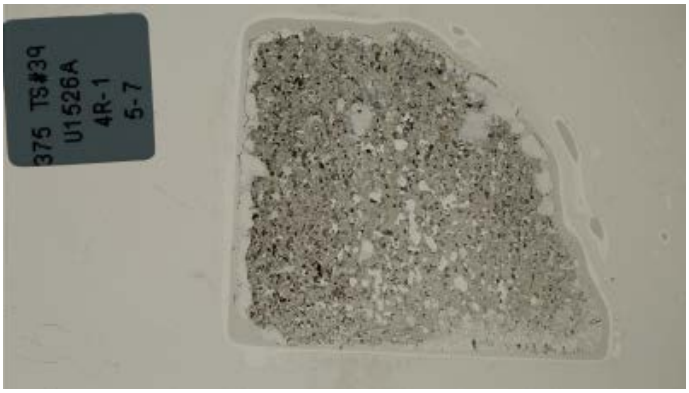
THIN SECTION LABEL ID: **375-U1526A-4R-1-W 5/7-TSB-TS39** TS no.: 39

Requestor Group: sedimentology Observer:

Summary Description

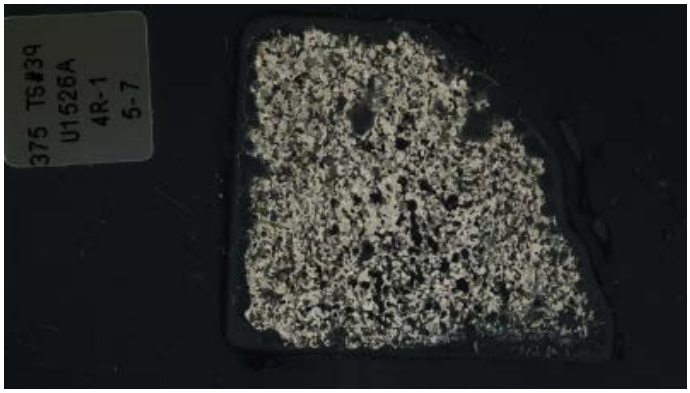
volcaniclastic sandstone

Plane-polarized



46655921

Cross-polarized



46655941

SEDIMENT DETAILS

Lithology: sandstone with volcaniclastics

Detailed description

sandstone composed of micritic limestone, basalt, and shell fragments. Calcite cementation. Imbricated alignment of shell fragments is visible.

Grain abundance

T=Trace; R=Rare; P=Present; C=Common; A=Abundant; D=Dominant; M=Major

Grain	Abundance	Grain	Abundance	Grain	Abundance
Feldspars	T	Radiolarians		Pyrite (framboids)	
Clay minerals		Mollusk	C	Pyrite (euhedra)	
Siltstone/Sandstone	T	Carbonate mud		Dolomite, authigenic	
Clear glass		Heavy minerals	P	Zeolite - phillipsite, clinoptilolite	P
Altered volcanic (palagonite)	A	Glauconite			
Other volcanic		Opaques	R		

THIN SECTION LABEL ID: **375-U1526A-4R-1-W 42/44-TSB-TS40** TS no.: 40

Requestor Group: sedimentology Observer:

Summary Description

volcaniclastic conglomerate with shell

Plane-polarized

46655961

Cross-polarized

46655981

SEDIMENT DETAILS

Lithology: volcaniclastic conglomerate with shells

Grain sorting: moderate [2014] Cement form: microcrystalline

Sand [%]: 75 Silt [%]: 15 Clay [%]: 10

Detailed description

sandy part of volcaniclastic conglomerate with shells. granule- to very fine sand-sized volcaniclastic sandstone including basalt and limestone lithic fragments and shells. Calcite cementation.

Grain abundance

T=Trace; R=Rare; P=Present; C=Common; A=Abundant; D=Dominant; M=Major

Grain	Abundance	Grain	Abundance	Grain	Abundance
Feldspars	T	Radiolarians		Pyrite (framboids)	
Clay minerals		Mollusk	C	Pyrite (euhedra)	
Chert		Other bioclast	T	Pyrite (grain coatings)	
Clear glass		Heavy minerals	T	Zeolite - phillipsite, clinoptilolite	
Altered volcanic (palagonite)	A	Glauconite			
Other volcanic		Opaques	T		

THIN SECTION LABEL ID: **375-U1526A-5R-1-W 41/42-TSB-TS41** TS no.: 41

Requestor Group: sedimentology Observer:

