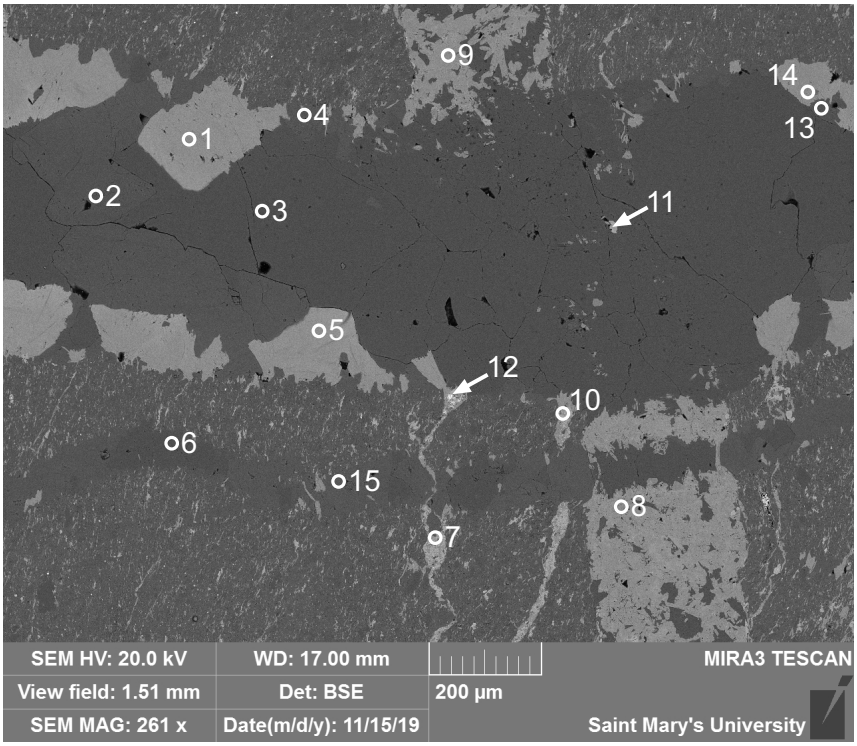
Supplementary Data for Pe-Piper & Piper (2020) Palinspastic reconstruction of the Cobequid Highlands in the late Palaeozoic: constraints on the fragmentation of the Appalachian orogen in Nova Scotia along intra-continental shear zones during the formation of Pangea

Appendix 1: Scanning electron microscope backscattered electron images and energy dispersive spectroscopy chemical analyses of mineral veins.

Samples are located in Supplementary Table 2 and are illustrated in Figure 6 of the main paper.

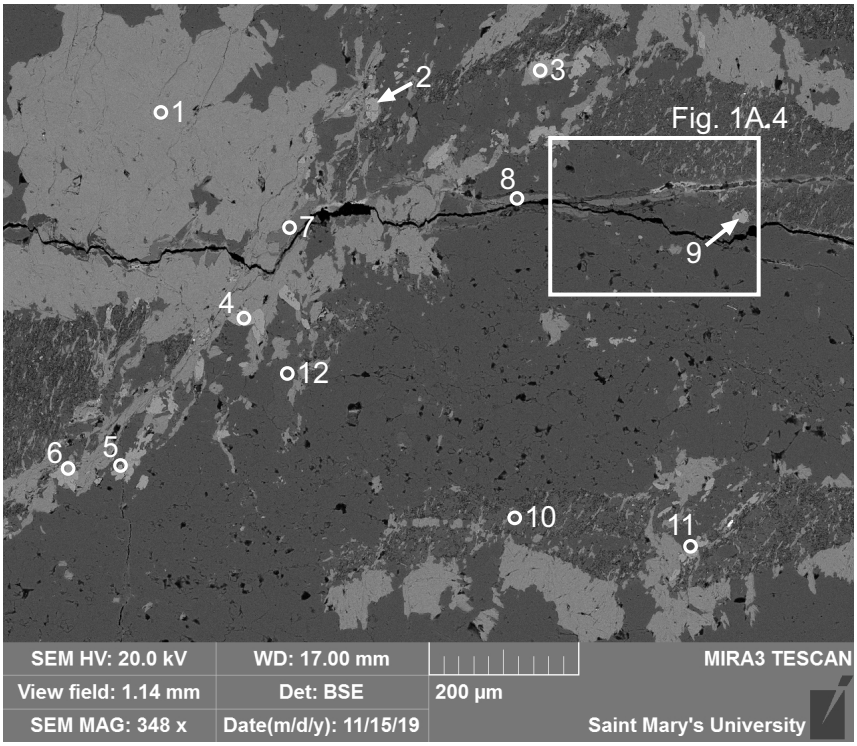
Appendix 1A: SEM-BSE images and EDS mineral analyses for sample 10009

