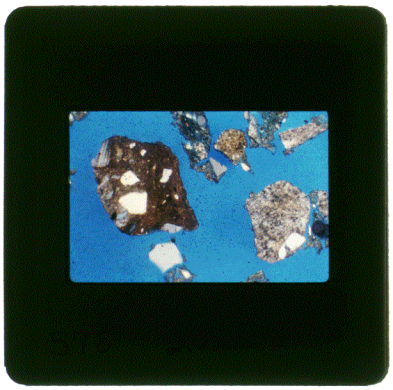
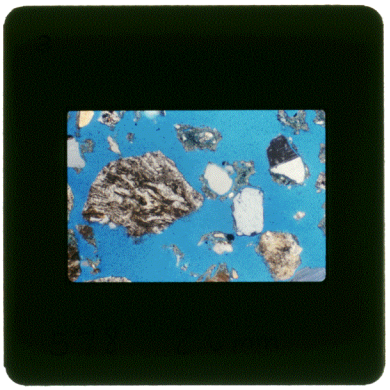
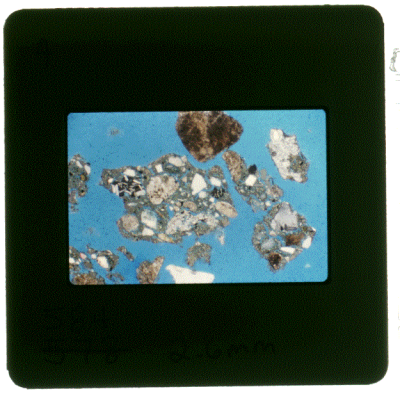
Thin Section Photomicrographs

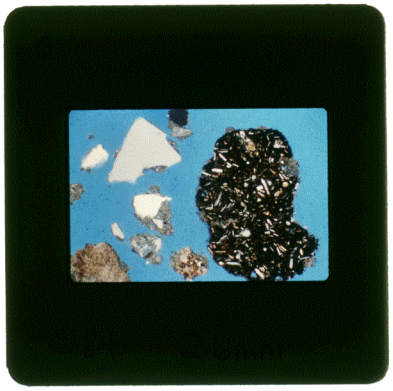
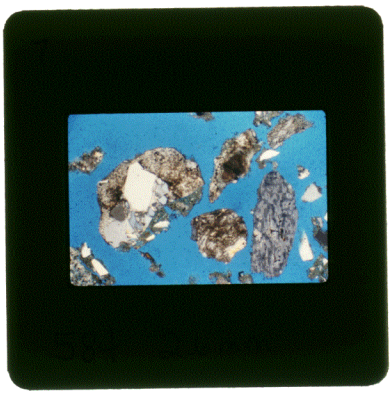
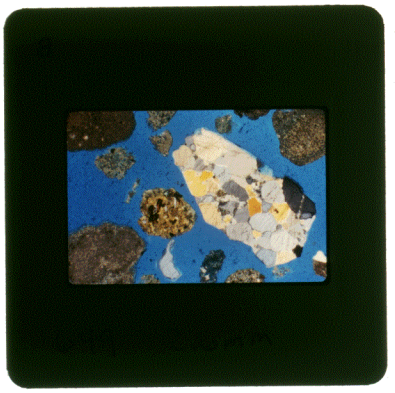
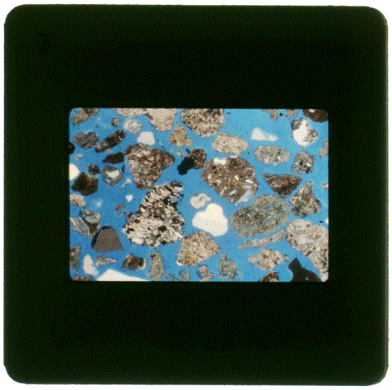
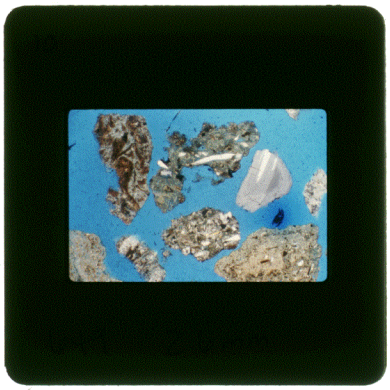
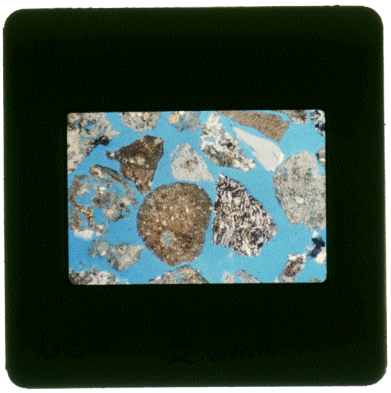
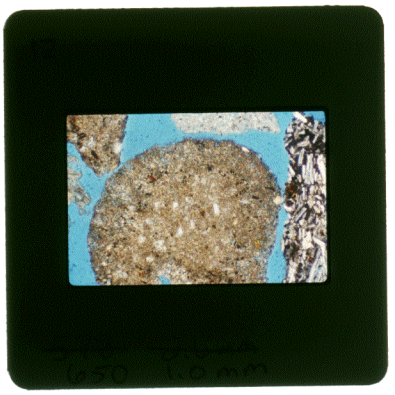
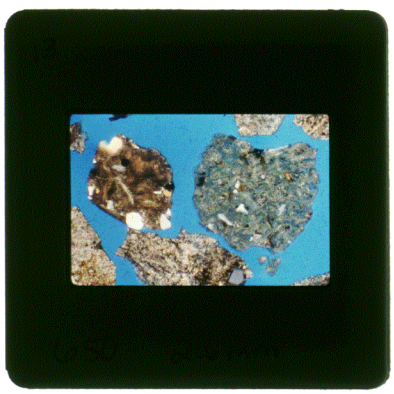
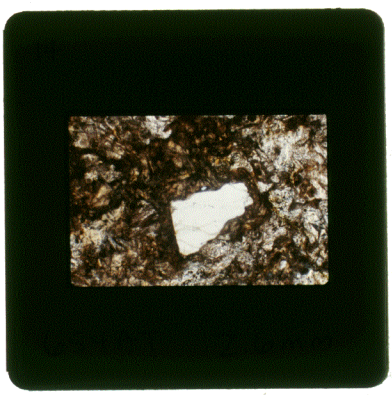
Of

