

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

Well Name: Grunder #3  
API: 15-185-24050-00-00  
Location: 480 FNL - 1670 FWL - Sec. 14 - Twp. 15S - 13W - NW-NE-NW  
License Number: 30862 Region: Kansas  
Spud Date: 11/21/2019 Drilling Completed: 12/01/2019  
Surface Coordinates:

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 1921 K.B. Elevation (ft): 1927  
Logged Interval (ft): 3100 To: 4335 Total Depth (ft): 4335  
Formation: Arbuckle Dolomite @ Total Depth  
Type of Drilling Fluid: Chemical Drispac (Andys)

Printed by MudLog from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

**OPERATOR**

Company: Grunder Oil, LLC  
Address: 122 S Main St, St. John, KS 67576

**GEOLOGIST**

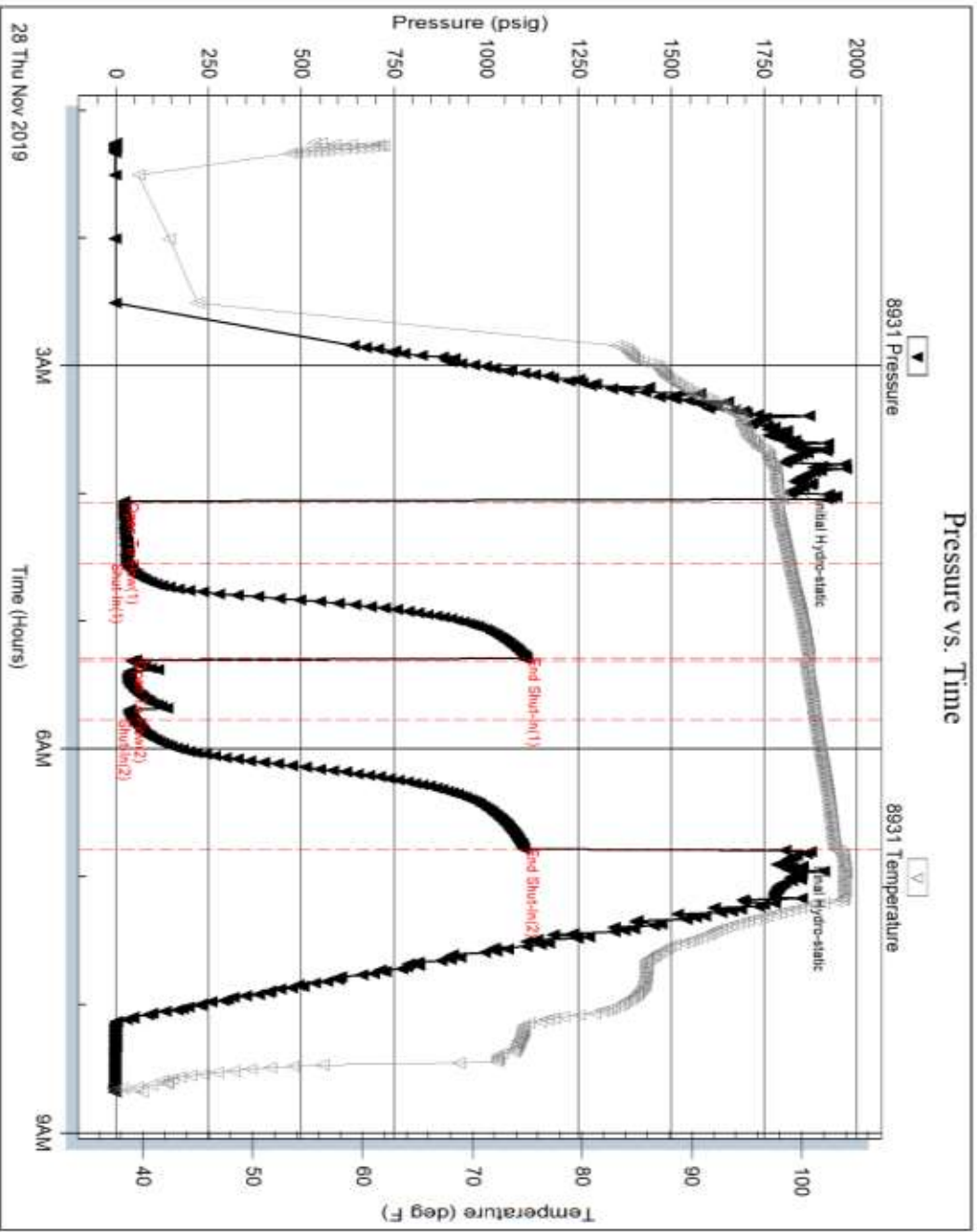
Name: Keaton Jones  
Company: Rockhound Petroleum, LLC  
Address: P.O Box 43 St. John KS 67576  
(620)-546-4010