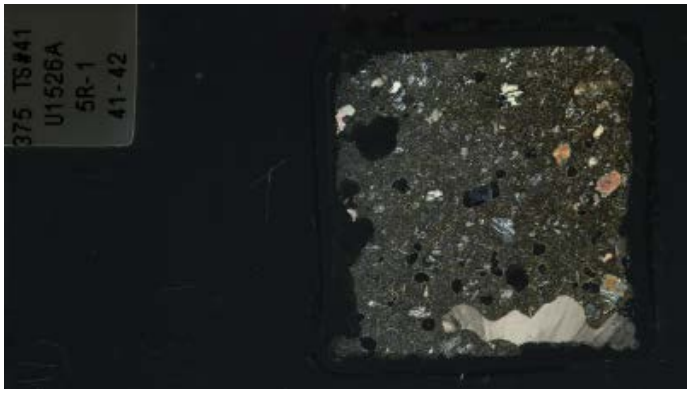
Summary Description

vesicular basalt

Plane-polarized

46656001

Cross-polarized



46656021

SEDIMENT DETAILS

Lithology: basalt

Detailed description

Plagioclase-clinopyroxene-opaque minerals basalt showing seriate texture and partly trachytic alignment. Vesicules are filled with calcite.

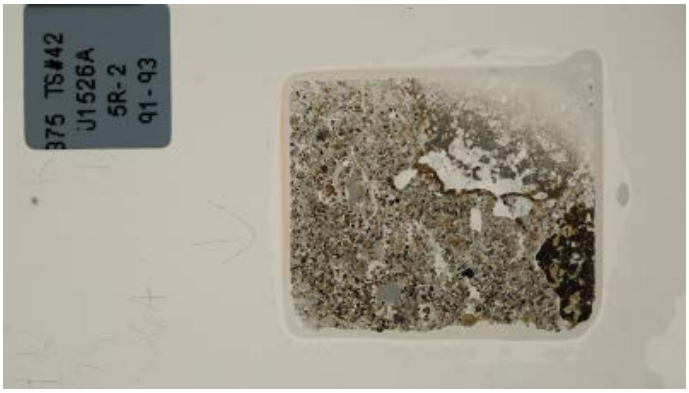
THIN SECTION LABEL ID: **375-U1526A-5R-2-W 91/93-TSB-TS42** TS no.: 42

Requestor Group: sedimentology Observer:

Summary Description

volcaniclastic conglomerate with clast and matrix

Plane-polarized



46656041

Cross-polarized

46656061

SEDIMENT DETAILS

Lithology: volcaniclastic conglomerate with shells

Grain sorting: poor [2014] Cement form: microcrystalline

Sand [%]: 75 Silt [%]: 15 Clay [%]: 10

Detailed description

sandy matrix of volcaniclastic conglomerate with shell fragments. Clasts are composed mostly of sub-rounded to rounded altered basalt showing hypocrystalline (porphyritic basalt) or holohyaline crystalinity (vesicular basalt). Sedimentary lithics are also present, which are well rounded micritic limestone. Pore space is cemented by calcite.

Grain abundance

T=Trace; R=Rare; P=Present; C=Common; A=Abundant; D=Dominant; M=Major

Grain	Abundance	Grain	Abundance	Grain	Abundance
Feldspars	T	Radiolarians		Pyrite (framboids)	
Clay minerals		Mollusk	C	Pyrite (euhedra)	
Chert		Other bioclast	T	Pyrite (grain coatings)	
Siltstone/Sandstone	T	Carbonate mud		Dolomite, authigenic	
Clear glass		Heavy minerals	T	Zeolite - phillipsite, clinoptilolite	
Altered volcanic (palagonite)	D	Glauconite			
Other volcanic		Opaques	R		

THIN SECTION LABEL ID: **375-U1526A-6R-1-W 109/113-TSB-TS43** TS no.: 43

Requestor Group: PAL Observer: WOOD/ OLIV

Summary Description

Volcaniclastic conglomerate with carbonate bioclasts

Plane-polarized

46656081

Cross-polarized

46656101

SEDIMENT DETAILS

Lithology: volcaniclastic conglomerate with shells

Grain sorting: poor [2014] Cement form: microcrystalline

Detailed description

Volcaniclastic conglomerate. Altered basalts to iron oxide and mica. Vocaniclastic clast are sub-rounded to rounded. Basalt clast are composed of feldspar, olivine and pyroxene. Carbonate clasts and bioclasts, coated with calcite cement. Clasts include: mollusc, echinoid spines

