



**INL Lithologic Core Storage Library**

Idaho National Laboratory  
Building CFA-663

Operated by the U.S. Geological Survey  
for the U.S. Department of Energy

**Contact:**  
Linda C. Davis  
PO Box 8072  
Pocatello, ID.  
83209

**Official Name:** USGS-128

Logged By: Reuben Johnson, Aug 2003

Selected Aliases: CFA LF 3-11A, LF3-11A

USGS Site ID: 433250112565601

Total Core Recovered (ft): 743.1

County & State: Butte County, ID.

Contractor Well ID: 721

Beginning Depth (ft): 23.0

Quadrangle Name: Circular Butte 3 SW

Drilling Agency: USGS

Ending Depth (ft): 766.1

Lat / Lng: 43° 32' 49.86" 112° 56' 55.51" NAD27

Year Drilled: 2000

Continuous Recovery

Tns / Rng / Sec: T03N, R29E, Sec 36 BDB 3

Names of Drillers: Matson, Gilbert

Selected Intervals Recovered

UTM Coordinates: N 686286.581, E 292644.545

Well Status: Bottom caved in

Total # of Core Boxes: 119

Altitude (ft): 4,934 (ft), NGVD29

Total Depth of Hole (ft): 768

Notes:

## Core Geological Profile

**Lithologic Patterns**

-  Basalts
-  Rhyolites
-  Sedimentary Rock

**Soil Patterns**

(See Unified Soil Classification System.)

-  Gravels - clean
-  Gravels with fines
-  Sands - clean
-  Sands with fines
-  Silt and clays

**Intervals in Absentia**

-  Surficial material
-  Natural void
-  Interval not cored
-  Missing interval

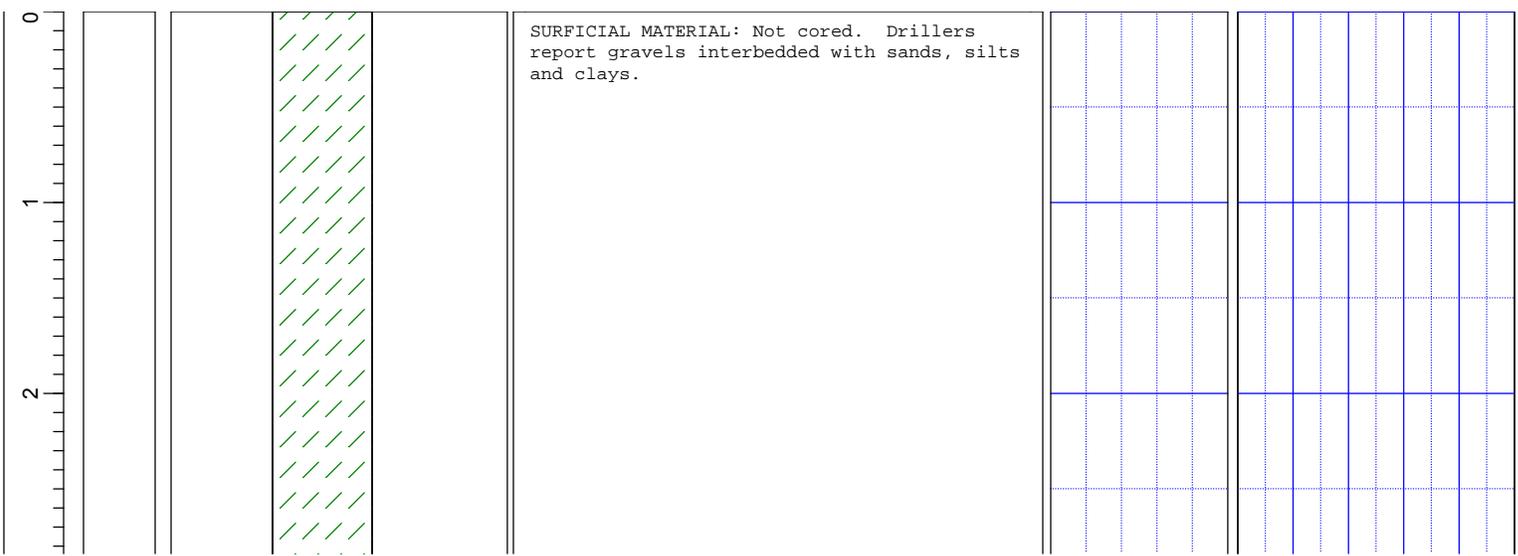
**Igneous and Sedimentary Structure Symbols**

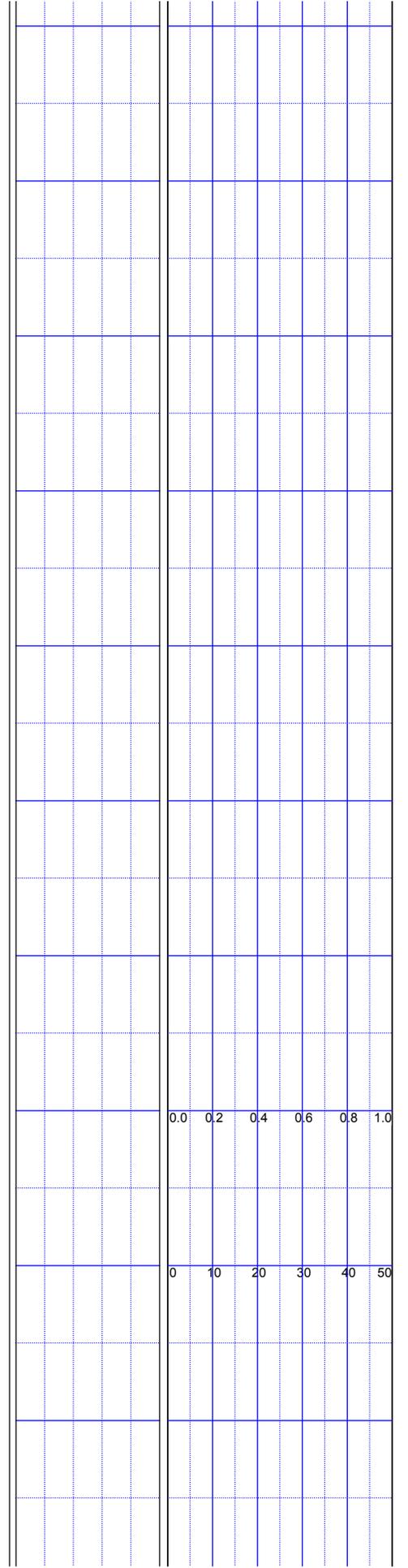
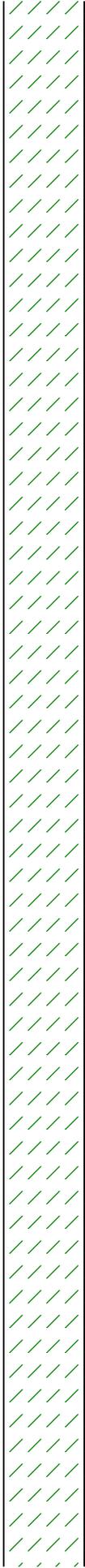
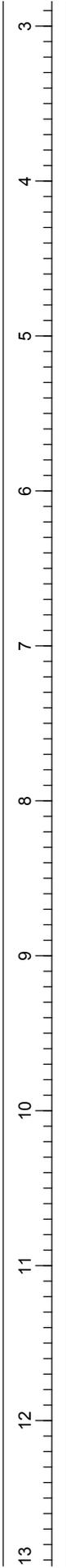
-  Vesicle zone
-  Large vesicles
-  Vesicle planes
-  Mega vesicles
-  Vesicle Cylinders
-  Pipe vesicles
-  Pillows
-  Vesicle Sheet
-  Flow/Mold
-  Spatter feature
-  Ripple marks
-  Mud cracks
-  Imbricated bedding
-  Graded bedding
-  Cross bedding

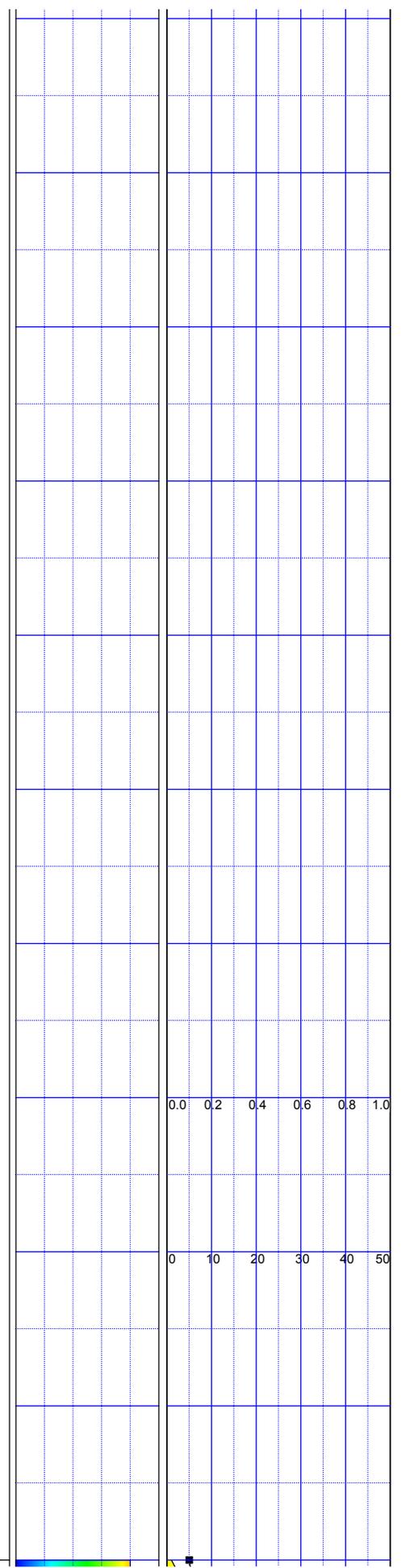
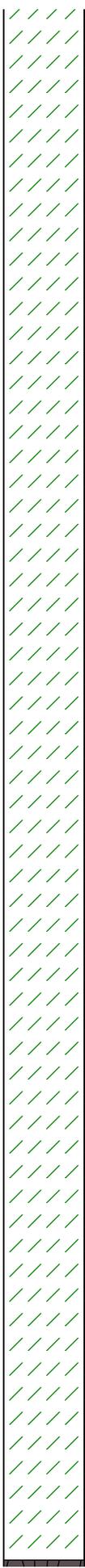
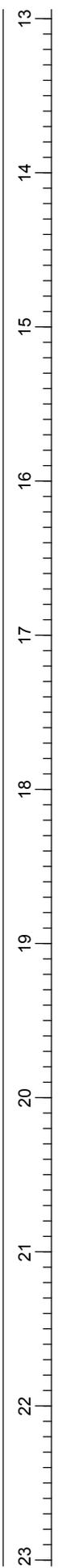
**Soil Structure Symbols**

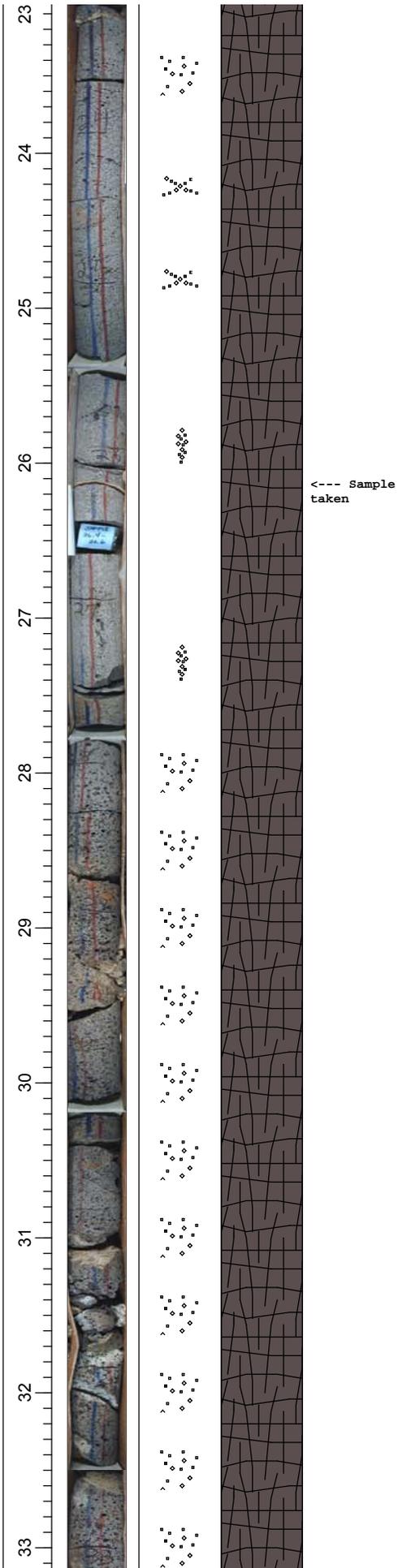
-  Structureless - Single Grained
-  Structureless - Massive
-  Platy
-  Granular
-  Blocky
-  Prismatic
-  Columnar

Depth (feet & tenths)	Core Photo	Igneous, Soil and Sed Structures	Lithology	Description	Fracture Frequency (See fracture classification on website.)	Vesicle Characteristics
				Miscellaneous Text      Lithologic Description	0 1 2 3 4 5	<p>Mean Size (in)</p> <p>0 0.2 0.4 0.6 0.8 1.0</p> <p>Volume Percentage</p> <p>0 10 20 30 40 50</p>







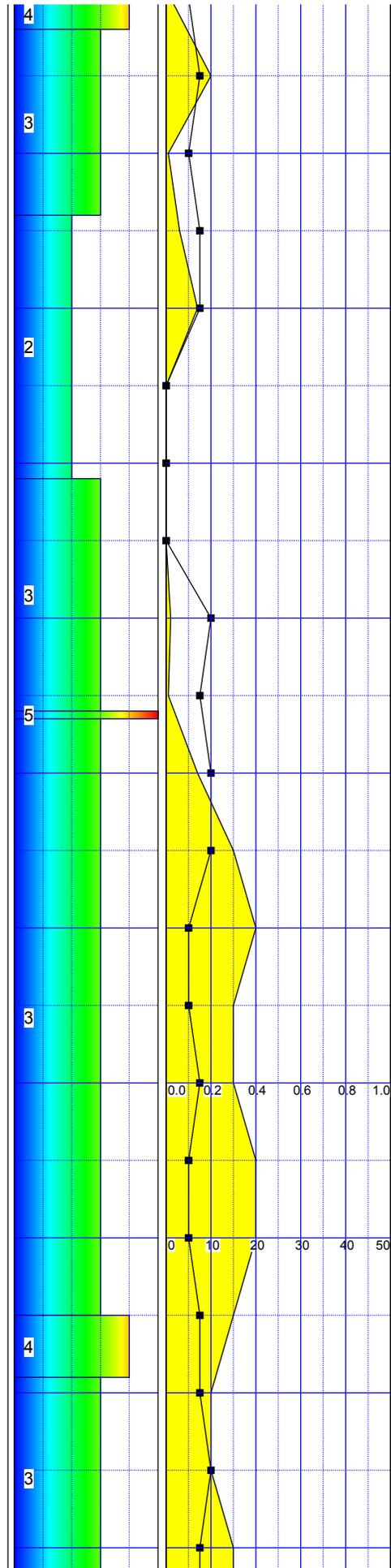


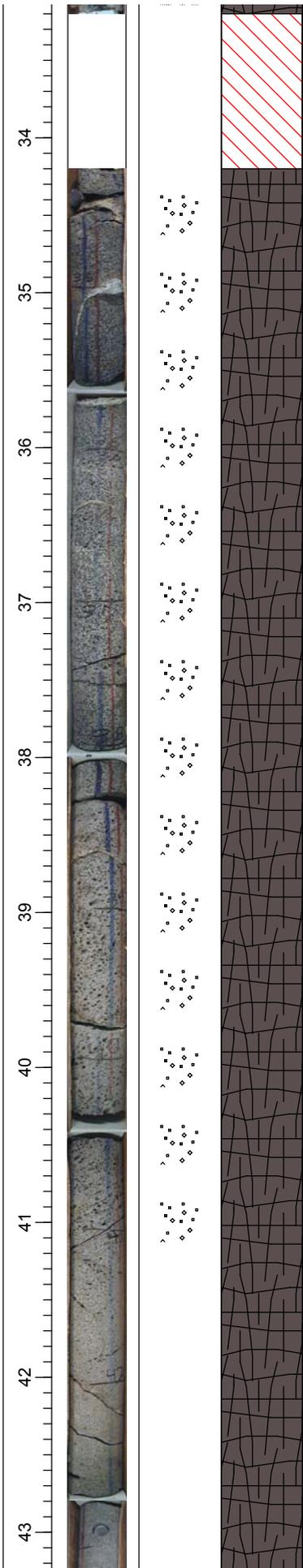
BASALT: Color: Medium gray to medium dark gray

Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

Xenoliths: None noted

Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.





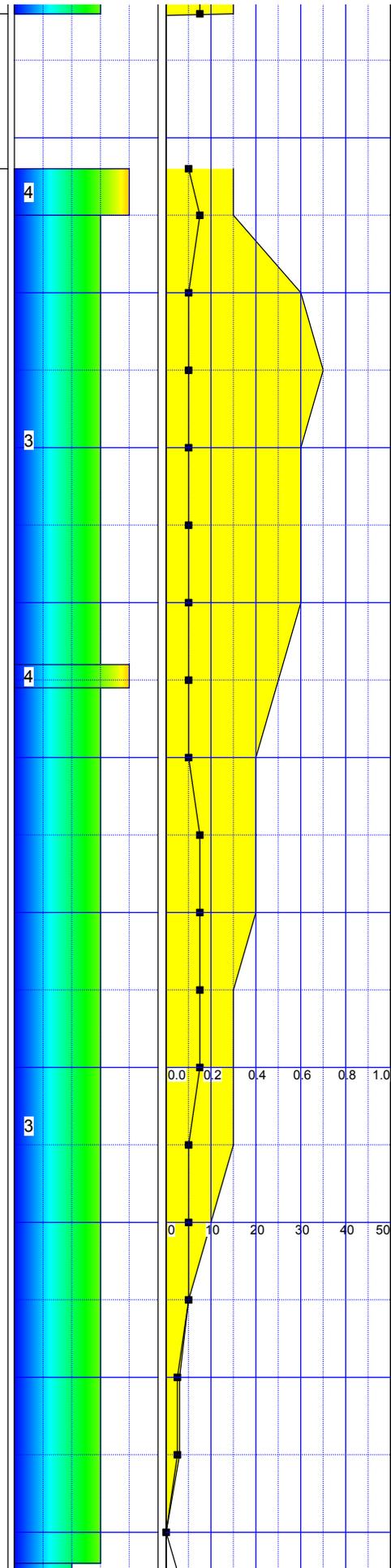
MISSING INTERVAL: Lost during recovery from borehole.

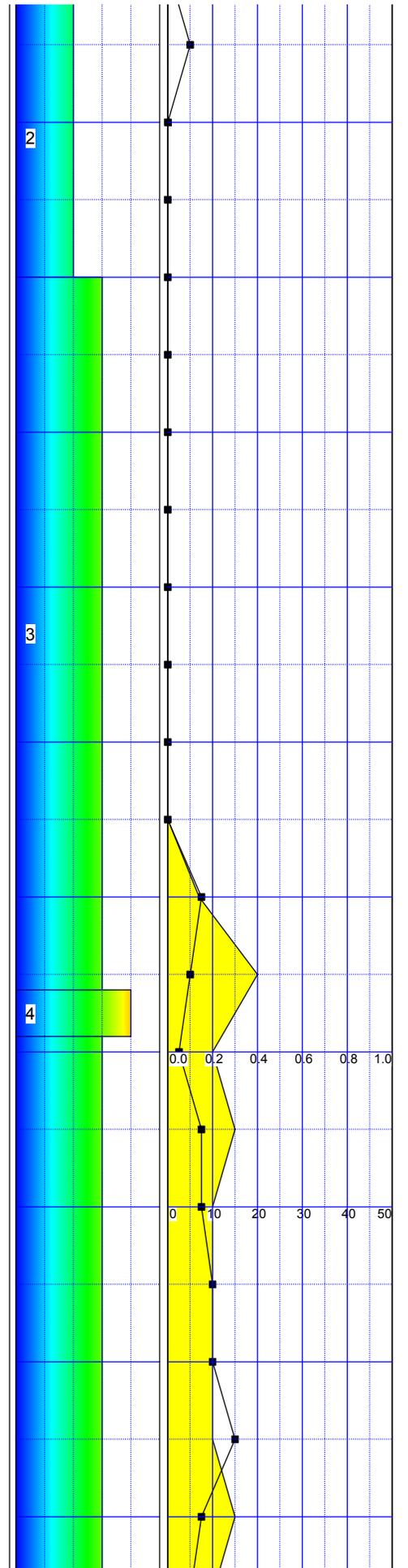
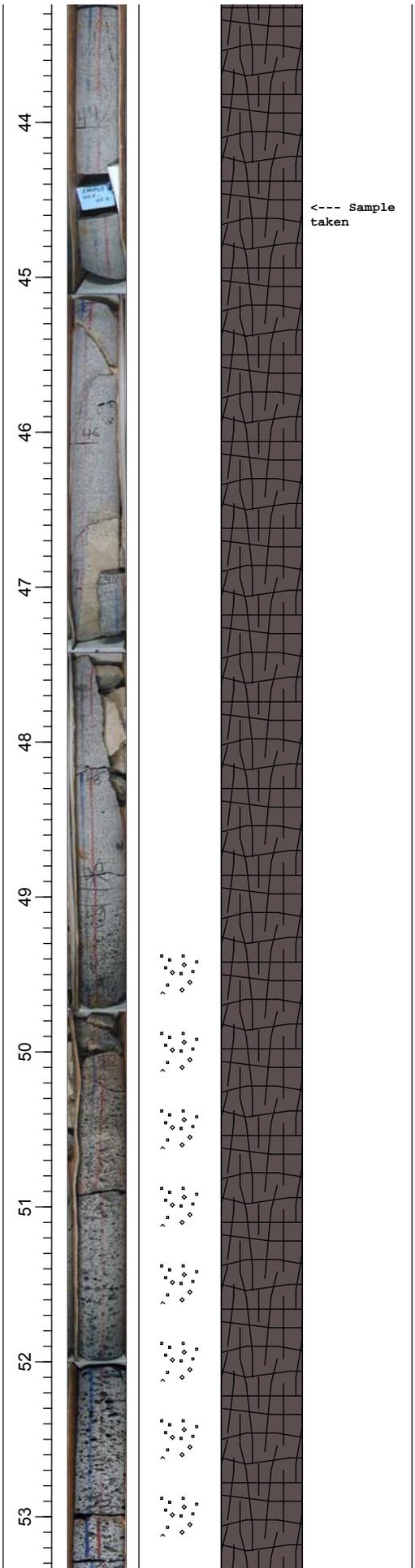
**BASALT:** Color: Dark gray at top grading into medium dark gray and light gray. Definite change to pale brown at ~102.5 feet then grades back into light gray.

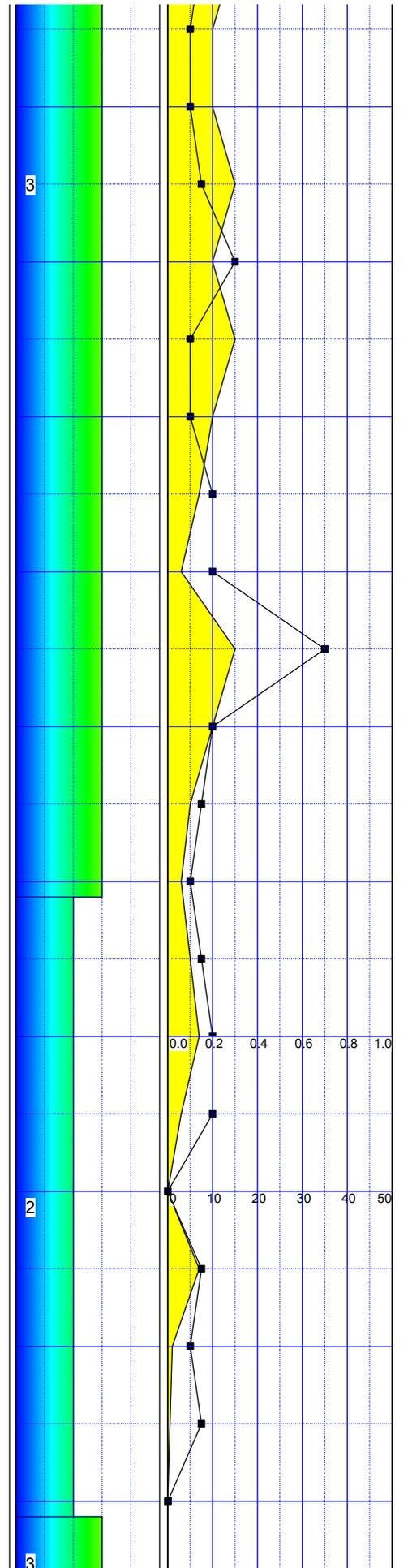
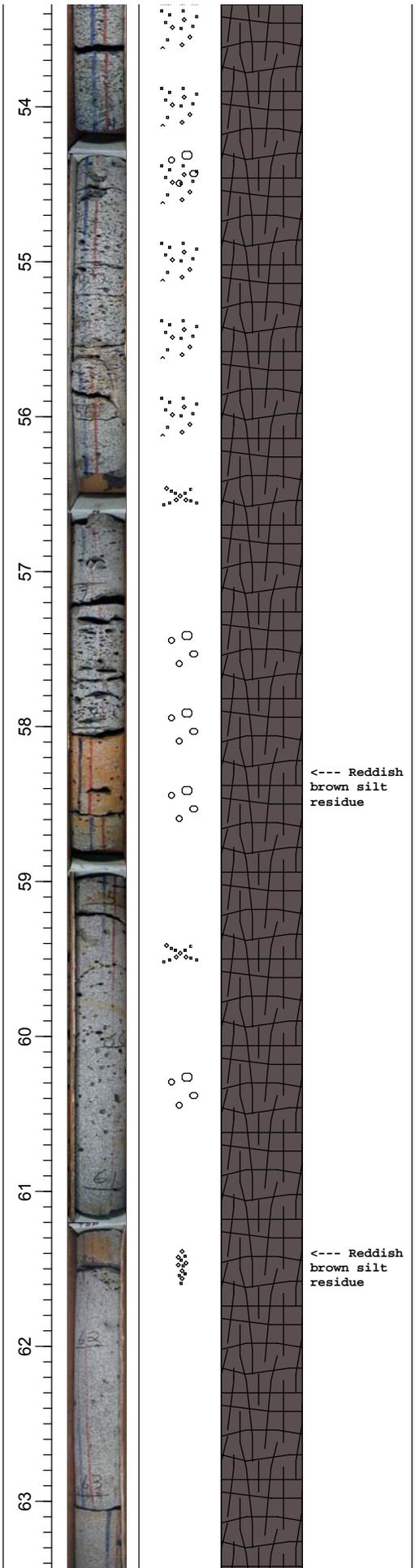
**Texture/Composition:** Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

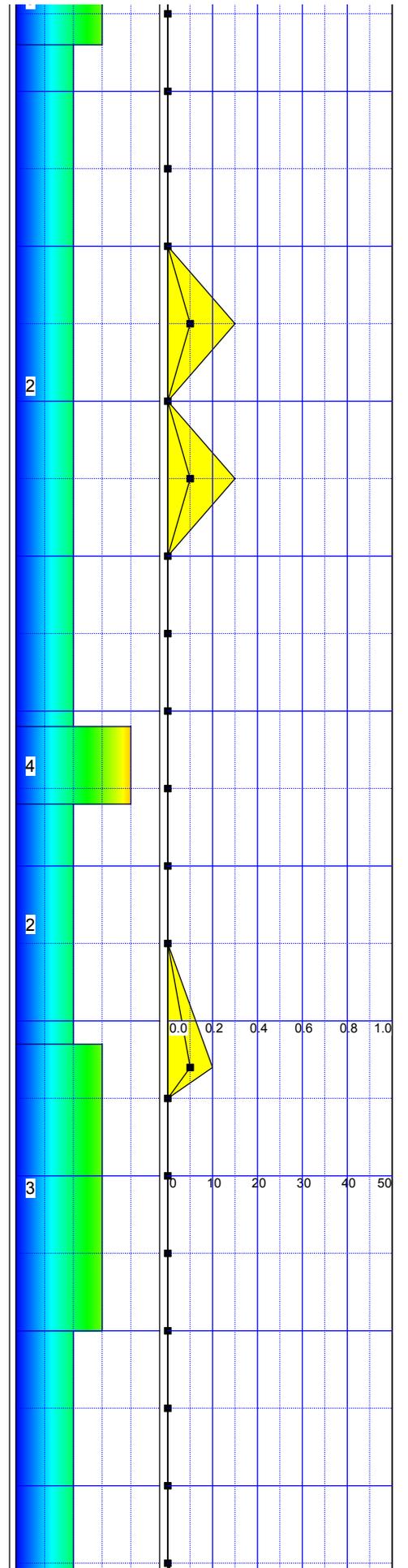
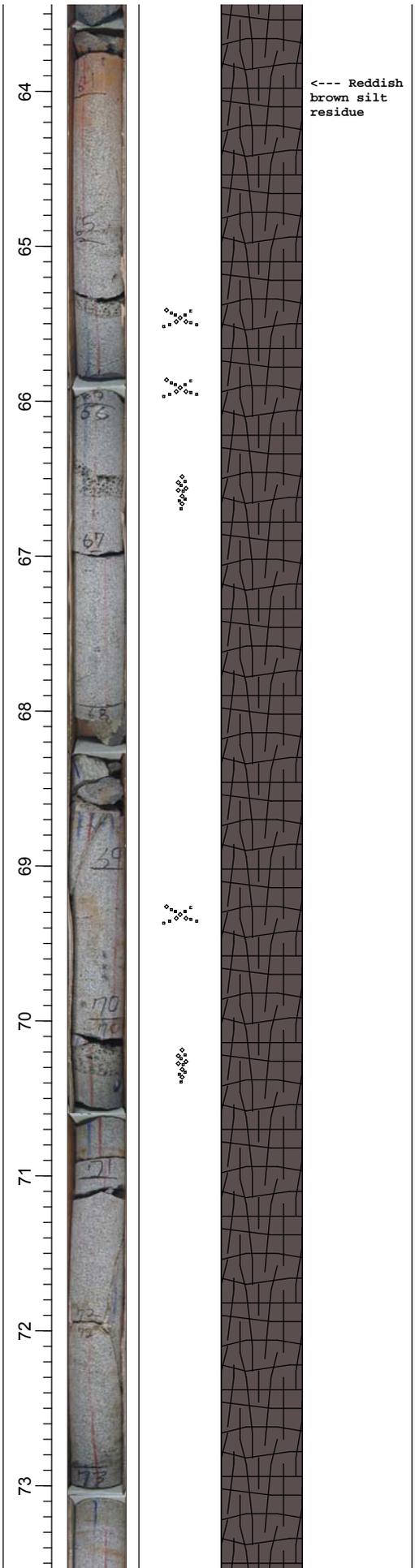
**Xenoliths:** None noted

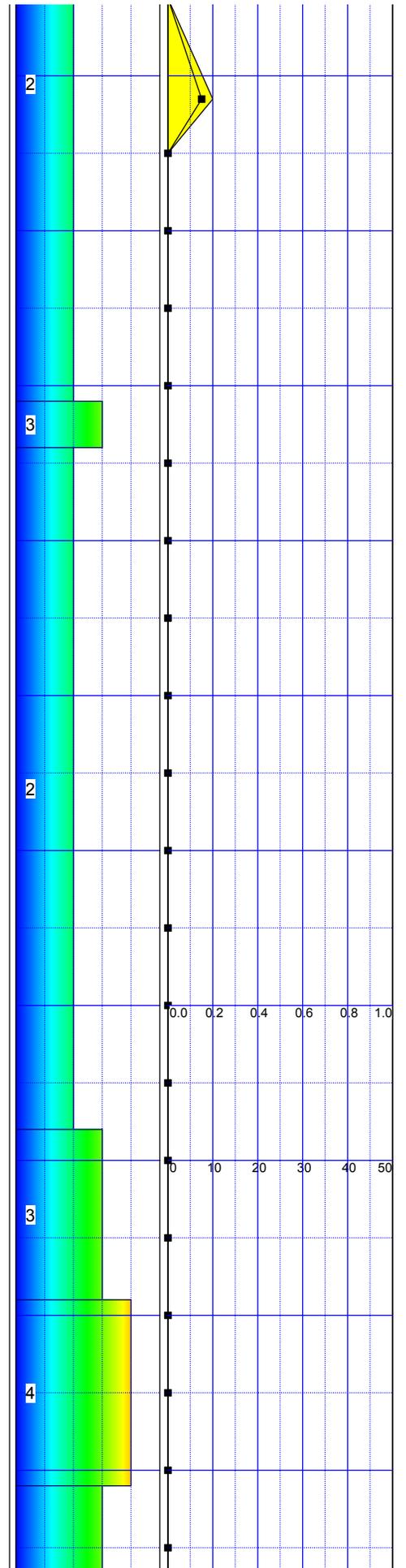
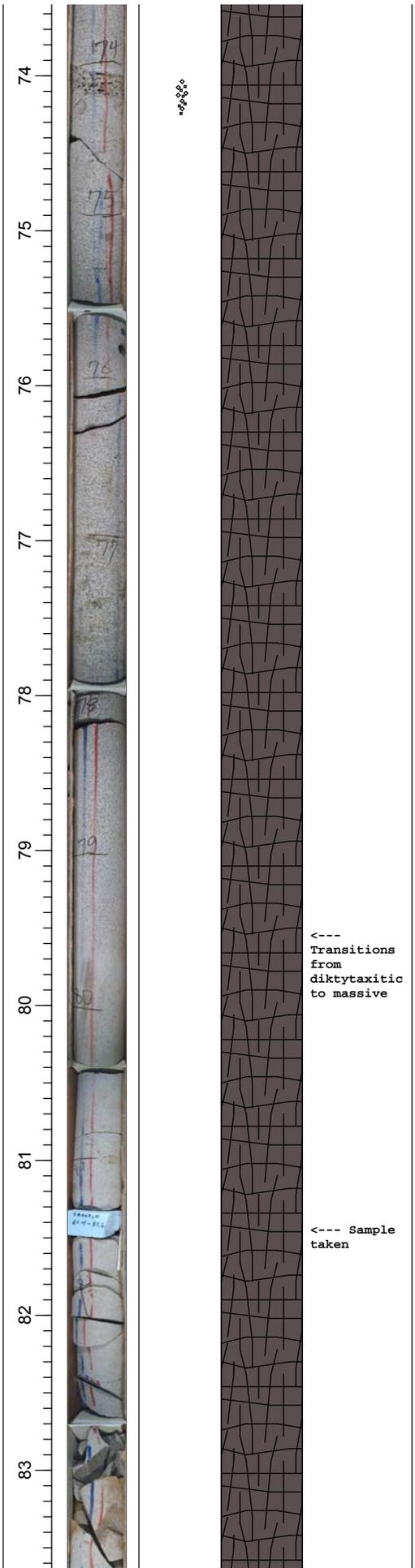
**Alteration Activity:** Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.

