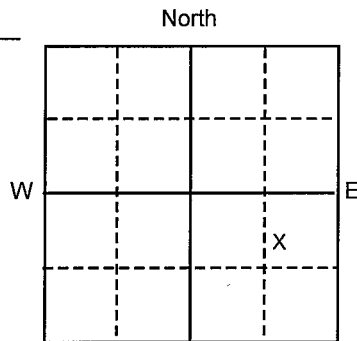


SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE ¼ SE ¼ Sec 34 Twp 8N Rg 2ECounty BUTTEPlease mark well
location with an "X"

Well Completion Date

DRILL TD 3-2-2025

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
1,900.0 ft. from HORSE CORRAL (identify source)

PROPOSED USE:

☐ Domestic/Stock ☒ Municipal ☐ Business ☐ Test holes
☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

FWD ROTARY

CASING DATA:

If other describe

☒ Steel ☐ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
94.0 LB/FT	20.00 IN	0.0 FT	60.0 FT	26.00 IN
54.5 LB/FT	13.32 IN	0.0 FT	1,518.0 FT	17.50 IN
28.0 LB/FT	8.62 IN	1,090.0 FT	2,119.0 FT	12.25 IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
NEAT CMT	72	15.1 Lb/gal	0.0 Ft	60.0 Ft
NEAT CMT	195	15.8 Lb/gal	1,518.0 Ft	1,218.0 Ft

Describe grouting procedure
805 SX 11.8 # from 1218 to sfc, 535 SX 15.8# 2120 to 1090

SCREEN:

☐ Perforated pipe ☒ Manufactured

Diameter _____ Inches Length _____ Feet

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information open hole completion 2120' to 2430'

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? _____

☒ No, Why Not? Flowing well
 Lab to which water quality sample sent for analysis
Well Owner: City of Belle Fourche

Business Name: _____

Address: 511 6th Ave.City, State, Zip: Belle Fourche SD 57717

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
INYAN KARA	0	164
LAKOTA	164	200
MORRISON	200	631
SPEARFISH	631	1411
MINNEKAHTA	1411	1458
OPECHE	1458	1561
MINNELUSA	1561	2090
MADISON	2090	2430

STATIC WATER LEVEL

FEET

If flowing: closed in pressure 82.50 PSIGPM flow 355.0 through 13.32 Inch pipeControlled by ☒ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? YES

WELL TEST DATA:

☐ Pumped Describe: FLOW METER
☐ Bailed
☒ Other
355 GPM after 24 Hrs.

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

RECEIVED

OCT 27 2025

OFFICE OF
WATERThis well was drilled under license # 814 and this report is true and accurate.Drilling firm: KELLER DRILLING LLC

Signature of License Representative:

Albert P. Keller Jr.Digitally signed by Albert P. Keller Jr.
DN: cn=Albert P. Keller Jr., o=Keller Drilling LLC,
ou, email=Kellerdrilling15@hotmail.com, c=US
Date: 2022.06.09 14:01:34 -06'00'

Signature of Well Owner or Equitable Property Holder:

Date: _____

HYDROLOGIC LOG FOR



SERVICES PROVIDED BY



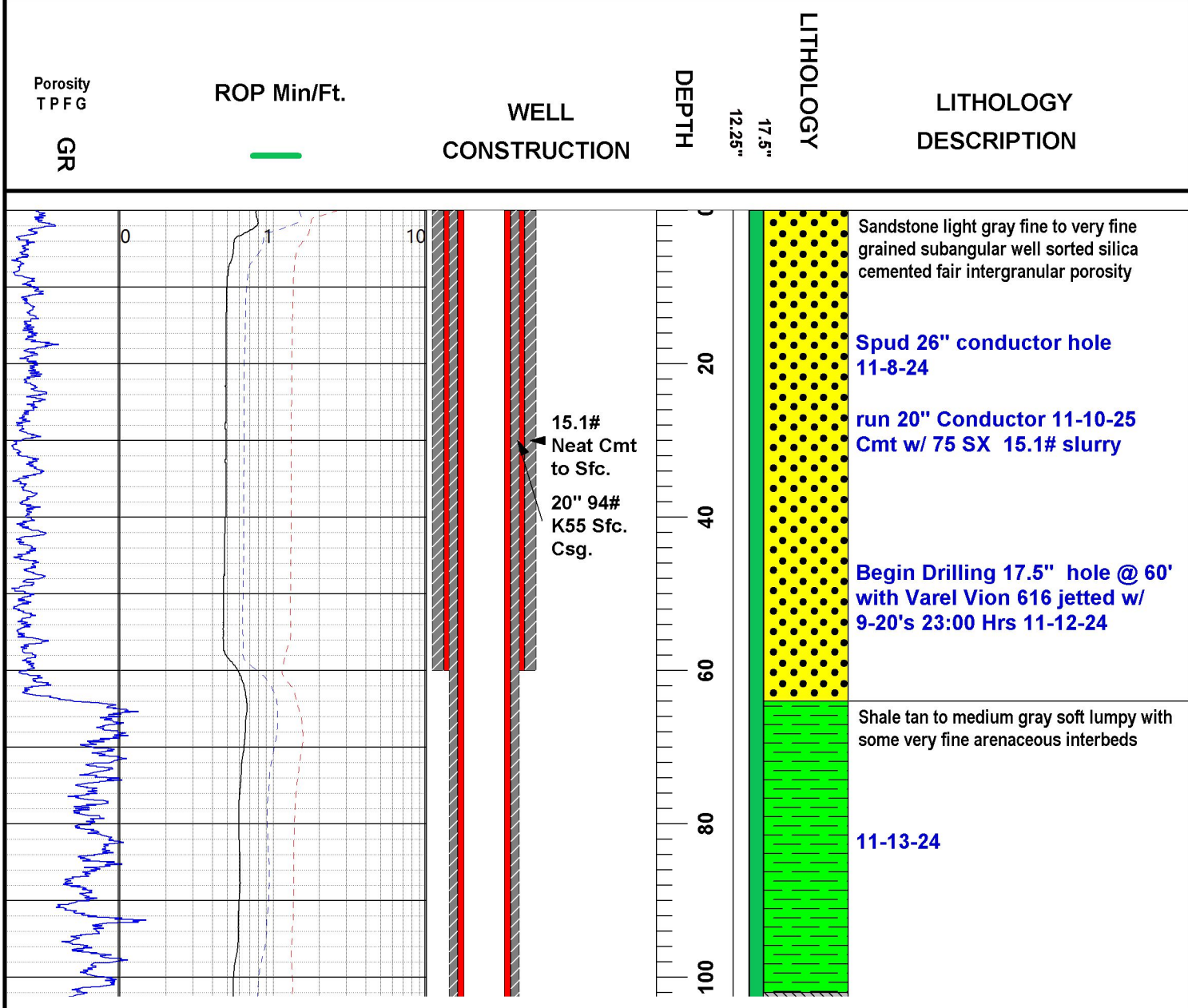
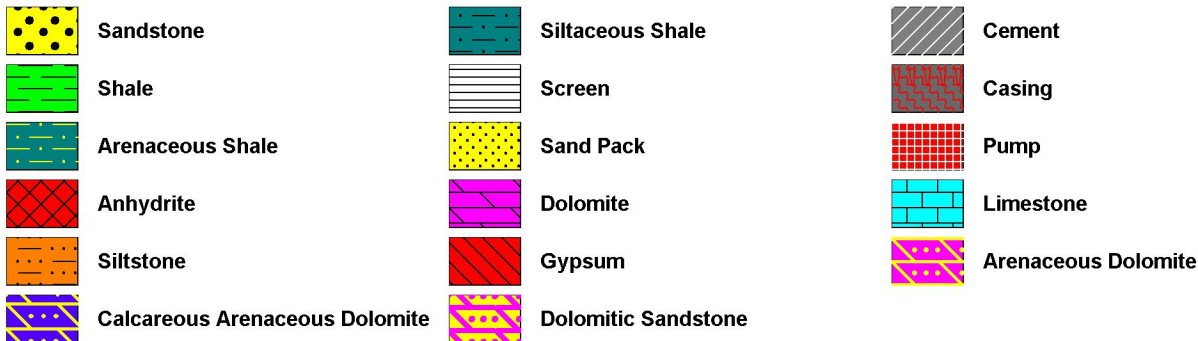
SOLUTIONS + SERVICE = SUCCESS

