



**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-130

Logged By: Reuben Johnson, July 2003

Selected Aliases:

USGS Site ID: 433130112562801

Contractor Well ID: N/A

Drilling Agency: USGS

Year Drilled: 2003

Names of Drillers: Gilbert & Vance

Well Status: Water level monitoring, calibration

Total Depth of Hole (ft): 723.0

Total Core Recovered (ft): 697

Beginning Depth (ft): 10.3

Ending Depth (ft): 703.1

Continuous Recovery

Selected Intervals Recovered

Total # of Core Boxes: 133

Notes: Well used for geophysical logging tool calibration

County & State: Butte County, ID.

Quadrangle Name: Circular Butte 3 SW

Lat / Lng: 43°31'30.67", 112°56'28.40" NAD 27

Tns / Rng / Sec: T02N, R29E, Sec 01, DCA1

UTM Coordinates: N 678252.86, E 294567.97 NAD 27

Altitude (ft): 4,927.55, NGVD 29

## 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
-  Silts and clays

**Intervals in Absentia**

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

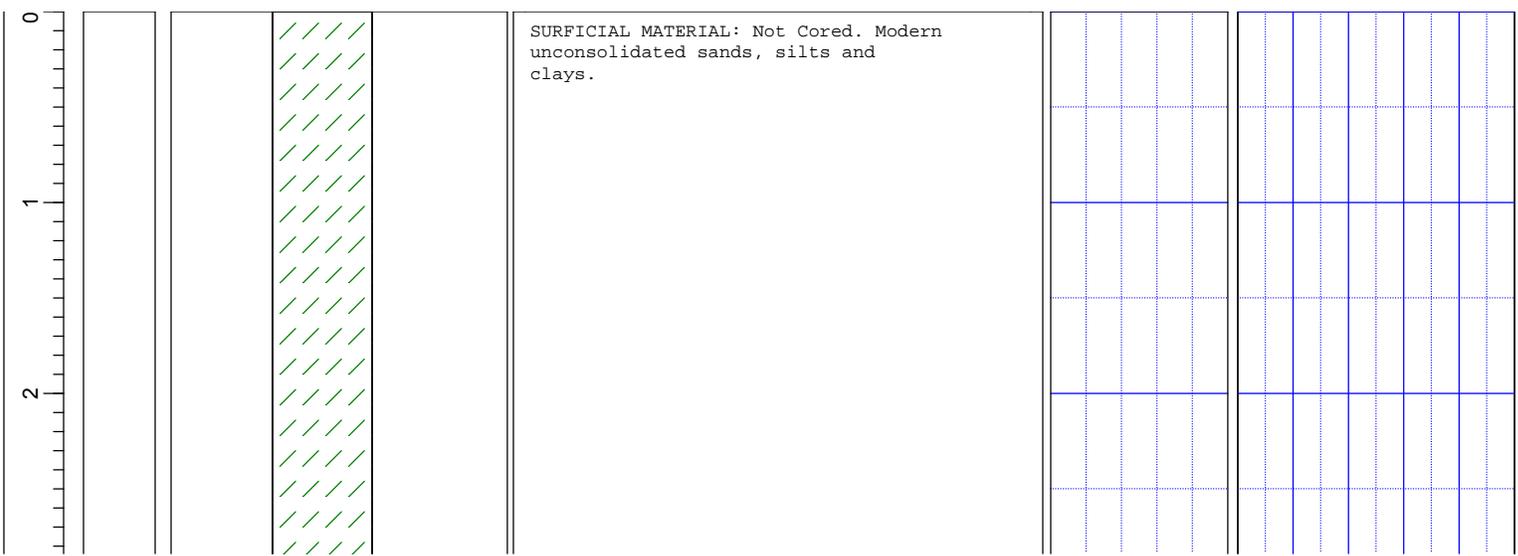
**Igneous and Sedimentary Structure Symbols**

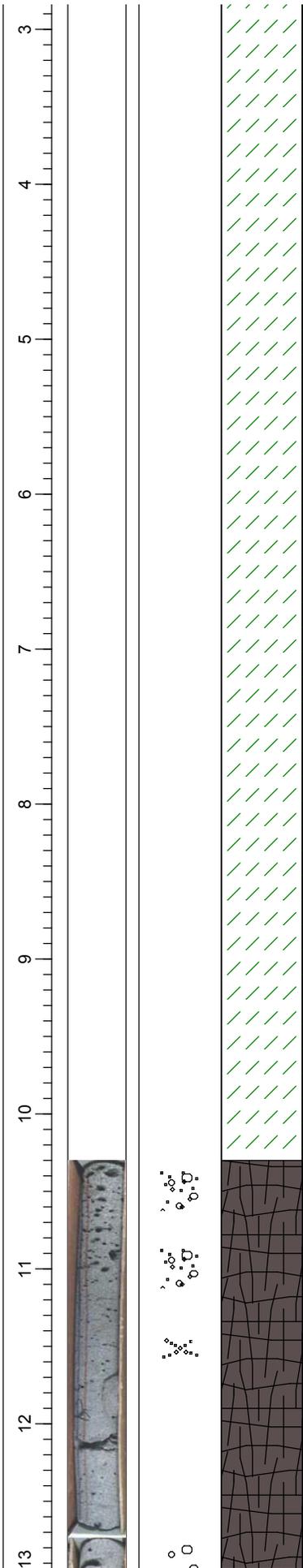
-  Vesicle zone
-  Large vesicles
-  Vesicle planes
-  Mega vesicles
-  Vesicle Cylinders
-  Pipe vesicles
-  Pillows
-  Vesicle Sheet
-  Flow/Mold
-  Spatter feature
-  Ripple marks
-  Mud cracks
-  Imbricated bedding
-  Graded bedding
-  Cross bedding

**Soil Structure Symbols**

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

Depth (feet & tenths)	Core Photo	gneous, 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	Mean Size (in) 0 0.2 0.4 0.6 0.8 1.0 Volume Percentage 0 10 20 30 40 50



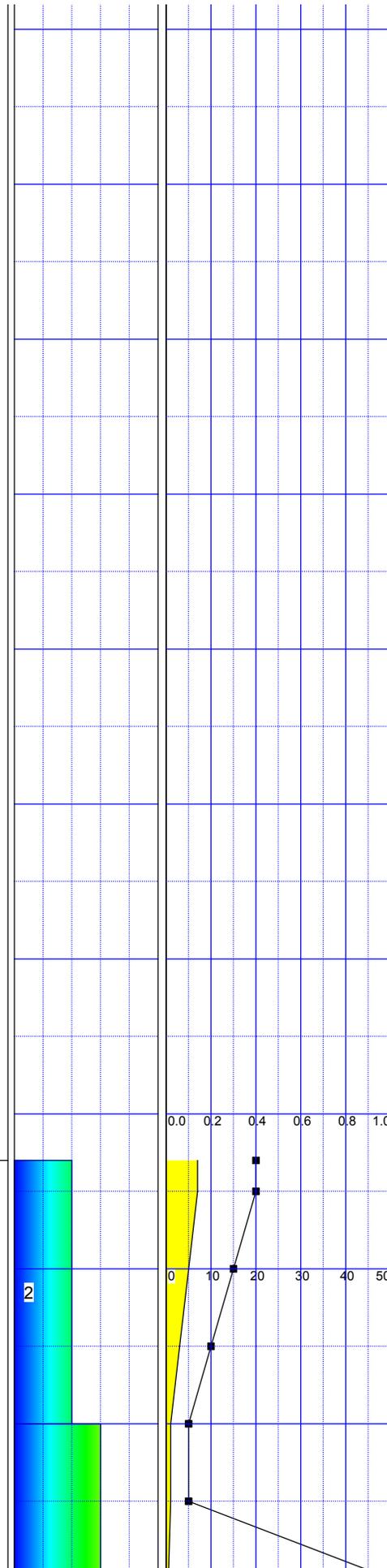


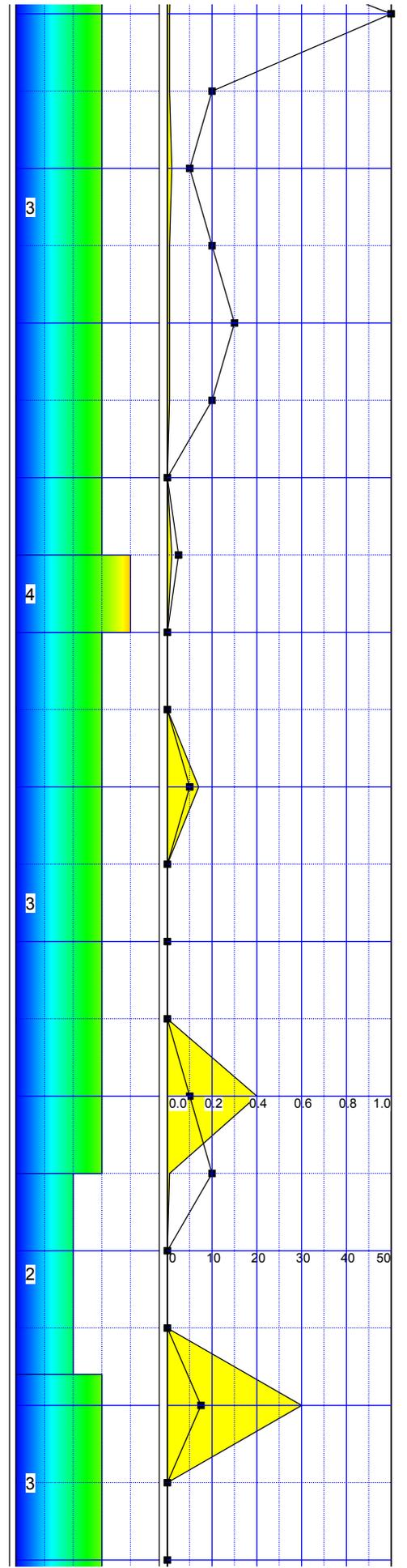
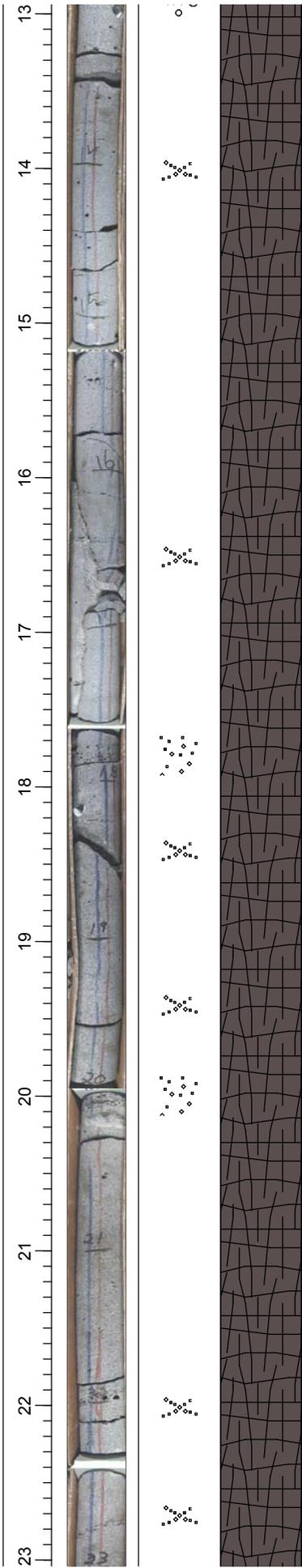
BASALT: Color: Medium gray to light gray

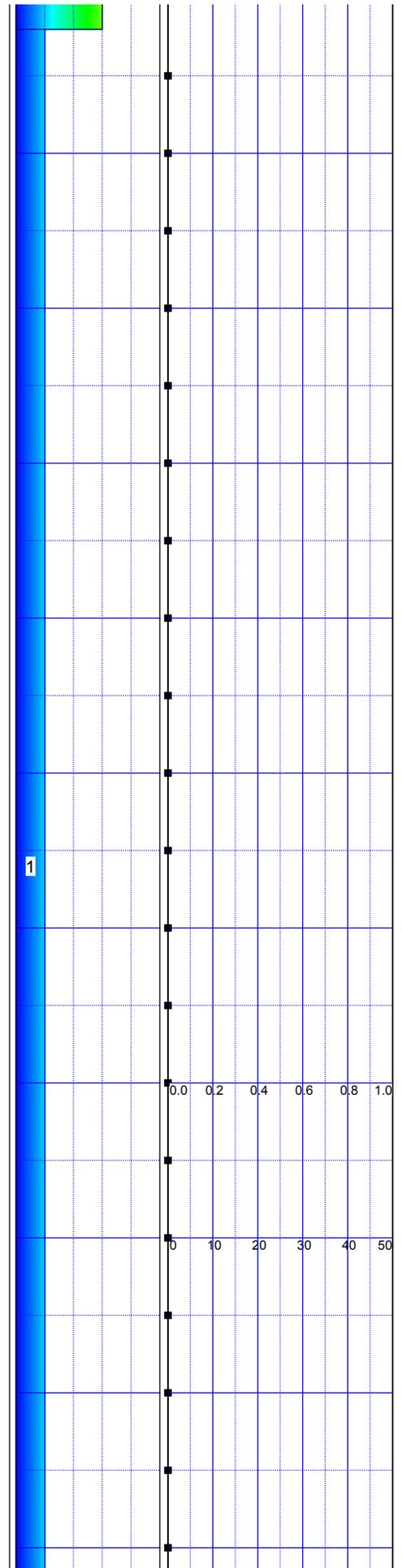
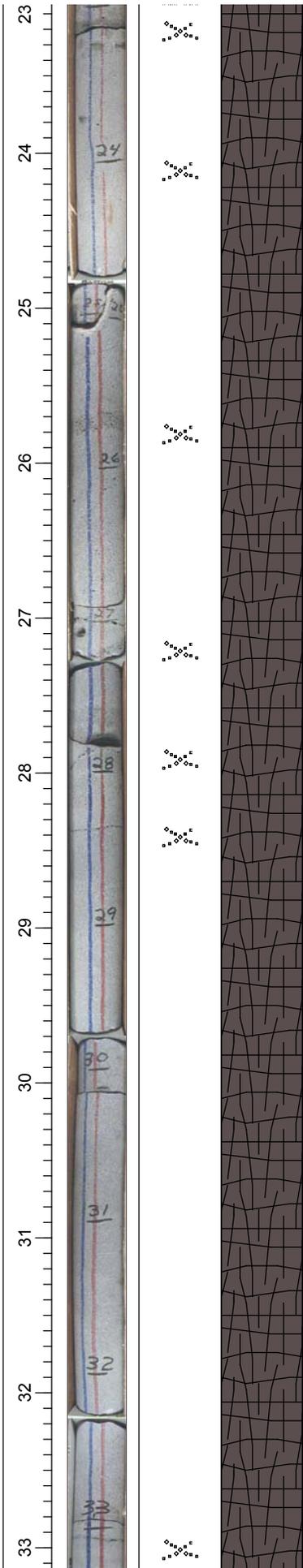
Texture/Composition: Fine-grained phaneritic, granular, diktytaxitic texture. Grains are euhedral to subhedral, equant to acicular, and evenly distributed throughout. Alternates between vesicular and massive.

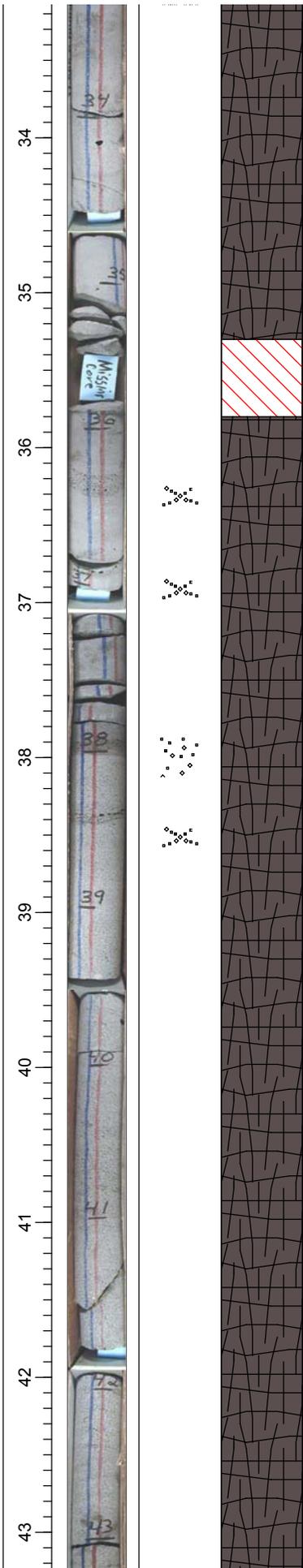
Xenoliths: None noted

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









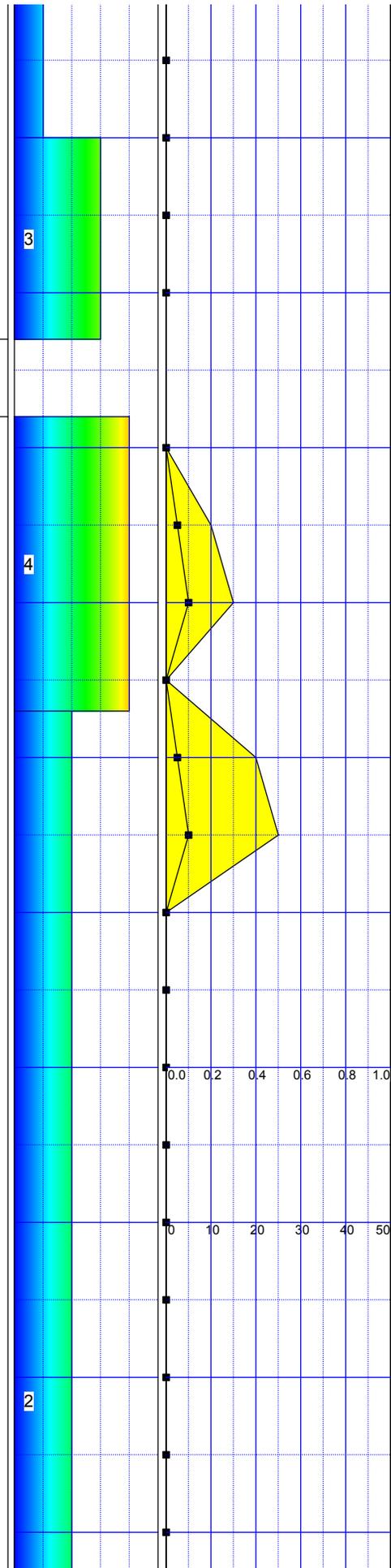
MISSING INTERVAL

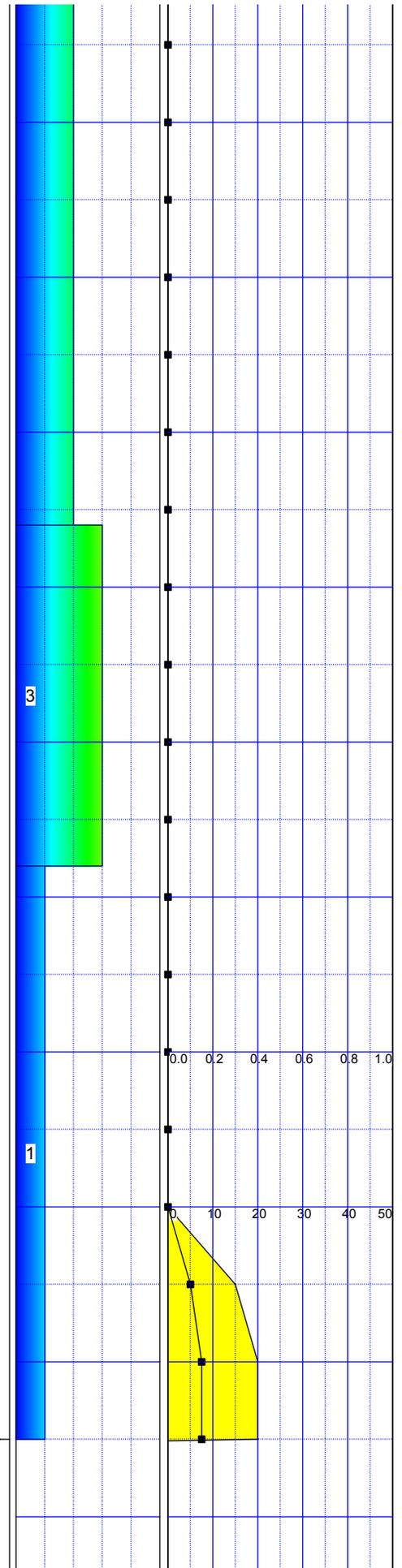
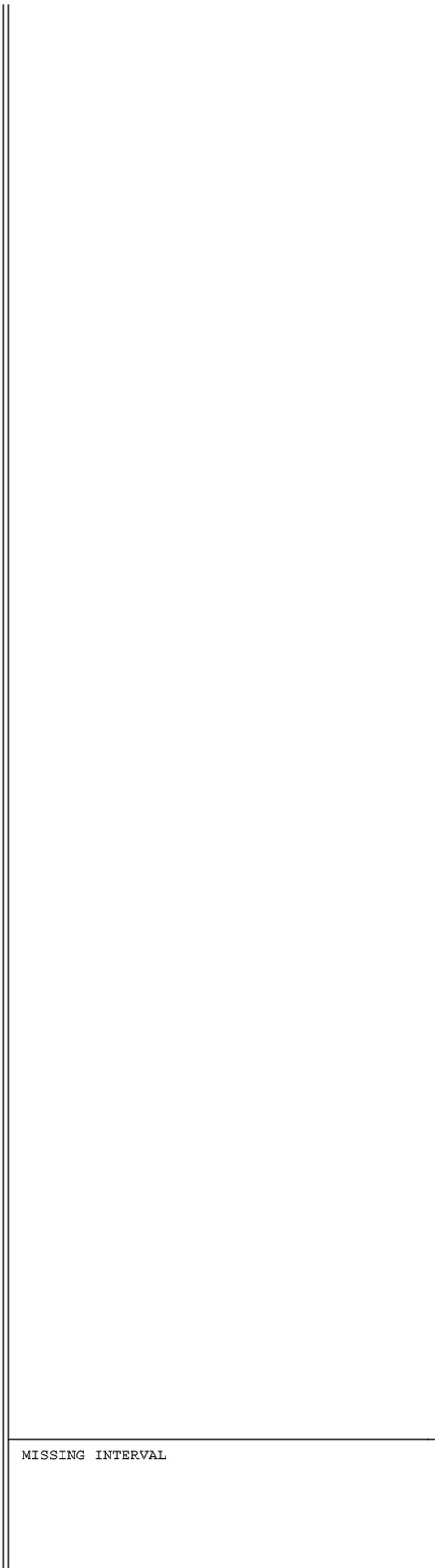
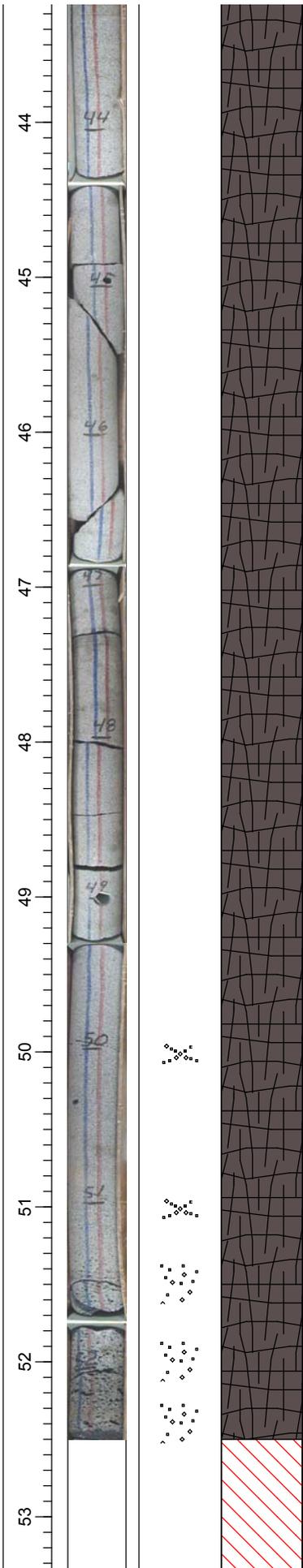
BASALT: Color: Light gray to brownish gray

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.

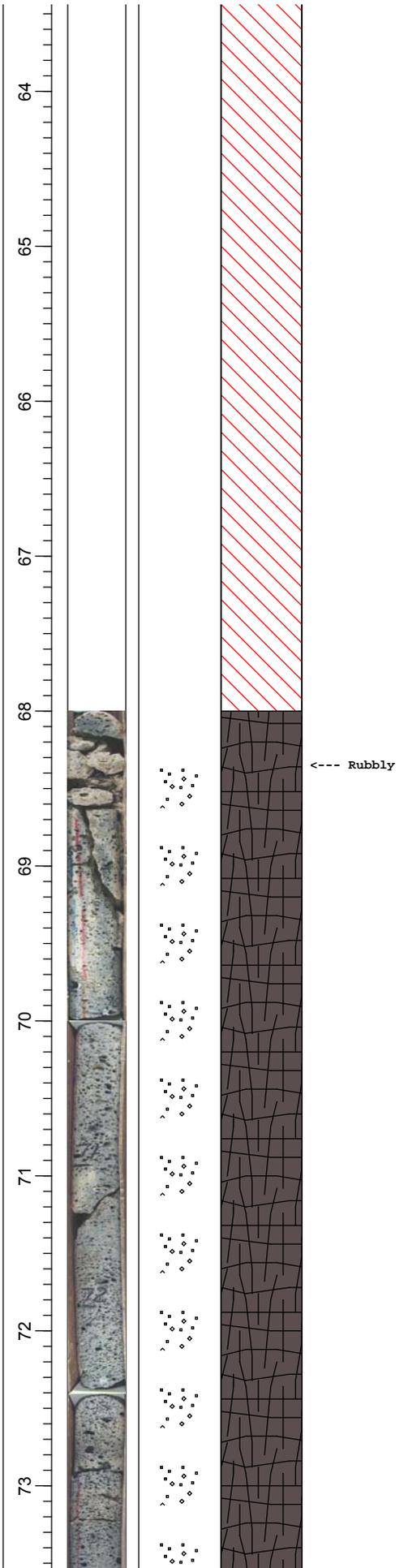
Xenoliths: None noted

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







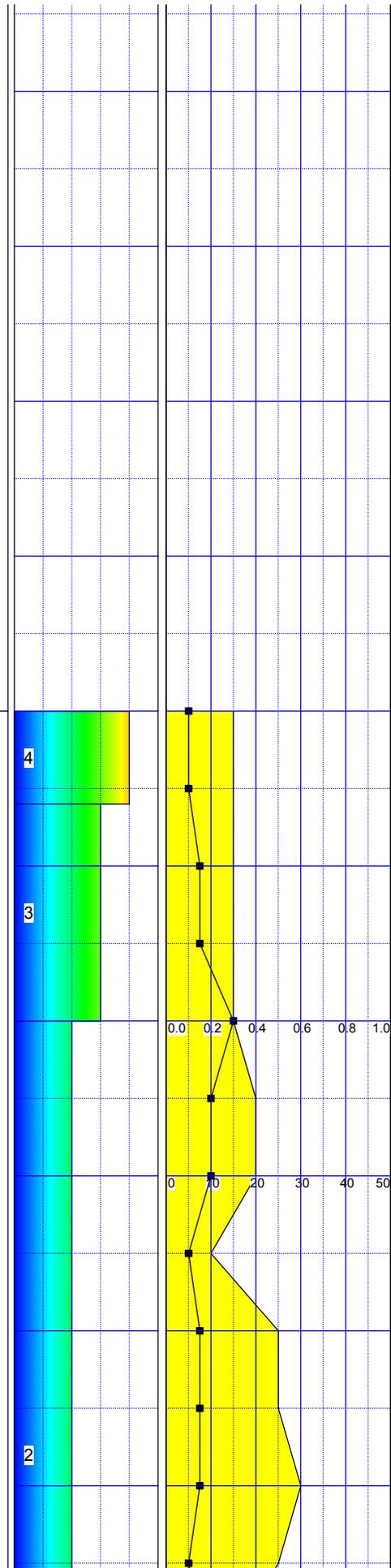


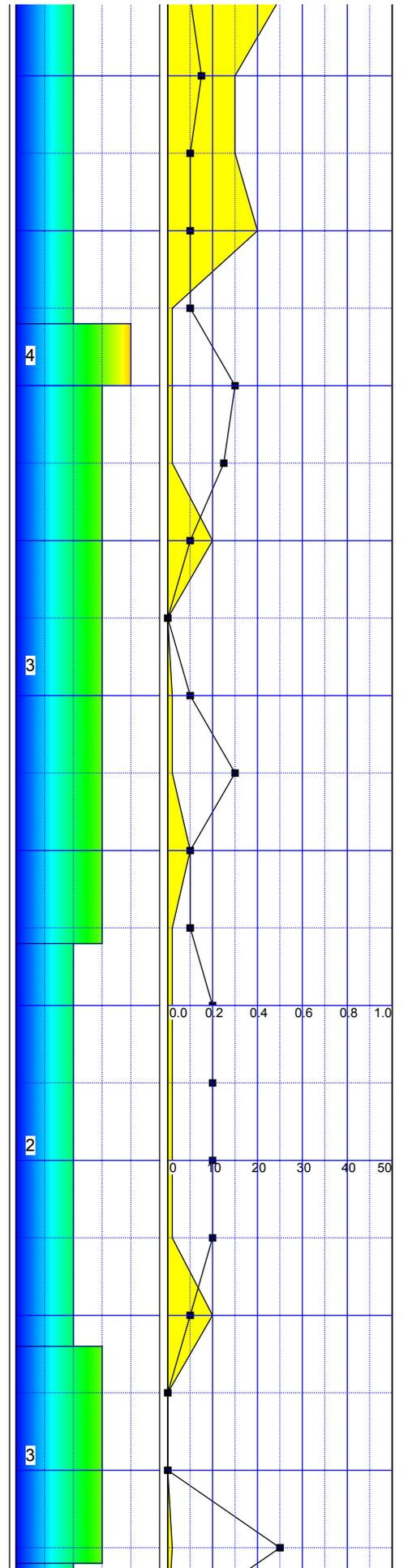
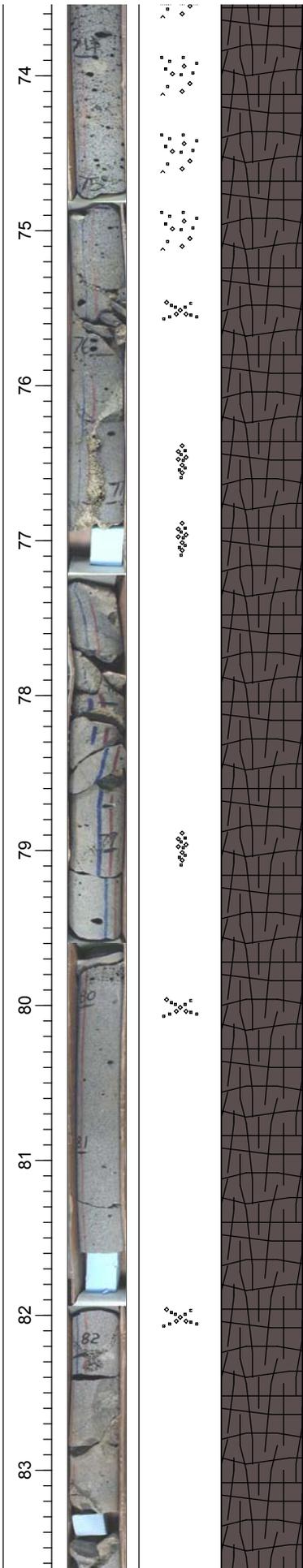
BASALT: Color: Medium gray to dark gray

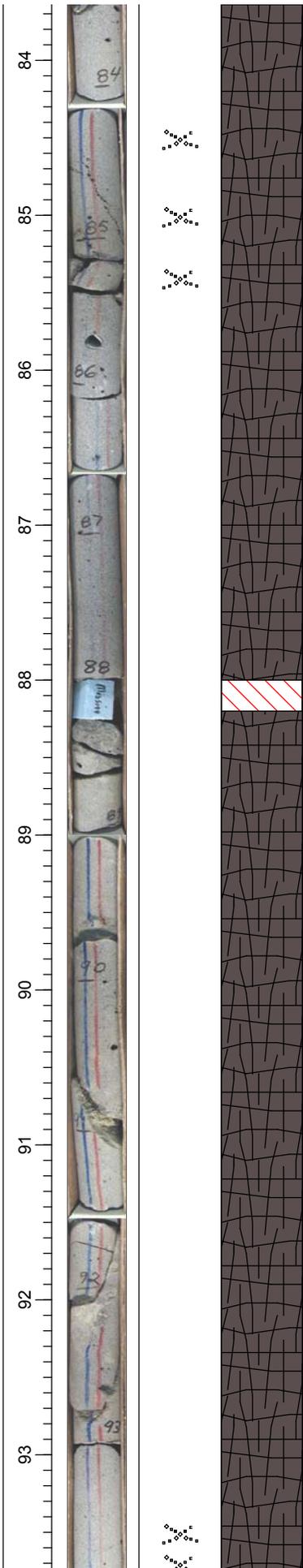
Texture/Composition: Aphanitic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