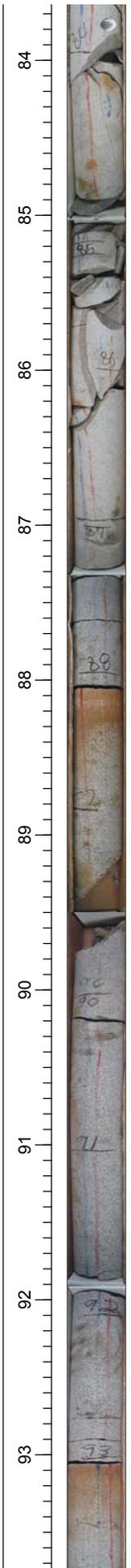










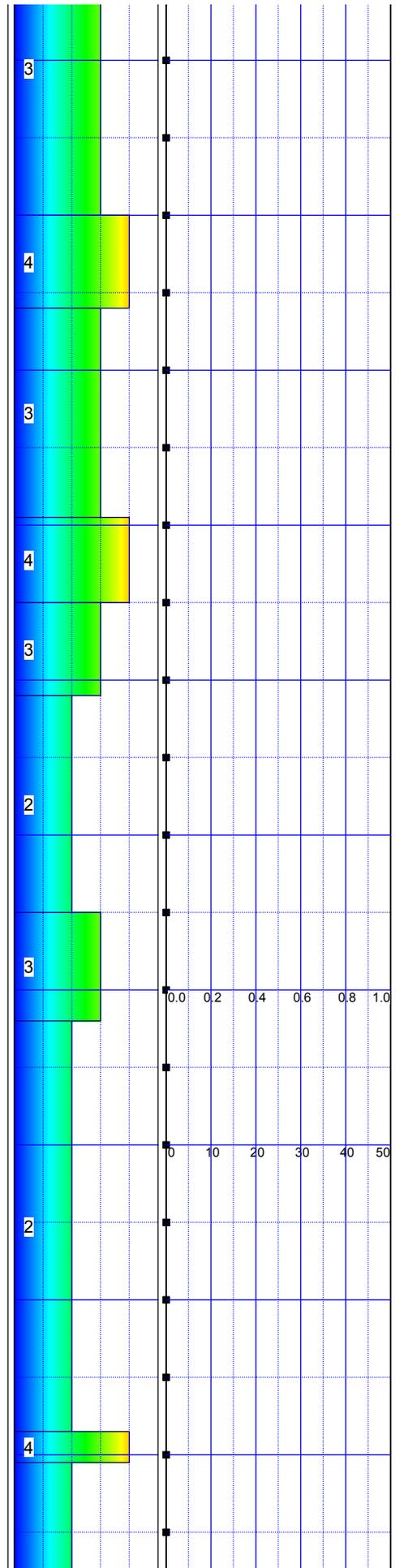


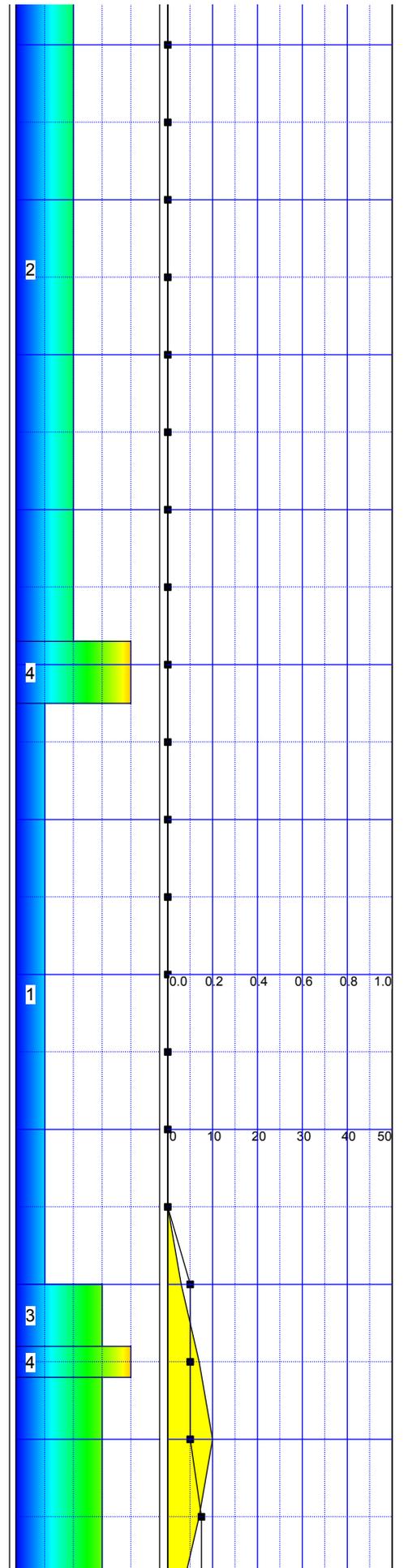
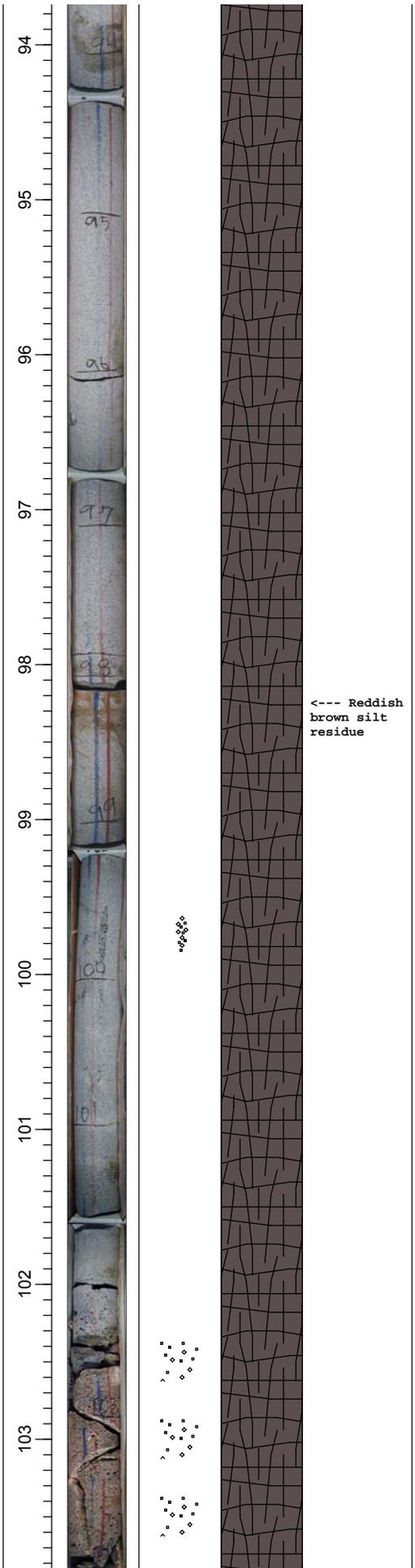
<---  
Transitions  
from massive  
back to  
diktytaxitic

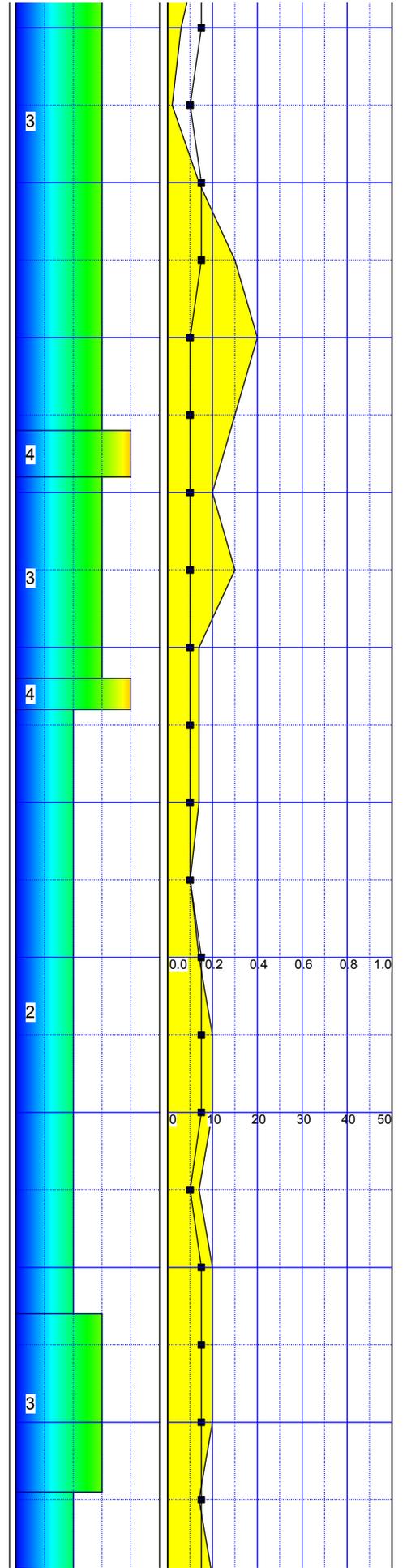
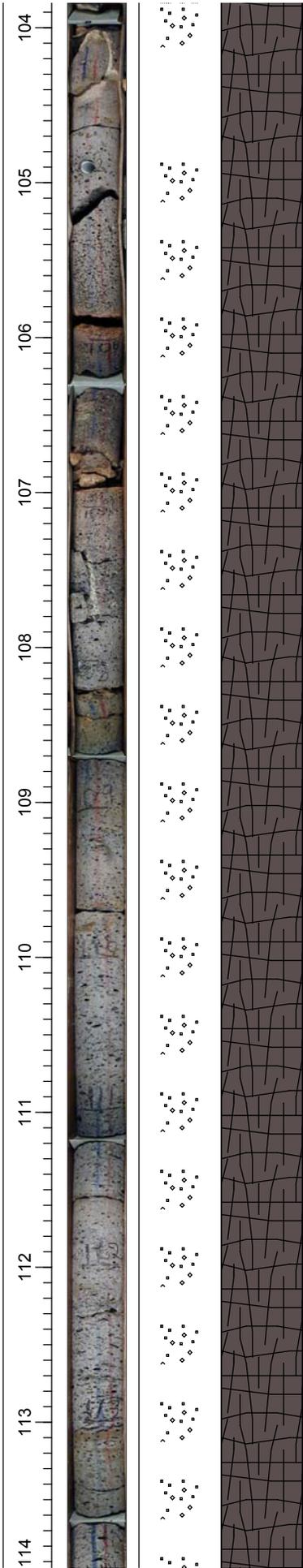
<--- Reddish  
brown silt  
residue

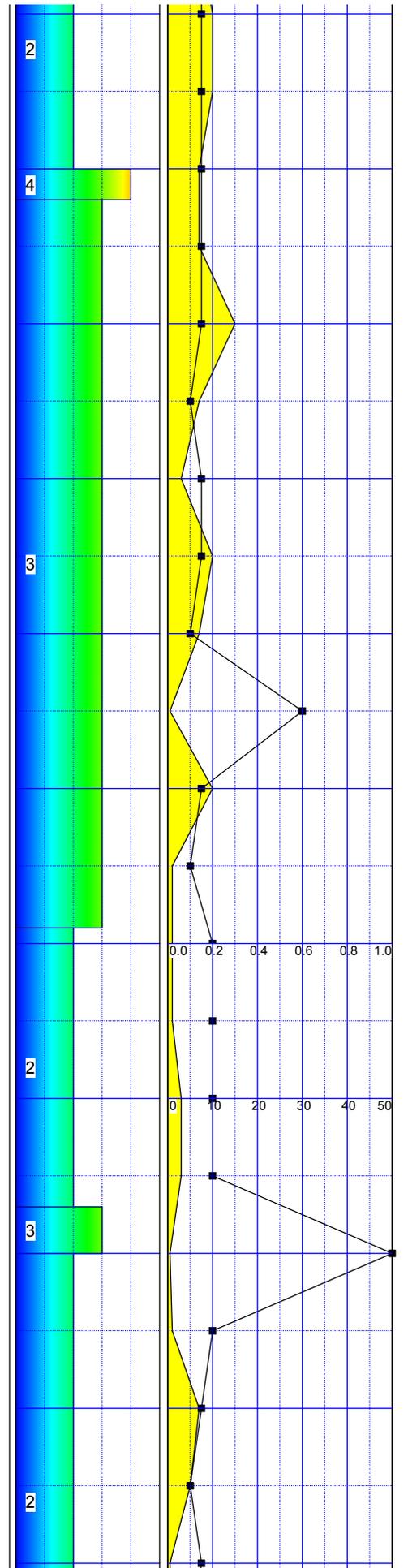
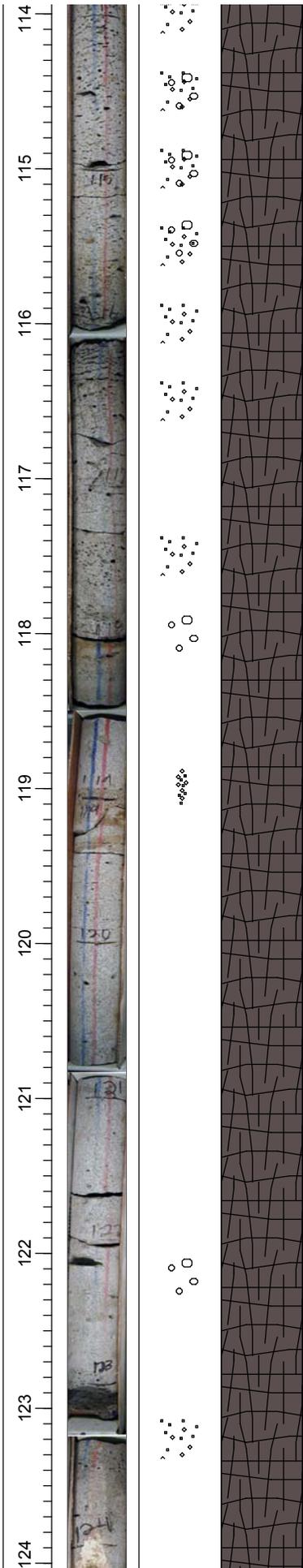
<--- Reddish  
brown silt  
residue

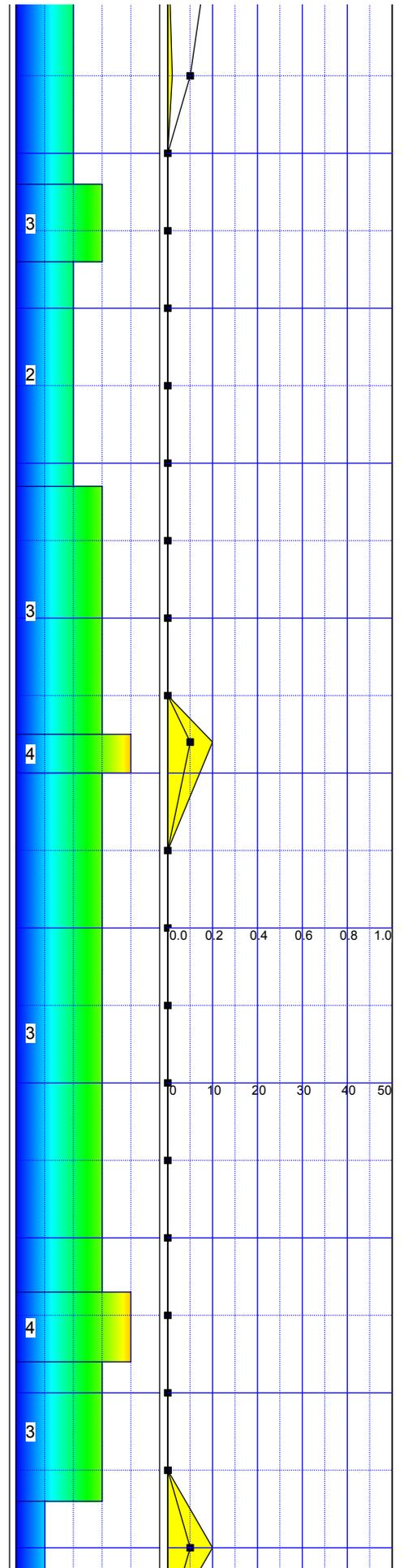
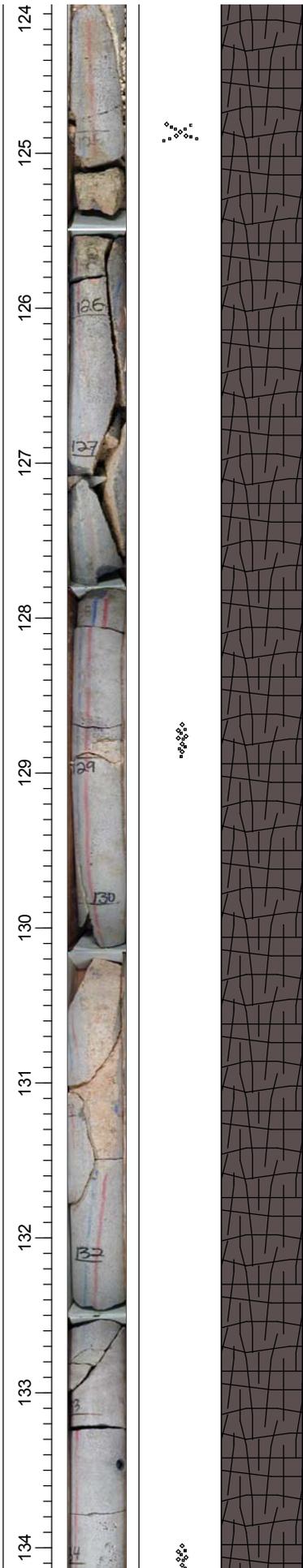
<--- Reddish  
brown silt  
residue





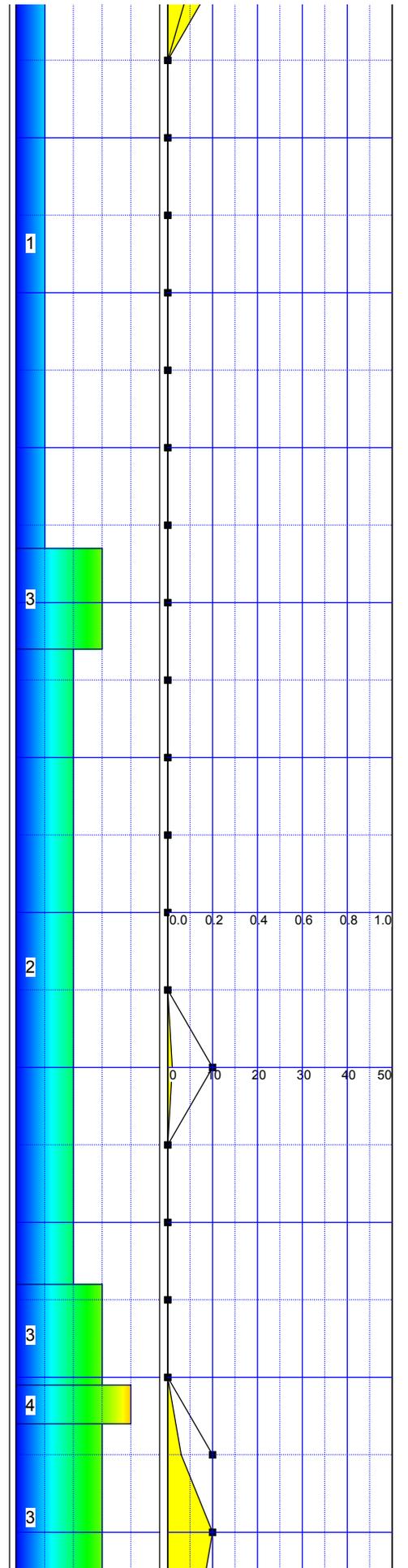


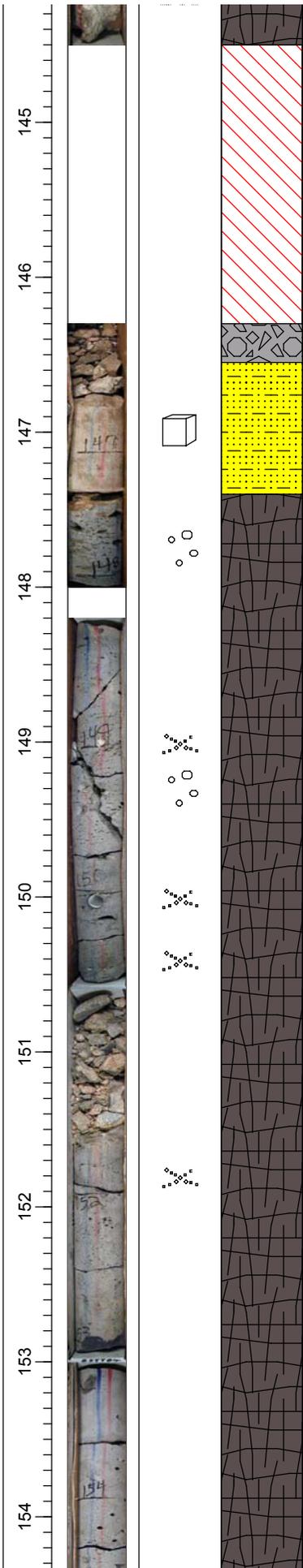






<--- Sample taken





MISSING INTERVAL: Lost during recovery from borehole.

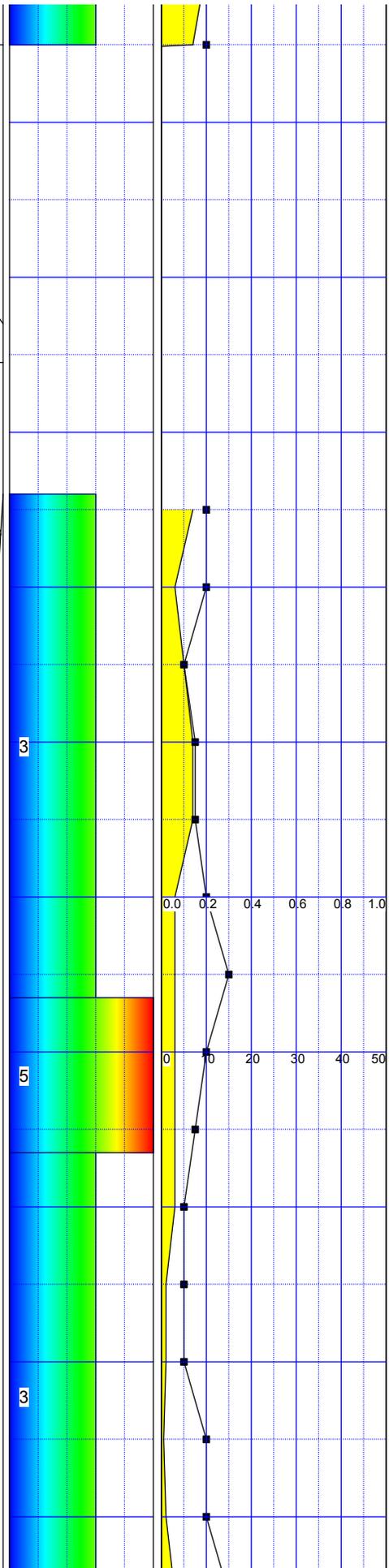
GRAVELS - CLEAN:  
Gravels consist of basalt rubble

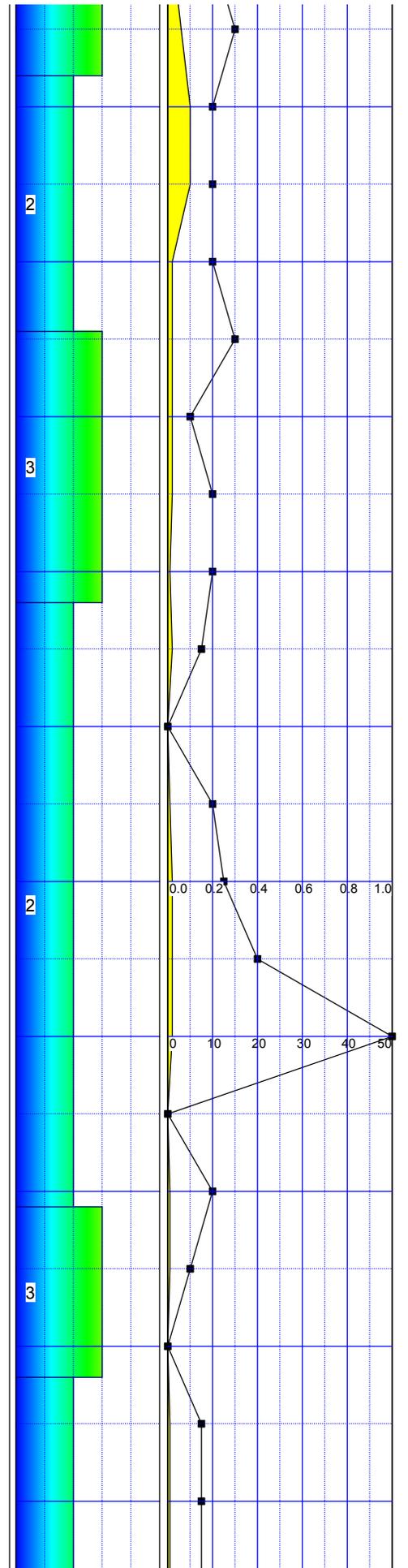
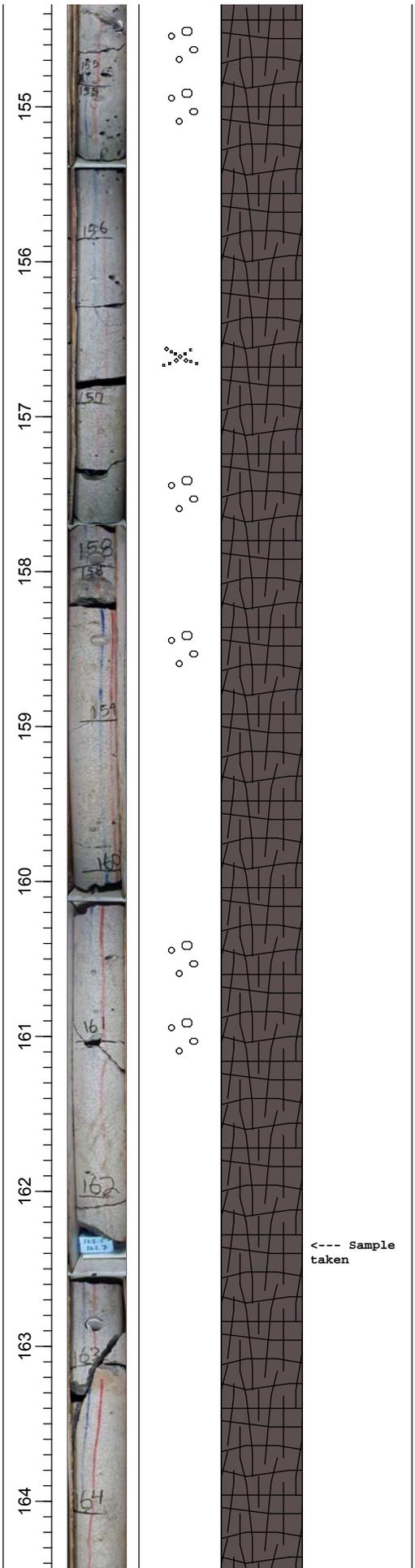
SANDS WITH FINES: Color: Yellowish gray  
Consistence: Firm  
Structure: Massive  
Free Carbonates: No

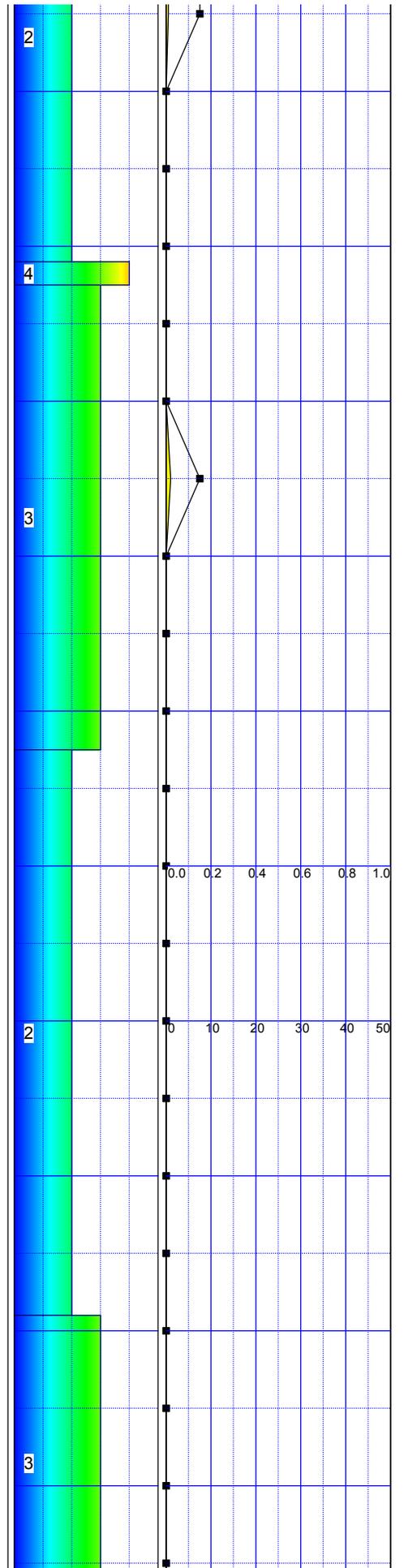
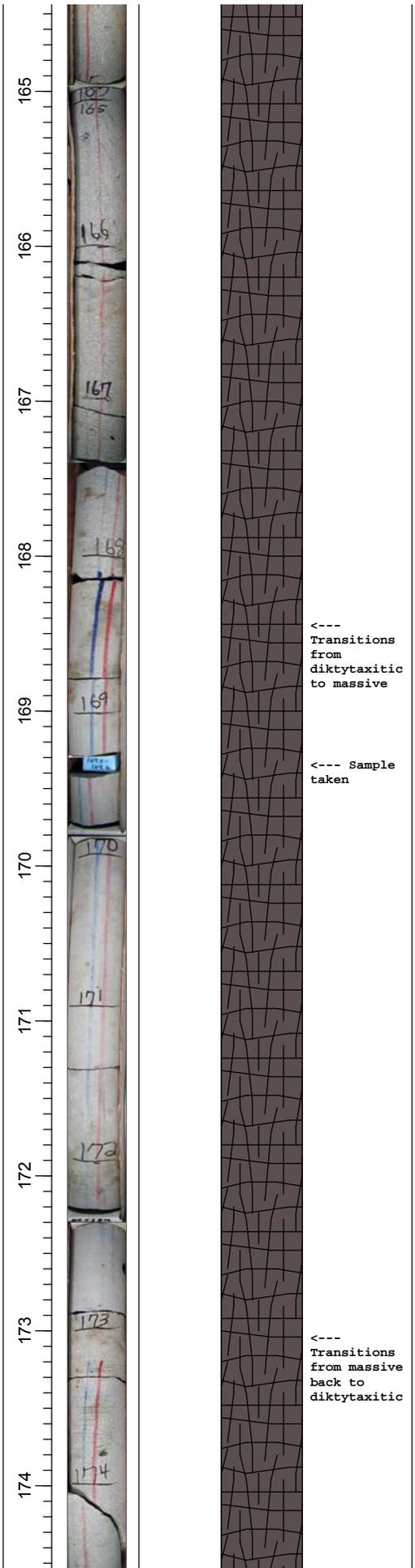
Rocks: Numerous subangular, subprismoidal vesicular 2 mm - 1.5 cm matrix-supported rocks evenly distributed throughout. One large matrix-supported 'rock' (vesicular basalt), 0.7 feet long, occupies an entire side of the core fragment.  
Roots / Fossils: None observed

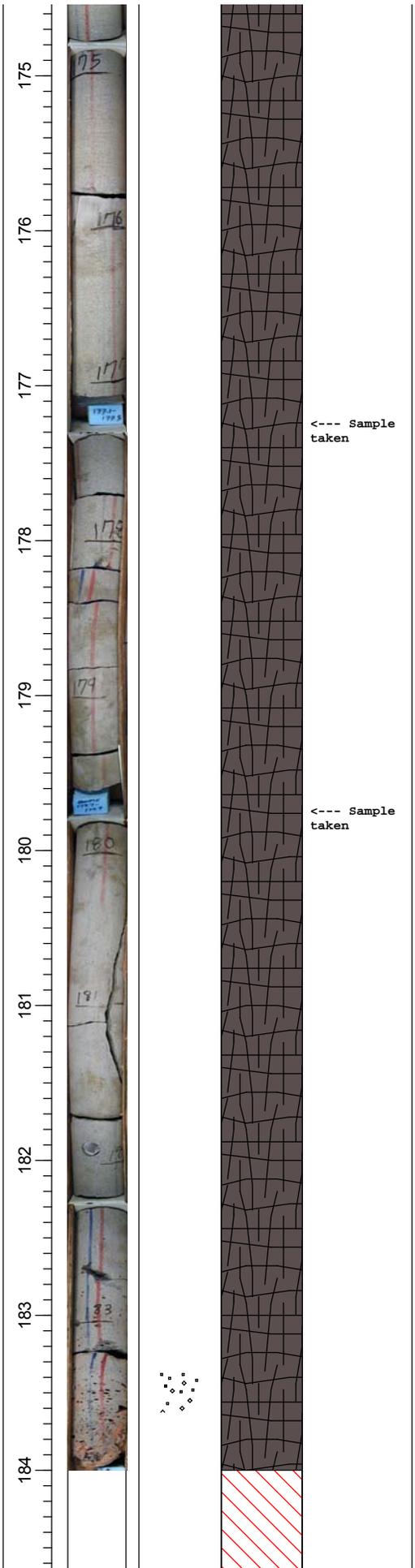
BASALT: Color: Medium light gray to light gray  
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

Xenoliths: None noted  
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.