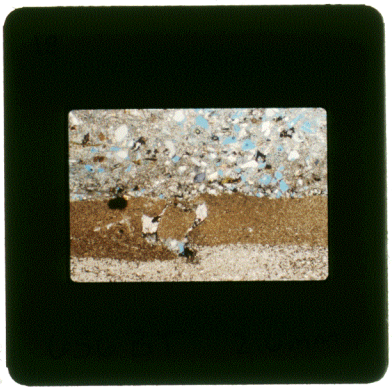
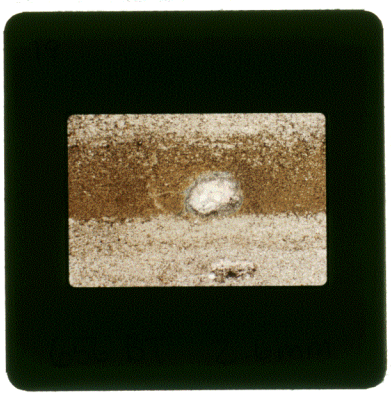
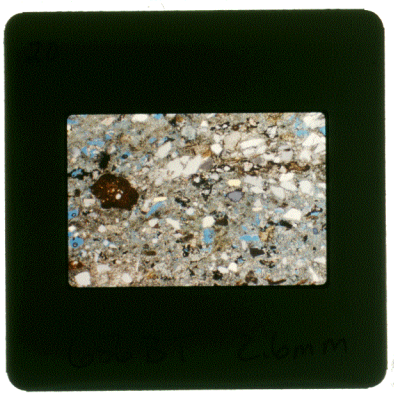
Nye County EWDP Samples

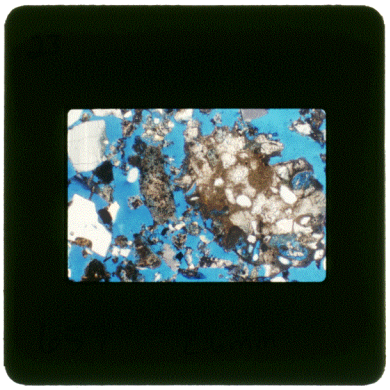
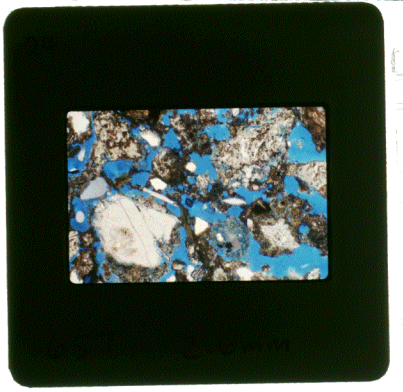
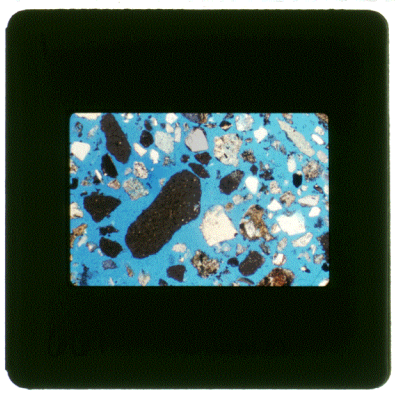
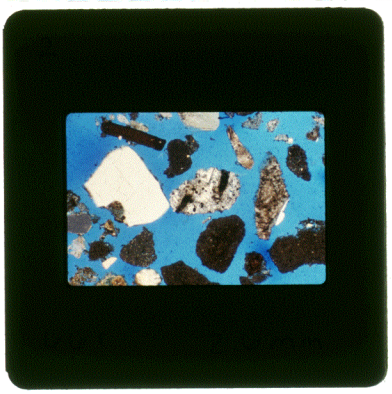
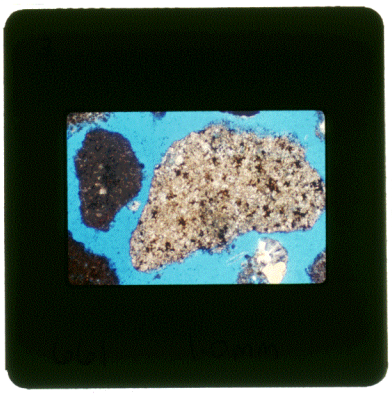
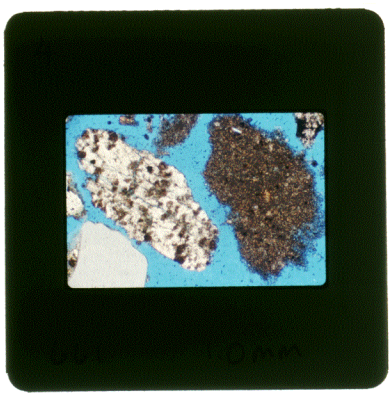
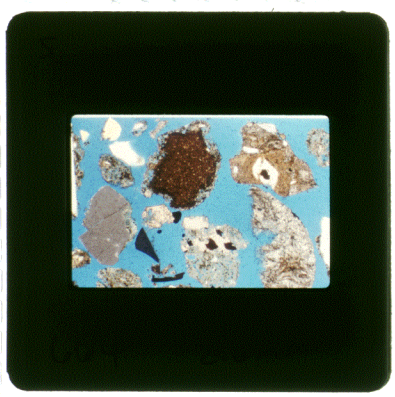
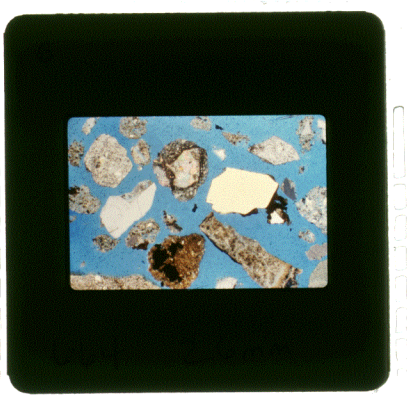
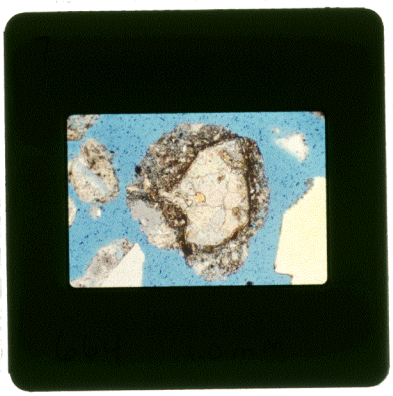
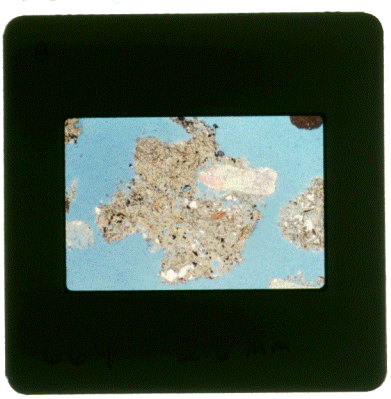
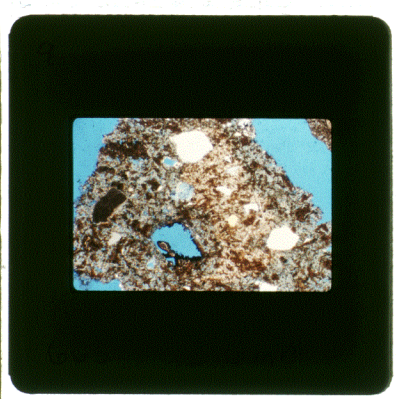
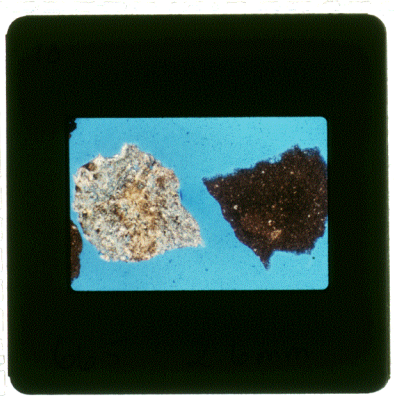
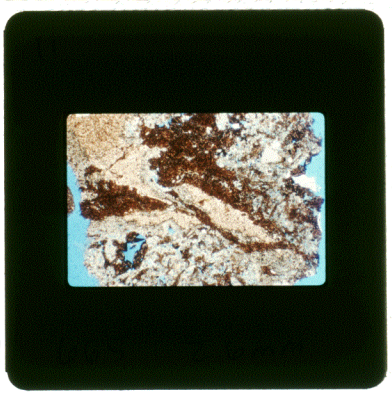
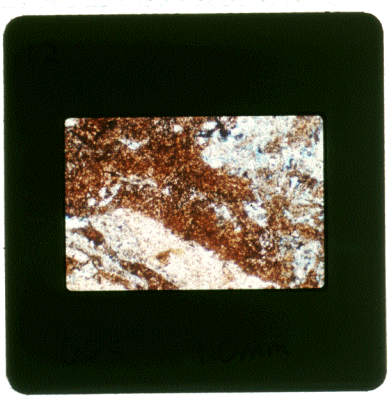
Supplemental Material, Technical Activity Supporting Documentation: Experimental Data for Thin Section Photomicrographs of Nye County EWDP Samples (No Date Range Available)