Xenoliths: None noted

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







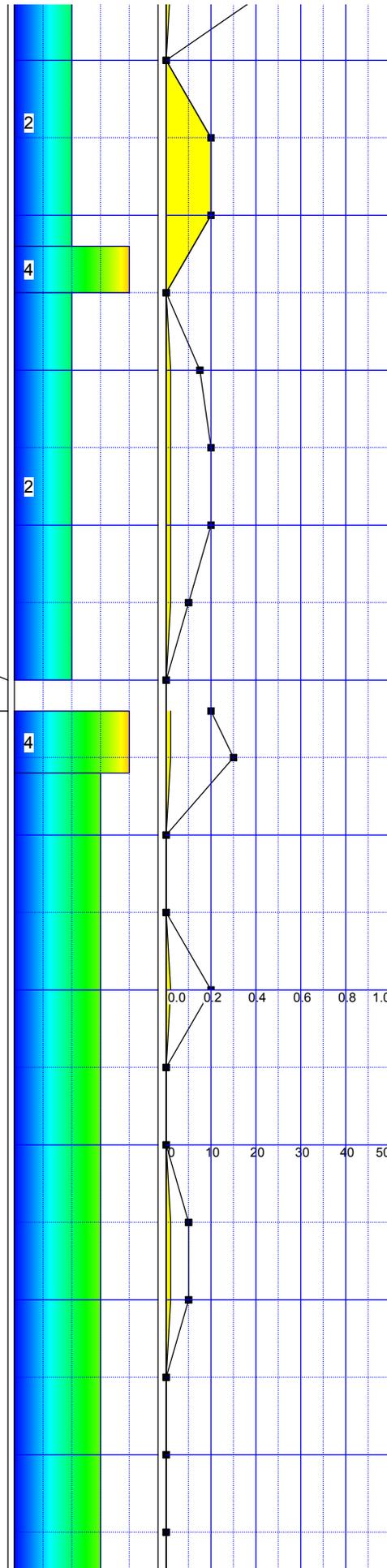
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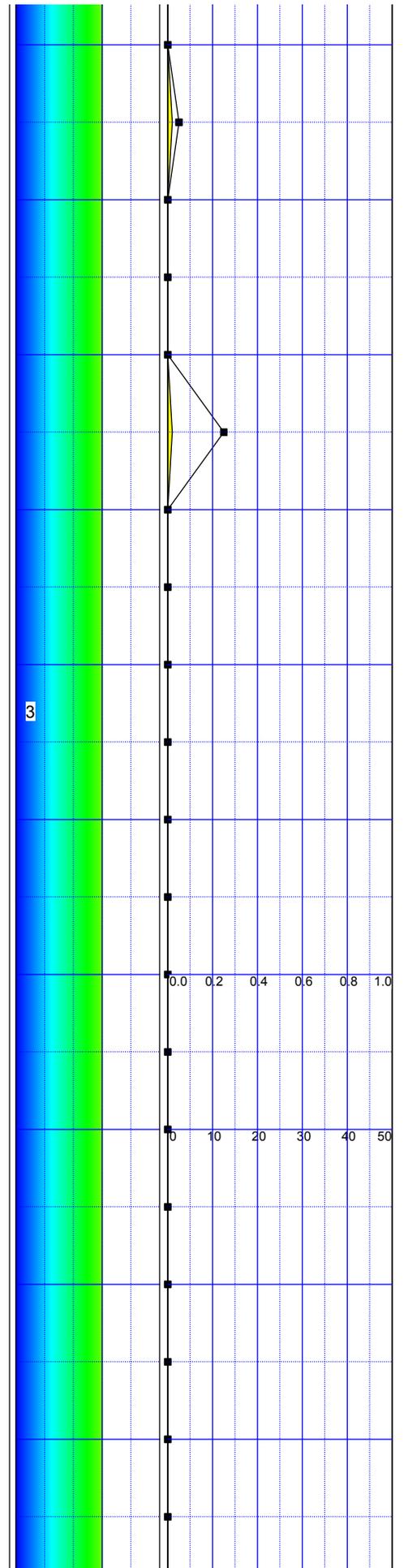
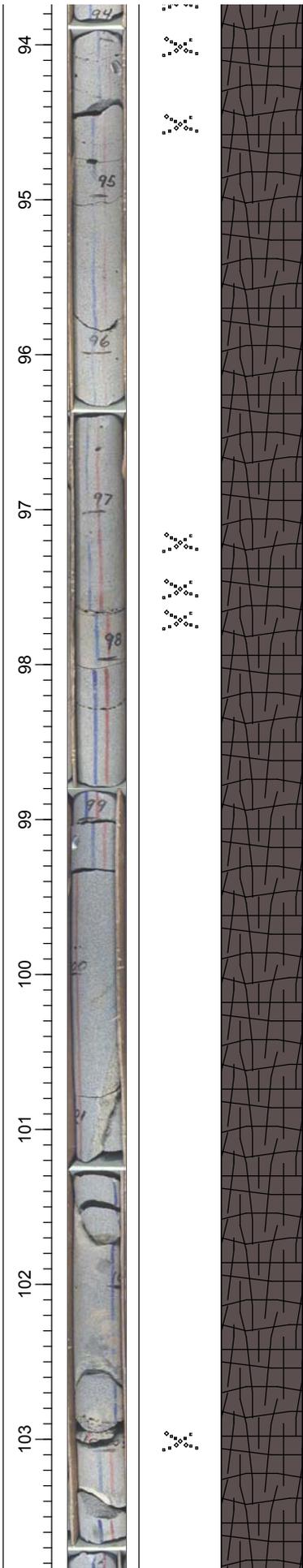
BASALT: Color: Medium dark gray to dark gray

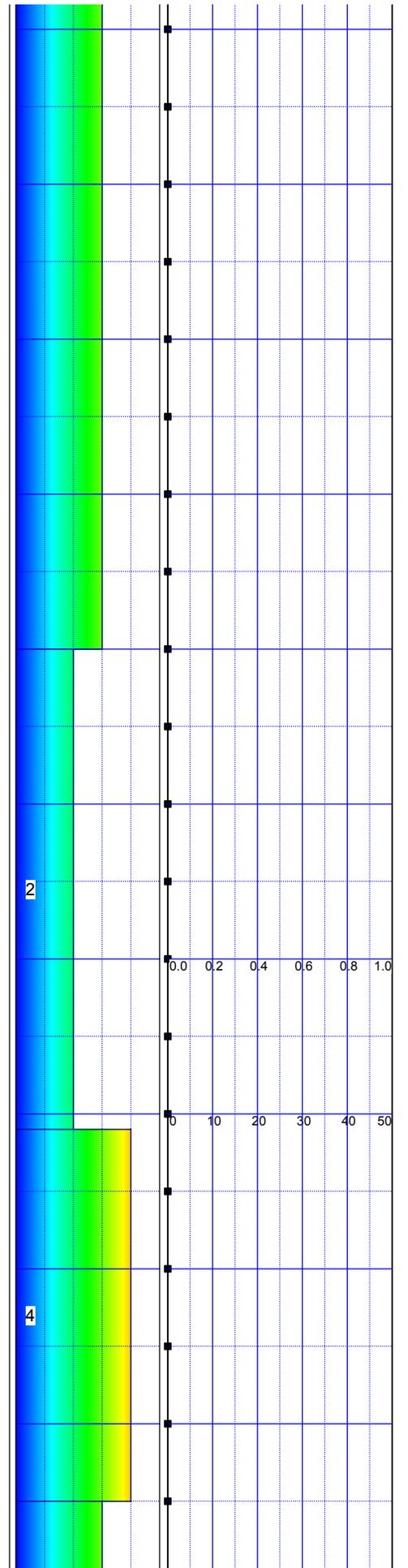
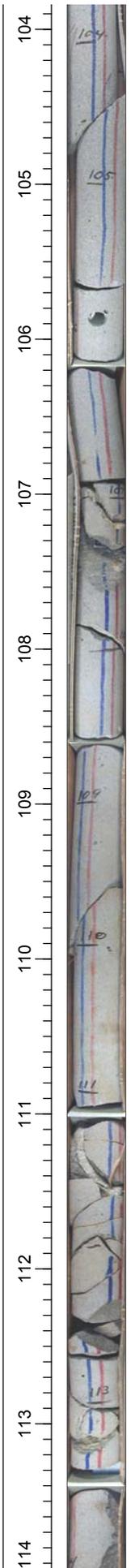
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

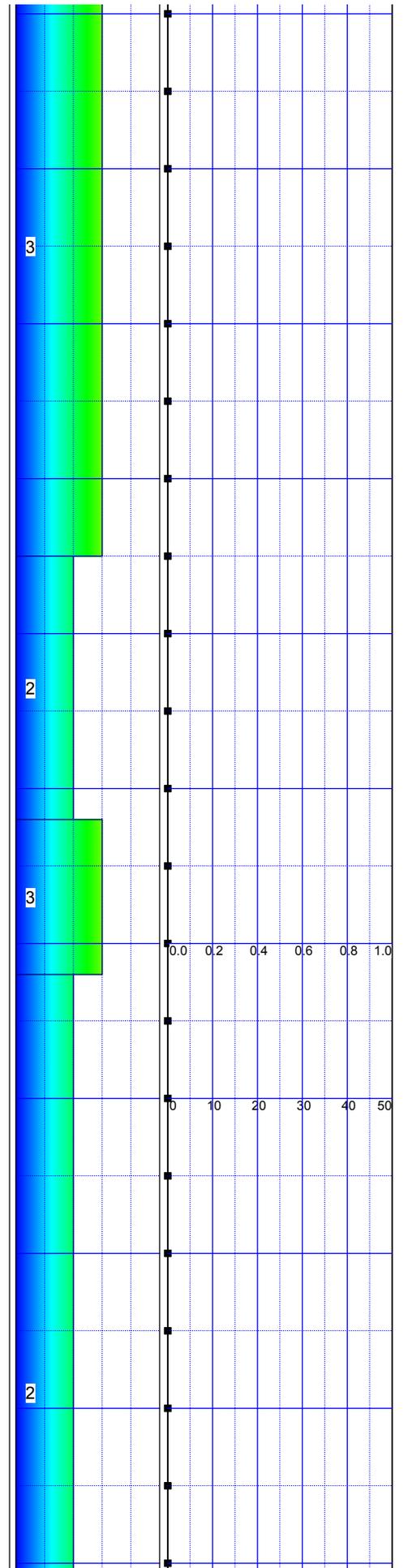
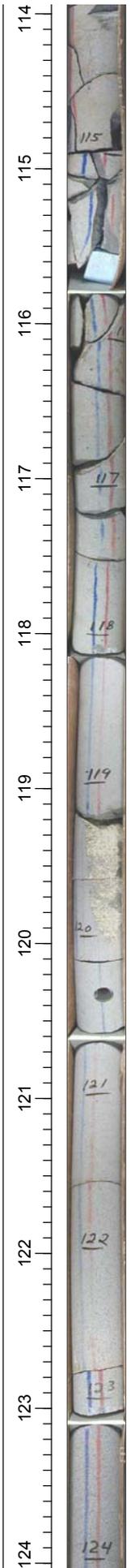
Xenoliths: None noted

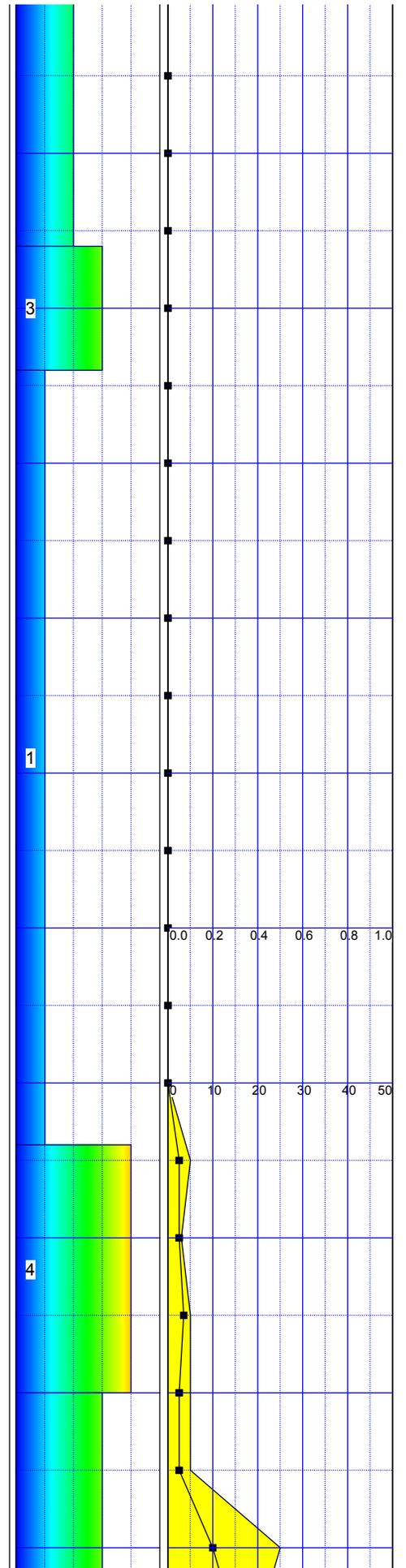
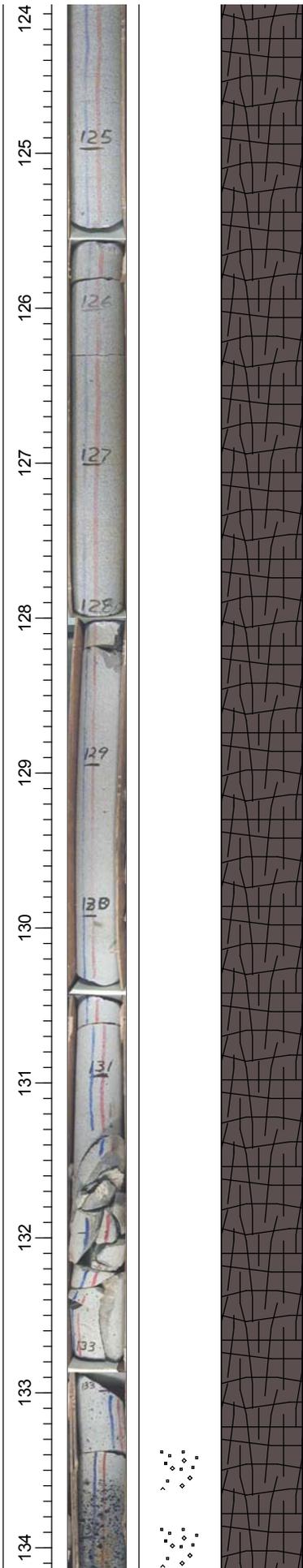
Alteration Activity: Some fractures and nearby vesicles filled with silts and clay, with mild bleaching.

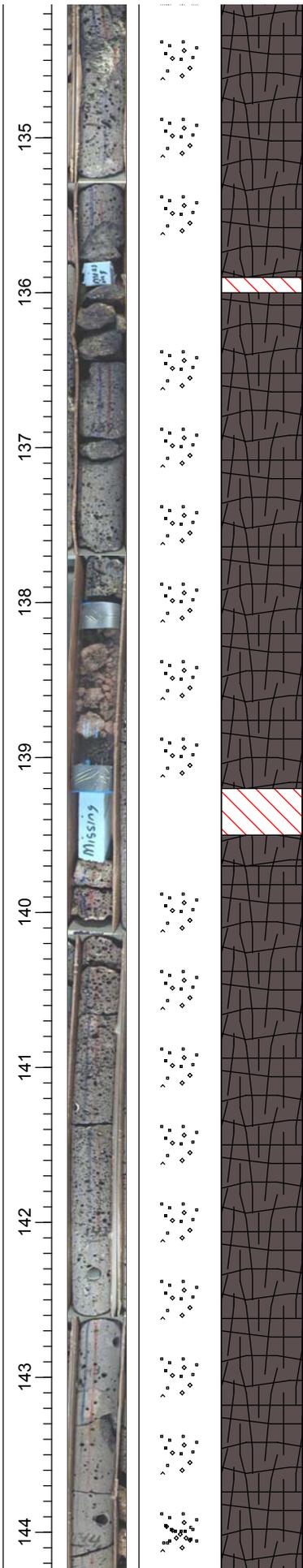












MISSING INTERVAL

BASALT: Color: Dark gray in solid region, rubble zone is pale red

Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

Xenoliths: None noted

Alteration Activity: Some fractures and nearby vesicles filled with silts and clays, mild bleaching.

MISSING INTERVAL

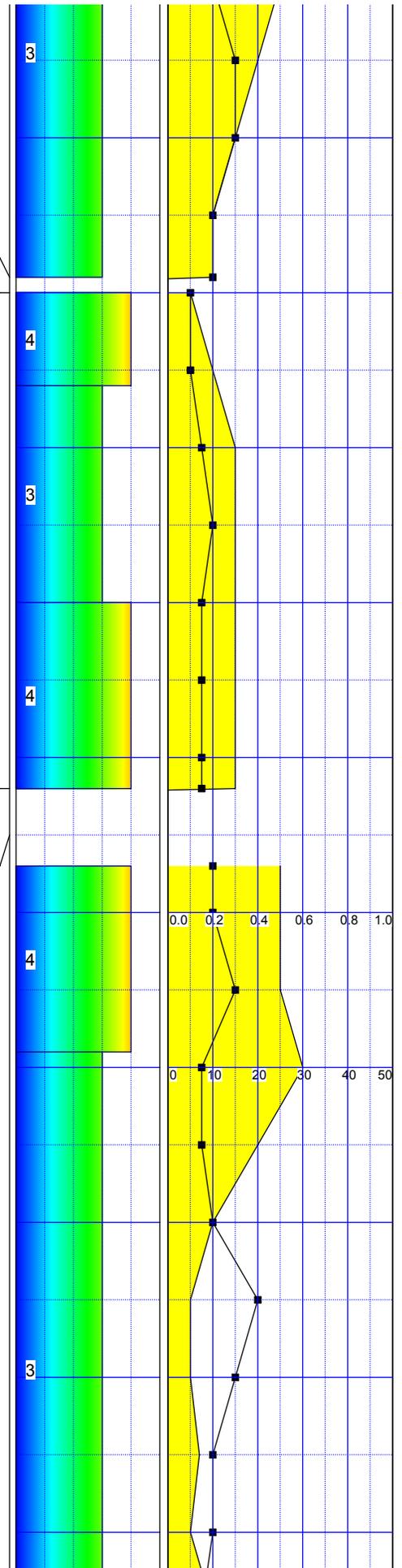
BASALT: Color: Dusky red, to dark yellowish brown grading into medium dark gray with increasing depth. Portion just above the missing interval returns to dark yellowish brown.

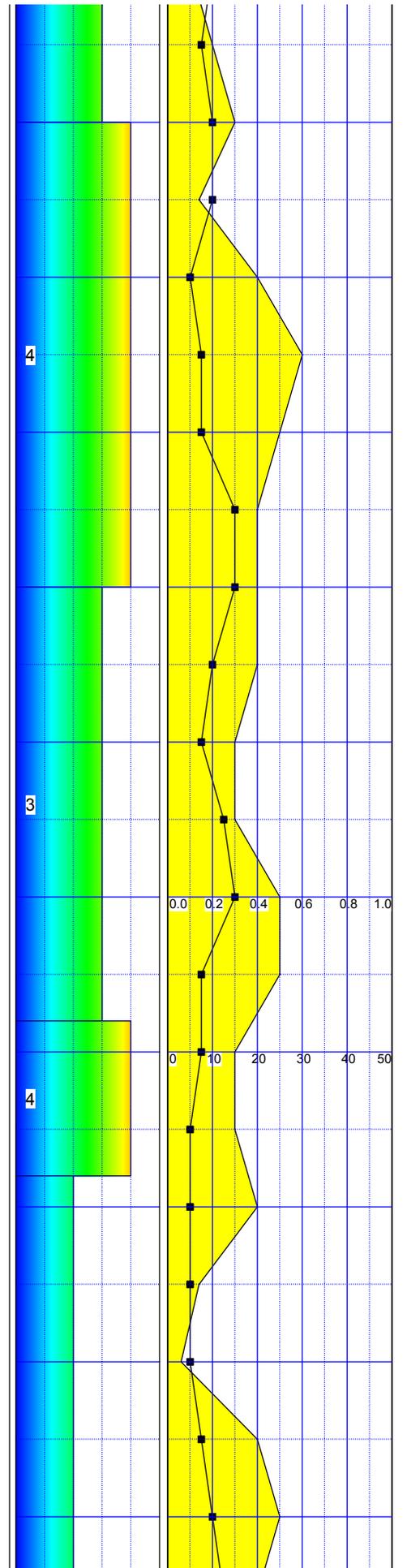
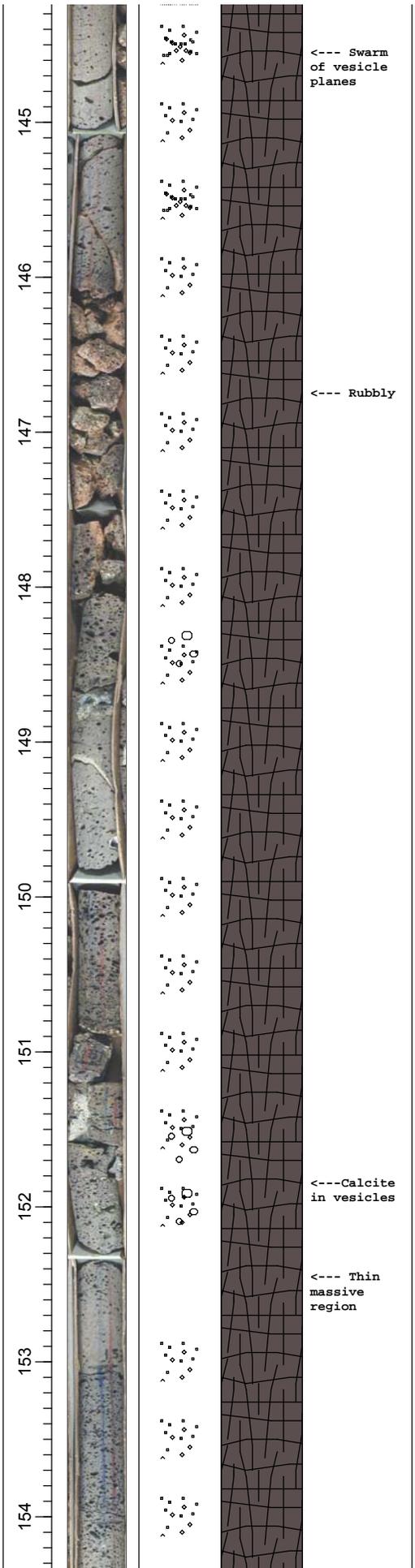
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

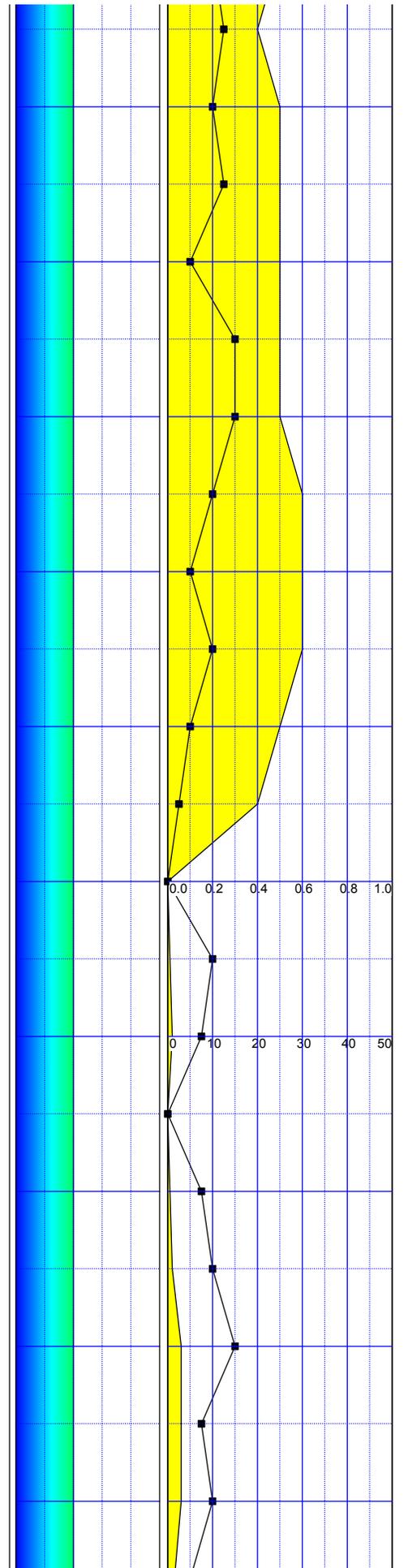
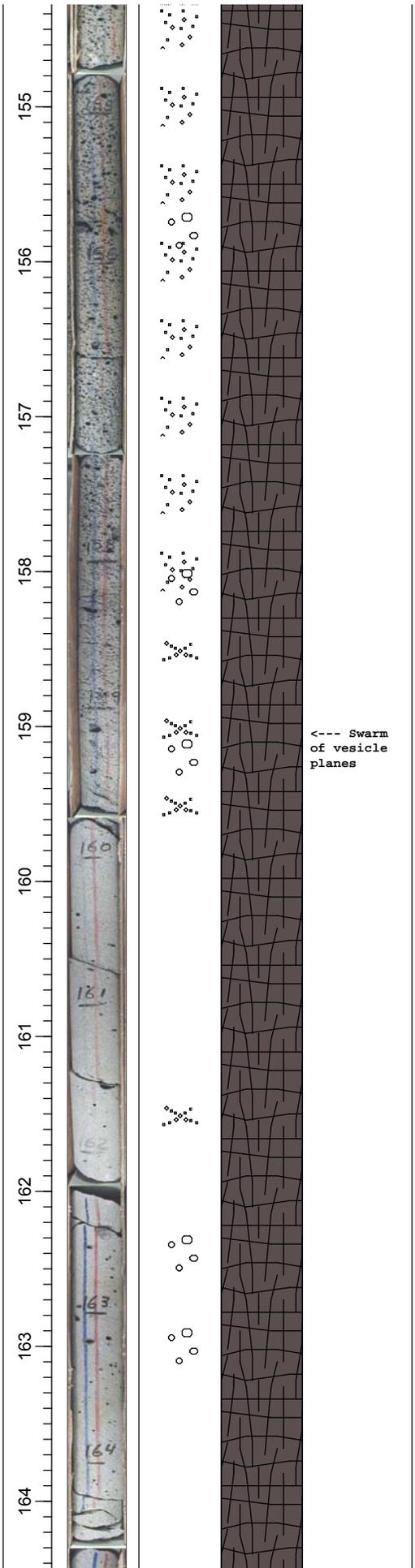
Xenoliths: None noted

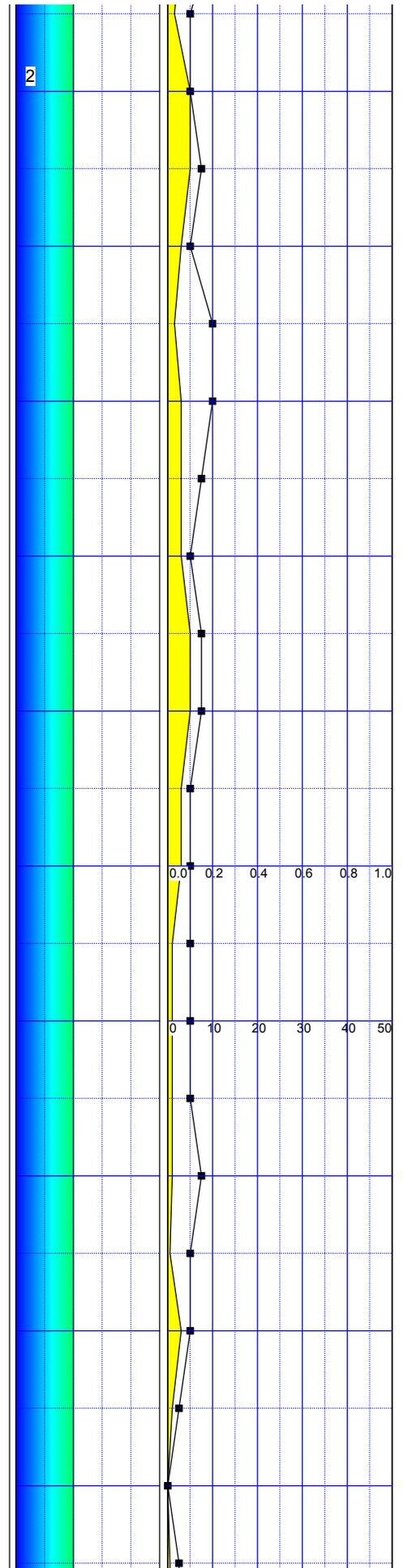
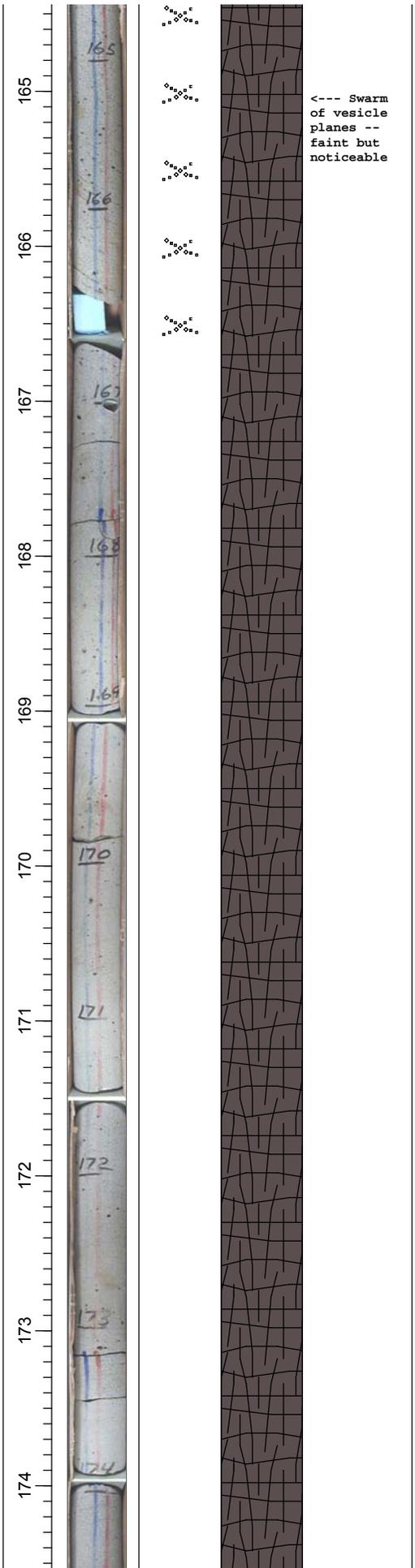
Alteration Activity: Calcite in vesicles at 145 - 147.5 feet, 151.7 feet, and 183.4 - 184.5 feet. Some fractures and nearby vesicles filled with silts and clays in addition to mild bleaching.

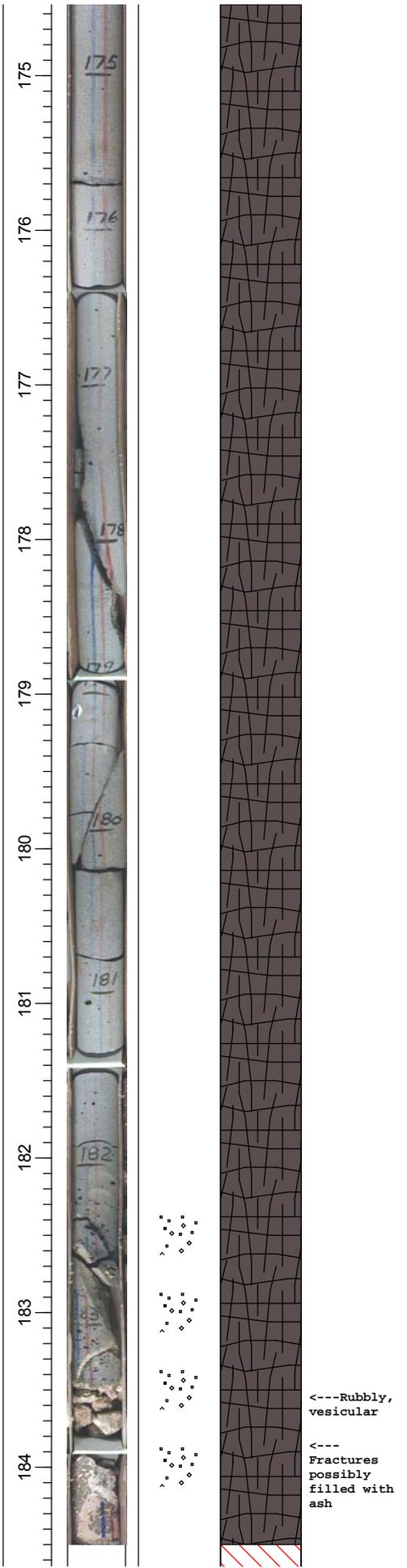
Fractures at base filled with medium orange-pink fines.