THIN SECTION LABEL ID: **375-U1526A-6R-1-W 134/137-TSB-TS49** TS no.: 49

Requestor Group: sedimentology Observer:

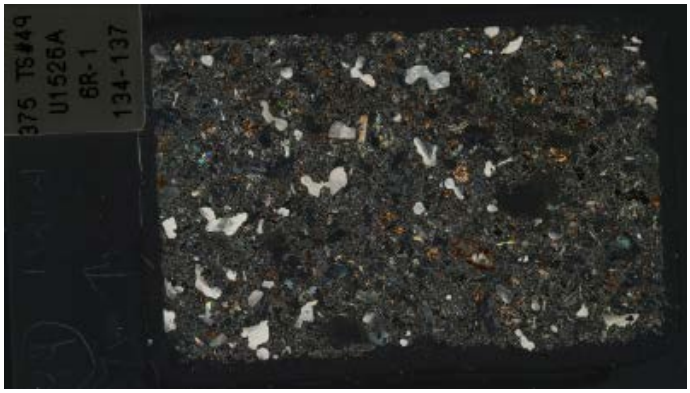
Summary Description

volcaniclastic sandstone

Plane-polarized

46739681

Cross-polarized



46739701

SEDIMENT DETAILS

Lithology: vesicular basalt

Detailed description

Amygdaloidal olivine-augite basalt. Olivine phenocrysts are altered (possibly replaced with serpentine) and rimmed with iddingsite. Amygdules are filled by calcite. Seriate texture.

THIN SECTION LABEL ID: **375-U1526A-6R-2-W 13/16-TSB-TS50** TS no.: 50

Requestor Group: sedimentology Observer:

Summary Description

basalt

Plane-polarized

46739721

Cross-polarized

46739791

SEDIMENT DETAILS

Lithology: basalt

Detailed description

Amygdaloidal olivine-augite basalt. Percentage of amygdules is relatively high (20-40%). Olivine phenocrysts are totally altered. Amygdules are filled with calcite or chlorite. Fe oxides are abundance.

THIN SECTION LABEL ID: **375-U1526A-6R-3-W 35/38-TSB-TS51** TS no.: 51

Requestor Group: sedimentology Observer:

Summary Description

volcaniclastic sandstone

Plane-polarized

46739841

Cross-polarized

46739861

SEDIMENT DETAILS

Lithology: volcaniclastic sandstone

Grain sorting: moderate [2014] Cement form:

Sand [%]: 75 Silt [%]: 25 Clay [%]: 0

Detailed description

Sandstone composed of angular to well rounded , fine- to coarse-grained sand grains of altered basalt and shell fragments. Sandstone is grain-supported without fine silt to clay matrix. Pore space is filled by calcite.

Grain abundance

T=Trace; R=Rare; P=Present; C=Common; A=Abundant; D=Dominant; M=Major

Grain	Abundance	Grain	Abundance	Grain	Abundance
Feldspars	P	Radiolarians		Pyrite (framboids)	
Clay minerals		Mollusk	P	Pyrite (euhedra)	
Chert		Other bioclast	R	Pyrite (grain coatings)	
Mudstone		Peloid		Calcite	C
Siltstone/Sandstone	T	Carbonate mud		Dolomite, authigenic	
Clear glass		Heavy minerals	P	Zeolite - phillipsite, clinoptilolite	
Colored glass	T	Micas (biotite, musc., chl.)		Fe/Mn Oxide	
Altered volcanic (palagonite)	C	Glauconite			
Other volcanic		Opaques	P		

THIN SECTION LABEL ID: **375-U1526A-6R-3-W 84/85-TSB-TS44** TS no.: 44

Requestor Group: PAL Observer: WOOD/ OLIV

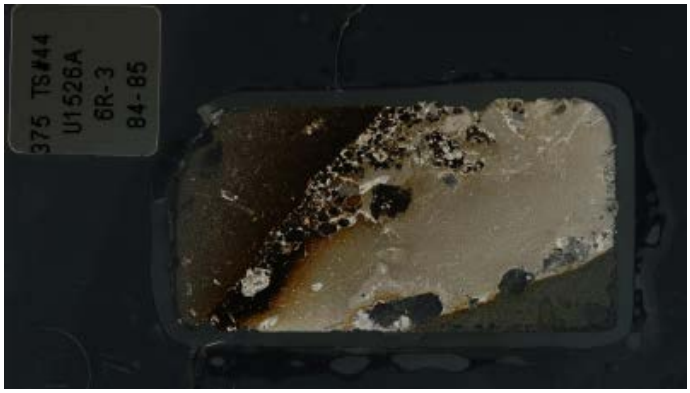
Summary Description

Volcaniclastic conglomerate with carbonate mud containing bioclasts

Plane-polarized

46698021

Cross-polarized



46698041

SEDIMENT DETAILS

Lithology: volcaniclastic conglomerate with shells

Grain sorting: poor [2014] Cement form:

Detailed description

Volcaniclastic conglomerate. Altered basalts to iron oxide and mica. Vocaniclastic clast are sub-rounded to rounded. Basalt clast are composed of feldspar, olivine and pyroxene. Amigdales infill by calcite. Carbonate mud containing macroinvertebrate bioclasts and broken benthic and possible planktonic foraminifers. Clasts include: mollusc, corraline algae. Carbonate mud-volcaniclast contact stained by haematite.

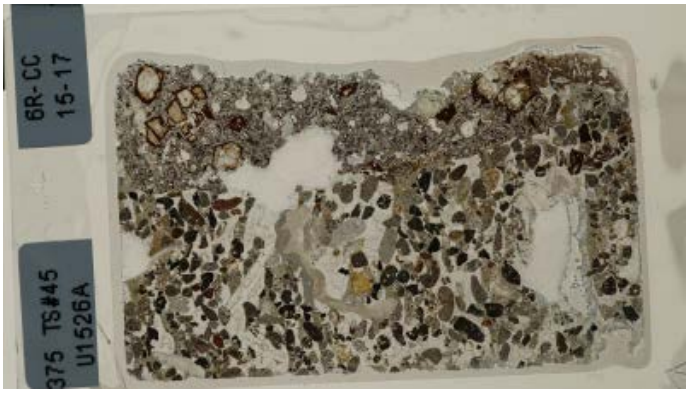
THIN SECTION LABEL ID: **375-U1526A-6R-CC-W 14/17-TSB-TS45** TS no.: 45

Requestor Group: PAL Observer: WOOD/ OLIV

Summary Description

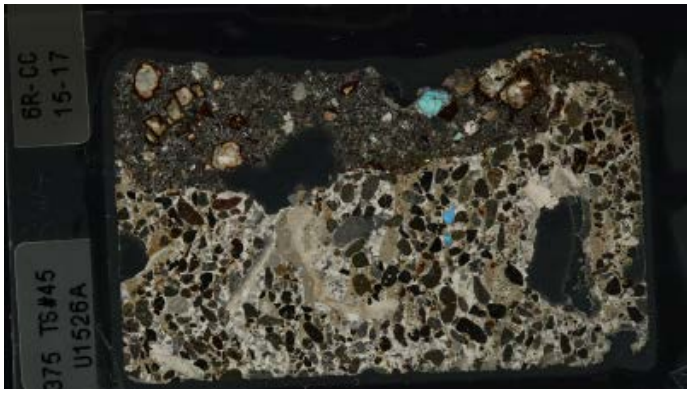
Volcaniclastic conglomerate with carbonate bioclasts

Plane-polarized



46698061

Cross-polarized



46698151

SEDIMENT DETAILS

Lithology: volcaniclastic conglomerate with shells

Grain sorting: poor [2014] Cement form:

Detailed description

Volcaniclastic conglomerate. Altered basalts to iron oxide and mica. Vocaniclastic clast are sub-angular to rounded. Basalt clast are composed of feldspar, olivine and pyroxene. Amigdales infill by calcite. Carbonate bioclasts within volcaniclastic conglomerate., with calcite cementation between grains. Clasts include: variety of disarticulated mollusc, corraline algae, echinoid spines.

THIN SECTION LABEL ID: **375-U1526A-8R-3-W 81/84-TSB-TS52** TS no.: 52

Requestor Group: sedimentology Observer:

Summary Description

basalt

Plane-polarized

46739881

Cross-polarized

46739901

SEDIMENT DETAILS

Lithology: basalt

Detailed description

clinopyroxene-bearing porphyritic basalt. Most of phenocrysts are euhedral plagioclase (up to 3 mm). Trachytic texture is visible. No amygdules.

