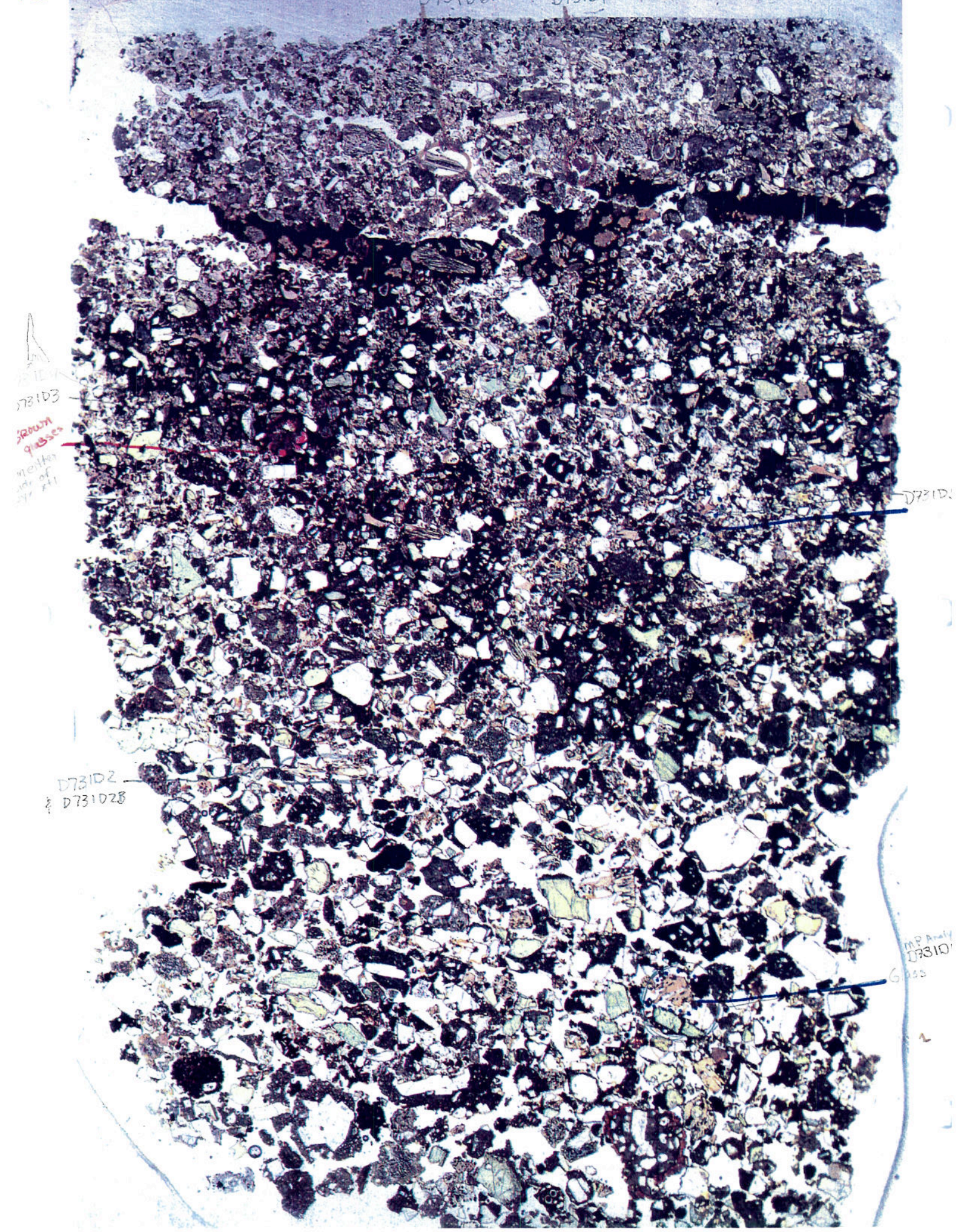
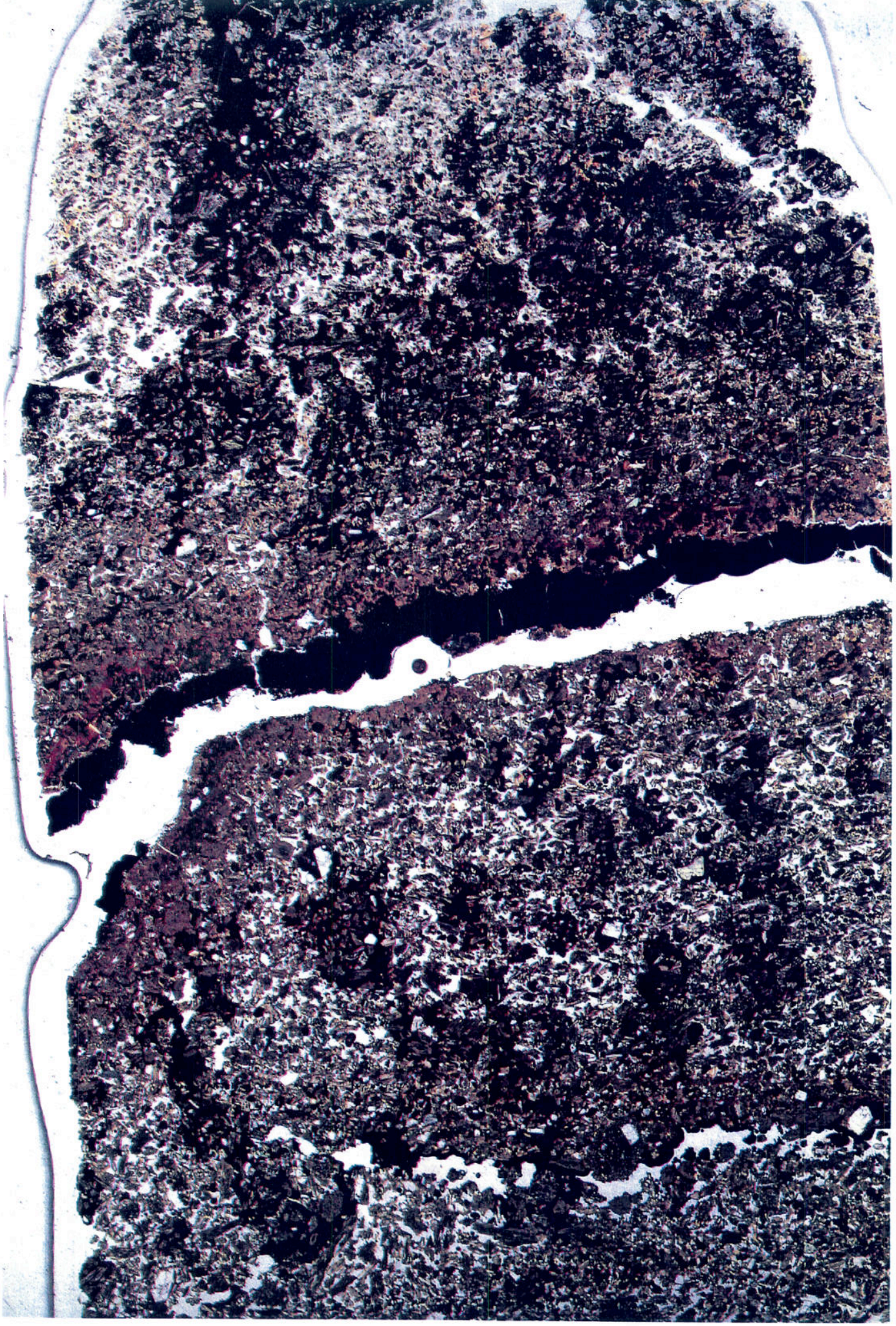

