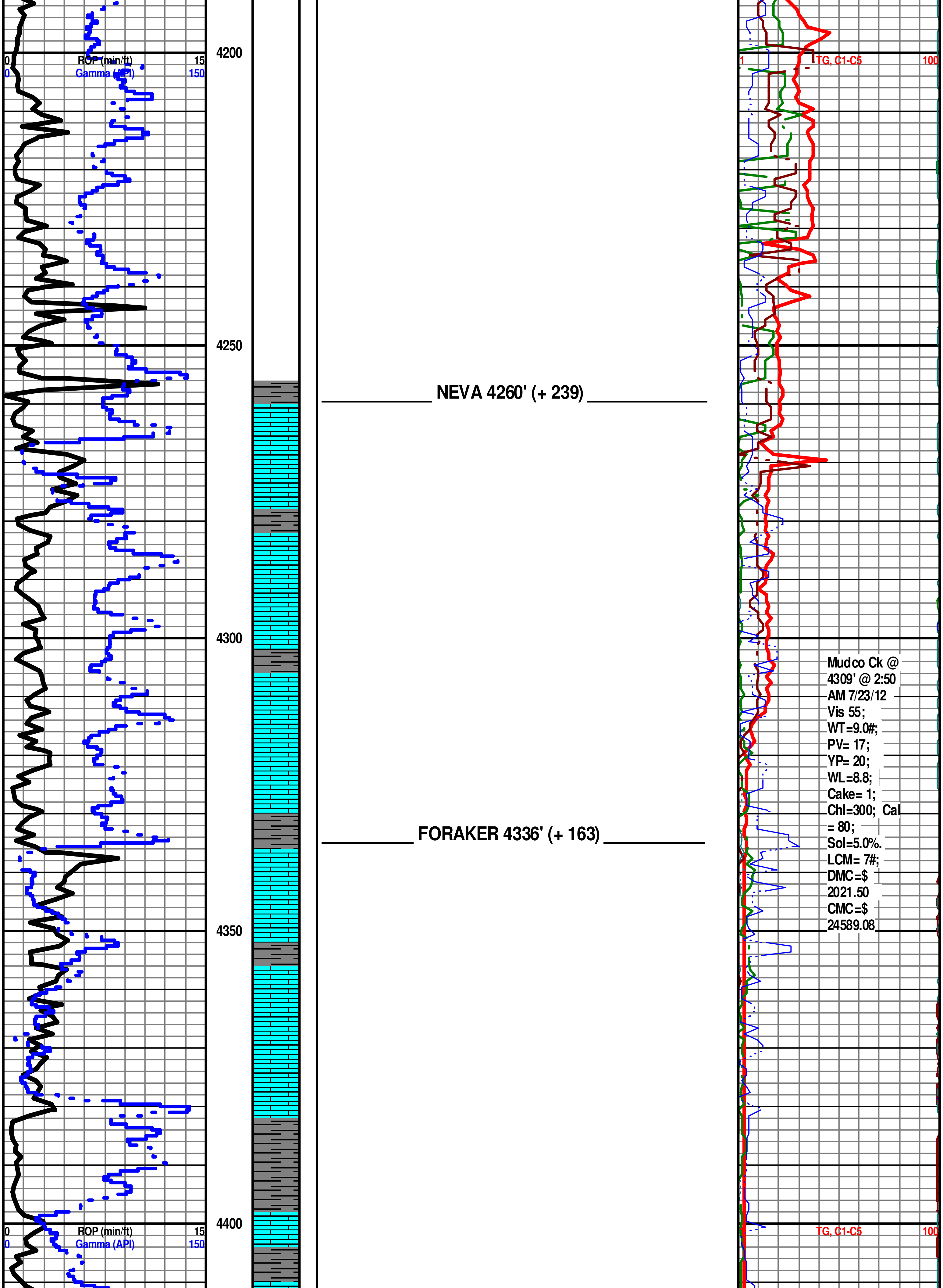
_____ BASE STONE CORRAL 3730' (+ 769) _____

1 TG, C1-C5 100

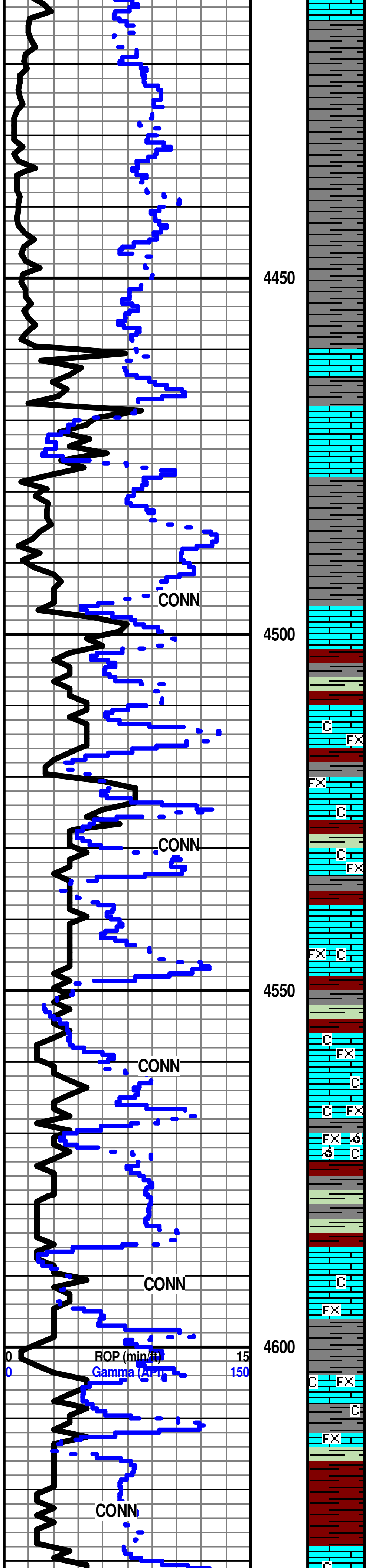
Mudco Ck @ 3582' @ 3:40 AM 7/22/12 Vis 36; WT=9.4#; PV= 7; YP= 11; WL=NC; Cake= NC; Chl=300; Cal = Hvy; Sol=7.8%. LCM= 12#; DMC=$ 7725.45 CMC=$ 22567.58


CONN
CONN
0
ROP (min/ft)
15
0
Gamma (API)
150
3800
NOTE: START MUD DISPLACEMENT @ 3800'
1
TG, C1-C5
100
CONN
3850
CONN
TOOKE DAQ WITHOUT POWER DATA LOST FROM 3863' TO 3905'
TOOKE DAQ WITHOUT POWER DATA LOST FROM 3863' TO 3905'
3900
3950


0 ROP (min/ft) 15
0 Gamma (API) 150
1 TG, C1-C5 100
4000
4050
4100
4150



0 ROP (min/ft) 15
0 Gamma (API) 150
1 TG, C1-C5 100
4200
4250
NEVA 4260' (+ 239)
4300
Mudco Ck @
4309' @ 2:50
AM 7/23/12
Vis 55;
WT=9.0#;
PV= 17;
YP= 20;
WL=8.8;
Cake= 1;
Chl=300; Cal
= 80;
Sol=5.0%.
LCM= 7#;
DMC=$
2021.50
CMC=$
24589.08
FORAKER 4336' (+ 163)
4350
4400
0 ROP (min/ft) 15
0 Gamma (API) 150
TG, C1-C5 100



Geologist on location @ (4472') 6: 30 PM 7-23-12

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

Begin 10' Sample Examination @ 4530'.

