Appendix I – 2017/2018 Sample list

Sample Number	Wall	Drawpoint	Original rock name	Description
TQPL-2017-001	LW	DP200-100-161	VQzCb	Large Qz-Cb vein with fracture-filling galena, 1000 lode
TQPL-2017-002	LW	DP200-100-161	VQz-Cb-Aspy	Large Qz-Cb shear vein with abundant, coarse arsenopyrite in sericitized slivers
TQPL-2017-003	LW	FW300-CC152	VQz-Cb-Aspy	Large Qz-Cb shear vein with abundant, coarse arsenopyrite
TQPL-2017-004	RW	FW300-CC152	VQz-Cb-Aspy	Example of S0-parallel replacement of BIF layers by coarse Aspy along Qz-Cb vein selvages
TQPL-2017-005	RW	FW300-CC152	VQz-Cb-Aspy	Example of S0-parallel replacement of BIF layers by coarse Aspy along Qz-Cb vein selvages
TQPL-2017-006	LW	FW300-CC152	VQz-Cb-Aspy	Granoblastic arsenopyrite replacement in BIF along the margins of an irregular Qz-Cb vein
TQPL-2017-007	LW	FW300-CC152	VQz-Cb-Aspy	Granoblastic arsenopyrite replacement in BIF along the margins of an irregular Qz-Cb vein
TQPL-2017-008	RW	FW300-CC152	VQz-Cb-Aspy	1150 or 1152 lode, semi-massive, coarse-grained arsenopyrite in Qz-Cb shear veins
TQPL-2017-009	LW	FW300-CC152	Chloritic Siltstone	Oriented sample (284/??). Silty sedimentary rock, strong foliation but no lineation?
TQPL-2017-010	RW	FW300-CC152	Chloritic Siltstone	Oriented sample (271/71). Shear zone with 2 fabrics?
TQPL-2017-011	RW	FW300-CC152	BIF	Early cherty white Qz vein thightly folded. Cut by subhorizontal mineralized Qz-Aspy-Cb vein
TQPL-2017-012	RW	FW300-CC152	Chloritic Siltstone	Oriented sample. Strongly foliated and crenulated sericitic-chloritic mudstone-siltstone
TQPL-2017-013	RW	FW300-CC152	Chloritic Siltstone	Ksc sample lithogeochemistry
TQPL-2017-014	LW	FW300-CC152	Chloritic Siltstone	Oriented sample. Strongly foliated , between Qz-Cb veining and 1151 BIF contact. (within shear zone).
TQPL-2017-015	LW	FW300-CC152	Chloritic Siltstone	Oriented sample. Strongly foliated Ksc unit within shear zone.
TQPL-2017-016	LW	FW300-CC152	Chloritic band/BIF?	Oriented sample within shear zone. Magnetic chloritic band with Qz-Cb veining.
TQPL-2017-017	RW	FW300-CC152	BIF	Lithogeochem sample for representative of BIF.
TQPL-2017-018	RW	FW300-CC152	Chloritic Siltstone	Oriented sample 278/45. Sample within shear zone.
TQPL-2017-019	RW	FW300-CC152	Chloritic Siltstone	Oriented sample 300/65. Within shear zone, Left of the hammer handle 2746-2748.
TQPL-2017-020	RW	FW300-CC152	BIF	Oriented sample, 230/56. Chloritic rich BIF (1100?) before the (1150) shear)
TQPL-2017-021	LW	FW300-CC152	Chloritic Siltstone	Oriented sample, 275/76. Ksc within shear zone. Pictures 2753-57 Hammer head touches sample.
TQPL-2017-022	LW	FW300-CC152	Chloritic Siltstone	Oriented sample, 305/76. Start of shear zone underneath NORMAL cataclasite.
TQPL-2017-023	RW	FW300-CC152	VQz-Cb-Aspy	Qz-Cb +AS+PO+ VG? Very rubbly @ the end of 1150 shear zone for textural observations
TQPL-2017-024	RW	FW300-CC155	Chloritic Siltstone	Oriented sample. 285/65. on contact with BIF. Pictures 9850-51 wrench is in place of sample.
TQPL-2017-025	RW	FW300-CC155	Chloritic Siltstone	Oriented sample, 270/87. within shear zone, with a very steep foliation.
TQPL-2017-026	RW	FW300-CC155	BIF	Mineralized BIFunit. Right before thrust shear zone fault. For lithogeochem/mineralization/ TS?
TQPL-2017-027	RW	FW300-CC155	Chloritic Siltstone	Oriented sample, 270/42. Very chloritic Ksc unit, right before shear plane
TQPL-2017-028	LW	FW300-CC152	Chloritic Siltstone	Oriented sample. 255/55Mineralized unit right on the contact of BIF.
TQPL-2017-029	LW	FW300-CC152	BIF	Chloritic rich band in BIF, sample is to the left of the bolt in pictures 9856-9857
TQPL-2017-030	RW	FW300-CC152	BIF	Oriented sample, 275/78. On contact with Ksc.
TQPL-2017-031	LW	FW300-CC155	Chloritic Siltstone	Oriented sample, 300/55. KMS unit right after "1151" BIF inbetween BIF and shear plane.
TQPL-2017-032	RW	FW300-CC155	BIF	BIF with chlorite band, lithogeochem + TS?
TQPL-2017-033	RW	FW300-CC155	BIF	Lithogeochem sample BIF with bedded PO+PY. Picture 9893 hammer handle is pointing to sample

Sample Number	Wall	Drawpoint	Original rock name	Description
TQPL-2017-034	RW	FW300-CC155	Chloritic Siltstone	Ksc unit. Pic 9894-95 hammer is pointing to sample.
TQPL-2017-035	LW	FW300-CC155	VQz-ak-Po-As-Gl	qz ak +PO+AS+GL+VG? Pictures 9896-98 Shows hammer head pointing to sample
TQPL-2017-036	LW	FW300-CC155	BIF	Lithogeochem. BIF unit within fold hinge. Pictures9899-9900 Hammer is hanging off sample.
TQPL-2017-037	LW	FW300-CC155	Chloritic Siltstone	Oriented sample, 265/69. Ksc within shear zone, hammer is touching sample in pictures .
TQPL-2017-038	RW	FW300-CC155	VQz-Cb-Aspy	Q-Ak veining with disseminated PO + AS right above shear plane.
TQPL-2017-039	RW	FW300-CC155	Chloritic Siltstone	Lithogeochem Ksc sample, 9905/9907 pictures show location of sample with hammer.
TQPL-2017-040	LW	FW300-CC155	Laminated mudstone	Lithogeochem of mineralized KMS unit. Pictures 9911/12 show location of sample
TQPL-2017-041	RW	FW300-CC155	Chloritic Siltstone	Oriented sample, 285/62. Ksc unit under shear, picture 9918 shows hammer in place of the sample.
TQPL-2017-042	RW	FW300-CC155	BIF	BIF unit displaying extreme folding. Lithogeochem?
TQPL-2017-043	LW	FW300-CC155	BIF	Oriented sample, 285/62. BIF sample with chloritic banding on boarder with contact.
TQPL-2017-044	RW	FW300-CC155	BIF	Oriented sample, 285/62. Oriented chloritic rich BIF unit.
TQPL-2017-045	RW	FW300-CC155	VQz-Cb-Aspy	Q ak in BIF AS+PO+GL+VG? Within shear wedge.
TQPL-2017-046	RW	FW300-CC155	BIF	BIF with veining just above shear plane. Picture 0024-25 Show hammer handle in place of sample
TQPL-2017-047	RW	FW300-CC155	BIF	Oriented sample 265/71. BIF unit.
TQPL-2017-048	RW	FW300-CC155	BIF	Oriented sample, 262/65. BIF unit underneath open fault gouge.
TQPL-2017-049	LW	FW300-CC155	BIF	Oriented sample, 285/65. BIF with veining and mineralization, to the right of shear.
TQPL-2017-050	LW	FW300-CC155	Chloritic Siltstone	KMS/Ksc unit within shear zone with disseminated arsenopyrite. Slab/lithogeochem.
TQPL-2017-051	LW	FW300-CC155	Chloritic Siltstone	Oriented sample, 265/63. KMS/Ksc unit right beside TQPL2017-050.
TQPL-2017-052	LW	FW300-CC155	Chloritic Siltstone	Oriented sample, 287/56. KMS/Ksc sample in between BIF contact and shear plane.
TQPL-2017-053	LW	FW300-CC155	Chloritic Siltstone	Oriented sample, 290/42. Ksc next to mineralized BIF contact.
TQPL-2018-004	RW	FW300-CC153	Chloritic Siltstone	Oriented sample, 278/79.10.2 mapping meter marks 0.7m up. Ksc unit right befor BIF contact
TQPL-2018-005	LW	FW300-CC153	Chloritic Siltstone	Chloritic rich sediment within BIF interval. 12.5m on fold hinge of first BIF. Flexural slip analysis.
TQPL-2018-006	RW	FW300-CC153	BIF	Magnetite chlorite BIF 14.5m/1.5m up taken for petrography and fabric analysis/ geochem.
TQPL-2018-007	LW	FW300-CC153	VQz-Cb-Aspy	Shear vein. Petrography/geochemistry.
TQPL-2018-008	LW	DP200-155	Ksc	Asicular ASPY halo from subvertical Qak vein within turbidites
TQPL-2018-009	LW	FW300-CC153	BIF	Oriented BIF sample 265/60
TQPL-2018-010	LW	FW300-CC153	BIF	BIF with sulphide replacement of ASPY+PO foliation sub-parallel vein.
TQPL-2018-012	LW	FW425-CC127	BIF	Oriented sample, 273/69.Magnetite dominated BIF with no sulphides.
TQPL-2018-013	LW	FW300-CC153	BIF	BIF with Porphyroblastic ASPY replacement. Sulphide mineralogy.
TQPL-2018-014	LW	FW300-CC153	Chloritic siltstone	Oriented sample, 275/59. Chloritic siltstone +greywacke Before BIF contact
TQPL-2018-015	LW	FW300-CC153	BIF	Oriented sample, 280/75. Near the end of the drift.
TQPL-2018-016	LW	FW-325-CC153	Chloritic siltstone	Oriented sample, 280/65. Start of drift.
TQPL-2018-017	LW	FW-425-CC127	Chloritic siltstone	Oriented sample, 268/60. Silicified turbidites with well developed shear planes on BIF contact.

Appendix II – Geochemical Data

SAMPLES	Lithology	SiO2	Al2O3	Na2O	CaO	K2O	Fe2O3	Fe2O3(T)	FeO	MgO	MnO
TQPL-2017-011	Oxide-silicate BIF	63.89	0.86	0.03	2.11	0.14	4.78	18.02	11.9	0.51	0.03
TQPL-2017-017	Oxide-silicate BIF	49.54	3.31	0.03	3.77	0.75	22.77	40.11	15.6	1.05	0.051
TQPL-2017-020	Oxide-silicate BIF	51.27	6.54	0.03	6.02	0.59	9.05	28.4	17.4	1.42	0.049
TQPL-2017-036	Oxide-silicate BIF	42.22	3.5	0.01	2.33	0.31	27.17	47.19	18	1.24	0.057
TQPL-2017-042	Oxide-silicate BIF	43.68	1.37	0.01	2.62	0.05	28.39	47.85	17.5	1.02	0.056
TQPL-2017-044	Oxide-silicate BIF	44.62	5.22	0.01	4.26	0.19	19.95	40.08	18.1	1.78	0.043
TQPL-2017-046	Oxide-silicate BIF	53.68	3.83	0.01	2.62	0.28	18.77	36	15.5	1.31	0.039
TQPL-2017-047	Oxide-silicate BIF	49.26	1.73	0.02	2.73	0.09	24.81	42.71	16.1	1.07	0.051
TQPL-2017-048	Oxide-silicate BIF	55.5	8.4	0.04	3.96	0.85	4.98	22.88	16.1	2.17	0.055
TQPL-2017-049	Oxide-silicate BIF	54.65	2.87	0.04	1.21	0.06	17.67	36.46	16.9	1.22	0.05
TQPL2018-006	Oxide-silicate BIF	50.55	1.14	0.03	2.47	0.11	6.81	40.17	30	0.98	0.069
TQPL2018-009	Oxide-silicate BIF	33.39	12.94	0.01	0.31	0.72	17.41	46.1	25.8	2.57	0.051
TQPL2018-012	Oxide-silicate BIF	53.31	0.61	0.07	2.41	0.01	28.42	43.1	13.2	0.13	0.024
TQPL2018-013	Oxide-silicate BIF	55.78	6.93	0.01	2.63	0.3	10.57	28.58	16.2	1.55	0.057
TQPL2018-015	Oxide-silicate BIF	74.45	1.28	0.01	3.28	0.06	8.6	17.39	7.9	0.47	0.062
LVA-13-288	Oxide-silicate BIF-L	42.28	1.56	0.03	1.28	0.03	12.01	39.03	24.3	0.64	0.043
LVA-13-289	Oxide-silicate BIF-L	36.54	2	0.02	1.98	0.05	17.08	36.87	17.8	0.8	0.062
LVA-13-290	Oxide-silicate BIF-L	48.94	2.12	0.02	3.07	0.11	9.72	29.63	17.9	1.04	0.057
LVA-13-291	Oxide-silicate BIF-L	52.62	5.24	0.05	2.89	1.27	7.22	23.24	14.4	1.08	0.074
LVA-13-294	Oxide-silicate BIF-L	50.43	10.26	2.43	3.79	1.88	4.22	15.45	10.1	1.44	0.066
LVA-13-295	Oxide-silicate BIF-L	46.02	5.85	1.2	3.73	0.14	17.81	34.6	15.1	1.42	0.066
LVA-13-296	Oxide-silicate BIF-L	42.53	5.19	0.69	1.2	0.64	10.17	26.74	14.9	1.06	0.034
TQPL-2017-028	Pelitic BIF	51.28	14.41	0.1	2.66	2.67	2.75	18.98	14.6	2.22	0.036
TQPL-2017-031	Pelitic BIF	61.81	15.21	1.56	2.3	3.86	0.79	7.79	6.3	1.97	0.023
TQPL-2017-034	Pelitic BIF	61.38	14.72	0.71	3.31	4.1	1.28	8.17	6.2	1.71	0.032
TQPL-2017-033	Pelitic BIF	46.98	6.27	0.01	3.62	0.34	19.12	37.02	16.1	1.62	0.046
TQPL-2017-016	Pelitic BIF	44.33	11.17	0.01	2.14	0.42	5.27	29.84	22.1	3.05	0.039
TQPL-2017-026	Pelitic BIF	40.69	13.35	0.3	4.45	4.46	9.19	19.2	9	1.59	0.045
TQPL-2017-029	Pelitic BIF	52.74	13.33	0.09	3.8	2.01	1.25	19.27	16.2	2.26	0.034
TQPL-2017-032	Pelitic BIF	35.47	13.31	0.01	0.48	0.03	16.17	43.97	25	2.69	0.052
LVA-13-292	Pelitic BIF-L	52.43	7.66	0.01	3.84	0.01	8.21	26.34	16.3	1.79	0.086
LVA-13-293	Pelitic BIF-L	56.19	10.82	3.04	3.05	1.16	8.01	19.02	9.9	1.33	0.042
LVA-13-297	Pelitic BIF-L	59.01	3.11	0.02	0.68	0.03	7.24	25.58	16.5	1.59	0.367

LVA-13-298	Pelitic BIF-L	58.68	12.98	5.5	3.2	1.14	0.01	6.26	5.8	1.22	0.046
LVA-13-299	Pelitic BIF-L	36.81	16.47	2.58	4.97	3.45	4.82	14.27	8.5	2.24	0.066
LVA-13-300	Pelitic BIF-L	62.81	12.3	5.55	2.92	0.66	3.08	6.97	3.5	1.08	0.039
LVA-13-302	Pelitic BIF-L	53.32	10.08	1.22	3.46	2.23	2.81	11.15	7.5	1.68	0.05
LVA-13-350	Pelitic BIF-L	65.37	15.63	3.31	1.81	2.13	0.67	5.12	4	2.27	0.047
TQPL-2017-009	Chloritic greywacke	61.37	15.88	0.68	3.54	4.86	0.62	6.29	5.1	1.45	0.034
TQPL-2017-010	Chloritic greywacke	68.71	13.8	4.21	1.79	1.98	0.14	3.81	3.3	1.31	0.022
TQPL-2017-012	Chloritic greywacke	55.76	10.51	0.62	5.86	1.49	0.8	15.48	13.2	1.61	0.077
TQPL-2017-013	Chloritic greywacke	57.97	17.64	0.37	3.29	5.15	0.99	6.88	5.3	1.31	0.033
TQPL-2017-018	Chloritic greywacke	57.51	15.99	1.73	3.66	4.37	0.12	7.13	6.3	1.79	0.033
TQPL-2017-022	Chloritic greywacke	78.79	3.51	0.05	3.11	0.64	0.69	7.92	6.5	0.86	0.028
TQPL-2017-024	Chloritic greywacke	51.3	8.16	0.01	8.94	0.24	3.24	19.58	14.7	1.52	0.073
TQPL-2017-025	Chloritic greywacke	61.25	15.02	0.34	2.39	4.16	1.75	9.65	7.1	1.66	0.026
TQPL-2017-027	Chloritic greywacke	58.46	16.22	2.32	0.45	2.13	2.95	14.62	10.5	1.73	0.023
TQPL-2017-037	Chloritic greywacke	60.22	12.11	0.58	4.96	3.53	0.93	7.93	6.3	2.05	0.057
TQPL-2017-039	Chloritic greywacke	62.47	13.64	4.98	4.3	1.14	0.32	5.99	5.1	0.79	0.039
TQPL-2017-050	Chloritic greywacke	60.74	14.29	1.87	3.07	3.34	1.24	6.91	5.1	1.33	0.03
TQPL-2017-051	Chloritic greywacke	57.1	14.1	3.25	3.05	2.73	2.22	8.89	6	1.39	0.033
TQPL-2017-052	Chloritic greywacke	66.25	10.03	0.09	3.94	2.21	2.38	10.49	7.3	1.47	0.054
TQPL-2017-053	Chloritic greywacke	57.4	12.33	2.38	5.25	2.58	1.06	9.06	7.2	1.86	0.052
TQPL2018-004	Chloritic greywacke	60.81	12.28	0.09	3.74	2.57	1.04	12.05	9.9	1.69	0.038
TQPL2018-005	Chloritic greywacke	65.64	16.18	0.21	1.35	4.89	0.77	6.77	5.4	1.14	0.02
TQPL2018-008	Chloritic greywacke	58.11	13.29	3.65	2.82	1.96	4.8	10.14	4.8	1.3	0.049
TQPL2018-014	Chloritic greywacke	74.09	11.16	4.03	1.48	1.01	0.72	4.72	3.6	0.79	0.028
TQPL2018-016	Chloritic greywacke	65.52	12.34	2.25	2.29	1.77	1.85	9.08	6.5	1.63	0.037
TQPL2018-019	Chloritic greywacke	56.75	5.34	0.03	8.82	0.38	1.89	16.13	12.8	1.18	0.123
TQPL2018-020	Greywacke	63.25	15.85	4.44	3	2.25	0.82	5.15	3.9	1.22	0.042
TQPL2018-021	Greywacke	61.12	13.54	3.72	4.7	1.63	1.06	7.29	5.6	1.15	0.061
LVA-13-278	Greywacke-L	51.92	12.99	1.65	8.6	2.9	0.01	4.33	4	4.14	0.102
LVA-13-280	Greywacke-L	67.75	15.28	3.84	0.74	2.2	1.13	4.8	3.3	2.15	0.035
LVA-13-281	Greywacke-L	65.26	15.55	3.44	1.52	1.97	1.12	5.12	3.6	2.28	0.044
LVA-13-282	Greywacke-L	66.58	14.69	2.62	1.88	2.28	0.75	4.76	3.6	1.94	0.036
LVA-13-283	Greywacke-L	67.17	14.67	3.82	1.58	1.79	1	4.33	3	1.79	0.043
LVA-13-284	Greywacke-L	58.38	18.1	1.5	1.2	3.46	1.65	6.98	4.8	3.11	0.044

LVA-13-285	Greywacke-L	63.5	14.92	2.95	2.06	2.54	0.99	4.99	3.6	1.97	0.042
LVA-13-286	Greywacke-L	65.26	15.56	3.15	1.46	2.56	0.83	4.95	3.7	2.16	0.046
LVA-13-287	Greywacke-L	65.92	14.77	0.75	1.6	4.68	1.08	5.64	4.1	1.96	0.037
LVA-13-335	Greywacke-L	68.02	14.3	3.63	2.1	1.82	1.32	4.21	2.6	1.67	0.045
LVA-13-336	Greywacke-L	67.66	14.59	3.98	1.78	1.84	0.6	4.38	3.4	1.8	0.044
LVA-13-337	Greywacke-L	45.75	12.13	2.69	7.1	3.92	1.7	6.81	4.6	9.08	0.094
LVA-13-338	Greywacke-L	45.95	11.97	3.36	7.51	4.45	1.21	7.33	5.5	8.28	0.096
LVA-13-341	Greywacke-L	59.55	11.55	2.58	3.06	0.17	3.19	16.76	12.2	1.49	0.048
LVA-13-342	Greywacke-L	64.35	13.8	4	5.31	2.09	0.7	3.48	2.5	0.61	0.054
LVA-13-343	Greywacke-L	61.38	13.69	2.5	2.83	2.36	2.64	10.2	6.8	1.59	0.046
LVA-13-344	Greywacke-L	59.08	17.69	2.12	1.16	3.73	0.68	8.02	6.6	2.61	0.041
LVA-13-345	Greywacke-L	47.06	16.63	2.34	6	3.5	2.56	8.23	5.1	2.34	0.087
LVA-13-346	Greywacke-L	90.92	2.42	0.11	0.3	0.63	1.55	3.11	1.4	0.22	0.013
TQPL-2017-015	Laminated mudstone	60.88	17.49	0.55	1.14	4.18	1.07	8.52	6.7	1.71	0.02
TQPL-2017-040	Laminated mudstone	62.06	16.79	2.08	1.85	4.12	0.78	6.68	5.3	1.68	0.022
LVA-13-301	Laminated Mudstone-L	57.54	15.95	0.38	4.27	4.58	0.15	5.16	4.5	1.27	0.061
LVA-13-303	Laminated Mudstone-L	58.99	11.76	0.42	5.65	2.83	2.4	6.62	3.8	1.64	0.111
TQPL-2017-038	Quartz veins	30.62	1.94	0.03	14.83	0.4	7.23	23.91	15	3.51	0.177
TQPL-2017-045	Quartz veins	35.08	7.47	0.56	5.14	1.95	11.89	28.9	15.3	1.43	0.06
TQPL2018-007	Quartz veins	45.2	1.33	0.02	2.1	0.01	5.73	41.32	32	0.84	0.053

SAMPLES	P2O5	TiO2	LOI	LOI2	Total	Total 2	Total S	Ag	As	Au	B	Ba
TQPL-2017-011	0.06	0.039	11.92	10.59	97.61	96.28	6.71	0.5	120000	13.3	9	127
TQPL-2017-017	0.25	0.12	1.77	0.02	100.8	99.01	0.71	0.5	719	0.462	3	6684
TQPL-2017-020	0.25	0.058	5.65	3.7	100.3	98.33	0.28	0.5	176	0.079	1	160
TQPL-2017-036	0.21	0.098	3.01	1	100.2	98.16	0.88	0.5	75.2	0.082	3	322
TQPL-2017-042	0.26	0.04	2.73	0.77	99.68	97.72	2.47	0.5	2700	0.04	2	33
TQPL-2017-044	0.19	0.103	3.44	1.41	99.93	97.9	0.43	0.5	27.9	0.007	7	277
TQPL-2017-046	0.22	0.091	1.83	0.1	99.9	98.16	0.86	0.5	68.3	0.028	1	195
TQPL-2017-047	0.2	0.048	2.83	1.03	100.8	98.95	0.17	0.5	38.9	0.008	1	95
TQPL-2017-048	0.4	0.252	5.6	3.8	100.1	98.3	1.77	0.5	1520	0.016	4	736
TQPL-2017-049	0.23	0.06	3.76	1.87	100.6	98.71	1.47	0.5	310	0.362	6	14
TQPL2018-006	0.33	0.011	3.28	6.63	99.13	99.13	6.07	0.5	1670	11.6	15	44
TQPL2018-009	0.11	0.319	3.91	6.8	100.4	100.4	0.04	0.5	81.1	0.016	9	1564
TQPL2018-012	0.36	0.033	0.36	1.84	100.4	100.4	0.02	0.5	35.6	0.009	4	13
TQPL2018-013	0.27	0.178	3.82	5.64	100.1	100.1	0.47	0.5	1360	0.179	1	248
TQPL2018-015	0.21	0.036	2.97	3.86	100.2	100.2	0.58	0.5	119	0.023	4	104
LVA-13-288	0.27	0.025	9.87	7.15	95.05	92.32	15.8	7.2	44000	113	1	11
LVA-13-289	0.19	0.029	12.85	10.86	91.4	89.4	12.2	14	97700	189	2	35
LVA-13-290	0.24	0.048	8.42	6.41	93.68	91.68	7.38	2	61200	73.4	5	31
LVA-13-291	0.17	0.121	7.74	6.13	94.5	92.89	5.12	0.5	48900	11	3	346
LVA-13-294	0.13	0.272	7.8	6.67	93.97	92.83	3.48	0.5	58900	9.11	20	451
LVA-13-295	0.21	0.181	5.16	3.47	98.58	96.89	0.58	0.9	134	0.918	5	57
LVA-13-296	0.13	0.15	14.14	12.47	92.5	90.83	9.05	1	112000	49.4	15	288
TQPL-2017-028	0.06	0.254	5.35	3.72	98.04	96.4	0.81	0.7	16100	0.031	12	1210
TQPL-2017-031	0.13	0.282	4.75	4.04	99.69	98.98	0.08	0.6	1710	0.013	57	1989
TQPL-2017-034	0.1	0.428	4.61	3.91	99.28	98.58	0.13	0.5	2020	0.017	69	1732
TQPL-2017-033	0.14	0.136	3.6	1.8	99.78	97.98	4.44	0.5	328	0.009	4	415
TQPL-2017-016	0.12	0.238	5.66	3.19	97.03	94.55	1.43	0.6	21100	2.28	3	327
TQPL-2017-026	0.05	0.249	10.36	9.35	94.74	93.73	5.2	0.5	54600	16.5	43	2594
TQPL-2017-029	0.11	0.446	5.18	3.37	99.26	97.45	0.28	0.8	1630	0.097	48	938
TQPL-2017-032	0.1	0.302	4.19	1.39	100.6	97.8	0.03	0.5	30.2	0.005	1	27
LVA-13-292	0.07	0.167	8.26	6.43	100.7	98.83	0.67	1.7	281	0.151	1	5
LVA-13-293	0.15	0.304	4.61	3.5	99.71	98.61	0.56	1.6	1040	0.184	17	285
LVA-13-297	0.02	0.098	3.86	2.01	94.37	92.53	5.67	0.5	42500	13.3	33	6

LVA-13-298	0.03	0.341	6.12	5.47	95.53	94.88	1.91	1.3	30500	3.07	21	242
LVA-13-299	0.11	0.677	10.41	9.46	92.05	91.1	4.41	1.7	73600	4.54	301	667
LVA-13-300	0.06	0.217	4.98	4.59	97.57	97.18	2.04	1.3	25100	3.04	30	146
LVA-13-302	0.08	0.75	8.6	7.76	92.63	91.79	3.85	0.5	76300	42.7	391	387
LVA-13-350	0.11	0.559	4.06	3.61	100.4	99.96	0.18	0.5	32.7	0.005	50	868
TQPL-2017-009	0.09	0.336	5.77	5.2	100.3	99.74	0.03	0.5	41.3	0.005	47	1455
TQPL-2017-010	0.09	0.338	3.55	3.18	99.61	99.24	0.07	0.6	465	0.005	35	920
TQPL-2017-012	0.12	0.292	7.11	5.63	98.92	97.44	0.54	0.5	68.4	0.015	30	600
TQPL-2017-013	0.11	0.465	5.84	5.25	99.06	98.46	0.1	0.5	465	0.005	43	2022
TQPL-2017-018	0.22	0.257	6.37	5.67	99.05	98.35	0.26	3.8	291	0.029	28	3076
TQPL-2017-022	0.13	0.106	3.49	2.76	98.63	97.9	1.19	0.5	5550	1.06	9	203
TQPL-2017-024	0.1	0.183	8.48	6.84	98.6	96.96	0.32	0.5	49.8	0.005	3	177
TQPL-2017-025	0.09	0.389	4.38	3.59	99.36	98.57	0.76	0.6	1890	0.022	54	1684
TQPL-2017-027	0.11	0.502	2.97	1.79	99.53	98.35	0.12	0.5	16.5	0.005	46	1909
TQPL-2017-037	0.71	0.346	6.98	6.27	99.46	98.76	0.04	0.7	430	0.944	25	5948
TQPL-2017-039	0.09	0.354	5	4.43	98.8	98.22	0.11	0.5	21.7	0.005	6	1049
TQPL-2017-050	0.02	0.406	6.84	6.27	98.85	98.27	1.55	0.6	29800	5.41	126	1520
TQPL-2017-051	0.05	0.328	7.68	7.01	98.6	97.93	2.31	0.8	42000	5.27	64	1263
TQPL-2017-052	0.2	0.276	4.03	3.22	99.05	98.24	0.98	0.5	339	0.021	45	1036
TQPL-2017-053	0.1	0.309	7.74	6.93	99.06	98.26	0.04	0.5	563	0.006	26	6473
TQPL2018-004	0.07	0.23	5.97	7.07	99.54	99.54	0.05	0.5	20.5	0.005	33	1167
TQPL2018-005	0.08	0.299	3.04	3.65	99.62	99.62	0.01	0.5	24.7	0.022	58	1991
TQPL2018-008	0.14	0.373	6.69	7.23	98.53	98.5	2.59	0.5	34100	4.33	32	512
TQPL2018-014	0.11	0.206	2.84	3.25	100.5	100.5	0.03	0.5	31.7	0.014	15	371
TQPL2018-016	0.08	0.309	4.45	5.17	99.75	99.75	0.18	0.5	8.7	0.005	59	484
TQPL2018-019	0.37	0.179	9.46	10.9	98.75	98.75	0.47	0.5	5.2	2.64	4	223
TQPL2018-020	0.1	0.418	4.96	5.39	100.7	100.7	0.06	0.5	26	0.007	30	746
TQPL2018-021	0.12	0.412	5.78	6.41	99.52	99.52	0.18	0.5	31.6	0.008	27	592
LVA-13-278	0.42	0.721	11.74	11.3	99.51	99.06	0.44	2	199	0.013	14	989
LVA-13-280	0.1	0.537	2.28	1.91	99.72	99.35	0.12	2.9	21	0.005	41	1225
LVA-13-281	0.12	0.571	3.86	3.46	99.74	99.34	0.16	2.9	29	0.005	48	661
LVA-13-282	0.11	0.523	4.04	3.64	99.46	99.06	0.17	2.4	19	0.005	54	530
LVA-13-283	0.1	0.524	3.16	2.83	98.98	98.65	0.23	2.2	39	0.013	36	561
LVA-13-284	0.11	0.693	4.24	3.71	97.85	97.31	0.04	2.3	164	0.005	106	807

LVA-13-285	0.13	0.556	4.37	3.96	98.02	97.61	0.23	2.4	83	0.005	47	566
LVA-13-286	0.12	0.542	3.78	3.36	99.57	99.15	0.16	2.7	199	0.005	50	646
LVA-13-287	0.1	0.525	3.99	3.53	99.99	99.53	0.01	2.5	44	0.005	60	1143
LVA-13-335	0.09	0.478	3.99	3.7	100.4	100.1	0.27	0.5	8	0.007	44	567
LVA-13-336	0.11	0.492	3.64	3.26	100.3	99.93	0.17	0.5	9.5	0.005	44	409
LVA-13-337	1.64	1.546	8.84	8.32	99.6	99.08	0.44	2.9	8.7	0.005	3	5698
LVA-13-338	1.77	1.452	6.8	6.18	98.97	98.36	0.54	4.2	8.1	0.022	9	7255
LVA-13-341	0.13	0.336	5.27	3.9	100.9	99.56	0.09	0.5	9.8	0.005	14	35
LVA-13-342	0.07	0.361	6.21	5.93	100.3	100	0.01	0.5	35	0.005	35	430
LVA-13-343	0.1	0.407	5.17	4.4	100.3	99.51	0.32	0.5	60.5	0.118	63	660
LVA-13-344	0.11	0.709	3.93	3.19	99.2	98.46	0.09	0.5	1450	0.01	169	698
LVA-13-345	0.15	0.636	9.79	9.22	96.75	96.18	1.57	0.7	29900	2.26	896	623
LVA-13-346	0.01	0.104	1.78	1.63	99.63	99.47	0.85	0.5	15400	4.16	47	125
TQPL-2017-015	0.09	0.397	3.62	2.87	98.59	97.84	0.02	0.6	47.6	0.005	80	1320
TQPL-2017-040	0.11	0.458	4.09	3.49	99.94	99.34	0.4	0.5	5380	0.107	278	2121
LVA-13-301	0.13	0.591	7.53	7.03	97.47	96.96	1.6	0.5	16600	0.627	107	709
LVA-13-303	0.14	0.469	8.88	8.45	97.5	97.08	2.17	1	3500	1.31	192	460
TQPL-2017-038	0.32	0.211	13.58	11.9	89.54	87.86	5.76	0.9	2090	9.48	4	402
TQPL-2017-045	0.19	0.353	14.98	13.27	96.1	94.39	8.38	1	105000	154	5	903
TQPL2018-007	0.34	0.045	8.06	11.65	99.32	99.32	13.4	1.9	7290	66.4	5	12

SAMPLES	Be	Bi	Cd	Ce	Co	CO2	Cr	Cs	Cu	Dy	Er	Eu
TQPL-2017-011	1	0.1	0.2	5.97	2	2.78	140	0.2	11.6	0.47	0.28	0.209
TQPL-2017-017	2	0.1	0.2	14.9	2	3.05	20	0.9	18.6	1.69	0.9	0.742
TQPL-2017-020	1	0.1	0.2	9.97	2	4.6	110	1.7	12.8	0.82	0.4	0.446
TQPL-2017-036	1	0.1	0.2	11.6	2	2.71	20	0.4	22.7	0.79	0.51	0.354
TQPL-2017-042	1	0.1	0.2	7.36	1	3.27	100	0.1	80.9	0.81	0.5	0.54
TQPL-2017-044	1	0.1	0.2	14	3	3.47	80	0.4	19	0.94	0.63	0.507
TQPL-2017-046	1	0.1	0.2	12.4	2	2.66	20	0.5	27.9	0.79	0.41	0.434
TQPL-2017-047	1	0.1	0.2	9.4	2	3.11	110	0.2	13.6	0.74	0.47	0.422
TQPL-2017-048	1	0.1	0.2	51.3	11	3.79	140	1.5	83	1.71	0.84	1.07
TQPL-2017-049	1	0.4	0.2	9.24	1	2.8	20	0.3	51.8	0.76	0.48	0.368
TQPL2018-006	1	0.1	0.2	8.67	2	2.39	30	0.1	159	0.98	0.48	0.519
TQPL2018-009	1	0.1	0.2	16.9	7	0.23	20	1.1	1.3	0.82	0.44	0.346
TQPL2018-012	1	0.1	0.2	7.55	1	1.5	40	0.1	3.7	0.71	0.48	0.393
TQPL2018-013	1	0.1	0.2	34.2	3	2.16	20	0.4	14.8	1.43	0.78	0.782
TQPL2018-015	1	0.1	0.2	9.53	2	2.86	20	0.1	25	0.66	0.37	0.291
LVA-13-288	1	1.03	0.2	6.26	6.9	2.39	30	0.3	584	0.94	0.48	0.431
LVA-13-289	1	1.62	0.2	5.82	6.5	2.69	29	0.6	376	0.54	0.29	0.253
LVA-13-290	1	0.82	0.2	9.71	7	3.55	47	0.3	187	0.85	0.48	0.484
LVA-13-291	1	1.28	0.2	16.2	12.6	4.36	53	1.9	118	0.89	0.53	0.444
LVA-13-294	1	1.07	0.2	24.8	9.1	4.79	41	4.3	70.2	1.38	0.77	0.625
LVA-13-295	1	0.19	0.2	23	4.7	4.82	36	0.7	22.3	1.22	0.73	0.673
LVA-13-296	1	4.61	0.2	15.9	38.6	2.46	50	2.1	155	0.9	0.5	0.443
TQPL-2017-028	3	0.1	0.2	24.8	6	2.49	20	2.5	4.2	0.88	0.45	0.547
TQPL-2017-031	3	0.1	0.2	38.5	6	2.71	50	3.2	4.4	1.24	0.7	0.585
TQPL-2017-034	3	0.1	0.2	48.7	8	3.34	70	3.4	5.2	1.99	1.1	0.917
TQPL-2017-033	1	0.1	0.2	11.4	1	3.4	30	0.6	98.2	0.84	0.53	0.416
TQPL-2017-016	1	0.1	0.2	23.3	5	2.2	60	0.6	13.1	1.06	0.66	0.508
TQPL-2017-026	4	0.1	0.2	32.1	5	5.1	50	3.6	41.1	1.21	0.72	0.696
TQPL-2017-029	2	0.1	0.2	43	5	2.82	40	1.7	15.4	1.68	1.04	0.939
TQPL-2017-032	1	0.1	0.2	16.3	7	0.38	40	0.3	2.5	0.72	0.41	0.303
LVA-13-292	1	0.12	0.2	17.6	3.6	6.04	38	0.2	27.8	0.92	0.57	0.446
LVA-13-293	1	0.19	0.2	26.7	7.8	3.31	47	3.8	22.8	1.09	0.66	0.626
LVA-13-297	1	1.55	0.2	4.75	128	0.72	76	0.1	349	0.91	0.51	0.271

