



Woolsey Operating Company, LLC

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

Well Name: Diel F #2
Location: N/2 S/2 SW SW
License Number: API: 15-007-23885-00-00
Spud Date: June 7, 2012
Surface Coordinates: 495' FSL, 660' FWL Section 23-Twp 34 South - Rge 11 West
Bottom Hole Coordinates: Vertical Hole
Ground Elevation (ft): 1327 K.B. Elevation (ft): 1340
Logged Interval (ft): 4000 To: 5173 Total Depth (ft): 5173
Formation: McLish Shale
Type of Drilling Fluid: Chemical Mud, Displace at 3115'

Region: Barber County, Kansas
Drilling Completed: June 14, 2012

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Woolsey Operating Company, LLC
Address: 125 N. Market, Suite 1000
Wichita, KS 67202

GEOLOGIST

Name: W. Scott Alberg
Company: Alberg Petroleum, LLC
Address: 609 Meadowlark Lane
Pratt, Kansas 67124

FORMATION TOPS

SAMPLE TOPS

LOG TOPS

| | | |
|-------------------|-------------|--------------|
| HUSHPUCKNEY SHALE | 4380(-3040) | 4381(-3041) |
| B/KC | 4434(-3094) | 4432(-3092) |
| PAWNEE | 4530(-3191) | 4529(-3190) |
| CHEROKEE GROUP | 4582(-3242) | 4582(-3242) |
| MISSISSIPPIAN | 4650(-3310) | 4644(-3304) |
| KINDERHOOK SHALE | 4908(-3568) | 4905(-3565) |
| WOODFORD SHALE | 4927(-3587) | 4926(-3586) |
| VIOLA | 4951(-3611) | 4951*(-3611) |
| SIMPSON GROUP | 5082(-3742) | 5082(-3742) |
| SIMPSON SAND | 5104(-3765) | 5098(-3759) |
| MCLISH SHALE | 5144(-3804) | 5147(-3807) |
| RTD | 5173(-3833) | |
| LTD | | 5174(-3834) |

COMMENTS

Surface Casing: Set 5 joints 10 3/4" at 219' with 240 sxs Class A, 2% gel, 3% cc, plug down at 9:30 pm on June 6, 2012. Cement did Circulate.

Production Casing: Ran 5 1/2" Casing

Deviation Surveys: 1/4 - 219', 3/4 - 547', 3/4 - 1016', 3/4 - 1516', 1/2 - 1986. 1/4 - 2488', 1/2 - 3021', 1/2 - 3490, 1/2 - 3615', 3/4 - 3742', 1/2 - 3867', 1 - 3962', 1/2 - 4025', 1/2 4118', 1 1/2 - 4274', 1 1/4 - 4401', 3/4 - 4495', 1 1/2 - 4696', 1 1/2 - 4779', 1 - 4904', 1-5173'.

Contractor Bit Record:

- 1- 14 3/4" out at 219'.
- 2- 7 7/8" out at 4401'(PDC)
- 3 - 7 7/8" out at 5173'.

Pipe Strap - 4403.62'

Board - 4401.25'

Strap 2.37' long

Gas Detector: Woolsey Operating Company, Trailer #1

Mud System: Mud Co, Brad Bortz, Engineer

DSTs: Trilobite Testing

Logged by Superior Well Services.

LTD - 5174'.

DSTs

DST #1 4551-4696 Mississippi

Times 30-60-60-120

1st opening - fair blow 5 inches - no blow back

2nd Opening - fair blow 5 inches - no blow back

Recovery: 60' Drilling Mud (slight odor at tool)

