

UNIT 1: HIGHLY PLAGIOCLASE PHYRIC DOLERITE

Pieces 1-8

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 35-40%; 1-5 mm; Euhedral to subhedral.

Pyroxene - 2%; 1-4 mm; Subhedral.

GROUNDMASS: Not discernable (alteration).

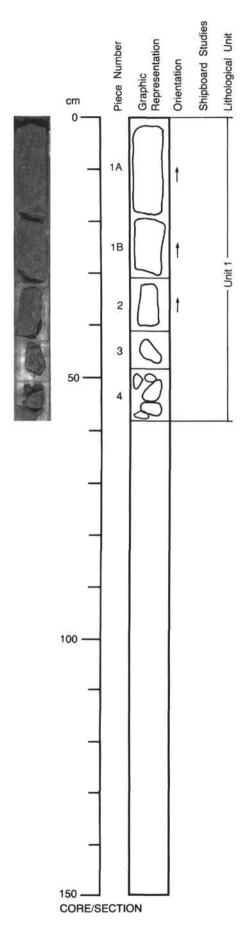
VESICLES: None.

COLOR: Gray to greenish gray. STRUCTURE: Massive. ALTERATION: Moderate.

VEINS/FRACTURES: 0.1%; 1 mm; 60 degrees; thin fractures filled with green material

(epidote and chlorite).

Information on Core Description Forms, for ALL sites, represents field notes taken aboard ship. Some of this information has been refined in accord with post-cruise findings, but production schedules prohibit definitive correlation of these forms with subsequent findings. Thus, the reader should be alerted to the occasional ambiguity or discrepancy.



UNIT 1: HIGHLY PLAGIOCLASE-PYROXENE PHYRIC DOLERITE

Pieces 1-4

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30-35%; 1-5 mm; Euhedral to subhedral. Pyroxene - 5%; 1-4 mm; Subhedral. GROUNDMASS: Indiscernable; magnetite 1%.

VESICLES: None.

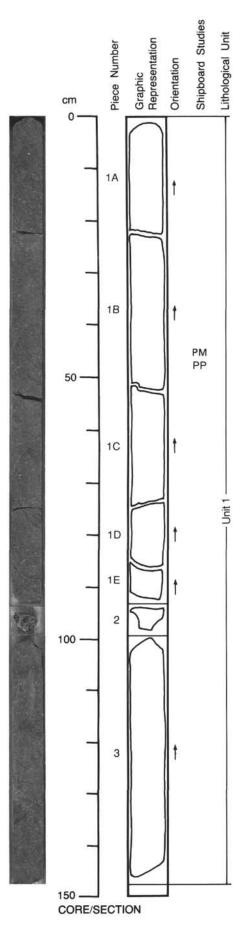
COLOR: Pale greenish gray.

STRUCTURE: Massive.

ALTERATION: Moderate: chlorite(?), epidote(?).
VEINS/FRACTURES: 0.1%; 0.1 mm; ?; scarce fine fractures filled with green mineral(s);

0.5 cm patches of epidote(?).

ADDITIONAL COMMENTS: Same as Section 1.



UNIT 1: HIGHLY PLAGIOCLASE-PYROXENE PHYRIC DOLERITE

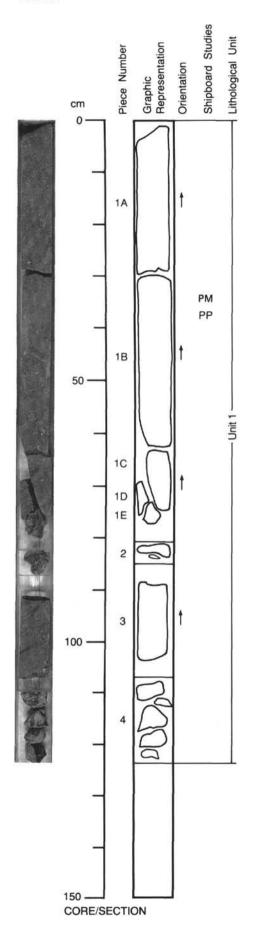
Pieces 1-3

CONTACTS: None.
PHENOCRYSTS: Uniform distribution of crystals.
Plagioclase - 35%; 1-5 mm; Euhedral to subhedral, tabular to round, altered.
Pyroxene - 10%; 1 mm; Anhedral.

GROUNDMASS: Not discernable.

VESICLES: None.

COLOR: Medium greenish gray.
STRUCTURE: Massive.
ALTERATION: Moderate: chlorite, epidote, pyrite.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Probably Unit 2 of Leg 127.

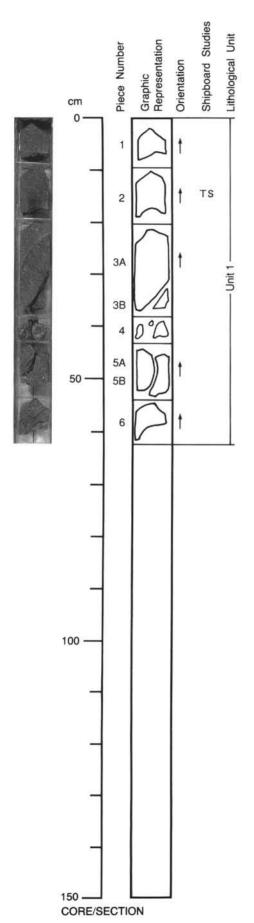


UNIT 1: HIGHLY PLAGIOCLASE PHYRIC DOLERITE

Pieces 1-4

CONTACTS: None.
PHENOCRYSTS: Uniform distribution of crystals.
Plagioclase - 35%; 1-5 mm; Euhedral to subhedral, tabular to round,

Plagioclase - 35%; 1-5 mm; Euhedral to subhedral, tab altered.
Pyroxene - 10%; 1 mm; Anhedral.
GROUNDMASS: Not discernable.
VESICLES: None.
COLOR: Medium greenish gray.
STRUCTURE: Massive.
ALTERATION: Moderate: chlorite, epidote, pyrite.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Probably Unit 2 of Leg 127.



UNIT 1: HIGHLY PLAGIOCLASE PHYRIC DOLERITE

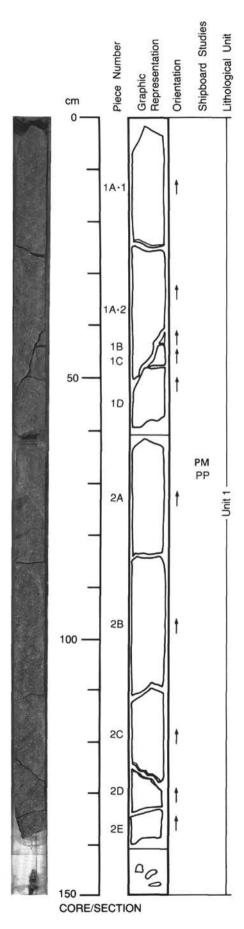
Pieces 1-6

CONTACTS: None.
PHENOCRYSTS: Uniform distribution of crystals.
Plagioclase - 35%; 1-5 mm; Euhedral to subhedral, tabular to round.
Pyroxene - 10%; 1 mm; Anhedral.
GROUNDMASS: Not discernable.
VESICLES: None.
COLOR: Medium greenish gray.
STRUCTURE: Massive.

STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, pyrite.

VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Probably Unit 2 of Leg 127.



128-794D-3R-1

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 1

CONTACTS: None.

PHENOCRYSTS: Uniform distribution of crystals.
Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round, altered.
Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not discernable.

VESICLES: None.
COLOR: Dark gray.
STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite.

VEINS/FRACTURES: 0.1%; 1 mm; 20 degrees; chlorite, epidote(?), trace pyrite. ADDITIONAL COMMENTS: Contains 1 mm plagioclase + pyroxene symplectites;

Magnetite 1%, anhedral grains.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 2

CONTACTS: None. PHENOCRYSTS:

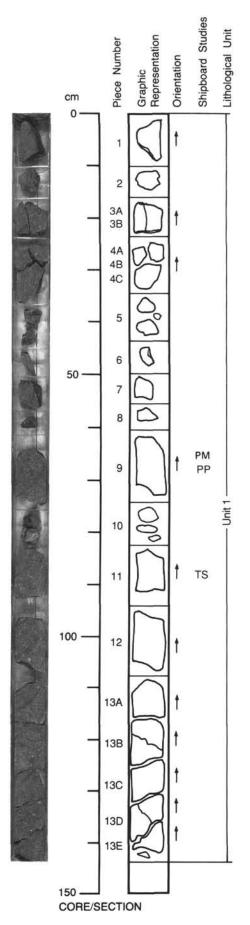
Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite. VEINS/FRACTURES: 0.1%; 1 mm; 20 degrees.
ADDITIONAL COMMENTS: Magnetite: 1%, anhedral.



128-794D-3R-2

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 1

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round. Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite. VEINS/FRACTURES: 1%; 2 mm; 340 degrees; chlorite. ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 2

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite.

VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 3

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None.

COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite. VEINS/FRACTURES: 0.1%; 0.1 mm; 350 degrees; chlorite. ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

128-794D-3R-2 (continued)

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Pieces 4-5

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite.

VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 6

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite. VEINS/FRACTURES: 0.1%; 0.1 mm; 10 degrees; chlorite. ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Pieces 7-12

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%: 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite.

VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Pieces 13B

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round. Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

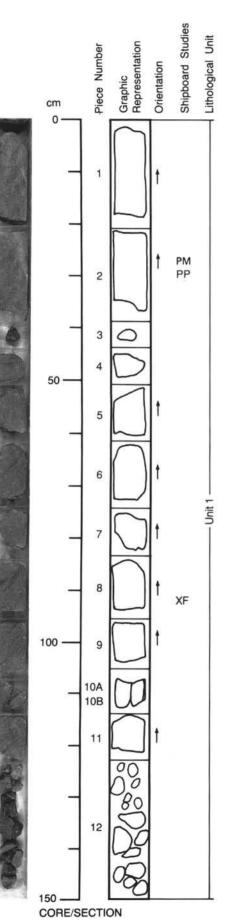
VESICLES: None. COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite.

VEINS/FRACTURES: 1%; 1 mm; 300 degrees; epidote, trace hematite(?).

ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.



128-794D-3R-3

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Pieces 1-10

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%; 1 mm; Euhedral to anhedral.

GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite.

VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 11

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round. Pyroxene - 10%; 1 mm; Euhedral to anhedral. GROUNDMASS: Not determined.

VESICLES: None COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite. VEINS/FRACTURES: 0.1%; 0.1 mm; 290 degrees; quartz(?). ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.