LVA-13-298	1	1.76	0.2	36.9	10.9	4.43	38	0.8	147	1.45	0.77	0.828
LVA-13-299	3	1.9	0.5	56.1	23.6	5.6	76	2.6	40.6	2.53	1.33	1.31
LVA-13-300	1	2.79	0.2	20.1	10.7	3.7	37	0.5	61.7	1.02	0.58	0.525
LVA-13-302	2	2.6	1.3	48.2	52.3	4.49	71	1.3	88	2.81	1.64	1.26
LVA-13-350	2	0.14	0.2	55.2	18.6	1.91	105	1.7	48.7	2.09	1.13	1.03
TQPL-2017-009	2	0.1	0.2	28.6	8	4.29	20	4.9	11.6	0.99	0.5	0.599
TQPL-2017-010	1	0.1	0.2	24.8	5	2.18	50	1.7	7.7	1.01	0.57	0.445
TQPL-2017-012	1	0.1	0.2	26.9	8	5.96	30	1.6	36	1.31	0.8	0.713
TQPL-2017-013	4	0.1	0.3	50.6	6	4.06	70	3.8	11.9	2.13	1.14	0.976
TQPL-2017-018	5	1	0.5	116	6	4.14	90	3.6	8.9	8.86	2.79	5.54
TQPL-2017-022	1	0.1	0.2	32.2	4	2.85	70	1.2	19.6	2.96	2.35	0.938
TQPL-2017-024	1	0.1	0.2	19.3	4	7	20	0.4	26.9	1.44	0.81	0.574
TQPL-2017-025	2	0.1	0.2	58.7	16	2.45	100	3.5	82.6	2.29	1.2	1.08
TQPL-2017-027	2	0.1	0.2	41.7	14	0.29	60	2.8	17.1	1.6	1.04	0.692
TQPL-2017-037	7	0.2	0.2	203	15	5.09	40	2.7	6.2	5.39	2.05	4.11
TQPL-2017-039	2	0.1	0.2	29.1	6	3.93	70	1.4	10.8	1.23	0.62	0.688
TQPL-2017-050	3	0.1	0.2	41.7	8	4.18	80	1.7	3	1.17	0.77	0.595
TQPL-2017-051	2	0.1	0.2	26.8	13	4.06	20	1.8	18.6	1.07	0.67	0.72
TQPL-2017-052	2	0.1	0.2	32.6	9	3.63	70	1.7	74.7	1.52	0.95	0.648
TQPL-2017-053	9	0.1	0.2	45.6	5	6.17	20	2.1	2.1	1.86	1	1.05
TQPL2018-004	3	0.1	0.2	28.3	6	3.43	40	2.7	3.7	1.07	0.54	0.685
TQPL2018-005	4	0.1	0.2	20.9	6	1.07	20	4.7	1.4	0.74	0.35	0.369
TQPL2018-008	2	0.1	0.2	32.5	8	3.61	50	1.4	47.5	1.23	0.67	0.795
TQPL2018-014	1	0.1	0.2	24.5	5	1.73	40	1	32.6	0.95	0.47	0.534
TQPL2018-016	1	0.1	0.2	37.3	9	2.69	70	1.9	38.9	1.2	0.66	0.752
TQPL2018-019	1	0.3	0.2	119	6	8.1	50	0.9	46	5.1	1.67	3.62
TQPL2018-020	1	0.1	0.2	35.2	10	3.44	30	2	20.8	1.38	0.7	0.81
TQPL2018-021	1	0.1	0.2	33.7	8	4.27	50	1.4	22.1	1.4	0.73	0.852
LVA-13-278	2	0.13	0.3	112	20.2	11.8	74	2.9	86.3	2.42	1.06	2.02
LVA-13-280	1	0.09	0.2	51.5	20.9	0.3	72	2.3	28.8	2.3	1.21	1.01
LVA-13-281	1	0.14	0.2	53	22.4	1.77	88	2.1	38.3	2.25	1.22	1.09
LVA-13-282	1	0.14	0.2	43.9	19.1	2.14	80	2.4	39	2	1.08	0.934
LVA-13-283	1	0.11	0.2	49.7	20	1.84	81	1.9	56.3	1.95	1.05	1.02
LVA-13-284	2	0.14	0.2	56.8	25.2	1.51	95	3.6	32.7	2.76	1.58	1.28

LVA-13-285	1	0.11	0.2	46.6	21	2.68	94	2.5	59.8	2.05	1.12	1.02
LVA-13-286	1	0.15	0.2	49.5	21.1	1.84	82	2.7	47.2	2.13	1.21	1.02
LVA-13-287	2	0.06	0.2	50.5	19.4	2.05	100	14.2	29.3	2.16	1.19	1.01
LVA-13-335	1	0.13	0.2	49.7	17.4	2.25	97	2.4	41.8	1.87	1	1.03
LVA-13-336	1	0.14	0.2	52.4	18.2	2.03	87	2.1	63	1.89	1.02	0.982
LVA-13-337	7	0.18	0.2	492	36.5	6.81	198	30.6	66.7	5.79	1.95	6.99
LVA-13-338	7	9.84	0.3	509	34.7	4.61	126	18.2	56.7	6.22	2.01	7.27
LVA-13-341	1	0.03	0.2	24.8	8.4	2.83	45	0.2	6.9	1.02	0.56	0.6
LVA-13-342	1	0.03	0.2	29.2	6	4.93	29	2.1	2.1	1.11	0.61	0.571
LVA-13-343	1	0.07	0.2	38.2	13.7	3.02	53	3.2	37.8	1.42	0.78	0.852
LVA-13-344	2	0.06	0.2	56	25.8	1.32	118	4.1	59.4	2.5	1.38	1.09
LVA-13-345	3	0.42	0.4	51.1	28.5	6.86	97	2.5	12.2	2.55	1.48	1.25
LVA-13-346	1	0.93	0.5	10.1	11.2	0.3	70	0.4	57.8	0.31	0.19	0.228
TQPL-2017-015	3	0.1	0.2	50.6	7	1.1	30	3	2.4	1.65	0.93	0.83
TQPL-2017-040	3	0.1	0.2	39.9	21	2.19	70	3.3	25.9	1.72	1.12	0.662
LVA-13-301	2	0.59	0.9	57.2	27.8	4.59	80	2.9	98.9	2.3	1.15	1.23
LVA-13-303	1	0.47	3.9	45.7	41.9	5.95	76	2.6	257	2.2	1.09	1.28
TQPL-2017-038	1	0.8	0.6	95.6	1	19.9	90	1	102	4.91	2.37	2.89
TQPL-2017-045	2	0.1	0.3	32	6	5.86	120	2.7	70	1.63	0.89	0.878
TQPL2018-007	1	0.3	0.2	8.6	1	2.89	20	0.1	351	1.01	0.62	0.601

SAMPLES	Ga	Gd	Ge	Hf	Ho	La	Li	Lu	Mo	Nb	Nd	Ni
TQPL-2017-011	2	0.53	0.9	0.3	0.1	2.99	2	0.045	3	0.6	2.7	7
TQPL-2017-017	5	1.73	2.7	0.8	0.34	7.21	8	0.455	2	2.7	7.32	6
TQPL-2017-020	9	0.98	2.2	0.4	0.16	5.1	17	0.094	8	0.6	4.46	10
TQPL-2017-036	5	0.88	2.6	0.8	0.16	5.89	5	0.087	1	0.8	5.18	8
TQPL-2017-042	4	0.84	3.8	0.3	0.18	3.68	1	0.088	7	0.4	3.42	8
TQPL-2017-044	6	1.11	3.6	1	0.21	7.2	7	0.096	1	0.9	5.71	9
TQPL-2017-046	5	0.86	2.6	0.8	0.15	6.76	9	0.073	1	0.8	5.07	4
TQPL-2017-047	3	0.82	4.7	0.5	0.16	4.85	2	0.075	8	0.5	4.22	9
TQPL-2017-048	10	2.68	2.1	2.5	0.29	26.8	28	0.126	1	2.3	21.6	16
TQPL-2017-049	6	0.76	2.5	0.7	0.17	4.65	3	0.079	2	0.6	4.24	5
TQPL2018-006	3	1.06	1.7	0.1	0.17	4.12	2	0.071	1	0.2	4.33	9
TQPL2018-009	17	0.94	4.9	2.2	0.17	8.14	23	0.079	1	1.8	6.9	12
TQPL2018-012	2	0.76	3.5	0.2	0.15	4.22	2	0.063	3	0.2	3.68	4
TQPL2018-013	10	2.01	3.2	1.7	0.26	18.2	13	0.132	1	1.7	14.1	9
TQPL2018-015	3	0.9	1.9	0.3	0.13	5.11	2	0.055	1	0.2	4.12	5
LVA-13-288	5	1.02	2.3	0.1	0.18	3.02	2	0.051	2	0.4	3.67	42
LVA-13-289	7	0.49	2.9	0.2	0.11	3.03	2	0.049	2	0.9	2.66	23
LVA-13-290	4	0.91	2.2	0.3	0.16	5.16	2	0.072	3	0.2	4.27	10
LVA-13-291	10	1.15	1.7	1	0.18	8.5	17	0.08	6	0.2	6.81	21
LVA-13-294	16	1.68	1.8	1.6	0.26	13.1	23	0.119	3	0.2	10.5	21
LVA-13-295	9	1.47	3.3	1.2	0.24	12	17	0.104	2	0.2	10	15
LVA-13-296	9	1.05	1	1	0.17	8.35	15	0.075	3	0.2	7.05	15
TQPL-2017-028	21	1.21	2.4	2.4	0.15	12.7	42	0.083	1	2.9	9.85	11
TQPL-2017-031	18	1.69	1.3	2.5	0.25	19.4	35	0.124	1	3.7	14.5	17
TQPL-2017-034	18	2.6	1.7	2.7	0.38	24.7	30	0.155	2	3.8	19	31
TQPL-2017-033	7	0.85	3.7	1.2	0.17	5.7	9	0.076	1	1.1	4.99	9
TQPL-2017-016	17	1.29	2.8	3	0.22	11.6	34	0.111	1	2.5	9.75	10
TQPL-2017-026	26	1.52	1.1	2.3	0.24	17	31	0.133	1	2.5	12.5	13
TQPL-2017-029	17	2.21	2.7	3.9	0.35	21.6	40	0.167	3	4.6	17.7	23
TQPL-2017-032	14	0.89	5.3	1.9	0.13	8.07	18	0.058	2	2	7.05	11
LVA-13-292	12	1.19	2.9	2.1	0.19	8.47	25	0.091	1	0.7	7.93	7
LVA-13-293	15	1.51	2.6	1.9	0.22	13.9	28	0.09	2	0.9	11.3	21
LVA-13-297	5	0.77	2.3	0.1	0.18	2.08	4	0.076	3	0.2	2.53	51

LVA-13-298	16	2.01	1	2.3	0.27	18.6	7	0.117	7	2.1	15.8	29
LVA-13-299	28	3.2	0.8	4	0.47	29.3	29	0.193	2	4.4	24.2	70
LVA-13-300	11	1.21	1.1	1.3	0.2	10.2	8	0.071	12	0.2	8.66	29
LVA-13-302	19	3.11	1.3	2.1	0.54	24.3	14	0.238	7	0.2	21.3	56
LVA-13-350	18	2.98	1.4	3.1	0.39	28	35	0.169	1	3.4	24.3	69
TQPL-2017-009	19	1.44	1.7	2.7	0.18	14.3	20	0.079	1	2.3	11.6	11
TQPL-2017-010	16	1.37	0.9	3	0.2	12.6	15	0.086	1	1.9	10.5	11
TQPL-2017-012	13	1.56	1.9	1.6	0.25	14.1	29	0.122	2	1.9	11	21
TQPL-2017-013	21	2.74	1.6	3.1	0.42	25.4	23	0.172	2	4.5	20.7	18
TQPL-2017-018	23	14.9	1.7	3.4	1.23	43	33	0.203	47	5.4	71.9	14
TQPL-2017-022	6	2.75	1.5	1.4	0.66	14.1	11	0.331	1	1.9	14.7	12
TQPL-2017-024	9	1.38	2.3	1.4	0.27	9.85	22	0.107	1	1	8.06	9
TQPL-2017-025	18	2.9	1.7	3	0.42	29.3	32	0.193	8	3.4	23.7	44
TQPL-2017-027	19	1.81	2.4	2.8	0.35	21.3	44	0.17	1	4.1	16.1	44
TQPL-2017-037	17	9.52	1.8	3.5	0.82	112	31	0.205	4	5.9	80.1	37
TQPL-2017-039	15	1.53	1.7	1.9	0.23	15	14	0.082	1	1.9	11.9	14
TQPL-2017-050	19	1.31	1	2.5	0.25	21.5	13	0.15	2	3.2	14.6	32
TQPL-2017-051	19	1.59	1.1	4.1	0.22	12	14	0.146	2	3.6	14.9	21
TQPL-2017-052	13	1.79	1.3	2.1	0.3	16.8	17	0.153	1	2.3	13.1	33
TQPL-2017-053	17	2.38	1.8	2.4	0.34	24.5	27	0.154	2	2.8	18.1	11
TQPL2018-004	17	1.35	2.9	1.8	0.2	14.9	22	0.088	2	2.2	11.6	11
TQPL2018-005	22	1.06	2.2	2.2	0.14	10.6	31	0.068	1	2.3	8.23	11
TQPL2018-008	19	1.95	1.2	2.5	0.23	16.6	14	0.105	1	2.8	13	21
TQPL2018-014	14	1.3	1.5	1.8	0.18	12.3	11	0.071	3	1.3	9.78	10
TQPL2018-016	16	1.76	1.7	2.5	0.22	18.4	29	0.082	2	2.6	14.7	30
TQPL2018-019	8	9.17	2.3	1.2	0.73	48.9	16	0.173	2	2.5	56.7	17
TQPL2018-020	19	1.8	1.2	2.6	0.24	18.6	19	0.094	1	3.3	13.9	21
TQPL2018-021	16	1.82	1.6	2.6	0.24	17.8	19	0.097	1	3	13.5	20
LVA-13-278	19	4.36	1.1	4.3	0.4	54	12	0.127	1	9.3	53.8	125
LVA-13-280	19	2.82	1.2	3.2	0.43	26	53	0.187	1	3.7	23.2	61
LVA-13-281	20	2.98	1.3	3.2	0.43	26.6	46	0.189	2	4	23.2	67
LVA-13-282	18	2.55	1.3	2.7	0.39	21.8	36	0.165	1	3.4	19.7	59
LVA-13-283	18	2.63	1.3	3.1	0.37	25.3	34	0.149	1	2.9	20.8	57
LVA-13-284	26	3.75	1.7	3	0.52	27.3	64	0.222	1	4.7	26.8	86

LVA-13-285	18	2.72	1.2	2.8	0.4	23.9	31	0.18	1	3.1	20.9	66
LVA-13-286	20	2.83	1.2	3.2	0.42	25.1	37	0.172	1	3.7	21.3	64
LVA-13-287	18	2.94	1.8	2.8	0.42	25.6	39	0.176	2	3.3	22.1	59
LVA-13-335	16	2.46	1.2	2.8	0.34	25.7	26	0.145	1	2.2	21.4	58
LVA-13-336	16	2.68	1.3	3.1	0.35	26.5	26	0.151	1	2.5	22.7	59
LVA-13-337	17	14.8	1.7	14.9	0.84	251	106	0.162	2	12.6	210	379
LVA-13-338	17	15.5	1.8	10.3	0.85	265	179	0.166	1	13.2	215	287
LVA-13-341	14	1.31	2.9	2.2	0.19	12.7	35	0.084	1	1	10.7	25
LVA-13-342	14	1.3	1.3	2.4	0.21	15.3	12	0.083	1	1.5	11.9	16
LVA-13-343	17	1.85	1.4	2.6	0.28	19.7	30	0.119	1	1	16.1	34
LVA-13-344	22	3.32	2.1	3.1	0.47	27.7	43	0.202	1	4.1	25.7	88
LVA-13-345	26	3.18	1.5	3.9	0.5	25.2	20	0.237	2	6.3	23.4	81
LVA-13-346	5	0.5	1.3	0.5	0.05	5.01	4	0.029	4	0.2	4.29	28
TQPL-2017-015	21	2.37	1.8	3.2	0.3	26.2	35	0.137	1	4.3	19.3	23
TQPL-2017-040	22	1.98	1.2	2.6	0.35	20	26	0.188	2	3.8	15.2	46
LVA-13-301	23	3.1	1.8	2.9	0.42	28.6	13	0.179	3	0.2	25	69
LVA-13-303	16	3.1	1.2	2	0.39	22.5	26	0.182	3	1.5	21.8	73
TQPL-2017-038	5	6.91	1	3.5	0.88	49.5	6	0.279	132	6.3	40.5	10
TQPL-2017-045	14	2.07	0.9	2.9	0.32	16.6	24	0.147	41	5.5	13.6	18
TQPL2018-007	4	0.96	2.2	0.3	0.19	4.33	1	0.078	2	0.2	4.04	13

SAMPLES	Pb	Pr	Rb	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te
TQPL-2017-011	16	0.7	6	41.7	1	4.2	0.57	1	98	0.08	0.08	0.16
TQPL-2017-017	8	1.85	29	0.36	9	0.3	1.79	1	786	0.06	0.28	0.15
TQPL-2017-020	5	1.15	25	0.11	3	0.3	1	1	295	0.06	0.14	0.02
TQPL-2017-036	7	1.32	15	0.59	3	0.3	1	1	129	0.06	0.13	0.02
TQPL-2017-042	9	0.89	2	0.44	2	0.4	0.79	1	227	0.02	0.13	0.02
TQPL-2017-044	6	1.6	8	0.37	3	0.2	1.15	1	400	0.08	0.16	0.02
TQPL-2017-046	11	1.42	11	0.3	2	0.3	1.03	1	226	0.09	0.13	0.02
TQPL-2017-047	7	1.09	4	0.67	2	0.1	0.8	1	253	0.05	0.12	0.02
TQPL-2017-048	16	5.71	40	0.35	5	0.6	3.84	1	275	0.18	0.32	0.1
TQPL-2017-049	5	1.08	3	0.57	2	0.5	0.83	1	63	0.05	0.14	0.02
TQPL2018-006	19	1.07	2	0.43	1	2.2	0.89	1	123	0.01	0.17	0.25
TQPL2018-009	5	1.86	31	0.3	3	0.1	1.3	1	21	0.17	0.14	0.02
TQPL2018-012	5	0.93	1	0.23	1	0.1	0.85	1	226	0.03	0.12	0.02
TQPL2018-013	5	3.7	11	0.41	2	0.1	2.48	1	135	0.18	0.28	0.02
TQPL2018-015	5	1.09	1	0.3	1	0.2	0.96	1	202	0.02	0.12	0.02
LVA-13-288	5	0.81	2	3.32	1	4	0.89	1	66	0.25	0.16	0.07
LVA-13-289	4	0.71	4	8.7	1	5	0.61	1	107	0.22	0.08	0.11
LVA-13-290	28	1.16	5	8.25	1	1	0.83	1	162	0.01	0.14	0.07
LVA-13-291	14	1.88	53	2.61	3	1	1.32	1	152	0.15	0.16	0.22
LVA-13-294	6	2.91	60	3.03	6	3	1.97	1	291	0.1	0.25	0.13
LVA-13-295	6	2.65	5	0.02	4	1	1.78	1	195	0.21	0.22	0.05
LVA-13-296	50	1.87	20	11.8	3	4	1.3	1	83	0.17	0.16	0.47
TQPL-2017-028	35	2.78	94	5	4	0.3	1.72	1	147	0.25	0.15	0.02
TQPL-2017-031	9	4.16	145	0.23	5	0.1	2.36	1	271	0.41	0.22	0.02
TQPL-2017-034	28	5.46	145	0.5	11	0.1	3.57	1	313	0.4	0.35	0.04
TQPL-2017-033	17	1.36	13	0.15	3	0.4	1.02	1	203	0.1	0.13	0.05
TQPL-2017-016	5	2.64	17	5.76	3	0.6	1.77	1	102	0.26	0.17	0.02
TQPL-2017-026	48	3.5	146	18.3	5	1.6	2.2	1	275	0.23	0.2	0.03
TQPL-2017-029	9	4.93	64	0.35	8	0.1	3.25	1	164	0.42	0.3	0.03
TQPL-2017-032	5	1.89	2	0.21	5	0.1	1.29	1	32	0.14	0.13	0.02
LVA-13-292	2	2.06	1	0.02	3	1	1.37	1	247	0.29	0.17	0.05
LVA-13-293	5	3.02	40	0.03	6	1	1.95	1	341	0.28	0.2	0.03
LVA-13-297	3	0.64	2	2.8	7	5	0.63	1	6	0.01	0.14	2.31

LVA-13-298	402	4.31	34	1.65	7	1	2.71	1	253	0.34	0.28	2.31
LVA-13-299	359	6.42	95	3.47	11	3	4.14	1	358	0.58	0.46	0.71
LVA-13-300	763	2.34	18	1.43	5	2	1.63	1	240	0.19	0.18	2.25
LVA-13-302	103	5.71	66	3.04	15	6	3.98	2	175	0.16	0.48	1.19
LVA-13-350	12	6.43	62	0.11	12	0.1	4.02	1	411	0.43	0.41	0.02
TQPL-2017-009	5	3.22	206	0.04	5	0.1	2.01	1	283	0.22	0.18	0.02
TQPL-2017-010	5	2.85	82	0.13	5	0.1	1.83	1	349	0.23	0.2	0.04
TQPL-2017-012	5	3.08	54	0.06	5	0.3	2.07	1	288	0.21	0.23	0.03
TQPL-2017-013	12	5.66	171	0.16	10	0.2	3.62	2	247	0.38	0.35	0.02
TQPL-2017-018	6930	16.6	146	6.43	6	1.9	19.6	1	468	0.34	1.93	1.17
TQPL-2017-022	5	3.9	28	1.26	3	0.4	3.29	1	87	0.07	0.45	0.03
TQPL-2017-024	9	2.17	12	0.02	3	0.3	1.58	1	708	0.13	0.21	0.03
TQPL-2017-025	16	6.46	156	0.46	10	0.6	4.06	1	195	0.32	0.39	0.07
TQPL-2017-027	8	4.51	88	0.03	11	0.2	2.49	1	237	0.38	0.25	0.02
TQPL-2017-037	120	22	124	0.24	8	0.1	14.3	2	809	0.32	1.14	0.11
TQPL-2017-039	10	3.25	49	0.05	6	0.1	2.18	1	525	0.23	0.22	0.02
TQPL-2017-050	13	4.36	96	13.9	9	0.8	2.17	1	303	0.37	0.19	0.07
TQPL-2017-051	21	3.48	89	17.4	6	1.2	2.72	1	303	0.31	0.2	0.1
TQPL-2017-052	5	3.64	78	0.22	7	0.5	2.44	1	228	0.29	0.24	0.06
TQPL-2017-053	79	4.99	90	0.14	6	0.2	3.24	1	772	0.24	0.33	0.11
TQPL2018-004	8	2.95	97	0.04	4	0.1	2.05	2	247	0.24	0.2	0.02
TQPL2018-005	8	2.34	174	0.06	5	0.1	1.42	2	198	0.24	0.14	0.02
TQPL2018-008	5	3.58	59	5.89	6	3.5	2.63	1	212	0.3	0.24	1.16
TQPL2018-014	6	2.65	44	0.07	4	0.1	2.03	1	219	0.2	0.18	0.02
TQPL2018-016	20	4.14	58	0.08	5	0.1	2.46	1	285	0.27	0.24	0.02
TQPL2018-019	44	14.6	25	0.04	9	0.1	12.8	1	511	0.14	1.15	0.14
TQPL2018-020	7	3.84	74	0.11	6	0.1	2.51	1	526	0.36	0.26	0.02
TQPL2018-021	9	3.58	51	0.13	6	0.1	2.35	1	589	0.33	0.24	0.02
LVA-13-278	20	14	98	0.02	8	1	7.98	1	678	0.52	0.5	0.09
LVA-13-280	5	6.01	54	0.03	11	1	4.03	1	176	0.48	0.43	0.03
LVA-13-281	14	6.18	62	0.02	13	1	3.96	1	371	0.43	0.43	0.03
LVA-13-282	11	5.23	75	0.02	11	1	3.43	1	338	0.41	0.38	0.07
LVA-13-283	16	5.62	57	0.02	10	1	3.69	1	375	0.4	0.38	0.01
LVA-13-284	10	6.87	117	0.02	19	1	4.99	2	212	0.55	0.54	0.07

LVA-13-285	9	5.56	84	0.02	12	1	3.56	1	252	0.44	0.38	0.05
LVA-13-286	7	5.72	84	0.02	12	1	3.69	1	329	0.46	0.4	0.06
LVA-13-287	9	5.92	188	0.02	12	1	3.74	1	265	0.42	0.4	0.04
LVA-13-335	11	5.78	56	0.11	9	0.1	3.47	1	378	2.9	0.34	0.02
LVA-13-336	7	6.08	61	0.44	10	0.1	3.89	1	303	1.33	0.36	0.02
LVA-13-337	125	57.7	219	0.66	15	0.9	30.3	2	2426	0.67	1.43	0.02
LVA-13-338	776	60.1	167	0.38	17	1.1	31.8	2	3177	0.69	1.5	0.81
LVA-13-341	5	2.89	4	0.04	6	0.1	1.86	1	287	0.42	0.19	0.02
LVA-13-342	8	3.33	62	0.4	5	0.1	1.97	1	303	0.37	0.2	0.02
LVA-13-343	9	4.32	76	0.13	8	0.1	2.64	1	206	0.44	0.26	0.02
LVA-13-344	6	6.68	112	0.51	18	0.1	4.6	1	167	0.49	0.48	0.02
LVA-13-345	145	6.12	97	7.99	13	1.1	3.96	1	345	0.57	0.48	0.02
LVA-13-346	79	1.22	18	3.32	3	0.7	0.75	1	34	0.08	0.06	0.19
TQPL-2017-015	5	5.48	135	0.1	8	0.1	3.49	1	142	0.42	0.32	0.02
TQPL-2017-040	14	4.36	146	1.07	10	0.3	2.64	1	268	0.38	0.27	0.17
LVA-13-301	24	6.95	127	0.25	14	1	4.37	2	149	0.28	0.45	0.21
LVA-13-303	82	5.49	82	0.07	13	2	4.03	4	136	0.31	0.44	0.7
TQPL-2017-038	904	10.9	18	0.65	10	1.5	8.44	1	849	0.14	0.91	0.96
TQPL-2017-045	433	3.62	72	40.5	5	2.3	2.64	1	185	0.4	0.28	0.15
TQPL2018-007	5	0.97	1	2.23	1	0.9	1.01	1	75	0.01	0.18	0.02

SAMPLES	Th	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
TQPL-2017-011	1.32	0.05	0.041	0.37	12	2.8	3	0.28	13.5	12
TQPL-2017-017	5.73	0.21	0.133	2.03	115	12.7	11.7	0.86	56.4	93
TQPL-2017-020	1.36	0.05	0.066	0.49	33	0.5	5	0.36	62.6	19
TQPL-2017-036	1.65	0.05	0.086	0.46	9	0.8	5.4	0.55	70.6	30
TQPL-2017-042	0.89	0.05	0.075	0.24	5	0.6	6.1	0.58	62.3	16
TQPL-2017-044	1.49	0.05	0.092	0.37	11	0.5	6.6	0.58	35.5	40
TQPL-2017-046	1.04	0.05	0.066	0.42	5	0.5	5.3	0.43	53.4	32
TQPL-2017-047	1.29	0.05	0.073	0.38	5	0.5	5.3	0.47	23.3	19
TQPL-2017-048	4.5	0.26	0.116	0.82	28	0.8	9.3	0.71	107	113
TQPL-2017-049	0.95	0.05	0.081	0.35	6	3	5.2	0.52	57.1	29
TQPL2018-006	0.21	0.05	0.072	0.1	7	0.5	5.1	0.48	41	3
TQPL2018-009	1.34	0.31	0.074	0.43	47	0.5	5.1	0.53	140	81
TQPL2018-012	0.42	0.05	0.066	0.15	5	0.5	5.2	0.41	13.9	15
TQPL2018-013	4.35	0.12	0.122	1.21	17	0.5	8.3	0.83	70.9	64
TQPL2018-015	0.52	0.05	0.056	0.15	5	0.5	4.5	0.35	24.3	13
LVA-13-288	0.09	0.05	0.065	0.09	18	5.4	5.5	0.37	32.4	9
LVA-13-289	0.17	0.05	0.042	0.12	19	6	3.2	0.31	34	14
LVA-13-290	0.56	0.05	0.07	0.2	6	0.5	5.2	0.44	31.1	21
LVA-13-291	2.73	0.05	0.074	0.88	29	0.5	5.4	0.48	42.6	48
LVA-13-294	2.91	0.05	0.124	0.94	69	0.6	7.8	0.83	43.8	86
LVA-13-295	2.12	0.05	0.111	0.69	28	2.8	7.4	0.62	51.5	48
LVA-13-296	1.44	0.05	0.076	0.57	27	5	5.7	0.51	41	48
TQPL-2017-028	2.31	0.45	0.073	0.94	45	3.6	4.9	0.47	99.1	112
TQPL-2017-031	6.88	1.12	0.114	1.82	38	4.6	7.3	0.81	76.9	103
TQPL-2017-034	5.75	0.51	0.158	1.87	65	3.8	10.9	0.98	57.2	108
TQPL-2017-033	1.57	0.06	0.088	0.38	11	0.5	5.4	0.55	104	51
TQPL-2017-016	3.05	0.07	0.101	1.12	37	2.6	6.7	0.72	163	137
TQPL-2017-026	6.87	0.51	0.119	1.11	85	8.3	7.6	0.81	66.2	96
TQPL-2017-029	5.39	0.26	0.151	1.83	59	4.2	9.9	0.99	112	160
TQPL-2017-032	1.36	0.05	0.064	0.42	45	0.8	4.3	0.38	72	75
LVA-13-292	2.77	0.05	0.088	0.89	17	2.4	6	0.6	63.3	88
LVA-13-293	2.55	0.15	0.104	0.78	45	2.1	6.6	0.65	59.7	95
LVA-13-297	0.05	0.05	0.078	0.11	57	0.5	5	0.5	159	15

LVA-13-298	5.09	0.09	0.128	1.41	61	11.9	7.9	0.8	29.3	100
LVA-13-299	5.81	0.35	0.211	1.86	113	11.3	13.7	1.44	97.8	173
LVA-13-300	3.52	0.07	0.087	1	35	4.5	5.7	0.53	28.7	54
LVA-13-302	4.36	0.24	0.25	1.46	157	0.5	15.4	1.61	145	98
LVA-13-350	5.63	0.05	0.175	1.78	103	0.5	10.8	1.14	98.2	131
TQPL-2017-009	2.56	0.57	0.069	0.92	41	1.9	5.1	0.45	35.2	113
TQPL-2017-010	2.87	0.46	0.073	1.2	32	1.3	5.7	0.53	60.1	157
TQPL-2017-012	2.88	0.22	0.113	0.78	50	0.7	7.9	0.73	65.6	89
TQPL-2017-013	5.32	0.55	0.166	1.81	73	4.2	12.1	1.06	44.5	126
TQPL-2017-018	55.2	0.88	0.296	12.2	45	9	40	1.75	123	135
TQPL-2017-022	40.7	0.08	0.377	2.21	26	1.8	20.9	2.33	35.5	70
TQPL-2017-024	2.03	0.05	0.114	0.59	21	0.5	9.1	0.75	65.5	64
TQPL-2017-025	8.3	0.52	0.169	2.3	67	3.8	12.1	1.14	63.5	144
TQPL-2017-027	6.61	0.31	0.156	1.47	81	1.5	10.2	1.03	72	118
TQPL-2017-037	12.8	0.66	0.238	2.11	53	6.6	26	1.37	32.9	91
TQPL-2017-039	2.29	0.28	0.079	0.87	42	1.3	7	0.58	26.4	83
TQPL-2017-050	9.9	0.47	0.124	1.75	64	6.2	7.2	0.96	17.9	121
TQPL-2017-051	13.8	0.45	0.121	1.86	50	3.9	7.1	0.85	31.4	179
TQPL-2017-052	3.91	0.39	0.155	1.27	50	2	9.5	0.99	66.9	80
TQPL-2017-053	6.03	0.68	0.154	1.66	62	4.5	10.5	1	22.5	109
TQPL2018-004	2.56	0.49	0.086	0.87	31	2.1	6.1	0.54	59.7	66
TQPL2018-005	1.89	0.9	0.055	0.83	31	3.4	4.2	0.39	33.2	80
TQPL2018-008	2.73	0.28	0.097	0.77	78	11.2	6.8	0.71	43.7	95
TQPL2018-014	2.58	0.16	0.069	0.78	24	0.5	5.4	0.49	38.3	68
TQPL2018-016	3.71	0.23	0.099	1.15	37	0.9	6.3	0.63	99.7	98
TQPL2018-019	14.1	0.14	0.213	0.58	54	0.5	23.5	1.3	61.1	51
TQPL2018-020	3.11	0.31	0.104	0.88	47	1.6	7.1	0.67	65.9	100
TQPL2018-021	3.32	0.23	0.11	0.93	44	0.8	7.3	0.64	51.3	100
LVA-13-278	8.35	0.06	0.139	1.84	74	2.5	12	0.84	26.7	179
LVA-13-280	5.23	0.28	0.18	1.64	94	7.1	11.6	1.19	57.6	141
LVA-13-281	5.85	0.31	0.185	1.94	102	4.8	12.2	1.22	83.2	149
LVA-13-282	4.63	0.37	0.173	1.55	94	4.5	10.9	1.08	58.5	124
LVA-13-283	5.24	0.34	0.161	1.63	85	4.2	10.3	1.07	75.4	147
LVA-13-284	5.86	0.53	0.226	1.76	145	4.7	14.9	1.47	93.4	131

LVA-13-285	5.08	0.44	0.165	1.63	98	4.1	11	1.09	53.8	145
LVA-13-286	5.04	0.35	0.182	1.59	95	4.2	11.5	1.18	69.6	148
LVA-13-287	4.84	1.21	0.177	1.47	92	5	11.3	1.16	58.5	135
LVA-13-335	4.91	0.05	0.153	1.23	81	0.5	9.2	0.97	70.2	116
LVA-13-336	5.2	0.05	0.158	1.62	87	0.5	9.7	1.05	74.4	129
LVA-13-337	24.2	1.03	0.226	3.6	144	1.1	23.6	1.16	140	685
LVA-13-338	25.3	0.65	0.238	3.7	145	0.5	24.8	1.25	126	729
LVA-13-341	2.91	0.05	0.085	0.82	56	0.5	5.4	0.54	67.5	96
LVA-13-342	2.34	0.05	0.086	0.9	42	0.5	6	0.6	16.2	94
LVA-13-343	3.66	0.05	0.119	1.2	67	2.3	7.7	0.85	89.8	106
LVA-13-344	5.9	0.05	0.204	1.8	147	1.4	13.2	1.33	101	130
LVA-13-345	6.52	0.56	0.229	2.21	113	3	14.5	1.53	85.9	157
LVA-13-346	0.96	0.05	0.028	0.4	39	0.5	1.6	0.17	54.7	22
TQPL-2017-015	7.49	0.5	0.137	2.22	49	3.9	9.1	0.91	87.3	129
TQPL-2017-040	12.5	0.9	0.178	1.89	78	3.9	10.3	1.13	69.4	111
LVA-13-301	5.87	0.42	0.172	1.87	111	0.5	11	1.12	220	130
LVA-13-303	4.71	0.75	0.174	1.14	95	4.3	10.5	1.17	1040	88
TQPL-2017-038	26.3	0.13	0.305	3.81	47	7.2	28.7	1.81	83.8	196
TQPL-2017-045	5.91	0.33	0.135	1.23	67	9.3	9.8	0.95	61.8	133
TQPL2018-007	0.49	0.05	0.093	0.15	11	0.5	6.5	0.55	29.3	10

Appendix III – Thin section petrography and microstructural descriptions

TQPL2017-009 **Chloritic Greywacke** **FW300-CC152-LW**

Description: Altered strongly foliated silty sedimentary rock with very fined grained disseminated sulphides and oxide minerals along foliation. Foliation is defined by alternating layers of compressed and stretched quartz and minor feldspar grains and clay layers made up of very fine grained euhedral to subhedral chlorite and sericite grains. Small and thin foliation parallel quartz ankerite veinlets. There are trace very fine arsenopyrite and oxide blebs <100 µm disseminated throughout sample along foliation. Most of the arsenopyrite grains are euhedral, but most of the oxide blebs are sub to anhedral and have a pitted texture.