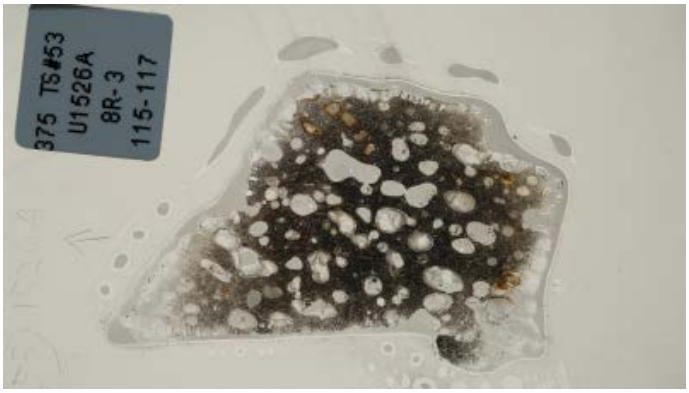
THIN SECTION LABEL ID: **375-U1526A-8R-3-W 115/117-TSB-TS53** TS no.: 53

Requestor Group: sedimentology Observer:

Summary Description

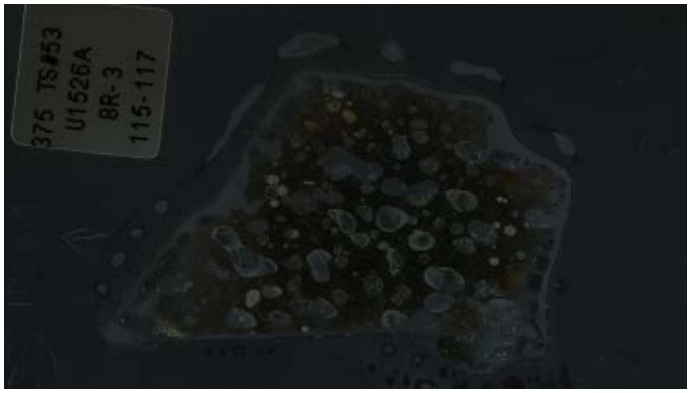
vesicular basalt

Plane-polarized



46787361

Cross-polarized



46787381

SEDIMENT DETAILS

Lithology: vesicular basalt

Detailed description

Vesicular basalt. Vesicules are lined and partly filled with palagonite. Size of vesicules is up to 4 mm.

THIN SECTION LABEL ID: **375-U1526A-9R-1-W 38/41-TSB-TS54** TS no.: 54

Requestor Group: sedimentology Observer:

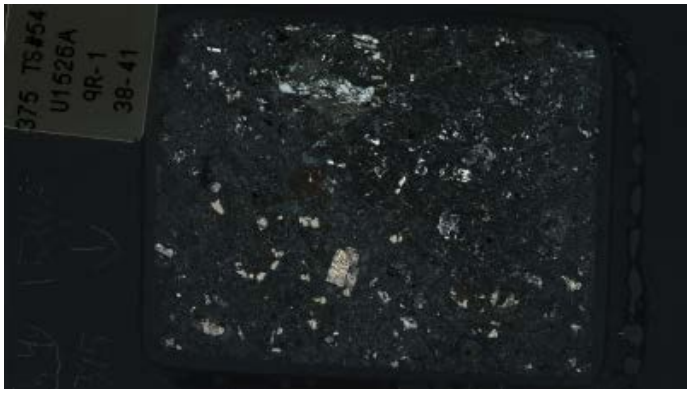
Summary Description

basalt

Plane-polarized

46787401

Cross-polarized



46787421

SEDIMENT DETAILS

Lithology: basalt

Grain sorting: poor [2014] Cement form: microcrystalline

Detailed description

Brecciated glomeroporphyritic basalt. Plagioclase phenocrysts are clustered in aggregates. Matrix between clasts are filled by altered glasses, possibly palagonite, smectite, or chlorite.

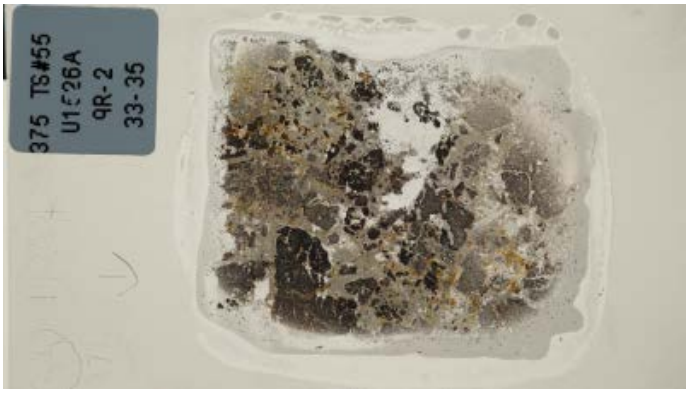
THIN SECTION LABEL ID: **375-U1526A-9R-2-W 33/35-TSB-TS55** TS no.: 55

Requestor Group: sedimentology Observer:

Summary Description

volcaniclastic conglomerate

Plane-polarized



46787471

Cross-polarized

46787491

SEDIMENT DETAILS

Lithology: volcaniclastic conglomerate

Detailed description

Brecciated and rounded fine-grained trachytic basalt clasts cemented with altered glass (palagonite) and calcite.