UNIT 1: HIGHLY PLAGIOCLASE - PYROXENE PHYRIC DOLERITE

Piece 12

CONTACTS: None. PHENOCRYSTS:

Plagioclase - 30%; 1-5 mm; Euhedral to anhedral, tabular to round.

Pyroxene - 10%; 1 mm; Euhedral to anhedral.

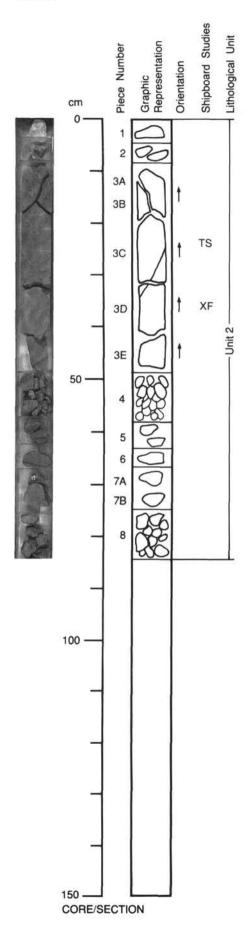
GROUNDMASS: Not determined.

VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Moderate: chlorite, epidote, trace pyrite.

VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: Magnetite, 1%, anhedral.



128-794D-4R-1

UNIT 1: CLAY

Piece 1

CONTACTS: None.
PHENOCRYSTS: Very fine grained fragment.
GROUNDMASS: Clay and chlorite.

VESICLES: None. COLOR: Light green. STRUCTURE: Massive. ALTERATION: None.

VEINS/FRACTURES: 2-4 cm, curved slickensides.

UNIT 2: PYROXENE MICROPHYRIC DOLERITIC BASALT

Pieces 2-8

CONTACTS: None.
PHENOCRYSTS: Microphenocrysts (Olivine-Pyroxene).

Ol-Pyroxene - 10-15%; 0.5-1.5 mm.

GROUNDMASS: Plagioclase laths and pyroxene in an intersertal to intergranular texture.

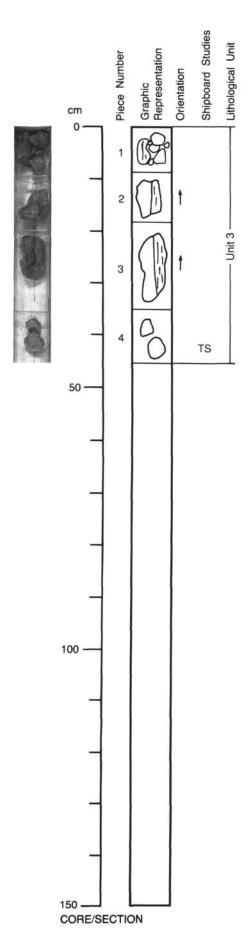
Feather-like textures.

VESICLES: 3-5%; 0.5-2 mm; irregular; Pieces 5 and 8; location at the top and the base of

the unit. COLOR: Dark green.

STRUCTURE: Massive.

ALTERATION: Highly altered into chlorite and epidote.
VEINS/FRACTURES: 0.1%; 1 mm; 320 degrees; vein of chlorite, epidote and trace pyrite in Piece 3C.



128-794D-5R-1

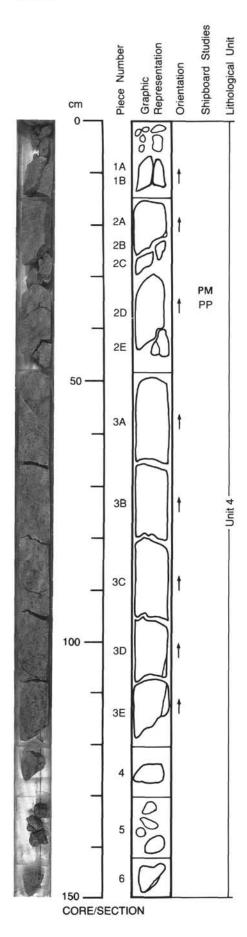
UNIT 3: APHYRIC DOLERITE

Pieces 1-3

CONTACTS: None.
PHENOCRYSTS: Fine to medium grained fragments.
GROUNDMASS: Plagioclase in tablets and anhedral crystals with subhedral pyroxene in an intergranular texture.

VESICLES: None.

VESICLES: None.
COLOR: Dark green.
STRUCTURE: Massive.
ALTERATION: High.
VEINS/FRACTURES: 2%; 10 cm; subvertical; large slickensided fracture in Pieces 1, 2 and 3, normal fault, pitch 75 degrees.



128-794D-7R-1

UNIT 4: MICROPHYRIC PYROXENE DOLERITE

Pieces 1, 2, 4, 5, 6

CONTACTS: None.

PHENOCRYSTS: These are microphenocrysts.

Plagioclase - 10%; 0.1-0.3 mm; Euhedral, homogeneous distribution.

Ol-Pyroxene - 20%; 0.2-0.4 mm; Subhedral, homogeneous distribution. Magnetite - 5%; 0.05-0.1 mm; Subhedral, homogeneous distribution.

GROUNDMASS: Not discernable.

VESICLES: 1%; 2 mm; round, eliptical; homogeneous distribution; filled with pale green

COLOR: Medium gray, mottled pale green. STRUCTURE: Massive.

ALTERATION: Moderate: epidote(?), chlorite(?), secondary albite(?), trace pyrite.

VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Similar to Unit 1 but phenocrysts are much smaller.

UNIT 4: MICROPHYRIC PYROXENE DOLERITE

Piece 3

CONTACTS: None.

PHENOCRYSTS: These are microphenocrysts.

Plagioclase - 10%; 0.1-0.3 mm; Euhedral, homogeneous distribution. Ol-Pyroxene - 20%; 0.2-0.4 mm; Subhedral, homogeneous distribution. Magnetite - 5%; 0.05-0.1 mm; Subhedral, homogeneous distribution.

GROUNDMASS: Not discernable.

VESICLES: 2%; 5 mm; various shapes; homogeneous distribution; filled with pale green "smectite".

COLOR: Medium gray, mottled pale green.

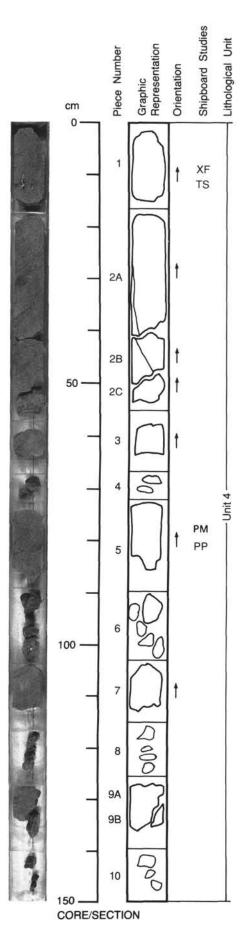
STRUCTURE: Massive.

ALTERATION: Moderate: epidote(?), chlorite(?), secondary albite(?), trace

pyrite.

VEINS/FRACTURES: 0.1%; 2 mm; Azimuth 05, Dip 6 degrees "E"; Limonite(?) fill.

ADDITIONAL COMMENTS: Similar to Unit 1 but phenocrysts are much smaller.



128-794D-7R-2

UNIT 4: MICROPHYRIC PYROXENE DOLERITE

Pieces 1-10

CONTACTS: None.
PHENOCRYSTS: These are microphenocrysts.

Plagioclase - 10%; 0.1-0.3 mm; Euhedral, homogeneous distribution. OI-Pyroxene - 20%; 0.2-0.4 mm; Subhedral, homogeneous distribution. Magnetite - 5%; 0.05-0.1 mm; Subhedral, homogeneous distribution.

GROUNDMASS: Not discernable.

VESICLES: 2%; 1-3 mm; various shapes; homogeneous distribution; filled

with pale green "clay".

COLOR: Medium gray, mottled pale green.

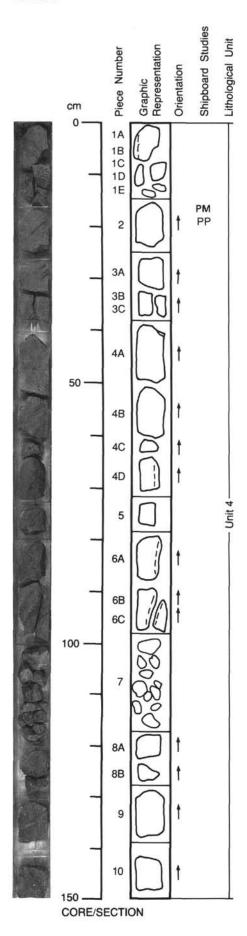
STRUCTURE: Massive.

ALTERATION: Moderate: epidote(?), chlorite(?), secondary albite(?), trace

pyrite.

VEINS/FRACTURES: 0.1%; 2 mm; Azimuth 355, Dip 70 degrees "E"; Limonite(?) fill.

ADDITIONAL COMMENTS: Similar to Unit 1 but phenocrysts are much smaller.



128-794D-8R-1

UNIT 4: APHYRIC TO MICROPHYRIC PYROXENE DOLERITE

Pieces 1-10

CONTACTS: None.

PHENOCRYSTS: These are microphenocrysts; intergranular to intersertal texture.

Plagioclase - 10%; 0.5-1.5 mm; Euhedral to subhedral.

Ol-Pyroxene - 20%; 0.3-0.8 mm; Subhedral.

Magnetite - 8%; 0.05-0.1 mm; Euhedral.

Ilmenite - 2%; 0.2 mm; Euhedral, tabular.

GROUNDMASS: Indiscernable.

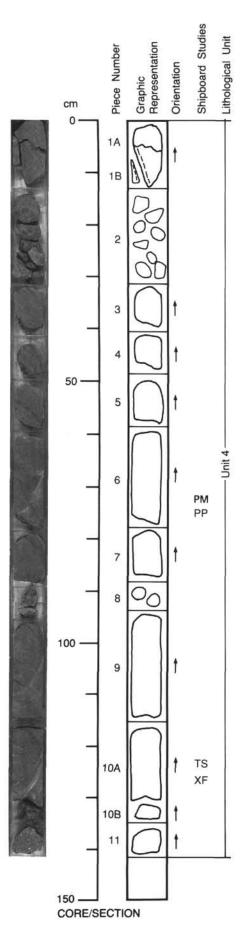
VESICLES: ?; 0.5-2 mm; irregular shape; random; filled with pale green "smectite(?)"; decreased abundance in Pieces 8-10.

COLOR: Medium greenish gray, mottled pale green.

COLOR: Medium greenish gray, mottled pale green. STRUCTURE: Massive.

ALTERATION: Moderate.