Serial #: 8931

Inside Gunder Oil LLC

Gunder #3

DST Test Number: 1



Tribble Testing, Inc

Ref No: 65457

Printed: 2019-11-28 @ 10:00:17

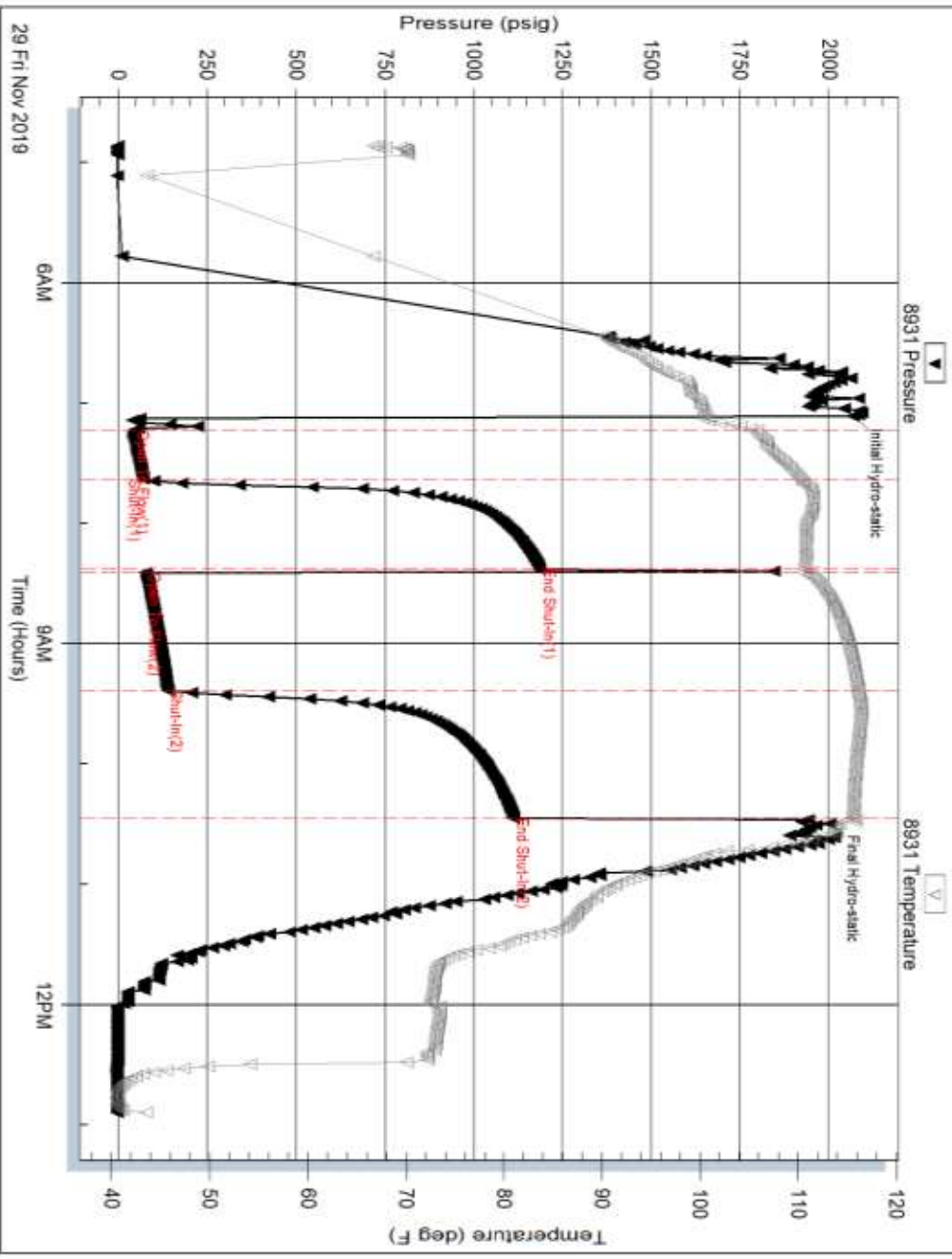
Serial #: 8931

Inside Gunter Oil LLC

Gunter #3

DST Test Number: 2

### Pressure vs. Time



Tribble Testing, Inc

