

DSTs

DST #1 3444'-3516'; Times: 5"-90"-110"-1180"

Blow: IF Strg Blow- BOB/1"; FF BOB - GTS/1".

Recovery: 3295' GIP; 125' Mud;

Pressures:

IH 1618#; FH 1612#;

IF 84-74 #; FF 103-117 #;

ISIP 931 #; FSIP 914 #; Temp = 99 Degrees.

Gas Flow Rates on FF=

@ 10" = 129 Mcf;

@ 20" = 166 Mcf

@ 30" = 183 Mcf;

@ 40" = 193 Mcf;

@ 50' = 205 Mcf;

@ 60" = 213.5 Mcf;

@ 70" = 219 Mcf;

@ 80 " = 222 Mcf;

@ 90" = 226 Mcf;

@ 100" = 226 Mcf;

@ 110" = 228.5 Mcf.

Comments

ROCK TYPES

	Anhy		Congl		Mrlst		Ss		New symbol
	Bent		Dol		Salt		Till		Grn sh
	Brec		Gyp		Shale		Gry sh		Red sh
	Cht		Igne		Shcol		Blk carb sh		Blk line
	Clyst		Lmst		Shgy		Blk carb sh		
	Coal		Meta		Slstst		Green sh		

ACCESSORIES

MINERAL		FOSSIL	
	Anhy		Algae
	Arggrn		Amph
	Arg		Belm
	Bent		Bioclst
	Bit		Brach
	Brecfrag		Bryozoa
	Calc		Cephal
	Carb		Coral
	Chtdk		Crin
	Chtlt		Echin
	Dol		Fish
	Feldspar		Foram
	Ferrpel		Fossil
	Ferr		Gastro
	Glau		Oolite
			STRINGER
			TEXTURE

2700
2750
2800
2850

CHASE GROUP 2656' (+ 155')

Ls Crm-Wht Grad Sli Dolo Wht-Gry Fxln No Vis Por Dns Sh Gry Grn AA No Odor No Stn V. Sli. Flor

Dolo Wht-Gry Fxln tr Poor-Med Sucrosic Por w/Fair lxln PorTr. Leaching Por Sh Gry Grn AA No Odor Te Brn Stn V. Sli. Flor Lt Grn w/ Fair SG when Broken

30" CFS Dolo Wht-Gry Fxln tr Poor-Med Sucrosic Por w/Fair lxln PorTr. Leaching Por Sh Gry Grn AA No Odor Tr Brn Stn V. Sli. Flor Lt Grn w/ Fair SG w/ Broken

60" CFS Dolo Wht-Gry Fxln tr Poor-Med Sucrosic Por w/Fair lxln PorTr. Leaching Vug Por Sh Gry Grn AA No Odor Tr Brn Stn V. Sli. Flor Lt Grn w/ Fair SG w/ Broken

Dolo AA Sh Gry-Grn No Odor No Stn No Flor NS

WINFIELD 2720' (+91)

Dolo Wht-Crm Fxln Fair-Med Sucrosic Por w/ Sm-Med Vug Leaching w/ Fair-Good Show Gas Faint Scatt Flor (Pale-Lt Grn) tr ? Gillsonitic Residue No Odor ? Stn

Dolo Wht-Crm Fxln Fair-Med Sucrosic Por w/ Sm-Med Vug Leaching w/ Fair Fos Plant -Good Show Gas Faint Scatt Flor (Pale-Lt Grn) tr ? Gillsonitic Residue No Odor ? Stn Lt Grn Flor HC Cut w/Acid

30" CFS Dolo Wht-Crm Fxln Fair-Med Sucrosic Por w/ Sm-Med Vug Leaching w/ Fair-Dec Show Gas Faint Scatt Flor (Pale-Lt Grn) Tr ? Gillsonitic Fos Plant Residue No Odor ? Stn Lt Grn Scatt Dec Flor

60" CFS Dolo Wht-Crm Fxln Poor-Fair Sucrosic Por w/ Tr. Sm-Med Vug Leaching w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? Dec Gillsonitic Fos Plant Residue No Odor ? V Sli Stn (Lt Gr) Inc Barron Fxln NS

TOWANDA 2764' (+ 47)

Dolo Wht-Crm Fxln Poor-Fair Sucrosic Por w/ Tr. Sm Vug Leaching AA w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? Dec Gillsonitic Fos Plant Residue No Odor ? Mostly Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil NS

Dolo Wht-Crm-Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN w/ Tr. Sm Vug Leaching AA w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? Dec Gillsonitic Fos Plant Residue No Odor ? Mostly Barron Fxln Cht Wht Op Shp Vit Sh Abd Red-Tr. Gry Soft Fissil NS

Dolo Wht- Crm- Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN w/ Tr. Sm Vug Leaching AA w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? Dec Gillsonitic Fos Plant Residue No Odor ? Mostly Barron Fxln Cht Wht Op Shp Vit Sh Abd Red-Tr. Gry Soft Fissil NS

FORT RILEY 2810' (+ 1')

Dolo Wht- Crm- Gry Dec Fxln Poor-Fair Sucrosic Por Grad Dns FXLN AA w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) No Odor Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Dolo Wht- Crm- Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN Micrite AA Fos Crin w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) Few Pcs No Odor Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Dolo Wht- Crm- Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN Micrite AA Fos Crin w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) Few Pcs No Odor Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Gas Kick = 25 Units
Bkgd Gas= 12.5 Units

CONN LOST DATA

Gas Kick = 41 Units
Bkgd Gas= 11.8 Units

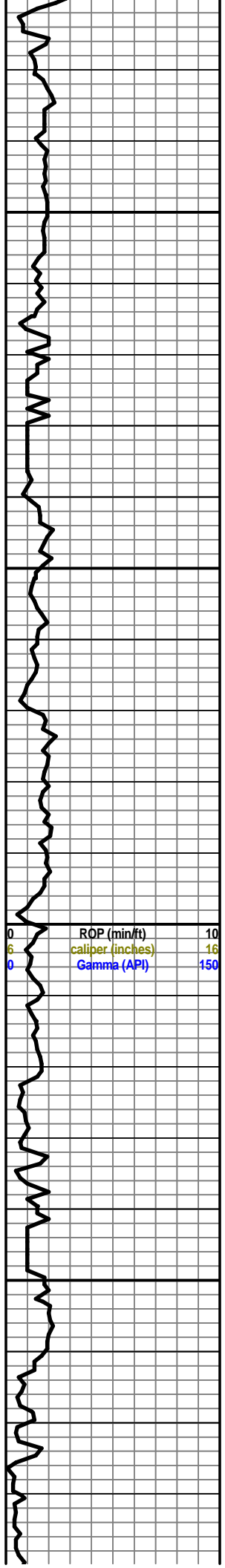
TG, C1-C5 100

Gas Kick = 15 Units
Bkgd Gas= 8.5 Units

CFS @ 2700'
30" - 60"

CFS @ 2759'
30" - 60"

ROP (min/ft) 10
caliper (inches) 16
Gamma (API) 150



2900

2950

3000

3050

0	ROP (min/ft)	10
6	caliper (inches)	16
0	Gamma (API)	150



Dolo Wht- Crm- Gry FxIn Poor-Fair Sucrosic Por Grad Dns FXLN Micrite AA w/ Pyr
Inclus Fos Crin w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) Few Pcs No Odor
Barron FxIn Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Dolo Wht- Crm- Gry FxIn Poor-Fair Sucrosic Por Grad Dns FXLN Micrite AA w/ Pyr
Inclus Fos Crin w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) Few Pcs No Odor
Barron FxIn Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Dolo Wht-Crm Grad Ls Crm- Abd Gry FxIn Micrite to Poor Sucrosic Por AA Sh
Abd Red-gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Dolo Wht-Crm Grad Ls Crm- Abd Gry FxIn Micrite to Poor Sucrosic Por AA Sh
Abd Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Dolo Abd Gry FxIn V Poor Sucrosic Por AA Ls Crm FxIn Micrite Sh V Abd
Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Dolo Abd Gry FxIn V Poor Sucrosic Por AA Ls Crm FxIn Micrite Sh V Abd
Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Dolo Abd Gry FxIn V Poor Sucrosic Por AA Ls Crm FxIn Micrite Sh V Abd
Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

WREFORD 3000' (-489)

Dolo Abd Gry FxIn V Poor Sucrosic Por AA Ls Crm FxIn Micrite Sh V Abd
Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

BASE CHASE GROUP 3022' (-211)

Ls Crm FxIn Micrite Dolo Abd Gry FxIn V Poor Sucrosic Por AASh V Abd
Red-Gry Inc Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Ls Wht-Crm FxIn Micrite w/Pry Inclus Sh Dec Red-Gry Fissil - Soft No Odor Tr
Scatt Flor (Lt Grn) ? Min Flor NS

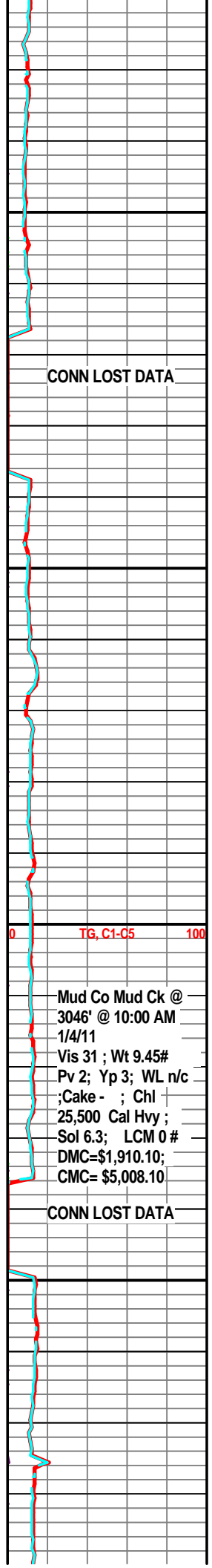
BADER 3049' (-238)

Ls Wht FxIn Micrite w/Pry Inclus Grad Abd Med OOM Por Fair Dis Fair Devel
Barren Sh Dec Red-Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

COTTONWOOD 3064' (- 253)

Ls Wht FxIn Micrite w/Pry Inclus Grad Abd Med OOM Por Fair Dis Fair Devel
Barren Sh Dec Red-Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Ls Wht FxIn Micrite w/Pry Inclus Grad Abd Med OOM Por Fair Dis Fair Devel
Barren Sh Dec Red-Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