Ls Crm-Tan Fxln Micritic Barren Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Tt Blk Carb Soft-Fissil V Abd No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Micritic Barren Grad Poor Pin-Pt Ixln por Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

Ls Crm-Wht-Tan-Gry Fxln Micritic Barren Grad Poor Pin-Pt Ixln por Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

Ls Crm-Wht-Tan-Gry Fxln Micritic Barren Grad Poor OOM/OOL Por (w/OOL in pl) Poor Develop Poor-No Leaching Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

Ls Crm-Wht-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

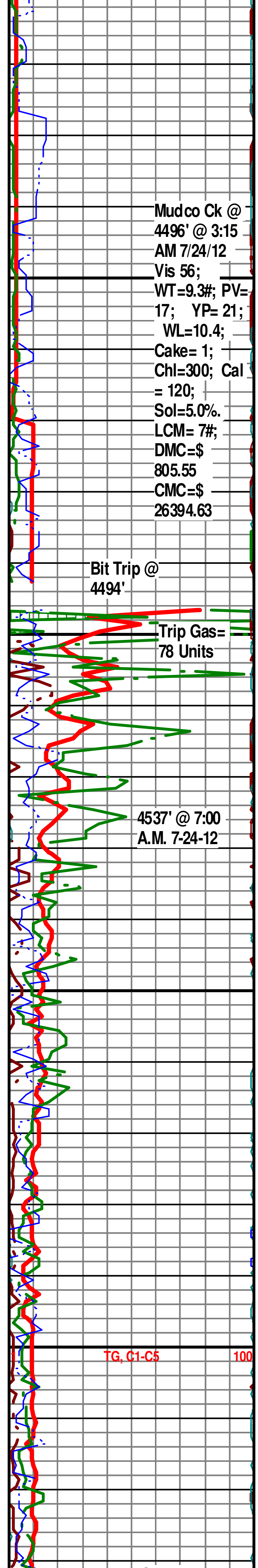
Ls Crm-Wht-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Char-Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

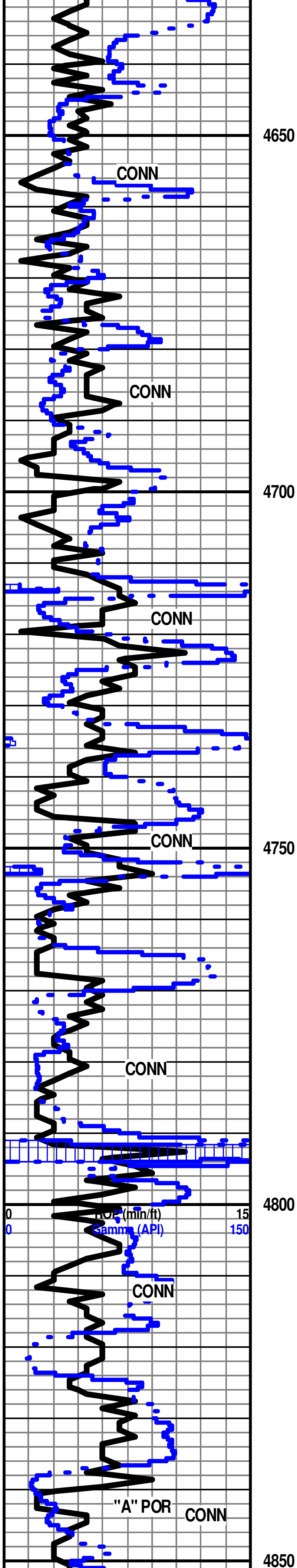
Ls Crm-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Char -Gry-Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

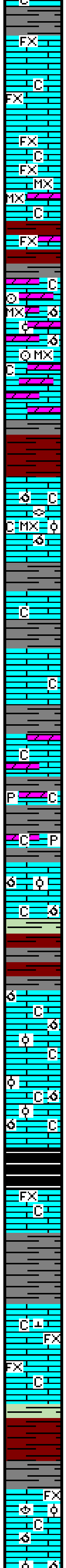
Ls Crm-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Char- Gry -Grn-Red-Maroon Soft-Fissil V Abd No Odor No Stn No Flor NS

Sh Red- V Abd Tr Gry -Char Soft Ls Crm-Tan Fxln-Microxln Barren No Odor No Stn No Flor NS

__________SHAWNEE 4628' (- 129)__________







Ls Crm-Wht-Tan-Gry Fxln-Micritic Barren Chalk Wht Soft Sh Tr Red - Char-Grn Soft No Odor No Stn No Flor NS

Ls Crm-Wht-Tan-Gry Fxln Micritic Barren Chalk Wht Soft Sh Tr Red - Char-Grn Soft No Odor No Stn No Flor NS

Ls Wht-Crm Fxln-Micritic Barren Chalk Wht Soft Abd Sh Tr Char-Red Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Bone-Wht-Crm-Tan Grad Dolo Gry Fxln-Microxln Micritic Barren Grad Poor OOM por w/OOL in pl Tr Fair Vug Leaching Poor InterOOM Por Poor Dissolu Poor Develop Chalk Wht Soft Sh Char- Gry- Red- Aqua Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

Ls Bone-Wht-Crm-Tan Grad Dolo Gry Fxln-Microxln Micritic Barren Grad Poor OOM por w/OOL in pl tr Fair Vug Leaching Poor InterOOM Por Poor Dissolu Poor Develop Fos (Crin) Chalk Wht Soft Sh Char- Gry- Red- Aqua Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

Sh Tr Char-Red Soft-Fissil Ls Wht-Crm Grad Dolo Gry Fxln -Microxln Barren Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

Ls Bone-Wht-Crm Fxln-Microxln Micritic Barren Grad Poor OOM por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Chalk Wht Soft Fos (Fuss) Sh Char- Gry- Red- Aqua Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Micritic Barren Chalk Wht Soft Abd Sh Tr Char- Red Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Micritic Barren Chalk Wht Soft Abd Sh Tr Char- Red Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm-Tan Grad Dolo Gry Fxln-Microxln Micritic Barren Chalk Wht Soft Abd Sh Tr Char- Red Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm-Tan Grad Dolo Gry Fxln-Microxln Micritic Barren Chalk Wht Soft Pyr Mass Sh Char- Red Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Poor OOM por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Chalk Wht Soft Sh Char- Grn- Red Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

Sh Char- Grn- Red Soft-Fissil Inc Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Poor OOM por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Grad Fxln Micrite Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Micritic Barren Grad Poor OOM por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Chalk Wht Soft Sh Char- Grn- Red Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm-Tan Fxln-Microxln Micritic Barren Grad Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Chalk Wht Soft Sh Char- Grn- Red Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

HEEBNER 4792' (- 293)

Sh blk Carb Fissil-Char-Red-Gen-Aqua Ls Wht-Crm Fxln Dns Micritic Grad Tr/ Poor pin-pt Fxln Por Chalky AA No Odor No Stn ? Sli Min Flor NS

TORONTO 4814' (- 315)