VEINS/FRACTURES: 0.1%; 1 mm(?); Azimuth 10, Dip 90 degrees; Pieces 1A, 4D, 5, 6A, 6B, 6C; oxidized margins.



128-794D-8R-2

UNIT 4: APHYRIC TO MICROPHYRIC PYROXENE DOLERITE

Pieces 1-11

CONTACTS: None.

PHENOCRYSTS: These are microphenocrysts; intergranular to intersertal texture.

Plagioclase - 10%; 0.5-1.5 mm; Euhedral to subhedral.

Ol-Pyroxene - 20%; 0.3-0.8 mm; Subhedral.

Magnetite - 8%; 0.05-0.1 mm; Euhedral.

Ilmenite - 2%; 0.2 mm; Euhedral, tabular.

GROUNDMASS: Indiscernable.

VESICLES: Bare: <0.5 mm; irregular shape; random distribution; found only in Piece VESICLES: Rare; <0.5 mm; irregular shape; random distribution; found only in Pieces 1A & B; absent in Pieces 2-11; filled with pale green "smectite(?)".

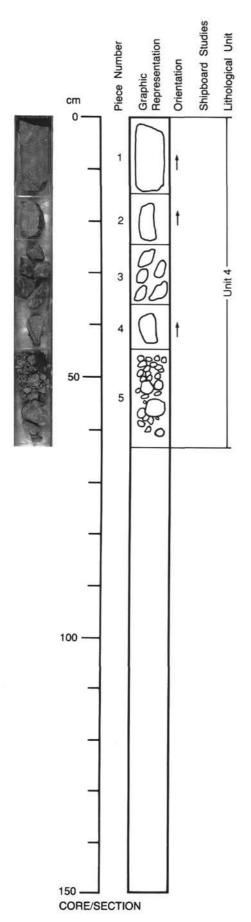
COLOR: Medium greenish gray, mottled pale green.

STRUCTURE: Massive.

ALTERATION: Moderate.

VEINS/FRACTURES: 0.1%; <0.5 mm; subvertical; Pieces 1A, B only; rimmed with iron

ADDITIONAL COMMENTS: Same as Section 1.



128-794D-8R-3

UNIT 4: APHYRIC TO MICROPHYRIC PYROXENE DOLERITE

Pieces 1-5

CONTACTS: None.
PHENOCRYSTS: These are microphenocrysts; intergranular to intersertal texture.

Plagioclase - 10%; 0.5-1.5 mm; Euhedral to subhedral. OI-Pyroxene - 20%; 0.3-0.8 mm; Subhedral.

Magnetite - 8%; 0.05-0.1 mm; Euhedral. Ilmenite - 2%; 0.2 mm; Euhedral, tabular.

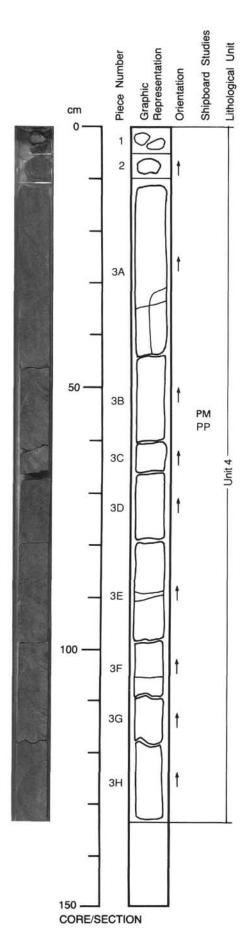
GROUNDMASS: Indiscernable.

VESICLES: None.

COLOR: Medium greenish gray, mottled pale green. STRUCTURE: Massive.

ALTERATION: Moderate. VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: Same as Section 2.



128-794D-9R-1

UNIT 4: APHYRIC DOLERITE

Pieces 1-3

CONTACTS: None. PHENOCRYSTS: None.

GROUNDMASS: Plagioclase 0.6-1.5 mm; olivine-pyroxene 0.5-1 mm; magnetite;

intergranular texture.

VESICLES: Rare; 0.3-0.6 mm; irregular; random distribution; Piece 3A has very rare 1-2 mm

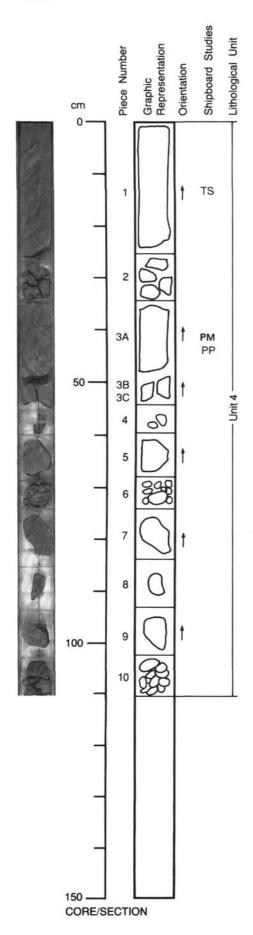
round vesicles filled with pale green mineral or calcite.

COLOR: Greenish gray. STRUCTURE: Massive.

ALTERATION: Moderate.

VEINS/FRACTURES: 0.1%; 0.1-0.3 mm; ?; filled with dark green mineral(s) - chlorite(?),

epidote(?).



128-794D-9R-2

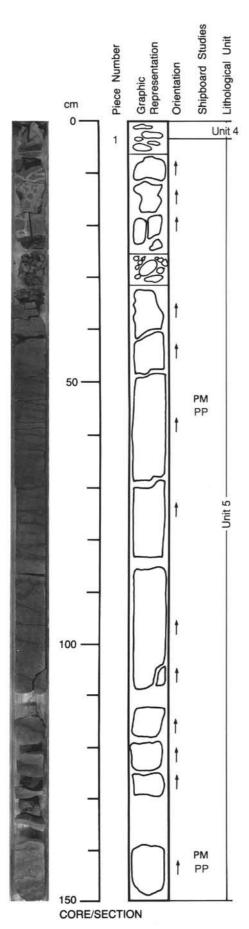
UNIT 4: APHYRIC DOLERITE

Pieces 1-10

CONTACTS: None. PHENOCRYSTS: None.

GROUNDMASS: Plagioclase 0.6-1.5 mm; olivine-pyroxene 0.5-1 mm; magnetite. VESICLES: Rare; 0.3-0.6 mm; irregular; random distribution; filled with pale green

mineral(s). COLOR: Greenish gray.
STRUCTURE: Massive.
ALTERATION: Moderate.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Same as Section 1.



128-794D-10R-1

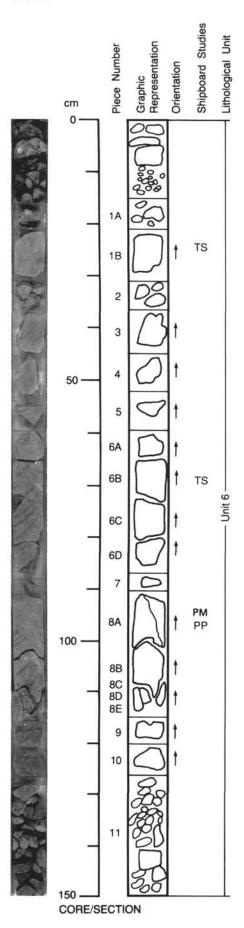
UNIT 4: APHYRIC DOLERITE

Piece 1

CONTACTS: In rubble (one piece of aphyric dolerite).
PHENOCRYSTS: None.
GROUNDMASS: Plagioclase 0.6-1.5 mm; pyroxene 0.5-1 mm; magnetite.
VESICLES: None seen (only one small piece present).

COLOR: Greenish gray. STRUCTURE: Massive. **ALTERATION:** Moderate. VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: Same as Core 9; remainder of core is sediment (=Unit 5).



128-794D-10R-2

UNIT 6: APHYRIC DOLERITIC BASALT

Pieces 1-11

CONTACTS: In rubble at approximately 15 cm. PHENOCRYSTS: None (or not recognizeable because of alteration).

GROUNDMASS: Indiscernable because of alteration except for about 1% magnetite

VESICLES: 1%; 0.3-3 mm; irregular to oval; patchy; unfilled 0.3-3 mm in Pieces 1-6A; filled

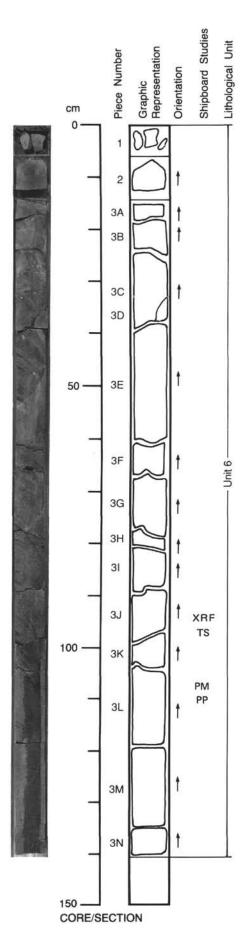
with green "smectite(?) in Piece 6A; large 5x8 mm filled with quartz(?) & calcite in COLOR: Medium gray.

STRUCTURE: Massive.

ALTERATION: High; green "smectite(?)" and sericite(??); trace pyrite.

VEINS/FRACTURES: 0.1%; 1 mm; Azimuth 340, Dip 85 degrees "W"; filled with chlorite.

ADDITIONAL COMMENTS: Appears to be a flow; sediment at top of section is not baked but does contain slickensides so contact may be displaced.



128-794D-11R-1

UNIT 6: APHYRIC BASALT

Pieces 1-3

CONTACTS: None.
PHENOCRYSTS: None discernable because of alteration.

GROUNDMASS: Not discernable because of alteration except for magnetite, ~0.02 mm,

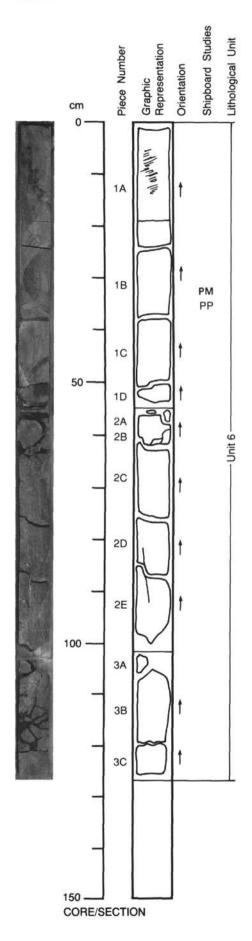
VESICLES: Rare; 1-2 mm; ?; random distribution; filled with soft white mineral.

COLOR: Medium gray. STRUCTURE: Massive.

ALTERATION: High: green "smectite" & sericite(??); magnetite oxidized to hematite from

130 cm adjacent to fracture seen in Section 2.