IFP 48-69# FFP 48-61#

ISIP 173# FSIP 170#

IHP 2170# FHP 2167#

Temp 120

CREWS

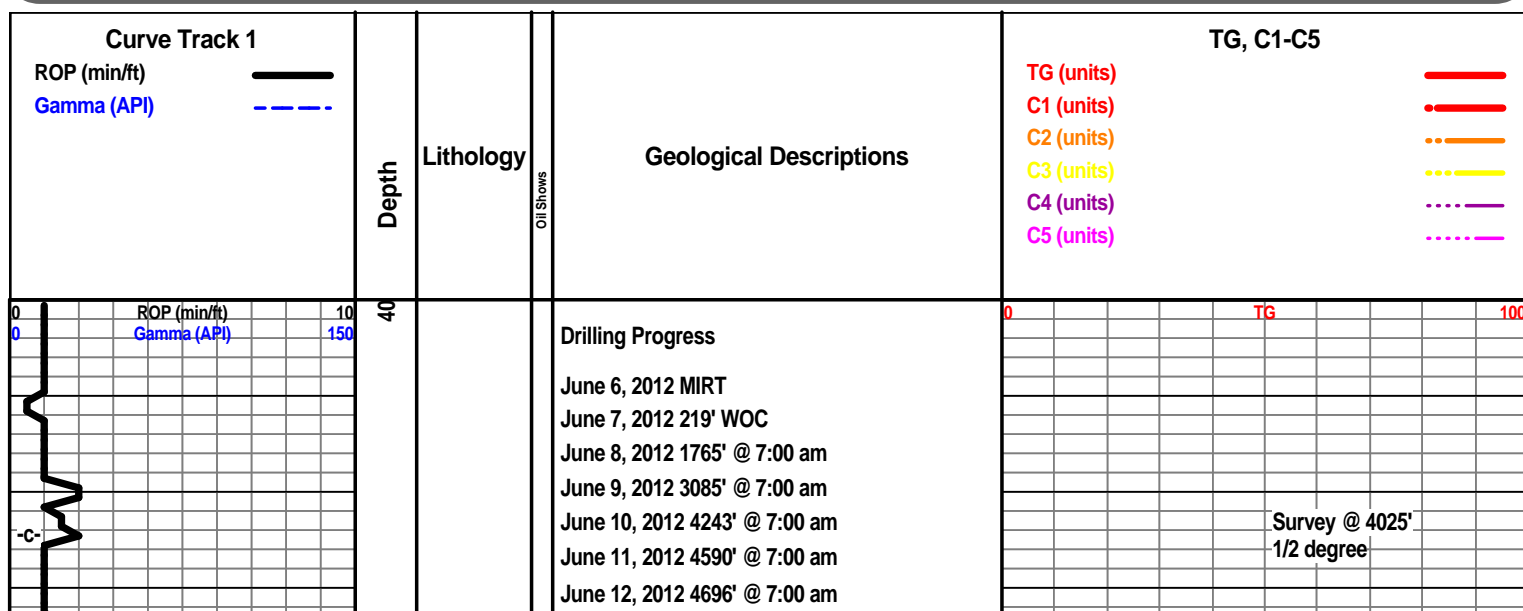
Duke Drilling
Tool Pusher - Galen Roach
Drillers - Shane Meitler
Charles Stout
Craig Mertens

ROCK TYPES

| | | | | | | | |
|--|-------|--|----------|--|-------|--|----------|
| | Anhy | | Congl | | Lmst | | Black sh |
| | Bent | | Sdy dolo | | Mrlst | | Gry sh |
| | Brec | | Shy dolo | | Salt | | Shale |
| | Cht | | Dol | | Shale | | Shysltst |
| | Clyst | | Gyp | | Sltst | | Sltysht |
| | Coal | | Sdy lmst | | Ss | | |