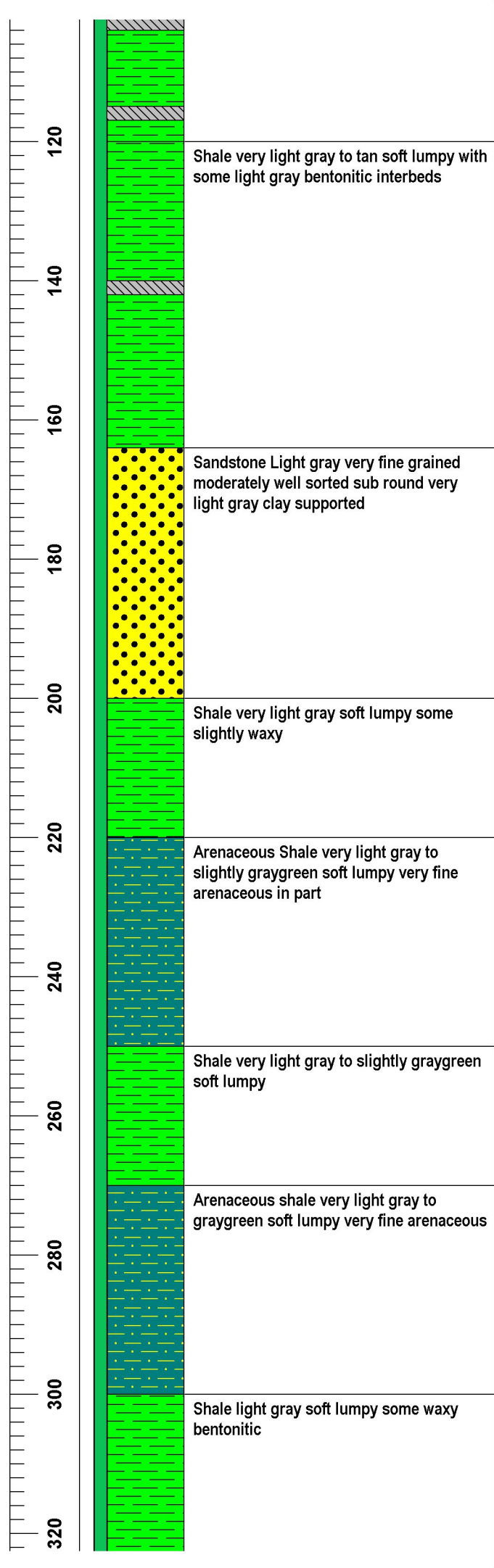
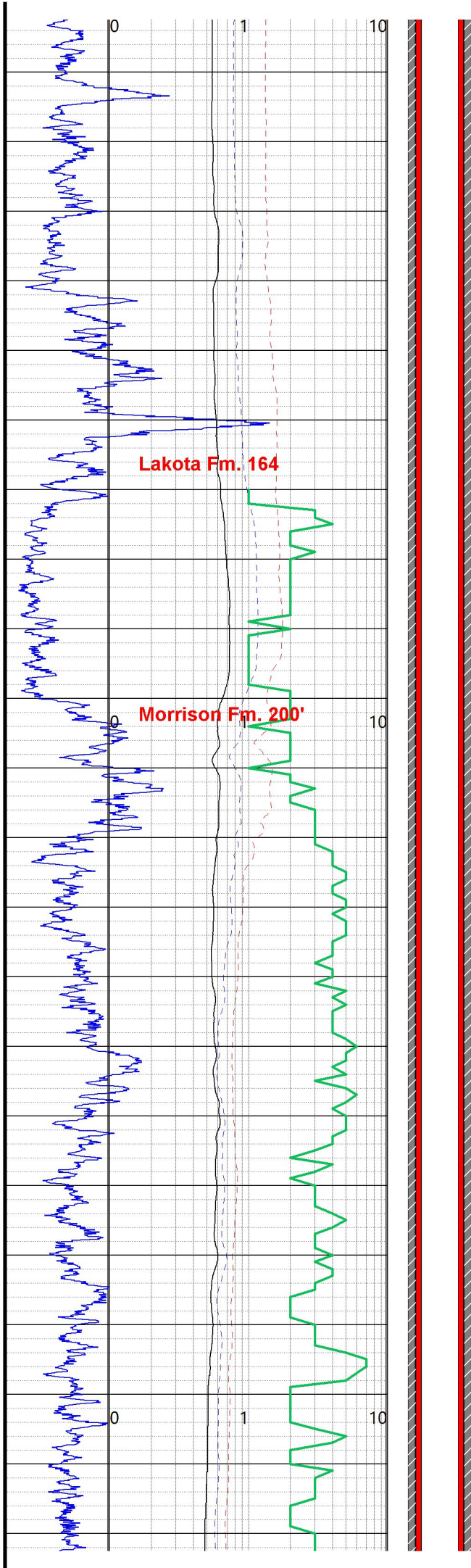