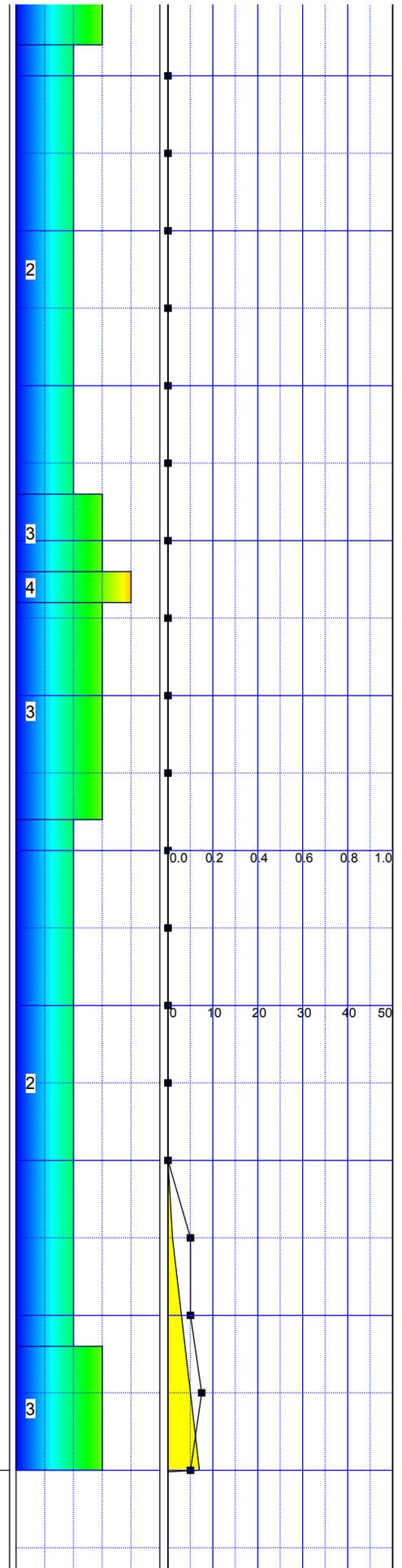




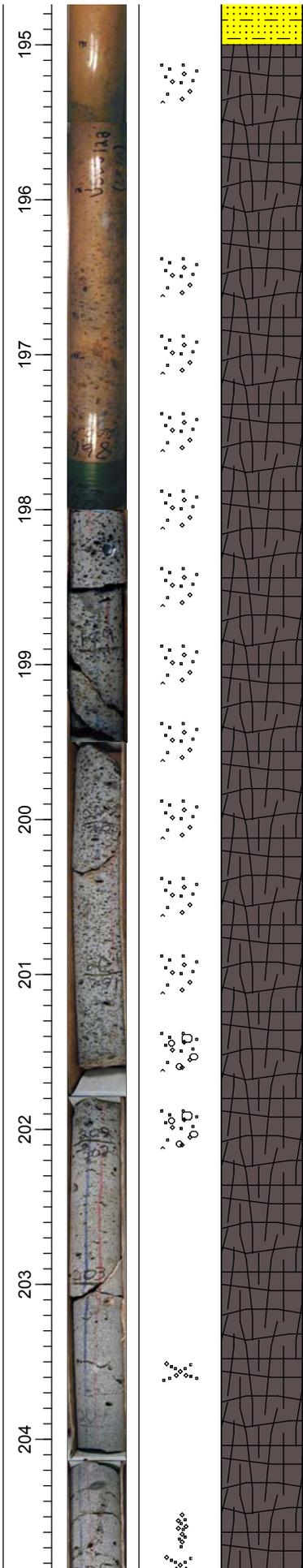




MISSING INTERVAL: Lost during recovery from borehole.







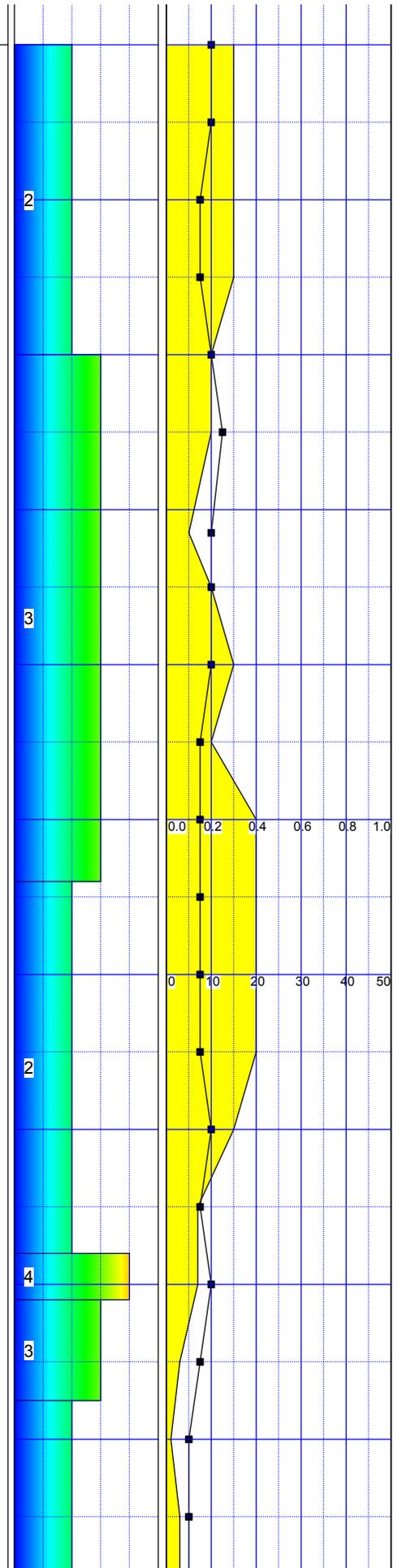
BASALT: Top-most portion encased in LEXAN

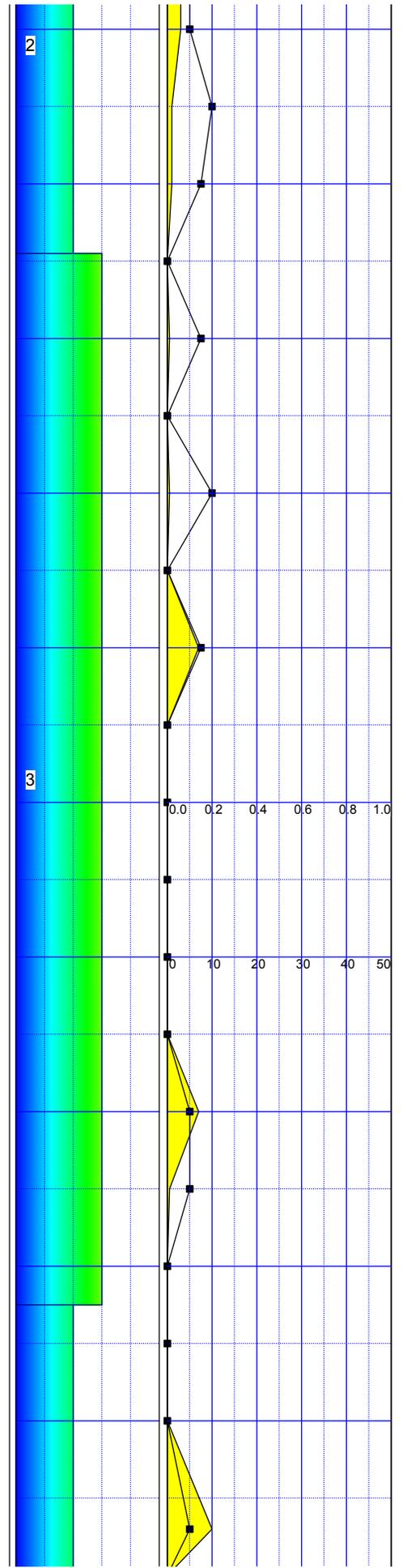
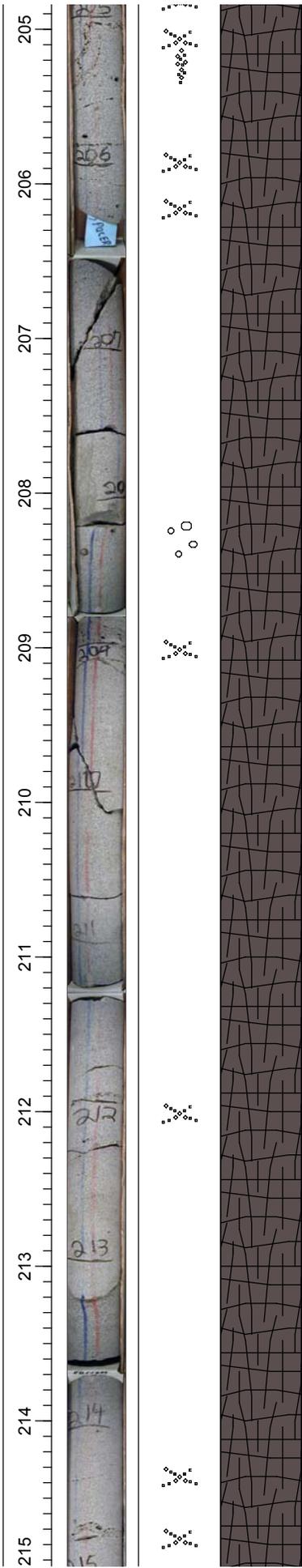
Color: Medium light gray to light gray

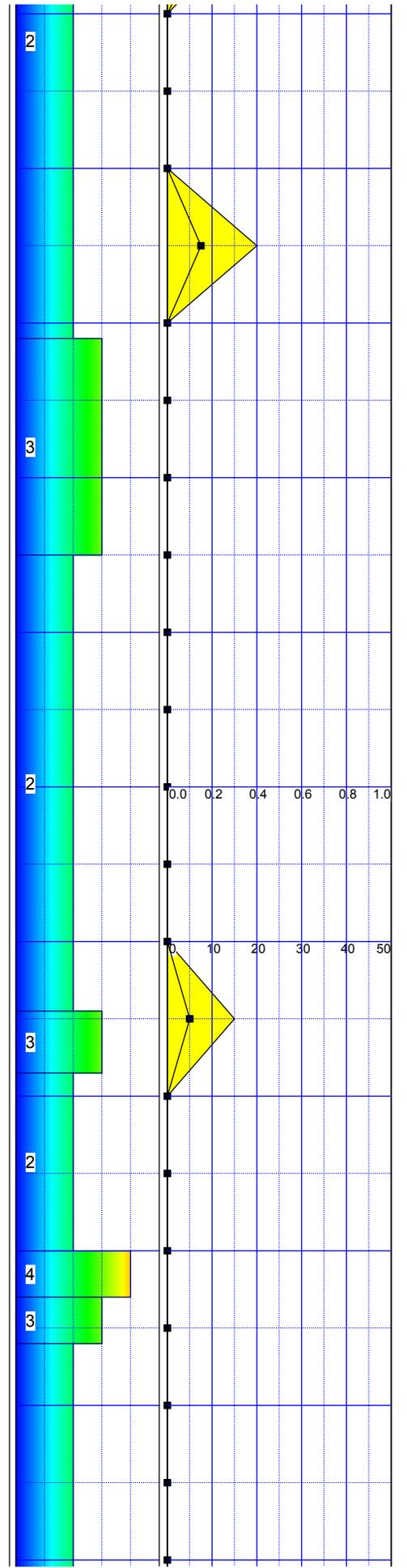
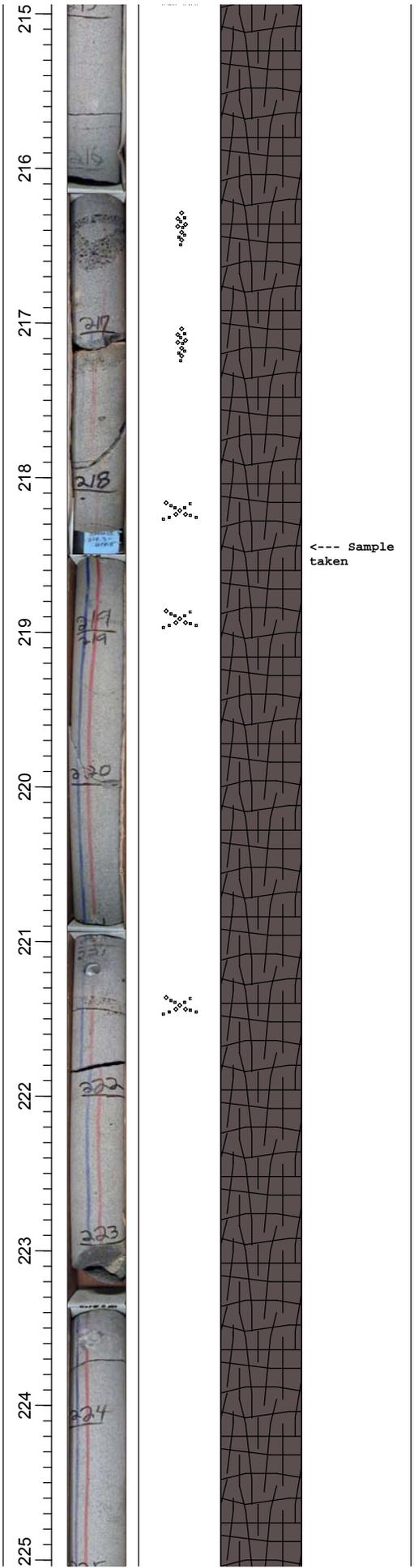
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

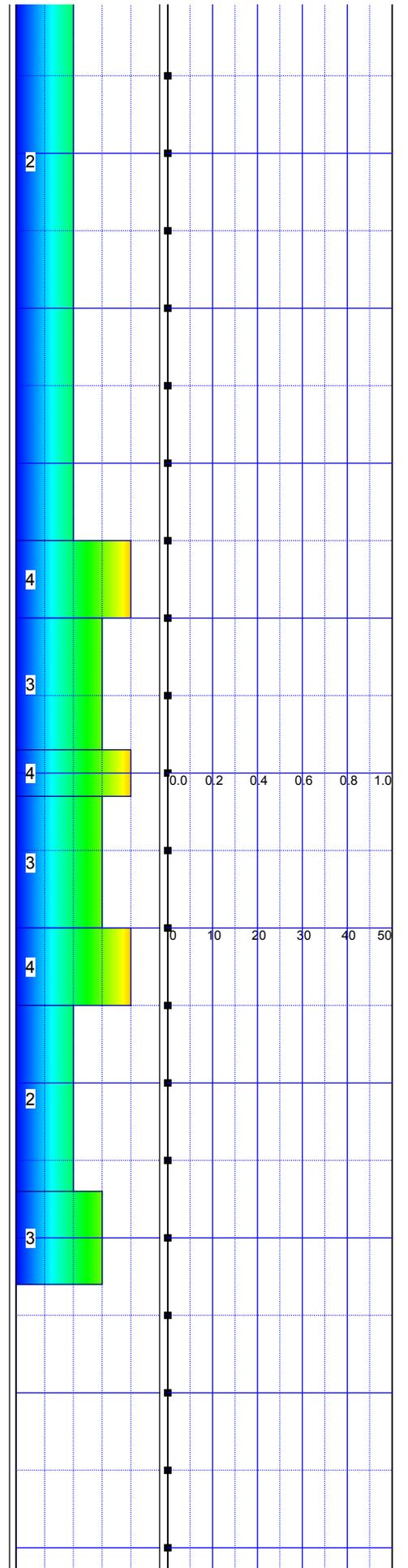
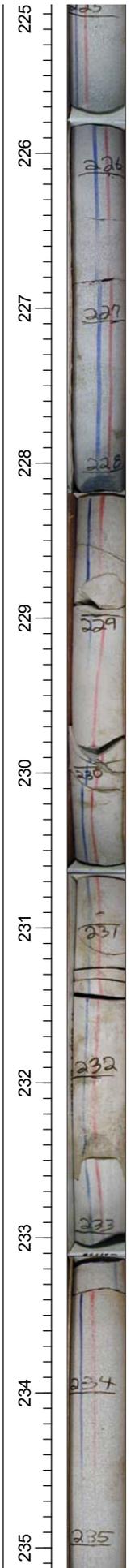
Xenoliths: None noted

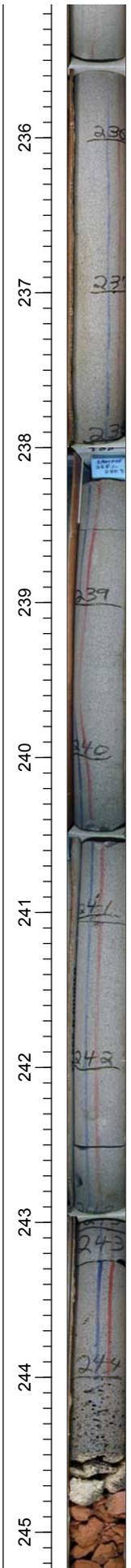
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.









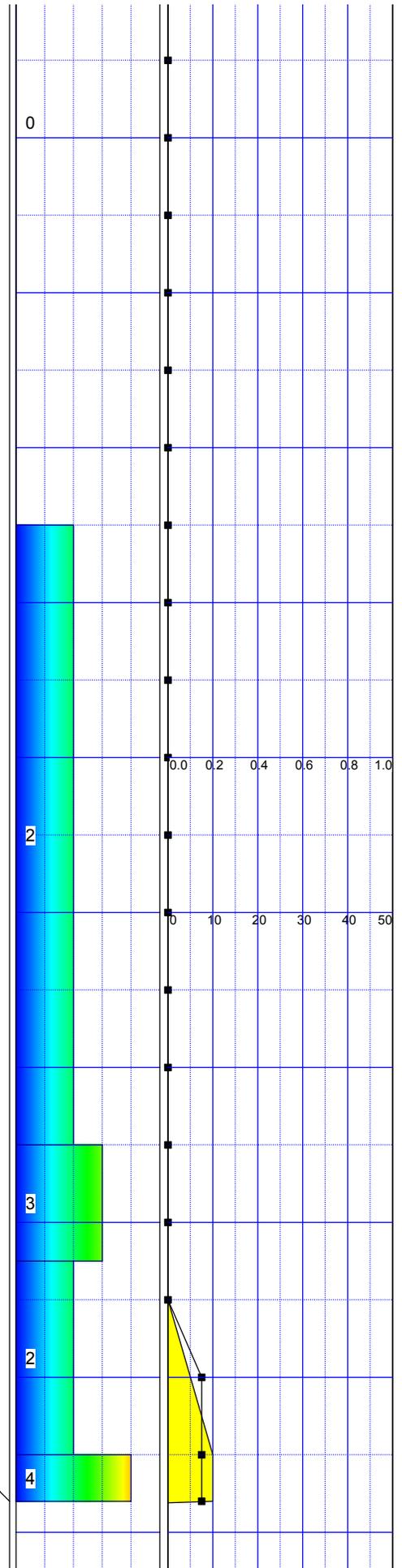


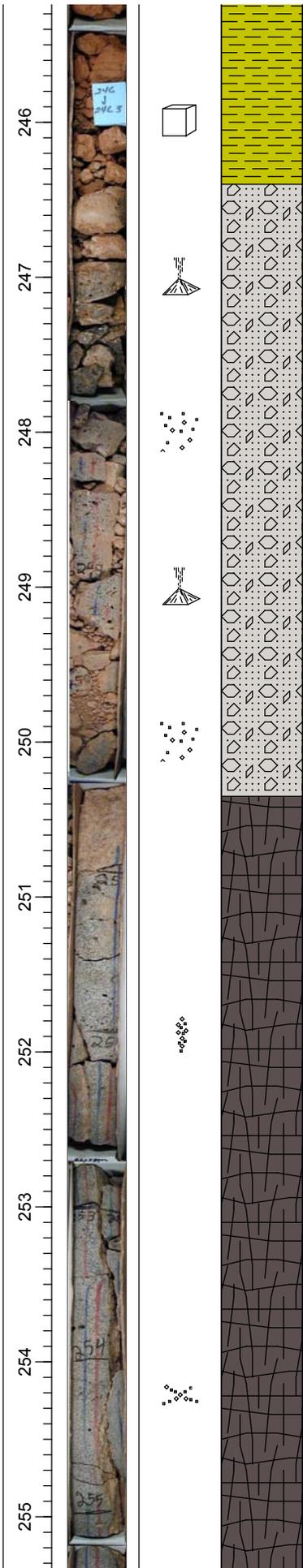
<--- Sample taken



SILT AND CLAY: Color: Light brown at top grading into moderate brown

Consistence: Friable





Structure: Single grained

Free Carbonates: No

Rocks: None observed.

Roots / Fossils: Several 1 - 2 mm sinuous tubules.

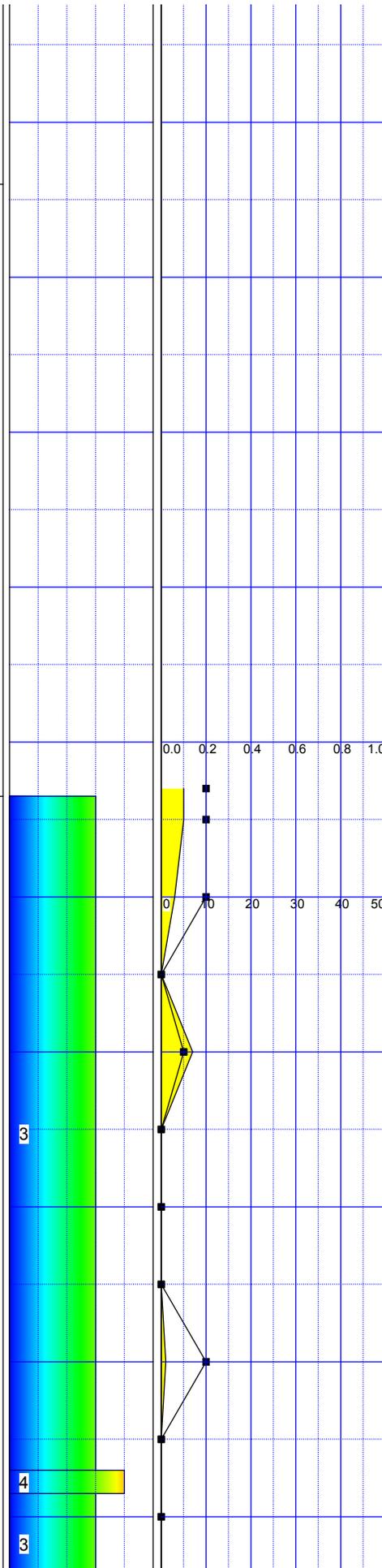
GRAVELS WITH FINES: Clast-supported rubble of vesicular basalt in moderate yellowish brown matrix of loose silts and clays. Free carbonates present

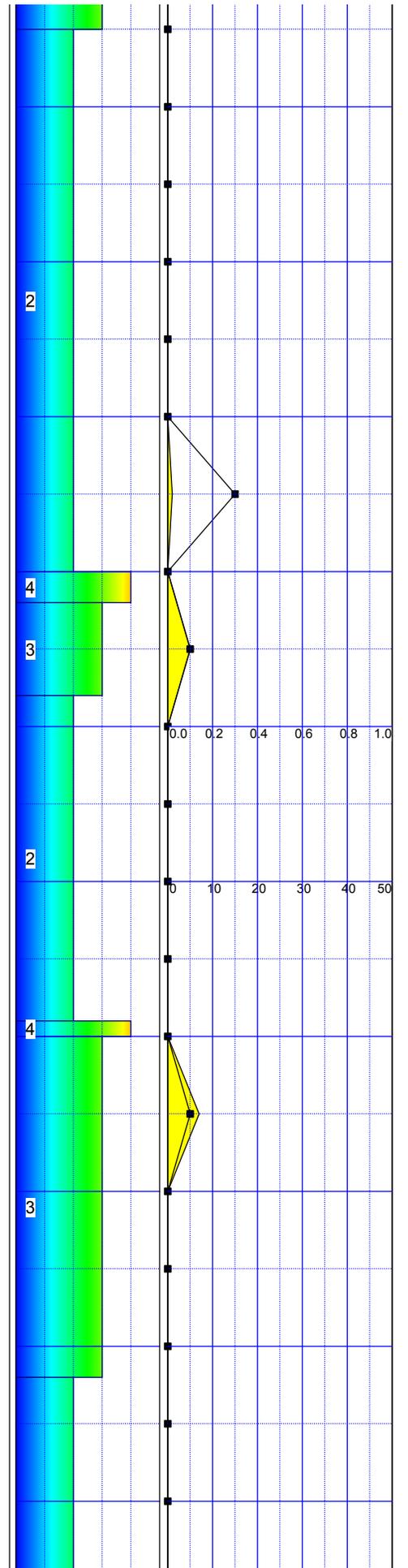
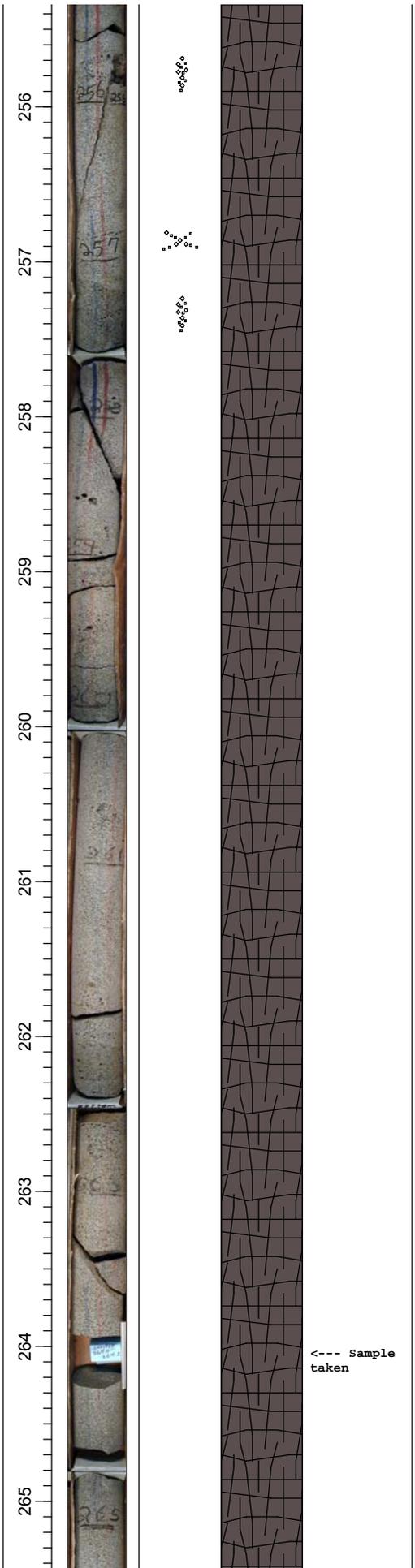
BASALT: Color: Light brownish gray. Becomes dark gray.