Quartz (55%) very fine 20-500 µm deformed, elongated, fractured grains and as slightly coarser grained subhedral grains within quartz-ankerite veinlets

Feldspar (5%) very fine 20-500 µm deformed, elongated, fractured grains

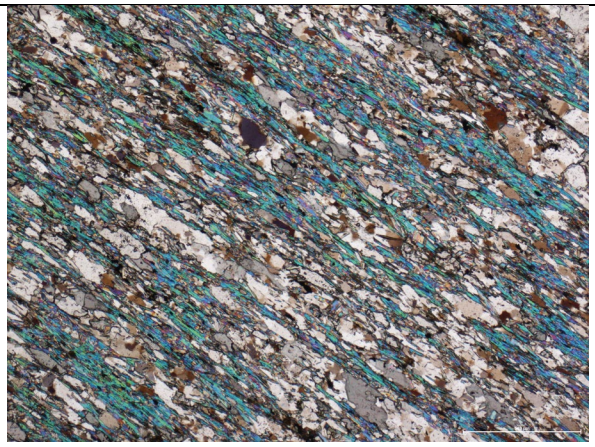
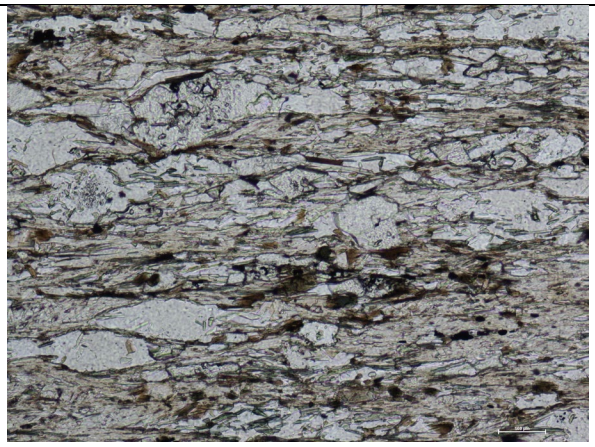
Chlorite (35%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation, but sometimes fanning texture

Sericite (5%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture

Ankerite (tr.) fine grained subhedral ankerite within foliation parallel quartz veinlets

Arsenopyrite (tr.) very fine 20-100µm euhedral blebs disseminated along foliation throughout sample

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample

	
TQPL2017-009-5X-XPL Foliation defined by fine grained chlorite (ultra blue) and elongate quartz (white)+feldspar grains (greyish green).	**TQPL2017-009-10X-PPL** Elongated and sheared fine grained quartz grains wrapped with very fine grained euhedral chlorite grains. Foliation parallel quartz ankerite veinlet

TQPL2017-010 **Chloritic Greywacke** **FW300-CC152-LW**

Description: Altered foliated silty sedimentary rock with very fine grained disseminated sulphides and oxide minerals along foliation. Foliation is defined predominantly by compressed and stretched elongated anhedral quartz and minor feldspar grains with very fine grained euhedral to subhedral chlorite and sericite grains wrapping quartz and feldspar grains. Minor foliation parallel quartz-ankerite veins with sericite dominated margins.There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated throughout sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, and most of the oxide blebs are sub to anhedral and have a pitted texture.

Quartz (60%) very fine-fine 20-500 µm deformed, elongated, fractured grains and coarser grained subhedral grains in foliation parallel quartz-ankerite veinlets

Feldspar (10%) very fine 20-500 µm deformed, elongated, fractured grains

Chlorite (15%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation, but sometimes fanning texture

Sericite (10%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture

Ankerite (5%) fine grained anhedral to subhedral ankerite grains within quartz-ankerite veining and proximal to vein selvages

Sulphides (tr.)

Arsenopyrite (tr.) very fine 20-100µm euhedral blebs disseminated along foliation throughout sample

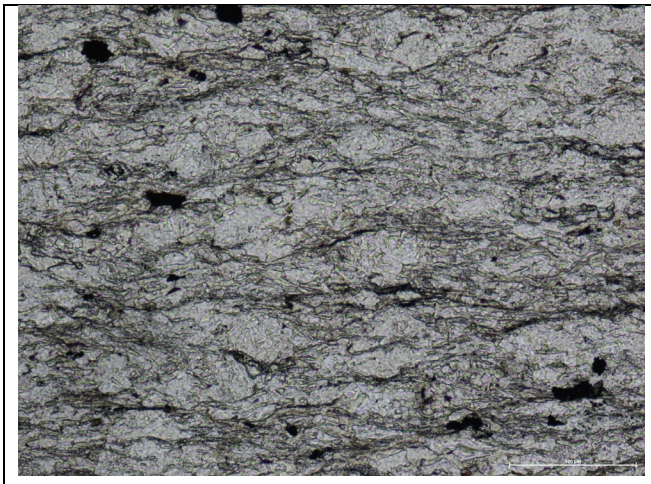
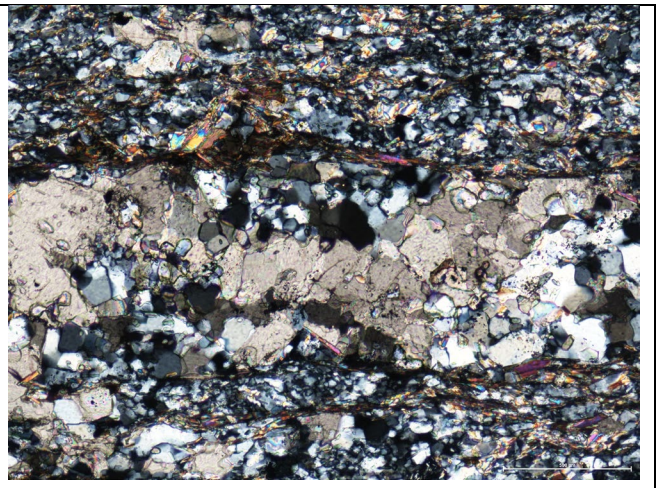
Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample

STRUCTURE

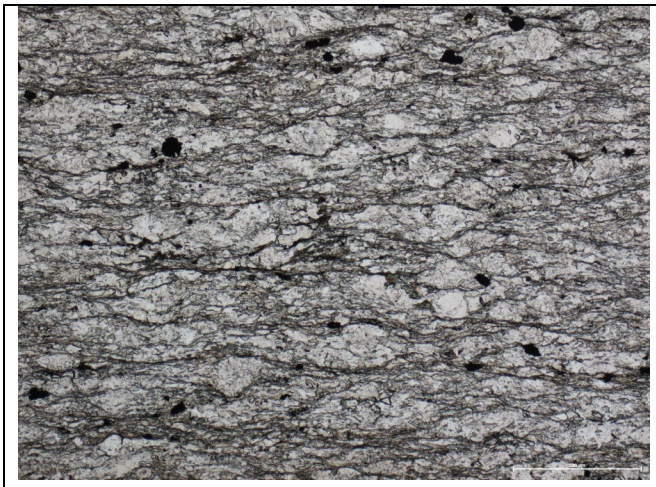
S_2A Foliation defined by fine grained mica (chlorite and sericite) wrapping elongated quartz and feldspar

grains (greyish green) commonly displaying fractured/sheared quartz and feldspar grains

display σ-type shear sense.

	
TQPL2017-010-5X-XPL Foliation defined by fine grained chlorite (ultra blue) wrapping elongate quartz (white)+feldspar grains (greyish green). Foliation parallel quartz-ankerite veins	**TQPL2017-010-10X-PPL** Quartz-ankerite veinlet parallel to subparallel to foliation surrounded by strong foliation mostly made up of chlorite layers. Main foliation is made up of fine grained elongated quartz+feldspar grains some of which have been altered by chlorite and sericite grains

Plan View

	
TQPL2017-010A-5X-PPL Oblique foliation defined by fine grained compressed/elongated quartz grains wrapped by very-grained euhedral chlorite grains. A number of fractured/sheared quartz and feldspar grains display σ-type dextral shear sense.	**TQPL2017-010A-2.5X-PPL** Quartz-ankerite veinlet oblique to foliation surrounded by strong foliation defined by very fine-grained elongated feldspar and quartz grains and chlorite grains. A number of fractured/sheared quartz and feldspar grains display σ-type dextral shear sense.

3) TQPL2017-012 Chloritic Greywacke FW300-CC152-RW

Description: Altered foliated silty sedimentary rock with very fined grained disseminated sulphides and oxide minerals along foliation. Foliation is defined predominantly by compressed and elongated anhedral quartz and feldspar grains with clay layers, made up of predominantly very fine grained euhedral to sub-hedral chlorite and sericite grains. There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated throughout sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, and most of the oxide blebs are sub to anhedral and have a pitted texture.

Quartz (48%) very fine 20-500 µm deformed, elongated, fractured grains, coarser grained quartz grains within foliation subparallel quartz-ankerite veinlets

Feldspar (15%) very fine 20-600 µm deformed, elongated, fractured grains and larger subhedral to anhedral porphyroclasts elongated parallel to subparallel to foliation

Chlorite (25%) very fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation, but sometimes fanning texture

Sericite (10%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture

Ankerite (2%) fine grained 20-150µm subhedral ankerite throughout sample and coarser grained 20-200µm subhedral ankerite within quartz-ankerite veinlets

Arsenopyrite (tr.) very fine 20-100µm euhedral blebs disseminated along foliation throughout sample

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample

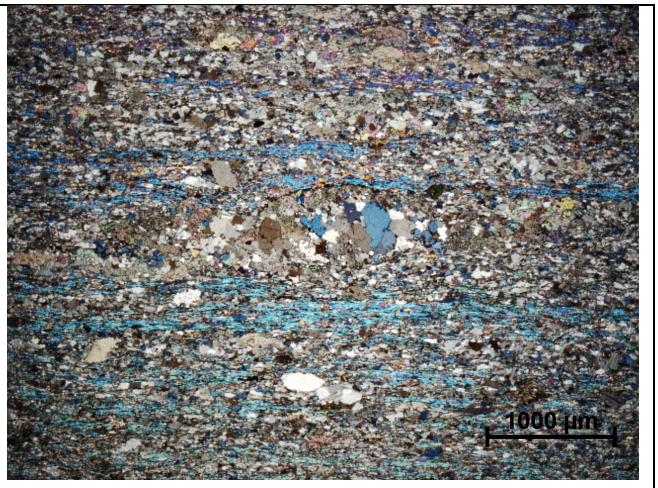
STRUCTURE

S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of sericite and minor chlorite

Plan View

TQPL2017-012A-5X-XPL Foliation defined by very fine-grained sericite and minor chlorite dominated layers and elongate quartz and feldspar grain domains.	**TQPL2017-012A-5X-PPL** Foliation defined by very fine grained sericite and minor chlorite dominated layers and elongate quartz and feldspar grain domains.

Section View

	
TQPL2017-012B-2.5X-PPL Recrystallized sigmoidal quartz grain displaying a reverse (north over south) shear sense.	**TQPL2017-012B-2.5X-PPL** Foliation defined by very fine-grained sericite and minor chlorite dominated layers and elongate quartz and feldspar grain domains. Foliation parallel quartz-ankerite veinlets

TQPL2017-013 **Chloritic Greywacke** **FW300-CC152-RW**

Description: Altered and well foliated sedimentary rock with very fined grained disseminated sulphides and oxide minerals along foliation. Foliation is defined by alternating layers of deformed and elongated quartz with minor feldspar grains and clay-rich layers made up of chlorite, sericite.There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated throughout sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, and most of the oxide blebs are sub to anhedral and have a pitted texture.

Quartz (45%) very fine 20-500 µm deformed, elongated, fractured grains

Feldspar (10%) very fine 20-500 µm deformed, elongated, fractured grains

Chlorite (15%) very fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation, but sometimes fanning texture

Ankerite (5%) Fine grained 100-350 µm subhedral porphyroblasts within clay-rich layers dominated by sericite

Sericite (25%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture

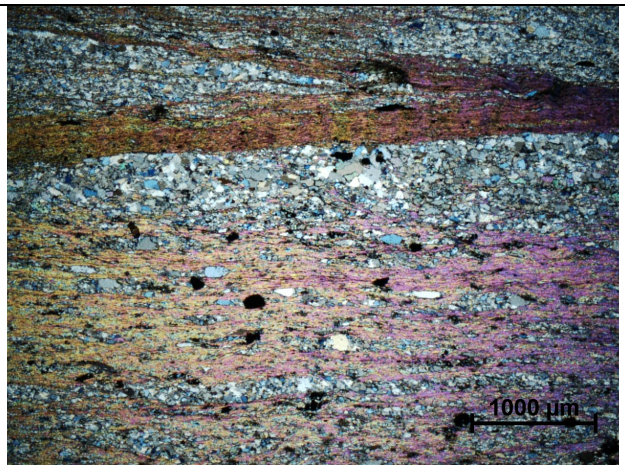
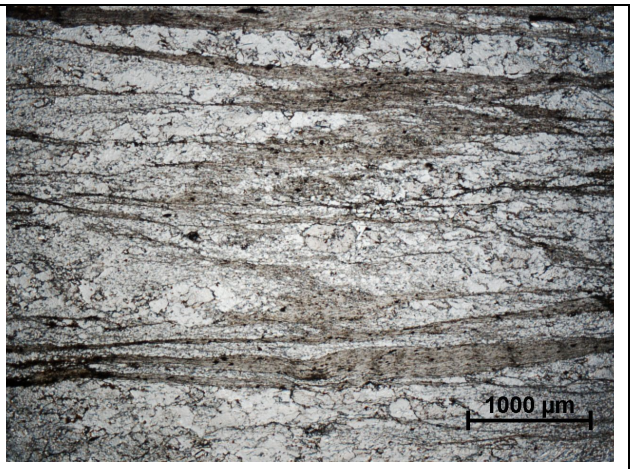
Arsenopyrite (tr.) very fine 20-100µm euhedral blebs disseminated along foliation throughout sample

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample

STRUCTURE

F_2A Axial planar folding of clay-rich and quartz + feldspar layers

S_2A foliation parallel to **F_2A** axial planar folds

	
TQPL2017-013A-2.5X-XPL Foliation defined by clay-rich layers dominated by very fine-grained sericite and minor chlorite grains and elongate quartz and feldspar grain domains.	**TQPL2017-013A-5X-PPL** Quartz-ankerite veinlet oblique to foliation surrounded by strong foliation in the same orientation mostly made up of chlorite.

TQPL2017-014 **Chloritic Greywacke** **FW300-CC152-LW**

Description: Altered foliated sedimentary rock with coarse grained euhedral arsenopyrite and fine-grained oxide minerals along foliation. Foliation is defined predominantly by alternating layers of deformed and elongated quartz and feldspar layers and clay-rich layers made up of predominantly sericite and minor chlorite. Foliation subparallel to parallel quartz-ankerite veins. Coarse grained euhedral arsenopyrite crystals with no preferred orientation and have associated stress shadows made up of quartz ankerite and sericite. There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated within sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, and most of the oxide blebs are sub to anhedral and have a pitted texture.

Quartz (40%) fine 20-500 µm deformed, elongated, fractured grains

Feldspar (5%) fine 20-500 µm deformed, elongated, fractured grains

Sericite (30%) very fine 20-100µm euhedral-subhedral grains predominantly make up clay-rich layers

Chlorite (10%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation, but sometimes fanning texture

Ankerite (5%) Very fine to medium grained 20-300µm subhedral grains within quartz-ankerite veinlets and within matrix

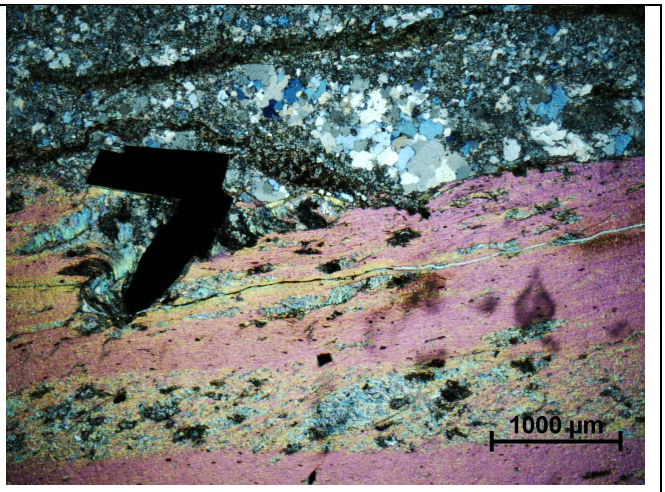
Arsenopyrite (10%) Coarse grained 500-2000µm euhedral arsenopyrite grains

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample

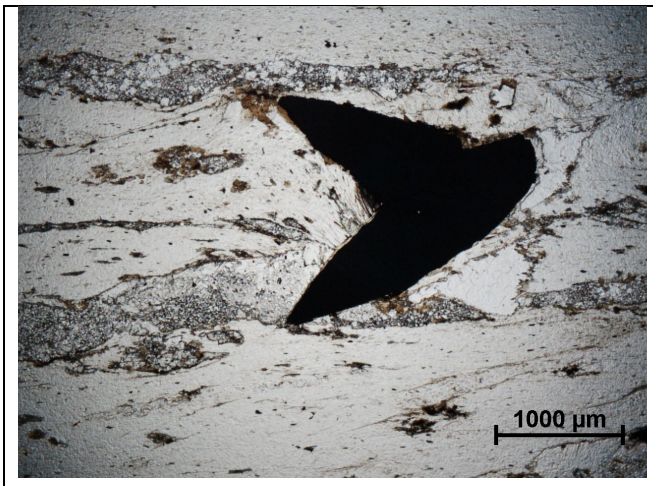
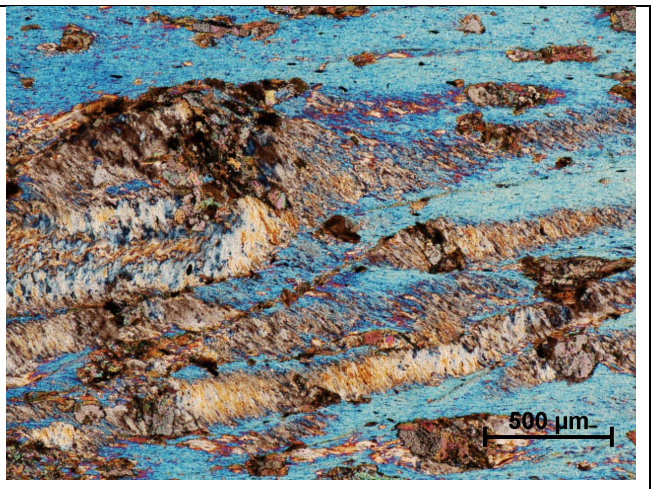
STRUCTURE

S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of predominantly sericite and minor chlorite with well-defined S_2A foliation dragged by D_2B shear bands developed within sericite-rich domains

Plan View

	
TQPL2017-014A-2.5X-PPL Foliation defined by alternating fine grained chlorite (green) and quartz domains. Coarse grained euhedral arsenopyrite crystals and associated recrystallized quartz pressure shadows.	**TQPL2017-014A-2.5X-XPL** Foliation parallel quartz-ankerite vein with coarse grained euhedral arsenopyrite and fine grained sericite domain.

Section View

	
TQPL2017-014B-2.5X-PPL Foliation parallel quartz veining within fine grained sericite domain with coarse grained euhedral arsenopyrite.	**TQPL2017-014B-5X-XPL** Sericitie dominated domain with distinct relationships.

TQPL2017-015 **Laminated mudstone** **FW300-CC152-LW**

Description: Well foliated siltstone with very fine grained anhedral arsenopyrite, pyrrhotite and oxide minerals disseminated along foliation. Foliation is defined by clay-rich layers (with fine grained chlorite on the margins) alternating with very fine grained deformed and elongated quartz and feldspar layers. Coarse grained foliation parallel quartz-ankerite-sericite veins. Fine grained mica-rich shearbands have anastomising geometry with main foliation and suggest a slight dextral shear sense.

Quartz (70%) very fine grained 20-150 µm deformed, elongated, fractured grains, and medium grained 200-500 µm subhedral grains within veins

Feldspar (10%) fine 20-100 µm deformed, elongated, fractured grains

Chlorite (5%) fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Sericite (5%) very fine 20-100µm euhedral-subhedral grains defining foliation, typically occurring at shear planes and quartz-ankerite vein selvages

Ankerite (10%) fine to medium grained 20-200 µm subhedral ankerite within veins

Arsenopyrite (tr.) Very fine grained 20-100µm anhedral arsenopyrite grains disseminated along foliation and on vein selvages

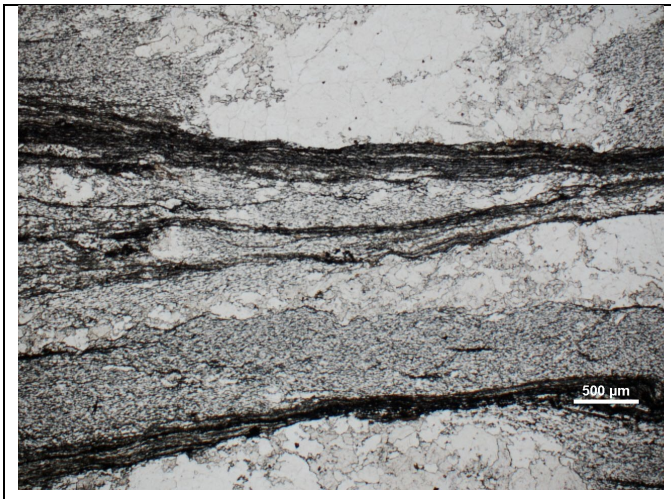
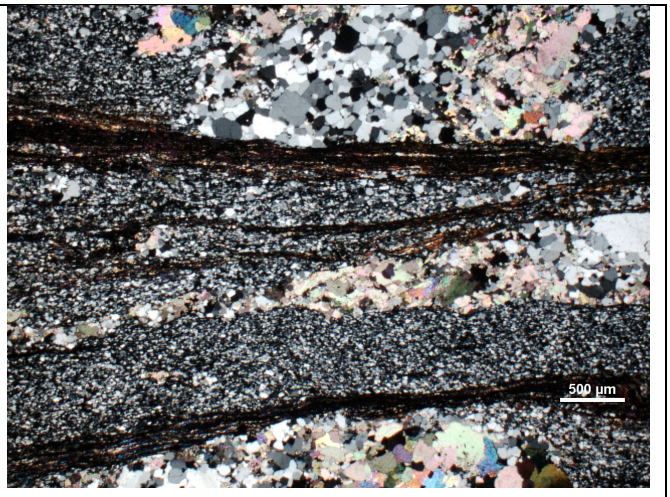
Pyrrhotite (1%) Very fine grained 20-100µm pyrrhotite blebs disseminated along foliation throughout sample

Oxides (tr.) very fine 20-100µm anhedral blebs disseminated along foliation throughout sample (much less abundant than pyrrhotite)

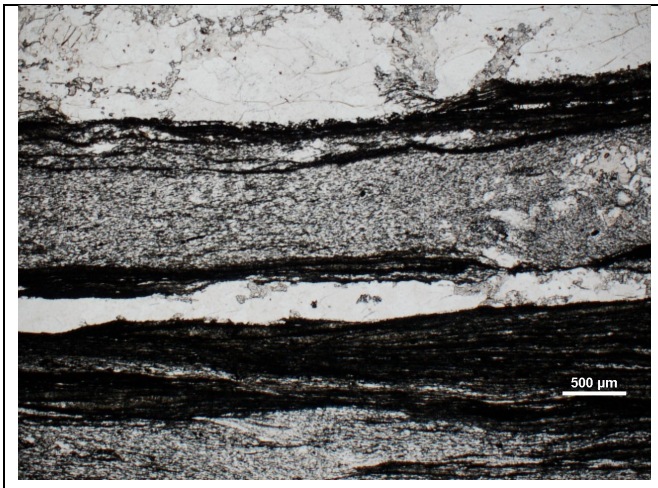
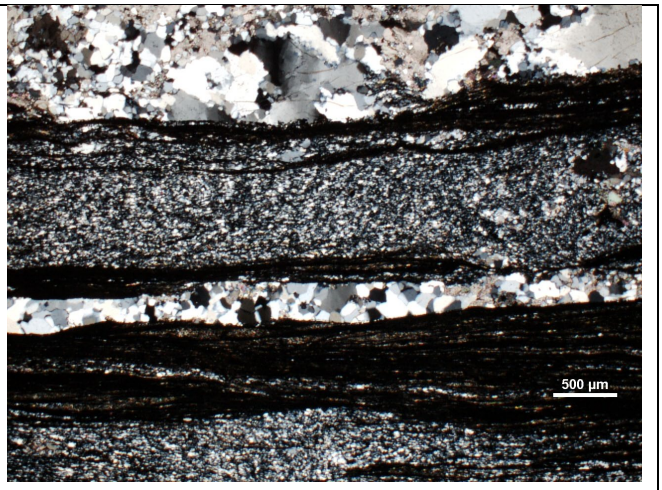
STRUCTURE

S_2A foliation defined by alternating layers of mud-rich bands with quartz-feldspar-rich layers

Plan View

	
TQPL2017-015A-2.5X-PPL Foliation defined by alternating mud-rich layers and deformed quartz-feldspar domains.	**TQPL2017-015A-2.5X-XPL** Foliation parallel quartz-ankerite-sericite veins.

Section View

	
TQPL2017-015B-2.5X-PPL Foliation defined by alternating mud-rich layers and deformed quartz-feldspar domains.	**TQPL2017-015B-5X-XPL** Foliation defined by alternating mud-rich layers and deformed quartz-feldspar domains.

TQPL2017-016 **Pelitic BIF** **FW300-CC152-LW**

Description: Well foliated chlorite-rich siltstone intercalated within BIF. Sample is dominated by clay-rich bands made up of fine-grained elongated chlorite grains defining the foliation and small quartz-feldspar intervals. Foliation parallel quartz-ankerite-sericite veins with medium to coarse grained euhedral to subhedral arsenopyrite and medium grained pyrrhotite blebs and trace oxide blebs, all typically occurring on the vein margins. Proximal sericite and minor chlorite alteration halos.

Chlorite (55%) very fine-fine 20-500 µm deformed, elongated, fractured grains

Quartz (25%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation and medium to coarse grained 200-1000µm subhedral grains within veins

Sericite (10%) very fine 20-500µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation and coarser grained within veins

Ankerite (5%) medium to coarse grained 200-1000µm subhedral grains within veins

Arsenopyrite (5%) Medium to very coarse grained 500-12000µm- sub-hedral to euhedral weakly deformed (cracked) arsenopyrite grains within quartz-ankerite-sericite veins and on margins

Pyrrhotite (tr.) Fine grained 20-300µm anhedral pyrrhotite grains

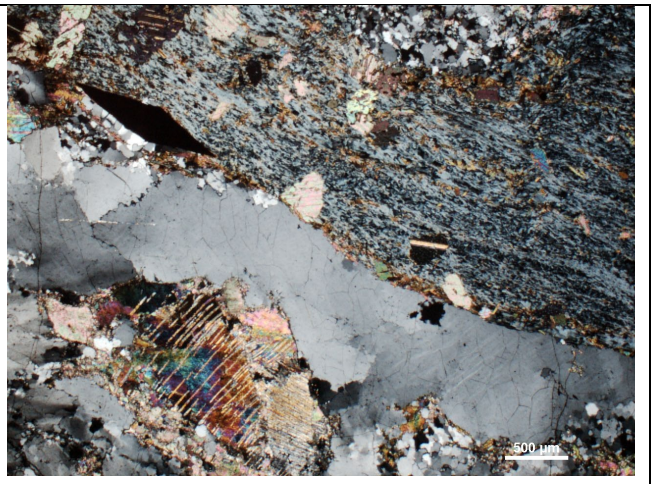
Oxides (tr.) very fine 500-200µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

STRUCTURE

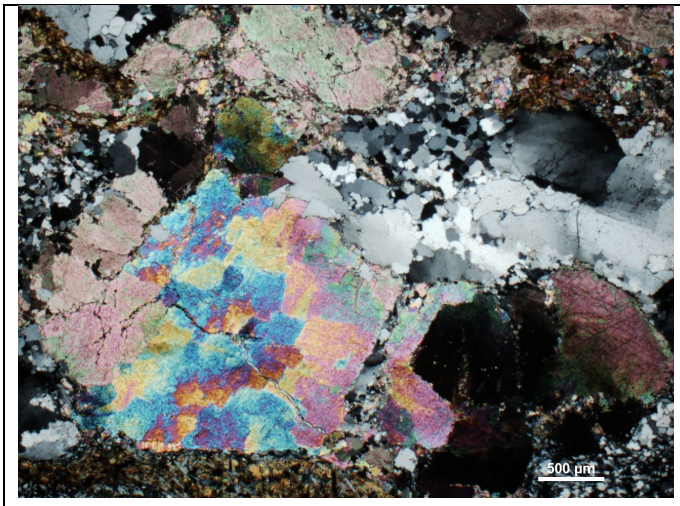
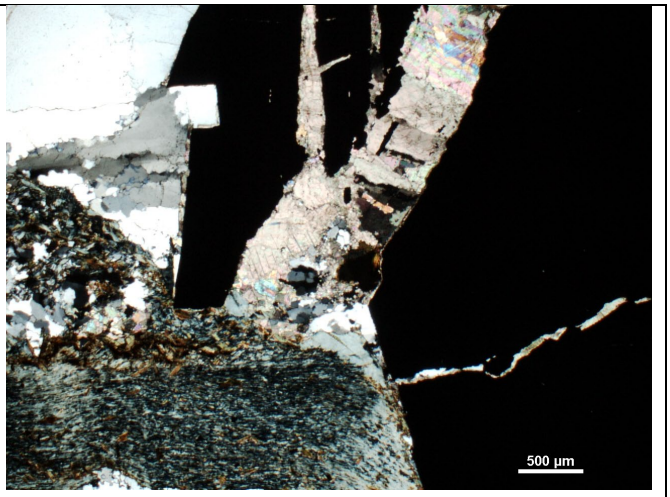
S_2A foliation defined by alternating layers of phyllosilicate -rich bands made up of fine-grained elongated chlorite grains with thin quartz-feldspar intervals.

S_3 crenulation cleavage preferentially developed within clay-rich layers

Plan View

	
TQPL2017-016A-2.5X-PPL Phyllosilicate-rich band in S_2A orientation made up of predominantly chlorite dominating sample, with S_3 crenulation cleavage developed perpendicular to S_2A foliation	**TQPL2017-016A-2.5X-XPL** Quartz-ankerite-sericite vein with medium grained euhedral elongated arsenopyrite on vein margin with recrystallized quartz shadow. With sericite and minor chlorite and ankerite alteration halo

Section View

	
TQPL2017-016B-2.5X-XPL Coarse grained quartz-ankerite-sericite vein.	**TQPL2017-016B-5X-XPL** Medium to coarse grained subhedral to euhedral slightly deformed (cracked) arsenopyrite occurring at the quartz-ankerite-sericite vein margin. Chlorite rich host rock wraps around coarse grained arsenopyrite.

TQPL2017-017 **Oxide-silicate BIF** **FW300-CC152-LW**

Altered oxide-silicate facies BIF. Predominantly made up of chert layers and amphibole-grunerite- and pitted textured magnetite layers with minor pyrrhotite and trace chalcopyrite blebs and very fine grained euhedral arsenopyrite crystals. All minerals are subhedral to anhedral. Foliation parallel pyrrhotite irregular blebs and stringers.

Quartz (40%) fine grained 20-600 µm quartz grains in chert bands

Magnetite (30%) Anhedral pitted texture magnetite bands and magnetite blades with differing orientations

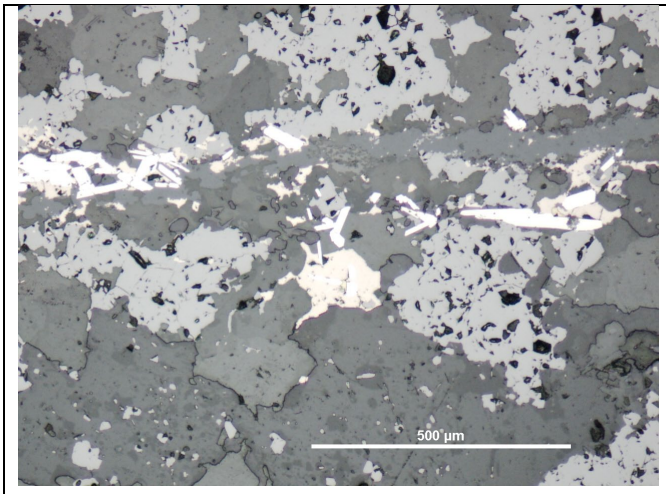
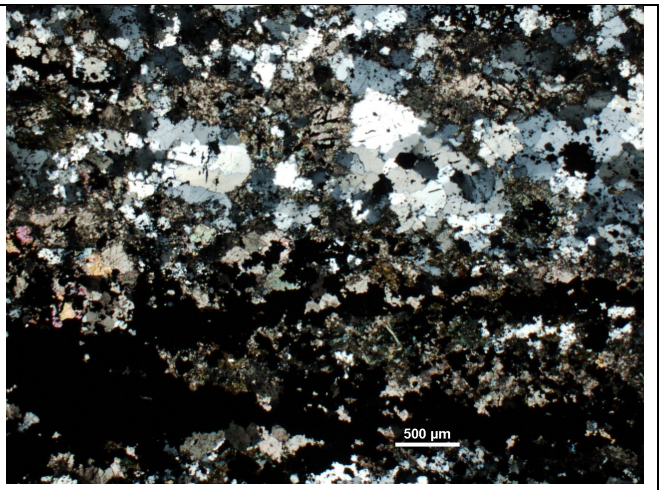
Amphibole (10%) medium grained 500-600µm subhedral grains, interstitial with chert layers and grunerite layers

Grunerite (15%) Very fine grained 20-100µm grunerite dominated layers

Pyrrhotite (3%) Blobby pitted pyrrhotite bands and disseminated blebs, with rare very fine grained arsenopyrite crystals within.

Arsenopyrite (2%) Very fine grained 20-100µm euhedral arsenopyrite grains associated with pyrrhotite bands and blebs

Chalcopyrite (tr.) very fine 20-40µm anhedral blebs with withing pyrrhotite and arsenopyrite

	
TQPL2017-017-10X-RL Oxide and sulphide assemblage. Up to 600 µm irregular pitted texture magnetite blebs interstitial with irregular pyrrhotite blebs and associated irregular chalcopyrite blebs and fine grained euhedral arsenopyrite crystals.	**TQPL2017-017-2.5X-XPL** Alternating irregular magnetite bands with quartz-amphibole-grunerite intervals.

TQPL2017-018 **Chloritic Greywacke** **FW300-CC152-LW**

Altered and well foliated choritic siltstone taken from within shear zone. Foliation is defined by sub-parallel S_2A foliation dragged by D_2B shear bands and alternating layers of very fine-grained quartz and chlorite domains. Sample displays penetrative sericite alteration and foliation parallel to sub-parallel quartz-ankerite-sericite veins. Foliation is defined predominantly by alternating layers of very fine-grained elongated chlorite and minor sericite and quartz domains. Fine grained mica rich shearbands have anastomising geometry with main foliation and suggest a slight dextral shear sense. There is foliation parallel to sub-parallel quartz-ankerite+/-sericite veins. There is trace subhedral to anhedral arsenopyrite, pyrrhotite and oxide blebs disseminated throughout sample.

Quartz (35%) very fine 20-300 µm primary quartz grains, and larger 1000µm recrystallized grains within veins

Sericite (35%) very fine 20-100µm euhedral-subhedral grains throughout, but more pervasive near quartz-ankerite veins and defines fabrics

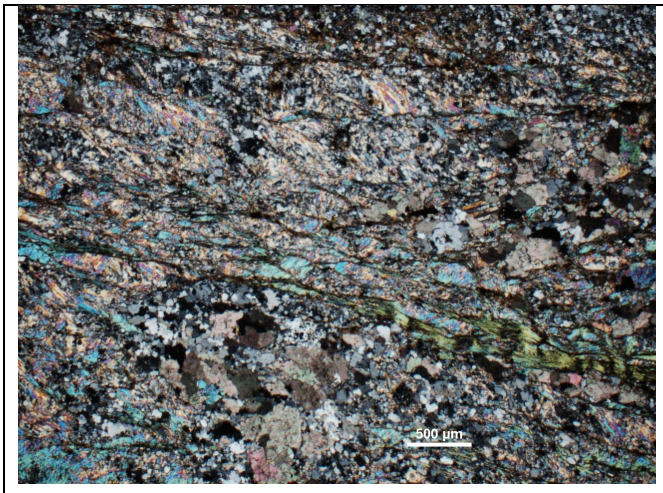
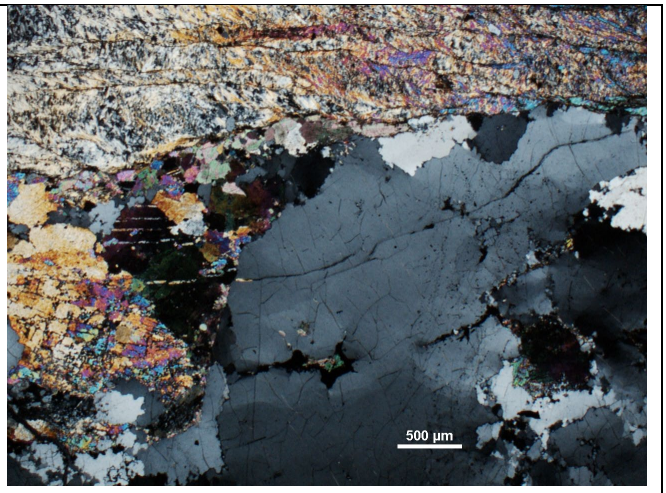
Chlorite (20%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation and helps define penetrative fabrics

Arsenopyrite (tr.) Very fine grained 20-100µm anhedral arsenopyrite grains

Pyrrhotite (tr.) Very fine grained 20-100µm anhedral pyrrhotite grains

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

Plan View

	
TQPL2017-018A-2.5X-PPL Fine grained sericite defining S_2A foliation dragged by D_2B shear bands adjacent to quartz ankerite vein	**TQPL2017-018A-2.5X-XPL** Coarse grained quartz ankerite veins, with sericite overgrowing relict ankerite crystal with intense sericite alteration adjacent to the vein.