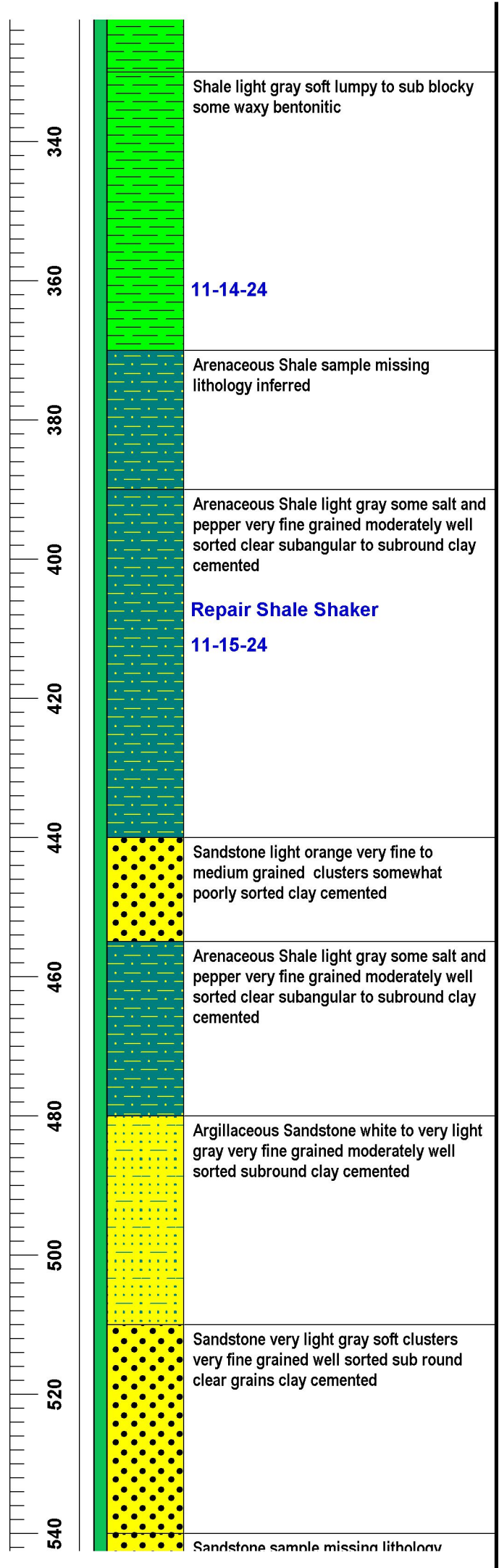
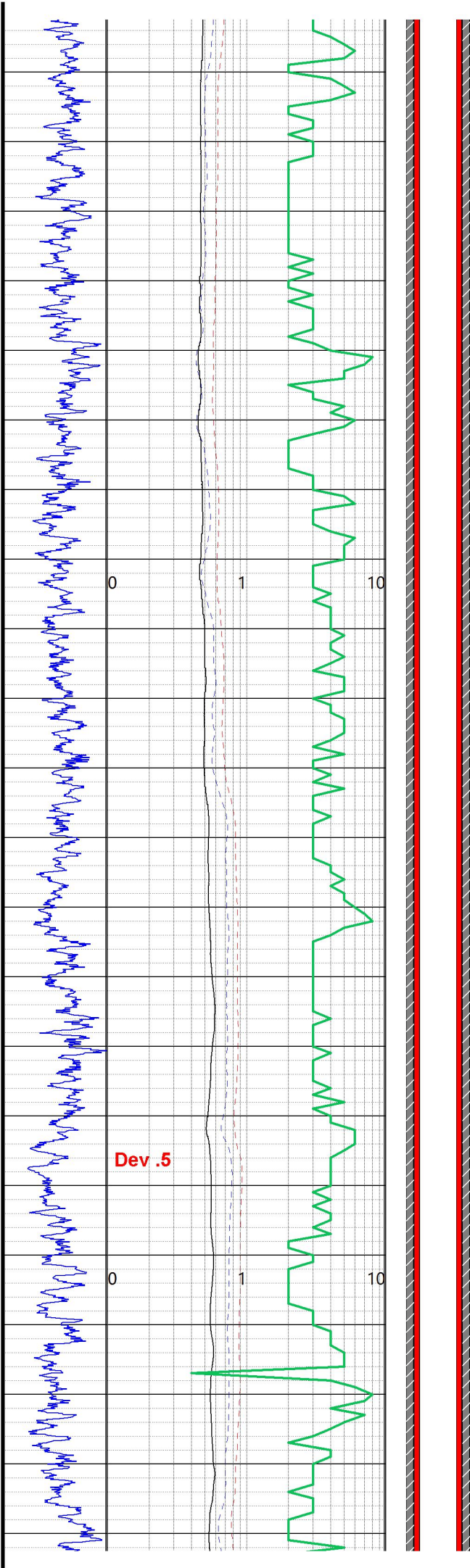
Advanced Engineering and Environmental Services, LLC

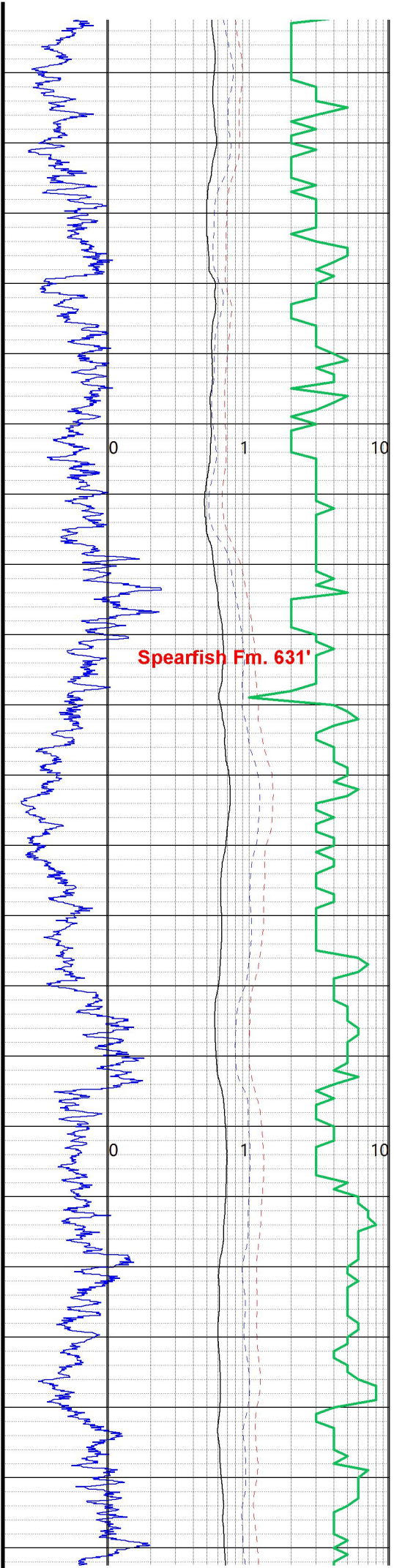
WELL OWNER: City of Belle Fourche, South Dakota
WELL NAME: Belle Fourche Well #3 AE2S Project No. P05070-2023-001
STATE: South Dakota
COUNTY: Butte
LOCATION: NE/SE S34 T8N R2E
ELEVATION: ELEVATIONS GL 3473 KB 3486 Datum for Log Depths = GL
INTERVAL: Surface to 2430' DATES: Nov 8, 2024 to Mar 2, 2025
GEOLOGIST: Peter J. Waldon