ACCESSORIES

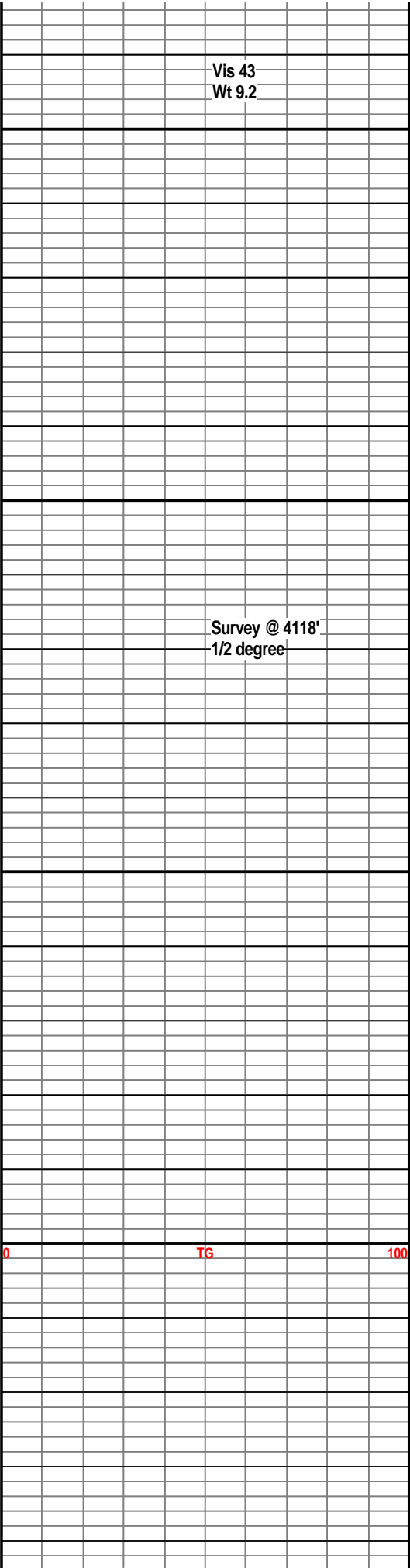
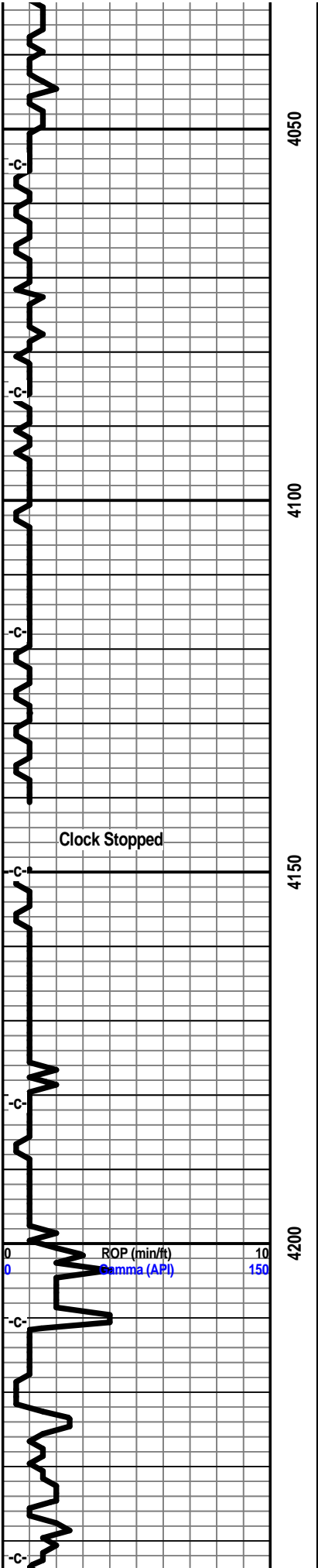
| MINERAL | | | | | | | |
|---------|----------|--------|----------|----------|----------|--|----------|
| | Anhy | | Chlorite | | Pelec | | Grysh |
| | Arg | | Dol | | Pellet | | Gryslt |
| | Bent | | Sand | | Pisolite | | Lms |
| | Bit | | Silty | | Plant | | Sandylms |
| | Brecfrag | FOSSIL | | | Strom | | Sh |
| | Calc | | Algae | | Fuss | | Sltstn |
| | Carb | | Amph | | Oomoldic | | |
| | Chtdk | | Belm | STRINGER | | | |
| | Chtlt | | Bioclst | | Anhy | | Boundst |
| | Dol | | Brach | | Arg | | Chalky |
| | Ferrpel | | Bryozoa | | Bent | | Cryxln |
| | Ferr | | Cephal | | Coal | | Earthy |
| | Glau | | Coral | | Dol | | Finexln |
| | Gyp | | Crin | | Gyp | | Grainst |
| | Marl | | Echin | | Ls | | Lithogr |
| | Nodule | | Fish | | Mrst | | Microxln |
| | Phos | | Foram | | Sltstrg | | Mudst |
| | Pyr | | Fossil | | Ssstrg | | Packst |
| | Salt | | Gastro | | Carbsh | | Wackest |
| | Sandy | | Oolite | | Clystn | | |
| | Silt | | Ostra | | Dol | | |

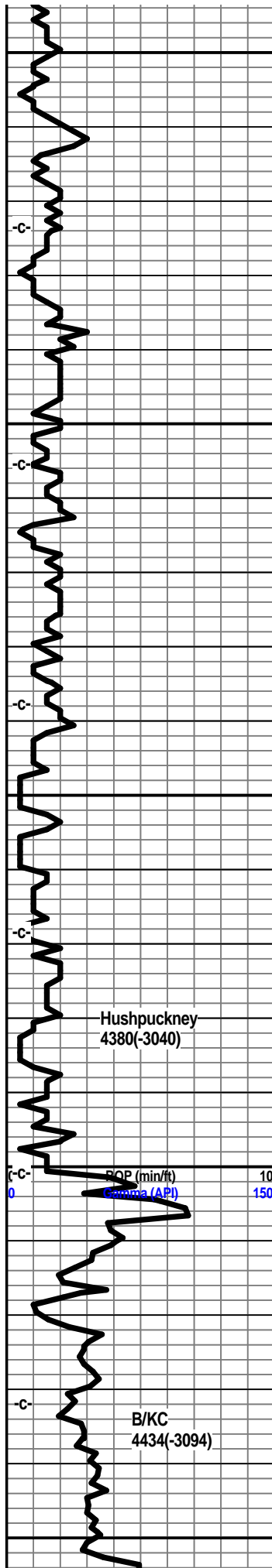


June 13, 2012 4975' @ 7:00 am
June 14, 2012 5155' @ 7:00 am
June 15, 2012 5173' @ 7:00 am Running Casing