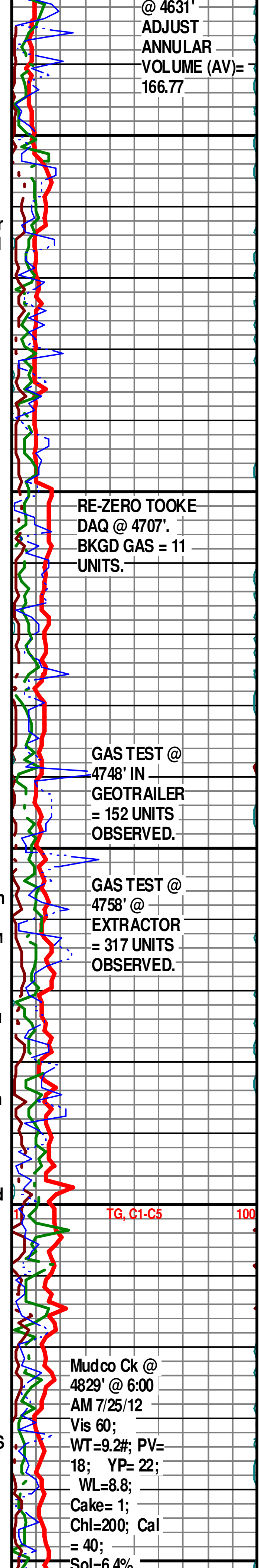
Ls Wht-Crm Fxln Dns Micritic Grad Tr/ Poor Pin-Pt Fxln Por Chalky Calcitic Sh Red-Char-Grn-Aqua-Maroon No Odor No Stn ? Sli Min Flor NS

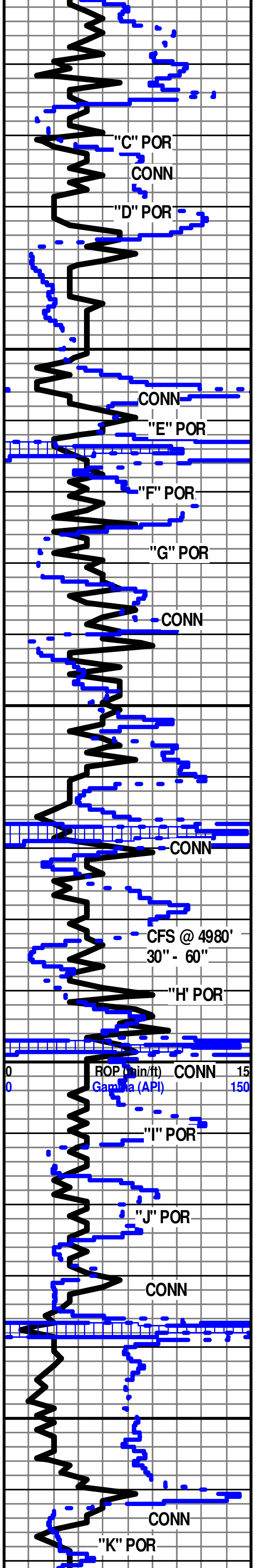
Ls Wht-Crm Fxln Dns Micritic Grad Tr/ Poor pin-pt Fxln Por Chalky Calcitic Sh Red-Char-Grn-Aqua-Maroon No Odor No Stn ? Sli Min Flor NS

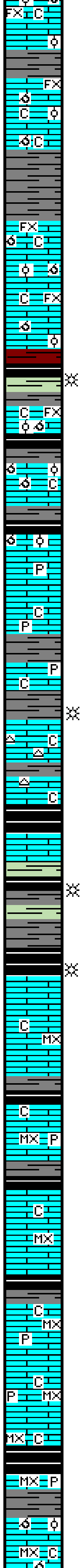
Ls Wht-Crm Fxln Dns Micritic Grad Tr/ Poor Pin-Pt Fxln Por Chalky Calcitic Sh Red-Char-Grn-Aqua-Maroon No Odor No Stn ? Sli Min Flor NS

LANSING 4840' (- 341)

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por Grad Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Fos (Brach) Chalk Wht Soft Sh Red-Gry-Grn Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS







Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por Grad Poor-Fair OOM Por (w/OOL in pl) Tr Poor-Fair Leaching Poor-Fair InterOOM Por Poor-Fair Dissolu Poor Develop Chalk Wht Soft Sh Red-Char-Gry-Grn-Maroon Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por Grad Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Dec Poor Dissolu Poor Develop Grad Poor Fxln Sucrosic Por barren Chalk Wht Soft Sh Red-Char-Gry-Grn-Maroon Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

Sh Red-Char--Maroon Soft-Fissil Dec Ls Wht-Crm-Tan Fxln-Microxln Micritic AA Barren Grad Poor Pin-Pt lxln Por Grad Tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Dec Poor Dissolu Poor Develop AA Grad Poor Fxln Sucrosic Por barren Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

Sh Red-Char--Maroon Soft-Fissil Dec Ls Wht-Crm-Tan Fxln-Microxln Micritic AA Barren Grad Poor Pin-Pt lxln Por Grad Tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Dec Poor Dissolu Poor Develop AA Grad Poor Fxln Sucrosic Por barren Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por Grad Poor-Fair OOM Por (w/OOL in pl) Tr Poor-Fair Leaching Poor-Fair InterOOM Por Poor-Fair Dissolu Poor Develop Chalk Wht Soft Sh Red - Gry - Grn-Maroon Soft-Fissil Inc No Odor No Stn ? Sli Min Flor NS

4900

Sh Red-Gry-Blk Carb Banded-Grn-Aqua-Maroon Soft-Fissil Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por Grad Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Mostly Micritic Barren Grad Tr Poor Pin-Pt lxln Por Grad tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Dec Chalk Wht Soft Sh Red-Gry-Grn-Aqua - Maroon Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Mostly Micritic Barren Grad Tr Poor Pin-Pt lxln Por Grad tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Tr Chalk Wht Soft Sh Red-Gry-Grn-Aqua - Maroon Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por Chalk Wht Soft Sh Char (w/Pyr Inclus)-Blk Carb-Red-Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por Chalk Wht Soft Sh Char-Red-Maroon-Aqua (w/Pyr Inclus) Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por AA Chalk Wht Soft Pyr Mass Sh Drk Char- Red- Maroon- Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

4950

Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por AA Cht Wht-Gry-Amber Translu Shp Vit Chalk Wht Soft Sh Drk Char-Blk Carb -Red-Maroon-Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

_____MUNCIE CREEK SHALE 4964' (- 465) _____

30" CFS @ 4980' Sh Drk Char-Red-Maroon-Aqua Soft-Fissil Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por AA Cht Wht-Gry-Amber AA Translu Shp Vit Tr Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

60" CFS @ 4980' Sh Blk Carb-Drk Char-Red-Maroon-Aqua Soft-Fissil Ls Wht-Crm Fxln-Microxln Micritic Barren Grad Tr Poor Pin-Pt lxln Por AA Cht Wht-Gry-Amber AA Translu Shp Vit Tr Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

___ KANSAS CITY "DRUM" (H) 4989' (- 490) _____

Ls Wht-Crm-Gry Microxln Micritic Barren Grad Tr Fxln Pin-Pt lxln Por Chalk Wht Soft Sh Char-Red-Maroon-Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

5000

Ls Wht-Gry Microxln Micritic Barren Grad Tr Fxln Sucrosic lxln Por Chalk Wht Soft Sh Blk Carb-Char-Maroon Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Gry Microxln Micritic Barren Grad Tr Fxln Pin-Pt lxln Por (w/Tr Pyr Inclus) Chalk Wht Soft Sh Char-Maroon-Gry Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Crm-Gry Microxln Micritic Barren Chalk Wht Soft Sh Blk Carb-Char Abd -Red-Maroon-Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Gry Microxln Micritic Barren Chalk Wht Soft Sh Blk Carb-Char -Red-Maroon-Aqua (w/Tr Pyr Inclus) Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Gry Microxln Micritic Barren Chalk Wht Soft Sh Blk Carb-Char -Red-Maroon-Aqua (w/Tr Pyr Inclus) Soft-Fissil No Odor No Stn ? Sli Min Flor NS