Pattern Legend



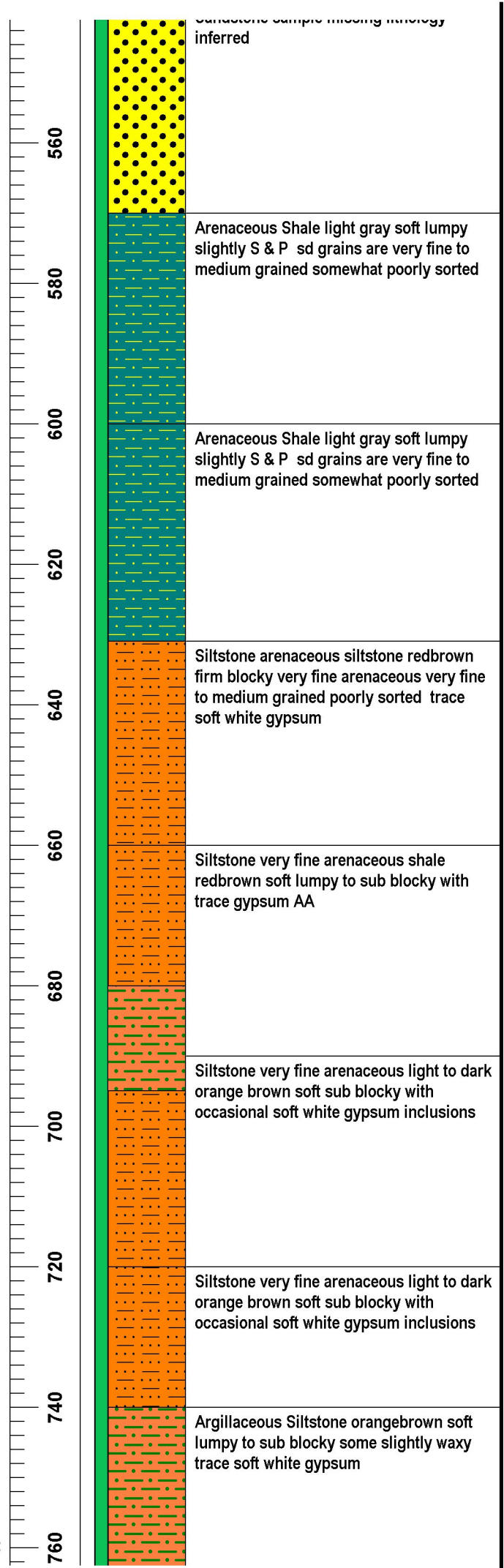






Spearfish Fm. 631'

13.3/8"
54.5# K55
casing set
at 1510'



Sandstone sample missing lithology inferred

Arenaceous Shale light gray soft lumpy slightly S & P sd grains are very fine to medium grained somewhat poorly sorted

Arenaceous Shale light gray soft lumpy slightly S & P sd grains are very fine to medium grained somewhat poorly sorted

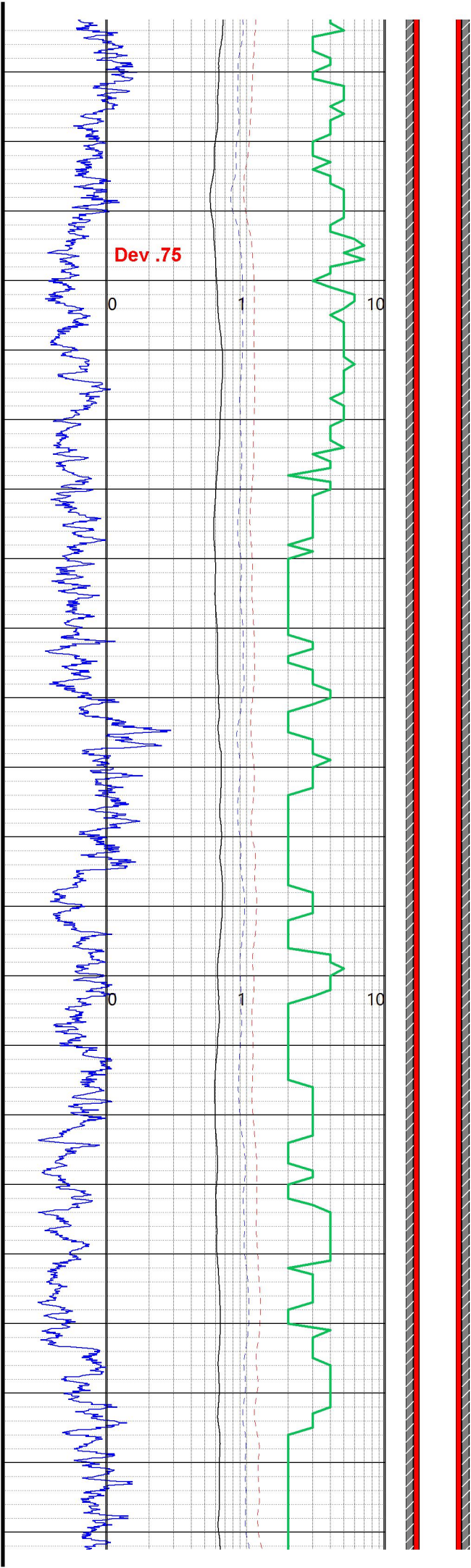
Siltstone arenaceous siltstone redbrown firm blocky very fine arenaceous very fine to medium grained poorly sorted trace soft white gypsum

Siltstone very fine arenaceous shale redbrown soft lumpy to sub blocky with trace gypsum AA

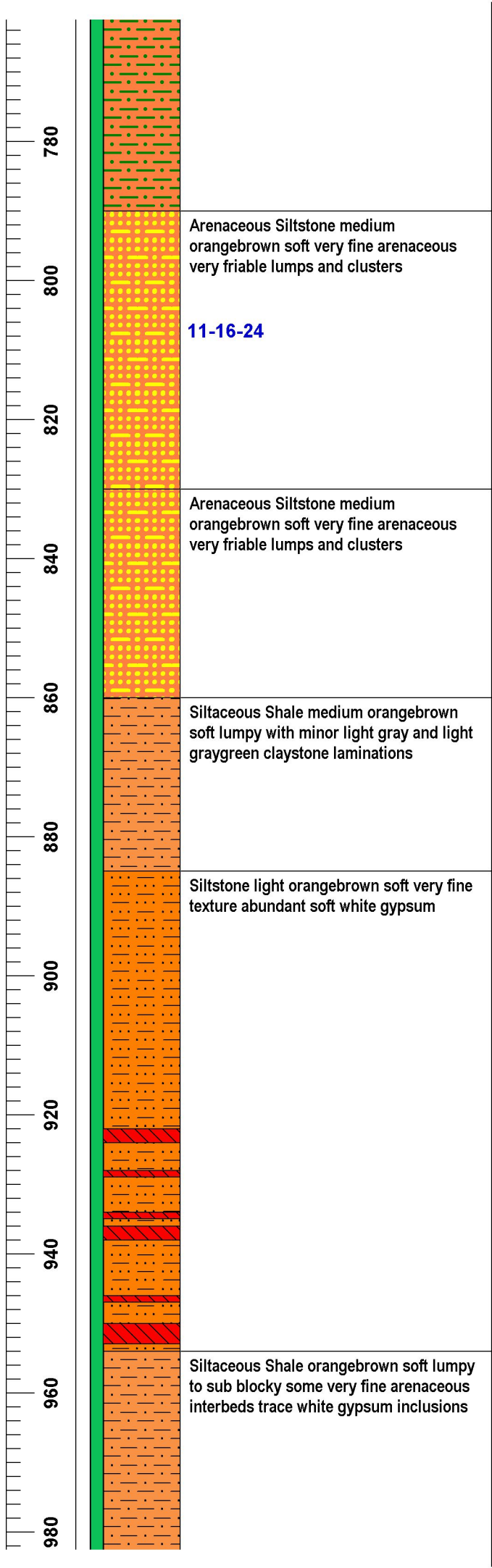
Siltstone very fine arenaceous light to dark orange brown soft sub blocky with occasional soft white gypsum inclusions