Figure 1A.1: Scanned slab of sample 10009.



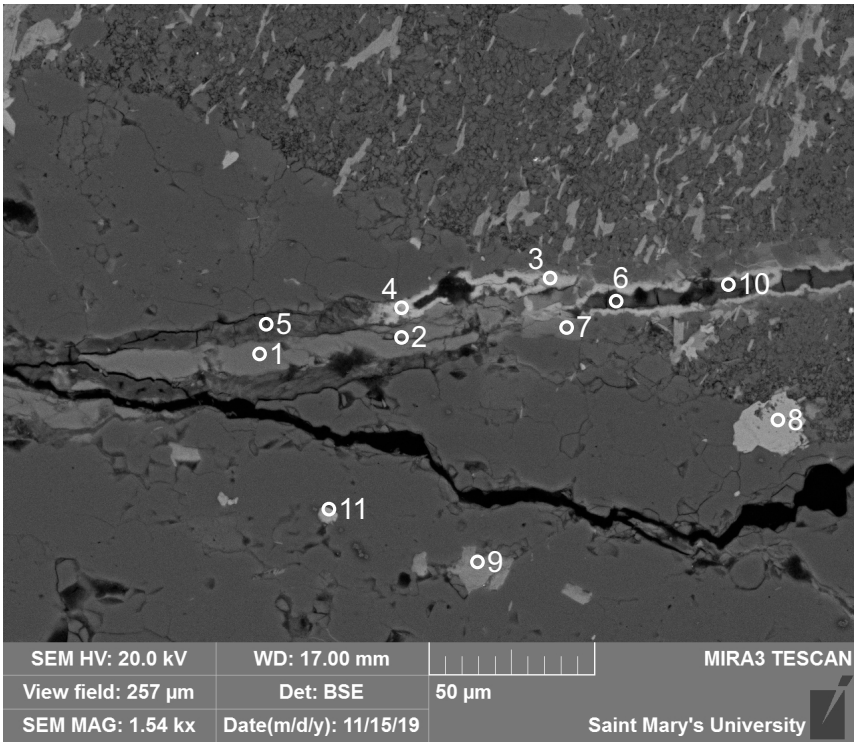
1: Chlorite
2: Albite
3: Quartz
4: Oligoclase
5: Chlorite
6: Quartz
7: Titanite
8: Epidote
9: Epidote
10: Titanite
11: Titanite
12: Epidote
13: Oligoclase
14: Chlorite
15: Oligoclase

Figure 1A.2: Sample 10009 site 1 (SEM).