VEINS/FRACTURES: None (but influence from fracture in Section 2 seen).
ADDITIONAL COMMENTS: Piece 3 continues as 1A-D in Section 2.



128-794D-11R-2

UNIT 6: APHYRIC BASALT

Pieces 1-3

CONTACTS: None.
PHENOCRYSTS: None discernable because of alteration.
GROUNDMASS: Not discernable because of alteration except for magnetite,

~0.02 mm, 1%.

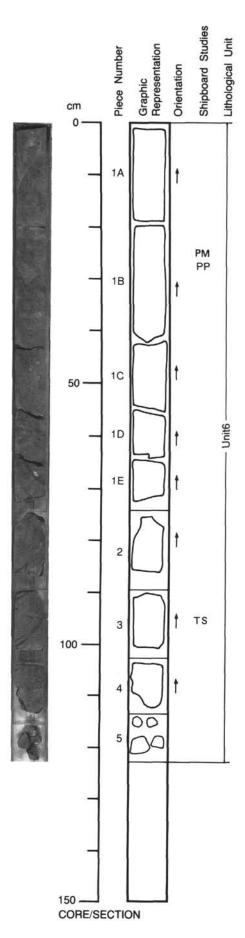
VESICLES: Rare; 1-2 mm; ?; random distribution; filled with green "smectite" & soft white

mineral. COLOR: Medium gray. STRUCTURE: Massive.

ALTERATION: High: green "smectite" & sericite(??); magnetite oxidized to hematite within 5 cm of fracture in 1A.

VEINS/FRACTURES: Piece 1A: parallel to saw cut (Azimuth ?, Dip 0), filled with dark. chlorite; Piece 2D: 0.6 mm, Azimuth 340, Dip (?), filled with dark chlorite(?); 0.5 mm, Azimuth 90, Dip 90 degrees, filled with calcite (XRD); Piece 2E: 1 mm, Azimuth 0, Dip (?), filled with soft white mineral.

ADDITIONAL COMMENTS: Pieces 1A-D are continuous with Piece 3 in Section 1.



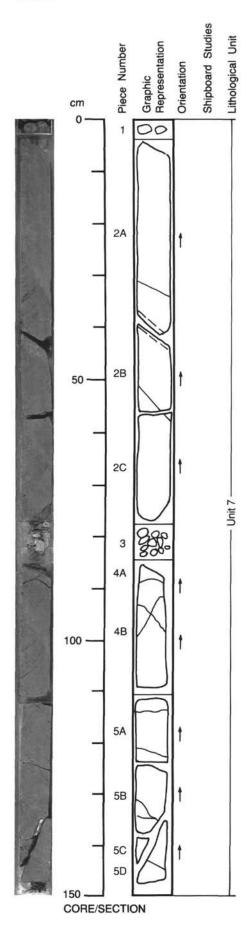
128-794D-11R-3

UNIT 6: APHYRIC BASALT

Pieces 1-5

CONTACTS: None.
PHENOCRYSTS: None discernable because of alteration.
GROUNDMASS: Not discernable because of alteration except for magnetite, ~0.02 mm, 1%.
VESICLES: Rare; 1 mm; ?; random distribution; Piece 1E: 1.3 x 0.5 cm vesicle filled with
"smectite", soft white mineral & marcasite (bladed; Piece 3: 3 vesicles aligned across
core, 3-6 mm, filled with green "smectite".
COLOR: Medium gray.
STRUCTURE: Massive.
ALTERATION: High: Green "smectite" & sericite(?).
VEINS/FRACTURES: Piece 4: 0.2 mm, Azimuth 0, Dip (?); 0.2 mm, Azimuth 90, Dip 0
degrees.

degrees.
ADDITIONAL COMMENTS: Same as Sections 1 & 2.



UNIT 7: APHYRIC DOLERITE

Pieces 1-5

CONTACTS: None.

PHENOCRYSTS: Glomerophyric aggregates of 1.5-2 mm plagioclase laths.

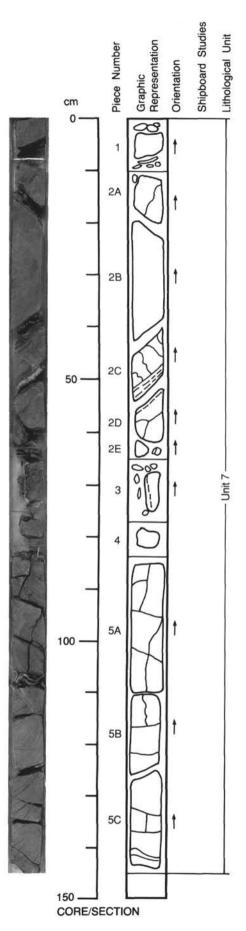
GROUNDMASS: Microcrystalline, intergranular texture; plagioclase 40%, 0.3-0.6 mm, subhedral; pyroxene 40%, 0.3-0.5 mm, subhedral; magnetite 10%, 0.05-0.2 mm, euhedral to subhedral; olivine pseudomorphs(?) Pieces 5C-D: slight increase in grain

size.
VESICLES: None.

COLOR: Dark grayish green.
STRUCTURE: Massive.

ALTERATION: Moderate.

VEINS/FRACTURES: Large oblique veins (Azimuth 20, 80, 295 degrees), 6-15 mm, filled with talc-chlorite (XRD) on borders and calcite (by XRD but looks like gypsum!) in center; fractures with same orientations; Piece 3 is debris of a large vein.



UNIT 7: APHYRIC DOLERITE

Pieces 1-5

CONTACTS: None.
PHENOCRYSTS: Similar to Section 1; Subhedral to euhedral tablets of plagioclase and

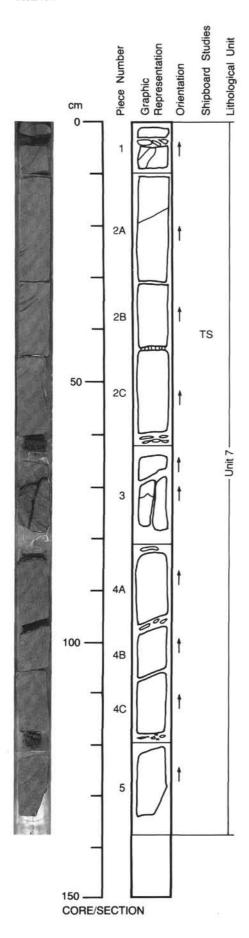
pyroxene, 0.8-1.5 mm.

GROUNDMASS: Pieces 1-2C: same as Section 1 but with increasing grain size; Pieces 2D-5C: same as Section 1 = microcrystalline, intergranular texture; plagioclase 40%, 0.3-0.6 mm, subhedral; pyroxene 40%, 0.3-0.5 mm, subhedral; magnetite 10%, 0.05-0.2 mm, euhedral to subhedral; olivine pseudomorphs(??) Pieces 5C-D: slight

VESICLES: None.

COLOR: Dark grayish green. STRUCTURE: Massive. ALTERATION: Moderate.

VEINS/FRACTURES: Very large (2.5 cm) vein, Azimuth 50 degrees. ADDITIONAL COMMENTS: Same as Section 1.



UNIT 7: APHYRIC DOLERITE

Pieces 1-5

CONTACTS: None.

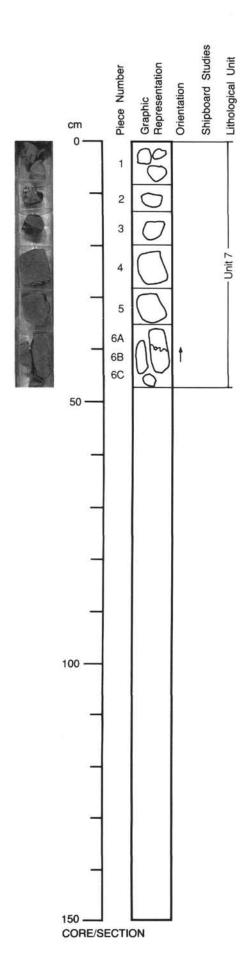
PHENOCRYSTS: Pieces 3-5: Subhedral to euhedral tablets of plagioclase and pyroxene, 0.8-1.5 mm.

GROUNDMASS: Pieces 1-2: same as Section 1 (fine grained); Pieces 3-5: increasing grain

size. VESICLES: None.

COLOR: Dark grayish green. STRUCTURE: Massive.

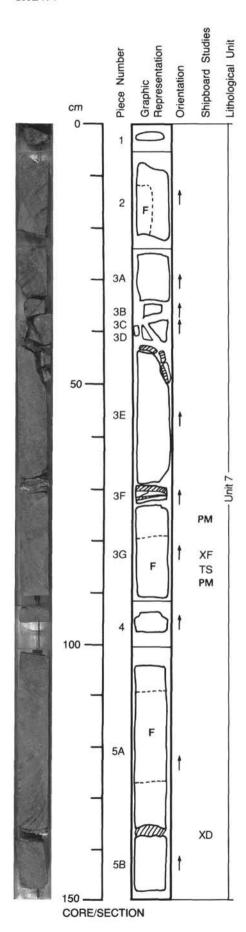
ALTERATION: Moderate.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Same as Section 1 & 2.



UNIT 7: APHYRIC DOLERITE

Pieces 1-6

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Same as Section 1 with increased grain size to 0.2-1.5 mm.
VESICLES: None.
COLOR: Dark grayish green.
STRUCTURE: Massive.
ALTERATION: Moderate.
VEINS/FRACTURES: Meandriform(?) dark green to blue vein.
ADDITIONAL COMMENTS: Same as Sections 1, 2 & 3.



128-794D-13R-1

UNIT 7: APHYRIC DOLERITE

Pieces 1-5

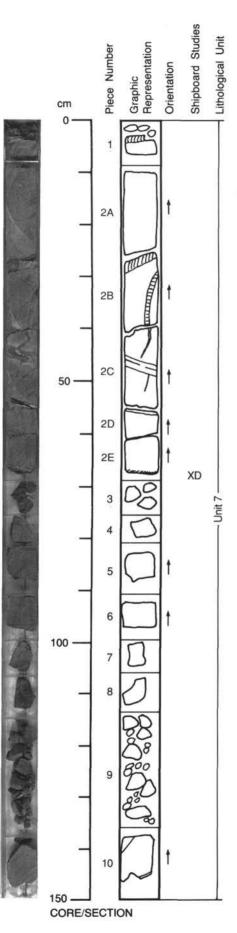
CONTACTS: Coarse/fine grained contacts in Pieces 2, 3G & 5A. PHENOCRYSTS: None.

