



INL Lithologic Core Storage Library

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

Contact:
Mary K. V. Hodges
1955 N. Fremont Ave.,
MS 1160
Idaho Falls, ID
83415

Official Name: TAN 2271

Logged By: M. K. V. Hodges

Selected Aliases: none

USGS Site ID: 435053112423101

Contractor Well ID: NA

Drilling Agency: USGS

Year Drilled: 2015

Names of Drillers: M. Gilbert and C. J. Jones

Well Status: complete

Total Depth of Hole (ft): 289 ft

Total Core Recovered (ft): 250.4 ft

Beginning Depth (ft): 0 ft

Ending Depth (ft): 289 ft

Continuous Recovery

Selected Intervals Recovered

Total # of Core Boxes: 43 of 64

Notes: From 208 ft to total depth, this core log was done from photographs and descriptions by W. Jolley, CWI geologist

County & State: Butte County, ID

Quadrangle Name: Circular Butte

Lat / Lng: N43°50'53.34", W 112°42'30.90" (NAD 27)

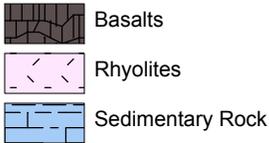
Tns / Rng / Sec: T6N / R31E / S13

UTM Coordinates: Zone 12 N 362662.161, 4856210.181

Surface Elevation (ft): 4,780.98 ft (NGVD 29)

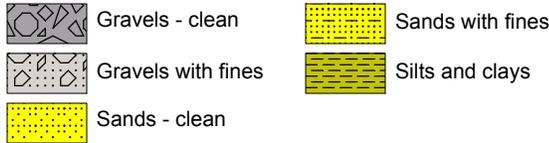
Core Geological Profile

Lithologic Patterns

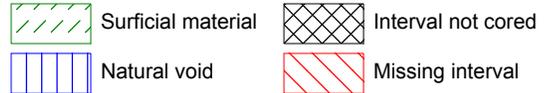


Soil Patterns

(See Unified Soil Classification System.)

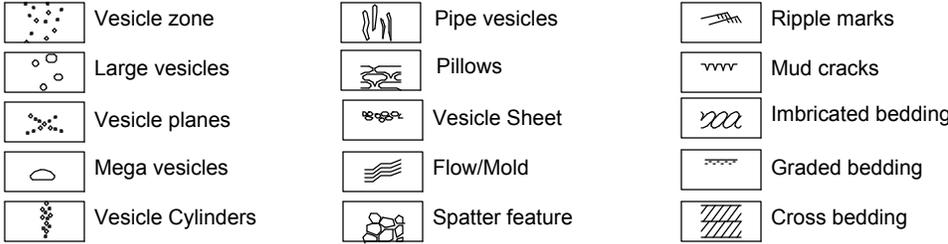


Intervals in Absentia

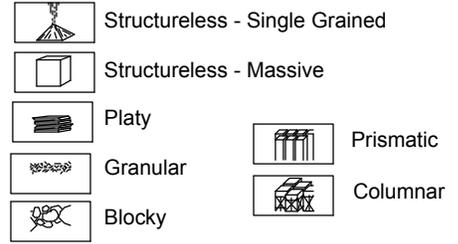


Idaho National Laboratory
Building CFA-663

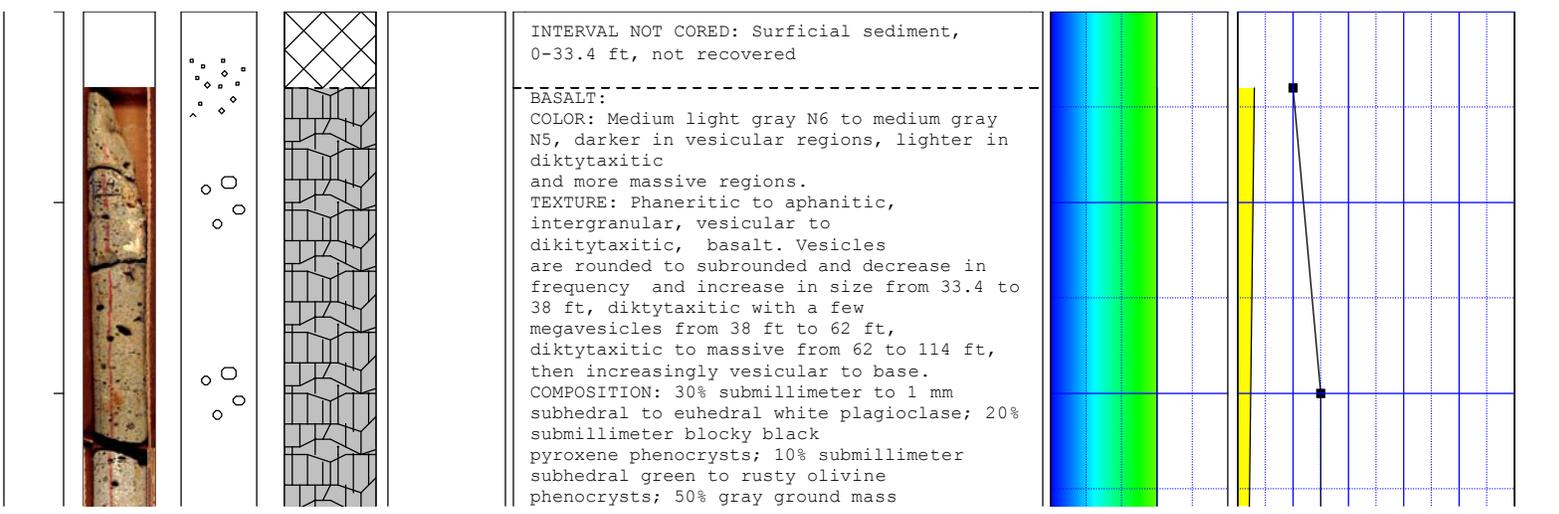
Igneous and Sedimentary Structure Symbols

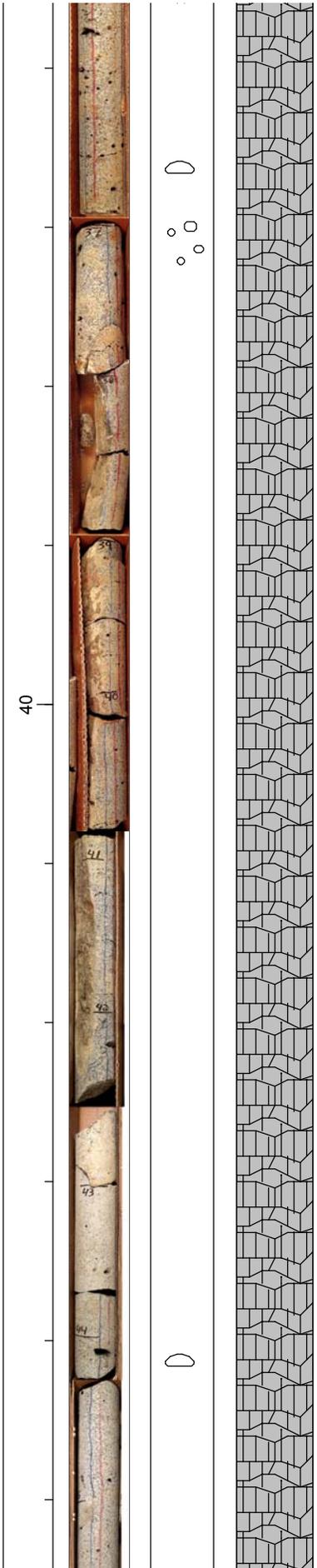


Soil Structure Symbols

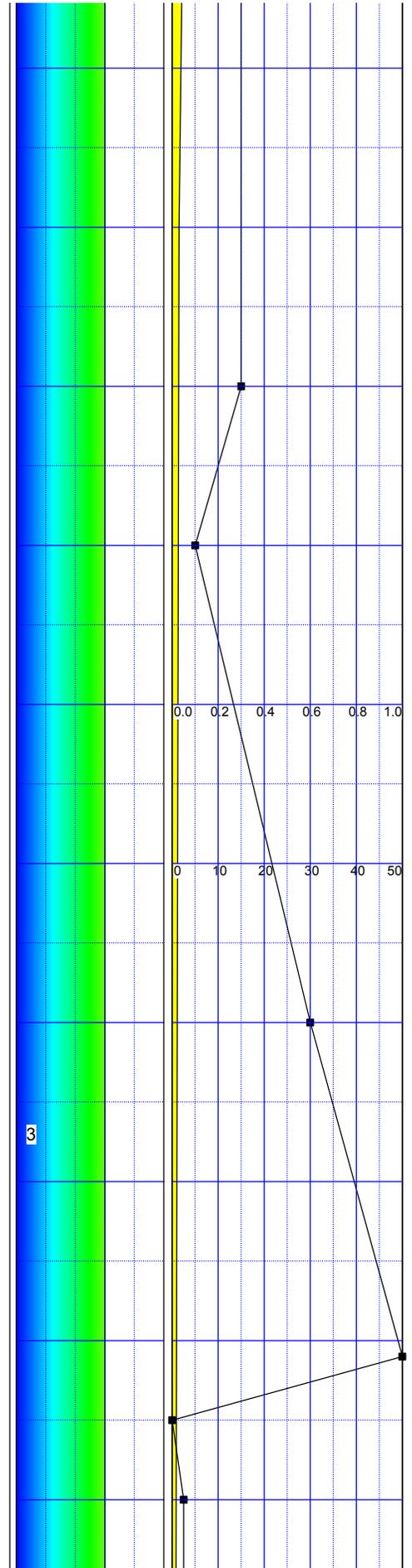


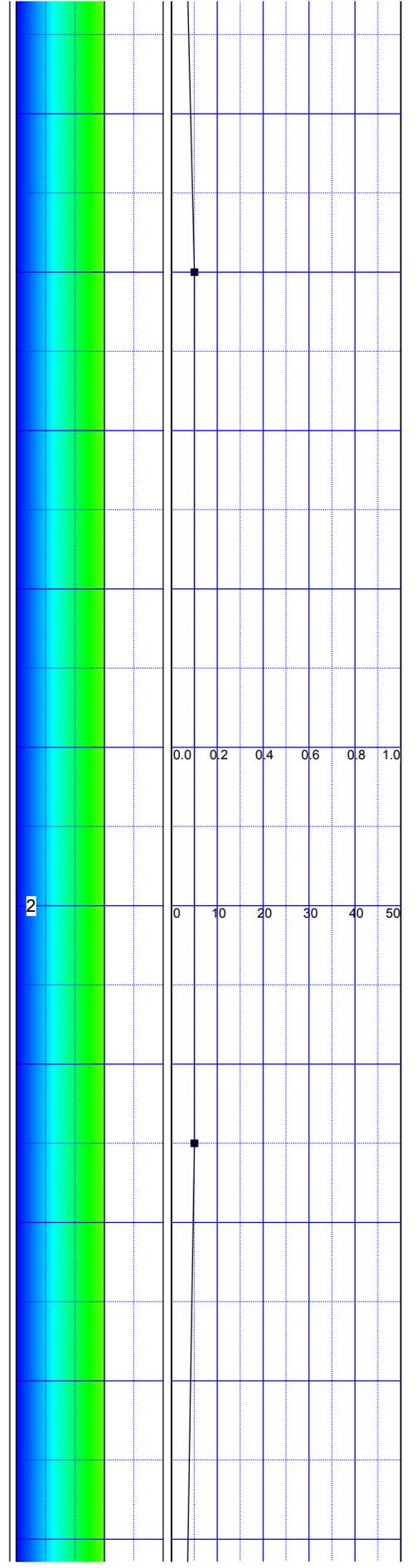
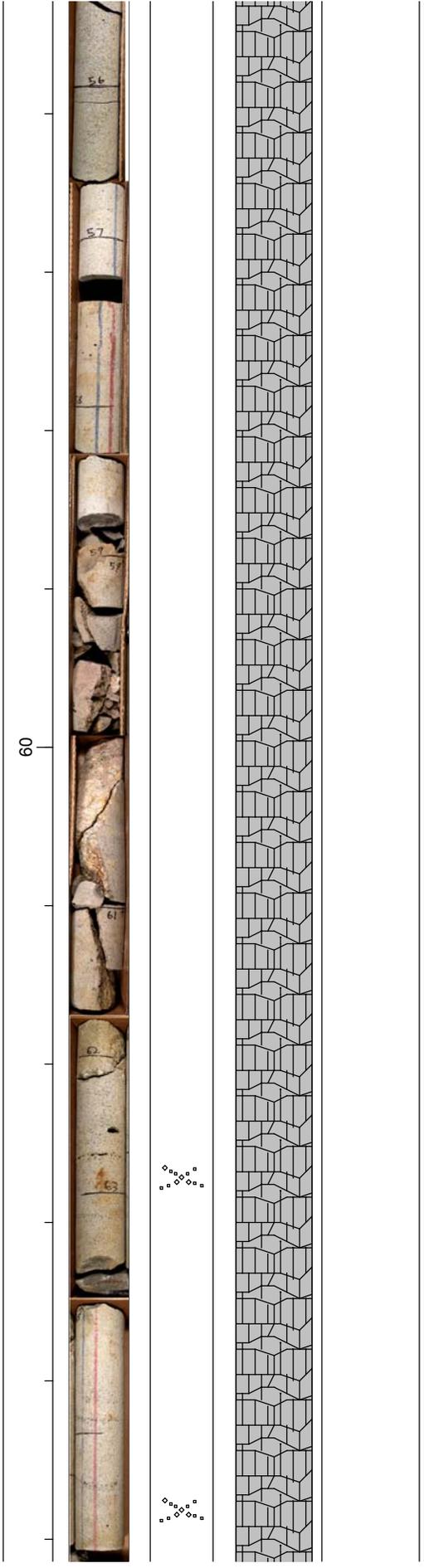
Depth (feet & tenths)	Core Photo	Igneous, Soil and Sed Structures	Lithology	Description		Fracture Frequency	Vesicle Characteristics
				Miscellaneous text	Lithologic description		
						unfractured 3-5 ft 1-3 ft 4 in to 1 ft 1-4 in < 1 in 0 1 2 3 4 5	Mean Size (in) 0 0.2 0.4 0.6 0.8 0 Volume Percentage 0 10 20 30 40 0 5

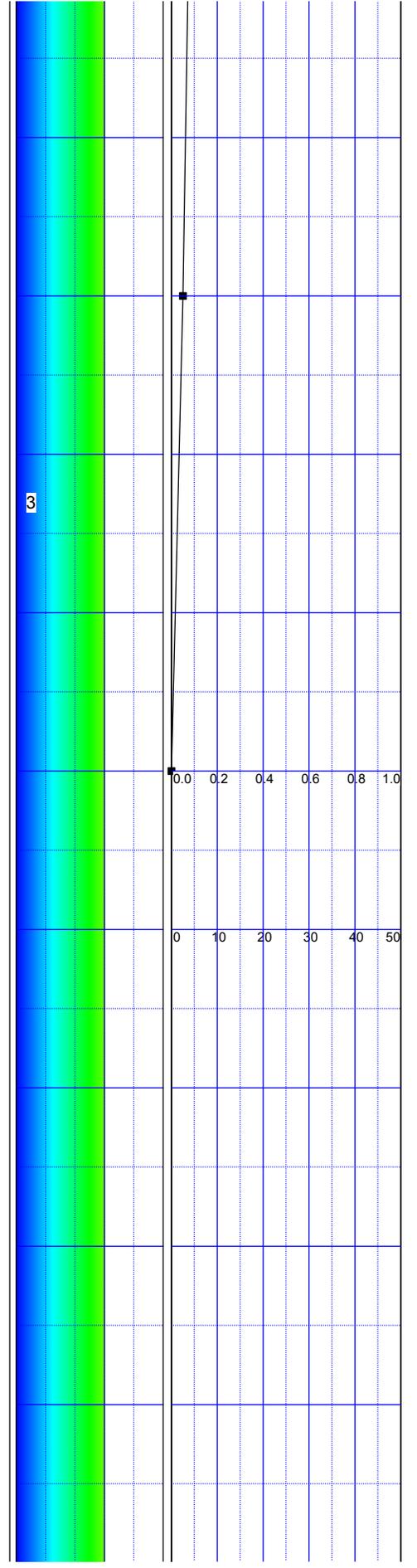
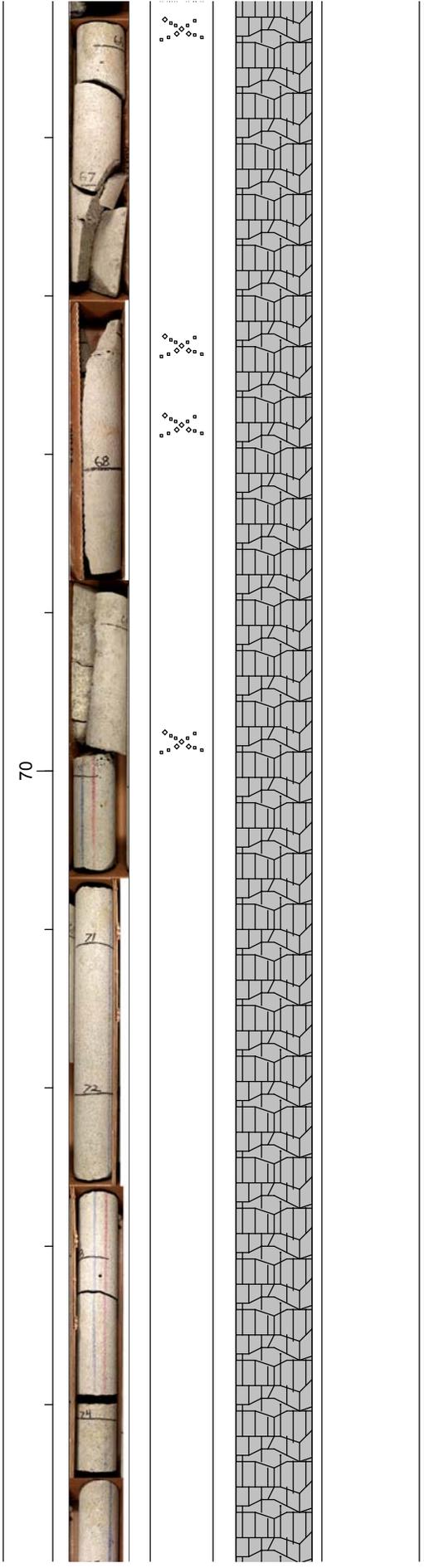