Ref No: 65458

Printed: 2019.11.29 @ 14:04:34

Serial #: 8931

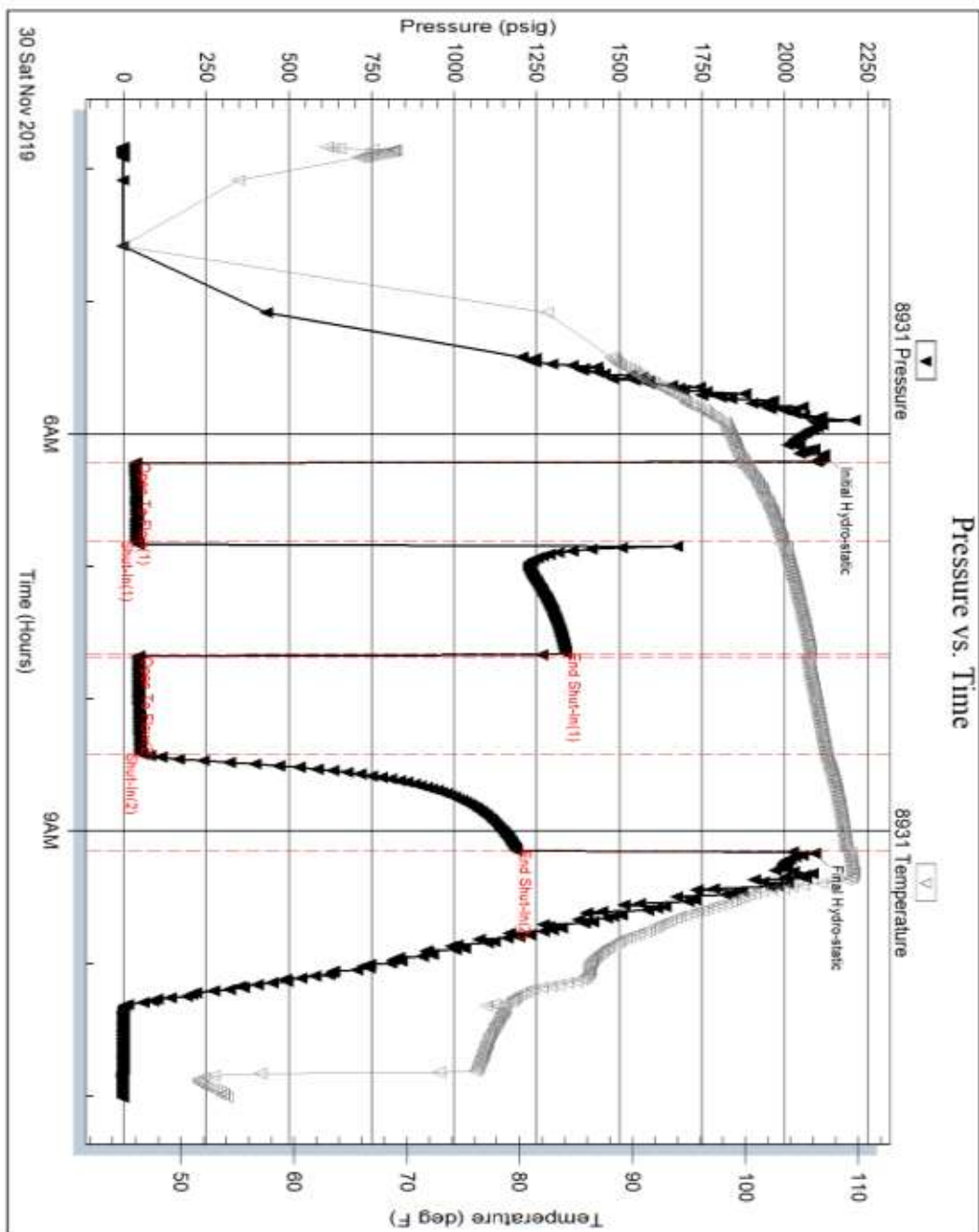
Inside

Gunder Oil LLC

Gunder #3

DST Test Number: 3

### Pressure vs. Time


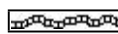
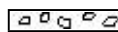