TQPL2017-019 **Laminated mudstone** **FW300-CC152-LW**

Well foliated Chloritic Greywacke taken from within a shearzone. Predominantly made up of quartz domains alternating with Chlorite and minor sericite bands. Foliation -sub-parallel to parallel quartz ankerite veining with sericite alteration. Chlorite bands record S3 crenulation cleavage. Sample displays net-textured chalcopyrite stringer and very fine grained disseminated subhedral to anhedral pyrrhotite and arsenopyrite blebs.

Quartz (65%) very fine-fine 20-500 µm primary quartz grains and larger recrystallized quartz veining

Chlorite (15%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Ankerite (10%) very fine 20-900µm subhedral grains, interstitial with quartz crystals

Sericite (10%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, more pervasive near quartz-ankerite veining

Chalcopyrite (tr.) Very fine grained 20-100µm anhedral arsenopyrite grains

Arsenopyrite (tr.) Very fine grained 20-100µm anhedral arsenopyrite grains

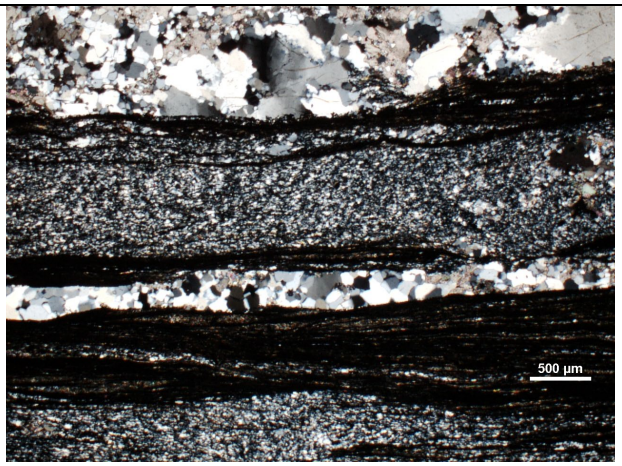
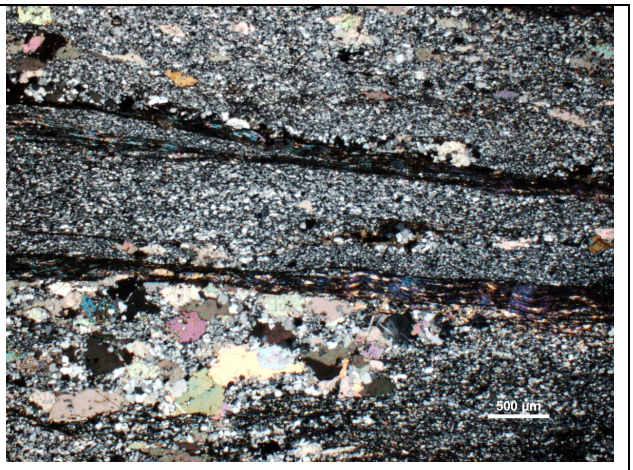
Pyrrhotite (tr.) Very fine grained 20-100µm anhedral pyrrhotite grains

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

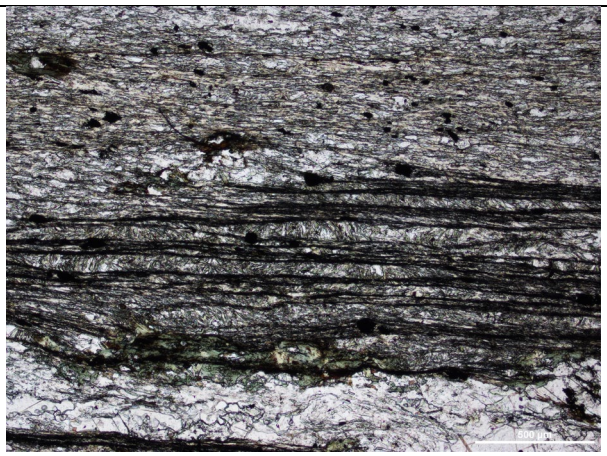
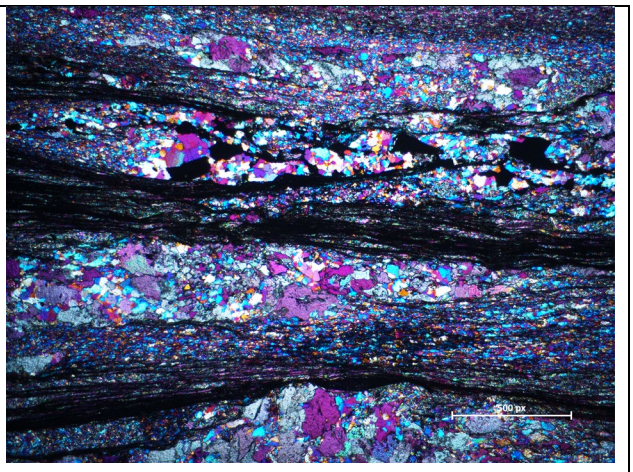
STRUCTURE

S_2A foliation defined by alternating layers of mud-rich bands with quartz-feldspar-rich layers

Plan View

	
TQPL2017-019A-2.5X-PPL Net-textured foliation parallel chalcopyrite stringer within quartz vein. Also subhedral arsenopyrite and anhedral pyrrhotite blebs	**TQPL2017-019A-2.5X-XPL** Fine grained quartz and chlorite intervals, with foliation parallel quartz-ankerite vein.

Section View

	
TQPL2017-019B-2.5X-PPL Mud-rich portion of sample	**TQPL2017-019B-5X-XPL** Foliation parallel quartz veining with subhedral arsenopyrite

TQPL2017-020 **Oxide-silicate BIF** **FW300-CC152-LW**

Description: Magnetite-rich BIF. Magnetite dominated lenses intercalated with quartz dominated lenses with grunerite and chlorite bands. Subhedral to anhedral fine to medium grained magnetite, locally partially to totally replaced by pyrrhotite and/or chalcopyrite. Subparallel and subparallel to banding quartz-ankerite veinlets with minor sericite and chlorite halos.

Quartz (45%) Fine 20-300 µm primary quartz grains. 100-900 µm within quartz-ankerite veins

Magnetite(40%) Fine 100-800µm subhedral to anhedral grains, locally partially to fully replaced by pyrrhotite and chalcopyrite

Chlorite (9%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture

Grunerite (3%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture

Ankerite (2%) very fine 20-900µm subhedral grains, interstitial with quartz crystals

Sericite (1%) very fine 20-100µm euhedral-subhedral grains, typically occurring on the edges of quartz ankerite veining

Pyrrhotite (tr.) Local partial to total replacement of magnetite grains

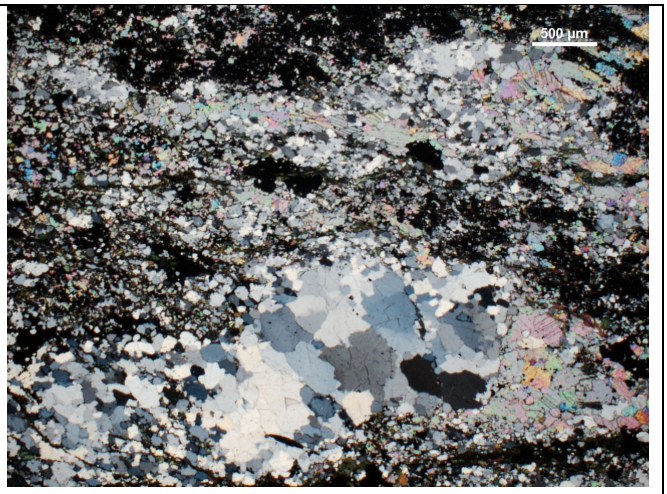
Chalcopyrite (tr.) Irregular blebs partial replacement of pyrrhotite/magnetite

Arsenopyrite (tr.) Very fine grained 20-100µm anhedral arsenopyrite grains

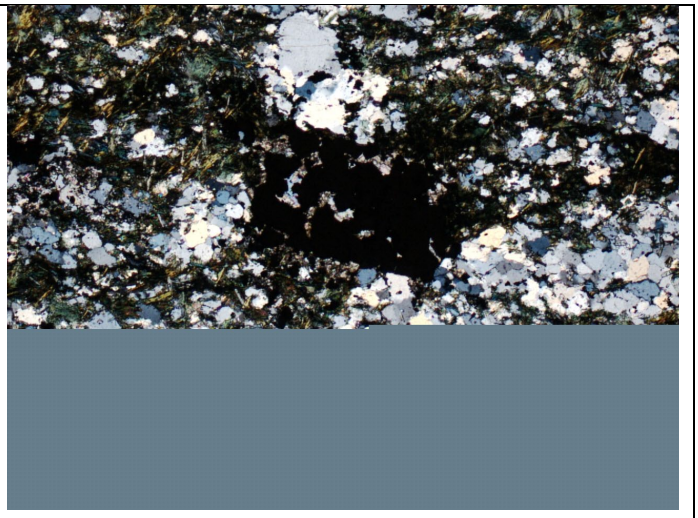
STRUCTURE

S_2A foliation defined by alternating layers of magnetite dominated lenses intercalated with quartz dominated lenses with grunerite and chlorite bands

Plan View

	
TQPL2017-020A-2.5X-PPL Alternating quartz-chlorite, magnetite-grunerite layers with foliation parallel quartz-ankerite-chlorite veins.	**TQPL2017-020A-2.5X-XPL** Magnetite dominated lenses with foliation subparallel quartz-ankerite-sericite vein, with distinct sericite halo.

Section View

	
TQPL2017-020B-2.5X-XPL Magnetite dominated (Intercalated with dquartz+grunerite) and quartz dominated (intercalated with minor magnetite and grunerite)	**TQPL2017-020B-5X-XPL** Quartz-ankerite vein crosutting foliation with relict pitted subhedral magnetite crystal, totally replaced by pyrrhotite

TQPL2017-021 **Chloritic Greywacke** **FW300-CC152-LW**

Description: Altered strongly foliated silty sedimentary rock with very fined grained disseminated sulphides and oxide minerals along foliation. Foliation is defined by alternating layers of compressed and stretched quartz grains and very fine grained euhedral to subhedral chlorite and sericite grains. There are trace very fine subhedral arsenopyrite, pyrrhotite and oxide blebs <100 µm disseminated throughout along foliation. Foliation subparallel quartz-ankerite veins and quartz-ankerite-pyrrhotite-arsenopyrite-chalcopyrite veins.

Quartz (55%) very fine-fine 20-500 µm deformed, elongated, fractured grains

Feldspar (10%) fine 20-500 µm deformed, elongated, fractured grains

Ankerite (5%) Large 200-6000 µm subhedral crystals proximal and within veinlets

Chlorite (20%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation as well as large porphyroclasts up to 2500µm

Sericite (10%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture

SULPHIDES

Arsenopyrite (tr.) Very fine grained 20-100µm anhedral arsenopyrite grains. Fine to medium grained euhedral grains typically occurring along quartz-sericite vein selvages associated with pyrrhotite and chalcopyrite

Pyrrhotite (tr.) Very fine grained 20-100µm anhedral pyrrhotite grains. Irregular pyrrhotite stringers within quartz-sericite veins with associated arsenopyrite and chalcopyrite

Chalcopyrite (tr.) Very fine-grained chalcopyrite blebs and stringers within quartz-ankerite vein

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

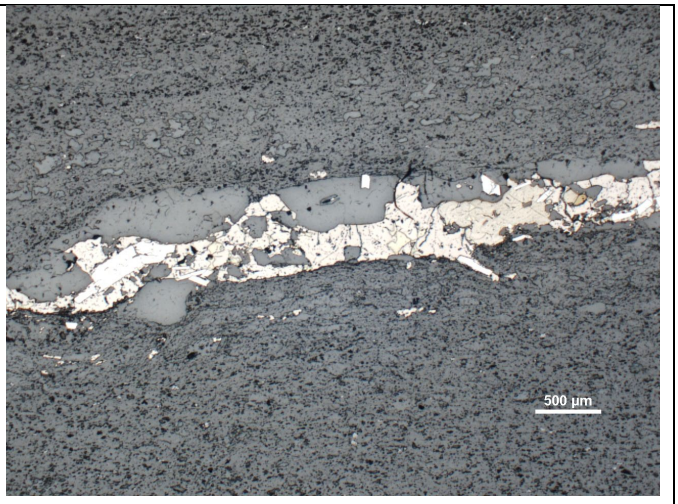
STRUCTURE

S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of predominantly sericite and minor chlorite with well-defined S_2A foliation dragged by D_2B shear bands developed within sericite and chlorite-rich domains

Plan View

TQPL2017-021A-2.5X-XPL Foliation defined by alternating fine grained chlorite (green) and quartz domains. Irregular shear bands developed within the chlorite dominated domains. Foliation subparallel quartz-ankerite veins.	**TQPL2017-021A-5X-XPL** Chlorite porphyroclast developed within mica dominated domain.

Section View

	
TQPL2017-021B-2.5X-XPL Foliation defined by alternating fine grained chlorite (green) and quartz domains. With S_2A foliation dragged by D_2B shear planes	**TQPL2017-021B-2.5X-RL** Foliation subparallel quartz-ankerite vein with pyrrhotite dominated stringer with associated euhedral arsenopyrite grains and irregular chalcopyrite blebs

TQPL2017-022 **Chloritic Greywacke** **FW300-CC152-LW**

Foliation parallel quartz-ankerite vein within Chloritic Greywacke taken within shear zone. Very coarse grained subhedral quartz and ankerite crystals. Veining contains fine to medium grained subhedral and euhedral arsenopyrite crystals and irregulat pyrrhotite blebs and stringers. Very fine grained arsenopyrite, pyrrhotite and oxide blebs occur along vein septae. Vein septae is made up of predominantly fine-grained chlorite and sericite.

Quartz (59%) Large 200-6000 µm subhedral crystals within veins

Feldspar (10%) fine 20-500 µm deformed, elongated, fractured grains

Ankerite(5%) Large 200-6000 µm subhedral crystals within veins

Chlorite 10%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Sericite (15%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture.

SULPHIDES

Arsenopyrite (1%) Very fine grained 20-3000µm anhedral arsenopyrite grains

Pyrrhotite (tr.) Very fine grained 20-1000µm anhedral pyrrhotite blebs

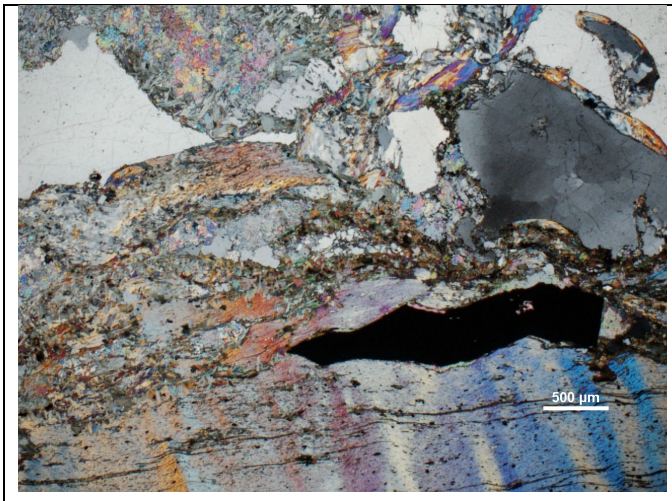
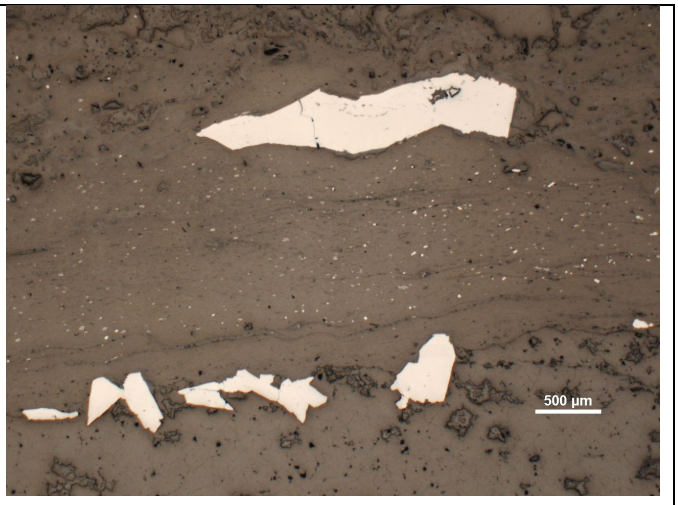
Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

STRUCTURE

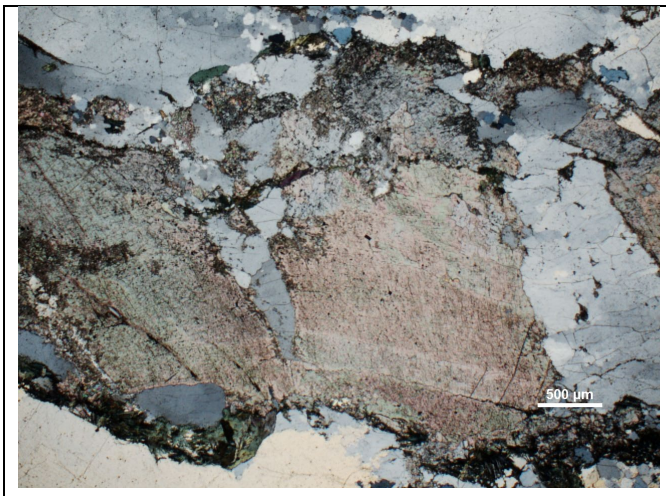
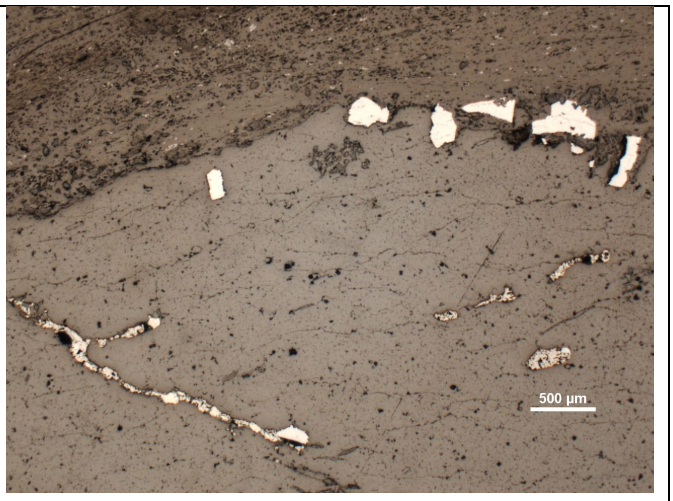
S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of predominantly sericite and minor chlorite with well-defined S_2A foliation dragged by D_2B shear bands developed within sericite and chlorite-rich domains

S_3 crenulation cleavage preferentially developed within clay-rich layers

Plan View

	
TQPL2017-022A-2.5X-XPL Intense sericite alteration along vein selvage and subhedral arsenopyrite crystal. Irregular quartz-ankerite veining with intense sericite alteration.	**TQPL2017-022A-2.5X-RL** Very fine-grained disseminated sulphides and oxide blebs along chlorite/sericite foliation. Larger subhedral arsenopyrite crystals occurring at vein selvages.

Section View

	
TQPL2017-022B-2.5X-PPL Coarse grained subhedral irregular quartz-ankerite veining.	**TQPL2017-022B-5X-RL** Medium grained subhedral arsenopyrite grains along quartz ankerite veining. Pyrrhotite dominated stringers within quartz-ankerite vein

TQPL2017-024 **Chloritic Greywacke** **FW300-CC155-LW**

Description: Altered foliated silty sedimentary rock with very fined grained disseminated sulphides and oxide minerals along foliation. Foliation is defined predominantly by compressed and elongated anhedral quartz grains with very fine grained euhedral to subhedral chlorite and sericite grains wrapping quartz grains. Foliation parallel quartz-ankerite veins. There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated throughout sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, but most of the oxide blebs have a pitted texture.

Quartz (50%) fine to medium grained 100-600 µm subhedral crystals within veins

Feldspar (15%) fine 20-500 µm deformed, elongated, fractured grains

Ankerite (15%) Medium to coarse 400-600 µm subhedral crystals within veins

Chlorite (10%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Sericite (10%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture.

SULPHIDES

Arsenopyrite (tr.) Fine to medium grained 20-300µm anhedral arsenopyrite grains

Pyrrhotite (tr.) Very fine grained 20-200µm anhedral pyrrhotite blebs

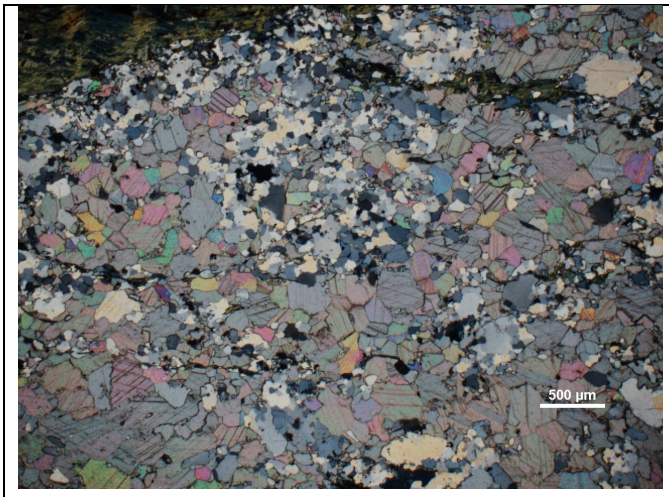
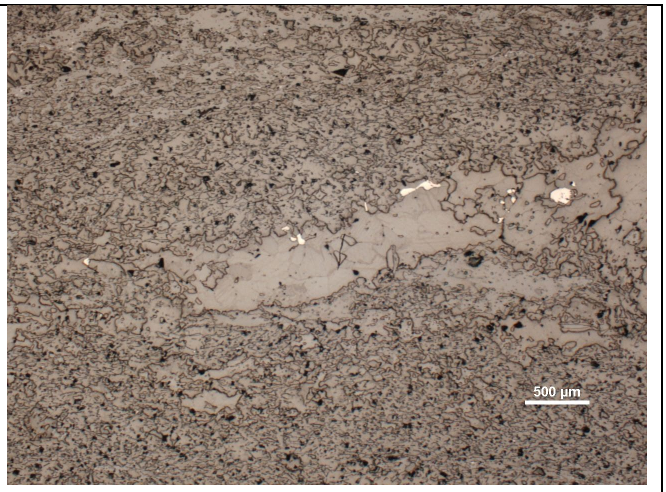
Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

STRUCTURE

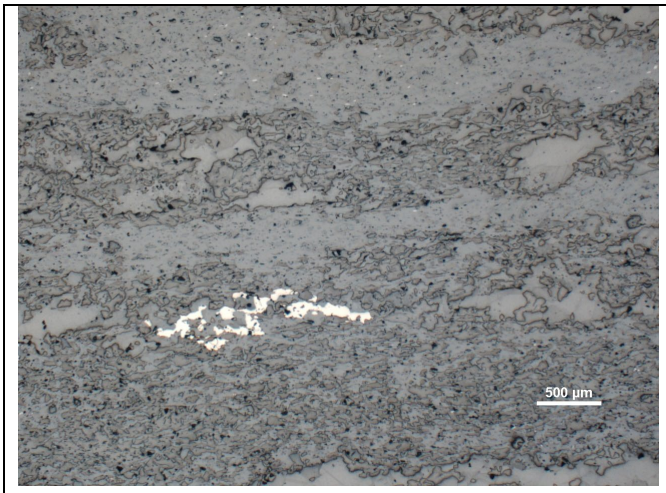
S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of predominantly sericite and minor chlorite with well-defined S_2A foliation dragged by D_2B shear bands developed within sericite and chlorite-rich domains

S_3 crenulation cleavage preferentially developed within clay-rich layers

Plan View

	
TQPL2017-024A-2.5X-PPL Foliation parallel quartz-ankerite vein.	**TQPL2017-024A-2.5X-RL** Foliation subparallel quartz-ankerite vein with fine grained irregular pyrrhotite blebs

Section View

	
TQPL2017-024B-2.5X-RL Medium grained irregular pyrrhotite blebs occurring on the edge of quartz-ankerite vein	**TQPL2017-024B-5X-XPL** Foliation parallel quartz-ankerite veining between chlorite and sericite dominated domains with fine grained irregular pyrrhotite blebs.

TQPL2017-025 **Chloritic Greywacke** **FW300-CC155-LW**

Description: Altered and deformed silty sedimentary rock with very fined grained disseminated sulphides and oxide minerals along foliation. Foliation is defined by shear bands made up of fine micaceous material. Primary foliation made up of predominantly by compressed and elongated anhedral quartz and feldspar grains. Foliation parallel chlorite bands. Foliation subparallel quartz-ankerite veins with sulphides, seems to be along primary foliation. There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated throughout sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, but most of the oxide blebs have a pitted texture.

Quartz (50%) fine to medium grained subhedral grains 20-100 µm

Feldspar (20%) fine to medium grained subhedral grains 20-100 µm

Chlorite (10%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Sericite (15%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture.

Ankerite (5%) Medium to coarse 400-600 µm subhedral crystals proximal to and within veins.

SULPHIDES

Arsenopyrite (tr.) Fine to medium grained 20-300µm anhedral arsenopyrite grains

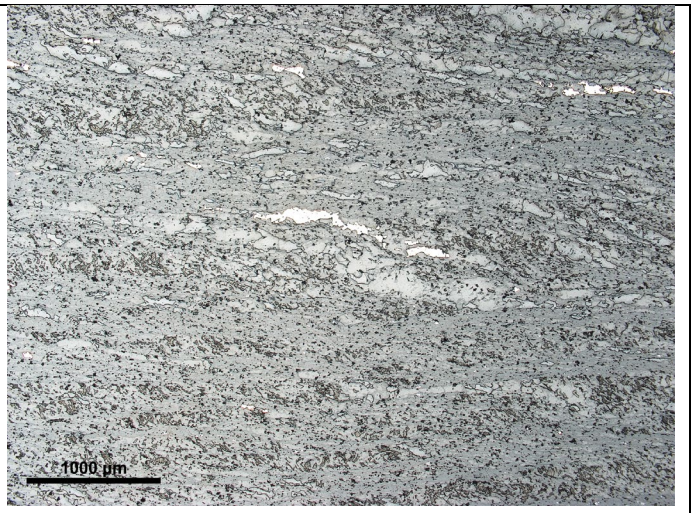
Pyrrhotite (tr.) Very fine grained 20-200µm anhedral pyrrhotite blebs

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

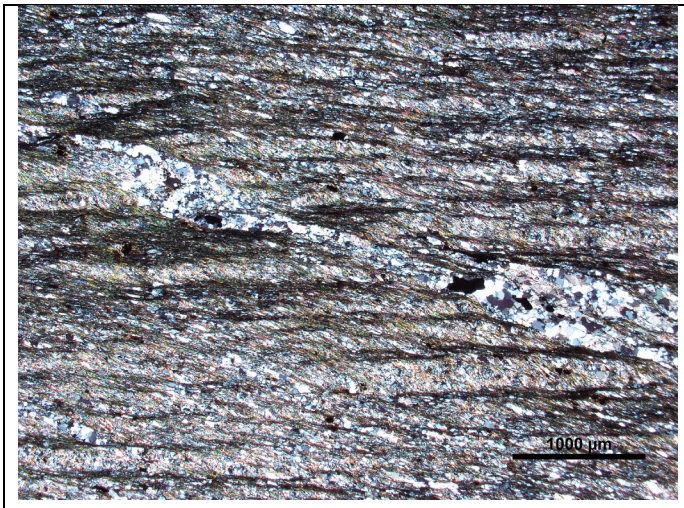
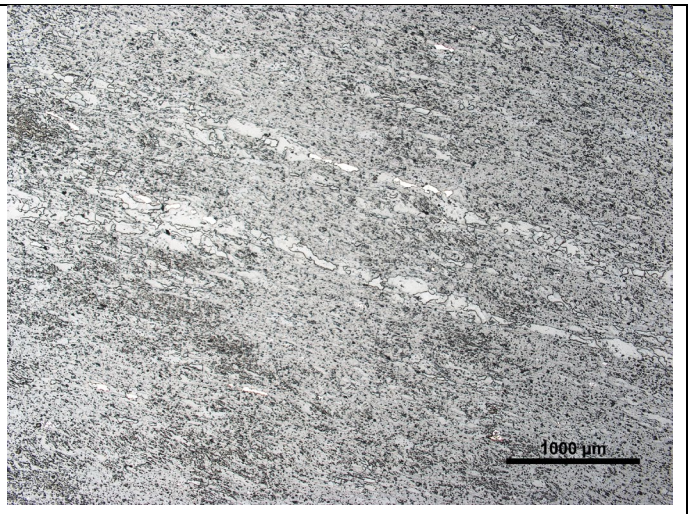
STRUCTURE

S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of predominantly sericite and minor chlorite with well-defined S_2A foliation dragged by D_2B shear bands developed within sericite and chlorite-rich domains

Plan View

	
TQPL2017-025A-2.5X-PPL Fine grained siltstone with distinct S_2A foliation dragged by D_2B shear bandswith quartz-ankerite-sulphide veins along primary foliation in between shear planes	**TQPL2017-025A-2.5X-RL** Distinct S_2A foliation dragged by D_2B shear bands within siltstone showing pyrrhotite and quartz veining occurring parallel to primary foliation

Section View

	
TQPL2017-025B-2.5X-PPL Distinct S2A foliation dragged by D2B shear bandswithin siltstone, obliquely crosscut by quartz+/-ankerite-pyrrhotite veinlets	**TQPL2017-025B-2.5X-RL** Obliquely crosutting quartz +/- ankerite-pyrrhotite veinlets

TQPL2017-026 **Pelitic BIF** **FW300-CC155-LW**

Description: Altered and deformed silty sedimentary rock with very fined grained disseminated sulphides and magnetite and other oxide minerals along foliation. Foliation is defined by shear bands made up of fine micaceous material and alternating domains of fine-grained quartz/feldspar and chlorite/sericite although the majority of the thin section displays a chlorite/sericite domain. Primary foliation made up of predominantly anhedral quartz and feldspar grains. Foliation subparallel quartz+/-ankerite veins with coarse grained subhedral and anhedral arsenopyrite crystals and fine grained subhedral pyrrhotite blebs. Chlorite also forms irregular orientations. There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated throughout sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, but most of the oxide blebs have a pitted texture.

Quartz (35%) fine grained subhedral grains 20-100 µm

Feldspar (15%) fine to medium grained subhedral grains 20-100 µm

Chlorite (30%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Sericite (20%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture.

SULPHIDES

Arsenopyrite (tr.) Fine to medium grained 20-300µm anhedral arsenopyrite grains

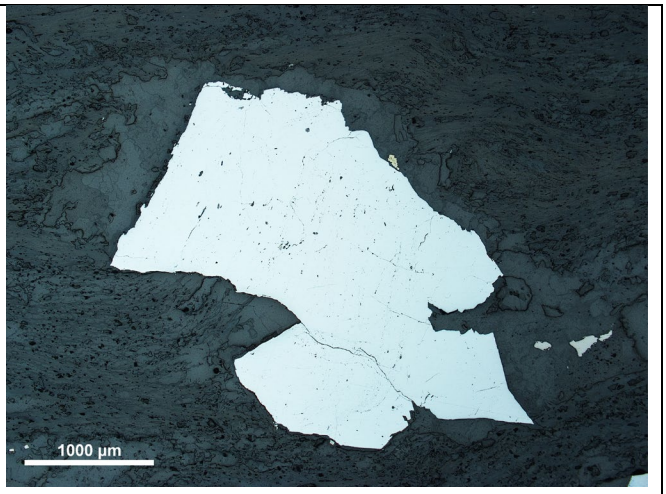
Pyrrhotite (tr.) Very fine grained 20-200µm anhedral pyrrhotite blebs

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

STRUCTURE

S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of predominantly sericite and minor chlorite

Plan View

	
TQPL2017-026-5X-PPL Quartz/feldspar and chlorite/sericite domains. Irregular growth of chlorite with differing orientations	**TQPL2017-026-2.5X-RL** Subhedral arsenopyrite crystal with quartz pressure shadows and bending of chlorite/sericite foliation

TQPL2017-027 **Chloritic Greywacke** **FW300-CC155-LW**

Description: Altered and deformed sedimentary rock with coarse grained subhedral arsenopyrite and fine-grained oxide minerals along foliation. Foliation is defined by S2A foliation dragged by D2B shear bands predominantly by alternating layers of elongated quartz/feldspar and chlorite/sericite domains. Coarse grained suhedral arsenopyrite crystals have associated quartz strain shadows with surrounding foliation bending around it, suggesting rotation. There are trace very fine pyrrhotite and oxide blebs <100 µm disseminated sample. Most of the pyrrhotite grains are subhedral-anhedral blebs, and most of the oxide blebs are sub to anhedral and have a pitted texture.

Quartz (50%) fine grained subhedral elongated grains 20-100 µm

Feldspar (15%) fine grained subhedral elongated grains 20-100 µm

Chlorite (20%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Sericite (8%) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture.

Ankerite (5%) Medium to coarse 400-600 µm subhedral crystals proximal to and within veins.

SULPHIDES

Arsenopyrite (2%) medium to coarse grained 200-2000µm anhedral arsenopyrite grains

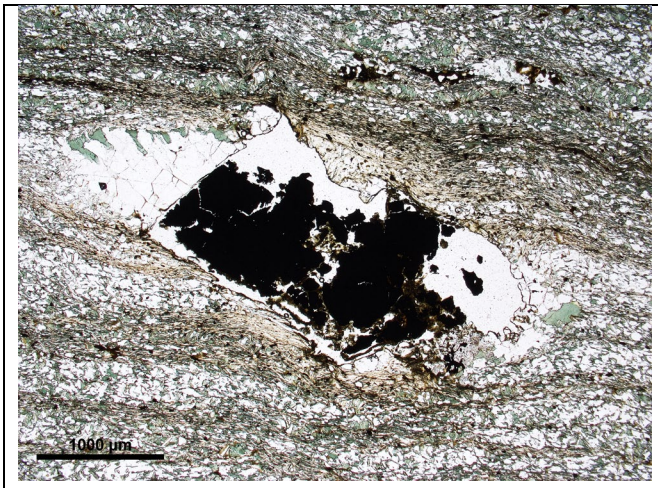
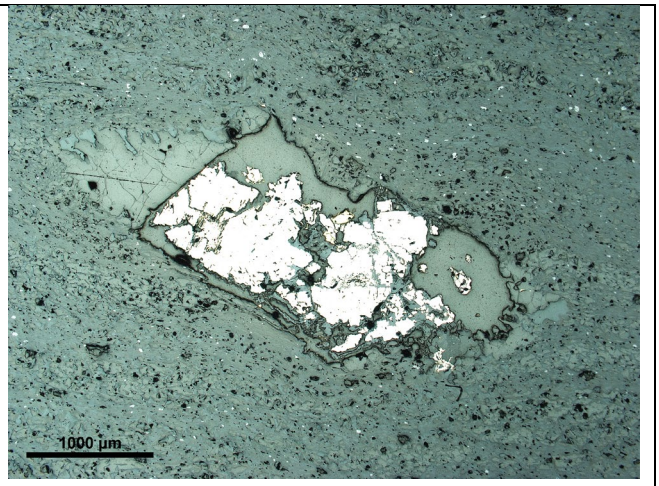
Pyrrhotite (tr.) Very fine grained 20-150µm anhedral pyrrhotite blebs

Oxides (tr.) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

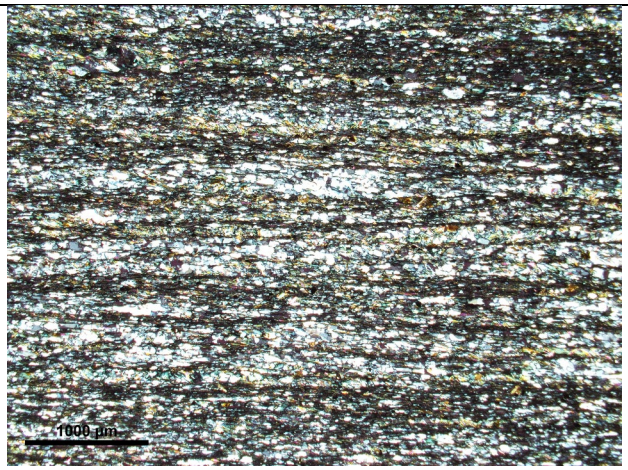
STRUCTURE

S_2A Foliation defined by alternating layers of deformed elongated quartz and feldspar grains and clay-rich layers made up of predominantly sericite and minor chlorite

Plan View

	
TQPL2017-027A-2.5X-PPL Alternating fine grained elongated quartz/feldspar and chlorite/sericite domains with large altered subhedral arsenopyrite crystal with distinct quartz pressure shadow and foliation drag	**TQPL2017-025A-2.5X-RL** Altered subhedral arsenopyrite crystal with oxide replacement around edges sitting within quartz pressure shadow. Fine grained disseminated anhedral oxide blebs and anhedral pyrrhotite blebs.

Section View

	
TQPL2017-027B-2.5X-XPL Alternating fine grained elongated quartz/feldspar and chlorite/sericite domains	**TQPL2017-027B-2.5X-PPL** Altered subhedral arsenopyrite crystal with oxide replacement around edges sitting within quartz pressure shadow.