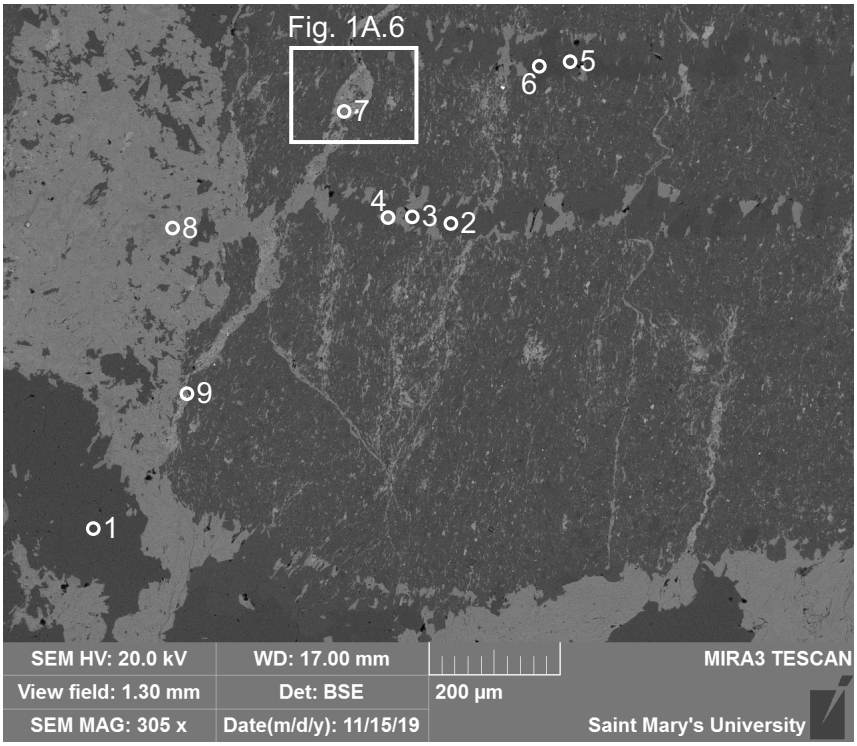
1: Chlorite
2: Titanite
3: Titanite
4: Titanite
5: Titanite
6: Titanite
7: K-feldspar
8: K-feldspar
9: Titanite
10: Oligoclase
11: Titanite
12: Oligoclase

Figure 1A.3: Sample 10009 site 2 (SEM).



1: K-feldspar
2: K-feldspar
3: Limonite+ Al-phosphate
4: Limonite+ Al-phosphate
5: Kaolinite
6: Kaolinite+Other
7: K-feldspar
8: Titanite
9: Chlorite
10: Kaolinite+Other
11: Titanite

Figure 1A.4: Sample 10009 site 3 (SEM).



1: Quartz
2: Oligoclase
3: Oligoclase
4: Chlorite
5: Oligoclase
6: Quartz
7: Chlorite+Titanite
8: Epidote
9: Chlorite+Titanite

Figure 1A.5: Sample 10009 site 4 (SEM).

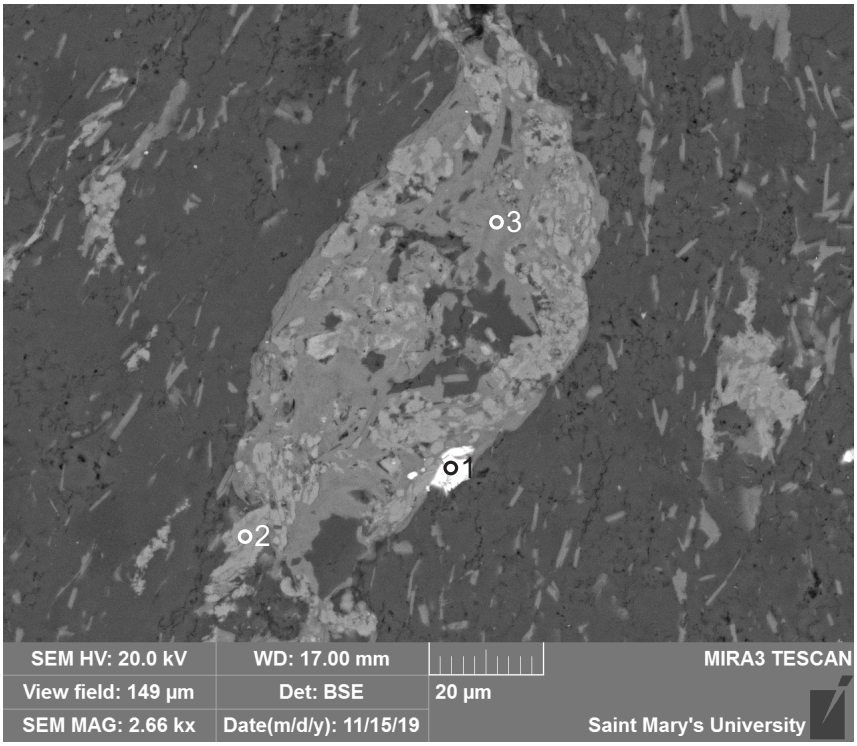


Figure 1A.6: Sample 10009 site 5 (SEM).