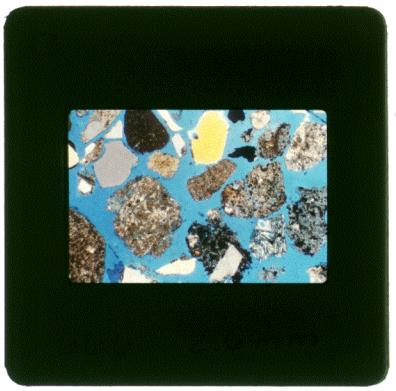
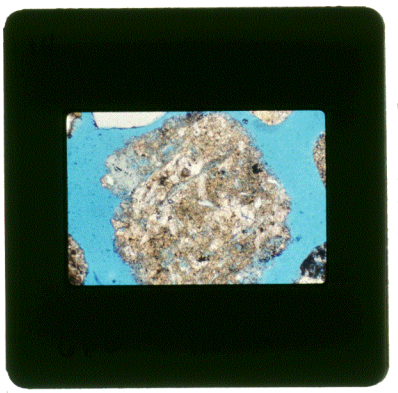
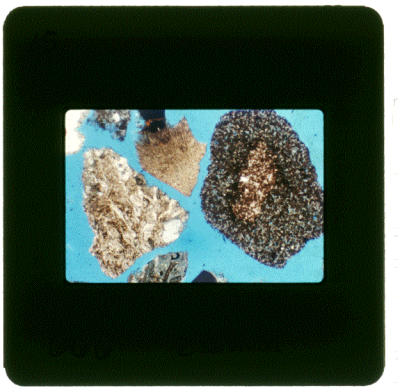
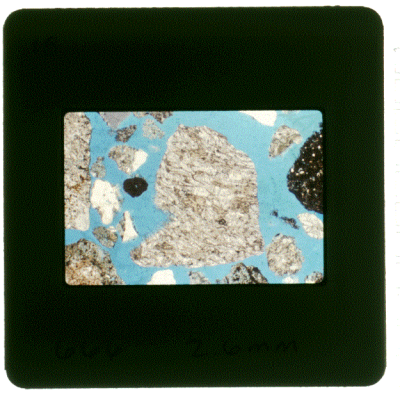
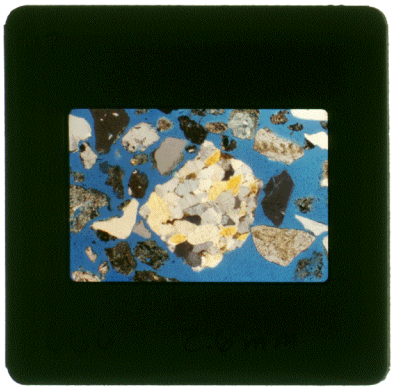
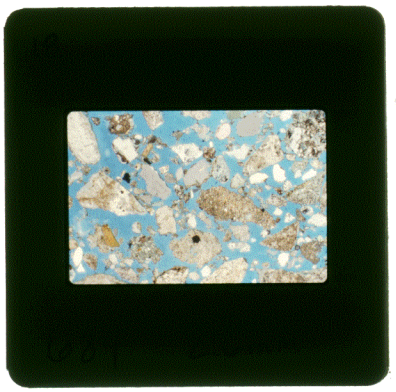
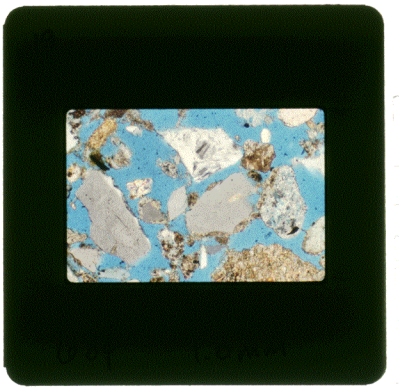
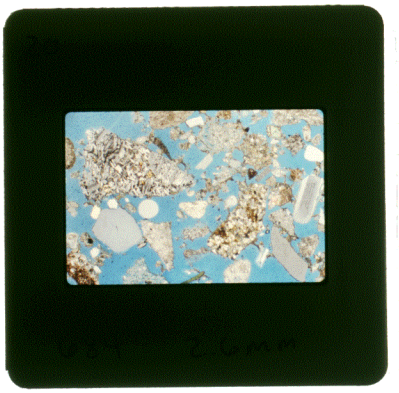
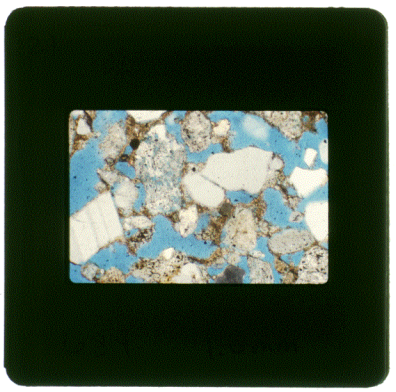
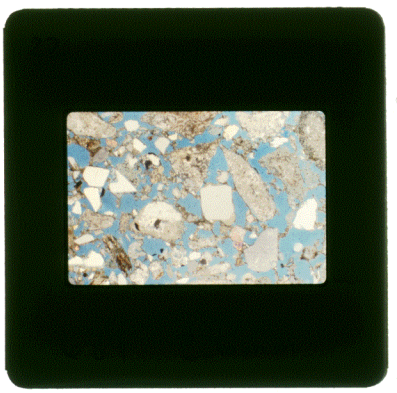
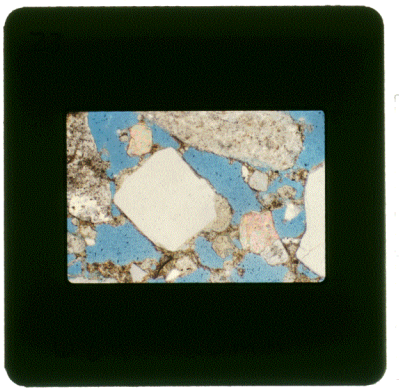
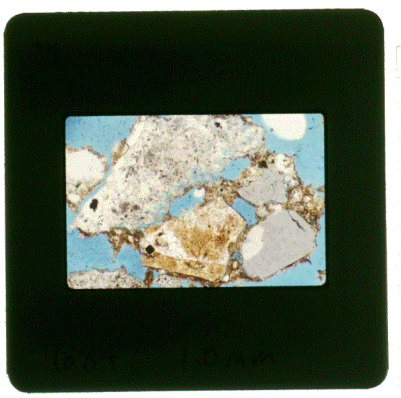
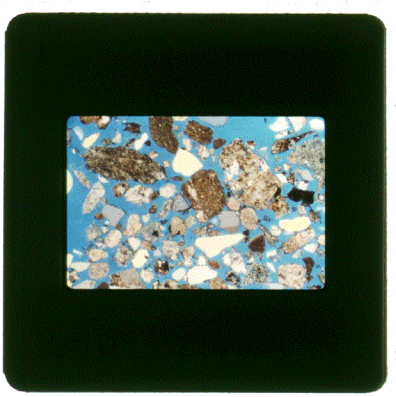
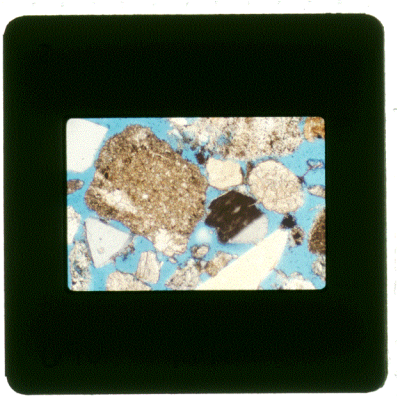
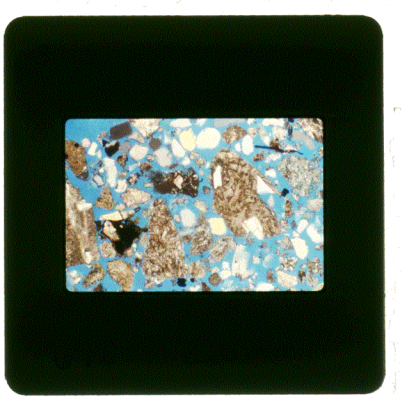
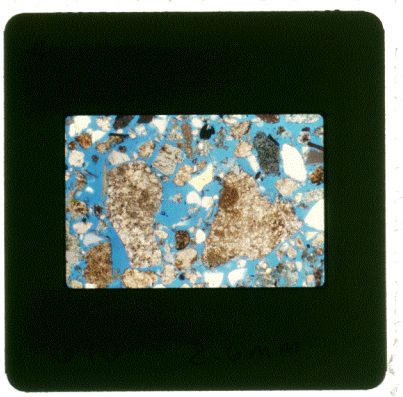