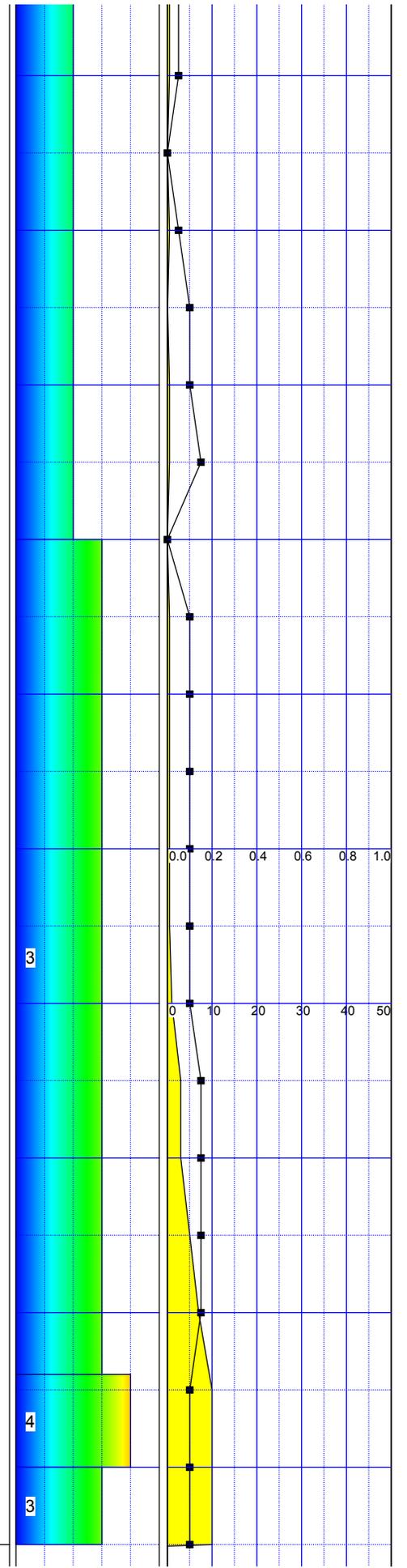


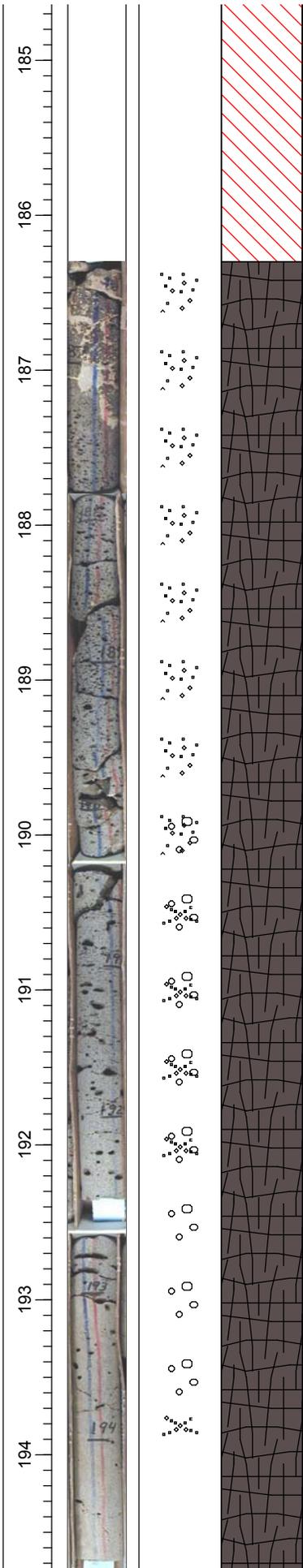






MISSING INTERVAL: Some rubble present.





Rubble and surrounding zones are intensely fractured. Fractures partly filled with medium orange-pink fines.

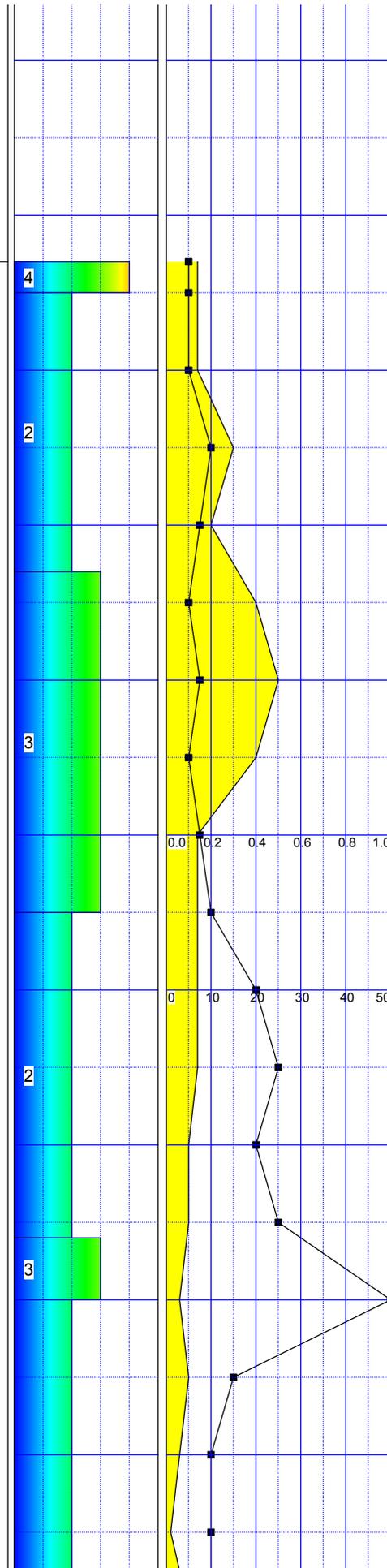
**BASALT:** Color: Grayish red, to dark yellowish brown grading into medium dark gray with increasing depth.

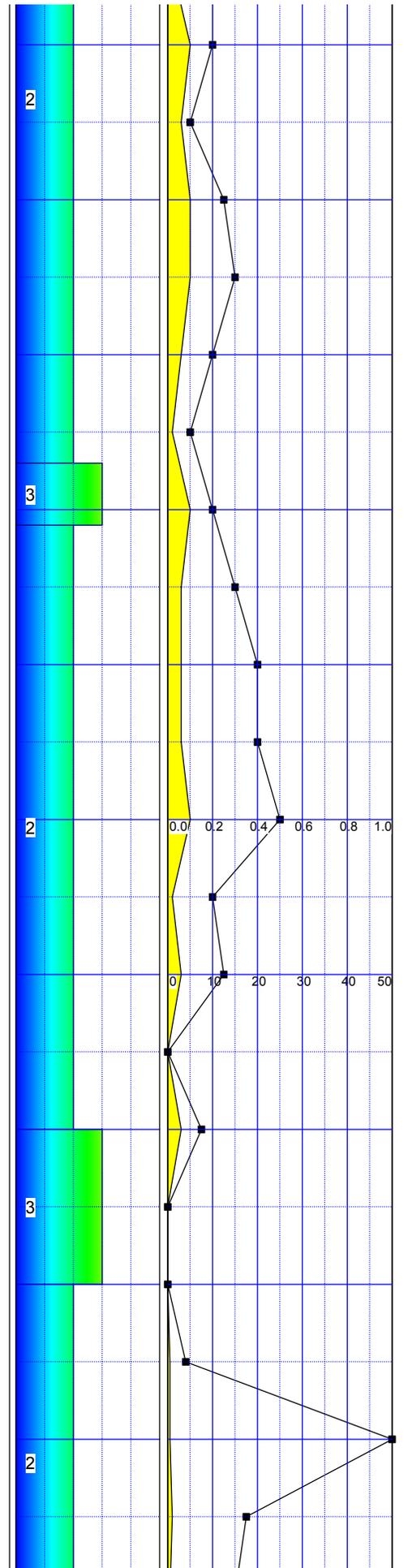
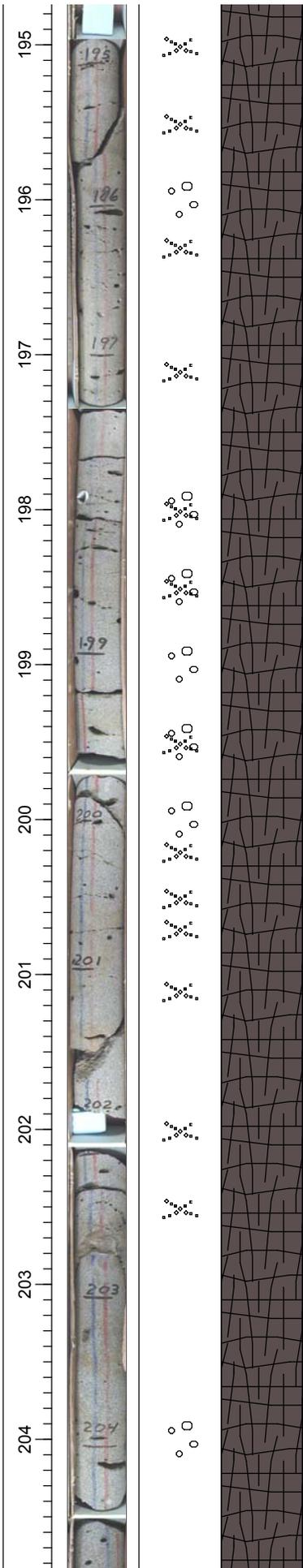
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

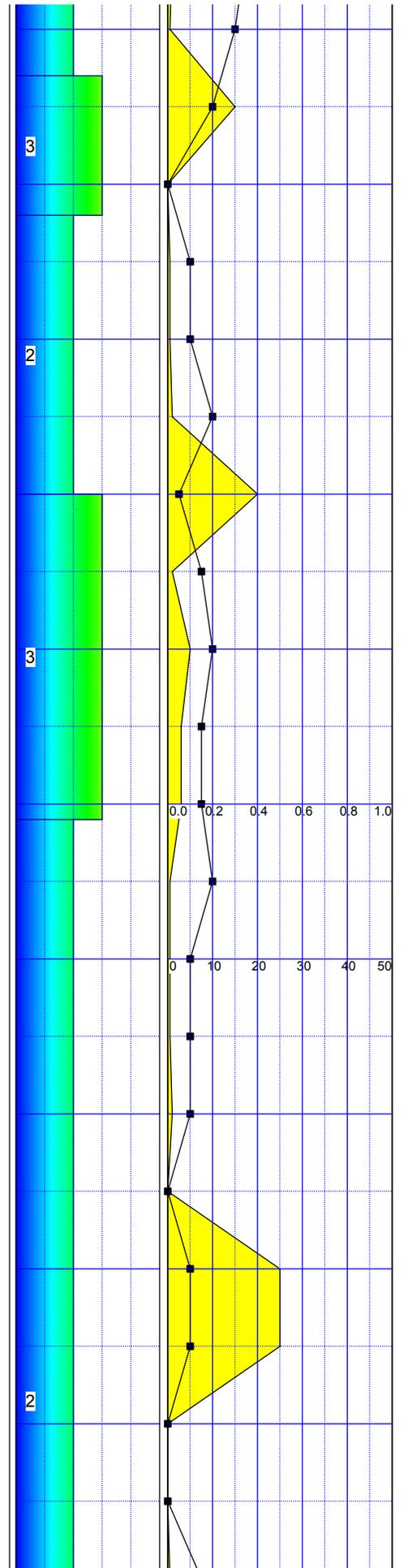
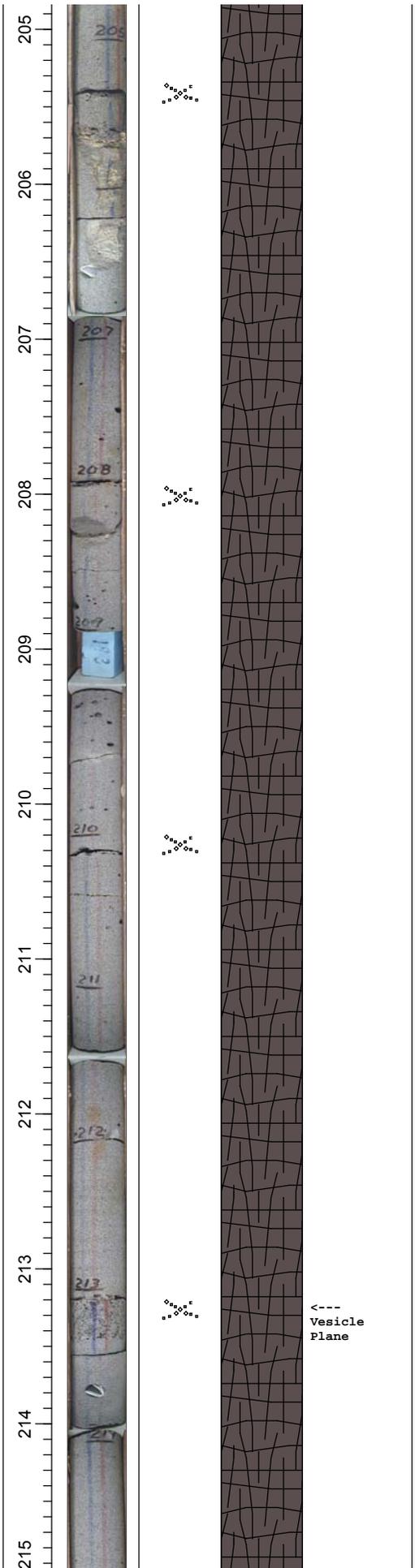
Xenoliths: None noted

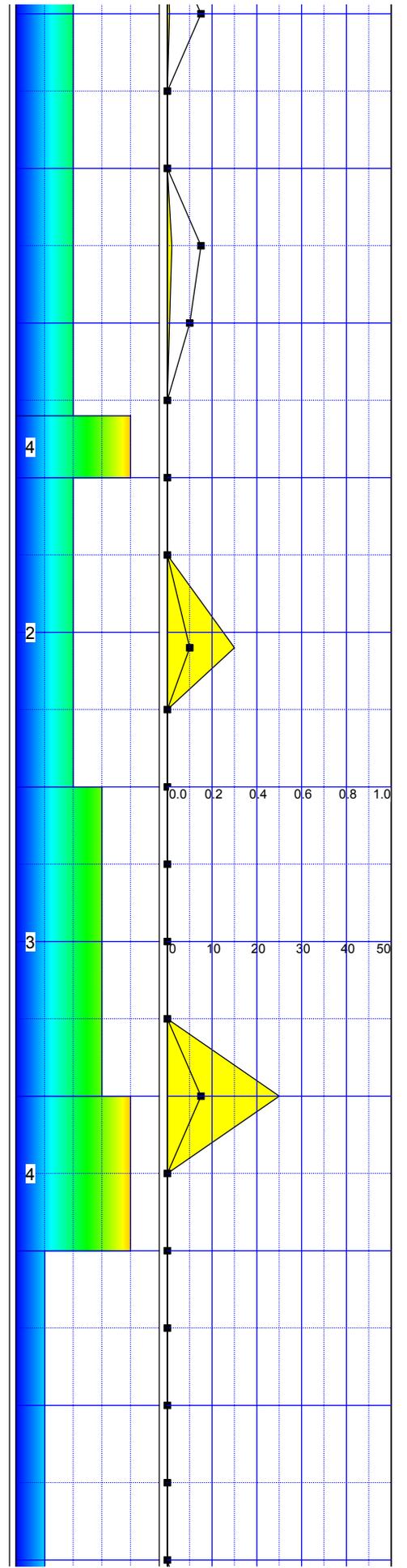
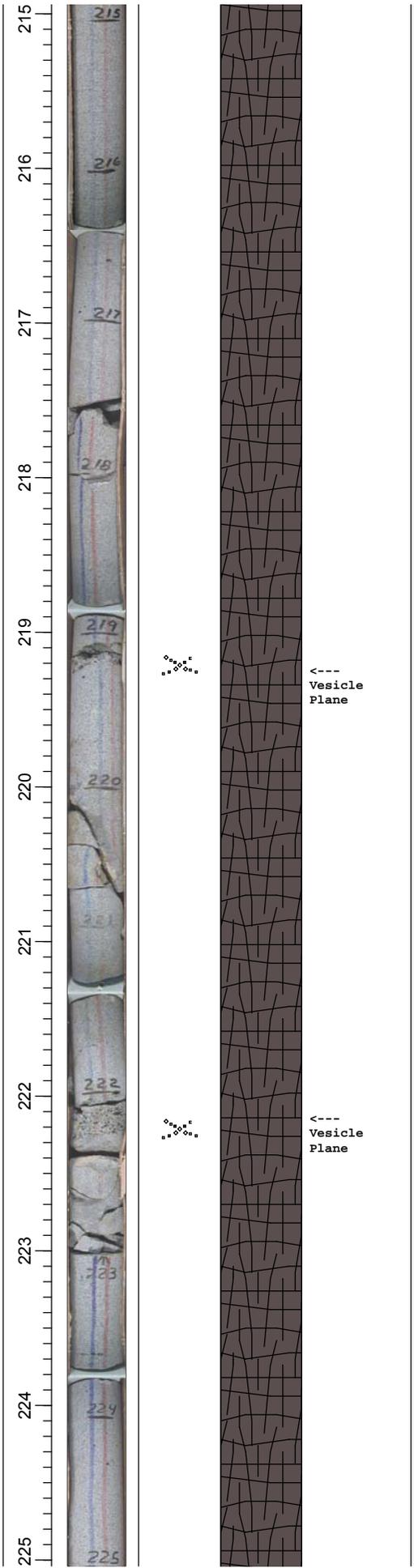
Alteration Activity: Filling noted in vesicles within fractured zones at 187 feet. Some fractures and nearby vesicles are filled with silts and clays, mild bleaching.

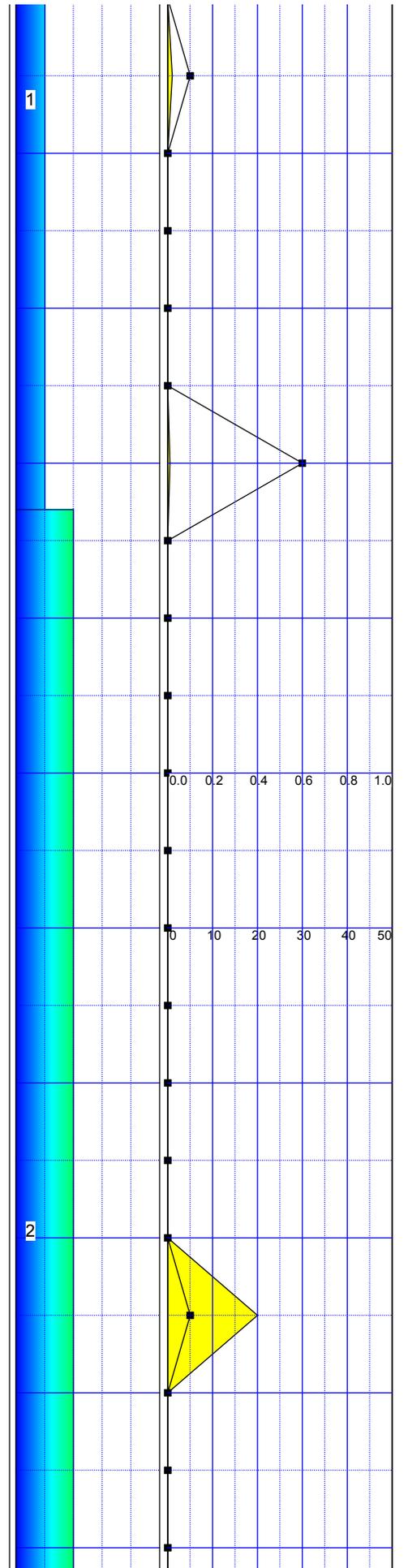
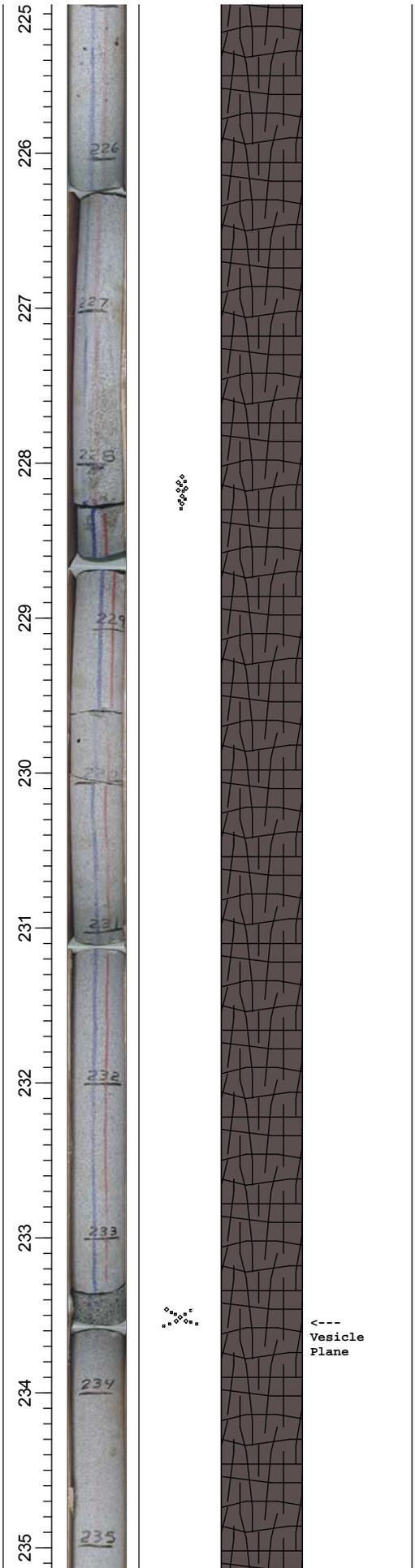
Large vesicles from 188 - 200 feet. Fractures at top partially filled with medium orange-pink fines.





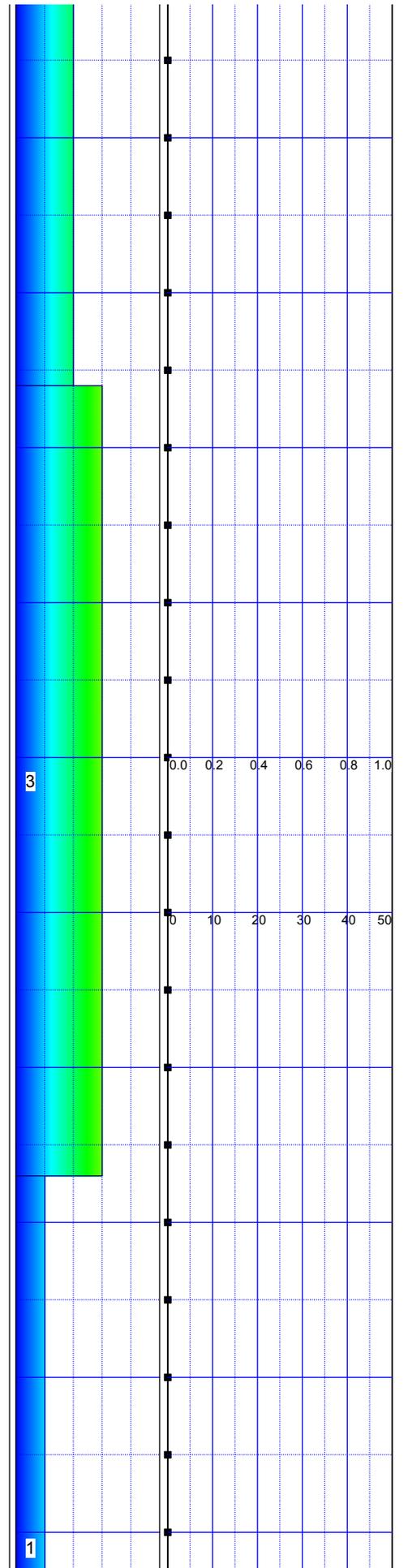


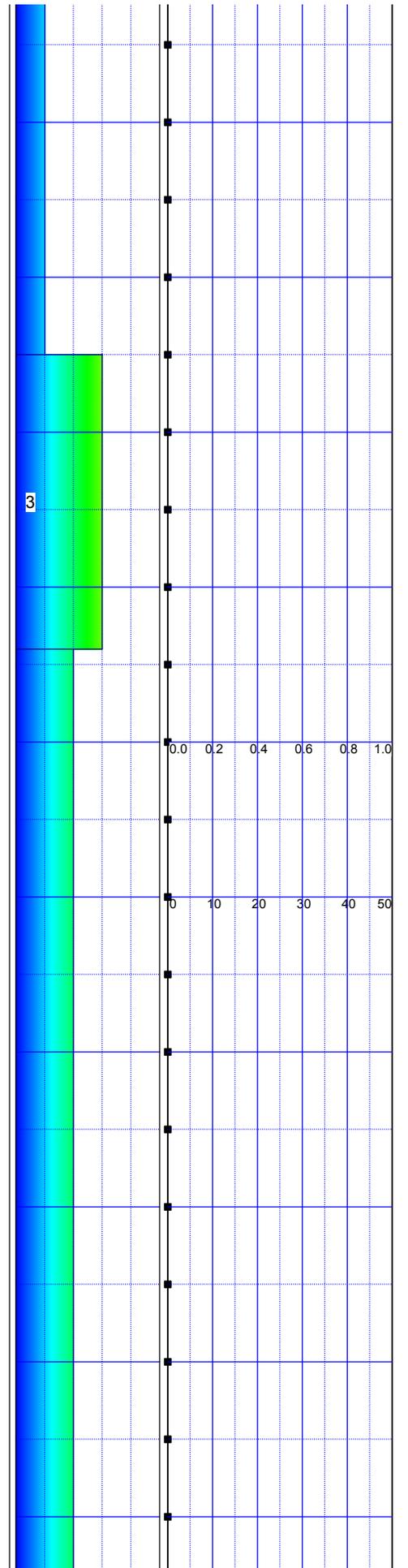
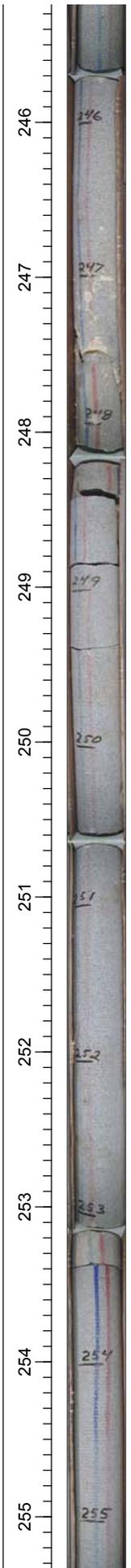


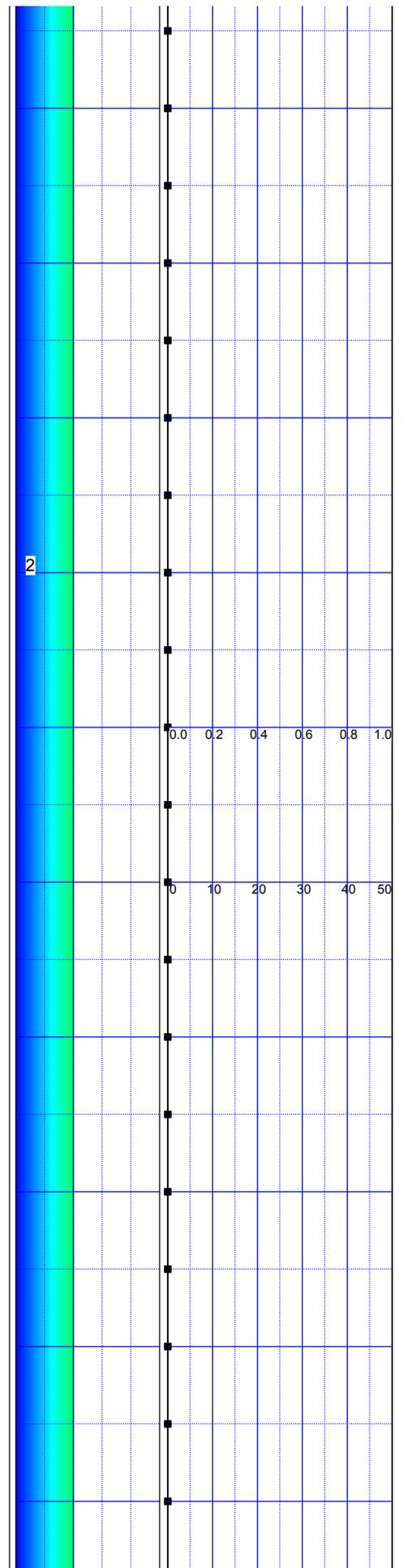
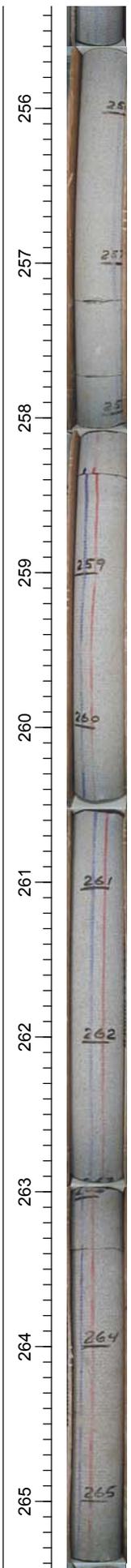


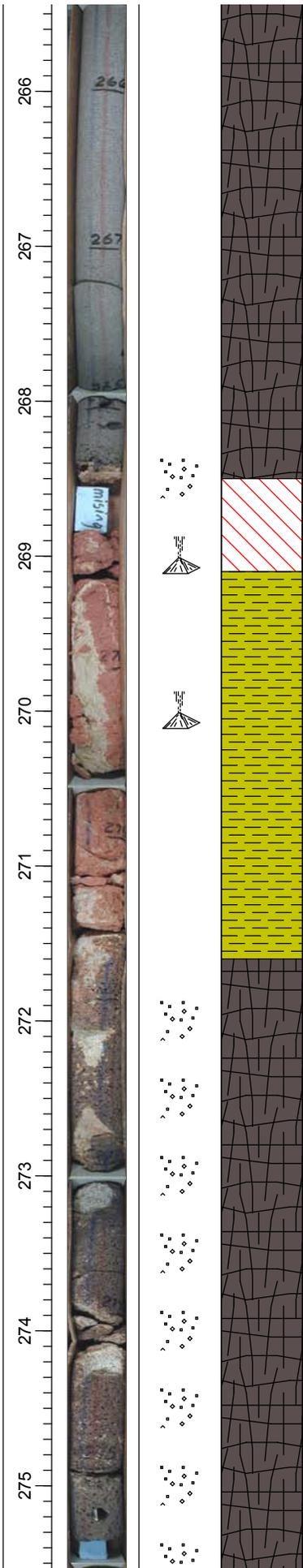


<--- Near vertical orientation to many fractures









MISSING INTERVAL

SILT AND CLAY: Color: Moderate reddish brown at the top grading to a pale reddish brown at the bottom

Consistence: Friable

Structure: Single-grained

Free Carbonates: Moderate reddish-brown, no, pale reddish brown and crack fill, yes

Rocks: At ~270 feet, several matrix-supported 2 mm - 3 cm angular to subangular, subprismoidal vesicular basalt rock fragments, very dark red

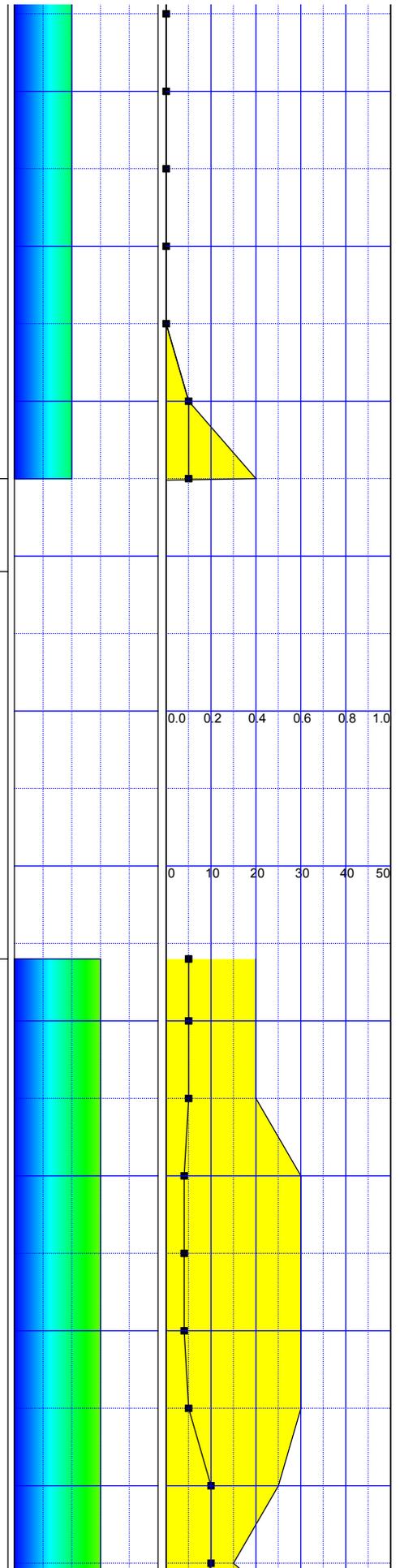
Roots/fossils: Several 1 - 2 mm sinuous passageways -- some with 1 cm fragments of wood at 270 feet