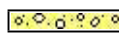



Tribble Testing, Inc



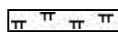
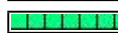
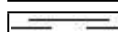
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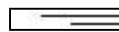




Printed: 2019-11-30 @ 20:20:14

### ROCK TYPES

-  Anhy
-  Bent
-  Brec
-  Cht
-  Clyst

-  Coal
-  Congl
-  Dol
-  Gyp
-  Igne

-  Lmst
-  Meta
-  Mrlst
-  Salt
-  Shale

-  Shcol
-  Shgy
-  Slstst
-  Ss
-  Till



Cfs

### ACCESSORIES

#### MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau

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- 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
- Gastro
- Oolite

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- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

#### STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst

- Siltstrg
- Ssstrg

#### 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

- Even
- Spotted
- Ques

#### EVENT

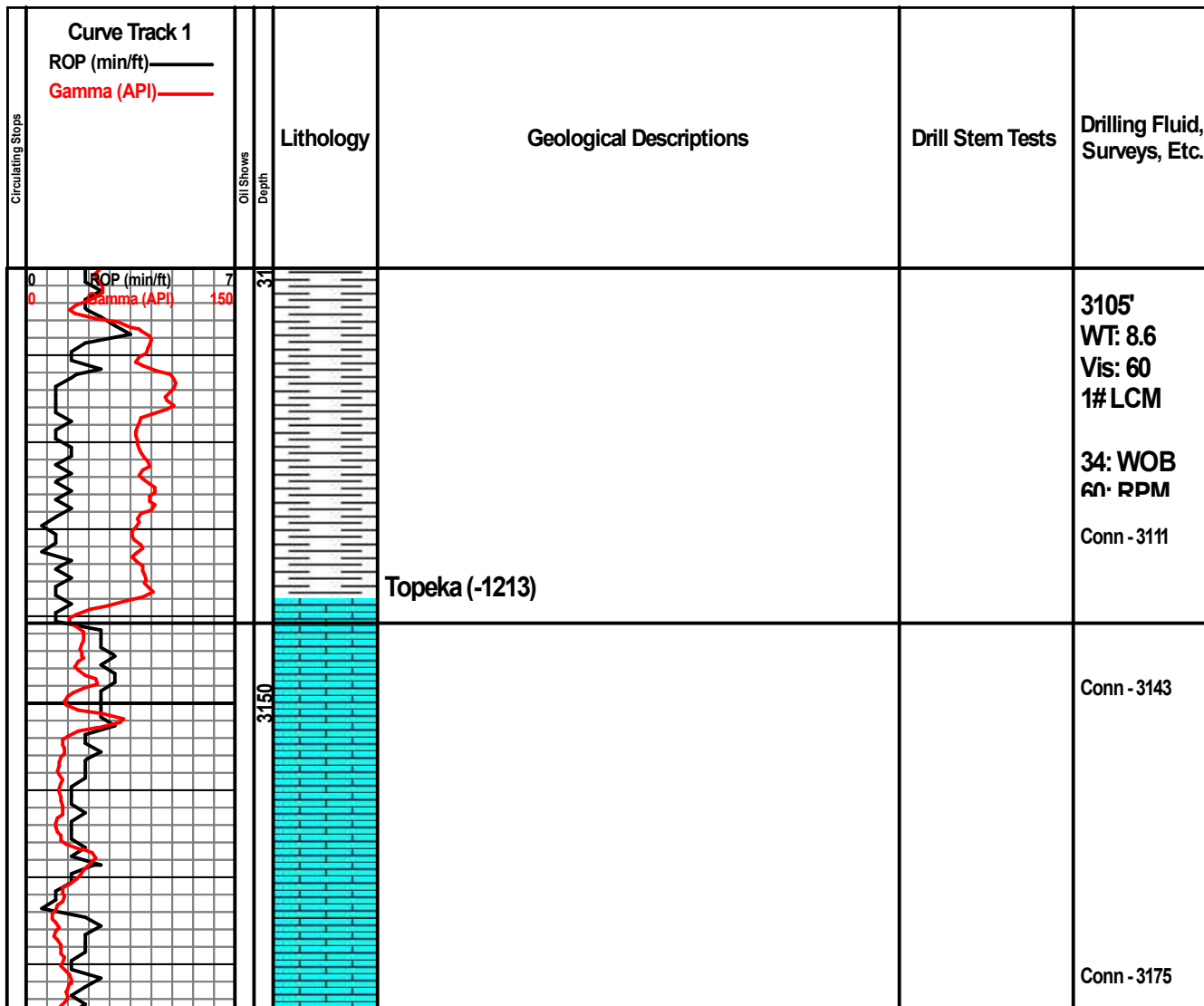
- Rft
- Sidewall

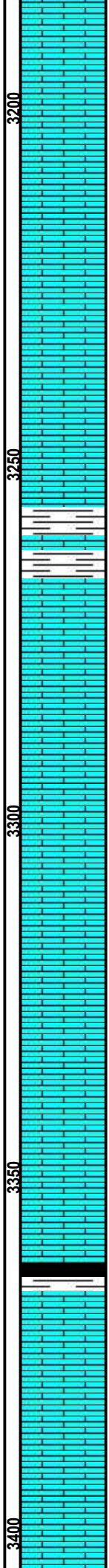
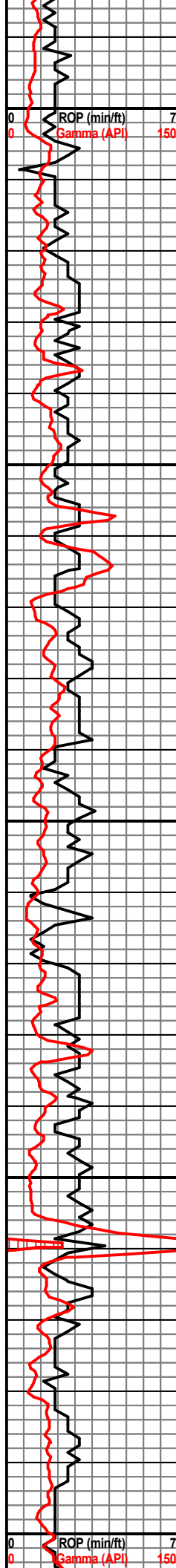
#### INTERVAL