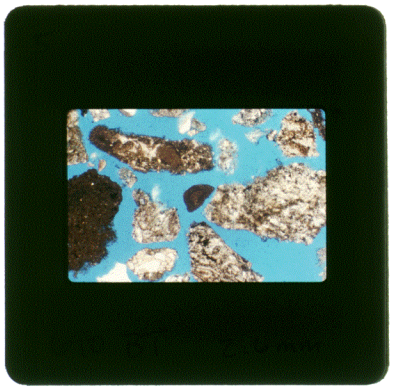
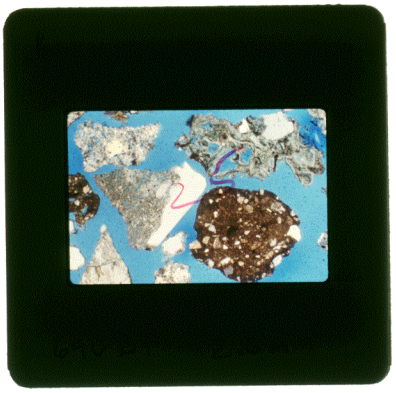
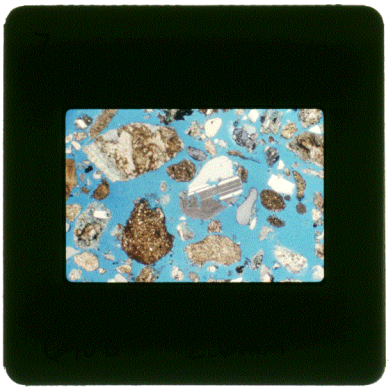
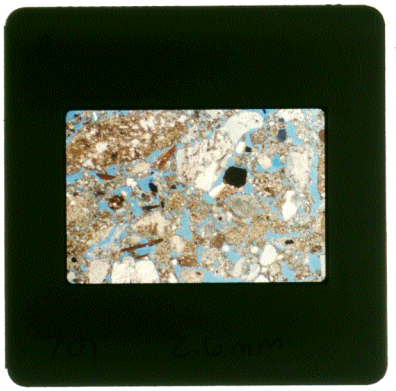
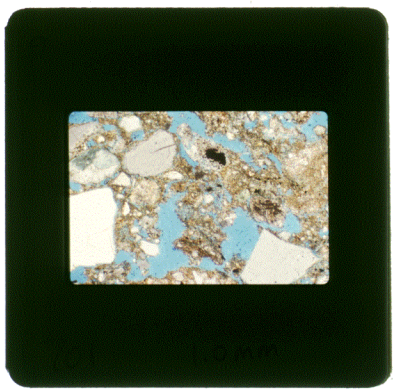
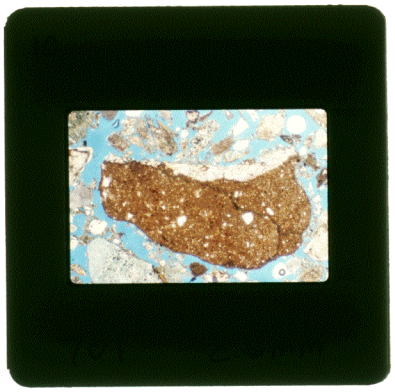
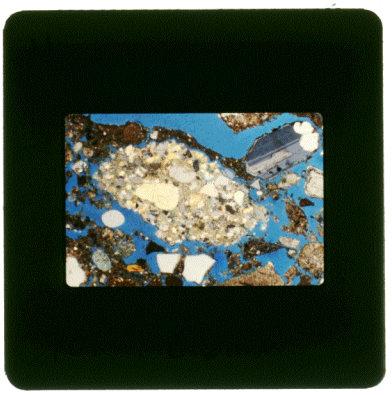



