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Le, Truong Xuan (2021) ***Geological characteristics, genesis and ore controlling factors of the Tick Hill Au deposit, Dajarra District, NW Queensland, Australia.*** **PhD Thesis [Appendices], James Cook University.**

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https://doi.org/10.25903/e5c3%2Drf39

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Appendices

Appendices 1-10 contain supplementary materials in support of this thesis. The following table provides a summary on the materials attached as appendices to this thesis.

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Appendix 1

Data for TH007: hyperspectral, assay data and core photos

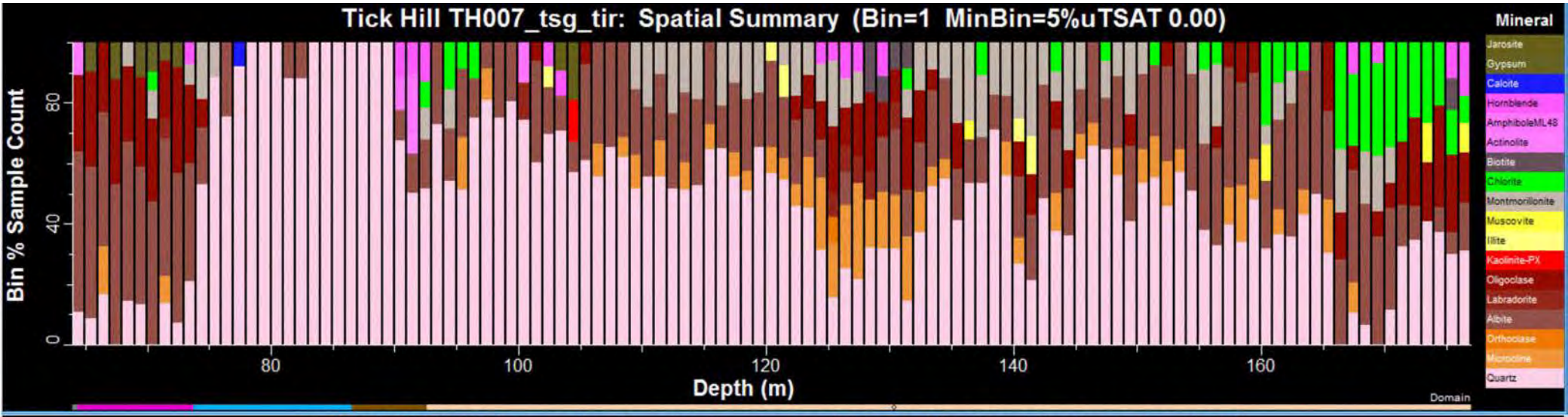
Appendix 1 contains the following data sets:

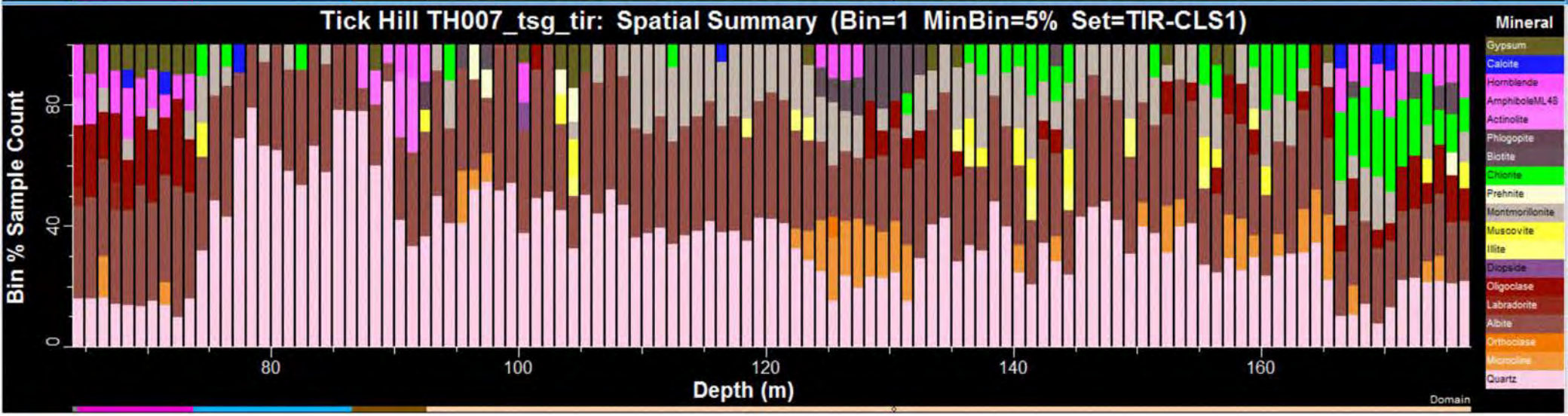
- Summary of hyperspectral imaging for drill hole TH007 conducted by GSQ (2015).
- Assay data to highlight the spatial relationship with alteration haloes defined by hyperspectral imaging
- images of the drill core scanned with the Hy-logger

Reference: GSQ, 2015. Hyperspectral data for drill hole TH007RD (71815), Tick Hill Deposit. Geological Survey of Queensland.

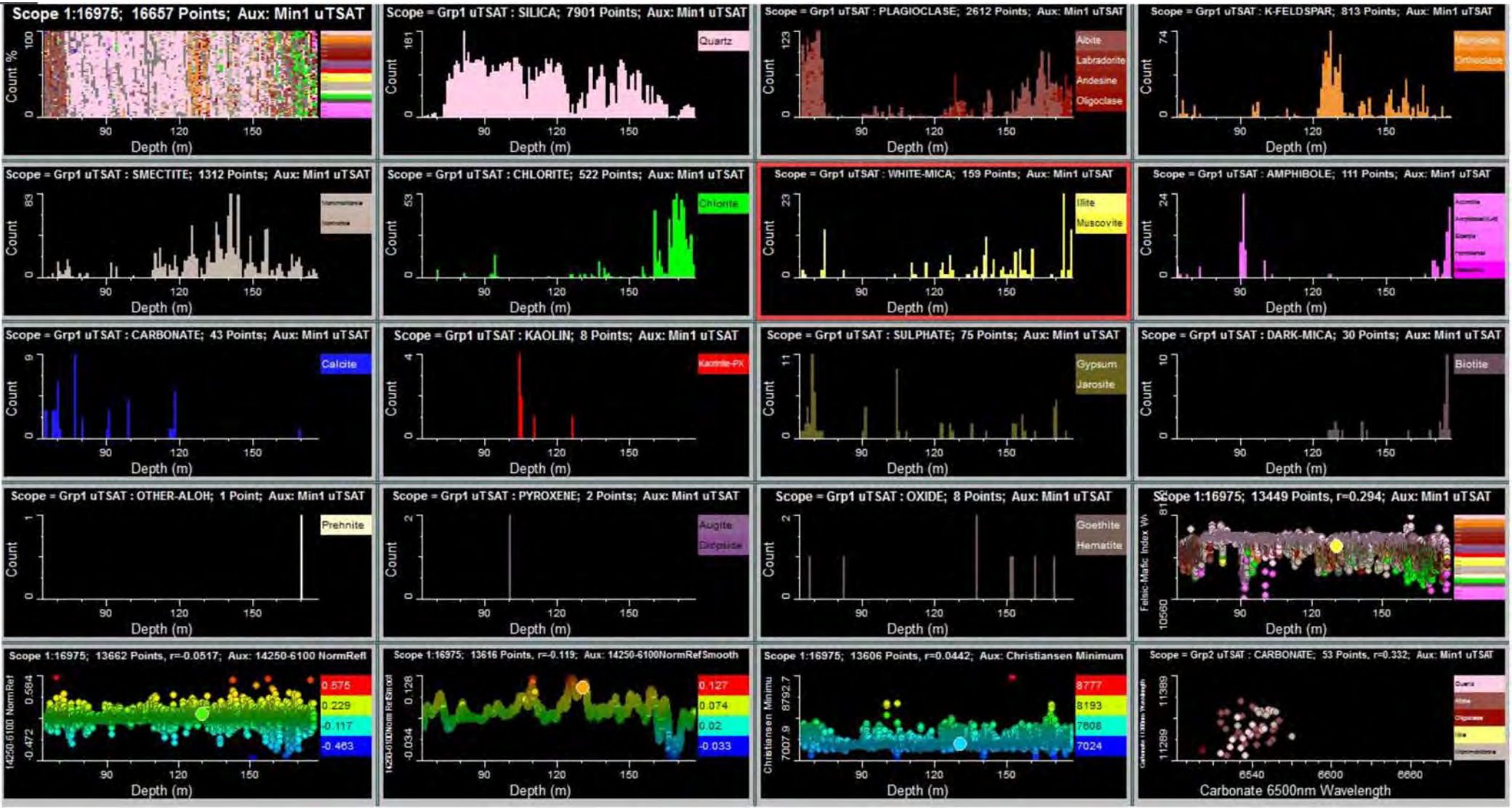
https://minesonlinemaps.business.qld.gov.au/SilverlightViewer/Viewer.html?Viewer=momapspublic (access 30 April 2018)

Appendix 1: TH007 hyperspectral





Appendix 1: TH007 hyperspectral_Scatter



Appendix 1: TH007 Assay data

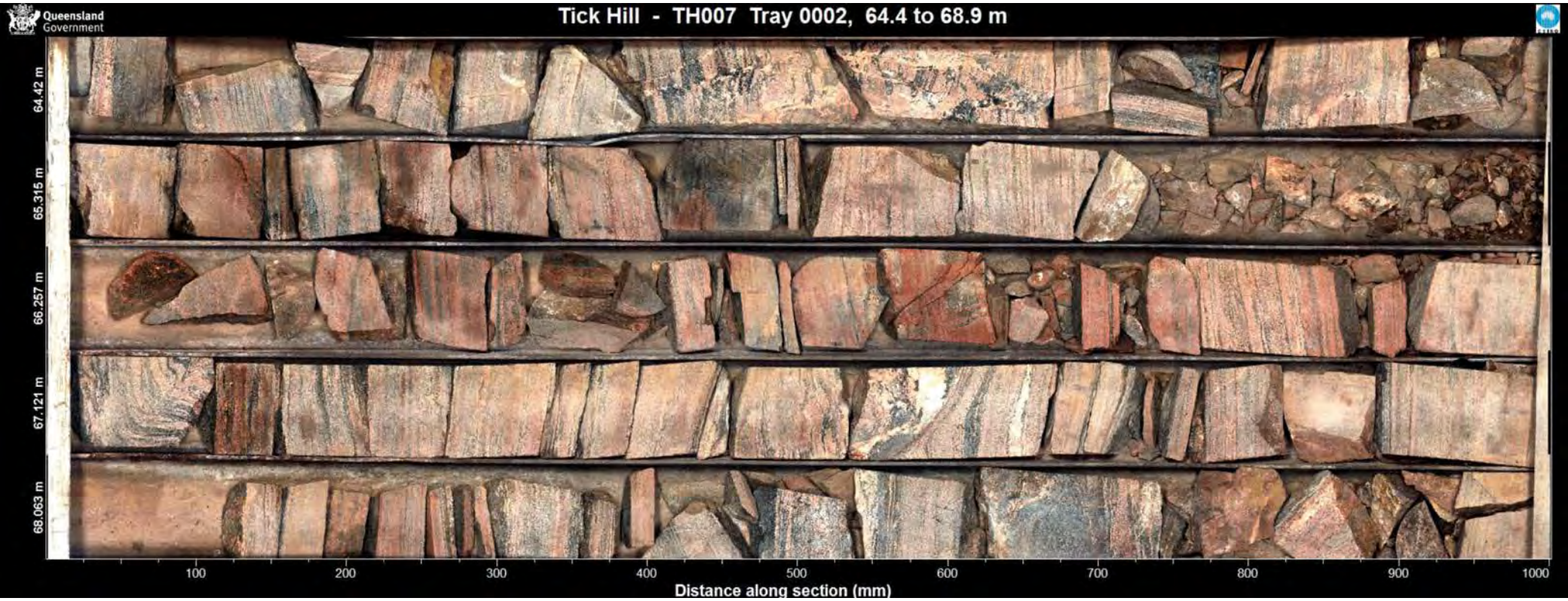
Hole_ID	Sample	From (m)	To (m)	Ppm									
				Au	Au1	Cu	Pb	Zn	Ag	As	Co	Ni	Mo
TH007RD	QQ 69305	0	1	0.134									
TH007RD	QQ 69306	1	2	0.042									
TH007RD	QQ 69307	2	3	0.041									
TH007RD	QQ 69308	3	4	0.032									
TH007RD	QQ 69309	4	5	0.017									
TH007RD	QQ 69310	5	6	0.013									
TH007RD	QQ 69311	6	7	0.006									
TH007RD	QQ 69312	7	8	-0.005									
TH007RD	QQ 69313	8	9	0.007									
TH007RD	QQ 69314	9	10	-0.005									
TH007RD	QQ 69315	10	11	0.005									
TH007RD	QQ 69316	11	12	-0.005									
TH007RD	QQ 69317	12	13	-0.005									
TH007RD	QQ 69318	13	14	-0.005									
TH007RD	QQ 69319	14	15	-0.005									
TH007RD	QQ 69320	15	16	-0.005									
TH007RD	QQ 69321	16	17	-0.005									
TH007RD	QQ 69322	17	18	-0.005									
TH007RD	QQ 69323	18	19	-0.005									
TH007RD	QQ 69324	19	20	-0.005									
TH007RD	QQ 69325	20	21	0.011									
TH007RD	QQ 69326	21	22	-0.005									
TH007RD	QQ 69327	22	23	-0.005									
TH007RD	QQ 69328	23	24	-0.005									
TH007RD	QQ 69329	24	25	-0.005									
TH007RD	QQ 69330	25	26	-0.005									
TH007RD	QQ 69331	26	27	-0.005									
TH007RD	QQ 69332	27	28	-0.005									
TH007RD	QQ 69333	28	29	0.006									
TH007RD	QQ 69334	29	30	-0.005									
TH007RD	QQ 69335	30	31	-0.005									
TH007RD	QQ 69336	31	32	0.007									
TH007RD	QQ 69337	32	33	-0.005									
TH007RD	QQ 69338	33	34	-0.005									
TH007RD	QQ 69339	34	35	-0.005									
TH007RD	QQ 69340	35	36	-0.005									
TH007RD	QQ 69341	36	37	-0.005									
TH007RD	QQ 69342	37	38	-0.005									
TH007RD	QQ 69343	38	39	-0.005									
TH007RD	QQ 69344	39	40	-0.005									
TH007RD	QQ 69345	40	41	-0.005									
TH007RD	QQ 69346	41	42	-0.005									
TH007RD	QQ 69347	42	43	-0.005									
TH007RD	QQ 69348	43	44	-0.005									
TH007RD	QQ 69349	44	45	0.005									
TH007RD	QQ 69350	45	46	-0.005									
TH007RD	QQ 69351	46	47	-0.005									
TH007RD	QQ 69352	47	48	-0.005									
TH007RD	QQ 69353	48	49	-0.005									
TH007RD	QQ 69354	49	50	0.01									
TH007RD	QQ 69355	50	51	0.008									
TH007RD	QQ 69356	51	52	-0.005									
TH007RD	QQ 69357	52	53	-0.005									
TH007RD	QQ 69358	53	54	0.005									
TH007RD	QQ 69359	54	55	-0.005									
TH007RD	QQ 69360	55	56	-0.005									
TH007RD	QQ 69361	56	57	-0.005									
TH007RD	QQ 69362	57	58	-0.005									
TH007RD	QQ 69363	58	59	-0.005									
TH007RD	QQ 69364	59	60.5	-0.005									
TH007RD	QQ 69956	60.5	61	0.008						-2			-5
TH007RD	QQ 69957	61	62	0.008	0.01					-2			-5
TH007RD	QQ 69958	62	63	-0.005		8				-2			-5

Hole_ID	Sample	From (m)	To (m)	Ppm									
				Au	Au1	Cu	Pb	Zn	Ag	As	Co	Ni	Mo
TH007RD	QQ 69959	63	64	0.006		30				-2			-5
TH007RD	QQ 69960	64	65	0.006		45				-2			-5
TH007RD	QQ 69961	65	66	-0.005		25				-2			-5
TH007RD	QQ 69962	66	67	0.008		8				-2			-5
TH007RD	QQ 69963	67	68	0.005						-2			-5
TH007RD	QQ 69964	68	69	0.009		13				-2			-5
TH007RD	QQ 69965	69	70	0.006		23				2			-5
TH007RD	QQ 69966	70	71	0.007		24				-2			-5
TH007RD	QQ 69967	71	72	-0.005		16				3			-5
TH007RD	QQ 69968	72	73.05	0.022		17				2			-5
TH007RD	QQ 69969	73.05	74	0.01		22				2			-5
TH007RD	QQ 69970	74	75	0.012		36				-2			-5
TH007RD	QQ 69971	75	76	0.026		135				-2			-5
TH007RD	QQ 69972	76	77	0.017		85				2			10
TH007RD	QQ 69973	77	78	0.015		54				-2			-5
TH007RD	QQ 69974	78	79	0.043		189				-2			-5
TH007RD	QQ 69975	79	80	0.014		82				-2			10
TH007RD	QQ 69976	80	81	0.02		22				-2			20
TH007RD	QQ 69977	81	82	0.023		7				-2			-5
TH007RD	QQ 69978	82	83	0.017	0.02	13				-2			-5
TH007RD	QQ 69979	83	84	0.027		10				-2			-5
TH007RD	QQ 69980	84	85	0.016		21				-2			-5
TH007RD	QQ 69981	85	86	0.014		7				2			-5
TH007RD	QQ 69982	86	87	0.01		5				-2			-5
TH007RD	QQ 69983	87	87.4	0.014		15				2			-5
TH007RD	QQ 69984	87.4	88	0.01		12				-2			-5
TH007RD	QQ 69985	88	89	0.029		13				-2			-5
TH007RD	QQ 69986	89	90	0.018		30				-2			-5
TH007RD	QQ 69987	90	91	0.016		19				-2			-5
TH007RD	QQ 69988	91	92	0.017		19				-2			-5
TH007RD	QQ 69989	92	93	0.305		25				2			-5
TH007RD	QQ 69990	93	94	0.109		23				2			-5
TH007RD	QQ 69991	94	94.55	0.148		41				-2			-5
TH007RD	QQ 69992	94.55	95	138.2	144	37				-2			-5
TH007RD	QQ 69993	95	96	40	48.7	57				-2			-5
TH007RD	QQ 69994	96	97	0.36		45				-2			-5
TH007RD	QQ 69995	97	98	0.068		40				-2			-5
TH007RD	QQ 69996	98	99	0.214		54				2			-5
TH007RD	QQ 69997	99	100	0.036		29				-2			-5
TH007RD	QQ 69998	100	101	0.173		28				-2			-5
TH007RD	QQ 69999	101	102	1.31		105				6			-5
TH007RD	QQ 70000	102	103	1.76	1.96	84				2			10
TH007RD	QQ 74301	103	103.65	0.146		249				5			-5
TH007RD	QQ 74302	103.65	104.2	0.183		730				12			-5
TH007RD	QQ 74303	104.2	105	0.658		560				15			-5
TH007RD	QQ 74304	105	106	8.75	8.63	800				19			-5
TH007RD	QQ 74305	106	107	56.1	58.7	360				16			-5
TH007RD	QQ 74306	107	108	1.08	1.2	970				18			-5
TH007RD	QQ 74307	108	109	229	252	258				6			-5
TH007RD	QQ 74308	109	110	103.7	104	105				4			-5
TH007RD	QQ 74309	110	111	210.2	212	135				6			-5
TH007RD	QQ 74310	111	111.7	1.98	1.94	1750				20			-5
TH007RD	QQ 74311	111.7	112.3	4.53	3.2	1280				23			-5
TH007RD	QQ 74312	112.3	113	0.766		70				12			-5
TH007RD	QQ 74313	113	114	1.77		106				6			-5
TH007RD	QQ 74314	114	115	1.88	2.4	86				8			-5
TH007RD	QQ 74315	115	116	1.02		82				5			-5
TH007RD	QQ 74316	116	116.5	0.184		92				4			-5
TH007RD	QQ 74317	116.5	117	0.629		31				-2			-5
TH007RD	QQ 74318	117	118	0.995		13				3			-5
TH007RD	QQ 74319	118	119	0.353		53				2			-5
TH007RD	QQ 74320	119	120	0.114		19				3			-5
TH007RD	QQ 74321	120	121	0.056		21				-2			-5

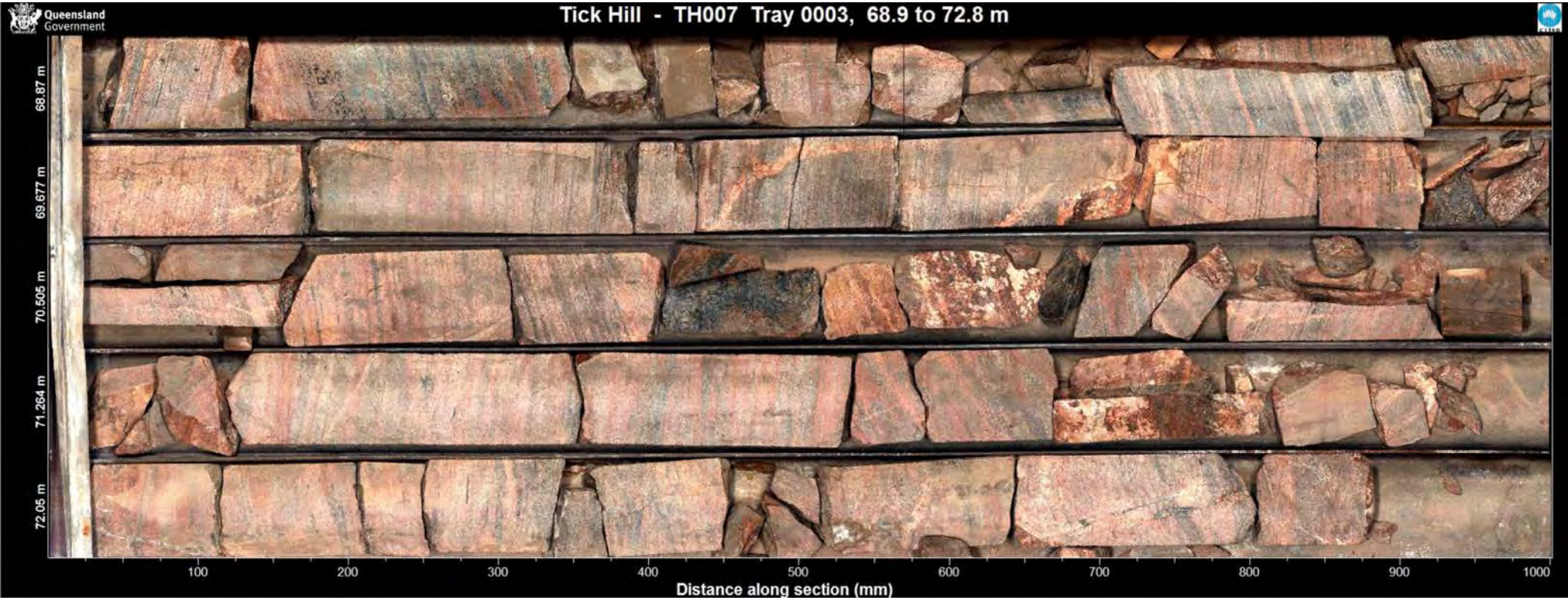
Appendix 1: TH007 Assay data (cont.)

Hole_ID	Sample	From (m)	To (m)	Ppm									
				Au	Au1	Cu	Pb	Zn	Ag	As	Co	Ni	Mo
TH007RD	QQ 74322	121	122	0.056		418				2			-5
TH007RD	QQ 74323	122	123	0.051		229				4			-5
TH007RD	QQ 74324	123	123.7	0.297		620				-2			-5
TH007RD	QQ 74325	123.7	124.3	0.111		15				-2			-5
TH007RD	QQ 74326	124.3	125	0.133		36				4			-5
TH007RD	QQ 74327	125	126	0.019		14				3			-5
TH007RD	QQ 74328	126	127	0.066	0.03	5				2			-5
TH007RD	QQ 74329	127	128	0.012						-2			-5
TH007RD	QQ 74330	128	129	0.009		168				3			-5
TH007RD	QQ 74331	129	130	0.008		6				-2			-5
TH007RD	QQ 74332	130	131	0.008		750				3			-5
TH007RD	QQ 74333	131	132	0.006		15				3			-5
TH007RD	QQ 74334	132	132.85	0.007		18				-2			-5
TH007RD	QQ 74335	132.85	133.5	0.01		10				-2			-5
TH007RD	QQ 74336	133.5	134.5	0.006		7				3			-5
TH007RD	QQ 74337	134.5	135.25	0.009		11				2			-5
TH007RD	QQ 74338	135.25	136	-0.005		19				-2			-5
TH007RD	QQ 74339	136	137	0.007		30				-2			-5
TH007RD	QQ 74340	137	138	0.006		61				-2			-5
TH007RD	QQ 74341	138	139	0.013	0.02	20				-2			-5
TH007RD	QQ 74342	139	139.7	0.018		12				-2			-5
TH007RD	QQ 74343	139.7	140	0.031		49				2			-5
TH007RD	QQ 74344	140	141	0.011		81				-2			-5
TH007RD	QQ 74345	141	142	0.018		20				-2			-5
TH007RD	QQ 74346	142	143	0.016		21				3			-5
TH007RD	QQ 74347	143	144	0.022		27				-2			-5
TH007RD	QQ 74348	144	145.04	0.012		36				-2			-5
TH007RD	QQ 74349	145.04	146	0.025		10				3			10
TH007RD	QQ 74350	146	147	0.012		9				3			-5
TH007RD	QQ 74351	147	148	0.015		9				-2			-5
TH007RD	QQ 74352	148	149	0.018		16				-2			-5
TH007RD	QQ 74353	149	149.6	0.01		8				2			-5
TH007RD	QQ 74354	149.6	150.18	0.01		9				2			-5
TH007RD	QQ 74355	150.18	151	0.006		12				-2			-5
TH007RD	QQ 74356	151	152	0.012		58				-2			-5
TH007RD	QQ 74357	152	153	0.018		20				-2			-5
TH007RD	QQ 74358	153	154	0.009		25				2			-5
TH007RD	QQ 74359	154	155	0.032		18				3			-5
TH007RD	QQ 74360	155	156	0.019		25				4			-5
TH007RD	QQ 74361	156	157	0.008		45				2			-5
TH007RD	QQ 74362	157	158	0.014		35				-2			-5
TH007RD	QQ 74363	158	159	0.008		34				2			-5
TH007RD	QQ 74364	159	159.5	0.007		45				-2			-5
TH007RD	QQ 74365	159.5	160.2	0.008		16				-2			-5
TH007RD	QQ 74366	160.2	160.94	0.006		17				-2			-5
TH007RD	QQ 74367	160.94	161.5	0.007		42				-2			-5
TH007RD	QQ 74368	161.5	162	0.443	0.08	15				3			-5
TH007RD	QQ 74369	162	163	0.014		31				-2			-5
TH007RD	QQ 74370	163	164	0.016		28				2			-5
TH007RD	QQ 74371	164	165	0.015		31				4			-5
TH007RD	QQ 74372	165	165.6	0.009	0.01	147				-2			-5
TH007RD	QQ 74373	165.6	166.2	0.02		69				-2			-5
TH007RD	QQ 74374	166.2	167	0.014		15				4			-5
TH007RD	QQ 74375	167	168	0.005		14				3			-5
TH007RD	QQ 74376	168	169	0.005		7				3			-5
TH007RD	QQ 74377	169	170	-0.005		5				2			-5
TH007RD	QQ 74378	170	170.55	0.006						-2			-5
TH007RD	QQ 74379	170.55	171.2	0.008		15				4			-5
TH007RD	QQ 74380	171.2	172	0.022	0.01	44				6			-5
TH007RD	QQ 74381	172	173	0.007		21				-2			-5
TH007RD	QQ 74382	173	174	0.008		20				-2			-5
TH007RD	QQ 74383	174	175	0.007		6				2			-5
TH007RD	QQ 74384	175	175.6	-0.005		6				2			-5
TH007RD	QQ 74385	175.6	176.15	0.007		16				12			-5
TH007RD	QQ 74386	176.15	177	0.007		17				13			-5
TH007RD	QQ 74387	177	177.4	0.006		5				-2			-5

Appendix 1: TH007 core photos



Appendix 1: TH007 core photos (cont.)



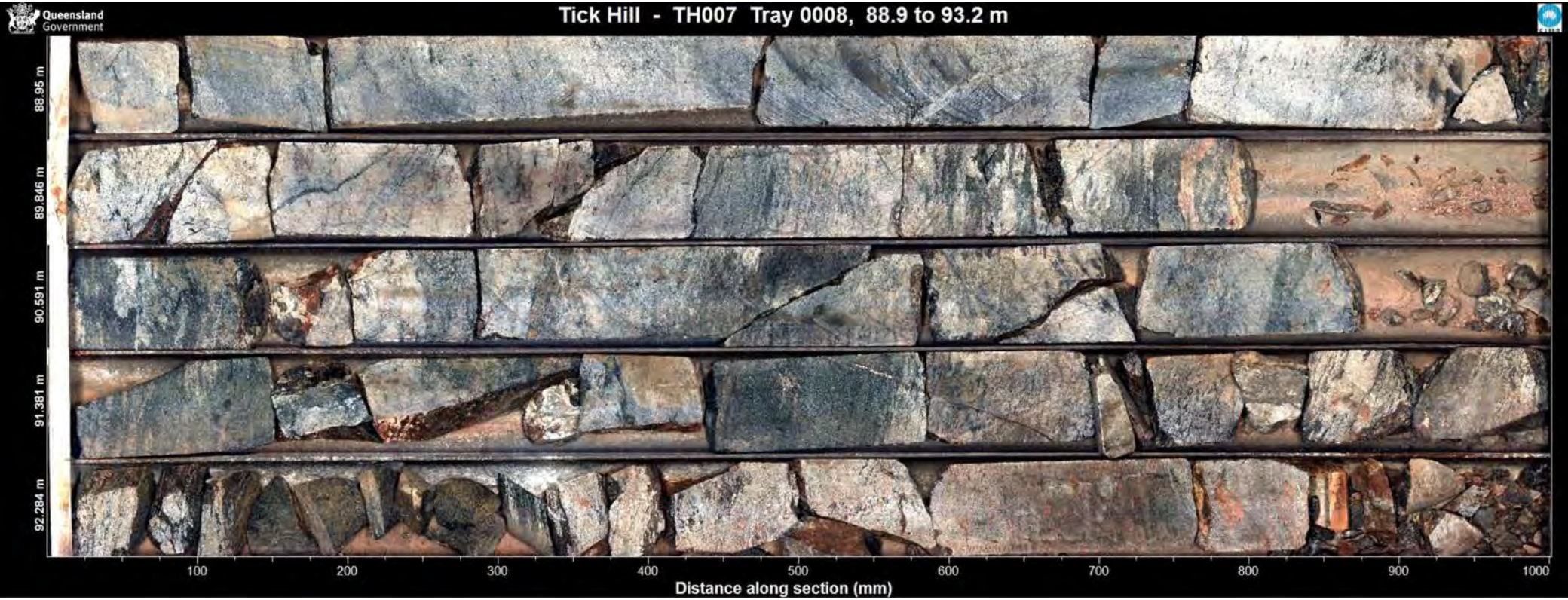
Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

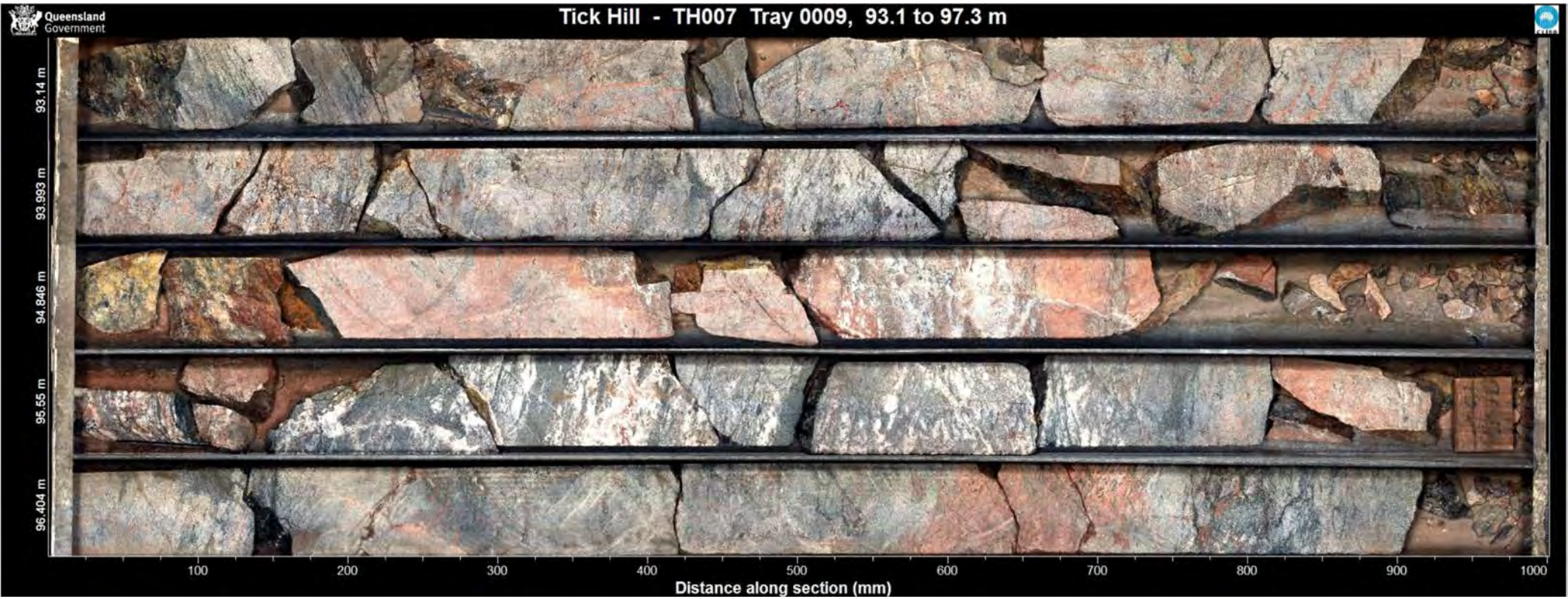
Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

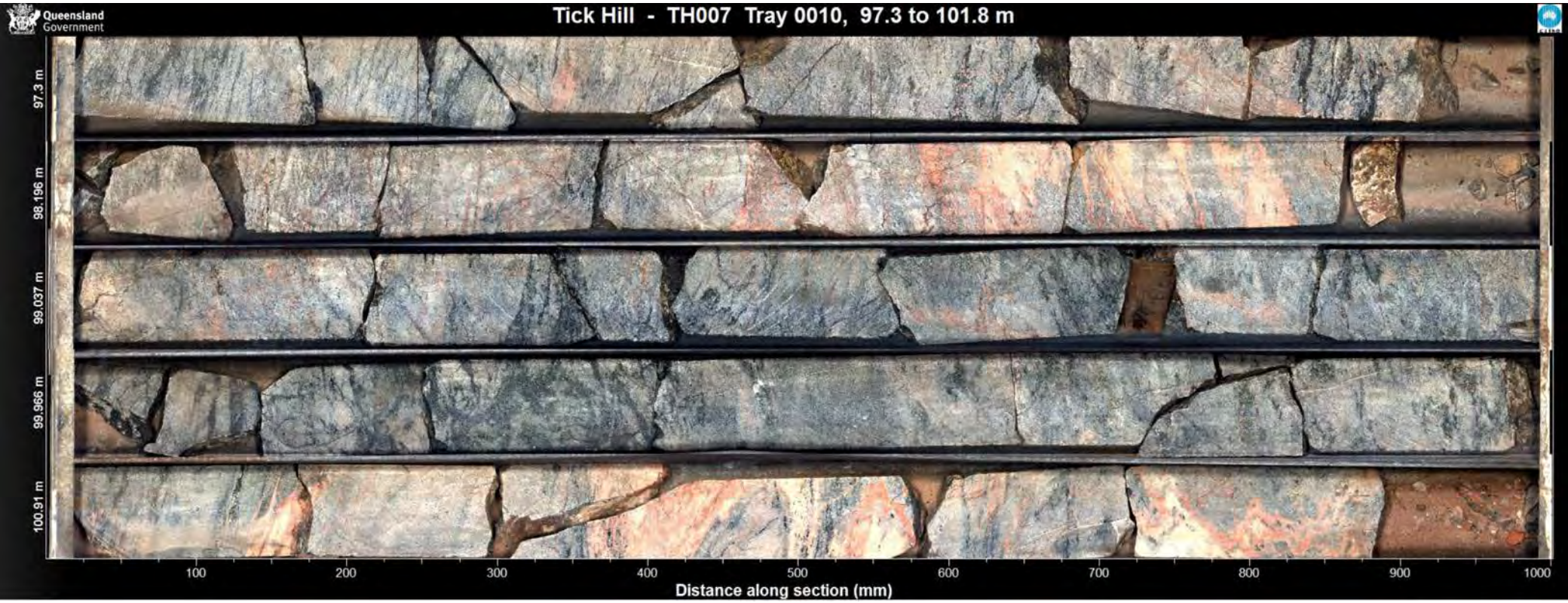
Appendix 1: TH007 core photos (cont.)



Appendix 1: TH007 core photos (cont.)



Appendix 1: TH007 core photos (cont.)

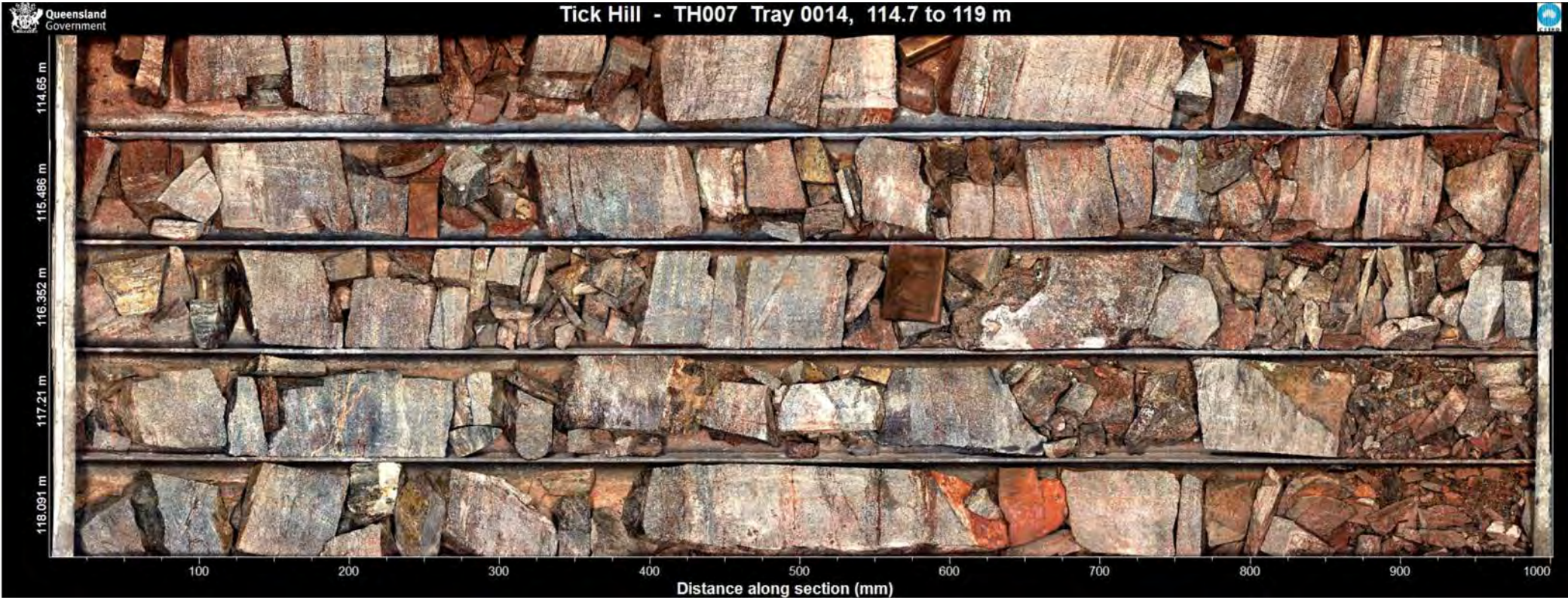


Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

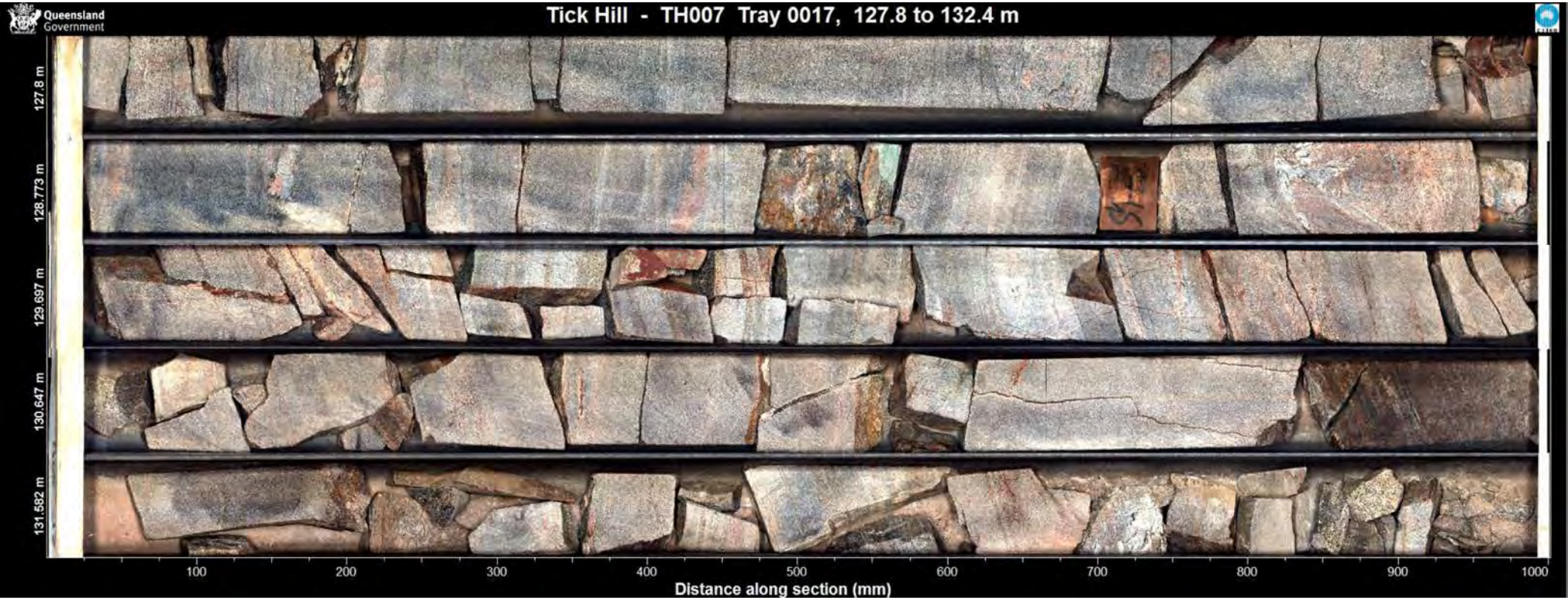
Appendix 1: TH007 core photos (cont.)



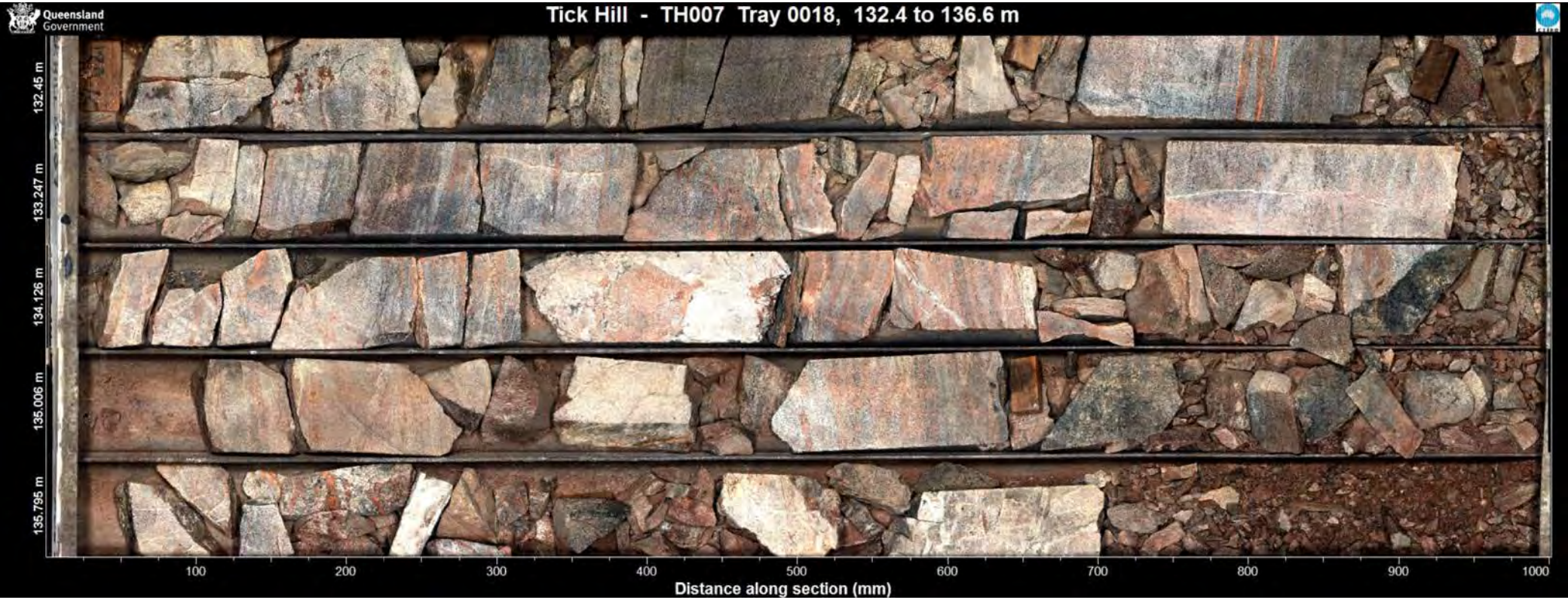
Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)



Appendix 1: TH007 core photos (cont.)



Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

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Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

Appendix 1: TH007 core photos (cont.)

Appendix 2

Geochronology data base for the Mary Kathleen Domain

Appendix 2 contains the following data sets:

- Geochronology data published between 1978 and 2019 including 61 dating results for zircon and titanite subdivided into groups.
- Sample profiles (sample ID, location, rock types, description, etc.) with techniques, authors and related information.

Appendix 2: Data base of historical geochronology in the Mary Kathleen Domain

Group (Ma)	Spl. ID	Zone 54-GDA94		Rock Name	R ock Type	Method	Age (Ma)	Comments	Reference
		E	N						
~1865-1860	73205128	380719	7741194	Leichhardt Volcanics	Metadacite	Zr U-Pb TIMS	1865±3	Excellent discordia array indicative of simple cogenetic suite of magmatically crystallized zircons; this is a primary age for the felsic volcanism in Barbara area.	Page, R.W. (1978)
	73205129	380019	7741893	Leichhardt Volcanics	Metadacite	Zr U-Pb TIMS	1865±3	With PR22 (73205128) forms an excellent discordia array indicative of a simple cogenetic suite of magmatically crystallized zircons; gives primary age of felsic volcanism in Barbara area. SHRIMP age on this sample is in good agreement. Other result from Ozchron Database (Geoscience Australia, without Ref.) for this sample is 1857+/-20 with original comment: 'This is the magmatic age. It is based on only 7 concordant data points, and hence is not as precise as the conventional U-Pb zircon age of 1865+_3 Ma for the same sample.	Page, R.W. (1978)
	74205209	383219	7719894	Leichhardt Volcanics	Rhyolite	Zr U-Pb TIMS	1865±3	This is a single analysis from the Blockade area. The result is possibly a few million years younger than Barbara Area but broadly consistent with 1865 Ma pooled discordia age.	Page, R.W. (1978)
	DPMI001	388813	7704895	Hardway Granite	Monzogranite	Zr U-Pb TIMS	1862±3	32 analyses of 32 zircons	Kositcin et. al. (2019)
	PDMT149	374700	7620010	Plum Mountain Gneiss	Augen granitic gneiss	Zr U-Pb SHRIMP	1862±3	33 analyses return a weighted mean 207Pb/206Pb age of 1862±3Ma, which is interpreted as the crystallization age	Carson et. al. (2011)
~1780 - 1770	IWMI2799	399648	7807853	Argylla Formation	Rhyolite	Zr U-Pb SHRIMP	1782±5	23 analyses permit calculation of a ┐Concordia age┐ of 1782± 5 Ma (MSWD of concordancy = 0.81. For reference, the weighted mean 207Pb/206Pb age is statistically indistinguishable at 1781 ±5 Ma	Carson et. al. (2011)
	2005169045	382883	7741042	Ballara Quartzite	Siltstone	Zr U-Pb SHRIMP	1780±4	32 of 36 individuals are indistinguishable from each other (MSWD = 0.73), and combine to yield a weighted mean 207Pb/206Pb age of 1780 +/- 4Ma (95% conf.), which is interpreted to be the crystallisation age of this volcanic	Neumann et. al. (2006)
	2005169006	379138	7712213	Argylla Formation	Porphyry	Zr U-Pb SHRIMP	1778±3	All 33 individuals are indistinguishable from each other (MSWD = 0.98), and combine to yield a weighted mean 207Pb/206Pb age of 1778 +/- 3 Ma (95% conf.), interpreted as the crystallisation age for this volcanic.	Neumann et. al. (2009)
	2005169009	380366	7720270	Argylla Formation	Rhyolite	Zr U-Pb SHRIMP	1778±3	32 of 33 individuals are indistinguishable from each other (MSWD = 0.69), & combine to yield a weighted mean age of 1778+/-3Ma (95% conf) interpreted to be the crystallisation age of this volcanic	Neumann et. al. (2009)
	2005169036	394989	7721537	Wonga Granite	Granite	Zr U-Pb SHRIMP	1778±3	n=41; MSWD 1.07	Neumann et. al. (2009)
	BB5940	379392	7673297	Bowlers Hole Granite	Granite	Zr U-Pb SHRIMP	1777±4	28 analyses on 28 zircons; magmatic crystallisation age	Geoscience Australia

Appendix 2: Data base of historical geochronology in the Mary Kathleen Domain

Group (Ma)	Spl. ID	Zone 54-GDA94		Rock Name	R ock Type	Method	Age (Ma)	Comments	Reference
		E	N						
~1780-1770	73205121	381919	7739294	Argylla Formation	Rhyodacite	Zr U-Pb TIMS	1777±7	This well fitted discordia gives the age of volcanism and zircon crystallisation.. Other data for this sample from Geoscience Australia (Ozchron database with no further Ref. has result of 1781+/-3 with original comments: This concordant set of zircon data provide the igneous crystallisation age and stratigraphic age of the unit, and this age is in good agreement with the conventionally measured age of 1783+/-5 Ma.	Page, R.W. (1978)
	BB5940	379392	7673297	Bowlers Hole Granite	Granite	Zr U-Pb TIMS	1777±4	28 analyses on 28 zircons	Kositcin et. al. (2019)
	2005169003	390651	7721920	Corella Formation	Quartzite	Zr U-Pb SHRIMP	1776±3	Youngest individual age 1744+/-32Ma is part of 1830-1745Ma cluster. Youngest modelled age consistent with weighted mean of 1776+/-3Ma (95% conf) for youngest 65 of 67 analyses in cluster (MSWD=1.17); weighted mean age is interpreted to be Max dep age	Neumann et. al. (2009)
	IWMI2210	416899	7815195	Boomarra Metamorphic s/f	Felsite	Zr U-Pb SHRIMP	1776±8	33 analyses out of 36 yield a weighted mean of 1773+/-8Ma with an unacceptable MSWD of 2.05. 15 outliers were arbitraily removed to give the quoted age	Carson et. al. (2008)
	95208076	416802	7813783	Boomarra Metamorphic s	Psamite	Zr U-Pb SHRIMP	1775±4	Data migrated from OZCHRON1. Original comment: 'Volcaniclastic rock - some inheritance (~1980 Ma, 1855 Ma). Majority of the concordant data (n=21) define a single pop. and this is a reliable (strictly maximum) stratigraphic age	Pase and Sun (1998)
	94209202	420201	7814641	Boomarra Metamorphic s	Rhyodacite	Zr U-Pb SHRIMP	1774±4	Data migrated from OZCHRON1. Recrystal. volcaniclastic contains a simple zircon suite, based on 30 concordant SHRIMP analyses, reliable age (strictly maximum) for ig. crystallisation and hence this part of stratigraphy. Curved data fit gives same age.	Pase and Sun (1998)
~1780-1770	74205205	376019	7725593	Argylla Formation	Rhyolite	Zr U-Pb TIMS	1771±17	This is age of volcanism, in agreement with other Argylla results (pooled result 30).	Page, R.W. (1978)
	2005169008	379509	7712059	Corella Formation	Quartzite	Zr U-Pb SHRIMP	1770±6	85% of ages are 1885-1740 Ma. Youngest individual age is 1742+/-58 Ma. Youngest modelled age is consistent with the weighted mean age of 1770+/-6 Ma (95% conf.) for the youngest 34 analyses (MSWD = 1.4), and is interpreted to be the maxdep age	Neumann et. al. (2009)
	IWMI2804	400652	7808116	Argylla Formation	Rhyolite	Zr U-Pb SHRIMP	1768±5	A weighted mean determination of 32 analyses yield an age of 1772 ± 5 Ma (MSWD 1.08). Corrected for the observed IMF results in a weighted mean age of 1768 ± 5 Ma	Mcgee et. al. (2010)
	2004169014	377720	7704474	Ballara Quartzite	Quartzite	Zr U-Pb SHRIMP	1767±4	85% of the ages cluster between 1895 & 1730Ma. Youngest modelled age is consistent with weighted mean age of 1767+/-4Ma (95% conf) for youngest 43 analyses (MSWD = 1.3) & this weighted mean age is interpreted to be the max depositional age. Total n =78; yield ages between ca 2750 & 1730Ma	Neumann et. al. (2009)
	85205001	397920	7723665	Natalie Granite	Granite	Zr U-Pb SHRIMP	1758±8	Original comments - Foliated microgranite at Breakfast Creek site. The zircon SHRIMP age of 1758+/-8 Ma is primary magmatic age (maximum) for the body, based on 21 concordant analyses. Good agreement with, but more precise than conventional zircon data	Pearson et. al. (1992)

Appendix 2: Data base of historical geochronology in the Mary Kathleen Domain

Group (Ma)	Spl. ID	Zone 54-GDA94		Rock Name	R ock Type	Method	Age (Ma)	Comments	Reference
		E	N						
1770-1750	IWMI1763	414330	7746527	Quamby Conglomerate	Quartzite	Zr U-Pb SHRIMP	1754±10	The youngest statistical grouping (at ca. 1754 Ma) forms an isolated simple unimodal population which returns a weighted mean of 1754 ▒ 10 Ma (95%; n = 15, MSWD = 0.78)	Carson et. al. (2008)
	BB5922	384767	7638085	Corella Formation	Micaceous feldspathic quartzite	Zr U-Pb SHRIMP	1752±2	95 analyses/95 Zr; maximum depositional age	Kositcin et. al. (2019)
	2005169011	385698	7741439	Deighton Quartzite	Quartzite	Zr U-Pb SHRIMP	1751±4	Youngest individual age 1700+/-40Ma forms part of the 1825-1700Ma cluster. Youngest modelled age consistent with weighted mean age of 1751+/-4Ma (95%conf) for the youngest 50 analyses (MSWD = 1.3). Weighted mean age is interpreted to be the Maxdep age	Neumann et. al. (2009)
	92208025	414632	7754495	Corella Formation	Rhyolite	Zr U-Pb SHRIMP	1750±7	Data migrated from OZCHRON1. Original comment: 'Rigorously a max age for felsic volcanics at Mt Roseby SSE of Dugald River. If these are felsic volcanics, the 18 data points that define the result provide an igneous & strat'c age for this part of Corella	Page and Sun (1998)
~1750-1730	BB5944	390843	7675787	Mount Philp Breccia	Albite-actinolite-titanite rock	Zr U-Pb SHRIMP	1749±5	27 analyses/27 Zr; maximum emplacement age (i.e. inheritance)	Kositcin et. al. (2019)
	2005169010	384773	7741055	Deighton Quartzite	Quartzite	Zr U-Pb SHRIMP	1748±3	Youngest individual age 1709+/-34Ma forms part of main 1795-1710Ma cluster. Youngest modelled age consistent with weighted mean age of 1748+/-3Ma for youngest 63 analyses in this cluster (MSWD=1.2), & this weighted mean age is interpreted to be Maxdep ag	Neumann et. al. (2009)
	CAP04	421000	7750000	Dipvale Granodiorite	Granodiorite	Zr U-Pb SHRIMP	1746±7	33 analyses from 32 grains, 4 >5% discordant, cores exist but aren't detectable from internal growth structures, 1746 Ma is considered the most relable estimate of the magmatic age of this sample. One inherited age at 1889+/-24 Ma	Davis et. al. (2001)
	72205018A	400519	7711694	Burstall Granite	Granite	Zr U-Pb TIMS	1745±16	This is a good determination of the emplacement age of the Burstall Granite.	Page (1983)
	72205025	393119	7716794	Wonga Granite	Gneiss	Zr U-Pb TIMS	1742±13	This is the best estimate of the magmatic age of the batholith in the Wonga Waterhole area.	Pearson et. al. (1992)
	BB5903	386775	7672701	Corella Formation	Metarhyolite	Zr U-Pb SHRIMP	1740±5	35 analyses/35 Zr; magmatic crystallisation age	Kositcin et. al. (2019)
	73200257	403419	7705194	Lunch Creek Gabbro	Gabbro	Zr U-Pb TIMS	1740±24	This is emplacement age of the Lunch Creek Gabbro, within error of the Burstall Granite age.	Page (1983)
	96208083	383878	7660900	Corella Formation	Quartzite	Zr U-Pb SHRIMP	1740±20	Original comments: This maximum depositional age for the feldspathic reworked tuff is based on the two youngest detrital grains in the rock, consistent with 8082. Other detrital age groupings: about 1780 Ma, 1830-1870 Ma, 1940 Ma, 2530 Ma.	Geoscience Australia
	2004169011	400652	7711507	Burstall Granite	Granite	Zr U-Pb SHRIMP	1740±3	55 analyses indistinguishable from each other (MSWD=1.09) & combine to yield weighted mean 207Pb/206Pb age of 1740+/-3Ma (95% conf). On basis of their morphology & homogeneous isotopic composition, 1740+/-3Ma is interpreted as the crystallisation age	Neumann et. al. (2009)

Appendix 2: Data base of historical geochronology in the Mary Kathleen Domain

Group (Ma)	Spl. ID	Zone 54-GDA94		Rock Name	R ock Type	Method	Age (Ma)	Comments	Reference
		E	N						
~1750-1730	BB5906	386955	7673667	Corella Formation	Metarhyolite	Zr U-Pb SHRIMP	1739±5	30 analyses/30 Zr; magmatic crystallisation age	Kositcin et. al. (2019)
	73200257	403419	7705194	Lunch Creek Gabbro	Gabbro	Zr U-Pb SHRIMP	1739±3	n=40	Neumann et. al. (2009)
	96208082	383628	7660920	Corella Formation	Rhyolite	Zr U-Pb SHRIMP	1738±2	Original comments: This precise zircon crystallisation age is a good stratigraphic age for the unit. It is based on 18 of the 20 data points, two discordant grains (32, 37) deleted.	Geoscience Australia
	2005169039	395060	7697699	Wonga Granite	Granite	Zr U-Pb SHRIMP	1738±3	n=38; MSWD 1.09	Neumann et. al. (2009)
	2004169010	398816	7702718	Burstall Granite	Aplite	Zr U-Pb SHRIMP	1737±3	40 analyses form a discordia array, with intercepts of ~1737Ma & ~585Ma. If analyses > 5% discordant are removed, remaining 34 yield weighted mean age of 1737+/-3Ma (95% conf MSWD=0.72). This is same as upper intercept & is interpreted to be Magmatic age	Neumann et. al. (2009)
	2004169013	403339	7708172	Burstall Granite	Gneiss	Zr U-Pb SHRIMP	1737±3	The remaining fifty-four analyses combine to yield a weighted mean 207Pb/206Pb age of 1737 +/- 3 Ma (95% conf.; Figure 8b), interpreted as the magmatic age of the Burstall Granite at this location.	Neumann et. al. (2009)
	72205013G	399019	7703494	Burstall Granite	Rhyolite	Zr U-Pb TIMS	1737±15	This is a good determination of the emplacement age of the Burstall Granite. Orignal sa# 72-237G	Page (1983)
	BB5933	381752	7639530	Mount Erle Igneous Complex	Granite	Zr U-Pb SHRIMP	1735±3	30 analyses/30 Zr; magmatic crystallisation age	Geoscience Australia
	95208071	383082	7652543	Revenue Granite	Granite	Zr U-Pb SHRIMP	1735±2	Data migrated from OZCHRON1. Original comment: 'Igneous crystallisation age based on 23 of 26 data points, and is a very reliable age measurement. Two discordant points and a xenocryst (grain 19 2305 Ma) are rejected from the weighted mean age	Geoscience Australia
	DPMI056	395776	7750630	Undifferentiat ed	Quartz diorite	Zr U-Pb SHRIMP	1730±9	27 analyses on 15 zircons; magmatic crystallisation age	Geoscience Australia
~1750-1730	72205021	395219	7703394	Natalie Granite	Granitoid	Zr U-Pb SHRIMP	1729±5	Data migrated from OZCHRON1. This gneissic microgranite, has a magmatic age of 1729+/-5Ma defined by sub-concordant high-U grains. Also group at 1660+/-5Ma (n=11); conventional age is 1671+/-8Ma	Pearson et. al. (1992)
	IWMI2207	410595	7754970	Knapdale Quartzite	Quartzite	Zr U-Pb SHRIMP	1728±5	105 analyses on 105 grains (101 accepted); population dominated by a single prominent peak at ~1730Ma; age based on weighted mean of 56 grains	Carson et. al. (2008)
	72205017A	400520	7710065	Burstall Granite	Granite	Zr U-Pb TIMS	1726±8	This is a good determination of the emplacement age of the Burstall Granite. Equiv to sa # 72-241A of Page, 1983. Econ Geo, 78, 838-853.	Page (1983)
	2009165029	408629	7759370	Lady Clayre Formation	Dolostone	Zr U-Pb SHRIMP	1691±9	66 analyses dominated by a broad peak with maxima at ~1770Ma with sub-maxima at ~1700 & ~1800Ma. UNMIX resolves subpopulations, the youngest of which comprises the youngest 10 grains. The weighted mean 207Pb/206Pb age is 1691 ± 9 Ma (MSWD = 0.45)	Carson et. al. (2011)

Appendix 2: Data base of historical geochronology in the Mary Kathleen Domain

Group (Ma)	Spl. ID	Zone 54-GDA94		Rock Name	R ock Type	Method	Age (Ma)	Comments	Reference
		E	N						
~1690-1620	2005169043	385996	7741430	Deighton Quartzite	Quartzite	Zr U-Pb SHRIMP	1690±32	For this sample, the youngest individual age of 1690 +/- 32 Ma (2s) is interpreted to be the maximum depositional age	Neumann et. al. (2009)
	IWMI2095	411848	7759487	Dugald River Shale Member	Schist	Zr U-Pb SHRIMP	1686±6	The youngest statistical grouping by application of the ┐UnMix┐ function identifies the youngest peak at 1686 ±7 Ma; 43 accepted analyses exhibit several prominent and clearly resolvable peaks, principally at ca. 1686 Ma, ca. 1798 Ma and ca. 1860 Ma, with other minor peaks at ca. 2050 Ma and ca. 2700 Ma	Carson et. al. (2008)
	95208069	386956	7673573	Corella Formation	Rhyolite	Zr U-Pb SHRIMP	1620±30	Original comments: Approx igneous crystallisation age for felsic volcanic rocks in this part of the 'Corella'. It is based on only 5 data points which although discordant, lie in the same trajectory as zircon data from 1620Ma Tommy Ck volc rocks	Geoscience Australia
~1550-1500	MK69	397319	7705465	Corella Formation	ORE	Zr U-Pb TIMS	1550±15	The 1550 Ma result is interpreted as the age of uraninite formation in the Mary Kathleen ore deposit. This is about the age of major D2 deformation.	Geoscience Australia
	MK69/4	397319	7705465	Corella Formation	ORE	Zr U-Pb TIMS	1535±20	Whole rock age dominated by and approximating to the uraninite age of 1550 +/-15 Ma.	Geoscience Australia
	DPMI056	395776	7750630	Undifferentiated	Quartz diorite	Titanite U-Pb SHRIMP	1527±16	27 analyses on 15 zircons; ower-intercept on 38 titanite analyses; metamorphic age	Kositcin et. al. (2019)
	96208082	383628	7660920	Corella Formation	Rhyolite	Zr U-Pb SHRIMP	1520±2	Metamorphic zircons give 1520+/-2Ma - a reliable metamorphic age for this volc rock.	Geoscience Australia
~1550-1500	BB5906	386955	7673667	Corella Formation	Metarhyolite	Zr U-Pb SHRIMP	1515±13	5 analyses/5 Zr; metamorphic age	Kositcin et. al. (2019)
	28G3	423400	7749500	Dipvale Granodiorite	Granodiorite	Zr U-Pb SHRIMP	1505±7	Thirty-five analyses on 34 grains - more than half >800 ppm U, Most concordant group used to calculated age , and is considered the best estimate for this sample	Davis et. al. (2001)
	BB5944	390843	7675787	Mount Philp Breccia	Albite-actinolite-titanite rock	Titanite U-Pb SHRIMP	1503±7	24 analyses/24 titanite; crystallisation age (matrix); probable emplacement age (breccia)	Kositcin et. al. (2019)
	78206019	420321	7758566	Mavis Granodiorite	Granodiorite	Zr U-Pb SHRIMP	1501±6	Data migrated from OZCHRON1. Original comment: 'Good age for igneous crystallisation based on 11 data points that are >90% concordant. One xenocryst (60.1, 1568 Ma) and 17 discordant points (high-U) not included because of apparent complex Pb loss	Pase and Sun (1998)
	BB5933	381752	7639530	Mount Erle Igneous Complex	Granite	Titanite U-Pb SHRIMP	1500±6	22 analyses/22 titanite; metamorphic age	Kositcin et. al. (2019)

Appendix 3

LA-ICP-MS data for zircon geochronology

Appendix 3 contains the following data sets:

- LA ICP-MS data for the 16 zircon samples used in dating (table below)
- Analyses with discordance >10% were discarded (presented in red texts)
- Analyses with noisy patterns were discarded

Sample ID	Zone 54-GDA94		Age (Ma)	Age comment
	East (m)	North (m)		
OTG	378,568	7,602,967	1857±5	n=20; MSWQ=0.96
THG2	385,138	7,606,776	1850±6	n=10; MSWD=1.6
SMG	381,233	7,604,274	1790±7	n=21; MSWD=0.42
THG1	385,156	7,606,851	1777±3	n=38; MSWD=1.04
THG4	386,702	7,603,938	1777±14	n=1
THG3	389,258	7,605,939	1778±10	n=7; MSWD=1.5
THM27	388,842	7,605,934	1771±5	n=43; MSWD=0.82
THM04	388,850	7,605,950	1789±16	n=5; MSWD=1.18
MG	386,650	7,600,566	1773±7	n=8; MSWD=1.2
TH11	388,869	7,605,868	1772±19	n=4; MSWD=2.1
TH141	388,867	7,606,015	1522±3	n=81; MSWD=0.79
TH108	388,728	7,605,910	1524±6	n=27; MSWD=1.14
TH140	388,607	7,605,915	1530±19	n=3; MSWD=0.2
TH66	388,752	7,605,976	1517±45	n=3; MSWD=0.021
TH13	388,842	7,605,827	1781±6	n=19; MSWD = 1.2
TH01	388,913	7,605,912	1841±15	n=11, MSWD = 0.74

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1	OTG	Otg-22	4.559	0.056	0.2956	0.0033	0.64127	3.38295	0.0377664	0.1123	0.0013	0.32392	1669	17	1833	22	8.9	concordia check: lead lost age => discarded
2	OTG	Otg-24A	4.963	0.069	0.3184	0.004	0.74052	3.140704	0.0394561	0.1126	0.0014	0.13264	1781	20	1838	23	3.1	Youngest group,1857Ma
3	OTG	Otg-12	4.662	0.069	0.2997	0.0044	0.7159	3.33667	0.0489868	0.1127	0.0015	0.40048	1689	22	1841	24	8.3	Youngest group,1857Ma
4	OTG	Otg-3A	5.326	0.066	0.3406	0.0036	0.45318	2.935995	0.0310323	0.1129	0.0014	0.31922	1889	17	1846	23	2.3	Youngest group,1857Ma
5	OTG	Otg-4	5.361	0.068	0.3425	0.0038	0.5916	2.919708	0.0323938	0.1131	0.0014	0.28139	1898	18	1847	23	2.8	Youngest group,1857Ma
6	OTG	Otg-8	4.973	0.067	0.3182	0.0042	0.7386	3.142678	0.041481	0.1132	0.0014	0.36296	1780	20	1848	22	3.7	Youngest group,1857Ma
7	OTG	Otg-18	5.102	0.068	0.3268	0.0041	0.73029	3.059976	0.0383902	0.1132	0.0014	0.28922	1822	20	1849	23	1.5	Youngest group,1857Ma
8	OTG	Otg-31	5.462	0.064	0.3488	0.0039	0.8346	2.866972	0.0320562	0.1132	0.0013	0.57642	1928	19	1849	21	4.3	Youngest group,1857Ma
9	OTG	Otg-28	4.964	0.069	0.3177	0.0042	0.7994	3.147624	0.0416116	0.1134	0.0013	0.2507	1778	20	1851	22	3.9	Youngest group,1857Ma
10	OTG	Otg-35	5.425	0.064	0.3454	0.0036	0.68774	2.895194	0.0301757	0.1134	0.0013	0.22647	1912	17	1853	21	3.2	Youngest group,1857Ma
11	OTG	Otg-23B	5.383	0.063	0.3449	0.0037	0.62688	2.899391	0.0311039	0.1137	0.0013	0.34336	1910	18	1856	21	2.9	Youngest group,1857Ma
12	OTG	Otg-17	5.391	0.065	0.3448	0.0038	0.60811	2.900232	0.0319631	0.1138	0.0014	0.33321	1909	18	1857	22	2.8	Youngest group,1857Ma
13	OTG	Otg-11	4.961	0.07	0.316	0.0044	0.79273	3.164557	0.0440635	0.1138	0.0014	0.31291	1769	21	1858	22	4.8	Youngest group,1857Ma
14	OTG	Otg-13	5.39	0.076	0.3417	0.0044	0.66977	2.926544	0.0376845	0.1142	0.0015	0.36134	1894	21	1863	24	1.7	Youngest group,1857Ma
15	OTG	Otg-19B	4.889	0.076	0.3121	0.0048	0.88832	3.204101	0.0492781	0.1141	0.0013	0.31646	1750	24	1863	21	6.1	Youngest group,1857Ma
16	OTG	Otg-23A	5.229	0.06	0.3319	0.0038	0.73798	3.012956	0.034496	0.1141	0.0013	0.47115	1847	19	1865	20	1.0	Youngest group,1857Ma
17	OTG	Otg-6	4.883	0.11	0.3099	0.007	0.96104	3.226847	0.0728878	0.1143	0.0013	0.28158	1737	35	1867	21	7.0	Youngest group,1857Ma
18	OTG	Otg-21	5.505	0.076	0.3502	0.0047	0.82276	2.855511	0.0383235	0.1145	0.0013	0.36066	1935	23	1870	21	3.5	Youngest group,1857Ma
19	OTG	Otg-20	5.314	0.075	0.3383	0.0043	0.78991	2.955956	0.037572	0.1146	0.0014	0.26851	1878	21	1871	22	0.4	Youngest group,1857Ma
20	OTG	Otg-27A	5.335	0.086	0.3384	0.0056	0.82053	2.955083	0.0489021	0.1148	0.0015	0.40298	1877	27	1873	23	0.2	Youngest group,1857Ma
21	OTG	Otg-3B	5.117	0.06	0.3223	0.0036	0.62716	3.102699	0.0346563	0.1148	0.0013	0.40174	1801	18	1874	21	3.9	Youngest group,1857Ma
22	OTG	Otg-26A	5.412	0.084	0.3406	0.0054	0.84386	2.935995	0.0465484	0.1154	0.0014	0.42707	1888	26	1882	22	0.3	Inherited
23	OTG	Otg-14	4.956	0.063	0.3089	0.0037	0.46703	3.237294	0.0387763	0.1163	0.0016	0.43089	1735	18	1896	25	8.5	Inherited
24	OTG	Otg-2	4.66	0.21	0.297	0.015	0.98282	3.367003	0.1700507	0.1139	0.0015	0.52036	1671	74	1861	24	10.2	Discordant
25	OTG	Otg-33	4.61	0.067	0.2905	0.0042	0.86869	3.442341	0.0497688	0.1148	0.0013	0.34382	1643	21	1874	21	12.3	Discordant
26	OTG	Otg-1	4.49	0.073	0.2857	0.0044	0.85802	3.500175	0.0539054	0.1134	0.0014	0.24066	1619	22	1852	22	12.6	Discordant
27	OTG	Otg-29	4.437	0.1	0.2851	0.0057	0.83958	3.507541	0.0701262	0.1132	0.0017	0.10405	1616	28	1849	28	12.6	Discordant
28	OTG	OTG-26b2	4.757	0.085	0.2915	0.0047	0.664	3.430532	0.0553122	0.1177	0.0019	0.4127	1648	23	1918	28	14.1	Discordant
29	OTG	Otg-9	5.19	0.13	0.3019	0.007	0.76029	3.312355	0.0768019	0.1243	0.0023	0.30523	1700	35	2016	33	15.7	Discordant
30	OTG	Otg-24B	4.51	0.1	0.2781	0.0059	0.80553	3.595829	0.0762869	0.1167	0.0017	0.26617	1581	30	1903	27	16.9	Discordant
31	OTG	Otg-15	3.703	0.062	0.2372	0.0042	0.90576	4.215852	0.0746483	0.1132	0.0014	0.2085	1371	22	1849	23	25.9	Discordant
32	OTG	Otg-5	3.743	0.085	0.2363	0.0051	0.91781	4.231909	0.0913362	0.1144	0.0014	0.14226	1366	27	1870	24	27.0	Discordant
33	OTG	Otg-34	3.555	0.1	0.2256	0.0063	0.91603	4.432624	0.1237834	0.1143	0.0017	0.12546	1310	33	1866	27	29.8	Discordant
34	OTG	Otg-26B	4.043	0.11	0.2354	0.0064	0.77601	4.248088	0.115496	0.1249	0.0025	0.46902	1362	34	2025	35	32.7	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
35	OTG	Otg-30	3.35	0.065	0.2075	0.0042	0.91998	4.819277	0.0975468	0.1172	0.0014	0.3563	1214	23	1914	22	36.6	Discordant
36	OTG	Otg-32	3.342	0.089	0.2024	0.0055	0.95554	4.940711	0.1342585	0.1197	0.0015	0.26024	1186	30	1948	22	39.1	Discordant
37	OTG	Otg-7	2.638	0.074	0.1629	0.005	0.94828	6.138735	0.1884204	0.1171	0.0018	0.29813	972	27	1911	28	49.1	Discordant
38	THG2	THG2-61	4.34	0.17	0.296	0.011	0.94657	3.378378	0.1255478	0.1061	0.0011	-0.14238	1664	54	1730	18	3.8	Very bad iollite signal
39	THG2	THG2-6	4.663	0.064	0.3062	0.0041	0.91245	3.265839	0.0437294	0.1102	0.00095	-0.01779	1721	20	1801	16	4.4	Concordia check: Lead lost age => eliminated
40	THG2	THG2-32	4.673	0.046	0.3061	0.0029	0.92976	3.266906	0.0309508	0.1107	0.00081	0.16384	1721	14	1810.2	13	4.9	Concordia check: Lead lost age => eliminated
41	THG2	THG2-53	5.026	0.077	0.3262	0.0051	0.6512	3.065604	0.0479294	0.1123	0.0014	0.34149	1819	25	1833	23	0.8	Youngest group, 1850Ma
42	THG2	THG2-56	5.265	0.12	0.3382	0.0073	0.48685	2.95683	0.0638228	0.1124	0.0011	0.38952	1878	35	1836	18	-2.3	Youngest group, 1850Ma
43	THG2	THG2-2	5.236	0.054	0.3362	0.0031	0.86176	2.97442	0.0274262	0.1128	0.00091	0.16446	1869	15	1843.7	14	-1.4	Youngest group, 1850Ma
44	THG2	THG2-13	5.252	0.085	0.3378	0.0059	0.90039	2.960332	0.051705	0.1129	0.0011	0.38705	1875	28	1845	18	-1.6	Youngest group, 1850Ma
45	THG2	THG2-11	5.236	0.099	0.3364	0.0063	0.93488	2.972652	0.0556709	0.113	0.001	0.18759	1868	30	1846	17	-1.2	Youngest group, 1850Ma
46	THG2	THG2-60	5.457	0.12	0.3489	0.0072	0.71135	2.866151	0.0591467	0.1131	0.00051	0.36763	1928.9	34	1847.7	8.2	-4.4	Youngest group, 1850Ma
47	THG2	THG2-27	5.326	0.04	0.3406	0.0022	0.83847	2.935995	0.0189642	0.1134	0.00088	0.10361	1889	10	1853	14	-1.9	Youngest group, 1850Ma
48	THG2	THG2-81	5.443	0.13	0.3486	0.0078	0.60787	2.868617	0.0641859	0.1137	0.0012	0.35602	1928	37	1858	19	-3.8	Youngest group, 1850Ma
49	THG2	THG2-9	5.32	0.029	0.3381	0.0019	0.6418	2.957705	0.0166212	0.114	0.0009	0.45283	1877.1	9.1	1861.9	14	-0.8	Youngest group, 1850Ma
50	THG2	THG2-74	5.478	0.12	0.3512	0.0075	0.70759	2.84738	0.0608068	0.114	0.00075	0.25781	1940	36	1862	12	-4.2	Youngest group, 1850Ma
51	THG2	THG2-59	5.295	0.12	0.3354	0.0073	0.80834	2.981515	0.0648928	0.1142	0.00074	0.19717	1864	35	1866	12	0.1	inherited, 1876Ma
52	THG2	THG2-55	5.574	0.12	0.3517	0.0074	0.78877	2.843332	0.0598256	0.1144	0.00064	0.046888	1942	35	1867	10	-4.0	inherited, 1876Ma
53	THG2	THG2-48	5.572	0.063	0.3528	0.0038	0.44695	2.834467	0.03053	0.1145	0.0011	0.2717	1948	18	1871	18	-4.1	inherited, 1876Ma
54	THG2	THG2-78	5.18	0.13	0.329	0.0083	0.7731	3.039514	0.0766807	0.1148	0.0012	0.47107	1832	40	1873	19	2.2	inherited, 1876Ma
55	THG2	THG2-71	5.443	0.12	0.3456	0.0071	0.57565	2.893519	0.0594444	0.1149	0.00073	0.38477	1913	34	1875	11	-2.0	inherited, 1876Ma
56	THG2	THG2-21	5.398	0.045	0.3413	0.0025	0.65843	2.929974	0.0214619	0.1147	0.001	0.24442	1893	12	1875	17	-1.0	inherited, 1876Ma
57	THG2	THG2-76	5.588	0.12	0.3535	0.0074	0.69379	2.828854	0.0592179	0.1152	0.00075	0.22134	1951	35	1879	12	-3.8	inherited, 1876Ma
58	THG2	THG2-62	5.269	0.12	0.3322	0.0072	0.57275	3.010235	0.0652429	0.1151	0.0011	0.29058	1849	35	1879	17	1.6	inherited, 1876Ma
59	THG2	THG2-30	5.401	0.038	0.3394	0.002	0.54362	2.946376	0.0173623	0.1154	0.001	0.34219	1883.4	9.8	1883	16	0.0	inherited, 1876Ma
60	THG2	THG2-73	5.08	0.18	0.3214	0.0097	0.80778	3.111388	0.0939031	0.1155	0.002	-0.03661	1796	47	1885	31	4.7	inherited, 1876Ma
61	THG2	THG2-26	5.693	0.06	0.3562	0.003	0.87043	2.807412	0.0236447	0.1158	0.00095	-0.11621	1963	14	1890.5	15	-3.8	inherited, 1876Ma
62	THG2	THG2-29	5.531	0.051	0.3456	0.0027	0.8272	2.893519	0.0226056	0.116	0.00095	0.062597	1913	13	1893.8	15	-1.0	inherited, 1876Ma
63	THG2	THG2-46	5.718	0.087	0.3549	0.0044	0.69412	2.817695	0.0349334	0.1168	0.0012	-0.01812	1958	21	1905	19	-2.8	Group 1925Ma
64	THG2	THG2-57	5.785	0.13	0.3572	0.0077	0.4737	2.799552	0.0603487	0.1172	0.0012	0.34778	1968	36	1913	18	-2.9	Group 1925Ma
65	THG2	THG2-66	5.512	0.13	0.3403	0.0073	0.45023	2.938584	0.0630375	0.1177	0.0011	0.40659	1888	35	1923	19	1.8	Group 1925Ma
66	THG2	THG2-42	5.752	0.084	0.3505	0.0046	0.50228	2.853067	0.037444	0.1181	0.0014	0.33011	1937	22	1927	23	-0.5	Group 1925Ma
67	THG2	THG2_28_2nd	5.714	0.043	0.3492	0.0028	0.66408	2.863688	0.022962	0.1184	0.0011	0.47271	1931	13	1930	16	-0.1	Group 1925Ma
68	THG2	THG2-15	5.564	0.065	0.3399	0.0032	0.88848	2.942042	0.027698	0.1186	0.001	-0.15418	1885	16	1932	15	2.4	Group 1925Ma
69	THG2	THG2-43	5.715	0.11	0.3444	0.0058	0.72585	2.9036	0.0488992	0.1194	0.0015	0.15189	1907	28	1944	23	1.9	Group 1925Ma
70	THG2	THG2-75	5.76	0.13	0.3517	0.0074	0.64318	2.843332	0.0598256	0.1195	0.00097	0.068619	1942	35	1947	14	0.3	Inherited
71	THG2	THG2-69	5.789	0.13	0.3452	0.0073	0.45691	2.896871	0.0612606	0.1224	0.0013	0.2443	1911	35	1988	19	3.9	Inherited
72	THG2	THG2-58	6.47	0.17	0.3667	0.0087	0.76888	2.727025	0.064699	0.1277	0.0013	0.086393	2014	41	2064	18	2.4	Inherited

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
73	THG2	THG2-67	5.959	0.14	0.3751	0.0081	0.75929	2.665956	0.0575693	0.1157	0.00079	0.16036	2053	38	1888	12	-8.7	Concordia check: Lead lost age => eliminated
74	THG2	THG2-79	5.673	0.13	0.3646	0.0083	0.78212	2.742732	0.0624374	0.1133	0.00082	0.28051	2003	39	1850	13	-8.3	Concordia check: Lead lost age => eliminated
75	THG2	THG2-77	5.514	0.13	0.3557	0.0082	0.63234	2.811358	0.0648106	0.1132	0.0011	0.42632	1961	39	1849	18	-6.1	Concordia check: Lead lost age => eliminated
76	THG2	THG2-44	5.472	0.091	0.3518	0.0058	0.83253	2.842524	0.0468637	0.1122	0.0014	0.10776	1943	28	1833	22	-6.0	Concordia check: Lead lost age => eliminated
77	THG2	THG2-65	6.051	0.14	0.3719	0.0079	0.54371	2.688895	0.0571182	0.1184	0.001	0.28622	2038	37	1930	16	-5.6	Concordia check: Lead lost age => eliminated
78	THG2	THG2-45	5.61	0.072	0.356	0.0044	0.6574	2.808989	0.0347178	0.1141	0.0011	0.26446	1962	21	1863	18	-5.3	Concordia check: Lead lost age => eliminated
79	THG2	THG2-38	5.534	0.085	0.3526	0.005	0.57043	2.836075	0.0402166	0.1136	0.0014	0.26226	1946	24	1853	22	-5.0	Concordia check: Lead lost age => eliminated
80	THG2	THG2-68	5.532	0.13	0.3335	0.0071	0.52575	2.998501	0.0638362	0.1209	0.0013	0.22045	1857	36	1967	19	5.6	Concordia check: Lead lost age => eliminated
81	THG2	THG2_21_2nd	4.472	0.075	0.2966	0.0045	0.94678	3.371544	0.0511529	0.1089	0.00091	-0.19409	1674	22	1779	15	5.9	Concordia check: Lead lost age => eliminated
82	THG2	THG2-8	4.669	0.089	0.3032	0.005	0.96995	3.298153	0.0543891	0.1116	0.00089	-0.29686	1705	25	1824.9	14	6.6	Concordia check: Lead lost age => eliminated
83	THG2	THG2-24	5.432	0.037	0.326	0.0025	0.77338	3.067485	0.0235237	0.1208	0.0011	0.15787	1818	12	1966	16	7.5	Concordia check: Lead lost age => eliminated
84	THG2	THG2-40	6.18	0.082	0.3456	0.004	0.30615	2.893519	0.0334898	0.1286	0.0016	0.39185	1913	19	2074	22	7.8	Concordia check: Lead lost age => eliminated
85	THG2	THG2-54	4.851	0.1	0.3059	0.0068	0.63365	3.269042	0.0726691	0.1157	0.002	0.42902	1720	33	1887	32	8.9	Concordia check: Lead lost age => eliminated
86	THG2	THG2-12	4.49	0.12	0.2928	0.0073	0.96681	3.415301	0.0851492	0.1112	0.001	-0.11728	1654	36	1818	17	9.0	Concordia check: Lead lost age => eliminated
87	THG2	THG2-5	5.905	0.084	0.3368	0.0044	0.85703	2.969121	0.038789	0.1271	0.0013	0.17486	1870	21	2058	17	9.1	Concordia check: Lead lost age => eliminated
88	THG2	THG2-34	4.606	0.08	0.2948	0.005	0.91821	3.39213	0.0575327	0.1132	0.001	0.13358	1664	25	1849	17	10.0	Discordant>10%
89	THG2	THG2-51	4.561	0.083	0.2913	0.0053	0.70409	3.432887	0.062459	0.1135	0.0016	0.33688	1647	26	1852	25	11.1	Discordant>10%
90	THG2	THG2-10	4.7	0.12	0.2947	0.0064	0.90924	3.393281	0.0736919	0.1153	0.0015	-0.17171	1664	32	1882	23	11.6	Discordant>10%
91	THG2	THG2-63	4.622	0.12	0.2914	0.0071	0.88772	3.431709	0.0836141	0.1147	0.0009	0.079584	1648	35	1873	14	12.0	Discordant>10%
92	THG2	THG2_18_2nd	4.938	0.046	0.3015	0.0025	0.68288	3.31675	0.0275021	0.1185	0.0013	0.1604	1698	12	1931	19	12.1	Discordant>10%
93	THG2	THG2-23	4.023	0.081	0.2671	0.0048	0.96718	3.743916	0.0672812	0.109	0.0009	-0.30337	1524	24	1779.7	15	14.4	Discordant>10%
94	THG2	THG2-19	3.617	0.047	0.2515	0.0033	0.89054	3.976143	0.0521721	0.1039	0.00091	0.22896	1446	17	1694	16	14.6	Discordant>10%
95	THG2	THG2-35	4.409	0.096	0.2793	0.0049	0.90617	3.58038	0.0628137	0.1149	0.0013	-0.11876	1587	25	1876	21	15.4	Discordant>10%
96	THG2	THG2-28	3.86	0.21	0.256	0.012	0.98259	3.90625	0.1831055	0.1092	0.0014	-0.45268	1466	61	1784	24	17.8	Discordant>10%
97	THG2	THG2-33	4.07	0.21	0.263	0.013	0.99429	3.802281	0.1879455	0.1123	0.00093	-0.24512	1497	66	1835.2	15	18.4	Discordant>10%
98	THG2	THG2_7_2nd	3.54	0.11	0.2421	0.0065	0.9508	4.130525	0.110898	0.1055	0.0012	-0.16232	1396	34	1721	21	18.9	Discordant>10%

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
99	THG2	THG2-37	4.779	0.053	0.2835	0.0026	0.80625	3.527337	0.0323495	0.1221	0.0011	0.004606	1609	13	1985	16	18.9	Discordant>10%
100	THG2	THG2-50	3.699	0.082	0.2488	0.0058	0.82941	4.019293	0.0936973	0.108	0.0014	0.32399	1432	30	1768	26	19.0	Discordant>10%
101	THG2	THG2-7	4.372	0.048	0.2702	0.003	0.76705	3.700962	0.0410914	0.1173	0.0012	0.40743	1542	15	1915	19	19.5	Discordant>10%
102	THG2	THG2-80	4.931	0.12	0.2849	0.0066	0.71939	3.510004	0.0813128	0.1261	0.0013	0.16449	1616	33	2041	19	20.8	Discordant>10%
103	THG2	THG2-3	4.318	0.057	0.2646	0.003	0.74681	3.779289	0.0428491	0.118	0.0013	0.20764	1513	15	1924	20	21.4	Discordant>10%
104	THG2	THG2-4	3.511	0.075	0.2339	0.0042	0.87246	4.275331	0.0767695	0.1088	0.0012	-0.26973	1354	22	1776	20	23.8	Discordant>10%
105	THG2	THG2-18	3.606	0.075	0.2352	0.005	0.88284	4.251701	0.0903848	0.1114	0.0014	0.4464	1361	26	1821	22	25.3	Discordant>10%
106	THG2	THG2-52	3.631	0.076	0.2353	0.0039	0.61557	4.249894	0.0704402	0.1123	0.0019	0.13519	1362	20	1832	30	25.7	Discordant>10%
107	THG2	THG2_6_2nd	2.572	0.059	0.1935	0.0046	0.91456	5.167959	0.1228559	0.096	0.0011	0.26304	1140	25	1547	22	26.3	Discordant>10%
108	THG2	THG2-22	3.243	0.074	0.2197	0.0045	0.95265	4.551661	0.0932293	0.1067	0.001	-0.16365	1279	24	1741	18	26.5	Discordant>10%
109	THG2	THG2-70	3.442	0.09	0.224	0.006	0.82197	4.464286	0.1195791	0.1118	0.0013	0.39093	1303	31	1827	21	28.7	Discordant>10%
110	THG2	THG2-64	3.11	0.091	0.2049	0.0051	0.81973	4.880429	0.1214748	0.1098	0.0014	-0.13492	1201	28	1792	22	33.0	Discordant>10%
111	THG2	THG2-25	3.085	0.048	0.2037	0.0031	0.94593	4.90918	0.0747102	0.1097	0.0011	0.32588	1195	17	1792	19	33.3	Discordant>10%
112	THG2	THG2-31	2.71	0.12	0.1842	0.0071	0.97861	5.428882	0.2092566	0.1058	0.0013	-0.48463	1087	38	1724	23	36.9	Discordant>10%
113	THG2	THG2-36	2.333	0.046	0.1616	0.0029	0.85577	6.188119	0.1110492	0.1049	0.0013	0.057089	965	16	1709	22	43.5	Discordant>10%
114	THG2	THG2-72	1.548	0.047	0.1059	0.0028	0.67753	9.442871	0.2496699	0.1062	0.0018	0.18659	649	16	1732	31	62.5	Discordant>10%
115	SMG	SMG-49core	4.841	0.17	0.3433	0.0081	0.36841	2.912904	0.0687286	0.1085	0.0031	0.34176	1902	39	1770	53	-7.5	Youngest group, 1790Ma
116	SMG	SMG-61	4.791	0.16	0.3233	0.0073	0.5381	3.093102	0.0698412	0.1086	0.003	-0.05064	1805	36	1774	51	-1.7	Youngest group, 1790Ma
117	SMG	SMG-29	5.018	0.065	0.3337	0.0035	0.47368	2.996704	0.0314308	0.1089	0.0013	0.37762	1856	17	1779	23	-4.3	Youngest group, 1790Ma
118	SMG	SMG-04A	4.779	0.072	0.3172	0.0035	0.55521	3.152585	0.0347858	0.109	0.0015	0.15995	1776	17	1779	25	0.2	Youngest group, 1790Ma
119	SMG	SMG-49	5.163	0.18	0.3234	0.0077	0.13709	3.092146	0.0736225	0.1093	0.0034	0.48106	1806	38	1781	57	-1.4	Youngest group, 1790Ma
120	SMG	SMG-04B	4.806	0.06	0.3194	0.0036	0.62531	3.13087	0.0352885	0.109	0.0013	0.407	1786	17	1782	22	-0.2	Youngest group, 1790Ma
121	SMG	SMG-01B	4.956	0.1	0.3303	0.0049	0.4598	3.027551	0.0449137	0.1093	0.0021	0.2665	1839	24	1783	35	-3.1	Youngest group, 1790Ma
122	SMG	SMG-01A	4.478	0.067	0.2961	0.0036	0.46471	3.377237	0.0410606	0.1094	0.0016	0.32109	1671	18	1785	27	6.4	Youngest group, 1790Ma
123	SMG	SMG-39	5.118	0.17	0.3305	0.008	0.5607	3.025719	0.0732398	0.1093	0.0031	0.55408	1840	39	1786	51	-3.0	Youngest group, 1790Ma
124	SMG	SMG-46q	5.39	0.19	0.3356	0.0082	0.39983	2.979738	0.0728065	0.1094	0.0032	0.41689	1865	39	1786	54	-4.4	Youngest group, 1790Ma
125	SMG	SMG-63	4.998	0.17	0.3378	0.0076	0.62981	2.960332	0.0666031	0.1097	0.0029	0.11634	1876	37	1791	47	-4.7	Youngest group, 1790Ma
126	SMG	SMG-03A	4.888	0.1	0.3215	0.0067	0.62032	3.11042	0.0648206	0.1097	0.002	0.46077	1797	33	1791	34	-0.3	Youngest group, 1790Ma
127	SMG	SMG-68	4.897	0.17	0.3075	0.0073	0.4525	3.252033	0.0772027	0.1097	0.0031	0.39207	1728	36	1791	51	3.5	Youngest group, 1790Ma
128	SMG	SMG-65	4.943	0.16	0.3268	0.0071	0.16233	3.059976	0.0664805	0.1098	0.0029	0.26214	1822.7	35	1794	47	-1.6	Youngest group, 1790Ma
129	SMG	SMG-45	4.636	0.15	0.3247	0.0079	0.39739	3.079766	0.0749312	0.1099	0.0029	0.52508	1812	38	1795	49	-0.9	Youngest group, 1790Ma
130	SMG	SMG-19B	4.811	0.06	0.3184	0.0033	0.63736	3.140704	0.0325513	0.11	0.0013	0.29951	1781	16	1797	21	0.9	Youngest group, 1790Ma
131	SMG	SMG-06A	4.678	0.073	0.3075	0.0037	0.54324	3.252033	0.0391302	0.1101	0.0016	0.21857	1728	18	1799	26	3.9	Youngest group, 1790Ma
132	SMG	SMG-42	4.415	0.15	0.2903	0.0072	0.57805	3.444712	0.0854355	0.1104	0.003	0.24131	1642	36	1801	49	8.8	Youngest group, 1790Ma
133	SMG	SMG-23A	4.914	0.075	0.3246	0.0036	0.64113	3.080715	0.0341669	0.1104	0.0014	0.10184	1812	18	1803	24	-0.5	Youngest group, 1790Ma
134	SMG	SMG-56_2nd	5.054	0.17	0.3308	0.0079	0.43299	3.022975	0.0721932	0.1107	0.0031	0.36148	1842	38	1807	51	-1.9	Youngest group, 1790Ma
135	SMG	SMG-12	4.92	0.067	0.321	0.0036	0.34465	3.115265	0.0349376	0.1106	0.0015	0.43537	1794	17	1808	25	0.8	Youngest group, 1790Ma
136	SMG	SMG-22	4.88	0.064	0.3204	0.0035	0.59685	3.121099	0.0340944	0.1109	0.0014	0.22969	1792	17	1812	22	1.1	group 1826Ma, inherited
137	SMG	SMG-09	4.96	0.058	0.3244	0.0033	0.63203	3.082614	0.0313583	0.111	0.0012	0.44865	1811	16	1813.6	20	0.1	group 1826Ma, inherited
138	SMG	SMG-53	4.83	0.18	0.2939	0.008	0.69508	3.402518	0.092617	0.1113	0.0032	0.20343	1660	40	1818	53	8.7	group 1826Ma, inherited

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Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
139	SMG	SMG-17	4.599	0.067	0.3026	0.0033	0.43636	3.304693	0.0360393	0.1116	0.0016	0.28542	1704	16	1823	26	6.5	group 1826Ma, inherited
140	SMG	SMG-28	4.655	0.073	0.2991	0.0039	0.52518	3.343363	0.0435945	0.1118	0.0017	0.36312	1687	19	1826	27	7.6	group 1826Ma, inherited
141	SMG	SMG-52	4.872	0.16	0.3288	0.0078	0.19909	3.041363	0.0721491	0.1119	0.0032	0.56662	1832	38	1827	52	-0.3	group 1826Ma, inherited
142	SMG	SMG-64	5.004	0.17	0.3244	0.0076	0.56442	3.082614	0.0722191	0.1119	0.003	0.32828	1810	37	1828	48	1.0	group 1826Ma, inherited
143	SMG	SMG-58	5.107	0.17	0.3311	0.0075	0.035847	3.020236	0.0684137	0.1123	0.0031	0.30313	1843	36	1831	49	-0.7	group 1826Ma, inherited
144	SMG	SMG-27B	4.955	0.061	0.3196	0.0034	0.42441	3.128911	0.0332863	0.1123	0.0014	0.44771	1787	16	1835	23	2.6	group 1826Ma, inherited
145	SMG	SMG-66	4.628	0.16	0.2972	0.0082	0.78052	3.364738	0.092836	0.1127	0.003	0.29523	1675	41	1841	48	9.0	group 1826Ma, inherited
146	SMG	SMG-25	4.757	0.071	0.3047	0.0039	0.67333	3.281917	0.0420068	0.113	0.0015	0.26792	1715	19	1847	23	7.1	group 1826Ma, inherited
147	SMG	SMG-08	5.44	0.077	0.3477	0.0043	0.81438	2.876043	0.035568	0.1136	0.0013	0.29734	1923	21	1857	21	-3.6	group 1865Ma
148	SMG	SMG-19A	5.429	0.076	0.3462	0.0039	0.67294	2.888504	0.0325395	0.1139	0.0014	0.26442	1916	19	1860	22	-3.0	group 1865Ma
149	SMG	SMG-38	4.849	0.17	0.3083	0.007	0.3888	3.243594	0.0736463	0.1141	0.0031	0.29546	1732	35	1860	50	6.9	group 1865Ma
150	SMG	SMG-05B	4.659	0.066	0.2978	0.0035	0.31544	3.357958	0.0394656	0.1139	0.0017	0.49681	1680	17	1860	27	9.7	group 1865Ma
151	SMG	SMG-27A	4.938	0.074	0.3113	0.0041	0.36461	3.212335	0.0423083	0.1155	0.0018	0.50752	1747	20	1884	29	7.3	group 1865Ma
152	SMG	SMG-47_2nd	5	0.17	0.3127	0.0072	0.25748	3.197953	0.0736337	0.1162	0.0033	0.53242	1754	35	1895	50	7.4	group 1865Ma
153	SMG	SMG-57	4.274	0.16	0.2838	0.0087	0.61327	3.523608	0.1080176	0.1099	0.0029	0.39447	1608	43	1794	48	10.4	Discordant
154	SMG	SMG-03B	4.471	0.059	0.2852	0.0033	0.67442	3.506311	0.0405709	0.1139	0.0014	0.41774	1617	17	1860	22	13.1	Discordant
155	SMG	SMG-59	4.607	0.16	0.2794	0.0071	0.26575	3.579098	0.0909506	0.1139	0.0035	0.42485	1588	36	1855	55	14.4	Discordant
156	SMG	SMG-50_q	4.579	0.16	0.2796	0.0071	0.063467	3.576538	0.0908205	0.1162	0.0032	0.6449	1588	36	1893	50	16.1	Discordant
157	SMG	SMG-60	3.858	0.14	0.2541	0.0077	0.81985	3.935458	0.1192563	0.1105	0.003	0.1091	1457	40	1806	48	19.3	Discordant
158	SMG	SMG-36	4.003	0.098	0.2493	0.0058	0.90397	4.011231	0.0933219	0.1151	0.0016	0.20488	1434	30	1879	25	23.7	Discordant
159	SMG	SMG-43	4.52	0.2	0.2563	0.01	0.8024	3.901678	0.1522309	0.121	0.0039	0.25796	1469	53	1971	55	25.5	Discordant, must delete
160	SMG	SMG-13	3.699	0.069	0.2359	0.0039	0.69254	4.239084	0.0700824	0.1149	0.0018	0.25501	1365	20	1877	27	27.3	Discordant
161	SMG	SMG-44	3.448	0.13	0.2097	0.0066	0.72292	4.768717	0.1500884	0.112	0.0034	0.31097	1226	35	1827	55	32.9	Discordant
162	SMG	SMG-51	3.394	0.14	0.2081	0.0065	0.80771	4.805382	0.150096	0.1119	0.0033	0.20404	1218	35	1826	52	33.3	Discordant
163	SMG	SMG-51_1st	3.56	0.2	0.224	0.012	0.9615	4.464286	0.2391582	0.1232	0.0035	-0.17714	1300	64	1999	50	35.0	Discordant
164	SMG	SMG-31	2.898	0.051	0.193	0.0029	0.88304	5.181347	0.0778544	0.1075	0.0015	0.28521	1138	16	1755	26	35.2	Discordant
165	SMG	SMG-55	3.343	0.14	0.2057	0.0075	0.90134	4.861449	0.1772526	0.1159	0.0032	0.099581	1203	40	1889	50	36.3	Discordant
166	SMG	SMG-37	3.128	0.04	0.1962	0.0022	0.51945	5.09684	0.0571511	0.116	0.0015	0.40465	1154.7	12	1894	23	39.0	Discordant
167	THG1	THG1-19	4.065	0.038	0.2764	0.0026	0.79892	3.617945	0.0340328	0.1066	0.00086	0.33536	1573	13	1740	15	9.6	Concordia check: lead lost => Discarded
168	THG1	THG1-31	4.596	0.04	0.3093	0.0021	0.49781	3.233107	0.0219513	0.1077	0.001	0.36223	1737	10	1757	18	1.1	in the same grain with (next to) spot THG1-47 (1767+/-21); younger and out of any grouo => discarded
169	THG1	THG1-39	4.903	0.075	0.3319	0.0041	0.34665	3.012956	0.0372194	0.1075	0.0016	0.35053	1847	14	1751	27	-5.5	next to spot THG1-3, 4 (1771 and 1794)
170	THG1	THG1-44	5.059	0.066	0.3413	0.0049	0.76461	2.929974	0.0420653	0.1081	0.001	0.35323	1892	18	1764	17	-7.3	Youngest group, 1777Ma
171	THG1	THG1-40	5.072	0.069	0.3401	0.0041	0.40734	2.940312	0.0354463	0.1081	0.0014	0.36472	1887	14	1765	24	-6.9	Youngest group, 1777Ma
172	THG1	THG1-21	4.588	0.057	0.3077	0.0033	0.89494	3.249919	0.0348545	0.1081	0.00085	0.025351	1728	17	1766	15	2.2	Youngest group, 1777Ma
173	THG1	THG1-35	4.811	0.04	0.3219	0.002	0.59576	3.106555	0.0193014	0.1083	0.00095	0.23757	1799	10	1767	16	-1.8	Youngest group, 1777Ma

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Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
174	THG1	THG1-47	4.779	0.061	0.3202	0.0038	0.62202	3.123048	0.037063	0.1084	0.0012	0.21655	1790	12	1767	21	-1.3	Youngest group, 1777Ma
175	THG1	THG1-9	4.218	0.068	0.2825	0.0036	0.74865	3.539823	0.0451093	0.1083	0.0012	0.1422	1604	18	1767	21	9.2	Youngest group, 1777Ma
176	THG1	THG1-37	4.626	0.037	0.3092	0.0019	0.55111	3.234153	0.0198735	0.1084	0.00096	0.25387	1736.3	9.2	1769	16	1.8	Youngest group, 1777Ma
177	THG1	THG1-1_1	4.834	0.042	0.3226	0.0021	0.42251	3.099814	0.0201786	0.1085	0.001	0.35293	1802	10	1770	18	-1.8	Youngest group, 1777Ma
178	THG1	THG1-14	4.842	0.036	0.3229	0.002	0.55551	3.096934	0.019182	0.1085	0.00094	0.3589	1803.8	9.6	1771	16	-1.9	Youngest group, 1777Ma
179	THG1	THG1-3	4.76	0.046	0.3176	0.0021	0.38629	3.148615	0.0208189	0.1084	0.0012	0.32632	1777	10	1771	20	-0.3	Youngest group, 1777Ma
180	THG1	THG1-10	4.358	0.066	0.292	0.004	0.92492	3.424658	0.0469131	0.1085	0.0009	0.14244	1650	20	1772	15	6.9	Youngest group, 1777Ma
181	THG1	THG1-33	4.465	0.049	0.2979	0.0024	0.52841	3.356831	0.027044	0.1087	0.0012	0.30614	1680	12	1773	20	5.2	Youngest group, 1777Ma
182	THG1	THG1-7	4.935	0.056	0.3287	0.0036	0.825	3.042288	0.0333199	0.1087	0.00093	0.30263	1831	18	1774	16	-3.2	Youngest group, 1777Ma
183	THG1	THG1-18	4.891	0.05	0.3254	0.0031	0.69518	3.073141	0.029277	0.1087	0.001	0.32076	1815	15	1774	17	-2.3	Youngest group, 1777Ma
184	THG1	THG1-22	5.036	0.086	0.336	0.0046	0.85461	2.97619	0.0407455	0.1086	0.0011	-0.04715	1866	22	1774	19	-5.2	Youngest group, 1777Ma
185	THG1	THG1-5	4.736	0.045	0.3157	0.002	0.34757	3.167564	0.0200669	0.1086	0.0012	0.34071	1769	10	1774	19	0.3	Youngest group, 1777Ma
186	THG1	THG1-51	5.05	0.069	0.3352	0.0043	0.60718	2.983294	0.0382702	0.1087	0.0012	0.34895	1863	15	1774	20	-5.0	Youngest group, 1777Ma
187	THG1	THG1-38	4.956	0.063	0.3315	0.0039	0.40558	3.016591	0.0354893	0.1085	0.0012	0.3616	1847	13	1774	20	-4.1	Youngest group, 1777Ma
188	THG1	THG1-36	4.767	0.04	0.318	0.002	0.71631	3.144654	0.0197777	0.1087	0.00086	0.1315	1779.4	9.7	1775	14	-0.2	In the same grain with THG1-51
189	THG1	THG1-2_1	4.561	0.094	0.3031	0.0063	0.94363	3.299241	0.0685755	0.1088	0.00097	0.20388	1705	31	1777	17	4.1	Youngest group, 1777Ma
190	THG1	THG1-29	4.924	0.036	0.3281	0.0023	0.56004	3.047851	0.0213656	0.1089	0.00095	0.48427	1829	11	1778	16	-2.9	Youngest group, 1777Ma
191	THG1	THG1-17	4.799	0.046	0.3192	0.0029	0.75709	3.132832	0.0284625	0.1089	0.00093	0.31878	1785	14	1778	16	-0.4	Youngest group, 1777Ma
192	THG1	THG1-41	4.862	0.077	0.3239	0.0042	0.48803	3.087373	0.0400339	0.1091	0.0015	0.24631	1808	15	1778	25	-1.7	Youngest group, 1777Ma
193	THG1	THG1-11	4.914	0.042	0.3277	0.0023	0.78315	3.051572	0.0214178	0.1089	0.00091	0.18096	1827	11	1779	15	-2.7	Youngest group, 1777Ma
194	THG1	THG1-23	4.825	0.046	0.3204	0.0025	0.62981	3.121099	0.0243531	0.109	0.0011	0.17747	1791	12	1780	18	-0.6	Youngest group, 1777Ma
195	THG1	THG1-24	4.884	0.058	0.3243	0.003	0.75493	3.083565	0.0285251	0.1091	0.001	0.039431	1810	14	1781	17	-1.6	Youngest group, 1777Ma
196	THG1	THG1-27	4.874	0.055	0.3251	0.0029	0.63934	3.075977	0.0274387	0.1093	0.0012	0.13107	1814	14	1782	20	-1.8	Youngest group, 1777Ma
197	THG1	THG1-42	4.886	0.059	0.3255	0.0037	0.34249	3.072197	0.0349221	0.1093	0.0013	0.44218	1816	12	1784	21	-1.8	Youngest group, 1777Ma
198	THG1	THG1-12	4.841	0.038	0.3209	0.0022	0.609	3.116236	0.021364	0.1094	0.00093	0.33375	1794	11	1787	16	-0.4	Youngest group, 1777Ma
199	THG1	THG1-30	4.9	0.048	0.3245	0.003	0.70499	3.081664	0.02849	0.1094	0.001	0.33942	1811	14	1787	17	-1.3	Youngest group, 1777Ma
200	THG1	THG1-49	4.864	0.081	0.3235	0.0045	0.48737	3.09119	0.0429996	0.1093	0.0015	0.31782	1806	17	1788	24	-1.0	Youngest group, 1777Ma
201	THG1	THG1-28	4.555	0.041	0.3019	0.0024	0.66584	3.312355	0.0263321	0.1094	0.001	0.33668	1700	12	1790	16	5.0	In the same grain with THG1-48 (~11% discordance)
202	THG1	THG1-45	4.926	0.058	0.3267	0.0038	0.50292	3.060912	0.0356029	0.1097	0.0011	0.36619	1822	12	1790	19	-1.8	Youngest group, 1777Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
203	THG1	THG1-46	4.682	0.058	0.3093	0.004	0.66909	3.233107	0.0418119	0.1097	0.0011	0.25042	1736	14	1794	19	3.2	Youngest group, 1777Ma
204	THG1	THG1-43	4.863	0.061	0.3224	0.0039	0.46719	3.101737	0.037521	0.11	0.0012	0.30956	1801	13	1794	20	-0.4	Youngest group, 1777Ma
205	THG1	THG1-4	5.22	0.15	0.346	0.011	0.85907	2.890173	0.0918841	0.1099	0.0014	0.18697	1911	52	1794	24	-6.5	Youngest group, 1777Ma
206	THG1	THG1-50	5.131	0.07	0.3374	0.004	5.087E-05	2.963841	0.0351374	0.1104	0.0014	0.6672	1874	13	1800	22	-4.1	In the same grain with spot THG1-35
207	THG1	THG1-8	4.927	0.061	0.3222	0.0031	0.90887	3.103662	0.0298614	0.11	0.00099	0.18644	1800	15	1796	16	-0.2	group 1796Ma
208	THG1	THG1-26	4.528	0.074	0.2979	0.0051	0.8755	3.356831	0.0574684	0.1099	0.0011	0.23212	1682	25	1796	18	6.3	group 1796Ma
209	THG1	THG1-20	4.852	0.083	0.3129	0.0038	0.68671	3.195909	0.0388126	0.112	0.0015	0.042587	1755	19	1829	25	4.0	group 1834 Ma
210	THG1	THG1_9_2nd	4.835	0.095	0.3102	0.0057	0.82957	3.223727	0.0592368	0.1123	0.0015	0.21104	1740	27	1835	23	5.2	group 1834 Ma
211	THG1	THG1-13	5.094	0.081	0.3276	0.0048	0.85949	3.052503	0.0447253	0.1124	0.0011	0.061283	1826	23	1837	18	0.6	group 1834 Ma
212	THG1	THG1-48	5.364	0.08	0.3572	0.0049	0.64421	2.799552	0.0384037	0.1084	0.0013	0.21969	1968	18	1772	22	-11.1	next to spot THG1-29
213	THG1	THG1-34	5.5	0.1	0.3215	0.0042	0.74305	3.11042	0.0406338	0.1238	0.0017	-0.07672	1796	20	2006	24	10.5	Discordant
214	THG1	THG1_15_2nd	5.575	0.071	0.3216	0.0034	0.81722	3.109453	0.0328736	0.1254	0.0012	0.070261	1797	17	2032	17	11.6	Discordant
215	THG1	THG1-16	4.002	0.052	0.2682	0.0027	0.80382	3.728561	0.0375359	0.1077	0.001	-0.02943	1531	14	1761	17	13.1	Discordant
216	THG1	THG1-15	3.8	0.22	0.256	0.015	0.98251	3.90625	0.2288818	0.1077	0.0014	-0.10845	1466	77	1760	24	16.7	Discordant
217	THG1	THG1-25	4.667	0.037	0.2699	0.0022	0.56917	3.705076	0.0302007	0.1252	0.0011	0.32421	1541	11	2028	16	24.0	Discordant
218	THG1	*THG1-32*	*3.437*	*0.042*	*0.2285*	*0.0027*	*0.76379*	*4.37637*	*0.051712*	*0.109*	*0.0011*	*0.32145*	*1326*	*14*	*1779*	*18*	25.5	Discordant
219	THG1	THG1-6	3.517	0.078	0.218	0.0052	0.93277	4.587156	0.1094184	0.1167	0.0012	0.3738	1270	27	1906	18	33.4	Discordant
220	THG3	THG3-3rd-12	4.894	0.093	0.3259	0.0052	0.31657	3.068426	0.0489592	0.1084	0.0007	0.40865	1818.2	25	1771	12	-2.7	Youngest group, 1778Ma
221	THG3	THG3-3rd-10	5.021	0.1	0.3351	0.0055	0.297	2.984184	0.0489794	0.1086	0.00096	0.41129	1863	27	1772	16	-5.1	Youngest group, 1778Ma
222	THG3	THG3-3rd-11	4.883	0.099	0.3246	0.0055	0.57742	3.080715	0.0521994	0.1089	0.00071	0.23172	1812	27	1778	12	-1.9	Youngest group, 1778Ma
223	THG3	THG3_4th_9	4.925	0.13	0.3273	0.005	0.55239	3.055301	0.0466743	0.1092	0.0019	0.34503	1825	24	1781	32	-2.5	Youngest group, 1778Ma
224	THG3	THG3_4th_8	4.619	0.13	0.3039	0.0044	0.49618	3.290556	0.0476421	0.11	0.002	0.2868	1710	22	1798	32	4.9	Youngest group, 1778Ma
225	THG3	THG3_4th_3	5.056	0.14	0.3317	0.0049	0.67495	3.014772	0.0445354	0.1105	0.0018	0.20886	1846	23	1803	29	-2.4	Youngest group, 1778Ma
226	THG3	THG3_4th_20	4.802	0.14	0.3146	0.0049	0.43322	3.17864	0.0495084	0.1108	0.0024	0.25184	1763	24	1809	39	2.5	Youngest group, 1778Ma
227	THG3	THG3_4th_26	5.114	0.13	0.3327	0.0042	0.6815	3.005711	0.0379441	0.1116	0.0016	0.27122	1851	20	1825	27	-1.4	Inherited, group 1848 Ma
228	THG3	THG3_4th_25	5.082	0.13	0.3308	0.0051	0.71475	3.022975	0.0466057	0.1117	0.0017	0.5091	1842	25	1827	26	-0.8	Inherited, group 1848 Ma
229	THG3	THG3_4th_17	5.067	0.14	0.3274	0.0066	0.67221	3.054368	0.0615725	0.1123	0.0021	0.55339	1825	32	1834	34	0.5	Inherited, group 1848 Ma
230	THG3	THG3_4th_12	5.665	0.15	0.3657	0.0048	0.56682	2.734482	0.0358915	0.1125	0.0018	0.29417	2008	23	1835	29	-9.4	Inherited, group 1848 Ma
231	THG3	THG3-3rd-6	5.182	0.11	0.3308	0.0057	0.7691	3.022975	0.0520887	0.1127	0.001	0.085516	1842	28	1842.1	17	0.0	Inherited, group 1848 Ma
232	THG3	THG3_4th_21	5.223	0.13	0.3353	0.0041	0.58076	2.982404	0.0364684	0.113	0.0017	0.25612	1864	20	1845	27	-1.0	Inherited, group 1848 Ma
233	THG3	THG3_4th_23	4.957	0.12	0.3198	0.0042	0.54368	3.126954	0.0410669	0.1132	0.0017	0.4691	1788	21	1847	28	3.2	Inherited, group 1848 Ma
234	THG3	THG3_4th_22	5.211	0.13	0.3351	0.0044	0.68043	2.984184	0.0391836	0.1133	0.0017	0.30395	1862	21	1850	26	-0.6	Inherited, group 1848 Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
235	THG3	THG3_4th_13	5.192	0.13	0.3324	0.004	0.53344	3.008424	0.0362025	0.1135	0.0017	0.29723	1850	19	1853	27	0.2	Inherited, group 1848 Ma
236	THG3	THG3_4th_11	5.556	0.14	0.3533	0.0051	0.44264	2.830456	0.0408586	0.1141	0.002	0.49408	1950	24	1861	31	-4.8	Inherited, group 1848 Ma
237	THG3	THG3_4th_1	5.173	0.13	0.3282	0.0043	0.57719	3.046923	0.0399201	0.114	0.0017	0.49749	1829	21	1861	27	1.7	Inherited, group 1848 Ma
238	THG3	THG3_4th_15	5.506	0.14	0.3509	0.0046	0.5622	2.849815	0.0373586	0.1141	0.0018	0.31281	1938	22	1864	27	-4.0	Inherited, group 1848 Ma
239	THG3	THG3_4th_14	4.799	0.12	0.3064	0.0045	0.34648	3.263708	0.047933	0.1144	0.002	0.50743	1723	22	1866	32	7.7	Inherited, group 1848 Ma
240	THG3	THG3_4th_18	5.107	0.13	0.3241	0.004	0.565	3.085467	0.0380804	0.1143	0.0018	0.19066	1809	19	1868	27	3.2	Inherited, group 1848 Ma
241	THG3	THG3-3rd-5-2nd	5.216	0.1	0.3276	0.0054	0.080762	3.052503	0.050316	0.1148	0.00065	0.10126	1826.4	26	1875	10	2.6	Inherited
242	THG3	THG3-3rd-7	5.698	0.11	0.3555	0.0057	0.60566	2.81294	0.045102	0.1155	0.00068	0.16023	1960.7	27	1888	11	-3.9	Inherited
243	THG3	THG3_4th_24	5.045	0.14	0.3156	0.0056	0.70425	3.168568	0.056223	0.1161	0.002	0.28125	1768	27	1894	31	6.7	Inherited
244	THG3	THG3-2nd-4	5.529	0.075	0.3429	0.0036	0.88638	2.916302	0.0306174	0.1167	0.001	-0.1888	1900	18	1904	16	0.2	Inherited
245	THG3	THG3-3rd-9	6.068	0.12	0.3694	0.0062	0.64978	2.707093	0.0454358	0.1186	0.00088	0.4714	2026	29	1933	13	-4.8	Inherited
246	THG3	THG3_4th_10	5.521	0.14	0.3361	0.0041	0.49928	2.975305	0.036295	0.1191	0.0019	0.22354	1868	20	1939	28	3.7	Inherited
247	THG3	THG3-3rd-8	6.424	0.14	0.3768	0.0069	0.84888	2.653928	0.048599	0.1234	0.001	0.11252	2060	32	2004	14	-2.8	Inherited
248	THG3	THG3-2nd-6	4.58	0.18	0.2858	0.0095	0.97391	3.49895	0.1163052	0.1154	0.0013	-0.52516	1617	48	1883	21	14.1	Discordant
249	THG3	THG3-3rd-2	3.12	0.12	0.2271	0.0085	0.5623	4.403347	0.1648104	0.099	0.00065	0.3537	1319	48	1603	12	17.7	Discordant
250	THG3	THG3-1st-28	4.27	0.091	0.27	0.0053	0.8789	3.703704	0.0727023	0.1148	0.00099	0.2792	1539	27	1873	15	17.8	Discordant
251	THG3	THG3-1st-34	4.324	0.084	0.2674	0.0047	0.84039	3.739716	0.0657317	0.1177	0.0011	0.42529	1527	24	1917	17	20.3	Discordant
252	THG3	THG3-3rd-4	3.665	0.09	0.2424	0.0051	0.90278	4.125413	0.0867971	0.109	0.00082	-0.0704	1398	26	1781	14	21.5	Discordant, but similar magma age
253	THG3	THG3_4th_6	4.54	0.16	0.2678	0.0097	0.68029	3.73413	0.1352541	0.1233	0.0035	0.62748	1529	49	1999	51	23.5	Discordant
254	THG3	THG3_4th_16	4.17	0.15	0.2557	0.0067	0.8413	3.910833	0.1024739	0.1185	0.0023	0.08945	1467	34	1931	34	24.0	Discordant
255	THG3	THG3-1st-20	3.761	0.083	0.2404	0.0048	0.92579	4.159734	0.0830563	0.1132	0.00081	0.27899	1390	25	1848	13	24.8	Discordant
256	THG3	THG3_4th_4	2.979	0.11	0.2059	0.0052	0.82195	4.856727	0.1226565	0.1045	0.0022	-0.0525	1207	28	1702	39	29.1	Discordant
257	THG3	THG3_4th_5	3.488	0.11	0.2216	0.0042	0.58627	4.512635	0.0855283	0.114	0.0023	0.37571	1290	22	1859	38	30.6	Discordant
258	THG3	THG3-1st-12	3.593	0.064	0.217	0.0032	0.78602	4.608295	0.0679564	0.1195	0.00093	0.37377	1266	17	1949	15	35.0	Discordant
259	THG3	THG3-1st-29	3.921	0.075	0.1944	0.0034	0.86528	5.144033	0.0899677	0.1464	0.0012	0.41034	1145	19	2302	14	50.3	Discordant
260	THG3	THG3-1st-33	3.232	0.065	0.1675	0.0029	0.82958	5.970149	0.1033638	0.1407	0.0013	0.39218	998	16	2233	16	55.3	Discordant
261	THG3	THG3-1st-30	2.578	0.054	0.1493	0.0027	0.81312	6.697924	0.1211279	0.125	0.0012	0.32263	897	15	2025	17	55.7	Discordant
262	THG3	THG3_4th_2	2.65	0.13	0.1484	0.006	0.94874	6.738544	0.2724479	0.1289	0.0023	-0.00264	891	34	2080	32	57.2	Discordant
263	THG3	THG3-3rd-3	3.577	0.075	0.1695	0.0034	0.8705	5.899705	0.1183422	0.153	0.00085	0.40562	1009	19	2377.4	9.4	57.6	Discordant
264	THG3	THG3-1st-24	3.142	0.073	0.1452	0.0032	0.96328	6.887052	0.1517808	0.157	0.00085	0.39954	873	18	2421.1	9.2	63.9	Discordant
265	THG3	THG3-1st-16	1.906	0.047	0.1137	0.0024	0.84893	8.795075	0.185648	0.1215	0.0014	0.23168	694	14	1974	20	64.8	Discordant
266	THG3	THG3-1st-22	3.948	0.08	0.1343	0.0025	0.89826	7.446016	0.1386079	0.2136	0.0015	0.40569	812	14	2931	12	72.3	Discordant
267	THG3	THG3-1st-37	2.598	0.049	0.1121	0.0017	0.81307	8.920607	0.1352813	0.1686	0.0013	0.28425	684.5	9.9	2545	14	73.1	Discordant
268	THG3	THG3-1st-38	2.056	0.043	0.0963	0.0018	0.84552	10.38422	0.1940975	0.1551	0.0014	0.35923	592.7	10	2401	16	75.3	Discordant
269	THG3	THG3-1st-27	4.349	0.081	0.1248	0.0021	0.76854	8.012821	0.1348311	0.2532	0.0024	0.48547	758	12	3204	15	76.3	Discordant
270	THG3	THG3-1st-11	4.58	0.12	0.1257	0.0029	0.91983	7.955449	0.1835386	0.2633	0.0023	0.14845	763	16	3264	14	76.6	Discordant
271	THG3	THG3-1st-3	3.183	0.057	0.107	0.0015	0.87057	9.345794	0.1310158	0.2165	0.0013	0.24007	654.9	8.5	2952	10	77.8	Discordant
272	THG3	THG3-1st-5	2.465	0.054	0.0959	0.0018	0.90564	10.42753	0.19572	0.1867	0.0014	0.24894	590.3	11	2711	13	78.2	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
273	THG3	THG3-1st-7	3.114	0.063	0.1042	0.002	0.7875	9.596929	0.1842021	0.216	0.0023	0.52749	639	12	2951	18	78.3	Discordant
274	THG3	THG3-1st-18	3.362	0.075	0.1047	0.0021	0.90156	9.551098	0.1915693	0.233	0.0019	0.20898	642	12	3071	13	79.1	Discordant
275	THG3	THG3-1st-8	2.401	0.05	0.091	0.0018	0.87166	10.98901	0.2173651	0.1909	0.0022	0.38883	561.1	10	2751	18	79.6	Discordant
276	THG3	THG3-1st-26	2.253	0.052	0.0875	0.0016	0.86107	11.42857	0.2089796	0.1878	0.0021	-0.1061	540.4	9.4	2719	18	80.1	Discordant
277	THG3	THG3-1st-35	3.19	0.067	0.0986	0.0018	0.86348	10.14199	0.1851479	0.2357	0.002	0.29691	605.9	11	3089	14	80.4	Discordant
278	THG3	THG3-1st-36	2.978	0.065	0.0956	0.0021	0.87337	10.46025	0.2297754	0.2278	0.0022	0.4399	588	12	3034	16	80.6	Discordant
279	THG3	THG3-1st-21	2.355	0.048	0.0856	0.0014	0.89513	11.68224	0.1910647	0.1994	0.0014	0.14099	529.1	8.3	2819	11	81.2	Discordant
280	THG3	THG3-1st-13	2.823	0.069	0.0855	0.0019	0.87089	11.69591	0.259909	0.238	0.0024	0.32751	529	11	3107	15	83.0	Discordant
281	THG3	THG3-1st-17	2.005	0.046	0.0705	0.0017	0.94791	14.1844	0.3420351	0.2065	0.0016	0.64248	438.8	10	2876	12	84.7	Discordant
282	THG3	THG3-1st-19	2.305	0.049	0.0685	0.0013	0.90814	14.59854	0.2770526	0.2435	0.0017	0.25636	427.1	7.7	3140	11	86.4	Discordant
283	THG3	THG3_4th_19	5.21	0.13	0.0819	0.001	0.76984	12.21001	0.1490844	0.4625	0.0063	0.41423	507.4	6.2	4124.4	20	87.7	Discordant
284	THG3	THG3-1st-4	1.937	0.049	0.0521	0.0012	0.83486	19.19386	0.442085	0.27	0.0033	0.2599	327.3	7.3	3303	19	90.1	Discordant
285	THG4	THG4-3rd-6	5.087	0.1	0.334	0.0058	0.71726	2.994012	0.0519918	0.1088	0.00082	0.22086	1857	28	1777	14	-4.5	Single age ca. 1777
286	THG4	THG4-3rd-4	4.752	0.1	0.2724	0.0048	0.30168	3.671072	0.0646885	0.1239	0.0015	0.46858	1553	24	2010	21	22.7	Discordant
287	THG4	THG4-3rd-2	4.97	0.21	0.259	0.011	0.98004	3.861004	0.1639809	0.1384	0.0014	0.81965	1472	59	2205	17	33.2	Discordant
288	THG4	THG4-3rd-7	2.533	0.062	0.1775	0.0041	0.83691	5.633803	0.1301329	0.1042	0.0011	0.40374	1053	22	1698	19	38.0	Discordant
289	THG4	THG4-3rd-5	3.739	0.087	0.211	0.0046	0.86655	4.739336	0.103322	0.126	0.0012	0.33329	1234	24	2040	17	39.5	Discordant
290	THG4	THG4-2nd-8	2.801	0.045	0.1819	0.0035	0.78601	5.497526	0.1057798	0.1114	0.0015	0.55003	1077	19	1819	24	40.8	Discordant
291	THG4	THG4-2nd-9	2.042	0.024	0.1435	0.0015	0.88026	6.968641	0.0728429	0.103	0.0008	0.014266	864	8.5	1676	14	48.4	Discordant
292	THG4	THG4-1st-1	2.252	0.059	0.1504	0.0038	0.93502	6.648936	0.1679917	0.1094	0.00099	0.33655	903	21	1788	16	49.5	Discordant
293	THG4	THG4-1st-11	2.064	0.041	0.14	0.0027	0.82831	7.142857	0.1377551	0.1064	0.0011	0.56247	844	15	1734	19	51.3	Discordant
294	THG4	THG4-3rd-3	2.423	0.052	0.1489	0.0029	0.86618	6.715917	0.1308003	0.1158	0.0007	0.29581	894	16	1891	11	52.7	Discordant
295	THG4	THG4-1st-18	2.145	0.048	0.1396	0.0026	0.75662	7.163324	0.1334143	0.1111	0.0014	0.20286	842	15	1812	22	53.5	Discordant
296	THG4	THG4-2nd-3	1.904	0.034	0.1298	0.0024	0.90587	7.70416	0.1424498	0.1061	0.001	0.28655	786	14	1732	18	54.6	Discordant
297	THG4	THG4-3rd-9	1.597	0.034	0.1101	0.0022	0.67589	9.082652	0.1814881	0.105	0.0011	0.51795	673.5	13	1712	19	60.7	Discordant
298	THG4	THG4-2nd-6	1.955	0.053	0.1213	0.0027	0.96712	8.244023	0.1835026	0.1167	0.0011	-0.48751	738	16	1905	17	61.3	Discordant
299	THG4	THG4-1st-12	1.642	0.031	0.1102	0.0017	0.78847	9.07441	0.1399864	0.1079	0.00099	0.27567	673.5	9.8	1760	17	61.7	Discordant
300	THG4	THG4_1st_1_2nd	1.87	0.044	0.118	0.0025	0.89128	8.474576	0.1795461	0.1153	0.0011	0.22987	718	14	1881	17	61.8	Discordant
301	THG4	THG4_2nd_4_2nd	1.411	0.018	0.1011	0.0011	0.84547	9.891197	0.1076194	0.1007	0.0009	-0.00203	620.5	6.2	1636	17	62.1	Discordant
302	THG4	THG4-2nd-1	1.769	0.027	0.1141	0.002	0.95861	8.764242	0.1536239	0.1124	0.00086	0.57643	696	12	1836.3	14	62.1	Discordant
303	THG4	THG4-2nd-2	1.946	0.024	0.1163	0.0014	0.85768	8.598452	0.1035067	0.1211	0.0011	0.23357	709.2	8.2	1970	16	64.0	Discordant
304	THG4	THG4-1st-5	1.386	0.062	0.0942	0.0036	0.92384	10.61571	0.405696	0.1073	0.0018	-0.11337	580	21	1752	32	66.9	Discordant
305	THG4	THG4-1st-16	2.489	0.054	0.1235	0.0025	0.82148	8.097166	0.1639102	0.1456	0.0016	0.44985	751	14	2291	19	67.2	Discordant
306	THG4	THG4-3rd-8	1.942	0.045	0.1057	0.0023	0.82456	9.460738	0.2058628	0.1302	0.0015	0.18716	647.4	14	2098	21	69.1	Discordant
307	THG4	THG4-2nd-4	1.324	0.011	0.0866	0.00082	0.55031	11.54335	0.109264	0.1109	0.0011	0.54316	535.5	4.9	1813	18	70.5	Discordant
308	THG4	THG4-1st-4	1.397	0.028	0.0873	0.0014	0.7832	11.45475	0.1836959	0.1164	0.001	0.28146	539.8	8.3	1900	16	71.6	Discordant
309	THG4	THG4_2nd_6_2nd	1.608	0.024	0.0924	0.0012	0.8493	10.82251	0.1405521	0.1258	0.0012	0.057304	569.8	7.4	2040	17	72.1	Discordant
310	THG4	THG4-3rd-1	1.842	0.039	0.0972	0.0018	0.68549	10.28807	0.1905197	0.1355	0.0012	0.26094	597.8	10	2168	15	72.4	Discordant
311	THG4	THG4-1st-13	1.939	0.039	0.0994	0.0017	0.80158	10.06036	0.1720585	0.1403	0.0014	0.42912	610.5	10	2227	17	72.6	Discordant
312	THG4	THG4-1st-10	1.186	0.035	0.0786	0.0023	0.92184	12.72265	0.3722912	0.1093	0.0011	0.37361	487	14	1787	19	72.7	Discordant
313	THG4	THG4-1st-8	1.188	0.024	0.0749	0.0013	0.8871	13.35113	0.2317286	0.1149	0.00086	0.39579	465.6	8	1877	13	75.2	Discordant
314	THG4	THG4-1st-7	1.852	0.032	0.0904	0.0012	0.63775	11.06195	0.14684	0.1481	0.0014	0.42924	558	7.3	2321	16	76.0	Discordant
315	THG4	THG4-1st-17	1.271	0.028	0.0702	0.0014	0.79088	14.24501	0.2840886	0.131	0.0015	0.30102	437.5	8.2	2109	19	79.3	Discordant
316	THG4	THG4-1st-14	1.223	0.029	0.0687	0.0015	0.84785	14.55604	0.3178175	0.1285	0.0014	0.29102	428.1	8.8	2074	19	79.4	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
317	THG4	THG4-1st-15	0.4411	0.011	0.019	0.00038	0.74852	52.77045	1.058194	0.1677	0.0023	0.27363	121	2.4	2529	23	95.2	Discordant
318	THM27	THM27_cg38	4.718	0.12	0.3196	0.0067	0.67488	3.128911	0.0655936	0.1067	0.0021	0.092377	1786	33	1740	36	-2.6	Youngest group, 1770Ma
319	THM27	THM27_cg47	4.629	0.1	0.3121	0.0061	0.53635	3.204101	0.0626242	0.1069	0.002	0.24563	1750	30	1740	34	-0.6	Youngest group, 1770Ma
320	THM27	THM27_fg11	4.629	0.13	0.3151	0.0043	0.26162	3.173596	0.0433084	0.1069	0.0022	0.38035	1765	21	1741	36	-1.4	Youngest group, 1770Ma
321	THM27	THM27_cg23	4.462	0.099	0.3026	0.006	0.4964	3.304693	0.065526	0.1068	0.0021	0.323	1703	30	1742	34	2.2	Youngest group, 1770Ma
322	THM27	THM27_fg32	4.649	0.13	0.3162	0.0041	0.50026	3.162555	0.0410072	0.107	0.0019	0.1991	1770	20	1743	33	-1.5	Youngest group, 1770Ma
323	THM27	THM27_cg25	4.729	0.12	0.3183	0.0071	0.71569	3.14169	0.0700785	0.1073	0.002	0.19884	1780	35	1746	34	-1.9	Youngest group, 1770Ma
324	THM27	THM27_cg27	4.733	0.094	0.3189	0.0059	0.36152	3.135779	0.0580154	0.1073	0.0019	0.41017	1784	29	1754	34	-1.7	Youngest group, 1770Ma
325	THM27	THM27_fg27	4.7	0.12	0.3176	0.0042	0.40931	3.148615	0.0416379	0.1077	0.0019	0.34333	1777	20	1754	32	-1.3	Youngest group, 1770Ma
326	THM27	THM27_cg56	4.794	0.11	0.3197	0.0065	0.30099	3.127932	0.0635958	0.1083	0.0023	0.49526	1788	32	1761	39	-1.5	Youngest group, 1770Ma
327	THM27	THM27_fg30	4.678	0.12	0.3158	0.0041	0.46672	3.166561	0.0411112	0.108	0.0018	0.3549	1768	20	1761	31	-0.4	Youngest group, 1770Ma
328	THM27	THM27_cg20	4.686	0.097	0.3142	0.0059	0.48462	3.182686	0.059764	0.1082	0.0019	0.37515	1761	29	1763	33	0.1	Youngest group, 1770Ma
329	THM27	THM27_cg33	4.76	0.095	0.3173	0.0063	0.65353	3.151592	0.0625749	0.1079	0.0017	0.46456	1776	31	1764	30	-0.7	Youngest group, 1770Ma
330	THM27	THM27_cg1	4.781	0.11	0.3195	0.006	0.51475	3.12989	0.0587773	0.1084	0.002	0.10096	1786	29	1765	34	-1.2	Youngest group, 1770Ma
331	THM27	THM27_cg22	4.729	0.098	0.3158	0.006	0.3586	3.166561	0.0601627	0.1084	0.002	0.41325	1768	29	1765	34	-0.2	Youngest group, 1770Ma
332	THM27	THM27_cg55	4.496	0.11	0.2997	0.0064	0.30693	3.33667	0.0712536	0.1089	0.0026	0.47014	1692	31	1766	43	4.2	Youngest group, 1770Ma
333	THM27	THM27_cg61	4.585	0.11	0.3047	0.0061	0.50461	3.281917	0.065703	0.1086	0.0021	0.28658	1714	30	1768	35	3.1	Youngest group, 1770Ma
334	THM27	THM27_cg42	4.553	0.1	0.3031	0.0062	0.67714	3.299241	0.067487	0.1085	0.0018	0.20475	1706	30	1768	31	3.5	Youngest group, 1770Ma
335	THM27	THM27_fg29	4.755	0.13	0.3178	0.0042	0.36708	3.146633	0.0415855	0.1084	0.0019	0.30432	1779	20	1769	33	-0.6	Youngest group, 1770Ma
336	THM27	THM27_fg20	4.67	0.13	0.314	0.0042	0.39144	3.184713	0.0425981	0.1086	0.0021	0.31953	1760	21	1771	35	0.6	Youngest group, 1770Ma
337	THM27	THM27_fg4	4.648	0.13	0.3105	0.0042	0.24489	3.220612	0.0435638	0.1089	0.0022	0.36814	1743	21	1771	38	1.6	Youngest group, 1770Ma
338	THM27	THM27_cg28	4.816	0.11	0.3188	0.0062	0.37967	3.136763	0.0610035	0.1092	0.0024	0.30504	1783	31	1773	40	-0.6	Youngest group, 1770Ma
339	THM27	THM27_fg33	4.694	0.13	0.3138	0.0046	0.31629	3.186743	0.0467145	0.1088	0.0021	0.45527	1759	22	1773	35	0.8	Youngest group, 1770Ma
340	THM27	THM27_fg23	4.691	0.13	0.3135	0.0043	0.38711	3.189793	0.0437515	0.1089	0.002	0.35383	1757	21	1773	34	0.9	Youngest group, 1770Ma
341	THM27	THM27_cg34	4.836	0.11	0.3215	0.0067	0.64019	3.11042	0.0648206	0.1088	0.002	0.3312	1796	33	1774	33	-1.2	Youngest group, 1770Ma
342	THM27	THM27_fg7	4.628	0.12	0.3094	0.0039	0.26418	3.232062	0.0407403	0.109	0.002	0.37804	1737	19	1775	34	2.1	Youngest group, 1770Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
343	THM27	THM27_cg29	4.836	0.11	0.3218	0.0063	0.34178	3.10752	0.0608371	0.1091	0.0022	0.43797	1798	31	1776	36	-1.2	Youngest group, 1770Ma
344	THM27	THM27_cg62	4.752	0.11	0.3154	0.0065	0.37719	3.170577	0.0653416	0.1089	0.0023	0.44428	1766	32	1776	39	0.6	Youngest group, 1770Ma
345	THM27	THM27_cg60	5.177	0.13	0.3417	0.0072	0.37758	2.926544	0.0616655	0.1092	0.0025	0.38407	1894	34	1777	41	-6.6	Youngest group, 1770Ma
346	THM27	THM27_fg17	4.708	0.13	0.3141	0.0042	0.43211	3.183699	0.042571	0.1089	0.002	0.21253	1760	21	1777	34	1.0	Youngest group, 1770Ma
347	THM27	THM27_cg41	4.698	0.11	0.3126	0.0062	0.74909	3.198976	0.0634474	0.1088	0.0018	0.15221	1753	30	1777	30	1.4	Youngest group, 1770Ma
348	THM27	THM27_cg3	4.623	0.099	0.3075	0.0056	0.37047	3.252033	0.059224	0.1089	0.0021	0.26009	1728	27	1778	33	2.8	Youngest group, 1770Ma
349	THM27	THM27_cg6	4.605	0.095	0.3051	0.0055	0.35619	3.277614	0.0590851	0.1091	0.0019	0.30883	1716	27	1778	32	3.5	Youngest group, 1770Ma
350	THM27	THM27_fg34	4.476	0.12	0.2979	0.0042	0.49168	3.356831	0.0473269	0.109	0.0019	0.40448	1681	21	1779	32	5.5	Youngest group, 1770Ma
351	THM27	THM27_cg15	4.503	0.11	0.299	0.0063	0.28544	3.344482	0.070469	0.1091	0.0026	0.42033	1686	31	1781	42	5.3	Youngest group, 1770Ma
352	THM27	THM27_cg52	4.317	0.099	0.2859	0.0056	0.43423	3.497726	0.0685109	0.1095	0.0022	0.36314	1620	28	1782	37	9.1	Youngest group, 1770Ma
353	THM27	THM27_cg17	4.719	0.095	0.3126	0.0057	0.32278	3.198976	0.0583307	0.1095	0.002	0.46981	1753	28	1784	34	1.7	Youngest group, 1770Ma
354	THM27	THM27_fg3	4.531	0.12	0.3015	0.0044	0.42179	3.31675	0.0484036	0.1094	0.002	0.41792	1698	22	1786	32	4.9	Youngest group, 1770Ma
355	THM27	THM27_fg44	4.757	0.13	0.3155	0.0041	0.29473	3.169572	0.0411894	0.1097	0.002	0.41243	1767	20	1787	34	1.1	Youngest group, 1770Ma
356	THM27	THM27_cg43	4.566	0.091	0.3027	0.0056	0.4222	3.303601	0.0611172	0.1096	0.0019	0.47616	1704	28	1787	30	4.6	Youngest group, 1770Ma
357	THM27	THM27_cg40	4.565	0.11	0.3001	0.006	0.33324	3.332223	0.0666222	0.11	0.0025	0.36564	1691	30	1788	42	5.4	Youngest group, 1770Ma
358	THM27	THM27_fg28	4.866	0.13	0.3224	0.0044	0.68148	3.101737	0.0423314	0.1097	0.0017	0.32785	1801	22	1791	27	-0.6	Youngest group, 1770Ma
359	THM27	THM27_fg9	5.033	0.14	0.3313	0.0049	0.68134	3.018412	0.044643	0.1101	0.0018	0.093745	1844	24	1797	30	-2.6	Youngest group, 1770Ma
360	THM27	THM27_fg21	4.532	0.12	0.2992	0.0043	0.58942	3.342246	0.0480336	0.11	0.0018	0.25585	1687	21	1797	31	6.1	Youngest group, 1770Ma
361	THM27	THM27_fg16	5.117	0.14	0.3346	0.0047	0.81237	2.988643	0.0419803	0.1107	0.0016	-0.04742	1860	23	1807	26	-2.9	inherited, group 1845Ma
362	THM27	THM27_fg8	5.067	0.14	0.3312	0.0048	0.53908	3.019324	0.0437583	0.111	0.0019	0.32627	1843	23	1815	31	-1.5	inherited, group 1845Ma
363	THM27	THM27_cg35	5.515	0.12	0.3558	0.0071	0.58596	2.810568	0.056085	0.1112	0.0019	0.35493	1962	34	1819	30	-7.9	inherited, group 1845Ma
364	THM27	THM27_cg58	5.182	0.12	0.3348	0.007	0.36263	2.986858	0.0624492	0.1116	0.0024	0.52712	1861	34	1819	39	-2.3	inherited, group 1845Ma
365	THM27	THM27_cg57	4.94	0.11	0.3202	0.0066	0.49519	3.123048	0.0643726	0.1115	0.0022	0.30608	1790	32	1820	35	1.6	inherited, group 1845Ma
366	THM27	THM27_cg8	5.19	0.14	0.333	0.007	0.51047	3.003003	0.0631262	0.1119	0.0023	0.21171	1852	34	1824	37	-1.5	inherited, group 1845Ma
367	THM27	THM27_cg24	5.16	0.13	0.3316	0.0069	0.64367	3.015682	0.0627509	0.1122	0.0022	0.076891	1845	33	1827	35	-1.0	inherited, group 1845Ma
368	THM27	THM27_fg43	4.931	0.13	0.3197	0.0044	0.6134	3.127932	0.0430494	0.1121	0.0018	0.30735	1788	21	1831	29	2.3	inherited, group 1845Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
369	THM27	THM27_cg4	5.07	0.13	0.3251	0.0063	0.44525	3.075977	0.0596083	0.1126	0.0024	0.17322	1814	31	1835	40	1.1	inherited, group 1845Ma
370	THM27	THM27_fg37	5.34	0.14	0.3451	0.0054	0.625	2.897711	0.0453423	0.1126	0.0019	0.3785	1911	26	1838	31	-4.0	inherited, group 1845Ma
371	THM27	THM27_cg11	5.267	0.11	0.3385	0.0063	0.45371	2.95421	0.0549823	0.1125	0.002	0.34905	1879	30	1838	31	-2.2	inherited, group 1845Ma
372	THM27	THM27_fg45	5.123	0.14	0.3309	0.0048	0.48544	3.022061	0.0438377	0.1126	0.002	0.33943	1842	23	1839	33	-0.2	inherited, group 1845Ma
373	THM27	THM27_cg51	4.89	0.16	0.3159	0.0084	0.65994	3.165559	0.0841744	0.113	0.0028	0.16843	1769	41	1840	45	3.9	inherited, group 1845Ma
374	THM27	THM27_fg5	5.652	0.15	0.3621	0.005	0.47398	2.761668	0.0381341	0.1128	0.0019	0.28215	1991	24	1842	32	-8.1	inherited, group 1845Ma
375	THM27	THM27_fg36	5.111	0.13	0.3307	0.0041	0.57219	3.023889	0.03749	0.1128	0.0016	0.38534	1842	20	1842	26	0.0	inherited, group 1845Ma
376	THM27	THM27_fg35	4.985	0.14	0.3206	0.0047	0.50411	3.119152	0.0457268	0.113	0.0021	0.29466	1792	23	1842	33	2.7	inherited, group 1845Ma
377	THM27	THM27_cg32	4.941	0.11	0.3153	0.0063	0.494	3.171583	0.0633713	0.113	0.0021	0.31336	1766	31	1842	34	4.1	inherited, group 1845Ma
378	THM27	THM27_fg48	5.192	0.14	0.3338	0.0048	0.49242	2.995806	0.0430793	0.1131	0.002	0.35492	1856	23	1843	32	-0.7	inherited, group 1845Ma
379	THM27	THM27_fg15	5.145	0.13	0.3311	0.0039	0.51842	3.020236	0.0355751	0.1129	0.0017	0.23275	1843	19	1843	28	0.0	inherited, group 1845Ma
380	THM27	THM27_cg63	5.266	0.1	0.337	0.0065	0.50816	2.967359	0.0572339	0.1131	0.0019	0.44985	1871	31	1844	31	-1.5	inherited, group 1845Ma
381	THM27	THM27_cg13	5.348	0.11	0.342	0.0063	0.36327	2.923977	0.0538627	0.1126	0.002	0.45709	1896	30	1845	33	-2.8	inherited, group 1845Ma
382	THM27	THM27_cg7	5.619	0.11	0.3571	0.0066	0.62001	2.800336	0.0517564	0.1131	0.0018	0.35677	1968	32	1846	29	-6.6	inherited, group 1845Ma
383	THM27	THM27_cg45	4.997	0.12	0.3201	0.0068	0.72328	3.124024	0.0663648	0.1133	0.002	0.26222	1789	33	1846	32	3.1	inherited, group 1845Ma
384	THM27	THM27_fg13	5.236	0.14	0.3353	0.0045	0.44605	2.982404	0.0400263	0.1133	0.002	0.24559	1863	22	1848	33	-0.8	inherited, group 1845Ma
385	THM27	THM27_cg30	5.421	0.1	0.3447	0.0065	0.58374	2.901073	0.0547055	0.1132	0.0018	0.30191	1909	31	1849	30	-3.2	inherited, group 1845Ma
386	THM27	THM27_cg49	5.391	0.11	0.3438	0.0065	0.56085	2.908668	0.0549923	0.1135	0.002	0.42599	1904	31	1850	32	-2.9	inherited, group 1845Ma
387	THM27	THM27_cg16	5.258	0.1	0.3358	0.0062	0.55514	2.977963	0.0549832	0.1135	0.0018	0.38158	1866	30	1852	29	-0.8	inherited, group 1845Ma
388	THM27	THM27_cg39	5.213	0.11	0.3313	0.0063	0.52499	3.018412	0.0573981	0.1136	0.0019	0.3243	1844	30	1853	31	0.5	inherited, group 1845Ma
389	THM27	THM27_cg2	5.215	0.11	0.332	0.0061	0.30242	3.012048	0.0553419	0.1139	0.0022	0.36842	1847	30	1854	35	0.4	inherited, group 1845Ma
390	THM27	THM27_fg38	5.302	0.14	0.339	0.0045	0.56431	2.949853	0.0391573	0.1139	0.0018	0.3325	1881	22	1858	29	-1.2	inherited, group 1845Ma
391	THM27	THM27_cg26	5.41	0.14	0.3404	0.0089	0.65262	2.93772	0.0768088	0.114	0.0024	0.44447	1888	43	1861	38	-1.5	inherited, group 1845Ma
392	THM27	THM27_cg10	5.256	0.11	0.3328	0.0062	0.42945	3.004808	0.055979	0.1143	0.0022	0.31397	1851	30	1861	34	0.5	inherited, group 1845Ma
393	THM27	THM27_fg6	5.37	0.17	0.3426	0.0053	0.49553	2.918856	0.0451545	0.1142	0.0024	0.094351	1898	25	1864	40	-1.8	inherited, group 1845Ma
394	THM27	THM27_fg46	4.692	0.12	0.2989	0.0039	0.56127	3.345601	0.0436529	0.1143	0.0017	0.42805	1685	20	1866	28	9.7	inherited, group 1845Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
395	THM27	THM27_cg31	5.66	0.14	0.3557	0.0079	0.464	2.811358	0.0624395	0.1145	0.0025	0.36154	1961	37	1867	40	-5.0	inherited, group 1845Ma
396	THM27	THM27_fg40	5.219	0.14	0.3301	0.0049	0.67714	3.029385	0.0449682	0.1145	0.0019	0.3053	1839	24	1870	30	1.7	inherited, group 1845Ma
397	THM27	THM27_fg41	4.892	0.13	0.3104	0.0049	0.3984	3.221649	0.0508572	0.1149	0.0022	0.49886	1742	24	1873	35	7.0	inherited, group 1845Ma
398	THM27	THM27_cg50	5.45	0.14	0.3444	0.0077	0.72843	2.9036	0.0649179	0.1152	0.0022	0.19064	1906	37	1876	34	-1.6	inherited, group 1845Ma
399	THM27	THM27_cg46	5.1	0.12	0.3216	0.0061	0.41538	3.109453	0.0589791	0.1148	0.0023	0.29563	1799	30	1876	34	4.1	inherited, group 1845Ma
400	THM27	THM27_cg9	5.199	0.11	0.3254	0.0068	0.57371	3.073141	0.0642205	0.1151	0.0022	0.40033	1815	33	1877	34	3.3	inherited, group 1845Ma
401	THM27	THM27_fg14	5.19	0.17	0.3226	0.0062	0.63947	3.099814	0.0595749	0.1171	0.0026	0.14875	1802	30	1907	40	5.5	inherited, group 1845Ma
402	THM27	THM27_fg18	5.693	0.15	0.3525	0.0052	0.75733	2.836879	0.041849	0.1174	0.0018	0.18769	1946	25	1915	28	-1.6	inherited, group 1845Ma
403	THM27	THM27_fg39	5.53	0.19	0.3419	0.0071	0.5212	2.924832	0.060738	0.1176	0.003	0.22653	1895	34	1915	45	1.0	inherited, group 1845Ma
404	THM27	THM27_cg48	5.203	0.12	0.3182	0.0064	0.57483	3.142678	0.0632091	0.118	0.0022	0.16597	1780	31	1920	34	7.3	inherited, group 1845Ma
405	THM27	THM27_fg1	5.93	0.21	0.3558	0.0088	0.74981	2.810568	0.0695138	0.1212	0.0027	0.19221	1962	42	1970	40	0.4	inherited Zr
406	THM27	THM27_cg37	10.12	0.2	0.4571	0.0085	0.72566	2.187705	0.0406815	0.1602	0.0024	0.33839	2426	38	2457	26	1.3	inherited, group 2473Ma
407	THM27	THM27_fg42	10.05	0.26	0.4535	0.0064	0.53946	2.205072	0.031119	0.1614	0.0026	0.46617	2410	28	2466	27	2.3	inherited, group 2473Ma
408	THM27	THM27_fg19	10.63	0.27	0.4715	0.0061	0.50025	2.120891	0.0274389	0.1637	0.0025	0.41582	2489	27	2493	25	0.2	inherited, group 2473Ma
409	THM27	THM27_cg53	4.156	0.11	0.2766	0.0058	0.28588	3.615329	0.0758095	0.108	0.0026	0.38655	1574	29	1766	42	10.9	Discordant
410	THM27	THM27_fg22	4.076	0.12	0.2729	0.0043	0.32398	3.664346	0.057738	0.1081	0.0025	0.38062	1555	22	1760	43	11.6	Discordant
411	THM27	THM27_fg2	3.96	0.14	0.268	0.0062	0.6783	3.731343	0.0863221	0.1081	0.0027	0.10411	1530	32	1760	44	13.1	Discordant
412	THM27	THM27_cg19	4.549	0.12	0.2835	0.0058	0.61591	3.527337	0.0721642	0.1141	0.0024	0.32385	1609	29	1864	38	13.7	Discordant
413	THM27	THM27_cg54	3.853	0.11	0.2599	0.0062	0.43644	3.847634	0.0917866	0.107	0.0028	0.41805	1489	32	1735	47	14.2	Discordant
414	THM27	THM27_cg18	4.46	0.13	0.2813	0.007	0.61085	3.554924	0.0884624	0.1157	0.0028	0.18834	1597	35	1884	43	15.2	Discordant
415	THM27	THM27_fg31	3.91	0.11	0.2622	0.0045	0.63265	3.813883	0.0654557	0.1086	0.0021	0.25933	1501	23	1771	36	15.2	Discordant
416	THM27	THM27_cg5	5.177	0.13	0.298	0.006	0.4148	3.355705	0.0675645	0.1265	0.0028	0.26811	1681	30	2045	39	17.8	Discordant
417	THM27	THM27_cg14	5.56	0.19	0.3035	0.0067	0.35469	3.294893	0.0727373	0.1311	0.0044	0.18024	1709	33	2107	59	18.9	Discordant
418	THM27	THM27_fg10	3.776	0.1	0.2503	0.0043	0.53454	3.995206	0.0686352	0.1095	0.002	0.45881	1440	22	1787	34	19.4	Discordant
419	THM27	THM27_fg24	3.131	0.087	0.2079	0.0044	0.61549	4.810005	0.101799	0.1104	0.0023	0.46981	1217	23	1801	37	32.4	Discordant
420	THM27	THM27_cg12	2.716	0.066	0.1887	0.0042	0.75242	5.299417	0.117952	0.1048	0.0019	0.15616	1114	23	1706	33	34.7	Discordant
421	THM27	THM27_fg12	2.669	0.095	0.1843	0.0048	0.6109	5.425936	0.1413157	0.1053	0.0028	0.32388	1090	26	1713	48	36.4	Discordant
422	THM27	THM27_cg59	2.93	0.11	0.1861	0.0073	0.6554	5.373455	0.2107803	0.1139	0.0036	0.46249	1100	40	1858	57	40.8	Discordant
423	THM27	THM27_cg44	2.195	0.099	0.1438	0.0049	0.70847	6.954103	0.2369618	0.1092	0.0037	0.018654	866	27	1778	62	51.3	Discordant
424	THM27	THM27_fg26	1.52	0.043	0.1129	0.0022	0.77598	8.857396	0.1725976	0.0973	0.0015	0.40926	689	13	1571	28	56.1	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
425	THM27	THM27_cg21	1.116	0.031	0.0828	0.0019	0.59132	12.07729	0.277136	0.0965	0.0022	0.2394	512.5	12	1554	42	67.0	Discordant
426	THM27	THM27_fg25	1.142	0.049	0.0775	0.0026	0.94283	12.90323	0.4328824	0.1067	0.0019	-0.20448	481	16	1738	32	72.3	Discordant
427	THM04	THM04_cg7	4.775	0.1	0.3169	0.0069	0.50845	3.15557	0.0687076	0.1089	0.0021	0.56878	1773	34	1772	34	-0.1	1789 Ma Group
428	THM04	THM04_cg10	4.523	0.11	0.3004	0.007	0.64961	3.328895	0.0775708	0.1087	0.0021	0.37908	1699	32	1773	34	4.2	1789 Ma Group
429	THM04	THM04_cg6	4.596	0.11	0.303	0.0075	0.6915	3.30033	0.0816913	0.1098	0.0021	0.32844	1704	37	1788	36	4.7	1789 Ma Group
430	THM04	THM04_Fg18	4.904	0.12	0.3196	0.0076	0.51821	3.128911	0.0744047	0.1111	0.0024	0.42193	1786	37	1807	41	1.2	1789 Ma Group
431	THM04	THM04_Fg16	4.445	0.11	0.2894	0.0068	0.57813	3.455425	0.0811917	0.1118	0.0024	0.42215	1637	34	1817	39	9.9	1789 Ma Group
432	THM04	THM04_Fg21	5.123	0.11	0.3306	0.007	0.65574	3.024803	0.0640461	0.1123	0.002	0.43668	1840	34	1830	31	-0.5	Inherited, group 1848Ma
433	THM04	THM04_Fg12	4.908	0.11	0.3158	0.0071	0.73789	3.166561	0.0711925	0.1123	0.002	0.29344	1768	35	1831	32	3.4	Inherited, group 1848Ma
434	THM04	THM04_cg11	5.291	0.12	0.3412	0.007	0.46229	2.930832	0.0601285	0.1122	0.0022	0.39908	1892	34	1832	35	-3.3	Inherited, group 1848Ma
435	THM04	THM04_Fg26	5.39	0.13	0.347	0.0076	0.48048	2.881844	0.0631182	0.1122	0.0025	0.47217	1922	38	1833	37	-4.9	Inherited, group 1848Ma
436	THM04	THM04_cg12	5.156	0.12	0.3312	0.0071	0.51744	3.019324	0.0647258	0.1126	0.0022	0.45502	1843	35	1837	36	-0.3	Inherited, group 1848Ma
437	THM04	THM04_cg18	5.309	0.12	0.3396	0.0076	0.54202	2.944641	0.0658989	0.1128	0.0023	0.49308	1883	36	1839	37	-2.4	Inherited, group 1848Ma
438	THM04	THM04_Fg19	5.124	0.1	0.3266	0.0064	0.69553	3.061849	0.0599995	0.1134	0.0017	0.36518	1821	31	1850	28	1.6	Inherited, group 1848Ma
439	THM04	THM04_cg4	5.095	0.11	0.3256	0.007	0.49143	3.071253	0.0660282	0.1135	0.0022	0.51734	1816	34	1851	36	1.9	Inherited, group 1848Ma
440	THM04	THM04_Fg8	5.161	0.11	0.3266	0.0066	0.56984	3.061849	0.0618745	0.1137	0.002	0.39831	1821	32	1853	31	1.7	Inherited, group 1848Ma
441	THM04	THM04_cg17	5.271	0.12	0.3335	0.0071	0.60499	2.998501	0.0638362	0.1141	0.0021	0.46078	1854	34	1862	34	0.4	Inherited, group 1848Ma
442	THM04	THM04_Fg17	5.279	0.13	0.3327	0.0072	0.55496	3.005711	0.0650469	0.1149	0.0025	0.40208	1850	35	1870	38	1.1	Inherited, group 1848Ma
443	THM04	THM04_Fg20	5.348	0.11	0.3379	0.0074	0.60861	2.959455	0.064812	0.1151	0.0022	0.48324	1875	36	1873	34	-0.1	Inherited, group 1848Ma
444	THM04	THM04_Fg10	5.07	0.17	0.314	0.0088	0.60811	3.184713	0.0892531	0.1156	0.0029	0.20303	1759	43	1888	49	6.8	Inherited, group 1848Ma
445	THM04	THM04_cg8	6.32	0.16	0.3646	0.0087	0.54478	2.742732	0.0654464	0.1255	0.0028	0.40058	2002	41	2024	40	1.1	Inherited; group 2036 Ma
446	THM04	THM04_cg5	5.97	0.14	0.3407	0.0081	0.67728	2.935134	0.0697816	0.1261	0.0022	0.43009	1888	39	2044	32	7.6	Inherited; group 2036 Ma
447	THM04	THM04_Fg7	7.83	0.2	0.4192	0.0098	0.54837	2.385496	0.0557678	0.1344	0.003	0.3898	2255	44	2149	39	-4.9	Inherited
448	THM04	THM04_Fg5	11.41	0.25	0.4932	0.011	0.68567	2.027575	0.0452217	0.1677	0.003	0.4952	2582	49	2530	31	-2.1	Inherited; group 2530 Ma
449	THM04	THM04_Fg23	10.23	0.27	0.44	0.012	0.78859	2.272727	0.0619835	0.1675	0.0033	0.4768	2347	55	2530	33	7.2	Inherited; group 2530 Ma
450	THM04	THM04_Fg6	6.42	0.16	0.3469	0.0082	0.72835	2.882675	0.0681405	0.1341	0.0025	0.33956	1918	39	2146	31	10.6	Discordant
451	THM04	THM04_cg9	5.55	0.21	0.323	0.014	0.60042	3.095975	0.1341909	0.1263	0.0045	0.53719	1803	67	2034	65	11.4	Discordant
452	THM04	THM04_cg15	4.313	0.11	0.282	0.0067	0.56376	3.546099	0.0842513	0.111	0.0024	0.36412	1600	34	1808	39	11.5	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
453	THM04	THM04_Fg4	4.48	0.15	0.2855	0.01	0.59305	3.502627	0.122684	0.1138	0.0036	0.53427	1617	52	1852	59	12.7	Discordant
454	THM04	THM04_cg2	4.04	0.095	0.2681	0.0058	0.32875	3.729952	0.0806927	0.1095	0.0025	0.4807	1530	29	1777	42	13.9	Discordant
455	THM04	THM04_Fg15	4.41	0.13	0.2776	0.0059	0.51632	3.602305	0.076562	0.1147	0.0028	0.085577	1579	30	1865	44	15.3	Discordant
456	THM04	THM04_cg1	4.116	0.11	0.2693	0.0079	0.55753	3.713331	0.1089317	0.1111	0.0027	0.52621	1535	40	1815	43	15.4	Discordant
457	THM04	THM04_Fg25	4.301	0.1	0.2691	0.0062	0.49005	3.716091	0.0856179	0.1157	0.0025	0.46347	1535	32	1885	40	18.6	Discordant
458	THM04	THM04_cg13	4.53	0.14	0.2751	0.0072	0.54575	3.635042	0.0951374	0.1186	0.0031	0.29555	1566	36	1926	47	18.7	Discordant
459	THM04	THM04_cg16	3.864	0.11	0.2479	0.0055	0.3563	4.033885	0.0894972	0.1127	0.0028	0.33483	1427	28	1837	46	22.3	Discordant
460	THM04	THM04_Fg11	3.214	0.078	0.2087	0.0047	0.58242	4.791567	0.1079078	0.1116	0.0022	0.29271	1221	25	1818	37	32.8	Discordant
461	THM04	THM04_Fg9	3.95	0.14	0.2264	0.0074	0.50807	4.416961	0.1443706	0.1251	0.0043	0.43482	1322	41	2014	59	34.4	Discordant
462	THM04	THM04_Fg27	2.869	0.085	0.1641	0.004	0.64521	6.093845	0.1485398	0.1253	0.0029	0.2335	979	22	2028	41	51.7	Discordant
463	THM04	THM04_Fg13	2.631	0.088	0.1517	0.0059	0.60993	6.591958	0.2563781	0.1265	0.0041	0.61043	910	33	2038	59	55.3	Discordant
464	THM04	THM04_Fg3	1.834	0.045	0.0463	0.0012	0.72885	21.57963	0.5588165	0.287	0.0055	0.43675	292	7.4	3396	30	91.4	Discordant
465	MG	MG-13	3.467	0.081	0.2586	0.0053	0.8888	3.866976	0.0792536	0.0939	0.00086	0.36237	1482	27	1504	17	1.5	Bad iolite signal
466	MG	MG-1	4.365	0.087	0.2978	0.0046	0.87017	3.357958	0.0518691	0.1042	0.00077	0.34225	1680	23	1697	14	1.0	Bad iolite signal
467	MG	MG24	4.345	0.058	0.2995	0.0042	0.79755	3.338898	0.0468226	0.1042	0.00095	0.33435	1688	21	1698	17	0.6	Bad iolite signal
468	MG	MG-33	4.81	0.11	0.3231	0.0068	0.59323	3.095017	0.0651381	0.108	0.00076	0.38287	1804	33	1762	13	-2.4	Youngest group, magmatic age
469	MG	MG-17	4.762	0.092	0.3186	0.0029	0.54739	3.138732	0.0285698	0.1079	0.00094	0.38498	1782	14	1765	16	-1.0	Youngest group, magmatic age
470	MG	MG-11	4.73	0.082	0.3121	0.0027	0.3535	3.204101	0.0277189	0.1085	0.00099	0.49727	1751	14	1770	17	1.1	Youngest group, magmatic age
471	MG	MG29	5.21	0.072	0.3452	0.0041	0.61921	2.896871	0.0344066	0.1087	0.0011	0.1897	1911	20	1773	19	-7.8	next to spot MG-11 but relatively high discordant => high MSWD => discarded
472	MG	MG-46	4.863	0.11	0.3241	0.0067	0.31073	3.085467	0.0637847	0.1085	0.00078	0.21589	1809	33	1773	13	-2.0	Youngest group, 1773Ma; Excellent signal
473	MG	MG30	4.877	0.062	0.3218	0.0038	0.52753	3.10752	0.0366954	0.1088	0.0012	0.3475	1798	19	1775	20	-1.3	Youngest group, 1773Ma
474	MG	MG-34	4.722	0.1	0.3146	0.0065	0.54107	3.17864	0.0656744	0.109	0.00075	0.34392	1763	32	1780	13	1.0	Youngest group, 1773Ma; Excellent signal
475	MG	MG-36	4.76	0.12	0.3154	0.0073	0.84406	3.170577	0.0733837	0.1093	0.00083	0.1098	1766	36	1785	13	1.1	Youngest group, 1773Ma
476	MG	MG-45	4.996	0.12	0.3292	0.0072	0.59681	3.037667	0.0664374	0.1099	0.0011	0.17155	1834	35	1796	18	-2.1	Youngest group, 1773Ma
477	MG	MG-12	5.225	0.11	0.3417	0.0037	0.28867	2.926544	0.0316892	0.1117	0.0014	0.39187	1894	18	1820	23	-4.1	inherited, group 1842Ma
478	MG	MG-7	5.419	0.11	0.3485	0.0036	0.77948	2.86944	0.0296413	0.1123	0.00068	0.34216	1927	17	1836	11	-5.0	inherited, group 1842Ma
479	MG	MG-20	5.553	0.11	0.3493	0.0045	0.42486	2.862869	0.0368821	0.1126	0.0016	0.47432	1931	21	1837	25	-5.1	inherited, group 1842Ma
480	MG	MG-18	5.266	0.098	0.3381	0.0031	0.53886	2.957705	0.0271189	0.1129	0.001	0.39287	1877	15	1841	16	-2.0	inherited, group 1842Ma
481	MG	MG-4	5.46	0.097	0.3498	0.0029	0.62192	2.858776	0.0237006	0.113	0.00081	0.39358	1933	14	1844	13	-4.8	inherited, group 1842Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
482	MG	MG-37	4.892	0.14	0.3137	0.0079	0.86388	3.187759	0.0802783	0.1131	0.0011	-0.08104	1757	39	1844	18	4.7	inherited, group 1842Ma
483	MG	MG-41	4.826	0.11	0.3084	0.0068	0.62315	3.242542	0.0714957	0.1134	0.0011	0.32321	1732	33	1850	17	6.4	inherited, group 1842Ma
484	MG	MG-42	5.359	0.14	0.3402	0.0083	0.38457	2.939447	0.0717149	0.1137	0.0018	0.43171	1887	40	1861	32	-1.4	inherited, group 1842Ma
485	MG	MG-3	5.65	0.13	0.3527	0.0051	0.64248	2.835271	0.0409977	0.1143	0.0017	0.13925	1947	24	1866	27	-4.3	inherited, group 1842Ma
486	MG	MG-43	5.523	0.12	0.3494	0.0074	0.7042	2.862049	0.0606158	0.1145	0.00079	0.24571	1931	35	1870	12	-3.3	Inherited, group 1874 Ma
487	MG	MG-19	5.51	0.098	0.3425	0.0043	0.72799	2.919708	0.0366562	0.1148	0.00094	0.29354	1898	21	1875	15	-1.2	Inherited, group 1874 Ma
488	MG	MG-44	5.896	0.13	0.3717	0.0078	0.74568	2.690342	0.0564559	0.115	0.00065	0.3051	2037	37	1877	10	-8.5	Inherited, group 1874 Ma
489	MG	MG25	5.575	0.098	0.3423	0.0056	0.38549	2.921414	0.0477941	0.1172	0.0021	0.50067	1897	27	1908	32	0.6	Inherited, group 1918 Ma
490	MG	MG-39	5.939	0.13	0.3671	0.0081	0.77105	2.724053	0.0601058	0.1175	0.00074	0.42371	2015	38	1916	11	-5.2	Inherited, group 1918 Ma
491	MG	MG26	5.752	0.072	0.3537	0.0044	0.48344	2.827255	0.0351708	0.1176	0.0013	0.46211	1952	21	1917	20	-1.8	Inherited, group 1918 Ma
492	MG	MG28	5.72	0.12	0.3529	0.0063	0.81034	2.833664	0.0505868	0.1178	0.0015	0.1557	1948	30	1921	22	-1.4	Inherited, group 1918 Ma
493	MG	MG-16	5.617	0.11	0.3504	0.0038	0.48446	2.853881	0.0309496	0.1181	0.0012	0.49296	1936	18	1925	19	-0.6	Inherited, group 1918 Ma
494	MG	MG-15	5.984	0.13	0.3685	0.0045	0.51594	2.713704	0.0331389	0.1208	0.0016	0.34377	2022	21	1963	24	-3.0	Inherited
495	MG	MG-14	5.747	0.1	0.3809	0.0041	0.76153	2.625361	0.0282593	0.1059	0.00082	0.13822	2080	19	1728	14	-20.4	Discordant
496	MG	MG-2	4.57	0.26	0.333	0.018	0.69017	3.003003	0.1623245	0.0967	0.0012	0.083706	1847	85	1558	23	-18.5	Discordant
497	MG	MG-38	5.997	0.14	0.3784	0.0084	0.61136	2.642706	0.0586647	0.1152	0.00098	0.45721	2068	39	1880	15	-10.0	Discordant
498	MG	MG-47	3.494	0.085	0.2521	0.0061	0.94619	3.96668	0.0959808	0.1003	0.00042	0.25688	1448	31	1627.8	7.9	11.0	Discordant
499	MG	MG-22	4.674	0.088	0.2947	0.0029	0.23368	3.393281	0.0333916	0.1151	0.00088	0.11947	1664	15	1878	14	11.4	Inherited
500	MG	MG-22	4.674	0.088	0.2947	0.0029	0.23368	3.393281	0.0333916	0.1151	0.00088	0.11947	1664	15	1878	14	11.4	Discordant
501	MG	MG32	6.484	0.088	0.3449	0.0044	0.39543	2.899391	0.0369885	0.1348	0.0017	0.45263	1909	21	2158	22	11.5	Discordant
502	MG	MG-5	4.913	0.1	0.2934	0.0042	0.43055	3.408316	0.0487898	0.1176	0.0019	0.50596	1658	21	1916	29	13.5	Discordant
503	MG	MG-40	3.289	0.1	0.2364	0.0071	0.94078	4.230118	0.1270467	0.1003	0.00083	0.027344	1367	37	1629	15	16.1	Discordant
504	MG	MG-23	3.9	0.14	0.2712	0.0051	0.41772	3.687316	0.0693411	0.1131	0.0013	0.34398	1547	26	1848	21	16.3	Discordant
505	MG	MG-9	6.404	0.13	0.323	0.0032	0.15949	3.095975	0.0306722	0.1456	0.0019	0.18105	1804	15	2292	24	21.3	Discordant
506	MG	MG-35	4.235	0.11	0.2619	0.0062	0.90476	3.818251	0.0903901	0.1172	0.00079	-0.20682	1499	32	1912	12	21.6	Discordant
507	MG	MG-6	4.784	0.11	0.2765	0.0031	0.54102	3.616637	0.0405482	0.1249	0.0018	-0.0675	1573	16	2018	25	22.1	Discordant
508	MG	MG-10	6.25	0.14	0.2951	0.0039	0.5489	3.388682	0.0447843	0.1607	0.0022	0.39504	1666	19	2460	23	32.3	Discordant
509	MG	MG-21	4.42	0.15	0.1931	0.0036	0.26701	5.178664	0.0965468	0.161	0.005	0.35231	1138	20	2457	52	53.7	Discordant
510	MG	MG-8	1.117	0.026	0.0571	0.0013	0.21235	17.51313	0.3987229	0.1431	0.0029	0.68851	357.6	8.1	2246	36	84.1	Discordant
511	TH11	TH11-72	4.78	0.11	0.3234	0.0069	0.59131	3.092146	0.0659734	0.1079	0.00089	0.24827	1806	33	1762	15	-2.5	Youngest group, but interpreted as inherited age
512	TH11	TH11-75	5.034	0.12	0.3384	0.0078	0.80645	2.955083	0.0681136	0.1083	0.00087	0.14742	1878	37	1769	15	-6.2	Youngest group, but interpreted as inherited age
513	TH11	TH11-36	4.817	0.052	0.3209	0.0027	0.62414	3.116236	0.0262195	0.1087	0.0012	0.21496	1794	13	1773	21	-1.2	Youngest group, but interpreted as inherited age
514	TH11	TH11-71	4.893	0.12	0.3268	0.0073	0.62317	3.059976	0.0683532	0.1093	0.001	0.26717	1822	35	1790	17	-1.8	Youngest group, but interpreted as inherited age
515	TH11	TH11-59	4.917	0.064	0.3222	0.0042	0.47966	3.103662	0.0404574	0.1103	0.0013	0.39263	1800	20	1799	22	-0.1	next to TH11-36, similar age but cause high MSWD

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
516	TH11	TH11-3	4.761	0.045	0.3112	0.0021	0.41509	3.213368	0.021684	0.1105	0.0012	0.3637	1746	10	1805	20	3.3	Group 1824 Ma
517	TH11	TH11-65	4.473	0.1	0.2916	0.0062	0.51259	3.429355	0.072915	0.1109	0.0011	0.32649	1649	31	1809	18	8.8	Group 1824 Ma
518	TH11	TH11-33	4.923	0.055	0.321	0.0024	0.58317	3.115265	0.0232917	0.1111	0.0012	0.11547	1794	12	1813	20	1.0	Group 1824 Ma
519	TH11	TH11-87	4.52	0.15	0.2944	0.0092	0.44136	3.396739	0.1061481	0.1111	0.002	0.19756	1662	46	1814	32	8.4	Group 1824 Ma
520	TH11	TH11-49	4.861	0.06	0.3148	0.0041	0.58541	3.17662	0.0413728	0.1118	0.0013	0.335	1764	20	1824	21	3.3	Group 1824 Ma
521	TH11	TH11-2	5.302	0.05	0.3424	0.0024	0.53762	2.920561	0.0204712	0.1121	0.0011	0.24605	1898	12	1830	19	-3.7	Group 1824 Ma
522	TH11	TH11-66	5.232	0.11	0.3374	0.007	0.40309	2.963841	0.0614905	0.1124	0.00091	0.42072	1874	34	1835	15	-2.1	Group 1824 Ma
523	TH11	TH11-88	5.177	0.12	0.3342	0.0076	0.7766	2.99222	0.0680457	0.1124	0.00083	0.34614	1857	37	1837	14	-1.1	Group 1824 Ma
524	TH11	TH11-84	5.438	0.13	0.3509	0.0078	0.52757	2.849815	0.0633473	0.1127	0.0011	0.39771	1938	37	1838	18	-5.4	Inherited, group 1854 Ma
525	TH11	TH11-86	5.383	0.12	0.346	0.0073	0.45548	2.890173	0.0609777	0.1129	0.001	0.31044	1915	35	1844	16	-3.9	Inherited, group 1854 Ma
526	TH11	TH11-79	5.454	0.13	0.3514	0.0079	0.48065	2.84576	0.063977	0.1132	0.0013	0.41944	1941	38	1846	20	-5.1	Inherited, group 1854 Ma
527	TH11	TH11-34	5.05	0.05	0.3237	0.0031	0.68899	3.08928	0.0295853	0.1132	0.0012	0.37831	1807	15	1847	19	2.2	Inherited, group 1854 Ma
528	TH11	TH11-82	5.716	0.13	0.3668	0.0084	0.66183	2.726281	0.0624339	0.1132	0.0011	0.37562	2013	39	1848	17	-8.9	Inherited, group 1854 Ma
529	TH11	TH11-63	5.2	0.11	0.3306	0.0069	0.48642	3.024803	0.0631311	0.1134	0.00079	0.39161	1841	33	1851	13	0.5	Inherited, group 1854 Ma
530	TH11	TH11-60	5.176	0.081	0.3288	0.0047	0.44679	3.041363	0.0434745	0.1134	0.0016	0.39361	1832	23	1851	25	1.0	Inherited, group 1854 Ma
531	TH11	TH11-93	4.785	0.11	0.3068	0.0069	0.77717	3.259452	0.0733058	0.1133	0.00085	0.3647	1724	34	1851	14	6.9	Inherited, group 1854 Ma
532	TH11	TH11-70	5.319	0.12	0.3419	0.0074	0.55924	2.924832	0.0633043	0.1134	0.001	0.43653	1897	36	1852	16	-2.4	Inherited, group 1854 Ma
533	TH11	TH11-69	5.517	0.12	0.3535	0.0076	0.63476	2.828854	0.0608184	0.1134	0.00079	0.42078	1951	36	1854	13	-5.2	Inherited, group 1854 Ma
534	TH11	TH11-7	5.348	0.04	0.3409	0.0021	0.40646	2.933412	0.0180703	0.1136	0.0011	0.40267	1891	10	1855	18	-1.9	Inherited, group 1854 Ma
535	TH11	TH11-14	5.203	0.041	0.332	0.0019	0.57836	3.012048	0.0172376	0.1136	0.001	0.24741	1847.7	9.3	1856	16	0.4	Inherited, group 1854 Ma
536	TH11	TH11-10	5.23	0.05	0.3333	0.0025	0.47793	3.0003	0.0225045	0.1137	0.0013	0.33239	1854	12	1857	20	0.2	Inherited, group 1854 Ma
537	TH11	TH11-76	5.58	0.15	0.3569	0.0095	0.72038	2.801905	0.0745814	0.1138	0.0016	0.3119	1967	45	1858	26	-5.9	Inherited, group 1854 Ma
538	TH11	TH11-17	5.169	0.073	0.3287	0.0033	0.67849	3.042288	0.0305432	0.1139	0.0014	0.11712	1832	16	1860	22	1.5	Inherited, group 1854 Ma
539	TH11	TH11-32	5.178	0.053	0.3284	0.0032	0.78255	3.045067	0.0296718	0.1139	0.0011	0.15095	1831	15	1860	17	1.6	Inherited, group 1854 Ma
540	TH11	TH11-92	5.575	0.14	0.3553	0.0091	0.7565	2.814523	0.072086	0.1141	0.0012	0.38107	1958	43	1861	20	-5.2	Inherited, group 1854 Ma
541	TH11	TH11-57	5.41	0.075	0.341	0.0039	0.27819	2.932551	0.0335394	0.1143	0.0015	0.37183	1891	19	1863	24	-1.5	Inherited, group 1854 Ma
542	TH11	TH11-15	5.309	0.042	0.337	0.002	0.52595	2.967359	0.0176104	0.1141	0.0011	0.26943	1871.9	9.9	1864	17	-0.4	Inherited, group 1854 Ma
543	TH11	TH11-55	5.173	0.08	0.3286	0.0048	0.63229	3.043214	0.0444535	0.1142	0.0014	0.20732	1831	23	1864	21	1.8	Inherited, group 1854 Ma
544	TH11	TH11-13combined	5.192	0.054	0.3292	0.0025	0.85754	3.037667	0.0230686	0.1142	0.0013	0.33419	1834	12	1868	19	1.8	Inherited, group 1854 Ma
545	TH11	TH11-39	5.417	0.09	0.3435	0.005	0.47192	2.911208	0.0423757	0.1151	0.0018	0.31366	1903	24	1874	28	-1.5	Inherited, group 1883 Ma
546	TH11	TH11-28	5.028	0.061	0.3163	0.0035	0.61552	3.161555	0.034984	0.1149	0.0014	0.33031	1771	17	1876	22	5.6	Inherited, group 1883 Ma
547	TH11	TH11-68	5.798	0.13	0.3659	0.0078	0.65261	2.732987	0.0582599	0.115	0.00085	0.35398	2011	38	1877	13	-7.1	Inherited, group 1883 Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
548	TH11	TH11-20	4.969	0.079	0.3124	0.0034	0.18299	3.201024	0.0348383	0.1148	0.0022	0.51183	1752	17	1879	33	6.8	Inherited, group 1883 Ma
549	TH11	TH11-27	5.2	0.051	0.3263	0.0024	0.37052	3.064664	0.0225412	0.1153	0.0014	0.38843	1820	12	1882	21	3.3	Inherited, group 1883 Ma
550	TH11	TH11-1	5.309	0.081	0.3331	0.004	0.45852	3.002101	0.0360505	0.1157	0.002	0.30304	1853	19	1887	31	1.8	Inherited, group 1883 Ma
551	TH11	TH11-4RIM	4.962	0.073	0.3116	0.003	0.55674	3.209243	0.0308977	0.1156	0.0016	0.097944	1748	15	1887	25	7.4	Inherited, group 1883 Ma
552	TH11	TH11-35	5.034	0.071	0.315	0.0048	0.80517	3.174603	0.0483749	0.1159	0.0013	0.43072	1764	23	1890	20	6.7	Inherited, group 1883 Ma
553	TH11	TH11-81	5.317	0.13	0.3329	0.0083	0.64776	3.003905	0.0748946	0.116	0.0015	0.41803	1851	40	1891	23	2.1	Inherited, group 1883 Ma
554	TH11	TH11_17_2nd	4.953	0.065	0.3064	0.0035	0.41304	3.263708	0.0372813	0.1169	0.0017	0.44177	1723	17	1905	26	9.6	Inherited, group 1883 Ma
555	TH11	TH11-91	5.306	0.13	0.3255	0.0077	0.47619	3.072197	0.0726756	0.1182	0.0016	0.51909	1816	38	1924	24	5.6	Inherited
556	TH11	TH11-24	5.217	0.061	0.3153	0.0029	0.63103	3.171583	0.0291709	0.1198	0.0013	0.20309	1767	14	1951	20	9.4	Inherited
557	TH11	TH11-4core	6.348	0.052	0.3743	0.0024	0.57036	2.671654	0.0171306	0.1224	0.0011	0.2591	2049	11	1990	16	-3.0	Inherited
558	TH11	TH11-73	6.174	0.14	0.3593	0.0079	0.53554	2.78319	0.0611945	0.1256	0.0012	0.45756	1978	37	2033	17	2.7	Inherited
559	TH11	TH11-18	6.316	0.072	0.3484	0.0036	0.74998	2.870264	0.0296583	0.1311	0.0013	0.22139	1927	17	2110	17	8.7	Inherited
560	TH11	TH11-44	8.475	0.11	0.4273	0.0055	0.65585	2.340276	0.0301229	0.1443	0.0014	0.32442	2293	25	2277	17	-0.7	Inherited
561	TH11	TH11-85	10.76	0.25	0.487	0.011	0.60893	2.053388	0.0463804	0.1603	0.0018	0.5103	2556	49	2456	18	-4.1	Inherited
562	TH11	TH11-89	11.22	0.25	0.4955	0.011	0.69316	2.018163	0.0448028	0.1643	0.0011	0.41209	2593	46	2498	11	-3.8	Inherited
563	TH11	TH11-80	5.931	0.14	0.3775	0.0088	0.77772	2.649007	0.0617517	0.1143	0.00095	0.21171	2064	41	1868	16	-10.5	Discordant
564	TH11	TH11-90	12	0.27	0.5328	0.012	0.6732	1.876877	0.042272	0.1638	0.0013	0.35948	2752	48	2493	13	-10.4	Discordant
565	TH11	TH11-11	5.066	0.064	0.307	0.0035	0.36355	3.257329	0.0371357	0.1193	0.0018	0.49868	1726	17	1942	27	11.1	Discordant
566	TH11	TH11-37	5.25	0.066	0.3092	0.0029	0.77455	3.234153	0.0303333	0.1229	0.0013	-0.08509	1736	14	1996	19	13.0	Discordant
567	TH11	TH11-23	7.19	0.11	0.3567	0.0042	0.46528	2.803476	0.0330098	0.1459	0.0023	0.34287	1966	20	2295	26	14.3	Discordant
568	TH11	TH11_52	5.51	0.15	0.3096	0.0085	0.4908	3.229974	0.0886782	0.1297	0.0038	0.3563	1738	42	2087	51	16.7	Discordant
569	TH11	TH11-74	3.648	0.1	0.2505	0.0066	0.80895	3.992016	0.1051789	0.1066	0.0012	0.22834	1440	34	1737	21	17.1	Discordant
570	TH11	TH11-48	4.843	0.09	0.2865	0.0045	0.55599	3.490401	0.0548231	0.1224	0.0018	0.28273	1623	23	1984	27	18.2	Discordant
571	TH11	TH11-83	4.15	0.13	0.264	0.0081	0.82619	3.787879	0.116219	0.1147	0.0017	0.24872	1509	41	1872	26	19.4	Discordant
572	TH11	TH11-56	4.458	0.082	0.2706	0.0041	0.56132	3.695492	0.0559923	0.1187	0.0019	0.22995	1544	21	1933	29	20.1	Discordant
573	TH11	TH11-29	5.242	0.074	0.2916	0.0031	0.73478	3.429355	0.0364575	0.1299	0.0015	0.012409	1649	15	2094	20	21.3	Discordant
574	TH11	TH11-78	4.954	0.13	0.2845	0.0076	0.569	3.514938	0.0938964	0.1272	0.0021	0.50838	1613	38	2056	30	21.5	Discordant
575	TH11	TH11-43	4.189	0.1	0.2539	0.0059	0.78314	3.938558	0.0915222	0.1195	0.0019	0.25377	1457	30	1945	28	25.1	Discordant
576	TH11	TH11-45	3.06	0.059	0.2152	0.0044	0.80902	4.64684	0.0950097	0.1031	0.0013	0.36153	1256	23	1679	22	25.2	Discordant
577	TH11	TH11-51	3.192	0.058	0.2187	0.0036	0.53065	4.572474	0.0752671	0.1051	0.0017	0.38202	1275	19	1710	30	25.4	Discordant
578	TH11	TH11-26	2.327	0.035	0.1789	0.0025	0.94174	5.589715	0.0781123	0.094	0.00088	0.093442	1061	14	1507	18	29.6	Discordant
579	TH11	TH11-62	3.648	0.097	0.2278	0.006	0.77543	4.389816	0.1156229	0.1152	0.0013	0.38244	1322	32	1880	21	29.7	Discordant
580	TH11	TH11-6	3.086	0.055	0.2082	0.0027	0.662	4.803074	0.0622877	0.107	0.0016	0.075493	1219	14	1746	27	30.2	Discordant
581	TH11	TH11-47	3.452	0.052	0.2182	0.0034	0.47392	4.582951	0.0714117	0.1143	0.0017	0.48049	1272	18	1862	27	31.7	Discordant
582	TH11	TH11-16	3.314	0.047	0.2107	0.0021	0.67832	4.746084	0.0473032	0.1137	0.0014	0.028919	1234	12	1858	23	33.6	Discordant
583	TH11	TH11-5	3.459	0.049	0.2136	0.0028	0.90172	4.681648	0.0613699	0.1171	0.001	-0.0074	1247	15	1911	16	34.7	Discordant
584	TH11	TH11-61	4.309	0.11	0.2288	0.0052	0.70169	4.370629	0.0993325	0.1356	0.0016	-0.02384	1328	27	2168	20	38.7	Discordant
585	TH11	TH11-67	3.93	0.17	0.2181	0.0081	0.94267	4.585053	0.1702839	0.1306	0.0017	-0.35818	1271	43	2103	24	39.6	Discordant
586	TH11	TH11-42	3.307	0.058	0.2004	0.0031	0.63921	4.99002	0.0771909	0.1197	0.0016	0.22896	1177	17	1949	24	39.6	Discordant
587	TH11	TH11-77	3.499	0.1	0.2058	0.0058	0.79376	4.859086	0.1369422	0.1243	0.0016	0.1504	1206	31	2017	23	40.2	Discordant
588	TH11	TH11-38	2.289	0.043	0.1645	0.0031	0.73363	6.079027	0.1145592	0.1013	0.0014	0.36273	981	17	1645	24	40.4	Discordant
589	TH11	TH11-64	5.64	0.18	0.2525	0.0073	0.90132	3.960396	0.1144986	0.1605	0.0018	-0.1623	1450	38	2458	18	41.0	Discordant
590	TH11	TH11-58	3.315	0.071	0.1866	0.0038	0.043776	5.359057	0.1091341	0.1275	0.0016	-0.0476	1102	20	2059	23	46.5	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
591	TH11	TH11-50	3.661	0.072	0.1809	0.0036	0.75011	5.527916	0.1100083	0.1462	0.002	0.35703	1072	20	2303	23	53.5	Discordant
592	TH11	TH11-40	1.785	0.046	0.1241	0.0025	0.84705	8.058018	0.1623291	0.1044	0.0016	-0.2316	754	14	1696	29	55.5	Discordant
593	TH11	TH11-30	2.605	0.036	0.1499	0.0018	0.7367	6.671114	0.0801068	0.1264	0.0015	0.15305	900.3	9.9	2045	20	56.0	Discordant
594	TH11	TH11-46	2.644	0.059	0.1449	0.003	0.66705	6.901311	0.1428843	0.132	0.0023	0.27597	872	17	2119	31	58.8	Discordant
595	TH11	TH11-8	2.741	0.055	0.1464	0.003	0.95691	6.830601	0.1399713	0.1357	0.0012	0.28989	880	17	2171	15	59.5	Discordant
596	TH11	TH11-19	2.571	0.053	0.1389	0.0022	0.67039	7.199424	0.1140298	0.1337	0.0022	0.11217	838	12	2144	29	60.9	Discordant
597	TH11	TH11-12	2.479	0.046	0.1235	0.002	0.43567	8.097166	0.1311282	0.1444	0.0026	0.49267	751	12	2285	34	67.1	Discordant
598	TH66	U9205-6	2.945	0.47	0.2247	0.014	0.81949	4.450378	0.2772821	0.0938	0.0059	0.20394	1306	70	1509	87	13.5	~13% discordant but the concordia and age is aceptable, youngest group
599	TH66	U9205-17	3.125	0.15	0.2399	0.0045	0.74433	4.168404	0.0781901	0.0947	0.0038	0.23586	1388	23	1519	77	8.6	Youngest group
600	TH66	U9205-19	3.718	0.18	0.2867	0.0079	0.58967	3.487967	0.0961107	0.0948	0.0039	0.49068	1624	41	1520	75	-6.8	Youngest group
601	TH66	U9205-3	4.03	0.23	0.2789	0.011	0.78794	3.585515	0.1414151	0.1045	0.0043	-0.45774	1585	58	1693	82	6.4	loss signal most part => discarded
602	TH66	U9205-7	4.68	0.26	0.3232	0.009	0.013993	3.094059	0.0861588	0.1045	0.0042	0.016621	1800	44	1699	75	-5.9	very bad lollite signal => Discarded
603	TH66	U9205-14	4.283	0.22	0.2935	0.012	0.55858	3.407155	0.1393045	0.1064	0.0042	0.65654	1658	63	1733	76	4.3	Only 4.9 second of signal => Discarded
604	TH66	U9205-12	4.809	0.24	0.3227	0.0067	0.60716	3.098853	0.0643394	0.1085	0.0044	0.29852	1802	33	1769	74	-1.9	Inherited
605	TH66	U9205-21	5.434	0.27	0.3462	0.0056	0.38302	2.888504	0.0467233	0.1139	0.0047	0.3803	1915	27	1854	75	-3.3	Inherited
606	TH66	U9205-20	5.276	0.26	0.3363	0.0058	0.49094	2.973536	0.0512831	0.1142	0.0047	0.40069	1868	28	1859	75	-0.5	Inherited
607	TH66	U9205-25	6.309	0.31	0.348	0.0059	0.61069	2.873563	0.0487185	0.1313	0.0052	0.37777	1924	29	2111	70	8.9	Inherited
608	TH66	U9205-4	6.59	0.37	0.3624	0.01	0.97312	2.759382	0.0761419	0.1313	0.0052	-0.47604	1987	50	2112	70	5.9	Inherited
609	TH66	U9205-13	8.11	0.41	0.4218	0.0077	0.87061	2.370792	0.043279	0.1393	0.0056	-0.26007	2267	35	2215	69	-2.3	Inherited
610	TH66	U9205-5	8.29	0.47	0.4186	0.01	0.89908	2.388915	0.0570692	0.1428	0.0061	-0.52815	2249	47	2247	77	-0.1	Inherited
611	TH66	U9205-15	10.92	0.68	0.4859	0.019	0.81088	2.058037	0.0804748	0.1641	0.0072	0.33938	2551	87	2496	96	-2.2	Inherited
612	TH66	U9205-11	5.333	0.26	0.3567	0.0079	0.73176	2.803476	0.0620899	0.1086	0.0043	0.24143	1965	38	1774	74	-10.8	Discordant
613	TH66	U9205-28	4.55	0.33	0.289	0.013	0.87782	3.460208	0.1556495	0.113	0.0051	-0.1079	1636	60	1832	77	10.7	Discordant
614	TH66	U9205-9	3.75	0.23	0.2621	0.0077	0.68603	3.815338	0.1120874	0.1034	0.0045	0.2527	1499	39	1681	80	10.8	Discordant
615	TH66	U9205-22	4.875	0.4	0.3013	0.011	0.56064	3.318951	0.1211698	0.1171	0.0055	0.37175	1697	52	1907	78	11.0	Discordant
616	TH66	U9205-24	3.937	0.21	0.2686	0.0072	0.90969	3.723008	0.0997977	0.1064	0.0043	0.086184	1531	36	1733	74	11.7	Discordant
617	TH66	U9205-16	5.25	0.54	0.298	0.019	0.9448	3.355705	0.2139543	0.1187	0.006	-0.56692	1667	92	1893	87	11.9	Discordant
618	TH66	U9205-1	3.49	0.21	0.2485	0.0078	0.93808	4.024145	0.1263112	0.1013	0.0042	-0.34431	1426	40	1640	75	13.0	Discordant
619	TH66	U9205-23	3.13	0.19	0.2298	0.0096	0.44656	4.35161	0.1817905	0.0996	0.0054	0.58716	1331	50	1629	94	18.3	Discordant
620	TH66	U9205-10	2.98	0.22	0.213	0.011	0.95534	4.694836	0.2424563	0.1019	0.0043	-0.14417	1238	61	1649	78	24.9	Discordant
621	TH66	U9205-18	3.197	0.18	0.2206	0.0043	0.80139	4.533092	0.0883604	0.1054	0.0045	0.027097	1284	23	1717	72	25.2	Discordant
622	TH66	U9205-8	2.95	0.22	0.2016	0.0099	0.74642	4.960317	0.243587	0.1068	0.0047	-0.03153	1176	52	1729	75	32.0	Discordant
623	TH66	U9205-26	4.85	0.38	0.2312	0.011	0.61313	4.32526	0.2057866	0.1524	0.0065	0.19481	1340	56	2368	70	43.4	Discordant
624	TH66	U9205-2	1.542	0.1	0.1184	0.0053	0.51341	8.445946	0.3780702	0.0952	0.0039	0.40946	721	30	1526	74	52.8	Discordant
625	TH66	U9205-27	1.756	0.19	0.0985	0.0083	0.87721	10.15228	0.8554717	0.1289	0.0052	0.28745	605	46	2077	74	70.9	Discordant
626	TH108	TH108_4th_8	3.123	0.1	0.2418	0.0046	0.44276	4.135649	0.0786765	0.0931	0.0023	0.28107	1395	24	1482	47	5.9	youngest group, 1524Ma
627	TH108	TH108_4th_44	3.226	0.12	0.2514	0.0066	0.54295	3.977725	0.1044271	0.094	0.0028	0.38521	1444	34	1488	56	3.0	youngest group, 1524Ma
628	TH108	TH108_4th_24	3.243	0.11	0.2495	0.0047	0.47615	4.008016	0.0755017	0.0939	0.0025	0.17754	1435	24	1488	52	3.6	youngest group, 1524Ma
629	TH108	TH108_4th_48	3.145	0.11	0.2436	0.0045	0.46405	4.10509	0.075833	0.0934	0.0023	0.23761	1408	24	1488	47	5.4	youngest group, 1524Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
630	TH108	TH108_4th_42	3.251	0.11	0.2522	0.005	0.44434	3.965107	0.0786104	0.0942	0.0025	0.34176	1449	26	1491	50	2.8	youngest group, 1524Ma
631	TH108	TH108_4th_3	3.366	0.11	0.2594	0.005	0.28494	3.85505	0.0743071	0.0949	0.0027	0.44793	1486	25	1501	53	1.0	youngest group, 1524Ma
632	TH108	TH108_4th_38	3.276	0.12	0.2493	0.0051	0.45492	4.011231	0.0820589	0.0952	0.0029	0.16438	1434	26	1505	59	4.7	youngest group, 1524Ma
633	TH108	TH108-72	3.283	0.082	0.2492	0.0054	0.27953	4.012841	0.0869556	0.0945	0.0014	0.32895	1434	28	1506	28	4.8	youngest group, 1524Ma
634	TH108	TH108_4th_16	3.494	0.094	0.2678	0.0042	0.56816	3.73413	0.0585637	0.0942	0.0016	0.46402	1529	21	1507	32	-1.5	youngest group, 1524Ma
635	TH108	TH108_4th_47	3.222	0.1	0.2463	0.0042	0.35844	4.060089	0.0692342	0.0942	0.0023	0.26973	1419	22	1509	47	6.0	youngest group, 1524Ma
636	TH108	TH108-30	3.594	0.081	0.2762	0.006	0.50263	3.620565	0.0786509	0.0945	0.00087	0.41387	1572	30	1515	17	-3.8	youngest group, 1524Ma
637	TH108	TH108_4th_21	3.52	0.11	0.2686	0.0048	0.67914	3.723008	0.0665318	0.0946	0.0018	0.14993	1533	25	1515	36	-1.2	youngest group, 1524Ma
638	TH108	TH108_4th_17	3.228	0.098	0.2459	0.0044	0.54095	4.066694	0.0727672	0.0951	0.002	0.30772	1416	23	1517	40	6.7	youngest group, 1524Ma
639	TH108	TH108-06	3.374	0.16	0.2585	0.0037	0.55835	3.868472	0.0553708	0.0946	0.0037	0.34109	1481.7	19	1518	73	2.4	youngest group, 1524Ma
640	TH108	TH108-17	3.665	0.083	0.2807	0.0061	0.78728	3.562522	0.0774186	0.0946	0.00059	0.14101	1594	31	1519	12	-4.9	youngest group, 1524Ma
641	TH108	TH108_4th_20	3.316	0.09	0.2516	0.0039	0.55106	3.974563	0.0616089	0.095	0.0017	0.37726	1449	21	1522	34	4.8	youngest group, 1524Ma
642	TH108	TH108-45	3.868	0.084	0.2955	0.0061	0.41942	3.384095	0.0698578	0.0949	0.00072	0.38033	1668.8	30	1523	14	-9.6	youngest group, 1524Ma
643	TH108	TH108_4th_9	3.153	0.1	0.2392	0.0044	0.46094	4.180602	0.0769007	0.095	0.0024	0.25275	1382	23	1523	46	9.3	youngest group, 1524Ma
644	TH108	TH108_4th_39	3.41	0.13	0.2553	0.0056	0.47925	3.91696	0.0859184	0.0963	0.0029	0.19257	1464	28	1527	58	4.1	youngest group, 1524Ma
645	TH108	TH108_4th_29	3.505	0.13	0.2663	0.007	0.48641	3.755163	0.0987088	0.0955	0.0027	0.37501	1521	36	1530	54	0.6	youngest group, 1524Ma
646	TH108	TH108-46	3.65	0.078	0.2767	0.0057	0.56217	3.614022	0.0744486	0.0956	0.00058	0.3729	1574.6	29	1536	11	-2.5	youngest group, 1524Ma
647	TH108	TH108-03	3.658	0.18	0.2767	0.004	0.67208	3.614022	0.0522446	0.0957	0.0038	0.27719	1574.3	20	1541	73	-2.2	youngest group, 1524Ma
648	TH108	TH108-39	3.645	0.091	0.2751	0.0064	0.65324	3.635042	0.0845666	0.0958	0.0011	0.31543	1566	32	1541	22	-1.6	youngest group, 1524Ma
649	TH108	TH108_4th_5	3.826	0.1	0.2886	0.0046	0.6343	3.465003	0.0552288	0.096	0.0016	0.42136	1634	23	1542	31	-6.0	youngest group, 1524Ma
650	TH108	TH108_4th_46	3.718	0.1	0.2804	0.0042	0.59756	3.566334	0.0534187	0.096	0.0016	0.41573	1593	21	1542	32	-3.3	youngest group, 1524Ma
651	TH108	TH108-48	3.279	0.082	0.2469	0.0054	0.38335	4.050223	0.0885832	0.0959	0.0014	0.31209	1423	28	1542	27	7.7	youngest group, 1524Ma
652	TH108	TH108-02	3.729	0.18	0.2815	0.0043	0.748	3.552398	0.054264	0.0959	0.0038	0.1744	1598	22	1545	76	-3.4	youngest group, 1524Ma
653	TH108	TH108-29	3.737	0.088	0.2824	0.0061	0.45832	3.541076	0.0764893	0.0961	0.0011	0.33124	1603	31	1547	21	-3.6	1557Ma group, inherited
654	TH108	TH108_4th_6	3.62	0.095	0.2722	0.0041	0.55454	3.673769	0.055336	0.0967	0.0017	0.36914	1551	21	1555	33	0.3	1557Ma group, inherited
655	TH108	TH108_4th_18	3.536	0.1	0.2652	0.0047	0.78146	3.770739	0.0668268	0.0966	0.0016	0.21358	1515	24	1556	32	2.6	1557Ma group, inherited

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
656	TH108	TH108-62	3.807	0.091	0.2838	0.0063	0.42146	3.523608	0.0782196	0.097	0.0013	0.39099	1610	31	1564	26	-2.9	1557Ma group, inherited
657	TH108	TH108_4th_40	3.486	0.1	0.2556	0.0048	0.77171	3.912363	0.0734716	0.0978	0.002	0.4957	1467	25	1576	38	6.9	1557Ma group, inherited
658	TH108	TH108-42	3.97	0.099	0.2923	0.0065	0.55667	3.421143	0.0760774	0.0982	0.0012	0.19164	1653	33	1587	23	-4.2	Inherited Zr
659	TH108	TH108_4th_45	3.897	0.1	0.2874	0.0044	0.54005	3.479471	0.0532696	0.0986	0.0016	0.45735	1628	22	1593	31	-2.2	Inherited Zr
660	TH108	TH108-44	3.766	0.092	0.2719	0.0059	0.62334	3.677823	0.0798056	0.1002	0.0011	0.019439	1550	30	1624	20	4.6	Inherited Zr
661	TH108	TH108-59	3.96	0.15	0.2754	0.0089	0.93422	3.631082	0.1173443	0.103	0.0014	-0.42588	1564	45	1671	25	6.4	Inherited Zr
662	TH108	TH108-67	4.189	0.11	0.2869	0.0071	0.80718	3.485535	0.0862576	0.1045	0.0011	0.13232	1625	36	1703	20	4.6	Inherited Zr
663	TH108	TH108_4th_2	4.58	0.15	0.3013	0.0053	0.67398	3.318951	0.0583818	0.1095	0.0023	-0.05918	1696	26	1782	37	4.8	Inherited Zr, 1755Ma group
664	TH108	TH108-63	4.66	0.1	0.3067	0.0066	0.63492	3.260515	0.0701643	0.1096	0.00084	0.40088	1724	33	1791	14	3.7	Inherited Zr, 1755Ma group
665	TH108	TH108-26	5.26	0.15	0.3443	0.0083	0.68388	2.904444	0.0700171	0.1103	0.0014	0.029411	1907	40	1808	26	-5.5	Inherited Zr, 1755Ma group
666	TH108	TH108-11	4.928	0.24	0.3235	0.0065	0.59777	3.09119	0.0621105	0.1108	0.0044	0.29391	1807	33	1809	72	0.1	Inherited Zr, 1755Ma group
667	TH108	TH108_4th_10	4.45	0.15	0.2914	0.0078	0.65351	3.431709	0.0918577	0.111	0.0027	0.34902	1648	38	1810	45	9.0	Inherited Zr, 1755Ma group
668	TH108	TH108-41	4.966	0.11	0.323	0.0069	0.72965	3.095975	0.0661369	0.1115	0.00079	0.050359	1804	33	1821	13	0.9	1834 Ma group
669	TH108	TH108-21	4.558	0.12	0.2961	0.0067	0.58717	3.377237	0.0764184	0.1115	0.0014	0.13751	1672	33	1825	24	8.4	1835 Ma group
670	TH108	TH108_4th_35	4.887	0.13	0.316	0.0053	0.66365	3.164557	0.0530764	0.1121	0.002	0.52772	1769	26	1828	32	3.2	1836 Ma group
671	TH108	TH108-15	4.639	0.22	0.3013	0.0055	0.54927	3.318951	0.0605849	0.1121	0.0044	0.50467	1697	28	1831	71	7.3	1837 Ma group
672	TH108	TH108-20	4.837	0.12	0.3113	0.0071	0.45317	3.212335	0.0732656	0.1128	0.0016	0.34015	1747	35	1841	26	5.1	1838 Ma group
673	TH108	TH108-58	4.633	0.12	0.2974	0.0072	0.62377	3.362475	0.0814049	0.1127	0.0014	0.32139	1678	36	1841	23	8.9	1839 Ma group
674	TH108	TH108-34	5.144	0.13	0.3305	0.0081	0.81055	3.025719	0.0741553	0.1127	0.00095	0.23516	1840	39	1844	16	0.2	1840 Ma group
675	TH108	TH108-50	5.322	0.13	0.3429	0.0077	0.64301	2.916302	0.0654871	0.1131	0.0012	0.23961	1900	37	1848	19	-2.8	1841 Ma group
676	TH108	TH108-33	5.049	0.12	0.3191	0.007	0.51661	3.133814	0.0687455	0.1145	0.0012	0.37354	1785	34	1870	18	4.5	Inherited Zr
677	TH108	TH108-49	6.097	0.14	0.3542	0.0077	0.47776	2.823264	0.0613753	0.125	0.0011	0.47829	1955	37	2027	16	3.6	Inherited Zr
678	TH108	TH108-07	10.47	0.59	0.4703	0.017	0.65045	2.126302	0.0768598	0.1625	0.0063	-0.04675	2484	84	2480	72	-0.2	Inherited Zr
679	TH108	TH108-64	5.902	0.15	0.3805	0.009	0.78572	2.628121	0.0621632	0.112	0.001	0.21127	2078	42	1829	17	-13.6	Discordant
680	TH108	TH108_4th_51	6.79	0.21	0.4096	0.0098	0.69851	2.441406	0.0584126	0.1205	0.0026	0.54499	2212	45	1960	38	-12.9	Discordant
681	TH108	TH108-57	4.278	0.12	0.2825	0.0071	0.57386	3.539823	0.0889655	0.1096	0.0019	0.16656	1604	36	1788	32	10.3	Discordant
682	TH108	TH108_4th_43	3.272	0.088	0.2426	0.0038	0.69652	4.122012	0.0645657	0.0973	0.0016	0.37045	1400	20	1570	31	10.8	Discordant
683	TH108	TH108-66	4.097	0.11	0.2744	0.007	0.72619	3.644315	0.0929672	0.1076	0.0013	0.12825	1563	35	1756	21	11.0	Discordant
684	TH108	TH108-69	4.133	0.13	0.2743	0.0077	0.94715	3.645643	0.1023385	0.1078	0.00087	-0.32235	1560	39	1760	15	11.4	Discordant
685	TH108	TH108-08	4.97	0.25	0.3016	0.0062	0.89575	3.31565	0.0681599	0.119	0.0047	-0.01094	1697	31	1938	71	12.4	Discordant
686	TH108	TH108-27	4.179	0.098	0.2743	0.0063	0.63068	3.645643	0.0837315	0.1101	0.0013	0.47224	1562	32	1799	21	13.2	Discordant
687	TH108	TH108-61	4.737	0.12	0.2926	0.0075	0.80727	3.417635	0.0876017	0.1166	0.0012	0.31514	1653	37	1905	19	13.2	Discordant
688	TH108	TH108_4th_30	3.146	0.11	0.2339	0.0047	0.29905	4.275331	0.0859088	0.0972	0.0028	0.37671	1354	24	1562	58	13.3	Discordant
689	TH108	TH108_4th_27	4.286	0.14	0.2774	0.0065	0.67557	3.604903	0.0844696	0.1121	0.0024	0.2941	1577	33	1829	39	13.8	Discordant
690	TH108	TH108-31	5.3	0.15	0.3085	0.0074	0.79142	3.241491	0.0777538	0.1245	0.0017	-0.02345	1733	36	2019	24	14.2	Discordant
691	TH108	TH108-38	4.553	0.11	0.2845	0.0062	0.3329	3.514938	0.0765997	0.1156	0.0014	0.3982	1614	31	1885	22	14.4	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
692	TH108	TH108-60	3.463	0.098	0.2458	0.0062	0.86827	4.068348	0.102619	0.1019	0.001	-0.17638	1416	32	1654	19	14.4	Discordant
693	TH108	TH108_4th_1	3.563	0.11	0.2492	0.0056	0.85656	4.012841	0.0901762	0.1038	0.0018	0.2687	1433	29	1688	31	15.1	Discordant
694	TH108	TH108_4th_31	3.178	0.11	0.2311	0.0058	0.021216	4.327131	0.1085996	0.1	0.0038	0.6341	1339	30	1589	73	15.7	Discordant
695	TH108	TH108-14	3.332	0.17	0.2381	0.005	0.63288	4.199916	0.0881965	0.1007	0.004	0.074448	1376	26	1634	72	15.8	Discordant
696	TH108	TH108_4th_34	3.95	0.15	0.2591	0.0065	0.69003	3.859514	0.096823	0.109	0.0029	0.37501	1485	33	1777	48	16.4	Discordant
697	TH108	TH108_4th_15	3.463	0.1	0.2436	0.0051	0.46823	4.10509	0.085944	0.1035	0.0025	0.41492	1405	26	1682	45	16.5	Discordant
698	TH108	TH108-18	3.766	0.097	0.2535	0.0062	0.89607	3.944773	0.0964797	0.1082	0.0008	0.1592	1456	32	1768	13	17.6	Discordant
699	TH108	TH108_4th_14	4	0.17	0.2585	0.0079	0.57932	3.868472	0.1182241	0.112	0.0036	0.26836	1481	40	1823	60	18.8	Discordant
700	TH108	TH108_4th_41	3.252	0.11	0.23	0.0048	0.61699	4.347826	0.0907372	0.1023	0.0024	0.1243	1334	25	1662	44	19.7	Discordant
701	TH108	TH108-12	3.54	0.23	0.2404	0.0098	0.98833	4.159734	0.1695732	0.1057	0.0042	-0.63193	1381	51	1721	75	19.8	Discordant
702	TH108	TH108_4th_19	4.07	0.16	0.2588	0.0075	0.69456	3.863988	0.111978	0.1158	0.0039	-0.08219	1483	38	1885	60	21.3	Discordant
703	TH108	TH108-32	2.542	0.069	0.1972	0.0049	0.74896	5.070994	0.1260034	0.0934	0.0013	0.00663	1160	26	1492	26	22.3	Discordant
704	TH108	TH108-43	3.815	0.092	0.2459	0.0054	0.66374	4.066694	0.0893052	0.1123	0.0011	0.11757	1417	28	1834	18	22.7	Discordant
705	TH108	TH108-70	2.616	0.086	0.1943	0.0059	0.62877	5.14668	0.1562811	0.096	0.0019	0.34148	1144	32	1545	38	26.0	Discordant
706	TH108	TH108-05	3.121	0.16	0.2155	0.0046	0.92187	4.640371	0.099052	0.1047	0.0042	-0.15951	1257	25	1705	74	26.3	Discordant
707	TH108	TH108-13	3.58	0.23	0.23	0.0072	0.39309	4.347826	0.1361059	0.1122	0.0044	0.11441	1334	36	1828	74	27.0	Discordant
708	TH108	TH108_4th_33	3.095	0.097	0.2113	0.0051	0.62143	4.732608	0.1142276	0.1055	0.0023	0.48476	1235	27	1718	39	28.1	Discordant
709	TH108	TH108_4th_25	3.039	0.094	0.2074	0.0043	0.77489	4.821601	0.0999657	0.1058	0.002	0.19118	1214	23	1724	34	29.6	Discordant
710	TH108	TH108-16	2.467	0.11	0.183	0.0044	0.56876	5.464481	0.1313864	0.0981	0.004	0.33179	1083	25	1585	76	31.7	Discordant
711	TH108	TH108-40	3.106	0.084	0.2066	0.0052	0.61381	4.840271	0.1218268	0.1087	0.0016	0.30391	1210	28	1774	27	31.8	Discordant
712	TH108	TH108-09	2.946	0.17	0.2004	0.0058	0.96463	4.99002	0.1444217	0.1062	0.0042	-0.25413	1175	31	1733	72	32.2	Discordant
713	TH108	TH108-25	2.262	0.063	0.1725	0.0046	0.88125	5.797101	0.1545894	0.0952	0.00085	0.09705	1025	25	1526	17	32.8	Discordant
714	TH108	TH108-73	2.449	0.083	0.1792	0.0058	0.89993	5.580357	0.1806142	0.098	0.0012	0.075255	1062	32	1584	23	33.0	Discordant
715	TH108	TH108_4th_12	4.64	0.15	0.2476	0.0049	0.50459	4.038772	0.0799272	0.1353	0.0031	0.30483	1426	25	2160	40	34.0	Discordant
716	TH108	TH108-04	2.299	0.15	0.1716	0.0065	0.39909	5.827506	0.2207389	0.0965	0.0039	0.39795	1021	34	1548	82	34.0	Discordant
717	TH108	TH108-52	2.503	0.068	0.1815	0.0044	0.84798	5.509642	0.1335671	0.1004	0.0009	-0.14485	1075	24	1630	17	34.0	Discordant
718	TH108	TH108-68	2.925	0.08	0.1952	0.0052	0.96004	5.122951	0.1364721	0.1072	0.00057	0.029382	1148	28	1750.1	9.7	34.4	Discordant
719	TH108	TH108-23	3.121	0.097	0.2006	0.0052	0.78853	4.985045	0.1292235	0.1115	0.0018	0.3689	1179	28	1821	29	35.3	Discordant
720	TH108	TH108-36	2.144	0.051	0.1629	0.0038	0.76722	6.138735	0.1431995	0.0953	0.00083	0.31249	973	21	1531	16	36.4	Discordant
721	TH108	TH108-24	3.814	0.11	0.221	0.006	0.59351	4.524887	0.1228476	0.1255	0.0021	0.38459	1287	32	2028	30	36.5	Discordant
722	TH108	TH108-37	2.399	0.075	0.1733	0.0054	0.95646	5.77034	0.1798029	0.1002	0.00072	0.1902	1028	30	1625	13	36.7	Discordant
723	TH108	TH108-55	2.33	0.062	0.1693	0.0041	0.71347	5.906675	0.1430441	0.0998	0.0012	0.10851	1008	22	1616	23	37.6	Discordant
724	TH108	TH108-35	2.706	0.087	0.1825	0.0053	0.73834	5.479452	0.1591293	0.1072	0.0019	0.11236	1080	29	1744	33	38.1	Discordant
725	TH108	TH108_4th_49	3.704	0.12	0.2124	0.0043	0.68692	4.708098	0.0953146	0.1264	0.0027	0.1404	1241	23	2045	38	39.3	Discordant
726	TH108	TH108-22	2.868	0.09	0.1862	0.005	0.75607	5.370569	0.1442151	0.1112	0.0018	0.033084	1101	27	1824	27	39.6	Discordant
727	TH108	TH108-19	2.152	0.055	0.1589	0.0037	0.77694	6.293266	0.1465392	0.0981	0.00092	0.065893	950	20	1585	17	40.1	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
728	TH108	TH108_4th_22	0.822	0.025	0.0862	0.0019	0.85381	11.60093	0.2557049	0.069	0.0011	0.27481	533	11	892	34	40.2	Discordant
729	TH108	TH108_4th_11	2.529	0.083	0.1699	0.004	0.73571	5.885815	0.1385713	0.1078	0.0022	0.29351	1011	22	1756	38	42.4	Discordant
730	TH108	TH108-01	2.023	0.13	0.1487	0.0055	0.65857	6.72495	0.2487372	0.0984	0.004	0.011289	893	31	1596	77	44.0	Discordant
731	TH108	TH108-51	1.805	0.067	0.1375	0.004	0.46615	7.272727	0.2115702	0.0949	0.0028	0.26855	831	23	1520	54	45.3	Discordant
732	TH108	TH108_4th_7	1.787	0.063	0.1355	0.0035	0.77498	7.380074	0.1906292	0.0947	0.0021	0.37345	819	20	1517	43	46.0	Discordant
733	TH108	TH108-47	2.161	0.057	0.15	0.0038	0.82621	6.666667	0.1688889	0.1047	0.00099	0.15115	901	21	1705	18	47.2	Discordant
734	TH108	TH108-54	2.003	0.068	0.1431	0.0045	0.92952	6.98812	0.2197522	0.1017	0.001	-0.16833	862	25	1653	18	47.9	Discordant
735	TH108	TH108_4th_36	1.864	0.062	0.1336	0.003	0.72918	7.48503	0.168077	0.1003	0.002	0.20092	808	17	1630	39	50.4	Discordant
736	TH108	TH108-10	1.467	0.076	0.1172	0.0031	0.92784	8.532423	0.225687	0.091	0.0036	0.46491	714	18	1441	76	50.5	Discordant
737	TH108	TH108_4th_13	1.741	0.055	0.1268	0.0027	0.79565	7.886435	0.1679288	0.0992	0.0018	0.16479	769	15	1605	34	52.1	Discordant
738	TH108	TH108-28	1.483	0.041	0.1148	0.003	0.76183	8.710801	0.2276342	0.0936	0.0012	0.29898	701	18	1498	24	53.2	Discordant
739	TH108	TH108_4th_23	1.491	0.044	0.1121	0.0022	0.62651	8.920607	0.1750699	0.0958	0.0019	0.44189	685	13	1537	39	55.4	Discordant
740	TH108	TH108_4th_50	1.092	0.031	0.0931	0.0017	0.73467	10.74114	0.1961325	0.085	0.0014	0.33371	573.8	10	1313	32	56.3	Discordant
741	TH108	TH108_4th_32	1.264	0.04	0.099	0.0018	0.61652	10.10101	0.1836547	0.0921	0.002	0.17979	608.5	11	1463	40	58.4	Discordant
742	TH108	TH108-56	1.424	0.053	0.106	0.0036	0.88834	9.433962	0.3203987	0.0975	0.0014	-0.00531	649	21	1573	28	58.7	Discordant
743	TH108	TH108_4th_28	5.58	0.22	0.1952	0.0065	0.57838	5.122951	0.1705901	0.2068	0.0066	0.45999	1149	35	2875	52	60.0	Discordant
744	TH108	TH108-65	1.186	0.042	0.0923	0.0032	0.83788	10.83424	0.3756182	0.0927	0.0015	0.18704	569	19	1477	31	61.5	Discordant
745	TH108	TH108_4th_37	0.911	0.028	0.0775	0.0017	0.83858	12.90323	0.2830385	0.0849	0.0014	0.32198	480.7	10	1307	32	63.2	Discordant
746	TH108	TH108-53	2.267	0.07	0.1143	0.003	0.5999	8.748906	0.2296301	0.1442	0.0028	0.1401	698	17	2276	34	69.3	Discordant
747	TH140	TH032_cg23	3.457	0.089	0.2662	0.0062	0.72606	3.756574	0.0874935	0.0948	0.0018	0.27472	1521	32	1521	37	0.0	Youngest group, 1530Ma
748	TH140	TH032_cg25	3.707	0.087	0.2795	0.006	0.63555	3.577818	0.0768047	0.0953	0.0018	0.2883	1588	30	1530	35	-3.8	Youngest group, 1530Ma
749	TH140	TH032_cg26	3.687	0.085	0.281	0.0061	0.77977	3.558719	0.0772533	0.0956	0.0015	0.27054	1596	31	1536	30	-3.9	Youngest group, 1530Ma
750	TH140	TH032_fg11	3.308	0.071	0.2457	0.0054	0.68673	4.070004	0.0894506	0.0974	0.0016	0.41433	1415	28	1572	32	10.0	~1575 Ma group
751	TH140	TH032_cg15	3.85	0.1	0.2857	0.0065	0.61523	3.500175	0.079633	0.0979	0.0021	0.27676	1619	33	1580	39	-2.5	~1575 Ma group
752	TH140	TH032_cg21	4.431	0.1	0.3113	0.0062	0.66398	3.212335	0.0639784	0.1027	0.0018	0.061486	1747	30	1667	32	-4.8	~1670 Ma group
753	TH140	TH032_fg47	3.853	0.084	0.2723	0.0062	0.75859	3.67242	0.0836174	0.1028	0.0017	0.41599	1551	31	1675	30	7.4	~1670 Ma group
754	TH140	TH032_fg26	4.8	0.36	0.323	0.02	0.91897	3.095975	0.1917013	0.1089	0.0035	-0.03937	1799	99	1777	56	-1.2	Inherited
755	TH140	TH032_fg28	5.367	0.12	0.3433	0.0079	0.58317	2.912904	0.0670316	0.1123	0.0022	0.44148	1902	38	1833	36	-3.8	Inherited, group 1869 Ma
756	TH140	TH032_fg4	5.137	0.12	0.3287	0.0069	0.46813	3.042288	0.0638631	0.1132	0.0023	0.39549	1831	33	1844	36	0.7	Inherited, group 1869 Ma
757	TH140	TH032_cg29	4.916	0.11	0.3138	0.0062	0.64847	3.186743	0.0629631	0.1134	0.0019	0.20179	1758	30	1850	31	5.0	Inherited, group 1869 Ma
758	TH140	TH032_cg18	4.705	0.11	0.3032	0.0067	0.72771	3.298153	0.0728814	0.1137	0.002	0.38323	1706	33	1856	32	8.1	Inherited, group 1869 Ma
759	TH140	TH032_fg35	5.82	0.13	0.3673	0.0081	0.72807	2.72257	0.0600403	0.1141	0.0019	0.32907	2016	38	1861	31	-8.3	Inherited, group 1869 Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
760	TH140	TH032_fg27	4.8	0.21	0.309	0.014	0.83386	3.236246	0.146626	0.1142	0.0031	0.38607	1732	69	1862	49	7.0	Inherited, group 1869 Ma
761	TH140	TH032_fg41	5.88	0.14	0.3734	0.0088	0.81028	2.678093	0.0631152	0.1138	0.0018	0.32392	2043	41	1864	32	-9.6	Inherited, group 1869 Ma
762	TH140	TH032_fg30	5.532	0.11	0.3499	0.0066	0.64134	2.857959	0.0539084	0.1142	0.0018	0.28659	1933	31	1866	29	-3.6	Inherited, group 1869 Ma
763	TH140	TH032_cg17	5.338	0.1	0.3373	0.006	0.25956	2.96472	0.0527374	0.1144	0.0019	0.52041	1873	29	1866	31	-0.4	Inherited, group 1869 Ma
764	TH140	TH032_fg36	5.56	0.13	0.3497	0.0071	0.54202	2.859594	0.0580587	0.1151	0.0022	0.27028	1932	34	1874	34	-3.1	Inherited, group 1869 Ma
765	TH140	TH032_cg22	5.643	0.13	0.3538	0.0073	0.71445	2.826456	0.0583186	0.1149	0.0019	0.13879	1952	34	1875	30	-4.1	Inherited, group 1869 Ma
766	TH140	TH032_fg31	5.496	0.12	0.3435	0.0068	0.5137	2.911208	0.0576309	0.1151	0.0021	0.38392	1903	33	1876	33	-1.4	Inherited, group 1869 Ma
767	TH140	TH032_fg32	5.654	0.12	0.3542	0.0073	0.66279	2.823264	0.058187	0.1155	0.0019	0.40765	1956	34	1885	31	-3.8	Inherited, group 1869 Ma
768	TH140	TH032_fg40	5.568	0.12	0.3486	0.007	0.5023	2.868617	0.0576028	0.1158	0.0022	0.384	1927	34	1885	35	-2.2	Inherited, group 1869 Ma
769	TH140	TH032_fg45	5.632	0.12	0.3525	0.0071	0.56334	2.836879	0.05714	0.1156	0.002	0.31548	1946	34	1888	30	-3.1	Inherited, group 1869 Ma
770	TH140	TH032_cg7	5.674	0.11	0.3524	0.0063	0.50672	2.837684	0.0507305	0.1164	0.0018	0.43422	1946	30	1898	28	-2.5	Inherited, group 1869 Ma
771	TH140	TH032_fg15	4.98	0.19	0.3085	0.011	0.7949	3.241491	0.1155799	0.118	0.0031	0.16986	1731	53	1918	46	9.7	Inherited, group 1948 Ma
772	TH140	TH032_fg10	5.999	0.14	0.3644	0.0079	0.67495	2.744237	0.0594936	0.1185	0.002	0.37049	2005	36	1934	31	-3.7	Inherited, group 1948 Ma
773	TH140	TH032_cg11	6.384	0.12	0.3866	0.0071	0.54092	2.586653	0.0475045	0.119	0.0019	0.3592	2106	33	1940	27	-8.6	Inherited, group 1948 Ma
774	TH140	TH032_fg38	5.93	0.16	0.3554	0.0081	0.6093	2.813731	0.0641284	0.1209	0.0026	0.20932	1959	38	1959	40	0.0	Inherited, group 1948 Ma
775	TH140	TH032_cg28	6.42	0.14	0.3849	0.0083	0.63457	2.598077	0.0560251	0.1208	0.0022	0.41859	2097	39	1961	33	-6.9	Inherited, group 1948 Ma
776	TH140	TH032_fg2	6.027	0.12	0.3596	0.0065	0.58622	2.780868	0.050266	0.121	0.002	0.19734	1979	31	1966	29	-0.7	Inherited, group 1948 Ma
777	TH140	TH032_fg14	6.144	0.13	0.3603	0.0072	0.58721	2.775465	0.0554631	0.1233	0.0022	0.34802	1982	34	1999	31	0.9	Inherited, group 2008 Ma
778	TH140	TH032_fg37	6.469	0.13	0.3784	0.0076	0.72643	2.642706	0.0530776	0.1237	0.0019	0.46399	2068	36	2006	28	-3.1	Inherited, group 2008 Ma
779	TH140	TH032_cg14	6.34	0.14	0.3694	0.0072	0.33592	2.707093	0.0527641	0.1243	0.0025	0.41403	2026	34	2009	36	-0.8	Inherited, group 2008 Ma
780	TH140	TH032_fg8	6.68	0.16	0.3871	0.0086	0.64373	2.583312	0.0573921	0.1242	0.0023	0.28705	2108	40	2020	33	-4.4	Inherited, group 2008 Ma
781	TH140	TH032_cg9	7.323	0.14	0.397	0.007	0.59878	2.518892	0.0444137	0.1329	0.0019	0.30562	2155	32	2134	26	-1.0	Inherited, group 2158 Ma
782	TH140	TH032_fg34	6.74	0.16	0.3595	0.008	0.47615	2.781641	0.0619002	0.1344	0.0028	0.45492	1979	38	2153	36	8.1	Inherited, group 2158 Ma
783	TH140	TH032_fg43	6.94	0.15	0.3742	0.0079	0.60544	2.672368	0.0564182	0.1348	0.0025	0.33146	2048	37	2158	31	5.1	Inherited, group 2158 Ma
784	TH140	TH032_fg3	8.1	0.23	0.4296	0.012	0.62585	2.327747	0.0650209	0.1353	0.0033	0.33982	2302	52	2162	42	-6.5	Inherited, group 2158 Ma
785	TH140	TH032_cg3	7.69	0.17	0.4105	0.0075	0.38268	2.436054	0.0445077	0.1355	0.0026	0.32686	2217	34	2165	33	-2.4	Inherited, group 2158 Ma
786	TH140	TH032_fg13	7.16	0.16	0.3779	0.0086	0.60424	2.646203	0.0602205	0.1361	0.0027	0.44116	2065	40	2172	34	4.9	Inherited, group 2158 Ma
787	TH140	TH032_fg22	7.41	0.16	0.393	0.0078	0.4938	2.544529	0.0505021	0.1366	0.0026	0.35375	2135	36	2180	34	2.1	Inherited, group 2158 Ma
788	TH140	TH032_cg24	8.73	0.18	0.4407	0.0094	0.62443	2.269117	0.0483996	0.1436	0.0026	0.50442	2353	42	2268	30	-3.7	Inherited
789	TH140	TH032_fg48	9.29	0.18	0.4533	0.0083	0.48058	2.206045	0.0403931	0.148	0.0024	0.48645	2409	37	2320	27	-3.8	Inherited
790	TH140	TH032_fg7	8.73	0.2	0.415	0.0085	0.64517	2.409639	0.049354	0.152	0.0027	0.23472	2240	40	2364	30	5.2	Inherited

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
791	TH140	TH032_fg12	9.46	0.25	0.4406	0.01	0.61417	2.269632	0.0515123	0.154	0.0033	0.19762	2352	45	2386	36	1.4	Inherited
792	TH140	TH032_fg21	8.89	0.35	0.411	0.015	0.57082	2.43309	0.0887989	0.1552	0.0054	0.36011	2217	69	2396	59	7.5	Inherited
793	TH140	TH032_fg19	9.82	0.2	0.4518	0.0092	0.71648	2.213369	0.0450708	0.1572	0.0026	0.39124	2402	41	2422	28	0.8	Inherited
794	TH140	TH032_fg16	9.18	0.31	0.4134	0.011	0.61188	2.418965	0.0643653	0.1591	0.0042	0.11413	2230	50	2442	44	8.7	Inherited
795	TH140	TH032_cg1	10.86	0.21	0.4753	0.0089	0.6914	2.103934	0.0393962	0.1648	0.0025	0.38725	2506	39	2503	25	-0.1	Inherited
796	TH140	TH032_fg9	10.98	0.25	0.4789	0.0097	0.68677	2.088119	0.0422943	0.1657	0.0028	0.21289	2521	42	2511	29	-0.4	Inherited
797	TH140	TH032_cg5	13.95	0.33	0.527	0.011	0.80331	1.897533	0.039607	0.1915	0.0032	-0.07724	2727	46	2754	27	1.0	Inherited
798	TH140	TH032_fg23	22.47	0.49	0.642	0.015	0.59371	1.557632	0.0363933	0.2513	0.0049	0.57199	3197	61	3190	31	-0.2	Inherited
799	TH140	TH032_cg27	4.041	0.095	0.3089	0.007	0.72683	3.237294	0.0733605	0.0939	0.0017	0.34477	1735	35	1503	33	-15.4	Discordant
800	TH140	TH032_fg17	11.66	0.27	0.5255	0.012	0.76126	1.90295	0.0434546	0.1597	0.0027	0.33244	2726	52	2452	28	-11.2	Discordant
801	TH140	TH032_fg25	7.85	0.19	0.4321	0.0098	0.66003	2.314279	0.0524877	0.1305	0.0025	0.29167	2314	44	2101	34	-10.1	Discordant
802	TH140	TH032_cg13	9.4	0.36	0.412	0.014	0.82438	2.427184	0.0824771	0.1631	0.0039	0.036863	2222	64	2485	40	10.6	Discordant
803	TH140	TH032_cg19	13.1	0.4	0.4724	0.011	0.68232	2.11685	0.0492916	0.1985	0.0044	0.020785	2493	50	2811	36	11.3	Discordant
804	TH140	TH032_cg16	4.78	0.18	0.2955	0.011	0.32562	3.384095	0.1259731	0.1158	0.0044	0.54487	1668	54	1886	69	11.6	Discordant
805	TH140	TH032_cg10	3.272	0.08	0.2401	0.0055	0.679	4.164931	0.0954066	0.0988	0.002	0.20525	1387	29	1597	37	13.1	Discordant
806	TH140	TH032_fg39	4.971	0.12	0.2962	0.0066	0.64312	3.376097	0.075227	0.1208	0.0023	0.31037	1672	33	1963	35	14.8	Discordant
807	TH140	TH032_fg24	4.141	0.11	0.2692	0.0073	0.60843	3.71471	0.1007332	0.1109	0.0026	0.47953	1536	37	1809	41	15.1	Discordant
808	TH140	TH032_cg4	4.78	0.13	0.2845	0.0087	0.64411	3.514938	0.1074867	0.1215	0.0029	0.5221	1613	44	1974	43	18.3	Discordant
809	TH140	TH032_cg8	4.65	0.16	0.2786	0.0075	0.65155	3.589375	0.0966271	0.12	0.0031	0.10935	1584	38	1952	47	18.9	Discordant
810	TH140	TH032_fg18	3.444	0.089	0.2356	0.0059	0.6651	4.244482	0.1062922	0.105	0.0021	0.3023	1363	31	1713	38	20.4	Discordant
811	TH140	TH032_fg46	8.2	0.19	0.3499	0.0083	0.6799	2.857959	0.0677938	0.1691	0.0031	0.43523	1932	39	2544	31	24.1	Discordant
812	TH140	TH032_fg42	2.836	0.081	0.2004	0.0055	0.76556	4.99002	0.1369516	0.1017	0.002	0.21216	1177	30	1651	37	28.7	Discordant
813	TH140	TH032_fg33	3.212	0.11	0.2129	0.0071	0.33096	4.697041	0.1566416	0.108	0.004	0.55263	1244	37	1760	68	29.3	Discordant
814	TH140	TH032_cg20	4.22	0.1	0.245	0.0053	0.49702	4.081633	0.0882965	0.1237	0.0026	0.30918	1412	27	2005	37	29.6	Discordant
815	TH140	TH032_fg20	6.819	0.14	0.3059	0.0064	0.681	3.269042	0.0683945	0.1622	0.0026	0.39525	1720	32	2476	27	30.5	Discordant
816	TH140	TH032_fg5	2.986	0.086	0.197	0.0049	0.61248	5.076142	0.1262594	0.1088	0.0024	0.26717	1159	26	1774	42	34.7	Discordant
817	TH140	TH032_fg44	2.849	0.068	0.1864	0.0043	0.47784	5.364807	0.123759	0.1102	0.0024	0.44678	1101	23	1795	40	38.7	Discordant
818	TH141	Pit_fg10	3.349	0.063	0.2594	0.0045	0.63512	3.85505	0.0668764	0.0935	0.0014	0.29029	1487	23	1494	28	0.5	Youngest group, 1522Ma
819	TH141	Pit_cg5	3.506	0.064	0.2697	0.0047	0.51985	3.707824	0.0646154	0.0935	0.0014	0.27647	1539	24	1495	28	-2.9	Youngest group, 1522Ma
820	TH141	Pit_cg20	3.48	0.064	0.268	0.0047	0.63952	3.731343	0.0654377	0.0938	0.0014	0.37627	1532	23	1503	28	-1.9	Youngest group, 1522Ma
821	TH141	Pit_cg88	3.821	0.086	0.292	0.0062	0.69807	3.424658	0.0727153	0.094	0.0017	0.25994	1651	31	1505	34	-9.7	Youngest group, 1522Ma
822	TH141	Pit_cg93	3.29	0.11	0.2565	0.011	0.73766	3.898635	0.1671929	0.094	0.0028	0.67211	1471	54	1505	56	2.3	Youngest group, 1522Ma
823	TH141	Pit_cg9	3.423	0.061	0.2637	0.0045	0.66373	3.792188	0.0647131	0.094	0.0013	0.29514	1508.5	23	1506	26	-0.2	Youngest group, 1522Ma
824	TH141	Pit_cg31	3.489	0.063	0.268	0.0046	0.56185	3.731343	0.0640454	0.0939	0.0014	0.35355	1531.7	23	1506	29	-1.7	Youngest group, 1522Ma
825	TH141	Pit_cg32	3.531	0.067	0.2711	0.0049	0.74524	3.688676	0.066671	0.094	0.0013	0.36167	1546	25	1506	27	-2.7	Youngest group, 1522Ma
826	TH141	Pit_cg67	3.801	0.083	0.2913	0.0062	0.77257	3.432887	0.0730652	0.094	0.0015	0.22955	1647	31	1506	30	-9.4	Youngest group, 1522Ma
827	TH141	Pit_fg8	3.81	0.071	0.2919	0.0052	0.4787	3.425831	0.0610289	0.0941	0.0015	0.42547	1651	26	1506	30	-9.6	Youngest group, 1522Ma
828	TH141	Pit_fg60	3.576	0.068	0.275	0.005	0.69203	3.636364	0.0661157	0.0941	0.0014	0.37668	1566	25	1507	28	-3.9	Youngest group, 1522Ma
829	TH141	Pit_fg74	3.515	0.064	0.2709	0.0048	0.57143	3.691399	0.0654069	0.0941	0.0014	0.47261	1545	24	1508	27	-2.5	Youngest group, 1522Ma
830	TH141	Pit_cg48	3.479	0.064	0.2667	0.0049	0.7019	3.749531	0.068889	0.0942	0.0014	0.39435	1524	25	1509	27	-1.0	Youngest group, 1522Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
831	TH141	Pit_cg78	3.47	0.063	0.2661	0.0047	0.69903	3.757986	0.0663756	0.0942	0.0013	0.46078	1521	24	1509	27	-0.8	Youngest group, 1522Ma
832	TH141	Pit_fg95	3.808	0.074	0.2905	0.0053	0.72879	3.442341	0.0628035	0.0942	0.0014	0.25125	1646	28	1510	27	-9.0	Youngest group, 1522Ma
833	TH141	Pit_cg79	3.839	0.08	0.292	0.0059	0.74558	3.424658	0.0691969	0.0943	0.0015	0.28125	1651	29	1511	30	-9.3	Youngest group, 1522Ma
834	TH141	Pit_cg94	3.25	0.14	0.2525	0.0098	0.70091	3.960396	0.1537104	0.0945	0.003	0.38261	1450	51	1511	60	4.0	Youngest group, 1522Ma
835	TH141	Pit_fg34	3.607	0.071	0.2767	0.0052	0.69018	3.614022	0.067918	0.0943	0.0014	0.31257	1574	26	1511	29	-4.2	Youngest group, 1522Ma
836	TH141	Pit_cg73	3.768	0.077	0.2888	0.0059	0.81581	3.462604	0.0707388	0.0944	0.0014	0.33467	1635	30	1512	28	-8.1	Youngest group, 1522Ma
837	TH141	Pit_fg46	3.511	0.073	0.2688	0.0054	0.81491	3.720238	0.0747369	0.0944	0.0014	0.38825	1534	27	1512	28	-1.5	Youngest group, 1522Ma
838	TH141	Pit_fg86	3.582	0.067	0.2745	0.005	0.72796	3.642987	0.0663568	0.0943	0.0013	0.29673	1563	25	1512	28	-3.4	Youngest group, 1522Ma
839	TH141	Pit_cg23	3.514	0.064	0.2685	0.0048	0.62136	3.724395	0.0665814	0.0945	0.0014	0.39249	1533	24	1514	28	-1.3	Youngest group, 1522Ma
840	TH141	Pit_cg41	3.502	0.064	0.2686	0.0047	0.60423	3.723008	0.0651457	0.0944	0.0014	0.40573	1534	24	1514	27	-1.3	Youngest group, 1522Ma
841	TH141	Pit_cg86	3.46	0.13	0.2677	0.0077	0.69846	3.735525	0.1074469	0.0945	0.0025	0.069694	1529	39	1514	51	-1.0	Youngest group, 1522Ma
842	TH141	Pit_fg26	3.503	0.07	0.2683	0.0049	0.74772	3.727171	0.0680698	0.0944	0.0014	0.18899	1532	25	1514	27	-1.2	Youngest group, 1522Ma
843	TH141	Pit_fg112	3.522	0.066	0.2695	0.0047	0.64882	3.710575	0.0647113	0.0944	0.0014	0.32269	1540	25	1514	28	-1.7	Youngest group, 1522Ma
844	TH141	Pit_cg54	3.466	0.068	0.2648	0.0049	0.67429	3.776435	0.0698812	0.0946	0.0014	0.29392	1514	25	1515	29	0.1	Youngest group, 1522Ma
845	TH141	Pit_cg62	3.312	0.071	0.2537	0.0054	0.86933	3.941663	0.0838982	0.0945	0.0014	0.11251	1457	28	1516	27	3.9	Youngest group, 1522Ma
846	TH141	Pit_cg69	3.84	0.086	0.2925	0.0061	0.79031	3.418803	0.0712981	0.0945	0.0015	0.22844	1653	30	1516	29	-9.0	Youngest group, 1522Ma
847	TH141	Pit_fg44	3.495	0.068	0.2671	0.0049	0.69355	3.743916	0.0686829	0.0945	0.0014	0.29272	1526	25	1516	28	-0.7	Youngest group, 1522Ma
848	TH141	Pit_cg80	3.371	0.084	0.2606	0.0057	0.68075	3.837299	0.0839317	0.0946	0.0018	0.37861	1493	29	1517	36	1.6	Youngest group, 1522Ma
849	TH141	Pit_fg106	3.513	0.063	0.2689	0.0047	0.53362	3.718855	0.0650004	0.0946	0.0014	0.43313	1535	24	1517	27	-1.2	Youngest group, 1522Ma
850	TH141	Pit_cg19	3.554	0.063	0.2715	0.0046	0.63245	3.683241	0.0624048	0.0946	0.0013	0.36894	1548	24	1518	26	-2.0	Youngest group, 1522Ma
851	TH141	Pit_fg1	3.549	0.068	0.2708	0.005	0.76665	3.692762	0.0681825	0.0946	0.0014	0.42193	1544	26	1518	27	-1.7	Youngest group, 1522Ma
852	TH141	Pit_fg17	3.521	0.065	0.2689	0.0047	0.68895	3.718855	0.0650004	0.0946	0.0013	0.2262	1535	24	1518	27	-1.1	Youngest group, 1522Ma
853	TH141	Pit_fg79	3.375	0.065	0.2584	0.0048	0.64143	3.869969	0.071888	0.0947	0.0014	0.43792	1481	24	1518	29	2.4	Youngest group, 1522Ma
854	TH141	Pit_fg88	3.486	0.067	0.2667	0.0048	0.61517	3.749531	0.0674831	0.0945	0.0014	0.30868	1524	24	1518	29	-0.4	Youngest group, 1522Ma
855	TH141	Pit_cg13	3.529	0.064	0.2694	0.0049	0.68529	3.711952	0.0675151	0.0947	0.0014	0.47526	1538	25	1519	27	-1.3	Youngest group, 1522Ma
856	TH141	Pit_cg53	3.671	0.072	0.2801	0.0051	0.78411	3.570154	0.0650046	0.0947	0.0014	0.13696	1591	26	1519	27	-4.7	Youngest group, 1522Ma
857	TH141	Pit_fg76	3.536	0.066	0.2715	0.0049	0.70952	3.683241	0.0664747	0.0946	0.0014	0.36044	1548	25	1519	28	-1.9	Youngest group, 1522Ma
858	TH141	Pit_cg40	3.856	0.073	0.2932	0.0054	0.65206	3.410641	0.0628154	0.0947	0.0014	0.37964	1657	27	1520	28	-9.0	Youngest group, 1522Ma
859	TH141	Pit_fg70	3.342	0.09	0.2586	0.0067	0.77268	3.866976	0.1001885	0.0944	0.0018	0.24044	1482	34	1520	32	2.5	Youngest group, 1522Ma
860	TH141	Pit_cg15	3.632	0.067	0.2756	0.0049	0.54963	3.628447	0.0645116	0.0948	0.0014	0.37686	1569	25	1521	29	-3.2	Youngest group, 1522Ma

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Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
861	TH141	Pit_cg49	3.509	0.078	0.265	0.0064	0.75192	3.773585	0.0911356	0.0948	0.0017	0.40677	1515	33	1521	34	0.4	Youngest group, 1522Ma
862	TH141	Pit_fg52	3.742	0.072	0.2852	0.0055	0.65605	3.506311	0.0676182	0.0948	0.0015	0.37589	1617	27	1521	29	-6.3	Youngest group, 1522Ma
863	TH141	Pit_fg73	3.715	0.069	0.2836	0.0051	0.60048	3.526093	0.06341	0.0948	0.0014	0.40085	1609	26	1521	28	-5.8	Youngest group, 1522Ma
864	TH141	Pit_fg40	3.551	0.066	0.2704	0.0049	0.66228	3.698225	0.0670167	0.0948	0.0014	0.38094	1543	25	1522	28	-1.4	Youngest group, 1522Ma
865	TH141	Pit_fg47	3.523	0.066	0.2679	0.0048	0.65369	3.732736	0.0668799	0.0948	0.0014	0.2599	1530	24	1523	29	-0.5	Youngest group, 1522Ma
866	TH141	Pit_cg68	3.591	0.068	0.2741	0.0049	0.72185	3.648304	0.0652196	0.0948	0.0014	0.2937	1561	25	1524	26	-2.4	Youngest group, 1522Ma
867	TH141	Pit_cg65	3.717	0.078	0.2814	0.0059	0.73617	3.55366	0.0745082	0.095	0.0015	0.40414	1598	30	1525	30	-4.8	Youngest group, 1522Ma
868	TH141	Pit_fg89	3.796	0.073	0.2871	0.0056	0.66471	3.483107	0.0679394	0.0951	0.0014	0.48952	1626	28	1527	29	-6.5	Youngest group, 1522Ma
869	TH141	Pit_cg63	3.442	0.064	0.2612	0.0048	0.72548	3.828484	0.070355	0.0951	0.0014	0.36074	1495	24	1528	27	2.2	Youngest group, 1522Ma
870	TH141	Pit_cg27	3.531	0.065	0.2681	0.0046	0.59349	3.729952	0.0639977	0.0952	0.0014	0.27647	1531	23	1529	28	-0.1	Youngest group, 1522Ma
871	TH141	Pit_fg28	3.804	0.075	0.288	0.0055	0.6898	3.472222	0.0663098	0.0952	0.0014	0.37277	1631	28	1529	29	-6.7	Youngest group, 1522Ma
872	TH141	Pit_fg98	3.683	0.069	0.2801	0.0052	0.64002	3.570154	0.0662792	0.0952	0.0014	0.49048	1591	26	1529	28	-4.1	Youngest group, 1522Ma
873	TH141	Pit_cg33	3.68	0.067	0.279	0.0051	0.67035	3.584229	0.0655182	0.0952	0.0014	0.39149	1586	26	1530	27	-3.7	Youngest group, 1522Ma
874	TH141	Pit_cg60	3.688	0.075	0.2788	0.0055	0.54545	3.586801	0.0707583	0.0953	0.0017	0.41294	1585	28	1530	33	-3.6	Youngest group, 1522Ma
875	TH141	Pit_cg56	3.62	0.066	0.2734	0.0049	0.70369	3.657644	0.065554	0.0952	0.0014	0.38079	1558	25	1531	27	-1.8	Youngest group, 1522Ma
876	TH141	Pit_cg85	3.764	0.072	0.2848	0.0054	0.6942	3.511236	0.0665754	0.0953	0.0014	0.31992	1615	27	1531	28	-5.5	Youngest group, 1522Ma
877	TH141	Pit_fg67	3.373	0.064	0.2552	0.0047	0.54118	3.918495	0.0721667	0.0952	0.0015	0.31584	1465	24	1531	31	4.3	Youngest group, 1522Ma
878	TH141	Pit_cg87	3.909	0.074	0.2956	0.0057	0.60675	3.38295	0.0652328	0.0954	0.0015	0.42402	1669	28	1532	29	-8.9	Youngest group, 1522Ma
879	TH141	Pit_cg12	3.325	0.066	0.2505	0.0048	0.64493	3.992016	0.0764937	0.0955	0.0015	0.30259	1441	25	1534	30	6.1	Youngest group, 1522Ma
880	TH141	Pit_cg82	3.168	0.084	0.2434	0.0091	0.50708	4.108463	0.1536032	0.0955	0.003	0.70399	1404	47	1534	60	8.5	Youngest group, 1522Ma
881	TH141	Pit_fg20	3.414	0.063	0.2588	0.0046	0.62217	3.863988	0.0686798	0.0955	0.0014	0.39203	1483	24	1535	28	3.4	Youngest group, 1522Ma
882	TH141	Pit_cg6	3.652	0.066	0.2765	0.005	0.67888	3.616637	0.0654003	0.0955	0.0014	0.45435	1573	25	1536	27	-2.4	Youngest group, 1522Ma
883	TH141	Pit_cg8	3.455	0.063	0.2613	0.0046	0.60227	3.827019	0.0673719	0.0956	0.0014	0.36753	1496	23	1536	27	2.6	Youngest group, 1522Ma
884	TH141	Pit_fg31	3.594	0.071	0.2727	0.0052	0.69375	3.667033	0.0699251	0.0956	0.0015	0.38145	1554	26	1537	29	-1.1	Youngest group, 1522Ma
885	TH141	Pit_fg96	3.616	0.074	0.273	0.0056	0.77701	3.663004	0.0751385	0.0956	0.0015	0.39946	1555	28	1537	29	-1.2	Youngest group, 1522Ma
886	TH141	Pit_fg59	3.466	0.077	0.2638	0.0054	0.64357	3.790751	0.0775969	0.0957	0.0017	0.30653	1509	28	1538	33	1.9	Youngest group, 1522Ma
887	TH141	Pit_cg81	3.594	0.076	0.2715	0.0051	0.70959	3.683241	0.069188	0.0958	0.0015	0.1532	1548	26	1539	29	-0.6	Youngest group, 1522Ma
888	TH141	Pit_fg77	3.674	0.072	0.2774	0.005	0.62945	3.604903	0.0649766	0.0956	0.0015	0.1766	1578	25	1539	28	-2.5	Youngest group, 1522Ma
889	TH141	Pit_fg33	3.224	0.066	0.2426	0.0049	0.61099	4.122012	0.0832558	0.0958	0.0016	0.39381	1400	26	1540	32	9.1	Youngest group, 1522Ma
890	TH141	Pit_cg55	3.764	0.079	0.2824	0.0056	0.58848	3.541076	0.0702197	0.0958	0.0016	0.29206	1603	28	1541	32	-4.0	Youngest group, 1522Ma

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Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
891	TH141	Pit_fg29	3.933	0.089	0.2954	0.0072	0.75044	3.38524	0.0825109	0.0959	0.0017	0.47776	1667	36	1541	33	-8.2	Youngest group, 1522Ma
892	TH141	Pit_fg109	3.692	0.087	0.2811	0.0056	0.64856	3.557453	0.0708706	0.0957	0.0017	0.16759	1597	28	1543	31	-3.5	Youngest group, 1522Ma
893	TH141	Pit_cg58	3.469	0.062	0.2613	0.0047	0.43943	3.827019	0.0688365	0.0959	0.0014	0.51942	1496	24	1544	29	3.1	Youngest group, 1522Ma
894	TH141	Pit_cg57	3.474	0.069	0.2616	0.0047	0.69766	3.82263	0.0686788	0.0961	0.0014	0.034569	1497	24	1546	28	3.2	Youngest group, 1522Ma
895	TH141	Pit_fg42	3.592	0.073	0.2711	0.0052	0.81101	3.688676	0.0707529	0.096	0.0014	0.28744	1546	26	1547	26	0.1	Youngest group, 1522Ma
896	TH141	Pit_cg21	3.544	0.066	0.2653	0.0048	0.45948	3.769318	0.0681972	0.096	0.0015	0.4861	1517	25	1548	31	2.0	Youngest group, 1522Ma
897	TH141	Pit_cg89	3.351	0.1	0.2546	0.0072	0.67173	3.92773	0.1110748	0.0963	0.0023	0.31676	1462	37	1550	46	5.7	Youngest group, 1522Ma
898	TH141	Pit_fg63	3.391	0.093	0.2557	0.0056	0.84311	3.910833	0.0856498	0.0963	0.0017	-0.19216	1467	29	1550	33	5.4	Youngest group, 1522Ma
899	TH141	Pit_fg5	3.401	0.068	0.2569	0.0051	0.64071	3.892565	0.0772755	0.0965	0.0016	0.47108	1474	26	1554	31	5.1	1557 Ma group
900	TH141	Pit_fg69	3.504	0.068	0.2626	0.0048	0.6833	3.808073	0.0696068	0.0965	0.0015	0.25371	1503	24	1554	28	3.3	1557 Ma group
901	TH141	Pit_fg108	3.39	0.067	0.2543	0.0047	0.72899	3.932363	0.0726784	0.0965	0.0014	0.21204	1460	24	1554	27	6.0	1557 Ma group
902	TH141	Pit_fg81	3.529	0.065	0.2646	0.0048	0.50215	3.779289	0.0685585	0.0966	0.0015	0.48487	1515	24	1555	29	2.6	1557 Ma group
903	TH141	Pit_fg9	3.438	0.069	0.2586	0.0049	0.67595	3.866976	0.0732722	0.0966	0.0015	0.33095	1482	25	1557	29	4.8	1557 Ma group
904	TH141	Pit_fg18	3.822	0.079	0.2862	0.0062	0.57439	3.49406	0.0756924	0.0968	0.0018	0.52668	1622	31	1560	33	-4.0	1557 Ma group
905	TH141	Pit_fg97	3.903	0.11	0.2927	0.0075	0.61263	3.416467	0.0875419	0.097	0.0022	0.33687	1655	37	1564	43	-5.8	1557 Ma group
906	TH141	Pit_fg15	3.374	0.07	0.2503	0.0048	0.57928	3.995206	0.076616	0.097	0.0016	0.36779	1439	25	1565	33	8.1	1557 Ma group
907	TH141	Pit_cg70	3.455	0.09	0.2528	0.0065	0.87609	3.955696	0.101709	0.0982	0.0016	0.27443	1452	33	1587	30	8.5	1602 Ma group, inherited
908	TH141	Pit_fg56	3.494	0.077	0.2567	0.0053	0.73878	3.895598	0.0804311	0.0982	0.0016	0.23661	1472	27	1587	31	7.2	1602 Ma group, inherited
909	TH141	Pit_fg100	3.819	0.079	0.2801	0.0054	0.78811	3.570154	0.0688284	0.0985	0.0015	0.14731	1592	27	1592	28	0.0	1602 Ma group, inherited
910	TH141	Pit_cg93_2	3.626	0.075	0.264	0.0052	0.57411	3.787879	0.0746097	0.0986	0.0017	0.36542	1510	26	1595	31	5.3	1602 Ma group, inherited
911	TH141	Pit_cg74	4.066	0.1	0.2968	0.0062	0.74838	3.369272	0.0703824	0.0985	0.0017	-0.05582	1677	30	1596	33	-5.1	1602 Ma group, inherited
912	TH141	Pit_cg11	3.903	0.071	0.2845	0.0053	0.63395	3.514938	0.0654804	0.0987	0.0015	0.52458	1613	27	1597	28	-1.0	1602 Ma group, inherited
913	TH141	Pit_fg16	3.563	0.07	0.2608	0.0049	0.71528	3.834356	0.0720412	0.0987	0.0014	0.22669	1493	25	1598	27	6.6	1602 Ma group, inherited
914	TH141	Pit_fg114	4.196	0.087	0.3039	0.0058	0.2194	3.290556	0.062801	0.0991	0.002	0.55018	1710	29	1602	37	-6.7	1602 Ma group, inherited
915	TH141	Pit_fg68	3.729	0.11	0.2705	0.0075	0.61088	3.696858	0.1025007	0.0994	0.0024	0.36508	1543	38	1607	45	4.0	1602 Ma group, inherited
916	TH141	Pit_cg43	3.616	0.087	0.261	0.0055	0.6478	3.831418	0.0807387	0.0993	0.0018	0.22634	1495	28	1608	34	7.0	1602 Ma group, inherited
917	TH141	Pit_fg116	4.192	0.1	0.3039	0.0063	0.83411	3.290556	0.0682149	0.0997	0.0016	0.011045	1710	31	1614	29	-5.9	1602 Ma group, inherited
918	TH141	Pit_fg78	3.693	0.075	0.2684	0.0052	0.7335	3.725782	0.0721836	0.0998	0.0015	0.16709	1532	26	1616	29	5.2	1602 Ma group, inherited
919	TH141	Pit_cg47	3.791	0.084	0.2737	0.0051	0.73419	3.653635	0.0680802	0.1001	0.0016	-0.05098	1559	26	1622	29	3.9	1602 Ma group, inherited
920	TH141	Pit_cg52	4.223	0.11	0.3049	0.0064	0.069516	3.279764	0.0688439	0.101	0.0029	0.49556	1715	32	1630	53	-5.2	1602 Ma group, inherited
921	TH141	Pit_fg84	4.344	0.11	0.3104	0.0067	0.52283	3.221649	0.0695395	0.1014	0.0021	0.33881	1742	33	1645	38	-5.9	1649 Ma group
922	TH141	Pit_cg16	3.7	0.075	0.2622	0.0049	0.62311	3.813883	0.0712739	0.1014	0.0016	0.27171	1501	25	1646	29	8.8	1649 Ma group
923	TH141	Pit_cg28	4.242	0.092	0.3018	0.0064	0.62592	3.313453	0.0702654	0.1016	0.0018	0.34299	1699	32	1648	33	-3.1	1649 Ma group
924	TH141	Pit_fg102	3.931	0.079	0.2793	0.0054	0.65452	3.58038	0.0692232	0.1019	0.0016	0.30886	1587	27	1655	30	4.1	1649 Ma group
925	TH141	Pit_fg107	4.423	0.1	0.3081	0.0064	0.78009	3.245699	0.0674212	0.1036	0.0017	0.07665	1731	32	1685	30	-2.7	not typical