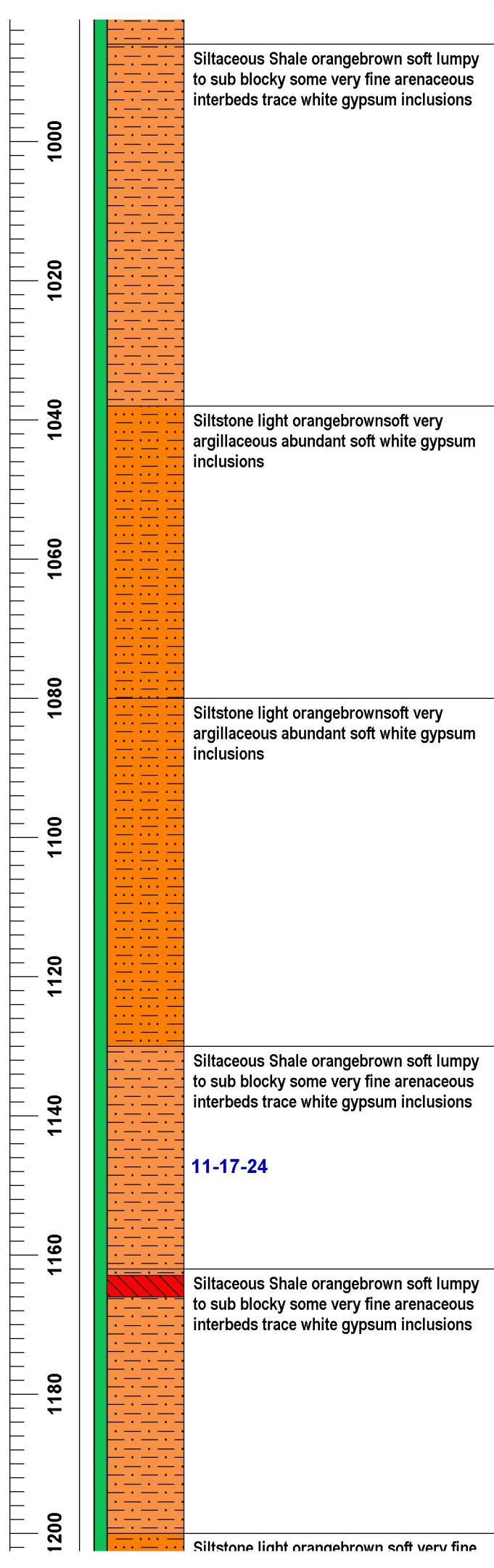
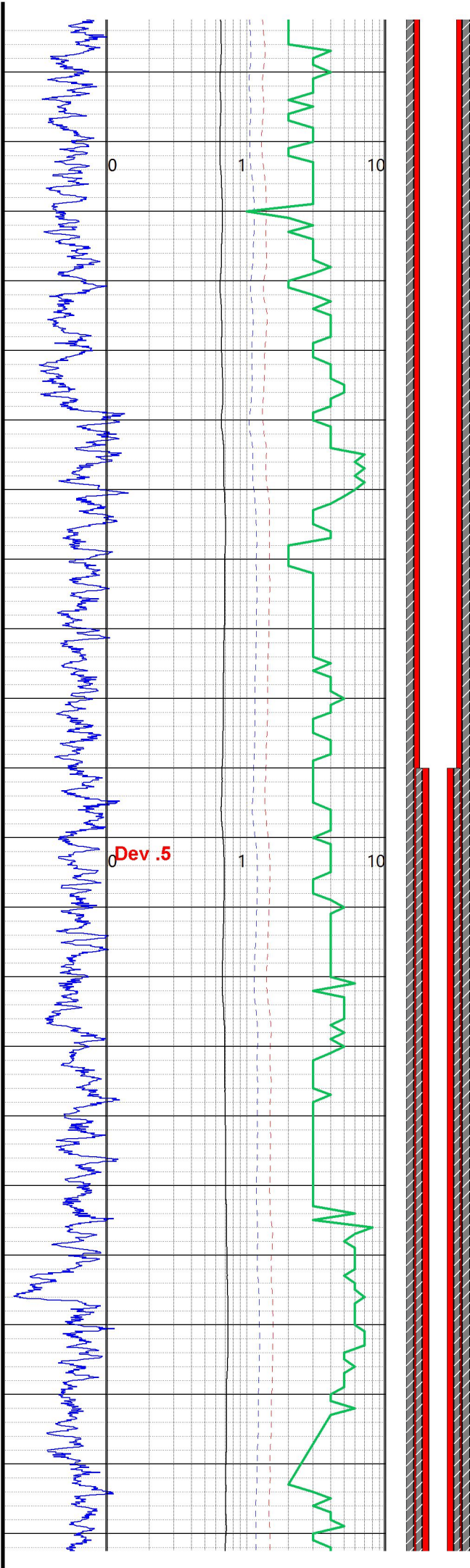
Siltstone very fine arenaceous light to dark orange brown soft sub blocky with occasional soft white gypsum inclusions