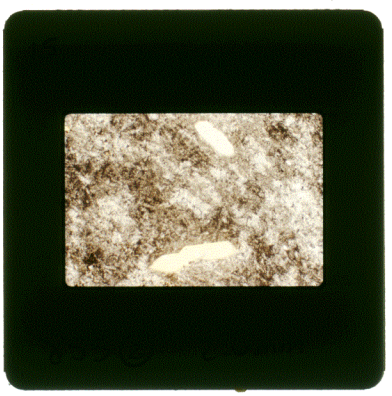










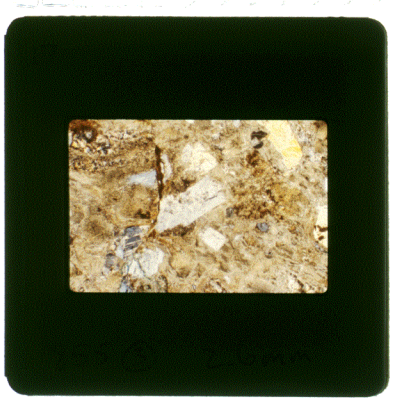
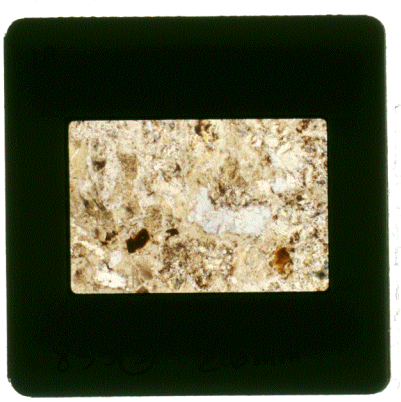
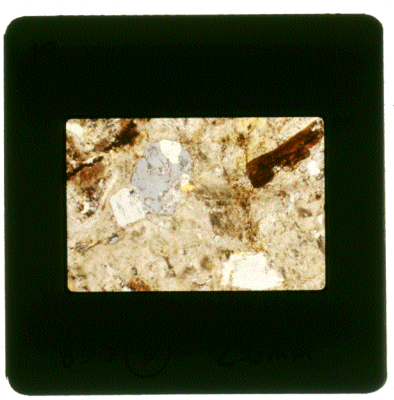
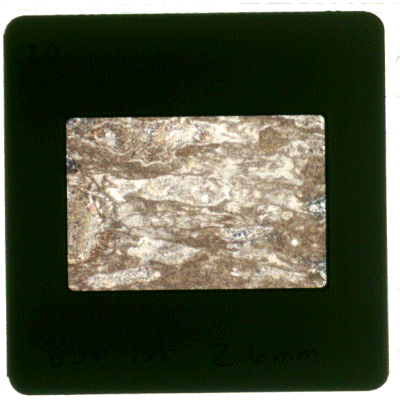
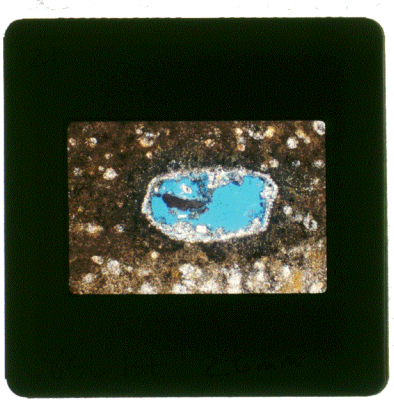
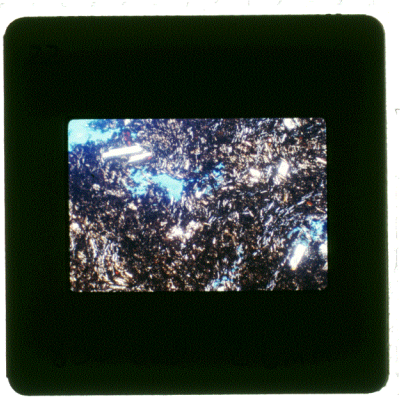