- Core
- Dst 2
- Dst

#### OIL SHOW

- Cfs





Shale - Black

Conn - 3207

**3215**  
WT: 8.6  
Vis: 60  
1# LCM

Conn - 3239

Changed Pump Head -

Conn - 3272

**3272**  
WT: 8.9  
Vis: 57  
1# LCM

Conn - 3303

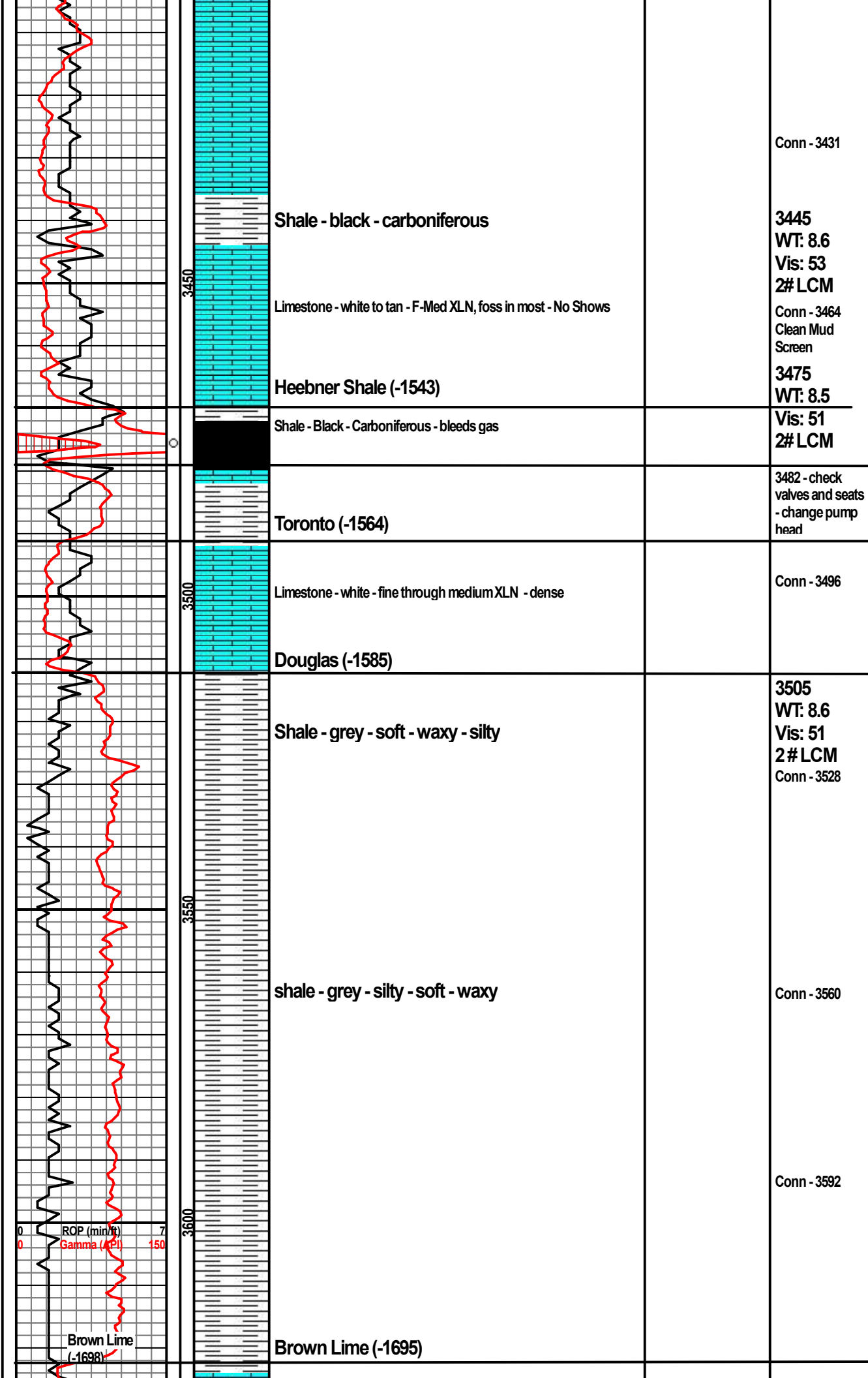
Mud Check  
@ - 3322  
WT: 8.6  
Vis: 56  
Fil: 7.2  
CHL: 4,800  
2# LCM

Conn - 3336

Conn - 3368

**3380**  
WT: 8.6  
Vis: 53  
2# LCM

Conn - 3400



Lansing (-1724)

Limestone - grey - very dse - shaley - some oolites - No shows No odor

interbedded Limestone and shales

Ls - blueish tint - fine xln - slightly vuggy in parts - slightly foss - 1 oil spot on break - no odor

CFS - 3700

Limestone - white to cream - med xln - wathered in most - very few vuggy porosity - no shows no odor

Conn - 3656  
Clean mud screen  
3656  
WT: 8.7  
Vis: 56  
1# LCM  
Conn - 3668

3718  
WT: 8.8  
Vis: 55  
1# I CM  
Conn - 3721

Limestone - cream to grey - oolitic to oomoldic - fossiliferous in some - No shows No Odor

CFS - 3753

Limestone - grey - fine to med XLN - weathered - No shows

Conn - 3753

3773  
WT: 8.8  
Vis: 56  
1.5# LCM

Limestone - grey highly oolitic baren porosity no shows no odor

Conn - 3785

ROP (ft/ft) 7  
Gamma (API) 150

CFS 3810

Limestone - cream to buff - med xln - oolitic to oomoldic in most - 1 pc oil spec - no shows no odor