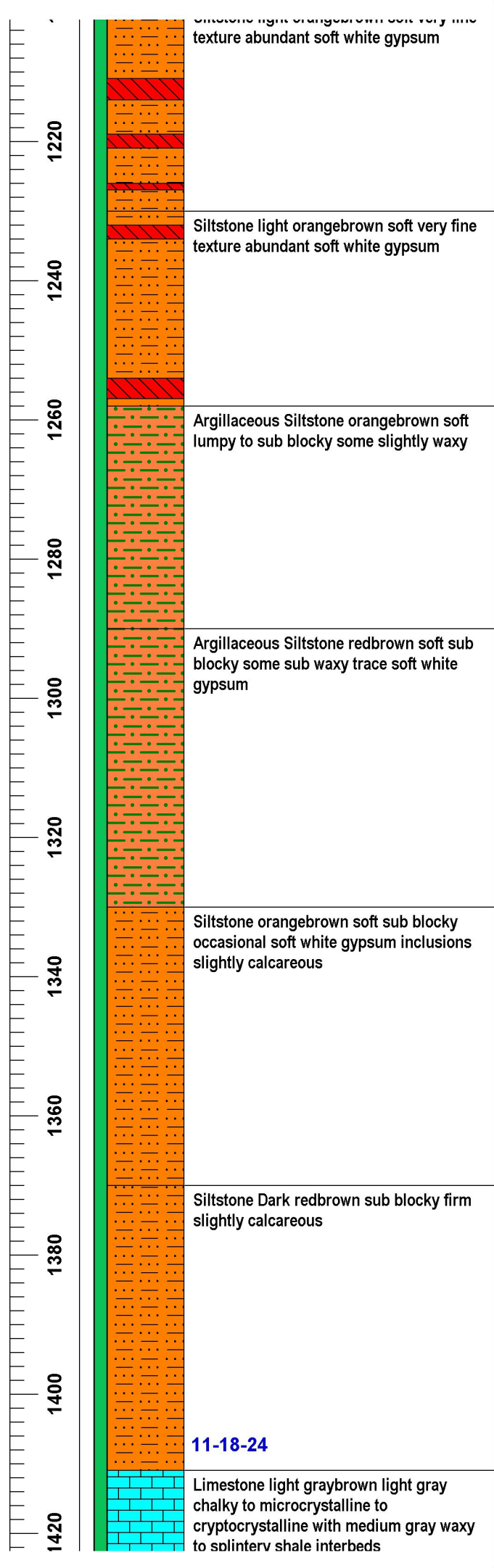
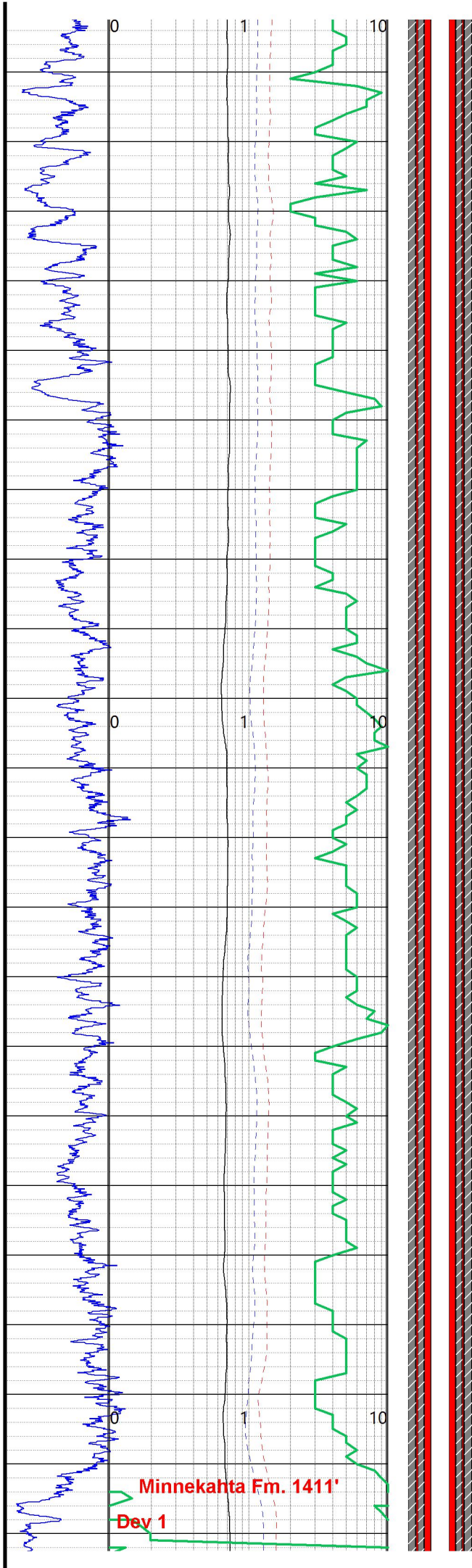
Argillaceous Siltstone orangebrown soft lumpy to sub blocky some slightly waxy trace soft white gypsum

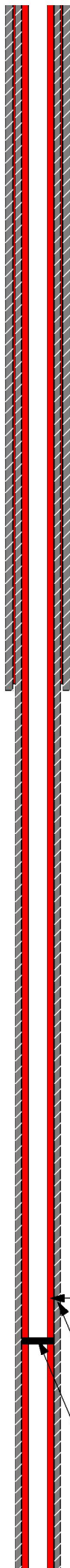
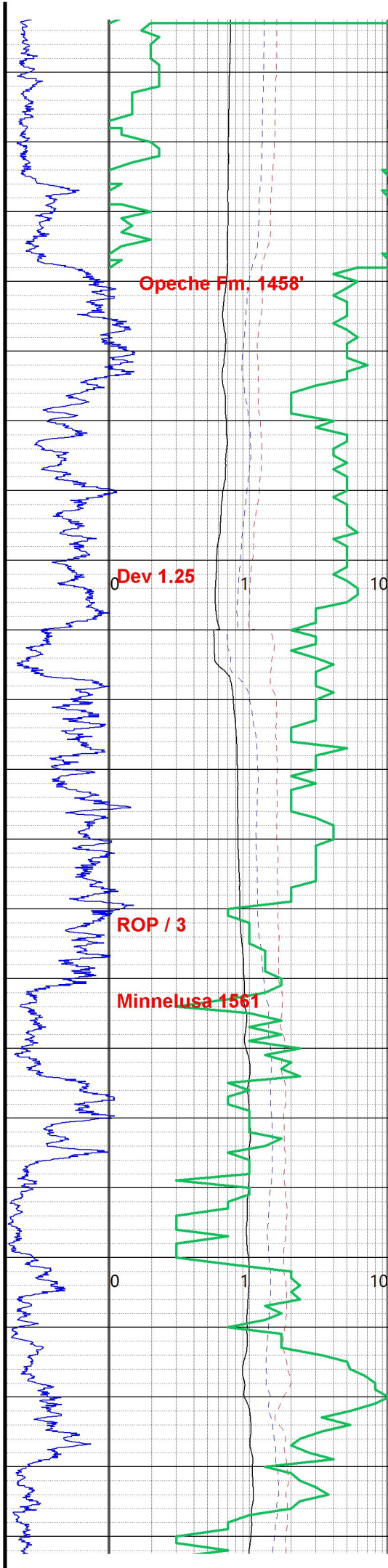