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Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
926	TH141	Pit_cg37	3.923	0.077	0.2729	0.0053	0.50514	3.664346	0.0711654	0.1039	0.0018	0.45093	1555	27	1691	32	8.0	not typical
927	TH141	Pit_fg117	4.582	0.1	0.3143	0.0071	0.71107	3.181674	0.0718736	0.1054	0.0018	0.34684	1761	35	1721	32	-2.3	1743 Ma group
928	TH141	Pit_cg1	4.164	0.093	0.2816	0.0059	0.70329	3.551136	0.0744024	0.1059	0.0017	0.27227	1599	30	1727	30	7.4	1743 Ma group
929	TH141	Pit_cg39	4.734	0.11	0.3195	0.006	0.541	3.12989	0.0587773	0.1072	0.002	0.18729	1787	29	1744	34	-2.5	1743 Ma group
930	TH141	Pit_fg35	4.16	0.11	0.2829	0.0068	0.756	3.534818	0.0849656	0.1072	0.0019	0.29761	1605	34	1749	33	8.2	1743 Ma group
931	TH141	Pit_cg4	4.638	0.12	0.3128	0.0066	0.21435	3.196931	0.0674544	0.108	0.0028	0.41723	1757	31	1753	47	-0.2	1743 Ma group
932	TH141	Pit_fg87	4.866	0.12	0.326	0.0073	0.60576	3.067485	0.0686891	0.1077	0.0021	0.3266	1818	36	1754	36	-3.6	1743 Ma group
933	TH141	Pit_fg48	5.191	0.11	0.348	0.0069	0.79906	2.873563	0.0569758	0.1077	0.0017	0.062287	1924	33	1758	29	-9.4	1743 Ma group
934	TH141	Pit_fg43	4.514	0.095	0.3007	0.0058	0.5083	3.325574	0.0641448	0.1082	0.0019	0.34663	1694	29	1764	32	4.0	1788 Ma group
935	TH141	Pit_fg85	4.68	0.2	0.315	0.013	0.59881	3.174603	0.1310154	0.1085	0.004	0.36728	1763	62	1764	70	0.1	1788 Ma group
936	TH141	Pit_fg118	5.022	0.11	0.334	0.0068	0.54894	2.994012	0.0609559	0.1086	0.0021	0.35401	1857	33	1773	36	-4.7	1788 Ma group
937	TH141	Pit_cg3	5.058	0.12	0.3326	0.0073	0.42445	3.006615	0.06599	0.1094	0.0024	0.40262	1850	35	1781	40	-3.9	1788 Ma group
938	TH141	Pit_fg82	4.513	0.11	0.2943	0.0074	0.72124	3.397893	0.085438	0.11	0.0022	0.25114	1662	37	1796	35	7.5	1788 Ma group
939	TH141	Pit_cg22	4.479	0.12	0.297	0.0065	0.42657	3.367003	0.0736886	0.1104	0.0027	0.38186	1676	32	1799	44	6.8	1788 Ma group
940	TH141	Pit_cg75	4.45	0.19	0.2896	0.0084	0.53804	3.453039	0.1001572	0.1107	0.0039	0.19283	1639	42	1803	65	9.1	1788 Ma group
941	TH141	Pit_fg119	5.174	0.1	0.3386	0.0063	0.59256	2.953337	0.0549499	0.1109	0.0018	0.43722	1879	30	1812	29	-3.7	1788 Ma group
942	TH141	Pit_fg22	4.555	0.097	0.2957	0.0062	0.61341	3.381806	0.070907	0.111	0.002	0.38192	1669	31	1815	33	8.0	inherited, 1841 Ma group
943	TH141	Pit_fg2	4.744	0.12	0.3062	0.0074	0.64149	3.265839	0.0789262	0.1114	0.0022	0.30929	1721	36	1817	37	5.3	inherited, 1841 Ma group
944	TH141	Pit_fg21	5.06	0.14	0.3229	0.0073	0.34625	3.096934	0.0700143	0.1122	0.0029	0.38152	1803	36	1830	47	1.5	inherited, 1841 Ma group
945	TH141	Pit_cg25	5.208	0.11	0.3331	0.0062	0.33089	3.002101	0.0558782	0.1129	0.0021	0.43942	1853	30	1844	33	-0.5	inherited, 1841 Ma group
946	TH141	Pit_cg61	4.7	0.17	0.2971	0.0093	0.59605	3.36587	0.1053605	0.1134	0.0033	0.30401	1676	46	1848	52	9.3	inherited, 1841 Ma group
947	TH141	Pit_fg53	4.632	0.12	0.2974	0.0072	0.80763	3.362475	0.0814049	0.1132	0.002	0.21141	1677	36	1848	32	9.3	inherited, 1841 Ma group
948	TH141	Pit_cg18	5.509	0.13	0.3499	0.0069	0.39726	2.857959	0.0563587	0.1128	0.0022	0.36524	1934	33	1850	36	-4.5	inherited, 1841 Ma group
949	TH141	Pit_cg64	5.465	0.12	0.3468	0.0067	0.721	2.883506	0.0557079	0.1136	0.0019	0.10827	1919	32	1854	30	-3.5	inherited, 1841 Ma group
950	TH141	Pit_cg14	5.239	0.13	0.3307	0.0071	0.58871	3.023889	0.0649217	0.1138	0.0023	0.26953	1841	34	1855	36	0.8	inherited, 1841 Ma group
951	TH141	Pit_cg24	5.552	0.12	0.3522	0.0066	0.61611	2.839296	0.0532066	0.1137	0.0019	0.20237	1945	31	1855	30	-4.9	1880 Ma group
952	TH141	Pit_fg115	5.391	0.12	0.3418	0.0065	0.35674	2.925688	0.0556377	0.1141	0.0023	0.32982	1894	31	1861	36	-1.8	1880 Ma group
953	TH141	Pit_fg71	5.57	0.13	0.3489	0.0072	0.61959	2.866151	0.0591467	0.115	0.0022	0.13233	1928	34	1881	33	-2.5	1880 Ma group
954	TH141	Pit_fg37	5.311	0.12	0.3312	0.0073	0.37511	3.019324	0.0665491	0.1153	0.0024	0.5051	1843	35	1883	40	2.1	1880 Ma group
955	TH141	Pit_cg76	5.48	0.11	0.3423	0.0062	0.3222	2.921414	0.0529149	0.1157	0.002	0.35954	1897	30	1888	33	-0.5	1880 Ma group
956	TH141	Pit_fg111	5.845	0.12	0.3623	0.0071	0.4662	2.760144	0.0540906	0.1159	0.0022	0.41553	1993	34	1890	33	-5.4	1880 Ma group
957	TH141	Pit_fg66	5.751	0.13	0.3555	0.0071	0.54515	2.81294	0.0561797	0.1168	0.0021	0.3318	1960	34	1902	33	-3.0	1880 Ma group
958	TH141	Pit_fg65	5.363	0.11	0.3297	0.0062	0.6535	3.03306	0.0570366	0.118	0.0018	0.2252	1836	30	1922	28	4.5	Inherited Zr
959	TH141	Pit_fg120	5.496	0.12	0.3354	0.0067	0.54221	2.981515	0.0595592	0.118	0.0021	0.3394	1864	32	1922	32	3.0	Inherited Zr
960	TH141	Pit_fg105	5.89	0.14	0.3533	0.0072	0.58144	2.830456	0.0576827	0.1203	0.0022	0.23671	1950	34	1956	32	0.3	Inherited Zr
961	TH141	Pit_fg103	6.41	0.16	0.3694	0.008	0.66097	2.707093	0.0586268	0.1256	0.0024	0.1283	2026	38	2033	34	0.3	Inherited Zr
962	TH141	Pit_fg61	8.08	0.21	0.4236	0.0092	0.67277	2.360718	0.0512715	0.1376	0.0027	0.30082	2276	42	2194	35	-3.7	Inherited Zr
963	TH141	Pit_fg92	10.39	0.29	0.4655	0.011	0.6008	2.148228	0.0507637	0.1607	0.0033	0.20338	2463	47	2459	35	-0.2	Inherited Zr
964	TH141	Pit_cg38	10.6	0.25	0.4767	0.0096	0.72159	2.097755	0.0422456	0.1607	0.0027	0.057487	2512	42	2460	28	-2.1	Inherited Zr
965	TH141	Pit_fg30	11.86	0.25	0.5003	0.01	0.36209	1.998801	0.039952	0.1706	0.0034	0.54273	2614	45	2558	34	-2.2	Inherited Zr
966	TH141	Pit_fg49	5.365	0.13	0.3555	0.0073	0.55271	2.81294	0.0577622	0.1085	0.0022	0.19975	1964	36	1767	37	-11.1	Discordant
967	TH141	Pit_fg113	5.502	0.12	0.3606	0.0076	0.32063	2.773156	0.058447	0.1094	0.0022	0.55772	1984	36	1790	39	-10.8	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
968	TH141	Pit_fg3	3.912	0.074	0.2976	0.0054	0.58501	3.360215	0.0609716	0.0949	0.0014	0.37847	1681	28	1523	28	-10.4	Discordant
969	TH141	Pit_fg32	4.174	0.093	0.31	0.0066	0.74239	3.225806	0.0686785	0.0978	0.0017	0.18606	1740	32	1578	31	-10.3	Discordant
970	TH141	Pit_cg30	6.16	0.14	0.3414	0.0073	0.78073	2.929115	0.0626319	0.1306	0.0021	0.23626	1893	35	2109	30	10.2	Discordant
971	TH141	Pit_cg94_2	3.379	0.096	0.2461	0.0066	0.84308	4.063389	0.1089735	0.0981	0.0019	0.13391	1418	34	1586	36	10.6	Discordant
972	TH141	Pit_fg93	4.409	0.093	0.2851	0.0057	0.42887	3.507541	0.0701262	0.1112	0.002	0.44384	1617	29	1814	32	10.9	Discordant
973	TH141	Pit_cg29	3.528	0.07	0.2532	0.0052	0.64747	3.949447	0.0811103	0.1007	0.0017	0.43995	1455	27	1633	30	10.9	Discordant
974	TH141	Pit_cg26	4.49	0.14	0.2857	0.0087	0.094197	3.500175	0.1065857	0.1125	0.0043	0.63417	1619	43	1831	69	11.6	Discordant
975	TH141	Pit_fg94	4.558	0.11	0.2883	0.006	0.63493	3.468609	0.0721875	0.1133	0.0022	0.20476	1633	30	1850	35	11.7	Discordant
976	TH141	Pit_cg10	4.24	0.14	0.2755	0.0086	0.6961	3.629764	0.1133066	0.11	0.0028	0.40884	1568	43	1796	46	12.7	Discordant
977	TH141	Pit_fg7	3.716	0.088	0.2568	0.0053	0.55011	3.894081	0.0803685	0.1054	0.002	0.29144	1473	27	1717	35	14.2	Discordant
978	TH141	Pit_fg91	3.63	0.11	0.2522	0.0062	0.51951	3.965107	0.0974769	0.1041	0.0028	0.21695	1449	32	1691	50	14.3	Discordant
979	TH141	Pit_fg80	3.23	0.066	0.2356	0.0045	0.60178	4.244482	0.0810703	0.0988	0.0017	0.31078	1363	24	1596	31	14.6	Discordant
980	TH141	Pit_fg23	4.55	0.12	0.2836	0.0059	0.51609	3.526093	0.0733567	0.1156	0.0026	0.1345	1609	30	1885	40	14.6	Discordant
981	TH141	Pit_fg36	4.111	0.11	0.2656	0.0071	0.71285	3.76506	0.1006473	0.1107	0.0023	0.38471	1518	36	1808	39	16.0	Discordant
982	TH141	Pit_fg55	5.36	0.16	0.3041	0.009	0.72985	3.288392	0.0973217	0.1271	0.0028	0.34925	1711	45	2053	39	16.7	Discordant
983	TH141	Pit_cg92	4.34	0.15	0.2712	0.0079	0.66146	3.687316	0.1074107	0.1146	0.003	0.18099	1546	40	1865	49	17.1	Discordant
984	TH141	Pit_fg25	3.463	0.079	0.2394	0.0054	0.60139	4.177109	0.0942205	0.1039	0.002	0.46953	1383	28	1691	36	18.2	Discordant
985	TH141	Pit_cg96	3.002	0.098	0.2194	0.0071	0.70682	4.557885	0.1474977	0.098	0.0024	0.40219	1278	38	1581	46	19.2	Discordant
986	TH141	Pit_cg83	3.078	0.07	0.222	0.0048	0.79732	4.504505	0.0973947	0.1003	0.0016	0.20531	1292	25	1626	29	20.5	Discordant
987	TH141	Pit_cg36	3.79	0.12	0.2407	0.0069	0.76205	4.154549	0.1190959	0.1127	0.0025	0.18878	1390	36	1840	40	24.5	Discordant
988	TH141	Pit_fg104	3.469	0.074	0.228	0.0047	0.7381	4.385965	0.0904124	0.1096	0.0018	0.25947	1324	25	1789	29	26.0	Discordant
989	TH141	Pit_cg45	2.787	0.058	0.2026	0.0042	0.65109	4.935834	0.1023223	0.0993	0.0017	0.35438	1189	22	1607	32	26.0	Discordant
990	TH141	Pit_fg58	3.71	0.097	0.236	0.0055	0.68415	4.237288	0.0987504	0.1135	0.0023	0.32047	1365	29	1850	37	26.2	Discordant
991	TH141	Pit_cg42	2.794	0.065	0.202	0.004	0.66823	4.950495	0.0980296	0.0994	0.0017	0.09478	1186	21	1609	33	26.3	Discordant
992	TH141	Pit_cg46	2.921	0.062	0.206	0.0044	0.78588	4.854369	0.1036856	0.102	0.0016	0.3716	1207	23	1658	29	27.2	Discordant
993	TH141	Pit_fg110	3.42	0.11	0.224	0.0071	0.7916	4.464286	0.1415019	0.1096	0.0024	0.36525	1302	37	1789	40	27.2	Discordant
994	TH141	Pit_cg72	2.813	0.071	0.2009	0.0046	0.58556	4.977601	0.1139719	0.1002	0.0021	0.27486	1180	24	1624	39	27.3	Discordant
995	TH141	Pit_fg45	3.106	0.07	0.2126	0.005	0.55581	4.703669	0.1106225	0.1052	0.002	0.51677	1242	27	1715	35	27.6	Discordant
996	TH141	Pit_fg24	3.47	0.13	0.2233	0.0067	0.66116	4.47828	0.1343685	0.1122	0.0032	0.16282	1299	35	1827	52	28.9	Discordant
997	TH141	Pit_cg2	6.22	0.16	0.295	0.0071	0.79347	3.389831	0.0815858	0.1506	0.0025	0.21989	1666	35	2355	31	29.3	Discordant
998	TH141	Pit_cg44	2.793	0.073	0.1975	0.005	0.75882	5.063291	0.1281846	0.1011	0.0018	0.22999	1161	27	1647	37	29.5	Discordant
999	TH141	Pit_fg38	3.59	0.13	0.2242	0.0078	0.21542	4.460303	0.1551756	0.1145	0.0049	0.62968	1304	41	1865	78	30.1	Discordant
1000	TH141	Pit_cg50	2.655	0.065	0.1899	0.0042	0.583	5.265929	0.1164661	0.1008	0.0019	0.32311	1121	23	1635	36	31.4	Discordant
1001	TH141	Pit_fg99	4.426	0.092	0.2471	0.005	0.60035	4.046945	0.0818888	0.1287	0.0023	0.40207	1423	26	2077	31	31.5	Discordant
1002	TH141	Pit_fg101	2.705	0.063	0.1894	0.0041	0.41057	5.279831	0.1142941	0.103	0.0023	0.3922	1118	22	1674	40	33.2	Discordant
1003	TH141	Pit_fg51	2.294	0.08	0.1706	0.0058	0.71142	5.861665	0.1992829	0.0963	0.0024	0.28667	1015	32	1549	48	34.5	Discordant
1004	TH141	Pit_fg64	2.477	0.075	0.1758	0.005	0.77738	5.688282	0.1617828	0.1012	0.0021	0.28072	1043	28	1639	39	36.4	Discordant
1005	TH141	Pit_fg62	2.507	0.07	0.1758	0.0045	0.49997	5.688282	0.1456045	0.1036	0.0026	0.37624	1044	25	1682	47	37.9	Discordant
1006	TH141	Pit_fg57	2.363	0.055	0.1694	0.0037	0.64195	5.903188	0.1289362	0.1005	0.0018	0.35978	1008	20	1633	35	38.3	Discordant
1007	TH141	Pit_fg41	2.674	0.097	0.1804	0.005	0.7058	5.543237	0.1536374	0.1068	0.0028	0.005005	1069	27	1736	47	38.4	Discordant
1008	TH141	Pit_cg51	1.995	0.051	0.1528	0.0043	0.69084	6.544503	0.1841712	0.0934	0.002	0.50278	916	24	1492	40	38.6	Discordant
1009	TH141	Pit_fg12	2.616	0.064	0.176	0.0037	0.58252	5.681818	0.1194473	0.1071	0.0021	0.24646	1045	20	1747	36	40.2	Discordant
1010	TH141	Pit_cg7	2.831	0.097	0.1834	0.0057	0.71896	5.452563	0.1694635	0.1114	0.0029	0.26364	1085	31	1819	47	40.4	Discordant
1011	TH141	Pit_cg66	2.689	0.069	0.1775	0.0038	0.61514	5.633803	0.120611	0.1088	0.0022	0.21523	1053	21	1776	36	40.7	Discordant
1012	TH141	Pit_fg6	2.312	0.058	0.1624	0.004	0.7182	6.157635	0.1516659	0.1027	0.0019	0.34486	970	22	1670	34	41.9	Discordant
1013	TH141	Pit_fg14	2.33	0.049	0.1627	0.0033	0.66257	6.146281	0.1246634	0.1032	0.0017	0.36055	971	19	1678	31	42.1	Discordant
1014	TH141	Pit_cg34	2.372	0.089	0.163	0.0056	0.82858	6.134969	0.210772	0.1044	0.0025	0.20273	973	31	1696	45	42.6	Discordant
1015	TH141	Pit_fg27	2.275	0.098	0.1592	0.0064	0.86278	6.281407	0.2525189	0.1029	0.0024	0.15003	952	36	1674	44	43.1	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1016	TH141	Pit_fg75	2.7	0.075	0.1753	0.0048	0.67033	5.704507	0.1561987	0.1129	0.0023	0.33969	1041	26	1843	37	43.5	Discordant
1017	TH141	Pit_fg54	2.374	0.06	0.1596	0.0039	0.65252	6.265664	0.1531083	0.1073	0.0022	0.28036	954	22	1749	37	45.5	Discordant
1018	TH141	Pit_fg11	2.242	0.056	0.1545	0.0038	0.76721	6.472492	0.159194	0.1047	0.002	0.28408	926	21	1705	34	45.7	Discordant
1019	TH141	Pit_fg4	2.213	0.056	0.1529	0.0034	0.64596	6.540222	0.1454333	0.1047	0.002	0.23895	917	19	1704	36	46.2	Discordant
1020	TH141	Pit_fg83	2.24	0.17	0.155	0.011	0.94989	6.451613	0.4578564	0.106	0.0023	-0.01637	921	59	1719	40	46.4	Discordant
1021	TH141	Pit_cg35	2.182	0.078	0.1489	0.0052	0.80799	6.715917	0.2345384	0.1054	0.0024	0.27279	894	29	1728	36	48.3	Discordant
1022	TH141	Pit_cg71	2.178	0.068	0.1465	0.0042	0.80106	6.825939	0.1956924	0.1078	0.0022	0.14003	881	24	1758	38	49.9	Discordant
1023	TH141	Pit_cg84	2.136	0.06	0.1438	0.0039	0.76506	6.954103	0.1886022	0.107	0.0021	0.29429	866	22	1745	37	50.4	Discordant
1024	TH141	Pit_cg59	2.324	0.065	0.1498	0.0039	0.637	6.675567	0.1737965	0.1119	0.0026	0.35548	900	22	1827	42	50.7	Discordant
1025	TH141	Pit_fg39	2.12	0.051	0.1415	0.0034	0.7402	7.067138	0.1698111	0.1078	0.0019	0.30906	853	19	1759	33	51.5	Discordant
1026	TH141	Pit_fg72	1.61	0.044	0.1208	0.0032	0.82284	8.278146	0.2192886	0.0961	0.0017	0.23799	735	18	1548	35	52.5	Discordant
1027	TH141	Pit_cg77	1.876	0.086	0.1302	0.0053	0.73936	7.680492	0.3126467	0.1039	0.0033	0.22389	789	30	1687	60	53.2	Discordant
1028	TH141	Pit_cg95	1.533	0.05	0.116	0.0036	0.90572	8.62069	0.2675386	0.0954	0.0017	-0.00274	707	21	1531	33	53.8	Discordant
1029	TH141	Pit_cg90	1.913	0.043	0.1301	0.0029	0.60516	7.686395	0.1713339	0.1058	0.002	0.4277	788	17	1724	35	54.3	Discordant
1030	TH141	Pit_fg13	1.95	0.055	0.1304	0.0033	0.74474	7.668712	0.1940702	0.1077	0.0021	0.18286	790	19	1755	36	55.0	Discordant
1031	TH141	Pit_fg50	1.929	0.068	0.1278	0.0041	0.81488	7.824726	0.251028	0.109	0.0024	0.15623	775	24	1779	40	56.4	Discordant
1032	TH141	Pit_fg90	1.879	0.054	0.1229	0.0029	0.56935	8.136697	0.1919969	0.1099	0.0026	0.13745	747	17	1791	43	58.3	Discordant
1033	TH141	Pit_cg17	1.272	0.039	0.0962	0.0028	0.76931	10.39501	0.3025575	0.0933	0.0022	0.57186	592	16	1491	45	60.3	Discordant
1034	TH141	Pit_cg91	1.714	0.044	0.1139	0.0024	0.62382	8.779631	0.1849966	0.1082	0.0022	0.16092	695.3	14	1762	37	60.5	Discordant
1035	TH141	Pit_fg19	1.58	0.046	0.0995	0.0026	0.70774	10.05025	0.2626196	0.1141	0.0025	0.18728	611	15	1859	41	67.1	Discordant
1036	TH13	TH13-32	3.934	0.096	0.28	0.0059	0.83871	3.571429	0.0752551	0.1014	0.0009	0.11431	1591	30	1647	16	3.4	Bad iolite signal
1037	TH13	TH13-86	4.806	0.15	0.3258	0.0061	0.7265	3.069368	0.0574682	0.1068	0.0029	0.25092	1819	30	1742	50	-4.4	Youngest Group, 1781Ma
1038	TH13	TH13-87	4.451	0.14	0.3005	0.0053	0.59114	3.327787	0.0586931	0.1073	0.003	0.09366	1694	26	1749	51	3.1	Youngest Group, 1781Ma
1039	TH13	TH13-85	4.761	0.15	0.3209	0.0058	0.72377	3.116236	0.0563234	0.1075	0.0029	0.15794	1794	28	1755	50	-2.2	Youngest Group, 1781Ma
1040	TH13	TH13-24	4.56	0.11	0.3127	0.006	0.45777	3.197953	0.0613614	0.1079	0.0016	0.34354	1754	30	1761	27	0.4	Youngest Group, 1781Ma
1041	TH13	TH13-62	5.03	0.15	0.3382	0.006	0.85434	2.95683	0.0524571	0.1081	0.0029	0.18213	1879	30	1765	48	-6.5	Youngest Group, 1781Ma
1042	TH13	TH13-88	4.207	0.13	0.2821	0.0054	0.55674	3.544842	0.0678559	0.1084	0.0031	0.28362	1601	27	1768	51	9.4	Youngest Group, 1781Ma
1043	TH13	TH13-38	4.656	0.096	0.3116	0.0057	0.69487	3.209243	0.0587057	0.1086	0.00087	0.21152	1748	28	1772	15	1.4	Youngest Group, 1781Ma
1044	TH13	TH13-69	4.542	0.14	0.3026	0.0053	0.2934	3.304693	0.0578813	0.1088	0.0031	0.39094	1704	26	1774	52	3.9	Youngest Group, 1781Ma
1045	TH13	TH13-44	5.077	0.1	0.3351	0.0056	0.40771	2.984184	0.04987	0.1089	0.001	0.29142	1863	27	1777	17	-4.8	Youngest Group, 1781Ma
1046	TH13	TH13-92	4.506	0.14	0.3005	0.0056	0.35771	3.327787	0.0620153	0.1089	0.0032	0.37303	1694	28	1778	53	4.7	Youngest Group, 1781Ma
1047	TH13	TH13-33	4.378	0.1	0.2891	0.0057	0.74966	3.459011	0.0681991	0.1091	0.0013	0.046569	1637	28	1780	23	8.0	Youngest Group, 1781Ma
1048	TH13	TH13-13	4.664	0.095	0.3102	0.0052	0.51033	3.223727	0.0540406	0.1093	0.00092	0.27428	1741	26	1783	15	2.4	Youngest Group, 1781Ma
1049	TH13	TH13-42	4.627	0.098	0.3093	0.0055	0.45438	3.233107	0.0574914	0.1092	0.001	0.39016	1737	27	1783	17	2.6	Youngest Group, 1781Ma
1050	TH13	TH13-3	4.821	0.097	0.3191	0.0055	0.66089	3.133814	0.0540143	0.1093	0.00078	0.29979	1785	27	1787	13	0.1	Youngest Group, 1781Ma
1051	TH13	TH13-39	4.844	0.11	0.3208	0.0065	0.72455	3.117207	0.0631604	0.1099	0.001	0.21626	1793	32	1794	18	0.1	Youngest Group, 1781Ma
1052	TH13	TH13-70	4.445	0.14	0.2912	0.0055	0.83468	3.434066	0.0648605	0.1107	0.003	0.13674	1647	27	1809	49	9.0	Youngest Group, 1781Ma
1053	TH13	TH13-53	5.562	0.17	0.3624	0.0064	0.45851	2.759382	0.0487308	0.111	0.003	0.41181	1993	30	1814	50	-9.9	Youngest Group, 1781Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1054	TH13	TH13-91	5.057	0.15	0.3286	0.0057	0.49255	3.043214	0.0527886	0.1117	0.003	0.32468	1831	28	1824	49	-0.4	Youngest Group, 1781Ma
1055	TH13	TH13-54	4.563	0.14	0.2964	0.0056	0.54215	3.373819	0.0637429	0.1116	0.0031	0.30276	1673	28	1824	50	8.3	Youngest Group, 1781Ma
1056	TH13	TH13-35	4.636	0.11	0.302	0.006	0.86326	3.311258	0.0657866	0.1117	0.00083	0.16999	1701	30	1826	13	6.8	1840 Ma group
1057	TH13	TH13-17	4.865	0.11	0.3134	0.0061	0.61671	3.19081	0.0621058	0.112	0.00069	0.19596	1759	31	1830	11	3.9	1840 Ma group
1058	TH13	TH13-20	5.242	0.11	0.3363	0.0057	0.40718	2.973536	0.0503989	0.1125	0.0012	0.3101	1868	28	1835	19	-1.8	1840 Ma group
1059	TH13	TH13-59	5.214	0.16	0.336	0.0059	0.35615	2.97619	0.0522605	0.1126	0.0032	0.33746	1867	28	1836	51	-1.7	1840 Ma group
1060	TH13	TH13-90	5.16	0.16	0.333	0.0057	0.31365	3.003003	0.0514028	0.1125	0.0031	0.35954	1853	28	1836	52	-0.9	1840 Ma group
1061	TH13	TH13-78	5.126	0.16	0.3279	0.0062	0.50343	3.04971	0.0576645	0.1127	0.0033	0.19946	1828	30	1839	52	0.6	1840 Ma group
1062	TH13	TH13-47	5.045	0.12	0.319	0.0065	0.69539	3.134796	0.0638752	0.1127	0.0012	0.27034	1784	32	1840	18	3.0	1840 Ma group
1063	TH13	TH13-84	4.849	0.15	0.3117	0.0053	0.43594	3.208213	0.0545509	0.1127	0.0031	0.26423	1748.8	26	1840	49	5.0	1840 Ma group
1064	TH13	TH13-77	4.691	0.14	0.301	0.0056	0.65854	3.322259	0.0618095	0.1128	0.0031	0.41338	1696	28	1842	49	7.9	1840 Ma group
1065	TH13	TH13-4	5.203	0.1	0.3345	0.0054	0.56728	2.989537	0.0482616	0.1129	0.00066	0.27857	1859.6	26	1843	11	-0.9	1840 Ma group
1066	TH13	TH13-9	5.178	0.1	0.3313	0.0056	0.56744	3.018412	0.0510206	0.1129	0.00069	0.24109	1845	27	1844	11	-0.1	1840 Ma group
1067	TH13	TH13-82	5.073	0.15	0.3252	0.0056	0.57515	3.075031	0.0529526	0.1131	0.003	0.31551	1815	27	1848	50	1.8	1840 Ma group
1068	TH13	TH13-60	5.13	0.19	0.3281	0.0089	0.95763	3.047851	0.0826756	0.1134	0.003	-0.08755	1825	43	1852	48	1.5	1840 Ma group
1069	TH13	TH13-68	5.129	0.17	0.3294	0.0077	0.82993	3.035823	0.0709649	0.1133	0.0031	0.19158	1839	36	1853	52	0.8	1840 Ma group
1070	TH13	TH13-73	4.785	0.15	0.3044	0.0058	0.63514	3.285151	0.0625949	0.1134	0.0032	0.099299	1712	29	1854	52	7.7	1840 Ma group
1071	TH13	TH13-1	4.71	0.11	0.2999	0.0063	0.4957	3.334445	0.0700467	0.1136	0.0017	0.41303	1691	31	1854	26	8.8	1840 Ma group
1072	TH13	TH13-8	5.171	0.11	0.3306	0.0054	0.31188	3.024803	0.049407	0.1137	0.0011	0.33452	1841	26	1855	17	0.8	1840 Ma group
1073	TH13	TH13-93	5.19	0.19	0.3323	0.0071	0.24885	3.009329	0.064298	0.114	0.0039	0.41041	1849	34	1856	62	0.4	1840 Ma group
1074	TH13	TH13-49	5.687	0.12	0.3608	0.0064	0.69276	2.771619	0.049164	0.1138	0.0011	0.26696	1986	30	1857	18	-6.9	1840 Ma group
1075	TH13	TH13-63	4.831	0.16	0.3076	0.0072	0.92602	3.250975	0.0760957	0.1138	0.0031	0.041644	1727	36	1859	49	7.1	1840 Ma group
1076	TH13	TH13-5	5.379	0.12	0.3312	0.006	0.86247	3.019324	0.0546979	0.1177	0.00081	-0.21185	1843	28	1919	12	4.0	Old group
1077	TH13	TH13-14	5.869	0.11	0.3601	0.0058	0.64713	2.777006	0.0447282	0.1188	0.0006	0.34336	1982.5	27	1935.7	9.1	-2.4	Old group
1078	TH13	TH13-43	6.523	0.13	0.3831	0.0064	0.53823	2.610285	0.043607	0.1226	0.00091	0.34256	2090	30	1993	14	-4.9	Old group
1079	TH13	TH13-56	6.433	0.19	0.3802	0.0066	0.69338	2.630195	0.0456583	0.1227	0.0033	0.37354	2077	31	1994.3	47	-4.1	Old group
1080	TH13	TH13-57	7.336	0.22	0.4085	0.0073	0.6846	2.44798	0.043746	0.13	0.0035	0.17725	2208	33	2096	48	-5.3	Old group
1081	TH13	TH13-67	11.06	0.35	0.4978	0.01	0.89296	2.008839	0.0403543	0.1613	0.0043	0.009738	2602	44	2467	45	-5.5	Old group
1082	TH13	TH13-71	18.4	3.4	1.32	0.25	0.9979	0.757576	0.1434803	0.1067	0.003	0.76379	4300	530	1739	52	-147.3	Discordant
1083	TH13	TH13-45	8.53	0.17	0.4508	0.0077	0.41065	2.218279	0.0378899	0.1355	0.001	0.49788	2398	35	2166	13	-10.7	Discordant
1084	TH13	TH13-59_2nd	3.132	0.1	0.222	0.0043	0.91166	4.504505	0.0872494	0.0942	0.0025	-0.18229	1266	22	1417	54	10.7	Discordant
1085	TH13	TH13-76	4.395	0.14	0.2858	0.0056	0.045397	3.49895	0.0685589	0.1117	0.0034	0.67957	1620	28	1820	56	11.0	Discordant
1086	TH13	TH13-79	3.884	0.12	0.2643	0.005	0.4375	3.783579	0.0715774	0.1067	0.0031	0.40288	1511	26	1737	53	13.0	Discordant
1087	TH13	TH13-72	2.98	0.096	0.228	0.0051	0.8631	4.385965	0.0981071	0.095	0.0025	0.36502	1323	27	1527	52	13.4	Discordant
1088	TH13	TH13-10	23.58	0.5	0.5839	0.011	0.58175	1.712622	0.0322638	0.2914	0.0031	0.44825	2964	44	3423	17	13.4	Discordant
1089	TH13	TH13-75	4.154	0.13	0.2693	0.0054	0.50201	3.713331	0.0744597	0.1117	0.0033	0.3313	1537	27	1824	53	15.7	Discordant
1090	TH13	TH13-7	4.773	0.11	0.2888	0.0059	0.58823	3.462604	0.0707388	0.1198	0.00073	0.50867	1635	29	1951	11	16.2	Discordant
1091	TH13	TH13-2	4.165	0.093	0.268	0.0051	0.72315	3.731343	0.0710069	0.1124	0.0013	0.28035	1530	26	1837	20	16.7	Discordant
1092	TH13	TH13-40	3.744	0.089	0.2523	0.0054	0.78776	3.963535	0.0848319	0.1078	0.0015	0.28478	1454	28	1758	27	17.3	Discordant
1093	TH13	TH13-23	4.075	0.1	0.2629	0.0055	0.82944	3.803728	0.0795759	0.1124	0.0014	0.1379	1504	28	1835	23	18.0	Discordant
1094	TH13	TH13-19	4.059	0.097	0.2595	0.0054	0.89731	3.853565	0.0801898	0.1127	0.0013	0.33656	1486	27	1841	21	19.3	Discordant
1095	TH13	TH13-11	3.587	0.078	0.2439	0.0046	0.4887	4.100041	0.0773276	0.1075	0.0013	0.44856	1407	24	1754	22	19.8	Discordant
1096	TH13	TH13-66	2.21	0.14	0.176	0.0087	0.98817	5.681818	0.2808626	0.0884	0.0029	-0.87955	1038	48	1368	69	24.1	Discordant
1097	TH13	TH13-28	2.58	0.048	0.1951	0.0036	0.98704	5.125577	0.0945775	0.0948	0.0011	-0.68865	1145	20	1521	25	24.7	Discordant
1098	TH13	TH13-89	3.487	0.12	0.2265	0.0054	0.91964	4.415011	0.1052585	0.1118	0.003	0.22153	1314	29	1825	49	28.0	Discordant
1099	TH13	TH13-27	3.036	0.086	0.2055	0.005	0.8961	4.86618	0.1183985	0.1066	0.0011	-0.00716	1204	27	1740	18	30.8	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1100	TH13	TH13-83	3.274	0.1	0.2125	0.0042	0.83288	4.705882	0.0930104	0.1119	0.003	0.1542	1242	23	1826	49	32.0	Discordant
1101	TH13	TH13-74	3.341	0.12	0.2139	0.0053	0.8836	4.675082	0.1158389	0.1133	0.0032	-0.16046	1249	28	1851	51	32.5	Discordant
1102	TH13	TH13-41	3.053	0.071	0.2033	0.0038	0.32576	4.918839	0.0919409	0.1098	0.0017	0.41853	1193	20	1789	27	33.3	Discordant
1103	TH13	TH13-58	2.83	0.15	0.1871	0.0086	0.97332	5.344735	0.2456693	0.1101	0.0031	0.14915	1101	46	1797	51	38.7	Discordant
1104	TH13	TH13-81	2.71	0.4	0.184	0.026	0.87955	5.434783	0.7679584	0.107	0.0048	-0.03853	1070	130	1754	86	39.0	Discordant
1105	TH13	TH13-29	4.14	0.093	0.2165	0.0045	0.95821	4.618938	0.0960056	0.1377	0.0019	-0.30611	1262	24	2195	24	42.5	Discordant
1106	TH13	TH13-25	2.603	0.091	0.1719	0.0057	0.53165	5.817336	0.1928959	0.1106	0.0016	0.16525	1022	29	1802	26	43.3	Discordant
1107	TH13	TH13-30	2.992	0.088	0.1769	0.0044	0.84914	5.652911	0.1406038	0.1215	0.0018	0.063447	1050	24	1975	26	46.8	Discordant
1108	TH13	TH13-64	2.304	0.12	0.1546	0.0067	0.97623	6.468305	0.2803211	0.1077	0.003	-0.19156	923	38	1759	51	47.5	Discordant
1109	TH13	TH13-80	2.44	0.14	0.1589	0.0081	0.98722	6.293266	0.3208021	0.1106	0.003	-0.30645	944	45	1805	50	47.7	Discordant
1110	TH13	TH13-36	2.559	0.06	0.1616	0.0035	0.83095	6.188119	0.1340249	0.114	0.0019	0.35212	965	19	1862	30	48.2	Discordant
1111	TH13	TH13-65	2.199	0.07	0.1478	0.003	0.82033	6.7659	0.1373322	0.1079	0.0029	0.1632	888	17	1762	49	49.6	Discordant
1112	TH13	TH13-55	3.054	0.099	0.1722	0.0036	0.75467	5.807201	0.1214049	0.1282	0.0036	0.22643	1024	20	2072	51	50.6	Discordant
1113	TH13	TH13-52	2.145	0.069	0.1405	0.0027	0.44995	7.117438	0.1367764	0.1104	0.0033	0.32756	847.6	16	1801	54	52.9	Discordant
1114	TH13	TH13-61	2.156	0.11	0.1381	0.0059	0.91444	7.24113	0.3093604	0.1134	0.0035	0.22815	833	33	1850	55	55.0	Discordant
1115	TH13	TH13-31	1.532	0.035	0.1	0.0021	0.87862	10	0.21	0.1108	0.00084	0.35863	614.1	12	1809	14	66.1	Discordant
1116	TH13	TH13-50	1.513	0.077	0.0986	0.0043	0.97482	10.14199	0.4422976	0.1113	0.0031	-0.03074	604	25	1819	49	66.8	Discordant
1117	TH13	TH13-26	2.59	0.088	0.1243	0.0038	0.95966	8.045052	0.2459469	0.1502	0.004	-0.13786	754	22	2344	45	67.8	Discordant
1118	TH13	TH13-46	1.435	0.04	0.0841	0.0018	0.87147	11.89061	0.2544957	0.1215	0.0022	-0.07026	520	11	1973	34	73.6	Discordant
1119	TH13	TH13-21	1.1	0.059	0.0747	0.0037	0.94155	13.38688	0.6630717	0.1113	0.0027	-0.05005	464	22	1819	44	74.5	Discordant
1120	TH13	TH13-18	0.911	0.036	0.0584	0.0019	0.97906	17.12329	0.5570933	0.1117	0.0016	-0.14673	365	11	1824	26	80.0	Discordant
1121	TH13	TH13-37	0.754	0.048	0.0447	0.0025	0.89043	22.37136	1.251195	0.123	0.0048	0.21007	281	15	1985	70	85.8	Discordant
1122	TH01	TH01-37	5.107	0.15	0.3377	0.0058	0.58442	2.961208	0.0508588	0.1099	0.003	0.33104	1875	28	1795	49	-4.5	Youngest group, 1841Ma
1123	TH01	TH01-77	5.285	0.17	0.3446	0.0073	0.75179	2.901915	0.0614741	0.1115	0.0031	0.38573	1908	35	1821	50	-4.8	Youngest group, 1841Ma
1124	TH01	TH01-65	5.094	0.15	0.3301	0.0058	0.57884	3.029385	0.0532276	0.112	0.003	0.46372	1838	28	1832	50	-0.3	Youngest group, 1841Ma
1125	TH01	TH01-74	4.651	0.15	0.2991	0.006	0.91737	3.343363	0.0670685	0.1122	0.003	0.098422	1686	30	1833	49	8.0	Youngest group, 1841Ma
1126	TH01	TH01-55	4.88	0.2	0.3147	0.01	0.98778	3.177629	0.1009733	0.1123	0.003	-0.15288	1758	49	1835.8	48	4.2	Youngest group, 1841Ma
1127	TH01	TH01-42	5.229	0.16	0.3369	0.006	0.58984	2.96824	0.0528627	0.1127	0.0031	0.31673	1872	29	1846	49	-1.4	Youngest group, 1841Ma
1128	TH01	TH01-19	5.218	0.16	0.3336	0.0061	0.44551	2.997602	0.0548123	0.1133	0.0032	0.30545	1856	30	1849	52	-0.4	Youngest group, 1841Ma
1129	TH01	TH01-13	5.275	0.16	0.3385	0.006	0.33947	2.95421	0.0523641	0.1135	0.0032	0.39512	1879	29	1851	51	-1.5	Youngest group, 1841Ma
1130	TH01	TH01-34	5.098	0.16	0.3241	0.0062	0.74519	3.085467	0.0590247	0.1139	0.0031	0.11846	1809	30	1860	50	2.7	Youngest group, 1841Ma
1131	TH01	TH01-49	5.42	0.16	0.344	0.006	0.85165	2.906977	0.0507031	0.1141	0.0031	0.15925	1906	29	1863	49	-2.3	Youngest group, 1841Ma
1132	TH01	TH01-72	5.465	0.16	0.3461	0.0061	0.70176	2.889338	0.0509245	0.1144	0.0031	0.28752	1915	29	1868	48	-2.5	Youngest group, 1841Ma
1133	TH01	TH01-35	4.952	0.15	0.3136	0.0059	0.51217	3.188776	0.0599929	0.1149	0.0032	0.49754	1758	29	1875	50	6.2	next to Th01-34 but older due to ~6% of discordant => discarded
1134	TH01	TH01-41	5.481	0.16	0.3452	0.0058	0.50067	2.896871	0.0486728	0.1151	0.0031	0.3153	1911.5	28	1878	49	-1.8	group 1883Ma
1135	TH01	TH01-76	5.93	0.22	0.3696	0.0093	0.94093	2.705628	0.0680799	0.1158	0.0032	-0.34867	2024	44	1889	49	-7.1	group 1883Ma
1136	TH01	TH01-18	5.084	0.17	0.3167	0.0069	0.86614	3.157562	0.0687944	0.1158	0.0032	0.15468	1773	34	1891	49	6.2	group 1883Ma
1137	TH01	TH01-28	5.282	0.17	0.3228	0.0064	0.56523	3.097893	0.0614204	0.119	0.0035	0.20245	1803	31	1937	52	6.9	Older group; 1984Ma
1138	TH01	TH01-58	5.603	0.18	0.341	0.0076	0.94311	2.932551	0.0653589	0.1191	0.0032	-0.00321	1890	36	1941	48	2.6	Older group; 1984Ma

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1139	TH01	TH01-78	5.52	0.19	0.3311	0.007	0.37003	3.020236	0.0638528	0.1203	0.0039	0.39381	1843	34	1955	57	5.7	Older group; 1984Ma
1140	TH01	TH01-50	5.994	0.19	0.3609	0.0074	0.91274	2.770851	0.0568143	0.1208	0.0032	0.31827	1985	35	1966	47	-1.0	Older group; 1984Ma
1141	TH01	TH01-60	5.971	0.18	0.3569	0.0069	0.74619	2.801905	0.0541697	0.1214	0.0033	0.25734	1967	33	1975	49	0.4	Older group; 1984Ma
1142	TH01	TH01-4	5.863	0.18	0.3489	0.006	0.68909	2.866151	0.0492889	0.1217	0.0033	-0.06583	1930	28	1979	48	2.5	Older group; 1984Ma
1143	TH01	TH01-15	5.984	0.19	0.3514	0.0069	0.89411	2.84576	0.0558786	0.1233	0.0033	-0.06229	1940	33	2003	47	3.1	Older group; 1984Ma
1144	TH01	TH01-71	6.66	0.23	0.3895	0.0092	0.79274	2.567394	0.0606419	0.1234	0.0035	0.21531	2119	43	2004	51	-5.7	Older group; 1984Ma
1145	TH01	TH01-40	5.772	0.19	0.3352	0.0064	0.38182	2.983294	0.0569603	0.1242	0.0037	0.33631	1863	31	2015	53	7.5	Older group; 1984Ma
1146	TH01	TH01-29	6.59	0.19	0.3813	0.0064	0.62124	2.622607	0.0440196	0.1252	0.0033	0.32842	2082	30	2029.3	47	-2.6	Older group; 1984Ma
1147	TH01	TH01-66	6.6	1.4	0.392	0.089	0.99028	2.55102	0.5791858	0.1258	0.0047	0.65178	2060	400	2034	67	-1.3	Older group; 1984Ma
1148	TH01	TH01-79	6.862	0.22	0.3709	0.0067	0.32212	2.696145	0.0487036	0.1343	0.0039	0.35662	2033	32	2146	51	5.3	Old population
1149	TH01	TH01-39	8.197	0.25	0.443	0.0081	0.58006	2.257336	0.0412741	0.134	0.0037	0.25895	2363	36	2149	49	-10.0	Old population
1150	TH01	TH01-54	10.12	0.31	0.466	0.0086	0.85283	2.145923	0.0396029	0.1572	0.0042	-0.02831	2465	38	2424.4	44	-1.7	Old population
1151	TH01	TH01-12	10.35	0.31	0.4482	0.0082	0.68427	2.231147	0.0408197	0.1676	0.0045	0.36529	2386	37	2532	46	5.8	Old population
1152	TH01	TH01-68	4.739	0.15	0.297	0.0055	0.58117	3.367003	0.0623519	0.1154	0.0032	0.25738	1676	27	1883	51	11.0	Discordant
1153	TH01	TH01-8	9.05	0.34	0.4057	0.012	0.94885	2.464876	0.0729073	0.1614	0.0044	0.070089	2190	53	2468	46	11.3	Discordant
1154	TH01	TH01-63	5.13	0.3	0.309	0.016	0.86789	3.236246	0.1675726	0.1202	0.0048	0.37735	1729	79	1960	77	11.8	Discordant
1155	TH01	TH01-38	4.845	0.16	0.2977	0.0069	0.96868	3.359086	0.0778559	0.1178	0.0031	0.19093	1681	35	1921.2	47	12.5	Discordant
1156	TH01	TH01-61	4.237	0.15	0.2731	0.006	0.79071	3.661662	0.0804466	0.1115	0.0031	-0.01617	1556	31	1822	51	14.6	Discordant
1157	TH01	TH01-25	9.2	0.37	0.399	0.013	0.97446	2.506266	0.0816578	0.1673	0.0045	0.15937	2154	59	2528	45	14.8	Discordant
1158	TH01	TH01-16	4.378	0.13	0.2696	0.0049	0.52824	3.709199	0.067415	0.1173	0.0032	0.45702	1539	25	1914	49	19.6	Discordant
1159	TH01	TH01-44	3.393	0.11	0.2339	0.0048	0.9084	4.275331	0.0877366	0.1051	0.0028	0.18638	1354	25	1713.5	49	21.0	Discordant
1160	TH01	TH01-21	9.15	0.43	0.3664	0.0088	0.80267	2.729258	0.0655499	0.1804	0.0062	-0.42068	2009	41	2652	57	24.2	Discordant
1161	TH01	TH01-7	4.22	0.2	0.2569	0.011	0.96212	3.892565	0.1666727	0.1197	0.0033	0.39574	1470	55	1951	52	24.7	Discordant
1162	TH01	TH01-24	4.077	0.15	0.2478	0.0071	0.90197	4.035513	0.1156261	0.1196	0.0033	0.34285	1424	36	1947	50	26.9	Discordant
1163	TH01	TH01-5	3.589	0.14	0.2238	0.0066	0.97157	4.468275	0.1317722	0.1161	0.0031	-0.18383	1300	34	1895	49	31.4	Discordant
1164	TH01	TH01-46	2.811	0.11	0.1962	0.0059	0.98333	5.09684	0.1532689	0.1038	0.0027	-0.04228	1153	32	1690.4	49	31.8	Discordant
1165	TH01	TH01-36	3.209	0.13	0.2097	0.0056	0.90141	4.768717	0.1273477	0.1106	0.0032	-0.16712	1227	30	1807	52	32.1	Discordant
1166	TH01	TH01-23	8.91	0.32	0.3338	0.0084	0.96857	2.995806	0.0753888	0.1933	0.0051	-0.15927	1853	40	2769.4	44	33.1	Discordant
1167	TH01	TH01-14	5.141	0.16	0.2613	0.0053	0.39698	3.827019	0.0776242	0.1426	0.0042	0.48529	1496	27	2255	52	33.7	Discordant
1168	TH01	TH01-67	3.551	0.13	0.2176	0.0049	0.67983	4.595588	0.1034852	0.118	0.0036	0.10887	1269	26	1923	54	34.0	Discordant
1169	TH01	TH01-43	6.488	0.21	0.285	0.0061	0.90244	3.508772	0.0751	0.1657	0.0045	0.13056	1616	31	2513	45	35.7	Discordant
1170	TH01	TH01-6	3.8	0.15	0.2199	0.0072	0.96113	4.547522	0.1488957	0.1259	0.0034	0.47175	1278	38	2037	49	37.3	Discordant
1171	TH01	TH01-32	2.66	0.085	0.1754	0.0034	0.61775	5.701254	0.1105146	0.1103	0.0031	0.23432	1042	19	1801	52	42.1	Discordant
1172	TH01	TH01-64	3.27	0.19	0.1768	0.0097	0.93743	5.656109	0.3103182	0.1349	0.0037	0.19322	1049	54	2162	51	51.5	Discordant
1173	TH01	TH01-52	2.827	0.1	0.1643	0.0044	0.93653	6.086427	0.1629962	0.1249	0.0034	0.23987	979	25	2026	47	51.7	Discordant
1174	TH01	TH01-73	2.78	0.28	0.161	0.017	0.99026	6.21118	0.6558389	0.1278	0.0043	0.41723	952	94	2059	58	53.8	Discordant
1175	TH01	TH01-2	3.64	0.12	0.1697	0.004	0.88265	5.892752	0.1388981	0.155	0.0042	0.30302	1010	22	2400	46	57.9	Discordant
1176	TH01	TH01-22	2.283	0.07	0.1355	0.0026	0.64863	7.380074	0.1416103	0.1218	0.0033	0.3204	819.1	15	1982	49	58.7	Discordant
1177	TH01	TH01-3	1.65	0.057	0.1094	0.0026	0.66664	9.140768	0.2172395	0.1086	0.0032	0.36943	669	15	1779	60	62.4	Discordant
1178	TH01	TH01-9	2.959	0.11	0.1414	0.0039	0.88338	7.072136	0.1950589	0.1515	0.0043	0.38193	852	22	2360	48	63.9	Discordant
1179	TH01	TH01-11	1.86	0.069	0.1105	0.003	0.95041	9.049774	0.2456952	0.122	0.0033	0.078677	675	18	1983	48	66.0	Discordant
1180	TH01	TH01-69	3.7	0.2	0.1418	0.0054	0.58073	7.052186	0.26856	0.1898	0.0079	0.038464	853	31	2715	59	68.6	Discordant
1181	TH01	TH01-59	1.432	0.059	0.0877	0.003	0.96542	11.40251	0.3900516	0.1186	0.0032	0.19621	541	18	1933	48	72.0	Discordant
1182	TH01	TH01-20	2.066	0.068	0.1022	0.0024	0.87259	9.784736	0.2297785	0.1467	0.004	0.36939	627	14	2308	46	72.8	Discordant
1183	TH01	TH01-62	2.04	0.18	0.103	0.01	0.91231	9.708738	0.9425959	0.1485	0.0079	0.56295	626	61	2314	93	72.9	Discordant
1184	TH01	TH01-10	1.601	0.066	0.0904	0.0033	0.92613	11.06195	0.40381	0.1287	0.0037	0.30195	558	19	2076	51	73.1	Discordant
1185	TH01	TH01-56	1.61	0.26	0.088	0.011	0.85521	11.36364	1.420455	0.1319	0.0095	-0.22885	545	65	2110	130	74.2	Discordant
1186	TH01	TH01-75	1.114	0.036	0.0686	0.0015	0.85078	14.57726	0.3187447	0.1178	0.0032	0.23687	427.4	9	1919	49	77.7	Discordant

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1187	TH01	TH01-33	1.398	0.047	0.0749	0.0017	0.8321	13.35113	0.3030298	0.1351	0.0037	0.23086	465.4	10	2163	50	78.5	Discordant
1188	TH01	TH01-45	1.161	0.041	0.0669	0.0019	0.93171	14.94768	0.4245231	0.1261	0.0035	0.58494	416.9	12	2040	49	79.6	Discordant
1189	TH01	TH01-31	1.197	0.04	0.0673	0.0017	0.88759	14.85884	0.3753348	0.1295	0.0036	0.30957	419.5	10	2087	48	79.9	Discordant
1190	TH01	TH01-70	1.216	0.058	0.067	0.0026	0.89391	14.92537	0.5791936	0.1311	0.0041	0.11264	418	16	2107	55	80.2	Discordant
1191	TH01	TH01-51	1.69	0.15	0.0727	0.005	0.43305	13.75516	0.9460219	0.1731	0.01	0.14661	450	30	2552	72	82.4	Discordant
1192	TH01	TH01-47	0.955	0.033	0.0554	0.0014	0.92147	18.05054	0.4561509	0.125	0.0034	0.17542	347.3	8.4	2026	48	82.9	Discordant
1193	TH01	TH01-30	0.818	0.027	0.0508	0.0011	0.8281	19.67729	0.4259154	0.1164	0.0032	0.22046	319.5	6.9	1899	50	83.2	Discordant
1194	TH01	TH01-57	1.64	0.052	0.0596	0.0013	0.68773	16.78697	0.3663432	0.1983	0.0056	0.38064	373	7.7	2810	47	86.7	Discordant
1195	TH01	TH01-27	0.7852	0.024	0.0351	0.00066	0.61013	28.5144	0.5366269	0.1627	0.0045	0.40885	222.2	4.1	2480	47	91.0	Discordant
1196	TH01	TH01-53	0.646	0.068	0.0319	0.0032	0.66791	31.34796	3.144623	0.15	0.016	0.53066	202	20	2270	180	91.1	Discordant
1197	TH01	TH01-17	0.474	0.018	0.0245	0.0008	0.95739	40.7498	1.328437	0.1405	0.0038	0.53154	156.2	5.1	2232	48	93.0	Discordant
1198	TH01	TH01-1	0.407	0.016	0.0144	0.00039	0.68385	69.63788	1.89128	0.2051	0.0064	0.092811	91.9	2.5	2862	51	96.8	Discordant
1199	GJ1	GJ1-2	0.811	0.013	0.0972	0.0011	0.45708	10.28807	0.1164287	0.0604	0.00099	0.23804	598	6.4	602	35	0.7	Standard spot
1200	GJ1	GJ1-3	0.812	0.012	0.0979	0.00099	0.46979	10.21555	0.1033138	0.0603	0.00092	0.23437	602.6	5.9	604	32	0.2	Standard spot
1201	GJ1	GJ1-4	0.81	0.013	0.0972	0.0009	0.26247	10.29018	0.0952991	0.0602	0.001	0.3178	597.8	5.3	600	38	0.4	Standard spot
1202	GJ1	GJ1-5	0.811	0.012	0.0975	0.00091	0.29832	10.25326	0.0956676	0.0603	0.00098	0.38636	599.8	5.4	600	35	0.0	Standard spot
1203	GJ1	GJ1-6	0.807	0.012	0.0977	0.00096	0.39934	10.23646	0.1005938	0.0599	0.00095	0.24903	600.7	5.6	585	35	-2.7	Standard spot
1204	GJ1	GJ1-7	0.806	0.011	0.0978	0.00089	0.34627	10.22495	0.0930491	0.0598	0.0009	0.32303	601.4	5.2	589	33	-2.1	Standard spot
1205	GJ1	GJ1-8	0.807	0.011	0.0978	0.00086	0.39102	10.22495	0.0899126	0.0599	0.00089	0.25242	601.4	5.1	591	31	-1.8	Standard spot
1206	GJ1	GJ1-9	0.817	0.015	0.097	0.0012	0.47763	10.30928	0.1275375	0.061	0.0011	0.28067	596.6	6.9	624	39	4.4	Standard spot
1207	GJ1	GJ1-10	0.816	0.013	0.0976	0.0011	0.41862	10.2459	0.1154764	0.0607	0.00097	0.37651	600.2	6.7	616	36	2.6	Standard spot
1208	GJ1	GJ1-11	0.809	0.013	0.0973	0.0011	0.43449	10.27749	0.1161895	0.0602	0.00096	0.26782	598.6	6.2	599	35	0.1	Standard spot
1209	GJ1	GJ1-12	0.808	0.012	0.098	0.00091	0.36461	10.20512	0.0947715	0.0597	0.00092	0.29662	602.5	5.3	584	34	-3.2	Standard spot
1210	GJ1	GJ1-13	0.812	0.012	0.0978	0.0011	0.43108	10.22495	0.1150045	0.0603	0.00094	0.3098	601.5	6.3	599	34	-0.4	Standard spot
1211	GJ1	GJ1-14	0.807	0.012	0.0979	0.00099	0.29035	10.21033	0.1032084	0.06	0.001	0.36776	602.2	5.8	589	36	-2.2	Standard spot
1212	GJ1	GJ1-15	0.802	0.012	0.0975	0.001	0.36638	10.25641	0.105194	0.0596	0.00097	0.333	599.6	6	576	36	-4.1	Standard spot
1213	GJ1	GJ1-16	0.809	0.011	0.098	0.0009	0.37948	10.20408	0.093711	0.06	0.00089	0.33525	602.6	5.3	594	32	-1.4	Standard spot
1214	GJ1	GJ1-17	0.804	0.014	0.0979	0.0012	0.58621	10.2145	0.1252033	0.0598	0.00096	0.14998	602.1	7.1	582	35	-3.5	Standard spot
1215	GJ1	GJ1-18	0.806	0.012	0.0973	0.0011	0.41658	10.27749	0.1161895	0.0601	0.00098	0.36228	598.3	6.7	600	35	0.3	Standard spot
1216	GJ1	GJ1-19	0.802	0.013	0.0981	0.001	0.36576	10.19368	0.1039111	0.0593	0.001	0.28672	603.1	6	566	36	-6.6	Standard spot
1217	GJ1	GJ1-20	0.818	0.013	0.0976	0.001	0.44222	10.2459	0.1049785	0.0606	0.00092	0.23112	600.2	6	619	35	3.0	Standard spot
1218	GJ1	GJ1-21	0.807	0.012	0.0979	0.0008	0.37529	10.21659	0.083503	0.0596	0.00088	0.22873	601.9	4.7	581	33	-3.6	Standard spot
1219	GJ1	GJ1-22	0.814	0.012	0.0969	0.00083	0.37166	10.32311	0.0884503	0.0609	0.00091	0.25837	596	4.9	631	33	5.5	Standard spot
1220	GJ1	GJ1-23	0.813	0.013	0.0978	0.0013	0.39963	10.22495	0.1359145	0.0606	0.001	0.40907	601.1	7.4	608	37	1.1	Standard spot
1221	GJ1	GJ1-24	0.801	0.014	0.0972	0.0012	0.43363	10.28807	0.1270132	0.0596	0.001	0.32325	598	7.1	576	37	-3.8	Standard spot
1222	GJ1	GJ1-25	0.814	0.013	0.0976	0.0011	0.30861	10.2459	0.1154764	0.0606	0.0011	0.42935	600	6.6	614	37	2.3	Standard spot
1223	GJ1	GJ1-26	0.812	0.013	0.0975	0.001	0.46283	10.25641	0.105194	0.0604	0.00098	0.25143	599.6	6.1	608	34	1.4	Standard spot
1224	GJ1	GJ1-27	0.809	0.014	0.0973	0.00085	0.16293	10.28172	0.0898567	0.06	0.00095	0.30437	598.3	5	588	35	-1.8	Standard spot
1225	GJ1	GJ1-28	0.812	0.015	0.0981	0.00089	0.22121	10.19472	0.0924998	0.0596	0.001	0.20689	603.2	5.2	577	38	-4.5	Standard spot
1226	GJ1	GJ1-29	0.814	0.014	0.0975	0.00088	0.27351	10.25536	0.0925517	0.0605	0.00094	0.19424	599.8	5.2	611	34	1.8	Standard spot
1227	GJ1	GJ1-30	0.8099	0.012	0.0975	0.00084	0.14029	10.2522	0.0882905	0.0603	0.00087	0.32687	600	5	607	32	1.2	Standard spot
1228	GJ1	GJ1-31	0.808	0.013	0.0978	0.00085	0.059768	10.22809	0.0889217	0.0599	0.00092	0.40007	601.3	5	588	34	-2.3	Standard spot
1229	GJ1	GJ1-32	0.804	0.013	0.0975	0.00088	0.02604	10.2522	0.0924948	0.0599	0.00099	0.46432	599.9	5.2	583	36	-2.9	Standard spot
1230	GJ1	GJ1-33	0.799	0.013	0.0976	0.00089	0.16801	10.24905	0.0934883	0.0594	0.00091	0.33099	600.1	5.2	574	34	-4.5	Standard spot
1231	GJ1	GJ1-34	0.818	0.014	0.0977	0.00087	0.13558	10.23646	0.0911631	0.0608	0.00097	0.32927	600.8	5.1	619	35	2.9	Standard spot
1232	GJ1	GJ1-35	0.812	0.014	0.0971	0.00096	0.11623	10.29442	0.1017361	0.0609	0.001	0.4421	597.6	5.6	630	38	5.1	Standard spot
1233	GJ1	GJ1-36	0.807	0.013	0.0978	0.00082	0.24862	10.22181	0.0856781	0.0601	0.0009	0.1962	601.7	4.8	595	32	-1.1	Standard spot
1234	GJ1	GJ1-37	0.813	0.014	0.0977	0.00083	0.13991	10.23856	0.0870073	0.0606	0.00096	0.29011	600.7	4.9	615	34	2.3	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1235	GJ1	GJ1-38	0.806	0.013	0.0975	0.00084	0.26659	10.25641	0.0883629	0.0601	0.00088	0.23228	599.7	4.9	603	32	0.5	Standard spot
1236	GJ1	GJ1-39	0.819	0.014	0.0977	0.00085	0.26511	10.23751	0.0890856	0.0606	0.00093	0.2062	600.7	5	621	32	3.3	Standard spot
1237	GJ1	GJ1-40	0.808	0.013	0.0976	0.0008	0.035551	10.2459	0.0839828	0.0601	0.00096	0.38018	600.3	4.7	592	35	-1.4	Standard spot
1238	GJ1	GJ1-41	0.818	0.014	0.0981	0.00083	0.1495	10.19368	0.0862462	0.0603	0.00096	0.29382	603.2	4.9	604	34	0.1	Standard spot
1239	GJ1	GJ1-42	0.797	0.015	0.097	0.00088	0.12068	10.3146	0.093624	0.0595	0.0011	0.28152	596.5	5.2	572	40	-4.3	Standard spot
1240	GJ1	GJ1-43	0.81	0.013	0.0976	0.00089	0.070027	10.24695	0.09345	0.06	0.00096	0.43781	600.2	5.2	593	34	-1.2	Standard spot
1241	GJ1	GJ1-44	0.807	0.014	0.0976	0.00082	0.098797	10.2417	0.0860119	0.0597	0.00096	0.33699	600.5	4.8	578	35	-3.9	Standard spot
1242	GJ1	GJ1-45	0.791	0.017	0.0971	0.00083	0.10213	10.30078	0.0880681	0.0593	0.00096	0.34272	597.2	4.9	564	37	-5.9	Standard spot
1243	GJ1	GJ1-46	0.807	0.017	0.0973	0.00089	0.14983	10.27855	0.0940272	0.0604	0.001	0.396	598.5	5.2	604	37	0.9	Standard spot
1244	GJ1	GJ1-47	0.813	0.019	0.0975	0.0009	0.16379	10.25851	0.0947134	0.0596	0.0011	0.2794	599.6	5.3	574	42	-4.5	Standard spot
1245	GJ1	GJ1-48	0.808	0.018	0.0976	0.00084	0.11747	10.2459	0.0881819	0.0604	0.0011	0.29066	600.8	5	600	38	-0.1	Standard spot
1246	GJ1	GJ1-49	0.813	0.018	0.0981	0.00091	0.27394	10.19368	0.0945591	0.0601	0.001	0.28693	603.2	5.3	588	38	-2.6	Standard spot
1247	GJ1	GJ1-50	0.809	0.019	0.0976	0.00091	0.07464	10.2438	0.0954913	0.0601	0.0011	0.36034	600.4	5.3	584	42	-2.8	Standard spot
1248	GJ1	GJ1-51	0.826	0.019	0.0985	0.001	0.03018	10.14816	0.1029852	0.0613	0.0014	0.47875	605.8	6	639	49	5.2	Standard spot
1249	GJ1	GJ1-52	0.798	0.021	0.0972	0.001	0.20925	10.28807	0.1058443	0.0605	0.0013	0.19478	597.9	6.2	601	50	0.5	Standard spot
1250	GJ1	GJ1-53	0.815	0.018	0.0982	0.00081	0.10362	10.18745	0.0840651	0.06	0.0011	0.30524	603.5	4.8	593	38	-1.8	Standard spot
1251	GJ1	GJ1-54	0.811	0.019	0.0978	0.00081	0.095321	10.22495	0.0846852	0.06	0.0012	0.28955	601.4	4.7	579	43	-3.9	Standard spot
1252	GJ1	GJ1-55	0.811	0.017	0.0976	0.00092	0.024846	10.25115	0.0966793	0.0604	0.0011	0.40076	599.9	5.4	604	39	0.7	Standard spot
1253	GJ1	GJ1-56	0.814	0.016	0.0972	0.00085	0.075975	10.28489	0.0899121	0.0607	0.00097	0.39695	598.1	5	613	34	2.4	Standard spot
1254	GJ1	GJ1-57	0.812	0.017	0.0975	0.0008	0.20386	10.25957	0.084207	0.0602	0.00099	0.17947	599.5	4.7	600	37	0.1	Standard spot
1255	GJ1	GJ1-58	0.832	0.018	0.0981	0.00092	0.1435	10.18953	0.0955203	0.0607	0.001	0.3169	603.4	5.4	625	37	3.5	Standard spot
1256	GJ1	GJ1-59	0.797	0.018	0.0972	0.00087	0.21896	10.28595	0.0920467	0.0595	0.00098	0.29751	598.1	5.1	567	36	-5.5	Standard spot
1257	GJ1	GJ1-60	0.82	0.018	0.098	0.00087	0.093979	10.20825	0.0906613	0.0604	0.0011	0.37115	602.3	5.1	597	37	-0.9	Standard spot
1258	GJ1	GJ1-61	0.804	0.018	0.0976	0.0008	0.21383	10.2501	0.0840517	0.0599	0.0011	0.14257	600	4.7	585	39	-2.6	Standard spot
1259	GJ1	GJ1-62	0.8	0.017	0.0971	0.00088	0.10411	10.29442	0.0932581	0.0598	0.0011	0.30379	597.5	5.2	580	39	-3.0	Standard spot
1260	GJ1	GJ1-63	0.814	0.018	0.0983	0.00086	0.26458	10.17191	0.0889822	0.0604	0.0011	0.18943	604.4	5.1	595	39	-1.6	Standard spot
1261	GJ1	GJ1-64	0.805	0.018	0.0975	0.00074	0.16339	10.25536	0.0778276	0.0598	0.00094	0.15371	599.7	4.3	588	35	-2.0	Standard spot
1262	GJ1	GJ1-65	0.808	0.02	0.0972	0.00087	0.13001	10.29018	0.0921225	0.0605	0.0012	0.33775	597.8	5.1	605	44	1.2	Standard spot
1263	GJ1	GJ1-66	0.797	0.019	0.0975	0.00086	0.072441	10.2522	0.0903926	0.0598	0.0012	0.37251	599.9	5	580	42	-3.4	Standard spot
1264	GJ1	GJ1-67	0.807	0.03	0.0978	0.0023	0.12912	10.22077	0.2402675	0.0597	0.0019	0.19768	601.7	13	581	71	-3.6	Standard spot
1265	GJ1	GJ1-68	0.817	0.029	0.0988	0.0023	0.065871	10.12658	0.2358596	0.06	0.0019	0.58153	607	13	582	69	-4.3	Standard spot
1266	GJ1	GJ1-69	0.797	0.03	0.0976	0.0022	0.047641	10.2501	0.2311421	0.0594	0.0019	0.26403	600	13	563	71	-6.6	Standard spot
1267	GJ1	GJ1-70	0.811	0.032	0.0976	0.0023	0.36121	10.2459	0.2414506	0.0595	0.0021	0.14977	600.2	13	559	76	-7.4	Standard spot
1268	GJ1	GJ1-71	0.828	0.03	0.0967	0.0022	0.015528	10.33699	0.2350772	0.0621	0.0019	0.24619	595.2	13	662	68	10.1	Standard spot
1269	GJ1	GJ1-72	0.82	0.03	0.0983	0.0023	0.047493	10.17191	0.2379756	0.0606	0.002	0.27605	604.4	13	599	69	-0.9	Standard spot
1270	GJ1	GJ1-73	0.8	0.029	0.0959	0.0022	0.32153	10.42318	0.239014	0.0598	0.0019	0.009469	590.5	13	576	70	-2.5	Standard spot
1271	GJ1	GJ1-74	0.789	0.031	0.0977	0.0022	0.20407	10.23227	0.2303387	0.0597	0.0019	0.11498	601	13	572	70	-5.1	Standard spot
1272	GJ1	GJ1-75	0.814	0.031	0.098	0.0023	0.082327	10.202	0.2393858	0.0603	0.002	0.082048	602.7	13	588	73	-2.5	Standard spot
1273	GJ1	GJ1-76	0.799	0.017	0.098	0.0012	0.083241	10.20825	0.12505	0.0596	0.0013	0.34474	602.4	6.8	561	48	-7.4	Standard spot
1274	GJ1	GJ1-77	0.808	0.017	0.0972	0.0012	0.13355	10.28489	0.1269348	0.0604	0.0012	0.29133	598.1	6.8	598	46	0.0	Standard spot
1275	GJ1	GJ1-78	0.813	0.016	0.0978	0.0012	0.28411	10.23018	0.1255879	0.0603	0.0011	0.18257	601.1	6.8	595	41	-1.0	Standard spot
1276	GJ1	GJ1-79	0.801	0.018	0.0974	0.0012	0.0024724	10.26378	0.1264142	0.0596	0.0014	-0.05456	599.3	7.1	569	52	-5.3	Standard spot
1277	GJ1	GJ1-80	0.826	0.016	0.0977	0.0012	0.1648	10.23123	0.1256136	0.0611	0.0012	0.34667	601.1	7.2	621	42	3.2	Standard spot
1278	GJ1	GJ1-81	0.815	0.016	0.0975	0.0011	0.12663	10.25746	0.1157371	0.0604	0.0012	0.29302	599.6	6.7	602	43	0.4	Standard spot
1279	GJ1	GJ1-83	0.808	0.018	0.097	0.0012	0.23289	10.30822	0.1275112	0.0602	0.0013	0.16022	596.8	6.9	588	47	-1.5	Standard spot
1280	GJ1	GJ1-84	0.817	0.016	0.0982	0.0012	0.3066	10.18641	0.1245156	0.0603	0.0011	0.56117	603.6	7	603	39	-0.1	Standard spot
1281	GJ1	GJ1-85	0.803	0.018	0.0972	0.0012	0.14327	10.28489	0.1269348	0.06	0.0013	0.46751	598.1	6.8	576	49	-3.8	Standard spot
1282	GJ1	GJ1-86	0.813	0.018	0.097	0.0013	0.051262	10.30715	0.1381086	0.0612	0.0014	0.59396	596.9	7.5	622	52	4.0	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1283	GJ1	GJ1-87	0.798	0.017	0.0976	0.0012	0.059382	10.2417	0.125871	0.0596	0.0012	0.53631	600.5	7	566	46	-6.1	Standard spot
1284	GJ1	GJ1-88	0.813	0.015	0.098	0.0011	0.11094	10.20721	0.1146058	0.0602	0.0011	0.32127	602.4	6.7	596	41	-1.1	Standard spot
1285	GJ1	GJ1-89	0.805	0.018	0.0975	0.0013	0.017123	10.2522	0.13664	0.06	0.0013	0.55695	599.9	7.6	579	49	-3.6	Standard spot
1286	GJ1	GJ1-90	0.806	0.019	0.0976	0.0012	0.26072	10.2438	0.1259226	0.0597	0.0013	0.13679	600.4	7.2	564	49	-6.5	Standard spot
1287	GJ1	GJ1-91	0.812	0.016	0.0975	0.0012	0.092247	10.25536	0.1262069	0.0604	0.0013	0.34408	599.7	7	599	45	-0.1	Standard spot
1288	GJ1	GJ1-92	0.8093	0.012	0.0976	0.0012	0.13365	10.2501	0.1260775	0.0605	0.00063	0.32253	600	6.8	612	23	2.0	Standard spot
1289	GJ1	GJ1-93	0.8093	0.013	0.0977	0.0012	0.1966	10.23856	0.1257937	0.0601	0.00072	0.24303	600.7	6.8	602	26	0.2	Standard spot
1290	GJ1	GJ1-94	0.8092	0.012	0.0976	0.0012	0.010636	10.248	0.1260258	0.06	0.00073	0.39606	600.2	6.9	591	27	-1.6	Standard spot
1291	GJ1	GJ1-95	0.809	0.013	0.0976	0.0012	0.18886	10.2417	0.125871	0.0599	0.00074	0.21881	600.6	6.8	590	27	-1.8	Standard spot
1292	GJ1	GJ1-96	0.81	0.014	0.0977	0.0012	0.011298	10.23961	0.1258195	0.0595	0.0008	0.52918	600.6	6.9	577	29	-4.1	Standard spot
1293	GJ1	GJ1-97	0.806	0.013	0.0971	0.0012	0.33634	10.30184	0.1273536	0.0603	0.00073	0.096968	597.2	7.1	602	26	0.8	Standard spot
1294	GJ1	GJ1-98	0.816	0.02	0.0986	0.0014	0.057255	10.14713	0.14415	0.06	0.0014	0.33064	605.9	8	583	50	-3.9	Standard spot
1295	GJ1	GJ1-99	0.808	0.015	0.0977	0.0012	0.2476	10.23437	0.1256907	0.0599	0.00089	0.22774	600.9	7.2	592	32	-1.5	Standard spot
1296	GJ1	GJ1-100	0.811	0.016	0.0975	0.0013	0.29271	10.25957	0.1368363	0.0605	0.00095	0.20371	599.5	7.5	614	34	2.4	Standard spot
1297	GJ1	GJ1-101	0.81	0.015	0.0977	0.0013	0.12088	10.23961	0.1363044	0.0604	0.00093	0.3767	600.6	7.4	605	33	0.7	Standard spot
1298	GJ1	GJ1-102	0.808	0.015	0.0976	0.0012	0.14763	10.2501	0.1260775	0.06	0.00091	0.33775	600	7.2	591	34	-1.5	Standard spot
1299	GJ1	GJ1-103	0.811	0.015	0.0978	0.0012	0.22547	10.22495	0.1254595	0.0603	0.0009	0.25549	601.5	7.2	602	33	0.1	Standard spot
1300	GJ1	GJ1-104	0.808	0.015	0.0974	0.0013	0.13358	10.26694	0.1370331	0.0605	0.00093	0.36876	599.1	7.4	604	34	0.8	Standard spot
1301	GJ1	GJ1-105	0.808	0.015	0.0974	0.0012	0.14136	10.26273	0.1263882	0.0601	0.00092	0.30931	599.3	7.2	601	33	0.3	Standard spot
1302	GJ1	GJ1-106	0.81	0.014	0.0978	0.0012	0.1114	10.22704	0.1255108	0.0607	0.0009	0.39167	601.4	7.2	621	31	3.2	Standard spot
1303	GJ1	GJ1-107	0.809	0.015	0.0975	0.0013	0.19091	10.25641	0.1367521	0.0596	0.00094	0.26753	599.7	7.4	580	35	-3.4	Standard spot
1304	GJ1	GJ1-108	0.81	0.015	0.0977	0.0012	0.042922	10.23541	0.1257165	0.06	0.00096	0.38137	600.9	7.3	585	35	-2.7	Standard spot
1305	GJ1	GJ1-109	0.8099	0.012	0.0978	0.0012	0.28565	10.22495	0.1254595	0.0603	0.00073	0.29109	601.5	7.1	604	26	0.4	Standard spot
1306	GJ1	GJ1-110	0.8087	0.012	0.0974	0.0012	0.13625	10.26378	0.1264142	0.06	0.00072	0.36433	599.3	7.1	597	26	-0.4	Standard spot
1307	GJ1	GJ1-111	0.8089	0.012	0.0974	0.0012	0.19492	10.26378	0.1264142	0.06	0.00069	0.26012	599.3	7	595	25	-0.7	Standard spot
1308	GJ1	GJ1-112	0.8096	0.012	0.0978	0.0012	0.16251	10.22599	0.1254852	0.0603	0.00069	0.3634	601.4	7	605	25	0.6	Standard spot
1309	GJ1	GJ1-113	0.813	0.018	0.0979	0.0018	0.065569	10.21138	0.1876899	0.0604	0.0011	0.35663	602.2	10	600	38	-0.4	Standard spot
1310	GJ1	GJ1-114	0.814	0.018	0.0971	0.0017	0.30489	10.2976	0.180269	0.0608	0.001	0.1674	597.4	10	617	36	3.2	Standard spot
1311	GJ1	GJ1-115	0.803	0.017	0.0973	0.0017	0.12353	10.27644	0.1795287	0.0598	0.0009	0.36556	598.6	10	587	33	-2.0	Standard spot
1312	GJ1	GJ1-116	0.816	0.019	0.0981	0.0018	0.61463	10.19056	0.1869257	0.0603	0.001	0.12532	603.4	10	608	37	0.8	Standard spot
1313	GJ1	GJ1-117	0.821	0.017	0.0986	0.0017	0.11102	10.14302	0.1748973	0.0603	0.00089	0.38144	606.1	10	608	32	0.3	Standard spot
1314	GJ1	GJ1-118	0.805	0.018	0.0983	0.0018	0.29775	10.1688	0.1861282	0.0592	0.00095	0.19082	604.6	10	569	35	-6.3	Standard spot
1315	GJ1	GJ1-119	0.813	0.017	0.0986	0.0018	0.13197	10.14096	0.1851103	0.06	0.00092	0.36189	606.2	10	589	33	-2.9	Standard spot
1316	GJ1	GJ1-120	0.809	0.023	0.0964	0.0018	0.071298	10.37022	0.1935745	0.0609	0.0015	0.32681	593.4	11	621	53	4.4	Standard spot
1317	GJ1	GJ1-121	0.799	0.019	0.0979	0.0017	0.19024	10.2145	0.1773714	0.0592	0.0011	0.19346	602	10	557	39	-8.1	Standard spot
1318	GJ1	GJ1-122	0.801	0.018	0.0963	0.0017	0.22849	10.38314	0.1832762	0.0605	0.001	0.25204	592.7	10	609	36	2.7	Standard spot
1319	GJ1	GJ1-123	0.817	0.019	0.0985	0.0018	0.24878	10.15125	0.1854863	0.0602	0.001	0.22823	605.6	10	595	37	-1.8	Standard spot
1320	GJ1	GJ1-124	0.83	0.023	0.0979	0.0019	0.26221	10.2145	0.1982386	0.0614	0.0014	0.26708	602.2	11	648	47	7.1	Standard spot
1321	GJ1	GJ1-125	0.809	0.018	0.0978	0.0017	0.22435	10.22704	0.177807	0.0601	0.00096	0.21071	601.3	10	599	35	-0.4	Standard spot
1322	GJ1	GJ1-126	0.795	0.018	0.097	0.0017	0.27104	10.30609	0.1805664	0.0595	0.00097	0.2227	596.9	10	569	35	-4.9	Standard spot
1323	GJ1	GJ1-127	0.806	0.019	0.0978	0.0017	0.2851	10.23018	0.1779162	0.0599	0.001	0.19091	601.1	10	583	38	-3.1	Standard spot
1324	GJ1	GJ1-128	0.795	0.018	0.0958	0.0017	0.1538	10.43732	0.1851941	0.0604	0.00095	0.24749	589.7	9.9	607	35	2.9	Standard spot
1325	GJ1	GJ1-129	0.809	0.019	0.0968	0.0017	0.24219	10.32844	0.1813505	0.0605	0.001	0.17176	595.7	10	604	38	1.4	Standard spot
1326	GJ1	GJ1-130	0.808	0.018	0.0969	0.0018	0.23182	10.32311	0.19182	0.0604	0.001	0.26591	596	10	600	39	0.7	Standard spot
1327	GJ1	GJ1-131	0.814	0.018	0.0975	0.0018	0.086099	10.25957	0.1894657	0.0607	0.00098	0.42747	599.5	10	616	34	2.7	Standard spot
1328	GJ1	GJ1-132	0.802	0.018	0.0968	0.0018	0.15305	10.33378	0.1922167	0.0603	0.0011	0.30233	595.4	10	594	38	-0.2	Standard spot
1329	GJ1	GJ1-133	0.819	0.019	0.0989	0.0018	0.23692	10.11327	0.1841008	0.06	0.0011	0.2461	607.8	10	586	38	-3.7	Standard spot
1330	GJ1	GJ1-134	0.792	0.019	0.0967	0.0017	0.2364	10.3434	0.1818761	0.0596	0.0011	0.22003	594.8	10	569	40	-4.5	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1331	GJ1	GJ1-135	0.81	0.019	0.0986	0.0018	0.28478	10.14302	0.1851854	0.0596	0.001	0.20587	606.1	10	586	36	-3.4	Standard spot
1332	GJ1	GJ1-136	0.82	0.018	0.0983	0.0017	0.030416	10.1688	0.1757877	0.0607	0.00099	0.41333	604.6	10	612	35	1.2	Standard spot
1333	GJ1	GJ1-137	0.8	0.018	0.0967	0.0017	0.16783	10.33699	0.1816506	0.06	0.00097	0.31733	595.2	10	593	37	-0.4	Standard spot
1334	GJ1	GJ1-138	0.805	0.018	0.0976	0.0017	0.14877	10.24275	0.1783538	0.0598	0.00099	0.31006	600.5	10	586	36	-2.5	Standard spot
1335	GJ1	GJ1-139	0.808	0.018	0.0986	0.0018	0.067364	10.14507	0.1852606	0.0597	0.001	0.37978	606	10	577	37	-5.0	Standard spot
1336	GJ1	GJ1-140	0.81	0.019	0.098	0.0017	0.19167	10.19992	0.1768652	0.06	0.0011	0.2278	603.3	10	585	40	-3.1	Standard spot
1337	GJ1	GJ1-141	0.809	0.018	0.0976	0.0017	0.029831	10.2438	0.1783903	0.0602	0.00099	0.41585	600.4	10	601	36	0.1	Standard spot
1338	GJ1	GJ1-142	0.812	0.018	0.0983	0.0018	0.20719	10.17087	0.1862039	0.06	0.00094	0.30992	604.5	10	593	35	-1.9	Standard spot
1339	GJ1	GJ1-143	0.803	0.017	0.0969	0.0017	0.22738	10.31779	0.1809765	0.0602	0.00091	0.2909	596.3	10	596	34	-0.1	Standard spot
1340	GJ1	GJ1-144	0.814	0.018	0.0972	0.0017	0.41182	10.2923	0.1800835	0.0607	0.001	0.04225	597.7	10	611	38	2.2	Standard spot
1341	GJ1	GJ1-145	0.82	0.018	0.0978	0.0018	0.16825	10.22286	0.1881123	0.0606	0.00099	0.32175	601.6	10	616	36	2.3	Standard spot
1342	GJ1	GJ1-146	0.819	0.019	0.0981	0.0018	0.0043889	10.19472	0.1870781	0.0603	0.001	0.001524	603.1	10	602	37	-0.2	Standard spot
1343	GJ1	GJ1-147	0.798	0.018	0.0962	0.0018	0.28953	10.39069	0.1943396	0.0597	0.00093	0.23941	592.3	10	586	35	-1.1	Standard spot
1344	GJ1	GJ1-148	0.823	0.019	0.0987	0.0018	0.060035	10.12863	0.1846606	0.0603	0.0011	0.36585	606.9	10	593	40	-2.3	Standard spot
1345	GJ1	GJ1-149	0.81	0.042	0.0976	0.0016	0.2593	10.24275	0.1678624	0.06	0.0026	0.24823	600.4	9.2	583	96	-3.0	Standard spot
1346	GJ1	GJ1-150	0.815	0.042	0.0983	0.0018	0.42906	10.17294	0.1862797	0.06	0.0026	0.27549	604.2	11	584	95	-3.5	Standard spot
1347	GJ1	GJ1-151	0.822	0.042	0.0979	0.0018	0.33946	10.2145	0.187805	0.0609	0.0026	0.35439	602.2	11	612	94	1.6	Standard spot
1348	GJ1	GJ1-152	0.789	0.041	0.0962	0.0017	0.30566	10.39501	0.1836956	0.0597	0.0026	0.29636	592	9.8	569	96	-4.0	Standard spot
1349	GJ1	GJ1-153	0.808	0.042	0.0971	0.0016	0.35784	10.29654	0.16963	0.0603	0.0026	0.18246	597.4	9.3	602	89	0.8	Standard spot
1350	GJ1	GJ1-154	0.818	0.042	0.0987	0.0017	0.31295	10.13171	0.1745077	0.0603	0.0026	0.28152	606.9	9.7	594	94	-2.2	Standard spot
1351	GJ1	GJ1-155	0.805	0.042	0.0982	0.0017	0.33749	10.1833	0.1762893	0.0595	0.0026	0.27851	603.5	9.8	563	95	-7.2	Standard spot
1352	GJ1	GJ1-156	0.799	0.041	0.0964	0.0016	0.18416	10.37237	0.1721376	0.06	0.0026	0.44233	593.2	9.4	582	94	-1.9	Standard spot
1353	GJ1	GJ1-157	0.813	0.042	0.0982	0.0018	0.62348	10.1833	0.1866593	0.0603	0.0026	0.49714	603.4	10	592	94	-1.9	Standard spot
1354	GJ1	GJ1-158	0.804	0.041	0.0971	0.0017	0.33718	10.29866	0.1803061	0.0599	0.0026	0.29051	597.2	9.9	583	97	-2.4	Standard spot
1355	GJ1	GJ1-160	0.808	0.042	0.0981	0.0017	0.34266	10.19368	0.1766489	0.0598	0.0026	0.29376	603.1	10	575	95	-4.9	Standard spot
1356	GJ1	GJ1-161	0.817	0.042	0.0983	0.0017	0.2935	10.17294	0.1759308	0.0603	0.0026	0.36857	604.5	9.8	599	96	-0.9	Standard spot
1357	GJ1	GJ1-163	0.809	0.041	0.0977	0.0017	0.28434	10.23541	0.1780983	0.06	0.0026	0.40812	600.5	10	589	94	-2.0	Standard spot
1358	GJ1	GJ1-164	0.798	0.041	0.0973	0.0016	0.22962	10.27327	0.1688641	0.0594	0.0026	0.31634	598.7	9.3	564	91	-6.2	Standard spot
1359	GJ1	GJ1-165	0.804	0.041	0.0971	0.0016	0.2864	10.29866	0.1696999	0.0601	0.0025	0.31664	597.5	9.5	590	94	-1.3	Standard spot
1360	GJ1	GJ1-166	0.802	0.041	0.0979	0.0016	0.25056	10.2145	0.1669378	0.0596	0.0026	0.38606	602.3	9.6	568	94	-6.0	Standard spot
1361	GJ1	GJ1_167	0.807	0.021	0.098	0.0021	0.22813	10.20721	0.2187928	0.0597	0.00097	0.27324	602.4	12	579	36	-4.0	Standard spot
1362	GJ1	GJ1_168	0.802	0.021	0.0972	0.0021	0.20656	10.29018	0.2223645	0.0601	0.0011	0.22531	597.8	12	589	39	-1.5	Standard spot
1363	GJ1	GJ1_169	0.814	0.022	0.0978	0.0021	0.19407	10.2239	0.2195092	0.0605	0.0011	0.23351	601.5	12	602	41	0.1	Standard spot
1364	GJ1	GJ1_170	0.804	0.022	0.0967	0.002	0.10286	10.34126	0.2138834	0.0603	0.0011	0.30467	595	12	593	41	-0.3	Standard spot
1365	GJ1	GJ1_171	0.814	0.021	0.0989	0.0021	0.2176	10.11225	0.2147408	0.06	0.001	0.28546	607.8	13	594	38	-2.3	Standard spot
1366	GJ1	GJ1_172	0.812	0.023	0.0974	0.0021	0.075832	10.26483	0.2212703	0.0606	0.0013	0.36201	599.2	13	602	49	0.5	Standard spot
1367	GJ1	GJ1_173	0.804	0.021	0.0972	0.0021	0.058921	10.28383	0.2220902	0.06	0.0011	0.38519	598.1	12	581	41	-2.9	Standard spot
1368	GJ1	GJ1_174	0.811	0.024	0.0969	0.0021	0.28437	10.31566	0.2234669	0.0607	0.0012	0.21685	596.4	13	611	45	2.4	Standard spot
1369	GJ1	GJ1_175	0.813	0.022	0.0987	0.0021	0.069249	10.13274	0.215612	0.0599	0.0012	0.33127	606.7	12	576	42	-5.3	Standard spot
1370	GJ1	GJ1_176	0.8	0.022	0.097	0.0021	0.067242	10.3114	0.2232826	0.0601	0.0012	0.33031	597.1	12	584	43	-2.2	Standard spot
1371	GJ1	GJ1_177	0.804	0.024	0.096	0.0021	0.16906	10.42101	0.2280546	0.0608	0.0014	0.29952	590.6	12	610	49	3.2	Standard spot
1372	GJ1	GJ1_178	0.827	0.022	0.0998	0.0021	0.27657	10.02305	0.2109693	0.0603	0.001	0.20904	613	13	598	38	-2.5	Standard spot
1373	GJ1	GJ1_179	0.806	0.022	0.0976	0.0021	0.19996	10.24905	0.2205904	0.0599	0.0011	0.21406	600.1	12	578	41	-3.8	Standard spot
1374	GJ1	GJ1_180	0.801	0.025	0.0978	0.0022	0.318	10.22495	0.2300091	0.0595	0.0014	0.19984	601.5	13	564	52	-6.6	Standard spot
1375	GJ1	GJ1_181	0.798	0.023	0.0968	0.002	0.24029	10.32844	0.2133535	0.0599	0.0012	0.12026	595.7	12	577	44	-3.2	Standard spot
1376	GJ1	GJ1_182	0.799	0.021	0.0967	0.0021	0.21842	10.34554	0.2247635	0.0596	0.0011	0.2474	594.8	12	568	39	-4.7	Standard spot
1377	GJ1	GJ1_183	0.818	0.021	0.098	0.0021	0.15749	10.20929	0.2188822	0.0599	0.00097	0.31299	602.3	12	593	36	-1.6	Standard spot
1378	GJ1	GJ1_184	0.837	0.024	0.0983	0.0021	0.21931	10.17191	0.2172821	0.0611	0.0013	0.2223	604.4	12	622	46	2.8	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1379	GJ1	GJ1_185	0.822	0.021	0.0981	0.0021	0.098275	10.18953	0.2180355	0.0602	0.001	0.38759	603.4	12	592	36	-1.9	Standard spot
1380	GJ1	GJ1_186	0.835	0.023	0.1	0.0022	0.25517	10.001	0.220044	0.0599	0.0011	0.29011	614.2	13	590	38	-4.1	Standard spot
1381	GJ1	GJ1_187	0.797	0.02	0.0964	0.002	0.31111	10.37237	0.215172	0.0601	0.00081	0.22443	593.3	12	598	30	0.8	Standard spot
1382	GJ1	GJ1_188	0.788	0.022	0.0972	0.0022	0.075446	10.28807	0.2328575	0.0593	0.0012	0.41408	597.9	13	573	46	-4.3	Standard spot
1383	GJ1	GJ1_189	0.806	0.02	0.0971	0.002	0.20824	10.29972	0.2121685	0.0606	0.00091	0.31491	597.3	12	613	32	2.6	Standard spot
1384	GJ1	GJ1_190	0.814	0.02	0.0978	0.0021	0.34323	10.22286	0.2194643	0.0605	0.00085	0.19785	601.6	12	609	31	1.2	Standard spot
1385	GJ1	GJ1_191	0.809	0.019	0.0977	0.002	0.16108	10.24066	0.209742	0.0604	0.00083	0.33219	600.5	12	604	30	0.6	Standard spot
1386	GJ1	GJ1_192	0.817	0.022	0.0982	0.0021	0.25325	10.18226	0.2177248	0.0606	0.001	0.17623	603.9	12	616	37	2.0	Standard spot
1387	GJ1	GJ1_193	0.807	0.021	0.0973	0.002	0.22439	10.28278	0.211471	0.0602	0.00097	0.1468	598.2	12	594	34	-0.7	Standard spot
1388	GJ1	GJ1_194	0.805	0.021	0.0976	0.002	0.32987	10.2438	0.209871	0.0599	0.00091	0.1164	600.4	12	588	32	-2.1	Standard spot
1389	GJ1	GJ1_195	0.804	0.02	0.0981	0.0021	0.16618	10.19576	0.2183023	0.0595	0.00085	0.33808	603.1	12	581	31	-3.8	Standard spot
1390	GJ1	GJ1_196	0.818	0.02	0.0975	0.002	0.11748	10.25326	0.2102585	0.0608	0.00092	0.34115	600.3	12	625	31	4.0	Standard spot
1391	GJ1	GJ1_197	0.802	0.02	0.0974	0.0021	0.18888	10.27116	0.2215431	0.0598	0.0009	0.32505	598.9	12	581	33	-3.1	Standard spot
1392	GJ1	GJ1_198	0.806	0.021	0.0973	0.002	0.10382	10.28172	0.2114275	0.0601	0.001	0.34669	598.3	12	593	36	-0.9	Standard spot
1393	GJ1	GJ1_199	0.814	0.02	0.0981	0.002	0.27028	10.1916	0.2077375	0.0599	0.0009	0.18117	603.4	12	593	33	-1.8	Standard spot
1394	GJ1	GJ1_200	0.821	0.021	0.098	0.0021	0.2592	10.20304	0.2186143	0.0605	0.00089	0.25389	602.7	12	609	32	1.0	Standard spot
1395	GJ1	GJ1_201	0.811	0.02	0.0974	0.002	0.30827	10.26378	0.2106903	0.0601	0.0009	0.19029	599.3	12	600	31	0.1	Standard spot
1396	GJ1	GJ1_202	0.822	0.021	0.0983	0.002	0.23531	10.16984	0.2068511	0.0608	0.00092	0.21918	604.5	12	618	33	2.2	Standard spot
1397	GJ1	GJ1_203	0.8	0.02	0.0971	0.002	0.19737	10.29972	0.2121685	0.0598	0.00093	0.24575	597.3	12	585	33	-2.1	Standard spot
1398	GJ1	GJ1_204	0.799	0.021	0.0971	0.002	0.19807	10.30397	0.2123435	0.0599	0.00096	0.23392	597	12	588	35	-1.5	Standard spot
1399	GJ1	GJ1_205	0.798	0.02	0.0978	0.0021	0.22569	10.23018	0.2197788	0.0597	0.00092	0.23037	601.2	12	579	34	-3.8	Standard spot
1400	GJ1	GJ1_206	0.8	0.02	0.0971	0.002	0.20956	10.29654	0.2120375	0.0601	0.00086	0.27042	597.4	12	598	31	0.1	Standard spot
1401	GJ1	GJ1_207	0.813	0.02	0.0981	0.0021	0.28155	10.19576	0.2183023	0.0603	0.00084	0.19965	603.1	12	600	30	-0.5	Standard spot
1402	GJ1	GJ1_208	0.8	0.02	0.0974	0.002	0.064293	10.27116	0.2109934	0.0599	0.00098	-0.05139	598.8	12	581	35	-3.1	Standard spot
1403	GJ1	GJ1_209	0.815	0.02	0.0975	0.002	0.22678	10.26062	0.2105606	0.0607	0.00086	0.27447	599.5	12	619	30	3.2	Standard spot
1404	GJ1	GJ1_210	0.816	0.022	0.0991	0.0021	0.30151	10.08776	0.2137022	0.0596	0.00099	0.16087	609.2	12	574	35	-6.1	Standard spot
1405	GJ1	GJ1_211	0.802	0.02	0.0968	0.0021	0.15868	10.33165	0.2241601	0.0599	0.00096	0.33279	595.5	12	586	34	-1.6	Standard spot
1406	GJ1	GJ1_212	0.812	0.02	0.0974	0.0021	0.21478	10.2701	0.2214976	0.0601	0.00085	0.29955	598.9	12	600	32	0.2	Standard spot
1407	GJ1	GJ1_213	0.81	0.02	0.0975	0.0021	0.14131	10.2522	0.2207262	0.06	0.00092	0.37883	599.9	12	591	33	-1.5	Standard spot
1408	GJ1	GJ1_214	0.822	0.021	0.0977	0.0021	0.20413	10.23541	0.2200038	0.0608	0.00096	0.27714	600.8	12	620	34	3.1	Standard spot
1409	GJ1	GJ1-1	0.809	0.023	0.0967	0.0024	0.32467	10.34126	0.2566601	0.0608	0.0017	0.44605	595	14	601	63	1.0	Standard spot
1410	GJ1	GJ1-3	0.8	0.023	0.0966	0.0022	0.29372	10.35197	0.2357591	0.0602	0.0017	0.37267	594.1	13	577	64	-3.0	Standard spot
1411	GJ1	GJ1-4	0.802	0.026	0.0973	0.0021	0.38936	10.27749	0.2218164	0.0599	0.0017	0.15497	598.6	13	574	62	-4.3	Standard spot
1412	GJ1	GJ1-5	0.839	0.027	0.0985	0.0023	0.33173	10.15228	0.2370584	0.0617	0.0019	0.33603	607	14	627	67	3.2	Standard spot
1413	GJ1	GJ1-6	0.828	0.027	0.099	0.0023	0.34851	10.10101	0.2346699	0.06	0.0018	0.28499	609	14	576	69	-5.7	Standard spot
1414	GJ1	GJ1-7	0.808	0.026	0.0976	0.0023	0.39307	10.2459	0.2414506	0.0601	0.0018	0.21786	600	14	583	66	-2.9	Standard spot
1415	GJ1	GJ1-8	0.834	0.026	0.0977	0.0021	0.33445	10.23541	0.2200038	0.0613	0.0017	0.26074	600.6	13	644	61	6.7	Standard spot
1416	GJ1	GJ1-9	0.823	0.025	0.0971	0.0021	0.2285	10.29866	0.2227311	0.0609	0.0018	0.40294	597.5	12	612	66	2.4	Standard spot
1417	GJ1	GJ1-10	0.807	0.025	0.0979	0.0023	0.35708	10.2145	0.239973	0.0597	0.0017	0.30554	602	13	563	63	-6.9	Standard spot
1418	GJ1	GJ1-12	0.802	0.025	0.0969	0.0022	0.32071	10.31992	0.2343015	0.0604	0.0018	0.30951	596.2	13	584	66	-2.1	Standard spot
1419	GJ1	GJ1-13	0.817	0.025	0.097	0.0021	0.017382	10.30928	0.2231906	0.0613	0.002	0.52174	596.5	13	609	69	2.1	Standard spot
1420	GJ1	GJ1-14	0.791	0.027	0.0958	0.0023	0.43759	10.43841	0.2506091	0.0599	0.0019	0.20626	589	13	563	68	-4.6	Standard spot
1421	GJ1	GJ1-15	0.798	0.027	0.0956	0.0025	0.5312	10.46025	0.2735421	0.0604	0.0018	0.10917	588	15	586	67	-0.3	Standard spot
1422	GJ1	GJ1-16	0.83	0.026	0.0985	0.0022	0.41195	10.15228	0.2267515	0.0607	0.0017	0.14922	605.7	13	616	59	1.7	Standard spot
1423	GJ1	GJ1-17	0.811	0.025	0.0961	0.0022	0.36574	10.40583	0.2382187	0.0612	0.0017	0.3113	591.5	13	615	62	3.8	Standard spot
1424	GJ1	GJ1-18	0.825	0.026	0.098	0.0021	0.3849	10.20408	0.2186589	0.0615	0.0018	0.21703	602.5	12	623	64	3.3	Standard spot
1425	GJ1	GJ1-20	0.803	0.025	0.0965	0.0022	0.30519	10.36269	0.236248	0.0603	0.0018	0.33914	593.8	13	580	66	-2.4	Standard spot
1426	GJ1	GJ1-21	0.819	0.023	0.0968	0.0021	0.33864	10.33058	0.2241138	0.0616	0.0017	0.31247	595.6	13	641	57	7.1	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1427	GJ1	GJ1-23	0.816	0.026	0.0984	0.0025	0.39971	10.1626	0.2581962	0.06	0.0018	0.35884	605	15	580	63	-4.3	Standard spot
1428	GJ1	GJ1-24	0.825	0.026	0.0994	0.0023	0.46291	10.06036	0.232785	0.0605	0.0016	0.17027	610.9	13	596	59	-2.5	Standard spot
1429	GJ1	GJ1-25	0.816	0.026	0.0994	0.0024	0.25819	10.06036	0.2429061	0.0594	0.0018	0.3566	610	14	563	71	-8.3	Standard spot
1430	GJ1	GJ1-81	0.81	0.023	0.0975	0.0025	0.45434	10.25641	0.2629849	0.0601	0.0016	0.35483	599	14	590	60	-1.5	Standard spot
1431	GJ1	GJ1-28	0.813	0.024	0.0991	0.0026	0.47196	10.09082	0.2647439	0.0593	0.0015	0.37458	609	15	555	57	-9.7	Standard spot
1432	GJ1	GJ1-29	0.816	0.027	0.0961	0.0023	0.35918	10.40583	0.2490469	0.0617	0.0019	0.30019	591	14	625	68	5.4	Standard spot
1433	GJ1	GJ1-30	0.814	0.026	0.0985	0.0025	0.38052	10.15228	0.2576722	0.0599	0.0018	0.37247	605	14	582	65	-4.0	Standard spot
1434	GJ1	GJ1-31	0.801	0.024	0.0963	0.0023	0.33951	10.38422	0.2480135	0.06	0.0017	0.42747	593	14	581	63	-2.1	Standard spot
1435	GJ1	GJ1-32	0.808	0.026	0.097	0.0023	0.45783	10.30928	0.2444468	0.0601	0.0017	0.20168	596.5	13	585	63	-2.0	Standard spot
1436	GJ1	GJ1-33	0.813	0.023	0.0967	0.0021	0.1988	10.34126	0.2245776	0.0612	0.0018	0.41434	594.8	12	621	63	4.2	Standard spot
1437	GJ1	GJ1-34	0.82	0.025	0.0979	0.0024	0.33397	10.2145	0.2504066	0.0608	0.0018	0.35646	602	14	610	61	1.3	Standard spot
1438	GJ1	GJ1-35	0.788	0.023	0.0967	0.0024	0.28743	10.34126	0.2566601	0.0592	0.0018	0.4636	595	14	542	64	-9.8	Standard spot
1439	GJ1	GJ1-37	0.819	0.025	0.0987	0.0024	0.35258	10.13171	0.2463638	0.0601	0.0018	0.39098	606	14	575	66	-5.4	Standard spot
1440	GJ1	GJ1-38	0.809	0.024	0.0991	0.0022	0.39327	10.09082	0.2240141	0.0599	0.0017	0.27652	608.9	13	570	63	-6.8	Standard spot
1441	GJ1	GJ1-39	0.823	0.026	0.0982	0.0023	0.40734	10.1833	0.238509	0.0606	0.0017	0.24466	604	13	601	62	-0.5	Standard spot
1442	GJ1	GJ1-40	0.795	0.024	0.0961	0.0023	0.27246	10.40583	0.2490469	0.0604	0.0019	0.42558	591	14	583	67	-1.4	Standard spot
1443	GJ1	GJ1-41	0.799	0.024	0.0969	0.0025	0.24035	10.31992	0.2662517	0.0604	0.0019	0.47714	596	14	579	69	-2.9	Standard spot
1444	GJ1	GJ1-42	0.796	0.024	0.0961	0.0022	0.32779	10.40583	0.2382187	0.0598	0.0017	0.37327	591.6	13	565	63	-4.7	Standard spot
1445	GJ1	GJ1-44	0.805	0.026	0.0979	0.0026	0.32297	10.2145	0.2712739	0.0599	0.0019	0.38722	602	15	560	69	-7.5	Standard spot
1446	GJ1	GJ1-46	0.813	0.029	0.0966	0.0023	0.41074	10.35197	0.2464754	0.0608	0.002	0.17174	594	14	595	68	0.2	Standard spot
1447	GJ1	GJ1-47	0.811	0.029	0.0976	0.0025	0.42368	10.2459	0.2624463	0.0609	0.002	0.24562	600	15	595	73	-0.8	Standard spot
1448	GJ1	GJ1-48	0.83	0.028	0.0992	0.0023	0.13616	10.08065	0.2337246	0.0609	0.0021	0.38308	609.3	13	600	75	-1.5	Standard spot
1449	GJ1	GJ1-50	0.829	0.027	0.0999	0.0023	0.21979	10.01001	0.2304607	0.0598	0.002	0.40082	613	13	562	71	-9.1	Standard spot
1450	GJ1	GJ1-79	0.813	0.024	0.0958	0.0024	0.43632	10.43841	0.2615051	0.0615	0.0018	0.41269	590	14	639	65	7.7	Standard spot
1451	GJ1	GJ1-80	0.82	0.027	0.0983	0.0023	0.386	10.17294	0.238024	0.0604	0.0018	0.24836	604	13	585	64	-3.2	Standard spot
1452	GJ1	GJ1-77	0.793	0.024	0.0971	0.0022	0.20921	10.29866	0.2333373	0.0592	0.0018	0.39009	597.2	13	543	65	-10.0	Standard spot
1453	GJ1	GJ1-78	0.808	0.025	0.0969	0.0022	0.32805	10.31992	0.2343015	0.0606	0.0017	0.24095	595.8	13	592	63	-0.6	Standard spot
1454	GJ1	GJ1-75	0.831	0.027	0.0997	0.0022	0.27728	10.03009	0.221326	0.0605	0.0019	0.3101	612.2	13	599	68	-2.2	Standard spot
1455	GJ1	GJ1-76	0.808	0.026	0.0959	0.002	0.29878	10.42753	0.2174667	0.0609	0.0018	0.23447	590.1	12	602	66	2.0	Standard spot
1456	GJ1	GJ1-73	0.812	0.03	0.0977	0.0026	0.52525	10.23541	0.2723856	0.0597	0.0019	0.16418	601	15	563	71	-6.7	Standard spot
1457	GJ1	GJ1-74	0.822	0.026	0.0998	0.0023	0.42384	10.02004	0.2309228	0.0597	0.0017	0.2035	613.2	13	562	60	-9.1	Standard spot
1458	GJ1	GJ1-69	0.825	0.025	0.0982	0.0024	0.27559	10.1833	0.248879	0.0614	0.0019	0.41496	604	14	617	67	2.1	Standard spot
1459	GJ1	GJ1-70	0.804	0.025	0.0976	0.0021	0.33227	10.2459	0.2204549	0.0595	0.0017	0.24843	599.9	12	562	64	-6.7	Standard spot
1460	GJ1	GJ1-67	0.81	0.025	0.0978	0.0021	0.31053	10.22495	0.2195541	0.06	0.0018	0.27413	601.5	12	573	64	-5.0	Standard spot
1461	GJ1	GJ1-68	0.822	0.025	0.0978	0.0021	0.22025	10.22495	0.2195541	0.0608	0.0018	0.35479	601.2	12	608	66	1.1	Standard spot
1462	GJ1	GJ1-65	0.804	0.025	0.0954	0.0024	0.33184	10.48218	0.2637026	0.0614	0.0019	0.42043	587	14	617	67	4.9	Standard spot
1463	GJ1	GJ1-66	0.818	0.027	0.098	0.0026	0.33162	10.20408	0.2707205	0.0606	0.002	0.39554	602	15	590	71	-2.0	Standard spot
1464	GJ1	GJ1-63	0.818	0.025	0.0974	0.0022	0.15183	10.26694	0.2319021	0.0609	0.0019	0.46343	598.9	13	617	68	2.9	Standard spot
1465	GJ1	GJ1-64	0.804	0.024	0.0974	0.0021	0.38664	10.26694	0.2213611	0.06	0.0017	0.21534	598.7	13	582	64	-2.9	Standard spot
1466	GJ1	GJ1-61	0.806	0.026	0.0974	0.0022	0.19639	10.26694	0.2319021	0.0599	0.0019	0.40431	600.2	13	561	70	-7.0	Standard spot
1467	GJ1	GJ1-62	0.815	0.024	0.0971	0.0021	0.31271	10.29866	0.2227311	0.0608	0.0017	0.26753	597.4	12	605	60	1.3	Standard spot
1468	GJ1	GJ1-59	0.822	0.024	0.0975	0.002	0.32533	10.25641	0.2103879	0.0611	0.0016	0.26213	599.8	12	615	59	2.5	Standard spot
1469	GJ1	GJ1-60	0.816	0.024	0.0968	0.0021	0.26625	10.33058	0.2241138	0.0612	0.0017	0.36976	595.6	13	618	60	3.6	Standard spot
1470	GJ1	GJ1-57	0.822	0.028	0.0988	0.0024	0.3654	10.12146	0.2458654	0.0606	0.0019	0.2469	607	14	587	69	-3.4	Standard spot
1471	GJ1	GJ1-58	0.821	0.024	0.0976	0.0021	0.30737	10.2459	0.2204549	0.061	0.0017	0.29325	600.4	12	609	60	1.4	Standard spot
1472	GJ1	GJ1-56	0.813	0.027	0.0981	0.0023	0.34515	10.19368	0.2389956	0.0601	0.0018	0.27187	603	13	574	67	-5.1	Standard spot
1473	GJ1	GJ1-53	0.817	0.025	0.0966	0.002	0.22903	10.35197	0.2143264	0.0611	0.0018	0.34237	594.5	12	620	64	4.1	Standard spot
1474	GJ1	GJ1-54	0.808	0.025	0.0975	0.0022	0.35262	10.25641	0.2314267	0.0601	0.0017	0.23345	599.5	13	585	60	-2.5	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1475	GJ1	GJ1-51	0.802	0.024	0.0975	0.0019	0.21106	10.25641	0.1998685	0.0596	0.0018	0.26538	599.8	11	557	65	-7.7	Standard spot
1476	GJ1	GJ1-52	0.8	0.024	0.0971	0.0019	0.27215	10.29866	0.2015186	0.0599	0.0016	0.19622	597.3	11	589	58	-1.4	Standard spot
1477	GJ1	GJ1-83	0.804	0.026	0.0976	0.0023	0.39985	10.2459	0.2414506	0.06	0.0017	0.25477	600	14	574	64	-4.5	Standard spot
1478	GJ1	GJ1-30-1	0.813	0.024	0.0976	0.0015	0.19194	10.2459	0.1574678	0.06	0.0014	0.41799	600.2	8.8	583	53	-3.0	Standard spot
1479	GJ1	GJ1-30-2	0.811	0.024	0.0976	0.0013	0.16472	10.2459	0.1364721	0.0599	0.0014	0.37008	600.2	7.9	580	51	-3.5	Standard spot
1480	GJ1	GJ1-30-3	0.806	0.024	0.0974	0.0013	0.059161	10.26589	0.137005	0.06	0.0015	0.40455	599.1	7.8	581	54	-3.1	Standard spot
1481	GJ1	GJ1-30-4	0.849	0.033	0.0984	0.0017	0.19362	10.1626	0.1755734	0.0624	0.0023	0.10601	604.9	9.9	662	75	8.6	Standard spot
1482	GJ1	GJ1-30-5	0.799	0.024	0.0977	0.0015	0.37679	10.23541	0.1571456	0.0593	0.0013	0.21682	600.6	8.6	566	50	-6.1	Standard spot
1483	GJ1	GJ1-30-6	0.8	0.023	0.0974	0.0014	0.17938	10.26694	0.1475741	0.0594	0.0013	0.39127	599.3	8	571	48	-5.0	Standard spot
1484	GJ1	GJ1-30-7	0.812	0.025	0.0974	0.0013	0.089962	10.26799	0.1370612	0.0606	0.0015	0.34938	599	7.5	612	52	2.1	Standard spot
1485	GJ1	GJ1-30-8	0.798	0.025	0.0979	0.0013	0.22257	10.21346	0.1356092	0.0592	0.0015	0.24501	602.1	7.9	553	54	-8.9	Standard spot
1486	GJ1	GJ1-30-9	0.829	0.027	0.0976	0.0014	0.18206	10.2459	0.1469699	0.0616	0.0016	0.33487	600.5	8.5	644	57	6.8	Standard spot
1487	GJ1	GJ1-30-10	0.806	0.025	0.0972	0.0014	0.20492	10.28807	0.148182	0.0604	0.0015	0.32247	597.8	8	597	55	-0.1	Standard spot
1488	GJ1	GJ1-30-11	0.808	0.024	0.0977	0.0013	0.21967	10.23123	0.1360814	0.0601	0.0014	0.25491	601.1	7.4	601	50	0.0	Standard spot
1489	GJ1	GJ1-30-12	0.807	0.026	0.0978	0.0014	0.22109	10.22495	0.1463694	0.06	0.0015	0.25322	601.3	8.2	582	57	-3.3	Standard spot
1490	GJ1	GJ1-30-13	0.808	0.026	0.0971	0.0014	0.22375	10.29866	0.1484874	0.0606	0.0016	0.24349	597	8.1	602	57	0.8	Standard spot
1491	GJ1	GJ1-30-14	0.813	0.026	0.0983	0.0013	0.24784	10.17294	0.1345353	0.06	0.0015	0.2034	604.1	7.9	588	55	-2.7	Standard spot
1492	GJ1	GJ1-30-15	0.804	0.025	0.0974	0.0014	0.23777	10.26694	0.1475741	0.0601	0.0015	0.30272	599.3	8.1	587	53	-2.1	Standard spot
1493	GJ1	GJ1-30-16	0.82	0.026	0.0976	0.0013	0.33596	10.25115	0.136612	0.0611	0.0015	0.11064	600	7.4	623	52	3.7	Standard spot
1494	GJ1	GJ1-30-17	0.825	0.025	0.0985	0.0013	0.22131	10.15228	0.1339895	0.0609	0.0015	0.2869	605.8	7.9	617	52	1.8	Standard spot
1495	GJ1	GJ1-30-18	0.807	0.024	0.097	0.0013	0.13399	10.30609	0.1380802	0.0608	0.0014	0.37322	596.9	7.7	614	51	2.8	Standard spot
1496	GJ1	GJ1-30-19	0.811	0.025	0.0972	0.0013	0.29643	10.29124	0.1376826	0.0608	0.0015	0.18374	597.7	7.8	611	52	2.2	Standard spot
1497	GJ1	GJ1-30-20	0.807	0.025	0.098	0.0014	0.167	10.20408	0.1457726	0.0599	0.0015	0.37645	602.4	8.5	583	56	-3.3	Standard spot
1498	GJ1	GJ1-30-21	0.817	0.025	0.0981	0.0014	0.1341	10.19368	0.1454756	0.0604	0.0015	0.34878	603.1	7.9	603	53	0.0	Standard spot
1499	GJ1	GJ1-30-22	0.8	0.026	0.097	0.0013	0.096595	10.30928	0.1381656	0.0598	0.0016	0.33863	596.7	7.8	576	62	-3.6	Standard spot
1500	GJ1	GJ1-30-23	0.81	0.026	0.0977	0.0013	0.23155	10.23646	0.1362207	0.0598	0.0015	0.23866	600.8	7.8	580	55	-3.6	Standard spot
1501	GJ1	GJ1-30-24	0.804	0.024	0.0978	0.0014	0.22259	10.22495	0.1463694	0.0597	0.0014	0.30002	601.4	8.1	575	51	-4.6	Standard spot
1502	GJ1	GJ1-30-25	0.815	0.025	0.0971	0.0014	0.036004	10.29866	0.1484874	0.0608	0.0016	0.43128	597.3	8.1	608	56	1.8	Standard spot
1503	GJ1	GJ1-30-26	0.804	0.025	0.0978	0.0013	0.19654	10.22704	0.1359701	0.0593	0.0014	0.27544	601.3	7.8	563	55	-6.8	Standard spot
1504	GJ1	GJ1-30-27	0.809	0.025	0.0978	0.0014	0.12816	10.22495	0.1463694	0.0598	0.0015	0.36365	601.5	8.1	573	56	-5.0	Standard spot
1505	GJ1	GJ1-30-28	0.799	0.025	0.0982	0.0013	0.11229	10.18849	0.1349468	0.059	0.0015	0.30907	603.5	7.5	550	58	-9.7	Standard spot
1506	GJ1	GJ1-30-29	0.799	0.025	0.0969	0.0013	0.24741	10.32205	0.1385081	0.0598	0.0015	0.25008	596	7.7	574	54	-3.8	Standard spot
1507	GJ1	GJ1-30-30	0.813	0.024	0.0972	0.0013	0.22573	10.2923	0.1377109	0.0607	0.0014	0.25455	597.7	7.6	612	50	2.3	Standard spot
1508	GJ1	GJ1-30-32	0.786	0.029	0.0965	0.0017	0.1518	10.36269	0.1825552	0.0591	0.0019	0.35717	593.8	10	549	72	-8.2	Standard spot
1509	GJ1	GJ1-25-2	0.85	0.031	0.0991	0.0018	0.10841	10.09082	0.1832843	0.0621	0.0023	0.53396	608.9	11	658	77	7.5	Standard spot
1510	GJ1	GJ1-25-3	0.812	0.028	0.0973	0.0016	0.27057	10.27749	0.169003	0.0604	0.0017	0.26623	598.3	9.4	599	59	0.1	Standard spot
1511	GJ1	GJ1-25-4	0.824	0.031	0.0984	0.0015	0.29225	10.1626	0.1549177	0.0603	0.0018	0.11351	604.7	8.7	589	66	-2.7	Standard spot
1512	GJ1	GJ1-25-5	0.816	0.028	0.0963	0.0015	0.30261	10.38422	0.1617479	0.0611	0.0017	0.21315	592.9	9.1	621	62	4.5	Standard spot
1513	GJ1	GJ1-25-6	0.824	0.028	0.0983	0.0015	0.16154	10.17294	0.1552331	0.0609	0.0018	0.31335	604.1	8.6	606	64	0.3	Standard spot
1514	GJ1	GJ1-25-7	0.81	0.026	0.097	0.0015	0.30785	10.30928	0.1594218	0.0603	0.0015	0.2368	596.9	8.7	598	58	0.2	Standard spot
1515	GJ1	GJ1-25-8	0.813	0.028	0.0981	0.0017	0.28223	10.19368	0.1766489	0.0601	0.0017	0.31565	603	10	585	60	-3.1	Standard spot
1516	GJ1	GJ1-25-9	0.818	0.027	0.0979	0.0015	0.15322	10.2145	0.1565042	0.0602	0.0017	0.36055	602	8.7	581	63	-3.6	Standard spot
1517	GJ1	GJ1-25-10	0.807	0.026	0.0969	0.0017	0.25511	10.31992	0.1810512	0.0603	0.0016	0.37336	596.3	9.8	596	57	-0.1	Standard spot
1518	GJ1	GJ1-25-12	0.822	0.027	0.0979	0.0015	0.17481	10.2145	0.1565042	0.061	0.0017	0.29652	601.8	8.5	609	61	1.2	Standard spot
1519	GJ1	GJ1-25-13	0.797	0.026	0.097	0.0016	0.12854	10.30928	0.17005	0.0598	0.0016	0.40865	596.5	9.3	575	61	-3.7	Standard spot
1520	GJ1	GJ1-25-14	0.811	0.028	0.0977	0.0015	0.16573	10.23541	0.1571456	0.0607	0.0018	0.31086	600.7	9	594	66	-1.1	Standard spot
1521	91500	91500_100	1.809	0.055	0.1749	0.0041	0.12242	5.717553	0.1340307	0.0751	0.0018	0.42915	1039	23	1052	50	1.2	Standard spot
1522	91500	91500_101	1.839	0.057	0.1781	0.004	0.14646	5.614823	0.126105	0.0755	0.0019	0.31542	1056	22	1051	51	-0.5	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1523	91500	91500_102	1.862	0.06	0.1792	0.004	0.18987	5.580357	0.1245615	0.0752	0.0018	0.22573	1062.4	22	1051	51	-1.1	Standard spot
1524	91500	91500_103	1.87	0.062	0.1774	0.004	0.26176	5.636979	0.1271021	0.0757	0.0019	0.16578	1053	22	1048	52	-0.5	Standard spot
1525	91500	91500_104	1.843	0.057	0.1768	0.0039	0.20487	5.656109	0.1247671	0.0748	0.0017	0.21676	1049	21	1038	47	-1.1	Standard spot
1526	91500	91500_105	1.859	0.058	0.1787	0.0041	0.27146	5.595971	0.1283911	0.0753	0.0017	0.21012	1059	22	1053	45	-0.6	Standard spot
1527	91500	91500_106	1.814	0.057	0.1756	0.004	0.17047	5.694761	0.1297212	0.0746	0.0019	0.28142	1043	22	1031	51	-1.2	Standard spot
1528	91500	91500_107	1.87	0.059	0.1776	0.0041	0.096076	5.630631	0.1299864	0.0759	0.002	0.35504	1053	22	1060	52	0.7	Standard spot
1529	91500	91500_108	1.803	0.072	0.1768	0.0051	0.11004	5.656109	0.163157	0.0747	0.0029	0.43365	1049	28	1040	79	-0.9	Standard spot
1530	91500	91500_109	1.865	0.054	0.1801	0.0039	0.098199	5.552471	0.1202367	0.0758	0.0016	0.34489	1067.2	21	1078	44	1.0	Standard spot
1531	91500	91500_110	1.845	0.054	0.1788	0.0039	0.083404	5.592841	0.1219915	0.0755	0.0016	0.36234	1060	21	1057	45	-0.3	Standard spot
1532	91500	91500_111	1.833	0.052	0.1791	0.004	0.056816	5.583473	0.1247007	0.0747	0.0016	0.12184	1061.7	22	1032	45	-2.9	Standard spot
1533	91500	91500_112	1.843	0.053	0.1795	0.004	0.18255	5.571031	0.1241455	0.0746	0.0016	0.32687	1064	22	1036	44	-2.7	Standard spot
1534	91500	91500_113	1.86	0.052	0.1812	0.004	0.16714	5.518764	0.121827	0.0749	0.0015	0.31017	1073.3	22	1043	41	-2.9	Standard spot
1535	91500	91500_114	1.875	0.058	0.1824	0.004	5.23E-05	5.482456	0.1202293	0.0749	0.0019	0.3918	1080	22	1041	51	-3.7	Standard spot
1536	91500	91500_115	1.848	0.054	0.1806	0.004	0.0088301	5.537099	0.1226378	0.0746	0.0017	0.43761	1069.9	22	1026	47	-4.3	Standard spot
1537	91500	91500_116	1.857	0.054	0.181	0.0038	0.19087	5.524862	0.1159916	0.0746	0.0016	0.21534	1072.4	21	1031	43	-4.0	Standard spot
1538	91500	91500_117	1.851	0.052	0.1789	0.0039	0.082986	5.589715	0.1218552	0.0752	0.0015	0.35735	1060.5	21	1048	42	-1.2	Standard spot
1539	91500	91500_118	1.811	0.053	0.1784	0.0041	0.19387	5.605381	0.1288232	0.0741	0.0017	0.32947	1058	22	1030	46	-2.7	Standard spot
1540	91500	91500_119	1.862	0.057	0.1821	0.0042	0.19338	5.491488	0.1266571	0.0743	0.0017	0.28821	1078	23	1029	48	-4.8	Standard spot
1541	91500	91500_120	1.864	0.054	0.1807	0.0039	0.14265	5.534034	0.1194396	0.0749	0.0016	0.3151	1070.6	21	1039	45	-3.0	Standard spot
1542	91500	91500_121	1.864	0.053	0.1798	0.0038	-0.056956	5.561735	0.117545	0.0751	0.0017	0.44017	1065.5	21	1043	46	-2.2	Standard spot
1543	91500	91500_122	1.857	0.052	0.1797	0.0039	0.14941	5.56483	0.1207726	0.0749	0.0015	0.33176	1065.1	21	1040	42	-2.4	Standard spot
1544	91500	91500_123	1.867	0.053	0.1819	0.004	0.13749	5.497526	0.1208912	0.0747	0.0016	0.34652	1077.2	22	1035	43	-4.1	Standard spot
1545	91500	91500_124	1.862	0.052	0.1808	0.0039	0.23248	5.530973	0.1193075	0.0749	0.0014	0.25841	1070.8	21	1053	39	-1.7	Standard spot
1546	91500	91500_125	1.872	0.052	0.183	0.0039	0.16113	5.464481	0.1164561	0.0748	0.0015	0.2334	1083.1	21	1044	40	-3.7	Standard spot
1547	91500	91500_126	1.866	0.053	0.1817	0.0039	0.10242	5.503577	0.1181285	0.0751	0.0016	0.35164	1076.1	22	1044	43	-3.1	Standard spot
1548	91500	91500_127	1.841	0.052	0.1809	0.0039	0.11425	5.527916	0.1191756	0.0742	0.0015	0.32634	1071.5	21	1026	43	-4.4	Standard spot
1549	91500	91500_128	1.863	0.054	0.1814	0.004	0.13907	5.512679	0.1215585	0.0748	0.0017	0.3155	1074	22	1035	45	-3.8	Standard spot
1550	91500	91500_129	1.863	0.056	0.1821	0.004	0.11276	5.491488	0.1206258	0.0744	0.0018	0.33839	1078	22	1022	50	-5.5	Standard spot
1551	91500	91500_88	1.851	0.06	0.1767	0.0041	0.099181	5.65931	0.1313139	0.0762	0.0021	0.35358	1049	22	1077	54	2.6	Standard spot
1552	91500	91500_89	1.861	0.059	0.1797	0.0041	0.10382	5.56483	0.1269661	0.0754	0.0019	0.31648	1065	22	1046	53	-1.8	Standard spot
1553	91500	91500_90	1.892	0.061	0.1792	0.0041	0.026056	5.580357	0.1276756	0.0766	0.002	0.39829	1062	22	1074	56	1.1	Standard spot
1554	91500	91500_91	1.848	0.063	0.1784	0.004	0.17265	5.605381	0.1256812	0.0752	0.002	0.23748	1058	22	1045	54	-1.2	Standard spot
1555	91500	91500_92	1.837	0.056	0.179	0.0041	0.20789	5.586592	0.127961	0.0744	0.0017	0.3322	1061	22	1024	46	-3.6	Standard spot
1556	91500	91500_93	1.814	0.061	0.1769	0.004	0.26072	5.652911	0.1278216	0.0744	0.0019	0.16569	1050	22	1041	51	-0.9	Standard spot
1557	91500	91500_94	1.804	0.072	0.179	0.0043	0.19036	5.586592	0.1342031	0.0732	0.0025	0.23395	1061	23	1007	64	-5.4	Standard spot
1558	91500	91500_95	1.83	0.057	0.1762	0.004	0.073158	5.675369	0.1288392	0.0753	0.0019	0.4005	1046	22	1060	49	1.3	Standard spot
1559	91500	91500_96	1.837	0.054	0.1798	0.0042	0.16063	5.561735	0.1299182	0.0741	0.0016	0.36705	1065	23	1031	46	-3.3	Standard spot
1560	91500	91500_97	1.786	0.073	0.1767	0.0045	0.2214	5.65931	0.144125	0.0731	0.0024	0.19999	1049	25	1053	65	0.4	Standard spot
1561	91500	91500_98	1.836	0.067	0.1795	0.0042	0.028239	5.571031	0.1303528	0.0746	0.0024	0.37078	1064	23	1031	64	-3.2	Standard spot
1562	91500	91500_99	1.814	0.059	0.1763	0.004	0.14974	5.67215	0.1286931	0.0749	0.002	0.27757	1047	22	1042	56	-0.5	Standard spot
1563	91500	91500-1	1.864	0.064	0.1792	0.0041	0.21042	5.580357	0.1276756	0.0752	0.0025	0.33581	1062	22	1039	72	-2.2	Standard spot
1564	91500	91500-1	1.844	0.039	0.1777	0.0019	0.22947	5.627462	0.0601698	0.0752	0.0017	0.26914	1054	11	1053	46	-0.1	Standard spot
1565	91500	91500-10	1.785	0.065	0.1774	0.0041	0.18718	5.636979	0.1302797	0.0727	0.0026	0.3385	1052	23	966	78	-8.9	Standard spot
1566	91500	91500-11	1.847	0.071	0.1797	0.0042	0.29133	5.56483	0.1300628	0.0745	0.0028	0.23824	1065	23	1005	75	-6.0	Standard spot
1567	91500	91500-11	1.821	0.037	0.1773	0.0017	-0.10784	5.640158	0.0540794	0.0744	0.0016	0.28972	1051.9	9.4	1030	45	-2.1	Standard spot
1568	91500	91500-12	1.815	0.065	0.177	0.0041	0.29084	5.649718	0.1308692	0.0737	0.0025	0.3167	1050	23	1000	70	-5.0	Standard spot
1569	91500	91500-12	1.829	0.033	0.1775	0.002	0.2062	5.633803	0.0634795	0.0745	0.0015	0.42088	1053	11	1041	41	-1.2	Standard spot
1570	91500	91500-13	1.82	0.048	0.1773	0.0023	0.2625	5.640158	0.0731662	0.0745	0.002	0.23553	1052	12	1030	55	-2.1	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1571	91500	91500-14	1.846	0.035	0.1789	0.0023	0.2094	5.589715	0.0718633	0.0752	0.0016	0.41974	1061	13	1050	44	-1.0	Standard spot
1572	91500	91500-14	1.815	0.066	0.1756	0.0043	0.34192	5.694761	0.1394503	0.0745	0.0026	0.29985	1045	23	1038	71	-0.7	Standard spot
1573	91500	91500-15	1.825	0.033	0.1772	0.0016	0.17222	5.643341	0.0509557	0.0748	0.0015	0.32273	1051.2	8.7	1046	39	-0.5	Standard spot
1574	91500	91500-15	1.863	0.065	0.1769	0.0045	0.2308	5.652911	0.1437993	0.0766	0.0027	0.47432	1049	25	1076	69	2.5	Standard spot
1575	91500	91500-16	1.862	0.064	0.179	0.0044	0.23261	5.586592	0.1373241	0.0757	0.0026	0.41141	1063	24	1053	72	-0.9	Standard spot
1576	91500	91500-16	1.832	0.041	0.1772	0.002	0.15106	5.643341	0.0636946	0.0746	0.0018	0.30882	1052	11	1045	48	-0.7	Standard spot
1577	91500	91500-17	1.693	0.059	0.1682	0.0038	0.22613	5.945303	0.1343172	0.073	0.0025	0.31247	1004	22	977	70	-2.8	Standard spot
1578	91500	91500-17	1.831	0.036	0.1779	0.0019	0.33297	5.621135	0.0600346	0.0746	0.0015	0.18412	1055	10	1042	41	-1.2	Standard spot
1579	91500	91500-18	1.833	0.035	0.1781	0.0021	0.29366	5.614823	0.0662051	0.0749	0.0015	0.31406	1056	11	1049	42	-0.7	Standard spot
1580	91500	91500-18	1.878	0.07	0.1759	0.0045	0.4491	5.685048	0.145439	0.0772	0.0025	0.19983	1043	25	1095	68	4.7	Standard spot
1581	91500	91500-19	1.831	0.034	0.1796	0.0019	0.16192	5.567929	0.0589035	0.074	0.0015	0.39289	1065	11	1024	42	-4.0	Standard spot
1582	91500	91500-19	1.845	0.07	0.1774	0.0044	0.36793	5.636979	0.1398123	0.0754	0.0027	0.20701	1052	24	1036	71	-1.5	Standard spot
1583	91500	91500-2	1.785	0.066	0.1769	0.0041	0.1763	5.652911	0.1310172	0.0734	0.0027	0.34919	1049	23	980	78	-7.0	Standard spot
1584	91500	91500-20	1.845	0.037	0.1778	0.0024	0.36395	5.624297	0.0759185	0.0754	0.0015	0.32901	1055	13	1061	42	0.6	Standard spot
1585	91500	91500-20	1.873	0.068	0.1773	0.0044	0.14723	5.640158	0.1399701	0.0768	0.0029	0.40961	1051	24	1072	77	2.0	Standard spot
1586	91500	91500-21	1.856	0.065	0.1808	0.0044	0.15336	5.530973	0.1346033	0.0749	0.0028	0.4062	1070	24	1012	78	-5.7	Standard spot
1587	91500	91500-21	1.84	0.039	0.178	0.0023	0.41628	5.617978	0.0725918	0.0748	0.0016	0.22798	1055	12	1047	44	-0.8	Standard spot
1588	91500	91500-22	1.853	0.038	0.1789	0.0025	0.31699	5.589715	0.0781123	0.0752	0.0017	0.36216	1061	14	1049	45	-1.1	Standard spot
1589	91500	91500-23	1.871	0.068	0.1809	0.0044	0.23925	5.527916	0.1344546	0.0751	0.0027	0.39599	1071	24	1020	76	-5.0	Standard spot
1590	91500	91500-23	1.837	0.035	0.1768	0.0018	0.17072	5.656109	0.0575848	0.0755	0.0016	0.35181	1049	10	1059	43	0.9	Standard spot
1591	91500	91500-24	1.818	0.063	0.177	0.0041	0.33274	5.649718	0.1308692	0.0743	0.0024	0.21252	1050	22	1020	65	-2.9	Standard spot
1592	91500	91500-24	1.825	0.042	0.1766	0.0018	0.20974	5.662514	0.0577153	0.0748	0.0018	0.25247	1048	10	1040	48	-0.8	Standard spot
1593	91500	91500-25	1.818	0.031	0.1784	0.002	0.15346	5.605381	0.0628406	0.074	0.0015	0.43377	1058	11	1026	40	-3.1	Standard spot
1594	91500	91500-25	1.895	0.075	0.1777	0.0042	0.15705	5.627462	0.133007	0.077	0.0031	0.29807	1054	23	1068	90	1.3	Standard spot
1595	91500	91500-25-1	1.871	0.079	0.1794	0.003	0.098641	5.574136	0.093213	0.0756	0.003	0.28947	1063	16	1049	77	-1.3	Standard spot
1596	91500	91500-25-10	1.873	0.072	0.1788	0.0034	0.1737	5.592841	0.1063516	0.0767	0.0028	0.34953	1060	19	1064	75	0.4	Standard spot
1597	91500	91500-25-11	1.814	0.076	0.1763	0.0031	0.22366	5.67215	0.0997372	0.0746	0.0028	0.20138	1046	17	1006	76	-4.0	Standard spot
1598	91500	91500-25-12	1.871	0.078	0.1746	0.0032	0.1747	5.727377	0.1049691	0.0778	0.0029	0.29504	1037	18	1100	76	5.7	Standard spot
1599	91500	91500-25-13	1.878	0.082	0.1753	0.0031	0.23932	5.704507	0.1008783	0.0775	0.0029	0.1737	1041	17	1101	77	5.4	Standard spot
1600	91500	91500-25-14	1.853	0.076	0.1776	0.0032	0.037262	5.630631	0.1014528	0.0763	0.0029	0.36105	1053	17	1059	78	0.6	Standard spot
1601	91500	91500-25-2	1.875	0.082	0.1802	0.0035	0.056532	5.54939	0.107785	0.0756	0.003	0.3457	1069	18	1049	83	-1.9	Standard spot
1602	91500	91500-25-3	1.907	0.096	0.18	0.0047	0.077969	5.555556	0.1450617	0.0771	0.004	0.4695	1066	26	1095	99	2.6	Standard spot
1603	91500	91500-25-4	1.937	0.089	0.1834	0.004	0.36459	5.452563	0.1189218	0.0764	0.003	0.12627	1085	22	1075	84	-0.9	Standard spot
1604	91500	91500-25-5	1.828	0.082	0.179	0.0033	0.084422	5.586592	0.102993	0.0742	0.0032	0.30312	1061	18	980	89	-8.3	Standard spot
1605	91500	91500-25-6	1.827	0.068	0.1787	0.0033	0.055623	5.595971	0.1033391	0.0744	0.0026	0.45915	1059	18	1007	73	-5.2	Standard spot
1606	91500	91500-25-7	1.814	0.076	0.1765	0.0027	0.14028	5.665722	0.0866711	0.0743	0.0028	0.25944	1048	15	1005	79	-4.3	Standard spot
1607	91500	91500-25-8	1.806	0.078	0.1748	0.0034	0.16614	5.720824	0.1112746	0.0749	0.003	0.28157	1038	18	1026	80	-1.2	Standard spot
1608	91500	91500-25-9	1.816	0.074	0.1794	0.0033	0.25287	5.574136	0.1025343	0.0732	0.0026	0.20306	1063	18	974	74	-9.1	Standard spot
1609	91500	91500-26	1.865	0.066	0.1786	0.004	0.23003	5.599104	0.1253999	0.0759	0.0027	0.31684	1059	22	1059	70	0.0	Standard spot
1610	91500	91500-26	1.846	0.038	0.1776	0.0019	0.021584	5.630631	0.0602376	0.0752	0.0016	0.41963	1053.4	11	1059	43	0.5	Standard spot
1611	91500	91500-27	1.852	0.069	0.1787	0.0045	0.24757	5.595971	0.140917	0.0751	0.0028	0.31542	1059	24	1021	76	-3.7	Standard spot
1612	91500	91500-27	1.847	0.038	0.1782	0.0021	0.25428	5.611672	0.0661308	0.0749	0.0015	0.26971	1057	12	1046	41	-1.1	Standard spot
1613	91500	91500-28	1.833	0.039	0.1782	0.0021	0.29617	5.611672	0.0661308	0.0746	0.0015	0.25659	1057	12	1042	40	-1.4	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1614	91500	91500-28	1.839	0.073	0.1759	0.0041	0.28904	5.685048	0.1325111	0.0755	0.0028	0.23962	1046	23	1048	76	0.2	Standard spot
1615	91500	91500-29	1.827	0.041	0.1775	0.0024	0.17513	5.633803	0.0761754	0.0748	0.0017	0.4145	1053	13	1039	47	-1.3	Standard spot
1616	91500	91500-29	1.861	0.067	0.177	0.0044	0.22888	5.649718	0.140445	0.0761	0.0027	0.36185	1050	24	1071	72	2.0	Standard spot
1617	91500	91500-3	1.835	0.036	0.1789	0.0019	0.12786	5.589715	0.0593653	0.0742	0.0016	0.40057	1061	10	1030	45	-3.0	Standard spot
1618	91500	91500-3	1.83	0.065	0.1765	0.0043	0.35069	5.665722	0.1380318	0.0746	0.0024	0.27996	1047	24	1026	70	-2.0	Standard spot
1619	91500	91500-30	1.795	0.063	0.1766	0.0043	0.15035	5.662514	0.1378755	0.0739	0.0026	0.41198	1048	23	1008	77	-4.0	Standard spot
1620	91500	91500-30	1.85	0.044	0.1799	0.0025	0.33408	5.558644	0.0772463	0.0747	0.0017	0.20278	1066	14	1040	45	-2.5	Standard spot
1621	91500	91500-30-1	1.826	0.064	0.1766	0.0027	0.13319	5.662514	0.086573	0.074	0.0022	0.27645	1048	15	1025	61	-2.2	Standard spot
1622	91500	91500-30-10	1.885	0.071	0.1835	0.0028	0.21584	5.449591	0.0831545	0.0748	0.0024	0.20691	1086	15	1054	63	-3.0	Standard spot
1623	91500	91500-30-11	1.797	0.062	0.1785	0.0028	0.10876	5.602241	0.0878783	0.0733	0.0022	0.33458	1059	15	992	60	-6.8	Standard spot
1624	91500	91500-30-12	1.861	0.067	0.1782	0.0027	0.14797	5.611672	0.0850253	0.0761	0.0024	0.26243	1057	15	1070	63	1.2	Standard spot
1625	91500	91500-30-13	1.805	0.063	0.1765	0.0027	0.032474	5.665722	0.0866711	0.0744	0.0023	0.41225	1048	15	1027	61	-2.0	Standard spot
1626	91500	91500-30-14	1.843	0.063	0.1768	0.0027	0.12219	5.656109	0.0863772	0.0761	0.0023	0.33585	1049	15	1073	60	2.2	Standard spot
1627	91500	91500-30-15	1.849	0.067	0.1783	0.003	0.19286	5.608525	0.0943667	0.0755	0.0024	0.3123	1057	16	1046	66	-1.1	Standard spot
1628	91500	91500-30-16	1.832	0.068	0.1802	0.003	0.23512	5.54939	0.0923872	0.0741	0.0024	0.2405	1068	16	1008	65	-6.0	Standard spot
1629	91500	91500-30-17	1.845	0.067	0.1781	0.0027	0.15226	5.614823	0.0851208	0.0755	0.0024	0.30586	1056	15	1056	61	0.0	Standard spot
1630	91500	91500-30-18	1.803	0.066	0.1761	0.0029	0.15173	5.678592	0.0935146	0.0751	0.0024	0.31623	1045	16	1039	66	-0.6	Standard spot
1631	91500	91500-30-19	1.768	0.069	0.175	0.0028	0.12913	5.714286	0.0914286	0.0737	0.0025	0.27867	1039	16	999	70	-4.0	Standard spot
1632	91500	91500-30-2	1.812	0.065	0.1763	0.0028	0.08662	5.67215	0.0900852	0.0743	0.0023	0.37681	1046	16	1030	61	-1.6	Standard spot
1633	91500	91500-30-20	1.825	0.063	0.1759	0.0028	0.085881	5.685048	0.0904954	0.0758	0.0023	0.36448	1044	15	1079	60	3.2	Standard spot
1634	91500	91500-30-21	1.832	0.062	0.178	0.0028	0.11239	5.617978	0.0883727	0.0749	0.0021	0.3729	1056	15	1047	57	-0.9	Standard spot
1635	91500	91500-30-23	1.825	0.067	0.1779	0.0026	0.091153	5.621135	0.0821526	0.0744	0.0024	0.31475	1055	14	1015	67	-3.9	Standard spot
1636	91500	91500-30-24	1.824	0.062	0.1766	0.0027	0.15672	5.662514	0.086573	0.0746	0.002	0.31842	1048	15	1046	57	-0.2	Standard spot
1637	91500	91500-30-25	1.849	0.067	0.1786	0.003	0.20834	5.599104	0.0940499	0.075	0.0023	0.28611	1059	16	1045	61	-1.3	Standard spot
1638	91500	91500-30-26	1.89	0.076	0.1829	0.003	0.029304	5.467469	0.0896796	0.075	0.0028	0.36028	1083	16	1014	80	-6.8	Standard spot
1639	91500	91500-30-27	1.835	0.067	0.1794	0.003	-0.003876	5.574136	0.093213	0.0747	0.0026	0.4348	1063	16	1026	69	-3.6	Standard spot
1640	91500	91500-30-28	1.929	0.071	0.1799	0.0028	0.24361	5.558644	0.0865159	0.0778	0.0024	0.18417	1066	15	1108	64	3.8	Standard spot
1641	91500	91500-30-29	1.875	0.067	0.1772	0.0028	0.16536	5.643341	0.0891724	0.077	0.0024	0.28384	1051	16	1087	63	3.3	Standard spot
1642	91500	91500-30-3	1.843	0.064	0.1764	0.0026	0.052077	5.668934	0.0835557	0.0755	0.0023	0.38464	1047	15	1048	63	0.1	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1643	91500	91500-30-30	1.814	0.065	0.1787	0.0031	0.079205	5.595971	0.0970762	0.0737	0.0024	0.42636	1059	17	1012	65	-4.6	Standard spot
1644	91500	91500-30-31	1.808	0.067	0.1764	0.0029	0.15285	5.668934	0.0931968	0.0745	0.0024	0.30239	1047	16	1017	66	-2.9	Standard spot
1645	91500	91500-30-32	1.789	0.068	0.176	0.0028	0.19255	5.681818	0.0903926	0.0738	0.0024	0.21188	1044	15	995	69	-4.9	Standard spot
1646	91500	91500-30-4	1.82	0.06	0.1764	0.0026	0.093785	5.668934	0.0835557	0.0744	0.002	0.36473	1047	14	1038	59	-0.9	Standard spot
1647	91500	91500-30-5	1.786	0.07	0.1768	0.0025	0.24412	5.656109	0.0799789	0.0731	0.0024	0.12183	1049	14	975	70	-7.6	Standard spot
1648	91500	91500-30-6	1.832	0.064	0.1761	0.0027	0.263	5.678592	0.0870653	0.0752	0.0022	0.21597	1045	15	1060	56	1.4	Standard spot
1649	91500	91500-30-7	1.843	0.067	0.1771	0.0028	0.17812	5.646527	0.0892732	0.0758	0.0023	0.23598	1051	15	1063	64	1.1	Standard spot
1650	91500	91500-30-8	1.844	0.067	0.1787	0.003	0.1652	5.595971	0.0939447	0.0752	0.0024	0.28956	1060	16	1046	65	-1.3	Standard spot
1651	91500	91500-30-9	1.852	0.07	0.1784	0.003	0.19425	5.605381	0.0942609	0.0757	0.0024	0.24205	1058	16	1060	65	0.2	Standard spot
1652	91500	91500-31	1.834	0.067	0.177	0.0043	0.32619	5.649718	0.137253	0.0745	0.0025	0.30672	1050	24	1043	71	-0.7	Standard spot
1653	91500	91500-31	1.877	0.043	0.1797	0.0025	0.2819	5.56483	0.0774183	0.0758	0.0017	0.30968	1065	14	1064	46	-0.1	Standard spot
1654	91500	91500-32	1.848	0.037	0.1791	0.002	0.32388	5.583473	0.0623503	0.0751	0.0014	0.22069	1061.8	11	1053	39	-0.8	Standard spot
1655	91500	91500-32	1.669	0.064	0.1631	0.0039	0.33428	6.131208	0.1466077	0.0737	0.0026	0.19893	973	21	1003	75	3.0	Standard spot
1656	91500	91500-33	1.799	0.06	0.1783	0.0041	0.30873	5.608525	0.1289678	0.0732	0.0023	0.30223	1057	22	993	65	-6.4	Standard spot
1657	91500	91500-33	1.866	0.037	0.1802	0.0019	0.24053	5.54939	0.0585119	0.0755	0.0015	0.28919	1067.6	10	1066	39	-0.2	Standard spot
1658	91500	91500-34	1.81	0.066	0.1784	0.0043	0.095461	5.605381	0.1351073	0.0738	0.0029	0.4544	1060	23	991	78	-7.0	Standard spot
1659	91500	91500-34	1.867	0.04	0.1795	0.0021	0.38496	5.571031	0.0651764	0.0759	0.0014	0.15893	1064	12	1078	37	1.3	Standard spot
1660	91500	91500-35	1.829	0.069	0.1787	0.0043	0.30825	5.595971	0.134654	0.0745	0.0026	0.25752	1059	23	1028	73	-3.0	Standard spot
1661	91500	91500-35	1.867	0.041	0.18	0.0023	0.24865	5.555556	0.0709877	0.0756	0.0016	0.33916	1067	12	1064	44	-0.3	Standard spot
1662	91500	91500-36	1.9	0.077	0.1832	0.0044	0.067067	5.458515	0.1310997	0.0757	0.0032	0.37458	1084	24	1017	90	-6.6	Standard spot
1663	91500	91500-36	1.861	0.041	0.1803	0.0023	0.31838	5.546312	0.0707516	0.0752	0.0016	0.28933	1068	13	1055	42	-1.2	Standard spot
1664	91500	91500-37	1.854	0.04	0.1808	0.0025	0.27198	5.530973	0.0764792	0.0749	0.0016	0.34101	1071	14	1046	43	-2.4	Standard spot
1665	91500	91500-38	1.838	0.038	0.1794	0.0023	0.3144	5.574136	0.0714633	0.0743	0.0014	0.31191	1063	13	1039	41	-2.3	Standard spot
1666	91500	91500-38	1.853	0.062	0.179	0.0042	0.34528	5.586592	0.1310821	0.0754	0.0024	0.28203	1061	23	1060	63	-0.1	Standard spot
1667	91500	91500-39	1.861	0.071	0.1788	0.0042	0.28217	5.592841	0.1313755	0.0756	0.0028	0.26785	1060	23	1034	75	-2.5	Standard spot
1668	91500	91500-39	1.866	0.04	0.1799	0.0025	0.19135	5.558644	0.0772463	0.0752	0.0016	0.43806	1066	14	1050	44	-1.5	Standard spot
1669	91500	91500-4	1.857	0.066	0.1794	0.0044	0.27878	5.574136	0.1367124	0.0751	0.0026	0.30081	1063	24	1029	72	-3.3	Standard spot
1670	91500	91500-4	1.859	0.039	0.1781	0.0019	0.20422	5.614823	0.0598999	0.0758	0.0018	0.32514	1056	11	1073	45	1.6	Standard spot
1671	91500	91500-40	1.838	0.061	0.1762	0.0043	0.33039	5.675369	0.1385022	0.0756	0.0024	0.35861	1045	23	1046	66	0.1	Standard spot
1672	91500	91500-40	1.873	0.038	0.1794	0.002	0.26345	5.574136	0.062142	0.0758	0.0015	0.27981	1064.3	11	1072	39	0.7	Standard spot
1673	91500	91500-41	1.875	0.038	0.1795	0.0021	0.2397	5.571031	0.0651764	0.0756	0.0015	0.31862	1064.1	11	1069	38	0.5	Standard spot
1674	91500	91500-41	1.896	0.068	0.1796	0.0044	0.24782	5.567929	0.1364081	0.0762	0.0027	0.32334	1064	24	1086	71	2.0	Standard spot
1675	91500	91500-42	1.889	0.041	0.1813	0.002	0.22977	5.51572	0.0608463	0.0752	0.0015	0.25311	1073.7	11	1056	42	-1.7	Standard spot
1676	91500	91500-43	1.862	0.074	0.1786	0.0044	0.32522	5.599104	0.1379399	0.076	0.0027	0.16739	1059	24	1048	73	-1.0	Standard spot
1677	91500	91500-43	1.843	0.059	0.1786	0.0023	0.097612	5.599104	0.0721049	0.0755	0.0022	0.30605	1059	13	1051	59	-0.8	Standard spot
1678	91500	91500-44	1.739	0.058	0.1753	0.004	0.1645	5.704507	0.1301656	0.0724	0.0025	0.41289	1041	22	953	72	-9.2	Standard spot
1679	91500	91500-44	1.913	0.061	0.182	0.0026	0.16018	5.494505	0.0784929	0.0759	0.0023	0.34944	1078	14	1061	61	-1.6	Standard spot
1680	91500	91500-45	1.858	0.072	0.1791	0.0043	0.24213	5.583473	0.1340532	0.0753	0.0029	0.25876	1061	24	1021	78	-3.9	Standard spot
1681	91500	91500-45	1.917	0.078	0.1779	0.0038	0.49231	5.621135	0.1200692	0.0764	0.0024	0.026993	1055	21	1112	63	5.1	Standard spot
1682	91500	91500-46	1.86	0.064	0.1793	0.0044	0.28302	5.577245	0.1368649	0.0752	0.0026	0.29005	1062	24	1031	70	-3.0	Standard spot
1683	91500	91500-46	1.885	0.055	0.1796	0.0027	0.24137	5.567929	0.0837049	0.0766	0.0019	0.27605	1064	15	1076	53	1.1	Standard spot
1684	91500	91500-47	1.796	0.068	0.1773	0.0041	0.10293	5.640158	0.1304267	0.0738	0.0029	0.40448	1052	23	979	79	-7.5	Standard spot
1685	91500	91500-47	1.865	0.074	0.1765	0.0031	0.22518	5.665722	0.0995113	0.0745	0.0026	0.22528	1047	17	1042	69	-0.5	Standard spot
1686	91500	91500-48	1.846	0.067	0.179	0.0041	0.24172	5.586592	0.127961	0.0749	0.0027	0.28846	1061	23	1030	71	-3.0	Standard spot
1687	91500	91500-48	1.844	0.051	0.1767	0.0024	0.30481	5.65931	0.0768667	0.0745	0.0017	0.31362	1048	13	1039	47	-0.9	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1688	91500	91500-49	1.864	0.07	0.1782	0.004	0.021758	5.611672	0.1259635	0.0761	0.003	0.42906	1058	23	1037	84	-2.0	Standard spot
1689	91500	91500-49	1.84	0.061	0.1799	0.0029	0.16322	5.558644	0.0896057	0.0757	0.0021	0.41402	1066	16	1066	56	0.0	Standard spot
1690	91500	91500-5	1.827	0.077	0.1773	0.0043	0.36969	5.640158	0.1367889	0.0746	0.0029	0.11318	1052	24	1001	81	-5.1	Standard spot
1691	91500	91500-5	1.839	0.038	0.1779	0.0026	0.14578	5.621135	0.0821526	0.0753	0.0019	0.49232	1057	15	1057	50	0.0	Standard spot
1692	91500	91500-50	1.895	0.076	0.1798	0.003	0.15191	5.561735	0.0927987	0.0753	0.0029	0.30268	1066	16	1036	81	-2.9	Standard spot
1693	91500	91500-50	1.839	0.072	0.1776	0.0044	0.19521	5.630631	0.1394976	0.075	0.0029	0.31614	1053	24	1032	79	-2.0	Standard spot
1694	91500	91500-51	1.86	0.071	0.1814	0.0044	0.11364	5.512679	0.1337144	0.0745	0.003	0.38629	1074	24	1007	81	-6.7	Standard spot
1695	91500	91500-51	1.88	0.072	0.1784	0.0037	0.24582	5.605381	0.1162551	0.0741	0.0027	0.27293	1058	20	1017	72	-4.0	Standard spot
1696	91500	91500-52	1.819	0.089	0.1806	0.0051	0.41041	5.537099	0.1563632	0.0761	0.0031	0.17559	1070	28	1063	83	-0.7	Standard spot
1697	91500	91500-53	1.923	0.065	0.1795	0.0033	0.24338	5.571031	0.1024201	0.0758	0.0023	0.33767	1064	18	1056	62	-0.8	Standard spot
1698	91500	91500-53	1.875	0.065	0.1792	0.0047	0.28376	5.580357	0.1463598	0.076	0.0027	0.42849	1062	26	1059	73	-0.3	Standard spot
1699	91500	91500-54	1.894	0.078	0.1821	0.0043	0.10176	5.491488	0.1296727	0.0753	0.0031	0.34786	1078	23	1035	86	-4.2	Standard spot
1700	91500	91500-54	1.762	0.071	0.1794	0.0038	0.36058	5.574136	0.1180698	0.074	0.0022	0.23109	1063	21	1035	58	-2.7	Standard spot
1701	91500	91500-55	1.854	0.073	0.1793	0.0043	0.092657	5.577245	0.1337543	0.0754	0.0031	0.38227	1062	23	1014	85	-4.7	Standard spot
1702	91500	91500-55	1.875	0.074	0.1817	0.0043	0.14673	5.503577	0.1302443	0.0762	0.0031	0.44699	1076	24	1059	84	-1.6	Standard spot
1703	91500	91500-56	1.934	0.086	0.1819	0.0042	0.19314	5.497526	0.1269357	0.0772	0.0034	0.19189	1077	23	1068	89	-0.8	Standard spot
1704	91500	91500-56	1.8	0.074	0.1782	0.0043	0.13965	5.611672	0.1354107	0.076	0.0027	0.31244	1056	24	1079	72	2.1	Standard spot
1705	91500	91500-57	1.842	0.061	0.1787	0.0043	0.20317	5.595971	0.134654	0.0758	0.0027	0.41243	1059	24	1053	70	-0.6	Standard spot
1706	91500	91500-57	1.898	0.06	0.1772	0.0033	0.32421	5.643341	0.1050961	0.0758	0.0021	0.329	1051	18	1070	59	1.8	Standard spot
1707	91500	91500-58	1.858	0.074	0.1813	0.0046	0.28402	5.51572	0.1399466	0.0741	0.0028	0.27021	1073	25	1001	79	-7.2	Standard spot
1708	91500	91500-58	1.843	0.062	0.1798	0.0037	0.35253	5.561735	0.1144517	0.0754	0.0022	0.23895	1065	20	1061	59	-0.4	Standard spot
1709	91500	91500-59	1.826	0.069	0.1785	0.0045	0.2664	5.602241	0.141233	0.0745	0.0027	0.31028	1058	24	1026	70	-3.1	Standard spot
1710	91500	91500-59	1.866	0.073	0.1748	0.0051	0.36853	5.720824	0.1669119	0.075	0.0025	0.41226	1038	28	1049	71	1.0	Standard spot
1711	91500	91500-6	1.849	0.066	0.1798	0.0046	0.18401	5.561735	0.1422913	0.0745	0.0027	0.42273	1065	25	1017	75	-4.7	Standard spot
1712	91500	91500-6	1.849	0.035	0.1779	0.0025	0.33468	5.621135	0.0789929	0.0756	0.0017	0.38979	1057	14	1057	45	0.0	Standard spot
1713	91500	91500-60	1.86	0.087	0.1846	0.0056	0.38138	5.417118	0.1643329	0.0763	0.0034	0.28047	1091	31	1057	89	-3.2	Standard spot
1714	91500	91500-61	1.873	0.076	0.1815	0.0045	0.22545	5.509642	0.1366027	0.0751	0.003	0.28862	1074	25	1021	82	-5.2	Standard spot
1715	91500	91500-61	1.846	0.057	0.1778	0.0027	0.29787	5.624297	0.0854083	0.0756	0.0019	0.26165	1054	15	1061	50	0.7	Standard spot
1716	91500	91500-62	1.873	0.065	0.1813	0.0041	0.14177	5.51572	0.124735	0.075	0.0026	0.4032	1073	22	1041	73	-3.1	Standard spot
1717	91500	91500-62	1.885	0.052	0.1806	0.0033	0.31015	5.537099	0.1011762	0.0766	0.002	0.4632	1071	18	1073	53	0.2	Standard spot
1718	91500	91500-63	1.878	0.072	0.18	0.0042	0.15595	5.555556	0.1296296	0.0758	0.0029	0.33875	1066	23	1032	81	-3.3	Standard spot
1719	91500	91500-63	1.847	0.074	0.1815	0.0052	0.47621	5.509642	0.157852	0.0762	0.0027	0.3527	1074	28	1057	73	-1.6	Standard spot
1720	91500	91500-64	1.812	0.072	0.1776	0.0038	0.14121	5.630631	0.1204752	0.0737	0.0028	0.23793	1053	21	995	81	-5.8	Standard spot
1721	91500	91500-64	1.877	0.032	0.1785	0.0025	0.29951	5.602241	0.0784628	0.0762	0.0011	0.35279	1058.6	14	1089	29	2.8	Standard spot
1722	91500	91500-65	1.818	0.068	0.1806	0.0046	0.19305	5.537099	0.1410335	0.0732	0.0028	0.4097	1069	25	975	79	-9.6	Standard spot
1723	91500	91500-65	1.838	0.036	0.1789	0.0028	0.38446	5.589715	0.0874858	0.0745	0.0012	0.31097	1061	15	1038	33	-2.2	Standard spot
1724	91500	91500-66	1.901	0.037	0.1811	0.0028	0.44431	5.521811	0.0853731	0.075	0.0011	0.25345	1073	15	1055	31	-1.7	Standard spot
1725	91500	91500-66	1.883	0.07	0.179	0.0046	0.24961	5.586592	0.1435661	0.0767	0.0029	0.37895	1060	25	1062	76	0.2	Standard spot
1726	91500	91500-67	1.882	0.037	0.1799	0.0027	0.35577	5.558644	0.083426	0.0751	0.0013	0.27384	1066	15	1054	33	-1.1	Standard spot
1727	91500	91500-67	1.869	0.074	0.1782	0.0039	0.22622	5.611672	0.1228144	0.076	0.0029	0.18626	1057	21	1050	79	-0.7	Standard spot
1728	91500	91500-68	1.815	0.067	0.178	0.0046	0.26273	5.617978	0.1451837	0.0743	0.0027	0.33101	1055	25	1011	75	-4.4	Standard spot
1729	91500	91500-68	1.844	0.041	0.1794	0.0031	0.1779	5.574136	0.0963201	0.0757	0.0017	0.49485	1063	17	1058	46	-0.5	Standard spot
1730	91500	91500-69	1.844	0.067	0.1766	0.0042	0.11691	5.662514	0.1346691	0.0764	0.0029	0.37023	1048	23	1054	77	0.6	Standard spot
1731	91500	91500-69	1.871	0.041	0.1798	0.0029	0.21378	5.561735	0.0897054	0.0761	0.0016	0.40747	1065	16	1082	43	1.6	Standard spot
1732	91500	91500-7	1.851	0.07	0.1797	0.0044	0.28162	5.56483	0.1362563	0.0748	0.0028	0.29045	1064	24	1024	75	-3.9	Standard spot
1733	91500	91500-7	1.821	0.032	0.1774	0.0016	0.31874	5.636979	0.0508408	0.0743	0.0013	0.21179	1052.8	8.6	1036	38	-1.6	Standard spot
1734	91500	91500-70	1.832	0.077	0.1789	0.0047	0.26164	5.589715	0.1468511	0.0746	0.0031	0.26354	1060	26	1003	83	-5.7	Standard spot
1735	91500	91500-70	1.832	0.043	0.1774	0.003	0.19422	5.636979	0.0953266	0.0747	0.0017	0.4489	1052	16	1034	47	-1.7	Standard spot

Appendix 3: LA-ICP-MS data for zircon geochronology

Oder	Sample	Analys. ID	Final207.235	Final207.235.pr2se	Final206.238	Final206.238.pr2se	Er.Cor.206.38vs7.35	Final238.206	Final238.206.prop2se	Final207.206	Final207.206.prop2se	Er.Cor._38.6vs7_6	FinalAge206_238	FinalAge206.238 pro2se	FinalAge207_206	FinalAge207.206 pr2se	Discordance %	Comments
1736	91500	91500-71	1.822	0.069	0.18	0.0044	0.21032	5.555556	0.1358025	0.0737	0.0028	0.29024	1066	24	978	79	-9.0	Standard spot
1737	91500	91500-71	1.837	0.047	0.1776	0.0031	0.41318	5.630631	0.0982824	0.0751	0.0016	0.19511	1055	17	1044	44	-1.1	Standard spot
1738	91500	91500-72	1.862	0.067	0.1817	0.0043	0.042925	5.503577	0.1302443	0.0748	0.0028	0.43532	1075	24	1011	78	-6.3	Standard spot
1739	91500	91500-72	1.849	0.044	0.1798	0.003	0.3485	5.561735	0.0927987	0.0742	0.0015	0.26513	1065	17	1037	41	-2.7	Standard spot
1740	91500	91500-73	1.814	0.048	0.179	0.0028	0.23045	5.586592	0.087388	0.0731	0.0017	0.24288	1061	15	1002	49	-5.9	Standard spot
1741	91500	91500-73	1.9	0.072	0.1806	0.0048	0.20558	5.537099	0.1471654	0.0769	0.0031	0.40577	1069	26	1057	82	-1.1	Standard spot
1742	91500	91500-74	1.871	0.044	0.1821	0.0031	0.29038	5.491488	0.093485	0.0757	0.0016	0.27948	1078	17	1078	41	0.0	Standard spot
1743	91500	91500-74	1.885	0.077	0.1783	0.0046	0.29305	5.608525	0.1446955	0.077	0.0031	0.28678	1057	25	1072	79	1.4	Standard spot
1744	91500	91500-75	1.857	0.047	0.1854	0.0032	0.29769	5.393743	0.0930959	0.074	0.0017	0.29711	1096	18	1019	47	-7.6	Standard spot
1745	91500	91500-75	1.896	0.065	0.18	0.0044	-0.035692	5.555556	0.1358025	0.0771	0.0031	0.54866	1066	24	1072	82	0.6	Standard spot
1746	91500	91500-76	1.69	0.06	0.1661	0.0041	0.28526	6.02047	0.1486088	0.0737	0.0025	0.32688	990	23	1007	74	1.7	Standard spot
1747	91500	91500-76	1.882	0.051	0.179	0.0037	0.28179	5.586592	0.115477	0.0768	0.0018	0.33191	1061	20	1091	46	2.7	Standard spot
1748	91500	91500-77	1.832	0.048	0.1789	0.0038	0.36648	5.589715	0.1187307	0.0745	0.0016	0.30688	1060	21	1035	44	-2.4	Standard spot
1749	91500	91500-77	1.905	0.073	0.181	0.0045	0.23504	5.524862	0.1373584	0.0764	0.0029	0.33265	1072	25	1061	78	-1.0	Standard spot
1750	91500	91500-78	1.843	0.049	0.1769	0.0036	0.20232	5.652911	0.1150395	0.0759	0.0017	0.39089	1050	20	1075	45	2.3	Standard spot
1751	91500	91500-79	1.725	0.066	0.1724	0.0048	0.33229	5.800464	0.1614978	0.073	0.0027	0.31605	1024	26	975	75	-5.0	Standard spot
1752	91500	91500-79	1.869	0.052	0.1802	0.004	0.36065	5.54939	0.1231829	0.0755	0.0017	0.30507	1067	22	1060	47	-0.7	Standard spot
1753	91500	91500-8	1.819	0.034	0.1788	0.0019	0.16467	5.592841	0.0594318	0.074	0.0016	0.39065	1060	11	1030	41	-2.9	Standard spot
1754	91500	91500-8	1.835	0.063	0.1773	0.0043	0.15215	5.640158	0.1367889	0.0746	0.0025	0.44002	1052	24	1053	68	0.1	Standard spot
1755	91500	91500-80	1.856	0.05	0.1803	0.0041	0.39904	5.546312	0.1261225	0.075	0.0017	0.36023	1068	22	1048	44	-1.9	Standard spot
1756	91500	91500-81	1.869	0.05	0.1818	0.0039	0.38748	5.50055	0.1179986	0.0748	0.0015	0.26959	1076	21	1045	42	-3.0	Standard spot
1757	91500	91500-82	1.823	0.048	0.1777	0.0039	0.34045	5.627462	0.1235065	0.0748	0.0016	0.36309	1053	21	1049	42	-0.4	Standard spot
1758	91500	91500-83	1.842	0.053	0.1793	0.0039	0.35528	5.577245	0.1213121	0.0744	0.0017	0.23321	1063	22	1038	46	-2.4	Standard spot
1759	91500	91500-84	1.849	0.056	0.1782	0.004	0.43124	5.611672	0.1259635	0.0751	0.0018	0.26903	1056	22	1045	49	-1.1	Standard spot
1760	91500	91500-85	1.84	0.05	0.1771	0.0038	0.33061	5.646527	0.1211564	0.0754	0.0017	0.31027	1051	21	1063	43	1.1	Standard spot
1761	91500	91500-86	1.815	0.047	0.1782	0.0039	0.31288	5.611672	0.1228144	0.074	0.0016	0.39394	1056	22	1016	44	-3.9	Standard spot
1762	91500	91500-87	1.838	0.051	0.1793	0.004	0.39943	5.577245	0.1244226	0.0743	0.0017	0.27695	1063	22	1028	45	-3.4	Standard spot
1763	91500	91500-9	1.84	0.069	0.1762	0.0044	0.39863	5.675369	0.1417232	0.0754	0.0025	0.25002	1048	23	1055	69	0.7	Standard spot
1764	91500	91500-9	1.84	0.032	0.1771	0.0019	0.19116	5.646527	0.0605782	0.0757	0.0015	0.37018	1051	10	1071	39	1.9	Standard spot

Appendix 4

Cathodoluminescence images for zircon geochronology

Appendix 4 contains the following data sets:

- Cathodoluminescence images for zircon grains from the 16 dated samples (table below)
- Circles marked on zircon grains show analysis locations and laser beam size
- (near-) concordant analyses for the youngest population are indicated with an ID

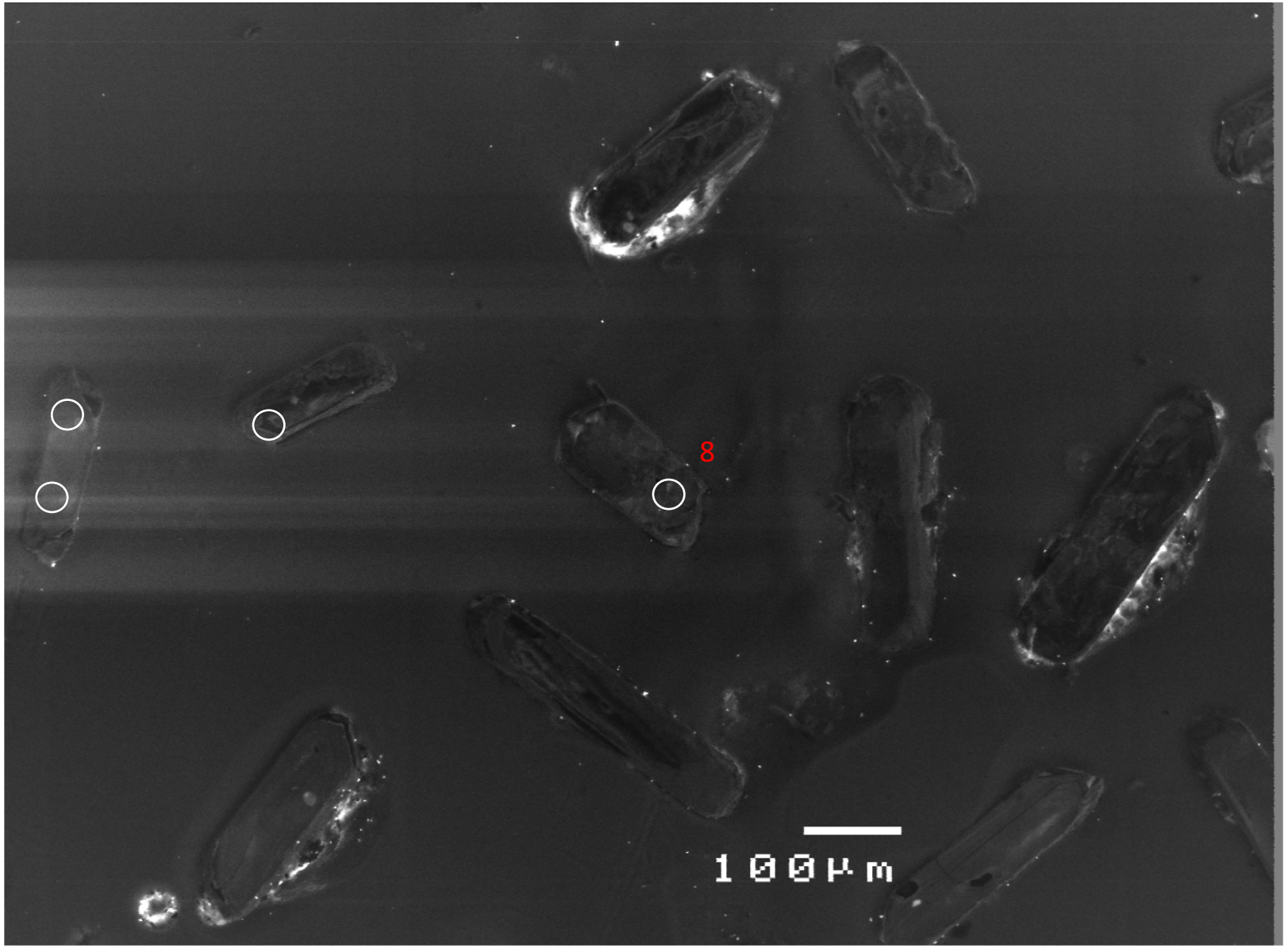
Sample ID	Zone 54-GDA94		Age (Ma)	Age comment
	East (m)	North (m)		
OTG	378,568	7,602,967	1857±5	n=20; MSWQ=0.96
THG2	385,138	7,606,776	1850±6	n=10; MSWD=1.6
SMG	381,233	7,604,274	1790±7	n=21; MSWD=0.42
THG1	385,156	7,606,851	1777±3	n=38; MSWD=1.04
THG4	386,702	7,603,938	1777±14	n=1
THG3	389,258	7,605,939	1778±10	n=7; MSWD=1.5
THM27	388,842	7,605,934	1771±5	n=43; MSWD=0.82
THM04	388,850	7,605,950	1789±16	n=5; MSWD=1.18
MG	386,650	7,600,566	1773±7	n=8; MSWD=1.2
TH11	388,869	7,605,868	1772±19	n=4; MSWD=2.1
TH141	388,867	7,606,015	1522±3	n=81; MSWD=0.79
TH108	388,728	7,605,910	1524±6	n=27; MSWD=1.14
TH140	388,607	7,605,915	1530±19	n=3; MSWD=0.2
TH66	388,752	7,605,976	1517±45	n=3; MSWD=0.021
TH13	388,842	7,605,827	1781±6	n=19; MSWD = 1.2
TH01	388,913	7,605,912	1841±15	n=11, MSWD = 0.74

Sample OTG

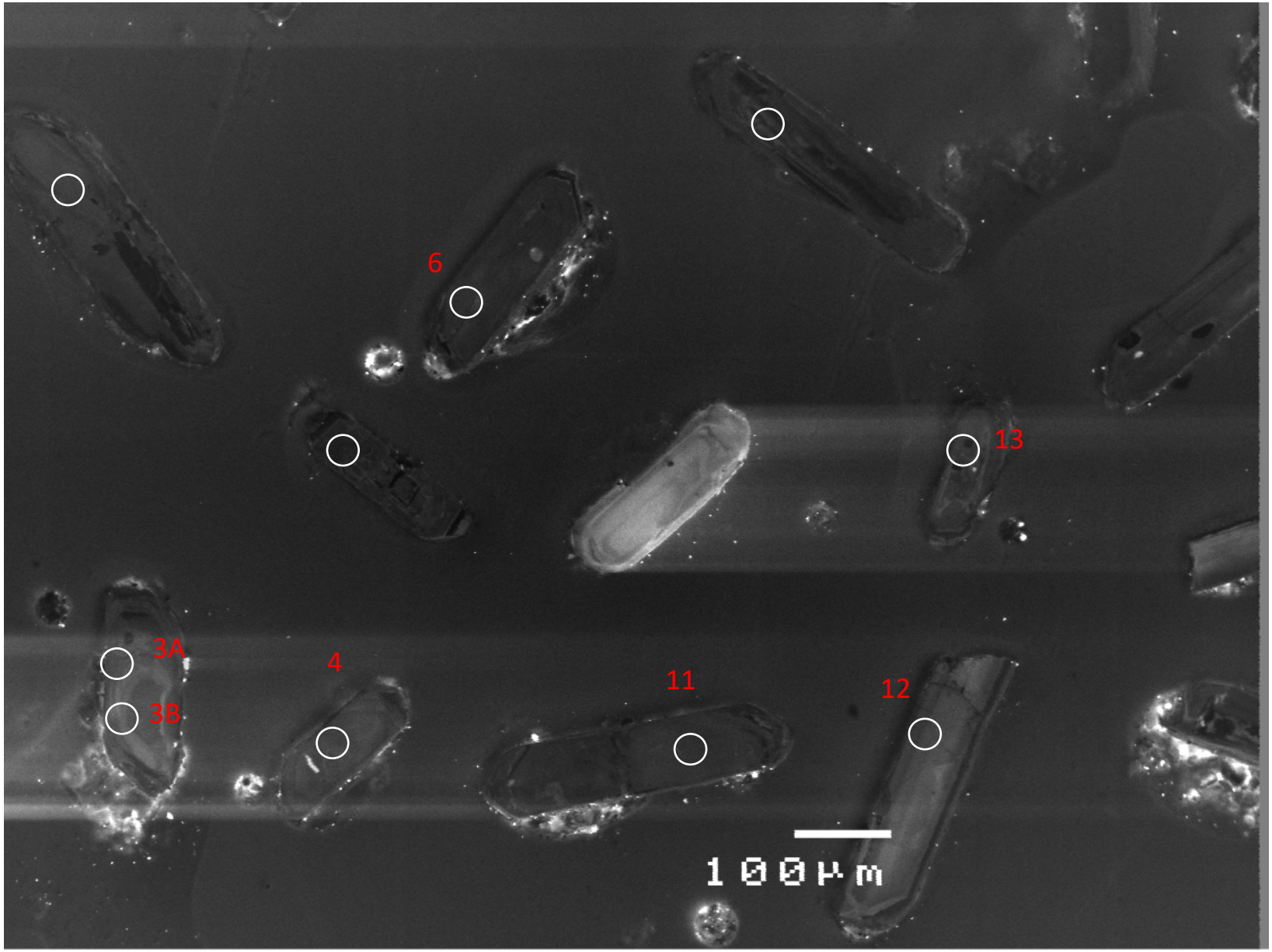
Marking 20 analyses (near-)concordant ages of the youngest population (circles with analysis ID)

Appendix 4: Cathodoluminescence images for zircon

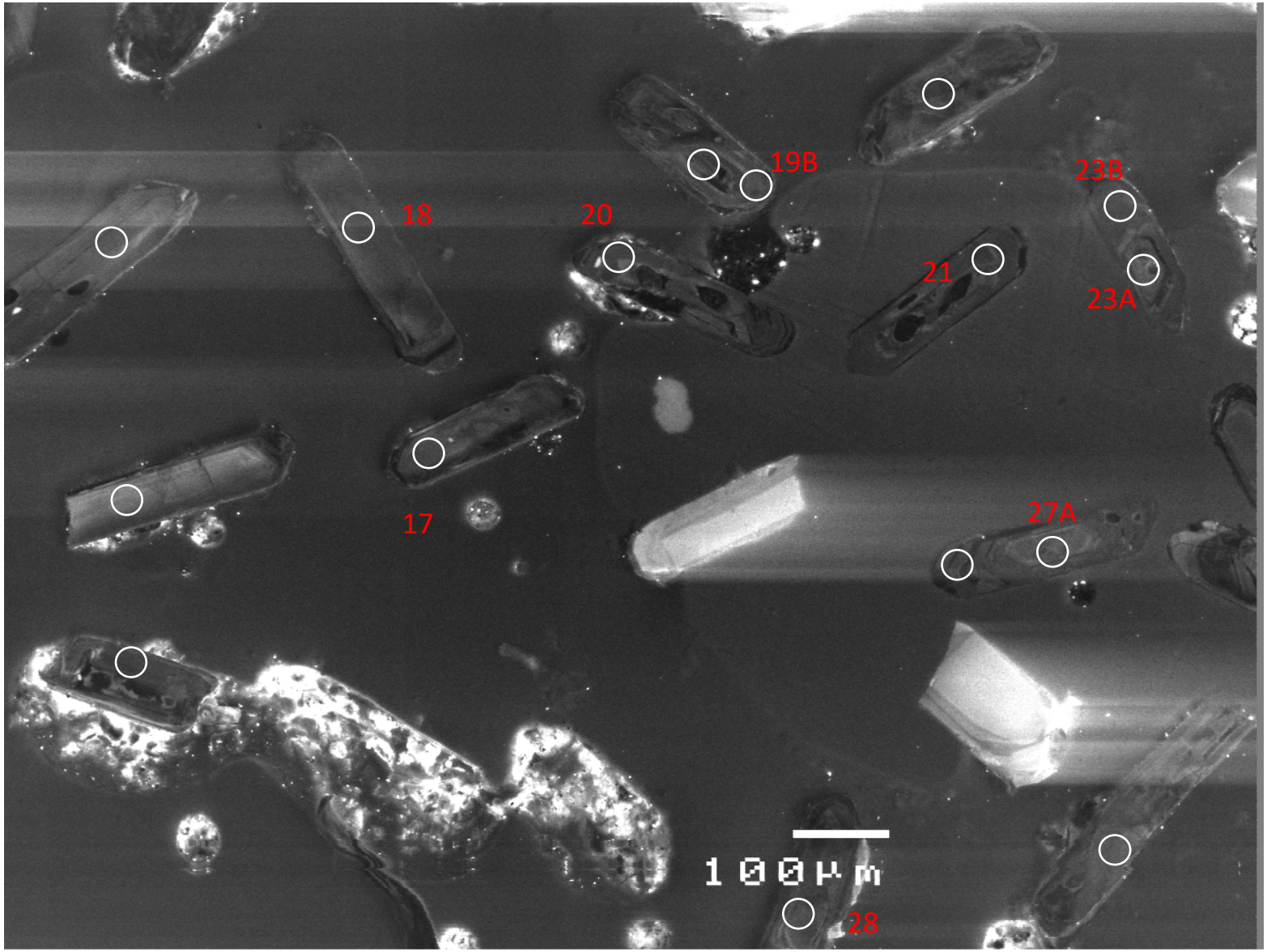
Sample OTG



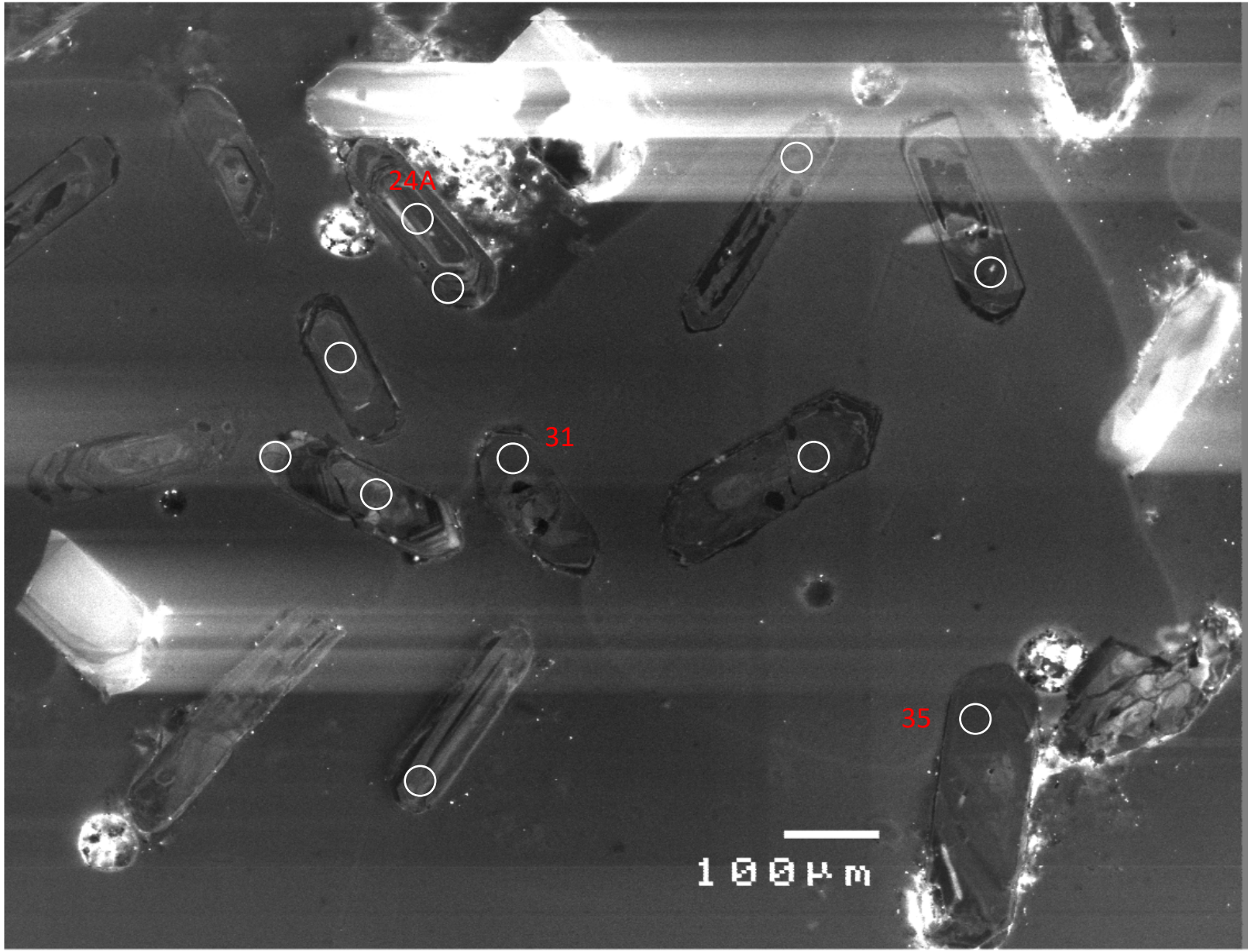
Appendix 4: Cathodoluminescence images for zircon
Sample OTG



Appendix 4: Cathodoluminescence images for zircon
Sample OTG



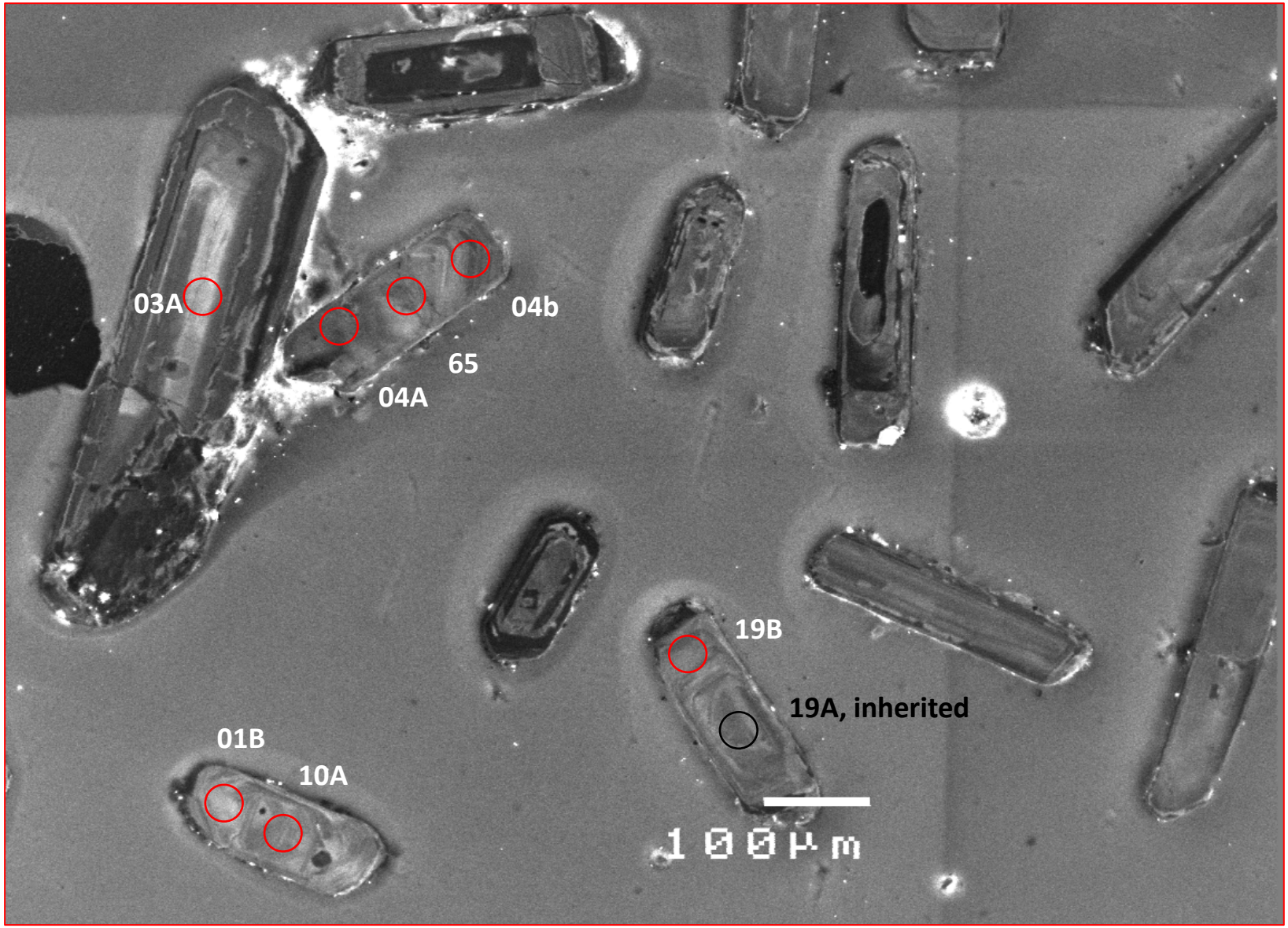
Appendix 4: Cathodoluminescence images for zircon
Sample OTG



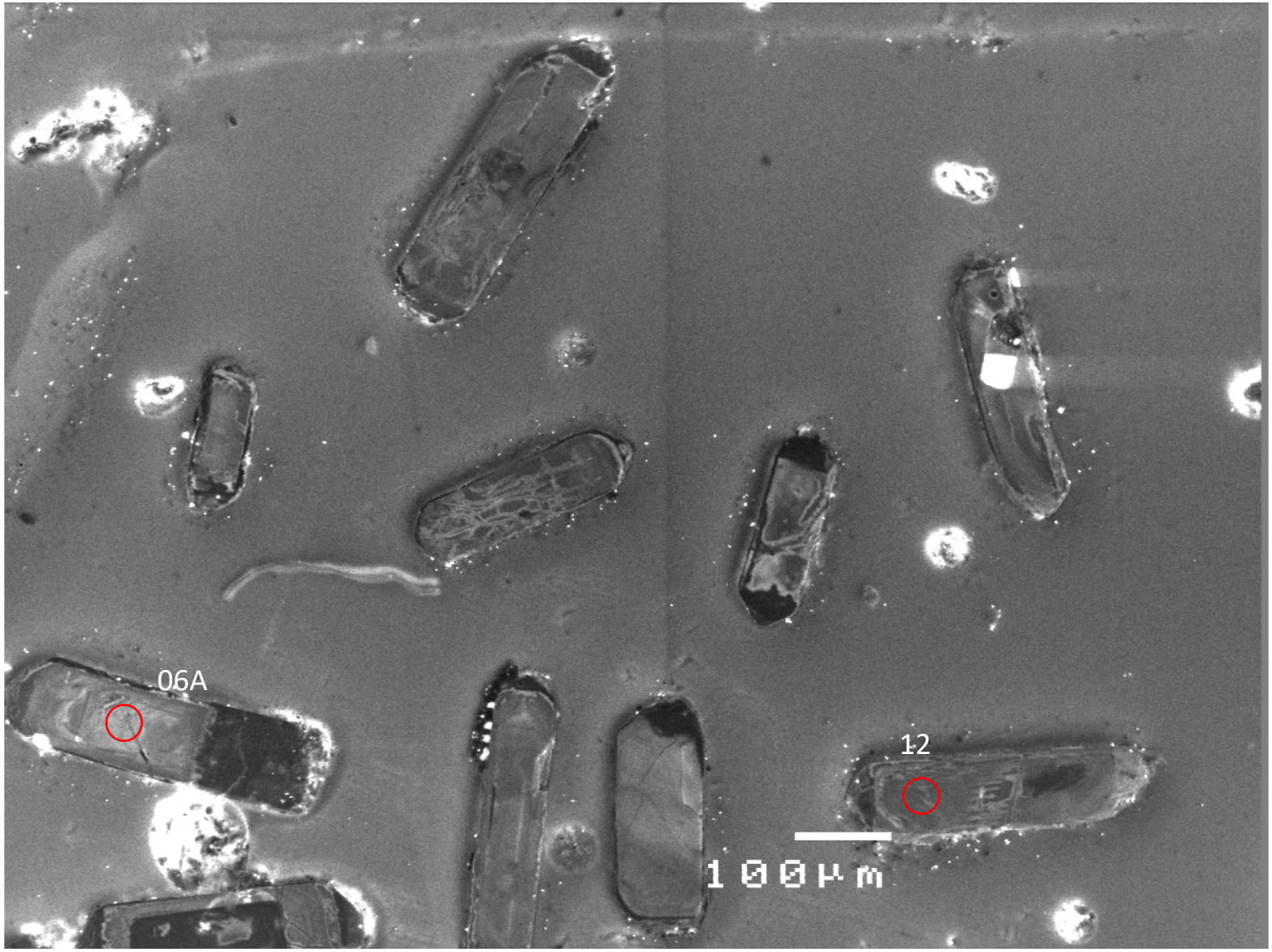
Sample SMG

Marking 21 (near-)concordant analyses of the youngest population (circles with analysis ID)

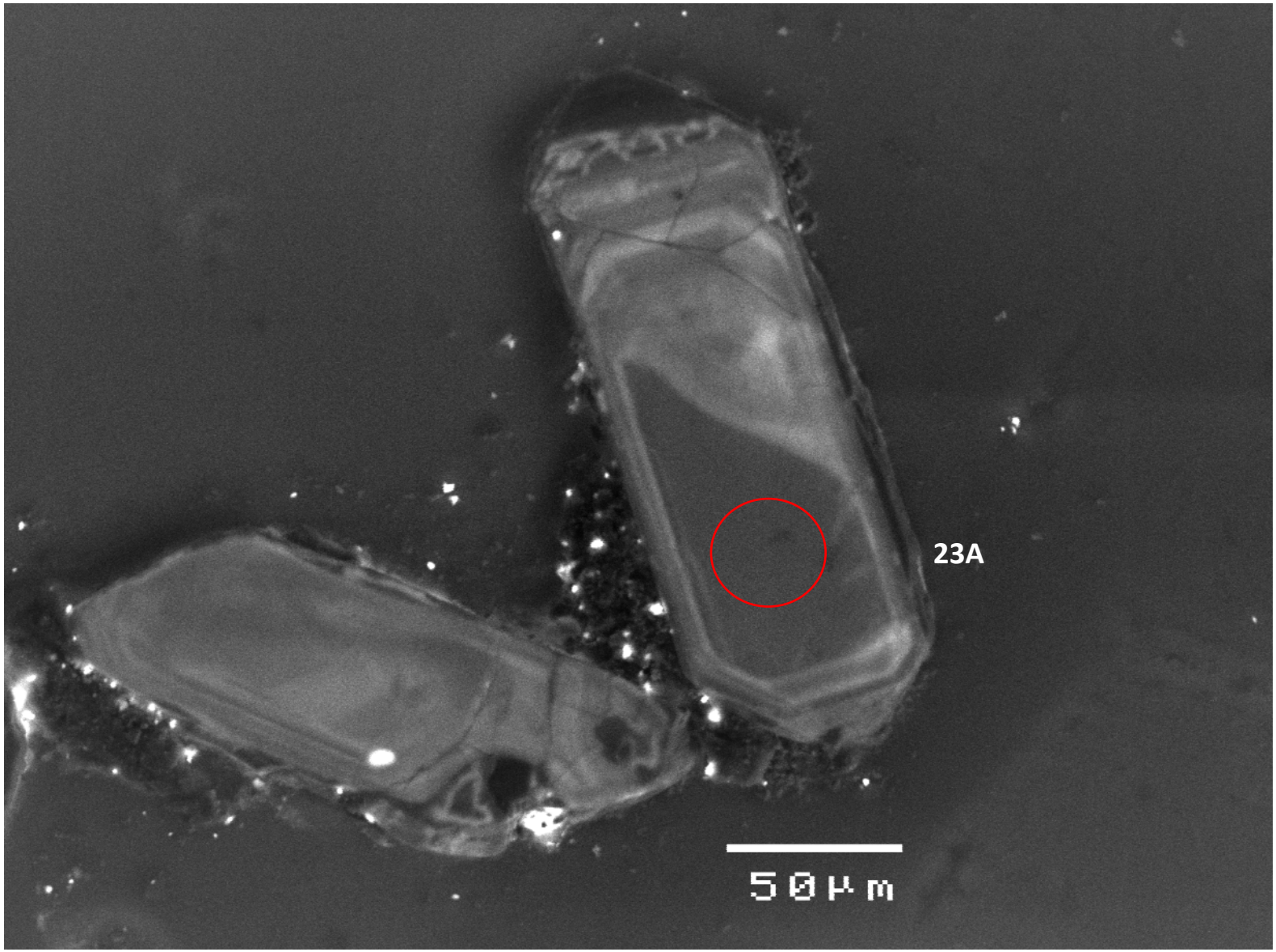
Appendix 4: Cathodoluminescence images for zircon
Sample SMG



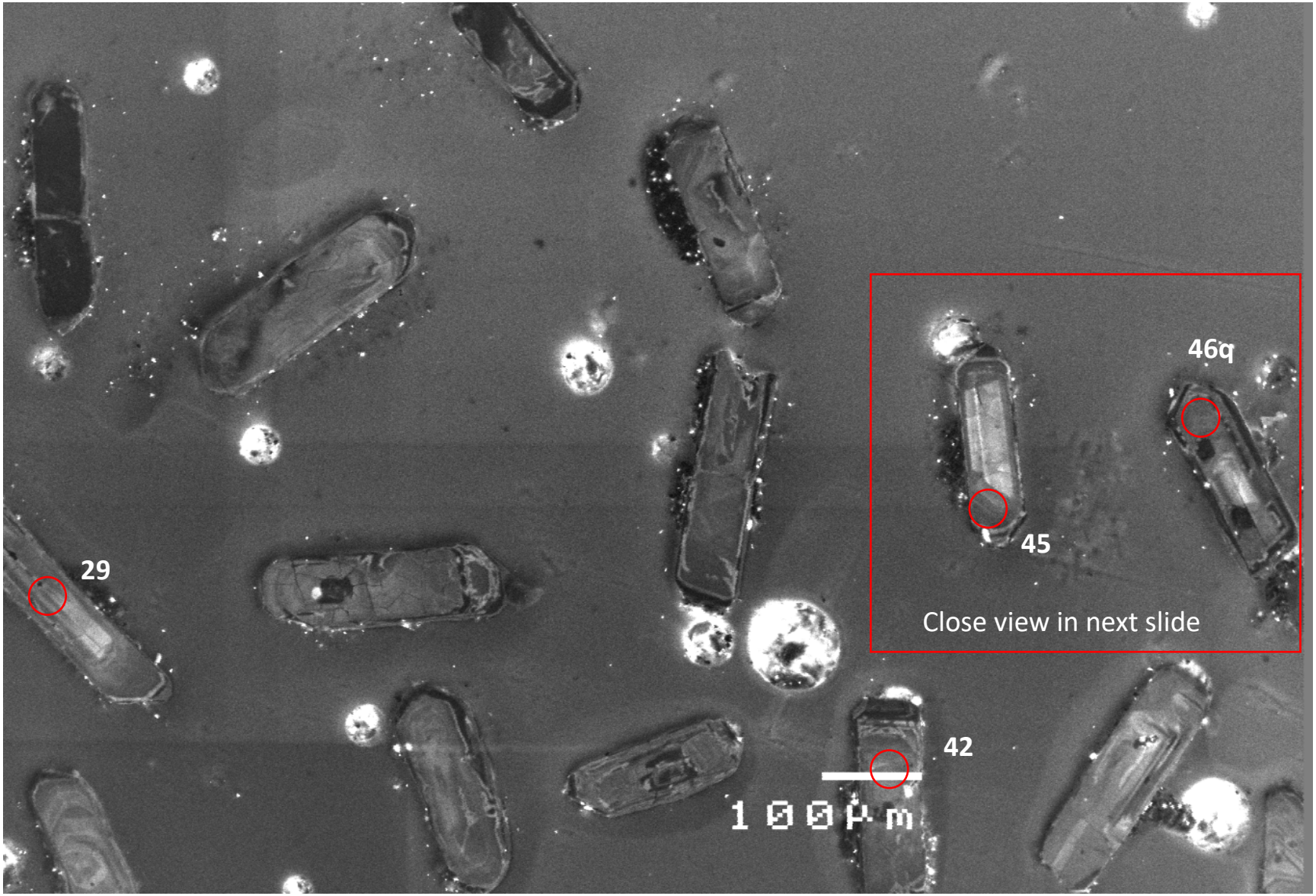
Appendix 4: Cathodoluminescence images for zircon
Sample SMG



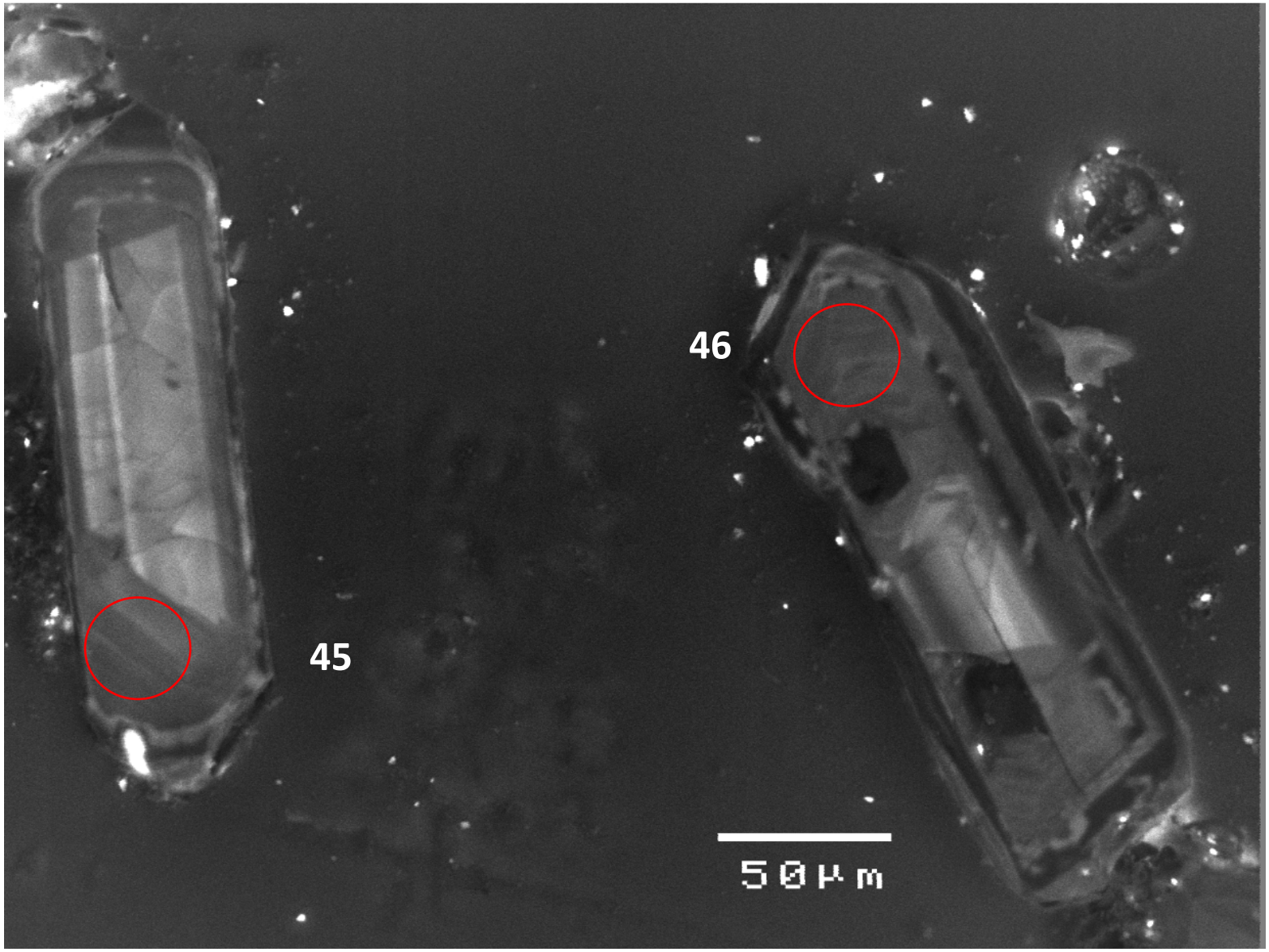
Appendix 4: Cathodoluminescence images for zircon
Sample SMG



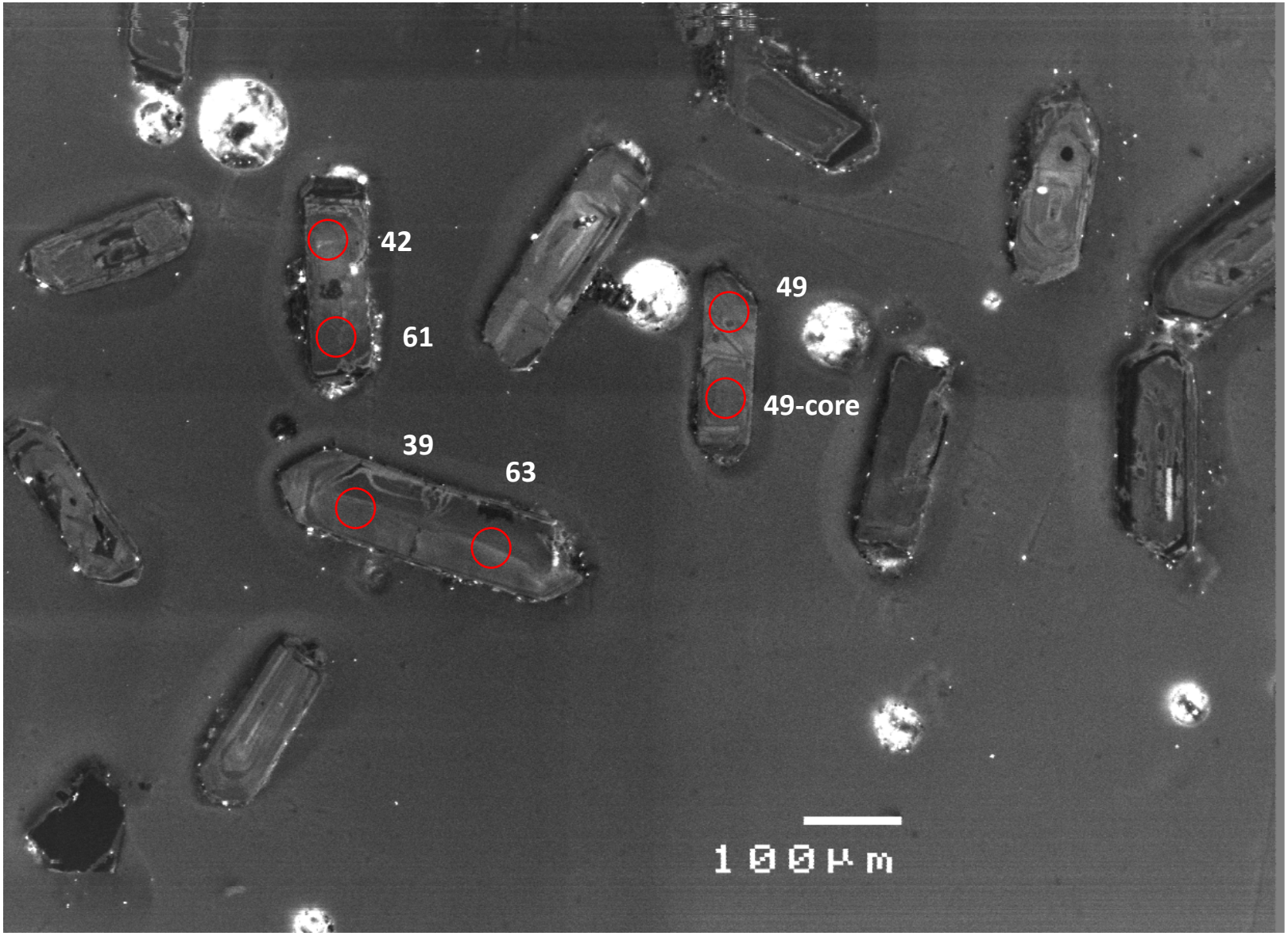
Appendix 4: Cathodoluminescence images for zircon
Sample SMG



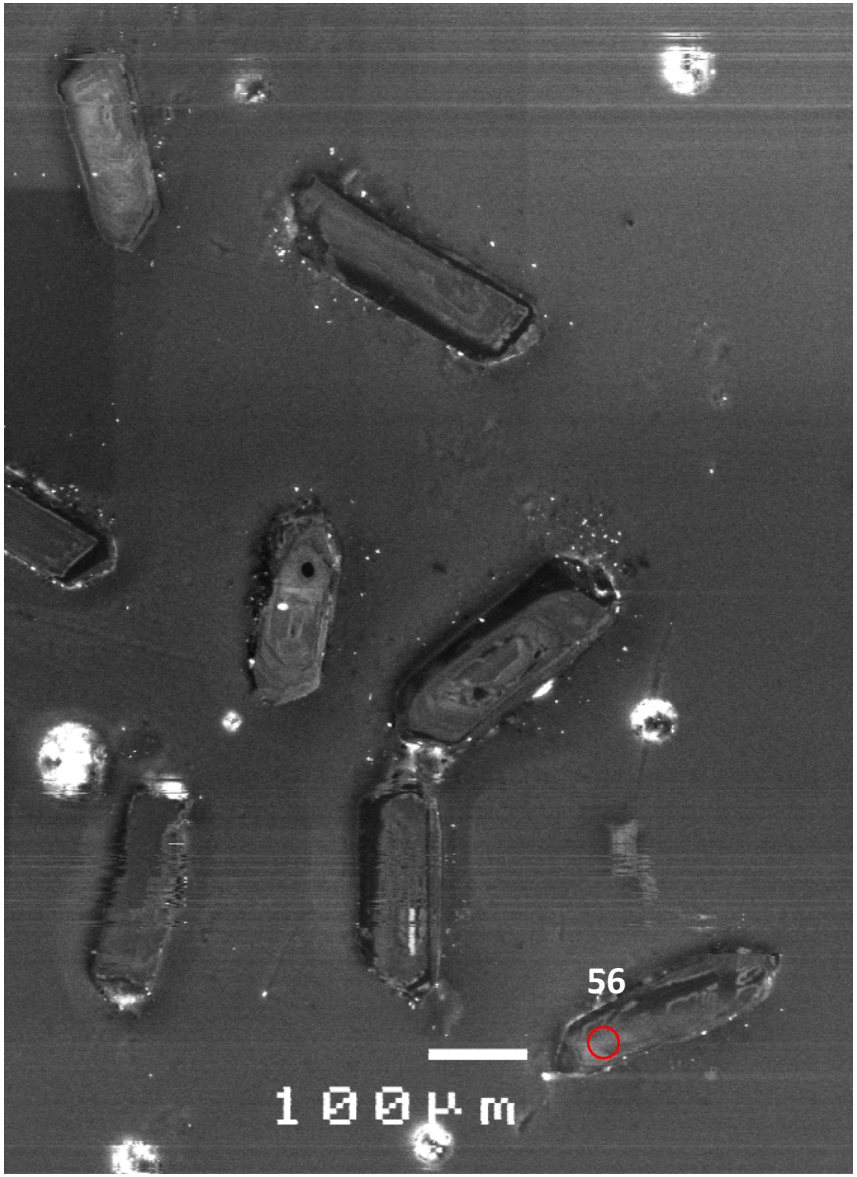
Appendix 4: Cathodoluminescence images for zircon
Sample SMG



Appendix 4: Cathodoluminescence images for zircon
Sample SMG



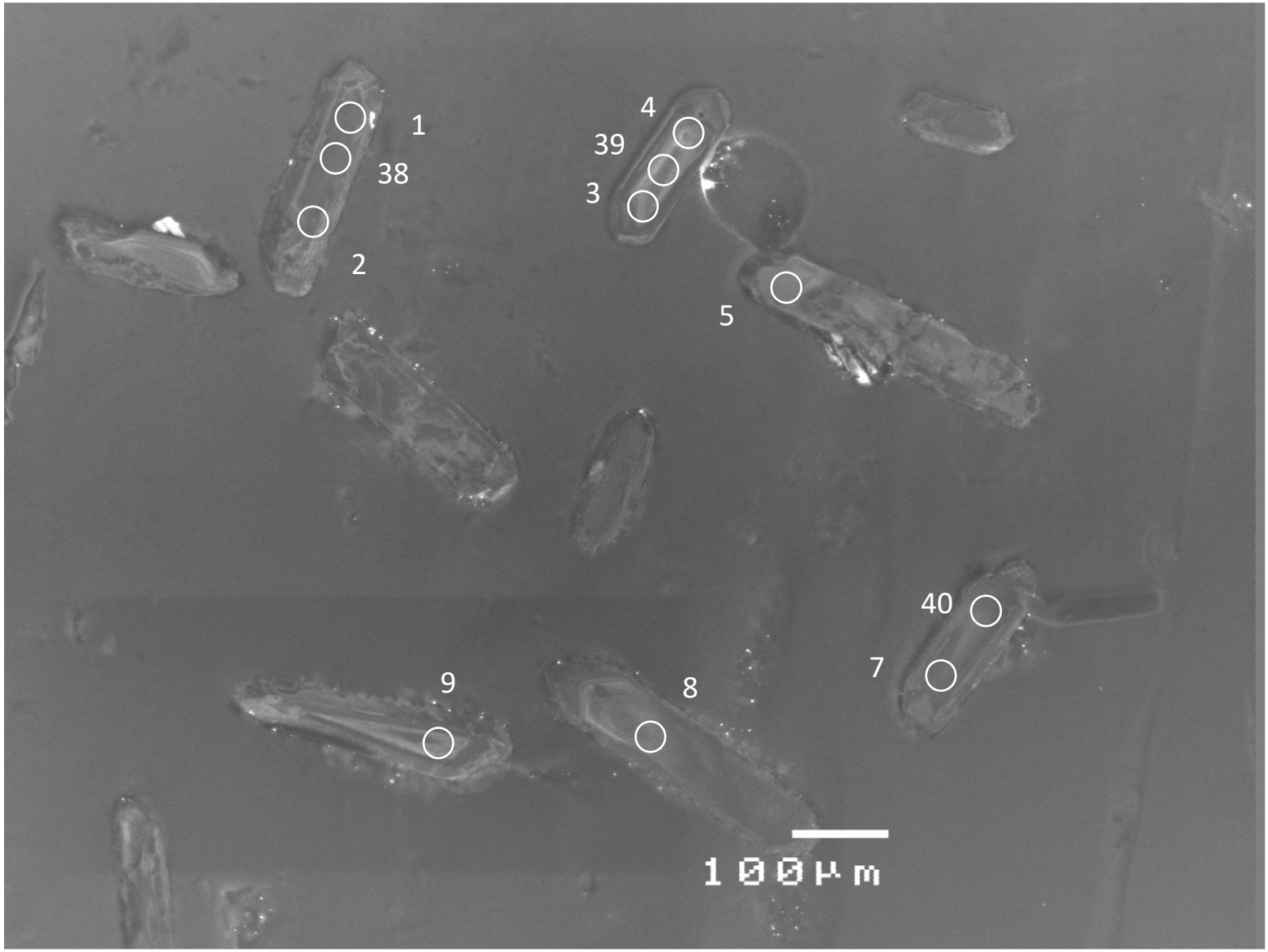
Appendix 4: Cathodoluminescence images for zircon
Sample SMG



Sample THG1

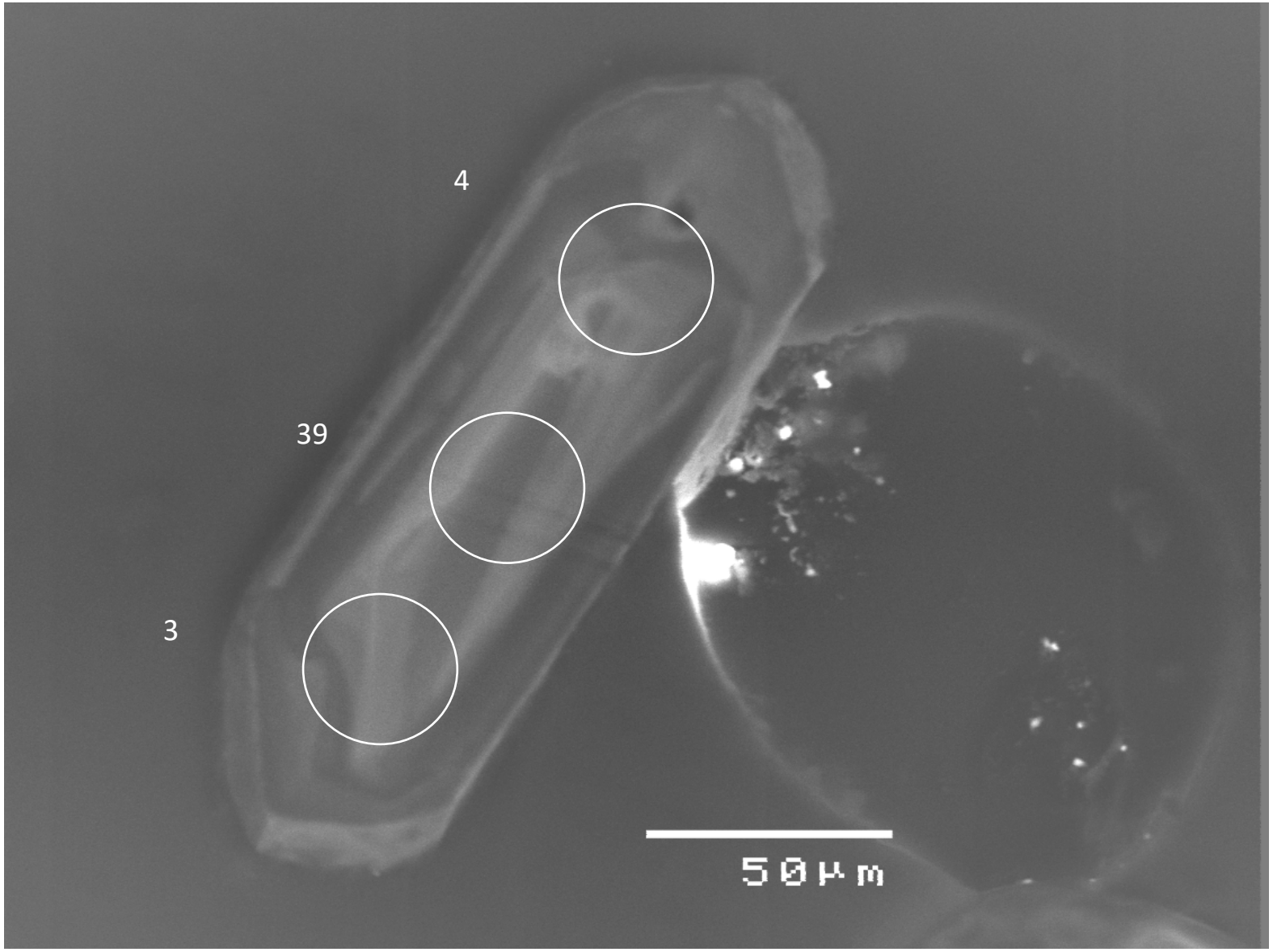
Marking 38 (near-)concordant analyses of the youngest population (circles with analysis ID)

Appendix 4: Cathodoluminescence images for zircon
Sample THG1



Appendix 4: Cathodoluminescence images for zircon

Sample THG1

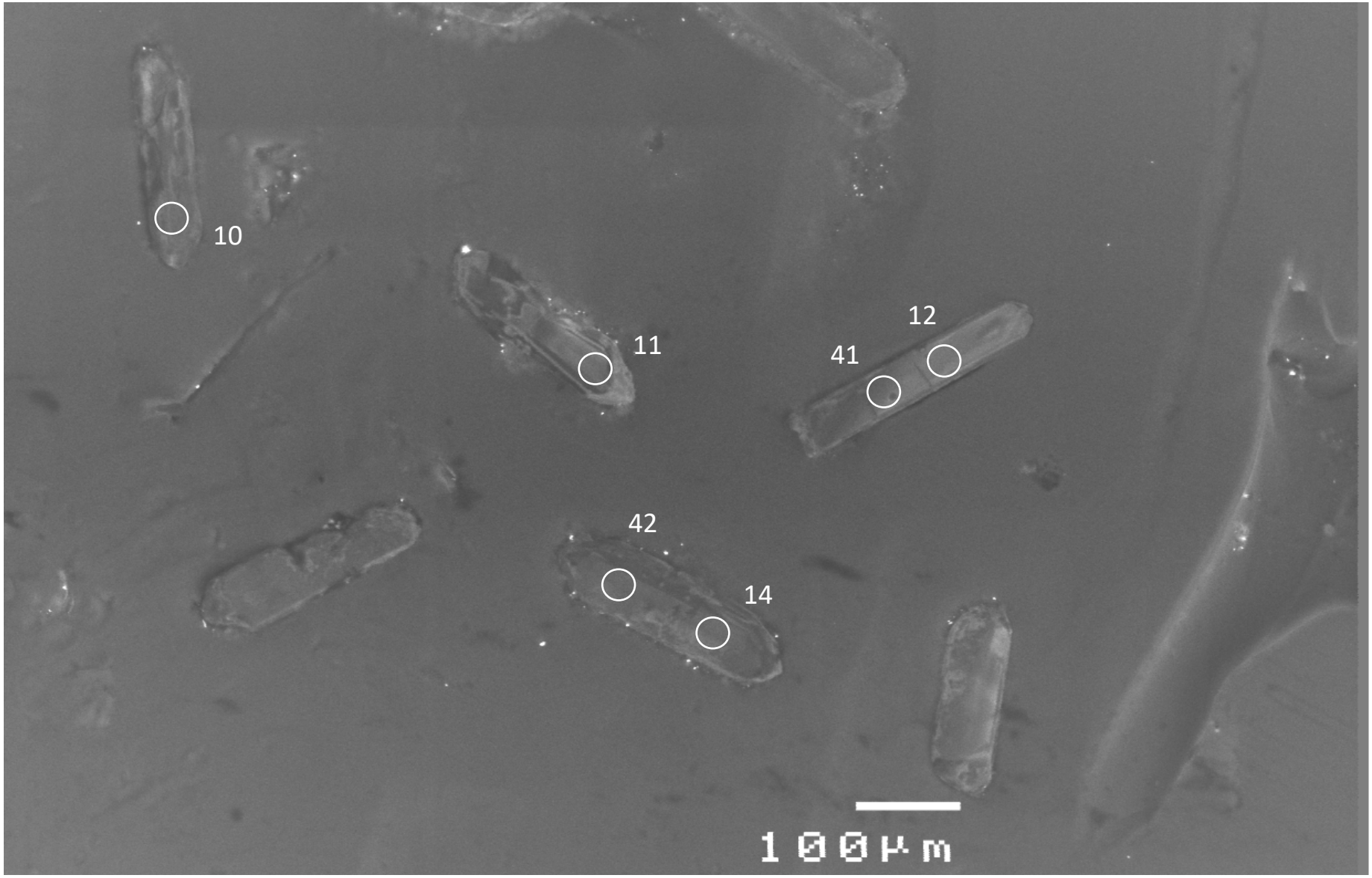


Appendix 4: Cathodoluminescence images for zircon

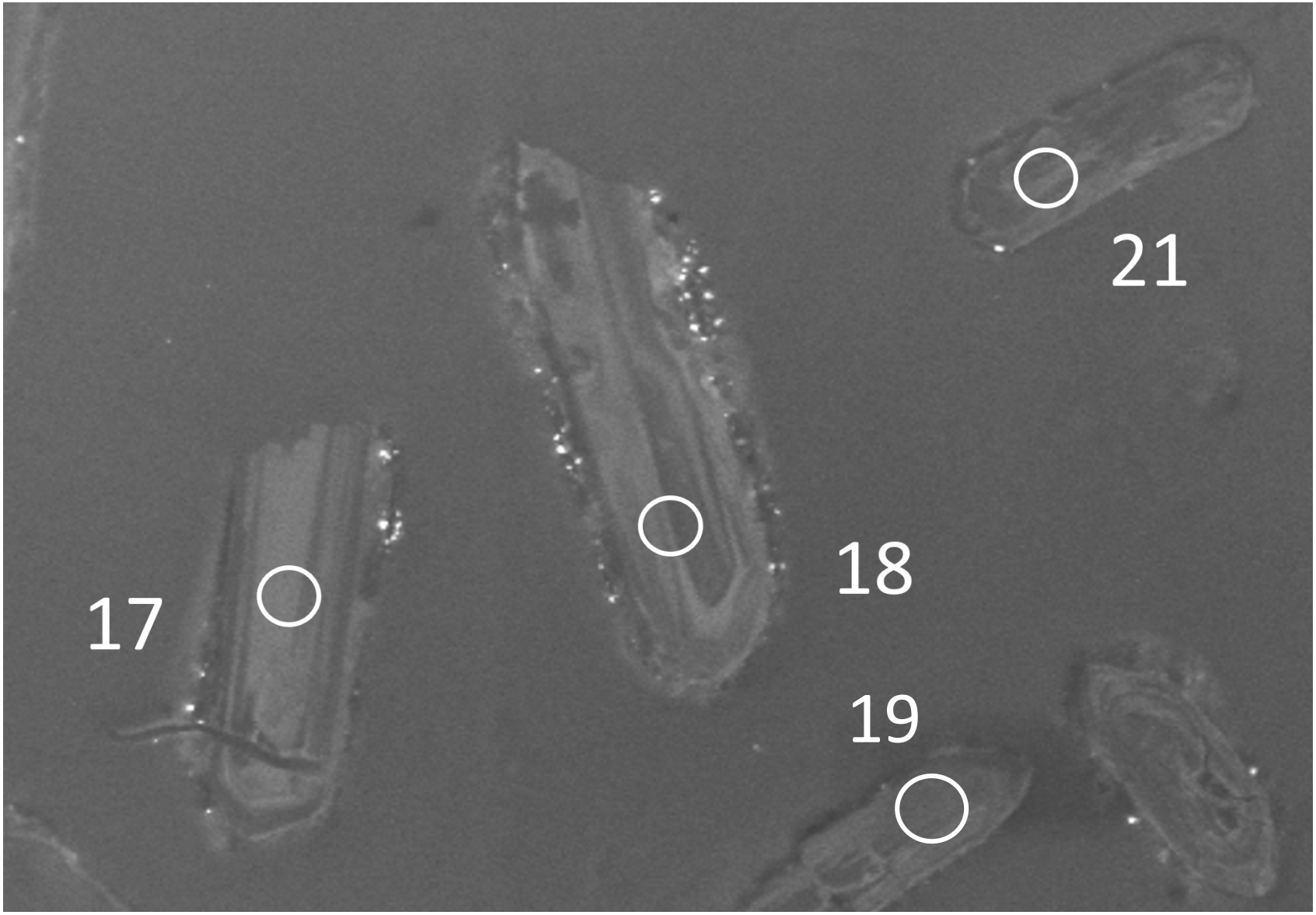
Sample THG1

Appendix 4: Cathodoluminescence images for zircon

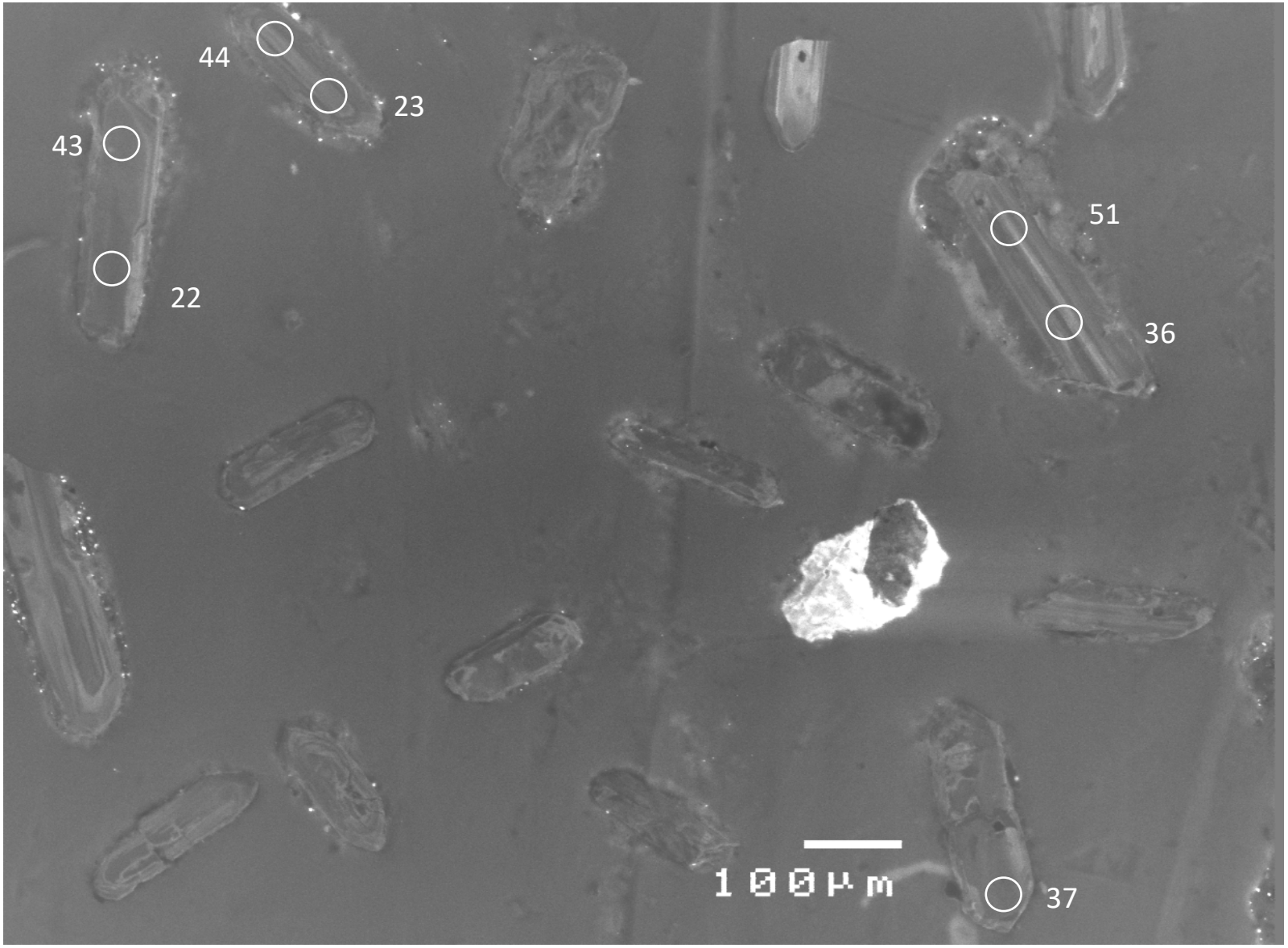
Sample THG1



Appendix 4: Cathodoluminescence images for zircon
Sample THG1

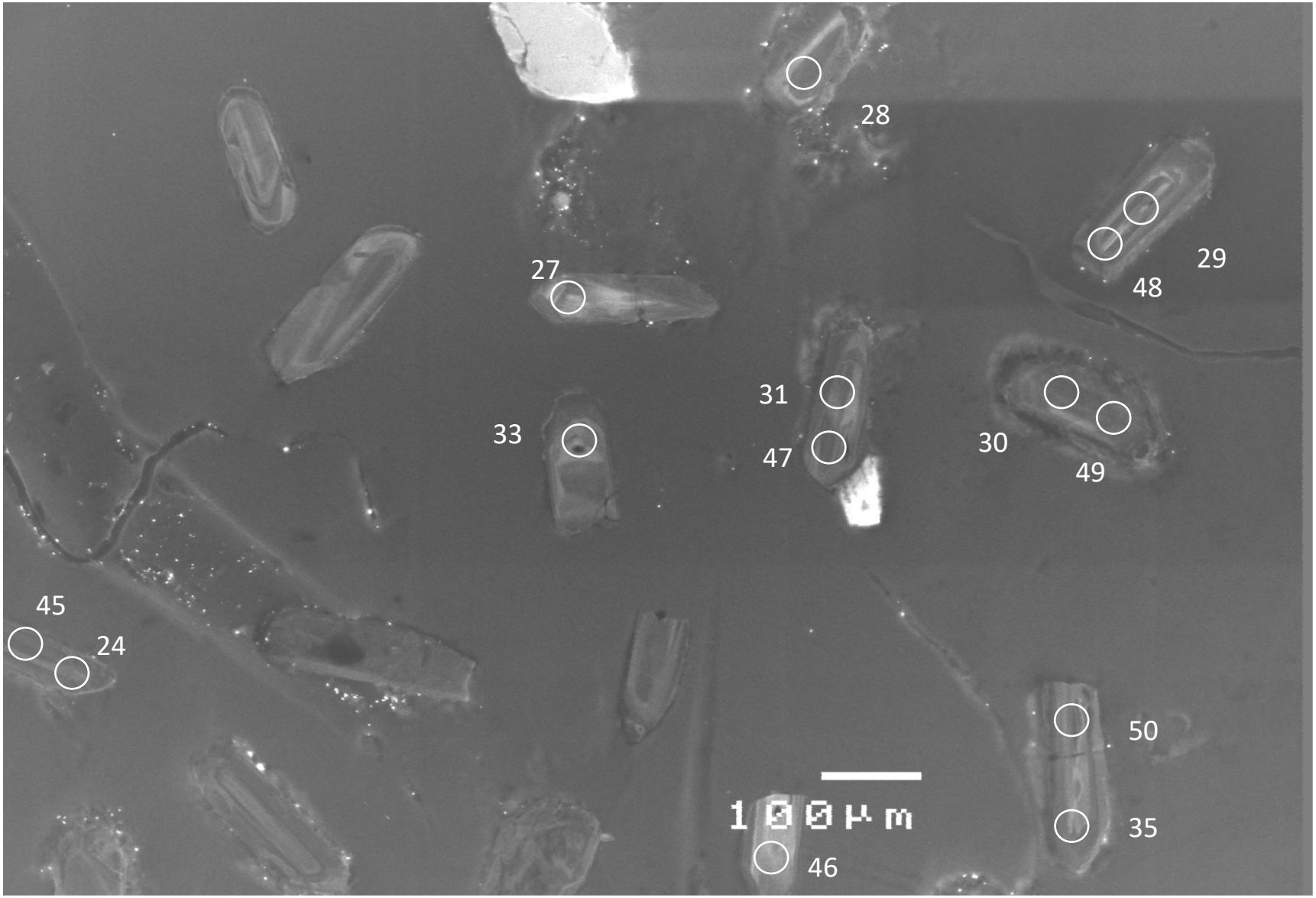


Appendix 4: Cathodoluminescence images for zircon
Sample THG1



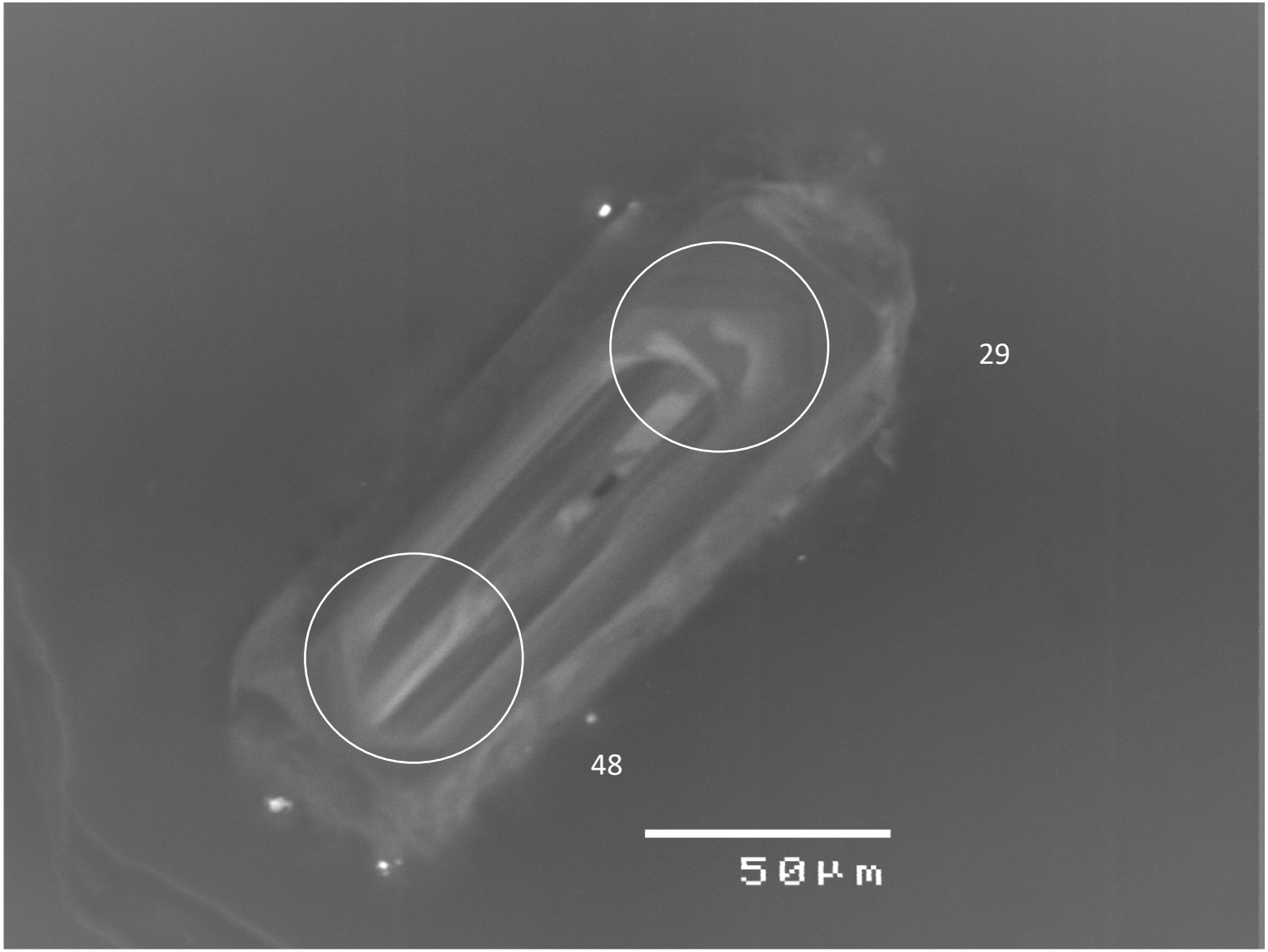
Appendix 4: Cathodoluminescence images for zircon

Sample THG1



Appendix 4: Cathodoluminescence images for zircon

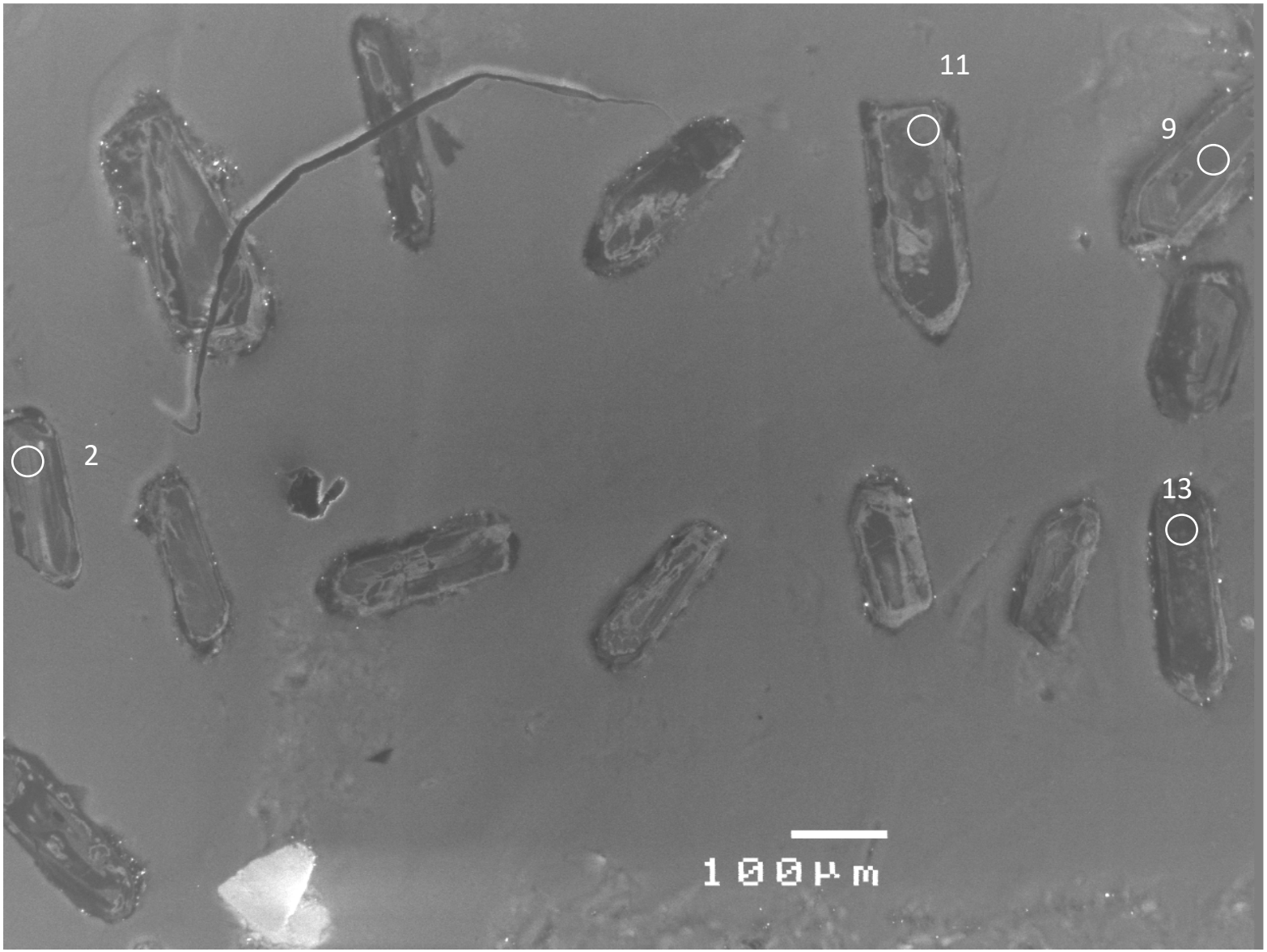
Sample THG1



Sample THG2

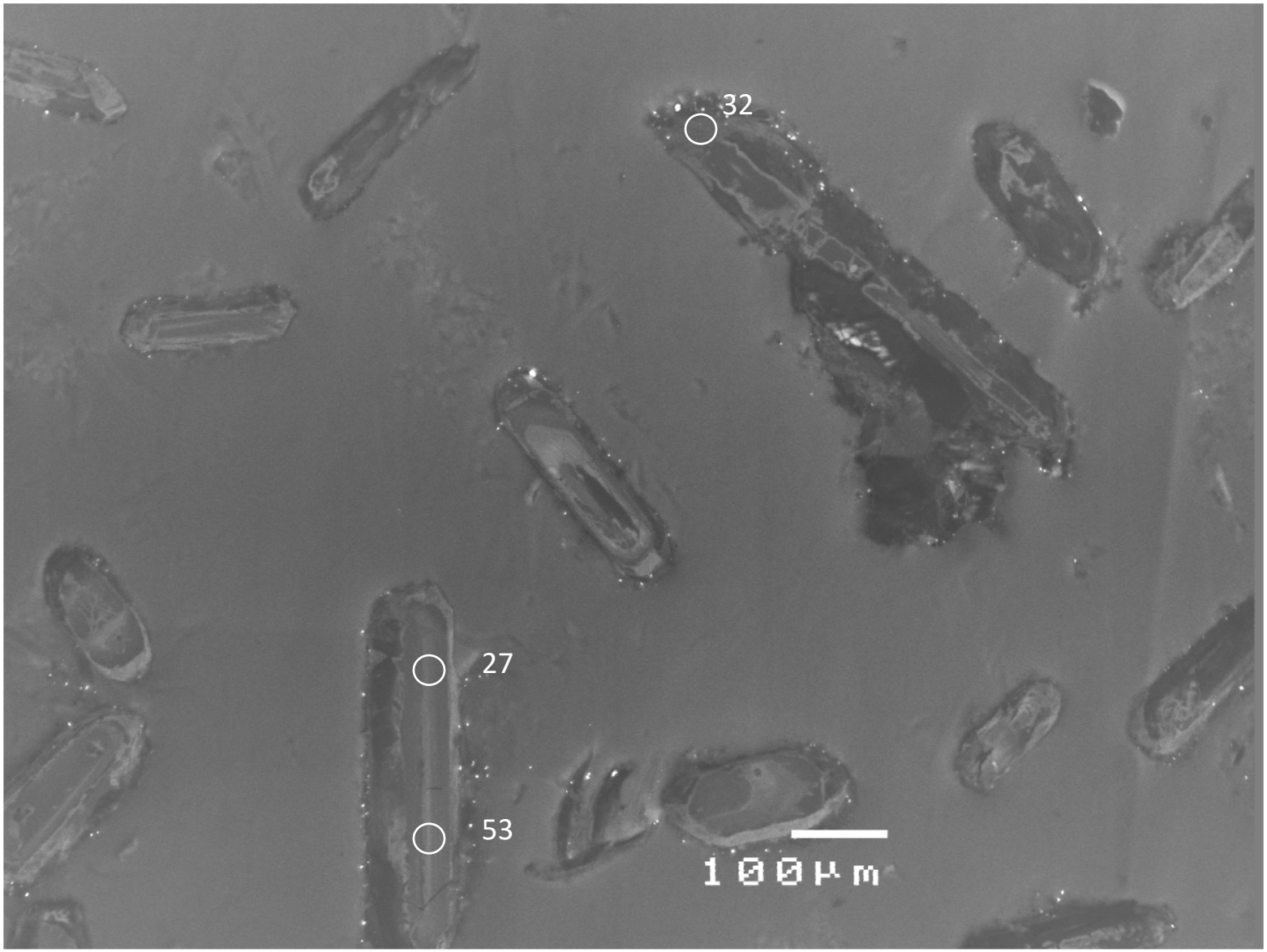
Marking 10 (near-)concordant ages of the youngest population (circles with analysis ID)

Appendix 4: Cathodoluminescence images for zircon
Sample THG2

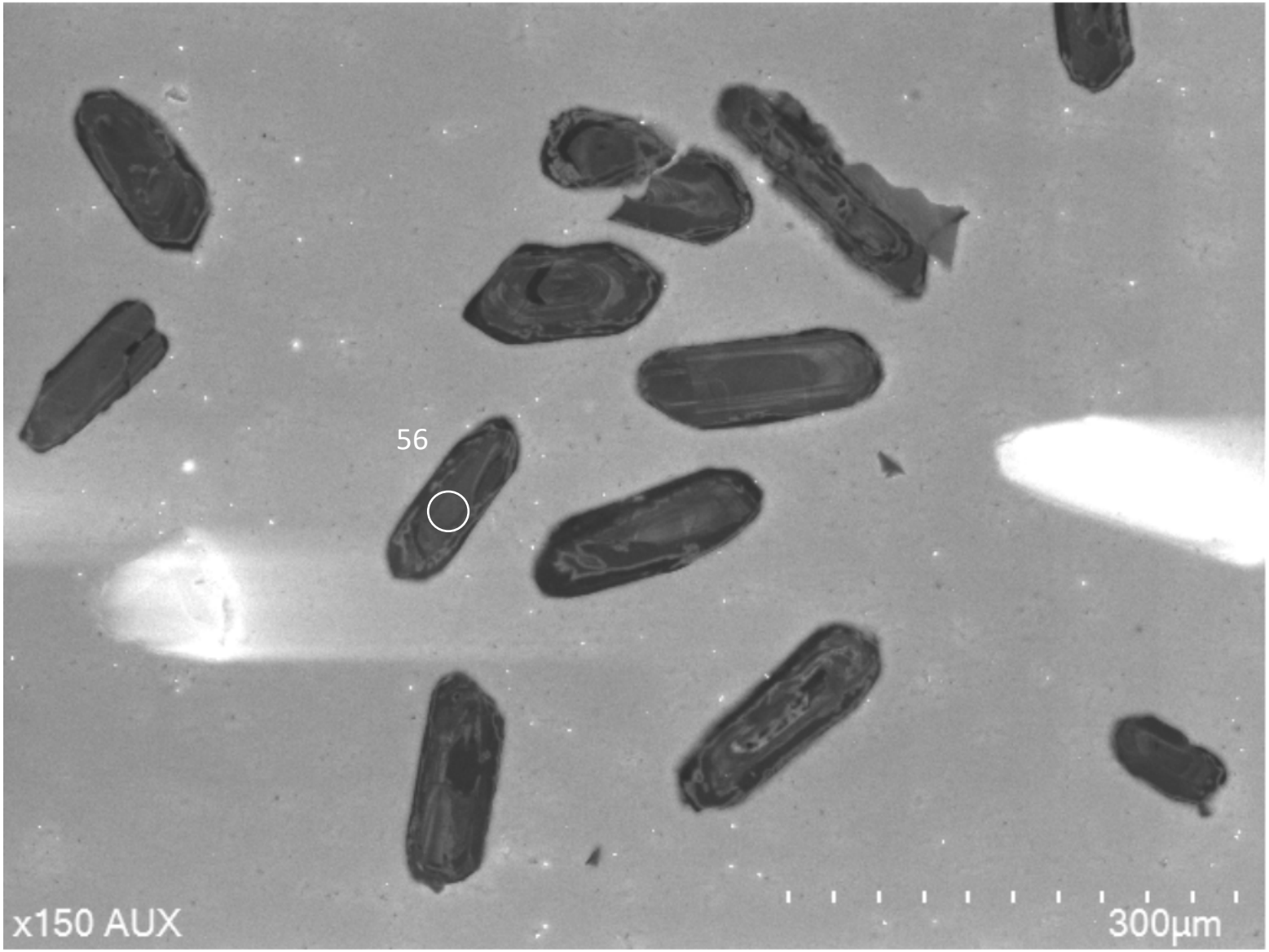


Appendix 4: Cathodoluminescence images for zircon

Sample THG2

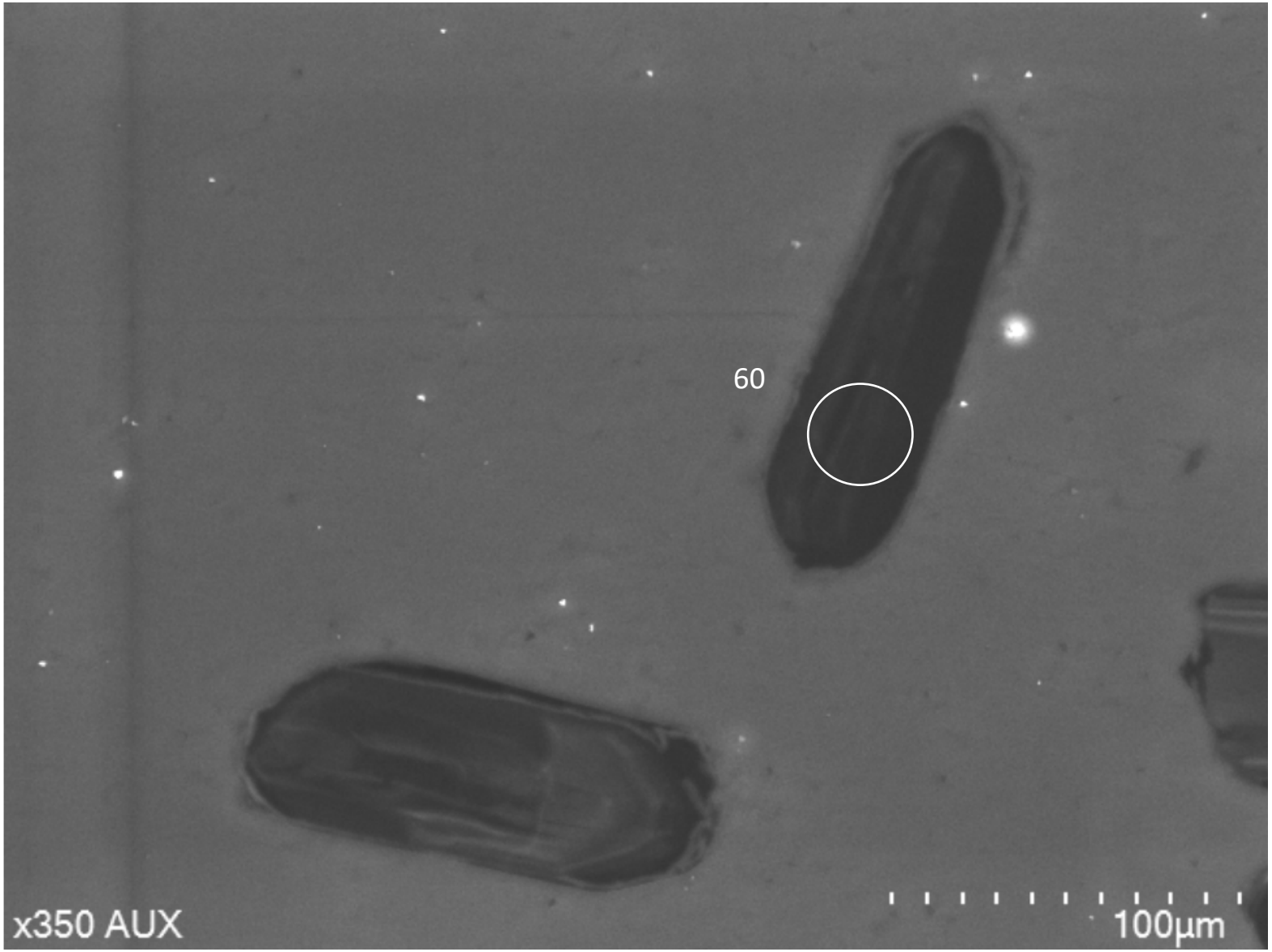


Appendix 4: Cathodoluminescence images for zircon
Sample THG2



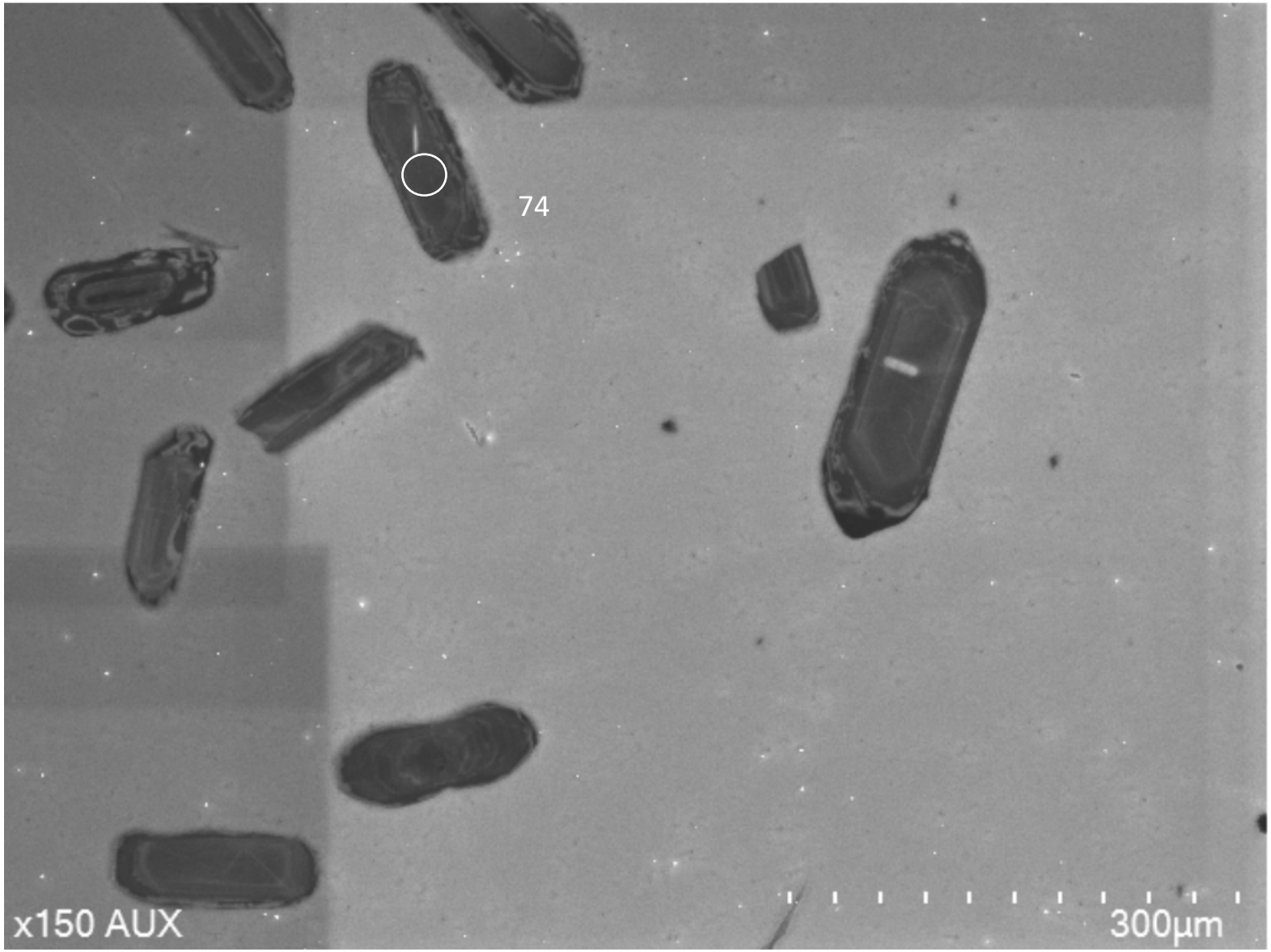
Appendix 4: Cathodoluminescence images for zircon