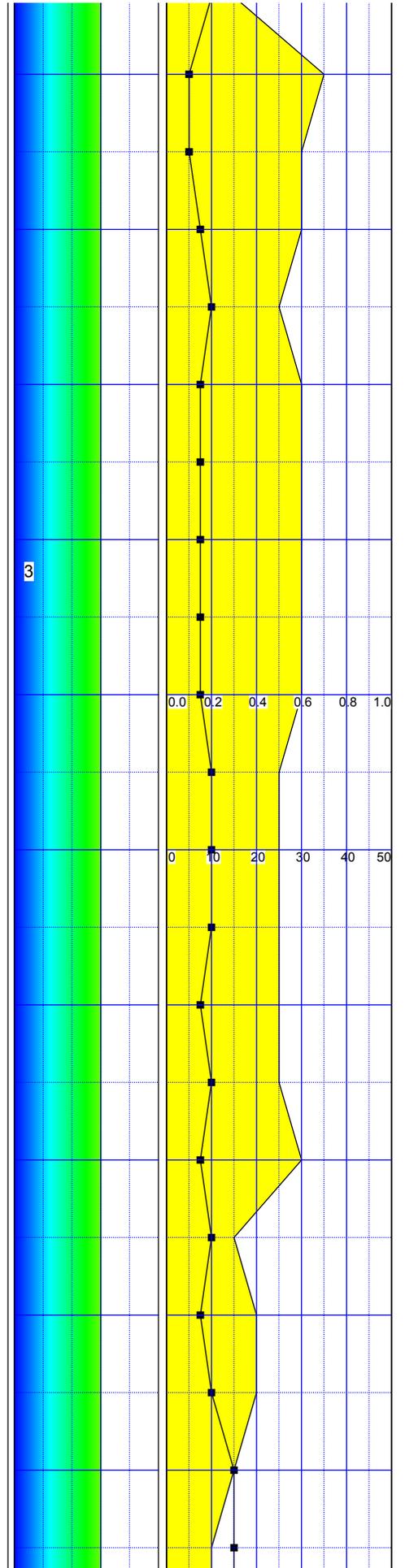
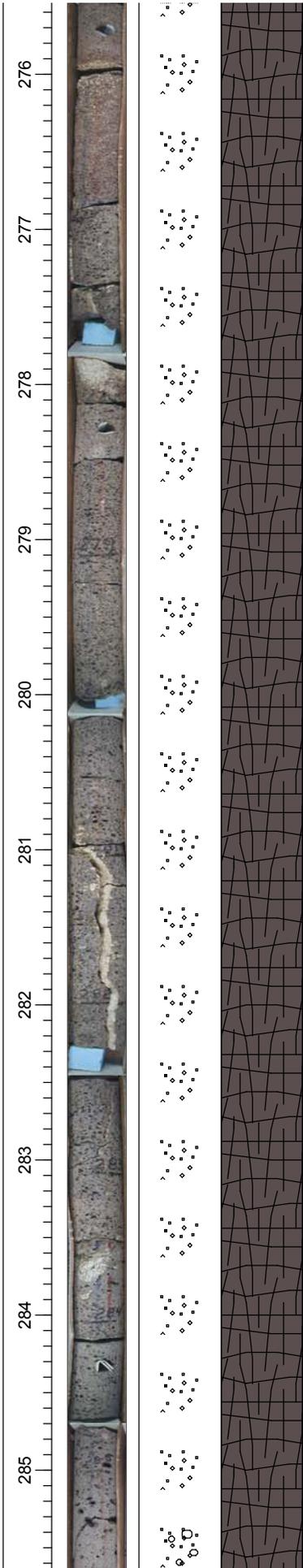
BASALT: Color: Dark reddish brown at top grading to a light brownish gray, then a light gray

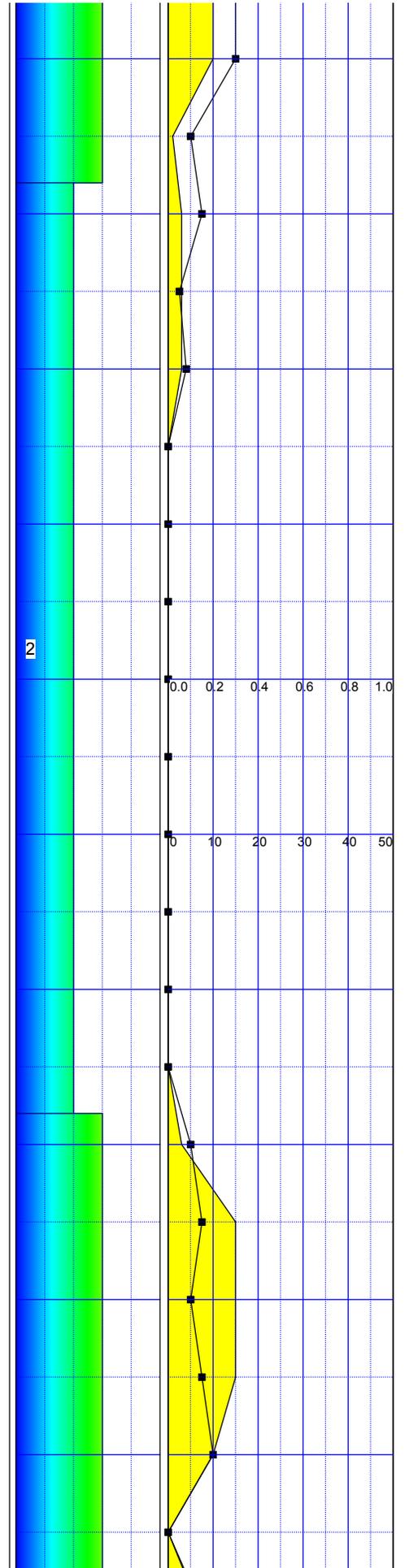
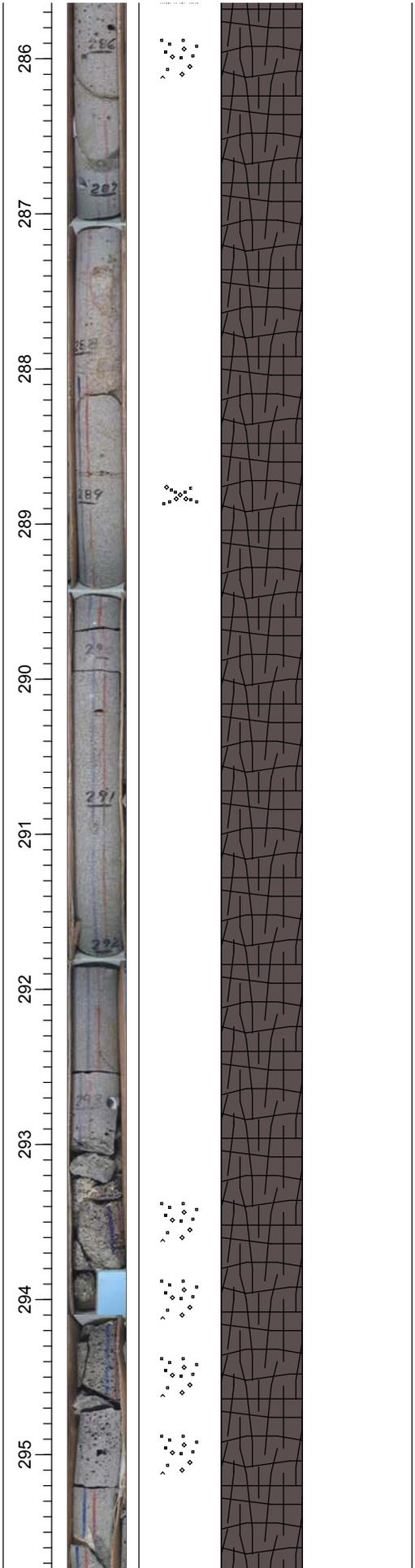
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

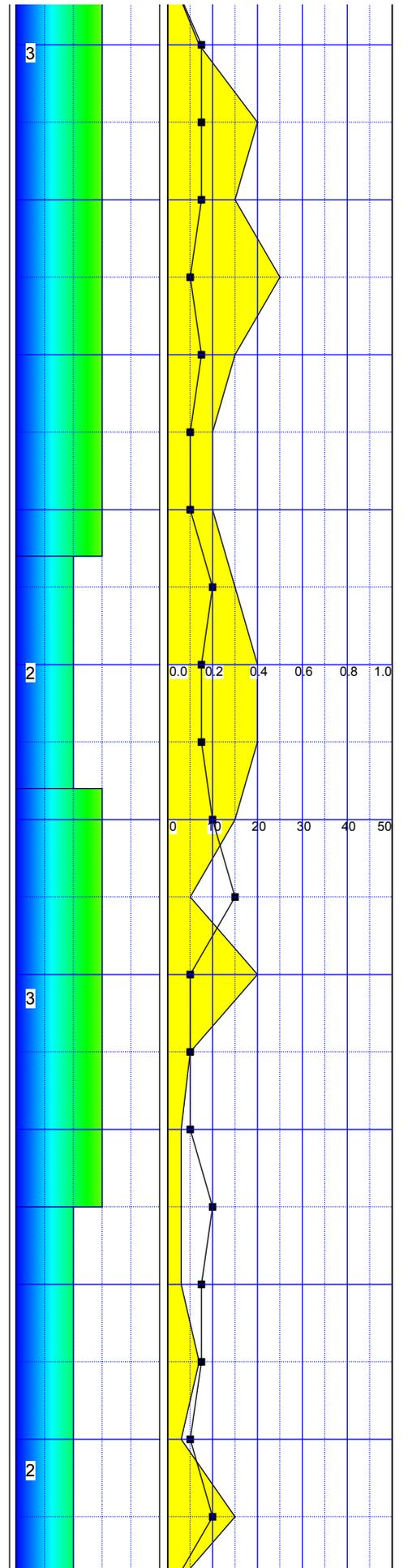
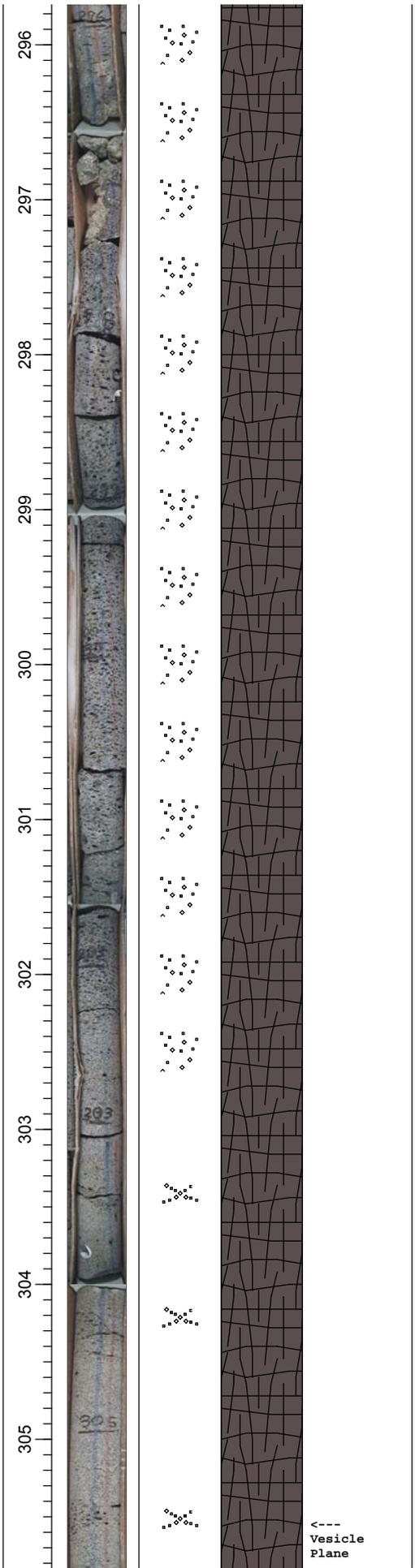
Xenoliths: None noted

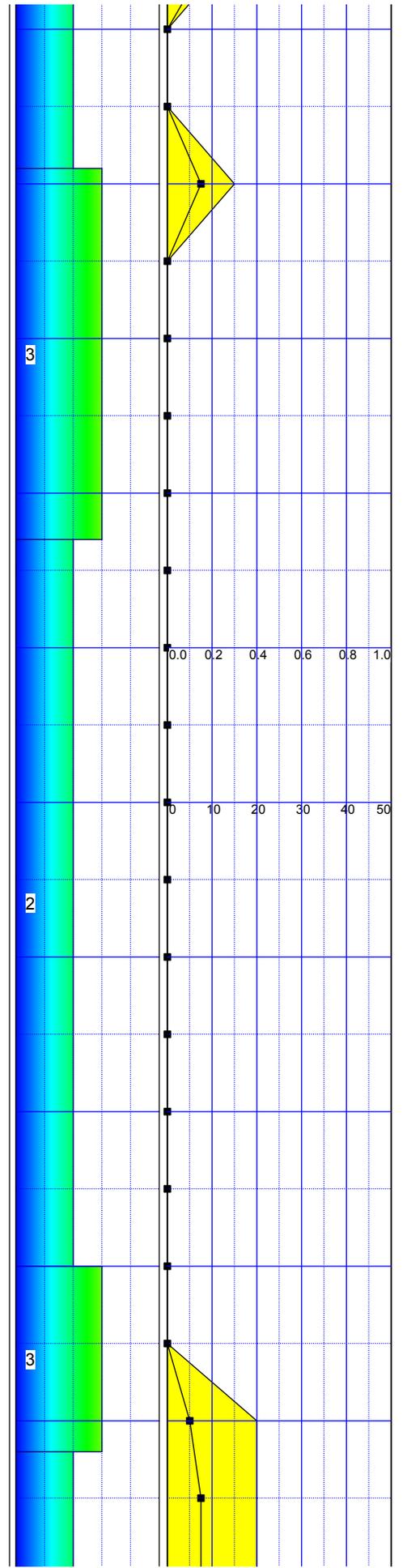
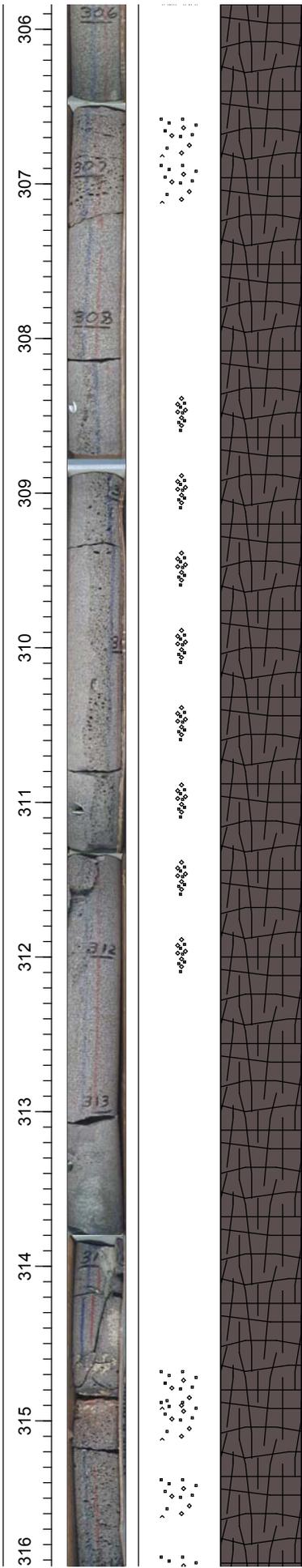
Alteration Activity: Some fracture systems and nearby vesicles filled with silts and clays, mild bleaching.

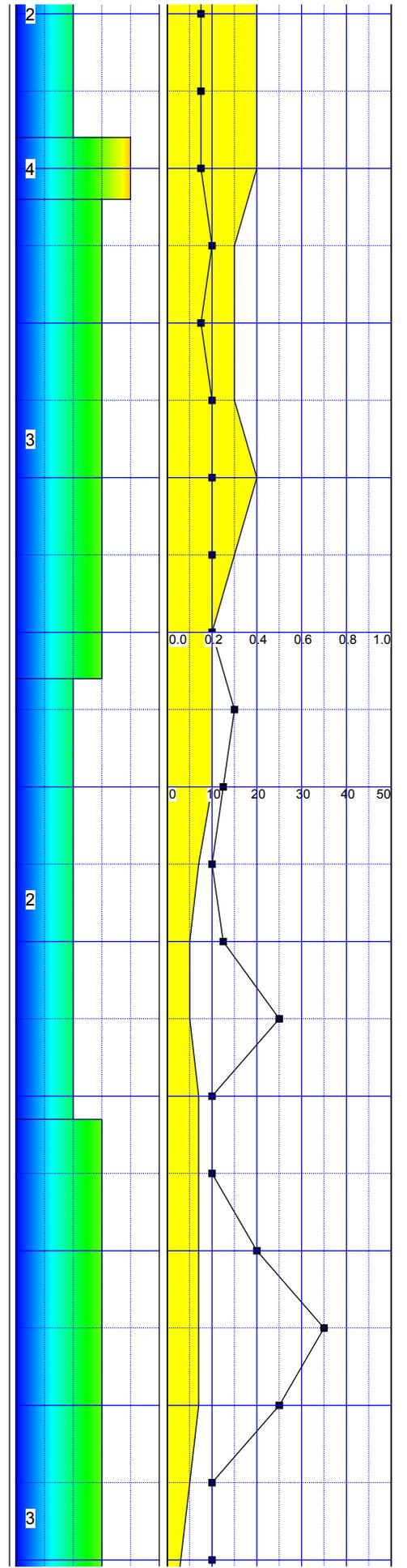
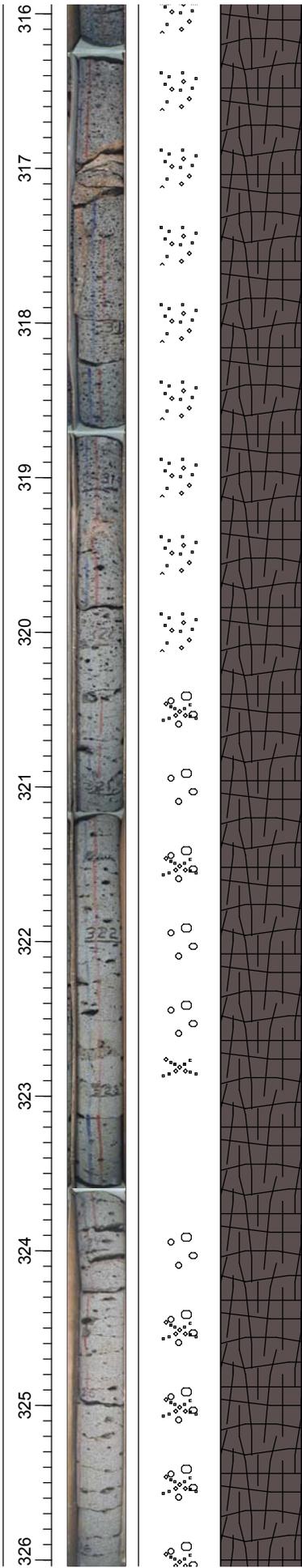


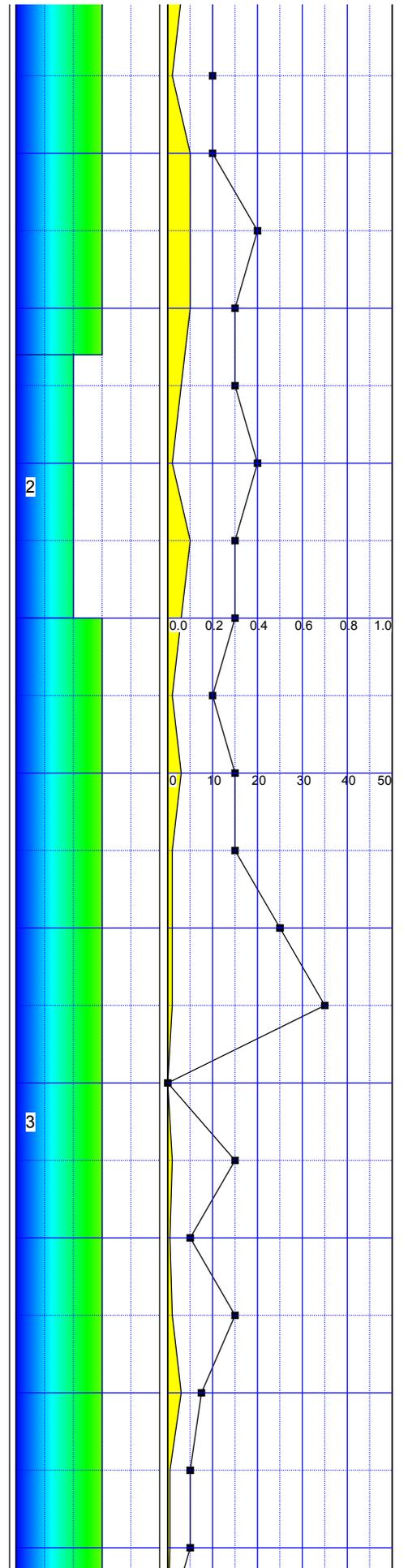
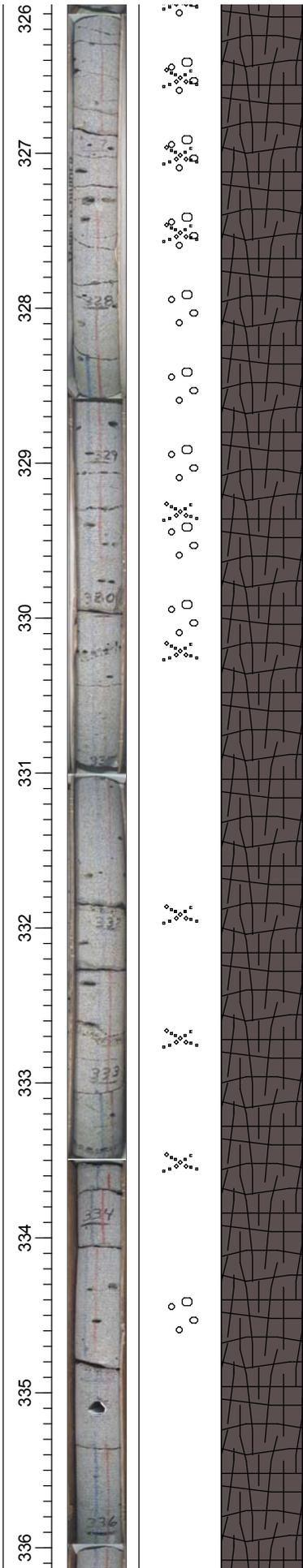


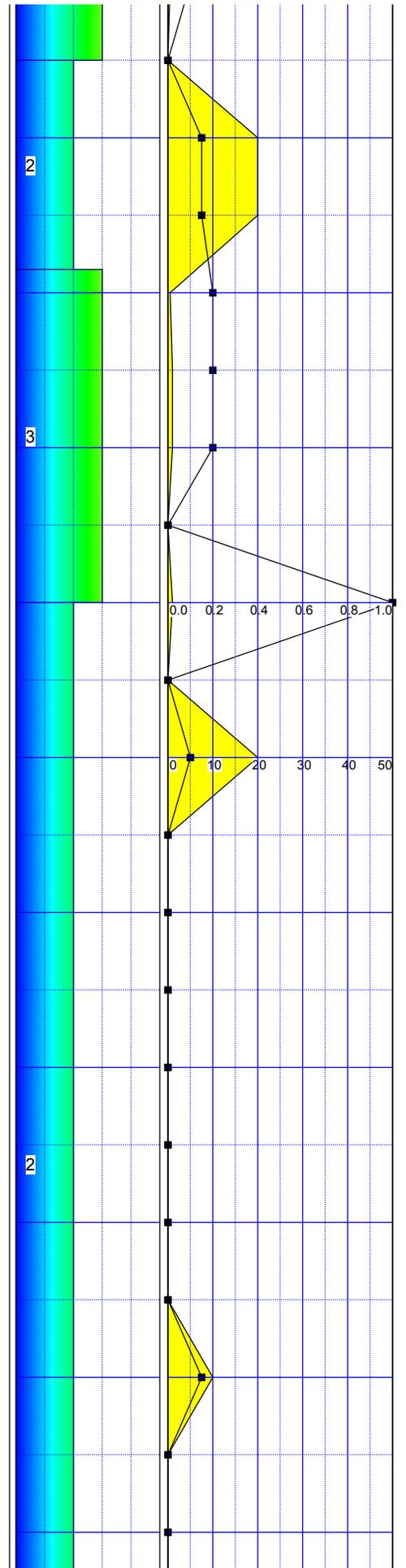
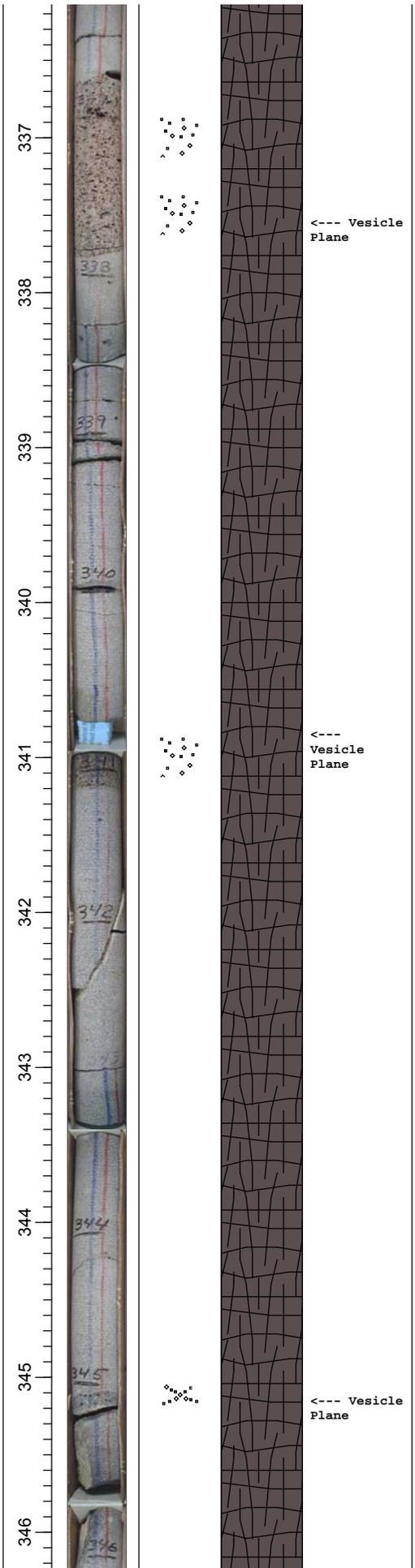


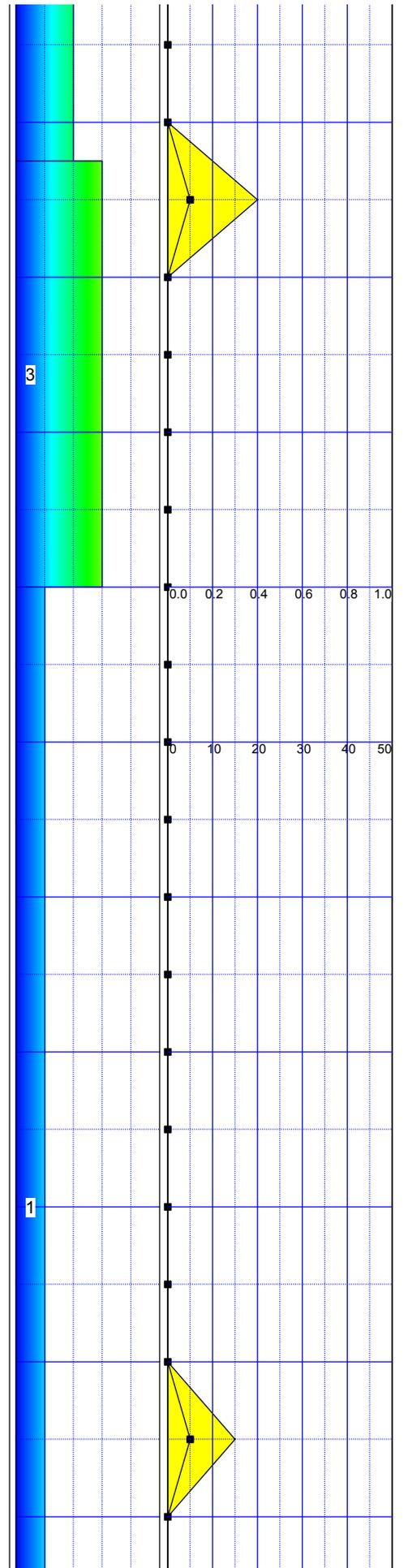
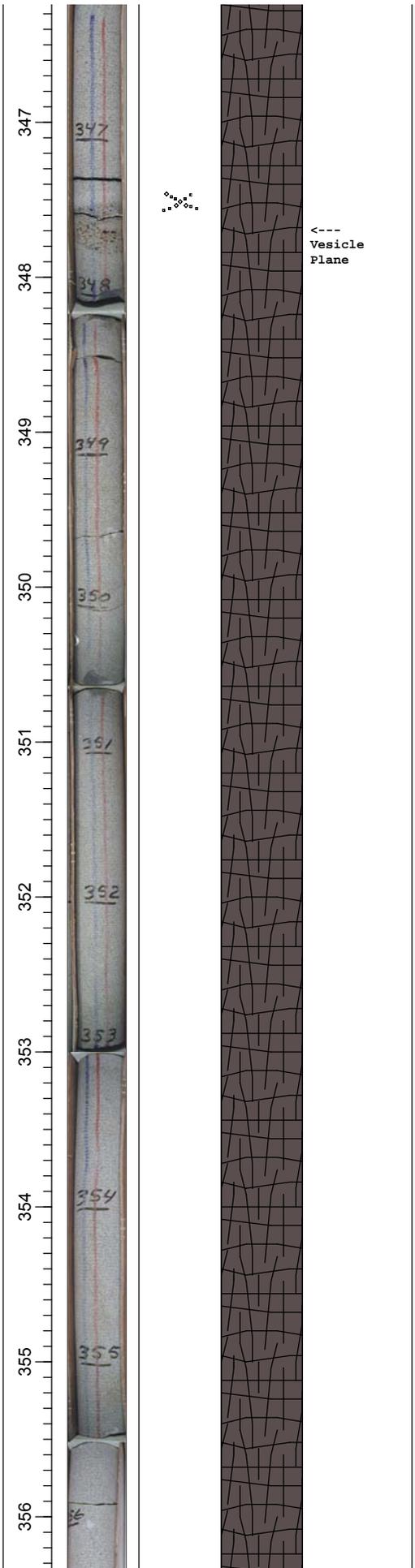


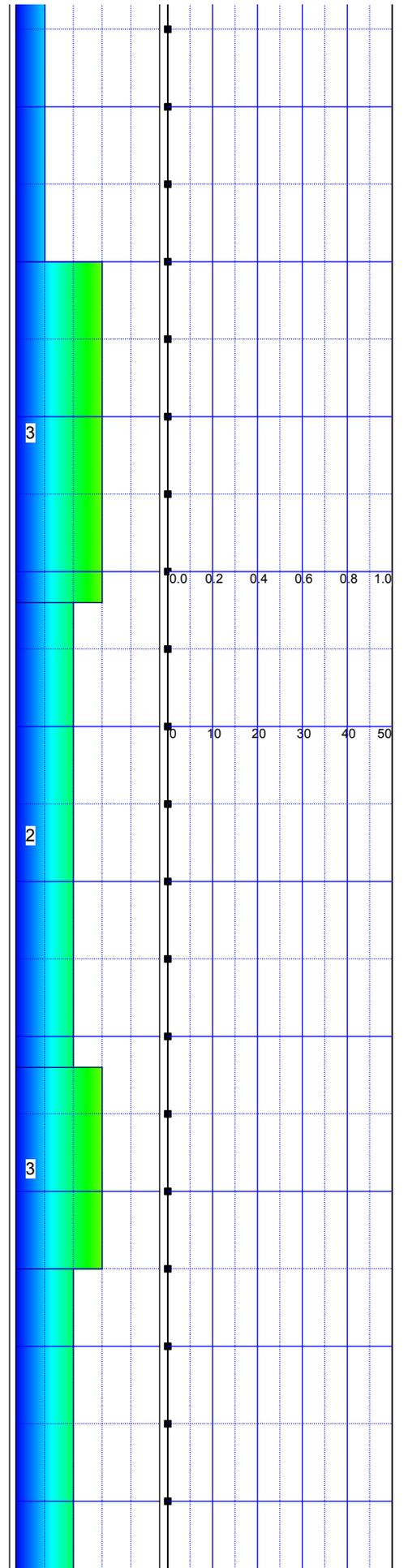
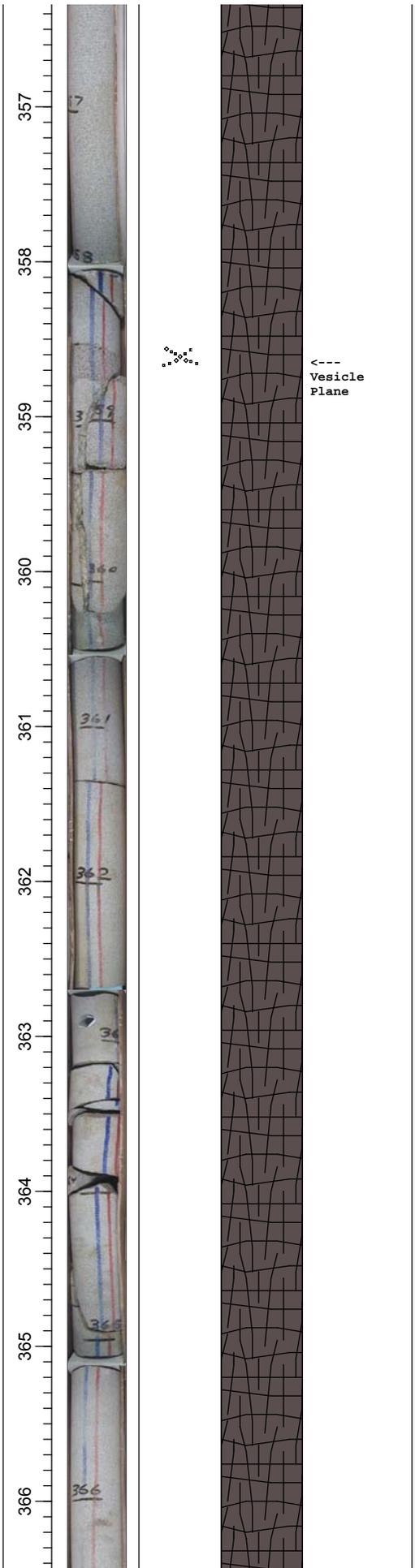