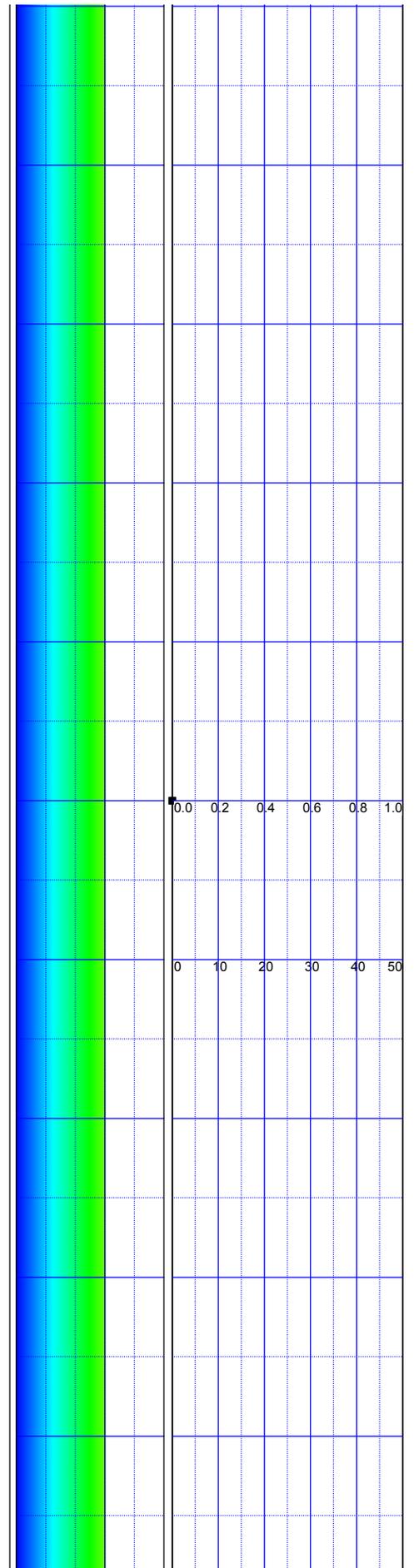
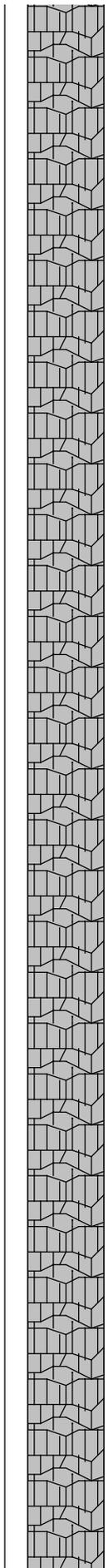
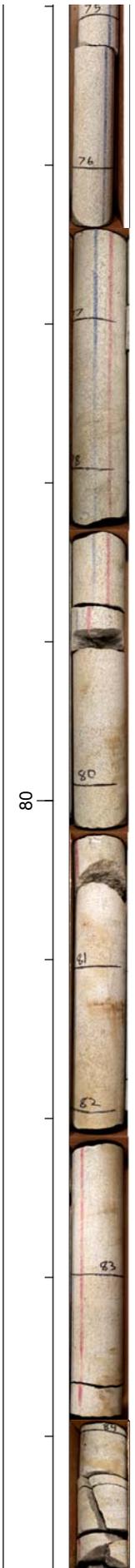


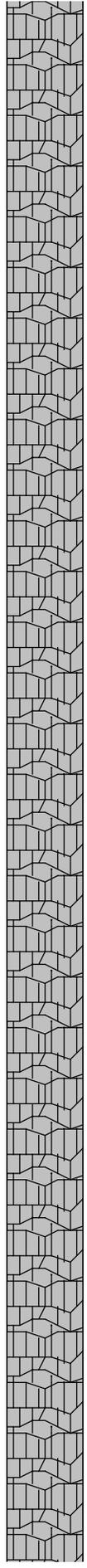
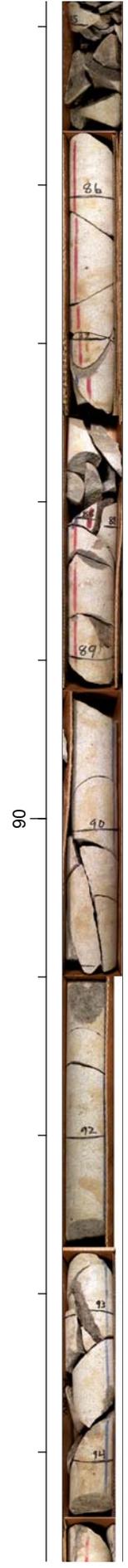
XENOLITHS/AUTOLITHS: None observed
ALTERATION: 10 YR 7/4 grayish orange non-calcareous clay in fractures, grading to 5YR 5/6 light brown, throughout interval. In the basalt itself, olivine phenocrysts display rusty alteration, about 40% of olivine is affected, with approximately 15% of olivine phenocrysts completely replaced.





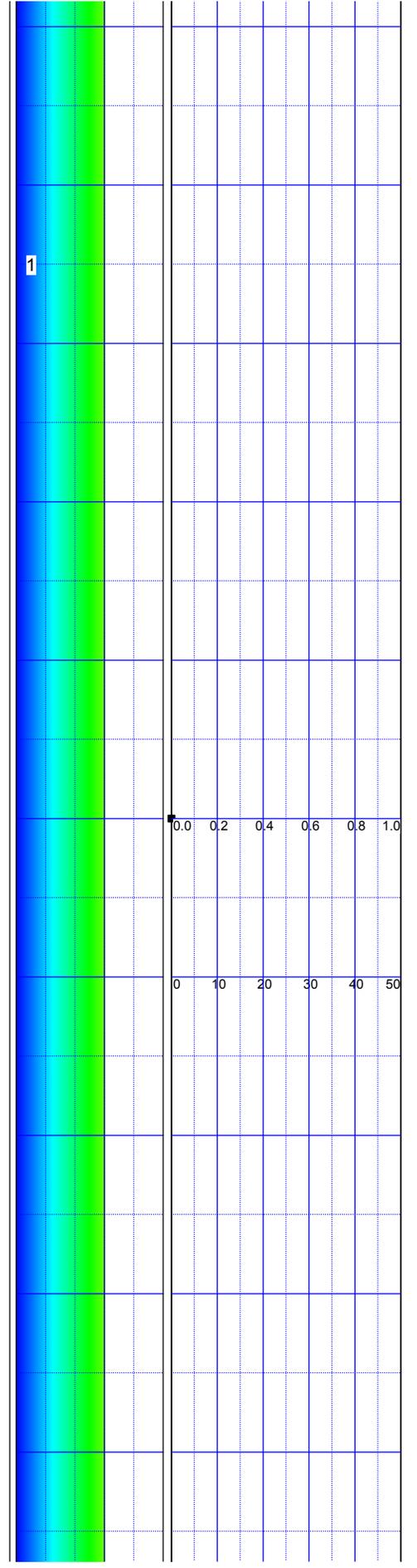


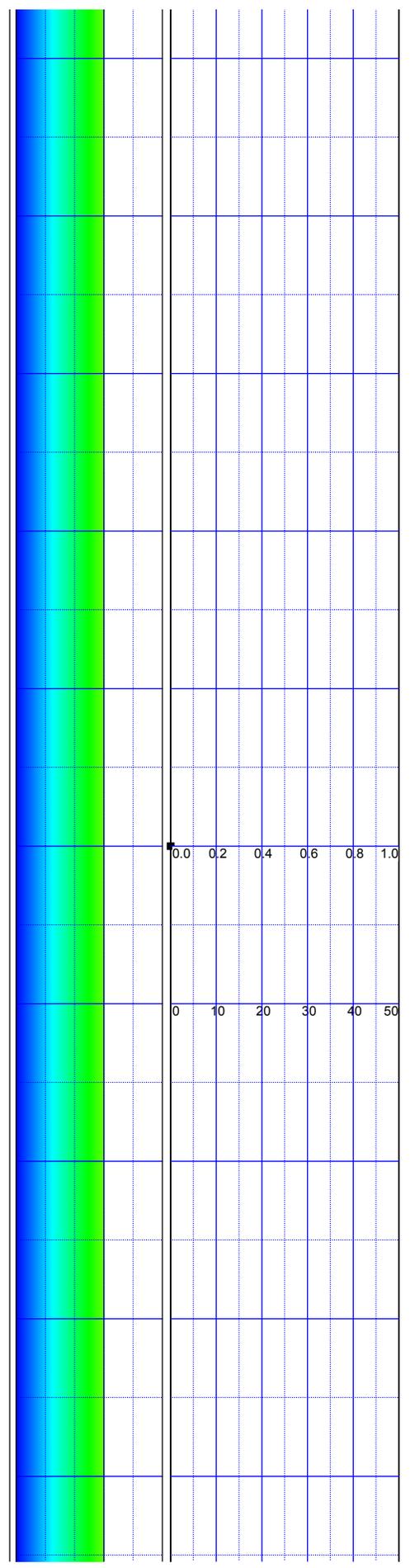
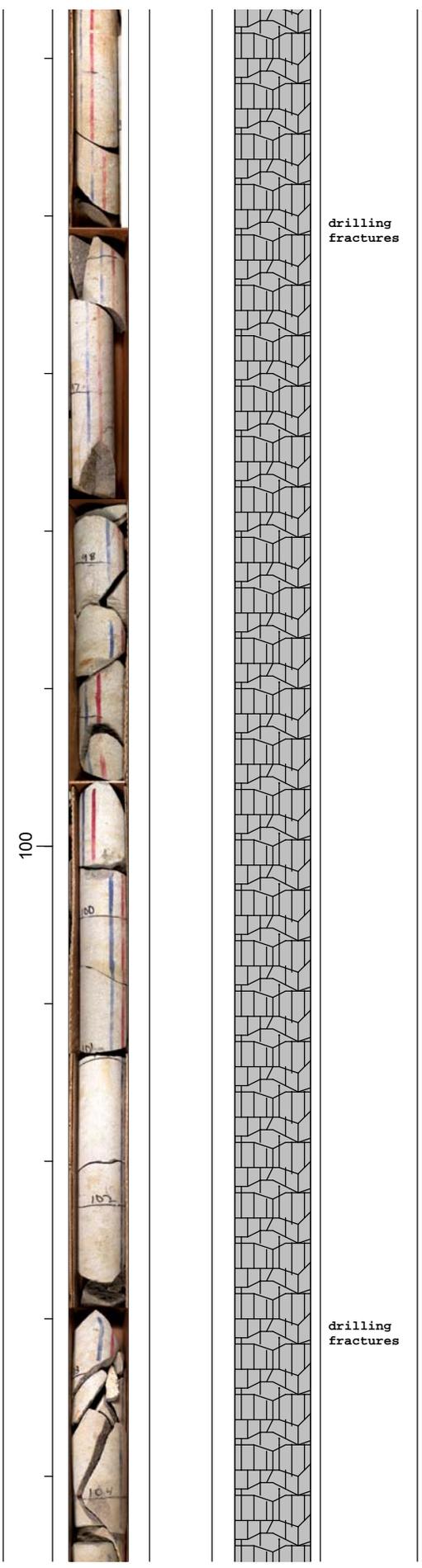


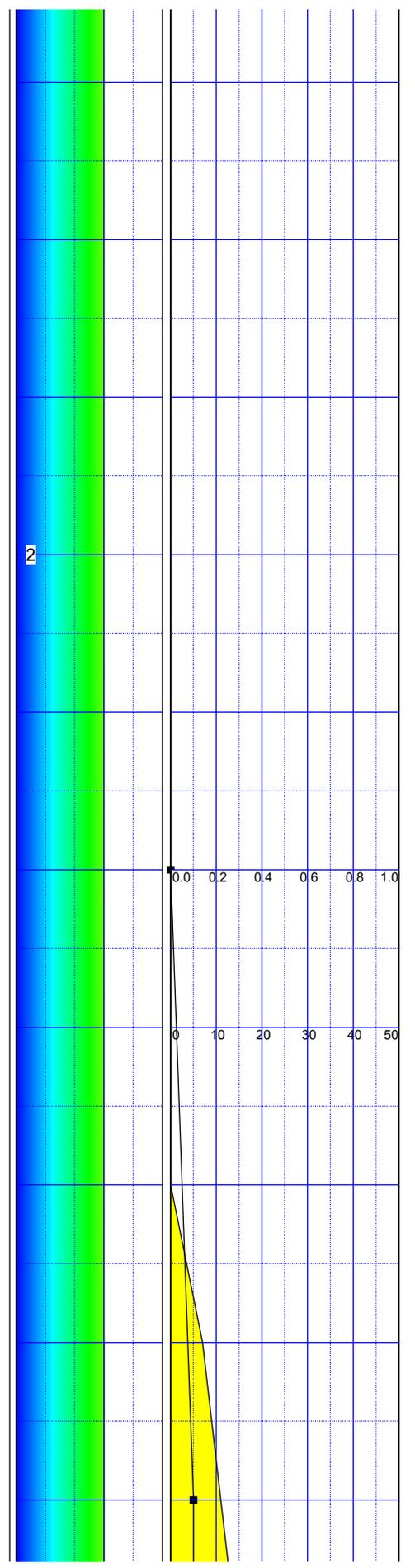
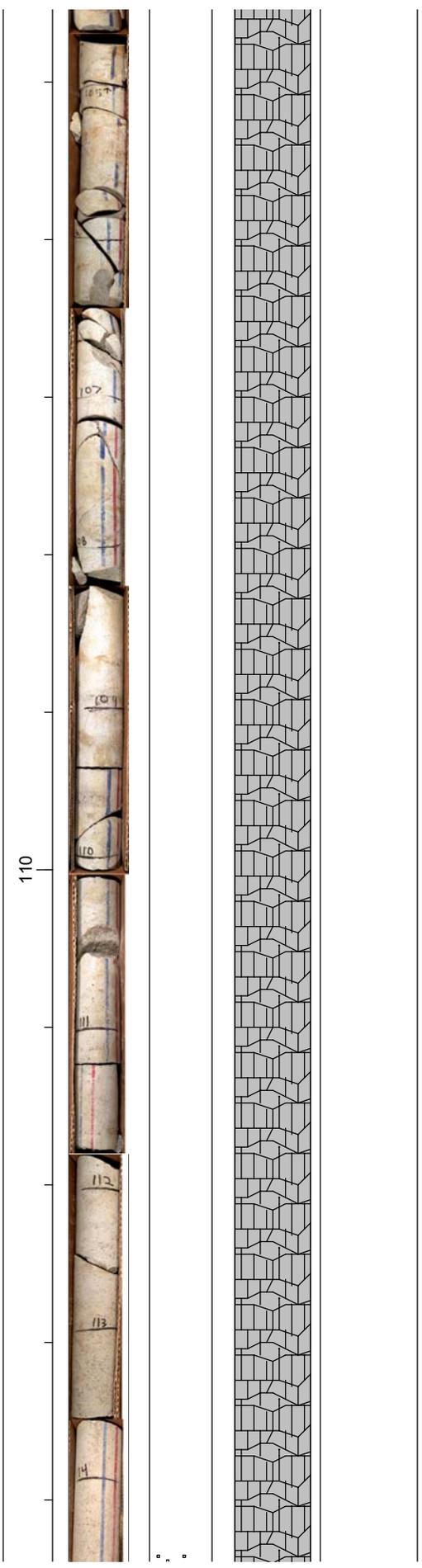