TQPL2017-028 **Chloritic Greywacke** **FW300-CC152-LW**

Description: Chlorite dominated green silty sedimentary rock. Foliation is defined mainly by fine grained elongated chlorite with minor quartz, grunerite and feldspar, as well as quartz layers. Fine to medium grained subhedral-euhedral sulphides disseminated within matrix with no preferred orientation. Sulphides are dominantly arsenopyrite with minor to trace pyrrhotite. Some sulphides have recrystallized pressure shadows.

Chlorite (45%) fine grained subhedral-euhedral elongated grains 20-200 µm

Quartz (30%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

Grunerite (5%) fine grained 100-200µm subhedral grunerite clusters, typically elongated along foliation orientation

Feldspar (5%) very fine 20-200µm subhedral grains throughout sample

Sericite (10%) fine grained subhedral-euhedral elongated grains 20-200 µm

SULPHIDES

Arsenopyrite (5%) medium to coarse grained 200-1000µm subhedral-euhedral arsenopyrite grains

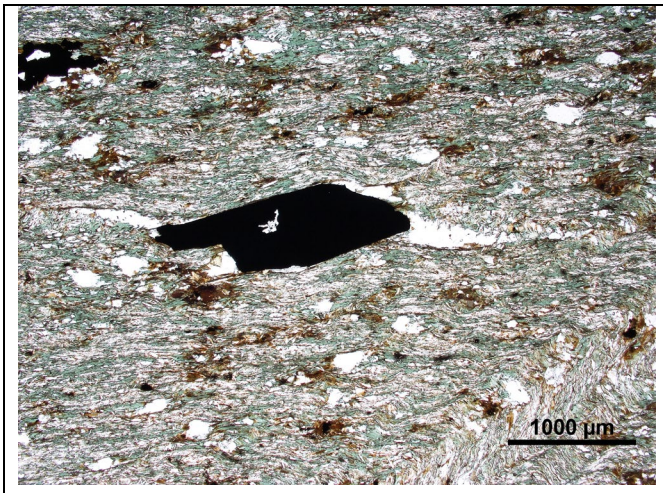
Pyrrhotite (tr.) Very fine grained 20-150µm anhedral pyrrhotite blebs.

STRUCTURE

S_2A deposit fabric defined mainly by fine grained elongated chlorite with minor quartz, grunerite and feldspar, as well as quartz layers

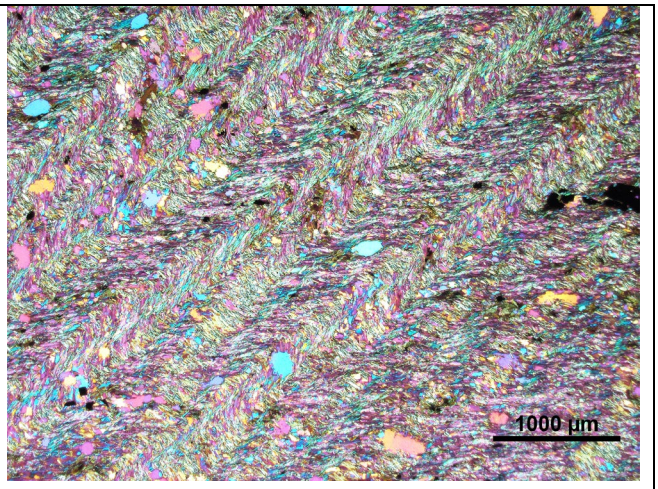
S_3 penetrative crenulation cleavage in this unit

Plan View



TQPL2017-028A-2.5X-PPL

Coarse grained subhedral arsenopyrite crystal with recrystallized quartz strain shadows subparallel to S_2A foliation.



TQPL2017-028A-2.5X-RL

Chlorite dominated layer with S_2A and S3 foliation relationships.

TQPL2017-029 **Pelitic BIF** **FW300-CC155-LW**

Description: Strongly altered and mineralized chlorite rich band within BIF. Greenish coloured silty interval within BIF. Sample is made up of predominantly chlorite, quartz, grunerite. S_2A foliation is defined by elongated chlorite and minor quartz and grunerite. Mineralized quartz-ankerite-sericite veins subparallel to foliation with pervasive sericite alteration in surrounding rocks. Subhedral/euhedral arsenopyrite replacing magnetite proximal to foliation subparallel veins, pyrrhotite stringers within veins, and fine disseminations throughout sample.

Chlorite (40%) fine grained subhedral-euhedral elongated grains 20-200 µm

Quartz (30%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

Sericite (15%) fine grained subhedral-euhedral elongated grains 20-200 µm

Grunerite (10%) fine grained 100-200µm subhedral grunerite clusters, typically elongated along foliation orientation

Magnetite (1%) medium to coarse grained 200-1000µm subhedral-euhedral arsenopyrite grains

SULPHIDES

Arsenopyrite (4%) medium to coarse grained 200-1000µm subhedral-euhedral arsenopyrite grains

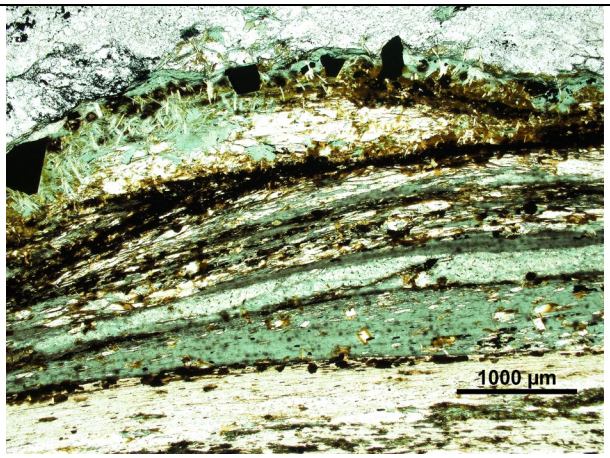
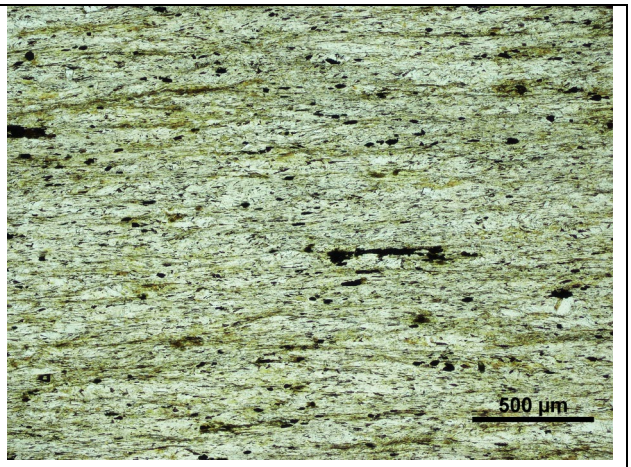
Pyrrhotite (tr.) Very fine grained 20-150µm anhedral pyrrhotite blebs

STRUCTURE

S_2A deposit fabric defined mainly by fine grained elongated chlorite with minor quartz,

grunerite as well as quartz layers

Plan View

	
TQPL2017-029A-2.5X-PPL Coarse grained subhedral arsenopyrite crystal with recrystallized quartz strain shadows subparallel to S_2A foliation.	**TQPL2017-029A-2.5X-PPL** Chlorite dominated interval with clear S_2A foliation

TQPL2017-031 **Pelitic BIF** **`FW300-CC155-LW**

Description: Fine grained greenish silty sedimentary rock. Sample is made up of fine-grained elongated chlorite, quartz, grunerite, and minor feldspar as well as Chlorite dominated bands. S_2A foliation is defined by elongated chlorite and minor quartz feldspar and grunerite as well as chlorite dominated bands. Mineralized quartz-ankerite-sericite veins subparallel to foliation with minor pervasive sericite alteration in surrounding rocks. Subhedral/euhedral arsenopyrite along foliation and very fine anhedral pyrrhotite blebs disseminated through sample.

Chlorite (40%) fine grained subhedral-euhedral elongated grains 20-200 µm

Quartz (40%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

Grunerite (10%) fine grained 100-200µm subhedral grunerite clusters, typically elongated along foliation orientation

Feldspar (5%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

Sericite (3%) fine grained subhedral-euhedral elongated grains 20-200 µm

SULPHIDES

Arsenopyrite (2%) medium to coarse grained 200-1000µm subhedral-euhedral arsenopyrite grains

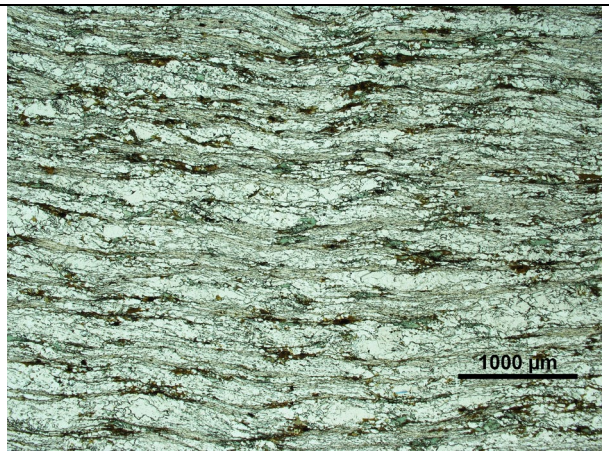
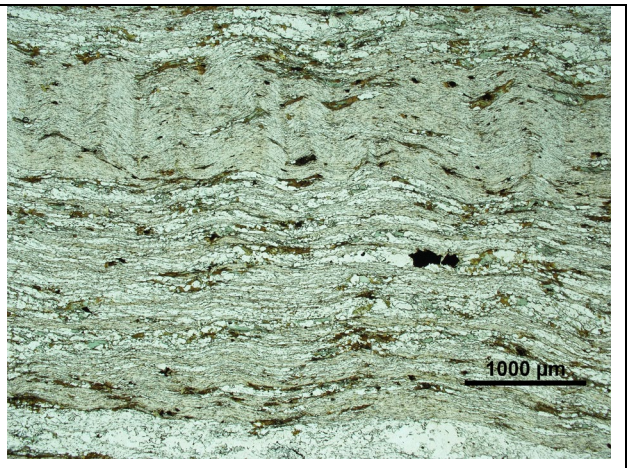
Pyrrhotite (tr.) Very fine grained 20-150µm anhedral pyrrhotite blebs

STRUCTURE

S_2A deposit fabric defined mainly by fine grained elongated chlorite with minor quartz,

grunerite as well as quartz layers

S_3 crenulation cleavage preferentially developed in mica (chlorite) dominated layers

	
TQPL2017-031A-2.5X-PPL Alternating quartz and mica (chlorite) dominated layers defining S_2A foliation and foliation parallel quartz-ankerite veins	**TQPL2017-031A-2.5X-RL** Alternating quartz and mica (chlorite) dominated layers defining S_2A foliation and Chlorite dominated interval displays S_3 crenulation clevage

TQPL2017-032 **Pelitic BIF** **FW300-CC155-LW**

Description: Dark green chlorite rich BIF. Sample made up of extremely fine-grained chlorite bands alternating with smaller quartz rich layers and medium grained subhedral to anhedral pitted textured magnetite layers within chlorite and quartz layers. Some magnetite grains are completely altered and pitted. Very fine grained pyrrhotite disseminated along foliation. Foliation subparallel to parallel quartz-ankerite veins.

Chlorite (55%) Extremely fine-grained chlorite making 200-2000 µm layers

Quartz (30%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

Magnetite (15%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

SULPHIDES

Pyrrhotite (tr.) Very fine grained 20-150µm anhedral pyrrhotite blebs disseminated along foliation

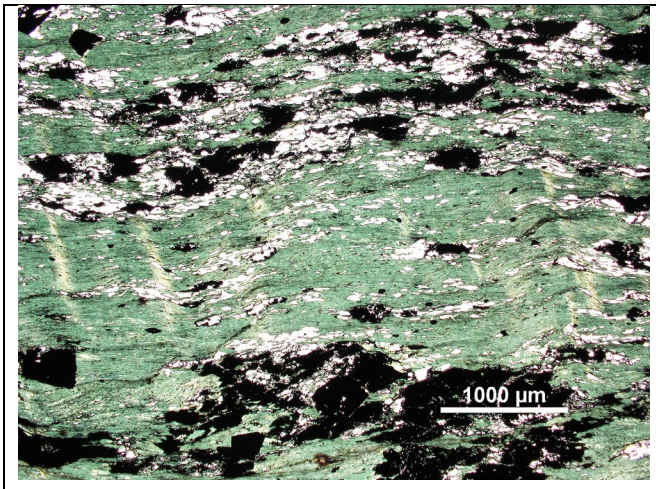
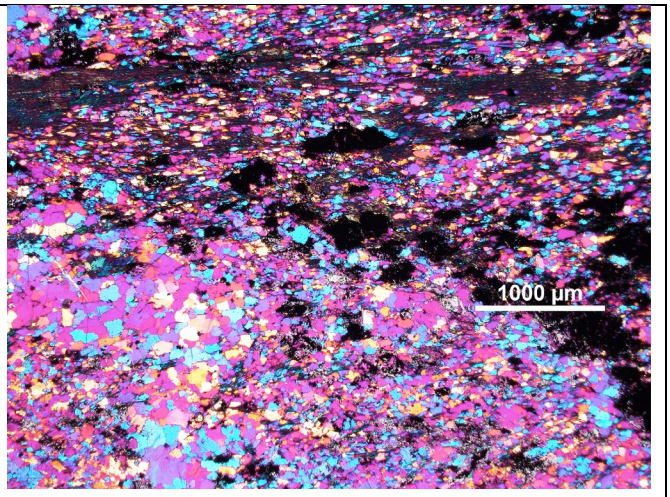
STRUCTURE

S_2A deposit fabric defined mainly by fine grained chlorite, magnetite, and

quartz layers

S3 crenulation cleavage perpendicular to S_2A penetrative fabric

Plan View

	
TQPL2017-032-2.5X-PPL Extremely fine grained chlorite rich layers and quartz rich layers with semi magnetite layers within both making up S_2A foliation, with distinct S3 crenulation cleavage developed in chlorite rich layer	**TQPL2017-032-2.5X-XPL** Foliation subparallel quartz ankerite vein

TQPL2017-033 **Pelitic BIF** **FW300-CC155-LW**

Description: Dark green chlorite-rich BIF. Sample made up of extremely fine-grained chlorite/grunerite bands alternating with smaller quartz rich layers and medium grained subhedral to anhedral pitted textured magnetite layers within chlorite and quartz layers. Some magnetite grains are completely altered and pitted and partially replaced by irregular pyrrhotite blebs. Very fine grained pyrrhotite disseminated along foliation. Foliation subparallel to parallel quartz-ankerite veins.

Chlorite (50%) Extremely fine-grained chlorite making 200-2000 µm layers

Quartz (30%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

Magnetite (15%) fine grained subhedral grains 100-400 µm throughout sample, but also quartz dominated layers

Grunerite (5%) fine grained 100-200µm subhedral grunerite clusters, typically elongated along foliation orientation

SULPHIDES

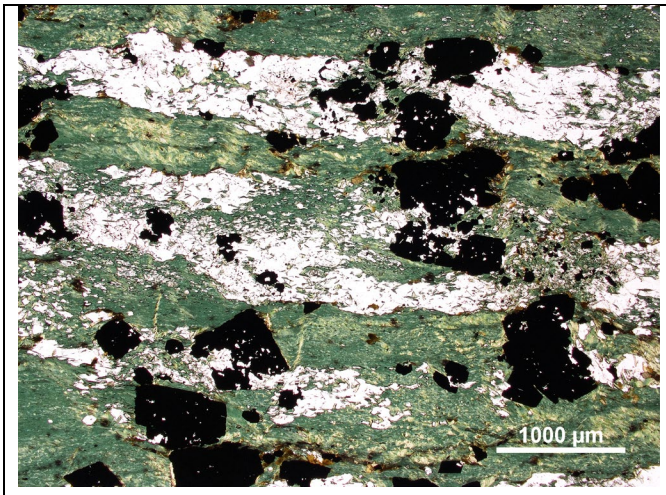
Pyrrhotite (tr.) Very fine grained 20-150µm anhedral pyrrhotite blebs disseminated along foliation

STRUCTURE

S_2A deposit fabric defined mainly by fine grained chlorite, magnetite, and

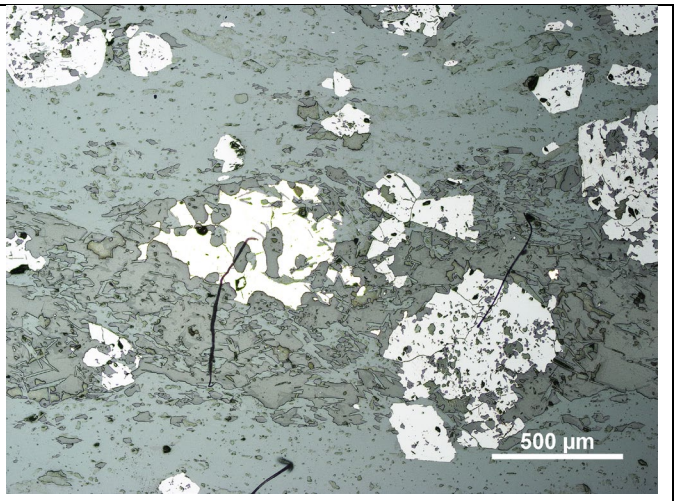
quartz layers

S3 crenulation cleavage perpendicular to S_2A penetrative fabric



TQPL2017-033-2.5X-PPL

Extremely fine-grained chlorite/grunerite rich layers and quartz rich layers with semi magnetite laters within both making up S_2A foliation, with distinct S3 crenulation cleavage overprinting



TQPL2017-033-5X-RL

Subhedral-anhedral pitted textured pyrrhotite grains and irregular pyrrhotite grain totally replacing relict magnetite

TQPL2017-034 **Pelitic BIF** **FW300-CC155-LW**

Description: Strongly deformed silty sedimentary rock with very fined grained disseminated sulphides and oxide minerals along foliation. Foliation is defined by shear bands made up of fine micaceous material. Primary foliation made up of predominantly by compressed and elongated anhedral quartz and very minor feldspar grains and minor grunerite. Foliation subparallel quartz-ankerite veins seem to be structures. There are very fine anhedral arsenopyrite and oxide blebs disseminated throughout sample. Most of the arsenopyrite grains are subhedral-anhedral blebs, and most of the oxide blebs have a pitted texture.

Quartz (50%) fine to medium grained subhedral grains 20-100 µm

Chlorite (32%) very fine-fine 20-200µm euhedral-subhedral grains, elongated along foliation orientation

Feldspar (9%) fine to medium grained subhedral grains 20-100 µm

Grunerite (8%) fine to medium grained subhedral grains 20-100 µm

Sericite (tr.) very fine 20-100µm euhedral-subhedral grains, interstitial with chlorite and elongated along foliation orientation, but sometimes fanning texture.

SULPHIDES

Arsenopyrite (0.5%) Fine to medium grained 20-300µm anhedral arsenopyrite grains

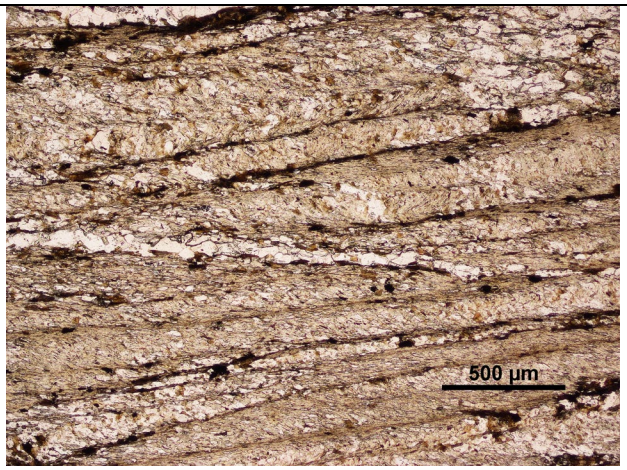
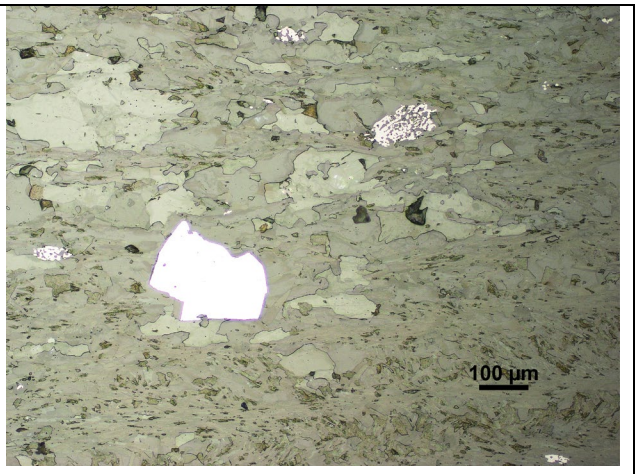
Pyrrhotite (tr.) Very fine grained 20-200µm anhedral pyrrhotite blebs

Oxides (0.5%) very fine 20-100µm subhedral-anhedral blebs with pitted texture disseminated along foliation throughout sample (much less abundant than pyrrhotite)

STRUCTURE

S_2A deposit fabric defined mainly by shear bands made up of fine micaceous material

S3 crenulation cleavage perpendicular to S_2A penetrative fabric

	
TQPL2017-034-5X-PPL Fine grained chlorite and quartz matrix, with **S_2A** fabric defined by distinct S2A foliation dragged by D2B shear bandsoverprinted by **S_2B** quartz ankerite veining	**TQPL2017-032-10X-RL** Subhedral-anhedral pitted textured magnetite grains and irregular subhedral arsenopyrite grains

TQPL2017-036 **Oxide-silicate BIF** **FW300-CC155-LW**

Description: Magnetite-chlorite-chert BIF with minor grunerite. Magnetite dominated layers contain subhedral to anhedral magnetite with pitted texture, some grains have been completely altered, and minor quartz and chlorite. Chert dominated layers contain minor chlorite and magnetite. Some layers are dominated by subhedral fine grained aligned chlorite grains with minor grunerite and magnetite. Sample contains small bedding parallel and crosutting quartz-ankerite-sericite veins rich in irregular pyrrhotite stringers and blebs with minor arsenopyrite and chalcopyrite. There is very fine-grained irregular disseminated pyrrhotite blebs along foliation, sometimes partially replacing magnetite grains.

Quartz (45%) fine grained subhedral grains 20-200 µm

Magnetite (30%) fine to coarse grained 20-700µm subhedral to anhedral grains, with pitted texture, some of which have been completely altered, and some partially to completely replaced by pyrrhotite blebs

Chlorite (20%) fine to medium grained euhedral to subhedral grains 20-100 µm

Grunerite (3%) fine grained subhedral grains 20-100 µm typically associated with chlorite rich layers

Sericite (tr.) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

SULPHIDES

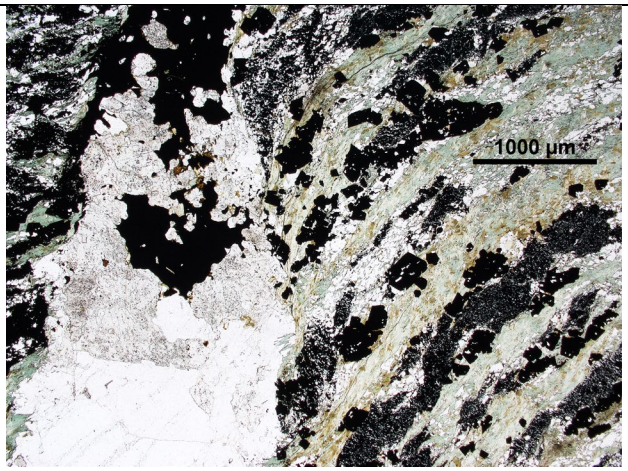
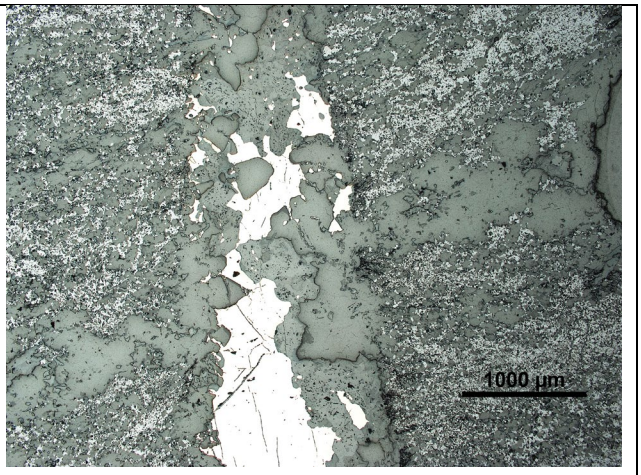
Pyrrhotite (2%) Very fine grained 20-200µm anhedral pyrrhotite blebs within quartz-ankerite veins or partially to completely replacing magnetite grains

Arsenopyrite (tr.) Fine grained 20-300µm anhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

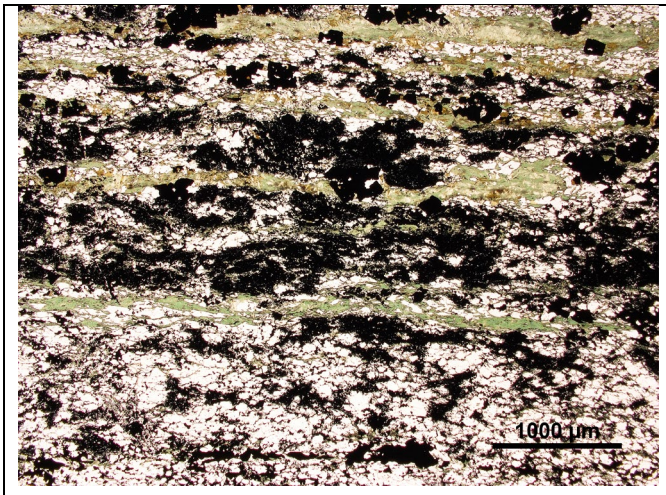
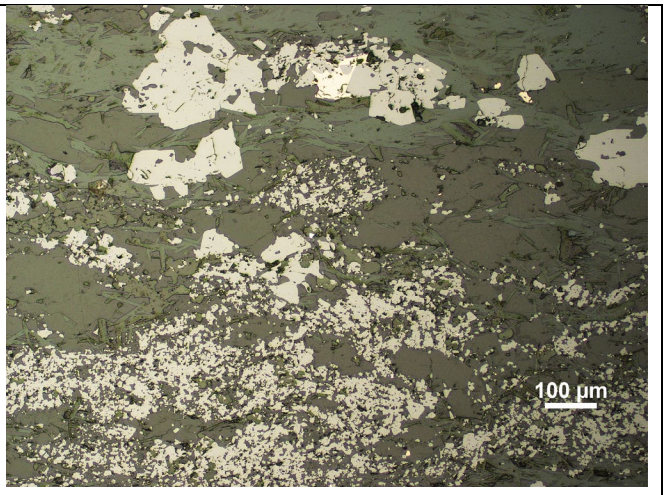
STRUCTURE

S_2A deposit fabric defined by layering S_1/S_0

Plan View

	
TQPL2017-036A-2.5X-PPL Magnetite, chert, chlorite (with minor grunerite) dominated layers, crosscut by pyrrhotite bearing quartz-ankerite-sericite vein	**TQPL2017-036A-2.5X-RL** Crosscutting quartz-ankerite-sericite vein with irregular pyrrhotite blebs within

Section View

	
TQPL2017-036B-2.5X-PPL **S_2A** deposit fabric defined by Magnetite, chert, chlorite(with minor grunerite) dominated layers	**TQPL2017-032-10X-RL** Irregular subhedral to anhedral magnetite rich layering with partial pyrrhotite replacement

TQPL2017-037 **Chloritic Greywacke** **FW300-CC155-LW**

Description: Well foliated fine grained greyish green siltstone with very fine grained anhedral arsenopyrite, pyrrhotite and oxide minerals disseminated along foliation. Foliation is defined by elongated quartz and minor feldspar grains and fine micaceous shear bands. Main foliation is defined by chlorite rich layers with distinct and fabrics. There is foliation parallel to sub-parallel and crosscutting quartz-ankerite+/-sericite veins and coarse grained anhedral ankerite disseminated in surrounding host rock.

Quartz (45%) fine grained subhedral elongated grains 20-200 µm

Chlorite (20%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

Ankerite (10%) fine to coarse grained 20-1000µm subhedral-anhedral grains, within quartz ankerite veining and surrounding host rock

Grunerite (5%) fine grained subhedral grains 20-100 µm typically associated with chlorite rich layers

Feldspar (10%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

Sericite (10%) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

SULPHIDES

Pyrrhotite (tr.) Very fine grained 20-80µm anhedral pyrrhotite blebs within quartz-ankerite veins or partially to completely replacing magnetite grains

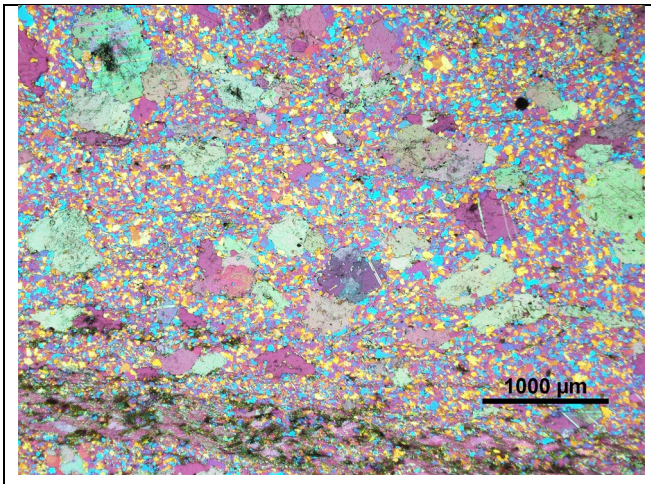
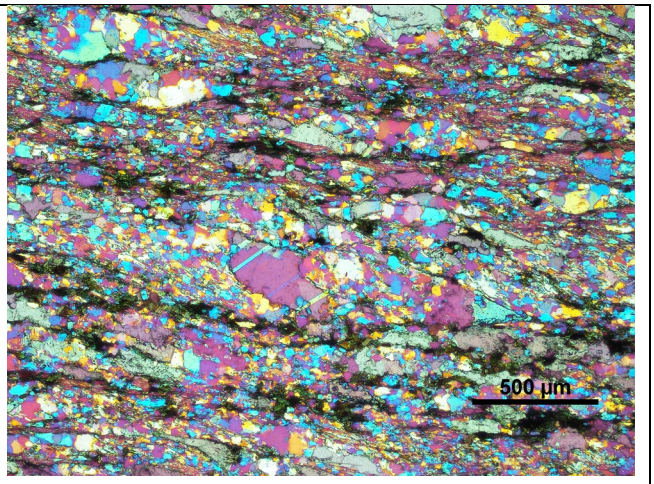
Arsenopyrite (tr.) Fine grained 20-80µm anhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

Oxides (tr.) Very fine grained irregular anhedral magnetite and ilmenite blebs.

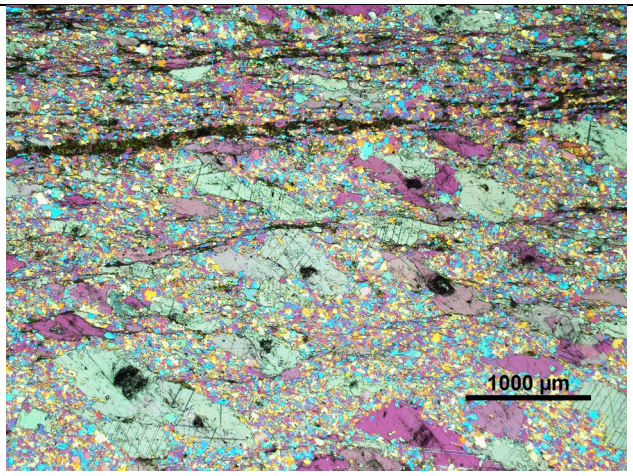
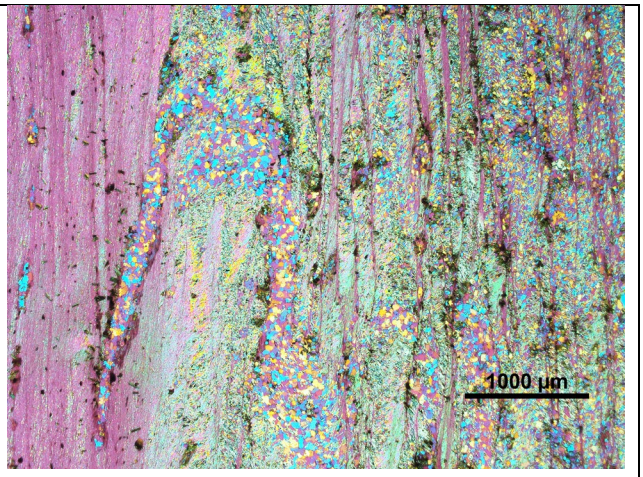
STRUCTURE

S_2A deposit fabric defined by layering and folding of S_1/S_0

Plan View

	
TQPL2017-037A-2.5X-XPL Recrystallized foliation subparallel quartz dominated vein with coarse grained subhedral ankerite aligned along shear band	**TQPL2017-037-5X-XPL** Quartz-feldspar dominated matrix with distinct micaceous S_2A foliation dragged by D_2B shear bands and coarse grained subhedral ankerite throughout

Section View

	
TQPL2017-037B-2.5X-PPL Recrystallized foliation subparallel vein, or quartz rich layer with micaceous S_2A foliation dragged by D_2B shear bands and coarse grained subhedral ankerite grains	**TQPL2017-037B-10X-RL** S_2A penetrative fabric defined by axial planar F_2A/B folding of quartz (minor feldspar) dominated layer (S_1/S_0)

TQPL2017-039 **Chloritic Greywacke** **FW300-CC155-LW**

Description: Well foliated fine grained greyish green siltstone with very fine grained anhedral arsenopyrite, pyrrhotite and oxide minerals disseminated along foliation. Foliation is defined by elongated quartz and minor feldspar grains and fine micaceous shearbands. Sample shows pervasive ankerite and sericite alteration. There are foliation parallel to sub-parallel quartz-ankerite+/-sericite veins.

Quartz (55%) fine grained subhedral elongated grains 20-200 µm

Ankerite (15%) fine to coarse grained 20-1000µm subhedral-anhedral grains, within quartz ankerite veining and surrounding host rock

Sericite (13%) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

Feldspar (10%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

Chlorite (5%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

Grunerite (tr.) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

SULPHIDES

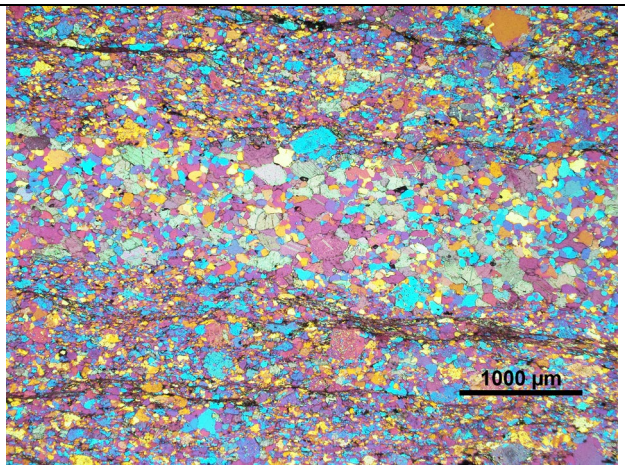
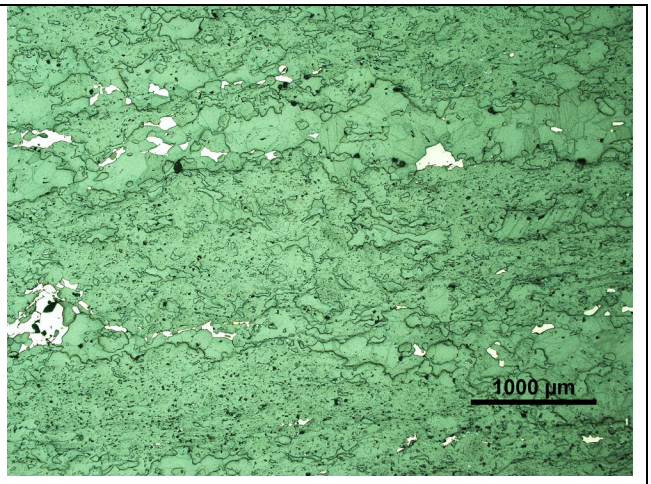
Pyrrhotite (2%) Very fine grained 20-80µm anhedral pyrrhotite blebs within quartz-ankerite veins or partially to completely replacing magnetite grains

Arsenopyrite (tr.) Fine grained 20-80µm anhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

Oxides (tr.) Very fine grained irregular anhedral magnetite and ilmenite blebs.

STRUCTURE

S_2A foliation defined by aligned sericite and chlorite

	
TQPL2017-039A-2.5X-XPL Quartz-ankerite vein and associated ankerite and minor sericite alteration in wall rock	**TQPL2017-039B-2.5X-RL** Irregular anhedral pyrrhotite blebs/stringers along foliation and on irregular quartz-ankerite veins margins

TQPL2017-040 **Chloritic Greywacke** **FW300-CC155-LW**

Description: foliated fine grained greyish green siltstone with very fine grained anhedral arsenopyrite, pyrrhotite and oxide minerals disseminated along foliation. Foliation is defined by fine micaceous shear bands and F_2A axial planar folding of quartz rich layers S_1/S_0. Distinct micaceous Sericite/chlorite layers with well-developed shear planes. foliation parallel to sub-parallel quartz-ankerite+/-sericite veins with irregular subhedral and anhedral pyrrhotite, arsenopyrite and minor chalcopyrite and oxides.