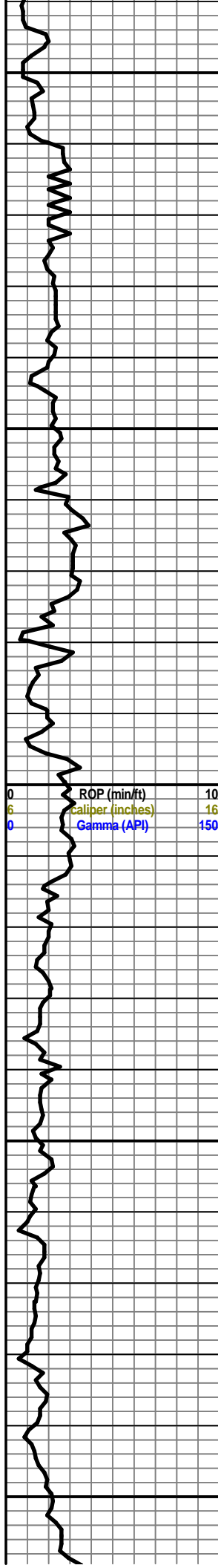


CONN LOST DATA

TG, C1-C5 100

Mud Co Mud Ck @
3046' @ 10:00 AM
1/4/11
Vis 31 ; Wt 9.45#
Pv 2; Yp 3; WL n/c
; Cake - ; Chl
25,500 Cal Hvy ;
Sol 6.3; LCM 0 #
DMC=\$1,910.10;
CMC= \$5,008.10

CONN LOST DATA



3100
 3150
 3200
 3250
 3300



Ls Wht FxIn Micrite w/Pry Includ Grad Abd Med OOM Por Fair Dis Fair Devel
 Barren Sh Dec Red-Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Ls Wht FxIn Tr Poor Gran IxIn Por Micrite Dns Abd Min Flor Sh Abd Red-Gry- Grn
 Fissil No Odor No Stn NS

Ls Wht FxIn Tr Poor Gran IxIn Por Micrite Dns Abd Min Flor Sh Abd Red-Gry- Grn
 Fissil No Odor No Stn NS

NEVA 3140' (- 329)

@ 3150' Samples Start 10' Interval Wet & Dry

Ls Wht FxIn Tr Poor Gran IxIn Por Micrite Dns Abd Min Flor Cht Crm Op Shp Vit
 Sh Abd Red-Gry- Grn Fissil No Odor No Stn NS

Ls Wht FxIn Tr Poor Gran IxIn Por Micrite Dns Abd Min Flor Sh Abd Red-Gry- Grn
 Fissil No Odor No Stn NS

Ls Wht FxIn Tr Poor Gran IxIn Por Micrite Dns Fos Crin Abd Min Flor Sh Abd
 Red-Gry- Grn Fissil No Odor No Stn NS

RED EAGLE 3174' (- 363')

Ls Wht FxIn Tr Poor-Igran IxIn Por Fos Crin Abd Min Flor ? SG Sh Abd Red-Gry-
 Grn Fissil No Odor No Stn NS

Ls Wht FxIn Tr Poor-Igran IxIn Por Fos Crin Abd Min Flor ? SG Sh Abd Red-Gry-
 Grn Fissil No Odor No Stn NS

BASE COUNCIL GROVE 3196' (-385)

DISPLACE MUD SYSTEM @ 3200'

Ls Wht FxIn Tr Poor-Igran IxIn Por AA Abd Min Flor Sh V Abd Red-Gry- Grn Fissil
 No Odor No Stn NS

Ls Wht FxIn Tr Poor-Igran IxIn Por AA Abd Min Flor Sh V Abd Red-Gry- Grn Fissil
 No Odor No Stn NS

Ls Wht FxIn Tr Poor-Igran IxIn Por AA Tr Min Flor Sh V Abd Red-Gry- Grn Fissil
 No Odor No Stn NS

Ls Wht FxIn Tr Poor-Igran IxIn Por AA Tr Min Flor Sh V Abd Red-Gry- Grn Fissil
 No Odor No Stn NS

FORAKER 3250' (- 439)

Ls Crm FxIn Poor-Fair IxIn Por Fos Spic Tr Igran Poor Por No Flor No Odor No Stn
 Sh Red-Brn Dec NS

Ls Crm FxIn Poor-Fair IxIn Por Fos Spic Tr Igran Poor Por No Flor No Odor No Stn
 Sh Red-Brn Dec NS

Ls Crm FxIn Poor-Fair IxIn Por Fos Spic Tr Igran Poor Por Tr Chalk No Flor No
 Odor No Stn Sh Red-Brn Dec NS

Ls Crm-Gry-Wht FxIn Poor-Fair IxIn Por Tr OOL Por w/OOL in pl Poor Poor Dis
 Poor Devel Por Tr Inc Chalk No Flor No Odor No Stn Sh Dec Red-Brn Dec NS

Ls Crm-Gry-Wht FxIn Poor-Fair IxIn Por Tr OOL Por w/OOL in pl Poor Poor Dis
 Poor Devel Por Tr Inc Chalk No Flor No Odor No Stn Sh Red-Brn Dec NS

Ls Crm-Gry FxIn Poor-Fair IxIn Por TrDc OOL Por w/OOL in pl Poor Poor Dis

CONN LOST DATA

Gas Kick =
 15 Units
 Bkgd Gas =
 9 Units

TG, C1-C5 100

CONN LOST DATA

Poor Devel For Mostly LS Gry Tr Inc Chalk Sh Gry Dec Red Soft No Flor No Odor No Stn Sh Red-Brn Dec NS

ADMIRE GROUP 3326' (-515)

Ls Crm-Gry Fxln Por Poor Ixln Por Fos Fussil Chalk SH Gry- Char Soft No Odor No Flor AA No Stn NS

Ls Crm-Gry Fxln Por Poor Ixln Por Fos Fussil Chalk SH Gry- Char Soft No Odor No Flor AA No Stn NS

Ls Crm AA Tr Poor OOM Por w/OOI in pl Poor- No Dis Poor Devel Mostly Fxln Chalk Cht GrySH Gry- Char Soft No Odor Sli Tr Min Flor AA No Stn NS

Ls Crm AA Poor-Fair OOM Por Poor Dis Poor Devel Mostly Fxln Chalk SH Gry- Char- Soft No Odor Sli Tr Min Flor AA No Stn NS

Ls Crm AA Tr Poor OOM Por Poor Dis Poor Devel Mostly Fxln Chalk SH Gry- Char Soft No Odor Sli Tr Min Flor AA No Stn NS

Ls Crm-Gry AA Tr Dec Poor OOM Por Poor Dis Poor Devel Chalk SH Gry- Char Soft No Odor Sli Tr Min Flor AA No Stn NS

Ls Crm AA Tr Dec Poor OOM Por Poor Dis Poor Devel Chalk SH Gry- Char Soft No Odor Sli Tr Min Flor AA No Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Fos Fussil Crm Fxln Poor Ixln Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Fos Fussil Crm Fxln Poor Ixln Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Fos Fussil Crm Fxln Poor Ixln Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Fos Fussil Crm Fxln Poor Ixln Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Fos Ls Fussil Crm Fxln Poor Ixln Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Fos Ls Fussil Crm Fxln Poor Ixln Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

ROOT SHALE 3451' (-640')

Sh Red- Gry-Char Abd Soft AA (Wash Red) Ls Crm AA Tr Poor OOM Por Poor Dis Poor Devel Chalk No Odor Sli Tr Min Flor AA No Stn NS

Sh Gry-Char Abd Soft AA Ls Crm AA Tr Poor OOM Por Poor Dis Poor Devel Chalk No Odor Sli Tr Min Flor AA No Stn NS

Sh Gry-Char Abd Soft AA Ls Crm AA Tr Poor OOM Por Poor Dis Poor Devel Chalk No Odor Sli Tr Min Flor AA No Stn NS

STOTLER 3480' (- 669)

Ls Crm Fxln Poor Ixln Por Micritic Fos Pelecy Ls Crm Fxln Poor Ixln Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Fos Fussil Tr Ls Gry w/OOL in pl Poor Dis Poor Dev Poor IOOL Por Chalk Tr Inc Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No HC Stn NS

45" CFS Ls Wht Fxln w/ Tr Scat Vug Leaching Poor-Fair Ixln Por "Tite" ? Frac Por Fos Crin Good Scatt Flor (Lt Grn) No Odor Sli SG (Few Gas Bubles in Tray) (No Gas Flor) Sli SG

60" CFS Ls Wht Fxln w/ Tr Scat Vug Leaching Fair Ixln Por "Tite" ? Frac Por Fos Crin Good Scatt Flor (Lt Grn) No Odor Sli SG (Few Gas Bubles in Tray) (No Gas Flor) Sli Inc SG

Mostly Trip Debris Grad Ls Wht-Gry Fxln Poor Ixln Por Micritic Abd Chalk Scatt Stn Flor (Lt Grn) No Odor Sli Stn Flor AA NS

3350

3400

3450

3500

DST #1 3444'-3516'
Times: 5"-90"-110"-1180"
Blow: _____
IF Strg Blow- BOB/1"
FF BOB - GTS/1"

Recovery: 3295' GIP; 125'
Mud; _____

Pressures:
IH 1618#; FH 1612#;
IF 84-74 #; FF _____
103-117 #; ISIP 931 #;
FSIP 914 #;
Temp = 99 Degrees

ROP (min/ft)	10
caliper (inches)	16
Gamma (API)	150

Gas Flow Rates on FF=

- @ 10" = 129 Mcf;
- @ 20" = 166 Mcf;
- @ 30" = 183 Mcf;
- @ 40" = 193 Mcf;
- @ 50" = 205 Mcf;
- @ 60" = 213.5 Mcf;
- @ 70" = 219 Mcf;
- @ 80" = 222 Mcf;
- @ 90" = 226 Mcf;
- @ 100" = 226 Mcf;
- @ 110" = 228.5 Mcf.