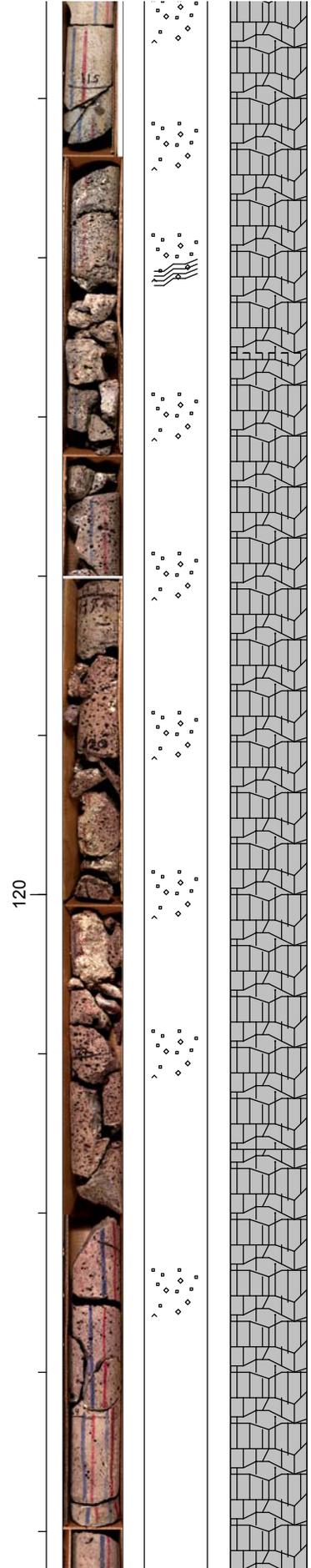
drilling fractures

drilling fractures



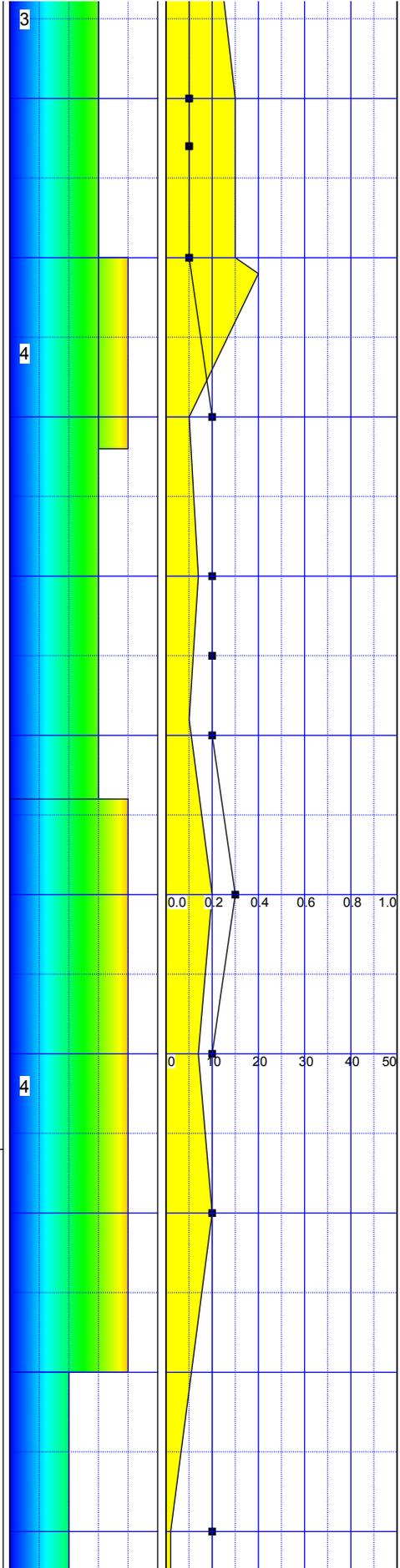




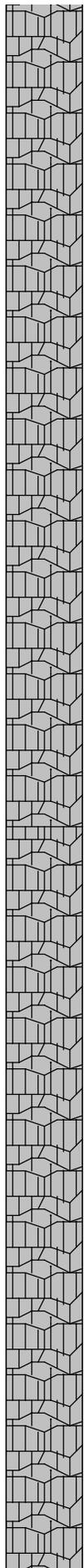


BASALT:
 COLOR: 5R 4/2 grayish red
 TEXTURE: Aphanitic, vesicular basalt.,
 flow/mold structures at 119.4, 120, and
 121.6 feet
 COMPOSITION: Sub-millimeter white euhedral
 plagioclase in grayish red groundmass
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: 10 YR 8/2 pale orange clay on
 fracture surfaces

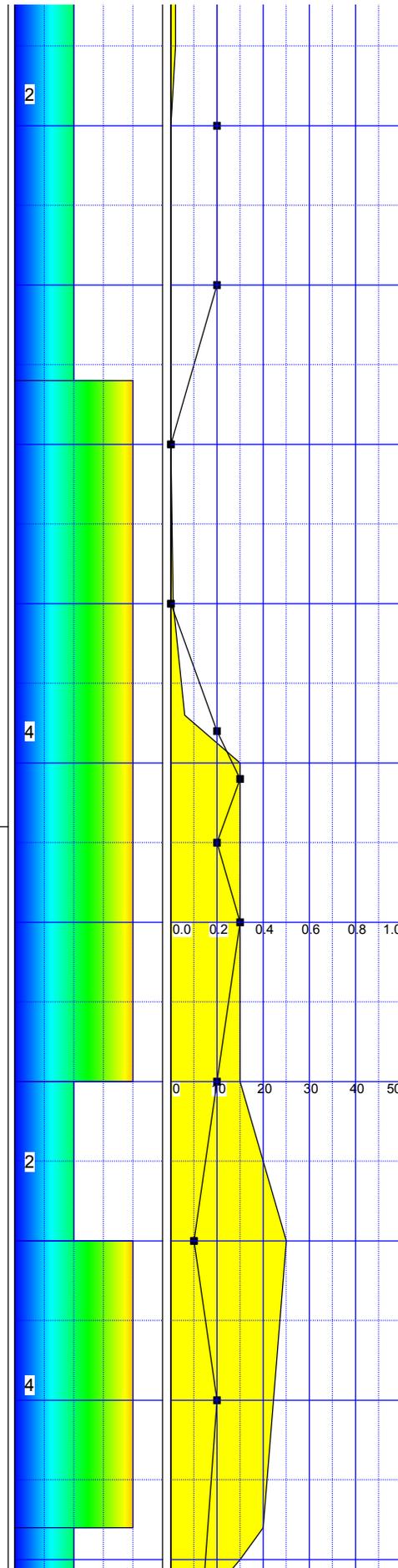
BASALT:
 COLOR: 5R 4/2 grayish red
 TEXTURE: Aphanitic, vesicular basalt.
 vesicular from top of interval to 124 ft,
 diktytaxitic with sparse vesicles to 128 ft,
 vesicles slightly increase to base,
 flow/mold structures at top of interval
 COMPOSITION: Sub-millimeter white euhedral
 plagioclase in grayish red groundmass
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: 10 YR 8/2 pale orange clay on
 fracture surfaces



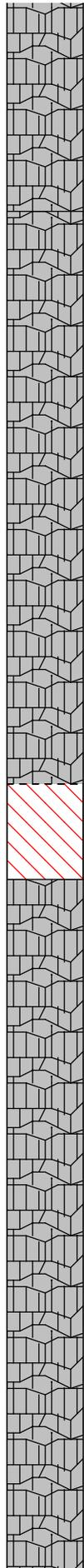
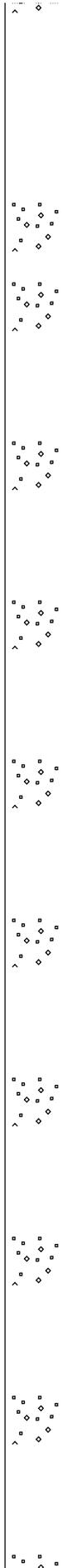
130



BASALT:
 COLOR: 5RP 4/2 Grayish red purple
 TEXTURE: Phaneritic, vesicular to 134.5 ft,
 diktytaxitic to 135 ft, vesicular to base of
 interval
 COMPOSITION: 30 % 1-3 millimeter white
 euhedral plagioclase in grayish red
 groundmass, plagioclase phenocrysts increase
 in size with depth, stellate clusters from
 133.6 ft to base, flow/mold structures at
 132 ft, 134 ft
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Non-calcareous 10 YR 8/2 pale
 orange clay on fracture surfaces



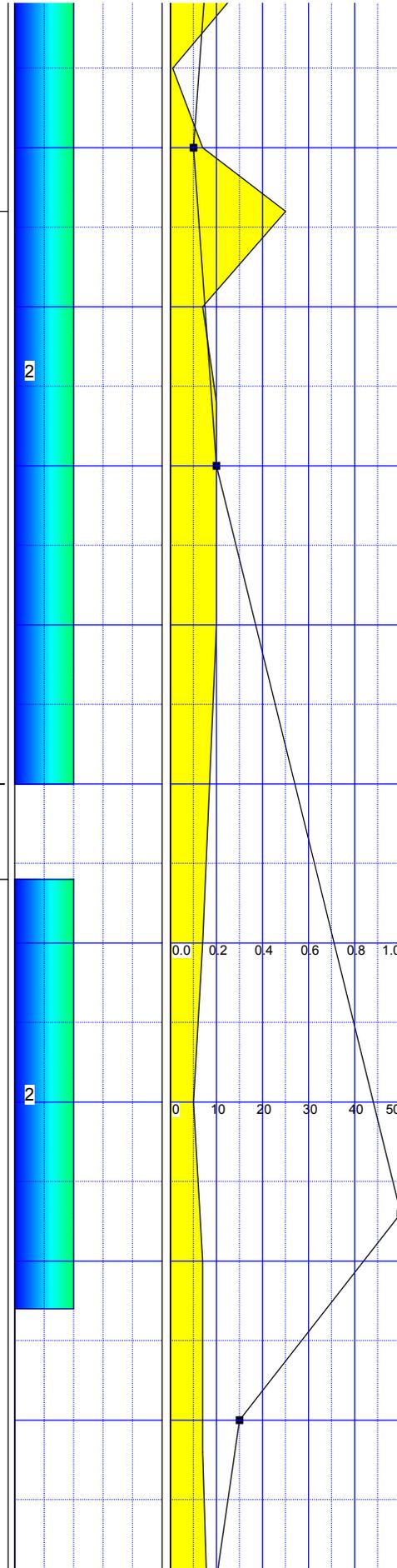
140

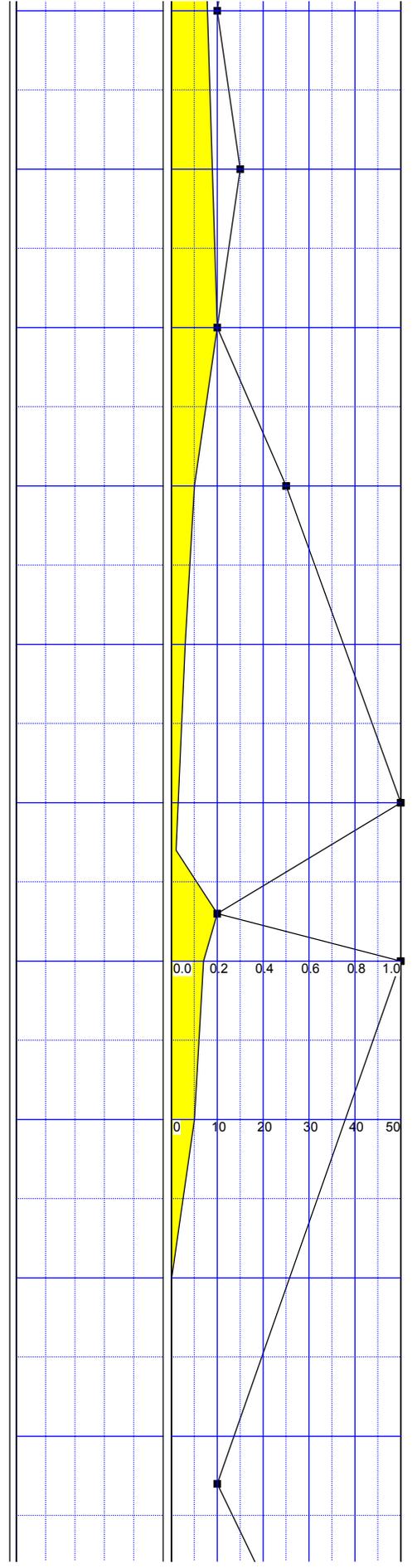
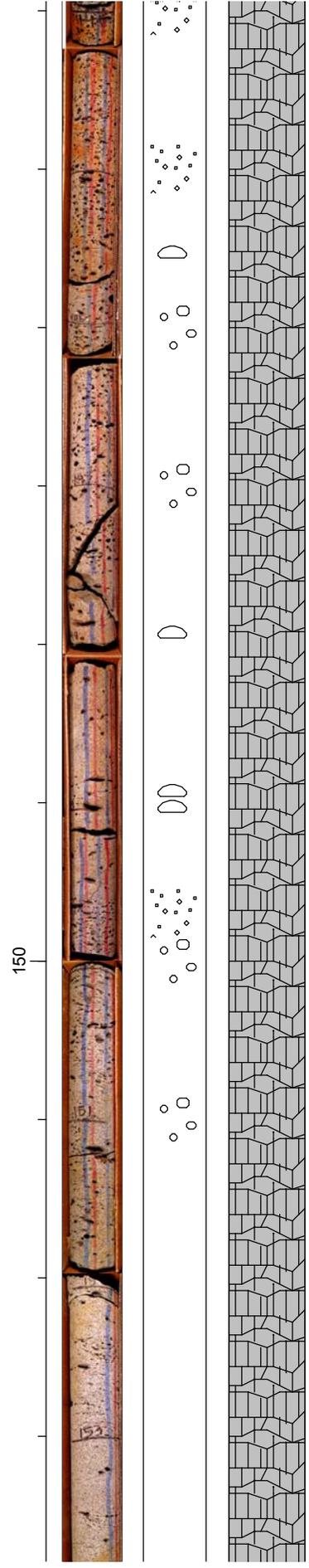


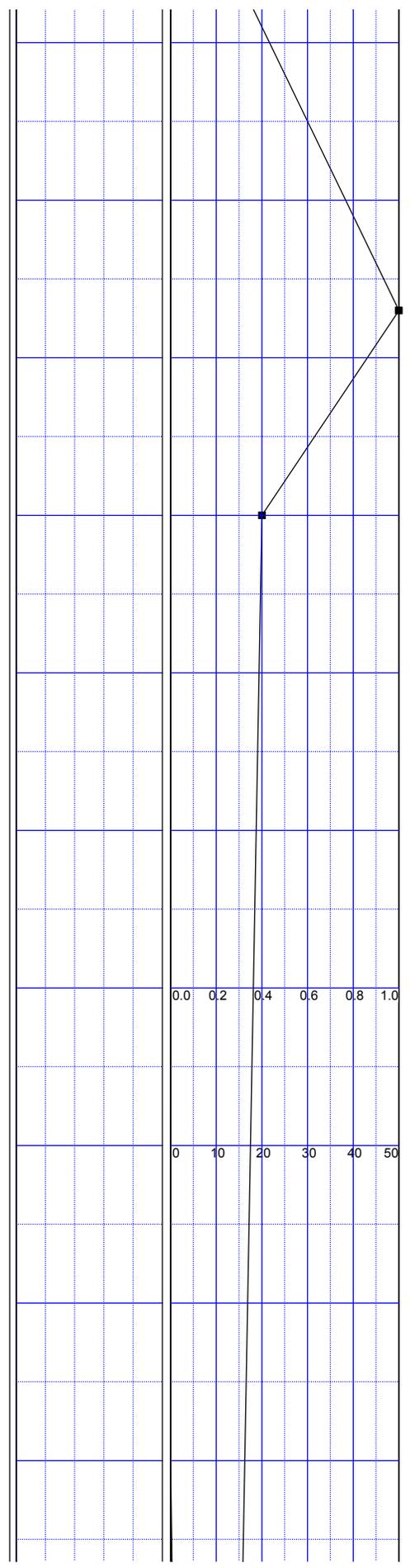
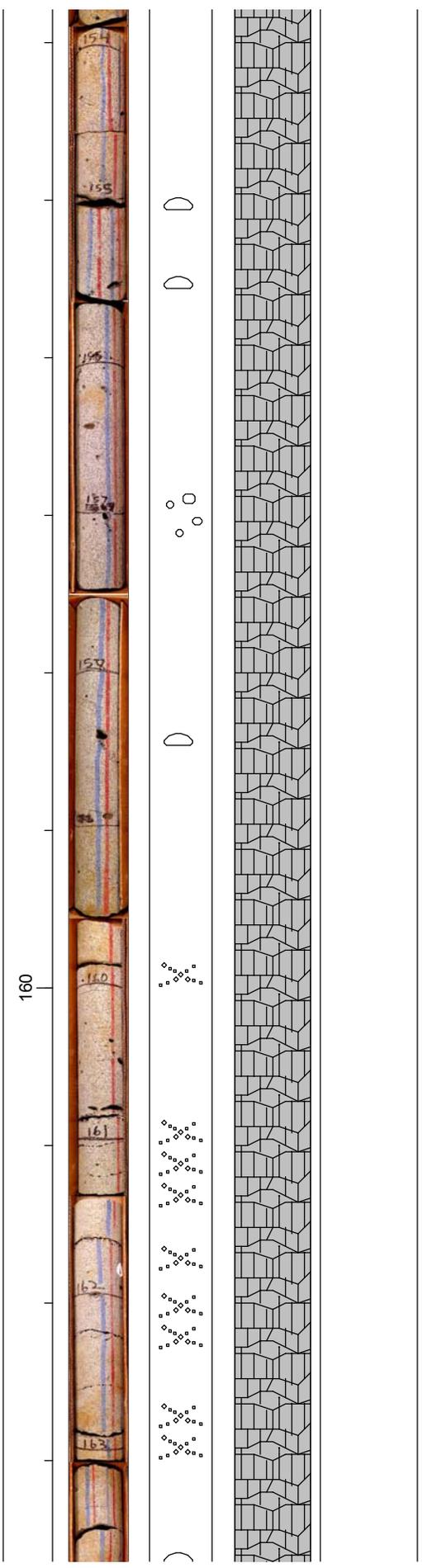
BASALT:
 COLOR: 5R 4/2 grayish red
 TEXTURE: Aphanitic, vesicular basalt, flow/mold structure at base
 COMPOSITION: Sub-millimeter white euhedral plagioclase in grayish red groundmass
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: 10 YR 8/2 pale orange clay on fracture surfaces