Sample THG2



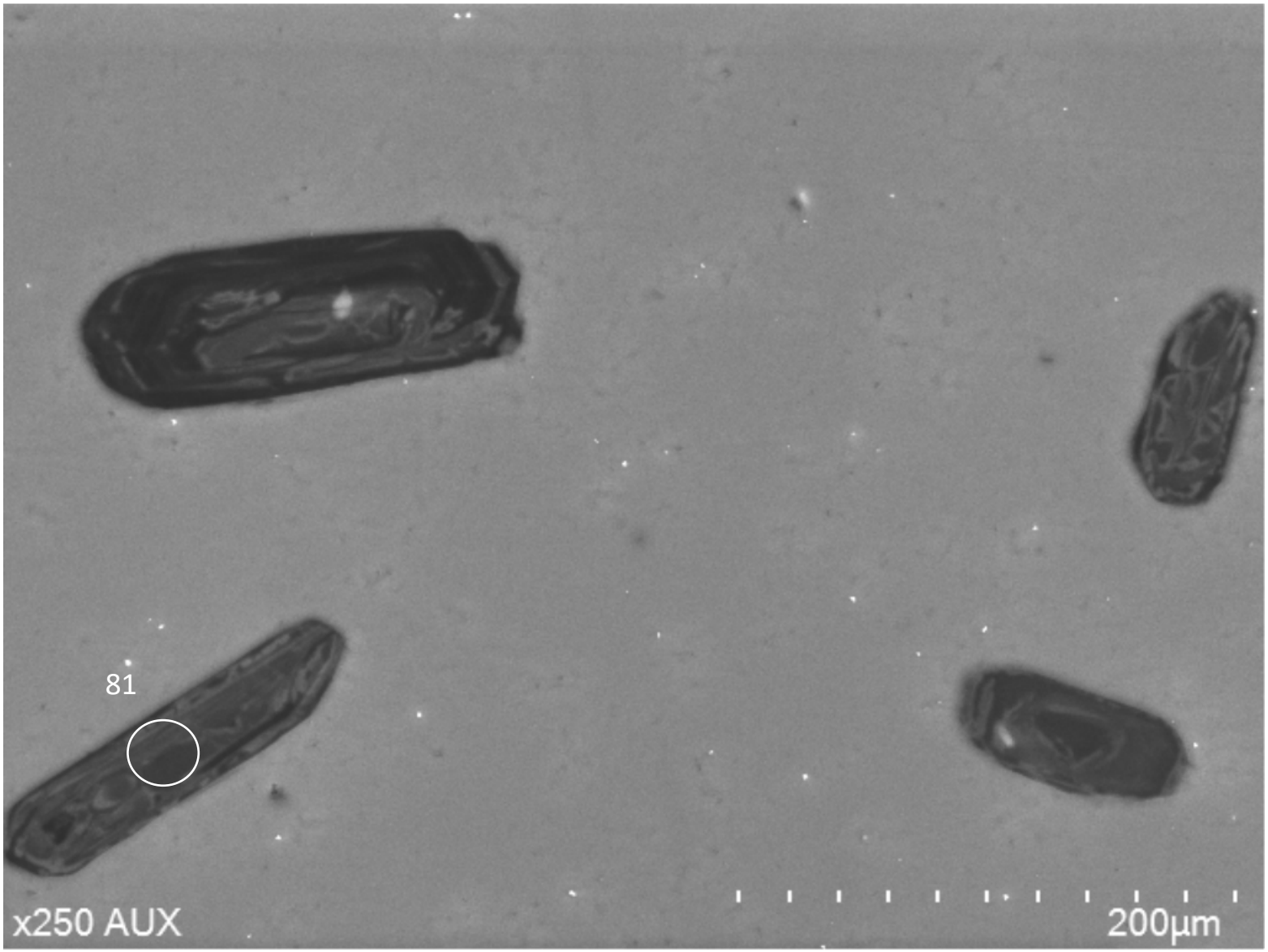
Appendix 4: Cathodoluminescence images for zircon

Sample THG2



Appendix 4: Cathodoluminescence images for zircon

Sample THG2

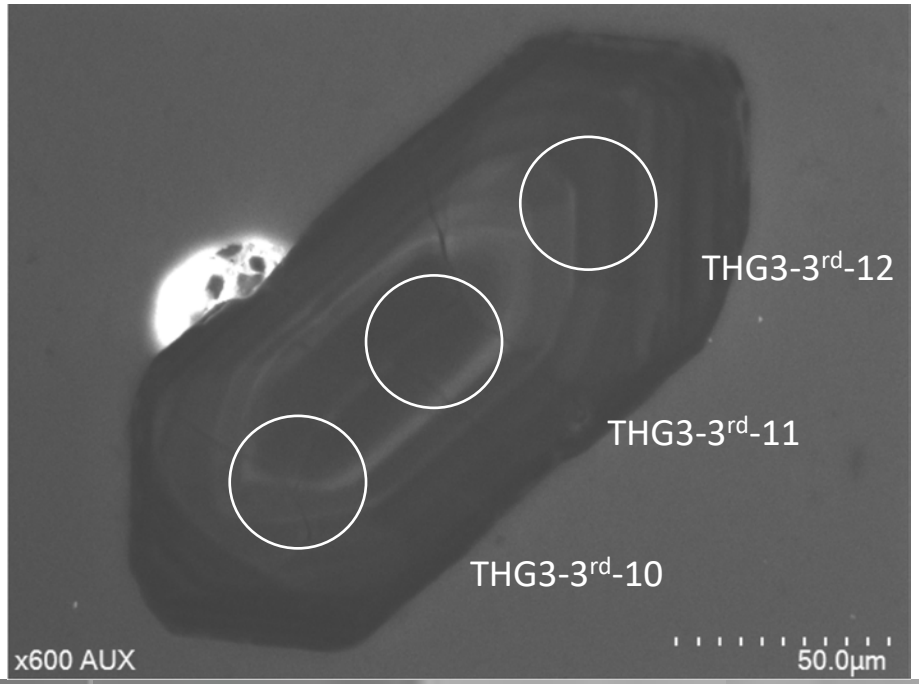


Sample THG3

Marking 7 (near-)concordant
analyses of the youngest cluster

Appendix 4: Cathodoluminescence images for zircon
Sample THG3

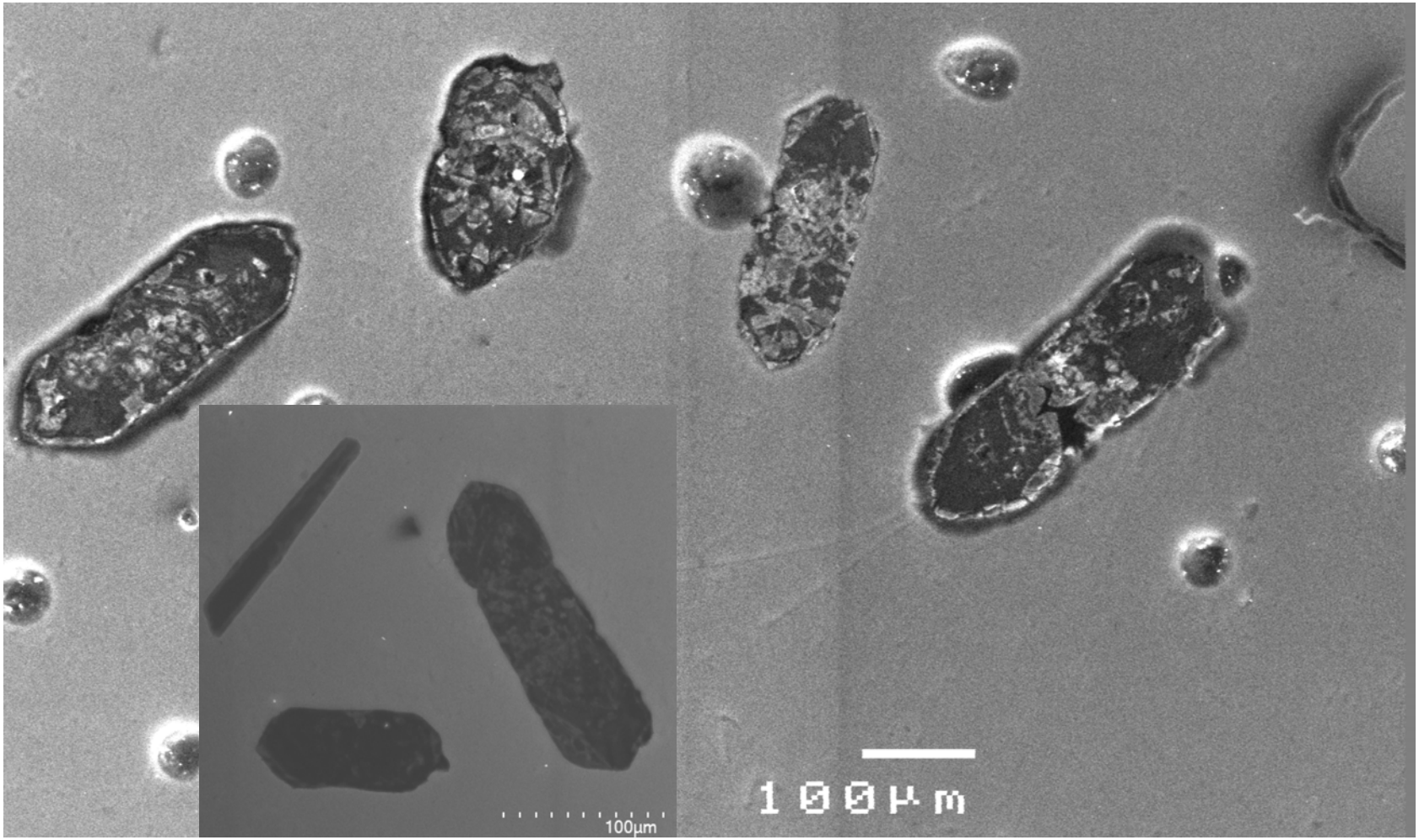
7 (near-)concordant analyses of the youngest cluster



Appendix 4: Cathodoluminescence images for zircon

Sample THG3

Representative CL image of strongly recrystallised and altered zircon grains with no internal zonation: only discordant age or cant produce a age

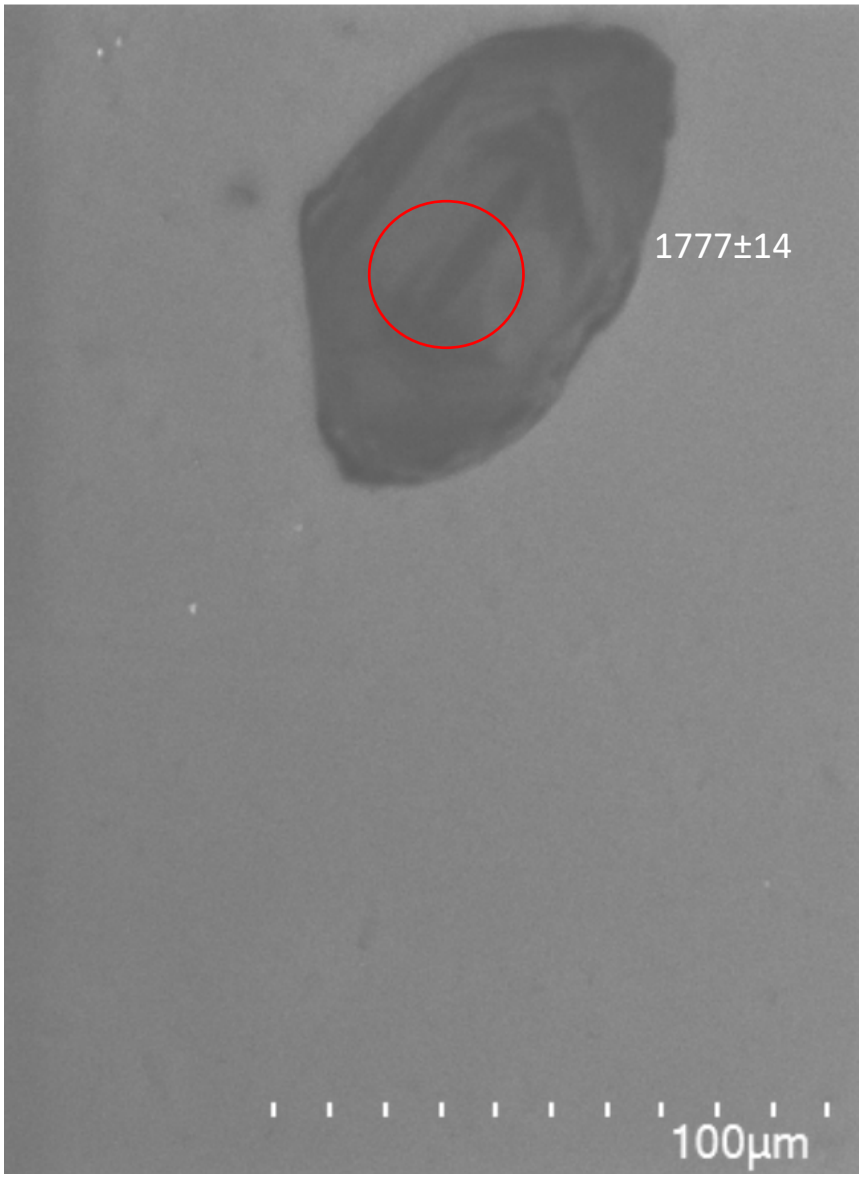


Sample THG4

Marking 10 (near-)concordant ages of the youngest population (circles with analysis ID)

Appendix 4: Cathodoluminescence images for zircon

Sample THG4

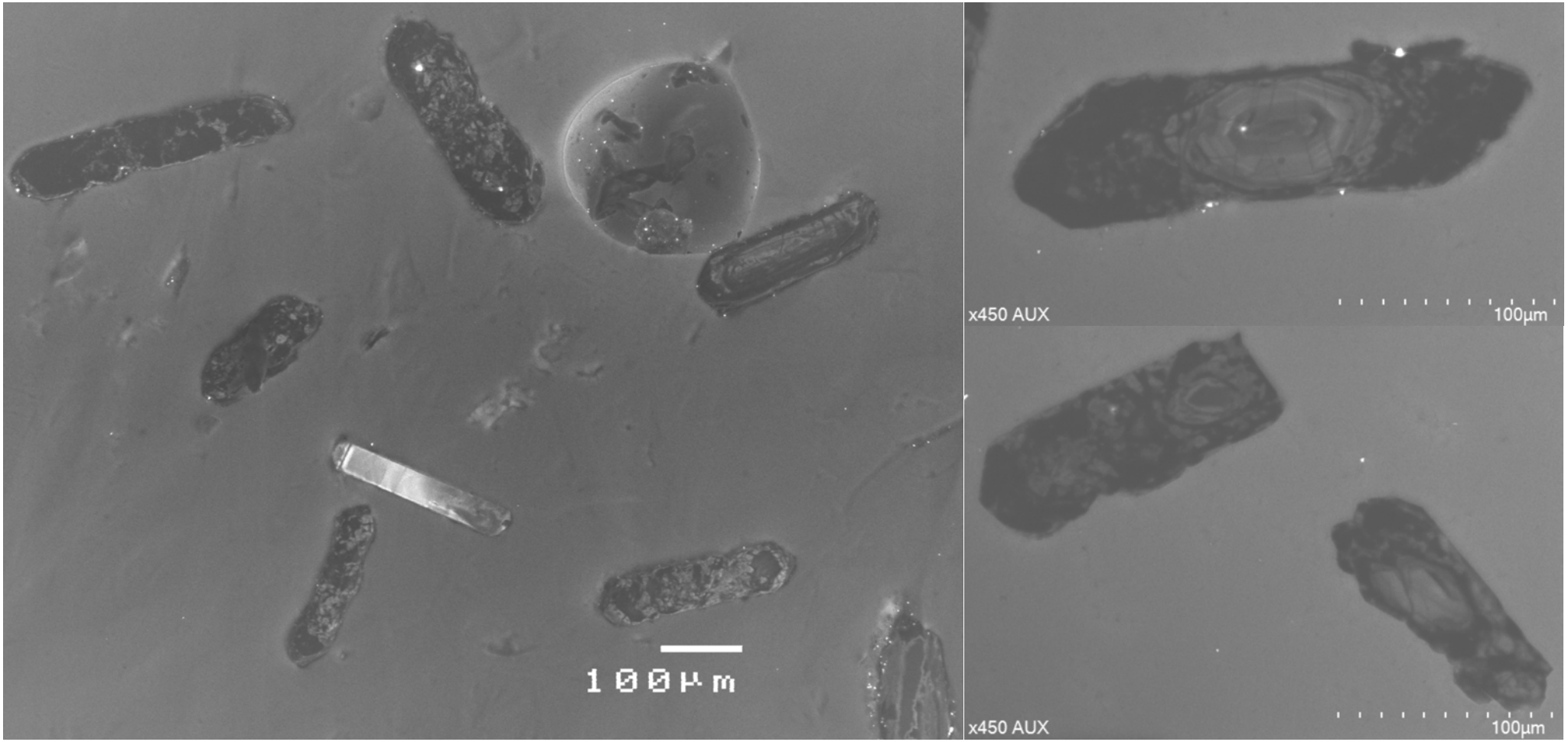


A single analysis of concordant age: 1777±14 Ma

Appendix 4: Cathodoluminescence images for zircon

Sample THG4

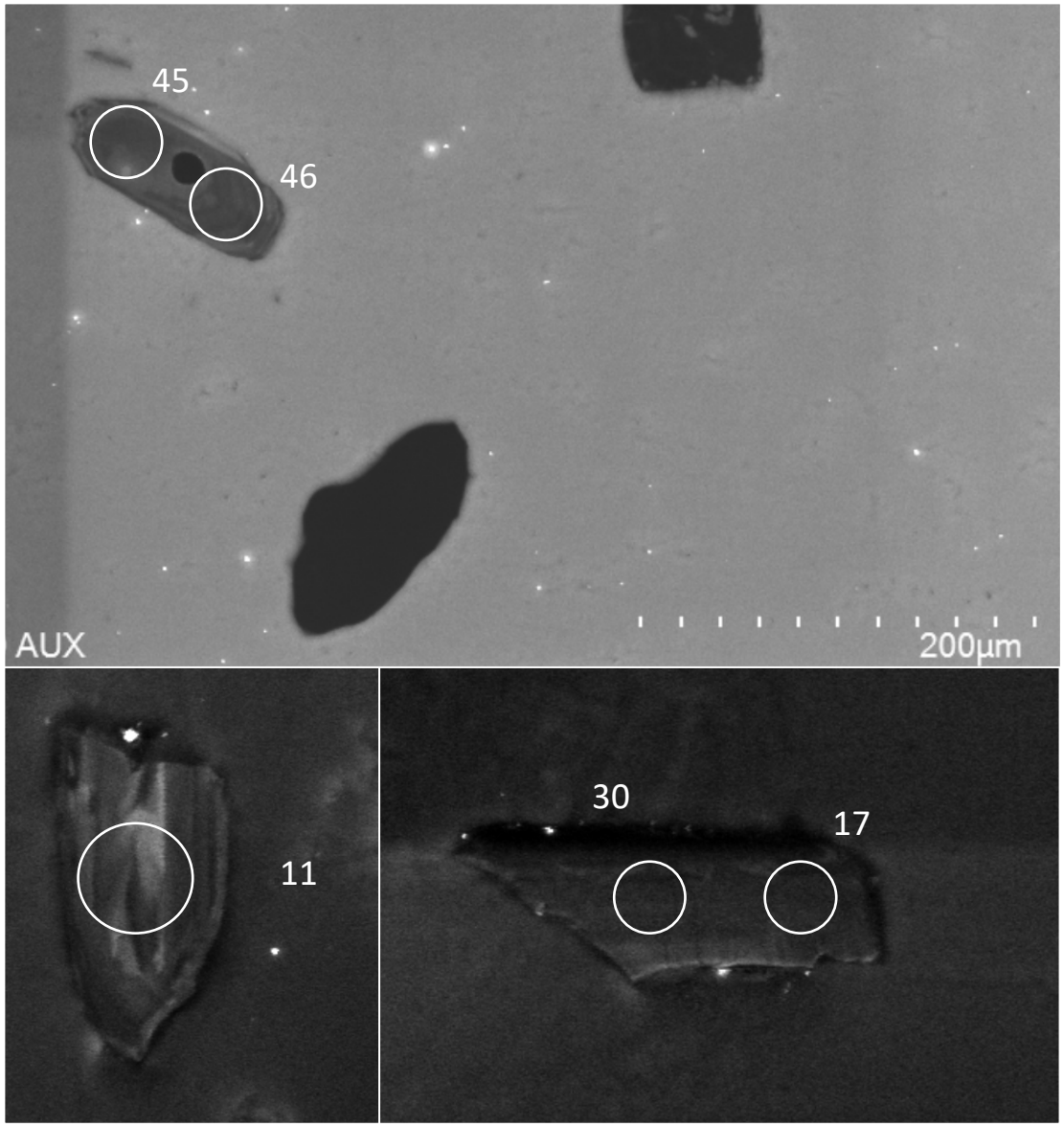
Representative CL images of strongly altered zircon grains that resulted in very discordant ages or can’t produce an age



Sample MG

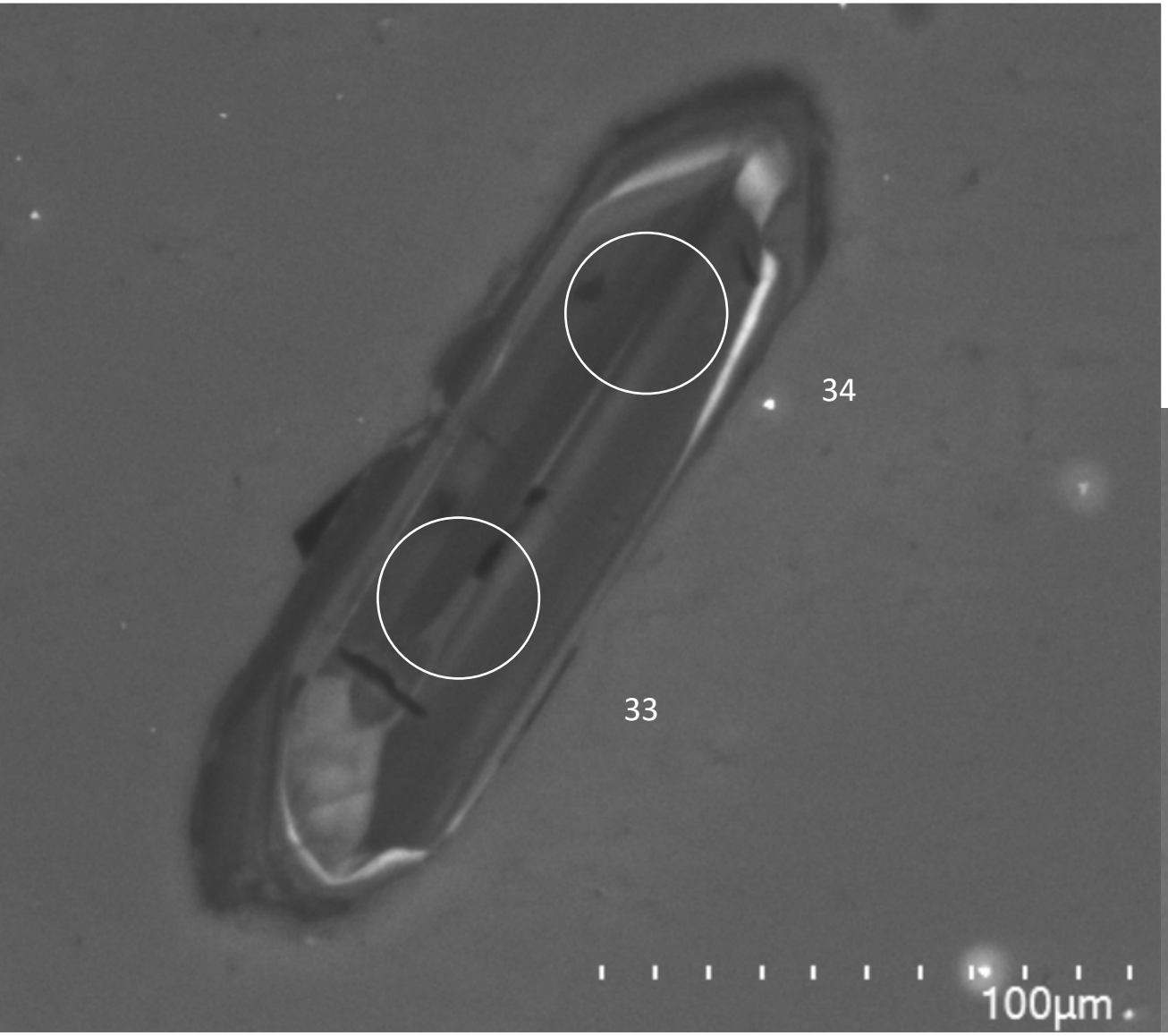
Marking 8 (near-)concordant ages of the youngest population (circle and analysis ID)

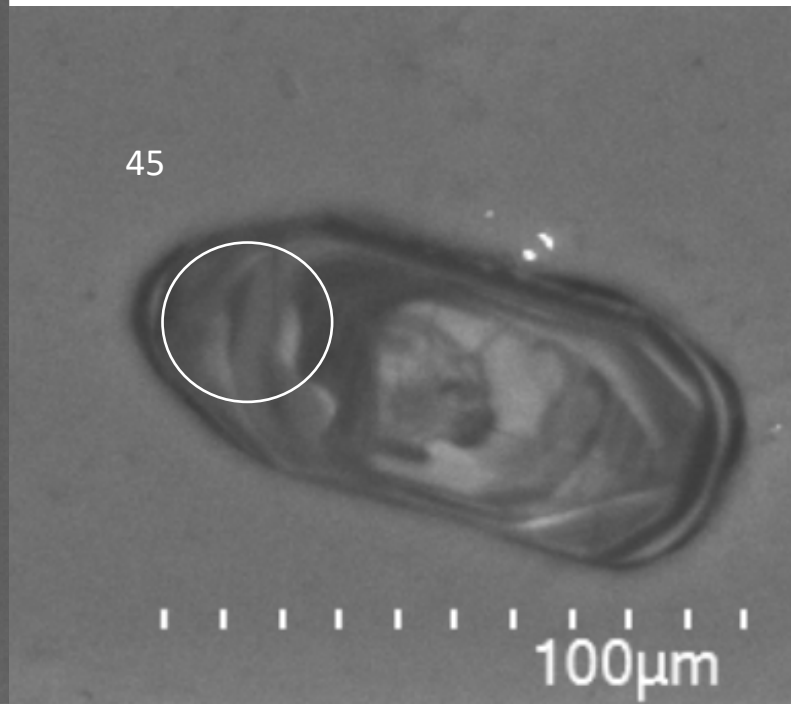
Appendix 4: Cathodoluminescence images for zircon
Sample MG



Appendix 4: Cathodoluminescence images for zircon

Sample MG

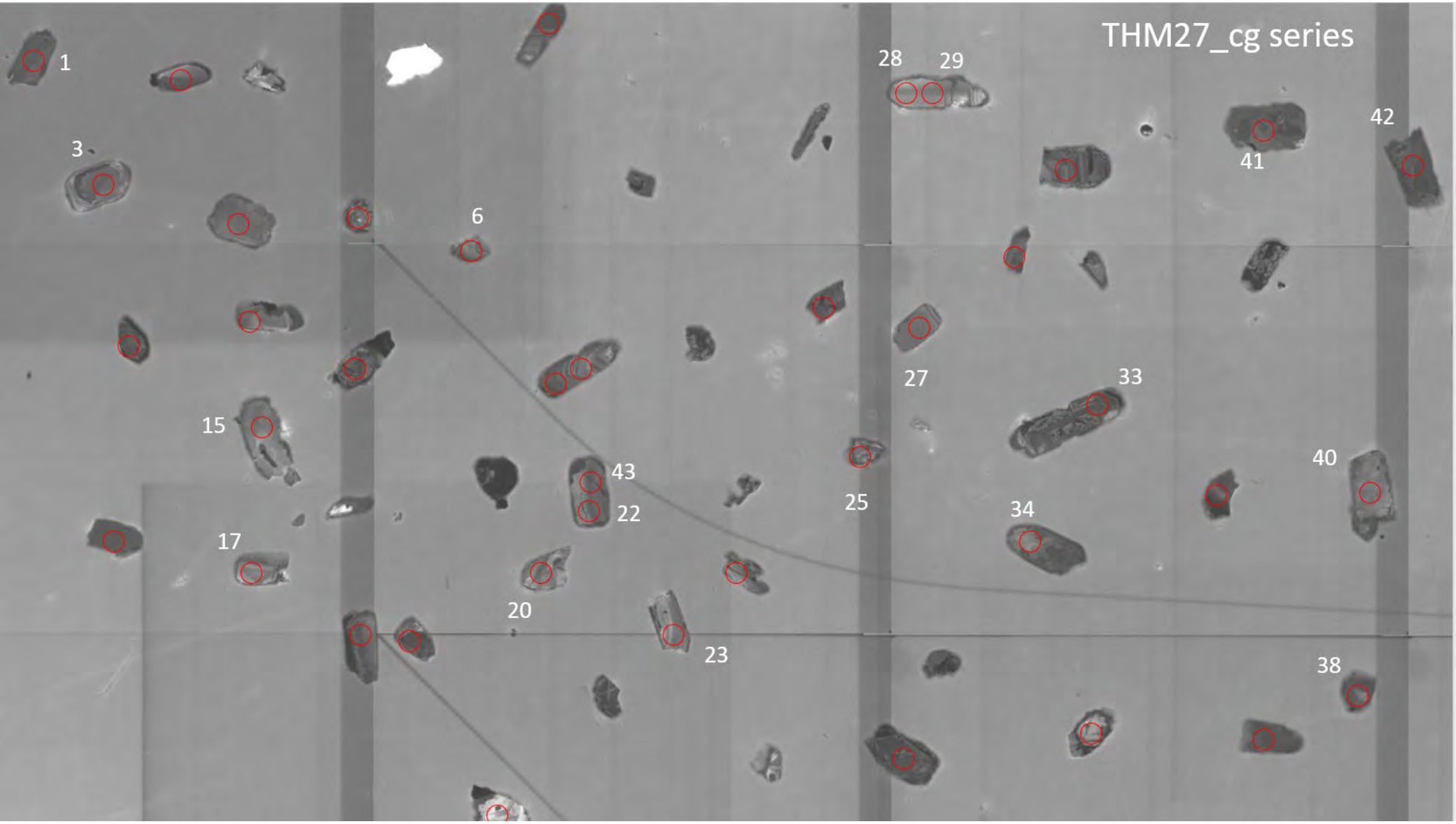




Sample THM27

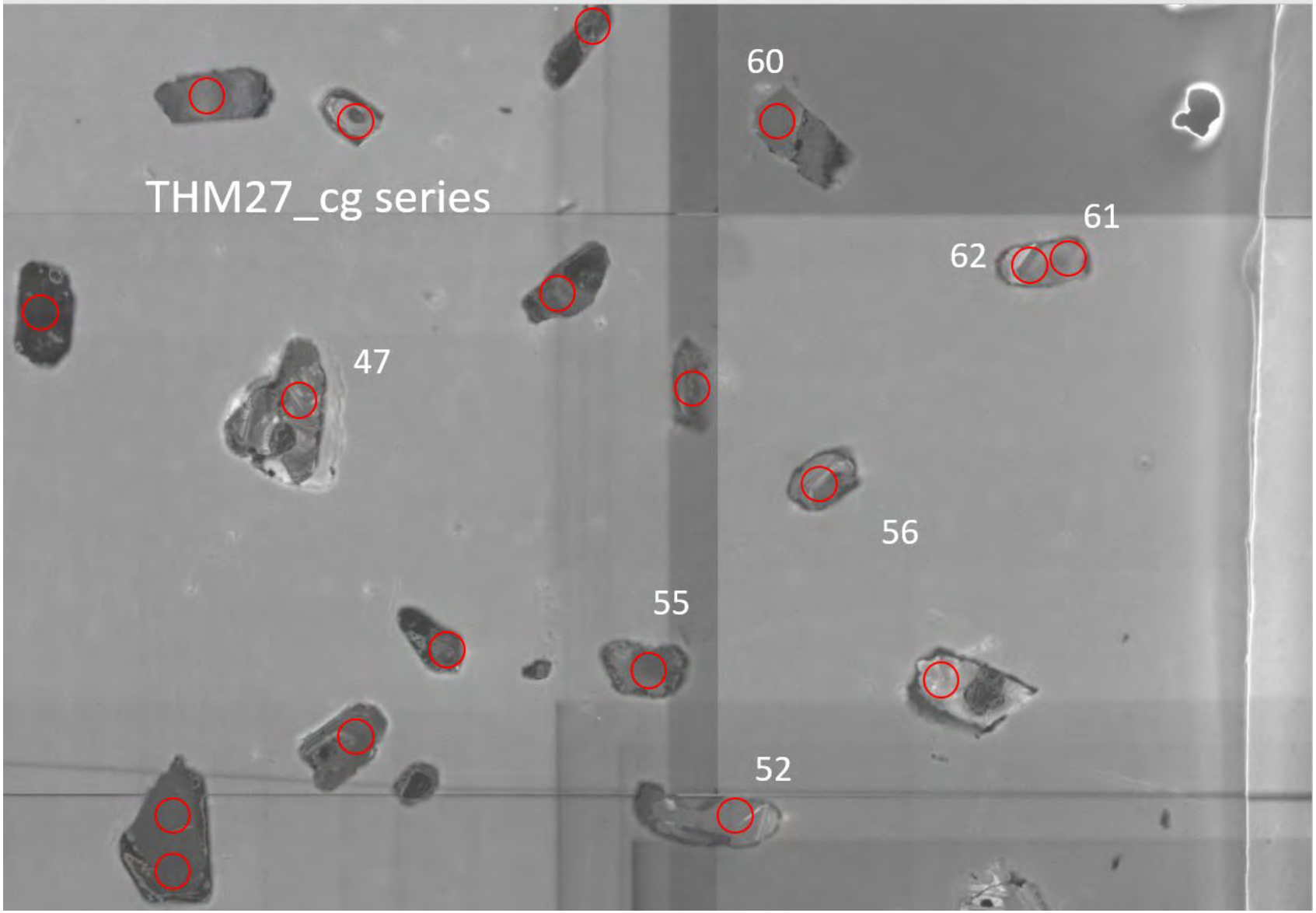
Marking 43 (near-)concordant ages of the youngest population (circles with analysis ID, including THM27_cg and THM27_fg series)

Appendix 4: Cathodoluminescence images for zircon
Sample THM27



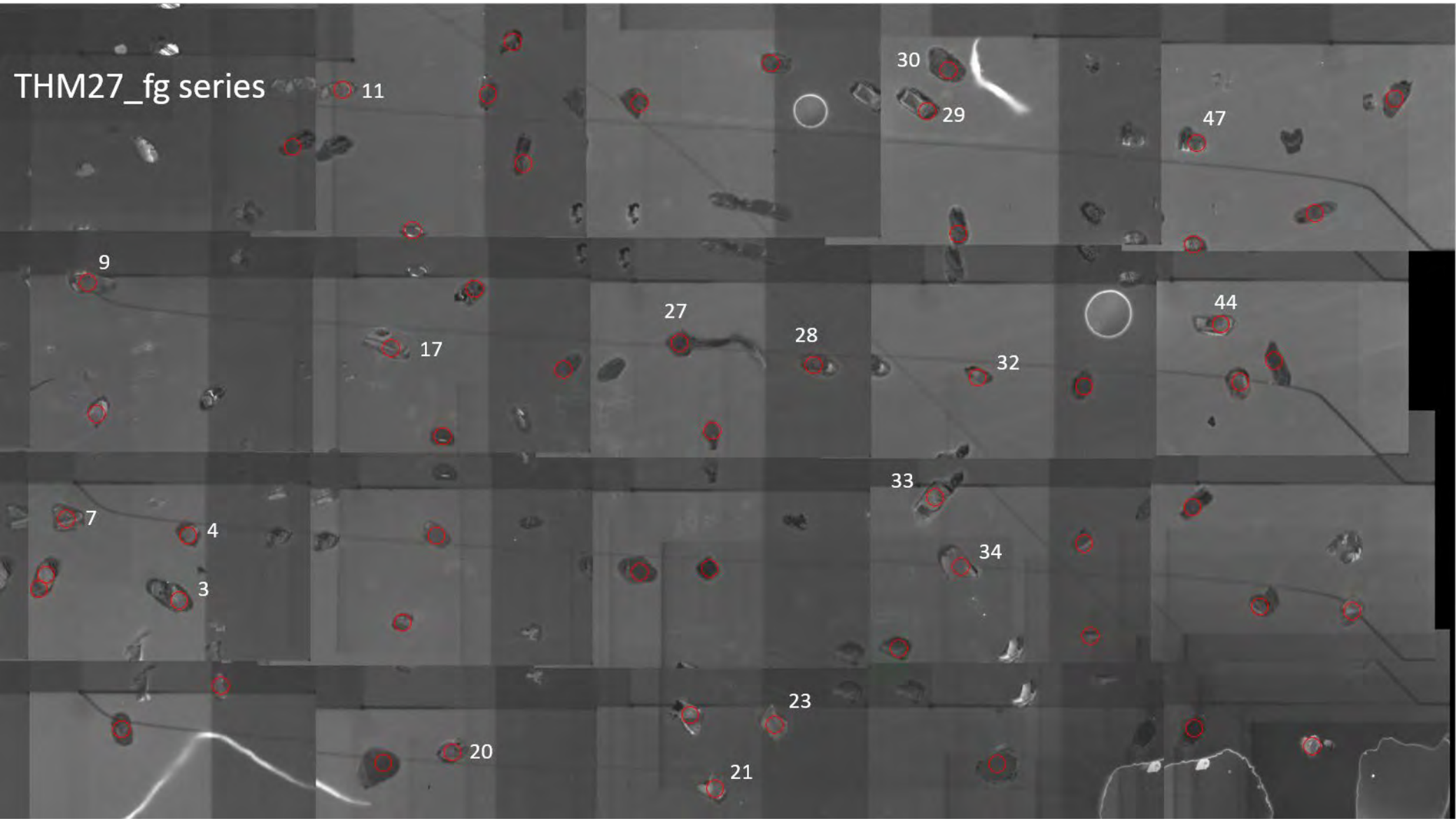
Analysis No. with the series of THM27_cg

Appendix 4: Cathodoluminescence images for zircon
Sample THM27



Analysis No. with the series of THM27_cg

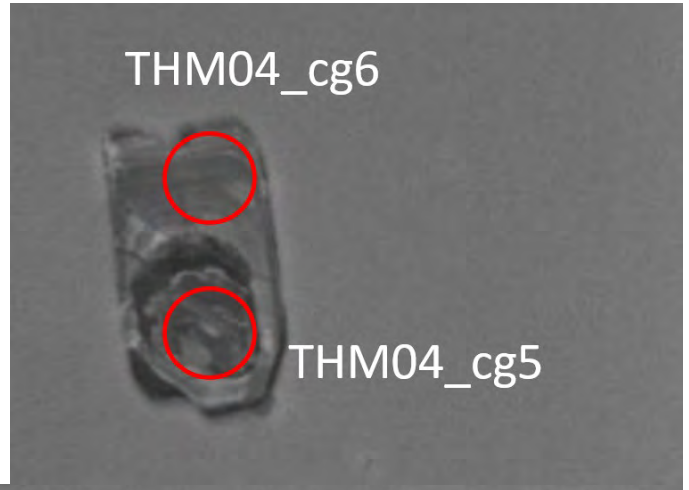
Appendix 4: Cathodoluminescence images for zircon
Sample THM27

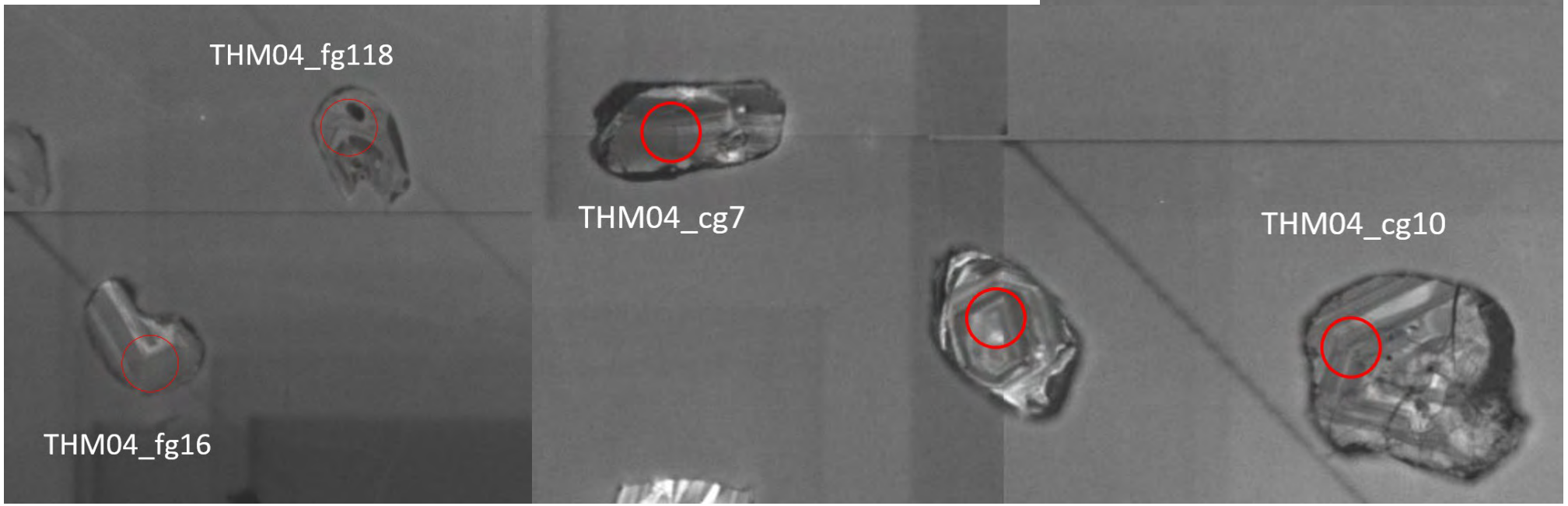


Analysis No. with the series of THM27_fg

Sample THM04

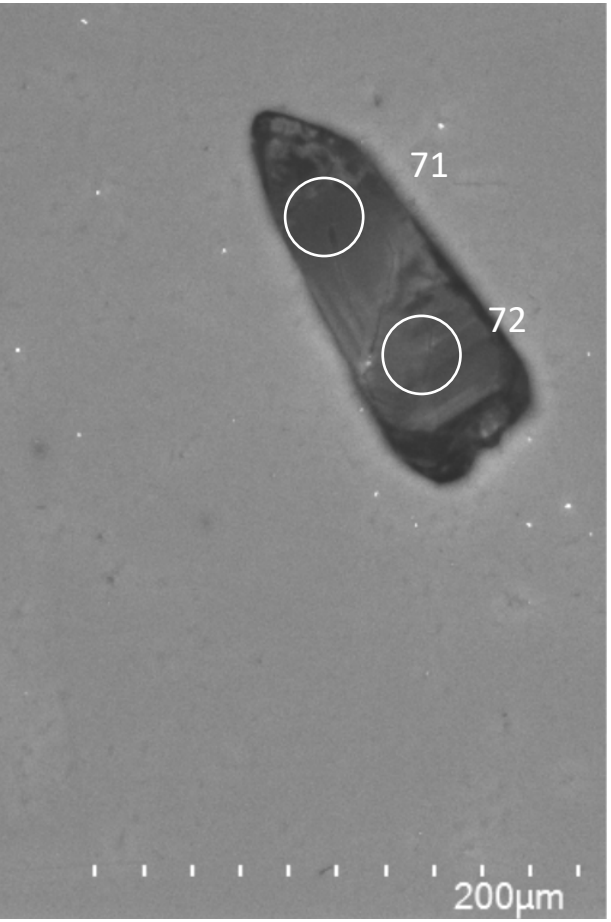
Marking 5 concordant analyses of the youngest cluster (circle with analysis ID) excluding the inherited analysis THM04_cg5

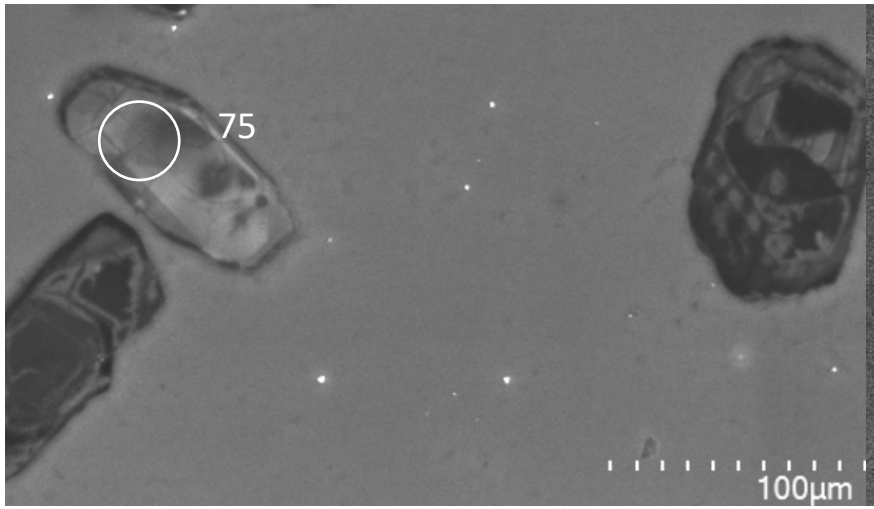


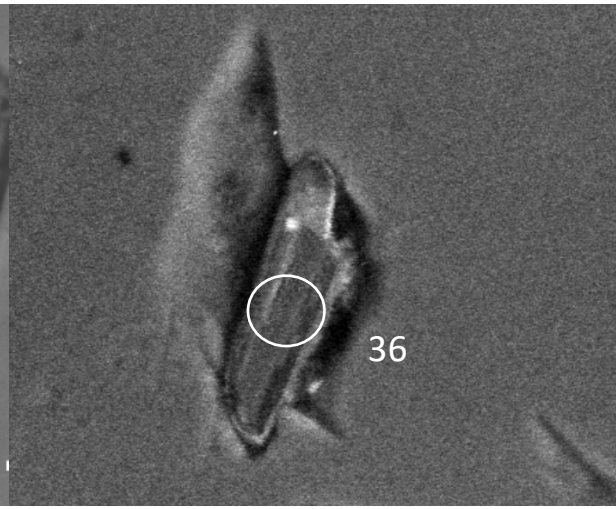


Sample TH11

Marking 4 analyses of the youngest cluster





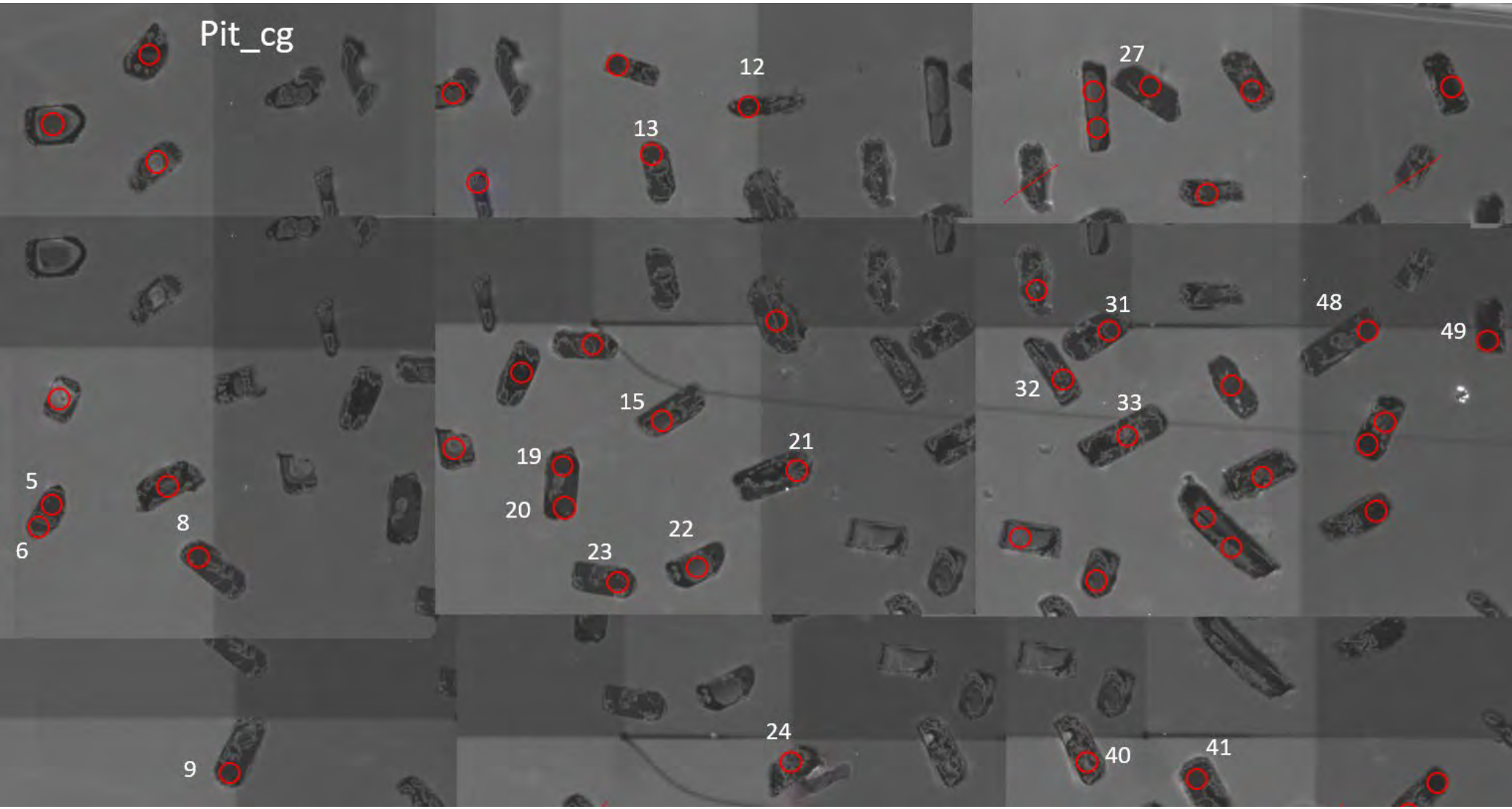


TH141 (or Pit)

Marking 81 concordant analyses of weighted mean age (the circle with analysis ID, including Pit_cg and Pit_fg series)

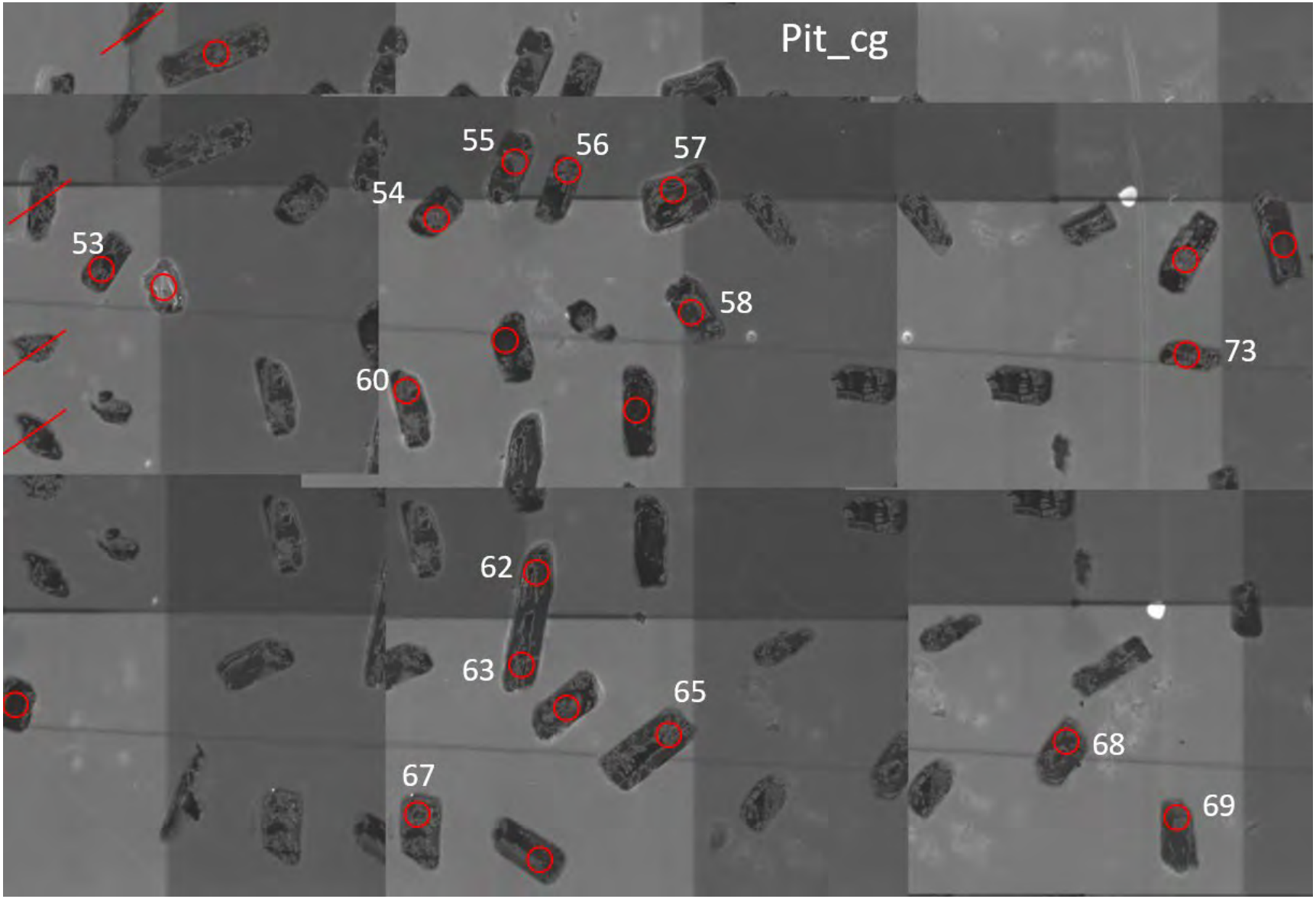
Appendix 4: Cathodoluminescence images for zircon
Sample TH141

Analysis No. with the series of pit_fg



Appendix 4: Cathodoluminescence images for zircon
Sample TH141

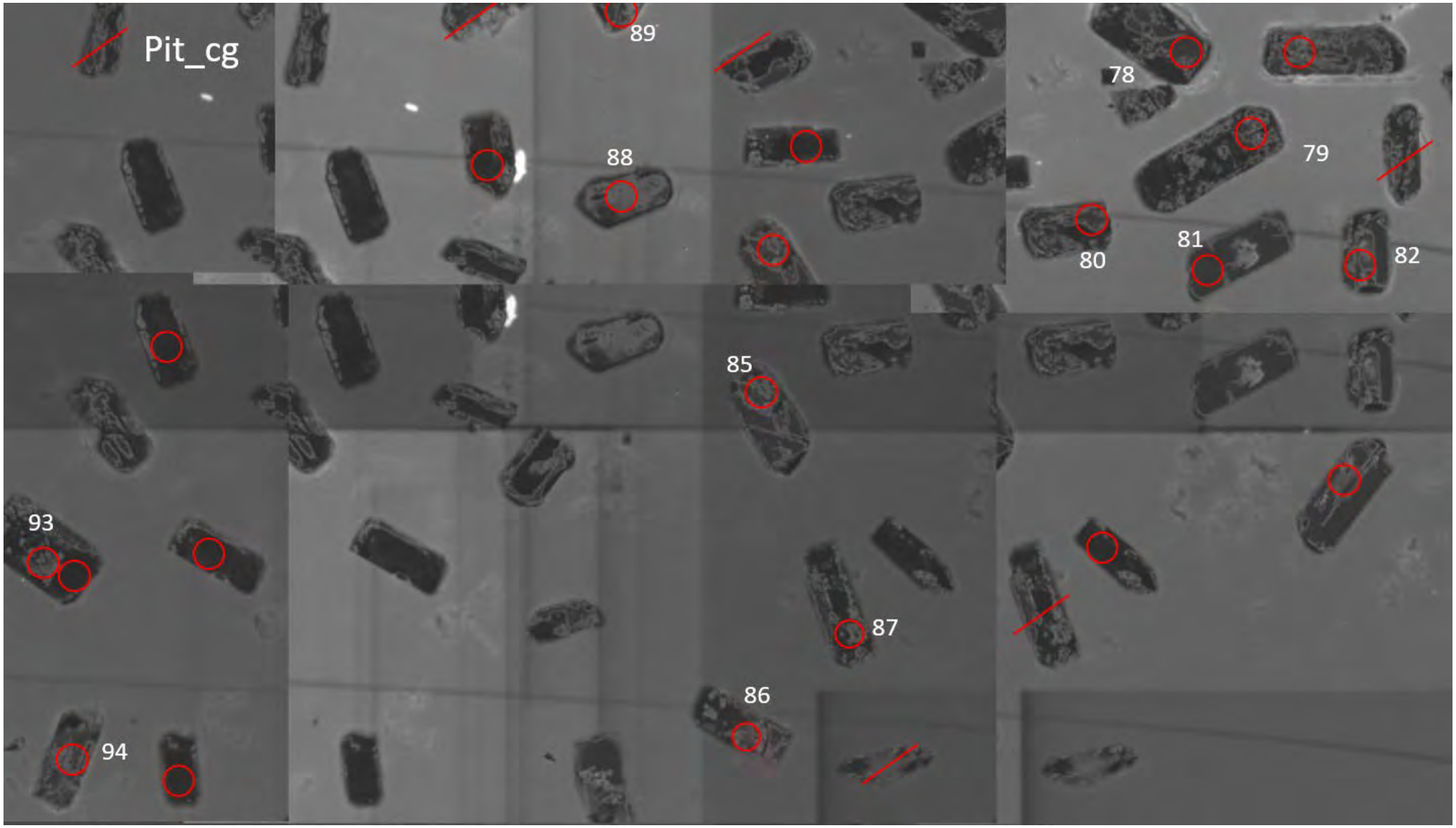
Analysis No. with the series of pit_fg



Appendix 4: Cathodoluminescence images for zircon

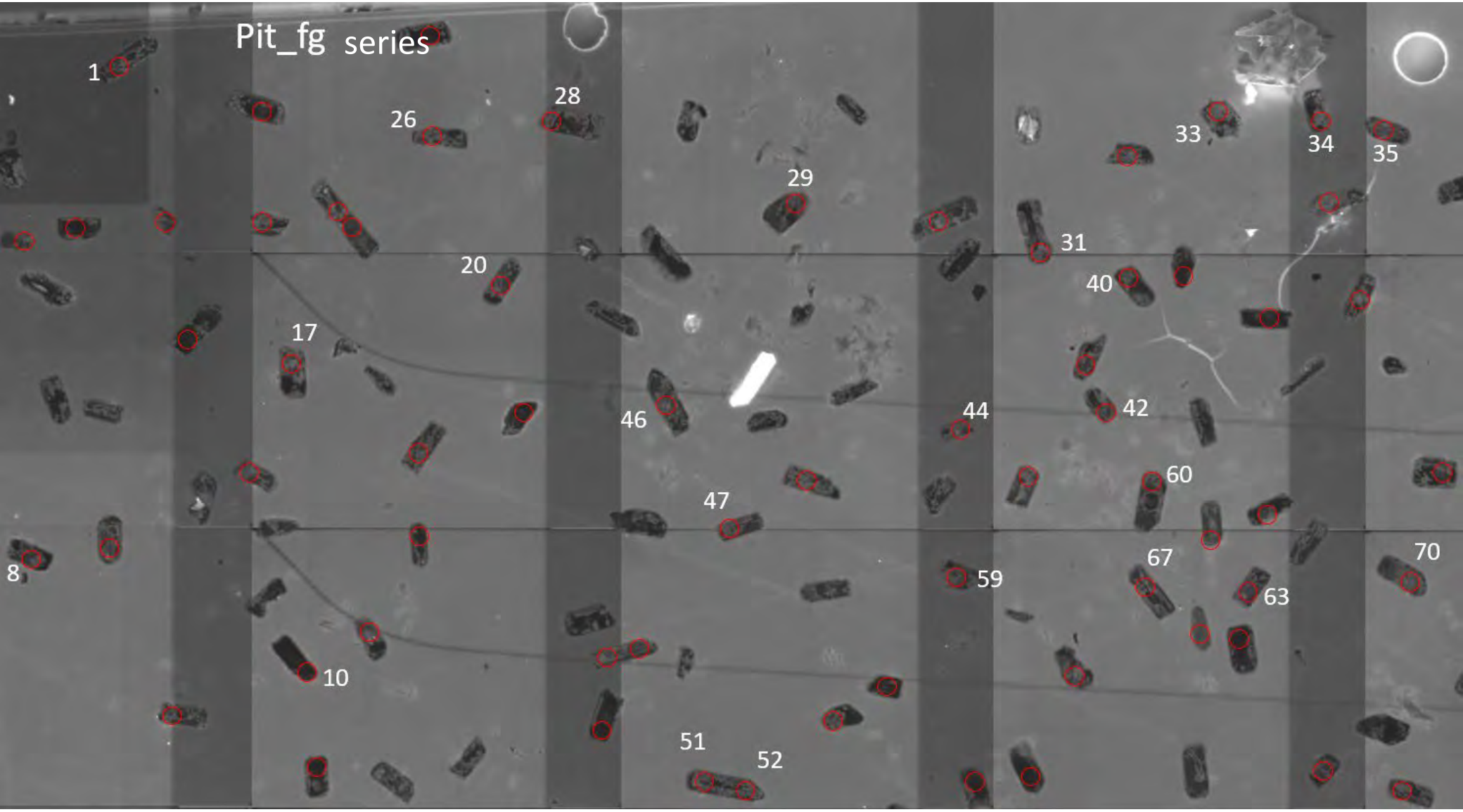
Sample TH141

Analysis No. with the series of pit_cg



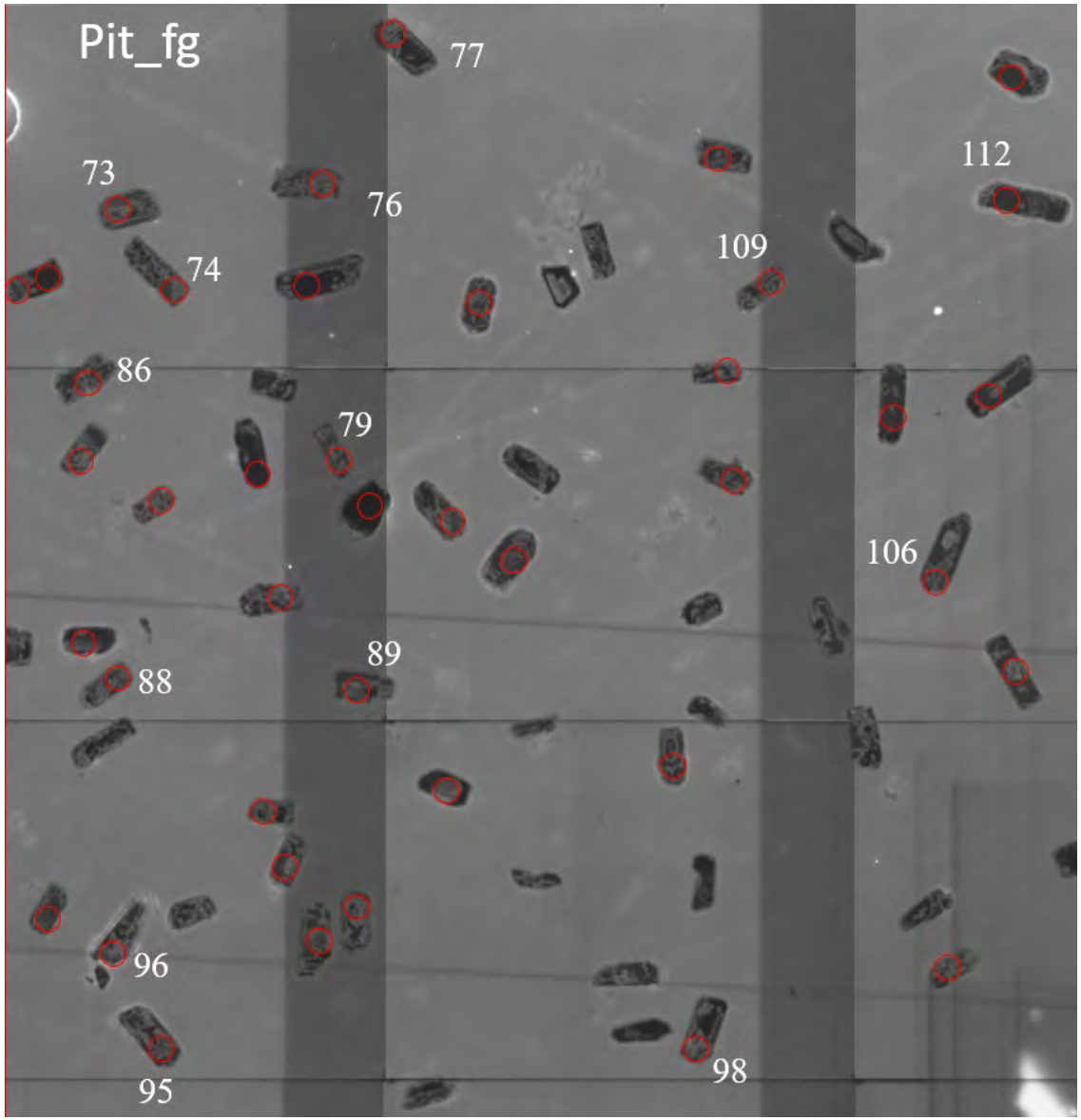
Appendix 4: Cathodoluminescence images for zircon
Sample TH141

Analysis No. with the series of pit_fg



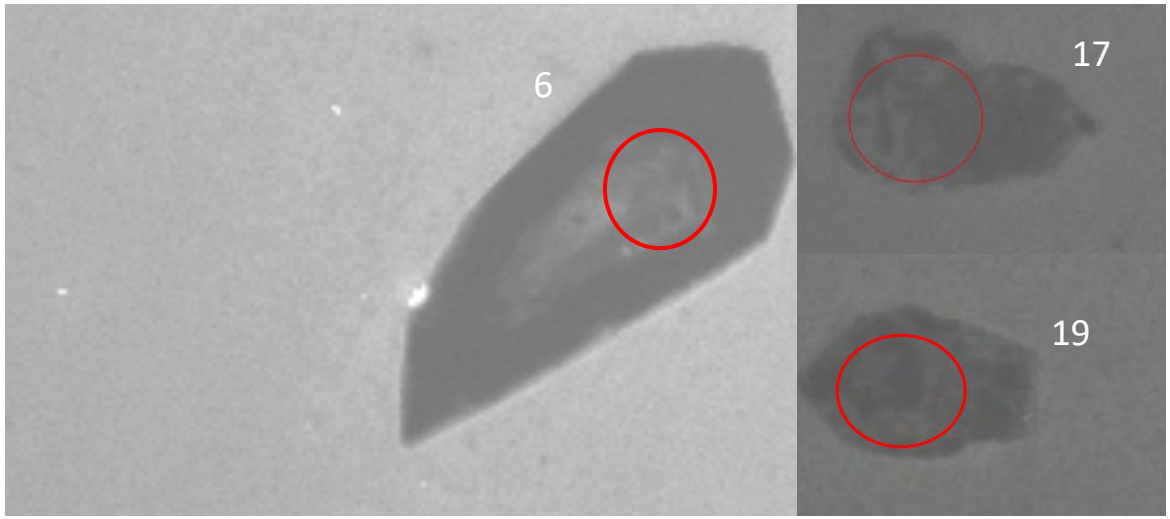
Appendix 4: Cathodoluminescence images for zircon
Sample TH141

Analysis No. with the series of pit_fg



Sample TH66

3 concordant analyses of the youngest group

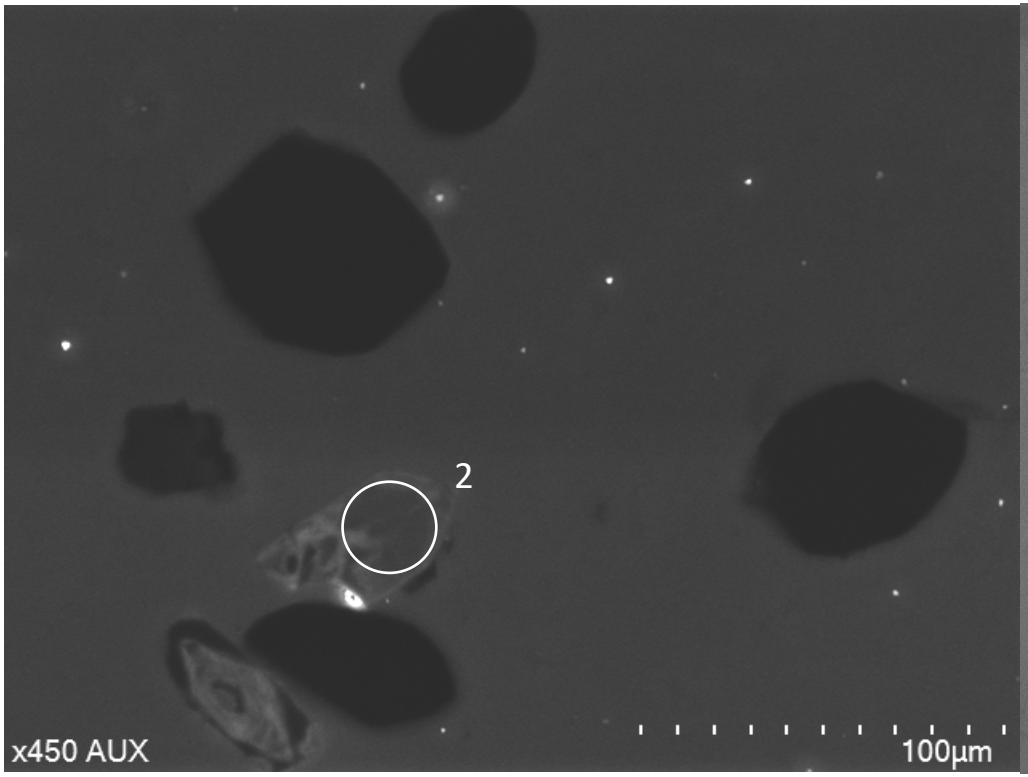


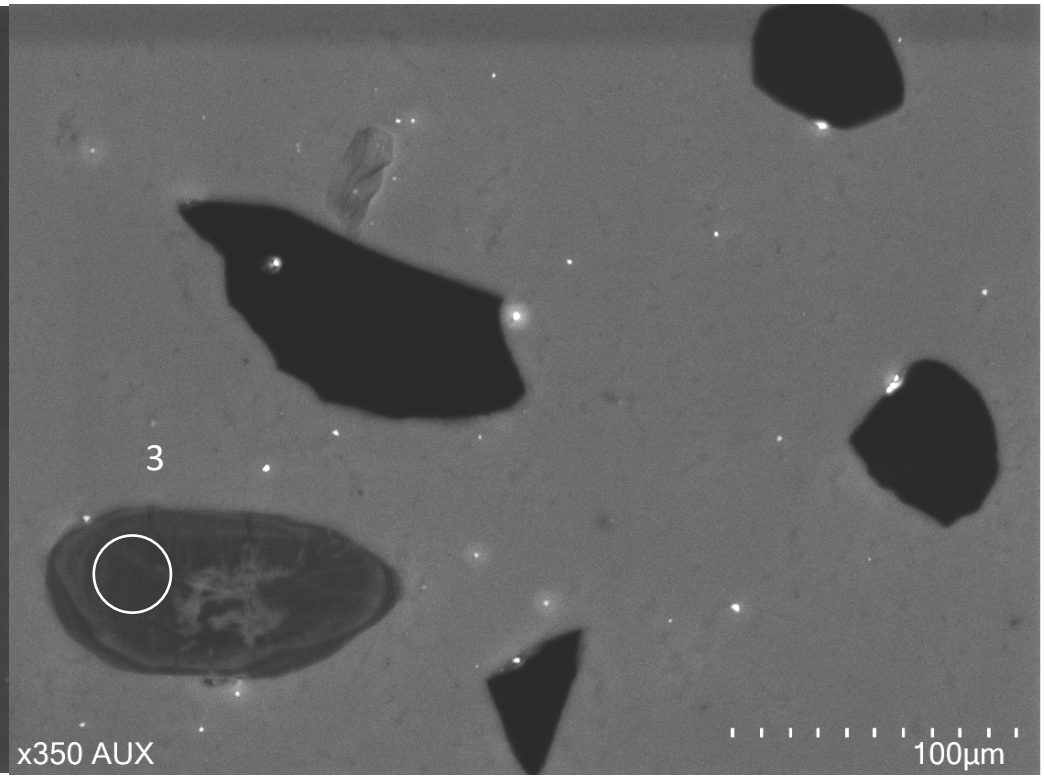
Sample TH108

Marking 27 (near-) concordant analyses of the youngest population (circle with analysis ID)

Appendix 4: Cathodoluminescence images for zircon
Sample TH108

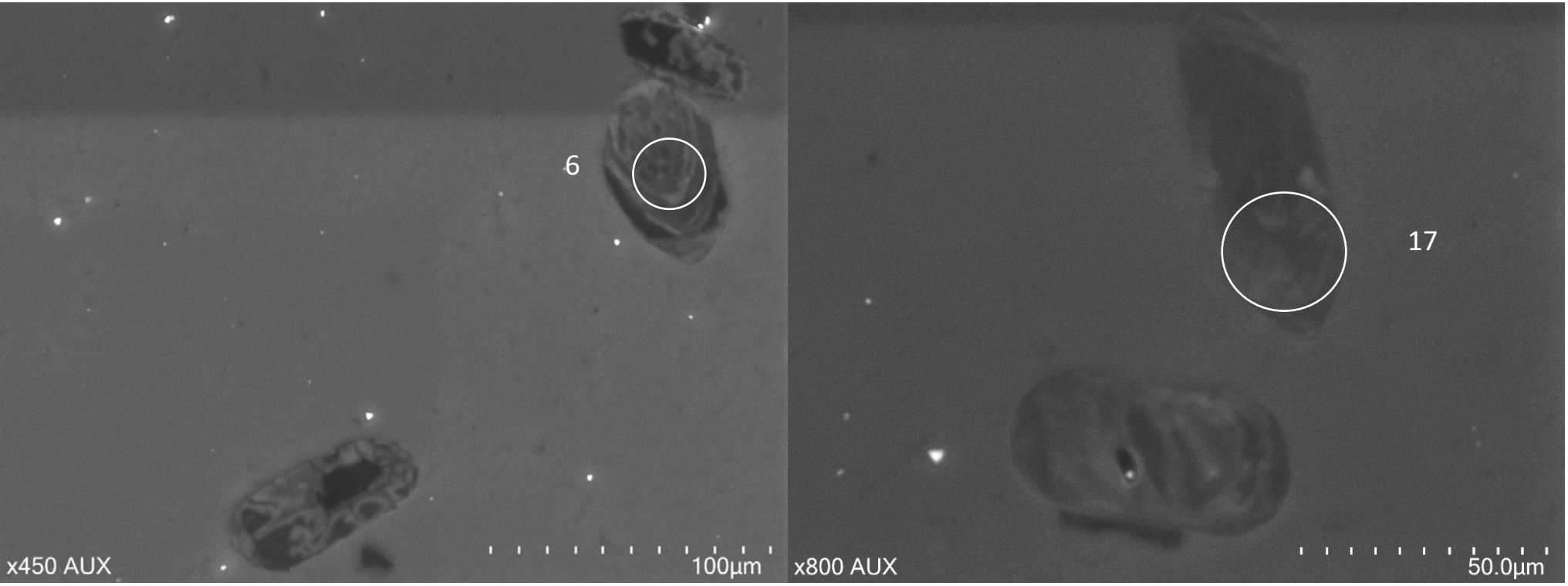
Analysis No. with the series of TH108-





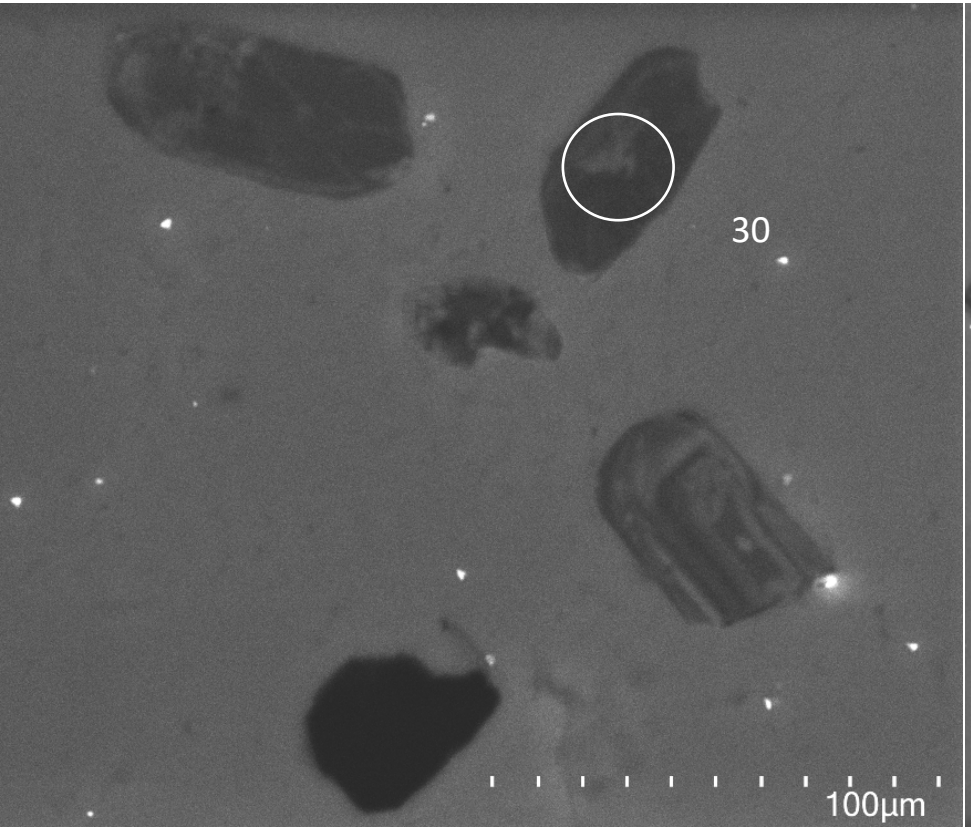
Appendix 4: Cathodoluminescence images for zircon
Sample TH108

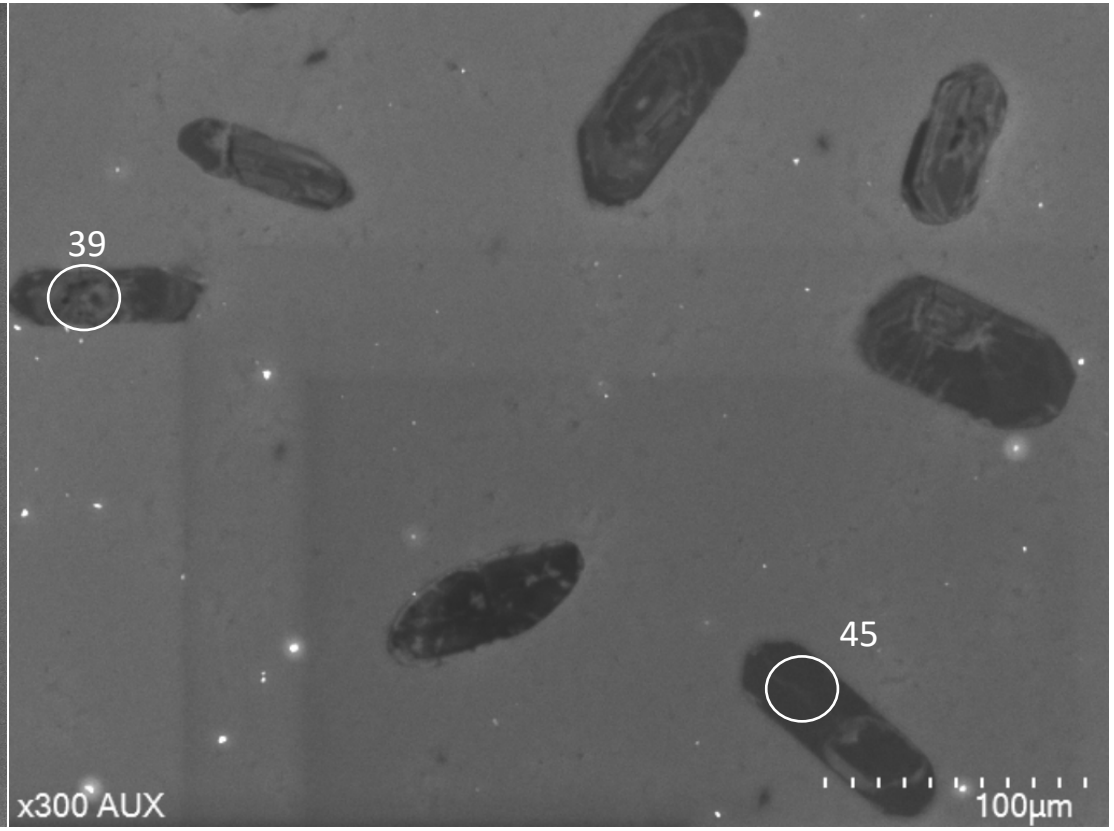
Analysis No. with the series of TH108-



Appendix 4: Cathodoluminescence images for zircon
Sample TH108

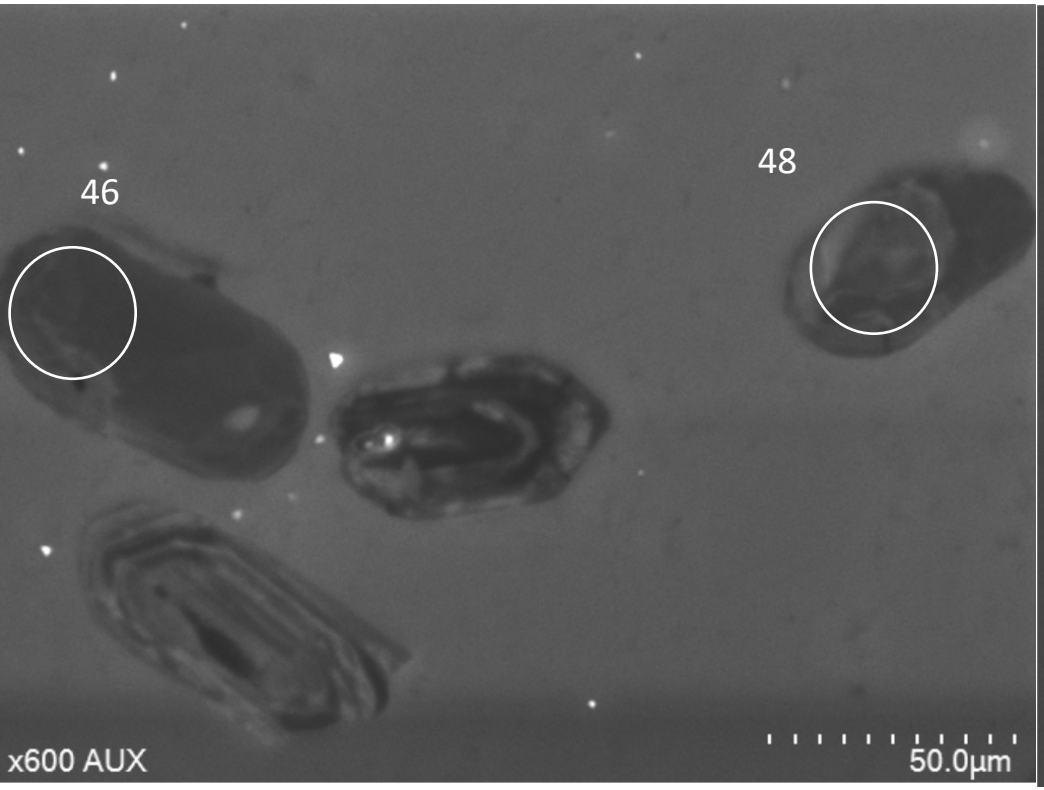
Analysis No. with the series of TH108-

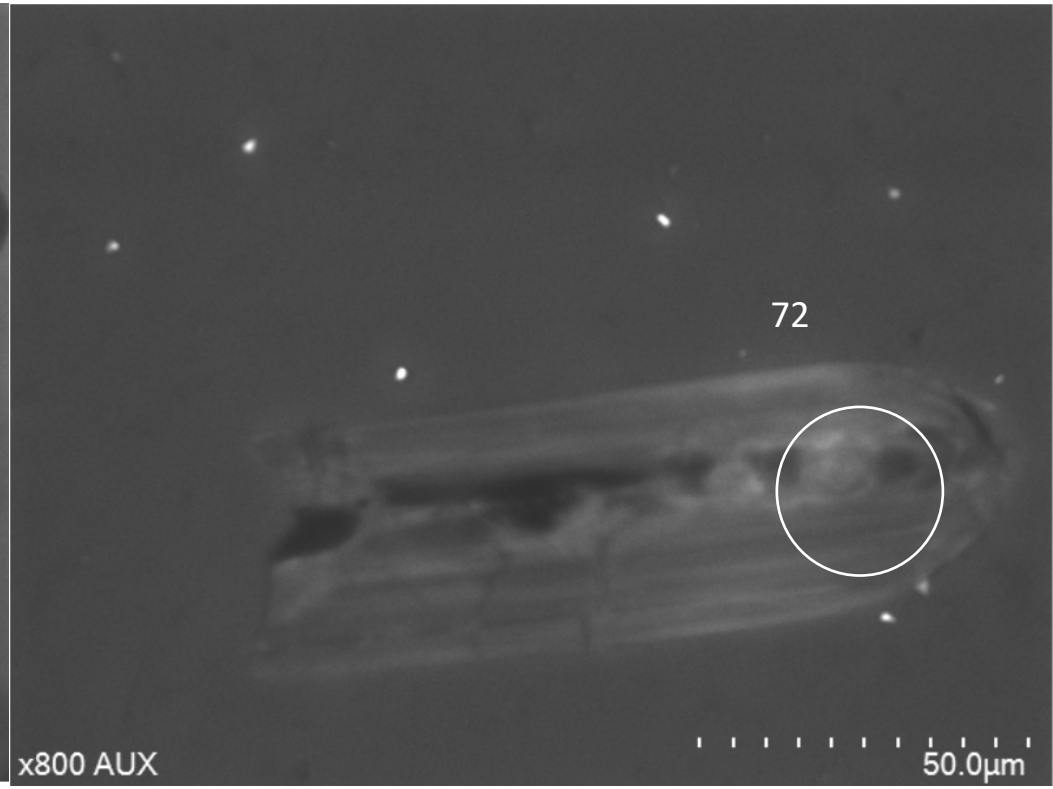




Appendix 4: Cathodoluminescence images for zircon
Sample TH108

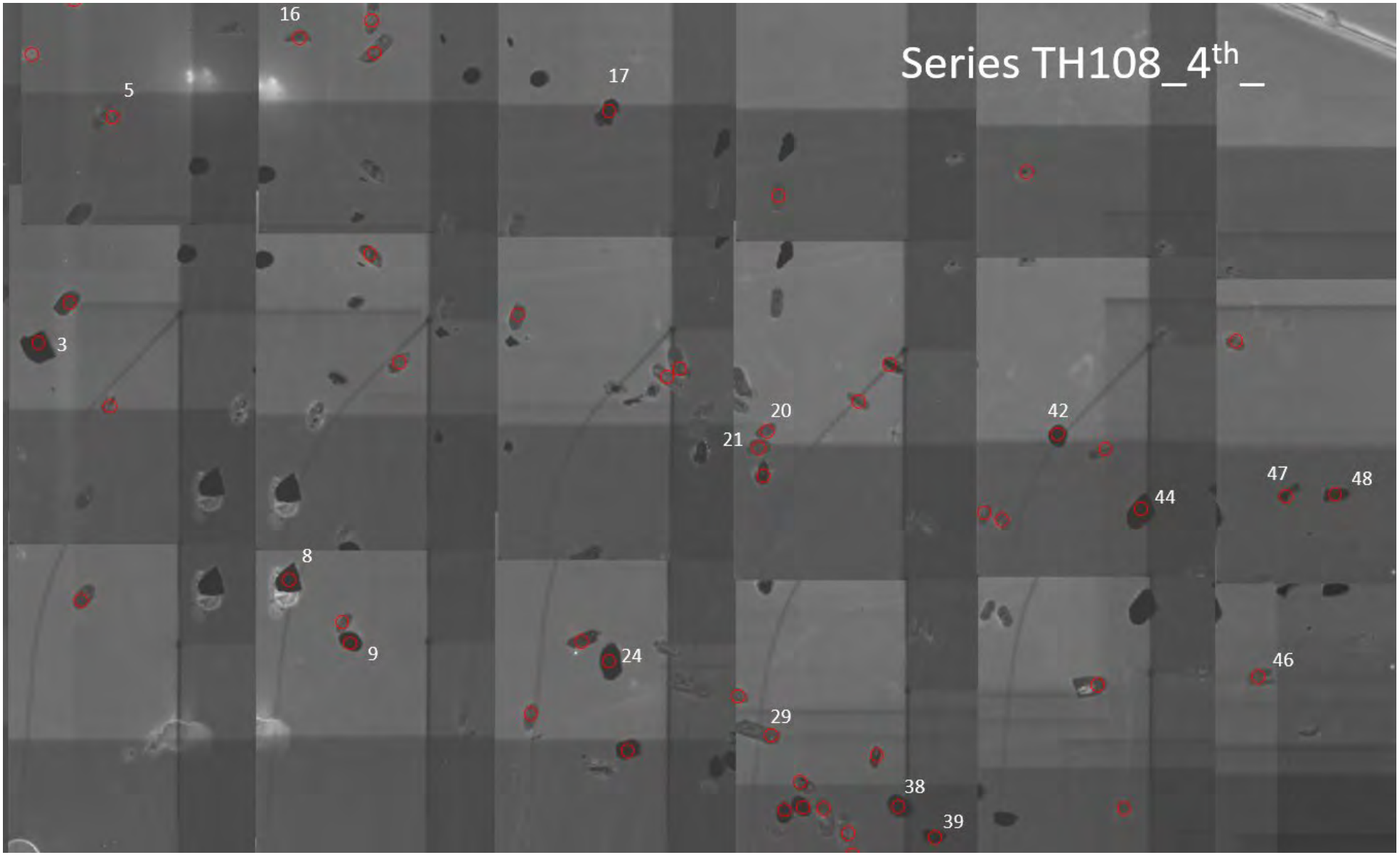
Analysis No. with the series of TH108-





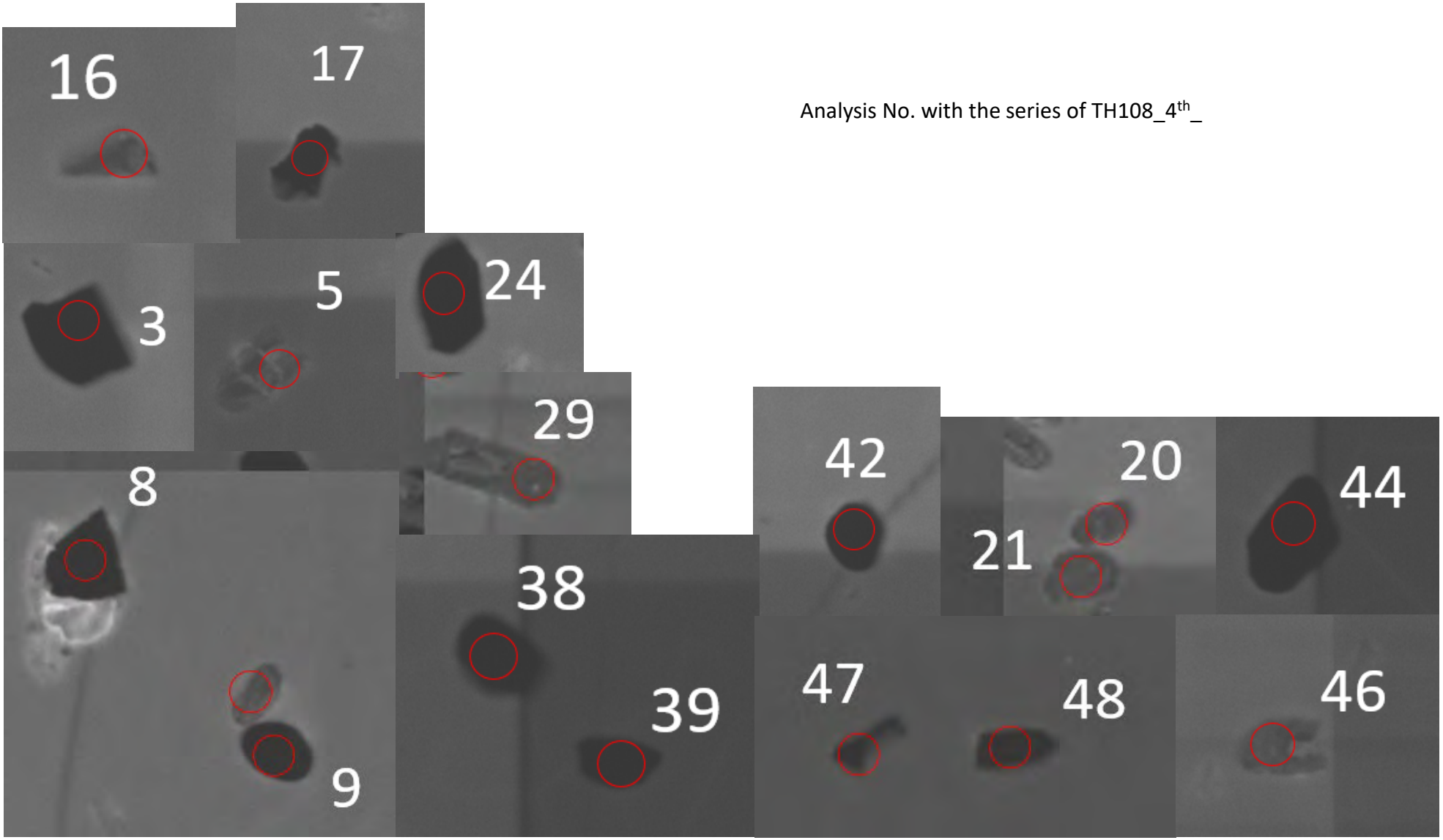
Appendix 4: Cathodoluminescence images for zircon
Sample TH108

Analysis No. with the series of TH108_4th_



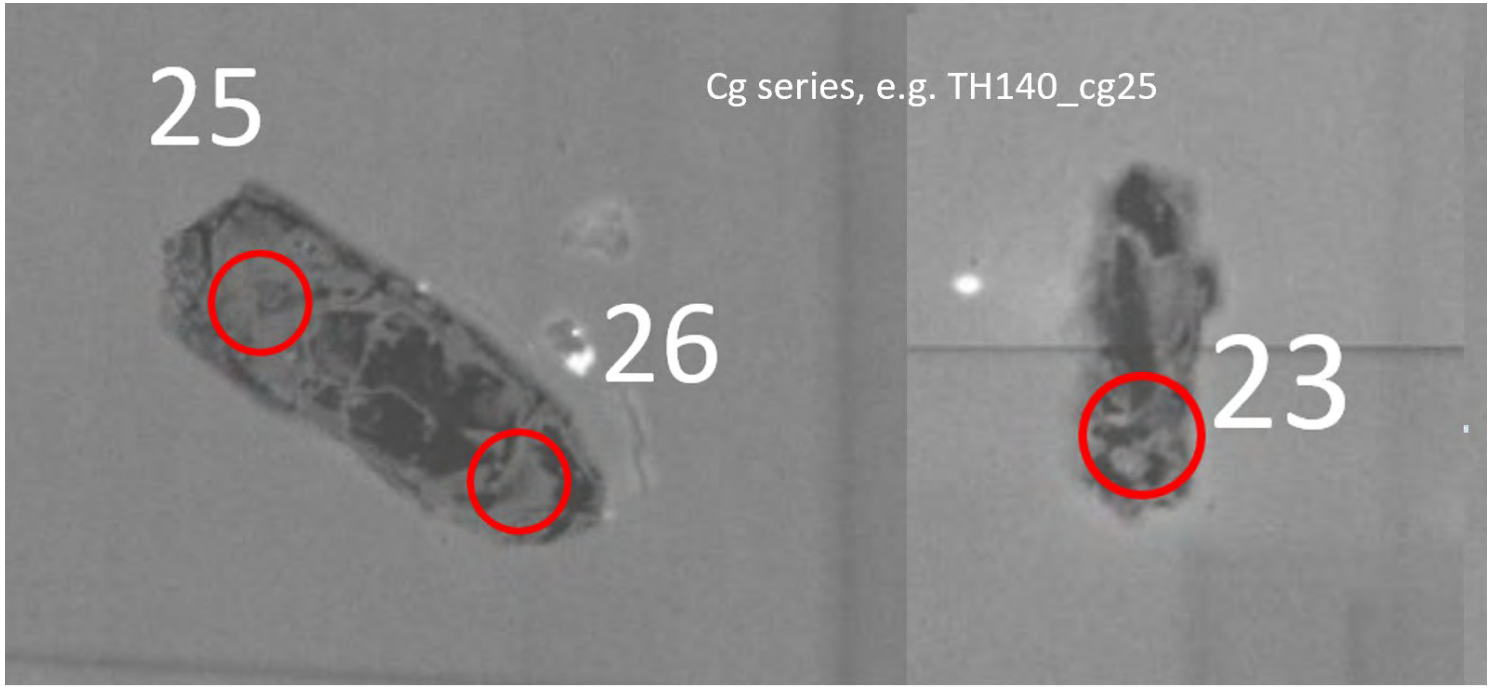
Appendix 4: Cathodoluminescence images for zircon
Sample TH108

Analysis No. with the series of TH108_4th_



Sample TH140

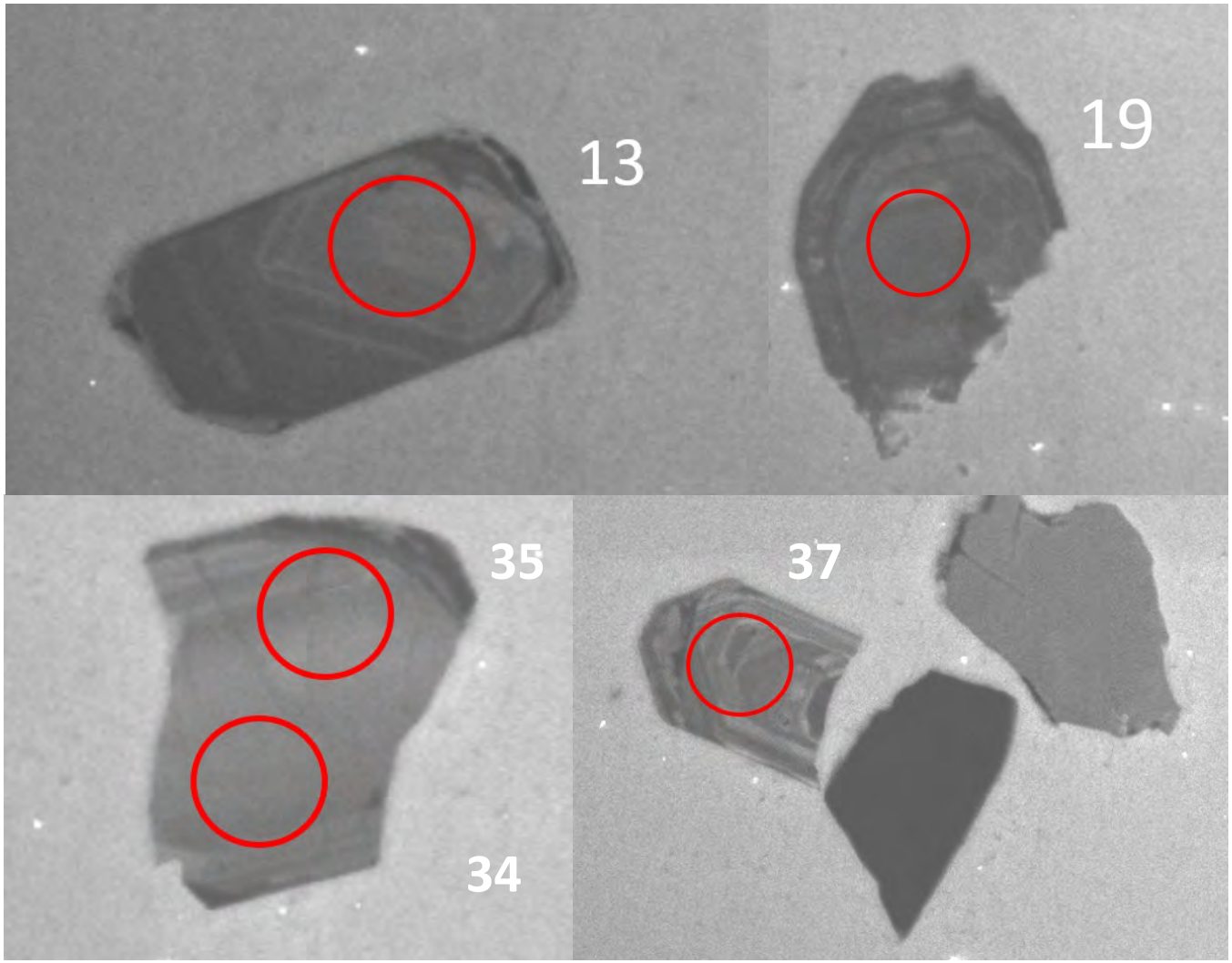
3 concordant analyses of the youngest group



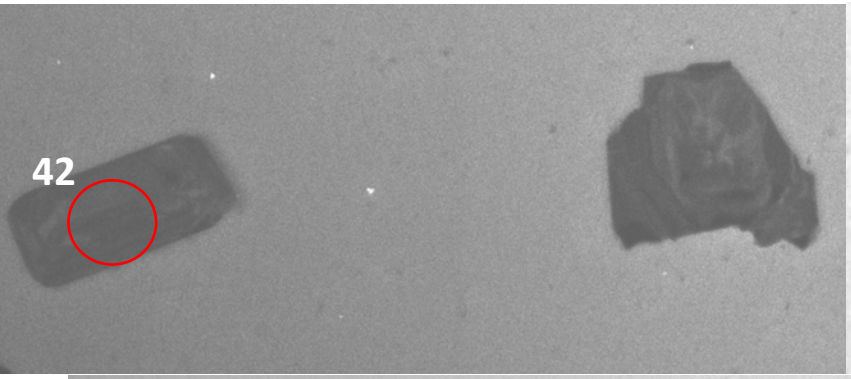
Sample TH01

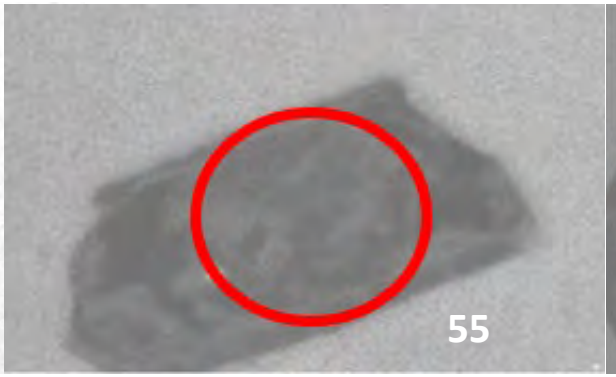
Making (near-)concordant analyses of the youngest cluster (circle with analysis ID)

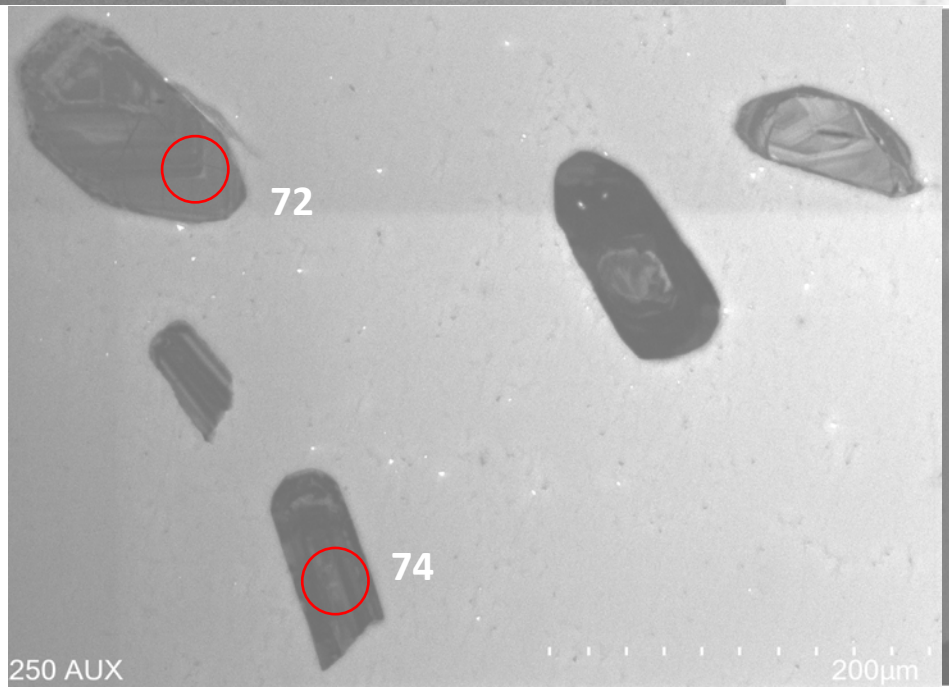
Appendix 4: Cathodoluminescence images for zircon
Sample TH01

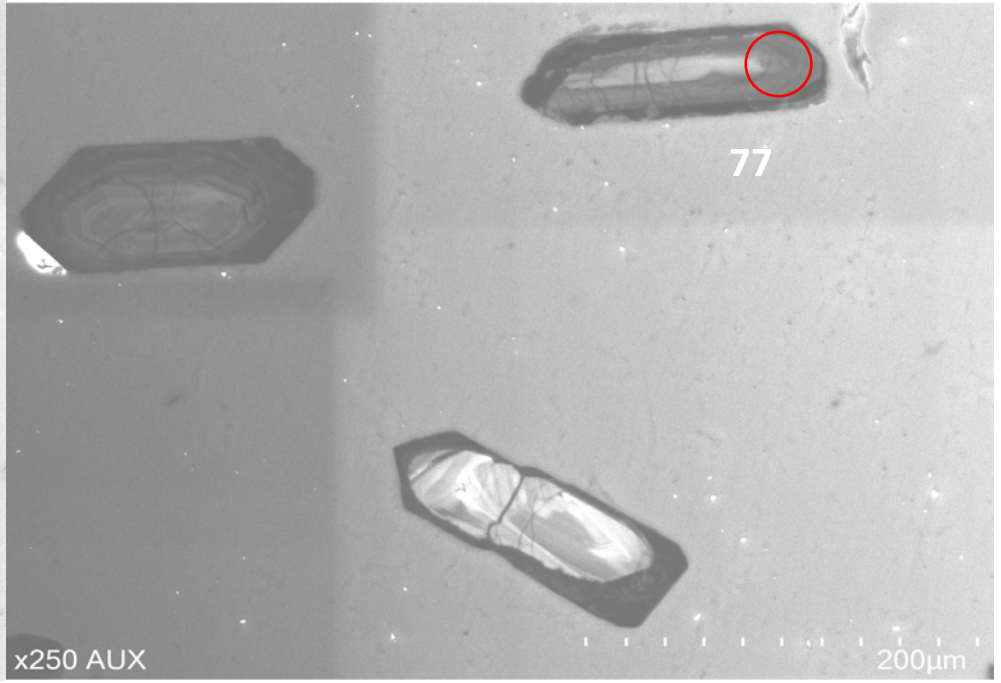


Appendix 4: Cathodoluminescence images for zircon
Sample TH01





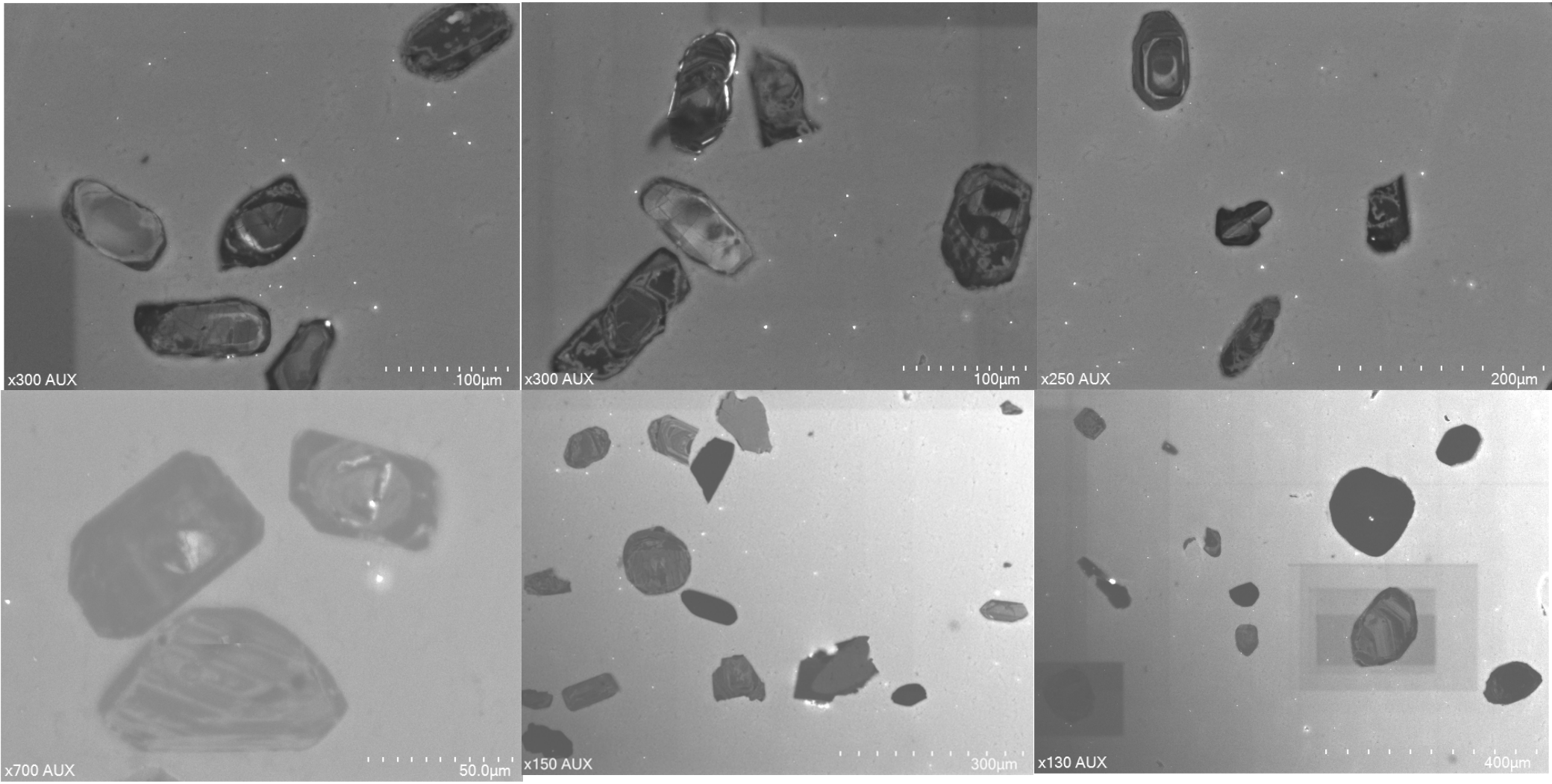




Appendix 4: Cathodoluminescence images for zircon

Sample TH01

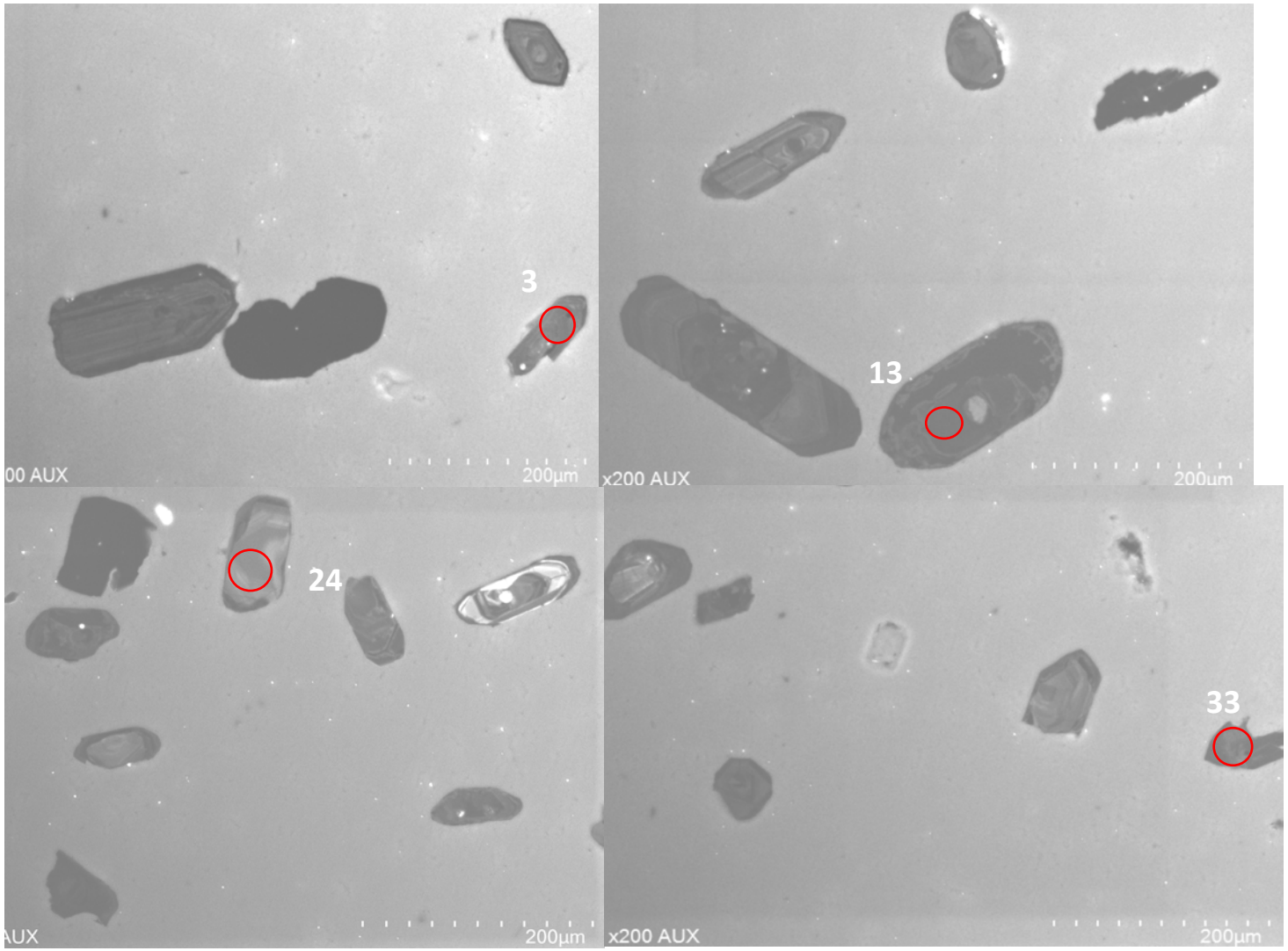
Other representative CL images of strongly detrital zircon grains in this sample



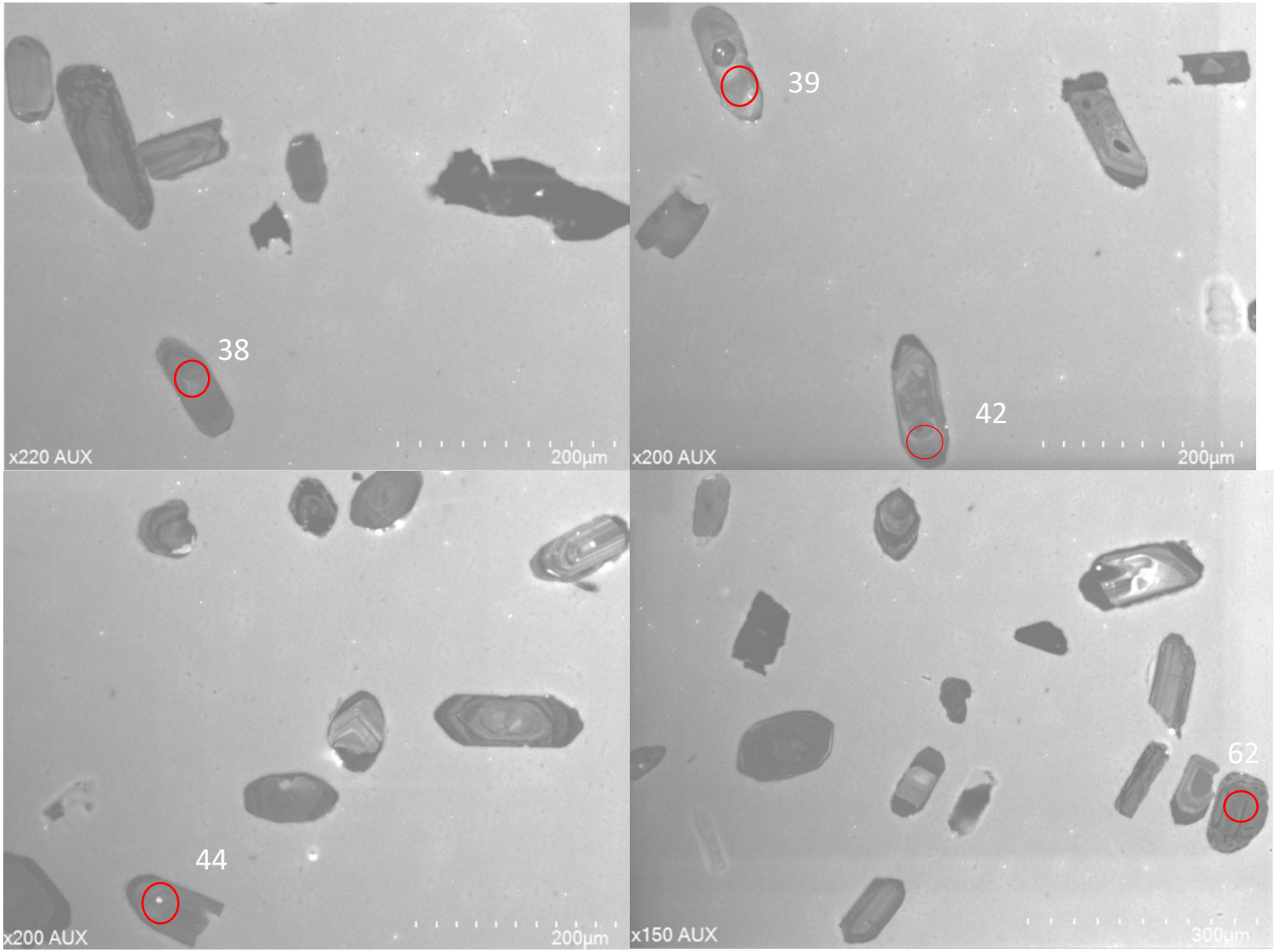
Sample TH13

Marking concordant analyses of the youngest population (circle with analysis ID)

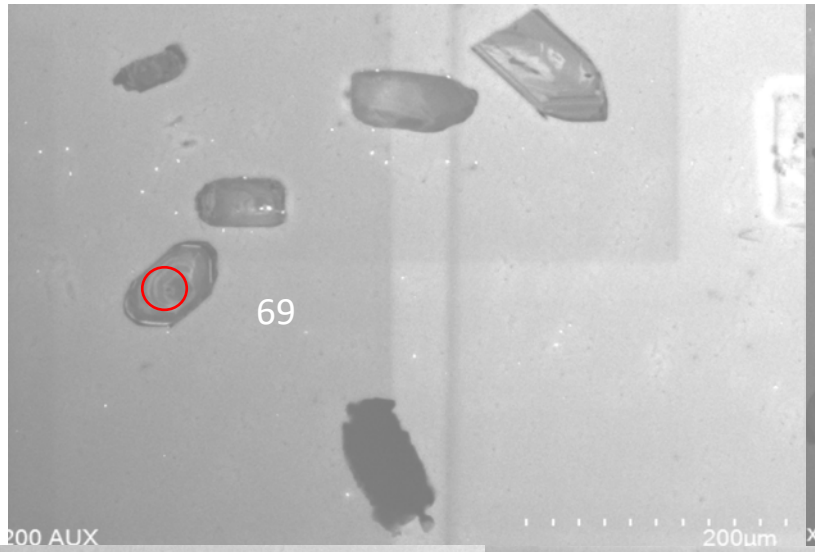
Appendix 4: Cathodoluminescence images for zircon
Sample TH13

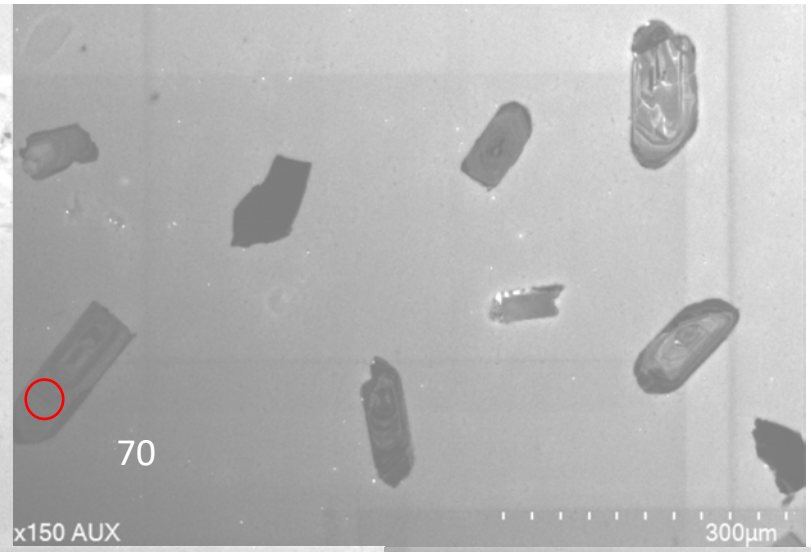


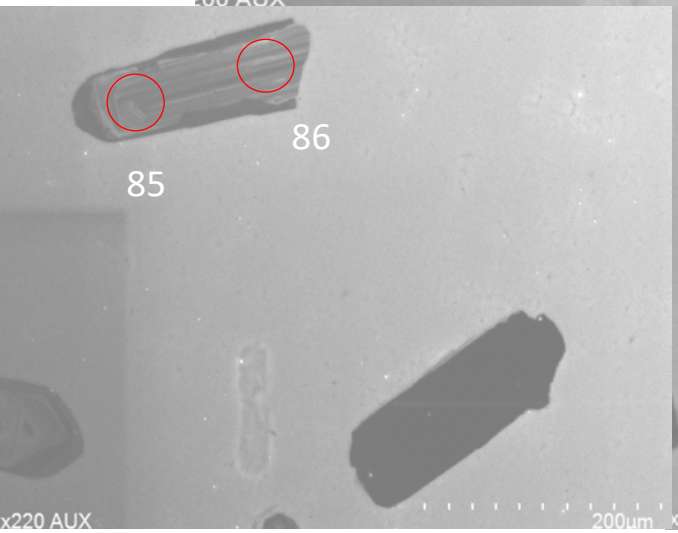
Appendix 4: Cathodoluminescence images for zircon
Sample TH13

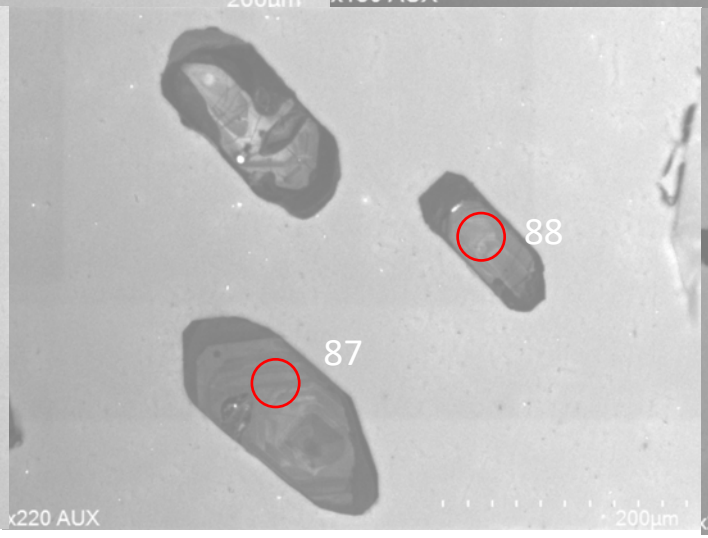


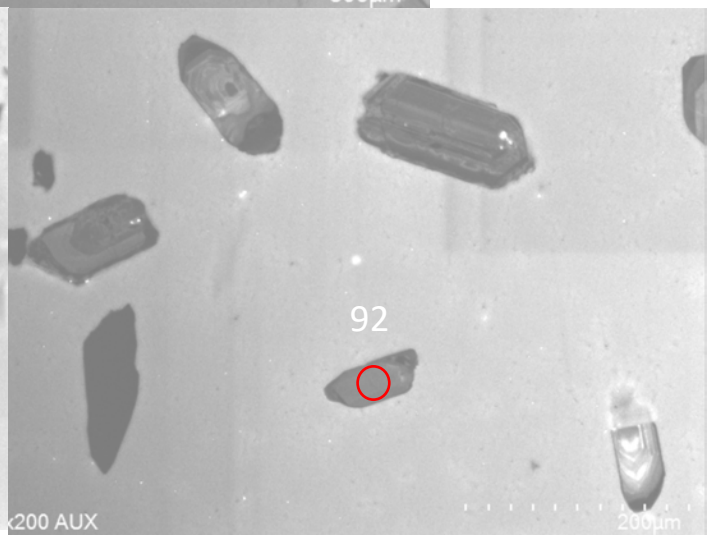
Appendix 4: Cathodoluminescence images for zircon
Sample TH13







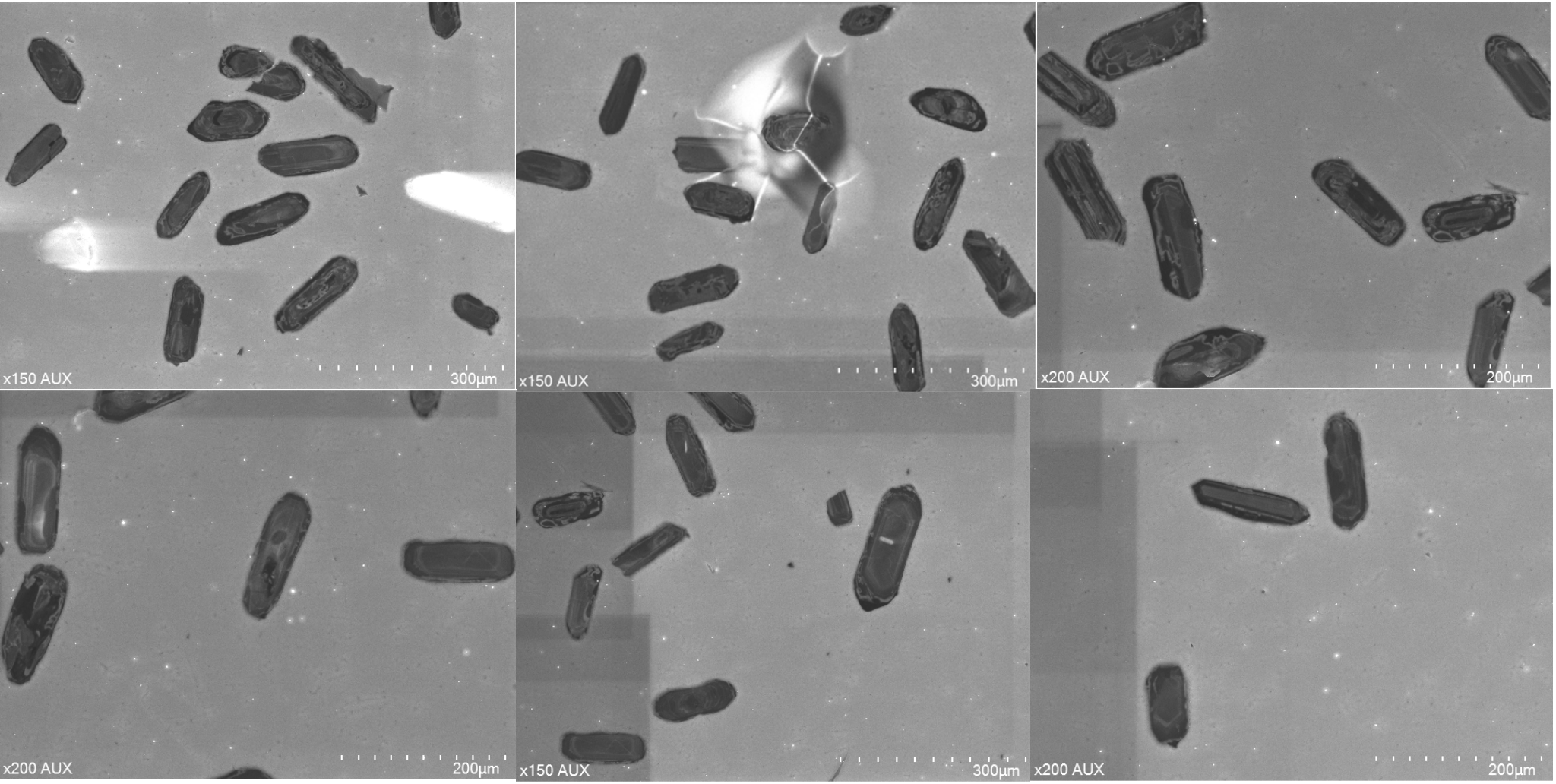




Appendix 4: Cathodoluminescence images for zircon

Sample TH13

Some of other CL images of prismatic zircon grains in this sample



Appendix 5

Trace element Geochemistry for zircon

Appendix 5 contains the following data sets:

- LA ICP-MS zircon trace element compositions from 10 samples in 4 age groups:
  - Group 1 hydrothermal zircon from syn-D3 pegmatite aged ~1520 Ma (n=51; samples TH141, TH140, TH108 and TH66);
  - Group 2 inherited zircon aged ~1550-1600 Ma from syn-D3 pegmatite (n=15; samples TH141 and TH140);
  - Group 3 magmatic zircon aged ~1770-1780 Ma obtained from syn-D1-2 intrusive granites (n=55; samples THG1, THG3, THgG4, THM04 and THM27);
  - Group 4 zircon from the hanging wall quartzite aged ~1780 Ma (n=14; sample TH13).

Appendix 5: Trace element geochemistry for zircon

Group (Ma)	Oder	Analysed ID	Sample	Na_23	Al_27	P_31	Ca_43	Sc_45	Ti_49	V_51	Mn_55	Fe_57	Co_59	Ni_60	Cu_63	As_75	Sr_88	Y_89	Zr_91	Nb_93	Sb_121	La_139	Ce_140	Pr_141	Nd_143	Sm147	Eu_151	Gd_157	Tb_159	Dy_163	Ho_165	Er_167	Tm_169	Yb_171	Lu_175	Hf_178	Ta_181	Pb_204	Pb_206	Pb_207	Pb_208	Bi_20	Th_232	U_238
1522	1	Pit_fg1	TH141	184.9	0.8	82	230	321.3	2.92	0.09	47.9	95.6	0.037	0.43	2.43	2.53	1.71	183.7	460100	1.392	0.05	0.0155	5.64	0.025	0.205	0.276	0.128	1.66	0.682	11.28	5.04	31.9	8.4	99.9	24.89	10690	2.23	3.65	1384	163.6	14.59	ukn	91.4	1401
1522	2	Pit_fg3	TH141	1320	1.15	30.5	1740	288.7	3.2	0.145	245	214	0.075	0.7	34.6	2.5	14.2	199.8	412000	1.11	0.095	0.155	5.88	0.205	1.15	0.51	0.199	2.03	0.94	12.4	5.58	33.4	8.45	102.9	25.8	10060	1.63	6.5	1264	152.4	15.9	ukn	69	1186
1522	3	Pit_fg5	TH141	259	3.7	92	320	328.8	3.2	0.37	70	59.7	0.068	0.6	4.41	1.85	5.1	245.3	462200	1.402	0.06	0.032	6.71	0.052	0.37	0.33	0.153	2.66	1.042	15.63	6.75	42.8	10.73	130.6	32.29	10620	1.861	3.55	1407	167.2	18.31	ukn	111.3	1429
1522	4	Pit_fg9	TH141	1280	255	125	1550	305.8	2.8	8.1	286	1380	0.033	0.5	7.3	5.6	15.3	433	426600	1.6	0.055	1.75	27.6	2.47	12.4	7.6	2.34	14.7	3.92	39.7	12.63	63.8	14.69	165.4	39.6	9230	2.3	4.6	1507	183.8	18.37	ukn	80.5	1498
1522	5	Pit_fg10	TH141	397	123	510	860	322.5	1.62	56	117	530	0.0475	0.6	1.35	5	12.6	439	448300	1.53	0.26	7.6	43	8.1	44	18	6	28.4	5.8	48	14.1	69	15.3	171.5	40.1	10200	2.31	3.1	1422	173.2	15.24	ukn	89.2	1469
1522	6	Pit_fg11	TH141	854	14	110	1230	299.8	2.22	3.6	319	530	0.08	0.55	16.2	4.8	8	217	425500	1.02	0.055	0.58	7.3	0.59	3.5	1.8	0.45	4	1.22	14.4	5.96	35.4	8.97	104.1	26.15	10200	1.77	3.85	1243	148.2	14.59	ukn	74.1	1184
1522	7	Pit_fg12	TH141	1120	12.7	131	1180	319.7	4	1.97	182	750	0.0235	0.55	5.3	4	12	314.3	423400	1.55	0.0435	0.68	12.4	0.52	3.47	2.25	1.23	6.92	2.05	24.9	9.16	50	12.06	133.5	32.22	9730	1.86	4.35	1568	194.2	21.21	ukn	99.7	1470
1522	8	Pit_fg13	TH141	417	53.2	230	840	316.4	3.19	10.7	211	846	0.0415	0.435	1.04	4.5	9.89	331	449600	1.59	0.133	5.2	28.9	2.73	14.9	7.2	5.23	11.8	2.71	27.3	9.41	51.4	11.61	129.2	31.35	10320	2.014	4.35	1313	160.3	18.56	ukn	91.7	1346
1522	9	Pit_fg14	TH141	930	260	440	3470	299.7	2.11	92	693	2460	0.134	0.65	2.64	8.6	40.7	645	418200	1.27	0.48	8.5	109	8.3	50	25.7	17.8	46	10.9	91	22.3	92	18.5	187	40	10150	1.96	4.6	1239	148	17.35	ukn	108.3	1440
1522	10	Pit_fg15	TH141	2240	83	320	7260	286	4.9	8.2	837	1180	0.17	0.65	26	7.7	84.2	369	380000	1.56	0.39	8.4	16.9	5.1	27	8.7	4.3	11.6	2.4	27.4	10.9	64	16	197	47.3	8150	2.17	14.9	1481	183.9	32.4	ukn	74.5	1520
1522	11	Pit_fg17	TH141	1494	159	588	2490	478	6.3	4.25	762	2400	0.164	0.65	3.62	12.3	25.8	434	418300	6.4	1.23	6.92	28.2	3.35	14.2	3.53	3.15	7.2	2.49	37	16.01	113.1	35.2	499	132.5	18130	75	3.85	1246	153.5	17.87	ukn	71.2	1363
1522	12	Pit_fg19	TH141	98	7.2	114	85	327.8	2.14	1.6	24.2	92	0.0295	0.55	1.64	3	0.95	224	463900	1.24	0.0355	0.26	11.3	0.23	1.7	1.19	0.26	3.9	1.18	14.7	6.27	38	9.52	112.4	27.81	10660	1.99	3.45	1237	146.8	15.2	ukn	100.9	1261
1522	13	Pit_fg20	TH141	82	4.2	215	135	338.6	4.4	1.2	1.6	43.2	0.03	0.6	1.06	4.9	0.87	431	445600	1.7	0.05	0.1	11.3	0.27	1.15	1.68	0.22	9	2.74	35.1	13.2	73	16.5	180	40.2	10490	1.98	4.15	1152	144.1	24.8	ukn	141	1102
1522	14	Pit_fg22	TH141	1228	477	522	3390	320.2	2.5	41.2	744	3740	0.174	0.55	8.23	14	41.3	1162	422600	1.42	0.22	20	270	27.2	166	71.3	38.4	102	17.7	139.5	34.9	136.1	24.63	225.1	47	9290	1.69	4.45	918	113.6	28.12	ukn	96.5	1058
1522	15	Pit_fg23	TH141	17	0.7	91	115	334.8	1.66	0.09	1.5	47.6	0.031	0.455	0.235	2	0.434	252.8	465400	1.35	0.0455	0.0102	7.05	0.007	0.133	0.29	0.209	2.69	1.023	15.52	6.91	44	11.1	131.4	33.61	10490	2.18	3.5	1550	185.3	20.11	ukn	132.2	1587
1522	16	Pit_fg24	TH141	1050	208	423	2580	327.1	4.5	40.8	620	2120	0.101	0.6	2.27	14	29	973	425200	2.2	0.185	15.9	63.4	9.8	54	23.1	15.5	41.1	9.49	92.5	30	141	28.4	283	59.7	9270	2.19	3.95	1003	128.8	47	ukn	212	1059
1522	17	Pit_fg25	TH141	1020	22	136	350	304.6	1.93	2.17	109	687	0.107	0.445	1.31	6	4.31	260	426500	1.381	0.055	0.69	20	0.97	5.3	3.17	2.08	5.74	1.6	18.5	7.32	42.7	10.19	117.4	29.54	9810	1.999	4.15	1441	169.9	18.39	ukn	102.4	1373
1522	18	Pit_fg28	TH141	806	138	347	1920	329	4.4	17.6	631	1820	0.039	0.49	2.29	16.8	20.4	860	416800	2.46	0.31	12.2	76	13.4	68	26.9	11	42.8	8.3	73	22.6	106	21.3	220	50	10470	2.84	3.75	929	115.4	23	ukn	95.7	1058
1522	19	Pit_fg29	TH141	1530	12	92	1800	312	1.87	1.47	379	830	0.0305	0.465	5.9	2.85	21	255	430000	1.18	0.104	0.83	10.4	0.59	2.95	1.66	0.52	4.34	1.29	17.4	6.68	40.9	10.61	123.9	31.3	9740	1.74	3.7	1315	159.8	24.1	ukn	100.9	1295
1522	20	Pit_fg30	TH141	851	143	457	1690	391.7	3.4	12.8	448	2210	0.0405	0.7	2.59	12.7	22	848	412000	1.84	0.205	10.6	53.6	10	48.4	19.9	7.38	31	6.97	71.7	24.4	122.5	26.2	260.4	57.8	10650	2.05	3.9	1287	235.4	14.25	ukn	40.2	996
1522	21	Pit_fg31	TH141	1600	153	235	2150	298.2	2.5	19.9	630	3330	0.136	0.6	4.19	16.5	22.2	520	414500	1.27	0.35	3.65	63.2	4.17	22.6	14.3	6.97	25.6	6.17	55.8	16.1	74.3	15.62	168.3	38.3	10300	1.86	4.95	1092	133.6	19.5	ukn	62.2	1190
1522	22	Pit_fg32	TH141	1020	20.8	108	1700	303.5	1.14	0.27	297	440	0.0345	0.5	9.4	9.1	15.9	218.9	423400	1.21	0.0385	0.285	7.7	0.223	1.35	0.74	0.34	3.48	1.007	14.11	5.96	37.8	9.46	113.9	28.44	9490	1.98	4.4	1250	151.6	20.33	ukn	93.1	1204
1522	23	Pit_fg34	TH141	421	6.4	108	510	326.3	1.33	0.09	109	213	0.0305	0.55	2.88	9.3	5.41	244.1	455100	1.34	0.034	0.46	7.93	0.193	1.04	0.61	0.68	2.86	1.091	16.12	6.75	39.8	10.5	121.7	30.77	10770	1.86	4.05	1558	186.5	19.62	ukn	112	1550
1522	24	Pit_fg35	TH141	46	1.67	117	110	327.6	2.49	0.085	4.7	49	0.023	0.55	0.215	6.8	0.71	327.8	458000	1.525	0.0295	0.027	9.16	0.121	1.59	2.53	0.407	8.31	2.29	26.6	9.78	53.2	12.13	129.8	31.59	10640	2.05	3.65	1334	161.9	28.4	ukn	158.8	1344
1522	25	Pit_fg36	TH141	624	3.5	150	1480	320.4	1.83	0.13	265	161	0.165	0.5	9.5	9	15.4	307.3	434500	2.02	0.0325	0.185	5.98	0.104	0.8	0.67	0.39	2.92	1.371	20.34	9.12	54.6	13.08	156.3	37.4	10260	2.38	3.9	1563	198.6	22.24	ukn	111.1	1537
1522	26	Pit_fg37	TH141	1377	316	524	2850	367.5	53	28.6	652	3450	0.139	0.65	10.8	30.6	31.2	1171	419200	3.89	0.39	21.6	226	26.4	139	51.1	44.4	64.7	12.35	113.4	34.3	159.1	33.31	325.4	70.3	10510	3.14	4.35	1258	165.9	27.37	ukn	118.5	1294
1522	27	Pit_fg38	TH141	650	480	365	810	308.7	3.99	12.3	245	1317	0.077	0.55	3.15	13.4	8.04	630	430800	1.63	0.42	11.6	68.8	12.4	70.7	26.8	24.1	36.3	6.3	58.6	17.7	87	17.6	184	41.4	9560	2.38	5	1363	166.2	23.9	ukn	119	1376
1522	28	Pit_fg41	TH141	650	100.5	473	2060	324.6	6.6	31.6	313	497	0.028	0.5	5.36	10.1	27.5	723	419000	1.91	0.123	9.79	57.5	6.81	33.9	16.9	3.41	31	6.6	65.6	21.4	102.4	21.7	222.1	50	9030	2.24	3.7	860	112	20	ukn	97.2	990
1522	29	Pit_fg43	TH141	1325	1034	2760	4240	314.2	5.6	188	783	5030	0.73	0.55	29.2	61.4	55	1730	419800	1.44	0.47	29.4	167	22.8	125	65.8	32.5	117	25.9	211	51.5	196	35.4	314	60.4	9410	1.59	4.2	1075	151.6	25.6	ukn	127.1	1118
1522	30	Pit_fg44	TH141	525	51.7	125	1270	313.6	2.11	0.34	261	950	0.023	0.425	0.78	5.7	12.9	299	441400	1.78	0.04	0.96	13.3	0.541	4.11	2.28	4.24	5.82	1.51	20.48	8.67	52.2	13.04	150	37.91	10130	2.33	4	1688	203.6	22.83	ukn	116.2	1765
1522	31	Pit_fg45	TH141	62	602	3300	2250	348	8.3	217	13.1	944	0.0245	0.46	3.9	16.2	34.7	1910	433200	2.15	0.39	20.8	113	16.6	100.5	53.9	25.5	106.5	26.8	239	59.8	230	42.2	361	63.6	11470	1.74	4.35	972	185	40.9	ukn	178.4	698
1522	32	Pit_fg48	TH141	446	67	186	680	307.3	3.02	13.4	223	550	0.028	0.455	5.16	5.4	7.5	365	433600	1.29	0.082	4.9	43	5.6	29.6	12.6	5	19	3.6	33.2	10.3	48.3	10.16	106.1	26.1	10290	1.9	3.1	1114	134.1	15.2	ukn	82.9	1142
1522	33	Pit_fg49	TH141	463	430	958	1050	301.5	22.1	54.3	194.2	1471	0.163	0.465	3.64	15.1	17.16	2650	420600	4.26	0.2	11.12	246	13.3	80.9	59.3	15.9	137	31.6	294	83.5	338	55.2	437	78.9	8790	2.25	3.55	775	104.5	53.5	ukn	254	695
1522	34	Pit_fg51	TH141	32	0.7	82	130	329.5	2.07	0.085	3.9	50.4	0.027	0.405	0.63	3.2	0.407	189.3	469200	1.32	0.0245	0.004	5.84	0.0057	0.029	0.155	0.088	1.74	0.667	11.49	5.31	32.92	8.4	102.4	25.83	11250	2.22	3.55	1284	153.4	13.37	ukn	89.4	1318
1522	35	Pit_fg53	TH141	284	26.3	221	470	339.6	1.43	1.3	62.6	274	0.029	0.41	4.2	1	6.3	339	449200	1.61	0.0335	0.424	8.51	0.204	1.14	0.9	0.366	3.78	1.36	20.68	9.43	60.7	15.57	186.1	46	10820	2.35	3.75	1381	169.9	15.64	ukn	93.7	1408
1522	36	Pit_fg54	TH141	1810	120	111	1790	301	2.37	0.76	290	2810	0.104	0.48	4	1.2	18.6	238.5	429500	1.34	0.0325	0.57	11.3	0.61	2.98	1.75	0.69	3.59	1.24	16	6.71	38.4	9.89	113.7	28.18	9610	2.1	4.9	1310	159.3	22.1	ukn	95.1	1358
1522	37	TH66_1	TH66	220	77	1810	350	365.3	5.4	ukn	20.3	78	0.055	0.65	5.7	4.55	1.83	479	440300	6.5	0.065	1.92	12.7	1.47	8	5.5	0.88	9.9	2.51	30.2	13.3	78.5	20.9	263	63.9	11810	11.8	5.5	859	109.5	11.5	0.02	61.9	933
1522	38	TH66_2	TH66	1122	1950	1080	2580	379	6.7	ukn	158.9	840	0.06	1	76.8	6	22.3	756	416000	1.31	0.105	37.6	227	15.1	91.7	27.6	65.6	42.6	8.09	75.8	21.7	89.3	20	227	56.1	11430	0.81	9	699	88.4	16.2	0.08	72.6	842
1522	39	TH108_1	TH108	265	494	900	300	294	9.2	ukn	164	671	0.18	4.6	11.4	13	5.33	397	369800	1.1	0.35	4.15	69	4.89	38	19	7.63	32.8	5.35	32.5	9.38	42.4	9.86	121.3	32.6	9070	0.61	11	586	76.3	7.11	0.03	36.8	602
1522	40	TH108_2	TH108	402	22.5	1830	950	456	3.2	ukn	166	162	0.0375	0.6	2.6	2.6	6.07	359	415700	1.28	0.065	0.96	8.6	0.93	7.2	3.25	1.43	5.55	2	25.2	10.11	62.5	19.54	293	77	12060	2.87	4.95	1269	169.6	8.45	0.01	36.5	1136
1522	41	TH108_3	TH108	4110	3049	3130	10480	744	12.9	ukn	2555	2320	0.0485	0.75	83.5	368	121	3560	394200	3.83	0.5	385	3740	206.7	1007	322	163.9	397	55.7	374	86.7	305	56.2	608	133.9	13250	7.19	15.7	1017	109.8	29.3	4.41	57.7	2493
1522	42	TH108_4	TH108	473	360	3150	1670	428	17	ukn	327	497	0.0425	0.6	9.3	8.4	14	1582	400300	3.98	0.065	7.39	200	15	104.1	50	25.5	86.2	18.58	174	51.4	206	36.5	337	68.8	9980	2.23	5.5	623	86.8	22.7	0.31	119.4	602
1522	43	TH108_5	TH108	46	43.5	215	315	309	13.2	ukn	5.5	424	0.12	1.7	10.6	8	0.81	269	432400	1.19	0.155	1.16	15.4	1.48	8.5	6.1	1.91	10.2	2.09	23.7	7.76	41.4	9.5	117.1	31.2	12000	0.81	17.5	549	67.7	10.8	0.03	65.1	610
1522	44	TH108_6	TH108	46.9	222	222	340	314	12.5	ukn	18.1	160	0.099	0.55	4.86	2.25	1.89	519	436500	1.79	0.055	5.37	58	9.19	61.5	35.5	10.39	47.8	8.49	63.6	15.3	60.2	11.72	122	33.4	11010	0.354	4.8	619	76.8	7.31	0.01	69.6	701
1522	45	TH108_7	TH108	239	150	184	230	308	5.4	ukn	120	84	0.046	0.65	5.23	2.85	3.35	169.2	412800	0.69	0.065	9.9	50.6	8.6	45.2	9.1	5.97	8.7	1.22	11.8	4.43	26	7.01	90.9	26	10320	0.512	8	711	87.8	12.43	0.57	75.2	728
1522	46	TH108_8	TH108	250	603	110	1010	309	3.6	ukn	233	1400	0.075	1.1	7.63	4.05	9.6	395	409000	0.91	0.095	3.74	115	4.85	35.3	16.6	11.7	24.5	3.91	35.4	10.1	44.5	9.77	116.8	31.5	10750	1.04	7.5	653	81.5	10.61	0.01	54.7	664
1522	47	TH108_9	TH108	5.5	3.8	198	155	313.1	2.8	ukn	2.5	55	0.065	0.8	1.19	2.7	0.363	188.4	441900	1.33	0.07	0.037	3.04	0.05	0.13	0.34	0.127	2	0.716	11.59	5.46	32.6	8.31	103.7	26.67	12100	1.055	5.5	803	95.6	14.55	0.02	98	856
1522	48	TH108_10	TH108	109	216	65	190	313.7	0.7	ukn	3.15	17.8	0.055	0.7	0.27	2.25	0.91	158.8	433900	0.57	0.065	0.024	1.08	0.005	0.075	0.0405	0.042	0.7	0.397	8.39	4.15	30.6	7.88	103.5	31.98	10880	0.259	4.5	700	83.6	5.95	0.01	36.6	680
1522	49	TH108_11	TH108	39.2	92	236	220	333	4.3	ukn	15	750	0.07	0.85	1.23	2.7	0.83	232.5	431100	0.65	0.095	0.87	30	0.9	6.4	2.71	0.89	5.7	0.91	13.2	6.64	43.7	11.33	147	42.3	10880	0.375	7.5	726	88.7	6.12	0.01	38	743
1522	50	THM032_Cg3	TH140	1940	15.6	1004	2750	407	3.5	ukn	232	95	0.06	0.6	10.8	1.75	26.6	655	412000	4.84	0.1	1.9	8.6	0.46	2.2	1.33	2.4	4.84	2.06	37	17.79	119.5	32.7	405	96.7	19270	30.2	5.5	1557	187.9	16.74	0.1	70.1	1547
1522	51	THM032_Cg4	TH140	413	730	1070	1690	518	680	ukn	57.7	400	0.542	0.55	2.15	6.2	6.32	633	401600	2.94	0.29	22.1	113.5	13.3	69.9	14.4	12.6	19.2	3.31	44.7	17.53	92.2	19.2	201	40.2	10610	6.2	5	758	114.5	8.53	0.02	24.7	628
1550-1600	52	Pit_fg2	TH141	698	107	201	1220	326.8	2.18	11	192	766	0.0315	0.75	3.46	3.31	14.36	537	447400	1.51	0.12	6.1	42.2	4.85	23.2	12.2	3.42	23.7	5.12	50.6	16.22	78.2	16.22	168.4	38.5	10200	1.98	4.3	1316	156.4	21.3	ukn	114.1	1345
1550-1600	53	Pit_fg4	TH141	20.9	0.8	102	120	319.3	2.75	0.125	3.8	56.6	0.026	0.6	0.96	2.63	0.69	227.5	455100	1.52	0.075	0.02	6.32	0.036	0.24	0.28	0.221	2.2	0.915	14.11	6.26	39.1	10.05	122.2	30.22	9660	2.22	3.8	1511	178.8	17.94	ukn	118.5	1511
1550-1600	54	Pit_fg6	TH141	562	122.1	201	1070	319.9	2.04	4.44	194	658	0.11	0.495	2.73	2.54	11.81	468	441600	1.82	0.055	14.4	45.4	5.36	24.8	7.78	10.44	14.16	3.88	41.6	14.72	73.4	16.02	166.2	39.08	9740	2.01	4.15	1373	168.2	25.9	ukn	125	1397
1550-1600	55	Pit_fg7	TH141	680	153	124	610	303.1	2.4	20.7	141	810	0.069	0.55	2.41	4.1	5.4	730	427400	1.17	0.137	4.9	99	7.8	47	27	7	40	7.7	76	20.3	88	16.4	167	36.4	9920	1.84	3.6	1275	150.7	16.23	ukn	89.5	1238
1550-1600	56	Pit_fg27	TH141	1092	65	133	1520	307.9	2.43	5.26	363	2131	0.052	0.5	1.9	7.6	14.5	342	433200	1.33	0.055	1.48	26.9	2.05	10.8	6.8	2.17	11.6	3.03	31.3	10.09	51.3	11.39	122.3	29.13	9730	1.87	4.1	1219	147.4	21.7	ukn	95.1	1226
1550-1600	57	Pit_fg42	TH141	1010	76	140	1110	301.4	1.57	2.4	293	960	0.027	0.5	2.4	10.1	11.7	320	418800	1.32	0.189	8.2	37	5.9	29.3	7.3	10.5	9.9	2.24	21.5	8.64	49.8	12.28	142.7	35	9970	1.84	3.9	1435	170.9	21.1	ukn	101.3	1360
1550-1600	58	Pit_fg47	TH141	1513	124	157	3050	312.3	3.2	1.18	515	810	0.07	0.5	8.33	17.6	39	289.3	418100	1.58	0.6	1.78	9.63	0.87	3.43	1.09	1.82	3.49	1.22	18.8	8.21	52	13.54	163.9	40.3	10030	2.49	3.4	1180	143.7	24.6	ukn	89.8	1285
1550-1600	59	Pit_fg50	TH141	282	172	362	750	370.8	5.6	6.29	221	430	0.0345	0.49	1.59	11.1	8.8	1093	445600	1.81	0.221	22.1	14.22	9.8	43.4	8.71	2.08	29	8.48	101.8	36.5	180.3	34	310	63.1	9860	1.27	3.3	650	86.3	37.8	ukn	202	615
1550-1600	60	THM032_Cg6	TH140	1728	350	878	3470	338	12.9	ukn	674	155	0.0435	0.6	98.8	1.9	21.9	567	394100	3.39	0.07	18.9	23.9	10.8	44.2	11.8	5.07	15.5	4.34	45	13.42	72	19.8	251	57.5	20650	31.6	5.5	1105	140.7	13.88	1.46	47	1076
1550-1600	61	TH032_fg3	TH140	4130	107	1541	5820	383.1	7.2	ukn	476	540	0.0495	0.65	33.8	2.8	49.8	725	425300	5.2	3.28	6.09	40	3.82	19.4	7.6	4.6	12.7	3.37	43.5	19.15	122.3	33.3	425	100.8	14090	35.7	5.5	1395	170.5	19.1	0.65	63.1	1531
1550-1600	62	Pit_fg8	TH141	380	61	279	610	308.9	2.81	49	18.5	81	0.042	0.5	11.6	3	10.6	228	440900	1.24	0.06	7.9	10	5.8	24.8	6.2	1.76	8.9	1.59	15.6	6.14	35.1	8.58	103.3	25.98	10350	2.01	4.65	1439	172.8	15.58	ukn	90.2	1350
1550-1600	63	Pit_fg18	TH141	738	1650	510	5160	305.7	283	26.1	1125	7520	0.4	0.85	2.08	42.6	62.6	1053	405500	4.76	0.08	13.99	236	14.7	80.4	36.4	42.7	58.9	13.06	114.4	31.2	135.7	25.47	233	49.6	9320	2.13	6.5	650	109.2	37.9	ukn	89.4	918
1550-1600	64	Pit_fg26	TH141	634	204	312	1160	317.6	3.3	28.9	336	1220	0.0425	0.42	2.09	14.1	14.3	1061	428500	2.31	0.15	18.4	228	29.1	162	62	16.3	73	12.6	103	27.6	117	22.01	223.6	48.3	10430	2.9	3.6	1121	137.6	18.87	ukn	99.2	1206
1550-1600	65	Pit_fg52	TH141	266	51	90	260	313.4	1.41	7.3	45	248	0.0305	0.435	0.56	3.2	2.8	377	448700	1.27	0.0355	2.01	40	3.3	22	9.4	2.7	13.4	3.27	31	10.7	56.7	12.4	139	33.1	10120	1.99	4	1411	170.1	15.31	ukn	92	1440
1550-1600	66	Pit_fg55	TH141	201	51.6	299	540	325.7	2.58	7.3	74.3	348	0.029	0.415	2.66	0.95	5.01	340	447100	1.58	0.028	2.63	23.6	2.14	12.3	5.25	5.82	10.5	2.57	27.5	9.59	54	12.41	146	34.77	10440	2.02	4.25	1465	176.1	16.23	ukn	102.3	1468
1770-1780	77	THM27_Cg1	THM27	2.8	10.7	189	105	353.7	12	ukn	1.5	8.2	0.092	0.365	0.165	3.8	0.677	1160	468400	2.65	0.065	0.19	7.72	0.4	4.5	6.6	0.64	29.5	9.1	110	38.4	173	31.5	266	50.2	9690	1.38	4.6	232	30.9	17.3	0.04	105	206
1770-1780	78	THM27_Cg2	THM27	3.15	0.6	213	330	326.9	8.5	ukn	1.75	4.5	0.0265	0.485	0.155	4.4	0.65	1876	470700	3.02	0.055	0.98	10.1	0.77	9.9	12.44	1.19	58	16.95	200	65.8	285.3	51.3	432	77.9	8850	1.308	3.95	244.1	33.4	24.49	0.01	138.2	216.4
1770-1780	79	THM27_Cg3	THM27	4.6	33.9	132	115	305.4	12.4	ukn	5.1	23.9	0.0285	0.425	0.15	3.57	1.4	1311	462000	4.1	0.127	0.72	17	1.21	8.3	10.1	2.64	37.3	11.54	126.8	44.3	197	37	319	59.8	9450	1.459	4.15	210.1	29.5	15.85	0.45	121	183
1770-1780	80	THM27_Cg4	THM27	3.7	32.7	117	105	315.6	12.5	ukn	1.7	14.1	0.0345	0.45	0.17	3.05	1.11	686	465000	2.88	0.103	0.531	16	0.77	5.16	6.15	1.45	20	6.14	72.9	23.4	105	19.8	178	32.4	9770	1.038	4.15	144.9	20.2	8.42	0.39	83.8	127.8
1770-1780	81	THM27_Cg5	THM27	10	73.5	166	120	338.6	12.3	ukn	5.5	28.6	0.166	0.48	0.47	4.3	2.24	1180	455000	4.59	0.26	1.37	22.3	1.79	13.2	13.9	4.22	40.1	12.1	127.2	40.7	175.9	32.6	290	51.3	9900	1.84	3.1	254.3	35.2	17.1	0.14	163.4	224
1770-1780	82	THM27_Cg6	THM27	14.1	25.6	142	125	324.5	13.3	ukn	5.8	21.4	0.026	0.38	0.145	2.96	1.25	1562	454900	2.81	0.0455	0.506	22.7	1.04	10.66	13.5	2.76	52.6	14.95	171.2	55.7	236.3	43.3	366	66.8	8570	1.177	3.3	209.9	28.7	17.89	0.5	102.8	187.8
1770-1780	83	THM27_Cg7	THM27	38.9	202	800	1640	318.6	14.9	ukn	27.6	255	0.56	0.42	2.67	4.69	4.53	1900	434000	4.46	0.212	5.5	46.1	4.7	31.7	26.3	6.9	73.6	19.4	205	62.3	268	48.4	405	75	8880	1.33	3.95	317	45.5	24.5	18.3	118.2	289
1770-1780	84	THM27_Cg8	THM27	2.75	6.5	227	95	364.2	9.7	ukn	1.4	9.9	0.028	0.405	0.13	3.12	0.76	1008	459300	2.98	0.055	0.114	7.93	0.187	2.03	3.88	0.43	22.2	7.44	92.4	33.7	158.1	30.5	274	53.1	10380	1.38	3.35	261	37	18.5	0.01	104.1	231
1770-1780	85	THM27_Cg9	THM27	13.5	25.2	174	125	334.7	18	ukn	8.6	475	0.0425	0.475	0.4	5.73	0.99	806	476000	3.22	0.6	1.21	19.1	1.04	5.99	5.08	0.94	20.6	6.12	75.6	27.08	127.6	24.66	226.2	43.4	9700	1.349	4.35	245.7	33.1	17.39	0.69	94.1	208.7
1770-1780	86	THM27_Cg10	THM27	45.7	567	292	830	384	21.1	ukn	58.4	613	0.341	0.455	92	46.5	21.4	3590	441000	3.61	2.02	17	142	24	157	146	52	290	67.5	558	133	476	77.6	618	98.8	9620	1.56	4.25	288	46.5	29.3	3.27	146.6	263
1770-1780	87	THM27_Cg11	THM27	157.5	80.9	159	165	286.5	33.9	ukn	42.5	1480	0.222	0.65	5.12	5.17	2.92	1760	427000	18.38	0.166	2.32	39.1	2.27	15.3	15.8	4.18	53.4	15.93	190.6	63.8	285	52.1	449	81.6	10060	6.08	4.3	879	117.6	61.6	2.52	316.3	703
1770-1780	88	THM27_Cg12	THM27	4.55	19.7	139	145	317.4	6.5	ukn	1.85	34	0.021	0.6	0.195	3.32	1.12	1799	455400	3.45	0.05	0.506	13.45	0.98	10.29	13.22	2.35	56.7	16.76	195.1	65.1	279.4	49.9	427	76.8	9050	1.223	4.4	245.6	35.8	22.22	0.14	130.1	210.8
1770-1780	89	THM27_Cg13	THM27	38.2	104.5	169	260	315.9	13.8	ukn	33.4	184	0.0255	0.495	2.75	6.48	4.91	2035	472000	5.62	0.215	3.88	111.1	5.69	36.7	33.9	9.49	83.8	23.6	257	76.2	327	58.2	477	85.1	9350	1.6	4.25	242	32.9	20	2.59	125.3	250
1770-1780	90	THM27_Cg14	THM27	31.1	49	50	110	315.8	24	ukn	16	1160	0.051	0.39	0.17	2.14	1.62	464	459000	2.71	0.048	0.92	13.7	1.01	6.95	6.34	2.02	15.9	4.57	48	15.51	71.7	13.58	125.9	24.8	10630	1.001	3.6	345.2	44	12.74	2.07	84.8	355

Appendix 5: Trace element geochemistry for zircon

Group (Ma)	Oder	Analysed ID	Sample	Na_23	Al_27	P_31	Ca_43	Sc_45	Ti_49	V_51	Mn_55	Fe_57	Co_59	Ni_60	Cu_63	As_75	Sr_88	Y_89	Zr_91	Nb_93	Sb_121	La_139	Ce_140	Pr_141	Nd_143	Sm147	Eu_151	Gd_157	Tb_159	Dy_163	Ho_165	Er_167	Tm_169	Yb_171	Lu_175	Hf_178	Ta_181	Pb_204	Pb_206	Pb_207	Pb_208	Bi_209	Th_232	U_238
1770-1780	91	THM27_Cg15	THM27	120	161	185	110	330	24.4	ukn	81	175	0.133	0.5	0.165	4.7	6	2170	430000	4.05	0.23	4.8	231	8.7	55	49	11.5	105	26.1	261	75.3	300	52.3	424	77	9250	1.37	3.95	435	58.4	27.8	6.8	148	453
1770-1780	92	THM27_Cg16	THM27	66	86	162	100	313	16	ukn	32.4	210	0.029	0.475	0.53	4.61	3.03	1057	447000	4.27	0.115	1.98	81	3.11	22.5	18.7	6.8	48.7	12.4	131	36.4	159	29.1	247	44.8	9210	2.14	4.6	315.6	40.3	10.76	48.8	59.6	290
1770-1780	93	THM27_Cg17	THM27	17.1	538	960	2440	291.3	92	ukn	14.8	4900	0.62	0.5	5	2.2	3.3	1750	413000	2.65	0.06	25.9	82	9.9	55	23.9	3.09	66.7	17.73	194	62.2	269	47.5	389	70.3	7540	1.083	4.45	272.2	37.1	25.38	1.05	128.2	219.7
1770-1780	94	THM27_Cg18	THM27	3.05	29.1	166	105	326.7	15.2	ukn	1.5	26	0.105	0.395	0.125	2.32	1.28	1910	469000	2.87	0.037	0.69	14.28	1.36	13.9	18.25	3.52	70.7	19.45	214	68.3	294.9	51.3	430	76.3	8860	1.168	3.5	217.9	30.1	20.61	0.24	156.5	198.5
1770-1780	95	THM27_Cg19	THM27	15.3	800	146	280	316.9	410	ukn	88	32600	2.04	0.485	4.5	6.8	5.36	796	450000	4.31	1.67	8.3	44.7	3.35	19.6	11.9	4.15	31.8	8.1	88.6	26	115.8	22.2	195	36.9	10030	1.88	3.7	233.4	34.3	18.9	7	104.6	211.6
1770-1780	96	THM27_Cg20	THM27	21	75	445	830	328.8	16.1	ukn	1.65	191	0.149	0.425	0.135	2.43	1.05	833	471000	2.93	0.0355	8.4	28.1	2.99	14.3	6.3	0.43	20.6	6.14	78.2	28.3	136.9	25.97	229.3	43.8	9570	1.216	3.65	215.1	29.2	14.1	0.1	79.2	187
1770-1780	97	THM27_Cg21	THM27	3.3	0.85	204	85	334.1	8.8	ukn	1.5	4.1	0.025	0.475	0.17	2.09	0.443	996	467900	3.32	0.048	0.001	7.19	0.093	2	3.4	0.231	21.2	7.34	93.6	33.7	160.3	30.01	261.2	49.9	9520	1.326	3.9	221.4	30.6	16.17	0.01	96.2	192.3
1770-1780	98	THM27_Cg22	THM27	13.2	4.6	191	105	316.6	9.7	ukn	11.7	48.9	0.023	0.37	0.16	2.24	1.19	1270	467000	6.18	0.033	0.103	8.95	0.231	2.68	4.85	0.512	32.3	9.88	127	45.4	209	38.2	324	60.8	9870	2.18	3	243	33.2	20	0.37	113	220
1770-1780	99	THM04_Cg1	THM27	14.1	340	295	430	320	15.6	ukn	24	416	1.35	0.45	0.99	27.5	6.4	2490	432000	4.65	1.43	9.6	107.6	13.2	85.5	70	20.5	140	36.4	336	92.1	366	66	551	90.3	7840	1.81	3.65	343	52.5	34.2	31.7	161.5	325
1770-1780	100	THM04_Cg2	THM27	3.5	357	262	105	318	44.2	ukn	10	2110	0.49	0.48	1.51	8.8	2.88	1211	402000	4.64	0.68	3.02	62.1	3.39	24.5	21.1	6.38	56.1	14.78	150.4	43.7	188.3	35.5	294	49.9	8950	1.99	3.85	330	46.5	24.1	12.9	124.8	296
1770-1780	101	THM04_Cg3	THM27	43.3	177	660	1320	305	14.4	ukn	37.7	1060	0.156	0.495	0.165	15.9	5.79	1040	417000	3.31	0.78	9.5	81	7.3	41.5	27.3	7.7	55.1	13.1	130	36.7	152	27.7	242	40.6	8840	1.25	3.8	259	33.3	14.97	16.3	76.8	273
1770-1780	102	THM04_fg1	THM27	20.2	30.5	4640	3410	332	12.3	ukn	9.8	20.6	0.0355	0.55	0.155	10.2	2.88	1566	443000	2.18	0.159	17.26	61.5	7.04	36.6	19.7	2.92	64	17.01	180.3	58.9	251.1	45.4	378	67.8	8190	0.851	4	232	31.1	21.18	1.25	118.3	204.2
1770-1780	103	THM04_fg2	THM27	118.6	1637	3322	1170	385	92.5	ukn	145	5690	0.87	0.6	6.18	243.1	9.01	6850	408800	3.88	6.57	46.7	763	64.5	391	303	102.3	548	128.6	1057	249.1	887	144.8	1204	186.2	10130	1.29	13.5	269.9	50.3	25.6	205	225	518
1770-1780	107	THG3_1	THG3	121	75.5	3530	280	393.8	31.9	ukn	8.8	83.1	0.185	0.55	1.36	3.7	1.87	1756	442300	3.01	0.055	5.25	34.5	2.83	20.8	13.9	1.75	46.9	14.11	170	61.8	287.2	51.9	481	91.4	9620	1.181	4.2	297.5	40.7	28.59	0.01	157.8	267.8
1770-1780	108	THG3_2	THG3	9.4	1181	3420	125	387	19.6	ukn	21.4	1010	2.49	0.55	6.87	3.05	1.24	1689	408000	2.78	0.055	5.88	35.8	4.03	28	16.5	1.45	52.7	14.72	169.8	62.2	272	50.5	466	85.4	8690	1.117	4.7	250.2	36.1	30	0.05	157.2	223.5
1770-1780	122	THG4	THG4	330	460	4180	2700	372	173	ukn	118	1290	1.64	3.4	20.2	8.5	10	1540	447000	15.7	0.83	43	145	24.5	128	71	4.6	110	17.4	155	52.2	224	43.6	407	82.6	1.25E+04	1.75	11	491	70	30.2	0.88	307	820
1770-1780	123	THG1_1	THG1	233	215	402	410	354	15.2	ukn	12.4	124	0.0325	0.37	0.175	24.9	2.49	1045	431000	2.11	0.11	21.3	102.1	9.86	49.6	22.5	3.15	44.1	10.27	104.1	33.4	149	28	245	47	10980	0.854	3.85	417	57.2	16.33	0.06	66.8	369
1770-1780	124	THG1_2	THG1	45	330	12180	38800	343	56	ukn	33.2	640	0.42	0.5	0.6	6.1	14.8	1514	457000	2.6	0.095	57.2	209	35.2	193	58.5	1.12	93	17.62	166.1	51.6	209.2	38.5	314	57.6	9390	1.062	3.95	225	29.9	20.6	0.02	116.2	195.4
1770-1780	125	THG1_3	THG1	7.9	22.2	602	105	365	15.1	ukn	1.6	4.35	0.032	0.375	0.17	3.5	0.582	1709	448000	1.94	0.075	0.39	5.83	0.379	3.25	6.05	0.226	35.5	12.2	156.7	58.3	267	51.8	451	86.8	9960	0.782	3.35	227.7	31.3	19.2	0.01	111.7	198.5
1770-1780	126	THG1_4	THG1	8.3	51	375	120	338.1	17.7	ukn	1.4	30.8	0.028	0.55	1.01	3.52	0.92	1960	433600	3.59	0.065	2.96	19.4	2.05	14.4	13.2	1.15	49.7	14.38	177.4	65.8	298.6	58.7	510	98.2	8770	1.94	3.6	417	57.2	48.6	0.02	265.4	354.4
1770-1780	127	THG1_5	THG1	3	20.6	447	130	358	19.9	ukn	1.55	22.2	0.035	0.46	0.61	4.9	1.04	1850	444000	2.96	0.085	9.9	46	5.27	26.7	14	1.9	49.7	14.8	182	64.6	294	55	466	87.4	10400	1.24	4.7	419	58.8	42.7	0.07	221	354
1770-1780	128	THG1_6	THG1	22.9	89	554	115	360	21.2	ukn	63	71	0.0285	0.355	0.185	4.1	2.25	1468	431000	3.02	0.17	12.3	52	6.6	38.6	19.9	2.8	43.5	10.85	131	48.5	225	44.9	407	79	10380	1.023	4.1	308	43	23.4	0.01	65.8	251
1770-1780	129	THG1_7	THG1	104	293	458	410	340	106	ukn	20.7	189	0.154	0.41	9.2	7.5	4.98	2054	410000	5.57	0.53	350	710	78	349	101.5	11.5	142	25.4	233	70.1	283.2	49.7	426	75.2	9050	1.17	3.55	423	57.2	53	0.01	245	392
1770-1780	130	THG1_8	THG1	10.7	9.8	397	85	356	8.7	ukn	1.6	17.9	0.029	0.455	0.155	3.88	0.61	1177	443000	2.15	0.055	0.0036	3.46	0.043	1.53	3.78	0.05	22.9	8.52	106.3	38	176.2	34.7	303.7	58.3	11190	1.068	3.55	396	54.2	17.27	0.01	95	324
1770-1780	131	THG1_9	THG1	32	13.2	446	105	394	16	ukn	1.55	17.9	0.0345	0.5	0.14	3.2	1.01	1340	455000	2.81	0.0475	1.05	8.27	0.74	5.45	5.37	0.304	27	8.67	115.5	44.5	212.1	42.4	376	74.1	9680	1.149	4.1	206.8	28.9	16.67	0.01	93.5	178.2
1770-1780	132	THG1_10	THG1	2.8	30.4	652	85	402	10.6	ukn	1.65	24.1	0.02	0.38	0.13	3	0.8	1767	452000	1.74	0.055	0.0001	1.228	0.053	0.95	3.04	0.06	24.2	9.86	145.3	57.5	284	59.3	550	106.5	11260	0.963	3.25	277.8	36.8	8.27	0.01	46.8	232.4
1770-1780	133	THG1_11	THG1	2.75	95	448	110	364	12.4	ukn	4	159	0.0295	0.37	0.39	3.3	0.599	1194	446000	1.66	0.0495	2.59	21.6	2.31	13.6	8.2	0.585	25.6	8.1	106.3	38.5	185	37.5	338	65.3	10200	0.727	3.8	189	26.2	12.2	0.01	60.5	153.6
1770-1780	134	THG1_12	THG1	3.25	35.1	440	115	363	21.6	ukn	1.45	18.1	0.0245	0.55	0.16	2.5	0.827	1433	438000	3.42	0.055	5.62	22	2.7	14.7	11.58	0.95	38	11.17	137.9	48.4	216.4	42.7	370.9	69.4	10280	1.107	3.95	338	45.8	23.3	0.01	123.1	287
1770-1780	135	THG1_13	THG1	1105	740	1594	2140	416	60.1	ukn	83	1050	0.51	0.39	0.78	4.6	20.7	4350	418000	3.59	0.28	58	216	33.1	177	90	7.7	168	39.9	449	147.7	666	124.5	1088	193.8	9690	1.137	4.45	757	102.3	34.9	0.05	191.3	716
1770-1780	136	THG1_14	THG1	2.75	7.7	514	130	354	12.1	ukn	1.7	12.3	0.0315	0.38	0.17	2.86	0.712	1776	445000	1.86	0.055	0.89	9.4	0.95	7.7	6.4	0.41	34.4	12.21	162.2	60.1	280	54.1	471	89.4	10510	0.817	3.2	292	39	21.3	0.01	116.5	247
1770-1780	137	THG1_15	THG1	5.2	107	473	110	358.7	15.1	ukn	1.4	120	0.03	0.315	0.135	2.8	0.665	1917	445000	2.08	0.045	1.78	12	1.04	7.5	8.82	0.416	46.1	15.22	187.7	64.8	277	52.4	451	81.6	10340	0.939	3.8	470	65.6	35.6	0.01	197.6	403
1770-1780	138	THG1_16	THG1	3.35	21	685	115	367.7	24.6	ukn	1.6	35.7	0.0265	0.395	0.67	1.15	0.932	2936	433000	3.4	0.0475	6.32	39.3	3.61	25.1	19.7	1.77	78.4	23.32	285.1	102.8	458.9	85.9	730	134.4	10000	1.533	3.35	593	80.1	67	0.01	357.9	500
1770-1780	139	THG1_17	THG1	23.1	1250	427	115	366	320	ukn	41	3900	2.7	3.2	14.5	2.35	1.27	1368	443000	2.99	0.0485	6.6	30	3.3	19.2	9.4	1.52	31.1	9.54	125.6	46.8	210.8	42.3	383	70.8	10040	1.18	3.4	229	31.6	15.1	0.01	72.5	204.3
1770-1780	140	THG1_18	THG1	31.2	46.8	295	105	348	17.7	ukn	1.4	16	0.0265	0.415	0.145	2.9	0.86	1076	453000	1.86	0.05	0.036	3.36	0.094	1.64	3.85	0.248	24.6	8.1	102.8	37.4	170.7	33.7	296	54.8	9810	0.716	4.3	137.4	17.6	14.01	0.01	76.3	119
1770-1780	141	THG1_19	THG1	57	142	882	1250	450	43	ukn	3.7	240	0.187	1.05	3.81	5	1.49	1954	433000	2.49	0.0435	32.1	390	12.6	63.2	30.2	3.56	72.6	17.74	195.9	66.1	300.7	57.7	511	98.4	8980	1.195	3.2	199	27.8	20.35	0.01	110.9	210.6
1770-1780	142	THG1_20	THG1	3.3	21.6	359	85	357	16.4	ukn	1.6	3.75	0.0265	0.365	0.16	4.02	0.596	1390	448000	1.75	0.0445	1.23	11.17	0.819	6.85	7.3	0.636	32.2	10.29	130	46.8	215.3	41	365	67.7	9950	0.782	4.05	179	24.6	17.2	0.01	96	154.1
1770-1780	143	THG1_21	THG1	3	4.34	377	105	349.8	16.9	ukn	1.55	4.6	0.0305	0.395	0.38	3.25	0.538	1409	459100	2.07	0.0385	0.411	6.52	0.387	4.1	6.79	0.231	37	11.5	137.7	47.3	218.6	40.6	352.6	65.1	10100	0.946	2.95	278.4	38.1	23.68	0.01	126.2	234.8
1770-1780	144	THG1_22	THG1	6	28.5	654	85	389	10.7	ukn	1.4	19.6	0.025	0.43	0.135	2.38	0.681	1920	445000	1.73	0.0475	0.0001	1.84	0.102	1.33	4.49	0.086	30.4	12.36	169.3	64.4	311	62	546	105	10660	0.863	3.75	346	46.6	13.14	0.01	73.4	295.8
1770-1780	145	THG1_23	THG1	17.9	9.4	336	300	345.5	14.6	ukn	6.4	34.3	0.023	0.33	0.39	1.84	0.94	1120	444900	2.27	0.055	3.4	13.5	1.29	6.7	4.81	0.179	23.7	7.82	102.5	37.3	182.7	36.2	325	61.8	9220	1.058	3.55	216	30.1	16.72	0.01	88.8	184.3
1780_qtz	109	TH13_1	TH13	52.6	218	2360	185	347.1	11.2	ukn	6.7	290	0.217	0.55	13.7	13	2.34	1540	431000	3.51	0.095	7.6	22.9	5.35	34	21.1	7.1	63.2	16.2	155	50.4	216	38.4	343	63.8	9620	1.393	4.95	386.4	56.6	32	0.65	205	337.7
1780_qtz	110	TH13_2	TH13	243	1136	10240	1810	432	30.6	ukn	39.3	3520	1.24	0.65	17.8	37.6	19	5200	423300	4.04	0.45	55.9	528	107.5	746	512	162	683	137	994	211	692	104	834	129	10010	1.67	6	313.7	41.8	19.93	0.4	191.1	431
1780_qtz	111	TH13_3	TH13	265	148	2050	150	335.9	11.9	ukn	8	2060	0.61	0.75	12.8	3.65	1.87	1076	458700	2.07	0.28	3.6	39	4.9	27	17.2	4.8	44.7	10.2	110.6	37.1	157.3	29.05	257.9	49.8	9280	0.958	5	193.4	27	13.21	0.34	74.5	198
1780_qtz	112	TH13_4	TH13	185	134	6160	125	348.4	29.7	ukn	61.1	6900	1.18	0.7	19.8	22.6	3.19	2490	414500	5.07	3.82	5.9	19.6	3.8	28.7	21.1	7.5	79	22.4	243	86.5	387	73.2	688	142.8	9870	2.6	13.4	933	144.1	51.5	1.44	179	780
1780_qtz	113	TH13_8	TH13	11.4	84	2820	130	333	13.2	ukn	2.4	86	0.0195	0.55	0.9	8.6	1.16	900	440000	2.72	0.05	1.18	34.8	2.2	17.5	14.5	5.22	40.1	9.26	91	28.96	119	21.99	201.7	37.1	8360	0.956	5	161.4	21.7	11.02	0.04	62.5	146.7
1780_qtz	114	TH13_9	TH13	52.8	58.2	2430	130	313	12.2	ukn	6.1	271	1.19	0.55	2.01	8.5	1.29	1147	415000	3.94	0.189	0.95	20	0.609	5.22	6.51	0.332	29.2	9.53	108.8	39.2	178	33.1	295	56.1	9740	1.81	5	451	61.5	56.7	0.08	242	417
1780_qtz	115	TH13_10	TH13	518	366	560	1110	298.2	16.5	ukn	62.9	1251	1.02	0.6	17.5	20.3	3.97	354	403000	1.45	0.065	8.8	56.1	7.67	43.1	16.7	4.31	22.2	3.93	33.3	10.08	44	8.91	93	20.52	9540	0.639	5	1010	135.6	42.8	0.45	150.6	849
1780_qtz	116	TH13_11	TH13	328	406	2750	600	348.8	8.5	ukn	140	1720	0.242	0.495	4.75	24.2	13.1	1139	417000	2.39	0.91	18.9	133	14.7	81.2	50.4	20.4	73.3	16.9	144.5	38.6	159.4	30	291	56.9	9610	1.636	5	451	83.3	15.1	4.8	54.6	449
1780_qtz	117	TH13_12	TH13	30	31	2210	245	298.6	11.5	ukn	3.3	128	0.28	1.2	10.7	6.5	0.81	1669	430200	3.15	0.1	0.95	12.7	0.98	8.8	10.52	1.52	44.8	13.57	159.4	55.7	246	44.1	399	72.9	8730	1.18	9.5	270	35.8	19.6	0.02	116.3	254
1780_qtz	118	TH13_13	TH13	7.9	138	3310	105	342.6	12.8	ukn	6.9	147	1.53	0.55	0.81	15	2.16	1222	435000	2.95	0.113	2.21	53.2	3.83	28	26.8	10.29	65.3	16.96	151.6	42.8	170.4	29.92	255.6	45.4	9320	1.205	3.45	221.8	31.5	13.29	0.1	85.3	223.2
1780_qtz	119	TH13_14	TH13	55	500	13400	840	504	23.5	ukn	68	3510	2.02	0.6	5.8	27.7	12.7	3490	422000	3.68	0.88	16.6	284	24.3	169	133	49	263	62	498	131	450	71.3	583	101.6	8520	1.57	3.95	225	30	18.44	4.66	128.6	308
1780_qtz	120	TH13_15	TH13	3.2	8	2720	130	326.8	13.6	ukn	1.95	46.4	0.102	0.5	0.175	7.9	0.701	1557	440600	1.97	0.055	0.5	9.03	0.587	7.79	11.09	1.3	47.7	14.44	159	54.2	232.6	42.2	371	69.1	8810	0.913	3.7	251.5	34.1	24.49	0.04	141.2	219.2
1780_qtz	121	TH01_2	TH01	42.4	560	16800	7200	305.5	32.4	ukn	28.7	1690	3.95	0.65	2.78	11	4.79	1455	416300	11.31	0.105	130	393	47	219	67	6.6	95	19.3	170	51.6	211.1	36.3	313	55.9	10500	3.1	5.5	268	38	41.3	0.23	237.1	250

Appendix 6

Data and Images of SEM and EPMA mineral analyses

Appendix 6 is composed of two main parts:

- Appendix 6A - Data of SEM and EPMA mineral analyses
- Appendix 6B - Images of SEM and EPMA mineral analyses

Appendix 6A

Mineral geochemistry

Appendix 6A contains the following data sets:

1. Table 1. Composition of Au at Tick Hill measured by the SEM
2. Table 2. Composition of bismuth selenide and other selenide minerals in quartz-feldspar mylonite unit
3. Table 3. Composition of copper sulphides at Tick Hill measured by the SEM
4. Table 4. Composition of pyrite and pyrrhotite at Tick Hill measured by the SEM
5. Table 5. Garnet composition collected from peak-metamorphic amphibolite, sample TH99, 800m N of Tick Hill
6. Table 6. Biotite composition from peak metamorphic amphibolite (Amp.; sample TH99) and quartz-feldspar mylonite (Qtz-fsp; sample TH22) at Tick Hill area
7. Table 7. Feldspar composition from quartz-feldspar mylonite (samples THM51C, THM22 and TH55), amphibole-rich calc-silicate (sample TH46) and amphibolite (sample TH99) at Tick Hill area
8. Table 8. Amphibole composition from quartz-feldspar mylonite (samples TH151C and TH55), amphibole-rich calc-silicate (sample TH46) and amphibolite (sample TH99) at Tick Hill area
9. Table 9. Pyroxene composition collected from amphibole-rich calc-silicate at Tick Hill, sample TH46
10. Table 10. Scapolite composition from amphibole-rich calc-silicate at Tick Hill, sample TH46
11. Table 11. Composition of (D_3, stage 2) epidote alteration in intensely silicified unit at Tick Hill, sample TH137
12. Table 12. Composition of (D3, stage 4) calcite associated with gold in quartz-feldspar mylonite unit at Tick Hill
13. Table 13. Ilmenite composition from peak-metamorphic amphibolite, 800m N to the Tick Hill, sample TH99
14. Table 14. Composition of hematite alteration from quartz-feldspar mylonite (samples THM22 and THM51C) at Tick Hill measured by the SEM
15. Table 15. Composition of (D_3) chlorite alteration

Table. 1. Composition of Au at Tick Hill measured by the SEM

#	Sample	Rock type	Analysis No	Event	Au	Cu	Ag	Sum	Notes
1	TH137	intensely silicified unit	TH137-S1A-Au1	D3	96.63		3.37	100	
2	TH137	intensely silicified unit	TH137-S1B-Au1	D3	95.58	1.19	3.23	100	
3	TH137	intensely silicified unit	TH137-S1B-Au2	D3	95.49	0.69	3.81	100	
4	TH137	intensely silicified unit	TH137-S1B-Au4	D3	92.98	1.79	5.23	100	
5	TH137	qtz-fsp mylonite	TH137-S1B-Au5	D3	92.64	2.04	5.32	100	
6	THM51C	qtz-fsp mylonite	THM51C-s1a-Au1	D3	100.00	0	0	100	
7	THM51C	qtz-fsp mylonite	THM51C-s4-Au1	D3	100.00	0	0	100	
8	THM51C	qtz-fsp mylonite	THM51C-s4-Au2	D3	100.00	0	0	100	
9	THM51C	qtz-fsp mylonite	THM51C-s4-Au4		100.00	0	0	100	
10	THM51C	qtz-fsp mylonite	THM51C-s4-Au3		100.00	0	0	100	
11	THM51C	qtz-fsp mylonite	THM51C-s5-Au		100.00	0	0	100	
12	THM51C	qtz-fsp mylonite	THM51C-s5-Au3		100.00	0	0	100	
13	THM51C	qtz-fsp mylonite	THM51C-s6-Au		100.00	0	0	100	
14	THM51C	qtz-fsp mylonite	THM51C-s7-Au1	stage 4	100.00	0	0	100	
15	THM51C	qtz-fsp mylonite	THM51C-s7-Au2	stage 4	100.00	0	0	100	
16	THM51C	qtz-fsp mylonite	THM51C-s7-Au3	stage 4	100.00	0	0	100	
17	THM51C	qtz-fsp mylonite	THM51C-s7-Au4	stage 4	100.00	0	0	100	
18	THM51C	qtz-fsp mylonite	THM51C-s7-Au5	stage 4	100.00	0	0	100	
19	THM51C	qtz-fsp mylonite	THM51C-s7-Au6	stage 4	100.00	0	0	100	
20	THM51C	qtz-fsp mylonite	THM51C-s7-Au7	stage 4	100.00	0	0	100	
21	THM51C	qtz-fsp mylonite	THM51C-s7-Au8	stage 4	100.00	0	0	100	
22	THM22	qtz-fsp mylonite	THM22-4-sp109		100.00	0	0	100	
23	THM22	qtz-fsp mylonite	THM22-4-sp110		100.00	0	0	100	
24	THM22	qtz-fsp mylonite	THM22-4-sp111		100.00	0	0	100	
25	THM22	qtz-fsp mylonite	THM22-6-pnt1		100.00	0	0	100	near stage 3 vein
26	THM22	qtz-fsp mylonite	THM22-7-sp14		100.00	0	0	100	
27	THM22	qtz-fsp mylonite	THM22-7-sp15		100.00	0	0	100	
28	THM22	qtz-fsp mylonite	THM22-7b-sp26		100.00	0	0	100	
29	THM22	qtz-fsp mylonite	THM22-8-au		100.00	0	0	100	
30	TH55	qtz-fsp mylonite	TH55-s1a-11	stage 1	100.00	0	0	100	
31	TH55	qtz-fsp mylonite	TH55-s1a-12	stage 1	100.00	0	0	100	
32	TH55	qtz-fsp mylonite	TH55-s4a-au1	D3	100.00	0	0	100	
33	TH55	qtz-fsp mylonite	TH55-s4a-au2	D3	100.00	0	0	100	
34	TH55	qtz-fsp mylonite	TH55-s4b-au1	D3	100.00	0	0	100	
35	TH55	qtz-fsp mylonite	TH55-s4b-au2	D3	100.00	0	0	100	
36	TH55	qtz-fsp mylonite	TH55-6-au1	D3	100.00	0	0	100	Au along D3 sheeted vein
37	TH55	qtz-fsp mylonite	TH55-6-au2	D3	100.00	0	0	100	Au along D3 sheeted vein
38	TH55	qtz-fsp mylonite	TH55-6-au3	D3	100.00	0	0	100	Au along D3 sheeted vein
39	TH55	qtz-fsp mylonite	TH55-6b-sp156	D3	100.00	0	0	100	in the D3 sheeted vein
40	TH55	qtz-fsp mylonite	TH55-6b-sp157	D3	100.00	0	0	100	in the D3 sheeted vein
41	TH55	qtz-fsp mylonite	TH55-6b-sp158	D3	100.00	0	0	100	in the D3 sheeted vein
42	TH55	qtz-fsp mylonite	TH55-6b-sp159	D3	100.00	0	0	100	in the D3 sheeted vein

Table. 1. Composition of Au at Tick Hill measured by the SEM (cont.)

#	Sample	Rock type	Analysis No		Au	Cu	Ag	Sum	Notes
43	TH55	qtz-fsp mylonite	TH55-6b-sp160	D3	100.00	0	0	100	in the D3 sheeted vein
44	TH55	qtz-fsp mylonite	TH55-6b-sp161	D3	100.00	0	0	100	in the D3 sheeted vein
45	TH55	qtz-fsp mylonite	TH55-8-au1	D3	100.00	0	0	100	
46	TH55	qtz-fsp mylonite	TH55-8-au2	D3	100.00	0	0	100	closed to stage 3b vein
47	TH55	qtz-fsp mylonite	TH55-8-au3	D3	100.00	0	0	100	
48	TH55	qtz-fsp mylonite	TH55-9-au1	D3	100.00	0	0	100	Au along D3 sheeted vein
49	TH55	qtz-fsp mylonite	TH55-9-au2	D3	100.00	0	0	100	Au along D3 sheeted vein
50	TH55	qtz-fsp mylonite	TH55-9-au3	D3	100.00	0	0	100	Au along D3 sheeted vein
51	TH55	qtz-fsp mylonite	TH55-9-au4		100.00	0	0	100	
52	TH55	qtz-fsp mylonite	TH55-9-au5		100.00	0	0	100	
53	TH55	qtz-fsp mylonite	TH55-15-au1	stage 2	100.00	0	0	100	Au inclusion in chlorite2
54	TH55	qtz-fsp mylonite	TH55-15-au2	stage 2	100.00	0	0	100	Au inclusion in chlorite2
55	TH46	amp-rich calc-silicate	TH46-s4-sp85		99.70	0.30	0	100	Au-Cpy inclusion in deformed Cpx
56	TH46	amp-rich calc-silicate	TH46-s6-au1		100.00	0	0	100	fine-graine Au in the contact amphibole-scapolite
57	TH46	amp-rich calc-silicate	TH46-s7-au	D1-2	100.00	0	0	100	Au inclusion in undeformed D1-2 Cpx, peak metamorphic gold
58	TH46	amp-rich calc-silicate	TH46-s11-au	D1-2	100.00	0	0	100	Au inclusion within D1-2 scapolite
59	TH46	amp-rich calc-silicate	TH46-s13-au		100.00	0	0	100	
60	TH46	amp-rich calc-silicate	TH46-s13-au1		100.00	0	0	100	
61	TH46	amp-rich calc-silicate	TH46-s14-au1		100.00	0	0	100	
62	TH46	amp-rich calc-silicate	TH46-s14-au2		100.00	0	0	100	
63	TH46	amp-rich calc-silicate	TH46-s14-au3		100.00	0	0	100	
64	TH46	amp-rich calc-silicate	TH46-s16-au1	D1-2	100.00	0	0	100	coarse grain Au within D1-2 hornblende and an inclusion of hornblende in Au grain
65	TH46	amp-rich calc-silicate	TH46-s16-au2		100.00	0	0	100	as above (i.e. TH46-s16-au1)
66	TH46	amp-rich calc-silicate	TH46-s16-au3	D3	100.00	0	0	100	fine-grained Au surrounding coarse Au grain (i.e. TH46-s16-au1)
67	TH46	amp-rich calc-silicate	TH46-s16-au4	D3	100.00	0	0	100	as above (i.e. TH46-s16-au1)
68	TH46	amp-rich calc-silicate	TH46-s16-au5	D3	100.00	0	0	100	as above (i.e. TH46-s16-au4)
69	TH46	amp-rich calc-silicate	TH46-s16-au6	D3	100.00	0	0	100	as above (i.e. TH46-s16-au4)

Table 2. Composition of bismuth selenide and other selenide minerals in quartz-feldspar mylonite unit measured by the SEM

#	Sample	Analysis No	Event	Se	Bi	Fe	S	Cu	Pb	Te	Sum	Mineral	Note
1	THM51C	THM51C-s1a-Bi	D3	33.61	64.97	0	0	0	0	1.42	100	Te- Bi_2Se_3	
2	THM51C	THM51C-s1b-sp3	D3	33.33	65.01	0	0	0	0	1.66	100	Te- Bi_2Se_3	
3	THM51C	THM51C-s4-unk1	stage 4	22.17	46.65	0	5.62	3.46	20.95	0	99	Closed to $Cu_2Pb_3Bi_8(S,Se)_{16}$	
4	THM51C	THM51C-s7-Bi1	stage 4	36.46	63.54	0	0.00	0.00	0.00	0	100	Bi_2Se_3	
5	THM51C	THM51C-s7-Bi2	stage 4	34.61	65.39	0	0.00	0.00	0.00	0	100	Bi_2Se_3	
6	THM51C	THM51C-s7-Bi3	stage 4	35.5827	64.4173	0	0	0	0	0	100	Bi_2Se_3	normalised from avoiding SiO_2 inclusion
7	THM51C	THM51C-s7-Bi4	stage 4	23.3918	47.4544	0	5	4	21	0	100	CuPbBiSe3	as above
8	THM51C	THM51C-s7-Bi6	stage 4	23.939	47.0521	0	5	4	21	0	100	$Cu_2Pb_3Bi_8(S,Se)_{16}$	as above
9	THM51C	THM51C-s7-Bi7	stage 4	23.53	0.00	0	2.70	0.00	73.78	0	100	PbSe/ PbSeO3	
10	THM51C	THM51C-s7-Bi8	stage 4	21.88	48.12	0	5.26	4.10	20.64	0	100	CuPbBiSe3	
11	TH55	TH55-s1-1	stage 1	34.59	65.41	0	0	0	0	0	100	Bi_2Se_3	
12	TH55	TH55-s1-2	stage 1	34.68	65.32	0	0	0	0	0	100	Bi_2Se_3	
13	TH55	TH55-s1-3	stage 1	34.54	65.46	0	0	0	0	0	100	Bi_2Se_3	
14	TH55	TH55-s1a-14	stage 1	34.96	65.04	0	0	0	0	0	100	Bi_2Se_3	
15	TH55	TH55-s3-3	D3	34.55	65.45	0	0	0	0	0	100	Bi_2Se_3	
16	TH55	TH55-s3-4	D3	34.49	65.51	0	0	0	0	0	100	Bi_2Se_3	
17	TH55	TH55-4a-bi1	D3	34.25	65.75	0	0	0	0	0	100	Bi_2Se_3	
18	TH55	TH55-4a-bi2	D3	35.1	64.9	0	0	0	0	0	100	Bi_2Se_3	
19	TH55	TH55-4a-bi3	D3	34.74	65.26	0	0	0	0	0	100	Bi_2Se_3	
20	TH55	TH55-4a-bi4	D3	34.67	65.33	0	0	0	0	0	100	Bi_2Se_3	
21	TH55	TH55-4b-bi1	D3	34.38	65.62	0	0	0	0	0	100	Bi_2Se_3	
22	TH55	TH55-s5-bi1	D3	34.84	65.16	0	0	0	0	0	100	Bi_2Se_3	
23	TH55	TH55-s5-bi2	D3	Se	Bi	0	0	0	0	0	0	Bi_2Se_3	
24	TH55	TH55-s5-bi3	D3	Se	Bi	0	0	0	0	0	0	Bi_2Se_3	
25	TH55	TH55-9-bi1	stage 3/4	34.58	65.42	0	0	0	0	0	100	Bi_2Se_3	
26	TH55	TH55-9-bi2	stage 3/4	35.41	64.59	0	0	0	0	0	100	Bi_2Se_3	
27	TH55	TH55-9-bi3	stage 3/4	34.74	64.81	0.44	0	0	0	0	100	Fe- Bi_2Se_3	
28	TH55	TH55-14-bi1	D3	34.88	64.25	0.87	0	0	0	0	100	Fe- Bi_2Se_3	
29	TH55	TH55-14-bi2	D3	34.85	64.49	0.66	0	0	0	0	100	Fe- Bi_2Se_3	
30	TH55	TH55-14-sp212	D3	34.52	64.28	1.19	0	0	0	0	100	Fe- Bi_2Se_3	

Table 3. Composition of copper sulphides at Tick Hill measured by the SEM

#	Analysis No	S	Fe	Cu	Co	Ni	Se	Sum	Sample	Rock type	Mineral	Event	Note
1	THM51C-s1a-cpy1	34.41	30.99	34.07			0.52	100.00	THM51C	qtz-fsp mylonite	chalcopyrite	D3	Au+(Bi-Se-Te)+Cpy+chl+calc. assemblage
2	THM51C-s11-cpy1	34.33	31.51	34.16				100.00	THM51C	qtz-fsp mylonite	chalcopyrite	D3	Cpy+calc. assemblage
3	THM51C-s11-cpr2	32.44	32.19	35.37				100.00	THM51C	qtz-fsp mylonite	chalcopyrite	D3	Cpy+calc. assemblage
4	THM22-s1-cp1	36.02	29.68	34.31				100.01	THM22	qtz-fsp mylonite	chalcopyrite	D3	Cpy+brn+pyrite+unk in quartz-albite laminea
5	THM22-1-bn1	27.21	11.48	61.31				100.00	THM22	qtz-fsp mylonite	bornite	D3	hosted in quartz-albite laminea
6	THM22-1-bn2	27.55	11.25	61.20				100.00	THM22	qtz-fsp mylonite	bornite	D3	hosted in quartz-albite laminea
7	THM22-1a-cp	36.02	29.68	34.31				100.01	THM22	qtz-fsp mylonite	chalcopyrite	D3	
8	THM22-7b-cus	27.35	0.67	71.98				100.00	THM22	qtz-fsp mylonite	covellite	D3	
9	THM22-1-unk1	42.42		8.46	32.69	16.42		99.99	THM22	qtz-fsp mylonite	Carrollite ($Cu[Co, Ni]_2S_4$)?	D3	late stage 1?
10	THM22-1a-unk2	42.29		8.60	32.35	16.77		100.01	THM22	qtz-fsp mylonite	Carrollite ($Cu[Co, Ni]_2S_4$)?	D3	late stage 1?
11	THM22-11uk1	38.68	3.70	29.51	25.15	2.96		100.00	THM22	qtz-fsp mylonite	Fe-carrollite ($Cu[Co, Ni]_2S_4$)?	D3	late stage 1?
12	THM22-11uk2	39.76	4.69	27.34	23.93	4.28		100.00	THM22	qtz-fsp mylonite	Fe-carrollite ($Cu[Co, Ni]_2S_4$)?	D3	late stage 1?
13	THM22-11uk3	39.32	4.16	25.07	26.80	4.66		100.01	THM22	qtz-fsp mylonite	Fe-carrollite ($Cu[Co, Ni]_2S_4$)?	D3	late stage 1?
14	THM22-9b-cp1	35.49	31.27	33.24				100.00	THM22	qtz-fsp mylonite	chalcopyrite	D3	
15	THM22-9b-cp2	35.41	30.74	33.85				100.00	THM22	qtz-fsp mylonite	chalcopyrite	D3	
16	THM22-9c-cpy	35.69	31.29	33.02				100.00	THM22	qtz-fsp mylonite	chalcopyrite	D3	
17	THM22-11-bn1	33.17	14.31	52.52				100.00	THM22	qtz-fsp mylonite	bornite	D3	
18	THM22-11-bn2	33.77	13.93	52.31				100.01	THM22	qtz-fsp mylonite	bornite	D3	
19	TH99-1-cpy1	36.28	30.33	33.40				100.00	TH99	amphibolite	chalcopyrite	D3	
20	TH99-1-cpy2	35.84	30.57	33.60				100.01	TH99	amphibolite	chalcopyrite	D3	
21	TH55-s4a-1	35.99	30.26	33.75				100.00	TH99	amphibolite	chalcopyrite	D3	
22	TH55-s4a-2	36.04	30.38	33.58				100.00	TH99	amphibolite	chalcopyrite	D3	

Table 4. Composition of pyrite and pyrrhotite at Tick Hill measured by the SEM

#	Analysis No	S	Fe	Se	Ni	Cu	As	Sum	Mineral	Sample	Rock type	Event	Note
1	THM22-s1-po1	54.85	45.15					100	pyrite	THM22	qtz-fsp mylonite	D3	
2	THM22-s1-Po	54.85	45.15					100	pyrite	THM22	qtz-fsp mylonite	D3	
3	THM22-4b-sp124	54.68	45.14		0.18			100	Ni-pyrite	THM22	qtz-fsp mylonite	D3-stage2	
4	THM22-4b-sp125	54.39	45.33		0.29			100	Ni-pyrite	THM22	qtz-fsp mylonite	D3-stage2	
5	THM22-4b-sp126	54.57	45.03		0.40			100	Ni-pyrite	THM22	qtz-fsp mylonite	D3-stage2	
6	THM22-4b-sp127	54.71	45.29					100	pyrite	THM22	qtz-fsp mylonite	D3-stage2	
7	THM22-4b-sp128	54.19	45.66		0.16			100	Ni-pyrite	THM22	qtz-fsp mylonite	D3-stage2	
8	THM22-6-hmt1	50.49	45.06	0.32	0.81	3.31		100	Se-Ni-Cu pyrite	THM22	qtz-fsp mylonite	D3	
9	THM22-6-pnt2	54.43	45.57					100	pyrite	THM22	qtz-fsp mylonite	D3	deformed pyrite
10	THM22-6-pnt3	54.15	45.70	0.15				100	Se-pyrite	THM22	qtz-fsp mylonite	D3	deformed pyrite
11	THM22-6-pnt4	54.32	45.52	0.16				100	Se-pyrite	THM22	qtz-fsp mylonite	D3	deformed pyrite
12	THM22-6-pnt5	54.39	45.61					100	pyrite	THM22	qtz-fsp mylonite	D3	deformed pyrite
13	THM22-6-pnt6	54.84	45.16					100	pyrite	THM22	qtz-fsp mylonite	D3	deformed pyrite
14	THM22-6d-sp9	43.86	53.79	0.44	1.91			100	Se-Ni-pyrite	THM22	qtz-fsp mylonite	D3	
15	THM22-7-sp12	54.46	45.54					100	Pyrite	THM22	qtz-fsp mylonite	D3-stage2	
16	THM22-7-sp13	54.47	45.42	0.11				100	Se-Py	THM22	qtz-fsp mylonite	D3-stage2	
17	THM22-8-sp27	54.82	45.18					100	pyrite	THM22	qtz-fsp mylonite	D3	
18	THM22-8-py	54.21	45.79					100	pyrite	THM22	qtz-fsp mylonite	D3	
19	THM22-8-sp33	55.15	44.85					100	pyrite	THM22	qtz-fsp mylonite	D3	
20	THM22-9b-sp64	53.96	45.46		0.17	0.40		100	Ni-Cu pyrite	THM22	qtz-fsp mylonite	D3-stage2	
21	THM22-9b-sp66	54.66	42.17		2.87			100	Ni-pyrite	THM22	qtz-fsp mylonite	D3-stage2	
22	THM22-9b-sp67	54.02	44.83		0.75	0.40		100	Ni-Cu pyrite	THM22	qtz-fsp mylonite	D3-stage2	
23	THM22-9b-sp74	47.45	48.00		2.71	1.85		100	Ni-Cu pyrite	THM22	qtz-fsp mylonite	D3-stage2	
24	THM22-13-py1	54.14	45.59		0.27			100	Ni-pyrite	THM22	qtz-fsp mylonite	D3	
25	THM22-13-py2	54.72	44.96		0.33			100	Ni-pyrite	THM22	qtz-fsp mylonite	D3	
26	THM22-13-sp170	54.43	45.57					100	pyrite	THM22	qtz-fsp mylonite	D3	
27	THM22-13-sp171	54.43	45.57					100	pyrite	THM22	qtz-fsp mylonite	D3	
28	TH55-s1-4	39.83	58.92	1.26				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
29	TH55-s1-5	39.47	58.59	1.95				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
30	TH55-s1-6	39.74	58.70	1.56				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
31	TH55-s1a-13	39.59	58.20	2.21				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
32	TH55-s1a-15	40.8	58.55	0.64				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
33	TH55-s2-1	39.71	58.35	1.94				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
34	TH55-s2-2	39.53	58.63	1.84				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
35	TH55-s2-3	39.56	58.68	1.76				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
36	TH55-s3-1	39.49	58.61	1.90				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
37	TH55-s3-5	54.24	44.73	1.03				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
38	TH55-s3-6	53.83	43.76	2.42				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	

Table 4. Composition of pyrite and pyrrhotite at Tick Hill measured by the SEM (cont.)

#	Analysis No	S	Fe	Se	Ni	Cu	As	Sum	Mineral	Sample	Rock type	Event	Note
39	TH55-s3-7	53.8	44.46	1.75				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
40	TH55-s3-8	52.34	43.69	1.93			2.04	100	As-Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
41	TH55-s3-8a	52.33	42.90	2.77			2.00	100	As-Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
42	TH55-s3-9	54.04	45.02	0.93				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
43	TH55-s3-10	53.9	44.02	2.08				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
44	TH55-s3-11	53.83	45.00	1.17				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
45	TH55-s3-12	53.76	45.13	1.11				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
46	TH55-s3-13	52.63	40.71	0.80			5.87	100	As-Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
47	TH55-s4b-Po1	39.63	59.28	1.10				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
48	TH55-s4b-Po2	39.75	58.86	1.40				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
49	TH55-s4b-Po3	40.72	59.28					100	Pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
50	TH55-s4b-Po4	40.71	59.29					100	Pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
51	TH55-6-po2	50.03	44.12	5.85				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
52	TH55-6a-sp1TH55	49.7	44.15	6.15				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
53	TH55-7-1	36.93	57.24	5.82				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
54	TH55-7-2	36.98	57.59	5.43				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
55	TH55-7-3	37.04	57.40	5.56				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
56	TH55-7-4	36.82	57.67	5.51				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
57	TH55-7-5	37.09	57.13	5.78				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
58	TH55-7-6	37.28	57.03	5.69				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
59	TH55-8-po1	39.21	57.05	3.74				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
60	TH55-9-po1	40.71	59.06	0.23				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
61	TH55-9-po2	39.21	58.64	2.15				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
62	TH55-9-po3	40.78	59.22					100	Pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
63	TH55-9-po4	39.27	58.59	2.14				100	Se-pyrrhotite	TH55	qtz-fsp mylonite	D3-stage3	
64	TH55-14-po1	51.44	44.35	4.20				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
65	TH55-14-sp210	50.91	44.14	4.95				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
66	TH55-14-sp211	50.62	44.35	5.04				100	Se-pyrite	TH55	qtz-fsp mylonite	D3-stage3	
67	TH99-3-py	54.56	45.44					100	pyrite	TH99	amphibolite	stage 2	D3 vein
68	TH99-4-sp258	54.99	45.01					100	pyrite	TH99	amphibolite	stage 2	D3 vein
69	TH99-4-sp259	54.7	43.39		1.90			100	Ni-pyrite	TH99	amphibolite	stage 2	D3 vein
70	TH99-4-sp260	54.25	45.72		0.03			100	Ni-pyrite	TH99	amphibolite	stage 2	D3 vein
71	TH99-4-sp261	54.58	45.40		0.02			100	Ni-pyrite	TH99	amphibolite	stage 2	D3 vein
72	TH99-4-sp262	53.63	46.37					100	pyrite	TH99	amphibolite	stage 2	D3 vein
73	TH99-4-sp263	53.99	46.01					100	pyrite	TH99	amphibolite	stage 2	D3 vein
74	TH99-4-sp265	54.76	45.24					100	pyrite	TH99	amphibolite	stage 2	D3 vein

Table 5. Garnet composition collected from peak-metamorphic amphibolite, sample TH99, 800m N of Tick Hill

Oder	1	2	3	4	5	6	7	8	9	10	11	12	13
Analysis No	gn1	gn_b	gn_c	gn_d	gn_f	gn_f2	th99j-s5-gn2	th99j-s5-gn3	th99j-s5-gn6	th99j-s5-gn7	th99j-s5-gn8	th99j-s5-gn9	th99j-s5-gn1
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	37.75	37.81	37.73	37.80	37.82	37.82	37.46	37.46	37.15	37.39	37.37	37.35	37.22
TiO2	0.02	0.00	0.00	0.00	0.04	0.05	0.00	0.00	0.00	0.30	0.42	0.00	0.00
Al2O3	20.25	20.33	20.08	19.78	20.19	20.18	21.07	21.36	21.15	21.33	21.25	21.32	21.38
FeO*	30.79	31.48	31.26	31.13	31.57	30.45	31.57	31.17	32.44	30.86	30.94	31.09	30.89
MnO	1.36	1.45	1.46	1.45	1.69	1.67	1.54	1.72	2.26	1.51	1.43	1.65	1.71
MgO	4.08	3.99	3.93	3.86	3.58	3.76	4.11	3.62	2.77	3.91	3.91	3.63	3.87
CaO	4.59	4.53	4.61	4.60	4.80	4.77	4.25	4.68	4.22	4.69	4.68	4.95	4.92
Sum	98.84	99.59	99.07	98.62	99.69	98.70	100.00	100.01	99.99	99.99	100.00	99.99	99.99
Cation per formula													
Si	3.03	3.02	3.03	3.05	3.03	3.05	2.98	2.98	2.98	2.97	2.97	2.97	2.96
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.00	0.00
Al	1.92	1.91	1.90	1.88	1.90	1.92	1.97	2.00	2.00	2.00	1.99	2.00	2.00
Fe3+	0.01	0.04	0.04	0.01	0.04	-0.02	0.07	0.04	0.04	0.03	0.02	0.06	0.09
Fe2+	2.06	2.06	2.06	2.09	2.08	2.07	2.02	2.04	2.13	2.02	2.04	2.01	1.96
Mn	0.09	0.10	0.10	0.10	0.11	0.11	0.10	0.12	0.15	0.10	0.10	0.11	0.12
Mg	0.49	0.48	0.47	0.46	0.43	0.45	0.49	0.43	0.33	0.46	0.46	0.43	0.46
Ca	0.40	0.39	0.40	0.40	0.41	0.41	0.36	0.40	0.36	0.40	0.40	0.42	0.42
Total	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Fe2+Mg	2.55	2.54	2.54	2.56	2.50	2.53	2.51	2.47	2.46	2.49	2.50	2.44	2.42
Almandine	67.82	68.18	68.10	68.49	68.53	67.96	68.01	68.32	71.56	67.74	68.01	67.57	66.44
Spessartine	3.05	3.25	3.28	3.25	3.78	3.74	3.48	3.89	5.15	3.40	3.21	3.74	3.89
Pyrope	16.10	15.73	15.53	15.22	14.10	14.80	16.36	14.41	11.12	15.50	15.47	14.49	15.50
Grossular	12.95	12.55	12.85	12.96	13.33	13.65	11.72	13.14	11.91	13.19	13.18	13.78	13.57
Andradite	0.07	0.29	0.24	0.08	0.26	0.00	0.44	0.25	0.26	0.17	0.13	0.42	0.59

Table 5. Garnet composition collected from peak-metamorphic amphibolite, sample TH99, 800m N of Tick Hill (cont.)

Oder	14	15	16	17	18	19	20	21	22	23	24	25	26
Analysis No	th99j-s5-gn5	th99j-s1-gn1	th99j-s1-gn2	th99j-s1-gn3	th99j-s1-gn4	th99j-s1-gn6	TH99-8b-sp247	TH99-8b-sp248	TH99-8b-sp249	th99j-s3-gn1	th99j-s3-gn2	th99j-s3-gn3	th99j-s3-gn4
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	38.20	36.95	37.15	37.88	37.03	36.98	36.83	36.79	36.78	37.77	36.80	36.68	37.31
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.13	0.00	0.00	0.00	0.00
Al2O3	20.83	21.16	21.22	20.81	21.21	21.33	21.62	21.83	21.41	20.84	21.08	21.25	21.02
FeO*	30.86	31.58	31.71	31.30	31.64	31.59	31.14	30.76	31.27	31.73	32.03	32.04	31.84
MnO	1.62	1.77	1.72	1.81	1.49	1.72	1.57	1.62	1.63	1.78	1.78	1.74	1.61
MgO	3.85	3.58	3.54	3.47	3.83	3.69	3.94	3.94	3.97	3.49	3.81	3.75	3.72
CaO	4.65	4.97	4.66	4.73	4.80	4.69	4.91	4.99	4.82	4.39	4.49	4.55	4.50
Sum	100.01	100.01	100.00	100.00	100.00	100.00	100.01	100.00	100.01	100.00	99.99	100.01	100.00
Cation per formula													
Si	3.04	2.94	2.96	3.02	2.94	2.94	2.92	2.92	2.92	3.01	2.93	2.92	2.97
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Al	1.95	1.99	1.99	1.96	1.99	2.00	2.02	2.04	2.00	1.96	1.98	1.99	1.97
Fe3+	0.00	0.13	0.09	0.01	0.12	0.11	0.13	0.12	0.14	0.01	0.16	0.16	0.08
Fe2+	2.07	1.97	2.03	2.08	1.98	1.99	1.93	1.92	1.94	2.10	1.98	1.97	2.04
Mn	0.11	0.12	0.12	0.12	0.10	0.12	0.11	0.11	0.11	0.12	0.12	0.12	0.11
Mg	0.46	0.43	0.42	0.41	0.45	0.44	0.47	0.47	0.47	0.42	0.45	0.45	0.44
Ca	0.40	0.42	0.40	0.40	0.41	0.40	0.42	0.42	0.41	0.38	0.38	0.39	0.38
Total	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Fe2+Mg	2.53	2.40	2.45	2.49	2.44	2.43	2.40	2.39	2.41	2.52	2.43	2.42	2.48
Almandine	68.34	67.09	68.43	68.92	67.28	67.60	66.16	65.82	66.20	69.78	67.40	67.45	68.56
Spessartine	3.59	4.06	3.92	4.05	3.41	3.94	3.61	3.72	3.74	3.99	4.10	4.02	3.65
Pyrope	15.02	14.44	14.21	13.66	15.42	14.88	15.95	15.94	16.05	13.77	15.43	15.24	14.86
Grossular	13.20	13.53	12.88	13.34	13.08	12.86	13.40	13.73	13.10	12.36	12.11	12.28	12.40
Andradite	0.00	0.88	0.56	0.04	0.81	0.73	0.88	0.79	0.90	0.09	0.97	1.01	0.52

Table 5. Garnet composition collected from peak-metamorphic amphibolite, sample TH99, 800m N of Tick Hill (cont.)

Oder	27	28	29	30	31	32	33	34	35	36	37	38	39
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Analysis No	th99j-s3-gn5	TH99-1-sp186	TH99-1-sp187	TH99-1-sp188	TH99-1-sp189	TH99-1-sp190	TH99-1-sp191	TH99-1-sp192	TH99-1-sp195	TH99-3-sp254	TH99-3-sp2TH55	TH99-3-sp231	TH99-3-sp233
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	37.06	36.82	37.18	36.77	37.17	36.81	36.75	36.80	36.95	36.59	36.55	36.90	37.24
TiO2	0.00	0.00	0.06	0.04	0.00	0.14	0.01	0.00	0.03	0.00	0.00	0.00	0.01
Al2O3	21.18	21.98	21.52	21.61	21.96	21.69	22.12	21.72	21.76	21.55	21.88	21.54	21.74
FeO*	32.02	31.04	30.87	31.30	30.44	31.12	30.81	31.28	30.74	32.36	31.64	30.80	30.73
MnO	1.60	1.75	1.45	1.39	1.70	1.53	1.49	1.56	1.54	1.88	1.55	1.62	1.36
MgO	3.94	3.74	4.07	4.34	4.06	4.05	3.94	3.95	4.04	3.06	3.70	3.99	3.96
CaO	4.19	4.67	4.85	4.55	4.68	4.67	4.89	4.70	4.94	4.56	4.68	4.90	4.96
Sum	99.99	100.00	100.00	100.00	100.01	100.01	100.01	100.01	100.00	100.00	100.00	99.75	100.00
Cation per formula													
Si	2.95	2.92	2.95	2.91	2.94	2.92	2.91	2.92	2.93	2.92	2.91	2.93	2.95
Ti	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al	1.99	2.06	2.01	2.02	2.05	2.03	2.07	2.03	2.03	2.03	2.05	2.02	2.03
Fe3+	0.11	0.10	0.09	0.15	0.06	0.11	0.11	0.13	0.11	0.12	0.14	0.11	0.07
Fe2+	2.02	1.97	1.96	1.92	1.95	1.95	1.93	1.95	1.93	2.04	1.96	1.93	1.97
Mn	0.11	0.12	0.10	0.09	0.11	0.10	0.10	0.10	0.10	0.13	0.10	0.11	0.09
Mg	0.47	0.44	0.48	0.51	0.48	0.48	0.47	0.47	0.48	0.36	0.44	0.47	0.47
Ca	0.36	0.40	0.41	0.39	0.40	0.40	0.42	0.40	0.42	0.39	0.40	0.42	0.42
Total	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Fe2+Mg	2.48	2.41	2.44	2.44	2.43	2.43	2.40	2.42	2.41	2.41	2.40	2.41	2.44
Almandine	68.38	67.24	66.44	65.97	66.35	66.58	66.33	66.72	65.87	69.83	67.60	65.93	66.79
Spessartine	3.66	4.03	3.30	3.20	3.87	3.51	3.43	3.59	3.53	4.35	3.59	3.72	3.09
Pyrope	15.85	15.14	16.30	17.58	16.28	16.36	15.98	16.00	16.29	12.47	15.09	16.12	15.85
Grossular	11.45	12.99	13.39	12.33	13.09	12.83	13.54	12.88	13.60	12.60	12.85	13.47	13.82
Andradite	0.66	0.60	0.57	0.92	0.40	0.73	0.72	0.81	0.72	0.75	0.87	0.76	0.44

Table 6. Biotite composition from peak metamorphic amphibolite (Amp.; sample TH99) and quarzt-feldspar mylonite (Qtz-fsp; sample TH22) at Tick Hill area

Oder	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Analysis No	bio1	bio2	bio3	bio_4	th99j-s3-bi1	th99j-s3-bi2	th99j-s3-bi3	th99j-s3-bi4	th99j-s3-bi5	th99j-s3-bi6	th99j-s3-bi7	th99j-s2-bi1	th99j-s2-bi3	th99j-s2-bi4	th99j-s2-bi5
Rock type	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.
Data type	EPMA	EPMA	EPMA	EPMA	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	36.25	33.99	35.21	34.68	35.84	35.52	35.93	35.03	35.27	35.56	35.42	35.26	34.33	33.73	35.18
TiO2	1.68	1.22	1.61	1.37	1.76	2.07	2.16	1.74	1.71	1.59	2.09	2.62	3.51	2.14	2.72
Al2O3	15.73	15.94	15.85	15.40	15.95	15.63	15.64	16.17	16.10	16.17	15.81	15.67	15.57	16.19	15.69
FeO*	19.83	22.28	20.88	20.30	20.60	20.60	20.06	21.81	21.43	20.81	20.73	21.56	22.53	25.33	21.28
MnO	0.04	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MgO	11.90	12.37	12.07	11.19	11.62	11.52	11.59	12.02	11.83	12.16	11.95	10.47	10.46	11.26	10.69
CaO	0.02	0.03	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	0.00	0.00
Na2O	0.26	0.20	0.28	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K2O	8.49	6.27	7.72	7.79	8.59	9.14	8.92	7.88	8.24	8.11	8.43	8.99	7.50	6.56	9.03
Cl	1.10	0.81	0.98	1.14	0.98	0.99	1.07	0.97	0.95	1.09	1.11	0.98	0.79	0.72	1.01
Sum	95.29	93.13	94.61	92.53	95.35	95.47	95.36	95.61	95.52	95.49	95.55	95.57	95.78	95.93	95.60
Cation per formula															
Si	5.52	5.35	5.43	5.50	5.47	5.45	5.49	5.37	5.41	5.43	5.42	5.44	5.30	5.24	5.42
Al iv	2.48	2.65	2.57	2.50	2.53	2.55	2.51	2.63	2.59	2.57	2.58	2.56	2.70	2.76	2.58
Al vi	0.34	0.31	0.31	0.38	0.35	0.28	0.30	0.29	0.32	0.34	0.28	0.28	0.14	0.20	0.27
Ti	0.19	0.14	0.19	0.16	0.20	0.24	0.25	0.20	0.20	0.18	0.24	0.30	0.41	0.25	0.31
Fe	2.52	2.93	2.69	2.69	2.63	2.65	2.56	2.80	2.75	2.66	2.65	2.78	2.91	3.29	2.74
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	2.70	2.90	2.78	2.65	2.65	2.64	2.64	2.75	2.70	2.77	2.73	2.41	2.41	2.61	2.46
Ca	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00
Na	0.08	0.06	0.08	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K	1.65	1.26	1.52	1.58	1.67	1.79	1.74	1.54	1.61	1.58	1.65	1.77	1.48	1.30	1.77
Cl	0.28	0.22	0.26	0.31	0.25	0.26	0.28	0.25	0.25	0.28	0.29	0.26	0.21	0.19	0.26
Sum	20.00	19.75	19.91	19.89	19.95	19.99	19.96	19.89	19.92	19.92	19.92	19.90	19.70	19.72	19.90
Alvi+Fe3+Ti	0.53	0.45	0.50	0.54	0.55	0.52	0.55	0.50	0.51	0.52	0.52	0.59	0.54	0.45	0.59
Fe2+Mn	2.53	2.94	2.69	2.69	2.63	2.65	2.56	2.80	2.75	2.66	2.65	2.78	2.91	3.29	2.74

Table 6. Biotite composition from peak metamorphic amphibolite (Amp.; sample TH99) and quarzt-feldspar mylonite (Qtz-fsp; sample TH22) at Tick Hill area (cont.)