GROUNDMASS: Dominant coarse fraction: plagioclase 40% subhedral 0.3-0.6 mm, pyroxene 40% subhedral 0.3-0.5 mm, magnetite 10% euhedral to subhedral 0.1-0.2 mm. Fine grained minor fraction: plagioclase 50% 0.3 mm, pyroxene 30% 0.1-0.2 mm, magnetite as in coarse fraction.

VESICLES: None.

VESICLES: None.
COLOR: Dark grayish green.
STRUCTURE: Massive.
ALTERATION: As in Core 12.
VEINS/FRACTURES: Pieces 3A, B, C, D, E: 6 mm wide, fibrous calcite interior and talc-chlorite exterior, Azimuth 290; Piece 3F: 2 cm wide including wall rock inclusion, same mineralogy as above, Azimuth 080; Pieces 5A, B: 1.5 cm wide, same mineralogy as above, Azimuth 090.

ADDITIONAL COMMENTS: Same as 794D-12R.



128-794D-13R-2

UNIT 7: APHYRIC DOLERITE

Pieces 1-2D

CONTACTS: None. PHENOCRYSTS: None.

GROUNDMASS: Same as Section 13 -- Plagioclase 40% subhedral 0.3-0.6 mm, pyroxene 40% subhedral 0.3-0.5 mm, magnetite 10% euhedral to subhedral 0.1-0.2

VESICLES: None.

COLOR: Dark grayish green. STRUCTURE: Massive.

ALTERATION: As in Section 1.

VEINS/FRACTURES: Piece 1: 1 cm wide, talc-chlorite rim with chlorite core, Azimuth 090; Piece 2A,B: 1.3 cm wide, same mineralogy, Azimuth 075; Pieces 2B,C: 1.3 cm wide, same mineralogy + small grains of quartz and trace pyrite, 3 mm selvedge of altered same mineralogy + small grains of quartz and trace pyrite, 3 mm selvedge of altered feldspar, Azimuth 280; Pieces 2B, C: 0.5 cm, chlorite with 1 mm selvedge as above, Azimuth 010, vein is older than the preceeding and is offset 2 cm "left lateral"; Pieces 2C,D: 4 mm, fibrous calcite core and talc-chlorite wall, Azimuth 285.

ADDITIONAL COMMENTS: Same as 794D-13R-1 (continued on next form).

UNIT 7: APHYRIC DOLERITE

Pieces 2E-10

CONTACTS: None.

PHENOCRYSTS: None.

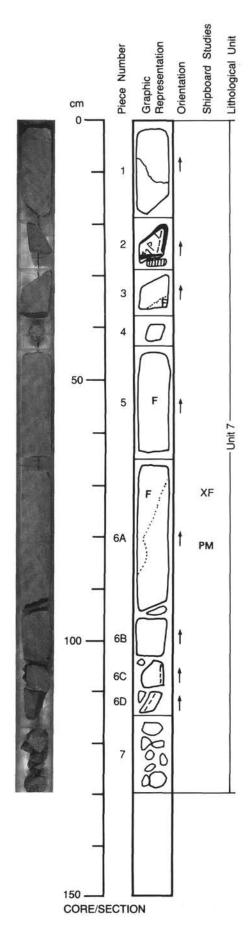
GROUNDMASS: Same as Pieces 1-2D: plagioclase 40% subhedral 0.3-0.6 mm, pyroxene 40% subhedral 0.3-0.5 mm, magnetite 10% euhedral to subhedral 0.1-0.2 mm.

VESICLES: None.

COLOR: Dark grayish green.
STRUCTURE: Massive.
ALTERATION: As in Section 1.

VEINS/FRACTURES: Piece 2E: 6 mm wide, chlorite, Azimuth 280; Piece 6: 1 mm wide, chlorite, Azimuth 355 and 090; Piece 10: 1 mm, chlorite rim and calcite core, Azimuth

ADDITIONAL COMMENTS: Same as 794D-13R-1, Pieces 1-2D (continued from previous form).



128-794D-14R-1

UNIT 7: APHYRIC DOLERITE

Pieces 1-7

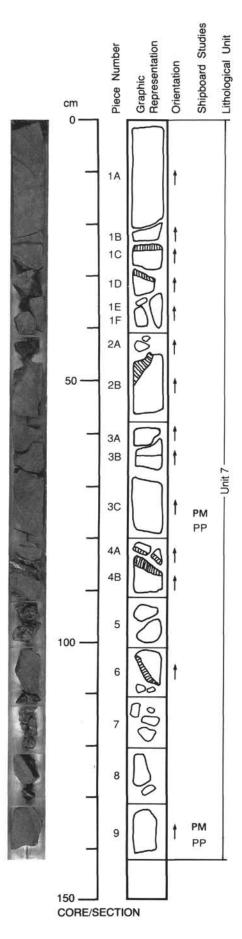
CONTACTS: None.
PHENOCRYSTS: None.

GROUNDMASS: Fine-medium grained, subophitic texture; plagioclase 40%, laths, euhedral to subhedral, 0.5-0.8 mm; pyroxene 40%, subhedral, 0.3-0.5 mm; magnetite 8%, subhedral, 0.05-0.2 mm. Pieces 3, 5, & 6A have finer grained groundmass: plagioclase 0.2-0.4 mm; pyroxene 0.15-0.3 mm but otherwise the same.

VESICLES: None.
COLOR: Grayish green.
STRUCTURE: Massive.
ALTERATION: Slight.

ALTERATION: Slight.
VEINS/FRACTURES: ?; 0.1 mm; 90, 320, & 350 degrees; talc.

ADDITIONAL COMMENTS: Same as Core 13.



128-794D-14R-2

UNIT 7: APHYRIC DOLERITE

Pieces 1-9

CONTACTS: None.
PHENOCRYSTS: None.

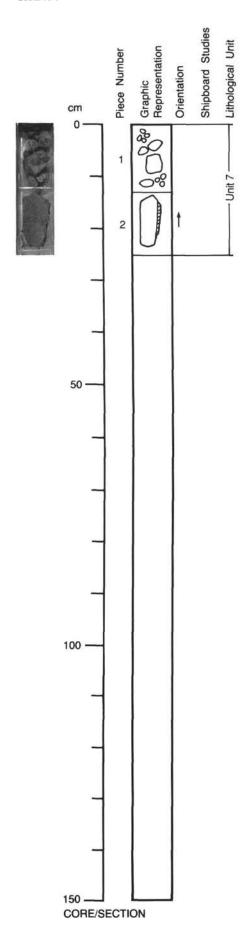
GROUNDMASS: Fine-medium grained, subophitic texture; plagioclase 40%, laths, euhedral to subhedral, 0.5-0.8 mm; pyroxene 40%, subhedral, 0.3-0.5 mm; magnetite 8%, subhedral, 0.05-0.2 mm.

VESICLES: None. COLOR: Grayish green. STRUCTURE: Massive.

ALTERATION: Slight.
VEINS/FRACTURES: 1%; 0.1 mm - 2 cm; 30, 90, 300, & 320 degrees; thin veins: talc;

thick veins: calcite core and talc + chlorite + quartz margin.

ADDITIONAL COMMENTS: Same as Section 1.



128-794D-14R-3

UNIT 7: APHYRIC DOLERITE

Pieces 1-2

CONTACTS: None. PHENOCRYSTS: None.

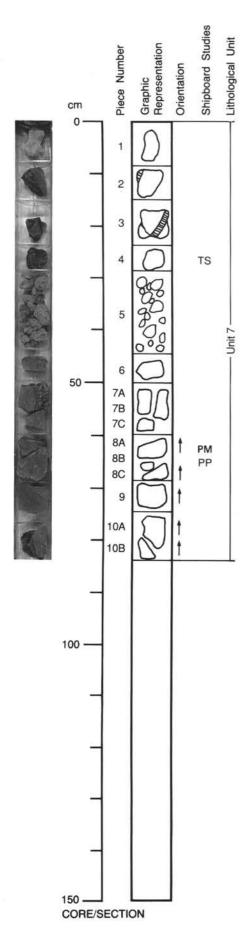
GROUNDMASS: Fine-medium grained, subophitic texture; plagioclase 40%, laths,

euhedral to subhedral, 0.5-0.8 mm; pyroxene 40%, subhedral, 0.3-0.5 mm; magnetite

8%, subhedral, 0.05-0.2 mm. VESICLES: None.

VESICLES: None.
COLOR: Grayish green.
STRUCTURE: Massive.

ALTERATION: Slight.
VEINS/FRACTURES: ?; 3 mm; subvertical; talc + chlorite.
ADDITIONAL COMMENTS: Same as Sections 1 & 2.



128-794D-15R-1

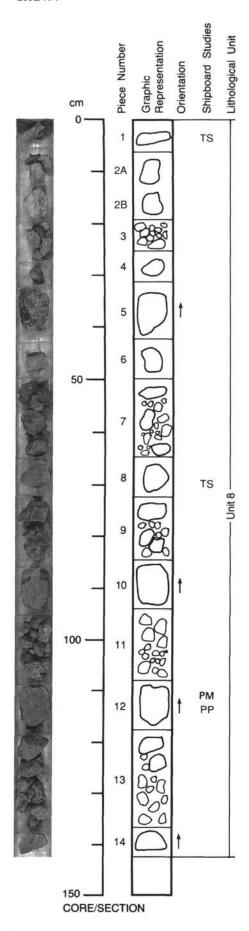
UNIT 7: APHYRIC DOLERITE

Pieces 1-10

CONTACTS: None.
PHENOCRYSTS: None.

GROUNDMASS: Fine grained, subophitic texture; plagioclase 40%, laths, subhedral, 0.2-0.4 mm; pyroxene 40%, subhedral, 0.1-0.3 mm; magnetite 5%, subhedral, 0.05

mm.
VESICLES: None.
COLOR: Grayish green.
STRUCTURE: Massive.
ALTERATION: Moderate (Pieces 2-10) to very high (Piece 1).
VEINS/FRACTURES: ?; 0.3-0.5 mm; ?; talc + chlorite.
ADDITIONAL COMMENTS: Same as Core 14.



128-794D-16R-1

UNIT 8: APHYRIC BASALT

Pieces 1-14

CONTACTS: None (Piece 1 is very fine grained so must be near upper contact).

PHENOCRYSTS: None.

GROUNDMASS: Fine grained, subophitic texture; plagioclase 60%, laths, subhedral to tabular, 0.1-0.5 mm; pyroxene 35%, subhedral, 0.1-0.3 mm; magnetite 5%, subhedral to skeletal, 0.05-0.1 mm.