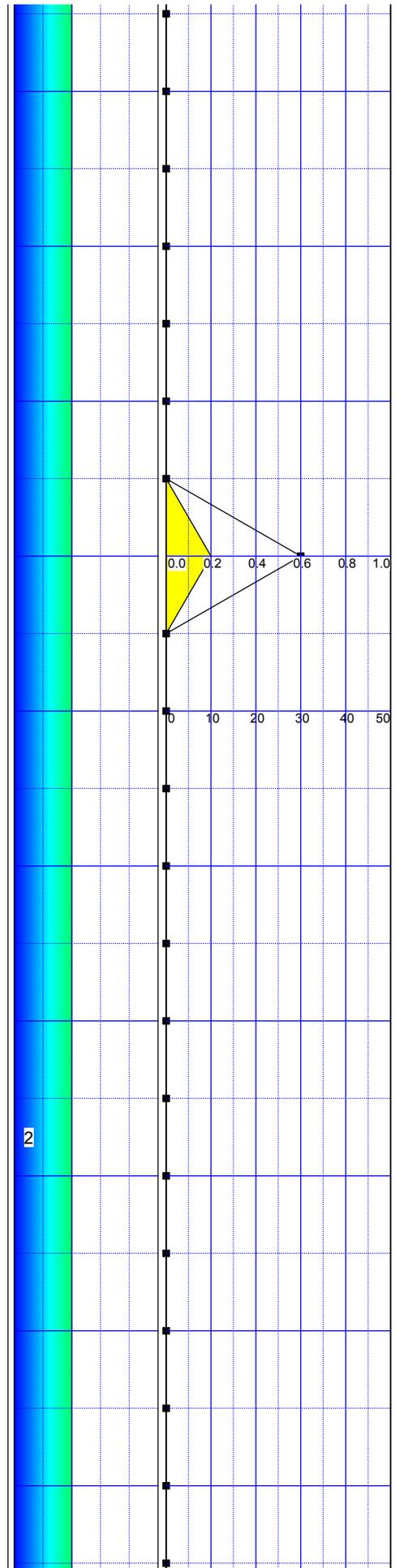
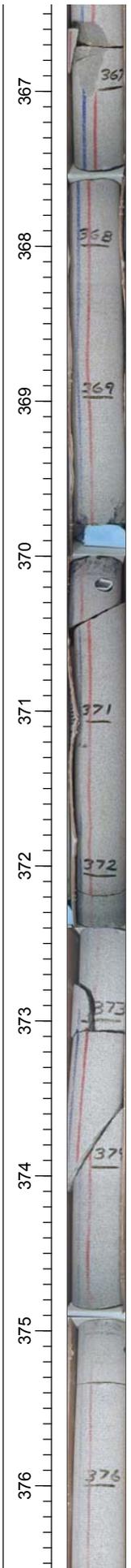


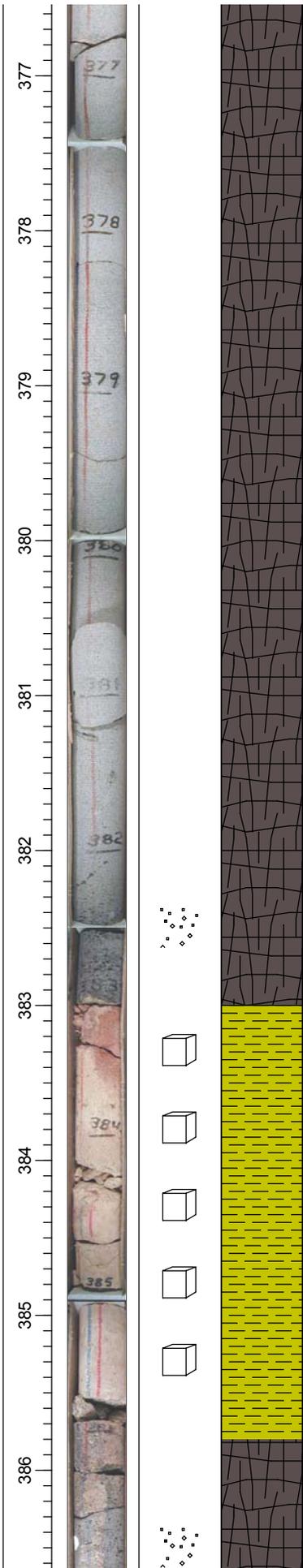












SILT AND CLAY: Color: Moderate brown at the very top grading to grayish orange

Consistence: Firm

Structure: Massive

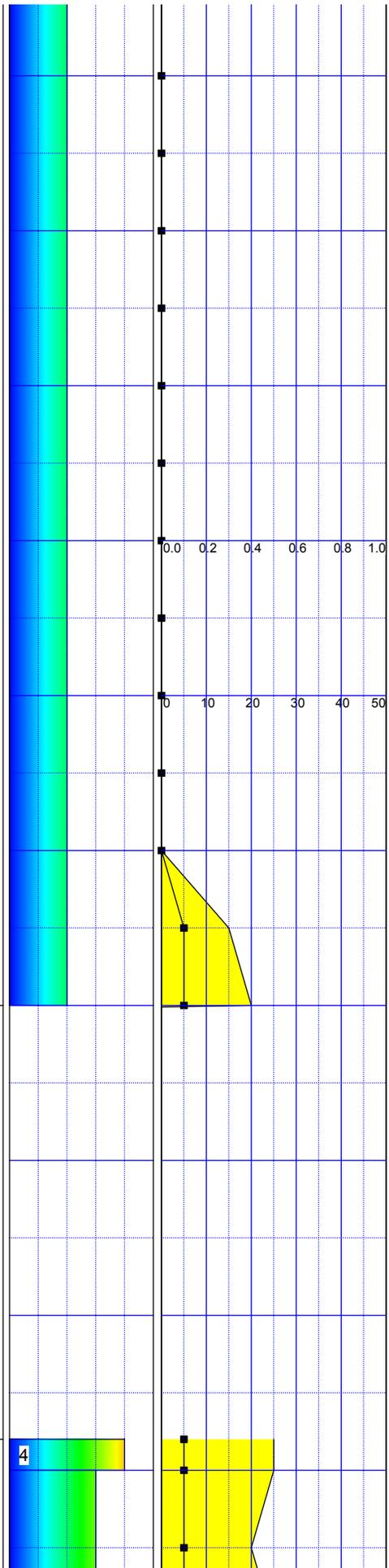
Free Carbonates: No, from 383' to 384.5', yes, from 384.5' to base of interval

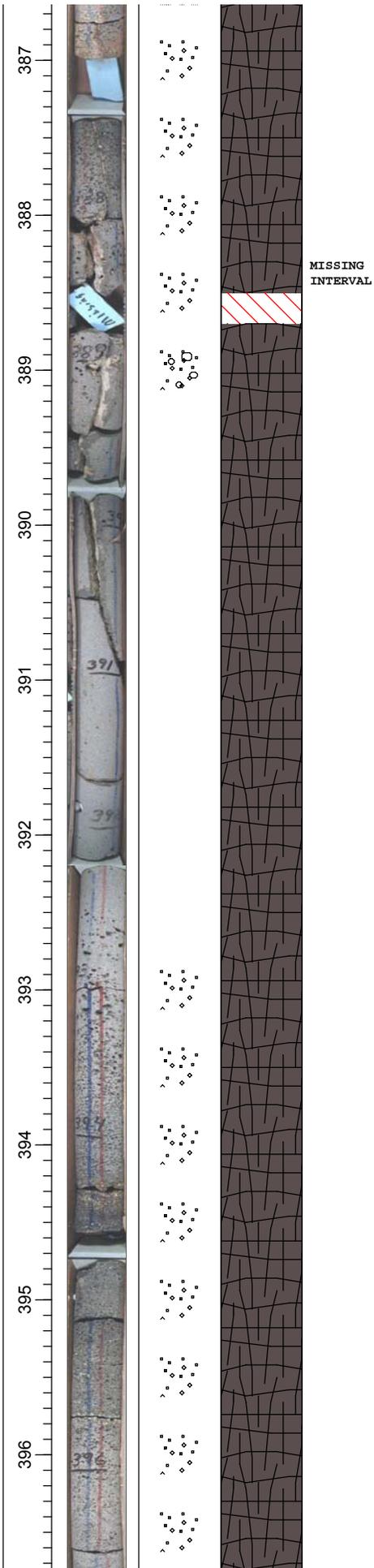
Rocks: Many 1 - 3 cm matrix-supported, subangular rock fragments at base -- pale brown, vesicular. Probably derived from underlying basalt.

Roots/fossils: Many < 1 mm sinuous tubules.

BASALT: Color: Alternates between pale brown grading to a light brownish gray, then a dusky brown and medium light gray then transitioning to grayish red around 432 feet.

Magnetic Properties: Nonmagnetic

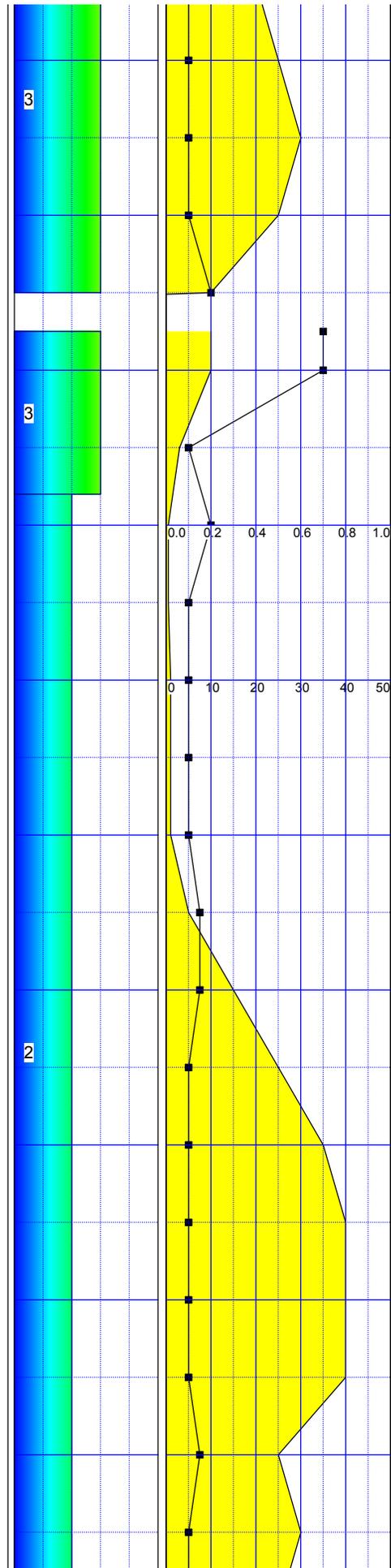


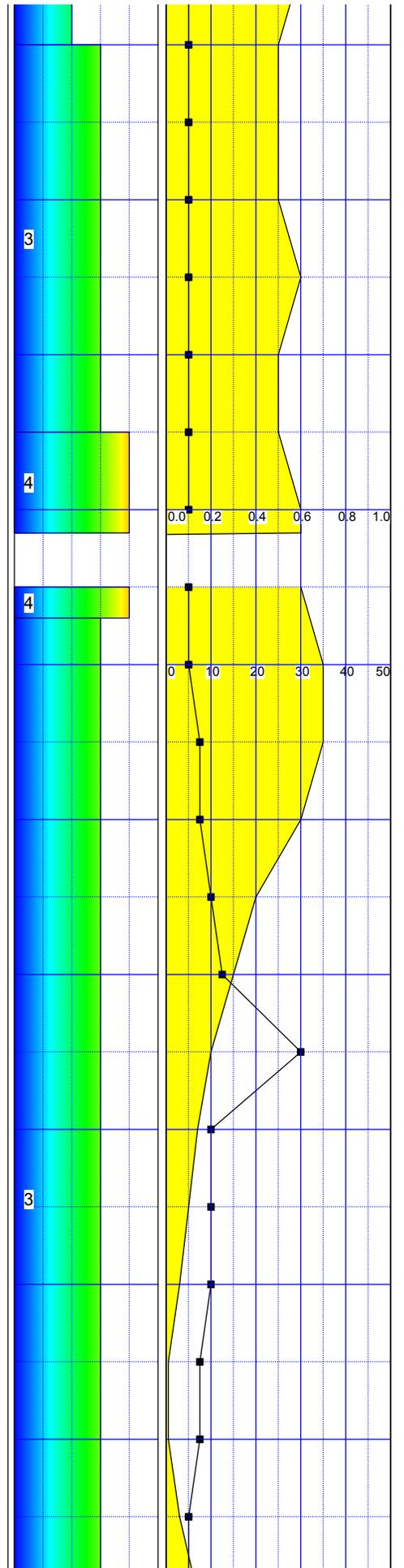
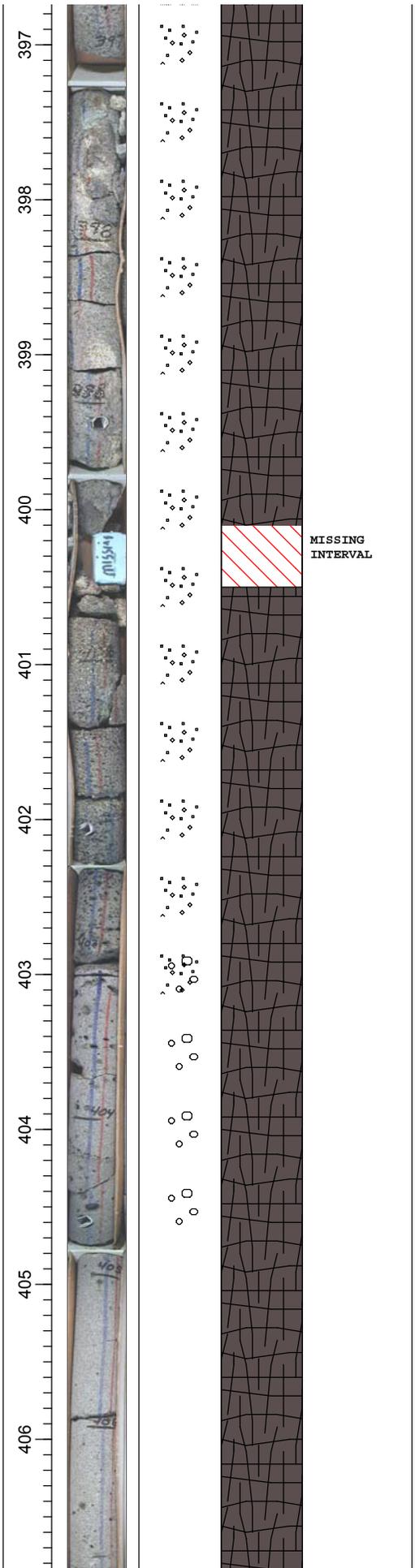


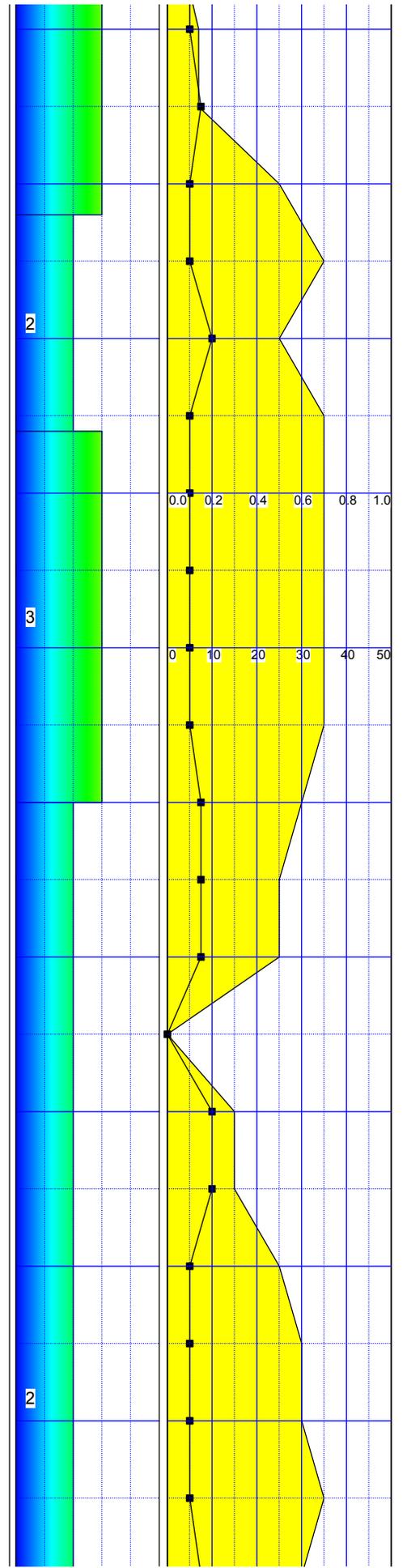
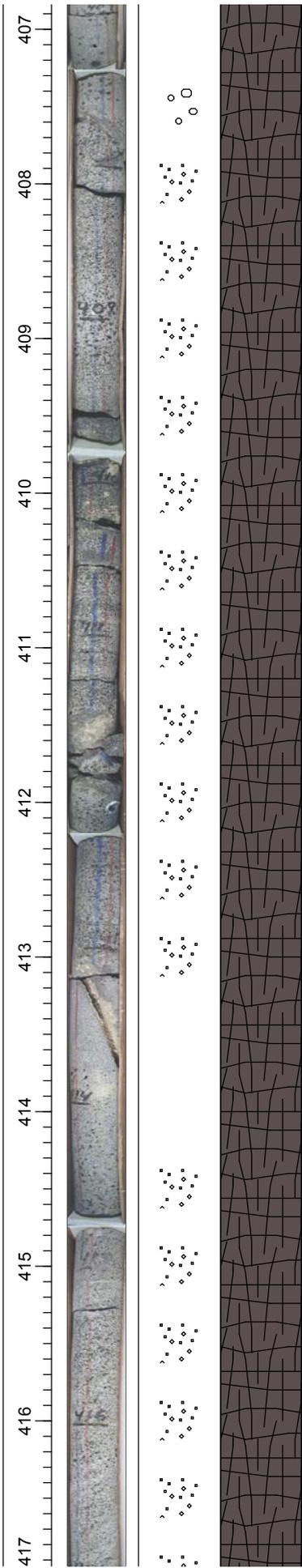
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

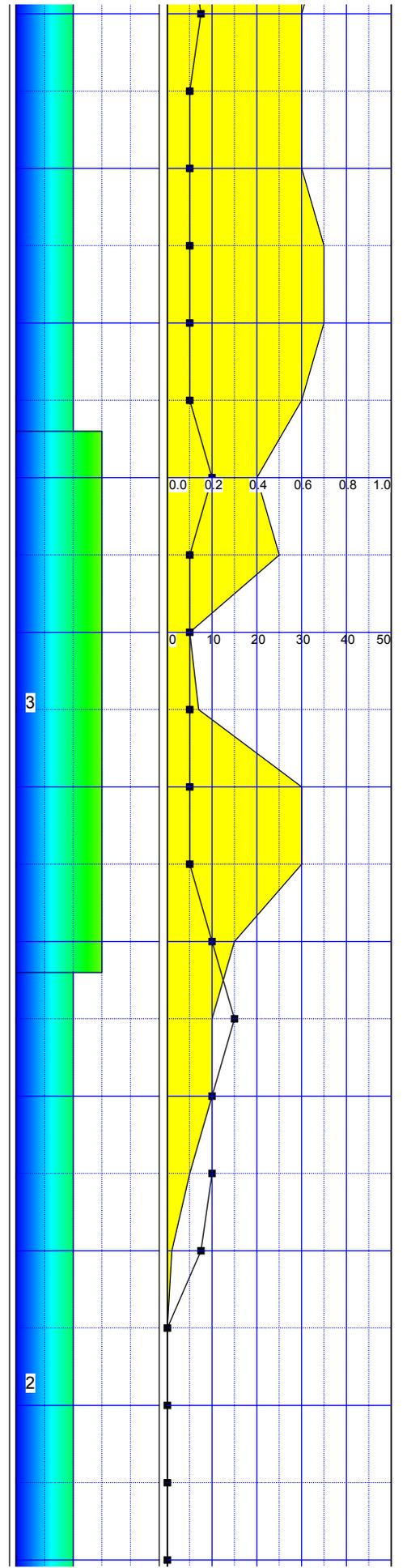
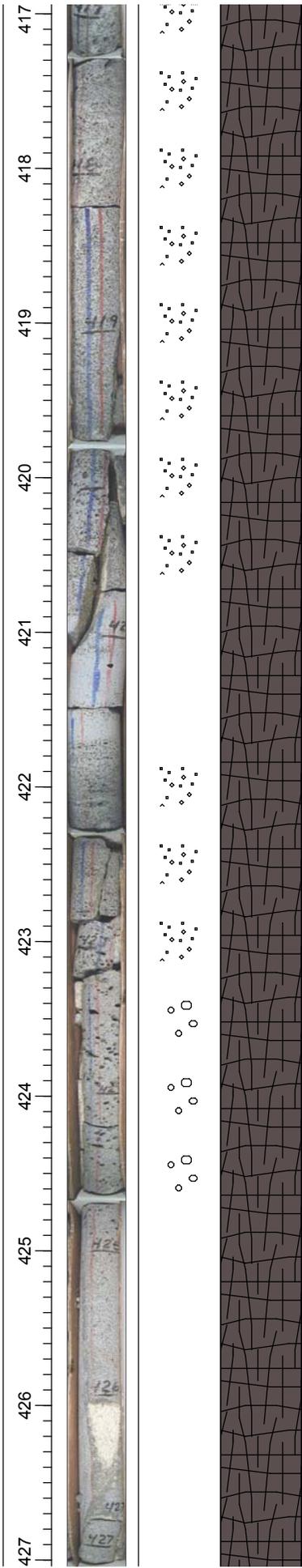
Xenoliths: None noted

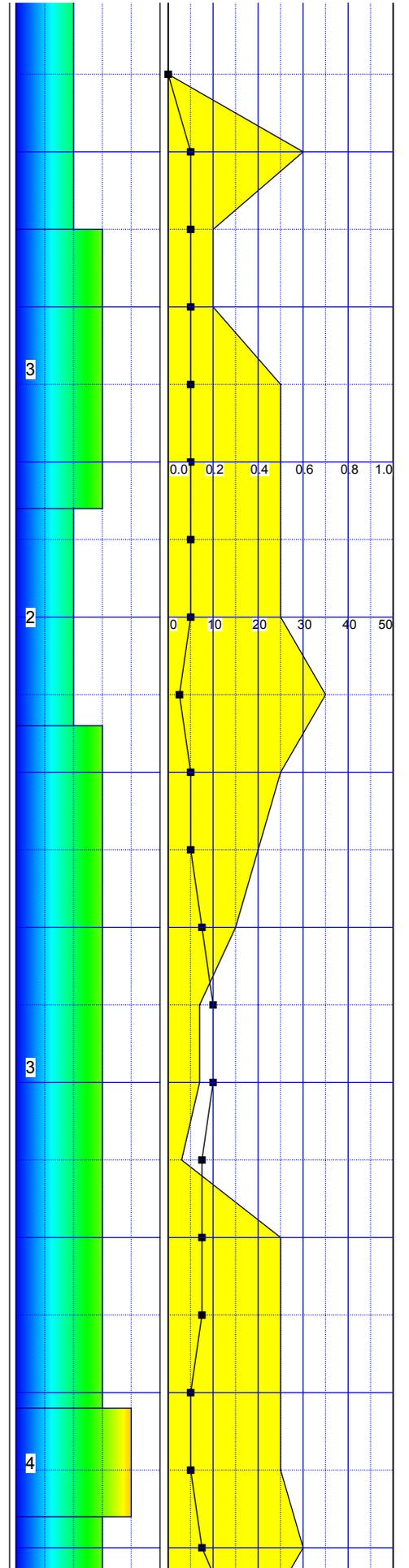
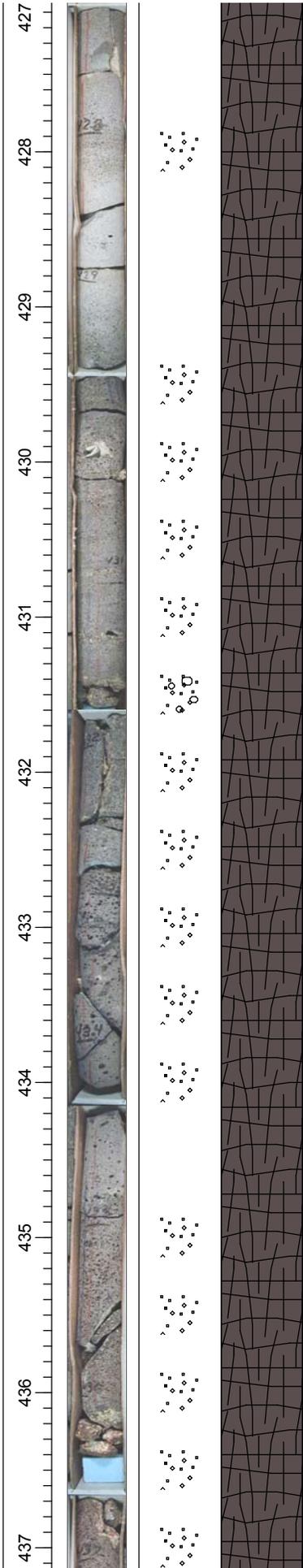
Alteration Activity: Some fractures and nearby vesicles filled with silts and clays in addition to mild bleaching.

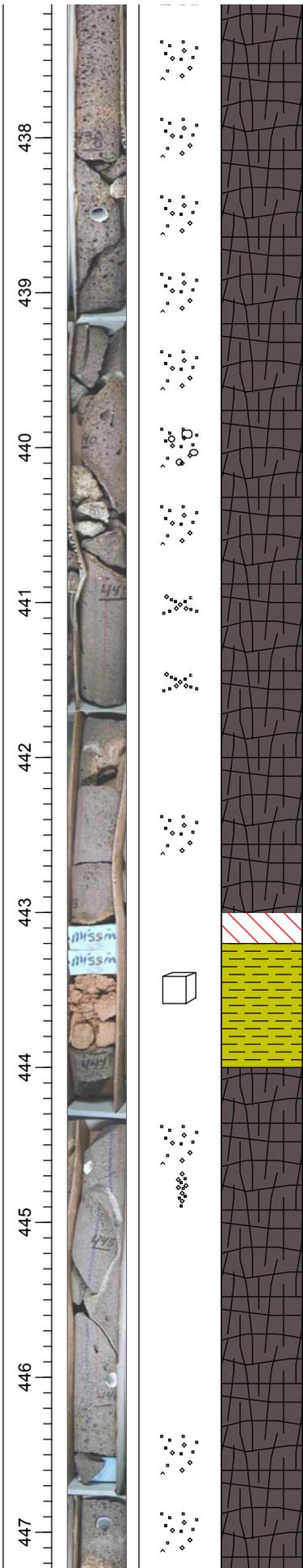






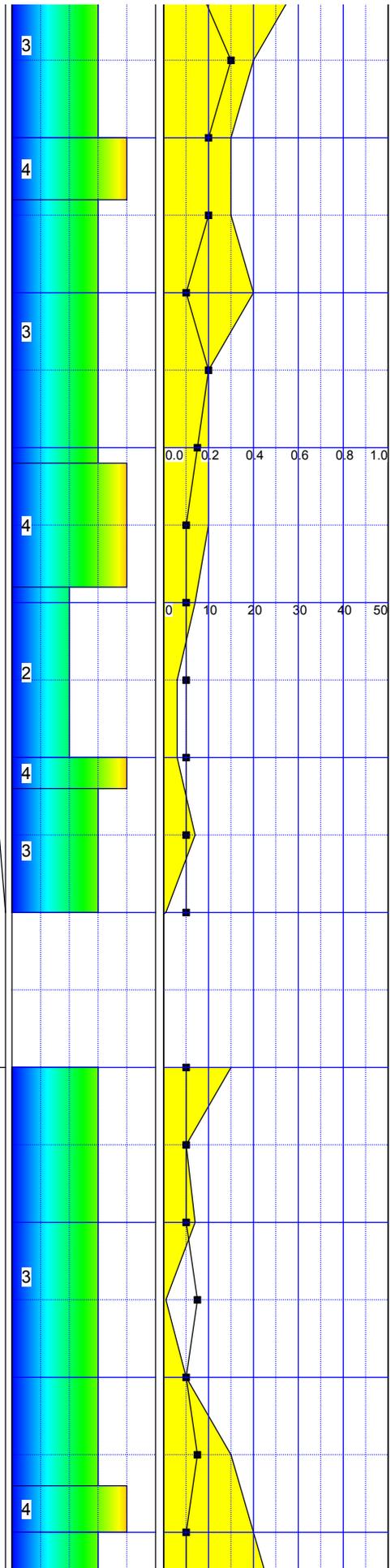


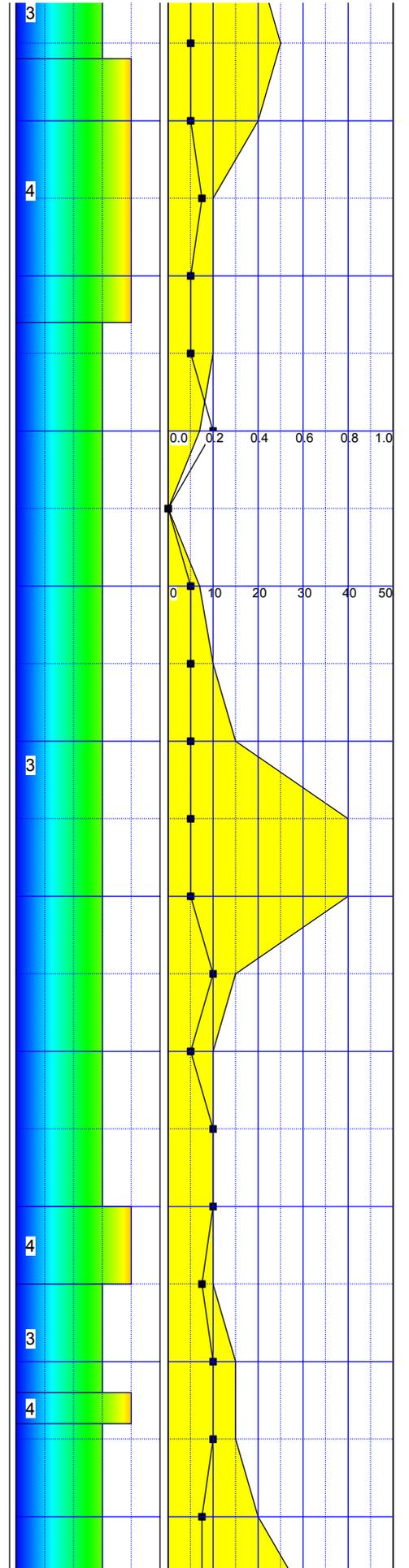
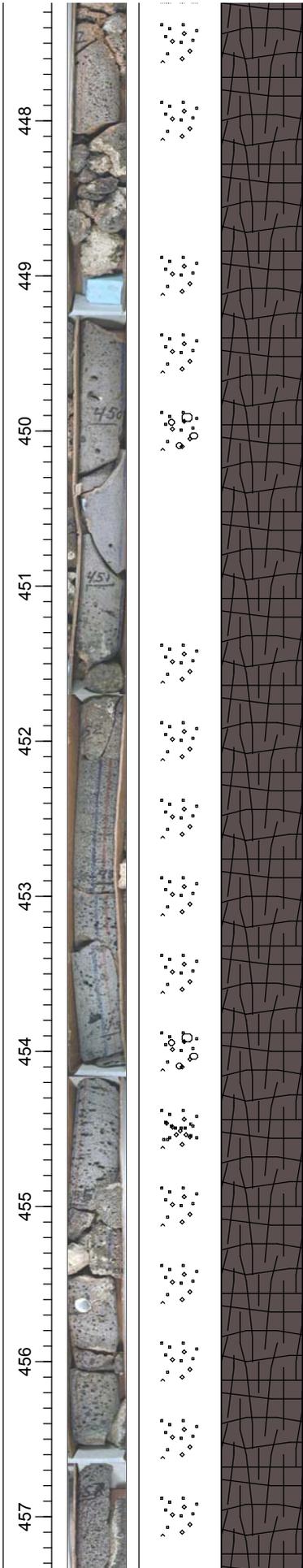