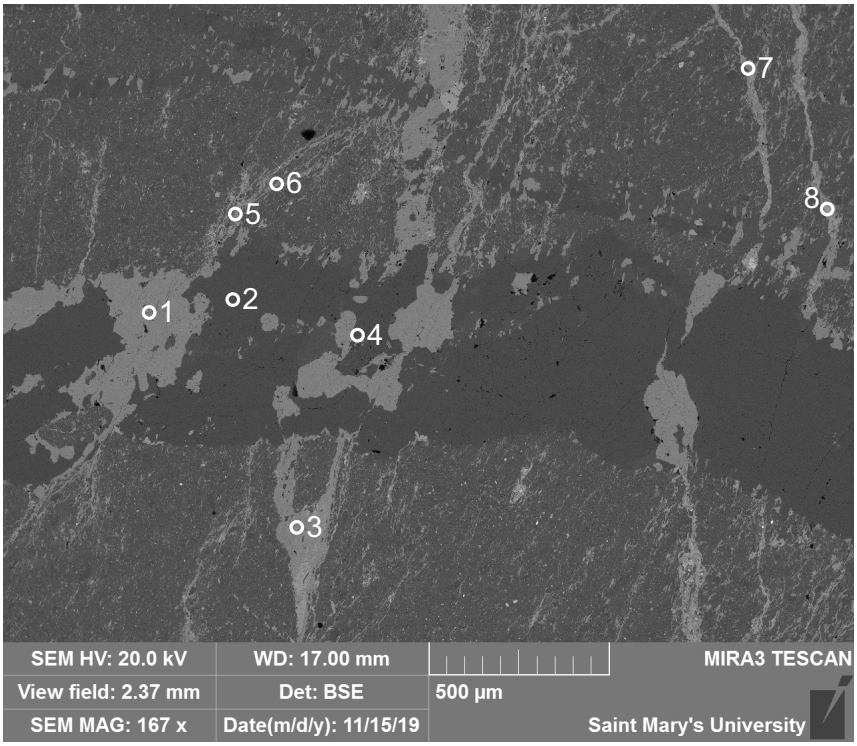


Figure 1A.7: Sample 10009 site 6 (SEM).

Table 1A: Scanning electron microscope chemical analyses of sample 10009.