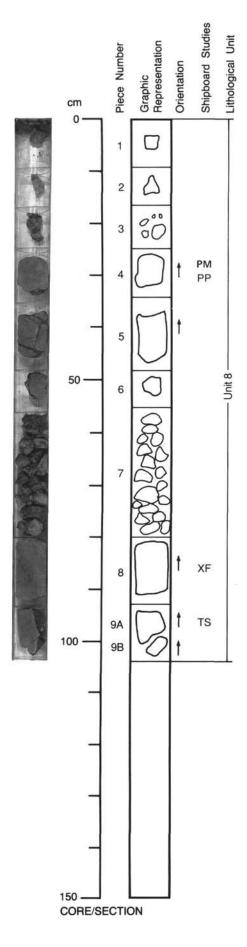
VESICLES: 0.1-1%; 0.5-2.5 mm; round; Pieces 9-14; filled with calcite and with calcite + thin rim of chlorite(?).

COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Pieces 2 & 3: very high to celadonite and other clays (in fault zone?); Pieces 4-14: low to moderate to smectite.

VEINS/FRACTURES: Piece 4: polygonal, 1-3 mm, chlorite; Piece 5: slickensides, chlorite; Piece 10: 1 cm narrowing to 1 mm, chlorite, Azimuth 065; Piece 12: 1 mm, chlorite, azimuth 070.

ADDITIONAL COMMENTS: Basalt lava.



128-794D-17R-1

UNIT 8: APHYRIC DOLERITIC BASALT

Pieces 1-9

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Fine grained, subophitic texture; plagioclase 60%, subhedral to tabular, 0.1-0.5 mm; pyroxene 35%, subhedral, 0.1-0.3 mm; magnetite 5%, subhedral to skeletal, 0.05-0.1 mm.

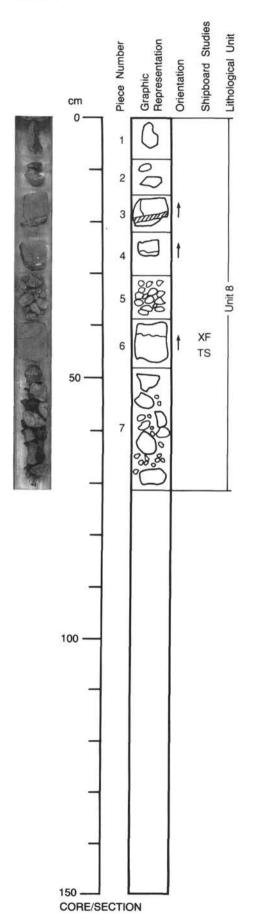
VESICLES: None. COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Pieces 1 & 2: completely altered to green, greasy, celadonitic clay; Pieces

VEINS/FRACTURES: Piece 4: 1 mm, chlorite, Azimuth 340; Piece 5: multiple,1-4 mm,

chlorite, 290-060; Piece 6: 1 mm, chlorite, 000.

ADDITIONAL COMMENTS: Coarse grained core of basalt; same unit as Core 16.



128-794D-18R-1

UNIT 8: APHYRIC DOLERITE

Pieces 1-7

CONTACTS: None.

PHENOCRYSTS: None.

GROUNDMASS: Medium grained, subophitic texture; plagioclase 50%, subhedral to tabular, 0.1-0.5 mm; pyroxene 35%, subhedral, 0.1-0.3 mm; magnetite 5%, subhedral to skeletal, 0.05-0.1 mm; mesostasis 10%, yellow.

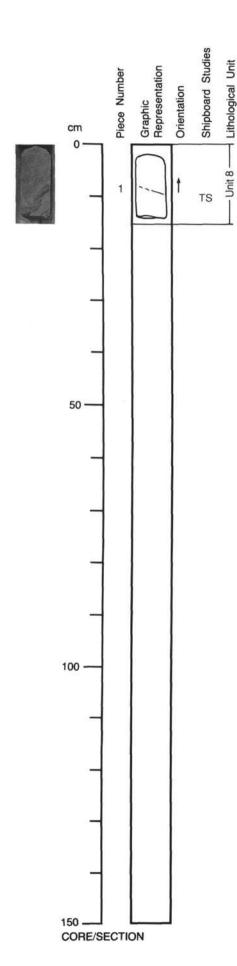
VESICLES: Rare; 1 mm; irregular; Piece 7; found in rubble pieces in 7.

COLOR: Dark gray. STRUCTURE: Massive.

ALTERATION: Low.

VEINS/FRACTURES: Piece 3: 8 mm, chlorite + calcite, 5 mm brown selvedge of altered feldspar, Azimuth 080; 3 mm, chlorite, Azimuth 000, extends from 8 mm vein and cuts selvedge; Piece 4: 4 mm, chlorite with fibrous calcite in core, 090; Piece 6: 2 of 0.05 mm, calcite, 285 & 300; Piece 6 (bottom): remnant of calcite chlorite vein.

ADDITIONAL COMMENTS: Coarse grained core of basalt; same unit as Cores 16 & 17.



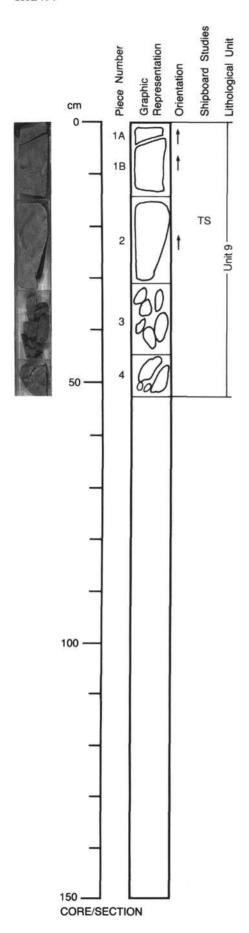
128-794D-19R-1

UNIT 9: APHYRIC DOLERITE

Piece 1

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Medium grained, subophitic texture; plagioclase: 30%, tabular & subhedral, 0.1-2 mm; pyroxene: 60%, subhedral, 0.2-0.5 mm; magnetite: 10%, euhedral to subhedral, 0.1-0.3 mm.
VESICLES: None.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: None to slight.
VEINS/FRACTURES: 0.25 mm, calcite, Azimuth 290.
ADDITIONAL COMMENTS: May be either a coarser portion of Unit 8 or a new unit (9).
Has different proportions of plagioclase and pyroxene than previous Unit 8 cores and is coarser grained.

coarser grained.



128-794D-20R-1

UNIT 9: APHYRIC DOLERITE

Pieces 1-4

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Medium-grained, sub-ophitic texture; plagioclase: 30%, laths,0.3-1mm; pyroxene: 30%, subhedral, 0.2-0.6 mm; olivine, 10%, euhedral, 0.3-0.6 mm; magnetite: 10%, skeletal, 0.2-0.5 mm.
VESICLES: None.
COLOR: Dark green.
STRUCTURE: Massive.
ALTERATION: Week

ALTERATION: Weak.

VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Pieces 3-4: finer grain.

128-794D-1R-01 (Piece 8C,101-102 cm)