Vis 43
Wt 9.2

Survey @ 4118'
1/2 degree

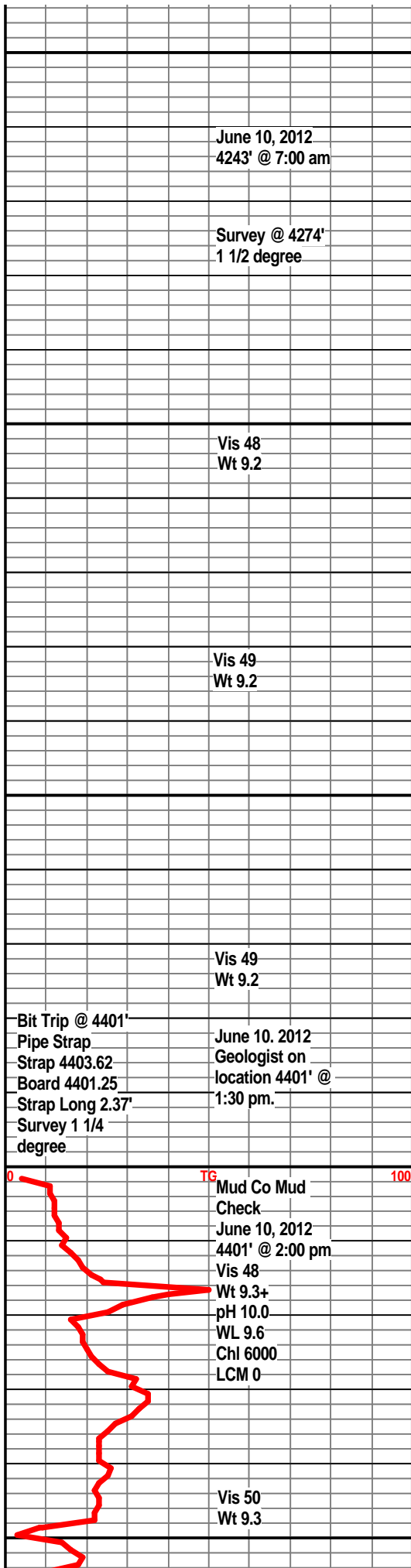


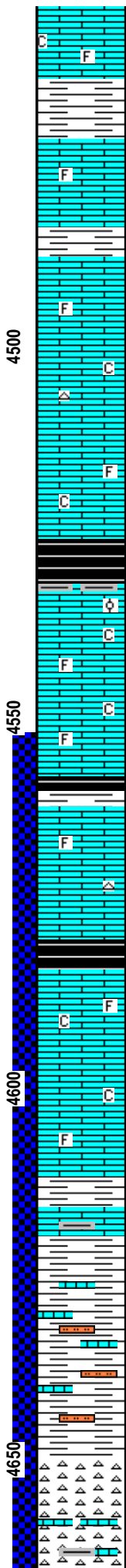
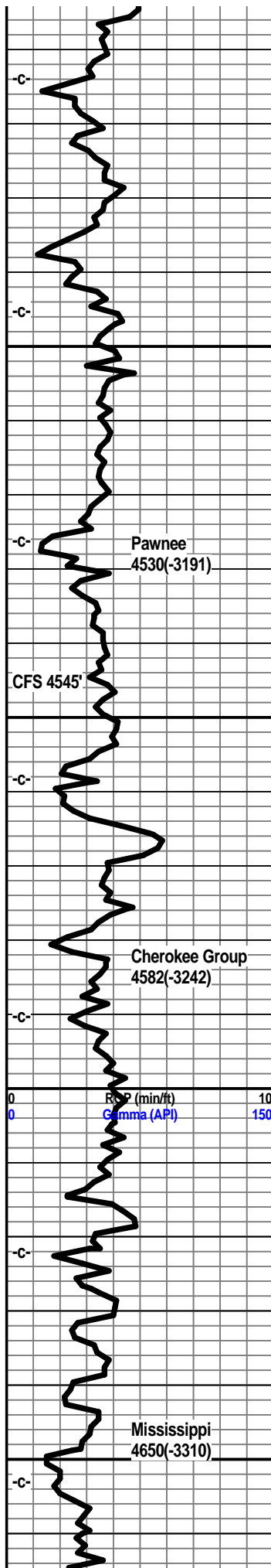


4250
4300
4350
4400
4450



Limestone, cream, tan, buff, xln, dense, trace foss.
Shale, grey-black, silty, slightly carb.
Limestone, tan, cream, brown, xln, dense, slightly foss.
Shale, light grey, slightly silty.
Limestone, tan-brown, xln, dense, foss in part.
Shale, light grey, silty green





Shale, light grey, pale green.
Limestone, pale green, light grey, xln, dense, subchalky, trace foss.