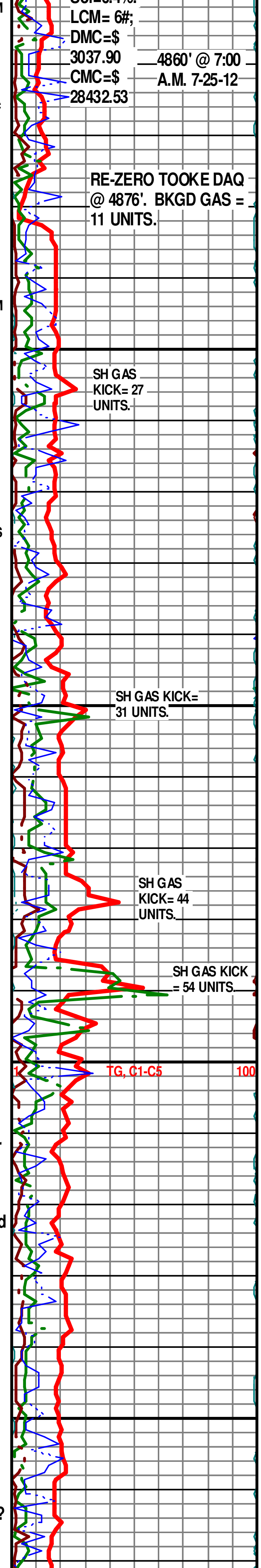
5050

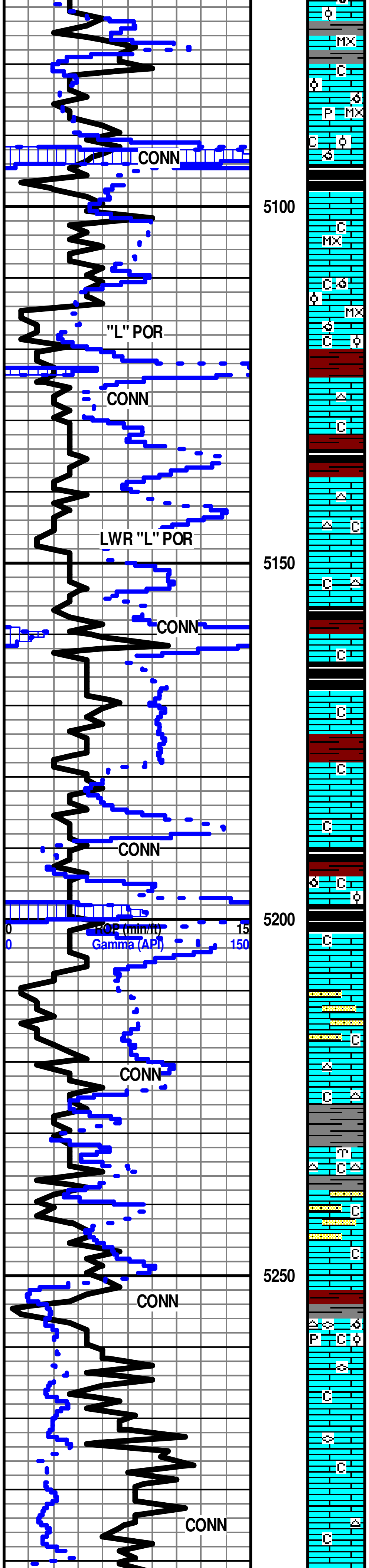
__________ STARK SHALE 5054' (- 555) ________

___ KANSAS CITY " SWOPE" 5058' (- 559) ______

Sh Blk Carb-Drk Char-Red-Maroon-Aqua Soft-Fissil Ls Wht-Crm Fxln-Microxln Micritic Barren Chalk Wht Soft Pyr Mass No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Fxln-Microxln Mostly Micritic Barren Grad Tr Poor Pin-Pt lxln





Por Grad tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Dec Chalk Wht Soft Sh Char-Red- Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm FxIn-MicroxIn Mostly Micritic Barren Grad Tr Poor Pin-Pt IxIn Por Grad tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Pyr Mass Chalk Wht Soft Sh Char-Red- Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

_____ HUSHPUCKNEY SHALE 5094' (- 595) _____

___ KANSAS CITY "HERTHA" (L) 5098' (-599) ___

Sh Blk Carb V Abd-Red-Char-Aqua-maroon Soft-Fissil Ls Gry - Crm FxIn-MicroxIn Micritic Barren Chalk Wht Soft Sh Char-Red- Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm FxIn-MicroxIn Mostly Micritic Barren Grad Tr Poor Pin-Pt IxIn Por Grad tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Pyr Mass Chalk Wht Soft Sh Char-Red- Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Sh Red V Abd-Char-Gry-Aqua Soft-Fissil (? Cave) Ls AA Tr Only Cht Wht Op Shp Vit Tr Only No Odor No Stn No Flor NS

Sh Red V Abd-Blk Carb-Char-Gry-Aqua Soft-Fissil (? Cave) Ls AA Tr Only No Odor No Stn No Flor NS

Ls Wht-Crm FxIn-MicroxIn Micritic Barren Grad Tr Poor Pin-Pt IxIn Por Cht Wht Op Shp Vit Tr Only Chalk Wht Soft Sh Blk Carb- Char-Red- Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm-Tan FxIn-MicroxIn Micritic Barren Grad Tr Poor-Fair Pin-Pt IxIn Por Cht Wht-Gry Op Shp Vit Tr Only Chalk Wht Soft Sh Blk Carb-Char-Red- Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor NS

______ BASE KANSAS CITY 5159' (- 660) ______

Sh Blk Carb-Char-Red-Aqua Soft-Fissil Ls Wht-Crm-Tan Micrite AA Chalk AA Tr Calcite No Odor Chalk Does Flor No Stn NS

Sh Blk Carb-Char-Red-Aqua Soft-Fissil Ls Wht-Crm-Tan Micrite AA Chalk AA Tr Calcite No Odor Chalk Does Flor No Stn NS

_________ MARMATON 5179' (- 680) __________

Sh Red V Abd- Char-Aqua Soft-Fissil Ls Wht-Crm-Tan Micrite AA Chalk AA No Odor Chalk Does Flor No Stn NS

Ls Wht-Crm FxIn-MicroxIn Micritic Barren Grad Tr Poor Pin-Pt IxIn Por Grad tr Poor OOM Por (w/OOL in pl) Tr Poor Leaching Poor InterOOM Por Poor Dissolu Poor Develop Chalk Wht Soft V Abd Sh Char-Red-Blk Carb Tr Only Soft-Fissil No Odor No Stn ? Sli Min Flor Dec NS

Ls Wht-Crm-Tan Micrite Barren Chalk Wht Soft Sh Red V Abd- Char-Aqua Soft-Fissil No Odor No Stn ? Sli Min Flor Dec NS

Sh Blk Carb-Char-Red-Aqua Soft-Fissil Ls Crm-Tan Micrite Qtz Ss Lt Grn VFGrn FairSort in Assoc Sh Chalk No Odor Chalk Does Flor No Stn NS

Ls Wht-Crm-Tan Micrite Barren Cht Wht Translu-Op Chalk Wht Soft Sh Red- Char Soft-Fissil Tr Only No Odor No Stn ? Sli Min Flor Dec NS

________ ALTAMONT 5232' (- 733) ____________

Ls Wht-Crm-Tan Micrite Barren Cht Wht Translu-Op Chalk Wht Soft Fos (? Bry) Sh Red-Char-Grn Soft-Fissil Tr Only No Odor No Stn ? Sli Min Flor Dec NS