DST # 1

3444'

TO

3516'

CFS @ 3516'
45" - 60"

TG, C1-C5 100

GAS TEST @
3426' IN
GEOTRAILER

Mud Co Mud Ck @
3516' @
10:00 AM 1/5/11
Vis 45 ;
Wt 8.95# Pv 13;
Yp 13; WL 8.0;
Cake 1;
Chl 2,100;
Cal 20;
Sol 4.3;
LCM 2 #
DMC= \$ 2,597.15
CMC=\$ 7,605.25

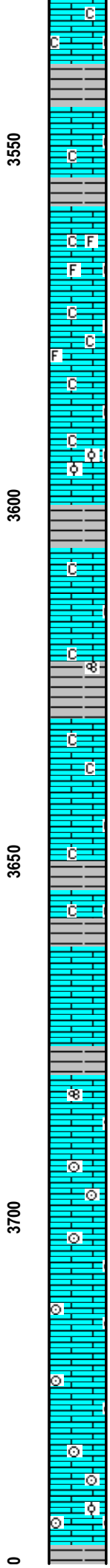
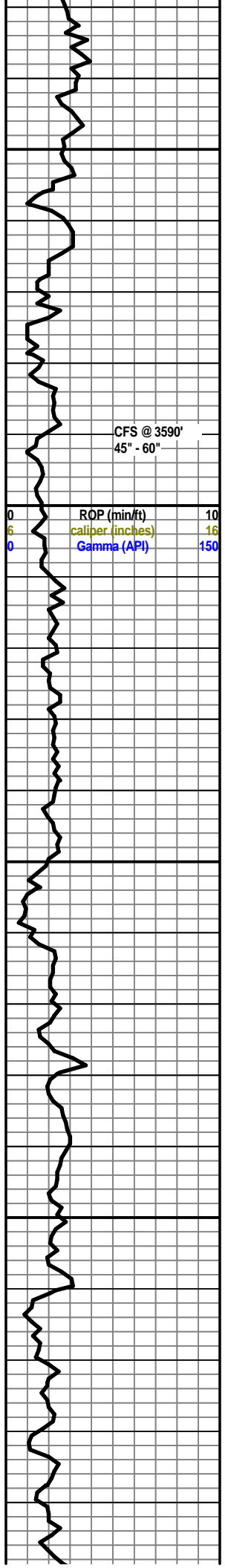
@ 3516' Pipe Strap
= .12' Long to
Board

Depth Corr
@ 3494' in
Geotrailer

Gas Kick =
41 Units
Bkgd Gas=
9 Units

Gas Kick =
24 Units
Bkgd Gas=
9 Units

Trip Gas



Ls Wht-Gry FxIn Poor IxIn Por Micritic Abd Chalk Scatt Stn Flor (Lt Grn) No Odor Sli Stn Flor AA NS

Ls Wht-Gry FxIn Poor IxIn Por Micritic Abd Chalk Scatt Stn Flor (Lt Grn) No Odor Sli Stn Flor AA NS

TARKIO 3558' (-747)

Ls Wht-Gry FxIn Poor IxIn Por Micritic Grad FxIn-MicroIn Por w/Fos Spiculitic Crin Tr Chalk Dec Cht Wht-Gry Op Shp Vit Tr Scatt Stn Flor (Lt Grn) No Odor Sli Stn Flor AA NS

45" CFS Ls Wht-Gry FxIn Poor IxIn Por Micritic Grad FxIn-MicroIn Por w/Fos Spiculitic Crin Tr Chalk Dec Cht Wht-Gry Op Shp Vit Tr Scatt Stn Flor (Lt Grn) ? Faint Odor Sli Stn Flor AA NS

60" CFS Ls Wht-Gry FxIn Poor IxIn Por Inc FxIn Por Grad FxIn-MicroIn Por Tr Chalk Cht Gry Op Shp Vit No Flor No Odor Sh No Stn Char-Gry Fissil NS

Ls Crm FxIn Dns Micritic w/Tr Poor OOM Por w/OOL in pl Poor- No Dis Poor Devel Abd Chalk SH Gry- Char Soft No Odor No Flor No Stn NS

Sh Char-Gry Soft Grad Fissil V Abd Chalk Ls Crm FxIn AA Dns Micritic No Odor No Flor No Stn NS

Ls Crm-Gry FxIn Poor IxIn Por Inc FxIn Por Grad FxIn-MicroIn Por Tr Chalk No Flor No Odor Sh Char-Gry Fissil No Stn NS

Ls Crm-Gry FxIn AA Poor IxIn Por Inc FxIn Por Grad FxIn-MicroIn Por Tr Inc Chalk Fos Fussil Sh Char-Gry Fissil No Flor No Odor No Stn NS

Ls Crm-Gry FxIn AA Poor IxIn Por Inc FxIn Por Grad FxIn-MicroIn Por Tr Chalk Cht Gry Op Shp Vit Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht Crm FxIn Poor IxIn Por MicroIn Por Micritic Tr Inc Chalk Sh Char-Gry Fissil No Odor No Stn Faint ? Min Flor NS

BERN 3654' (- 843)

Sh Char-Gry Soft V Abd Chalk Ls Gry FxIn Dns Micritic No Odor No Flor No Stn NS

Ls Gry FxIn Abd Poor IxIn Por MicroIn Por Micritic Chalk AA Sh Char-Gry Abd Soft Fos Fussil No Odor No Stn No Flor NS

Ls Gry FxIn AA Abd Poor Grad Fair IxIn Por Fair OOM Por w OOL in pl Poor Dis Poor Devel Chalk AA Sh Char-Gry Abd Soft Fos Fussil No Odor No Stn No Flor NS

Ls Wht FxIn V Soft Poor IxIn Por Sh Char w/Fos Fussil Inclu Ls Micritic Grad FxIn-MicroIn Por Tr ? Min Flor (Dull Grn-Wht) No Odor NS

Ls Wht FxIn Poor IxIn Por Dns Micritic w/Fos Crin Micritic AA Sh Char-Gry Tr ? Min Flor (Dull Grn-Wht) No Odor NS

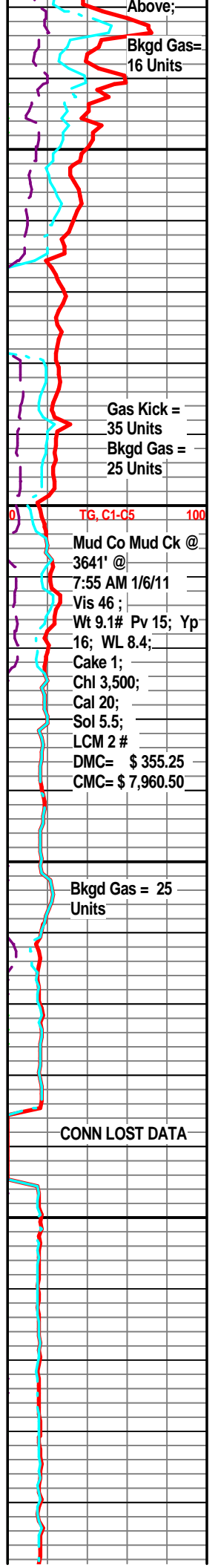
Ls Wht FxIn Poor IxIn Por Dns Micritic w/Fos Crin Micritic AA Sh Char-Gry Tr ? Min Flor (Dull Grn-Wht) No Odor NS

Ls Wht-Crm FxIn Poor IxIn Por Dns Micritic w/Fos Crin Micritic AA Sh Char-Gry Tr ? Min Flor (Dull Grn-Wht) No Odor NS

Ls Crm-Wht FxIn Poor IxIn Por Dns Micritic w/Fos Crin Micritic Sh Char-Gry Tr ? Min Flor (Dull Grn-Wht) No Odor NS

Ls Crm-Wht FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Crin Grad Fair OOM Por w/OOL in Pl Poor Dis Poor Develop Sh Char-Gry Tr ? Min Flor (Dull Grn-Wht) No Odor NS

TOPEKA 3750' (- 939)



375

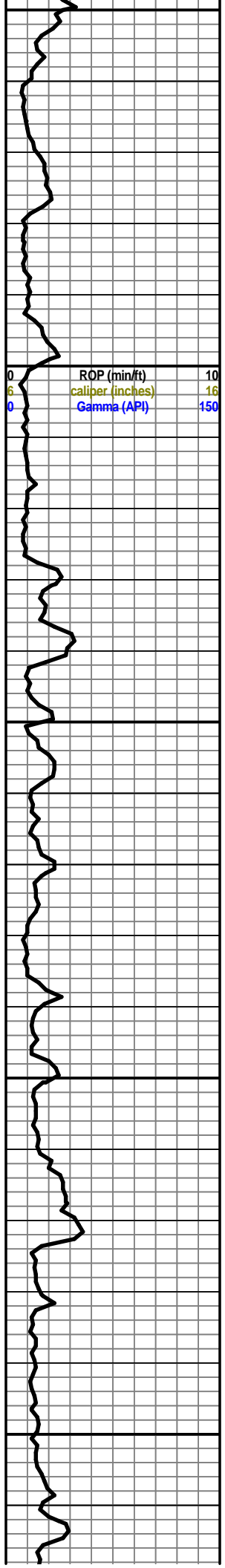
3800

3850

3900

3950

0	ROP (min/ft)	10
6	caliper (inches)	16
0	Gamma (API)	150



Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Crin Grad Tr Fair OOM Por w/ OOL in PI Poor Dis Poor Develop Sh Char-Gry Dec ? Min Flor (Dull Grn-Wht) No Odor NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Fussil Grad Tr Fair OOM Por w/ OOL in PI Poor Dis Poor Develop Cht Gry Op Shp Vit Sh Char-Gry No Flor No Odor NS

Ls Wht FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Pelecy Grad Fair OOM Por w/ OOL in PI Poor Dis Poor Develop Cht Gry Op Shp Vit Sh Char-Gry No Stn No Flor No Odor NS

Ls Wht FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Pelecy Grad Fair OOM Por w/ OOL in PI Poor Dis Poor Develop Chalk V Abd Cht Gry Op Shp Vit Sh Char-Gry No Stn No Flor No Odor NS

Ls Wht FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Fussil Grad Fair OOM Por w/ OOL in PI Poor Dis Poor Develop Chalk V Abd Tr Cht Gry Op Shp Vit Sh Char-Gry No Stn No Flor No Odor NS

Ls Wht FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Fussil Grad Chalk V Abd Tr Cht Wht Op Shp Vit Sh Char-Gry No Stn No Flor No Odor NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Fussil Grad Tr Fair OOM Por w/ OOL in PI Poor Dis Poor Develop AA Chalk V Abd Tr Cht Wht Op Shp Vit Sh Char-Gry No Flor No Odor NS