at 1510
GL

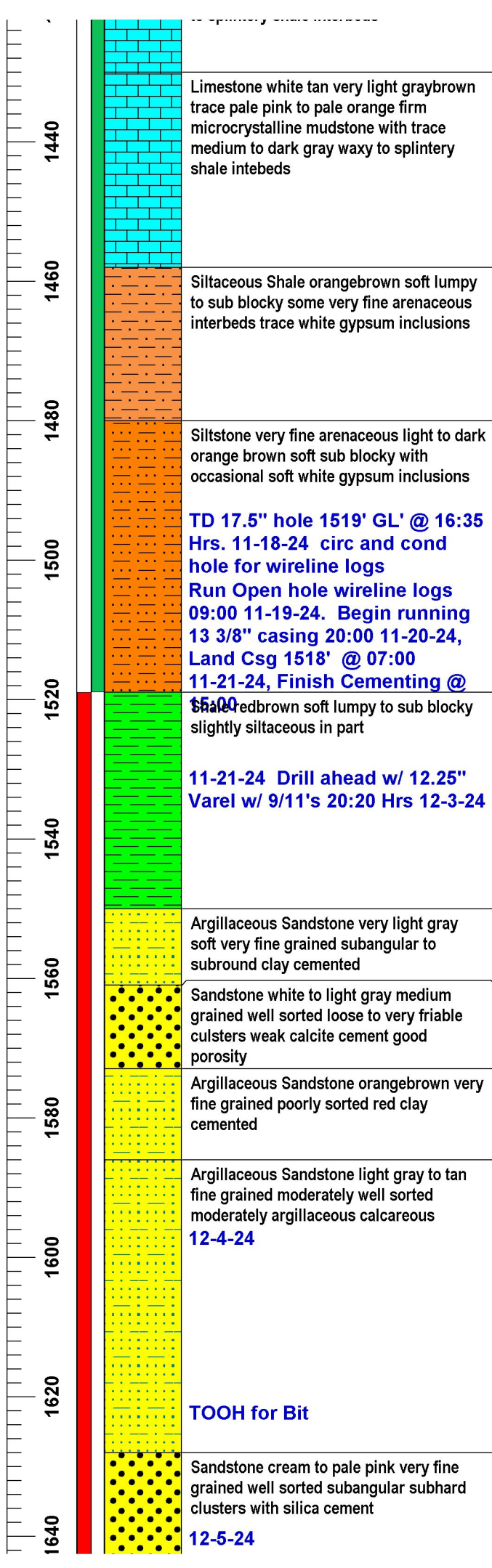


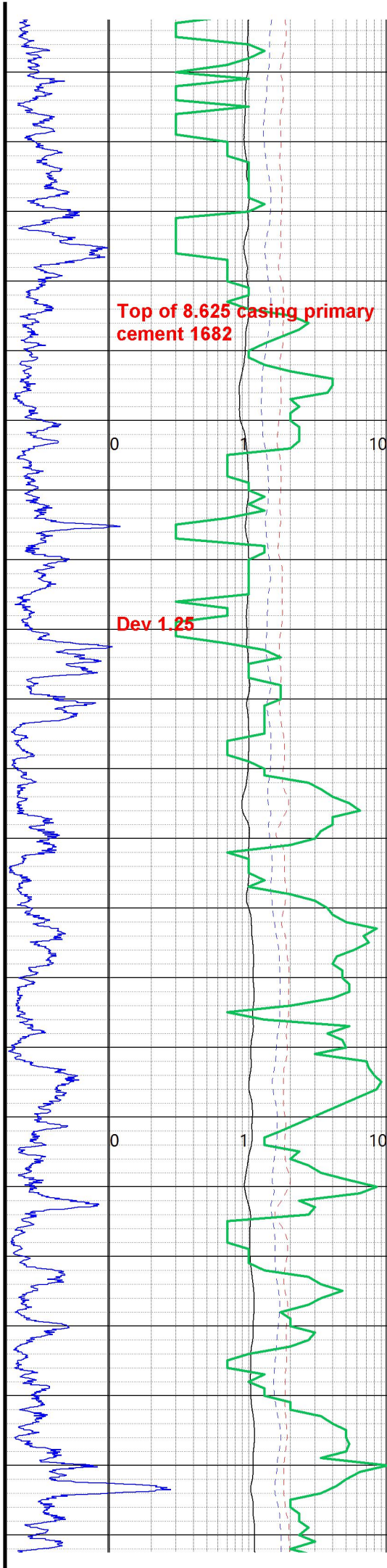




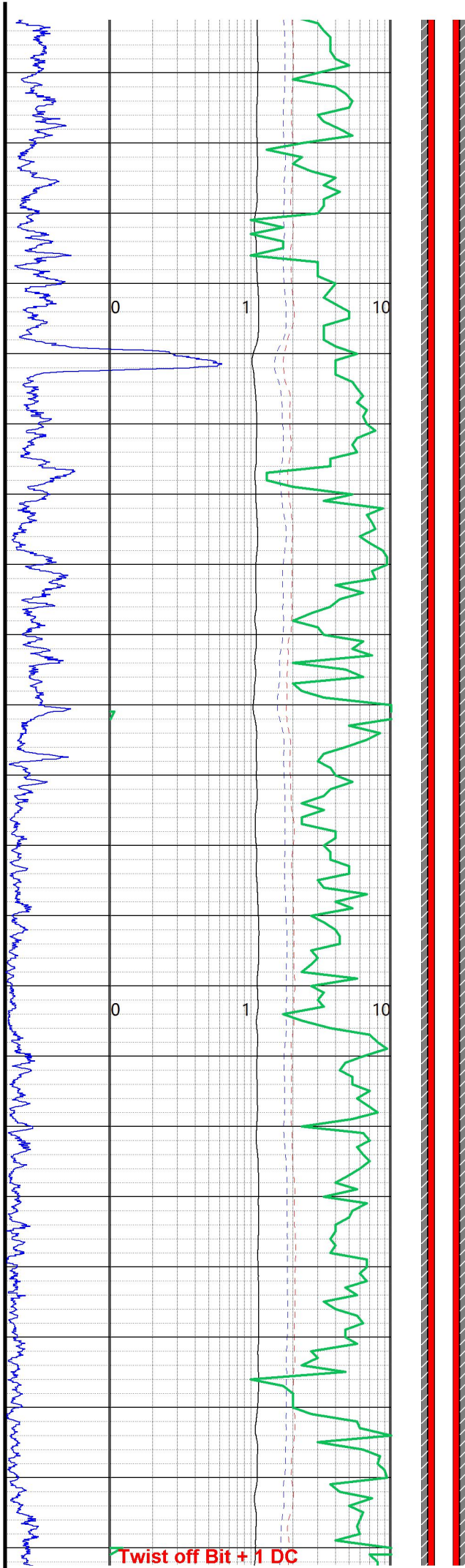


8.625" 28#
casing
set at
2119 GL
15.8 Neat
Cmt 2120'
to 1090'
Cast iron
Cement
retainer
1610