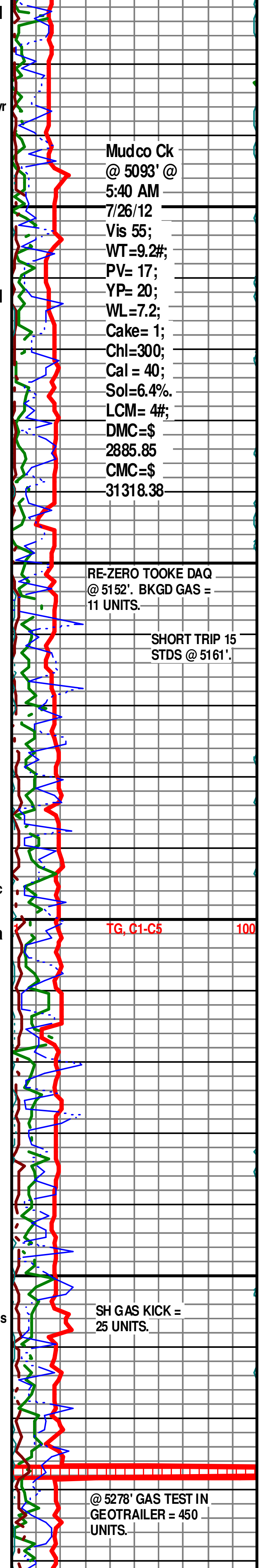
Ls Crm-Tan Micrite AA Qtz Ss Gry-Wht VFGrn FairSort Hvy CaCo3 Matrix Poor IGran Por Chalk Wht Soft Sh Red- Char Soft-Fissil Tr Only No Odor No Stn ? Sli Min Flor Dec NS

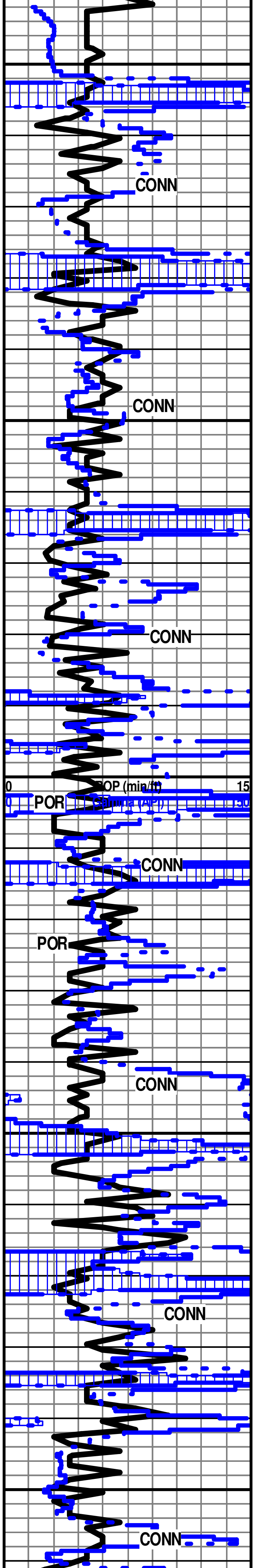
Ls Crm-Gry-Tan Micrite Barren (w/Tr Pyr) Inclus Grad Tr Poor Pin-Pt IxIn Por Grad Tr Poor-Fair OOM Por (w/OOL in pl) Tr Poor-Fair Leaching Poor-Fair InterOOM/OOL Por Poor Dissolu Tr Poor Vug Leaching Poor Develop Cht Wht Transp-Op Shp Vit Chalk Wht Soft Fos (Fuss) Sh Char-Red Tr Only Soft-Fissil No Odor No Stn ? Sli Min Flor Dec NS

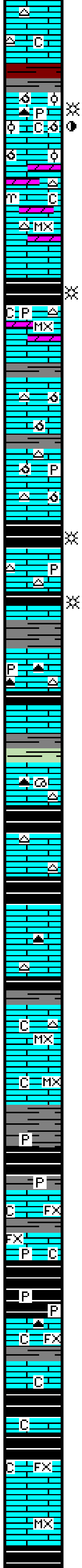
Ls Crm-Tan MicroxIn Micrite Barren Fos (Fuss) Chalky AA Sh Char-Red Soft-Fissil No Odor No Stn ? Sli Min Flor Dec NS

Ls Crm-Tan-Gry Abd (Banded) MicroxIn Micrite Barren Fos (Fuss) Chalky AA Sh Char-Maroon-Grn (Tr Only) Soft-Fissil No Odor No Stn ? Sli Min Flor Dec NS

Ls Crm-Tan-Gry Abd Inc MicroxIn Micrite Barren Grad FxIn Poor Pin-Pt IxIn Por (Tr Only) Cht-Gry Op Shp Vit Chalky AA Sh Char-Red-Grn (Tr Only) Soft-Fissil No Odor No Stn ? Sli Min Flor Dec NS







Ls Crm-Tan-Gry Abd Inc Microxln Micrite Barren Grad Fxln Poor Pin-Pt lxln Por (Tr Only) Cht-Gry Op Shp Vit Chalky AA Sh Char-Red Soft-Fissil No Odor No Stn ? Sli Min Flor Dec NS

5300

Sh Char-Red-Grn-Aqua Soft-Fissil Abd (50% Spl) Ls Crm-Gry-Tan Micrite (20% Spl) Barren Grad Dns Poor-Fair OOM Por (w/OOL in pl) w/SSG & SSO (Lt Brn-Both Gas & Oil Do Flor) Poor-Fair Leaching Poor InterOOM/OOL Por (V Poor InterConn OOM/OOL Por (20% Spl) Poor-Tr Fair Dissolu Poor Vug Leaching Poor Develop Cht Blk Op Shp Vit Chalk Wht Soft Pyr MassFos (Fuss) No Odor Fair Stn Flor (Lt Grn) SSG & SSO

Ls Wht-Crm-Tan Micrite Microxln Barren Poor Pin-Pt Fxln-Mxln lxln Por Grad Poor OOM Por AA Grad Dolo Gry Fxln (w/Pyr Inclus) Poor Sucrosic Por Barren Cht Wht Op Shp Vit Fos (Bry) Sh Char-Gry-Red -Maroon Soft-Fissil No Odor No Stn No Flor NS

LABETTE SHALE 5330' (- 831)

FORT SCOTT 5334' (- 835)

Sh Blk Carb (w/Pyr Inclus) V Abd-Red-Aqua Soft-Fissil Ls Wht-Crm-Tan Micrite Microxln Barren Poor Pin-Pt Fxln lxln Por AA Dolo Gry Fxln (w/Pyr Inclus) Poor Sucrosic Por Barren Cht Wht Transp- Op Shp Vit Inc No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln-Mxln lxln Por (w/Pry Inclus) Grad Poor-Fair OOM Por Grad Cht Wht Op Shp Vit Tr Only Sh Blk Carb-Char-Gry-Red Soft-Fissil No Odor No Stn No Flor NS

5350

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Grad Tr Poor-Fair OOM Por Grad Cht Wht Transl-Op Shp Vit Tr Only Pyr Mass Sh Blk Carb-Char-Gry-Red Soft-Fissil No Odor No Stn No Flor NS

CHEROKEE SHALE 5366' (- 867)

Sh Blk Carb-Char-Gry-Red Soft-Fissil LsCrm-Tan Micrite Microxln Barren (w/Pyr Inclus) Grad Poor Pin-Pt Fxln lxln Por Grad Tr Poor-Fair OOM Por Grad Cht Wht Op Shp Vit No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Cht Wht Op Shp Vit Sh Blk Carb-Char-Gry-Red-Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Cht Wht-Drk Amber (w/Pyr Inclus) Translu-Op Shp Vit Sh Blk Carb -Char -Gry-Red -Aqua Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Cht Wht-Drk Amber Op Shp Vit Sh Blk Carb -Char -Gry-Red -Aqua-Maroon Soft-Fissil No Odor No Stn No Flor NS