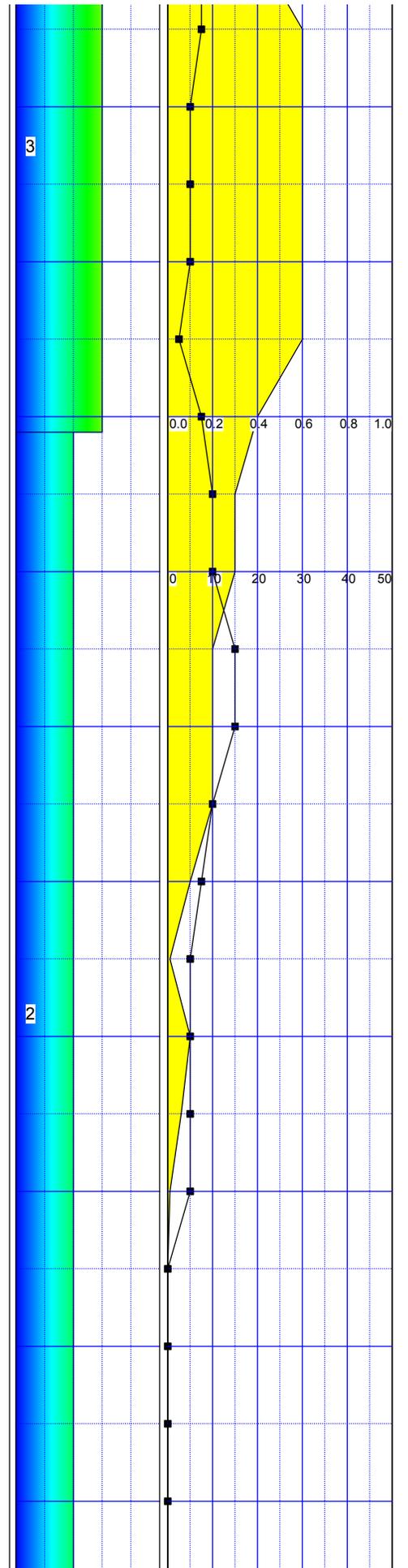
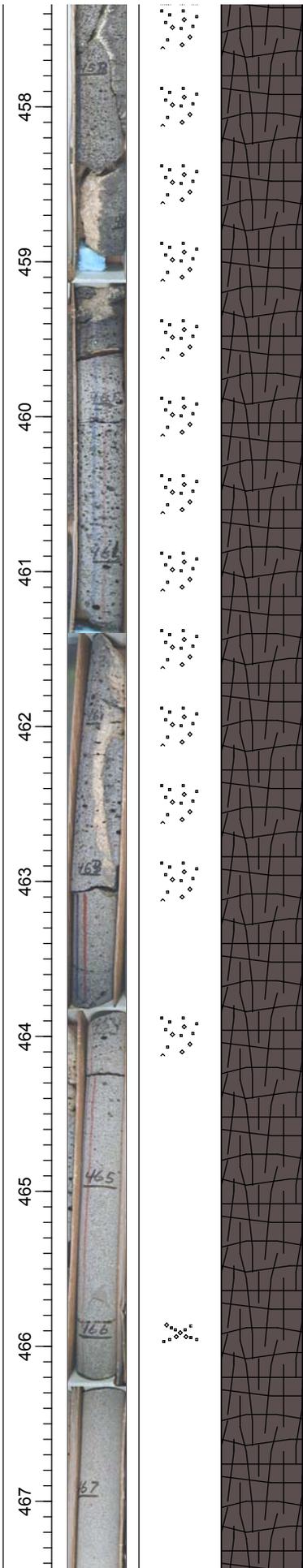


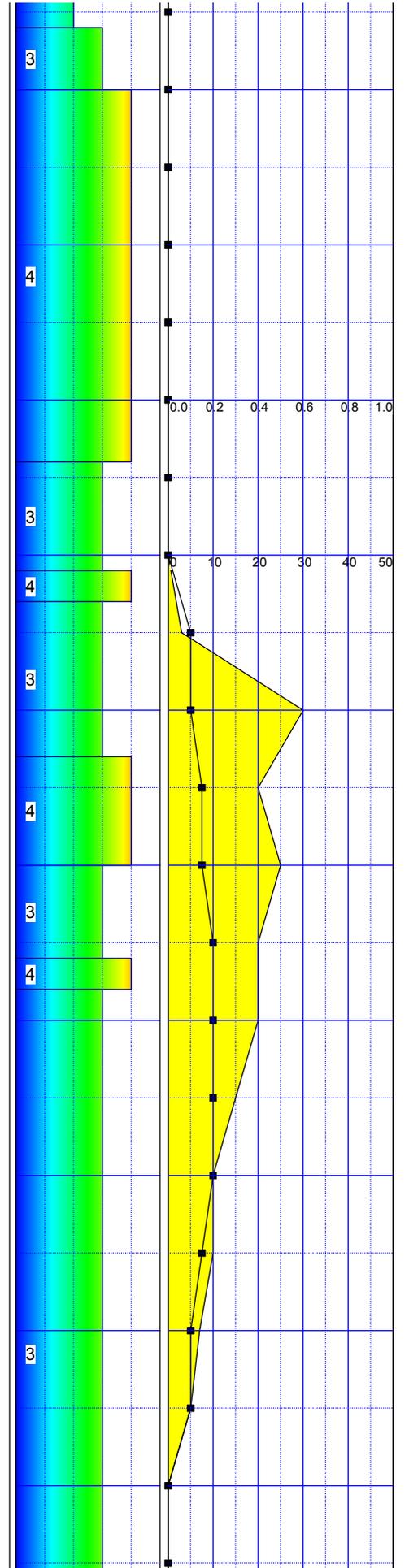
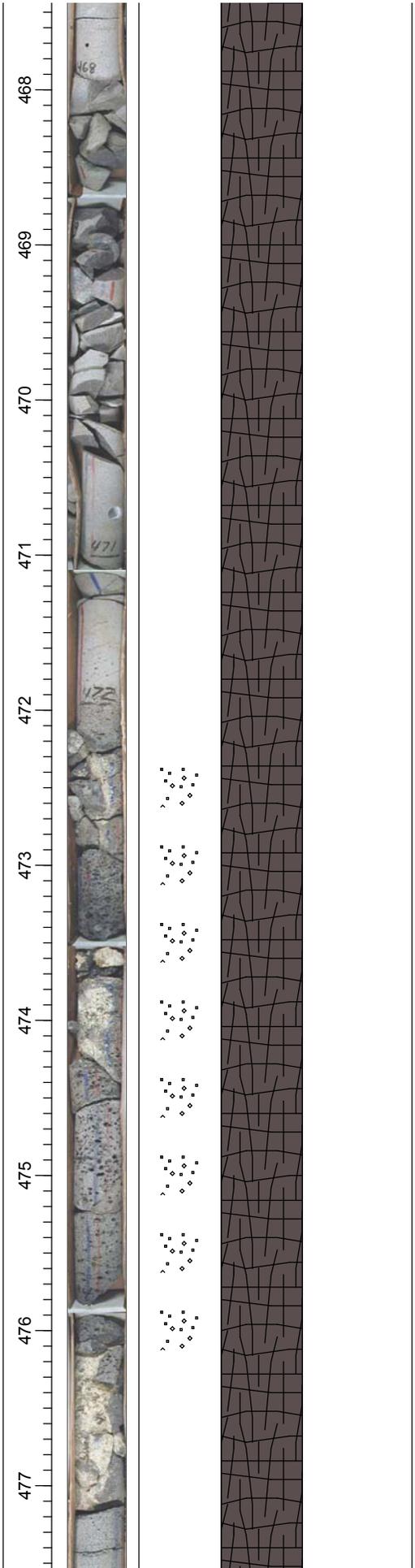
SILT AND CLAY: Color: Light brown  
 Consistence: Friable  
 Structure: Structureless (Massive)  
 Free Carbonates: No  
 Rocks: Few 1 - 3 cm, matrix-supported, subangular pale brown, vesicular rock fragments.  
 Roots/fossils: Many <1 mm sinuous holes.

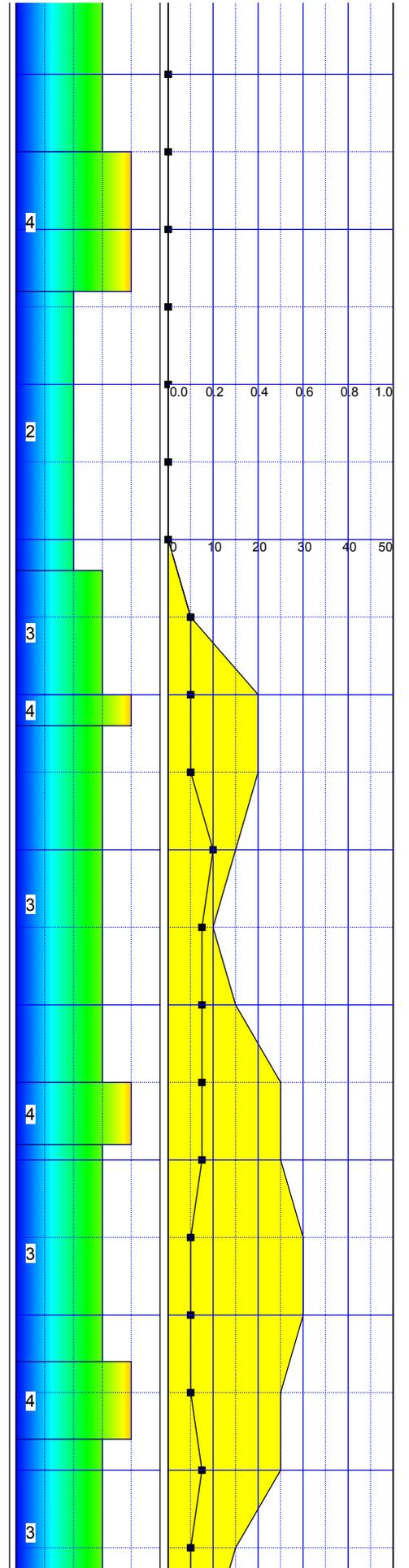
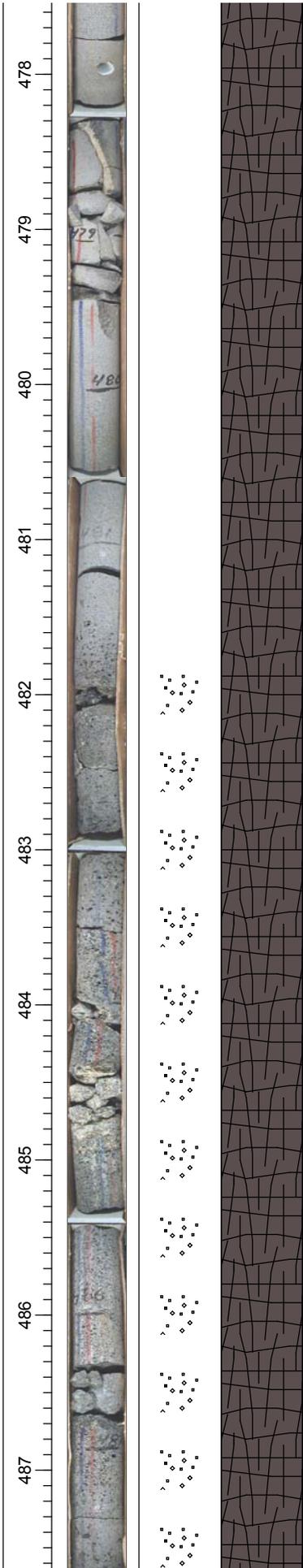
BASALT: Color: Varies between pale brown, grayish red, dark gray and light brownish gray  
 Magnetic Properties: Very slightly magnetic  
 Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.  
 Xenoliths: None noted  
 Alteration Activity: Some fractures and nearby vesicles filled with silts and clays in addition to mild bleaching.

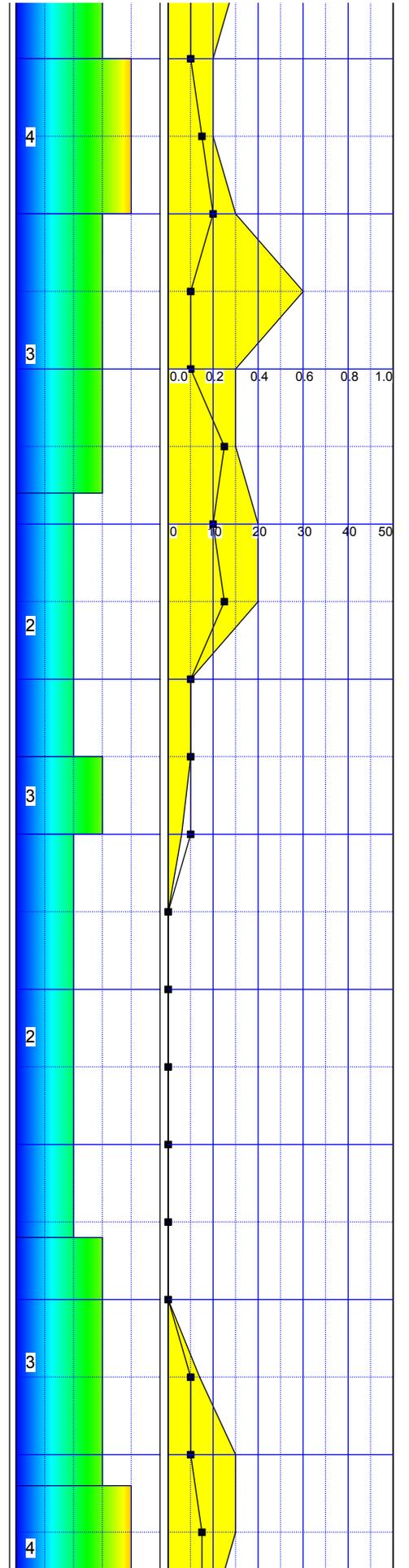
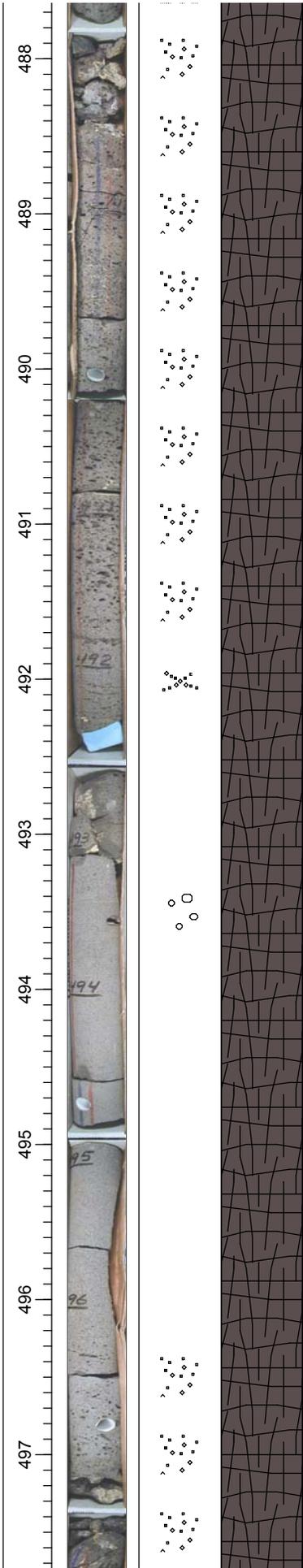


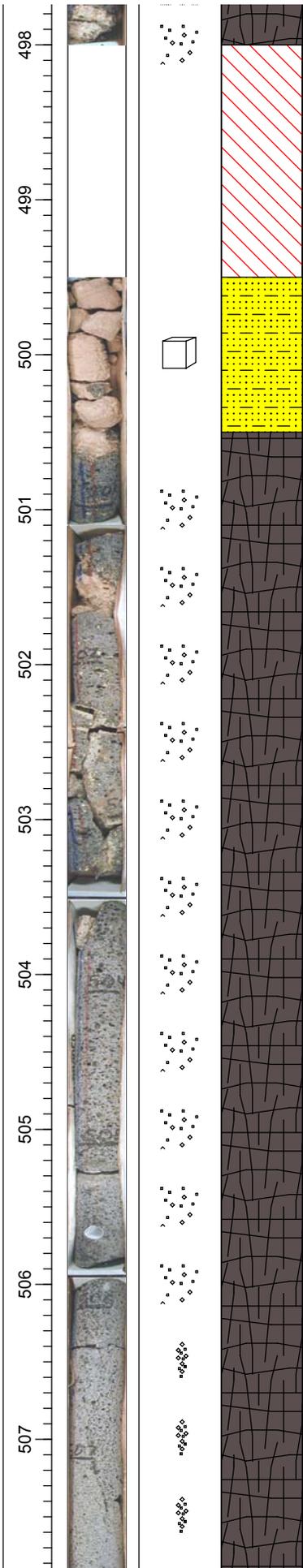












MISSING INTERVAL

SANDS WITH FINES: Color: Moderate yellowish brown

Consistence: Friable

Structure: Structureless (massive)

Free Carbonates: No

Rocks: Few 2-5 mm matrix-supported, subangular rock fragments -- pale brown, vesicular.

Roots/fossils: None noted

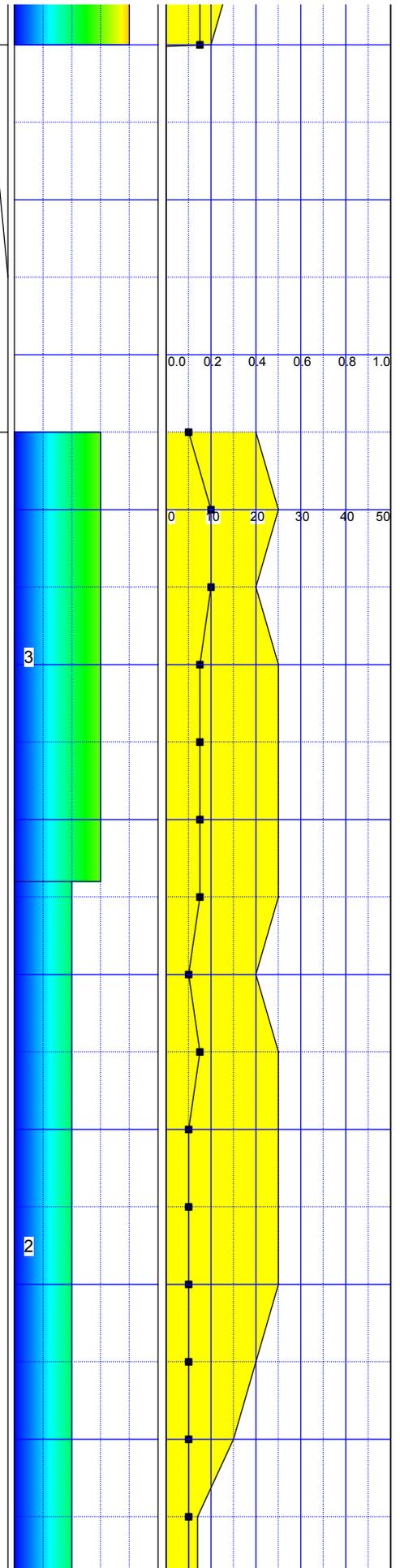
BASALT: Color: Varies between brownish gray and medium gray

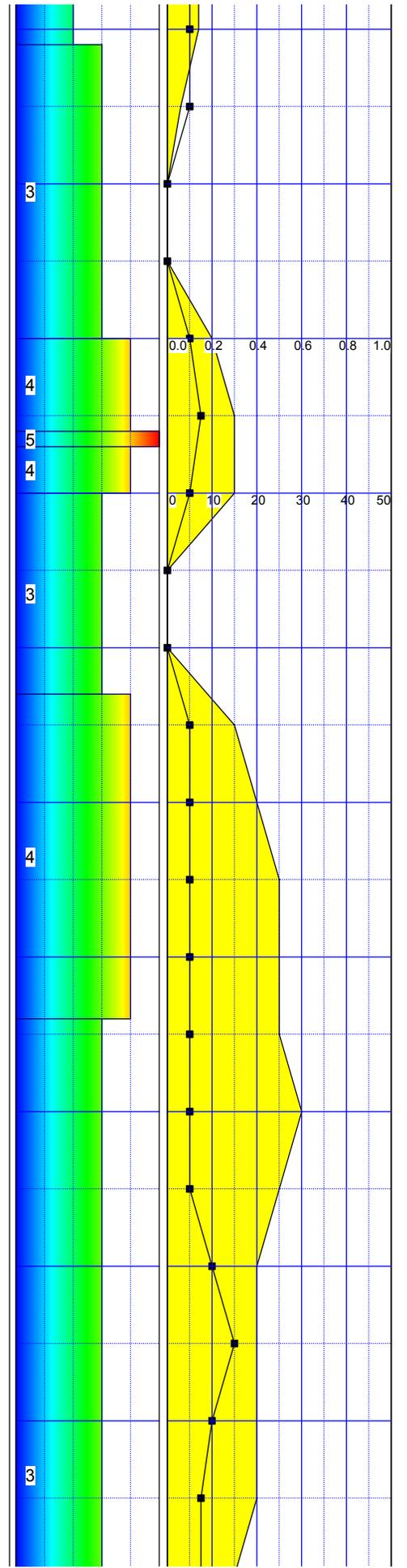
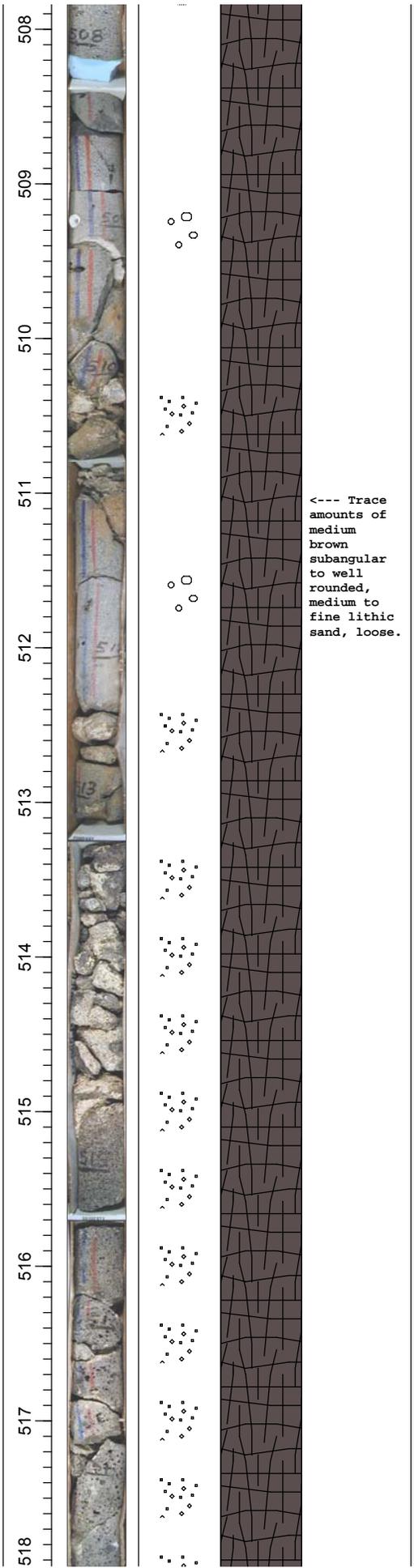
Magnetic Properties: nonmagnetic

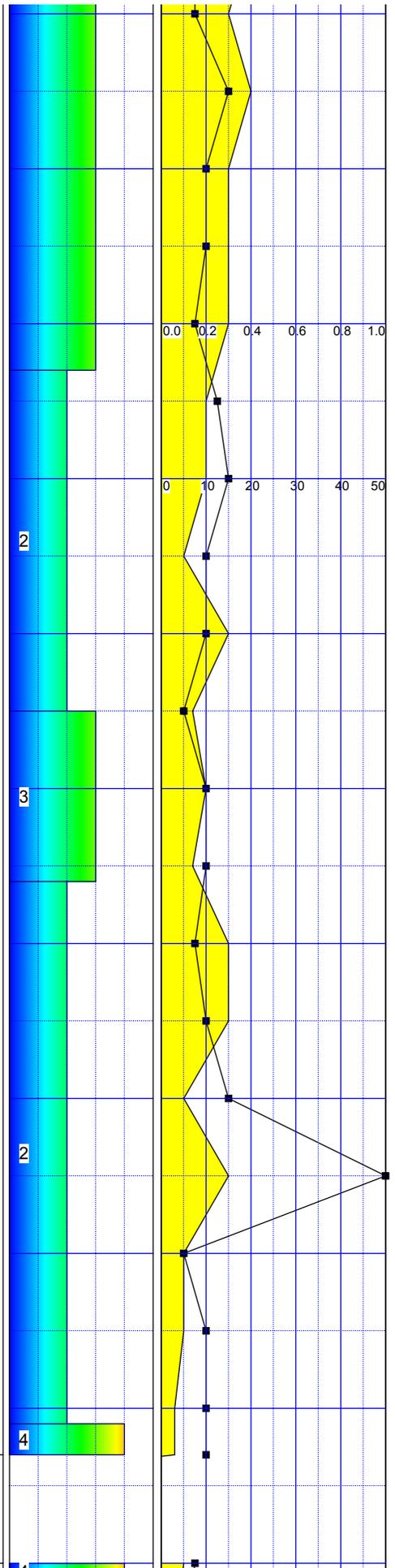
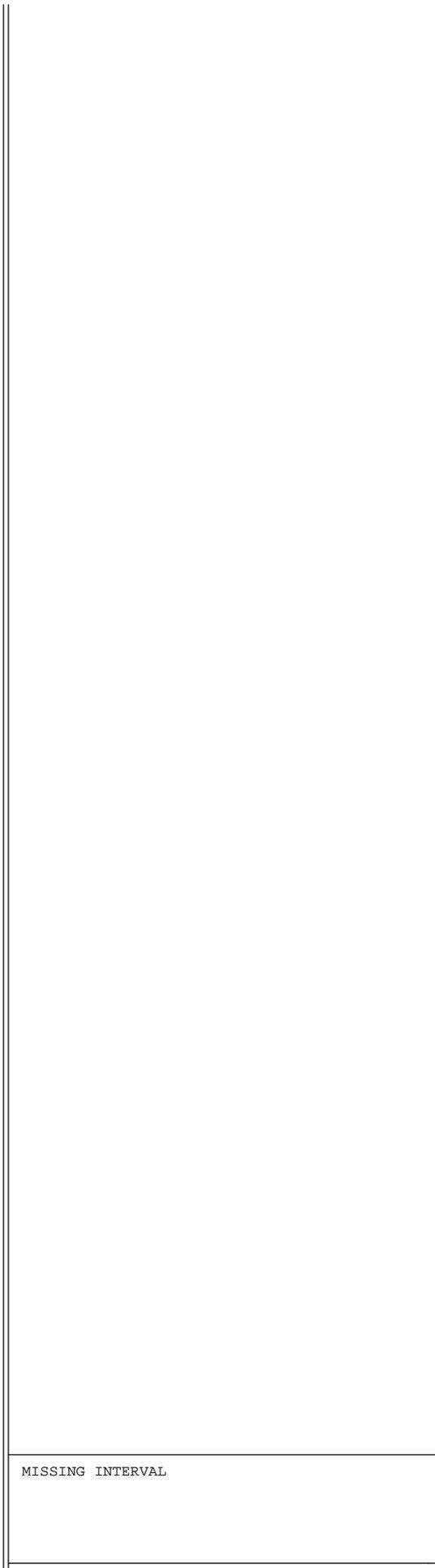
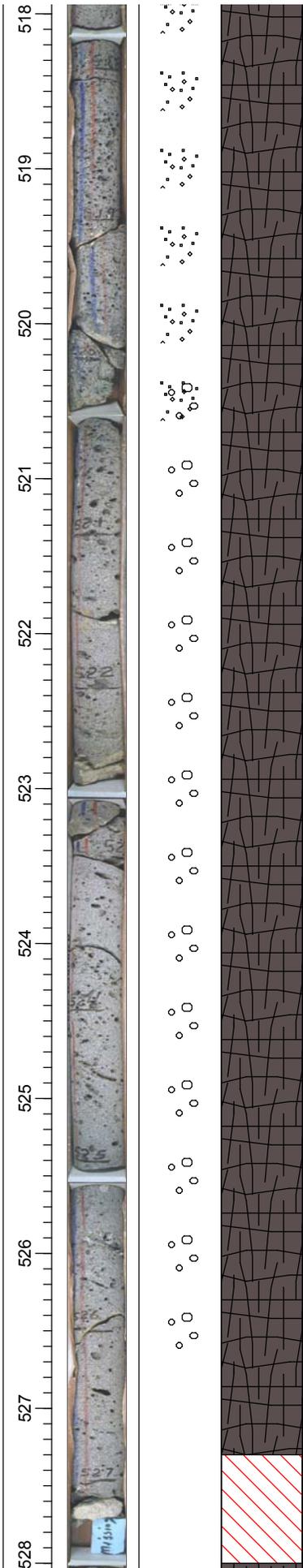
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

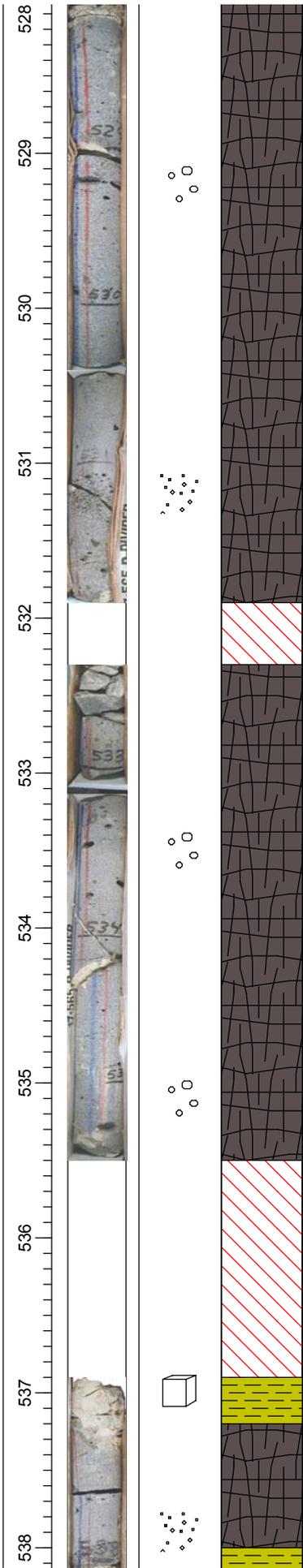
Xenoliths: None noted

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









BASALT: Color: Medium gray

Magnetic Properties: Nonmagnetic

Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, 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 in addition to mild bleaching.

MISSING INTERVAL

BASALT: Color: Medium gray

Magnetic Properties: Nonmagnetic

Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, 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 in addition to mild bleaching.