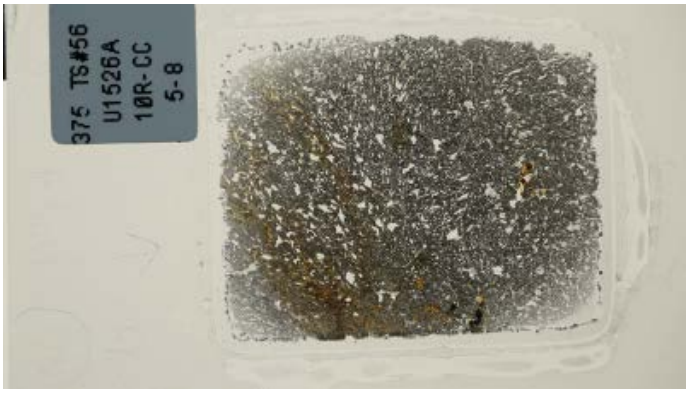
THIN SECTION LABEL ID: **375-U1526A-10R-CC-W 5/8-TSB-TS56** TS no.: 56

Requestor Group: sedimentology Observer:

Summary Description

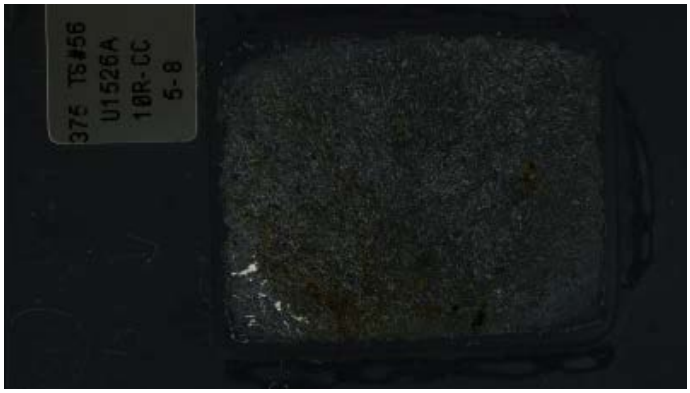
vesicular basalt

Plane-polarized



46787511

Cross-polarized



46787531

SEDIMENT DETAILS

Lithology: vesicular basalt

Detailed description

Vesicular basalt. Vesicules are partly filled by palagonite and calcite. Average size of vesicules are 0.3 mm.

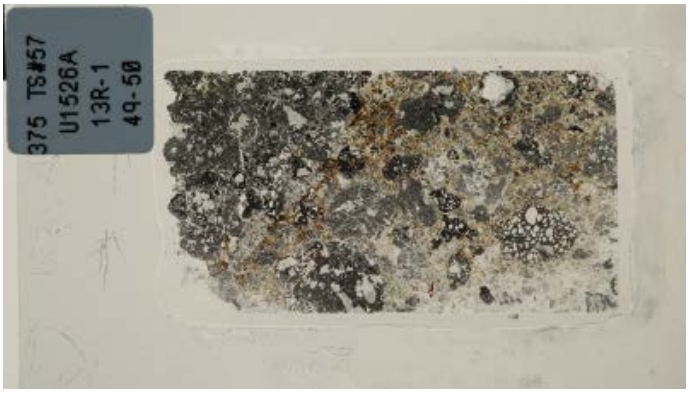
THIN SECTION LABEL ID: **375-U1526A-13R-1-W 49/50-TSB-TS57** TS no.: 57

Requestor Group: sedimentology Observer:

Summary Description

volcaniclastic conglomerate

Plane-polarized



46787551

Cross-polarized

46787571

SEDIMENT DETAILS

Lithology: volcaniclastic conglomerate

Detailed description

Volcaniclastic conglomerate composed of pyroxene-bearing vesicular basalt, glomeroporphyritic basalt, and trachytic basalt. Matrix is calcite with palagonite rim. Some amygdules are also filled with calcite and lined with palagonite.