Quartz (45%) fine grained subhedral grains 20-200 µm

Chlorite (15%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

Sericite (20%) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

Ankerite (8%) fine to coarse grained 20-1000µm subhedral-anhedral grains, within quartz ankerite veining and surrounding host rock

Feldspar (10%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

SULPHIDES

Pyrrhotite (2%) Very fine grained 20-220µm anhedral pyrrhotite blebs within quartz-ankerite veins or partially to completely replacing magnetite grains

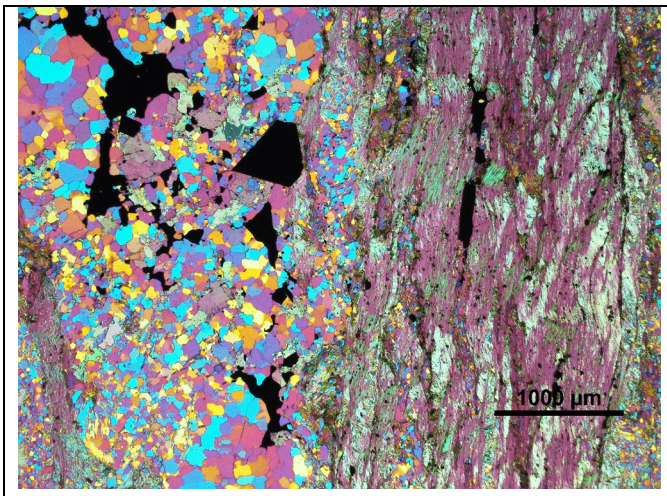
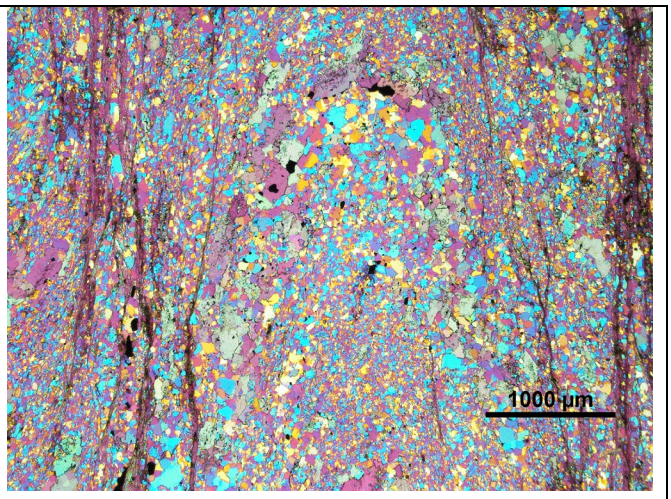
Arsenopyrite (tr.) Fine grained 20-150µm anhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

Oxides (tr.) Very fine grained irregular anhedral magnetite and ilmenite blebs.

STRUCTURE

S_1/ S_0 Tightly folded with axial plane parallel to S_2A foliation

S_2A foliation defined by aligned sericite and chlorite

	
TQPL2017-040-2.5X-XPL Quartz-ankerite vein with irregular anhedral sulphide blebs with pervasive sericitic alteration on the margins.	**TQPL2017-040-2.5X-XPL** S_2A fabric defined by axial planar folding of S_1/S_0 quartz rich layers.

TQPL2017-041 **Chloritic Greywacke** **FW300-CC155-LW**

Description: foliated fine grained greyish green siltstone with very fine grained anhedral arsenopyrite, pyrrhotite and oxide minerals disseminated along foliation. Foliation is defined by fine micaceous shearbands and F_2A axial planar folding of quartz rich layers S_1/S_0. Distinct micaceous Sericite/chlorite layers with well-developed shear planes. foliation parallel to sub-parallel quartz-ankerite+/-sericite veins with irregular subhedral and anhedral pyrrhotite, arsenopyrite and minor chalcopyrite and oxides.

Quartz (50%) fine grained subhedral grains 20-200 µm

Feldspar (10%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

Chlorite (20%) fine grained euhedral to subhedral grains 20-100 µm elongated with foliation

Sericite (10%) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

Grunerite (3%) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

Ankerite (5%) fine to coarse grained 20-1000µm subhedral-anhedral grains, within quartz ankerite veining and surrounding host rock

SULPHIDES

Pyrrhotite (2%) Very fine grained 20-220µm anhedral pyrrhotite blebs within quartz-ankerite veins or partially to completely replacing magnetite grains

Arsenopyrite (tr.) Fine grained 20-150µm anhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

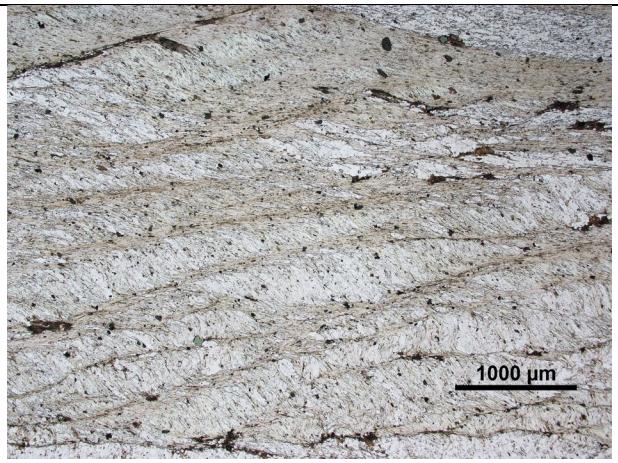
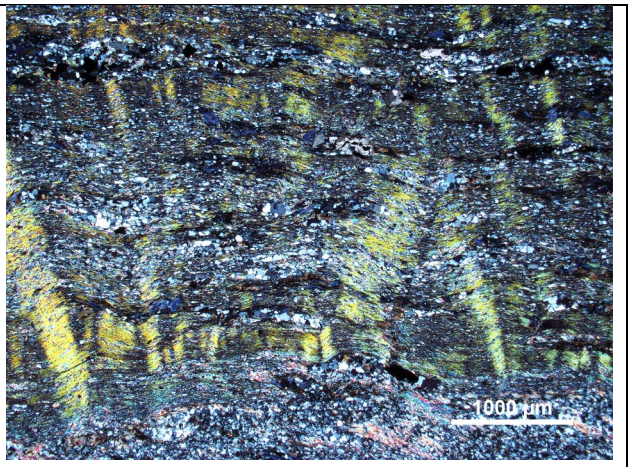
Oxides (tr.) Very fine grained irregular anhedral magnetite and ilmenite blebs.

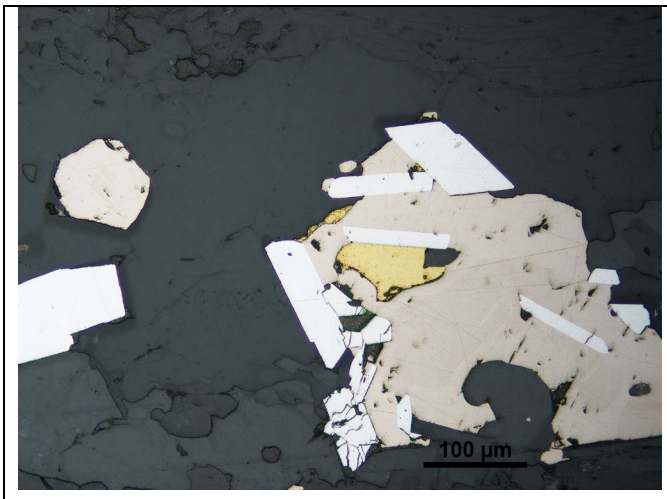
STRUCTURE

S_2A deposit fabric defined by aligned sericite and chlorite and alternating layering (QFP and Mud-rich domains)

D_2B Shear planes sub-parallel to **S_2A** foliation

S3 crenulation cleavage NW-N-NE trending

	
TQPL2017-041A-2.5X-PPL Main **S_2A** foliation being dragged by **D_2B** shear bands. Mud rich intervals dominated by fine grained sericitie with minor chlorite+/-grunerite.	**TQPL2017-041A-2.5X-XPL** **S_2A** fabric defined by mud rich layering alternating with QFP domains. **S_3** crenulation cleavage preferentially developed in mud rich intervals and trending NW-N-NE

	
TQPL2017-041A-20X-RL Representative sulphide assemblage within Quartz-ankerite-sericite-veining. Fine grained euhedral arsenopyrite interstitial with subhedral pitted textured pyrrhotite with irregular gold blebs on the edges	**TQPL2017-041B-2.5X-XPL** Main **S_2A** foliation being dragged by **D_2B** shear bands. Mud rich intervals dominated by fine grained sericite with minor chlorite.

TQPL2017-042 **Oxide-silicate BIF** **FW300-CC155-LW**

Description: Chlorite-magnetite BIF with minor quartz and grunerite. Extremely fine-grained chlorite matrix throughout sample making it difficult to recognize S_0/S_1 layering. Magnetite dominated layers make up remnant layering containing subhedral to anhedral magnetite with pitted texture and wrapped in fine grained grunerite, and minor to trace extremely fine grained irregular pyrrhotite blebs. Remnant layering made up by local quartz dominated layers that contain minor chlorite and magnetite and grunerite.

Quartz (20%) fine grained subhedral grains 20-200 µm

Magnetite (33%) fine to coarse grained 20-700µm subhedral to anhedral grains, with pitted texture, some of which have been completely altered, and some replaced by pyrrhotite blebs

Chlorite (40%) fine to medium grained euhedral to subhedral grains 20-100 µm

Grunerite (5%) Subhedral grains 20-100 µm typically associated with chlorite rich layers

Sericite (tr.) 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

SULPHIDES

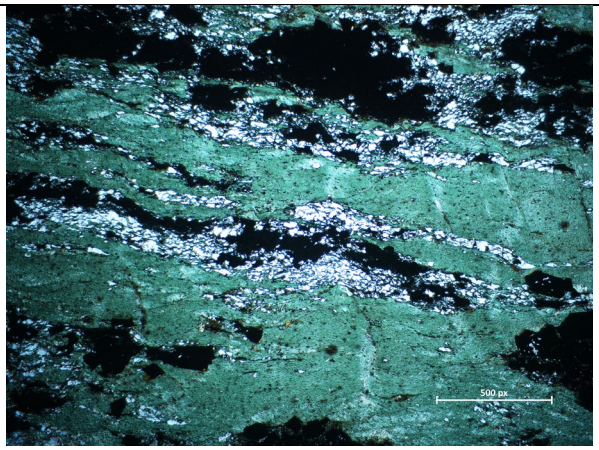
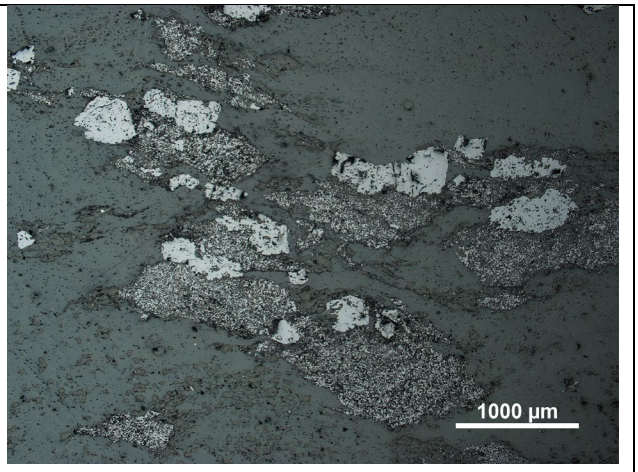
Pyrrhotite (2%) Very fine grained 20-200µm anhedral pyrrhotite blebs within quartz-ankerite veins or partially to completely replacing magnetite grains

Arsenopyrite (tr.) Fine grained 20-300µm anhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

STRUCTURE

S_2A deposit fabric defined by layering S_1/S_0

S_3 discontinuous crenulation cleavage defined in fine grained chlorite/phyllosilicate dominated layers

	
TQPL2017-042-2.5X-PPL Main **S_2A** foliation defined by S_0/S_1 layering defined by magnetite dominated layers, quartz dominated layers, and phyllosilicate dominated layers (chlorite +/- grunerite) **S_3** crenulation cleavage preferentially developed within phyllosilicate dominated layers	**TQPL2017-042-2.5X-RL** Representative subhedral to anhedral magnetite with pitted and altered texture within magnetite-dominated layers.

TQPL2017-043 **Pelitic BIF** **FW300-CC155-LW**

Description: Chlorite rich interval on contact with sediments and BIF with. Sample is dominated by fine grained chlorite with fine grained quartz feldspar intervals, with medium grained subhedral to euhedral feldspar and clinopyroxene porphyroclasts, and minor hornblende within both layers. minor quartz and grunerite. Foliation parallel to sub-parallel quartz-ankerite-sericite veins with sulphide stringers within and on vein selvages. Sulphide stringers are primarily made up of irregular pyrrhotite, subhedral galena blebs and minor chalcopyrite and pyrite. Some ankerite within host rocks adjacent to veining. Some sulphide stringers are adjacent to veining as well.

Chlorite (30%) fine to medium grained euhedral to subhedral grains 20-100 µm making up the majority of matrix

Quartz (30%) fine to medium grained euhedral to subhedral grains 20-100 µm and coarse subhedral grains in quartz-ankerite-sericite veins

Ankerite (18%) grained subhedral grains 100-600 µm within quartz ankerite veins and adjacent to veining in chlorite matrix

Feldspar (10%) Medium grained subhedral porphyroclasts 50-300 µm within chlorite rich intervals

Clinopyroxene (10%) medium grained subhedral to anhedral grains 50-400 µm within chlorite matrix

Hornblende (tr.) medium grained subhedral porphyroclasts 20-200 µm

Sericite (tr.) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

Grunerite (tr.) fine grained subhedral grains 20-100 µm typically associated with chlorite rich layers

SULPHIDES

Pyrrhotite (1.5%) Very fine grained 20-200µm anhedral pyrrhotite veinlets within quartz-ankerite veins and adjacent to veins

Galena (0.5%) Very fine grained 20-200µm anhedral galena blebs interstitial with irregular pyrrhotite stringers

Chalcopyrite (tr.) Very fine grained 20-200µm anhedral chalcopyrite blebs interstitial with irregular pyrrhotite stringers

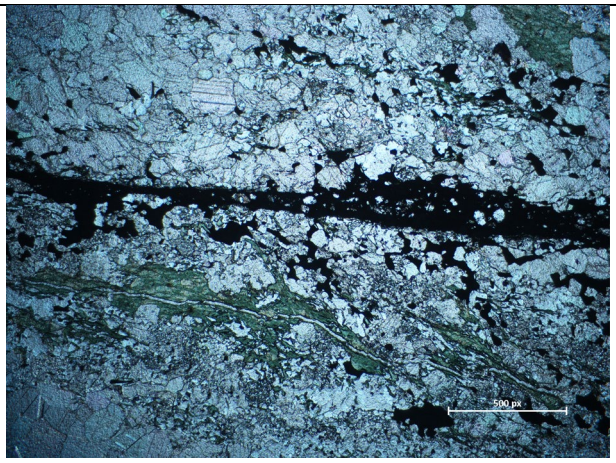
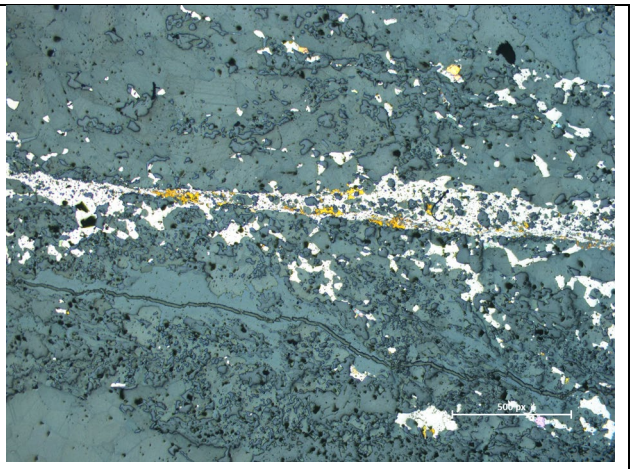
Pyrite (tr.) Very fine grained 20-200µm anhedral pyrite blebs interstitial with irregular pyrrhotite stringers

STRUCTURE

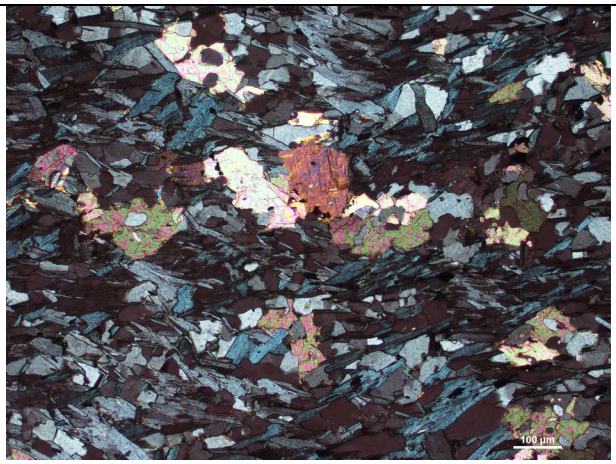
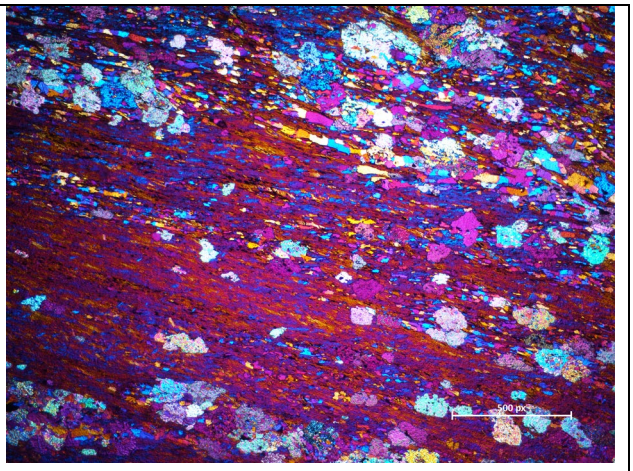
S_2A deposit fabric defined by layering S_1/S_0 and foliation parallel quartz-ankerite-sericite veins

S_3 discontinuous crenulation cleavage defined in fine grained chlorite dominated layers

Plan view

	
TQPL2017-043A-2.5X-PPL Quartz-ankerite-sericite veins with sulphide stringer within it.	**TQPL2017-043A-5X-RL** Sulphide stringer made up of predominantly pyrrhotite with interstitial irregular galena and chalcopyrite blebs.

Section view

	
TQPL2017-043B-10X-XPL Subhedral orthopyroxene grains within chlorite dominated interval.	**TQPL2017-043B-2.5X-XPL** **S_2A** defined by sericite +/- chlorite dominated layers wrapping quart +/- feldspar +/- ankerite

TQPL2017-044 **Oxide-silicate BIF** **FW300-CC155-RW**

Description: Magnetite-chert BIF with minor chlorite and grunerite. Magnetite and pyrrhotite dominated layers contain subhedral to anhedral magnetite with pitted texture, and irregular pyrrhotite stringers with minor medium grained euhedral arsenopyrite and fine-grained irregular chalcopyrite blebs. Chert dominated layers contain minor chlorite and magnetite and fine grained irregular anhedral ankerite alteration. Some layers are dominated by subhedral fine grained aligned chlorite grains with minor grunerite and magnetite. Sample contains small bedding parallel and crosutting quartz-ankerite veins.

Quartz (55%) fine grained subhedral grains 20-300 µm mainly in quartz/chert dominated layers, but also within quartz-ankerite veining

Magnetite (20%) fine to coarse grained 20-700µm subhedral to anhedral grains, with pitted texture, some of which have been completely altered, and some partially to completely replaced by pyrrhotite blebs and arsenopyrite

Ankerite (15%) medium to coarse grained euhedral to subhedral grains 100-1000 µm within ankerite dominated quartz veins, also fine grained irregular anhedral ankerite withing chert dominated layers

Chlorite (5%) fine to medium grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains as well as thin chlorite rich layers with minor grunerite

Grunerite (1%) fine grained subhedral grains 20-100 µm typically associated with chlorite rich layers

Sericite (tr.) very fine 20-100µm euhedral-subhedral grains, within quartz ankerite veining and vein margins

SULPHIDES

Pyrrhotite (3%) thin irregular pyrrhotite stringers along magnetite layers or partially to completely replacing magnetite grains

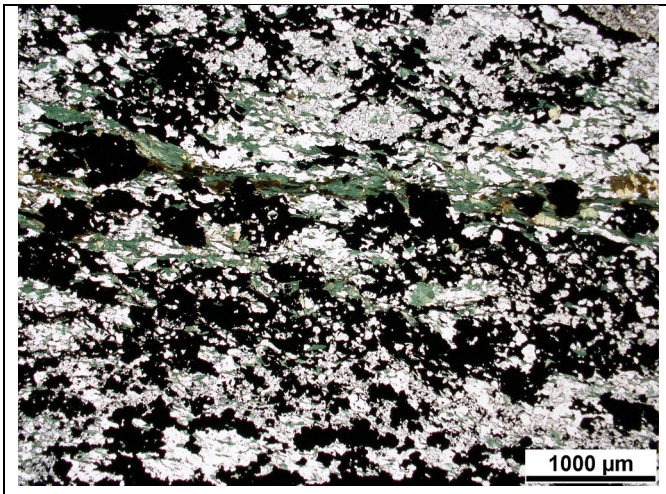
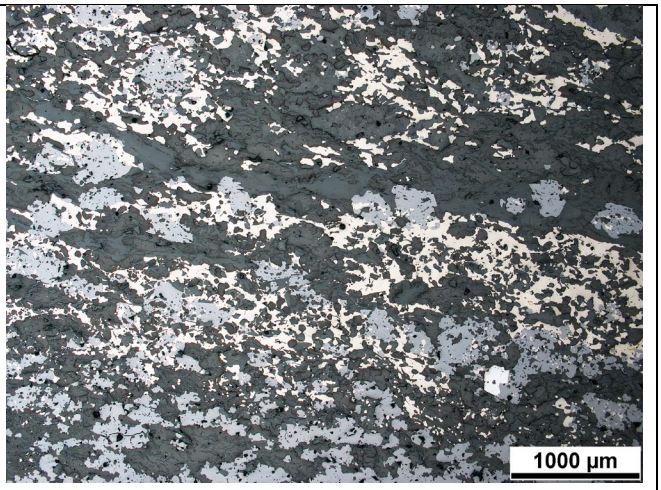
Arsenopyrite (1%) Fine grained 20-300µm euhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

Chalcopyrite (tr.) Fine grained 20-100µm anhedral chalcopyrite blebs associated with pyrrhotite replacing magnetite

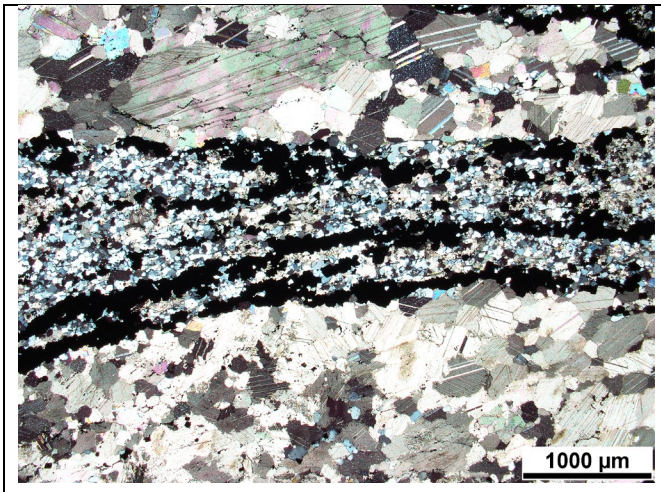
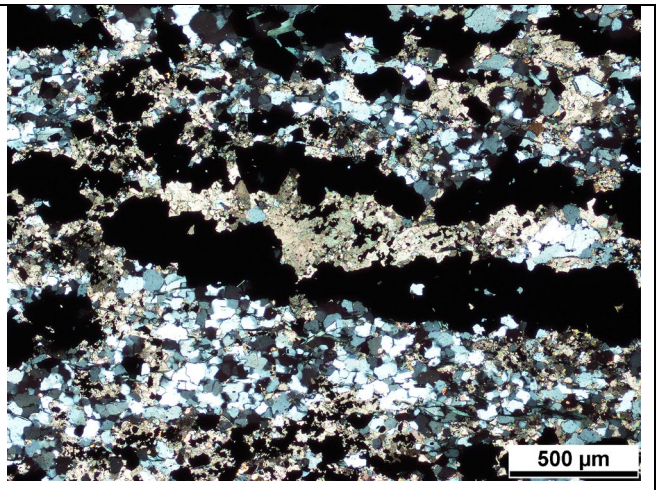
STRUCTURE

S_2A deposit fabric defined by layering S_1/S_0

Plan view

	
TQPL2017-044A-2.5X-PPL Representative quartz, magnetite, and chlorite dominated layers	**TQPL2017-044A-2.5X-RL** Magnetite and pyrrhotite dominated layers with minor subhedral arsenopyrite

Section view

	
TQPL2017-044B-2.5X-XPL Alternating quartz dominated layers and magnetite dominated layers in between two ankerite dominated quartz-ankerite veins. Minor fine grained irregular ankerite alteration within host rock	**TQPL2017-044B-5X-XPL** Alternating quartz and magnetite dominated layers, with pervasive ankerite alteration within quartz dominated layers

TQPL2017-045 **Oxide-silicate BIF** **FW300-CC155-LW**

Description: Magnetite-chert-chlorite BIF with minor grunerite. Magnetite rich layers have been partially to completely replaced by irregular pyrrhotite stringers and fine to coarse grained subhedral arsenopyrite, or completely altered. Chert dominated layers contain minor chlorite and grunerite and fine grained irregular anhedral ankerite alteration. Thin chlorite-rich layers with minor grunerite. Sample contains small bedding parallel and quartz veins with minor ankerite and sericite.

Quartz (45%) fine grained subhedral grains 20-300 µm mainly in quartz/chert dominated layers, but also within quartz-ankerite veining

Chlorite (35%) fine to medium grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains as well as thin chlorite rich layers with minor grunerite

Magnetite (13%) fine to coarse grained 20-600µm subhedral to anhedral grains, with pitted texture, some of which have been completely altered, and some partially to completely replaced by pyrrhotite blebs and arsenopyrite

Ankerite (1%) Very fine-grained irregular grains 100-150 µm within quartz veins, also fine grained irregular anhedral ankerite within chert dominated layers

Grunerite (1%) subhedral grains 20-100 µm typically associated with chlorite rich layers

Sericite (tr.) very fine 20-100µm subhedral grains, within quartz ankerite veining and vein margins

SULPHIDES

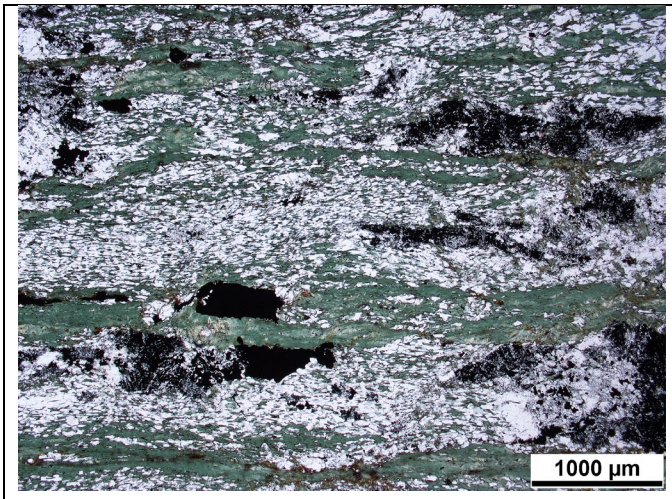
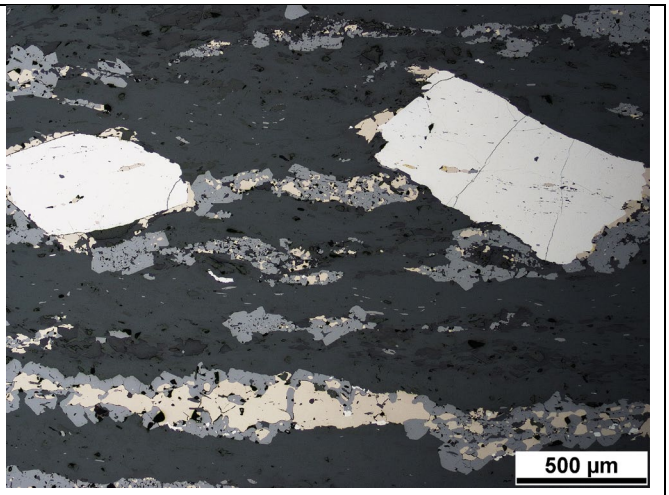
Pyrrhotite (1%) thin irregular pyrrhotite stringers along magnetite layers or partially to completely replacing magnetite grains

Arsenopyrite (4%) Fine grained 20-300µm euhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

Chalcopyrite (tr.) Fine grained 20-100µm anhedral chalcopyrite blebs associated with pyrrhotite replacing magnetite

STRUCTURE

S_2A deposit fabric defined by layering S_1/S_0

	
TQPL2017-045-2.5X-PPL Representative quartz, magnetite, and chlorite dominated layers.	**TQPL2017-045-5X-RL** Magnetite dominated layers partially replaced by pyrrhotite and coarse grained arsenopyrite

TQPL2017-046 **Oxide-silicate BIF** **FW300-CC155-LW**

Description: Magnetite-chert-chlorite BIF with minor grunerite. Magnetite within magnetite-rich layers have pitted texture and have been partially replaced by irregular pyrrhotite grains and fine grained subhedral arsenopyrite. Chert dominated layers contain minor chlorite and grunerite and fine grained irregular anhedral ankerite alteration. Thin chlorite-rich layers with minor grunerite. Sample contains small bedding parallel and quartz veins with minor ankerite and sericite.

Quartz (55%) fine grained subhedral grains 20-300 µm mainly in quartz/chert dominated layers, but also within quartz-ankerite veining

Chlorite (25%) fine to medium grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains as well as thin chlorite rich layers with minor grunerite

Magnetite (15%) fine to coarse grained 20-600µm subhedral to anhedral grains, with pitted texture, some partially replaced by pyrrhotite blebs and fine grained subhedral arsenopyrite

Ankerite (3%) Very fine-grained irregular grains 100-150 µm within quartz veins, also fine grained irregular anhedral ankerite within chert dominated layers

Grunerite (1%) fine grained subhedral grains 20-100 µm typically associated with chlorite rich layers

Sericite (tr.) very fine 20-100µm subhedral grains, within quartz ankerite veining and vein margins

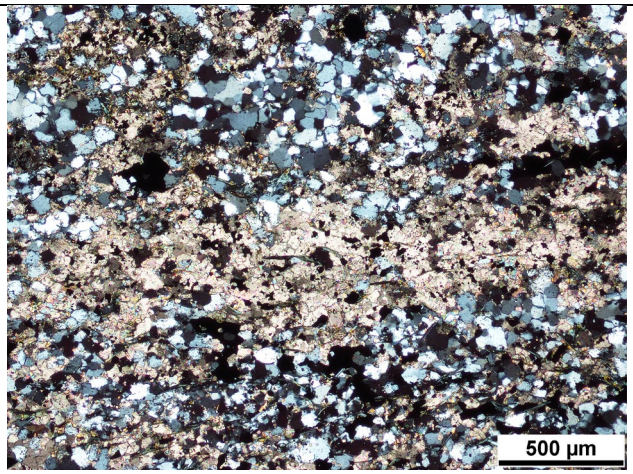
SULPHIDES

Pyrrhotite (1%) thin irregular pyrrhotite stringers along magnetite layers or partially to completely replacing magnetite grains

Arsenopyrite (tr.) Fine grained 20-300µm euhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

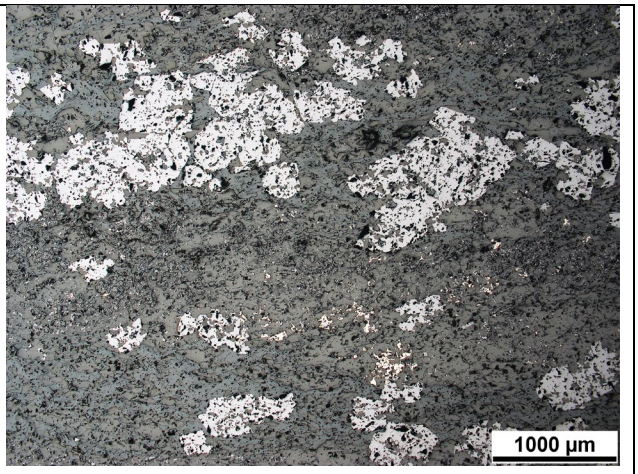
STRUCTURE

S_2A deposit fabric defined by layering S_1/S_0



TQPL2017-046-5X-PPL

Bedding parallel quartz-ankerite vein, displaying fine grained amalgamation of ankerite



TQPL2017-046-2.5X-RL

Magnetite dominated layers with pitted texture partially replaced by pyrrhotite

TQPL2017-047 **Oxide-silicate BIF** **FW300-CC155-RW**

Description: Magnetite-chert-chlorite BIF with minor grunerite. Thick magnetite-rich layers made up with fine to coarse grained magnetite with pitted texture. Fine grained pyrrhotite blebs disseminated throughout sample. Chert dominated layers contain minor chlorite and grunerite and fine grained irregular anhedral ankerite alteration. Thin chlorite-rich layers with minor grunerite. Sample contains small bedding parallel and quartz-ankerite veins with minor sericite.

Quartz (25%) fine grained subhedral grains 20-300 µm mainly in quartz/chert dominated layers, but also within quartz-ankerite veining

Magnetite (55%) fine to coarse grained 20-1200µm subhedral to anhedral grains, with extreme pitted texture, some partially replaced by pyrrhotite blebs

Chlorite (16%) fine to medium grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains as well as thin chlorite rich layers with minor grunerite

Ankerite (1%) fine to medium 100-350 µm grains within quartz-ankerite veins. Also as very fine grained irregular grains 100-150 µm within quartz veins, also fine grained irregular anhedral ankerite within chert dominated layers

Grunerite (1%) fine grained subhedral grains 20-100 µm typically associated with chlorite rich layers

Sericite (tr.) very fine 20-100µm subhedral grains, within quartz ankerite veining and vein margins

SULPHIDES

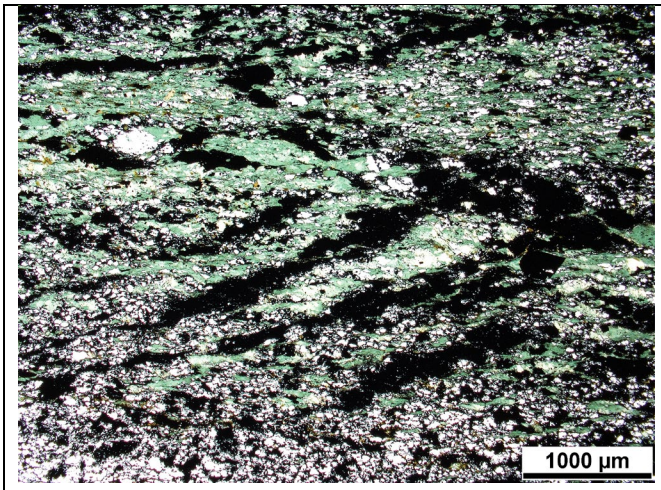
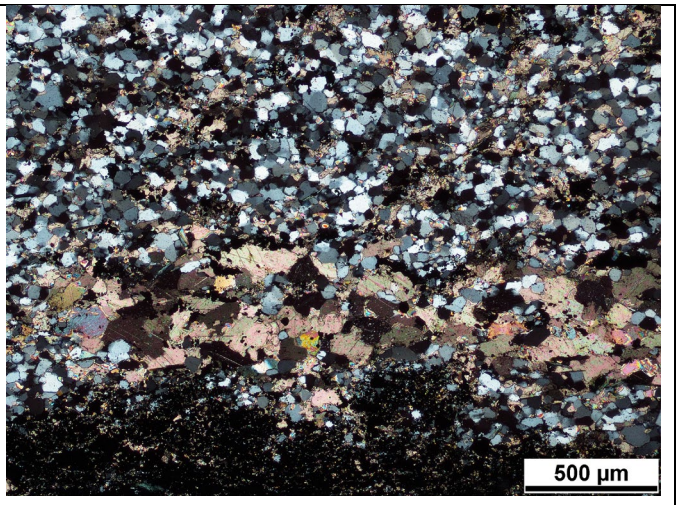
Pyrrhotite (2%) thin irregular pyrrhotite stringers along magnetite layers or partially to completely replacing magnetite grains

Arsenopyrite (tr.) Fine grained 20-300µm euhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

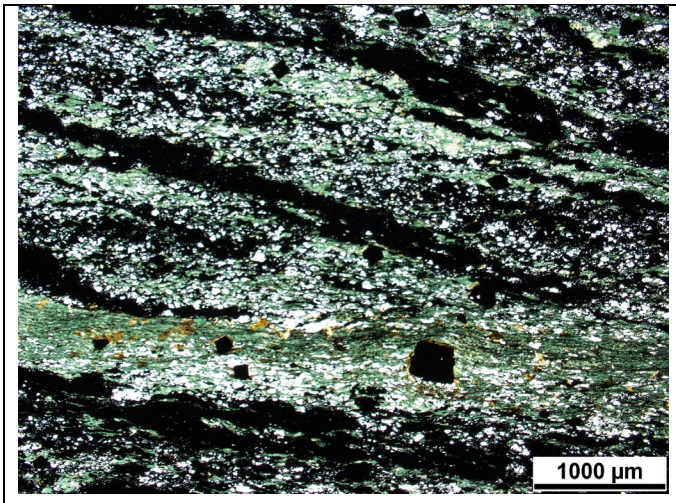
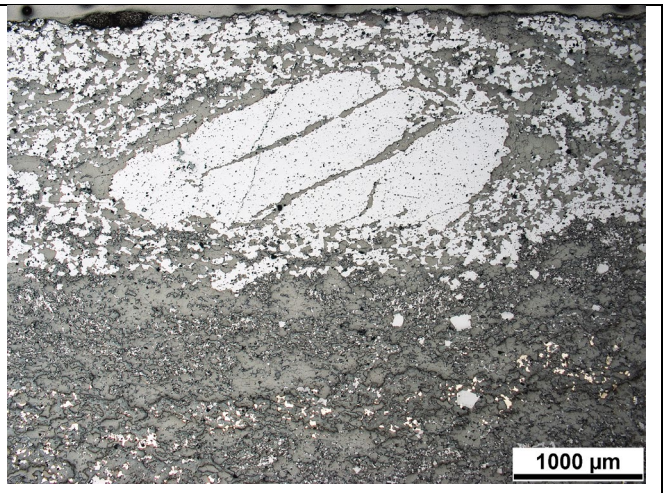
STRUCTURE

S_2A deposit fabric defined by layering S_1/S_0

Plan view

	
TQPL2017-047A-2.5X-PPL F_2A folding of S_1/S_0 layering of alternating magnetite and chert defining S_2A foliation	**TQPL2017-047A-5X-XPL** Quartz-ankerite and minor sericite vein.