Ls Crm-Wht FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Fussil Chalk Dec Tr Cht Wht Op Shp Vit Sh Char-Gry Tr V Sli Scat ? Min Flor No Odor NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Fussil Tr Poor OOM Por V Small OOL w/ Poor Dis Poor Devel Chalk Dec Tr Cht Wht Op Shp Vit Sh Char-Gry Tr V Sli Scat ? Min Flor No Odor NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Por Dns Micritic w/Fos Fussil Tr Poor OOM Por V Small OOL w/ Poor Dis Poor Devel Chalk Dec Tr Cht Wht Op Shp Vit Sh Char-Gry Tr V Sli Scat Inc ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Crm-Wht-Gry FxIn Poor-Fair IxIn Gran Por w/Tr Poor OOM Por V Small OOL w/ Poor Dis Poor Devel Chalk Dec Tr Cht Wht Op Shp Vit Sh Char-Gry -Blk (? Carb) Tr V Sli Scat Inc ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Poor-Fair IxIn Gran Por w/Tr Poor-Fair OOM Por w/Poor-Fair Dis Poor Devel Chalk Dec Sh Char-Gry Tr Inc Scat Inc ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Poor-Fair IxIn Gran Por w/Tr Poor-Fair OOM Por w/Poor-Fair Dis Poor Devel Chalk Dec Sh Char-Gry-Grn Scat Inc ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Poor-Fair IxIn Gran Por w/Tr Poor-Fair OOM Por w/Poor-Fair Dis Poor Devel Tr Dec Chalk Sh Red-Grn Scat Inc ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Tr Chalk Dec Sh Red-Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Tr Chalk Sh Red-Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

LECOMPTON 3923 (- 1112)

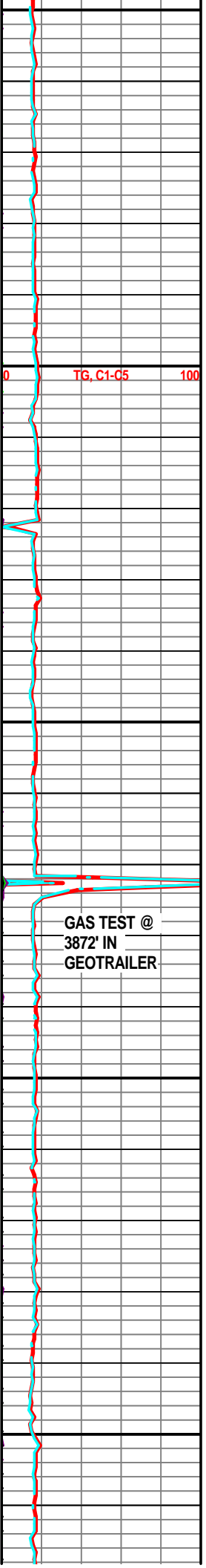
Ls Wht-Gry FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Fussil Spiculitic Tr Chalk Sh Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Fussil Spiculitic Tr Chalk Sh Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Cht Wht Op Shp Vit w/ Fos Foram Inclus Sh Char-Gry Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

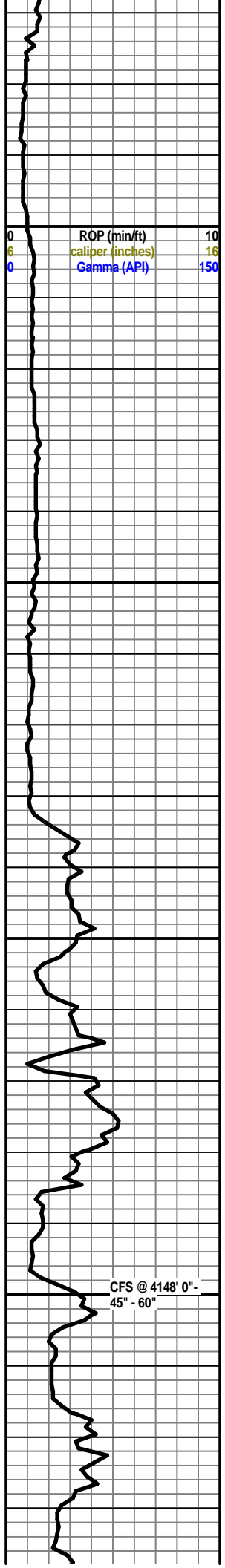
Ls Wht-Gry FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Fussil Spiculitic Tr Chalk Sh Grn-Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Crin Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS



TG, C1-C5

GAS TEST @ 3872' IN GEOTRAILER



4000

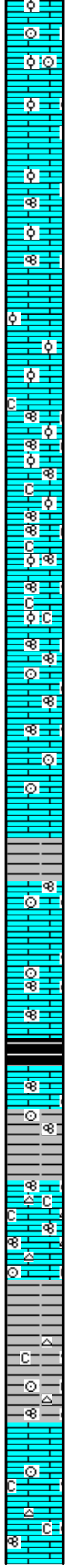
4050

4100

4150

ROP (min/ft) 10
caliper (inches) 16
Gamma (API) 150

CFS @ 4148' 0" - 45" - 60"



Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Crin Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Crin Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Foram Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Foram Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Foram Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Foram Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Foram Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Gry AA FxIn Fair-Med IxIn Gran Por w/Inc Fair-Med OOM Por w/Poor-Fair Dis Poor Devel Fos Foram Tr Chalk Sh Char Fissil Scat ? Min Flor (Dull Wht-Grn) No Odor NS

Ls Wht-Crm-Gry FxIn Tr Gran IxIn Por Fos Crin Foram Chalk Sh Char AA Dec Fissil No Odor Sli ? Min Flor (Dull Wht-Grn) NS

Ls Wht-Crm-Gry FxIn Tr Gran IxIn Por Fos Crin Foram Chalk Sh Char AA Dec Fissil No Odor Sli ? Min Flor (Dull Wht-Grn) NS

Ls Wht-Crm-Gry FxIn Tr Gran IxIn Por Fos Crin Foram Chalk Sh Char AA Dec Fissil No Odor Sli ? Min Flor (Dull Wht-Grn) NS

Ls Crm FxIn Tr Poor-Fair Gran IxIn Por Chalk Sh Char Fissil (V Few Pcs) No Odor Sli ? Min Flor (Dull Wht-Grn) NS

Sh Char Fissil Ls Wht-Crm-Gry FxIn Tr Gran IxIn Por Fos Crin Foram Chalk Sh Char AA Dec Fissil No Odor Sli ? Min Flor (Dull Wht-Grn) NS

Ls Wht-Crm-Gry FxIn Tr Gran IxIn Por Fos Crin Foram Chalk Sh Char AA Dec Fissil No Odor Sli ? Min Flor (Dull Wht-Grn) NS

HEEBNER 4116' (-1305)

Sh Blk Carb Fissil V Abd Ls AA Wht FxIn Barren V fxIn Por Grad Micritic No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micritic Fos Cry Foram Sh Blk AA Dec Fissil No Odor Sli ? Min Flor (Dull Wht-Grn) NS

TORONTO 4144' (-1333')

0" CFS Ls Wht-Crm-Gry FxIn Micritic Fos Crin Cht Wht Op Shp Vit Sli ? Min Flor (Dull Wht-Grn) No Odor NS

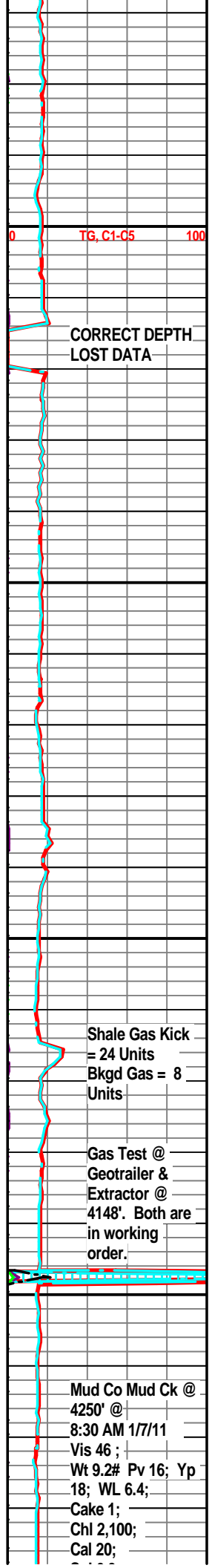
45" CFS Ls Wht FxIn Poor-Fair Igran Por Barren Fos Crin Foram Chalk Abd Cht Wht Op Vit Shp No Odor ? Min Flor V Abd Sh Blk Fissil AA NS

60" CFS Ls Wht FxIn Fair Igran FxIn Por Barren Fos Crin Foram Chalk Abd Cht Wht Op Vit Shp No Odor ? Min Flor V Abd Sh Blk Fissil AA NS

Ls Wht FxIn Fair Igran FxIn Por Barren Fos Crin Foram Chalk Abd Cht Wht Op Vit Shp No Odor ? Min Flor V Abd Sh Blk Fissil AA NS

Ls Wht FxIn Fair Igran FxIn Por Barren Fos Crin Foram Chalk Abd Cht Wht Op Vit Shp No Odor ? Min Flor V Abd Sh Char Fissil AA NS

Ls Wht FxIn Fair Igran FxIn Por Barren Fos Crin Foram Chalk Abd Cht Wht Op Vit Shp No Odor ? Min Flor V Abd Sh Char Fissil AA NS



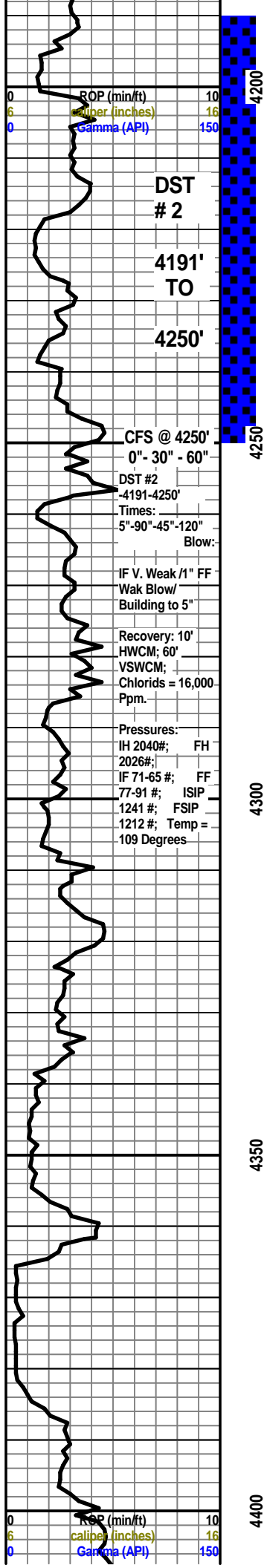
TG, C1-C5 100

CORRECT DEPTH
LOST DATA

Shale Gas Kick = 24 Units
Bkgd Gas = 8 Units

Gas Test @ Geotrailer & Extractor @ 4148'. Both are in working order.