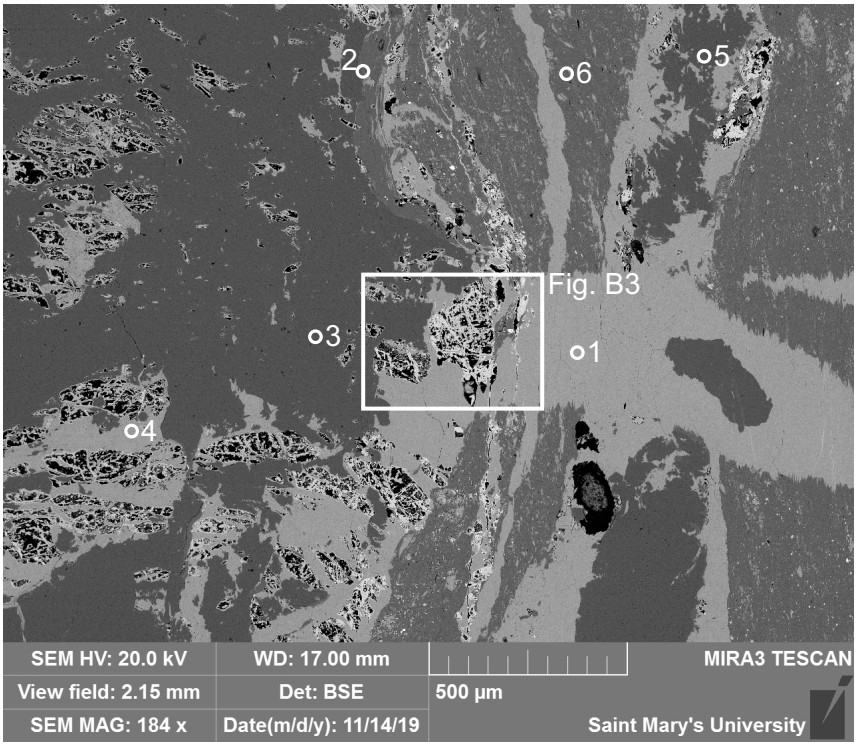
Site	Position	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	P_2O_5	SO_3	F	Cl	Sc_2O_3	CuO	As_2O_3	ZrO_2	La_2O_3	Ce_2O_3	Nd_2O_3	HfO_2	Total	Actual Total
1	1	Chl	24.27		22.14	29.14		9.45																85	77
1	2	Ab	64.76		20.33				1.71	13.20														100	91
1	3	Qz	100.00																					100	90
1	4	Olig	63.64		20.90				2.65	12.80														100	93
1	5	Chl	24.39		21.62	28.72	0.45	9.81																85	82
1	6	Qz	100.00																					100	91
1	7	Ttn	28.88	35.60	5.47	4.17		1.31	24.57															100	98
1	8	Ep	38.00		24.91	9.62			24.47															97	96
1	9	Ep	38.28		24.56	9.53	0.29		24.34															97	90
1	10	Ttn	29.84	24.57	10.47	13.24		3.36	18.52															100	94
1	11	Ttn	29.88	32.00	6.37				29.14					2.62										100	101
1	12	Ep	34.75		20.22	11.36			16.12											3.53	8.90	2.11		97	93
1	13	Olig	64.00		20.54	0.29			2.39	12.79														100	97
1	14	Chl	24.34		22.38	28.67	0.34	9.27																85	81
1	15	Olig	63.57		21.10				2.88	12.45														100	98
2	1	Chl	24.47		21.65	28.19	0.39	10.30																85	80
2	2	Ttn	29.57	35.37	4.41	0.45			28.59					1.40	0.22									100	100
2	3	Ttn	29.52	35.93	4.06	0.31			28.64					1.54										100	101
2	4	Ttn	28.93	38.26	3.85	0.79			27.00					1.17										100	101
2	5	Ttn	29.56	36.96	3.38	0.48			28.25					1.36										100	100
2	6	Ttn	29.64	37.10	3.38	0.55			28.30					1.03										100	99
2	7	Kfs	63.12		17.72	0.51					18.66													100	97
2	8	Kfs	63.79		17.43						18.78													100	98
2	9	Ttn	29.61	35.74	4.09	0.44			28.70					1.42										100	102
2	10	Olig	66.49		18.96	0.94			3.62	9.99														100	101
2	11	Ttn	29.49	35.36	4.53	0.51			28.84					1.26										100	106
2	12	Olig	63.24		21.97				2.64	12.15														100	97
3	1	Kfs	63.67		17.44						18.89													100	96
3	2	Kfs	63.46		17.85	0.28					18.41													100	96
3	3	Lim+Alph	10.16	0.86	17.76	61.46			0.34	0.90	0.33	4.45	1.57				0.61	1.57						100	70
3	4	Lim+Alph	16.55	0.52	20.20	54.83			0.32		0.32	4.19	1.06		0.40			1.59						100	68
3	5	Kln	46.42		36.59	1.52		0.29			1.18													86	74
3	6	Kln+Other	44.05		40.79	10.62			0.34	0.88	0.45	1.59	0.91		0.37									100	79
3	7	Kfs	63.61		17.78	0.61					18.00													100	96
3	8	Ttn	29.85	35.92	4.08	0.45			28.47					1.23										100	100
3	9	Chl	25.55		21.59	26.76	0.40	10.70																85	84
3	10	Kln+Other	44.21		42.24	9.63			0.30	0.73	0.43	1.32	0.72		0.43									100	70
3	11	Ttn	45.21	29.06	2.33	0.30			21.98					1.12										100	99
4	1	Qz	100.00																					100	87

Table 1A: Scanning electron microscope chemical analyses of sample 10009.