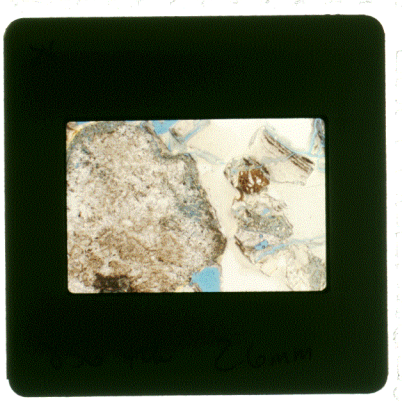















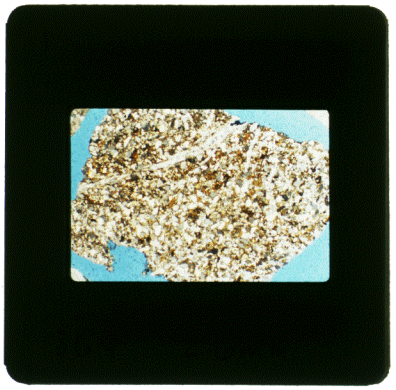
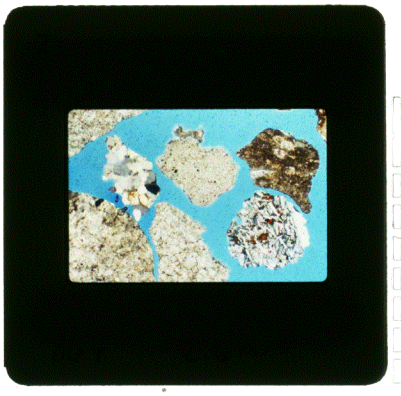

















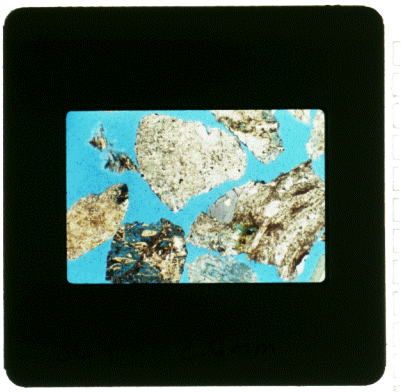








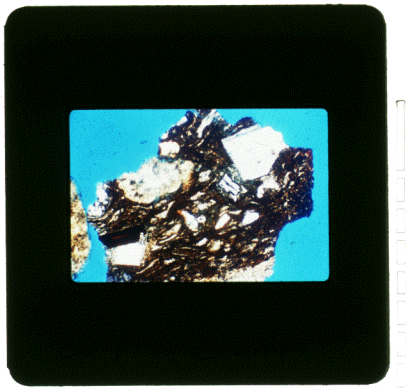
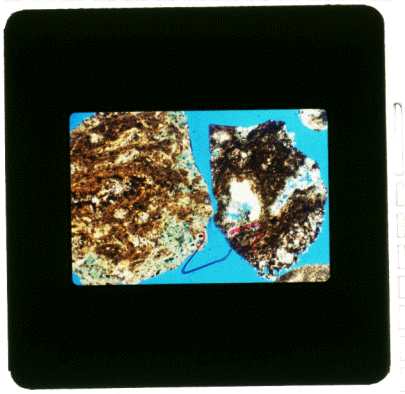
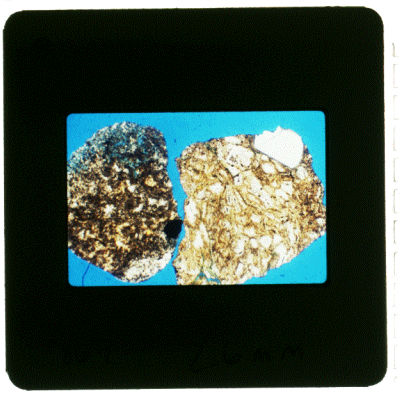


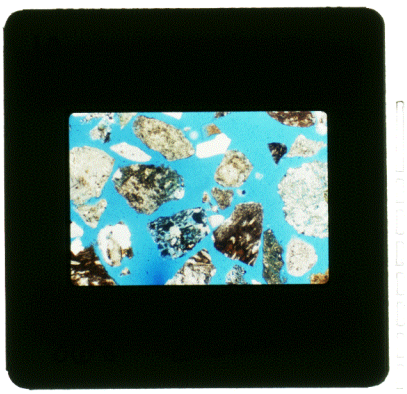







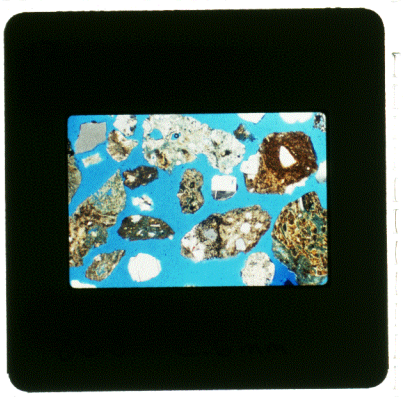


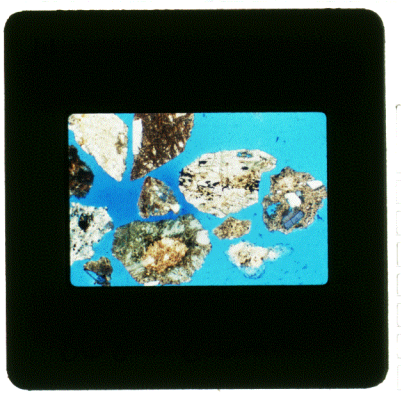
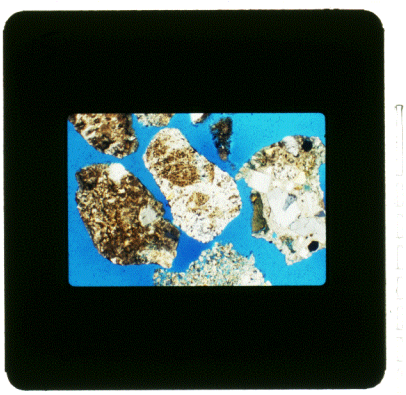
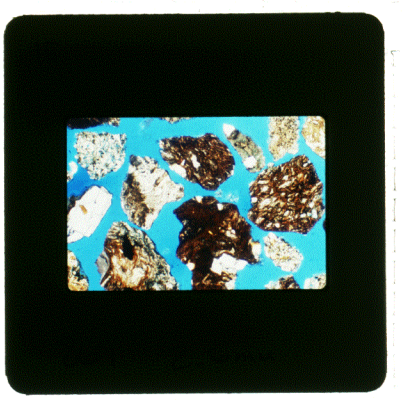
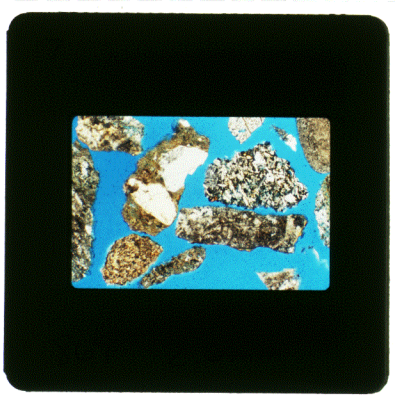
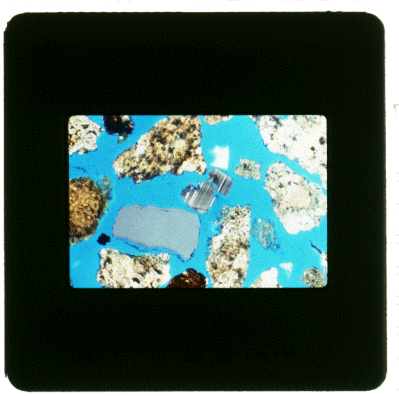