MISSING INTERVAL

SILT AND CLAY: Particularly clay-rich

Color: Grayish orange

Consistence: Extremely firm

Structure: Structureless (Massive)

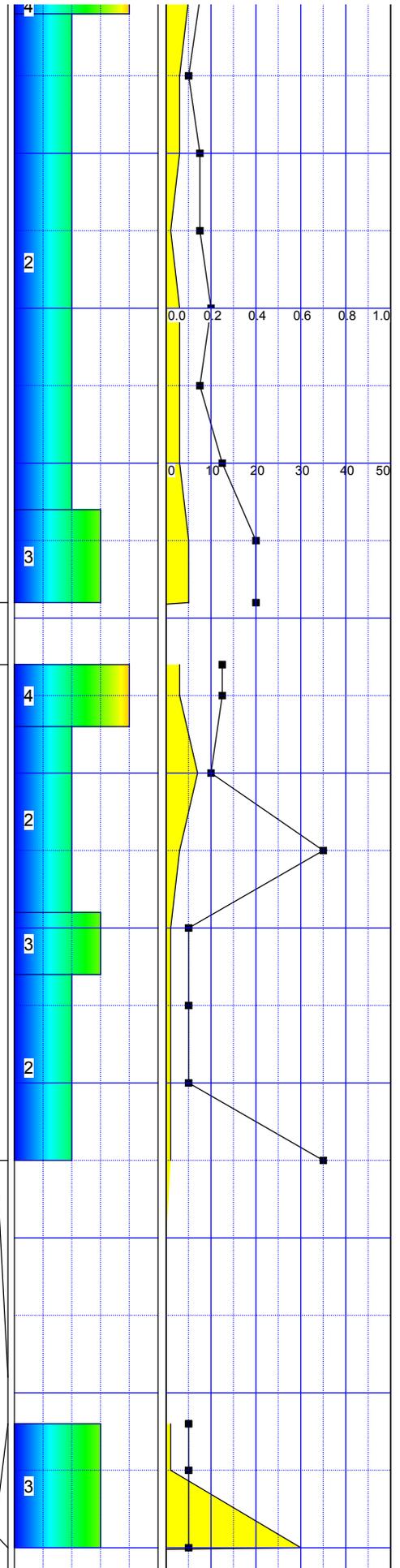
Free Carbonates: Yes

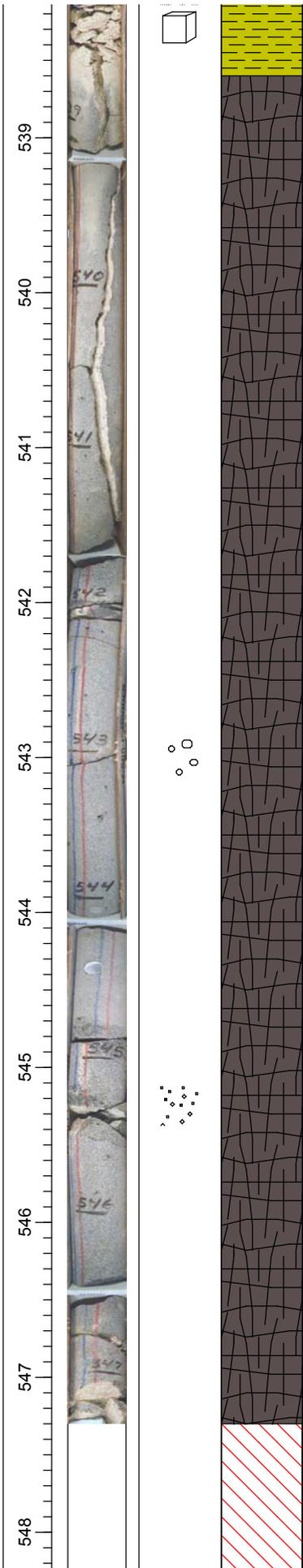
Rocks: Many clast-supported gravel size (up to 8cm) angular to subangular prismatic to spherical rock fragments -- pale brown, vesicular

Roots/fossils: None noted

BASALT: Same as basalt above/below

SILT AND CLAY: Same as above, except as follows:





Rocks: Few matrix-supported fine pebble size (1cm) angular to subangular pale brown, vesicular rock fragments

Free carbonates: Yes

Roots/fossils: None noted

BASALT: Color: Medium gray

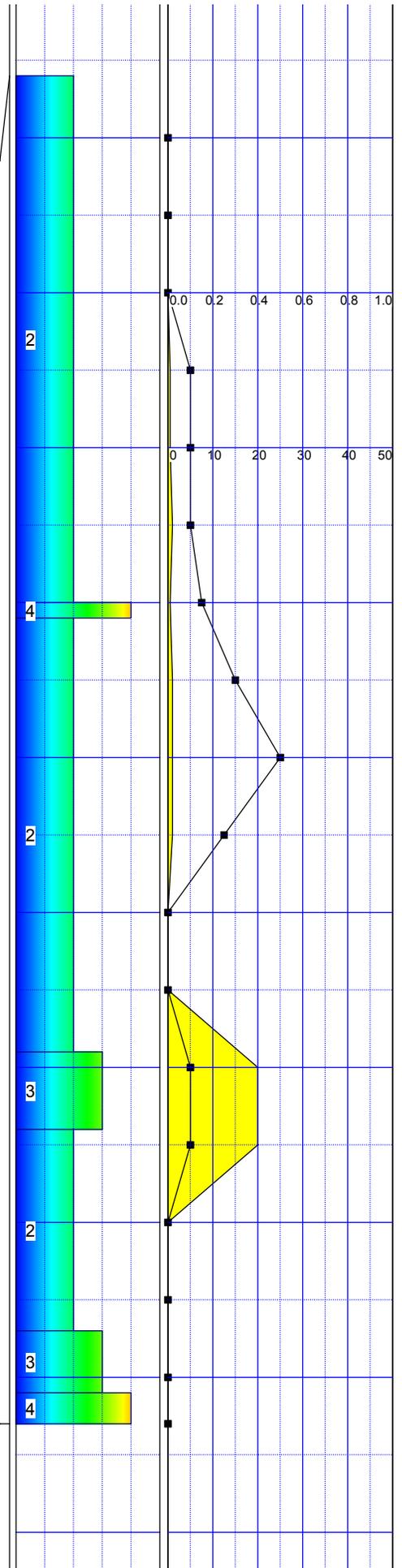
Magnetic Properties: nonmagnetic

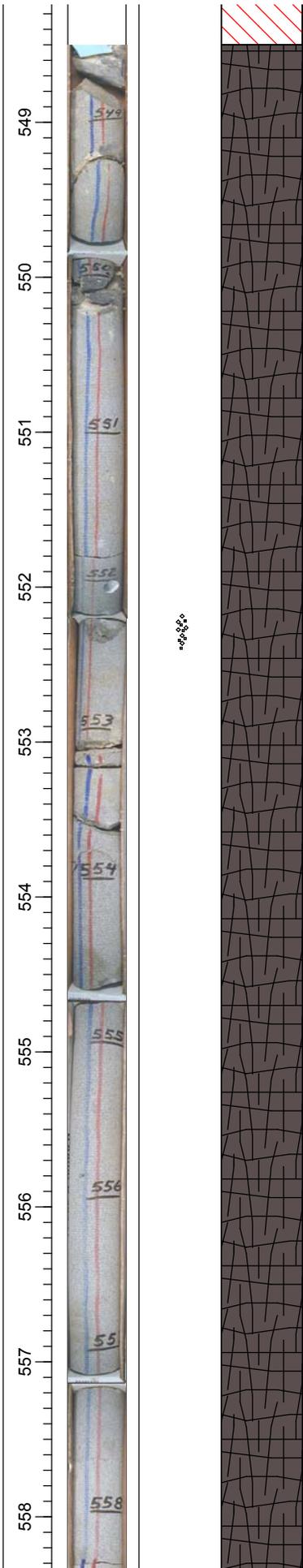
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

Xenoliths: None noted

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

MISSING INTERVAL





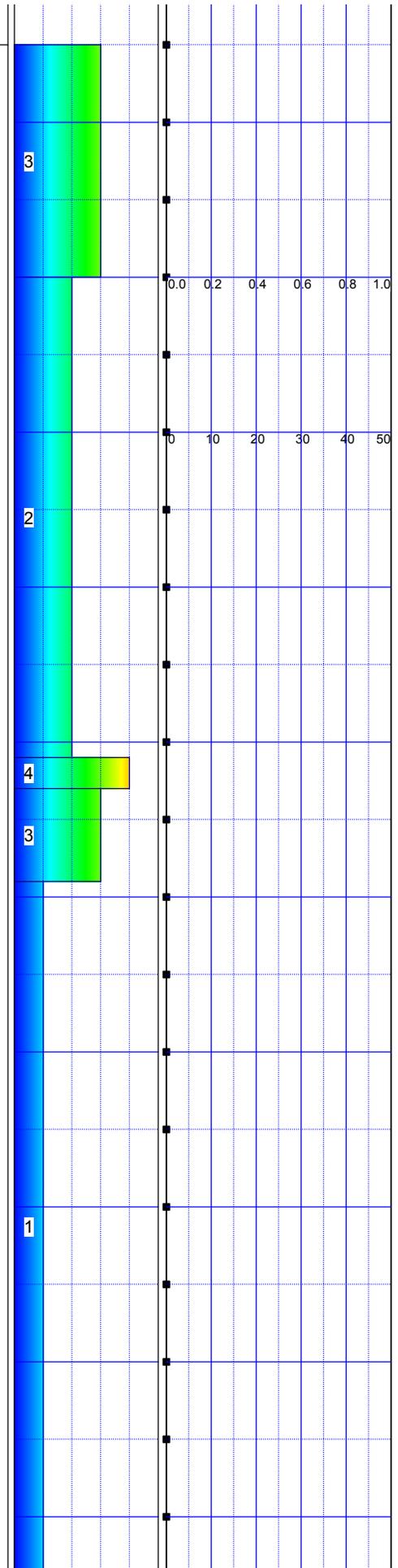
BASALT: Color: Varies between medium gray and grayish brown

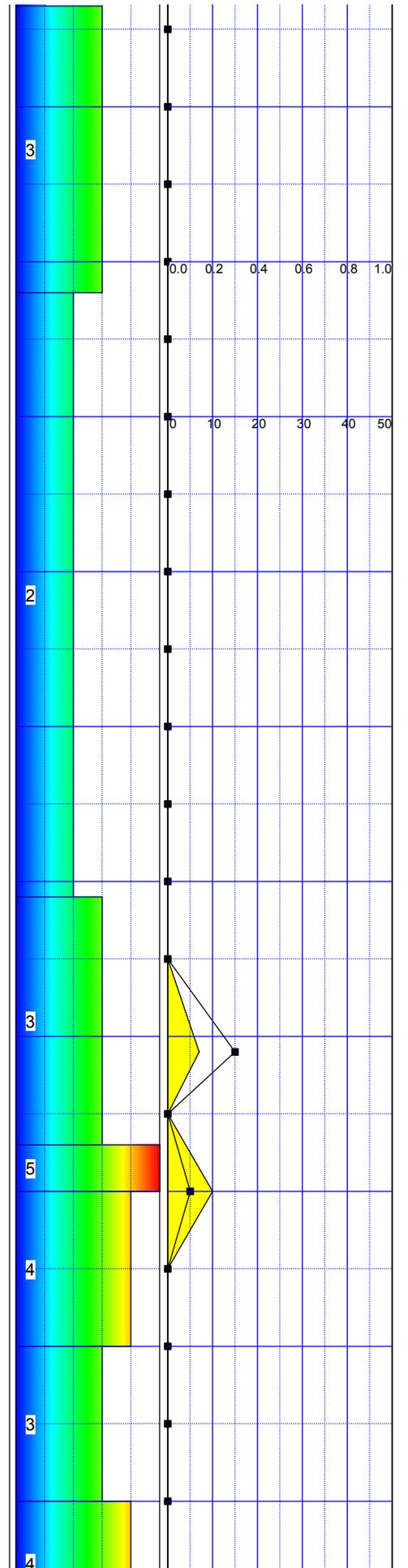
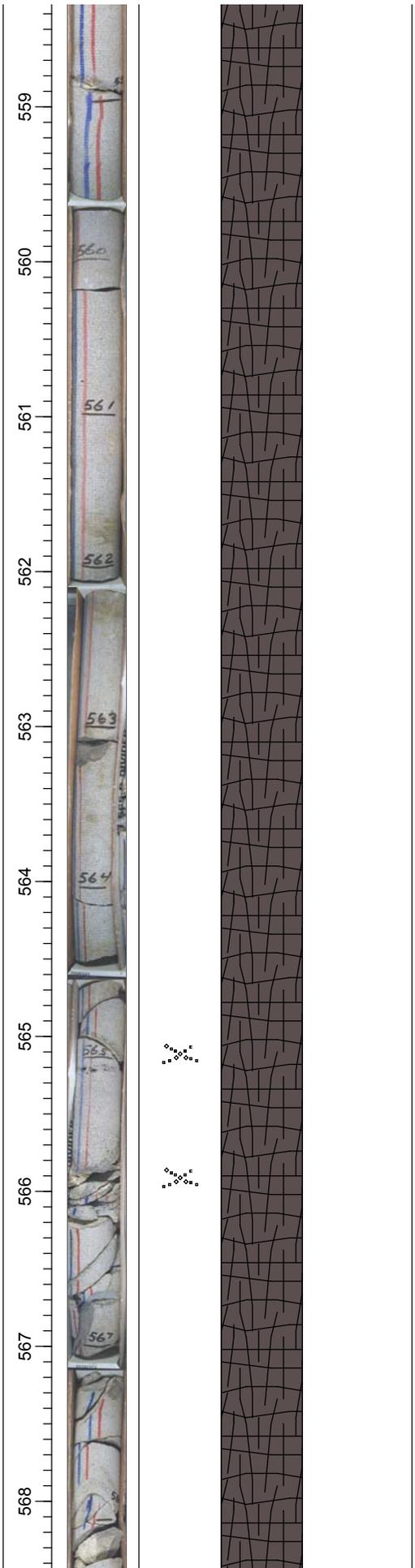
Magnetic Properties: nonmagnetic

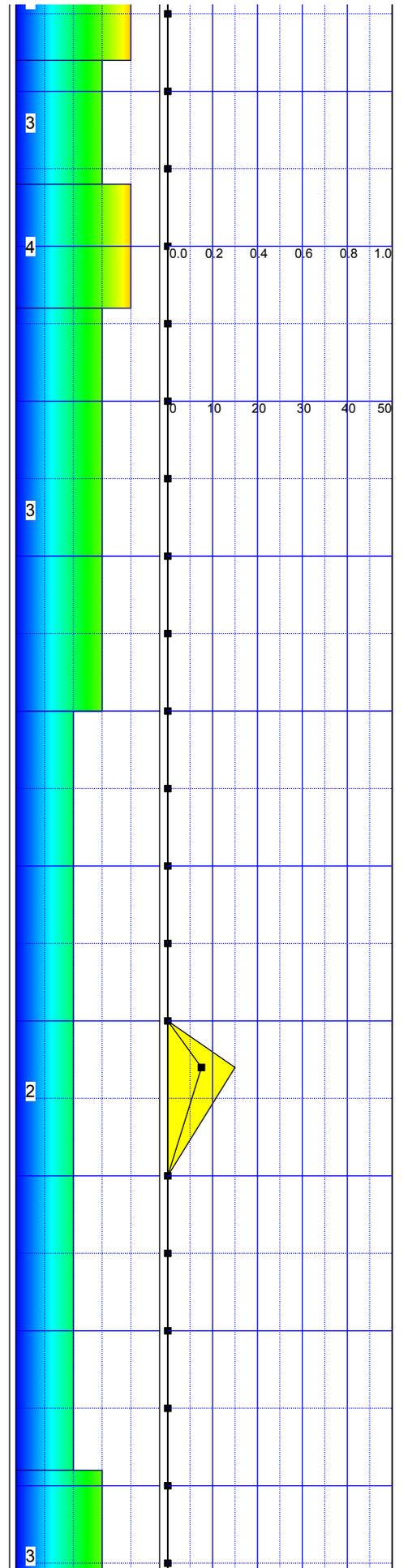
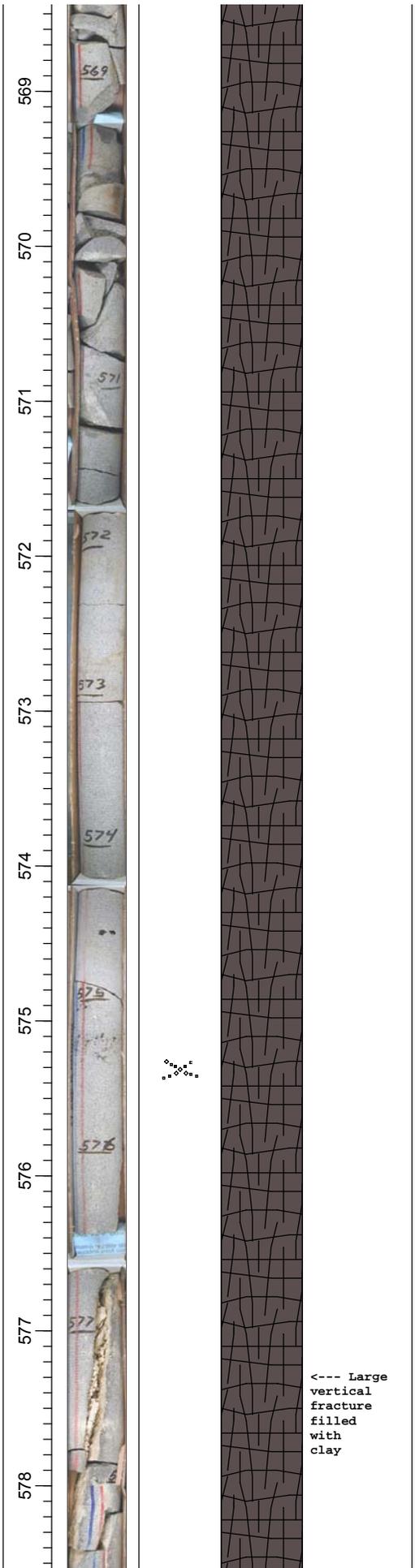
Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.

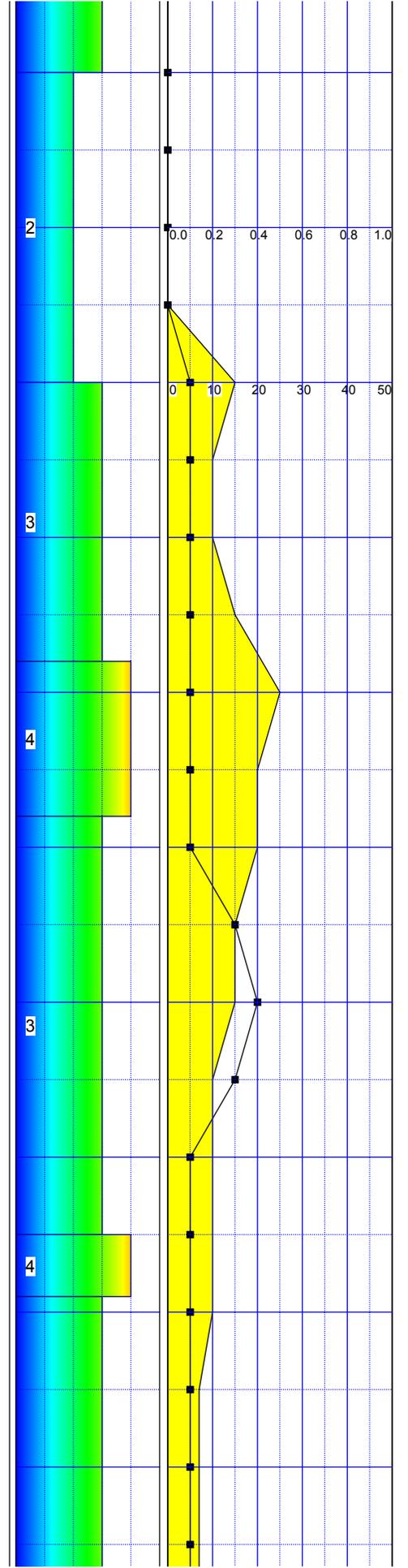
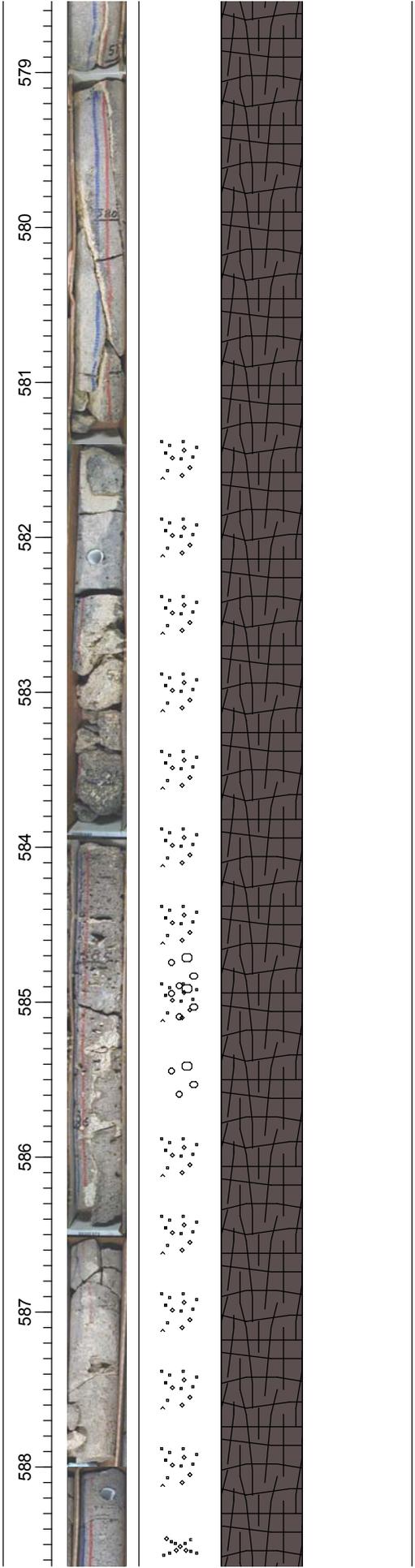
Xenoliths: None noted

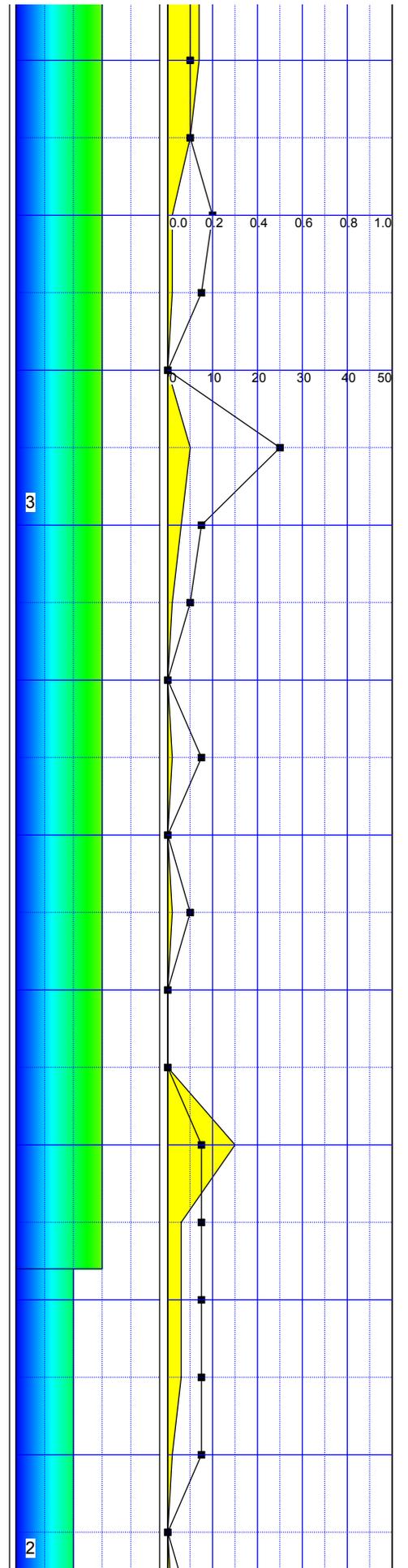
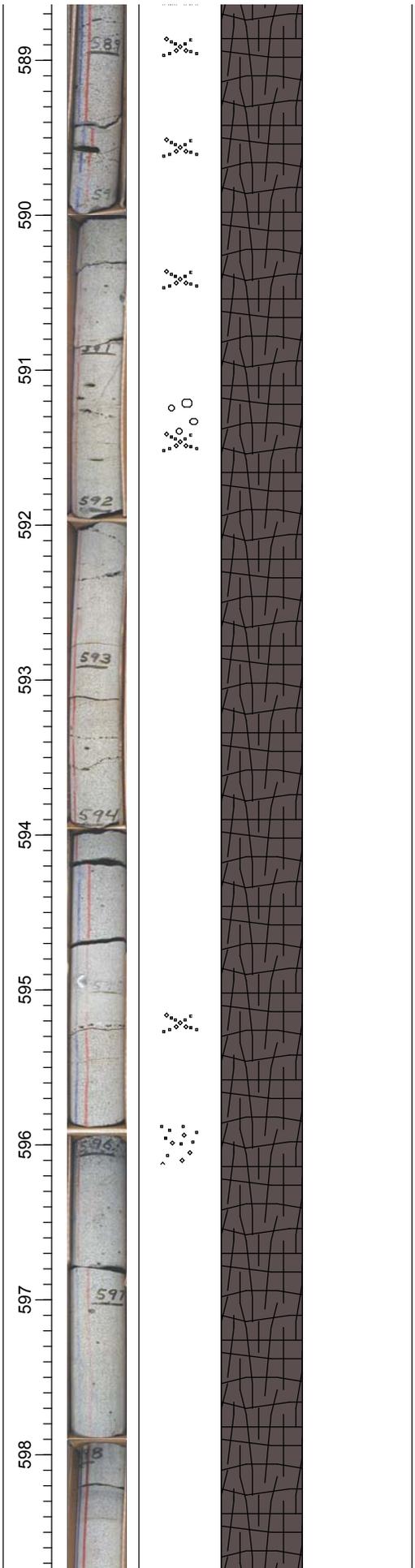
Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays in addition to mild bleaching.

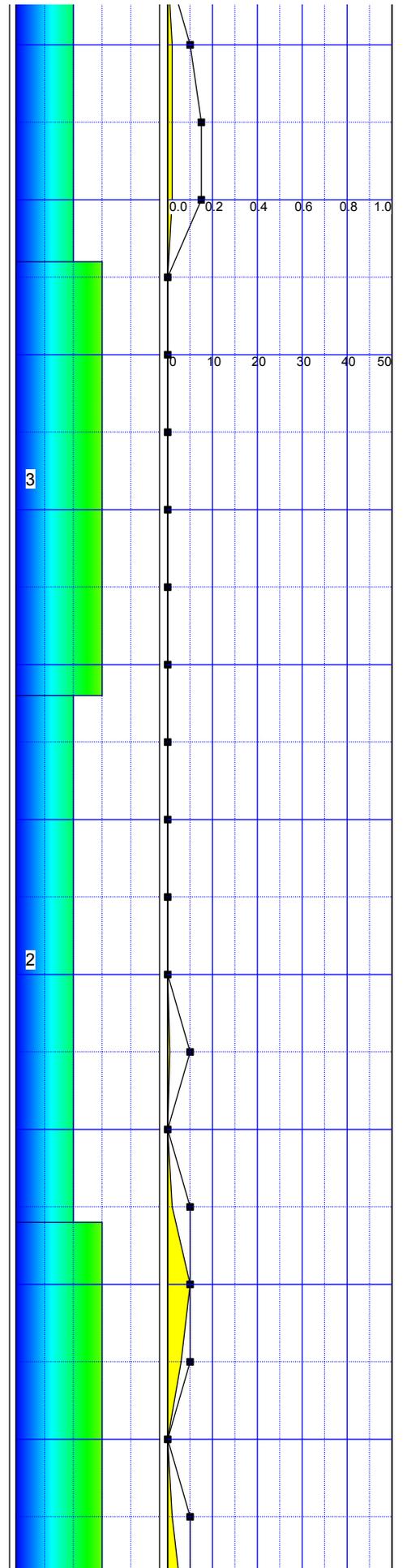
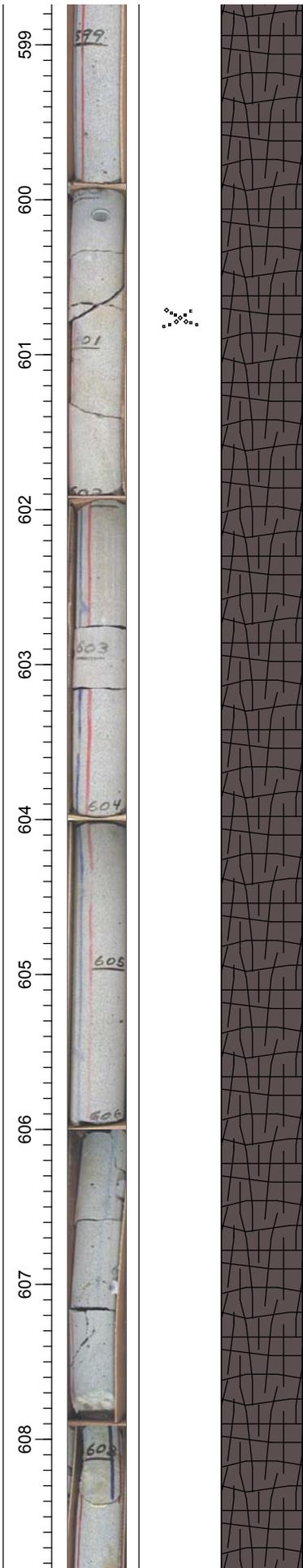


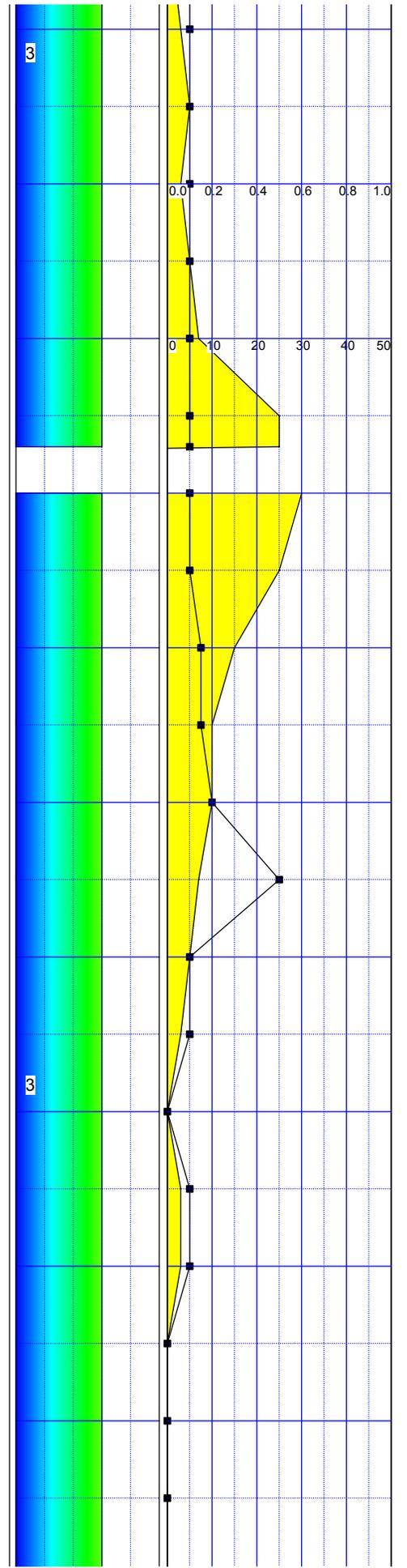
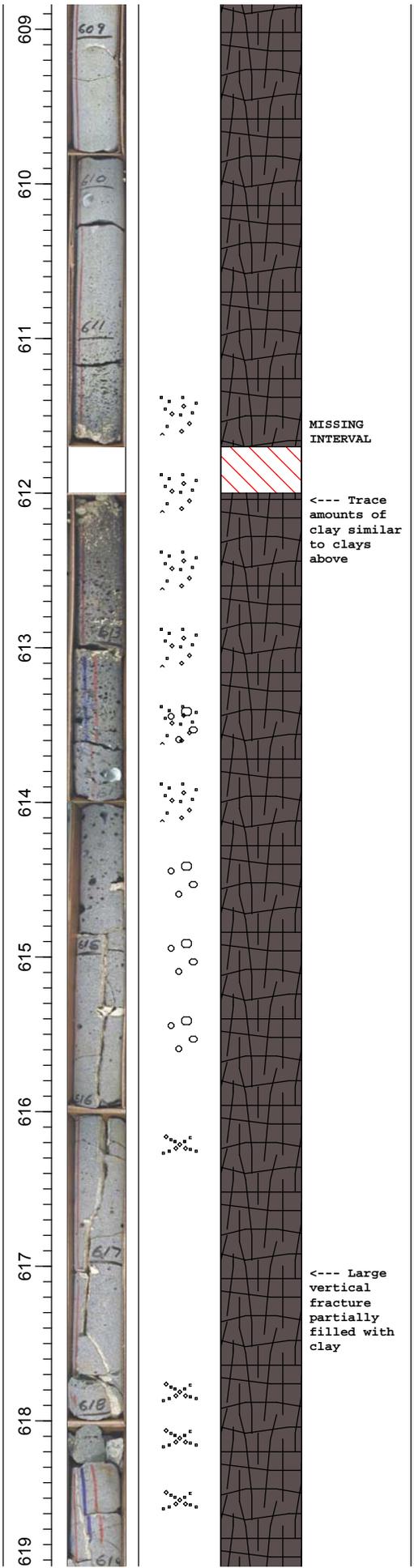