Grain abundance

T=Trace; R=Rare; P=Present; C=Common; A=Abundant; D=Dominant; M=Major

Grain	Abundance	Grain	Abundance	Grain	Abundance
Feldspars	T	Radiolarians		Pyrite (framboids)	
Altered volcanic (palagonite)	R	Glauconite			
Other volcanic	A	Opaques	T		

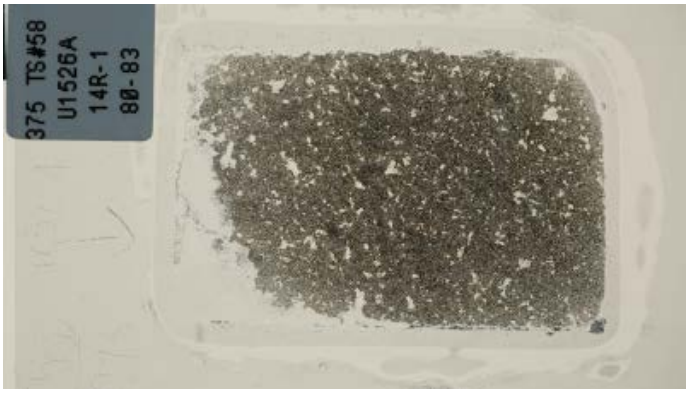
THIN SECTION LABEL ID: **375-U1526A-14R-1-W 80/83-TSB-TS58** TS no.: 58

Requestor Group: sedimentology Observer:

Summary Description

vesicular basalt

Plane-polarized



46787591

Cross-polarized

46787611

SEDIMENT DETAILS

Lithology: vesicular basalt

Detailed description

Vesicular basalt. Vesicules are lined with fibrous palagonite.

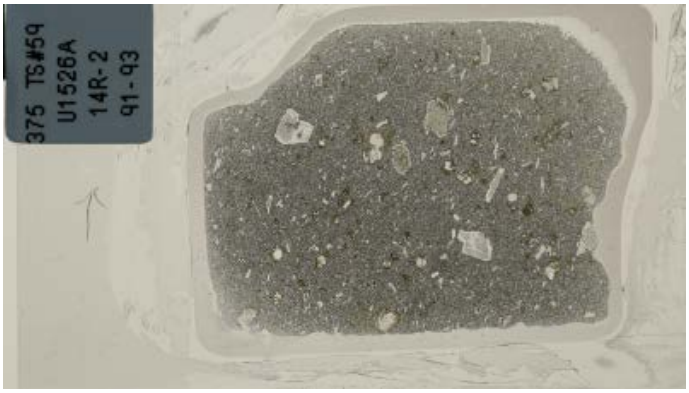
THIN SECTION LABEL ID: **375-U1526A-14R-2-W 91/93-TSB-TS59** TS no.: 59

Requestor Group: sedimentology Observer:

Summary Description

basalt

Plane-polarized



46787631

Cross-polarized

46787651

SEDIMENT DETAILS

Lithology: basalt

Detailed description

Pyroxene-bearing altered basalt showing seriate texture. Pyroxene phenocrysts are partly altered and replaced with fibrous secondary minerals.

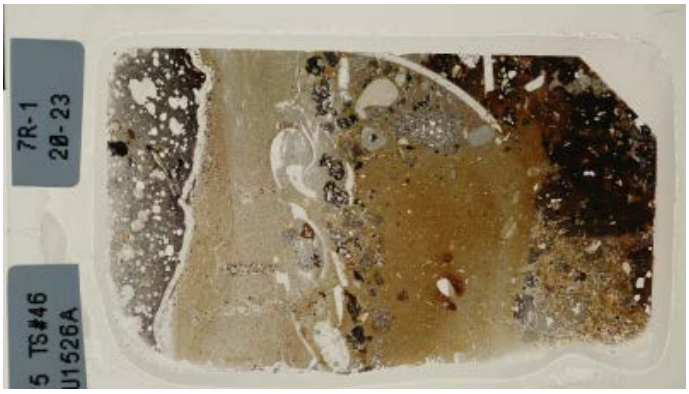
THIN SECTION LABEL ID: **375-U1526A-7R-1-W 20/23-TSB-TS46** TS no.: 46