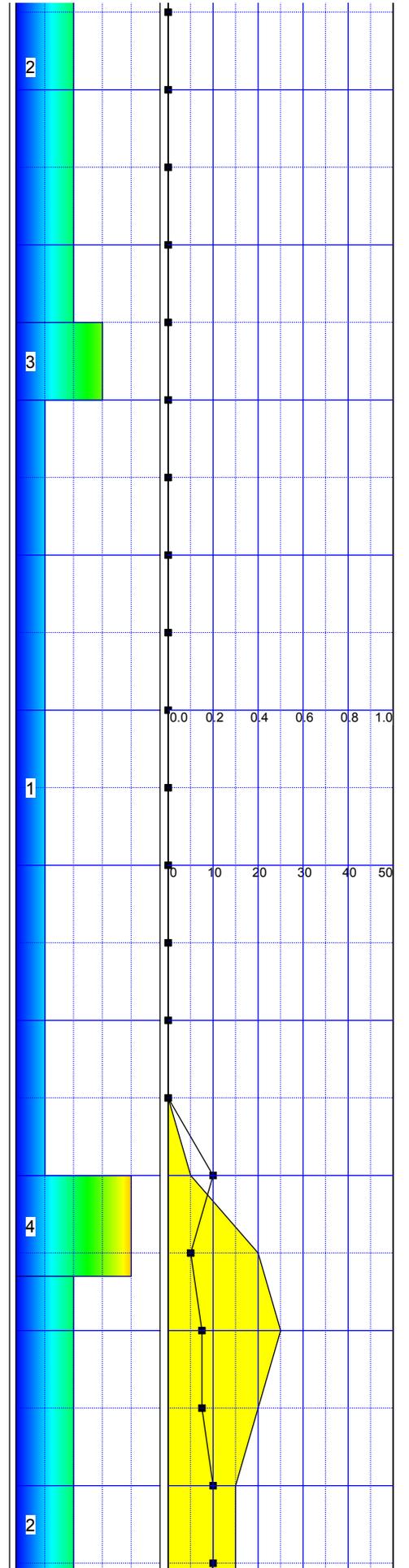
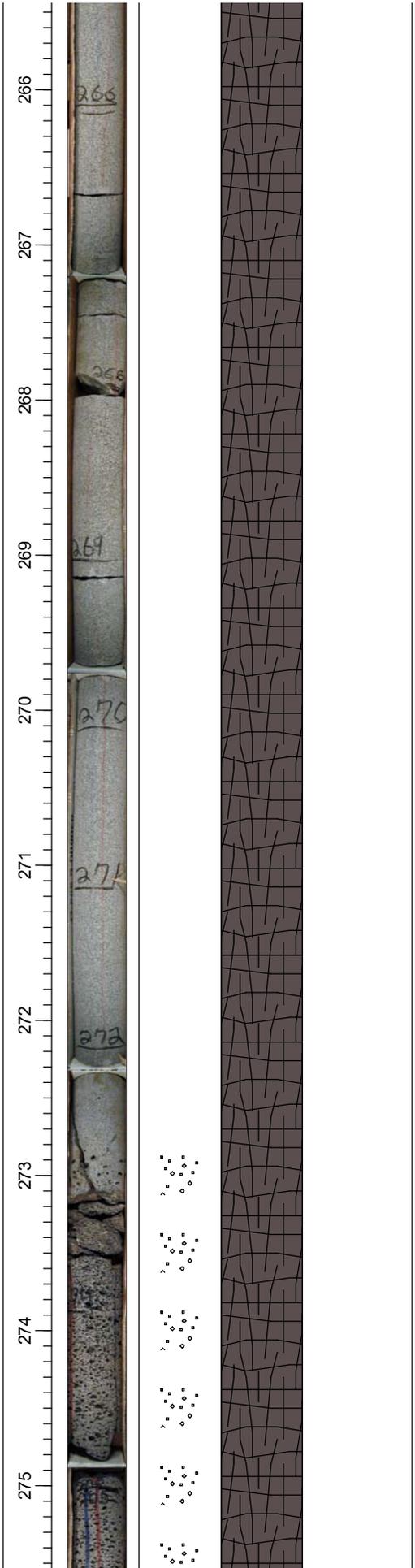
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

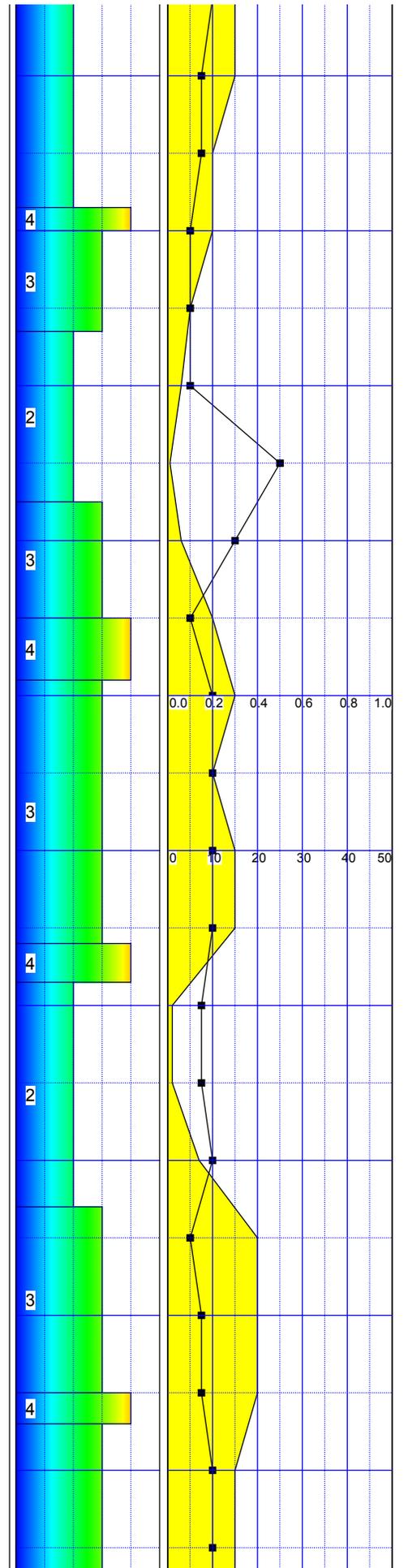
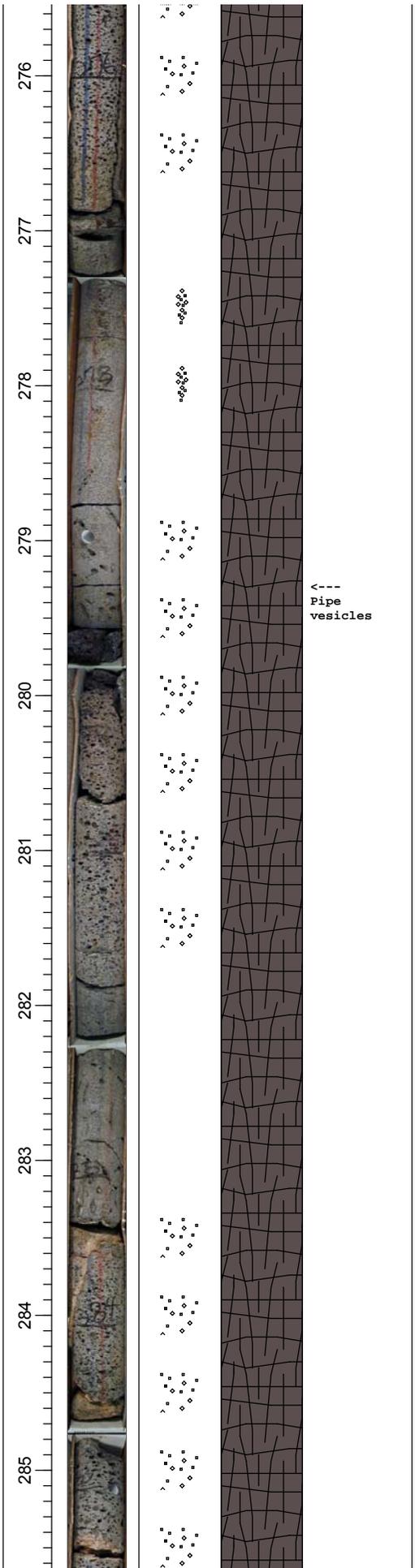
Xenoliths: None noted

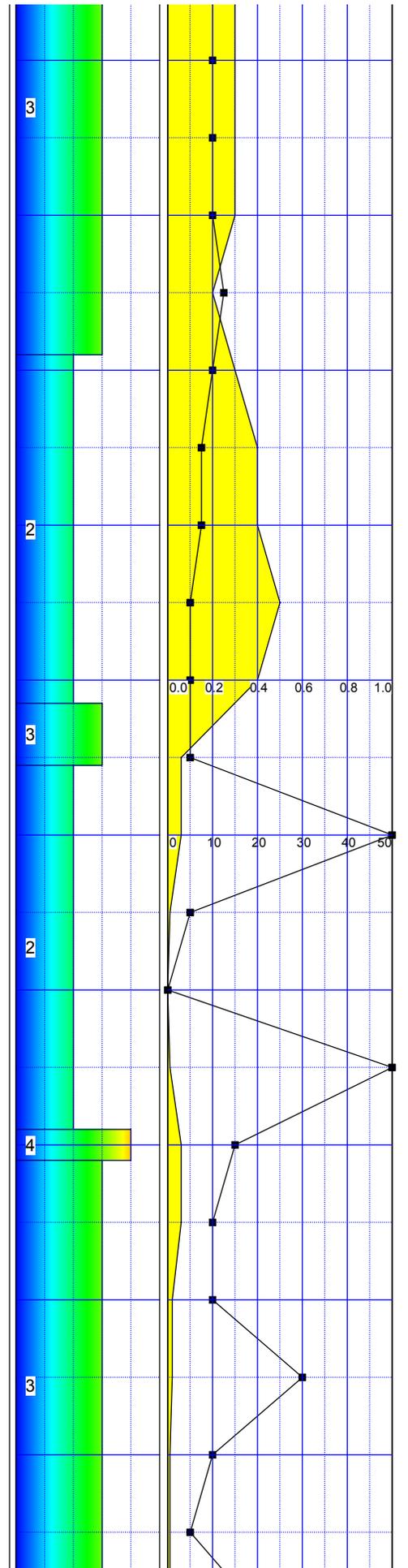
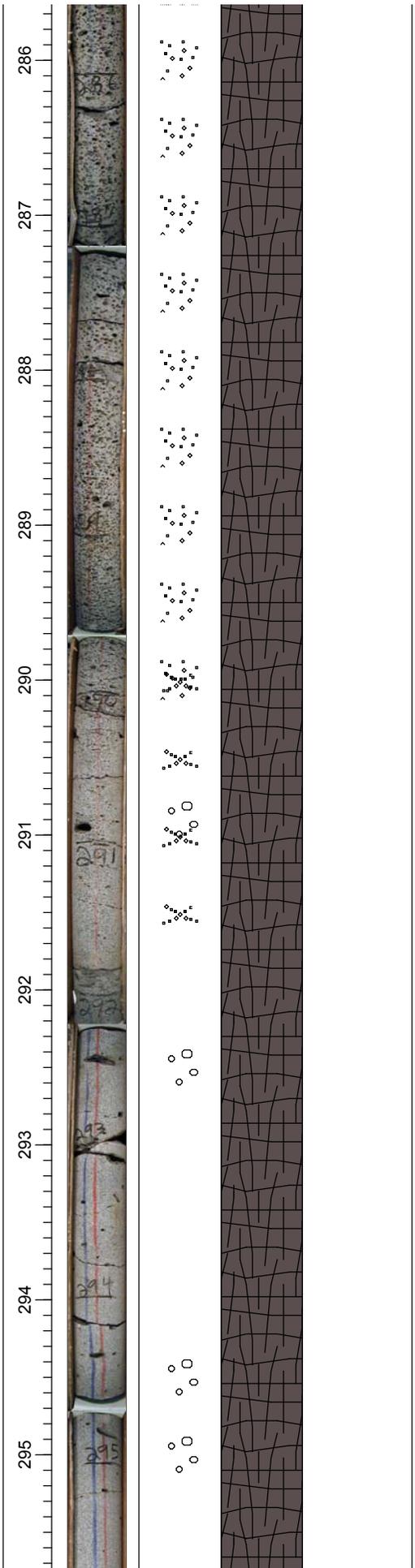
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.

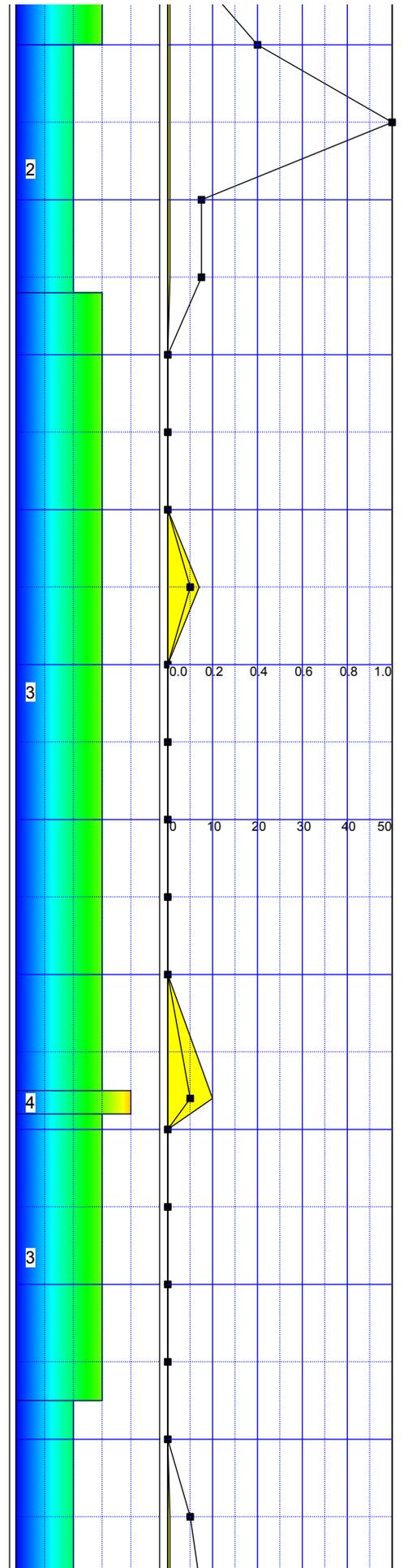
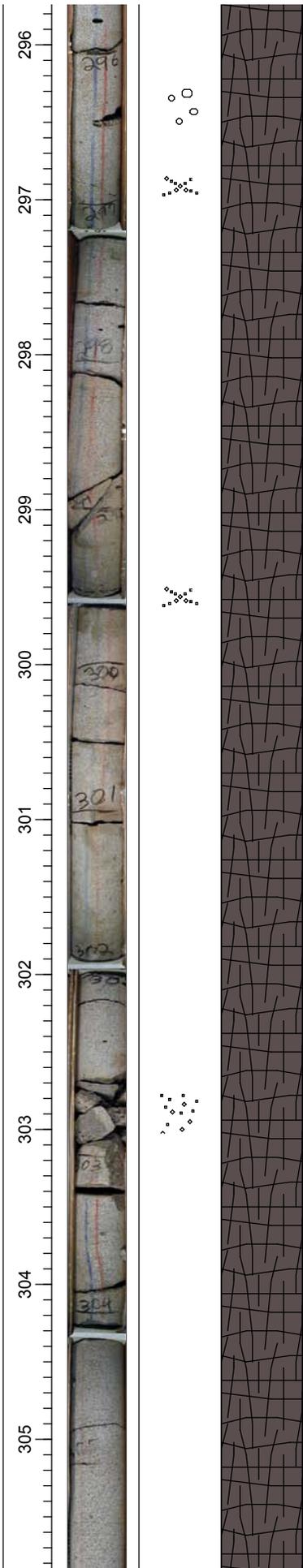


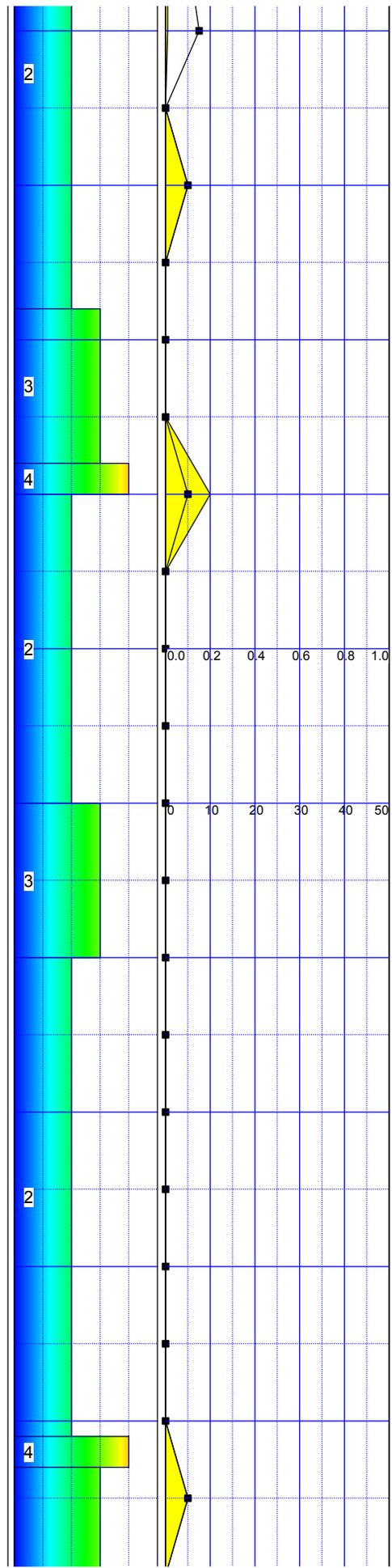
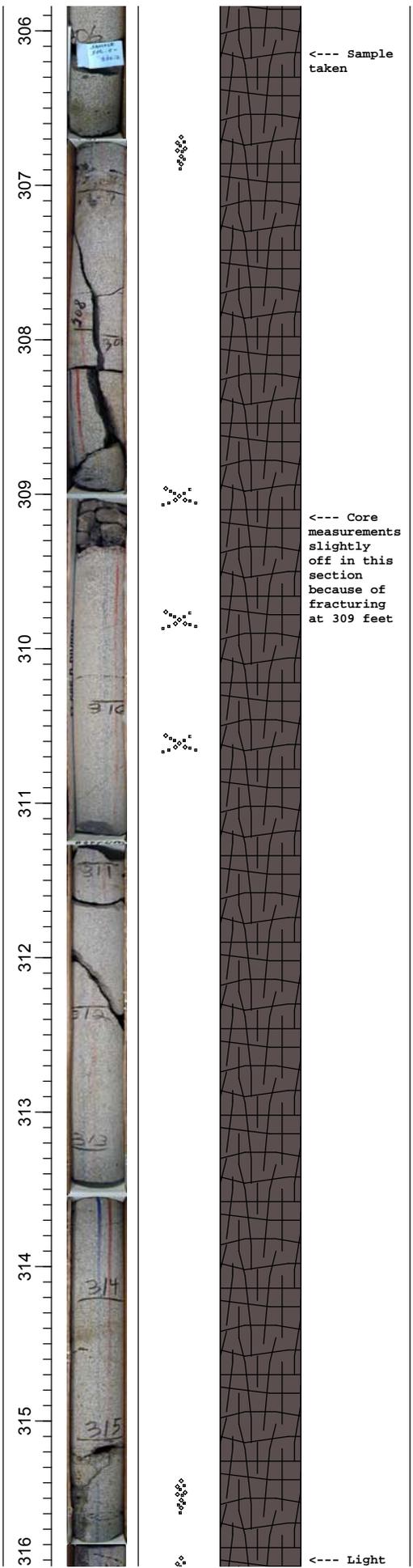


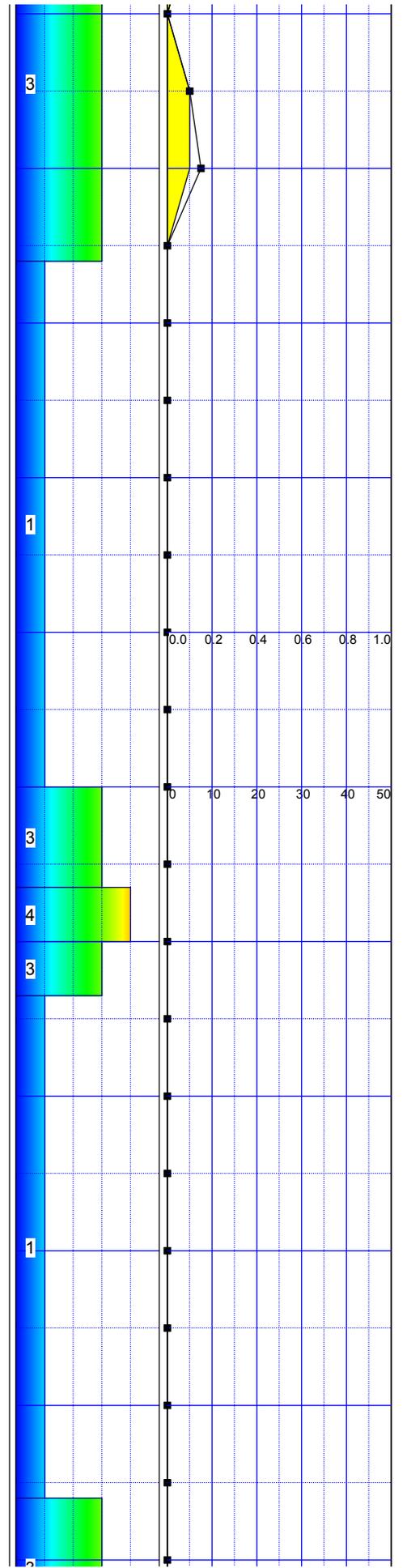
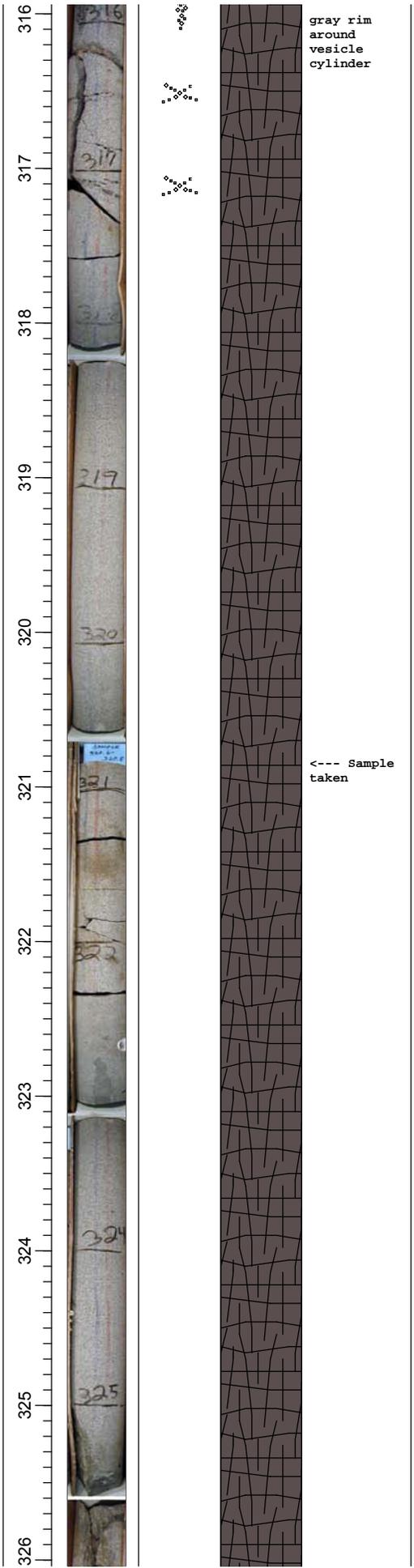


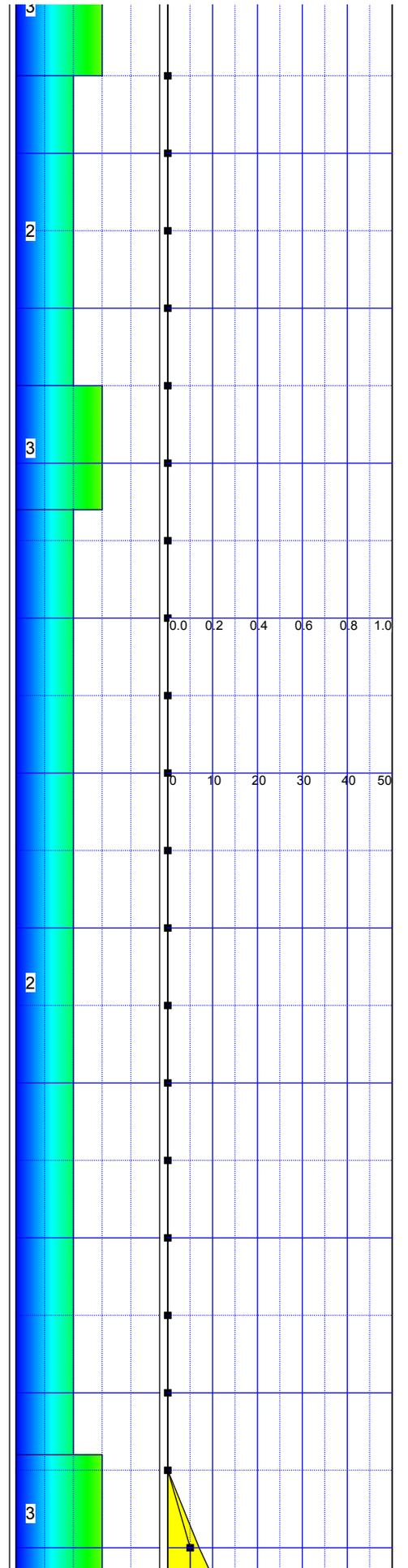
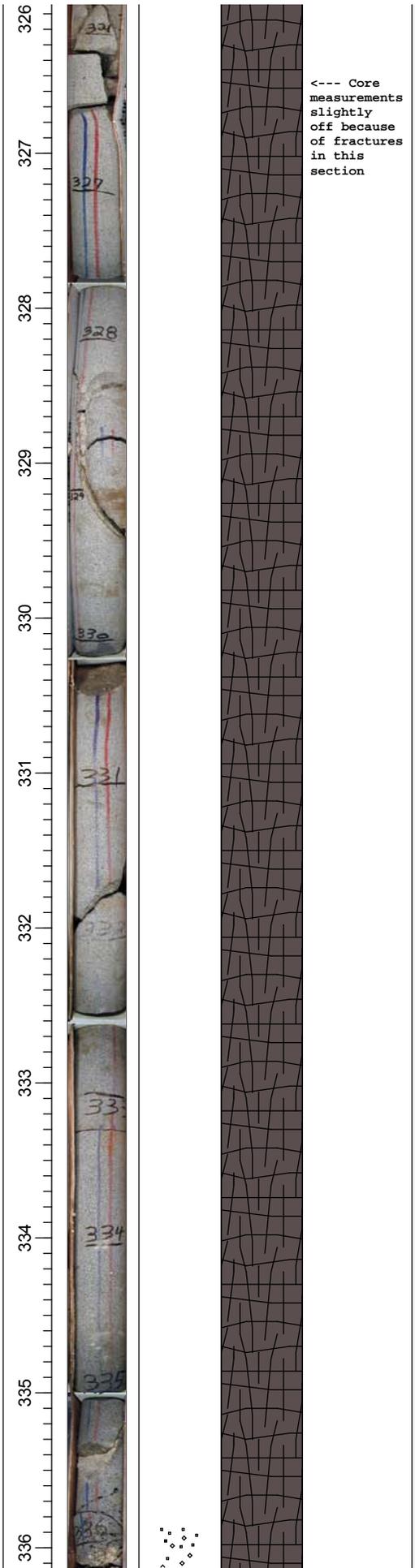


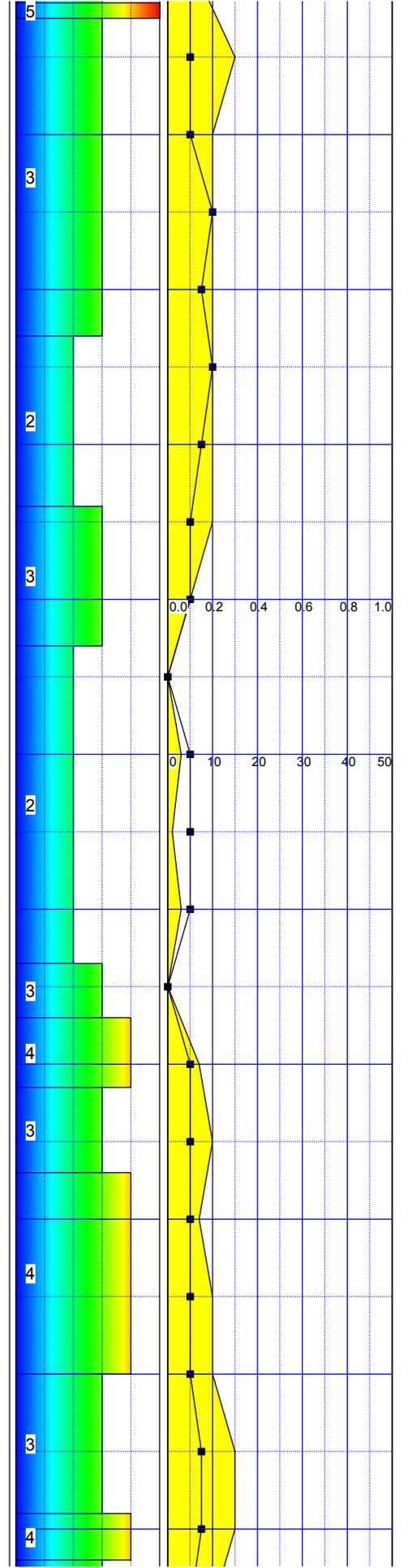
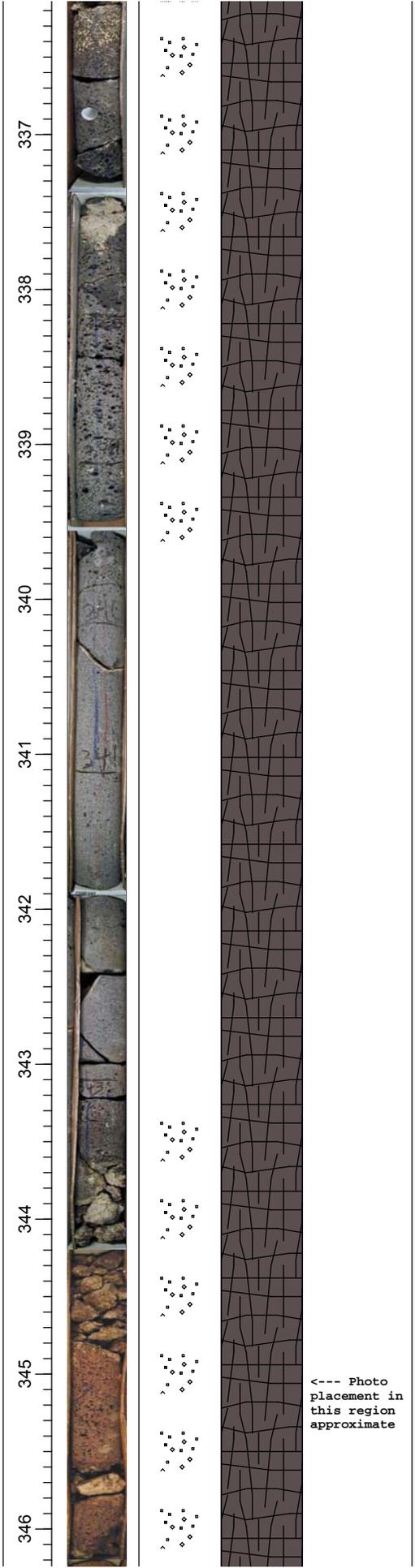


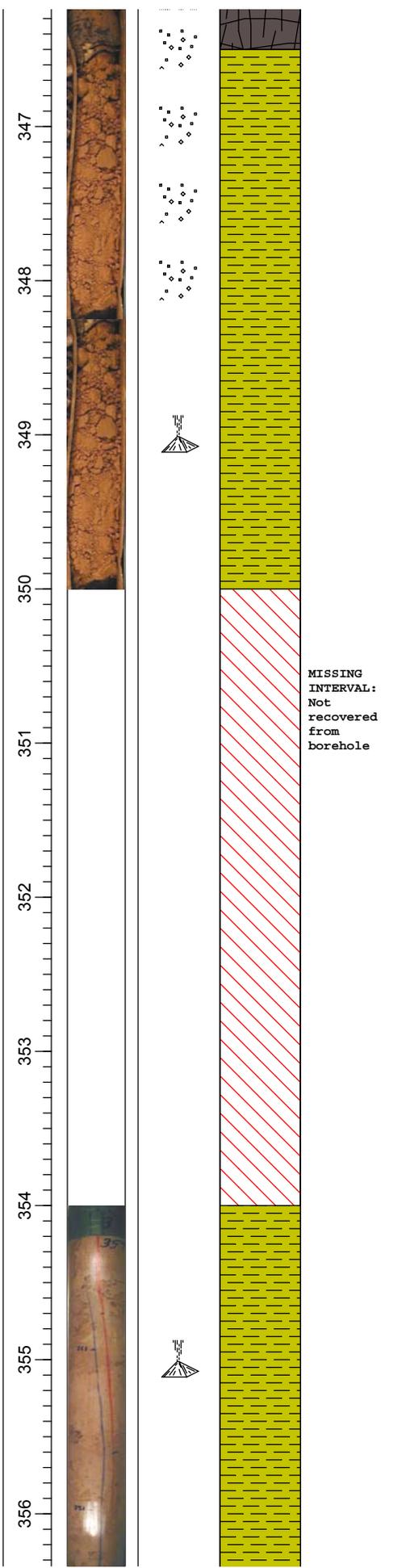












SILT AND CLAY: Lower portion encased in LEXAN

Color: Light brown at top grading into grayish orange pink

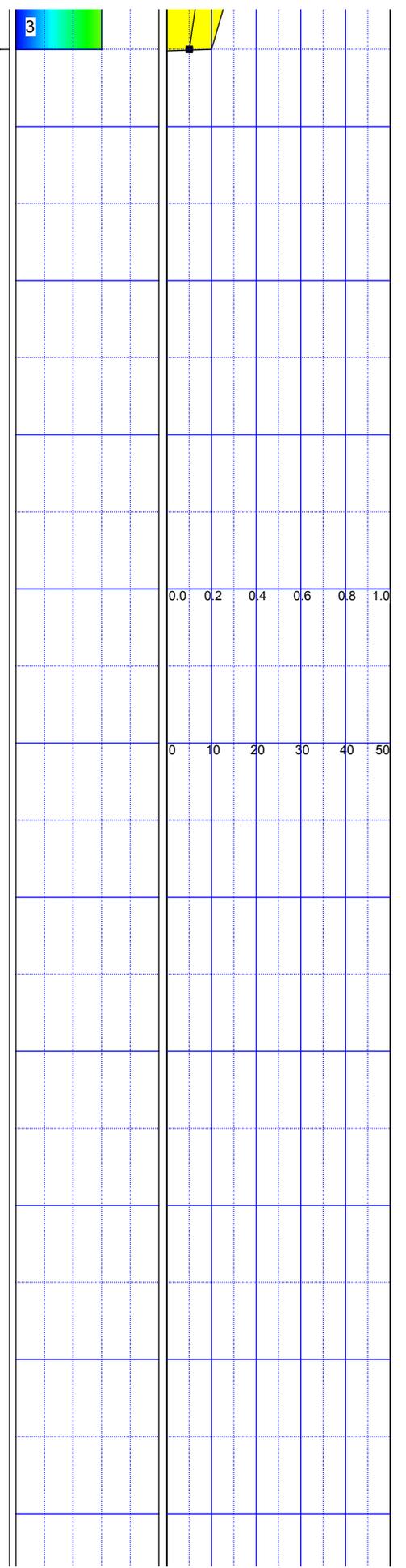
Consistence: Loose

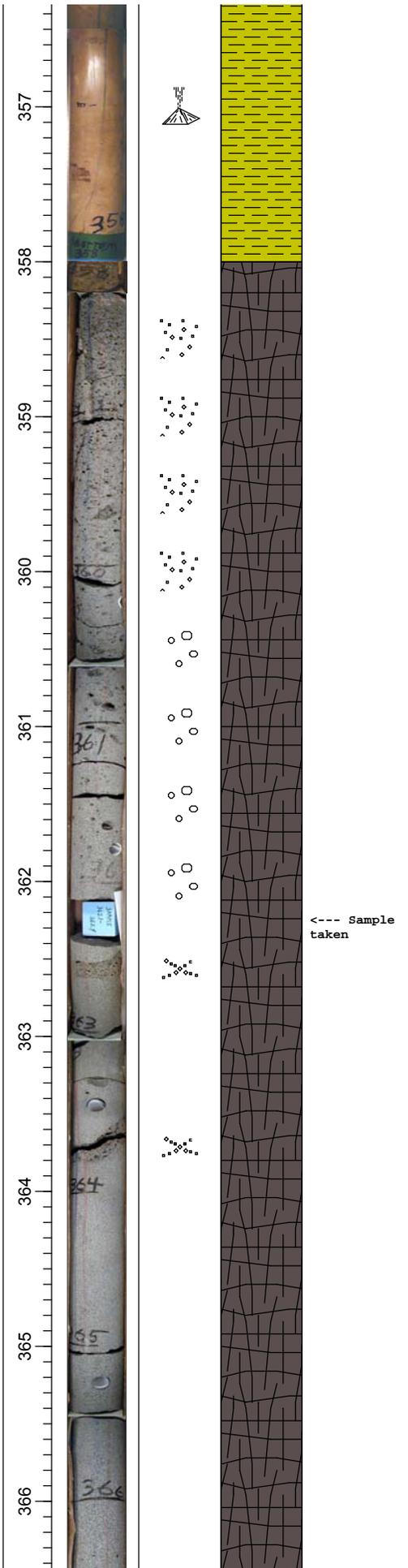
Structure: Single grained

Free Carbonates: Yes

Rocks: None observed.