Mud Co Mud Ck @ 4250' @ 8:30 AM 1/7/11
Vis 46 ; Wt 9.2# Pv 16; Yp 18; WL 6.4; Cake 1; Chl 2,100; Cal 20;



ROP (min/ft) 10
 Caliper (inches) 16
 Gamma (API) 150

DST # 2

4191' TO

4250'

CFS @ 4250'

0" - 30" - 60"

DST #2

-4191-4250'

Times:

5"-90"-45"-120"

Blow:

IF V. Weak /1" FF

Wak Blow/

Building to 5"

Recovery: 10'

HWCM: 60'

VSWCM;

Chlorids = 16,000 Ppm.

Pressures:

IH 2040#; FH

2026#;

IF 71-65 #; FF

77-91 #; ISIP

1241 #; FSIP

1212 #; Temp =

109 Degrees

ROP (min/ft) 10
 Caliper (inches) 16
 Gamma (API) 150

Ls Wht FxIn Fair Igran FxIn Por Barren Fos Crin Foram Chalk Abd Cht Wht Op Vit Shp No Odor ? Min Flor V Abd Sh Char Fissil AA NS

IATAN 4201' (-1390)

Ls Wht FxIn Fair Igran FxIn Por Barren Fos Crin Foram Chalk Abd Cht Wht Op Vit Shp No Odor ? Min Flor V Abd Sh Char Fissil AA NS

LANSING 4215' (-1404)

Ls Wht FxIn Fair Igran FxIn Por Barren Fos Crin Foram Cht Wht Op Vit Shp No Odor Tr ? Min Flor V Abd Sh Char Fissil AA NS

30" CFS Ls Wht FxIn Fair Igran FxIn Por Tr Poor OOM Por Poor Leaching Barren Soft Fos Crin Foram Cht Wht Abd Op Vit Shp w/ Fos Foram Includ No Odor V. Sli ? Min Flor (Dull Wht-V.Lt Grn) Sh Char Fissil AA No HC Stn NS

60" CFS Ls Wht FxIn Fair Igran FxIn Por Barren Soft Fos Crin Foram Cht Wht-Gry Abd Op Vit Shp w/ Fos Foram Includ w/ Drk HC Stn in Sli Trip Cht w/V Sli SG (1 Pcs-1 Gas Bubble After Heating) ? Frac Por ? Tr Stn in Cht No Odor V. Sli ? Min Flor (Dull Wht-V.Lt Grn) Sh Char Fissil AA No Vis HC Stn NS

Mostly Trip Debris Grad Ls Wht-Gry FxIn Poor IxIn Por Micritic No Odor Sh Char Fissil Abd AA NS

Dec Trip Debris Grad Ls Wht-Gry FxIn Poor IxIn Por Micritic Sh Char -Grn-Gry Fissil Abd AA No Odor No Flor NoStn NS NS

Ls Wht-Crm FxIn Poor IxIn Por Micritic Sh Char -Grn-Gry Dec AA No Odor No Flor NoStn NS

Ls Wht-Crm FxIn Poor IxIn Por Micritic Sh Char -Grn-Gry Dec AA No Odor No Flor NoStn NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic w/Tr Pyr Includ in Ls Gry AA Sh Char AA Chalk Cht Wht w/ OOL Includ Shp Op Vit No Odor No Flor NoStn NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic w/Tr Pyr Includ in Ls Gry AA Sh Char AA Chalk Cht BLK-Gry Shp Op Vit No Odor No Flor NoStn NS

Ls Gry-Crm FxIn Poor IxIn Por Micritic Sh Char AA Chalk Cht BLK-Gry Shp Op Vit Sh Char Fissil Chalk No Odor No Flor NoStn NS

Ls Gry-Crm FxIn Poor IxIn Por Micritic Sh Char AA Chalk Cht BLK-Gry Shp Op Vit Sh Char Fissil Chalk No Odor No Flor NoStn NS

Ls Wht FxIn Poor-Fair IxIn Gran Por w/Tr Poor OOM Por w/Poor Dis Poor Devel Tr Chalk Sh Char-Blk Carb Fissil Tr Poor ? Min Flor (Dull Wht-Grn) No Odor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Gran Por w/Tr Poor OOM Por w/Poor Dis Poor Devel Chalk ABD Sh Char-Tr Blk AA Carb Fissil Tr Poor No Flor No Odor No Stn NS

Ls Wht-Crm -Tan FxIn Poor IxIn Gran Por Flor Crin Chalk Sh Char AA Fissil Tr Poor No Flor No Odor No Stn NS

Ls Wht-Crm -Tan FxIn Poor IxIn Gran Por Flor Crin Chalk Sh Char AA Fissil Tr Poor No Flor No Odor No Stn NS

Ls Wht-Crm -Tan FxIn Poor IxIn Gran Por Flor Crin Chalk Sh Char AA Fissil Tr Poor No Flor No Odor No Stn NS

Ls Crm-Brn Abd Med-Good OOM Por w/ OOL in pl w/Med-Good Dis Med-Good Devel Good Vug Leaching Por Barren Dec Chalk Tr Sh Char Med-Good Scat Min Flor (Dull Wht-Grn) No Odor No Stn NS

Ls Crm AA w/ Good OOM Por w/ OOL in pl w/Med-Good Dis Med-Good Devel Good Vug Leaching Por Grad IXIn Poor Por w/ Poor IxIn Por Barren Dec Chalk Tr Sh Char Tr Poor Dec Scat Min Flor (Dull Wht-Grn) No Odor No Stn NS

Ls Crm AA w/ Dec Good OOM Por w/ OOL in pl w/Med-Good Dis Med-Good Devel Good Vug Leaching Por Grad Inc FxIn Por w/Poor IXIn Por Barren Dec Chalk Tr Sh Char Tr V Poor Dec Scat Min Flor (Dull Wht-Grn) No Odor No Stn NS

Ls Wht V FxIn w/Poor IxIn Por Micritic Sh Char -Grn-Gry No Odor No Flor NoStn NS

Sol 6.3;
 LCM 2 #
 DMC= \$ 3,287.40
 CMC=\$ 11,247.90

TG, C1-C5 100

Gas Test @ Geotrailer & Extractor @ 4250'. Both are in working order. Propane Added in Mud system After 60" CFS shows Extractor & System was working properly.

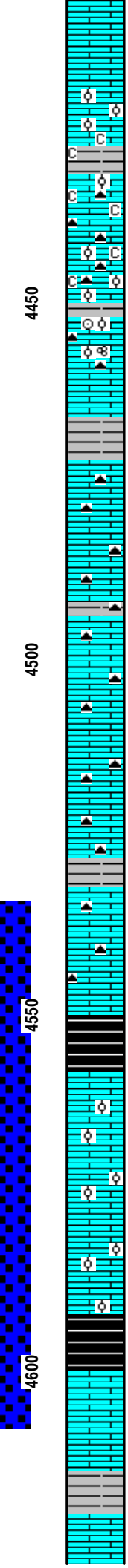
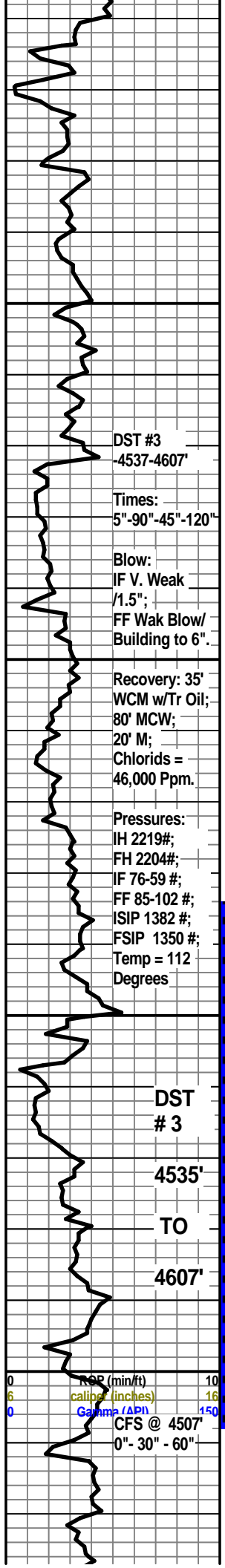
TG, C1-C5 100

Gas Test @ 4368' @ Geotrailer & it appears to be working properly

Re-Zero @ 4417' Iball Gas Dection System @ Geotrailer

TG, C1-C5 100

Gas Test @ 4422' @ Geotrailer & Extractor



Ls Wht V Fxln w/Poor Ixln Por Micritic Sh Char -Grn-Gry No Odor No Flor NoStn NS

Ls Crm -Gry w/ Tr Good OOM Por w/ OOL in pl AA w/Med-Good Dis Med-Good Devel Good Vug Leaching Por Grad Mostly Fxln Por w/Poor IXIn Por Barren Inc Abd Chalk Tr Sh Char-Grn-Gry Fissil Tr V Poor Scat Min Flor (Dull Wht-Grn) No Odor No Stn NS

Ls Wht V Fxln w/Poor Ixln Por Micritic Dec Cht Char-Gry-Blk Op Shp Vit Tr Ls Gry w/Poor OOM Por Poor-No Dis Poor Devel Abd Chalk Sh Char -Grn-Gry No Odor No Flor NoStn NS

Ls Wht V Fxln w/Poor Ixln Por Micritic Dec Cht Char-Gry-Blk Op Shp Vit Tr Ls Gry w/Poor OOM Por Poor-No Dis Poor Devel Dec Chalk Sh Char -Grn-Gry No Odor No Flor NoStn NS

Ls Wht V Fxln w/Poor Ixln Por Micritic Dec Cht Char-Gry-Blk Op Shp Vit Tr Ls Gry w/ (Few Pcs) OOL Fair Por w/ Abd OOL in pl Poor Dis Poor-Fair Inter OOL Por w/ Poor-Fair Leaching Por Fair-Good Devel Cht Gry-Smokey-Gry Op Vit Shp Fos Crin Foram Sh Char -Grn-Gry No Odor No Flor NoStn NS

Ls Wht V Fxln w/Poor Ixln Por Micritic Sh Char -Grn-Gry No Odor No Flor NoStn NS

Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Cht Gry Op Shp Vit Sh Char -Grn-Gry Tr Chalk No Odor Tr V Poor Scat Min Flor (Dull Wht-Grn) No Flor NoStn NS

Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Cht Gry Op Shp Vit Sh Char -Grn-Gry Tr Chalk No Odor Tr V Poor Scat Min Flor (Dull Wht-Grn) No Flor NoStn NS

Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Cht Gry Op Shp Vit Sh Char -Grn-Gry Tr Chalk No Odor Tr V Poor Scat Min Flor (Dull Wht-Grn) No Flor NoStn NS

Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Cht Gry Op Shp Vit Sh Char -Grn-Gry Tr Chalk No Odor Tr V Poor Scat Min Flor (Dull Wht-Grn) No Flor NoStn NS

Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Cht Gry Op Shp Vit Sh Char -Grn-Gry Tr Chalk No Odor Tr V Poor Scat Min Flor (Dull Wht-Grn) No Flor NoStn NS

Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Cht Gry Op Shp Vit Sh Char -Grn-Gry Tr Chalk No Odor Tr V Poor Scat Min Flor (Dull Wht-Grn) No Flor NoStn NS

Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Cht Gry Op Shp Vit Sh Char -Grn-Gry Tr Chalk No Odor Tr V Poor Scat Min Flor (Dull Wht-Grn) No Flor NoStn NS

STARK SHALE 4550' (- 1739)

Sh Blk Carb Fissil Ls Crm-Brn Fxln w/ Tr Poor OOM Por Poor-Fair Inter OOM Por Tr Few Pcs w/Poor Vug OOM Leaching Por Sli Scatt Snt Flor (Lt Grn) Faint Odor Sli SG (Few PCS) Mostly "Tite Por" Sli SG

Ls Crm-Brn Fxln w/ Tr Poor OOM Por Poor-Fair Inter OOM Por Tr Few Pcs w/Poor Vug OOM Leaching Por Sli Scatt Stn Flor (Lt Grn) Inc Odor Sli SG (Few PCS) Mostly "Tite Por" Sh Blk Carb Fissil Sli SG

Ls Crm-Brn Fxln w/ Tr Dec Poor OOM Por Poor-Fair Inter OOM Por Tr (Few Pcs) w/Dec Poor Tr OOM Leaching Por AA Sli Dec Scatt Stn Flor (Lt Grn) No Odor No SG "Tite Por" Grad Micritic Sh Blk Carb Fissil NS

Ls Wht-Crm Fxln w/ Tr Dec Poor OOM Por Poor-Fair Inter OOM Por Tr (V Few Pcs) w/Dec Poor Tr OOM Leaching Por AA Sli Dec Scatt Stn Flor (Lt Grn) No Odor No SG "Tite Por" Grad Micritic Tr Dec Sh Blk Carb Fissil AA NS

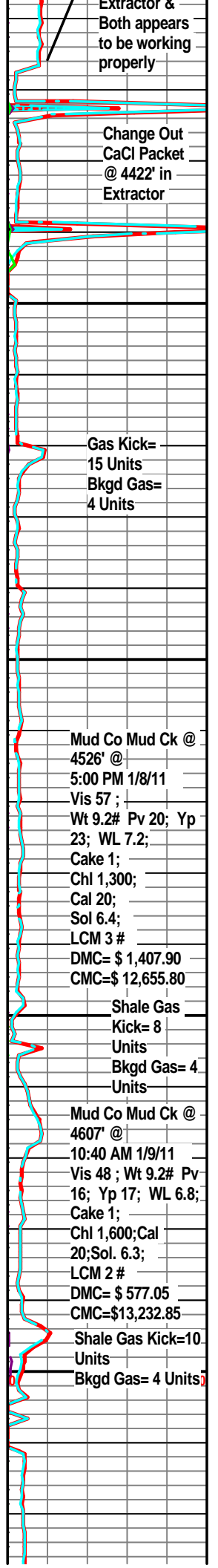
HUSHPUCKNEY SHALE 4592 (-1781)

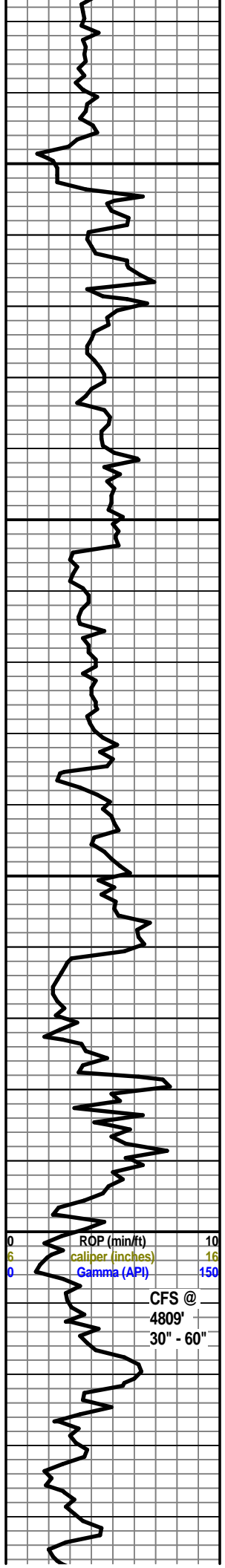
30" CFS Sh ABD BIK Carb Fissil Ls Wht-Crm Mostly Fxln Grad Micritic w/ Tr Poor OOM Por AA Poor-Fair Inter OOM Por Tr Few Pcs w/Poor Vug OOM Leaching Por Sli Scatt Stn Flor (Lt Grn) Sli Odor Sli ? SG

60" CFS Ls Crm-Brn V Fxln w/Poor Ixln Por Micritic AA Sh ABD BIK Carb Fissil Sli Scatt Stn Flor (Lt Grn) No Odor

Ls Wht V Fxln w/Poor Ixln Por Micritic Gran Por w/ Poor-Fair Igran Por Inc Chalk Cht Wht-Smokey Op Vit Shp Sh V Abd Char Fissil Sli Scatt Stn Flor (Lt Grn) No Odor

Sh V Abd Char Fissil Ls Wht-Gry V Fxln w/Poor Ixln Por Micritic Tr Dec Gran Por w/ Poor-Fair Igran Por Inc Chalk Cht Tr/Wht-Smokey Op Vit Shp Sli Scatt Stn Flor (Lt Grn) No Odor



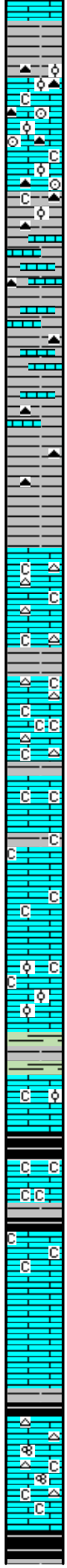


4650

4700

4750

4800



(Lt Grn) No Odor

Ls Cm-Gry Med OOM Por Barren w/ Tr Med OOM Leaching Por Med Dis Med Develop Tr Poor-Fair Igran Ixln Por Micritic Chalk Cht Gry-Char Op Vit Shp Sh V Abd Char Fissil No Stn No Flor No Odor NS

Sh V Abd Char Fissil Ls Wht-Gry V Fxln w/Poor Ixln Por Micritic Tr Dec OOM Por w/ Poor-Fair InterOOM Por Chalk Cht Tr/Char Op Vit Shp Sli Fos Crin No Stn No Flor No Odor NS

Sh V Abd Char Fissil Ls Wht-Gry V Fxln w/Poor Ixln Por Micritic Tr Dec OOM Por w/ Poor-Fair InterOOM Por Chalk Cht Tr/Char Op Vit Shp Fos Crin No Stn No Flor No Odor NS

Sh V Abd Char Fissil Tr Ls Wht-Gry V Fxln w/Poor Ixln Por Micritic Cht Tr/Char Op Vit Shp No Stn No Flor No Odor NS

Sh V Abd Char Fissil Tr Ls Wht-Gry V Fxln w/Poor Ixln Por Micritic Cht Tr/Char Op Vit Shp No Stn No Flor No Odor NS

Sh V Abd Char Fissil Tr Ls Wht-Gry V Fxln w/Poor Ixln Por Micritic Cht Tr/Char Op Vit Shp No Stn No Flor No Odor NS

BASE KANSAS CITY 4690' (- 1879)

Sh V Abd Char Fissil Tr Ls Wht-Gry V Fxln w/Poor Ixln Por Micritic Cht Tr/Char Op Vit Shp No Stn No Flor No Odor NS

MARMATON 4704' (- 1893)

Ls Wht Crm V Fxln w/Poor Ixln Por Micritic Gran Por Tr Chalk Cht Wht-Tan Transl-Op Vit Shp Sh Tr/ Char Fissil Inc Scatt Stn Flor (Dull-Wht-Lt Grn) No Odor NS

Ls Wht Crm V Fxln w/Poor Ixln Por Micritic Gran Por Tr Chalk Cht Wht-Tan Transl-Op Vit Shp Sh Tr/ Char Fissil Inc Scatt Stn Flor (Dull-Wht-Lt Grn) No Odor NS

Chk V Abd Wht Ls Wht- Crm V Fxln w/Poor Ixln Por Micritic Sh Tr/ Char Fissil No Odor NS

Ls Crm-Gry Poor Ixln Por Mostly Dns Micritic Chalk AA Sh AA No Odor No Stn No Flour NS

Ls Crm-Gry Poor Ixln Por Mostly Dns Micritic Chalk AA Sh AA No Odor No Stn No Flour NS

Ls Crm-Gry Poor Ixln Por Mostly Dns Micritic Abd Chalk Inc AA Sh AA No Odor No Stn No Flour NS

Ls Wht-Crm V Fxln w/Poor Ixln Por Micritic Grad Inc OOM Por w/ Poor-Fair InterOOM Por w/ OOL in pl Tr Poor Dis Poor-Fair Develop Abd Chalk No Stn No Flor No Odor NS

Ls Wht-Crm V Fxln w/Poor Ixln Por Micritic Grad Inc OOM Por w/ Poor-Fair InterOOM Por w/ OOL in pl Tr Poor Dis Poor-Fair Develop Abd Chalk Sh Grn-Gry Soft Abd Fos Fussil No Stn No Flor No Odor NS

PAWNEE 4790' (- 1979)

30" CFS Ls Wht Fxln Poor Ixln Por Chalk Abd AA Sh Blk AA Dec ? Faint Odor NSG Tr V Sli ? Min Flor No Cut NS

60" CFS Ls Wht Fxln Poor Ixln Por Grad Poor Gran Por w/Poor Igran Ixln Por Chalk Abd AA Tr Sh Blk AA Dec No Odor No Flor NSG NS