Oder	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	THM22	THM22	THM22	THM22	THM22
Analysis No	th99j-s2-bi6	TH99-1-bio1	TH99-1-bio2	TH99-1-bio3	TH99-3-sp250	TH99-3-sp251	TH99-3-sp252	TH99-3-sp253	TH99-6a-sp201	TH99-6a-sp202	THM22-14-sp139	THM22-14-sp140	THM22-14-sp141	THM22-14-sp142	THM22-14-sp143
Rock type	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Qtz-fsp	Qtz-fsp	Qtz-fsp	Qtz-fsp	Qtz-fsp
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	35.25537	34.78266	34.72462	33.5226	34.40	35.17	34.88	33.42	35.07	35.14	30.21	32.16	32.51	32.44	33.30
TiO2	2.54	1.34	1.77	0.99	2.62	2.41	2.62	1.88	2.62	2.41	2.37	1.00	1.52	2.92	1.23
Al2O3	15.87	16.30	16.16	17.09	15.94	16.38	16.21	17.24	16.13	15.90	17.60	16.15	14.92	15.80	15.08
FeO*	21.34	21.90	20.88	25.11	20.40	19.88	20.35	24.91	20.37	20.39	36.17	36.49	34.41	32.13	31.24
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.23	0.00	0.19	0.11	0.05
MgO	10.61	11.55	11.57	11.65	10.57	11.01	11.24	12.38	10.78	11.09	7.71	6.57	5.97	8.37	7.11
CaO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.41	0.00
Na2O	0.00	0.00	0.36	0.18	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.26
K2O	8.96	8.31	8.62	6.22	8.93	9.23	8.91	5.04	9.21	9.25	0.91	2.96	5.36	3.20	6.24
Cl	0.99	1.08	1.25	0.94	1.01	1.00	0.98	0.72	0.93	0.86	0.51	0.71	1.59	0.72	1.65
Sum	95.58	95.26	95.34	95.70	94.14	95.08	95.18	95.62	95.10	95.04	96.22	96.28	96.47	96.10	96.16
Cation per formula															
Si	5.43	5.39	5.38	5.22	5.39	5.41	5.38	5.15	5.41	5.42	4.81	5.17	5.30	5.13	5.38
Al iv	2.57	2.61	2.62	2.78	2.61	2.59	2.62	2.85	2.59	2.58	3.19	2.83	2.70	2.87	2.62
Al vi	0.31	0.36	0.33	0.35	0.34	0.39	0.32	0.28	0.34	0.31	0.11	0.23	0.17	0.07	0.26
Ti	0.29	0.16	0.21	0.12	0.31	0.28	0.30	0.22	0.30	0.28	0.28	0.12	0.19	0.35	0.15
Fe	2.75	2.84	2.70	3.27	2.67	2.56	2.62	3.21	2.63	2.63	4.82	4.91	4.69	4.25	4.22
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.01	0.01
Mg	2.43	2.66	2.67	2.70	2.47	2.53	2.58	2.84	2.48	2.55	1.83	1.57	1.45	1.97	1.71
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.07	0.00
Na	0.00	0.00	0.11	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
K	1.76	1.64	1.70	1.23	1.79	1.81	1.75	0.99	1.81	1.82	0.19	0.61	1.12	0.65	1.29
Cl	0.26	0.28	0.33	0.25	0.27	0.26	0.26	0.19	0.24	0.22	0.14	0.19	0.44	0.19	0.45
Sum	19.89	19.98	19.77	19.86	19.90	19.87	19.57	19.88	19.93	19.35	19.52	19.64	19.37	19.72	0.00
Alvi+Fe3+Ti	0.60	0.52	0.53	0.47	0.65	0.66	0.62	0.50	0.65	0.59	0.40	0.35	0.35	0.42	0.40
Fe2+Mn	2.75	2.84	2.70	3.27	2.67	2.56	2.62	3.21	2.63	2.63	4.85	4.91	4.72	4.26	4.23

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area

Oder	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Sample	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C
Analysis No	THM51C-s4-fsp4	THM51C-s4-fsp5	THM51C-s4-fsp7	THM51C-s4-fsp8	THM51C-s4-fsp9	THM51C-s5-fsp1	THM51C-s5-alb1	THM51C-s6-pt1	THM51C-s6-pt2	THM51C-s6-pt4	THM51C-s7-alb1	THM51C-s7-alb2	THM51C-s7-alb3	THM51C-s7-alb4
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	68.23	68.2	68.6	68.41	69.62	68.31	68.51	68.43	68.29	68.08	68.32	67.75	68.76	67.08
Al2O3	20.31	20.51	20.3	20.45	20.33	20.43	20.49	20.37	20.74	20.6	20.56	20.65	20.38	20.52
CaO	0	0	0	0	0	0	0	0	0	0.18	0	0.4	0	1.29
Na2O	11.46	11.29	11.11	11.13	10.05	11.26	11.01	11.2	10.97	11.14	11.13	11.2	10.87	11.1
K2O	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100	100	100.01	99.99	100	100	100.01	100	100	100	100.01	100	100.01	99.99
Cation per formula														
Si	2.97	2.97	2.98	2.98	3.01	2.98	2.98	2.98	2.97	2.97	2.97	2.96	2.99	2.94
Al	1.04	1.05	1.04	1.05	1.04	1.05	1.05	1.05	1.06	1.06	1.05	1.06	1.04	1.06
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.06
Na	0.97	0.95	0.94	0.94	0.84	0.95	0.93	0.95	0.93	0.94	0.94	0.95	0.92	0.94
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	4.99	4.98	4.96	4.97	4.89	4.98	4.96	4.97	4.96	4.97	4.97	4.99	4.95	5.00
Or	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ab	100	100	100	100	100	100	100	100	100	99	100	98	100	94
An	0	0	0	0	0	0	0	0	0	1	0	2	0	6

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Sample	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C
Analysis No	THM51C-s7-alb5	THM51C-s7-alb6	THM51C-s7-alb7	THM51C-s7-alb8	THM51C-s7-alb9	THM51C-s7-alb10	THM51C-s7-alb11	THM51C-s7-alb13	THM51C-s7-alb14	THM51C-s7-alb15	THM51C-s7-alb16	THM51C-s8-alb1	THM51C-s8-alb2	THM51C-s8-alb3
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	70.12	68.13	68.56	67.81	67.83	68.22	68.45	68.32	68.55	75.68	68.46	68.49	68.37	68.41
Al2O3	20.17	20.63	20.4	20.8	20.79	20.54	20.51	20.49	20.37	15.85	20.73	20.31	20.29	20.3
CaO	0.4	0	0	0.38	0.4	0	0	0	0	0	0	0	0	0
Na2O	9.31	11.25	11.03	11	10.98	11.24	11.03	11.19	11.08	8.46	10.81	11.2	11.34	11.28
K2O	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100	100.01	99.99	99.99	100	100	99.99	100	100	99.99	100	100	100	99.99
Cation per formula														
Si	3.03	2.97	2.98	2.96	2.96	2.97	2.98	2.98	2.98	3.23	2.98	2.98	2.98	2.98
Al	1.03	1.06	1.05	1.07	1.07	1.05	1.05	1.05	1.04	0.80	1.06	1.04	1.04	1.04
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Na	0.78	0.95	0.93	0.93	0.93	0.95	0.93	0.94	0.93	0.70	0.91	0.95	0.96	0.95
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	4.85	4.98	4.96	4.97	4.97	4.98	4.96	4.97	4.96	4.72	4.95	4.97	4.98	4.98
Or	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ab	98	100	100	98	98	100	100	100	100	100	100	100	100	100
An	2	0	0	2	2	0	0	0	0	0	0	0	0	0

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Sample	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C	TH51C
Analysis No	THM51C-s8-alb4	THM51C-s8-alb5	THM51C-s8-alb6	THM51C-s8-alb7	THM51C-s8-alb8	THM51C-s8-alb9	THM51C-s9-alb1	THM51C-s9-alb2	THM51C-s9-alb3	THM51C-s10-alb1	THM51C-s10-alb2	THM51C-s10-alb3	THM51C-s10-alb4	THM51C-s11-alb1
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	68.61	68.24	68.81	68.07	68.9	68.35	68.19	68.48	68.39	68.21	68.01	68.18	68.79	69.61
Al2O3	20.38	20.67	20.28	20.55	20.51	20.76	20.51	20.46	20.31	20.12	20.8	20.49	20.45	19.98
CaO	0	0	0	0	0	0	0	0	0	0.22	0.16	0	0	1.59
Na2O	11.01	11.09	10.9	11.38	10.59	10.89	11.3	11.06	11.31	11.46	11.02	11.33	10.76	8.83
K2O	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100	100	99.99	100	100	100	100	100	100.01	100.01	99.99	100	100	100.01
Cation per formula														
Si	2.98	2.97	2.99	2.97	2.99	2.97	2.97	2.98	2.98	2.98	2.96	2.97	2.99	3.01
Al	1.04	1.06	1.04	1.06	1.05	1.06	1.05	1.05	1.04	1.03	1.07	1.05	1.05	1.02
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.07
Na	0.93	0.94	0.92	0.96	0.89	0.92	0.95	0.93	0.96	0.97	0.93	0.96	0.91	0.74
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	4.96	4.97	4.95	4.99	4.93	4.95	4.98	4.96	4.98	4.99	4.97	4.98	4.94	4.85
Or	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ab	100	100	100	100	100	100	100	100	100	99	99	100	100	91
An	0	0	0	0	0	0	0	0	0	1	1	0	0	9

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Sample	TH51C	TH51C	TH51C	TH51C	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22
Analysis No	THM51C-s11-alb2	THM51C-s11-alt2	THM51C-s12-alb1	THM51C-s12-alb2	THM22-s1b-sp227	THM22-s1b-sp228	THM22-s1b-sp229	THM22-1b-sp227	THM22-1b-sp228	THM22-1b-sp229	THM22-3-alb1	THM22-3-alb2	THM22-4-albite	THM22-4a-sp122
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	69.18	68.28	68.29	68.43	64.96	64.61	64.51	64.96	64.61	64.51	64.64	67.96	66.65	65.31
Al2O3	20.31	19.86	20.52	20.41	22.68	22.85	23.1	22.68	22.85	23.1	22.88	20.63	21.62	22.53
CaO	0.76	0.62	0	0	2.71	2.9	2.94	2.71	2.9	2.94	2.82	0.08	1.11	2.44
Na2O	9.75	10.64	11.2	11.15	9.65	9.64	9.45	9.65	9.64	9.45	9.46	11.09	10.53	9.71
K2O	0	0	0	0	0	0	0	0	0	0	0.21	0.25	0.1	0
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100	99.4	100.01	99.99	100	100	100	100	100	100	100.01	100.01	100.01	99.99
Cation per formula														
Si	3.00	2.99	2.97	2.98	2.85	2.84	2.83	2.85	2.84	2.83	2.84	2.96	2.91	2.86
Al	1.04	1.03	1.05	1.05	1.17	1.18	1.20	1.17	1.18	1.20	1.19	1.06	1.11	1.16
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.04	0.03	0.00	0.00	0.13	0.14	0.14	0.13	0.14	0.14	0.13	0.00	0.05	0.11
Na	0.82	0.90	0.95	0.94	0.82	0.82	0.80	0.82	0.82	0.80	0.81	0.94	0.89	0.83
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00
Sum	4.89	4.95	4.97	4.97	4.97	4.98	4.97	4.97	4.98	4.97	4.98	4.98	4.98	4.97
Or	0	0	0	0	0	0	0	0	0	0	1.23822739	1.45553078	0.58686058	0
Ab	96	97	100	100	87	86	85	87	86	85	85	98	94	88
An	4	3	0	0	13	14	15	13	14	15	14	0	5	12

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	57	58	59	60	61	62	63	64	65	66	67	68	69	70
Sample	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22
Analysis No	THM22-4a-sp123	THM22-7a-sp16	THM22-7a-sp17	THM22-7a-sp18	THM22-7a-sp19	THM22-7a-sp20	THM22-7a-alb1	THM22-7a-alb	THM22-8-al1	THM22-8-fsp1	THM22-8-fsp2	THM22-8-alb2	THM22-8-ksp1	THM22-9-ksp1
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	67.59	63.72	63.59	63.36	63.56	63.6	64.46	68.05	68.1	65.27	64.1	66.94	64.18	62.83
Al2O3	20.51	19.17	19.29	19.46	19.25	19.01	22.88	20.77	20.53	23.51	24.94	21.19	18.41	19.12
CaO	0	0	0	0	0	0	2.8	0	0	0	0	0.57	0	0
Na2O	11.24	0.24	0.17	0.33	0.2	0.13	9.69	11.18	11.37	9.55	8.31	10.78	1.79	0.18
K2O	0	16.64	16.95	16.28	16.58	16.89	0.17	0	0	1.67	2.66	0.52	14.42	16.81
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0.53	0.24	0	0.57	0.41	0.38	0	0	0	0	0	0	1.19	0.91
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0.15
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	99.34	99.77	100	99.43	99.59	99.63	100	100	100	100	100.01	100	98.8	98.94
Cation per formula														
Si	2.96	2.96	2.95	2.94	2.95	2.96	2.84	2.96	2.97	2.86	2.82	2.93	2.97	2.94
Al	1.06	1.05	1.06	1.06	1.05	1.04	1.19	1.07	1.05	1.22	1.29	1.09	1.00	1.05
Fe	0.02	0.01	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Na	0.95	0.02	0.02	0.03	0.02	0.01	0.83	0.94	0.96	0.81	0.71	0.92	0.16	0.02
K	0.00	0.99	1.00	0.96	0.98	1.00	0.01	0.00	0.00	0.09	0.15	0.03	0.85	1.00
Sum	4.99	5.02	5.03	5.02	5.02	5.03	4.99	4.97	4.98	4.98	4.97	4.99	5.03	5.05
Or	0.00	97.85	98.50	97.01	98.20	98.84	0.99	0.00	0.00	10.32	17.39	2.99	84.13	98.40
Ab	100	2	2	3	2	1	85	100	100	90	83	94	16	2
An	0	0	0	0	0	0	14	0	0	0	0	3	0	0

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	71	72	73	74	75	76	77	78	79	80	81	82	83	84
Sample	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22
Analysis No	THM22-9-ksp2	THM22-9-alb	THM22-9-alb2	THM22-9-alb3	THM22-9-alb4	THM22-10-al1	THM22-10-al2	THM22-10-al3	THM22-10-al5	THM22-10-al6	THM22-12-alb1	THM22-12-alb2	THM22-13-ksp1	THM22-13-sp163
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	63.52	68.03	68.48	64.67	68.09	65.38	67.61	68.14	67.59	67.95	64.63	63.95	64.07	63.43
Al2O3	19.2	20.3	20.4	22.75	20.41	22.28	20.53	20.77	20.72	20.54	22.42	22.04	19.06	19.38
CaO	0	0	0	2.77	0	2.33	0	0	0.11	0.06	2.7	1.5	0	0
Na2O	0.23	11.15	11.12	9.7	11.17	9.77	11.17	11.09	11.21	11.13	9.32	9.99	0.41	0.32
K2O	16.37	0.16	0	0.12	0	0.24	0	0	0	0	0.93	0.34	16.47	16.47
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0.68	0.35	0	0	0.33	0	0.69	0	0.37	0.32	0	2.19	0	0.4
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	99.32	99.64	100	100.01	99.67	100	99.31	100	99.63	99.68	100	97.82	100.01	99.6
Cation per formula														
Si	2.95	2.97	2.98	2.84	2.97	2.87	2.96	2.97	2.95	2.97	2.85	2.84	2.97	2.95
Al	1.05	1.05	1.05	1.18	1.05	1.15	1.06	1.07	1.07	1.06	1.17	1.15	1.04	1.06
Fe	0.03	0.01	0.00	0.00	0.01	0.00	0.03	0.00	0.01	0.01	0.00	0.08	0.00	0.02
Ca	0.00	0.00	0.00	0.13	0.00	0.11	0.00	0.00	0.01	0.00	0.13	0.07	0.00	0.00
Na	0.02	0.94	0.94	0.83	0.94	0.83	0.95	0.94	0.95	0.94	0.80	0.86	0.04	0.03
K	0.97	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.02	0.97	0.98
Sum	5.02	4.98	4.97	4.98	4.98	4.98	4.99	4.97	4.99	4.98	4.99	5.02	5.02	5.03
Or	97.91	0.94	0.00	0.70	0.00	1.41	0.00	0.00	0.00	0.00	5.36	2.03	96.35	97.13
Ab	2	99	100	86	100	87	100	100	99	100	82	90	4	3
An	0	0	0	14	0	11	0	0	1	0	13	8	0	0

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	85	86	87	88	89	90	91	92	93	94	95	96	97	98
Sample	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22
Analysis No	THM22-13-sp164	THM22-13-sp165	THM22-13-sp166	THM22-13-sp167	thm22p-s9-alb_a	thm22p-s9-alb_b	thm22p-s7a-sp16_p	thm22p-s7a-sp19_a	thm22p-s7a-sp20a	thm22p-s9-ksp1	thm22p-s9-ksp2	thm22p-s7a-sp16_ksp	thm22p-s7a-sp19_k	thm22p-s7a-sp20k
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA
SiO2	66.21	79.09	67	63.89	67.76	67.60	67.17	66.51	57.79	62.68	64.38	63.71	64.01	63.86
Al2O3	19.87	13.25	20.58	23.23	20.03	19.74	20.11	20.46	16.68	19.00	18.69	18.72	18.66	18.84
CaO	0	0	0.43	3.21	0.07	0.02	0.21	0.48	0.00	0.00	0.00	0.00	0.00	0.00
Na2O	9.03	7.66	10.8	9.24	11.53	9.83	11.45	11.33	6.47	0.18	0.72	0.20	0.30	0.17
K2O	3.73	0	0.14	0.17	0.31	3.00	0.47	0.13	5.17	16.39	15.69	16.51	16.08	16.32
BaO	0	0	0	0	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.08	0.00	0.12
FeO	1.16	0	1.06	0.27	0.44	0.37	0.43	0.07	0.28	1.01	0.82	0.33	0.15	0.37
TiO2	0	0	0	0	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.06	0.00
MnO	0	0	0	0	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.04	0.00
MgO	0	0	0	0	0.00	0.00	0.00	0.01	0.07	0.16	0.10	0.00	0.10	0.07
Cl	0	0	0	0	0.01	0.01	0.03	0.04	0.02	0.01	0.02	0.02	0.00	0.01
Sum	98.84	100	98.95	99.74	100.16	100.61	99.88	99.08	86.61	99.48	100.43	99.57	99.41	99.77
Cation per formula														
Si	2.95	3.35	2.94	2.81	2.97	2.97	2.95	2.94	2.98	2.94	2.97	2.97	2.98	2.97
Al	1.04	0.66	1.06	1.21	1.03	1.02	1.04	1.07	1.02	1.05	1.02	1.03	1.02	1.03
Fe	0.04	0.00	0.04	0.01	0.02	0.01	0.02	0.00	0.01	0.04	0.03	0.01	0.01	0.01
Ca	0.00	0.00	0.02	0.15	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Na	0.78	0.63	0.92	0.79	0.98	0.84	0.98	0.97	0.65	0.02	0.06	0.02	0.03	0.02
K	0.21	0.00	0.01	0.01	0.02	0.17	0.03	0.01	0.34	0.98	0.92	0.98	0.96	0.97
Sum	5.03	4.64	4.99	4.98	5.02	5.02	5.03	5.01	5.00	5.03	5.01	5.01	5.00	5.00
Or	21.37	0.00	0.83	1.01	1.76	16.70	2.61	0.74	34.45	98.36	93.48	98.16	97.23	98.44
Ab	79	100	97	83	97.93	83.19	96.40	97.01	65.55	1.64	6.52	1.84	2.77	1.56
An	0	0	2	16	0.31	0.10	0.99	2.25	0.00	0.00	0.00	0.00	0.00	0.00

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Analysis No	TH55-s1a-16	TH55-s1b-18	TH55-s1b-19	TH55-s1b-20	TH55-s1b-21	TH55-s1b-22	TH55-s1b-23	TH55-s1b-25	TH55-s1b-26	TH55-s1b-27	TH55-s1b-28	TH55-s1b-29	TH55-s2-4	TH55-s3-alb1
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	68.44	65.09	64.97	65.06	65.04	65.05	65.1	68.34	68.31	66.86	68.1	65.17	63.49	68.15
Al2O3	20.43	22.67	22.84	22.57	22.65	22.72	22.83	20.42	20.14	21.5	20.46	22.41	19.38	20.64
CaO	0	2.34	2.32	2.44	2.61	2.34	2.72	0	0.36	0.87	0.32	2.39	0	0
Na2O	11.13	9.9	9.88	9.94	9.7	9.89	9.34	11.24	10.97	10.53	11.12	9.69		11.2
K2O	0	0	0	0	0	0	0	0	0.22	0.24	0	0.34	17.13	0
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100	100	100.01	100.01	100	100	99.99	100	100	100	100	100	100	99.99
Cation per formula														
Si	2.98	2.86	2.85	2.86	2.85	2.85	2.85	2.98	2.98	2.92	2.97	2.86	2.95	2.97
Al	1.05	1.17	1.18	1.17	1.17	1.17	1.18	1.05	1.04	1.11	1.05	1.16	1.06	1.06
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.00	0.11	0.11	0.11	0.12	0.11	0.13	0.00	0.02	0.04	0.01	0.11	0.00	0.00
Na	0.94	0.84	0.84	0.85	0.83	0.84	0.79	0.95	0.93	0.89	0.94	0.83	0.00	0.95
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02	1.02	0.00
Sum	4.97	4.98	4.98	4.98	4.97	4.98	4.95	4.97	4.97	4.98	4.98	4.98	5.03	4.97
Or	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28	1.41	0.00	1.99	100.00	0.00
Ab	100	88	89	88	87	88	86	100	97	94	98	86	0	100
An	0	12	11	12	13	12	14	0	2	4	2	12	0	0

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	113	114	115	116	117	118	119	120	121	122	123	124	125	126
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Analysis No	TH55-s3-alb2	TH55-s3-alb3	TH55-s3-kfsp1	TH55-s4-1	TH55-s4-2	TH55-s4-3	TH55-s4-4	TH55-s4-5	TH55-s4-6	TH55-s4-a7	TH55-s4-a8	TH55-s5-a1	TH55-s5-a2	TH55-8-al1
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	68.35	68.36	63.18	65.04	65.49	65.17	64.93	65.88	64.81	68.34	68.11	67.75	66.29	68.15
Al2O3	20.18	20.49	19.28	22.51	22.39	22.57	22.5	22.25	22.84	20.61	20.51	21.43	22	20.68
CaO	0	0	0	2.4	2.4	2.43	2.49	2.39	2.28	0	0.2	0.98	0.39	0
Na2O	11.47	11.16	0.36	9.72	9.73	9.83	9.74	9.48	9.56	11.06	11.18	9.58	10.71	11.17
K2O	0	0	16.33	0.33	0	0	0.33	0	0.51	0	0	0.26	0.61	0
BaO	0	0	0.84	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100	100.01	99.15	100	100.01	100	99.99	100	100	100.01	100	100	100	100
Cation per formula														
Si	2.98	2.98	2.95	2.86	2.87	2.86	2.85	2.88	2.85	2.97	2.97	2.95	2.90	2.97
Al	1.04	1.05	1.06	1.17	1.16	1.17	1.17	1.15	1.18	1.06	1.05	1.10	1.14	1.06
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.00	0.00	0.00	0.11	0.11	0.11	0.12	0.11	0.11	0.00	0.01	0.05	0.02	0.00
Na	0.97	0.94	0.03	0.83	0.83	0.84	0.83	0.80	0.81	0.93	0.94	0.81	0.91	0.94
K	0.00	0.00	0.97	0.02	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.01	0.03	0.00
Sum	4.99	4.97	5.03	4.98	4.97	4.98	4.99	4.95	4.98	4.96	4.98	4.91	5.00	4.97
Or	0.00	0.00	96.76	1.93	0.00	0.00	1.92	0.00	3.01	0.00	0.00	1.66	3.54	0.00
Ab	100	100	3	86	88	88	86	88	86	100	99	93	95	100
An	0	0	0	12	12	12	12	12	11	0	1	5	2	0

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	127	128	129	130	131	132	133	134	135	136	137	138	139	140
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Analysis No	TH55-8-al2	TH55-8-al3	TH55-9-al1	TH55-9-al2	TH55-10-al1	TH55-12-al1	TH55-12-al2	TH55-12-al3	TH55-12-mix1	TH55-12-kspa1	TH55-12a-al1	TH55-12a-k-spa1	TH55-14-k-sp1	TH55-16-sp195
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	68.37	68.23	68.24	65	65.27	67.56	67.54	67.51	61.93	63.98	67.29	64.07	63.82	63.85
Al2O3	20.41	20.54	20.56	22.71	22.34	20.72	20.73	20.94	18.68	19.04	20.98	19.2	19.12	23.23
CaO	0	0	0	2.28	2.65	0.46	0.56	0.74	0	0	0.55	0	0	3.4
Na2O	11.21	11.23	11.2	10.01	9.75	11.08	10.96	10.82	0	0	11.01	0	0	9.3
K2O	0	0	0	0	0	0.17	0.22	0	16.13	16.97	0.17	16.73	17.06	0.23
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	2.32	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	99.99	100	100	100	100.01	99.99	100.01	100.01	96.74	99.99	100	100	100	100.01
Cation per formula														
Si	2.98	2.97	2.97	2.85	2.86	2.95	2.95	2.95	2.93	2.97	2.94	2.97	2.96	2.81
Al	1.05	1.05	1.06	1.17	1.16	1.07	1.07	1.08	1.04	1.04	1.08	1.05	1.05	1.21
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
Ca	0.00	0.00	0.00	0.11	0.12	0.02	0.03	0.03	0.00	0.00	0.03	0.00	0.00	0.16
Na	0.95	0.95	0.95	0.85	0.83	0.94	0.93	0.92	0.00	0.00	0.93	0.00	0.00	0.79
K	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.97	1.00	0.01	0.99	1.01	0.01
Sum	4.97	4.97	4.97	4.99	4.97	4.99	4.99	4.97	5.04	5.01	4.99	5.00	5.02	4.99
Or	0.00	0.00	0.00	0.00	0.00	0.98	1.27	0.00	100.00	100.00	0.98	100.00	100.00	1.34
Ab	100	100	100	89	87	97	96	96	0	0	96	0	0	82
An	0	0	0	11	13	2	3	4	0	0	3	0	0	17

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	141	142	143	144	145	146	147	148	149	150	151	152	153	154
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH46	TH46	TH46	TH46	TH46	TH46
Analysis No	th55p-s5-pl	th55p-s15-alb1	th55p-s16-sp196	th55p-s15-ksp1	th55p-s15-ksp2	th55p-s20b-181-ksp	th55p-s17-ksp	th55p-s17-ks2	pl_i	alb_1	alb_2	th46-s2-a1	th46-s2-a2	th46-s2-a3
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	SEM	SEM	SEM
SiO2	67.76	67.57	64.44	64.40	64.28	64.09	63.20	63.10	63.51	63.90	63.92	63.66	63.31	63.41
Al2O3	19.89	20.41	22.96	19.14	19.34	18.98	18.98	18.76	22.52	22.55	22.50	23.13	23.36	22.99
CaO	0.35	0.15	2.99	0.00	0.00	0.00	0.00	0.00	4.06	3.95	3.81	4.02	4.12	4.3
Na2O	11.89	11.58	10.05	0.62	0.07	0.22	0.29	0.26	9.38	9.54	9.63	8.88	8.96	8.95
K2O	0.04	0.08	0.15	16.47	17.08	16.67	16.27	16.57	0.18	0.16	0.19	0.31	0.25	0.36
BaO	0.00	0.00	0.00	0.00	0.00	0.10	0.09	0.07	0	0	0	0	0	0
FeO	0.08	0.12	0.11	0.10	0.16	0.41	0.21	0.20	0.09	0.08	0.05	0	0	0
TiO2	0.02	0.00	0.00	0.02	0.00	0.01	0.04	0.00	0.00	0.03	0.00	0	0	0
MnO	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.00	0.00	0	0	0
MgO	0.00	0.06	0.02	0.00	0.01	0.12	0.01	0.06	0.01	0.00	0.00	0	0	0
Cl	0.00	0.01	0.01	0.01	0.01	0.00	0.02	0.01	0.01	0.00	0.01	0	0	0
Sum	100.07	99.98	100.72	100.75	100.95	100.61	99.11	99.06	99.76	100.20	100.11	100.00	100.00	100.01
Cation per formula														
Si	2.97	2.96	2.82	2.96	2.96	2.96	2.96	2.96	2.82	2.82	2.82	2.81	2.80	2.80
Al	1.03	1.05	1.19	1.04	1.05	1.03	1.05	1.04	1.18	1.17	1.17	1.20	1.22	1.20
Fe	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.02	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.18	0.19	0.19	0.20
Na	1.01	0.98	0.85	0.06	0.01	0.02	0.03	0.02	0.81	0.82	0.82	0.76	0.77	0.77
K	0.00	0.00	0.01	0.97	1.00	0.98	0.97	0.99	0.01	0.01	0.01	0.02	0.01	0.02
Sum	5.03	5.01	5.02	5.03	5.02	5.02	5.02	5.03	5.00	5.01	5.01	4.98	4.99	4.99
Or	0.20	0.44	0.83	94.58	99.38	98.00	97.41	97.70	1.01	0.88	1.07	1.80	1.44	2.05
Ab	98.20	98.87	85.17	5.42	0.62	2.00	2.59	2.30	80	81	81	79	79	77
An	1.59	0.69	14.00	0.00	0.00	0.00	0.00	0.00	19	18	18	20	20	21

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	155	156	157	158	159	160	161	162	163	164	165	166	167	168
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Analysis No	th46-s2-a4	th46-s2-a5	th46-s2-a6	th46-s2-a7	th46-s2-a8	th46-s2-a10	th46-s2-a11	th46-s2-sp9	th46-s2-sp1	th46-s2-sp2	th46-s5-pl5	th46-s5-pl7	th46-s11-pl1	th46-s12-pl2
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	63.4	63.33	63.56	63.32	63.42	63.40	63.75	63.14	63.55	63.50	63.73	63.27	63.54	68.83
Al2O3	23.15	23.36	23.28	23.11	23.33	23.37	23.00	23.34	23.11	23.21	22.99	23.45	23.17	19.84
CaO	4.19	4.25	3.98	4.21	4.10	4.11	4.15	4.26	3.94	4.11	4.29	4.22	4.12	0.17
Na2O	8.89	8.77	8.92	9.14	8.82	8.80	8.87	9.00	9.10	8.85	8.76	8.72	8.83	10.88
K2O	0.36	0.29	0.25	0.22	0.32	0.32	0.23	0.25	0.30	0.33	0.22	0.35	0.34	0.28
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	99.99	100.00	99.99	100.00	99.99	100.00	100.00	99.99	100.00	100.00	99.99	100.01	100.00	100.00
Cation per formula														
Si	2.80	2.80	2.80	2.80	2.80	2.80	2.81	2.79	2.81	2.80	2.81	2.79	2.80	3.00
Al	1.21	1.22	1.21	1.20	1.21	1.22	1.20	1.22	1.20	1.21	1.20	1.22	1.21	1.02
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.20	0.20	0.19	0.20	0.19	0.19	0.20	0.20	0.19	0.19	0.20	0.20	0.19	0.01
Na	0.76	0.75	0.76	0.78	0.75	0.75	0.76	0.77	0.78	0.76	0.75	0.75	0.76	0.92
K	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.02	0.02	0.02
Sum	4.99	4.98	4.98	5.00	4.98	4.98	4.98	4.99	4.99	4.98	4.97	4.98	4.98	4.96
Or	2.07	1.69	1.47	1.25	1.86	1.87	1.34	1.43	1.72	1.91	1.29	2.04	1.97	1.65
Ab	78	78	79	79	78	78	78	78	79	78	78	77	78	98
An	20	21	19	20	20	20	20	20	19	20	21	21	20	1

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	169	170	171	172	173	174	175	176	177	178	179	180	181	182
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Analysis No	th46-s12-pl3	th46-s12-pl13	th46-s13-al1	th46-s13-al2	th46-s13-pl2	th46-s13-pl5	th46-s13-pl6	th46-s14-pl2	th46-s14-pl4	th46-s15-pl2	th46-s15-pl3	th46-s15-pl4	th46-s15-pl5	th46-s15-pl6
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	63.99	63.73	68.21	68.51	63.18	63.33	45.92	63.79	63.50	64.01	63.93	63.94	64.77	64.14
Al2O3	23.18	23.11	20.31	20.02	23.38	23.38	25.69	22.76	23.23	23.02	23.10	23.19	22.82	22.99
CaO	3.78	4.14	0.65	0.22	4.24	4.22	28.39	4.09	4.14	4.11	3.94	3.95	3.71	3.80
Na2O	8.79	8.58	10.83	11.26	8.98	8.79	0.00	9.22	8.93	8.67	8.65	8.76	8.71	8.85
K2O	0.26	0.43	0.00	0.00	0.23	0.29	0.00	0.14	0.20	0.19	0.15	0.17	0.00	0.21
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100.00	99.99	100.00	100.01	100.01	100.01	100.00	100.00	100.00	100.00	99.77	100.01	100.00	99.99
Cation per formula														
Si	2.82	2.81	2.97	2.99	2.79	2.80	2.19	2.82	2.80	2.82	2.82	2.81	2.84	2.82
Al	1.20	1.20	1.04	1.03	1.22	1.22	1.44	1.18	1.21	1.19	1.20	1.20	1.18	1.19
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.18	0.20	0.03	0.01	0.20	0.20	1.45	0.19	0.20	0.19	0.19	0.19	0.17	0.18
Na	0.75	0.73	0.92	0.95	0.77	0.75	0.00	0.79	0.76	0.74	0.74	0.75	0.74	0.76
K	0.01	0.02	0.00	0.00	0.01	0.02	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Sum	4.96	4.97	4.96	4.98	4.99	4.98	5.09	4.99	4.98	4.96	4.95	4.96	4.94	4.96
Or	1.55	2.54	0.00	0.00	1.32	1.69	0.00	0.80	1.16	1.13	0.90	1.01	0.00	1.25
Ab	80	77	97	99	78	78	0	80	79	78	79	79	81	80
An	19	21	3	1	20	21	100	20	20	21	20	20	19	19

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	183	184	185	186	187	188	189	190	191	192	193	194	195	196
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Analysis No	th46-s17-pl2	th46-s2-a9	th46-s2-a12	th46-s2-a13	th46-s2-a14	th46-s2-a15	th46-s2-sp8	th46-s11-pl3	th46-s12-pl14	th46-s12-pl15	th46-s13-pl7	th46-s13-pl11	th46-s14-pl3	th46-s15-pl1
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	63.52	63.39	63.29	63.43	63.44	55.62	63.75	63.28	63.83	63.9	65.31	62.65	63.33	64.1
Al2O3	23.30	23.15	23.37	23.19	23.23	23.15	22.92	23.3	23.14	23	20.17	23.66	23.2	23.26
CaO	3.88	4.25	4.08	4.28	4.06	7.38	4.01	4.17	4.18	3.77	8.91	4.65	3.95	4.04
Na2O	9.05	8.97	8.99	8.9	9.05	8.96	9.12	8.98	8.57	9.01	5.26	8.74	9.15	8.34
K2O	0.25	0.24	0.26	0.2	0.22	1.04	0.19	0.27	0.28	0.31	0	0.29	0.11	0.26
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0	0	0	0	0.25	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0.35	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100.00	100.00	99.99	100.00	100.00	96.15	99.99	100.00	100.00	99.99	99.65	99.99	99.99	100.00
Cation per formula														
Si	2.80	2.80	2.79	2.80	2.80	2.63	2.81	2.80	2.81	2.82	2.89	2.77	2.80	2.82
Al	1.21	1.21	1.22	1.21	1.21	1.29	1.19	1.21	1.20	1.20	1.05	1.23	1.21	1.21
Fe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Ca	0.18	0.20	0.19	0.20	0.19	0.37	0.19	0.20	0.20	0.18	0.42	0.22	0.19	0.19
Na	0.77	0.77	0.77	0.76	0.77	0.82	0.78	0.77	0.73	0.77	0.45	0.75	0.78	0.71
K	0.01	0.01	0.01	0.01	0.01	0.06	0.01	0.02	0.02	0.02	0.00	0.02	0.01	0.01
Sum	4.99	4.99	4.99	4.98	4.99	5.17	4.99	4.99	4.96	4.98	4.81	4.99	4.99	4.94
Or	1.45	1.38	1.50	1.15	1.27	4.99	1.09	1.55	1.66	1.81	0.00	1.66	0.63	1.59
Ab	80	78	79	78	79	65	80	78	77	80	52	76	80	78
An	19	20	20	21	20	30	19	20	21	18	48	22	19	21

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	197	198	199	200	201	202	203	204	205	206	207	208	209	210
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Analysis No	th46-s15-al1	th46-s15-al11	th46-s15-ch4	th46-s16-pl1	th46-s16-al3	th46-s16-al4	th46-s2-k1	th46-s2-k2	th46-s12-k2	th46-s12-k3	th46-s13-k1	th46-s13-k2	th46-s12-k1	th46-s12-k11
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	69	69.2	68.96	46.75	66.81	67.03	64.06	63.95	64.34	64.51	63.8	63.98	64.48	64.49
Al2O3	20.06	20.14	20.08	25.56	20.64	20.74	18.73	18.83	18.8	18.69	18.76	19.01	18.61	18.69
CaO	0.41	0	0.26	27.44	2.08	1.83	0	0	0	0	0	0	0	0
Na2O	10.53	10.66	10.49	0.26	9.87	9.78	0.41	0.64	0.5	0.53	0.47	0.46	0.67	0.62
K2O	0	0	0	0	0.3	0.36	16.27	15.92	15.94	15.76	16.19	16.07	15.85	15.79
BaO	0	0	0	0	0	0	0.54	0.66	0.43	0.5	0.79	0.47	0.38	0.42
FeO	0	0	0	0	0.29	0.27	0	0	0	0	0	0	0	0
TiO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100.00	100.00	99.79	100.01	99.99	100.01	100.01	100	100.01	99.99	100.01	99.99	99.99	100.01
Cation per formula														
Si	3.00	3.00	3.00	2.22	2.93	2.94	2.98	2.97	2.98	2.99	2.97	2.97	2.99	2.98
Al	1.03	1.03	1.03	1.43	1.07	1.07	1.03	1.03	1.03	1.02	1.03	1.04	1.02	1.02
Fe	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.02	0.00	0.01	1.40	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Na	0.89	0.90	0.88	0.02	0.84	0.83	0.04	0.06	0.04	0.05	0.04	0.04	0.06	0.06
K	0.00	0.00	0.00	0.00	0.02	0.02	0.96	0.94	0.94	0.93	0.96	0.95	0.94	0.93
Sum	4.93	4.93	4.93	5.07	4.96	4.95	5.01	5.01	5.00	4.99	5.02	5.01	5.00	5.00
Or	0.00	0.00	0.00	0.00	1.76	2.15	96.31	94.24	95.45	95.14	95.77	95.83	93.96	94.37
Ab	98	100	99	2	88	89	4	6	5	5	4	4	6	6
An	2	0	1	98	10	9	0	0	0	0	0	0	0	0

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	211	212	213	214	215	216	217	218	219	220	221	222	223	224
Sample	TH46	TH46	TH46	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Analysis No	th46-s12-k12	th46-s13-k3	th46-s13-k4	pl_e	pl_e2	pl_f	pl_f2	th99j-s4-pl1	th99j-s4-pl3	th99j-s4-pl9	th99j-s4-pl11	th99j-s4-pl12	th99j-s5-pl2	th99j-s5-pl3
Rock type	apm-rich Calc-silicate	apm-rich Calc-silicate	apm-rich Calc-silicate	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite
data type	SEM	SEM	SEM	EPMA	EPMA	EPMA	EPMA	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	64.38	64.17	64.08	58.69	57.83	57.56	57.27	58.22	57.88	57.08	57.88	57.41	57.08	57.26
Al2O3	18.82	19.41	18.82	25.79	26.37	26.09	26.65	26.77	27.06	27.50	26.97	27.28	27.44	27.29
CaO	0	0	0	7.80	8.62	8.53	8.34	8.10	8.56	9.08	8.60	8.94	9.07	9.13
Na2O	0.56	0.76	0.5	7.17	6.85	6.77	6.62	6.77	6.49	6.35	6.57	6.36	6.28	6.31
K2O	16.24	15.5	16.01	0.12	0.10	0.06	0.30	0.14	0.00	0.00	0.00	0.00	0.13	0.00
BaO	0	0	0.59	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0.05	0.15	0.00	0.07	0	0	0	0	0	0	0
TiO2	0	0	0	0.00	0.00	0.01	0.00	0	0	0	0	0	0	0
MnO	0	0	0	0.01	0.01	0.00	0.00	0	0	0	0	0	0	0
MgO	0	0	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0
Cl	0	0.15	0	0.01	0.02	0.01	0.01	0	0	0	0	0	0	0
Sum	100	99.84	100	99.63	99.95	99.03	99.26	100.00	99.99	100.01	100.02	99.99	100.00	99.99
Cation per formula														
Si	2.98	2.96	2.97	2.63	2.59	2.60	2.58	2.60	2.59	2.56	2.59	2.57	2.56	2.56
Al	1.03	1.06	1.03	1.36	1.39	1.39	1.42	1.41	1.42	1.45	1.42	1.44	1.45	1.44
Fe	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	0.00	0.00	0.00	0.37	0.41	0.41	0.40	0.39	0.41	0.44	0.41	0.43	0.44	0.44
Na	0.05	0.07	0.04	0.62	0.60	0.59	0.58	0.59	0.56	0.55	0.57	0.55	0.55	0.55
K	0.96	0.91	0.95	0.01	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.00
Sum	5.01	5.00	5.01	5.00	5.01	5.00	5.00	4.99	4.98	4.99	4.99	4.99	4.99	4.99
Or	95.0191368	93.0633155	95.4676202	0.67	0.59	0.32	1.71	0.81	0.00	0.00	0.00	0.00	0.75	0.00
Ab	5	7	5	62	59	59	58	60	58	56	58	56	55	56
An	0	0	0	37	41	41	40	39	42	44	42	44	44	44

Table 7. Feldspar composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	225	226	227	228	229	230	231	232	233	234	235	236	237	238
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Analysis No	th99j-s5-pl11	th99j-s5-pl12	th99j-s5-pl13	th99j-s5-pl1	th99j-s2-pl5	th99j-s2-pl6	th99j-s2-pl	th99j-s2-pl8	th99j-s2-pl9	th99j-s4-pl2	th99j-s4-pl5	th99j-s4-pl6	th99j-s4-pl8	th99j-s4-pl10
Rock type	amphibolite	amphibolite	amphibolite	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	57.15	57.16	57.67	57.45	56.62	56.72	57.12	56.94	57.06	57.27	58.16	59.18	58.26	57.28
Al2O3	27.08	27.39	26.96	27.18	27.23	27.07	26.96	26.99	26.7	27.42	26.78	26.21	26.66	27.2
CaO	8.73	9.10	8.88	8.98	9.02	9.07	9.14	9.14	8.92	9.16	8.5	7.61	8.44	9.07
Na2O	6.78	6.36	6.49	6.39	6.2	6.18	5.98	6.1	6.25	6.15	6.56	7.01	6.64	6.21
K2O	0.26	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0
BaO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0.48	0.47	0.38	0.4	0.57	0	0	0	0	0.24
TiO2	0	0	0	0	0	0.49	0.42	0.42	0.51	0	0	0	0	0
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	100.00	100.01	100.00	100.00	99.55	100.00	100.00	99.99	100.01	100.00	100.00	100.01	100.00	100.00
Cation per formula														
Si	2.56	2.56	2.58	2.57	2.55	2.56	2.57	2.56	2.57	2.56	2.60	2.64	2.60	2.57
Al	1.43	1.45	1.42	1.43	1.45	1.44	1.43	1.43	1.42	1.45	1.41	1.38	1.40	1.44
Fe	0.00	0.00	0.00	0.00	0.02	0.02	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.01
Ca	0.42	0.44	0.43	0.43	0.44	0.44	0.44	0.44	0.43	0.44	0.41	0.36	0.40	0.44
Na	0.59	0.55	0.56	0.55	0.54	0.54	0.52	0.53	0.55	0.53	0.57	0.61	0.57	0.54
K	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	5.02	4.99	4.99	4.99	5.00	4.99	4.98	4.99	4.99	4.98	4.98	4.98	4.98	4.99
Or	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ab	58	56	57	56	55	55	54	55	56	55	58	63	59	55
An	41	44	43	44	45	45	46	45	44	45	42	37	41	45

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area

Oder	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sample	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	THM51C-s8-grc1	THM51C-s8-grc2	THM51C-s8-grc3	THM51C-s8-grc5	THM51C-s8-grd1	THM51C-s8-grd2	THM51C-s8-grd3	THM51C-s8-grd5	THM51C-s8-grd7	THM51C-s8-gre1	THM51C-s8-ct4	THM51C-s8-gre3	THM51C-s8-grf1	THM51C-s8-grf2	THM51C-s8-grf3
Event	D3	D3	D3?	D3?	D1-2	D1-2	D1-2	D1-2	D3	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2
SiO2	54.81	52.87	47.08	47.86	48.37	48.24	47.71	46.89	54.72	48.79	48.10	46.95	49.37	49.42	52.14
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	2.72	4.74	7.85	6.99	6.98	7.28	7.25	8.08	1.38	7.14	6.79	7.80	6.07	5.81	4.26
FeO	11.63	12.13	15.73	16.21	15.06	15.04	15.02	15.68	13.75	15.53	16.31	16.10	14.63	14.99	12.93
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MgO	16.00	15.76	13.15	13.15	13.61	13.65	13.84	13.36	14.94	12.71	12.90	13.01	14.21	14.14	15.60
CaO	11.88	10.63	11.45	11.08	11.43	11.39	11.59	11.19	12.39	11.34	11.17	11.45	11.48	11.36	11.58
Na2O	0.54	1.08	1.43	1.52	1.32	1.27	1.34	1.49	0.69	1.40	1.66	1.43	1.29	1.32	0.88
K2O	0.25	0.41	0.78	0.72	0.75	0.71	0.77	0.78	0.00	0.68	0.63	0.75	0.53	0.56	0.32
Cl	0.00	0.26	0.59	0.51	0.49	0.43	0.49	0.58	0.00	0.46	0.47	0.57	0.43	0.39	0.18
Sum	97.83	97.89	98.07	98.03	98.01	98.01	98.01	98.05	97.87	98.04	98.03	98.05	98.00	98.00	97.90
Cation per formula															
Si	7.78	7.46	6.87	6.97	7.03	6.99	6.93	6.81	7.89	7.12	7.03	6.86	7.14	7.15	7.43
Aliv	0.22	0.54	1.13	1.03	0.97	1.01	1.07	1.19	0.11	0.88	0.97	1.14	0.86	0.85	0.57
Alvi	0.23	0.25	0.22	0.17	0.22	0.23	0.18	0.20	0.12	0.34	0.20	0.20	0.17	0.14	0.14
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.18	0.70	0.78	0.84	0.68	0.76	0.76	0.94	0.00	0.48	0.69	0.81	0.68	0.72	0.59
Fe2+	1.20	0.73	1.14	1.14	1.15	1.06	1.07	0.97	1.66	1.42	1.30	1.15	1.09	1.09	0.95
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	3.38	3.32	2.86	2.85	2.95	2.95	3.00	2.90	3.21	2.76	2.81	2.83	3.06	3.05	3.31
Ca	1.81	1.61	1.79	1.73	1.78	1.77	1.80	1.74	1.91	1.77	1.75	1.79	1.78	1.76	1.77
Na	0.15	0.29	0.41	0.43	0.37	0.36	0.38	0.42	0.19	0.40	0.47	0.41	0.36	0.37	0.24
K	0.05	0.07	0.15	0.13	0.14	0.13	0.14	0.15	0.00	0.13	0.12	0.14	0.10	0.10	0.06
Cl	0.00	0.06	0.15	0.13	0.12	0.11	0.12	0.14	0.00	0.11	0.12	0.14	0.11	0.10	0.04
Sum	17.00	16.98	17.34	17.29	17.29	17.26	17.33	17.31	17.09	17.29	17.33	17.34	17.24	17.23	17.07
Mg/ (Mg+Fe2)	0.74	0.82	0.71	0.72	0.72	0.74	0.74	0.75	0.66	0.66	0.68	0.71	0.74	0.74	0.78
Mineral	actinolite	actinolitic hbl	Fe-Mg hbl	Fe-Mg hbl	Mg hbl	Fe-Mg hbl	Fe-Mg hbl	Fe-Mg hbl	actinolite	Mg hbl	Mg hbl	Fe-Mg hbl	Mg hbl	Mg hbl	actinolitic hbl
Notes	grain6, edge,	grain6, edge	grain6, edge	grain6, central	grain6, central	grain6, central	grain6, central	grain6, central	grain6, edge,	grain6, edge	grain8, near edge	grain8, near edge	grain9, near edge	grain9, near edge	grain9, near edge

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Sample	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	THM51C-s8-grg1	THM51C-s8-grg2	THM51C-s8-grh1	THM51C-s8-grh2	THM51C-s9-a1	THM51C-s9-a2	THM51C-s9-a3	THM51C-s9-a4	THM51C-s9-a5	THM51C-s9-a6	THM51C-s9-a7	THM51C-s9-a8	THM51C-s9-a9	THM51C-s9-a11	THM51C-s10-a1
Event	D1-2	D1-2	D3?	D3?	D1-2	D1-2	D1-2	D1-2	D1-2	D3	D1-2	D3	D1-2	D3	D3?
SiO2	50.34	49.25	49.45	47.90	48.42	47.56	48.03	48.39	50.02	53.28	47.38	53.03	49.98	54.70	48.80
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	5.55	6.46	6.10	7.22	6.93	7.43	7.07	7.12	6.02	2.86	7.45	3.33	5.37	2.77	6.76
FeO	14.41	15.09	14.61	15.01	15.05	15.73	15.72	14.29	13.87	15.03	15.81	12.27	14.71	12.61	14.56
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MgO	14.46	13.63	13.79	13.50	13.65	13.22	13.37	14.20	14.59	14.27	13.01	16.01	14.12	16.96	13.82
CaO	11.37	11.39	11.79	11.73	11.50	11.41	11.32	11.35	11.48	11.27	11.94	12.38	11.79	9.90	11.54
Na2O	1.05	1.19	1.31	1.47	1.33	1.39	1.31	1.50	1.11	1.03	1.25	0.56	1.01	0.84	1.44
K2O	0.48	0.59	0.57	0.72	0.66	0.77	0.70	0.69	0.53	0.00	0.65	0.20	0.61	0.00	0.65
Cl	0.29	0.41	0.35	0.51	0.46	0.50	0.49	0.48	0.34	0.18	0.57	0.10	0.42	0.00	0.44
Sum	97.96	98.00	97.98	98.06	98.00	98.03	98.01	98.01	97.96	97.90	98.06	97.88	98.01	97.78	98.01
Cation per formula															
Si	7.23	7.13	7.19	6.99	7.03	6.93	6.98	7.00	7.19	7.65	6.94	7.57	7.25	7.58	7.08
Aliv	0.77	0.87	0.81	1.01	0.97	1.07	1.02	1.00	0.81	0.35	1.06	0.43	0.75	0.42	0.92
Alvi	0.17	0.23	0.24	0.23	0.22	0.21	0.19	0.21	0.21	0.14	0.22	0.13	0.16	0.03	0.24
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.71	0.67	0.43	0.56	0.68	0.76	0.80	0.73	0.66	0.45	0.62	0.33	0.53	1.22	0.56
Fe2+	1.02	1.16	1.35	1.27	1.15	1.16	1.11	1.00	1.00	1.35	1.32	1.14	1.25	0.24	1.21
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	3.10	2.94	2.99	2.94	2.96	2.87	2.90	3.06	3.12	3.06	2.84	3.41	3.05	3.50	2.99
Ca	1.75	1.77	1.84	1.83	1.79	1.78	1.76	1.76	1.77	1.73	1.87	1.89	1.83	1.47	1.79
Na	0.29	0.33	0.37	0.42	0.38	0.39	0.37	0.42	0.31	0.29	0.35	0.15	0.28	0.23	0.41
K	0.09	0.11	0.11	0.13	0.12	0.14	0.13	0.13	0.10	0.00	0.12	0.04	0.11	0.00	0.12
Cl	0.07	0.10	0.09	0.13	0.11	0.12	0.12	0.12	0.08	0.04	0.14	0.02	0.10	0.00	0.11
Sum	17.13	17.21	17.31	17.38	17.29	17.32	17.26	17.31	17.17	17.02	17.35	17.08	17.23	16.70	17.32
Mg/ (Mg+Fe2)	0.75	0.72	0.69	0.70	0.72	0.71	0.72	0.75	0.76	0.69	0.68	0.75	0.71	0.93	0.71
Mineral	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Fe-Mg hbl	Fe-Mg hbl	Mg hbl	Mg hbl	actinolite	Mg hbl	actinolite	Mg hbl	actinolitic hbl	Mg hbl
Notes	grain10, near edge	grain10, near edge	grain 11, near edge	grain 11, near edge	grain12, near edge	grain12, near edge	grain12, central	grain12, central	grain12, central	grain 13, near edge	grain 13, near edge	grain 13, near edge	grain 13, central	edge	grain19, edge

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Sample	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	THM51C-s10-a2	THM51C-s10-a3	THM51C-s10-a4	THM51C-s10-am1	THM51C-s10-am2	THM51C-s10-am3	THM51C-s10-am4	THM51C-s10-am5	THM51C-s10-am6	THM51C-s12-ac1	THM51C-s12-ac2	THM51C-s12-ac3	THM51C-s12-ac4	THM51C-s12-ac5	THM51C-s12-ac6
Event	D3	D3	D3	D3	D3	D3	D3	D3	D3	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2
SiO2	55.64	52.93	48.25	50.84	49.26	50.26	51.01	50.83	54.48	47.58	49.45	48.41	48.50	48.70	48.95
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	0.53	3.66	7.07	5.25	6.10	5.56	5.34	5.68	2.01	6.40	6.62	6.94	6.87	6.81	6.25
FeO	12.57	11.64	14.80	14.21	14.75	13.96	13.44	13.54	12.33	16.99	15.29	14.70	15.16	14.84	14.31
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MgO	16.13	16.66	14.06	14.33	14.38	14.64	14.84	14.59	15.58	12.53	13.01	14.06	13.70	13.83	14.48
CaO	12.68	11.68	11.46	11.43	11.46	11.57	11.49	11.37	12.58	12.18	11.24	11.43	11.40	11.42	11.75
Na2O	0.32	0.81	1.27	1.11	1.10	1.09	1.17	1.22	0.64	1.20	1.31	1.34	1.18	1.22	1.22
K2O	0.00	0.35	0.63	0.49	0.54	0.55	0.37	0.46	0.18	0.69	0.64	0.67	0.72	0.72	0.62
Cl	0.00	0.15	0.46	0.30	0.38	0.31	0.30	0.24	0.12	0.47	0.45	0.46	0.47	0.50	0.40
Sum	97.87	97.87	97.99	97.96	97.97	97.94	97.95	97.94	97.91	98.04	98.00	98.01	97.99	98.03	97.98
Cation per formula															
Si	7.97	7.49	6.98	7.32	7.10	7.23	7.31	7.29	7.82	7.03	7.19	7.00	7.03	7.05	7.08
Aliv	0.03	0.51	1.02	0.68	0.90	0.77	0.69	0.71	0.18	0.97	0.81	1.00	0.97	0.95	0.92
Alvi	0.05	0.11	0.18	0.21	0.13	0.18	0.22	0.25	0.16	0.14	0.32	0.19	0.20	0.22	0.15
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.00	0.57	0.82	0.54	0.82	0.62	0.55	0.53	0.00	0.50	0.50	0.76	0.77	0.71	0.67
Fe2+	1.50	0.81	0.97	1.17	0.95	1.06	1.06	1.09	1.48	1.59	1.36	1.01	1.07	1.08	1.06
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	3.44	3.52	3.03	3.08	3.09	3.14	3.17	3.12	3.33	2.76	2.82	3.03	2.96	2.99	3.12
Ca	1.95	1.77	1.77	1.76	1.77	1.78	1.77	1.75	1.93	1.93	1.75	1.77	1.77	1.77	1.82
Na	0.09	0.22	0.36	0.31	0.31	0.30	0.32	0.34	0.18	0.34	0.37	0.38	0.33	0.34	0.34
K	0.00	0.06	0.12	0.09	0.10	0.10	0.07	0.08	0.03	0.13	0.12	0.12	0.13	0.13	0.11
Cl	0.00	0.04	0.11	0.07	0.09	0.08	0.07	0.06	0.03	0.12	0.11	0.11	0.12	0.12	0.10
Sum	17.03	17.06	17.25	17.16	17.18	17.19	17.16	17.17	17.12	17.40	17.24	17.27	17.23	17.25	17.28
Mg/ (Mg+Fe2)	0.70	0.81	0.76	0.72	0.76	0.75	0.75	0.74	0.69	0.63	0.67	0.75	0.73	0.73	0.75
Mineral	actinolite	actinolitic hbl	Fe-Mg hbl	actinolitic hbl	Fe-Mg hbl	Mg hbl	actinolitic hbl	actinolitic hbl	actinolite	Mg hbl	Mg hbl	Fe-Mg hbl	Fe-Mg hbl	Mg hbl	Mg hbl
Notes	grain19, central	grain19, central	grain19, central	grain18, edge	grain18, central	grain18, central	grain18, edge	grain18, edge	grain18, edge	grain14, central	grain14, edge	grain15, central	grain15, central	edge	central grain

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Appendix 6A: Mineral geochemistry

Oder	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Sample	THM51 C	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH46	TH46	TH46	TH46
Rock type	qtz-fsp mylonit e	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
Data type	SEM	SEM	SEM	SEM	SEM	EPMA	EPMA	EPMA	EPMA	EPMA	SEM	EPMA	EPMA	EPMA	EPMA
Analysis No	THM51 C-s12-ac9	TH55-20b-sp182	TH55-20b-sp183	TH55-20b-sp184	TH55-20b-sp185	th55p-s20b-185	th55p-s20b-184	th55p-s20b-184b	th55p-s20b-183	th55p-s20b-182	TH55-20-mix	TH46_25	TH46_26	TH46_29	TH46_32
Event	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3
SiO2	48.35	41.39	41.66	41.20	41.83	41.78	42.04	41.44	41.59	41.81	42.09	49.46	49.79	47.96	53.42
TiO2	0.00	1.17	1.19	0.93	1.09	1.10	1.13	0.88	1.10	1.05	0.00	0.12	0.00	0.00	0.00
Al2O3	6.92	10.44	10.02	10.68	10.43	10.38	10.05	10.08	10.02	10.66	10.45	6.09	5.69	6.98	0.64
FeO	15.19	20.52	20.67	21.84	21.28	21.21	19.46	21.23	20.61	20.57	20.81	13.88	13.65	14.76	7.97
MnO	0.00	0.00	0.00	0.00	0.00	0.22	0.11	0.14	0.15	0.11	0.00	0.17	0.16	0.16	0.15
MgO	14.04	8.77	9.06	10.02	8.09	8.46	9.24	8.57	8.94	9.04	9.32	13.81	13.67	12.64	12.84
CaO	11.24	11.36	11.42	9.74	11.16	11.13	11.31	10.60	10.77	11.09	11.32	12.10	11.74	11.95	22.83
Na2O	1.17	1.72	1.52	1.37	1.48	1.79	1.42	1.62	1.64	1.80	1.48	1.12	1.14	1.35	0.59
K2O	0.65	1.66	1.56	1.41	1.69	1.51	1.34	1.48	1.33	1.56	1.61	0.52	0.55	0.62	0.00
Cl	0.43	1.30	1.22	1.01	1.27	1.19	1.08	1.14	1.11	1.25	1.20	0.37	0.29	0.47	0.00
Sum	97.98	98.35	98.32	98.20	98.34	98.77	97.17	97.19	97.26	98.97	98.29	97.64	96.71	96.89	98.44
Cation per formula															
Si	6.97	6.34	6.36	6.11	6.41	6.36	6.44	6.37	6.37	6.32	6.38	7.22	7.32	7.12	7.73
Aliv	1.03	1.66	1.64	1.87	1.59	1.64	1.56	1.63	1.63	1.68	1.62	0.78	0.68	0.88	0.11
Alvi	0.15	0.23	0.16	0.00	0.30	0.22	0.25	0.19	0.17	0.23	0.25	0.27	0.31	0.35	0.00
Ti	0.00	0.13	0.14	0.10	0.13	0.13	0.13	0.10	0.13	0.12	0.00	0.01	0.00	0.00	0.00
Fe3+	0.96	0.59	0.71	1.96	0.60	0.71	0.65	0.98	0.92	0.78	0.93	0.29	0.25	0.22	0.00
Fe2+	0.87	2.04	1.93	0.75	2.13	1.99	1.84	1.75	1.71	1.82	1.71	1.40	1.43	1.62	0.96
Mn	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.02	0.02	0.01	0.00	0.02	0.02	0.02	0.02
Mg	3.02	2.00	2.06	2.21	1.85	1.92	2.11	1.96	2.04	2.04	2.11	3.00	3.00	2.80	2.77
Ca	1.74	1.87	1.87	1.55	1.83	1.82	1.86	1.74	1.77	1.80	1.84	1.89	1.85	1.90	3.54
Na	0.33	0.51	0.45	0.39	0.44	0.53	0.42	0.48	0.49	0.53	0.44	0.32	0.32	0.39	0.17
K	0.12	0.32	0.30	0.27	0.33	0.29	0.26	0.29	0.26	0.30	0.31	0.10	0.10	0.12	0.00
Cl	0.11	0.34	0.32	0.25	0.33	0.31	0.28	0.30	0.29	0.32	0.31	0.09	0.07	0.12	0.00
Sum	17.18	17.70	17.62	17.21	17.61	17.64	17.54	17.52	17.51	17.63	17.59	17.31	17.28	17.41	17.30
Mg/ (Mg+Fe2)	0.78	0.50	0.52	0.75	0.47	0.49	0.53	0.53	0.54	0.53	0.55	0.68	0.68	0.63	0.74
Mineral	Fe-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	K-Mg hbl	Mg hbl	actinolitic hbl	Mg hbl	actinolite

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	SEM	EPMA	SEM	EPMA	SEM	EPMA	EPMA	EPMA	EPMA	EPMA
Analysis No	TH46_33	TH46_34	TH46_36	TH46_37	TH46_8	th46-s3-at1	TH46_6	th46-s3-at2	TH46_7	th46-s3-at3	hbl_g	hbl_h	hbl_i	hbl_k	hbl_k2
Event	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3
SiO2	51.76	53.05	52.79	51.51	52.37	49.96	52.94	49.17	50.15	49.73	48.53	49.36	48.70	55.06	54.88
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.13	0.06	0.04	0.08
Al2O3	1.34	0.76	3.61	4.48	3.53	4.97	3.16	5.58	5.24	5.51	6.40	6.03	6.80	1.38	1.94
FeO	7.24	7.73	11.94	12.77	13.40	14.41	12.96	15.32	14.98	14.77	14.30	13.46	13.63	10.43	11.01
MnO	0.23	0.15	0.14	0.18	0.14	0.25	0.14	0.00	0.16	0.00	0.16	0.12	0.14	0.16	0.11
MgO	15.49	12.76	15.33	14.67	14.45	14.16	14.98	13.54	13.38	13.71	14.25	14.68	14.42	17.50	17.26
CaO	20.73	22.71	11.97	11.92	12.64	12.58	12.40	12.37	12.09	12.37	11.27	11.86	11.07	12.43	12.14
Na2O	0.60	0.70	0.79	1.07	0.57	0.71	0.68	0.97	0.94	0.90	1.31	1.07	1.12	0.31	0.44
K2O	0.16	0.00	0.27	0.37	0.33	0.40	0.24	0.46	0.46	0.53	0.39	0.39	0.38	0.07	0.10
Cl	0.04	0.02	0.17	0.24	0.19	0.31	0.13	0.36	0.33	0.32	0.38	0.29	0.36	0.05	0.07
Sum	97.59	97.89	97.02	97.21	97.63	97.76	97.63	97.77	97.72	97.83	97.09	97.39	96.68	97.43	98.03
Cation per formula															
Si	7.53	7.72	7.62	7.48	7.62	7.28	7.65	7.20	7.33	7.26	7.05	7.15	7.05	7.81	7.73
Aliv	0.23	0.13	0.38	0.52	0.38	0.72	0.35	0.80	0.67	0.74	0.95	0.85	0.95	0.19	0.27
Alvi	0.00	0.00	0.24	0.25	0.22	0.13	0.19	0.17	0.23	0.21	0.15	0.17	0.21	0.04	0.06
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.01
Fe3+	0.00	0.00	0.16	0.19	0.00	0.38	0.08	0.39	0.30	0.30	0.83	0.60	0.90	0.27	0.39
Fe2+	0.88	0.94	1.28	1.36	1.63	1.38	1.48	1.49	1.53	1.50	0.90	1.03	0.75	0.97	0.91
Mn	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.00	0.02	0.00	0.02	0.01	0.02	0.02	0.01
Mg	3.36	2.77	3.30	3.18	3.13	3.08	3.23	2.96	2.92	2.98	3.09	3.17	3.11	3.70	3.63
Ca	3.23	3.54	1.85	1.86	1.97	1.96	1.92	1.94	1.89	1.94	1.75	1.84	1.72	1.89	1.83
Na	0.17	0.20	0.22	0.30	0.16	0.20	0.19	0.27	0.27	0.25	0.37	0.30	0.31	0.08	0.12
K	0.03	0.00	0.05	0.07	0.06	0.07	0.04	0.09	0.09	0.10	0.07	0.07	0.07	0.01	0.02
Cl	0.01	0.00	0.04	0.06	0.05	0.08	0.03	0.09	0.08	0.08	0.09	0.07	0.09	0.01	0.02
Sum	17.46	17.32	17.12	17.22	17.19	17.24	17.16	17.30	17.24	17.29	17.19	17.21	17.10	16.99	16.97
Mg/ (Mg+Fe2)	0.79	0.75	0.72	0.70	0.66	0.69	0.69	0.67	0.66	0.67	0.77	0.75	0.81	0.79	0.80
Mineral	actinolite	actinolite	actinolite	actinolitic hbl	actinolite	actinolitic hornblend	actinolite	Mg hbl	actinolitic hbl	actinolitic hbl	Fe-Mg hbl	Mg hbl	Fe-Mg hbl	Fe-Mg hbl	actinolite

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	hbl_zone1	hbl_zone2	hbl_zone4	hbl_L1	hbl_L2	hbl_N	Th46-s2-h5	Th46-s2-h14	Th46-s2-h15	th46-s3-sp1	th46-s5-am5	th46-s10-h1	th46-s10-h2	th46-s10-h6	th46-s10-h7
Event	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3
SiO2	49.18	50.81	55.23	48.50	48.77	54.71	48.06	47.94	48.72	50.06	50.48	47.94	48.18	48.21	47.18
TiO2	0.10	0.11	0.00	0.12	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	6.12	5.24	1.57	6.93	6.84	2.33	6.99	7.06	6.42	4.88	5.50	7.07	6.74	7.06	7.55
FeO	13.79	13.01	9.83	14.97	13.88	10.32	14.32	14.31	13.85	14.26	13.17	14.74	14.44	14.45	15.08
MnO	0.16	0.15	0.14	0.15	0.16	0.13	0.20	0.32	0.00	0.21	0.21	0.00	0.00	0.00	0.21
MgO	14.41	14.93	17.76	13.79	13.87	17.47	13.87	13.70	14.52	14.34	14.45	13.71	13.99	13.58	13.16
CaO	11.69	11.83	12.45	11.59	11.57	12.13	11.58	11.61	11.97	12.30	12.35	11.79	11.96	11.93	11.78
Na2O	1.26	1.06	0.28	1.50	1.35	0.54	1.47	1.55	1.23	0.91	0.93	1.29	1.38	1.58	1.49
K2O	0.37	0.30	0.07	0.45	0.48	0.16	0.62	0.68	0.52	0.46	0.49	0.61	0.54	0.52	0.68
Cl	0.35	0.25	0.07	0.49	0.46	0.08	0.52	0.48	0.33	0.30	0.25	0.48	0.44	0.51	0.56
Sum	97.43	97.70	97.40	98.49	97.48	97.92	97.62	97.67	97.56	97.71	97.82	97.61	97.66	97.84	97.70
Cation per formula															
Si	7.13	7.31	7.81	7.01	7.10	7.71	7.01	7.01	7.08	7.29	7.32	7.00	7.03	7.05	6.93
Aliv	0.87	0.69	0.19	0.99	0.90	0.29	0.99	0.99	0.92	0.71	0.68	1.00	0.97	0.95	1.07
Alvi	0.18	0.20	0.07	0.19	0.27	0.09	0.21	0.22	0.17	0.13	0.26	0.22	0.19	0.27	0.24
Ti	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.61	0.46	0.25	0.68	0.53	0.35	0.63	0.56	0.58	0.40	0.24	0.62	0.54	0.39	0.57
Fe2+	1.07	1.10	0.91	1.13	1.16	0.87	1.12	1.19	1.10	1.33	1.36	1.18	1.22	1.37	1.28
Mn	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.00	0.03	0.03	0.00	0.00	0.00	0.03
Mg	3.12	3.20	3.75	2.97	3.01	3.67	3.02	2.99	3.14	3.11	3.12	2.98	3.04	2.96	2.88
Ca	1.82	1.82	1.89	1.79	1.80	1.83	1.81	1.82	1.86	1.92	1.92	1.84	1.87	1.87	1.85
Na	0.35	0.30	0.08	0.42	0.38	0.15	0.42	0.44	0.35	0.26	0.26	0.36	0.39	0.45	0.43
K	0.07	0.06	0.01	0.08	0.09	0.03	0.11	0.13	0.10	0.09	0.09	0.11	0.10	0.10	0.13
Cl	0.09	0.06	0.02	0.12	0.11	0.02	0.13	0.12	0.08	0.07	0.06	0.12	0.11	0.13	0.14
Sum	17.24	17.18	16.98	17.30	17.27	17.01	17.34	17.39	17.30	17.26	17.27	17.32	17.36	17.41	17.41
Mg/ (Mg+Fe2)	0.75	0.74	0.80	0.73	0.72	0.81	0.73	0.72	0.74	0.70	0.70	0.72	0.71	0.68	0.69
Mineral	Mg hbl	actinolitic hbl	actinolite	Mg hbl	Mg hbl	actinolite	Mg hbl	Mg hbl	Mg hbl	actinolitic hbl	actinolitic hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	th46-s11-am1	th46-s14-h1	th46-s14-h2a	th46-s14-h3	th46-s14-h4	th46-s15-h2	th46-s15-h6	th46-s15-h7	th46-s15-h8	th46-s15-h9	th46-s17-h2	th46-s17-ha	Th46-s2-h1	Th46-s2-h2	Th46-s2-h3
Event	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3
SiO2	50.87	49.64	49.24	48.71	48.36	48.46	50.65	51.09	49.48	50.08	48.84	53.38	47.67	47.71	48.60
TiO2	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	5.16	6.25	6.32	6.47	6.75	6.75	5.67	5.79	6.25	5.87	6.46	2.97	7.42	7.24	6.50
FeO	12.79	13.24	13.92	14.22	14.50	14.38	13.09	12.43	13.77	13.28	14.25	11.58	14.84	14.54	13.95
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.24	0.14
MgO	15.00	14.68	14.40	14.12	13.96	14.03	14.68	14.87	14.23	14.67	14.23	16.63	13.28	13.64	14.26
CaO	12.01	11.81	11.62	11.88	11.76	11.76	11.50	11.81	11.88	11.80	11.44	11.98	11.68	11.56	12.00
Na2O	0.98	1.15	1.13	1.24	1.25	1.29	1.42	1.16	1.22	1.20	1.33	0.66	1.58	1.52	1.20
K2O	0.41	0.51	0.56	0.62	0.57	0.55	0.40	0.36	0.51	0.47	0.57	0.22	0.62	0.64	0.58
Cl	0.26	0.35	0.32	0.35	0.42	0.33	0.30	0.23	0.34	0.28	0.35	0.12	0.54	0.48	0.40
Sum	97.71	97.63	97.51	97.62	97.56	97.54	97.71	97.74	97.69	97.64	97.47	97.53	97.74	97.58	97.63
Cation per formula															
Si	7.33	7.17	7.13	7.09	7.04	7.05	7.30	7.34	7.18	7.24	7.09	7.60	6.98	6.97	7.07
Aliv	0.67	0.83	0.87	0.91	0.96	0.95	0.70	0.66	0.82	0.76	0.91	0.40	1.02	1.03	0.93
Alvi	0.21	0.24	0.21	0.20	0.20	0.21	0.27	0.32	0.25	0.24	0.19	0.09	0.27	0.22	0.19
Ti	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.35	0.52	0.64	0.53	0.63	0.61	0.41	0.31	0.44	0.45	0.68	0.43	0.52	0.64	0.55
Fe2+	1.19	1.08	1.05	1.20	1.14	1.14	1.17	1.18	1.23	1.15	1.04	0.94	1.30	1.14	1.15
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.02
Mg	3.22	3.16	3.11	3.06	3.03	3.04	3.16	3.18	3.08	3.16	3.08	3.53	2.90	2.97	3.10
Ca	1.85	1.83	1.80	1.85	1.83	1.83	1.78	1.82	1.85	1.83	1.78	1.83	1.83	1.81	1.87
Na	0.27	0.32	0.32	0.35	0.35	0.36	0.40	0.32	0.34	0.34	0.37	0.18	0.45	0.43	0.34
K	0.08	0.09	0.10	0.12	0.11	0.10	0.07	0.07	0.09	0.09	0.10	0.04	0.12	0.12	0.11
Cl	0.06	0.09	0.08	0.09	0.10	0.08	0.07	0.06	0.08	0.07	0.09	0.03	0.13	0.12	0.10
Sum	17.20	17.25	17.22	17.32	17.29	17.30	17.25	17.21	17.28	17.25	17.26	17.05	17.40	17.36	17.32
Mg/(Mg+Fe2)	0.73	0.74	0.75	0.72	0.73	0.73	0.73	0.73	0.71	0.73	0.75	0.79	0.69	0.72	0.73
Mineral	actinolitic hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	actinolitic hbl	actinolitic hbl	Mg hbl	Mg hbl	Mg hbl	actinolite	Mg hbl	Mg hbl	Mg hbl
Notes		grain 51, edge	grain 51, near edge	grain 51, to central	grain 51, to central								grain 52, eastern edg	grain 52, near central	grain 52, near central

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	Th46-s2-h4	Th46-s2-h6	Th46-s2-h7	Th46-s2-h8	Th46-s2-h9	Th46-s2-h10	Th46-s2-h11	Th46-s2-h12	Th46-s2-13	Th46-s2-at1	Th46-s2-at2	Th46-s2-at3	th46-s2-sp59	th46-s2-sp60	th46-s2-at4
Event	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3
SiO2	48.09	50.36	48.21	47.79	47.92	47.95	47.53	47.21	47.66	49.08	47.94	48.62	44.50	46.01	48.44
TiO2	0.22	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00
Al2O3	7.13	5.45	6.81	7.20	7.12	7.27	7.35	7.43	7.74	6.39	7.07	6.50	9.25	8.23	6.76
FeO	14.22	12.93	14.27	14.56	14.62	14.43	14.98	15.04	14.86	13.87	14.46	13.96	17.23	16.15	14.44
MnO	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MgO	13.78	15.00	14.09	13.69	13.77	13.70	13.43	13.42	13.19	14.25	13.73	14.27	11.67	12.50	13.94
CaO	11.67	11.86	11.95	11.88	11.68	11.92	11.71	11.72	11.50	11.97	11.97	12.00	12.01	11.99	11.73
Na2O	1.48	0.98	1.21	1.38	1.31	1.38	1.44	1.65	1.56	1.16	1.47	1.20	1.40	1.41	1.21
K2O	0.67	0.46	0.62	0.67	0.67	0.63	0.67	0.69	0.68	0.57	0.66	0.58	1.08	0.96	0.61
Cl	0.48	0.31	0.42	0.54	0.52	0.42	0.57	0.58	0.52	0.39	0.44	0.40	0.50	0.40	0.46
Sum	97.74	97.61	97.59	97.71	97.61	97.68	97.68	97.73	97.71	97.67	97.74	97.66	97.64	97.65	97.60
Cation per formula															
Si	7.02	7.26	7.03	6.99	6.99	7.00	6.96	6.93	6.97	7.13	7.02	7.08	6.63	6.81	7.05
Aliv	0.98	0.74	0.97	1.01	1.01	1.00	1.04	1.07	1.03	0.87	0.98	0.92	1.37	1.19	0.95
Alvi	0.24	0.19	0.20	0.23	0.22	0.25	0.23	0.22	0.31	0.23	0.23	0.19	0.26	0.24	0.22
Ti	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Fe3+	0.50	0.51	0.59	0.53	0.64	0.50	0.60	0.57	0.55	0.48	0.46	0.51	0.66	0.56	0.61
Fe2+	1.24	1.05	1.15	1.25	1.15	1.26	1.24	1.28	1.27	1.20	1.31	1.18	1.49	1.44	1.15
Mn	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	3.00	3.22	3.06	2.99	3.00	2.98	2.93	2.94	2.88	3.09	3.00	3.10	2.59	2.76	3.03
Ca	1.82	1.83	1.87	1.86	1.83	1.87	1.84	1.84	1.80	1.86	1.88	1.87	1.92	1.90	1.83
Na	0.42	0.27	0.34	0.39	0.37	0.39	0.41	0.47	0.44	0.33	0.42	0.34	0.40	0.40	0.34
K	0.13	0.08	0.12	0.13	0.13	0.12	0.13	0.13	0.13	0.11	0.12	0.11	0.21	0.18	0.11
Cl	0.12	0.08	0.10	0.13	0.13	0.10	0.14	0.14	0.13	0.10	0.11	0.10	0.13	0.10	0.11
Sum	17.37	17.19	17.32	17.38	17.32	17.37	17.37	17.44	17.37	17.30	17.42	17.32	17.53	17.49	17.29
Mg/(Mg+Fe2)	0.71	0.75	0.73	0.71	0.72	0.70	0.70	0.70	0.69	0.72	0.70	0.72	0.64	0.66	0.73
Mineral	Mg hbl	actinolitic hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	edenitic hbl	Mg hbl	Mg hbl
Notes		grain 50, edge	grain 50, near edge	grain 50, near edge	grain 50, near central	grain 50, near central	grain 50, central	grain 50, near central	grain 50,edge						

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	th46-s2-h14	th46-s2-h15	th46-s3-sp1	th46-s5-am1	th46-s5-am2	th46-s5-am3	th46-s5-am4	th46-s5-am5	th46-s10-h3	th46-s10-h4	th46-s10-h5	th46-s15-h3	th46-s15-h4	th46-s15-h5	th46-s16-h1
Event	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3
SiO2	47.94	48.72	50.06	55.07	53.11	54.00	54.73	50.48	49.52	50.12	48.58	48.75	48.75	49.28	49.10
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	7.06	6.42	4.88	1.43	3.36	2.84	1.98	5.50	5.95	5.68	6.77	6.54	6.63	6.30	6.06
FeO	14.31	13.85	14.26	10.11	11.37	10.61	10.54	13.17	13.55	12.76	14.04	14.10	13.99	13.92	14.03
MnO	0.32	0.00	0.21	0.24	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MgO	13.70	14.52	14.34	17.79	16.59	16.96	17.49	14.45	14.72	15.17	14.05	14.17	14.13	14.31	14.36
CaO	11.61	11.97	12.30	12.44	12.13	12.35	12.66	12.35	11.96	12.12	11.79	11.88	11.90	11.62	12.10
Na2O	1.55	1.23	0.91	0.34	0.69	0.68	0.00	0.93	1.11	1.08	1.46	1.22	1.34	1.30	1.09
K2O	0.68	0.52	0.46	0.19	0.20	0.19	0.16	0.49	0.45	0.44	0.55	0.60	0.59	0.50	0.55
Cl	0.48	0.33	0.30	0.00	0.15	0.13	0.00	0.25	0.35	0.29	0.46	0.38	0.35	0.36	0.38
Sum	97.67	97.56	97.71	97.62	97.60	97.76	97.56	97.82	97.61	97.67	97.70	97.63	97.67	97.58	97.67
Cation per formula															
Si	7.01	7.08	7.29	7.79	7.56	7.67	7.74	7.32	7.17	7.23	7.08	7.09	7.09	7.14	7.14
Aliv	0.99	0.92	0.71	0.21	0.44	0.33	0.26	0.68	0.83	0.77	0.92	0.91	0.91	0.86	0.86
Alvi	0.22	0.17	0.13	0.02	0.12	0.15	0.07	0.26	0.18	0.20	0.24	0.21	0.23	0.22	0.18
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.56	0.58	0.40	0.29	0.38	0.20	0.33	0.24	0.54	0.44	0.49	0.54	0.48	0.57	0.50
Fe2+	1.19	1.10	1.33	0.90	0.97	1.06	0.91	1.36	1.10	1.10	1.22	1.18	1.22	1.12	1.21
Mn	0.04	0.00	0.03	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	2.99	3.14	3.11	3.75	3.52	3.59	3.69	3.12	3.18	3.26	3.05	3.07	3.07	3.09	3.11
Ca	1.82	1.86	1.92	1.89	1.85	1.88	1.92	1.92	1.85	1.87	1.84	1.85	1.85	1.81	1.89
Na	0.44	0.35	0.26	0.09	0.19	0.19	0.00	0.26	0.31	0.30	0.41	0.34	0.38	0.36	0.31
K	0.13	0.10	0.09	0.03	0.04	0.03	0.03	0.09	0.08	0.08	0.10	0.11	0.11	0.09	0.10
Cl	0.12	0.08	0.07	0.00	0.04	0.03	0.00	0.06	0.09	0.07	0.11	0.09	0.09	0.09	0.09
Sum	17.39	17.30	17.26	17.01	17.08	17.10	16.95	17.27	17.25	17.26	17.35	17.31	17.34	17.26	17.30
Mg/ (Mg+Fe2)	0.72	0.74	0.70	0.81	0.78	0.77	0.80	0.70	0.74	0.75	0.71	0.72	0.71	0.73	0.72
Mineral	Mg hbl	Mg hbl	actinolitic hbl	actinolite	actinolite	actinolite	actinolite	actinolitic hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl	Mg hbl

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
Sample	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH46	TH99	TH99	TH99	TH99	TH99	TH99
Rock type	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amp-rich calc-silicate	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite
Data	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA
Analysis No	th46-s16-h2	th46-s16-h3	th46-s16-h4	th46-s16-h5	th46-s16-h6	th46-s17-h1	th46-s17-at1	th46-s17-h3	th46-s17-h4	hbl1	hbl_b	hbl_c	hbl_d	hbl_e	hbl_e2
Event	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2/D3	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2
SiO2	49.42	47.72	50.46	50.86	46.22	48.77	54.80	50.60	50.10	40.09	39.94	40.32	39.99	39.93	40.01
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.92	1.07	1.17	0.83	0.80	1.01
Al2O3	6.16	7.08	4.85	5.00	7.88	6.21	1.86	5.55	5.88	14.69	14.86	14.37	14.78	14.62	14.44
FeO	13.64	15.26	13.28	12.96	16.32	14.48	10.89	12.22	12.66	20.60	20.24	19.52	20.38	20.87	20.88
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.22	0.12	0.13	0.14	0.14	0.18	0.16
MgO	14.52	13.29	15.19	15.16	12.59	14.10	17.05	15.15	14.71	7.26	7.39	7.47	7.09	6.71	6.90
CaO	11.91	11.94	12.22	12.20	12.16	11.90	12.91	12.01	12.02	10.55	10.56	10.32	10.63	10.21	10.32
Na2O	1.14	1.24	0.97	0.87	1.14	1.14	0.00	1.10	1.04	1.82	1.95	1.75	1.93	1.92	1.87
K2O	0.46	0.71	0.45	0.39	0.92	0.61	0.20	0.40	0.41	0.94	1.01	1.13	0.91	1.01	0.98
Cl	0.33	0.40	0.19	0.18	0.38	0.41	0.10	0.00	0.00	1.27	1.27	1.22	1.35	1.23	1.17
Sum	97.58	97.65	97.60	97.61	97.61	97.61	97.80	97.27	97.26	98.26	98.42	97.40	98.04	97.48	97.74
Cation per formula															
Si	7.16	7.00	7.29	7.33	6.83	7.11	7.79	7.30	7.24	6.04	6.02	6.12	6.06	6.08	6.07
Aliv	0.84	1.00	0.71	0.67	1.17	0.89	0.21	0.70	0.76	1.96	1.98	1.88	1.94	1.92	1.93
Alvi	0.21	0.22	0.12	0.18	0.21	0.17	0.10	0.24	0.25	0.65	0.65	0.68	0.70	0.70	0.65
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.12	0.13	0.09	0.09	0.12
Fe3+	0.53	0.54	0.45	0.40	0.61	0.57	0.15	0.37	0.37	0.98	0.92	0.85	0.85	0.94	0.95
Fe2+	1.12	1.33	1.16	1.16	1.41	1.20	1.14	1.10	1.16	1.62	1.63	1.63	1.73	1.72	1.70
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02
Mg	3.14	2.91	3.27	3.26	2.78	3.06	3.61	3.26	3.17	1.63	1.66	1.69	1.60	1.52	1.56
Ca	1.85	1.88	1.89	1.88	1.93	1.86	1.96	1.86	1.86	1.70	1.70	1.68	1.73	1.67	1.68
Na	0.32	0.35	0.27	0.24	0.33	0.32	0.00	0.31	0.29	0.53	0.57	0.51	0.57	0.57	0.55
K	0.08	0.13	0.08	0.07	0.17	0.11	0.04	0.07	0.08	0.18	0.19	0.22	0.18	0.20	0.19
Cl	0.08	0.10	0.05	0.04	0.10	0.10	0.02	0.00	0.00	0.32	0.32	0.31	0.35	0.32	0.30
Sum	17.25	17.36	17.25	17.20	17.43	17.29	17.00	17.24	17.23	17.42	17.47	17.41	17.47	17.43	17.42
Mg/(Mg+Fe2)	0.74	0.69	0.74	0.74	0.66	0.72	0.76	0.75	0.73	0.50	0.50	0.51	0.48	0.47	0.48
Mineral	Mg hbl	Mg hbl	actinolitic hbl	actinolitic hbl	Mg hbl	Mg hbl	actinolite	actinolitic hbl	Mg hbl	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Rock type	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite
Data	EPMA	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	hbl_f	th99j-s4-h1	th99j-s4-h2	th99j-s4-h4	th99j-s4-h6	th99j-s4-h7	th99j-s5-h1	th99j-s5-h2	th99j-s5-h4	th99j-s5-h5	th99j-s5-h6	th99j-s5-h7	th99j-s1-h1	th99j-s1-h2	th99j-s1-h3
Event	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2
SiO2	39.86	39.63	39.82	39.60	38.85	39.26	39.21	38.71	37.49	39.79	40.37	39.41	39.09	39.34	39.28
TiO2	0.82	0.89	0.79	0.87	0.41	0.88	0.83	0.24	0.25	1.11	1.05	1.09	0.88	0.92	0.88
Al2O3	14.67	14.67	14.45	14.51	15.67	14.83	14.83	16.37	18.17	14.61	13.81	14.71	14.51	14.45	14.32
FeO	20.87	21.56	21.73	21.57	21.51	21.52	21.35	21.39	21.63	20.82	20.71	21.04	21.80	21.37	21.49
MnO	0.14	0.00	0.00	0.00	0.23	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.12	0.12	0.17
MgO	6.64	6.47	6.36	6.65	6.24	6.47	6.84	5.87	5.05	7.19	7.78	7.25	6.79	6.92	6.80
CaO	10.50	10.75	11.28	10.87	10.99	10.95	10.88	11.01	11.30	10.28	9.86	10.28	10.63	10.97	10.98
Na2O	1.91	1.60	1.43	1.58	1.56	1.75	1.61	1.74	1.65	1.63	1.59	1.66	1.57	1.51	1.68
K2O	0.77	1.05	0.94	0.92	1.03	0.97	0.96	1.00	0.96	0.90	1.02	0.78	1.03	1.01	1.01
Cl	1.18	1.23	1.13	1.23	1.37	1.30	1.24	1.42	1.71	1.31	1.27	1.33	1.17	1.11	1.23
Sum	97.37	97.85	97.92	97.80	97.86	97.93	97.76	97.98	98.20	97.64	97.45	97.56	97.59	97.71	97.83
Cation per formula															
Si	6.08	6.04	6.08	6.04	5.93	6.00	5.97	5.92	5.75	6.02	6.08	5.96	5.96	5.99	6.00
Aliv	1.92	1.96	1.92	1.96	2.07	2.00	2.03	2.08	2.25	1.98	1.92	2.04	2.04	2.01	2.00
Alvi	0.72	0.68	0.69	0.64	0.75	0.67	0.63	0.87	1.04	0.62	0.53	0.58	0.56	0.59	0.58
Ti	0.09	0.10	0.09	0.10	0.05	0.10	0.10	0.03	0.03	0.13	0.12	0.12	0.10	0.11	0.10
Fe3+	0.87	0.89	0.75	0.93	0.96	0.83	0.99	0.83	0.75	1.13	1.31	1.24	1.14	0.99	0.92
Fe2+	1.79	1.86	2.03	1.82	1.79	1.92	1.73	1.90	2.02	1.51	1.29	1.42	1.63	1.74	1.82
Mn	0.02	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.02	0.02	0.02
Mg	1.51	1.47	1.45	1.51	1.42	1.48	1.55	1.34	1.16	1.62	1.75	1.63	1.54	1.57	1.55
Ca	1.72	1.76	1.85	1.77	1.80	1.79	1.78	1.80	1.86	1.67	1.59	1.67	1.74	1.79	1.80
Na	0.56	0.47	0.42	0.47	0.46	0.52	0.48	0.52	0.49	0.48	0.46	0.49	0.46	0.45	0.50
K	0.15	0.20	0.18	0.18	0.20	0.19	0.19	0.19	0.19	0.17	0.20	0.15	0.20	0.20	0.20
Cl	0.30	0.32	0.29	0.32	0.35	0.34	0.32	0.37	0.44	0.34	0.32	0.34	0.30	0.29	0.32
Sum	17.43	17.43	17.45	17.42	17.46	17.50	17.44	17.52	17.54	17.32	17.25	17.30	17.40	17.43	17.49
Mg/(Mg+Fe2)	0.46	0.44	0.42	0.45	0.44	0.43	0.47	0.41	0.36	0.52	0.57	0.54	0.49	0.48	0.46
Mineral	Fe-tschermak	calcian-tirodite	Fe-tschermak	Fe-tschermak	Fe-tschermak	Mg-hastingsite	Fe-tschermak	Fe-pargasite	Al-Fe pargasite	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Rock type	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite
Data	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	th99j-s1-h4	th99j-s1-h5	th99j-s1-h6	th99j-s1-h7	th99j-s2-h10	th99j-s2-h11	th99j-s2-h12	th99j-s2-h13	th99j-s4-h3	th99j-s4-h5	TH99-s5-sp218	TH99-s5-sp219	TH99-s5-sp220	TH99-s5-sp221	TH99-s5-sp222
Event	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2
SiO2	40.17	39.33	39.66	38.71	39.13	38.91	38.86	39.09	39.48	39.47	39.30	39.13	39.10	39.18	39.16
TiO2	0.97	0.95	0.84	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.91	0.99	1.02	1.15	0.90
Al2O3	14.72	14.57	14.59	14.84	14.56	14.45	14.80	14.56	14.49	14.58	14.88	14.83	14.99	14.93	15.13
FeO	20.00	21.78	21.52	21.51	22.30	21.90	22.27	22.19	21.46	21.41	21.65	21.53	21.67	21.52	21.70
MnO	0.21	0.00	0.00	0.25	0.00	1.03	0.86	0.90	0.81	0.84	0.01	0.10	0.17	0.05	0.12
MgO	7.24	6.53	6.55	6.84	6.29	6.45	6.23	6.25	6.77	6.56	6.83	6.80	6.64	6.73	6.57
CaO	10.82	10.76	10.99	10.80	10.82	10.83	10.62	10.77	10.63	11.00	10.88	10.97	10.86	10.83	10.85
Na2O	1.58	1.66	1.60	1.53	1.59	1.64	1.63	1.66	1.68	1.65	1.56	1.56	1.57	1.65	1.58
K2O	0.98	1.02	0.94	1.04	1.07	0.95	1.07	0.95	1.06	0.99	1.02	1.21	1.03	1.04	1.08
Cl	1.15	1.16	1.17	1.27	1.20	0.79	1.18	1.20	1.19	1.22	1.25	1.14	1.26	1.21	1.19
Sum	97.83	97.77	97.87	97.64	97.79	96.95	97.52	97.57	97.56	97.72	98.31	98.27	98.31	98.30	98.28
Cation per formula															
Si	6.08	6.00	6.05	5.90	5.99	5.97	5.95	5.99	6.02	6.03	5.95	5.94	5.93	5.94	5.94
Aliv	1.92	2.00	1.95	2.10	2.01	2.03	2.05	2.01	1.98	1.97	2.05	2.06	2.07	2.06	2.06
Alvi	0.70	0.62	0.67	0.57	0.62	0.58	0.62	0.62	0.62	0.66	0.61	0.60	0.61	0.61	0.64
Ti	0.11	0.11	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.10	0.11	0.12	0.13	0.10
Fe3+	0.84	0.94	0.84	1.15	0.97	1.22	1.26	1.18	1.19	1.02	1.04	0.97	1.03	0.98	1.01
Fe2+	1.69	1.84	1.90	1.60	1.88	1.59	1.59	1.66	1.55	1.72	1.70	1.77	1.72	1.75	1.74
Mn	0.03	0.00	0.00	0.03	0.00	0.13	0.11	0.12	0.10	0.11	0.00	0.01	0.02	0.01	0.02
Mg	1.63	1.49	1.49	1.56	1.43	1.48	1.42	1.43	1.54	1.49	1.54	1.54	1.50	1.52	1.48
Ca	1.75	1.76	1.80	1.76	1.77	1.78	1.74	1.77	1.74	1.80	1.77	1.78	1.77	1.76	1.76
Na	0.46	0.49	0.47	0.45	0.47	0.49	0.48	0.49	0.50	0.49	0.46	0.46	0.46	0.49	0.47
K	0.19	0.20	0.18	0.20	0.21	0.19	0.21	0.18	0.21	0.19	0.20	0.23	0.20	0.20	0.21
Cl	0.30	0.30	0.30	0.33	0.31	0.21	0.31	0.31	0.31	0.32	0.32	0.29	0.32	0.31	0.31
Sum	17.40	17.45	17.45	17.42	17.46	17.45	17.43	17.45	17.44	17.48	17.42	17.48	17.43	17.45	17.44
Mg/(Mg+Fe2)	0.49	0.45	0.44	0.49	0.43	0.48	0.47	0.46	0.50	0.47	0.48	0.47	0.47	0.46	0.46
Mineral	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	181	182	183	184	185	186	187	188	189	190	191	192	193	194
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Rock type	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite
Data	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	TH99-s5-sp223	TH99-s5-am-au1	TH99-s5-am-au	TH99-s5-sp229	TH99-s5-am-au2	TH99-s5-am-au3	TH99-6b-sp205	TH99-6b-sp206	TH99-6b-sp207	TH99-6b-sp208	TH99-6b-sp209	TH99-6b-sp210	TH99-6b-sp211	TH99-6b-sp212
Event	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2
SiO2	39.17	40.25	39.11	39.11	39.21	39.28	39.11	39.04	39.17	39.11	39.27	39.13	38.80	39.17
TiO2	0.74	0.95	0.78	0.71	0.90	0.88	0.83	1.09	0.91	0.83	0.93	0.97	1.00	0.94
Al2O3	15.45	14.73	15.79	15.56	15.12	14.96	15.15	15.00	14.86	15.20	15.17	15.05	14.97	14.78
FeO	21.03	20.99	20.74	20.89	21.03	21.12	21.66	21.64	21.89	21.70	21.24	21.74	21.71	21.81
MnO	0.08	0.18	0.10	0.11	0.11	0.10	0.12	0.24	0.09	0.18	0.15	0.15	0.17	0.10
MgO	6.82	6.52	6.98	7.06	7.22	6.96	6.77	6.81	6.53	6.60	6.71	6.57	6.81	6.59
CaO	10.97	10.84	10.98	11.04	10.78	10.96	10.87	10.74	10.95	10.79	11.01	11.07	10.90	11.13
Na2O	1.58	1.53	1.55	1.45	1.60	1.65	1.52	1.47	1.61	1.63	1.64	1.45	1.67	1.51
K2O	0.97	1.05	0.94	1.08	1.01	1.07	1.04	1.09	1.06	1.05	1.01	0.96	0.99	1.09
Cl	1.21	1.26	1.33	1.34	1.25	1.21	1.23	1.16	1.19	1.22	1.15	1.22	1.29	1.17
Sum	98.30	98.30	98.34	98.34	98.32	98.27	98.30	98.28	98.27	98.30	98.29	98.30	98.32	98.30
Cation per formula														
Si	5.94	6.10	5.90	5.91	5.92	5.96	5.92	5.90	5.96	5.93	5.95	5.94	5.89	5.96
Aliv	2.06	1.90	2.10	2.09	2.08	2.04	2.08	2.10	2.04	2.07	2.05	2.06	2.11	2.04
Alvi	0.70	0.73	0.71	0.68	0.61	0.63	0.62	0.57	0.62	0.64	0.66	0.63	0.57	0.61
Ti	0.08	0.11	0.09	0.08	0.10	0.10	0.09	0.12	0.10	0.09	0.11	0.11	0.11	0.11
Fe3+	0.98	0.77	1.02	1.05	1.12	0.95	1.10	1.15	0.96	1.05	0.91	1.00	1.09	0.93
Fe2+	1.69	1.89	1.60	1.59	1.53	1.73	1.64	1.58	1.82	1.70	1.78	1.76	1.67	1.85
Mn	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.03	0.01	0.02	0.02	0.02	0.02	0.01
Mg	1.54	1.47	1.57	1.59	1.62	1.57	1.53	1.54	1.48	1.49	1.52	1.49	1.54	1.49
Ca	1.78	1.76	1.78	1.79	1.74	1.78	1.76	1.74	1.78	1.75	1.79	1.80	1.77	1.81
Na	0.47	0.45	0.45	0.42	0.47	0.49	0.45	0.43	0.48	0.48	0.48	0.43	0.49	0.45
K	0.19	0.20	0.18	0.21	0.19	0.21	0.20	0.21	0.21	0.20	0.20	0.19	0.19	0.21
Cl	0.31	0.32	0.34	0.34	0.32	0.31	0.32	0.30	0.31	0.31	0.30	0.31	0.33	0.30
Sum	17.44	17.42	17.41	17.42	17.41	17.47	17.41	17.38	17.47	17.44	17.47	17.41	17.46	17.47
Mg/(Mg+Fe2)	0.48	0.44	0.50	0.50	0.51	0.48	0.48	0.49	0.45	0.47	0.46	0.46	0.48	0.45
Mineral	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak

Table 8. Amphibole composition from quartz-feldspar mylonite, amphibole-rich calc-silicate and amphibolite at Tick Hill area (cont.)

Oder	195	195	197	198	199	200	201	202
Sample	TH99	TH99	TH99	TH99	TH99	TH99	TH99	TH99
Rock type	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite	amphibolite
Data	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	TH99-6b-sp213	TH99-6b-sp213	TH99-6b-sp217	TH99-8b-sp242	TH99-8b-sp243	TH99-8b-sp244	TH99-8b-sp245	TH99-8b-sp246
Event	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2	D1-2
SiO2	39.22	39.22	39.14	39.32	39.37	39.58	39.36	39.30
TiO2	0.89	0.89	0.97	1.02	1.01	1.10	1.08	0.92
Al2O3	15.11	15.11	14.98	15.09	14.92	15.04	14.61	14.93
FeO	21.28	21.28	21.61	21.17	21.22	20.91	21.47	21.33
MnO	0.12	0.12	0.13	0.14	0.16	0.01	0.10	0.08
MgO	6.70	6.70	6.81	6.74	6.90	6.97	6.76	6.94
CaO	10.94	10.94	10.75	10.77	10.94	10.84	10.93	10.89
Na2O	1.62	1.62	1.58	1.64	1.65	1.62	1.57	1.53
K2O	1.19	1.19	1.10	1.22	0.99	1.07	1.18	1.14
Cl	1.22	1.22	1.24	1.18	1.10	1.15	1.23	1.22
Sum	98.31	98.31	98.32	98.29	98.25	98.29	98.30	98.29
Cation per formula								
Si	5.96	5.96	5.93	5.96	5.96	5.98	5.98	5.95
Aliv	2.04	2.04	2.07	2.04	2.04	2.02	2.02	2.05
Alvi	0.66	0.66	0.60	0.66	0.62	0.66	0.60	0.62
Ti	0.10	0.10	0.11	0.12	0.12	0.13	0.12	0.11
Fe3+	0.91	0.91	1.09	0.93	0.96	0.92	0.91	1.02
Fe2+	1.79	1.79	1.65	1.75	1.72	1.73	1.82	1.68
Mn	0.02	0.02	0.02	0.02	0.02	0.00	0.01	0.01
Mg	1.52	1.52	1.54	1.52	1.56	1.57	1.53	1.57
Ca	1.78	1.78	1.74	1.75	1.77	1.76	1.78	1.77
Na	0.48	0.48	0.46	0.48	0.48	0.48	0.46	0.45
K	0.23	0.23	0.21	0.24	0.19	0.21	0.23	0.22
Cl	0.31	0.31	0.32	0.30	0.28	0.29	0.32	0.31
Sum	17.49	17.49	17.42	17.47	17.45	17.44	17.47	17.44
Mg/(Mg+Fe2)	0.46	0.46	0.48	0.46	0.47	0.48	0.46	0.48
Mineral	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak	Fe-tschermak

Table 9. Pyroxene composition collected from amphibole-rich calc-silicate at Tick Hill, sample TH46

Oder	1	2	3	4	5	6	7	8	9	10	11	12
Analysis No	Cpx_k	Cpx_k2	Cpx_L1	Cpx_L2	Cpx_M	Cpx_N	Cpx_O	TH46_1	TH46_2	TH46_9	TH46_10	TH46_14
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA
SiO2	53.73	53.51	53.82	54.05	53.90	53.99	54.27	54.12	53.74	53.84	54.34	54.38
TiO2	0.03	0.02	0.05	0.02	0.02	0.05	0.03	0.02	0.00	0.01	0.00	0.05
Al2O3	0.91	0.81	0.70	0.82	0.81	0.74	0.79	0.77	0.79	0.84	0.80	0.76
Cr2O3	_	_	_	_	_	_	_	0.00	0.00	0.01	0.01	0.00
FeO*	8.16	8.20	7.35	8.12	8.06	8.14	8.10	8.14	8.16	7.98	8.50	8.08
MnO	0.20	0.18	0.22	0.17	0.20	0.20	0.23	0.18	0.21	0.20	0.16	0.14
MgO	13.79	13.53	13.63	13.59	13.96	13.73	13.80	12.79	13.03	13.25	13.07	12.92
CaO	22.49	22.94	23.19	23.07	22.84	23.13	22.99	23.15	23.22	23.00	23.17	23.35
Na2O	0.74	0.70	0.64	0.75	0.71	0.71	0.71	0.72	0.73	0.69	0.79	0.70
K2O	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.02	0.00
Cl	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.03	0.02	0.01
Sum	100.07	99.89	99.59	100.59	100.50	100.70	100.94	99.91	99.89	99.85	100.86	100.40
Cation per formula												
Si	1.99	1.99	2.00	1.99	1.99	1.99	2.00	2.02	2.00	2.00	2.01	2.02
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al	0.04	0.04	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.03	0.03
Cr	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0003	0.0002	0.0001
Fe3+	0.03	0.04	0.00	0.03	0.04	0.03	0.02	-0.02	0.01	0.00	0.01	-0.02
Fe2+	0.22	0.22	0.22	0.22	0.21	0.22	0.22	0.27	0.24	0.25	0.25	0.27
Mn	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Mg	0.76	0.75	0.76	0.75	0.77	0.75	0.76	0.71	0.72	0.74	0.72	0.71
Ca	0.89	0.91	0.93	0.91	0.90	0.91	0.91	0.92	0.93	0.92	0.92	0.93
Na	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05
K	0.0007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0006	0.0008	0.0000	0.0000	0.0008	0.0000
Total	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Tri. plots												
En	0.41	0.40	0.40	0.40	0.41	0.40	0.40	0.37	0.38	0.39	0.38	0.37
Fs	0.12	0.12	0.12	0.12	0.11	0.11	0.12	0.14	0.13	0.13	0.13	0.14
Wo	0.48	0.49	0.49	0.48	0.48	0.48	0.48	0.49	0.49	0.48	0.49	0.48

Table 9. Pyroxene composition collected from amphibole-rich calc-silicate at Tick Hill, sample TH46 (cont.)

Oder	13	14	15	16	17	18	19	20	21	22	23	24
Analysis No	TH46_16	TH46_22	TH46_23	TH46_24	th46-s3-cpx1	th46-s3-cpx2	th46-s3-cpx3	th46-s3-cpx4	th46-s3-cpx5	th46-s5-cpx4	th46-s5-cpx5	th46-s5-cpx6
Data type	EPMA	EPMA	EPMA	EPMA	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	54.36	54.00	54.15	53.80	53.74	53.25	53.41	53.58	53.44	53.51	53.76	53.40
TiO2	0.01	0.02	0.07	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	0.78	0.69	0.80	0.84	0.81	0.82	0.81	0.00	0.82	0.90	0.98	1.19
Cr2O3	0.03	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FeO*	8.20	8.00	8.11	8.22	8.16	8.10	8.16	8.08	7.88	7.90	7.91	8.18
MnO	0.19	0.19	0.18	0.21	0.25	0.26	0.00	0.00	0.00	0.25	0.22	0.30
MgO	13.21	13.20	13.18	12.94	13.58	13.69	13.75	13.60	13.63	13.50	13.41	13.32
CaO	23.25	23.47	23.08	23.11	22.81	23.21	23.21	23.27	23.64	23.23	22.95	22.79
Na2O	0.71	0.76	0.73	0.76	0.65	0.67	0.66	0.70	0.59	0.70	0.78	0.82
K2O	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cl	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	100.74	100.38	100.33	99.95	100.00	100.00	100.00	99.23	100.00	99.99	100.01	100.00
Cation per formula												
Si	2.01	2.00	2.01	2.00	2.00	1.98	1.98	2.00	1.98	1.99	1.99	1.98
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.00	0.04	0.04	0.04	0.05
Cr	0.0007	0.0004	0.0000	0.0004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fe3+	0.00	0.02	0.00	0.01	0.02	0.06	0.05	0.04	0.04	0.04	0.02	0.04
Fe2+	0.25	0.22	0.25	0.25	0.23	0.19	0.20	0.21	0.20	0.21	0.22	0.21
Mn	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01
Mg	0.73	0.73	0.73	0.72	0.75	0.76	0.76	0.76	0.75	0.75	0.74	0.74
Ca	0.92	0.93	0.92	0.92	0.91	0.92	0.92	0.93	0.94	0.92	0.91	0.91
Na	0.05	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.04	0.05	0.06	0.06
K	0.0000	0.0006	0.0004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Tri. plots												
En	0.38	0.39	0.38	0.38	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Fs	0.13	0.12	0.13	0.13	0.12	0.10	0.11	0.11	0.11	0.11	0.12	0.11
Wo	0.48	0.49	0.48	0.49	0.48	0.49	0.49	0.49	0.50	0.49	0.49	0.49

Table 9. Pyroxene composition collected from amphibole-rich calc-silicate at Tick Hill, sample TH46 (cont.)

Oder	25	26	27	28	29	30	31	32	33	34	35
Analysis No	th46-s10-cpx2	th46-s17-cpx3	th46-s17-cpx5	th46-s5-cpx1	th46-s5-cpx3	th46-s7-cpx	th46-s8-cpx1	th46-s8-cpx2	th46-s17-cpx1	th46-s17-cpx2	th46-s17-cpx4
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	53.33	53.65	53.76	53.44	53.65	53.39	53.45	53.38	53.26	53.65	53.60
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	1.10	0.82	0.93	0.82	1.09	0.74	0.89	0.73	0.66	0.80	0.82
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FeO*	8.27	7.96	7.96	7.89	7.89	8.16	7.95	8.22	7.97	7.82	8.08
MnO	0.00	0.21	0.00	0.27	0.00	0.00	0.00	0.29	0.27	0.00	0.00
MgO	13.38	13.79	13.77	13.74	13.44	13.61	13.67	13.73	13.74	13.80	13.78
CaO	23.13	22.91	22.97	23.12	23.27	23.43	23.43	22.97	23.54	23.31	23.01
Na2O	0.79	0.66	0.62	0.71	0.66	0.66	0.60	0.67	0.55	0.62	0.71
K2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	100.00	100.00	100.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cation per formula											
Si	1.98	1.99	1.99	1.98	1.99	1.98	1.98	1.98	1.98	1.99	1.99
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al	0.05	0.04	0.04	0.04	0.05	0.03	0.04	0.03	0.03	0.03	0.04
Cr	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fe3+	0.05	0.03	0.02	0.05	0.02	0.05	0.04	0.05	0.05	0.03	0.04
Fe2+	0.21	0.22	0.23	0.19	0.23	0.20	0.21	0.20	0.19	0.21	0.21
Mn	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00
Mg	0.74	0.76	0.76	0.76	0.74	0.75	0.76	0.76	0.76	0.76	0.76
Ca	0.92	0.91	0.91	0.92	0.93	0.93	0.93	0.91	0.94	0.93	0.91
Na	0.06	0.05	0.04	0.05	0.05	0.05	0.04	0.05	0.04	0.04	0.05
K	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Tri. plots											
En	0.40	0.40	0.40	0.41	0.39	0.40	0.40	0.41	0.40	0.40	0.40
Fs	0.11	0.11	0.12	0.10	0.12	0.11	0.11	0.11	0.10	0.11	0.11
Wo	0.49	0.48	0.48	0.49	0.49	0.49	0.49	0.49	0.50	0.49	0.48

Table 10. Scapolite composition from amphibole-rich calc-silicate at Tick Hill, sample TH46

Oder	1	2	3	4	5	6	7	8	9	10	11
Analysis No	pl_g	pl_h	pl_k	pl_k2	pl_11	pl_L1	pl_L2	pl_M	pl_N	pl_O	th46-s2-f1
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	SEM
SiO2	56.01	56.13	56.10	56.00	56.34	56.17	56.16	56.44	56.69	56.68	56.04
TiO2	0.00	0.03	0.00	0.02	0.00	0.02	0.01	0.00	0.00	0.06	0.00
Al2O3	22.33	22.13	22.53	22.68	22.59	22.60	22.58	22.50	22.56	22.66	23.19
FeO	0.10	0.08	0.12	0.05	0.14	0.11	0.14	0.14	0.14	0.14	0.00
MnO	0.00	0.02	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00
CaO	7.26	6.85	7.28	7.35	6.94	7.27	7.45	7.44	7.14	7.31	7.51
Na2O	9.61	9.55	9.61	9.57	9.46	9.63	9.40	9.65	9.64	9.74	9.12
K2O	0.74	0.72	0.76	0.79	0.78	0.73	0.74	0.78	0.99	1.00	0.95
Cl	3.08	3.11	2.90	2.95	3.12	2.95	3.05	3.08	3.01	2.72	3.19
Sum	99.12	98.61	99.30	99.41	99.38	99.50	99.52	100.02	100.17	100.32	100.00

Oder	12	13	14	15	16	17	18	19	20	21	22
Analysis No	th46-s2-f2	th46-s2-f3	th46-s2-f4	th46-s2-f5	th46-s2-f6	th46-s2-f7	th46-s2-f8	th46-s2-f9	th46-s2-f10	th46-s2-f11	th46-s2-f12
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	55.76	56.17	55.9	56.01	56.05	55.94	55.97	56.63	56.18	55.72	56.13
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	23.35	23.26	23.11	23.06	23.13	23.17	23.12	22.76	23.04	23.28	22.91
FeO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CaO	7.49	7.38	7.61	7.66	7.5	7.43	7.45	7.39	7.4	7.49	7.2
Na2O	9.13	9.05	9.13	8.99	9.11	9.23	9.25	9.04	9.12	9.29	8.78
K2O	0.99	0.92	0.98	1.08	0.99	1.01	0.99	1	1.09	1	1.08
Cl	3.28	3.21	3.27	3.2	3.22	3.22	3.23	3.18	3.17	3.23	3.13
Sum	100.00	99.99	100.00	100.00	100.00	100.00	100.01	100.00	100.00	100.01	99.23

Oder	23	24	25	26	27	28	29	30	31	32	33
Analysis No	th46-s2-f13	th46-s2-f14	th46-s2-sp3	th46-s2-sp4	th46-s2-sp58	th46-s2-f15	th46-s2-f16	th46-s2-f17	th46-s3-pl2	th46-s3-pl1	th46-s5-pl1
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	56.27	56.41	55.9	56.16	55.9	56.45	56.07	55.7	55.61	56.29	56.25
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	22.98	23.02	23.12	22.89	23.09	22.65	23.09	23.43	22.91	22.85	22.91
FeO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CaO	7.43	7.39	7.43	7.43	7.73	7.53	7.51	7.82	8.25	7.9	7.57
Na2O	9.08	9.04	9.23	8.98	8.84	8.95	9.16	8.85	8.56	8.82	9.01
K2O	1.07	0.94	1	1.05	0.98	0.96	1.05	1.05	0.94	1.01	1.03
Cl	3.18	3.19	3.31	3.28	3.21	3.22	3.11	3.14	3.04	3.14	3.24
Sum	100.01	99.99	99.99	99.79	99.75	99.76	99.99	99.99	99.31	100.01	100.01

Table 11. Composition of (D_3, stage 2) epidote alteration in intensely silicified unit at Tick Hill, sample TH137

Oder	1	2	3	4	5	6	7	8	9
Analysis No	TH137-s2-alt1	TH137-s2-alt11	TH137-s2-alt12	TH137-s2-alt14	TH137-s2-alt15	TH137-s2-alt16	TH137-s2-alt17	TH137-s2-alt19	TH137-s2-alt20
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	37.67	38.40	37.35	37.65	37.10	36.96	36.90	36.81	37.58
Al2O3	22.89	24.00	24.52	21.77	25.03	21.74	21.52	21.96	24.93
FeO	14.83	13.63	13.03	15.63	12.70	15.87	16.42	15.51	12.25
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
CaO	22.59	21.35	22.68	22.93	22.89	23.39	22.75	23.15	22.63
Na2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	97.97	97.38	97.57	97.98	97.72	97.98	97.59	97.44	97.68
Cation per formula									
Si	3.01	3.08	2.98	3.02	2.95	2.97	2.98	2.97	2.98
Al	2.16	2.27	2.30	2.06	2.34	2.06	2.05	2.09	2.33
Fe3+	0.89	0.82	0.78	0.94	0.76	0.96	1.00	0.94	0.73
Mn2+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
Mn3+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	1.94	1.83	1.94	1.97	1.95	2.01	1.97	2.00	1.92
Na	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Oder	10	11	12	13	14	15	16	17	18
Analysis No	TH137-s4-epi1	TH137-s4-epi2	TH137-s4-epi3	TH137-s4-epi4	TH137-s4-epi5	TH137-s4-epi6	TH137-s4-epi7	TH137-s4-epi8	TH137-s4-epi9
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
SiO2	38.94	39.70	37.07	38.22	40.15	38.55	37.95	37.14	37.19
Al2O3	21.76	22.41	22.50	22.43	22.24	23.57	22.01	21.18	22.91
FeO	16.06	14.58	15.18	15.36	14.81	14.33	14.75	18.26	14.61
MnO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CaO	21.21	21.28	23.22	20.55	20.27	21.52	23.27	20.86	23.27
Na2O	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
Sum	97.98	97.97	97.97	96.73	97.47	97.97	97.97	97.45	97.97
Cation per formula									
Si	3.13	3.18	2.97	3.10	3.24	3.08	3.04	3.02	2.97
Al	2.06	2.12	2.12	2.14	2.11	2.22	2.08	2.03	2.16
Fe3+	0.97	0.88	0.92	0.94	0.90	0.86	0.89	1.12	0.88
Mn2+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mn3+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ca	1.83	1.83	1.99	1.78	1.75	1.84	2.00	1.82	1.99
Na	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00

Appendix 6A: Mineral geochemistry

Table 12. Composition of (D3, stage 4) calcite associated with gold in quartz-feldspar mylonite unit at Tick Hill

Oder	1	2	3	4	5	6	7	8	9	10
Sample	TH55	TH55	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C
Analysis No	TH55-1-ca1	TH55-1-ca2	THM51C-4-ca2	THM51C-4-ca4	THM51C-4-ca5	THM51C-4-ca7	THM51C-4-ca9	THM51C-4-ca10	THM51C-9-v9	THM51C-9-v12
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
CaO	98.63	99.05	98.8	96.04	95.32	100	95.5	100	97.04	96.52
SiO2	1.37	0.36	1.2	2.28	2.87	0	3.41	0	1.89	1.96
MnO	0	0.59	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0.6	0.89
Na2O	0	0	0	0.8	0.81	0	0.32	0	0	0
Al2O3	0	0	0	0.88	0.99	0	0.76	0	0	0
MgO	0	0	0	0	0	0	0	0	0.48	0.63
Sum	100	100	100	100	99.99	100	99.99	100	100.01	100
Notes	quartz mixed	quartz mixed	quartz mixed	albite mixed	albite mixed		albite mixed		amphi. mixed	amphi. mixed

Oder	11	12	13	14	15	16	17	18	19	20
Sample	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C
Analysis No	THM51C-9-vb2	THM51C-10-ca1	THM51C-10-ca2	THM51C-10-ca3	THM51C-10-ca4	THM51C-11-ca2	THM51C-11-ca3	THM51C-11-ca4	THM51C-11-ca5	THM51C-7-ca1
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
CaO	85.64	96.03	95.7	99.05	97.11	98.17	100	95.99	97.98	100
SiO2	8.9	3.97	2.72	0	0	0.97	0	4.01	2.02	0
MnO	0	0	0	0	0	0	0	0	0	0
FeO	2.81	0	0	0	0	0	0	0	0	0
Na2O	0	0	0.75	0.95	2.89	0.4	0	0	0	0
Al2O3	0	0	0.84	0	0	0.45	0	0	0	0
MgO	2.65	0	0	0	0	0	0	0	0	0
Sum	100	100	100.01	100	100	99.99	100	100	100	100
Notes	amphi. mixed	quartz mixed	albite mixed	albite mixed	albite mixed	albite mixed		quartz mixed	quartz mixed	

Oder	21	22	23	24	25	26	27	28	29
Sample	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C	THM51C
Analysis No	THM51C-7-ca2	THM51C-7-ca4	THM51C-7-ca5	THM51C-7-ca6	THM51C-7-ca7	THM51C-7-ca8	THM51C-7-ca9	THM51C-7-ca10	THM51C-7-ca11
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
CaO	100	96.97	92.19	95.31	95.81	96.95	96.72	100	100
SiO2	0	1.88	5.13	2.71	2.48	1.75	2.32	0	0
MnO	0	0	0	0	0	0	0	0	0
FeO	0	0	0	0	0	0	0	0	0
Na2O	0	0.43	1.07	0.8	0.64	0.56	0.38	0	0
Al2O3	0	0.72	1.62	1.18	1.06	0.74	0.57	0	0
MgO	0	0	0	0	0	0	0	0	0
Sum	100	100	100.01	100	99.99	100	99.99	100	100
Notes		albite mixed	albite mixed	albite mixed	albite mixed	albite mixed	albite mixed		

Appendix 6A: Mineral geochemistry

Table 13. Ilmenite composition from peak-metamorphic amphibolite, 800m N to the Tick Hill, sample TH99

Oder	1	2	3	4	5	6	7	8	9
Analysis No	TH99-1-ti1	TH99-1-ti2	TH99-1-ti3	TH99-1-ti5	TH99-4-sp266	TH99-s5-sp234	TH99-6b-ti1	TH99-6b-ti2	TH99-8a-sp235
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
TiO2	50.63	51.11	49.91	50.46	51.20	49.13	49.43	49.93	52.04
FeO	49.03	49.25	48.30	48.32	48.19	50.41	49.94	49.51	47.50
MnO	0.28	0.61	0.72	0.53	0.65	0.41	0.59	0.55	0.46
Sum	99.94	100.98	98.93	99.31	100.04	99.95	99.97	100.00	100.01
Cation per formula									
Ti	0.96	0.96	0.96	0.96	0.97	0.93	0.94	0.95	0.99
Fe^{+3}	0.08	0.08	0.09	0.07	0.06	0.14	0.13	0.11	0.02
Fe^{+2}	0.95	0.95	0.94	0.95	0.96	0.92	0.92	0.93	0.98
Mn	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01

Oder	10	11	12	13	14	15
Analysis No	TH99-8a-sp236	TH99-8a-sp237	th99j-s1-il1	th99j-s1-il2	th99j-s1-il3	th99j-s1-il4
Data type	SEM	SEM	EPMA	EPMA	EPMA	EPMA
TiO2	51.39	51.54	49.28	48.70	48.84	50.96
FeO	48.09	48.08	50.71	50.68	50.64	48.28
MnO	0.52	0.37	0.00	0.60	0.52	0.73
Sum	100.00	100.00	99.99	99.98	100.00	99.97
Cation per formula						
Ti	0.97	0.98	0.93	0.92	0.92	0.97
Fe+3	0.05	0.04	0.13	0.16	0.15	0.07
Fe+2	0.96	0.97	0.93	0.91	0.91	0.95
Mn	0.01	0.01	0.00	0.01	0.01	0.02

Table 14. SEM composition of hematite alteration from quartz-feldspar mylonite (samples THM22 and THM51C) and intensely silicified unit (sample TH137)

#	Sample	Rock type	analysis No	O	Fe	Ti	Cu	S	Al	Si	Na	K	Ca	V	Sum	Note
1	THM22	qtz-fsp mylonite	THM22-6d-sp8	34.78	63.33	0	0	0.07	0.18	1.64	0	0	0	0	100	mixed with alt minerals
2	THM22	qtz-fsp mylonite	THM22-6d-sp10	29.56	67.71	0	0	0.14	1.00	1.58	0	0	0	0	100	mixed with alt minerals
3	THM22	qtz-fsp mylonite	THM22-6d-sp11	29.15	67.59	0	0	0	1.11	1.89	0.20	0.06	0	0	100	mixed with alt minerals
4	THM22	qtz-fsp mylonite	THM22-8-32	28.60	70.76	0	0	0.43	0	0	0	0.21	0	0	100	mixed with alt minerals
5	THM22	qtz-fsp mylonite	THM22-9b-hmt1	29.30	70.56	0.14	0	0	0	0	0	0	0	0	100	mixed with alt minerals
6	THM22	qtz-fsp mylonite	THM22-9b-hmt2	28.88	70.78	0.15	0.15	0	0	0	0	0	0	0	100	mixed with inclusion of Cpy
7	THM22	qtz-fsp mylonite	THM22-9b-hmt3	29.48	69.88	0.16	0.28	0.18	0	0	0	0	0	0	100	mixed with inclusion of Cpy
8	THM22	qtz-fsp mylonite	THM22-9b-hmt4	29.11	70.33	0.20	0.09	0.27	0	0	0	0	0	0	100	mixed with inclusion of Cpy
9	THM22	qtz-fsp mylonite	THM22-9b-hmt5	29.14	69.94	0	0.40	0.52	0	0	0	0	0	0	100	mixed with inclusion of Cpy
10	THM22	qtz-fsp mylonite	THM22-9b-hmt6	28.55	70.25	0.14	0.46	0.60	0	0	0	0	0	0	100	mixed with inclusion of Cpy
11	THM51C	qtz-fsp mylonite	THM51C-4-fe1	24.82	66.78	1.20	0	0	0	2.72	0	0	4.48	0	100	hmt+ leucoxene+cal.+quartz
12	THM51C	qtz-fsp mylonite	THM51C-7-Fe1	26.10	67.15	0	0	0	0.73	5.20	0.82	0	0	0	100	hmt+ab

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite

Oder	1	2	3	4	5	6	7	8	9	10	11	12	13
Sample	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137
Rock type	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	TH137-s2-alt2	TH137-s2-alt3	TH137-s2-alt10	TH137-s2-alt22	TH137-s3-al1	TH137-s3-al3	TH137-s3-al4	TH137-s3-al5	TH137-s3-al8	TH137-s3-al9	TH137-s3-al10	TH137-s3-al11	TH137-s3-al13
Event	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2
SiO2	28.44	27.48	28.53	30.46	30.42	30.32	29.49	29.46	26.85	29.23	30.50	26.75	29.23
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	17.64	17.94	18.90	17.64	16.82	17.65	17.83	18.73	18.39	17.90	17.36	16.65	18.09
FeO	20.82	22.59	20.20	18.89	20.69	20.45	21.07	17.64	28.62	19.99	19.90	25.65	19.63
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	19.76	18.81	18.95	19.46	18.64	18.12	17.93	20.22	13.36	19.45	18.75	18.04	19.58
CaO	0	0	0	0	0	0	0	0	0	0	0	0	0
Na2O	0	0	0	0	0	0	0.31	0.35	0	0	0	0	0
K2O	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	86.66	86.82	86.58	86.44	86.58	86.54	86.64	86.40	87.22	86.57	86.51	87.09	86.53
Cation per formula													
Si	5.90	5.75	5.87	6.19	6.24	6.20	6.07	5.97	5.77	6.00	6.23	5.67	5.99
Al iv	2.10	2.25	2.13	1.81	1.76	1.80	1.93	2.03	2.23	2.00	1.77	2.33	2.01
Al vi	2.21	2.18	2.47	2.44	2.33	2.49	2.43	2.48	2.43	2.35	2.43	1.85	2.38
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.06	0.00	0.19	0.35	0.32	0.38	0.22	0.19	0.11	0.20	0.37	0.00	0.21
Fe2+	3.55	3.98	3.29	2.86	3.23	3.11	3.41	2.80	5.03	3.23	3.03	4.74	3.16
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	6.11	5.87	5.81	5.89	5.70	5.53	5.50	6.11	4.28	5.96	5.70	5.69	5.99
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Na	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.28	0.00	0.00	0.00	0.00	0.00
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.92	36.04	35.76	35.55	35.59	35.51	35.81	35.86	35.86	35.74	35.53	36.29	35.73
Mineral	pycnochlorite	pycnochlorite	pycnochlorite	pycnochlorite	diabantite	diabantite	pycnochlorite	pycnochlorite	brunsvigite	pycnochlorite	diabantite	ripidolite	pycnochlorite
Chl type	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2
Note	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	14	15	16	17	18	19	20	21	22	23	24	25	26
Sample	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137	TH137
Rock type	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit	intensely silicified unit
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	TH137-s3-al14	TH137-s3-al15	TH137-s3-al16	TH137-s4-ch1	TH137-s4-ch2	TH137-s4-ch3	TH137-s4-ch4	TH137-s4-ch5	TH137-s5-ch1	TH137-s5-ch2	TH137-s5-ch4	TH137-s5-ch5	TH137-s5-ch6
Event	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	stage2/3	stage2/3	stage2/3	stage2/3	stage2/3
SiO2	30.85	28.65	28.89	26.59	26.83	29.28	27.42	28.44	29.09	28.82	29.10	28.97	29.22
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	17.36	17.50	17.98	19.15	18.76	17.42	17.85	18.37	17.61	17.47	17.77	17.42	17.44
FeO	19.34	21.11	20.85	27.61	27.06	19.84	27.39	25.36	19.70	20.66	19.53	19.62	19.83
MnO	0	0	0	0	0	0	0	0	0	0	0	0	0
MgO	18.45	19.41	18.89	13.81	14.47	20.02	14.47	14.43	20.16	19.68	20.14	20.56	20.07
CaO	0	0	0	0	0	0	0	0	0	0	0	0	0
Na2O	0.49	0	0	0	0	0	0	0.35	0	0	0	0	0
K2O	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	86.48	86.67	86.62	87.15	87.12	86.56	87.13	86.95	86.56	86.64	86.54	86.56	86.56
Cation per formula													
Si	6.27	5.94	5.96	5.68	5.72	6.02	5.85	5.97	5.98	5.96	5.98	5.96	6.01
Al iv	1.73	2.06	2.04	2.32	2.28	1.98	2.15	2.03	2.02	2.04	2.02	2.04	1.99
Al vi	2.46	2.22	2.36	2.52	2.45	2.25	2.36	2.55	2.26	2.23	2.29	2.20	2.25
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.32	0.09	0.18	0.11	0.10	0.15	0.12	0.23	0.14	0.10	0.15	0.09	0.14
Fe2+	2.96	3.57	3.42	4.82	4.73	3.26	4.77	4.22	3.25	3.47	3.21	3.29	3.27
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	5.59	6.00	5.82	4.40	4.60	6.14	4.61	4.52	6.18	6.07	6.17	6.31	6.16
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Na	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.72	35.88	35.77	35.86	35.88	35.80	35.85	35.81	35.83	35.87	35.81	35.88	35.82
Mineral	diabantite	pycnochlorite	pycnochlorite	brunsvigite	brunsvigite	pycnochlorite	brunsvigite	pycnochlorite	pycnochlorite	pycnochlorite	pycnochlorite	pycnochlorite	pycnochlorite
Chl type	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2
Note	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt	chl+epi+hmt

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	27	28	29	30	31	32	33	34	35	36	37	38	39
Sample	TH137	TH137	THM51C	THM51C	THM51C	THM51C	THM51C	THM22	THM22	THM22	THM22	THM22	THM22
Rock type	intensely silicified unit	intensely silicified unit	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	TH137-s5-ch8	TH137-s5-ch10	THM51C-s5-chl1	THM51C-s5-chl2	THM51C-s5-chl3	THM51C-s5-alt4	THM51C-s5-alt5	THM22-2-sp129	THM22-2-sp130	THM22-2-sp131	THM22-2-sp132	THM22-2-sp133	THM22-3-sp97
Event	stage2/3	stage2/3	stage3	stage3	stage3	stage3	stage3	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2
SiO2	29.16	29.31	27.94	26.82	26.83	25.66	26.35	24.69	25.92	24.97	25.54	25.37	28.49
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.05	0.29	0.07	0.17
Al2O3	17.83	18.06	17.65	17.62	16.82	17.04	16.88	20.84	20.67	21.05	20.72	20.89	16.38
FeO	19.19	19.52	30.44	33.44	34.26	36.82	35.57	32.75	32.22	32.13	31.52	32.24	28.77
MnO	0	0	0	0	0	0	0	1.06	0.45	0.84	0.57	0.53	0.38
MgO	20.33	19.63	11.28	9.00	9.20	8.32	8.94	7.91	8.15	8.29	8.68	8.30	12.77
CaO	0	0	0	0	0	0	0	0	0	0	0	0	0.07
Na2O	0	0	0	0.60	0.55	0	0	0	0	0	0	0	0.21
K2O	0	0	0	0.12	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	86.51	86.52	87.31	87.60	87.66	87.84	87.74	87.34	87.42	87.34	87.32	87.39	87.25
Cation per formula													
Si	5.98	6.01	6.02	5.88	5.92	5.76	5.86	5.45	5.64	5.47	5.56	5.54	6.11
Al iv	2.02	1.99	1.98	2.12	2.08	2.24	2.14	2.55	2.36	2.53	2.44	2.46	1.89
Al vi	2.30	2.38	2.52	2.47	2.32	2.27	2.30	2.89	2.98	2.94	2.90	2.95	2.27
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.05	0.01	0.03
Fe3+	0.15	0.22	0.30	0.07	0.03	0.02	0.09	0.20	0.34	0.24	0.31	0.28	0.21
Fe2+	3.13	3.13	5.19	6.07	6.29	6.90	6.53	5.84	5.52	5.65	5.43	5.61	4.95
Mn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.08	0.16	0.10	0.10	0.07
Mg	6.21	6.00	3.62	2.94	3.02	2.78	2.97	2.60	2.65	2.71	2.82	2.70	4.08
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Na	0.00	0.00	0.00	0.51	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
K	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.80	35.72	35.62	36.13	36.14	35.97	35.88	35.75	35.57	35.70	35.61	35.64	35.80
Mineral	pycnochlorite	pycnochlorite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	ripidolite	brunsvigite	ripidolite	ripidolite	ripidolite	brunsvigite
Chl type	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl1	chl1	chl1	chl1	chl1	chl2
Note	chl+epi+hmt	chl+epi+hmt	Au-Cpy-Se-Bi-chl-calc.	Au-Cpy-Se-Bi-chl-calc.	Au-Cpy-Se-Bi-chl-calc.	Au-Cpy-Se-Bi-chl-calc.	Au-Cpy-Se-Bi-chl-calc.	chl aligned the S1 fabric					

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	40	41	42	43	44	45	46	47	48	49	50	51	52
Sample	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	THM22-3-sp98	THM22-3-sp99	THM22-3-sp100	THM22-3-sp101	THM22-3-sp102	THM22-3-sp103	THM22-4-ch	THM22-4a-sp117	THM22-4a-sp118	THM22-4a-sp119	THM22-4a-sp120	THM22-8-cl1	THM22-8-ch2
Event	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage 2	Stage2	Stage2
SiO2	30.98	28.46	30.50	30.53	30.81	30.15	25.15	28.43	26.26	25.53	28.53	24.43	23.74
TiO2	0.10	0.63	0.12	0.00	0.03	0.10	0.11	1.02	0.23	0.20	1.05	0.00	0.00
Al2O3	16.05	16.16	16.06	16.45	16.12	16.39	20.02	15.22	19.10	19.60	17.08	21.00	21.25
FeO	24.71	29.40	26.95	26.20	25.18	26.65	33.74	30.14	29.46	31.25	26.61	33.83	33.96
MnO	0.07	0.36	0.26	0.20	0.24	0.20	0.06	0.17	0.66	0.26	0.30	0.31	0.42
MgO	14.56	11.86	13.04	13.57	14.34	13.11	8.39	11.85	11.63	10.58	13.13	8.06	8.09
CaO	0.19	0	0.09	0	0.17	0.09	0	0	0	0	0	0	0
Na2O	0.19	0.21	0	0	0	0.22	0	0.11	0	0	0.29	0	0.23
K2O	0	0.24	0	0	0	0.13	0	0.44	0	0	0.11	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	86.84	87.31	87.02	86.95	86.89	87.03	87.47	87.37	87.34	87.43	87.10	87.64	87.68
Cation per formula													
Si	6.44	6.12	6.42	6.40	6.43	6.34	5.54	6.14	5.68	5.56	6.03	5.39	5.26
Al iv	1.56	1.88	1.58	1.60	1.57	1.66	2.46	1.86	2.32	2.44	1.97	2.61	2.74
Al vi	2.42	2.24	2.44	2.50	2.43	2.45	2.76	2.05	2.56	2.61	2.33	2.87	2.82
Ti	0.01	0.10	0.02	0.00	0.00	0.02	0.02	0.17	0.04	0.03	0.17	0.00	0.00
Fe3+	0.47	0.25	0.50	0.50	0.49	0.41	0.19	0.22	0.17	0.14	0.32	0.14	0.00
Fe2+	3.83	5.04	4.24	4.09	3.91	4.28	6.03	5.23	5.16	5.56	4.38	6.10	6.29
Mn	0.01	0.07	0.05	0.04	0.04	0.04	0.01	0.03	0.12	0.05	0.05	0.06	0.08
Mg	4.51	3.80	4.09	4.24	4.46	4.11	2.76	3.82	3.75	3.44	4.14	2.65	2.67
Ca	0.04	0.00	0.02	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Na	0.15	0.17	0.00	0.00	0.00	0.18	0.00	0.10	0.00	0.00	0.24	0.00	0.20
K	0.00	0.13	0.00	0.00	0.00	0.07	0.00	0.24	0.00	0.00	0.06	0.00	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.46	35.79	35.36	35.36	35.37	35.57	35.76	35.84	35.79	35.83	35.69	35.82	36.07
Mineral	diabantite	brunsvigite	diabantite	diabantite	diabantite	diabantite	ripidolite	brunsvigite	brunsvigite	ripidolite	brunsvigite	ripidolite	ripidolite
Chl type	chl2	chl2	chl2	chl2	chl2	chl2	chl1	chl1	chl1	chl1	chl1	chl1	chl1
Note							with Au	with albite alteration	with albite alteration	with albite alteration	with albite alteration		

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	53	54	55	56	57	58	59	60	61	62	63	64	65
Sample	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	THM22-8-ch3	THM22-8-ch5	THM22-8-ch6	THM22-8-ch7	THM22-8-ch8	THM22-8-ch9	THM22-9-sp51	THM22-9-sp52	THM22-9-sp53	THM22-9-sp54	THM22-9-sp55	THM22-10-sp84	THM22-10-sp85
Event	Stage2	Stage2	Stage2	Stage2	Stage2	Stage2	Stage3?	Stage3?	Stage3?	Stage3?	Stage3?	Stage 2?	Stage 2?
SiO2	23.84	24.31	24.40	24.40	26.13	24.81	29.58	29.73	29.86	29.86	29.96	25.03	24.56
TiO2	0.09	0.04	0.11	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.09	0.14
Al2O3	20.88	21.27	19.89	20.74	19.03	20.84	15.75	16.00	15.87	15.92	15.51	21.56	20.37
FeO	35.22	33.40	34.83	34.95	33.46	33.70	27.52	27.44	27.89	27.40	28.09	29.13	32.73
MnO	0.42	0.45	0.28	0.41	1.00	0.42	0.13	0.10	0.17	0.18	0.10	0.10	0.12
MgO	7.31	8.16	8.20	7.22	7.76	7.79	13.73	13.53	13.06	13.44	13.35	11.37	9.63
CaO	0	0	0	0	0	0	0.21	0.12	0.17	0.09	0.12	0	0
Na2O	0	0	0	0	0	0	0.20	0	0	0.10	0	0	0
K2O	0	0	0	0	0.25	0	0	0.16	0.14	0.11	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	87.76	87.62	87.71	87.71	87.65	87.60	87.12	87.09	87.14	87.09	87.13	87.28	87.56
Cation per formula													
Si	5.31	5.36	5.43	5.42	5.75	5.46	6.28	6.30	6.34	6.32	6.37	5.39	5.40
Al iv	2.69	2.64	2.57	2.58	2.25	2.54	1.72	1.70	1.66	1.68	1.63	2.61	2.60
Al vi	2.81	2.90	2.65	2.86	2.72	2.89	2.25	2.33	2.34	2.33	2.27	2.87	2.69
Ti	0.01	0.01	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Fe3+	0.08	0.15	0.06	0.15	0.23	0.21	0.26	0.33	0.36	0.34	0.36	0.16	0.07
Fe2+	6.48	6.01	6.41	6.34	5.93	6.00	4.63	4.53	4.59	4.52	4.63	5.08	5.94
Mn	0.08	0.08	0.05	0.08	0.19	0.08	0.02	0.02	0.03	0.03	0.02	0.02	0.02
Mg	2.43	2.68	2.72	2.39	2.55	2.56	4.35	4.28	4.13	4.24	4.23	3.65	3.16
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.04	0.02	0.03	0.00	0.00
Na	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.08	0.00	0.00	0.00
K	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.08	0.08	0.06	0.00	0.00	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.90	35.82	35.92	35.81	35.76	35.74	35.72	35.60	35.56	35.62	35.54	35.80	35.91
Mineral	ripidolite	ripidolite	ripidolite	ripidolite	brunsvigite	ripidolite	diabantite	diabantite	diabantite	diabantite	diabantite	ripidolite	ripidolite
Chl type	chl1	chl1	chl1	chl1	chl1	chl1	chl2	chl2	chl2	chl2	chl2	chl1	chl1
Note						chl+alb+K-fsp+qtz	chl+alb+K-fsp+qtz	chl+alb+K-fsp+qtz	chl+alb+K-fsp+qtz	chl+alb+K-fsp+qtz	chl+alb+K-fsp+qtz		

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	66	67	68	69	70	71	72	73	74	75	76	77	78
Sample	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22	THM22
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	THM22-10-sp86	THM22-10-sp87	THM22-10-sp88	THM22-10-sp89	THM22-10-sp90	THM22-10-sp91	THM22-12-sp151	THM22-12-sp152	THM22-12-sp154	THM22-13-ch1	THM22-13-ch2	THM22-14-sp134	THM22-14-sp136
Event	Stage 2?	Stage 2?	Stage 2?	Stage 3?	Stage 3?	Stage 3?	Stage2	Stage2	Stage2	stage2?	stage2?	Stage2	Stage2
SiO2	24.06	24.35	24.77	26.75	26.81	26.40	28.36	27.97	28.28	28.34	27.89	28.10	27.82
TiO2	0.00	0.08	0.07	0.17	0.25	0.17	0.03	0.06	0.01	0.03	0.00	0.03	0.00
Al2O3	21.70	21.17	20.20	17.66	17.53	17.77	16.45	16.58	16.39	16.33	16.74	16.14	16.02
FeO	31.99	31.68	31.05	30.39	31.10	30.31	28.96	30.23	29.49	30.82	30.87	31.57	31.81
MnO	0.20	0.15	0.24	0.21	0.29	0.24	0.21	0.13	0.18	0.14	0.15	0.26	0.22
MgO	9.54	9.73	11.12	12.21	11.45	12.51	12.80	11.89	12.92	11.40	11.73	11.05	11.42
CaO	0	0	0	0	0	0	0	0.15	0	0.16	0	0.10	0.11
Na2O	0	0	0	0	0	0	0.38	0.33	0	0	0	0.20	0
K2O	0	0.20	0	0	0	0	0.08	0	0	0.17	0	0	0.09
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	87.49	87.37	87.45	87.38	87.43	87.39	87.26	87.35	87.27	87.39	87.37	87.45	87.48
Cation per formula													
Si	5.27	5.33	5.41	5.81	5.83	5.74	6.09	6.04	6.09	6.13	6.04	6.11	6.07
Al iv	2.73	2.67	2.59	2.19	2.17	2.26	1.91	1.96	1.91	1.87	1.96	1.89	1.93
Al vi	2.88	2.82	2.62	2.33	2.34	2.30	2.27	2.29	2.26	2.32	2.33	2.27	2.20
Ti	0.00	0.01	0.01	0.03	0.04	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Fe3+	0.08	0.07	0.03	0.11	0.15	0.05	0.13	0.13	0.20	0.23	0.21	0.18	0.14
Fe2+	5.78	5.73	5.64	5.41	5.52	5.46	5.07	5.33	5.11	5.34	5.38	5.56	5.66
Mn	0.04	0.03	0.05	0.04	0.05	0.04	0.04	0.02	0.03	0.03	0.03	0.05	0.04
Mg	3.11	3.18	3.62	3.95	3.72	4.05	4.10	3.83	4.14	3.68	3.79	3.58	3.71
Ca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.04	0.00	0.02	0.03
Na	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.28	0.00	0.00	0.00	0.17	0.00
K	0.00	0.11	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.10	0.00	0.00	0.05
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.89	35.95	35.96	35.86	35.81	35.93	35.96	35.93	35.75	35.73	35.73	35.83	35.84
Mineral	ripidolite	ripidolite	ripidolite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	brunsvigite	brunsvigite
Chl type	chl1	chl1	chl1	chl1	chl1	chl1	chl2	chl2	chl2	chl2	chl2	chl2	chl2
Note													

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	79	80	81	82	83	84	85	86	87	88	89	90	91
Sample	THM22	THM22	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	THM22-14-sp137	THM22-14-sp138	TH55-s1-7	TH55-s1-8	TH55-s1-9	TH55-s1-10	TH55-s5-ch1	TH55-s5-ch2	TH55-s5-ch3	TH55-s5-ch4	TH55-s5-ch5	TH55-s5-ch6	TH55-s5-7
Event	Stage2	Stage2	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1
SiO2	28.26	27.55	25.59	28.43	26.49	26.03	24.68	25.89	25.89	26.06	25.49	25.03	24.92
TiO2	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	16.01	15.91	20.33	17.99	19.30	19.60	21.12	19.45	19.45	18.97	20.24	20.62	20.77
FeO	31.05	32.36	30.38	24.20	29.91	31.26	30.97	30.49	30.49	28.87	30.38	29.91	30.59
MnO	0.17	0.20	0.45	0.46	0.84	0.82	0.69	1.91	1.91	1.32	0.68	1.15	0.76
MgO	11.62	11.11	11.07	16.27	11.66	10.57	10.00	9.75	9.75	12.12	10.60	10.72	10.40
CaO	0.11	0.18	0	0	0	0	0	0	0	0	0	0	0
Na2O	0.14	0.10	0	0	0	0	0	0	0	0	0	0	0
K2O	0.04	0.06	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	87.41	87.53	87.83	87.36	88.19	88.27	87.46	87.48	87.48	87.34	87.40	87.42	87.43
Cation per formula													
Si	6.13	6.04	5.52	5.94	5.68	5.62	5.38	5.65	5.65	5.65	5.54	5.44	5.43
Al iv	1.87	1.96	2.48	2.06	2.32	2.38	2.62	2.35	2.35	2.35	2.46	2.56	2.57
Al vi	2.24	2.16	2.71	2.39	2.57	2.62	2.82	2.68	2.68	2.50	2.73	2.74	2.77
Ti	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe3+	0.18	0.09	0.13	0.18	0.14	0.14	0.11	0.18	0.18	0.08	0.15	0.10	0.11
Fe2+	5.45	5.83	5.36	4.05	5.22	5.51	5.53	5.39	5.39	5.15	5.37	5.34	5.46
Mn	0.03	0.04	0.08	0.08	0.15	0.15	0.13	0.35	0.35	0.24	0.13	0.21	0.14
Mg	3.75	3.63	3.56	5.07	3.73	3.40	3.25	3.17	3.17	3.91	3.43	3.48	3.38
Ca	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Na	0.12	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.82	35.92	35.84	35.77	35.82	35.83	35.86	35.77	35.77	35.89	35.81	35.87	35.86
Mineral	brunsvigite	brunsvigite	ripidolite	pycnochlorite	brunsvigite	brunsvigite	ripidolite	brunsvigite	brunsvigite	brunsvigite	ripidolite	ripidolite	ripidolite
Chl type	chl2	chl2	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1
Note			Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	92	93	94	95	96	97	98	99	100	101	102	103	104
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	TH55-s5-8	TH55-s5-9	TH55-s5-10	TH55-s5-11	TH55-s5-12	TH55-s5-13	TH55-s5-14	TH55-12-ch1	TH55-13-ch1	TH55-13-ch2	TH55-13-ch3	TH55-13-ch4	TH55-13-ch5
Event	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1
SiO2	25.97	27.91	28.03	25.01	25.40	27.62	28.47	26.99	25.49	25.55	25.13	25.54	25.16
TiO2	0.52	0.00	0.24	0.31	0.00	0.00	0.00	0.00	0.00	4.15	0.00	0.16	0.09
Al2O3	19.01	17.70	17.41	20.23	20.17	18.59	18.04	18.86	20.45	17.64	20.44	19.77	20.74
FeO	28.60	25.60	24.97	30.22	31.07	25.35	24.71	28.73	29.30	26.49	30.23	30.78	29.89
MnO	1.31	0	0.20	0.78	0.66	0	0	1.58	0.88	1.14	1.22	0.61	0.74
MgO	11.41	15.79	16.12	10.88	10.15	15.40	15.69	11.16	11.21	8.72	10.42	10.58	10.75
CaO	0.54	0	0	0	0	0	0	0	0	3.71	0	0	0
Na2O	0	0	0	0	0	0	0	0	0	0	0	0	0
K2O	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	87.36	87.00	86.97	87.43	87.45	86.97	86.90	87.32	87.34	87.39	87.44	87.43	87.37
Cation per formula													
Si	5.62	5.90	5.92	5.44	5.54	5.83	5.97	5.82	5.51	5.51	5.47	5.56	5.46
Al iv	2.38	2.10	2.08	2.56	2.46	2.17	2.03	2.18	2.49	2.49	2.53	2.44	2.54
Al vi	2.49	2.33	2.26	2.64	2.73	2.47	2.45	2.63	2.74	2.04	2.74	2.65	2.77
Ti	0.08	0.00	0.04	0.05	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.03	0.01
Fe3+	0.16	0.13	0.14	0.10	0.15	0.17	0.24	0.25	0.14	0.50	0.12	0.14	0.14
Fe2+	5.02	4.40	4.27	5.40	5.52	4.31	4.10	4.93	5.16	4.28	5.39	5.46	5.28
Mn	0.24	0.00	0.04	0.14	0.12	0.00	0.00	0.29	0.16	0.21	0.23	0.11	0.14
Mg	3.68	4.98	5.07	3.53	3.30	4.85	4.91	3.59	3.61	2.81	3.38	3.43	3.47
Ca	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00
Na	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.80	35.84	35.82	35.87	35.81	35.79	35.70	35.68	35.82	35.36	35.85	35.82	35.82
Mineral	brunsvigite	pycnochlorite	pycnochlorite	ripidolite	ripidolite	pycnochlorite	pycnochlorite	brunsvigite	ripidolite	ripidolite	ripidolite	ripidolite	ripidolite
Chl type	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1
Note	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	Aligned S1	aligned with stage 3 vein	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	105	106	107	108	109	110	111	112	113	114	115	116	117
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM
Analysis No	TH55-15-ch1	TH55-15-ch2	TH55-15-ch3	TH55-15-ch4	TH55-16-sp192	TH55-16-sp193	TH55-16-sp194	TH55-17-1	TH55-17-2	TH55-17-3	TH55-17-4	TH55-18-sp200	TH55-18-sp201
Event	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2
SiO2	32.77	32.18	31.11	31.34	28.46	28.84	28.13	30.58	30.79	30.18	30.50	30.52	30.51
TiO2	0.00	0.00	0.00	0.00	0.94	0.61	0.75	0.14	0.00	0.00	0.00	0.00	0.07
Al2O3	13.40	13.21	14.21	14.21	15.90	15.97	16.63	14.33	14.37	14.79	14.82	14.45	13.73
FeO	21.32	22.73	25.43	25.16	27.46	27.56	27.13	25.64	25.36	25.72	25.04	25.32	26.84
MnO	0	0	0	0	0.11	0.23	0.44	0	0	0	0.11	0.04	0.03
MgO	18.49	18.17	15.91	16.03	13.34	12.98	13.12	15.68	16.02	16.29	16.10	15.95	15.48
CaO	0	0.16	0.17	0	0.38	0	0.45	0.20	0.14	0	0	0.28	0.13
Na2O	0.39	0	0	0	0.23	0.25	0	0.26	0.10	0	0.19	0.28	0.20
K2O	0.26	0.29	0.11	0.18	0.26	0.57	0.28	0.17	0.17	0	0.18	0.16	0.08
Cl	0	0	0	0	0.15	0.22	0.30	0	0	0	0	0	0
Sum	86.63	86.74	86.95	86.92	87.22	87.23	87.23	86.99	86.95	86.98	86.95	87.00	87.08
Cation per formula													
Si	6.72	6.67	6.53	6.56	6.08	6.16	6.02	6.44	6.47	6.36	6.40	6.42	6.47
Al iv	1.28	1.33	1.47	1.44	1.92	1.84	1.98	1.56	1.53	1.64	1.60	1.58	1.53
Al vi	2.00	1.92	2.07	2.09	2.11	2.21	2.24	2.02	2.05	2.05	2.09	2.03	1.92
Ti	0.00	0.00	0.00	0.00	0.15	0.10	0.12	0.02	0.00	0.00	0.00	0.00	0.01
Fe3+	0.31	0.30	0.32	0.34	0.20	0.20	0.25	0.22	0.26	0.23	0.22	0.19	0.19
Fe2+	3.35	3.64	4.14	4.06	4.70	4.72	4.61	4.30	4.20	4.30	4.17	4.27	4.57
Mn	0.00	0.00	0.00	0.00	0.02	0.04	0.08	0.00	0.00	0.00	0.02	0.01	0.01
Mg	5.65	5.62	4.98	5.00	4.25	4.13	4.19	4.92	5.02	5.12	5.04	5.00	4.89
Ca	0.00	0.03	0.04	0.00	0.09	0.00	0.10	0.05	0.03	0.00	0.00	0.06	0.03
Na	0.31	0.00	0.00	0.00	0.19	0.21	0.00	0.21	0.08	0.00	0.16	0.23	0.16
K	0.14	0.15	0.06	0.10	0.14	0.31	0.15	0.09	0.09	0.00	0.10	0.08	0.04
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.76	35.66	35.60	35.59	35.86	35.92	35.74	35.83	35.73	35.70	35.80	35.87	35.83
Mineral	diabantite	diabantite	diabantite	diabantite	brunsvigite	brunsvigite	picnochlorite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite
Chl type	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2
Note	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	118	119	120	121	122	123	124	125	126	127	128	129	130
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	SEM	EPMA	EPMA	EPMA	EPMA
Analysis No	TH55-18-sp202	TH55-18-sp203	TH55-18-sp204	TH55-18-sp205	TH55-20a-sp177	TH55-20a-sp178	TH55-20a-sp179	TH55-20a-sp180	TH55-20a-sp181	th55p-s1-7	th55p-s1-7b	th55p-s1-8	th55p-s1-9
Event	stage2	stage2	stage2	stage2	stage4	stage4	stage4	stage4	stage4	stage1	stage1	stage1	stage1
SiO2	30.60	30.45	30.75	30.90	34.04	34.29	34.56	33.71	34.83	25.88	26.08	28.19	28.13
TiO2	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.03	0.07
Al2O3	14.38	14.62	15.04	14.57	13.73	13.14	13.23	13.05	13.32	21.09	21.32	19.27	19.57
FeO	25.88	25.04	23.84	24.51	14.40	15.20	14.59	16.33	15.43	30.08	29.45	24.43	24.62
MnO	0	0	0.10	0	0	0	0	0	0	0.88	0.87	0.26	0.26
MgO	16.11	16.29	16.82	16.32	23.37	22.85	23.23	22.65	22.14	11.54	11.64	16.50	16.75
CaO	0	0.17	0	0.09	0.27	0.37	0.32	0.30	0.19	0.00	0.00	0.02	0.01
Na2O	0	0.22	0	0.29	0	0	0	0	0	0.00	0.00	0.02	0.00
K2O	0	0.17	0.20	0.23	0.30	0.30	0.16	0.21	0.22	0.01	0.00	0.01	0.01
Cl	0	0	0	0	0	0	0	0	0	0.06	0.05	0.01	0.02
Sum	86.97	86.95	86.83	86.90	86.10	86.15	86.09	86.25	86.12	89.61	89.52	88.74	89.44
Cation per formula													
Si	6.45	6.40	6.41	6.46	6.76	6.84	6.86	6.77	6.92	5.47	5.49	5.80	5.75
Al iv	1.55	1.60	1.59	1.54	1.24	1.16	1.14	1.23	1.08	2.53	2.51	2.20	2.25
Al vi	2.03	2.04	2.13	2.08	2.01	1.95	1.98	1.89	2.07	2.73	2.79	2.48	2.47
Ti	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.01
Fe3+	0.27	0.19	0.30	0.23	0.40	0.41	0.46	0.35	0.54	0.12	0.17	0.15	0.13
Fe2+	4.29	4.21	3.86	4.06	1.99	2.12	1.96	2.40	2.03	5.20	5.01	4.05	4.08
Mn	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.15	0.04	0.04
Mg	5.06	5.10	5.23	5.09	6.92	6.79	6.87	6.78	6.56	3.63	3.65	5.06	5.10
Ca	0.00	0.04	0.00	0.02	0.06	0.08	0.07	0.06	0.04	0.00	0.00	0.00	0.00
Na	0.00	0.18	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
K	0.00	0.09	0.11	0.12	0.15	0.15	0.08	0.11	0.11	0.01	0.00	0.01	0.00
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.65	35.85	35.65	35.83	35.53	35.51	35.43	35.58	35.34	35.85	35.79	35.81	35.84
Mineral	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	ripidolite	ripidolite	pycnochlorite	pycnochlorite
Chl type	chl2	chl2	chl2	chl2	chl3	chl3	chl3	chl3	chl3	chl1	chl1	chl1	chl1
Note	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	aligned with s1	at the same SEM spot of th55-s1-7	new spot at the same grain	at the same SEM spot of th55-s1-8	at the same SEM spot of th55-s1-9

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	131	132	133	134	135	136	137	138	139	140	141	142	143
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	THM22
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA
Analysis No	th55p-s1-9b	th55p-s1-10	th55p-s5-ch1	th55p-s5-ch2	th55p-s5-ch3	th55p-s5-ch4	th55p-s5-ch6	th55p-s5-ch8	th55p-s5-ch9	th55p-s5-ch10	th55p-s5-ch13	th55p-s5-ch14	thm22p-s8-ch2
Event	stage1	stage1	stage1	stage1	stage1	stage1	stage1	stage1	stage1	stage1	stage1	stage1	stage1
SiO2	28.14	27.01	26.92	27.07	26.02	26.52	25.62	26.40	27.30	27.41	28.06	27.70	24.88
TiO2	0.00	0.03	0.00	0.12	0.00	1.16	0.04	0.53	0.25	0.77	1.28	0.16	0.16
Al2O3	19.53	20.72	20.63	19.52	20.08	19.20	20.66	18.71	18.93	18.91	17.77	19.33	21.51
FeO	24.13	29.74	29.73	24.61	28.39	26.29	28.88	27.15	24.17	23.89	23.12	25.81	34.88
MnO	0.39	1.34	1.52	0.38	1.36	1.09	0.85	1.21	0.21	0.23	0.21	0.28	0.43
MgO	16.47	11.90	11.52	14.97	11.59	11.82	11.21	11.88	15.38	14.61	15.32	14.82	8.12
CaO	0.03	0.03	0.01	0.05	0.03	1.10	0.06	0.59	0.22	0.77	1.31	0.15	0.01
Na2O	0.00	0.00	0.02	0.00	0.03	0.00	0.03	0.05	0.02	0.01	0.03	0.04	0.02
K2O	0.01	0.00	0.01	0.01	0.00	0.01	0.02	0.03	0.03	0.04	0.04	0.03	0.02
Cl	0.01	0.03	0.03	0.01	0.02	0.03	0.05	0.04	0.02	0.02	0.03	0.02	0.07
Sum	88.71	90.82	90.39	86.75	87.52	87.23	87.47	86.58	86.53	86.66	87.17	88.34	90.12
Cation per formula													
Si	5.78	5.61	5.62	5.72	5.60	5.66	5.52	5.71	5.77	5.77	5.86	5.77	5.36
Al iv	2.22	2.39	2.38	2.28	2.40	2.34	2.48	2.29	2.23	2.23	2.14	2.23	2.64
Al vi	2.52	2.69	2.71	2.59	2.70	2.52	2.78	2.51	2.50	2.49	2.26	2.53	2.83
Ti	0.00	0.00	0.00	0.02	0.00	0.19	0.01	0.09	0.04	0.12	0.20	0.02	0.03
Fe3+	0.17	0.17	0.18	0.19	0.16	0.30	0.17	0.21	0.19	0.28	0.28	0.18	0.13
Fe2+	3.98	4.99	5.01	4.16	4.95	4.39	5.04	4.71	4.09	3.93	3.76	4.31	6.16
Mn	0.07	0.24	0.27	0.07	0.25	0.20	0.16	0.22	0.04	0.04	0.04	0.05	0.08
Mg	5.04	3.68	3.58	4.71	3.72	3.76	3.60	3.83	4.84	4.59	4.77	4.60	2.61
Ca	0.01	0.01	0.00	0.01	0.01	0.25	0.01	0.14	0.05	0.17	0.29	0.03	0.00
Na	0.00	0.00	0.01	0.00	0.03	0.00	0.03	0.04	0.02	0.01	0.03	0.03	0.02
K	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.79	35.79	35.78	35.76	35.81	35.62	35.80	35.76	35.77	35.66	35.65	35.79	35.85
Mineral	pycnochlorite	brunsvigite	brunsvigite	pycnochlorite	ripidolite	brunsvigite	ripidolite	brunsvigite	pycnochlorite	pycnochlorite	pycnochlorite	pycnochlorite	ripidolite
Chl type	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1	chl1
Note	new spot at the same grain	at the same SEM spot of th55-s1-10	at the same SEM spot of th55-s5-ch1	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	144	145	146	147	148	149	150	151	152	153	154	155	156
Sample	THM22	THM22	THM22	THM22	THM22	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA
Analysis No	thm22p-s10-sp84	thm22p-s10-sp86	thm22p-s10-sp89	thm22p-s9-sp54	thm22p-s9-sp55	th55p-s15-ch1	th55p-s15-ch2	th55p-s15-ch3	th55p-s15-ch4	th55p-s15-ch5	th55p-s16-sp193	th55p-s16-sp192	th55p-s16-sp191
Event	stage1	stage1	stage1	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2
SiO2	24.57	24.80	27.18	31.65	31.18	32.30	32.06	30.49	30.33	32.07	28.44	28.46	28.85
TiO2	0.07	0.01	0.16	0.00	0.00	0.07	0.04	0.00	0.02	0.01	0.62	0.63	0.73
Al2O3	22.06	21.86	18.19	16.64	16.20	13.74	13.33	14.36	13.85	13.78	16.40	16.18	16.56
FeO	28.98	31.55	29.79	25.51	26.09	21.81	22.36	24.93	24.05	21.20	26.87	26.87	27.88
MnO	0.16	0.19	0.29	0.22	0.21	0.07	0.10	0.11	0.08	0.06	0.26	0.27	0.27
MgO	11.88	10.25	11.85	12.71	13.13	18.98	18.96	15.89	15.72	19.26	13.50	13.83	13.85
CaO	0.01	0.03	0.04	0.13	0.12	0.09	0.09	0.12	0.07	0.07	0.11	0.23	0.24
Na2O	0.04	0.04	0.00	0.04	0.04	0.12	0.09	0.20	0.20	0.08	0.08	0.04	0.04
K2O	0.02	0.02	0.08	0.97	0.56	0.17	0.18	0.19	0.25	0.19	0.43	0.30	0.32
Cl	0.14	0.10	0.03	0.00	0.01	0.03	0.03	0.08	0.07	0.03	0.19	0.15	0.11
Sum	87.95	88.84	87.62	87.87	87.55	87.38	87.25	86.37	84.68	86.75	86.91	86.96	88.86
Cation per formula													
Si	5.27	5.32	5.84	6.52	6.48	6.61	6.61	6.45	6.52	6.59	6.08	6.08	6.05
Al iv	2.73	2.68	2.16	1.48	1.52	1.39	1.39	1.55	1.48	1.41	1.92	1.92	1.95
Al vi	2.85	2.87	2.47	2.62	2.50	1.95	1.86	2.06	2.06	1.96	2.24	2.18	2.17
Ti	0.01	0.00	0.03	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.10	0.10	0.12
Fe3+	0.07	0.10	0.20	0.52	0.48	0.29	0.23	0.23	0.27	0.28	0.22	0.22	0.21
Fe2+	5.13	5.57	5.16	3.88	4.06	3.45	3.62	4.18	4.06	3.37	4.58	4.58	4.68
Mn	0.03	0.03	0.05	0.04	0.04	0.01	0.02	0.02	0.01	0.01	0.05	0.05	0.05
Mg	3.80	3.28	3.80	3.90	4.07	5.79	5.82	5.01	5.04	5.90	4.30	4.41	4.33
Ca	0.00	0.01	0.01	0.03	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.05	0.05
Na	0.03	0.03	0.00	0.04	0.03	0.10	0.07	0.16	0.17	0.07	0.07	0.03	0.03
K	0.01	0.01	0.04	0.51	0.30	0.09	0.10	0.10	0.14	0.10	0.24	0.16	0.17
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.93	35.89	35.77	35.53	35.50	35.69	35.75	35.79	35.76	35.70	35.82	35.79	35.80
Mineral	ripidolite	ripidolite	brunsvigite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	brunsvigite	brunsvigite	brunsvigite
Chl type	chl1	chl1	chl1	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2
Note	at the same SEM spot	at the same SEM spot	at the same SEM spot,	at the same SEM spot	at the same SEM spot	at the same SEM spot, hosting Au inclusion	at the same SEM spot, hosting Au inclusion	at the same SEM spot, hosting Au inclusion	at the same SEM spot, hosting Au inclusion	cotaining Au inclusion	at the same SEM spot	at the same SEM spot	

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	157	158	159	160	161	162	163	164	165	166	167	168	169
Sample	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55	TH55
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA
Analysis No	th55p-s16-sp194	th55p-s18-sp200	th55p-s18-sp201	th55p-s18-sp202	th55p-s18-sp203	th55p-s18-sp204	th55p-s18-sp205	th55p-s17-ch1	th55p-s17-ch2	th55p-s17-ch3	th55p-s20-177	th55p-s20-178	th55p-s20-179
Event	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage2	stage 4	stage 4	stage 4
SiO2	27.88	29.95	30.07	30.05	30.51	30.29	30.53	30.52	30.13	30.26	33.87	34.72	33.22
TiO2	1.22	0.03	0.09	0.12	0.10	0.00	0.03	0.08	0.00	0.05	0.01	0.04	0.02
Al2O3	16.78	14.28	14.24	14.38	14.60	14.68	14.47	14.23	14.32	15.03	13.99	13.99	13.38
FeO	25.06	23.36	24.55	23.27	23.95	23.45	23.99	23.99	24.44	23.96	12.97	14.73	15.08
MnO	0.47	0.08	0.12	0.10	0.12	0.10	0.14	0.09	0.07	0.10	0.05	0.03	0.07
MgO	13.30	16.34	16.11	15.97	16.93	16.49	16.94	15.92	15.96	16.68	25.60	23.10	22.41
CaO	0.81	0.17	0.09	0.10	0.10	0.09	0.09	0.11	0.13	0.10	0.18	0.16	0.19
Na2O	0.05	0.09	0.08	0.08	0.05	0.07	0.08	0.08	0.05	0.08	0.20	0.18	0.22
K2O	0.24	0.13	0.12	0.18	0.19	0.21	0.16	0.21	0.21	0.19	0.11	0.25	0.20
Cl	0.30	0.02	0.02	0.02	0.02	0.01	0.02	0.03	0.02	0.01	0.18	0.14	0.15
Sum	86.17	84.45	85.50	84.26	86.57	85.41	86.45	85.27	85.34	86.47	87.16	87.36	84.94
Cation per formula													
Si	5.98	6.44	6.42	6.46	6.41	6.43	6.42	6.50	6.44	6.36	6.64	6.80	6.74
Al iv	2.02	1.56	1.58	1.54	1.59	1.57	1.58	1.50	1.56	1.64	1.36	1.20	1.26
Al vi	2.26	2.08	2.03	2.13	2.04	2.12	2.03	2.10	2.07	2.10	1.89	2.06	1.97
Ti	0.20	0.01	0.01	0.02	0.02	0.00	0.01	0.01	0.00	0.01	0.00	0.01	0.00
Fe3+	0.32	0.26	0.24	0.31	0.24	0.27	0.23	0.31	0.25	0.23	0.25	0.44	0.35
Fe2+	4.18	3.94	4.15	3.87	3.97	3.89	3.99	3.96	4.12	3.98	1.87	1.98	2.21
Mn	0.09	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.01	0.02	0.01	0.00	0.01
Mg	4.26	5.23	5.13	5.12	5.30	5.22	5.31	5.05	5.09	5.23	7.48	6.74	6.78
Ca	0.19	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.04	0.03	0.04
Na	0.04	0.07	0.07	0.07	0.04	0.06	0.06	0.07	0.04	0.07	0.15	0.14	0.18
K	0.13	0.07	0.07	0.10	0.10	0.12	0.09	0.11	0.12	0.10	0.06	0.13	0.10
OH*	16	16	16	16	16	16	16	16	16	16	16	16	16
Total	35.66	35.71	35.74	35.65	35.75	35.72	35.76	35.66	35.73	35.76	35.75	35.53	35.65
Mineral	brunsvigite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	diabantite	penninite	diabantite	diabantite
Chl type	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl2	chl3	chl3	chl3
Note	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot	at the same SEM spot of th55-s20-177	at the same SEM spot of th55-s20-178	at the same SEM spot of th55-s20-179

Table 15. Composition of D_3 chlorite hosted in quartz-feldspar mylonite, intensely silicified unit and amphibolite (cont.)

Oder	170	171	172	173	174	175
Sample	TH55	TH55	TH55	TH55	TH55	TH55
Rock type	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite	qtz-fsp mylonite
Data type	EPMA	EPMA	EPMA	EPMA	EPMA	EPMA
Analysis No	th55p-s20-180	th55p-s20-181	th55p-s20-182	th55p-s20-183	th55p-s20-184	th55p-s20-185
Event	stage 4	stage 4	stage 4	stage 4	stage 4	stage 4
SiO2	32.84	34.05	33.64	33.70	34.00	34.95
TiO2	0.01	0.07	0.10	0.05	0.09	0.69
Al2O3	14.77	13.85	13.88	13.73	13.76	12.99
FeO	15.01	14.92	15.76	14.72	11.55	10.42
MnO	0.14	0.13	0.09	0.07	0.09	0.12
MgO	23.29	23.08	22.31	23.27	26.41	26.36
CaO	0.15	0.16	0.19	0.14	0.18	0.75
Na2O	0.14	0.12	0.19	0.24	0.18	0.15
K2O	0.06	0.12	0.23	0.15	0.07	0.08
Cl	0.13	0.11	0.14	0.15	0.16	0.14
Sum	86.55	86.61	86.52	86.22	86.50	86.66
Cation per formula						
Si	6.55	6.75	6.72	6.72	6.66	6.78
Al iv	1.45	1.25	1.28	1.28	1.34	1.22
Al vi	2.04	2.01	2.01	1.97	1.86	1.78
Ti	0.00	0.01	0.01	0.01	0.01	0.10
Fe3+	0.30	0.41	0.37	0.34	0.27	0.40
Fe2+	2.20	2.07	2.26	2.12	1.62	1.29
Mn	0.02	0.02	0.01	0.01	0.02	0.02
Mg	6.92	6.82	6.64	6.91	7.71	7.63
Ca	0.03	0.03	0.04	0.03	0.04	0.16
Na	0.11	0.10	0.15	0.19	0.14	0.11
K	0.03	0.06	0.12	0.08	0.04	0.04
OH*	16	16	16	16	16	16
Total	35.66	35.53	35.62	35.65	35.71	35.53
Mineral	diabantite	diabantite	diabantite	diabantite	penninite	penninite
Chl type	chl3	chl3	chl3	chl3	chl3	chl3
Note	at the same SEM spot of th55-s20-180	at the same SEM spot of th55-s20-181				

Appendix 6B

Images of SEM and EPMA mineral analyses

Appendix 6B contains the following data sets:

- SEM and microscopic images of minerals from 6 samples (THM51C, TH55, THM22, TH137, TH99 and TH46).
- Scanned images of hand specimen and block section for each sample
- A scanned image of thin sections with analyses locations marked (thin section map)
- A summary of SEM or EPMA analyses for each sample

Appendix 6B: Images of SEM and EPMA mineral analyses

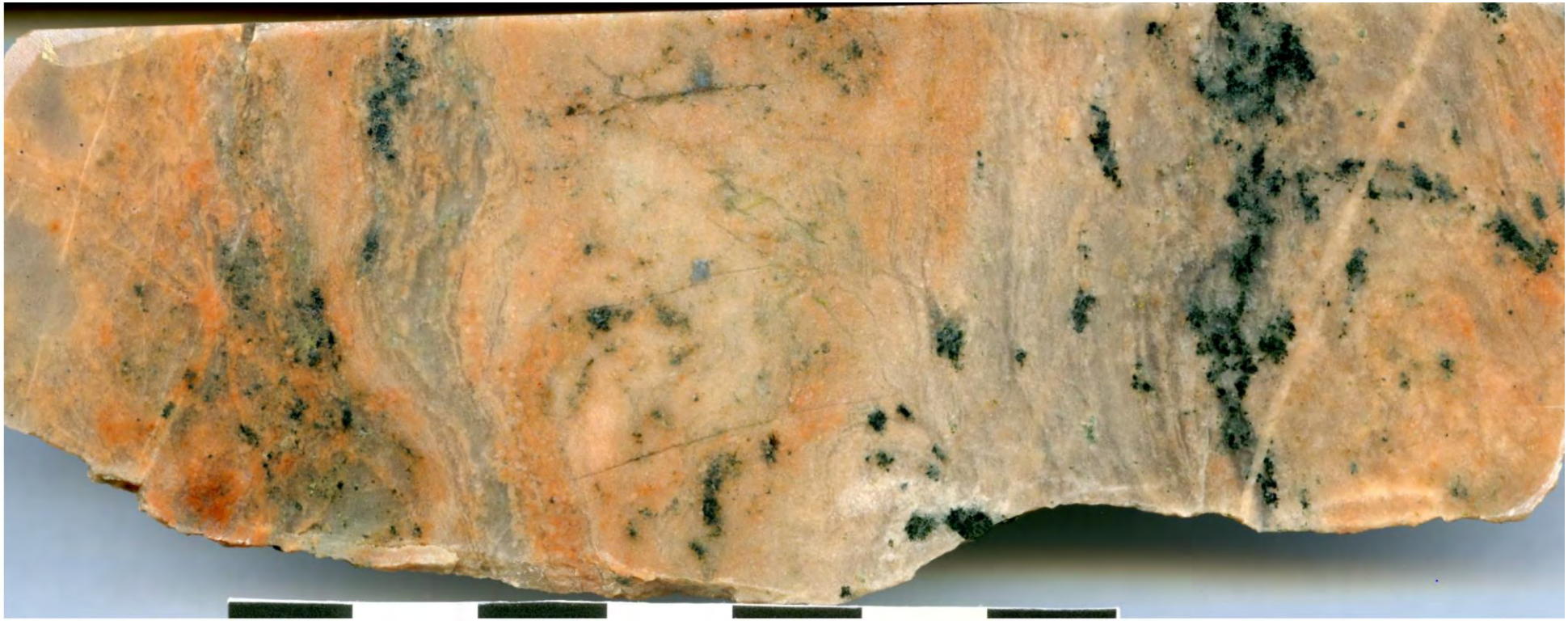
Abbreviation

- Pyrite: Py
- Chalcopyrite: Cpy
- Pyrrhotite: Po
- Hornblende: hbl
- Actinolite: Act
- Albite: Alb
- Chlorite$_1$: Chl$_1$
- Chlorite$_2$: Chl$_2$
- Chlorite$_3$: Chl$_3$
- Epidote: Epi
- Plagioclase: Plg
- Comp.: composition
- Txt: texture

Sample THM51C

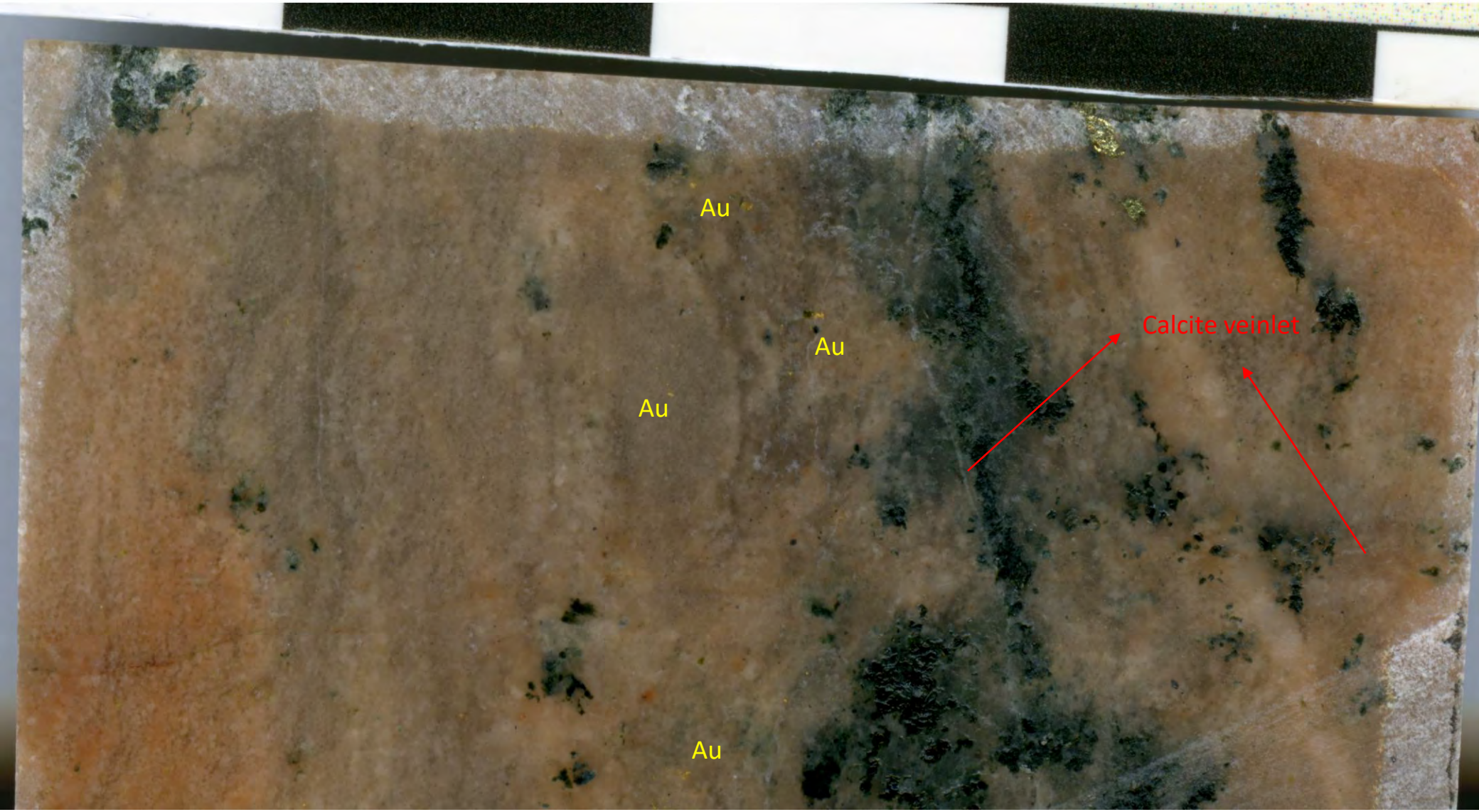
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C

Hand specimen image

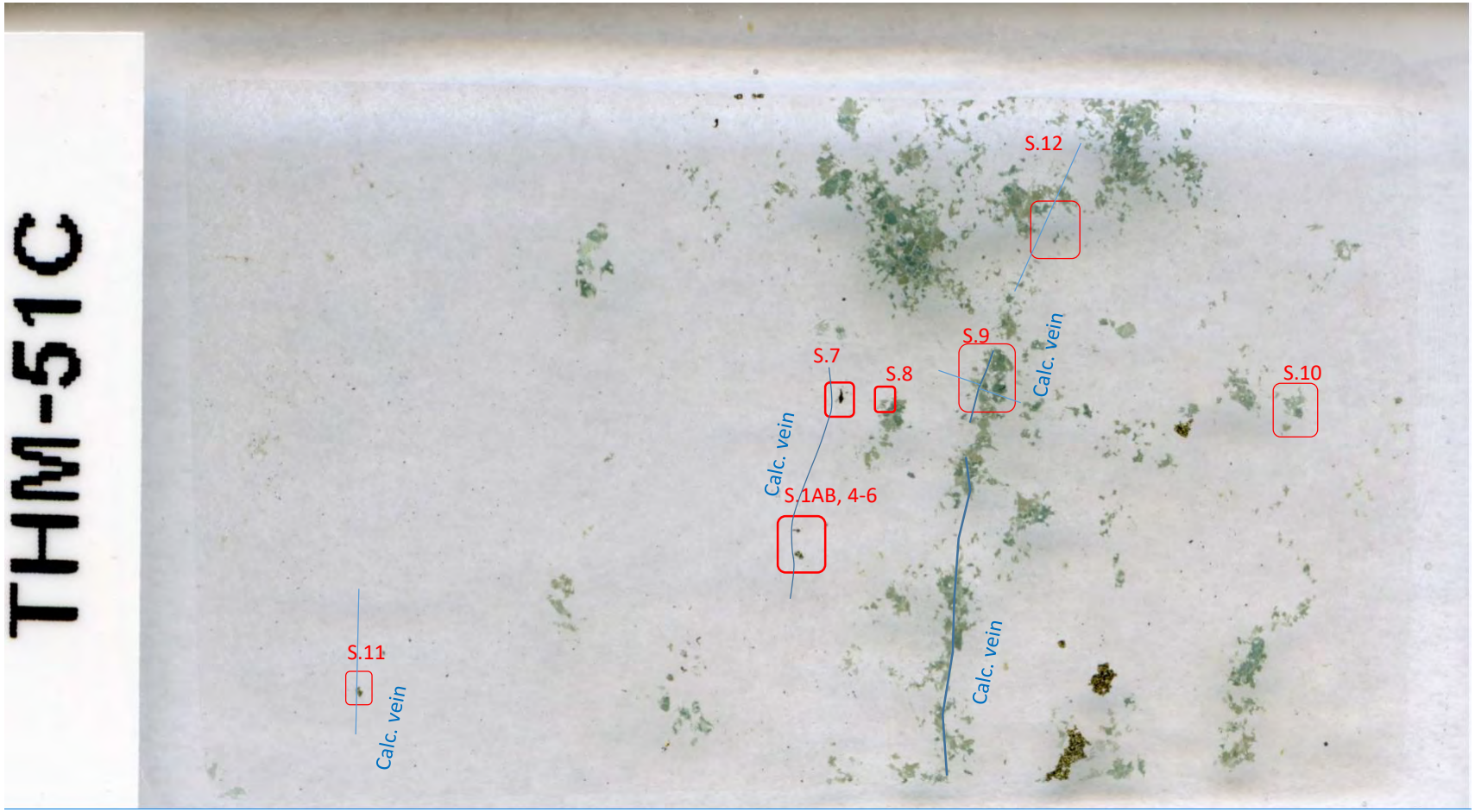


Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C

Block section image



Thin section map of analysis locations



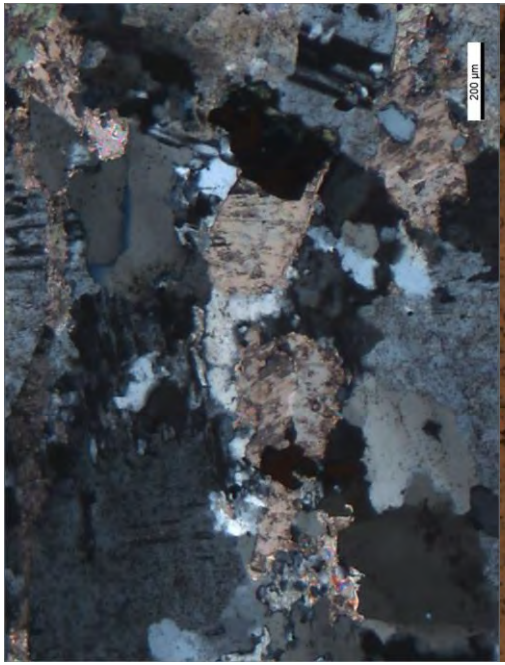
Stage 4 calcite micro (blue) veins sub-parallel with $S_{1/2}$ fabric, overprinting early alteration

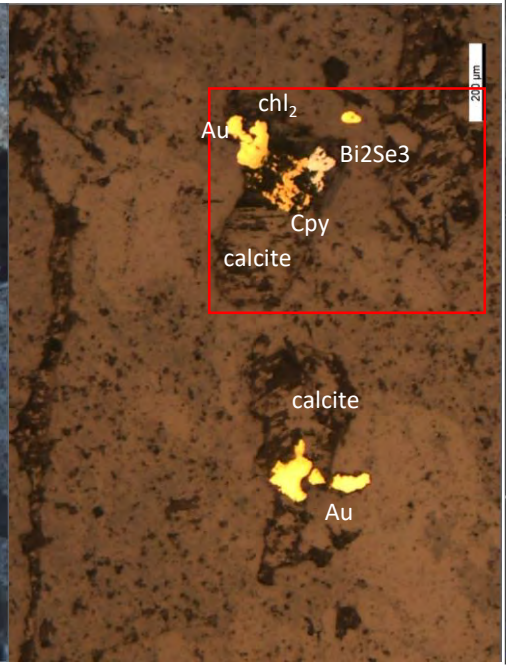
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C

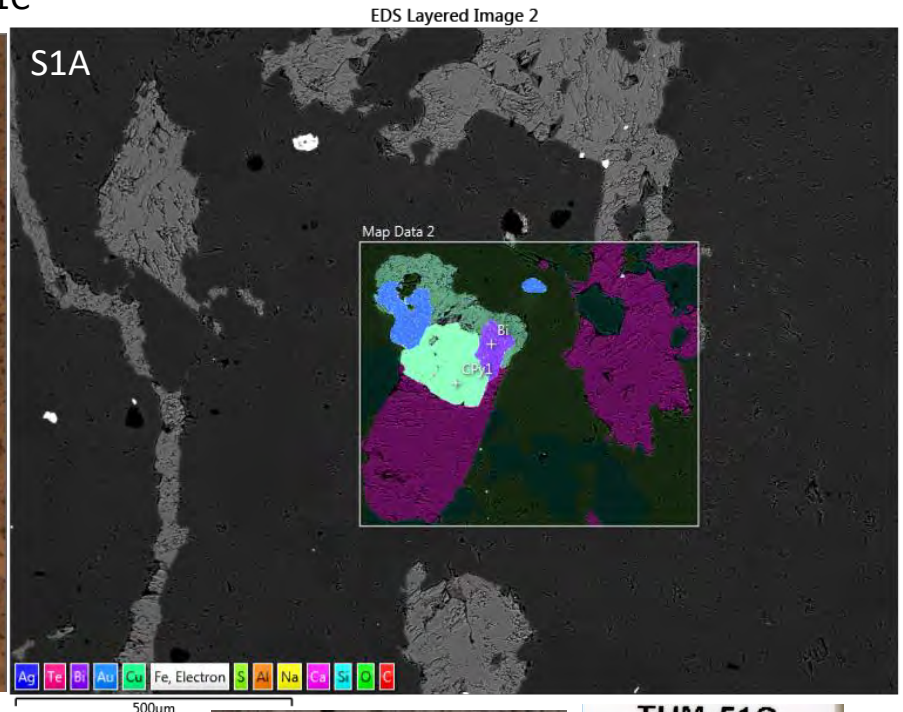
Summary

- Stage 1-2:
  - Hbl (stage 1) and Act (stage 2) alteration (Site 8-10, 12): locally cut by stage 4 calcite veins (Site 9, 12)
    - No Ti or Mn in this amphibole alteration
  - Fsp checked is Alb plus K-fsp
  - Chl2
  - Pure Au (Au locally contain inclusions of hematite)
  - Cpy (+/- Se), aligned with the S1 and late calcite vein (site 7)
  - Guanajuatite - Bi_2Se_3 and fine grains of below minerals are confirmed
    - Cerromojonite- $CuPbBiSe_3$
    - Skipenite - Bi_2TeSe_2;
    - Junoite- $Pb_3Cu_2Bi_8(S,Se)_{16}$;
    - Clausthalite PbSe or Molybdomenite $PbSeO_3$
  - Hematite (Iron oxide locally with Ti)
- Stage 4 carbonate veins : along the S_1 fabric
  - Calcite
  - Other metallic minerals in the veins (Cpy, Au, Bi2Se3): earlier minerals overprinted by late hydrothermal stage

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C

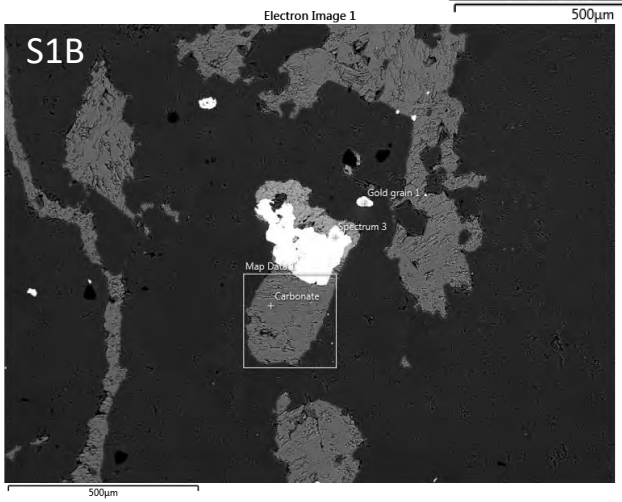


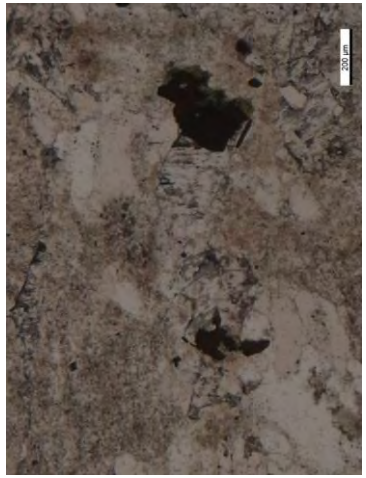




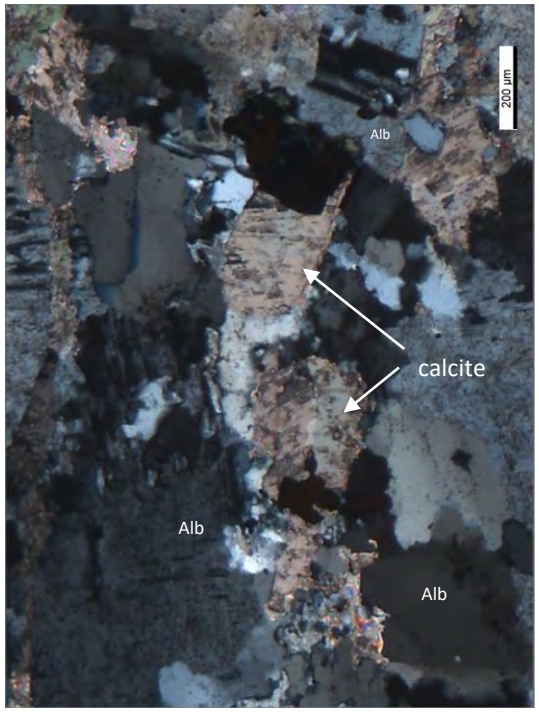
THM51C: S1A-1B

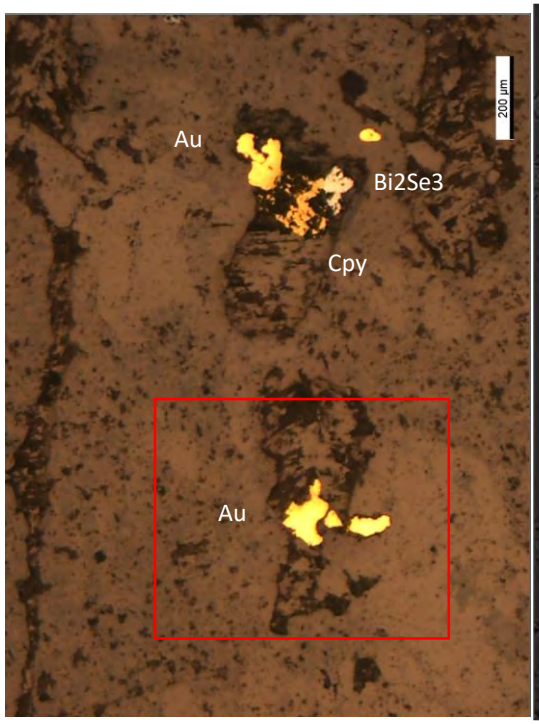
- Preferred option: D_3 stage 4 Au-Bi_2Se_3- Cpy - calcite replacing the stage 3 Chl_2 alteration
- Or other option: stage 3 Au-Bi_2Se_3- Cpy –chl_2 overprinted by stage 4 calcite vein
- Calcite contains inclusions of Qtz

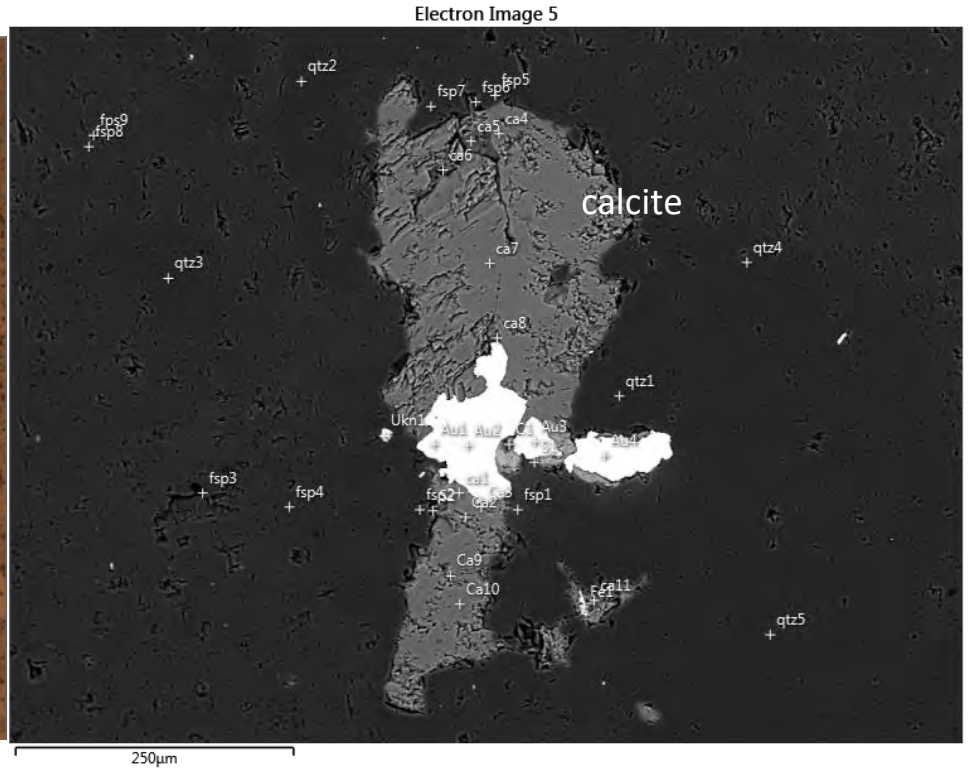


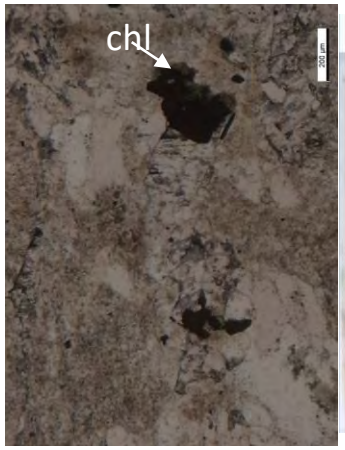


Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C





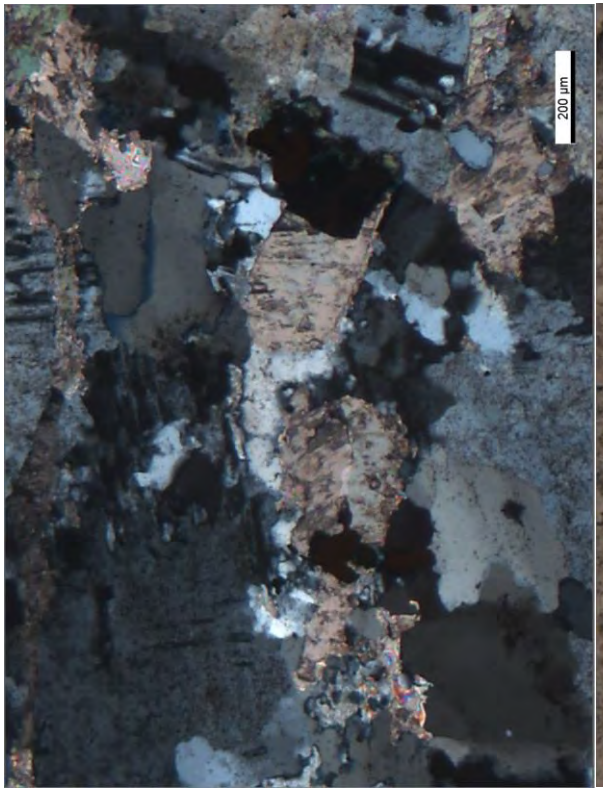


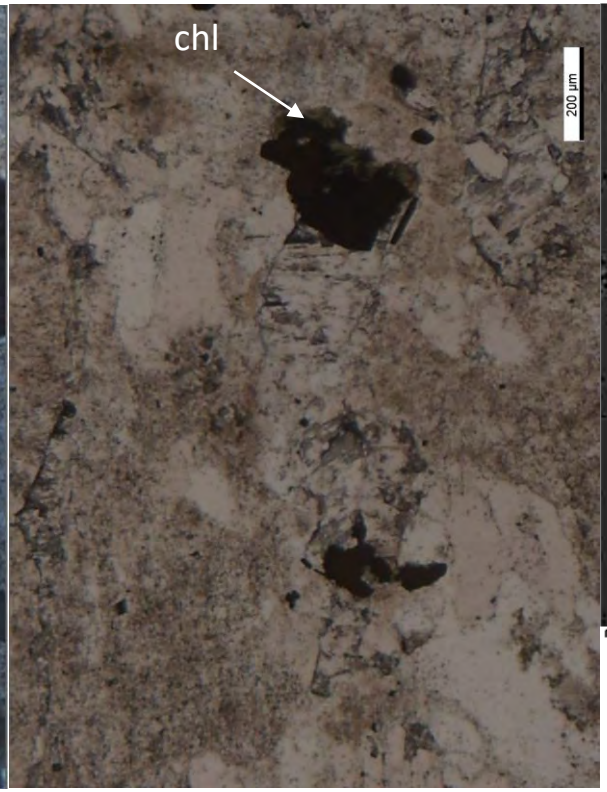


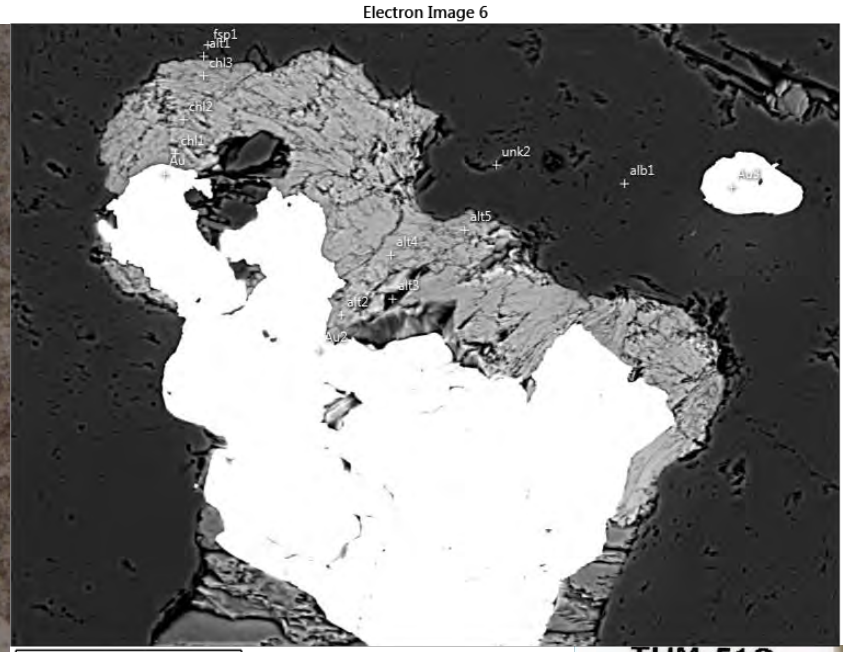
THM51C: S4

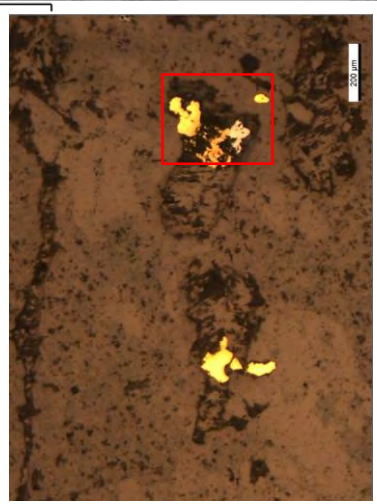
- Stage 4 Au-Cpy

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C





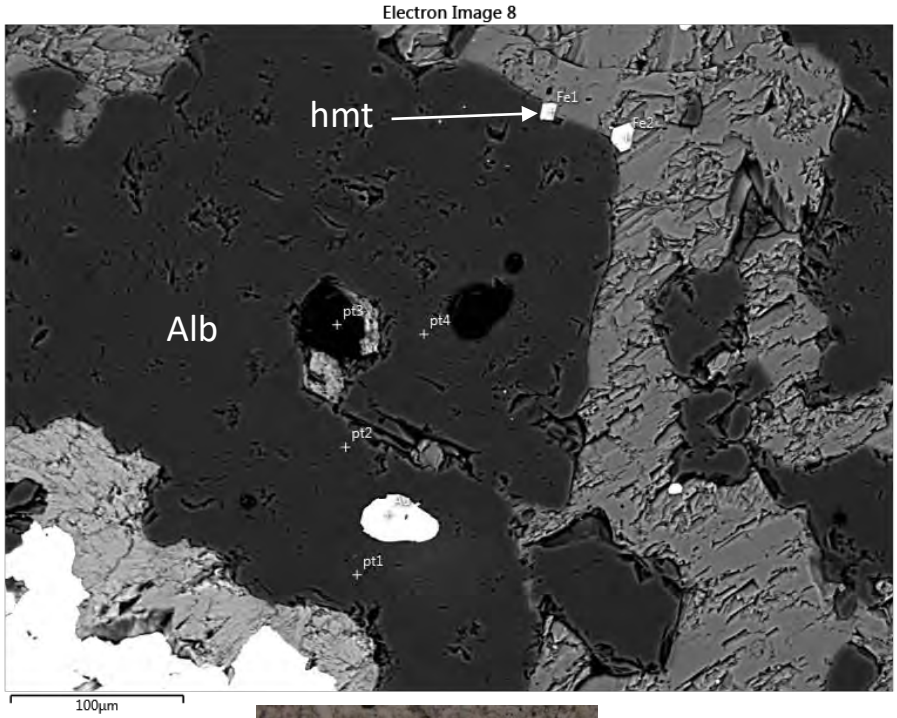


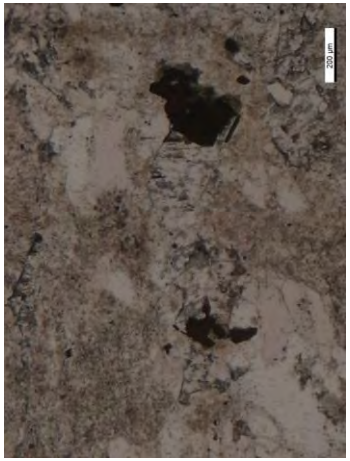


THM51C: S5

Stage 3 Chl2 (+ stage 4 Au, Cpy, Te-Bi_2Se_3, calcite overprint?) – stage 3 overprinted by stage 4?

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C

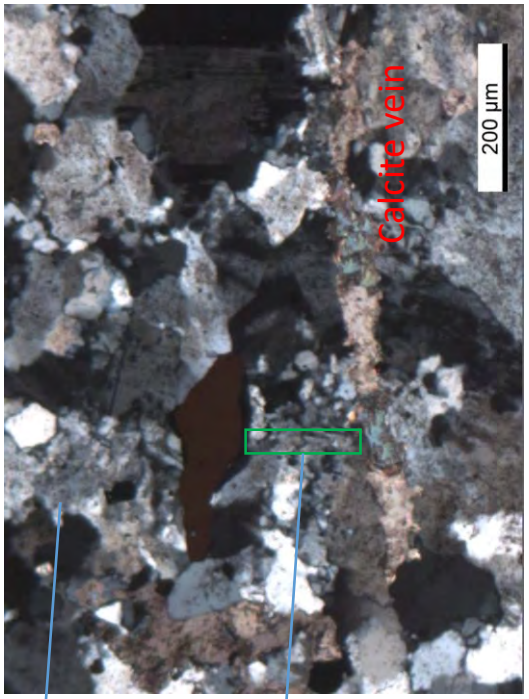




THM51C: S6

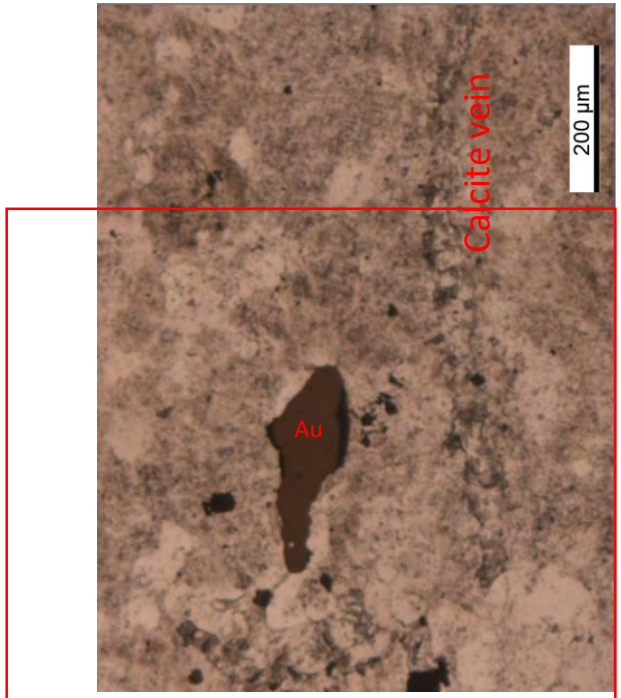
Alb associated with Au in stage 2

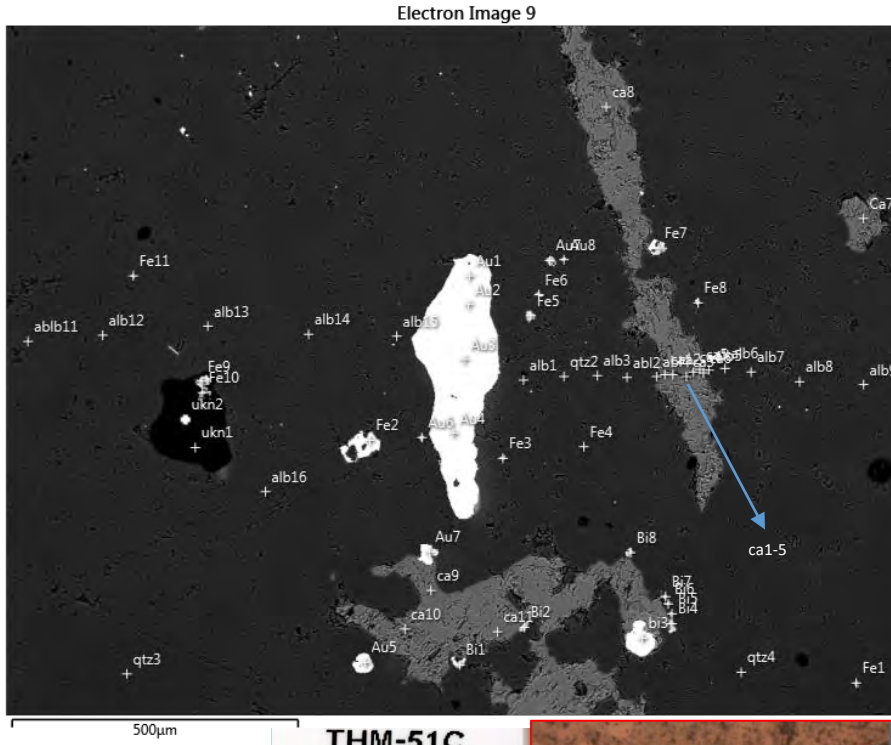
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C

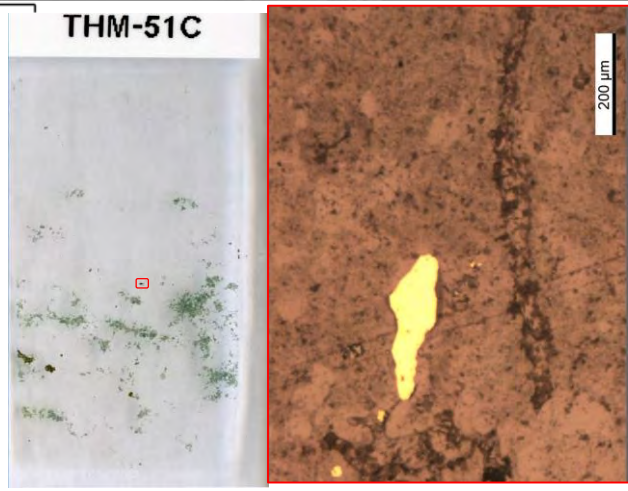


Alb (Alb16)

Alb+qtz



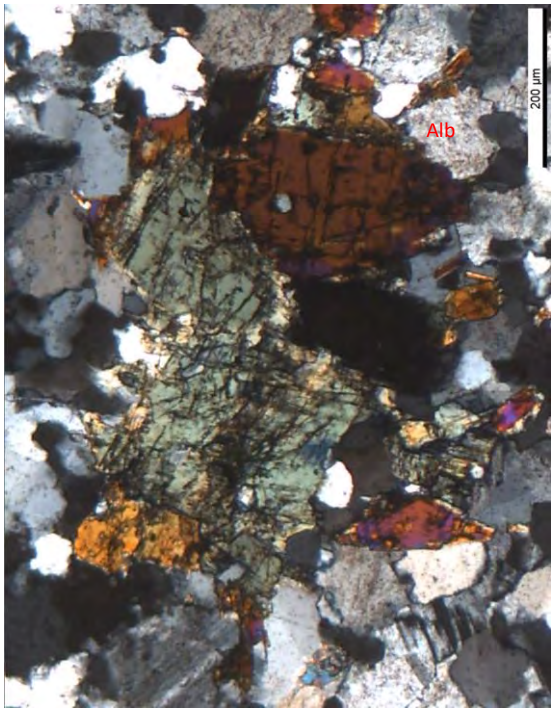


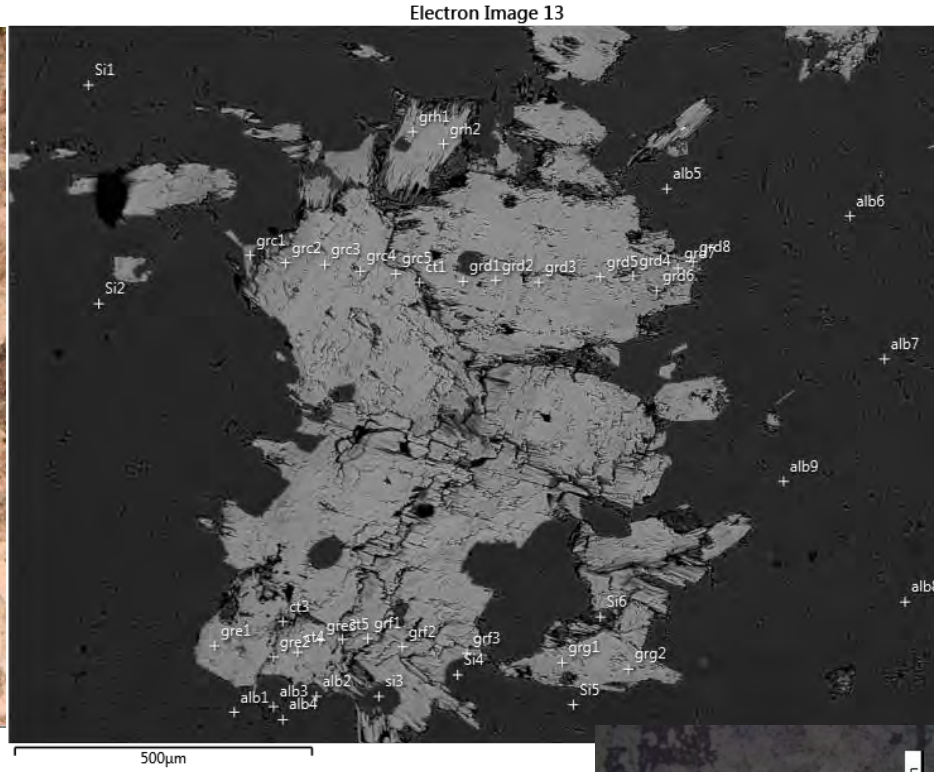


THM51C: S7

- Multistage D_3: Au + Bi-Se minerals + Alb + hematite + calcite

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C





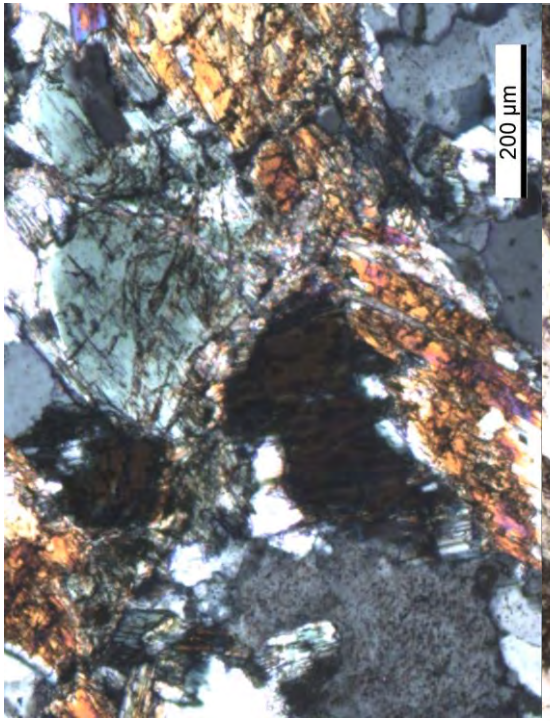
Act

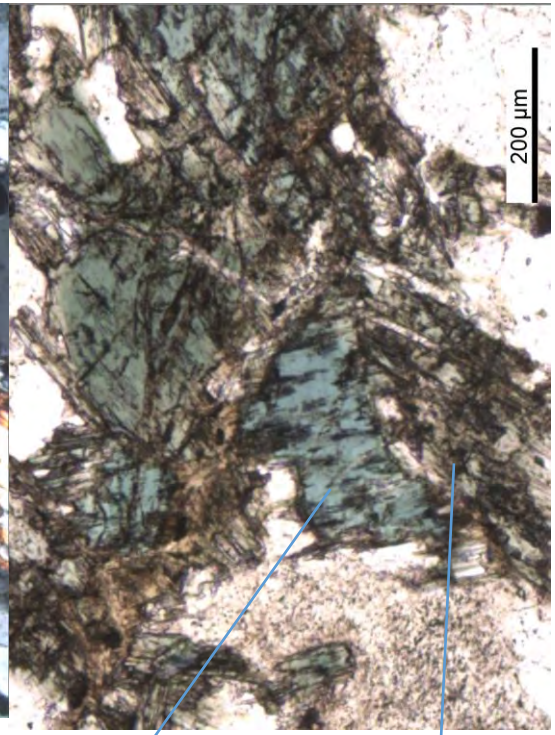
Fe-Mg Hbl

THM51C: S8

Stage 2 Act rimmed stage 1 Hbl

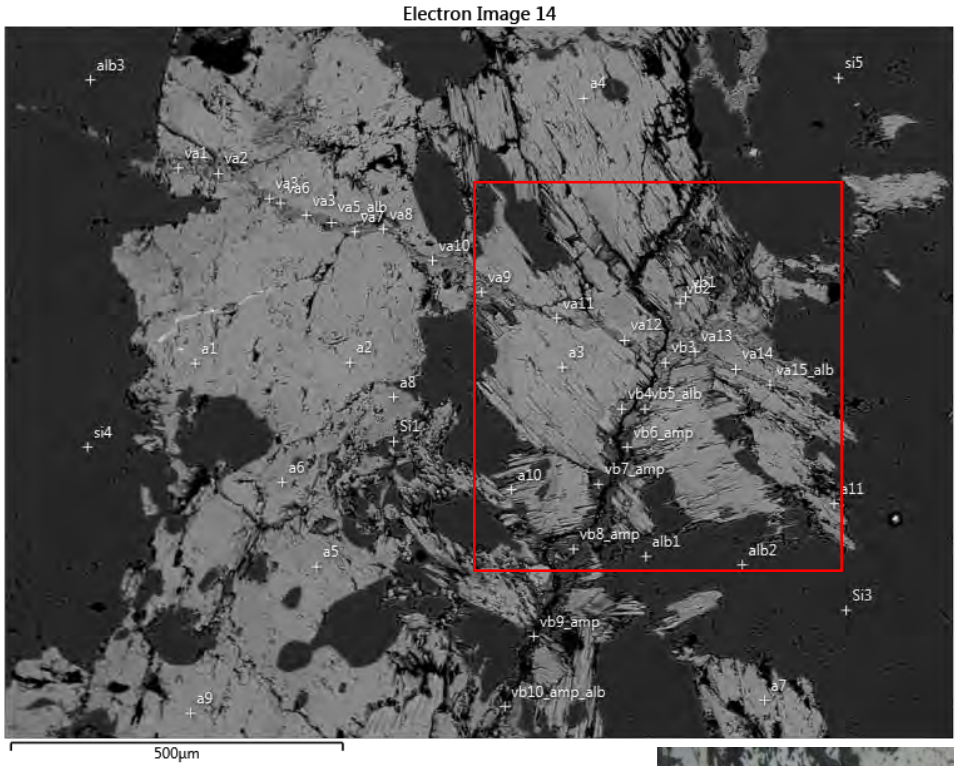
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C





Fe-Mg Hbl

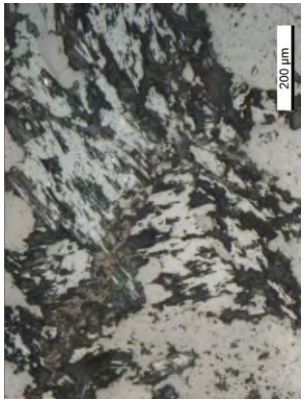
Act



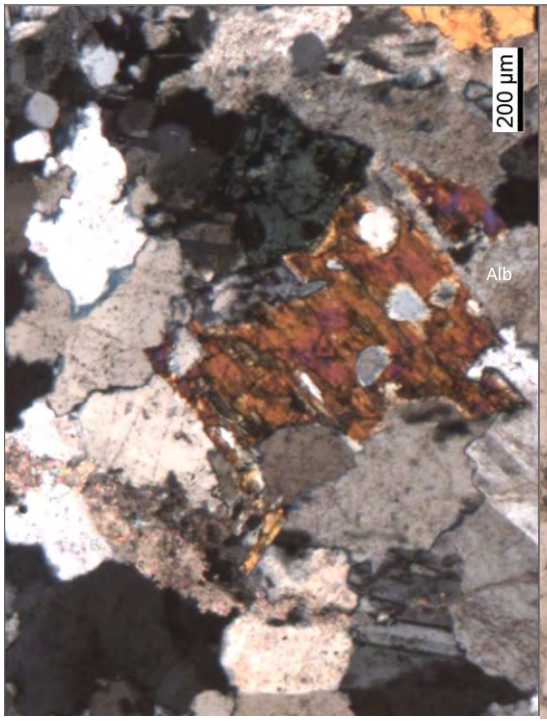
THM51C: S9

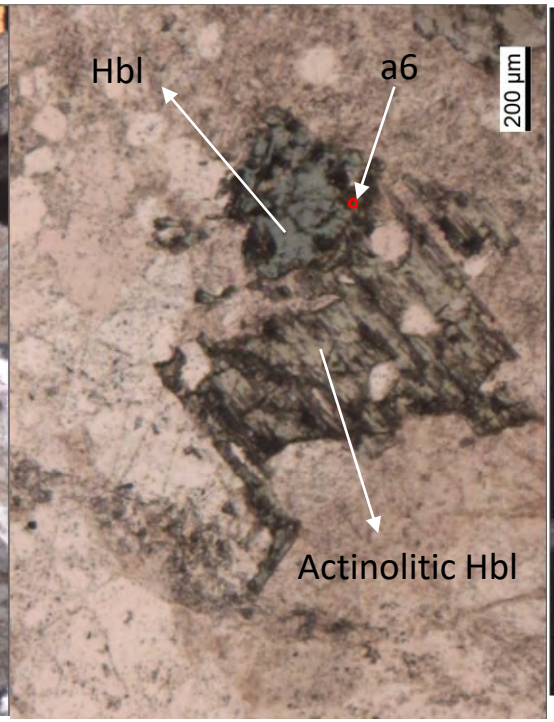
SEM larger than microscope image

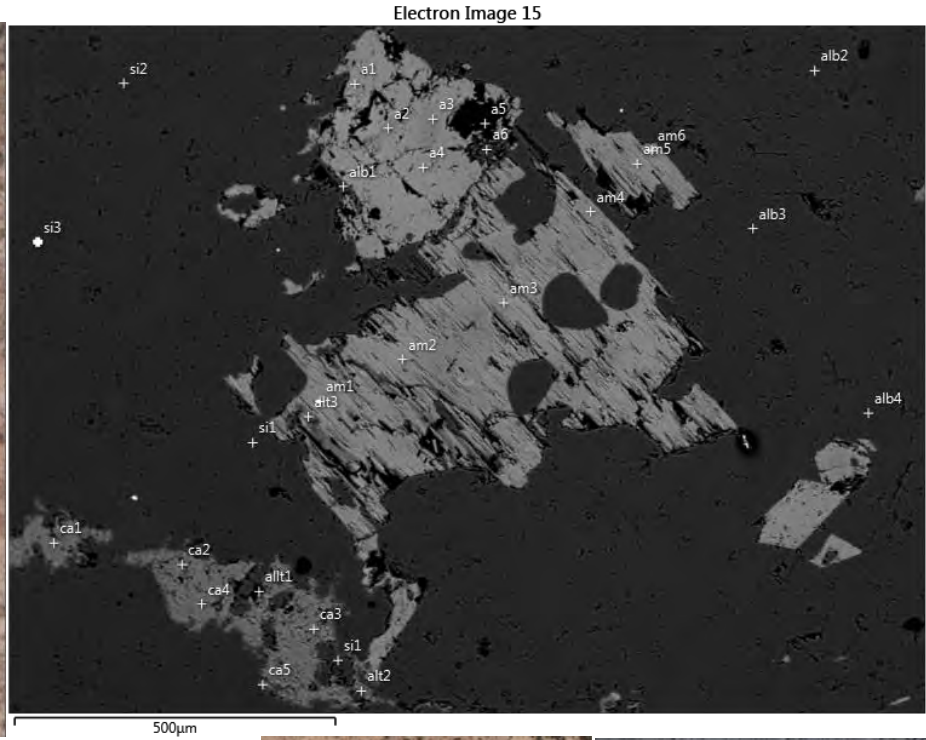
- Hbl is replaced by Act
- Stage 4 calcite veins cutting the amphibole alteration
- Calcite mixed with other minerals



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C

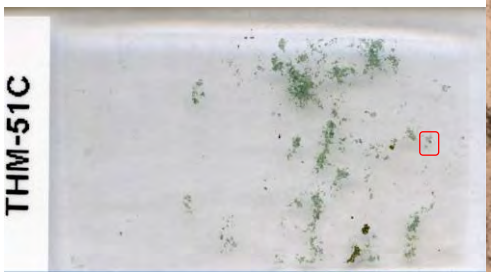




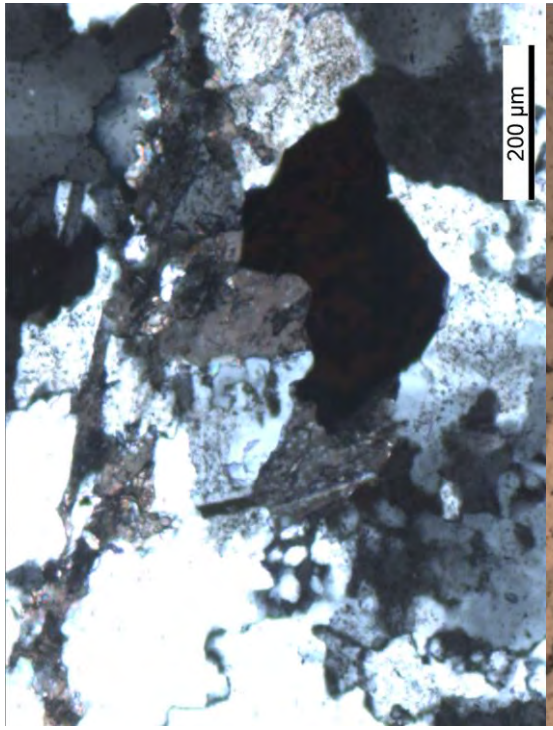


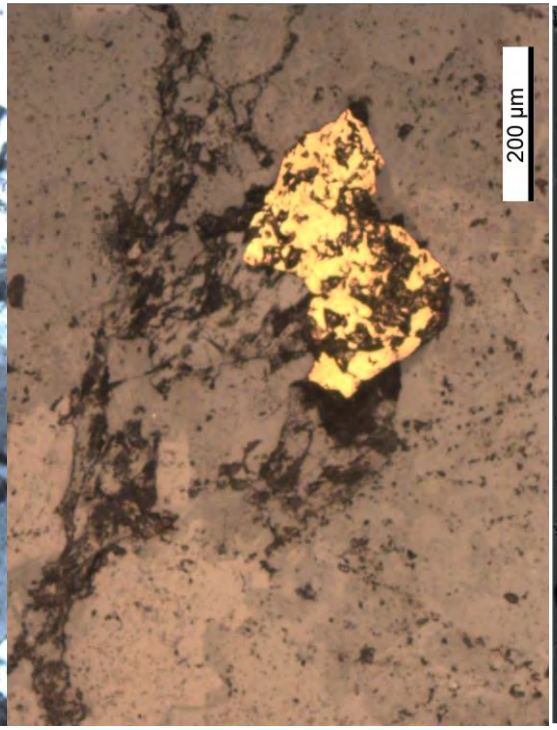
- Stage 1-2 amphibole alt: variation from Fe-Mg Hbl to Act (a2);
  - Mainly Fe-Mg Hbl and actinolitic Hbl
- Point a6 is a different amphibole alt: magnesio-gedrite (magnesio-cummingtonite)

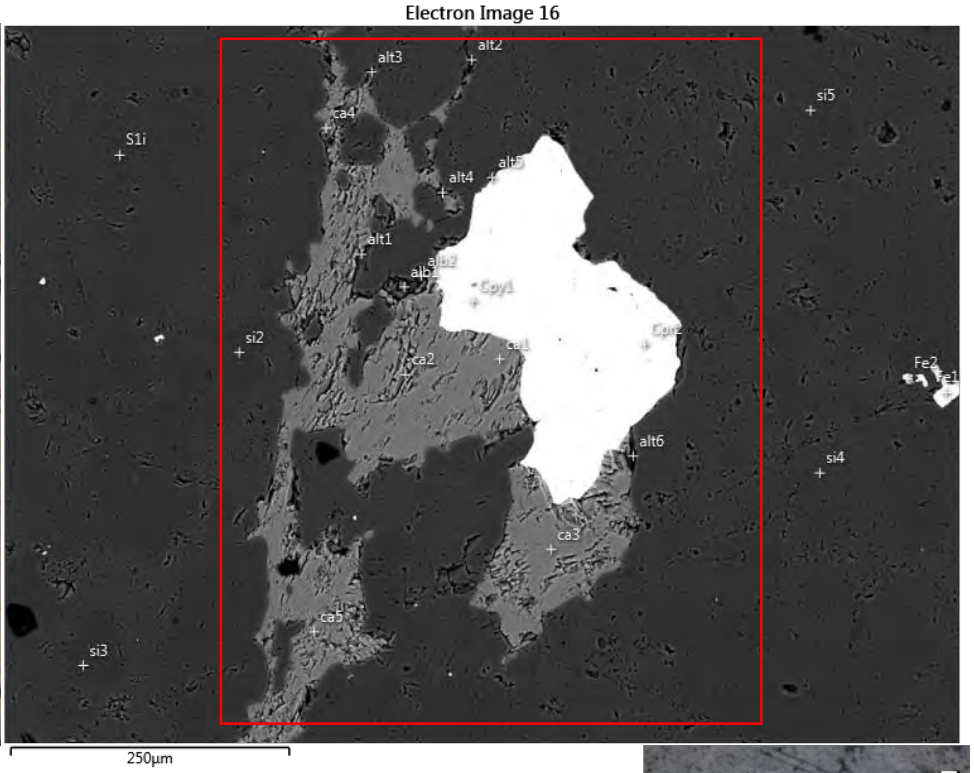
THM51C: S10



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C





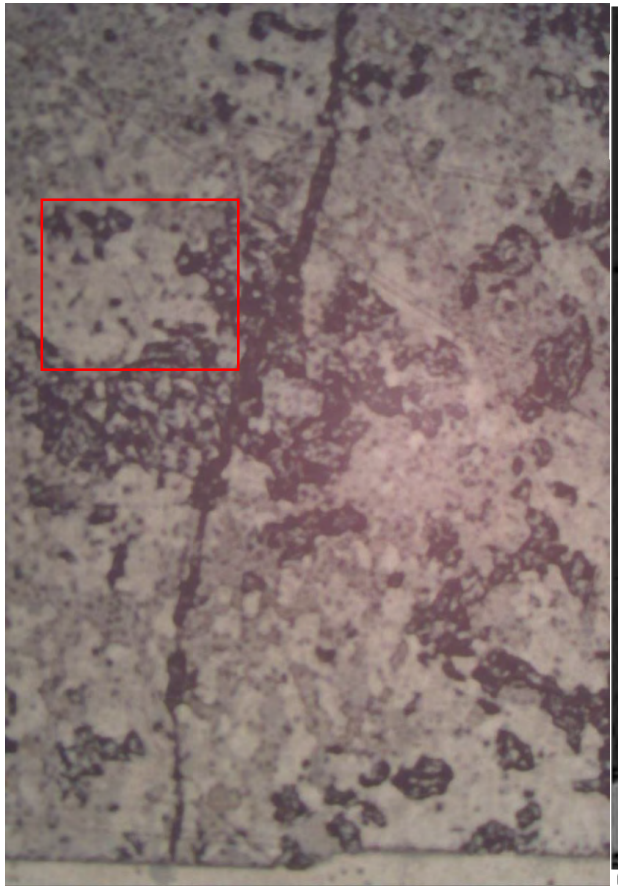


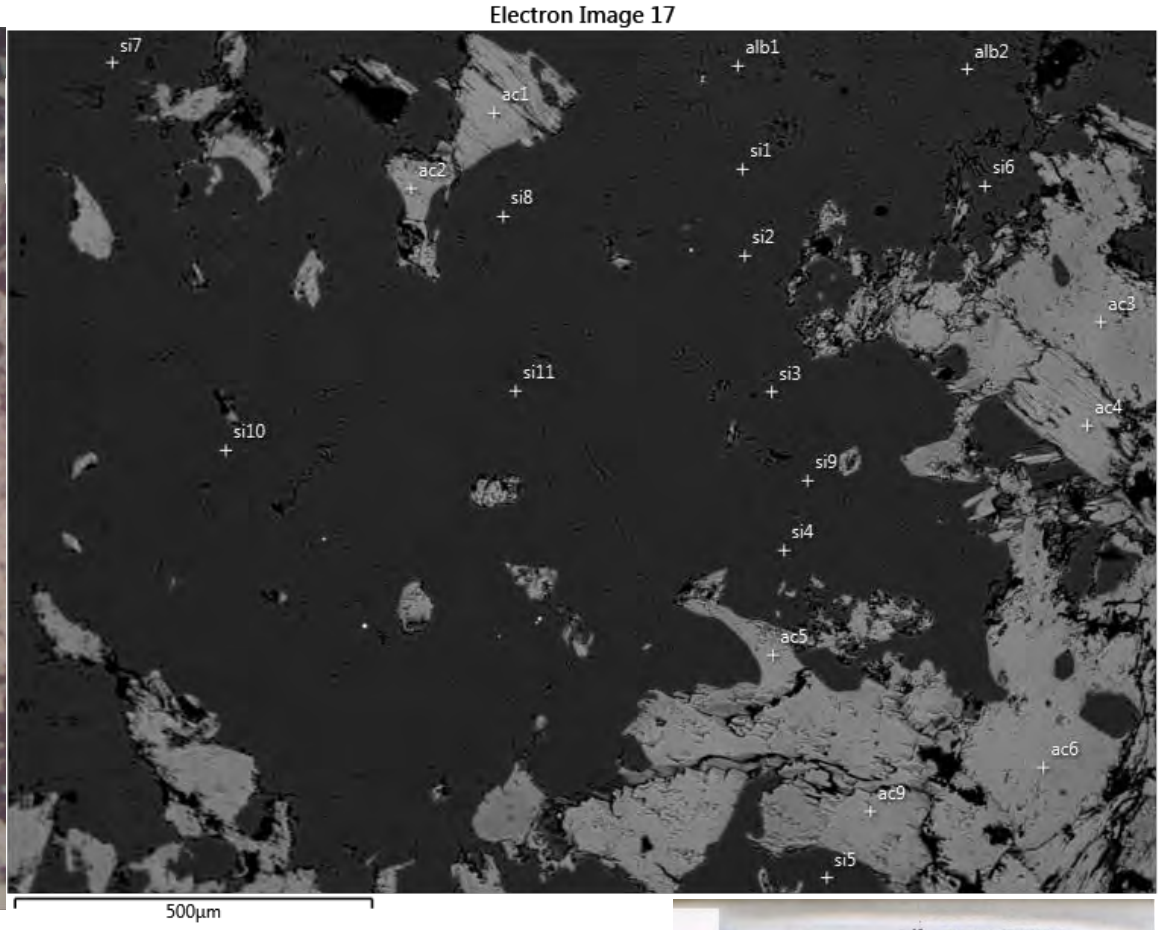
THM51C: S11

SEM larger than microscope image

Cpy associated with stage 4 calcite vein

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM51C





THM51C: S12

- Stage 2-3 Qtz-Alb
- Next to the area of stage 3: stage 4 calcite vein cutting stage 1-2 amphibole

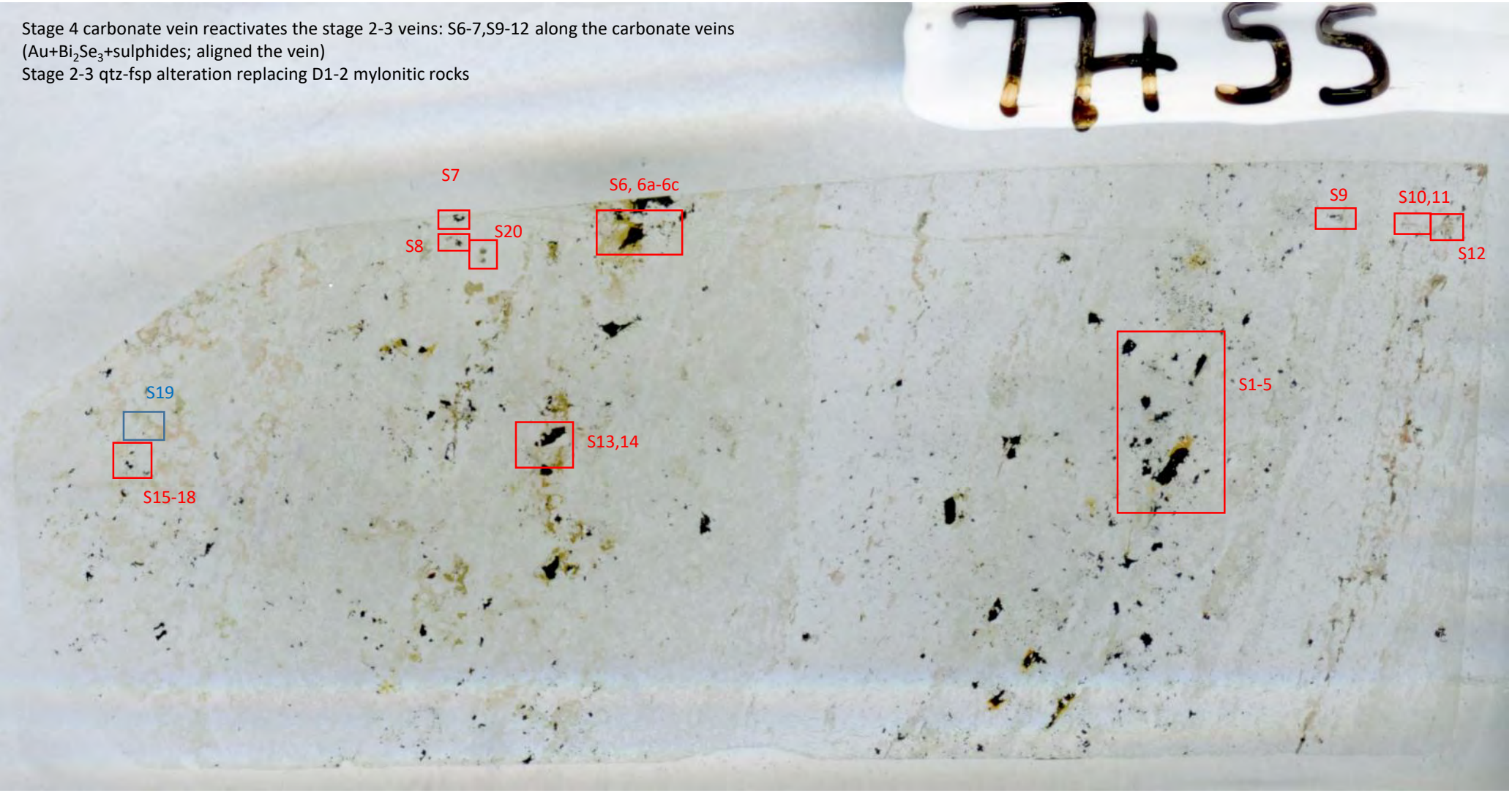
Sample TH55

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

Hand specimen image

Block section image

Thin section map of analysis locations



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

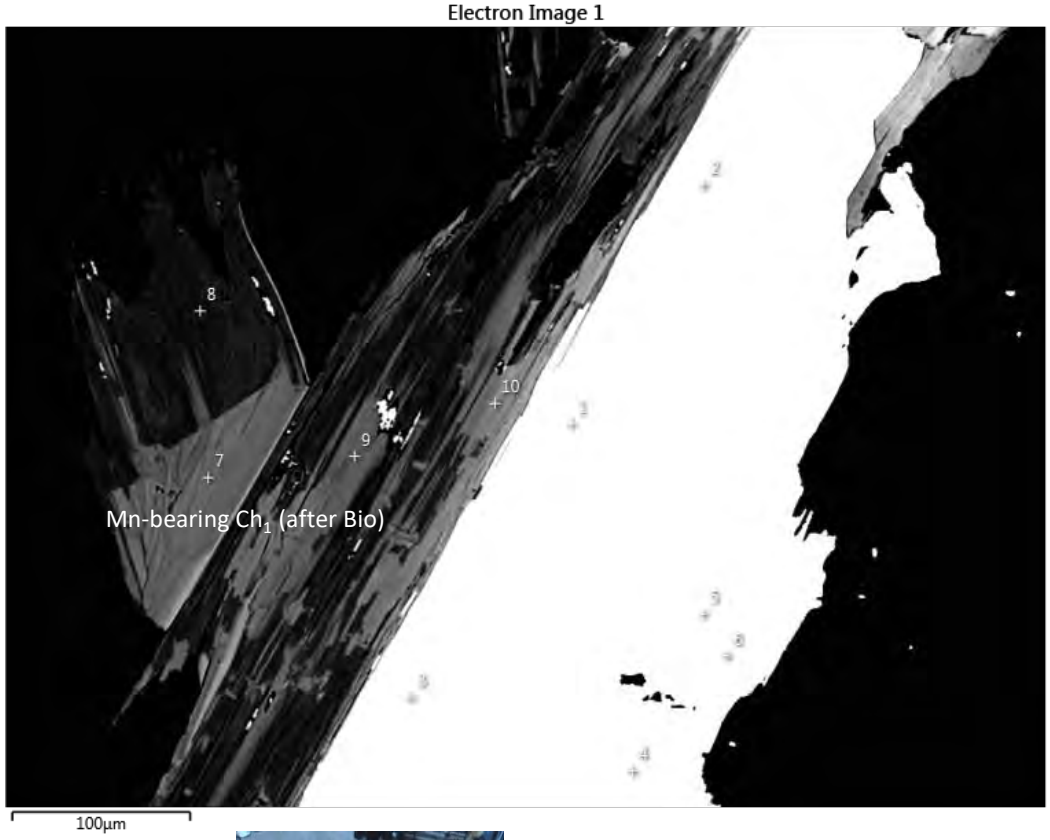
Summary

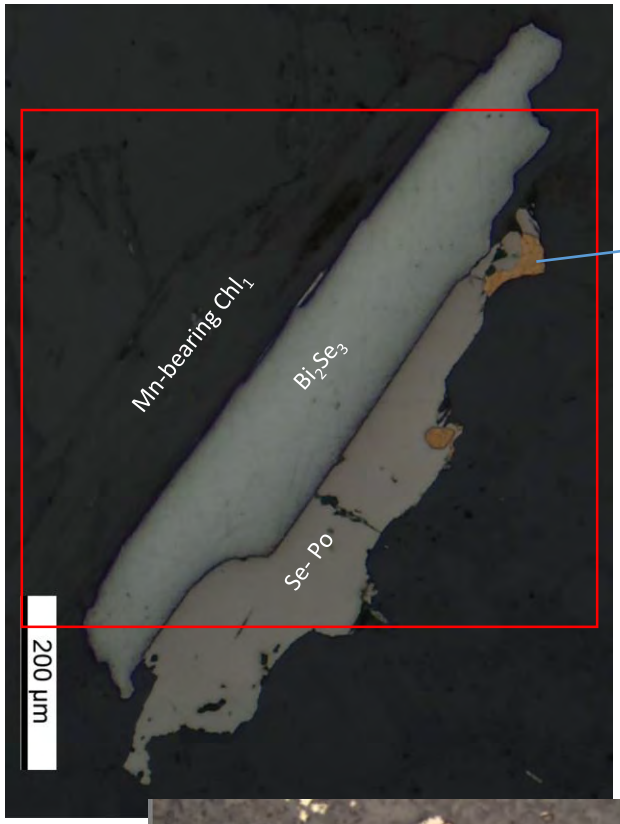
- Stage 2: Assemblage as below; aligned with S_1 fabric or in the sheeted vein that is reactivated during stage 4 event in some locations (Site 9-10)
  - Chl1: relic fabric/texture of biotite, brownish green under cross polarized light
  - Au,
  - Bi_2Se_3
  - Se-Po (similar to TH48 under microscope); Se-Py (similar to TH48 under microscope); Cpy.
  - Act alteration; chl commonly has trace of Na-K-Ca, Mn-Ti; plus the texture => incomplete alteration of bio to chl ?
  - Oligoclase/ Alb
- Stage 3:
  - Chl2: very dark green under cross polarized light, compared to brownish green under cross polarized light of Chl1, various shapes, with inclusion of Au
  - K-fsp
  - Alb-oligioclase
  - Au
  - Amphibole (not sure stage 1-2 or even relic D_{1-2} amphibole)
- Stage 4: Calcite vein contain "Au + Se-Po + Bi_2Se_3" with mineral shape aligned with the vein trend. This could be due to the activation of the earlier Au-Po- Bi_2Se_3 sheeted vein during stage 4.
  - Calcite with trace of Mn
  - Au (immobile?)
  - Chl3 (very low Al)

Bismuth selenide in this sample:

- Commonly rich in very Au-rich sample (THM51C, TH55 ; Similar to THM51C and THM46, THM27, TH47 under microscope)
- In sample THM51C, the Bi_2Se_3 appears to associated with calcite veins and Au-Cpy
- In the sample TH55, the Bi_2Se_3 is not likely associated with calcite veins. The Bi_2Se_3 in this sample is aligned with the S_1 fabric

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

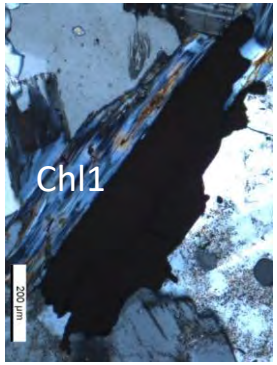




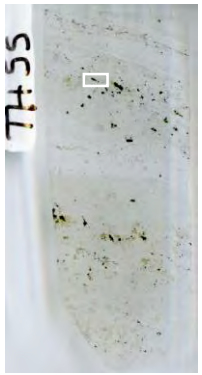
TH55: S1

Pure Au

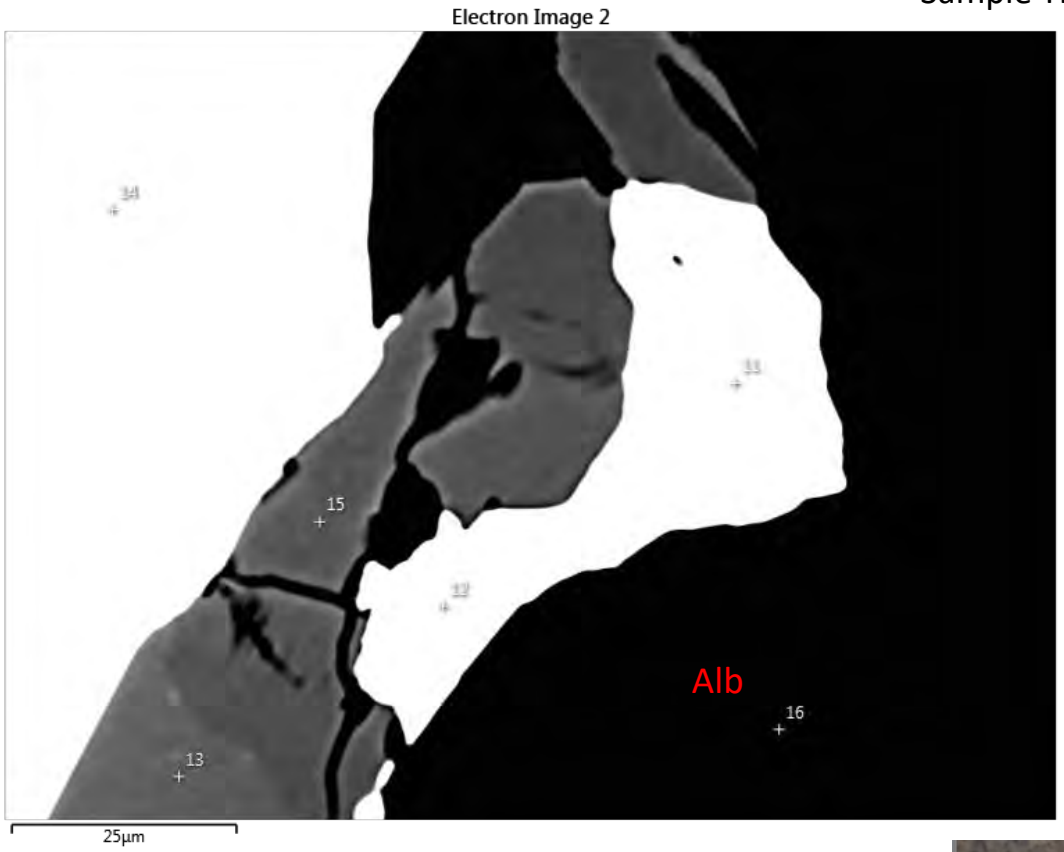
Element	Wt%
S	39.47
Fe	58.59
Se	1.95

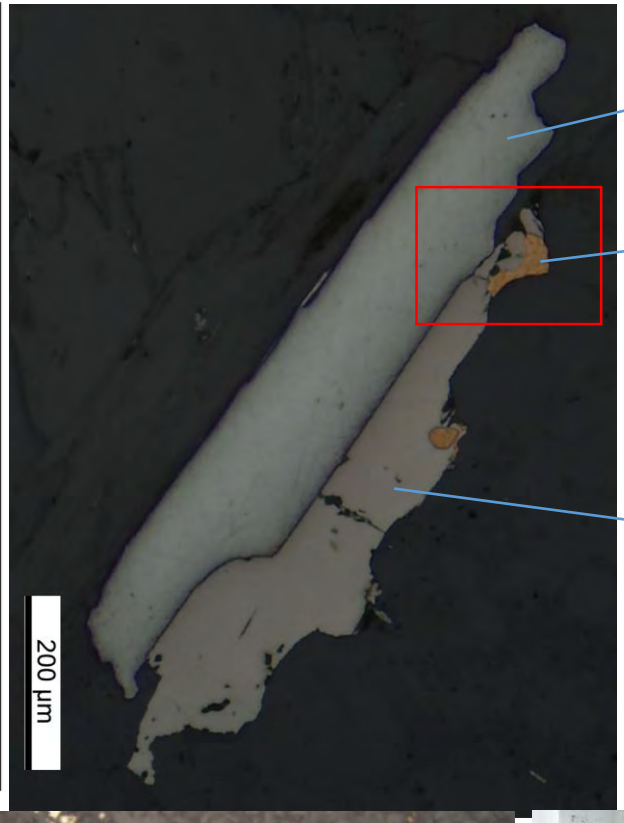


Chl$_1$-Au-Bi$_2$Se$_3$-Po (stage 2)



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55





Bismuth selenide
Bi_2Se_3

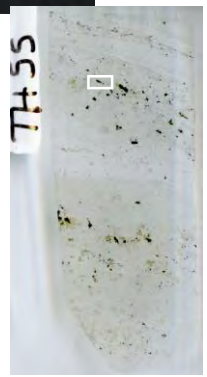
Pure Au

Selenide Po

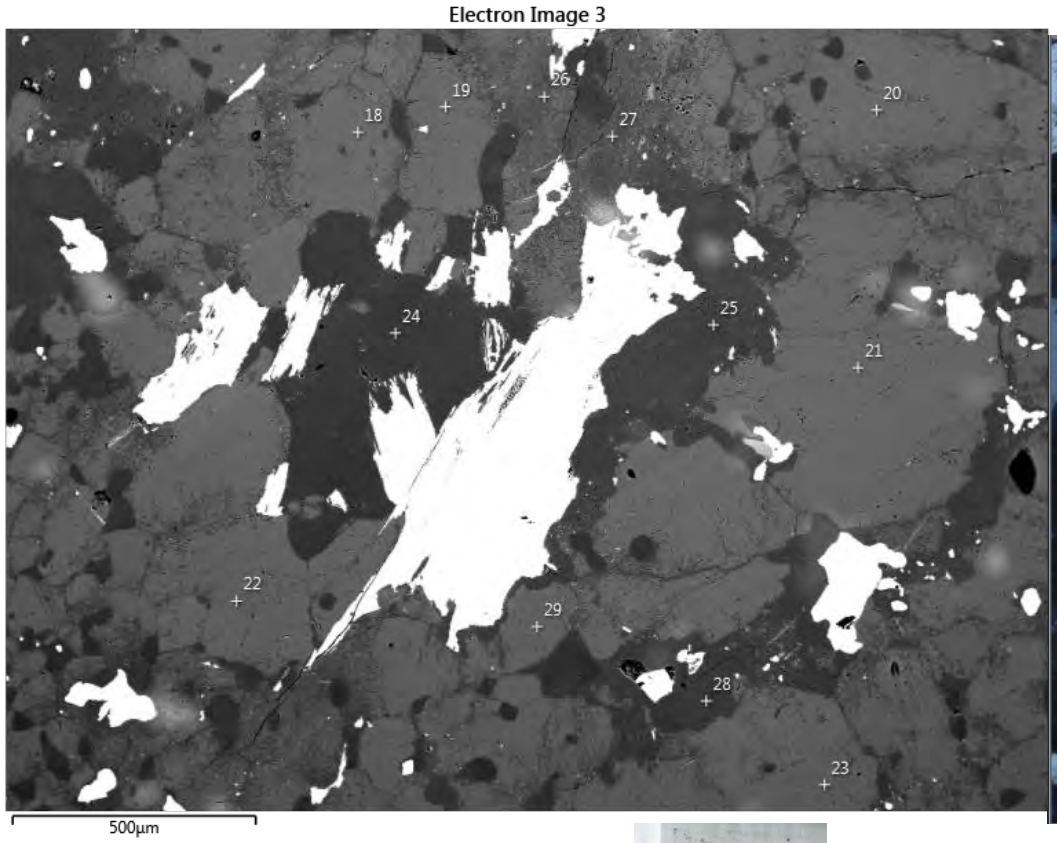
Element	Wt%
S	39.47
Fe	58.59
Se	1.95

TH55: S1A

Chl1-Alb-Au-Bi_2Se_3-Po (Stage 1-2)



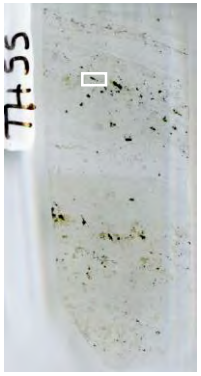
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55



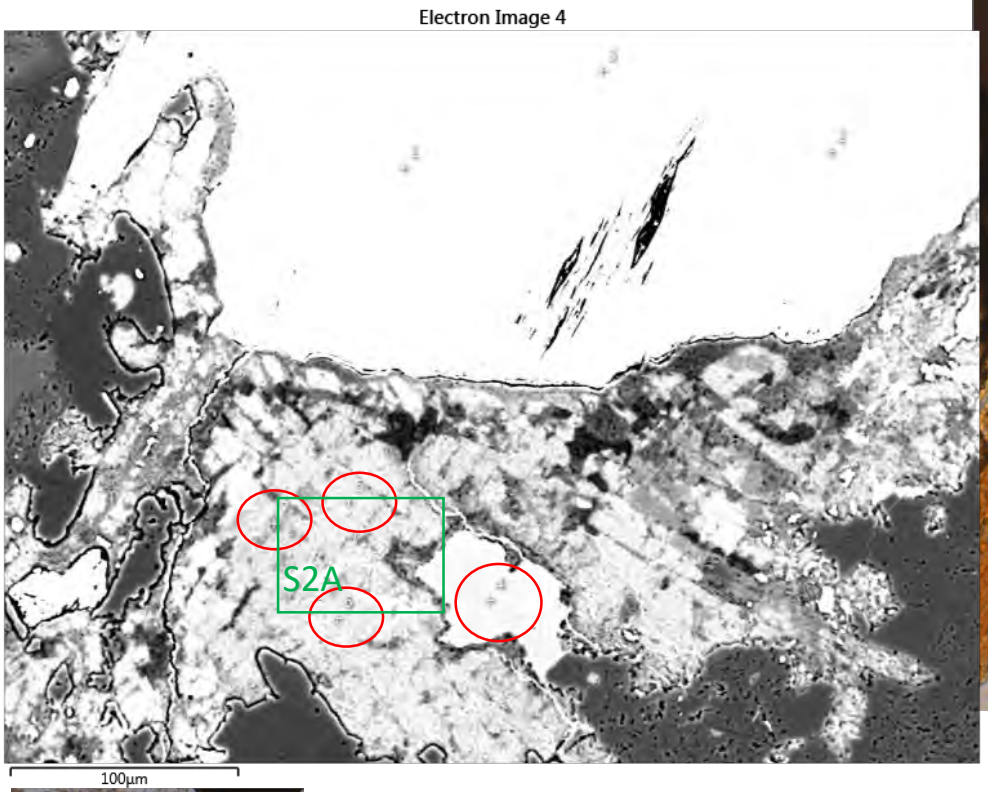
Chl_1 in S1

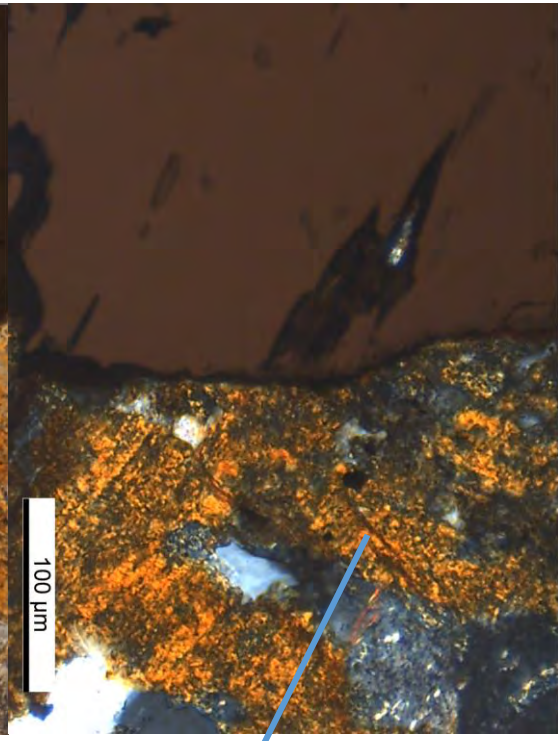
Alb to oligoclase (~0-13% An)

TH55: S1B

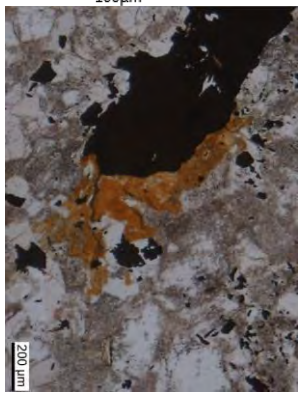


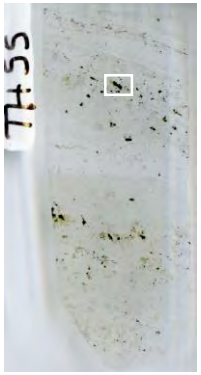
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55





K-fsp





TH55: S2

D3 alteration:

- Siderite mixed
- Associated with Chl_2 (stage3)

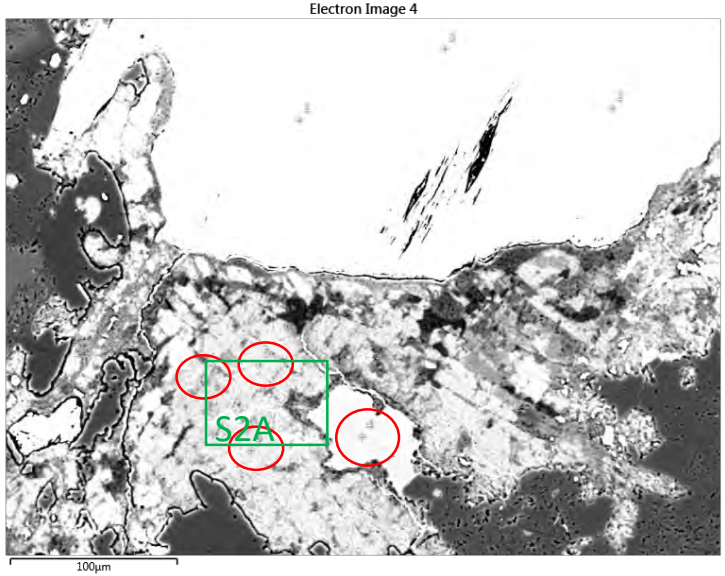
Oxide	Oxide %
MgO	13.52
Al2O3	22.59
SiO2	40.77
SO3	1.25
K2O	1.54
FeO	20.33
	100

Oxide	Oxide %
MgO	24.24
Al2O3	24.58
SiO2	37.15
SO3	0.37
K2O	0.47
FeO	13.2
	100

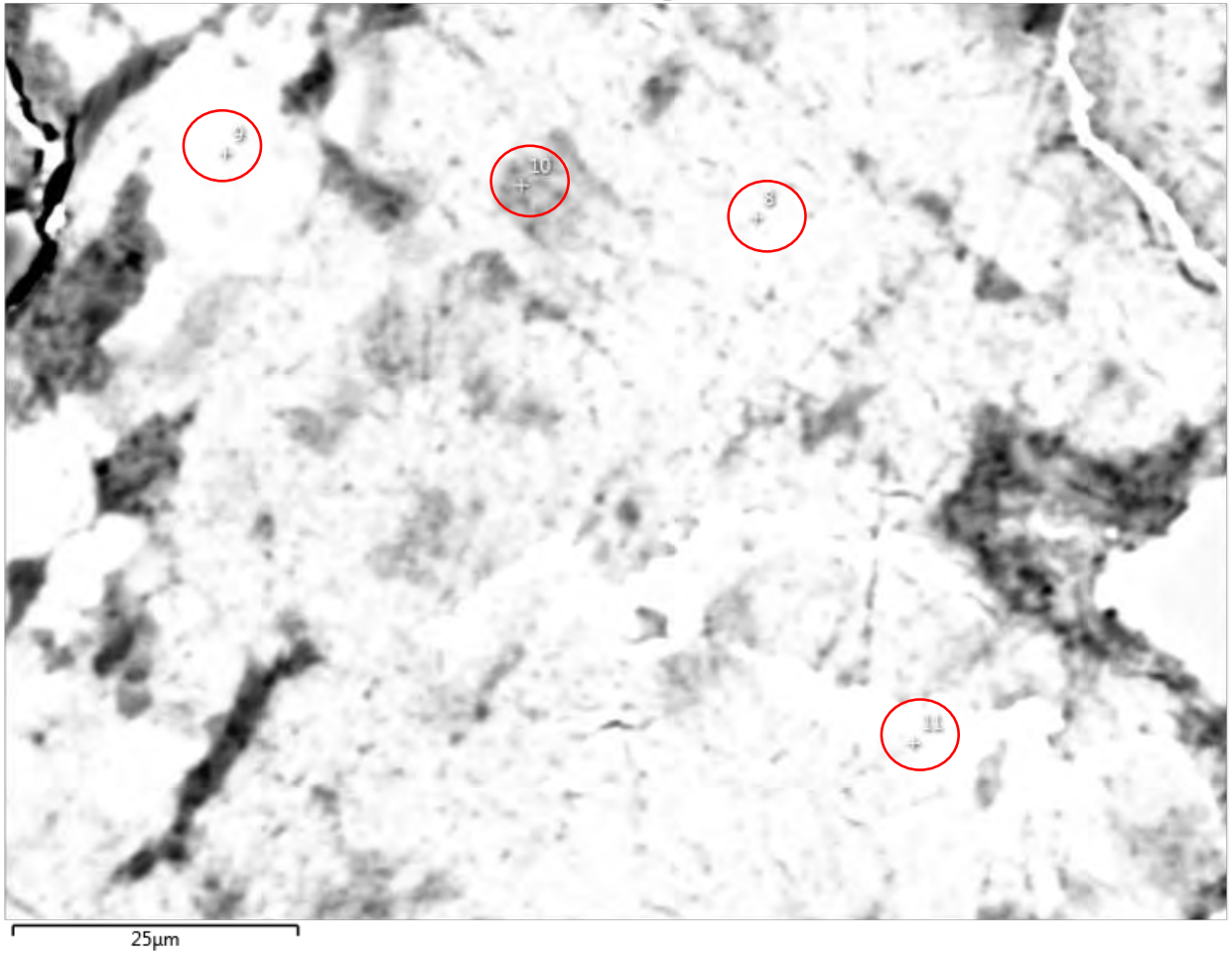
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

TH55: S2A (zoom in from S2)

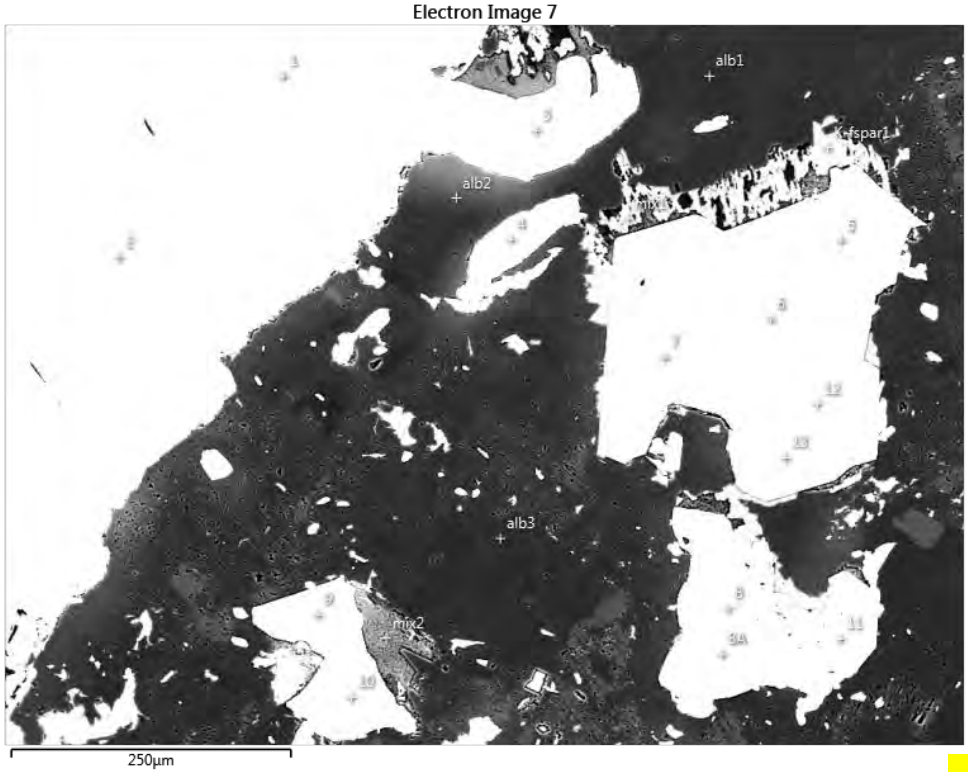
Electron Image 4

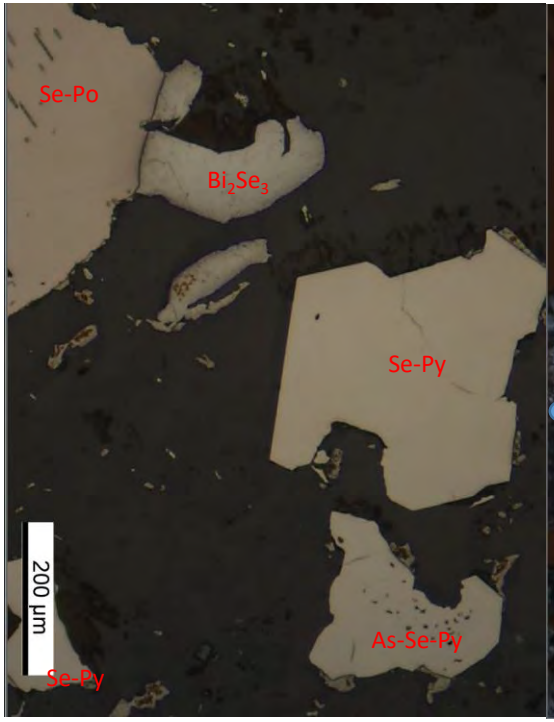


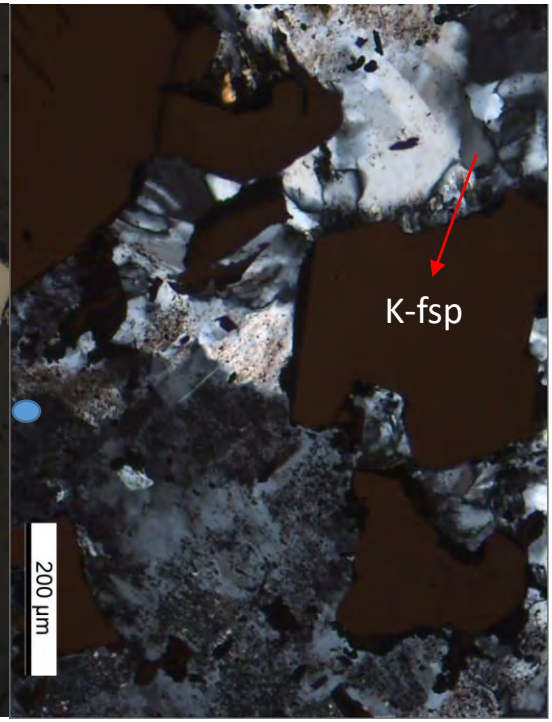
Electron Image 5

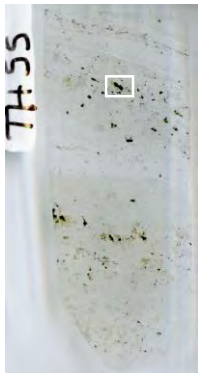


Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55





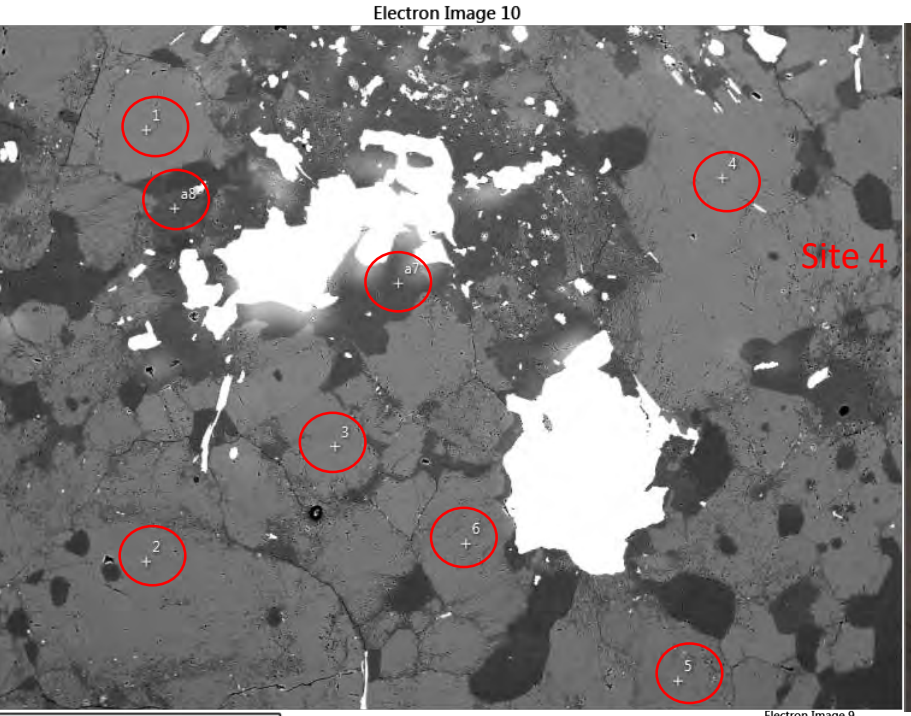


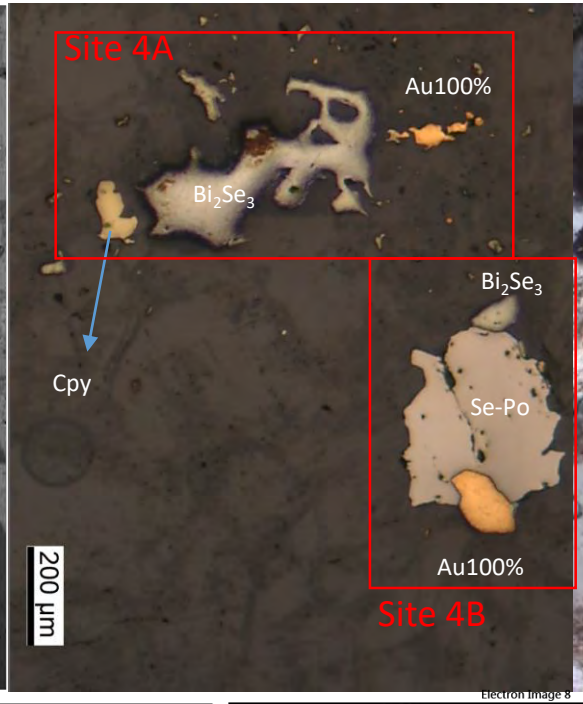


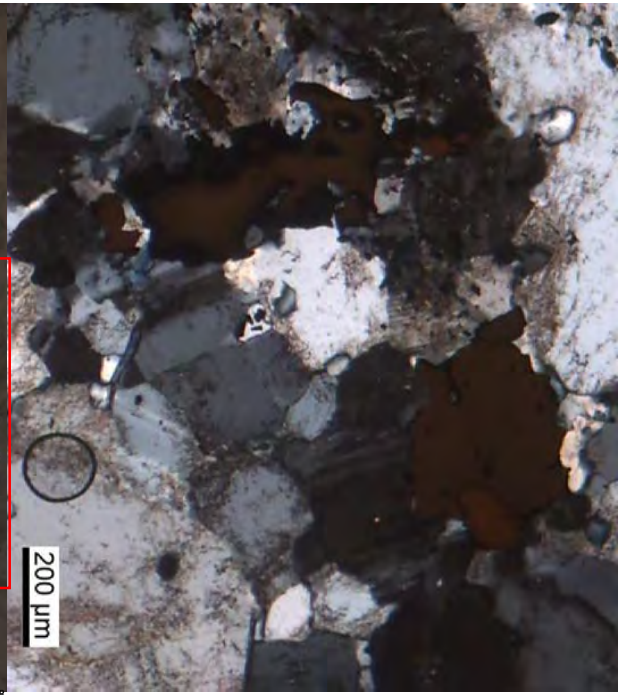
TH55: S3

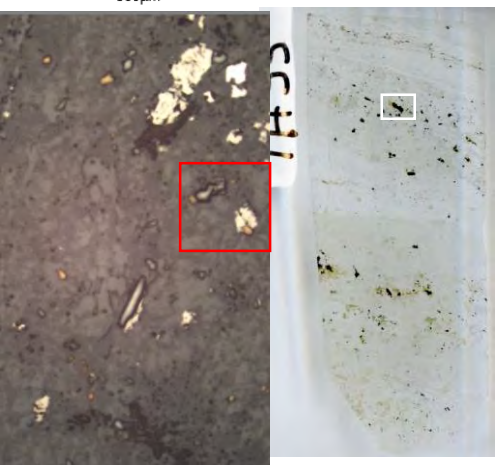
- Fsp: Alb+ minor K-fsp
- Stage 2 assemblage in this site:
  - Bi_2Se_3
  - As-Se-Py
  - Se-Po
  - Alb
  - K-fsp

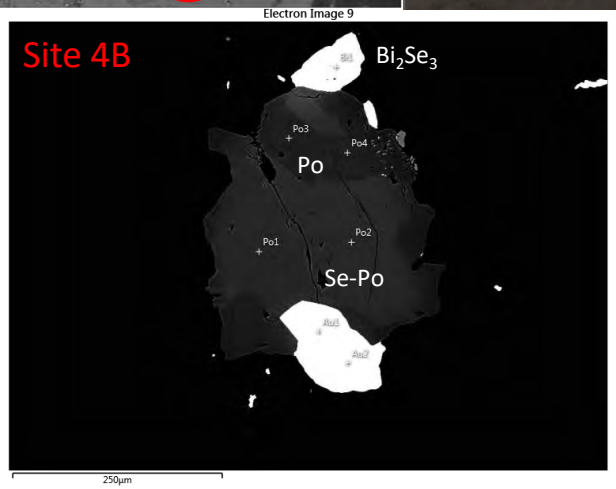
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

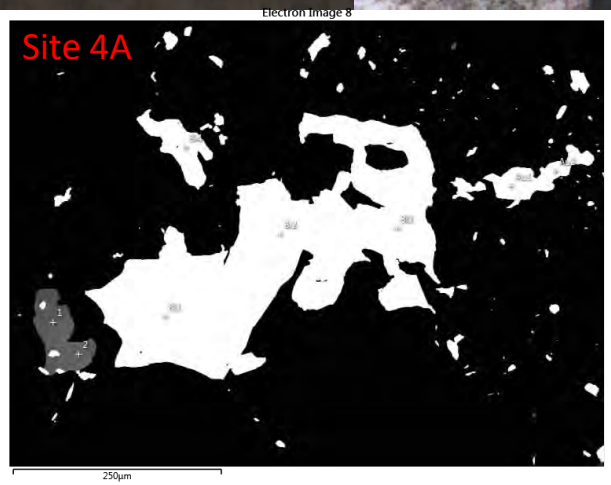












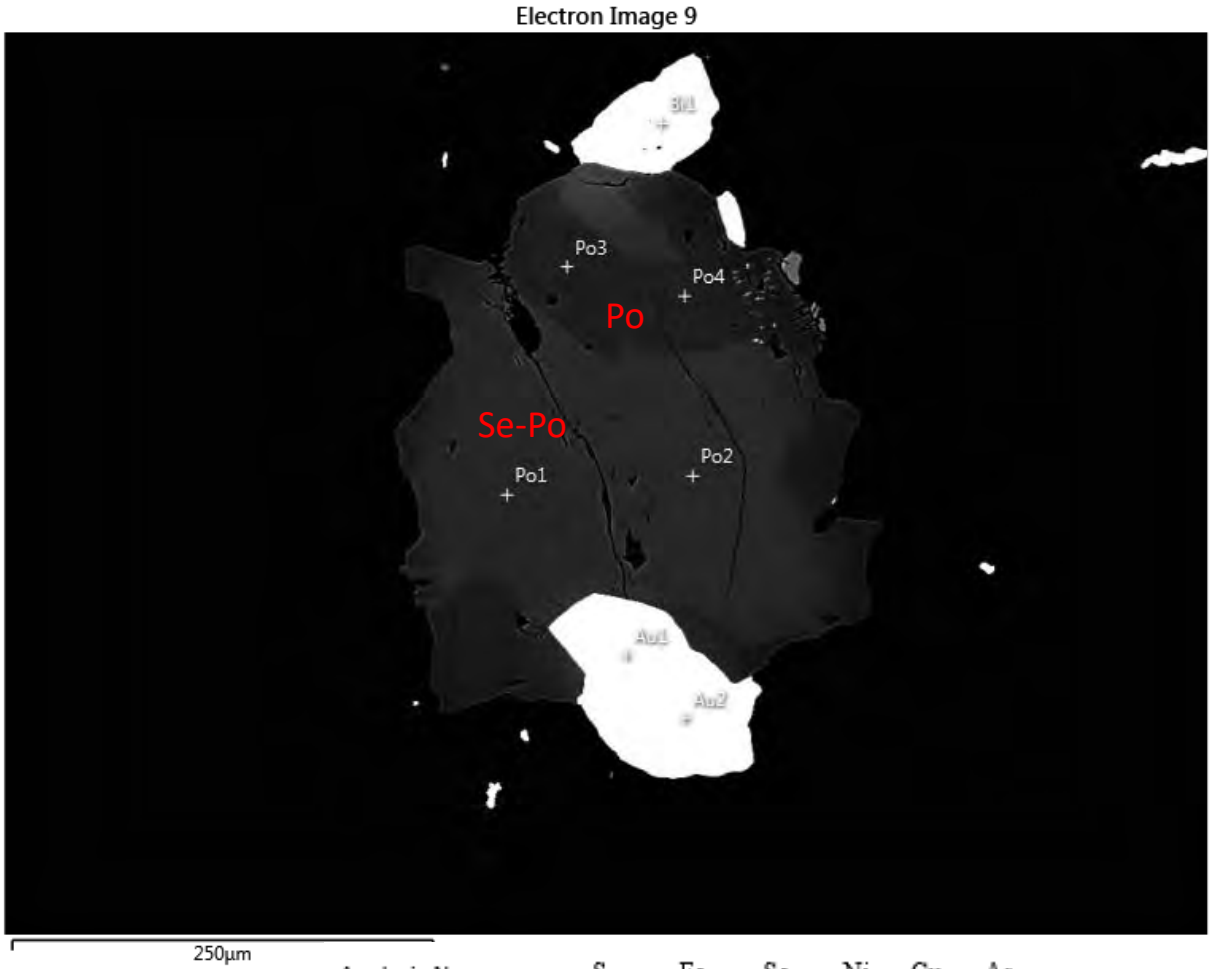
TH55: S4A-4B

Mineral assemblage:

- Alb-oligoclase
- Bi_2Se_3
- Se-Po
- Au

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

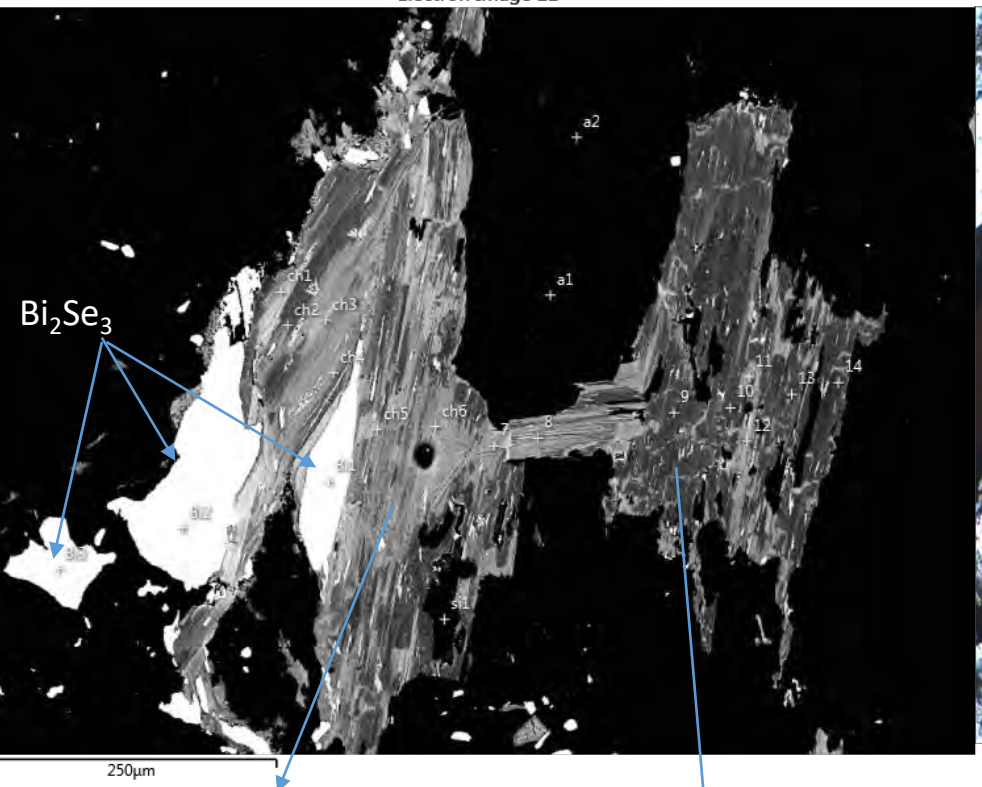
TH55: S4B

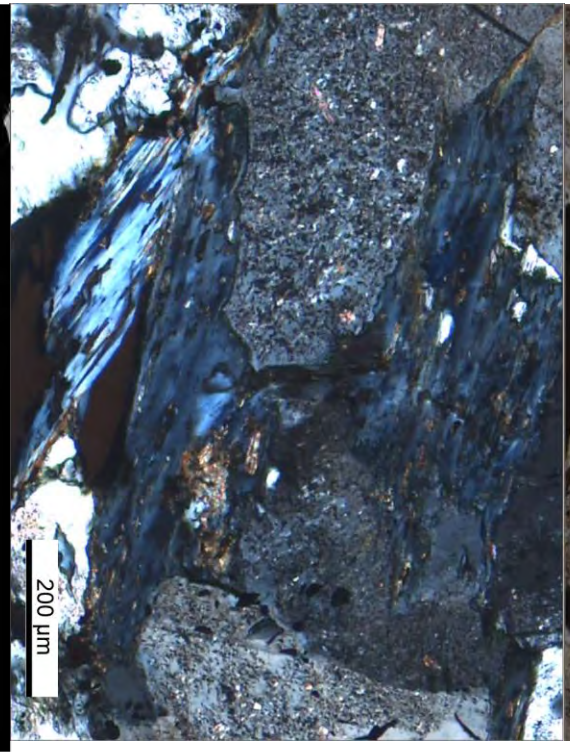


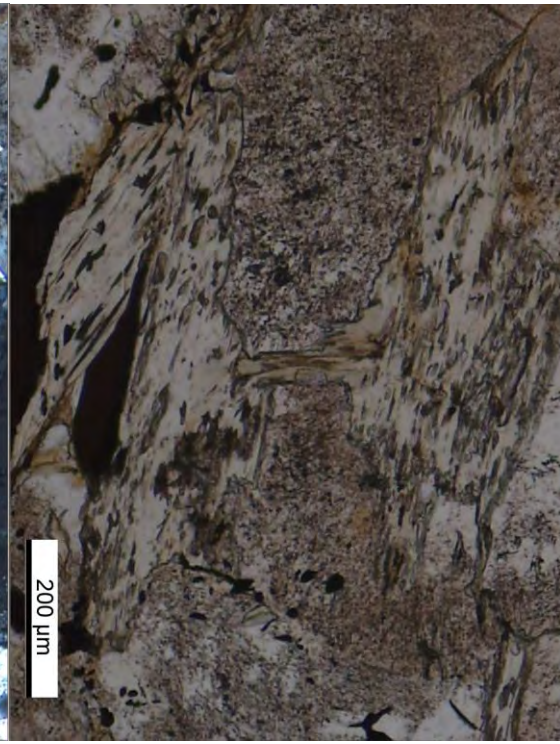
Analysis No	S	Fe	Se	Ni	Cu	As
TH55-s4b-Po1	39.63	59.28	1.10			
TH55-s4b-Po2	39.75	58.86	1.40			
TH55-s4b-Po3	40.72	59.28				
TH55-s4b-Po4	40.71	59.29				