Roots / Fossils: None observed





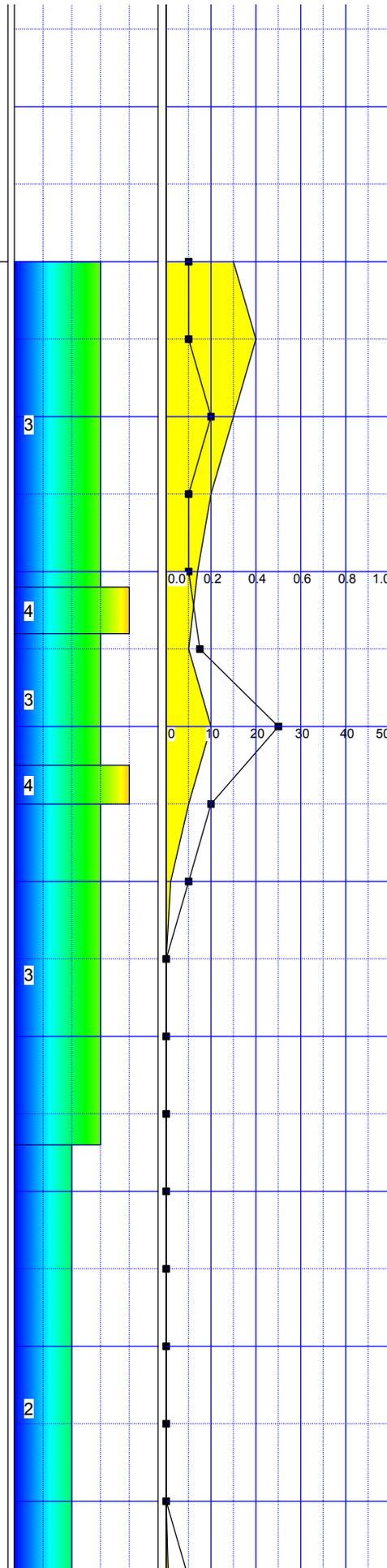
BASALT: Color: Light gray at top becoming grayish red around 368 feet.

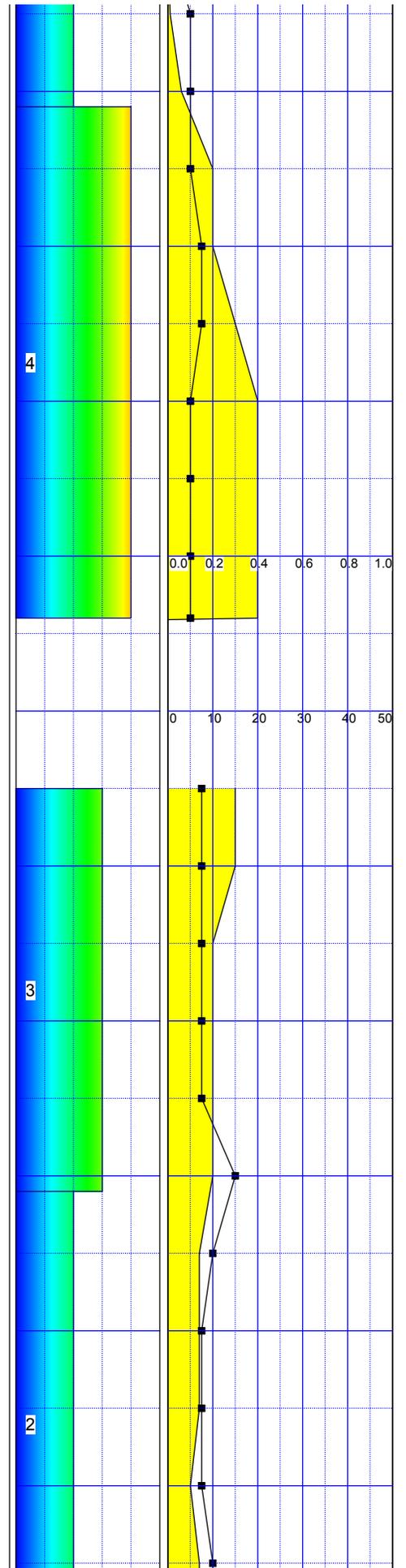
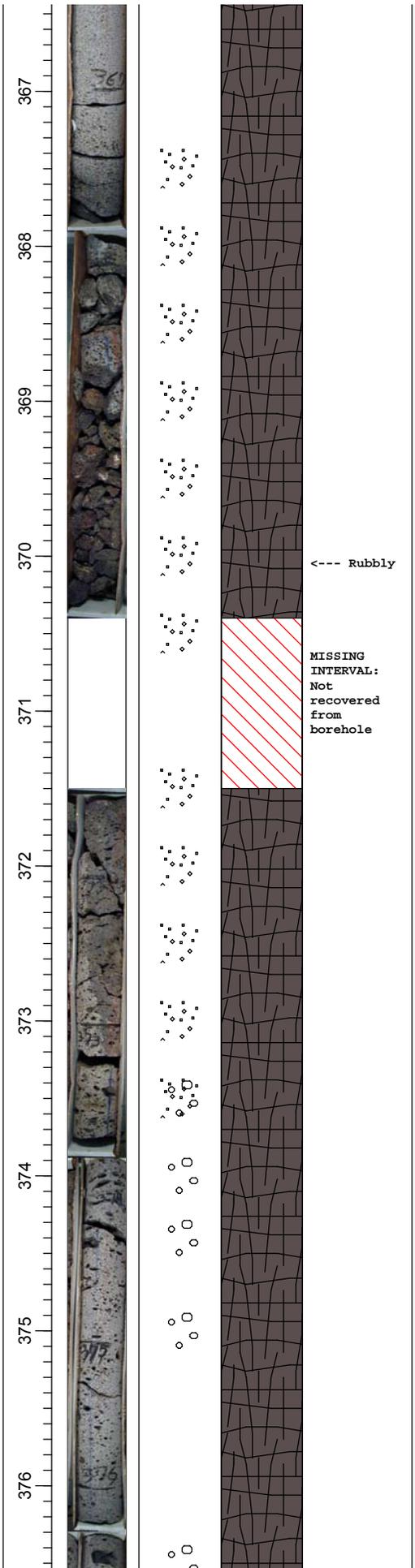
Magnetic properties: Non-magnetic to very slightly magnetic

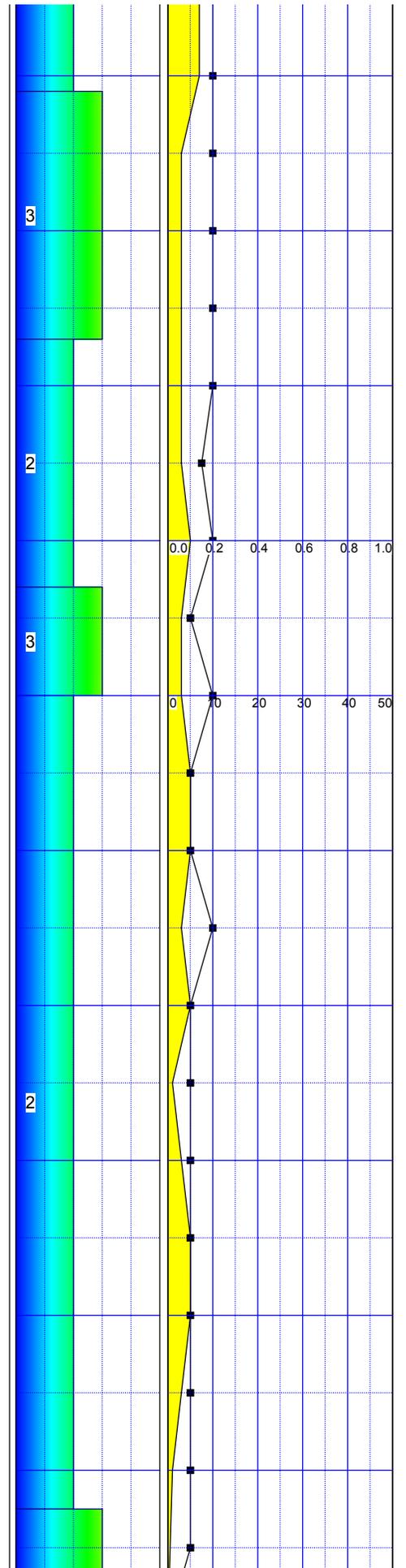
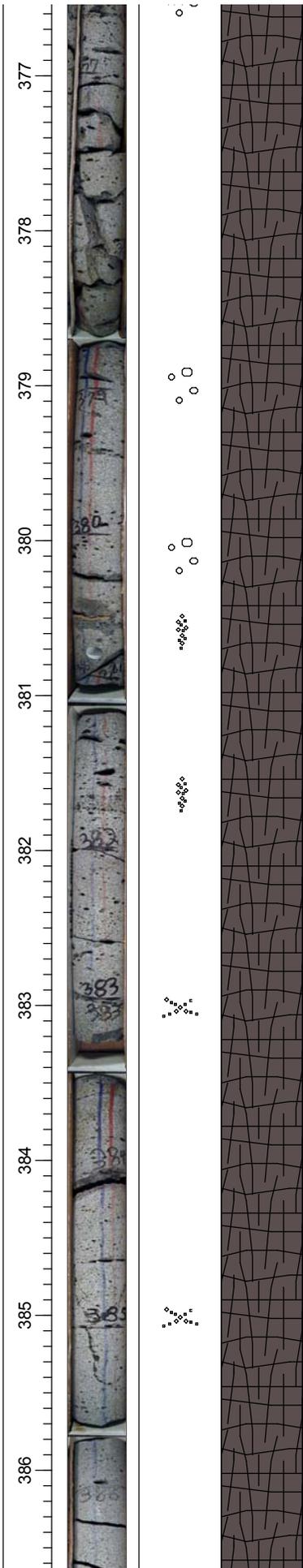
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

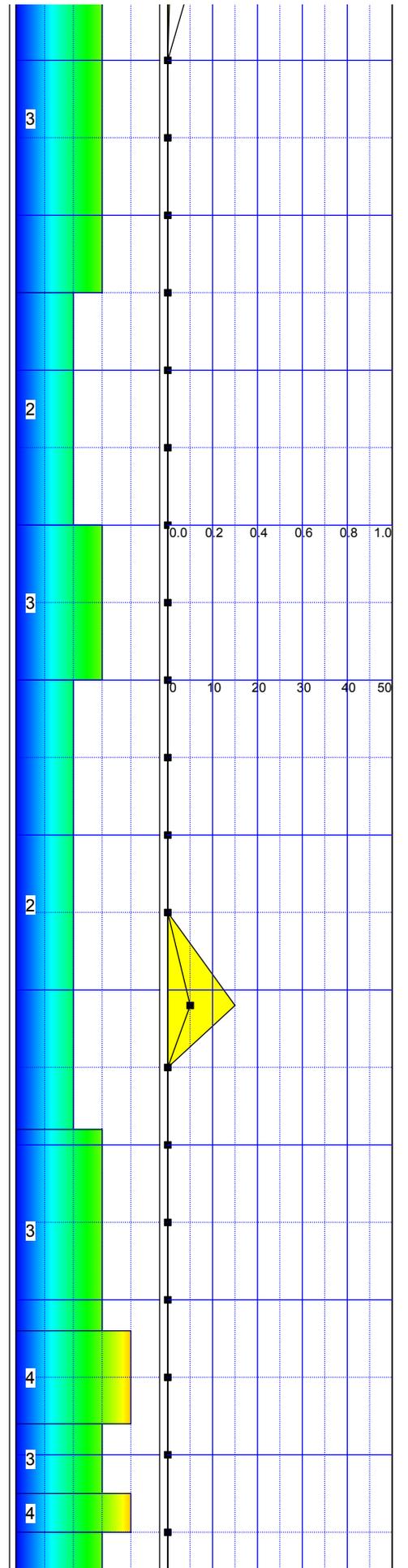
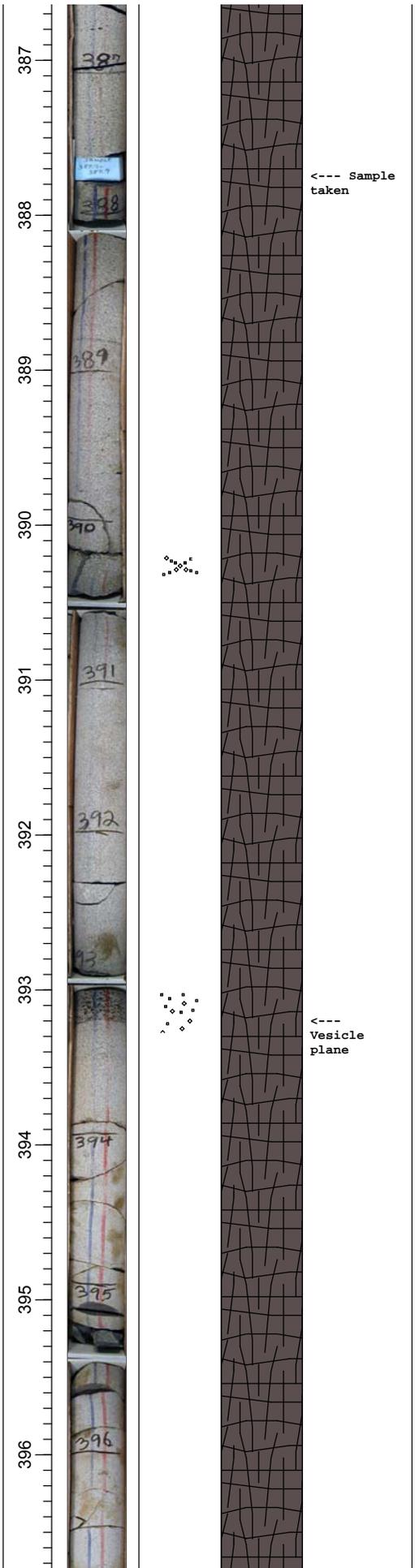
Xenoliths: None noted

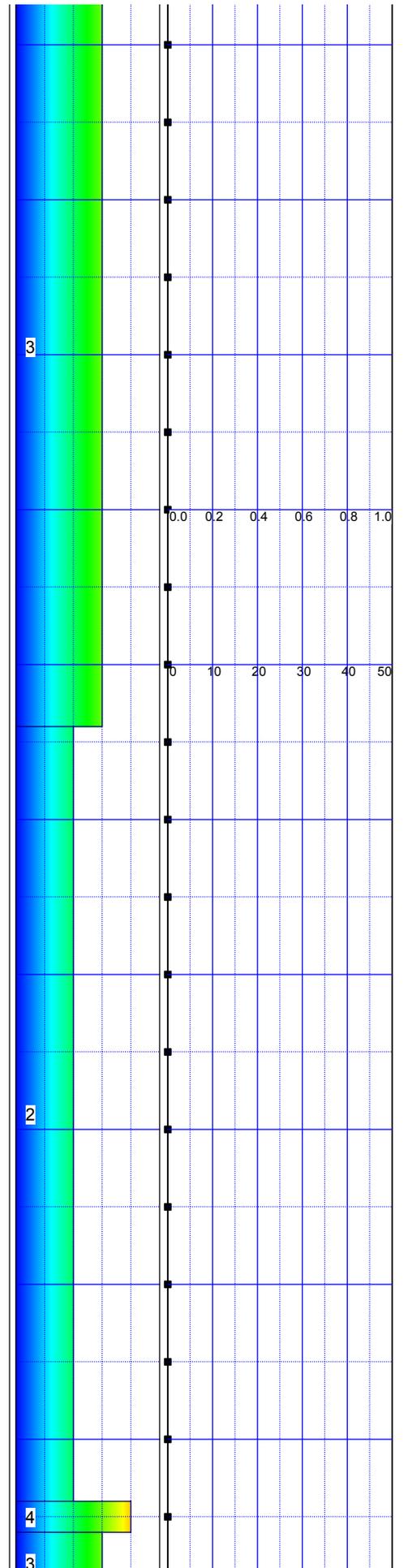
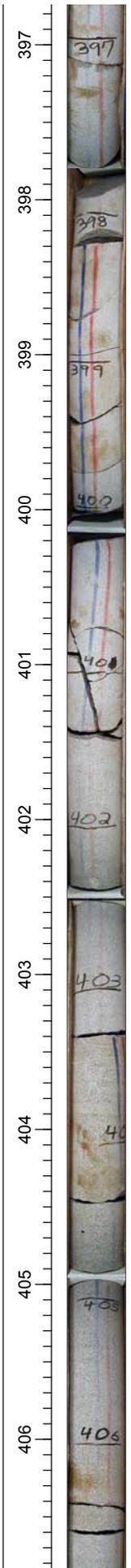
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.













SANDS WITH FINES: Mostly silt with small fraction of very fine sand

Color: Light brown

Consistence: Loose to friable

Structure: Single grained

Free Carbonates: No

Rocks: None observed.

Roots / Fossils: Several 1 - 2 mm sinuous tubules

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SILT AND CLAY: Color: Grayish orange grading into light brown

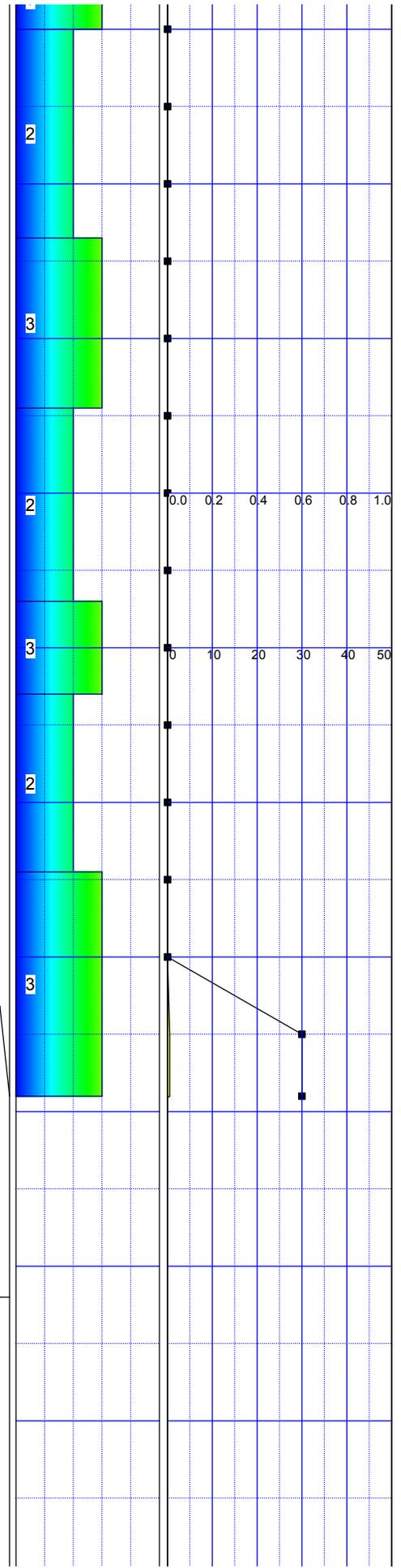
Consistence: Loose to friable

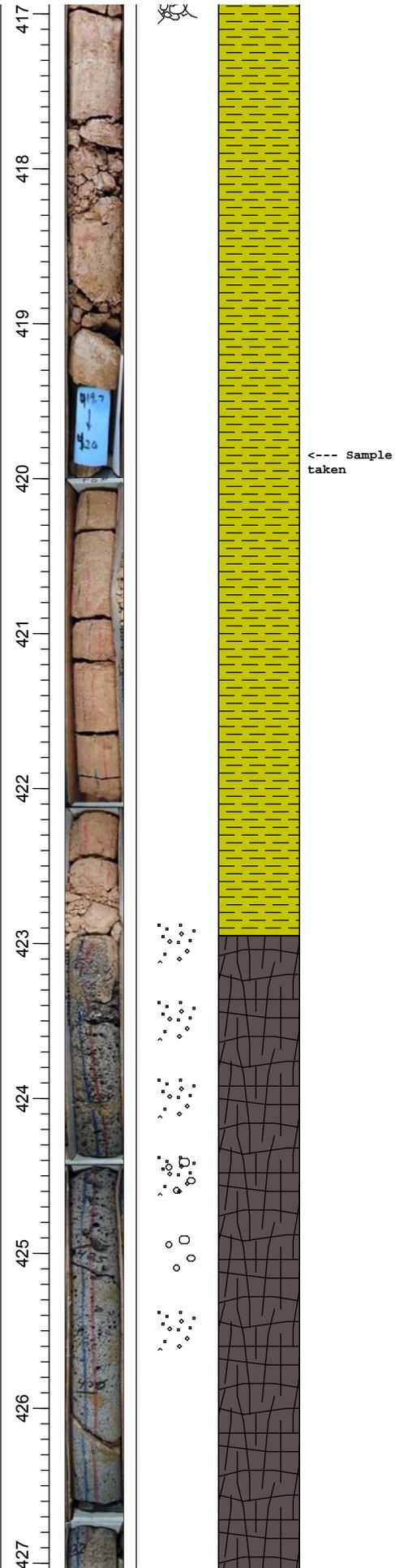
Structure: Granular or blocky. Appears as peds with interstices filled by lighter-colored silt and clay

Free Carbonates: 415' to 419' No, 420'to base of interval, yes

Rocks: Few subangular, spherical vesicular 2 mm - 1 cm rocks, randomly distributed.

Roots / Fossils: Several 1 mm round, sinuous tubules





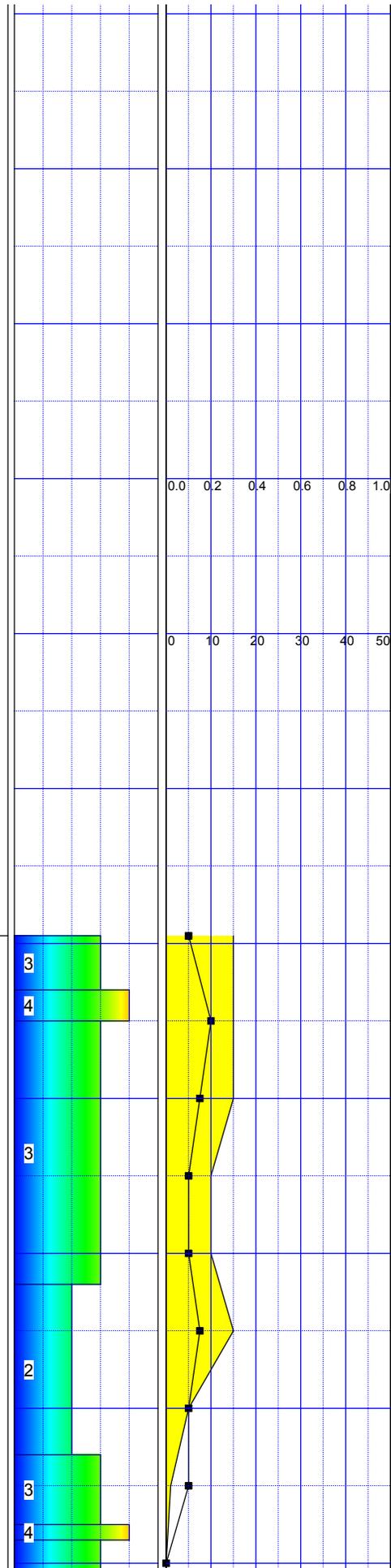
BASALT: Color: Alternates between grayish red, grayish brown and medium light gray

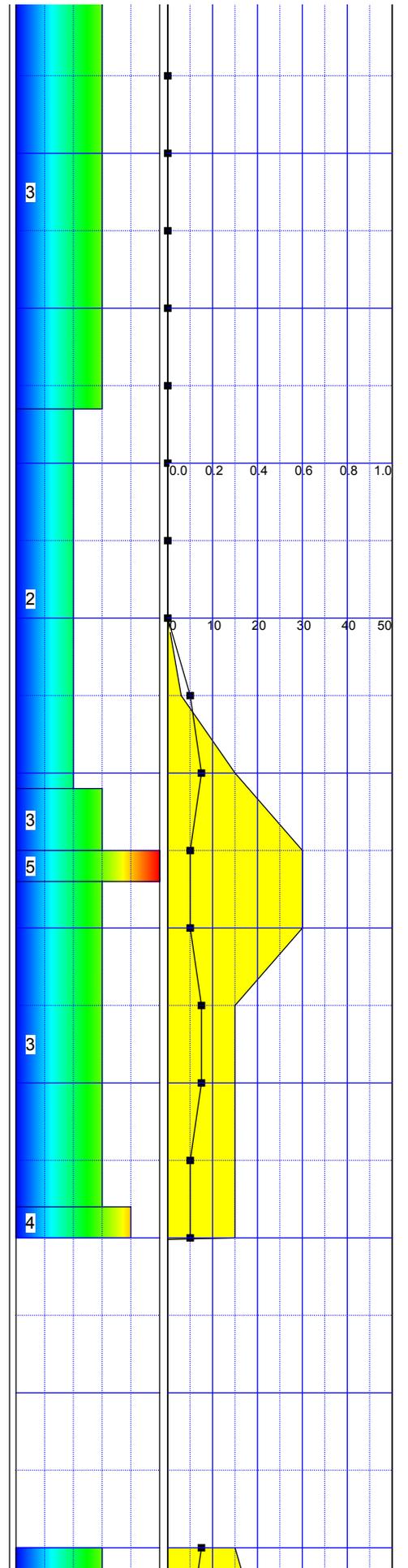
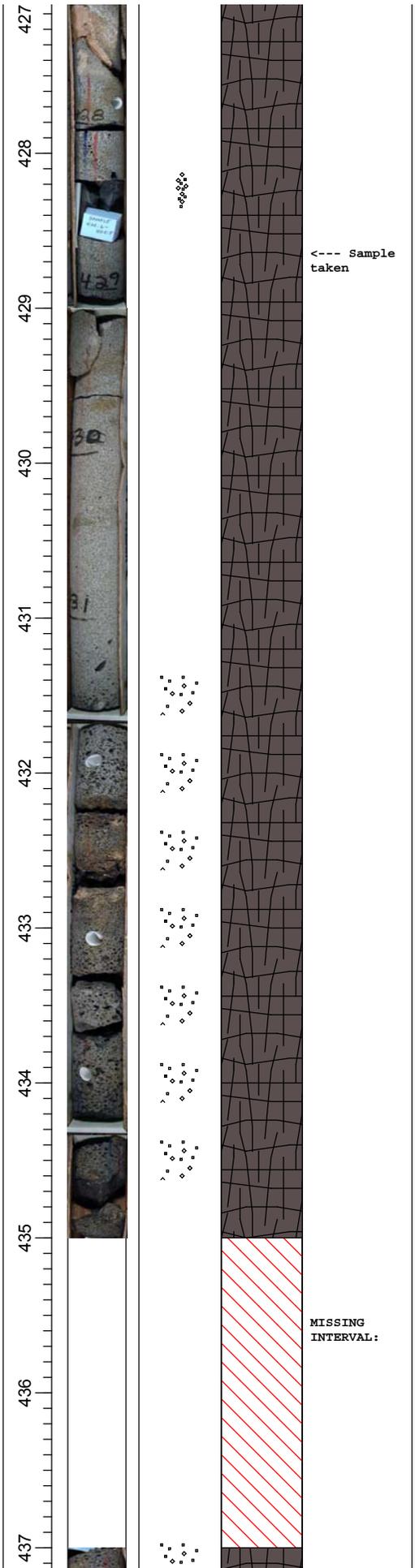
Magnetic properties: Non-magnetic to very slightly magnetic

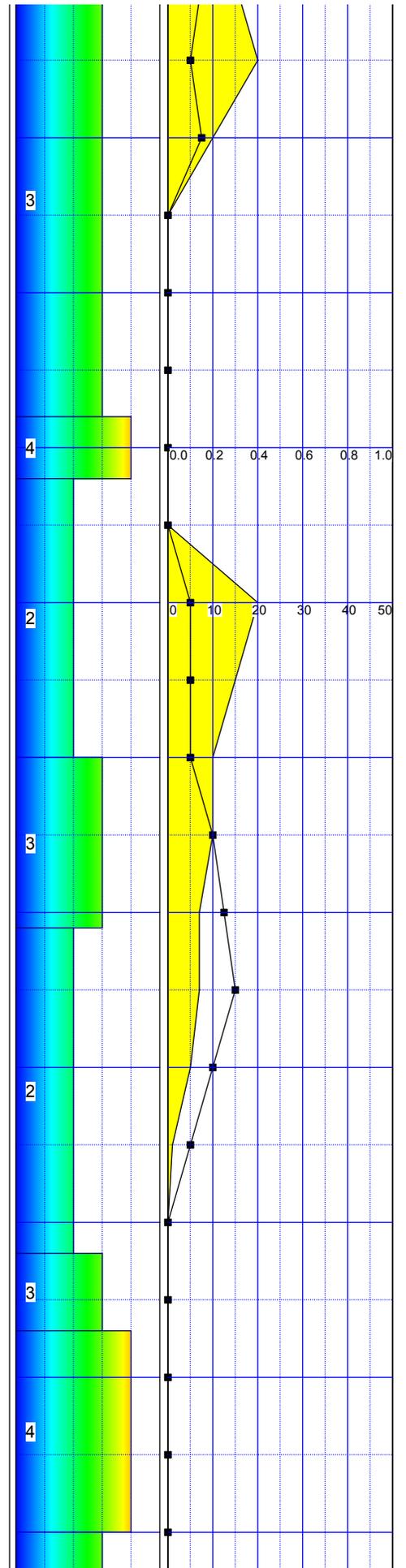
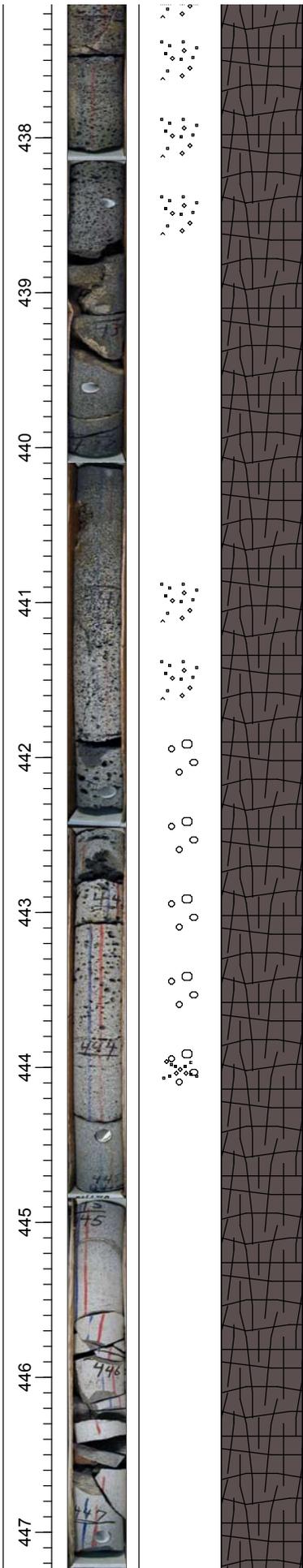
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