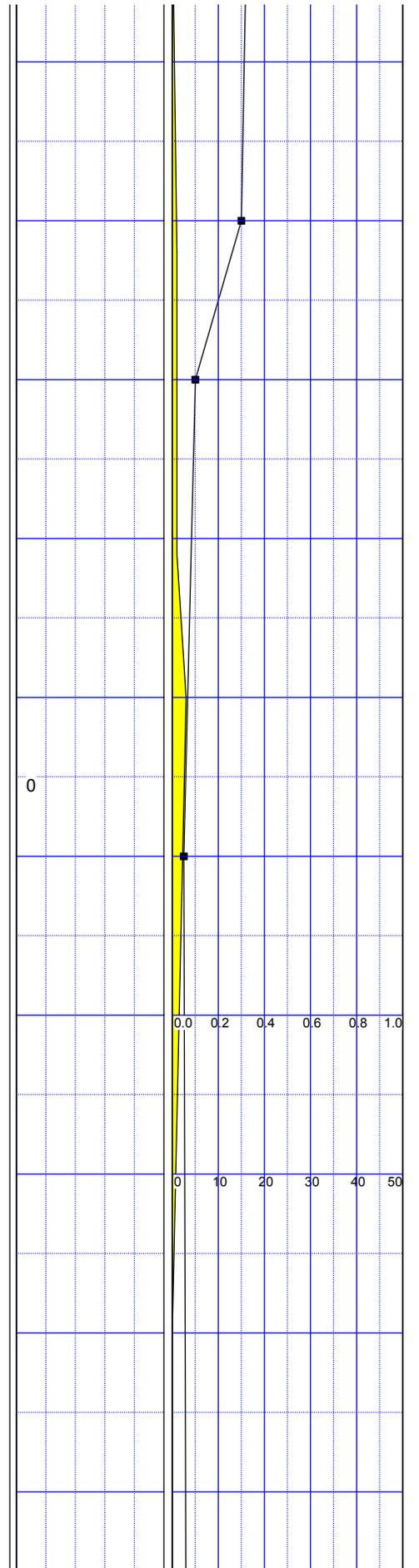
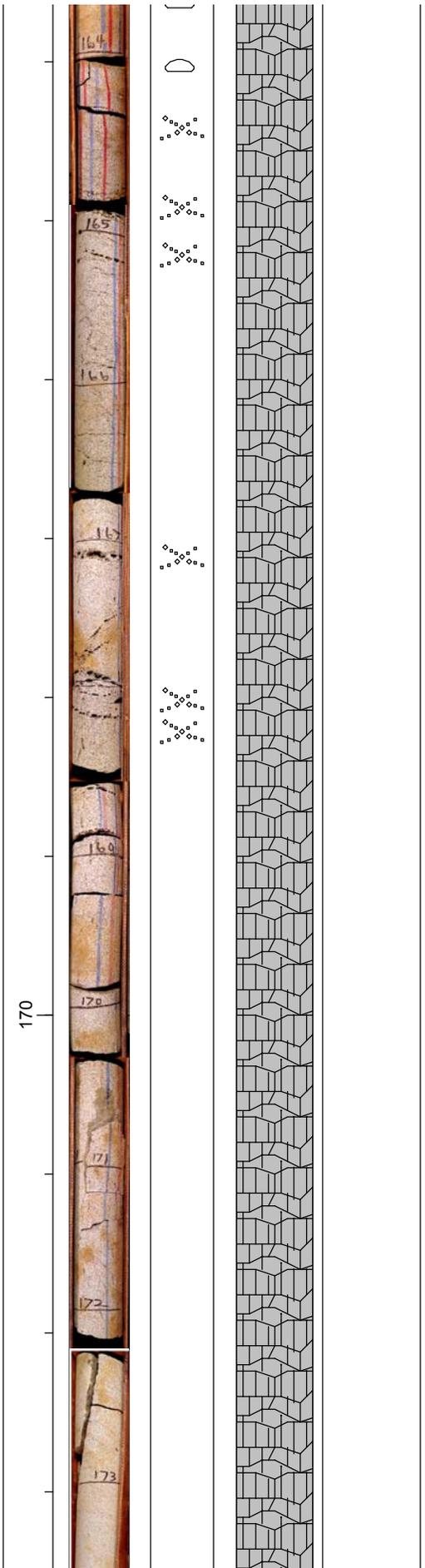
MISSING INTERVAL: Missing, no data

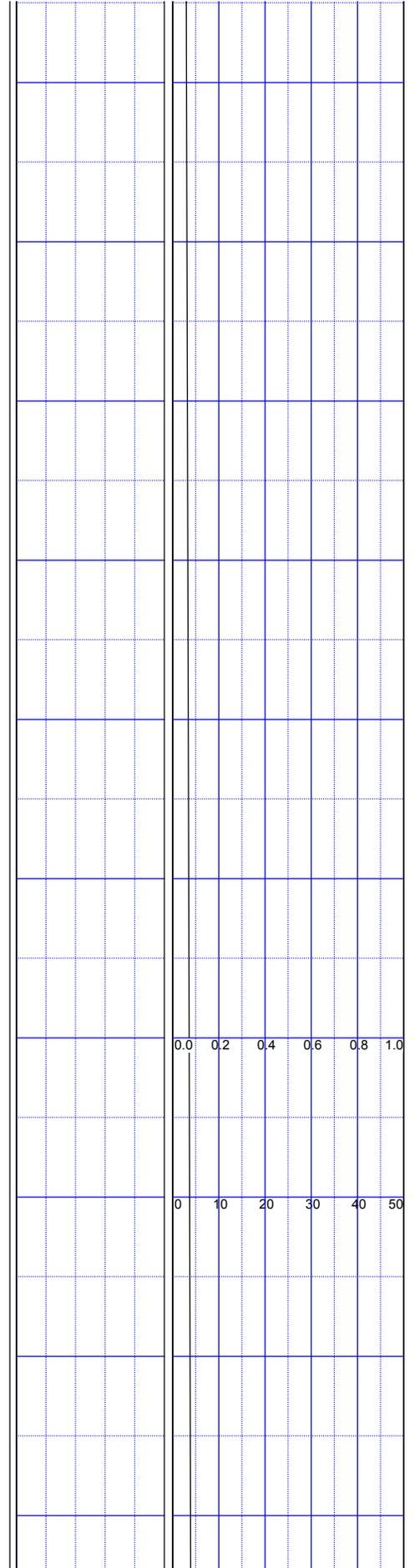
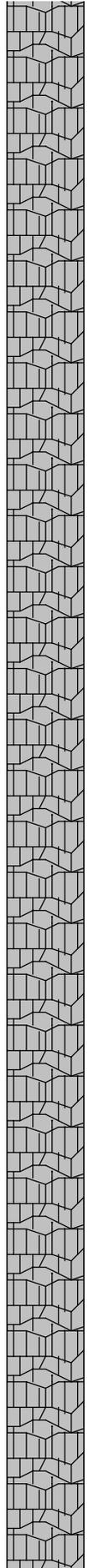
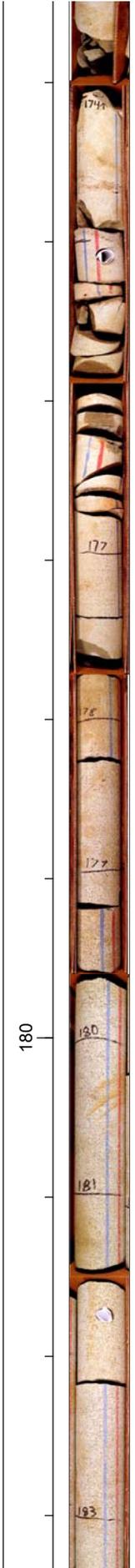
BASALT:
 COLOR: N4 medium dark grey to N3 dark grey
 TEXTURE: Aphanitic, vesicular basalt, flow/mold structures at top and base. Vesicular from top to 154 ft, vesicles increase in size and decrease in number to 154 ft, diktytaxitic from 153 to 195 ft, vesicular to base
 COMPOSITION: 25% 2-4 mm euhedral plagioclase phenocrysts, and 10% 1-2 mm grey groundmass
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Reddish oxidation on surfaces and inside vesicles at top and base of interval, Non-calcareous 10 YR 8/2 pale orange clay on fracture surfaces

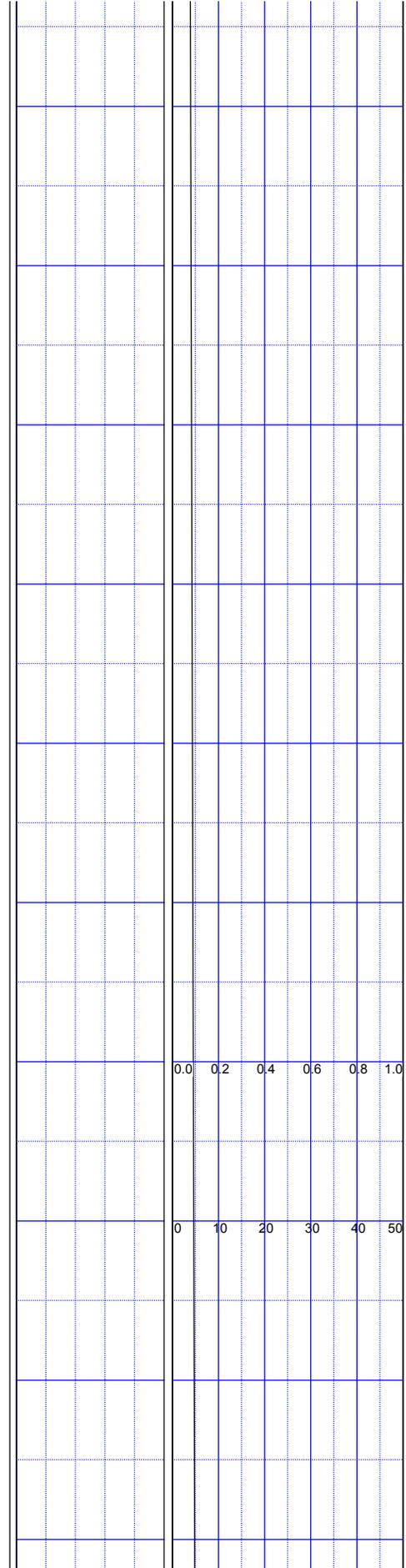
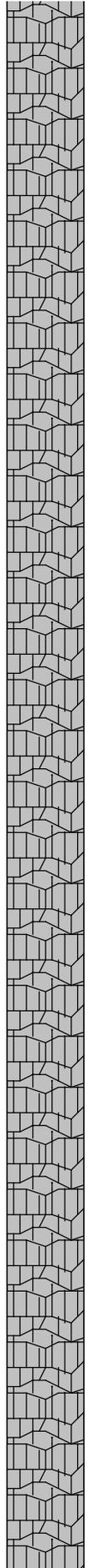
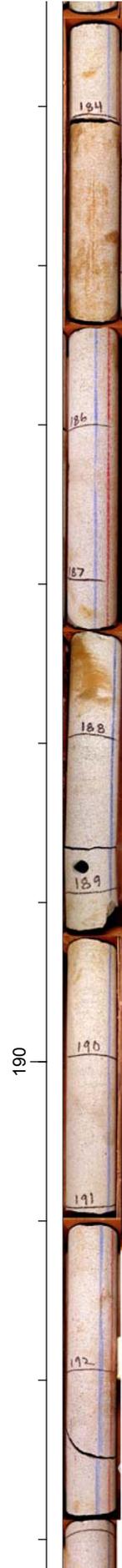


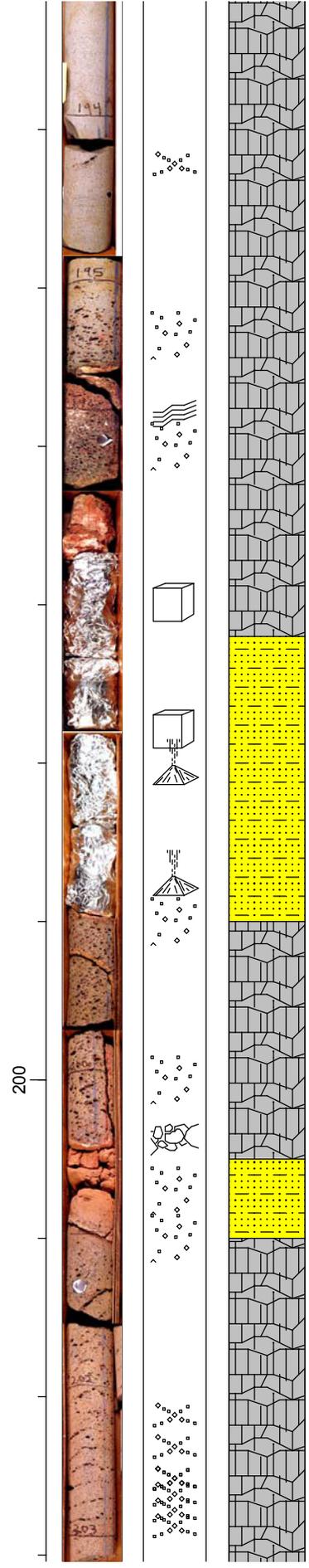












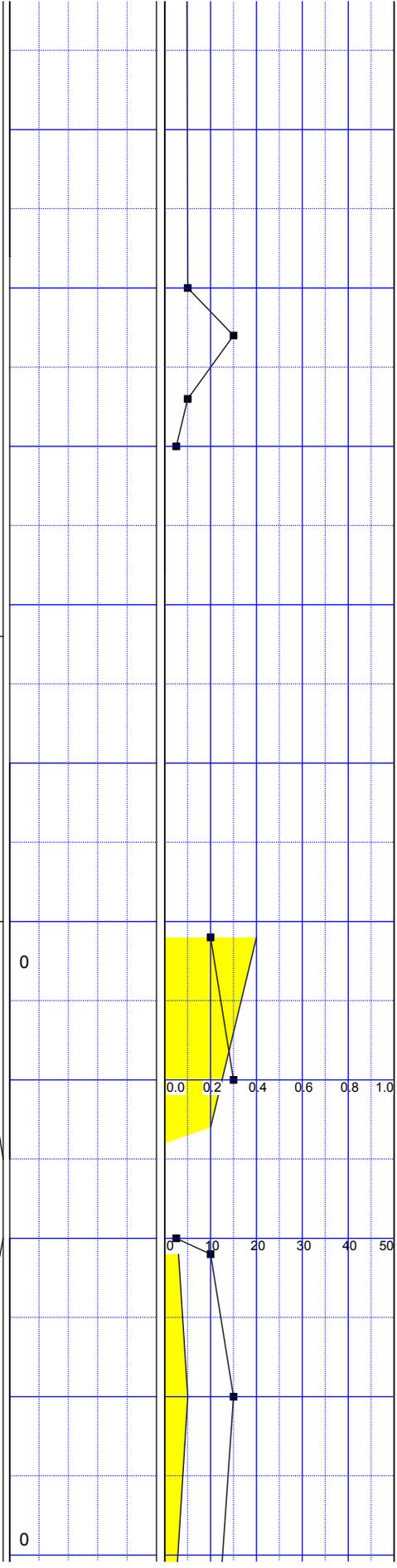
SANDS WITH FINES:
 SILT AND CLAY
 TEXTURE: Sand with fines, rare quartz grains, and some 1 to 10 cm basalt clasts
 COLOR: 5 R 5/4 Moderate red at the top, grading to 5 YR 5/2 pale brown at bottom of interval
 CONSISTENCY: Loose at top to firm at base of interval
 STRUCTURES: Structureless, massive
 CARBONATES: No
 ROCKS: Angular clasts of basalt, 1-2 mm lithic rounded pebbles

BASALT:
 COLOR: N5 medium grey
 TEXTURE: Aphanitic, vesicular basalt, flow/mold structures at top and base.
 COMPOSITION: Grey groundmass
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Reddish oxidation on surfaces and inside vesicles at top and base of interval,

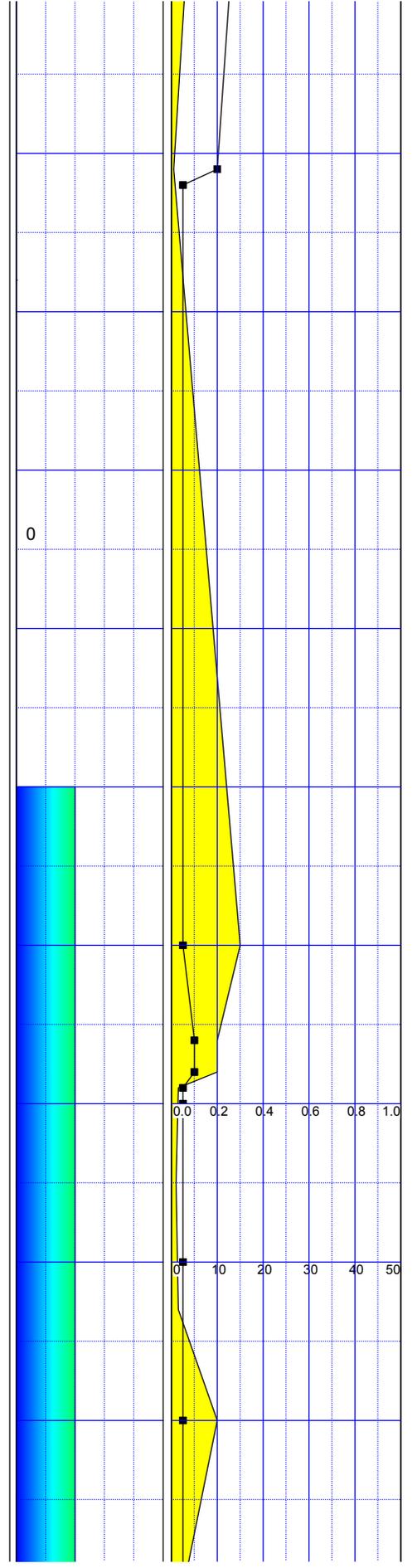
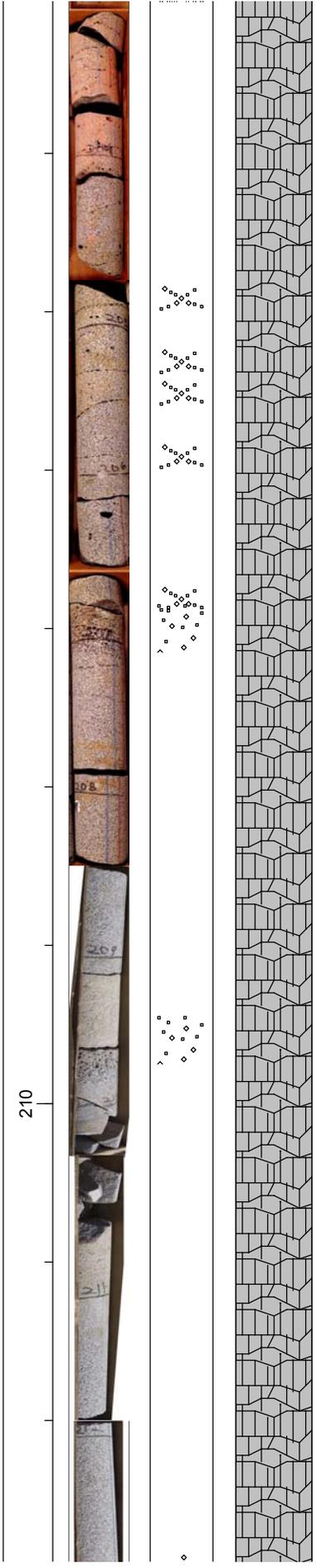
SANDS WITH FINES:
 SILT AND CLAY
 TEXTURE: Sand with fines, rare quartz grains, and some 1 to 10 cm basalt clasts
 COLOR: 5 YR 5/2 pale brown
 CONSISTENCY: Firm
 STRUCTURES: Massive
 CARBONATES: No
 ROCKS: Angular clasts of basalt, 1-2 mm lithic rounded pebbles