Conn - 3817



Conn - 3848

3855  
WT: 8.8  
Vis: 55  
1.5 # LCM

Conn - 3881

- DST (1) -  
3856-3920  
Recovery -  
34' Oil specked Mud

BHT: 98  
IFP: 22-29  
FFP: 41-47  
SIP: 1108-1102

Conn - 3910

- Mud check -  
Depth: 3920  
WT: 9.3  
Vis: 54  
Filtrate: 10.8  
CHL: 8,000  
1.5 # LCM

Conn 3942

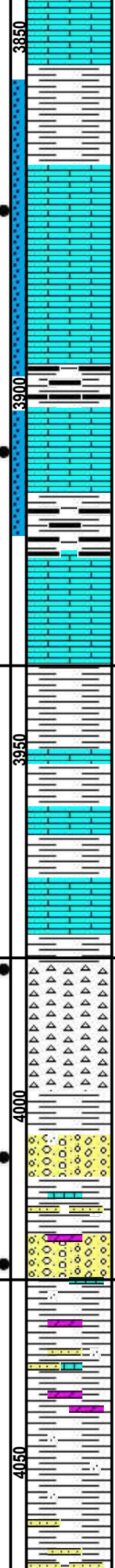
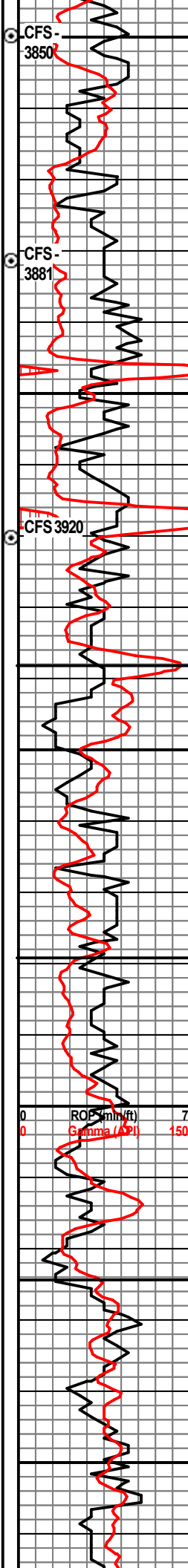
Conn 3974

WT: 8.6  
Vis: 51  
2 # LCM

Conn - 4006

Conn - 4040

4040  
WT: 9.0  
Vis: 50  
2 # LCM



Limestone - light grey - oomoldic in most fine  
XLN - 1 pc free oil specks - fairly dense - No  
shows faint odor if ainv

Limestone - brown to grey - fine XLN - dense -  
no shows no odor

Limestone - white - medium XLN - highly foss -  
well saturdated with oil - free oil in tray - weak  
odor - little gas on break

Shale - black carboniferous

Base Kansas City (-2009)

Limestone - tan - Fine XLN - cherty - dense -

cherty limestone - mostly grey with greenish tint - chert is mostly  
orang No shows No odor

Mississippi (-2052)

Chert - white - tripolitic in few pieces sfo&g when broken - faint odor  
Chert - limy - white - sandy in part -

Chert - tripolitic in part - fossiliferous - abundant free oil in tray - no  
live oil in rocks unless broken - Faint odor