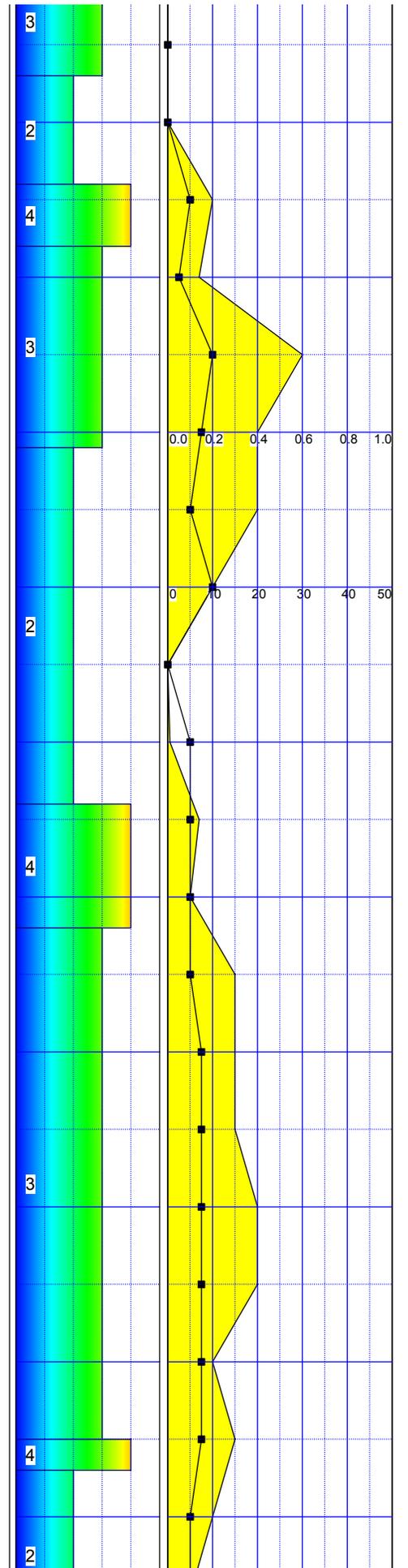
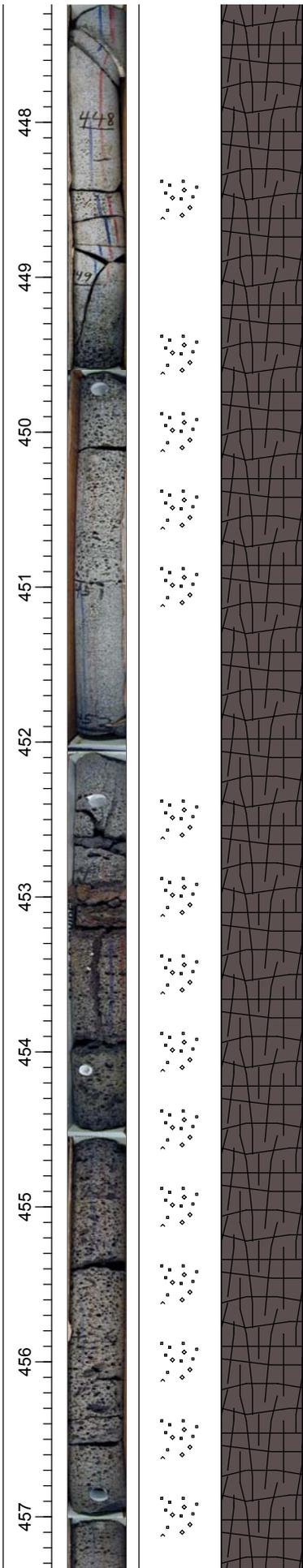
Xenoliths: None noted

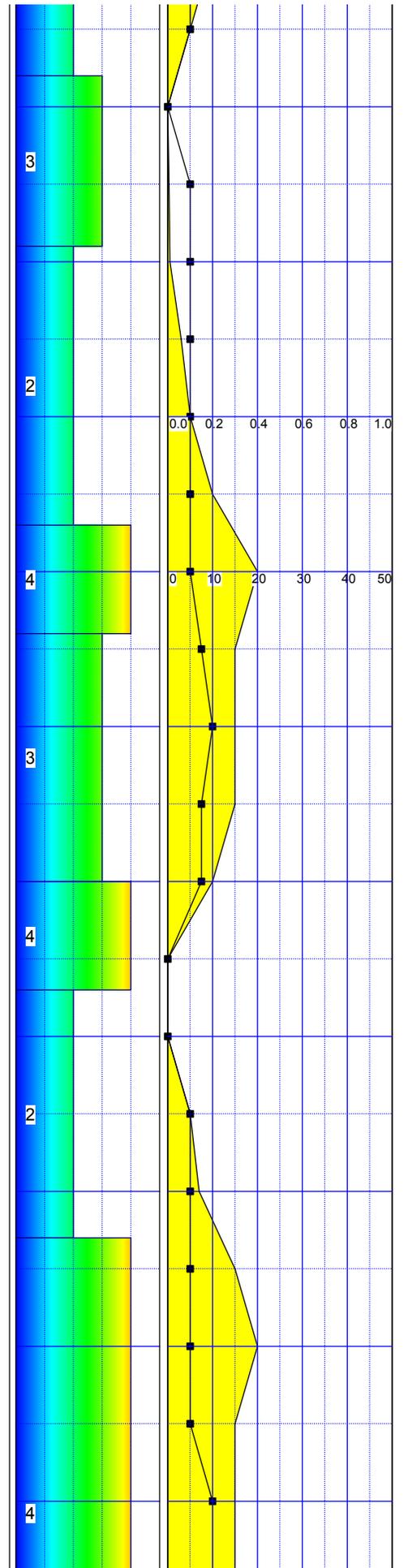
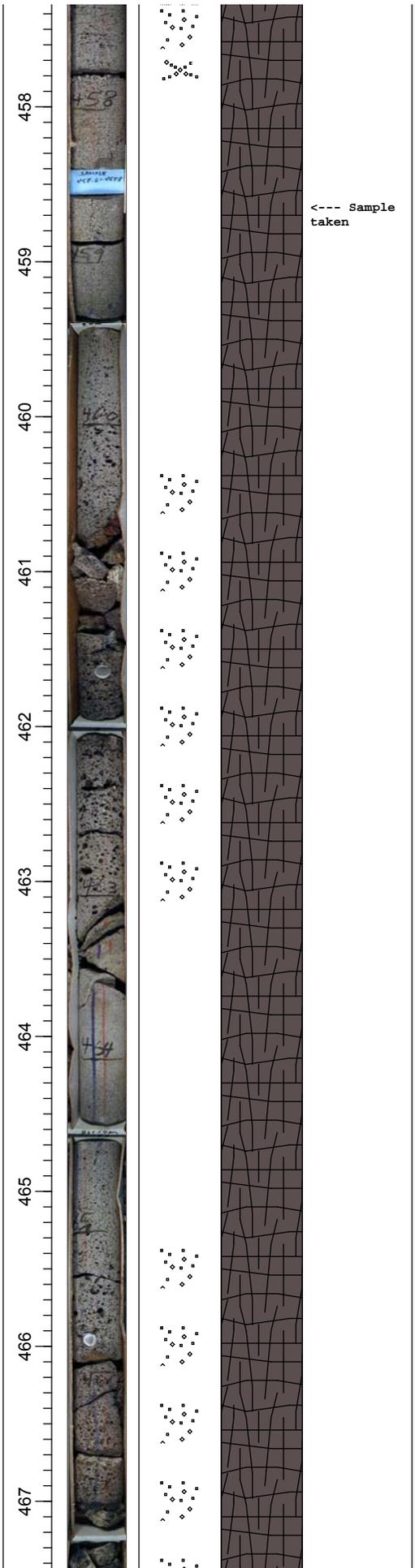
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.

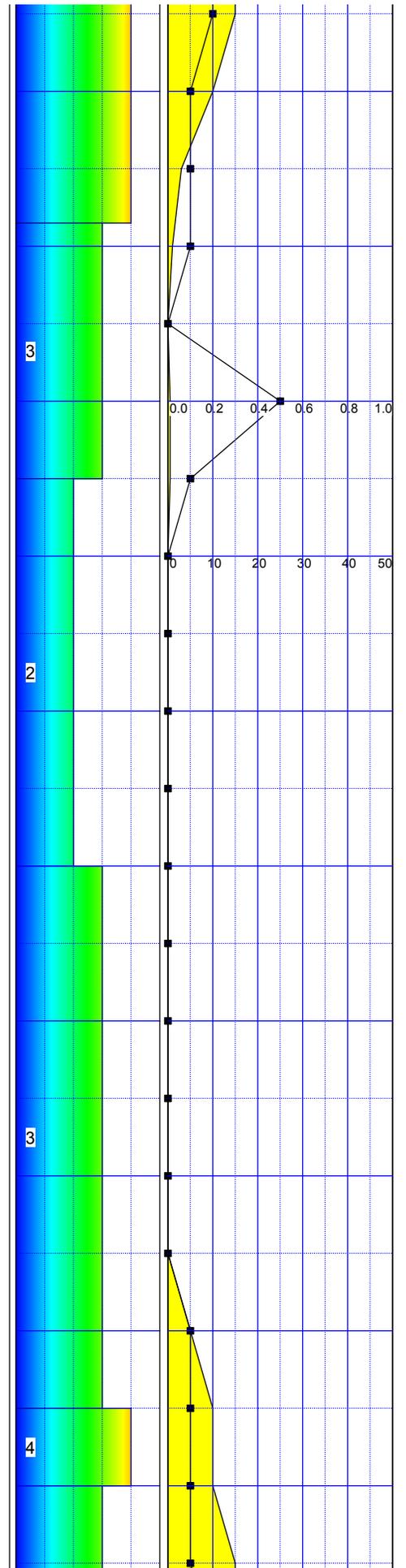
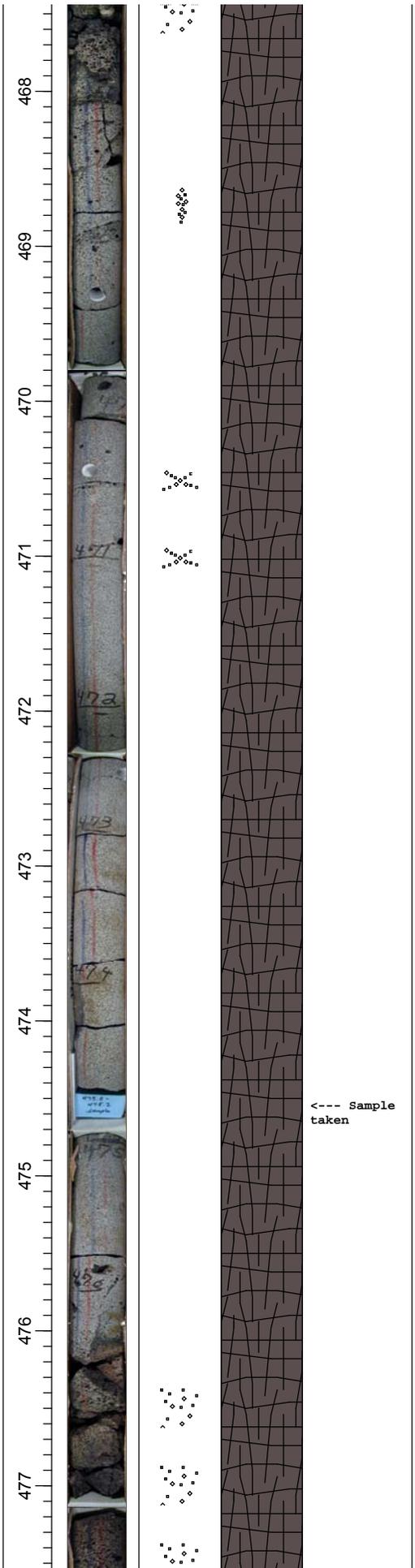


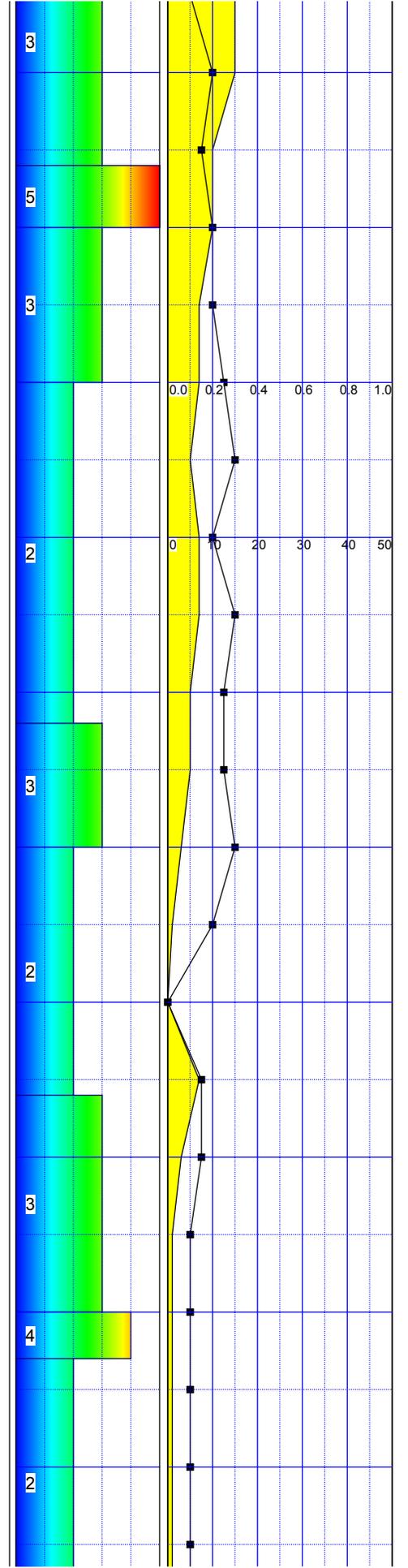
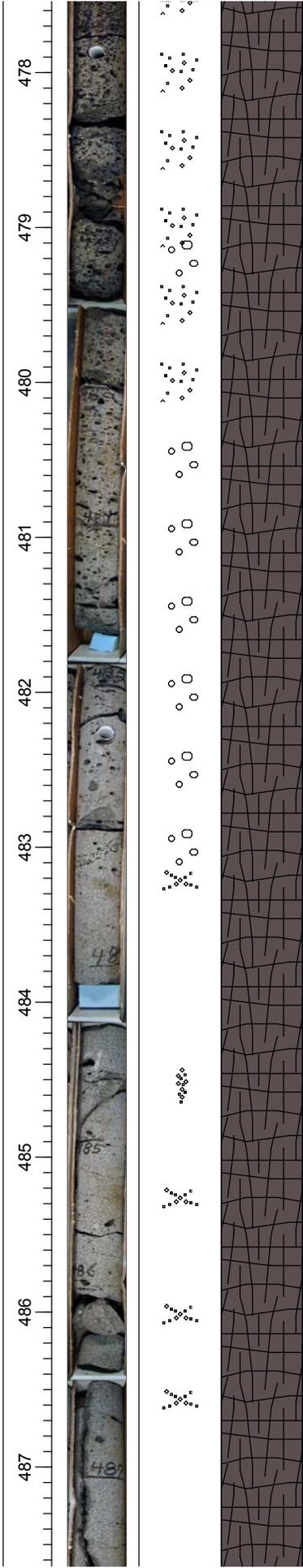


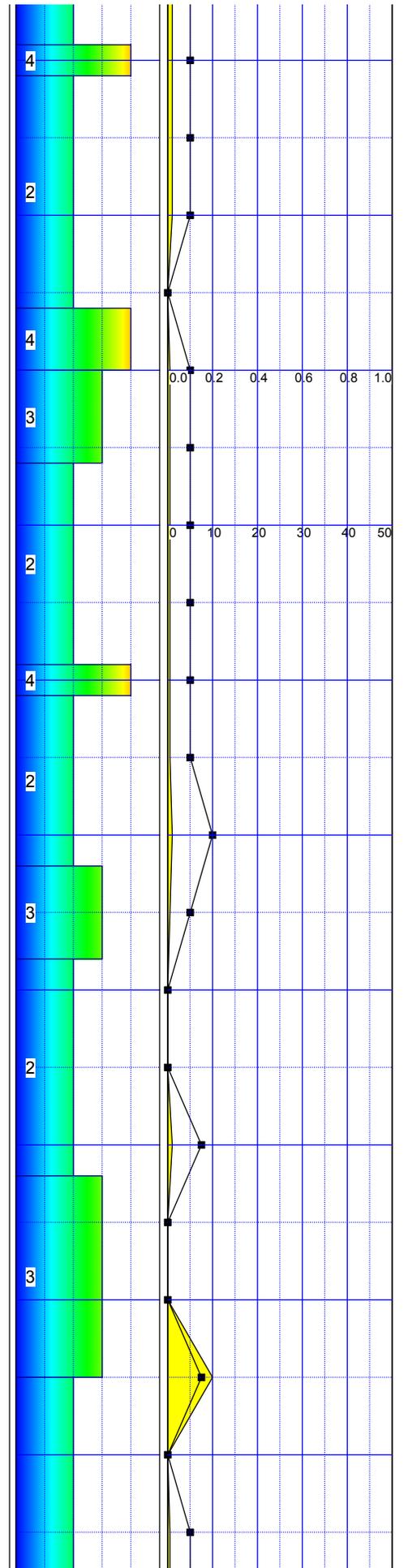
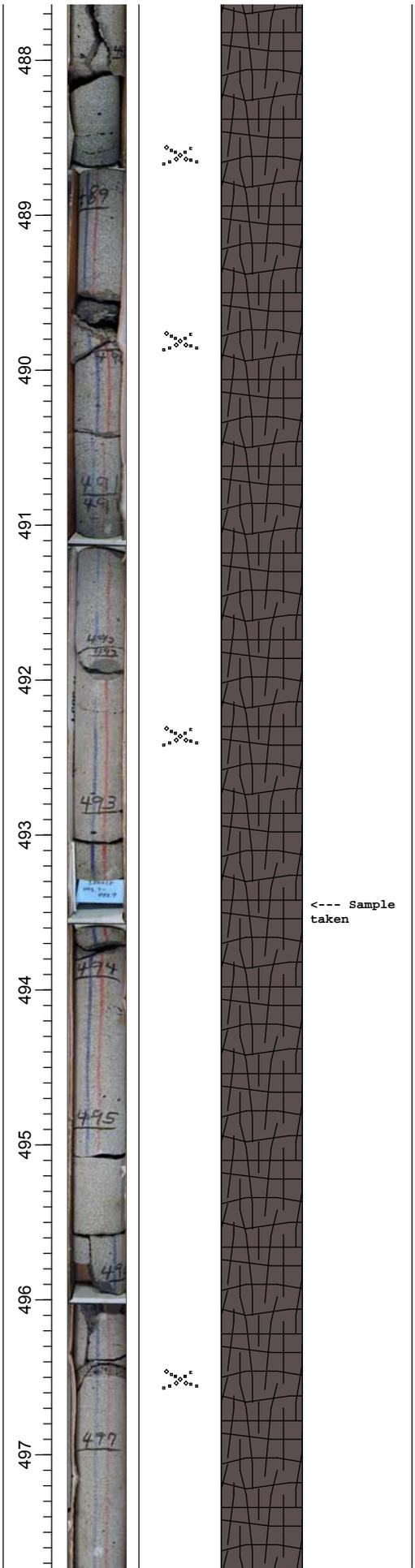


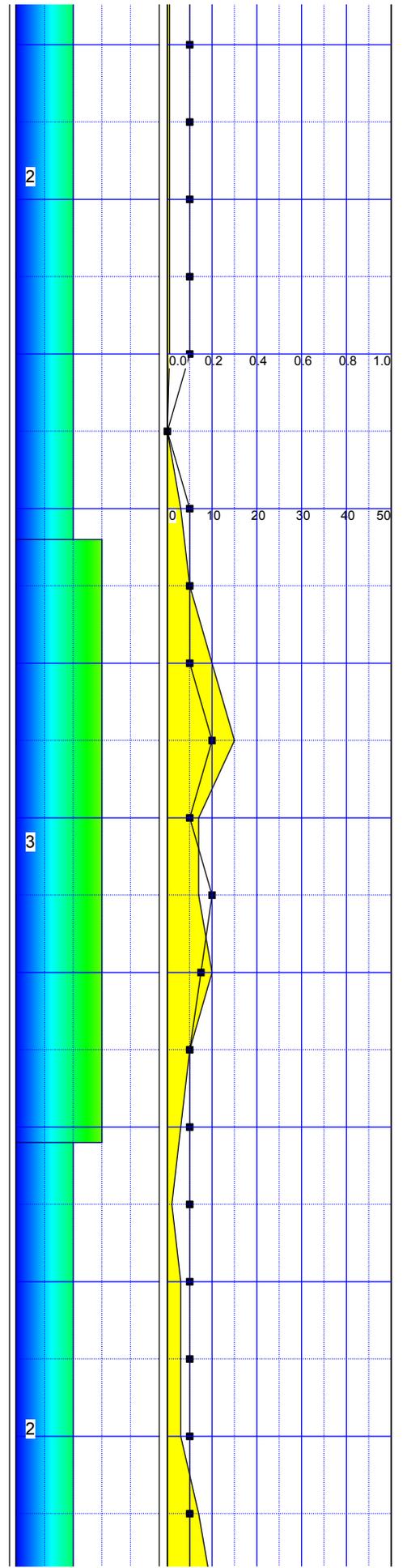
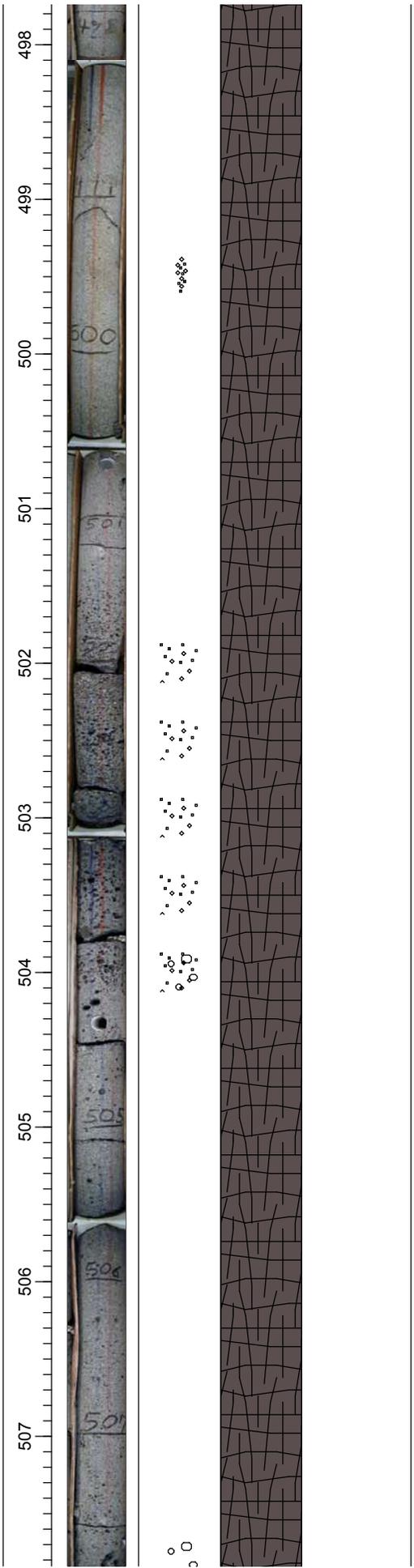


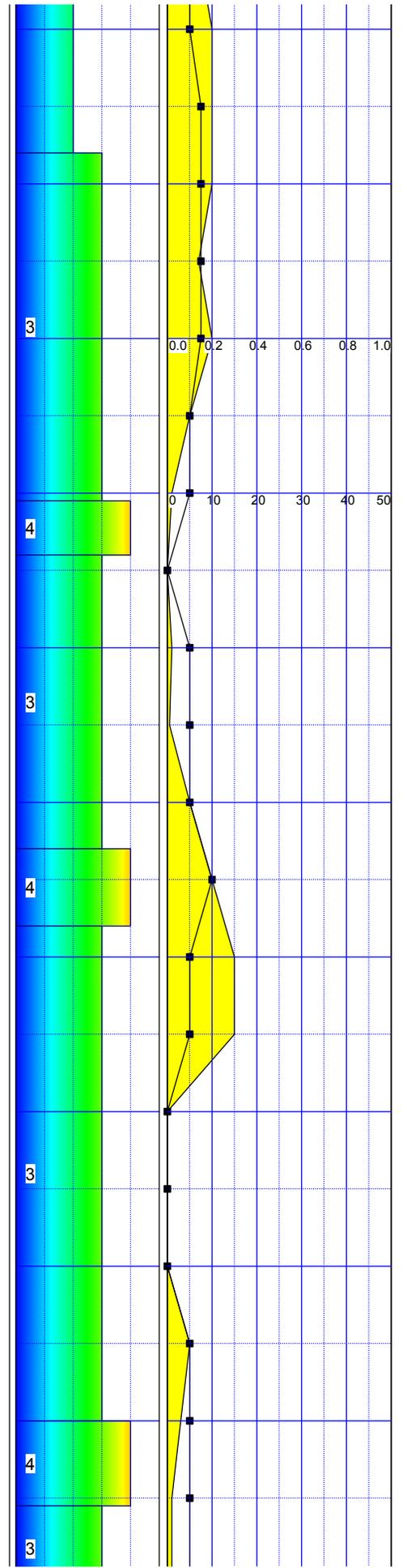
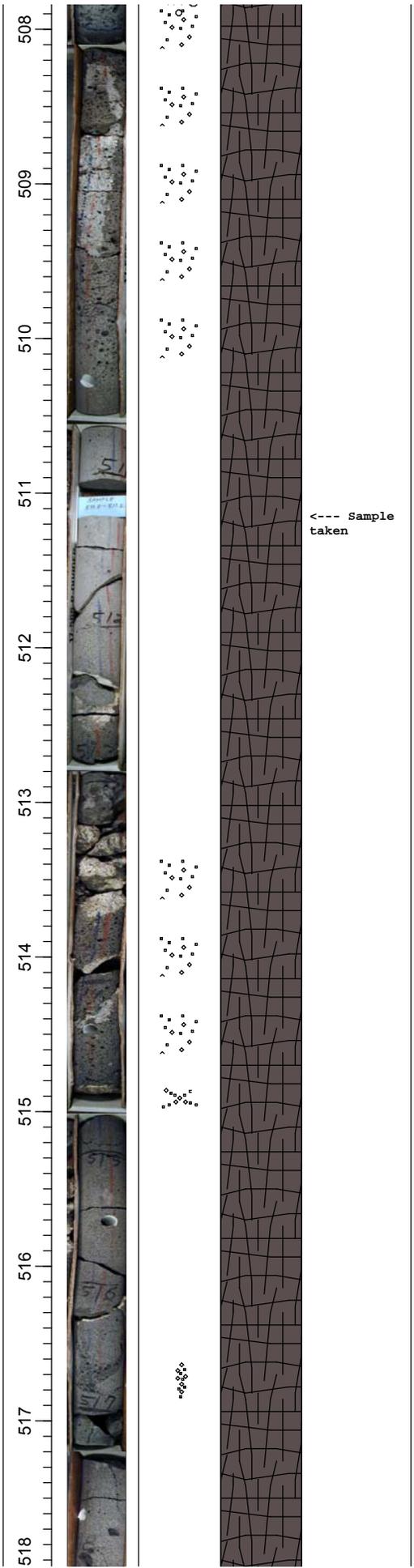


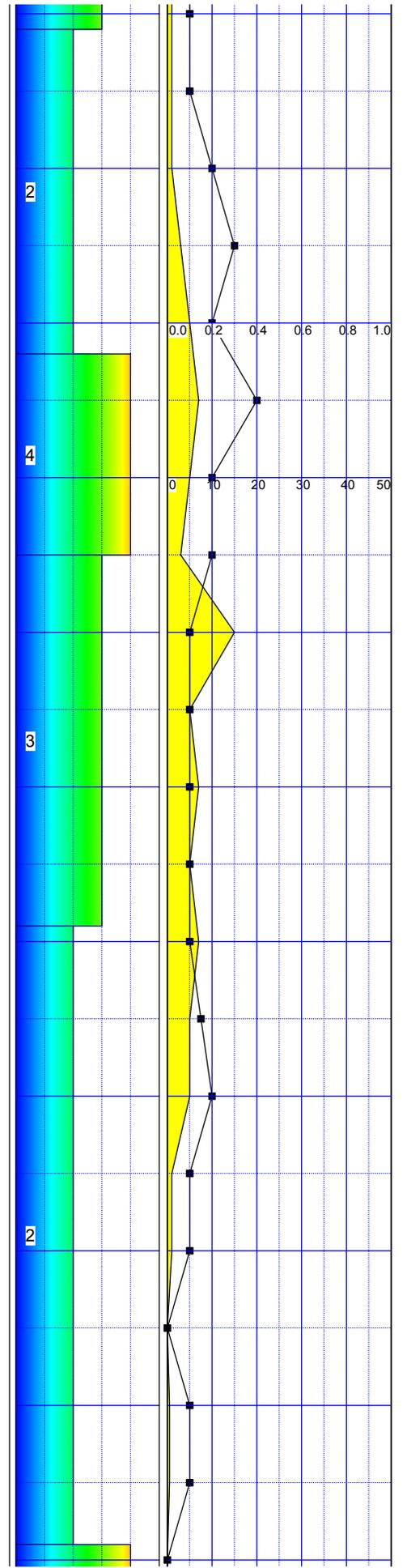
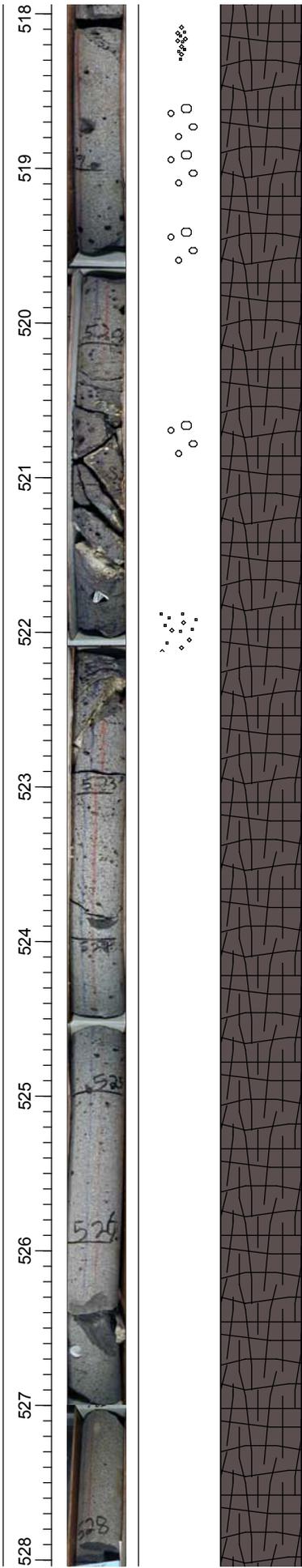


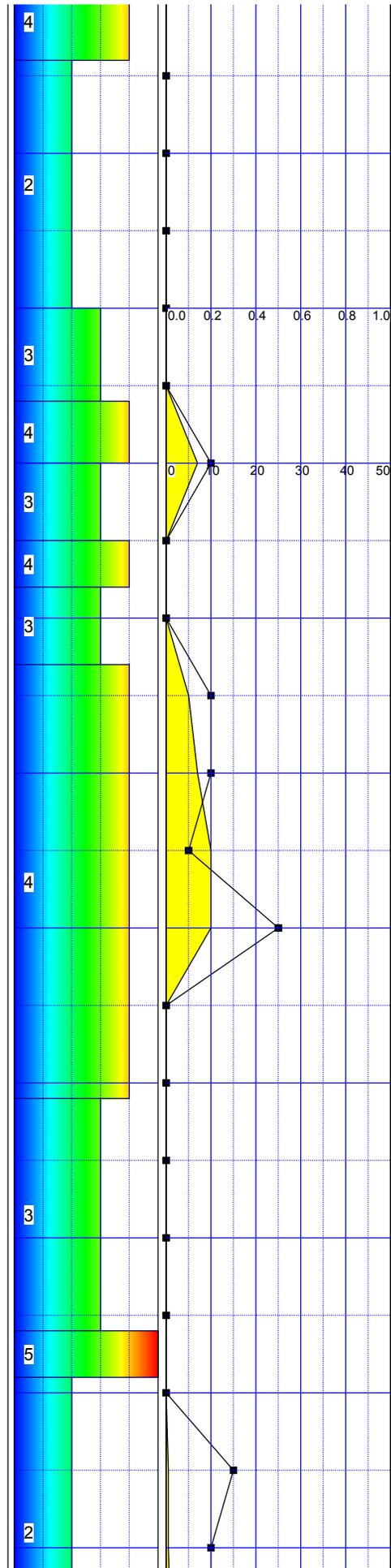
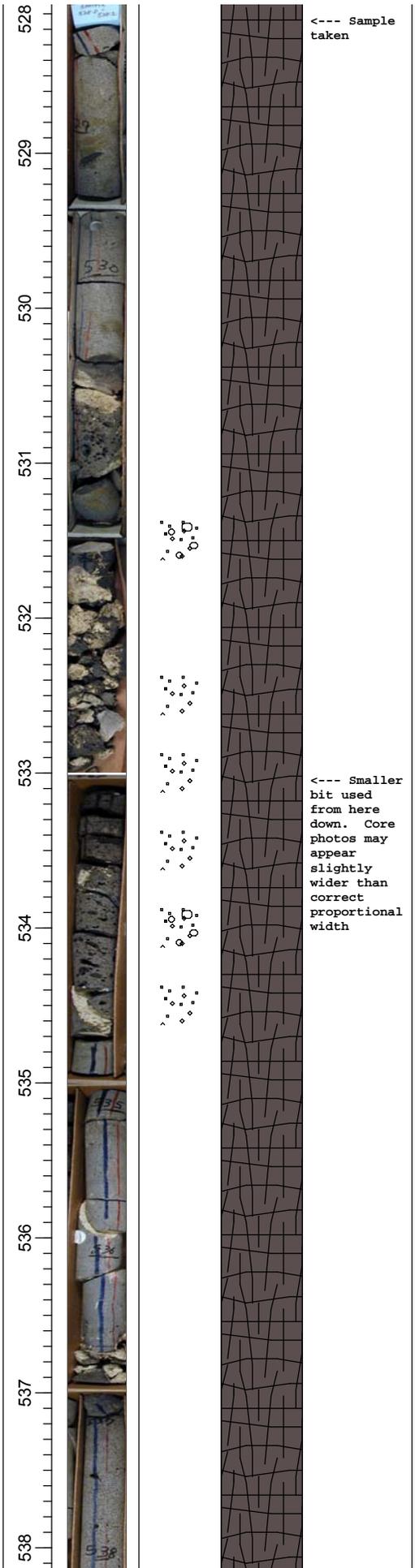