OBSERVER: POU

WHERE SAMPLED: Sill, upper part

ROCK NAME: Highly plagioclase phyric dolerite

GRAIN SIZE: Medium-grained

TEXTURE: Intergranular-intersertal

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-			
INERALOGY		ORIGINAL		SITION	MORPHOLOGY	COMMENTS	
PHENOCRYSTS							
Plagioclase	35	35	1-5		Euhedral and subhedral	Seriate texture.	
Magnetite	5	5	.15		Euhedral or skeletal		
orthopyroxene	1		2-4		Euhedral		
yroxene/	0	5	1-2		Euhedral-subhedral	Totally altered.	
livine							
GROUNDMASS							
Plagioclase	20		.3-1		Lath	Seriate texture.	
Clinopyroxene	20	20	.38		Subhedral or		
Magnetite	2	2	.0308		anhedral Subhedral		
SECONDARY		REPL	ACING/				
MINERALOGY	PERCENT					COMMENTS	
Sideromelane	8	Interst			Variolitic.		
Smectites	4	Insters	titial				
Smectites, Se-oxides	5		, clinopyr				
/ESICLES/			SIZE				
	PERCENT	LOCATIO			FILLING	SHAPE	
/esicles	0						
ROCK NAME: High	nly plagi	oclase py		OBSERVER: PO	J WHERE SAMPLED: Sill,	middle part	
128-794D-3R-02 ROCK NAME: High GRAIN SIZE: Med FEXTURE: Interd	nly plagio	oclase py	roxene phy		J WHERE SAMPLED: Sill,	middle part	
ROCK NAME: High	nly plagio	oclase py	roxene phy	ric dolerite	J WHERE SAMPLED: Sill,		
ROCK NAME: High	nly plagionium-graingranular-	oclase py	al SIZE	ric dolerite			
ROCK NAME: High	nly plagionium-graingranular-	oclase py ned intersert PERCENT	al SIZE	ric dolerite	MORPHOLOGY		
ROCK NAME: High GRAIN SIZE: Med TEXTURE: Interd PRIMARY MINERALOGY PHENOCRYSTS Plagioclase	nly plagic dium-grain granular- PERCENT PRESENT	oclase py ned intersert PERCENT ORIGINAL	al SIZE (mm)	ric dolerite	MORPHOLOGY Euhedral-subhedral		
ROCK NAME: High GRAIN SIZE: Med TEXTURE: Interd PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene	nly plagic dium-grain granular	oclase py ned intersert PERCENT ORIGINAL	size (mm)	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral	COMMENTS	
ROCK NAME: High GRAIN SIZE: Med GRAIN SIZE: Me	nly plagic dium-grain granular	percent ORIGINAL	size (mm)	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral	COMMENTS Seriate texture.	
ROCK NAME: High GRAIN SIZE: Med GEXTURE: Interes GRIMARY MINERALOGY PHENOCRYSTS Plajioclase Cliniopyroxene Othopyroxene Olivine	nly plagic dium-grain granular- PERCENT PRESENT	percent ORIGINAL	size (mm) 1-5 .5-1 .68 .68	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral	COMMENTS Seriate texture. Altered.	
GRAIN SIZE: Med FEXTURE: Interes PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene Orthopyroxene Divine Magnetite	nly plagic dium-grain granular	percent ORIGINAL	size (mm)	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral	COMMENTS Seriate texture.	
ROCK NAME: High GRAIN SIZE: Med FEXTURE: Interes PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene Orthopyroxene Divine Magnetite GROUNDMASS	percent PERCENT 30 8 4 0	percent ORIGINAL	SIZE (mm) 1-5 .5-1 .68 .68 .15	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral	COMMENTS Seriate texture. Altered.	
ROCK NAME: High GRAIN SIZE: Med GEXTURE: Interes PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Dithopyroxene Divine Magnetite GROUNDMASS Plagioclase	percent present 30 8 4 0 5 18	percent ORIGINAL	SIZE (mm) 1-5 .5-1 .68 .68 .15	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral Euhedral	COMMENTS Seriate texture. Altered.	
RAIN SIZE: Med REAIN SIZE: Med	percent Present 30 8 4 0 5 18 18	percent ORIGINAL 30 8 4 3 5 5 18 18 18	SIZE (mm) 1-5 .5-1 .68 .68 .15	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Euhedral Euhedral Lath Subhedral-anhedral	COMMENTS Seriate texture. Altered.	
COCK NAME: High GRAIN SIZE: Med CEXTURE: Interes CRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene Divine Magnetite GROUNDMASS Plagioclase Clinopyroxene	percent present 30 8 4 0 5 18	percent ORIGINAL 30 8 4 3 5 5 18 18 18	SIZE (mm) 1-5 .5-1 .68 .68 .15	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral Euhedral	COMMENTS Seriate texture. Altered.	
ROCK NAME: High GRAIN SIZE: Med FEXTURE: Interes PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Orthopyroxene Divine Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite	percent Present 30 8 4 0 5 18 18	percent ORIGINAL 30 8 4 3 5 5 18 18 2	SIZE (mm) 1-5 .5-1 .68 .68 .15	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Euhedral Euhedral Lath Subhedral-anhedral	COMMENTS Seriate texture. Altered.	
PROCK NAME: High GRAIN SIZE: Med FEXTURE: Interese PRIMARY MINERALOGY PHENOCRYSTS PLagioclase Clinopyroxene Divine Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY	percent state of the state of t	percent ORIGINAL 30 8 4 3 5 18 18 18 2 REPI	SIZE (mm) 1-5 .5-1 .68 .68 .15 .3-1 .38 .0308 ACING/	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral Lath Subhedral-anhedral Subhedral	COMMENTS Seriate texture. Altered.	
PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene Orthopyroxene Divine Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY Sideromelane	percent state of the state of t	percent ORIGINAL 30 8 4 3 5 5 18 18 2 REPI FILI	SIZE (mm) 1-5 .5-1 .68 .68 .15 .3-1 .38 .0308 ACING/	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Euhedral Euhedral Lath Subhedral-anhedral	COMMENTS Seriate texture. Altered. May be skeletal.	
ROCK NAME: High GRAIN SIZE: Med GEXTURE: Interes PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene Drivine Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY Sideromelane Smectites	percent 18 18 2 Percent 18 18 2	percent ORIGINAL 30 8 4 3 5 5 18 18 18 18 18 18 18 18 18 18 18 18 18	SIZE (mm) 1-5 .5-1 .68 .68 .15 .3-1 .38 .0308 ACING/	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral Lath Subhedral-anhedral Subhedral	COMMENTS Seriate texture. Altered. May be skeletal.	
ROCK NAME: High GRAIN SIZE: Med GEXTURE: Interest PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Chinopyroxene Orthopyroxene Orthopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite Secondary MINERALOGY MINERALOGY Sinderomelane Smectites Fe-oxides,	percent state of the state of t	percent ORIGINAL 30 8 4 3 5 5 18 18 2 REPI FILI	SIZE (mm) 1-5 .5-1 .68 .68 .15 .3-1 .38 .0308 ACING/	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral Lath Subhedral-anhedral Subhedral	COMMENTS Seriate texture. Altered. May be skeletal.	
PROCK NAME: High GRAIN SIZE: Med FEXTURE: Interest PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene Divine Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY Sideromelane Smectites Fe-oxides, smectites	percent 18 18 2 Percent 18 18 2	percent ORIGINAL 30 8 4 3 5 5 18 18 18 18 18 18 18 18 18 18 18 18 18	SIZE (mm) 1-5 .5-1 .68 .68 .15 .3-1 .38 .0308 ACING/ ING/ itial itial	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral Lath Subhedral-anhedral Subhedral	COMMENTS Seriate texture. Altered. May be skeletal.	
ROCK NAME: High GRAIN SIZE: Med CEXTURE: Interest PRIMARY MINERALOGY PHENOCRYSTS Plagioclase Clinopyroxene Drivine Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite GROUNDMASS Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY SIGNOTINE SIGNOTIN SIGNOTINE SIGNOTINE SIGNOTINE SIGNOTINE SIGNOTINE SIGNOTINE SIG	percent state of the state of t	percent ORIGINAL 30 8 4 3 5 5 18 18 18 18 18 18 18 18 18 18 18 18 18	SIZE (mm) 1-5 .5-1 .68 .68 .15 .3-1 .38 .0308 .ACING/.ING	ric dolerite	MORPHOLOGY Euhedral-subhedral Subhedral-anhedral Subhedral Euhedral Euhedral Lath Subhedral-anhedral Subhedral	COMMENTS Seriate texture. Altered. May be skeletal.	

COMMENTS: Some orthocumulate textures.

128-794D-4R-01 (Piece 3C, 27-30 cm)

OBSERVER: POU

WHERE SAMPLED: Flow

ROCK NAME: Doleritic basalt

GRAIN SIZE: Fine grained, microcrystalline

TEXTURE: Intersertal

PERCENT PERCENT SIZE PRESENT ORIGINAL (mm) PRIMARY COMPO-MINERALOGY MORPHOLOGY COMMENTS SITION PHENOCRYSTS Totally altered. 0 10 Euhedral Olivine/ .4-1 pyroxene GROUNDMASS Magnetite 5 .01-.03 Euhedral-subhedral Plagioclase Feather-like textures. 30 Lath, microlith 30 .2-.6 .1-.3 Subhedral Altered. Pyroxene SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Fe-oxides, 40 Olivine, pyroxene smectites Chlorite, 25 Glass smectites VESICLES/ SIZE PERCENT LOCATION (mm) SHAPE CAVITIES FILLING Irregular Vesicles 3-5 Top and .5-2 Chlorite, smectites base

128-794D-5R-01 (Piece 4,40-41 cm)

OBSERVER: POU

WHERE SAMPLED: Sill

ROCK NAME: Aphyric dolerite

GRAIN SIZE: Fine to medium-grained

TEXTURE: Intergranular

PRIMARY PERCENT PERCENT SIZE COMPO-PRESENT ORIGINAL (mm) COMMENTS MINERALOGY SITION MORPHOLOGY Skeletal. 5 Euhedral Magnetite 5 .02-.2 10 Altered. Olivine 0 Euhedral .5-1 Plagioclase 40 40 Lath .5-1 .5-1.2 Subhedral Altered. 10 30 Pyroxene SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Fe-oxides, 45 Olivine, pyroxene, interstitial smectites VESICLES/ CAVITIES PERCENT LOCATION (mm) FILLING SHAPE Vesicles

COMMENTS: Highly altered.

128-794D-7R-02 (Piece 1,12-13 cm)

OBSERVER: POU

WHERE SAMPLED: Sill

ROCK NAME: Olivine microphyric dolerite

GRAIN SIZE: Fine to medium-grained

TEXTURE: Intergranular

PRIMARY COMPO-PERCENT PERCENT SIZE MINERALOGY PRESENT ORIGINAL (mm) MORPHOLOGY COMMENTS SITION PHENOCRYSTS 20 1-1 5 Altered. Olivine 0 Eubedral GROUNDMASS .03-.08 Euhedral, subhedral Skeletal. Magnetite 5 Plagioclase 30 .5-.9 30 Lath .3-.6 Clinopyroxene 30 Subhedral-anhedral SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Fe-oxides, Olivine, pyroxene, interstitial smectites VESICLES/ SIZE PERCENT LOCATION CAVITIES (mm) FILLING SHAPE Vesicles 1-2 2- 5 Smectites Irregular COMMENTS: Highly altered. 128-794D-8R-02 (Piece 10A, 126-127 cm) OBSERVER: POU WHERE SAMPLED: Sill ROCK NAME: Olivine microphyric dolerite GRAIN SIZE: Fine to medium-grained TEXTURE: Intergranular PRIMARY PERCENT PERCENT SIZE PRESENT ORIGINAL (mm) COMPO-COMMENTS MINERALOGY SITION MORPHOLOGY PHENOCRYSTS n 20 1-1.5 Euhedral Altered. Olivine GROUNDMASS Euhedral-subhedral Dendritic-skeletal. .03-.08 Magnetite 5 5 Plagioclase 30 30 .5-1 Lath .3-.6 Subhedral Altered. 10 Clinopyroxene 30 SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Fe-oxides, 55 Olivine, pyroxene, interstitial smectites

FILLING

Smectites

SHAPE

Irregular

COMMENTS: Highly altered.

PERCENT LOCATION

1-2

SIZE

.2-.5.2-.5

(mm)

VESICLES/

CAVITIES

Vesicles

128-794D-9R-02 (Piece 1,13-14 cm)

OBSERVER: POU WHERE SAMPLED: Sill

ROCK NAME: Olivine microphyric dolerite

GRAIN SIZE: Fine to medium-grained

TEXTURE: Intergranular

						~=====	
PRIMARY MINERALOGY		PERCENT ORIGINAL		COMPO- SITION	MORPHOLOGY	COMMENTS	
PHENOCRYSTS Olivine	0	20	1-1.5		Euhedral	Altered	
GROUNDMASS Magnetite Plagioclase Clinopyroxene		30	.0308 .5-1 .36		Euhedral-subhedral Lath Subhedral	Partly altered	
SECONDARY MINERALOGY Fe-oxides, smectites	PERCENT 50	FILL		interstitial		COMMENTS	
Vesicles	PERCENT 0	LOCATIO	SIZE N (mm)		FILLING	SHAPE	
128-794D-10R-01			cm)	OBSERVER: POU	WHERE SAMPLED: Sed	iment	
ROCK NAME: Clay	ey tuff						
GRAIN SIZE: Fin	е						
TEXTURE: None							
Volcanic shards	PRESENT	PERCENT ORIGINAL 40		COMPO- SITION	MORPHOLOGY Blocky	COMMENTS Altered.	
	PERCENT 40	FILL	ACING/ ING c shards			COMMENTS	
VESICLES/ CAVITIES Vesicles		LOCATION	SIZE N (mm)		FILLING	SHAPE	
128-794D-10R-02	(Piece	1B,24-25	cm)	OBSERVER: POU	WHERE SAMPLED: Flo	W	
ROCK NAME: Basa	ilt						
GRAIN SIZE: Mic	rocrysta	lline					
TEXTURE: Microl	itic int	ersertal					
PRIMARY MINERALOGY Magnetite Olivine Pyroxene Plagioclase		15 20		COMPO- SITION	MORPHOLOGY Euhedral-subhedral Euhedral Subhedral-anhedral Lath, microlith	COMMENTS Altered. Altered.	
SECONDARY MINERALOGY Fe-oxides, smectites	PERCENT 72	FILL		plagioclase,	glass	COMMENTS	
VESICLES/ CAVITIES Vesicles	PERCENT	LOCATIO Random	SIZE N (mm)		FILLING Chlorite, smectites	SHAPE Irregular	

COMMENTS: Very highly altered.