5400

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Cht Wht-Drk Amber Op Shp Vit Fos (Gastro) Sh Blk Carb -Char -Gry-Red - Aqua- Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Cht Wht Op Shp Vit Sh Blk Carb -Char -Gry-Red - Aqua- Maroon Soft-Fissil No Odor No Stn No Flor NS

Sh Blk Carb -Char -Gry-Red - Aqua- Maroon Soft-Fissil Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Cht Wht Op Shp Vit No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Micrite Microxln Barren Grad Poor Pin Pt Fxln lxln Por Cht Wht-Drk Amber Op Shp Vit Sh Blk Carb -Char -Gry-Red-Aqua-Maroon Soft-Fissil No Odor No Stn No Flor NS

JOHNSON 5433' (- 934)

Sh Blk Carb -Char -Gry-Red - Aqua- Maroon Soft-Fissil Ls Tan-Gry Micrite Microxln Barren Grad Poor Pin-Pt Fxln lxln Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

BASE JOHNSON 5445' (- 946)

Sh Blk Carb Fissil V Abd-Char (w/Pyr Inclus) Gry-Red-Aqua Tr Only Ls Crm-Gry-Tan Flxn Micrite Barren Chalk No Odor No Stn No Flor NS

5450

ATOKA LIME 5458' (- 959)

Sh Blk Carb Fissil V Abd-Char-Gry-Red-Aqua Tr Only Ls Crm-Gry -Tan Flxn Micrite Barren Fos (Crin) Chalk No Odor No Stn No Flor NS

Sh Blk Carb Fissil V Abd-Char (w/Pyr Inclus) Gry-Red-Aqua Tr Only Ls Crm-Gry-Tan Flxn Micrite Barren Cht Blk Op Shp Vit Chalk No Odor No Stn No Flor NS

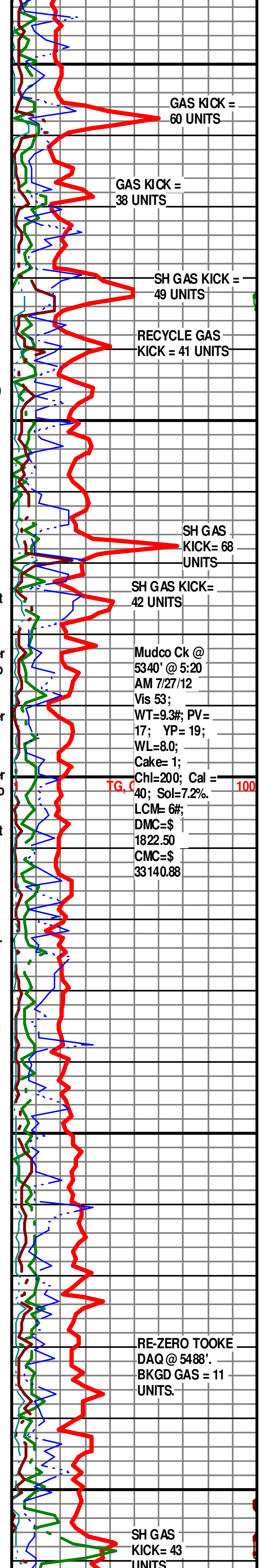
Sh Blk Carb Fissil V Abd-Char-Gry-Red-Aqua Tr Only Ls Crm- Gry- Tan Flxn Micrite Barren Chalk No Odor No Stn No Flor NS

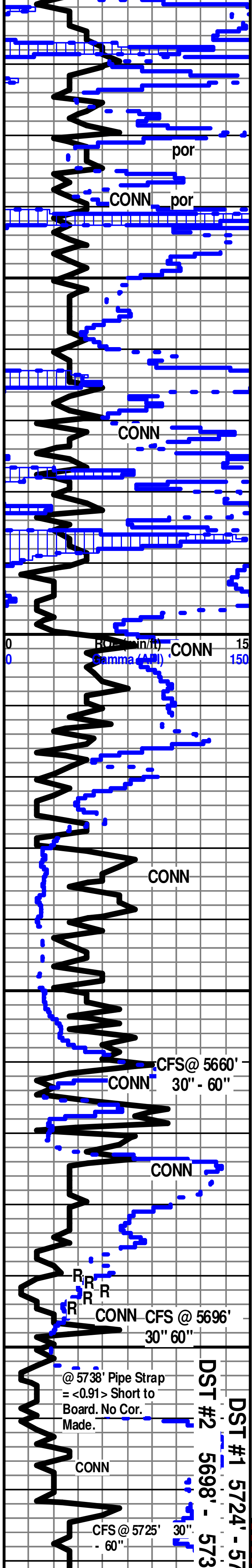
Sh Blk Carb Fissil V Abd-Char-Gry-Red-Aqua Tr Only Ls Crm-Gry Flxn Micrite Barren Chalk Tr Only No Odor No Stn No Flor NS

5500

Ls Gry-Crm Microxln Dns Micrite Sh Blk Carb Fissil V Abd- Char- Gry No Odor No Stn Scatt ? Min Flor NS

Ls Crm-Gry Microxln Dns Micrite Grad Fxln Pin-Pt lxln Por Barron Cht





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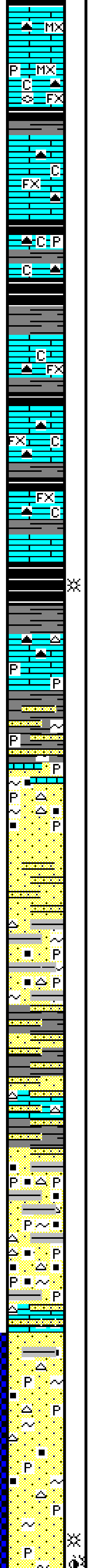


Amber Translu Shp Vit Sh Blk Carb Fissil V Abd-Char-Gry Tr Red No Odor No Stn Scatt ? Min Flor NS

Ls Wht-Crm-Gry-Tan Microxln Dns Micrite Grad Fxln Pin Pt Ixln Por Barron Cht Amber Translu -Op Shp Vit Chalk Pyr Mass Foss (Fuss) Sh Blk Carb Fissil V Abd-Char-Gry Tr Red No Odor No Stn Scatt ? Min Flor NS

Ls Wht-Crm-Gry-Tan Fxln Dns Micrite Barron Cht Amber-Blk Op Shp Vit V Abd Chalk Sh Blk Carb Fissil V Abd-Char-Gry Tr Red No Odor No Stn Scatt ? Min Flor NS

Ls Crm-Gry-Tan Fxln Dns Micrite Barron Cht Amber (w/Pyr Inclus)-Blk Op Shp Vit Abd Chalk Sh Blk Carb Fissil V Abd- Char- Gry Tr Red No Odor No Stn Scatt ? Min Flor NS

Ls Crm-Gry-Tan Fxln Dns Micrite Barron Cht Amber-Blk Op Shp Vit Abd Chalk Pyr Mass Sh Blk Carb -Char-Gry Tr Red Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

Ls Crm-Gry-Tan Fxln Dns Micrite Barron Cht Amber (Banded Wht) Translu-Op Shp Vit Abd Chalk Sh Blk Carb -Char-Gry Tr Red Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

Ls Crm-Gry-Tan Fxln Dns Micrite Barron Cht Amber-Drk Gry Translu-Op Shp Vit Chalk Sh Blk Carb -Char-Gry Tr Red Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

Ls Crm-Gry-Tan Fxln Dns Micrite Barron Cht Wht-Amber-Blk Translu-Op Shp Vit Chalk Pyr Mass Sh Blk Carb -Char-Gry Tr Red Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