Shale, grey, light green, calcitic.

Limestone, cream, tan, pale grey-green, xln, slightly shaley, trace foss, trace chalky.

Shale, light grey, grey.

Limestone, cream, tan, buff, light grey-green, xln, dense, slightly foss, subchalky.

Limestone, buff-white, tan, xln, dense in part, subchalky, trace foss, trace tan chert.

Shale, grey-black, slightly carb.

Limestone, tan, cream, buff, xln, fxln, poor xln porosity, foss in part, trace oolite, trace foss frags, no visible shows, slightly chalky in part, dull mineral fluor.

Limestone, tan, buff-tan, xln, dense, slightly foss, trace chalky.

Shale, grey, dark grey.

Limestone, tan, cream, buff, xln, dense, slightly foss, trace tan chert.

Shale, grey-black, slightly carb.

Limestone, buff, grey-white, xln, dense, foss, sub chalky.

Limestone, tan, grey-white, fxln, dense, trace foss, trace chalky.

Shale, grey, light grey.

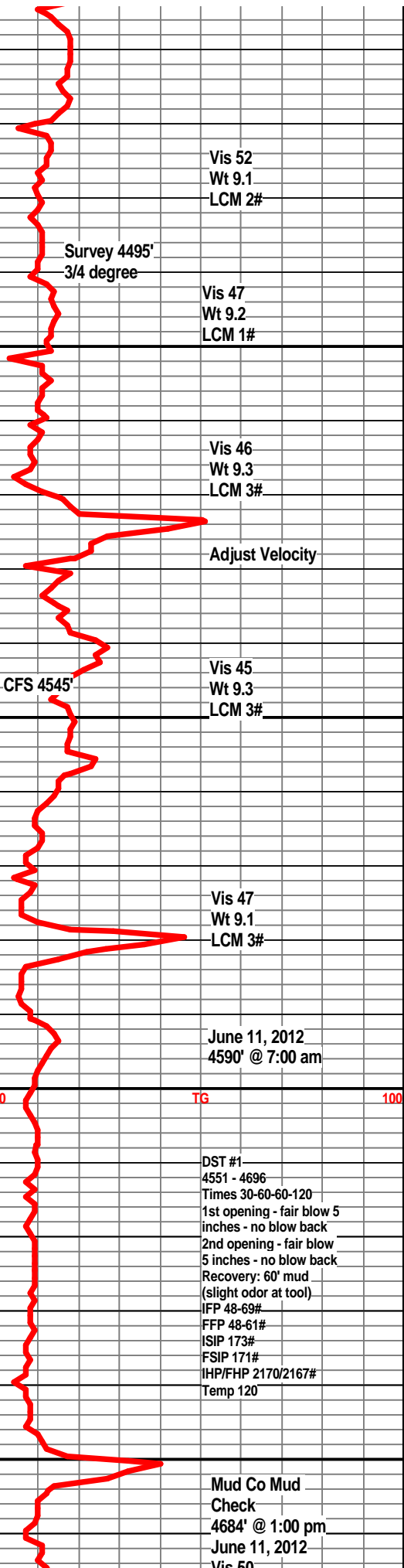
Limestone, tan, buff, xln, some vari-colored shales.