D731D3
D731D2
& D731D28



D23-1D

Petrographic Descriptions

Cruise ID TT192

Sample # D73-1D

2 overlapping sections

Stratabound oxide Layer

Stratabound oxide-replaced Sandstone

Stratabound oxide-cemented Sandstone ✓

Fe-Mn Crust

Mn Textures:

Dense
- Massive
- Laminated
  - Planar
  - Wavey

Colloform
- Columnar
- Laminated
- Aggregate Radial

Stockwork

Crystal Form: Radial-fibrous Spherulitic Aligned Tabular Euhedral Void Fill

The mineralization through this sample is mostly Colloform, radial, fibrous; very little of the spherulitic stuff. (Due to grain size or Glass alteration?)

Grain Supported

Cement Supported

Fracture Orientation

Fracture Fill

Porosity

Alteration and replacement of grains In area of Celadonite alteration V. Glass, VRF & mineral grains are replaced in what seems to be a greater percentage by Mn. The grains are often outlined by a brighter rim in reflected light. The coarser grained sand (top of 1st slide) has replaced grains not in contact w/ Mn cement. There is a group of Colloform oval radial, Celadonite w/ Mn coating it. 1st Slide an opaque which reflects ~~apricot~~ pale (yellow orange) pale not pleochroic. Mn surrounds it. Near top, (By color looks like a sulfide?) (in section w/ hydrothermal layer)

Photo(s) Taken of

SEM: Strabound layer w/ Fibers

Microprobe

VRF = glass w[illegible]

Grain Counts

Count	Category	Unaltered	Altered
56	Volcanic Rock Fragments	[tally marks]	[tally marks] 5
65	Volcanic Glass	[tally marks]	[tally marks]
	Mineral Grains		
10	Pyroxene	[tally marks]	
	Olivine		
14	Plagioclase	[tally marks]	
	K-spar		
	Amphibole		
	Quartz		
	Others		
1	Microfossils	Foram I	
	Others		
	Matrix		
48	Pore Space	[tally marks]	
73	Mn Cement	[tally marks]	
51	Other Cements	Celadonite [illegible]: [tally marks]	

~~Brown V. Glass~~ ~~[illegible] V. Glass~~ [tally marks]

Altered V. Glass (Celadonite?) III

Transmitted light Notes:

(A[illegible] seem to be pointing to the top, if you assume the Mn scallops/botryoids point down, Usui 1985)

V[illegible] glass [illegible] brownish clear like D'73-1C w/ alteration product around grains

Alteration of glass is more extensive near Mn cements, [illegible]

Medium to fine grains, poor sorting, angular to sub rounded VRF and mineral grains all fairly fresh. Forams & Radiolaria. There is inverse grading (assuming orientation as above) from [illegible] medium [illegible] bottom of 2nd slide

V.G. is very vesicular, can have Mn infilling vesicles

Nearly all grains have rind of celadonite