Photos

4X (2.6mm) 1	- 578	Volcanic rock fragments
4X (2.6mm) 2	- 578	Quartz, Feldspar, URF
4X (2.6mm) 3	- 578	URF with glassy texture, Feldspar, qtz.
4X (2.6mm) 4	- 584	URFs w/ qtz + Feldspar cemented by fine matrix
4X (2.6mm) 5	- 584	~~fine matrix~~. Plag grain ~~in~~; URF, qtz + Feldspar in fine matrix.
4X (2.6mm) 6	- 584	URF + quartz.
4X (2.6mm) 7	- 584	MRF - stretched qtz, URFs, opal.
4X (2.6mm) 8	- 649	MRF - quartz grain ~~after~~ next to URF
4X (2.6mm) 9	- 649	URFs, qtz, Feldspar.
4X (2.6mm) 10	- 649	URFs - some with glassy texture, FID.
4X (2.6mm) 11	- 650	URFs
10X (1.0mm) 12	- 650	Closeup of #11 showing replacement of
4X (2.6mm) 13	- 650	URF groundmass by calcite. Typical URFs. Glassy, opaline.
4X (2.6mm) 14	- 654AT	Phenocryst of quartz in groundmass of quartz, cristobalite + feldspar. URF Ghosts of glass shards in groundmass.
10X (1.0mm) 15	- 654AT	Photo of groundmass - glass shards replaced by quartz + Feldspar.
4X (2.6mm) 16	- 656AT	URF - most groundmass matrial.
10X (1.0mm) 17	- 656AT	Plag crystal in groundmass of qtz + Feldspar.
4X (2.6mm) 18	- 656BT	hanged sandstone rock fragment. Medium
4X (2.6mm) 19	- 656BT	to fine substone layers. Cemented
4X (2.6mm) 20	- 656BT	by calcite dolomite. Vugs filled
10X (1.0mm) 21	- 656BT	by dolomite.
10X (1.0mm) 22	- 656BT	

	Sple	
4Y (2.60mm) 23	657	VRF in which calcite replaces quartz or forms in open space. Also qtz, feldspar, VRF.
4Y (2.60mm) 24	657	Native piece of dolomite + VRFs.

Photos

4X(2.6mm)	1	-661	Numerous dolomite grains, also calcite fragments. Qtz VRFs.
4X(2.6mm)	2	-661	Dolomite, qtz, biotite, VRF
10X(1.0mm)	3	661	Fine crystalline dolomite grain next to a coarser crystalline calcite/dolomite grain.
10X(1.0mm)	4	-661	Fine crystalline dolomite next to coarse dolomite/calcite grain.
4X(2.6mm)	5	-664	VRFs, dolomite, dol/cal fragment. Notice possible replacement by dol in VRF
4X(2.6mm)	6	-664	VRFs, qtz, dolomite replacing VRF
10X(1.0mm)	7	-664	Dolomite replacing qtz in VRF
4X(2.6mm)	8	-664	Dolomite replacing VRF
4X(2.6mm)	9	-665	VRF undergoing replacement by dolomite
4X(2.6mm)	10	-665	Dolomite next to VRF
4X ~~10X~~ (2.6mm ~~1.0mm~~)	11	-665	VRF undergoing replacement by dolomite
10X(1.0mm)	12	-665	Closeup of dol replacement before
4X(2.6mm)	13	-666	VRFs, dolomite, Dolomite replacing VRF.
10X(1.0mm)	14	-666	Dolomite replacing or precipitating in open space in VRF.
4X(2.6mm)	15	-666	VRFs - Dolomite grain.
4X(2.6mm)	16	-666	VRF - devitrified
4X(2.6mm)	17	-666	MRF - sutured qtz.
4X(2.6mm)	18	-684	VRFs, qtz, dolomite grains. Replacement by calcite, some calcite cement on rims of qtz + VRFs.

10X (1.0mm)	19 - 684	Notice rim of calcite cement on [illegible].
4X (2.6mm)	20 - 684	VRFs, [illegible], MRF. Calcite cement + rim cement.
10X (1.0mm)	21 - 684	Calcite cementing several VRFs.
4X (2.6mm)	22 - 684	VRFs with calcite cement rim.
10X (1.0mm)	23 - 684	Calcite cementing VRFs
10X (1.0mm)	24 - 684	Calcite cementing VRFs.

Photos

4X (2.6mm)	1 - 690	VRFs, dol frags, calcite frags, qtz
10X (1.0mm)	2 - 690	Cal frag, cal replacmt in dol frag.
4X (2.6mm)	3 - 690	VRFs, calcite, etc. . .
10X (2.6mm)	4 - 690	Recrystlyd dol frag, VRF
4X (2.6mm)	5 - 690BT	VRF, dol, calcite.
4X (2.6mm)	6 - 690BT	Sandy dolomite, VRFs.
4X (2.6mm)	7 - 690BT	Dol frags, VRFs, plag.
4X (2.6mm)	8 - 701	Replacmt + cemtn of VRF + qtz by dolomite
10X (1.0mm)	9 - 701	Closer view of fine dol cemt.
4X (2.6mm)	10 - 701	large Dol frag.
4X (2.6mm)	11 - 701	Plag, VRF, dol cemt + replacmt.
4X (2.6mm)	12 - 855 ①	Phenocrysts of qtz in felsic matrix with cristobalite. Devitrified
4X (2.6mm)	13 - 855 ①	Qtz + feldspar phenocrysts in ~~feldspar-cristobalite~~ groundmass ~~matrix~~.
4X (2.6mm)	14 - 855 ①	Groundmass - layering.
4X (2.6mm)	15 - 855 ②	Feldspar phenocrysts in fine groundmass of feldspar - cristobalite
4X (2.6mm)	16 - 855 ②	Qtz + Fld phenocrysts in groundmass of feldspar - cristobalite.
(4X) (2.6mm)	17 - 855 ③	Alteration of qtz + feldspar phenocrysts. Groundmass altered to opal?