Site	Position	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	P_2O_5	SO_3	F	Cl	Sc_2O_3	CuO	As_2O_3	ZrO_2	La_2O_3	Ce_2O_3	Nd_2O_3	HfO_2	Total	Actual Total
4	2	Olig	63.11		21.39				3.24	12.25														100	93
4	3	Olig	63.70		21.06				2.76	12.48														100	93
4	4	Chl	25.49		21.92	27.78	0.34	9.48																85	78
4	5	Olig	59.83		22.31	2.65		0.61	3.36	11.23														100	92
4	6	Qz	100.00																					100	88
4	7	Chl+Ttn	37.56	4.47	24.78	10.25		1.51	21.43															100	86
4	8	Ep	37.34		26.96	8.82		0.82	23.07															97	84
4	9	Chl+Ttn	33.77	15.85	12.46	13.12		3.12	12.93	1.32									7.43					100	85
5	1	Zrn	27.00		2.71	2.67		0.48								0.38			65.25				1.51	100	107
5	2	Ttn	29.58	34.98	4.51	3.56		0.97	26.39															100	98
5	3	Chl	25.06		21.43	28.13		9.64	0.74															85	84
6	1	Chl	24.87		22.04	28.58	0.40	9.11																85	77
6	2	Qz	100.00																					100	90
6	3	Chl	24.82		20.84	27.85	0.42	9.21	1.85															85	84
6	4	Qz	99.66			0.34																		100	94
6	5	Chl	24.41	1.21	21.46	27.86		8.92	1.13															85	79
6	6	Chl+Ttn	32.30	11.08	19.46	20.30		6.71	8.83	1.32														100	83
6	7	Ttn+Chl	35.89	12.26	19.70	8.83		1.21	22.11															100	88
6	8	Ttn+TiO_2	24.36	45.56	4.48	0.44			23.70					1.45										100	102

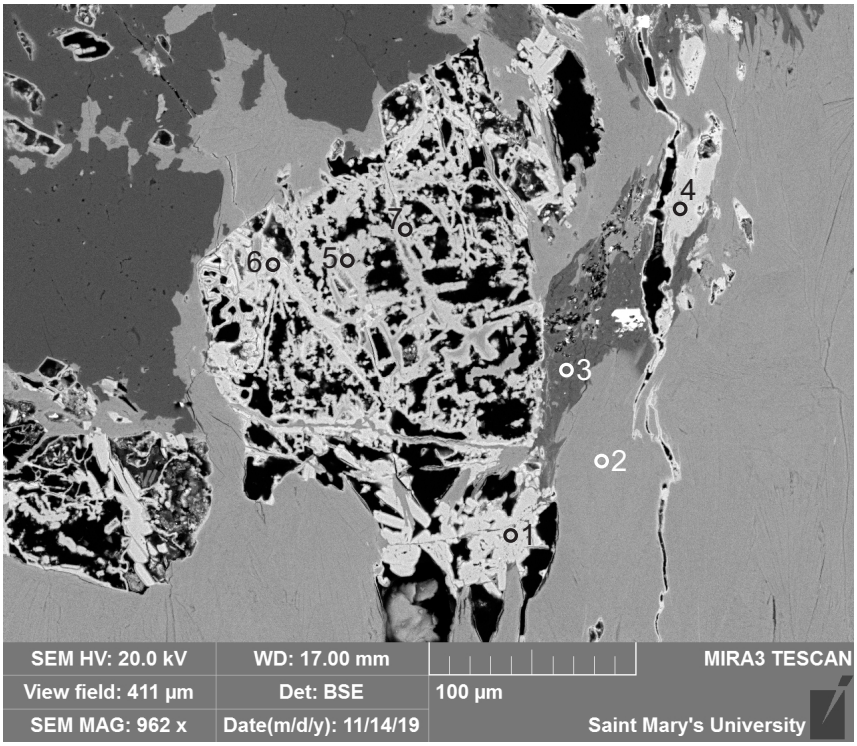
Appendix 1B: SEM-BSE images and EDS mineral analyses for sample 10010

Figure1B.1: Scanned slab of sample 10010.