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

Electron Image 11







Mn-(+Ti) Chl_1

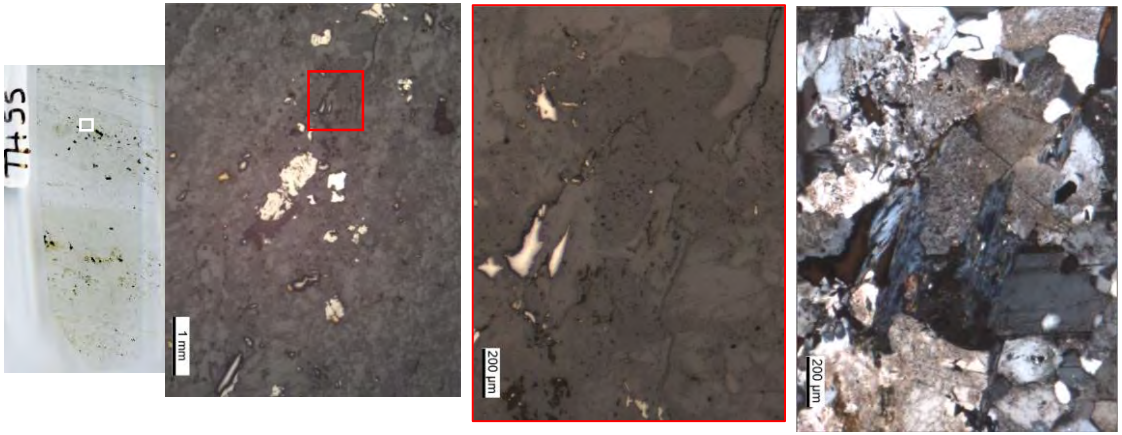
TH55: S5

SEM image: brighter color show Mn-Ti chl_1
Bi2S3 associated with chl_1 (after biotite, the shape of chl is still preserved)

(Mn-Ti) Chl_1

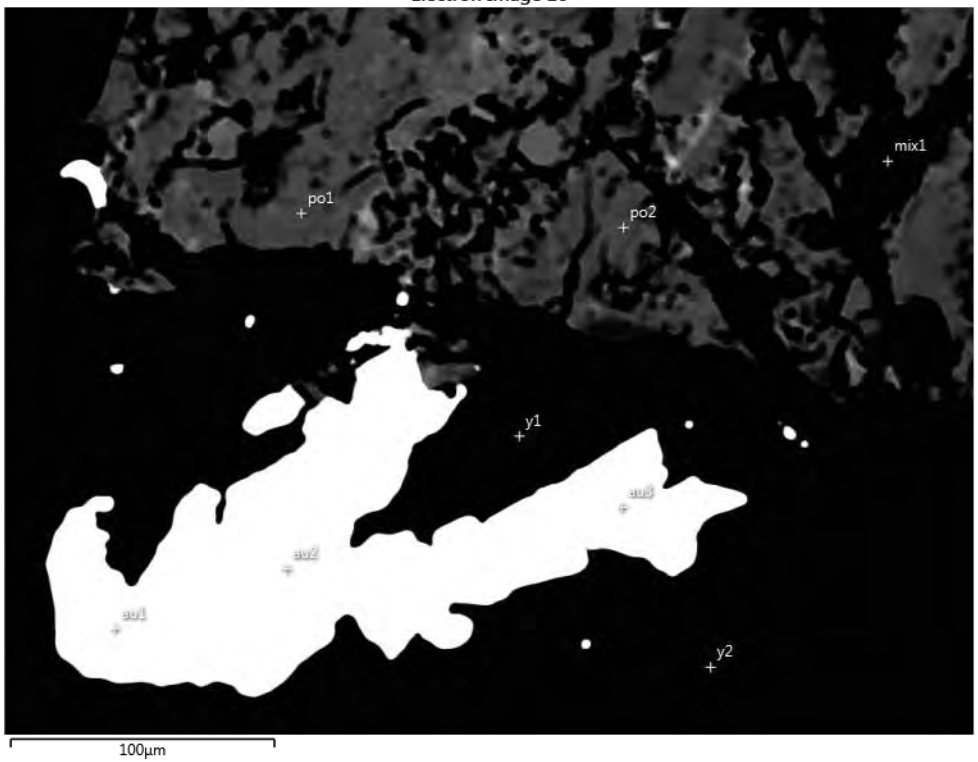
Spots 9-10, 13-14: chl_1
11-12: (Mn-Ti) Chl_1

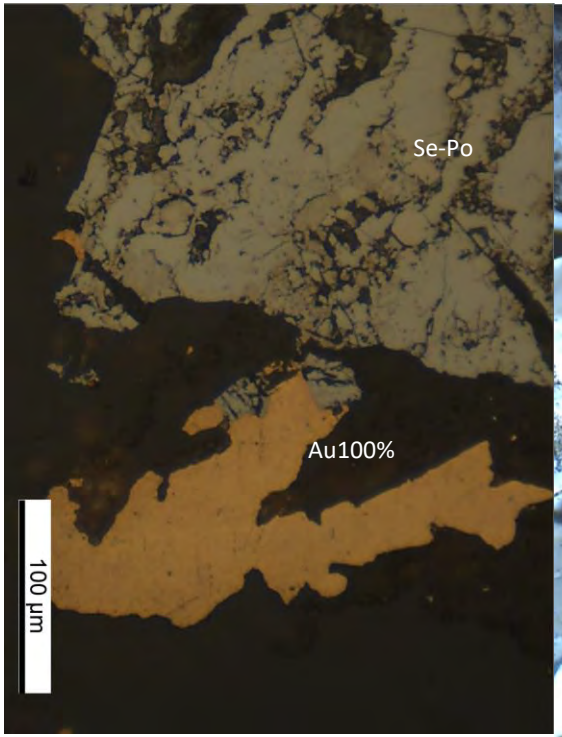
MgO	12.45
Al2O3	23.14
SiO2	28.61
TiO2	0.35
MnO	0.89
FeO	34.57
	100

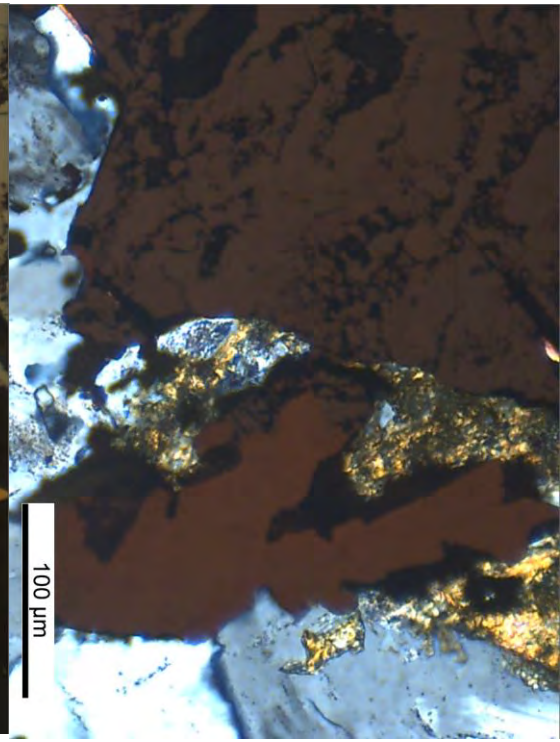


Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

Electron Image 16





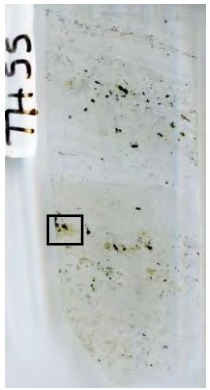


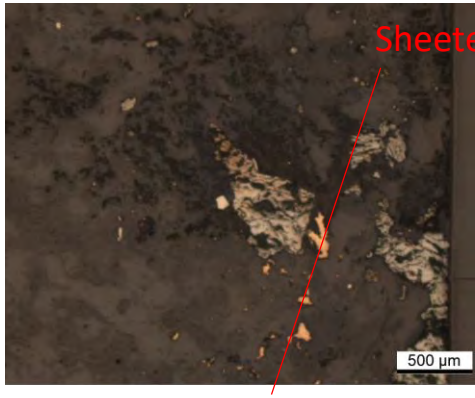
TH55: S6

- Late Au: Au aligned along the late sheeted calcite vein, Stage 4 (mobile Au?)
- Stage 2 early Po
- Yellow-pink, stage 3: siderite mixed with clay minerals ?
- The composition of the "worm-like tubes" in the pyrrhotite is a mixture of different alteration minerals that cannot be defined

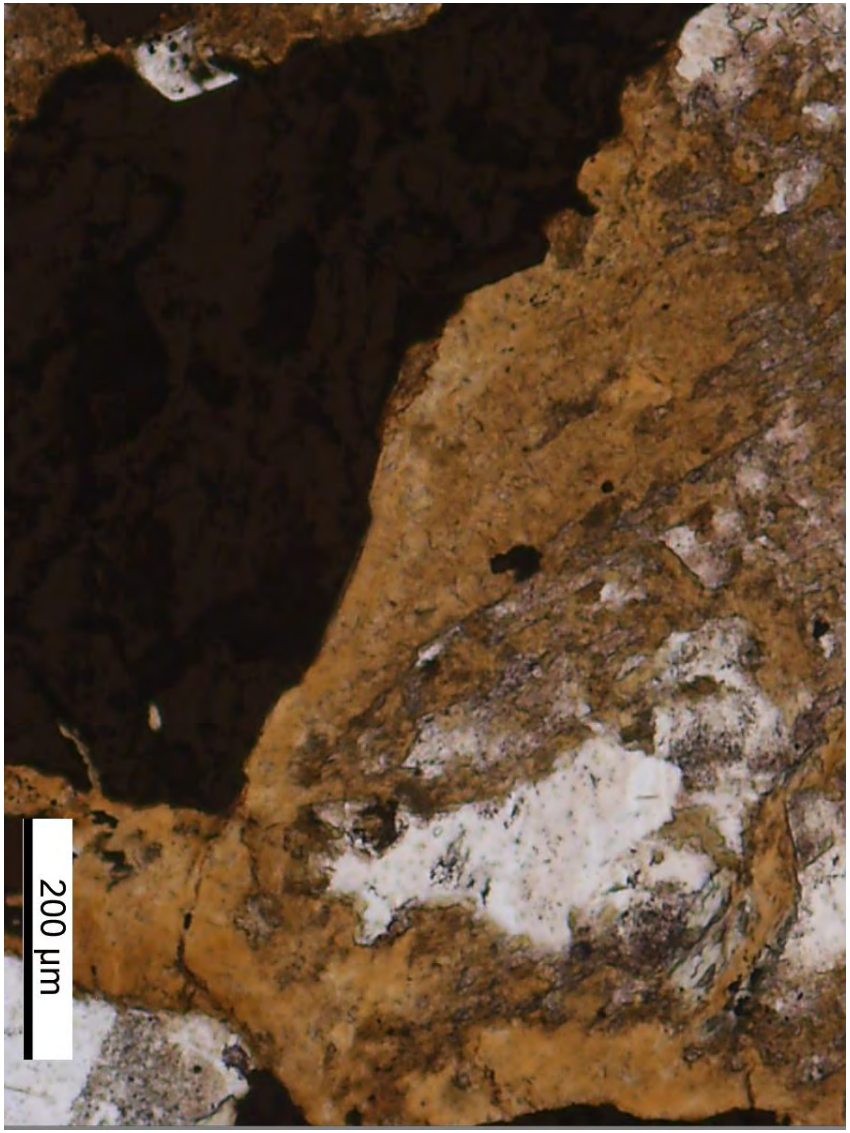
Yellow mineral

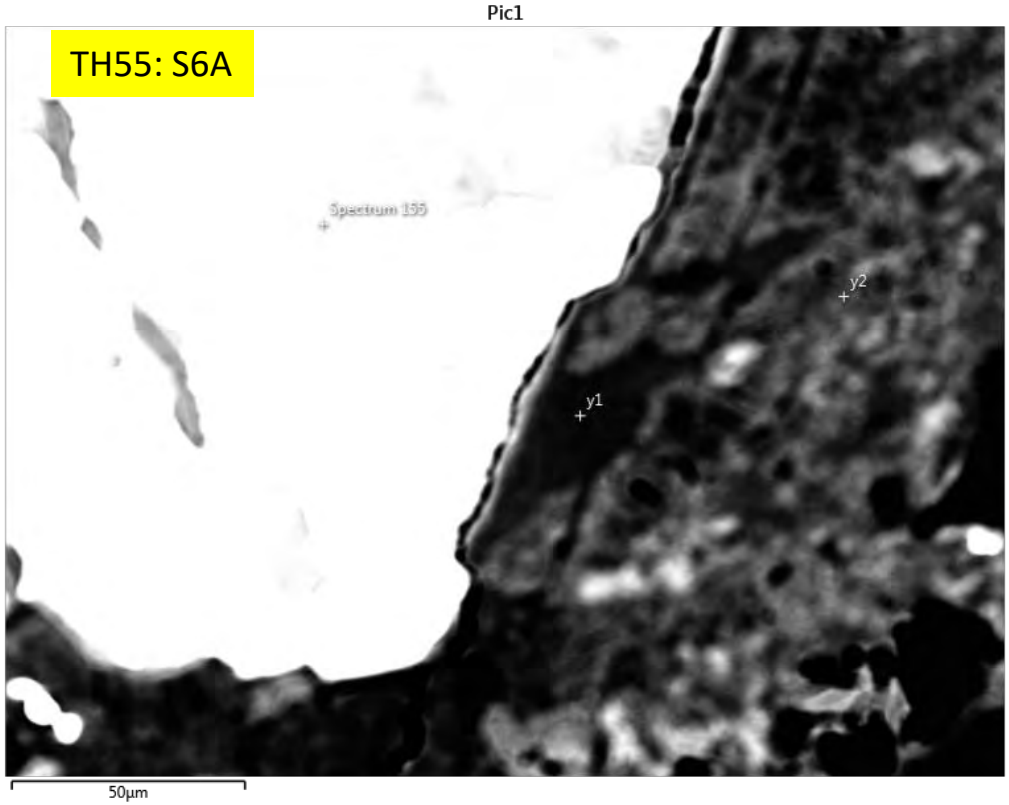
Oxide	Oxide %
MgO	5.66
Al2O3	19
SiO2	47.04
SO3	0.38
K2O	7.28
FeO	20.65
	100





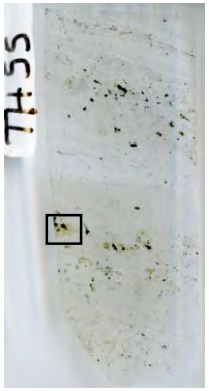
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

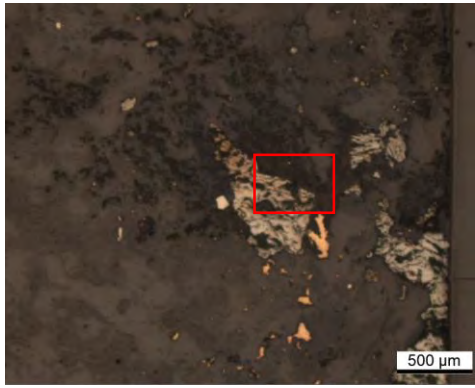




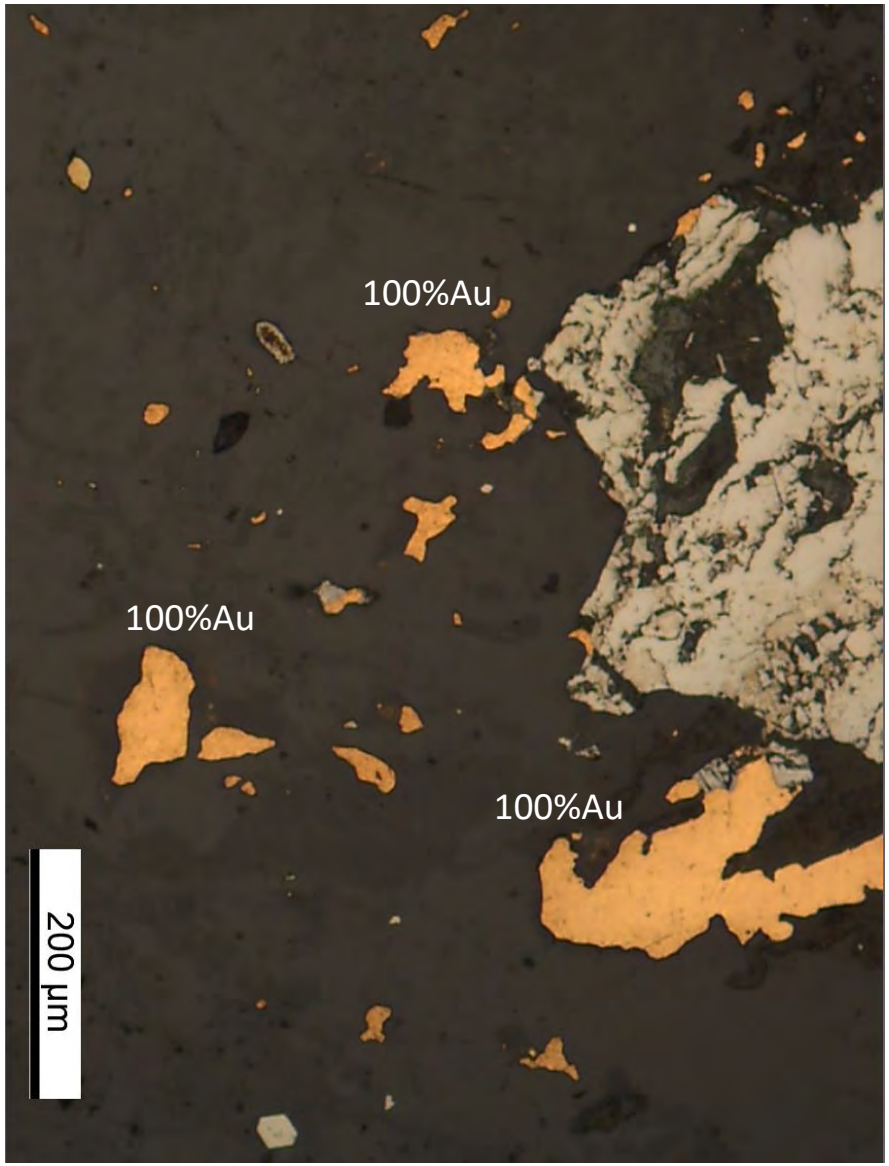
Yellow mineral: siderite mixed with clay minerals:

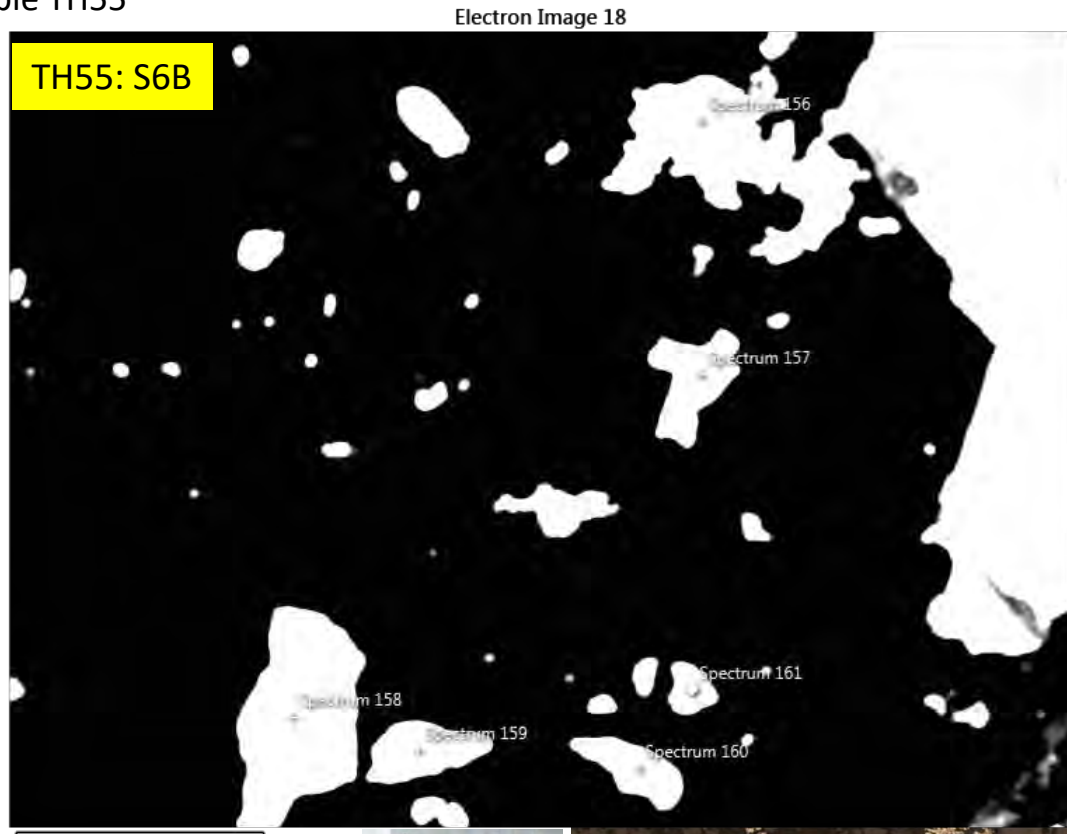
Oxide	Oxide %
MgO	5.66
Al2O3	19
SiO2	47.04
SO3	0.38
K2O	7.28
FeO	20.65
	100

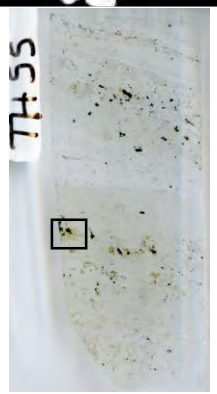




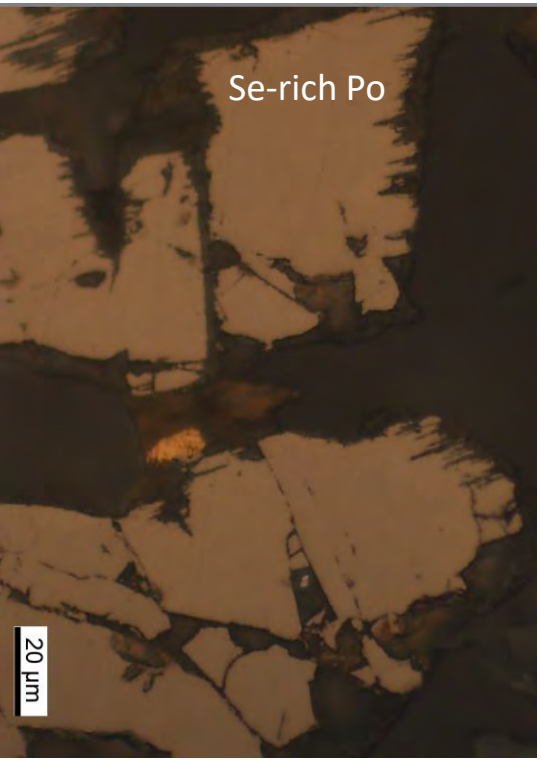
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

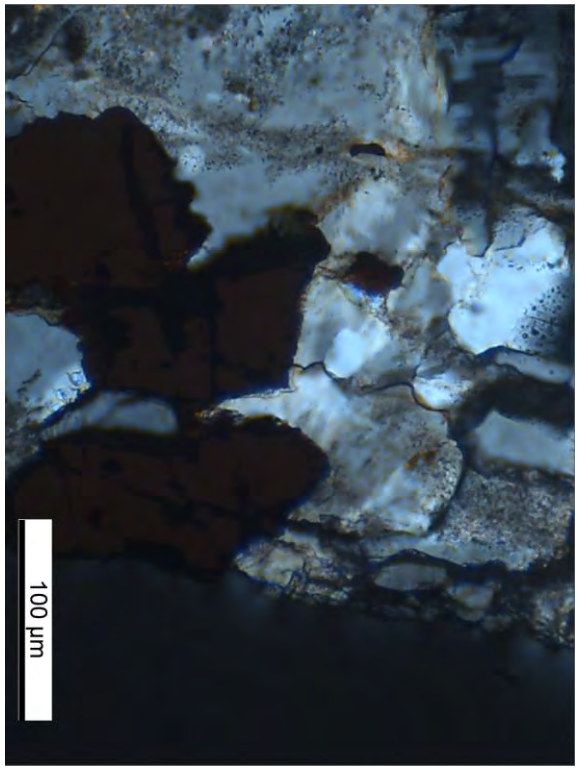


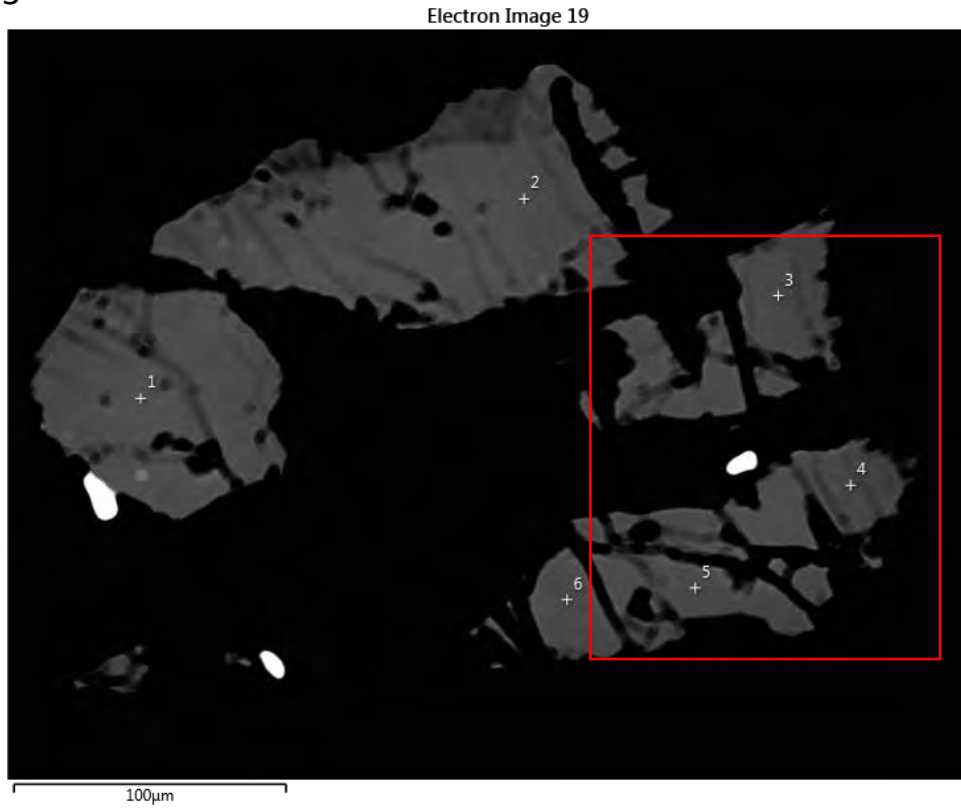


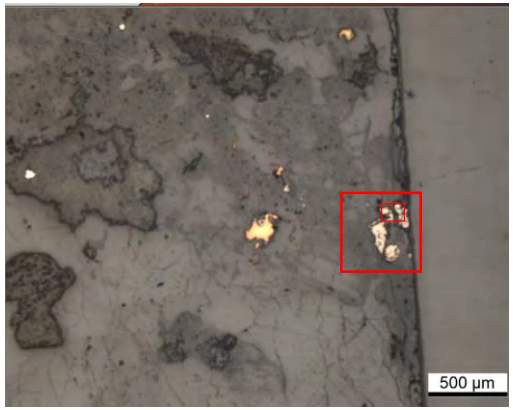


Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55







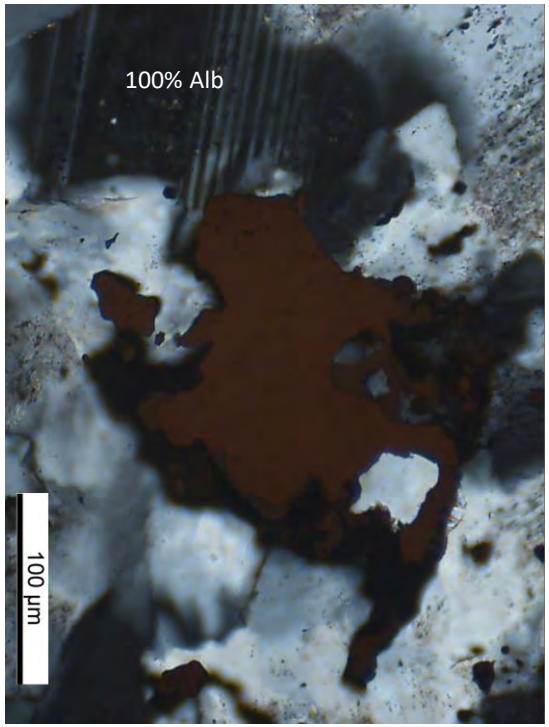


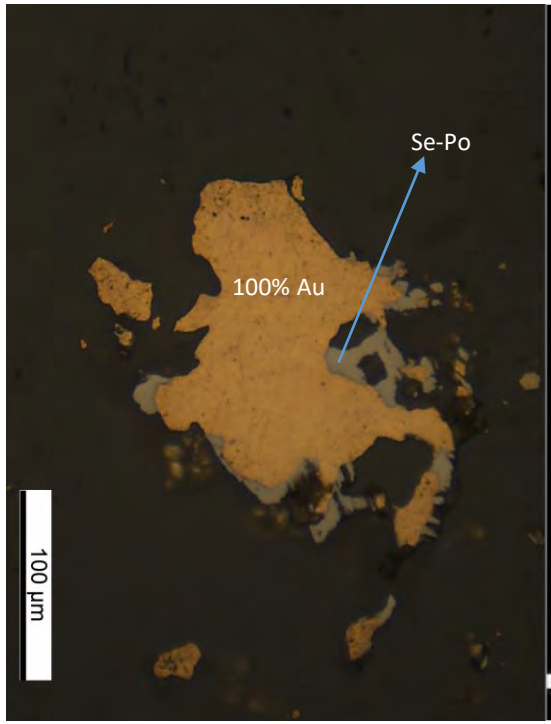
Element	Wt%
S	37.04
Fe	57.4
Se	5.56

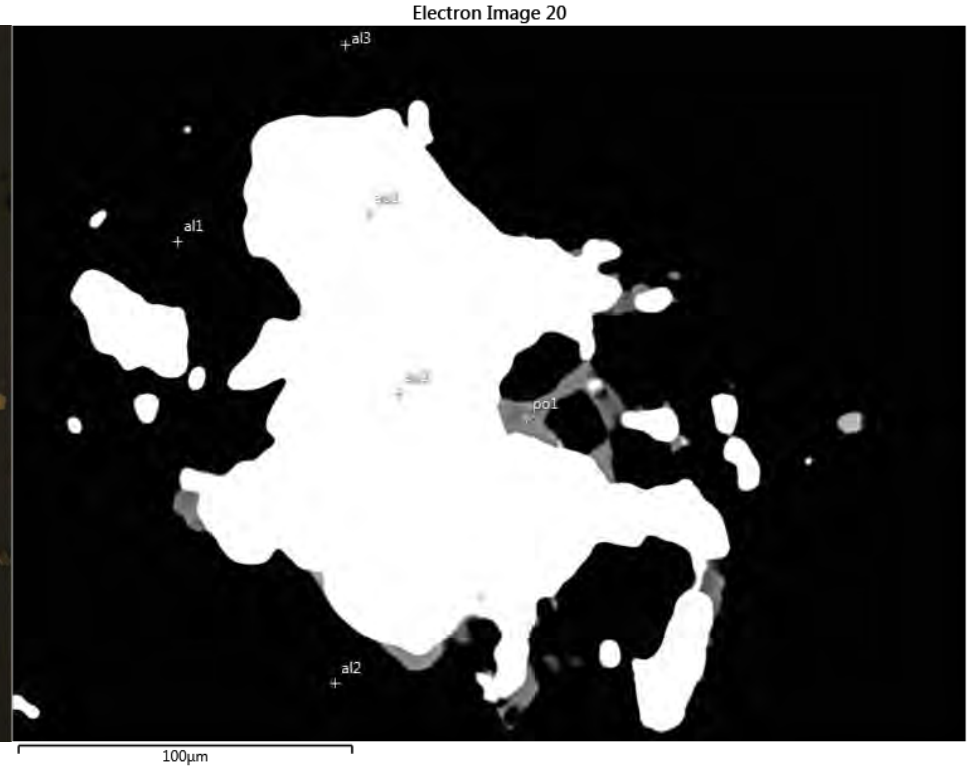
TH55: S7

Checking late vein with Au (stage 4) and Po along the late calcite-qtz micro sheeted vein: Se Po

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55



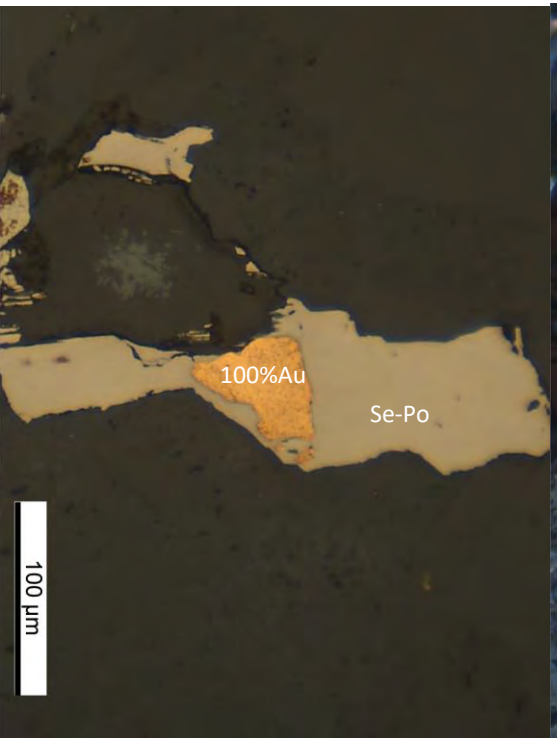


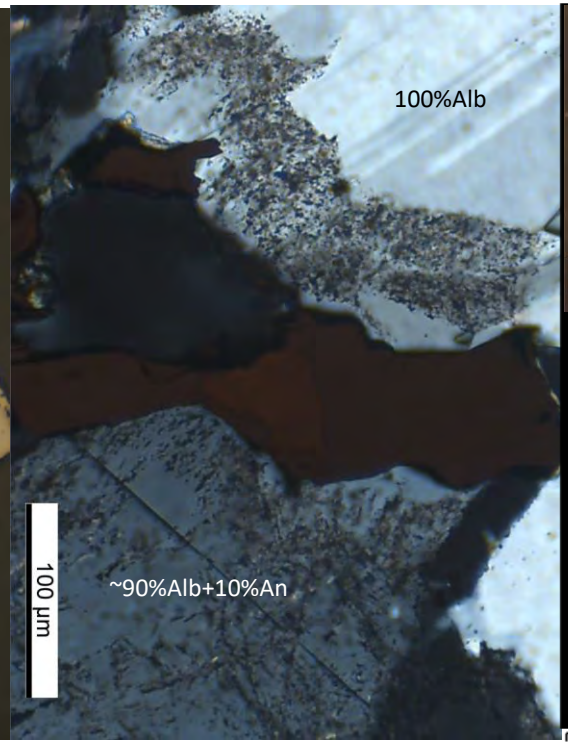


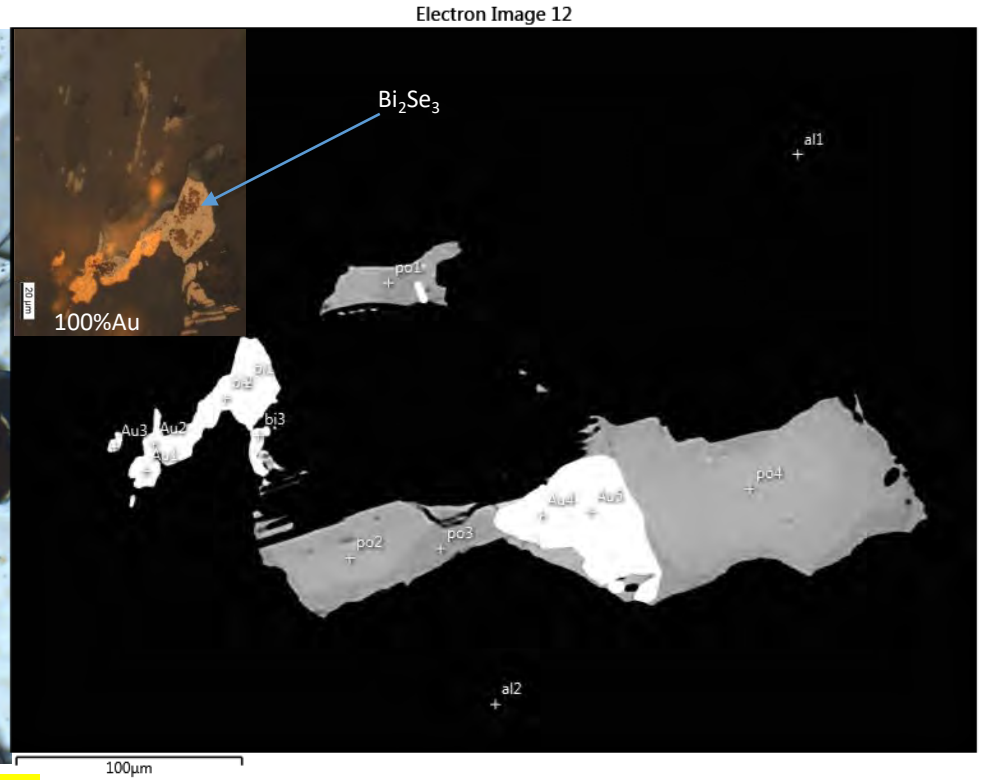
TH55: S8

- Stage 2 Au

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55



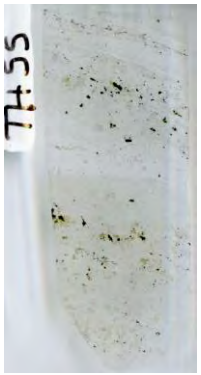




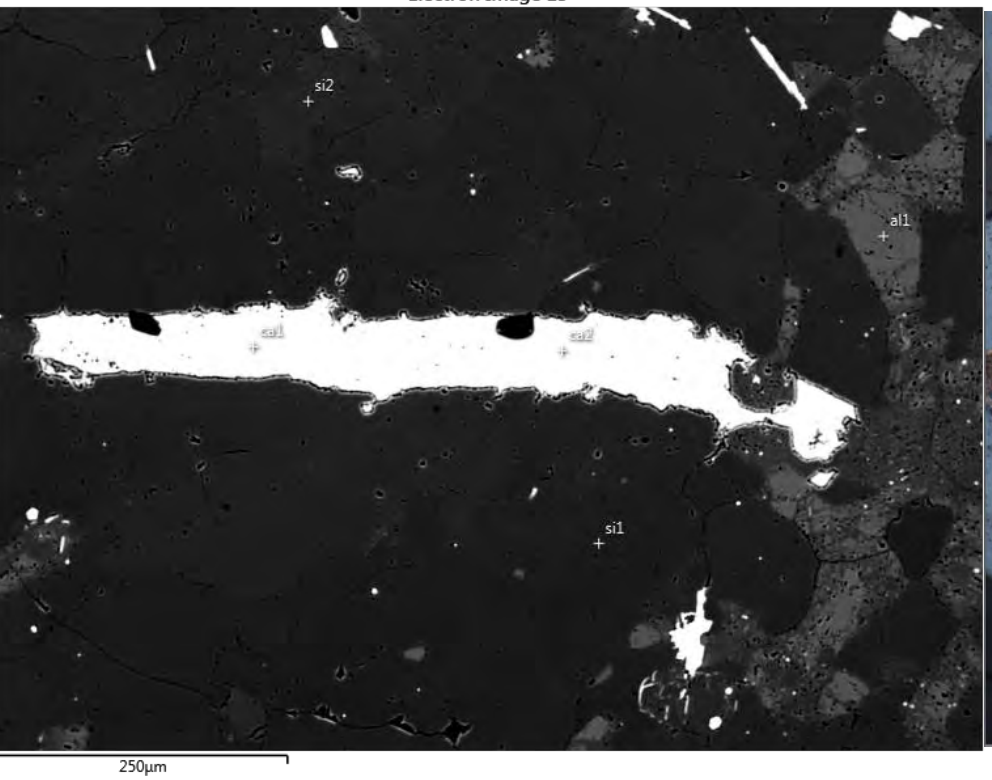
TH55: S9

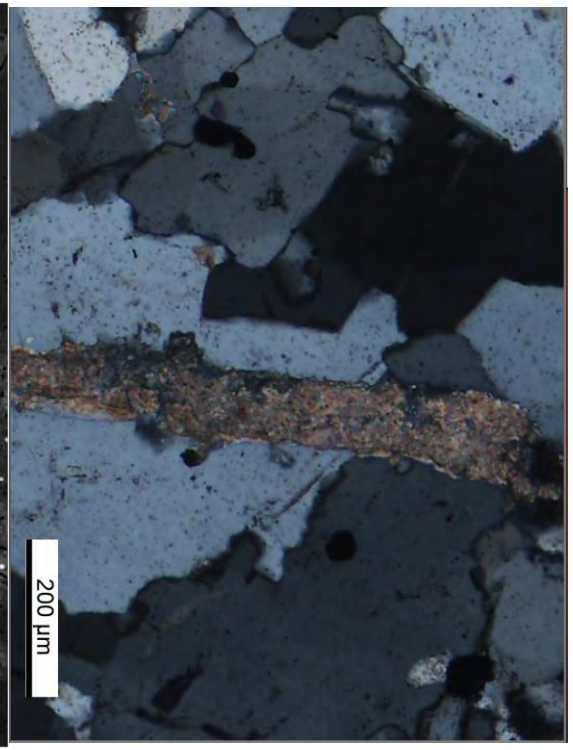
- Au and Se-Po along and aligned the calcite sheeted vein; 2 options
  - Likely Stages 2/3 Au could be reactivated during stage 4 or stage 4 Au
    - Bi_2Se_3
    - Au
    - Alb+oligioclase
    - Se-Po

Analysis No	S	Fe	Se	Ni	Cu	As
TH55-9-po1	40.71	59.06	0.23			
TH55-9-po2	39.21	58.64	2.15			
TH55-9-po3	40.78	59.22				
TH55-9-po4	39.27	58.59	2.14			



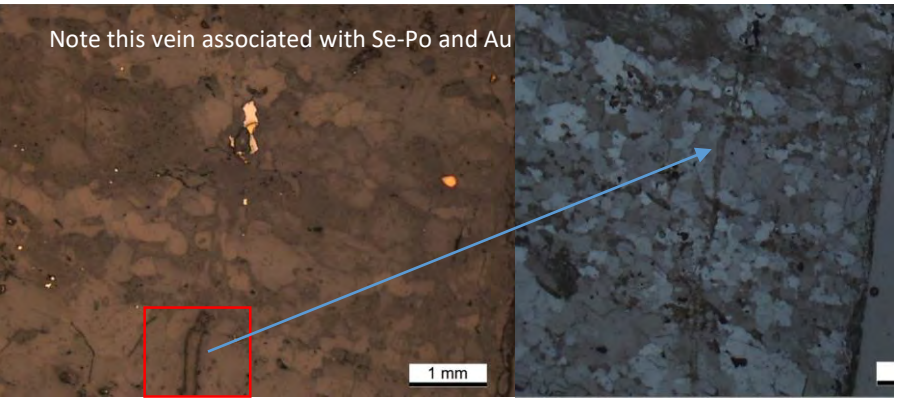
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

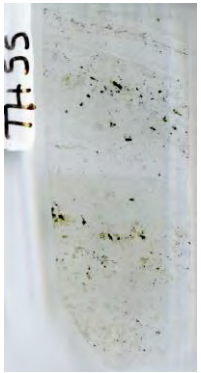




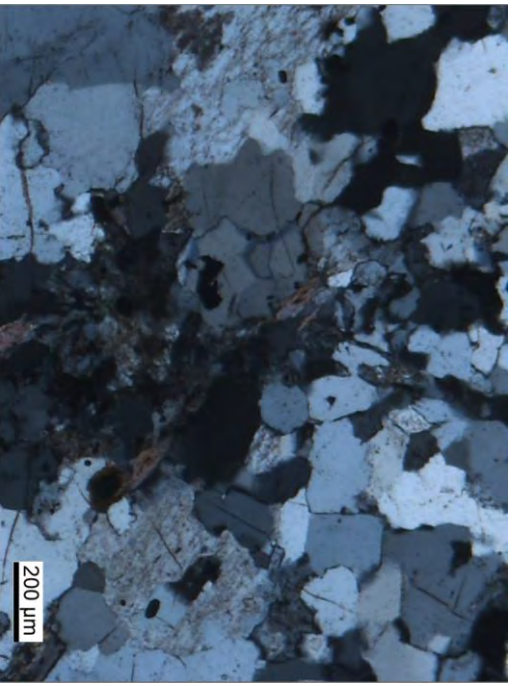
TH55: S10

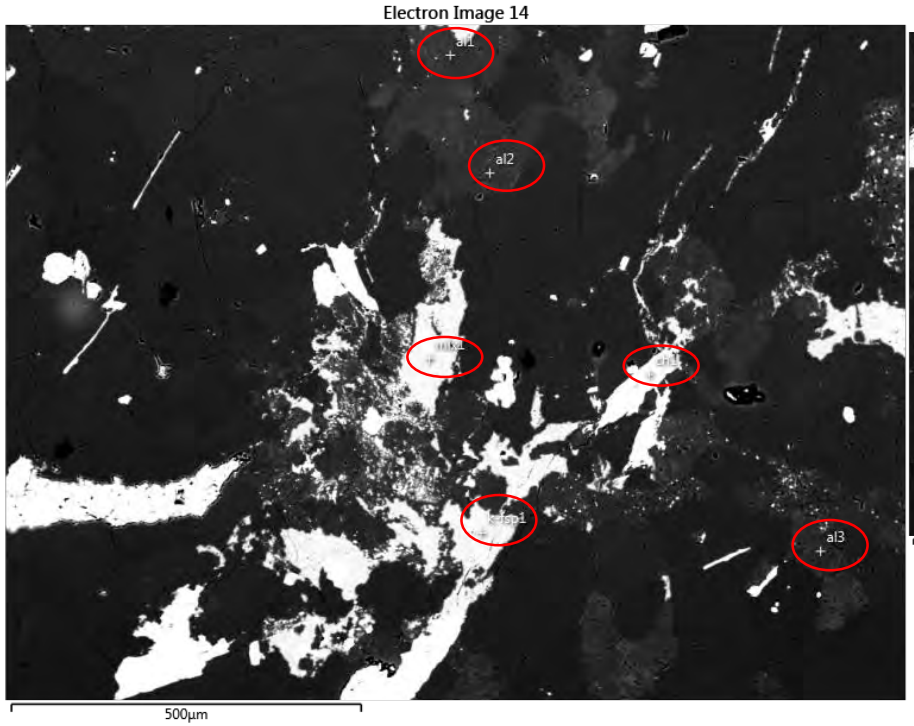
- stage 4 calcite vein with trace of Mn and inclusions of Qtz
- Stage 4 reactivate Au-bearing stage 2-3 ?

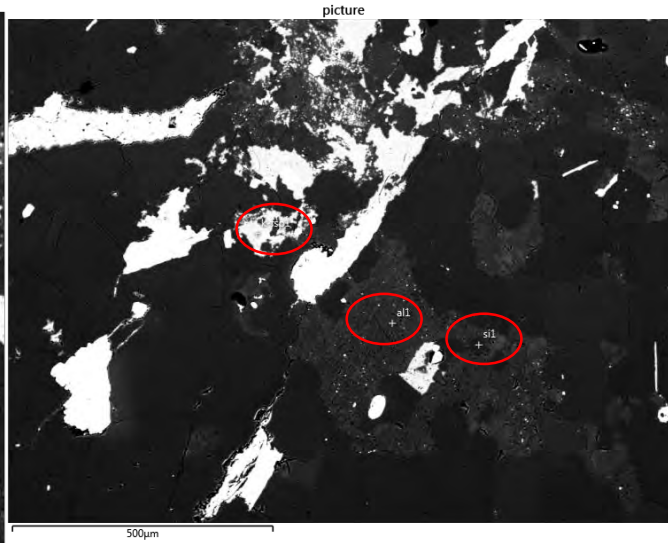




Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55



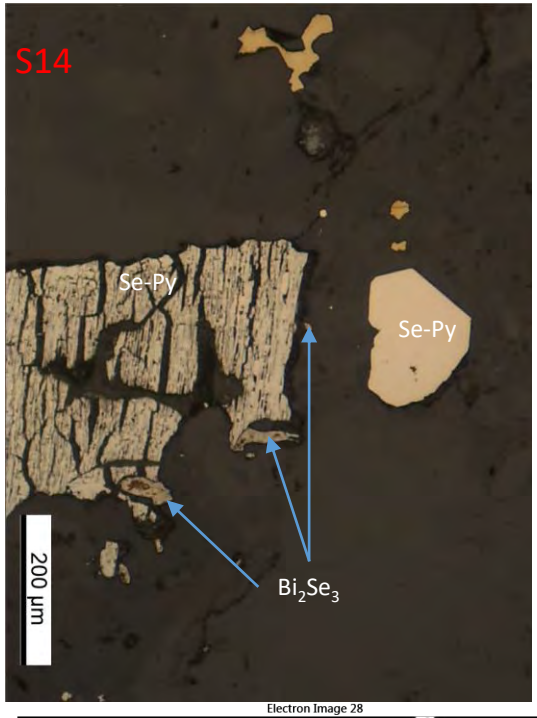


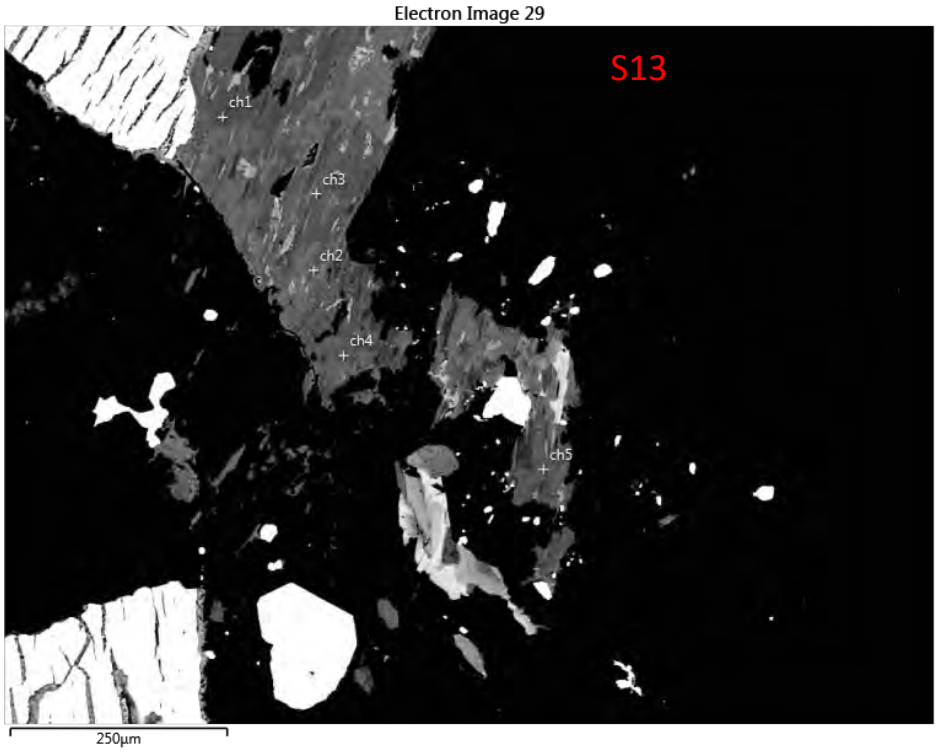


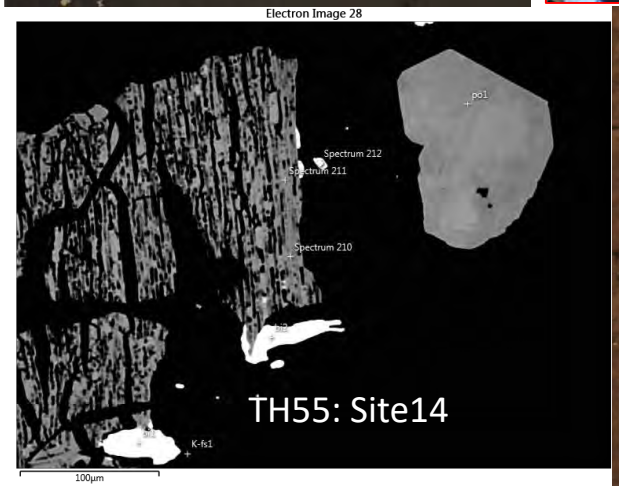
TH55: S12

Fsp: Alb+K-fsp
Chl_1: Mn-bearing chl (1.8%MnO)
Calcite vein: trace of Mn

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55



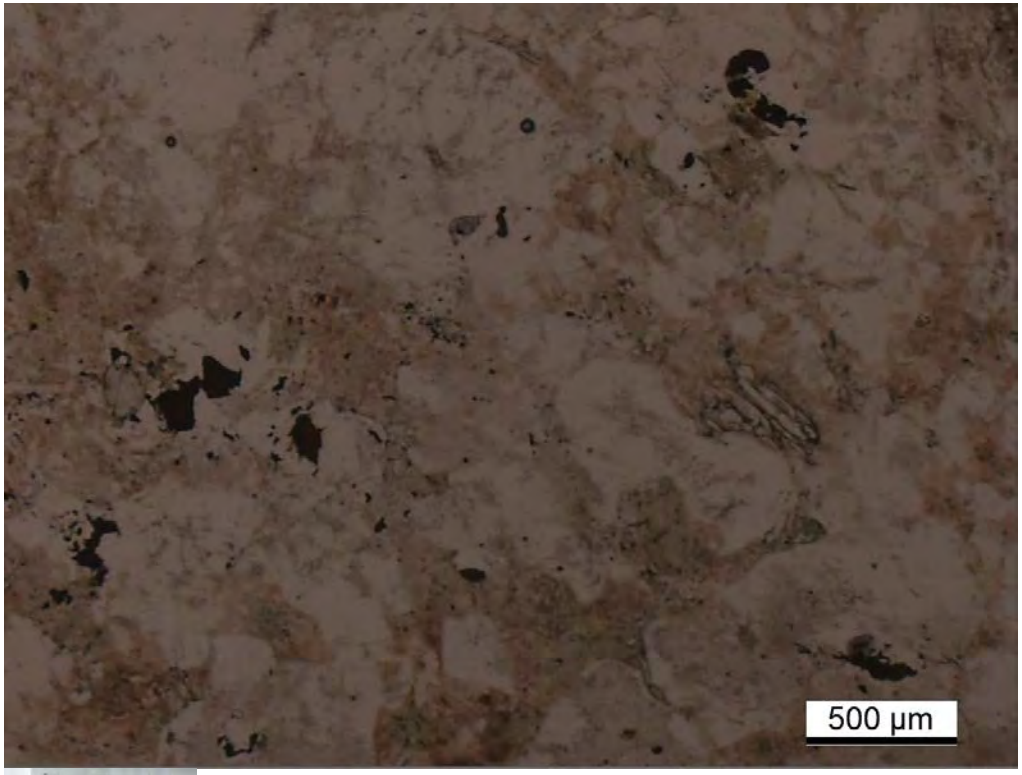


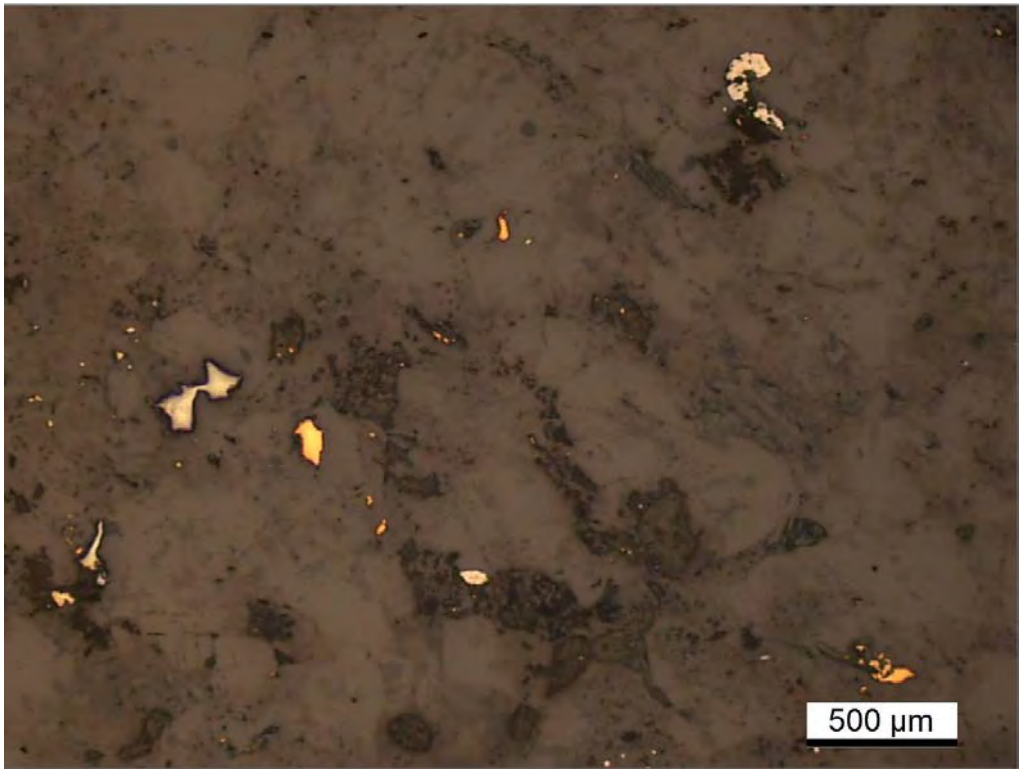


TH55: S13-14

- 2 type of Se-Py (stages 2 ands 3)
- Mn (-Ti) Chl_1
- K-fsp alteration

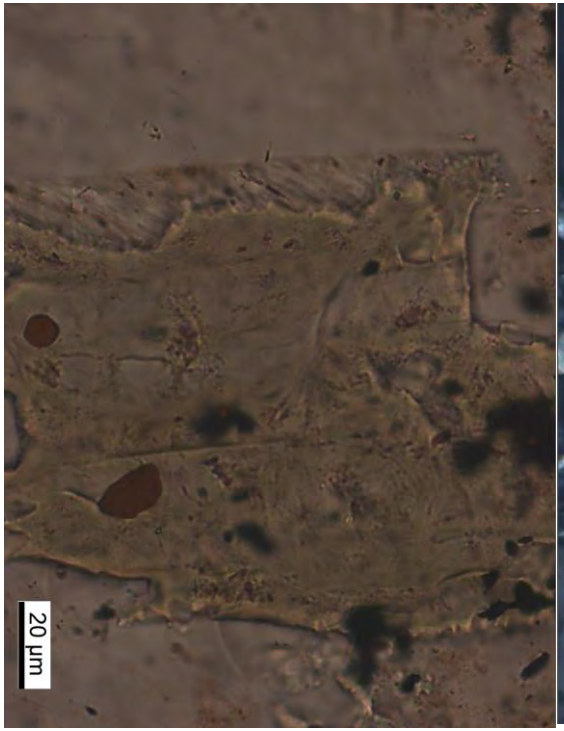
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

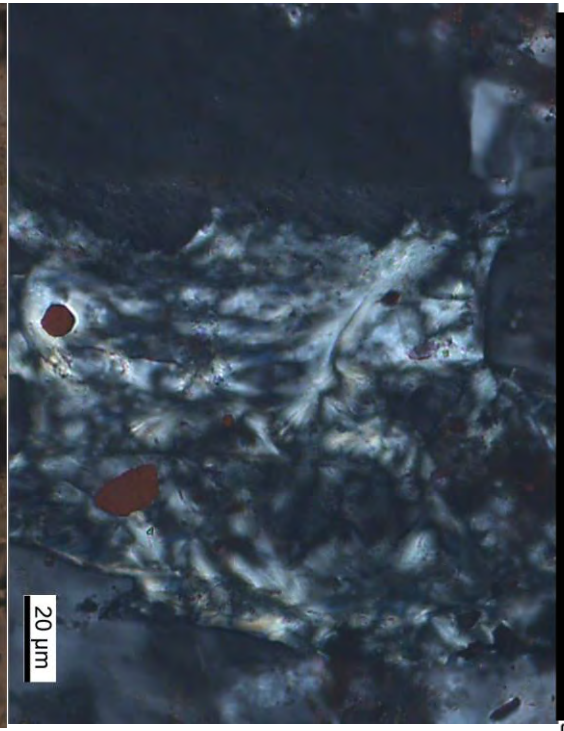


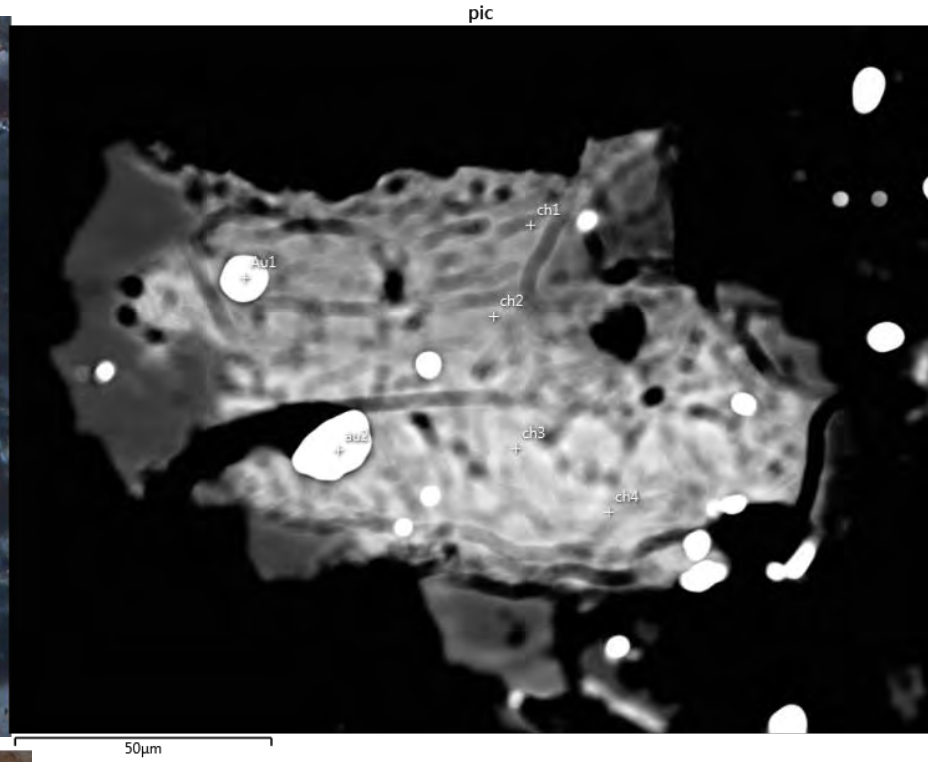


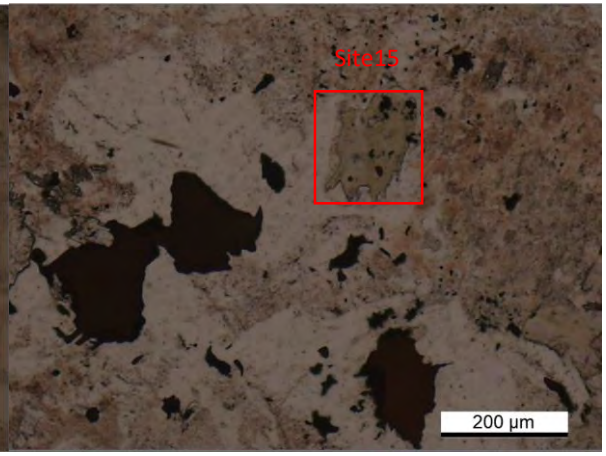
TH55: S15-16-15-18

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55









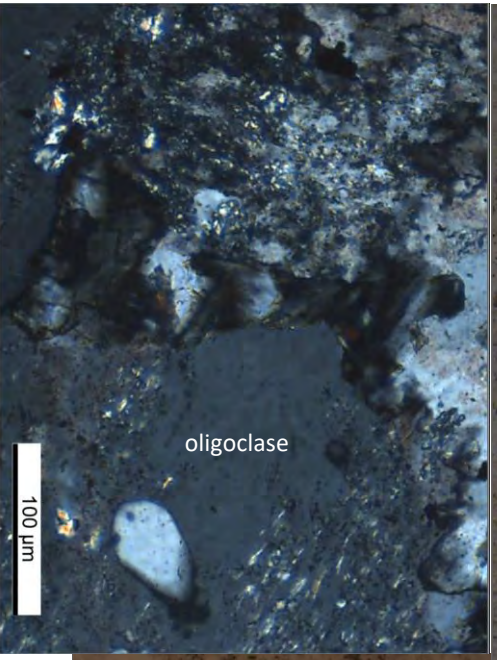
TH55: S15

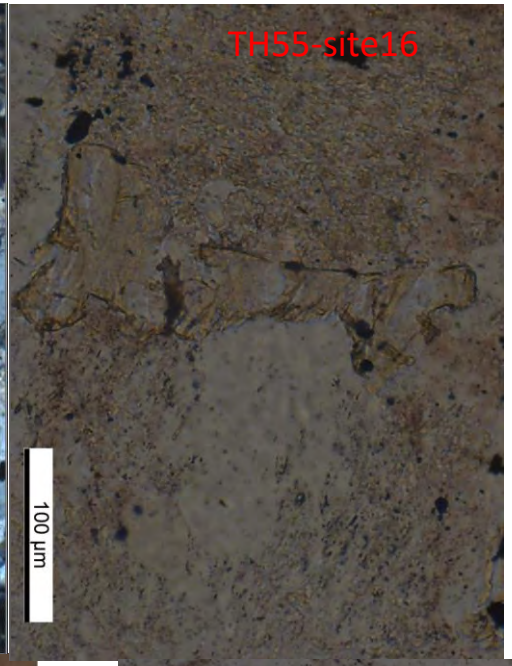
Chl_2 associated with Au:

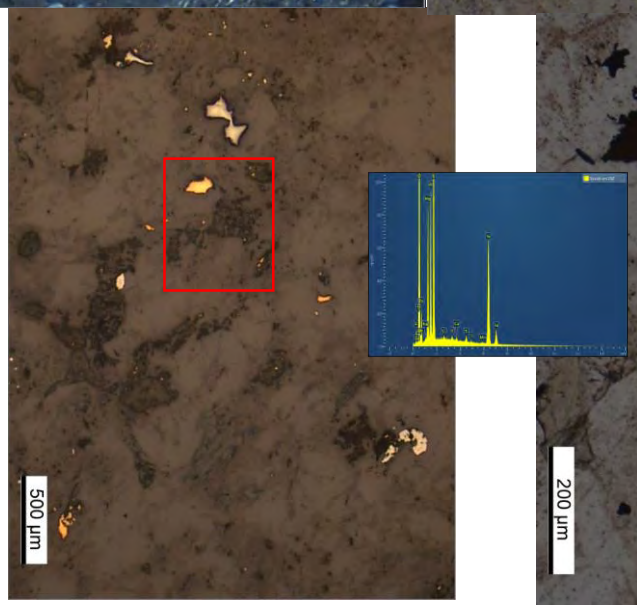
- Chl_2: minor K /Ca content)

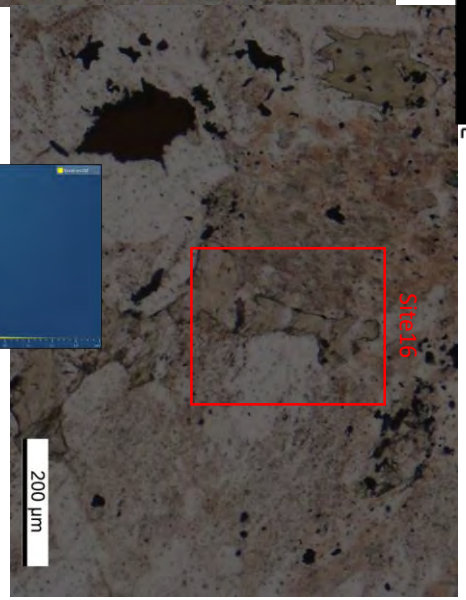
Oxide	Oxide %	C
MgO	20.95	
Al2O3	15.23	
SiO2	37.1	
K2O	0.33	
CaO	0.18	
FeO	26.2	
	100	

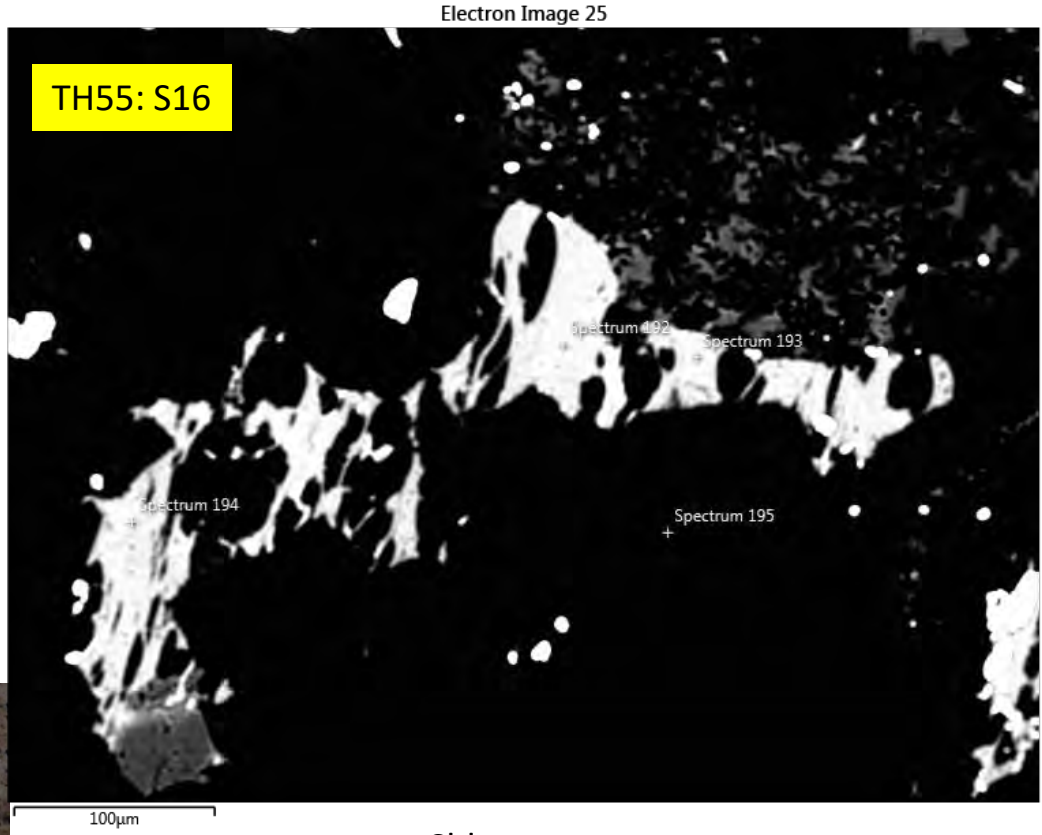
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55







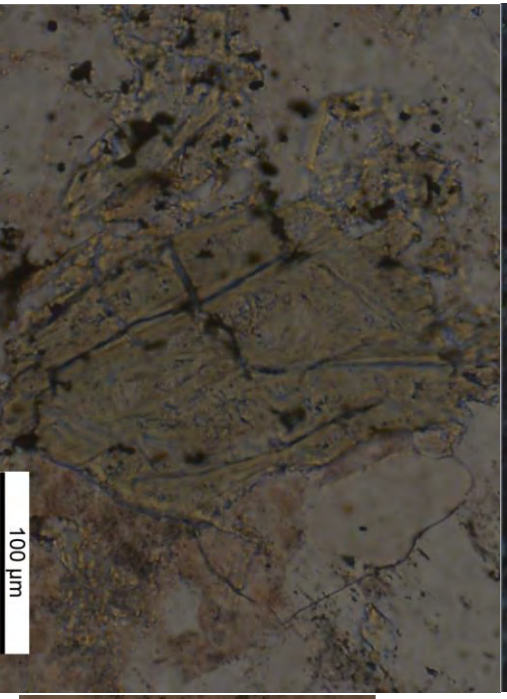


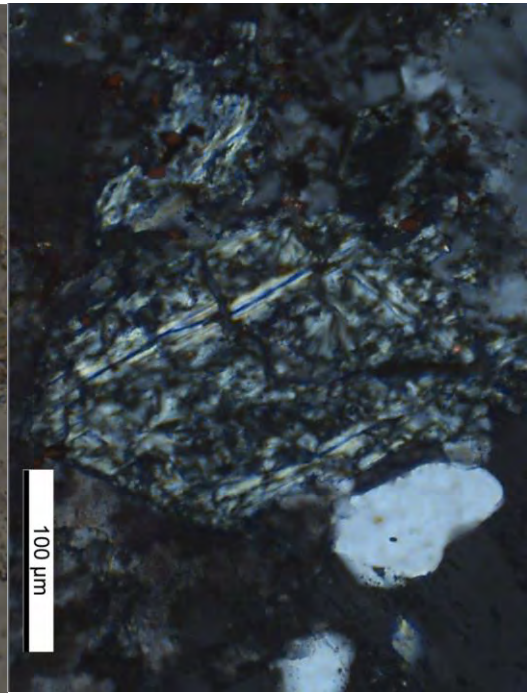


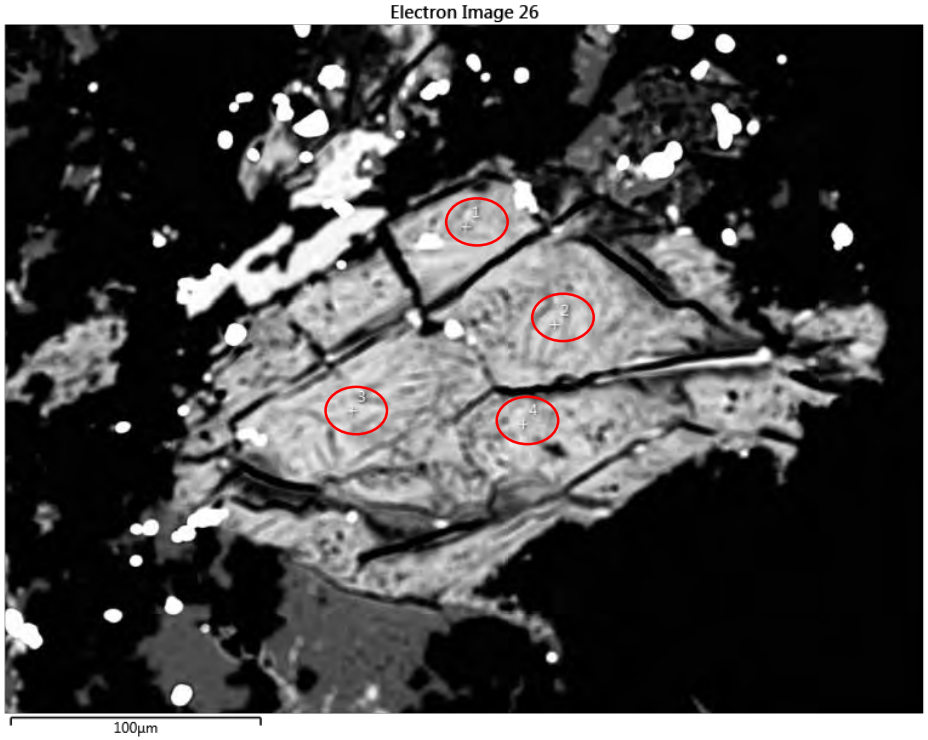
Chl_2

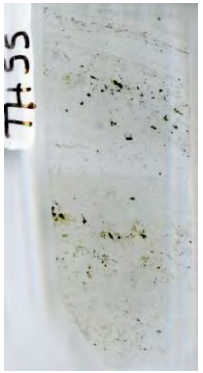
Element	Wt%	Wt% Sigma	Atomic %	Oxide	Oxide %
O	39.74		58.52		
Na	0.19	0.06	0.2	Na2O	0.26
Mg	9.22	0.11	8.93	MgO	15.29
Al	9.65	0.11	8.42	Al2O3	18.23
Si	15.25	0.12	12.79	SiO2	32.63
Cl	0.17	0.04	0.12		0
K	0.25	0.04	0.15	K2O	0.3
Ca	0.31	0.04	0.18	CaO	0.44
Ti	0.65	0.06	0.32	TiO2	1.08
Mn	0.1	0.07	0.04	MnO	0.13
Fe	24.47	0.19	10.32	FeO	31.48
Total:	100		100		99.83

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55







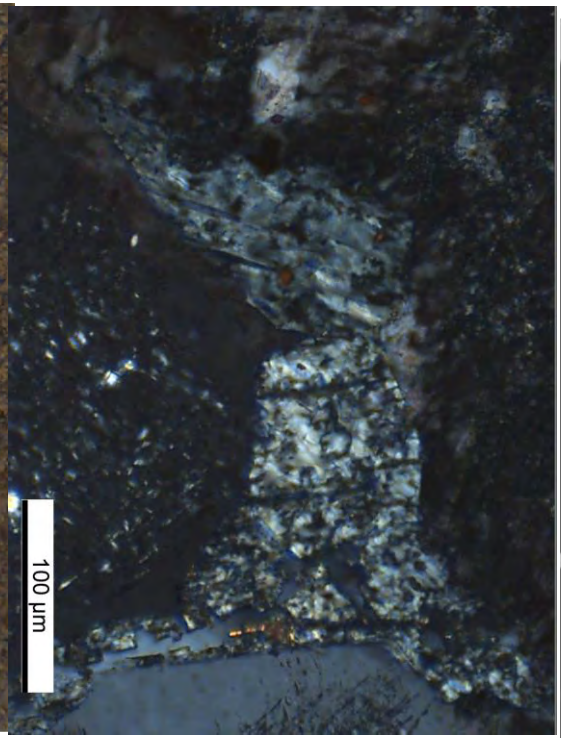


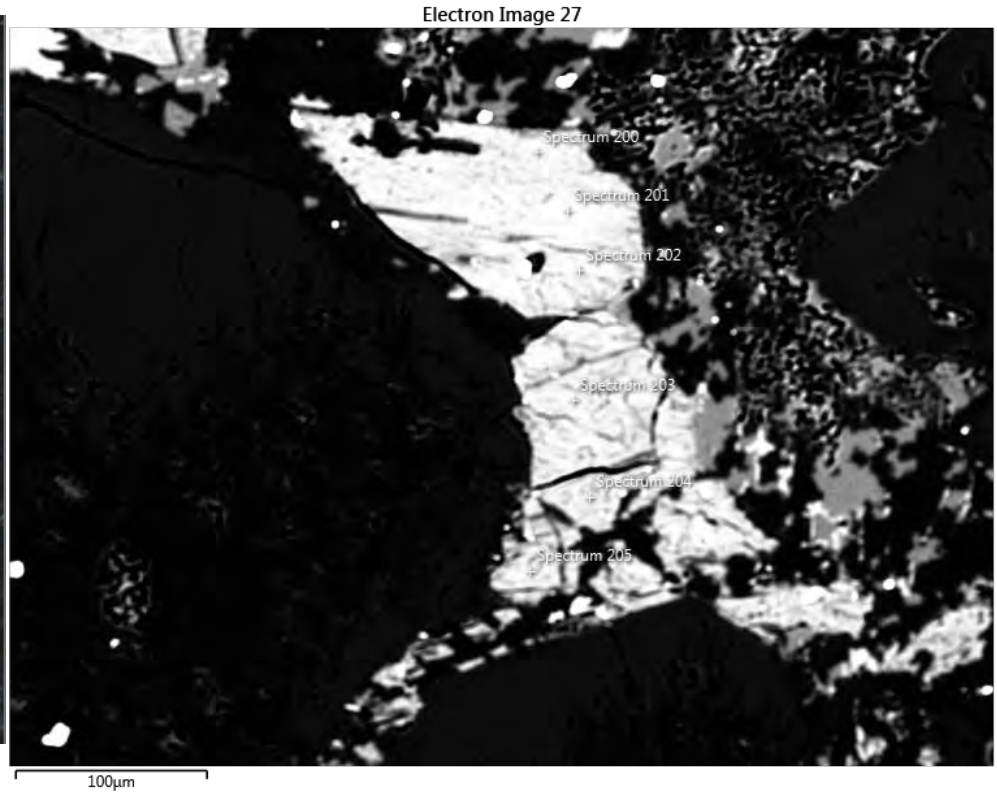
TH55: S17

- Chl_2 (containing inclusion of Au) has trace of Na-K-Ca-Mn but locally clean chl

Oxide	Oxide %
Na2O	0.3
MgO	18.02
Al2O3	16.47
SiO2	35.15
K2O	0.2
CaO	0.23
TiO2	0.16
FeO	29.47
	100

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55





TH55: S18 Checking Chl_2 associated with Au

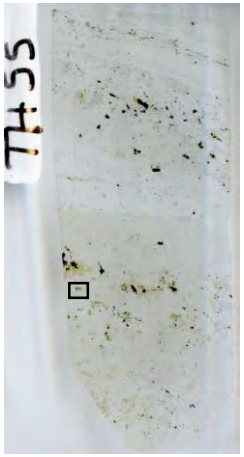
- Chl_2 with trace of K-Ti-Mn-Ca
- Occasionally clean chl_2

Oxide	Oxide %
Na2O	0.25
MgO	18.73
Al2O3	16.81
SiO2	35.02
K2O	0.2
CaO	0.19
FeO	28.8
	100

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55

Chl_3 with trace of K-Ca

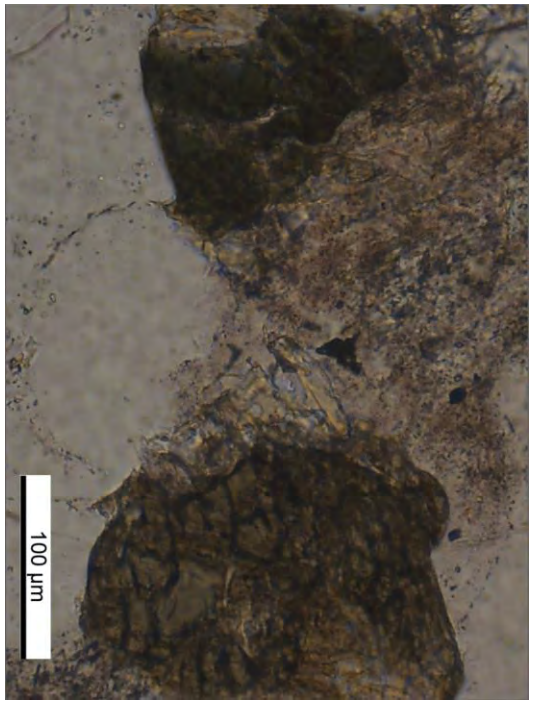
Oxide	Oxide %
MgO	26.98
Al2O3	15.37
SiO2	40.14
K2O	0.19
CaO	0.37
FeO	16.95
	100

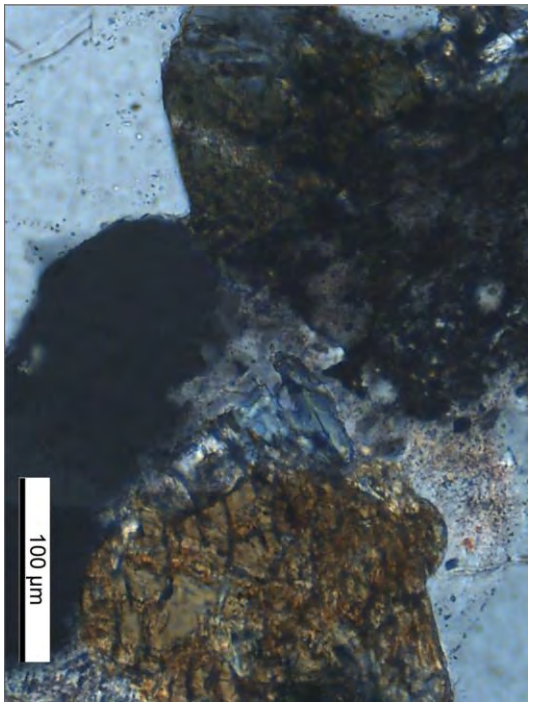


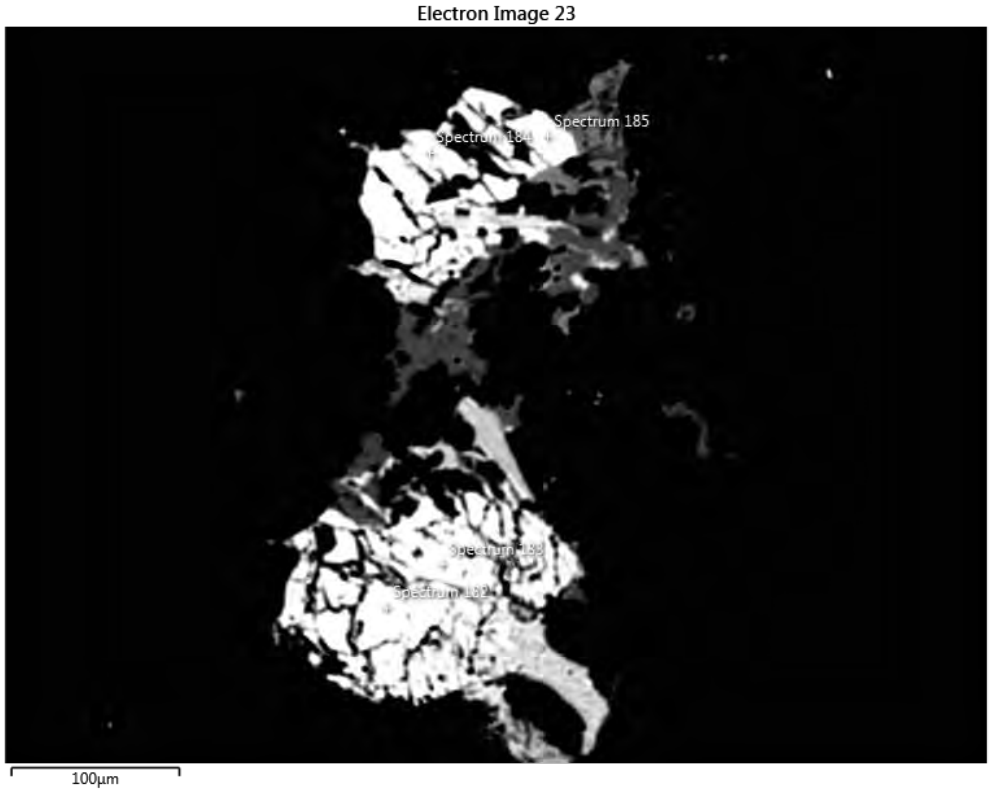
Th55: S20A

Mg- Chl_3 in association with calcite

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH55



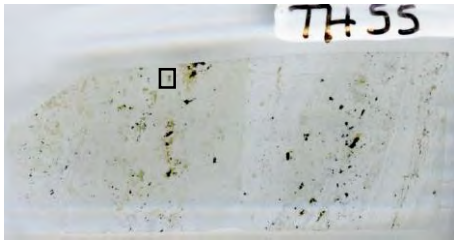




Element	Wt%	Wt% Sigma	Atomic %	Oxide	Oxide %
O	40.28		58.75		
Na	1.03	0.07	1.05	Na2O	1.39
Mg	6.15	0.09	5.91	MgO	10.2
Al	5.76	0.09	4.98	Al2O3	10.88
Si	19.61	0.13	16.29	SiO2	41.95
Cl	1.03	0.05	0.68		0
K	1.19	0.05	0.71	K2O	1.44
Ca	7.09	0.09	4.13	CaO	9.92
Ti	0.57	0.05	0.28	TiO2	0.95
Fe	17.29	0.17	7.22	FeO	22.24
Total:	100		100		98.97

Relic amphibole after D_3 hydrothermal alteration

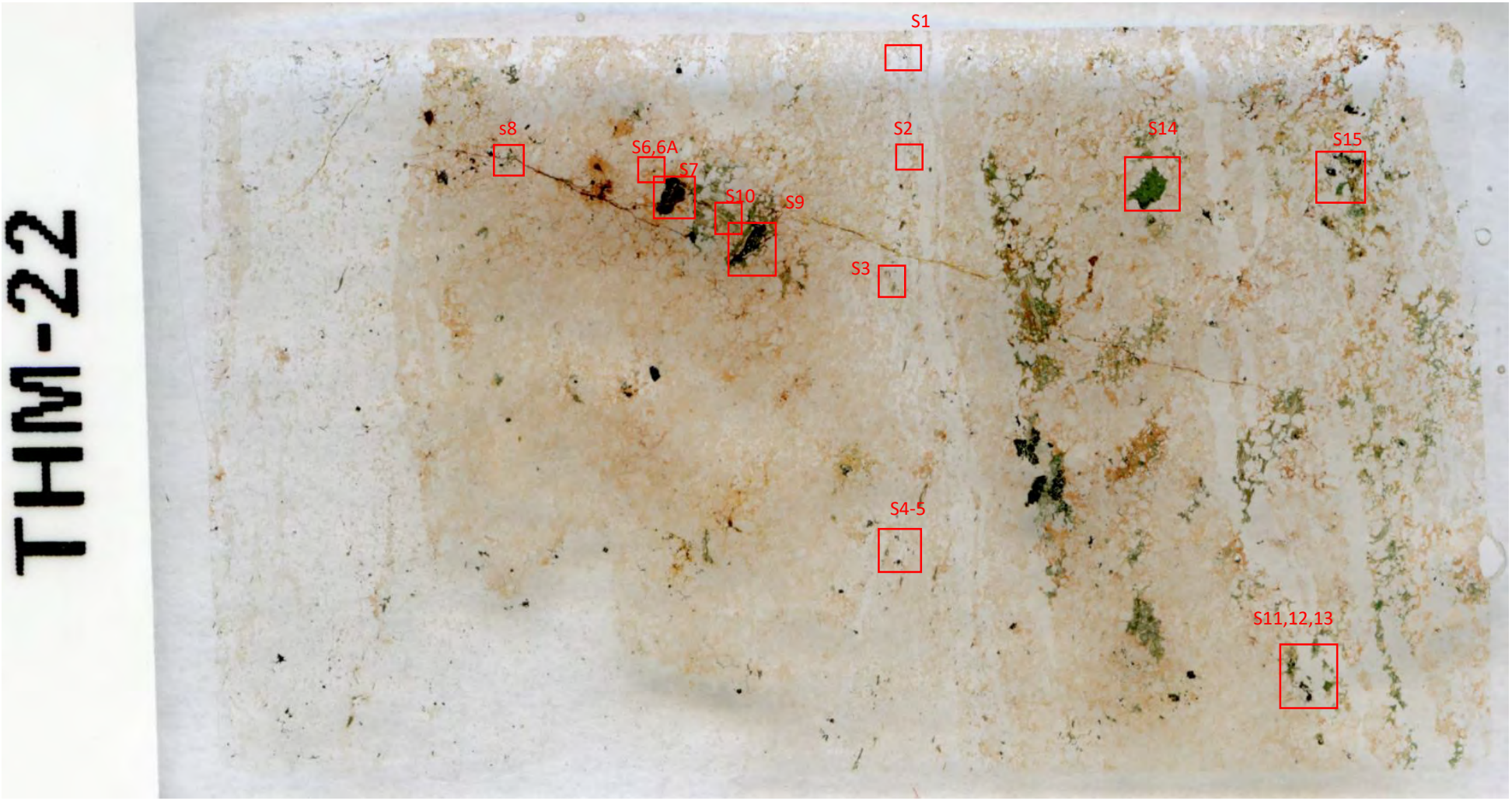
TH55:S20B
Checking relic D1-2 amp



Sample THM22

Block section images

Thin section map of analysis locations



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

Summary

- S6-10: stage 2/3 overprinted by stages 4 and 5
- S1-5 and S11-15: stage 2/3 overprinted by stage 4
- In most cases, silicate elements was eliminated in the ore minerals to immediately normalize the data but it is still there in some cases to present the reality

- Stage 2:
  - Chl_1
  - Alb+oligoclase+ K-fsp; with dusted hematite (as contain some Fe)
  - Au
  - Py (+/-Ni; some Py 800m north of Tick Hill sample also contain Ni)
  - Co-Cu-Ni-S minerals

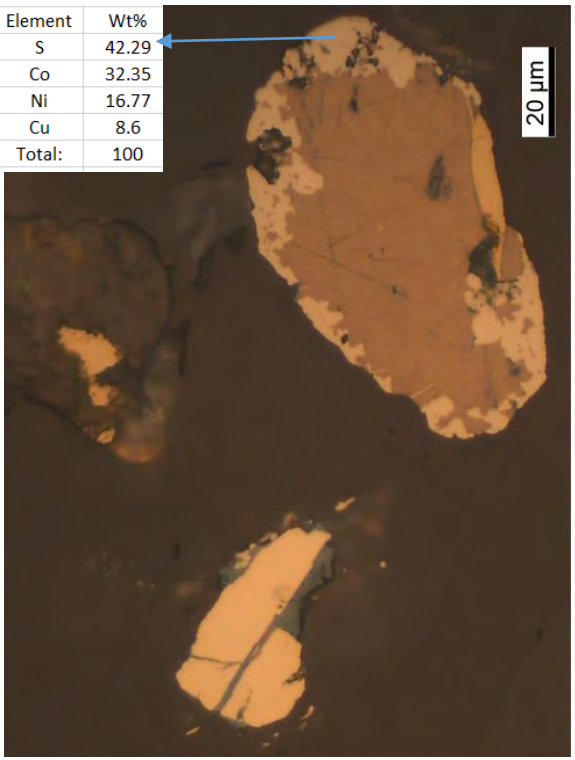
- Stage 3:
  - Chl_2
  - Alb, K-fsp; with dusted hematite
  - Cpy
  - Au
  - Se-Py

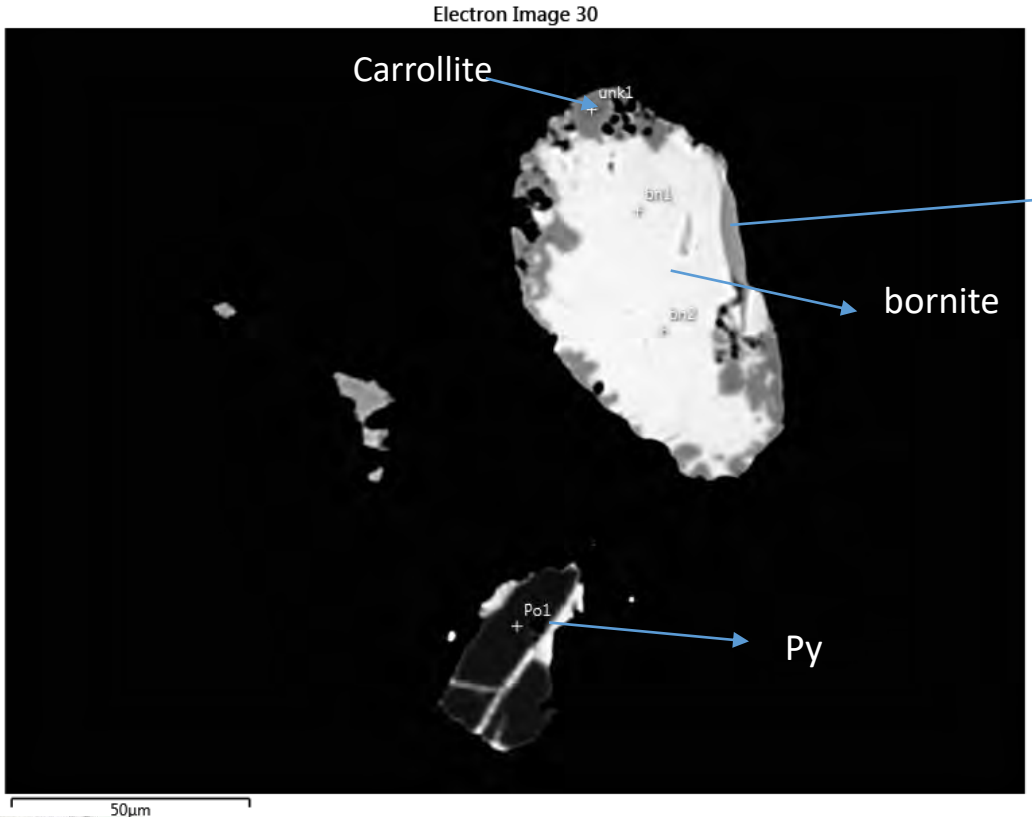
Stage 4
- Hematite
- Clay minerals

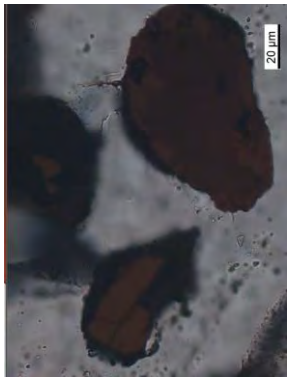
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

Carrollite

Element	Wt%
S	42.29
Co	32.35
Ni	16.77
Cu	8.6
Total:	100

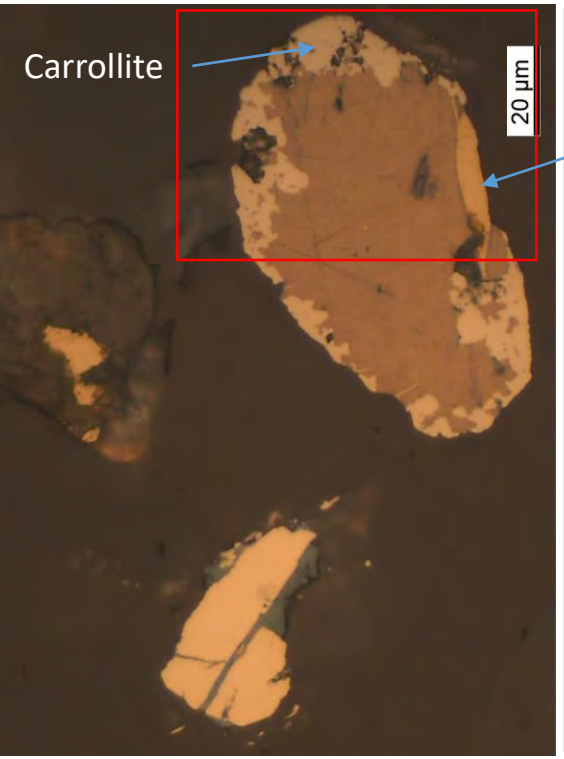


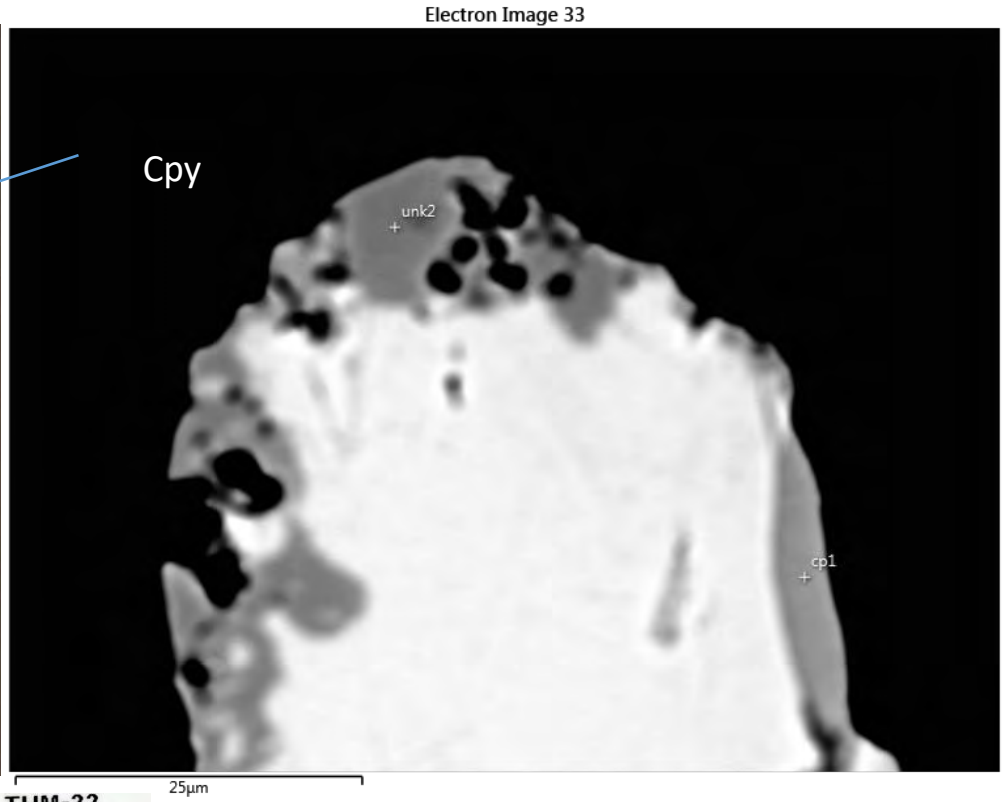


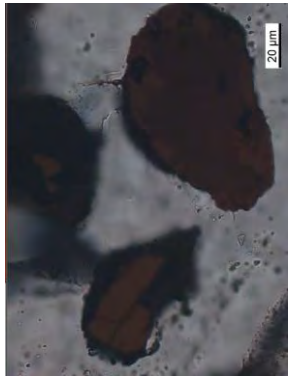


THM22: S1
Early D_3 bornite-Cpy (early stage 2)
D_3 Carrollite rimming (late stage 2?)
D_3 Py (late stage 2?)

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22



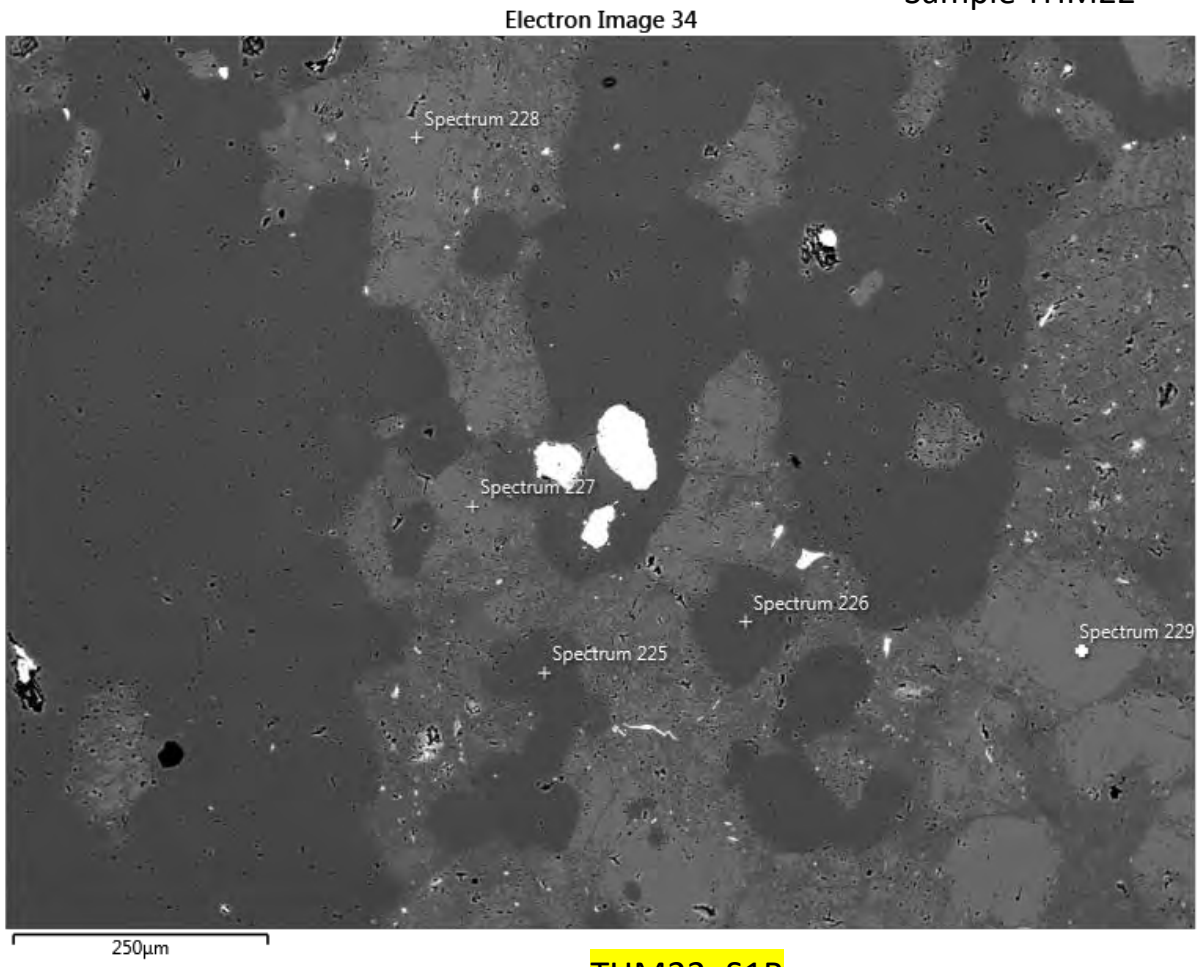


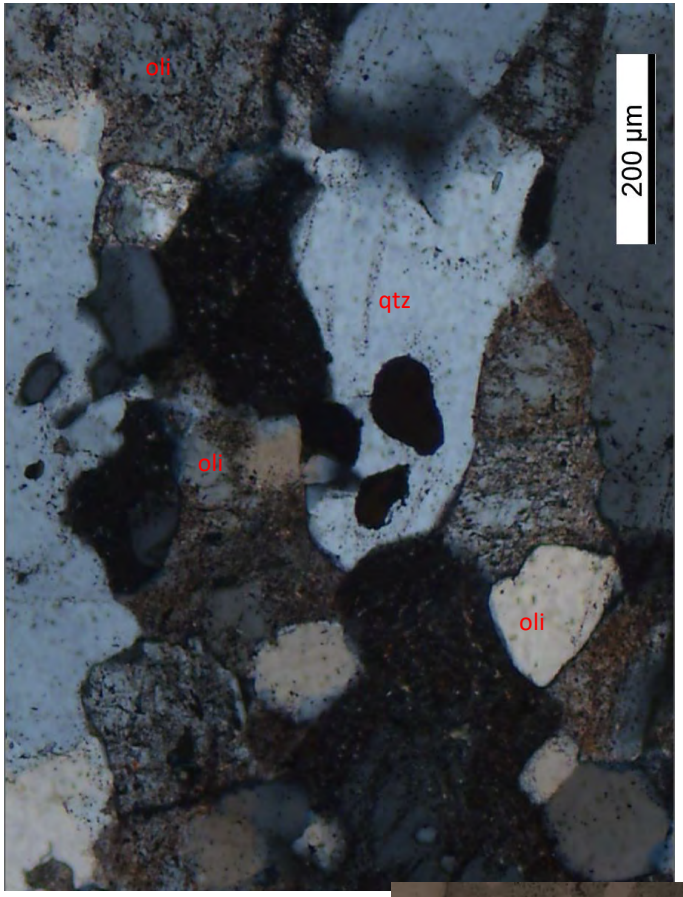


THM22: S1A (Zoom in of S1)

Stage 2A Bornite-Cpy and Stage 2B Carrollite ?

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22



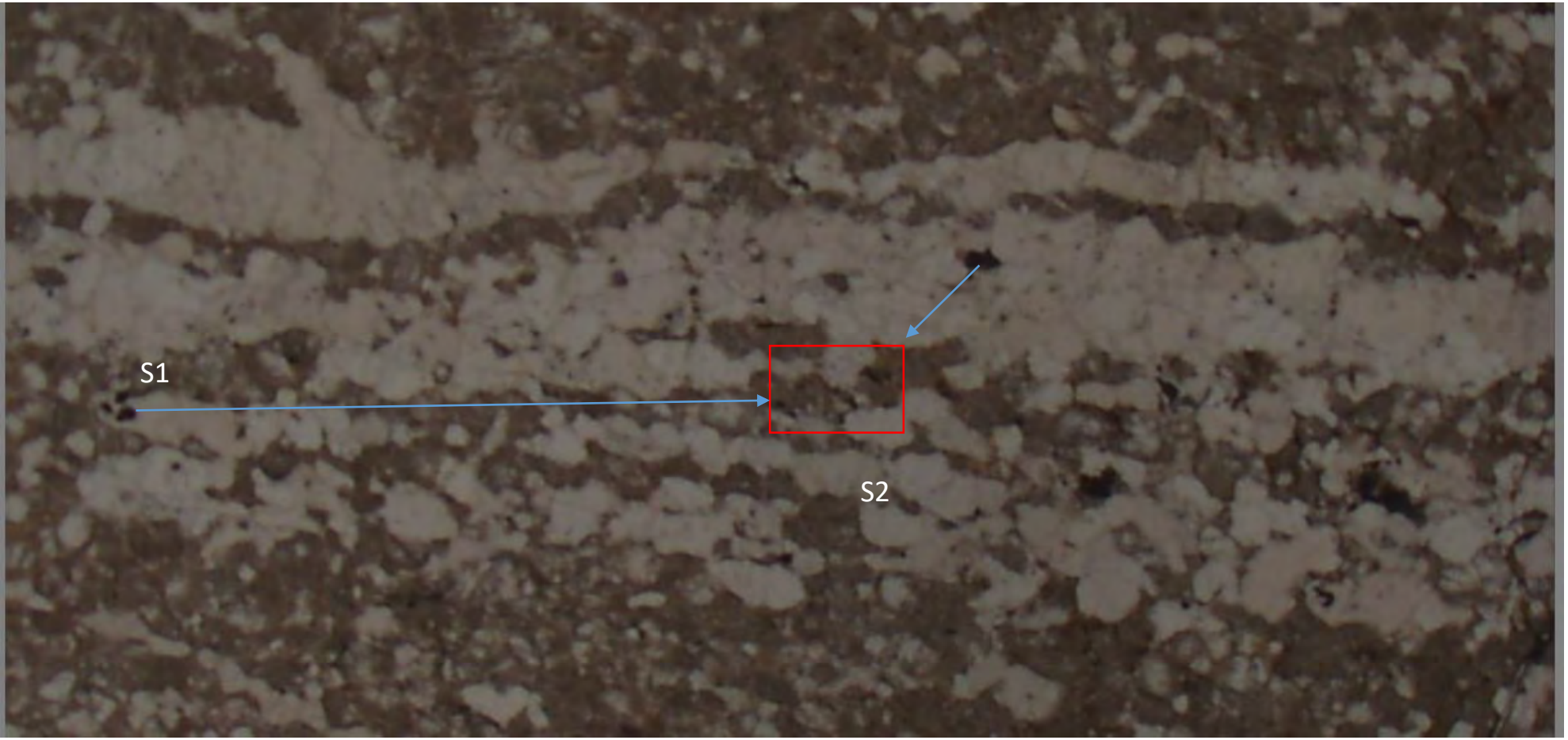


THM22: S1B

225-226: SiO_2
227-229: oligoclase (~13.5%An)

S1B:
Checking fsp

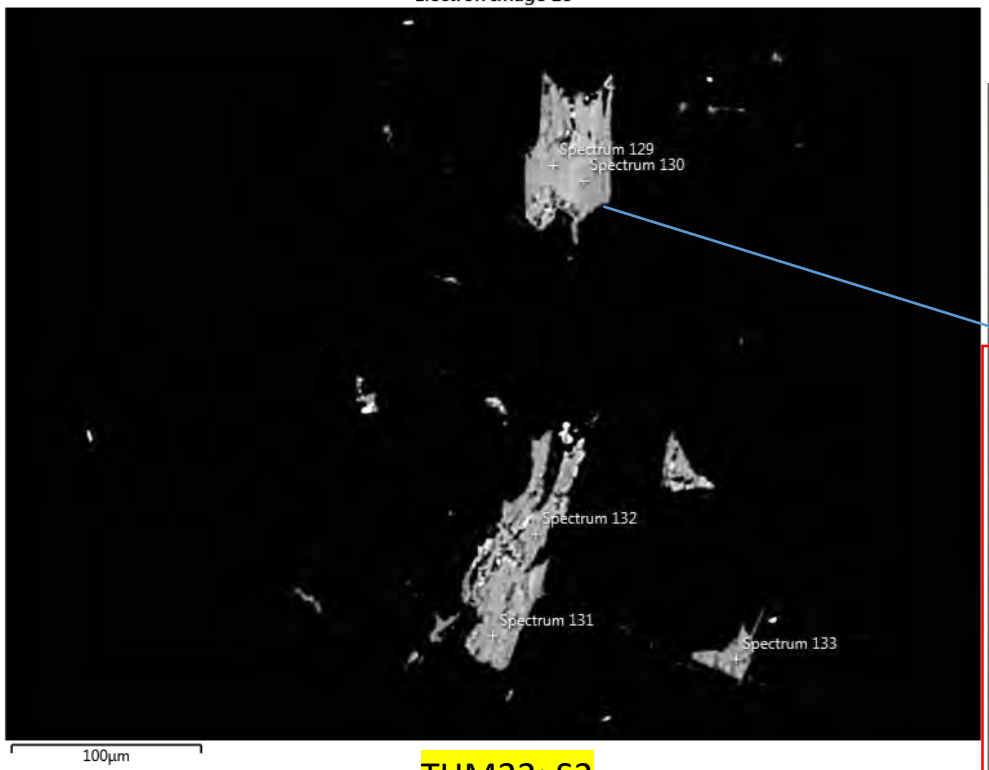
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

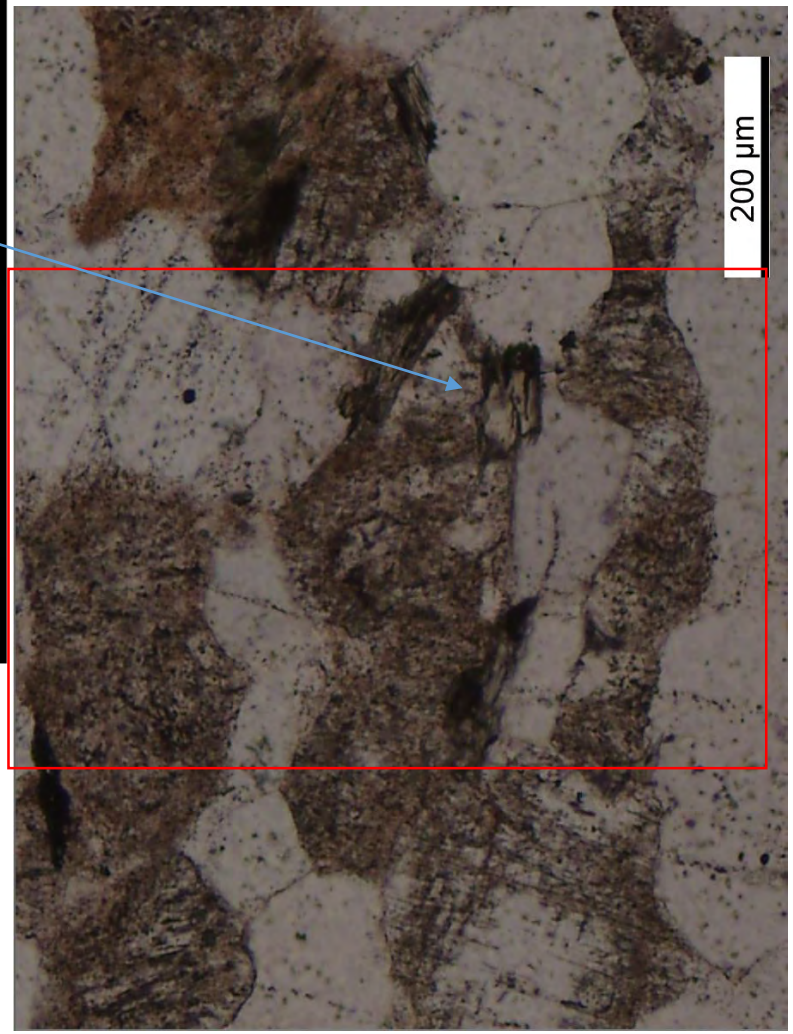


Navigating the S2 location

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

Electron Image 18



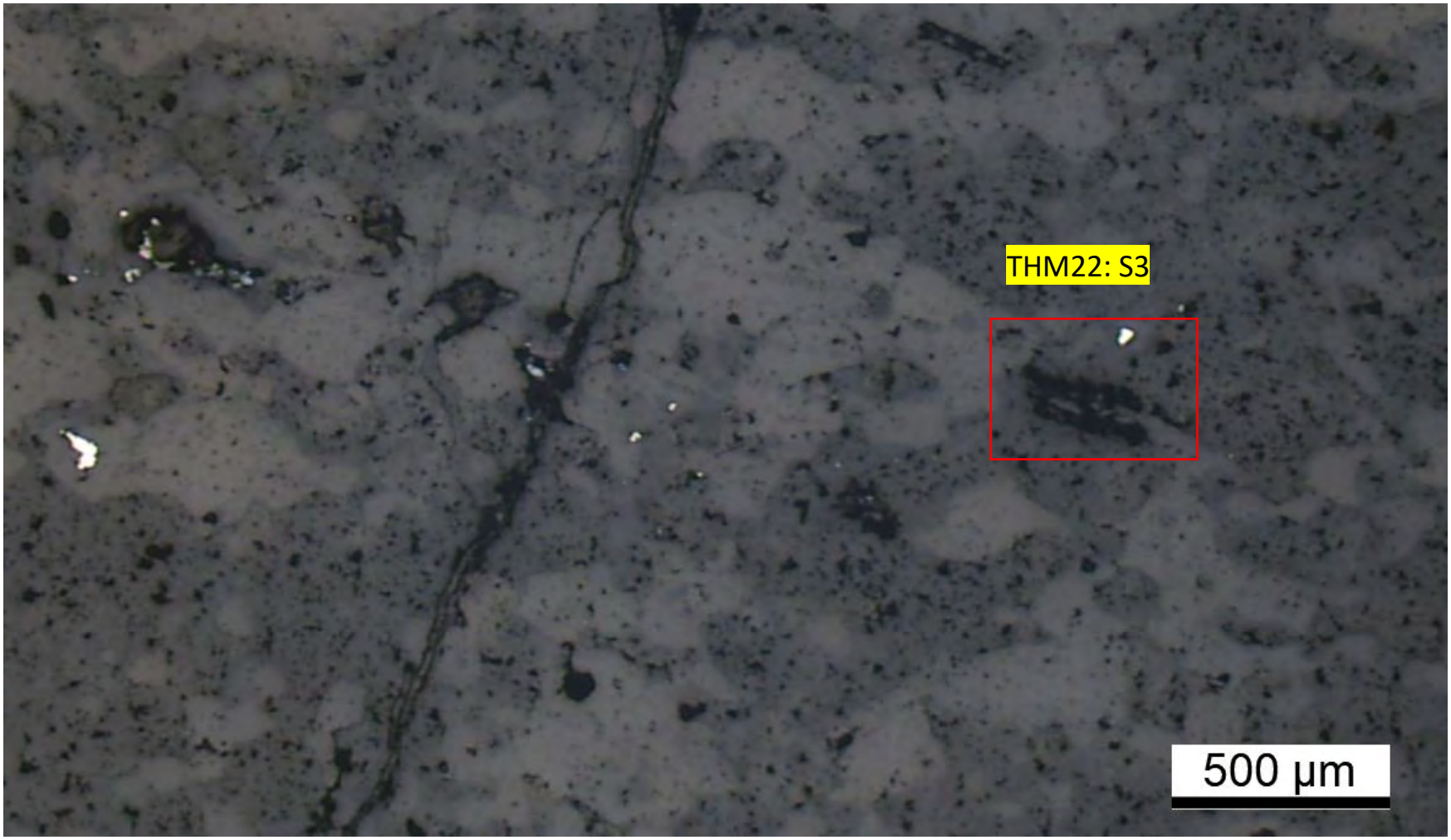


THM22: S2

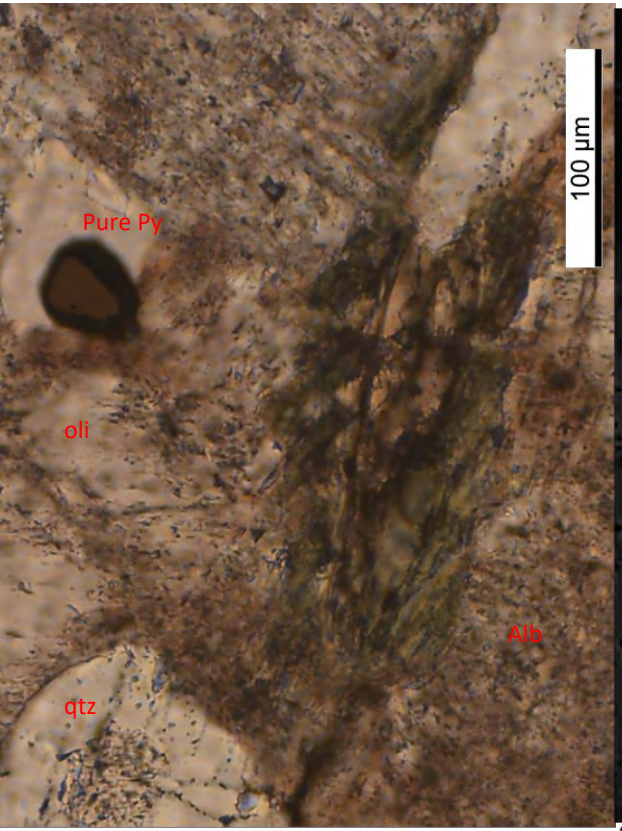
- Mn (+Ti; +/-NI, Cl, Rn, Ru?) Chl_1

Element	Wt%	Wt% Sigma	Atomic %	Oxide	Oxide %
O	38.7		58.56		
Mg	5.71	0.1	5.69	MgO	9.47
Al	12.73	0.12	11.42	Al2O3	24.05
Si	13.34	0.12	11.49	SiO2	28.53
Cl	0.14	0.04	0.1		0
Ti	0.03	0.05	0.02	TiO2	0.06
Mn	0.75	0.07	0.33	MnO	0.96
Fe	28.53	0.2	12.37	FeO	36.71
Ni	0.06	0.08	0.03	NiO	0.08
Total:	100		100		99.86

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22



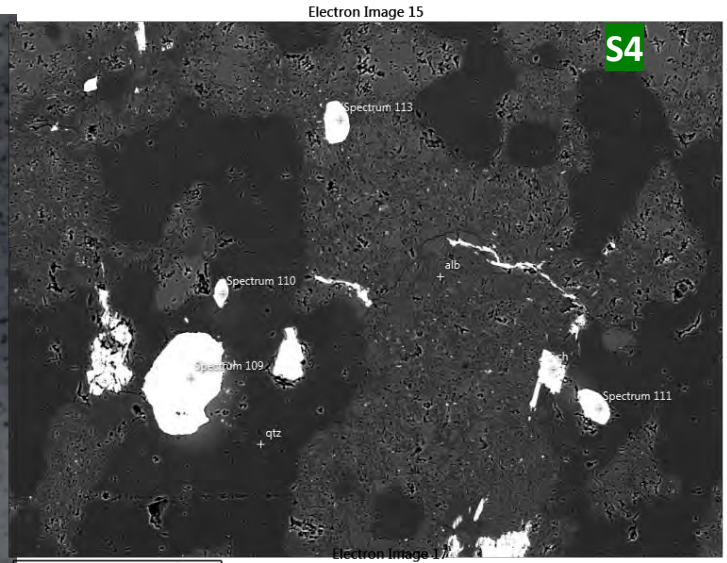
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

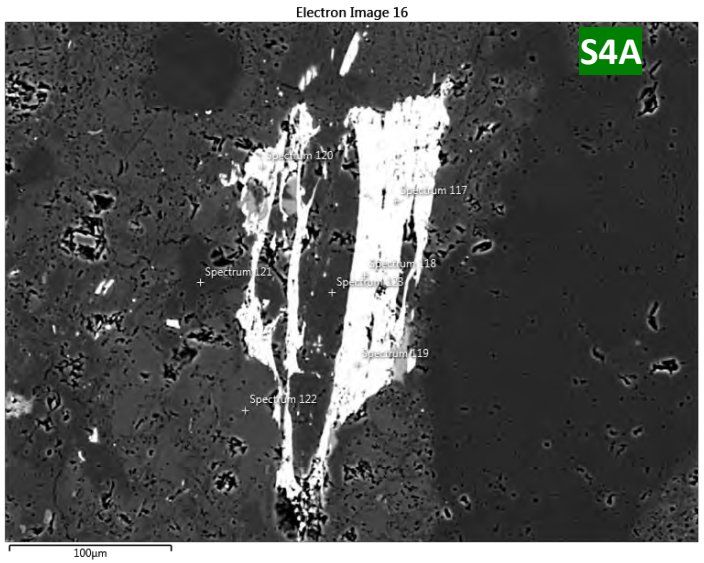


THM22: S3

- Chl_2 with minor contents of +/- Na, K, Ca, Ti, Mn
- Fsp: Alb to oligoclase(<~13% An), along S1 fabric; same stage? D_{1-2}? Or D_3?
- Pure Py within Qtz associated with Chl_2: most likely stage 3 Py

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22





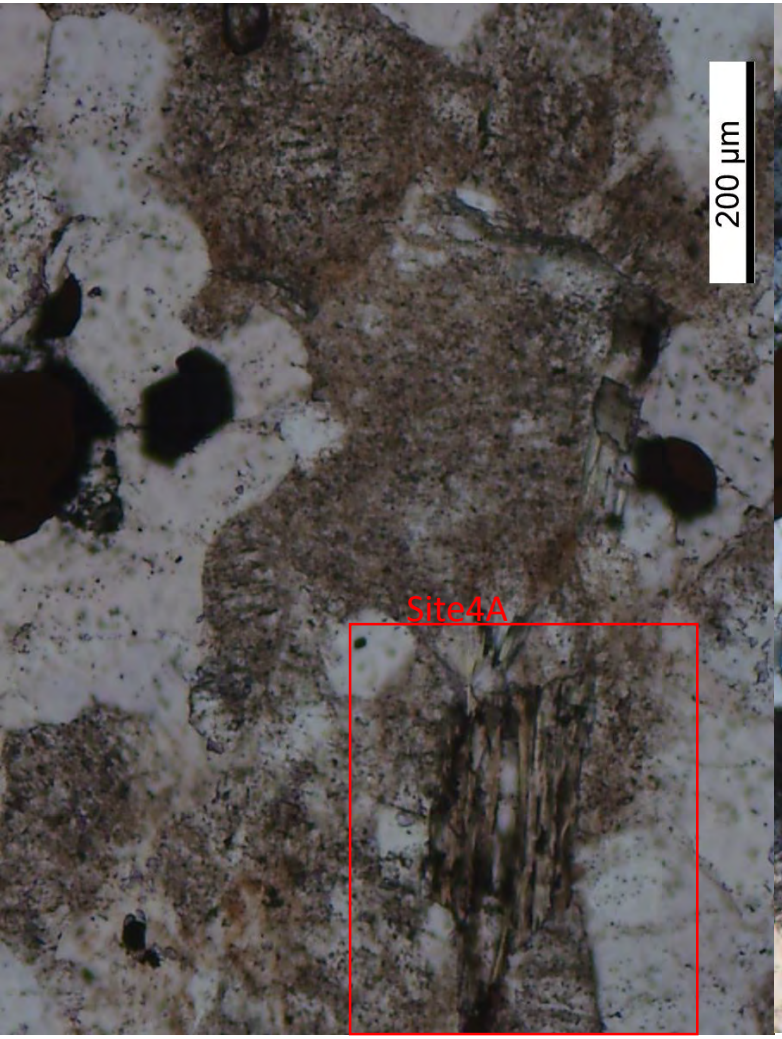
THM22:
S4, 4A, 4B

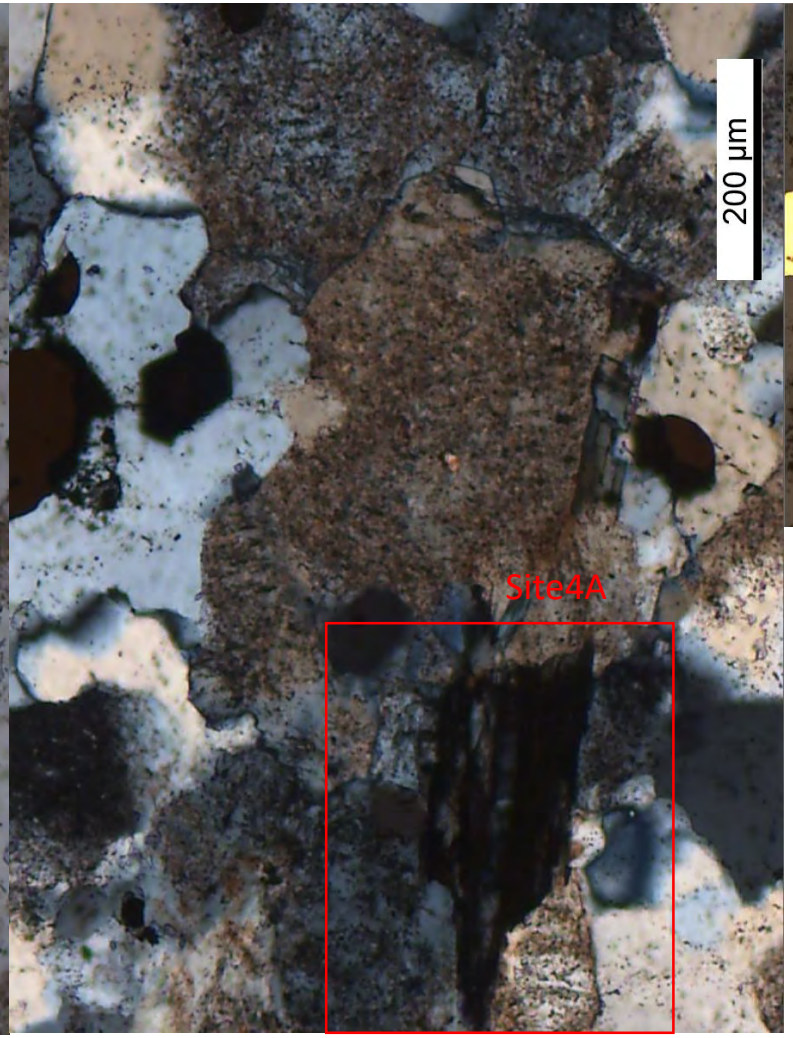
Stage 1-2 qtz-fsp metasomatism+ chl alt

- Alb-oligoclase +Qtz+
- (Mn-Ti-Cl-k) Chl_1
- Ni-bearing Py

Element	Wt%
S	54.19
Fe	45.66
Ni	0.16
Total:	100

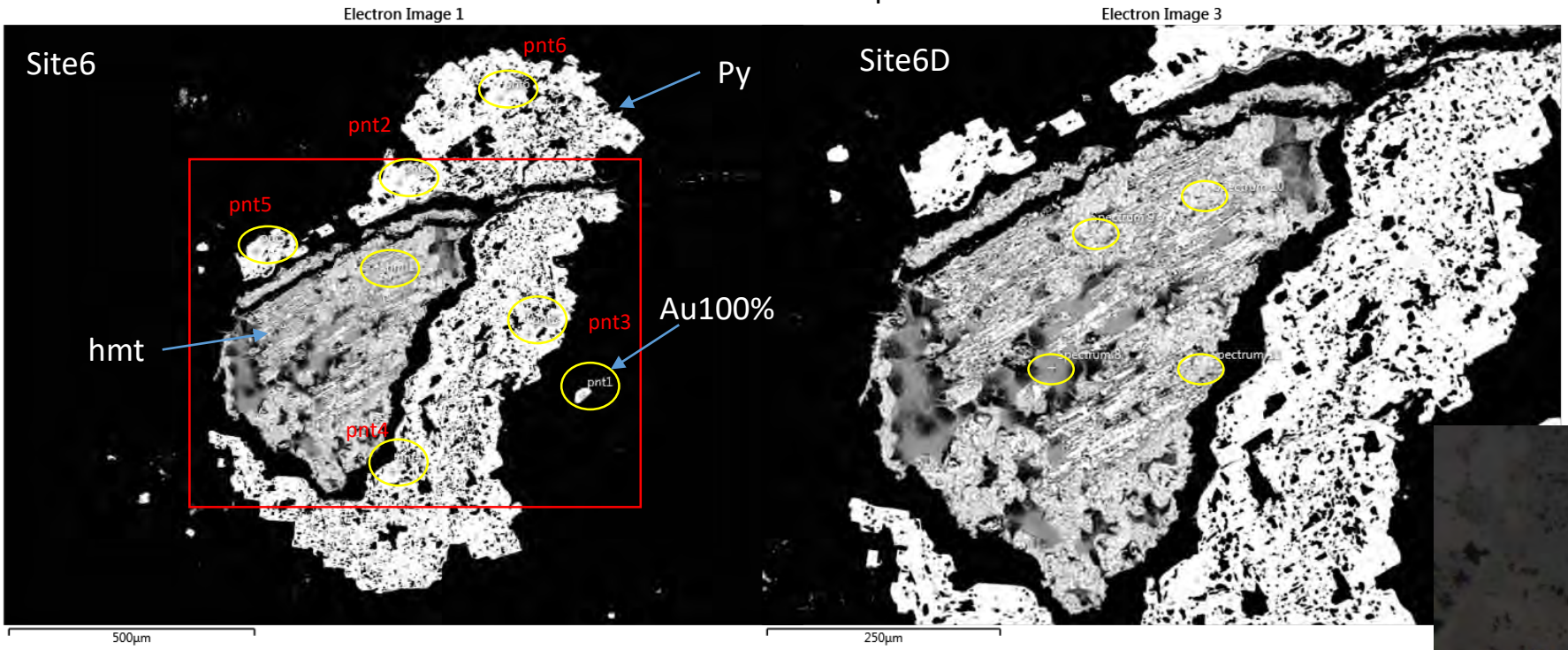
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

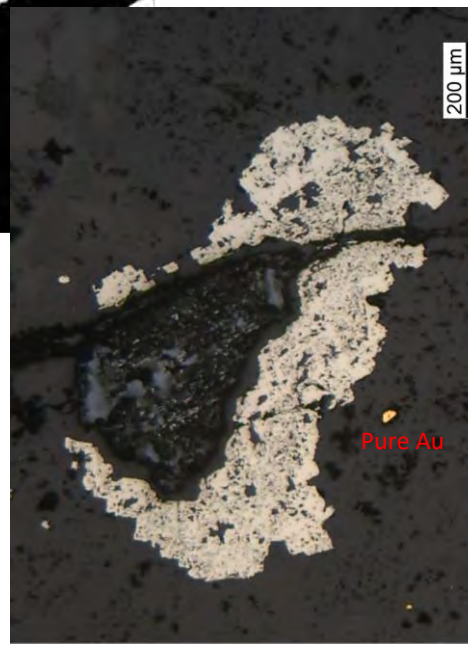




THM22:4A, 4B

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22





THM22: S6, 6D

- Hematite alteration due to the stage 4 vein ? cutting through
- The uncompleted alt of Py to Hmt: contain some Se-Ni-Cu (hmt1-site6; spectrum 9-site6D)
- Py: contains some Se (site6)

hmt1

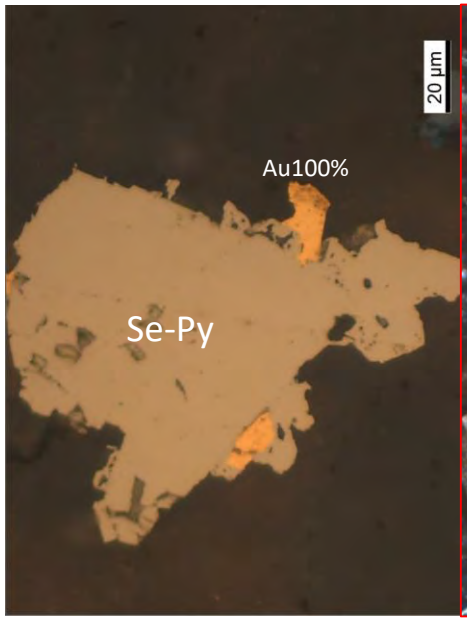
Element	Wt%
O	5.92
Si	0.11
S	47.19
K	0.44
Ca	0.07
Fe	42.11
Ni	3.09
Cu	0.76
Se	0.3
Total:	100

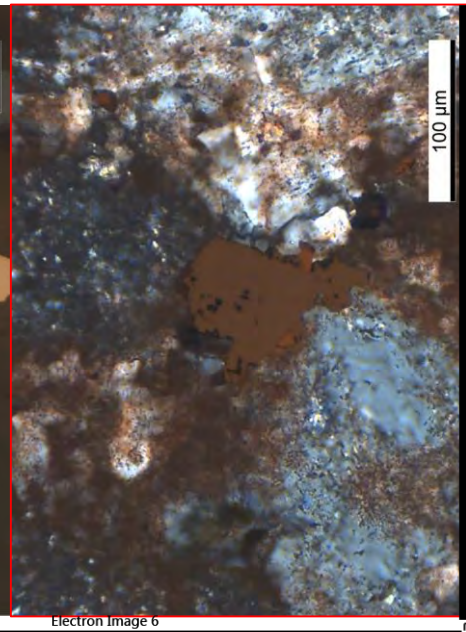
Spectrum 9

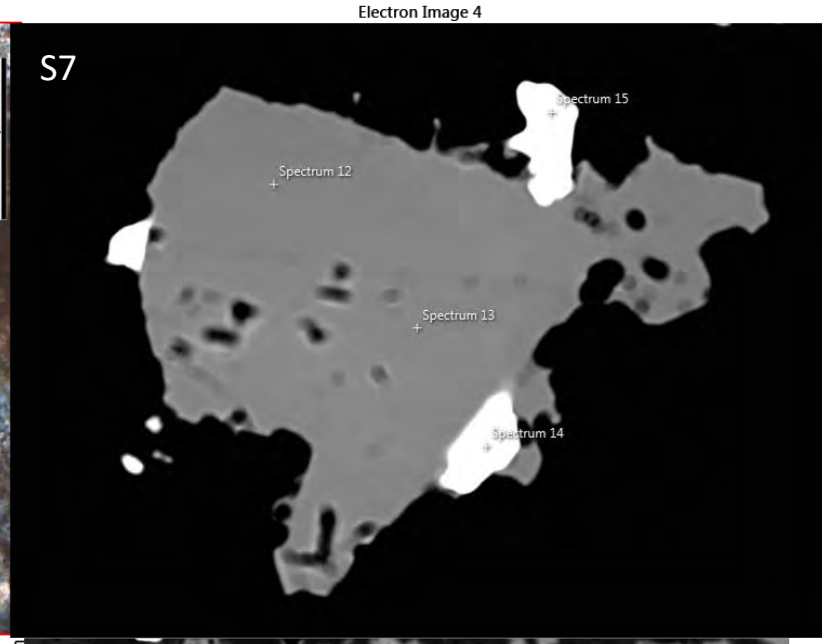
Element	Wt%
O	13.61
Al	0.25
Si	0.2
S	37.69
Fe	46.23
Ni	1.64
Se	0.38
Total:	100

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

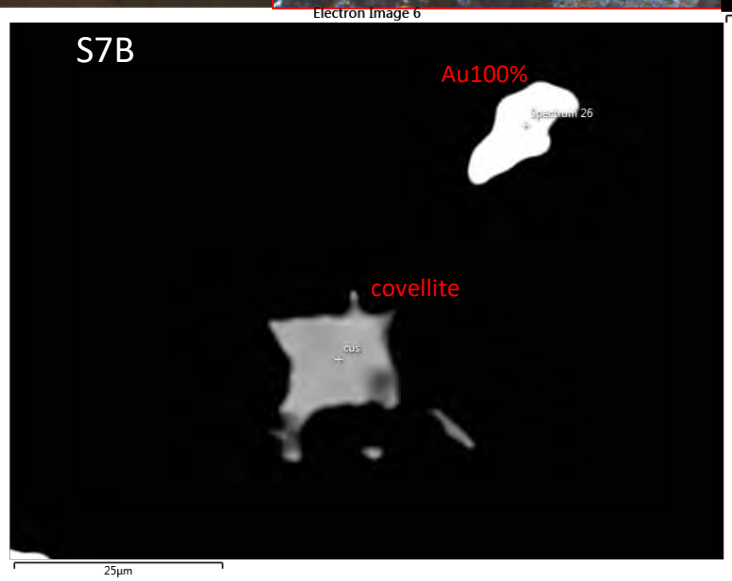
THM22: S7, 7A, 7B

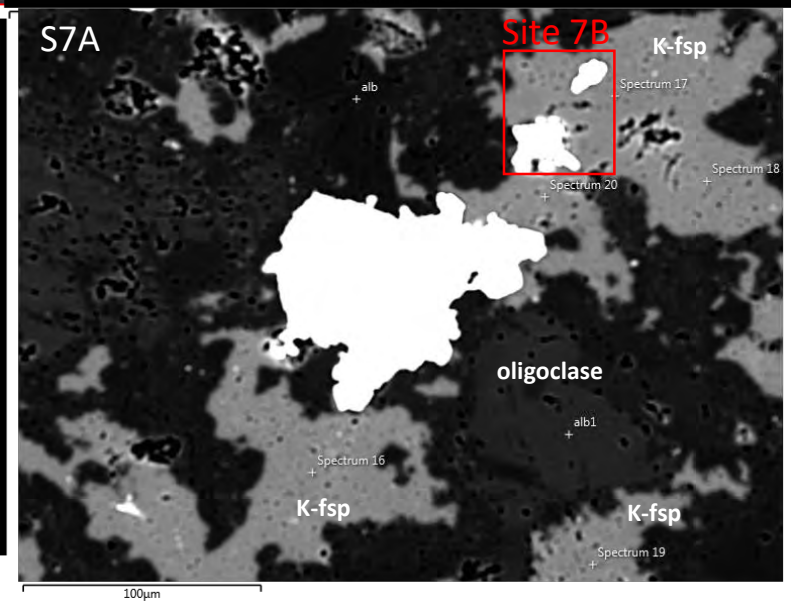






- Early oligoclase
- D_3 stage 3? overprinting:
  - K-fsp +Se-Py
  - Happy pure Au within K-fsp
- Covellite: could be due to weathering

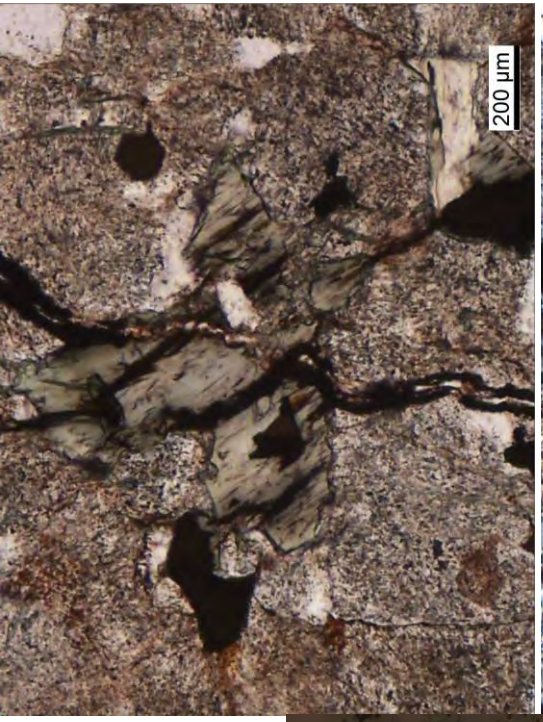


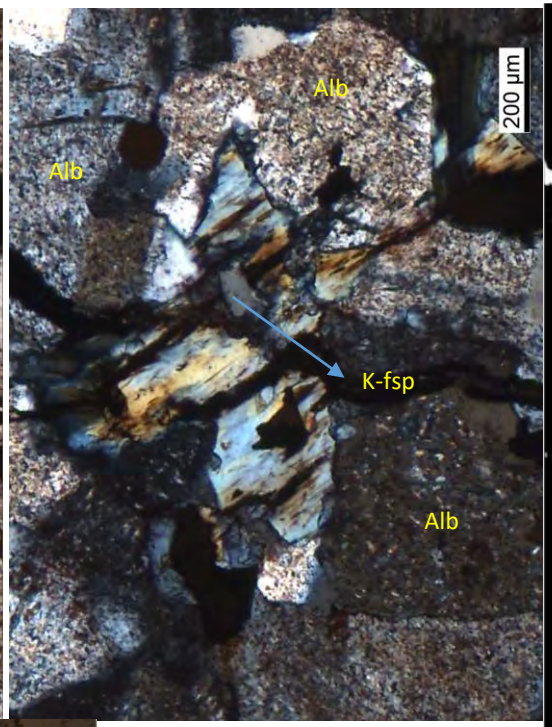


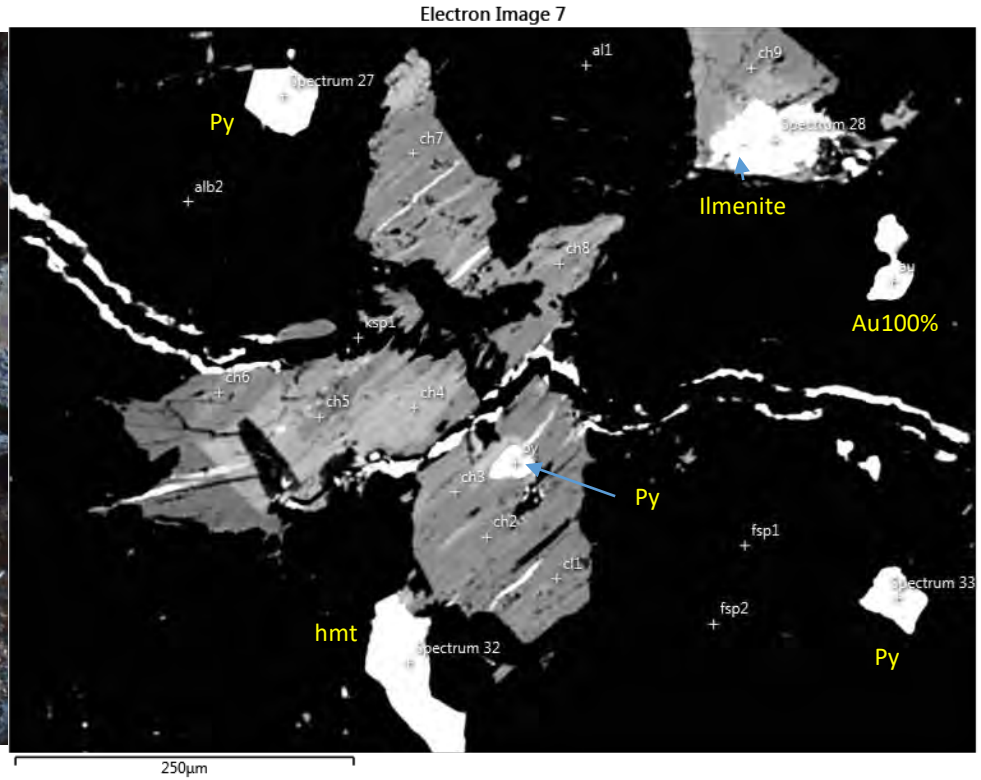
Se-Py:

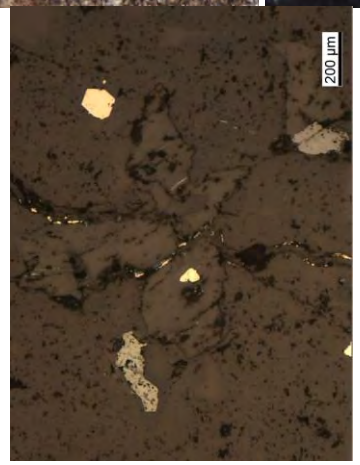
Element	Wt%
Al	0.07
Si	0.14
S	54.36
Fe	45.32
Se	0.11
Total:	100

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22





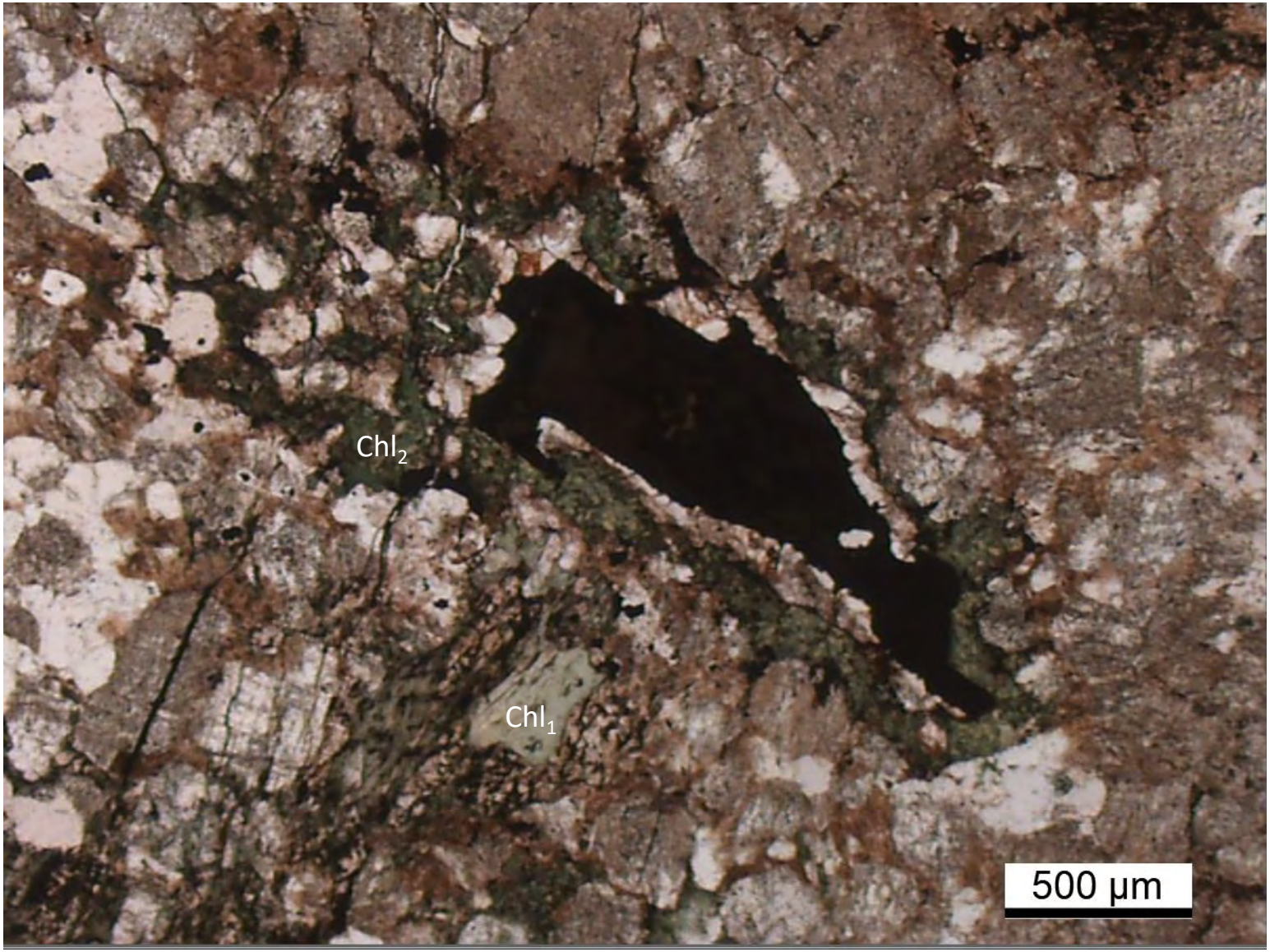




THM22: S8

- Pure Au
- Stage 1-2 Chl_1 overprinted by Stage 3/5 Py veins
  - Chl contain minor Mn+/-Ti, K
- Py without Ni or Cu or Se
- Hematite without Mn, Ti or Se or Cu
- K-fsp contain some Fe (hematite dusted?)

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

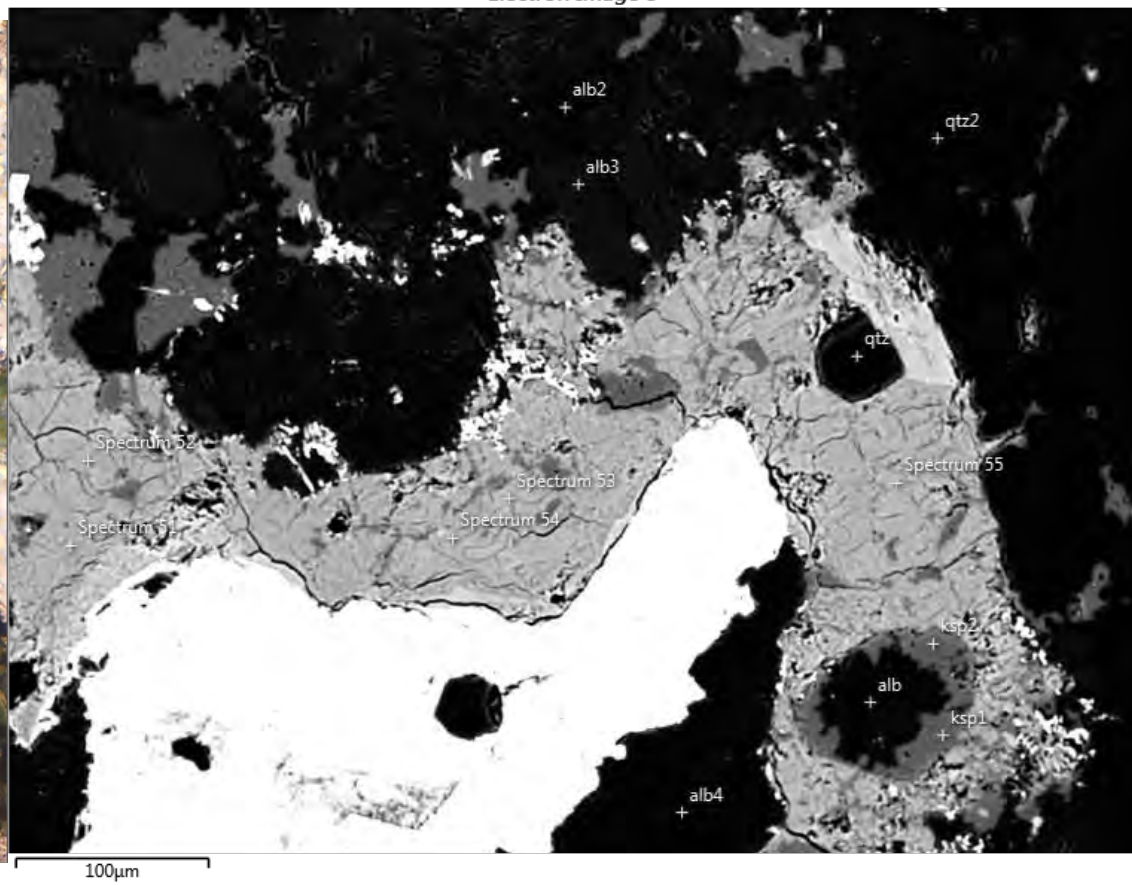


THM22: S9

- early D_3 Py (Chl$_1$-Py$_1$)?
- Later D_3 overprinting (Chl$_2$-Cpy-hematite) ?

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

THM22: S9



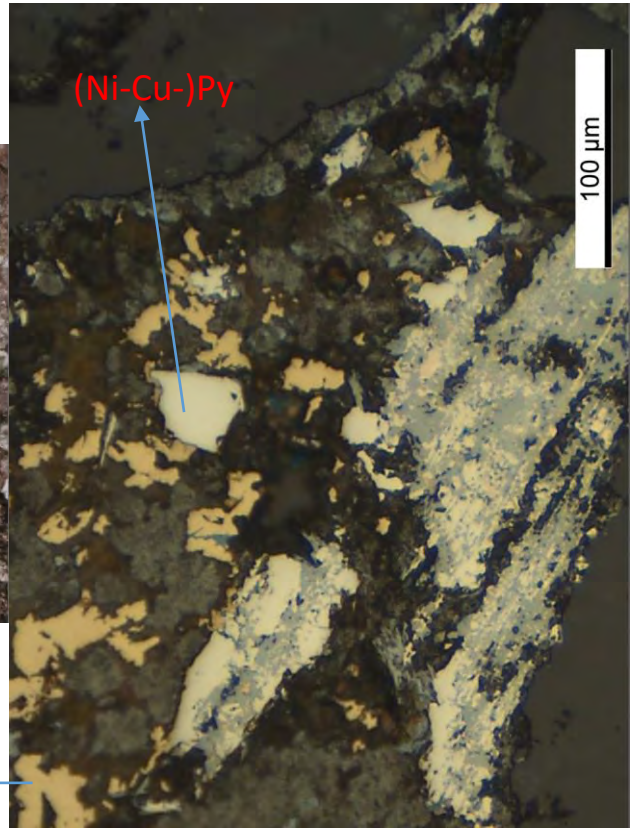
Hematite dusted Alb Alb (Alb with minor Fe)

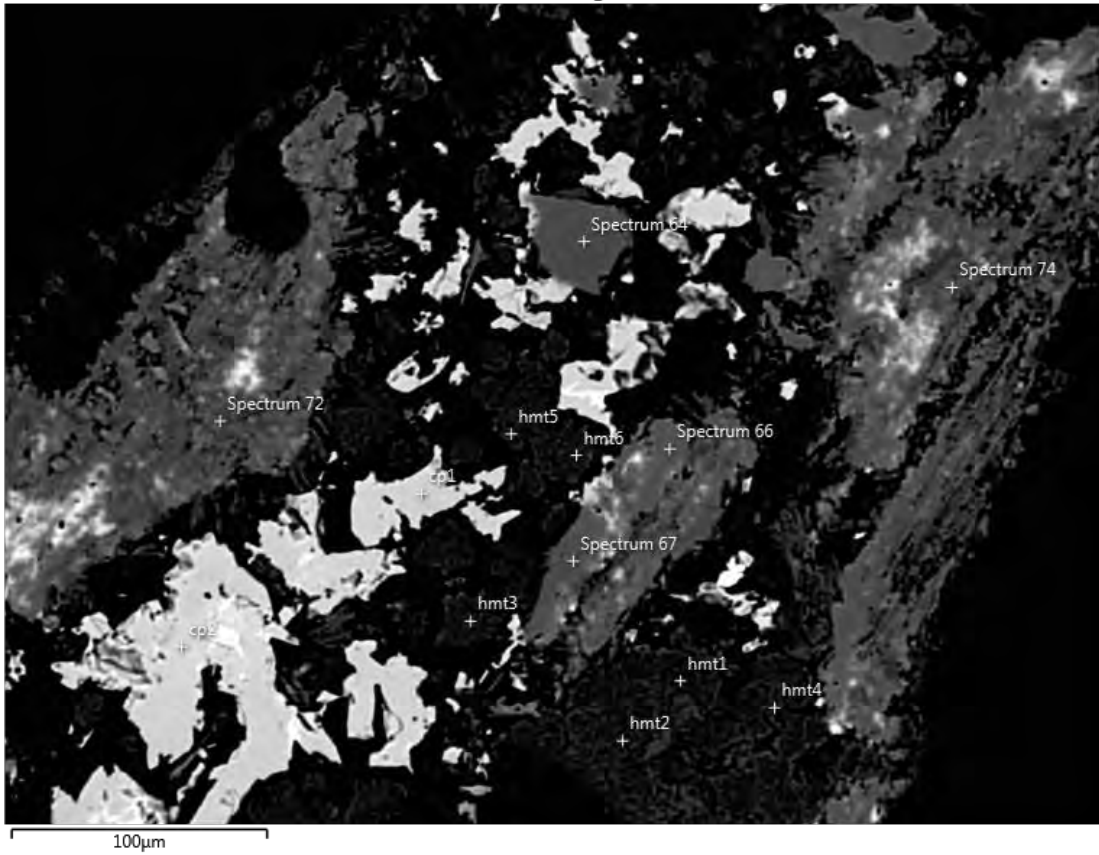
Chl with minor Mn, Ca, K

- early D_3 Py_1 (Stage 2 D)
- Later D3 overprinting (Chl_2-Cpy-hematite-Alb-K-fsp –Qtz; Stage 3?)
  - K-fsp (stage 3?) just after Alb (stage 2?)

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

THM22:
S9B

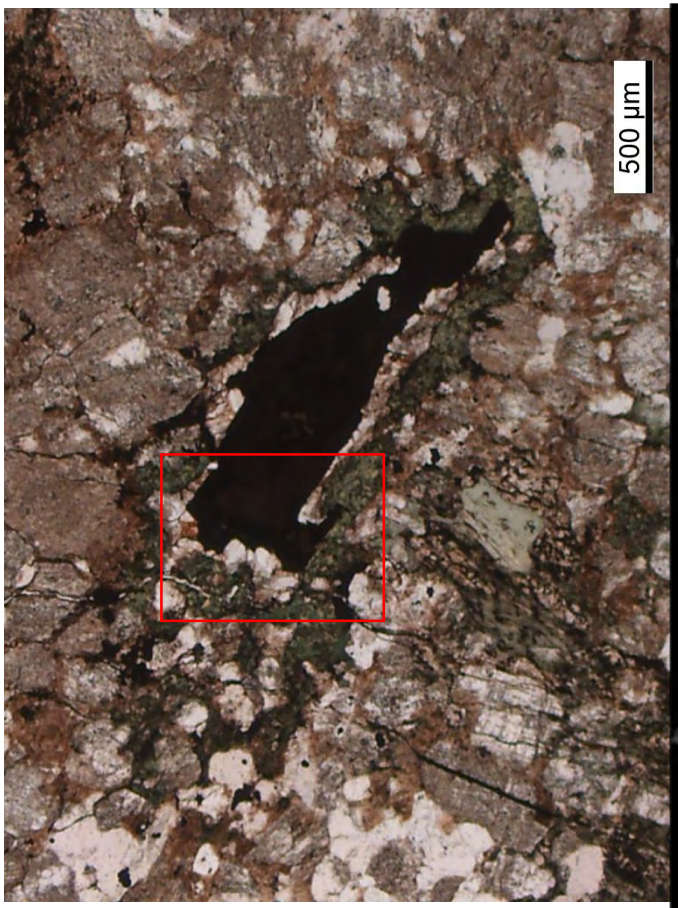


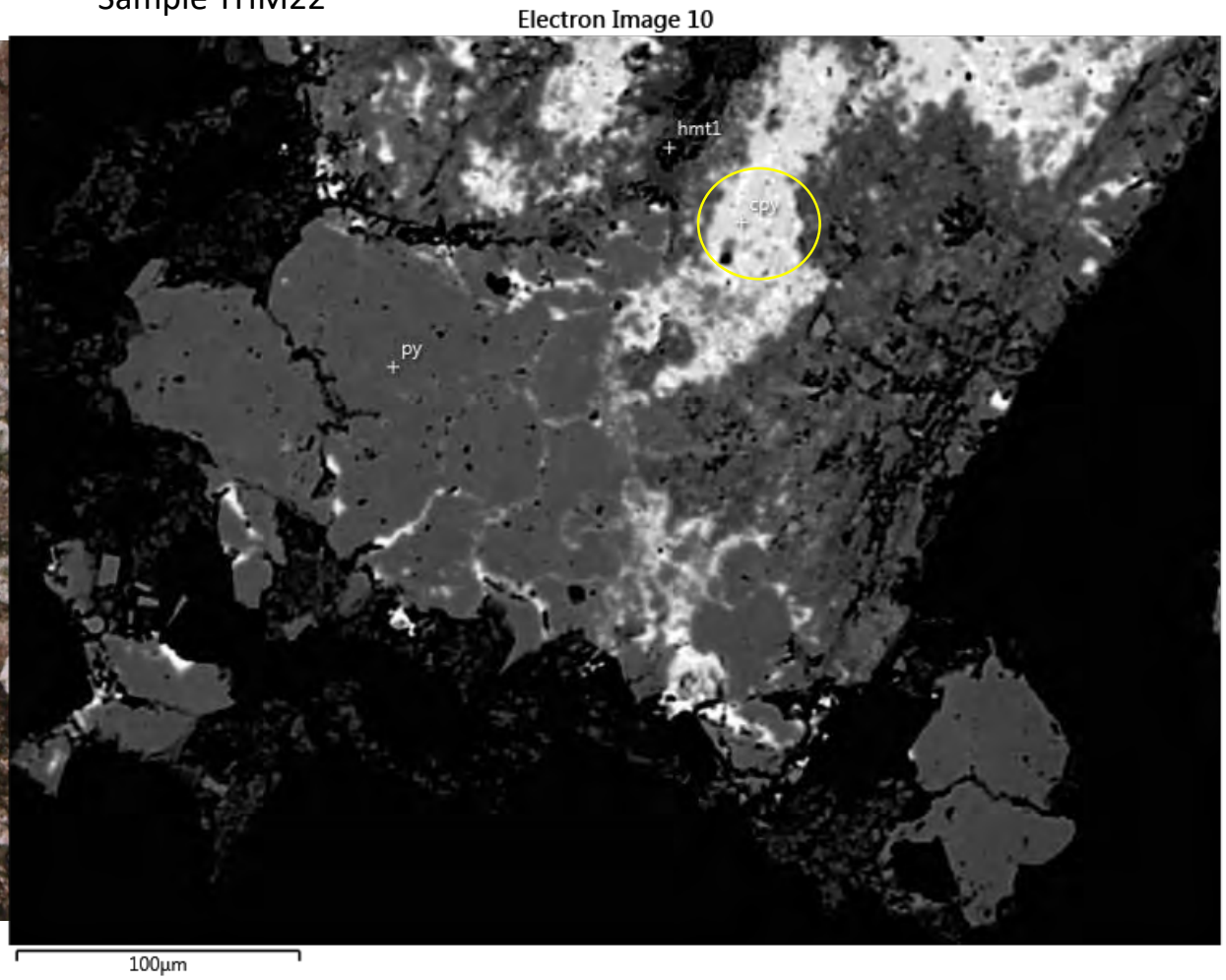


Stage 2 :$_1$ with minor Ni+Cu
Stage 3:

- Hematite with minor Ti +/-Cu (all hematite spots)
- Cpy without Ni, Co, Se or Bi

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22





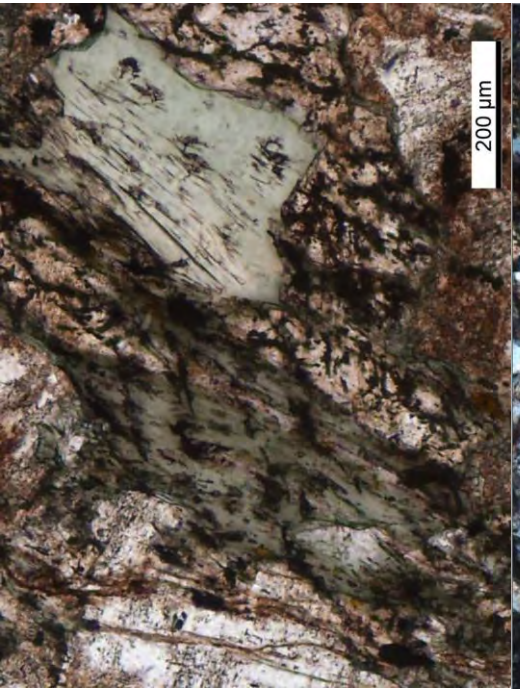
THM22:

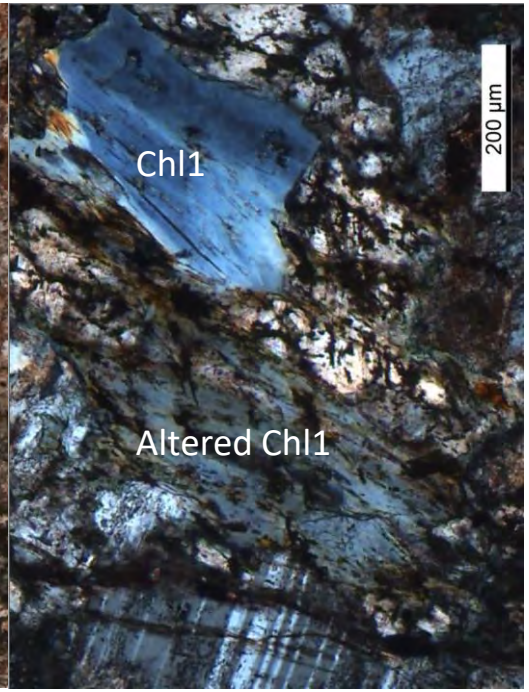
- Py contain some Cu-Ni
- Hematite contain some Ti
- Cpy is pure

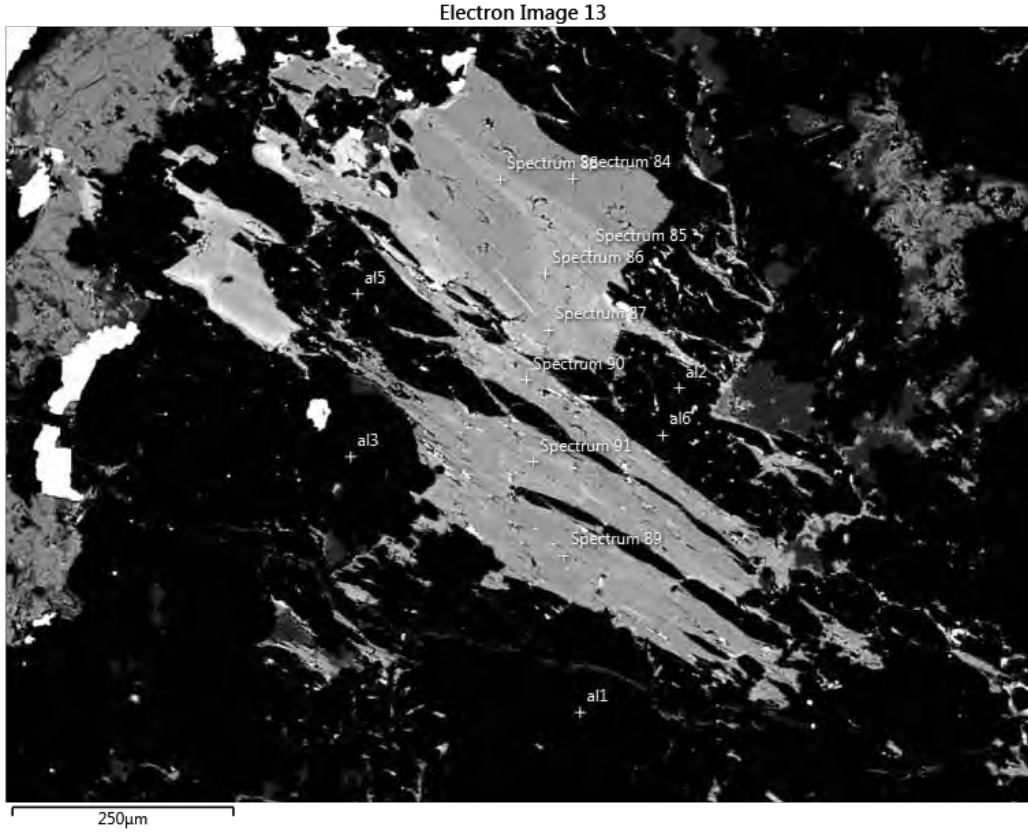
S9C

- Stage 2 Py (Py_1) overprinted by stage 3 Chl_2-Cpy-hematite

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22







THM22: S10

Chl commonly with minor Mn and Ti
Alb is hematite dusted (locally with Fe content, asl can see under microscope)

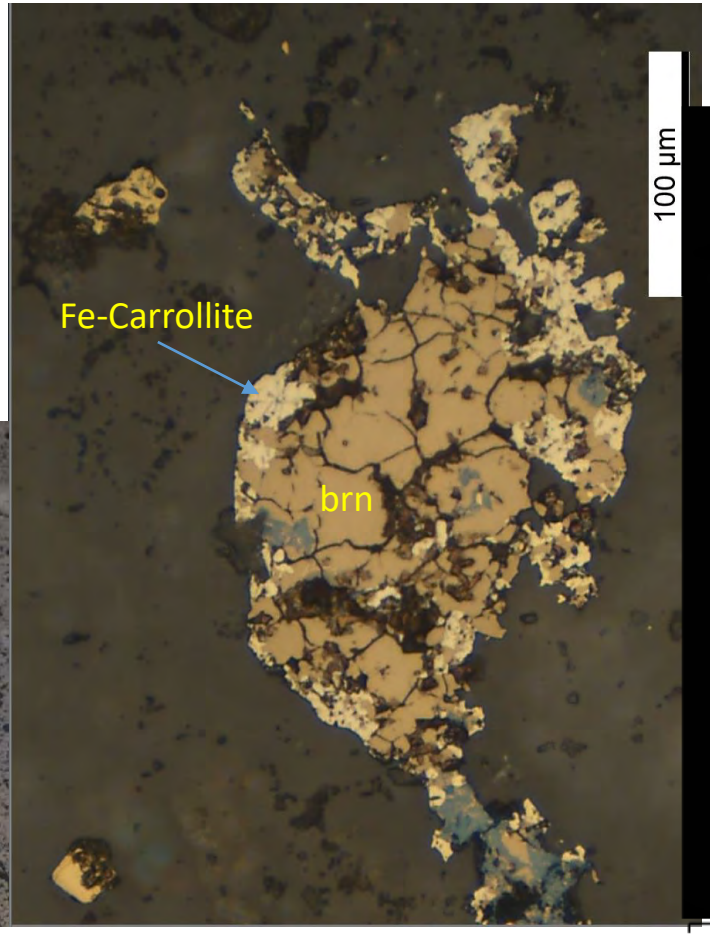
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

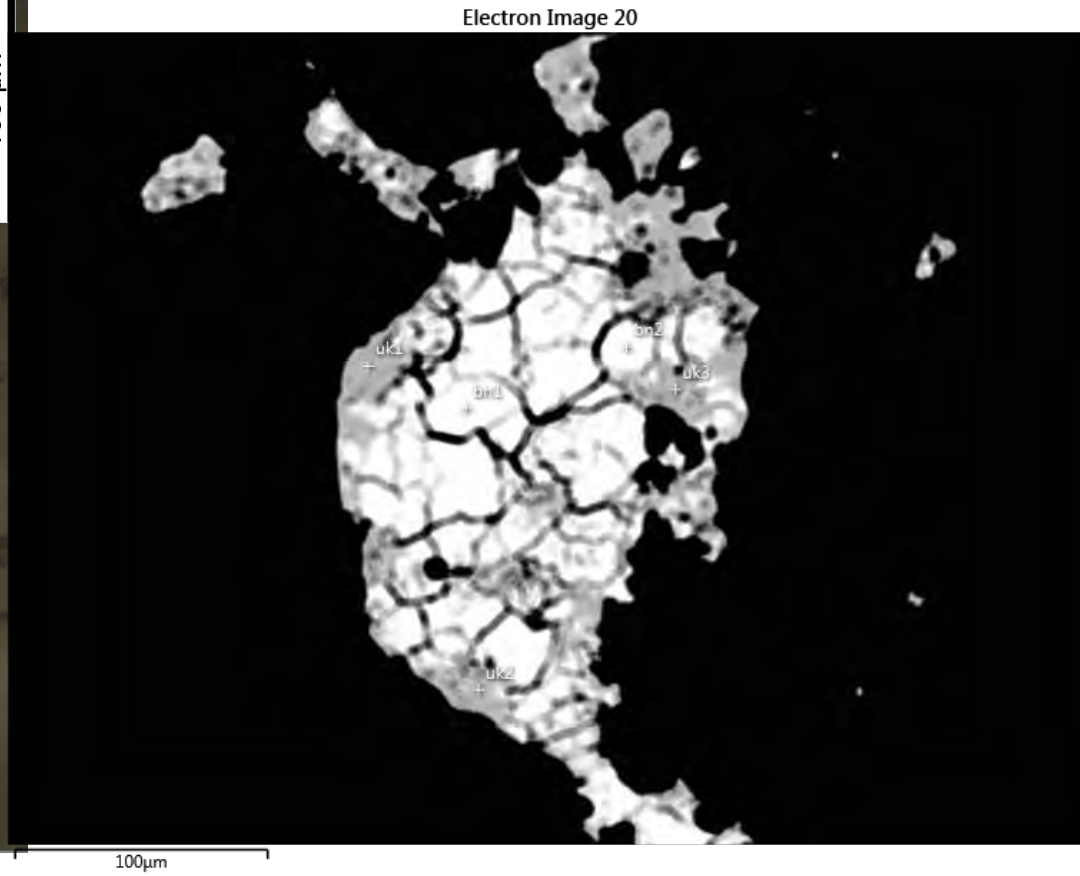
THM22: S11

- This sulphides is early D3?, strongly deformed
  - The textures is likely D3 Py
  - Bornite is pure
  - Fe-Carrollite

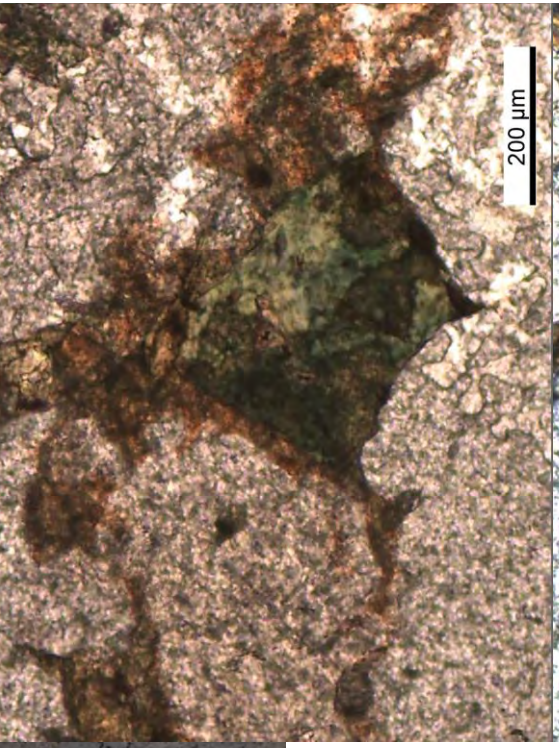
Fe-Carrollite

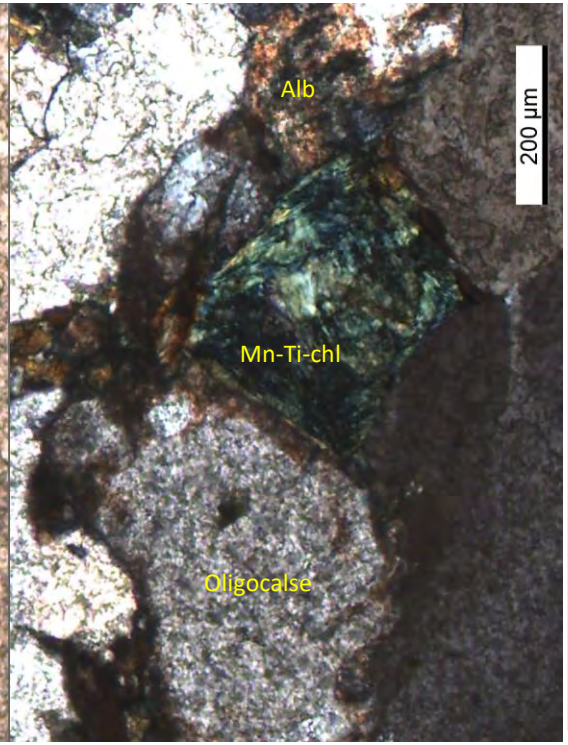
Element	Wt%
S	39.32
Fe	4.16
Co	26.8
Ni	4.66
Cu	25.07
Total:	100

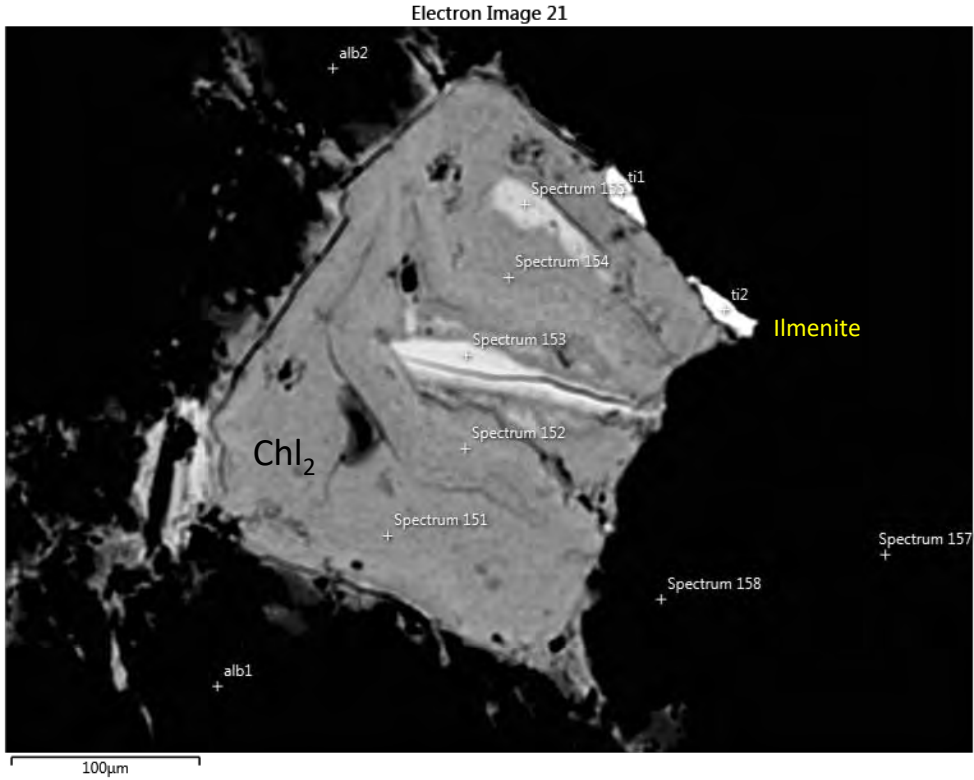




Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22







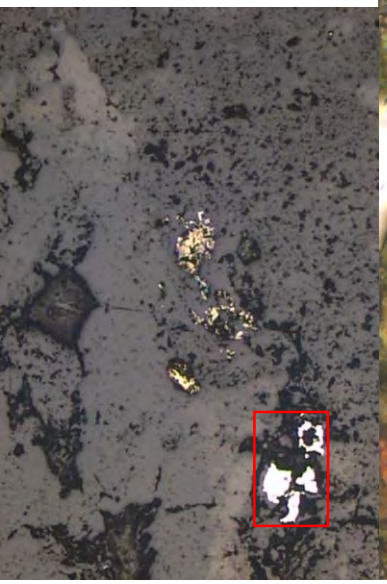
THM22: S12

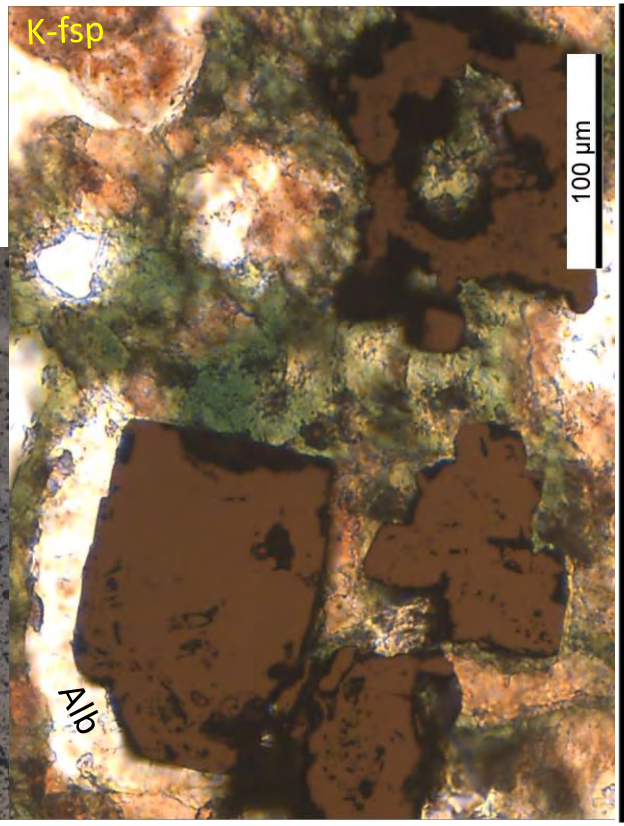
Sp153,155: not use as they are in the cracked domains

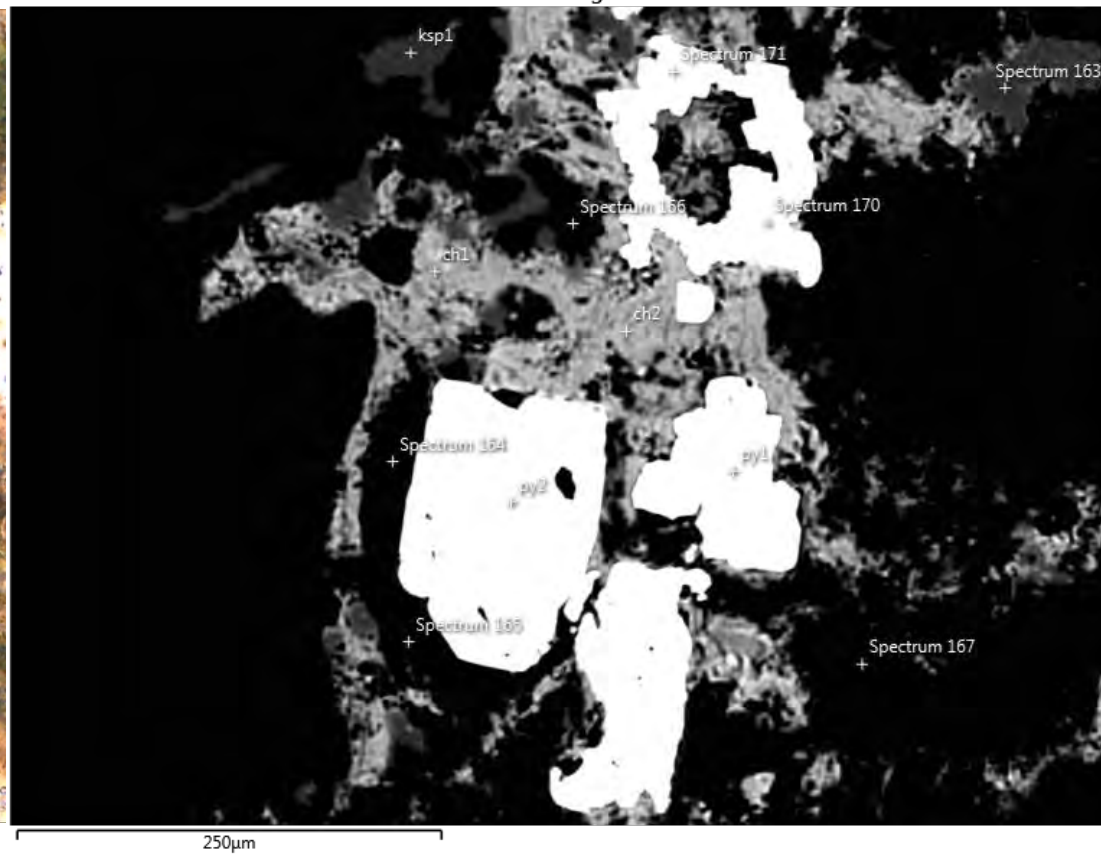
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22

THM22: S13

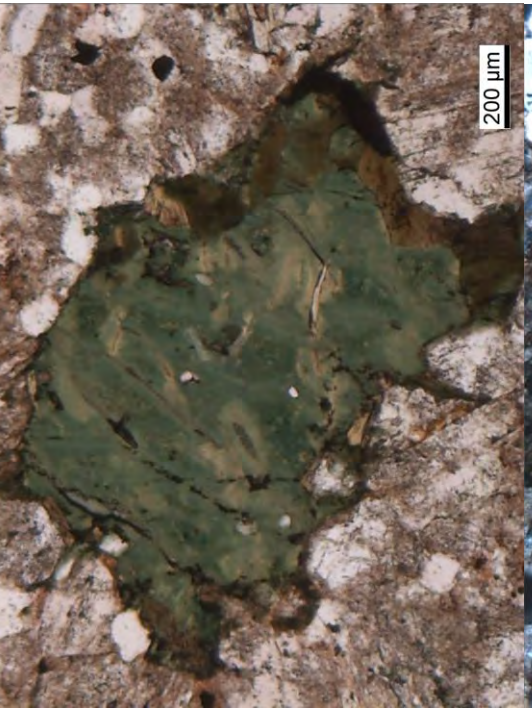
- Stage 2: Ni-Py
- Stage 3 rimming reaction assemblage?:
  - Fsp: K-fsp+ Alb +hematite dusted
  - Chl2: with minor Mn+Ti

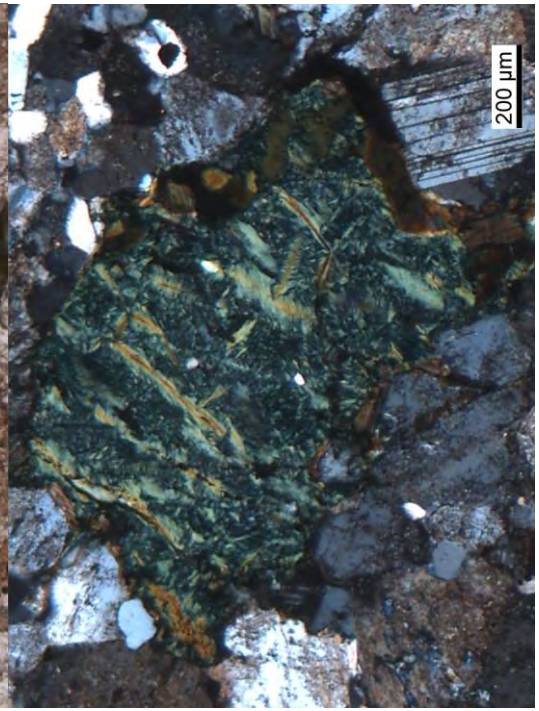


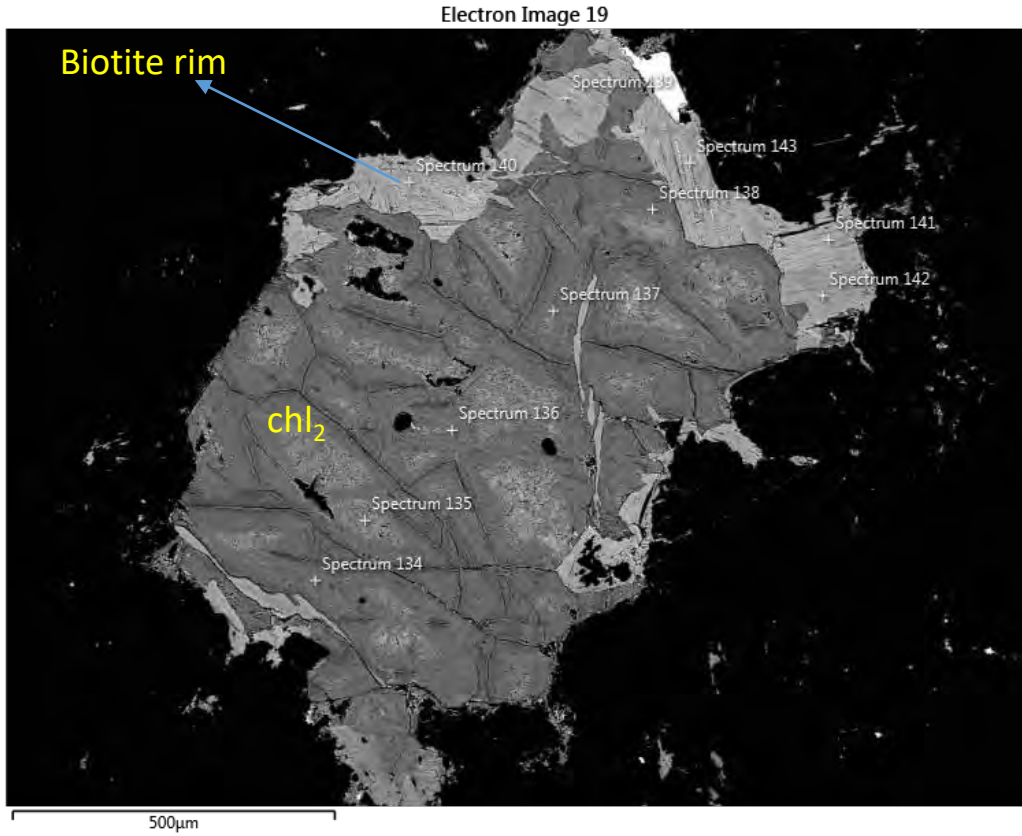




Appendix 6B: Images of SEM and EPMA mineral analyses
Sample THM22







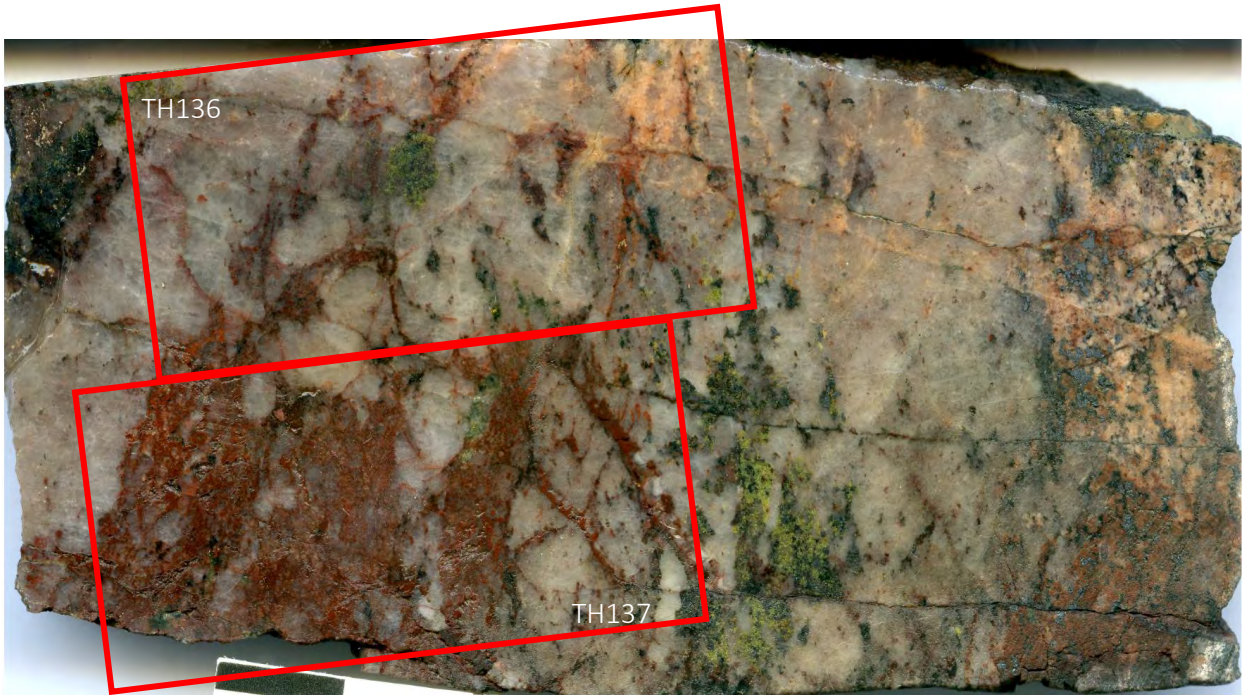
THM22: S14

- Chl_2
- Biotite rim contain Ti and Mn

Sample TH137

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137

Hand specimen image



Summary:

Stage 3 qtz-fsp + mineralisation; at depth level, in the qtz-fsp alteration zone closed to the “brecciation”, with mineral assemblage:

1. Au has minor content of Ag and Cu (different from THM51C- Pure Au)
2. Chl_2: Mg-rich chl
3. Epidote, locally with minor Mn content (a single spot)
4. Hematite: locally contain minor contents of V or Ti

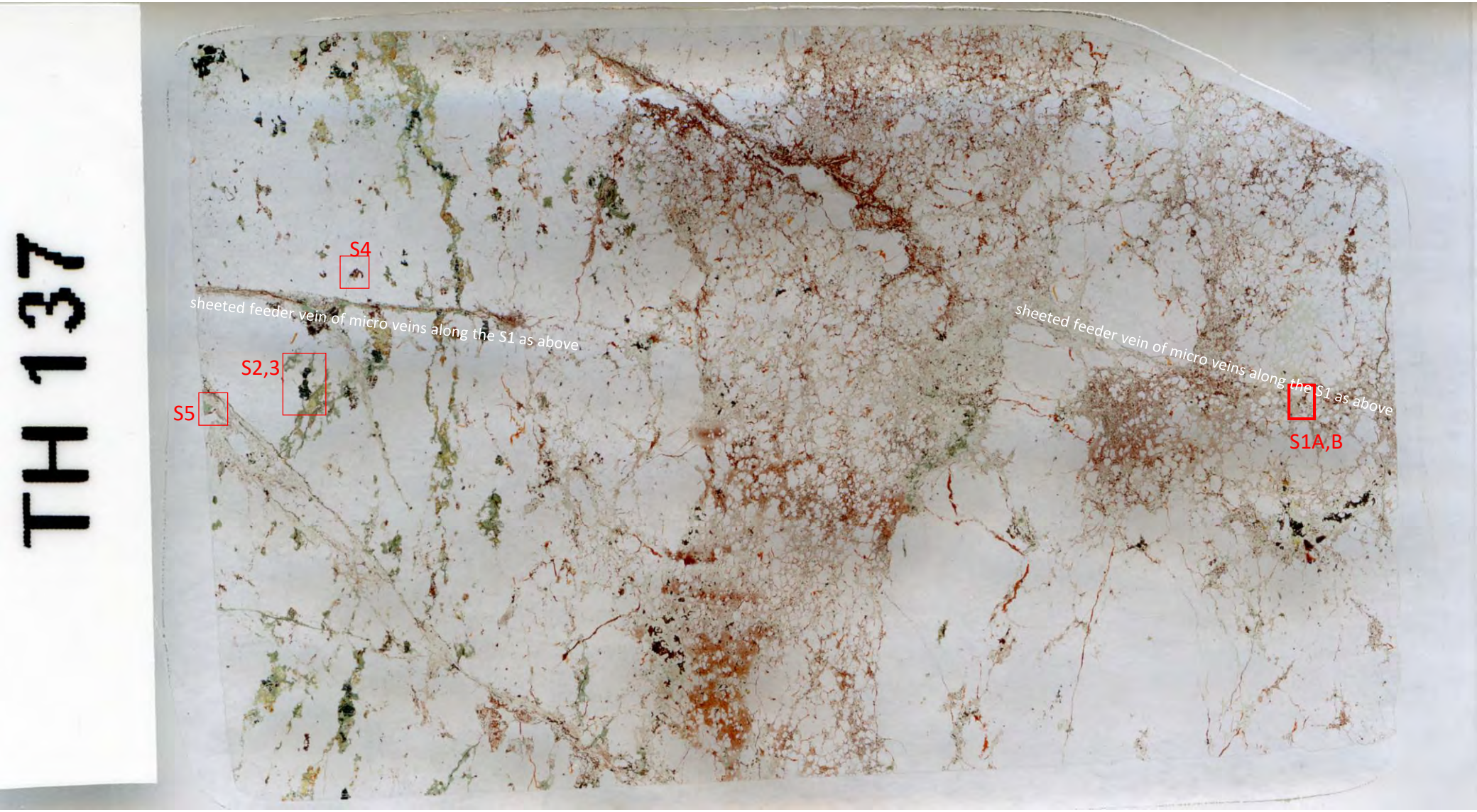
Stage 3B/4: Clay alteration replacing Chl_2

Clay

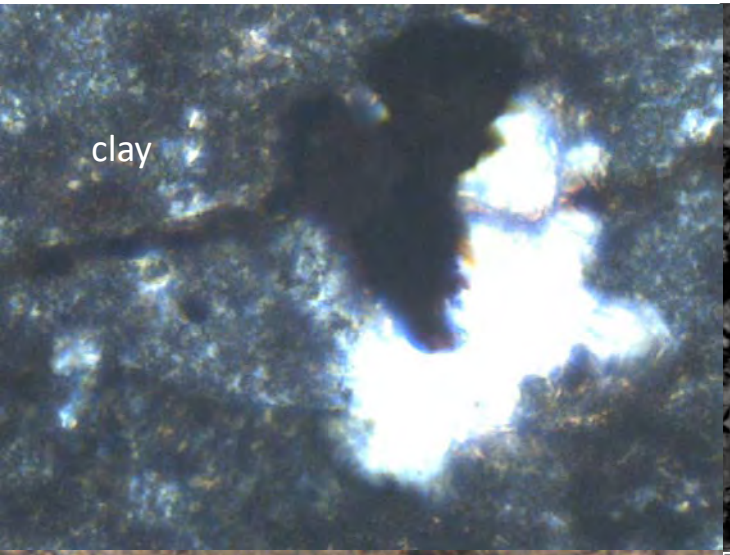
Au (+/-Ag,Cu)

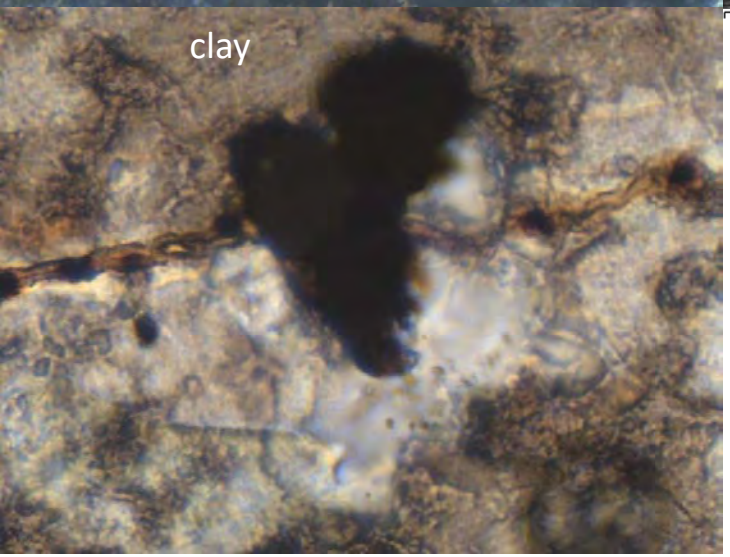
Block section image

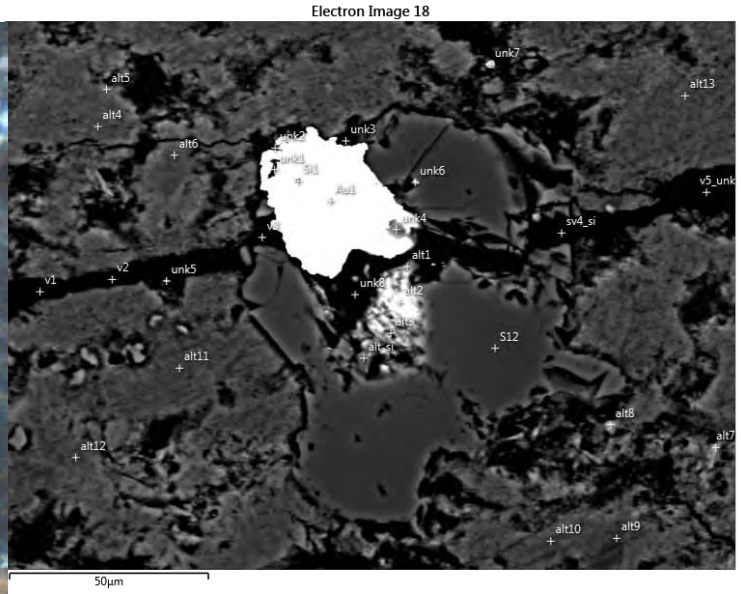
Thin section map of analysis locations



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137

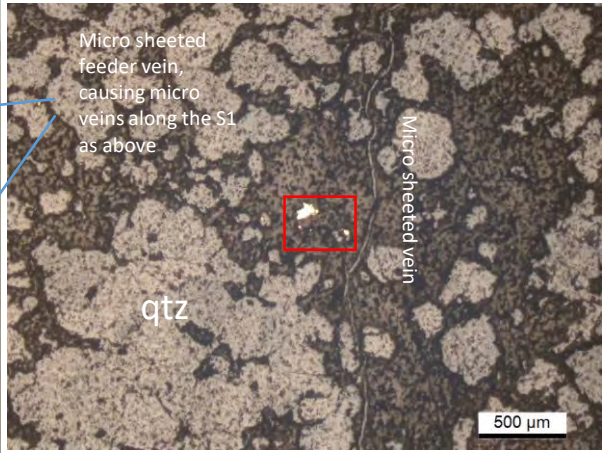


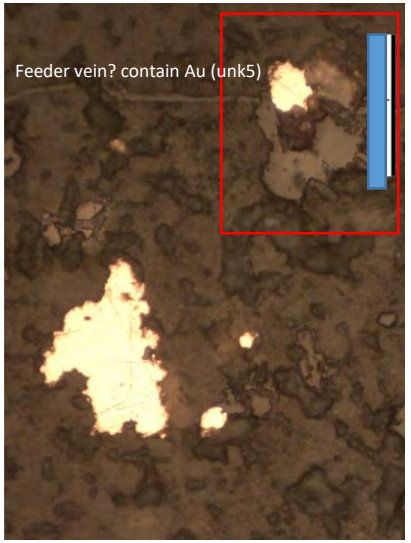




TH137: S1A

- Ag-Cu Au2 but not enough Ag to call electrum; <4% Ag
- The vein is not calcite vein

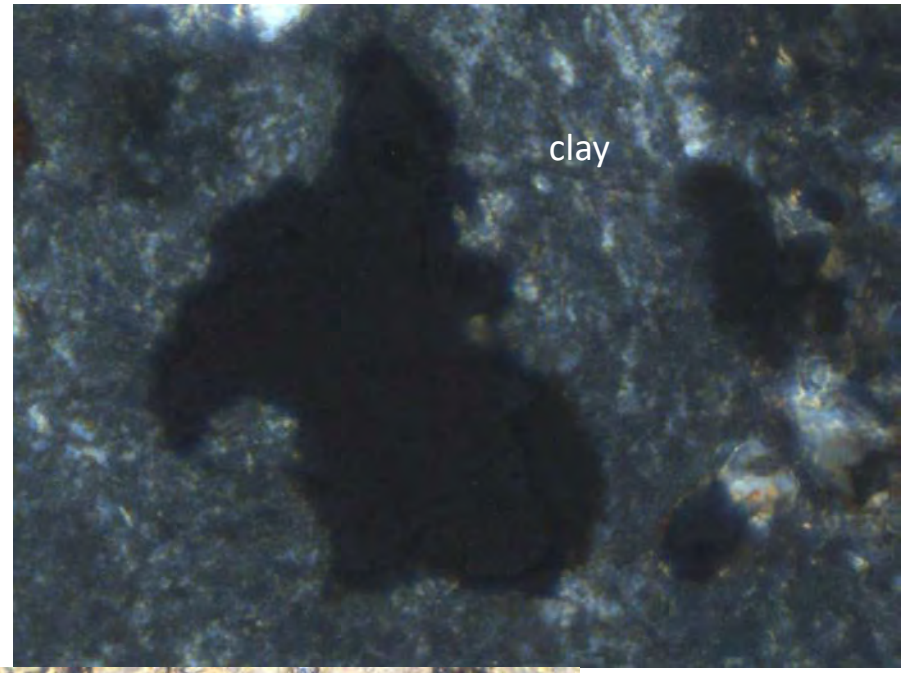


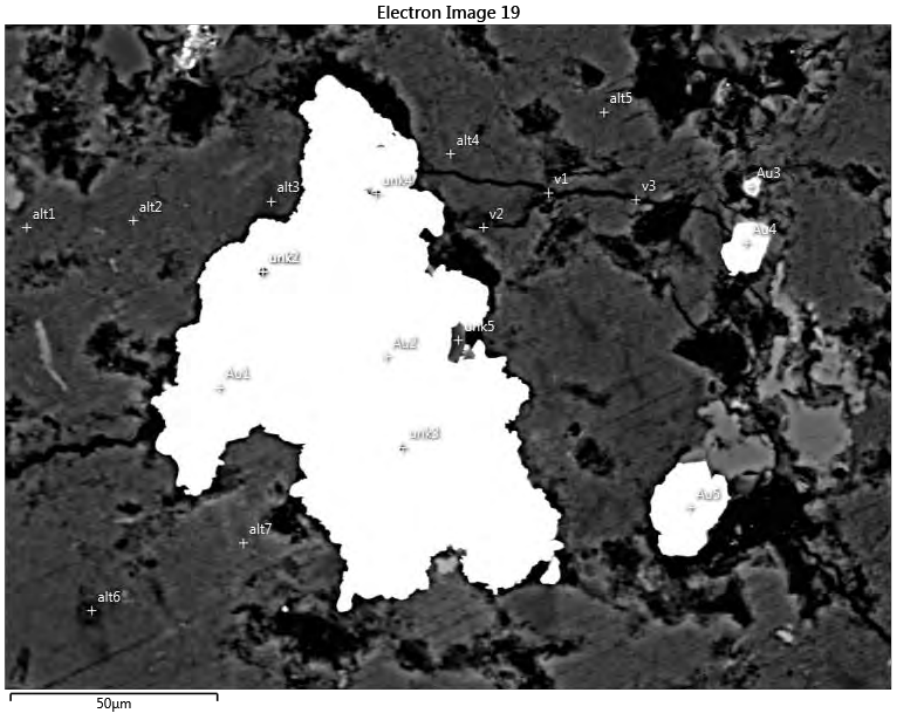


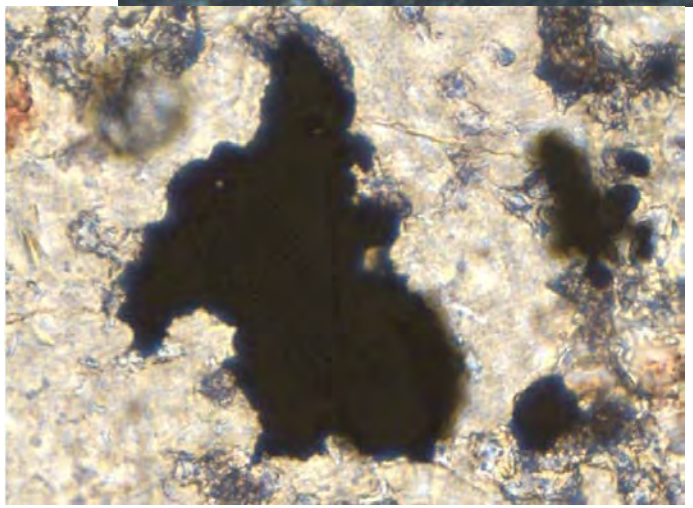
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137

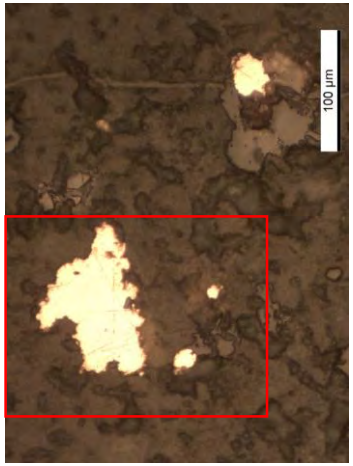
TH137: S1B

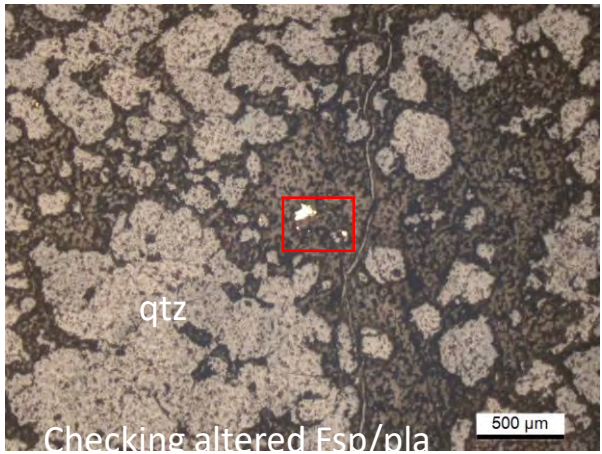
Ag-Cu Au but not enough Ag to call electrum; <6% Ag
Au2: Au (+/-Ag, Cu)



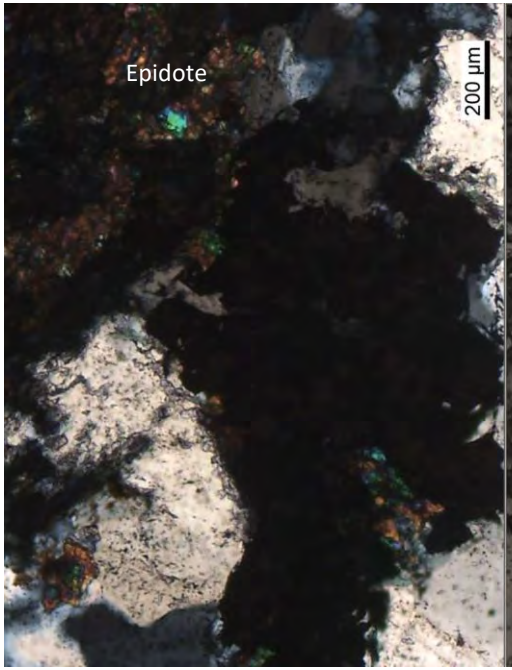


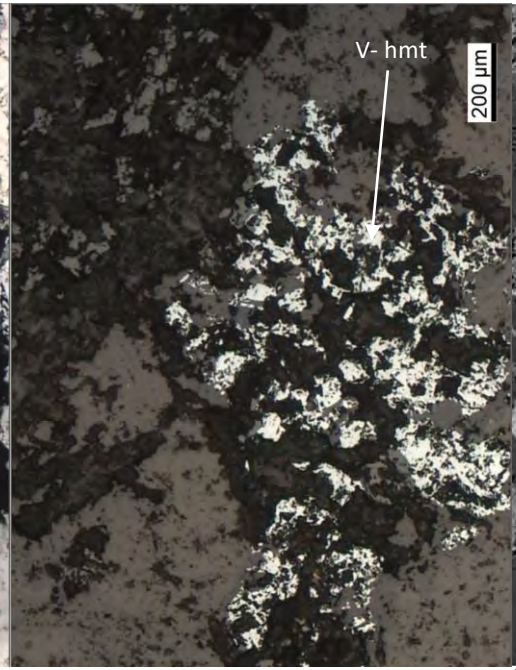


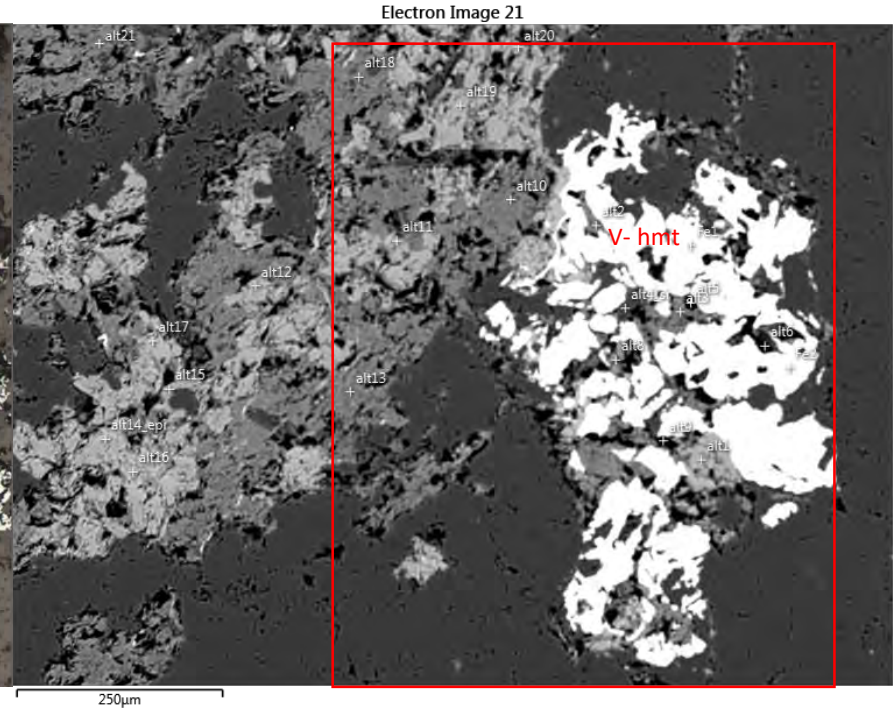




Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137

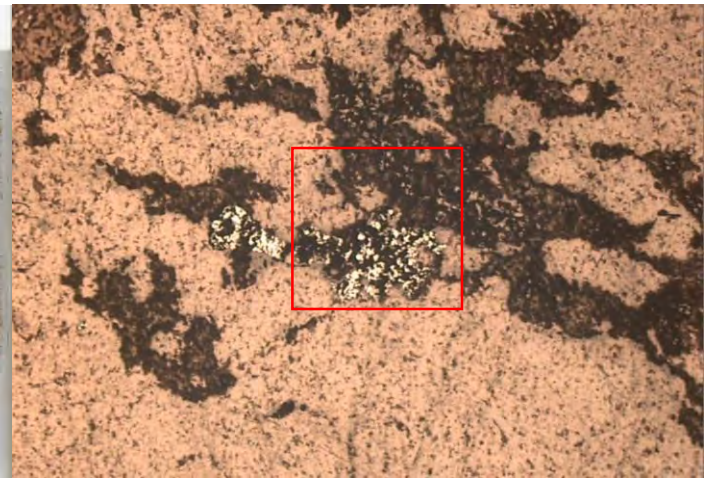




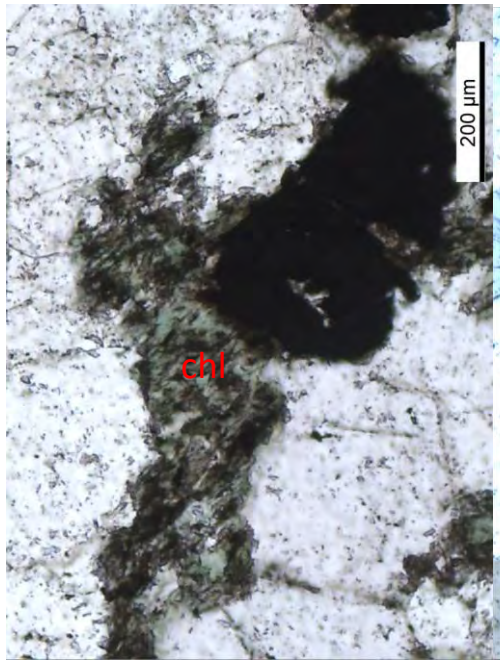


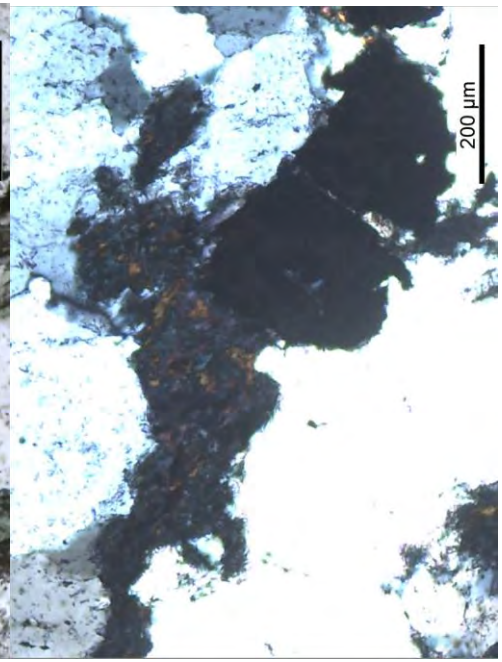
TH137: S2

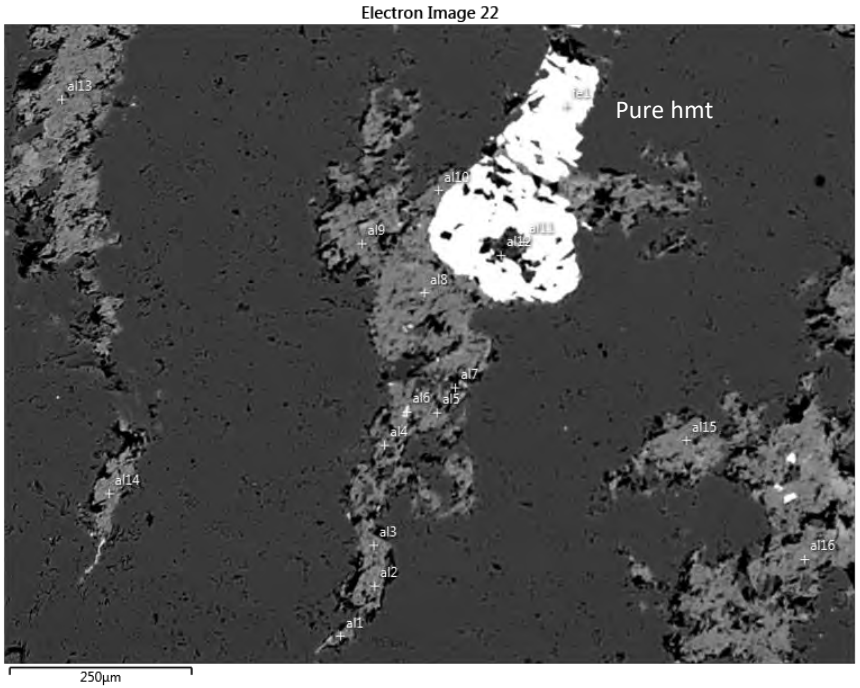
- Chl_2+ epidote + hmt
- hematite (hematite contain minor content of V)



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137

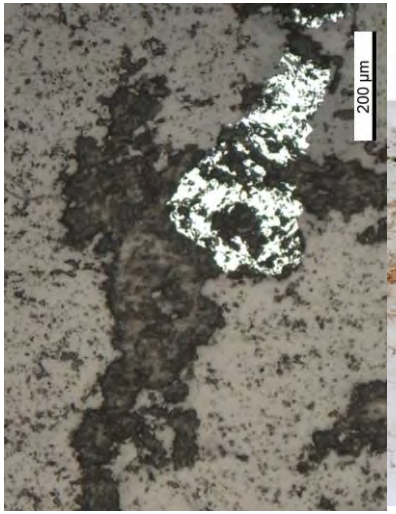


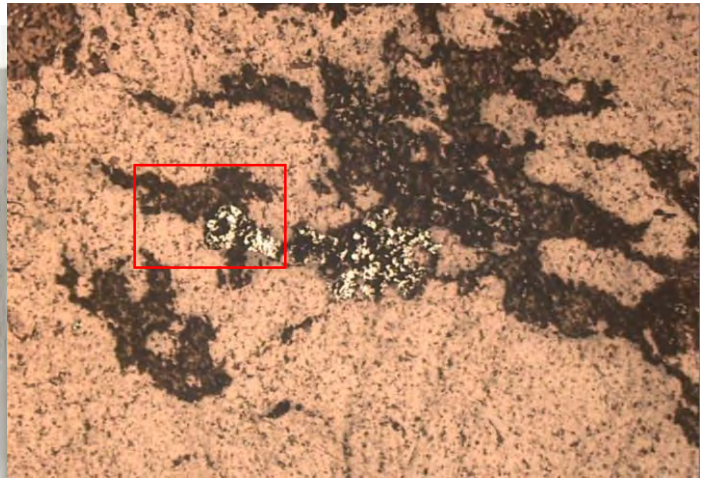




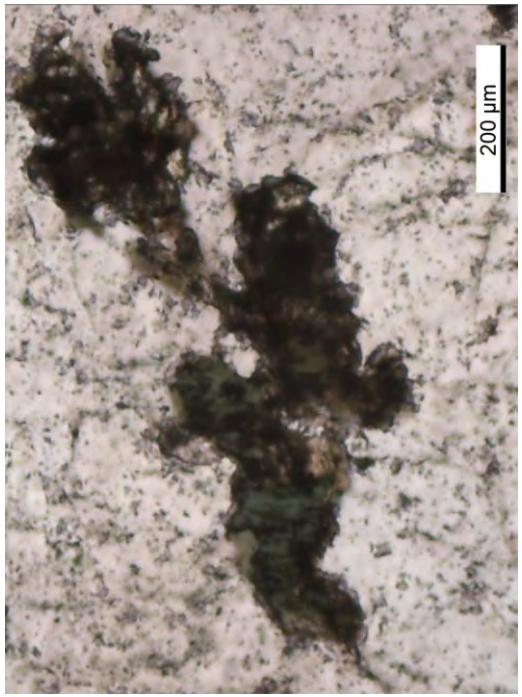
TH137: S3

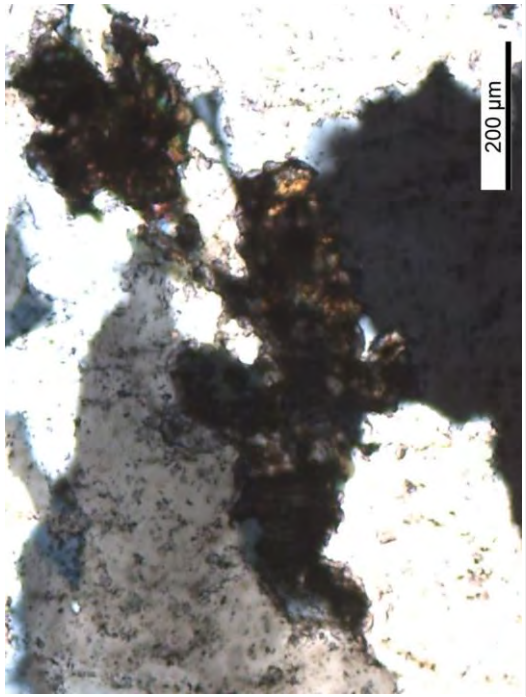
Chl_2+ epidote+hmt

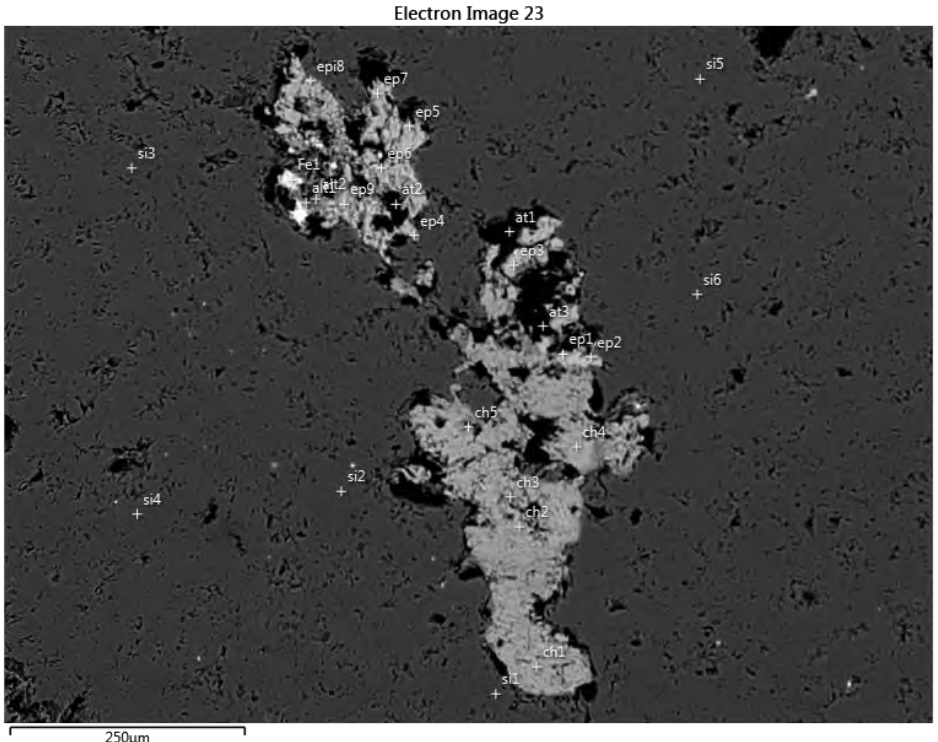




Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137



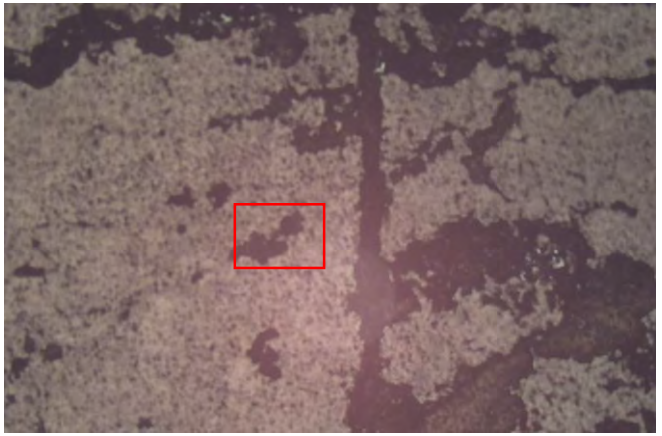




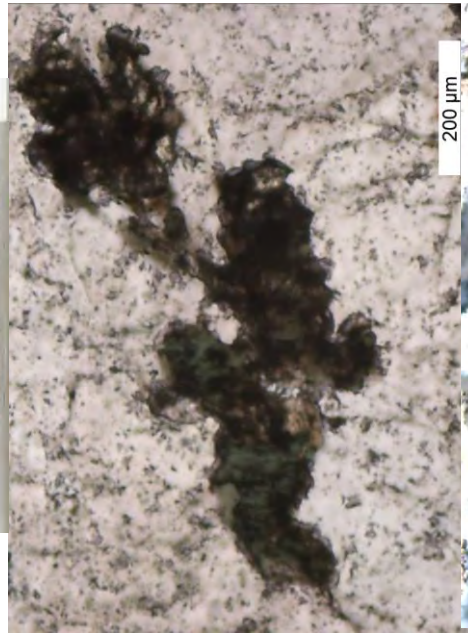
TH137: S4

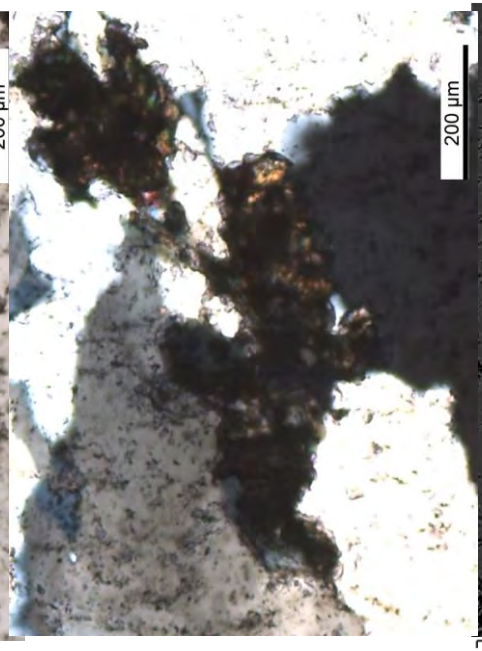
Ti-hematite despite mixing with epidote

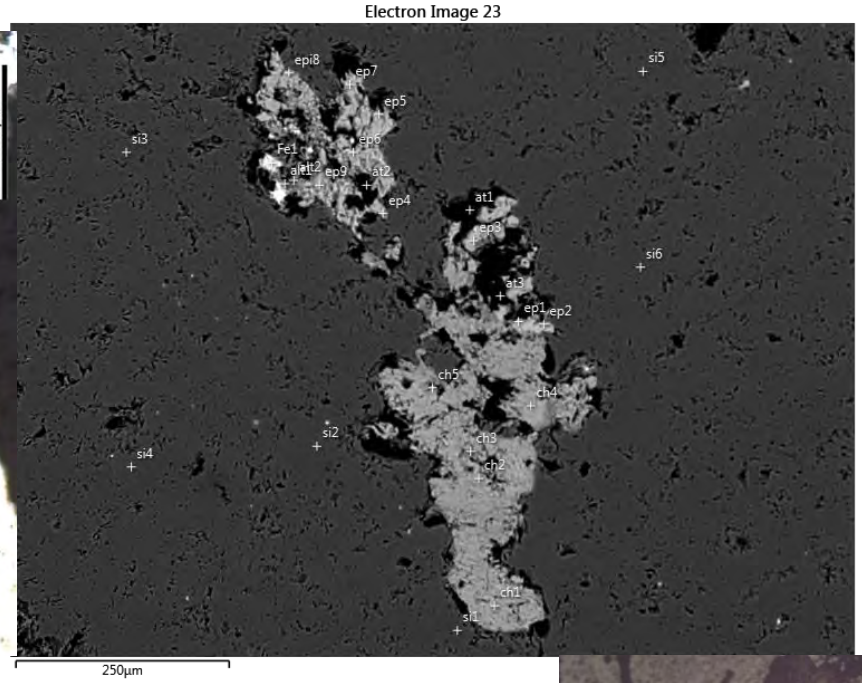
Chl2+ epidote+hmt



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137



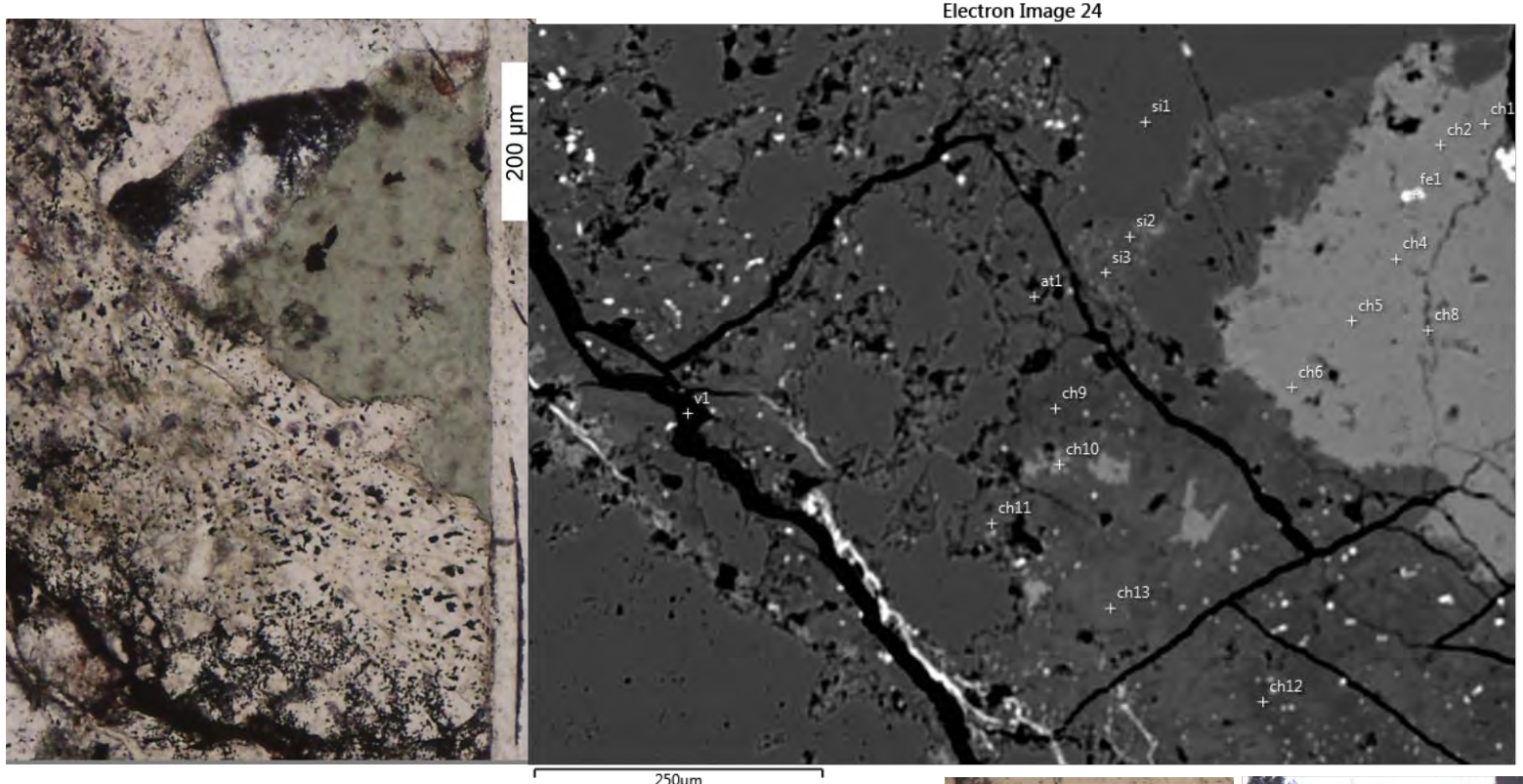




TH137: S4 (cont.)

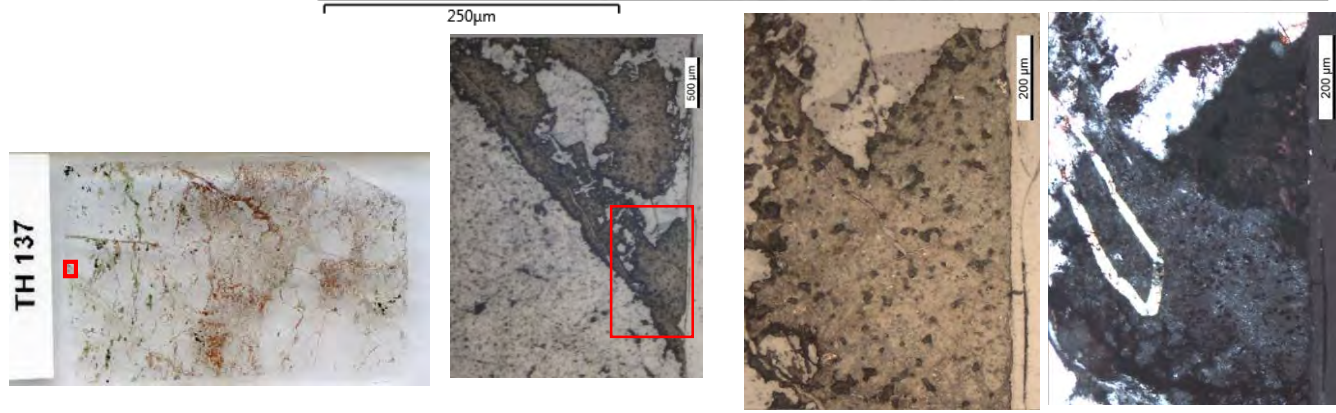
Chl_2+ epidote

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH137



TH137: S5

Remnant Chl_2 in clay minerals



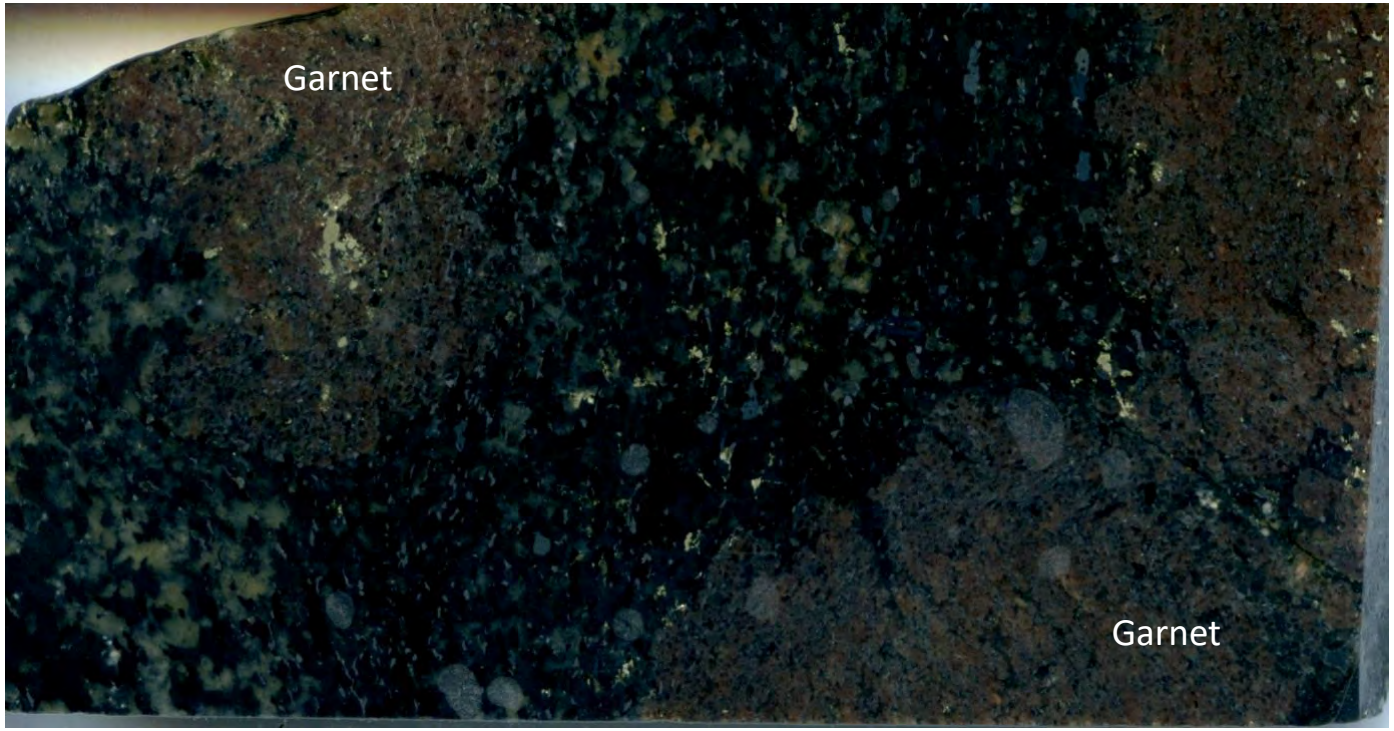
Sample TH99

(2020 analyses)

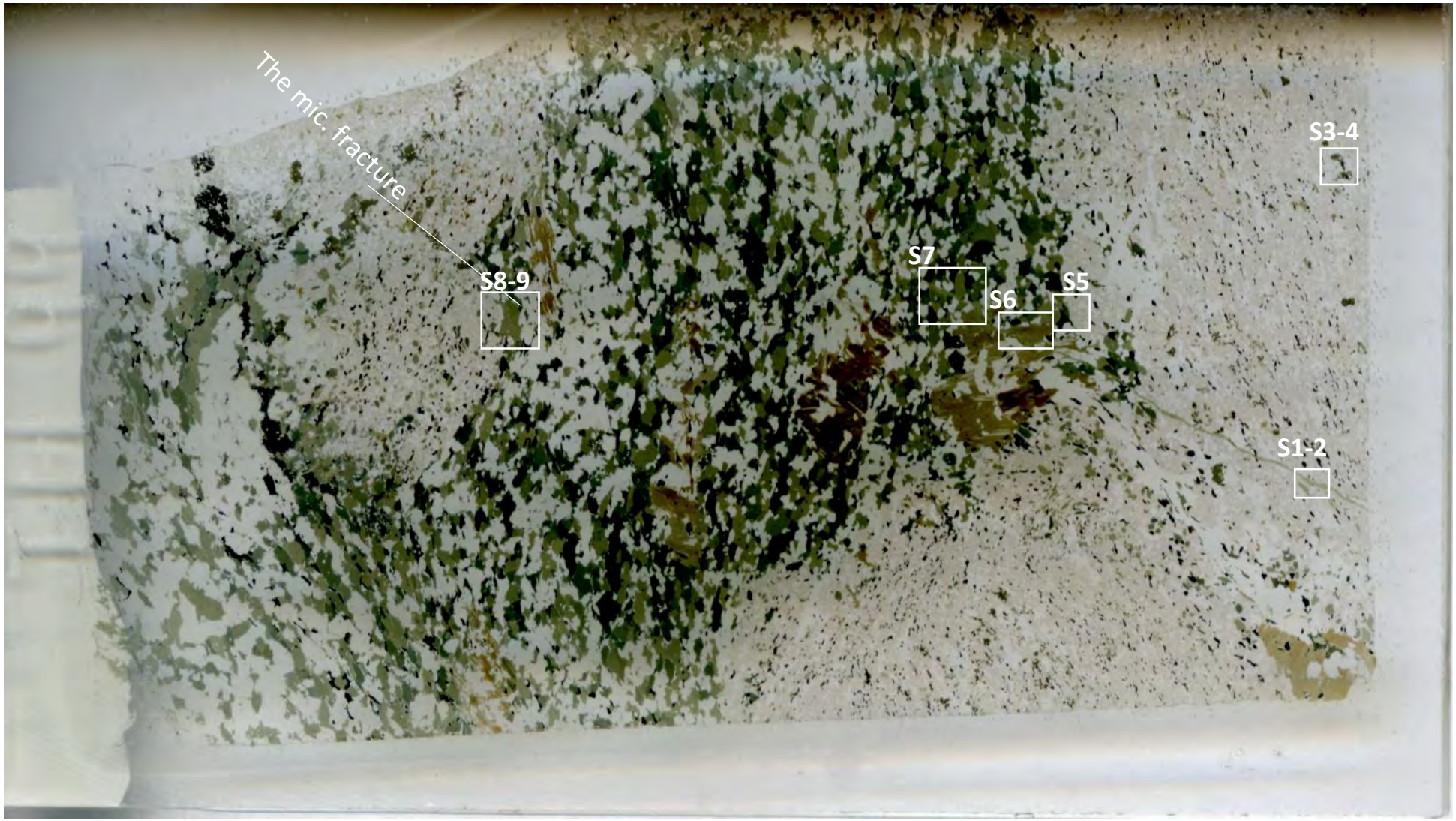
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

Hand specimen Image

Block section Image



Thin section map of analysis locations



Summary

This sample is from background amphibolite 800m North of Tick Hill

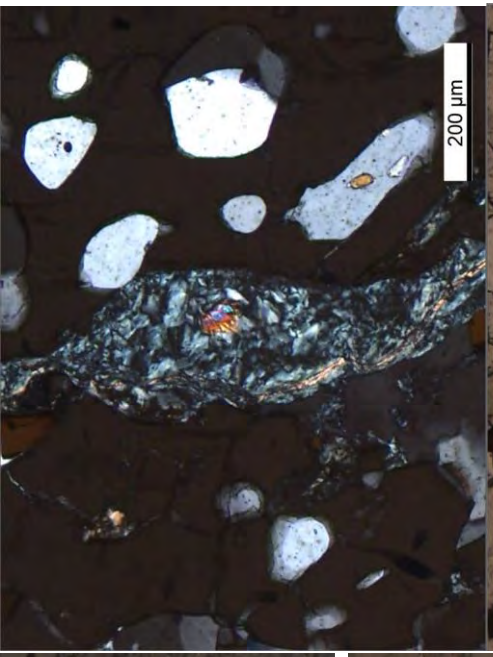
D_{1-2} amphibolite background

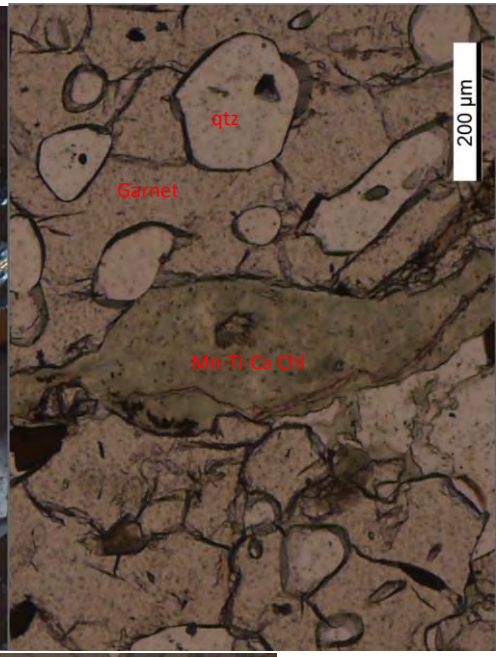
- Ti biotite
- Mn-ilmenite
- **Fe**-Mg-Ca-$_{Mn-Ti}$ Garnet /Almandine dominated
- Mn- and Ti-bearing Fe-amp
- Pure Py: D_1 Py, associated with ilmenite
- Ni-Py (later Py , D_{2-3} Py?)

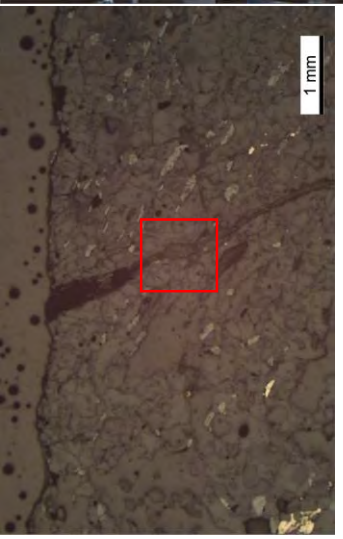
Along the stage 3 microveins:

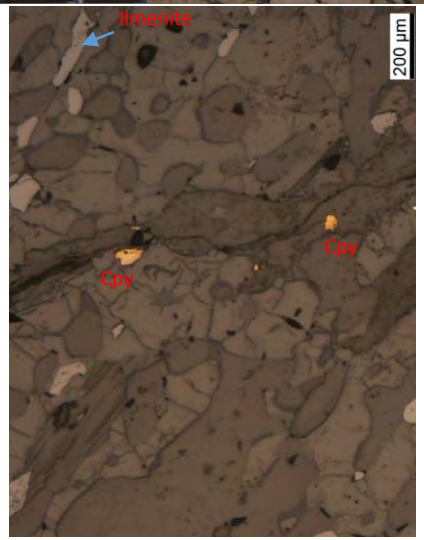
- Chl_2-cpy in the stage 3 veins
  - Chl2 with minor Ca, Ti, Mn
  - Pure Cpy
- Chl_2 with K, Ca, Mn, Ti contents
- Bio with minor Ti (likely after amphibole? Based on microscope images)

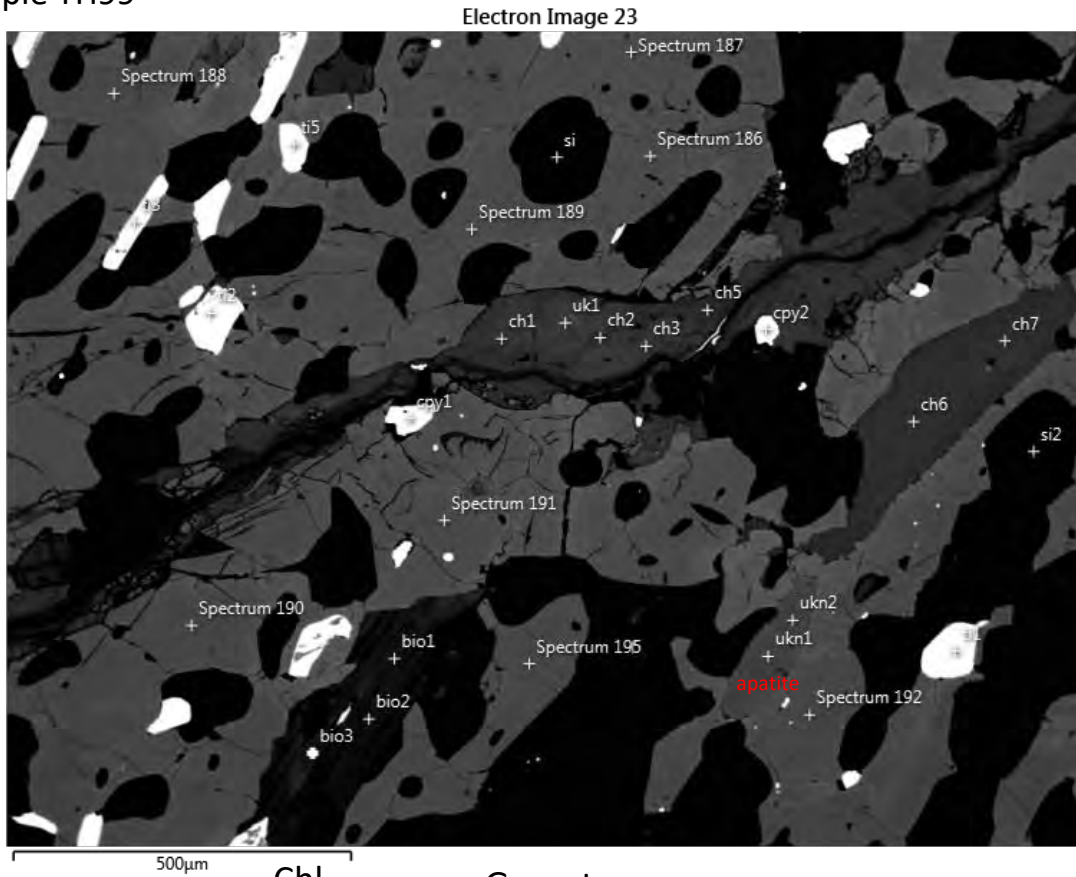
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99











TH99: S1

- Chl-cpy in the stage 3 veins
  - Chl with minor Ca, Ti, Mn
  - Pure Cpy
- Ti biotite
- Mn-Ilmenite
- **Fe**-Mg-Ca-Mn-Ti Garnet /Almandine
- Check uk1, Unk1-2

Chl

Oxide	Oxide %
MgO	9.49
Al2O3	19.31
SiO2	30.16
TiO2	0.07
MnO	0.01
FeO	40.96
	100

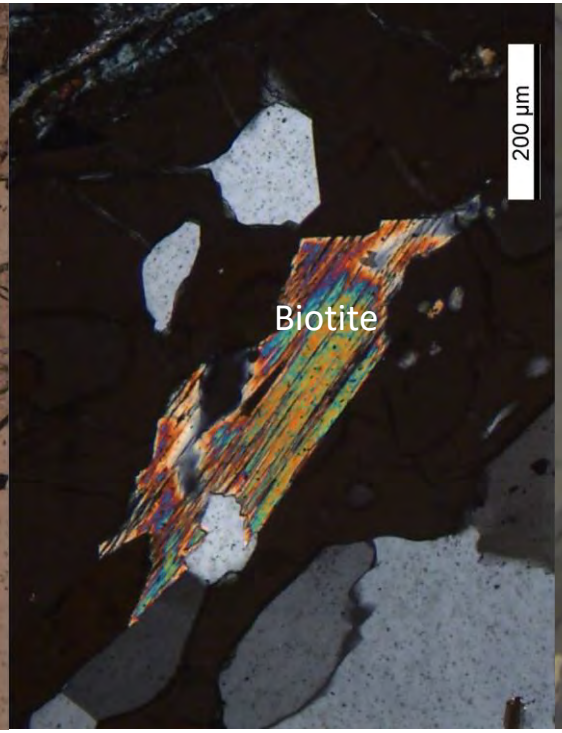
Garnet

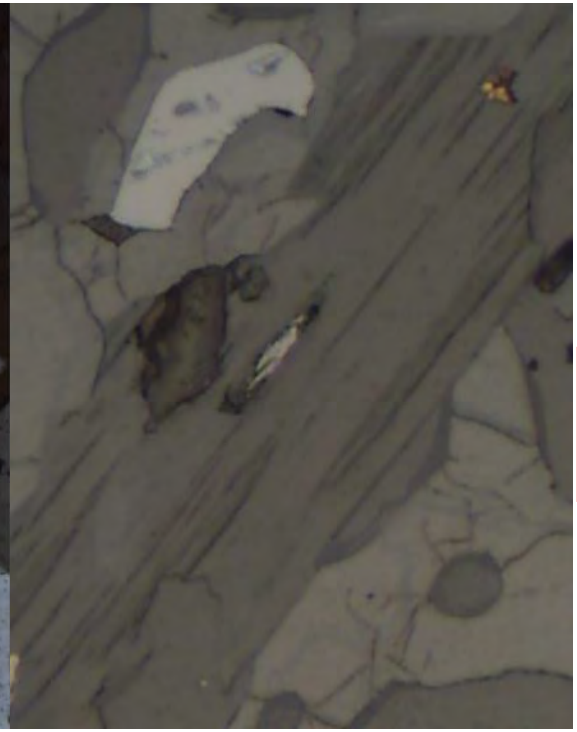
Oxide	Oxide %
MgO	4.05
Al2O3	21.69
SiO2	36.81
CaO	4.67
TiO2	0.14
MnO	1.53
FeO	31.12
	100

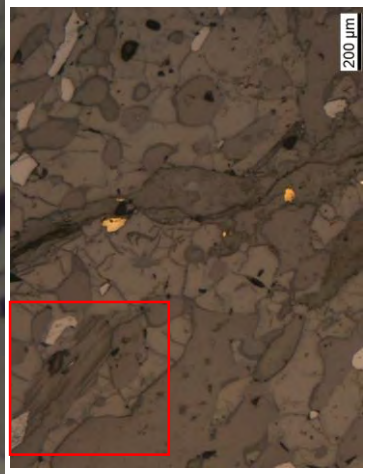
Biotite

Element	Wt%	Wt% Sigma	Atomic %	Oxide	Oxide %
O	39.45		57.68		
Na	0.28	0.06	0.29	Na2O	0.38
Mg	7.32	0.1	7.04	MgO	12.14
Al	8.97	0.1	7.78	Al2O3	16.95
Si	17.03	0.12	14.18	SiO2	36.42
Cl	1.31	0.05	0.86		0
K	7.51	0.09	4.49	K2O	9.04
Ti	1.12	0.06	0.55	TiO2	1.86
Fe	17.02	0.17	7.13	FeO	21.9
Total:	100		100		98.69

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

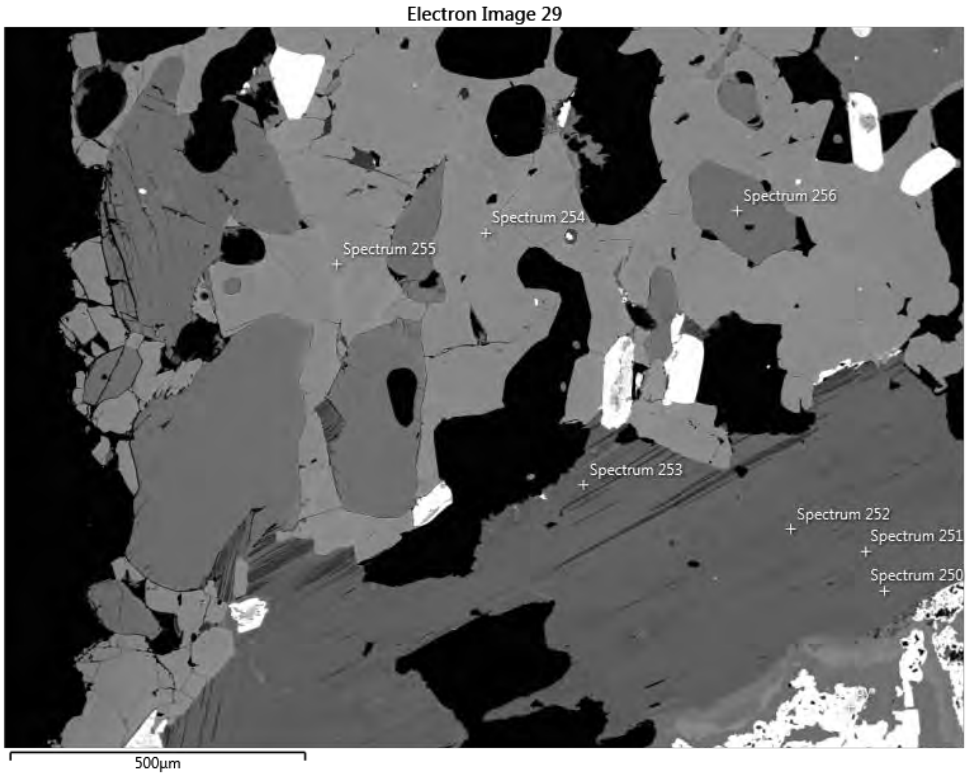






TH99: S1 (cont.)