Sh Blk Carb Abd Fissil Ls Crm-Gry Fxln Poor Ixln Por Tr Chalk AA Fos Crin No Odor No Stn NS

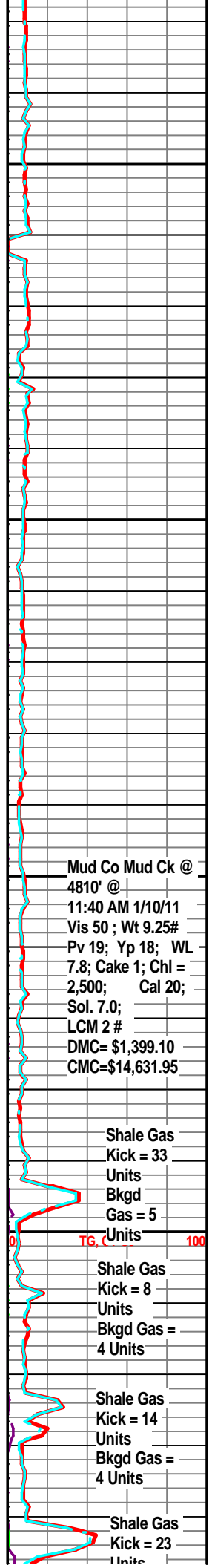
FORT SCOTT 4822' (- 2011)

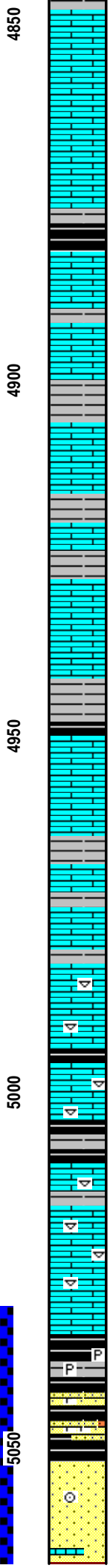
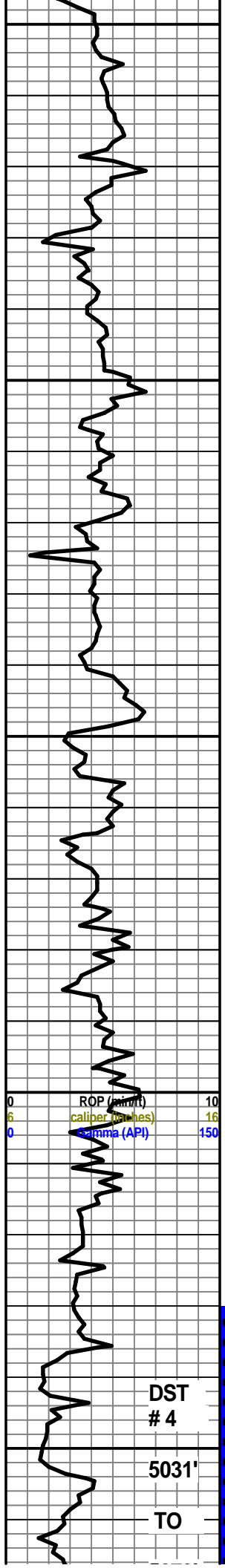
Ls Wht-Crm Fxln Poor Ixln Por Micritic Cht Wht-Gry Op Shp Vit Fos Fussil Tr/Chalk AA Tr Sh Blk AA Dec No Odor No Flor NSG NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Cht Wht-Gry Op Shp Vit Fos Fussil Tr/Chalk AA Tr Sh Blk AA Dec No Odor No Flor NSG NS

CHEROKEE SHALE 4844' (- 2033)

Ls Wht-Crm Fxln Poor Ixln Por Micritic Cht Wht-Gry Op Shp Vit Sh Blk Carb V





Abd AA \$ Sli Odor No Flor NSG NS

Ls Wht-Crm FxIn Poor IxIn Por Micritic Cht Wht-Gry Op Shp Vit Sh Blk Carb V Abd AA Dec No Odor No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Tr/ 1 pcs Ls Crm Poor OOM Por Poor InterOOM Por Tr Poor Leaching Poor Dis Cht Wht-Gry Fos Bry Inklus Shp Vit Sh Char V Abd AA Dec No Odor No Flor NS

Second Cherokee Shale 4876 (- 2065)

Ls Crm FxIn Poor IxIn Por Micritic Cht Gry Sh Char Dec AA Tr Sh Blk Carb Inc No Odor No Flor NS

Ls Crm FxIn Poor IxIn Por Micritic Cht Gry Sh Char Dec AA Tr Sh Blk Carb Inc No Odor No Flor NS

Sh Char-Blk Carb Fissil Ls Crm FxIn Poor IxIn Por Micritic Chalk No Odor No Stn No Flour NS

Ls Crm FxIn Poor IxIn Por Micritic Sh Char-Sh Blk Carb No Odor No Flor NS

Ls Crm FxIn Poor IxIn Por Micritic Sh Char-Sh Blk Carb No Odor No Flor NS

Ls Crm FxIn Poor IxIn Por Micritic Ls AA (1 Pc w. Scart Dead SO on Edge Poor IxIn Por) Sh Char-Sh Blk Carb No Odor No Flor NS

Ls Crm FxIn Poor IxIn Por Micritic Sh Inc Char-Sh Blk Carb No Odor No Flor NS

Ls Crm FxIn Poor IxIn Por Micritic Sh Char-Aqua-Sh Blk Carb Abd No Odor No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Sh Char-Aqua-Sh Blk Carb Fissil No Odor No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Sh Char-Aqua-Sh Blk Carb Fissil No Odor No Flor NS

Ls Gry FxIn Poor IxIn Por Micritic Fos Pelecy Sh Char-Aqua-Sh Blk Carb Fissil No Odor No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Fos Pelecy Sh Char-Aqua-Sh Blk Carb Fissil No Odor No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Fos Pelecy Sh Char-Aqua-Sh Blk Carb Fissil No Odor No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Fos Pelecy Sh Char-Aqua-Sh Blk Carb Fissil No Odor No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Fos Pelecy Sh Char-Aqua-Sh Blk Carb Fissil No Odor No Flor NS

MORROW SHALE 5036' (-2225)

Sh Gry V Soft Tr Qtz SS Wht VFgrn V Friable Fair Sort Barren Chalk Tr Pyr Mass (Much Debris) No Odor No Floru No Stn NS

Sh Blk - Char -Grn Fissil V Abd Sli Tr Qts SS Brn-Wht Fgrn Fair-Well Sorted (Few Pcs.) w/ SSO/SSG (Mostly Shale) Pyr Mass No Odor V Sli SO?SG

MORROW SAND 5053' (- 2242)

0" CFS Qtz SS Brn-Gry-Wht Upper Section Med Grn Well Sorted Grad Finnok ing Downward in Lower Section of Fgrn-Small Grns Good Igran Por Well Rd/ Well Sorted V FriableFos Crin Sh AA Poor-No Flour/Tr Flor (V. Lt Grn) Abd SG/FO in Tray Good Odor Good SG/SO

30" CFS Sh Red-Gry-Char-Grn Abd Soft (Wash V Red) Qtz SS Brn-Gry-Wht AA Fgrn-Small Grns Good Igran Por Well Rd/Well Sorted Ls Wht FxIn Dns Micrite Sh Red-Char-Blk AA Good Show

Units = 4 Units

Shale Gas Kick = 18 Units Bkgd Gas = 5 Units

Mud Co Mud Ck @ 5079' @ 10:40 AM 1/11/11 Vis 52 ; Wt 9.25# Pv 20; Yp 22; WL 7.6; Cake 1; Chl = 1,900; Cal 20; Sol. 6.3; LCM 2 # DMC= \$445.90 CMC=\$15,077.8595

Shale Gas Kick = 15 Units Bkgd Gas = 5 Units

DST #4 5031'-5079" Times: 5"-90"-60"-60" Blow: IF V. Weak Surface Blow 1/2" @ 20"; FF Weak Blow/ Building to 1/2". Flush Tool @ 20" FF No Help.

Recovery: 15' M w/Tr Oil;

Pressures: IH 2437#; FH 2422#; IF 69-37 #; FF 63-34#; ISIP 1034 #; FSIP 78.7 #; Temp = 117 Degrees

Gas Kick = 98 Units Bkgd Gas = 5 Units

0	ROP (min)	10
6	caliper (inches)	16
0	gamma (API)	150

DST # 4
5031'
TO

5050

5079'

CFS 5079'
30" - 60"

5100

5150

5200

5250

60" CFS Qtz SS Brn-Gry-Wht Fgrn-Small Well Rd Well Sorted Good Show Ls Wht AA FxIn Dns Micrite Inc V Sli Odor Fair/Good SG/SO in SS

MISSISSIPPIAN STE. GEN 5076' (-2265')

Qtz SS Brn-Gry-Wht AA Fgrn-Small Well Rd Well Sorted Good Show In SS Ls Wht AA FxIn Dns Micrite Inc V Sli Odor Fair/Good SG/SO in SS Sh Char-Aqua AA

Sh Red Char Blk AA Tr Aqua w/Pry Includ (V Hvy Wash Dec Red) Tr LS Wht AA FxIn Poor Igran Por "Sandy Gran Por" Soft No Odor No Flor NS

LS Wht FxIn Poor Igran Por "Sandy Gran Por" Soft Tr Ls w/ Tr Dead Stn (Drk Blk) Sh Char Blk AA Tr Aqua w/Pry Includ (Sh Red Dec Wash Red) No Odor No Flor NS

LS Wht FxIn Poor Igran Por "Sandy Gran Por" Soft Sh Char Tr Aqua w/Pry Includ Dec (Sh Red Dec Wash Red) No Odor No Flor NS

? MISSISSIPPIAN ST. LOUIS 5112' (- 2301)

LS Wht FxIn Poor Igran Por "Sandy Gran Por" Soft Sh Char Tr Aqua w/Pry Includ Dec (Sh Red Dec Wash Red) No Odor No Flor NS

LS Wht FxIn Poor Igran Por "Sandy Gran Por" Soft Chalk Sh Char Tr Aqua w/Pry Includ Dec No Odor No Flor NS

LS Wht FxIn Poor Igran Por "Sandy Gran Por" Soft Chalk Sh Char Tr Aqua Blk No Odor No Flor NS

LS Wht FxIn Poor Igran Por "Sandy Gran Por" Soft Chalk Sh Char Tr Blk No Odor No Flor NS

? MISSISSIPPIAN ST. LOUIS UPPER B 5152' (- 2346)