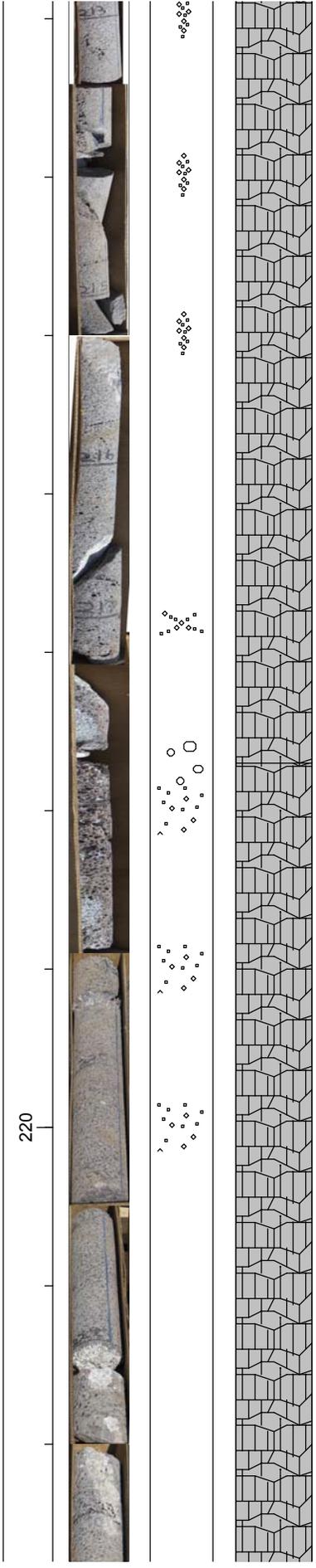
BASALT:
 COLOR: N5 medium grey
 TEXTURE: Aphanitic, vesicular basalt. Vesicular from top of interval to 204 ft, diktytaxitic to 216.4 ft, increasingly vesicular to base, flow/mold structure at base
 COMPOSITION: Grey groundmass
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Reddish oxidation on surfaces and inside vesicles at top of interval, white clay-appearing substance on surfaces at base of interval

Note: The core log from 208.5 ft to total depth of core was done from notes taken by

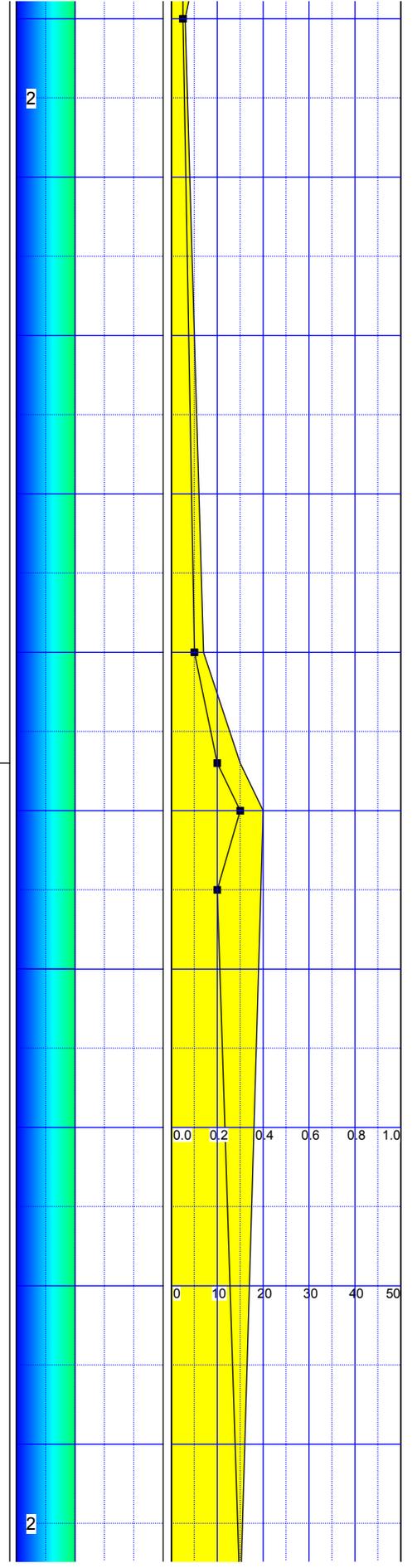


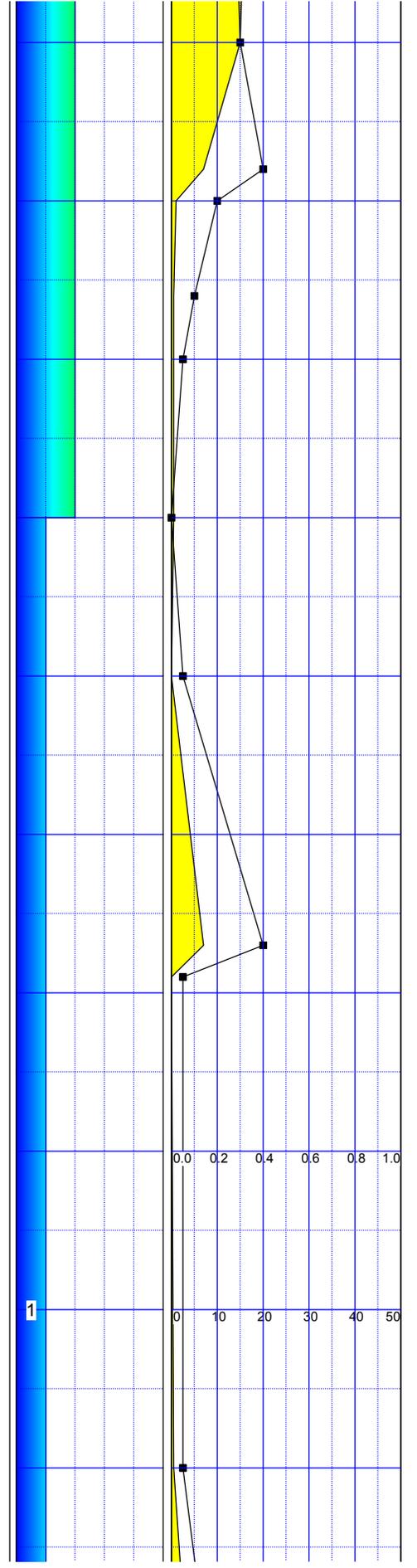
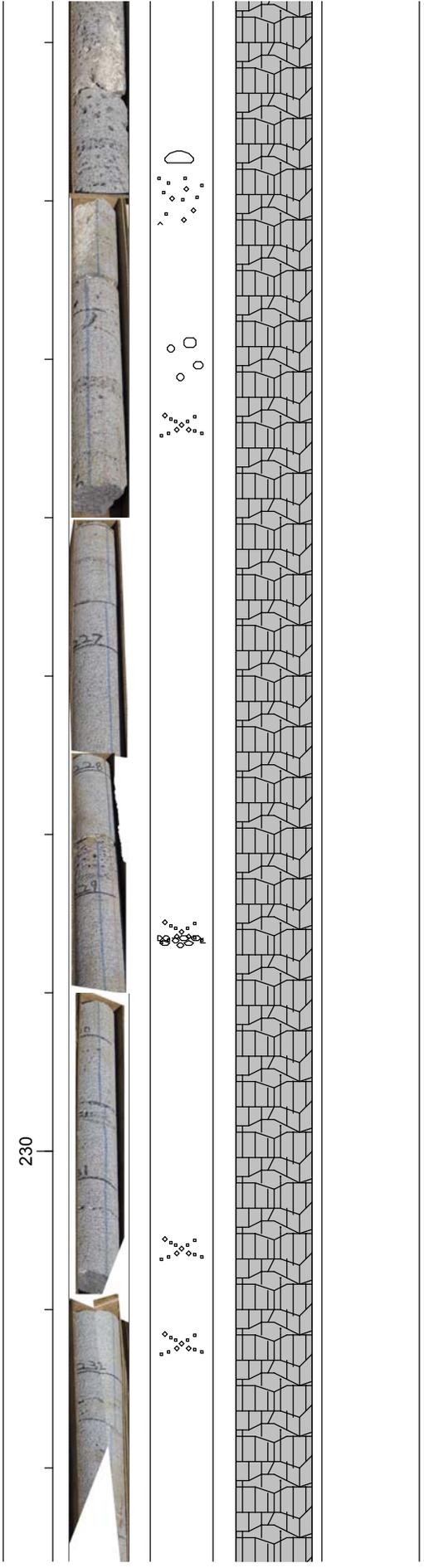
W. Jolley, CWI geologist, and photographs.

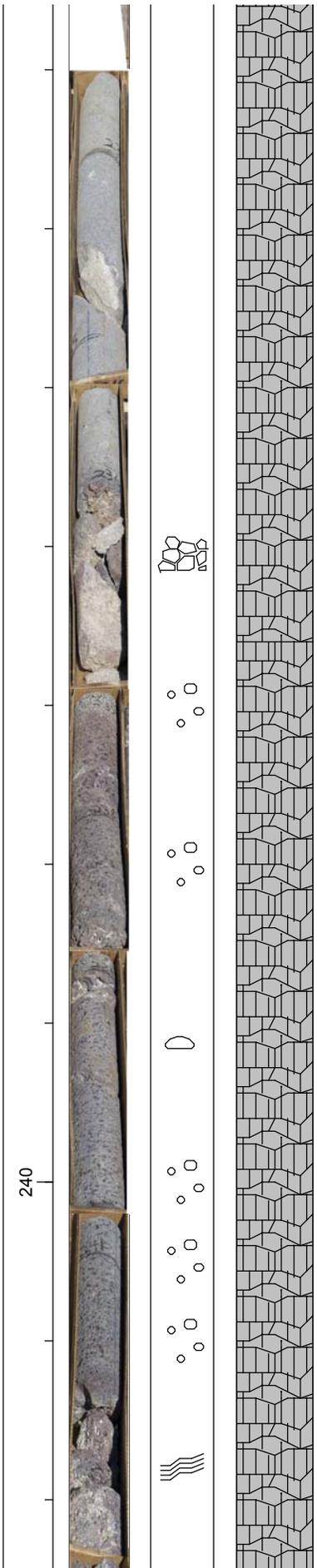




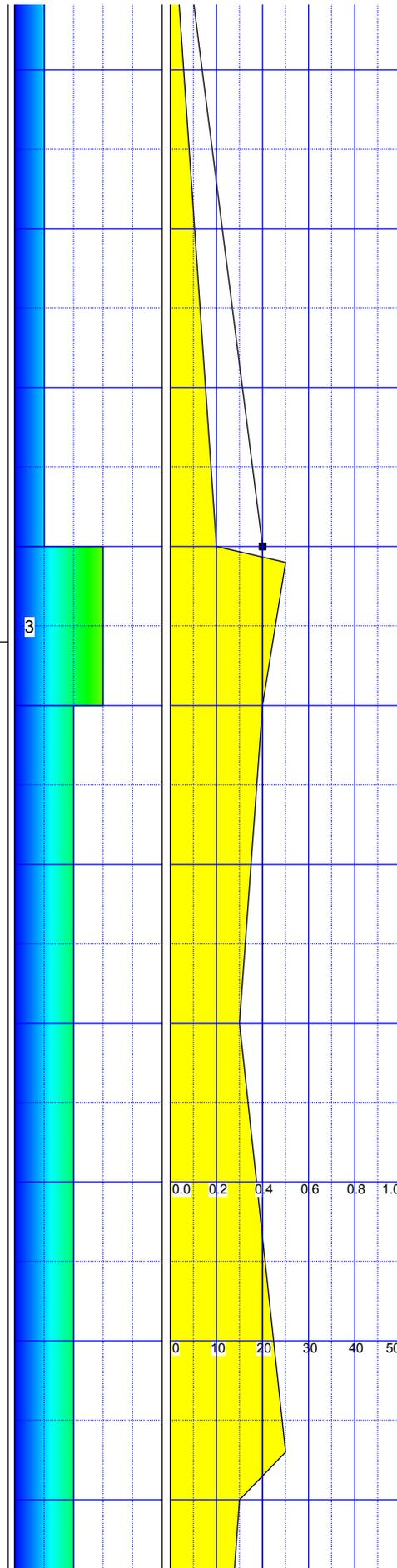
BASALT:
 COLOR: Medium grey
 TEXTURE: Vesicular basalt, vesicular from top of interval to 224.5 ft, diktytaxitic to 235.8 ft, vesicular from 235.8 ft to base of interval. Spatter, flow and mold at base.
 COMPOSITION: Grey groundmass
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Red to orange oxidation on surfaces and inside vesicles at top and base of interval, white to light tan material in fractures at base.

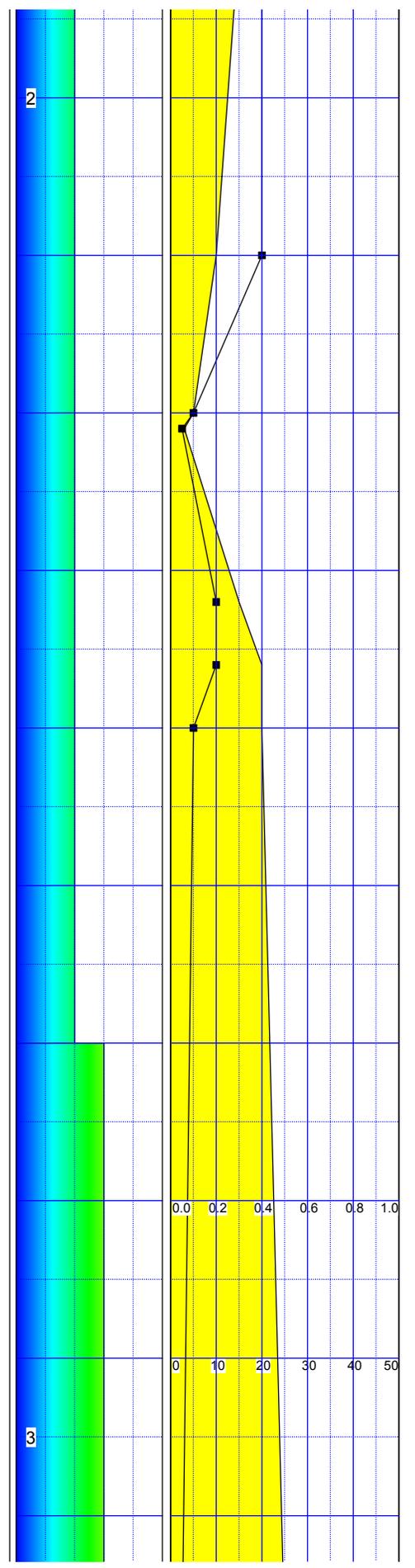
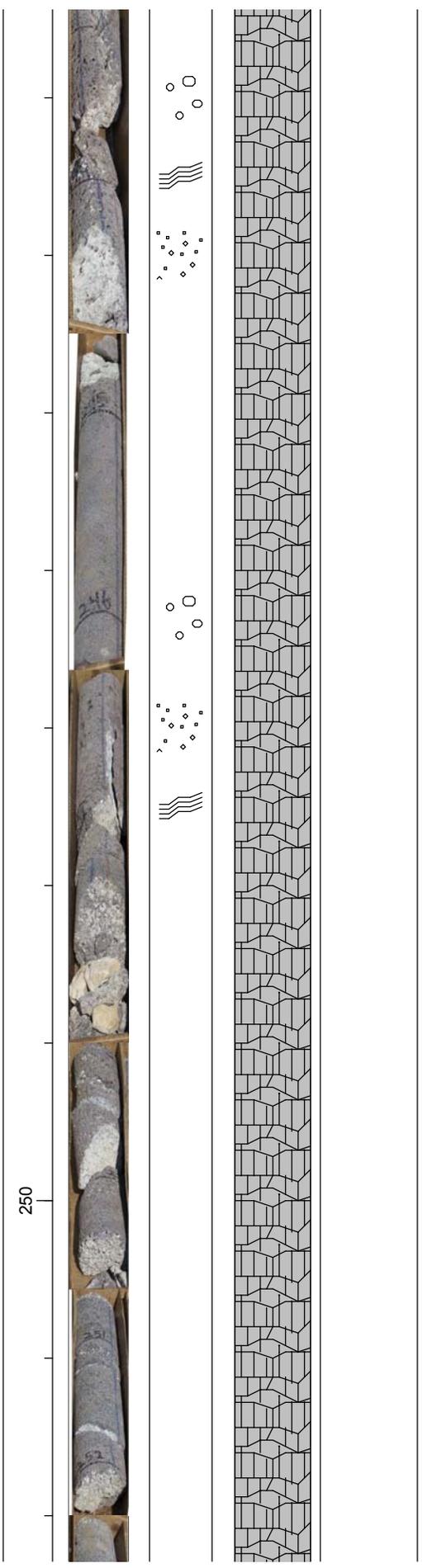