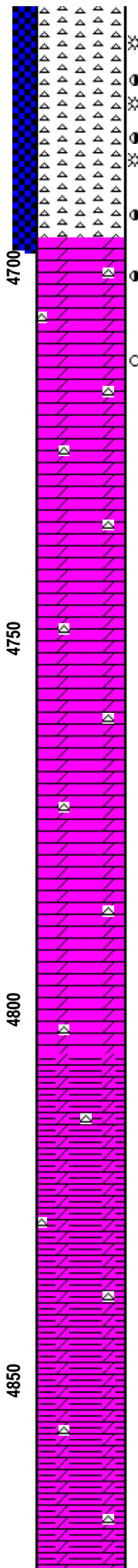
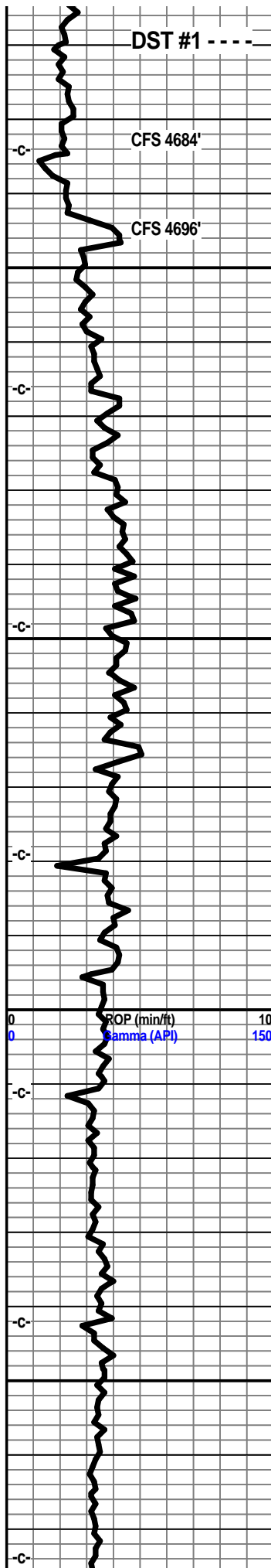
Shale, light grey, grey, some vari-colored, limestone, frags.

Shale, vari-colored, soft, silty, some embedded sand grains, ls frags, few pieces vari-colored chert.

Chert, grey-white, sharp, v. slightly weathered, mostly fresh, trace pp porosity, slight show gas, questionable dark stain, some lighter stain along fractured edges, abundant shales and ls frags.

Chert, grey-white, sharp, abundant ls frags, some slight staining, fresh cherts, vari-colored shales.





Chert, grey-white, off-white, sharp to weathered, some pp porosity, trace light brown staining, very slight show oil, no odor, some light brown edge staining, dull fluor.

Chert, off-white, buff, light grey, pale green, sharp to weathered, traces of pp porosity, slight show oil, faint odor, very few small vugs, light brown spotted staining, few grey green shales.

60 min - chert a/a - good show of oil, fair odor

Chert, off-white, grey, tan, weathered to sharp, pp porosity, small vugs, good show oil, good odor, light brown staining, dull fluor.

Dolo. grey-white, xln, dense, w/ chert a/a.

Dolo, grey-white, xln, dense, traces of weathered chert, very faint show, some spotted staining.

Dolo, grey-white, off-white, xln, dense, traces of off-white chert, very few shows of staining, mostly fresh chert.

Dolo, light grey, grey, xln, dense, traces of chert, few grey shales.

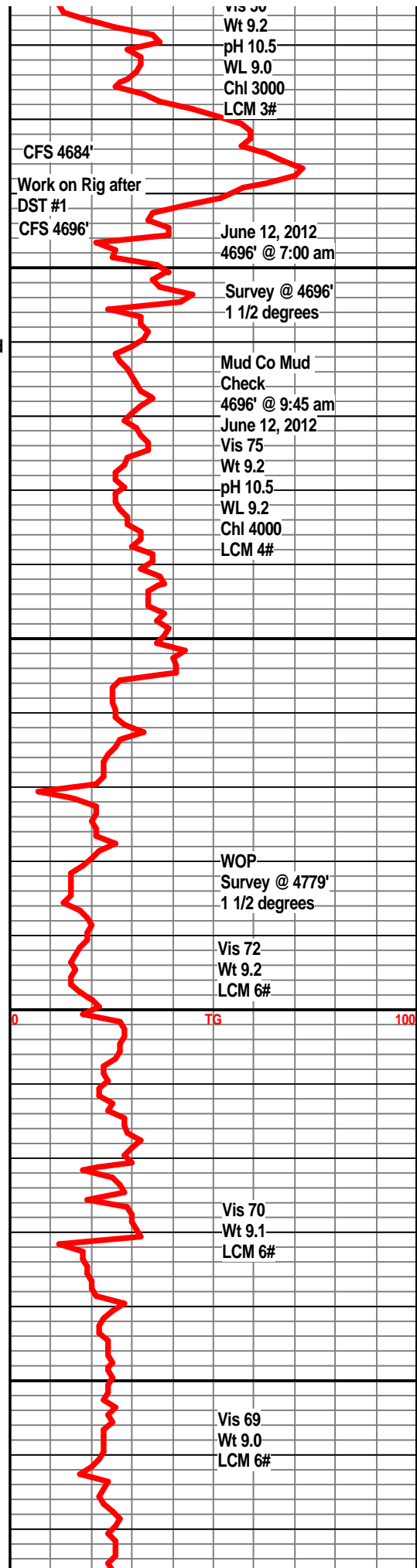
Dolo, light grey, grey, xln, light grey silty shales, trace fresh chert.