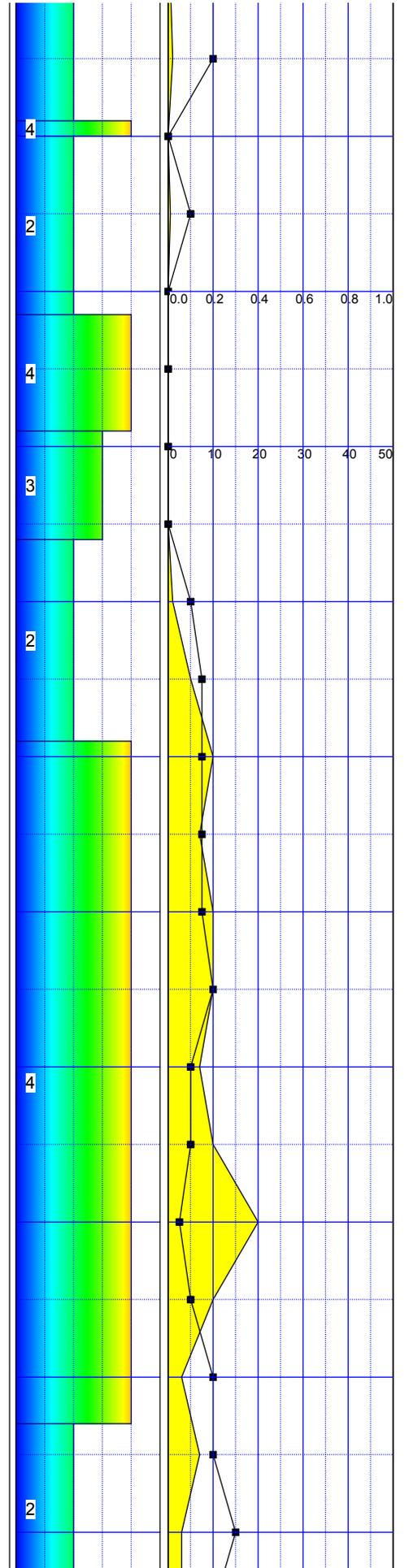
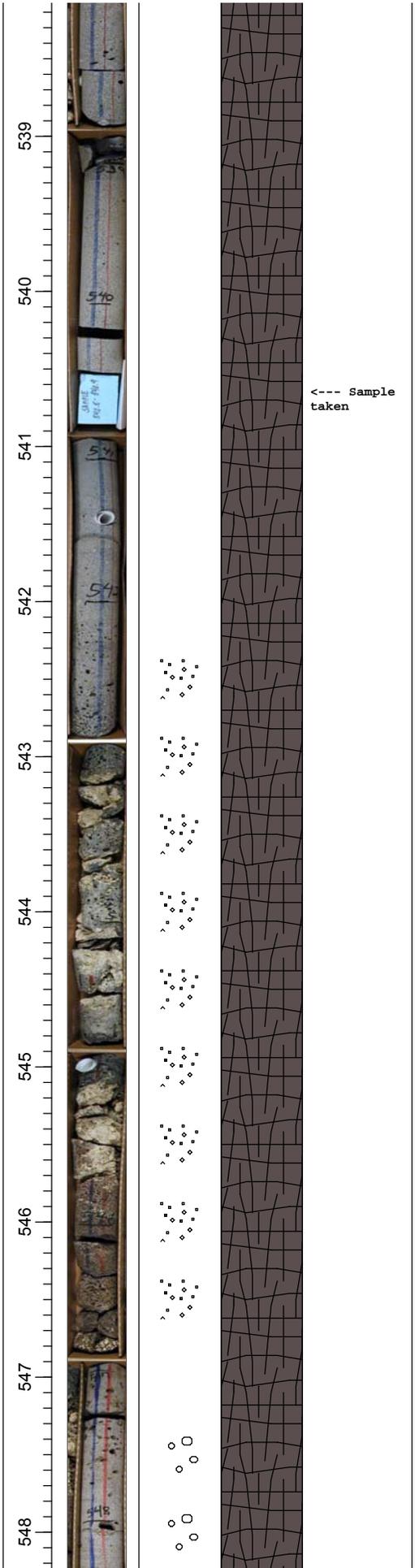


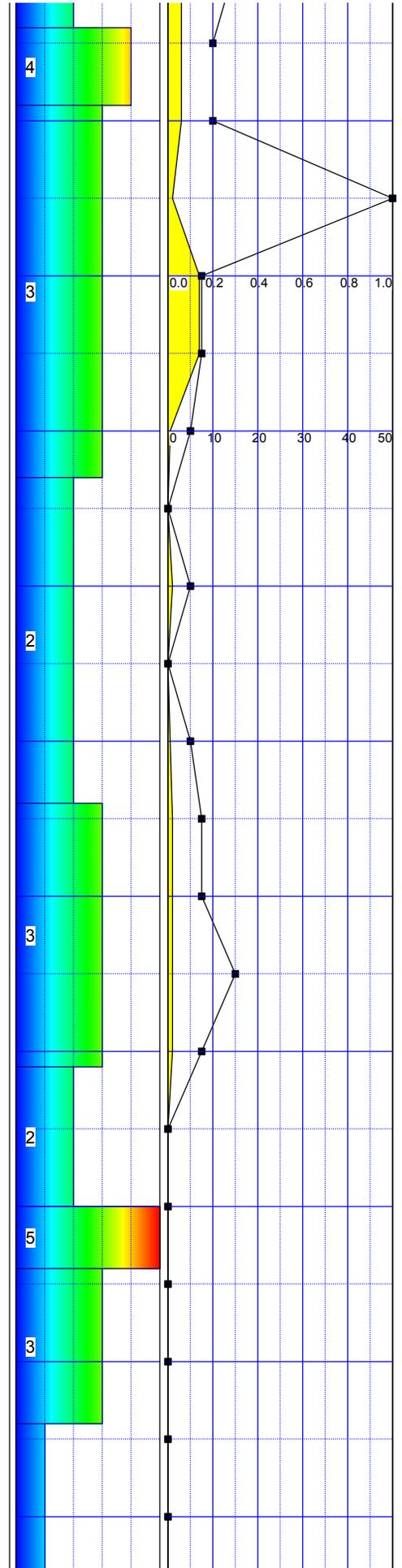
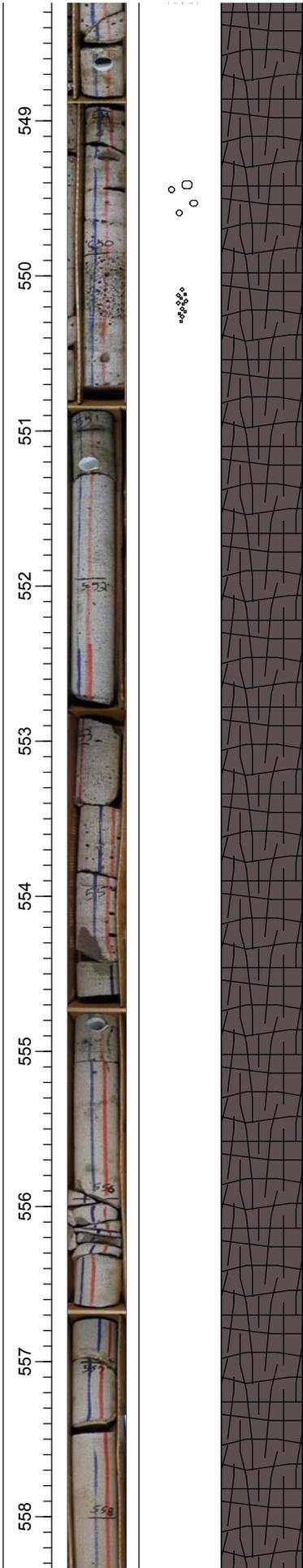


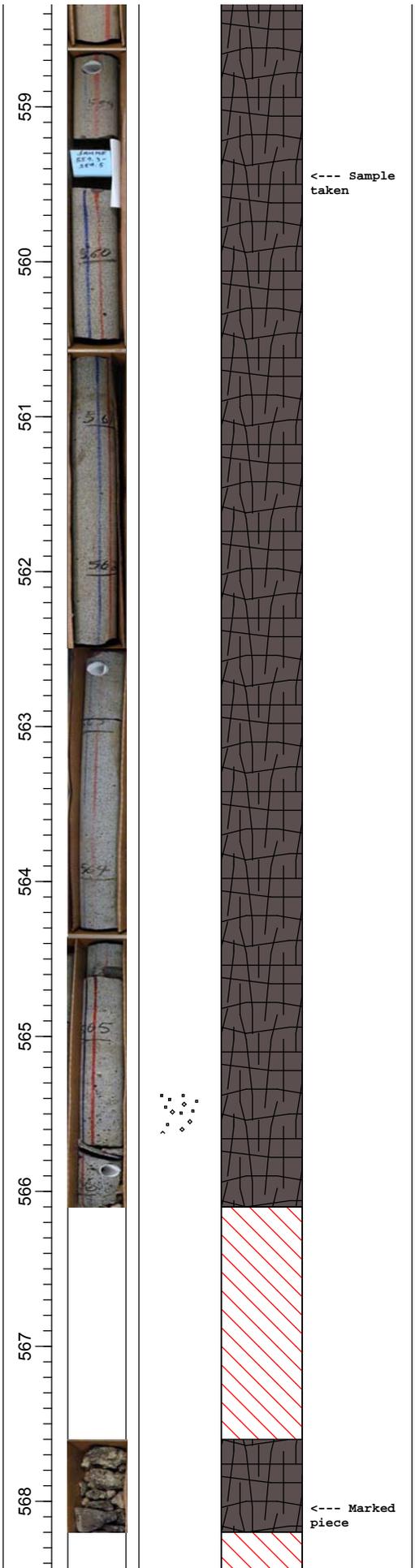




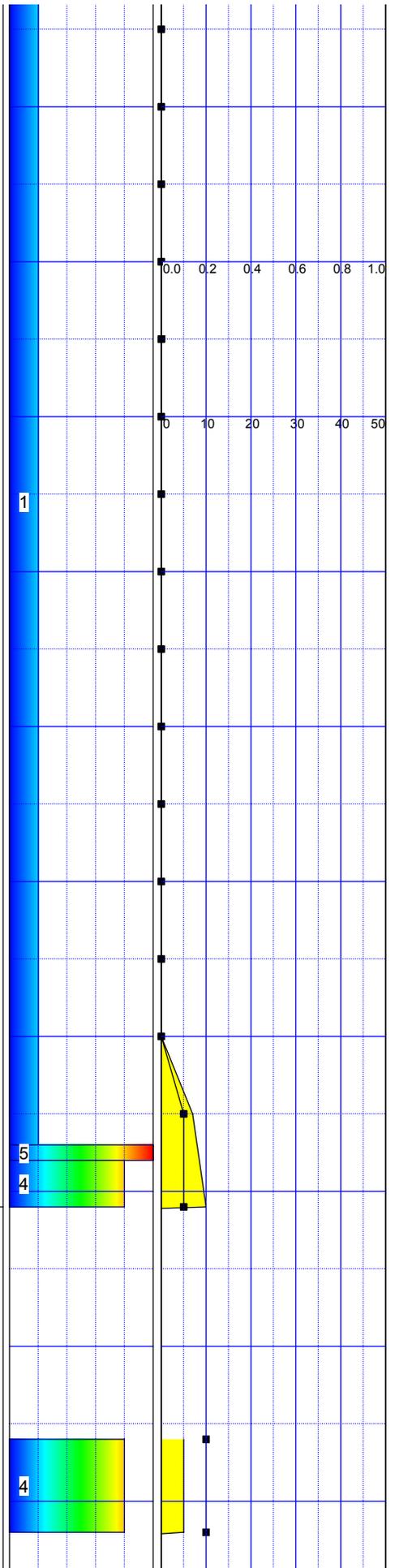


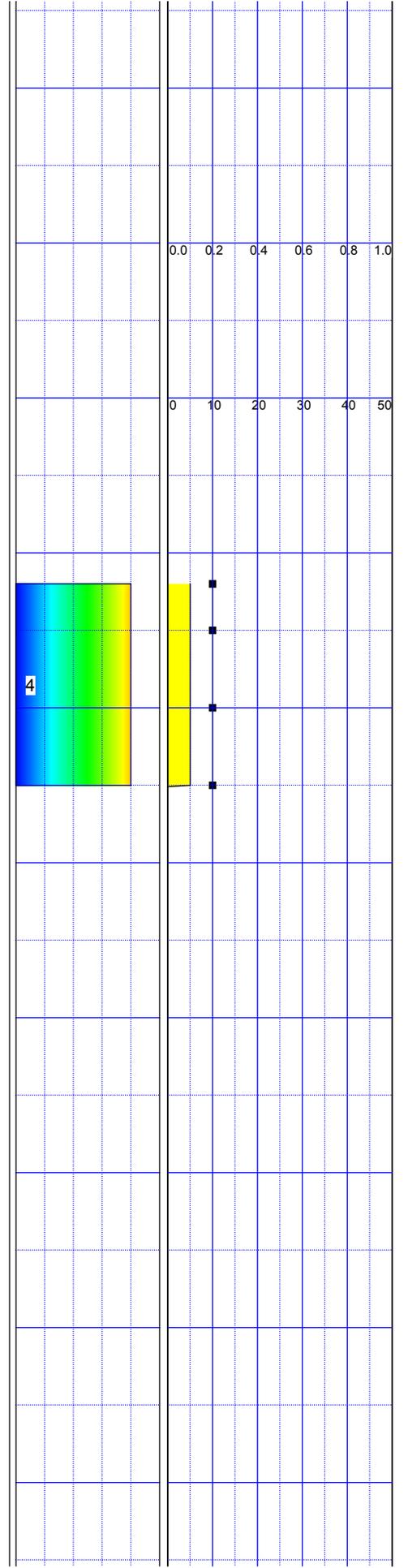
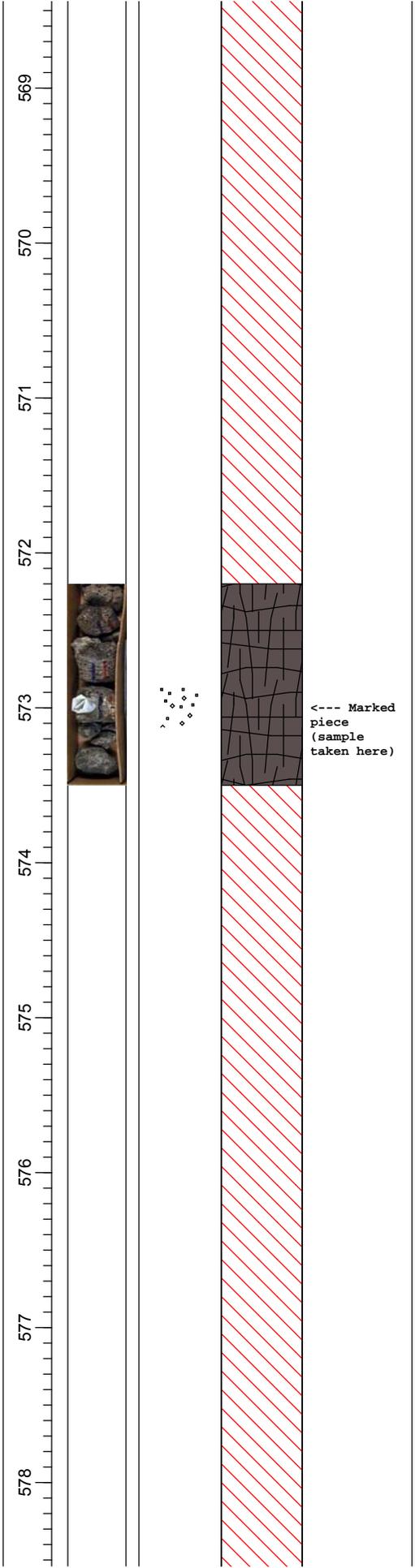


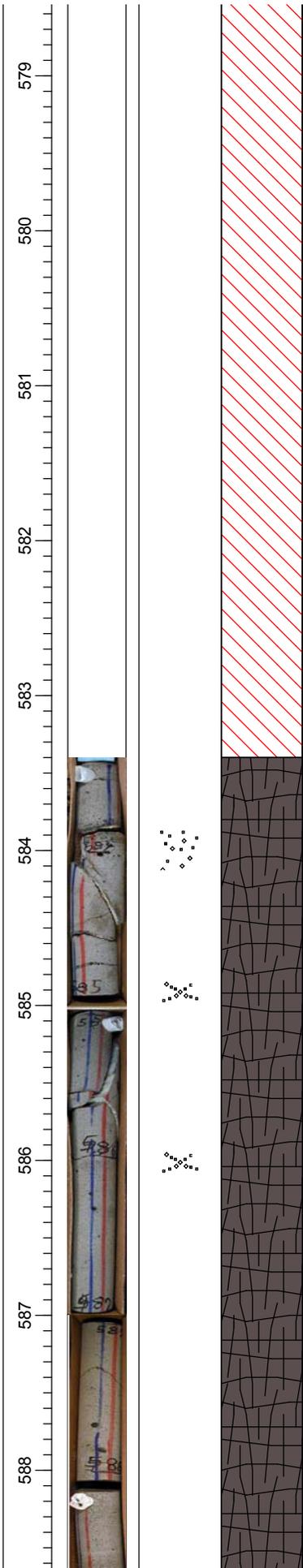




MISSING INTERVAL: Rubble only







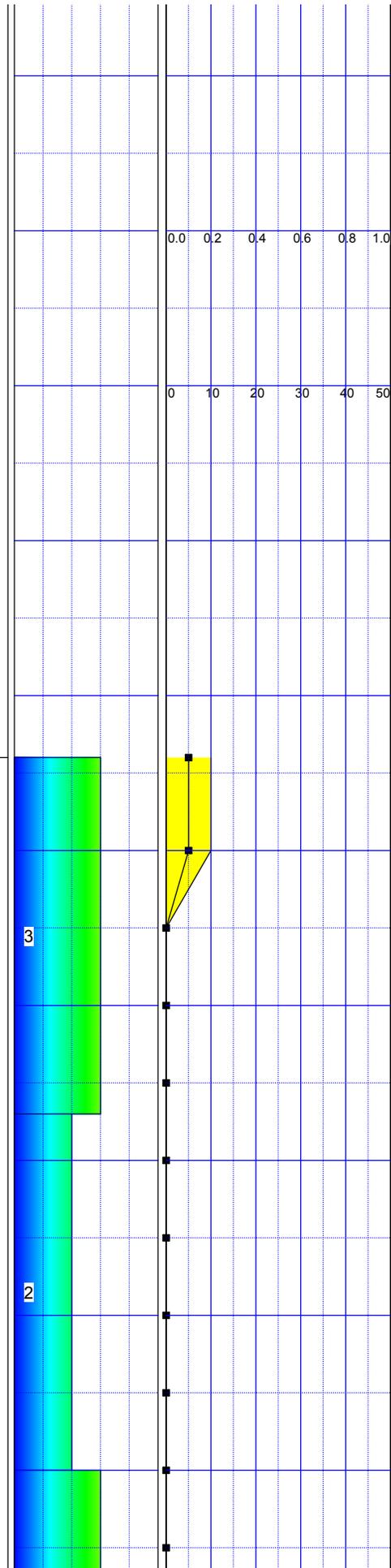
BASALT: Color: brownish gray and medium light gray

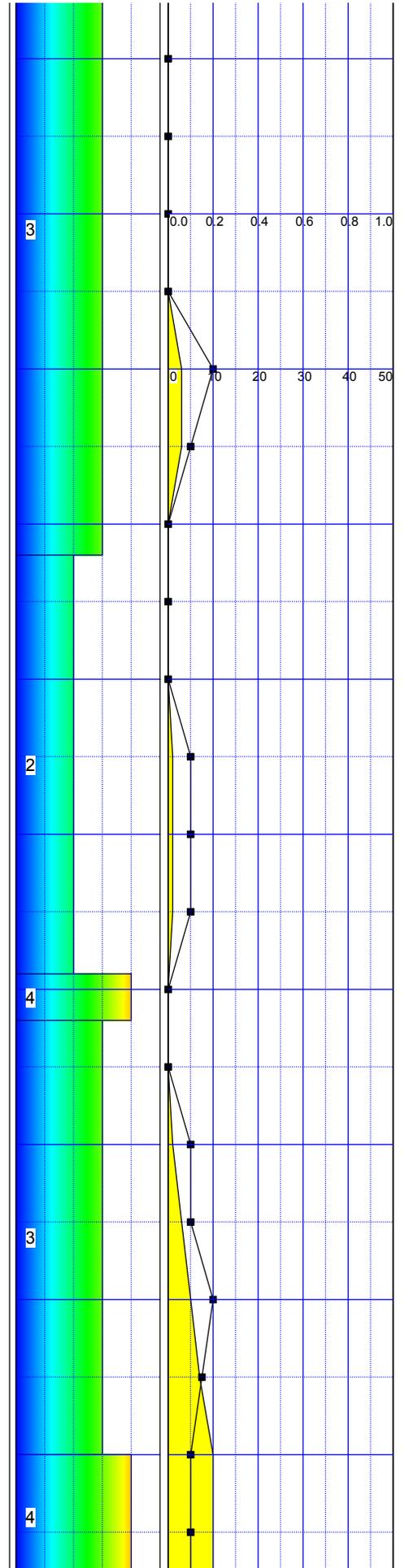
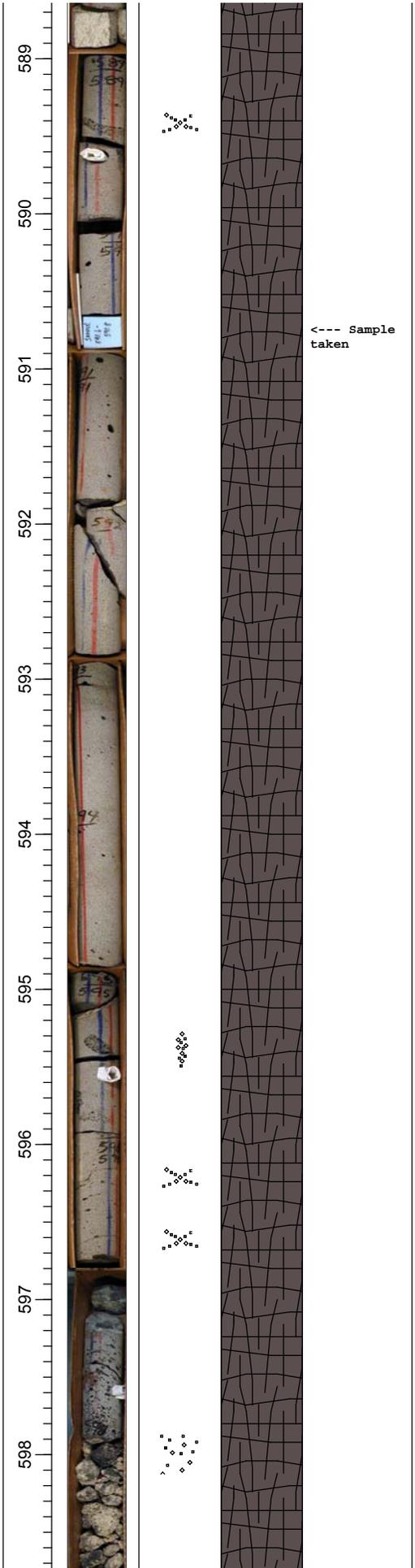
Magnetic properties: Non-magnetic to very slightly magnetic

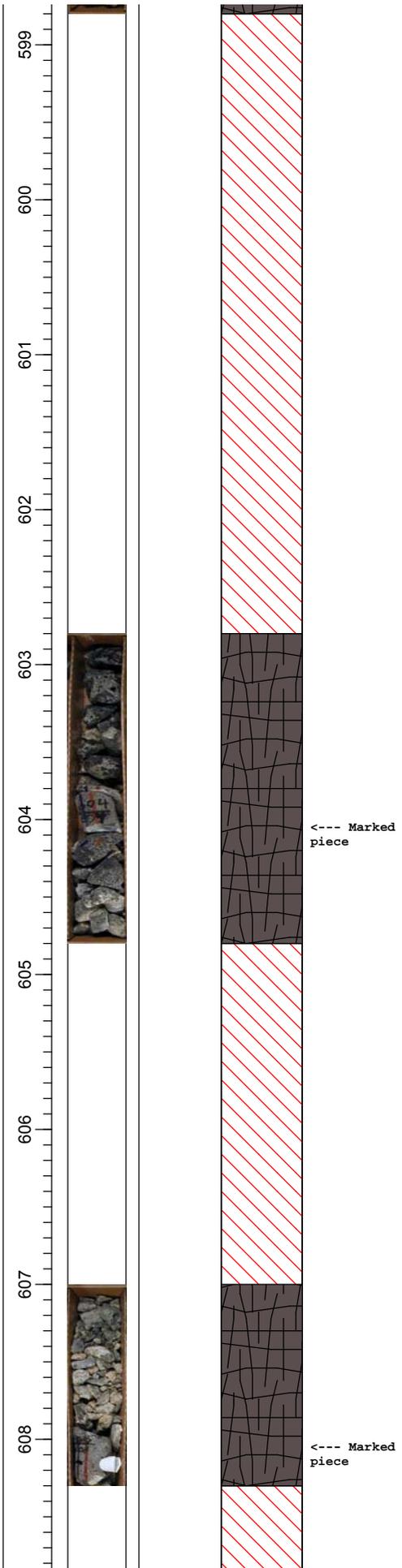
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

Xenoliths: None noted

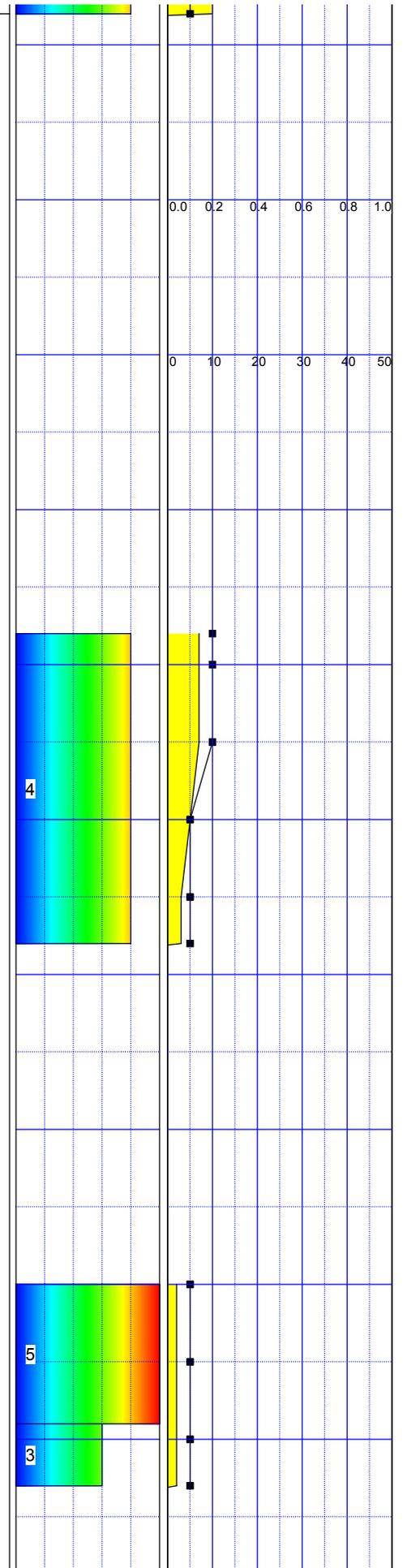
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.







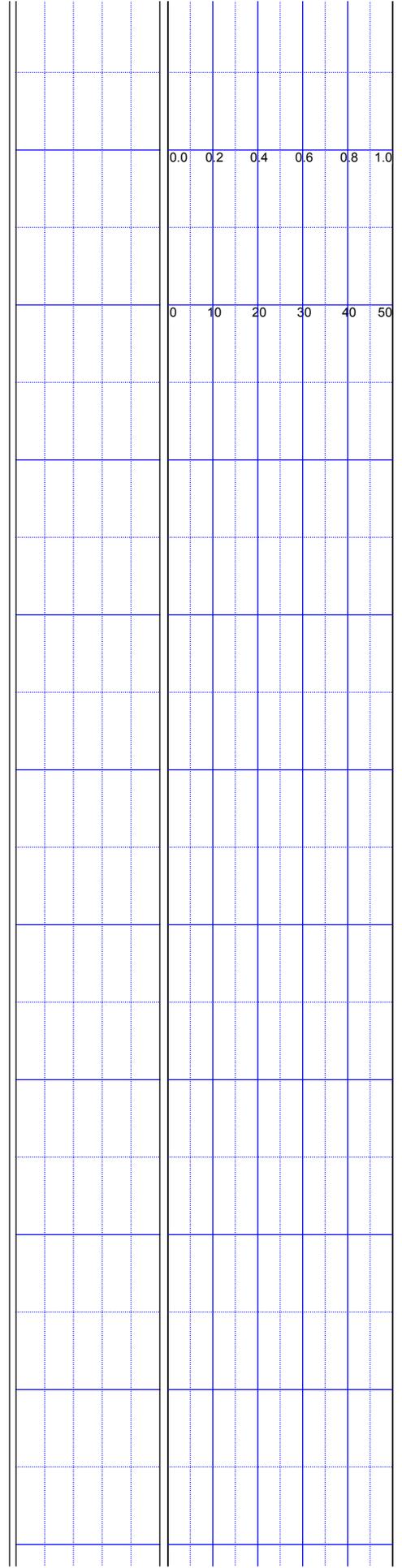
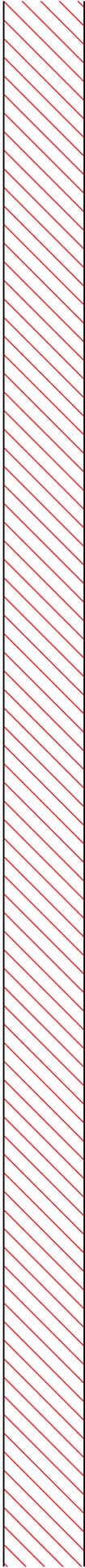
MISSING INTERVAL: Rubble only

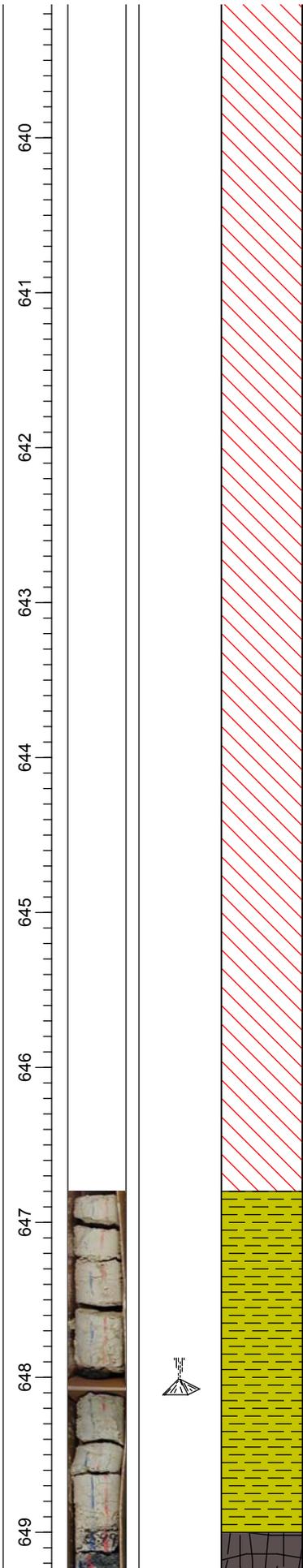






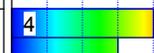
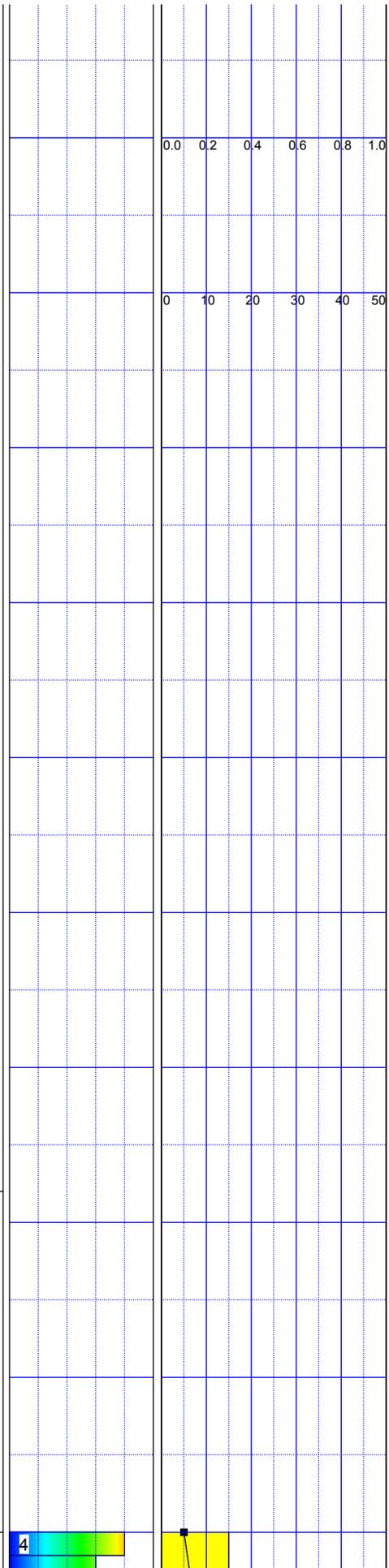
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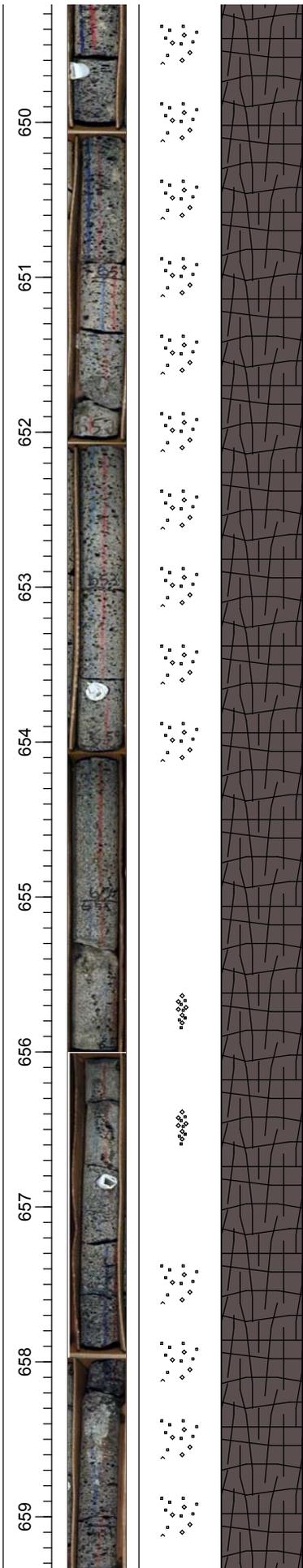




SILT AND CLAY: Color: Yellowish gray  
 Consistence: Firm  
 Structure: Structureless - Massive  
 Free Carbonates: Yes  
 Rocks: Few 1 - 3 cm vesicular basalt fragments near base.  
 Roots / Fossils: None observed.