LS Wht FxIn Poor Igran Por "Sandy Gran Por" AA Grad FxIn OOL Por w/Poor IntOOL Por Soft Chalk Sh Char Tr Blk No Odor ? Sli Min (Dull Wht-Lt Grn) Flor NS

? MISSISSIPPIAN ST. LOUIS LOWER B 5170' (- 2359)

LS Wht FxIn Poor Igran Por "Sandy Gran Por" AA Soft Grad Fair-Med OOM Por W/Poor-Fair IntOOM Por w/OOL In Pl. Tr Vug Leaching OOM Por Poor-Fair Develop Poor-Fair Dis (Few Pcs) Cht Wht-Org Op Shp Vit No Odor No Stn ? Sli Min Flor Inc (Dull Wht-Lt Grn) NS

LS Wht FxIn Poor Igran Por "Sandy Gran Por" Soft Grad Fair-Med OOM Por W/Poor-Fair IntOOM Por w/OOL In Pl. Tr Vug Leaching OOM Por Poor-Fair Develop Poor-Fair Dis (Few Pcs) Cht Wht-Org Inc Op Shp Vit No Odor No Stn ? Sli Min Flor Inc (Dull Wht-Lt Grn) NS

St. Louis Lower B Dense Corr. Marker 5193' (-2382')

LS Wht FxIn Grad Dns Micritic w/ Tr Fair-Med OOM Por W/Poor-Fair IntOOM Por w/OOL In Pl. Tr Vug Leaching OOM Por (Few Pcs) Poor-Fair Develop Poor-Fair Dis (Few Pcs) Cht Wht-Org Inc Op Shp Vit No Odor No Stn ? Sli Min Flor (Lt Grn Throughout Tray) NS

LS Wht FxIn Grad Dns Micritic Grad Fair OOM Por W/Poor-Fair IntOOM Por w/OOL In Pl. Tr Poor Vug Leaching OOM Por (V Few Pcs) Poor-Fair Develop Poor-Fair Dis (Few Pcs) Cht Wht-Org-Wht-Gry Inc Op Shp Vit Fos Pelecy No Odor V Sli Min Flor (Dull Wh- Lt Grn) NS

LS Wht FxIn Dns Micritic Grad Tr Fair OOM Por W/Poor-Fair IntOOM Por w/OOL In Pl. Tr Poor Vug Leaching OOM Por (V Few Pcs) Poor-Fair Develop Poor-Fair Dis (Few Pcs) Cht Wht-Org-Wht-Gry Inc Op Shp Vit No Odor V Sli Min Flor (Dull Wh- Lt Grn) NS

LS Wht FxIn Grad Tr Fair-Med Grn OOM Por W/Poor-Fair InterOOM Por w/Med Grn OOL In Pl. Tr Poor Leaching OOM Por (V Few Pcs) Fair Develop Fair Dis (Few Pcs) Tr Ls Poor-Fair Inter OOM Frac Por w/ Tr Dead Brn Stn on edges w/VSSG w/Broken Sli Min Flor (Lt- Grn) No Odor VSli ? SG

LS Wht FxIn Poor Igran Fine Small Gran Por "Sandy Gran Por" Soft Grad Poor-OOL Por W/Poor- InterOOM Por w/OOL In Pl. Poor Develop Poor-Fair Dis (Few Pcs) Grad VFxIn VFgran Por Cht Crm-Org Inc Op Shp Vit No Odor ? Sli Dec Min Flor Inc (Dull Wht-Lt Grn) NS

LS Wht-Crm FxIn Gran OOL Por Fair InterOOL Por w/ Poor Leaching Por Poor Dis Grad FxIn Dns Micritic Fos Bry Chalk No Odor No Vis Stn Flor NS

LS Wht-Crm FxIn Gran OOL Por Fair InterOOL Por w/ Poor Leaching Por Poor Dis Grad FxIn Dns Micritic Fos Bry Chalk Tr Cht Wht Op Shp Vit No Odor No Vis Stn Flor NS

? MISSISSIPPIAN ST. LOUIS C 5280' (- 2469)

45" CFS Ls Wht-Crm FxIn Tr Dec Gran OOL Por Fair InterOOL Por w/ Poor Leaching Por Poor Dis Grad FxIn Dns Micritic Chalk Tr Cht Wht Op Shp Vit No

Gas Kick = 30 Unit
Re-Cycle Bkgd Gas = 18 Units

Bkgd Gas= 5 Units

Mud Co Mud Ck @ 5131' @ 10:50 AM 1/12/11
Vis 48 ; Wt 9.25#
Pv 18; Yp 20; WL 6.8; Cake 1; Chl = 1,650; Cal 20; Sol. 6.3;
LCM 3 #
DMC= \$1,660.05
CMC=\$16,737.90

Bkgd Gas= 5 Units

Gas Test @ 5216' in Geotrailer

Bkgd Gas= 3 Units

DST #5 5031'-5079'

Times: 5"-90"-60"-15" Blow:

IF V. Weak Surface Blow = 1/2"; FF No Blow for 6" then V. Weak 1/2" Blow for 10". Flushed tool & Got Weak Blow for 23" Dec. to 1/4" Blow.

Recovery: 35' M;

Pressures: IH 2465#; FH 2439#

@ 5194' Inc RPM to 80; Inc Weight on Bit from 128,000# to 130,000#

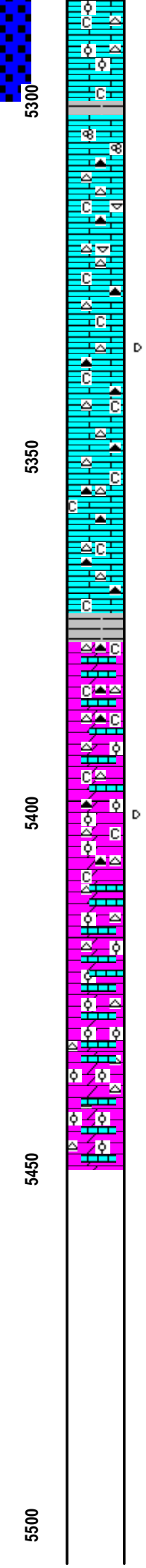
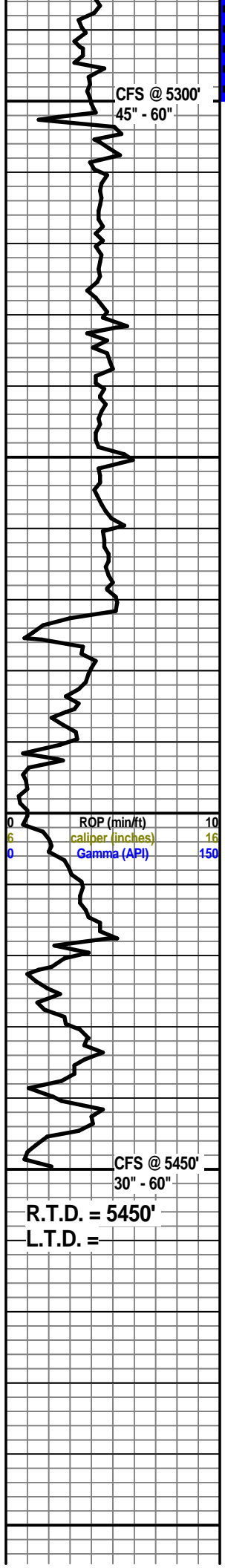
ROP (min/ft) 10
caliber (inches) 16
Gamma (API) 150

DST # 5

5137'

TO

5300'



60" CFS Wht-Crm Fxln Tr Dec Gran OOL Por Fair InterOOL Por w/ Poor Leaching Por Poor Dis Grad Fxln Dns Micritic Chalk Tr Cht Wht Op Shp Vit No Odor No Vis Stn Flor NS

Ls Wht-Crm Wht Fxln Micritic Fos Foram Tr Ls AA Dec OOL Por Chalk Sh Char-Fissil Tr Only No Odor No Stn No Flor NS

Ls Wht- Gry Fxln Micritic Fos Pelec Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor ? Min Flor Inc No Stn NS

Ls Wht- Gry Fxln Micritic Fos Pelec Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor ? Min Flor Inc No Stn NS

Ls Wht- Crm Fxln Micritic Fxln Tr 1Pc w/ Brn Dead Stn Scatt in Micritic Ls Fxln Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec Tr Dead Stn NS

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

Ls Wht- Crm Fxln Micritic Fxln Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec in Flor NS

Ls Wht- Crm Fxln Micritic Ls Fxln Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec in Flor No Stn NS

? MISSISSIPPIAN SALEM 5378' (-2567)

Dolo Gry Fxln Dns Micritic No Vis Por Ls AA Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec NS

Dolo Gry Fxln Dns Micritic No Vis Por Ls AA Chalk Cht Wht-Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec NS

Dolo Gry Fxln Dns Micritic No Vis Por Ls Wht-Gry Fxln Grad OOM InterOOM Por Poor-Fair Dis Fair Develop Chalk Cht Gry Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec NS

Dolo Gry Fxln Grad Poor OOL Por w/ OOL in PI Poor Dis Poor InterOOM Por Tr Ls Wht-Gry AA Fxln Grad OOM InterOOM Por Poor-Fair Dis Fair Develop Chalk Cht Wht-Gry-Clrst Transl- Op Shp Vit Tr Rhombic Inclus Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec Tr 3 pcs Poor OOM Por w/ Scatt Dead Stn Frac Por When Broken NSO/NSG NS

Dolo Gry Fxln Grad Med OOL Por w/ OOL in PI Abd Good Dis Good InterOOM Por w/Ls Wht-Gry AA Fxln Grad OOM InterOOM Por Good Dis Good Develop Chalk Cht Wht-Gry-Clrst Transl- Op Shp Vit Tr Rhombic Inclus Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec NS

30" CFS Dolo Gry Fxln Grad Med OOL Por w/ OOL in PI Abd Good Dis Good InterOOM Por w/Ls Wht-Gry AA Fxln Grad OOM InterOOM Por Good Dis Good Develop Chalk Cht INC Abd Wht-Gry-Clrst Transl- Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec NS

60" CFS Dolo Gry Fxln Grad Med OOL Por w/ OOL in PI Abd Good Dis Good InterOOM Por w/Ls Wht-Gry AA Fxln Grad OOM InterOOM Por Good Dis Good Develop Chalk Cht INC Abd Wht-Gry-Clrst Transl- Op Shp Vit Sh Char-Fissil Tr Only No Odor Tr ? Min Flor Dec NS