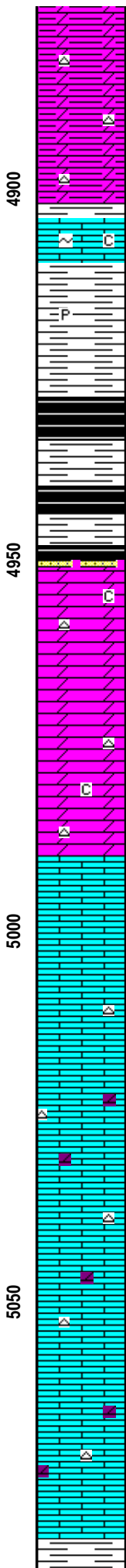
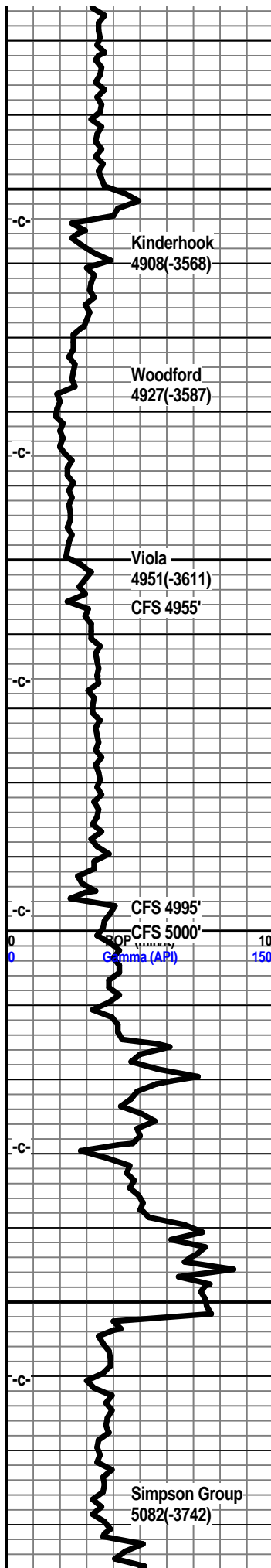
Dolo, grey, light grey-white, xln, dense, silty in texture, trace fresh chert, trace grey shale.

Dolo, grey, light grey, xln, slightly silty, trace fresh sharp chert, trace grey shales.

Dolo, grey, light grey, xln, silty texture, grey shales.

Dolo, light grey, grey, xln, silty, grey shales, trace chert.





Dolo, grey, light grey, xln, silty, grey shales.

Dolo, grey-white, grey, xln, dense, silty texture, trace fresh chert, trace grey shales.

Limestone, cream, tan-white, xln, trace xln porosity, glauc, chalky, spotty fluor, trace show light oil under uv light, slight gas indication.
Shale, grey, dark grey, firm, trace pyrite.

Shale, grey-black, coffee brown, gas bubbles.

Shale, grey-black, brown, show bleeding gas bubbles. Few embedded sand grains along base.

Dolo, grey-white, xln, few ls frags, some small black specks, trace chalky, no visible shows, trace mineral flour.

Dolo, grey-white, fxln, silty, trace fresh chert, few ls frags, no visible shows.

Dolo, grey-white, xln, dense, silty, traces of chert and ls frags.

Limestone, cream-white, fxln, trace xln porosity, slightly chalky, spotty fluor, slight show light oil under uv light, no odor.

Limestone, grey-white, cream, xln, trace xln porosity, chalky, black specks, slight mineral flour, no odor, no gas kick. 30 min.

Poor Samples

Limestone, grey-white, xln, traces of tan chert, slightly chalky.