MORROW SHALE 5590' (- 1091)

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

MORROW LIME 5600' (- 1101)

Ls Crm-Gry-Tan Fxln Dns Micrite Barron Cht Blk (Banded Wht)-Amber Translu-Op Shp Vit Chalk Sh Blk Carb -Char-Gry-Aqua (w/Pyr Inclus)-Red Soft-Fissil No Odor No Stn Scatt No Flor NS

BASE MORROW LIME 5608' (- 1109)

Qtz Ss Wht Small-Med Clear-Frosted Well Rd SS Clusters Well Sort Friable Tr Carb & Glacu (w/Pyr Inclus) & Micaceous Barren Ls Tr AA Chalk Tr AA Sh Char--Gry Fissil Mo Odor No Flor No Stn NS

1st MORROW SAND 5618' (- 1119)

Qtz Ss Wht Small-Med-Lg Clear-Frosted Grns Ang-Sub Ang-Poor Rd Med-Well Sort V Friable Tr Carb & Glacu (w/Pyr Inclus & Micaceous w/Poor CaCo3 Cmt Grad- No Cmt) Barren Ls Tr AA Cht Amber Translu Shp-Vit Chalk Tr AA Sh Char--Gry Fissil No Odor No Flor No Stn NS

Qtz Ss Wht Small-Med-Lg Clear-Frosted Grns Ang-Sub Ang-Poor Rd Med-Well Sort V Friable Tr Carb & Glacu (w/Pyr Inclus & Micaceous w/Poor CaCo3 Cmt Grad- No Cmt) Barren Ls Tr AA Cht Amber Translu Shp-Vit Chalk Tr AA Sh Char--Gry Fissil No Odor No Flor No Stn NS

30" CFS @ 5660' Qtz Ss Wht Small-Med-Lg Clear-Frosted Grns Ang -Sub Ang- Poor Rd Med-Well Sort Friable Grad Dns Carb & Glacu (w VAbd /Pyr Inclus & Micaceous w/Inc CaCo3 Cmt) Barren Pyr Mass Abd Ls Tr AA Cht Amber Translu Shp-Vit Chalk Tr AA Sh Char-Gry Fissil No Odor No Flor No Stn NS

60" CFS @ 5660' Sh Char-Gry Fissil Qtz Ss Wht Small-Med Clear-Frosted Grns Ang-Sub Ang-Poor Rd Med-Well Sort Friable Grad Dns Tr Carb & Glacu (w V Abd /Pyr Inclus & Micaceous w/Inc CaCo3 Cmt) Barren Pyr Mass Abd Ls Tr AA Cht Amber Translu Shp-Vit Chalk Tr AA No Odor No Flor No Stn NS

2nd MORROW SAND 5674' (- 1175)

30" CFS @ 5696' Qtz Ss Wht Small-Med-Lg Clear-Frosted Grns Ang -Sub Ang To Fair Rd Med-Well Sort Friable Grad Dns Carb & Glacu (w V Abd w/ Pyr Inclus & Micaceous w/Hvy CaCo3 Cmt in Lg Grn Ang Dns Qtz Ss) Barren Pyr Mass Abd Ls AA Cht Wht-Peach Translu Shp-Vit Chalk Tr AA Sh Char-Gry Fissil No Odor No Flor No Stn NS

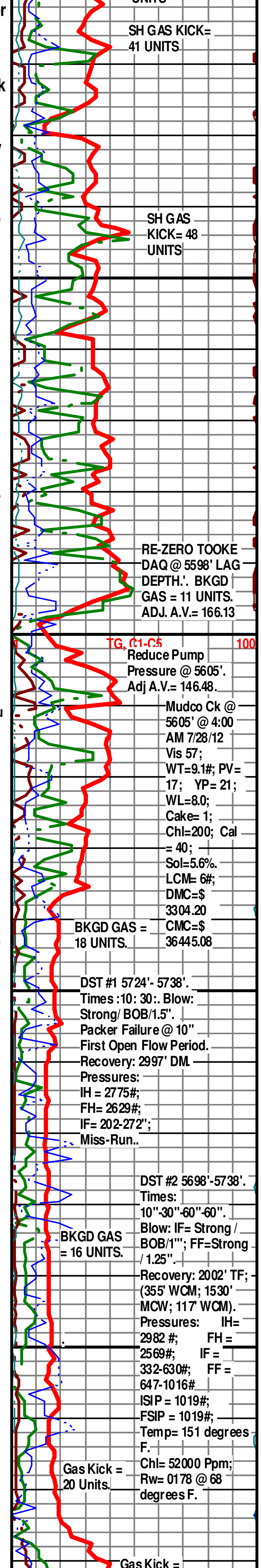
60" CFS @ 5696' Qtz Ss Wht Small-Med-Lg Clear-Frosted Grns Ang -Sub Ang To Fair Rd Med-Well Sort Friable Grad Dns Tr Hvy Carb Mat & Glacu (w V Abd w/ Pyr Inclus & Micaceous w/Hvy CaCo3 Cmt in Lg Grn Ang Dns Qtz Ss) Barren Pyr Mass Abd Ls AA Cht Wht-Yell Translu-Op Shp-Vit Chalk Tr AA Sh Char-Gry Fissil No Odor No Flor No Stn NS

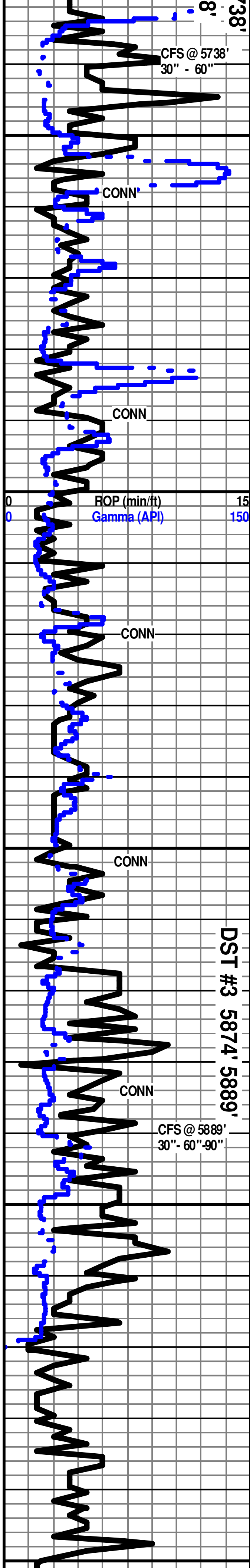
3rd MORROW SAND (V-7) 5698' (- 1199)

30" CFS @ 5725' Qtz Ss Wht Med-Lg Clear-Frosted Grns Ang-Sub Ang Poor Rd Med-Well Sort Friable Grad Dns Tr Hvy Carb Mat & Glacu (w/ Pyr Inclus CaCo3 Cmt in Lg Grn Ang Dns Qtz Ss) Barren Pyr Mass Ls AA Tr Cht Wht-Yell Translu-Op Shp-Vit Chalk Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

60" CFS @ 5725' Qtz Ss Wht Med-Lg Clear-Frosted Grns Ang-Sub Ang Poor Rd Med-Well Sort Friable Grad Dns Tr Hvy Carb Mat & Glacu (w/ Pyr Inclus CaCo3 Cmt in Lg Grn Ang Dns Qtz Ss) Barren Pyr Mass Ls AA Tr Cht Wht-Yell Translu-Op Shp-Vit Chalk Sh Blk Carb-Char-Gry Fissil Inc No Odor No Flor No Stn NS