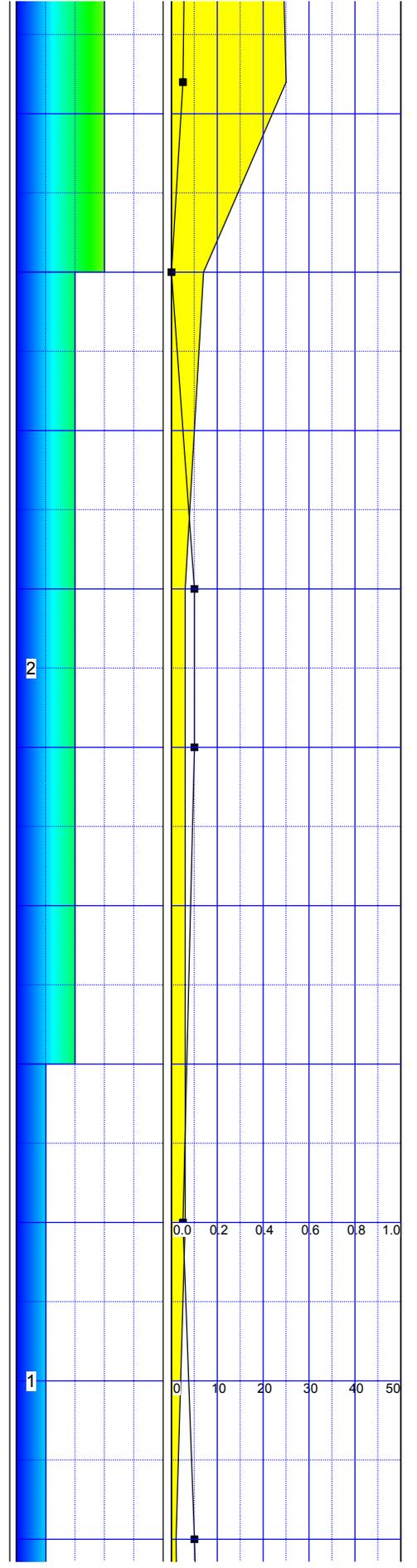
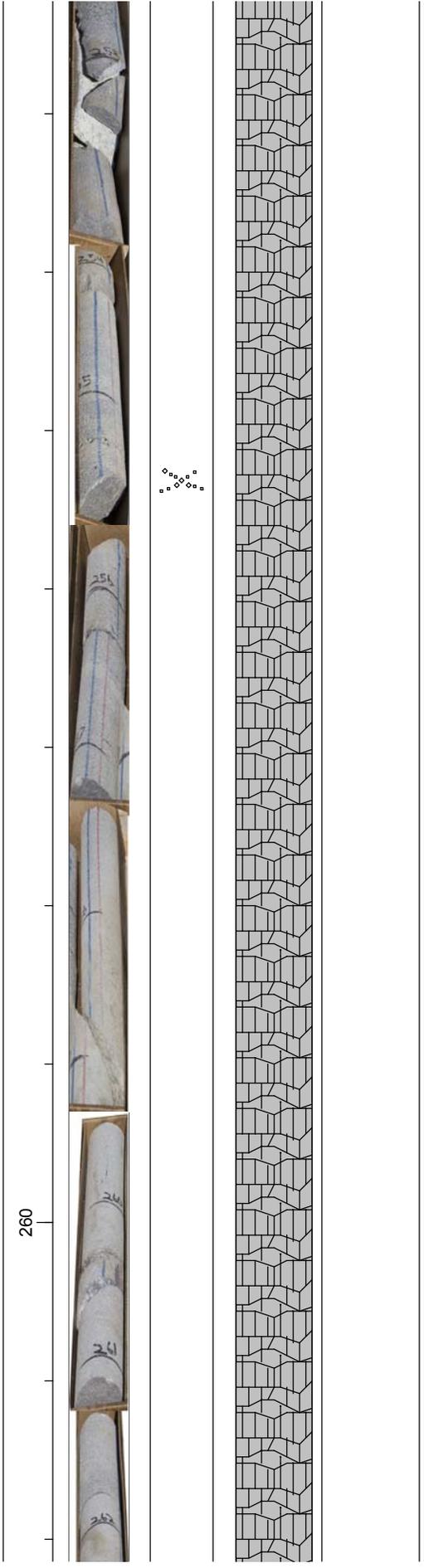




BASALT:
COLOR: Medium grey
TEXTURE: Aphanitic, vesicular basalt, vesicular to 245 ft, diktytaxitic to 246.2 ft, increasingly vesicular from 246 to 253 ft, then diktytaxitic to 258 ft, massive from 258 to 261 ft, diktytaxitic to 269 ft, then increasingly vesicular to base of interval. Flow/mold and spatter at top, 247 ft, and base of interval.
COMPOSITION: Grey groundmass
XENOLITHS/AUTOLITHS: None noted
ALTERATION: Whitish amorphous substance on fracture surfaces and inside some vesicles throughout interval, white to tan massive substance at base, Red to orange oxidation at top, base, and on flow structures



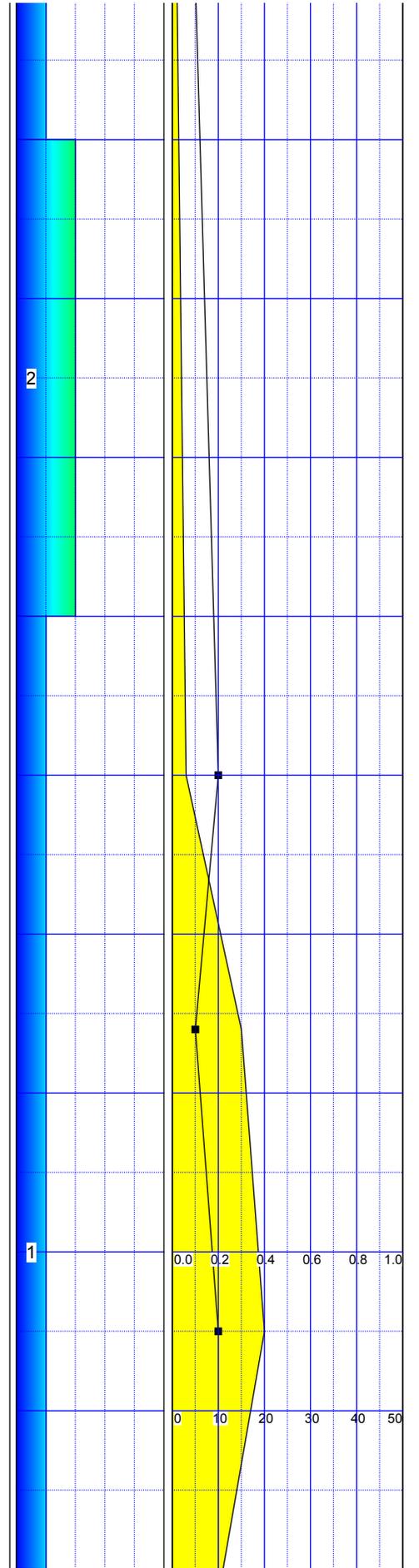
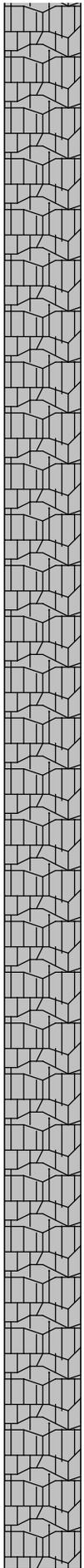


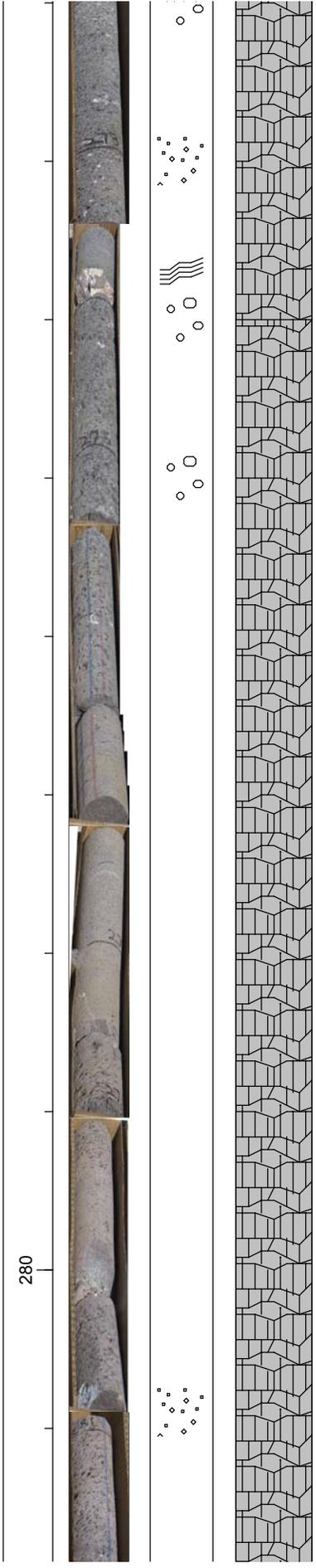


270

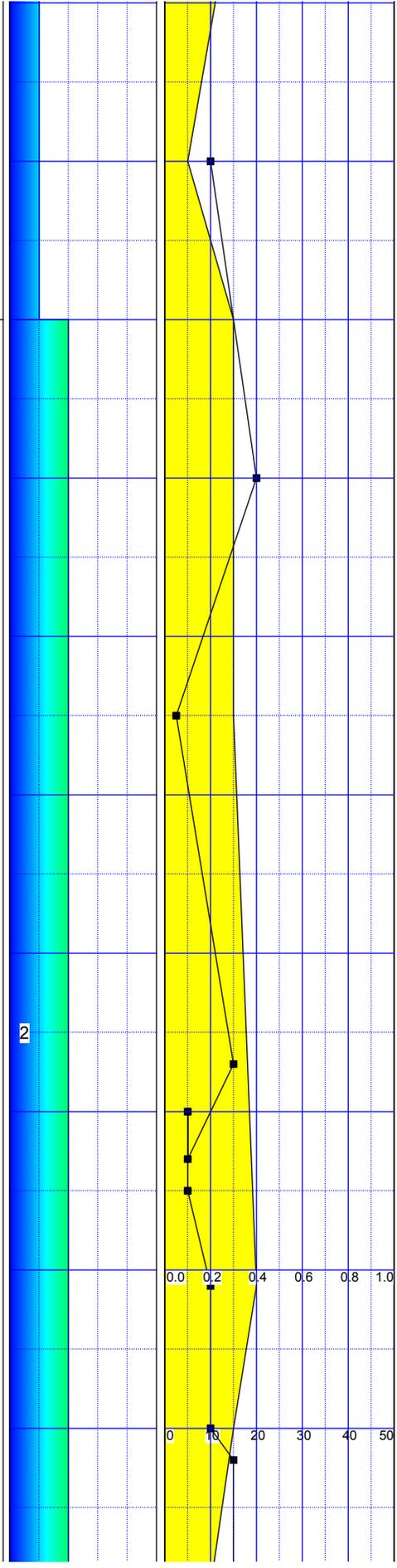


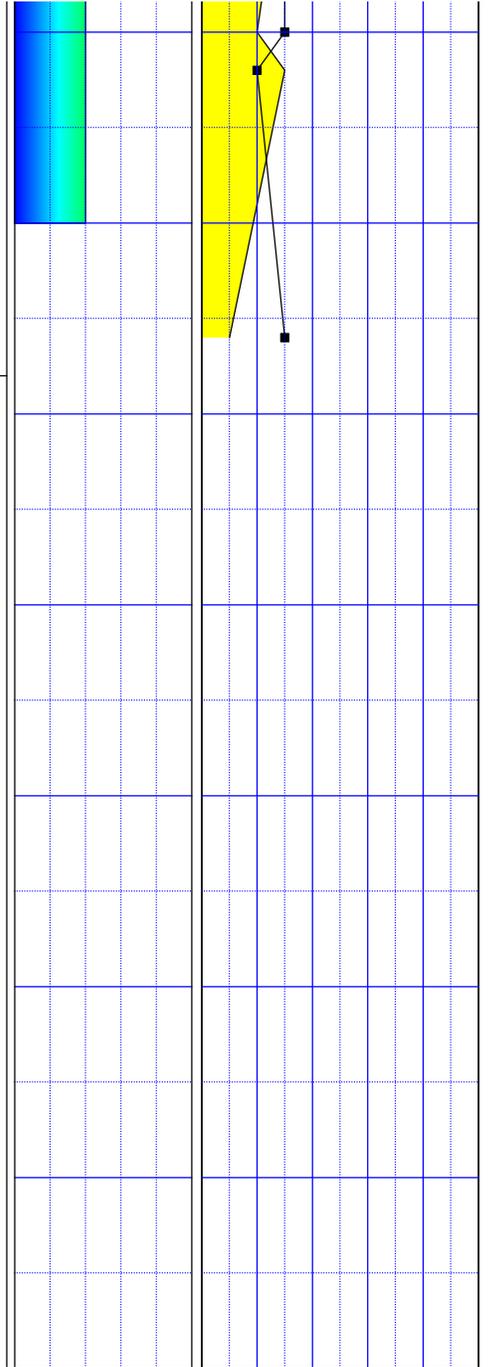
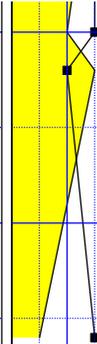
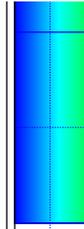
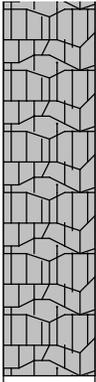
0 0





BASALT:
COLOR: Medium grey
TEXTURE: Aphanitic, vesicular
basalt, vesicular to 276.5 ft, diktytaxitic
to 278.6 ft, vesicular to 279.4 ft,
diktytaxitic to 280.3 ft, vesicular to base
of interval, which did not reach the base of
this flow
COMPOSITION: Grey groundmass
XENOLITHS/AUTOLITHS: None noted
ALTERATION: Whitish amorphous substance on
fracture surfaces and inside some vesicles
throughout interval, Red to orange oxidation
at top of interval





Official Name: TAN 2272

Logged By: M. K. V. Hodges

Selected Aliases: No aliases

USGS Site ID: 435053112423001

Contractor Well ID: NA

Drilling Agency: USGS for CWI

Year Drilled: 2015

Names of Drillers: M. Gilbert, C. J. Jones

Well Status: Complete

Total Depth of Hole (ft): 289

Total Core Recovered (ft): 79

Beginning Depth (ft): 210.7

Ending Depth (ft): 282.8

 Continuous Recovery

 Selected Intervals Recovered

Total # of Core Boxes: 20

Notes: Well was rotary drilled to approximate water level, then cored to total depth, core log was done from photos and site geologist notes.