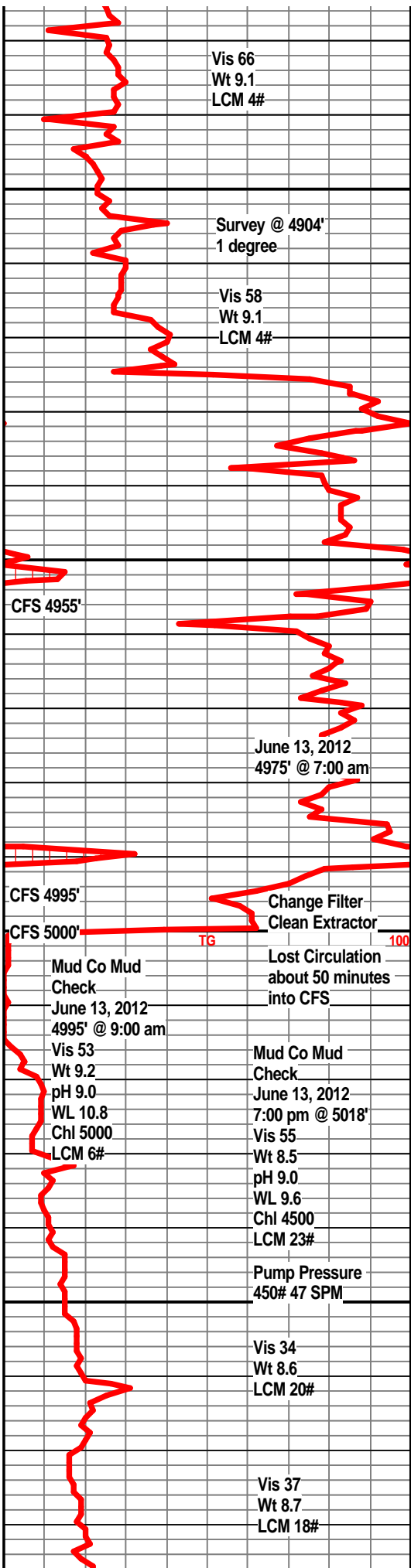
Limestone, tan, grey-white, xln, dense, traces of tan chert, sharp.

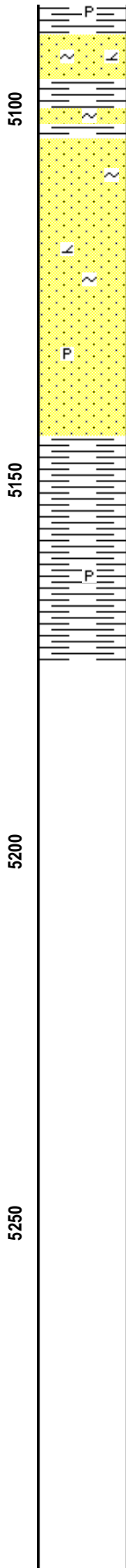
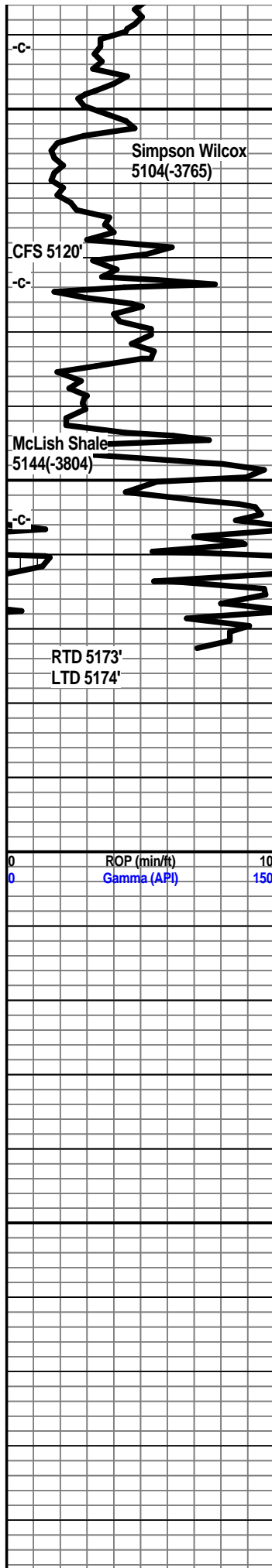
Limestone, tan, tan-white, xln, dense, sharp tan cherts, slightly dolo.

Limestone, tan, tan-white, xln, granular texture, tan sharp cherts, slightly dolo in part.

Limestone, tan, tan-white, cream, xln, dense, dolo in part, sharp tan cherts.

Shale, green, teal green, firm massive, trace





pyrite.
Sandstone, clear to grey-white, poorly sorted, well cemented, glauc, slightly dolo, slight gas indication, questionable light stain.

Shale, teal green, firm.

Sandstone, clear to frosted white, SA to SR, friable, slightly dolo in part, glauc, questionable spotted stain, no visible shows, no odor, no fluor.

Sandstone, clear, tan-white, friable in part, questionable scattered light brown staining, no odor, no fluor, glauc., slightly dolo in part.

Sandstone, grey-white, tan, friable in part, some well cemented, glauc, some gil, sa fair sorting, pyrite, no visible shows, no odor, no kick

A/A

Shale, teal green, grey-green, firm, massive, some sand stringers.

Shale, teal green, dark green, firm to soft, slightly pyritic.