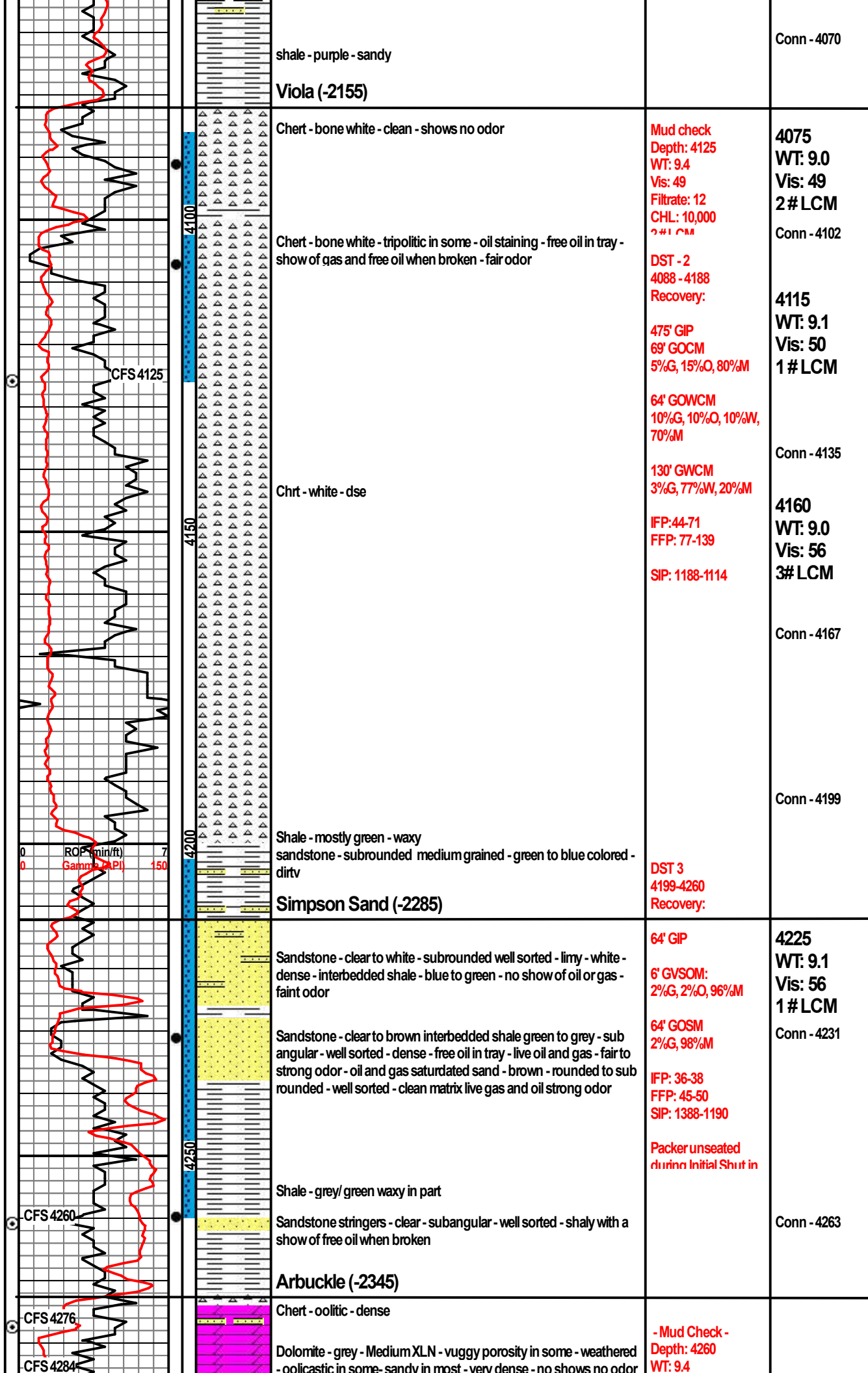
Chert - white - tripolitic in parts - SFO&G when broken limestone -  
medXLN dolomitic in part - Faint odor

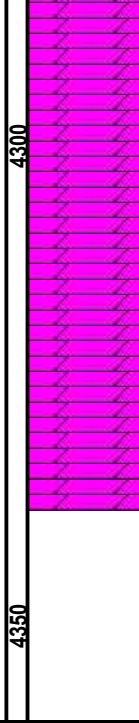
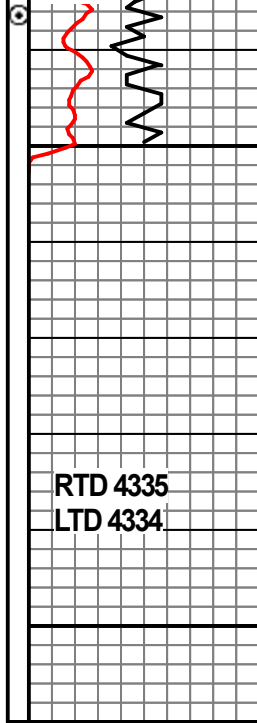
Kinderhook shale (-2097)

shale - purple - sandy in part

shale green - waxy and sandy in part

Shale - Purple waxy





Dolomite - tan to grey - dense - fineXLN - few pink colored pieces

Dolomite - grey - medXLN - dense - slightly weathered. no shows

Dolomite - tan - medXLN - dense - weathered - oolitic oolitic in most - No shows

VIS: 54  
Filtrate: 12.8  
CHL: 10,000  
241 CM

Conn - 4295