128-794D-10R-02 (Piece 6B, 69-70 cm)

OBSERVER: POU

WHERE SAMPLED: Flow

ROCK NAME: Olivine-pyroxene microphyric basalt

GRAIN SIZE: Fine and microcrystalline

TEXTURE: Intersertal

PRIMARY PERCENT PERCENT SIZE COMPO-PRESENT ORIGINAL (mm) MORPHOLOGY COMMENTS MINERALOGY SITION PHENOCRYSTS 25 .4-1.4 Euhedral Altered. Olivine Pyroxene 0 10 .3-1.3 Euhedral Altered. GROUNDMASS Magnetite 8 0.01-0.1 Euhedral-subhedral Olivine Euhedral Altered. .1-.4 Plagioclase 20 20 .1-.3 Microlith Sheaf-like textures. Clinopyroxene 5 10 .06-.2 Subhedral-anhedral SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Glass Feather-like textures involving plagioclase. 22 Palagonite Fe-oxides, 47 Olivine, pyroxene smectites VESICLES/ SIZE CAVITIES PERCENT LOCATION (mm) FILLING Vesicles 0

128-794D-11R-01 (Piece 3J,93-95 cm)

OBSERVER: POU

WHERE SAMPLED: Sill or thick flow

ROCK NAME: Olivine microphyric dolerite basalt

GRAIN SIZE: Fine and microcrystalline

TEXTURE: Intersertal

PRIMARY PERCENT PERCENT SIZE COMPO-MINERALOGY PRESENT ORIGINAL (mm) SITION MORPHOLOGY COMMENTS PHENOCRYSTS Olivine 25 .5-1 Euhedral Altered. Pyroxene .3-.6 Altered. Euhedral GROUNDMASS Magnetite .02-.08 Euhedral-subhedral Olivine 0 10 .2-.4 Subhedral Plagioclase 25 25 .3-.6 Lath, microlith Sheaf-like agregates. Clinopyroxene 20 20 .2-.4 Subhedral-anhedral SECONDARY REPLACING/ PERCENT COMMENTS MINERALOGY FILLING Glass Palagonite 10 Fibrous. Fe-oxides, 40 Olivine, pyroxene smectites VESICLES/ SIZE CAVITIES PERCENT LOCATION (mm) SHAPE FILLING Vesicles 0

128-794D-12R-03 (Piece 2B,40-41 cm) OBSERVER: POU WHERE SAMPLED: Sill

ROCK NAME: Dolerite

GRAIN SIZE: Fine to medium TEXTURE: Subophitic-ophitic

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Magnetite	8	8	.15		Euhedral-subhedral	Skeletal.
Plagioclase	40	40	.2-1		Lath	Seriate size.
Clinopyroxene	40	40	.3-1.2		Subhedral	Tablets and poikilitic crystals.
SECONDARY		REPL	ACING/			
MINERALOGY	PERCENT	FILL	ING			COMMENTS
Fe-oxides, smectites	12	Interst	itial,	olivine (?)		

VESICLES/ SIZE
CAVITIES PERCENT LOCATION (mm)
Vesicles 0 SIZE FILLING SHAPE

COMMENTS: Moderately altered.

128-794D-13R-01 (Piece 3G,80-81 cm) OBSERVER: POU WHERE SAMPLED: Sill or thick flow

COMPO-

ROCK NAME: Olivine dolerite GRAIN SIZE: Medium-grained TEXTURE: Sub-ophitic

PRIMARY PERCENT PERCENT SIZE

MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLO	GY		COMMENTS
Magnetite	8	8	.033		Euhedral,	skeletal		
Olivine	5	15	.38		Euhedral		Altered.	
Plagioclase	32	32	.5-2		Euhedral,	subhedral		
Clinopyroxene	35	35	.3-2		Subhedral	, anhedral		
SECONDARY		REPL	ACING/					
MINERALOGY	PERCENT	FILL	ING				COMMENTS	
Smectite,	10	Interst	itial					
chlorite								
Serpentine	10	Olivine						
VESICLES/			SIZE					
CAVITIES	PERCENT	LOCATIO	N (mm)		LLING		S	HAPE
Vesicles	0							

WHERE SAMPLED: Sill or thick flow

ROCK NAME: Doleritic basalt GRAIN SIZE: Fine-sized

TEXTURE: Intergranular

128-794D-15R-01 (Piece 4,28-29 cm) OBSERVER: POU

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Magnetite	8	8	.0215		Euhedral	
Olivine	0	15	.35		Euhedral	Totally altered.
Plagioclase	30	30	.2-1		Euhedral, subhedral	
Clinopyroxene	5	30	.28		Subhedral	Altered.
SECONDARY		REPL	ACING/			
MINERALOGY	PERCENT	FILL	ING			COMMENTS
Smectite,	17	Interst	itial			
Fe-oxides						
Serpentine, smectite	15	Olivine				
Chlorite,	25	Pyroxen	е			
actinote						
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATIO	N (mm)		FILLING	SHAPE
Vesicles	0					

128-794D-16R-01 (Piece 1,4-5 cm)

OBSERVER: POU

WHERE SAMPLED: Flow

ROCK NAME: Basalt GRAIN SIZE: Fine-sized TEXTURE: Quenched

PRIMARY MINERALOGY		PERCENT	SIZE (mm)	COMPO- SITION		MORPHOLOGY	COMMENTS
Magnetite	5		.0306	SITION		Subhedral	COPPENIO
Olivine	0		.24			Suhedral	Clusters.
Plagioclase	25		.18			Thin laths	Agregated.
SECONDARY		REPL	ACING/				
MINERALOGY	PERCENT	FILL	ING				COMMENTS
Smectites	5	Olivine					
Smectites,	65	Glass,	plagioclase,	pyroxene		Altered radiate	e intergrown plagioclase and pyroxene.
chlorite							
VESICLES/			SIZE				
CAVITIES	PERCENT	LOCATIO	N (mm)		FILLING	3	SHAPE
Vesicles	0						

128-794D-16R-01 (Piece 8,70-71 cm)

ROCK NAME: Basalt

GRAIN SIZE: Fine-grained

TEXTURE: Quenched

DDTMADY PERCENT PERCENT SIZE COMPO-

T LATIMALA	LENCHIL	FRICENT	SIZE	COLIFO		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Magnetite	5	5	.0306		Subhedral	Oxidized.
Olivine	0	5	.24		Euhedral	
Plagioclase	35	35	.18		Thin laths	Agregated.

SECONDARY REPLACING/ PERCENT COMMENTS MINERALOGY FILLING Olivine Smectite 5

COMPO-

55 Smectite, Altered radiate intergrown plagioclase and pyroxene. Glass, plagioclase, pyroxene chlorite

VESICLES/ SIZE PERCENT LOCATION (mm) SHAPE CAVITIES FILLING Vesicles 3 Dispersed .1 Chlorite, calcite Rounded

128-794D-17R-01 (Piece 9A, 96-97 cm) OBSERVER: POU WHERE SAMPLED: Flow

ROCK NAME: Olivine doleritic basalt

PERCENT PERCENT SIZE

GRAIN SIZE: Fine-grained TEXTURE: Intergranular

DDTMADY

PRIMARI	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Magnetite	8	8	.033		Euhedral, skeletal	
Olivine	5	15	.38		Euhedral	
Plagioclase	32	32	.5-2		Lath	
Clinopyroxene	35	35	.3-2		Subhedral	
SECONDARY		REPL	ACING/			
MINERALOGY	PERCENT	FILL	ING			COMMENTS
Smectite	10	Interst	itial			
Serpentine	10	Olivine				
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATIO	N (mm)	FI	LLING	SHAPE
Vesicles	0					

128-794D-18R-01 (Piece 6,43-44 cm)

OBSERVER: POU

WHERE SAMPLED: Flow

ROCK NAME: Olivine dolerite

GRAIN SIZE: Fine to medium-grained

TEXTURE: Sub-ophitic PRIMARY PERCENT PERCENT SIZE COMPO-COMMENTS MINERALOGY PRESENT ORIGINAL (mm) SITION MORPHOLOGY Magnetite 8 8 .03-.3 Euhedral, skeletal Olivine 5 15 .3-.8 Euhedral Plagioclase 32 32 .5-2 Lath Subhedral Clinopyroxene 25 35 .3-2 SECONDARY REPLACING/ COMMENTS PERCENT MINERALOGY FILLING Smectite 10 Interstitial Serpentine 10 Olivine Smectite, 10 Pyroxene chlorite VESICLES/ SIZE CAVITIES PERCENT LOCATION FILLING SHAPE (mm) Vesicles 128-794D-19R-01 (Piece 1,10-11 cm) OBSERVER: POU WHERE SAMPLED: Sill ROCK NAME: Olivine dolerite GRAIN SIZE: Fine to medium-grained TEXTURE: Sub-ophitic PRIMARY PERCENT PERCENT SIZE COMPO-PRESENT ORIGINAL (mm) COMMENTS MORPHOLOGY MINERALOGY SITION Magnetite 8 8 .05-.3 Euhedral Euhedral Olivine 25 .3-.8 5 Plagioclase 27 27 .5-2 Lath Clinopyroxene 30 30 .4-2 Subhedral SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Smectite 10 Interstitial Serpentine, 20 Olivine smectite VESICLES/ SIZE CAVITIES PERCENT LOCATION FILLING SHAPE Vesicles 0 WHERE SAMPLED: Sill 128-794D-20R-01 (Piece 2,19-20 cm) OBSERVER: POU ROCK NAME: Olivine dolerite GRAIN SIZE: Fine to medium-grained TEXTURE: Sub-ophitic PRIMARY PERCENT PERCENT SIZE COMPO-MINERALOGY PRESENT ORIGINAL (mm) SITION MORPHOLOGY COMMENTS Magnetite 8 8 .03-.3 Euhedral Olivine 15 25 .3-.8 Euhedral Plagioclase 27 27 .5-2 Lath Clinopyroxene 30 30 .4-2 Subhedral SECONDARY REPLACING/ COMMENTS PERCENT MINERALOGY FILLING Smectite 10 Interstitial Serpentine, 10 Olivine smectite VESICLES/ SIZE SHAPE CAVITIES PERCENT LOCATION FILLING (mm) Vesicles