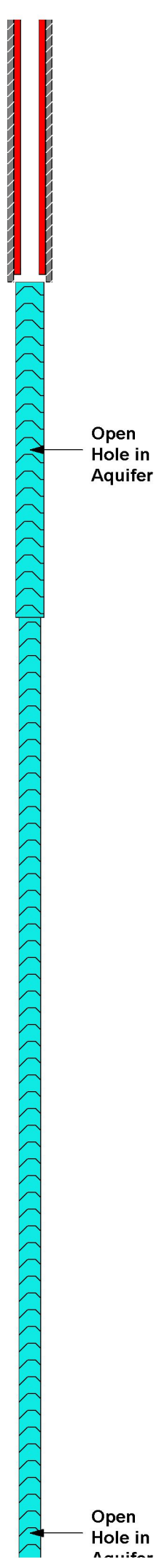
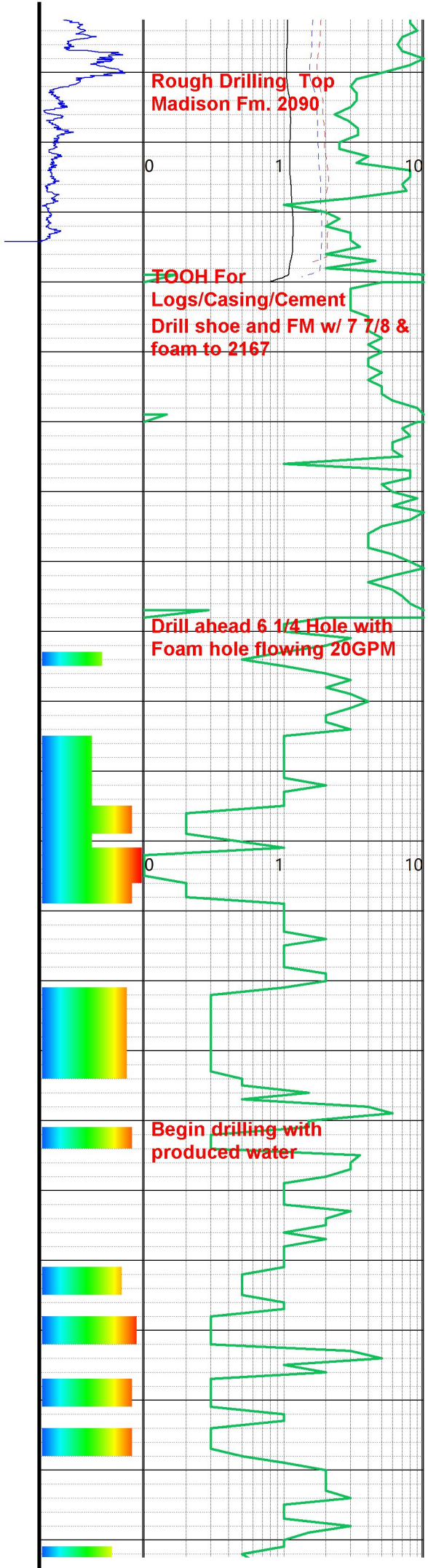




1660	
1680	
1700	
1720	Sandstone pale orange pink to brick red fine grained well sorted slightly to moderately argillaceous interbeds silica cemented some slightly calcareous
1740	Dolomite cream subhard brittle cryptocrystalline
1760	Sandstone very light gray hard very fine to medium grained somewhat poorly sorted subangular tight calcareous cement
1780	12-6-24 TOOH for Bit
1800	Sandstone pale orange fine to medium grained somewhat poorly sorted minor dark redbrown very argillaceous interbeds slightly calcareous trace soft white gypsum occasional light gray hard silica cemented clusters
1820	Dolomite pink hard dense cryptocrystalline brittle
1840	Dolomite pale pink to pink hard brittle cryptocrystalline
1860	12-7-24
	Sandstone pale pink very fine grained well



1880		Calcareous pale pink very fine grained well sorted sub angular hard clusters with pink slightly calcareous dolomitic cement
1900		
1920		Sandstone pale pink hard clusters A/A with minor pink to pale orange hard brittle cryptocrystalline dolomite
1928		12-8-24
1930		Dolomite pale pink to medium orange-pink hard brittle cryptocrystalline trace with dark redbrown Fe stain on fracture faces
1935		Dolomitic Mudstone gray to graygreen firm fissile to blocky slightly calcareous with trace dolomite pink to light gray hard brittle cryptocrystalline slightly silicic
1940		Dolomite pink white rose hard brittle cryptocrystalline with chert light gray opaque hard brittle
1950		Dolomite very light gray to white subhard microsucrosic to hd crpxln tr ltgy cht
1960		Dolomite very pale pink to pink-orange cream hard brittle cryptocrystalline sli calc
1980		Dolomite very light gray hard cryptocrystalline
2000		Dolomite very pale pink hard brittle cryptocrystalline
2020		Dolomite very light tan hard dense brittle cryptocrystalline sli calcareous
2040		Dolomite cream hard brittle cryptocrystalline
2060		Dolomite pale pink to cream hard brittle cryptocrystalline
2080		Dolomite very pale pink to pale orange-pink hard brittle fine sucrosic to cryptocrystalline
2085		Calcareous Dolomite white to pale pink hard cryptocrystalline -microsucrosic tight moderately calcareous
2090		Dolomite cream to very pale pink hard brittle cryptocrystalline
2095		Dolomite cream to very light pink trace light gray cherty cryptocrystalline to fine sucrosic slightly calc
2100		Dolomitic Limestone verv light arav hard



2100	Dolomitic Limestone very light gray hard dense microsugrosic
2100	Dolomitic Limestone cream to tan dense microsugrosic some relic oolitic with redbrown ool
2100	Dolomitic Limestone cream cryptocrystalline to fine sugrosic dense
2100	Dolomitic Limestone very light cream cryptocrystalline to fine sugrosic tight
2120	Dolomite very light pink hard brittle fine sugrosic to cryptocrystalline tight
2120	Dolomite pale pink some light gray hard brittle dense cryptocrystalline to microsugrosic
2120	2-26-25
2140	Dolomite very light tan to cream some white dense brittle very fine sugrosic to cryptocrystalline tight
2160	Dolomite white to pale cream hard brittle fine to medium sugrosic predominantly cryp[tocrystalline trace with poor intercrystalline porosity
2160	2-27-25
2180	Dolomite cream hard brittle dense fine sugrosic to cryptocrystalline tight
2200	Dolomite very light gray hard microsugrosic some with poor to fair pinpoint vuggy porosity
2200	Dolomite cream hard brittle cryptocrystalline some with good vuggy porosity
2220	Dolomite Cream to very light gray hard cryptocrystalline tight
2240	Dolomite cream hard brittle cryptocrystalline some with good vuggy porosity
2240	Dolomite Cream to very light gray hard cryptocrystalline tight
2240	2-28-25
2260	3-1-25
2280	Calcareous Dolomite cream to white cryptocrystalline to microsugrosic some vuggy interbeds with good porosity common clear white calcite crystals
2300	Calcareous Dolomite cream to white hard brittle cryptocrystalline to microsugrosic prodominantly tight
2300	Calcareous Arenaceous Dolomite cream hard brittle medium sugrosic some with