County & State: Butte County, ID

Quadrangle Name: Circular Butte

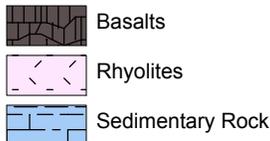
Lat / Lng: N 43° 50' 52.91" W 112° 42' 30.28"

Tns / Rng / Sec: T6N / R31E / S13

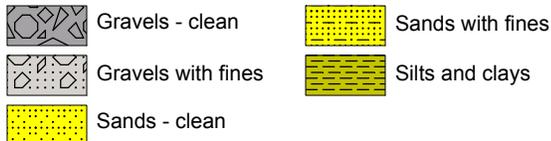
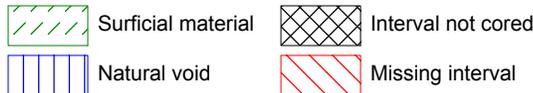
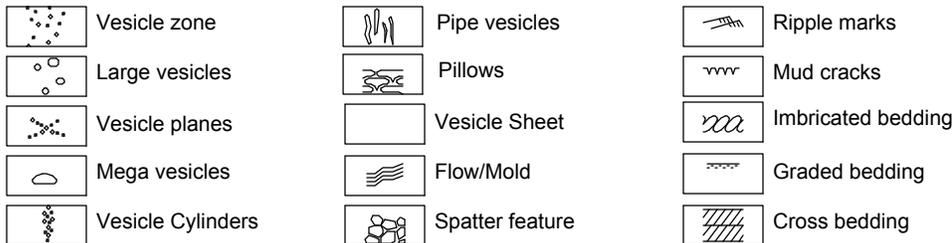
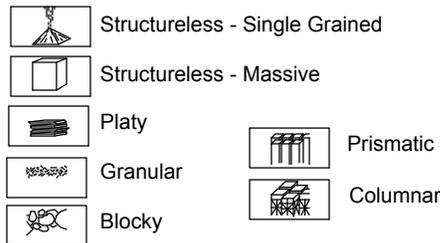
UTM Coordinates: Zone 12 N 362611.797, 4856413.705

Surface Elevation (ft): 4781.25

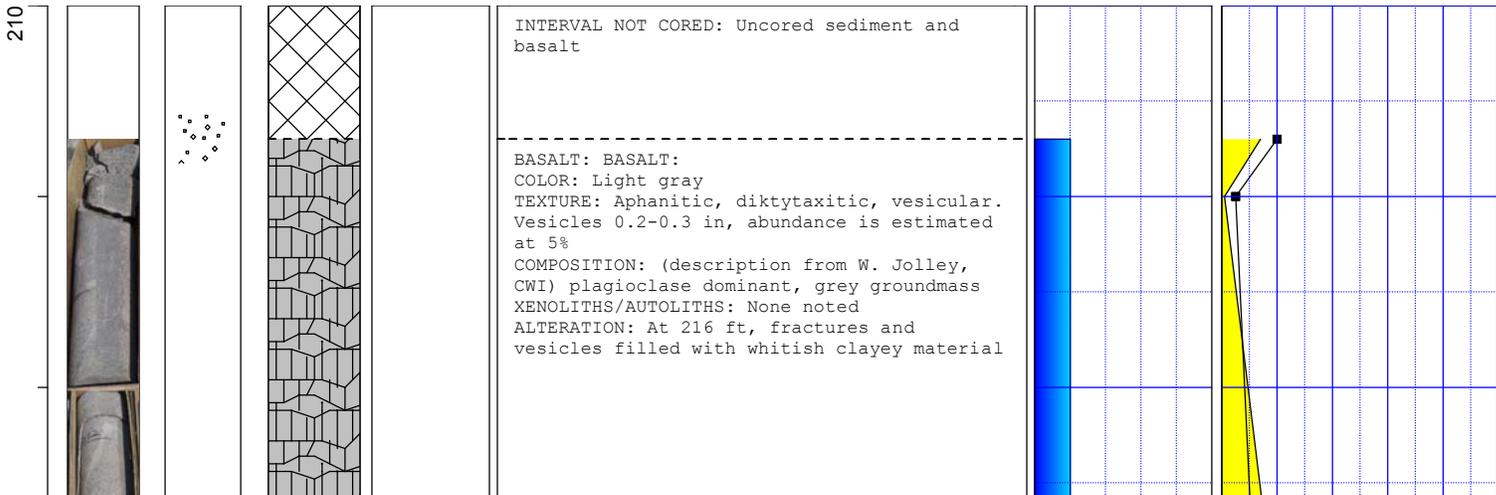
Core Geological Profile

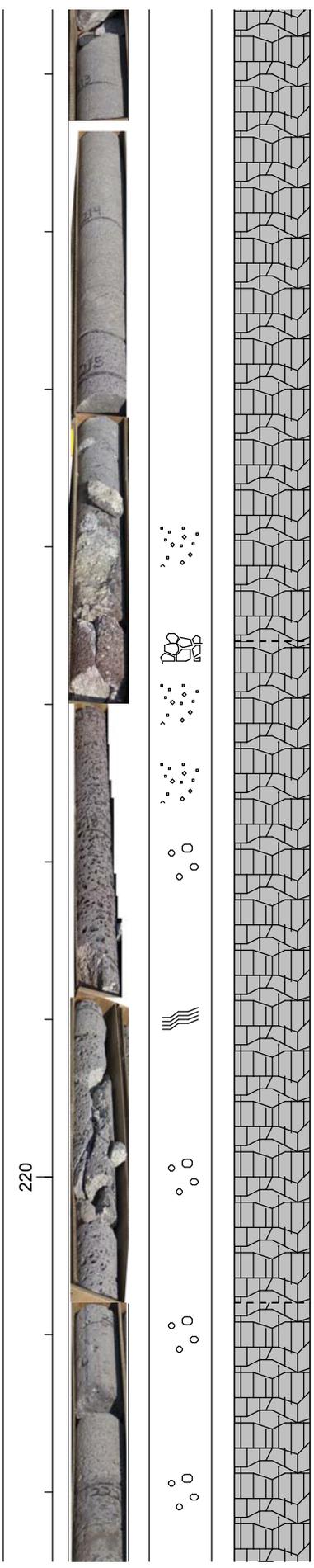
Lithologic Patterns

Soil Patterns

(See Unified Soil Classification System.)


Intervals in Absentia

Igneous and Sedimentary Structure Symbols

Soil Structure Symbols


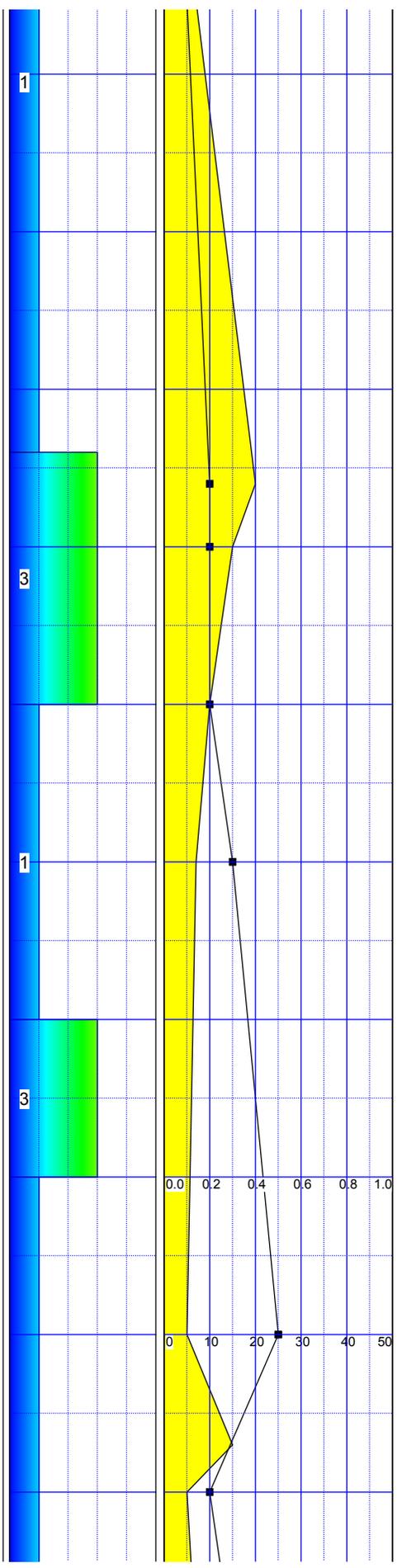
Depth (feet & tenths)	Core Photo	Igneous, Soil and Sed Structures	Lithology	Description	Fracture Frequency	Vesicle Characteristics
				Miscellaneous Text Lithologic Description	unfractured 3 - 5 ft 1 - 3 ft 4 in to 1 ft 1 - 4 in < 1 in 0 1 2 3 4 5	Mean Size (in) 0 0.2 0.4 0.6 0.8 1.0 Volume Percentage 0 10 20 30 40 50

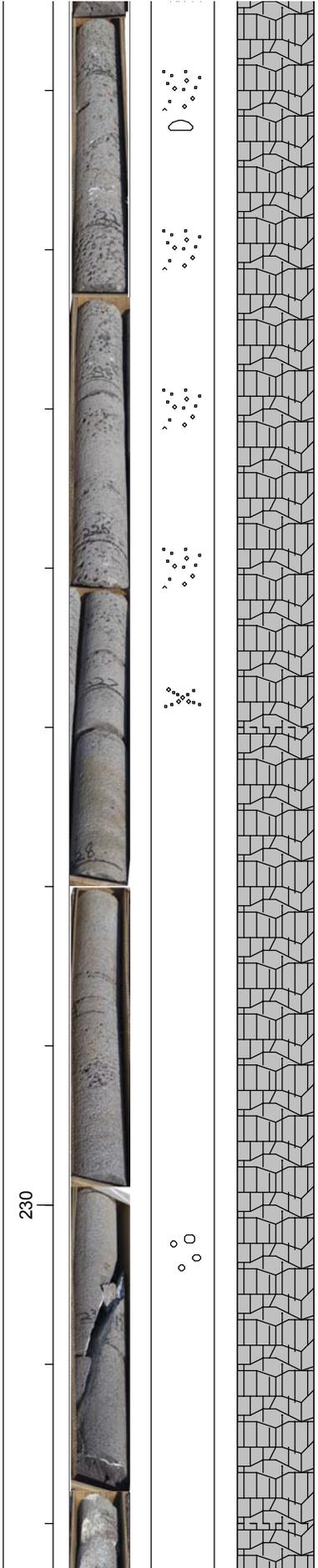




BASALT:
 COLOR: Reddish oxidation from 217.7 to 220 ft, where it changes to light gray.
 TEXTURE: Diktytaxitic, aphanitic basalt, vesicular from top of interval, vesicles average 0.25 in., and approximately 15 % abundance; vesicles increase in size and decrease in abundance to 226 ft; diktytaxitic to 235.8 ft, fractures at 217.7, 217.9, 221.3, 222-224 ft, 228.6 ft, 233 ft.
 COMPOSITION: Plagioclase dominated
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Reddish oxidation at the top and base of interval, pale yellowish to white amorphous material fills fractures

BASALT:
 COLOR: Reddish oxidation from 217.7 to 220 ft, where color changes to light gray.
 TEXTURE: Diktytaxitic, aphanitic basalt, vesicular from top of interval, vesicles average 0.25 in., and approximately 15 % abundance; vesicles increase in size and decrease in abundance to 226 ft; diktytaxitic to 235.8 ft Fractures at 217.7, 217.9, 221.3, 222-224 ft, 228.6 ft, 233 ft.,
 COMPOSITION: Plagioclase dominated
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Reddish oxidation at the top and base of interval, pale yellowish to white

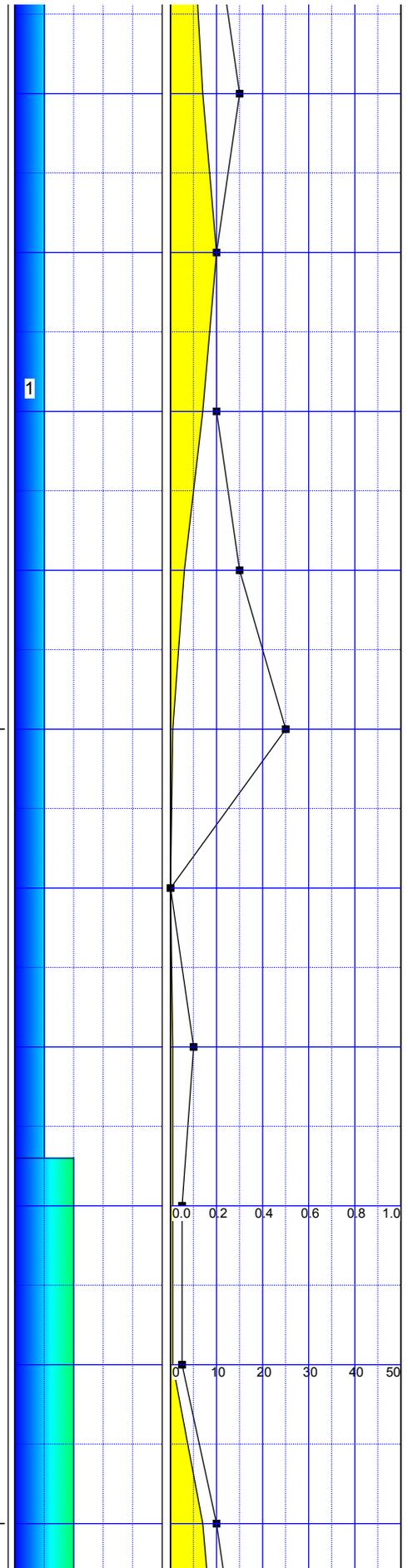


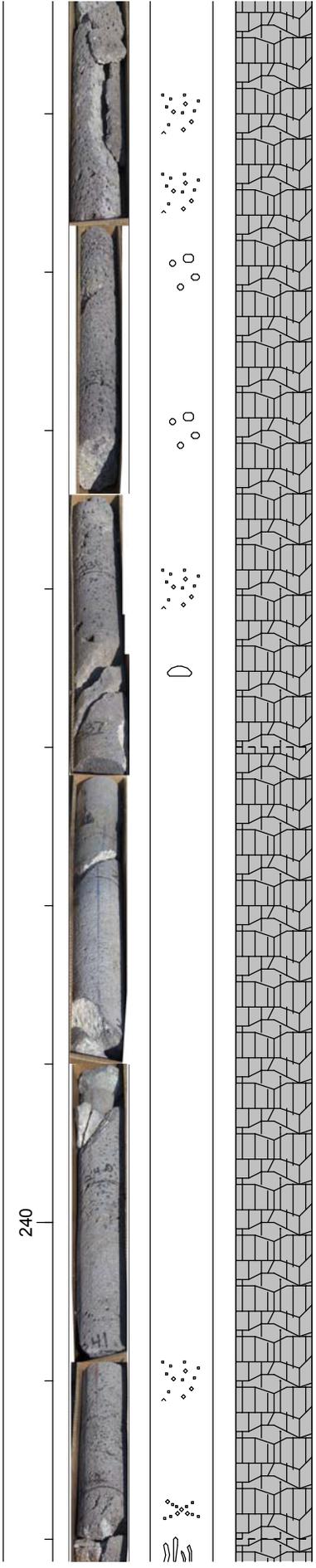


amorphous material fills fractures

BASALT:
 COLOR: Light gray.
 TEXTURE: Aphanitic, diktytaxitic. Vesicle planes at 228.8 ft 229.4 ft. Fracture at 251 ft
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Fracture 231 ft filled with white amorphous material, CWI radiological control technician reports that the substance reacts moderately to HCl, and reports that the substance is likely to be wey injected into formation for contaminant remediation, plus calcium carbonate

BASALT:
 COLOR: Medium gray.
 TEXTURE: Aphanitic, diktytaxitic, vesicular

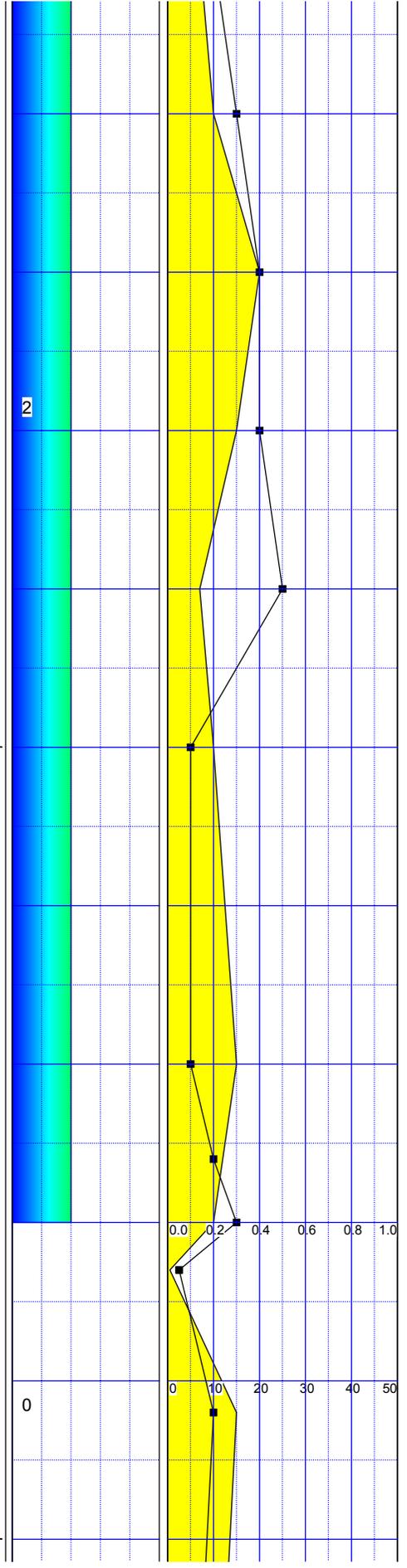


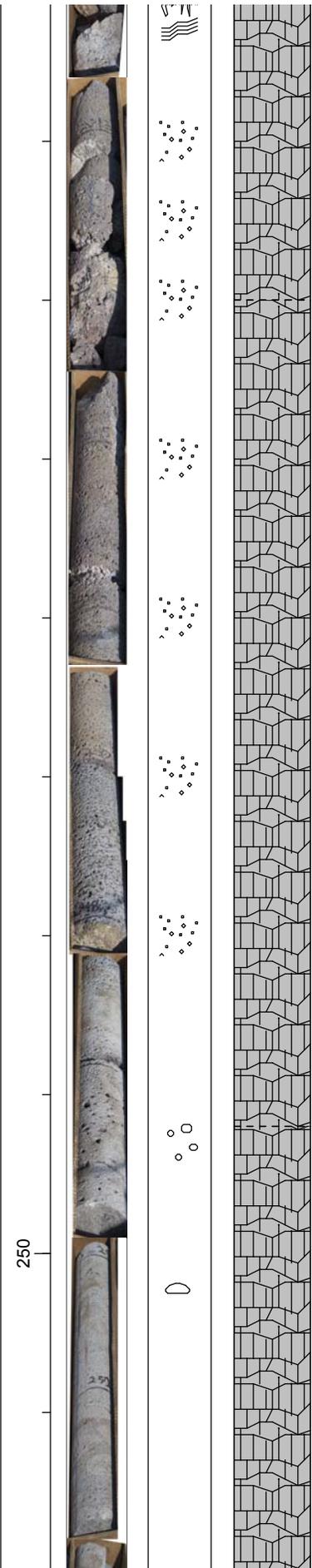


basalt. Fractured and vesicular from 232-236 ft, diktytaxitic and fractured from 236-237 ft; vesicles 0.1 in to 1.0 inch, increasing in size and decreasing in abundance with increasing depth
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Amorphous, white substance fills fractures, reacts moderately to HCL, likely wey plus calcium carbonate