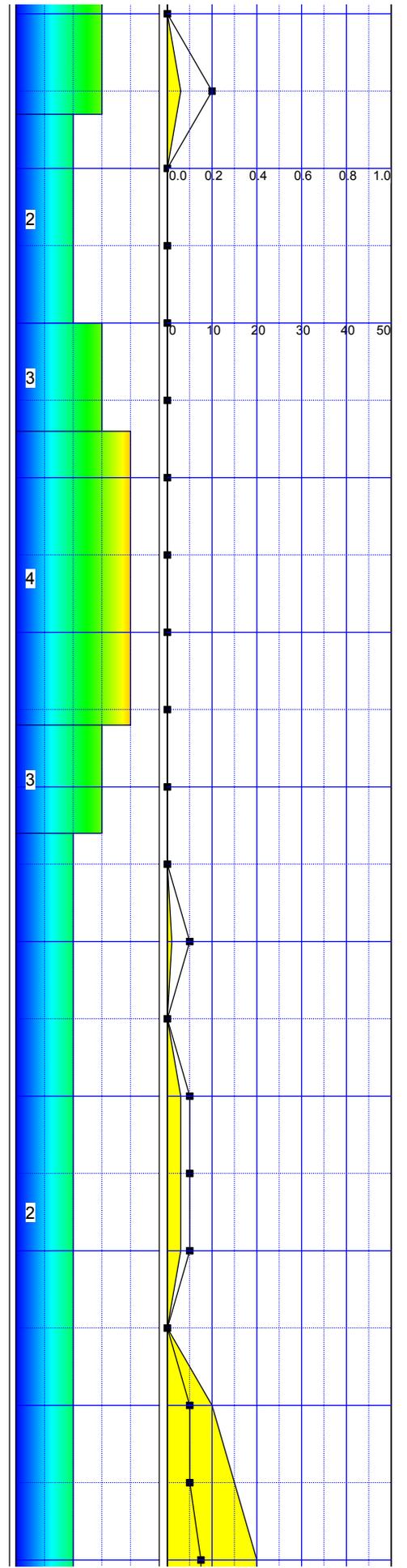
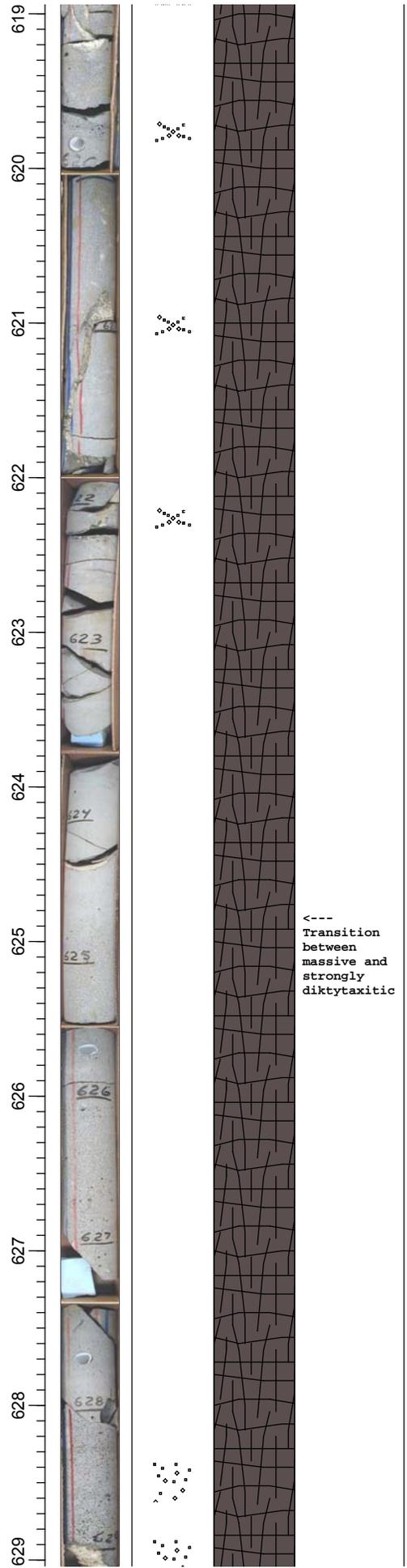


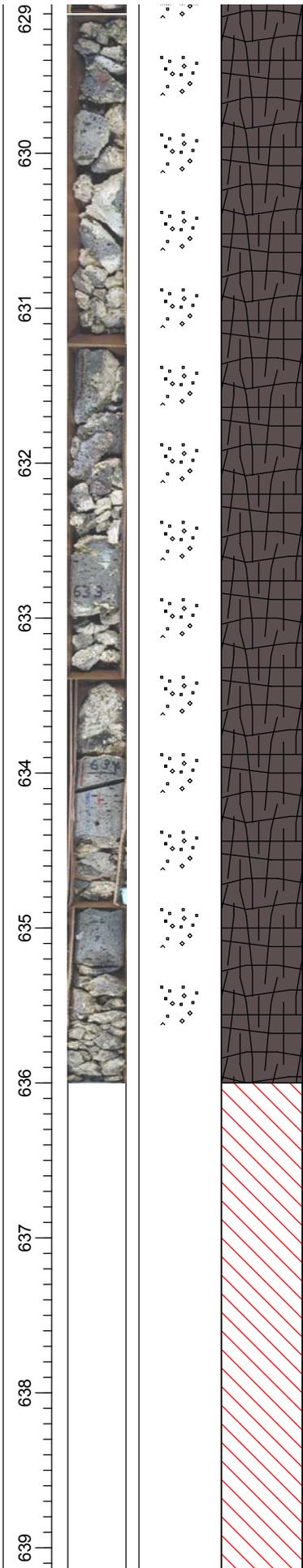




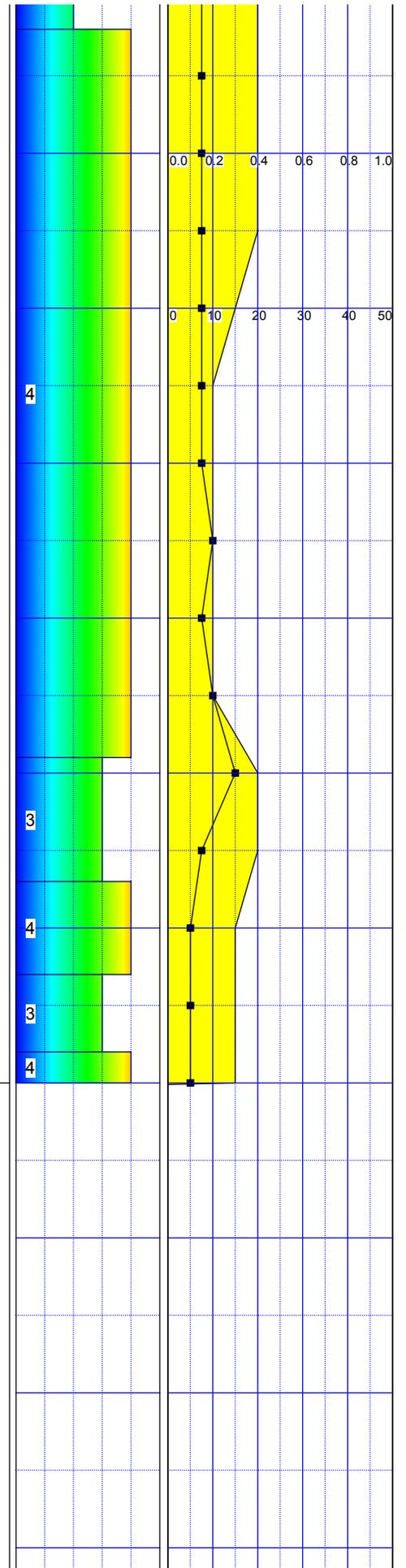


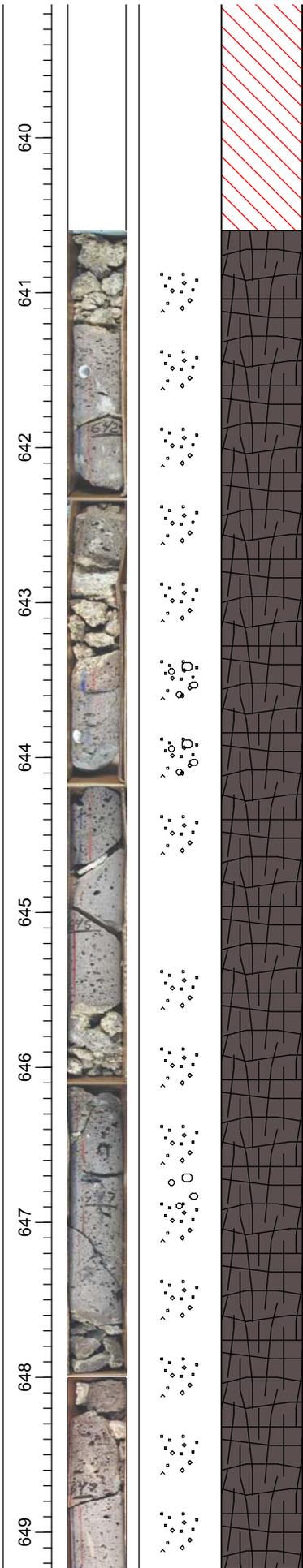






MISSING INTERVAL





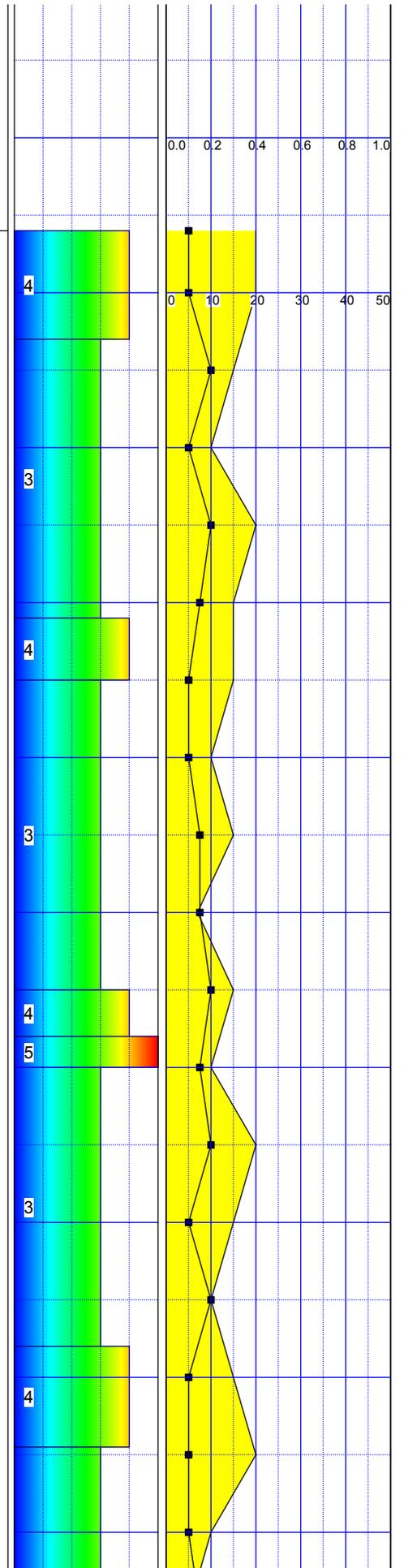
**BASALT:** Color: Pale brown at top grading into light brownish gray with depth

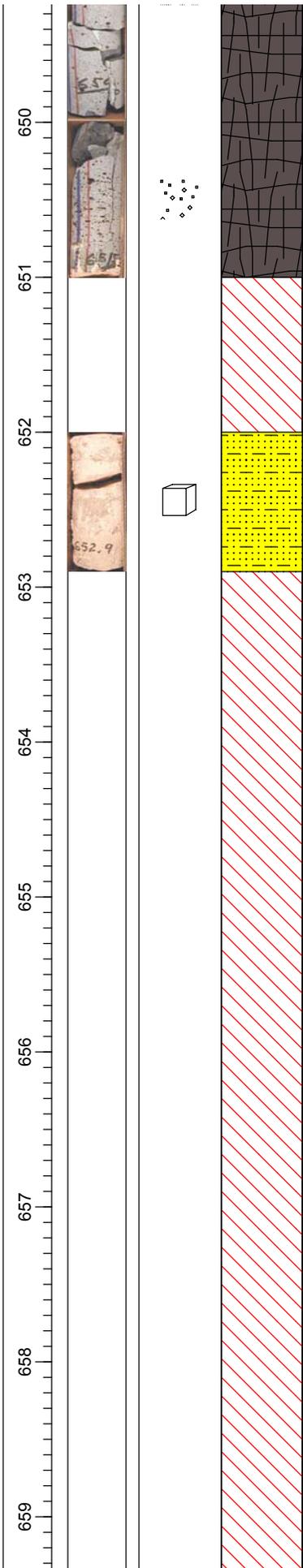
Magnetic Properties: Nonmagnetic

Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, 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

SANDS WITH FINES: Fines upward -- mostly silts and clays at top grading into medium sand with some larger fragments (see below)

Color: Light brown

Consistence: Extremely firm

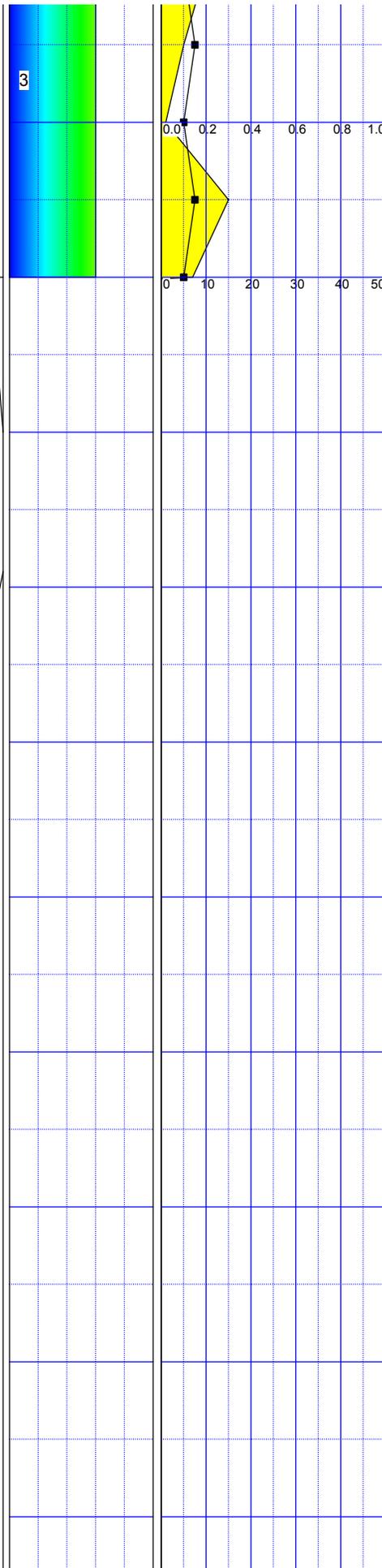
Structure: Structureless (Massive)

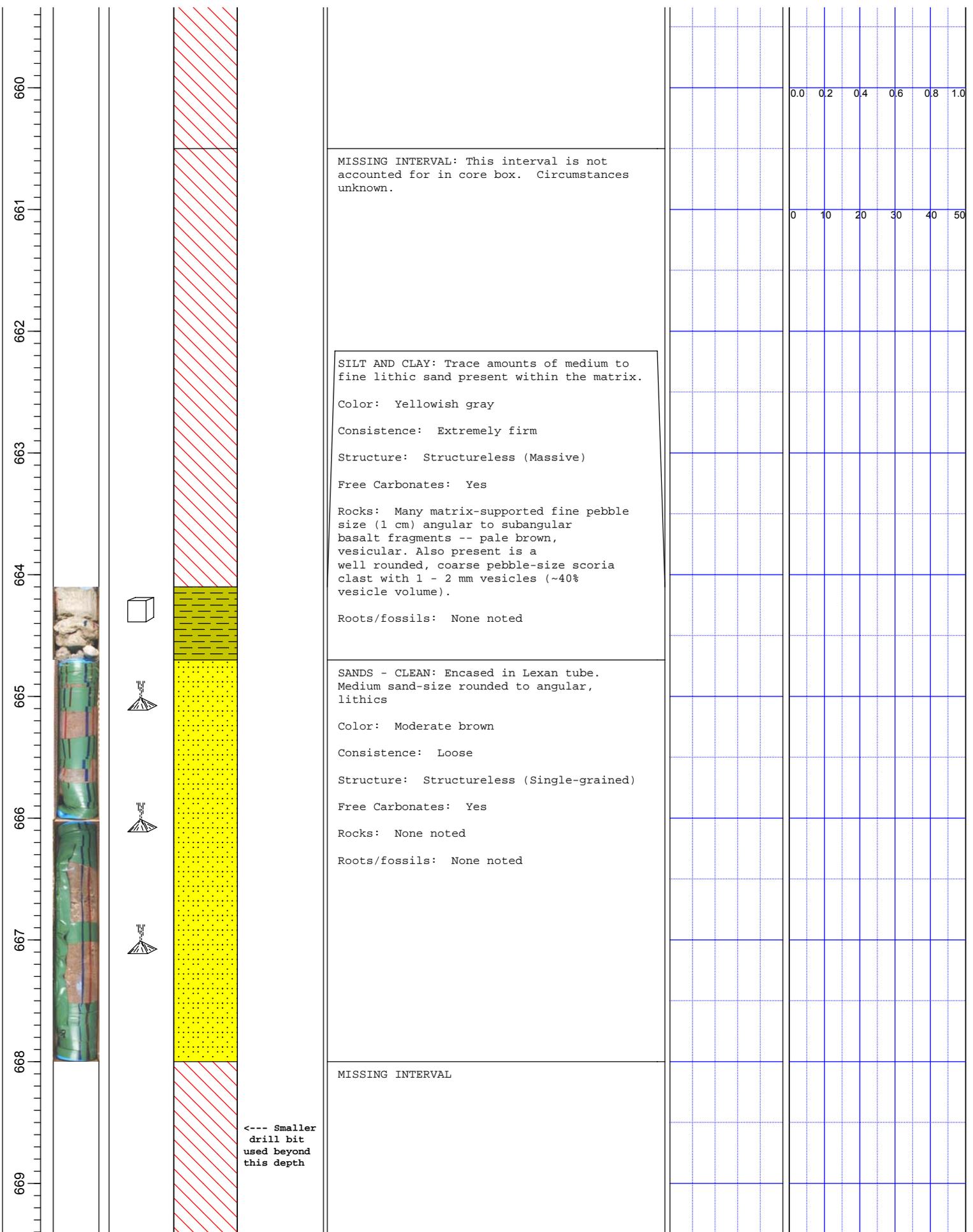
Free Carbonates: Yes

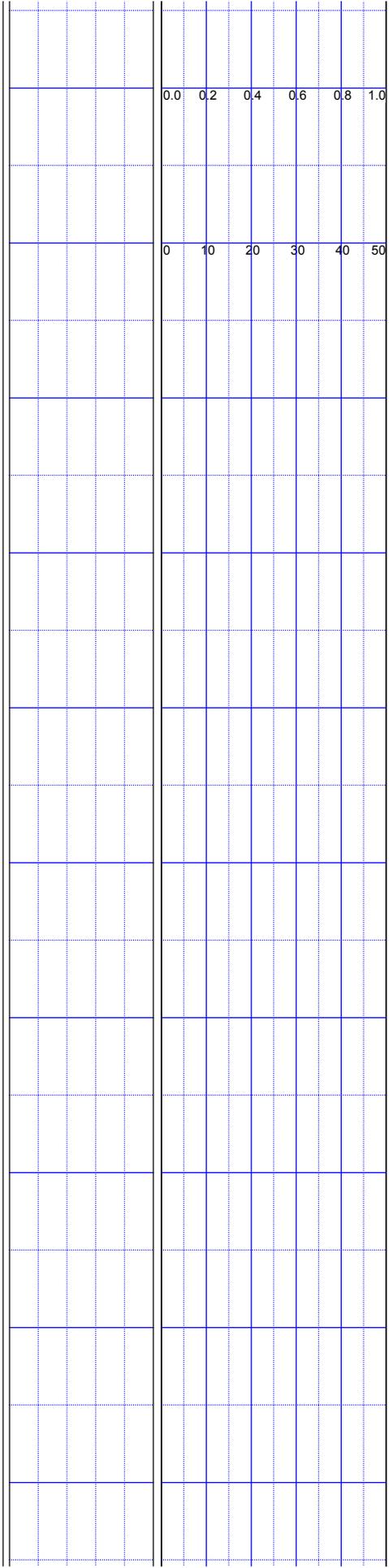
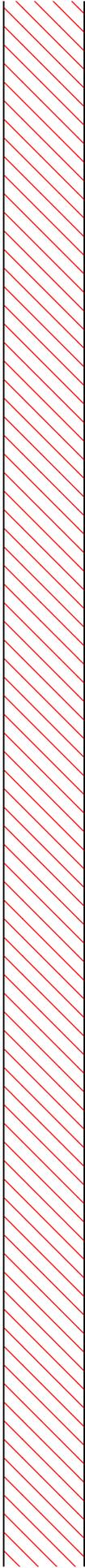
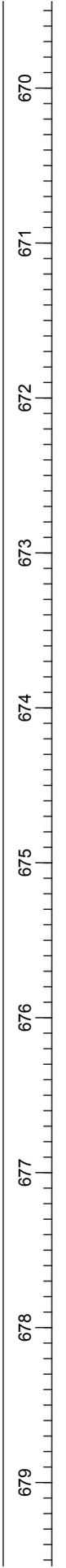
Rocks: Many matrix-supported granules and fine pebbles (<1 cm) angular to well rounded, lithic fragments.

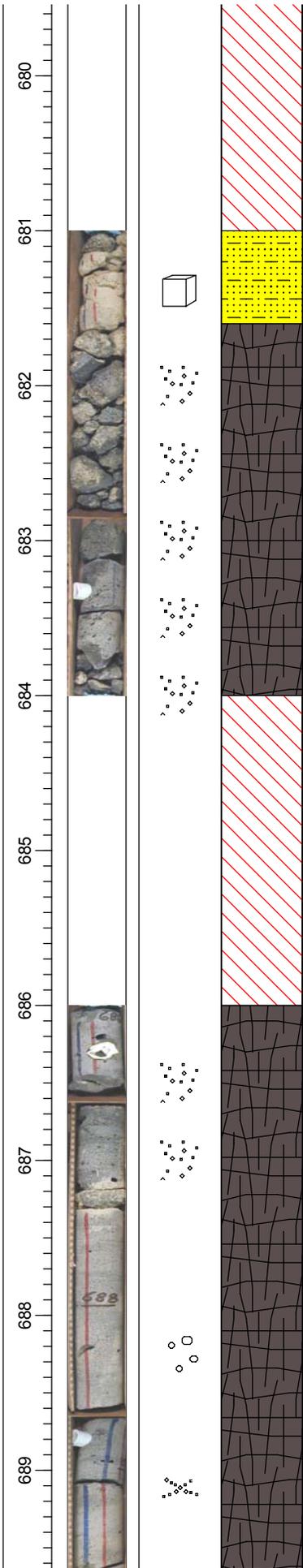
Roots/fossils: None noted

MISSING INTERVAL







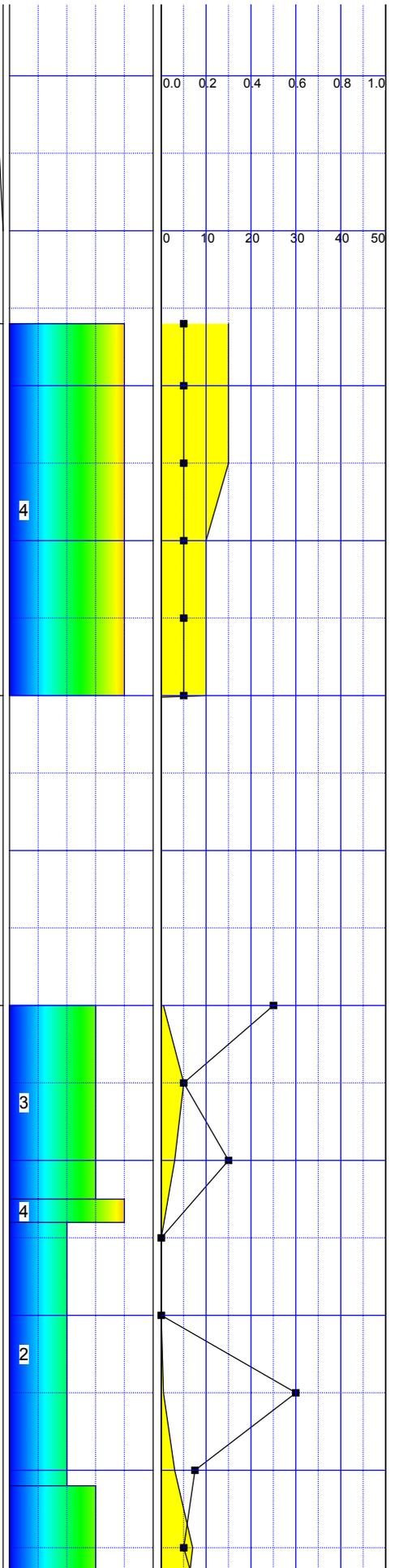


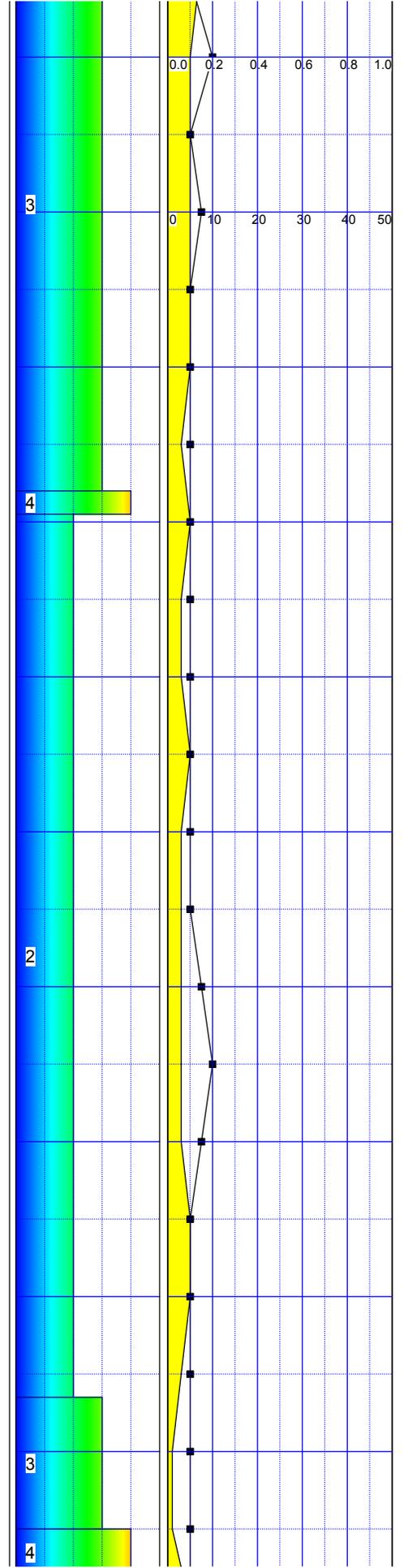
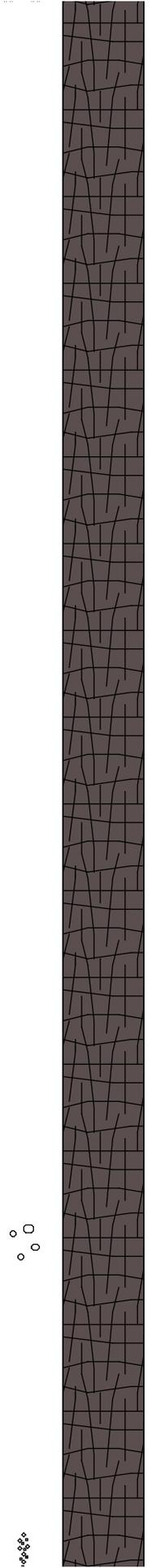
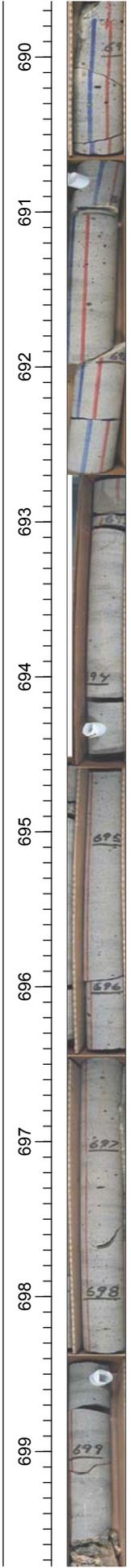
SANDS WITH FINES: Medium and fine sands with silts and clays  
 Color: Yellowish gray  
 Consistence: Extremely firm  
 Structure: Structureless (Massive)  
 Free Carbonates: Yes  
 Rocks: Few 2--5 mm matrix-supported, subangular, pale brown, vesicular rock fragments.  
 Roots/fossils: None noted

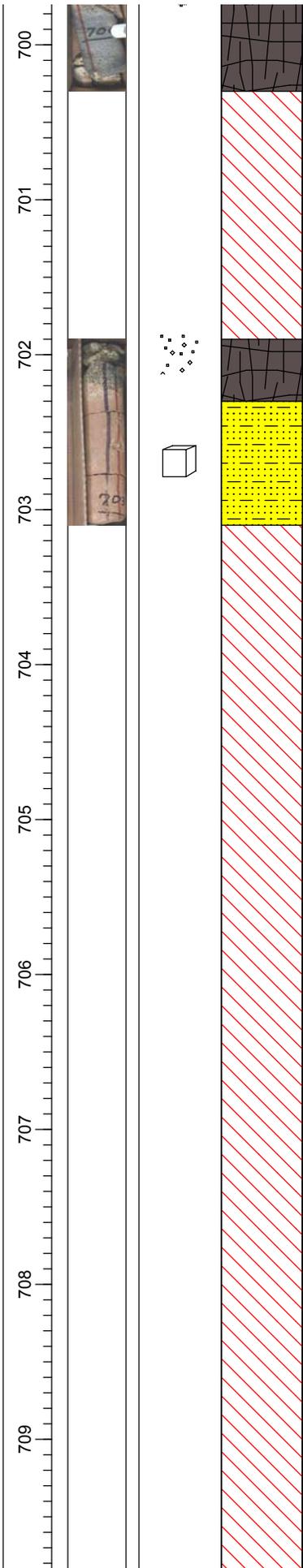
BASALT: Color: Medium dark gray  
 Magnetic Properties: Nonmagnetic  
 Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, and evenly distributed throughout. Alternates between vesicular and massive.  
 Xenoliths: None noted  
 Alteration Activity: Some fractures and nearby vesicles show infilling with silts and clays and mild bleaching.

MISSING INTERVAL

BASALT: Color: Medium dark gray  
 Magnetic Properties: very slightly magnetic  
 Texture/Composition: Aphanitic to fine-grained phaneritic, granular, diktytaxitic texture. Grains are subhedral to anhedral, 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

SANDS WITH FINES: Medium and fine lithic sands with silts and clays, angular to subangular

Color: Light brown

Consistence: Extremely firm

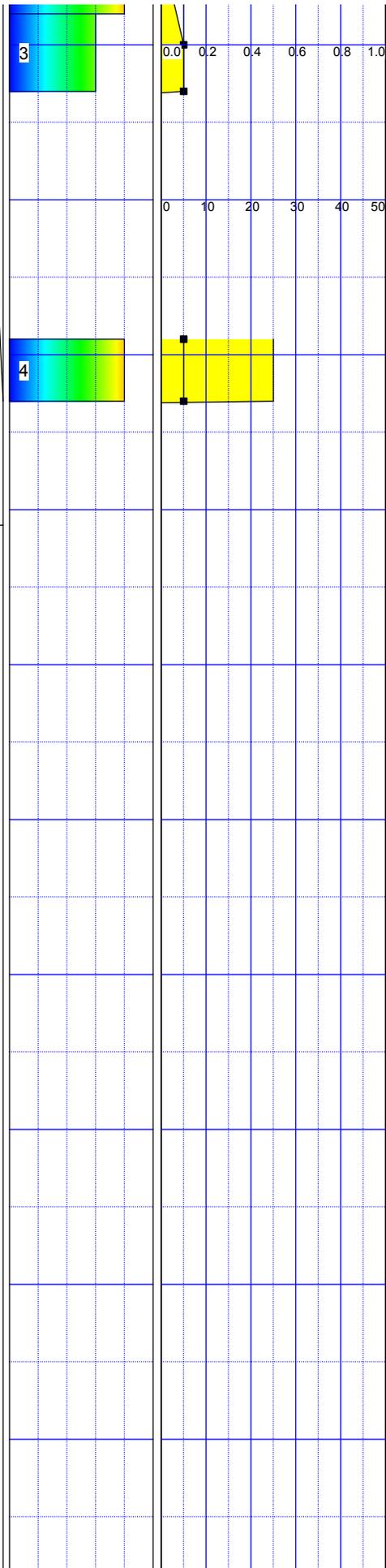
Structure: Structureless (Massive)

Free Carbonates: Yes

Rocks: Only at top of unit -- granule to coarse pebble-size matrix-supported, subangular to subrounded rock fragments of medium gray, vesicular basalt.

Roots/fossils: None noted

MISSING INTERVAL: Lost



720 719 718 717 716 715 714 713 712 711 710