30" CFS @ 5738' Sh AA Qtz Ss AA Lg Ang Grns Ls AA Cht AA No Odor No Stn No Flor NS





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60" CFS @ 5738' Qtz Ss Wht Lg Clear-Frosted Grns Ang Poor Rd Poor Sort Friable Good lGran Por w/Glacu (w/ Pyr Inclus CaCo3 Cmt) w/ SSG & SSO (Lt Brn Stn (3 Pcs) Pyr Mass Ls AA Tr Cht Yell-Org Op Shp-Vit Chalk Tr Sh Blk Carb-Char-Gry Fissil Inc No Odor No Flor Sli Tr Stn SSG & SSO

Sh Blk-Carb Char-Gry-Red-Maroon-Brn Soft-Fissil Abd Ls Wht - Crm Fxln Dns Micrite Grad Poor Pin-Pt lxln Por (w/Pyr Inclus) Chalk Wht Soft No Odor No Stn Scatt ? Min Flor NS

KEYES 5758' (- 1259)

Sh Char-Gry-Red-Maroon-Brn Soft-Fissil Abd Ls Wht-Crm Fxln Dns Micrite Grad Poor Pin-Pt lxln Por (w/Pyr Inclus) Chalk Wht Soft No Odor No Stn Scatt ? Min Flor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor Pin-Pt lxln Por (w/Pyr Inclus) Chalk Wht Soft Fos (Brach) Sh Char-Gry-Red-Aqua Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor Pin-Pt lxln Por Chalk Wht Soft Fos (Brach Abd, Crin) Pyr Mass Sh Char-Gry-Red-Grn Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor Pin-Pt lxln Por Chalk Wht Soft Sh Char-Gry-Aqua Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor-Fair Pin-Pt lxln Por Grad ? Poor OOM Por Chalk Wht Soft Sh Blk Carb-Char Soft-Fissil No Odor No Stn Scatt ? Min Flor NS

MISS. "SALEM"(SPERGEN) 5810' (- 1311)

Dolo Tan-Crm-Gry Fxln- Microxln Poor Pin-Pt lxln Sucrosic Por (w/Tr Pyr Inclus) Barren Ls Microxln Micrite Barren (w/? Min Flor) Chalk Sh Char-Gry-Red Soft-Fissil No Odor No Flor (Dolo) No Stn NS

Dolo Tan-Crm-Gry Fxln Fxln- Microxln Poor Pin-Pt lxln Sucrosic Por (w/Tr Pyr Inclus) Barren Ls Microxln Micrite Barren (w/? Min Flor) Chalk Sh Char-Gry-Red Soft-Fissil No Odor No Flor (Dolo) No Stn NS

Dolo-Gry-Crm-Tan Fxln Fxln- Microxln Poor Pin-Pt lxln Sucrosic Por (w/Tr Pyr Inclus) Barren Ls Microxln Micrite Barren (w/? Min Flor) Chalk Sh Char-Gry-Red Soft-Fissil No Odor No Flor (Dolo) No Stn NS

Dolo-Gry-Crm-Tan Fxln Fxln- Microxln Poor Pin-Pt lxln Sucrosic Por (w/Tr Pyr Inclus) Barren Ls Microxln Micrite Barren (w/? Min Flor) Chalk Sh Char-Gry-Red Soft-Fissil No Odor No Flor (Dolo) No Stn NS

Dolo-Gry-Crm-Tan Fxln Fxln- Microxln Poor Pin-Pt lxln Sucrosic Por (w/Tr Pyr Inclus) Barren Ls Microxln Micrite Barren (w/? Min Flor) Chalk Sh Char-Gry-Red Soft-Fissil No Odor No Flor (Dolo) No Stn NS

MISSISSIPPIAN "WARSAW" 5817' (- 1318)

Dolo-Gry-Crm-Tan Fxln Fxln- Microxln Poor Pin-Pt lxln Sucrosic Por (w/Tr Pyr Inclus) Barren Ls Microxln Micrite Barren (w/? Min Flor) Chalk Sh Char-Gry-Red Soft-Fissil No Odor No Flor (Dolo) No Stn NS

30" CFS @ 5989' Dolo Lt Brn-Crm Good ?Fxln Sucrosic Por Ls Wht-Crm-Tan F-Med -Lg Xln Por Cht Wht-Amber Translu-Op Shp Vit Chalk AA Sh AA No Odor Tr ? Min Flor (Lt Grn in Ls) No Stn ? SG

60" CFS @ 5989' Dolo Lt Brn-Crm Good ?Fxln Sucrosic Por w/SG (1 Pc w/Tr Gas Bbl) Ls Wht-Crm-Tan F-Med -Lg Xln Por Cht Wht-Amber Translu-Op Shp Vit Chalk AA Fos (Crin) Sh AA No Odor Tr ? Min Flor (Lt Grn in Ls) No Stn SSG

90" CFS @ 5989' Dolo AA Ls AA Cht AA Chalk AA Sh AA No Odor No Stn Scat ? Min Flor in LS ? SG

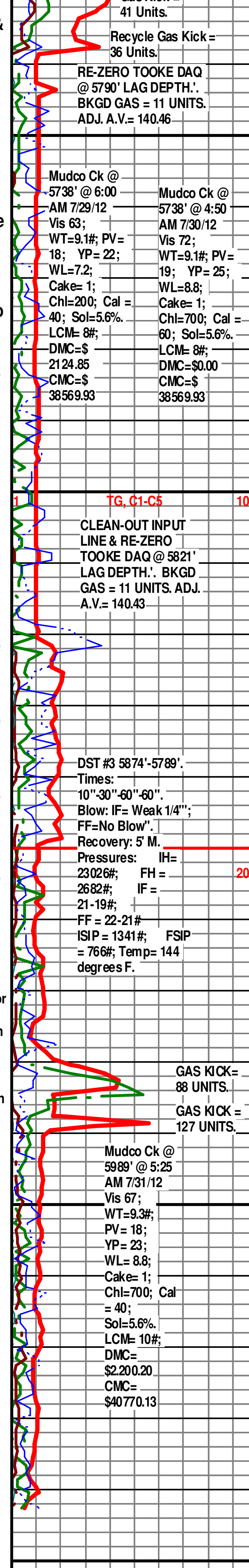
Ls Wht Microxln Dns Micrite (w/Glacu Inclus) Barren Grad Fxln Fair Sucrosic Dolo Crm-Tan AA Grad Fair Sucrosic Cht Wht Op Shp Vit Abd Chalk Pry Mass Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht Microxln Dns Micrite (w/Glacu Inclus) Barren Grad Fxln Fair Sucrosic Dolo Crm-Tan AA Grad Fair Sucrosic Cht Wht Op Shp Vit Abd Chalk Pry Mass Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht Microxln Dns Micrite (w/Glacu Inclus) Barren Grad Fxln Fair Sucrosic Dolo Crm-Tan AA Grad Fair Sucrosic Cht Wht Op Shp Vit Abd Chalk Pry Mass Sh Char-Gry Fissil No Odor No Stn No Flor NS

Lost Circulation - No Sample

MISSISSIPPIAN "ST. JOE" 5947' (- 1451)



Lost Circulation @ 5954'

R.T.D. 5954' (-1455)

L.T.D. =2951' (-1452)

Lost Circulation - No Sample

Geologist Left Location @ 5:00 P.M. 8-1-12

6000

0 ROP (min/ft) 15

0 Gamma (API) 150

1 TG, C1-C5 200

6050

6100

6150

0 ROP (min/ft) 15
0 Gamma (API) 150

1 TG, C1-C5 200

6200

6250

6300