4X (2.6mm) 18 · 855(3) Altered qtz grain

4X (2.6mm) 19 - 855(3) This sample may have undergone some hydrothermal alteration.

4X (2.6mm) 20 - 856(1st) Glass shards replaced by zeolite

4X (2.6mm) 21 - 856(1st) Dissolution + replacement of qtz or feldspar grain by zeolite.

4X (2.6mm) 22 - 856(2nd) Plag in dark matrix.

4X (2.6mm) 23 - 856(3rd) Phenocrysts of qtz feldspar in fine groundmass

4X (2.6mm)(24) - 856(4th) VRF in fine groundmass.

Photos

4X (2.6mm) 1 - 864 Sandstone fragment - cemented by dolomite.

4X (2.6mm) 2 - 864 URFs, MRF (stained grey).

4X (2.6mm) 3 - 864 URFs - play in fine glass.

4X (2.6mm) 4 - 864 A number of typical URFs.

4X (2.6mm) 5 - 867 Qtz phenocrysts in felsic groundmass.

4X (2.6mm) 6 - 867 Plag + qtz in glassy groundmass.

4X (2.6mm) 7 - 867 URFs.

4X (2.6mm) 8 - 867 URFs.

4X (2.6mm) 9 - 867 URF

4X (2.6mm) 10 868 Unit of URFs, grey.

4X (2.6mm) 11 868 URFs, grey.

4X (2.6mm) 12 868 URFs, grey.

4X (2.6mm) 13 868 URFs, SRF

4X (2.6mm) 14 868 URFs,

4X (2.6mm) 15 869 URFs

" " 16 869 URFs

" " 17 869 URFs

" " 18 869 URFs

Sample 578

Consists of grains ranging in size from 0.05 to 7 mm

Comparable Grains -

Volcanic quartz
Feldspar.

Volcanic rock fragments - most are rhyolitic
(quartz + feldspar in fine crystalline groundmass).
Glassy texture - remnant.

MRFs composed of quartz

Sample 584

Similar to 578
Grain sizes range from 0.025 to 0.5 mm.

Components

URFs, Qtz, Feldspar., MRF
Composite grain - URFs, qtz, feldspar in fine matrix.

Sample 649

Grain range size - 0.025 to 2.5 mm

Composite

URFs, Qtg, Feldspar, MRF.

Sample 650

Similar to 649

Composite

Predominantly URFs, qtg, feldspar

Minor MRF.

Appears to be some replacement by calcite -

Groundmass of URF replaced by calcite

Sample 654AT

Large volcanic rock fragment

Phenocrysts of quartz + feldspar in a groundmass of feldspar & recrystallized / felty matrix

Chunks of glass shards visible

Sample 656AT

VRF composed of phenocrysts of feldspar & quartz in a groundmass of quartz, cristobalite, and feldspar. Matrix feldspar has felty ~~texture~~. Quartz replaces glass shards.

Sample 656BT

Appears to be layered SRF composed of layers of coarse to fine sandstone cemented by calcite and/or dolomite.
Open space & vugs in the sandstone are filled by sparry dolomite.

Sample 657

Alluvium material composed of grains of qtz, feldspar, VRFs, SRFs, in fine matrix.
Sample contains calcite replacement or void filling in VRF and grains of dolomite (~~angular~~ angular suggests little transport).

Sample 661

Composed of VRFs - rhyolite, some with glass shards, few pumice fragments.
Qtz - feldspar grain - biotite grain.
This section also contain Numerous dolomite fragments - fine grained and a few coarser grained calcite fragments.

Sample 664

Composed of VRFs, qtz feldspar. Some dolomite grain but less than previous sample (661).
Some of VRFs appear to be undergoing replacement by dolomite - crypt replacement or void filling.

Sample 665

Composed of VRFs, dolomite grain, + VRFs undergoing replacement by dolomite.

Sample 666

Composed of VRFs, dolomite grains, MRFs., qtz, Feldspar
Dolomite replacing VRFs is common texture.

Sample 684

Composed of VRFs. Some VRFs are cemented by calcite (rim along edges of fragments).
Some replacement of VRFs by calcite.

Sample 690

Composed of VRFs, qtz, FID, fine dolomite fragments.
This slide contains coarser calcite/dolomite fragments.
Some replacement + precipitation of calcite in VRFs + open space.

Sample 690 BT

Composed of VRF, qtz, FID, dolomite fragments.
Coarse calcite fragments + calcite replacement textures

Sample 701

Sample shows pervasive calcite/dolomite cementation & replacement.

Sample 855(1)

Large fragment. Volcanic rock fragment.
Liquid type structure - indicative of flow.
Phenocrysts of qtz & feldspar in felsic matrix.

Sample 855(2)

Volcanic rock fragment - Large
Phenocrysts of qtz & feldspar in feldspar enriched groundmass.

Sample 855(3)

Large fragment - Volcanic fragment appear to have undergone alteration (MRF)?
Phenocrysts altered - being replaced. Groundmass appears to be altered to opal.
Hydrothermal alteration?

Sple 856

Several (4) VRFs - all different.

1st Ghosts of glass shards replaced by chrophilite. Also replacement of phosphate by zeolite chrophilite or analcime.

2nd VRF - plag in dark fine matrix - ejecta.

3rd Altered VRF - phosphates of qtz fld in matrix of qtz-opal-feldspar

4th ? VRFs qtz fld in fine fractured groundmass. Alteration.

Sple 864

Consists mostly of VRFs with few SRFs (sandstone cemented by dolomite) and MRFs. Some qtz + flds grains.

Sample 867

Composed of coarse VRFs. Varied.

Sample 868

Composed of VRFs, 矽, feldspar
Few SRFs + MRFs.

Sample 869

Composed of VRFs, 矽 510