BASALT: Color: Medium dark gray, dark gray, and brownish black



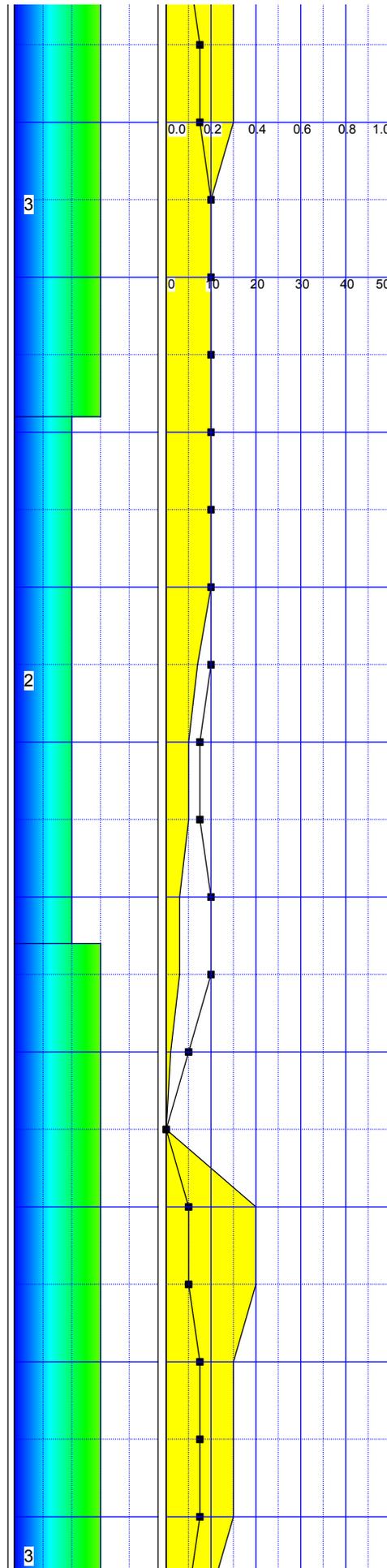


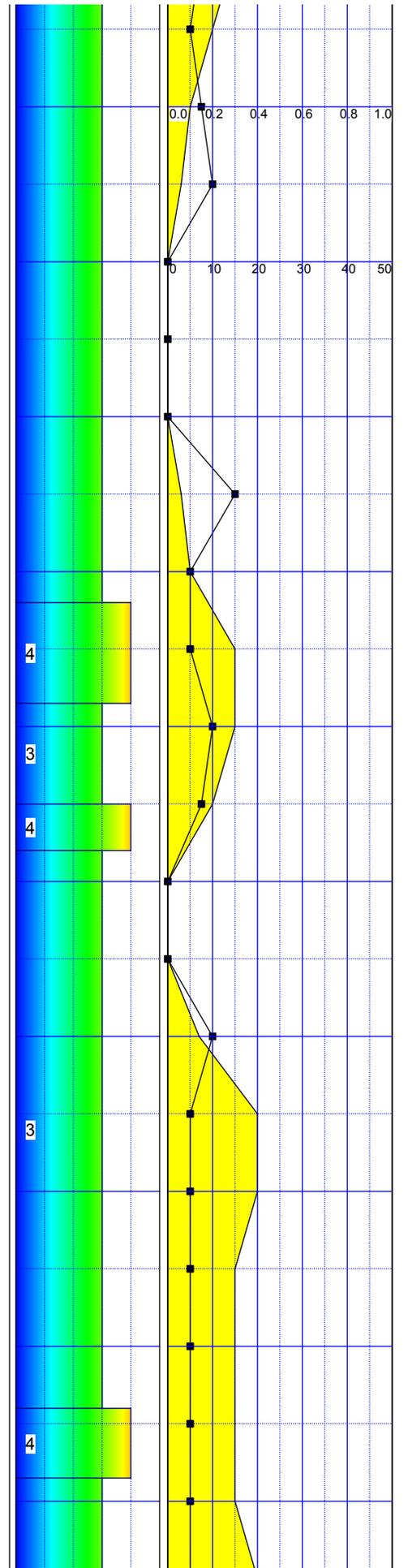
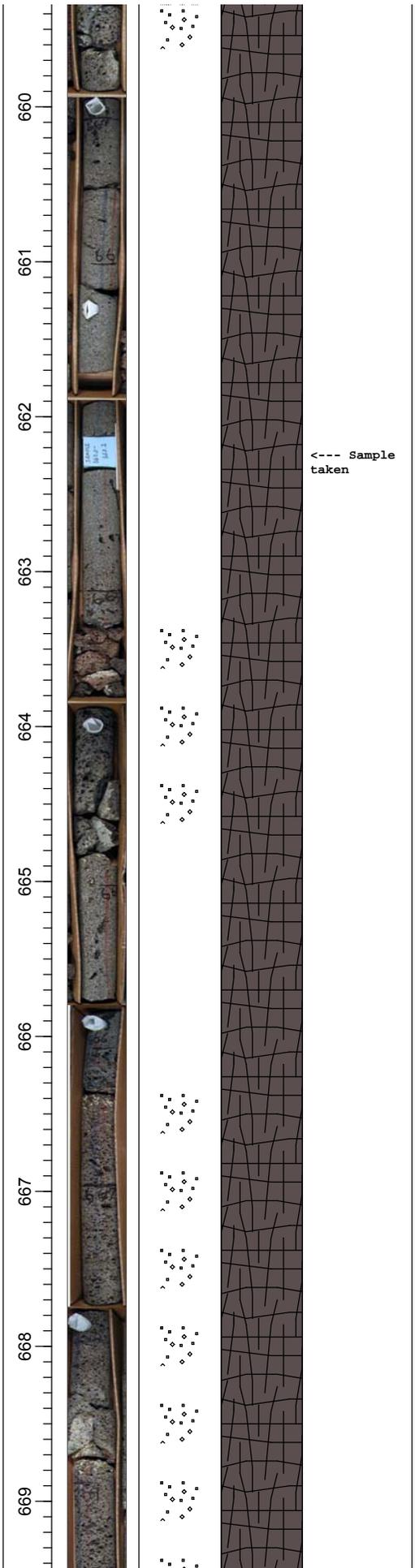
Magnetic properties: Non-magnetic to very slightly magnetic

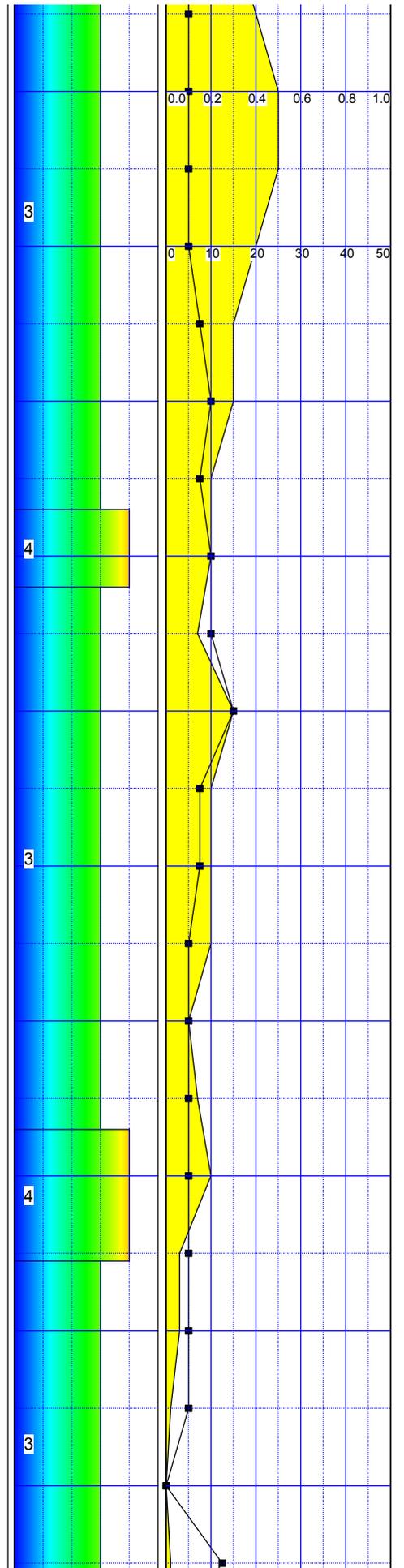
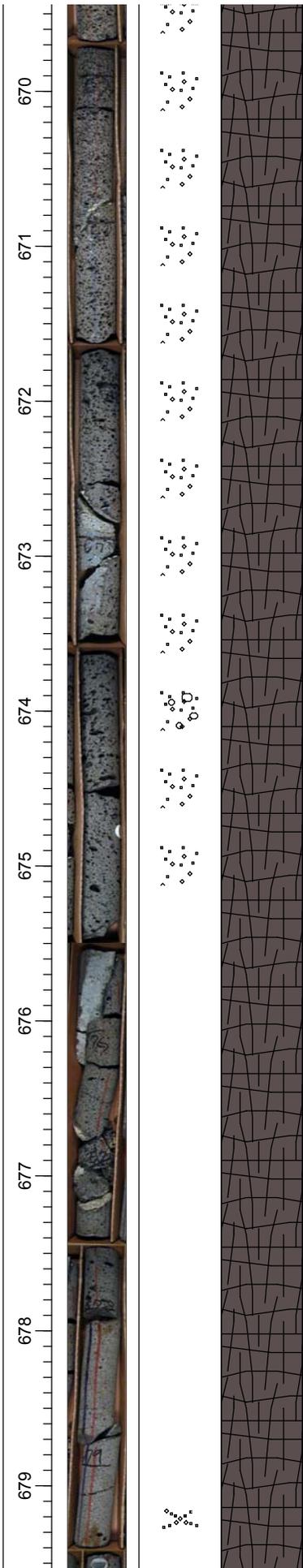
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

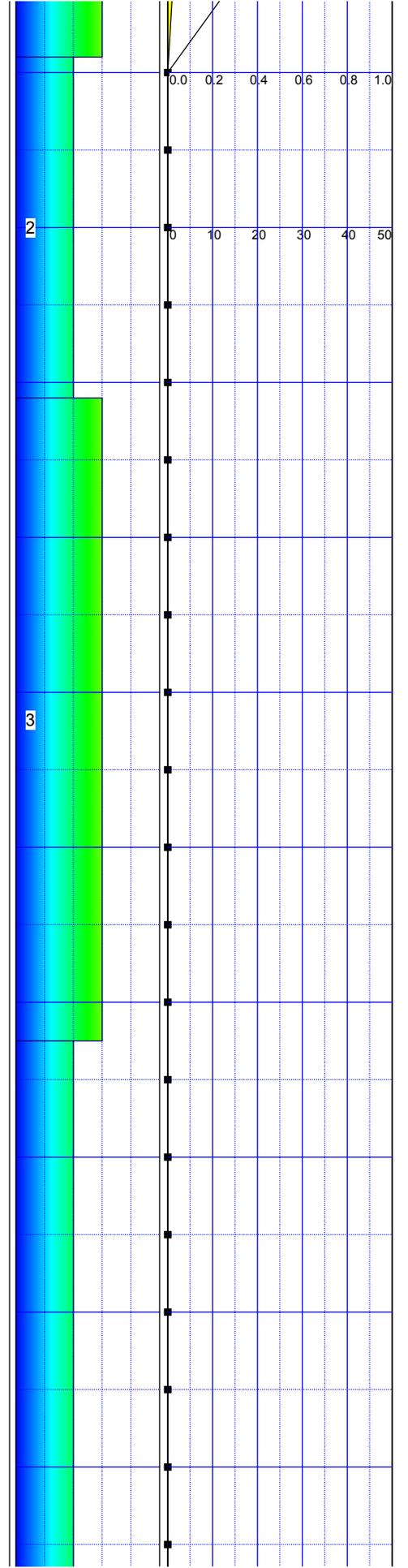
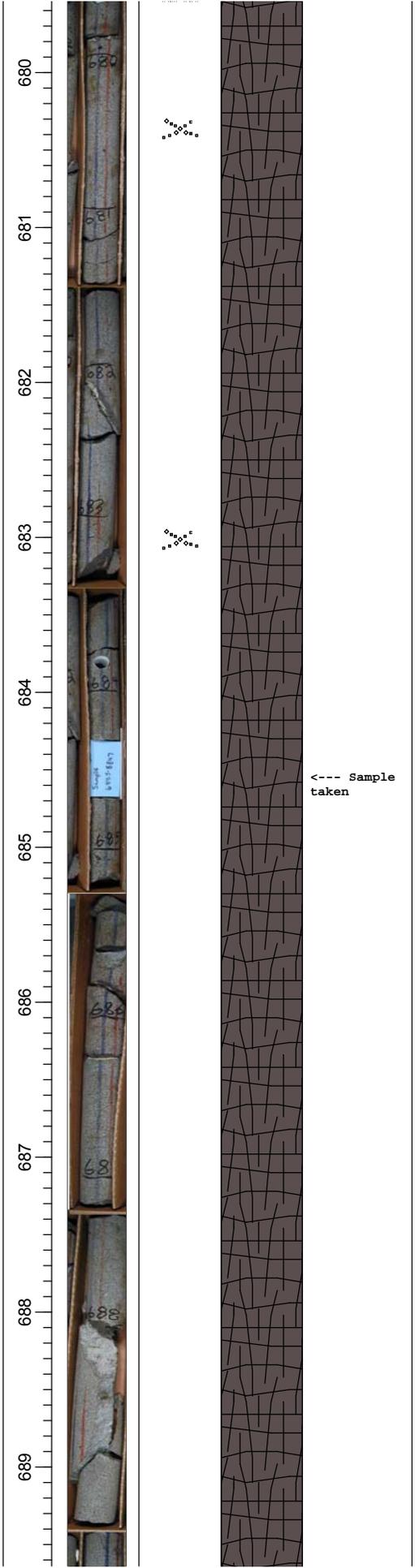
Xenoliths: None noted

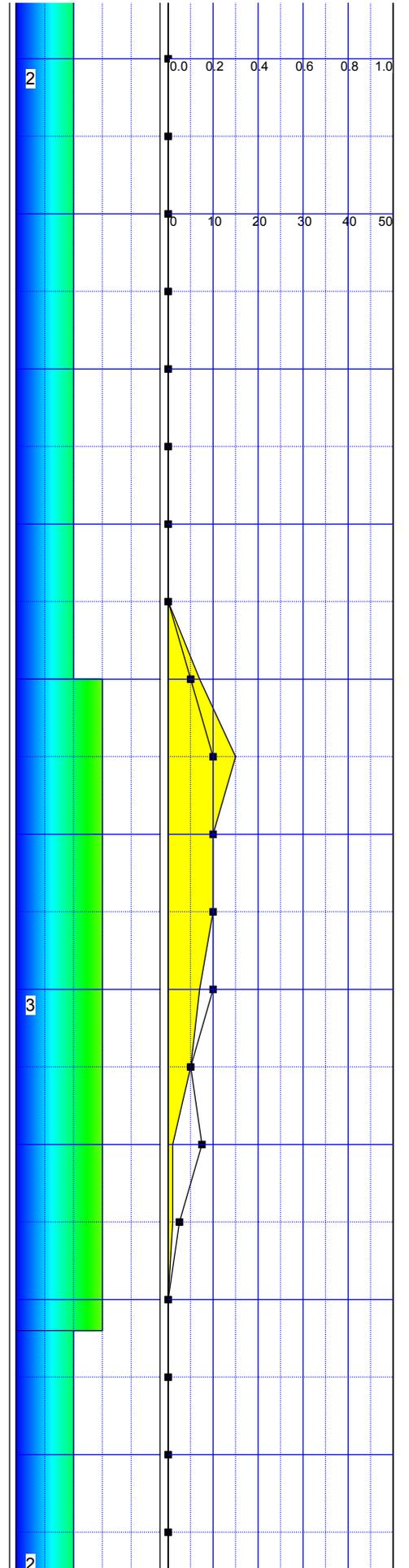
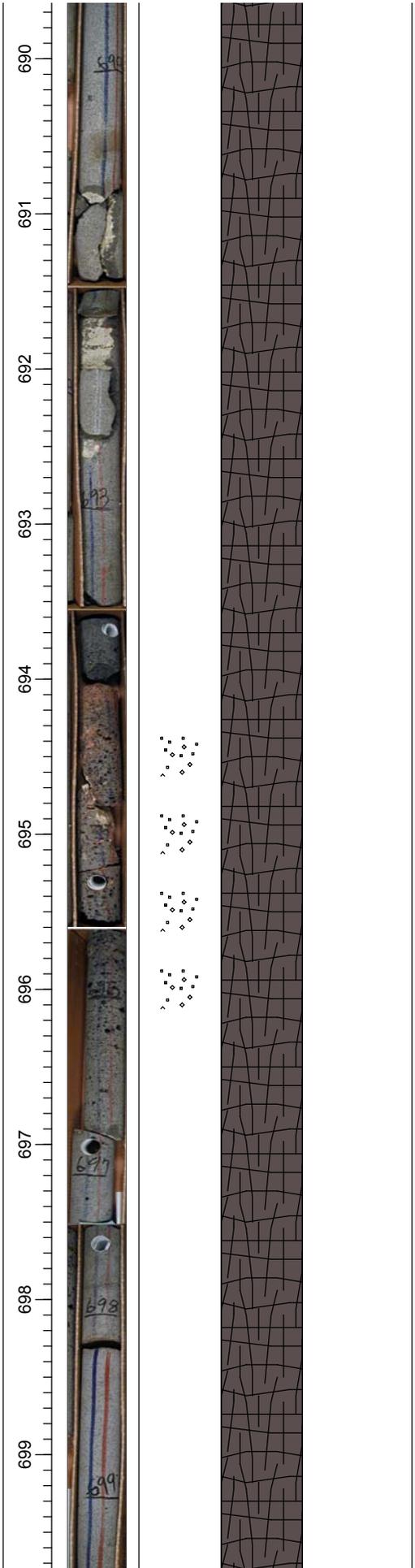
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.

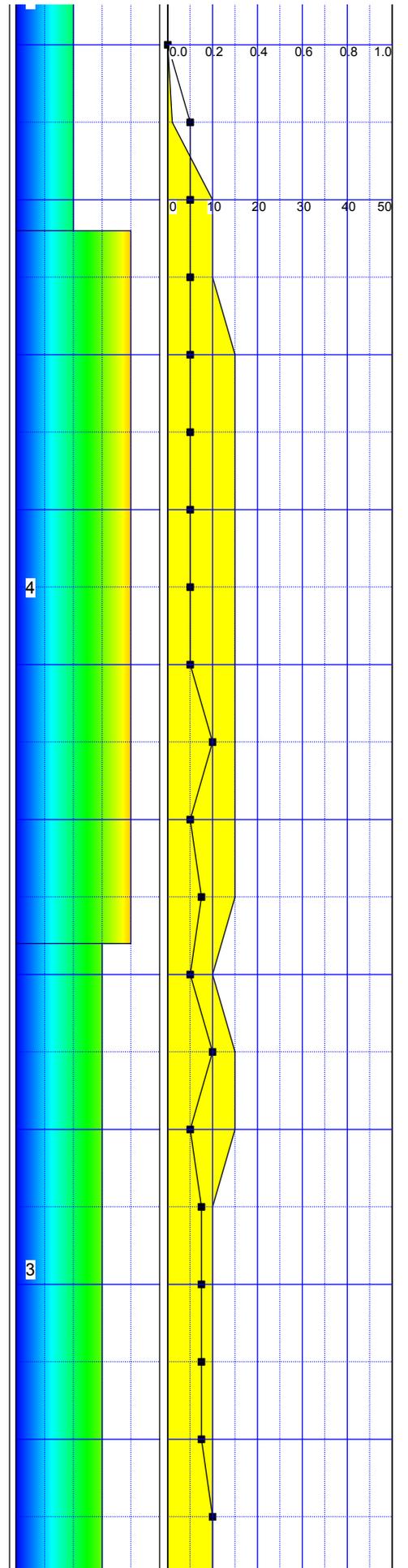
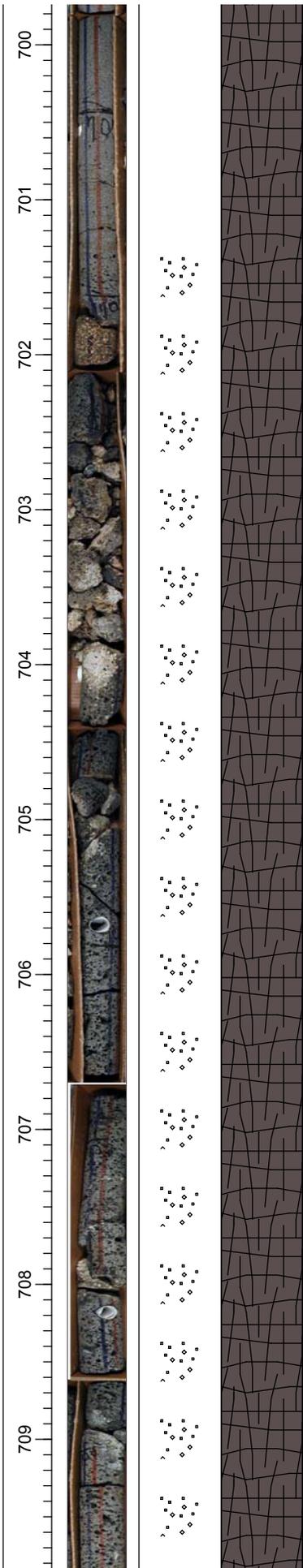


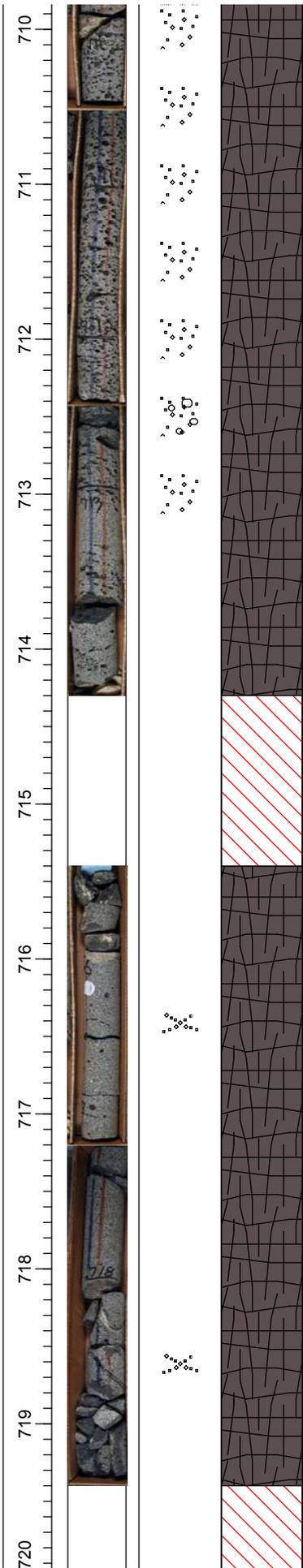












MISSING INTERVAL

BASALT: Color: Medium dark gray, dark gray, and brownish black

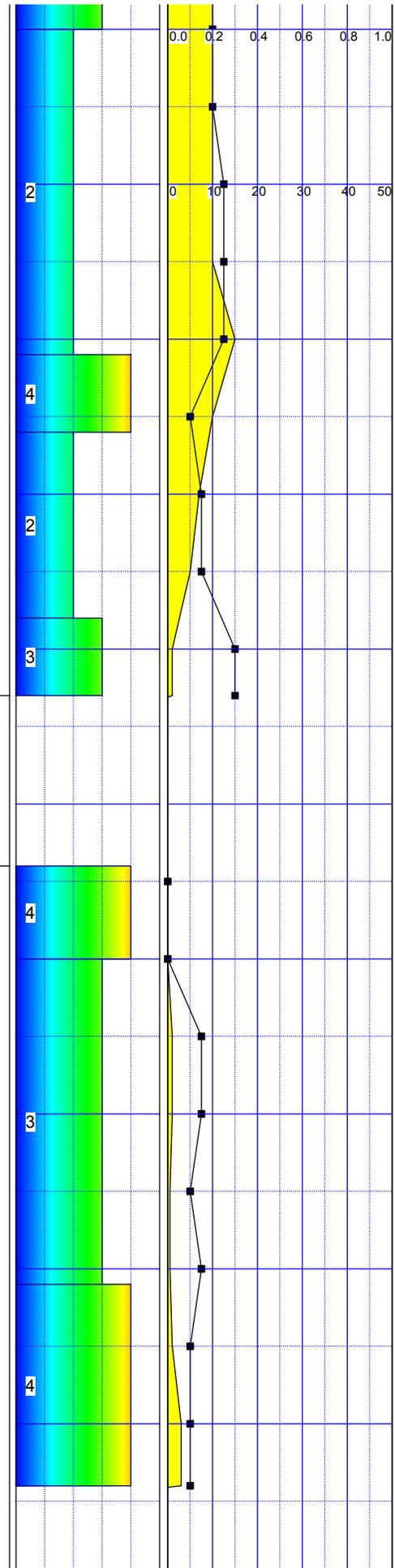
Magnetic properties: Non-magnetic to very slightly magnetic

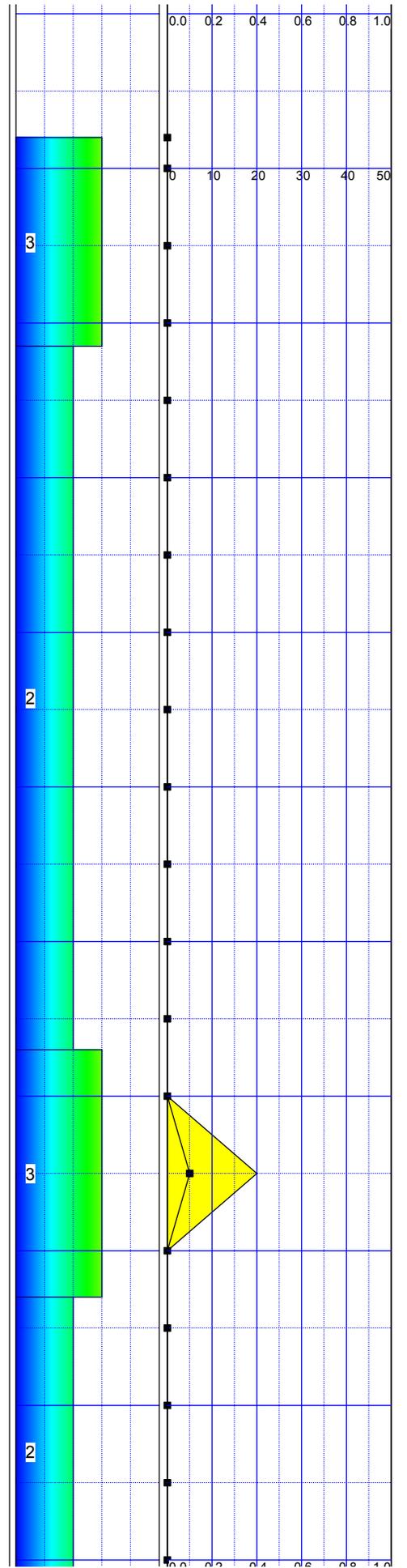
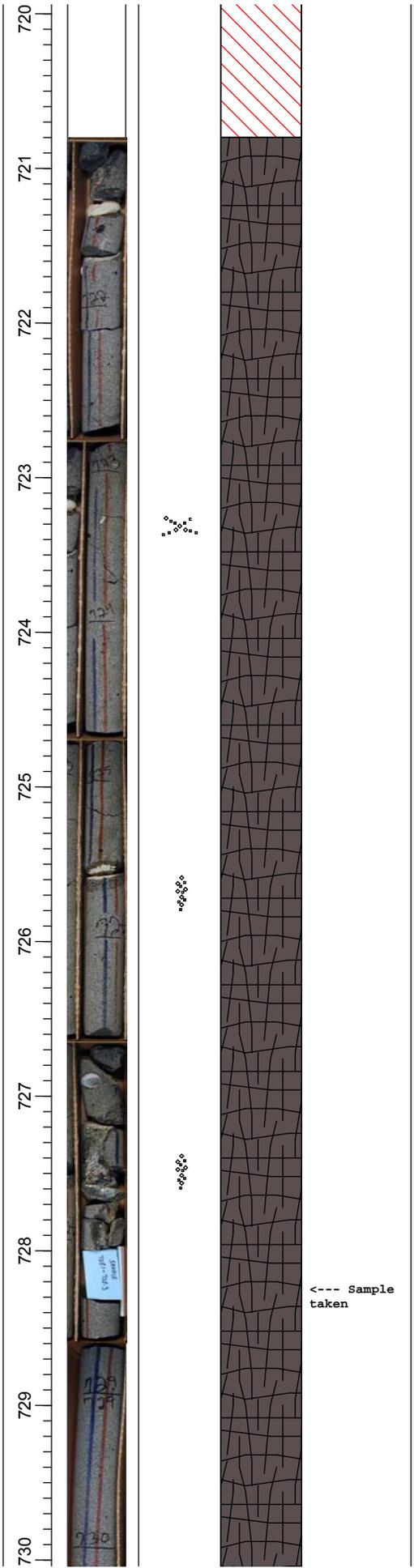
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

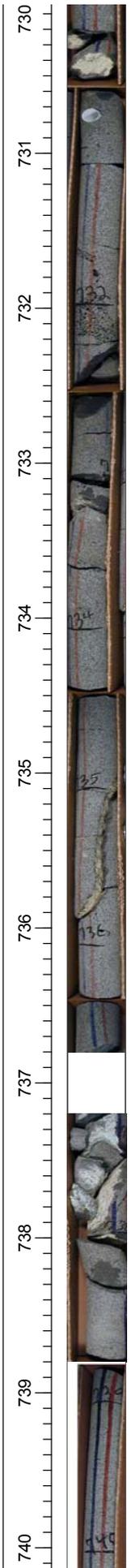
Xenoliths: None noted

Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.

MISSING INTERVAL:  
Rubble







~\*~\*~\*~\*



MISSING  
INTERVAL:  
Rubble