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99



TH99: S3,4

- Ti-Mn chl
- Pure Py
- **Fe**-Mg-Ca-$_{Mn\text{-}Ti}$ Garnet/Almandine
- Ti-Mn biotite

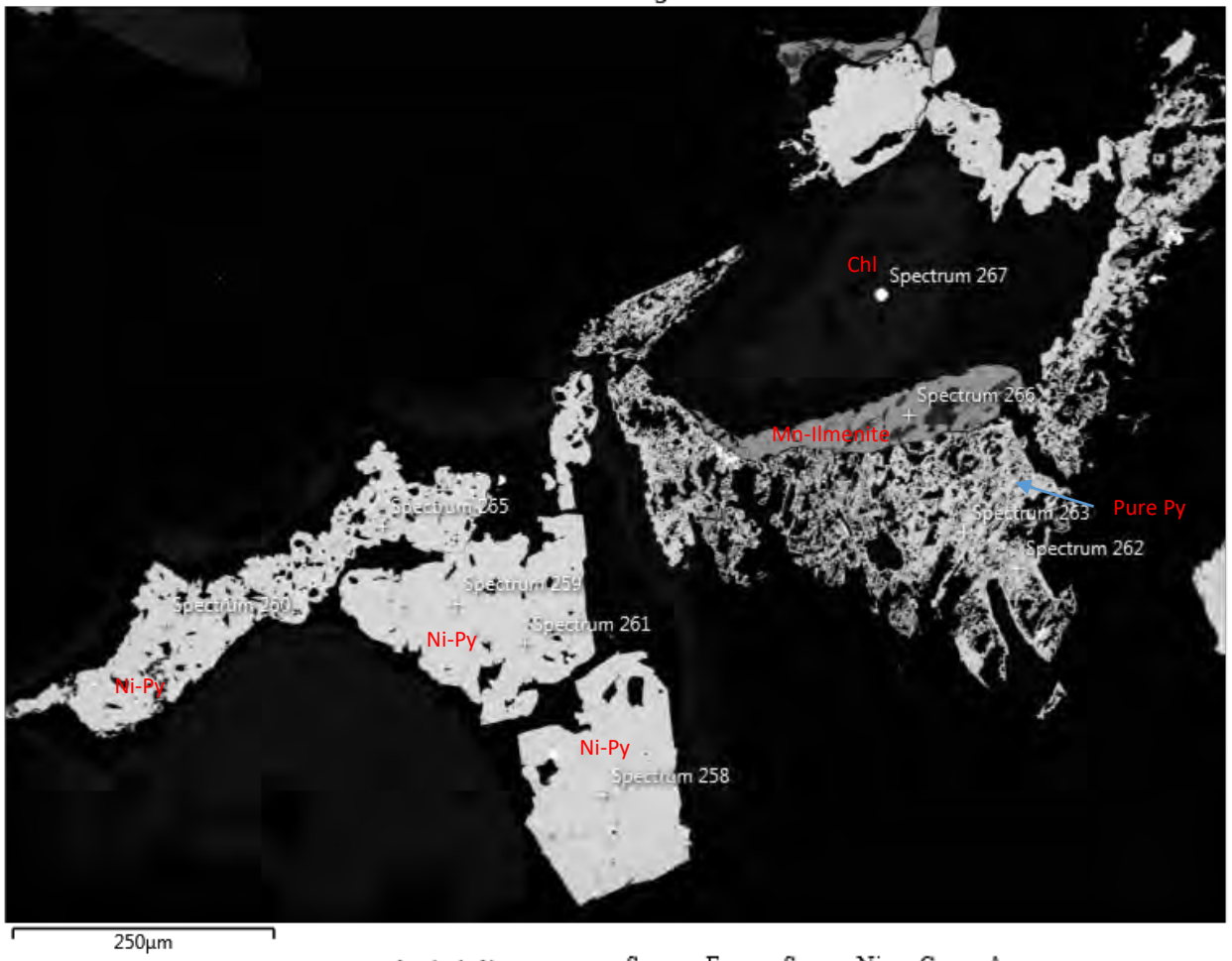
Al_2O_3 of sp254 (near rim) < that of 255 (closer to the center)

biotite

Element	Wt%	Wt% Sigma	Atomic %	Oxide	Oxide %
O	39.72		57.98		
Mg	6.98	0.09	6.71	MgO	11.58
Al	9.12	0.1	7.89	Al2O3	17.23
Si	17.29	0.12	14.38	SiO2	36.99
Cl	1.05	0.05	0.69		0
K	8.06	0.09	4.82	K2O	9.71
Ti	1.51	0.06	0.74	TiO2	2.53
Mn	0	0.06	0	MnO	0
Fe	16.25	0.17	6.8	FeO	20.91
Total:	100		100		98.95

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

Electron Image 30

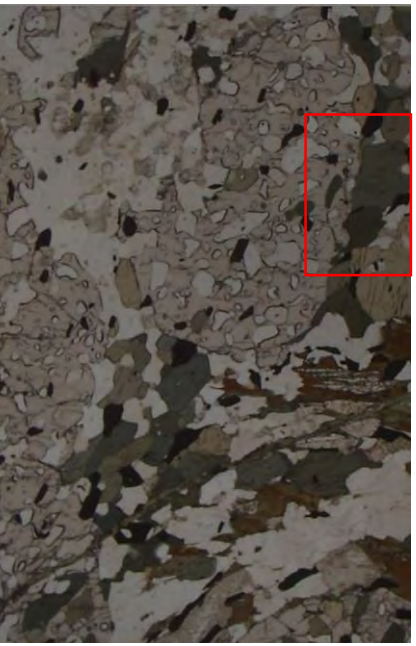


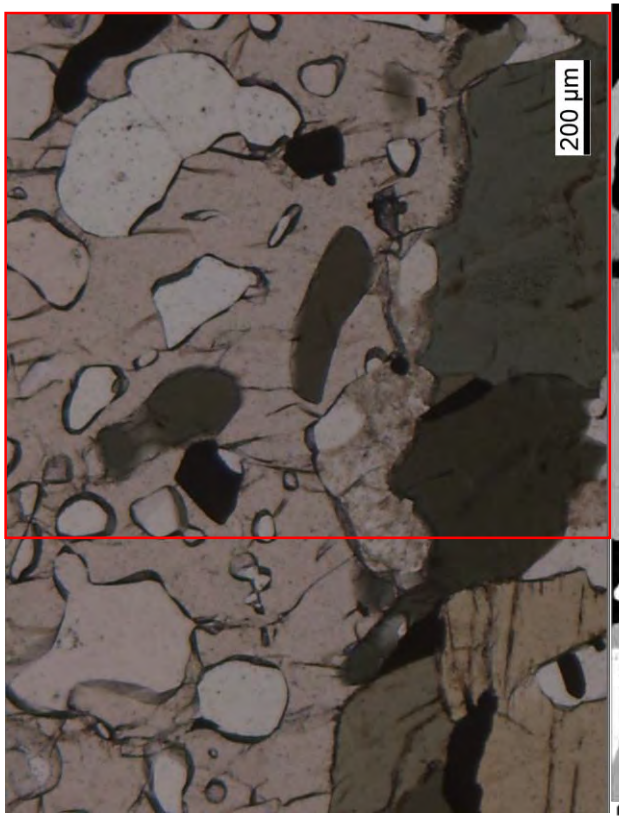
TH99: S3,4

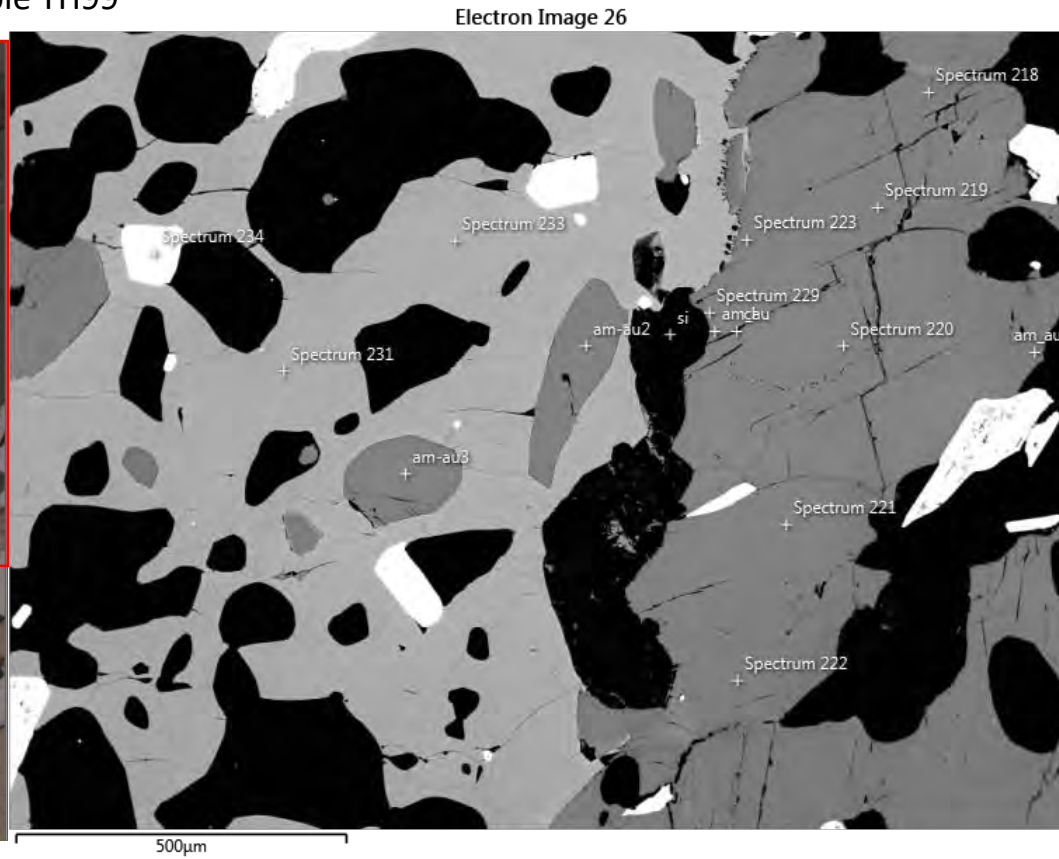
Ni-Py

Analysis No	S	Fe	Se	Ni	Cu	As
TH99-4-sp258	54.99	45.01				
TH99-4-sp259	54.7	43.39		1.90		
TH99-4-sp260	54.25	45.72		0.03		
TH99-4-sp261	54.58	45.40		0.02		
TH99-4-sp262	53.63	46.37				
TH99-4-sp263	53.99	46.01				
TH99-4-sp265	54.76	45.24				

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99



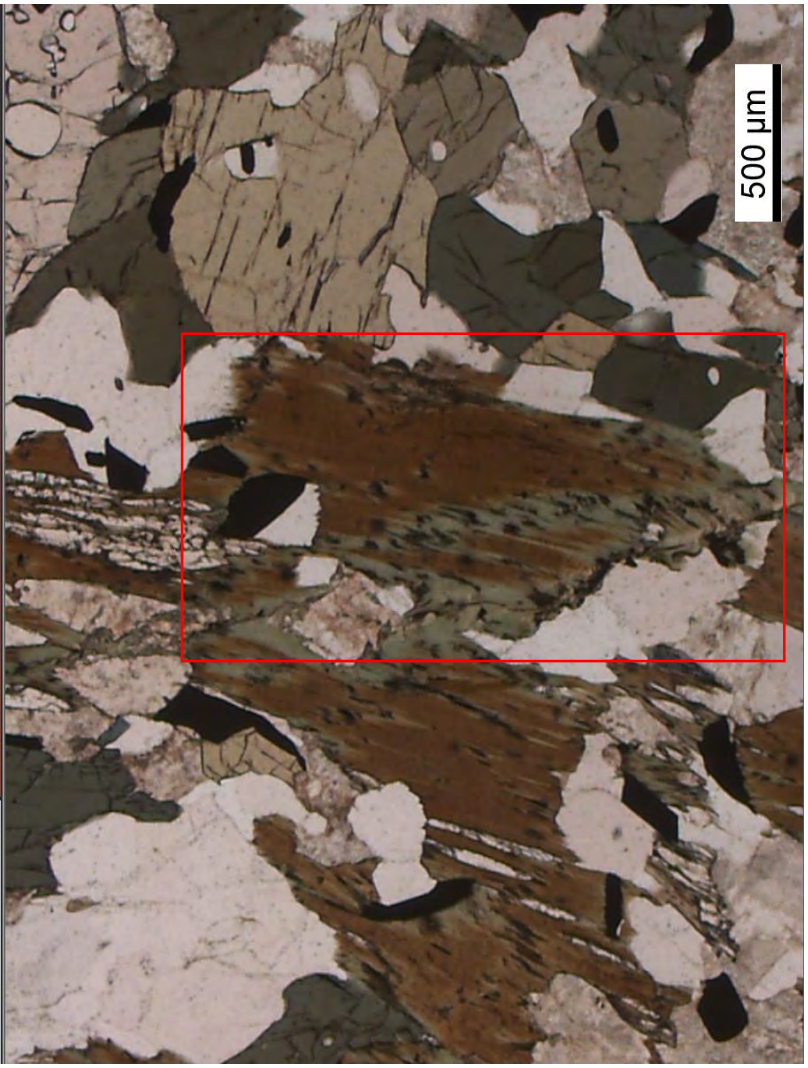


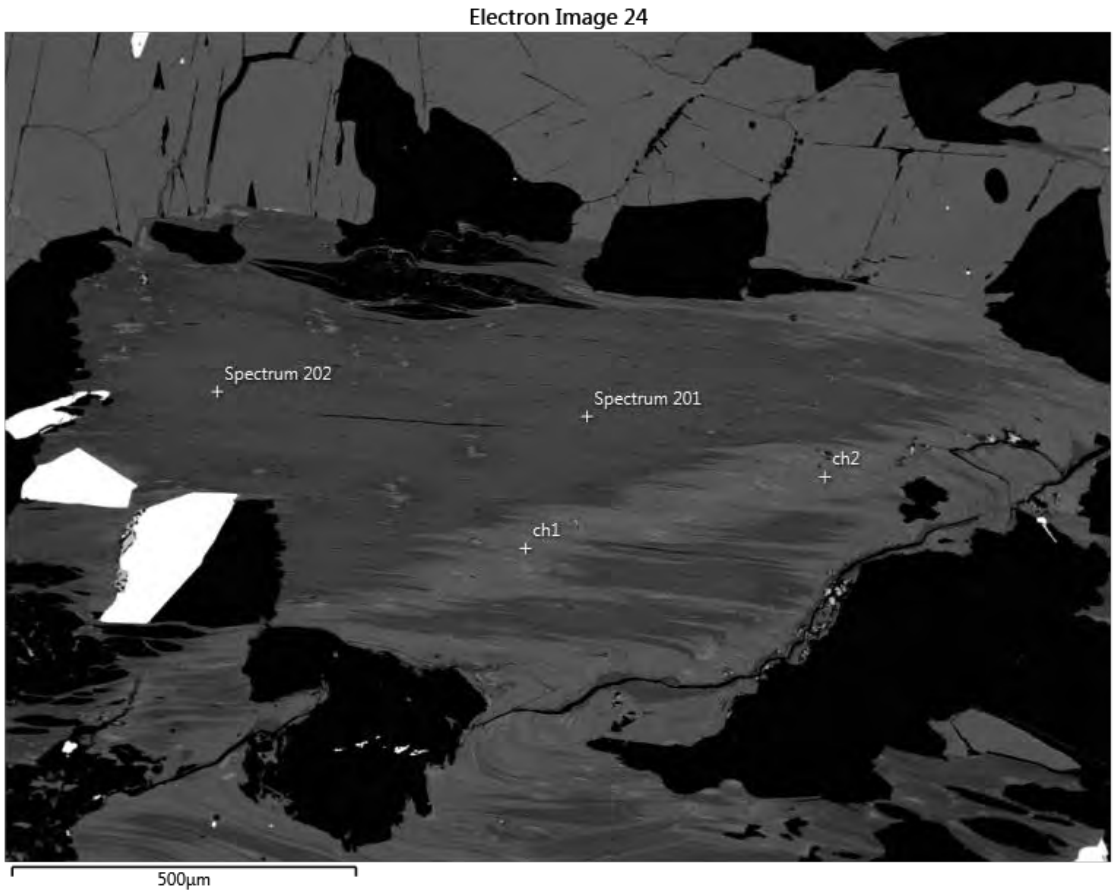


TH99: S5

- Na-K-Cl-Ti-Mn Fe-amphibole
- Some spot has trace of Au, check the peak during analyses but no other element instead of Au, Can not explain if it is, strange!
- Fe-Ca-Mg-Mn garnet/almandine, occasionally with trace of Pd? (spec. 231)
- Mn- Ilmenite

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

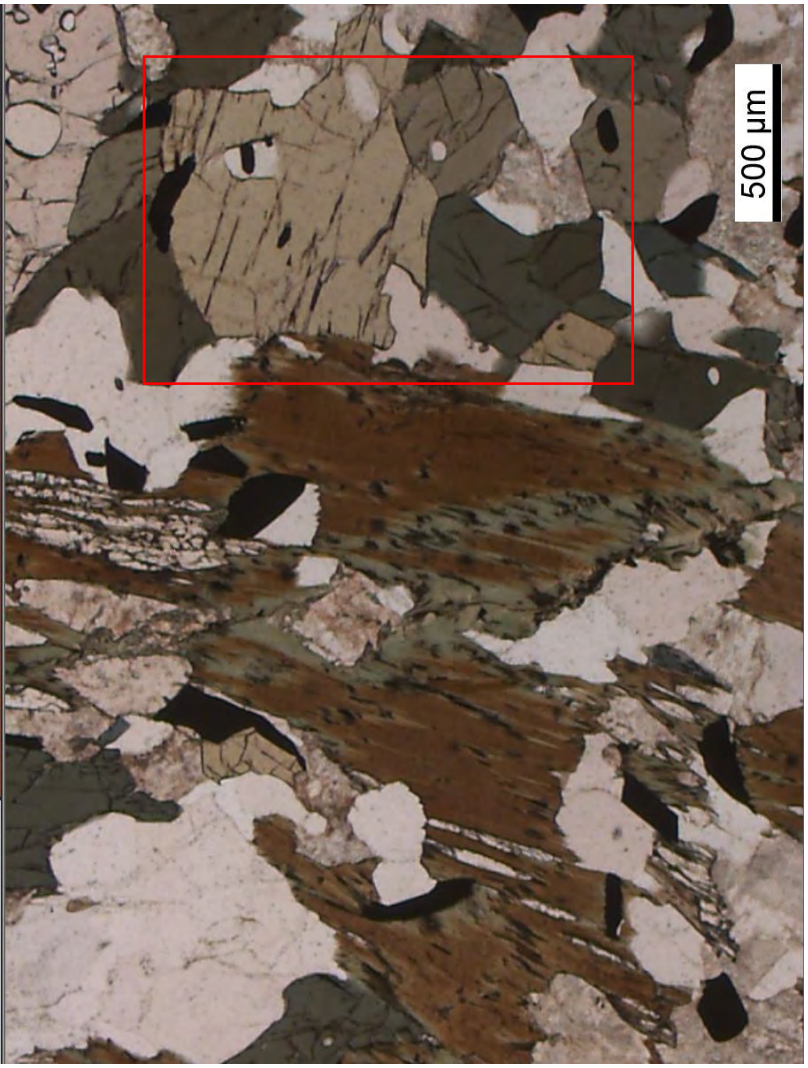


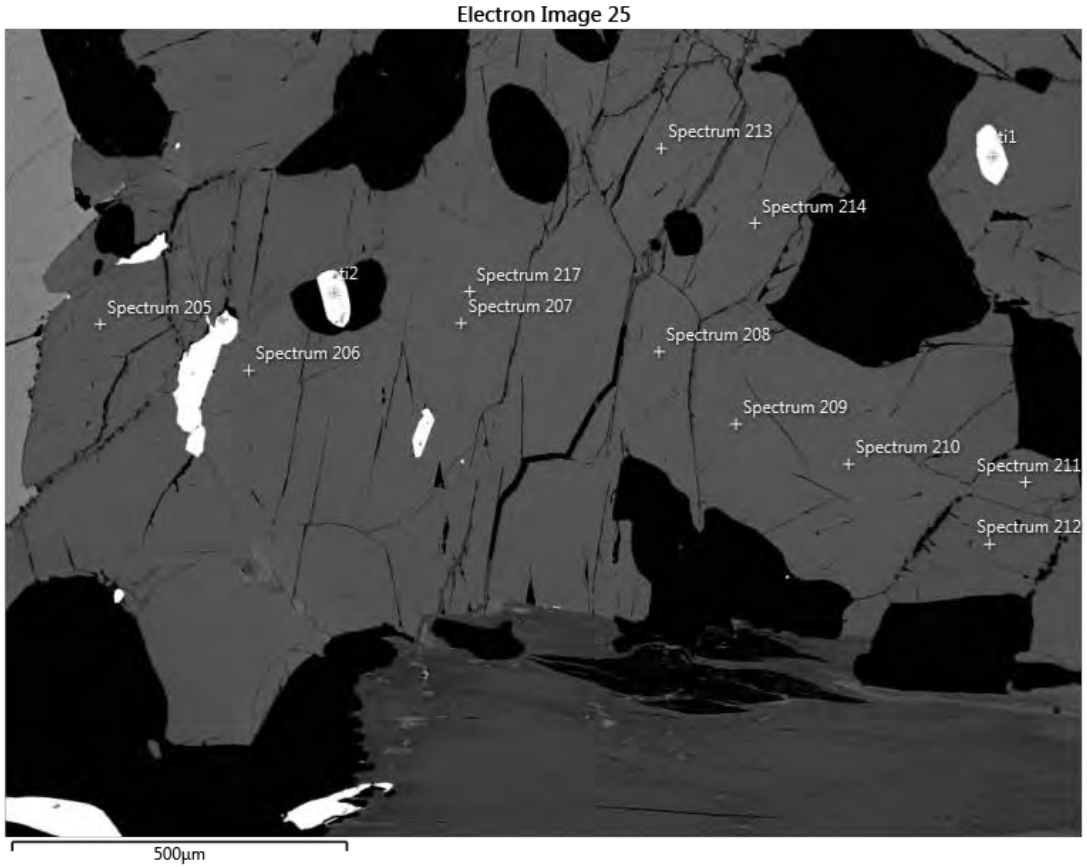


TH99: S6

- Chl with K, Ca, Mn, Ti contents (after biotite)
- Bio with minor Ti (likely after amphibole? Based on microscope pictutes)

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

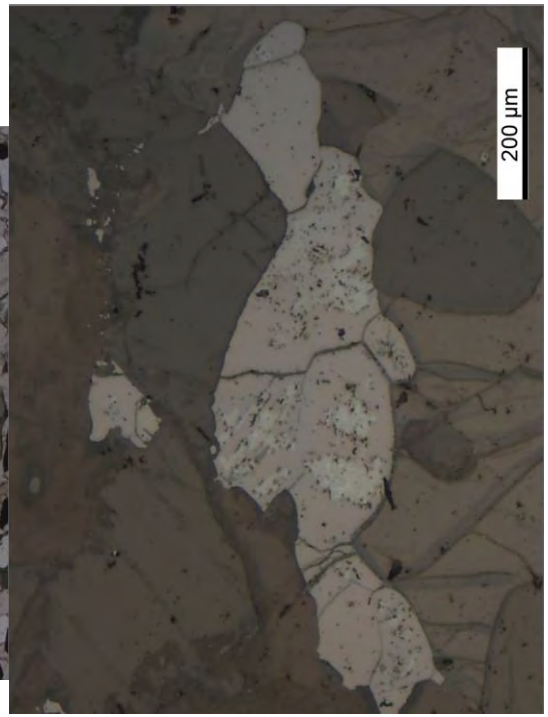


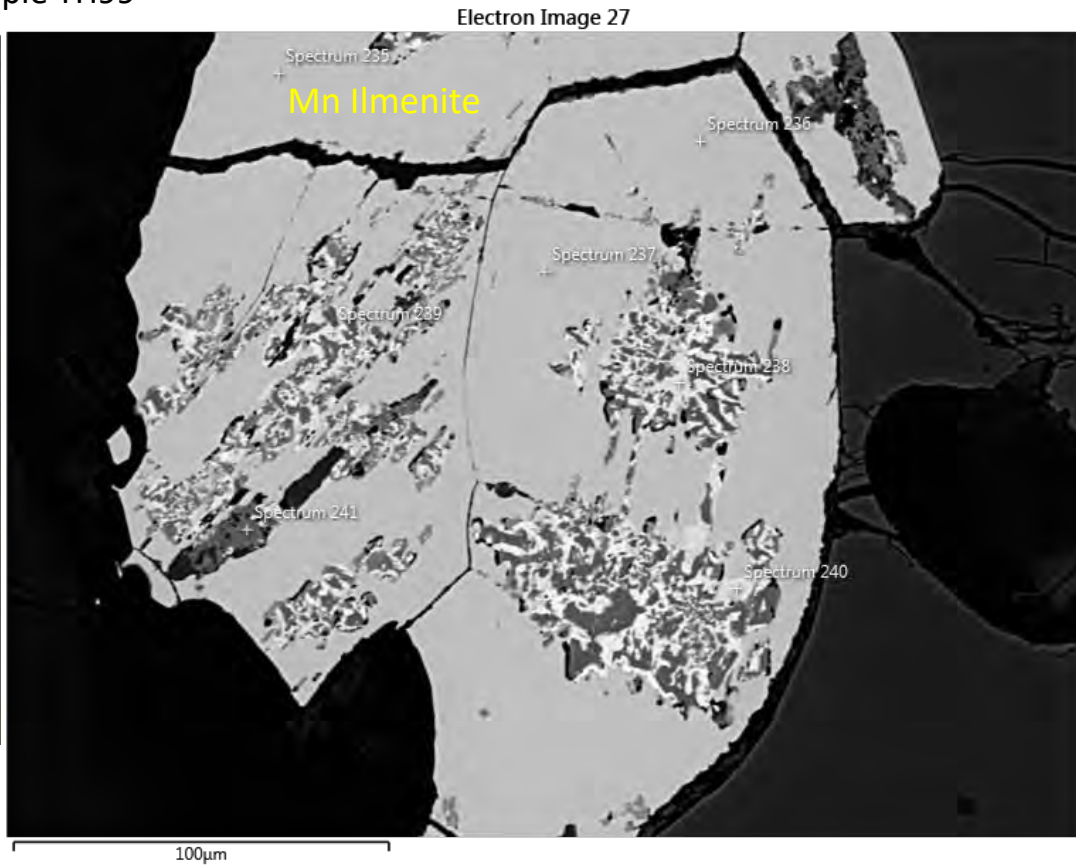


TH99: S6B

- Ca-Mn bearing Ilmenite
- Mn-Ti Fe-amphibole

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99





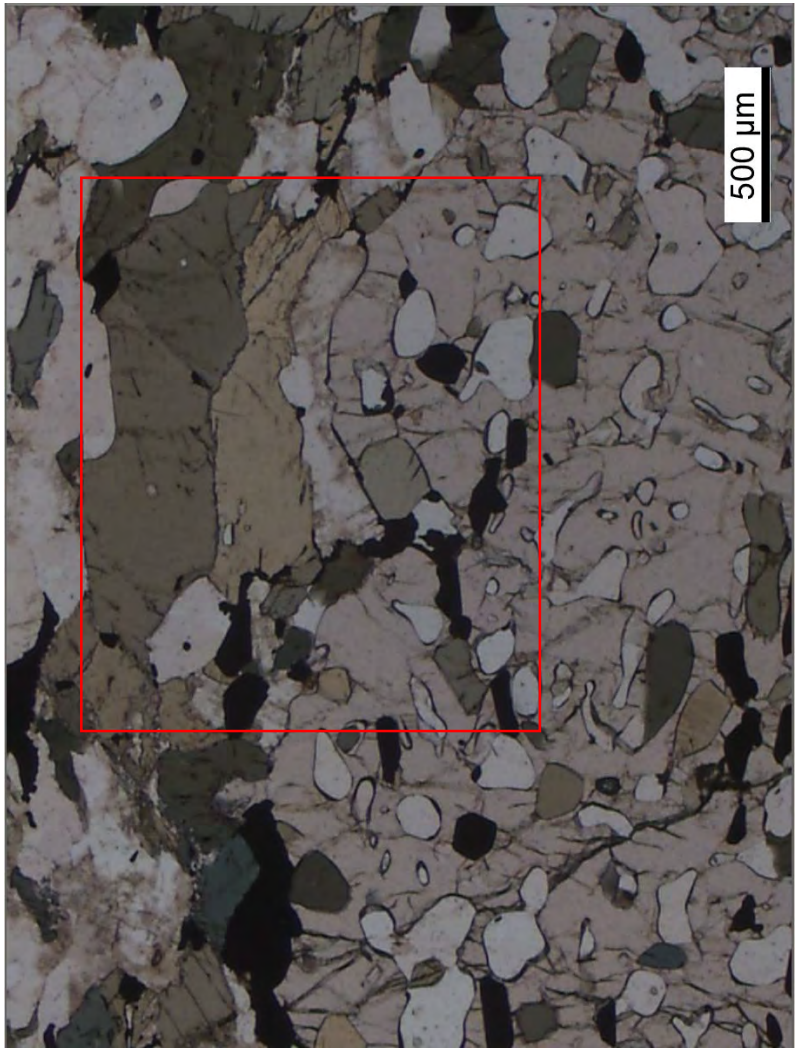
TH99: S8A altered Ilmenite

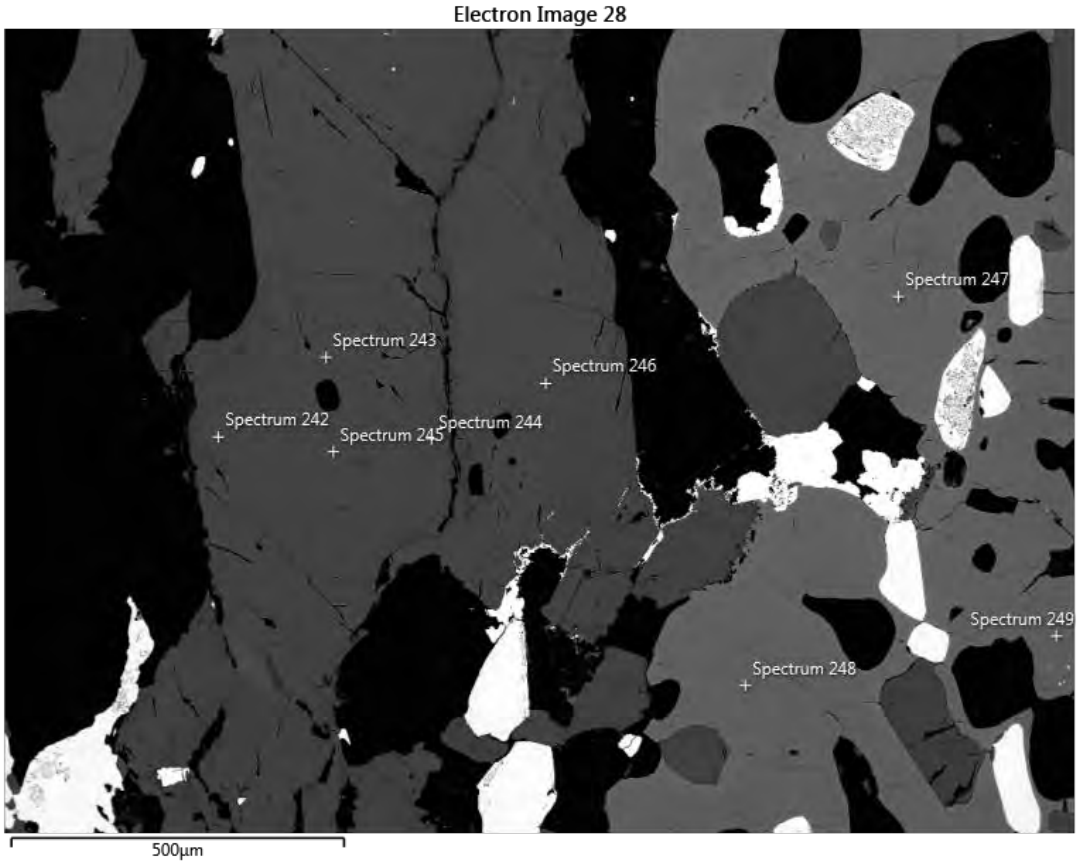
Element	Wt%	Wt% Sigma	Atomic %	Oxide	Oxide %
O	29.29		57.8		
Ti	23.66	0.15	15.6	TiO2	39.46
Mn	0.39	0.07	0.23	MnO	0.51
Fe	46.66	0.2	26.38	FeO	60.03
Total:	100		100		100

Ilmenite

Element	Wt%	Wt% Sigma	Atomic %	Oxide	Oxide %
O	31.52		59.9		
Ti	31.2	0.17	19.8	TiO2	52.04
Mn	0.36	0.07	0.2	MnO	0.46
Fe	36.92	0.2	20.1	FeO	47.5
Total:	100		100		100

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99





TH99: S8B

- Ti-Mn Fe-amphibole
- Fe-Ca-Mg-Mn garnet/almandine

Sample TH99

(2021 analyses)

Sample TH99- amphibolite D_{1-2} peak metamorphic analyses aiming for P-T estimates

Summary

Mineral assemblage for P-T estimates:

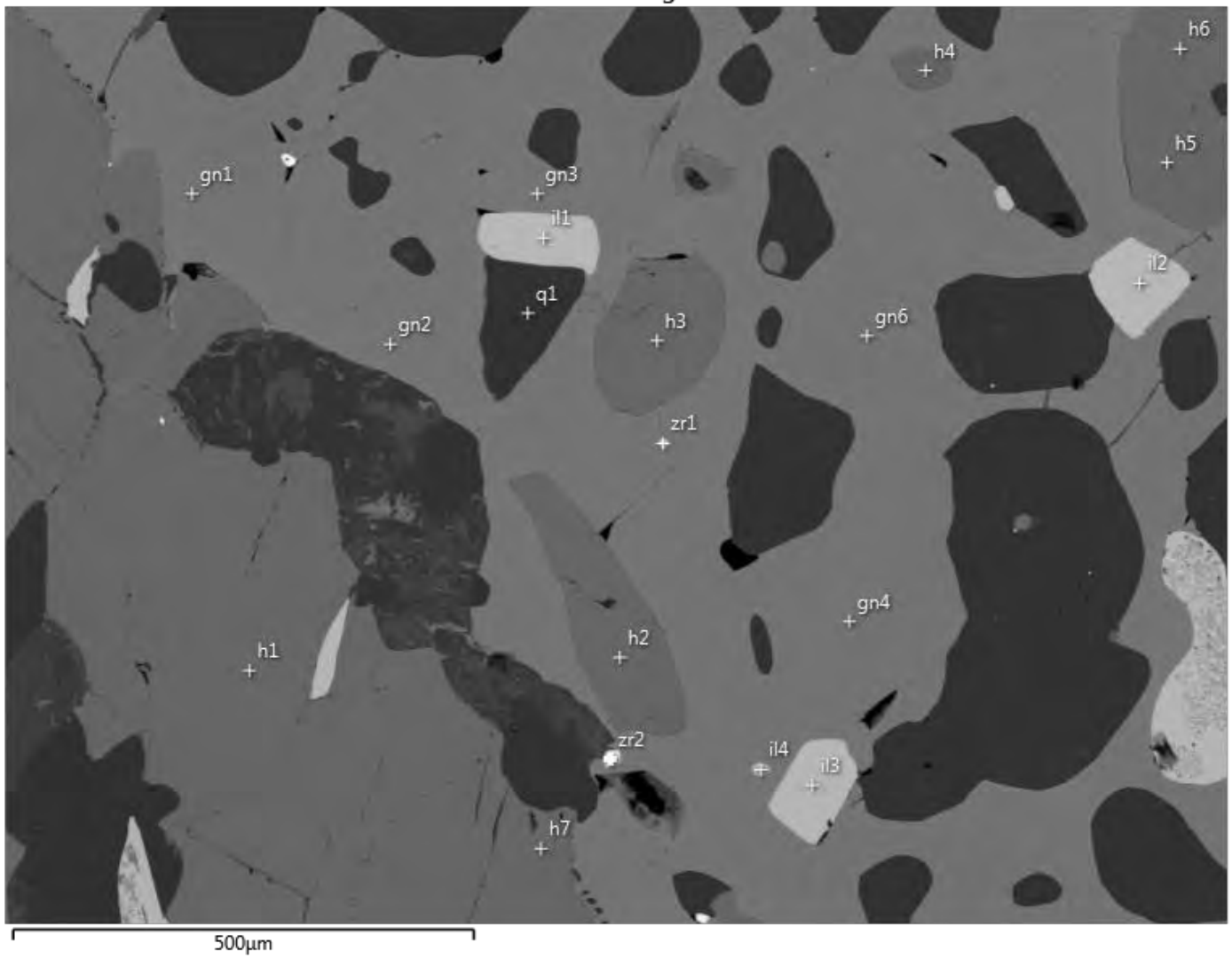
1. Gn-bio pairs: 12 (4 EPMA + 7 SEM)
2. Gn-Hbl-plg-qtz pairs: 08 (2 EPMA + 6 SEM)
3. Gn-Hbl pairs: 03 (EPMA)
4. Hbl-plg pairs: 07 (2 EPMA + 5 SEM)

Mineral geochem zonation:

1. amphibole: Al_2O_3 increase in a particular direction across the grain
2. No clear zonation identified in garnet based on SEM and EPMA analyses
3. No zonation identified in plagioclase
4. No zonation identified in biotite

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

Electron Image 1



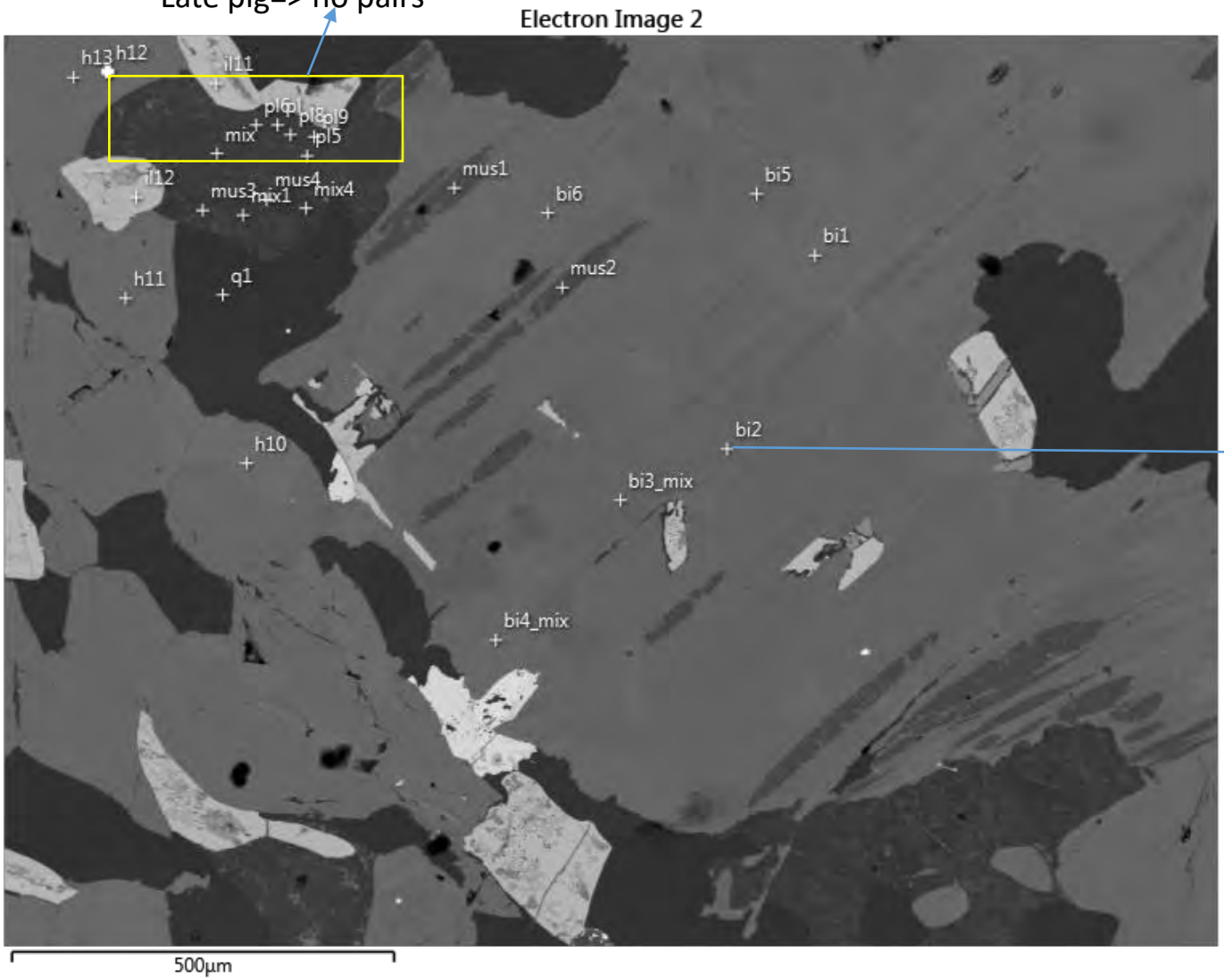
TH99j: S1

SEM pairs in this site:

- Il1-gn3 (test only as Il1 contains no Mn)
- Il2-gn6
- Il3-gn4
- Il4-gn4

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

Late plg=> no pairs



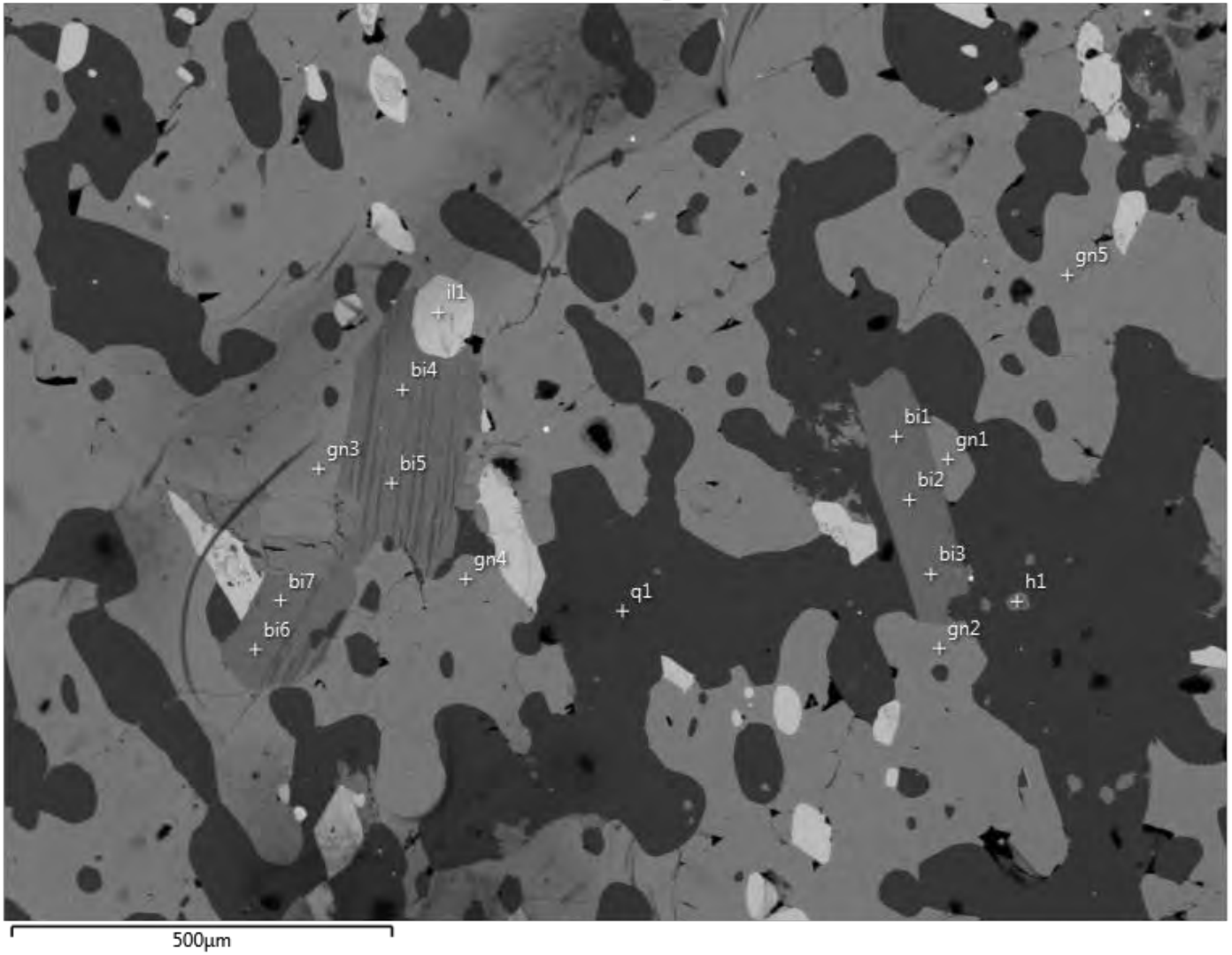
TH99j: S2

Matrix biotite in amphibolite

Not clean spot, altered biotite, low SiO2 => eliminated

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

Electron Image 3



TH99j: S3

Biotite inclusion within garnet

$D_{1\text{-}2}$: Gn-bio pairs

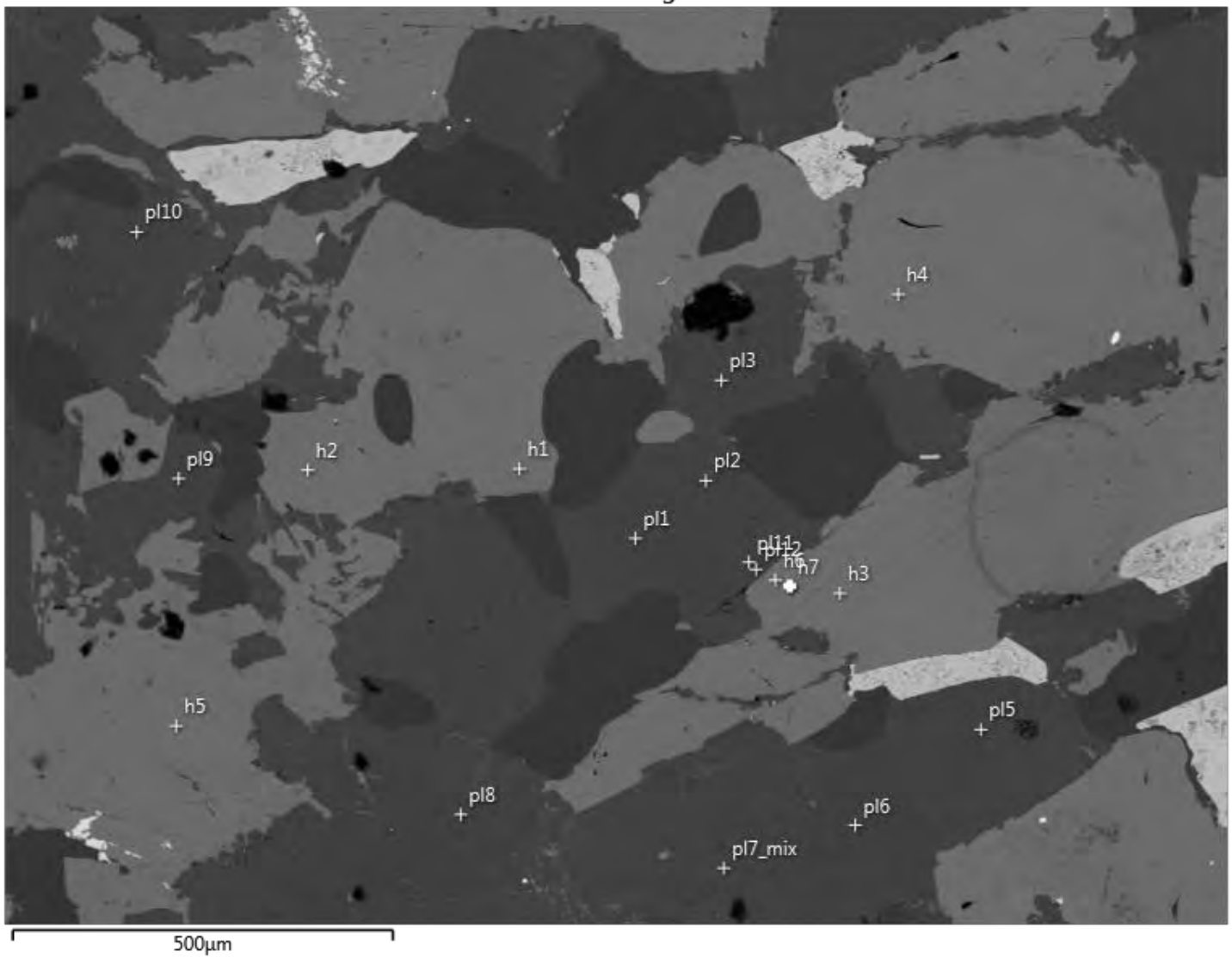
Gn1-bi1
Gn1-bi2
Gn2-bi3
Gn3-bi4
Gn3-bi5

Test:
Gn4-bi6
Gn4-bi7
Gn5-bi1

Gn-ilmenite
Il1-gn3 but il1 is quite contaminated=> no pairing

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

Electron Image 4



TH99j: S4

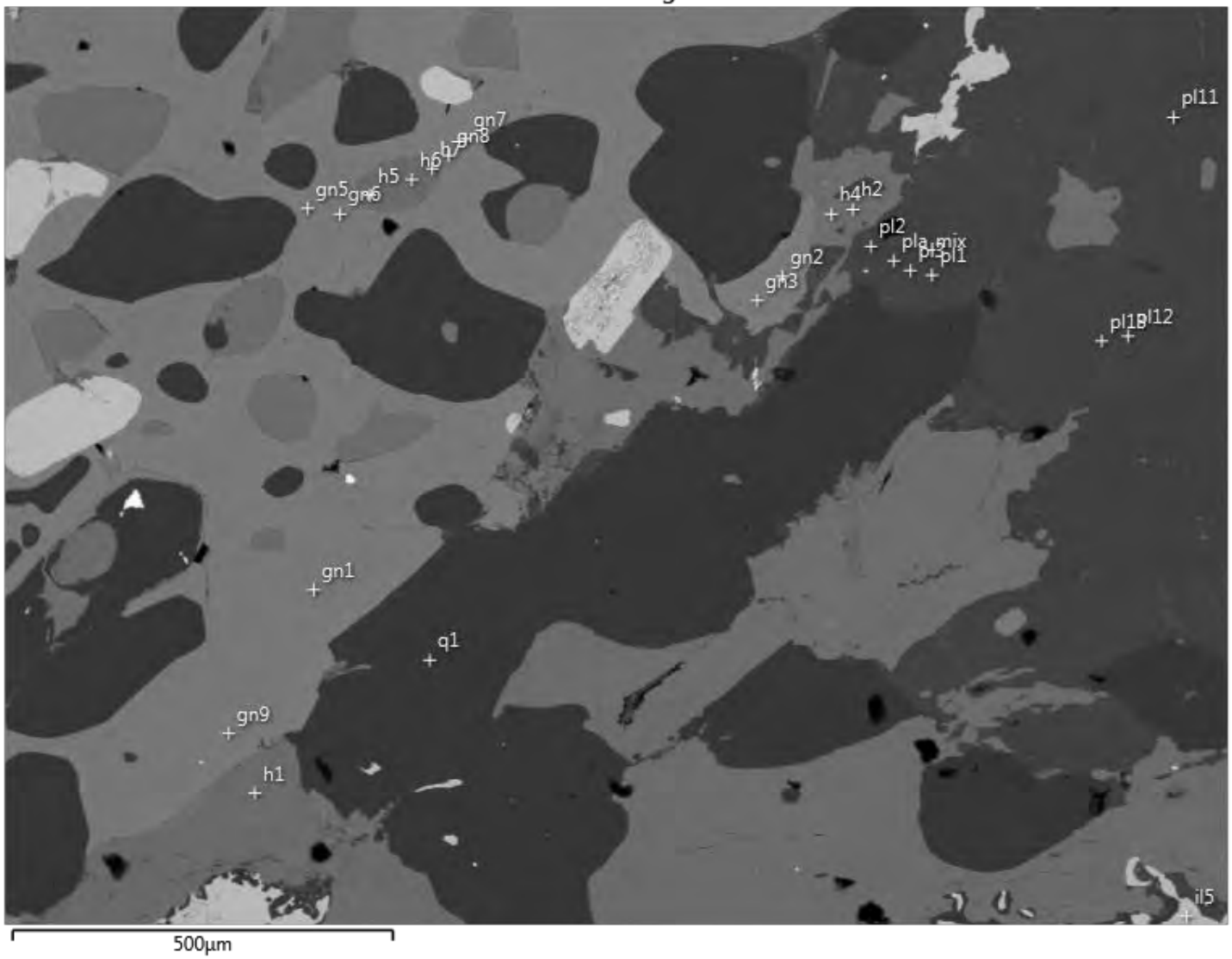
D1-2 plg-Hbl pairs:

1. Pl1-h1
2. Pl9-h2
3. Pl3-h4
4. Pl12-h6
5. Pl11-h7

Can test with garnet compositions

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH99

Electron Image 5



TH99j: S5

$D_{1\text{-}2}$ Gn-Hbl-plg-qtz pairs:

1. Gn2-h4-pl2
2. Gn3-h2-pl3

Test: as the comp. of garnet and plg is quite homogeneous:

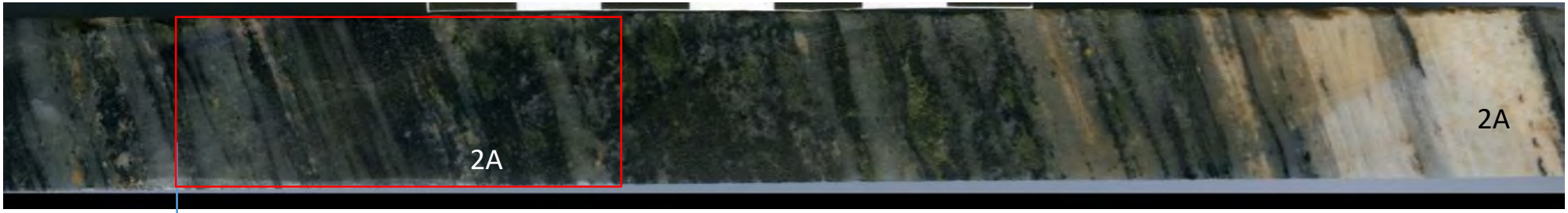
4. Gn6-h5-pl11
5. Gn7-h6-pl12
6. Gn8-h7-pl13
7. Gn9-h1-pl11

Sample TH46

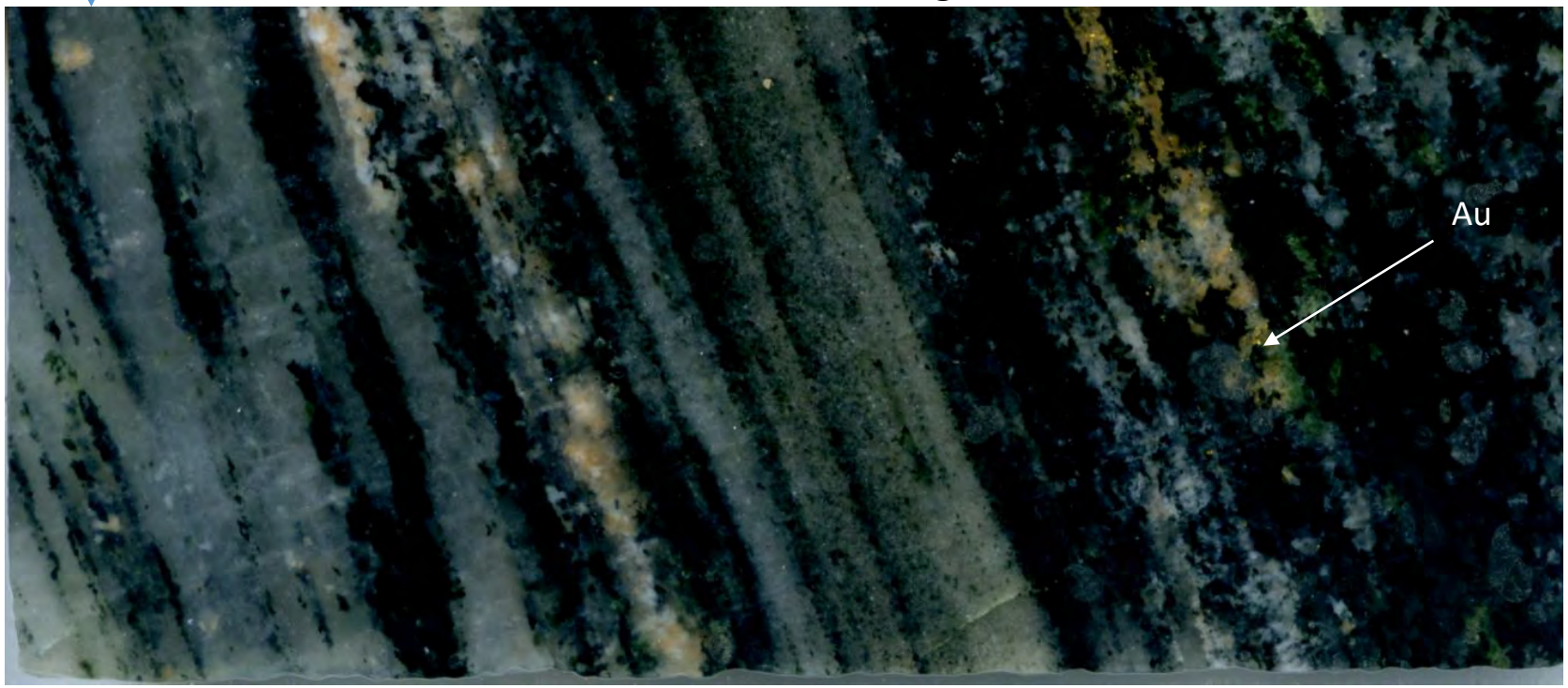
EPMA 2020 analyses

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

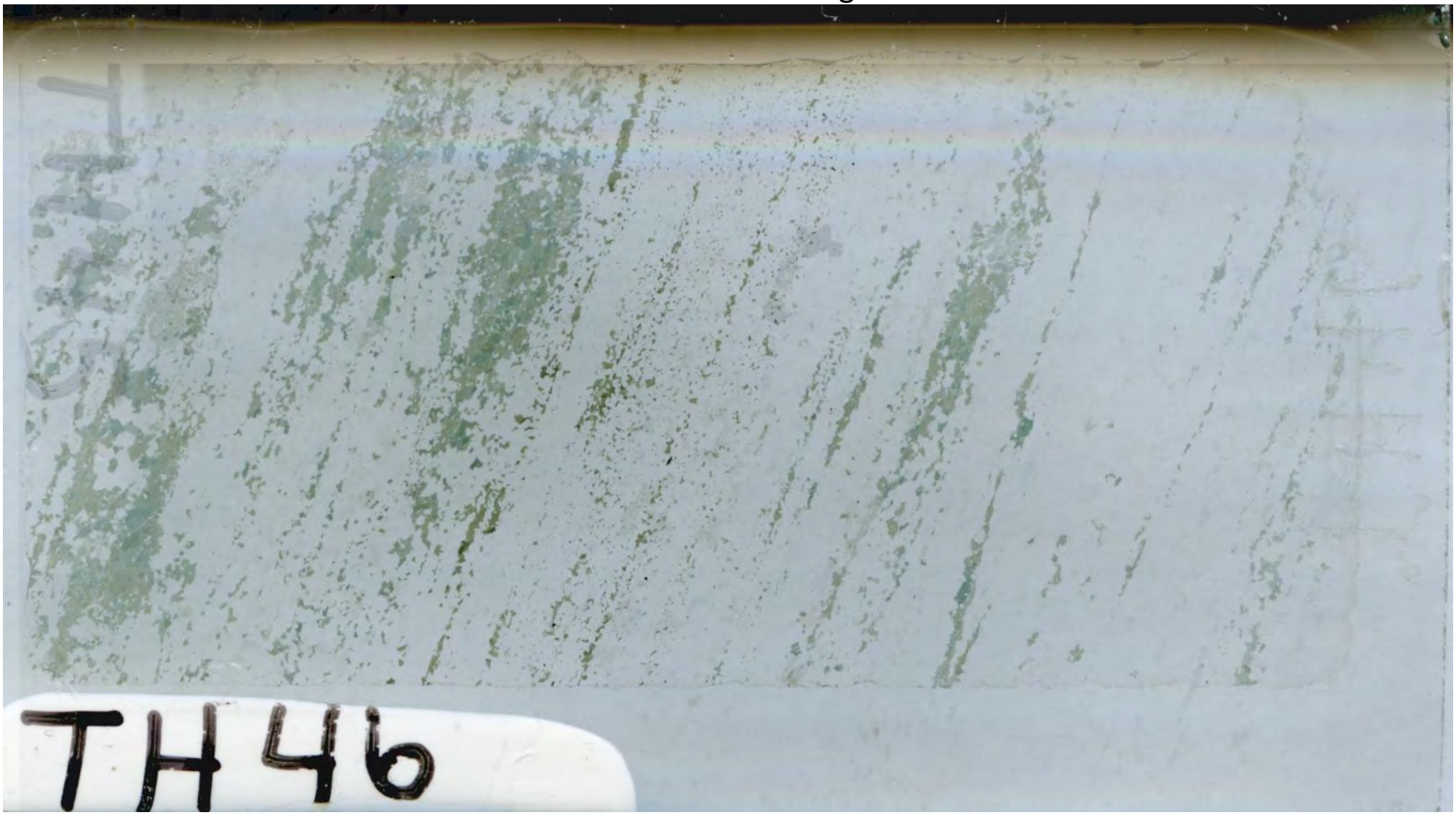
Hand specimen image



Block section image

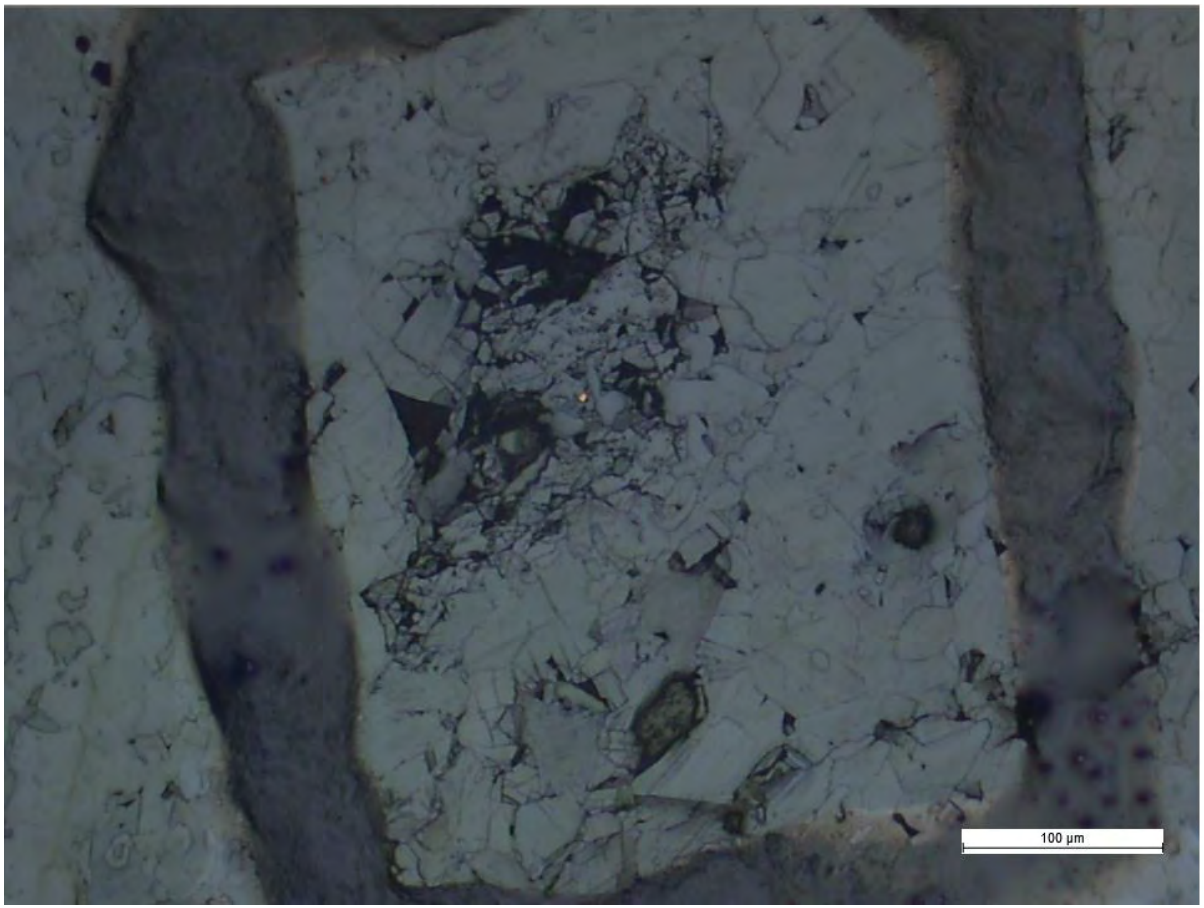


Thin section image



N

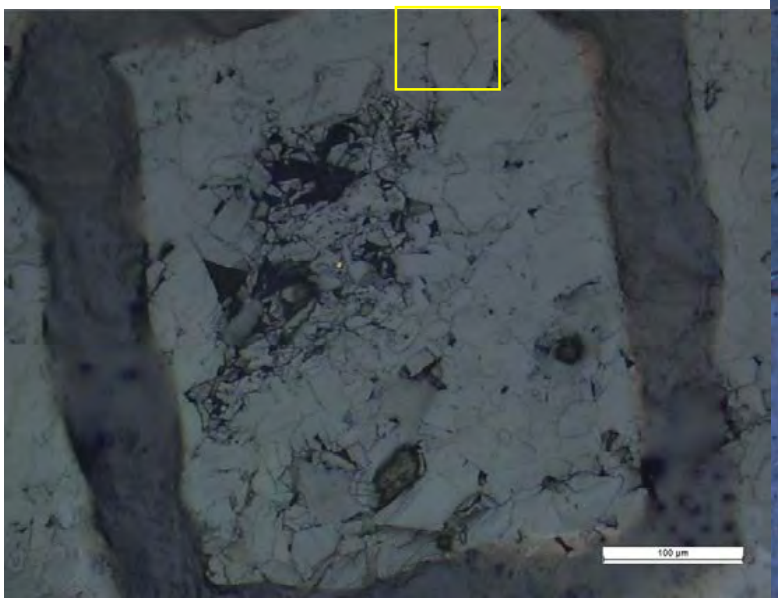
EPMA analyses (2020)

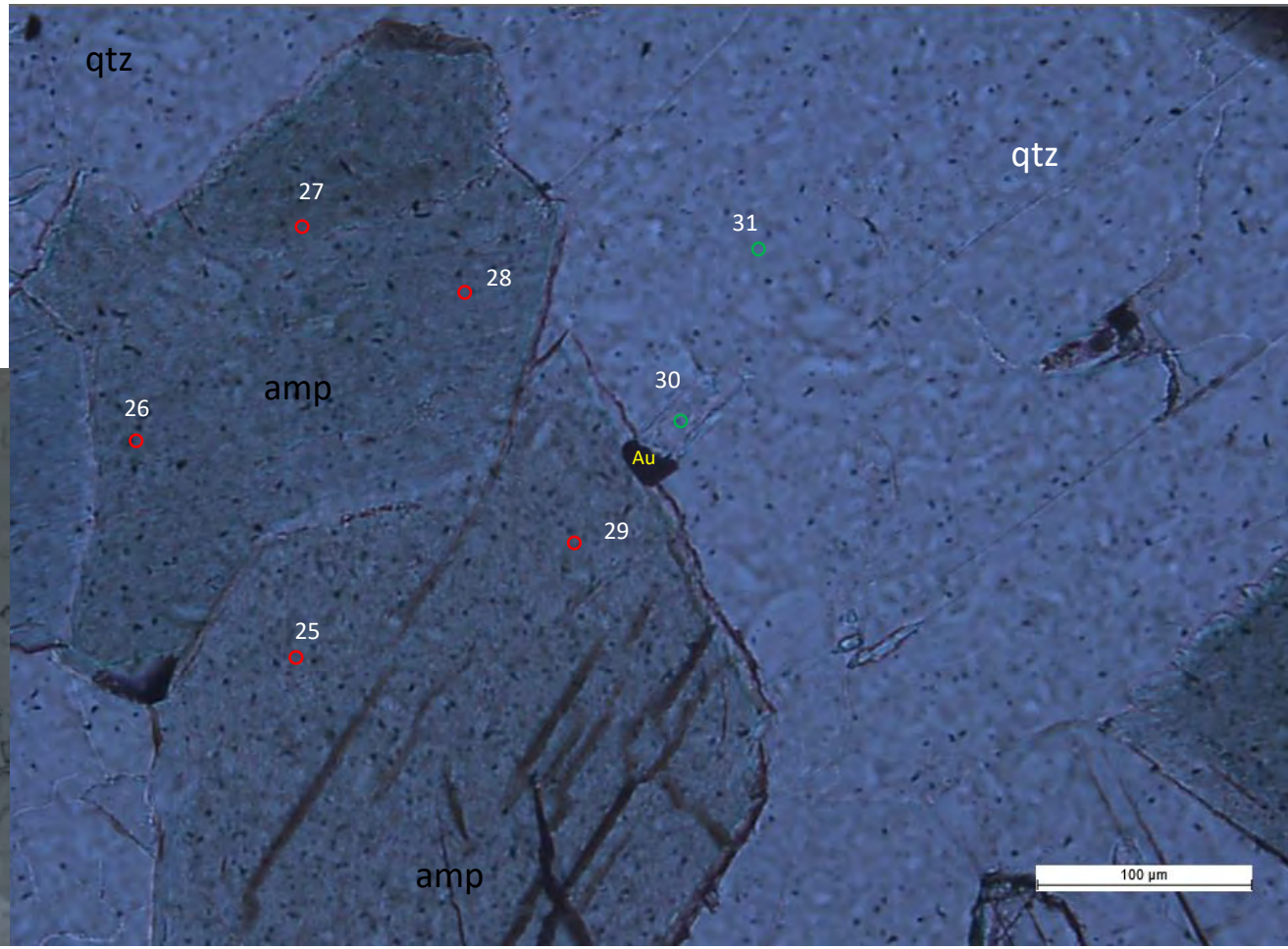


Au grain within diopside

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

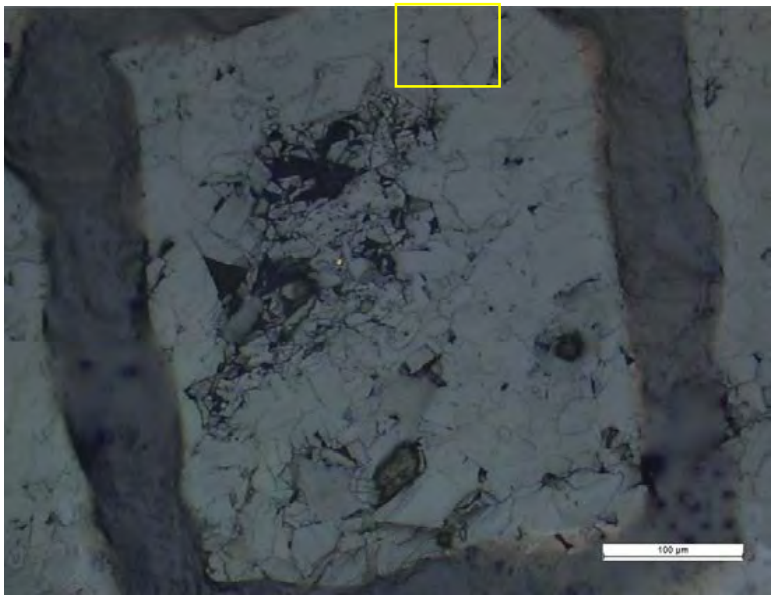
Unaltered CPX
Altered CPX
Actinolite

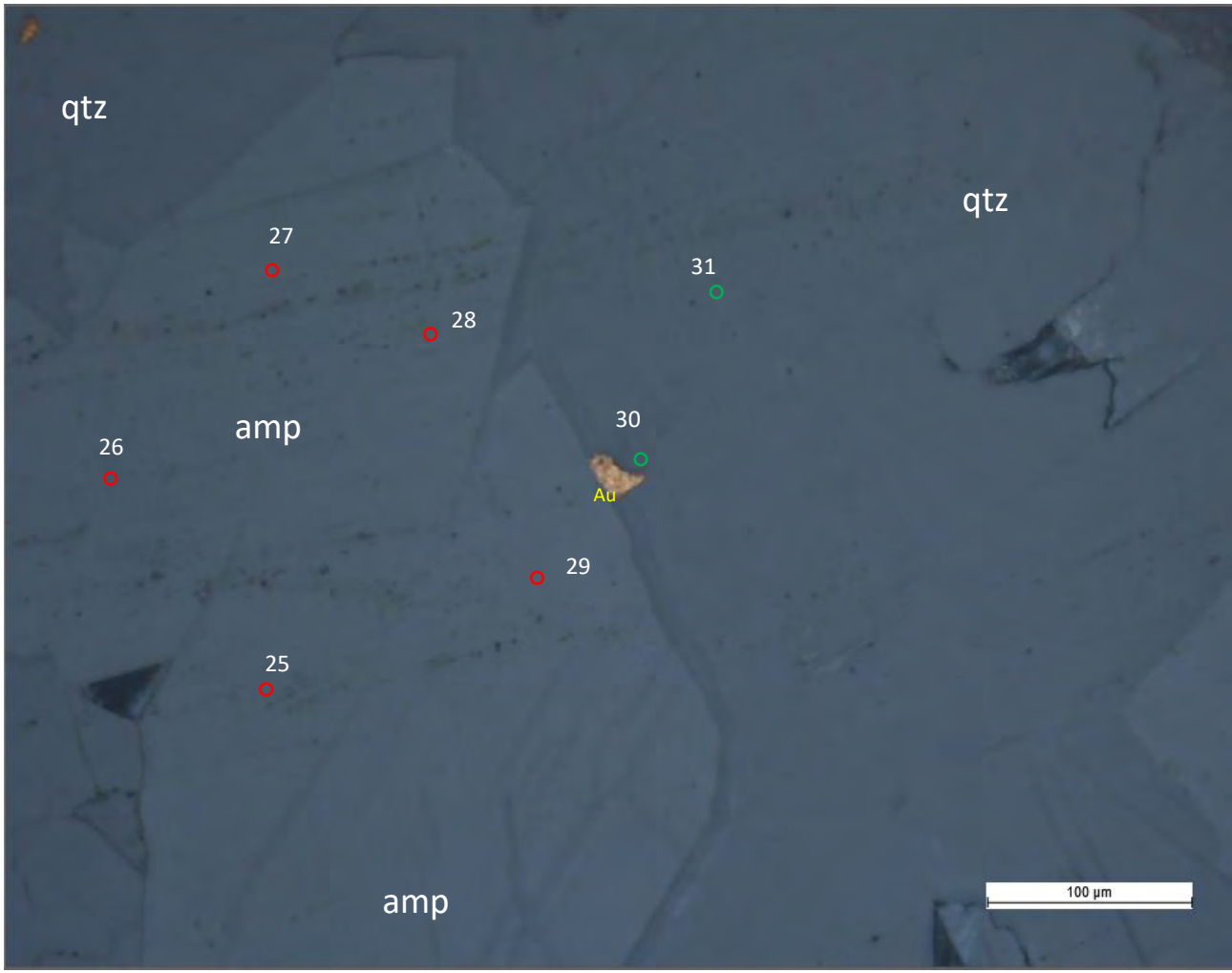




Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Unaltered CPX
Altered CPX
Actinolite



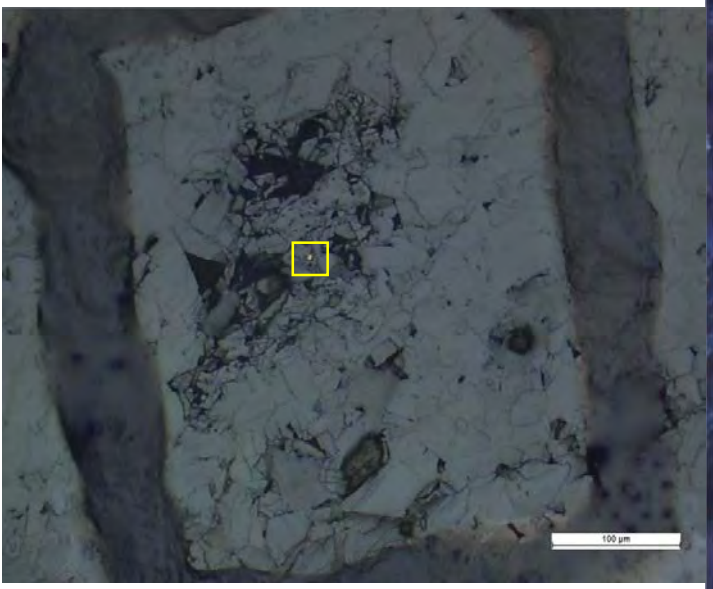


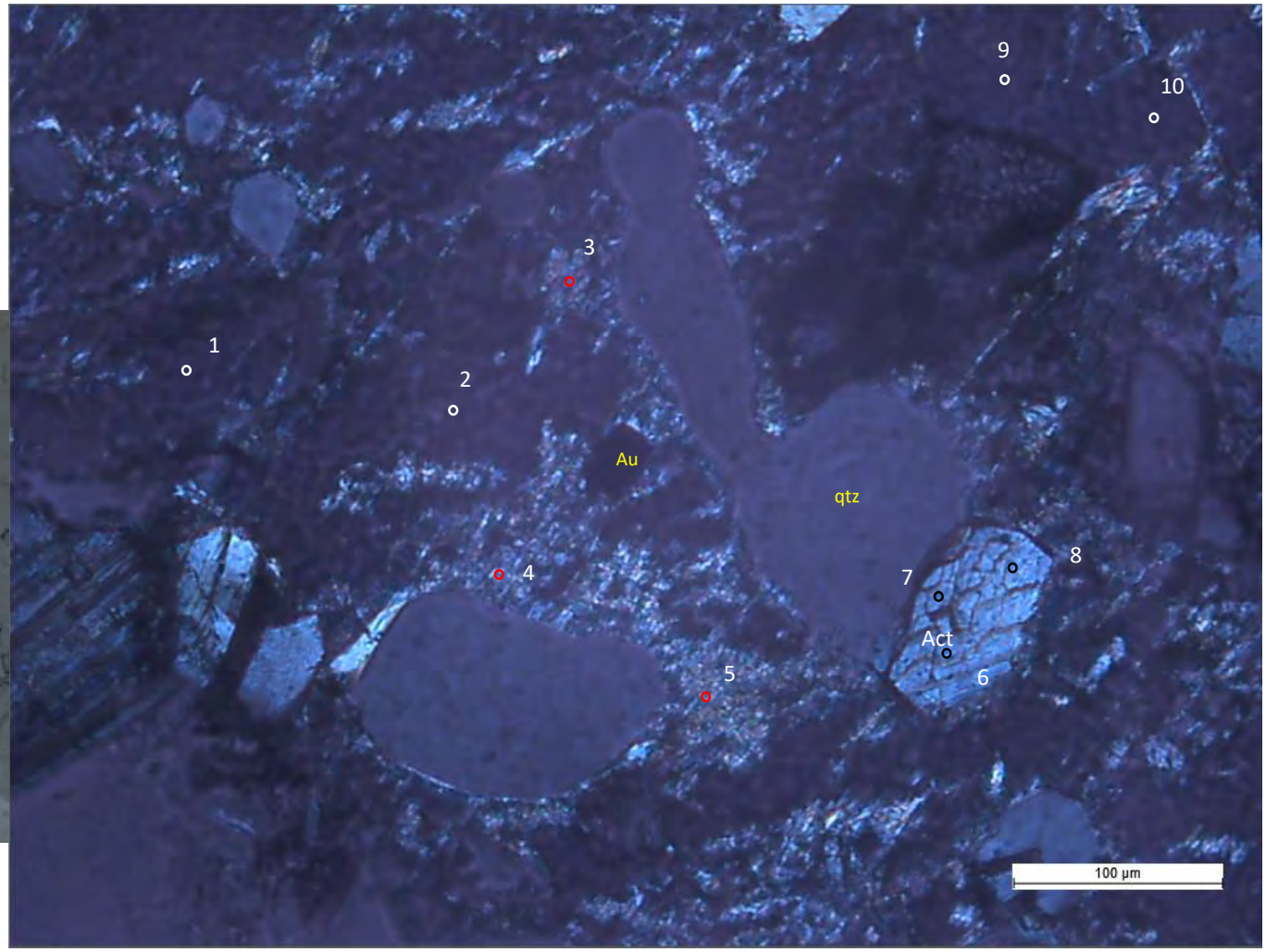
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Unaltered CPX

Altered CPX

Actinolite





Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

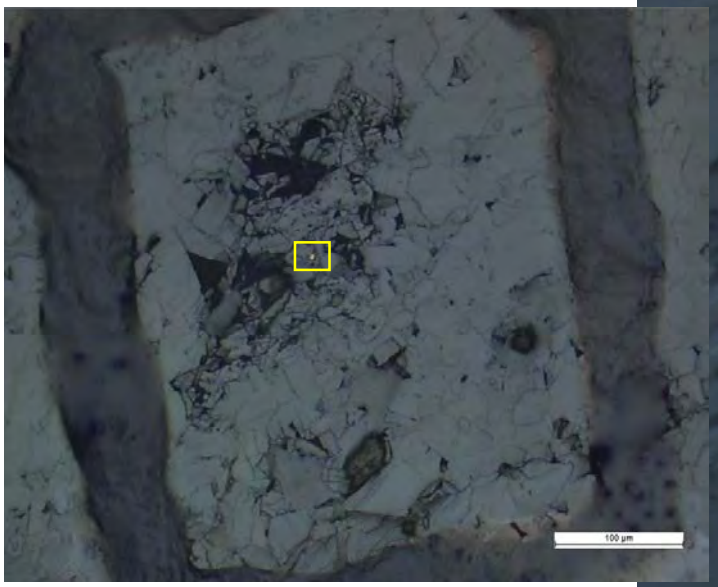
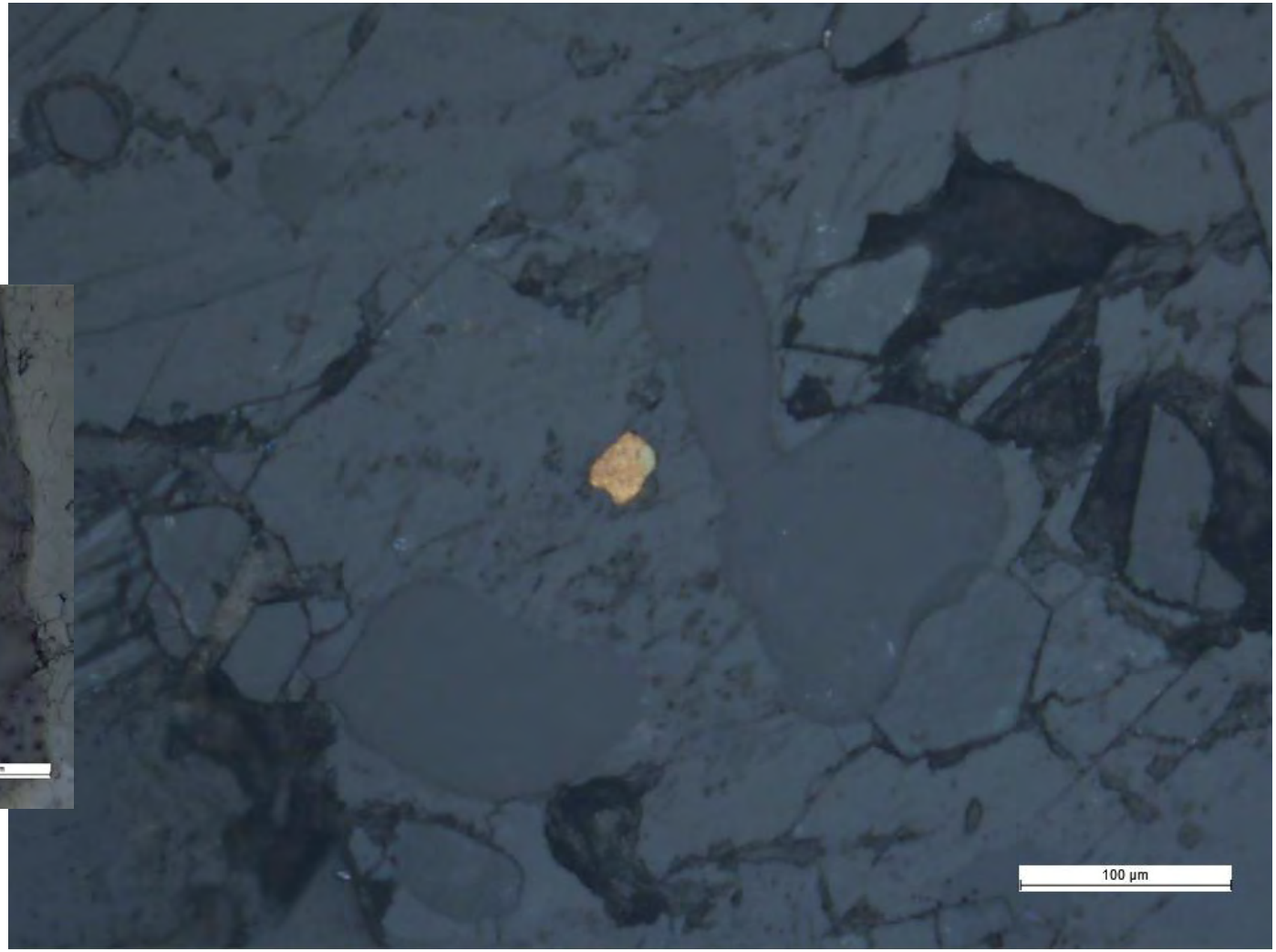


Image of the previous slide under RL



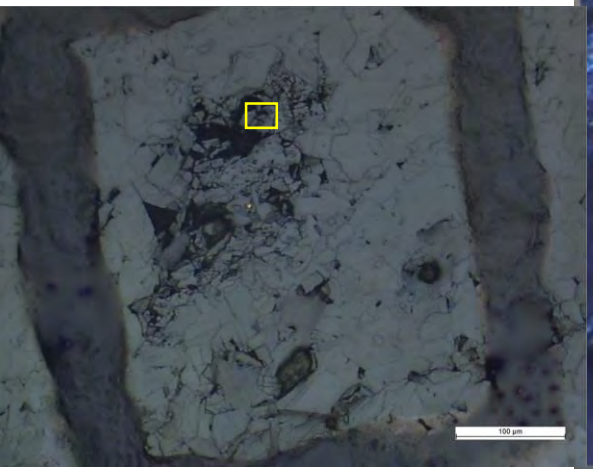
Navigating analysis location

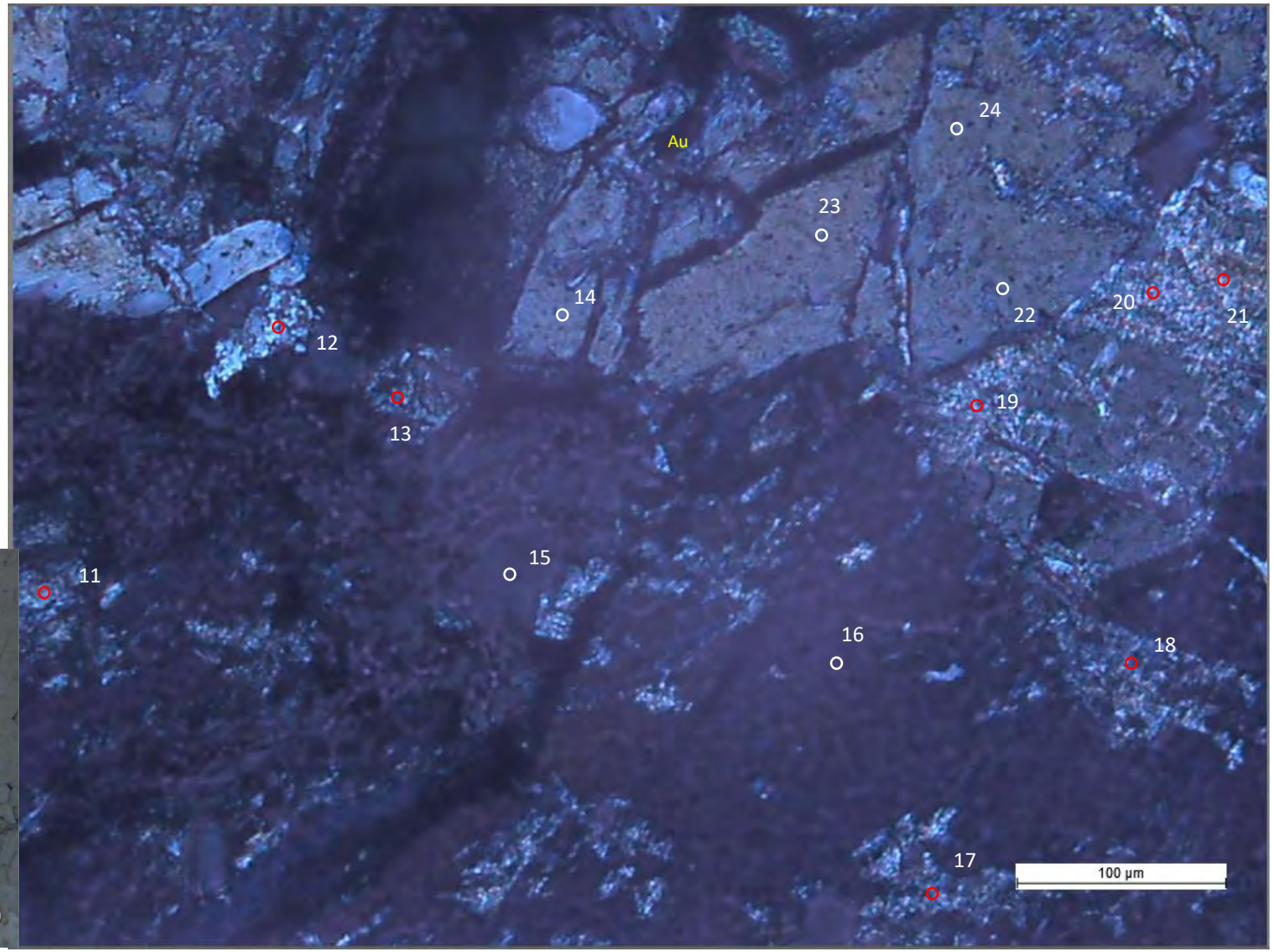
Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Unaltered CPX

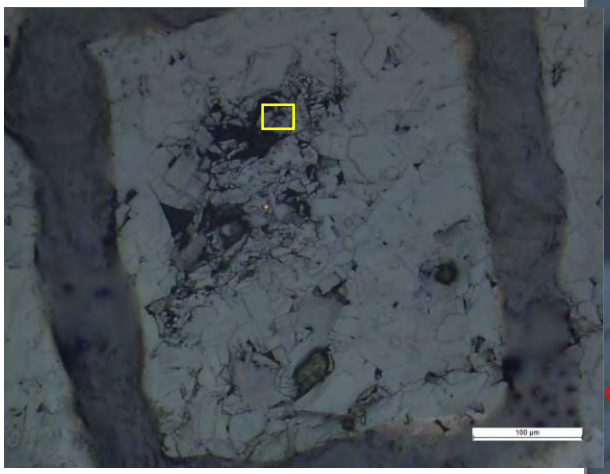
Altered CPX

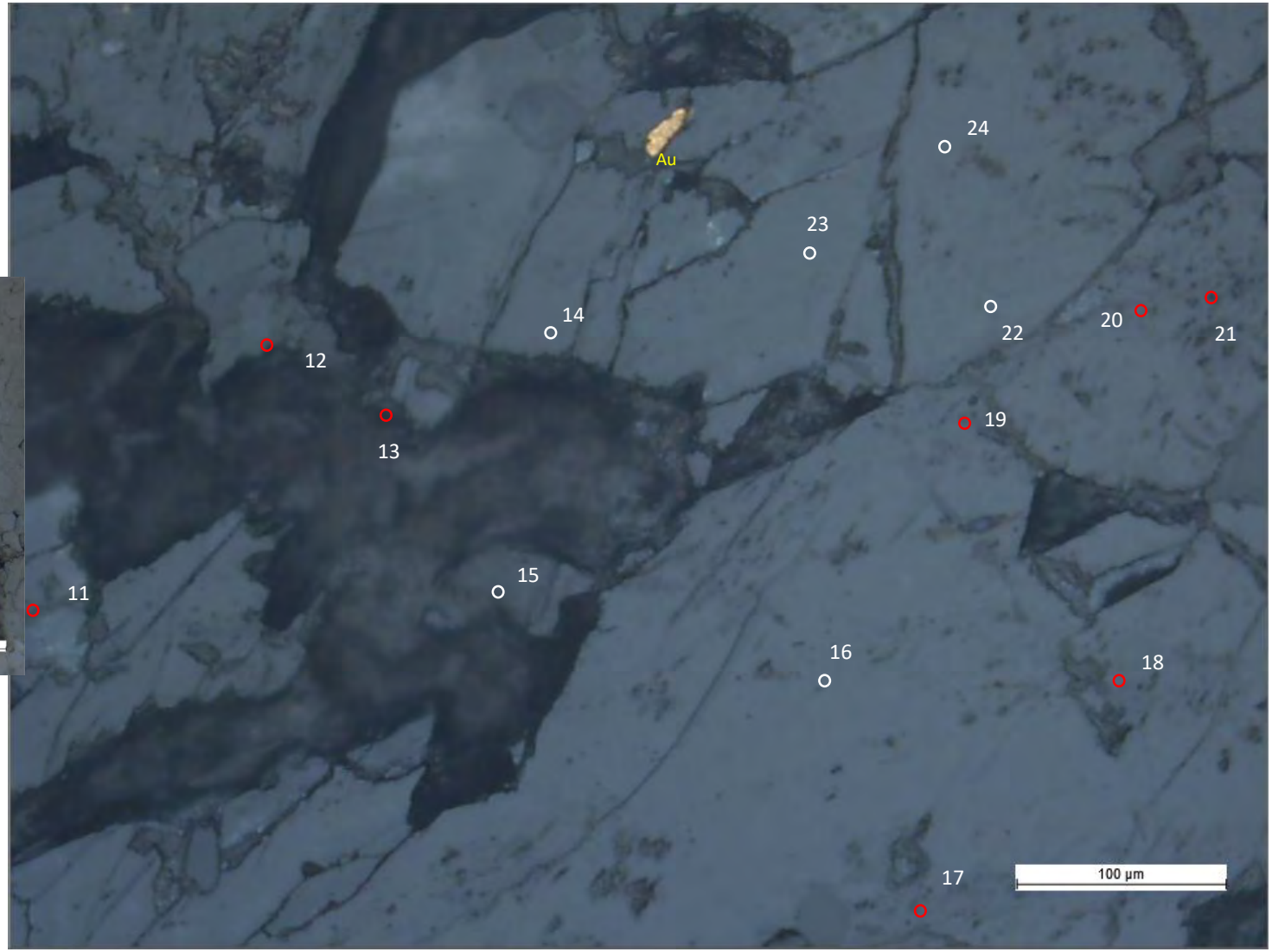
Actinolite



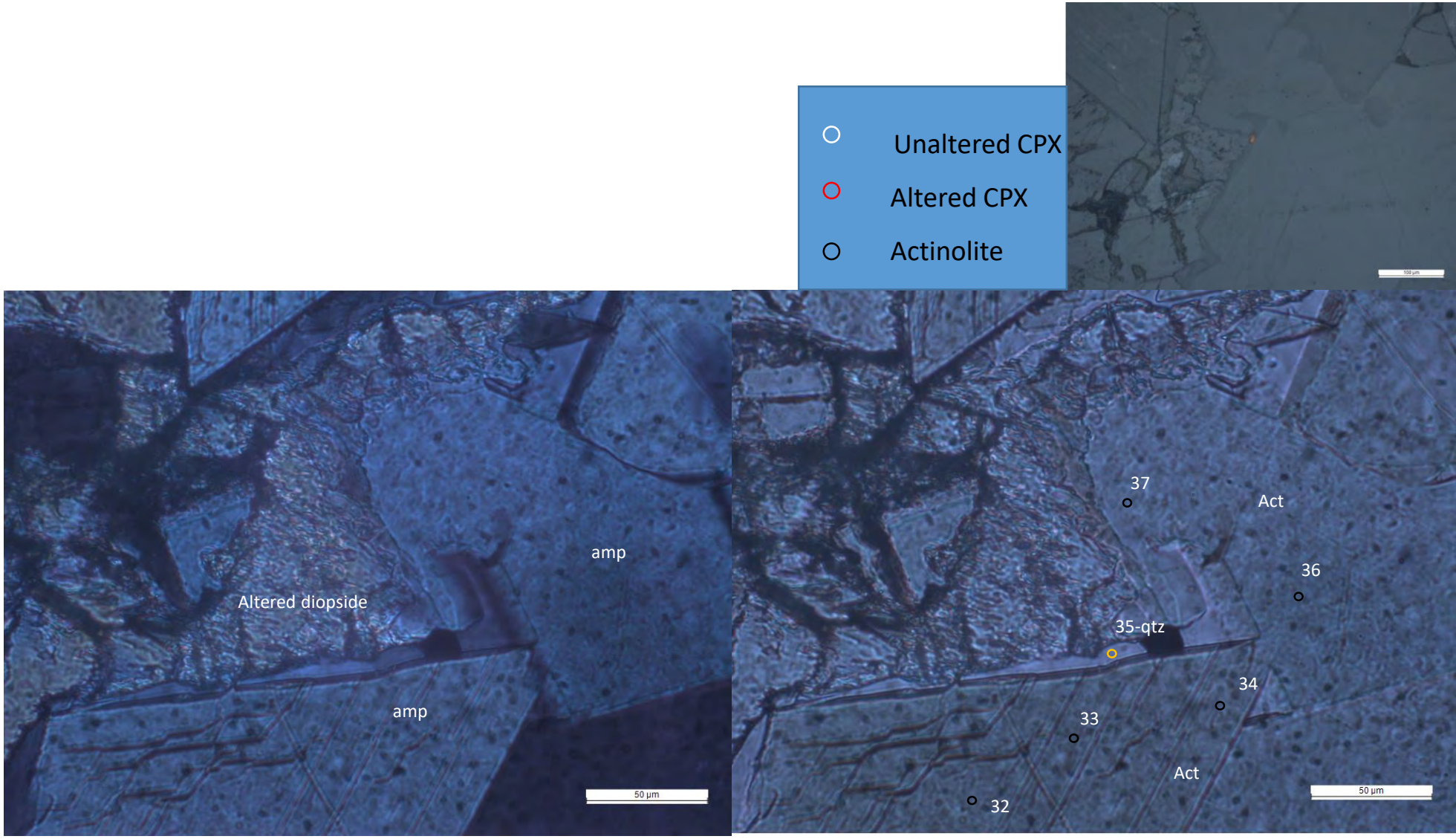


Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46





Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46



Sample TH46

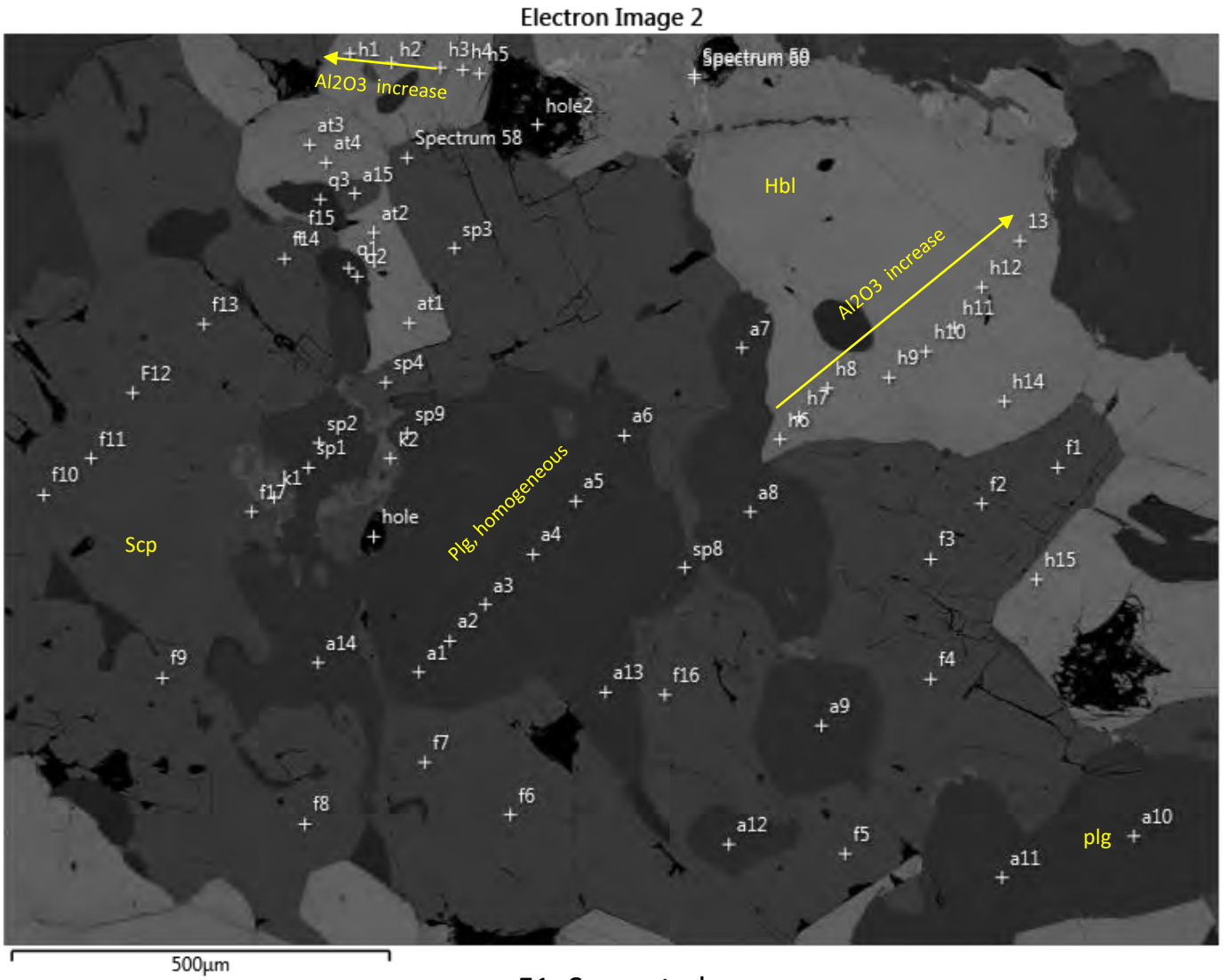
SEM and EPMA 2021 analyses aiming for P-T estimates

1. Cpx-plg pairs: 05 (SEM)
2. cpx-Hbl-plg pairs: 01 (SEM)
3. Hbl-plg pairs: 18 (03 EPMA+ 15 SEM)
4. Two Fsp pairs: 03 good pairs (+06 pairs for testing; SEM)

Mineral geochem zonation:

1. amphibole: Al_2O_3 increase in a particular direction across the grain
2. No zonation identified in Cpx
3. No zonation identified in plagiclase

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46



F1: Scp not plg

TH46: S2

- a= oligioclase
- F= Scp, not Fsp
- Plg grain (a1to a6): homogeneous data
- Amp grain (h6 to h12, 13): Al2O3 increase

D_1 Hbl-plg pairs

1. H6-a8
2. H6-a7
3. H15-a10

testing

1. H5-a5
2. H1-a1

Checked: fsp (a series) is homogeneous then can pair it for the h1, h5

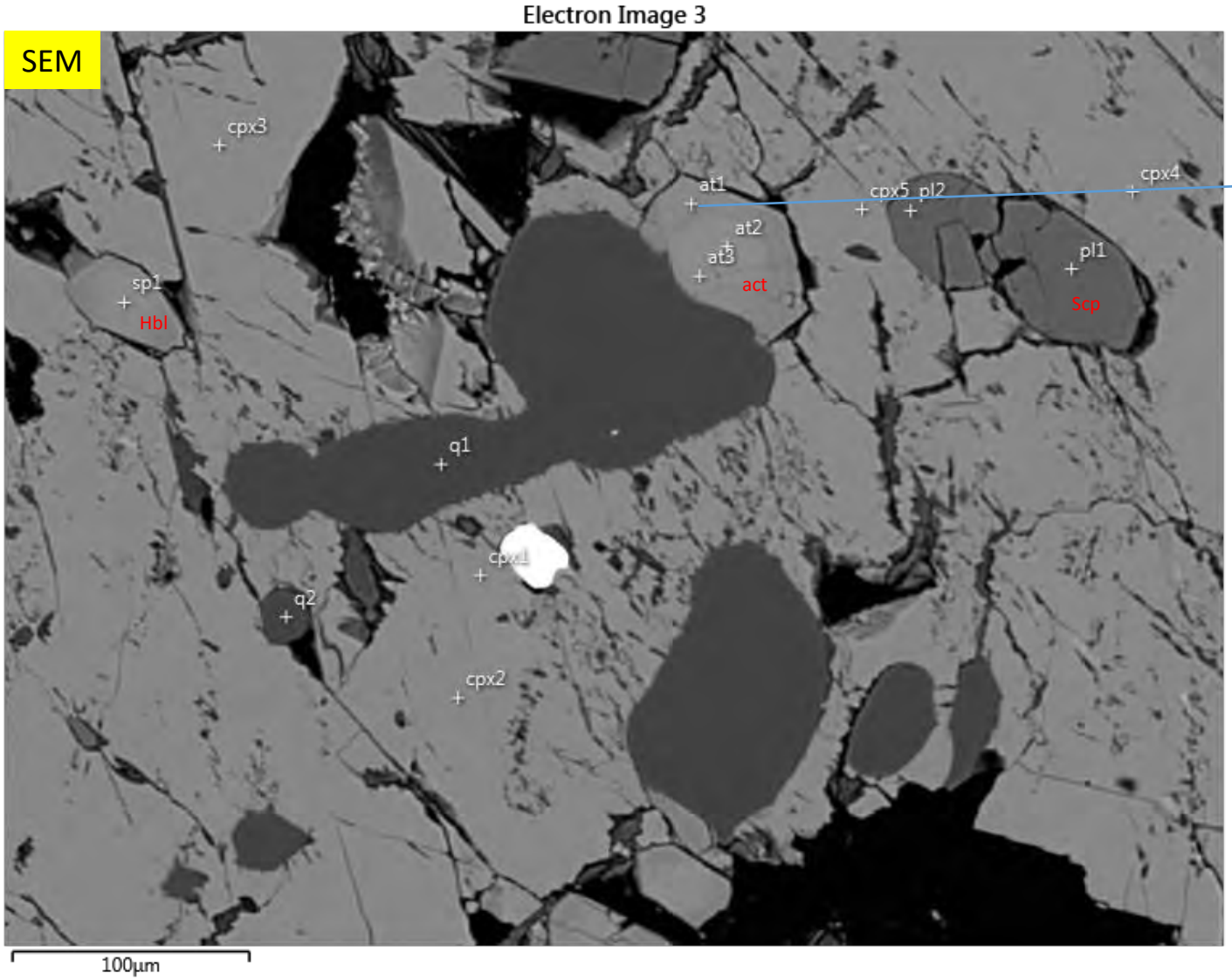
$D_{3?\,2}$ fsp (if the grain of sp1-2 is D_3)

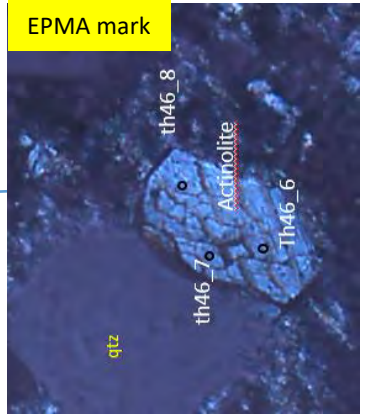
1. K1-sp1
2. K2-sp2

Note that sp9 is not D_3, the comp. and txt is the same with a1-a6

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

TH46: S3





Checking with 2020 EPMA data for the same spots in the same grain: similar-at3; at1: different (detailed in the comparing file)

Pl here is actually Scp (Scp, not plg as being though initially)

Pl2 contain minor Fe, Mg (possibly due to the micro crack => eliminated

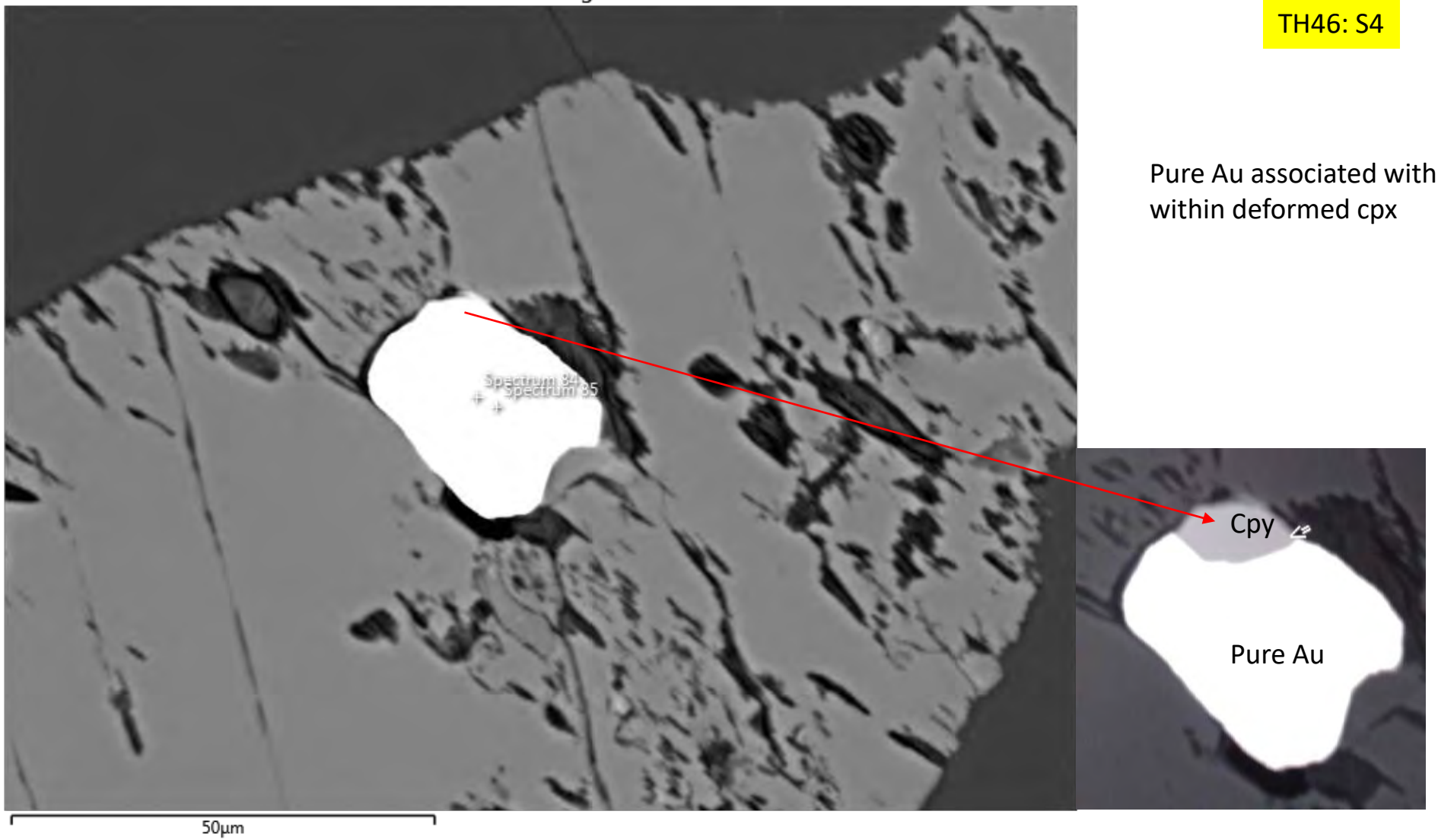
No pairing as no plg

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 4

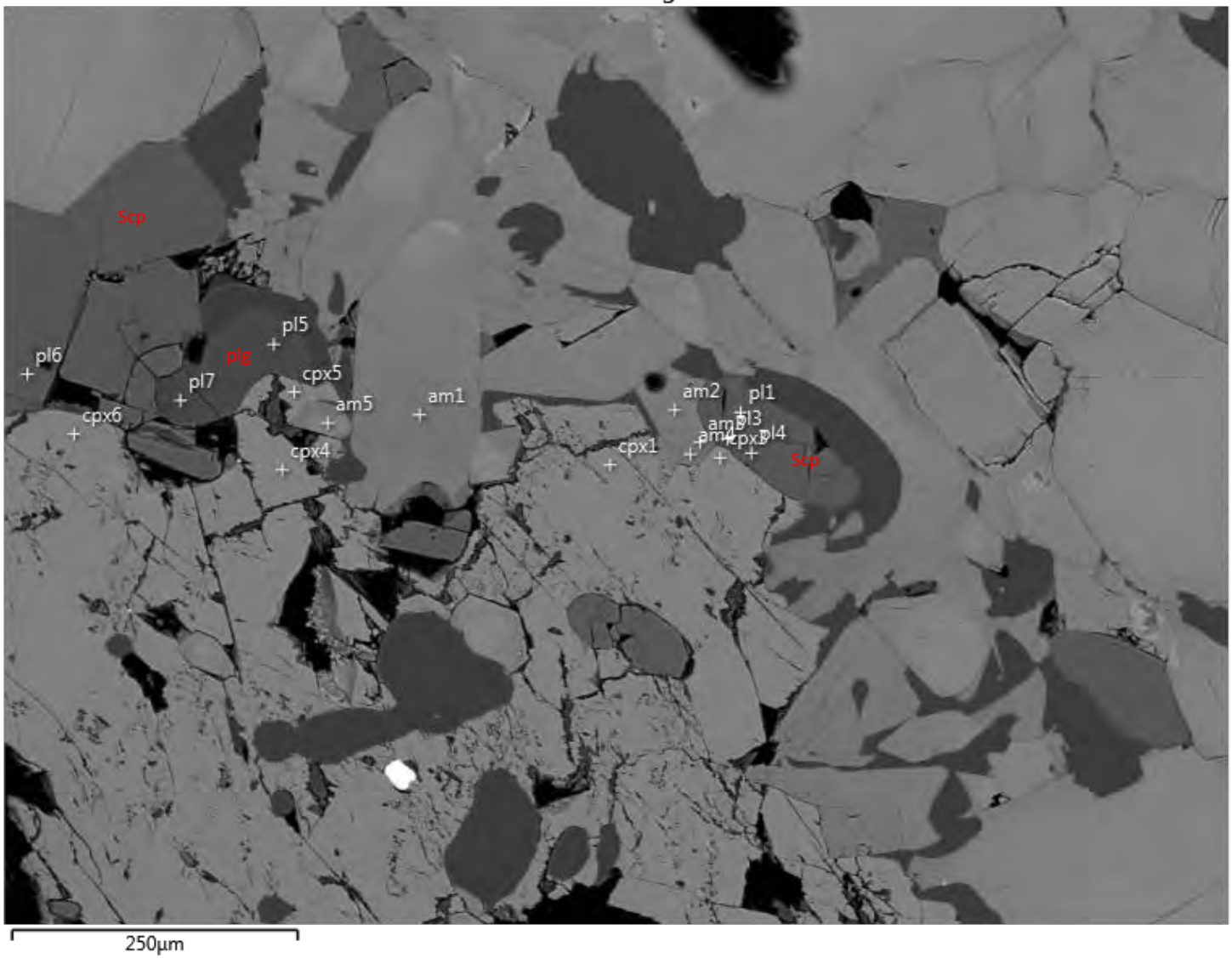
TH46: S4

Pure Au associated with Cpy within deformed cpx



Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 5



TH46: S5

Pl1-4,6: Scp

Pl5,7: plg (D_1?); if this is D_1 plg then can make pairs as below:

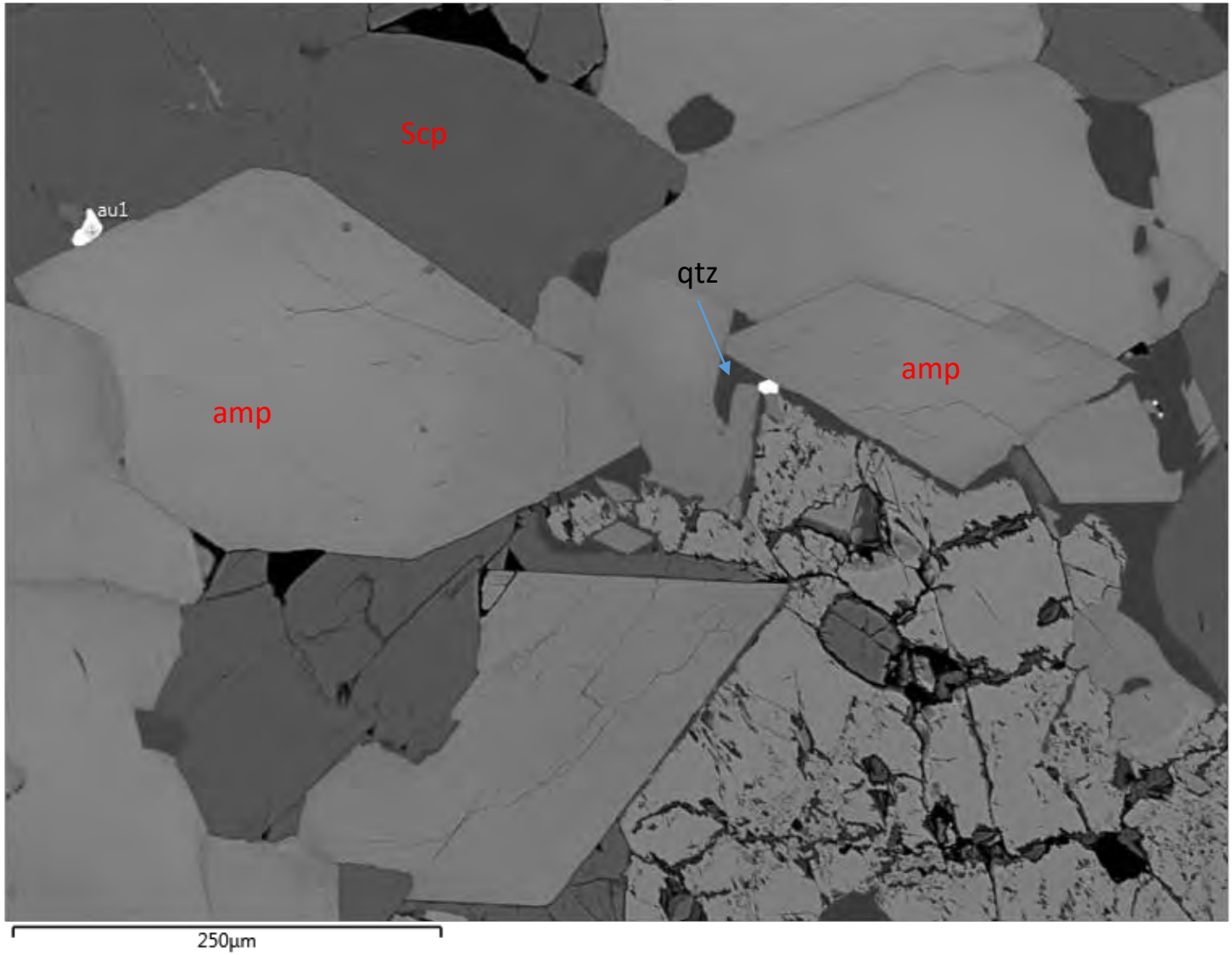
1. Test Cpx5-pl5-am5 despite that am5 grain not contacting pl5 grain

1. Cpx4-pl5
2. Cpx5-pl5
3. Cpx6-pl7

1. pl5-am5

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 6

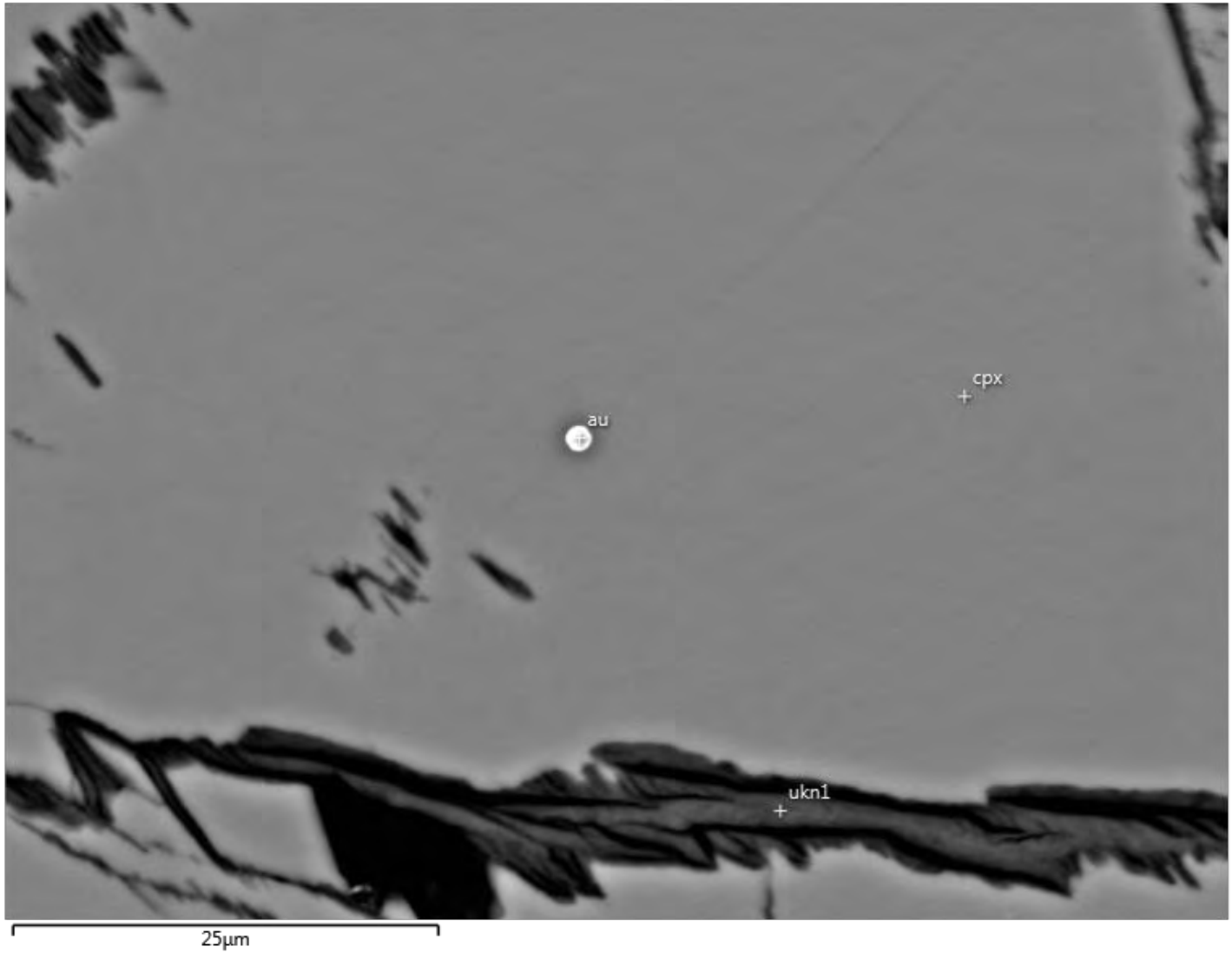


TH46: S6

Pure Au in Scp

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 7

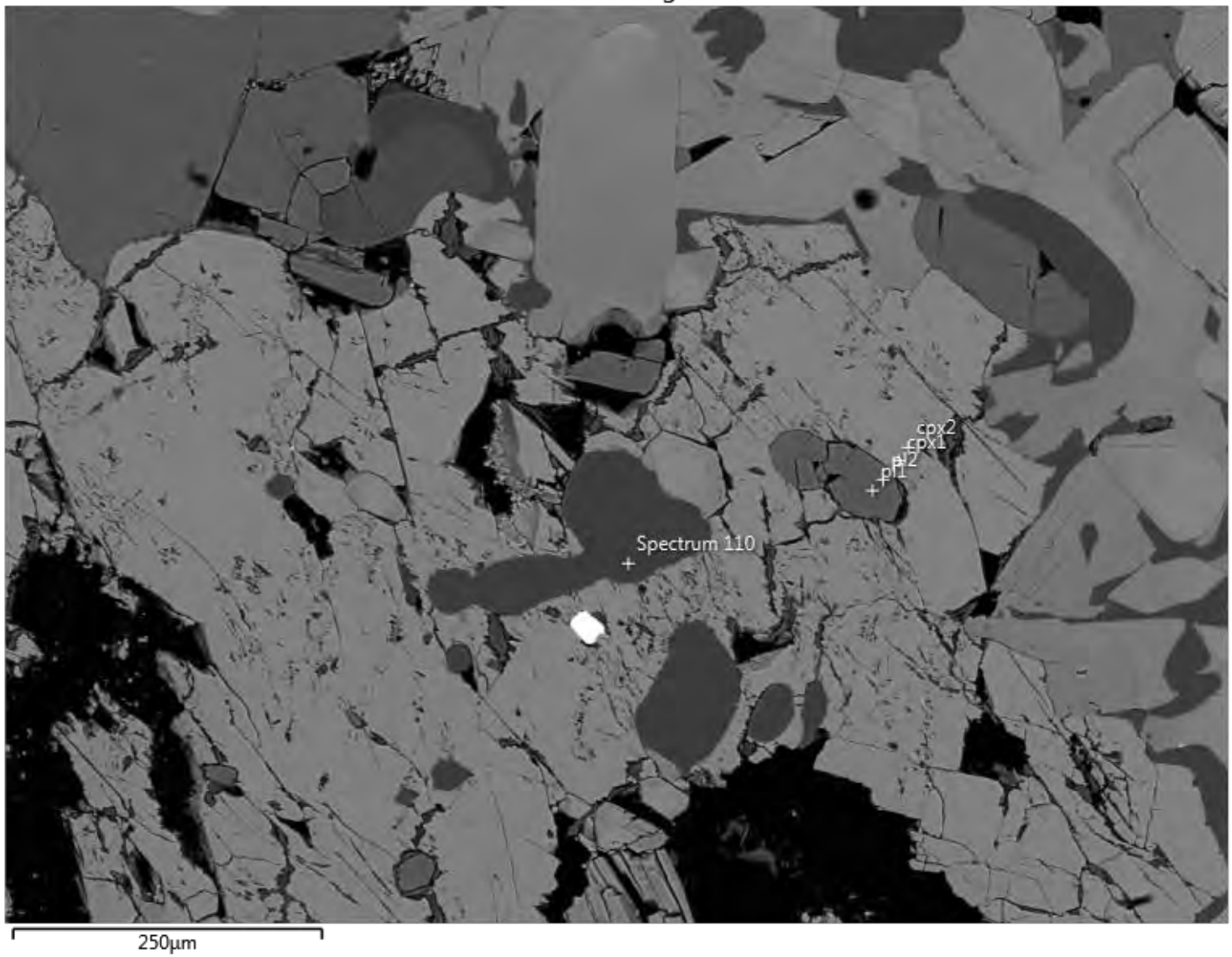


TH46: S7

Pure Au in clean cpx

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 8

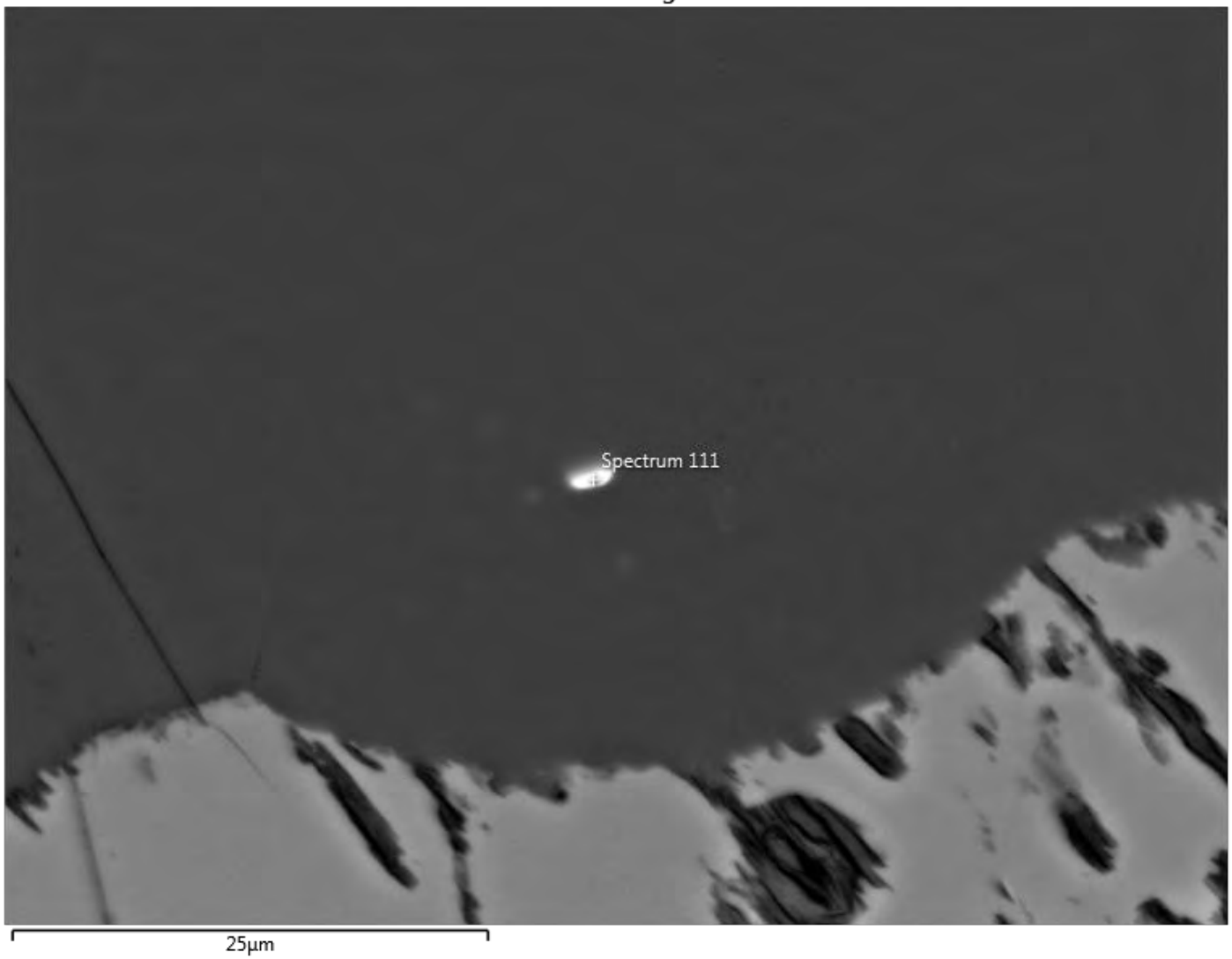


TH46: S8

Pl here is Scp => can't pairing for P-T

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 9

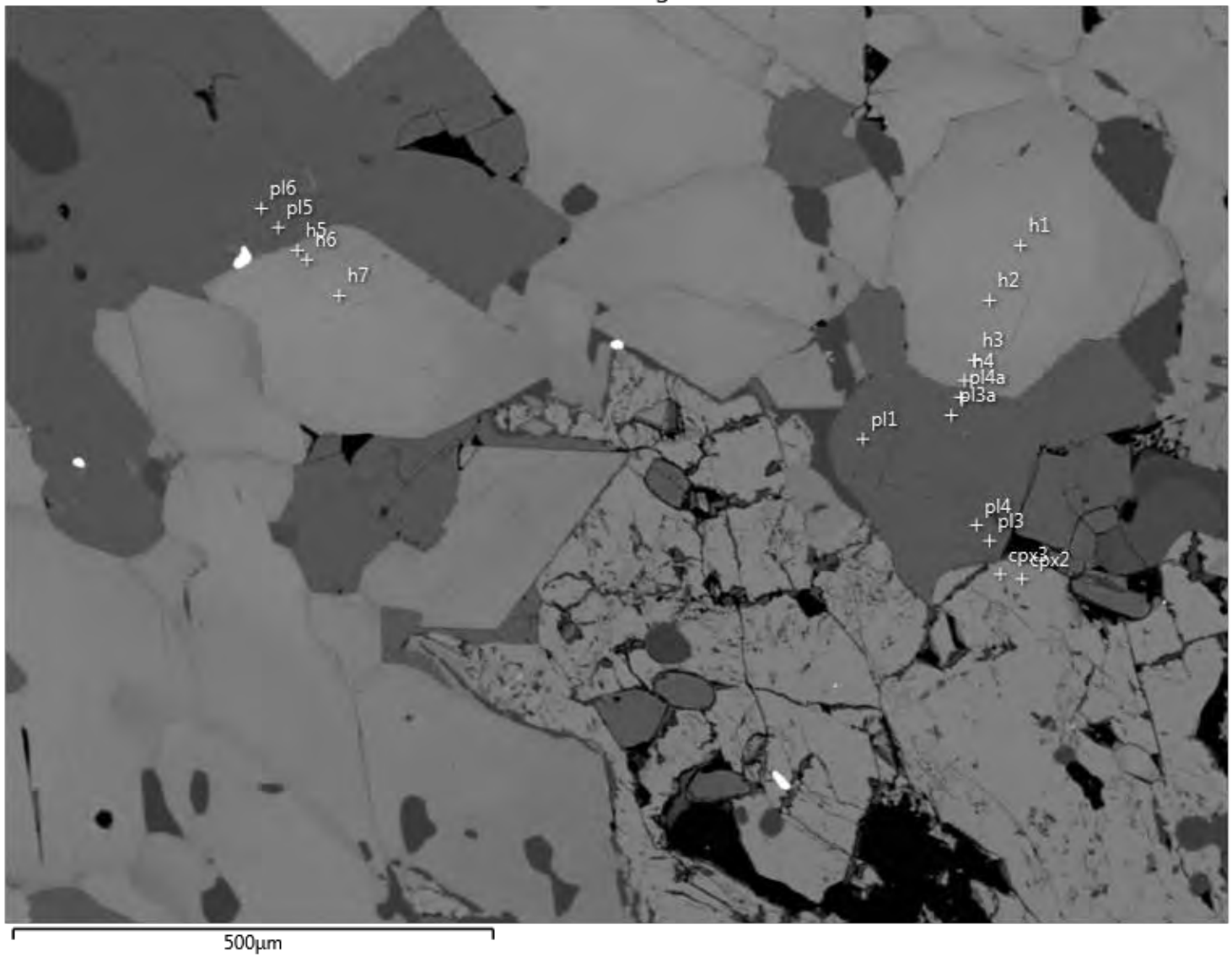


TH46: S9

Mixed spot

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 10



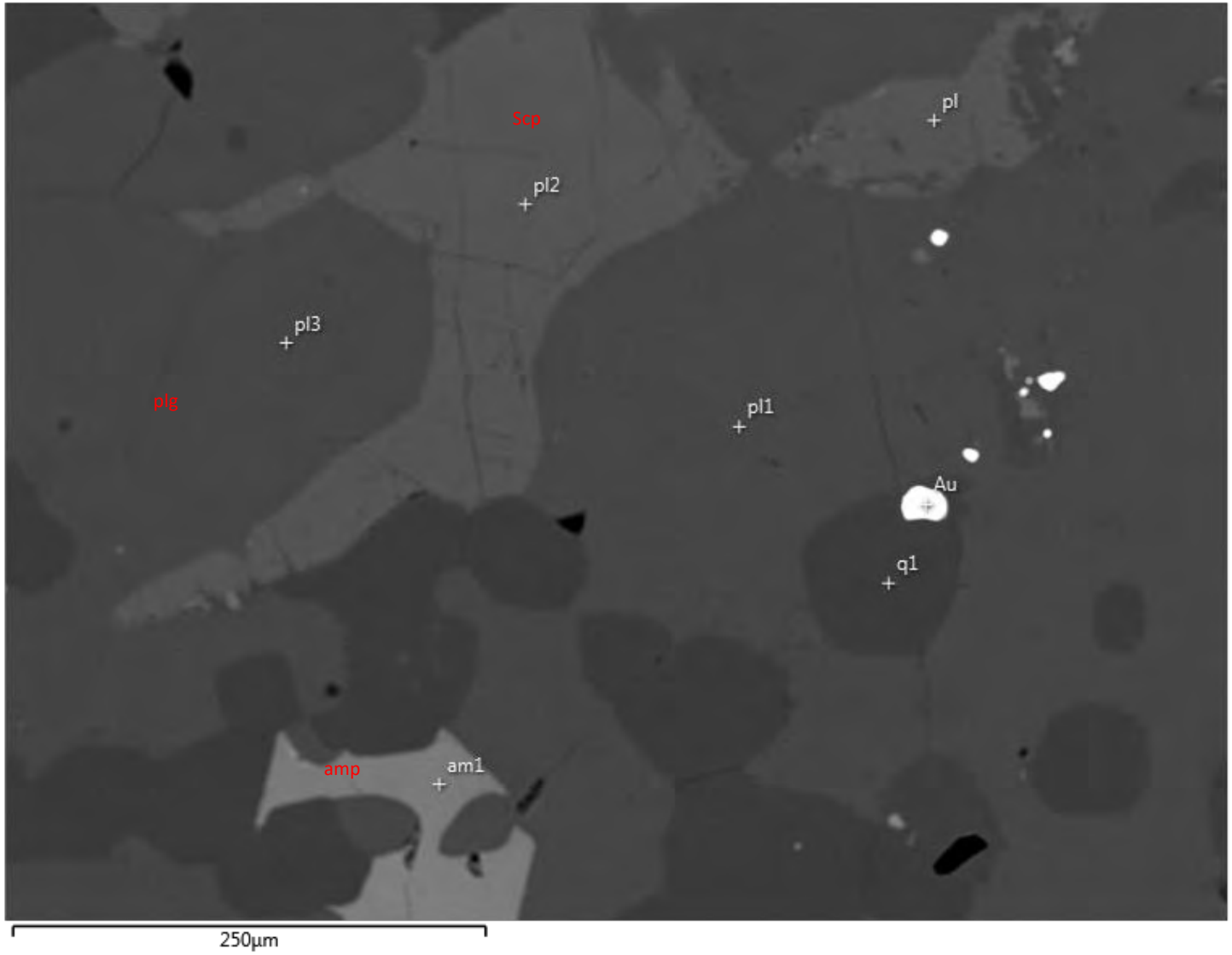
TH46: S10

Pl here is actually Scp => can't pair for P-T but still input the amp to compare with previous EPMA/EPMA data that was analysed in the same and near-by grains

Most of Scp spots herein contain minor Fe except pl3a, 4a

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 11



TH46: S11

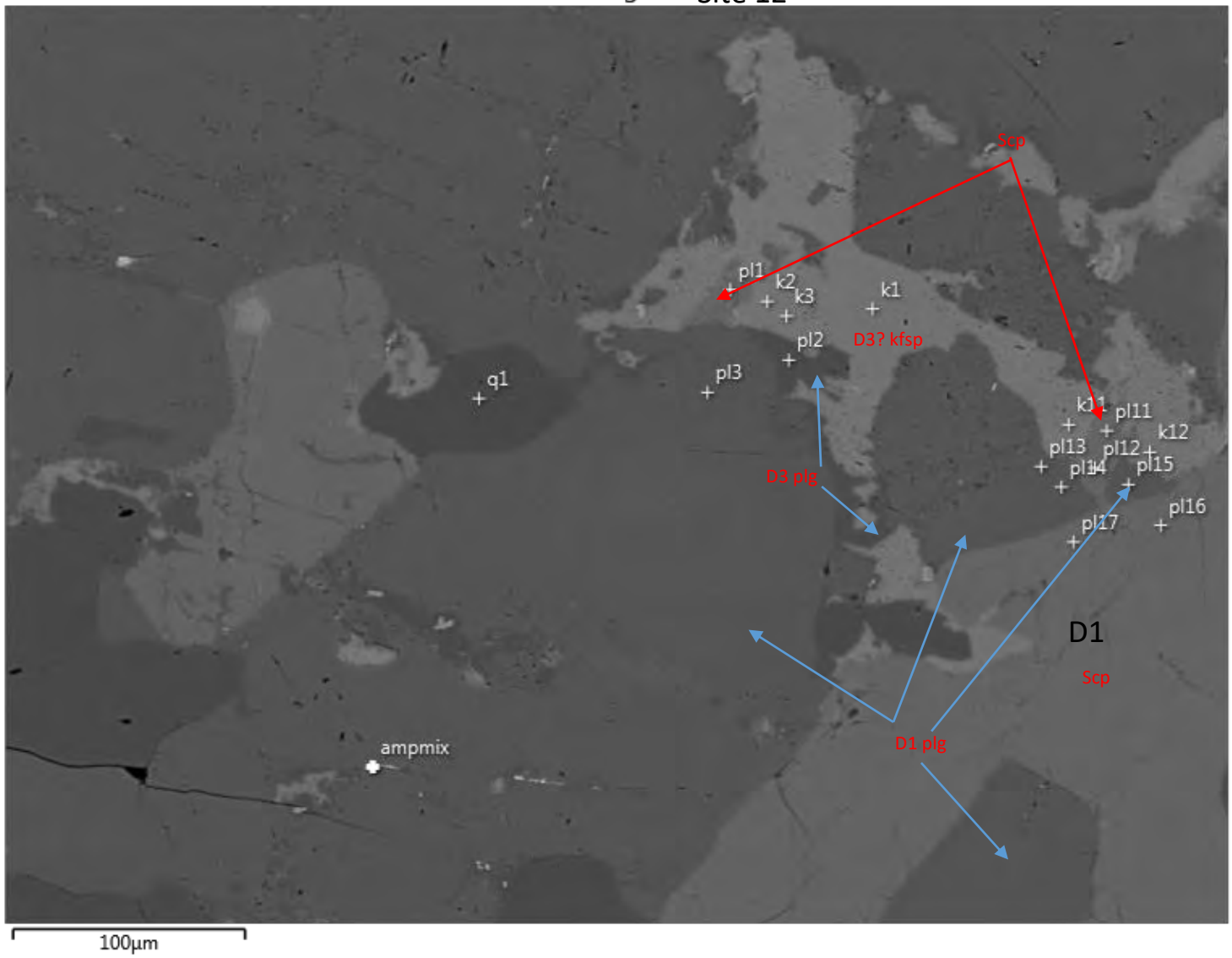
Pl2, pl: Scp

Hbl-plg pair:

1. Am1-pl1? (consider that plg is homogeneous

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

image Site 12



TH46: S12

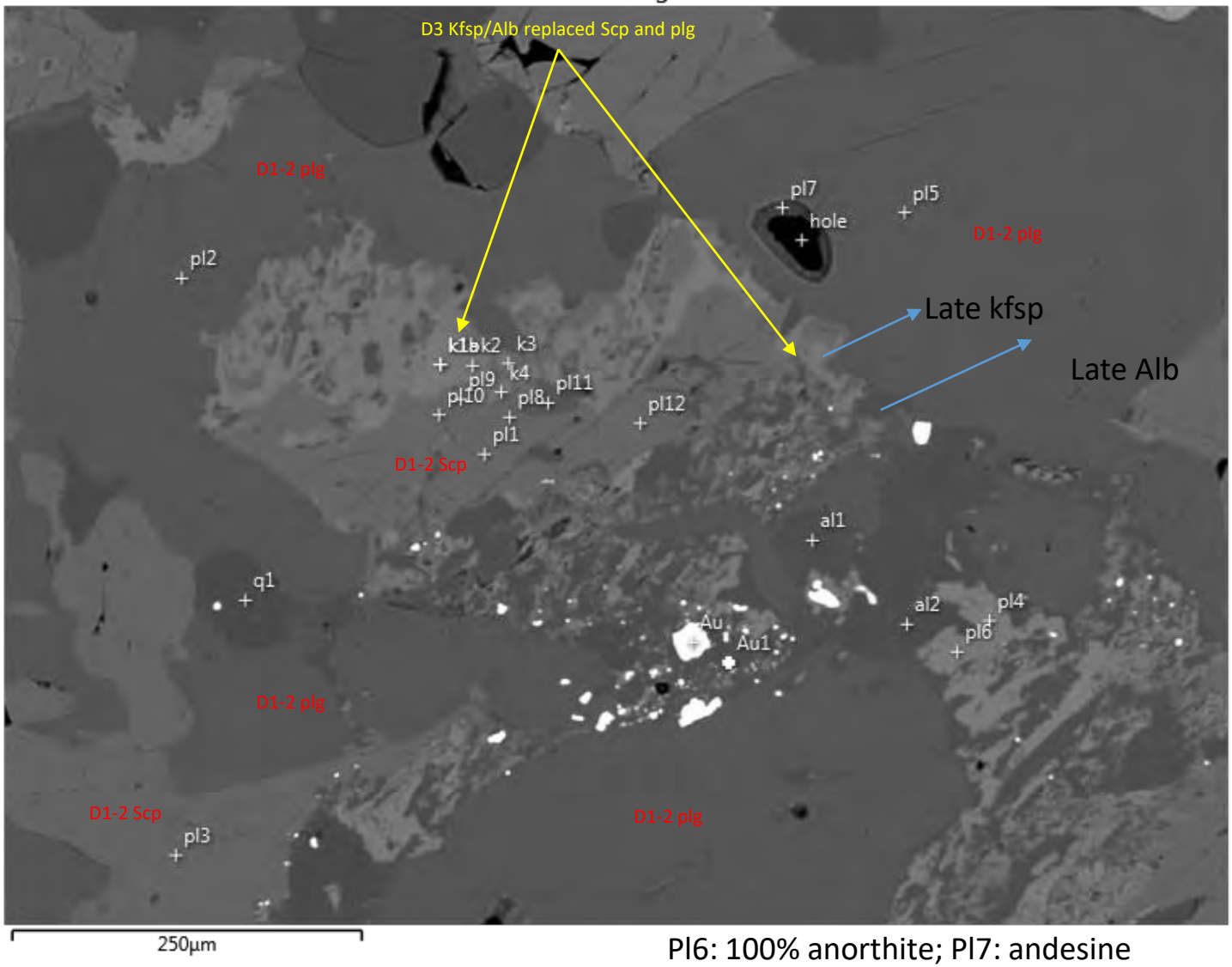
D_3-two Fsp:
1. Pl2-k2
2. Pl2-k3

Test D_1-two Fsp?:
1. Pl3-pl13 test despite not contacting

This may not work as two grains are not kfsp/Alb-plg but just test

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 13



Pl6: 100% anorthite; Pl7: andesine

TH46: S13

- Pl4,6: anorthite dispite that CaO here is , likely D1-2 anorthite as it is ~28% while CaO in anorthite is ~20%; brighter than Scp. This anorthite is altered but the spot pl4,6 is still clean for calculating
- Pl7: mixed = eliminated
- K1/1A/1B in the same place, accidentally clicking (K-fsp replaced Scp):
- Pl11: early D1-2 plg (D1?), similar comp. to pl2. Then testing pairs as below

Testing D1 two Fsp

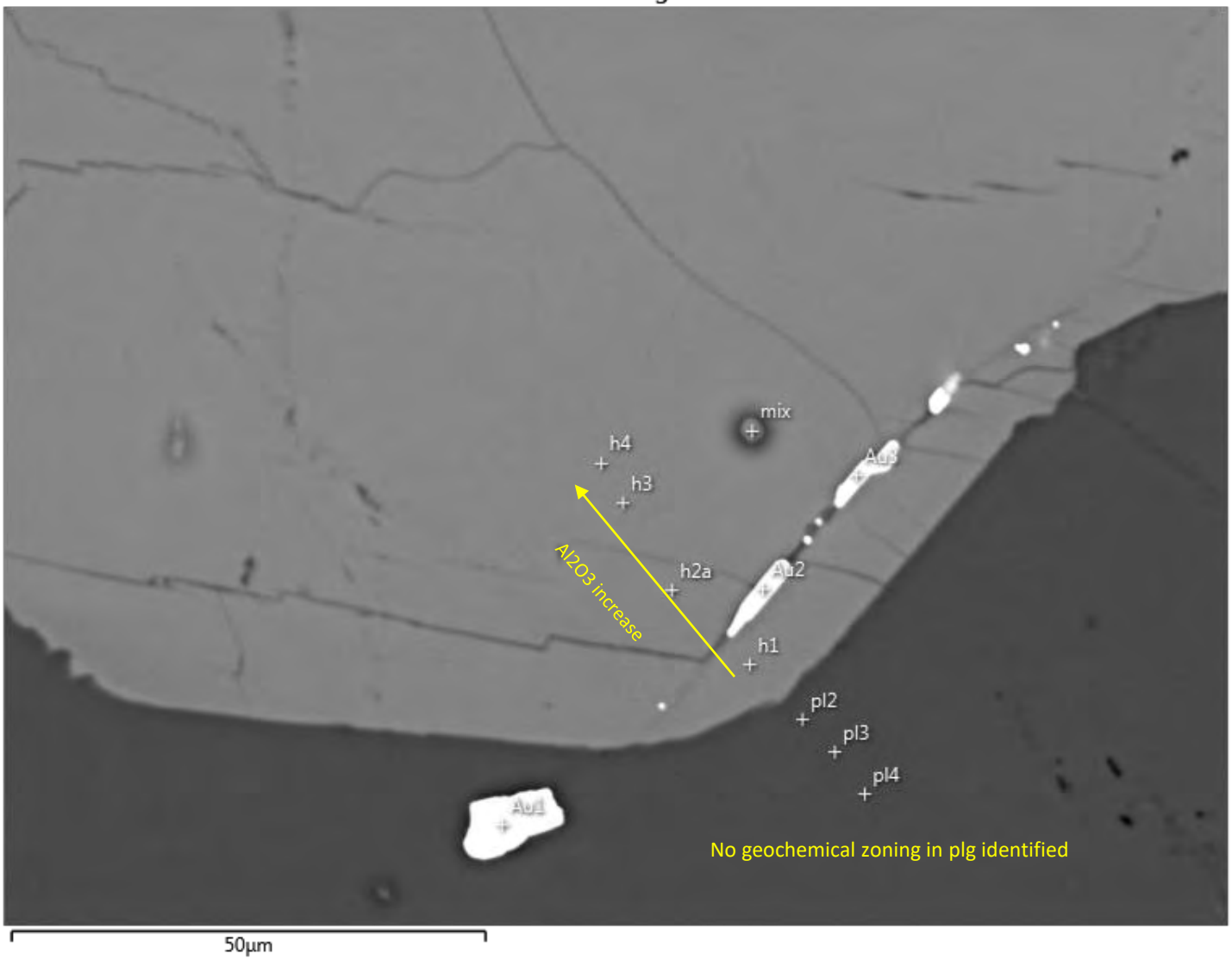
1. Pl2-pl5 (very similar composition, like the same)
2. Pl5-pl6 (if pl6 is arnorthite,; pl4 is Fe contaminated)

Testing D3 Two Fsp. Despite of not contacting, Assuming the kfs and Alb in this site are homogenous :

1. K1-al1
2. K2-al2

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 14



TH46: S14

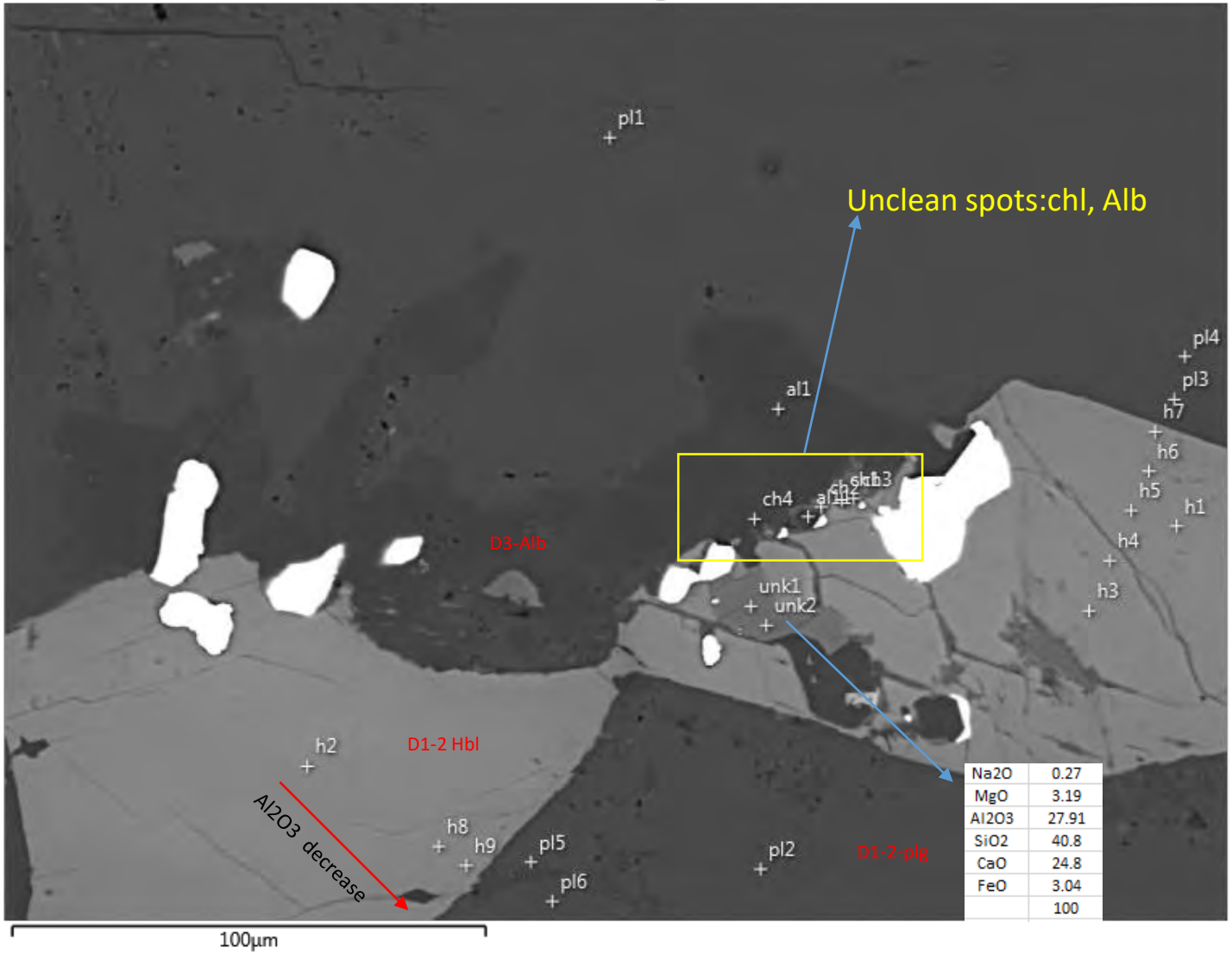
D_1 Hbl-pl (very good pairs)

1. H1-pl2

Test: H2a-pl4? Compare with the H1-pl2

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 15



Na2O	0.27
MgO	3.19
Al2O3	27.91
SiO2	40.8
CaO	24.8
FeO	3.04
	100

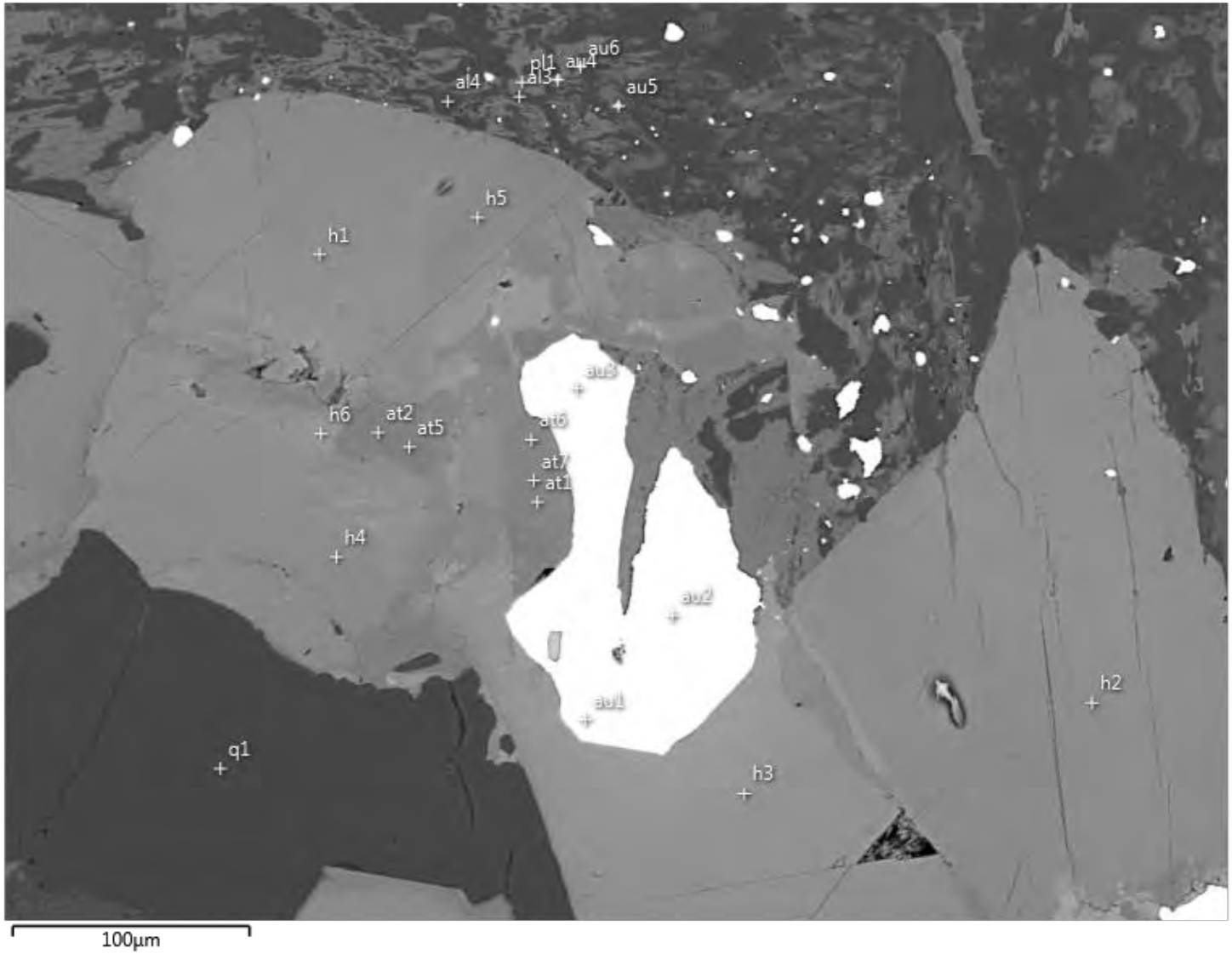
TH46: S15

1. H9-pl5
2. H7-pl3

Test:
H8-pl6
H2-pl2
H6-pl4

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 16



TH46: S16

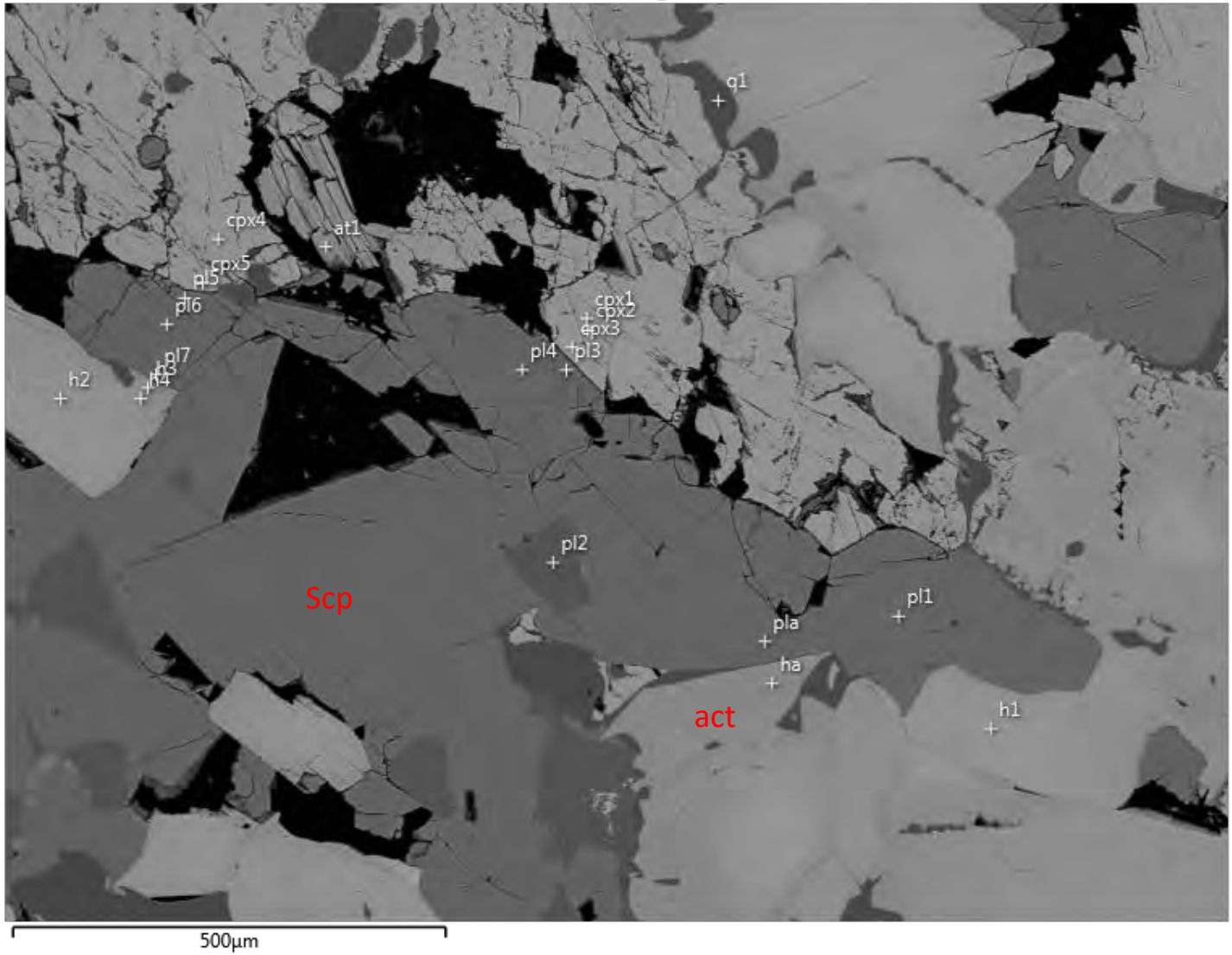
Pure Au
D_3 Act replaces $D_{1\text{-}2}$ Hbl
D_3 Alb

No pairing in this site

Pl1: 100% anorthite

Appendix 6B: Images of SEM and EPMA mineral analyses
Sample TH46

Electron Image 17



TH46: S17

cpx-plg-qtz (assuming that plg and cpx are homogeneous:)

1. Pl2-cpx3
2. Pl2-cpx5

Pl2 is likely relic plg after being replaced by Scp (Scp), and if plg is homogeneous, then use pl2 as a point for pairing

Appendix 7

Sample list

Appendix 7 contains the following data sets:

- A sample list with information for 176 samples that were selected for different types of analyses, including petrological microscope (thin section), geochronology, geochemistry, oxygen isotope and fluid inclusion studies.
- A map of sample location

Appendix 7: Sample list

Oder	Spl ID	Location	GDA94, Zone 54		Rock type	Au	Sample type					Note
			E/depth	N			Thin section	Wholerock	Dating	O. isotope	min. chem.	
1	TH01	Pit wall	388913	7605912	Quartzite		1		1			
2	TH02	Pit wall	388910	7605970	Biotite-rich schist		1					within quartzite or at the contact (unclear)
3	TH03	Pit wall	388891	7606002	Quartzite		1					
4	TH06	Pit wall	388884	7605896	Biotite-rich schist		1					
5	TH07	Pit wall	388882	7605892	Calc-silicate							
6	TH08	Pit wall	388880	7605888	Biotite-rich schist		1					
7	TH09	Pit wall	388872	7605874	Biotite-rich schist		1					
8	TH10	Pit wall	388869	7605869	Biotite-rich schist		1					
9	TH11	Pit wall	388869	7605868	D3 pegmatite		1	1	1	1		
10	TH12	Pit wall	388866	7605862	Biotite-rich schist		1					quartz-feldspar metasomatosed
11	TH12A	Pit wall	388863	7605856	Intense silicified unit		1					quartz-feldspar metasomatosed
12	TH12B	Pit wall	388856	7605847	Intense silicified unit		1					Other name: 02
13	TH13	Pit wall	388842	7605827	Metazomatosed quartzite		1		1	1		quartz-feldspar metasomatosed
14	TH14	Pit wall	388840	7605824	Metazomatosed quartzite		1					quartz-feldspar metasomatosed
15	TH15	Pit wall	388809	7605813	Amphibole-rich calc-silicate		1					
16	TH16	Pit wall	388800	7605820	Calc-silicate		1					
17	TH17	Pit wall	388786	7605825	Amphibole-rich calc-silicate		1					
18	TH18	Pit wall	388763	7605837	Amphibolite		1					
19	TH19	Pit wall	0	0	D3 pegmatite lense		1					Boulder
20	TH21	Pit wall	388749	7605863	Amphibolite		1					
21	TH22	Pit wall	388749	7605883	Calc-silicate		1					
22	TH23	Pit wall	388750	7605900	Amphibolite		1					
23	TH24	Pit wall	388755	7605913	Amphibole-rich calc-silicate		1					
24	TH25	Pit wall	388756	7605923	Calc-silicate		1					
25	TH26	Pit wall	388757	7605933	Amphibolite/ redrock alteration		1					
26	TH34	Pit wall	388870	7606014	biotite rich schist		1					intercalated in in amphibolite
27	TH35	Pit wall	388852	7606022	Biotite-rich schist		1					
28	TH39	Pit wall	388838	7606029	Magnetic calc-silicate		1					
29	TH41	DH. U9205	8.1		magnetite calc-silicate		1					

Appendix 7: Sample list

Oder	Spl ID	Location	GDA94, Zone 54		Rock type	Au	Sample type					Note
			E/depth	N			Thin section	Wholerock	Dating	O. isotope	min. chem.	
30	TH42	DH. U9205	25.4		late quartz-feldspar vein		1					
31	TH43	DH. U9205	45.8		intense silicified unit		1					
32	TH44	DH. U9205	50.1		intense silicified unit		1					
33	TH45	DH. U9205	53.1		intense silicified unit		1			1		
34	TH46	DH. U9205	54.05		amphibole-rich calcsilicate/ intense silicified	1	1			1	1	
35	TH47	DH. U9205	54.1		amphibole-rich calcsilicate/ intense silicified	1	1					
36	TH48	DH. U9205	54.15		quartz-feldspar mylonite	1	1			1		
37	TH49	DH. U9205	56.2		quartz-feldspar mylonite	1	1					
38	TH50	DH. U9205	56.25		quartz-feldspar mylonite	1	1					
39	TH51	DH. U9205	56.4		quartz-feldspar mylonite	1	1			1		
40	TH52	DH. U9205	59.04		intense silicified unit		1					
41	TH53	DH. U9205	59.25		intense silicified unit		1					
42	TH54	DH. U9205	59.3		quartz-feldspar mylonite	1	1					
43	TH55	DH. U9205	59.35		quartz-feldspar mylonite	1	1				1	
44	TH56	DH. U9205	59.85		intense silicified unit		1			1		
45	TH57	DH. U9205	60.3		intense silicified unit/ quartz-feldspar mylonite		1					with migmatite?
46	TH58	DH. U9205	60.6		quartz-feldspar mylonite		1					
47	TH59	DH. U9205	61.35		intense silicified calc-silicate/quartz-feldspar alteration		1					Ending mineralised zone
48	TH60	DH. U9205	62.8		intense silicified unit		1			1		
49	TH61	DH. U9205	73.4		intense silicified unit		1			1		
50	TH62	DH. U9205	76.8		quartz-feldspar laminea		1			1		
51	TH63	DH. U9205	86.4		intense silicified unit		1					
52	TH64	DH. U9205	102		quartzite		1					FWQ
53	TH65	DH. U9205	144.75		Late pegmatite		1			1		
54	TH66	DH. U9205	149.9		Late pegmatite		1	1	1			
55	TH67	DH. U9205	160.3		Late pegmatite		1					
56	TH68	DH.TH007	64.95		calc-silicate		1			1		
57	TH69	DH.TH007	74.74		magnetic-caalc-silicate		1					

Appendix 7: Sample list

Oder	Spl ID	Location	GDA94, Zone 54		Rock type	Au	Sample type					Note
			E/depth	N			Thin section	Wholerock	Dating	O. isotope	min. chem.	
58	TH70	DH.TH007	93.4		quartz-feldspar alteration		1					
59	TH71	DH.TH007	94.65		intense silicified unit/ quartz-feldspar alteration		1					
60	TH72	DH.TH007	99.3		intense silicified unit		1					
61	TH73	DH.TH007	102.3		quartz-feldspar mylonite	1	1			1		
62	TH74	DH.TH007	106.2		quartz-feldspar mylonite	1	1	1		1		
63	TH75	DH.TH007	106.25		quartz-feldspar mylonite	1	1					
64	TH76	DH.TH007	110.6		intense silicified unit		1					
65	TH77	DH.TH007	116.8		intense silicified unit/ biotite-rich schist		1					
66	TH78	DH.TH007	120		intense silicified unit		1					
67	TH79	DH.TH007	127.4		biotite-rich schist		1					with migmatite?
68	TH80	DH.TH007	137		calcite vein		1			1		
69	TH81	DH. U8506	122.7		amphibolite		1					
70	TH82	DH. U8506	125.7		intense silicified unit, D3 vein		1					
71	TH83	DH. U8506	130.3		calc-silicate		1					
72	TH84	DH. U8506	141.5		late pegmatite		1			1		
73	TH85	DH. U8506	180.5		intense silicified unit/ quartz-feldspar alteration		1			1		
74	TH86	DH. U8506	238		Quartz-feldspar mylonite		1					
75	TH87	DH. U8506	144.1		Late pegmatite		1	1		1		Not enough population, no concordant age
76	TH88	DH. U8506	250.7		Quartz-feldspar veins		1					
77	TH89	DH. L8507	60.75		intense silicified unit		1					
78	TH90	DH. L8507	88.7		D4 veins		1					
79	TH91	DH. L8507	110.3		quartz-feldspar unit		1					
80	TH92	DH. L8507	186.2		quartz-feldspar vein/ intense silicified unit		1					
81	TH93	DH. UG4	139.9		late D3 quartz-feldspar vein		1					contain late magnetite
82	TH94	DH. UG4	160		late D3 quartz-feldspar vein		1					contain late magnetite
83	TH95	DH. UG4	192		magnetic calc-silicate		1					
84	TH96	DH. DJ525	243		quartz-feldspar mylonite		1					800m North to Tick Hill
85	TH97	DH. DJ525	299		granoblastic quartz-feldspar vein like		1			1		migmatite?

Appendix 7: Sample list

Oder	Spl ID	Location	GDA94, Zone 54		Rock type	Au	Sample type					Note
			E/depth	N			Thin section	Wholerock	Dating	O. isotope	min. chem.	
86	TH98	DH. DJ525	329		amphibolite		1					
87	TH99	DH. DJ525	336.7		amphibolite		1				1	Garnet-bearing
88	TH100	DH. UG1	155.2		calc-silicate		1					
89	TH101	DH. UG1	178		quartz-feldspar alteration/ intense silicified unit		1					
90	TH102	DH. UG1	183.75		mylonitic quartz-feldspar vein		1					
91	TH103	DH. UG1	209.2		quartz veins/ calc-silicate		1			1		
92	TH104	DH. TH014	61		amphibole-rich calcsilicate		1			1		
93	TH105	DH. TH014	71.5		calc-silicate					1		
94	TH106	DH. TH014	85.5		amphibole-rich calcsilicate					1		
95	TH107	DH. TH014	94		intense silicified unit		1					
96	TH108	DH. U8506	224.3-240.5		D3 pegmatite		1	1	1	1		
97	TH109	DH. TH014	112		Calc-silicate		1					in the chloritization zone
98	TH110	DH. TH014	119.6		Calc-silicate		1					in the chloritization zone
99	TH113	DH. TH014	127.7		intense silicified unit		1					
100	TH114	DH. TH014	144.4		intense silicified unit/ feldspar alteration		1					
101	TH115	DH. TH014	148		intense silicified unit/ chlorite alteration		1					
102	TH117	DH. TH014	153		intense silicified unit/ chlorite alteration		1					
103	TH118	DH. TH014	153.4		quartz-feldspar mylonite	1	1					
104	TH119	DH. TH014	154.5		quartz-feldspar mylonite	1	1					
105	TH120	DH. TH014	155		biotite-rich schist		1					
106	TH121	DH. TH014	156.5		intense silicified unit/ feldspar alteration		1					
107	TH122	DH. TH014	164.6		intense silicified unit		1					with 1cm pyrite-rich layer
108	TH123	DH. TH014	173		intense silicified unit		1					with 1cm pyrite-rich layer
109	TH126	DH. TH014	186.2		intense silicified unit/ sulphide-albite alteration		1					
110	TH128	DH. TH085	173.3		intense silicified unit		1					chlorite-albite-sulphide alteration
111	TH129	DH. TH085	175.6		quartz-feldspar mylonite	1	1					

Appendix 7: Sample list

Oder	Spl ID	Location	GDA94, Zone 54		Rock type	Au	Sample type					Note
			E/depth	N			Thin section	Wholerock	Dating	O. isotope	min. chem.	
112	TH130	DH. TH086	237.3		quartz-feldspar alteration	1	1					
113	TH131	DH. TH086	250.4		intense silicified unit/ sulphide-albite alteration		1					
114	TH132	DH. TH044	80		quartz-feldspar mylonite	1						
115	TH134	DH. TH045	106		quartz-feldspar mylonite	1	1					
116	TH135	DH. TH069	147.3		brecciaation/ quartz-feldspar alteration	1	1					
117	TH136	DH. TH078	215.6		intense silicified unit/ Au-bearing alteration	1	1					
118	TH137	DH. TH078	215.6		intense silicified unit/ Au-bearing alteration	1	1				1	2 thin section samples in this speciment
119	TH138	DH. TH077	139		brecciation		1					
120	TH139	DH. TH032	206		quartz-feldspar mylonite	1	1					
121	TH140	DH. TH032	286.1		D3 pegmatite		1	1	1			
122	TH141	Pit wall	388867	7606015	D3 pegmatite		1	1	1			
123	MG	T. Hill region	386650	7600566	Monzonite		1	1	1			
124	Msy	T. Hill region	386953	7600313	Syenite		1	1				
125	Msy.d	T. Hill region	386953	7600313	Syenite dyke		1	1				
126	Msy.m	T. Hill region	386914	7600329	Syenite		1	1				
127	OTG	T. Hill region	378568	7602967	Granite		1	1	1			
128	SMG	T. Hill region	381233	7604274	Granite		1	1	1			
129	THG1	T. Hill region	385156	7606851	Granite		1	1	1			
130	THG2	T. Hill region	385138	7606776	Granite		1	1	1			
131	THG3	Tick Hill area	389258	7605939	Leucogranite		1	1	1	1		
132	THG4	T. Hill region	386702	7603938	Leucogranite		1	1	1	1		
133	THM01	ore zone, pit	0	0	quartz-feldspar mylonite	1	1			1		from MIM
134	THM04	ore zone, pit	0	0	quartz-feldspar mylonite	1	1	1	1	2		from MIM
135	THM05	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM
136	THM06A	ore zone, pit	0	0	quartz-feldspar mylonite	1	1	1				from MIM; in the same hand speciment with THM06B
137	THM06B	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM
138	THM07A	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM; in the same hand speciment with THM07B

Appendix 7: Sample list

Oder	Spl ID	Location	GDA94, Zone 54		Rock type	Au	Sample type					Note
			E/depth	N			Thin section	Wholerock	Dating	O. isotope	min. chem.	
139	THM07B	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM
140	THM08A	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM; in the same hand speciment with THM08B
141	THM08B	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM
142	THM09	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM
143	THM10	ore zone, pit	0	0	quartz-feldspar mylonite	1	1			1		from MIM
144	THM11	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from MIM
145	THM22	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver
146	THM23	ore zone, pit	0	0	quartz-feldspar mylonite	1	1			1	1	from N. Oliver
147	THM24	ore zone, pit	0	0	quartz-feldspar mylonite	1	1			1		from N. Oliver
148	THM25	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver
149	THM26	ore zone, pit	0	0	quartz-feldspar mylonite	1	1	1		1		from N. Oliver
150	THM27	ore zone, pit	0	0	quartz-feldspar mylonite	1	1	1	1			from N. Oliver
151	THM28	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver
152	THM29	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver
153	THM30	Unknown	0	0	feldspar veins	1	1					from N. Oliver
154	THM31	Unknown	0	0	leucogranite		1					from N. Oliver; OQ19767
155	THM32	Unknown	0	0	mylonite		1			1		from N. Oliver; 52692
156	THM34	Unknown	0	0	quartz vein		1					from N. Oliver; OQ033081
157	THM35	Unknown	0	0	intense silicified unit		1					from N. Oliver; OQ033082
158	THM36	Unknown	0	0	intense silicified unit		1					from N. Oliver; OQ033083
159	THM38	Unknown	0	0	intense silicified unit		1					from N. Oliver; OQ033085
160	THM39	Unknown	0	0	intense silicified unit		1					from N. Oliver; OQ033086
161	THM40A	ore zone, pit	0	0	quartz-feldspar mylonite	1	1	1		1		from N. Oliver; OQ033087, in the same hand speciment with THM40B
162	THM40B	ore zone, pit	0	0	quartz-feldspar mylonite		1					from N. Oliver; OQ033087_1
163	THM44	ore zone, pit	0	0	quartz-feldspar mylonite		1					from N. Oliver; OQ033090
164	THM45	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver; OQ033091
165	THM46	ore zone, pit	0	0	quartz-feldspar mylonite	1	1			2		from N. Oliver; OQ033092
166	THM48	Unknown	0	0	pegmatite		1					from N. Oliver; OQ033094
167	THM49	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver; OQ033095
168	THM51A	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver; OQ033097; in the same hand speciment with THM51B,C

Appendix 7: Sample list

Oder	Spl ID	Location	GDA94, Zone 54		Rock type	Au	Sample type					Note
			E/depth	N			Thin section	Wholerock	Dating	O. isotope	min. chem.	
169	THM51B	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver
170	THM51C	ore zone, pit	0	0	quartz-feldspar mylonite	1	1	1		1	1	from N. Oliver
171	THM52A	ore zone, pit	0	0	quartz-feldspar mylonite	1	1					from N. Oliver; OQ033098
172	THM52B	ore zone, pit	0	0	quartz-feldspar mylonite		1					from N. Oliver; in the same hand speciment with THM52A
173	THM53	Unknown	0	0	leucogranite		1					from N. Oliver; MQ039547
174	THM56	ore zone, pit	0	0	quartz-feldspar mylonite	1	1			2		from N. Oliver
175	THM58	ore zone, pit	0	0	quartz-feldspar mylonite		1					from N. Oliver
176	THM59	ore zone, pit	0	0	quartz-feldspar mylonite		1					from N. Oliver
Total						**51**	**172**	**23**	**16**	**40**	**6**	

Appendix 8

Sample images

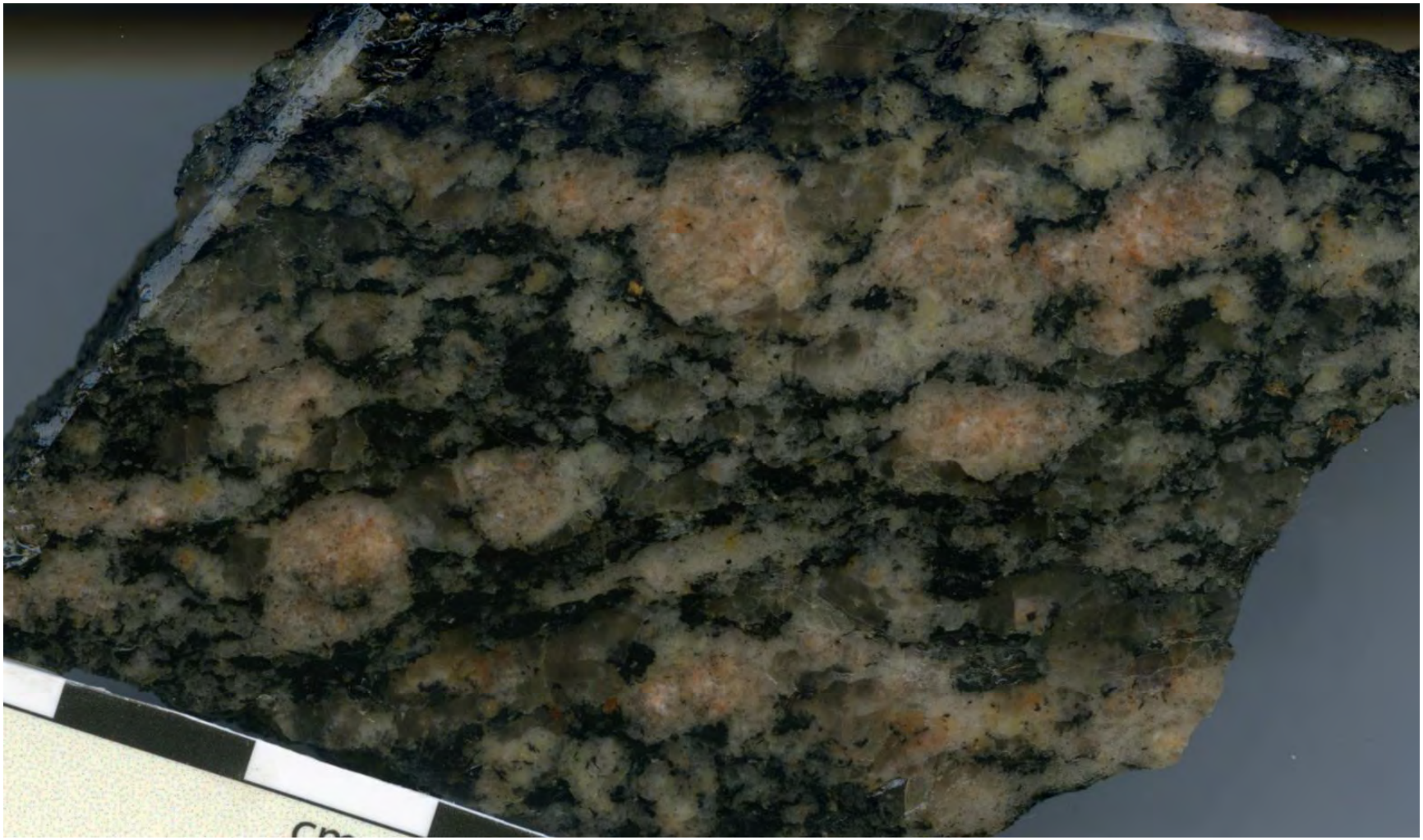
Appendix 8 contains the following data sets:

- Sample images for 176 samples that have been selected for different types of analyses, with close-ups for Au-rich locations and geological features of interest. The images are organized in 3 parts:
    - Part 1: Regional samples of igneous rocks in the vicinity of Tick Hill
    - Part 2: Samples donated by MIM and Nick Oliver, mainly from high-grade ore zones
    - Part 3: Samples from pit wall and drill cores

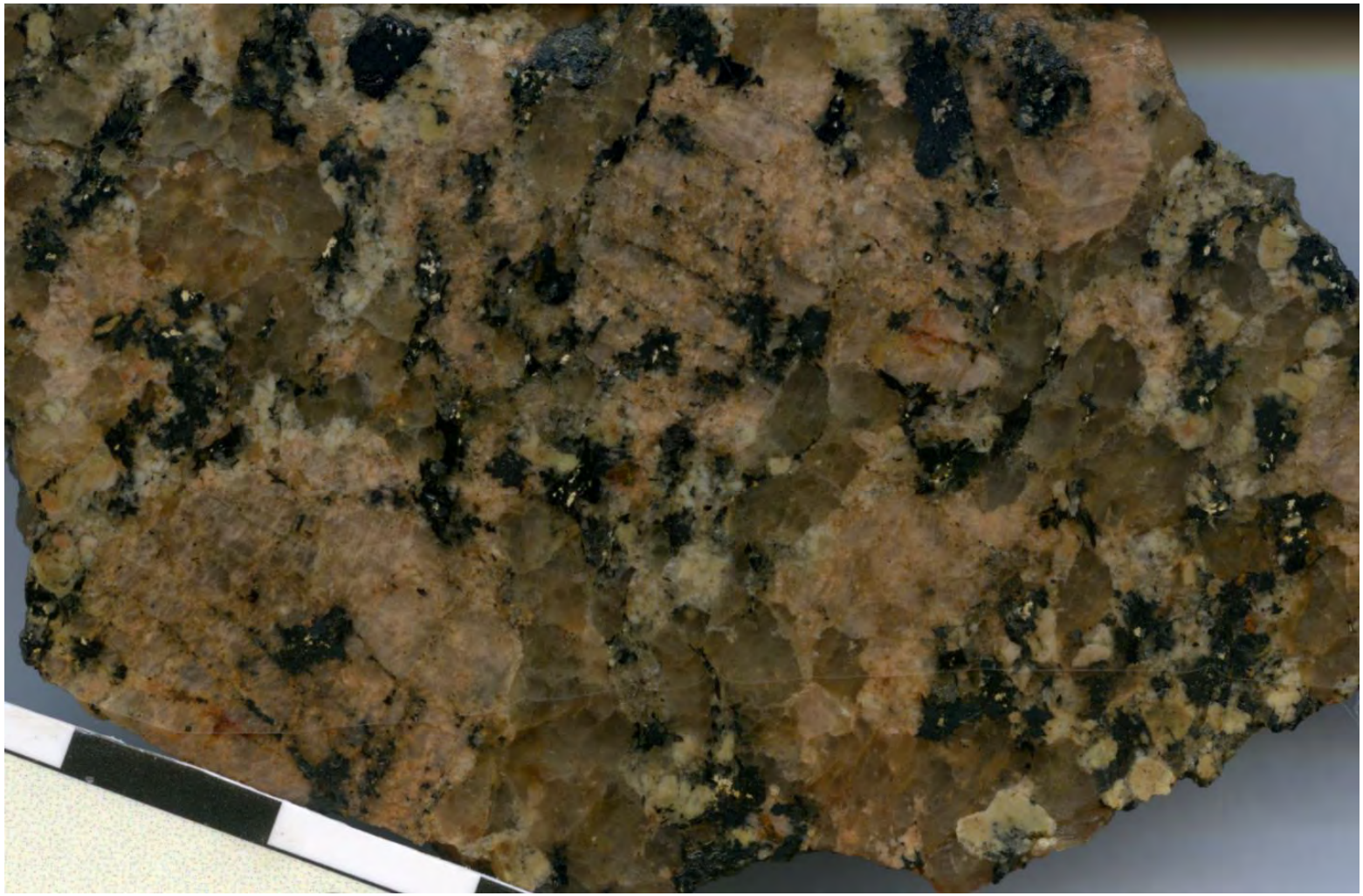
The sample ID (+ drill hole ID, depth of sample for core samples) is attached in each image

Part 1 – Regional samples

OTG

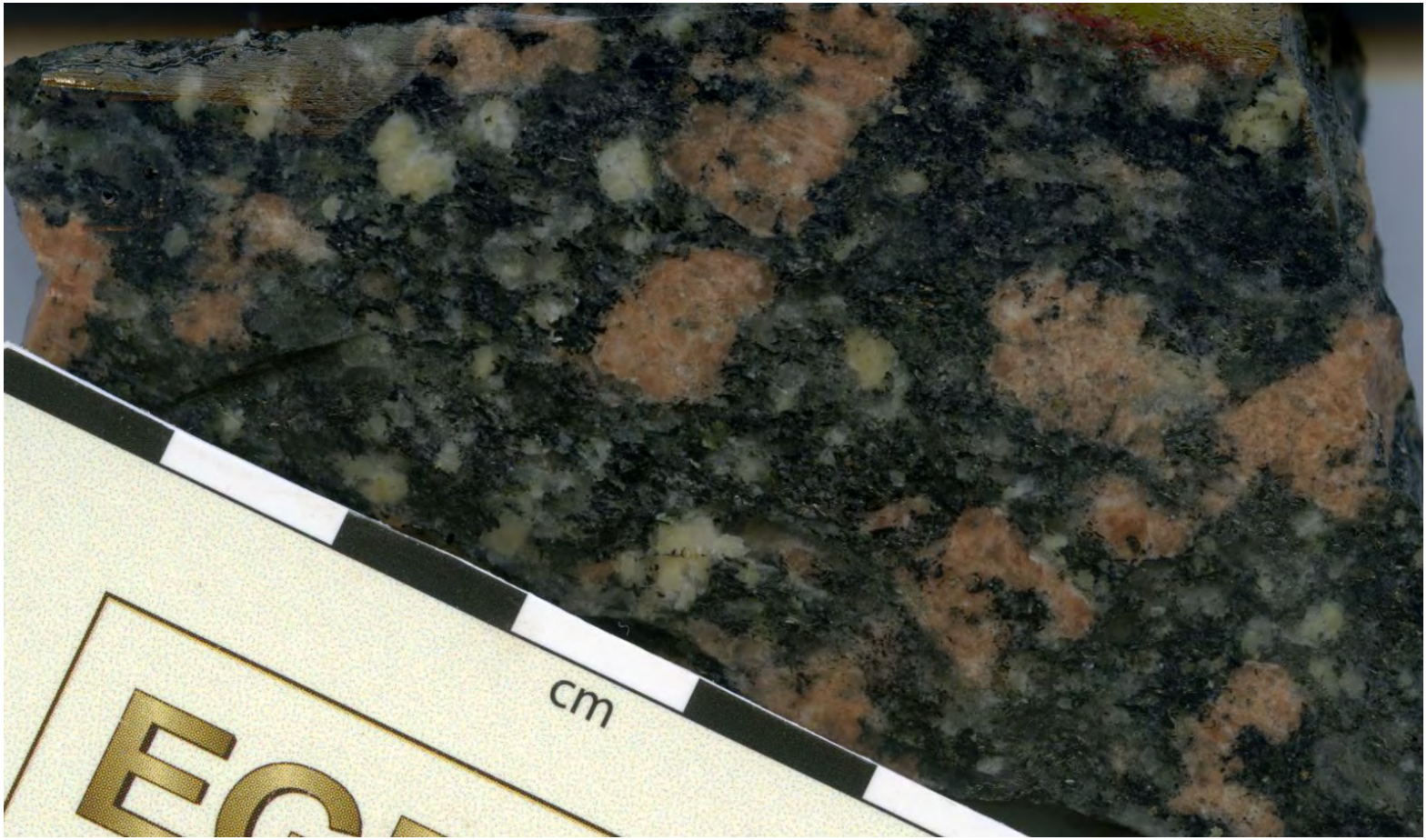


SMG

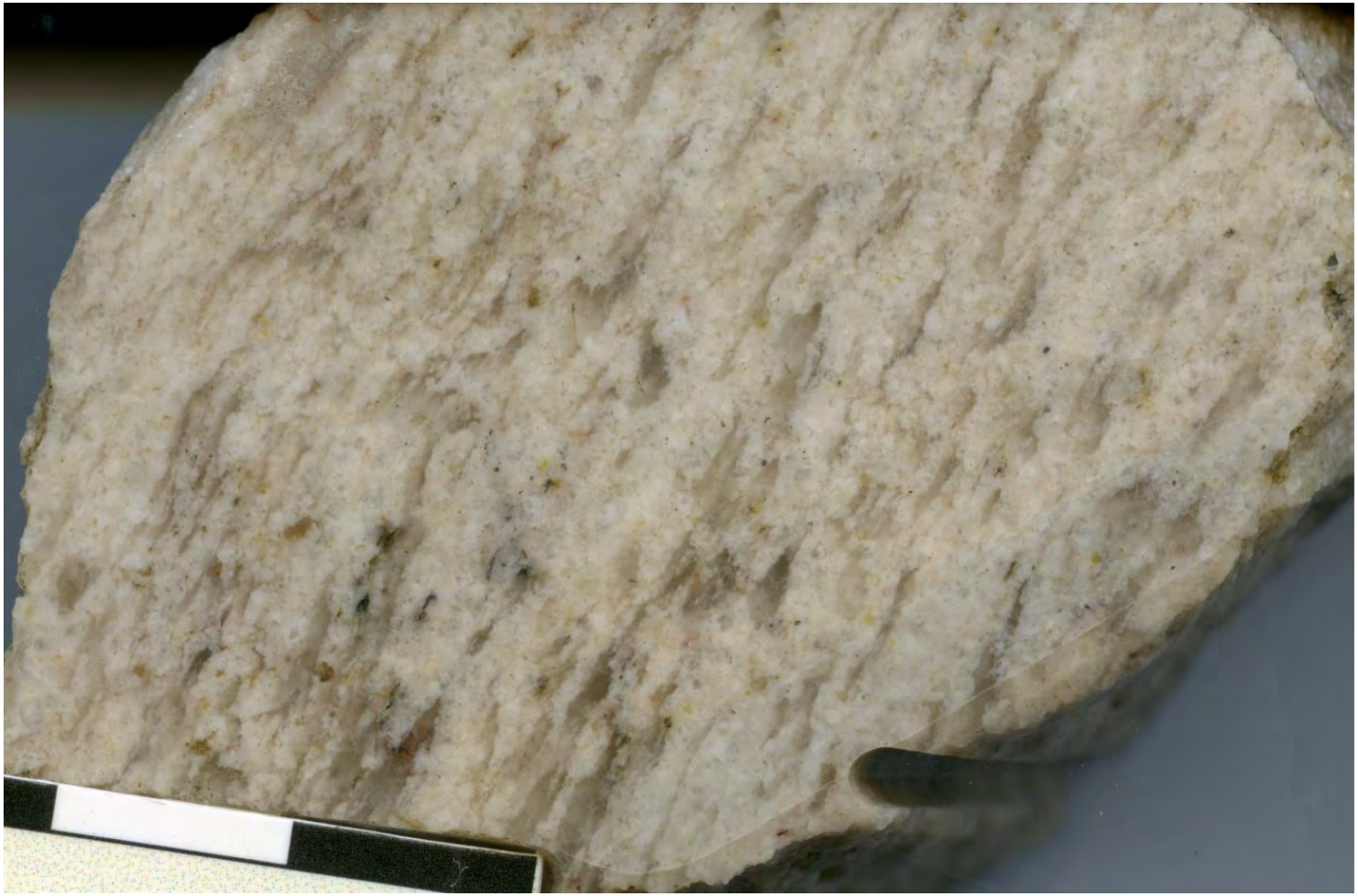


THG1

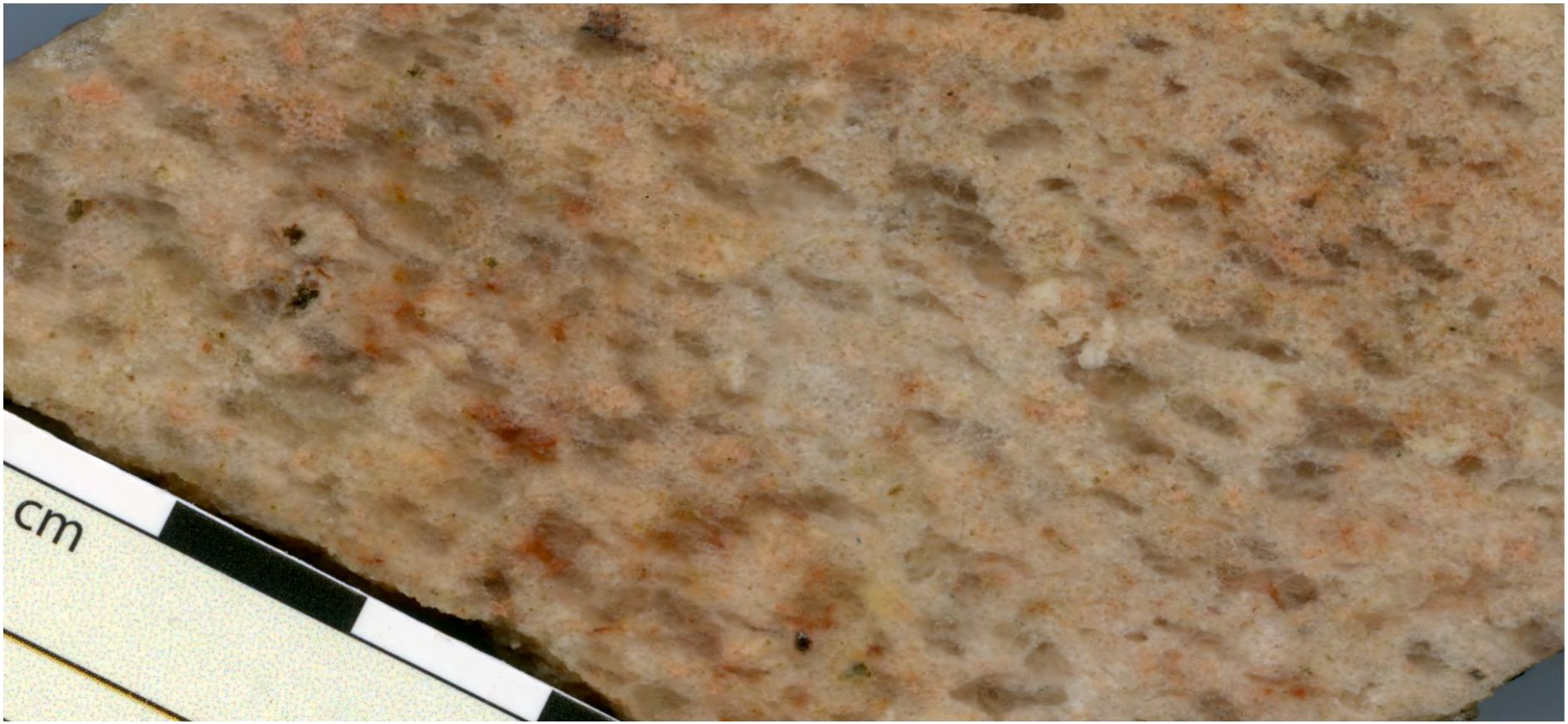
THG2



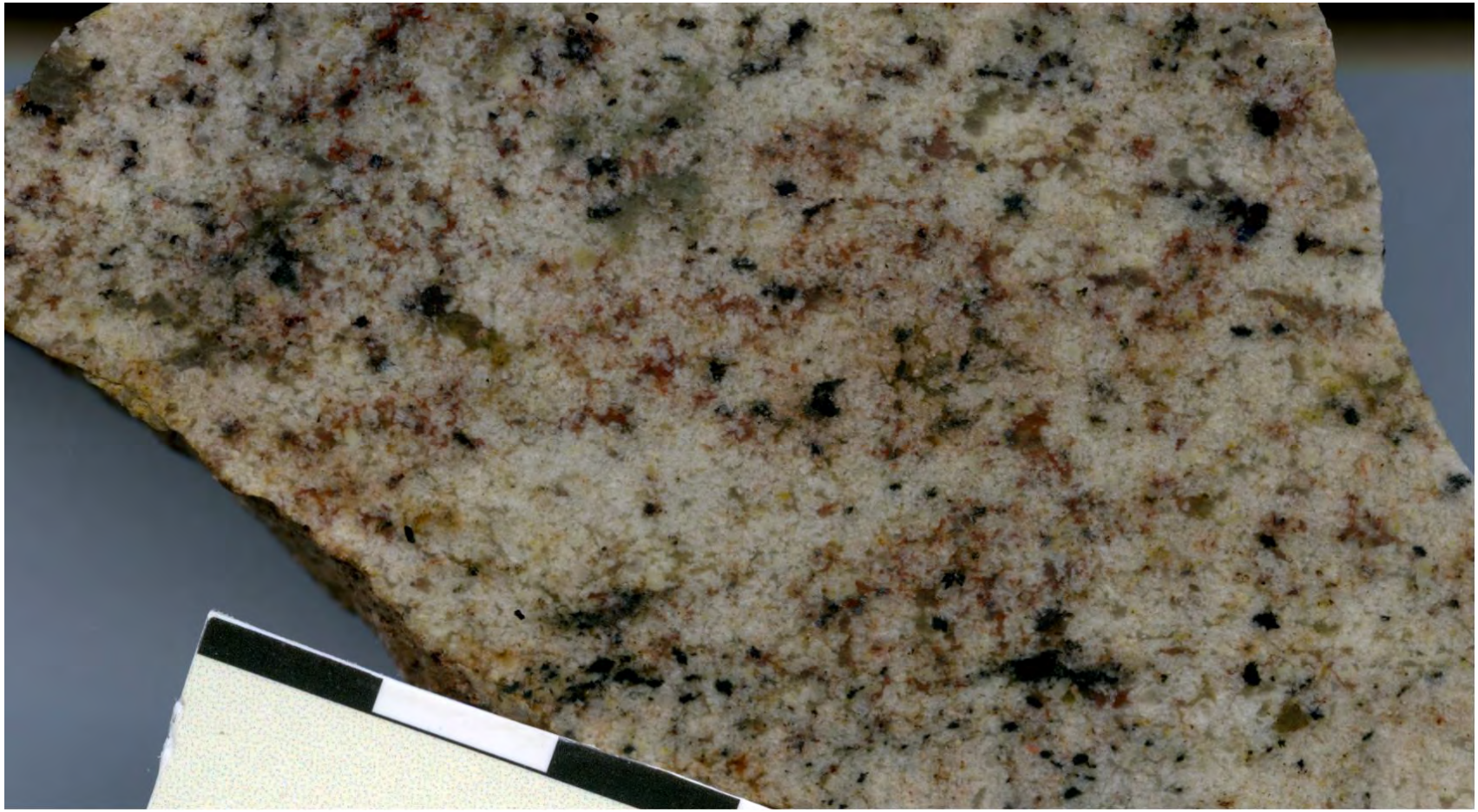
THG3



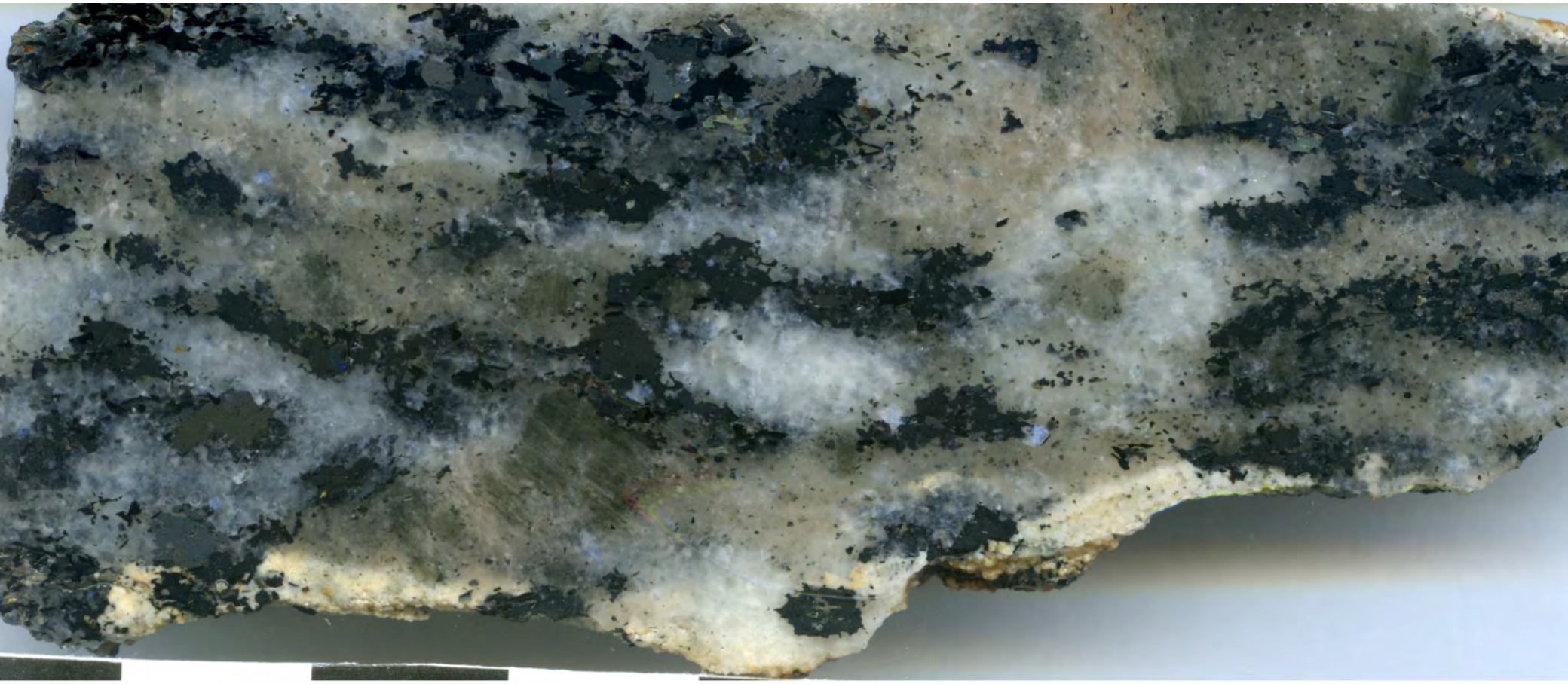
THG4



MG



MSY



MSY.m

MSY.d

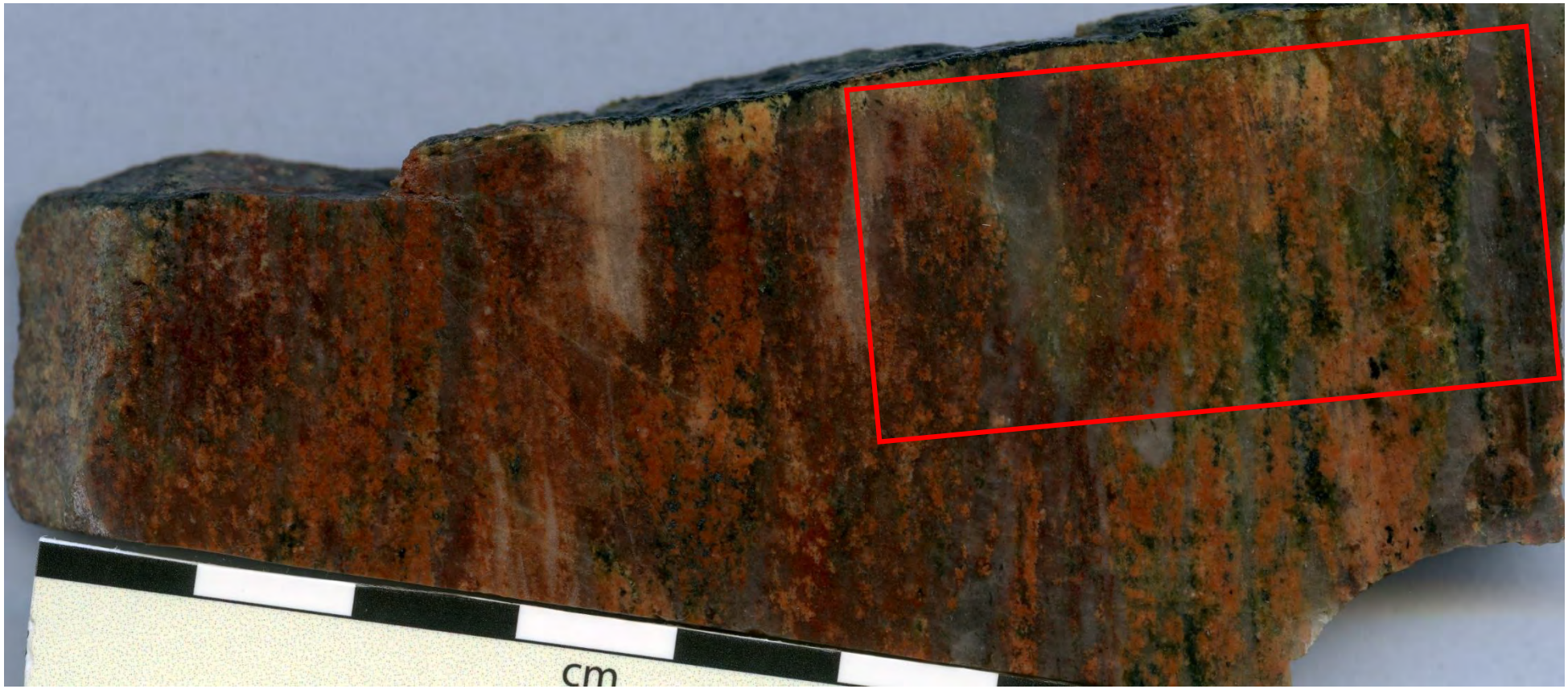
Part 2 – Under ground (mining pit) samples