Section view

	
TQPL2017-047B-2.5X-PPL S_2A foliation dragged by D_2B shear bands defined by magnetite and chert dominated layers	**TQPL2017-047B-2.5X-RL** Magnetite-dominated layer with very coarse grained anhedral deformed magnetite grain

TQPL2017-048 **Oxide-silicate BIF** **FW300-CC155-LW**

Description: Chlorite-chert-magnetite BIF with minor grunerite. Magnetite-rich layers made up of fine-grained anhedral magnetite grains that have pitted texture with disseminated irregular pyrrhotite blebs and fine-grained elongated quartz grains wrapped with minor chlorite and minor grunerite. Fine grained pyrrhotite blebs disseminated throughout sample. Chert dominated layers contain minor chlorite and grunerite and fine grained irregular anhedral ankerite alteration. Chlorite-rich layers with minor grunerite. Sample contains small bedding parallel and quartz-ankerite-sericite veins with sulphide stringers on the margins, made up of irregular pyrrhotite stringers with interstitial fine to medium grained euhedral to subhedral arsenopyrite grains.

Quartz (61%) fine to coarse grained subhedral grains 20-500 µm in quartz/chert dominated layers, but also within quartz-ankerite-sericite veining

Magnetite (9%) fine grained 20-100µm anhedral grains, with extreme pitted texture, some partially replaced by pyrrhotite blebs

Chlorite (15%) fine to medium grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains as well as thin chlorite rich layers with minor grunerite

Ankerite (5%) fine to medium 100-500 µm grains within quartz-ankerite-sericite veins. Also, as very fine grained irregular grains 100-150 µm within quartz veins, also fine grained irregular anhedral ankerite within chert dominated layers

Grunerite (5%) fine to medium grained subhedral grains 20-200 µm typically associated with chlorite rich layers

Sericite (1%) very fine 20-100µm subhedral grains, within quartz ankerite veining and vein margins replacing ankerite and quartz grains

SULPHIDES

Pyrrhotite (3%) thin irregular pyrrhotite stringers along magnetite layers or partially to completely replacing magnetite grains

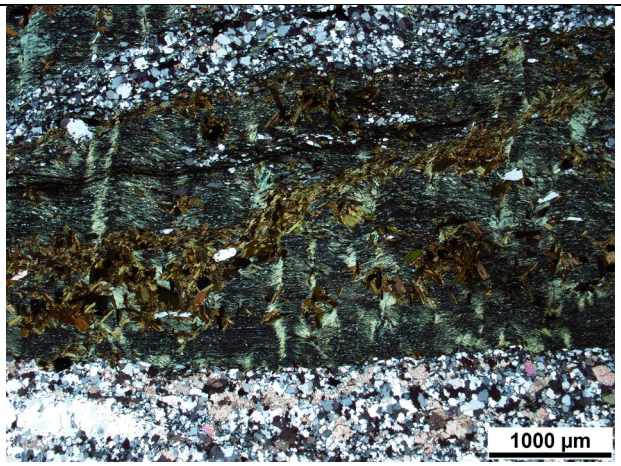
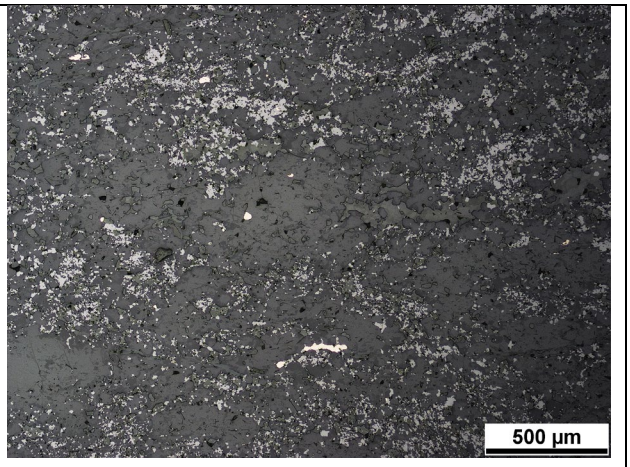
Arsenopyrite (1%) Fine grained 20-300µm euhedral arsenopyrite grains associated with pyrrhotite replacing magnetite

STRUCTURE

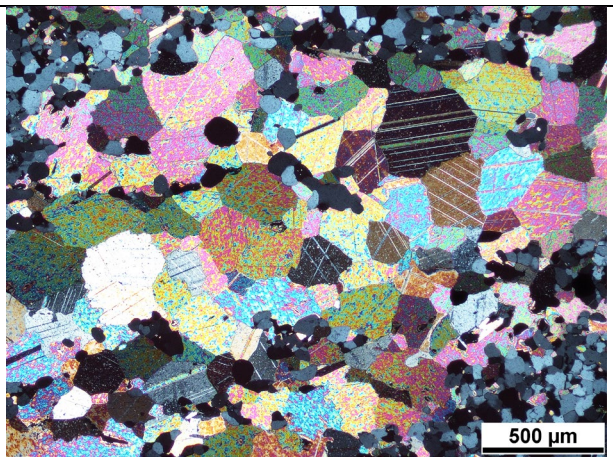
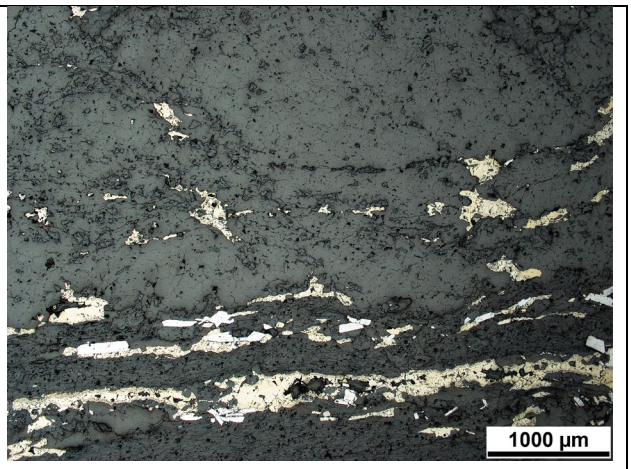
S_2A deposit fabric defined by layering S_1/S_0

S_3 crenulation cleavage developed in chlorite and grunerite-rich layers

Plan view

	
TQPL2017-048A-2.5X-XPL Chlorite rich layer displaying S_3 crenulation cleavage and associated euhedral grunerite	**TQPL2017-048A-5X-RL** Magnetite-rich layer with fine grained irregular magnetite blebs with pitted texture and fine disseminated pyrrhotite interstitial with quartz grains wrapped with chlorite

Section view

	
TQPL2017-048B-5X-XPL Quartz-ankerite-sericite veins with disseminated irregular pyrrhotite blebs	**TQPL2017-047B-2.5X-RL** Sulphide stringer on quartz-ankerite-sericite veins selvage. Irregular pyrrhotite stringers and subhedral to euhedral arsenopyrite grains

TQPL2017-049 **Oxide-silicate BIF** **FW300-CC155-RW**

Description: Chlorite-quartz BIF with minor magnetite and grunerite. Magnetite-rich layers made up of fine-grained anhedral magnetite grains that have pitted texture with disseminated irregular pyrrhotite blebs and fine grained elongated quartz grains wrapped with minor chlorite and minor grunerite. Fine grained quartz-dominated layers with minor chlorite. Chlorite-rich layers with minor grunerite. Sample contains large bedding parallel and quartz-ankerite-sericite veins with coarse grained disseminated sulphides and irregular sulphide stringers on the margins, made up of irregular Coarse grained subhedral to euhedral arsenopyrite within veins and with associated irregular pyrrhotite and chalcopyrite stringers.

Quartz (54%) fine to coarse grained subhedral grains 20-900 µm in quartz/chert dominated layers, but also within quartz-ankerite-sericite veining

Chlorite (20%) fine to medium grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains as well as thin chlorite rich layers with minor grunerite

Grunerite (4%) fine to medium grained subhedral grains 20-200 µm typically associated with chlorite rich layers

Magnetite (10%) fine to coarse grained 20-900µm irregular grains, with extreme pitted texture, some partially replaced by pyrrhotite blebs

Ankerite (1%) Very fine 50-100µm grains within quartz-ankerite-sericite veins, also fine grained irregular anhedral ankerite within chert dominated layers

Sericite (1%) very fine 20-100µm subhedral grains, within quartz ankerite veining and vein margins replacing ankerite and quartz grains

SULPHIDES

Arsenopyrite (6%) Fine to very coarse grained 20-1500µm euhedral arsenopyrite grains within quartz-ankerite-sericite veins or associated with pyrrhotite replacing magnetite

Pyrrhotite (3%) thin irregular pyrrhotite stringers along magnetite layers or partially to completely replacing magnetite grains

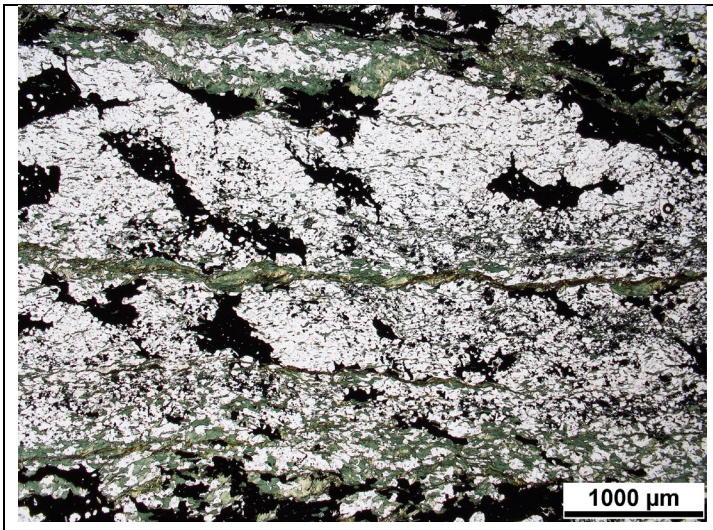
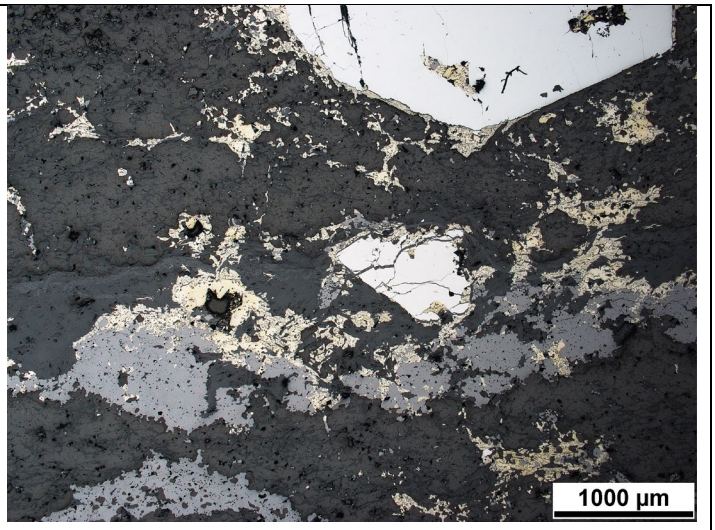
Chalcopyrite (1%) Fine grained 20-100µm irregular grains associated with pyrrhotite replacing magnetite

STRUCTURE

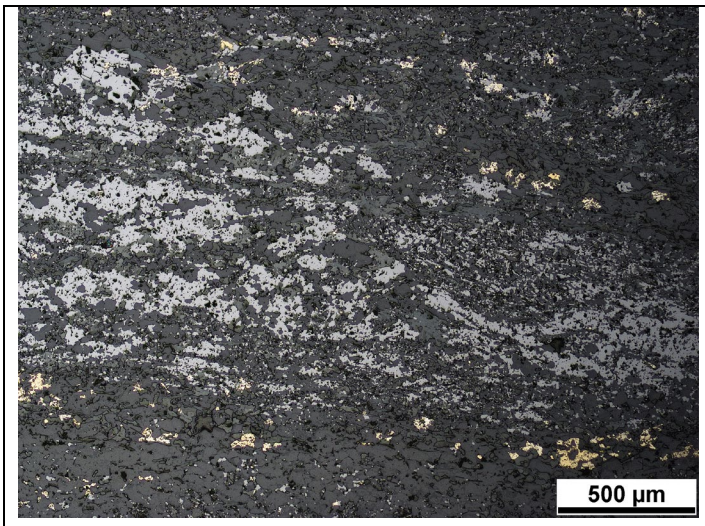
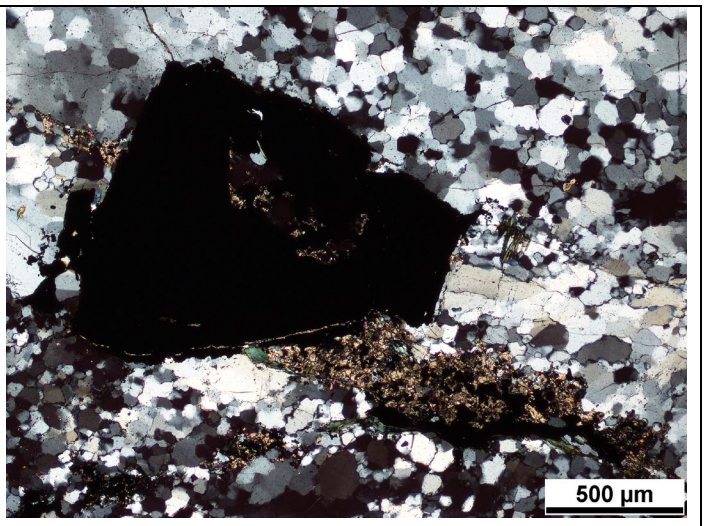
S_2A deposit fabric defined by layering S_1/S_0

S_3 crenulation cleavage developed in chlorite rich layers

Plan view

	
TQPL2017-049A-2.5X-PPL Quartz dominated layers with irregular disseminated pyrrhoite/magnetite blebs with fine grained chlorite and thin chlorite-dominated layers with minor grunerite.	**TQPL2017-049A-2.5X-RL** Magnetite -rich layer on vein margin with irregular magnetite blebs being replaced by irregular pyrrhotite and subhedral arsenopyrite. Coarse grained subhedral arsenopyrite within vein with pyrrhotite border

Section view

	
TQPL2017-049B-5X-RL Magneite dominated layer made up of irregular elongated blebs of magnetite with pitted texture with associated disseminated pyrrhotite.	**TQPL2017-049B-5X-XPL** Large subhedral arsenopyrite grain within quartz-ankerite sericite vein. Ankerite is very fine grained irregular textured.

TQPL2017-050 **Chloritic greywacke** **FW300-CC155-RW**

Description: Folded and sheared greywacke/siltstone. Predominantly made up of fine-grained quartz and feldspar grains wrapped in micas defining main S_2A foliation, typically cut by D_2B shear bands Fine grained mica rich domains. Quartz-feldspar-rich domains displaying F_2A folding, synchronous with shearing. S_2A foliation dragged by D_2B shear bands displaying fine grained sericite alteration. Quartz-ankerite-sericite veining displaying coarse grained euhedral arsenopyrite mineralization. Coarse grained euhedral arsenopyrite associated with quartz-ankerite-sericite pressure shadows. Large subhedral to anhedral ankerite grains throughout sample. Very fine-grained irregular oxide and pyrrhotite blebs and stringers disseminated throughout, typically along foliation.

Quartz (52%) fine to coarse grained subhedral grains 20-600 µm in quartz/feldpar dominated layers, but also within quartz-ankerite-sericite veining

Feldpsar (8%) fine grained subhedral grains 20-150 µm within quartz rich layers

Sericite (15%) fine grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains and defining pervasive fabrics as well as proximal to quartz-ankerite veining

Ankerite (10%) Fine to medium 50-800µm grains within quartz-ankerite-sericite veins and disseminated throughout sample

Chlorite 5%) very fine 20-100µm subhedral grains, throughout sample wrapping quartz-feldspar grains and helping define fabrics

SULPHIDES

Arsenopyrite (10%) Fine to very coarse grained 20-3000µm euhedral arsenopyrite grains within or on margins of quartz-ankerite-sericite veins or disseminated with quartz-ankerite-sericite pressure shadows

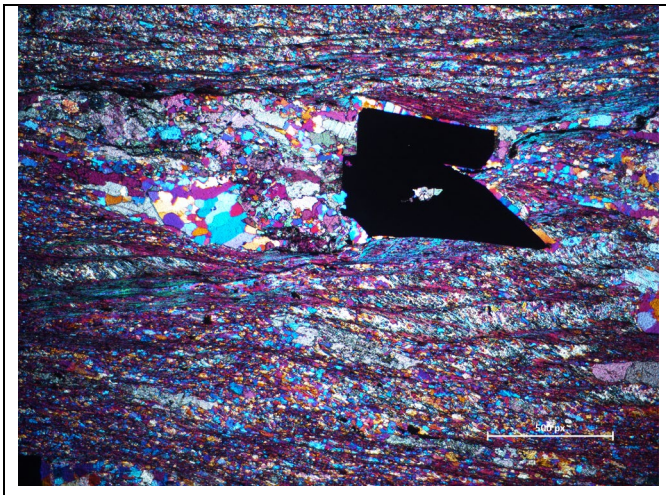
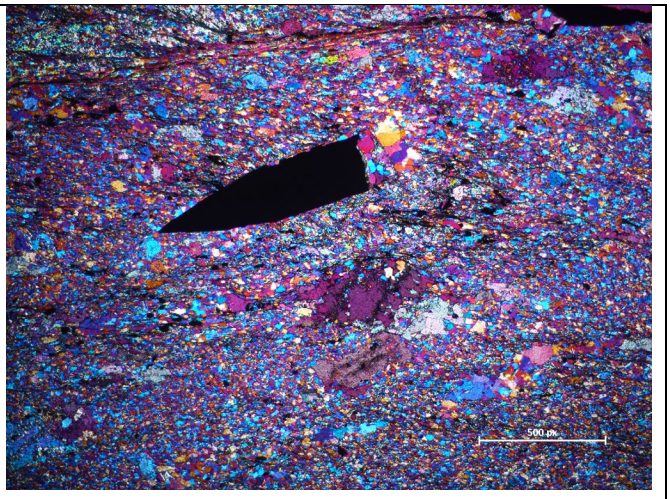
Pyrrhotite (tr.) thin very fine grained 20-80µm irregular pyrrhotite stringers and blebs

Oxides (tr.) Fine grained 20-80µm irregular grains associated with pyrrhotite

STRUCTURE

S_2A deposit fabric defined by axial planar folding of quartz/felspar layers S_1/S_0

D_2B shear planes infiltrated by quartz-ankerite-sericite veining

	
TQPL2017-050-2.5X-XPL Large euhedral arsenopyrite grains within irregular quartz-ankerite veins (or pressure shadows? **S_2A** foliation dragged along **S_2B** shear bands with sericite alteration and large anhedral ankerite throughout	**TQPL2017-050-5X-XPL** Disseminated ankerite and coarse euhedral arsenopyrite

TQPL2017-051 **Chloritic greywacke** **FW300-CC155-LW**

Description: Folded and sheared greywacke/siltstone. Predominantly made up of fine-grained quartz and feldspar grains and pervasive sericite and minor chlorite defining main S_2A foliation. S_2A foliation dragged by D_2B shear bands made up of fine-grained sericite grains. Irregular quartz-ankerite-sericite veining displaying coarse grained euhedral arsenopyrite mineralization with associated pyrrhotite and galena. Large subhedral to anhedral ankerite grains throughout sample. Very fine-grained irregular oxide and pyrrhotite blebs and stringers disseminated throughout, typically along foliation.

Quartz (50%) fine to coarse grained subhedral grains 20-600 µm in quartz/feldspar dominated layers, but also within quartz-ankerite-sericite veining

Sericite (15%) fine grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains and defining pervasive foliation as well as proximal to quartz-ankerite veining

Ankerite (10%) Fine to medium 50-800µm grains within quartz-ankerite-sericite veins and disseminated throughout sample

Feldpsar (10%) fine grained subhedral grains 20-150 µm within quartz rich layers

Chlorite (5%) very fine 20-100µm subhedral grains, throughout sample wrapping quartz-feldspar grains and helping define foliation.

SULPHIDES

Arsenopyrite (7%) Fine to very coarse grained 20-3000µm euhedral arsenopyrite grains within or on margins of quartz-ankerite-sericite veins or disseminated with quartz-ankerite-sericite pressure shadows

Pyrrhotite (2.5%) thin very fine grained 20-80µm irregular pyrrhotite stringers and blebs

Galena (0.5%) Fine grained 20-80µm irregular grains associated with pyrrhotite

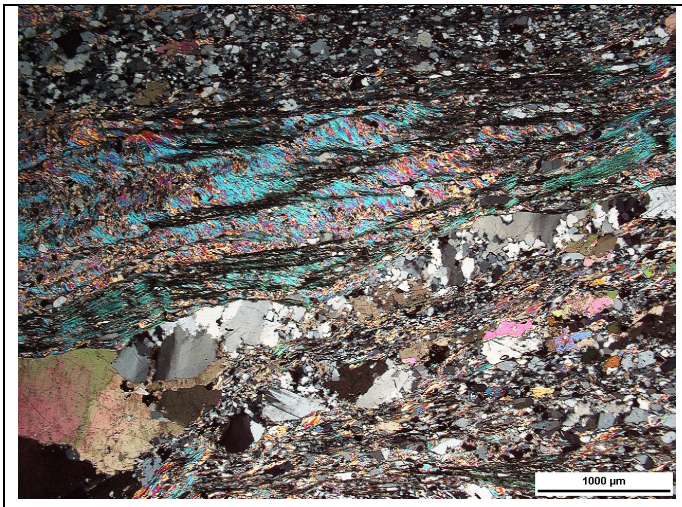
Oxides (tr.) Fine grained 20-80µm irregular grains associated with pyrrhotite

STRUCTURE

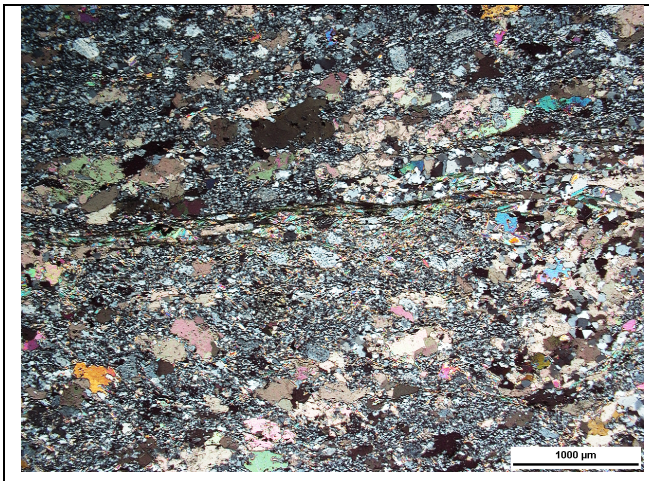
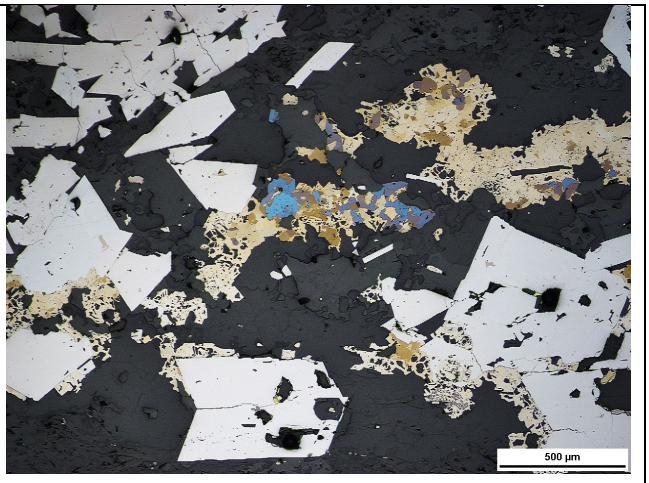
S_2A foliation defined by sub parallel S_2A foliation dragged by D_2B shear bands and differentiating quartz/feldspar domains and mica-rich domains

D_2B shear planes typically infiltrated by quartz-ankerite-sericite veining

Plan view

	
TQPL2017-051A-2.5X-XPL Main deposit fabric defined by S_2A foliation dragged by D_2B shear bandsmade up of micas, predominantly sericite being truncated sub-parallel quartz-ankerite-sericite vein on shear plane	**TQPL2017-051A-2.5X-XPL** Pervasive sericite and ankerite alteration

Section view

	
TQPL2017-051B-2.5X-XPL Pervasive ankerite and sericite alteration on C planes being truncated by distinct Shear planes	**TQPL2017-051B-5X-RL** Representative sulphide assemblage displaying subhedral pitted textured arsenopyrite grains interstitial with irregular pitted pyrrhotite and associated galena within quartz-ankerite-sericite veins

TQPL2017-052 **Chloritic Greywacke** **FW300-CC155-LW**

Description: Made up of very grained mud material (Fine grained chlorite and very minor sericite) and quartz and feldspar domains that definie the main S_2A foliation, commonly cut by sub-parallel D_2B shear planes. Abundant thin foliation subparallel to parallel quartz-ankerite veins with fine grained subhedral arsenopyrite and irregular pyrrhotite blebs and stringers.

Quartz (40%) fine to medium grained subhedral grains 20-600 µm in quartz/feldspar dominated layers, but also within quartz-ankerite veins

Chlorite (33%) very fine 10-100µm subhedral grains making up mica-rich layers

Feldpsar (15%) fine grained subhedral grains 20-150 µm within quartz rich layers

Sericite (5%) fine grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains and defining pervasive fabrics as well as proximal to quartz-ankerite veining

Ankerite (5%) Fine to medium 50-800µm grains within quartz-ankerite-sericite veins and disseminated throughout sample

SULPHIDES

Arsenopyrite (1%) Fine grained subhedral 20-150µm arsenopyrite grains within or on margins of quartz-ankerite veins

Pyrrhotite (1%) thin very fine grained 20-80µm irregular pyrrhotite stringers and blebs associated with arsenopyrite within quartz-ankerite veins and disseminated along foliation

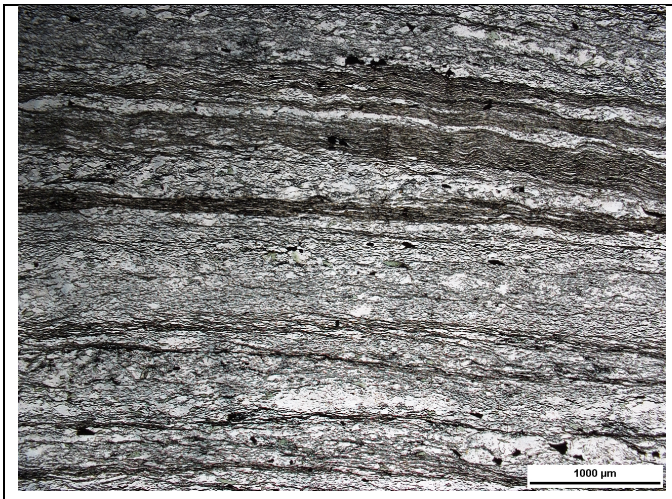
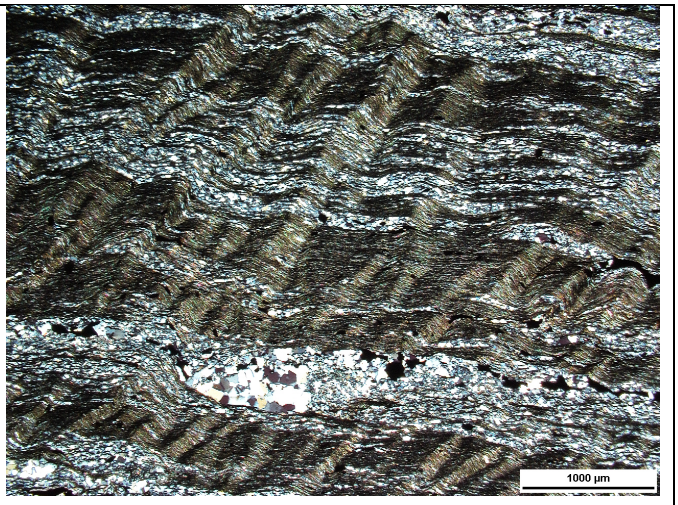
Oxides (tr.) Fine grained 20-80µm irregular grains associated with pyrrhotite

STRUCTURE

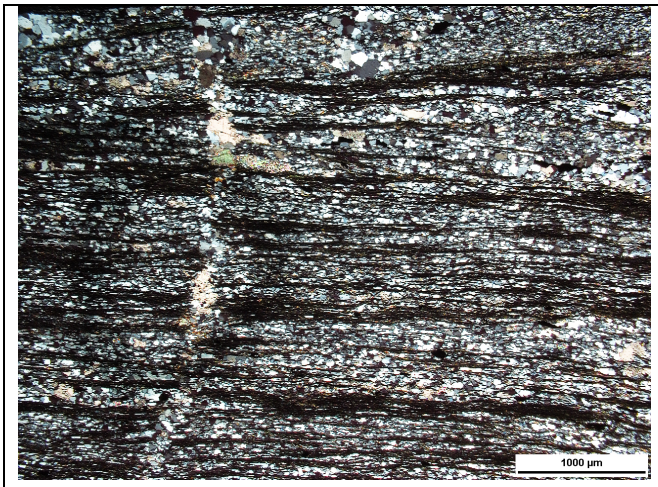
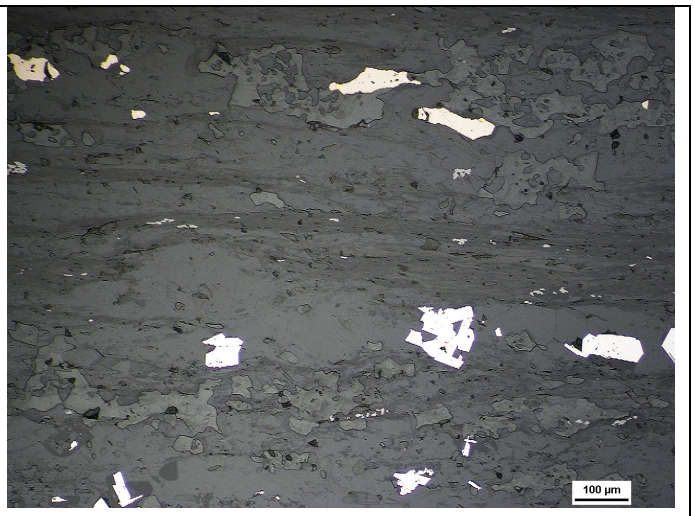
S_2A foliation defined by sub parallel S_2A foliation dragged by D_2B shear bands and differentiating quartz/feldspar domains and mica-rich domains

S_3 Crenulation cleavage developed within mica-rich layers (Chlorite and minor sericite)

Plan view

	
TQPL2017-052A-2.5X-PPL Main deposit fabric defined by alternating quartz-feldspar and mica-rich domains and slight subparallel D_2B shear planes. S_3 crenulation cleavage developed in mica-rich layers.	**TQPL2017-052A-2.5X-XPL** Quartz ankerite veining with disseminated irregular shaped sulphides within, and visible S_3 crenulation cleavage

Section view

	
TQPL2017-052B-2.5X-XPL Quartz-ankerite vein crosscutting main foliation defined by micaceous S_2A foliation dragged by D_2B shear bands	**TQPL2017-052B-10X-RL** Representative sulphide assemblage displaying subhedral arsenopyrite and irregular pyrrhotite blebs and minor oxide blebs within quartz-ankerite veins and disseminated along foliation

TQPL2017-053 **Chloritic Greywacke** **FW300-CC155-RW**

Description: Made up of fine-grained quartz and minor feldspar and very grained mud material (Fine grained chlorite, grunerite and sericite). Main S_2A foliation defined by alternating layers of quartz/feldspar and mica rich layers (sericite, grunerite and chlorite), and prominent fabrics. Quartz-ankerite veins are typically along the D_2B shear planes. Large subhedral ankerite aligned along foliation planes. Pervasive sericite alteration on vein margins and along foliation planes and folded mica rich layers.

Quartz (50%) fine to medium grained subhedral grains 20-600 µm in quartz/feldspar dominated layers, but also within quartz-ankerite veins

Sericite (18%) fine grained euhedral to subhedral grains 20-100 µm wrapping elongated quartz grains and defining pervasive foliaiton proximal to quartz-ankerite veining and Mica rich layers are dominated by sericite and grunerite

Chlorite (10%) very fine 10-100µm subhedral grains making up mica-rich layers

Grunerite (5%) fine grained euhedral to subhedral grains 20-100 µm in mica-rich layers and along pervasive foliaiton as well as proximal to quartz-ankerite veining

Ankerite (10%) Fine to medium 50-1000µm grains within quartz-ankerite-sericite veins and disseminated throughout sample along Shear bands

Feldpsar (5%) fine grained subhedral grains 20-150 µm within quartz rich layers

SULPHIDES

Arsenopyrite (2%) Fine grained subhedral 20-150µm arsenopyrite grains within or on margins of quartz-ankerite veins

Pyrrhotite (tr.) thin very fine grained 20-80µm irregular pyrrhotite stringers and blebs associated with arsenopyrite within quartz-ankerite veins and disseminated along foliation

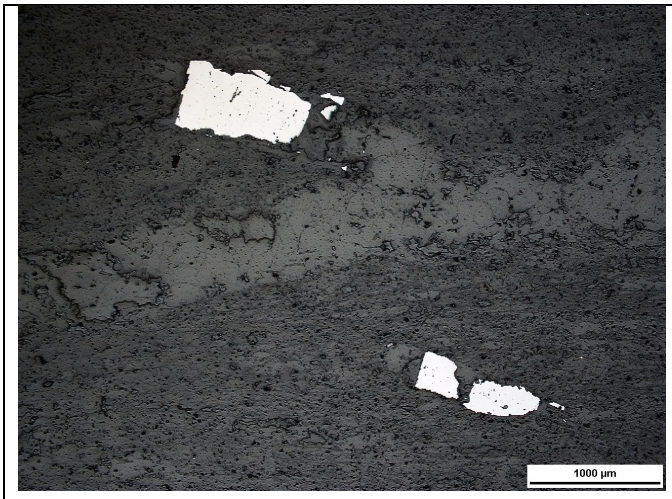
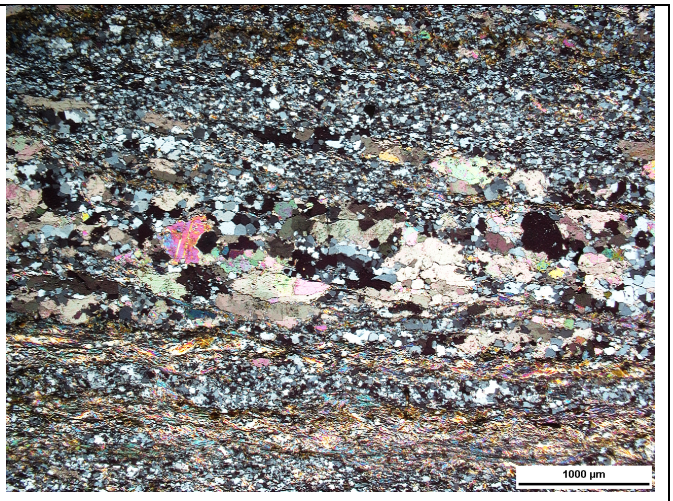
Oxides (tr.) Fine grained 20-80µm irregular grains associated with pyrrhotite

STRUCTURE

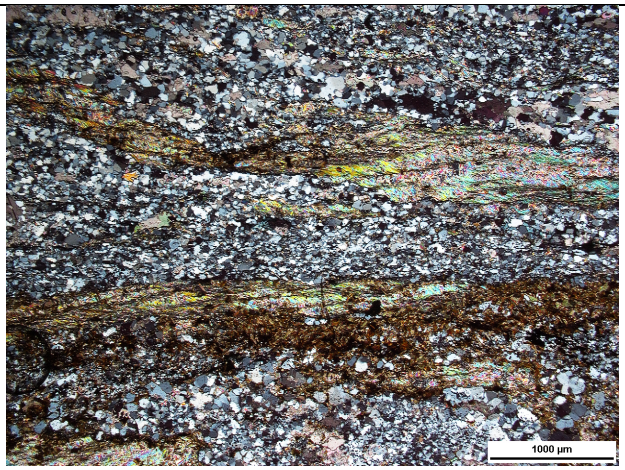
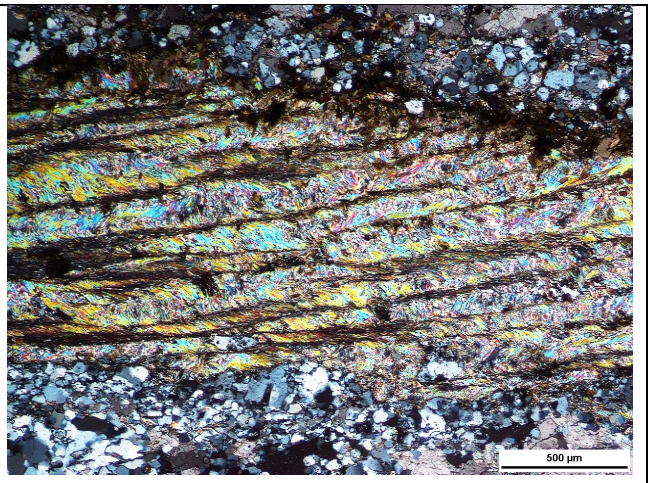
S_2A deposit fabric defined by sub parallel S_2A foliation dragged by D_2B shear bands and differentiating quartz/feldspar and mica-rich domains

D_2B Shear planes infiltrated by quartz-ankerite veins

Plan view

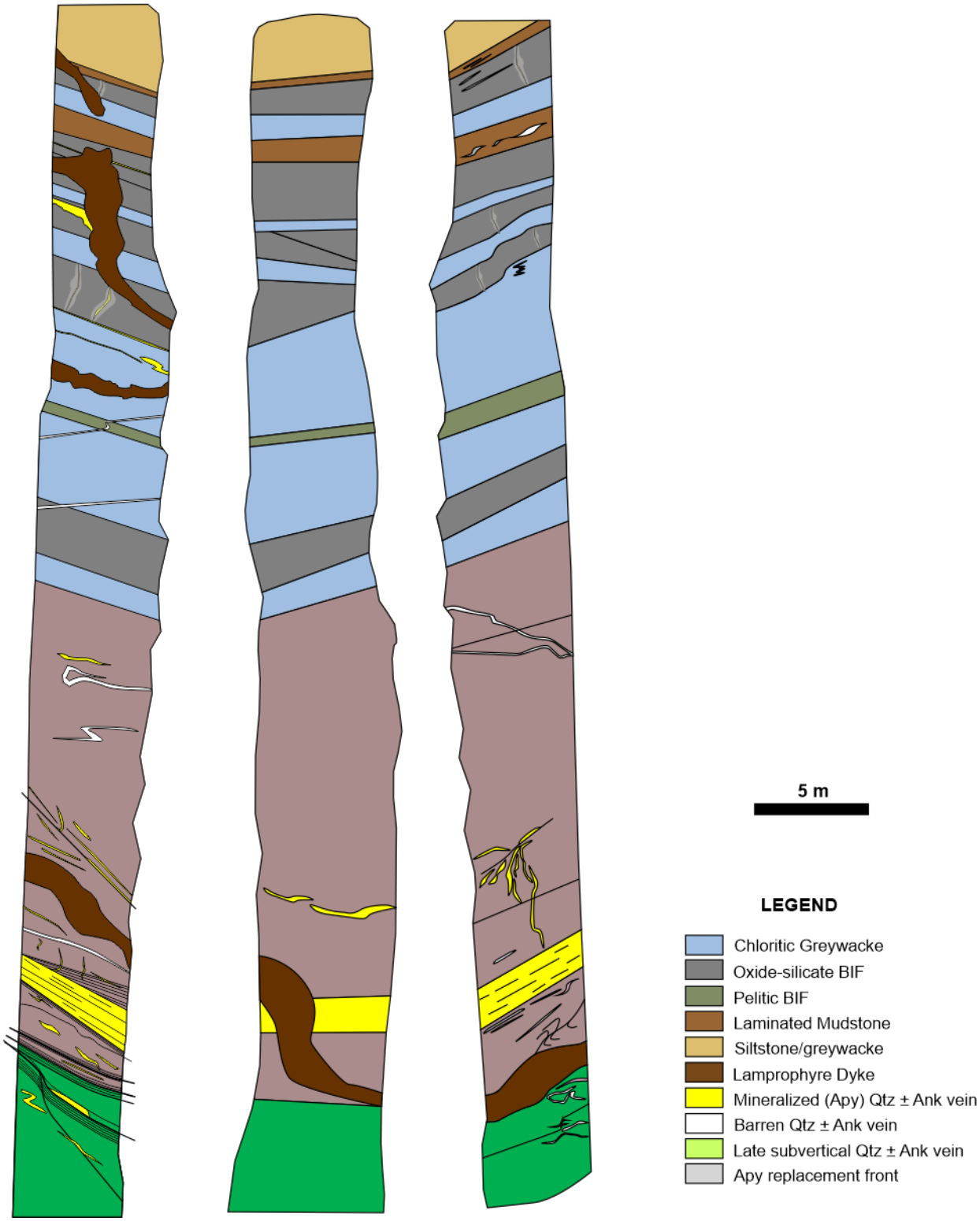
	
TQPL2017-053A-2.5X-RL Large subhedral arsenopyrite grains within deformed extensional quartz-ankerite veins associated with quartz-ankerite vein infiltrating shear planes	**TQPL2017-053A-2.5X-XPL** Alternating mica-rich and quartz-rich domains crosscut by subparallel quartz-ankerite veins and large subhedral ankerite along shear bands

Section view

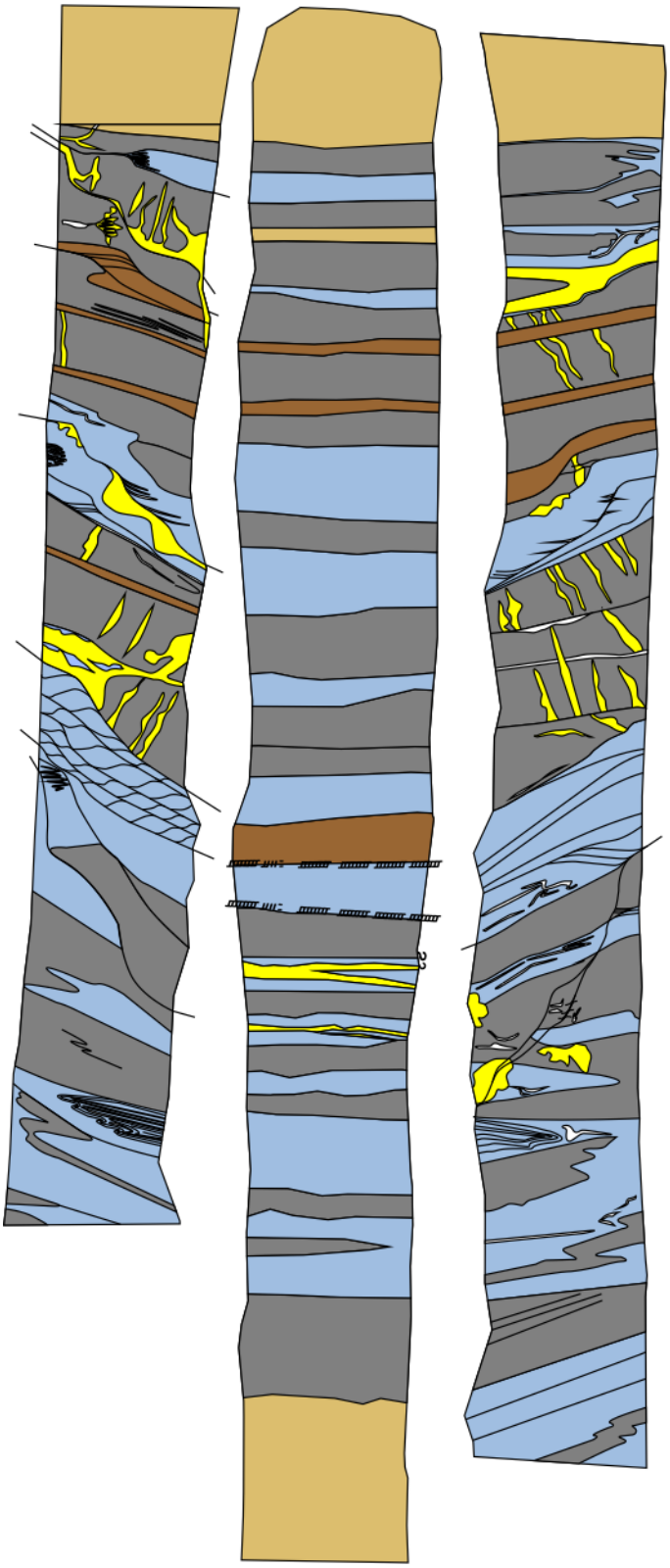
	
TQPL2017-053B-2.5X-XPL **D_2B** Shear bands dragging **S_2A** foliation well defined in mica-rich domains predominantly made up of sericite and minor grunerite.	**TQPL2017-053B-5X-XPL** Mica-rich layer predominantly made up of sericite and chlorite and minor grunerite surrounding it, displaying **S_2A** foliation dragged by **D_2B** shear bands.

Appendix IV – Digitized underground Mapping

DP200-161


5 m
LEGEND
Chloritic Greywacke
Oxide-silicate BIF
Pelitic BIF
Laminated Mudstone
Siltstone/greywacke
Lamprophyre Dyke
Mineralized (Apy) Qtz ± Ank vein
Barren Qtz ± Ank vein
Late subvertical Qtz ± Ank vein
Apy replacement front

CC300-152

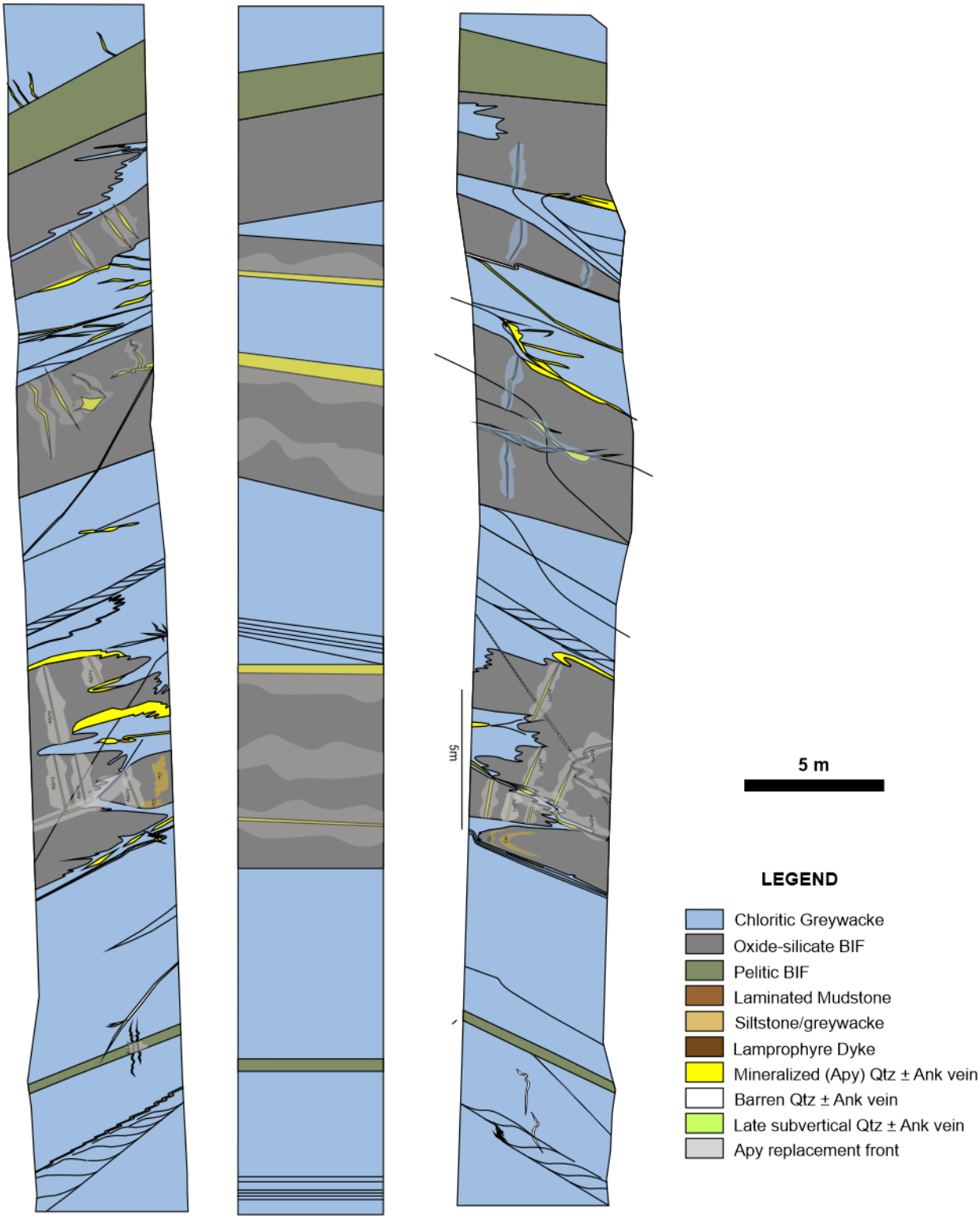


5 m

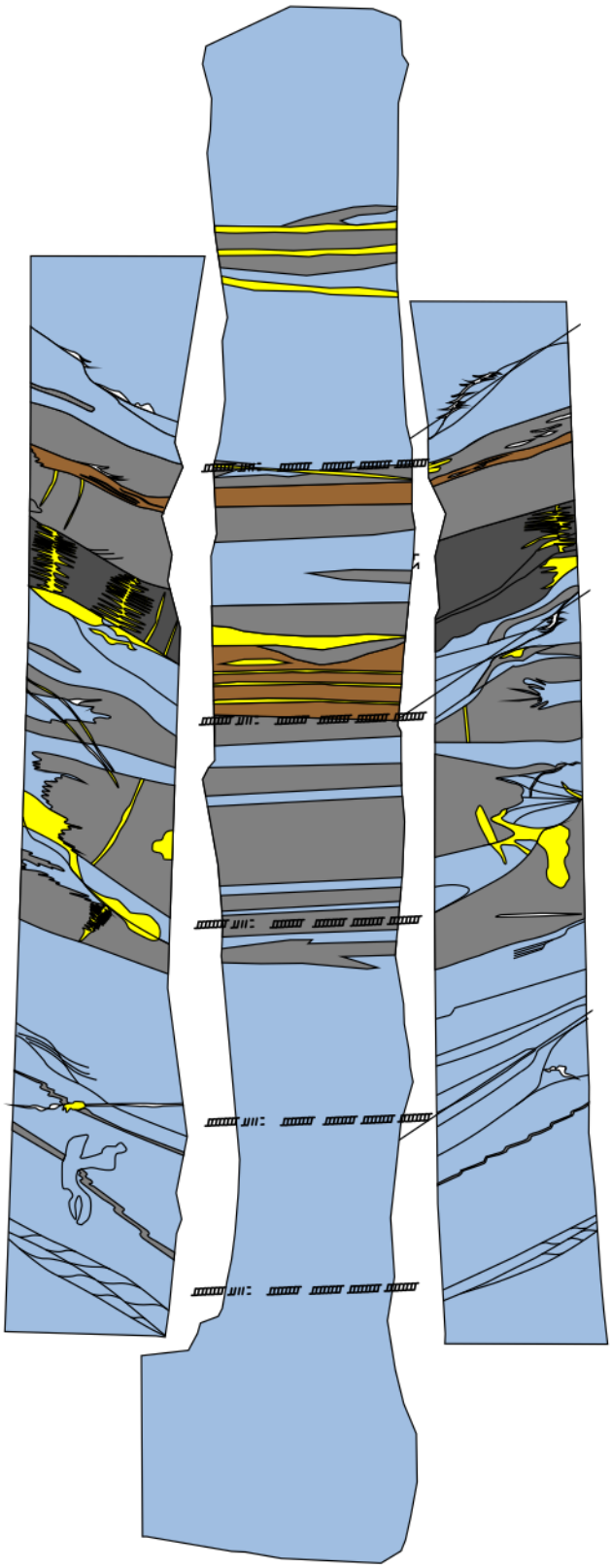
LEGEND

- Chloritic Greywacke
- Oxide-silicate BIF
- Pelitic BIF
- Laminated Mudstone
- Siltstone/greywacke
- Lamprophyre Dyke
- Mineralized (Apy) Qtz ± Ank vein
- Barren Qtz ± Ank vein
- Late subvertical Qtz ± Ank vein
- Apy replacement front

CC300-153


5m
5 m
LEGEND
Chloritic Greywacke
Oxide-silicate BIF
Pelitic BIF
Laminated Mudstone
Siltstone/greywacke
Lamprophyre Dyke
Mineralized (Apy) Qtz ± Ank vein
Barren Qtz ± Ank vein
Late subvertical Qtz ± Ank vein
Apy replacement front

CC300-155

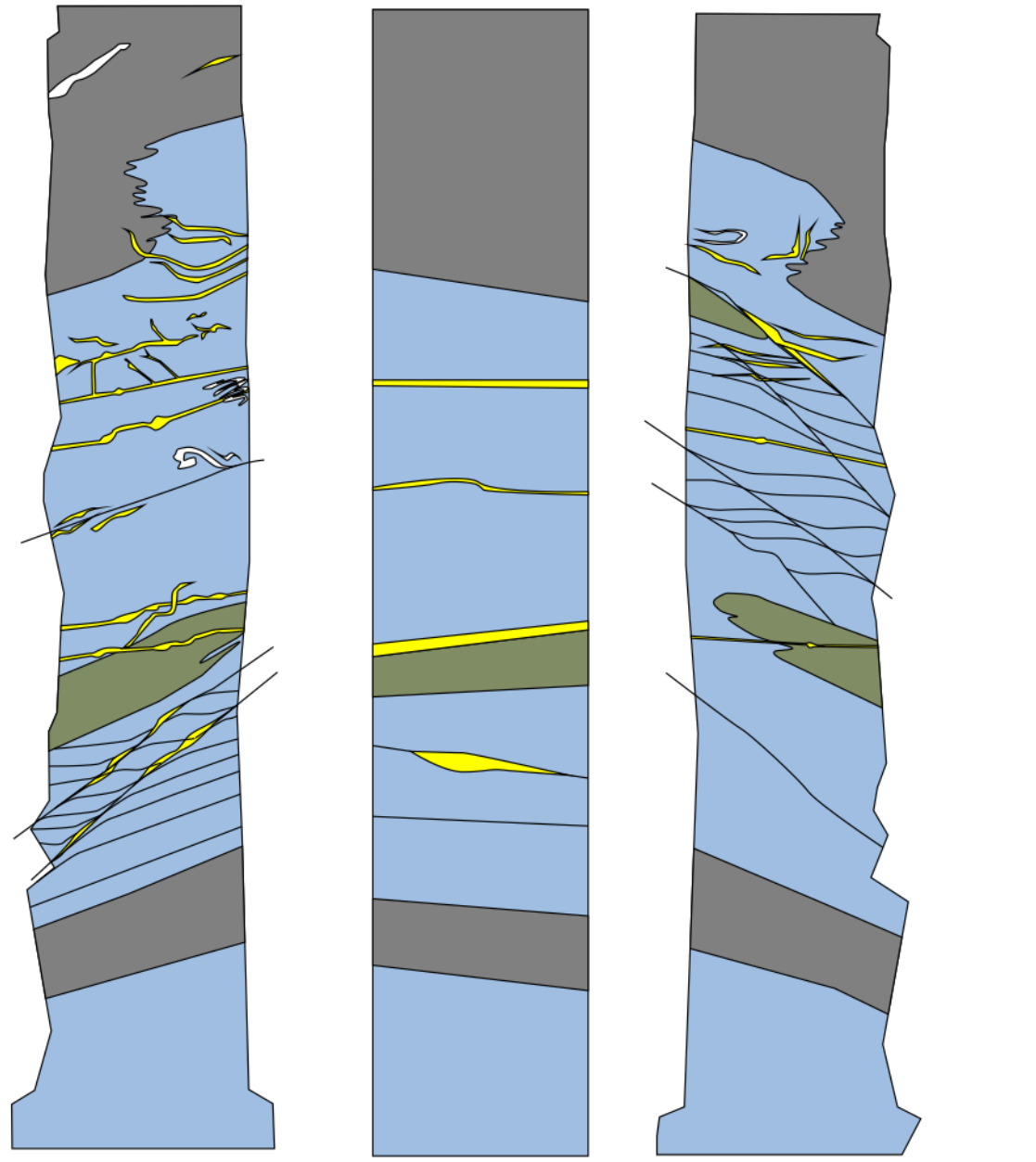


5 m

LEGEND

- Chloritic Greywacke
- Oxide-silicate BIF
- Pelitic BIF
- Laminated Mudstone
- Siltstone/greywacke
- Lamprophyre Dyke
- Mineralized (Apy) Qtz ± Ank vein
- Barren Qtz ± Ank vein
- Late subvertical Qtz ± Ank vein
- Apy replacement front

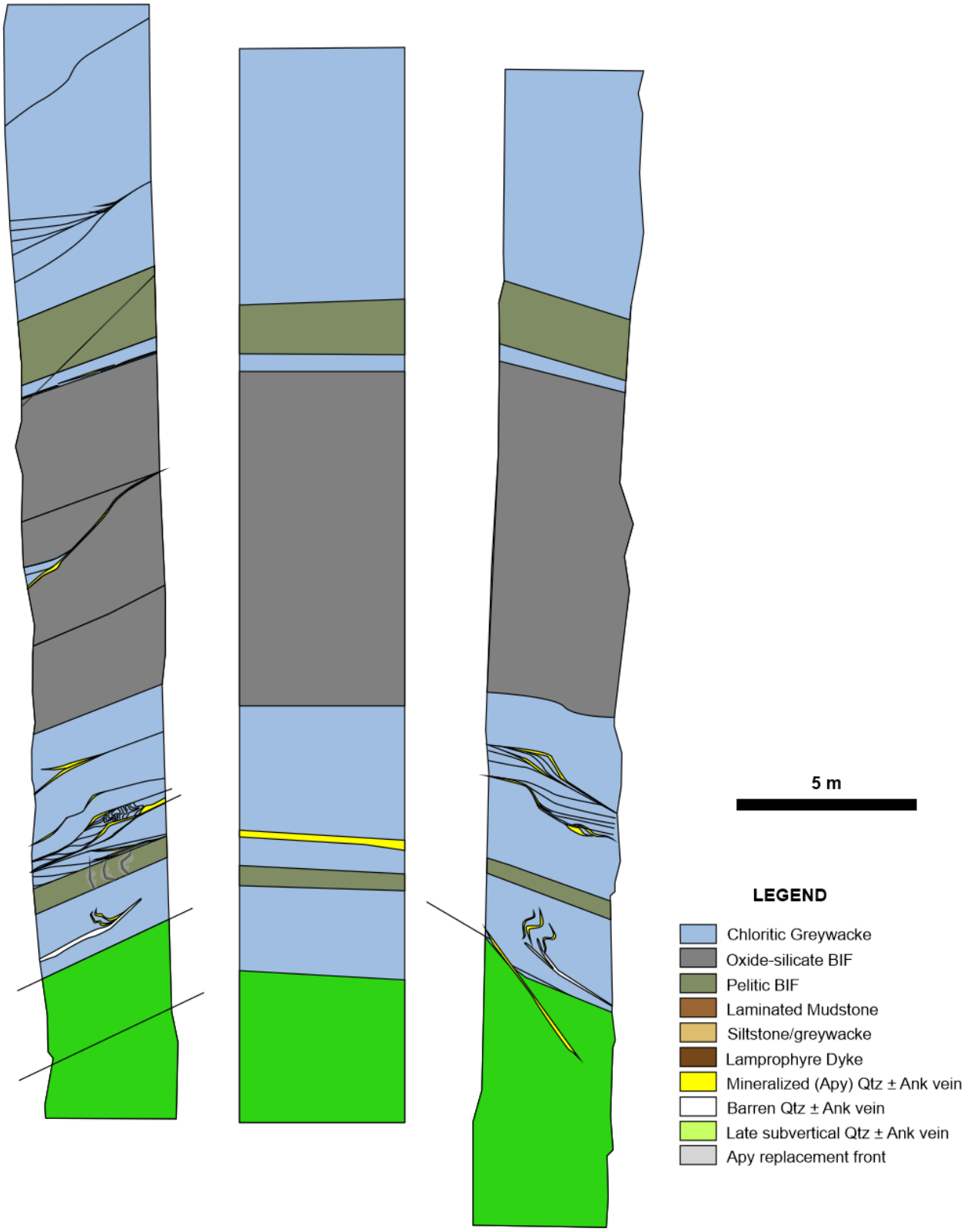
CC325-155



5 m

- Chloritic Greywacke
- Oxide-silicate BIF
- Pelitic BIF
- Laminated Mudstone
- Siltstone/greywacke
- Lamprophyre Dyke
- Mineralized (Apy) Qtz ± Ank vein
- Barren Qtz ± Ank vein
- Late subvertical Qtz ± Ank vein
- Apy replacement front

CC425-127


5 m
LEGEND
Chloritic Greywacke
Oxide-silicate BIF
Pelitic BIF
Laminated Mudstone
Siltstone/greywacke
Lamprophyre Dyke
Mineralized (Apy) Qtz ± Ank vein
Barren Qtz ± Ank vein
Late subvertical Qtz ± Ank vein
Apy replacement front

Appendix V – Structural measurements

Strike/trend	Dip/plunge	Description	Crosscut
274	58	D2B Shear plane	CC300-152
258	45	D2B Shear plane	CC300-152
263	55	D2B Shear plane	CC300-155
273	56	D2B Shear plane	CC300-152
260	49	D2B Shear plane	CC300-155
269	52	D2B Shear plane	CC300-152
271	51	D2B Shear plane	CC300-152
263	54	D2B Shear plane	CC300-152
263	55	D2B Shear plane	CC300-152
258	52	D2B Shear plane	CC300-152
271	55	D2B Shear plane	CC300-155
272	56	D2B Shear plane	CC300-152
268	51	D2B Shear plane	CC300-152
264	55	D2B Shear plane	CC300-152
270	54	D2B Shear plane	CC300-152
271	51	D2B Shear plane	CC300-152
263	54	D2B Shear plane	CC300-152
269	47	D2B Shear plane	CC300-152
270	57	D2B Shear plane	CC300-152
258	58	D2B Shear plane	CC300-152
270	54	D2B Shear plane	CC300-152
273	55	D2B Shear plane	CC300-152
261	47	D2B Shear plane	CC300-152
266	57	D2B Shear plane	CC300-152
276	58	D2B Shear plane	CC300-152
264	59	D2B Shear plane	CC300-152
263	55	D2B Shear plane	CC300-152
272	54	D2B Shear plane	CC300-152
273	55	D2B Shear plane	CC300-152
274	47	D2B Shear plane	CC300-152
279	57	D2B Shear plane	CC300-152
264	51	D2B Shear plane	CC300-152
265	48	D2B Shear plane	CC300-153
266	49	D2B Shear plane	CC300-153
267	52	D2B Shear plane	CC300-153
270	53	D2B Shear plane	CC300-153
266	57	D2B Shear plane	CC300-153
276	58	D2B Shear plane	CC300-153
263	51	D2B Shear plane	CC300-153
272	54	D2B Shear plane	CC300-153
273	55	D2B Shear plane	CC300-153
274	50	D2B Shear plane	CC300-153
262	59	D2B Shear plane	CC300-153
263	51	D2B Shear plane	CC300-153
267	54	D2B Shear plane	CC300-153

Strike/trend	Dip/plunge	Description	Crosscut
279	54	D2B Shear plane	CC300-153
262	55	D2B Shear plane	CC300-153
259	57	D2B Shear plane	CC300-153
260	49	D2B Shear plane	CC300-155
264	52	D2B Shear plane	CC300-153
269	47	D2B Shear plane	CC300-153
270	57	D2B Shear plane	CC300-153
258	58	D2B Shear plane	CC300-153
270	53	D2B Shear plane	CC325-155
271	48	D2B Shear plane	CC325-155
273	55	D2B Shear plane	CC325-155
261	47	D2B Shear plane	CC325-155
270	54	D2B Shear plane	CC325-155
273	47	D2B Shear plane	CC325-155
279	51	D2B Shear plane	CC325-155
267	52	D2B Shear plane	CC325-155
267	55	D2B Shear plane	CC325-155
263	56	D2B Shear plane	CC325-155
259	51	D2B Shear plane	CC325-155
263	10	Extensional vein	CC300-152
92	7	Extensional vein	CC300-152
86	9	Extensional vein	CC300-152
91	8	Extensional vein	CC300-155
274	1	Extensional vein	CC300-153
83	11	Extensional vein	CC300-153
80	7	Extensional vein	CC300-153
91	5	Extensional vein	CC300-153
101	14	Extensional vein	CC300-155
269	3	Extensional vein	CC325-155
272	4	Extensional vein	CC325-155
7	264	F2A Fold-hinge	CC300-152
12	264	F2A Fold-hinge	CC300-152
17	270	F2A Fold-hinge	CC300-155
10	273	F2A Fold-hinge	CC300-152
5	276	F2A Fold-hinge	CC300-153
8	266	F2A Fold-hinge	CC300-153
11	258	F2A Fold-hinge	CC300-153
9	276	F2A Fold-hinge	CC325-155
276	67	S2A Foliation	CC300-152
258	61	S2A Foliation	CC300-152
259	60	S2A Foliation	CC300-152
270	62	S2A Foliation	CC300-152
266	63	S2A Foliation	CC300-152
271	70	S2A Foliation	CC300-152
276	72	S2A Foliation	CC300-152

Strike/trend	Dip/plunge	Description	Crosscut
276	60	S2A Foliation	CC300-152
264	63	S2A Foliation	CC300-152
264	61	S2A Foliation	CC300-152
264	62	S2A Foliation	CC300-152
259	66	S2A Foliation	CC300-153
266	61	S2A Foliation	CC300-155
261	69	S2A Foliation	CC300-153
279	69	S2A Foliation	CC300-155
261	63	S2A Foliation	CC300-153
262	62	S2A Foliation	CC300-153
279	69	S2A Foliation	CC300-153
279	71	S2A Foliation	CC300-153
267	69	S2A Foliation	CC300-153
263	61	S2A Foliation	CC300-153
259	69	S2A Foliation	CC300-153
275	63	S2A Foliation	CC300-153
270	62	S2A Foliation	CC300-153
263	63	S2A Foliation	CC300-153
276	67	S2A Foliation	CC300-153
276	69	S2A Foliation	CC300-153
264	67	S2A Foliation	CC300-153
263	61	S2A Foliation	CC300-153
259	69	S2A Foliation	CC325-155
275	63	S2A Foliation	CC325-155
273	63	S2A Foliation	CC325-155
274	62	S2A Foliation	CC325-155
275	70	S2A Foliation	CC325-155

Appendix VI - Geochemical Analytical Methods

Geochemical Analytical Methods

Whole-rock analyses were performed at Activation Laboratories Ltd. in Ancaster, Ontario, using a combination of their standard preparation and analytical packages, the details of which can be found at https://actlabs.com/geochemistry/.Methods and detection limits are reported for oxides and elements in AppendixVII-worksheet "DetectionLimit" while method abbreviations appear in *italic* below.

Samples were initially dried (60°C) and crushed to at least 90% (<2mm) in a steel jaw crusher. A mechanically split fraction was pulverized in a chromium-free steel mill until 95% of the sample material passed through a 74 µm mesh. Major elements were determined by lithium metaborate-tetraborate fusion followed by inductively coupled plasma mass spectrometry (FUSICP; *FUS-MS*). Trace and rare earth elements were determined by a combination of lithium metaborate-tetraborate and total digestion (four acids) followed by inductively coupled plasma mass spectrometry (*FUS-MS; TD-MS*) and inductively coupled plasma atomic emission spectrometry (*FUS-ICP*). FeO was determined by titration using a cold acid digestion (ammonium metavanadate and hydrofluoric acid) in an open system (*TITR*).

For chalcophile elements, a four-acid digestion ICP-MS (*TD-MS*) method was preferred. Aqua regia (*AR MS*) digestion coupled with ICP-MS was chosen to analyze As, Sb, Bi, Se and Te.

Boron was determined by gamma neutron activation analysis (*PGNAA*).

Preferred method for Au included the combination of fire assay with an atomic absorption (*FA-AA*) finish. High-grade ore zone samples were re-analyzed with a combination of fire assay and gravimetry (*FA-GRAV*). Silver was measured by using lithium metaborate-tetraborate fusion (*FUS-MS)* or near total four-acid digestion (*TD-MS*) combined with ICP-MS.

CO_2 and Total (S) were determined by combustion infrared analysis (*IR*). Mercury was measured by cold vapor-atomic absorption using a flow injection mercury system (*FIMS*) after aqua regia digestion.

Actlabs reports LOI, LOI2, Total and Total 2. LOI is determined by weighing a small amount of the sample before and after ignition. However, because FeO was measured, it was possible to adjust LOI to take into account the weight gain resulting from oxidation of FeO to Fe2O3. This adjusted value of LOI is LOI2.

Reported Total is the total of all major oxides using Fe2O3(T) and LOI, whereas Total2 includes LOI2.

Appendix VII - Analytical Detection Limits

Analyte Symbol	Unit Symbol	Detection Limit	Analysis Method
As	%	0.01	FUS-Na2O2
Au	ppb	5	FA-AA
B	ppm	1	PGNAA
Mass	g		PGNAA
CO2	%	0.01	CO2
FeO	%	0.1	TITR
Total S	%	0.01	CS
SiO2	%	0.01	FUS-ICP
Al2O3	%	0.01	FUS-ICP
Fe2O3	%	0.01	FUS-ICP
MnO	%	0.001	FUS-ICP
MgO	%	0.01	FUS-ICP
CaO	%	0.01	FUS-ICP
Na2O	%	0.01	FUS-ICP
K2O	%	0.01	FUS-ICP
TiO2	%	0.001	FUS-ICP
P2O5	%	0.01	FUS-ICP
LOI	%		FUS-ICP
LOI2	%		FUS-ICP
Total	%	0.01	FUS-ICP
Total 2	%	0.01	FUS-ICP
Fe2O3(T)	%	0.01	FUS-ICP
Sc	ppm	1	FUS-ICP
Be	ppm	1	FUS-ICP
V	ppm	5	FUS-ICP
Cr	ppm	20	FUS-MS
Co	ppm	1	FUS-MS
Ni	ppm	20	FUS-MS
Cu	ppm	10	FUS-MS
Zn	ppm	30	FUS-MS
Ga	ppm	1	FUS-MS
Ge	ppm	0.5	FUS-MS
As	ppm	5	FUS-MS
Rb	ppm	1	FUS-MS
Sr	ppm	2	FUS-ICP
Y	ppm	0.5	FUS-MS
Zr	ppm	1	FUS-ICP
Nb	ppm	0.2	FUS-MS
Mo	ppm	2	FUS-MS
Ag	ppm	0.5	FUS-MS
In	ppm	0.1	FUS-MS
Sn	ppm	1	FUS-MS
Sb	ppm	0.2	FUS-MS
Cs	ppm	0.1	FUS-MS
Ba	ppm	2	FUS-ICP
Bi	ppm	0.1	FUS-MS

Analyte Symbol	Unit Symbol	Detection Limit	Analysis Method
La	ppm	0.05	FUS-MS
Ce	ppm	0.05	FUS-MS
Pr	ppm	0.01	FUS-MS
Nd	ppm	0.05	FUS-MS
Sm	ppm	0.01	FUS-MS
Eu	ppm	0.005	FUS-MS
Gd	ppm	0.01	FUS-MS
Tb	ppm	0.01	FUS-MS
Dy	ppm	0.01	FUS-MS
Ho	ppm	0.01	FUS-MS
Er	ppm	0.01	FUS-MS
Tm	ppm	0.005	FUS-MS
Yb	ppm	0.01	FUS-MS
Lu	ppm	0.002	FUS-MS
Hf	ppm	0.1	FUS-MS
Ta	ppm	0.01	FUS-MS
W	ppm	0.5	FUS-MS
Tl	ppm	0.05	FUS-MS
Pb	ppm	5	FUS-MS
Th	ppm	0.05	FUS-MS
U	ppm	0.01	FUS-MS
As	ppm	0.1	AR-MS
Bi	ppm	0.02	AR-MS
Sb	ppm	0.02	AR-MS
Se	ppm	0.1	AR-MS
Te	ppm	0.02	AR-MS
Ag	ppm	1	TD-MS
Cd	ppm	0.2	TD-MS
Co	ppm	0.5	TD-MS
Cr	ppm	1	TD-MS
Cu	ppm	0.5	TD-MS
In	ppm	0.2	TD-MS
Li	ppm	1	TD-MS
Ni	ppm	1	TD-MS
Mn	ppm	2	TD-MS
Mo	ppm	1	TD-MS
Pb	ppm	2	TD-MS
Zn	ppm	0.5	TD-MS
Au	g/tonne	0.03	FA-GRA