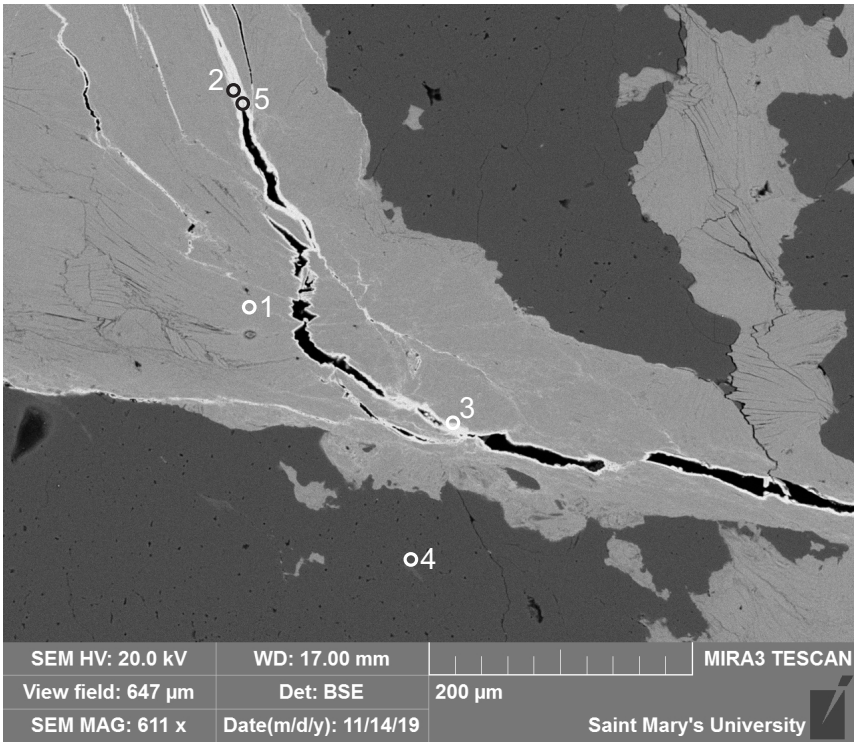
1: Chlorite
2: Muscovite
3: Quartz
4: Chlorite
5: Quartz
6: Muscovite+Albite

Figure1B.2: Sample 10010 site 1 (SEM).



1: TiO_2
2: Chlorite
3: Muscovite
4: “Ilmenite”+
5: “Ilmenite”+
6: “Ilmenite”+
7: “Ilmenite”+

Figure1B.3: Sample 10010 site 2 (SEM).



1: Chlorite
2: Limonite+ Al-phosphate
3: Limonite+ Al-phosphate
4: Quartz+ Muscovite
5: Limonite+ Al-phosphate

Figure1B.4: Sample 10010 site 3 (SEM).

Table 1B: Scanning electron chemical analyses of sample 10010.

Site	Position	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	P_2O_5	SO_3	Cl	Total	Actual Total
1	1	Chl	22.78		22.62	32.54		7.06							85	83
1	2	Ms	46.72		34.94	0.56		0.35		1.18	11.25				95	81
1	3	Qz	99.80											0.20	100	88
1	4	Chl	23.15		22.55	32.19		7.11							85	74
1	5	Qz	100.00												100	88
1	6	Ms+Ab	46.70		38.33	2.60		0.61	0.46	5.00	6.29				100	82
2	1	TiO_2	0.74	98.75		0.51									100	104
2	2	Chl	23.06		22.42	32.16	0.39	6.97							85	81
2	3	Ms	45.43	0.32	35.57	1.31		0.41		1.28	10.68				95	84
2	4	"Ilm"+	1.06	72.99	2.57	21.08						1.67	0.63		100	95
2	5	"Ilm"+	1.02	76.38	4.35	13.51						3.11	1.63		100	86
2	6	"Ilm"+	1.38	81.29	1.78	13.33						1.18	1.04		100	91
2	7	"Ilm"+	1.72	68.75	4.59	20.35						2.99	1.60		100	84
3	1	Chl	22.15		21.35	34.20	0.34	6.96							85	75
3	2	Lim+Alph	3.71		8.15	82.36						3.65	2.13		100	63
3	3	Lim+Alph	6.75		9.73	77.20				0.82		3.30	2.20		100	66
3	4	Qz+Ms	84.02		11.40	0.36				0.34	3.87				100	91
3	5	Lim+Alph	3.64		9.06	81.64						3.78	1.88		100	62