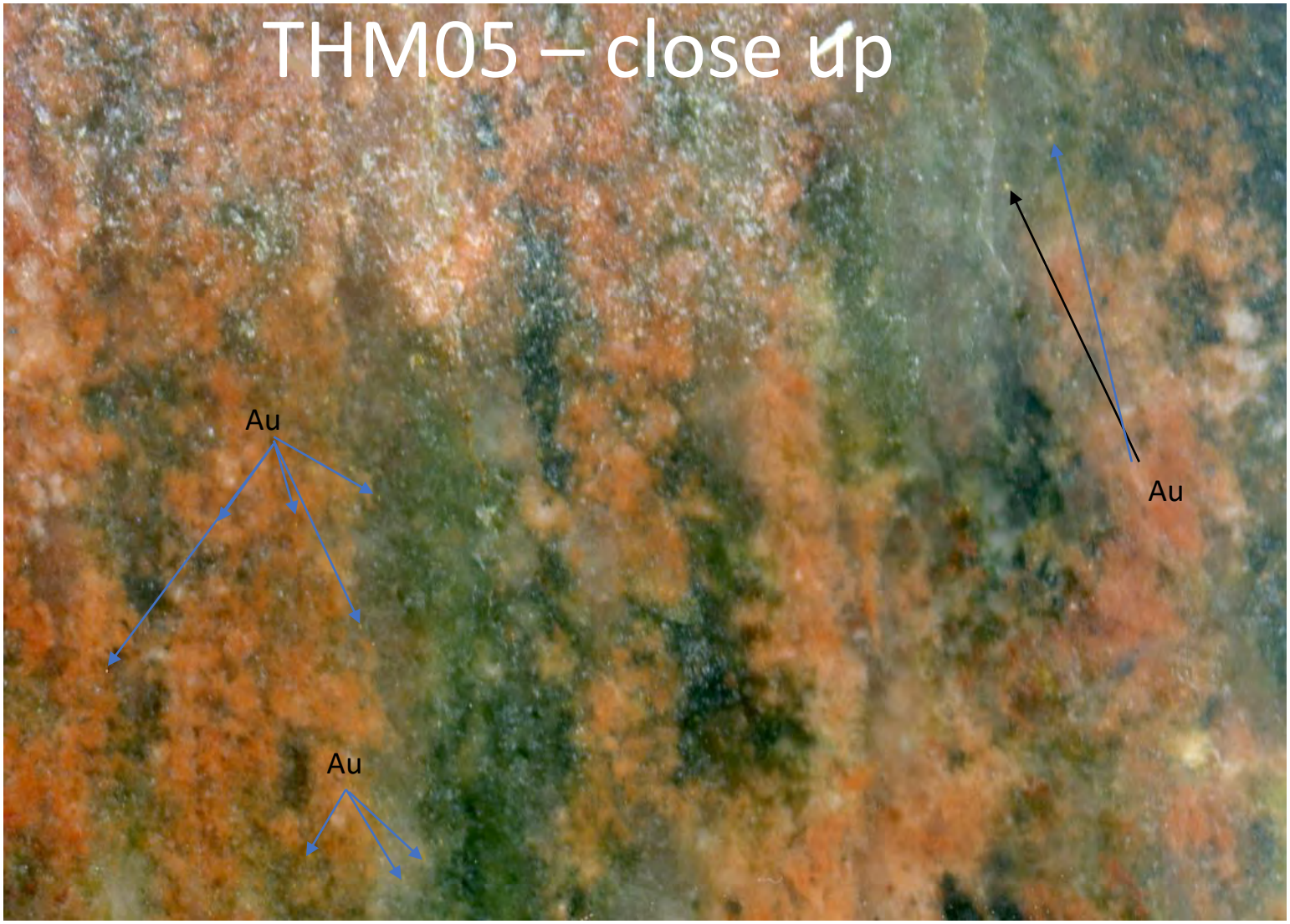
THM01

THM01 – close view

THM04

THM05




THM05 – close up
Au
Au
Au

THM06

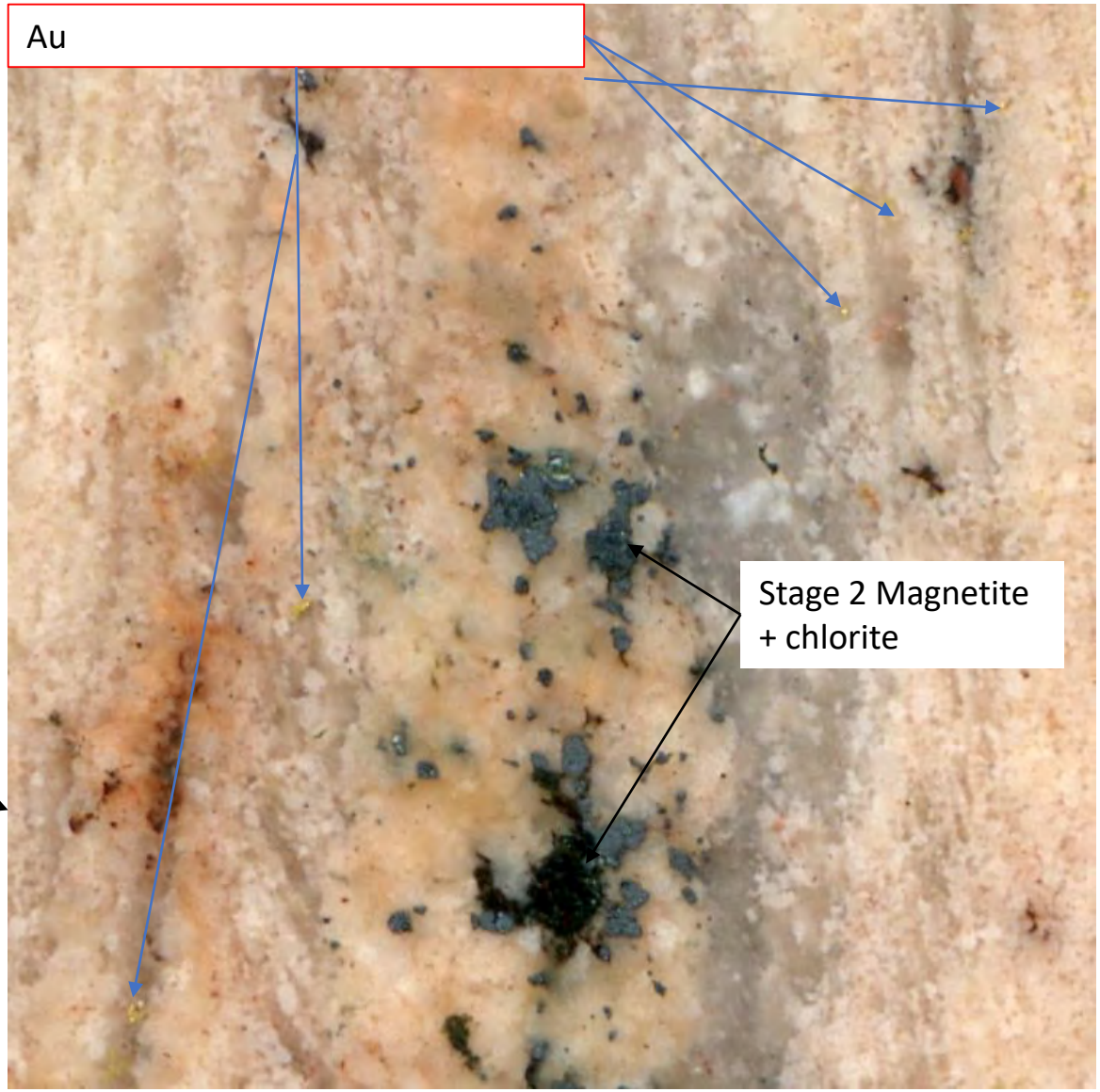
THM06 close up
chlorite

THM07

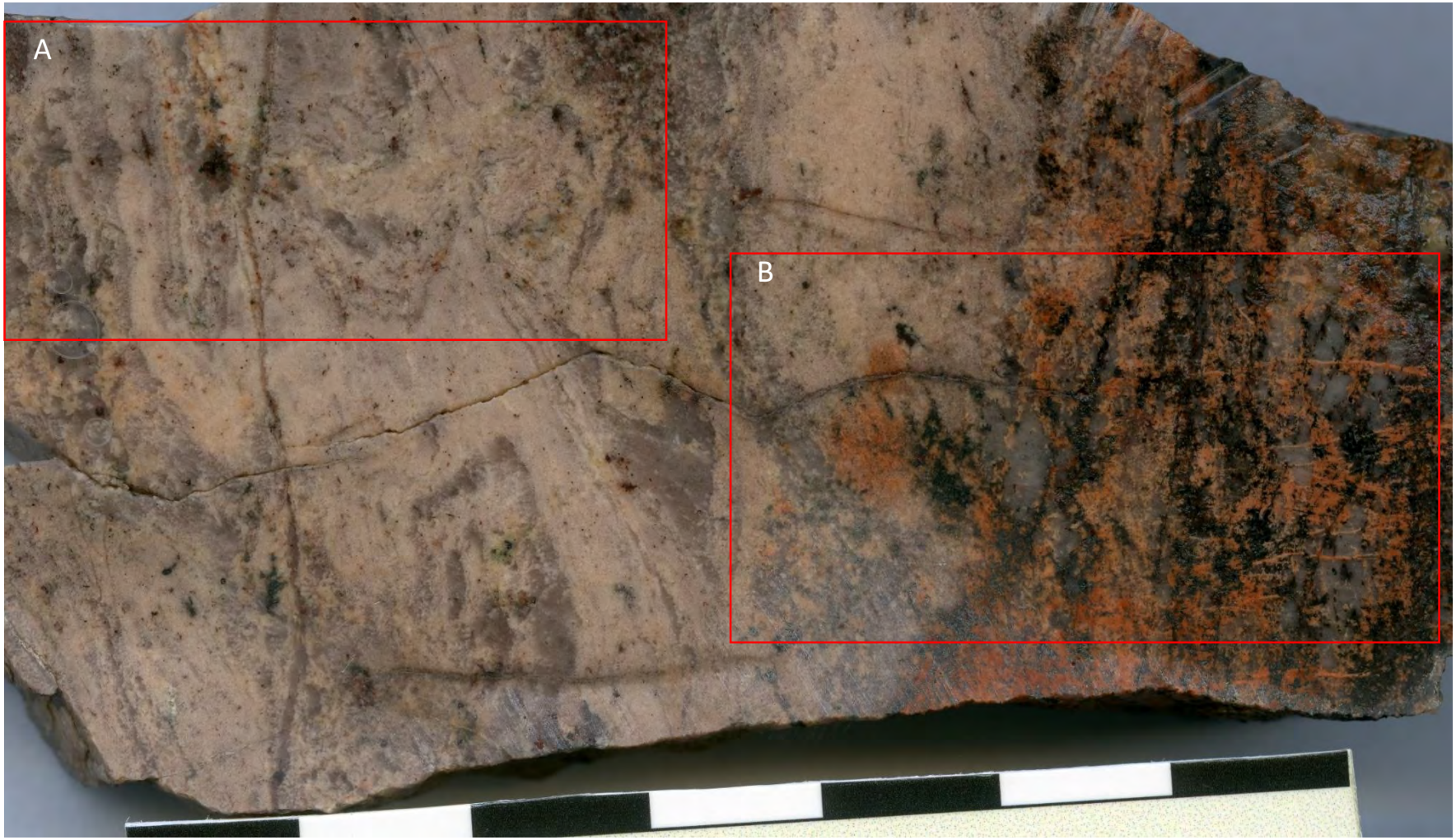
THM07- close up

Au in magnetite

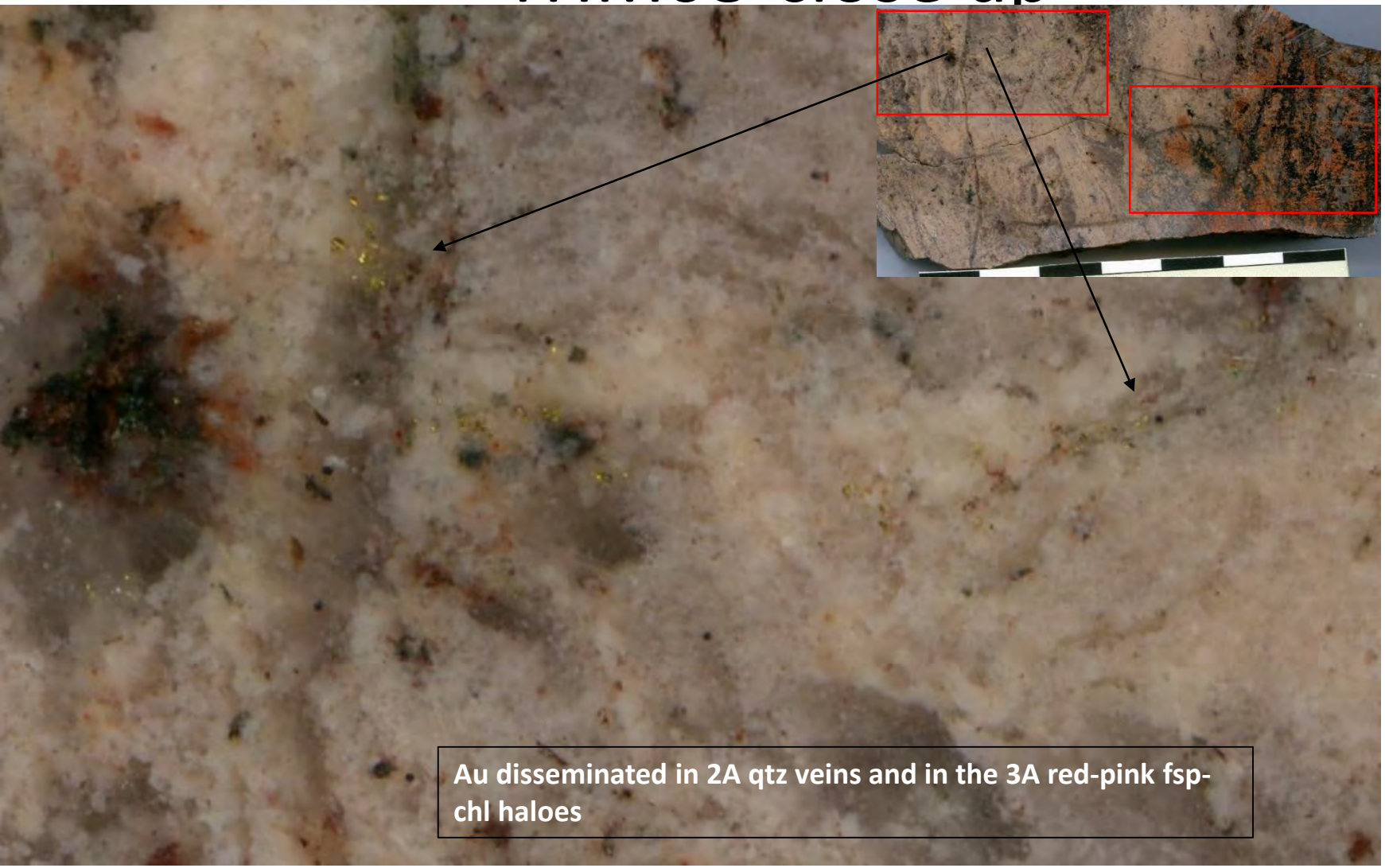
THM07-close up



THM08

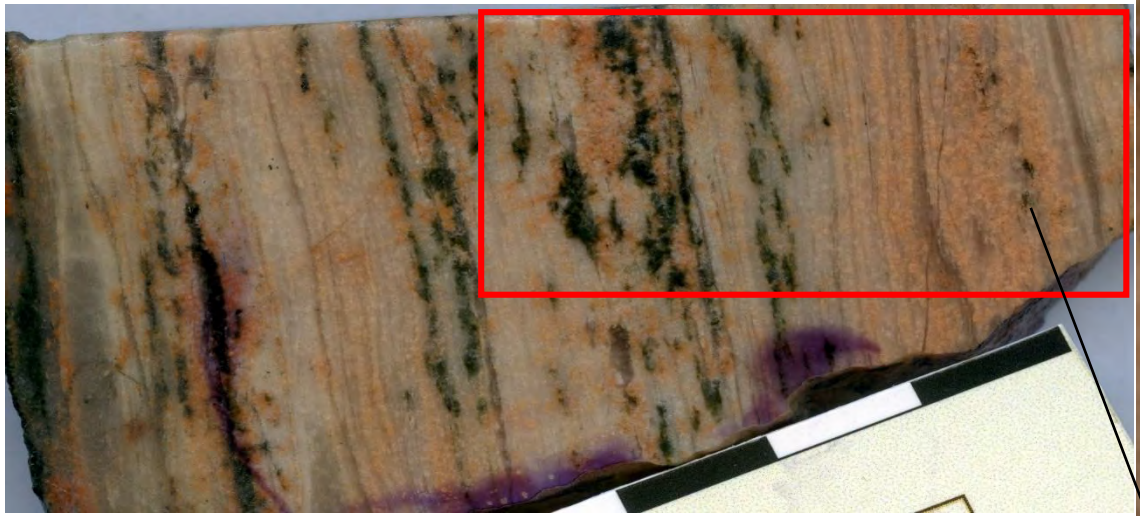


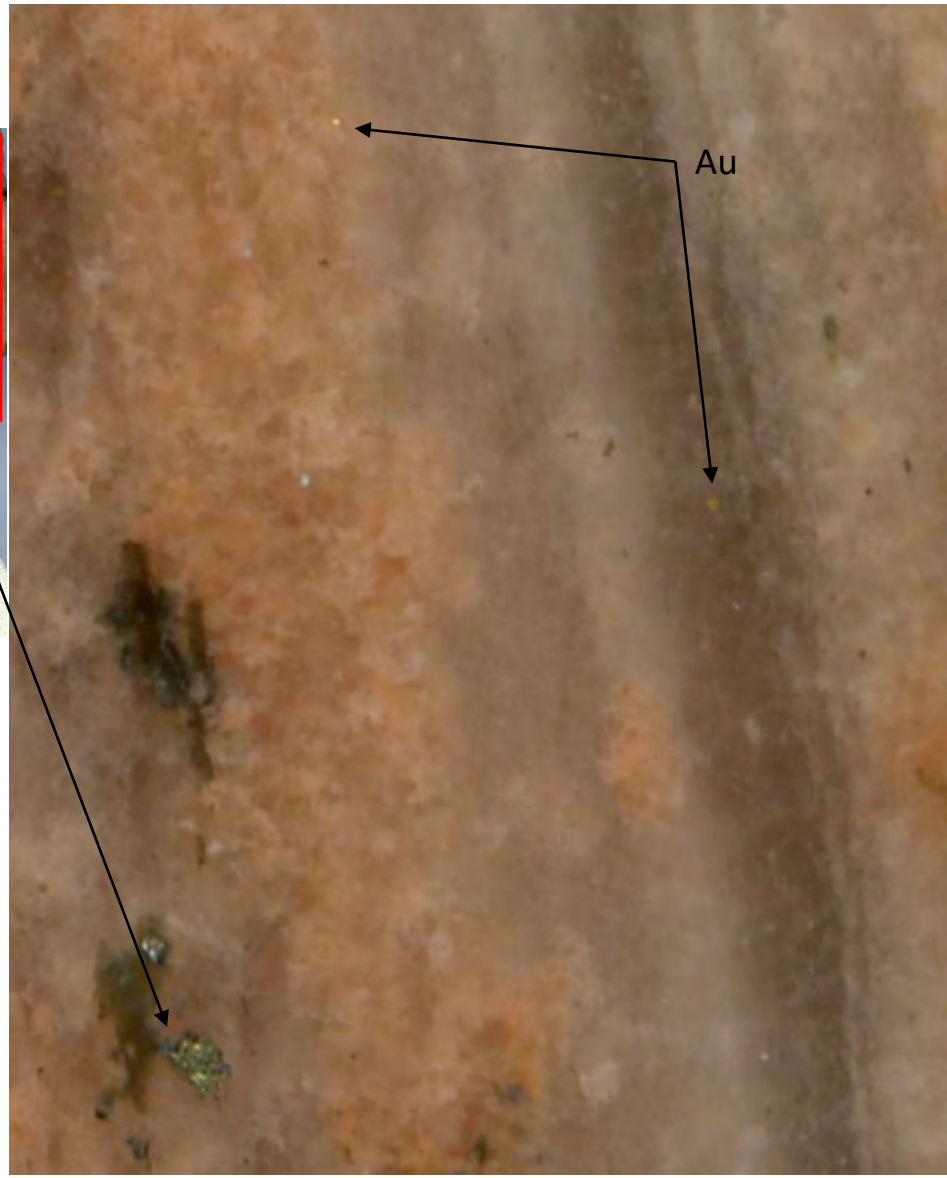
THM08-close up



THM08-close up

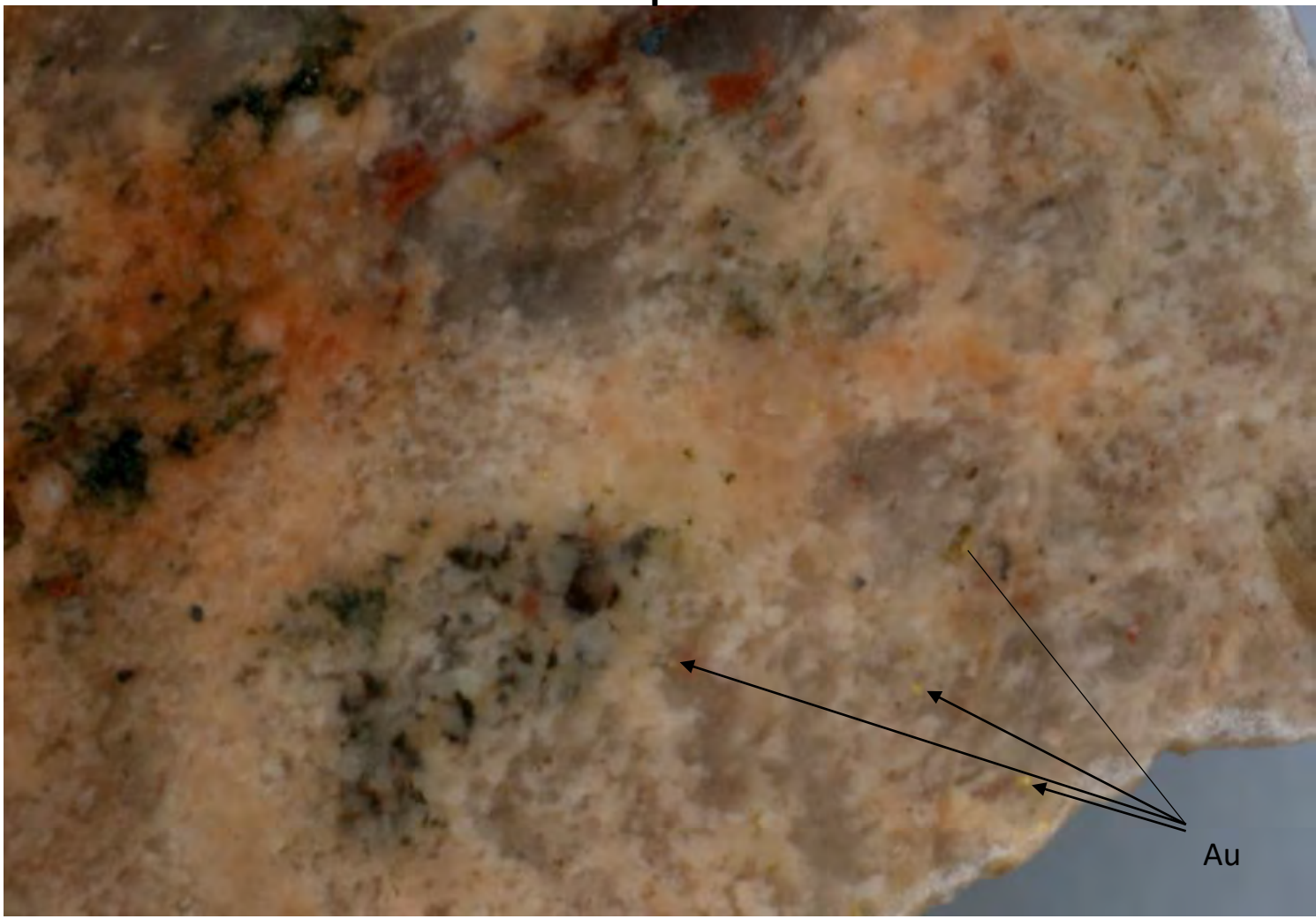
THM09



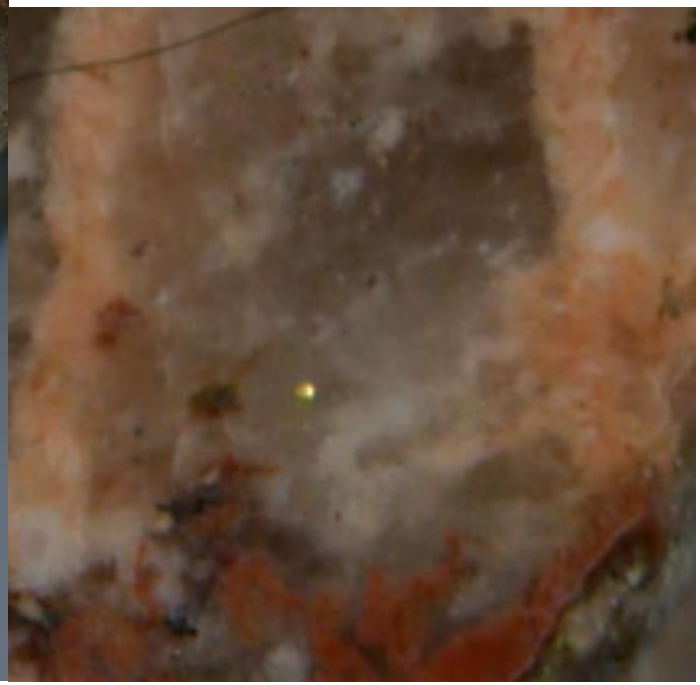


THM10

THM10 close up

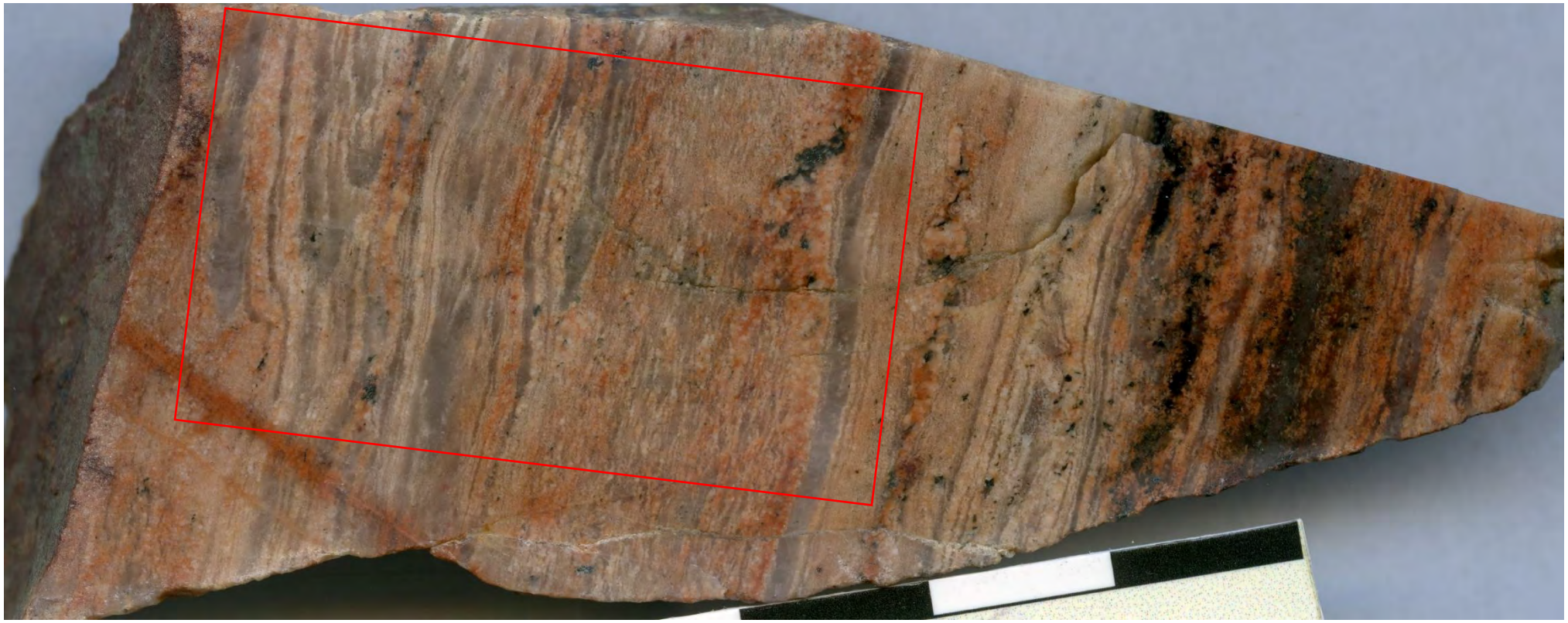


THM10 close up

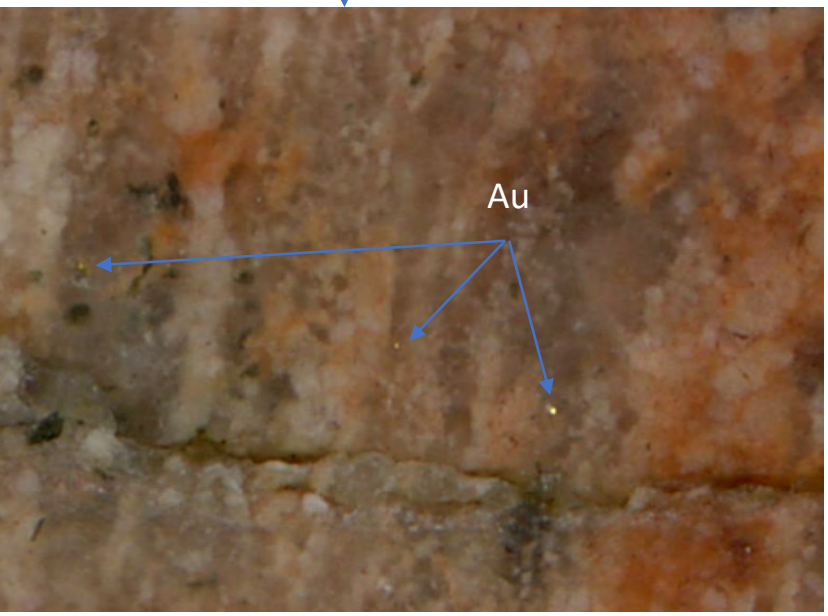


Appendix 8: Sample images

THM11



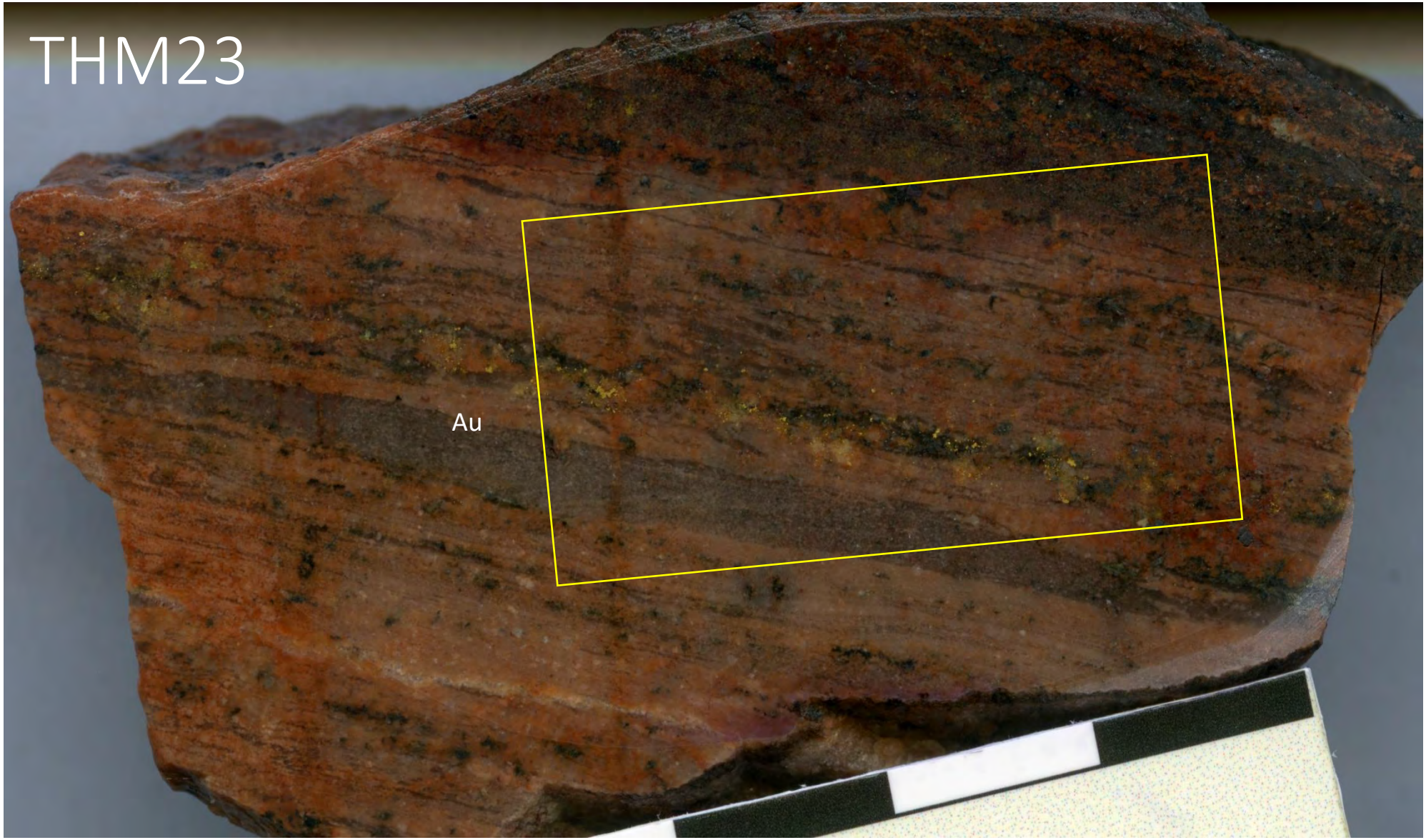
Foldhing



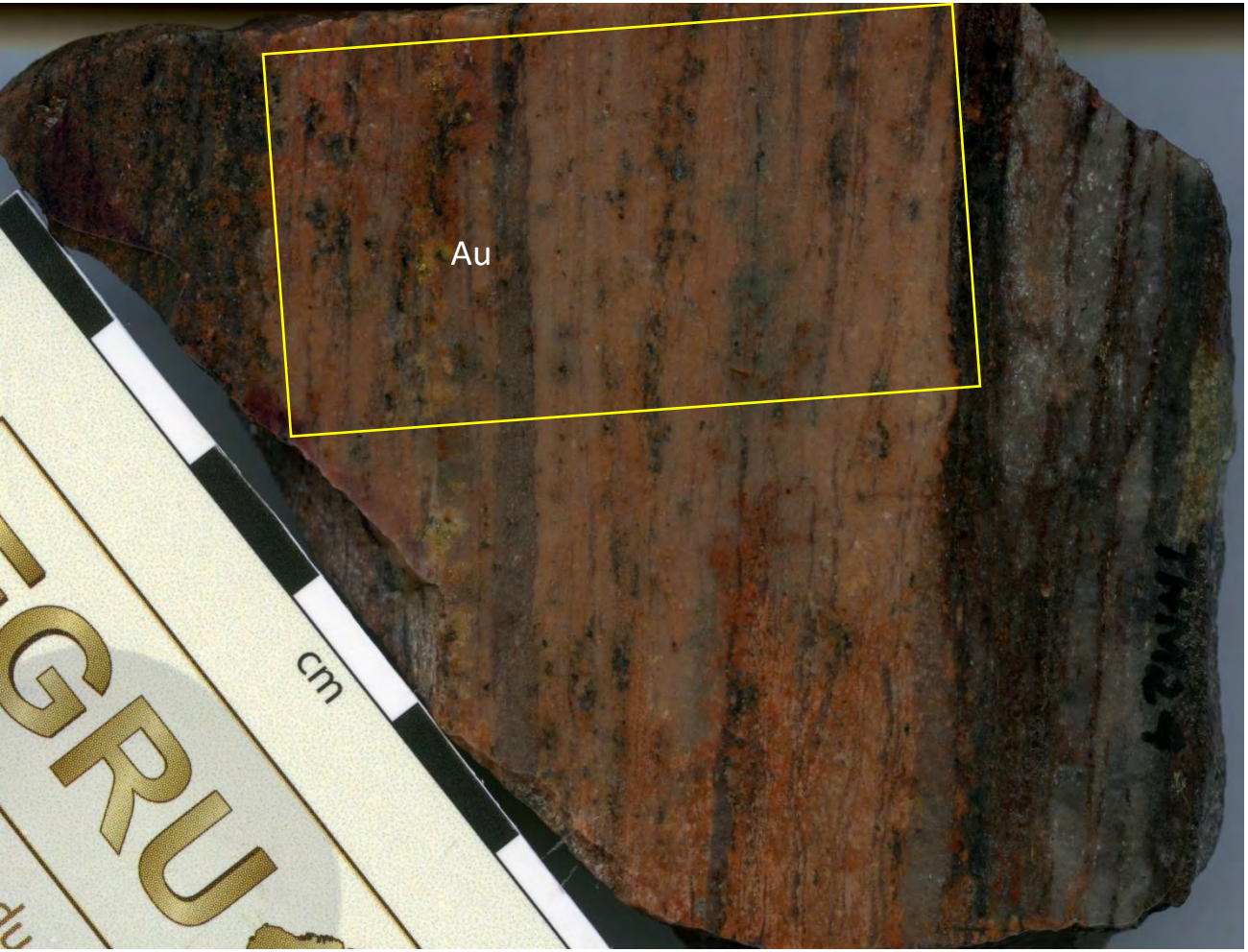
THM11 – close up

THM22

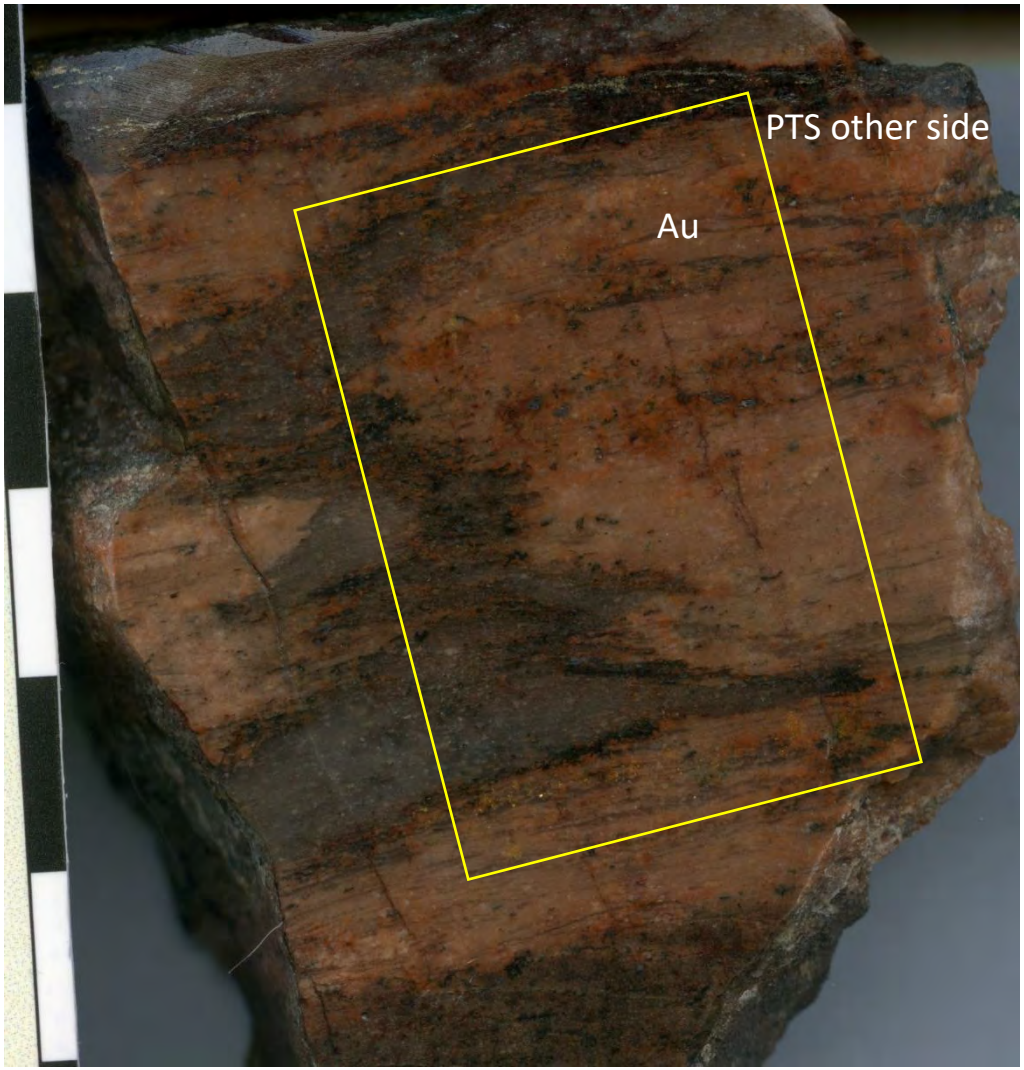
THM22-close up
Au
Au


THM23
Au

THM24

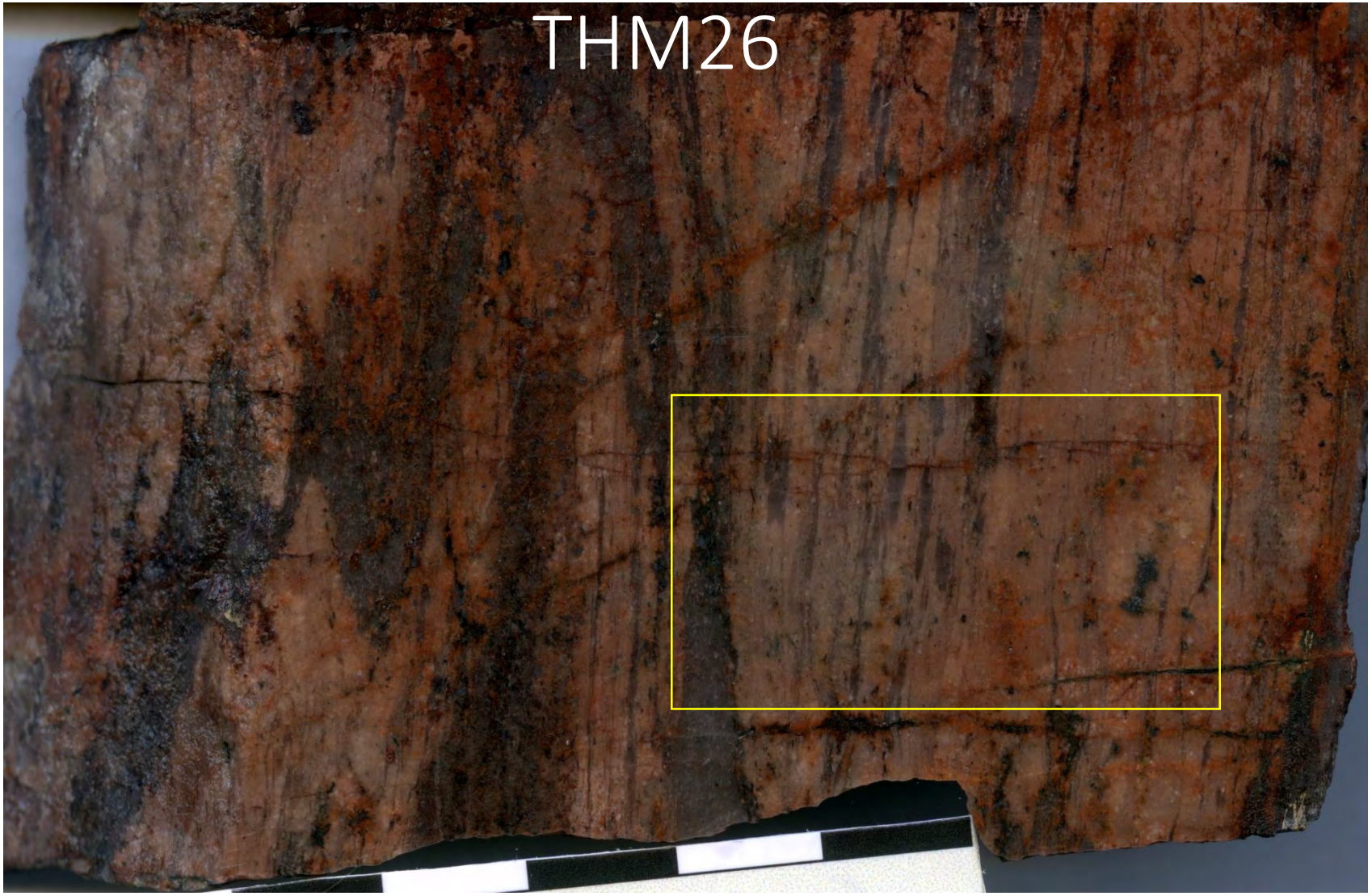


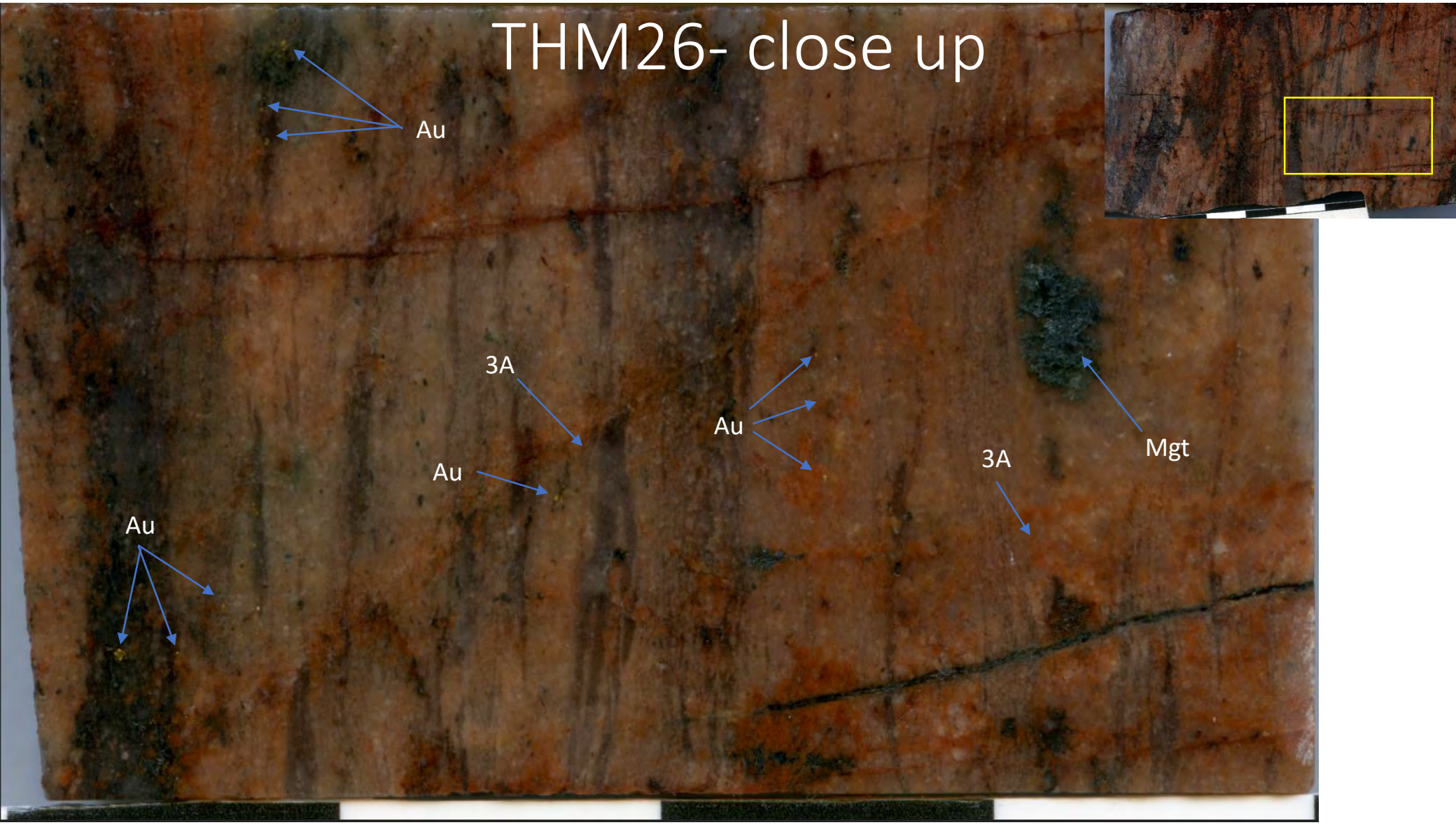
Similar to THM23



THM25

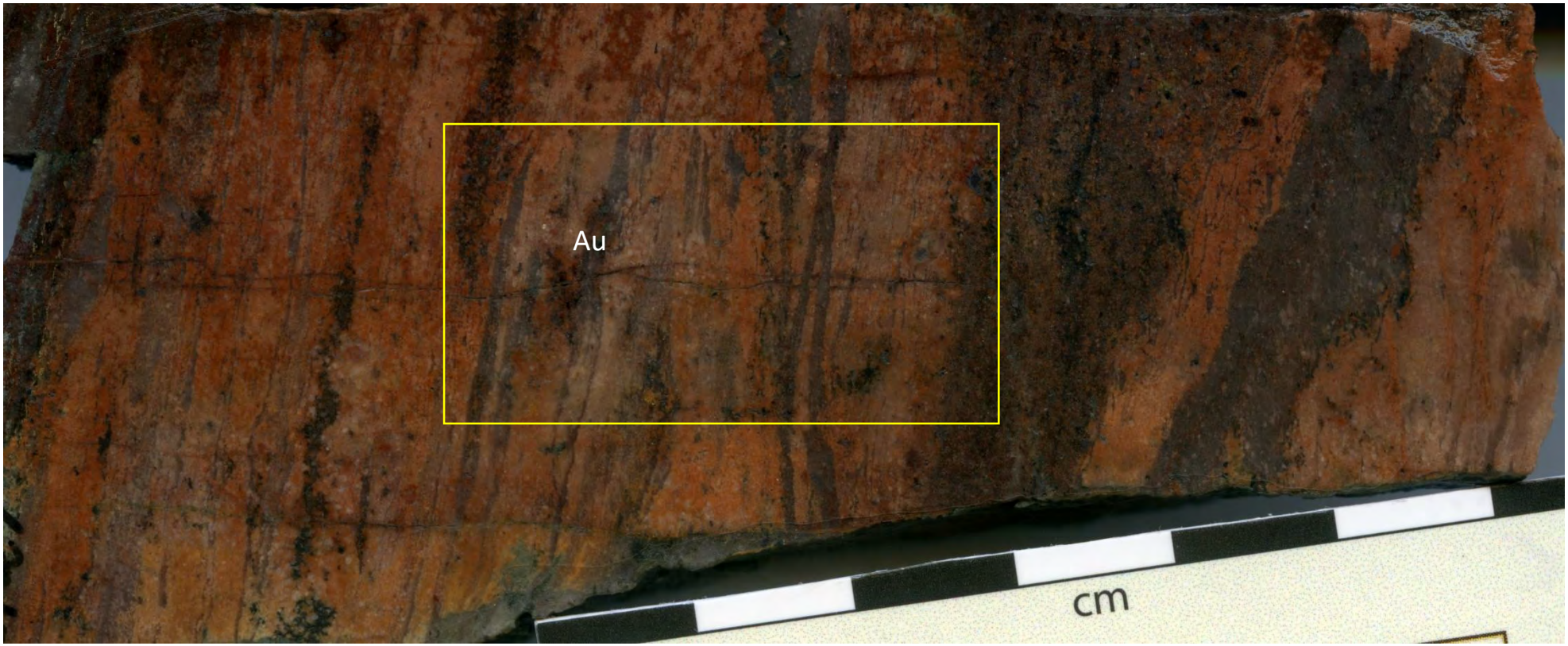
Very similar to THM23 and THM24


THM26


THM26- close up
Au
3A
Au
Au
Au
3A
Mgt

THM27

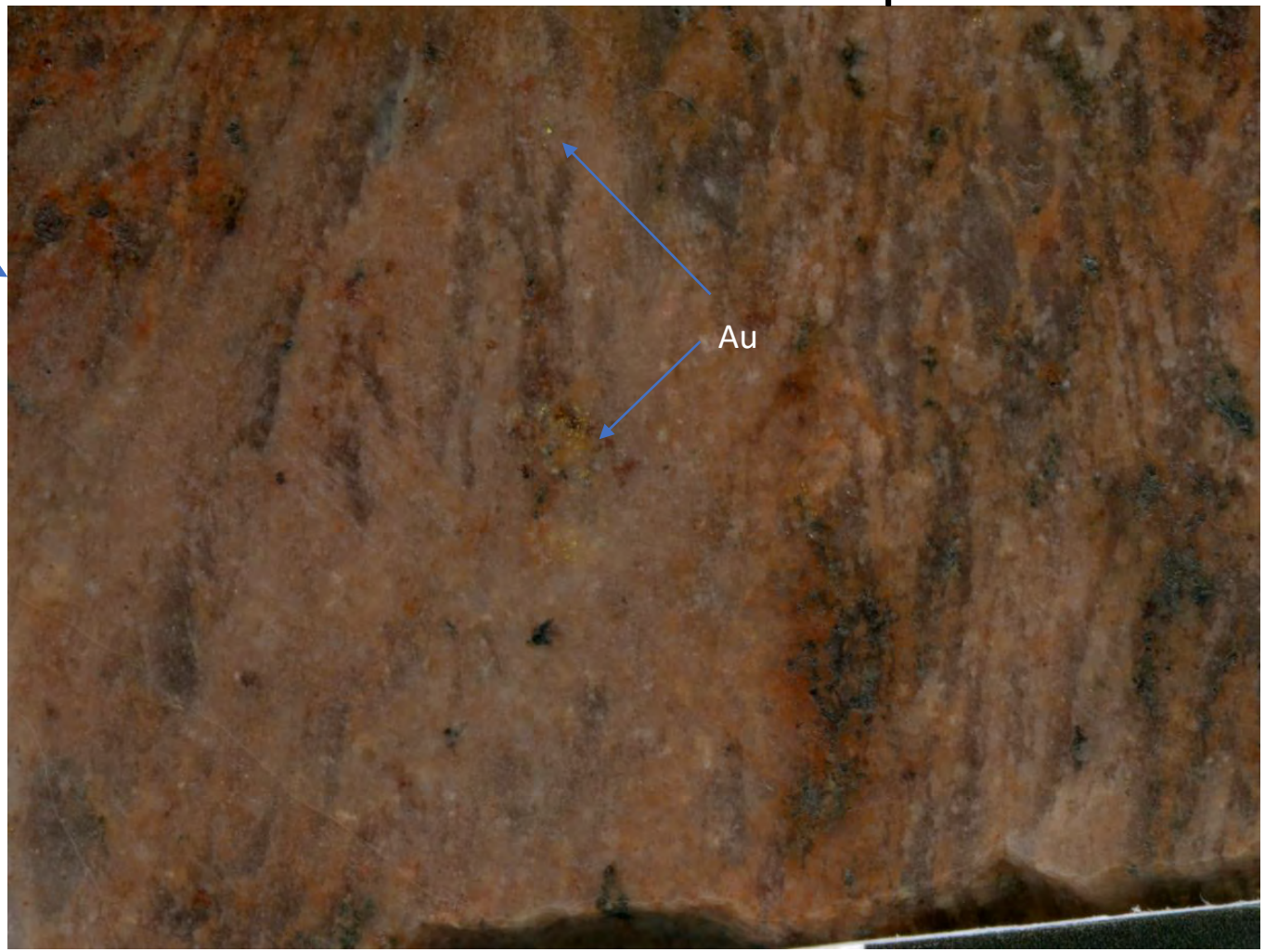
Similar to THM26



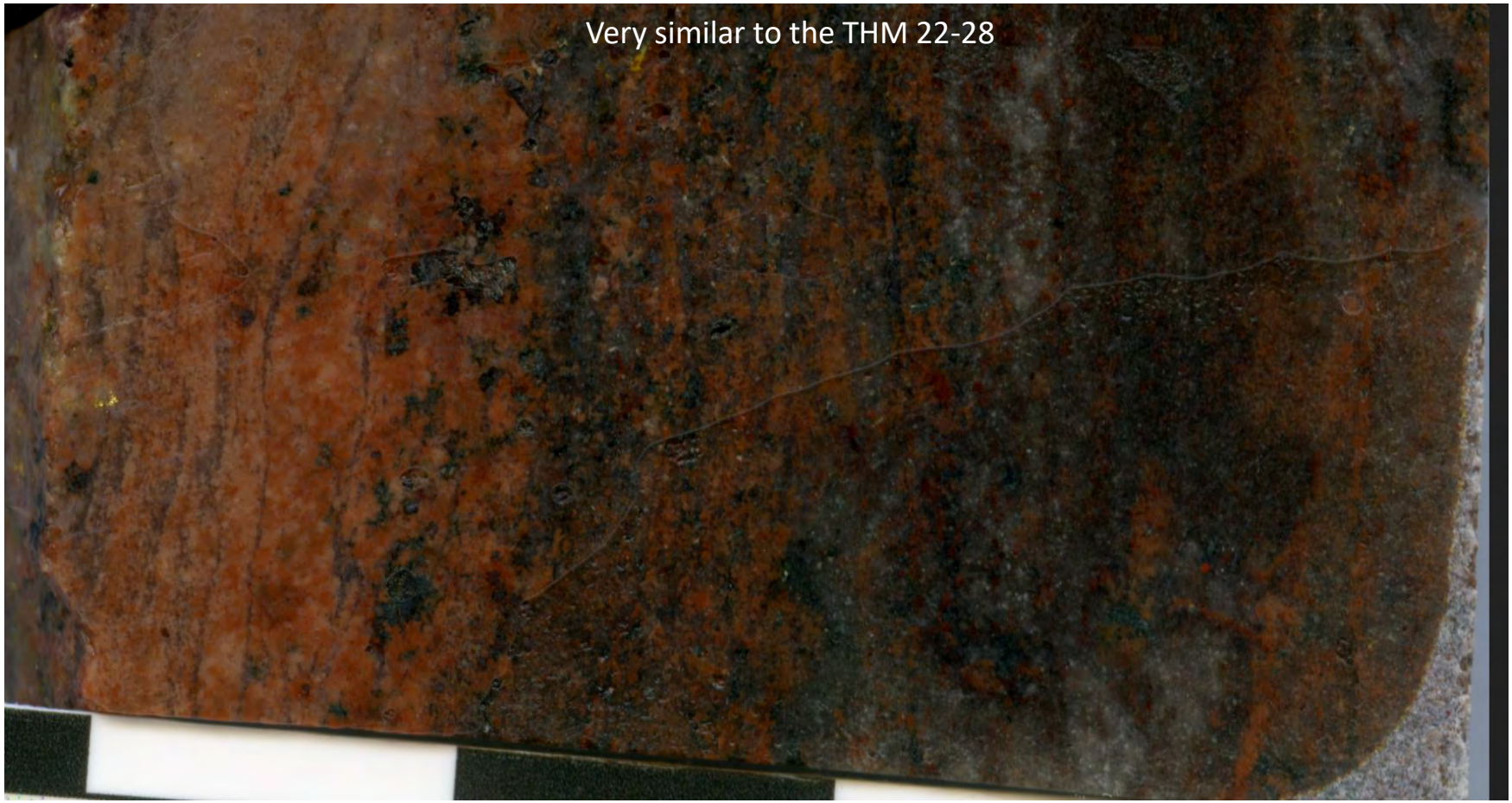
THM27 – close up

THM28

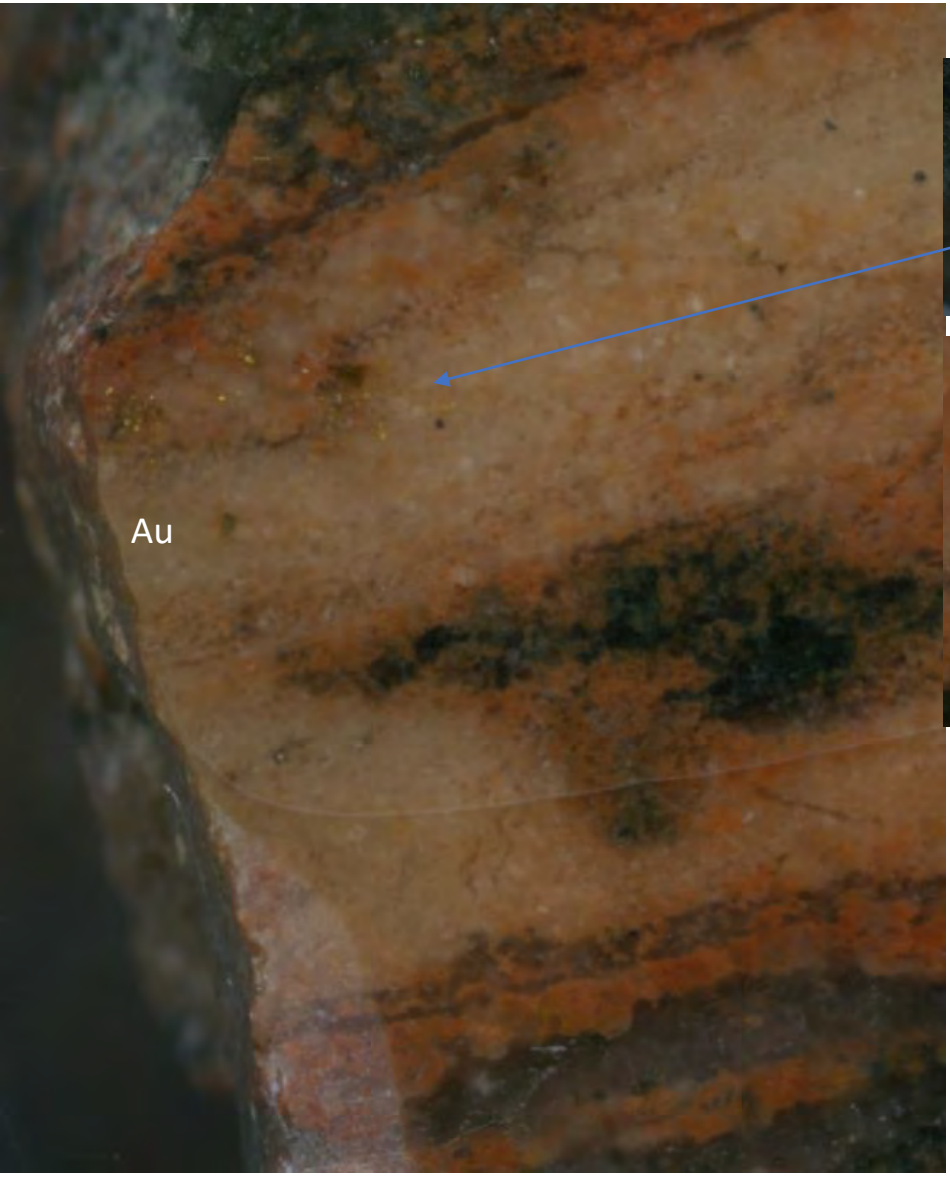
THM28- close up

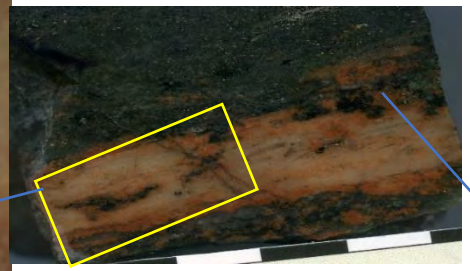


THM29



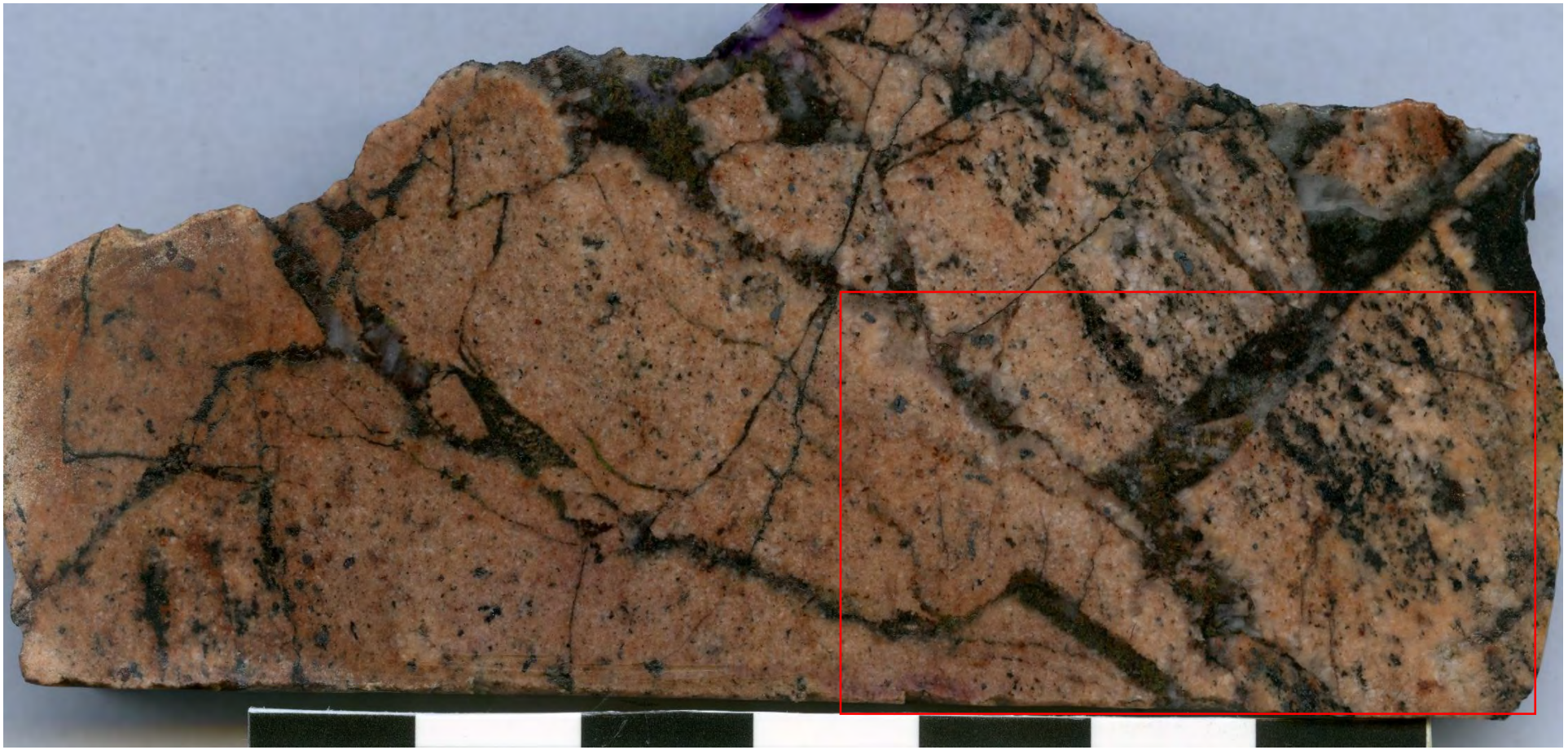
THM30





THM30 – close up

THM31



THM32

THM34

THM35

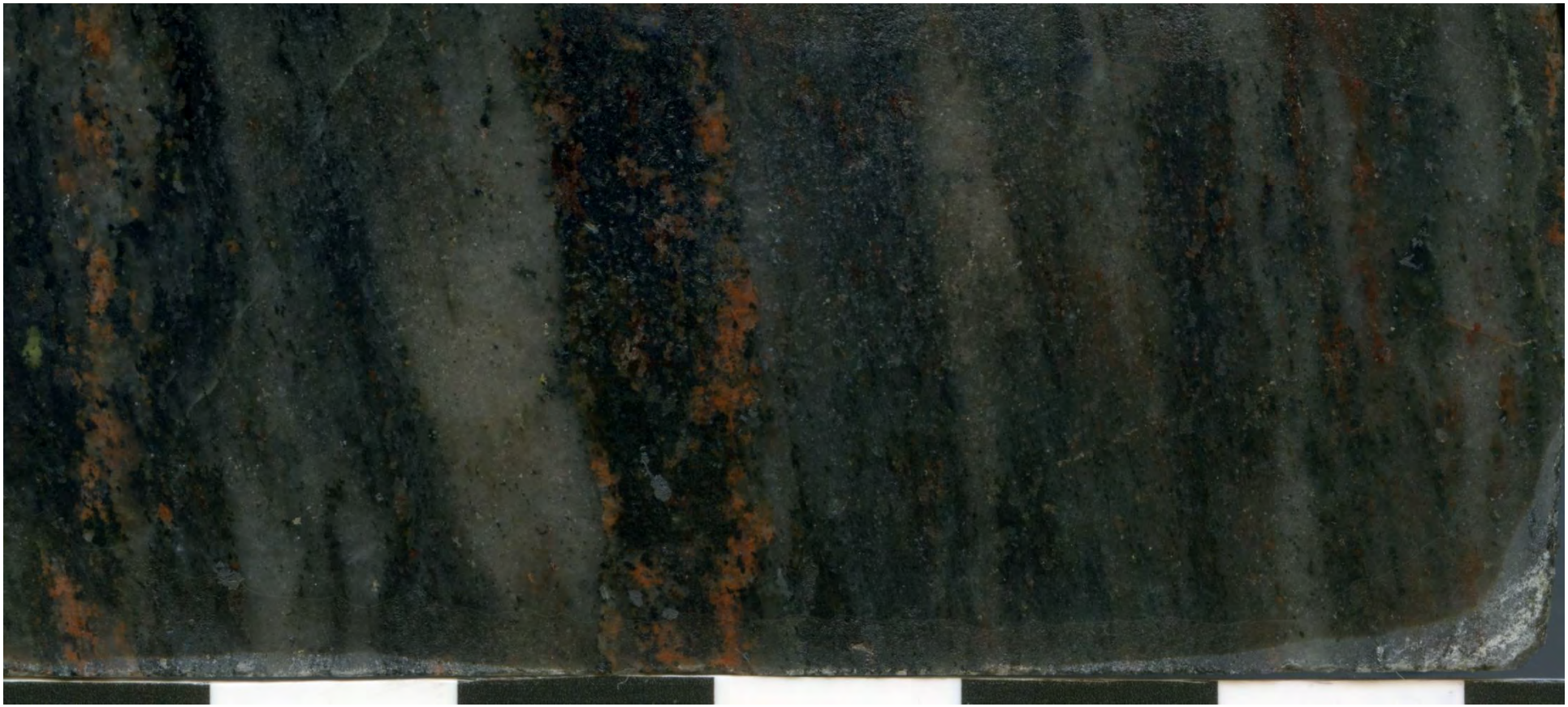
No Au observed in this sample

No Au observed in this sample

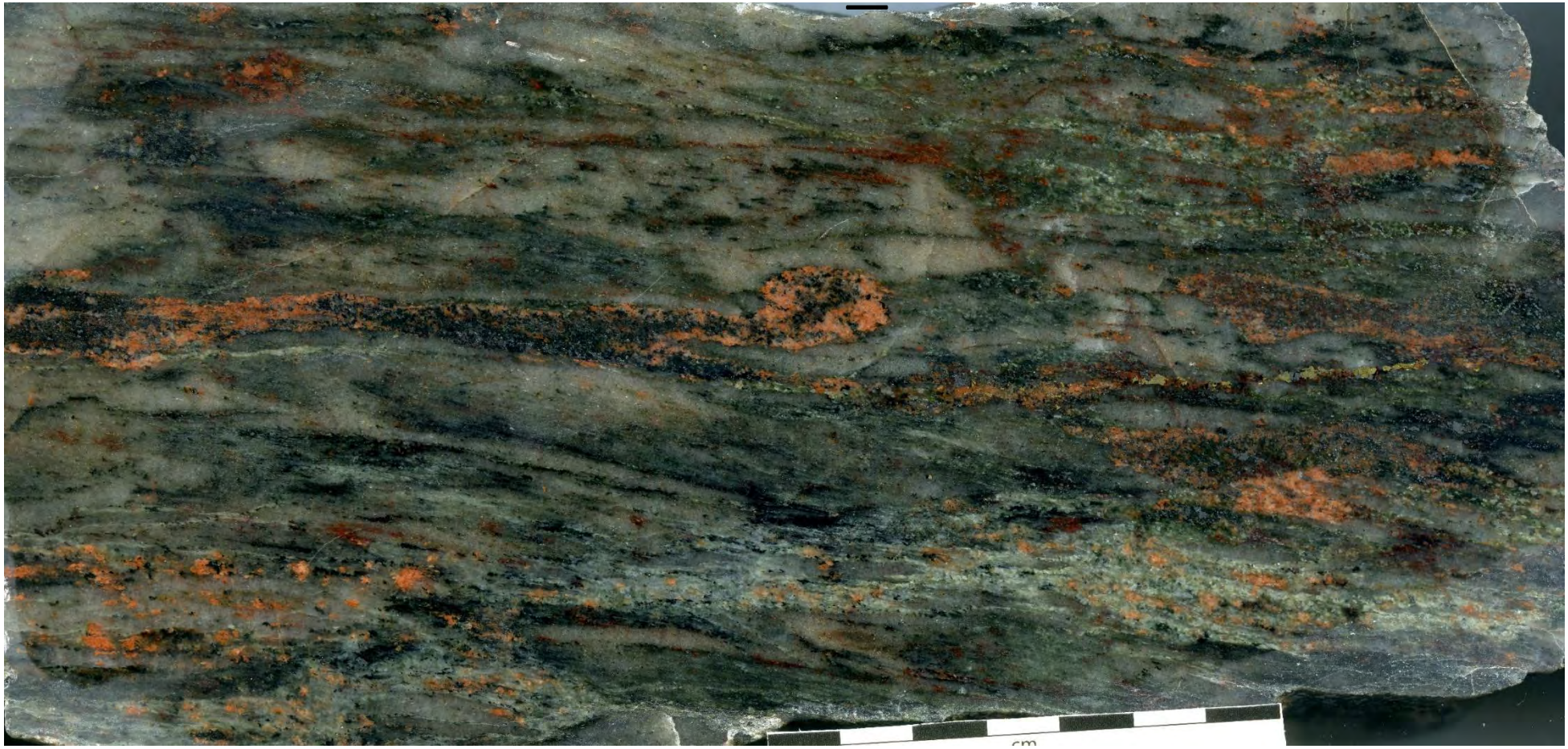
THM36

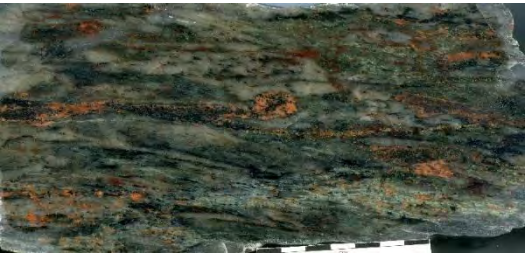
THM38

No Au observed in this sample

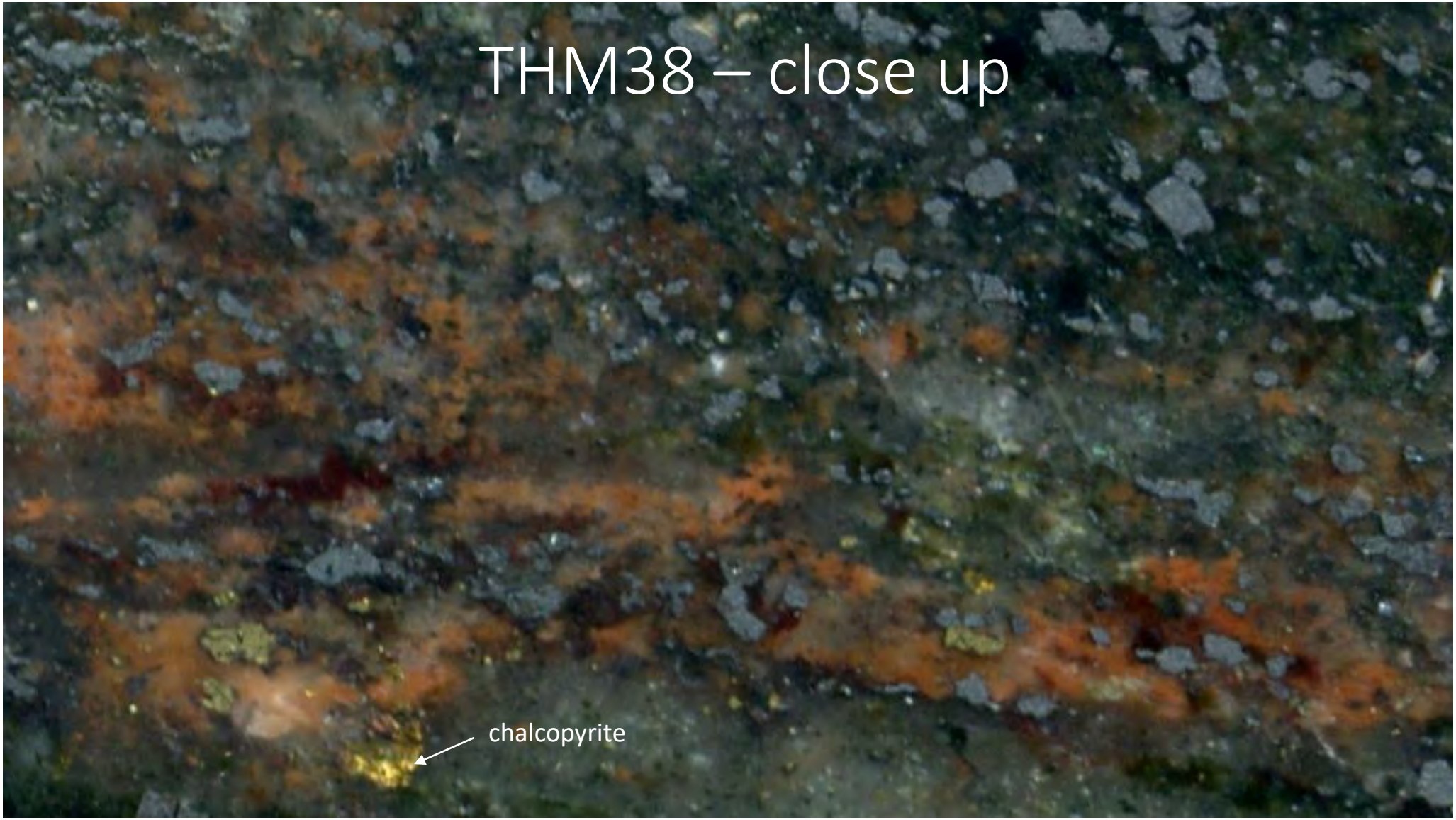


THM38_2





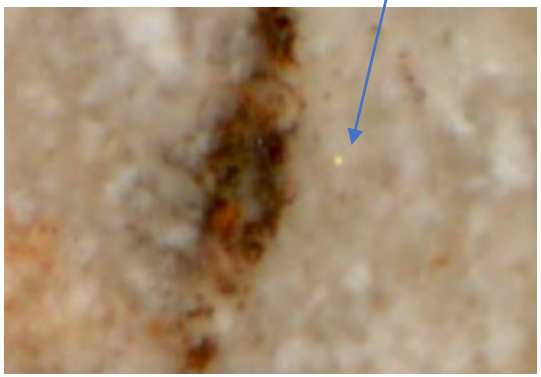
THM38 – close up


THM38 – close up
chalcopyrite

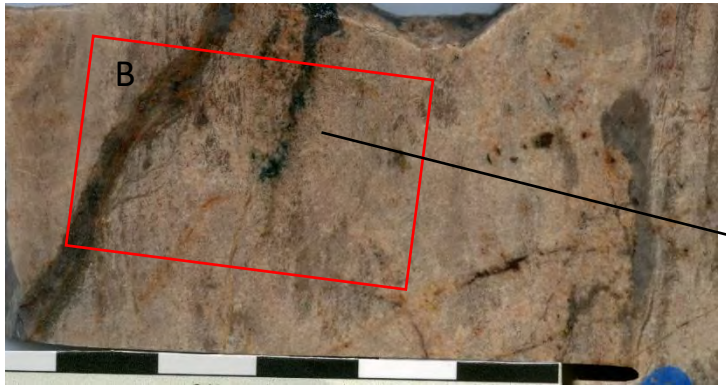
THM39

THM40A

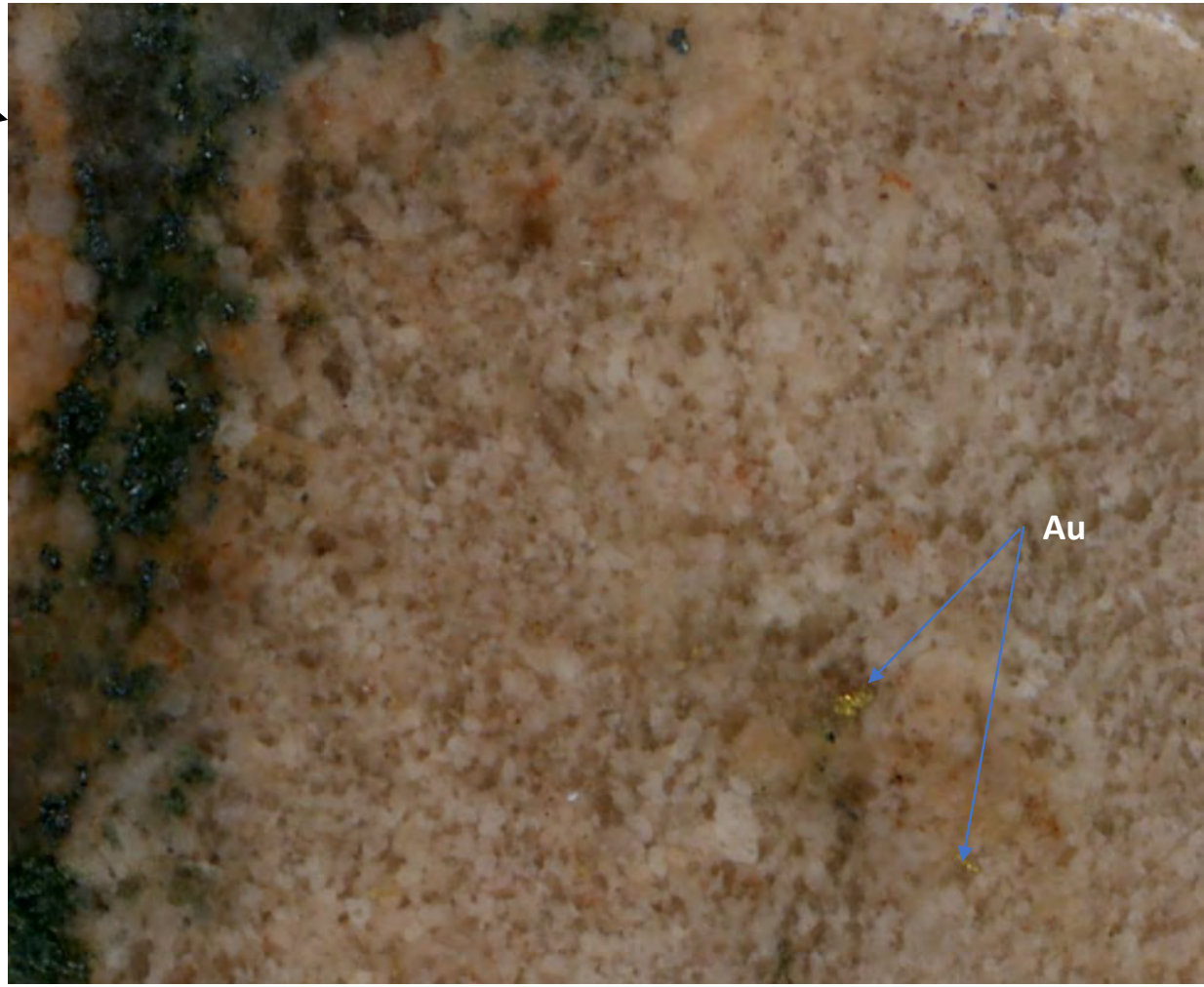
close up with Au



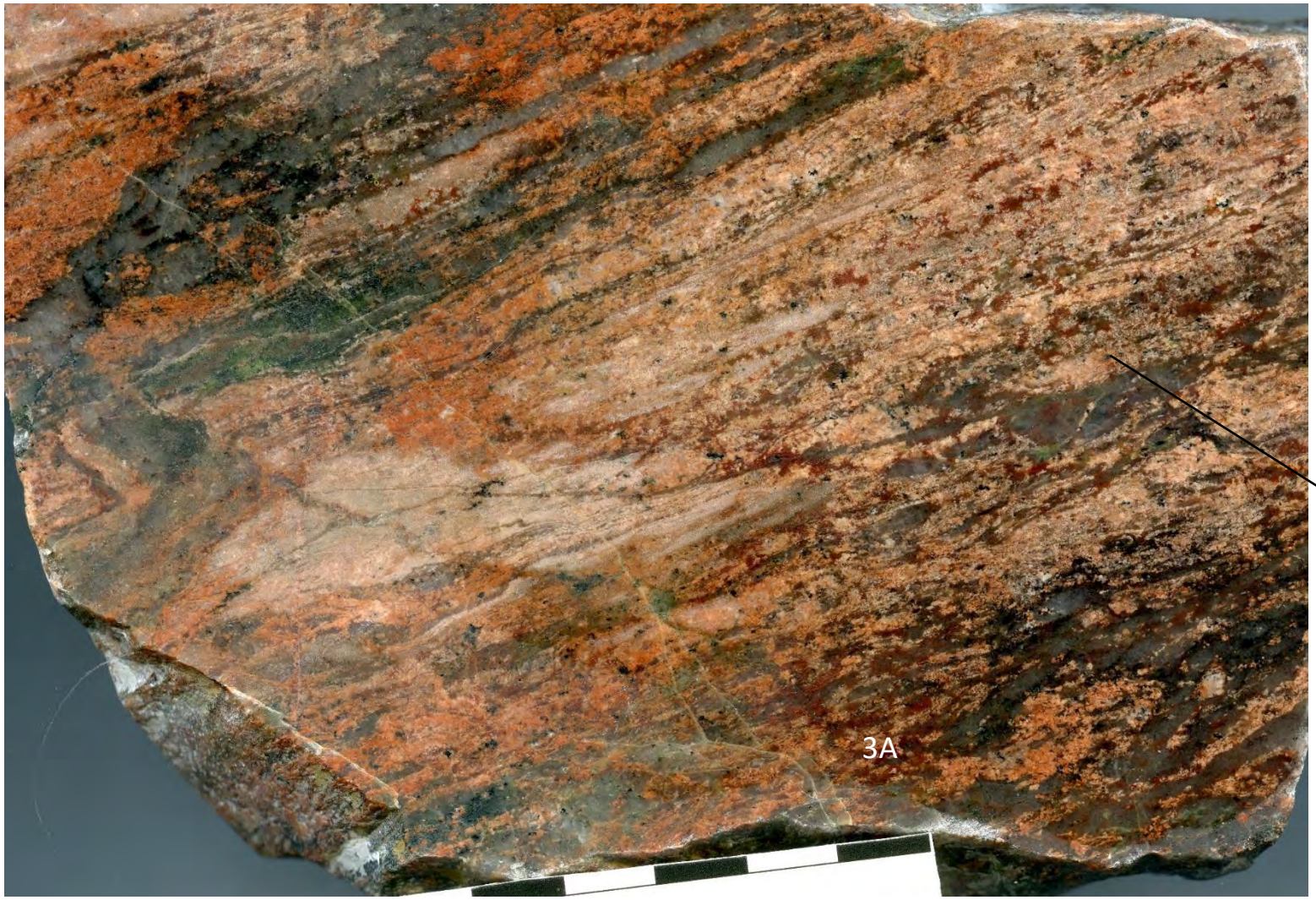
THM 40B



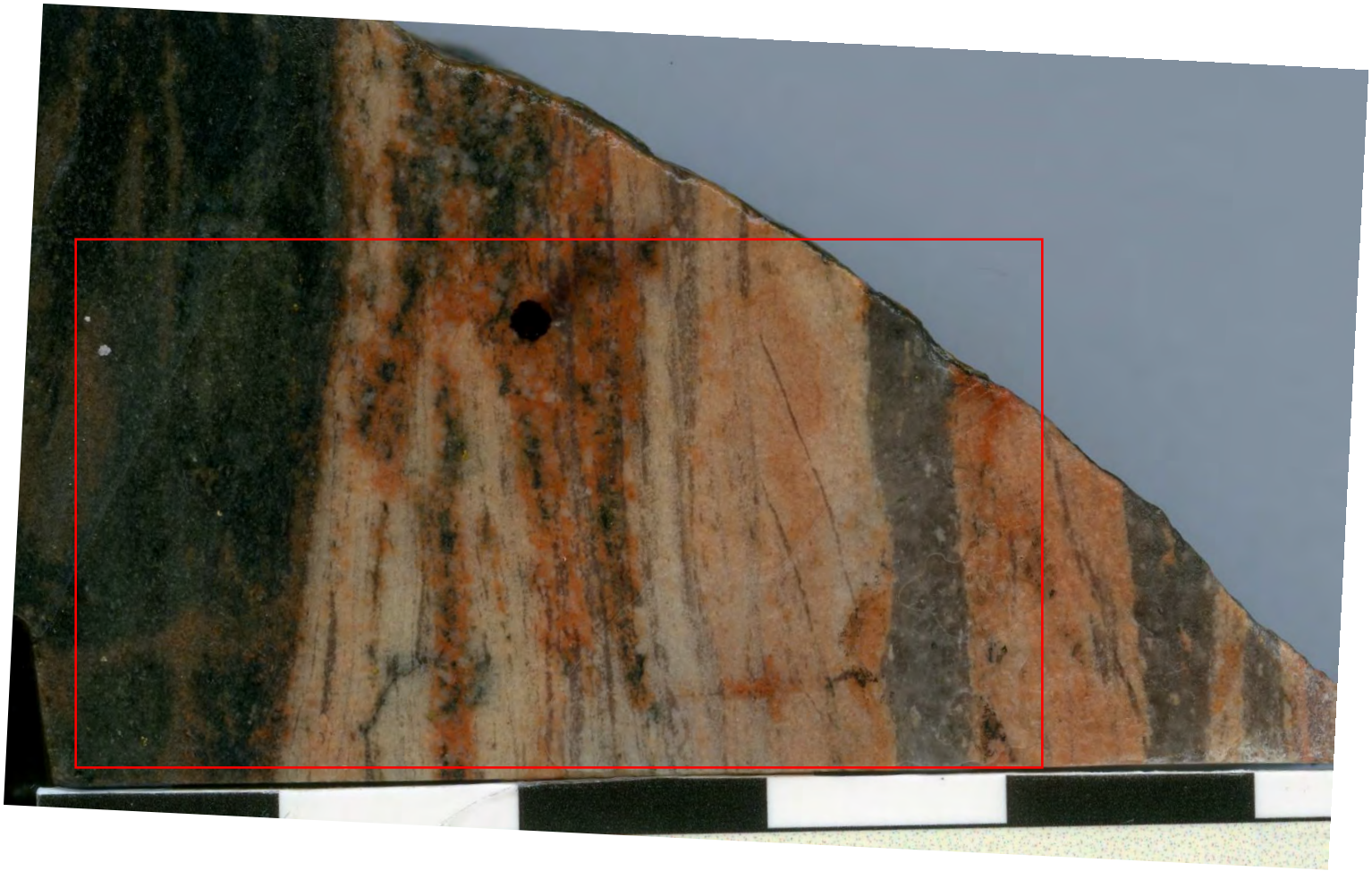
THM 40B_close up



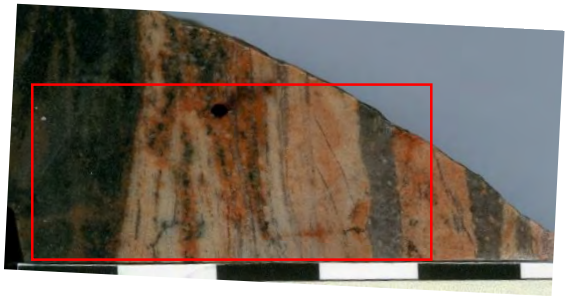
THM 44

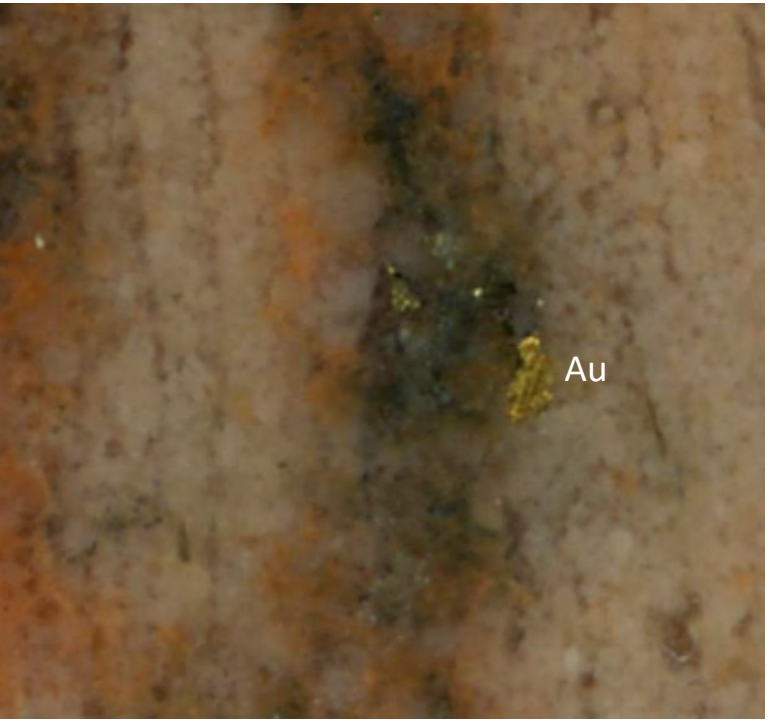


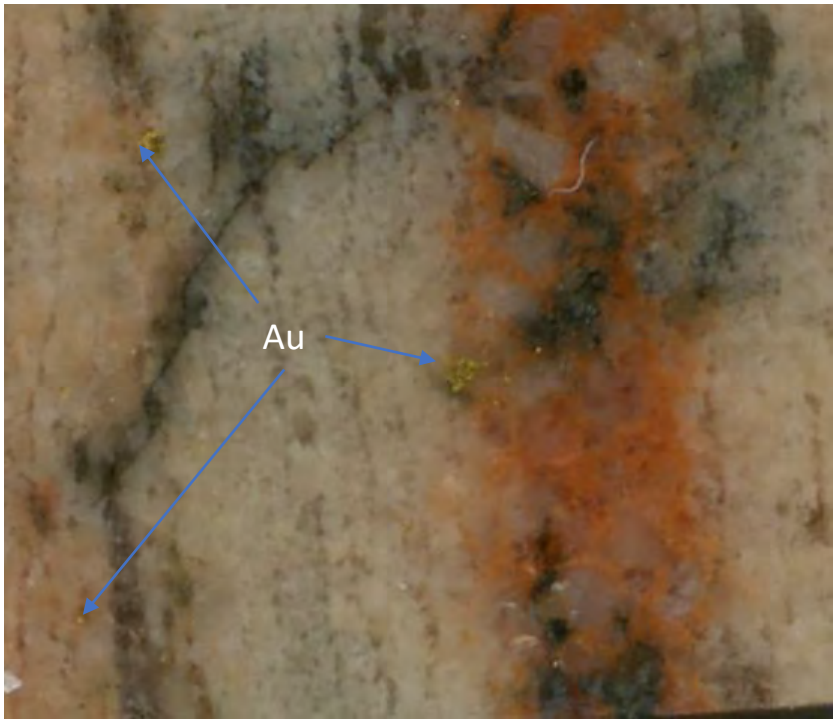
THM45



THM45- close up

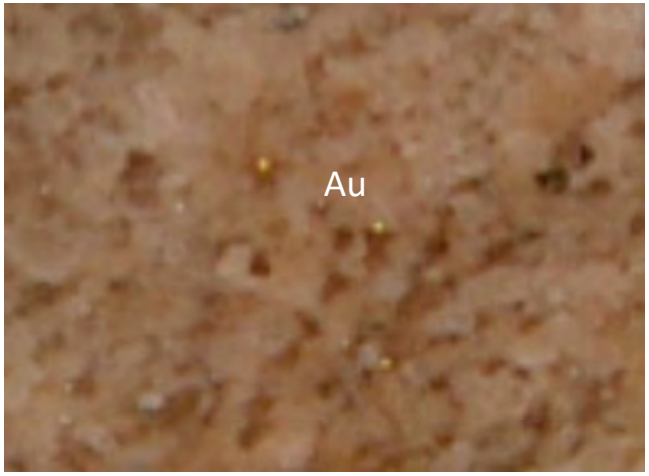




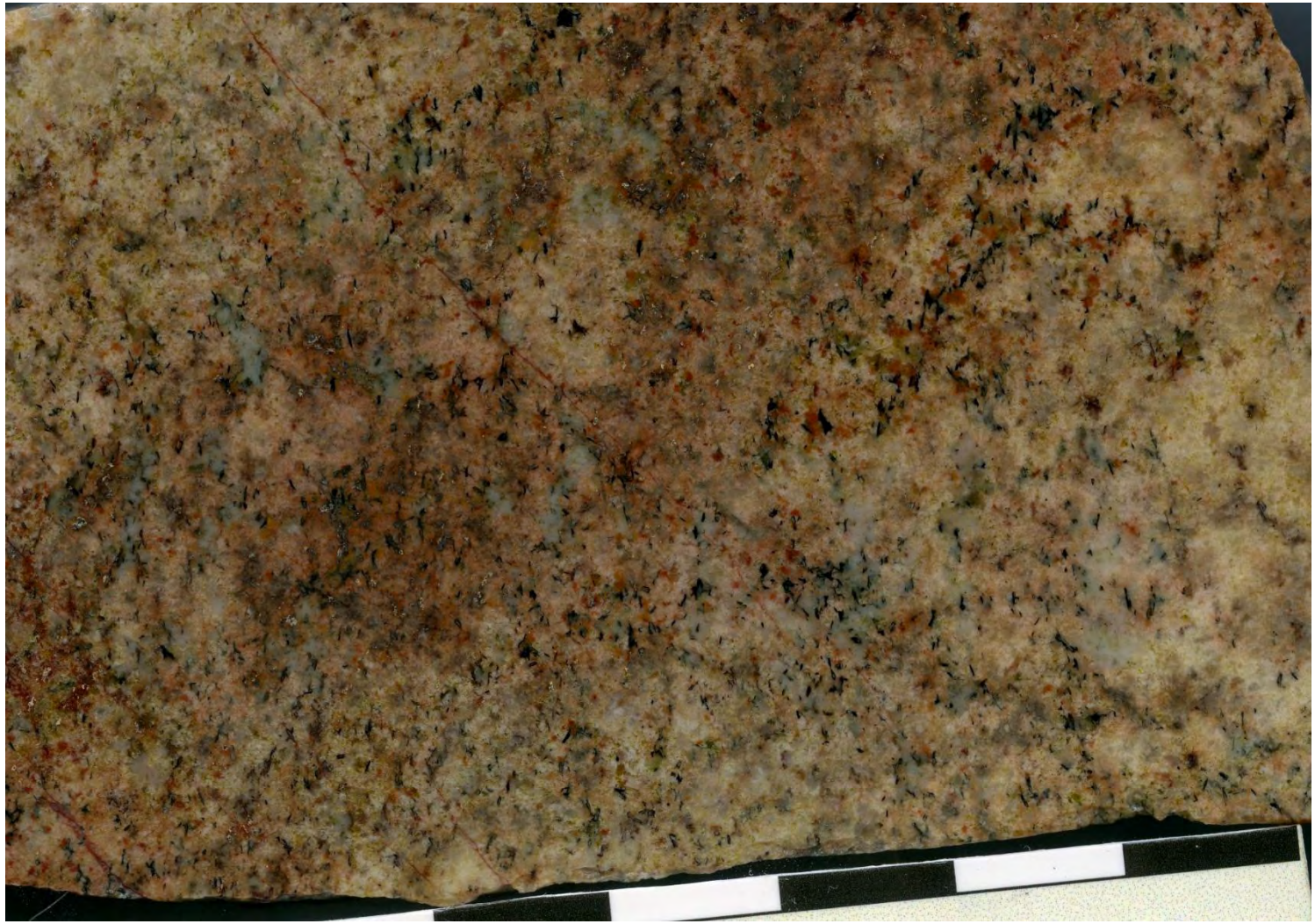


THM46

THM46 – close up

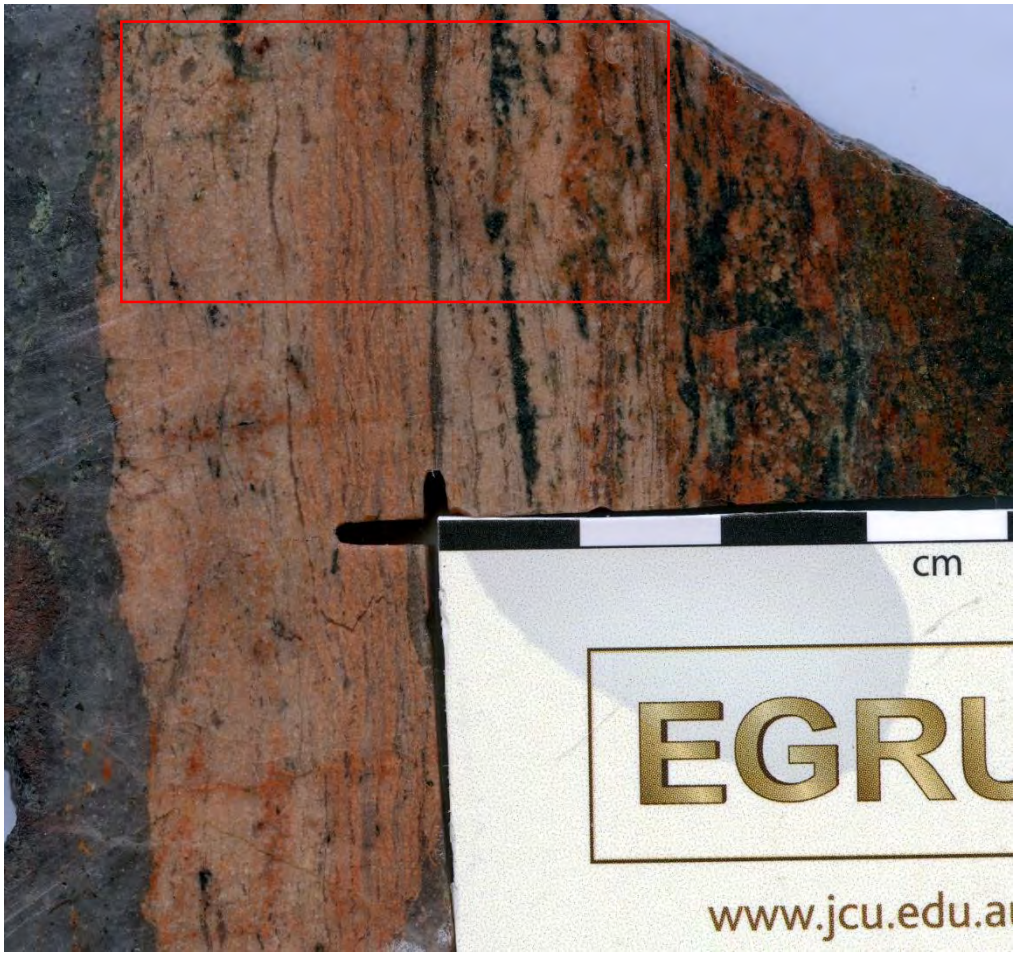


THM48



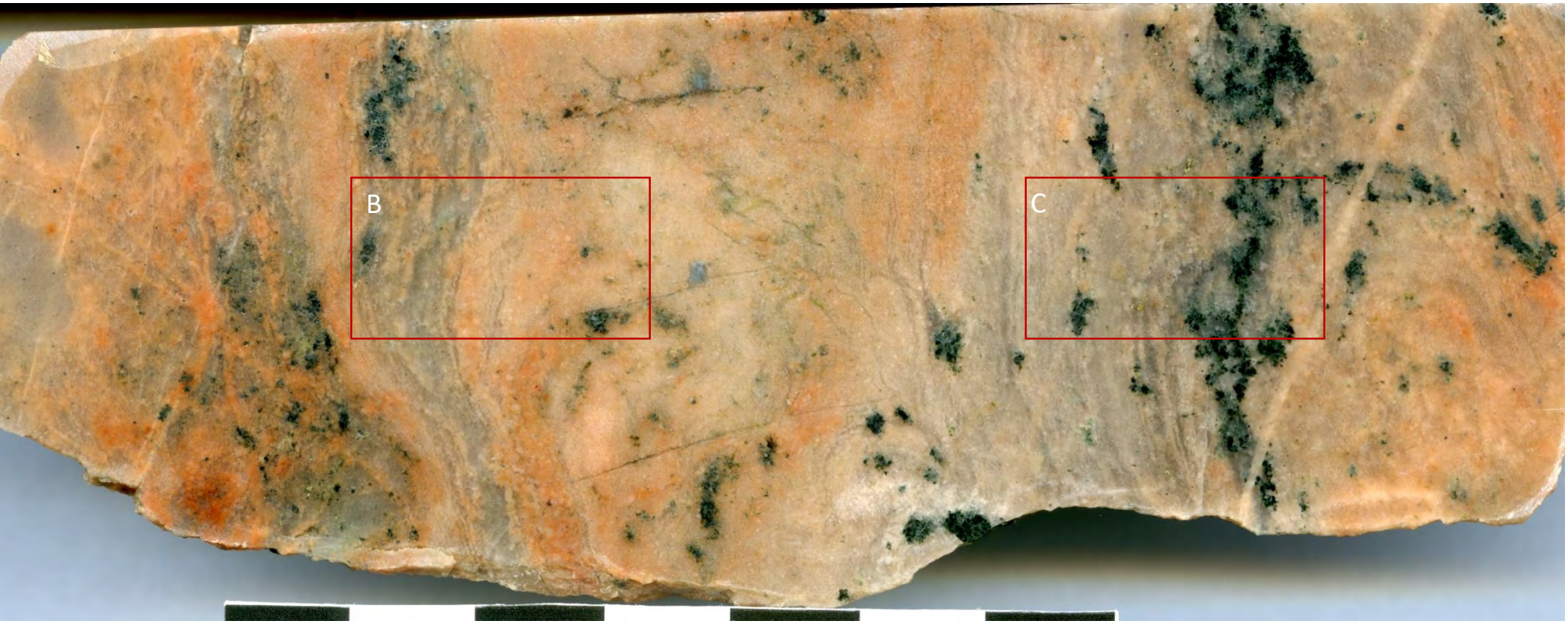
Similar to MG (in regional sample package)

THM49

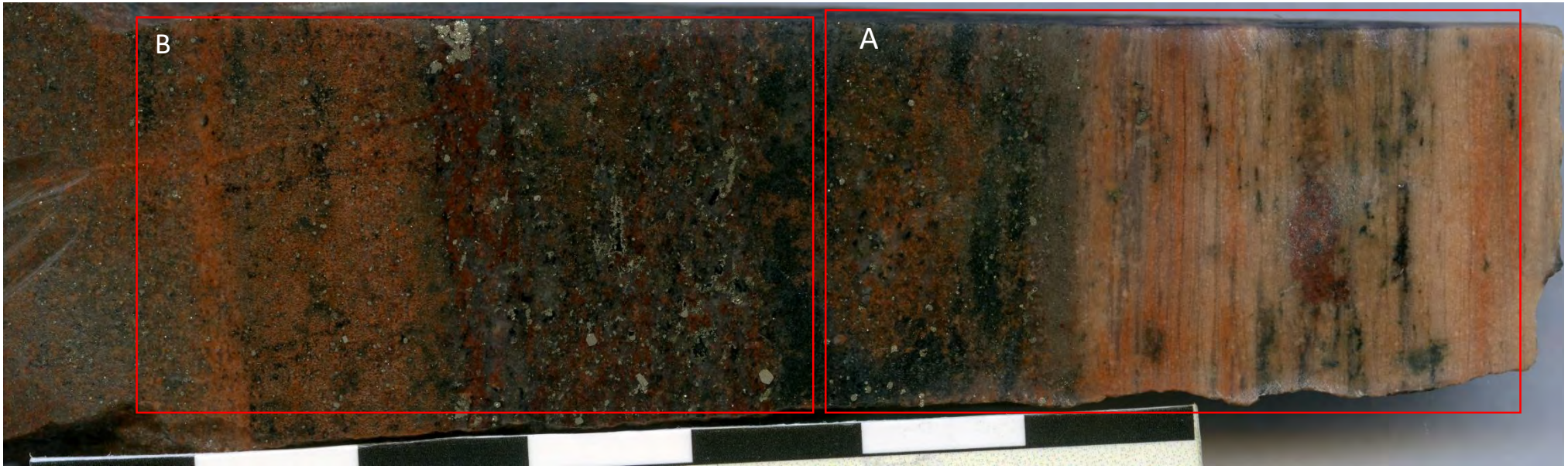


Very similar to THM45

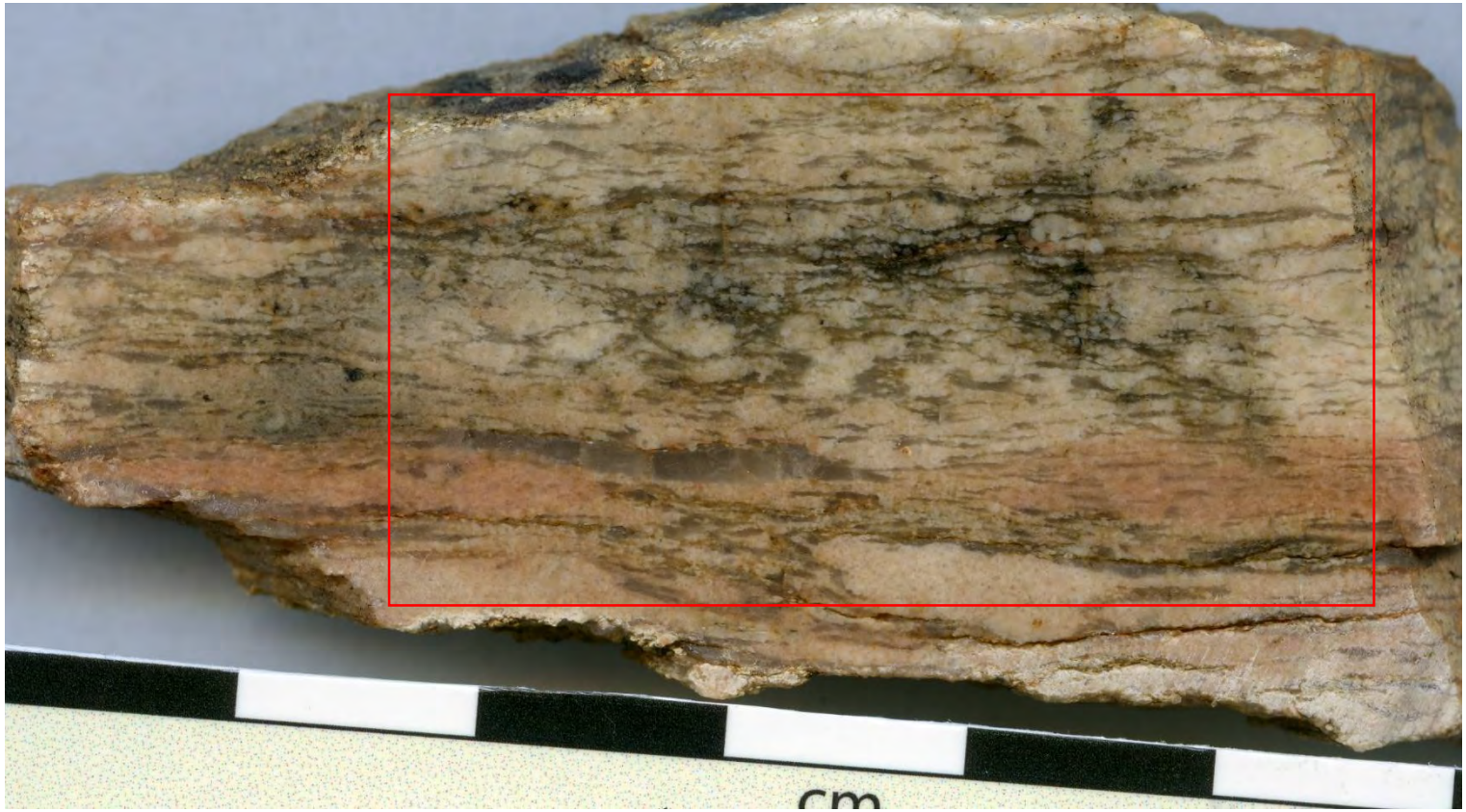
THM51



THM52



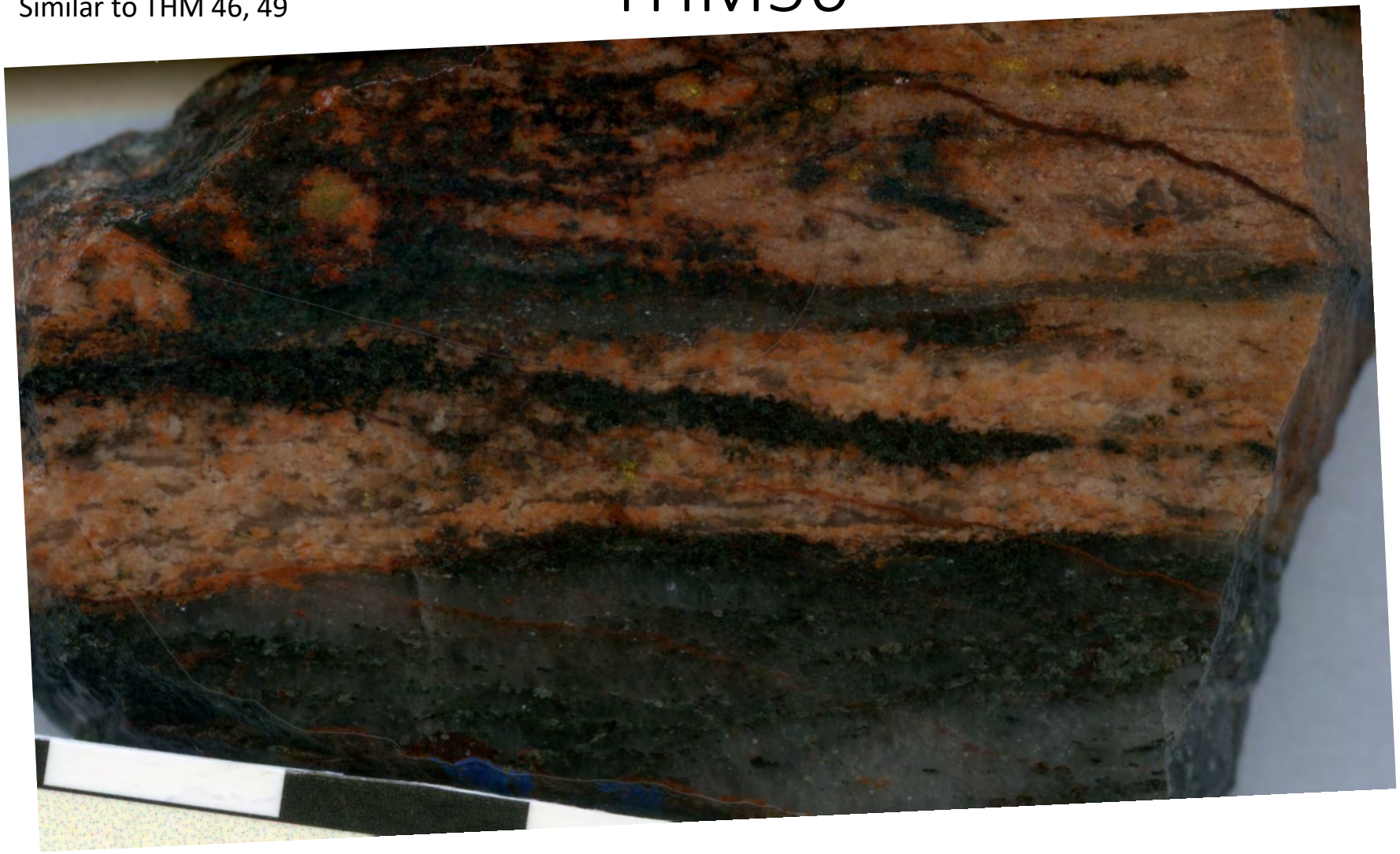
THM53



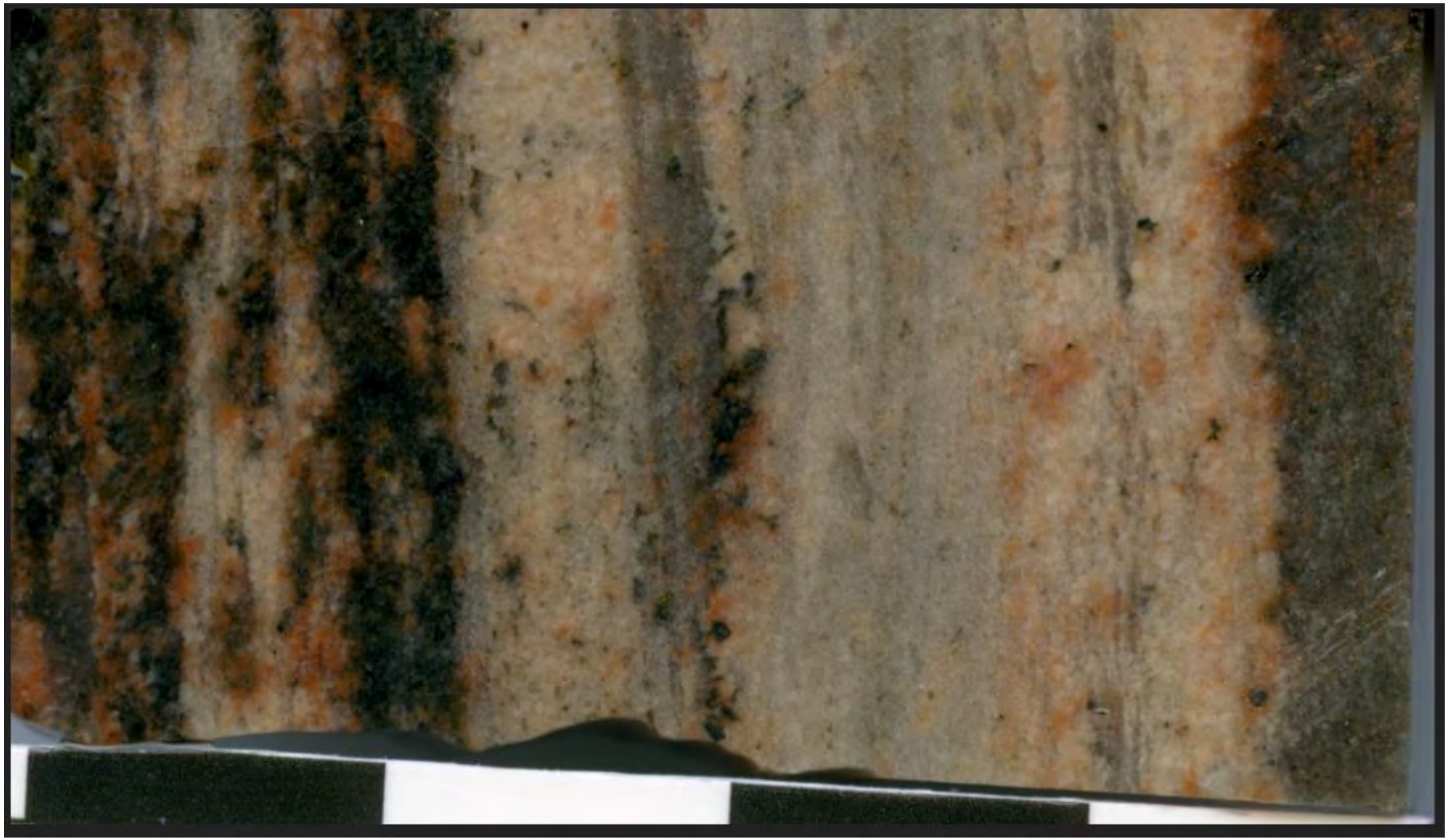
Mylonite

THM56

Similar to THM 46, 49



THM58



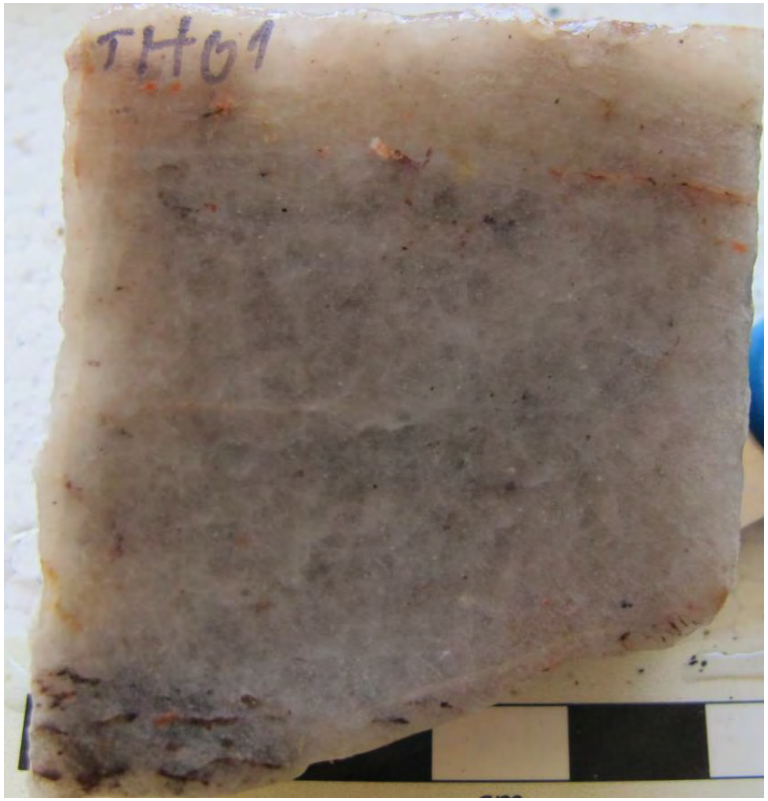
THM59

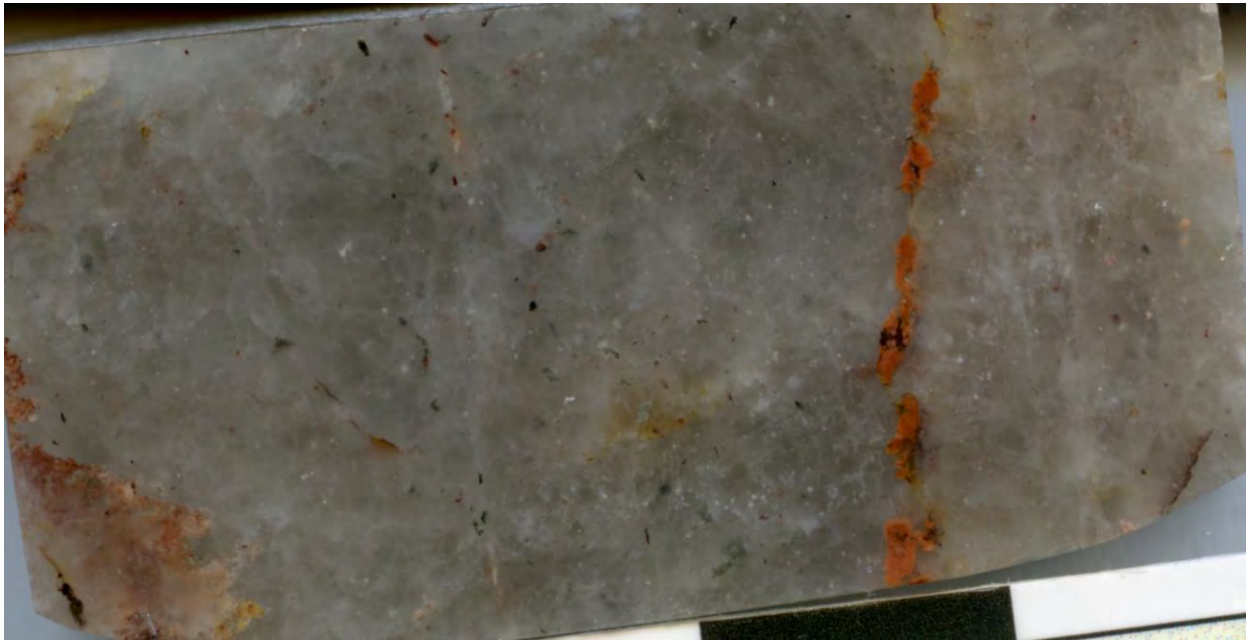
Part 3
Pit wall and drill core samples

Part 3A- Pit wall samples

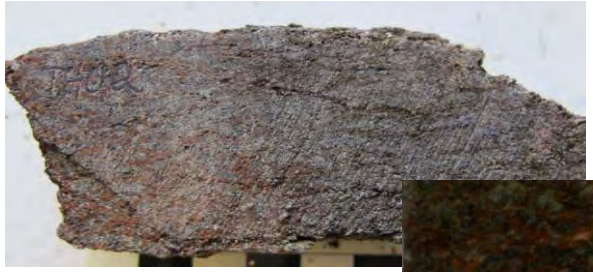
TH01

Foot wall quartzite





TH01

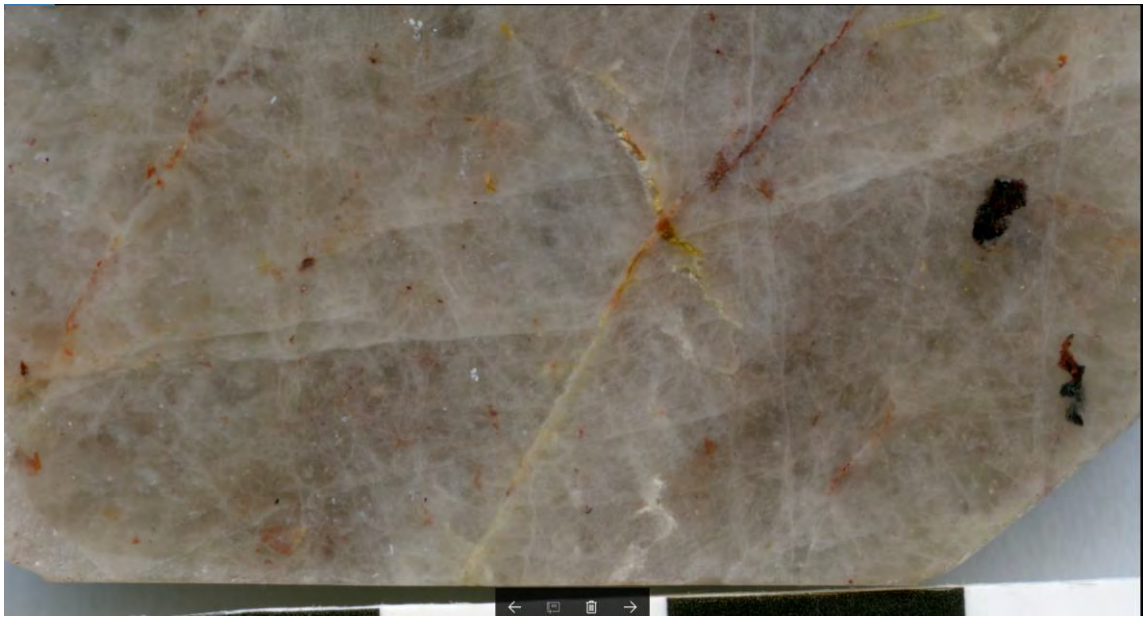


TH02

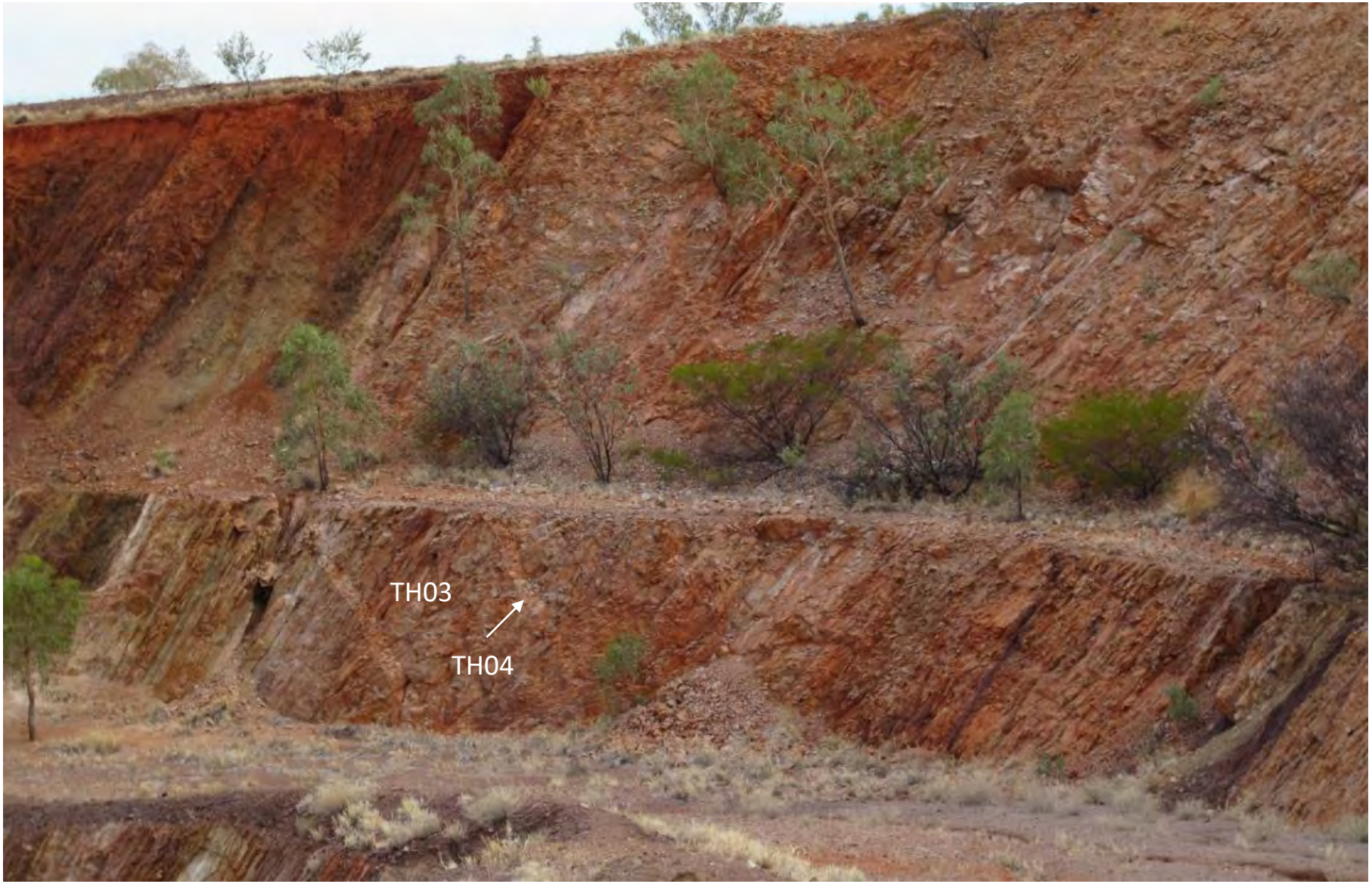
Biotite-rich schist

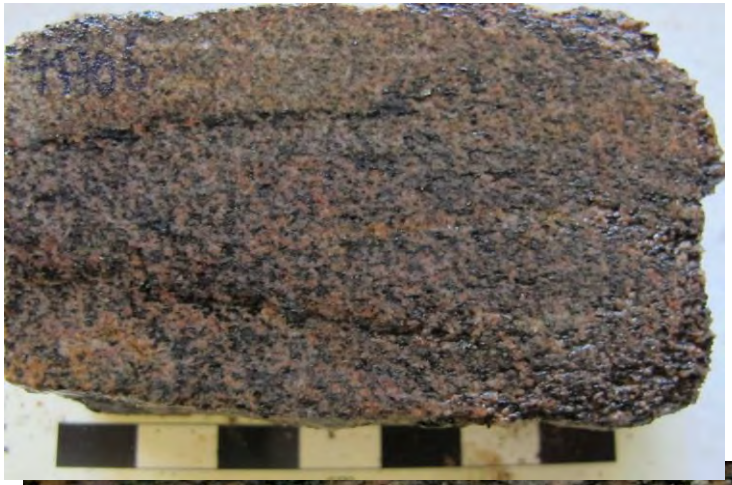
TH03

FWQ: bedding 260<60; at the footwall contact with the fault dividing quartzite and pelite.



Appendix 8: Sample images

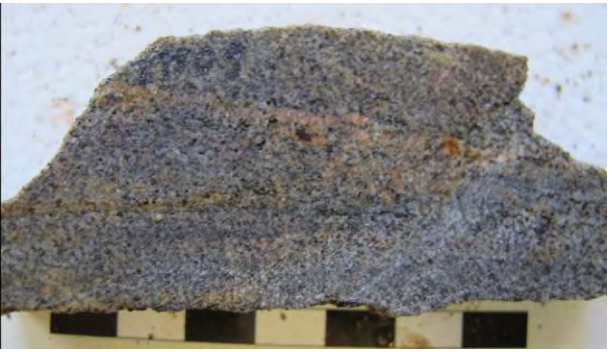




TH06

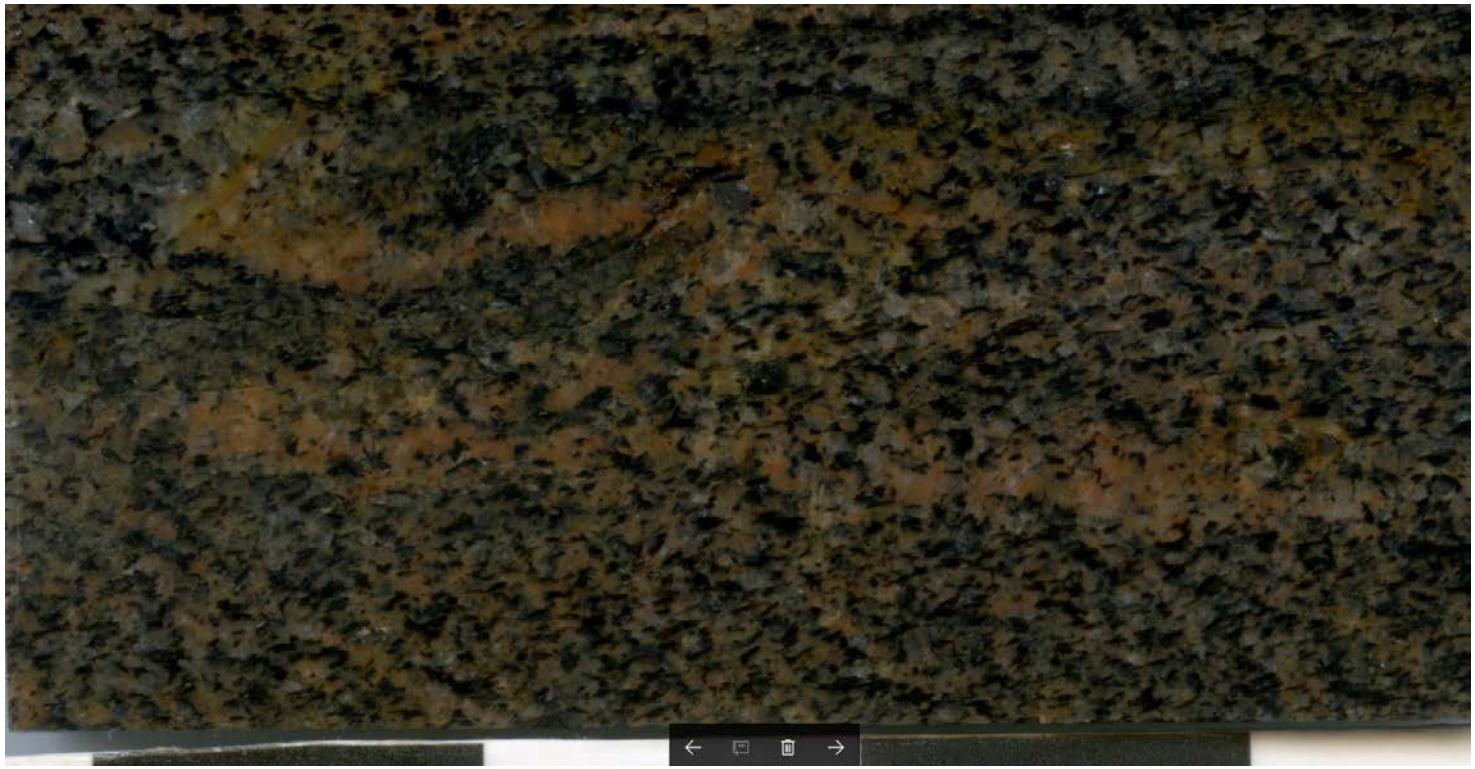
Metapelite/ biotite-rich schist

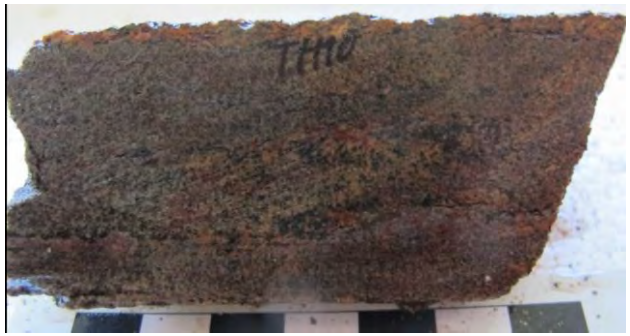
TH08 Biotite-rich schist



TH09

Biotite-rich schist

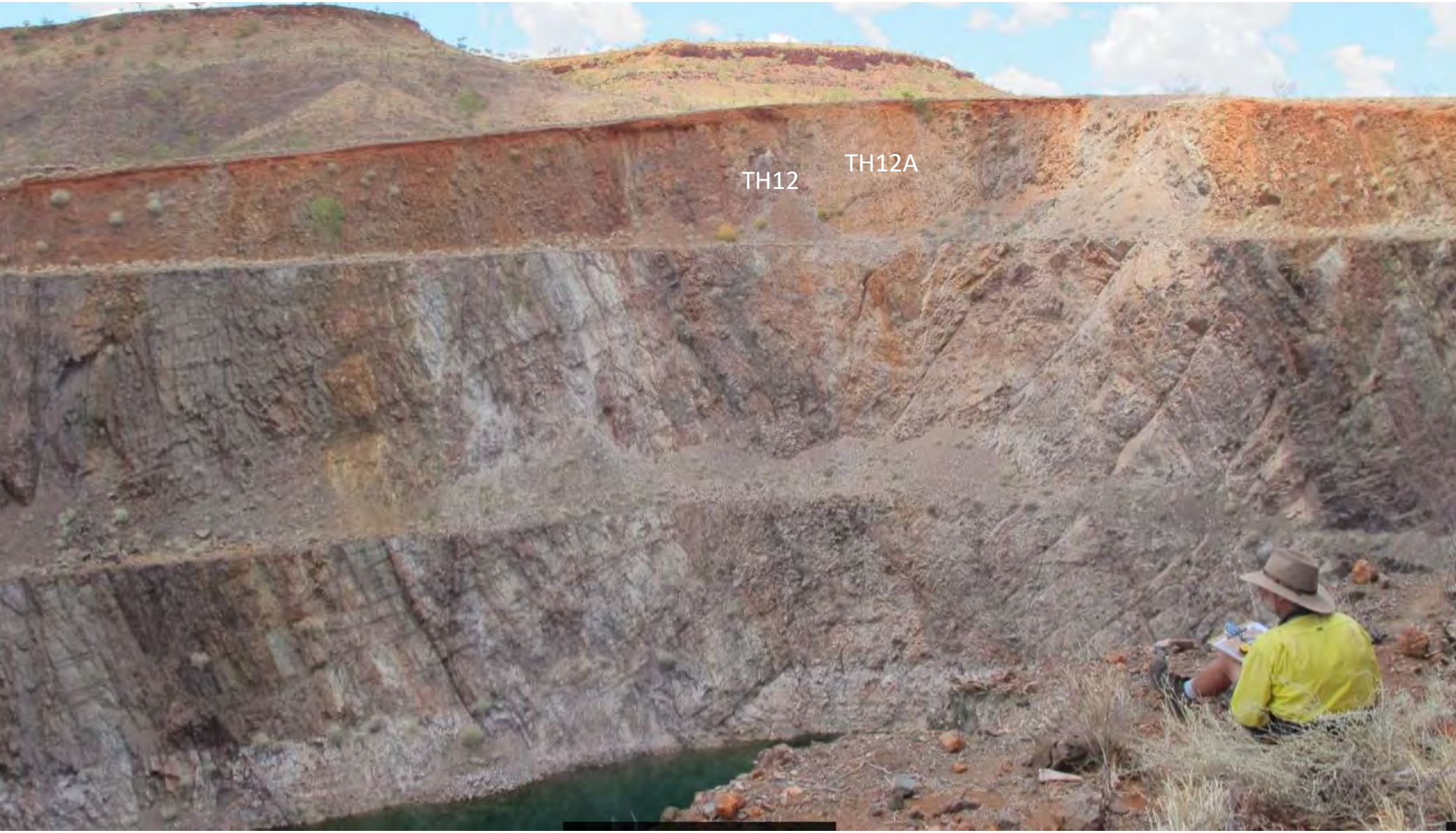


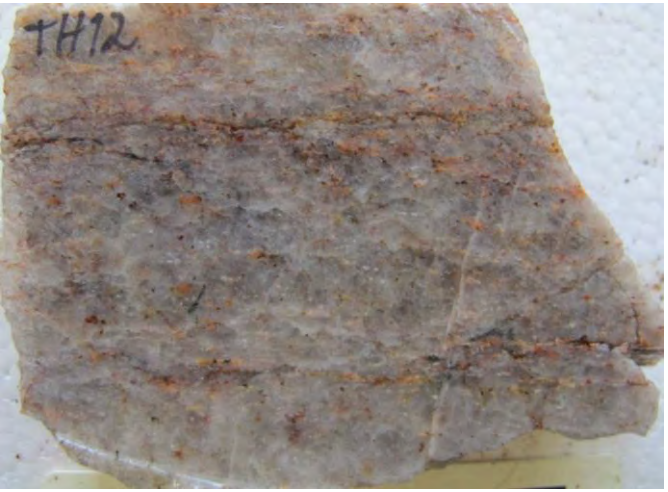


TH10

Biotite-rich schist

Appendix 8: Sample images

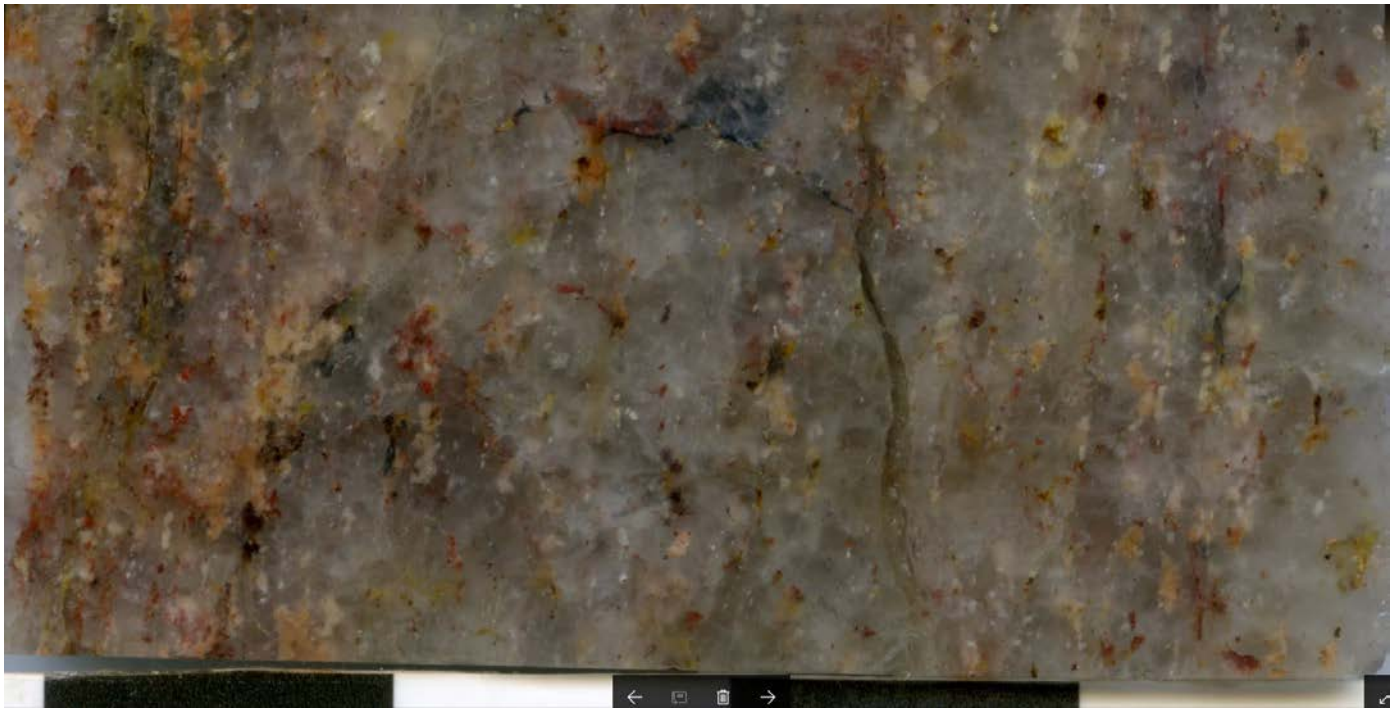




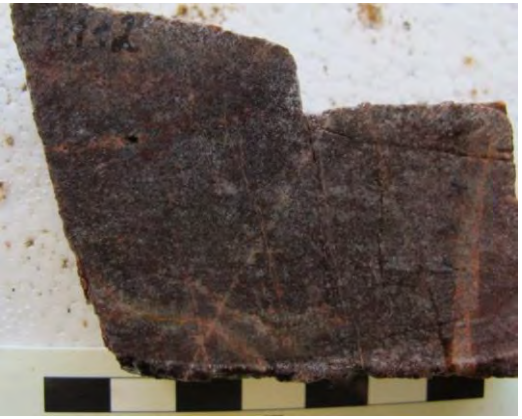
TH12A

HWQ

This sample is nearly white quartzite layer



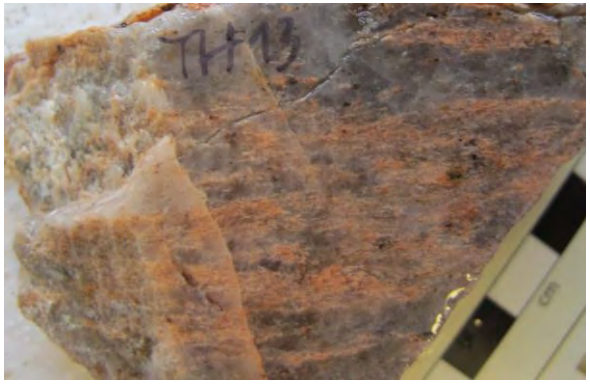
TH12



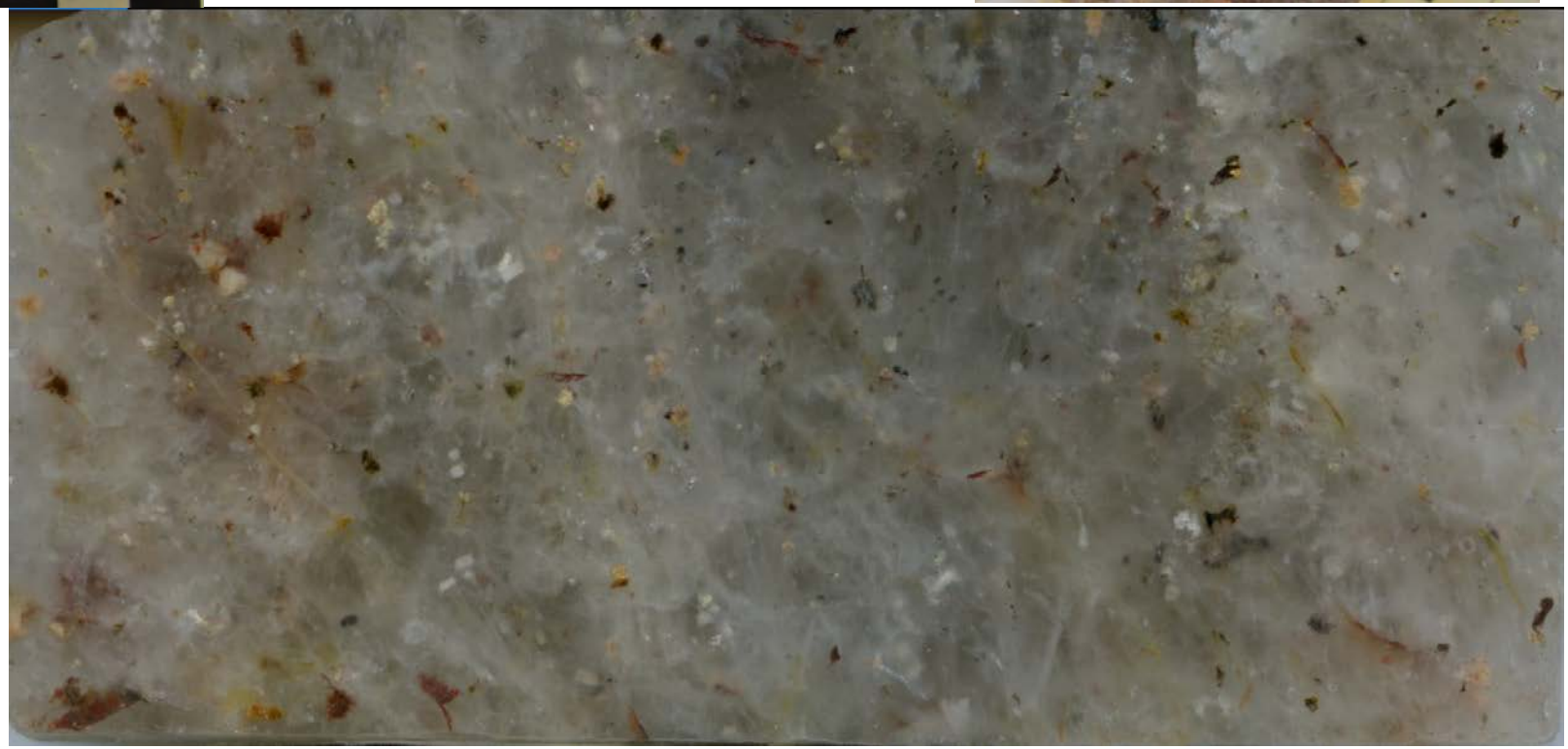
Intense silicified unit (after Biotite-rich schist)

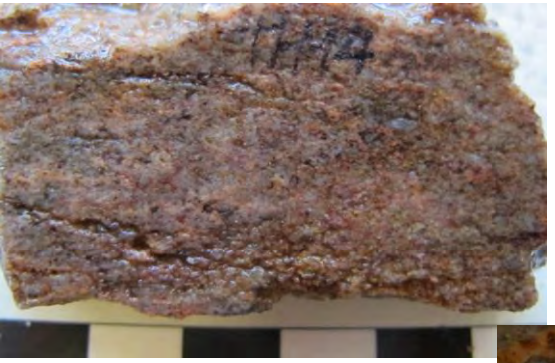
TH13

HWQ



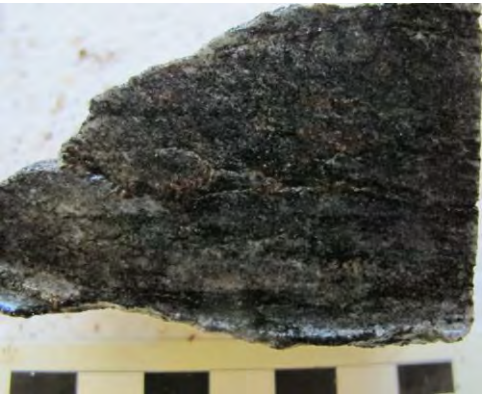
Metazomatosed quartzite





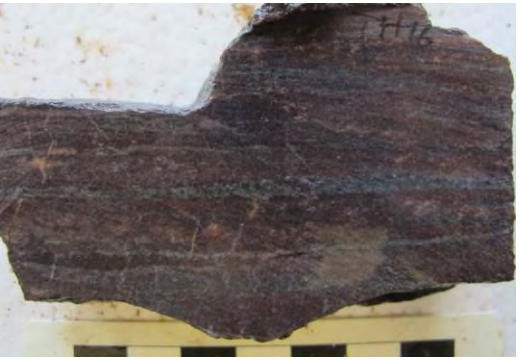
TH14

Metasomatosed HWQ



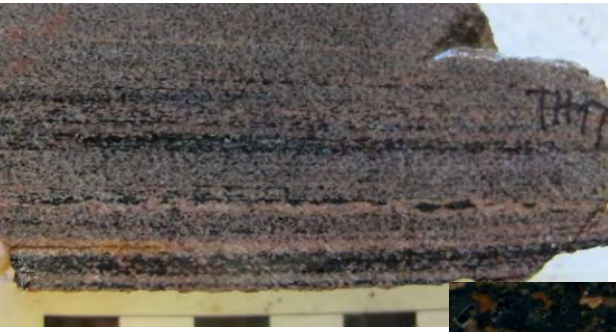
TH15

Amphibole-rich calc-silicate; at the top of a fault zone



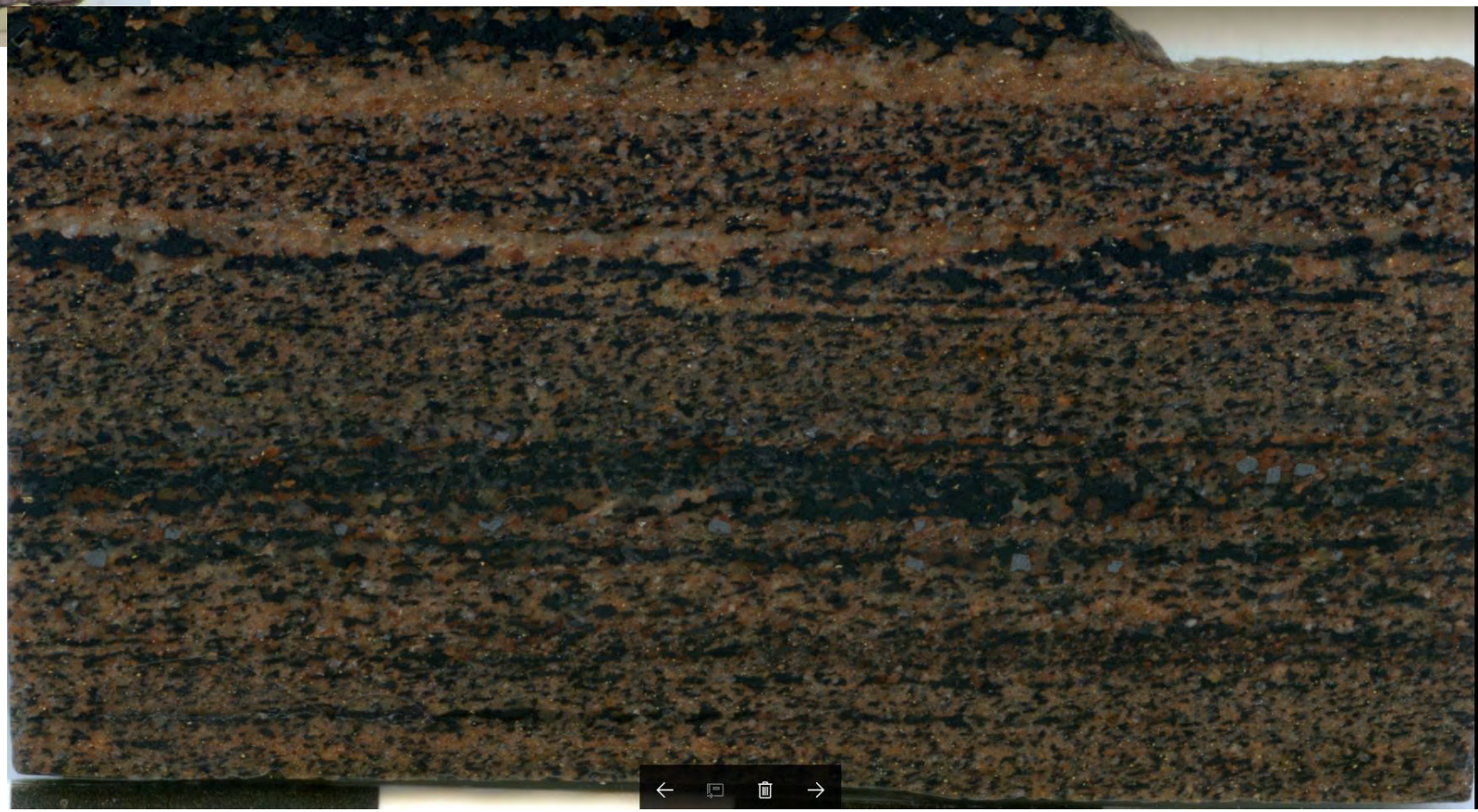
TH16

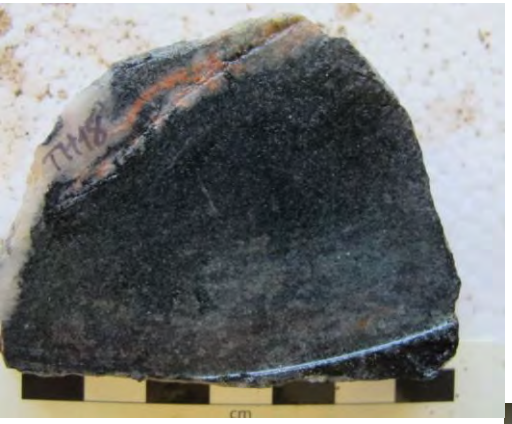
Calc-silicate



TH17

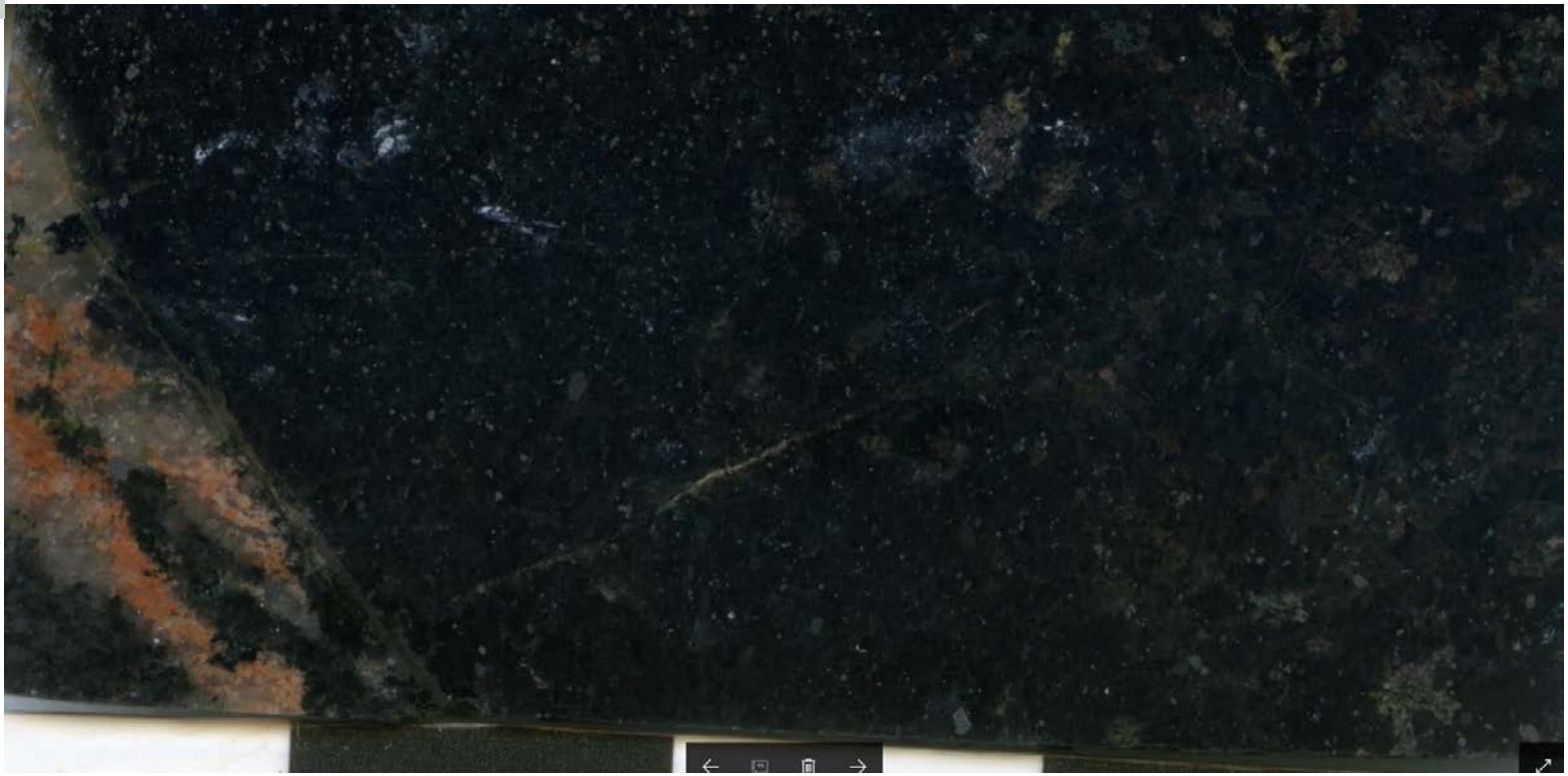
Amphibole-rich calc-silicate; scapolite-bearing





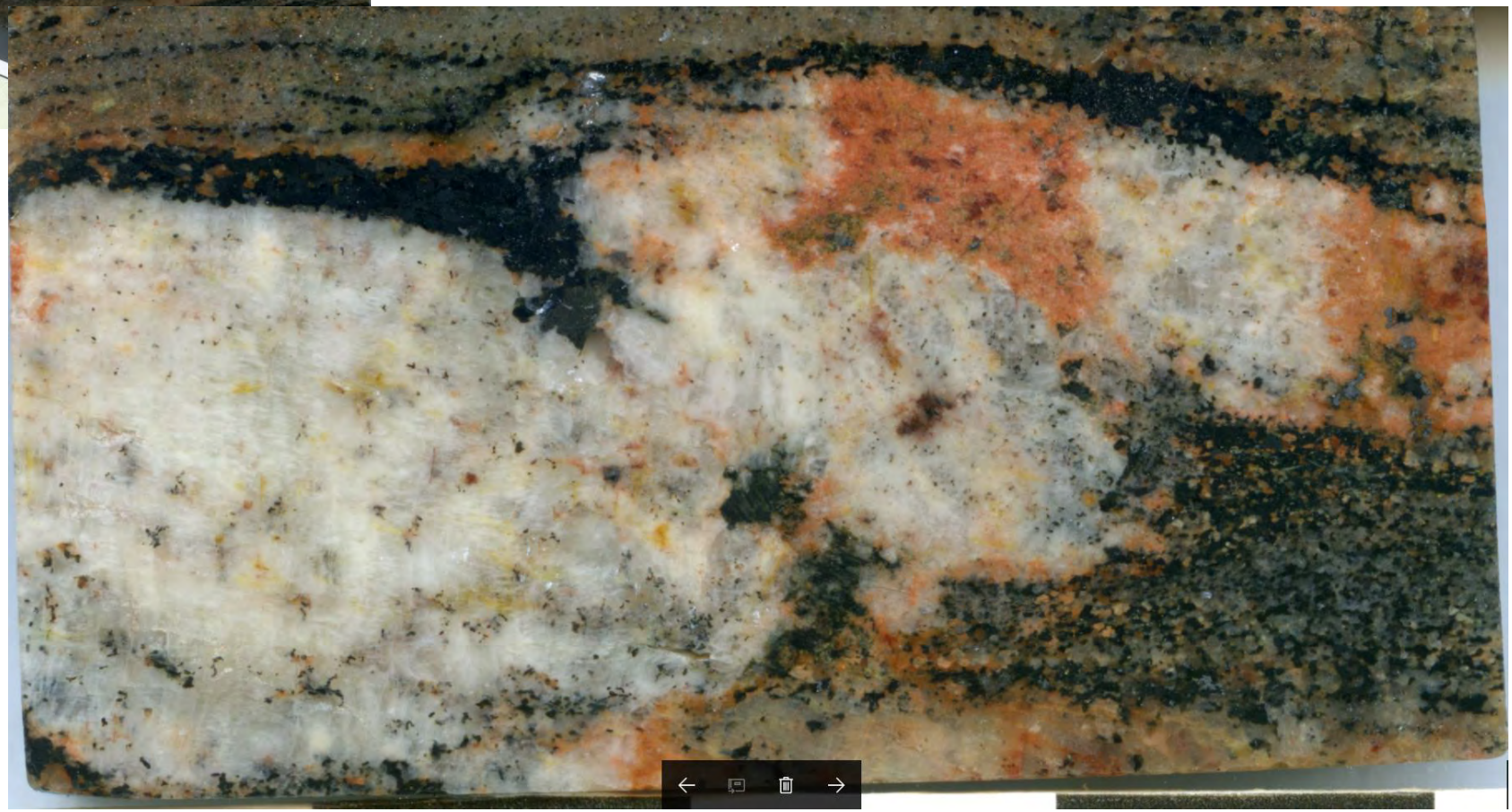
TH18

amphibolite



TH19

D3 pegmatite lense

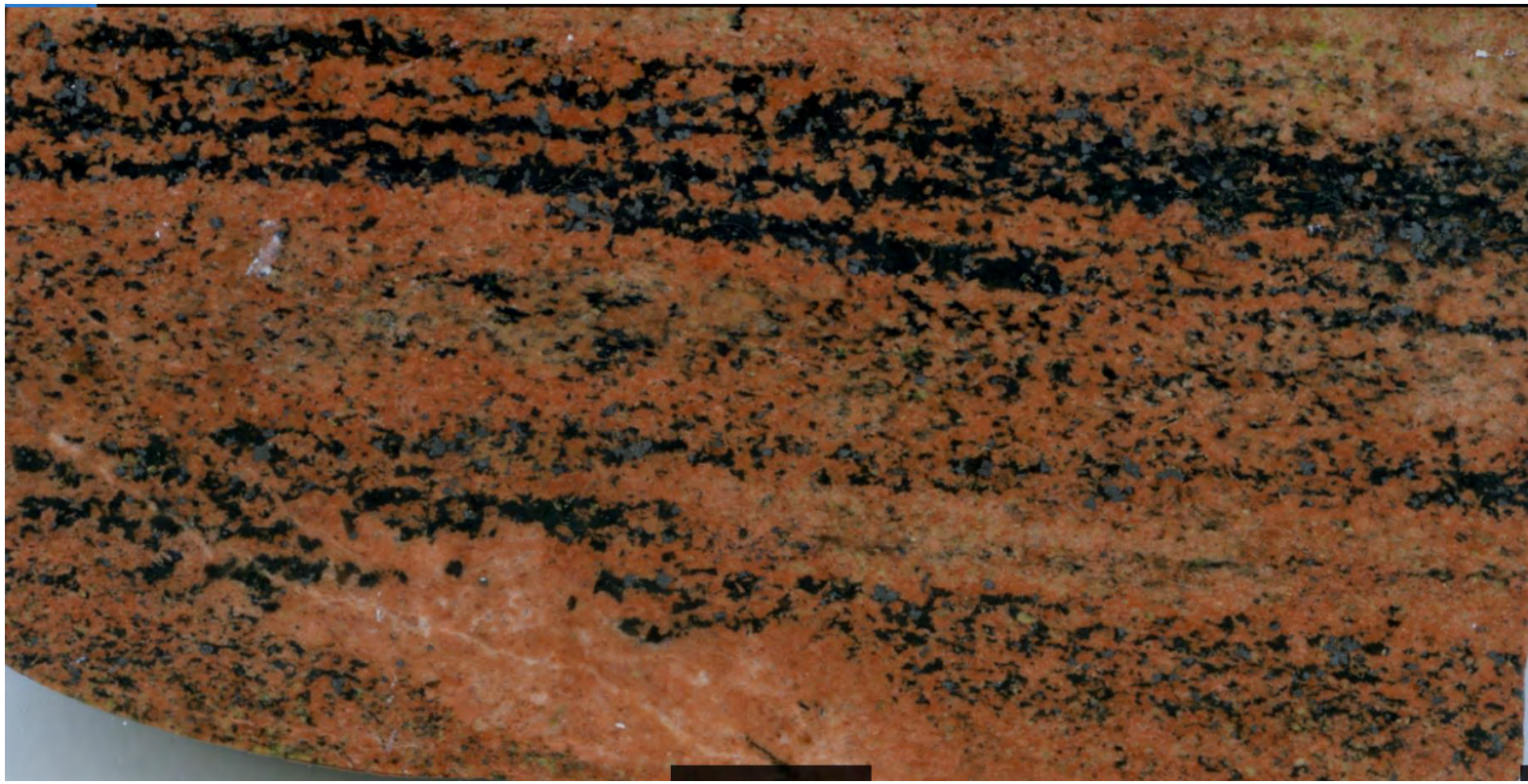


TH21

Amphibolite, similar to TH18, 30cm thick

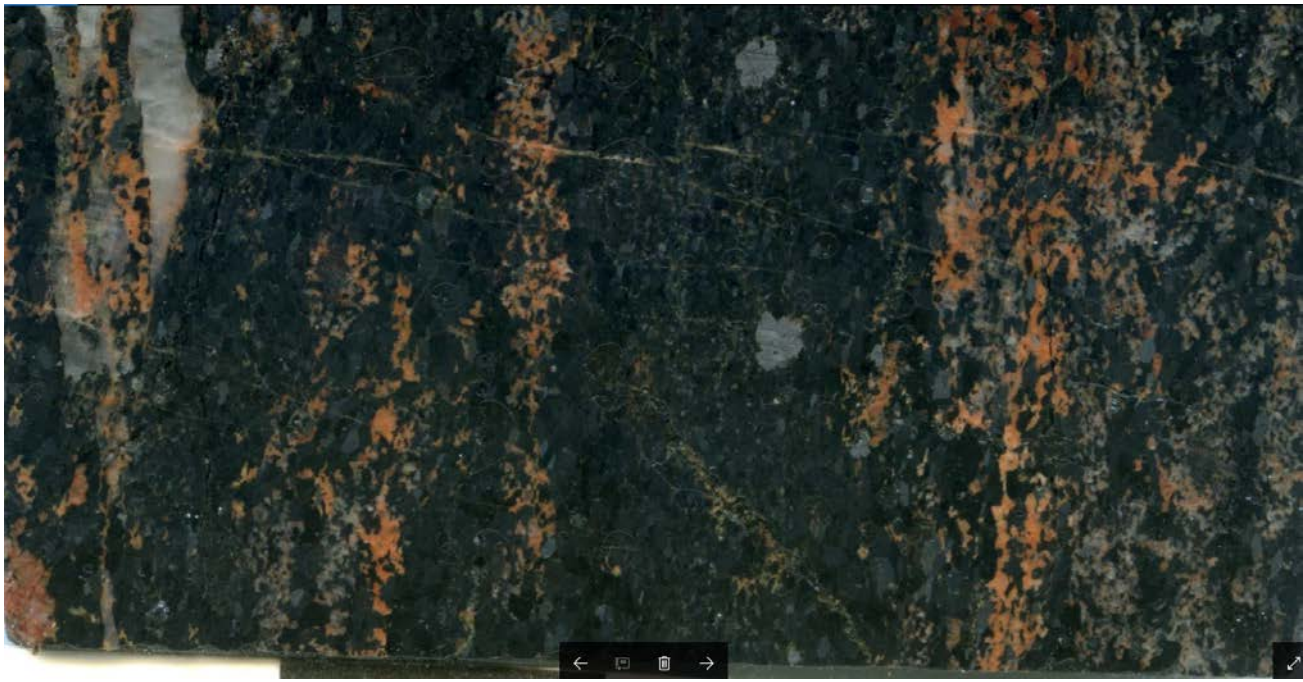
TH22

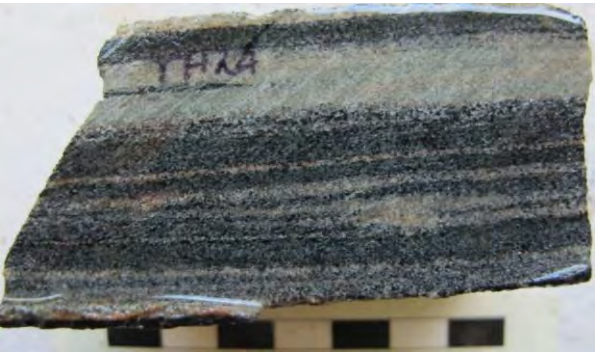
Calc-silicate intercalated with biotite-rich and amphibole-rich laminates; S0?/S1 285<50



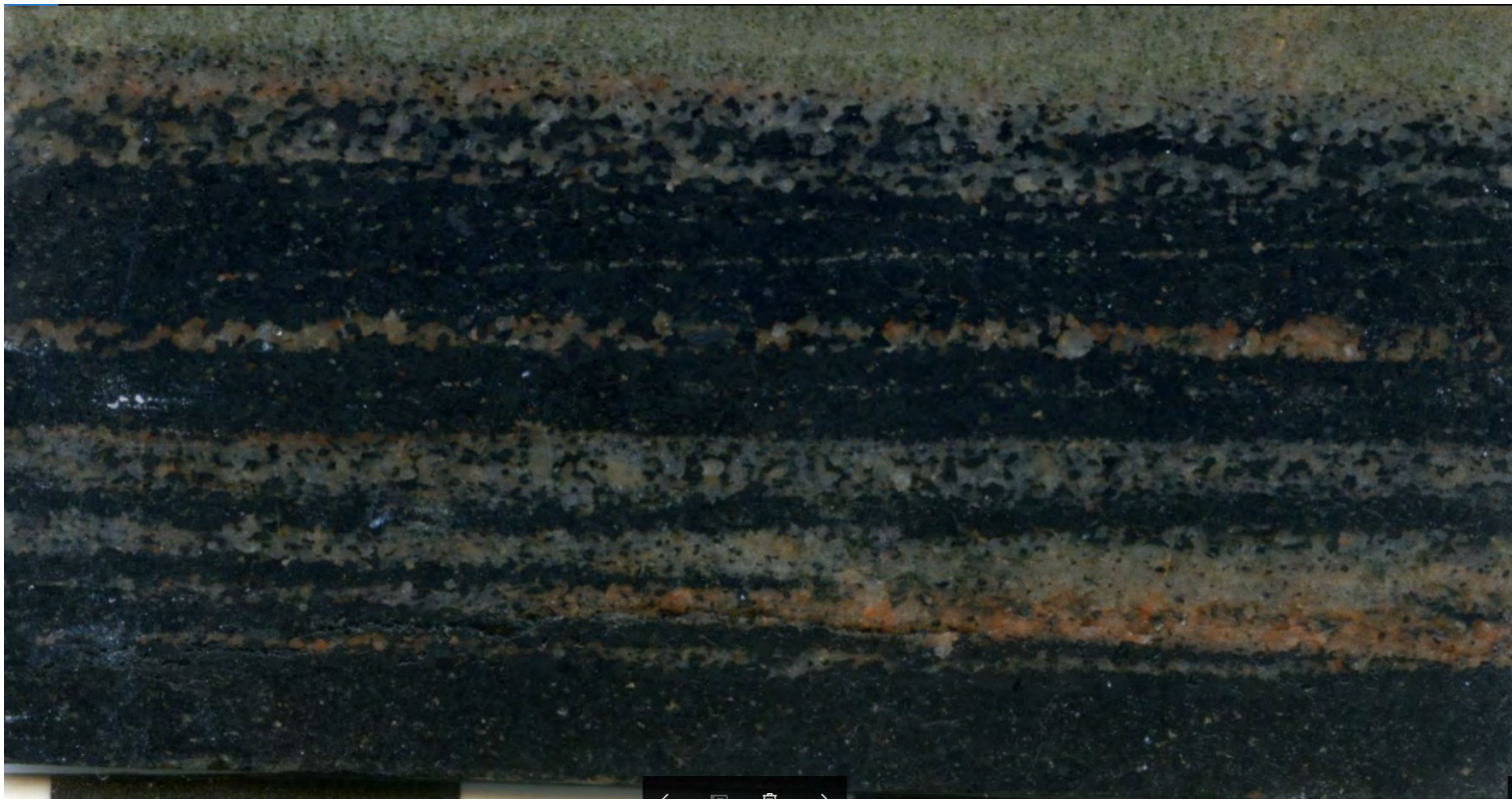
TH23

Amphibolite





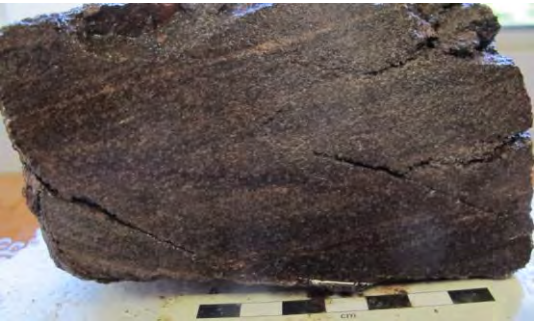
TH24 Amphibole-rich calc-silicate



TH25

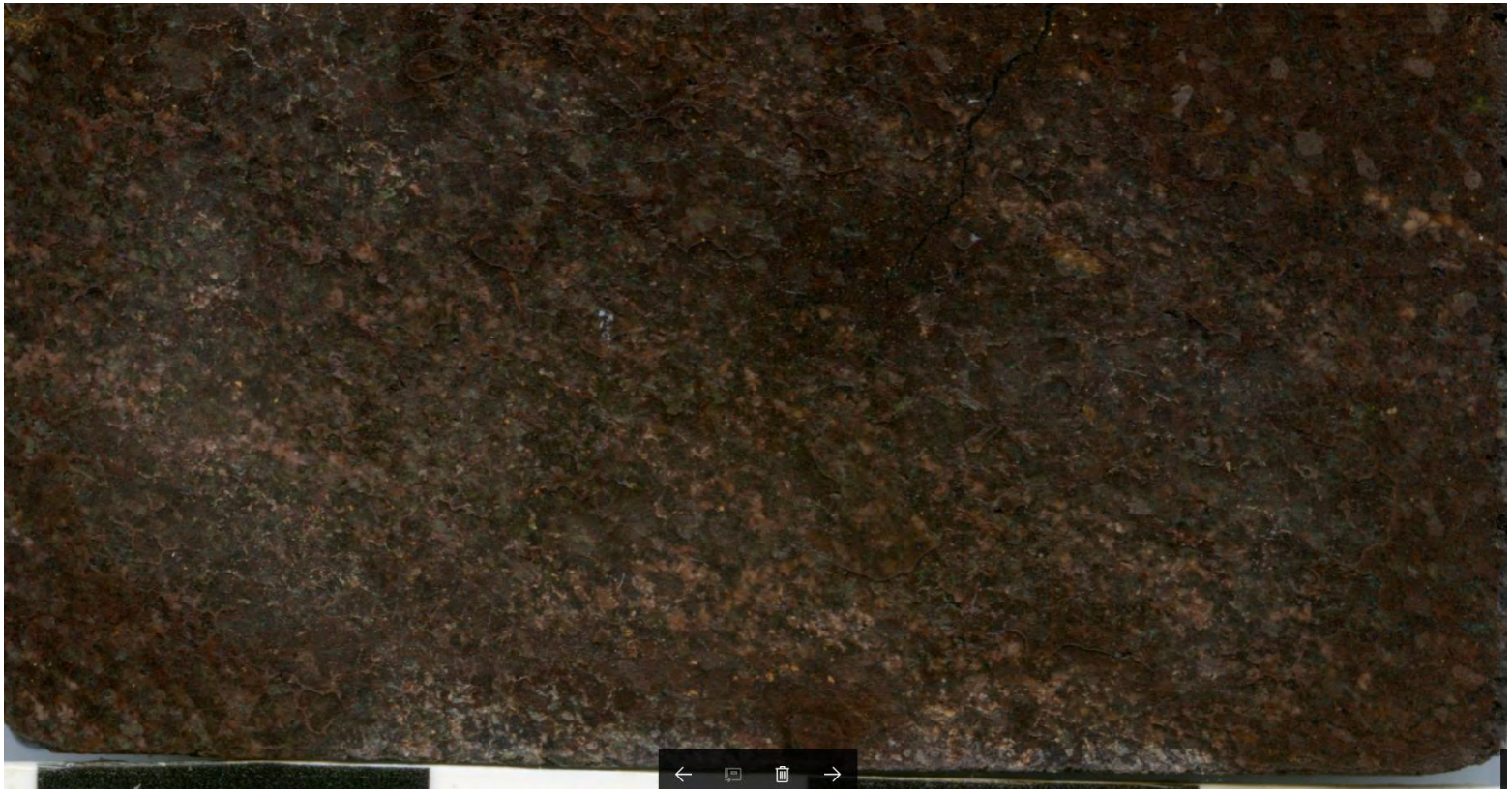
Calc-silicate

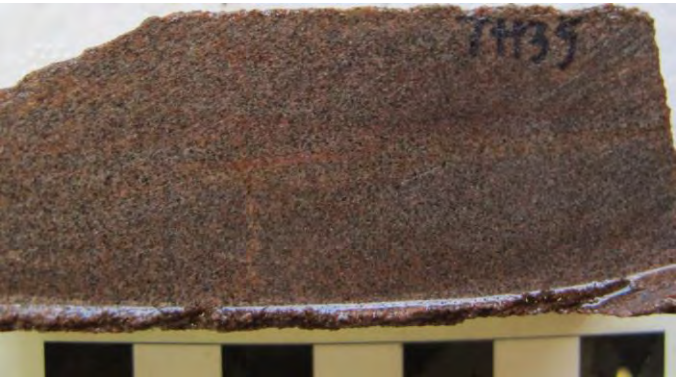
TH26 Amphibolite



TH34

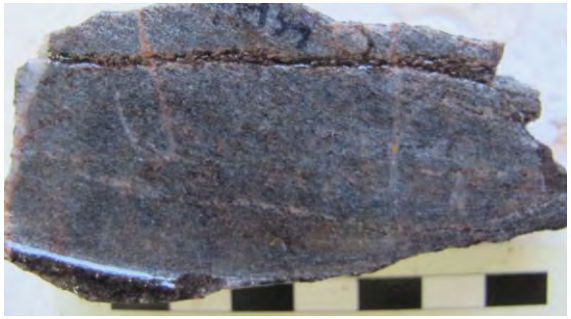
Biotite-rich schist





TH35

Biotite-rich schist

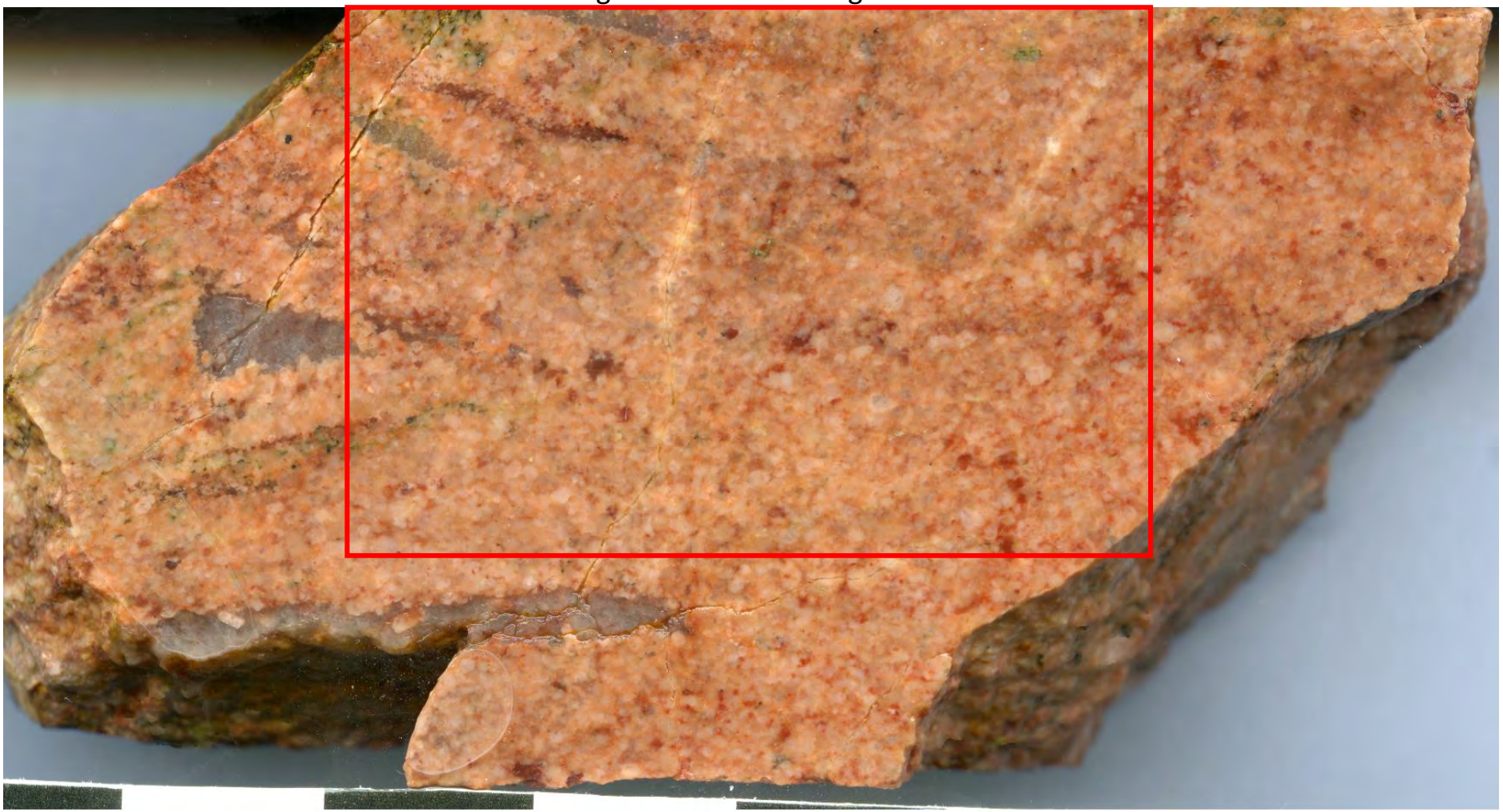


TH39

Magnetic calc-silicate

TH141

Pegmatite in Pit with age of 1522 Ma

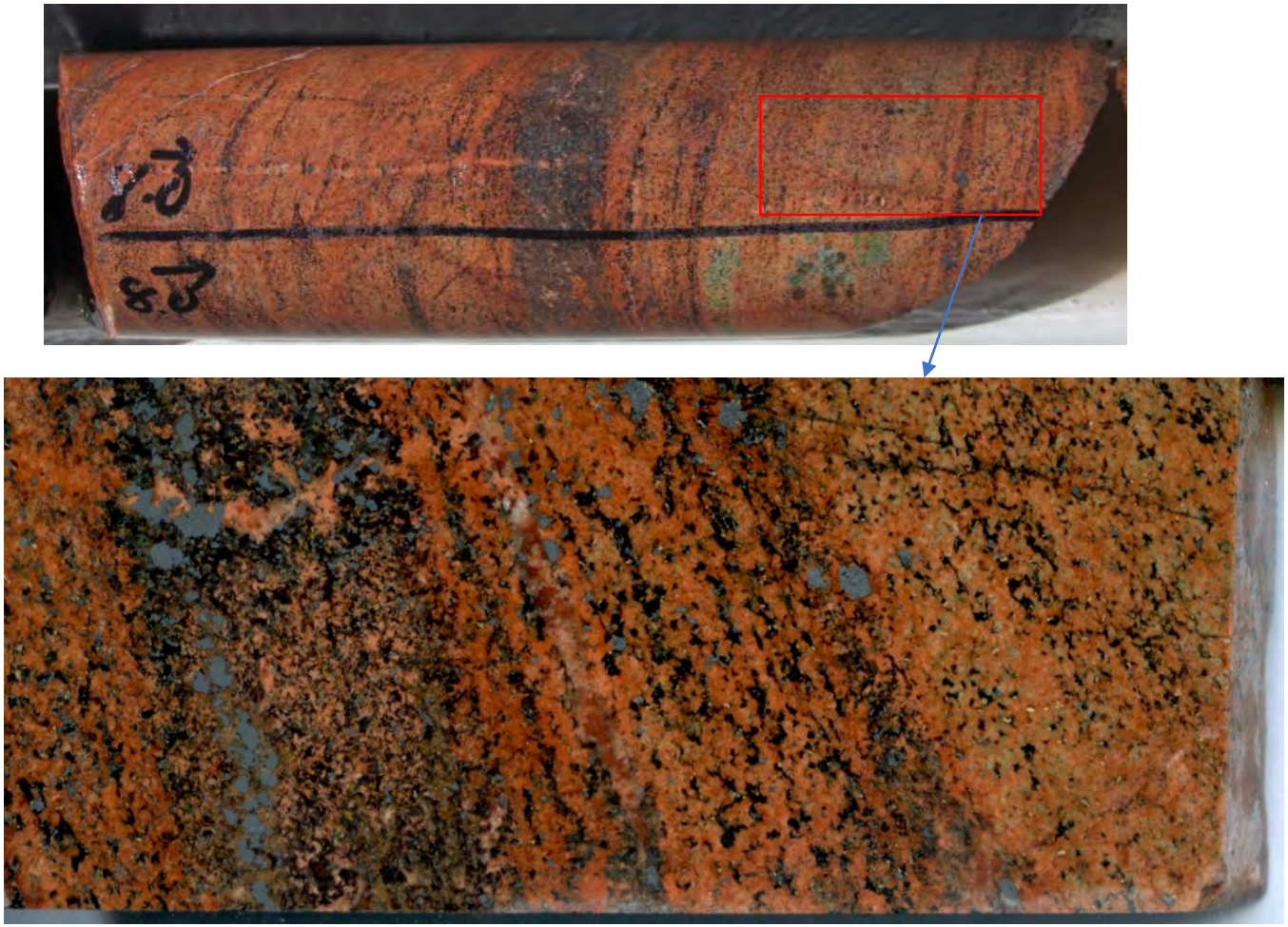


Checking the mineralogy and textures, alteration of the pegmatite. Also do the whole rock

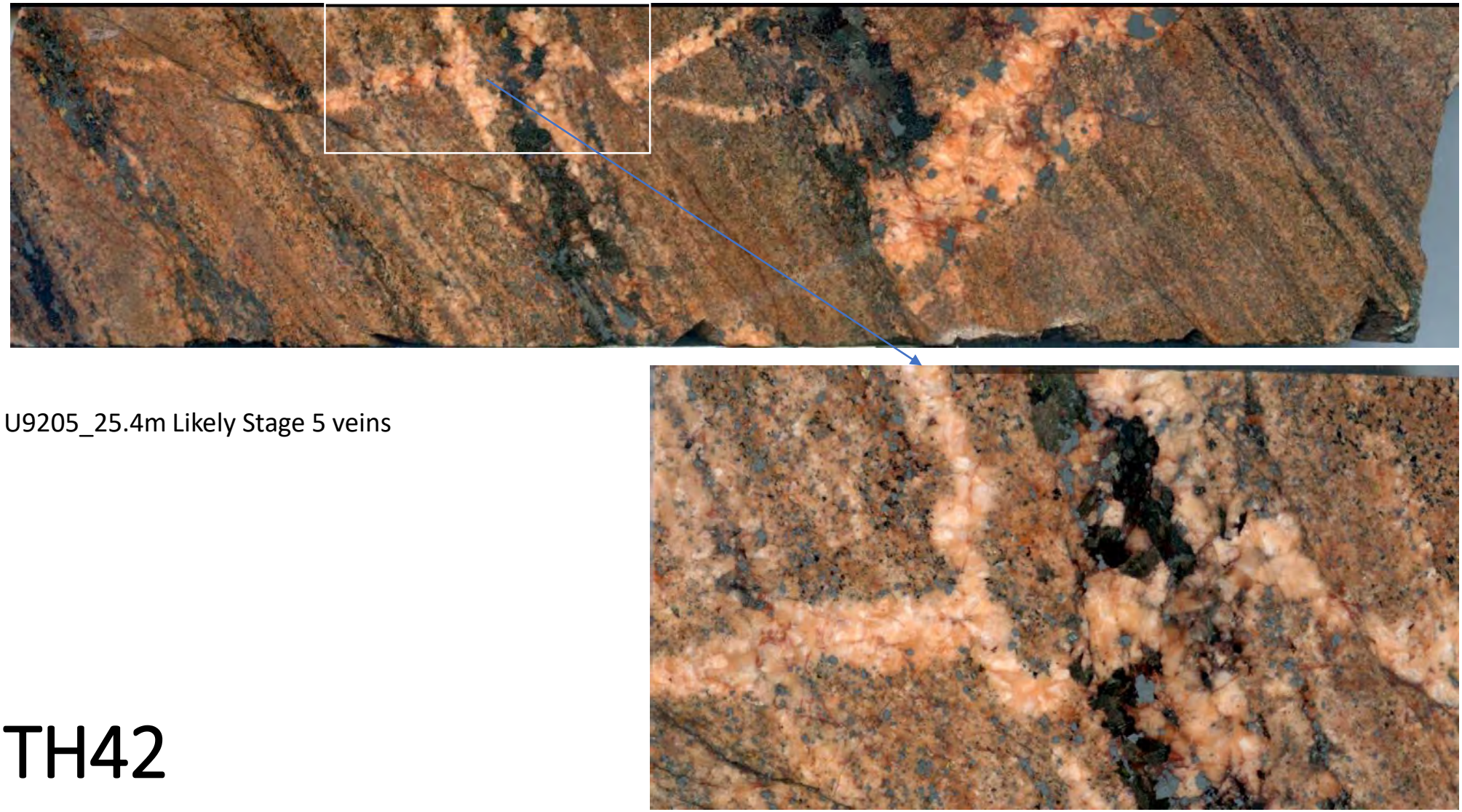
Part 3B- Drill core samples

DH. U9205

TH41



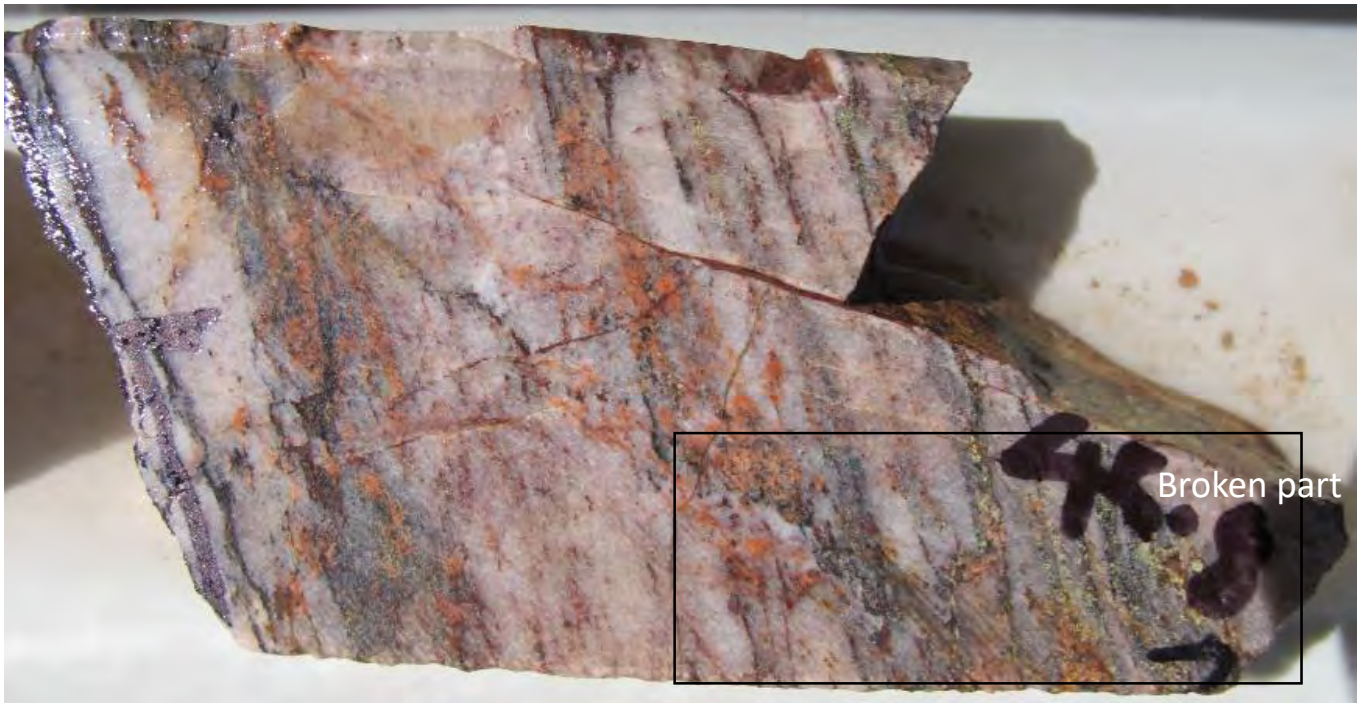
U9205_8.1m: magnetitic Cal-silicate

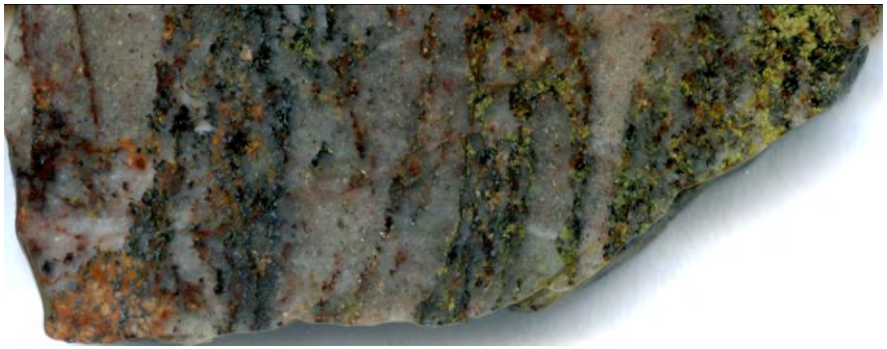


U9205_25.4m Likely Stage 5 veins

TH42

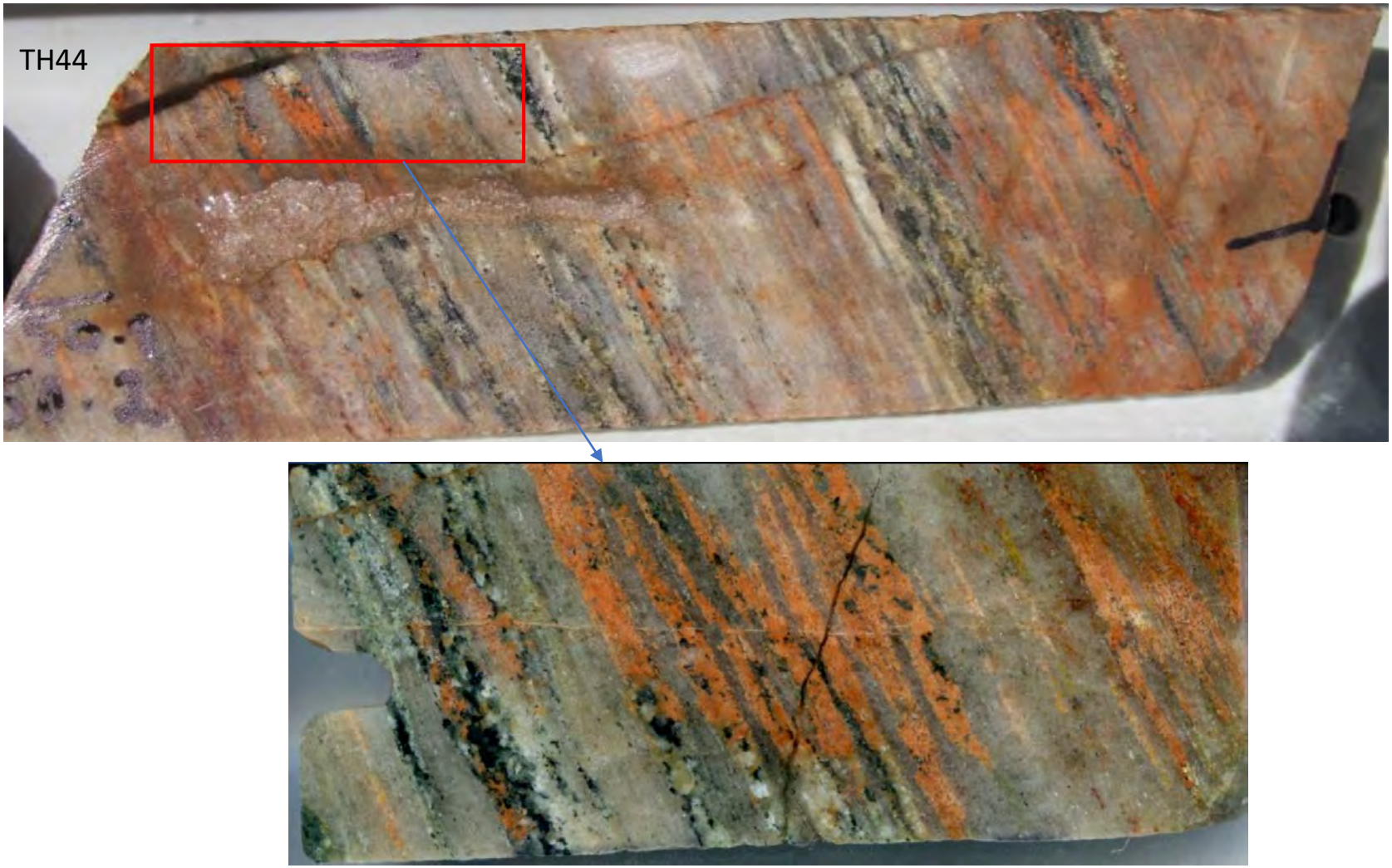
TH43





U9205_45.8m. Au rich assay ~7g/t. intense silicified unit

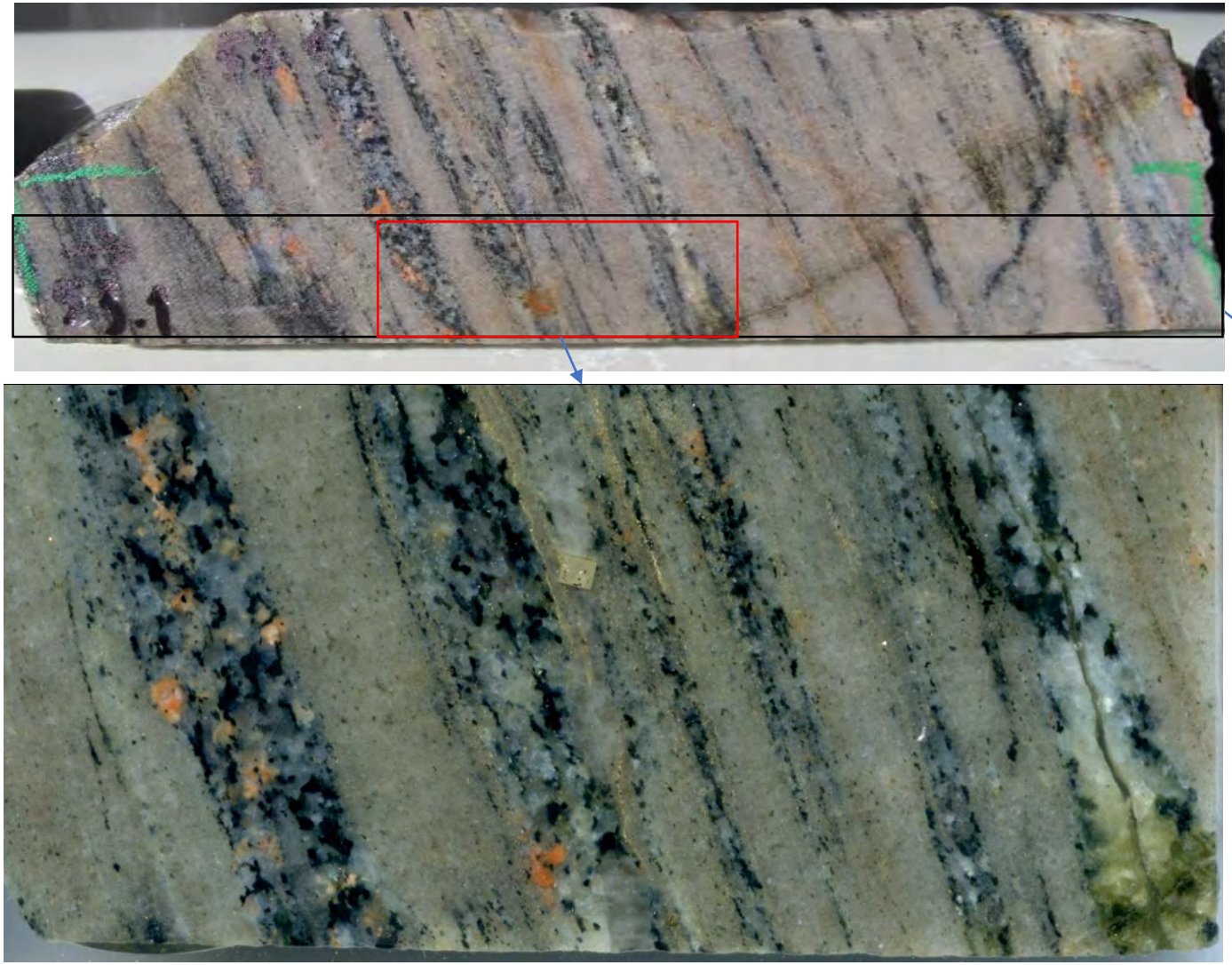
TH44



U9205_50.1: intense silicified unit; checking the alteration of Au mineralization which is a few meters upper the ore

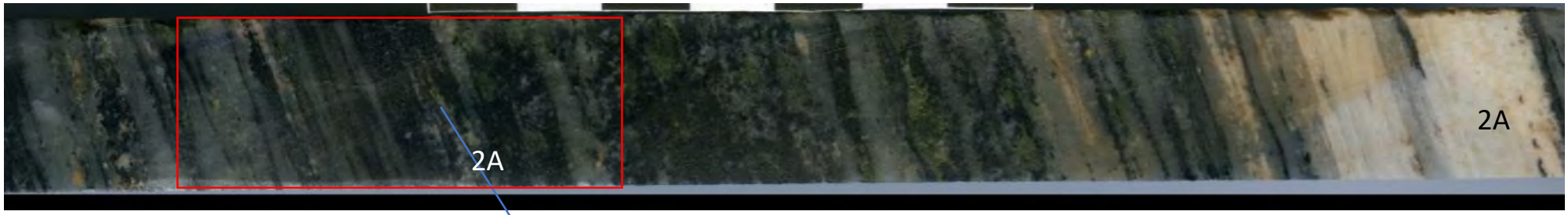
TH45

TH45



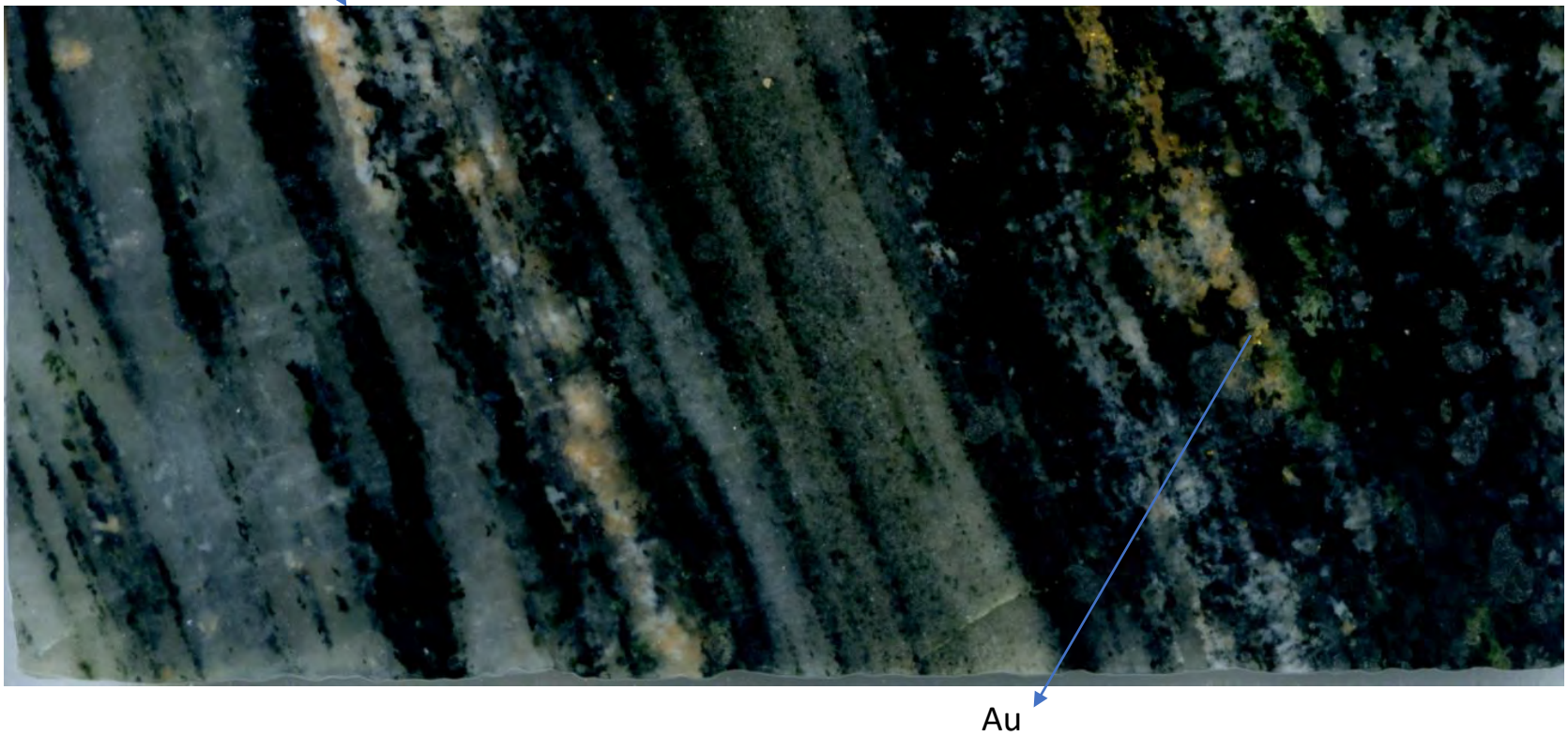
Sampling lower half

U9205_ 53.1m: Alteration close to ore body; intense silicified unit



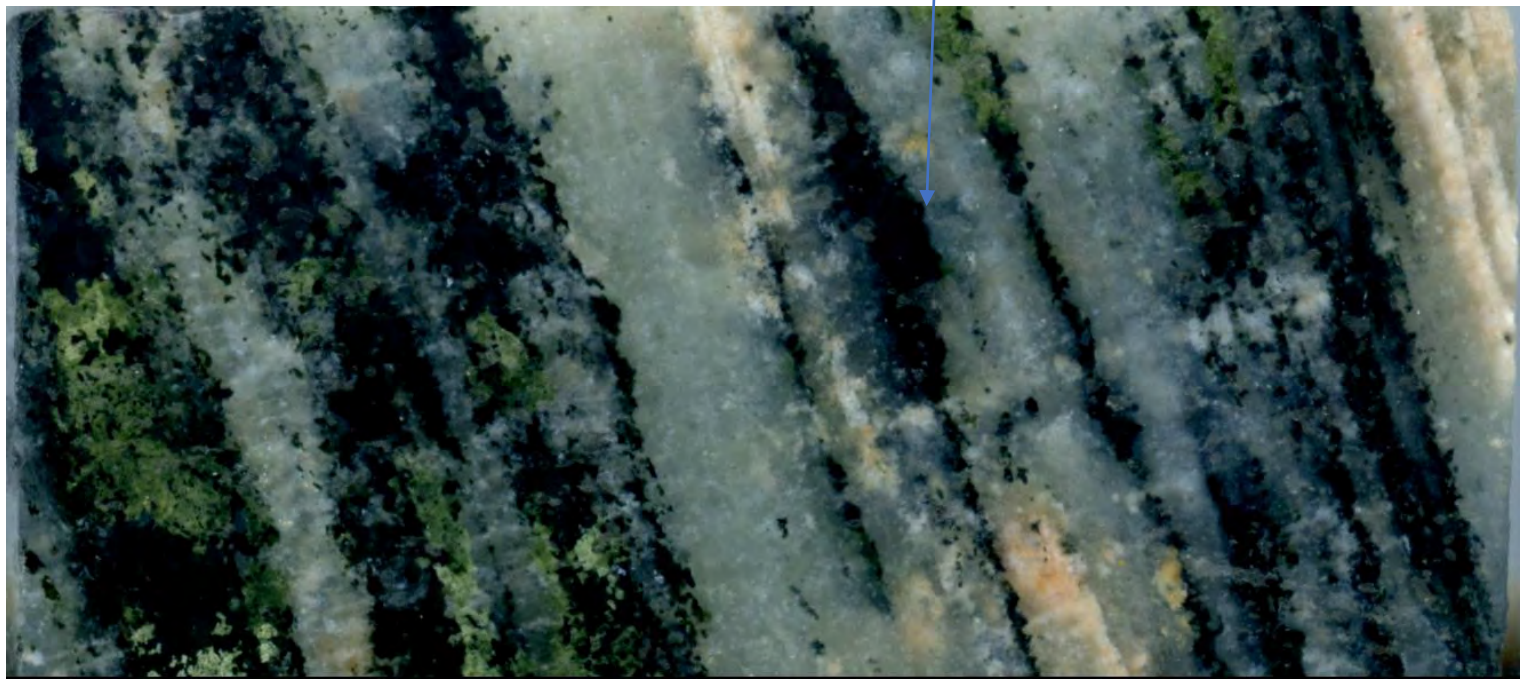
TH46

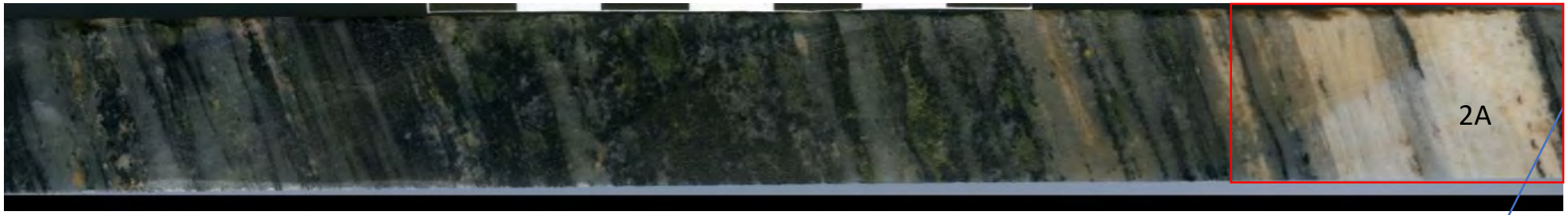
U9205_ 54.05m:
Au rich in quartz-feldspar alteration, hosted in amphibole-rich calc-silicate that was intensely silicified



TH47

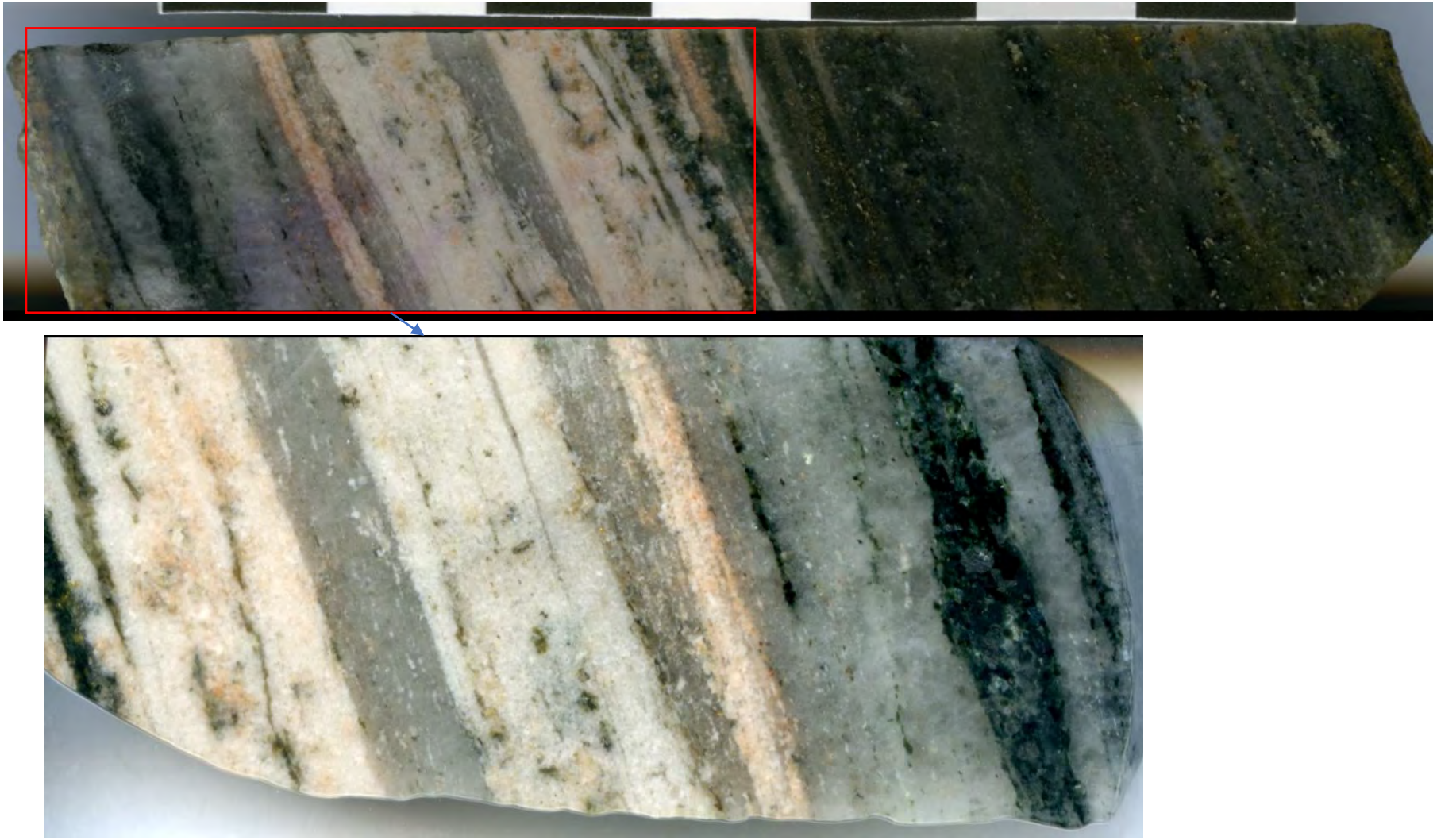
U9205_ 54.10m: amphibole-rich calc-silicate with Au





TH48

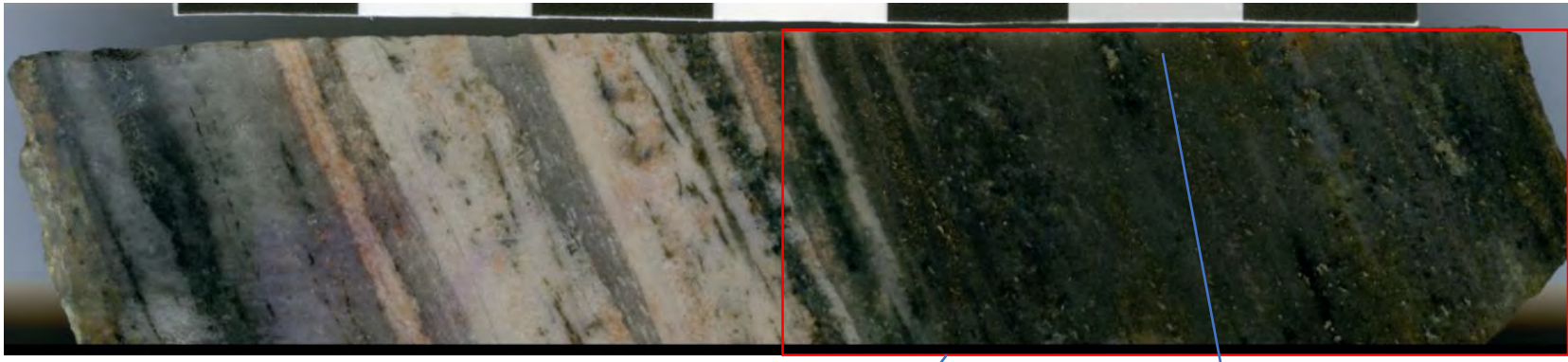
U9205_ 54.15m: Au
quartz-feldspar mylonite

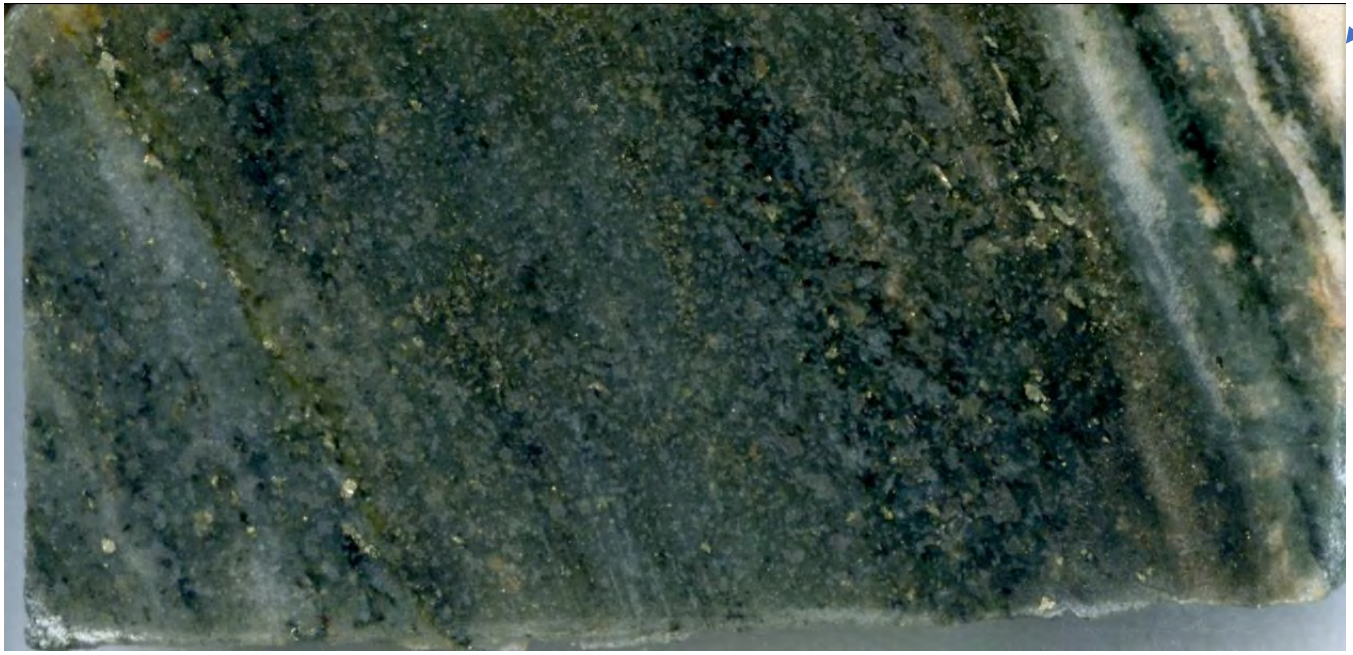


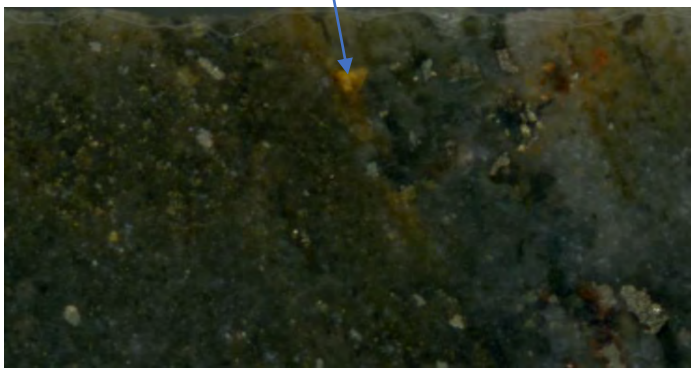
U9205_ 56.2m, side 2: Au-rich quartz-feldspar mylonite

TH49

TH50

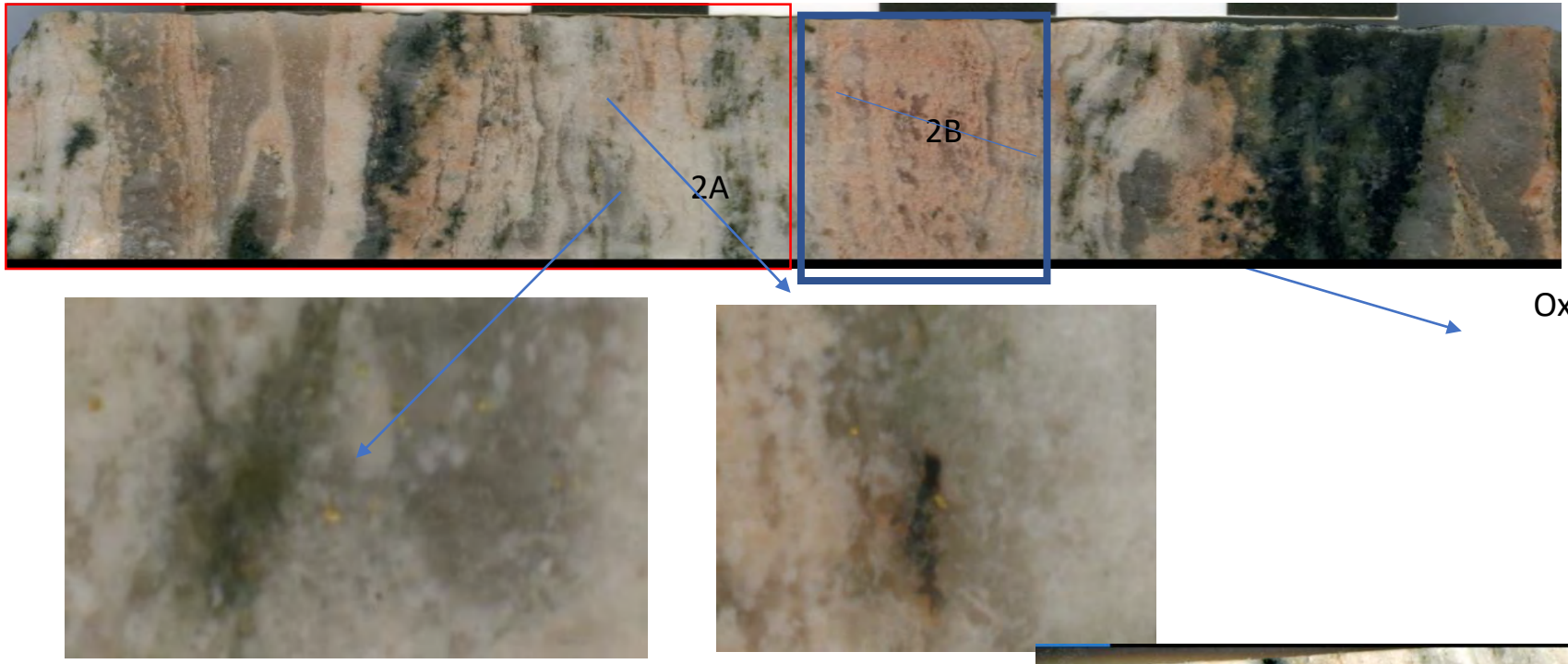






U9205_ 56.25m, side 2_intense silicified unit next to quartz-feldspar alteration

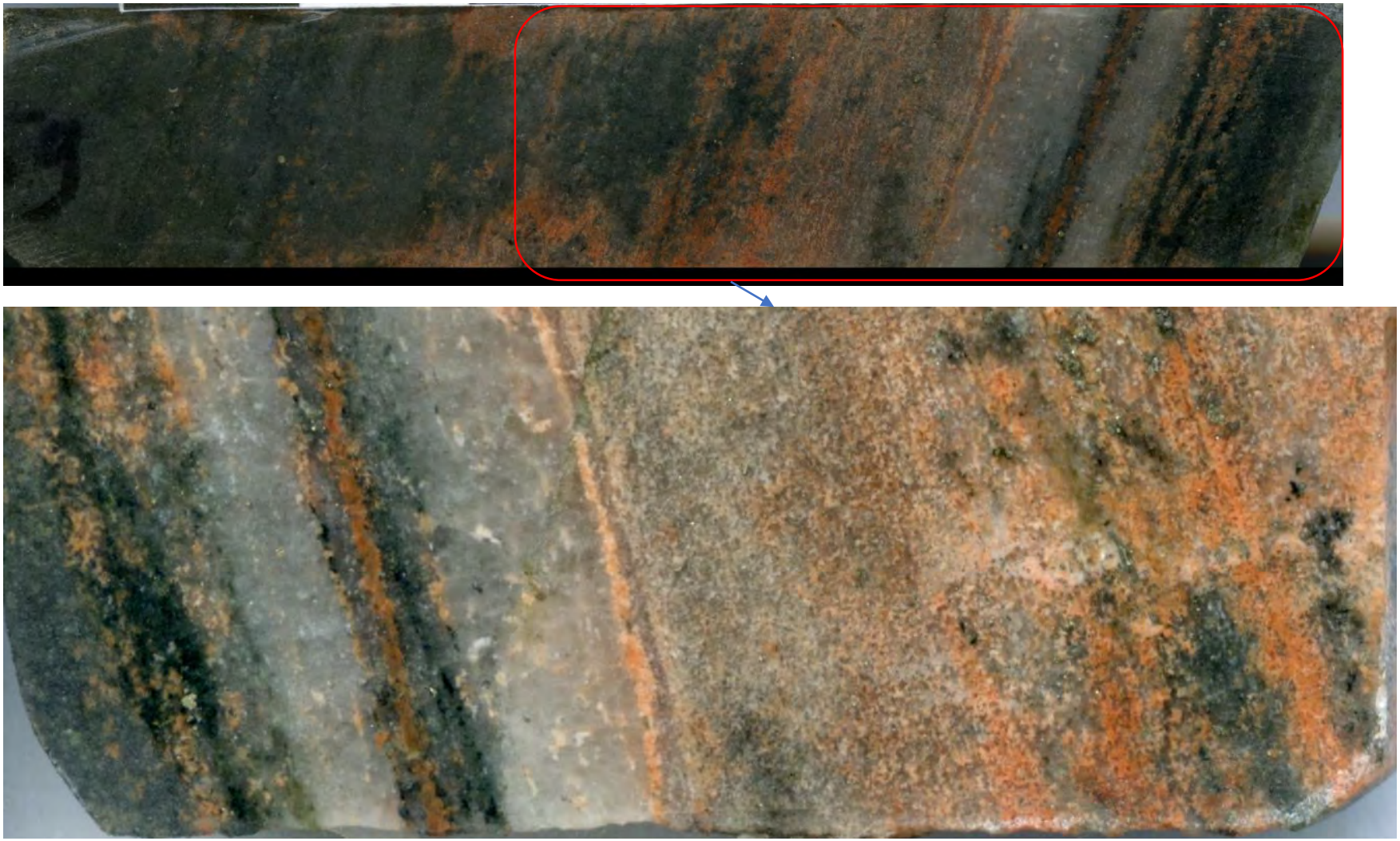
TH51



Oxygen Isotope

U9205_56.4m: Au-rich quartz-feldspar mylonite

TH52



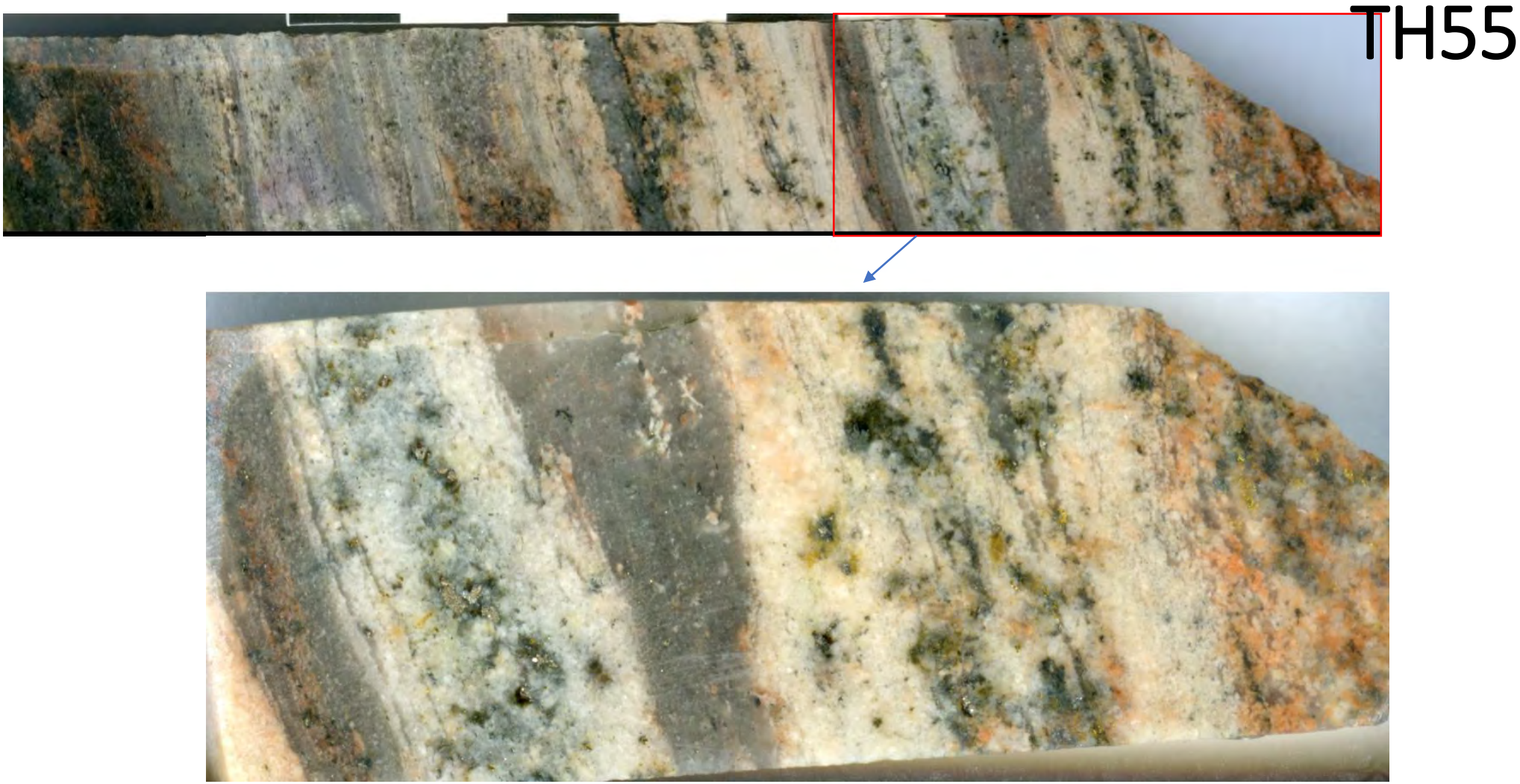
U9205_59.04m: intense silicified unit

TH53

U9205_59.25m: side 1_ quartz-feldspar alteration/ intense silicified unit

TH54

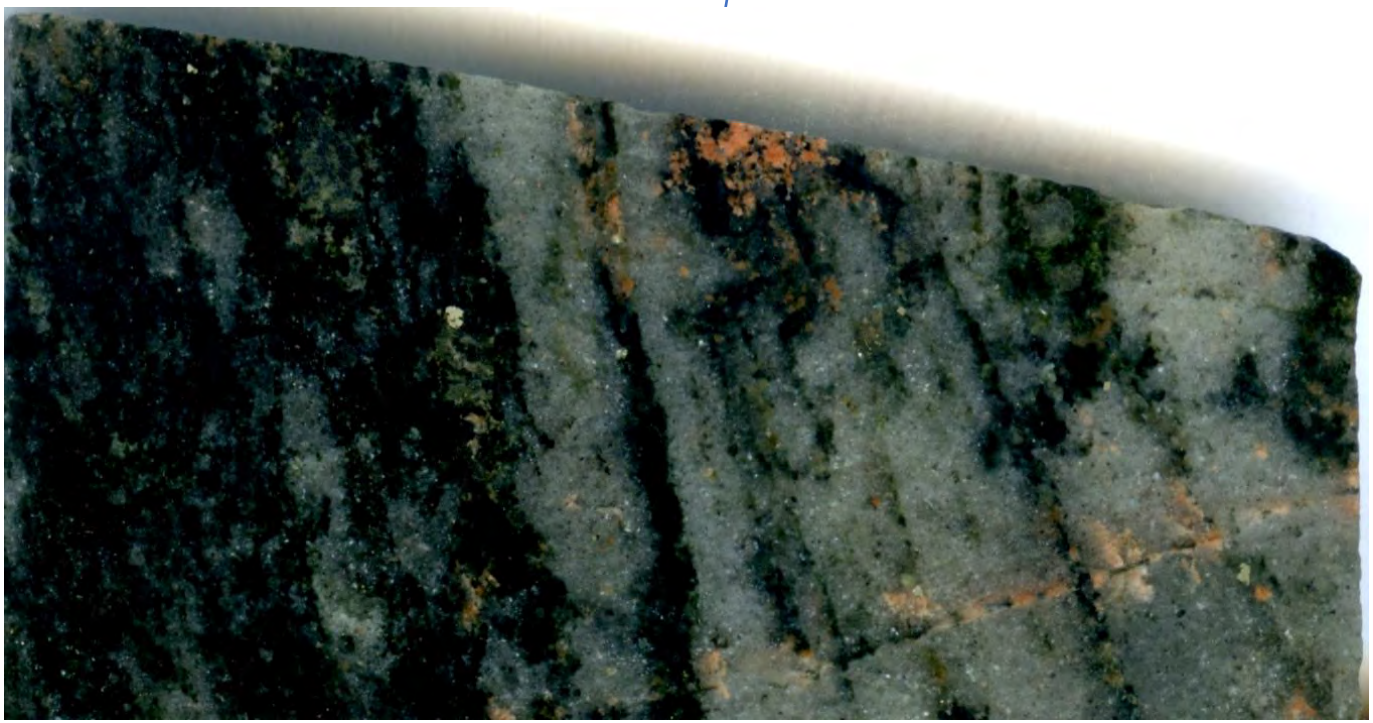
U9205_59.30m: Au-rich quartz-feldspar mylonite



U9205_59.35m side 2: Au-rich quartz-feldspar mylonite

TH56

59.85m: intense silicified unit



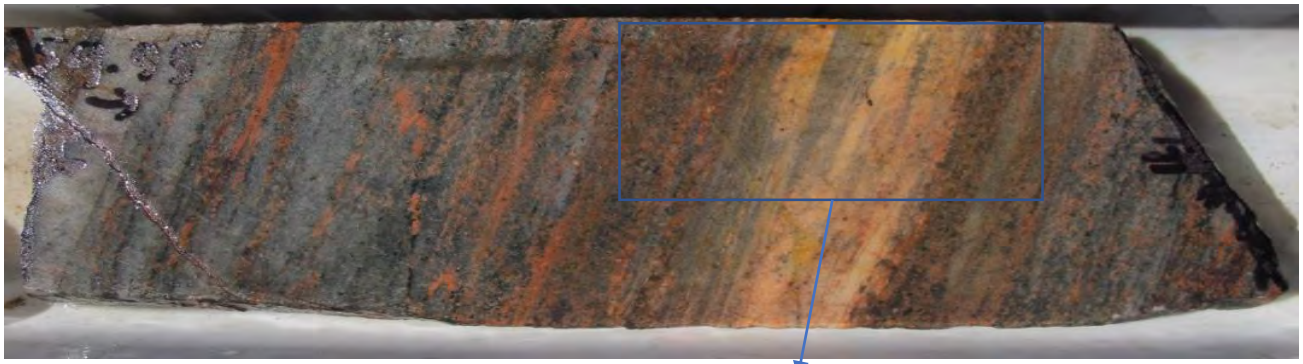
TH57

TH57: similar to TH56

60.3m: intense silicified unit/ quartz-feldspar alteration/migmatite?

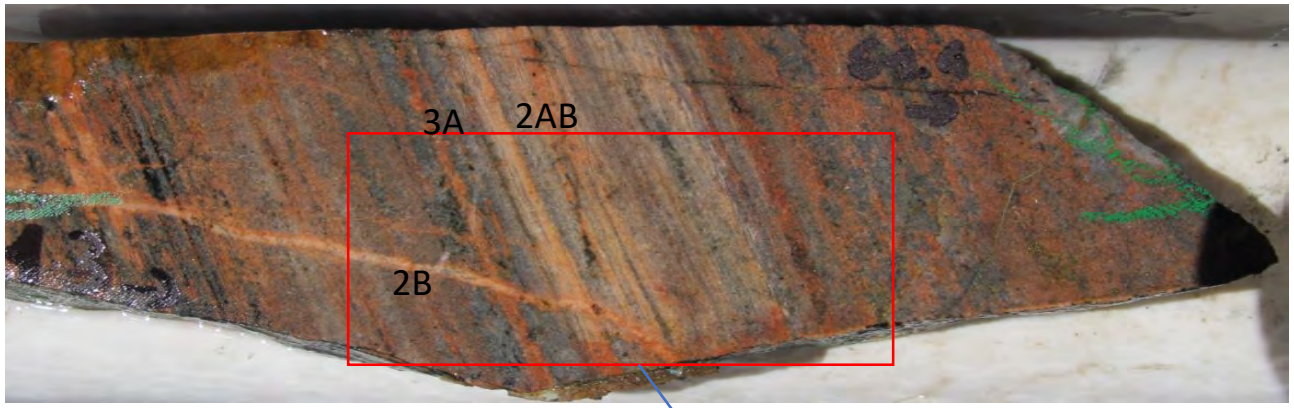
TH58

intense silicified unit/
quartz-feldspar mylonite



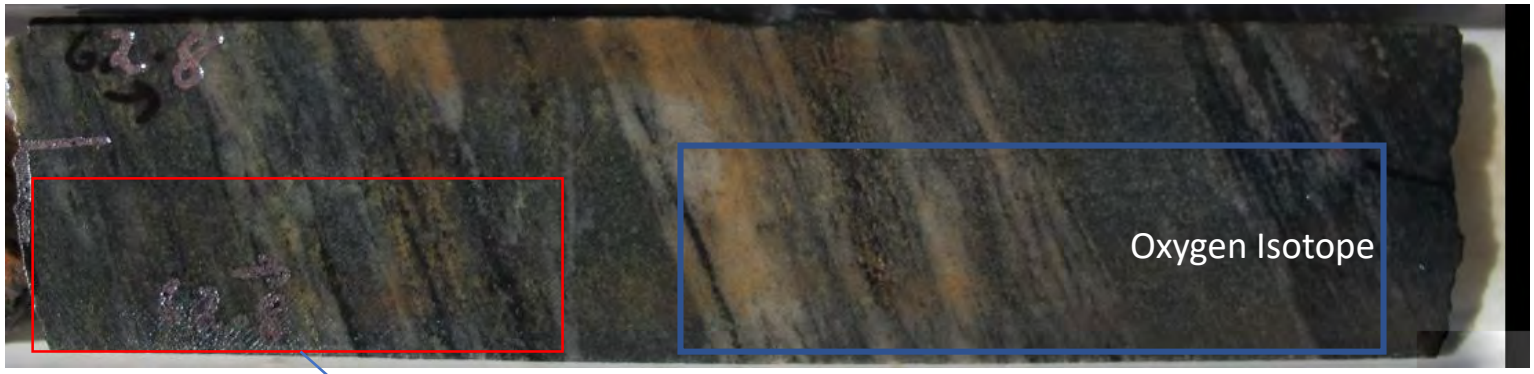
60.6m, something wrong with the original core mark

TH59

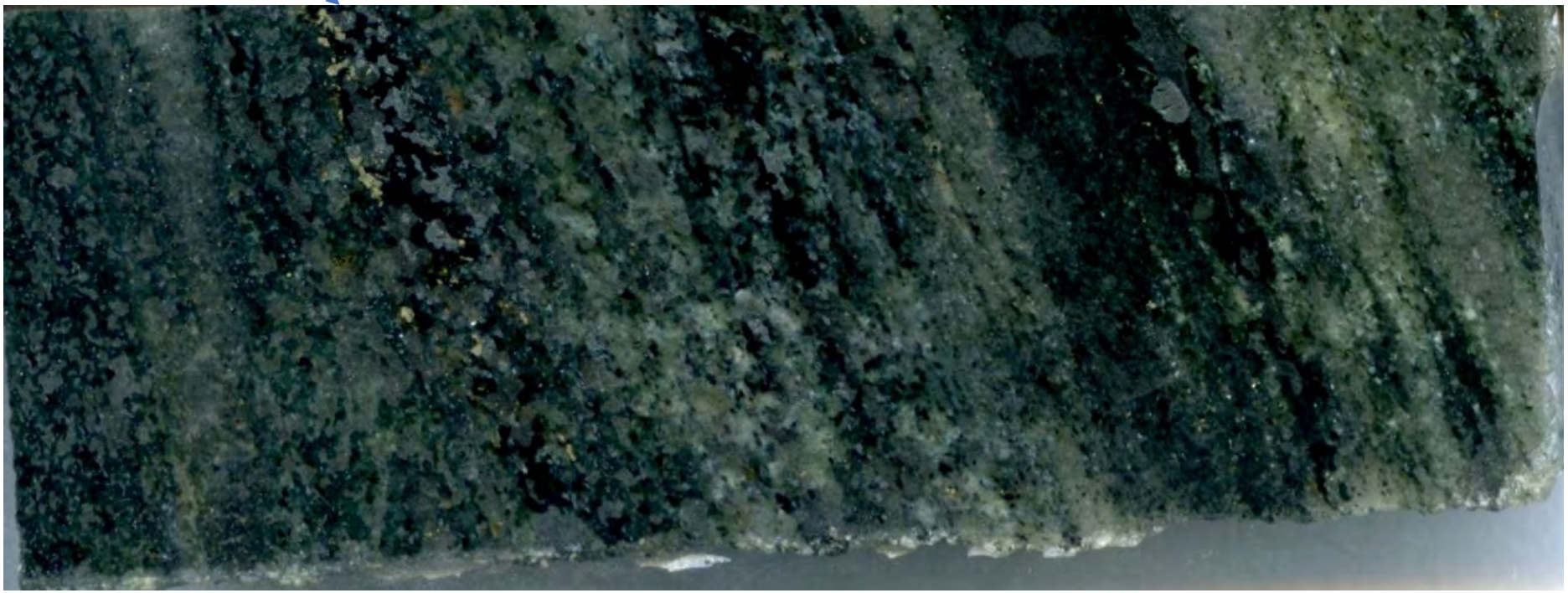


U9205_61.35: the ending interval of Au mineralization (61-62: 0.78ppm)

TH60

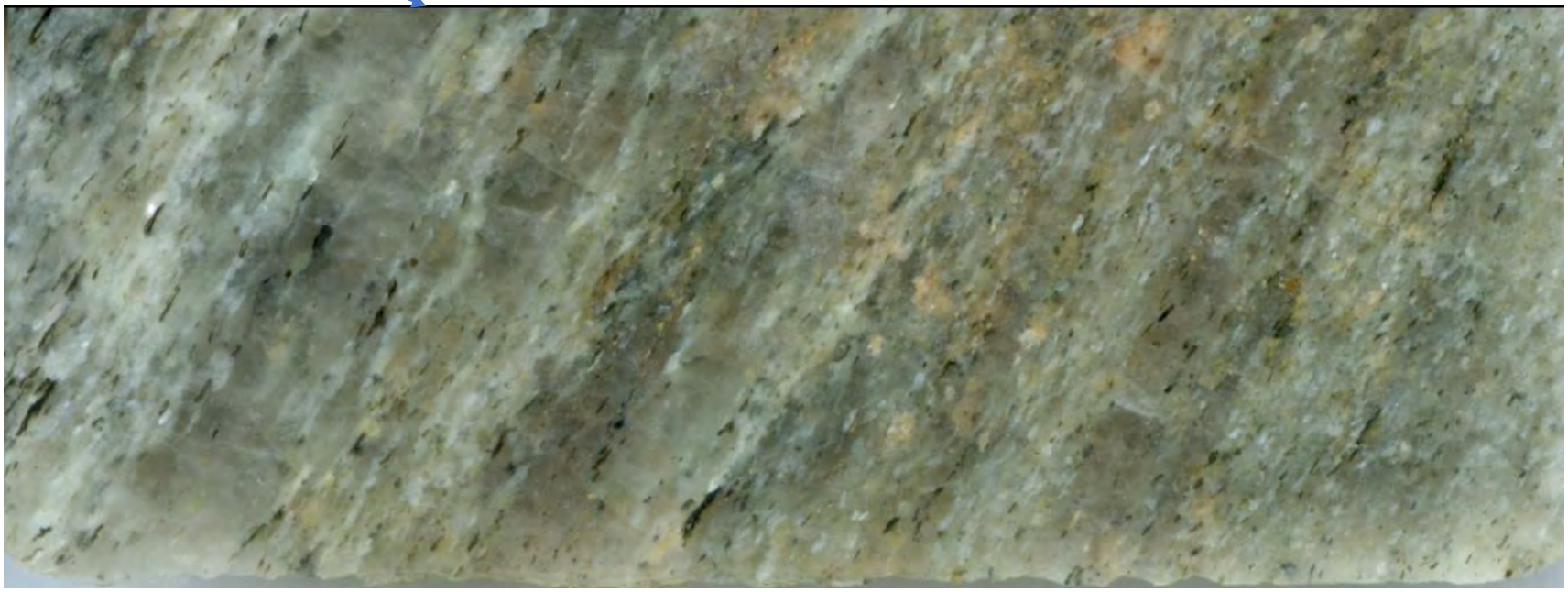


U9205_62.8m:
62-63m: 0.16ppm



TH61

U9205_73.4m

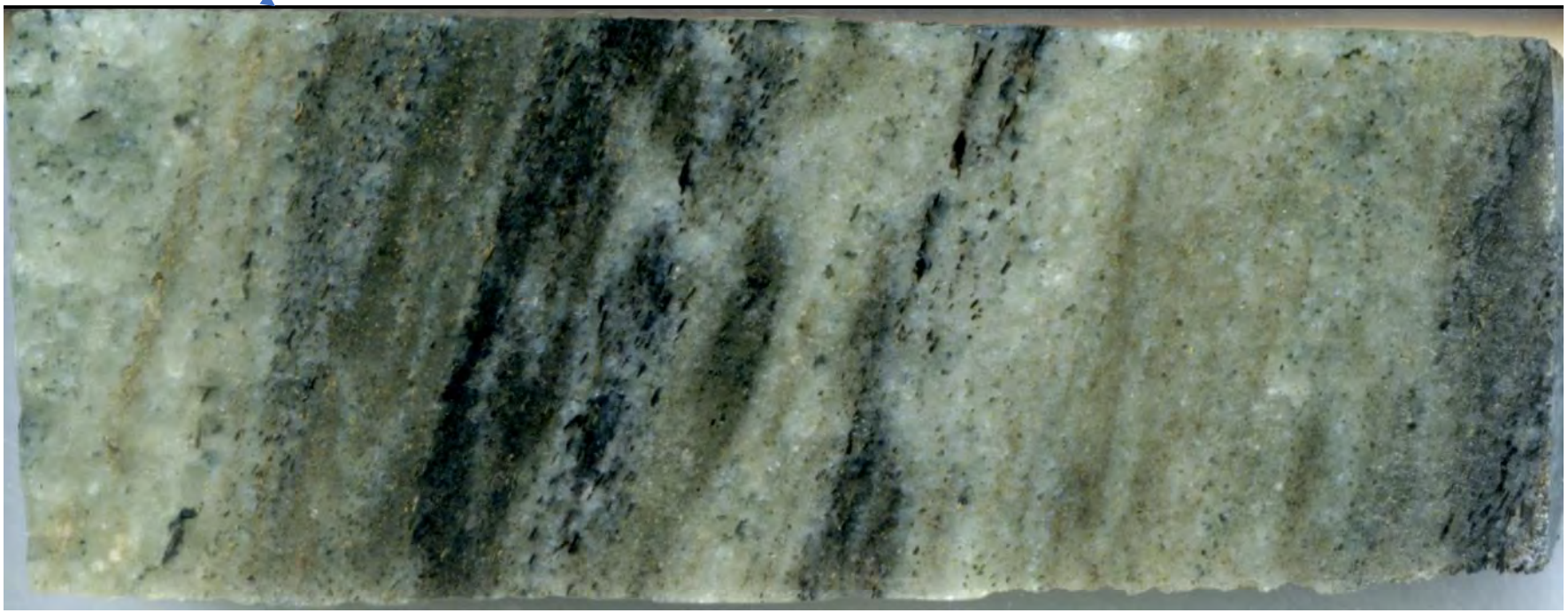


TH62

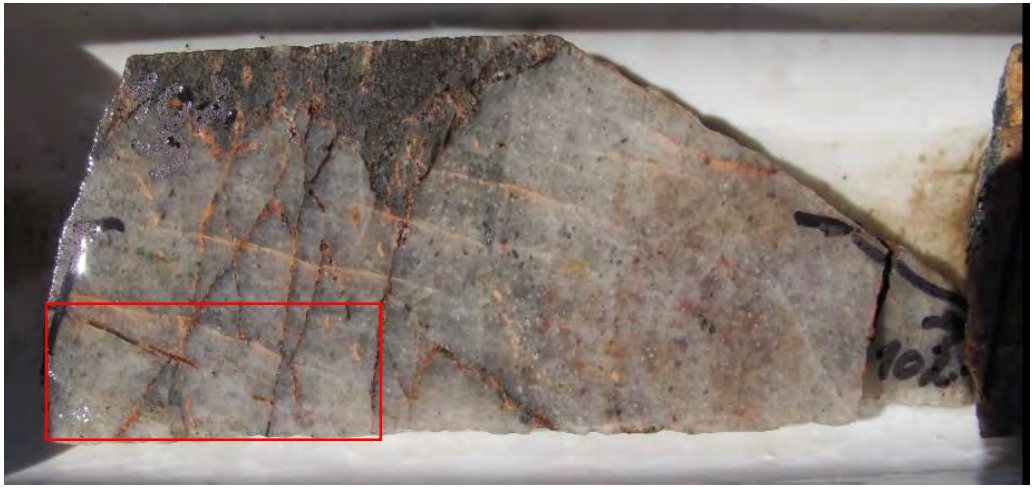
U9205_76.8m: none-Au quartz-feldspar vein/layer

TH63

U9205_86.4m

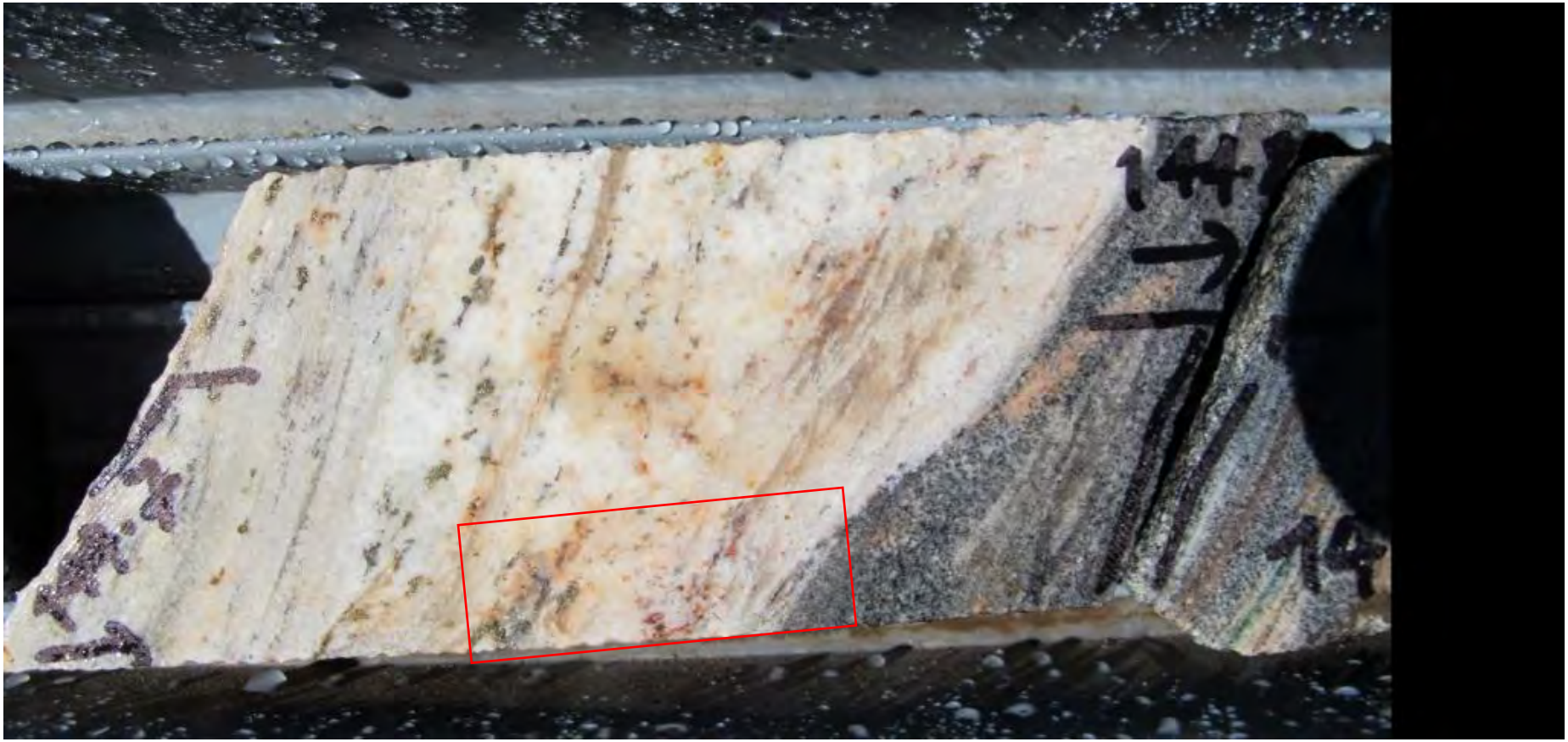


TH64



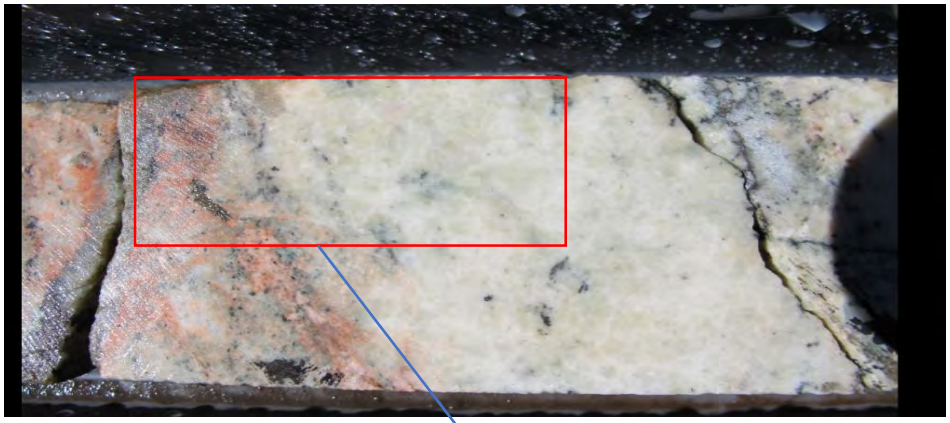
U9205_102m: footwall quartzite, with vein array of feldspar overprint

TH65

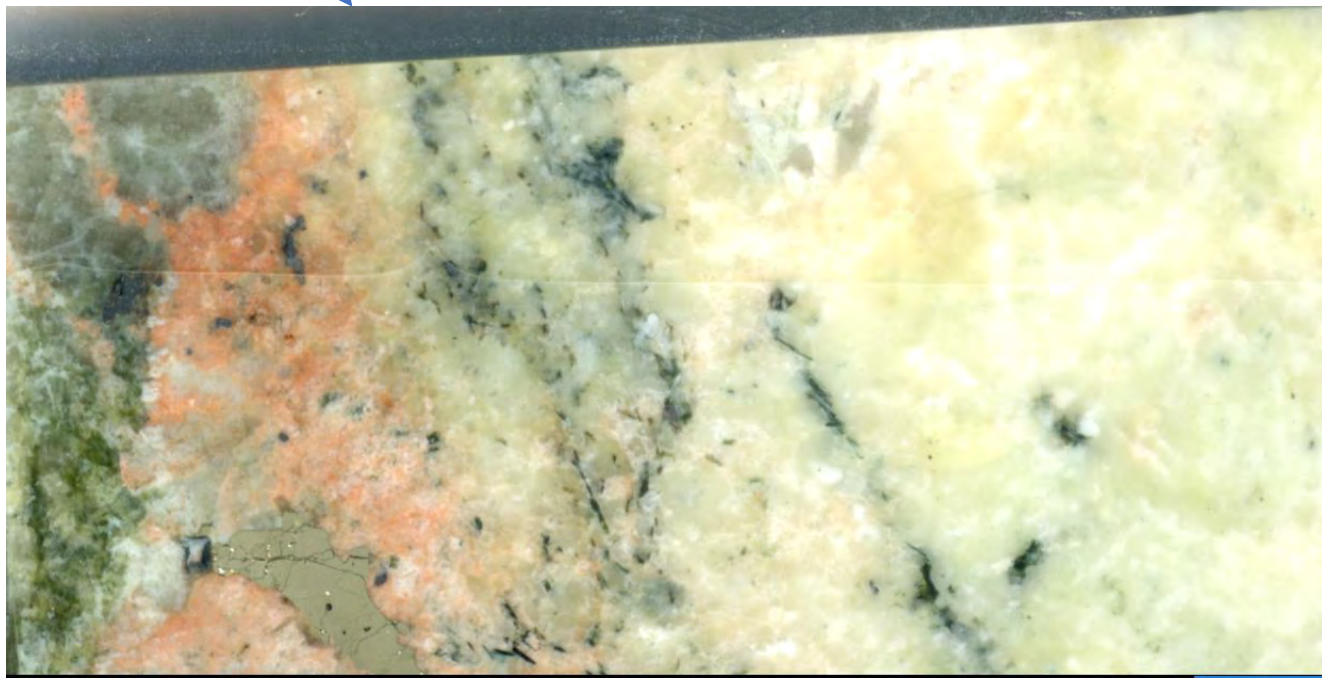


U9205_144.75: late pegmatite

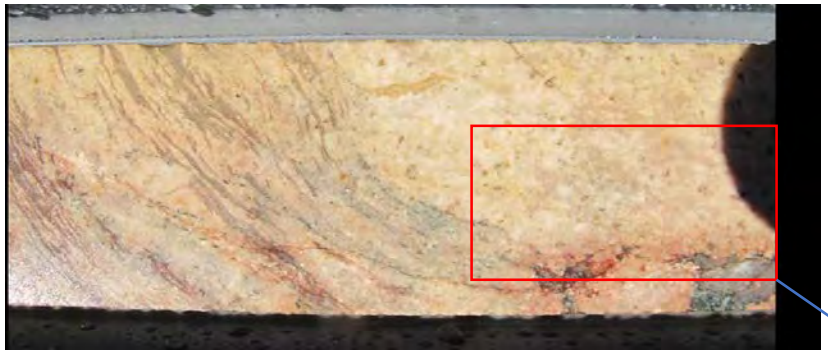
TH66



U9205_149.9m



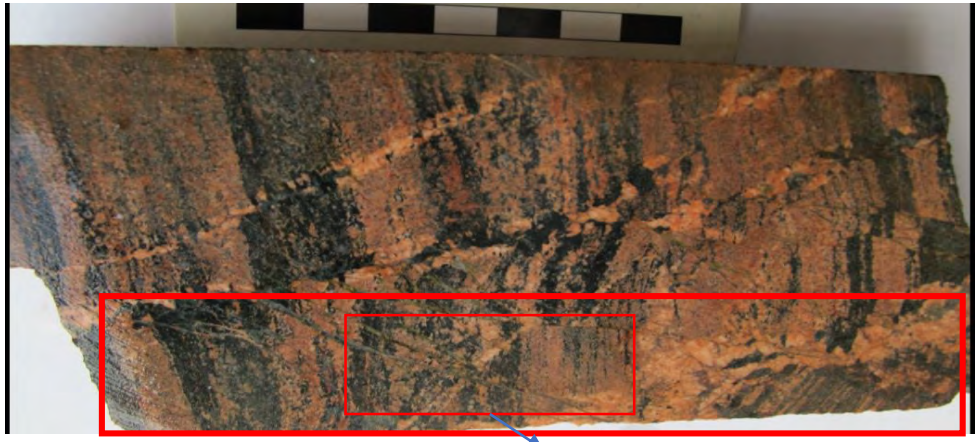
TH67



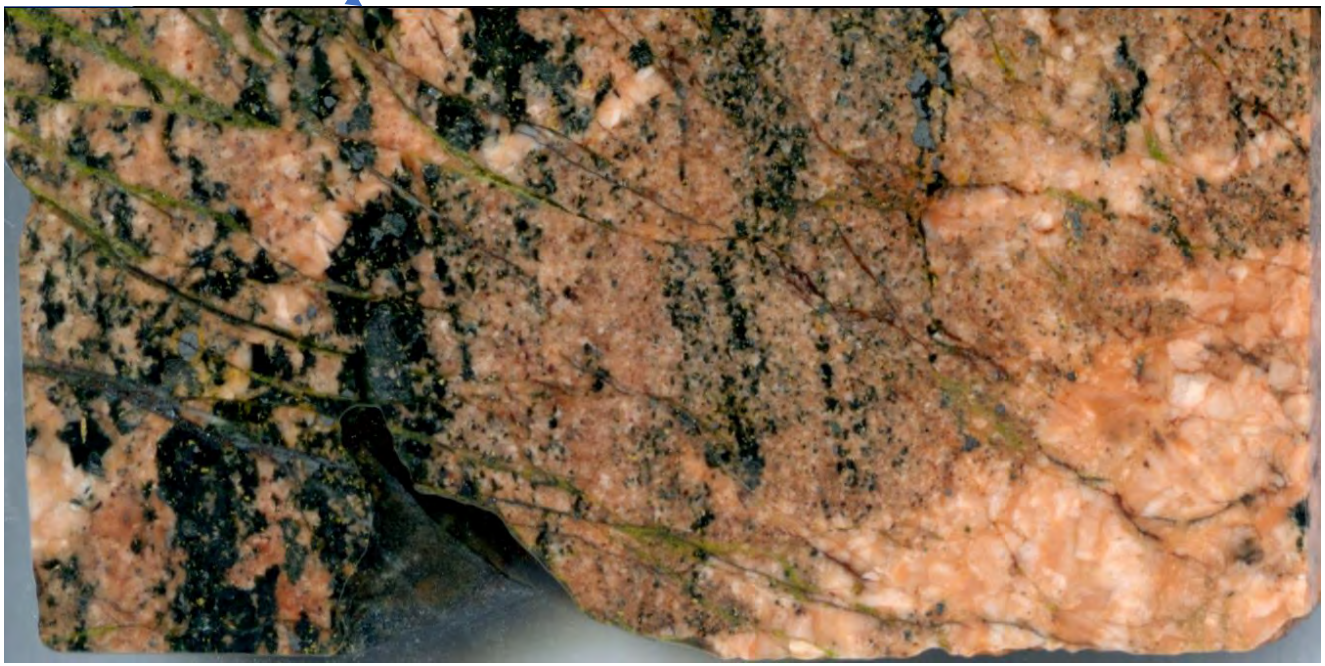
U9205_160.3: late pegmatite

DH. TH007

TH68



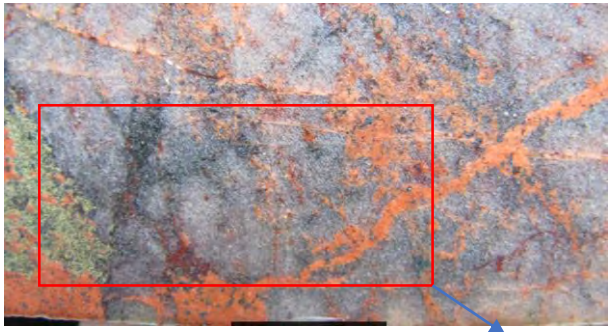
TH007-64.95m



TH69

TH007-74.75m

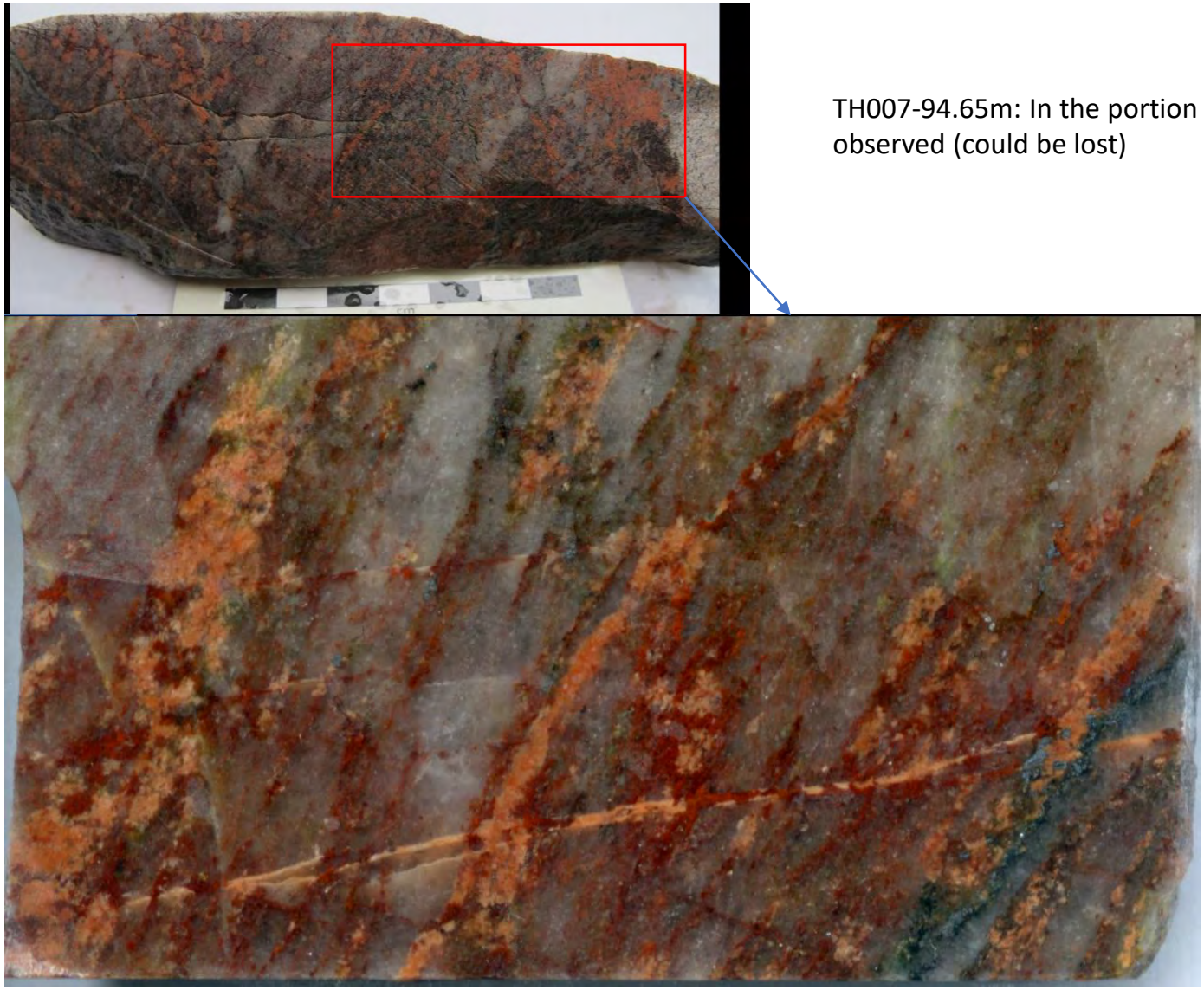
TH70



TH007-93.4m:

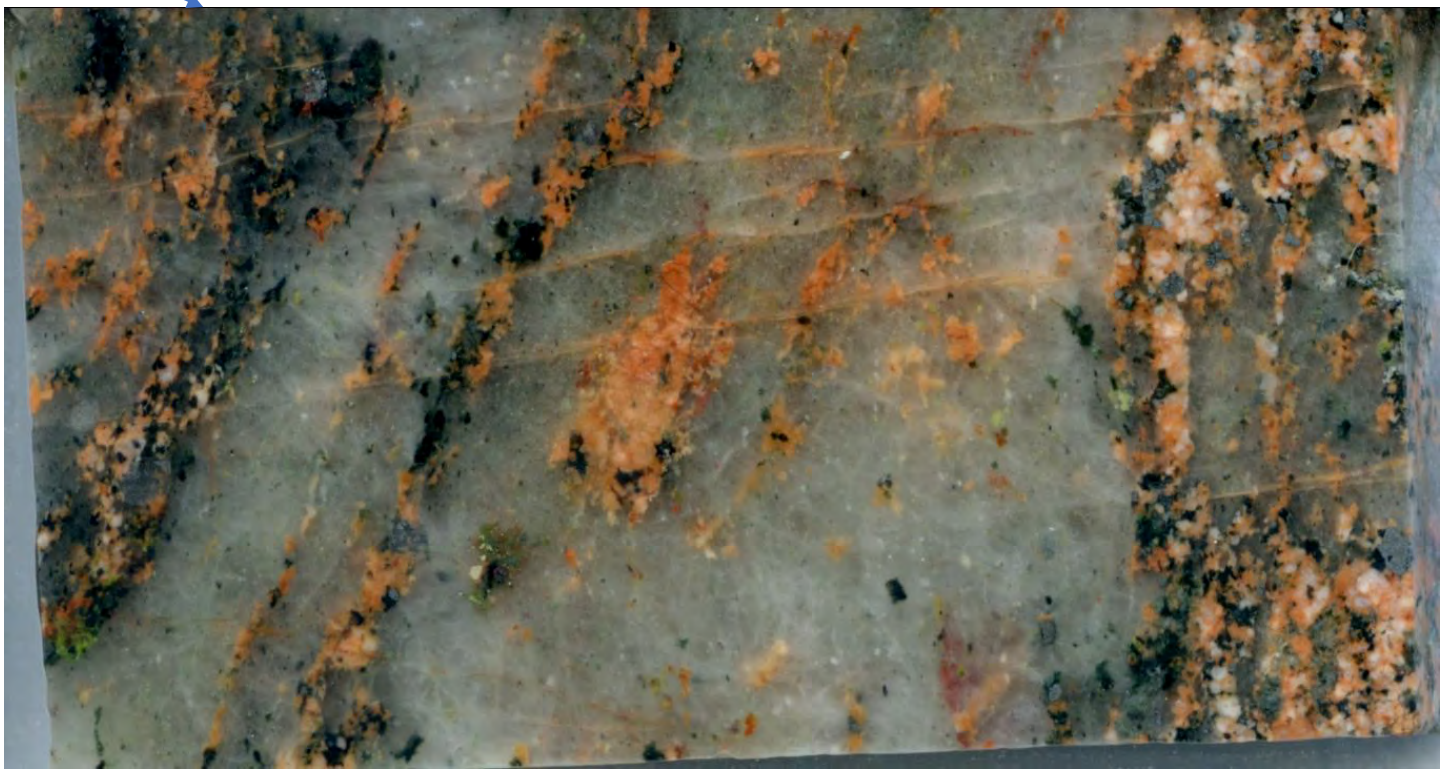
TH71

TH007-94.65m: In the portion of 138.2ppm; no mylonitic fsp-qtz laminate observed (could be lost)

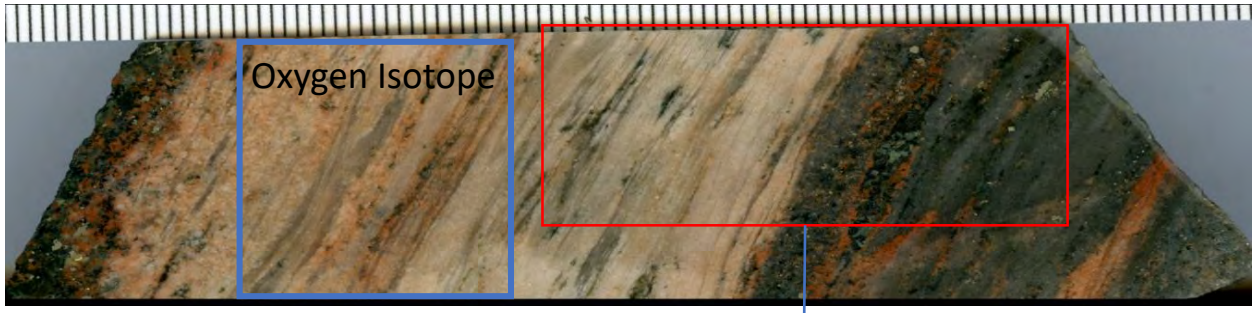


TH72

TH007-99.3m: intense silicified unit overprinted by D3 quartz-feldspar alteration



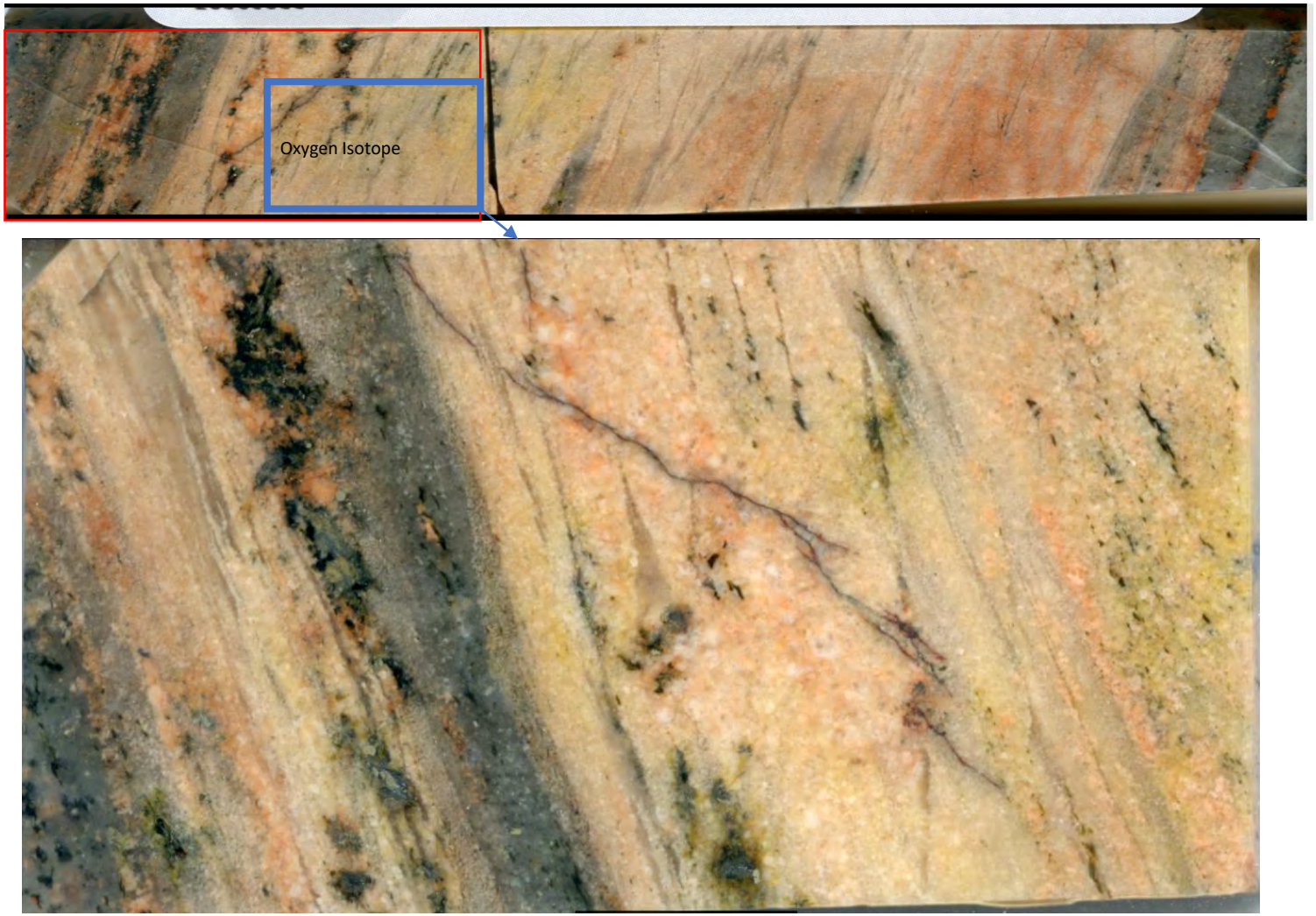
TH73



PTS + FI

TH007-102.3m; 102-103 = 1.96g/t

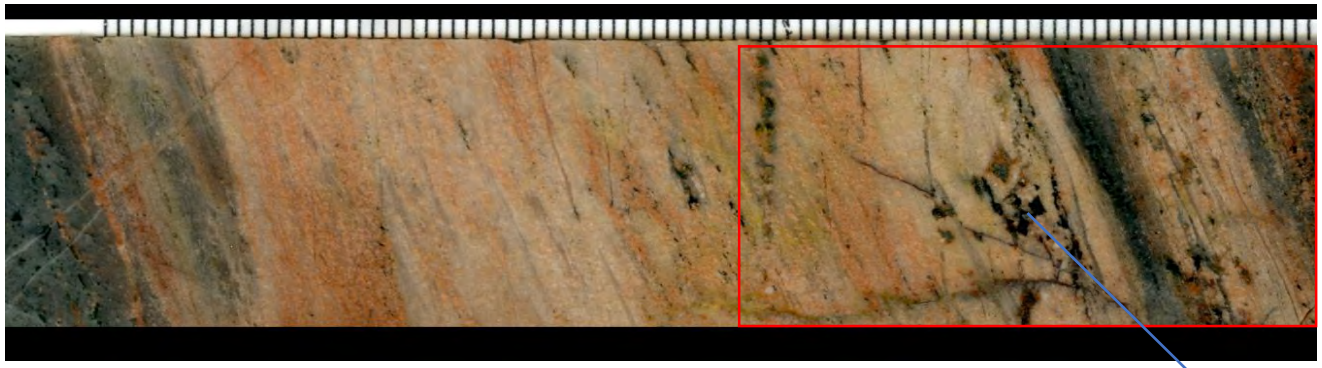
TH74

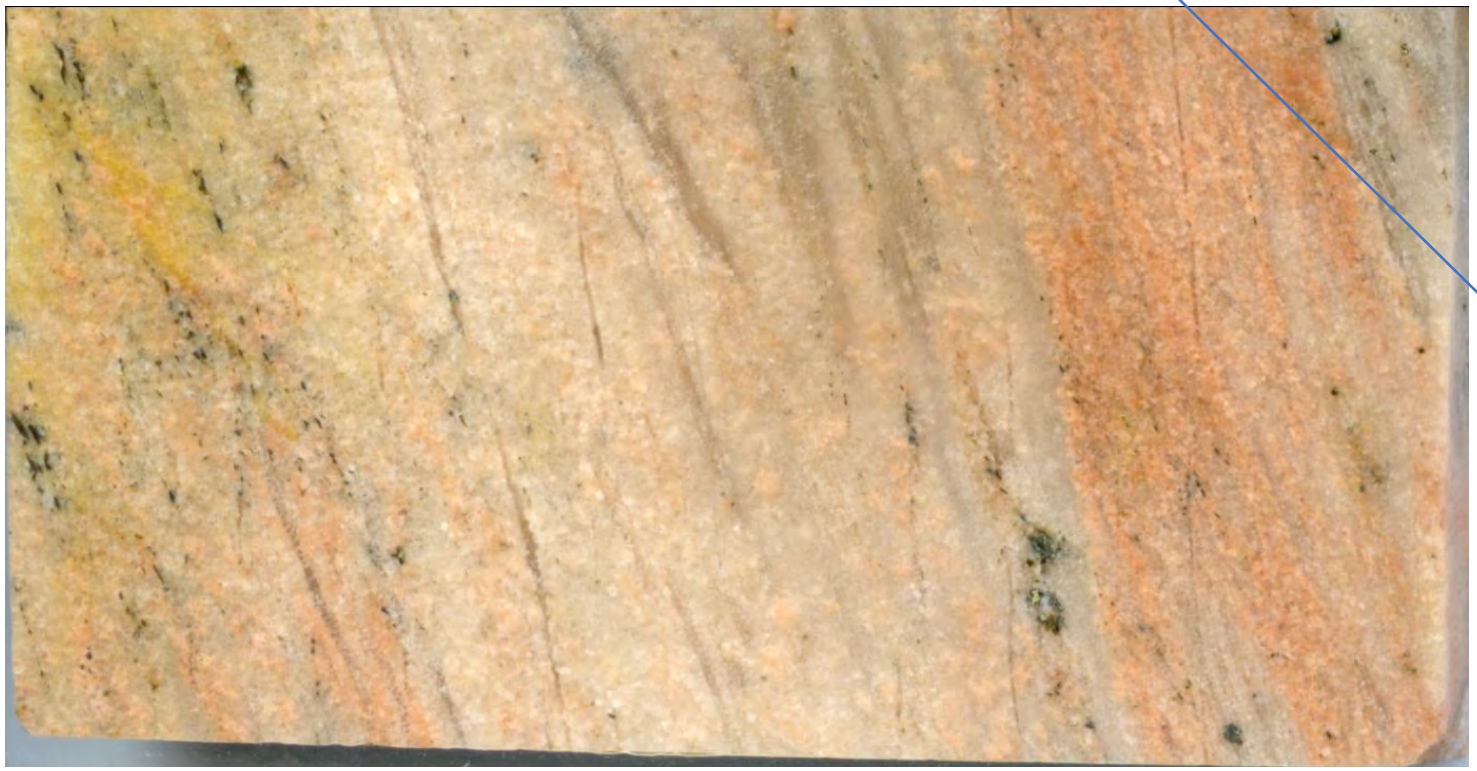


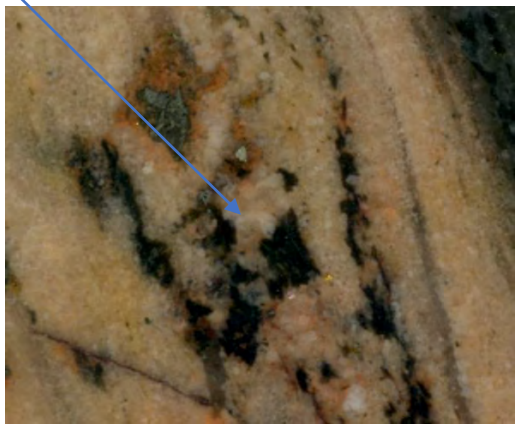
TH007: 106.2; 56.1g/t (106-107m); Au is every where herein

TH75

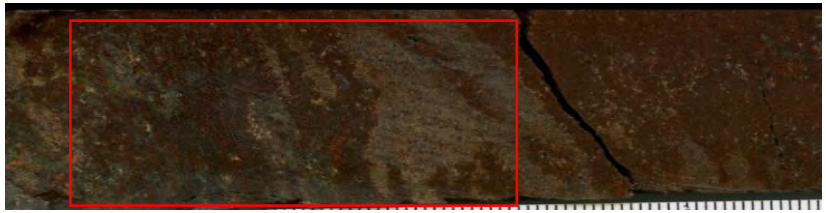
TH007: 106.25m; 56.1g/t



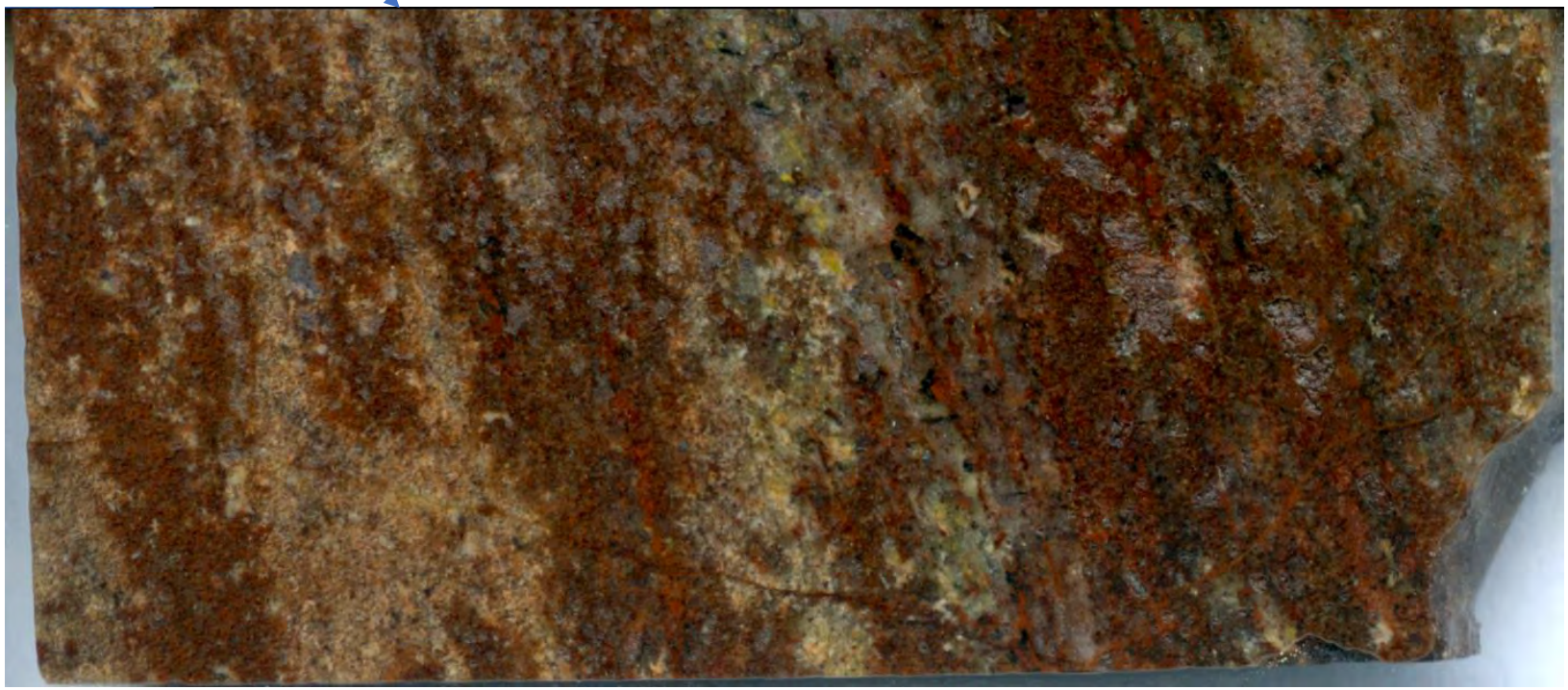




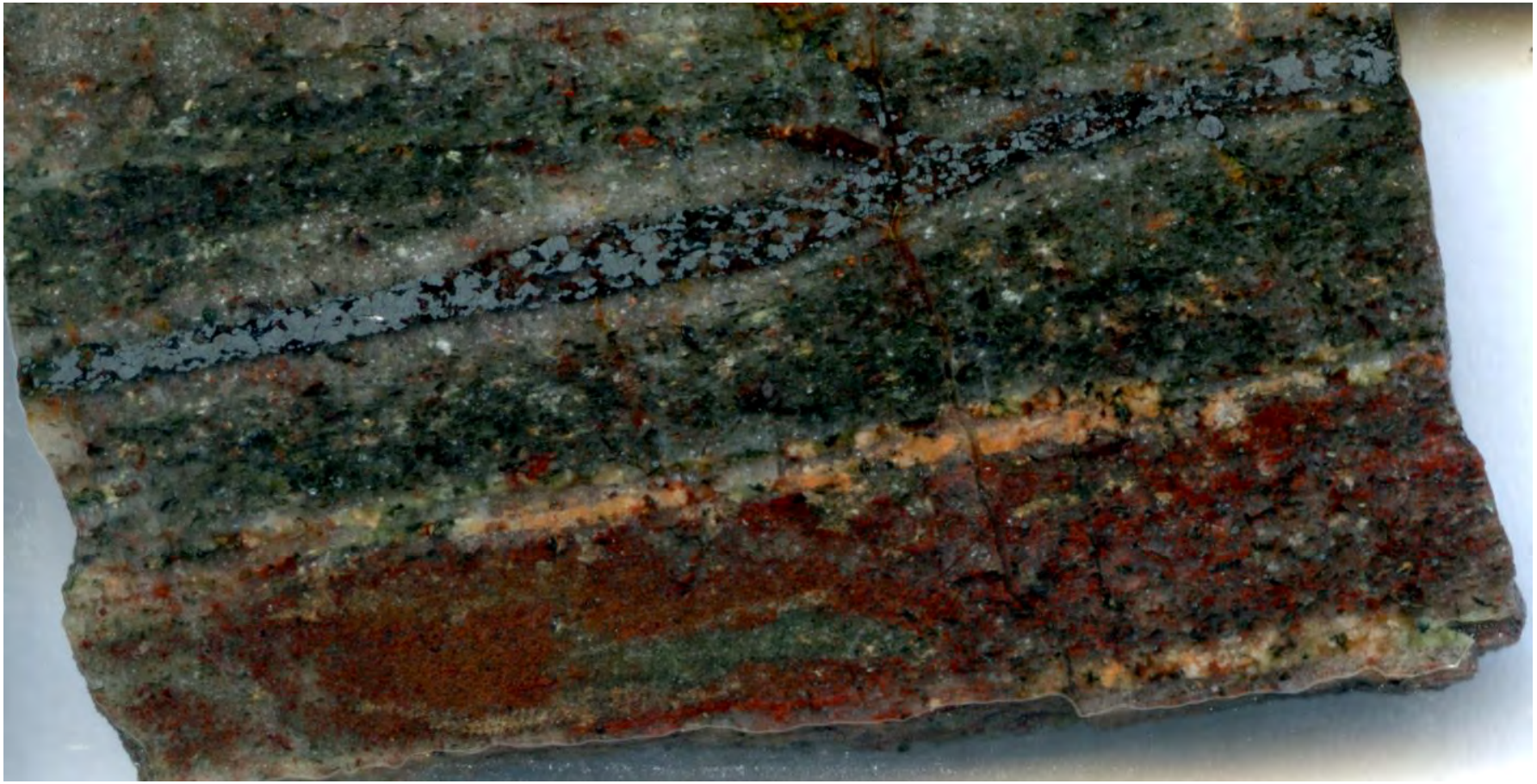
TH76



TH007-110.6m: in the meter of 211g/t (110-111m). No Au observed by naked eyes from this specimens