Requestor Group: structure Observer: Morgan

Summary Description

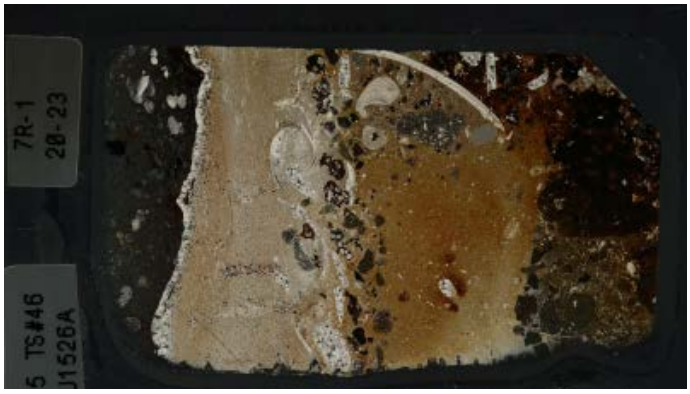
volcaniclastic clast in matrix of fine calcite rich clastic sediment; circumgranular calcite vein along clast edge; grain size variation, coarser along clast edge; several coarser clastic dikes cut matrix; very thin calcite veins cut matrix.

Plane-polarized



46698241

Cross-polarized



46698261

MICROSTRUCTURES

Microstructure: Rock name: volcaniclastic conglomerate

Microstructure comment: circumgranular and fracture veins

Detailed description volcaniclastic clast in matrix of fine calcite rich clastic sediment; circumgranular calcite vein along clast edge; grain size variation, coarser along clast edge; several coarser clastic dikes cut matrix; very thin calcite veins cut matrix

THIN SECTION LABEL ID: **375-U1526A-7R-1-W 80/83-TSB-TS47** TS no.: 47

Requestor Group: structure Observer: Morgan

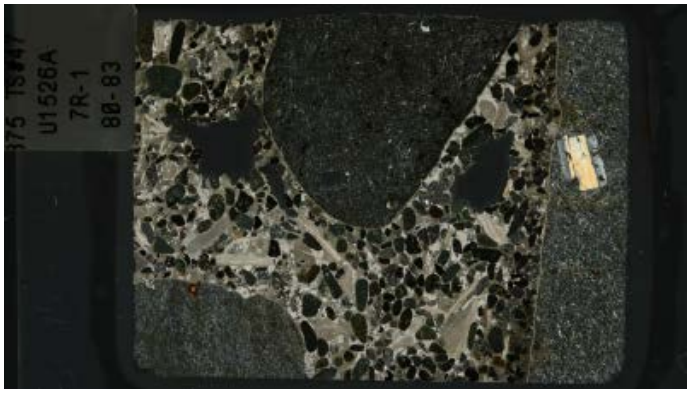
Summary Description

circumgranular calcite vein around large volcanic clast; green mineral fills vesicles in volcanic clast; multiple generations of calcites in pore space, including sparry overgrowths on bioclasts; nice twinned feldspars

Plane-polarized

46656121

Cross-polarized



46656141

MICROSTRUCTURES

Microstructure: Rock name: volcaniclastic conglomerate

Microstructure comment: circumgranular and fracture veins

Detailed description circumgranular calcite vein around large volcanic clast; green mineral fills vesicles in volcanic clast; multiple generations of calcites in pore space, including sparry overgrowths on bioclasts; nice twinned feldspars

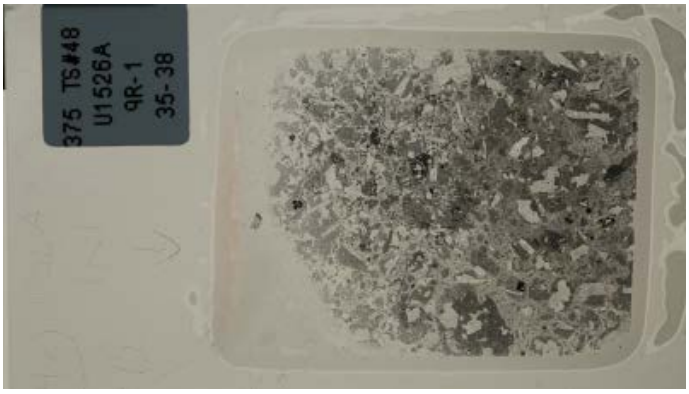
THIN SECTION LABEL ID: **375-U1526A-9R-1-W 35/38-TSB-TS48** TS no.: 48

Requestor Group: structure Observer: Morgan

Summary Description

Volcanic clast with substantial alteration; platy phyllosilicate or palagonite; sampled for green vein filling, but not evident in thin section; twinned calcite with apparent calcite replacement

Plane-polarized



46698281

Cross-polarized

46698301

MICROSTRUCTURES

Microstructure comment: No veins observed, just zones of alteration

Detailed description Volcanic clast with substantial alteration; platy phyllosilicate or palagonite; sampled for green vein filling, but not evident in thin section; twinned calcite with apparent calcite replacement