BASALT:
 COLOR: Light gray.
 TEXTURE: Aphanitic, diktytaxitic. Vesicle zone from 239-240.3 ft ft. Fracture at 239 ft,
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Amorphous, white substance fills fractures, reacts moderately to HCL, likely wey plus calcium carbonate

BASALT:

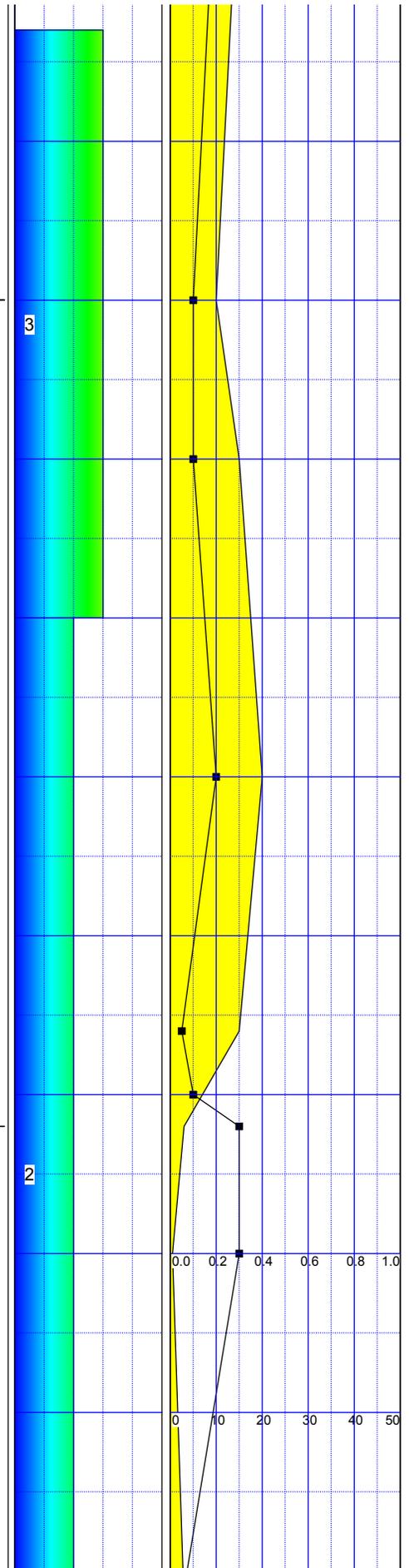


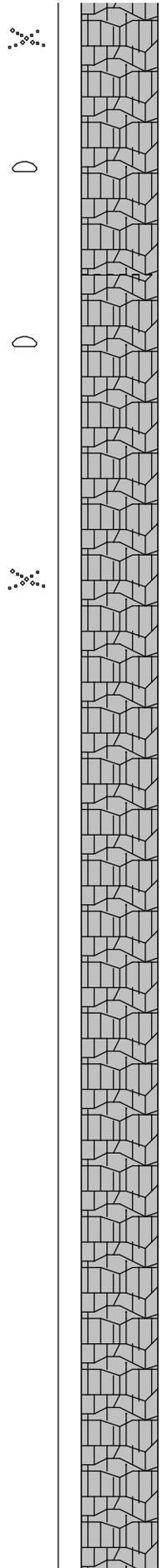
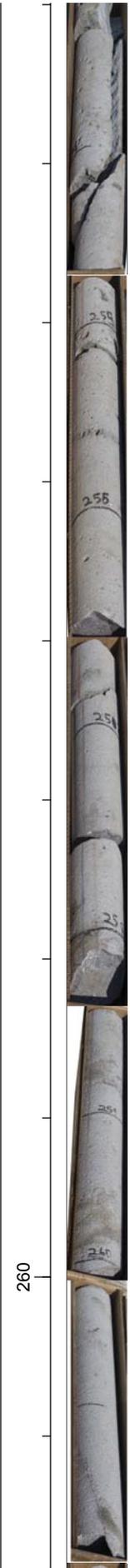


COLOR: Reddish gray, oxidized
 TEXTURE: Aphanitic, vesicular basalt.
 Vesicular throughout. Fractures 242-244 ft.
 Vesicles average 0.1 in, approximately 10% abundance
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Amorphous, white substance fills fractures, reacts moderately to HCL, likely whey plus calcium carbonate

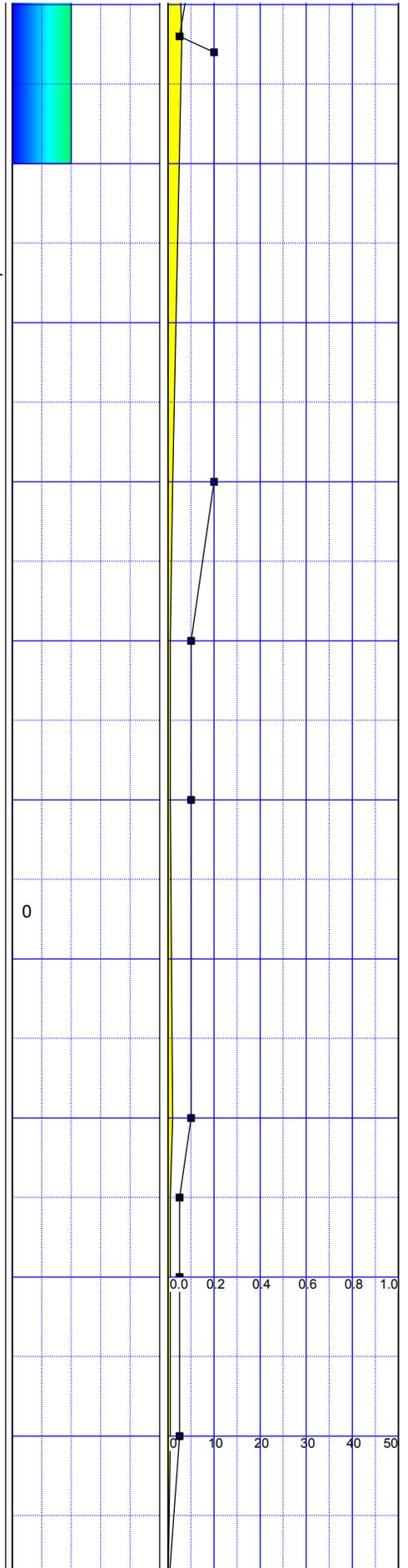
BASALT:
 COLOR: Light gray.
 TEXTURE: Aphanitic, diktytaxitic.
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Red fracture fill at 242.8 ft

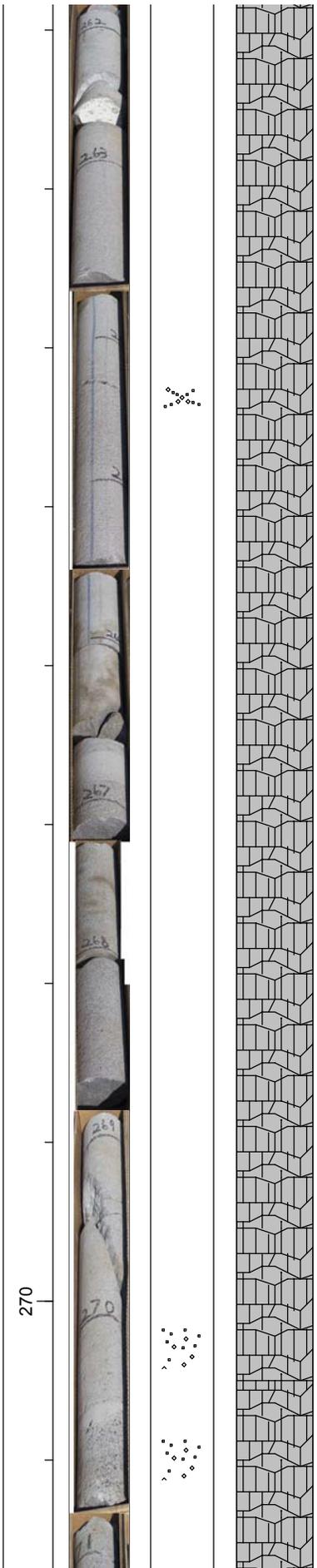
BASALT:
 COLOR: Light gray.
 TEXTURE: Aphanitic, diktytaxitic basalt.
 Rare, large (> 1 in) vesicles near top of interval, rest is massive
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: None noted



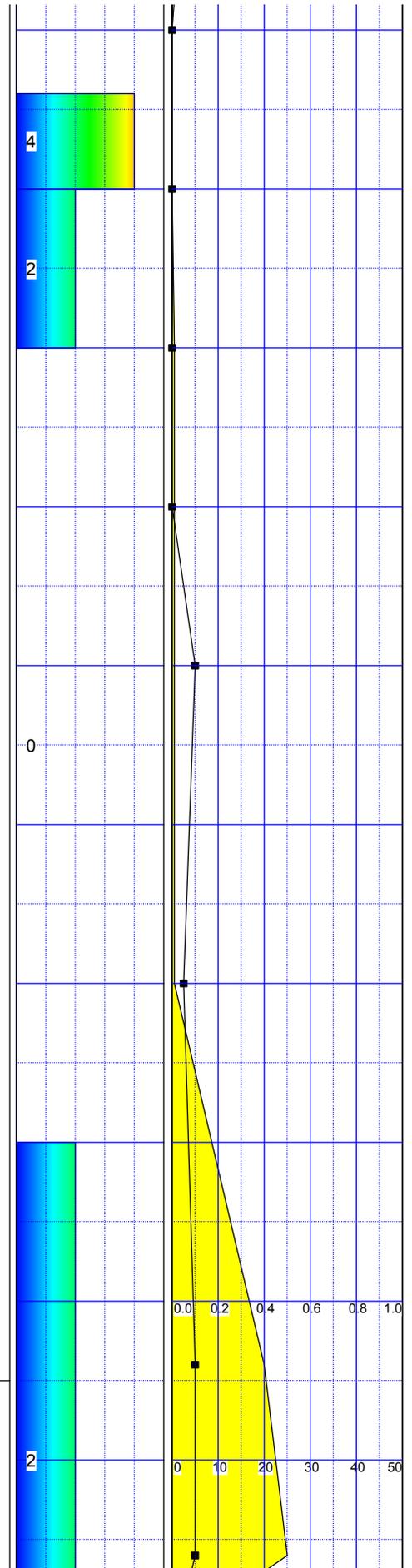


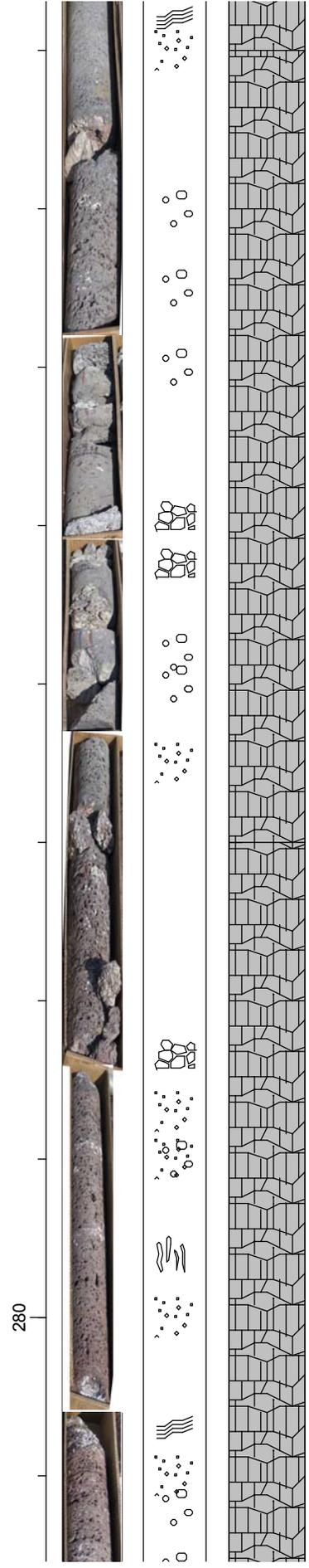
BASALT:
 COLOR: Light gray.
 TEXTURE: Aphanitic, diktytaxitic. Vesicle zone from 239-240.3 ft ft. Fractures at 254, 257.5, 262.7, 269.2 ft. Vesicle plane at 364.3 ft
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Amorphous, white substance fills fractures, reacts moderately to HCL, likely whey plus calcium carbonate





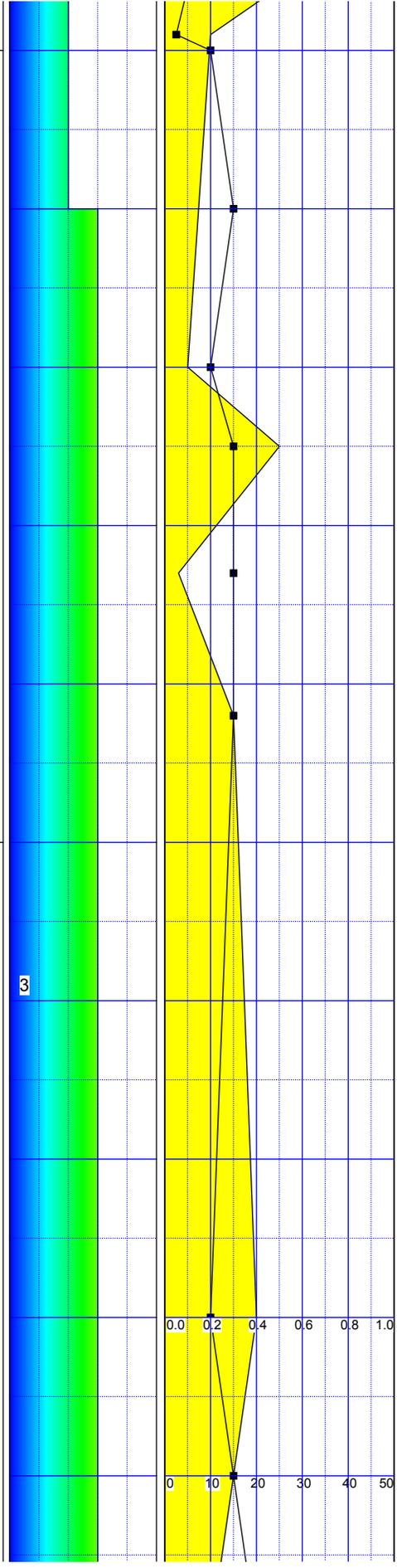
BASALT:
 COLOR: Medium gray.
 TEXTURE: Aphanitic, vesicular, Vesicles decrease in size and increase in abundance to base, flow/mold structure at base of interval
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: None noted

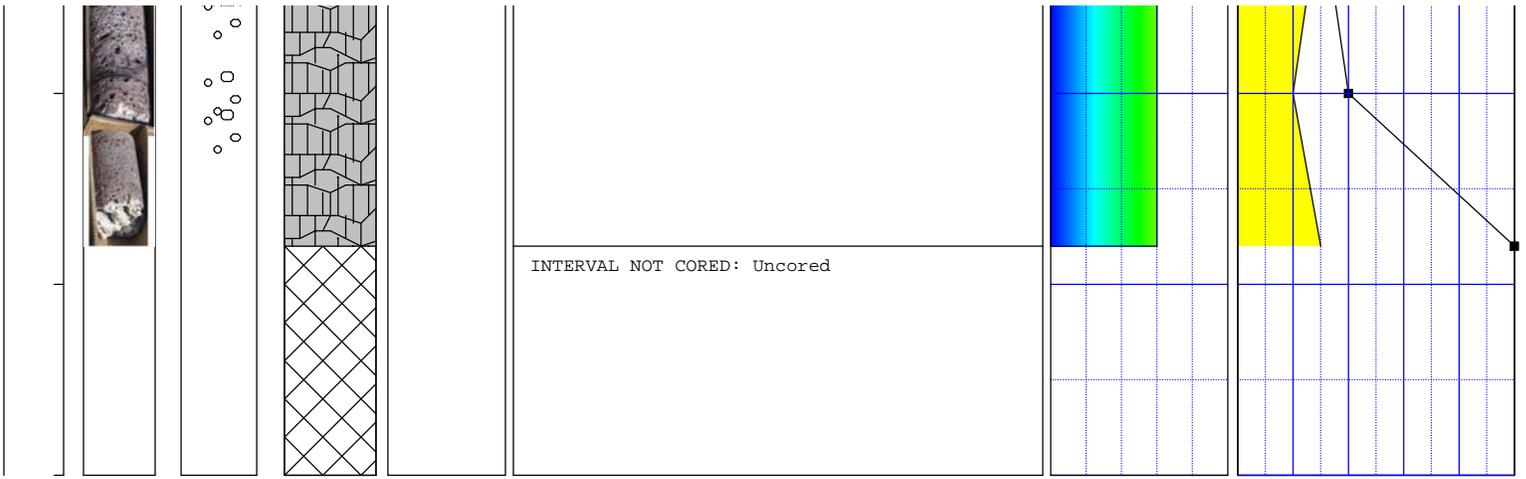




BASALT:
 COLOR: Medium gray.
 TEXTURE: Aphanitic, vesicular, Vesicles decrease in size and increase in abundance to base, red oxidized flow/mold structure at base; spatter at 275.3 ft, fractures at 274.5, 276 ft,
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Amorphous, white substance fills fractures, reacts moderately to HCL, likely wey plus calcium carbonate

BASALT:
 COLOR: Dark red
 TEXTURE: Aphanitic, vesicular, Vesicles average 0.5 in. in size, 10-15% abundance, some vesicles are filled with, and some fractures are coated with yellow to white amorphous substance, as is the base. Fractures at 278.2, 280.6, 282.2 ft
 COMPOSITION: Not done
 XENOLITHS/AUTOLITHS: None noted
 ALTERATION: Amorphous, yellow to white substance in fractures, vesicles, and base





INTERVAL NOT CORED: Uncored