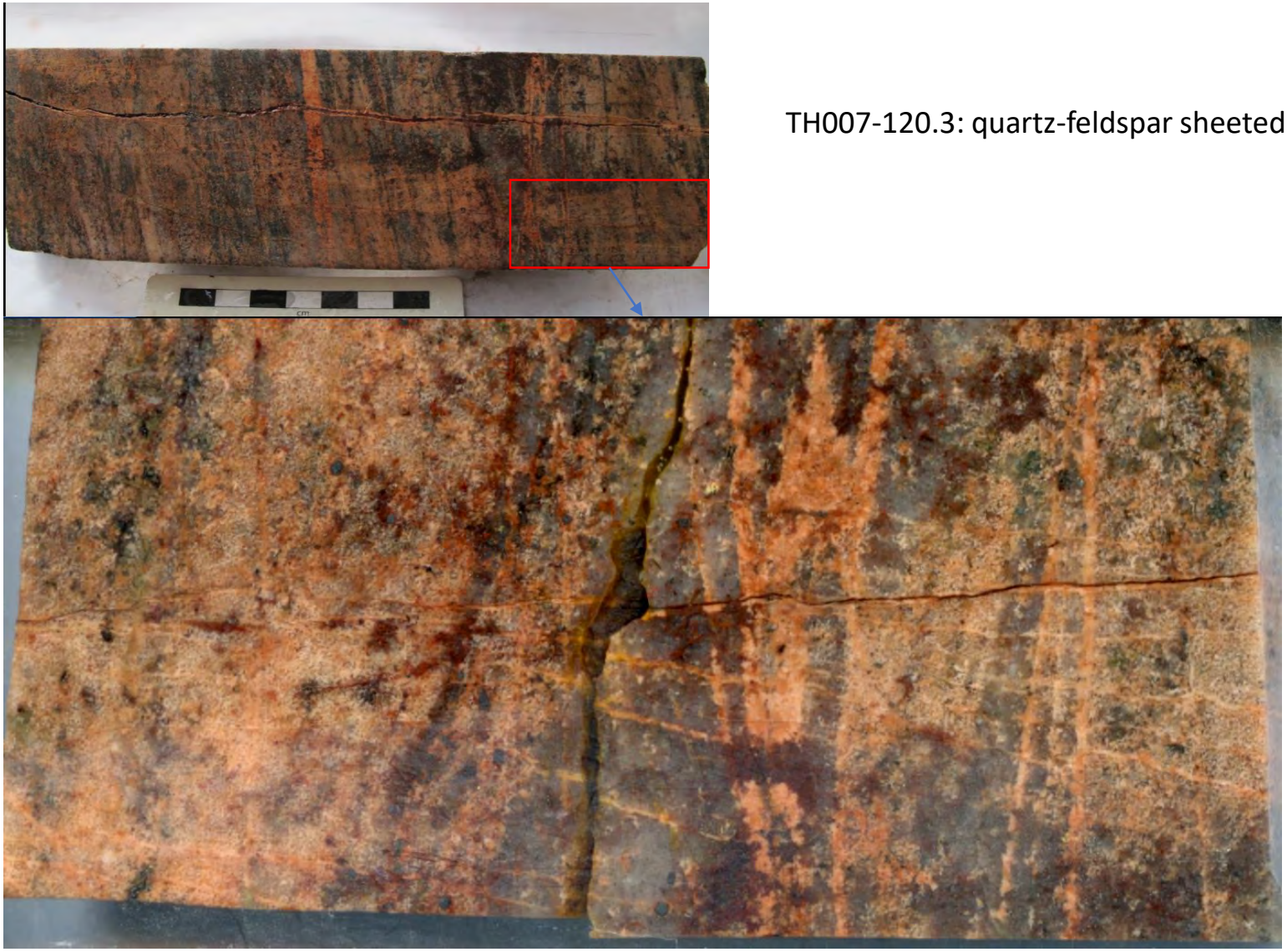
TH77



TH007-116.8m: in the portion of 0.7ppm, ending the ore zone

TH78

TH007-120.3: quartz-feldspar sheeted feeder veins

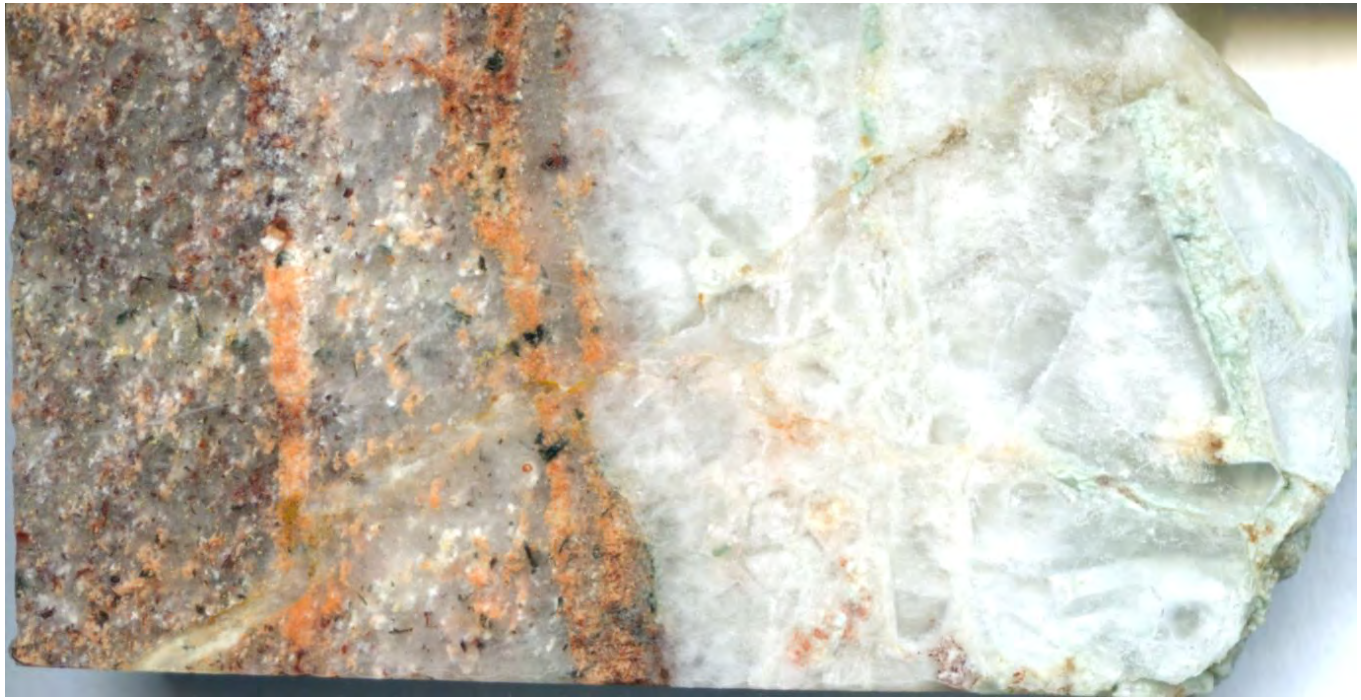


TH79

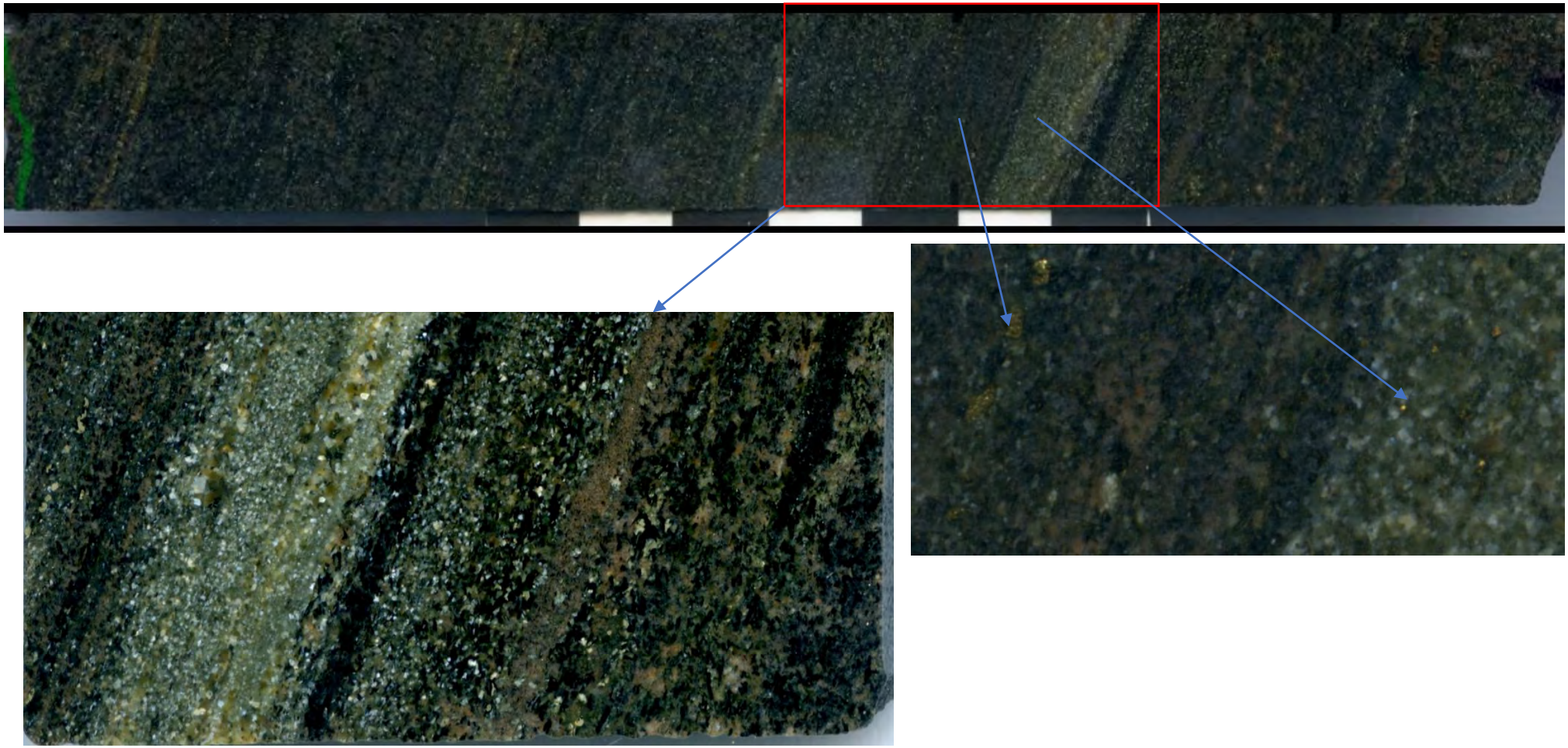
TH007-127.4: Metapelite`

TH80

TH007-137: D_4 brecciation of qtz and green clay minerals cutting D_3 alteration



DH. U8506



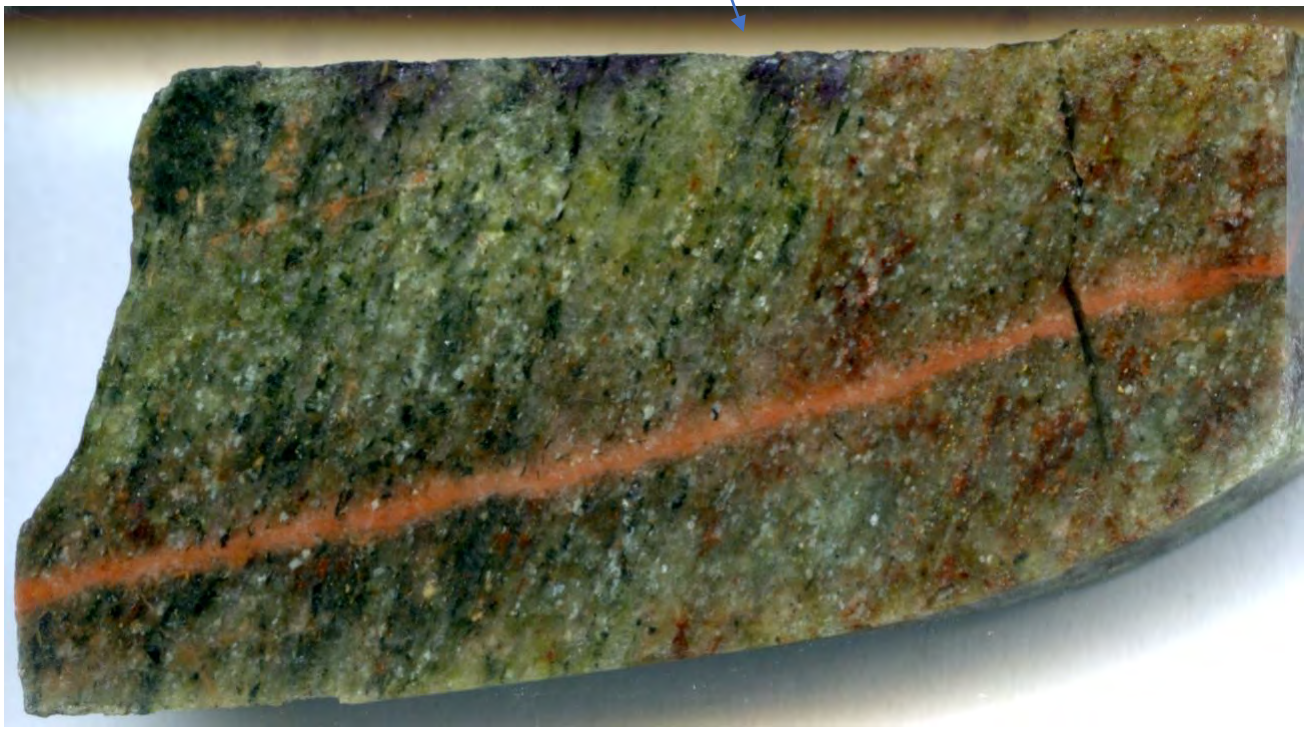
U8506- 122.7m_TH81 Cpy and Py in Amp

TH81

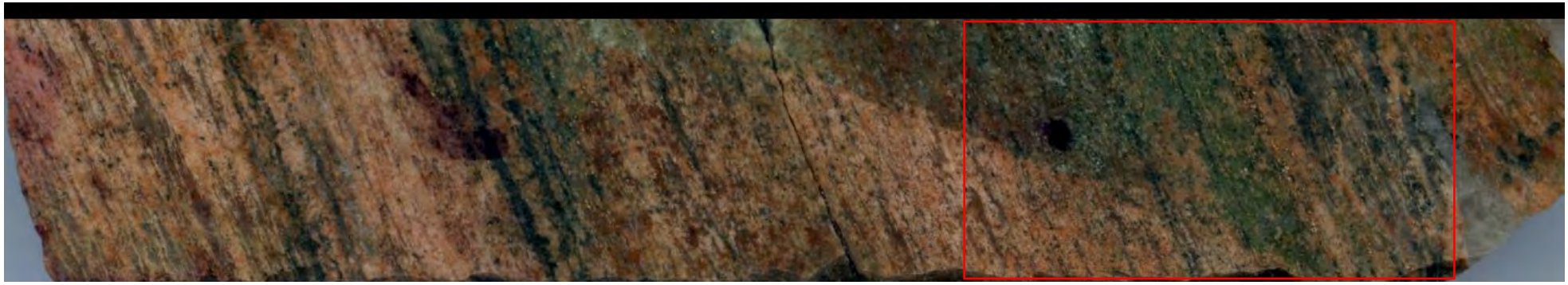
TH82

U8506- 125.7m_TH82

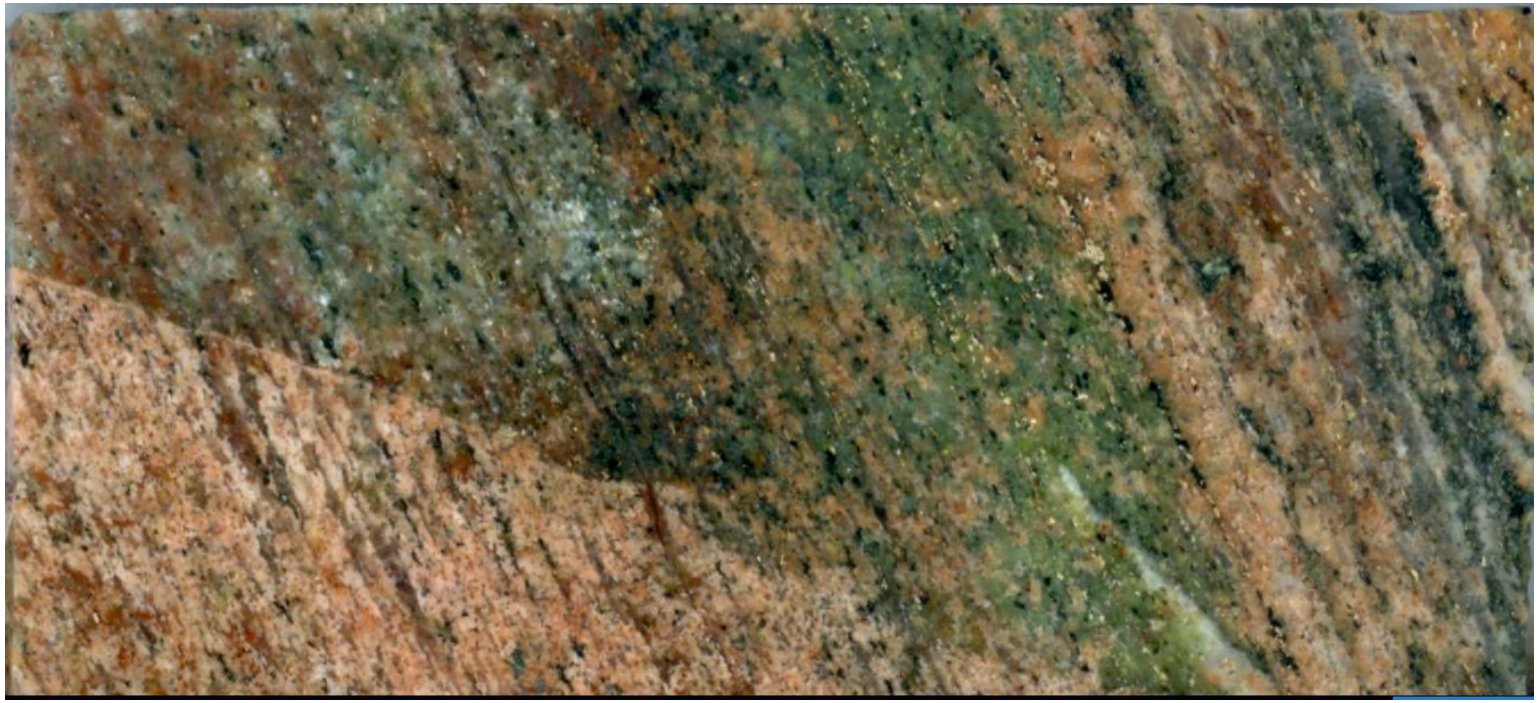
intense silicified unit



U8506- 130.3m_TH83

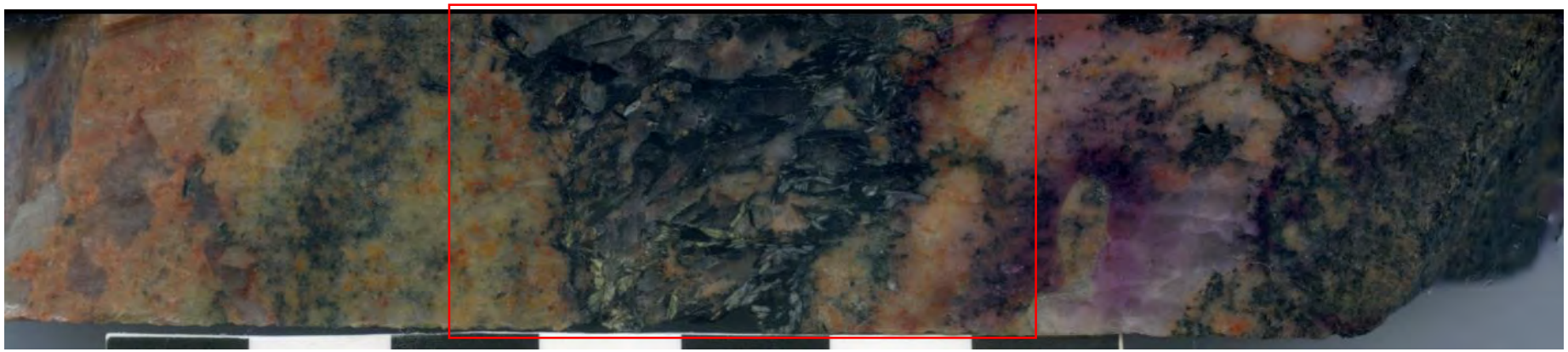


TH83

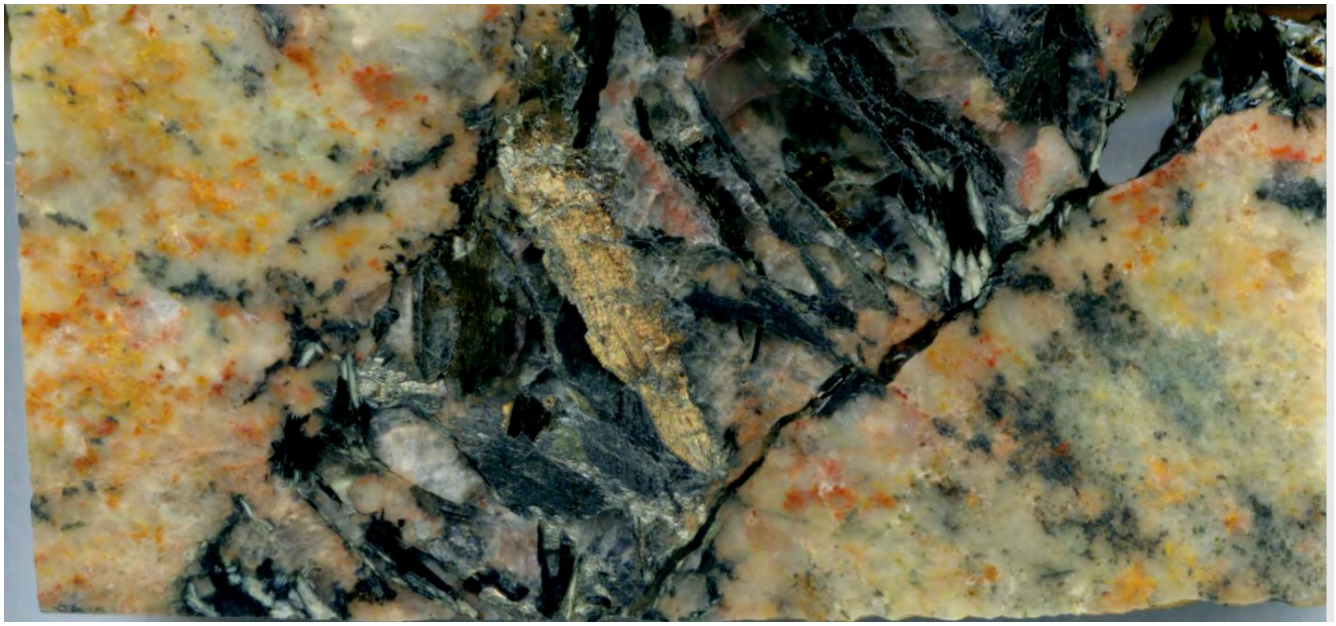


U8506- 141.5m_TH84

late pegmatite with coarse-grained biotite



TH84



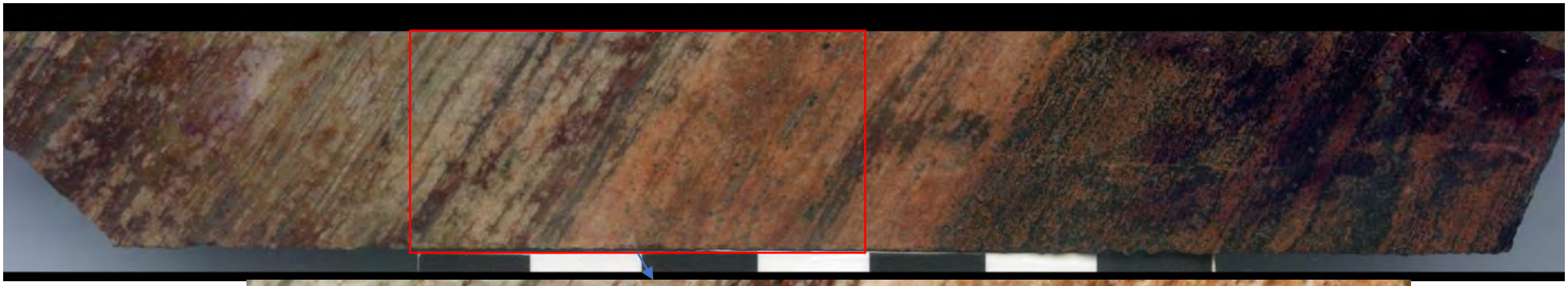
TH85

feldspar alteration overprint intense silicified unit, No Au

U8506-180.5m _TH85

U8506-238m_TH86

Quartz-feldspar mylonite intercalated with calc-silicate



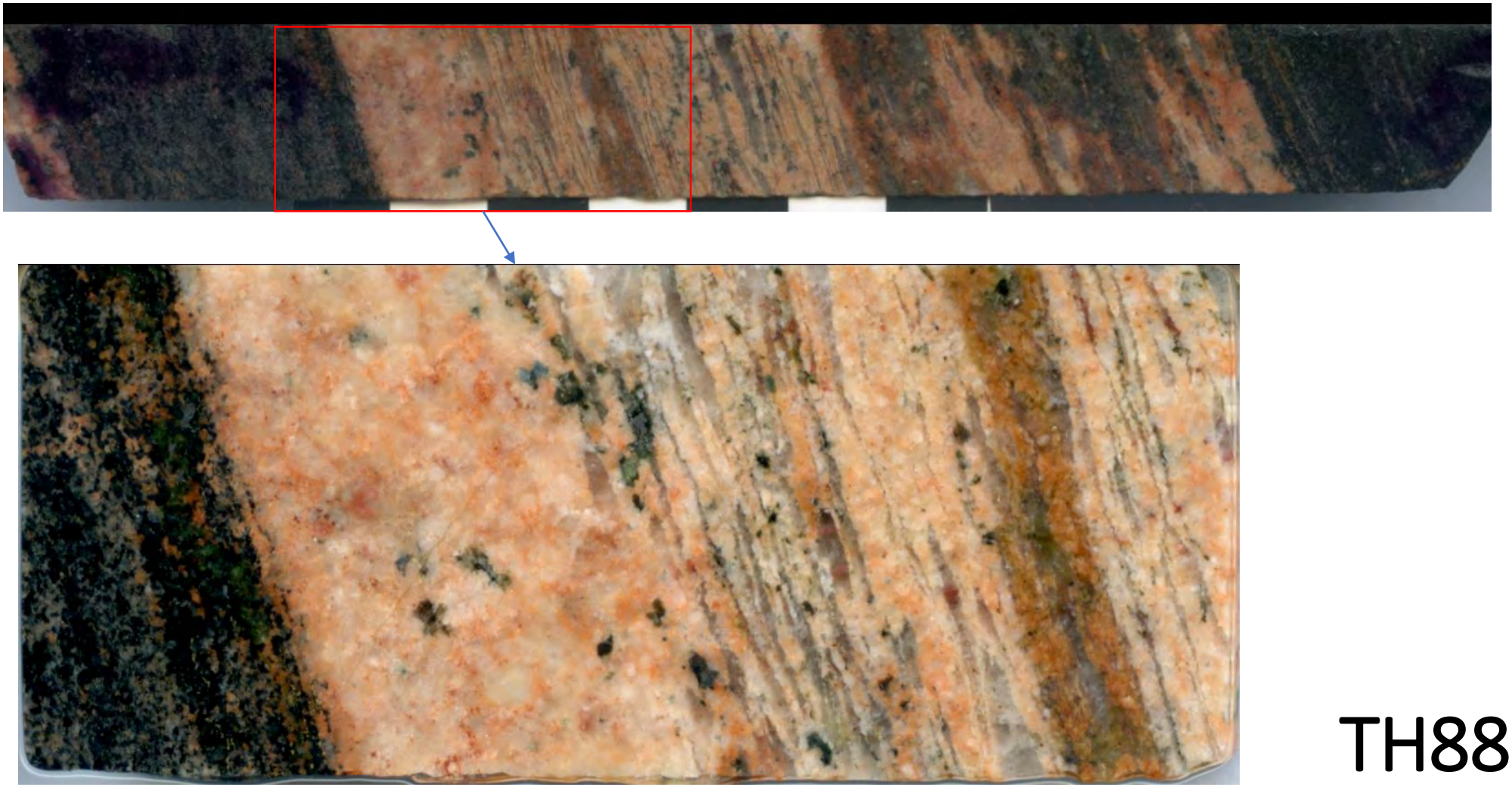
TH86

TH87

U8506-144.1m –TH87: Late pegmatite with relic D1 mylonitic textures, at near-boundary of the late pegmatite vein

U8506-250.7_TH88

Quartz-feldspar veins



TH88

DH. L8507

L8507-60.75m_TH89

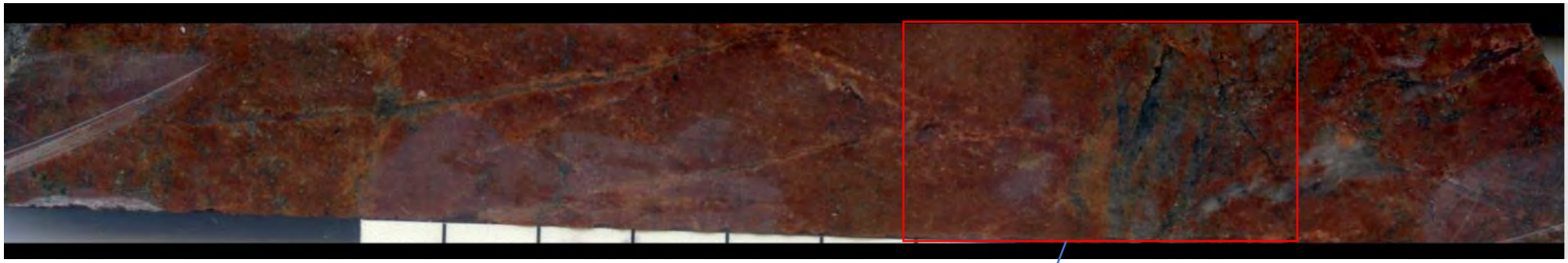
Trace of Au assay; intense silicified unit

TH89

TH90

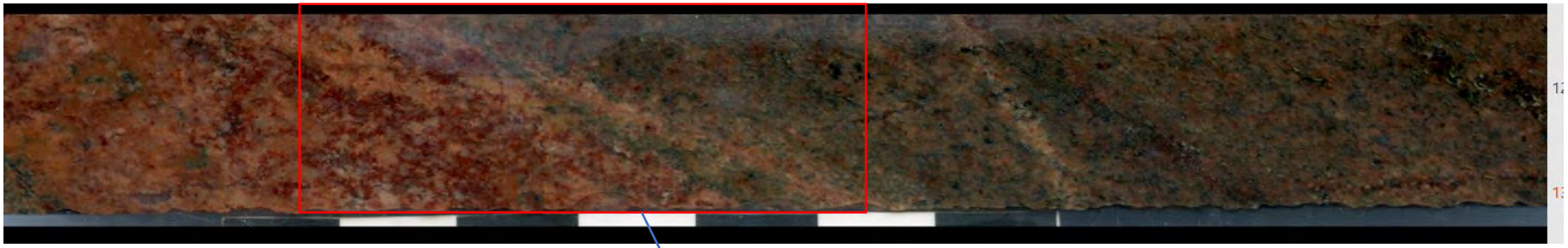
L8507-88.7m; TH90 D4 brecciation

L8507-110.3m; TH91

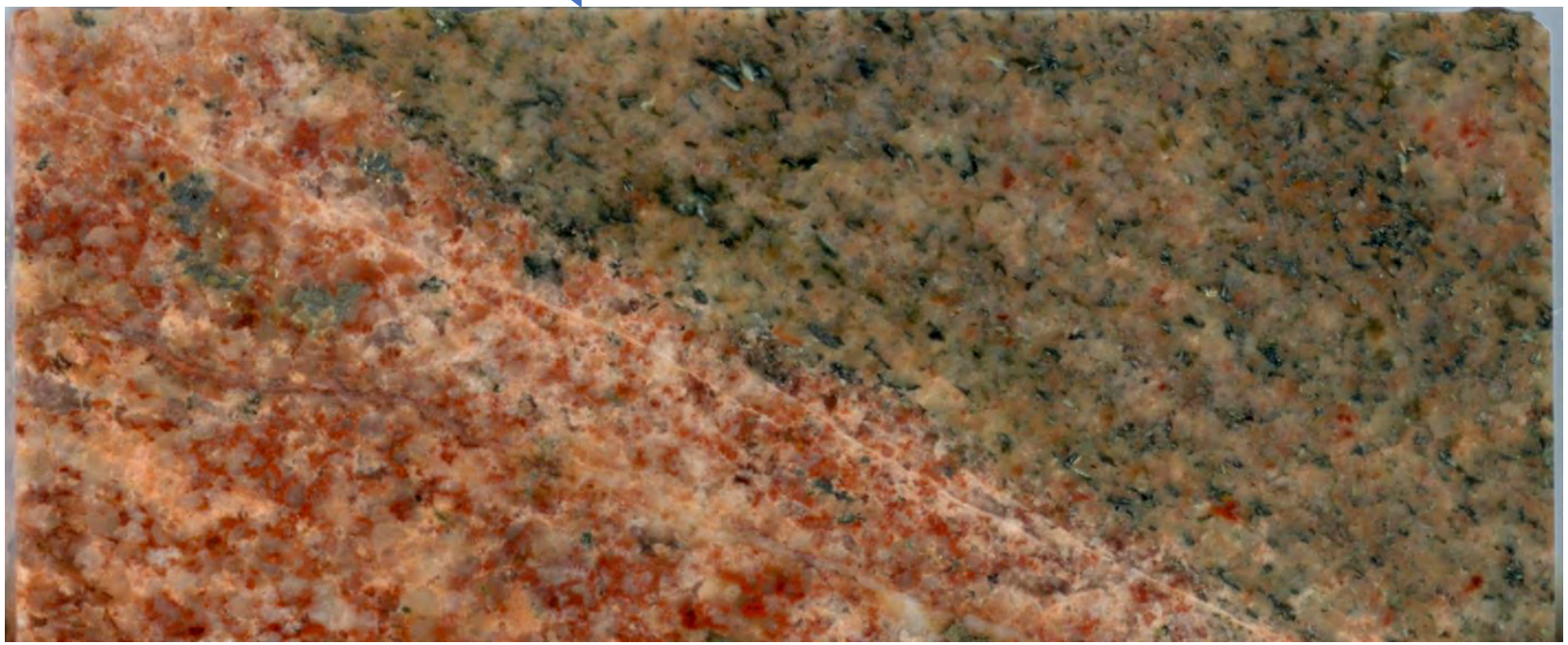


TH91

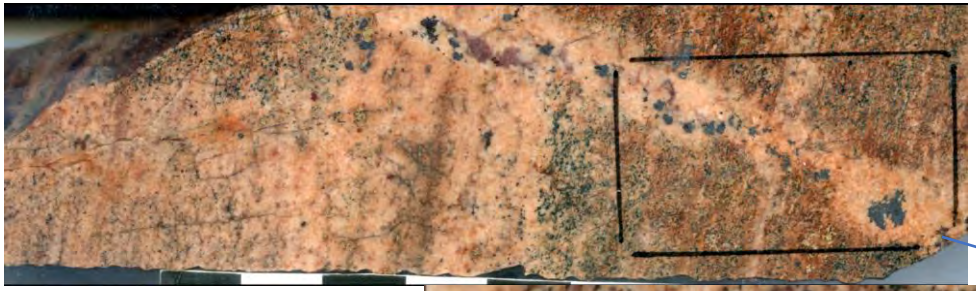
L8507-186.2m; TH92



TH92



DH. UG4

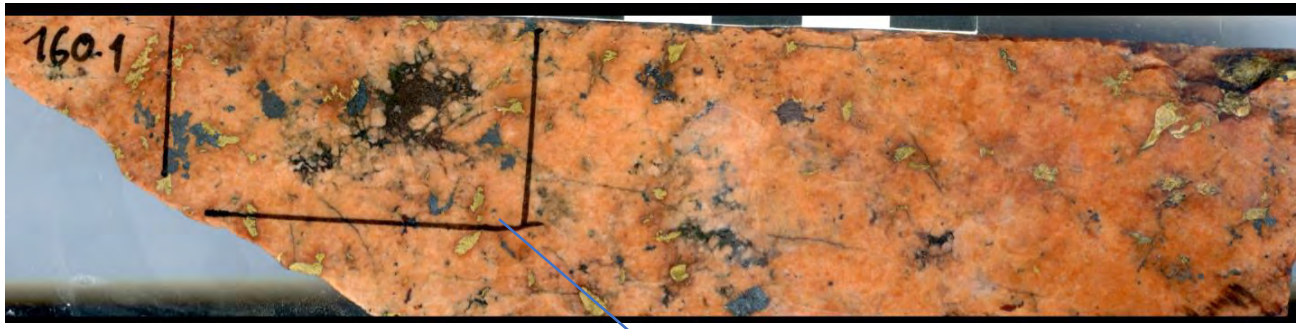


UG4 – 139.9m – TH93; Stage 5 vein, after red rock alteration

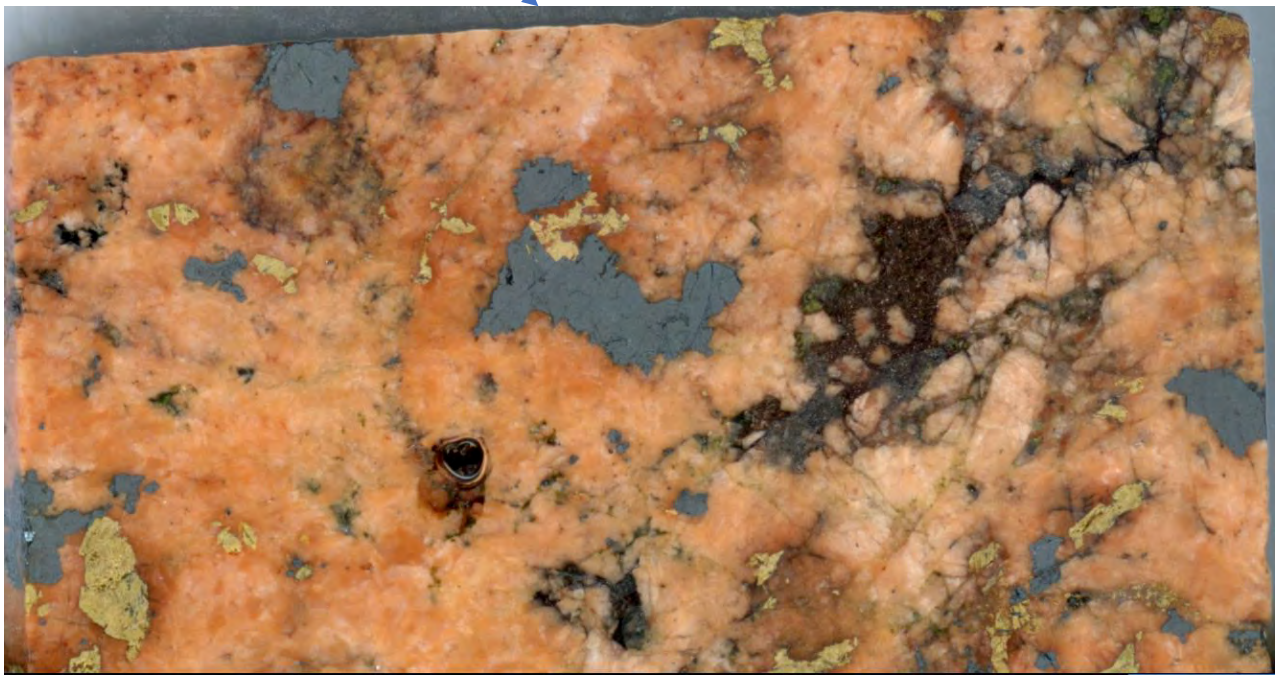
TH93

UG4 160m – TH94

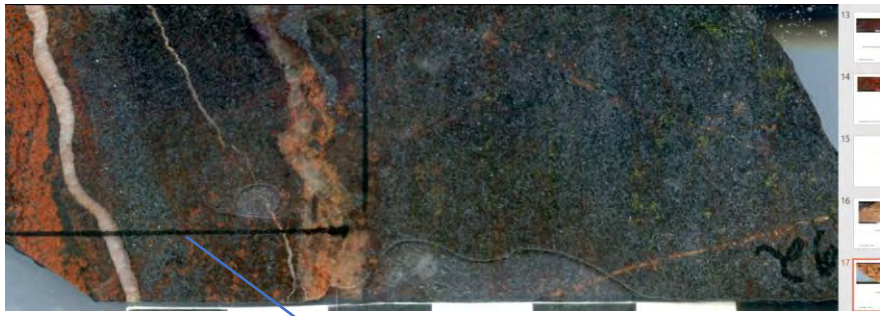
Stage 5 feldspar flooding



TH94

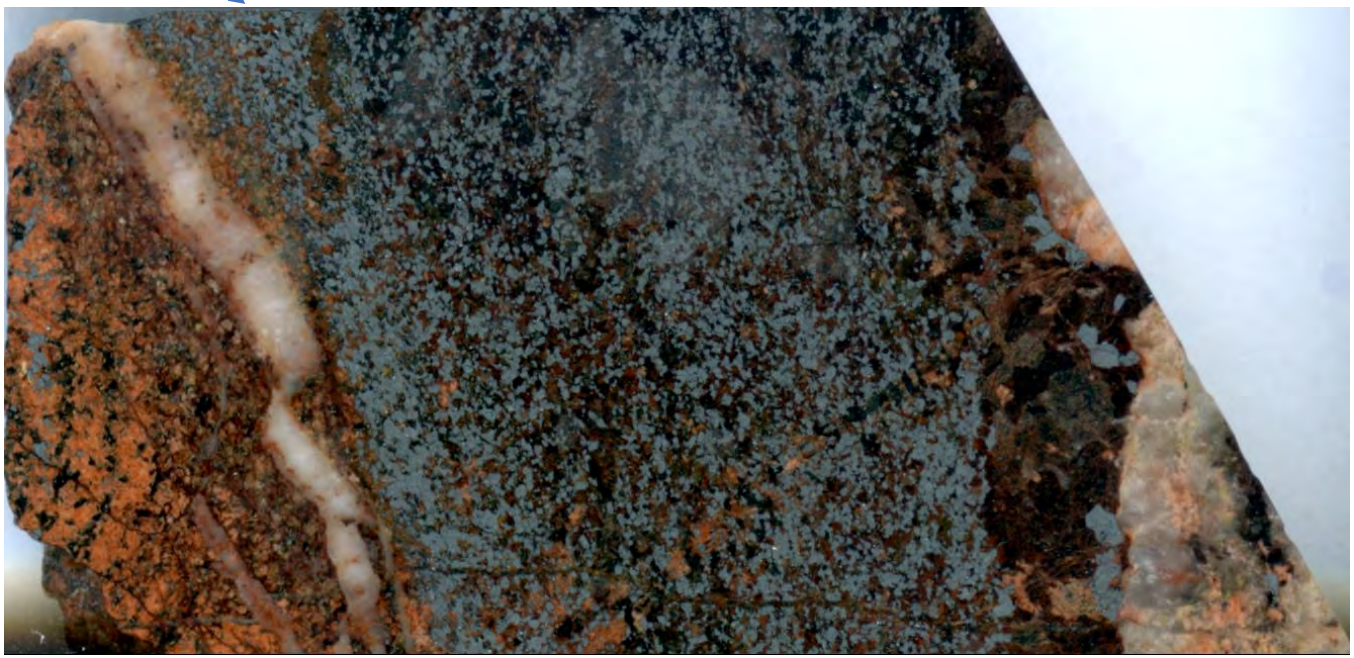


Appendix 8: Sample images



UG4-192m; TH95 : magnetic calc-silicate

TH95

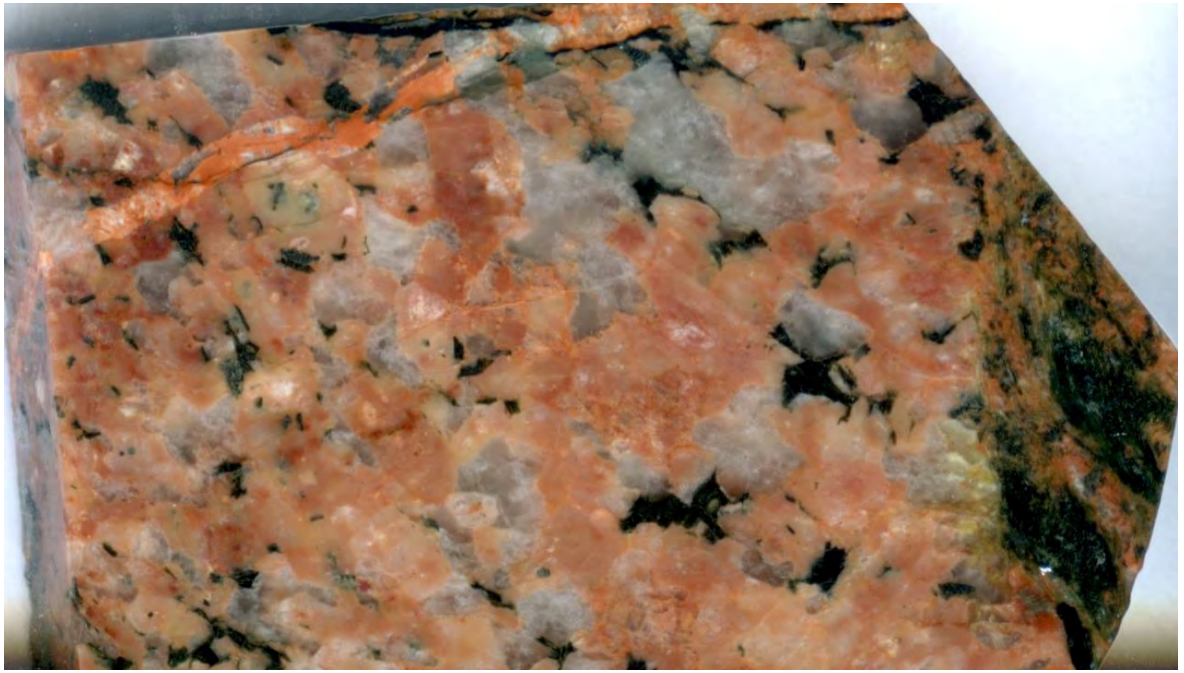


DH. DJ525

DJ525 -243m – TH96 : quartz-feldspar mylonite

TH96

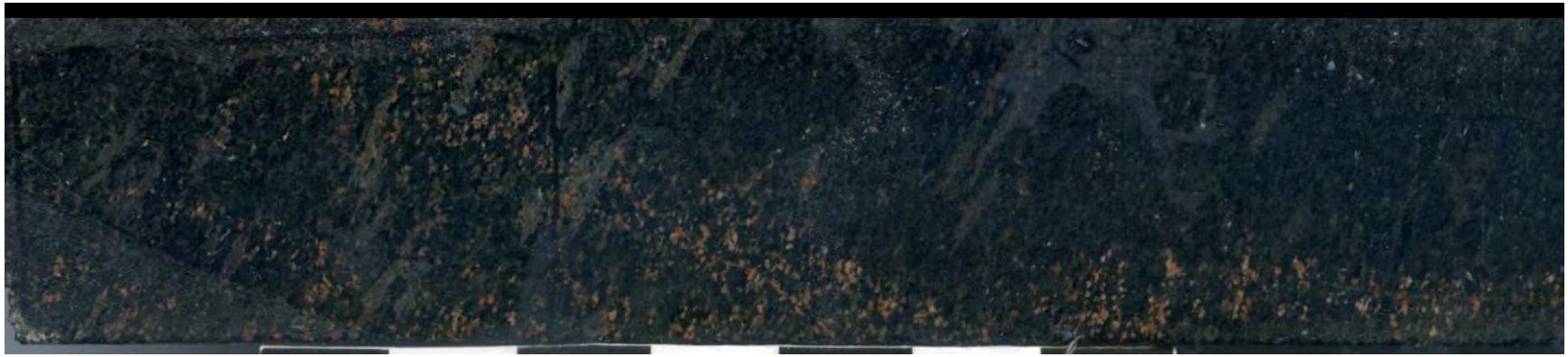
TH97



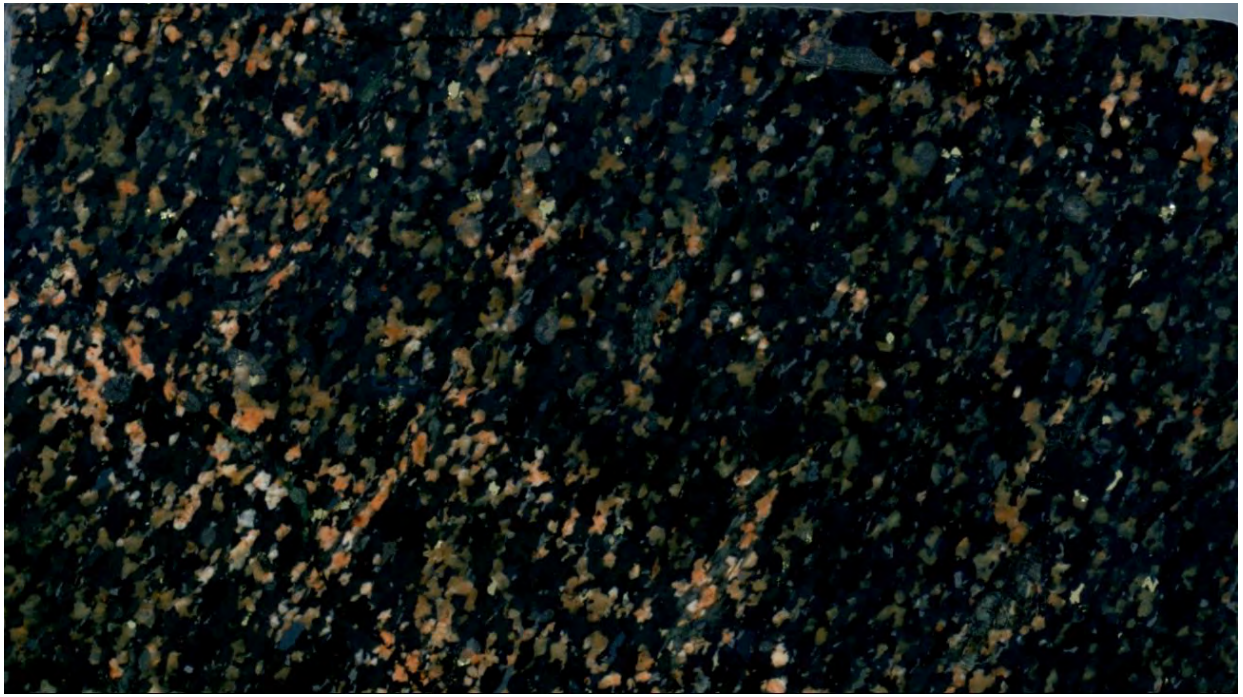
Migmatite ?

DJ525-299m: TH97

DJ525-329: TH98; Amphibolite with textures of start melting ?

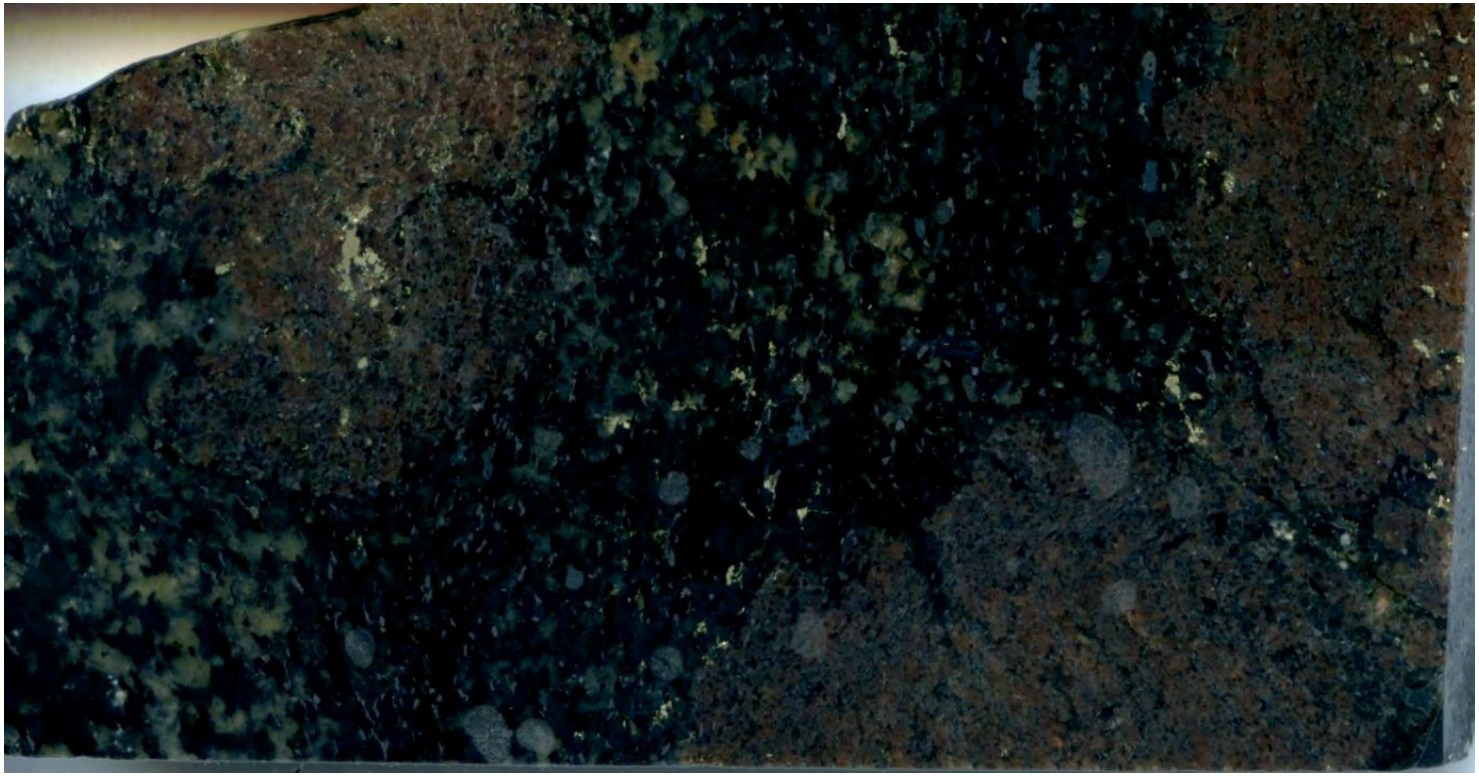


TH98



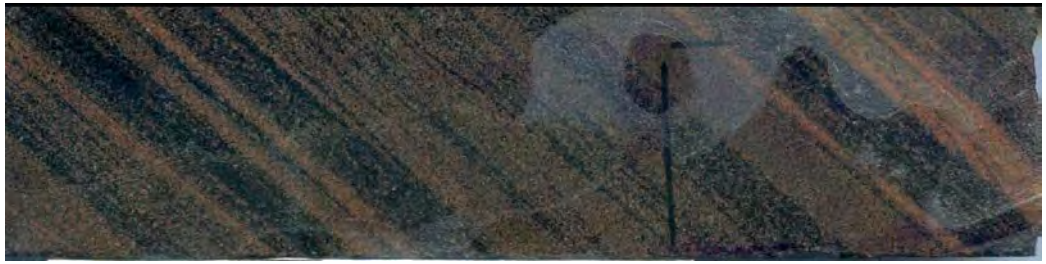
Appendix 8: Sample images

DJ525-336.7m, TH99; amphibolite



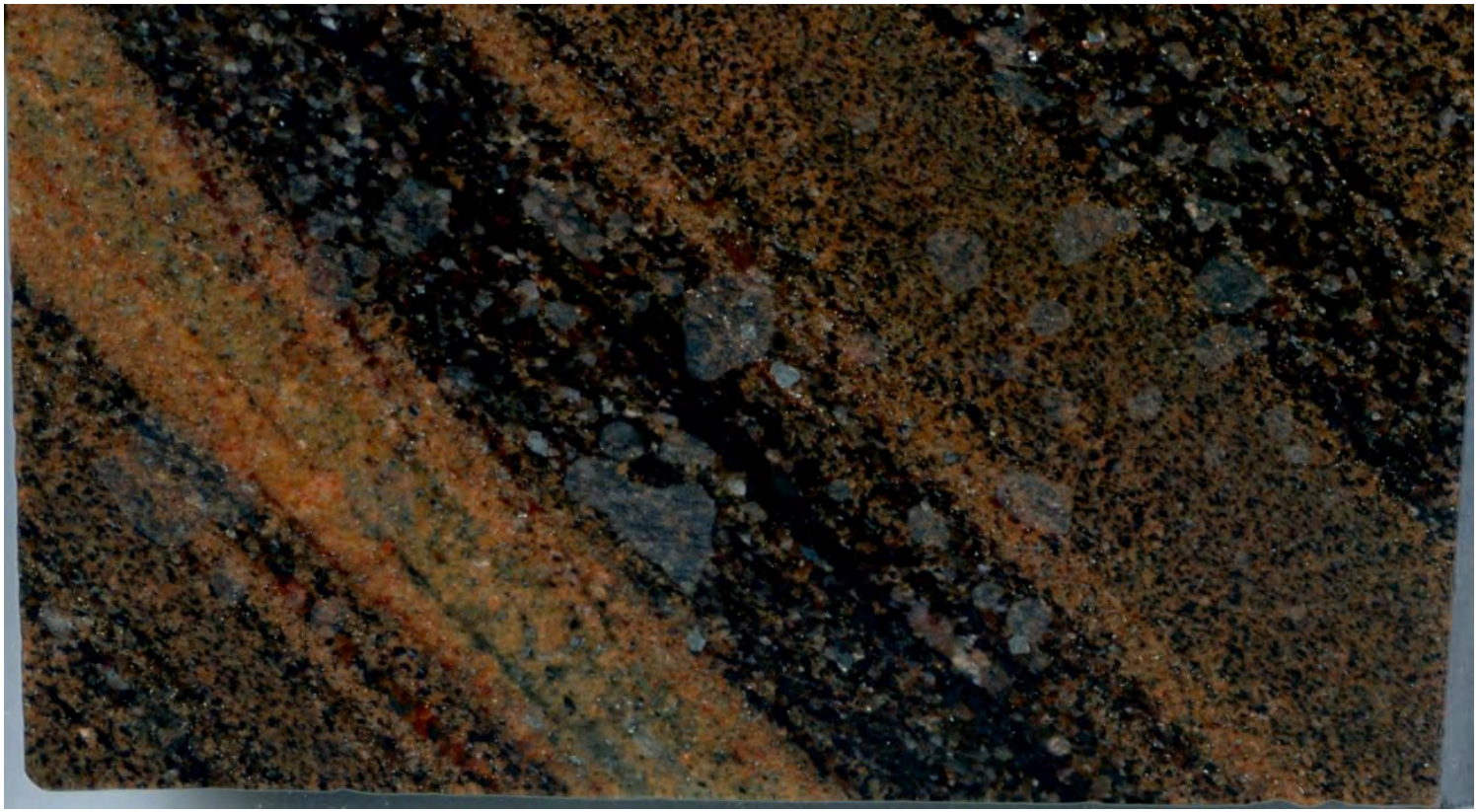
TH99

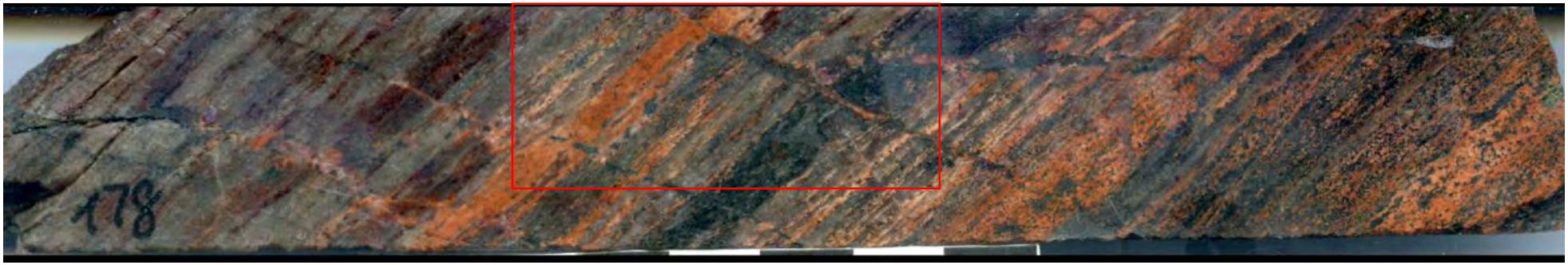
HD. UG1



UG1 155.2m; TH100: calc-silicate Dominant rock type in this DH

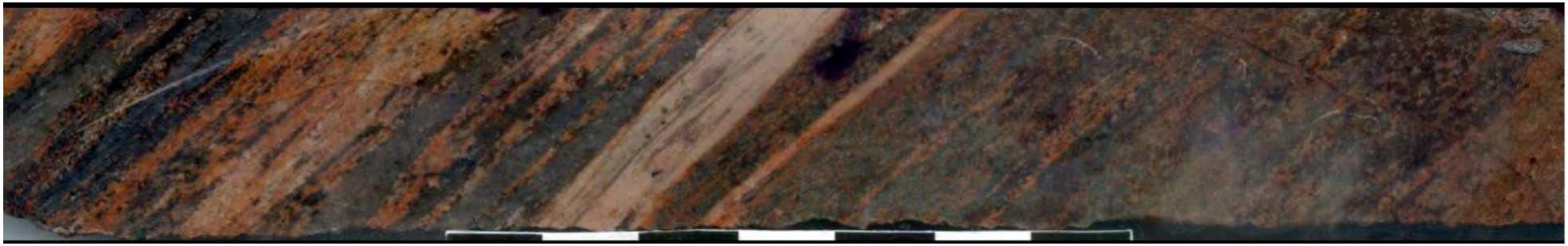
TH100





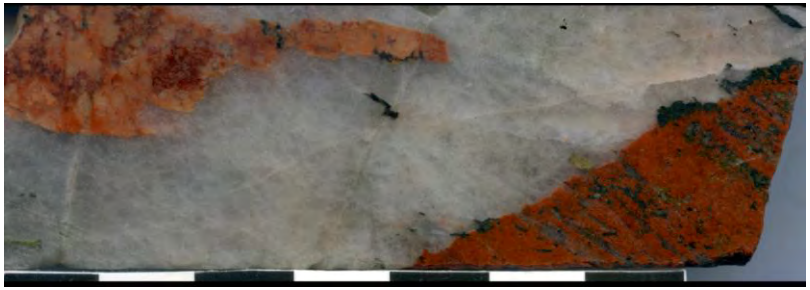
TH101

UG1-178m; TH101: quartz-feldspar alteration



UG1-183.75; TH10; in trace assay of Au; feldspar vein

TH102



UG1-209.2m, TH103 Late qtz cutting the RRA?

TH103

DH. TH014

TH104

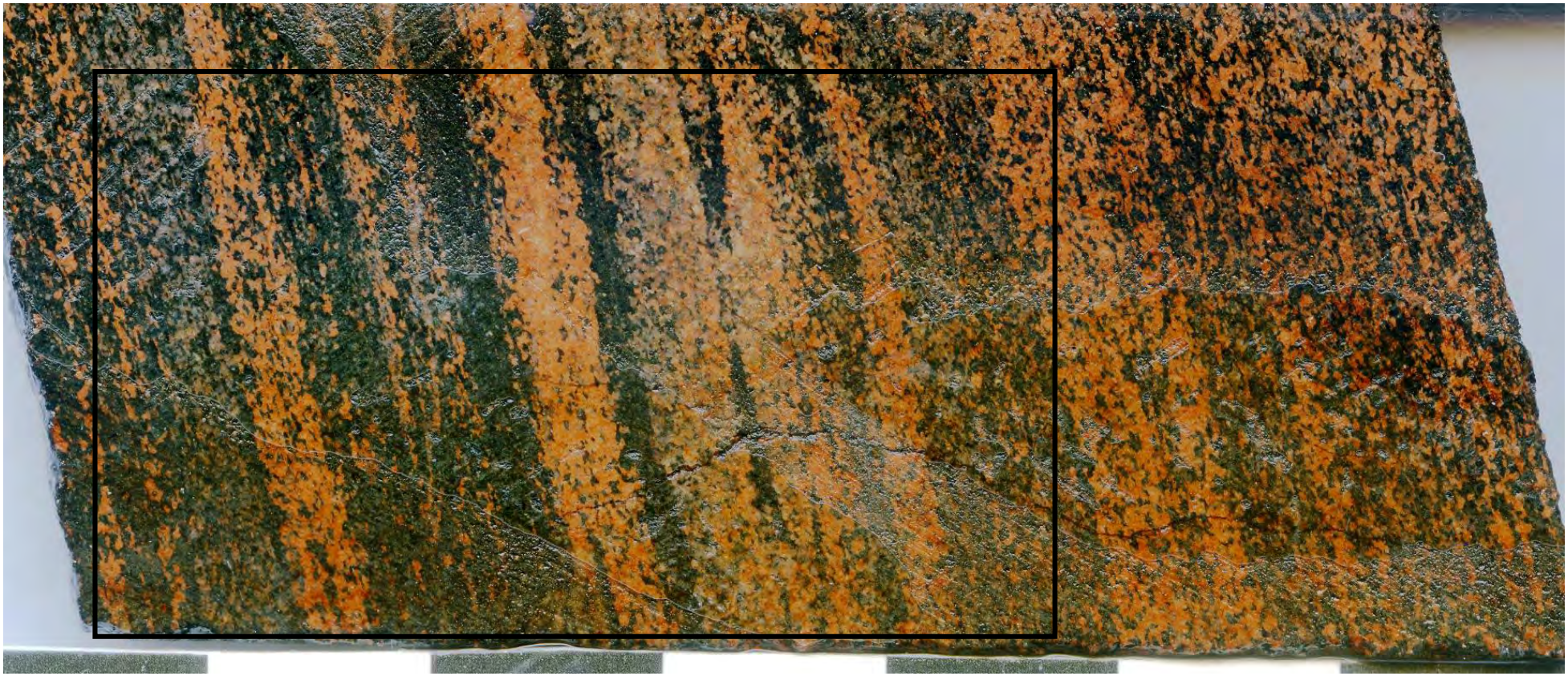
DH. TH014

61m

Amphibole-rich calcsilicate : ~ 80m above the mineralized zone

TH105

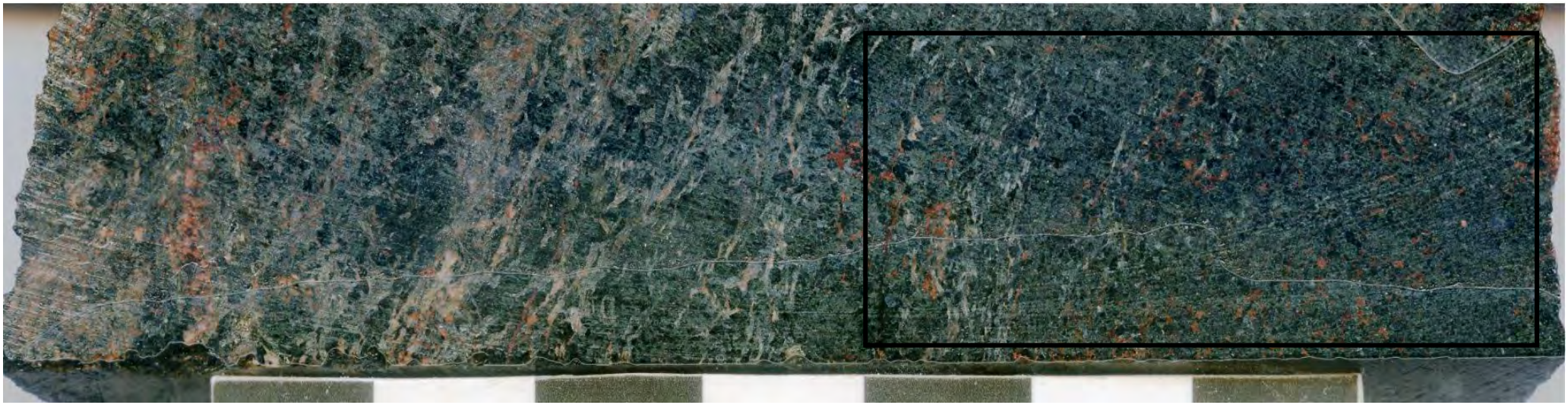
DH. TH014 **71.5m**



Calc-silicate: ~ 70m above the ore zone

TH106

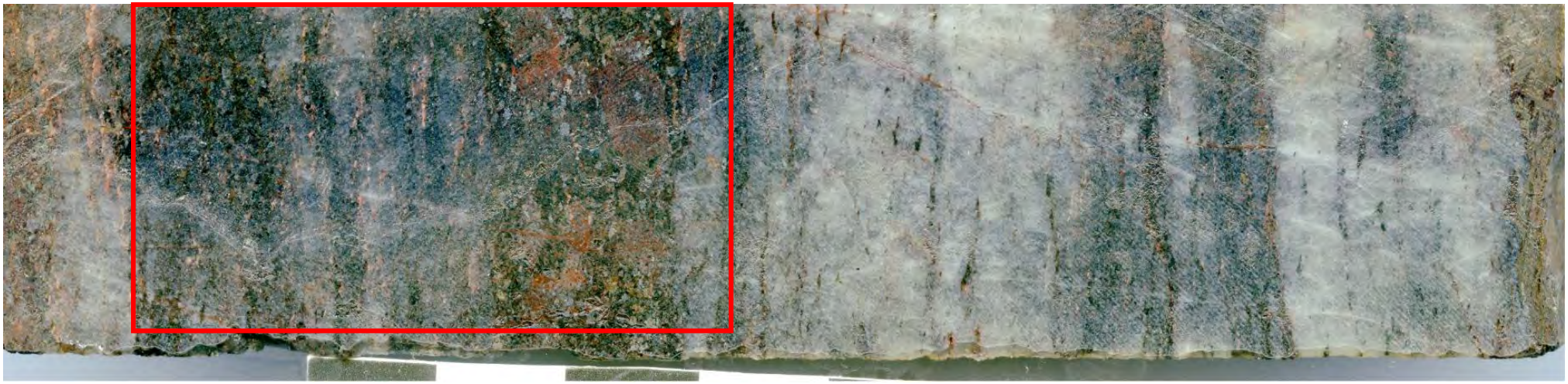
DH. TH014 85.5m



Amphibole-rich calcsilicate: ~ 55m above the ore zone

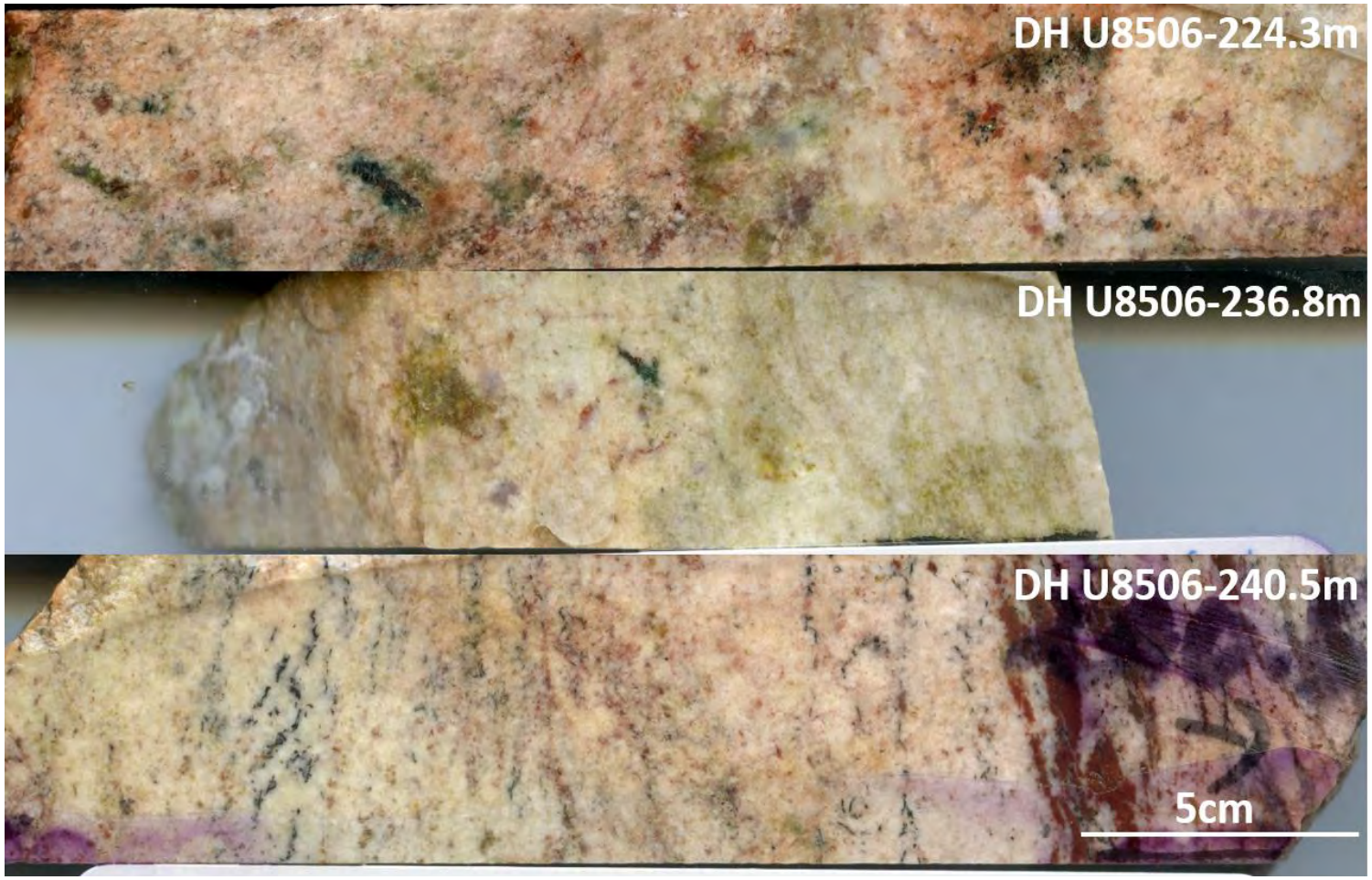
TH107

DH. TH014 **94m**



Intense silicified unit : ~ 45m above the ore zone

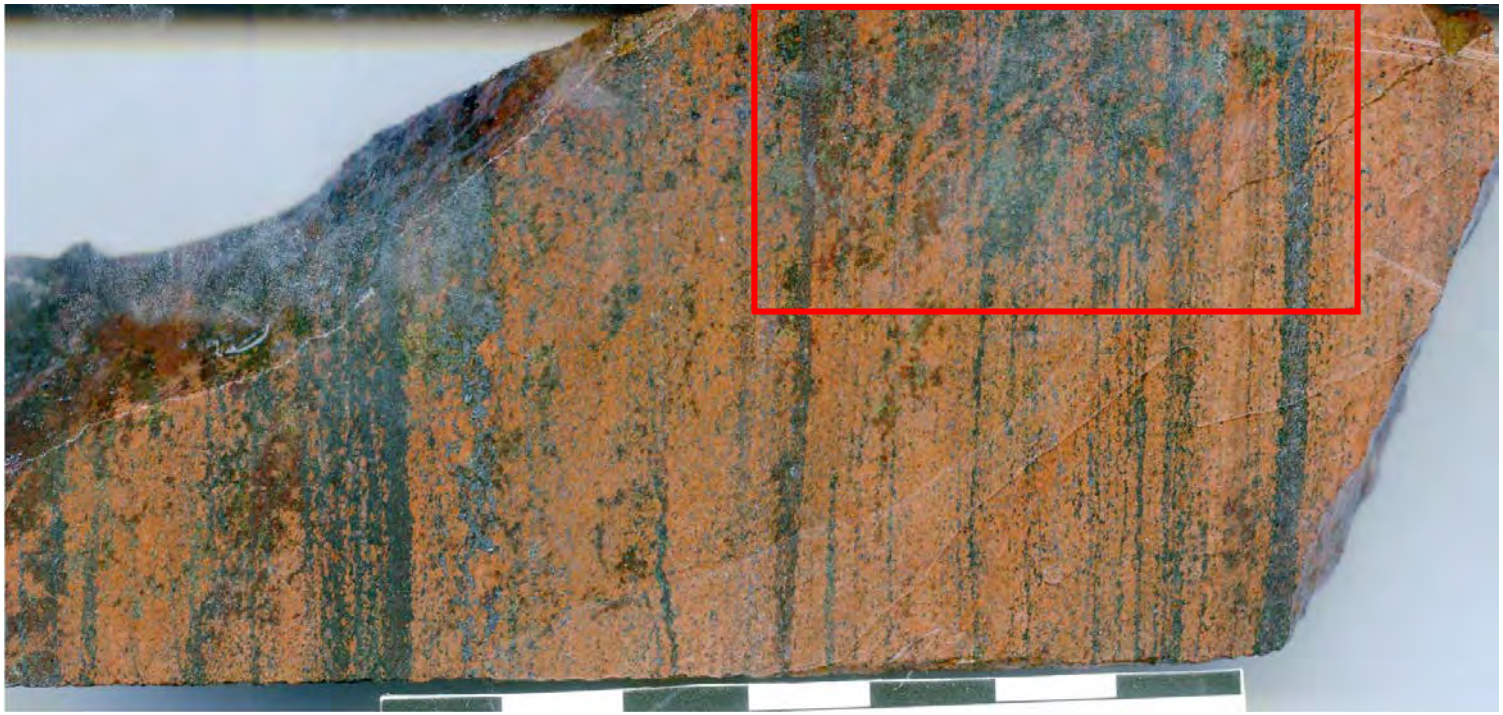
TH108



Combination of 3 intervals of D3 pegmatite

TH109

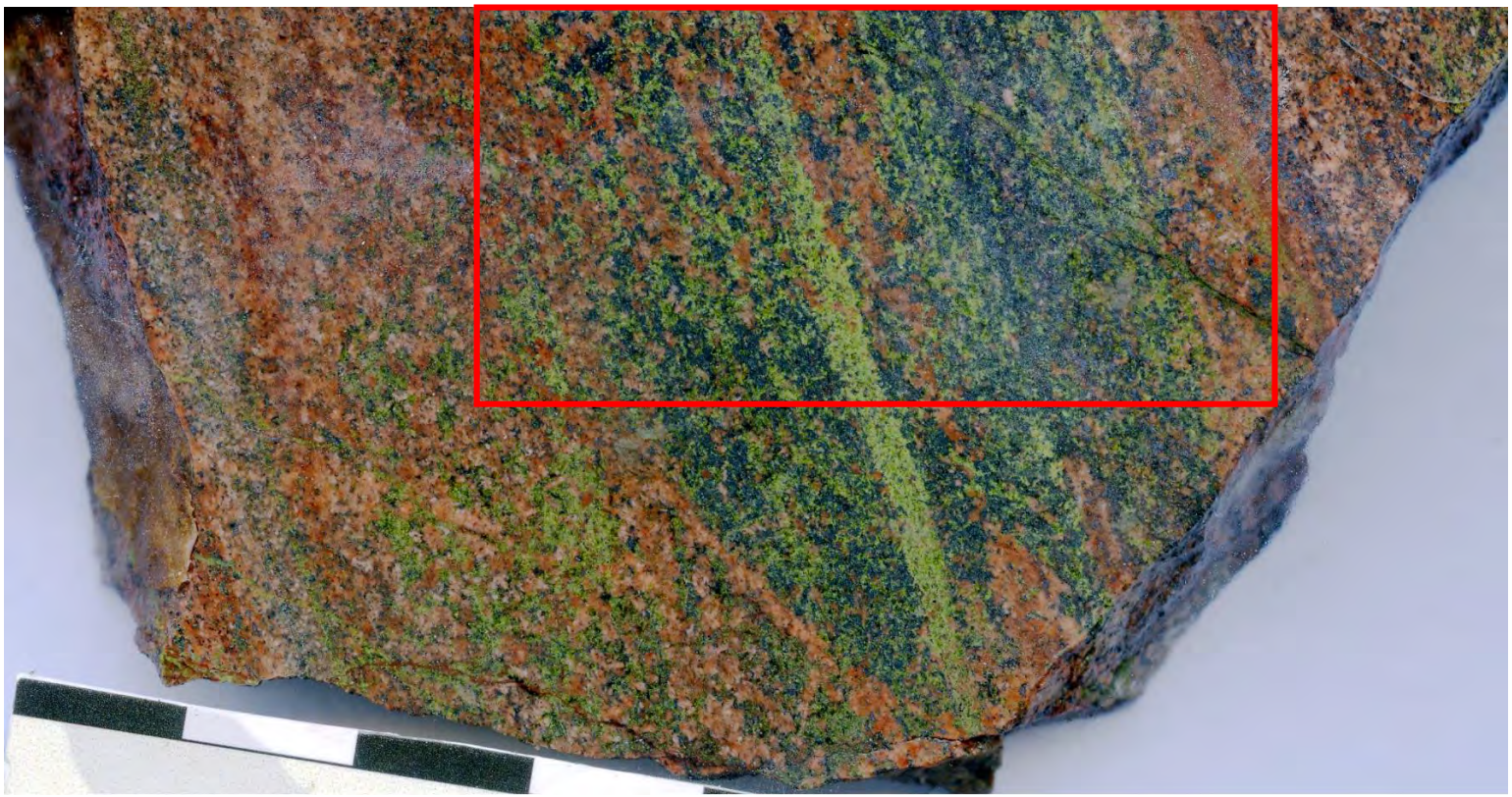
DH. TH014 112m



Calc-silicate in the chloritization zone

TH110

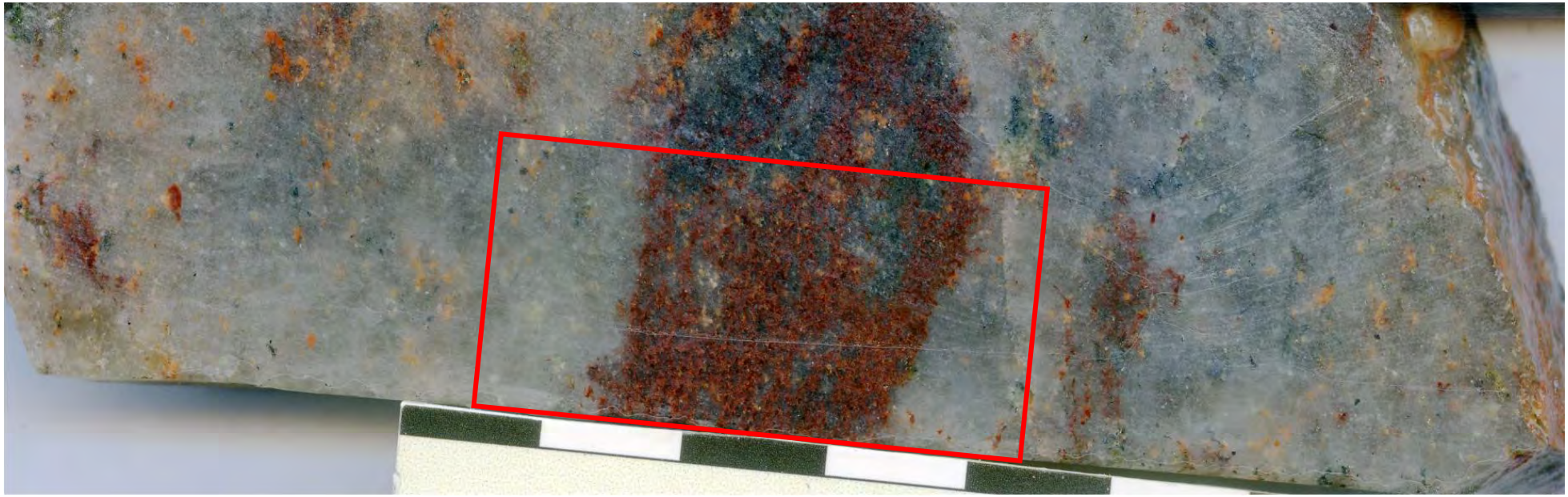
DH. TH014 119.6m



Calc-silicate in the chloritization zone : ~ 20m above the ore zone

TH113

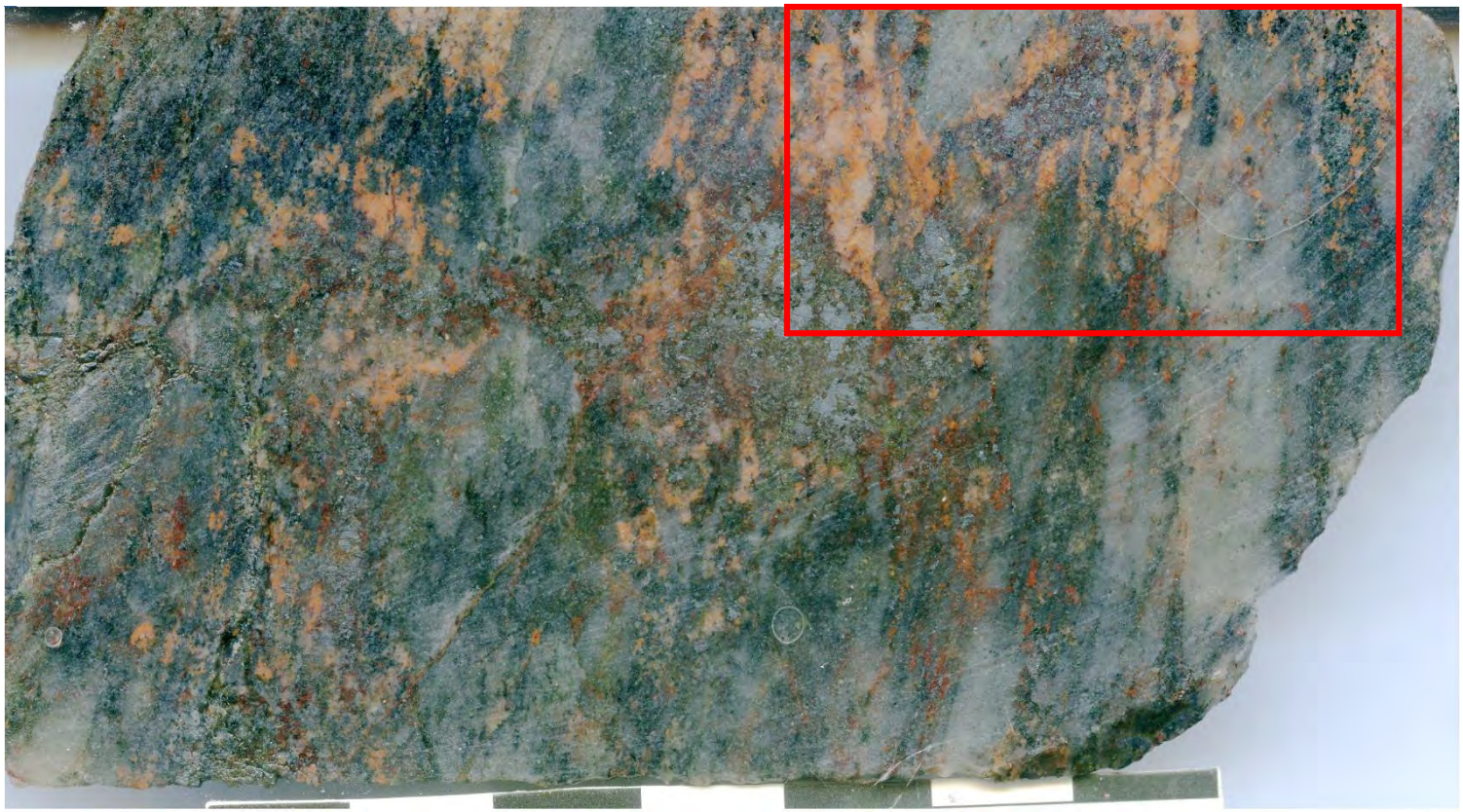
DH. TH014 127.7m



intense silicified unit: ~ 1.5m above the ore zone

TH114

DH. TH014 **144.4m**



intense silicified unit: ~ 6m above the most Au-rich meters

TH115

DH. TH014 **148m**

Intense silicified unit: ~ 3m above the most Au-rich meters

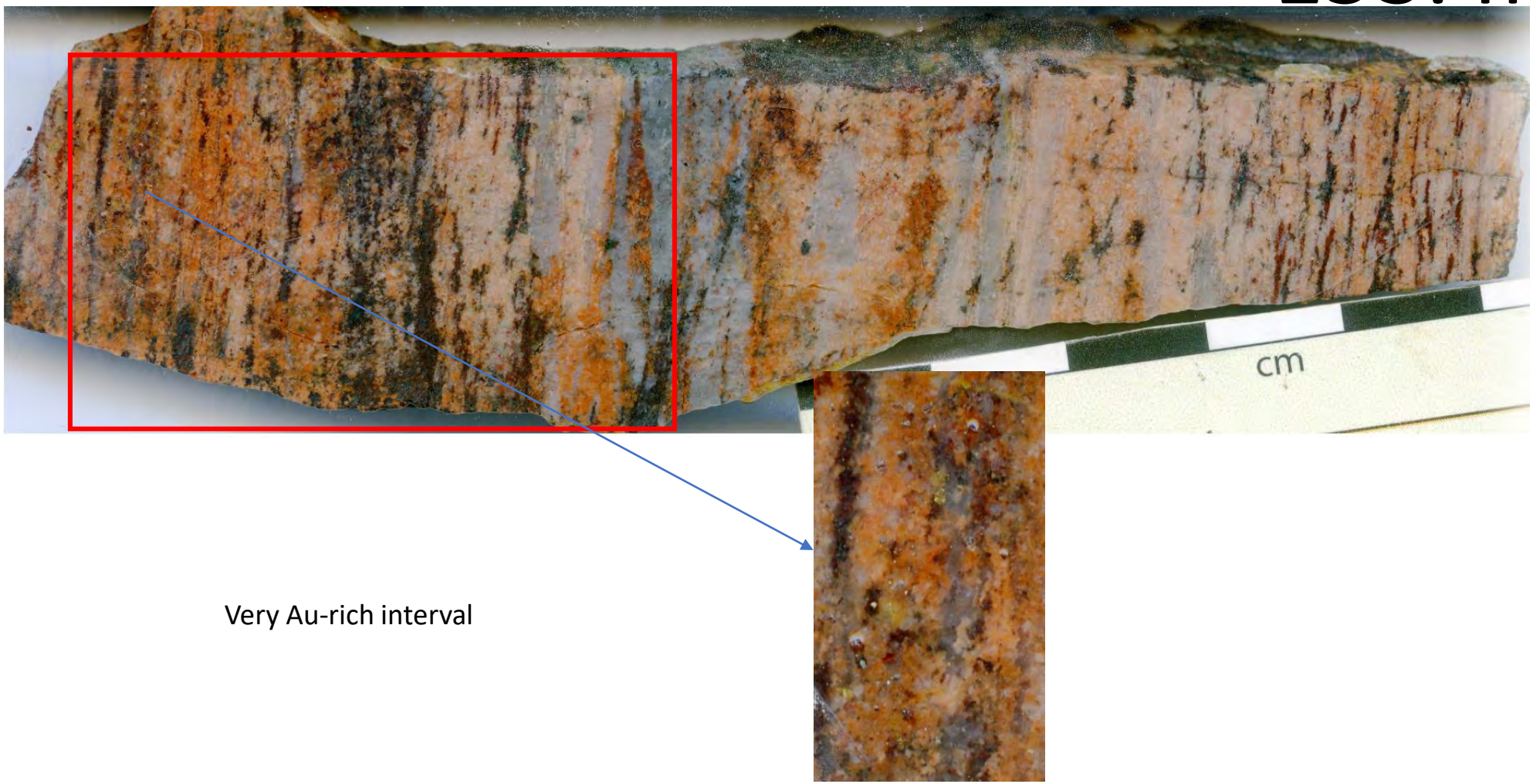
TH117

DH. TH014 153m

In the mineralisation zone, ~ 0.3m above the most Au-rich meters

TH118

DH. TH014 153.4m



Very Au-rich interval

TH119

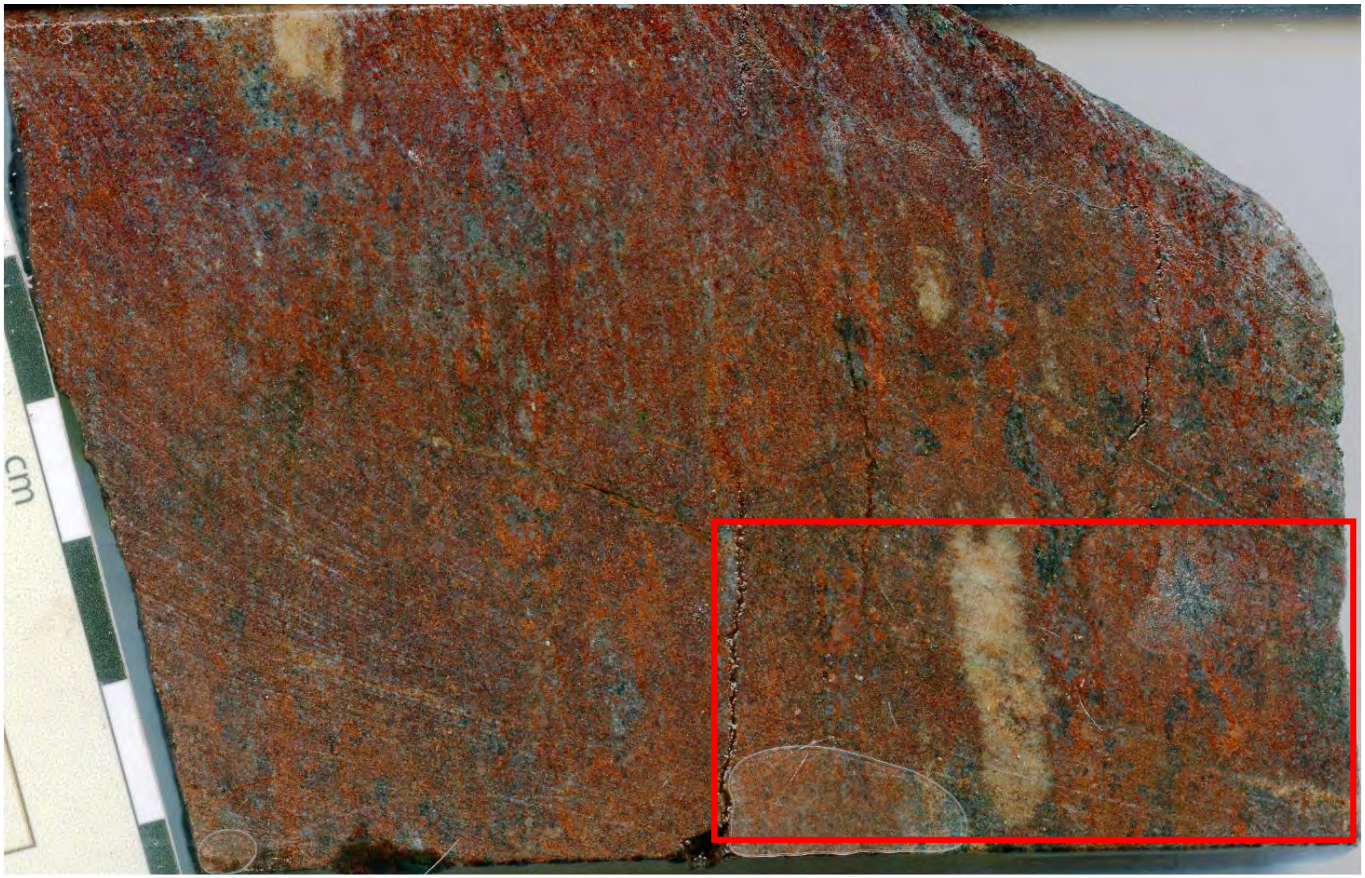
DH. TH014

154.5m

Au-rich interval

TH120

DH. TH014 155m



In Au-rich zone (151-157m)

TH121

DH. TH014 156.5m

Intense silicified unit/ feldspar alteration in the most Au-rich zone (151-157m)

TH122

DH. TH014 **164.6m**

Intense silicified unit with a local pyrite-rich layer

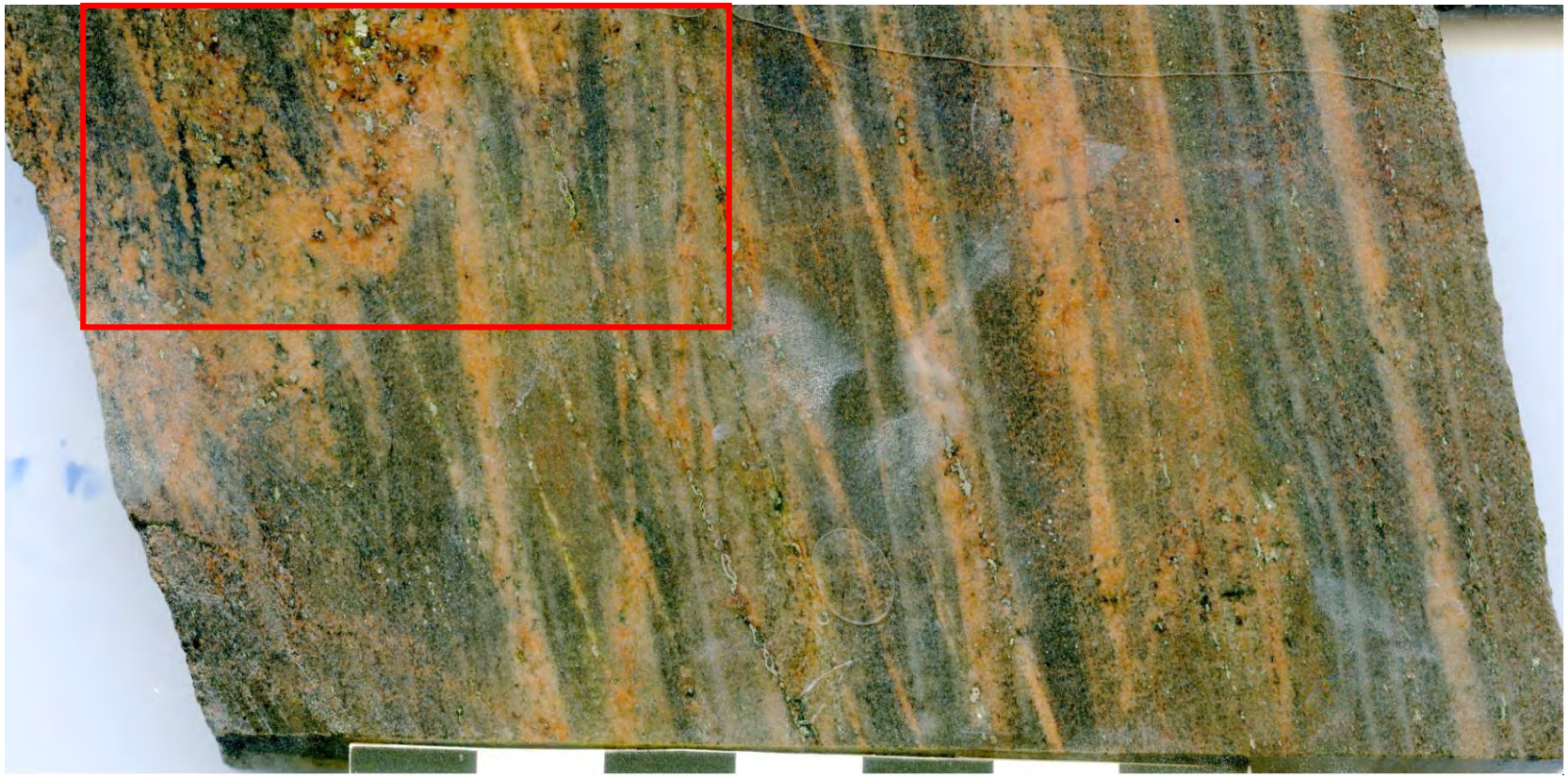
TH123

DH. TH014 173m

Sulphides in the strongly silicified zone (TZ unit) with a Cu-Co (with low Au) anomaly, below the ore zone

TH126

DH. TH014 186.2m

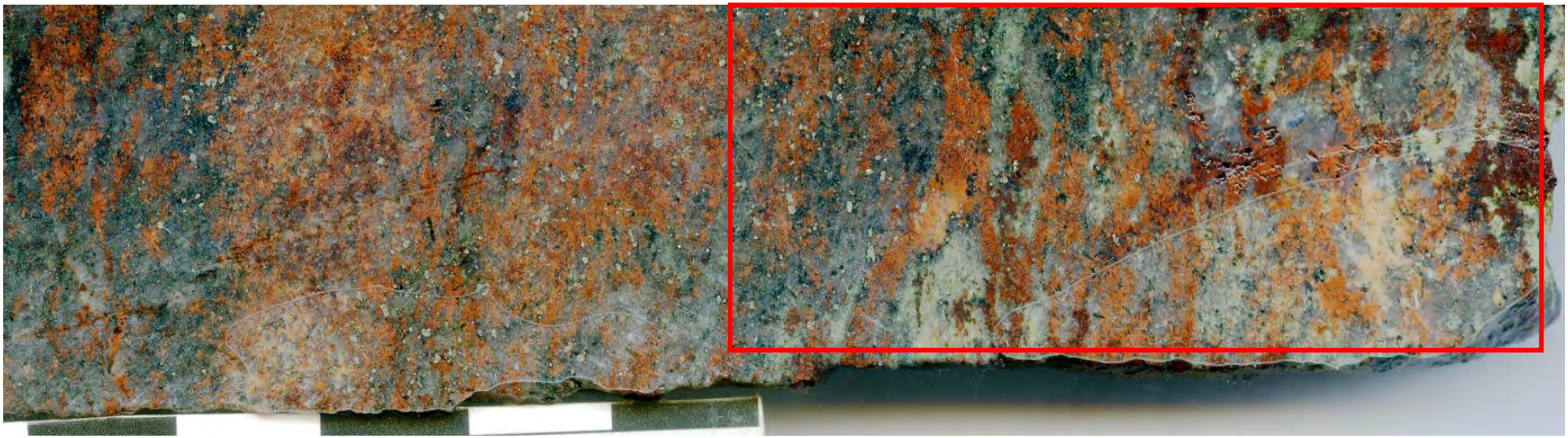


Intense silicified unit/ sulphide-albite alteration

DH. TH085

TH128

DH. TH085 173.3m



Intense silicified unit; altered minerals and sulphides in the most Cu-rich meter (0.4%; 20cm above the Au-rich interval

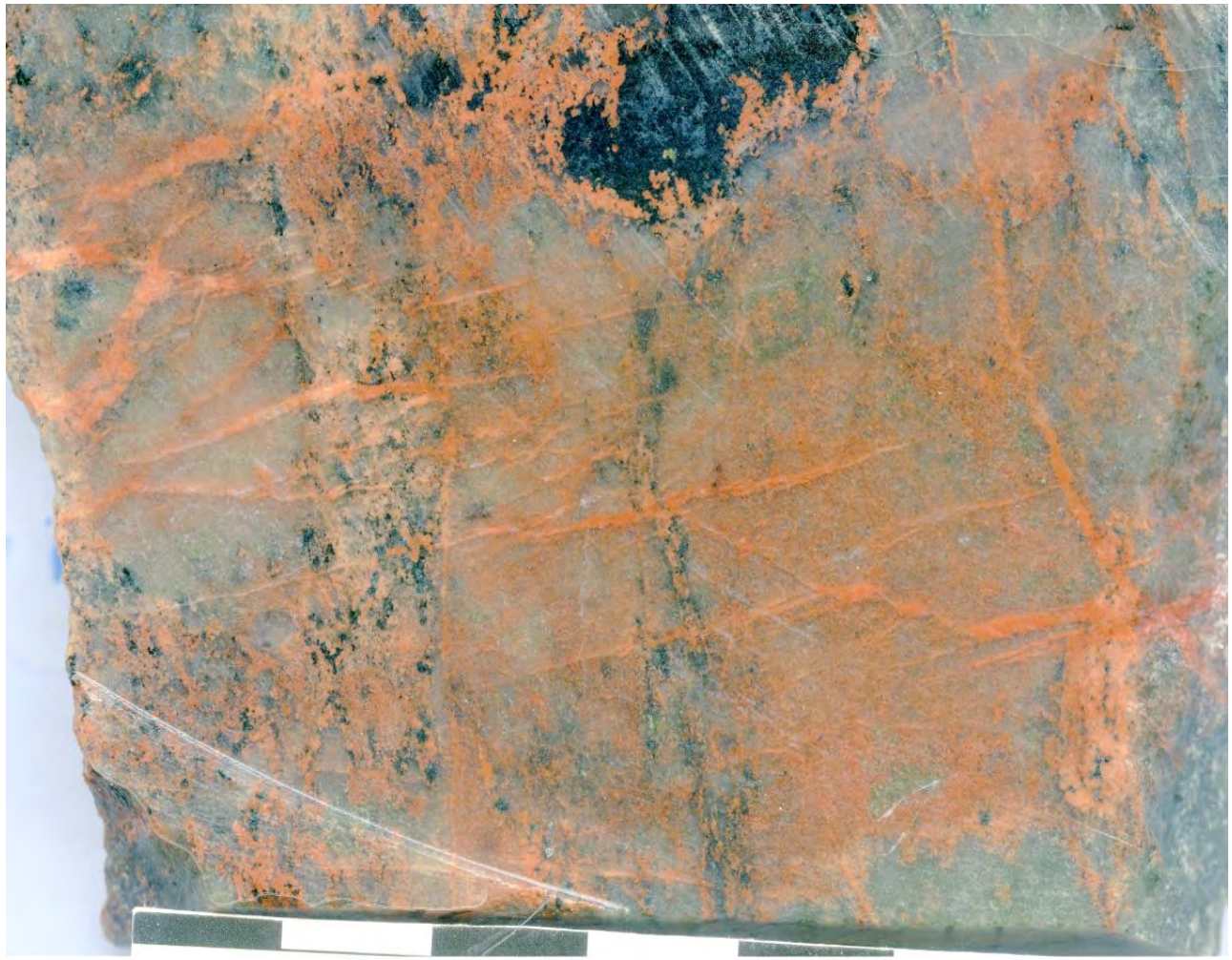
TH129

DH. TH085 175.6m

Au-bearing sample

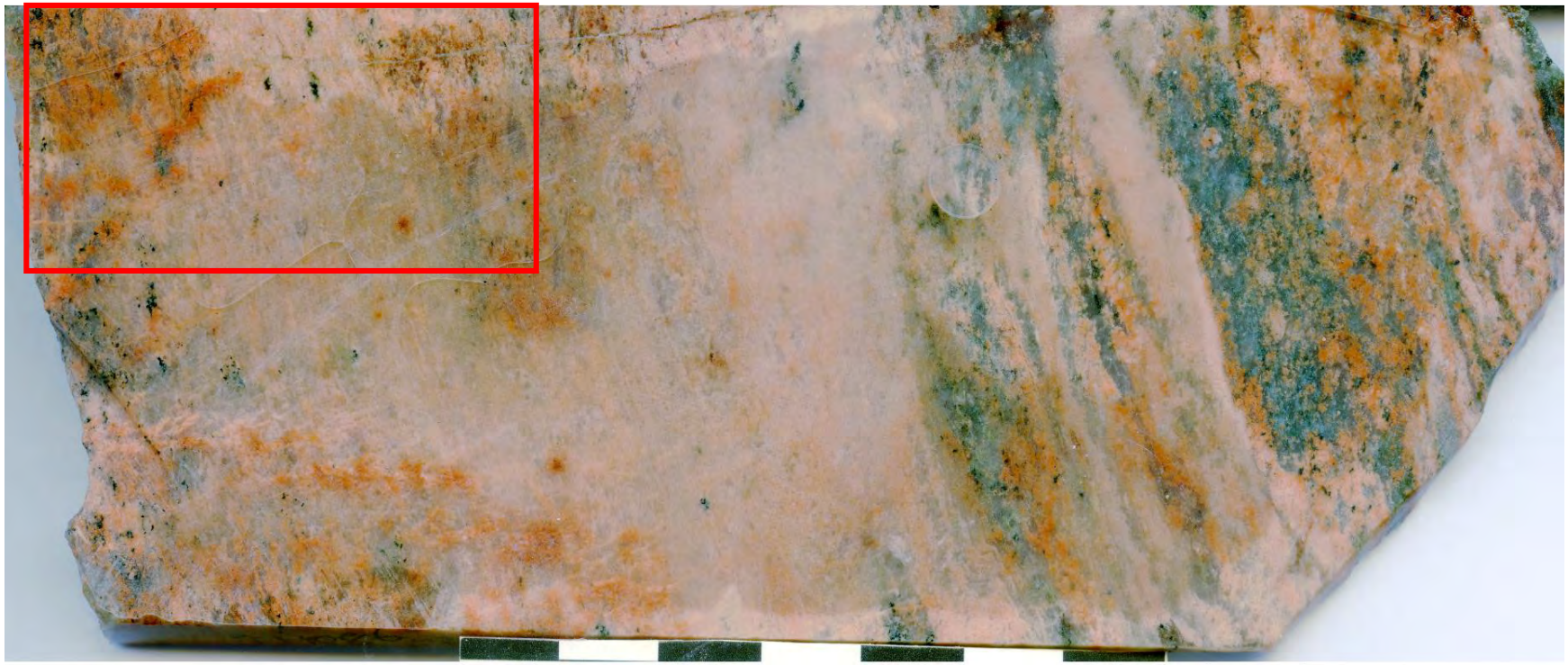
DH. TH086

DH. TH086 237.2m



TH130

DH. TH085 237.3m



Au in the alteration haloes along the sheeted vein

TH131

DH. TH085 250.4m

Cu zone (with low Au)

DH. TH044

TH132

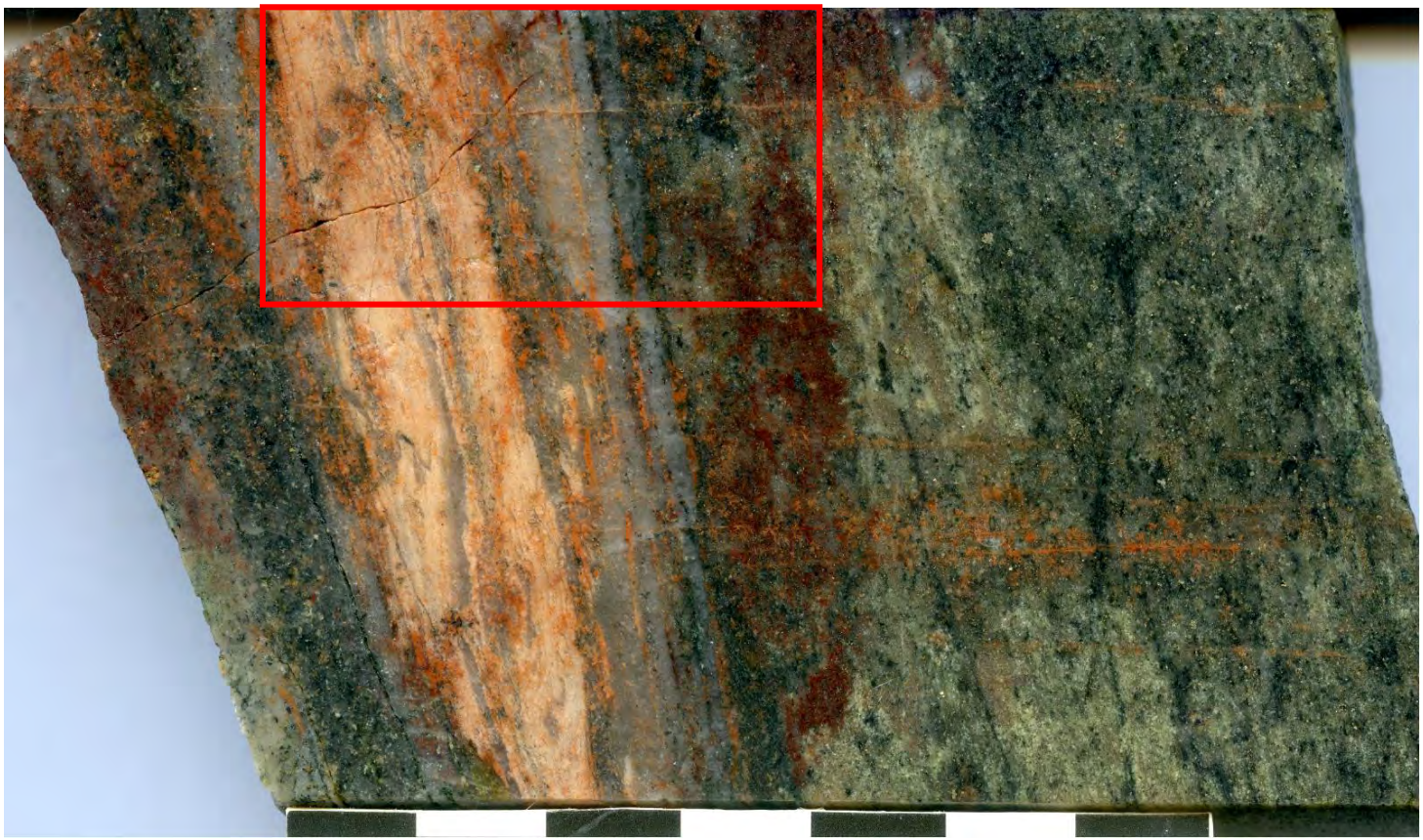
DH. TH044 **80m**

Very Au-rich portion

DH. TH045

TH134

DH. TH045 106m

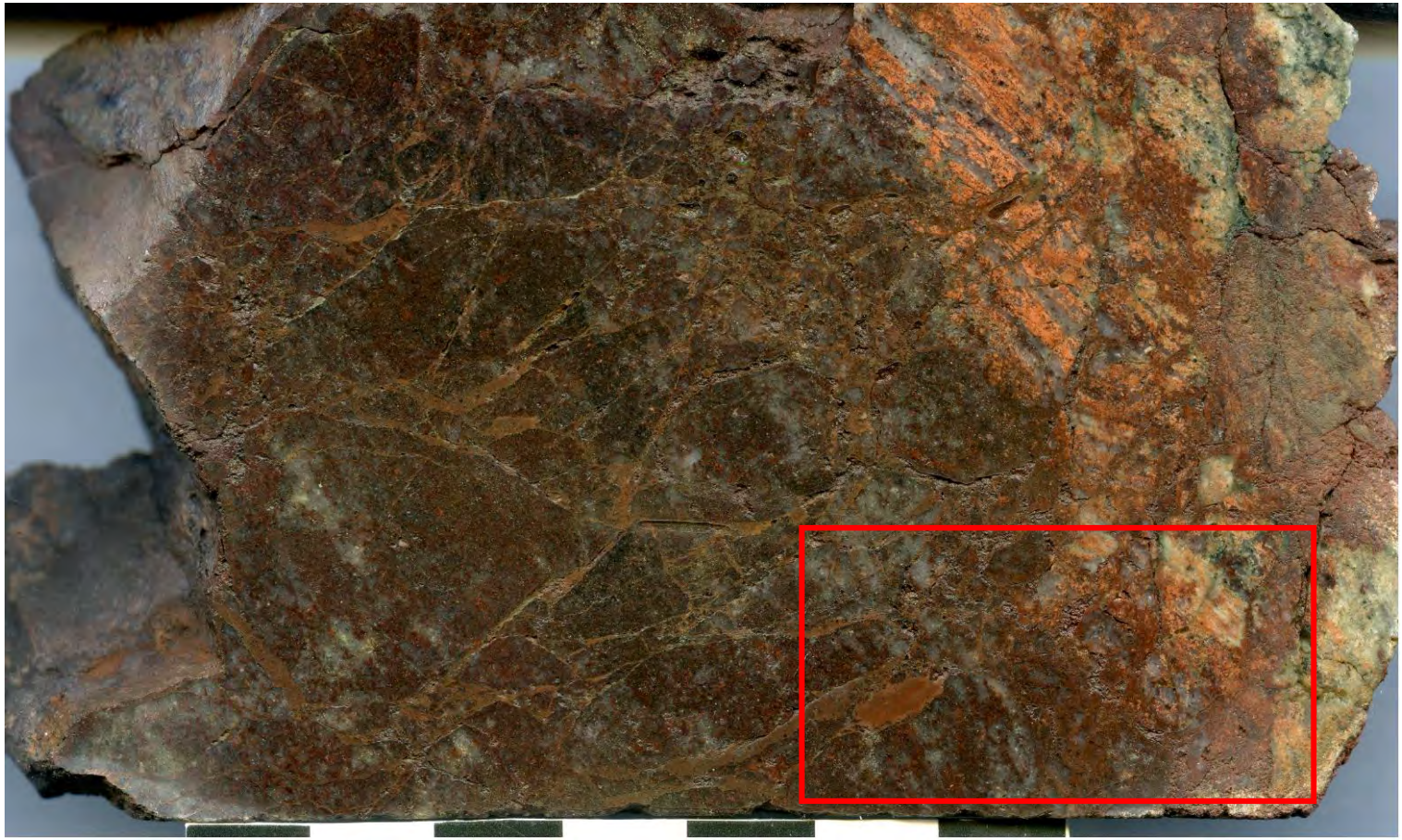


Au-bearing quartz-feldspar vein

DH. TH069

TH135

DH. TH069 147.3m



Au-rich meter (can not see Au by naked eyes)

DH. TH078

DH. TH078 215.6m

Au-bearing intensely silicified unit

DH. TH077

TH138

DH. TH077 **139m**

Brecciation below the ore zone

DH. TH032

TH139

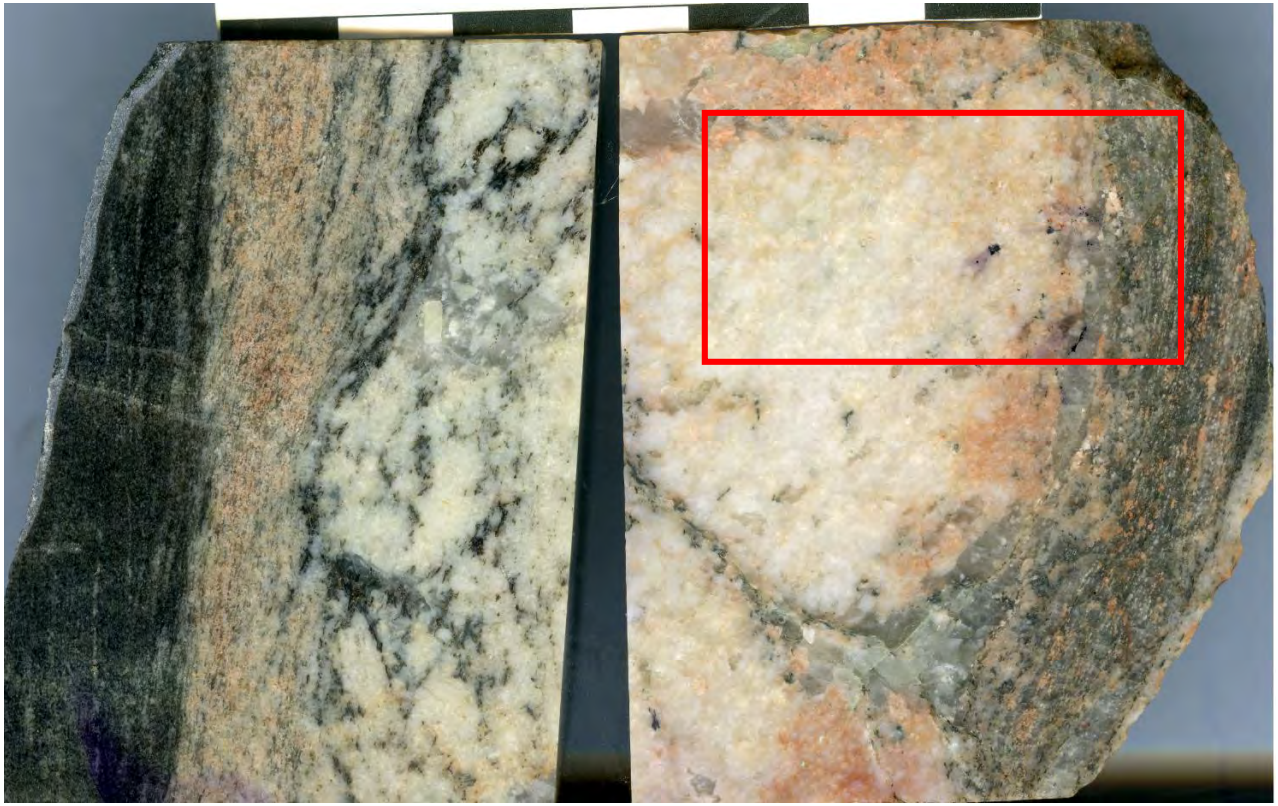
DH. TH032 206.3m

Au-bearing qtz-fsp mylonite

TH140

DH. TH032

286.1m



1522 Ma pegmatite underneath the mineralisation zone in the DH. TH032

Appendix 9: Drill logs

Appendix 9 contains the following data sets:

- Logs for 27 drill holes that were completed during 2018-2019 field campaigns.
- A list and a map of drill holes that were logged.
- A map of drill holes that were logged

A total of 27 drill holes have been logged during 2018-2019, and are listed in Table 1 and plotted in Figs. 1,2 below. The log is separated into 2 sessions with two logging formats.

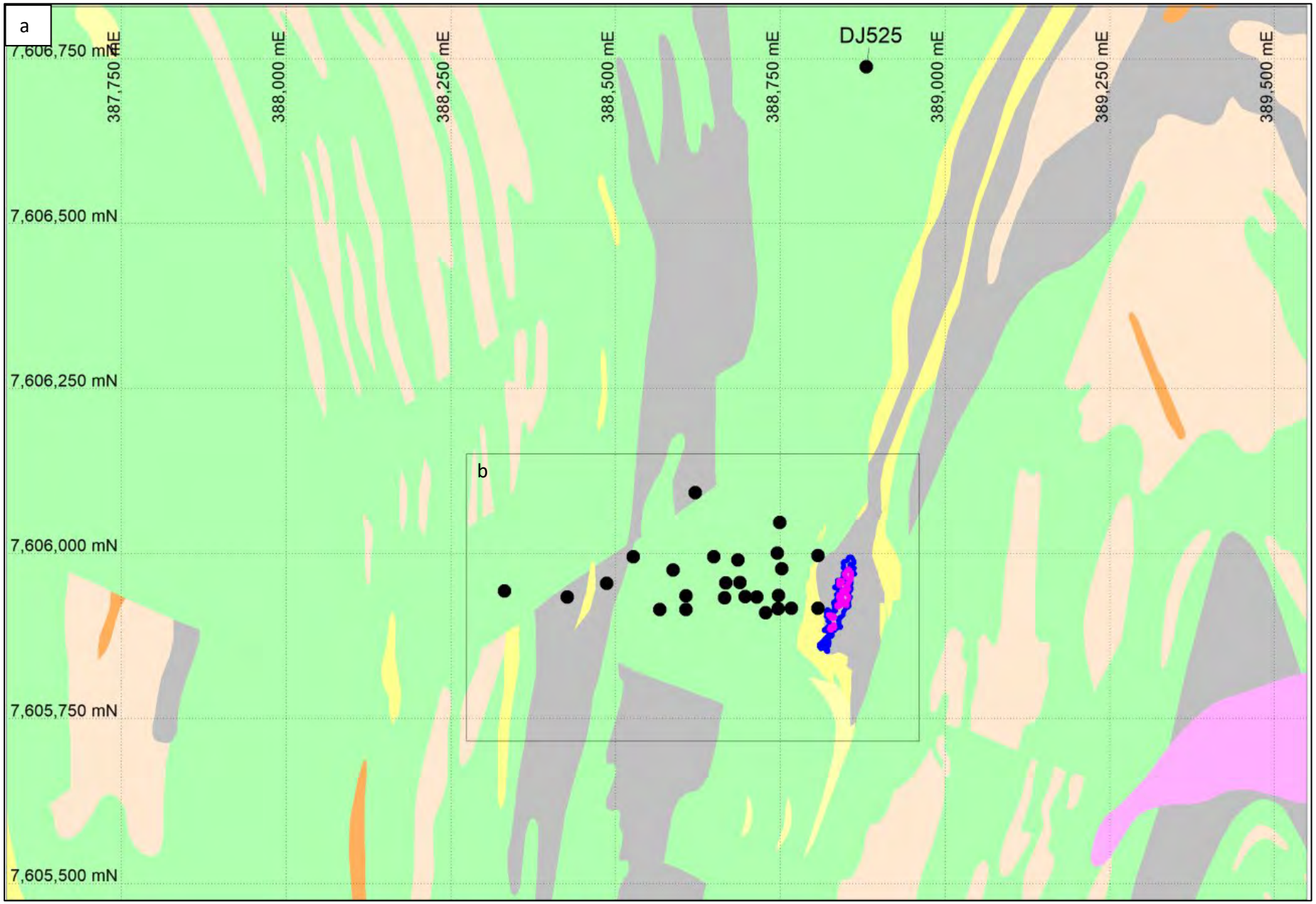
- Session 1: the core log of common description format
- Session 2: the core log of coding description format that is popularly used in exploration

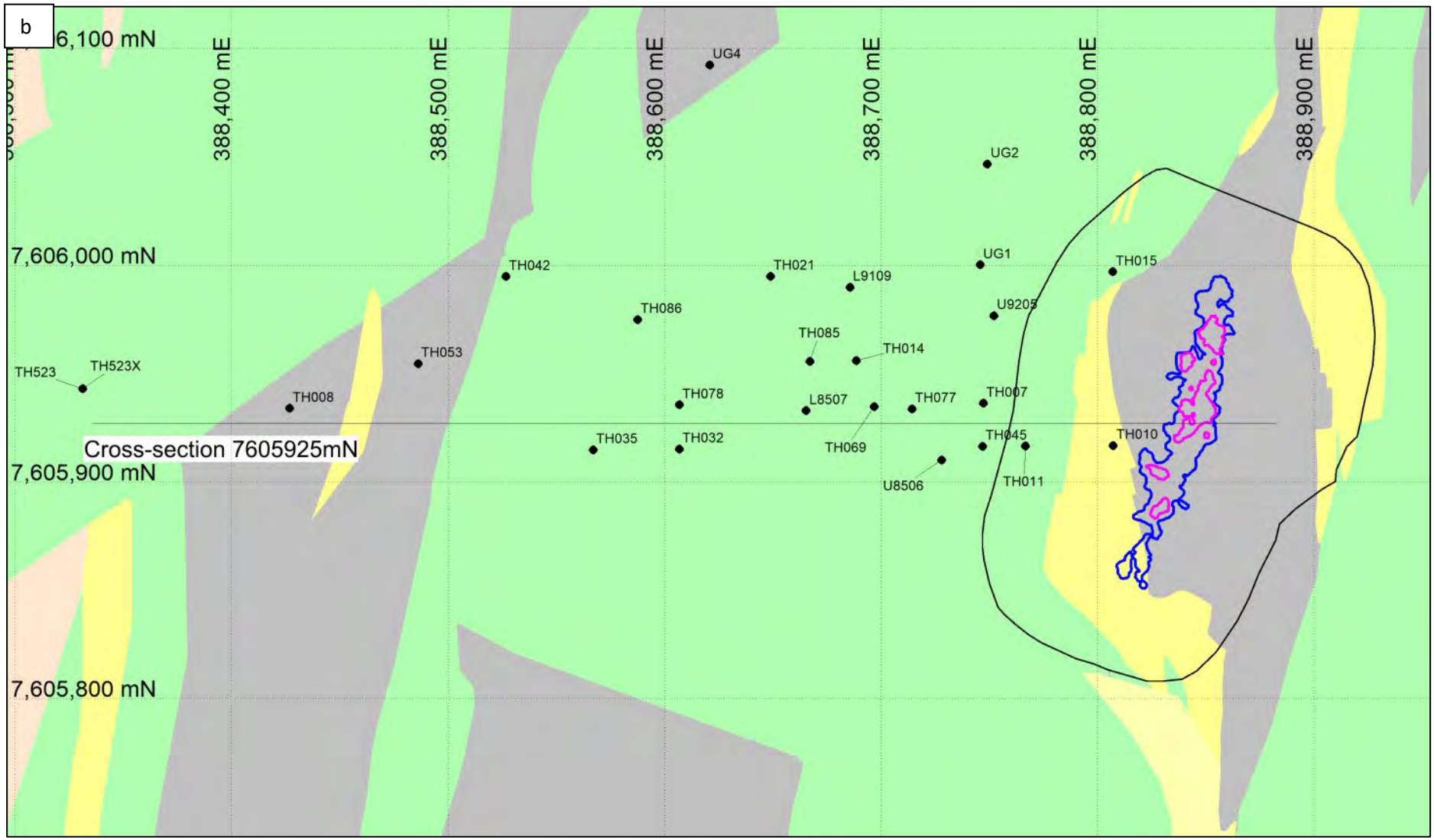
Appendix 9: Drill logs

Table 1. List of drill holes logged (GDA94 coordination, zone 54)

Order	Hole_ID	Session	Depth (m)	Co-ordination	X (m)	Y (m)	RL (m)	Dip	Nat_Azimuth
1	TH008	1	494.7	MGA94_54	388427	7605934	338	-61	91
2	TH010	1	98.9	MGA94_54	388807	7605917	342	-58	93
3	TH011	1	133	MGA94_54	388767	7605917	340	-60	93
4	TH014	1	198.6	MGA94_54	388688	7605956	336	-60	95
5	TH015	1	93	MGA94_54	388807	7605997	342	-57	94
6	TH021	1	243.4	MGA94_54	388649	7605995	336	-60	94
7	TH032	1	291	MGA94_54	388607	7605915	338	-60	93
8	TH035	1	303	MGA94_54	388567	7605915	338	-65	90
9	TH042	1	321	MGA94_54	388527	7605995	337	-67	90
10	TH045	1	125.9	MGA94_54	388747	7605917	338	-60	90
11	TH053	1	550	MGA94_54	388486	7605955	337	-67	90
12	TH069	1	188.7	MGA94_54	388697	7605935	337	-61	92
13	TH077	1	158.6	MGA94_54	388714	7605934	336	-62	88
14	TH078	1	251.8	MGA94_54	388607	7605936	337	-64	85
15	TH085	1	203.8	MGA94_54	388667	7605956	337	-60	92
16	TH086	1	270	MGA94_54	388588	7605975	336	-62	91
17	TH523	1	610.5	MGA94_54	388331	7605943	338	-68	88
18	TH523X	1	575	MGA94_54	388331	7605943	338	-68	88
19	DJ525	2	363	MGA94_54	388881	7606738	329	-55	110
20	TH007	2	177.4	MGA94_54	388747	7605936	339	-62	90
21	U8506	2	264	MGA94_54	388728	7605910	267	-63	unknown
22	U9205	2	199.1	MGA94_54	388752	7605977	266	-59	unknown
23	L8507	2	252	MGA94_54	388665	7605933	188	-79	unknown
24	L9109	2	104.2	MGA94_54	388686	7605990	188	-87	unknown
25	UG1	2	250	MGA94_54	388746	7606000	339	-90	unknown
26	UG2	2	154	MGA94_54	388749	7606047	339	-60	110
27	UG4	2	254	MGA94_54	388621	7606092	335	-60	110

Fig. 1. Maps of drill holes logged at Tick Hill area (a) with a closed view for the Tick Hill deposit in (b). The geology legend was presented in the Final Report – Part 1




b
6,100 mN
7,606,000 mN
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7,605,800 mN
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388,700 mE
388,800 mE
388,900 mE
UG4
UG2
UG1
TH042
TH021
L9109
TH015
U9205
TH086
TH085
TH014
TH053
TH523
TH523X
TH008
TH078
L8507
TH077
TH007
TH035
TH032
TH069
TH045
TH010
TH011
U8506
Cross-section 7605925mN

Core logs: Session 1

Abbreviation

CS: calc-silicate	FWS: foot wall sequence	Cpy: chalcopyrite
MCS: magnetic calc-silicate	Peg: pegmatite	Py: pyrite
CSC: scapolite-feldspar dominant calcsilicate (laminate or schist)	RRA: red rock alteration (red pink hematite-dusted albite and k-fsp alteration)	Hmt: Hematite
ACS: amphibole-rich calc-silicate	PRA: pink red feldspar alteration	Cg: coarse-grained
SB: biotite-rich schist	LPRA: light pink feldspar alteration	Fg: fine-grained
ChS: chlorite-rich schist	Silic.: silicification	CA: core axis
TZ: transition zone, intense silicified unit	Chl: chlorite	Amp: amphibole
AM: amphibolite	Qtz: quartz	Mt: magnetite
HWQ: hanging wall quartzite	Fsp: feldspar	Bio.: biotite
FWQ: footwall quartzite	Qtz-fsp: quartz-feldspar	Cla.: clay minerals
Q: undifferentiated quartzite	Pla.: plagioclase	GCM: green clay minerals
QAM: magnetic quartzite	Epi.: epidote	Galastone: pink quartz-feldspar mylonite
HWS: hanging wall sequence	Flt: fault	=> : altered to

Paragenetic definition:

- Stage 1 vein: quartz-feldspar (± minor magnetite, hornblende) vein, usually appears as EW sheeted veins;
- Stage 2: pink to red pink quartz-feldspar alteration in association with chlorite (±-epidote), gold, trace to minor content of sulphides. The quartz-feldspar, chlorite and hematite dominate the alteration haloes.
- D_3 Stage 3: early chlorite-epidote (stage 3A) and later red pink veins with hematite-rich alteration haloes (Stage 3B; hematite-dusted K-feldspar), in association with Au, trace to minor sulphides;
- Stage 4: calcite veins or veinlets. Au is very rarely observed in this vein;
- Stage 5: light pink quartz-feldspar (± magnetite) dykes or veins, usually as dykes with the thickness of a few meters to tens of meters
- D_4 Stage 6: brecciated quartz-calcite veins or cataclasite with clay alteration haloes

Hole ID: TH014	**Date: 14 Aug 2019**	**Depth: 60-197.3m**	**Core: HQ**	**Au: 140-160; High-Au: 151.7-157.5 (to 3209ppm); Low-Au:**
Summary: This hole is the Au-richest hole with 5 samples ranging from 49ppm to 3209ppm, and with anomalies of Cu-Co-As (151.1-165m) in the Au-rich and the Cu-Co anomalies (184.2-186m) at low grade Au zone; Historical whole rock sampling was taken systematically in this drill hole. A further of 21 samples were taken for this study.				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 60.1-79: CS • 79-87.7: ACS • 87.7-122.5: CS • 122.5-126.7: Mt amphibolite or amphibole-rich calc-silicate; massive mt at 125.5-126.5m • 126.7-156.6: TZ, the intensely silicified SB zone making it TZ unit • 156.6-157.7 (884-3209g/t): core loss • 157.5-172: SB • 172-187: SB, amp-rich SB • 187-197.3: FWQ	• D3 sheeted veins/fractures intensely occurred at 147-162m, bounding the most Au-rich zone. • The infills of the sheeted veins is occasionally calcite (either late D3 or D4 calcite filling in the pre-existing structures). These calcite sheeted veins occurred in the 97g/t meter (153.3-153.6), Au grains found at the haloes of calcite alteration. • Au is not found in the sheeted veins at the haloes of sheeted vein alteration	• Metal zonation: o Fe-Mn-Co (Cu) zone is 8m at 126.7-134.7m o Cu-Co-As-Au zone is 14.3m, at 151.1-165.4m (Au rich zone) o Cu-Co zone is 3 meters, at 184.2-187.2m • Quartz-feldspar mylonite intensely occurred from 147m to 153.6m (may be including the core-lost portion at 156.6-157.5m) • The clear D3 quartz-feldspar mylonitism along the sheeted veins at 183-184.3m making the intense silicification haloes + chloritization + green clay minerals (?) at 172-187m. Note this is the non-Au qtz-fsp alteration • The Au-Co-Cu-As zone, the quartz-feldspar mylonite has red-pink feldspar appears to be just later than the light pink-feldspar metasomatism. This red-pink feldspar is similar to that in the metasomatosed feldspar along the sheeted veins at 185.4-186.2m. However, there are some differences as below:	• Stage 5 light-pink feldspar at 117-122m • Silicification: ✓ 126.7-156.6: TZ ✓ 172-187: SB, amp-rich SB, chloritized + intensely silicified due to quartz-feldspar metasomatism at 183-184.3m • Chloritization: ✓ Chlorite-epidote at HWS 115-126.7m ✓ Chloritization with green clay minerals at FWS at 162-187m • Carbonate veinlet: Likely in the same D3 deformation event, after RRA, Stage 4 (?) – need a microscopic work to confirm	Purpose: Checking alteration and mineralisation in the HWS and in the ore zone (including mineral geochemistry where suitable) 1. 61m: Checking "background" biotite 2. 71.5: as above 3. 85.5: RRA + chlorite check 4. 94m: Checking chlorite-epi alteration in the HWS 5. 103: semi-massive mt, with RRA+epidote+chlorite 6. 122m 7. 119.6m 8. 122.3m 9. 126.2: massive magnetite 10. 127.7: checking silicified biotite-rich unit in upper interval of the TZ zone 11. 144.4: as above 12. 148: as above, with sheeted veins The Au-rich Zone 13. 151.1m: quartz-feldspar mylonite, the start of the ore zone (Au-Cu-Co-As) 14. 153m: Checking geochem of biotite in Au-rich zone 15. 153.4: quartz-feldspar mylonite with Au and intense sheeted veins 16. 154.5m: small piece of quartz-feldspar mylonite with Au 17. 155m: checking biotite in Au-rich zone 18. 156.5

		• In Au-rich red-pink feldspar portion: (1) the quartz is grey, not white; (2) no Cpy-Py recorded; and (3) intense silicification => quartzite • At 186.2m (Cu-Co zone): (1) weaker quartz-feldspar alteration; (2) quartz is white, not grey; (3) a lot of Cpy and Py; • The relationship between the red-pink feldspar and sheeted veins: • Close special relationship • At Cu-Co zone: the quartz-feldspar associated with the sheeted veins		19. 157.5: checking geochem (?) of biotite in SB, just below the most Au-rich portion (157-157.5m, 3209ppm) The Au-poor and Cu-Co Zone samples: 20. 161 (a small piece with malachite) 21. 164.6: checking geochem of chlorite-epi in Au-poor zone 22. 173: checking geochem of chlorite-epi in Au-poor zone 23. 178.3: as above 24. 183.4: quartz-feldspar metasomatosed 25. 186.2: Cpy-Py in Cu-Co zone with chloritization (checking geochem of chlorite and S isotope?) 26. 186.4: similar to 186.2 but with white quartz associated with red pink feldspar (checking geochem of chlorite and S isotope?)

Hole ID: TH085	**Date: 15 Aug 2019**	**Depth: 6-202m**	**Core: HQ**	**High-Au: 173-176 (with Cu up to 0.4%)**
Summary: This log Just focuses in the mineralisation zone, the relationship between Au and Cu mineralisation in this hole (one of the most Cu-rich drill hole)				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• Quick view: the wall rock is similar to other holes (TH086, TH014)	• Similar to other holes viewed/logged • Sheeted veins intensely at 178-180m, strongly at 164-194m, and have a very close special relationship with the mineralisation zone and the D3 (?) stage 1-2 quartz-feldspar metasomatism/ alteration	• The stage 1-2 qtz-fsp alteration occurred from 162-192m • Au concentrate in the quartz-feldspar mylonite, along the S1 structures and in sheeted veins. A very cg Au in sheeted vein at 175.6m in quartz-feldspar mylonite (D1 or D3 gold?) • In quartz-feldspar mylonite: No or trace of Cpy and Py • In Cu-Co anomalies: Py-Cpy-rich associated with chlorite-epi in silicified SB or amphibole-rich SB that hosting the quartz-feldspar mylonite (173.3m) - the chlorite-epi alteration occurred in the quartz-feldspar mylonite, but it occurred strongly in favorable host rock, such as host SB	• The alteration zonation forms from: the intense silicified zone to chloritization but chloritization can occur throughout the different alteration zone (similar to the other holes) • The epi-chlorite occurred in the Au-rich zone, 30cm next to the quartz-feldspar mylonite, in the host rock containing the amphibole and biotite	1. 173-173.3: Au-Cpy-Py, for S isotope at 173.3m? 2. 175.3: SB with Py-CPy (mostly altered to malachite) 3. 175.6m: Au in sheeted veins and S1 structures in quartz-feldspar mylonite overprinted by D3 qtz-fsp alteration (?)

Hole ID: TH086	**Date: 15 Aug 2019**	**Depth: 6-270m**	**Core: HQ**	**High-Au: 233-241 (to 15.6ppm); Low-Au: High-Cu: 248-256 (to 0.5%)**
Summary: Similar to hole TH085. This core checking Just focus in the mineralisation zone, the relationship between Au and Cu mineralisation in this hole (one of the most Cu-rich drill hole)				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• Quick view: Similar to other drill hole, from top to bottom is (amphibole-bearing) CALCSILICATE=> TZ => SB => FWQ		• Qtz-fsp metasomatism at 237.3m, making ~5cm haloes of quartz-feldspar mylonite around the intrusive patches at 237.3m, and the pink quartz-feldspar alteration in the TZ zone (or speckle quartzite) at 233-234m (with a few Au ppm) and 245.5m (with a few Au ppm). • The red pink feldspar (K-feldspar) in the sheeted veins (with Au, at 237.3m) is later than the non-foliated white to light pink pegmatite metasomatism (albite-rich). The Feldspar-rich portion is none or trace of pyrite • At 248-256m: up to 0.5% Cu, Py-Cpy is associated with the red-pink feldspar (K-fsp) alteration in SB unit	• The alteration haloes are similar to other holes: Chlorite - silicification – chlorite (i.e. chlorite bounding the silicification, but the chlorite also occurred in the silicification zone)	1. 237.3m: intrusion associated with quartz-feldspar metasomatism (quartz-feldspar mylonite) with later Au in sheeted vein 2. 240.5m: Au 3. 250: Cpy-Py rich with red-pink feldspar alteration in SB (For S isotope if can drill enough Py/Cpy) 4. 250.4: As above

Cross-Section 7605925N:

TH010 –TH044 – TH011 - TH045 - TH077 (15m north projected) - TH069 (15m north projected) – TH032 – TH078 (15m north projected) – TH035 – TH053 (30m north projected)-008-523

Hole ID: TH010	**Date: 09 Jul 2019**	**Depth:20-98.9m**	**Core: HQ but only 1/4 core left**	**High Au: 51-54; Low Au 46-55**
Summary: The Au mineralisation is specially related to the stage 2 quartz-feldspar mineralisation and the high intensity of the sheeted veins (E-W structures). The brecciation in and underneath the ore zone does not present in this shallow hole.				
Geology	Structures		Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 20-29: HWQ, white quartz but less quartz-feldspar alteration compared to the speckle HWQ at the Pit wall • 29-41: TZ or ortho-quartzite formed due to the intense silicification • 41-65.5: SB and amphibole -rich SB • 65.5-69: mylonitic quartzite • 69-95.5: SB Some amphibolite bands intercalated within the SB, within the interval 71-78; 86-88.5m • 95.5-98.9: FWQ	• The S1 x CORE AXIS = 65-80 deg • The stage 2 veins mostly are sheeted veins but occasionally cut the S1 structures or in "convoluted" form (54.5m) • The sheeted veins are more intense in the mineralisation zone and its surrounding haloes (from 38m), causing very broken core but not "brecciation" at depth observed in hole TH077, 078, 042, 069 • The fracture intensity at the footwall of the mineralisation zone (i.e. at 69-95.5m) is weak		• The stage 2 pink quartz-feldspar veins are sub-parallel with the core axis, filling the sheeted veins. It is more intense in the mineralisation zone and its surrounding (from 38m) • The stage 2 quartz-feldspar alteration penetrated into the S1 foliation planes causing the "quartz-feldspar mylonite like" in the alteration haloes • The thickness of the alteration/metasomatism haloes from 1-20cm, at: 49.5m, 50m, 50.6m, 52.9m, • The stage 3 RRA is occasionally associated with pyrite vein (50.2m) • Stage 5 veins: light pink feldspar – mt – quartz have sharp contact, almost not penetrating into the S1 structures, clearly overprinting the D1 fabric and early D3 veins (e.g. at 66.9m)	• The ore zone is at the lower part of the silicification unit (TZ) • The silicification at the footwall of the mineralisation zone is weak-medium, at 69-95.5m	1. 54.5-54.55: Typical Au-bearing quartz-feldspar mylonite) 2. 66.3-66.37 (Stage 5 veins)

Hole ID: TH044	**Date: 07 Jul 2019**	**Depth: 53-90m**	**Core: HQ (available core 53-90m)**	**High-Au: 54.5-80.5 ; Low-Au: whole hole**

Summary: This drill hole presents the E-W feeder vein causing the Au mineralisation in the most Au-rich interval and Au in the feeder vein, also the spatial relationship between the stage 2 quartz-feldspar alteration with the sheeted veins, the high-Au zones, and the intense silicification

Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples

• 53-67: TZ zone with QAM
• 67-85: TZ
• 85-88: SB
• 99-90: SB intercalated with CS
	• The intensity of sheeted veins is positively related to the Au-grade
	• The brecciation formed by the intense sheeted veins and the veins filling into the S1 structures occurred just below high-Au zone, 87.5-87.6m
	• The intensity of the sheeted veins is very high in and around the high-grade zone
		• Mylonitic quartz-feldspar metasomatism frequently occurred at 56-56.03; 56.3-56.5; 66-66.03; 67.6-67.9; 69.7-70; 70.5-70.6; 73.5-73.7; 74.3 (5cm) and 74.5 (3cm); 80-80.2m
		• The stage 2 reactivate the stage 1 structures at 67.6-67.9m or cut the S1 structures by sheeted veins (typically at 69.5-69.7m)
		• The typical Au-rich mylonitic quartz-feldspar with the feeder quartz veins at 80-80.1m. Some fine-grained Au is observed in the feeder vein (that is // CORE AXIS). The quartz-feldspar mylonite here appear to be resulted from the metasomatism with the feeder vein that lastly healed by the quartz. The S1 fabric in this portion is not well-preserved
		• At 80-80.5m: 3 stages recorded,
		  o Stage 1 metasomatism
		  o The stage 2 Au-bearing alteration/metasomatism (fsp, chl-epi, qtz)
		  o Stage 3 RRA (+Au?)
		• At 60-60.2m: the stage 5 quartz-feldspar-specularite
			• The hematism is very strong at the breccia zone, 86-88m
			• The chl-epi is likely associated with both stage 2 vein (e.g at 63m), in later vein alteration (chl-epi veins; 2B-c?), and the RRA (?)
			• The silicification is intense, causing TZ unit at 53-85m, bounding the mineralisation zone
				1. 63-63.1m (stage 2 chl-epi alteration)
				2. 73.5-73.35, a small picece similar to THM04
				3. 80-80.15; very Au-rich with Au in the feeder vein
				4. 87.5-87.6 (brecciation)

Hole ID: TH011	**Date: 08 Jul 2019**	**Depth: 60.4-133m**	**Core: HQ**	**High-Au: 75.7-96m; Low-Au: 0-127m**
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 60.4-66.6: HWQ • 66.6-82: TZ • 82-94: SB • 94-103: SB • 103-127: SB • 127-133: FWQ	• The stage 2 qtz-fsp veins // and X core axis and S1 fabric • The brecciation that caused by the intense sheeted veins, does not present in this shallow hole • The late fault (D4), with different fill of compared to the D3 brecciation, has a nest of beautiful quartz crystals in a cavity at 99.5m, cutting the bottom of the ore zone at 94.3-102m	• The Au-rich zone located in the TZ unit and upper SB unit, spatially related to the stage 2 metasomatism and alteration occurred in the TZ unit and the upper SB unit, at: 75.5-76, 77.5-77.6, 81.25-81.7; 84-84.5; 85-85.3, 86.8-87.5, 88.3-89.1, 92-92.2, 93.4-93.5m • A lot of disseminated fine-grained Au in the mylonitic quartz-feldspar at 84m • The D3 stage 2 quartz-feldspar metasomatism and alteration penetrate into S1 structures (77.5m, 84m, 92m, 93.5m) but the transgressive contact can be observed at 75.7; 81.6; 85; 87.5m (very clearly that the late metasomatism with transgressive contact causing the quartz-feldspar metasomatism overprinting mylonite); • The stage 3 RRA varies from medium (outside the ore zone) to strong (inside the ore zone) intensity	• The hematism is very strong in the high-grade ore zone • The weak chl-epi alteration in the high-grade zone but not sure stage 2 or 3 or both	1. 87.4-87.6: transgressive contact of metasomatism causing the quartz-feldspar mylonite like 2. 88.5-88.65: the contact of quartz-feldspar mylonite and SB, with sheeted veins and hematism 3. 99.5m: brecciation with quartz crystals in the cavity similar to those in the late brecciation at the waste (late D3 ?)

Hole ID: TH045	**Date: 10 Jul 2019**	**Depth: 71- 125.9m**	**Core: HQ**	**>1g/t Au: 95-112 (10-20g/t: 98-99, 103-104, 107-108); Low-Au: 12-118**
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 71-86: TZ The TZ unit (ortho quartzite) is formed due to the intense silicification of the original SB intercalated with amphibolite bands (evidenced by some biotite or amphibole bands but poorly preserved) • 86-102: SB • 102-104.7: mylonitic quartz-feldspar • 104.7-117: SB Weak stage 2 metasomatism • 117-125.9: SB Very week stage 2 veins, weak RRA, but strong chloritization	• The tight folds within the stage 2 quartz-feldspar mylonite (102-104m) are likely syn-D3 folds • the intense fractured zone occurred at the bottom the ore zone, at 105-106m, weaker fracture compared to the fractured zone at holes TH044, 077, 078, 069, 032	• Mineralisation in the TZ and upper SB unit • D1: mylonitic quartz-feldspar • Stage 2: sheeted veins + veins cutting across the D1 mylonite, has similar composition to the mylonite • The stage 2 quartz-feldspar metasomatism overprinting mylonite occurred at 88-111.5m with thickness of ~1-20cm (88 – 1cm, 95.3-3cm, 96.2-6cm, 97.9-98.1, 100.2-100.4m; 106-2cm; 107.3-4cm, 109.5-3cm), but concentrated at 102.5-104.7m. • The stage 2 metasomatism with irregular contact at 96.2m; 104.4-104.7m • Note that the interval 110-112m, with 1-2g/t, has no quartz-feldspar mylonite, only irregular veins of stage 2 quartz-feldspar metasomatism observed (the picture with the core marked as 11.3 is actually at 117.9m) • Pyrite is a trace mineral, rarely with the stage 2 (95,3 and 103m). It sometimes associated RRA overprinting the stage 2 veins/ alteration	• The alteration zonation in a cm-scale is clearly observed at 106m: (3) ~5cm chlorite - (2) 2cm silicification- (1) 1cm mylonitic quartz-feldspar bands • In m-scale the intense silicification 71-117m, the chl zone at 117-125m	1. 106.1-106.2: the intense fractured zone at the bottom of the ore zone

Hole ID: TH077	**Date: 16 Jul 2019**	**Depth: 94- 151.2m**	**Core: HQ**	**>1g/tAu: 130-141m; >80g/t Au: 133.9-136m; 0.01-0.9g/t: 16-157m**
Summary: The high-grade zone is spacially related to the high intensity of the sheeted veins and the sheeted-vein-related breccia				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 93.9-103.9: MCS • 103.9-107.2: HWQ • 107.2-129.6: TZ • 129.6-149: SB The very strongly silicified SB (not like the intense silicification in the TZ unit) • 149-151.2: SB The amphibole-rich SB unit, has medium silicification and chloritization (note that in the colar, the depth is 158.6)	• The sheeted veins occurred through the hole but very week at the poor or non-Au zone (<0.01g/t), • The intensity of the sheeted veins is much higher in and around the high-grade Au zone (>1g/t), at 107.2-151.2, • The sheeted veins are more intense at 127-151.2m, causing the sheeted-veins-related brecciation at 138.8-139.3m and 144-149m. This breccia is different from the D4 breccia at the bottom the holes TH044 and TH007 in composition and texture (with no quartz or carbonate cement and not like typically brecciated textures)	• The stage 1-2 qtz-fsp metasomatism and alteration is week in the HWQ, TZ and SB units. They occurred as the haloes around the sheeted veins that // with the core axis. No information for the core loss interval (111.5-111.9m), but 3cm of quartz-feldspar mylonite is left at 111.95cm. • Au is disseminated in the sheeted veins, in association with the quartz-chlorite (at 135m) and also in the S1 structures (135.2-135.3m)	• The alteration zonation is as below: o Intense silicification: 107.2-129.6 o Very strong silicification: 129.6-149 o Weak silicification + strong chloritization zone: 149-151.2 • The Stage 5 light-pink feldspar flooding at 99-102m	1. 127.4m: Typical piece of 0.4g/t meter just above the Au-rich gold zone 2. 134m: Au in S1 structures and also in the sheeted veins 3. 134.8m: Au in mylonitic ribbon quartz grains and Au in the fractured surface or sheeted veins on the reserved side 4. 135m: Au clearly in the sheeted veins 5. 135.5m: Alteration just below the high-grade zone 6. 139m: Breccia immediately below the high-grade zone 7. 145m: stage 2 sheeted vein “brecciation”

Hole ID: TH069	**Date: 13 Jul 2019**	**Depth: 113-188.7m**	**Core: HQ**	**High-Au: 140-141, 144-153 (147-149:11-60g/t); Low-Au: 118-172**
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
The sequence of this hole is similar to those in the TH032, TH035 • 113.7-119.6: CS and BS-rich CS • 119.6-131.6: HWQ • 131.6-158: TZ Intense silicified BS and amp-bearing CS • 158-188.7: BS	• D3 brecciation in association with sheeted veins at: o 118.1-123: brecciation in some intervals o 130.6-133: similar as above o 143-148: similar as above o 152-173: strongly fractured that is related to above faults zones	• The quartzite-feldspar metasomatism at 136m (10cm), 138-138.5m (stage 1 with feeder veins), especially at 152-152.8m (not continuously, and with higher intensity of silicification). • The high-grade Au zone spatially coincide with the D3 faults/fractures (sheeted veins and brecciation), and also the silicification and hematism • 145.2-148.2: Very high-grade zone (but cannot see Au), "brecciation" that was related to the sheeted veins, in the ore zone. Similar to the "brecciation" occurred at the bottom of the high-grade zone in holes TH077, TH078, TH032, TH044 • The mylonitic quartz-feldspar at 147.7-147.9 but the Au mineralisation appears to occur with the later sheeted veins (similar to the mineralisation observed in holes TH077, 708, 032, 044) • At 140-141 (2.3g/t): stage 1-2 quartz-feldspar weakly replaced the S1 fabrics • Fine-grained Au at 152.3-152.6	The alteration zonation is clearly as below: • 117.7-119.6: Medium silicification • 119.6-136: Strong silicification • 136-153: intense silicification with stage 1-2 quartz-feldspar metasomatism and alteration • 153-158: intense silicification • 157-172: Medium silicification • 172-185.7: Strong chloritization Note that in the silicification zone, the chloritization also occurs	1. 140.3-140.4: stage 1-2 quartz-feldspar weakly replaced the S1 fabrics 2. 147.3-147.4: High grade Au with poor quartz-feldspar alteration but intense sheeted veins and brecciation 3. 152.6 (1/6 core, a small piece), fine-grained Au disseminated

Hole ID: TH032	**Date: 13 Jul 2019**	**Depth: 115-291m**	**Core: HQ**	**High-Au: 205-207 (4-47g/t); Low-Au: 198-246, 263-268**
Summary: The lithology of this hole is comparable with the interpretation of the Tick Hill Tight fold center in the mining pit				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 155-177.6: CS (core lost at 177.6-182.2m) • 182-191.3: MCS The mt content is increasing from 155m, reaching semi-massive mt in some intervals at 182-186m. • 191.3-200: ACS, amphibole-rich CS; the S1 fabric is not well preserved due to the intense silicification • 200-200.2: HWQ or TZ? • 200-227: TZ, intense silicified BS • 227-274.2: SB The BS also occasionally contains amphibole bands and quartz-rich BS • 274.2-277.5: FWQ • 277.5-281.5: TZ, extremely silicified BS; qtz>>>>bio.>amp • 281.5-291: CS o Some early quartz veins at 170m o The CS in the FWS (277.5-291m) in this hole is intense silicified, appears due to the metasomatism and the late intrusion?	• D3 open fold at 160.5m • A fault occurred below the ore zone (208.9-211.5), brittle deformation, • The intense sheeted veins making the brecciations, the sheeted veins are reactivated and then filled by the quartz-epi-feldspar	• The qtz-fsp metasomatism weakly occurred at 200-227m. At 207.3m, quartz-feldspar mylonite in high grade zone is quartzite-rich compared to the non-Au quartz-feldspar mylonite • The stage 1 metasomatism occasionally occurred at some intervals at 259-264m • The stage 1 also occurs in the FWQ, concentrate at the top of the FWQ, at 279.5-281m, making mylonitic quartz-feldspar • Patches of pegmatite at 285.5-290.4m	The alteration zonation in this hole is similar to that in hole TH068: • 183-191.5: chl zone • 191.5-200: strong silicification • 200-228: intense silicification • 228-231.5: strong silicification • 231.5-250: chl zone	1. 183.5: Checking geochem of chlorite in HWS ? 2. 195.6: medium to strong silicified zone 3. 203.5: upper TZ zone 4. 207.3: Ore zone 5. 210: Lower TZ zone 6. 231: medium to strong silicification in FWS 7. 235.5: chloritization in the FWS 8. 280.4-280.5: biotite-rich CS that is similar to the HWS of this hole (comparable with the Tick Hill tight fold interpretation) 9. 285.5-286.1: dating pegmatite

Hole ID: TH078	**Date: 16 Jul 2019**	**Depth: 180-258m**	**Core: HQ**	**High-Au: 213-221 (up to 177ppm) and 227-228 (6ppm); Low Au: 202-236**
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 180-185.4: CS, biotite-rich CS • 185.4-207.4: CS replaced by the flooded light pink feldspar (Stage 5) • 207.4-210: HWQ • 210-233: TZ, actually is the intense silicified SB • 233-258: SB	• Intense sheeted veins/fractures are spatially related to the silicification (the TZ unit) and mineralisation. It concentrates in and around the high-grade zone • Strong fractures along the core at 190.5-191.5 fault, cataclasite with quartz vein at 191.5-192.5m • The shearing occurred in along the sheeted veins, with smooth shearing surface. The surface of the shear is chlorite + quartz • The sheeted veins also strongly occurred at 238-239m and 244-245m • Near the bottom of the high-grade ore zone is the breccia zone (221.5-223.5) that appear to be associated with the sheeted veins	• The metasomatism is not strong in this hole, occurred along the sheeted hair veins; The metasomatism replacing host rock, along the S1 fabric • A lot of Au disseminated on the surface (also along) of the sheeted veins at 215-216m, in quartz-chlorite • At 215.6m, Au (including a coarse grain) occurred in the quartz-feldspar metasomatism haloes and in sheeted veins • Note that no quartz-feldspar mylonite (galahstone) in this very high-grade drill hole, only weak quartz-feldspar metasomatism/alteration with disseminated Au at 215-216m along the hair sheeted veins.	• The silicification above the ore zone is overprinted by the Stage 5 LPRA • The intense silicification at 210-233m, making TZ zone • The strong silicification zone also bounds the TZ zone (~4-5 m thick) • It appears that: the fluid associated with the quartz-feldspar metasomatism that make the silicification come through the sheeted veins	1. 215.6: Cg Au in sheeted veins and in quartz-feldspar metasomatism 2. 222.3-222.3m: the breccia zone associated with the sheeted veins at the bottom of the high-grade zone (has not reported)

Hole ID: TH035	**Date: Jul 2019**	**Depth: 303m**	**Core: HQ**	**Only trace of Au in this hole (< 0.02g/t): 180-182; 242-244; 265-271**
Summary: Available cores at the site for logging is only from 101.5m to 233.8m. This hole intersects the deep ore zone (see the geological cross-section in Part 1), only trace of Au found. The sequence of the lithology fits the interpreted Tick Hill tight fold. Note the amphibolite unit is only 25~ 30m thick in true thickness (38m along the core axis)				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 101.5-118: CS dominated amphibolite • 118-156: Amphibolite dominated SB and CS • 156-173: CS dominated SB/amphibolite • 173-207: Amphibolite dominated SB/CS • 207-226: CS-MCS The magnetite content increase in the period 212-226m • 226-233.8: HWQ or TZ	• The S1 foliation X the core axis = 70-85 degree.	• The pink quartz-feldspar alteration (making speckle quartzite) occurred in the TZ/HWQ unit.	• chlorite + epidote alteration in this drill hole is weak	No sample taken

Note: the rest of the deeper part of this cross-section, from this hole, include TH048 (not logged, see the C-TJ's log) and TH053, TH008 and TH523 (logged)> all of them have only trace of Au (<0.004ppm)

Hole ID: TH053	**Date: Jul 2019**	**Depth: 550m**	**Core: HQ-NQ**	
Summary: The main purpose of this log is to compare my observation with C-TJ's observation. Generally, I agree with C-TJ's observations but have some minor change in the lithology from 192 to 297m as below.				
Geology	Structures		Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 92-230: HCS or ACS • 230-273: CS • 273- 282: ACS • 282-297: ACS Convoluted amphibolite mixing with CS or HCS • 297 -304: CS • 304-309: QAM • 309-335: Q • 335-411: SB • 411-419: Amphibole • 419-421: Peg • 421- 455: SB • 455-489: FWQ • 489-499: CS • 499-501: Peg • 501-550: CS with high content of amphibole				

Hole ID: TH008	**Date: Jul 2019**	**Depth: 495m**		
Summary: Just check the C-TJ's log. I agree with C-TJ, just adding some more information about the stage 2-3-4 alteration as below.				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
		• The stage 2 and stage 3 RRA and Stage 5 veins occurred along the veins // core axis. The key RRA is dominated. o The stage 2 is overprinted by the RRA: 49m, 50m, 57.7m, 82-82.5m; 118-120m, with the light-pink feldspar, quartz and magnetite • The Stage 5 veins cutting the RRA has similar composition with the stage 2: light pink feldspar, quartz and magnetite, 57m		

Hole ID: TH523	**Date: Jul 2019**	**Depth: 370m**	**Core: HQ-NQ**	**High-Au: No; Low-Au: 481-491m**
Summary: Review the Bill Laing's logging, checking the metasomatism in this hole and also the stratigraphy of this deep hole but only core at 0-135.6m is available for logging. Available core at the site: 0-135.6m				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 0-17: ACS, amphibole-rich CS • 17-45: ACS, banded amphibole intercalated with CS, with quartz-feldspar mylonite as described in the metasomatism section • 45-51: TZ, intense silicified unit • 51-67: ACS, similar to 17-45m, with galahstone like at 57.7-60.5m • 67-135.6: ACS, similar to other ACS in this hole but has late pegmatite intrusion and the subsequent metasomatism	• The S1 foliation x the core axis = 40-45 degree • D3 fault at 4-17m • The D4 fault occur at 123.3 and 128.7-131m	- Late pegmatite occurred from the top of the hole (18.9m, 27.3-28.5, 29.8-30.1, 49, 49.5). The pegmatite veins and dyke have with both transgressive and concordant contact with the host rock. Most of the metasomatism portion (excluding 29.8m) are very similar to Au-bearing quartz-feldspar mylonite in color and composition but no Au is recorded. Also, no feeder veins were recorded in this interval (sheeted veins just related to the mineralisation zone?). - The late pegmatite more frequently occurred at 71.8-101.6m (71.8, 76.6, 76.9, 79, 82.9, 86.3, 101.6, 94.3, 95m) which is similar to late feldspar-rich pegmatite in TH032, U8506 and U9205 that has been dated. The pegmatite lead to the transgressive contact metasomatism. It penetrates into the syn-tectonic S1 structures and making the quartz-feldspar mylonite - The pegmatite presenst no fabric texture, the contact has the S1 fabric texture sue to the pre-existing texture of the host rock that the late pegmatite does not completely replace - The late intrusion occurred at 79m cut across the very intense silicified with irregular contact, but the S1 texture is still preserved - At 76.9m: the late pegmatite cause the metasomatism along the S1 fabric => quartz-feldspar mylonite like. The FW of the peg is completely silicified - At 82.9m: similar to 76.9 and 79m - The feeder vein of the metasomatism is recorded at 73.5m - 86.3m: discordant contact of the quartz-feldspar metasomatism. The hair veins of pink feldspar are the later stage after the metasomatism (but in the same deformation event?) - The metasomatism occurred above the foliation truncation plane - This metasomatism and mylonite is overprinted by the RRA	• The metasomatism lead to the alteration haloes of silicification, chlorite, epidote at 71.9m • The intrusions at 71m cause a very intense silicification zone (1.5m) at the footwall of the pegmatite at 79-80.5m. The TZ zone occurred from 80.5 to 87.3m • The stage 5 feldspar-quartz-magnetite cut and replace the RRA • The stage 2 Cpy-Py-quartz-feldspar occurred at 84m and 91m, and is overprinted by the RRA	1. 27.2-27.3: quartz-feldspar mylonite like without Au 2. 42.8-42.9: stage 5 veins cutting the RRA 3. 71.9-71.95m: metasomatism lead to the alteration haloes of silicification, chlorite, epidote 4. 76.9-77: contact metasomatism 5. 86.23-86.3: metasomatism, stage 1? 6. 95-95.1m: quartz-feldspar metasomatism

Hole ID: TH523X	**Date: Jul 2019**	**Depth: 370-575m (continuation of DH TH523)**	**Core:**	**High-Au: No**
Summary: This drill hole is the continuation of the hole TH523. Purpose of this drill hole is a quick check if any quartz-feldspar mylonite or brecciation at depth. Available core 370.5-575m;				
Geology	Structures	Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• 370.5-408.7: Amphibolite, amphibolite intercalated with M.amp, CS (amphibole>fsp>quartz>biotite). The amphibolite is not banded but thick layered or massive • 408-426: ACS • 426-428: LPRA • 428-436: ACS • 436-452.5: LPRA, flooding stage 5a pale pink feldspar, cut by stage 5b white pink feldspar veins (<0.5cm thickness) • 452.5-466: HWQ, similar to TZ • 466-482: TZ occasionally contain fg biotite • 482-487: BS • 487-490: TZ • 490-552: SB; biotite-amphibole-plagioclase - quartz • 552-564: FWQ; broken core, filled by the cg red-pink feldspar-amphibole and minor quartz, making cataclasite • 564-575: ACS (?)	• Some changes in the S1 foliation: o 408-426m: the S1xCore axis = 40-45 degree o 490-540: S1X CA = 60-85 degree, mostly 80	• Patches of late pegmatite at 499.5 and 500.5m (~10cm wide) • 509-510m, 540-552: stage 5 quartz-feldspar alteration but this this red feldspar		1. 376 (5cm) 2. 392.3 (5cm) 3. 410.5 (5cm) 4. 471 5. 509.6

Cross section 7606005N

Drill holes TH015 - TH021 - TH042

The purpose of logging this low-grade cross section is to find differences in this cross section and the high-grade cross section (7605925)

This hole has been logged by the C-TJ in 2001 already. Thus, this logging only presents additional information that has not been present in C-TJ

Result: These 3 drill holes with trace to poor-Au due to:

- very week quartz – feldspar alteration
- week chlorite-epidote alteration
- no brecciation (as occurred in drill holes with Au-rich ore zone) recorded
- scattered fracture/sheeted veins recorded

Hole ID: TH015	**Date: Jul 2019**	**Depth: 93m**	**Core: HQ**	**High-Au: no; Low-Au: 64.5-68 (to 0.925ppm)**	
Geology	Structures		Qtz-fsp metasomatism/alteration and mineralisation	Other alteration	Samples
• As in the C-TJ's log	• 0-48m: very broken core • 48-60; 64-68; 69-72.5: broken core due to the fractures along the core axis		• 40-64m; 68-76m: trace of stage 1-2 alteration • 64-68m: weak stage 1-2 metasomatism/alteration along the sheeted veins	• Hematism strongly occurred at 48-60m; 64-65m; 71-73m • Strong silicification at 64.5-71 and 77.7-82 but weaker than some intense silicification in hole TH021 and other high-grade zone in other holes • Chloritization zone: 56-84m	

Hole ID: TH042	**Date: Jul 2019**	**Depth: 321m**	**Core: HQ**	**High-Au: No**	
Available core: 190-321m					
Geology	Structures		Metasomatism/alteration and mineralisation	Other alteration	Samples
• 190-211: CS • 211-227.5: SB or biotite-rich CS • 227.5-235: D3 feldspar flooding that is overprinted by the RRA • 235.5-237: SB • 237-243: Late stage feldspar flooding overprinted by the RRA • 243-247: Feldspar replacement over the SB, the banded texture is still preserved but the composition is very feldspar-rich • From 247m to the end, the same with C-TJ's log	• 213-228.5: strongly sheeted fractured • 233-237: very broken core		• In the D3 feldspar flooding: all pre-existing texture and composition is replaced	• 235-237: strongly hematism	

Hole ID: TH021	**Date: Jul 2019**	**Depth: 244 m**	**Core:**	**High-Au: No** **Low Au: 197-205m (0.2-0.8ppm)**

Summary: The observation is similar to C-TJ's log but some stage 1-2 alteration portion is not logged in C-TJ and the HCS/ACS in C-TJ equal to amphibole in my observation and out pit map. Some lithology correction as below:

Geology	Structures	Stage 1-2 metasomatism/alteration and mineralisation	Other alteration	Samples
• Correction: o 214.8-215m: quartz veins in TZ zone o 214-224: the quartz in C-TJ is TZ, intense silicified SB => ortho quartzite o 230-231: quartz veins associated with the pegmatite patches • Lithology: • 35-45: CS dominated SB and amphibolite • 45-49: SB • 49-84: CS dominate the SB and amphibolite • 84-119: ACS dominate the CS and SB • 119-189: M Amphibolite, magnetite quartz amphibolite. The magnetite in this hole is much lower than that in the high-grade holes • 197-220: TZ • 220-240: SB • 240-244: FWQ	• 150.6-155: The fault along the core with pegmatite veins, pegmatite veins to brecciated texture in some portions • Sheeted/fractured zone: 115m, 135-140, 139-140, 165-168,	• 197-205m: 0.2-0.8g/t, present weak quartz-feldspar alteration associated with sheeted veins, overprinted by the RRA • 205-216: with much lower Au grade, show the similar stage 1-2 alteration but it has higher Cu content • 216-231, 134-136; 188-190: weaker stage 1 • Interpretation: • The low-grade has weaker metasomatism, weaker sheeted veins and weaker silicification, lower magnetite content • Why the Au-bearing fluid occurred less in this hole? Because of the low magnetite content? • The peg patches occurred through the hole, at 79.8m, 81.8, 157.5, 95m	• Silicification intensely occurred in and around the mineralized zone (TZ unit) but narrower than the silicification zone in the high-grade Au zone • The silicification is not continuous • Associated with chlorite-epi • Chlorite zone 201-227m, coincide with the silicification zone and bounding the silicified zone • The hematism in this hole is weaker compared to that in the Au-rich hole (because the magnetite content is smaller) • The sheeted veins and fractures // CA, and is weaker than that in the Au-rich hole	• 203-203.1: typical feldspar alteration that possibly related to Au in the mineralisation zone of this drill hole

Drill hole: TH007	Depth: 177.4m. This drill hole has ben Hylogged

Summary:

- Au is mainly hosted within mylonitic qtz-fsp laminates and the mineralisation coincide with the intense fracture zone caused by sheeted veins that // core axis.
- The stratigraphy: CS + ACS + HWQ + TZ + BS + ACS; Au mineralisation hosted within TZ unit, concentrated in qtz-fsp laminates but there is low grade Au bounding the laminates. No FWQ recorded
- At least 3 phases of veins recorded
  1. qtz-fsp laminate with thin qtz veins where is high Au grade (with pyrite?)
  2. Qtz-fsp alteration overprinting qtz-fsp laminates and metamorphic rocks: different stages during this phase, including LPRA, RRA alteration, late epidote veins (a seri of epidote veins cutting the light pink plag.-hmt veins at 64.9-65m, Pictured), hematite veins
     + RRA alteration associated with epidote (+sulphide/pyrite)

3. brecciation with qtz-carbonate veins

R. type	Fr	To	Description	Sampling (m)
CS	64.42	74	• Thin laminated CS intercalating with thin laminates of amphibolite (~<3mm), with a variation content of magnetite • Fracture filled veins (<1cm) has light pink plag. cutting across the S1 (banding) 64.9-65m (Pictured) • A lot of late epidote veins cutting the light pink plag-hmt veins (64.9-65m, pictured & sampled) • At 65m: fsp fills in the microfractures in the hinge zone of a minor fault. Note rock type of this zone is CS intercalated with amphibolite (at 66.5-66.6m) but not sure this microfractures relates to the folding or not.	64.9-65.05 67.1-67.2
ACS	74	75	Amphibole-rich calc silicate.	74.55-74.7
HWQ	75	87.4	• Deformed HWQ. • 77-82.5m is almost fractured pure quartzite, fracture cutting the core ~45 degree. Very broken core. • Two to three veins type reckoned: 1. quartz-pyrite vein/lenses (just 3 veins/lenses with thickness varying 2mm to 2cm). 2. micro veins of anneal quartz reckoned 3. Red pink fsp-hmt veins cutting qtz-py veins (e.g. at 75-75.1)	75-75.1
TZ	87.4	93	• Ortho quartzite (intensely silicified units, including amphibole bands) • Qtz-fsp dyke: 88.5-89m, and several thin dyke around	
TZ	93	94.55	• Very fractured quartzite/TZ with at least 3 phases of veins: 1. Light pink fsp (LPRA) 2. Dark red-brown hair veins of hematite cutting the LPF 3. Red-pink feldspar alteration in association with epidote (Pictured at 93.6) Note that the veins are reactivated, the later vain overprint the earlier one	93.44-93.64
Au-bearing quartz-feldspar mylonite	94.55	95.8	• Qtz-fsp mylonite overprinted by feldspathic alteration, epidote alteration (1) Thin qtz veins // qtz-fsp bands (light pink feldspar, LPF) (2) red pink fsp veins over printing the LPF alteration (e.g. 95-95.8m)	94.65-94.75

Drill hole: TH007 (cont.)				
R. type	**Fr**	**To**	**Description**	**Sampling (m)**
TZ	95.8	103.2	• BS is intensely silicified • Felspar alteration occurs at 94m (5cm, pictured); 97m (10cm); 101.3m (10cm); 101.9 (5cm, containing Au?) and 102m (5cm, pictured). In this feldspar alteration, qtz-fsp replacement occurs along previous banding textures with thin qtz veins and annealed fsp and lenses of qtz • Pyrite found in alteration haloes	99-99.3 100-100.05 102-102.3
Flt	103.5	106.5	• Fault rocks, with fsp alteration and chl-epi alteration	106.06-106.26
BS	106.5	109	• Biotite-rich schist have been strongly altered to chl-rich schists. Rocks comprise biotite, chlorite, fsp, hematite, epidote, limonite; these are alteration minerals. Fracture fill is occasionally hematite. • Intense E-W sheeted veins in this interval	
Au-bearing quartz-feldspar mylonite	109	111	• Qtz-fsp laminate/mylonite intercalated with amphibolite-rich bands. Qtz-fsp mylonite at: 109-109.1m; 109.5-109.6m; and 109.9-110.4m • The core is very broken (due to the intense sheeted veins) and being messed up • Au observed in only mylonite. Note that the core of the ore zone is very broken, partially due to the sheeted fractures	110.6-110.75
BS	111	119	• Chlorite-rich (after biotite) schists with magnetite veins and dense E-W sheeted hair fractures along the core • Alteration minerals: biotite, chlorite, fsp, hematite, epidote, limonite; these are • Fracture fill: hematite, chl • Breccia at 117.1-117.2m (cataclasite)	
BS	119	126.5	• Biotite-rich schists, similar to previous portion but with less fracturing of sheeted hair veins and LPF alteration	120.1-120.3
BS	126.5	128	• Amphibole-biotite (chlorite)-rich sillimanite? overprinted by brick fsp-hmt-qtz alteration	127.4-127.5
BS	128	133	• Biotite-amphibole schist containing qtz veins, overprinted by brick fsp-hmt micro veins	
BS+CS	133	158.7	• BS intercalated with CS: biotite-rich bands with scapolite intercalating with amphibolite bands, magnetic amphibolite bands. • Brittle deformed rocks: rock is strongly deformed with open-fill veins (// with core or cross-cut the core) of vuggy quartz, green clays, carbonate and trace of sulphide. • Breccia in some portions: 137.5, 145.2-146m, 147-147.2, 153.8-154.1. • Fsp alteration (142.5-142.75m). • At 145.9-150: Late D3 veins of epidote cutting the earlier D3 fso alteration	137-137.1 142.5-142.75 154-154.1
BS	158.7	170.8	• Biotite-rich schist or semi biotite schists, week Fe3O4 • Rock is brecciated (with intense sheeted veins) at some intervals: 158.9-160.1; 160.5-161; 161.7-165m	164-164.1
ACS+BS	170.8	177.4 (EOH)	• Biotite-rich schist intercalated with amphibole-rich calc-silicate and amphibolite layers • Very poor fsp alteration • 4cm nest of carbonate breccia observed (stage 6); 3cm nest of fsp-hmt observed; some veins of fsp-hmt observed	

Core logs: Session 2

Abbreviation

CS: calc-silicate	FWS: foot wall sequence	Cpy: chalcopyrite
MCS: magnetic calc-silicate	Peg: pegmatite	Py: pyrite
CSC: scapolite-feldspar dominant calcsilicate (laminate or schist)	RRA: red rock alteration (red pink hematite-dusted albite and k-fsp alteration)	Hmt: Hematite
ACS: amphibole-rich calc-silicate	PRA: pink red feldspar alteration	Cg: coarse-grained
SB: biotite-rich schist	LPRA: light pink feldspar alteration	Fg: fine-grained
ChS: chlorite-rich schist	Silic.: silicification	CA: core axis
TZ: transition zone, intense silicified unit	Chl: chlorite	Amp: amphibole
AM: amphibolite	Qtz: quartz	Mt: magnetite
HWQ: hanging wall quartzite	Fsp: feldspar	Bio.: biotite
FWQ: footwall quartzite	Qtz-fsp: quartz-feldspar	Cla.: clay minerals
Q: undifferentiated quartzite	Pla.: plagioclase	GCM: green clay minerals
QAM: magnetic quartzite	Epi.: epidote	Galastone: pink quartz-feldspar mylonite
HWS: hanging wall sequence	Flt: fault	=> : altered to

Intensity of sheeted vein (Sh.vein)		**Alteration (RRA, PRA, LPRA, Mag.; Silic.; Hmt; Py; Cla.)**	
Code	**Description**	**Code**	**Strength level**
1	weak sheeted cracks, usually 5-10deg to CA, no fill	1	very weak
2	mod sheeted cracks, usually 5-10deg to CA, no fill	2	weak
3	strong sheeted cracks, usually 5-10deg to CA, no fill	3	medium
4	weak sheeted cracks, usually 5-10deg to CA, trace to weak pink and/or red fsp fill-speckled	4	strong
5	mod sheeted cracks, usually 5-10deg to CA, pk, red fsp fil-veined, weak foliation flooding	5	very strong
6A	strong sheeted cracks, usually 5-10deg to CA,pk, red fsp fil-veined with penetrative flooding		
6B	Strong replacive l. pink feldspar, within lensoidal/laminate breccias ("galahstone style")		
7	weak sheeted cracks, usually 5-10deg to CA, goethite/hem fill		
8	mod sheeted cracks, usually 5-10deg to CA, goethite/hem fill		
9	strong sheeted cracks, usually 5-10deg to CA, goethite/hem fill		

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
UG1	97	97.4	QAM	Cloudy-color quartzite with patches of chlorite							5	3	0-1		
UG1	97.4	100.4	ACS	Quartz veins <1cm thickness in some places			30	1	1			3			
UG1	100.4	105.7	CS	CS dominantly RRA overprinted. At 104.5m quartz lens with chlorite selvage overprinted by red rock alteration.			30	3	1			3			
UG1	105.7	106.7	QAM	Similar to 97-97.4m, but more red pink feldspar hair veins. Green quartzite, 3cm quartz veins //CA			30	3	1			2			
UG1	106.7	110.5	CS	CS intercalated with amphibole layers. Quartz veins/lenses up to 3cm thickness.			30					3			
UG1	110.5	114.5	Flt	Fault rock: quartz, pale pink feldspar flood overprinted by red rock alteration. Fractures sub// CA filled by carbonate.				2							
UG1	114.5	124	MCS	Intercalated CS and amphibolite. Thin banded quartzite at 121-121.25. Highly silicified at 116.9-117.7, 120.5-121.1 => quartzite. Fractures at 116.5, 118 and sub// CA. At 115.5 white feldspar is overprinted by 3A feldspar. 121-121.25 is QAM laminate with 3A parallel but not like galahstone At 121m: Minor fault, dextral, normal, deeping E, displacement 1cm. A Seri of this micro texture in the interval.			30	3-4	1			4			
UG1	124	130.5	ACS	Biotite-chlorite rich schist intercalated with/dominate thin CS bands. Micro folds recorded (127.3-127.5); some thin quartz veins, up to 4cm and X CA ~90 deg.			40	2	2			2			
UG1	130.5	161	CS	CS dominate ChS (after BS, due to chlorite alteration). Migmatite (meat pink feldspar and quartz) occurs in some location. Magnetite is enriched in both CS and amphibole-rich schist. Some banded quartz-feldspar	155.2-155.3		40	1	1			3			
UG1	161	167.3	CS	CS with pervasive red rock alteration: biotite, chlorite, epidote. Annealed quartz and feldspar and magnetite; mostly along the banding, sometime cut the banding.	163.3-163.4		35	5	2			2-3			
UG1	167.3	168.2	Mig	Migmatite like? start melting textures?			40								
UG1	168.2	170.8	QM	Dark grey magnetite quartzite containing chlorite patches, massive but some banded texture preserved.			40	1				4			
UG1	170.8	173.1	QM?	Thin quartzite bands with strongly RRA but no pale pink feldspar (171.3-171.7) (not like galahstone). Very silicified, massive at 170.8- 171.2			40	3-4			4			1	
UG1	173.1	174.8	Q	Quartzite, banded texture, galahstone like at 173.85-174.1 overprinted by 3A feldspar style.	173-173.2		40	2	2		5	1			
UG1	174.8	176.4	ACS	Stage 2-3 feldspar style along the banding. Garnet dissimilated in this	176-176.1		40	2	2			1			
UG1	176.4	177	Peg	Pegmatite overprinted by Stage 2-3 feldspar?			40	3	3		4	0-1			
UG1	177	178	AM	Amphibole; Garnet disseminated as patches at 177.8-178			40	3				0-1			
UG1	178	178.4	TZ/Q	Very silicified biotite quartz, ~90% quartz, ~10% biotite, similar to galah stone but little (pale pink) feldspar	178-178.2		40	2	2			0			
UG1	178.4	182.6	AM	Stage 2 feldspar style ? but // amphibole layers, along S1 fabric			40	1	1			0			

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
UG1	182.6	188.5	Qtz-fsp myl	Quartz-feldspar mylonite dominant, especially at 183.75-184m: quartz- pink feldspar (as typical Au-rich hosted Stage 2 feldspar style in hole U9206. This interval is very broken) Stage 2 vein overprinted by red rock alteration	183.7-183.9 188-188.1		40	2	2		4	0			
UG1	188.5	190.7	AM	Gray green chlorite-biotite rich schist, with pink feldspar alteration			40		1			0			
UG1	190.7	194.5	ACS	Amphibole dominant biotite CS. Shearing at 200.5-201.2, fractures core, migmatite?			40								
UG1	194.5	199	BS/Q	Very silicified BS, quartz >chlorite> biotite	198-198.2		40	1	1			0-1			
UG1	199	203	BS	Quartz veins repeatedly occurs from 201-203m with irregular contact. Sparsely spotty Stage 2 feldspar overprinted by 3A feldspar veins style.			40	1	1			0-1			
UG1	203	206	ChS	Chlorite rich schist (after BS?) intercalated with intensely silicified BS			40	1	1		3	0-1			2
UG1	206	208	ACS	Similar to previous interval but common 3A feldspar style. Irregular quartz veins cut by 3A veins at 207.05-207.12, Silicified.			40	2	2		3	0-1			
UG1	208	213.5	TZ/Q	Quartzite intruded by quartz veins, overprinted by RRA 208-208-65: thin quartz bands intercalated with red rock bands, Seri of stage 2-3 hair veins (feeder veins of the red rock alteration?). They are cut by Stage 5 (?) veins. Intensive RRA at 208-208.65. The upper contact // S1; galahstone textures overprinted by RRA at 209.6-209.9: qtz veins has sharp upper contact; lower contact: intrusive contact (irregular). The zone is cut by RRA and Stage 5 (?) feldspar vein style. In the particular galahstone like no cross cutting between Stage 2 and 3 veins but they are cut by Stage 5 (?) veins.	209.1-209.25	6A?	40	4	3		5	0-1			
UG1	212	213.1	Q	Red rock alteration, some blur banding preserved		6A?	40	2	2			0-1			
UG1	213.1	215.9	TZ/Q	Very silicified BS, quartz vein (6cm) at 213.5m. Stage 2 + 3A vein along and cut the banding			40	1	1		3	0-1			
UG1	215.9	217.5	BS	Main minerals: biotite, chlorite, quartz			40		1			0-1			
UG1	217.5	222.9	BS	Very silicified Biotite-chlorite rich schist => green speckle quartzite			40	2	2			0-2			
UG1	222.9	224.9	Q	Biotite-rich schist with repeated feldspar bands (<1cm, not galahstone like)			40					0-1			
UG1	224.9	227	ChS	Chlorite - biotite rich schist. Fractured and broken core		3	40					0-1			
UG1	227	227.6	Q	Pure white quartz, containing irregular chlorite patches and pink feldspar patches. Irregular contact				1	1			0-1			
UG1	227.6	242.3	AM	Amphibolite partially => chlorite, contain biotite. At the bottom of this interval, a shear (near the fault in the lower interval) sense dextral, reversed.				0-1	0-1			2			
UG1	242.3	248.8	Flt	Grey quartzite but was cut by a brittle fault. Brecciated; cement is biotite and limonite, cutting Stage 2-3veins				0-1	0-1			0-1			
UG1	248.8	250	Flt	Chlorite-biotite - limonite fault rock								2-3			
UG2	0	2		White broken quartzite with gravel form											
UG2	2	13.4		Brown to light pink broken core, soil form											
UG2	13.4	32.4	UN	Undifferentiated sequences: AS intercalated with CS and BS, very broken core (especially BS and AS) due toweathering		2									

Appendix 9: Drill logs

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
UG2	32.4	41.2	CS	Feldspar (+scp?) CS with "partial-melting textures"? at 33.2-33.6m. Late fractures sub// CA at 36-37m								1-2			
UG2	41.2	45.5	ChS	ChS dominate the CS and BS. Fractures X CA ~45 deg. Crack fill are latest carbonate (latest veins)								1-2			
UG2	45.5	56.5	CS/BS	Very weathered and broken core (due to weathering), thin laminated CS and dark green ChS								1-2			
UG2	56.5	63.5	CS	CS dominated BS and ChS. Red rock alteration mostly along the foliation plains or uncontinuous veins // CA. Hair carbonate late veins (Late D3 carbonate? Stage 4 (?))		4-5		3-4	1			2	2-3		2-3
UG2	63.5	68.5	QAM	Quartzite with common red rock alteration crack fill of fsp and some hair veins				2	1						
UG2	68.5	74	ACS	Amphibole dominated QAM (70-80m)				2	1			2			
UG2	74	75.7	TZ	Common red rock alteration; similar to 66-68.5m but contain quartz veins (part of HWQ?)				2	1		3-4	2			
UG2	75.7	76.1	HWQ?	white cloudy quartzite with paches of amphibole/chlorite				3			5				
UG2	76.1	88	CS	CS dominated BS and ChS				3	1			2-3			
UG2	88	98.1	CS	CS dominated BS and ChS. Enrichment of magnetite. At least two stages of fsp alteration. Sheeted fractures sub// CA at 88- 90m		3 (88-90m)		1-2				4			
UG2	98.1	98.3	QAM	Fractures sub//CA. stage 2 veins overprinted by stage 3A then stage 6 veins. Note around the quartz is very strong red rock alteration, especially at its foot wall		6A		3	3		3-4	2			
UG2	98.3	99.3	CS	Intensively/pervasively red rock alteration				5				2			
UG2	99.3	112	BS	BS dominate CS and less ChS/AS. Magnetite drop compared to 76-98.1m. Common fractures x CA =~30 deg at 103-115m, pale pink feldspar occurs in this interval				2				1-2			
UG2	112	115.3	CS	Brecciated feldspar; well sorted phenocrystals (~1-1.5mm). Dark color cements (biotite and hematite?). This is overprinted by clear a peg. patch with coarse grains of biotite, meat-pink feldspar and magnetite. Overprinted by red rock alteration	113.4-113.5		70	1				3			
UG2	115.3	117.3	CS	Sheared sense at 117.3: normal, sub NS, sub vertical		3 (116.4-116.7)						2			
UG2	117.3	119.7	Fsp	Feldspar flooding? It is brecciated texture of feldspar				2				0			
UG2	119.7	123.5	FLT/CS	Dark brown brecciated rock, related to latest hydrothermal event? angular dark brown specimens and quartzite. Cement is white, white green clay minerals, biotite, limonite/hematite/goethite. Similar to the brecciated interval just above the ore zone in U9205 or at the bottom of the drill hole UG1. Cannot define the shear sense in this interval. At 121-121.3: The fault plain trending NE-SW, dipping SW, dip ~70- 80 deg	119.7-119.85			0-1	0-1				4		

Appendix 9: Drill logs

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
UG2	123.5	135	TZ/Q	Intensely silicified BS or biotite-rich CS. The BS is extremely weathered and broken. Broken core pieces are sheared but cannot define the shear sense. This is in the flt zone, displacing Stage 2-3 veins. This fault zone from 112m to the EOH. Fractures sub// CA => NS (if the dip of structure similar to the dip of drilling) or EW trending.		3/5		2	1			1			
UG2	135	139.2	SB	Intensely silicified BS, thin laminated at some intervals											
UG2	139.2	154.4	FWQ	White gray quartzite, very broken and fractured, fractures cut and displace Stage3 hair veins		3		0-1				0-1	0-1		
UG4	0	17.5	ACS	Very broken core into small pieces, core mixed				0				2-3		0	0
UG4	17.5	21.1	ACS	Extremely weathered and broken core	20-20.05			0				1-2		0	0
UG4	21.1	23.7	ChS	Biotite ChS	21.7-21.75			0				2		0	0
UG4	23.7	26.3	CS	Unconformity contact with ChS?	24.1-24.15			0				1		0	0
UG4	26.3	28.7	ChS	Chlorite > feldspar (late feldspar?) >biotite	28-28.05			0				0		0	0
UG4	28.7	30.6	QAM	Massive quartzite; late fractures with carbonate fill (D4?)				0				3		0	0
UG4	30.6	31.6	ChS		31-31.05			0				0		0	0
UG4	31.6	32.2	QAM	Similar to 28.7-30.6, patches of chlorite, irregular contact with lower unit	31.8-31.85							2		0	0
UG4	32.2	33	ChS		32.6			0					3		
UG4	33	33.7	UKN	quartz-red pink feldspar - magnetite flooding, overprinted by D4 carbonate veins	33.4-33.6				5						
UG4	33.7	34.7	ChS	Very silicified ChS => quartzite overprinting by early red pink feldspar alteration	34-34.05			2	2		4				
UG4	34.7	35.15	UKN	Similar to 33-33.7	35-35.05										
UG4	35.15	37.4	ChS	Very silicified ChS interbedded with quartzite bands (36-36.1). Chlorite BS at 37-37.4. Sample the contact zone	37.4-37.5						3-4	0-1			
UG4	37.4	43	UKN	Quartz - red pink feldspar flooding dominates host rock, fsp flooding at 37.4-39.5; 40.7-41; 42.6-43. Likely stage 1 feldspar (or may be migmatite related). Not sure red rock alteration overprinting	37.9-38			?	4			0-1			
UG4	43	46.2	ChS	similar to 35.15-37.4; Biotite chlorite rich schist but almost no silicification	44-44.1							0-1			
UG4	46.2	58	ACS	Chlorite dominate feldspar, minor quartz (~2%) and fine-grained biotite (~2%). Fractures sub// CA: 43-45; ~46.4; 47-48; 49-50; ~52.6; ~54; 56.5-57. Almost no crack sill; trace of convoluted-like quartz-feldspar veins. A hinge zone at 48.5-48.9 but cannot oriented the core	47.3-47.4 48.6-48.7 52.5-52.55 56.8-56.9	3		0	1			0-1	0-1		
UG4	58	62	CS	Brown green pink CS: red pink feldspar dominates chlorite and biotite. Convoluted red pink feldspar -magnetite at 65.5-60.7	60.5-60.7			1		?		2-3			
UG4	62	65	AM	Massive; patches of biotite. Amphibole dominate feldspar and biotite	64-64.1				1			0-1		0	0
UG4	65	68.4	ACS	Recrystallized? Weird contact between amphibole/chlorite and CS, likely melt flows. Overprinted by late carbonate veins	67.9-68							0		0	0
UG4	68.4	68.75	UNK	quartz-red pink feldspar flooding with patches of chlorite	68.4-68.5							0		0	0
UG4	68.75	72.4	Q	Biotite quartzite: quartz > biotite>chlorite > green quartzite; massive	70.95-71										
UG4	72.4	76	ChS	Chlorite dominate feldspar. A quartz veins with patches of euhedral amphibole (now chlorite) at 75.7m	**75.5-75.6**										

Appendix 9: Drill logs

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
UG4	76	79	ChS	Pervasive red rock alteration overprinting the red pink feldspar alteration. Hydrothermal magnetite associated with feldspar (late vein, sub// CA)	76.4-76.5? 67.4-67.5?	5		4	2-3			2		0	0
UG4	79	95.9	AM	Mostly massive, chlorite dominate feldspar, little quartz, some BS and CS bands at 82.9-83.3; 95; 91.7-92.3	80.3-80.4 81.95-82(p) 94.93-95							0-1			
UG4	95.9	100	Q	Chlorite/biotite-rich quartzite with feldspar alteration A fold at 97.5m fit the location of T.H in the T.H synform	96.4-96.45(p)			1	1			0			
UG4	100	103.7	ACS	Broken core, intruded by red pink feldspar -quartz, similar to 68.4-68.75; Fractures sub// CA	101-101.1			1	3			0-1	3		
UG4	103.7	105.9	Q	Broken green quartzite. Quartz dominate feldspar, chlorite and biotite. Brecciated due to quartz-feldspar veins	104.9-105				3		4	0	2-3	0	0
UG4	105.9	116	UN	ChS+biotite quartzite + BS + CS intercalated, banding texture, thin bands of quartz-red pink feldspar is likely quartz-red pink feldspar veins // S1. Quartz-red pink feldspar flooding at 114.7-115m	111.8-111.85(p)			2	2			2			
UG4	116	128	ACS	ACS dominate CS, 2mm sheeted veins of red pink feldspar displaced the banding 1cm. Magnetite varies. Irregular quartz- feldspar veins with chlorite selvages occur at the contact of quartz veins (?) or intensely silicified intervals and other metasedimentary rocks due to competency contrast)	118.3-118.37 122.7-122.8	5; 3 (127.5-128.2)		3	3			2-3	1-2		
UG4	128	131.4	ACS	Coarse grained spotted feldspar in this unit is overprinted by red rock alteration (as matrix bounding the feldspar grains)	128.5-128.55			4	4			2	2		
UG4	131.4	140	UK	Late LPFA with minor quartz and magnetite. Blur banding preserved; magnetite partially => hematite. Late magnetite veins at 139.9- 140m	135.7-138			2		5		2-3	2		
UG4	140	149.4	ACS	Banding; 7cm quartz-red pink feldspar at 142.4-142.47 without chlorite selvages, similar to previous quartz-feldspar flooding. Strong red rock alteration along bands, associated with epidote, overprinted the red pink feldspar. Up right fold at 143.2, NS, Plunge ~180<10-20 deg. Mgt in CS more than in AM.	139.9-140 143.6-143.75	4		3	2			2-3			
UG4	149.4	157	BS	Fine grained biotite, very broken cores, Seri of fractures along the CA.	151.8-151.85(p) 155.5-155.6	5		3	2			2	2		
UG4	157	184.5	UNK	Initial CS+BS ? Is almost completely light pink feldspar alteration. Massive light pink feldspar, sometime with quartz (few irregular veins at ~169.2-169.4; 174.2-174.5; 175-175.3; 176; 177.5-178; 179;182-184). This interval is similar to interval 131.4-140 but darker due to the pervasive red rock alteration precursor. BS preserved with banding txt and least altered: 165.7- 166.7, ~163.8; 168-169; 172-174; ~179; ~181.2.	160.1-160.2 165.5-165.6 169.8-169.9 174.2-174.3 178-178.05(p) 181.85-182			3-4		4-5		2-3	?		
UG4	184.5	187.6	CS	CS dominate BS	184.9-185			3	1	1		2			
UG4	187.6	191.5	BS	BS dominate CS				2	1			2			
UG4	191.5	198	MCS	Highly silicified => quartzite. Silicification due to the quartz-red pink feldspar intrusion	192.2-192.4 196.2-196.3(p)			3	3		4-5	4			
UG4	198	212.4	BS	BS (~50%) intercalated with CS (~50%). Very broken at biotite rich schists. Magnetite varies	198.6-198.7 201.9-202 211.4-211.5			1				1-2			

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
UG4	212.4	215.8	ACS	Contain convoluted bands of red pink feldspar -quartz (1x10cm + 1x30cm). Strongly silicified at 215m	214-214.5			1	2		4 (215 m)	0-1			
UG4	215.8	227.7	MCS	Banding; week red pink feldspar veins sub// CA, overprinted by red rock alteration.	216.15-216.25 217.7-217.8	4		4	2			3-4			
UG4	227.7	231	QAM	Spotty and micro uncontinuous veins of pink feldspar and red pink feldspar in the cloudy white quartzite	228.3-228.4			2	2			2-3			
UG4	231	232.3	ChS	Banding, Cla. occurs				2	2			1			
UG4	232.3	233	BS	Banding; biotite quartzite?											
UG4	233	237	SCS	Scapolite CS; banding	234.4-234.5			2	2			3			
UG4	237	243.4	CS	CS dominate ChS, very silicified rock except the chlorite rich schist which is strongly weathered and broken.	239-239.1			3	2			2-3			
UG4	243.4	249.7	ChS	Similar to previous interval but more chlorite; with Cla.				1	1			1			
UG4	249.7	253.7	BS	Banding	250.5-250.56			2	2			2			
UG4	253.7	254	Q	Pure quartz (+red pink feldspar?) overprinted by red rock alteration											
U8506	83.42	92.3	TZ/CS?	83.4-87; 89-90: 0.01-0.02ppm. Silicified granofel: scapolite?, feldspar, biotite, chlorite granofels dominate BS. Spotty feldspar texture at around 85.3m. Cla. in the fractured amp/chlorite- rich interval. Cannot define shear sense	84-84.1 87.3-87.4 (spotty) 90.5-90.6	3 (83.4-90.3) 2 (90.3-	70	2			2	0		1	3
U8506	92.3	106.4	TZ/ACS	Similar to previous but amphibole dominated, massive texture, some is amphibole -rich banded. Red rock alteration // S1. Hair sheeted veins at ~94m (pic.)	94.2-94.3 99.9-100 102.7-102.8	3 (104-104.9)	70-80	1	0-1			1			1
U8506	106.4	109.2	ACS	107/5-107.65: inteensive pink feldspar and red rock alteration veins/spotty veins (Stage 2?) then overprinted by stage 6 veins. Fsp alt associated with normal shear sense 130<70	108.7-108.8	4	65-70	3	2		4-5	1			
U8506	109.2	126.4	CS	quartzite intercalated with ACS/ChS frequently, banding txt; medium-strong silicified in some portion (118.6-119.7; 123.6-124.8), very silicifed around the quartz veins in those portions. 5 quartz vien, <2cm in the interval 118.5-119.7 . 10 veins in the portion 123.6-124.8; trace of Py+Cpy in ChS. Red rock allteration strngly at 119.2m. At 133m, migmatite is overprinted by 3A veins ithen stage 6 veins.	112.4-112.5 (amr) 116-116.1 BS 119.2-119.3 (fsp alt) 122.7-122.85 (Cpy) 125.7-125.75		70	2	1		3	1-2		1	1-2
U8506	126.4	131.1	QAM	ChS intercalated with quartz-feldspar pegmatite. The intrusion contact is irregular, pegmatite is laminated and is light pink feldspar and red pink feldspar altered but some is not. A magnetite thin vein at 128.4-128.5. Cla. bound the feldspathic alteration (130.3-130.4m). Trace Py in pink to RPF alteration halo. Chl selvage is not clear in the felspathic alteration halo. 3A feeder hair vein at 128.4m (pic.)	128.4-128.5 (magnetite vein) 130.3-130.4 (fsp alt+Cla.)	4-5	65	4	3		3-4	3		1	2
U8506	131.1	134	CS	Contain repeated 1cm quartz-feldspar laminates (galahstone like). Migmatite overprinted by stage 6 veins; Stage 2 overprinted by stage Stage 5 (?) veins?: pink feldspar, epidote, magnetite, green clay	133-133.1	3 (132.6-133.1)		3	2		3	1-2		1	2

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
U8506	134	137.5	FWQ	White quartz fractured, feldspar of stage 2? Spotty veins, contain 5cm og green clays	136.1-136.2?			2	1		5	0			
U8506	137.5	144.1	BS/TZ	Silicification due to the peg intrusion. Some thin vein sealed by pink feldspar some is sealed by carbonate. Migmatite is common in this interval, replacing the early pegmatite (at 138.9-139.1). The thin pink feldspar veins (<2mm) also cause a halos of silicifation	139-139.15 (mig?) 140-140.05 (piece of silicified SB) 141.5-141.6 (mig. with cg biotite)	75-80		1			3-4	2			
U8506	144.1	144.5	peg	Mylonitic Pegmatite, partial melted? Resulted in meat pink feldspar and quartz.	144.1-144.4 (1/4 core)										
U8506	144.5	160.6	CS	BS contaning migmatite with "convoluted like" textures 151.3-151.7; 152-152.3. Irregular and repeated pegmatite in this interval. Peg: quartz, feldspar, coarse grained biotite. Some pegmatite is not sheared or mylonised. Fractures // CA at 152m; generally fractures X CA = ~45 deg with 2-3 fr/m. qtz veins at 157.8-158 with s-strong silicification	146.9-147 (2A(?) peg) 150-150.1 (Stage 2B?) 151.8-152 (fsp alt in hing zone) 156-156.1 (BS) 157.9-158 (folded F2) 160-160.1 (BS)		70	1-2	1		1-3	1		1	
U8506	160.6	161	Mig?	Migmatite, laminated pale cream migmatite cut by quartz veins											
U8506	161	176	CS	BS dominates ChS. From this portion, red rock alteration more common. pink feldspar (Stage 2?) more common with hair feeder veins. Early pegmatite irregularly repeated at 161-174.2m, commonly <35cm except portion 166.5-167.2 (this portion mixed with the metasediments) Fsp alteration irregularly repeated from 161 to 165.8m and usually overprint the early pegmatite.	163-163.1 (3A) 167.2-167.3 (2A(?)) 173-173.15 (fsp alt. in SB) 175.9-176 (3A)		70	1-2			2-3	2		0-1	
U8506	176	190.6	CS	175-198m: red rock alteration occurs more than other portions, mostly along foliation plains but also as sheeted hair veins (sub// CA). Note RRA hydrothermal event does not present clear silicification halo. The galahstone like (180.5-181.2) has been describe in detailed.	177.8-177.9 (galah) 180.5 -180.6 (Stage 2+Cla., galah) 186.3-186.4 (3A)	5	70	3	3		2	2		0-1	
U8506	190.6	198	ACS		191.8-191.9 (pervasive 3A) 196.4-196.5 (Stage 2 with Cla., sili)	4	70	3	3		2	2		0-1	
U8506	198	205.7	Q?	Quartzite, very similar to FWQ. Banding of pink to red pink feldspar associated with epidote // metasediments banding. 209.2 to 2012 slightly vuggy quartzite.	204.8-204.9			1	1			1	1		
U8506	205.7	209.5	Ukn	Peg? Feldspar, quartz, amphibole, biotite	206.9-207							0			
U8506	209.5	212	Q?	Similar to previous quartzite 205.7-209.5	210.9-211			1	1			0			

Appendix 9: Drill logs

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
U8506	212	221.7	CS	feldspar-biotite calcsilicate dominates/intercalated with ChS and BS, strong RRA associated with Cla. in this portion, especially in 212-216 (BS intercalated with CS) and 219.3-219.5 ; 215.75-215.9: late intrusion; 216-221.7: No Py observed; 6cm of mylonised pegmatite. migmatite is overprinted by 3A veins.	214.8-214.9 (BS with 3A and Cla.) 217.4-217.5 (SB with 3A and Cla.) 219.4 (piece, rra)			3-4				1-2			4
U8506	221.7	223.7	CS	red rock alteration pervasively in some location (associated with epidote and Cla.); 2x6cm veins of late pegmatite/or feldspathic veins. Red rock alteration occurs strongly around this feldspar veins.				3-4				1	2		3-4
U8506	223.7	225.6	peg	Late pegmatite. It is partially melted at the selvages but all recrystallized in the middle? Overprinted by RRA. Surrounding this pegmatite is banded host rock intercalated with banded pegmatite (without mylonitic texture).	224-224.3 (1/4 core)										
U8506	225.6	231	CS	CS dominated interval	228.7-228.8										
U8506	231	243.5	TZ	Transition zone between CS and ACS. Quartz-feldspar focuses in this zone but also occurs around it with less intensity. Various intrusion of pegmatite (not mylonitic) with halos of migmatic texture. Pegmatite is folded at 240.2m. Overprinted by Stage 2? And RRA. Intrusion: 236.5-236.8; 240.3-240.5. galahstone like at 238.5-238.8; 241.3-241.35, 231.55-232.6; 239.6-240; 240.8-241.4. Remnant of mgt, no chl selvages, no Py observed. Stage 5 (?) veins (pale cream) cut stage2-3 feldspar veins. Goethite strongly occurs in some places. Sheeted Stage 2 hair veins recorded. Also late fractures along the CA, similar to the ore zone in U9205	231.15-231.25 236.5-236.8 238.5-238.8 (mylonite) 240.3-240.5 241.3-241.35 (myl. contact SB)	5 +3	65-70	3-4	2		2	0-1		0-1	
U8506	243.5	263.7	ACS	ACS dominated CS almost, except 256-259m. 10cm migmatite at 253-253.1. Galahstone like at 250.7-250.8	247-247.1 (ACS) 250.7-250.8 (mylonite) 258-258.1		70	1-2				1			
L8507	0	16.8	ACS	Early Fsp alt cut by RRA vein style. Some location with red pink feldspar likely Stage 2 vein style	4.8-4.9	3(3-5m)	45-75	3	1-2	1	0	3-4		0	0
L8507	16.8	21	BS			3		?				1			2
L8507	21	22.4	FLT	Broken core of BS, brecciated texture with quartz, limonite, hematite,											
L8507	22.4	38	CS	Some RRA veins cut by Stage 5 (?) veins		4				1		2			
L8507	38	49	UN	Calcsilicate; BS intercalated with CS and ChS		3(40.5-41.5)		1				0-1	3		0
L8507	49	54	CS	Magnetite-rich migmatite: meat pink feldspar. Magnetite increase, Stage 5 (?) veins cut 3A veins				1-2							
L8507	54	55.7	Ukn	massively recrystallized CS? Pale cream feldspar + dark green amphibole/chlorite, overprinted by red pink feldspar. Late carbonate veins overprinting RRA veins	55.1-55.2	4(54.6-55.6)		1-2	0-1			1-2			
L8507	55.7	57.5	CS	Stage 3 RRA + Stage 5 (?) reactivate sheeted thin veins(<1.5mm).				3	1			3			

Appendix 9: Drill logs

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
L8507	57.5	75	QAM	Stage 2 veins style are common, overprinted by RRA veins at 59.4, 62.9 (pictured). Magnetite partially replaced by hematite; biotite => chlorite. Fractures sub// CA filled by green minerals at 61.7; 66; 69; 72-75; 79.5-80; 83.5-84;	60.6-60.7 (tr Au interval) 69.7-69.8 (tr Au interval)	5		3	2		4-5	2	2	0	2
L8507	75	85	HWQ	Fractures sub// CA, filled by green minerals at 79.5-80; 83.5-84;				2	2		4-5	0-1	0-1	0	1
L8507	83.5	85	HWQ	HWQ with RR. Feldspar flooding 3x5cm veins; stage 2 veins associated with quartz within 84.5-85				4	2			1			
L8507	85	85.9	Peg	Feldspar dominant pegmatite. White to red pink feldspar with chlorite but they did not continuously occur. Not mylonite or foliated; overprinted by RRA				3				0			
L8507	85.9	95	QAM	Vuggy QAM. Vuggy texture due to the washing away of green clay minerals and hematite. Late fault shear sense at 90m: normal. Feldspar flooding is the late phase associated with the late fault?	88.7-88.8	2+4		2			5	1	1-2		
L8507	95	103.1	QAM	Black brown spotty quartzite. Feldspar flooding at 96.4-96.6, 101-101.05, 101.5-101.7. They could be migmatite as there is a very coarse grain of amphibole (cleavage 120-60) at 101.6m (sampled). The early fsp alt is overprinted by the RRA veins at 101m	101.6-101-7			2	1		5	1			
L8507	103.1	108.4	UN	ChS + QAM + minor CS + fsp alt		3		1-2	1			2-3			1
L8507	108.4	113.8	BS	110.3-110.5m is likely feldspar flooding (different from other). Strongly silicified around this feldspar vein. Some red meat feldspar are likely migmatite	110.3-110.5			0	0		3	0		0	0
L8507	113.8	116	UKN	Broken core, extremely weathered, oxidised steel tray staining to the core. Cannot see the core clearly.											
L8507	116	138.5	ACS	Very broken core, cla mineral/sericite in the crack fills. Generally, chlorite > biotite > CS. Brecciated at 126-126.3		3		2-3				0-1			
L8507	138.5	148.5	QAM	Strongly silicified and red rock alteration. Core is broken to small pieces.		4+3		3	1-2		4	1			
L8507	148.5	156.3	ACS	ACS dominate CS. Late fractures with quartz and carbonate sub // CA;		4+3		2			3	0		0	0
L8507	156.3	160	CS	Very silicified ChS and BS => green brown quartzite			50					1			
L8507	160	163	ChS	At 161.8m, 10cm feldspar flooding: feldspar + coarse grained chlorite/amphibole.			50	0	0			0			
L8507	163	166.5	Q	Speckle quartz, white quartzite with Stage 2 replacement. Very strongly fractured that sub//CA, filled by Cla. mineral at 165m		3 165m)						0			
L8507	166.5	167	TZ	Similar to previous quartzite but with common Stage 2 veins				3	2			0-1			
L8507	167	168	TZ	Strong Cla.								1			3-4
L8507	168	168.2	UNK	Quartz + feldspar occurs as intrusion at 168-168.2without foliation but the Rock; surrounding this rock is foliated and mylonitic textures.	168-168.2										
L8507	168.2	170	TZ												
L8507	170	171.5	TZ	Similar to previous interval but strong Cla. alteration occurring at 170-171.5											3-4
L8507	171.5	179.5	AS	amphibole dominate feldspar SC								1	0	0	0

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
L8507	179.5	189.5	AS	Similar to previous interval but magnetite enrichment; With meat pink feldspar. Medium to strong silicification at 182-187m. Note 186-188 (assay 0.027ppm), no Stage 2 veins recorded, just meat red pink feldspar and quartz similar to migmatite ?	179.9-180			2			2-3		1	0	0
L8507	189.5	201	Q	TZ? Very siliceous BS due to felsic alteration (likely quartz-feldspar intrusion?). This "intrusion" irregularly occurs at 192.4-192.6, 194.7-195.7	186-186.2 186.5-186.7			0	0		4-5	0	0	3	
L8507	201	208.5	TZ	Intensely silicified biotite quartzite with some quartz-meat pink feldspar				1	1		4	0	0	0-1	
L8507	208.5	236.8	TZ	Intensely silicified biotite schists => biotite quartzite. Common fsp alteration as irregular patches or irregular bands. Pale cream quartz-feldspar mylonite at 215-215.1. At 218-220 (assay 0.082ppm) weak pink felspar alteration, similar to red pink feldspar of migmatite, not like Stage 2 veins. Spotty pale cream feldspar recorded	215-215.1 218.8-219 223.1-223.2										
L8507	236.8	238.5	ACS	Amphibole dominate feldspar-rich SC. Fsp alteration along banding texture.				1				2		0-1	
L8507	238.5	242.7	TZ	Similar to 208.5 to 236.8 but common RRA				3				0-1		0-1	
L8507	242.7	252	FWQ	White quartz, weakly spotty of stage 2 feldspar style at 245-245.1		4									
U9205	0.0	8.9	CS/TZ	0-1.4: granofels, 90% quartz, the rest is mainly biotite. Veins of pink feldspar - qtz (Stage 2) overprinted by RRA. Small quartz lenses: 2.6-4 and 6.5-6.75; very siliceous quartz with thin layer of CS and biotite rich schists, very magnetic. The rest of rocks is mainly CS and less BS (30%), mgt rich. Patches of amp/chl-epidote-mgt replacing BS. few pf veins at 8-8.15m. Fractures sub// CA: 0.5-1; 2.6-3.6; 4.5; 5.5-6.5m	1-1.1 3.9-4.0 5.8-5.9 8-8.15		2-3	2	2		2	2-3	2		
U9205	8.9	16.6	BS	Biotite up to 80%, the rest is chlorite, magnetite, CS, quartz veins. Very weathered and broken core=> Cannot sample properly. CS interval: 11-12.3; 15-15.9, weakly silicified CS, ChS at 12.1-12.3 with quartz veins and Stage 2-3 halos then chlorite selvage bounding the qtz vein. RRA pervasively occur around the qtz veins and its alteration halo. This qtz vein was folded. Hair sheeted veins with no fill cutting Stage 2 veins.	12.1-12.3		2	1	1		1-2	2	2		
U9205	16.6	24.2	TZ	Very silicified CS to quartzite: 16.7-17.7; 21.5-23.5; 24-24.2; Fsp alteration occurred. Magnetite in both quartz and red pink feldspar CS. Vein array of Stage 2-3 at 22-22.15. Pink feldspar veins have chlorite selvages. 21-24.2: very broken core, EW faulting? Fractures sub//CA: 18.1; 20-20.5; 21; 22-24; sheeted Stage 2 veins overprinted by 3A veins	16.7-16.8 22-22.15 (vein array)		4	2	2		3	2			
U9205	24.2	32.1	CS	Similar but weakly silicified. No sheeted stage 2 veins	24.2-24.3 (Stage 2-3?) 25.3-25.5 26.1-26.25 (mt) 30-30.25 (CS)		0	1-2	1-2		1	3-2			
U9205	32.1	35.4	CS	Brown red feldspar (limonite staining?). A fracture with shear sense: normal, sub NS, steep. 34.7034.85: ChS, highly weathered. Broken cores.	34-34.1		2	1-2	1-2			3	3		

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
U9205	35.4	38.8	TZ/flt	Strongly silicified, fault zone	35.85-36.05		3	1-2	1-2		4-5	3			
U9205	38.8	44.0	QAM/ Flt	Fault zone: very siliceous sedimentary quartzite intercalated with BS. Magnetite drops in some locations. Similar to previous portion but stronger silicification.	39.85-40.05 41.9-42 43.7-43.8		3	1	1		5	2	1-2		
U9205	44.0	47.0	QAM	Similar to previous interval but strong Stage 2-3 veining style. Some quartz lenses with chlorite selvages; no galahstone like (or lost?) but assay 7g/t at 45-46m. Very broken core (now, small pieces)	45.8-45.85		4	2-3	2		4	2			
U9205	47.0	48.6	TZ	intensely silicified ChS and BS, spotty Stage 2-3 feldspar styles. ~5%	47.9-48			1	1		4-5	3-4		1	1
U9205	48.6	52.5	QAM	intensely silicified ChS, CS. Banding texture, weak red pink feldspar alteration along the banding, some cut across the banding. Magnetite in red rock alteration halo, partially => hematite. Stage 2 hair vein cut by 3A (50.6-50.7), Fractures // CA at 49.3-49.9. Mino epidote and trace of Py associated with 3A style. Hair vein fodder veins of 3A red rock alteration style at 52.3-52.4: sub NS deeping E?, dip ~60 deg. Most of Stage 2-3 veins// banding.	50.1-50.2 52.3-52.4		2	3	2		5	3		1	2
U9205	52.5	54.0	QAM	intensely silicified AS/ChS. This is strong silicified closed to the ore zone. Banding texture preserved at 53.1-53.2. Stage 2-3 veins mostly occurred in 52-52.4; 53-53,2.	53.1-53.2		0	1-2	1-2			1-2			
U9205	54.0	57.5	QAM	Galah stone likely intense silicified AS. Galahstone at 54.3 (3cm); 55.25 (1.2cm); 56.2 (2cm); 56.3 (2x0.5cm); 56.36 (8cm); 57 (1cm); 57.05 (0.5cm); 57.15 (2x0.5cm); 57.45 (2x0.3cm).	54.05-54.3 55.05-55.3 55.7-56.7		0	2-3	4	4	5	2		2	2-3
U9205	57.5	62.5	QAM	Galah stone like bands in very strong silicified AS (similar to previous) but strong red rock alteration. Galahstone at 57.9 (0.5cm); 58.2 (1cm); 59.4 (15cm); 59.6 (1cm); 60.4 (1cm); 61.05 (2x0.3cm); 62m-not clear. This has been described in detailed in notebook (checked). Few sheeted veins overprinted by RRA veins at 55.5-61.5. Late fractures // CA: 59.8-61.5	57.75-57.95 59-59.4 59.8-60.5 61-61.1 62-62.25		4-5	4	4	4	3-4	2		2	2-3
U9205	62.5	66.0	TZ	Chlorite> quartz > green clay minerals. Silicified AS/ChS. Very broken core, less magnetite	62.8-63 64.5-64.55 65.24-65.55		0	1	1		5	1-2	1-2	1	2
U9205	66.0	68.5	TZ	silicified AS/ChS. Banding texture, 3A red rock alteration mostly along the bands but also cut the banding (65 deg). Au? At 67.4-67.45 (amphibole/chlorite rich schist)	67.4-67.45		0	1	1		5	3		1	3
U9205	68.5	72.3	TZ	Biotite and chlorite rich quartzite, banding texture preserved, sheeted veins X banding => broken core. In some locations, red pink feldspar alteration locally occurred with chlorite.	71.3-71.4		0	1			4-5	0-1		0-1	2
U9205	72.3	76.0	TZ	Silicified AS/ChS. Weathered, broken cores	73.4-73.5		0	1	1		3-4	2			3
U9205	76.0	78.2	TZ/AS	Intense silicified quartzite intercalated with amphibole-rich quartzite and thin bands of CS at 76m. Light pink feldspar and red rock alteration at 76.8-76.9m. Py enrichment in the 4cm veins of quartz. Py replaced magnetite in some niches.	76-76.05 76.8-76.9		0	2	2		4-5	1		1	3
U9205	78.2	79.7	TZ	Silicified quartzite intercalated with amphibole rich schist and ChS. Very broken core due to weathering	79-79.1		3	1	1		5	1-2			3
U9205	79.7	81.2	CS	Banded brown grey green quartzite.	81-81.1			1				1			

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
U9205	81.2	85.3	TZ	Similar to 79.7-81.2m, silicified quartzite intercalated with amphibole rich schist and ChS. But more Cla.; intercalated with strongly silicified CS	83-83.1			2	2		5	1		0	4
U9205	85.3	87.3	TZ	Weathered, broken, contain green clay minerals and quartz	86.4-86.5			1	1			0			3
U9205	87.3	89.7	QA	Green cloudy quartzite. Green = amphibole/chlorite. RRA vein array at 87.8-87.9	87.8-87.9		4	1	0			0		0	2
U9205	89.7	91.0	ChS	Amphibole/chlorite banding preserved. A hair Py vein at 90.2-90.3m	90.2-90.3			1	0			0		0-1	2
U9205	91.0	122.5	FWQ	Almost pure quartz with spotty amphibole/chlorite. Very fractured, // CA and cut CA. Red pink feldspar occurs mostly with spotty texture but al so as dense veins in some portion as 103-103.5, 100.6-100.7, 102-102.1;	103-103.05 102-102.1 110.8-110.9 121.1-121.2		0	2-3			4	0-1			
U9205	122.5	140.2	AM	Amphibole dominate feldspar, biotite rich amphibolite at 130.5-131. Fsp alteration at 133-140. GCM at 133-140	135.8-136		3-4 (129.5-130.6)	1				3		0-1	2
U9205	140.2	140.3	Peg	S1 fabric pegmatite (mylonite); spotty red pink feldspar (migmatite?) at the boundary of the pegmatite.	140.2-140.4										
U9205	140.3	144.5	CS	Strong silicified metasediments due to the intrusion of peg? Intercalating with intense silicified unit. 141.5-141.6 is the hinge zone of a fold, medium tight fold. Quartz vein cut the BS intercalated with peg fills. Fold plane sub// with the S1/S2, NS trending, sub vertical. Various qtz-pale cream fsp veins occurs in association with Py. The pegmatite (U9205: 140.3; 159.8m, other portions at the bottom interval of the hole) has been sheared/foliated with foliation plane (S2?) of 250- 260 (dip direction) < 60-70 (dip). Shear sense appears to be thrust fault (143.3m)	142.1-142.3			0	0			0		1	
U9205	144.5	144.6	Peg	Peg (quartz-feldspar)? Is weakly lensoidal, ribbon laminate breccia (CTJ term). pale cream feldspar. Py rich, spotty red pink feldspar, no chlorite selvages.	144.7-144.8							0		3	3
U9205	144.6	145.5	CS	Silicified banded metasediments								0			
U9205	145.5	145.6	Peg	Similar to 144.5-144.6								0			
U9205	145.6	147.8	BS	Silicified banded metasediments								0			
U9205	147.8	151.0	CS	Silicified rocks containing various irregular pegmatite veins (feldspar-quartz). This pegmatite is extreme feldspar-rich, just ~2% muscovite and ~5% of quartz. They are not likely mynolised or foliated but has "convoluted-like" texture in some locations. Are they fully recrystallized? Note the peg. occurs in the contact between different rock bands	148.2-148.4 149.45-149.9							0			
U9205	151.0	155.2	AM	Amphibolite schist. Magnetite => hematite. Trace Py. Green clay at 153.2-155.2. The brittle crack fill of red rock alteration is a normal fault defined by the slickenside (U9205: 154.3-154.5m).	151.2-151.3 154-154.1			2			2-3	3-2		0-1	
U9205	155.2	159.9	CS	Similar to previous but contain pegmatite in form of sills and "convoluted-like" from 155.2-160.3. Angular brecciation at 155.7-155.8. The pegmatite (U9205: 140.3; 159.8m, other portions at the bottom interval of the hole) has been sheared with the plane of 250-260 (dip direction)/60-70 (dip)	155.7-155.75 156.8-156.9							0			

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
U9205	159.9	160.3	peg	Occurred massively at 159.9-160.3 (has been described in detailed). The meat pink in the selvage of this pegmatite. Slightly overprinted by stage 2-3 feldspar style.	159.9-160.35							0		0-1	
U9205	160.3	186.4	CS	Similar to previous 155.2-159.2m, contain pegmatite in form of sills and irregular veins, at 169.5-169.6m; 171.3-172.9. Massive pegmatite dyke at 172.2-172.3 180,181m and sparsely occurs from 181m to 185m	162.65-162.8 166-166.15 168.2-168.35 172.4-172.5 175.1-175.3 177.1-177.2 180.1-180.2 182.7-182.8 184.4-184.5 186.1-186.2			0-1				0		0-1	
U9205	186.4	190.5	CS	The stage 2-3 feldspar style veins are overprinted by the Stage 4 (?) vein Style, the late carbonate veins. The RRA is cut and displaced by the carbonate vein (sub vertical, NE trending, Dipping D, reversed fault	188.3-188.4			2-3	1			0		0-1	1
U9205	190.5	194.0	ChS	Chlorite-rich schist, contain 30cm "pure" quartz inside. 40cm of core with fractures sub// CA	191.6-191.7			1				0		0	
U9205	194.0	199.0	Q	Pure white quartz with sparsely spotty Stage 2-3 feldspar style. Broken core and late carbonate veins at 195.7-196.2	197-197.1										
DJ525	179.3	183.7	TZ	Intensely-strongly silicified amphibolite => like quartzite, CS bands ~6-8%; Fractured			67	1	1		4-5	2			
DJ525	183.7	198	HWQ	grey quartzite, fractured. Late carbonate veins cutting earlier veins, Stage 2-3 cut CA ~ 70 deg. This rock is very similar to the pit HWQ (spl No 02).	188.1-188.3			2	1		5	0			3
DJ525	198	199.3	Flt	HWQ cut by fault with Cla. minerals. Red rock alteration 198-198.15. No magnetite recorded.				2				0			3
DJ525	199.3	204.5	QAM?	Laminated, foliated, intercalated with thin bands of amphibolite								0			
DJ525	204.5	207	QAM?	Chlorite rich quartzite			70					1			3
DJ525	207	211.5	SCS	Scapolite chlorite-rich CS > (dominates) biotite rich schist. RRA with epidote overprints. Spotty scapolite CS			70					0			
DJ525	211.5	215	SCS	Similar to pervious interval but more chlorite			70					0			
DJ525	215	217	ChS	Chlorite rich schist contain biotite, plagioclase (15-20%)	215-215.25							2			
DJ525	217	225.6	ChS/flt	Similar to previous interval but strongly fractured, faulted and strong silicified in some locations. Sheeted veins of hematite. Scapolite in 221.7-221,8 m		3	70			2 (St2	3	1			
DJ525	225.6	227.8	QAM?	Common late carbonate (D4) fractures along the CA, chlorite quartz											
DJ525	227.8	235	QAM?	Amphibole- rich quartzite? intercalated with ~5% BS. At 233-233.5m, thin vein arrays of Stage 2 feldspar style	231.5-231.6; 232.7-233		70-85					1			

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
DJ525	235	252.5	ACS	Intercalated with CS band , Epidote veins at the contact of CS and amphibolite (at 239.2m, late epidote?). RRA commonly occurs in CS bands. Pale cream feldspar and quartz bands overprinted by RRA veins. 239.8-239.95 and 244-244.5: intensive early light pink feldspar and less quartz alteration, overprinted by Stage 5 (?) veinstyles.	243.2-243.5			3	1-2		3	1			2
DJ525	252.5	269.3	AM	amphibolite contains disseminated biotite, mostly massive but sometime as thin bands. Amphibole ~ 60%, biotite 20%, feldspar 20%. Stage 2 thin/hair veins occurs at 268.5 - 270.5				0-1		1?		1			
DJ525	269.3	287.5	BS	Banded BS with RRA. Fault: 269.3-273.5; sheared, broken core, common migmatite with light to meat pink feldspar-quartz			80	0-1				1			
DJ525	287.5	290.6	AM	Chlorite schists intercalated with Amp				0-1				3			
DJ525	290.6	300	AM	Similar to 269.3- 271.3 with common qtz-fsp alteration, especially at 295-	298.9-299		80	0-1				2			
DJ525	300	312	CS	Dark grey banded quartzite, pink red feldspar migmatite with peal cream pegmatite			80	0-1				1			
DJ525	312	326	AM	Quite pure amphibole/Chlorite but shear at 324.3-325.5, qtz-fsp alteration also occur in this shear zone.			80	0-1				1		2	
DJ525	326	330.6	SCS	Scapolite amphibole-rich CS			80	0-1				1		2	
DJ525	330.6	350	AS	Amphibole-biotite rich schist. Coarse grained garnet disseminated at 336.7-336.8, other grains scattered in the same meter. Other than that, no garnet was recorded. Fsp alteration: pink red feldspar + cream feldspar	332.7-332.9 236.7-236.8			0			3	0			
DJ525	350	363	AM	Amphibolite. Py appears as thin short veins(2X20-30mm). Few stages 2-3 feldspar vein style < 1-2cm				0-1				2-3			
L9109A	0	17.5	ACS	Amphibole dominant schist. Amphibole/chlorite biotite rich schist intercalated with thin bands of quartz. Magnetite volume variously changed but generally enriched in chlorite rich rather than biotite rich sequence. Quartz veins at: 7.3, 8.3, 9.3, 11, 15 with silicification halos, especially at ~ 15m.	4.4-4.5 12-12.1			3	2-3		3	S		0-1	
L9109A	17.5	19.8	CS	Strong magnetite alt at intensive red rock alteration suggesting this is highly magnetified interval but may partially => hmt during red rock alteration)	17.9-18			3	0-1			2-3		0-1	
L9109A	19.8	24.7	BS	Very biotite rich schist. Banded texture; Strongly weathered and broken core (due to weathering and late fault). Silicified at the first 0.6m.		3					2				
L9109A	24.7	26	CS	Similar to 17.5-19.8m, brick color due to hematite alteration overprint		4-5		2	1-2						
L9109A	26	40	CS	CS dominated. RRA feldspar along banding and cut the banding.	33.1-33.3 38.4-38.5			2			1	3-4			
L9109A	40	42	ACS	ACS dominate BS. Magnetite increase significantly, especially in BS.				2			1	4			
L9109A	42	51.8	AS	Intensely silicified AS, minor ChS; massive txt, magnetite increases significantly at deeper part. ~20-30%	43.2-43.3 50-50.1			1			3-4	5			

Drill hole	Fr (m)	To (m)	R. type	Description	Sampling (m)	Sh. veins	S1 fab. x CA	Alteration							
								RRA	PRA	LPRA	Silic.	Mag.	Hmt	Py	Gc
L9109A	51.8	57.2	ACS	Silicified, less magnetite than previous interval	53.4-53.6			4-5			3-4	5		0-1	
L9109A	57.2	62	TZ	Transition zone, intensely silicified BS? Chlorite rich at 60-62m.	59.8-59.9							3-4		0-1	
L9109A	62	68	HWQ	White, speckle (Stage 2-3) quartzite at 96.1	63 (piece)										

Appendix 10

Bibliography of exploration reports and data

Appendix 10 contains the following data sets:

- A bibliography of reports and data collected for this study organised in alphabetical order
- Copies of all reports and data are attached with this appendix except for materials published on QDEX

Appendix 10: Bibliograph of exploration reports and data

#	Author	Title	Callno (MIM)	Data type	Year	Notes
1	Agustin	Mapping the Regolith and its Mineralogy of the Tick Hill Region		Msc	2011	Curtin University
2	Beams & Lesh	2006_Tick Hill Gold Project_Annual Report		Report	2006	
3	Berkut Mineral Limited	Acquisition of Tick Hill Gold Project		Report	2016	
4	Bill Perkins	Tick Hill Gold Mine Discovery 4		Presentation (conference)	1999	
5	Boda S P	Au-Niche, alteration and paragenetic sequence of the Tick Hill Deposit, NW Queensland	Misc.1993/015	Report	1993	Record No: 29974 Author: Boda S P; ; Title: Au-Niche, alteration and paragenetic sequence of the Tick Hill Deposit, NW Queensland Place: Publisher: MIM Exploration Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: Misc.1993/015 Subject: Economic Geology - Precious Metals Mineral Exploration; Mineralogy and Petrology (Igneous and Metamorphic); Queensland; Keywords: Tick Hill Notes:
6	Boda S P	Au-Niche and vein analysis Study_Summary			Ukn	
7	BRAUNS K.A.	Drill report			2000	
8	Buckland K R	Joint Venture Report to 18 Dec 1988 EPM 4532 project _Dajarra 1988_EAST AND WEST TICK HILL		Report	1988-1989	QDEX sourced; Various files have been organised reported on geology - structure - mineralisation of different areas in the region, around Tick Hill. Not attached with this appendix
9	Carnaby Resources	Tick Hill Exploration Report		Report	2019	
10	Choy D K W	The Tick Hill Gold Deposit in North-West Queensland Geology, Petrology, Mineralisation, Alteration and Structure. Monash University		Report	1992	Record No: 29966 Author: Choy D K W; ; Title: The Tick Hill Gold Deposit in North-West Queensland Geology, Petrology, Mineralisation, Alteration and Structure. Monash University Place: Publisher: unpublished report Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: Misc.1992/089 Subject: Economic Geology - Precious Metals Mineral Exploration; Thesis; Keywords: SF5401; 6756; QLD; Mt Isa Block; Literature reviews Mapping, Metamorphism Structural petrology Structural geology; Petrology; Mt Isa Fault; ML 8058 (Isa mine lease); Mt Isa Gp, Sybella Gr, Eastern Ck Volcs; Tick Hill Notes:
11	Choy D K W	The Geology, Structure, Petrology, Alteration and Mineralisation of Tick Hill, Northwest Queensland	Thesis.047	Thesis	1994	Record No: 21999 Author: Choy D K W; Title: The Geology, Structure, Petrology, Alteration and Mineralisation of Tick Hill, Northwest Queensland Place: Publisher: Monash University Citation: Series: Pagination: Year: 1994 Edition: Holdings: Callno: Thesis.047 Subject: Queensland; Geology; Petrology; Alteration; Structural Geology and Tectonics; Mineralisation; Thesis; Keywords: Tick Hill Notes:
12	Collin Nash	Photogeological and aeromagnetic interpretation of the T.H area			1998	Cullen internal report, MIM sourced
13	Corbert	Comments on structures controls T.H Au Deposit			1998	from 9083 Project
14	Coughlin T J	Burke River ; QLD ; EPM 9083 ; Tick Hill Enclave 1:10000 Geological Mapping Programme.	2120	Report	1993	Record No: 8548 Author: Coughlin T J; Title: Burke River ; QLD ; EPM 9083 ; Tick Hill Enclave 1:10000 Geological Mapping Programme. Place: Publisher: Internal MIMEX Report Citation: Series: Pagination: Year: 1993 Edition: Holdings: 1 Callno: 2120 Subject: Tick Hill type; Queensland; Keywords: Tick Hill ; Burke River ; EPM9083 Notes:
15	Crookes	Technical report, EPM 4532 "Dajarra" report for 12 month ended			1990	Tick Hill related
16	Crookes R	The Geology of the host lithologies to the gold mineralisation at Tick Hill ; a report of observations from the mine	MISC.1993/026	Report	1993	Record No: 29987 Author: Crookes R; ; Title: The Geology of the host lithologies to the gold mineralisation at Tick Hill ; a report of observations from the mine Place: Publisher: Carpentaria Gold Pty Ltd Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: MISC.1993/026 Subject: Queensland; Keywords: Tick Hill Notes:

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#	Author	Title	Callno (MIM)	Data type	Year	Notes
17	Croxford N J W	Rocko report no.1190-782; Dajarra A to P 4532; Tick Hill Petrology of core specimens from DDH TH032; TH030; TH002 and TH003	ISAMISREP.002	Report	1990	Record No: 30851 Author: Croxford N J W; ; Title: Rocko report no.1190-782; Dajarra A to P 4532; Tick Hill Petrology of core specimens from DDH TH032; TH030; TH002 and TH003 Place: Publisher: Rockco Pty Ltd Citation: Series: Pagination: Year: 1990 Edition: Holdings: Callno: ISAMISREP.002 Subject: Petrology; Keywords: Tick Hill ; Dajarra Ato P 4532; Notes:
18	Croxford N J W	Tick Hill district; the petrology of six (6) field specimens QQ49041 to QQ49046	ISAMISREP.022	Report	1994	Record No: 30879 Author: Croxford N J W; ; Title: Tick Hill district; the petrology of six (6) field specimens QQ49041 to QQ49046 Place: Publisher: Rockco Pty Ltd Citation: Series: Pagination: Year: 1994 Edition: Holdings: Callno: ISAMISREP.022 Subject: Keywords: Petrology; Tick Hill ; Notes:
19	Croxford N J W	Some considerations on the Tick Hill mineralisation arising from a review of the petrographic collection and related literature	ISAMISREP.025	Report	1999	Record No: 30881 Author: Croxford N J W; ; Title: Some considerations on the Tick Hill mineralisation arising from a review of the petrographic collection and related literature Place: Publisher: Rockco Pty Ltd Citation: Series: Pagination: Year: 1999 Edition: Holdings: Callno: ISAMISREP.025 Subject: Mineralisation; Keywords: Petrology; Tick Hill ; Notes:
20	CSIRO	Report Pb_isotope data		email	1999	only 2 samples, sent to Richard
21	D Johnson	Tick Hill a review – a discussion		Report	2000	
22	D Johnson	Drawings List		Report	2002	
23	D Johnson	Tick Hill review		Report	2002	
24	Denton GJ et al	Exploration and Mining Report 690C: The Pb Isotopic Analysis of High Pb Samples from Tick Hill, Eastern Succession, Mount Isa Inlier, Northwest Queensland	ISARESREP.122	Report	2000	Record No: 32104 Author: Denton GJ et al; ; Title: Exploration and Mining Report 690C: The Pb Isotopic Analysis of High Pb Samples from Tick Hill, Eastern Succession, Mount Isa Inlier, Northwest Queensland Place: Publisher: CSIRO Division of Exploration and Mining Citation: Series: Pagination: Year: 2000 Edition: Holdings: Callno: ISARESREP.122 Subject: Keywords: Tick Hill; Pb Isotope ; Eastern Succession; Notes: 2 samples only
25	Dickson et al	Alteration of South MKD_pilot study_summary		Report	1993	
26	Downing J	Some notes on Tick Hill orebody and Tick Hill regional exploration	MEMO.1996/093	Memo	1996	Record No: 12884 Author: Downing J; Title: Some notes on Tick Hill orebody and Tick Hill regional exploration Place: Publisher: Internal MIMEX memorandum Citation: Series: Pagination: Year: 1996 Edition: Holdings: Callno: MEMO.1996/093 Subject: Keywords: Tick Hill Notes:
27	Downs R C	Summary report on the Tick Hill mining leases & environs from March 1996 - March 1999	ISAMISREP.027	Report	1999	Record No: 30882 Author: Downs R C; ; Title: Summary report on the Tick Hill mining leases & environs from March 1996 - March 1999 Place: Publisher: MIM Exploration Pty Ltd Citation: Series: Pagination: Year: 1999 Edition: Holdings: Callno: ISAMISREP.027 Subject: Keywords: RAB; RC; Assays; Tick Hill; Notes:
28	Downs R C	Tick Hill Drilling Programme - June - July 1999	Memo.1999/026	Memo	1999	Record No: 20278 Author: Downs R C; Title: Tick Hill Drilling Programme - June - July 1999 Place: Publisher: Internal MIMEX Memo Citation: Series: Pagination: Year: 1999 Edition: Holdings: 1 Callno: Memo.1999/026 Subject: Queensland; Keywords: Tick Hill Notes:
29	Downs R C	Tick Hill ML Expln Report 1996_1999		Report	1999	
30	Downs R C	Notes concerning thickness distributions of upper and lower quartzite horizons at Tick Hill, and their control on gold mineralisation. A down-plunge drill target	(B)CD.060	Computer Disc	2000	Record No: 20322 Author: Downs R C; Title: Notes concerning thickness distributions of upper and lower quartzite horizons at Tick Hill, and their control on gold mineralisation. A down-plunge drill target Place: Publisher: Internal MIMEX Report Citation: Series: Pagination: Year: 2000 Edition: Holdings: 1 Callno: (B)CD.060 Subject: Queensland; Keywords: Tick Hill Notes:
31	Downs R C	July2000 Monthly Report		Report	2000	
32	Downs R C	Tick Hill Technical Report Summary		Report	2000	

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#	Author	Title	Callno (MIM)	Data type	Year	Notes
33	Downs R C	Cross sections and Au wireframe_various files of drawing		data	2000	
34	Downs R C	Notes Concerning Thickness Distributions of Upper and Lower Quartzite Horizons at Tick Hill, and Their Control on Gold Mineralisation. A Down-Plunge Drill Target	ISAMISREP.096	Report		Record No: 30956 Author: Downs R C; ; Title: Notes Concerning Thickness Distributions of Upper and Lower Quartzite Horizons at Tick Hill, and Their Control on Gold Mineralisation. A Down-Plunge Drill Target Place: Publisher: MIM Exploration Pty Ltd Citation: Series: Pagination: Year: Edition: Holdings: Callno: ISAMISREP.096 Subject: Keywords: Tick Hill ; Gold; Quartzite Horizons; Notes:
35	England R N	Petrographic report for 35 samples from Tick Hill	ISAMISREP.018	Report	1993	Record No: 30874 Author: England R N; ; Title: Petrographic report for 35 samples from Tick Hill Place: Publisher: England R N Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: ISAMISREP.018 Subject: Keywords: Petrology; Fluid inclusions; Tick Hill; Notes:
36	England R N	The Tick Hill sedimentary exhalative gold deposit	ISAMISREP.023	Report	1995	Record No: 30871 Author: England R N; ; Title: The Tick Hill sedimentary exhalative gold deposit Place: Publisher: England R N Citation: Series: Pagination: Year: 1995 Edition: Holdings: Callno: ISAMISREP.023 Subject: Gold; Keywords: Tick Hill; sedimentary; Notes:
37	Geoff	Pb_isotope discussion		email	Unk	Email form
38	Grove D	consulting work at Tick Hill_Oxyzen isotopes_probe_lead isotopes			1995	
39	GSQ	TH007 hyperspectal		data	Unk	Images
40	GSQ	North-West Queensland Mineral and Energy Report		Report	2011	Tick Hill included
41	Hannan K W	Tick Hill district quartz oxygen isotope results	MEMO.1994/002	Memo	1994	Record No: 13886 Author: Hannan K W; Title: Tick Hill district quartz oxygen isotope results Place: Publisher: Internal MIMEX memorandum Citation: Series: Pagination: Year: 1994 Edition: Holdings: 1 Callno: MEMO.1994/002 Subject: Queensland; Keywords: Tick Hill Notes:
42	Holmes C R	Burke River ; QLD ; EPM 9083 ; Tick Hill Gold Deposit Non Metallic Halo Study	2119	Report	1993	Record No: 11072 Author: Holmes C R; Title: Burke River ; QLD ; EPM 9083 ; Tick Hill Gold Deposit Non Metallic Halo Study Place: Publisher: Internal MIMEX Report Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: 2119 Subject: Statistical methods; Diamond; analysis; Logs; Vein deposits; analysis; Whole rock analysis; Keywords: SF5406; 6854; QLD; Mt Isa Block; Gold; Whole Rock Analysis, Statistical Analysis; Diamond, Analysis, Logs; Tick Hill Synform, Tick Hill Detachment Zone; Vein deposits; ML 7094 ML 7096 ML 7097; Corella Fm, Argylla Fm; Tick Hill Gold Mine; epm9083 Notes:
43	Jones P A	Report on Microstructure and mapping at Tick Hill	Misc.1999/056	Report	1999	Record No: 30642 Author: Jones P A; ; Title: Report on Microstructure and mapping at Tick Hill Place: Publisher: Geometrix Exploration Services Citation: Series: Pagination: Year: 1999 Edition: Holdings: Callno: Misc.1999/056 Subject: Keywords: Tick Hill Notes:
44	K.A. Brauns	Drill report		Report	2000	
45	Laing W P	Key issues at Tick Hill	ISAMISREP.008b	Report	1992	Record No: 30860 Author: Laing W P; ; Title: Key issues at Tick Hill Place: Publisher: Laing Exploration Pty Ltd Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: ISAMISREP.008b Subject: Keywords: Tick Hill; Notes:
46	Laing W P	A priority target zone at Tick Hill	ISAMISREP.009	Report	1992	Record No: 30861 Author: Laing W P; ; Title: A priority target zone at Tick Hill Place: Publisher: Laing Exploration Pty Ltd Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: ISAMISREP.009 Subject: Keywords: Tick Hill; Notes:
47	Laing W P	The metasomatic development of the quartz feldspar laminate gold hostrock at Tick Hill; illustrated	ISAMISREP.010	Report	1992	Record No: 30862 Author: Laing W P; ; Title: The metasomatic development of the quartz feldspar laminate gold hostrock at Tick Hill; illustrated Place: Publisher: Laing Exploration Pty Ltd Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: ISAMISREP.010 Subject: Keywords: Tick Hill; gold; metasomatic development; quartz feldspar; Notes:

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#	Author	Title	Callno (MIM)	Data type	Year	Notes
48	Laing W P	The Starra Osborne mineralised system and its implications for the Tick Hill region	ISAMISREP.011	Report	1992	Record No: 30863 Author: Laing W P; ; Title: The Starra Osborne mineralised system and its implications for the Tick Hill region Place: Publisher: Laing Exploration Pty Ltd Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: ISAMISREP.011 Subject: Keywords: Osborne Cu-Au deposit; Tick Hill ; Notes:
49	Laing W P	Tick Hill Structural study	ISAMISREP.012 b	Report	1992	Record No: 30865 Author: Mawer C K; ; Title: Tick Hill Structural study Place: Publisher: MIM Exploration Pty Ltd Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: ISAMISREP.012b Subject: Keywords: Tick Hill; Notes:
50	Laing W P	A drilling program to test the central area, Tick Hill	ISAMISREP.014 a	Report	1992	Record No: 30868 Author: Laing W P; ; Title: A drilling program to test the central area, Tick Hill Place: Publisher: Laing Exploration Pty Ltd Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: ISAMISREP.014a Subject: Drilling; Keywords: Tick Hill; Notes:
51	Laing W P	Geology of the Tick Hill region, Mount Isa with implications for exploration	ISAMISREP.017	Report	1993	Record No: 30870 Author: Laing W P; ; Title: Geology of the Tick Hill region, Mount Isa with implications for exploration Place: Publisher: Laing Exploration Pty Ltd Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: ISAMISREP.017 Subject: Geology; Keywords: Tick Hill; Mount Isa; Notes:
52	Laing W P	Progress report on spectral and radiometric interpretation on T.H region				
53	Leach	Petrological valuation of alteration and mineralisation from selected thin sections_		Report	1998	Cover page only
54	Lord	Hemlo versus Tick Hill ; includes a paper by Kerry Knoll, "The lesson of Hemlo : persistence pays off"	Memo.1991/018	Memo	1991	Record No: 17489 Author: Title: Hemlo versus Tick Hill ; includes a paper by Kerry Knoll, "The lesson of Hemlo : persistence pays off" Place: Publisher: Citation: Series: Pagination: Year: 1991 Edition: Holdings: Callno: Memo.1991/018 Subject: Keywords: Regional Geology - Queensland; Tick Hill ; Notes: Source Internal MIMEX Memorandum;
55	Mark G	Titanite Age dating subgroup		data	2001	Include various reports in email form
56	Mawer C K	Tick Hill Structural study	ISAMISREP.012	Report	1992	Record No: 30864 Author: Mawer C K; ; Title: Tick Hill Structural study Place: Publisher: MIM Exploration Pty Ltd Citation: Series: Pagination: Year: 1992 Edition: Holdings: Callno: ISAMISREP.012 Subject: Keywords: Tick Hill; Notes:
57	McNaughton	Pb Isotopes from Pyrite		email	1995	concordia diagram only
58	MCNaughton	Consulting work at Tick Hill_lead isotopes 2			1995	
59	MIM	Drill programs_1998_2000_2006 and RAV		data	to 2006	Including different types of files
60	MIM	MISCELLANEOUS REPORT_Geochem files		data	Unk	Including different types of files
61	MIM	Drilling data group with vaious mapionfor files and excel files sourced from MIM, is divided into 4 subgroups of data		data		
62	MIM	Drill database		data		Including excel and mapinfor files, using GAD84 coordination
63	MIM	Drill Logs_excluding drill logs from Tedman-Jone 2001 that has been shown in group 5		data		Including different types of files
64	MIM	Drill _Miscellaneous additional files		data		Including different types of files
65	MIM	Geochem and alteration group includes reports and data as below:				
66	Nano	Tick Hill Report		Email	1999	To Rick
67	Nano	Tick Hill Petrology		Report	1999	

Appendix 10: Bibliograph of exploration reports and data

#	Author	Title	Callno (MIM)	Data type	Year	Notes
68	Nano	Tick Hill Re Os_08090		email	2000	Email form; failed as not enough Mo and Cu sulphide in the samples
69	Nano	Tick Hill Re Os dating_failed		email	2000	failed as not enough Mo and Cu sulphide in the samples
70	Nano	monthly report sept99		report	1999	
71	Nano et al	Tick_Hill_conference poster_290500			2000	PPt file
72	Oliver	Regional Structural, Metamorphic, and Stratigraphic Setting of the Tick Hill Gold Deposit, with Implications for Ore Genesis and Exploration: a report to MIM Exploration and Carpentaria Gold	ISAPRINT.0074 b	REPRINT	1992	Record No: 31627 Author: Oliver N; ; Title: Regional Structural, Metamorphic, and Stratigraphic Setting of the Tick Hill Gold Deposit, with Implications for Ore Genesis and Exploration: a report to MIM Exploration and Carpentaria Gold Place: Publisher: VIEPS/Monash University Dept of Earth Sciences Citation: Series: Pagination: Year: Edition: Holdings: Callno: ISAPRINT.0074b Subject: Keywords: Tick Hill; Ore Genesis ; Mary Kathleen; Duchess Monument; Evolution; Ore Deposition Notes:
73	Oliver	Tick Hill - altered and deformed granites and Corella metasediments			1998	Email form
74	Pearson P (Etheridge and Henley)	A Preliminary Targetting Exercise Over the Enclave Area, Based on the Gold Exploration Model Recently Developed at Tick Hill.	MISC.1993/013	Report	1993	Record No: 29973 Author: Pearson P (Etheridge and Henley); ; Title: A Preliminary Targetting Exercise Over the Enclave Area, Based on the Gold Exploration Model Recently Developed at Tick Hill. Place: Publisher: Etheridge & Henley - Geosciece Consultants Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: MISC.1993/013 Subject: Alteration; Interpretation; Maps; Vein deposits; Airborne magnetic; Structural geology; Exploration potential; Keywords: SF5406; 6854; QLD; Mt Isa Block; Gold; Exploration potential, Structural geology, Alteration, Maps; Tick Hill Detachment; Vein deposits; EPM 9083; Corella Fm, Argylla Fm, St Mungo Gr; Tick Hill Mine; Airborne magnetic, Interpretation; Notes:
75	Perkins	Tick Hill - late Au model		Report	1995	
76	R Down	July2000 Monthly Report		Report	2000	
77	R Down	Cross sections and Au wireframe (various files of drawing)		Report	2000	
78	Richard	Geology faces			1993	A hand drawing draft
79	Richard	CSIRO_Initial_Results_689		email	1999	only 1 sample
80	Rutherford NF	Joint Venture Report to 17 April 2000 for EPM 9083 Burke River Region, Mt Isa - Cloncurry District, North West Queensland,Technical Report for the year 1998		Report	1999	QDEX sourced; Various files have been organised reported on geology - structure - mineralisation of different areas in the region, covering Tick Hill. Not attached with this appendix
81	Rutherford NF	comments on the strucural controls of the Tick Hill gold mineralisation		Report	1999	Appendix 2 of 9083 Project, annually report for the year 1998
82	Rutherford NF	Joint Venture Report to 17 April 2000 for EPM 9083 Burke River Region, Mt Isa - Cloncurry District, North West Queensland, Technical Report for the year 1999		Report	2000	QDEX sourced; Various files have been organised reported on geology - structure - mineralisation of different areas in the region, covering Tick Hill. Not attached with this appendix
83	Rutherford NF	Tick Hill Joint Venture, Final Joint Venture Report to 17 April 2000 for EPM 9083 Burke River Region, Mt Isa - Cloncurry District, North West Queensland, Technical Report No 3, 15 May 2000	ISAMISREP.114	Report	1999-2000	Record No: 30975 Author: Rutherford NF; ; Title: Tick Hill Joint Venture, Final Joint Venture Report to 17 April 2000 for EPM 9083 Burke River Region, Mt Isa - Cloncurry District, North West Queensland, Technical Report No 3, 15 May 2000 Place: Publisher: Cullen Exploration Pty Ltd Citation: Series: Pagination: Year: 2000 Edition: Holdings: Callno: ISAMISREP.114 Subject: Keywords: Tick Hill; Cullen Exploration; Burke River Region; EPM9083 Notes:

Appendix 10: Bibliograph of exploration reports and data

#	Author	Title	Callno (MIM)	Data type	Year	Notes
84	Sillitoe R H	Comments on the Ravenswood, Mount Wright and Tick Hill Gold Deposits and the Bulonga Prospect, Queensland	Misc.1993/066	Report	1993	Record No: 30029 Author: Sillitoe R H; ; Title: Comments on the Ravenswood, Mount Wright and Tick Hill Gold Deposits and the Bulonga Prospect, Queensland Place: Publisher: Richard H Sillitoe Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: Misc.1993/066 Subject: Queensland; Gold; Keywords: Tick Hill ; Ravenswood ; Mount Wright ; Bulonga Prospect Notes:
85	Superior Resource	ositive scoping Tick Hill study		Report	2016	
86	Tedman-Jones C J	Gold dispersion and geochemistry at the Tick Hill Gold Deposit and implications for exploration ; Mt Isa Inlier, NW Queensland	Thesis.167	Book	1993	Record No: 14420 Author: Tedman-Jones C J; Title: Gold dispersion and geochemistry at the Tick Hill Gold Deposit and implications for exploration ; Mt Isa Inlier, NW Queensland Place: Publisher: James Cook University North Qld(JCUNQ) Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: Thesis.167 Subject: Thesis; Economic Geology - Precious Metals Mineral Geology Exploration; Queensland; Gold deposits; Geochemistry; Geology Exploration; Mount Isa Inlier; Keywords: Tick Hill ; Notes:
87	Tedman-Jones C J	Tick Hill core relogging review	Misc.2001/010	Report	2001	Record No: 30764 Author: Tedman-Jones C J; ; Title: Tick Hill core relogging review Place: Publisher: M.I.M. Exploration Pty Ltd Citation: Series: Pagination: Year: 2001 Edition: Holdings: Callno: Misc.2001/010 Subject: Queensland; Gold; Keywords: SF5406 ; 6854 Tick Hill Notes:
88	Ukn	APPENDIX 1_Structure data pit		data	1999	
89	Unk	Wireframe			2000	
90	Unk	Targeting files		data	2000	Including different types of files
91	Unk	Ore body data files_images		data	2000	Including different types of files
92	Unk	Wireframe data files		data	2000	Including different types of files
93	Unk	MINEDASS_Statistics			Unk	
94	Unk	Spectral Data_TH034		data	Unk	Images
95	Unk	TH014_TH502_WholeRockDiagrams		data	Unk	Images
96	Unk	TH502RD_WholeRock_		data	Unk	Excel data
97	Unk	Draft of Proposed Fault based on mag. Data		data	Unk	An image
98	Unk	Tick HIll evolution		poster	Unk	The photos is not clear to reckon the Author and year of publication
99	Various	Geophysics folder		data		~1.2 Gb folder include vaious data and reports of geophysics organised in different sections, such as ground magnetic, helimag, IP, etc.
100	Various	Satellite Imagery		data		Folder including Satellite Image and related reports
101	Various	Drill core photoes		images		Historical photoes and photoes from this study; some photoes from mining pit area are included
102	Watkins R H	Deformation, Felsic magmatism and alteration associated with the Tick Hill Gold deposit, N W Queensland.	Thesis.098	Book	1993	Record No: 7995 Author: Watkins R H; Title: Deformation, Felsic magmatism and alteration associated with the Tick Hill Gold deposit, N W Queensland. Place: Publisher: Monash University, department of Earth Sciences. Citation: Series: Pagination: Year: 1993 Edition: Holdings: Callno: Thesis.098 Subject: Thesis; Queensland; Earth Science Information; Alteration; Keywords: Tick Hill; Gold deposit; North West Queensland ; deformation ; felsic magmatism Notes: