Supplementary Appendix 10

Element Maps: ASEM

All maps were run using a 120 µm aperture, 4 nA beam current, 20 kV, dwell time of 15 000 µs per pixel and process time of 1s. Maps were true mapped (background removed) unless otherwise stated. Images were corrected and enhanced using a vector drawing program. Please see Appendix A for methods used for mapping.

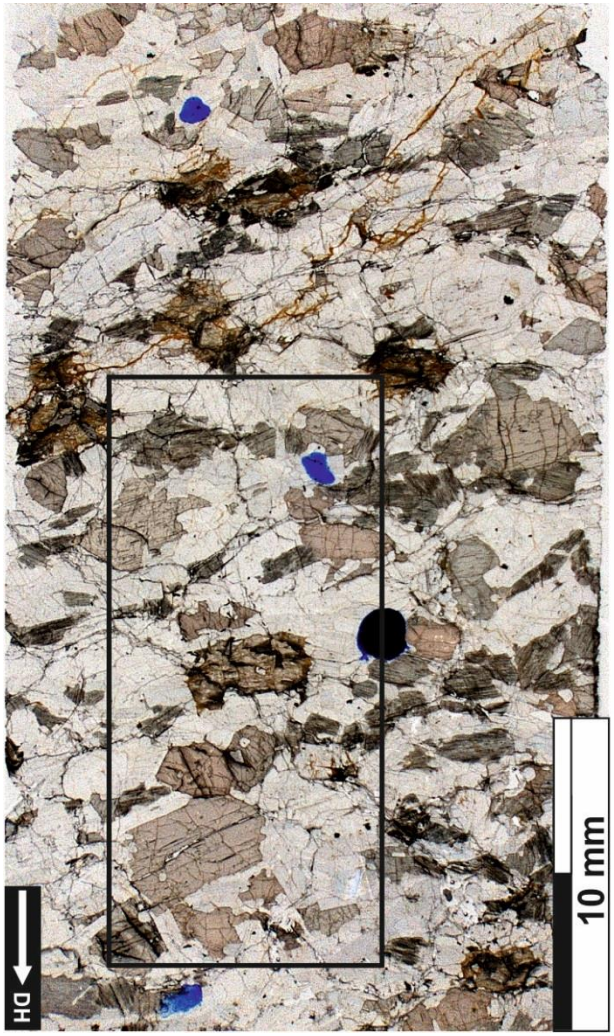
Table A10: Running conditions of back scatter electron (BSE) maps using ASEM.

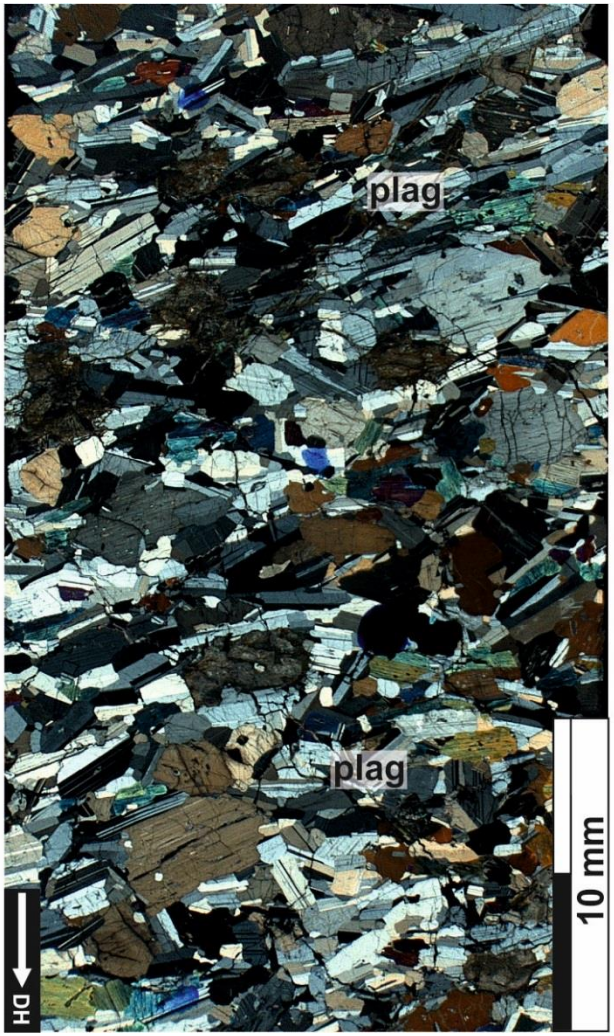
Sample	Depth VSF2 (m)	TU	Date RUN	Mapped	Pixel size (µm)	Res.	Mag.
TU: Vogelstruisfontein (VSF2)							
FT1003	27.95	TU4	22/11/2017	Texture of norite above reoccurrence of olivine	5	256	215
FT1010	44.55	TU4	23/11/2017	Texture of norite above reoccurrence of olivine	5	256	215
FT1012	55.00	TU4	20/11/2017	Texture of reappearance of olivine-rich GN (reappearance of olv) Fluid inclusions in olv	5	256	215
FT1019	65.95	TU4	22/11/2017	Texture of olv poor lithologies in hiatus	5	256	215
FT1030	82.15	TU4	10/08/2017	Mottled contact AN-N	20	64	215
JD33	82.82	TU4	21/11/2017	Mottle textures	20	64	107
FT4201	86.11	TU4		Pyroxene mottle with inclusions of plag + opx	5	256	215
JD02	86.7	TU4		Pyroxenite texture	5	256	215
JD03	88.19	TU4-TU3	09/08/2017	Contact TU3-TU4 TROC, BMS, mottles	20	64	215
FT1038	89.05	TU3	09/08/2017	TROC textures Highest grade PGE	20	64	215
FT4203E	90.77	TU3	26/09/2017	Contact norite-pegmatite	5	256	215
FT1046	113.89	TU3	20/11/2017	Texture of troctolite with mottles + inclusions	5	256	215
FT1046 zoom	113.89	TU3	23/11/2017	Inclusion in olivine	20	64	107
FT4204	120.40	TU3	23/11/2017	Norite eye of autolith/ mottle in TROC	20	64	107
JD34A	142.80	TU3	20/11/2017	An vein and contact with OLMGN	5	256	215
JD39	159.40	TU3	26/03/2019	Massive biotite/phlog in TU with qrtz-plag-apatite	10	128	125

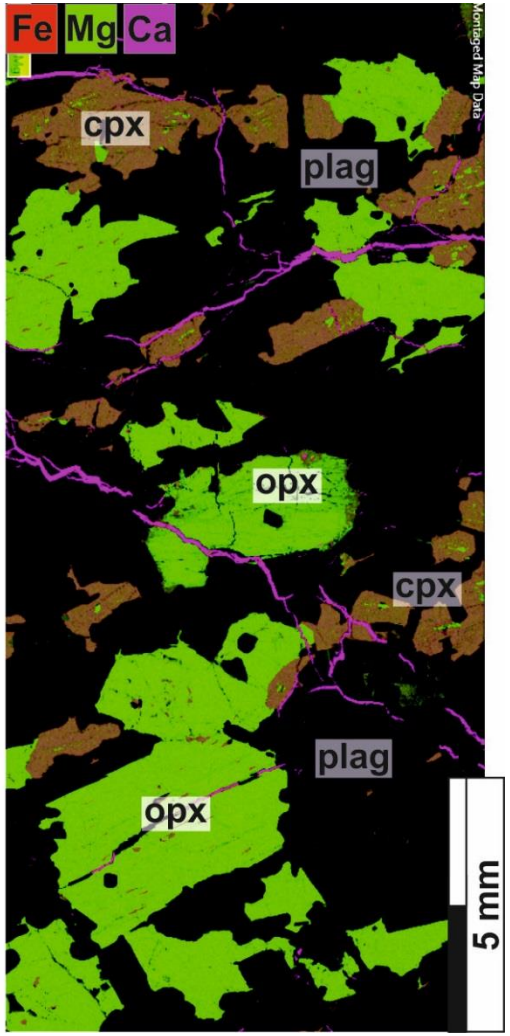
Table A10 cont.: Running conditions of back scatter electron (BSE) maps using ASEM.

Sample	Depth VSF2 (m)	TU	Date RUN	Mapped	Pixel size (µm)	Res.	Mag.
TU: Vogelstruisfontein (VSF2)							
JD06	159.80	TU3	26/09/2017	Troctolite texture, mottles + symplectite	5	256	215
FT1091	185.64	TU3	21/11/2017	Texture: generic TU	5	256	215
FT1093	189.00	TU3	28/09/2017	Texture: generic TU	5	256	215
JD10	215.65	TU3	22/11/2017	Troctolite texture and alteration phase	5	256	215
JD14	221.70	TU2	10/08/2017	Clean An, highest grade PGE	20	64	215
FT4208	230.65	TU2		Texture of felsic feature with apatite and BMS	5	256	215
FT4209	232.52	TU2		High grade PGE, texture	5	256	215
FT1128	234.59	TU2	26/09/2017	High grade PGE, texture	5	256	215
FT1131	240.60	TU2	09/08/2017	Replacement texture	20	64	215
JD21	246.81	TU2	10/08/2017	Pyx phenocryst / melt	20	64	215
JD20	246.86	TU2		Texture of olv poor lithologies that mark the contact TU1-2	5	256	215
FT1143	257.44	TU1	08/08/2017	Difference in texture between olv-rich and poor gabbro	13	165	166
JD25	268.46	TU1	28/09/2017	Difference in texture between olv-rich and poor gabbro	5	256	215
Main Zone samples							
BK015	390.27	Main Zone	20/11/2017	Typical MZ texture	5	256	215
TU: Bellevue (BV1)							
BV07B	2809.13	BV1-TU1	06/12/2017	Olv-opx texture	10	128	107
BV22 zoom	2915.78	BV1-TU1	06/12/2017	Reaction texture olv+opx	2	512	270
BV22	2915.78	BV1-TU1	06/12/2017	Reaction texture olv+opx	2	512	270

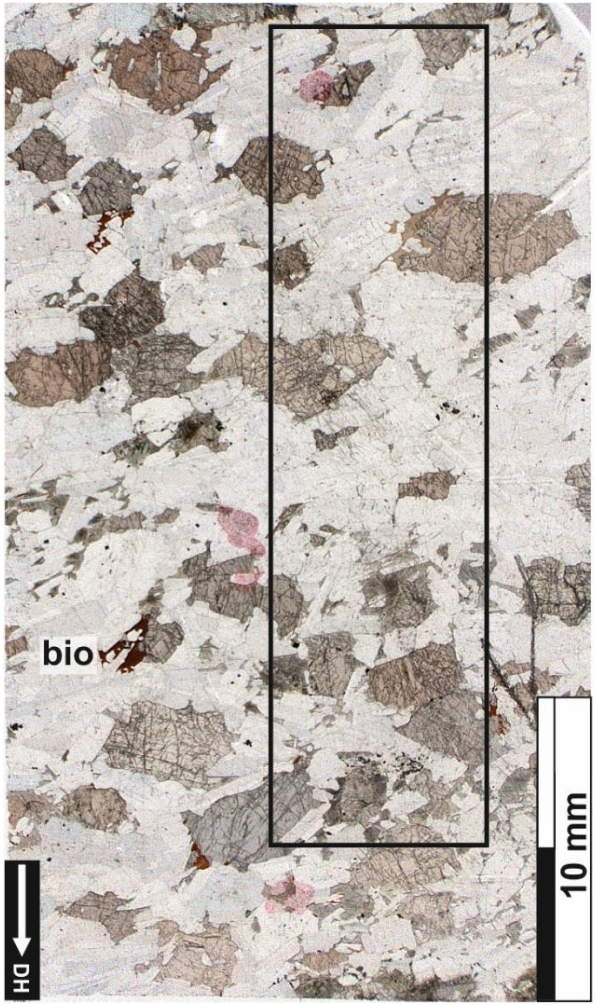
Troctolite Unit: VSF2- FT1003 (blue markings are pen marks for LA-ICP-MS)

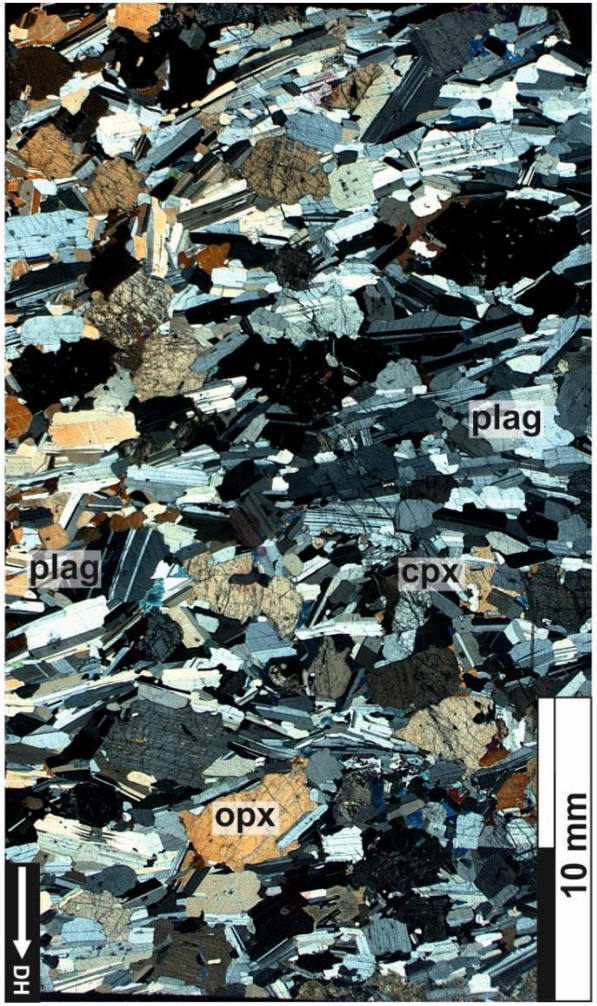


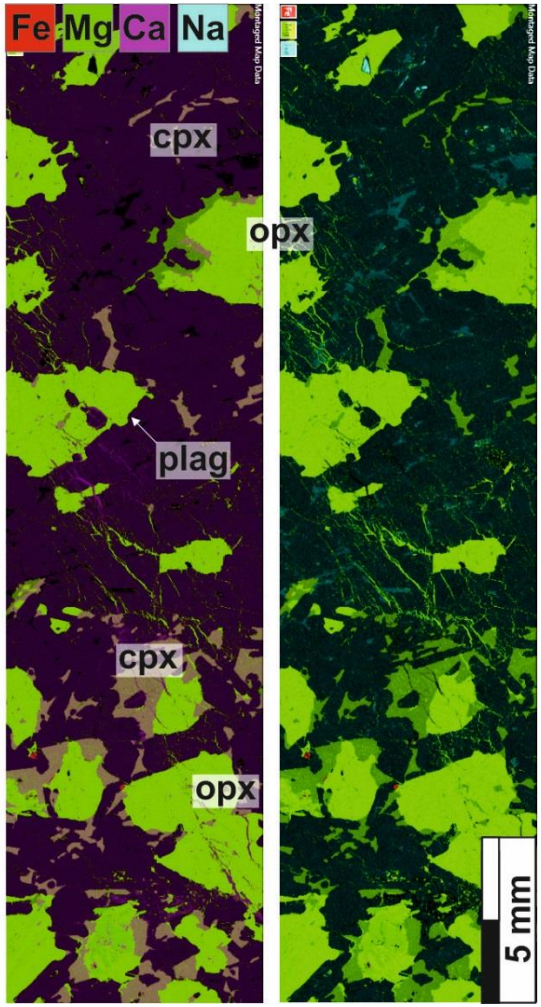




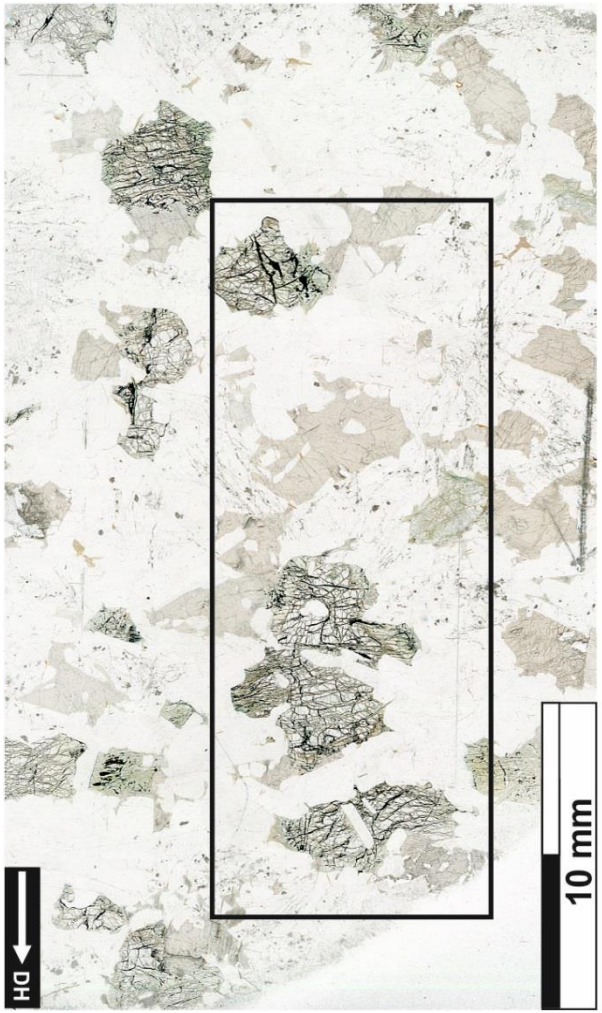
Troctolite Unit: VSF2- FT1010 (orange markings are pen marks for LA-ICP-MS analysis)

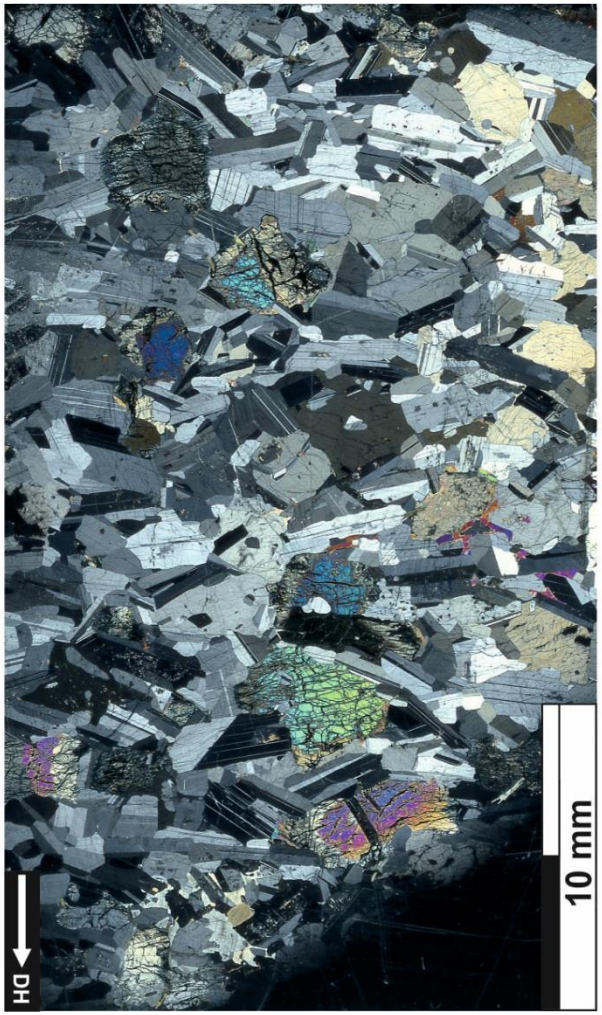


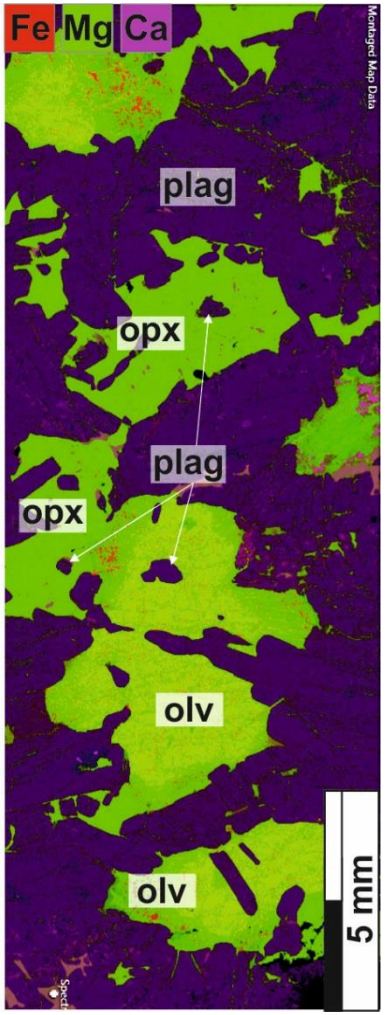




Troctolite Unit: VSF2- FT1012







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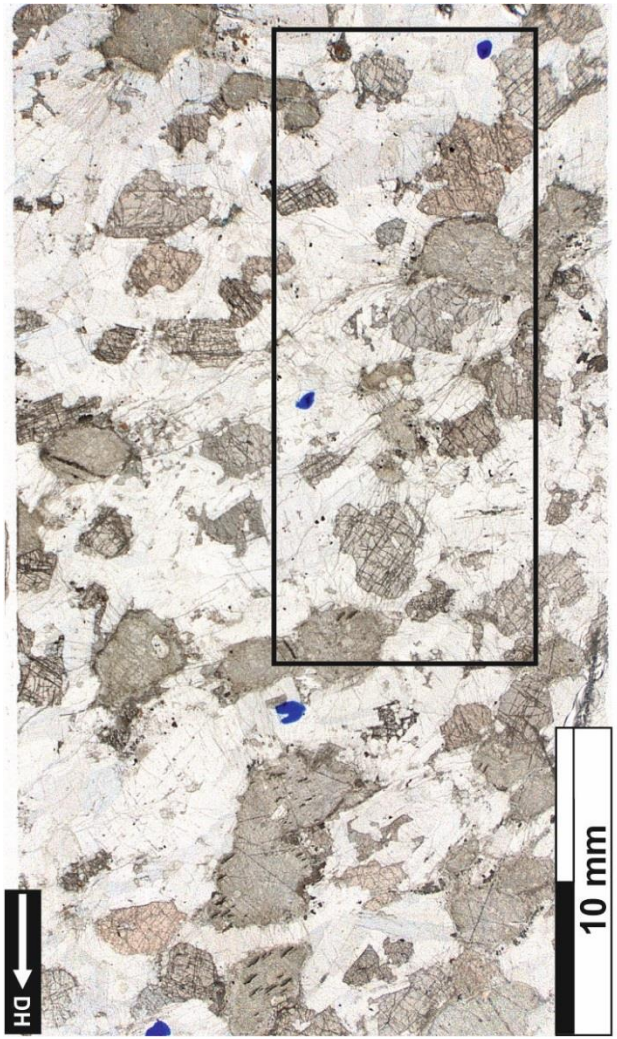

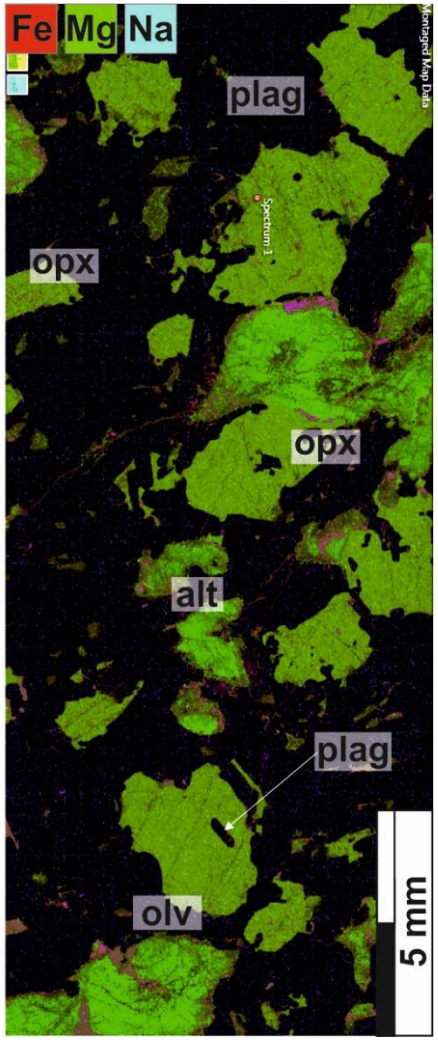

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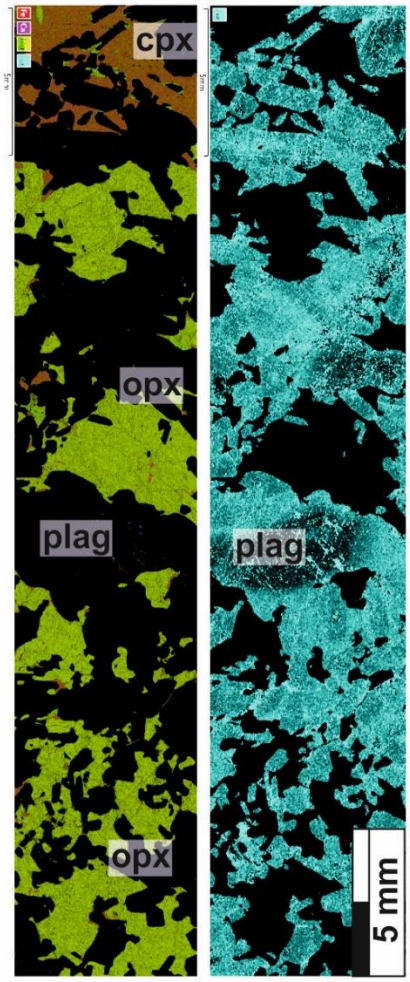

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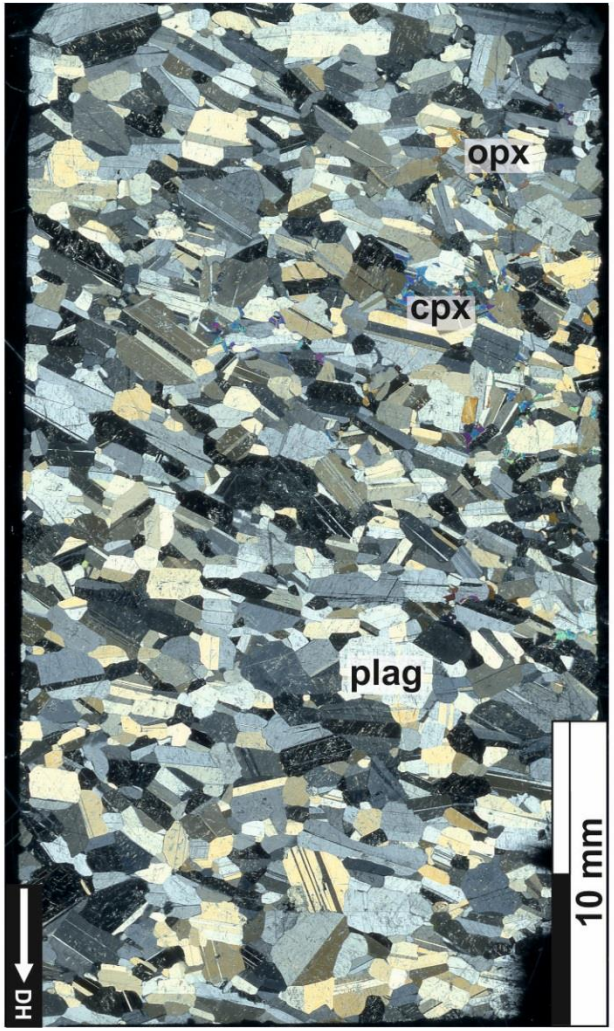

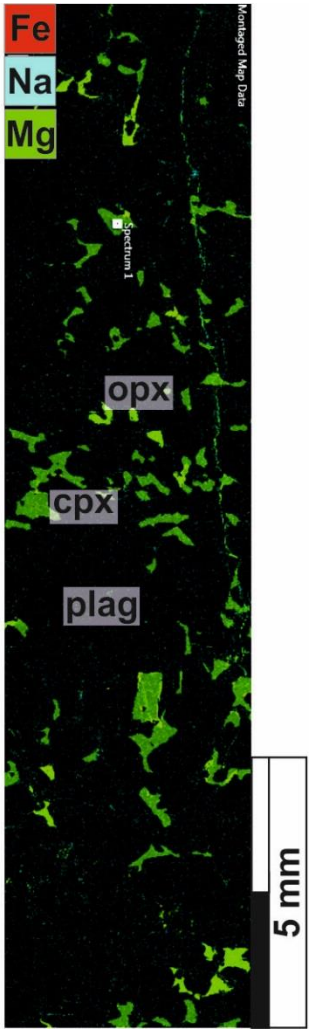

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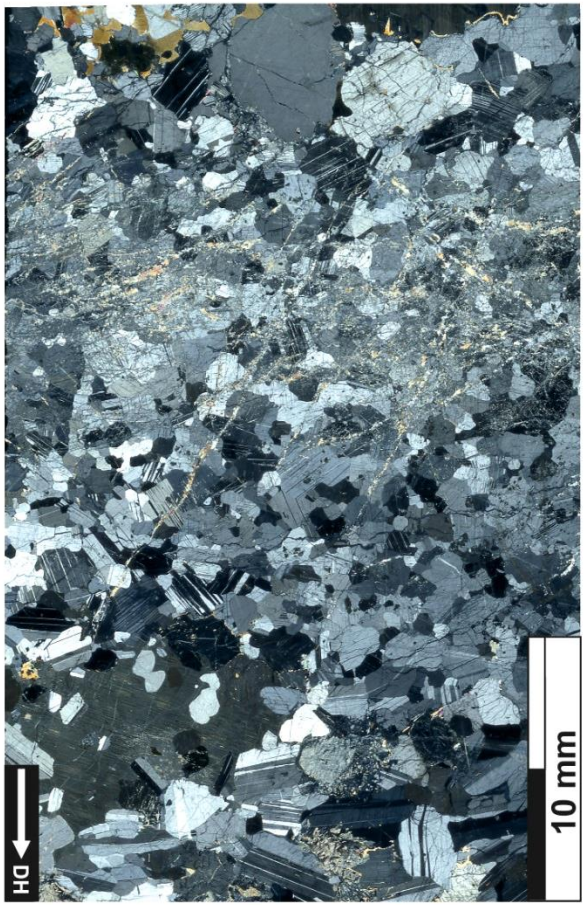

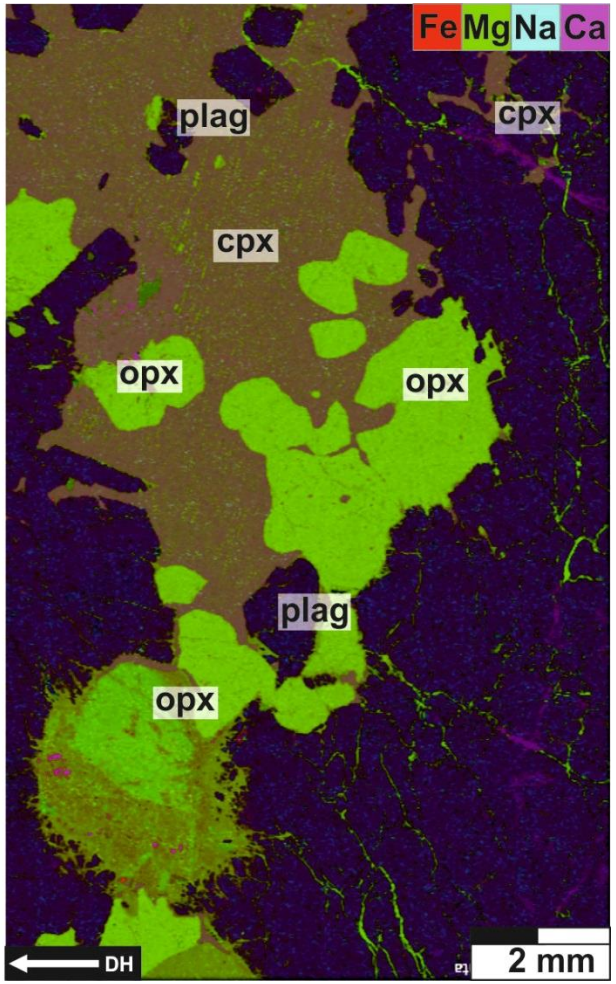

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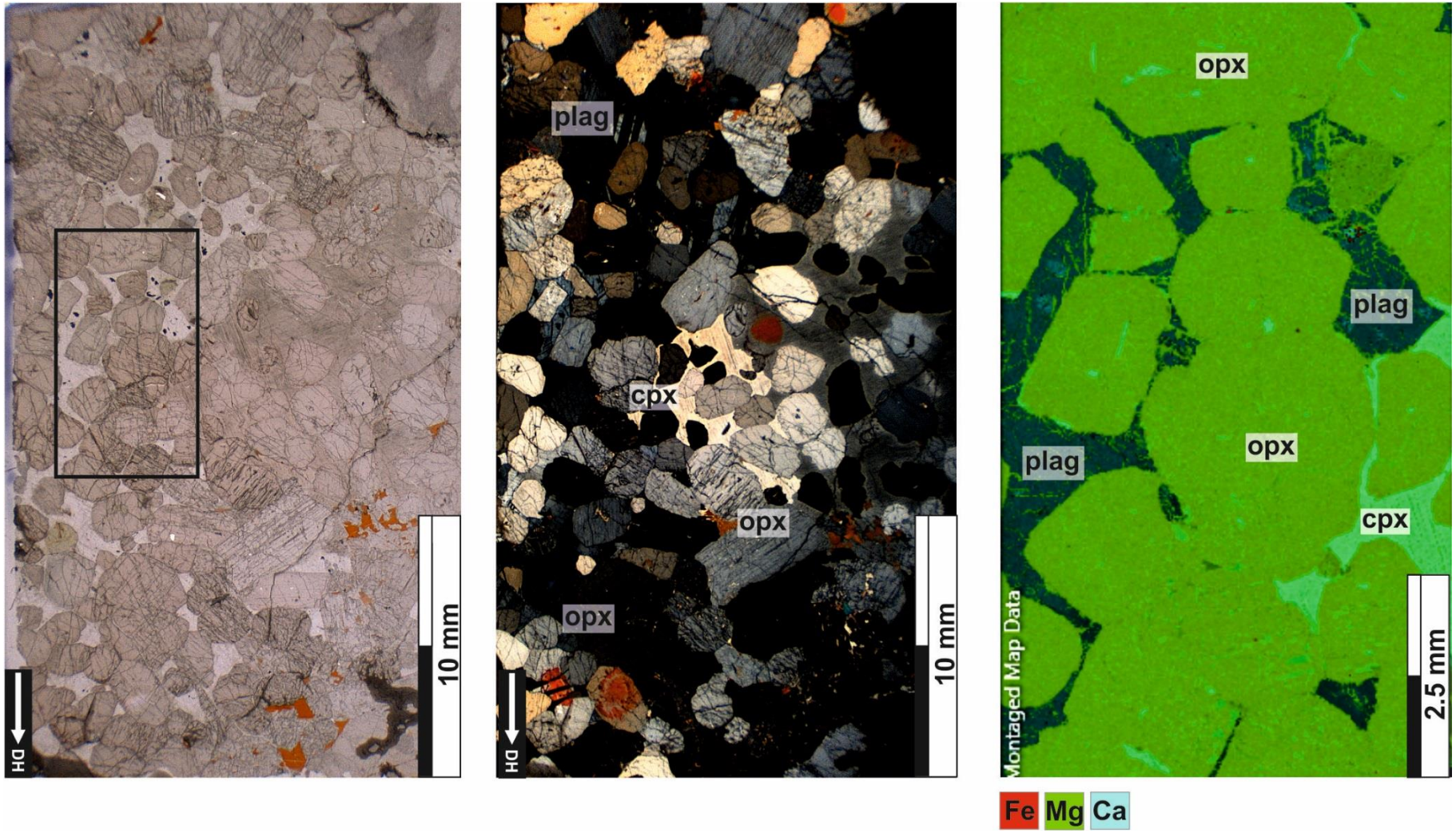

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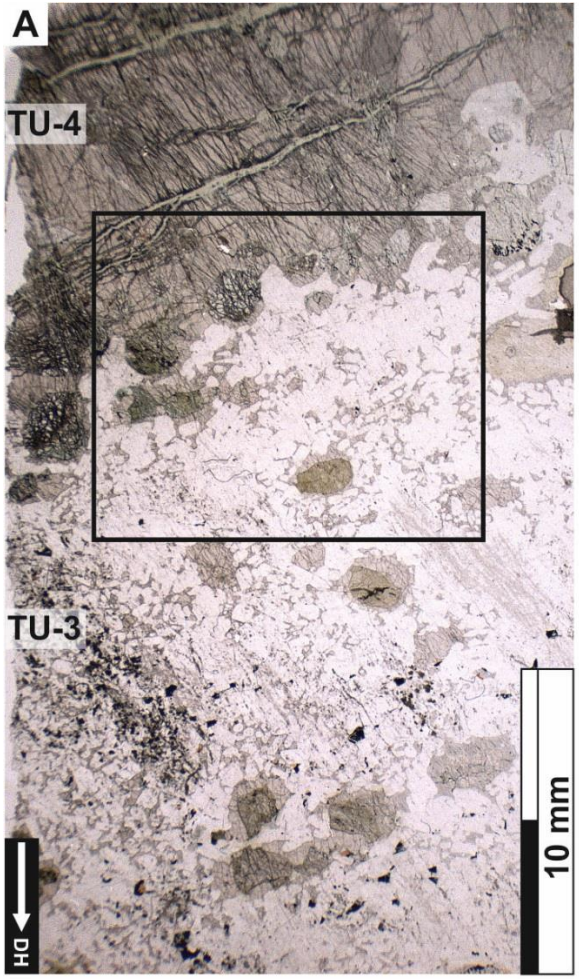
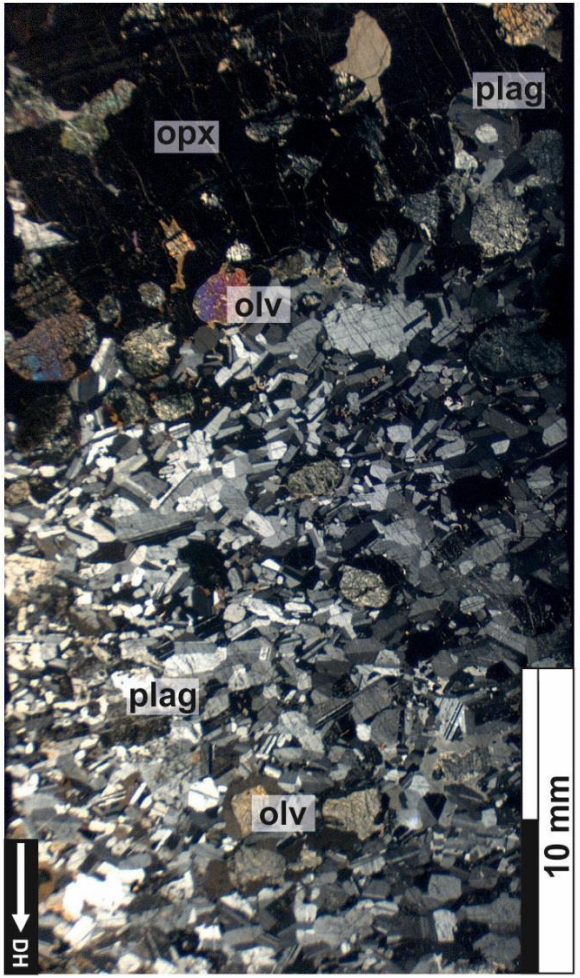
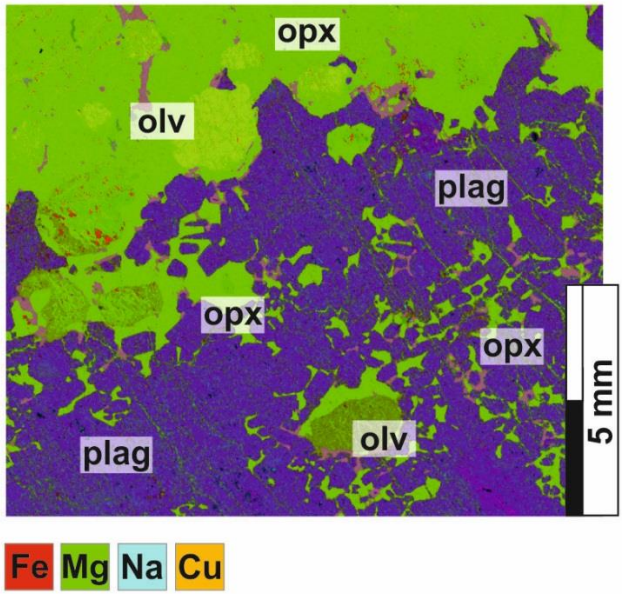
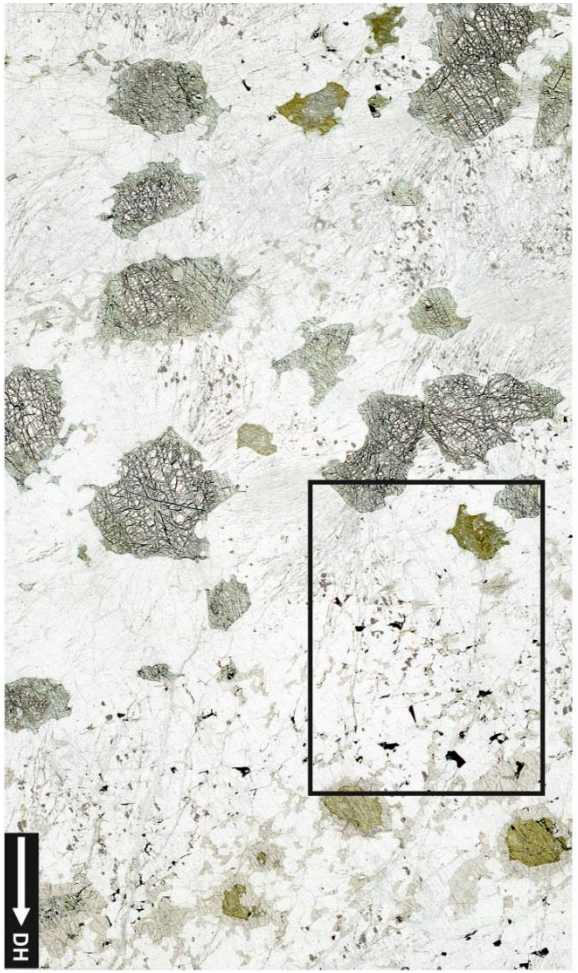
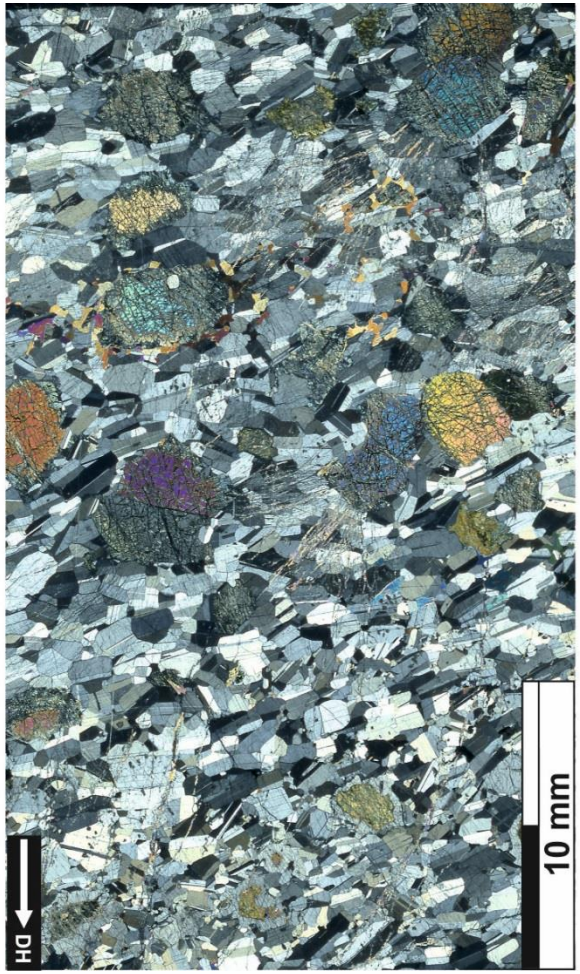


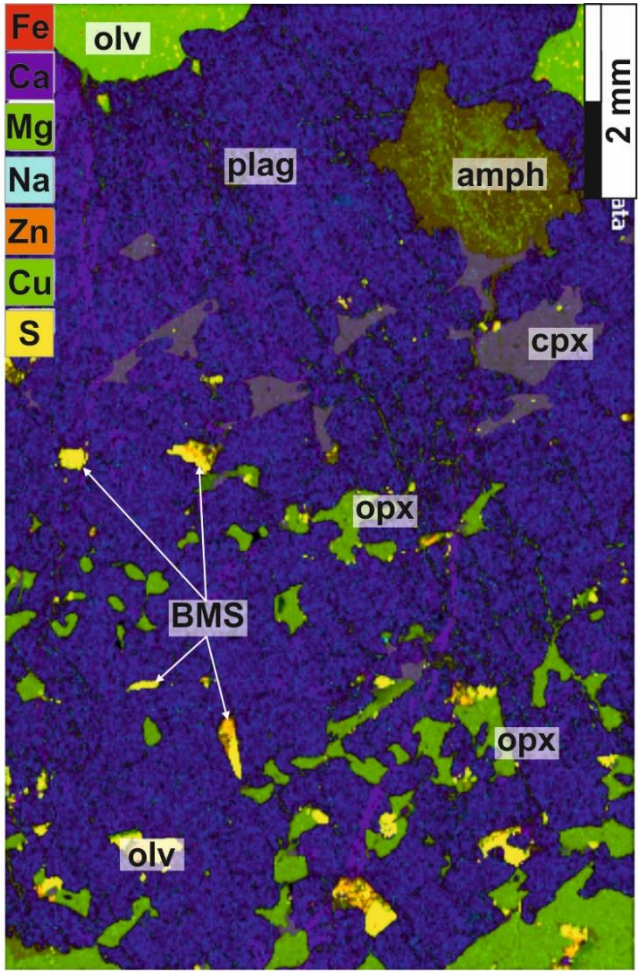




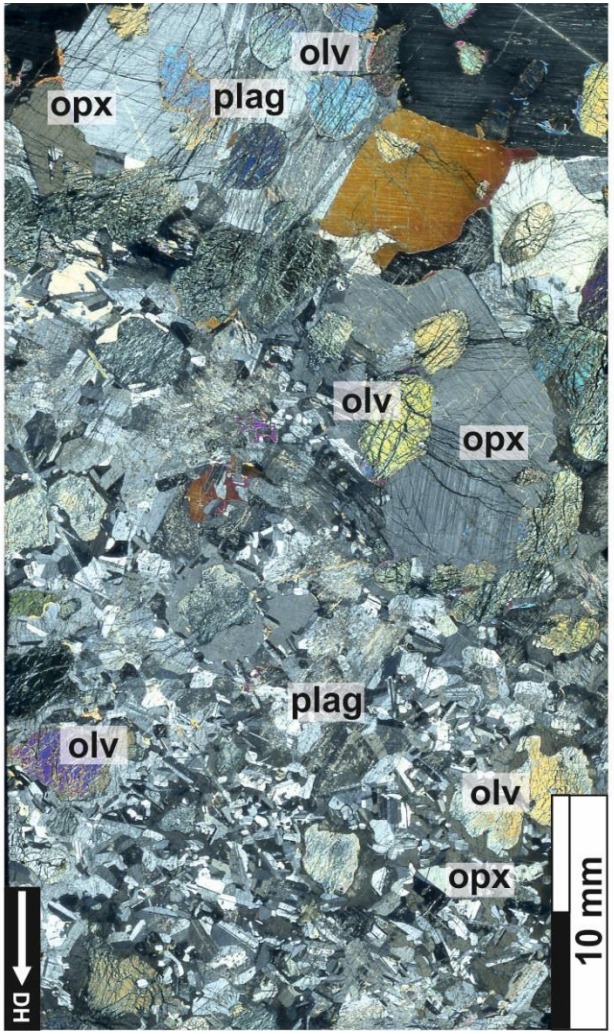
Troctolite Unit: VSF2- FT1038

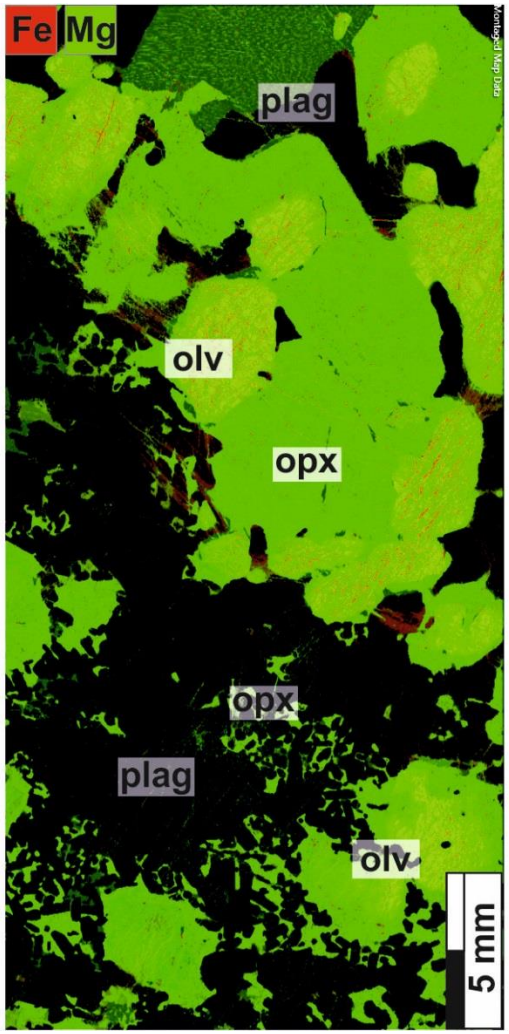




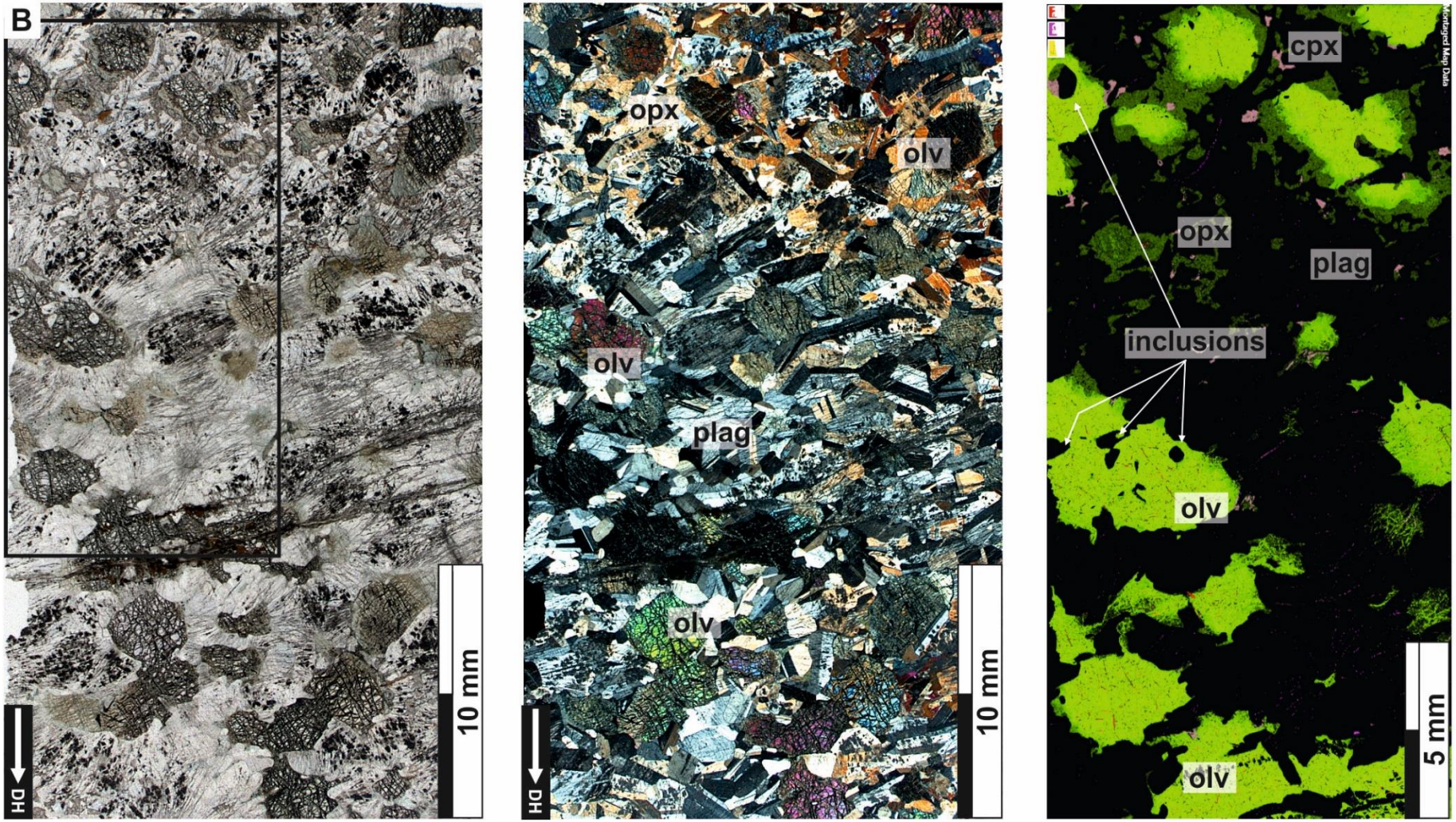


Troctolite Unit: VSF2- FT4203E

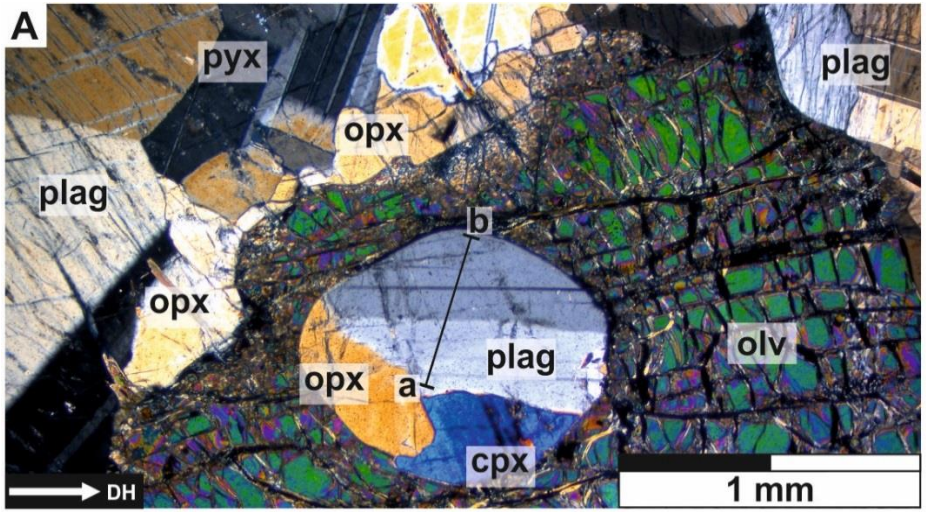


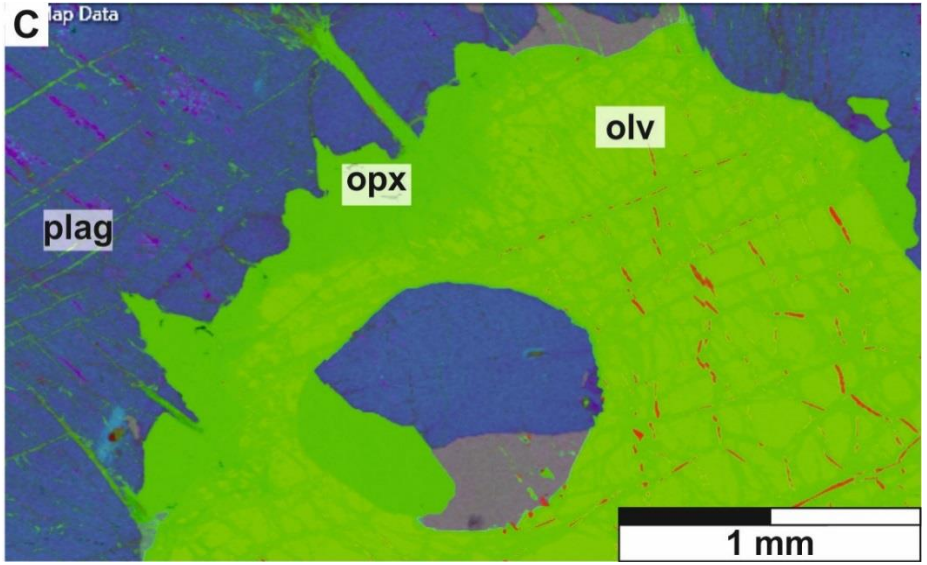


Troctolite Unit: VSF2- FT1046



Troctolite Unit: VSF2- FT1046, inclusion in interstitial olivine





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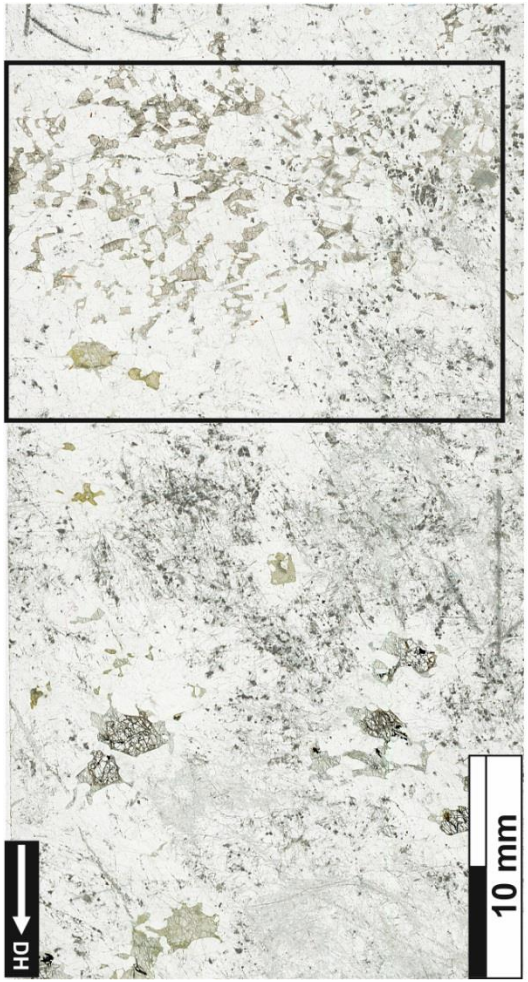

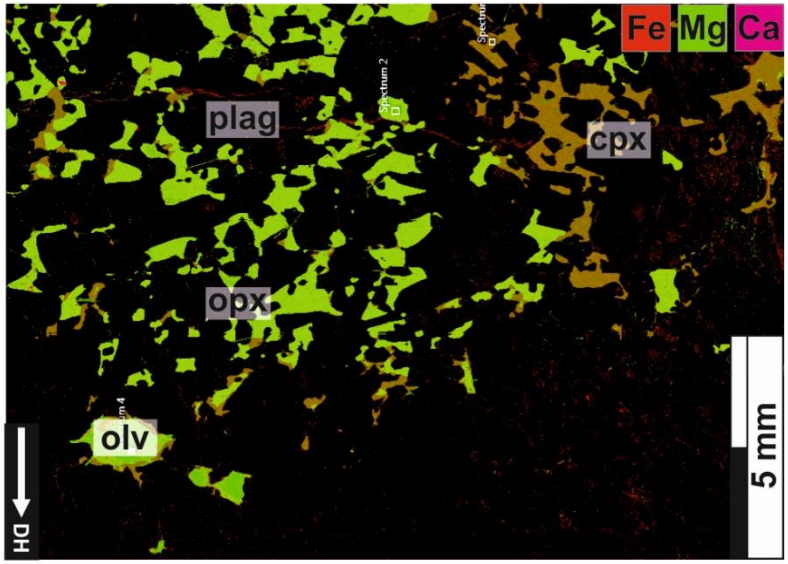

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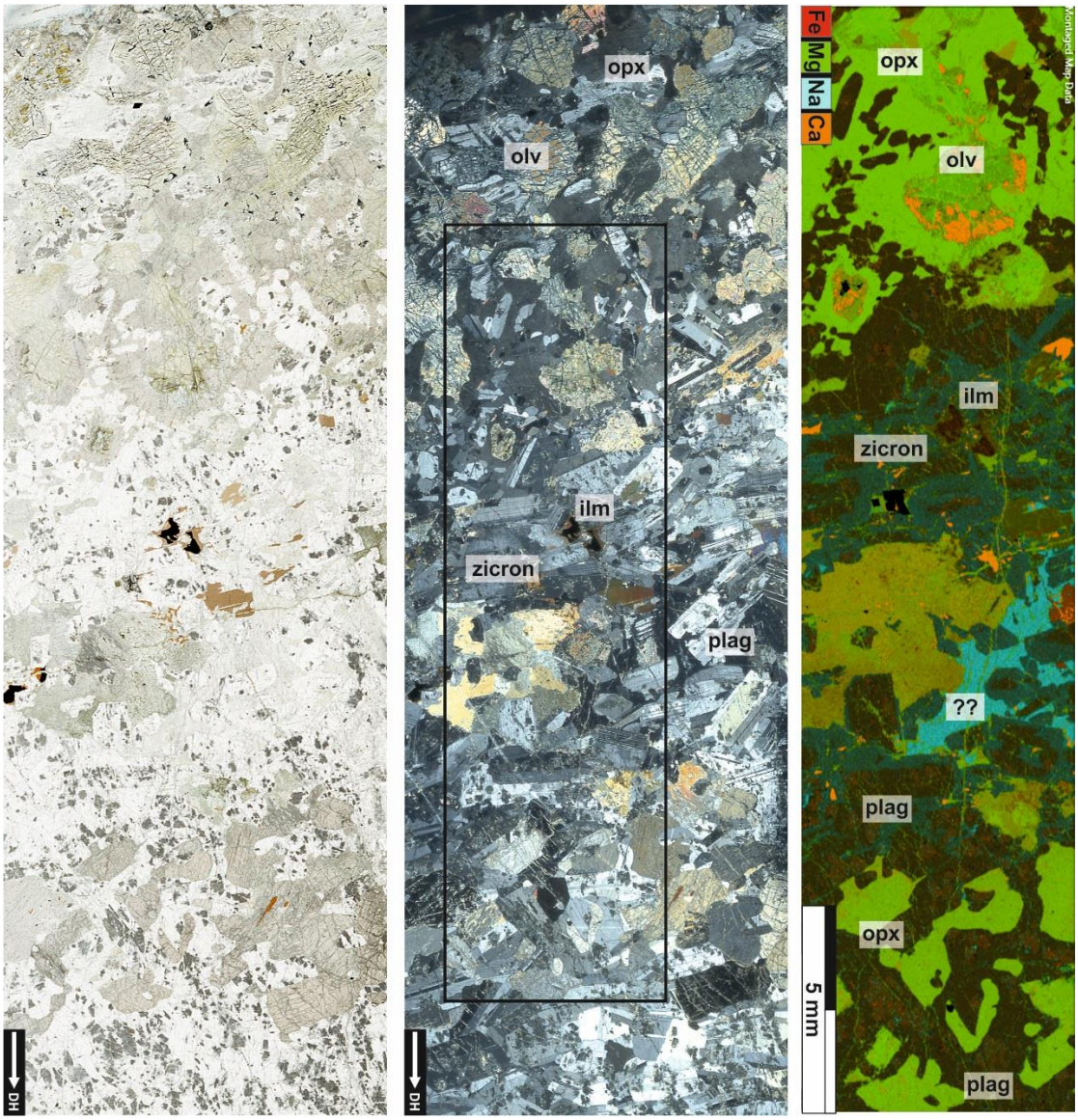

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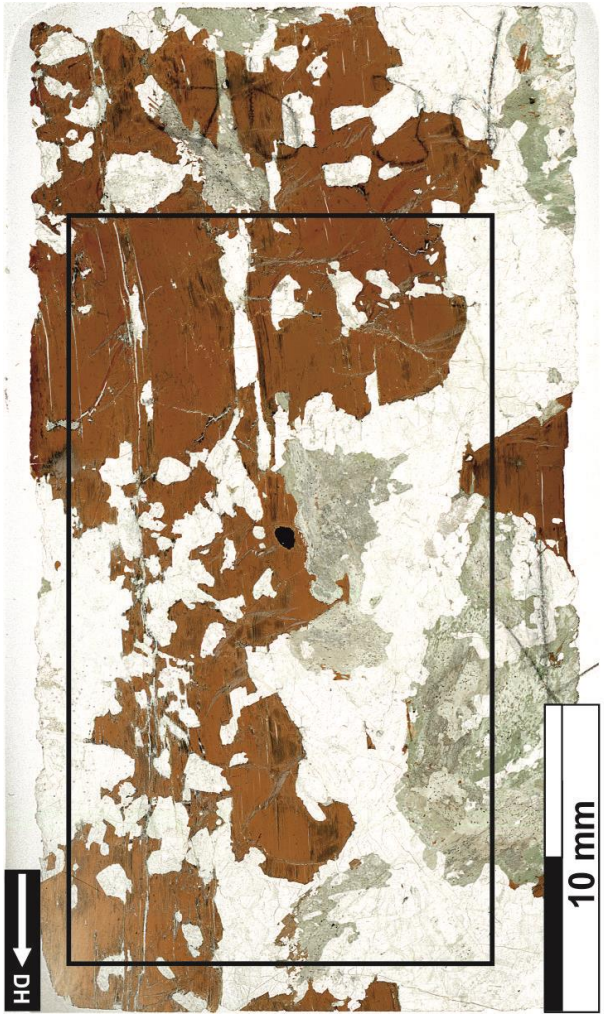

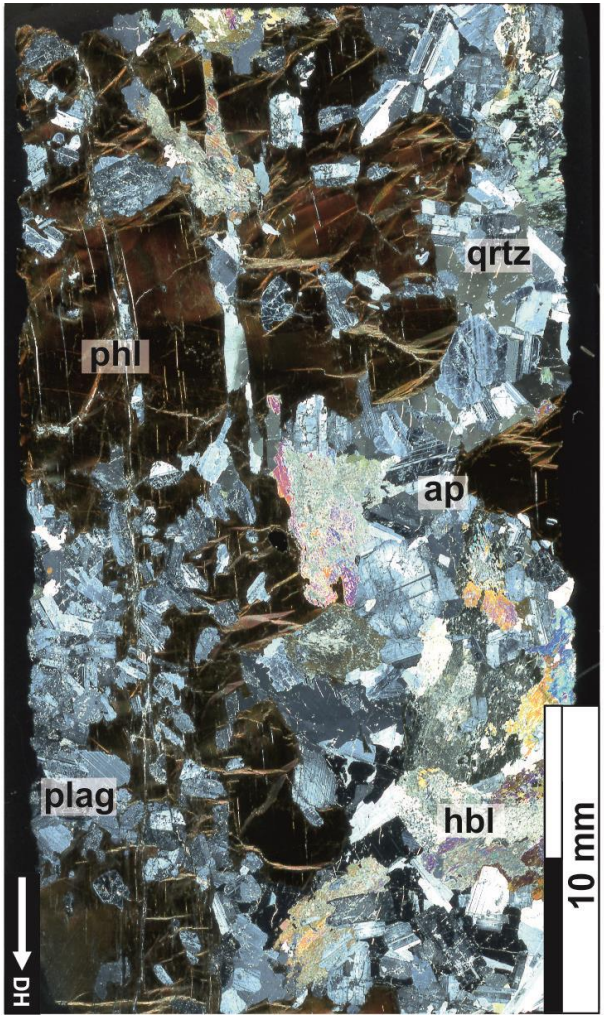

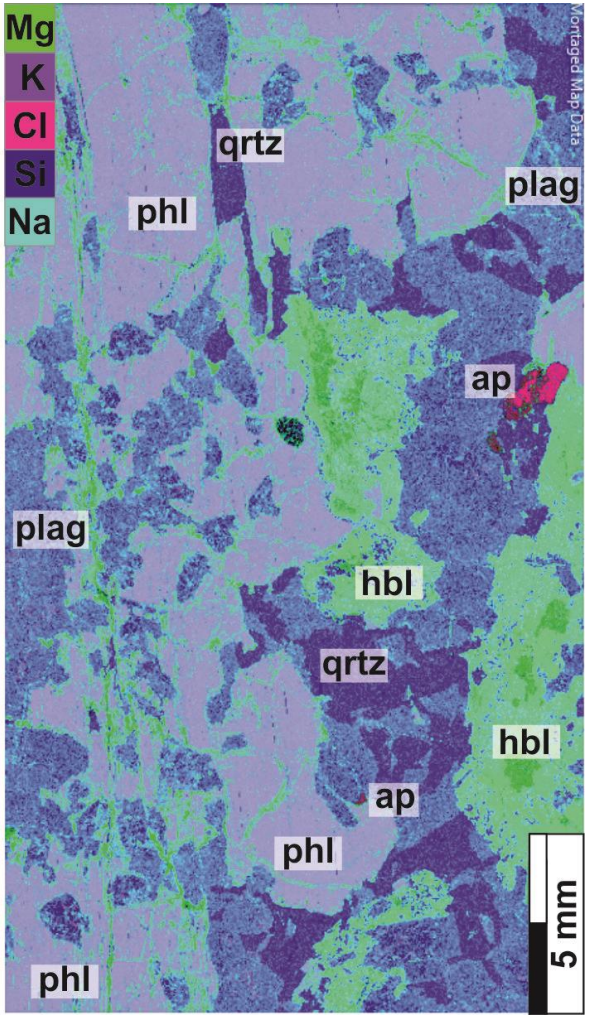

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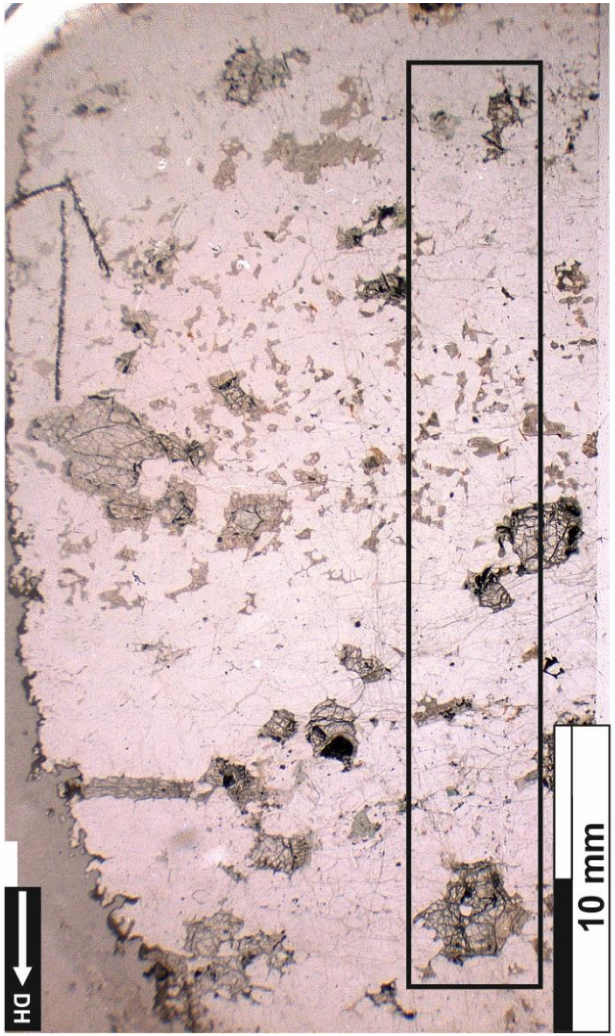
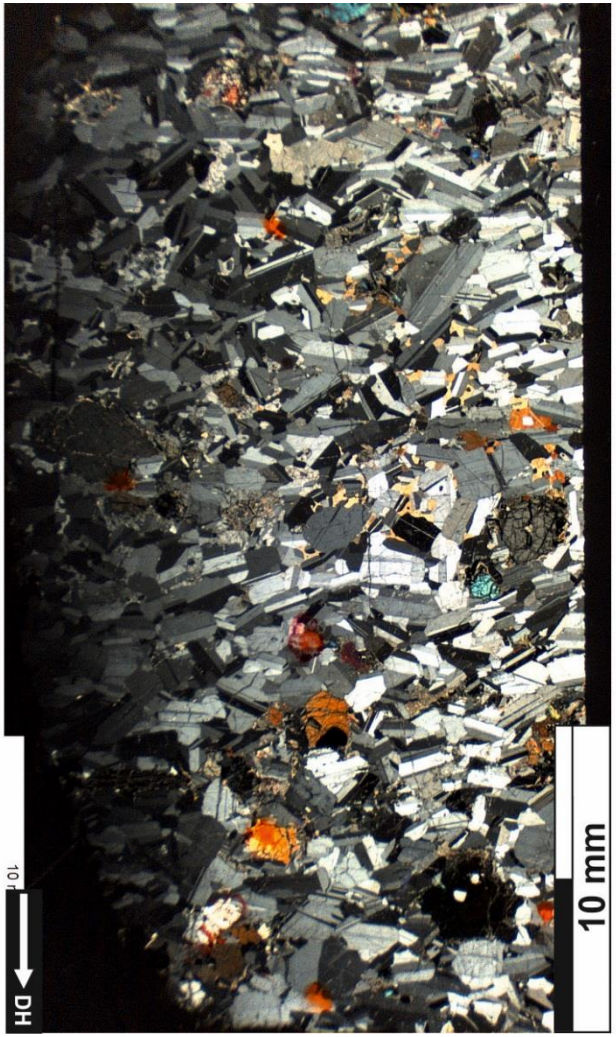
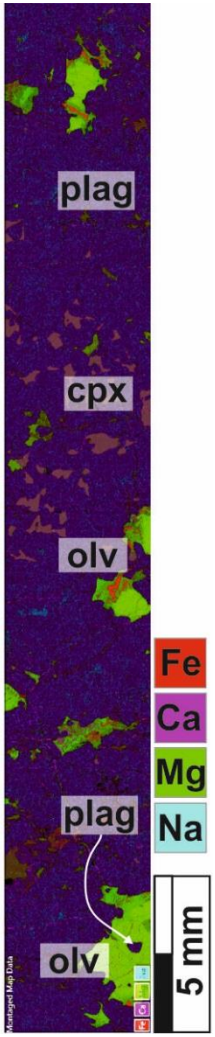
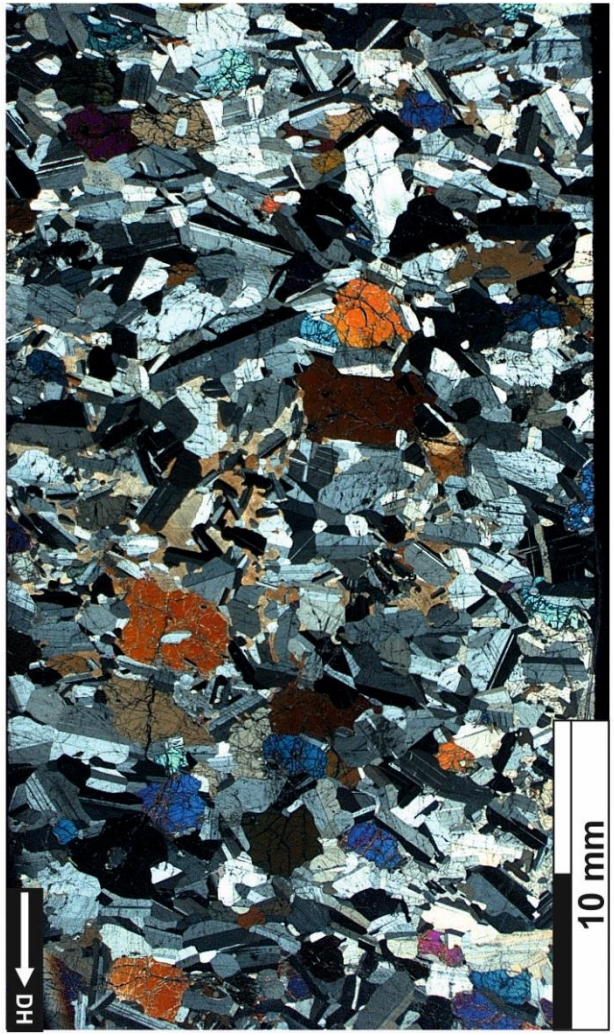
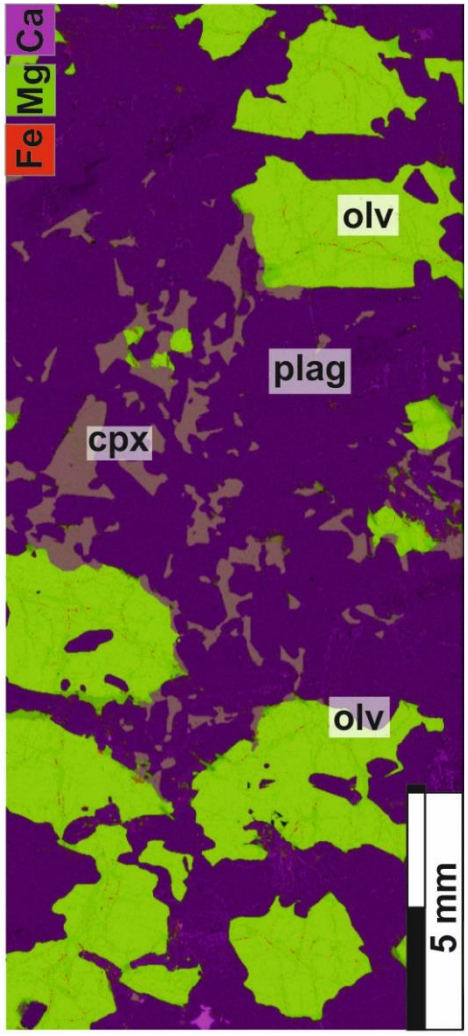






Troctolite Unit: VSF2- FT1091





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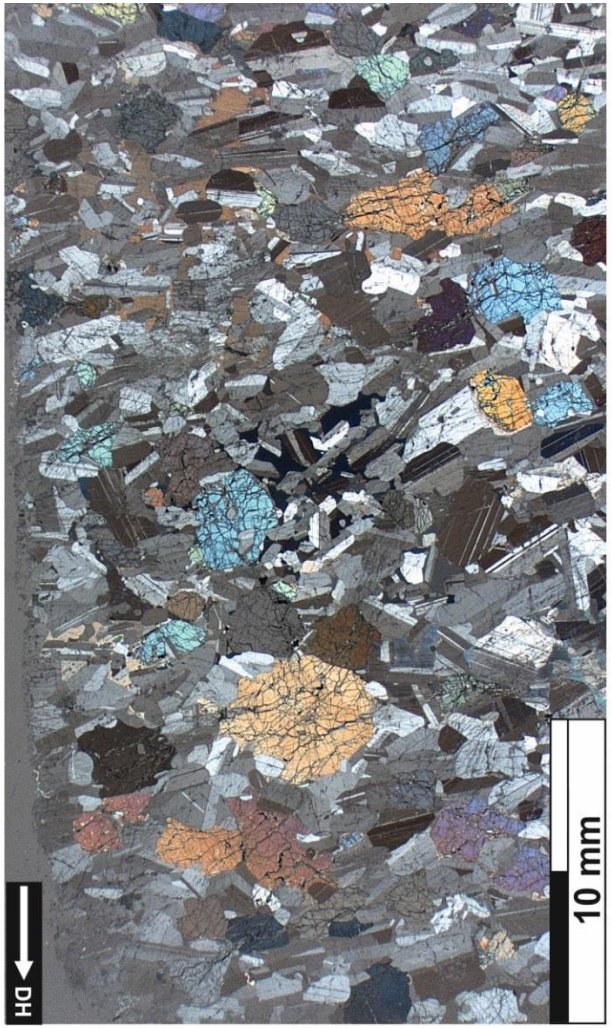

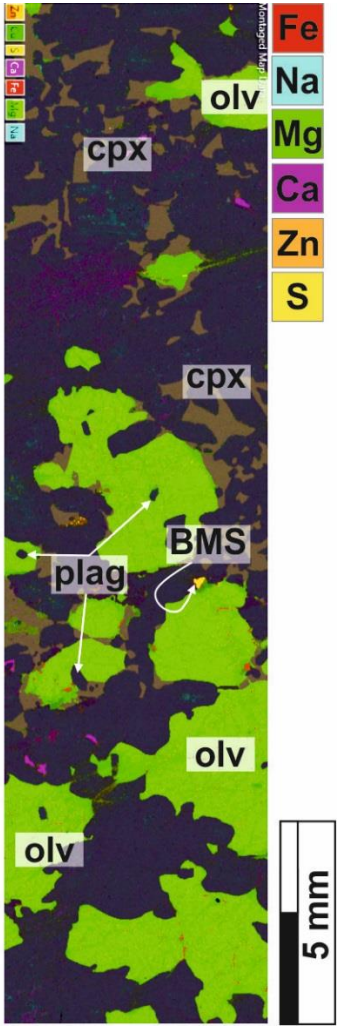

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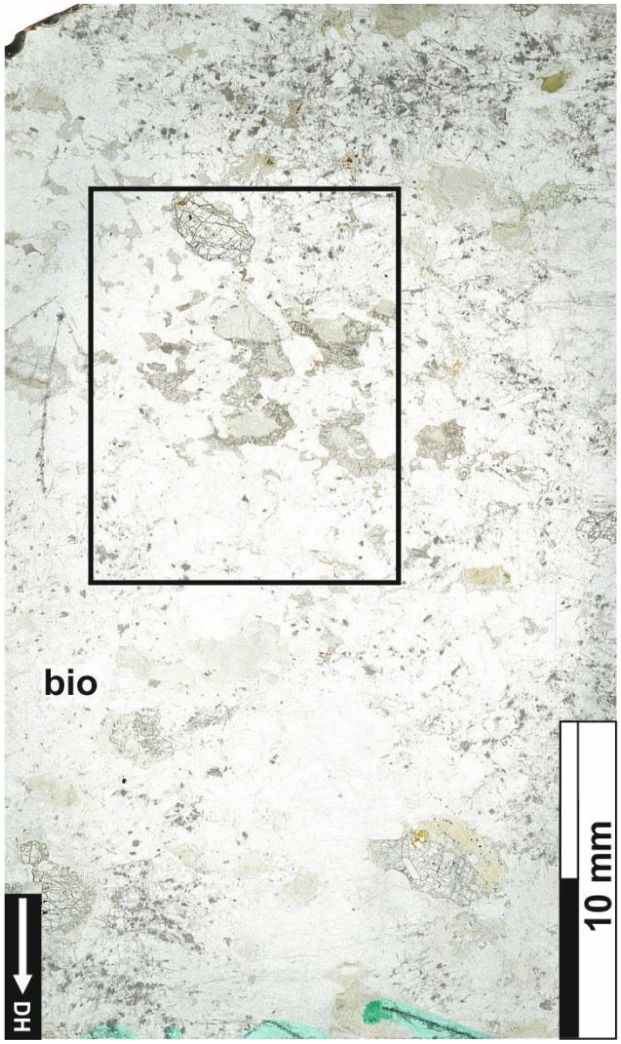

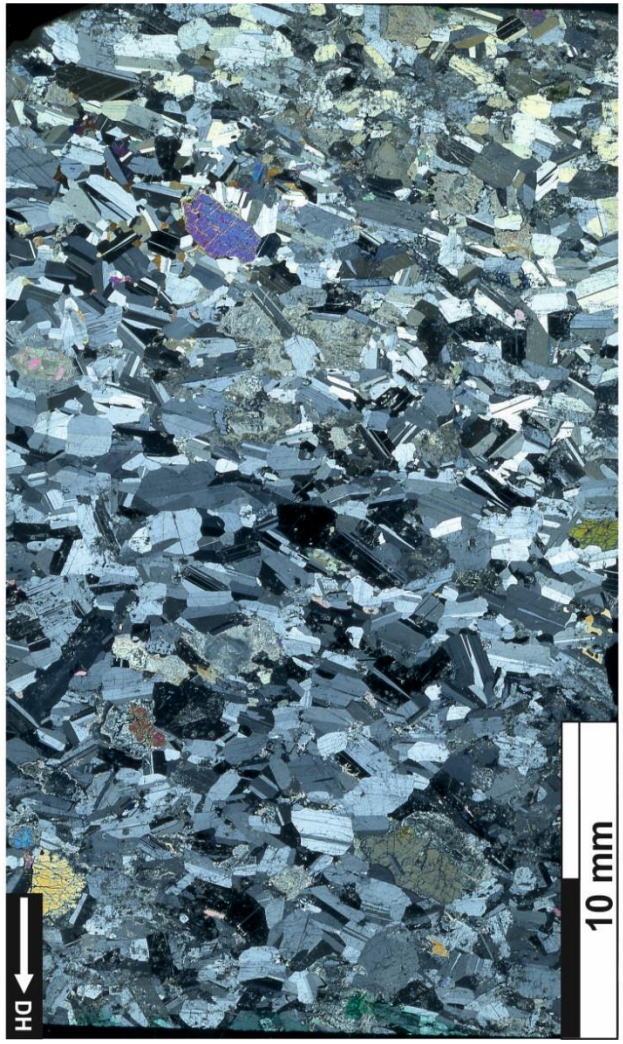

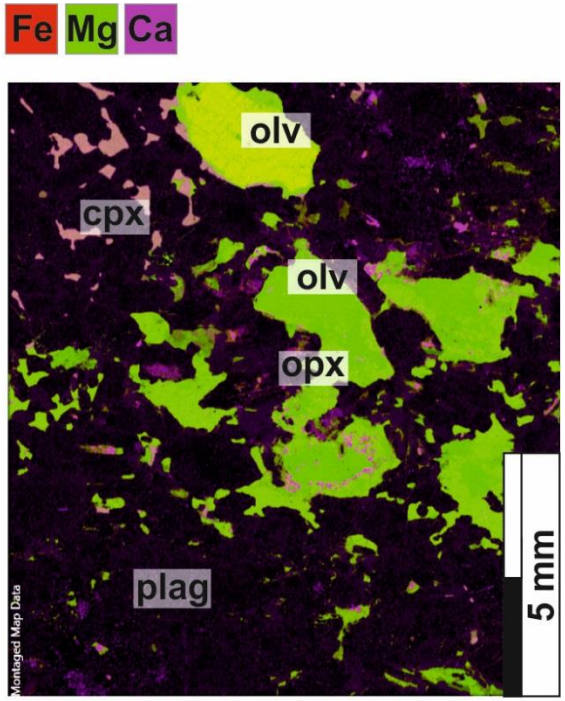

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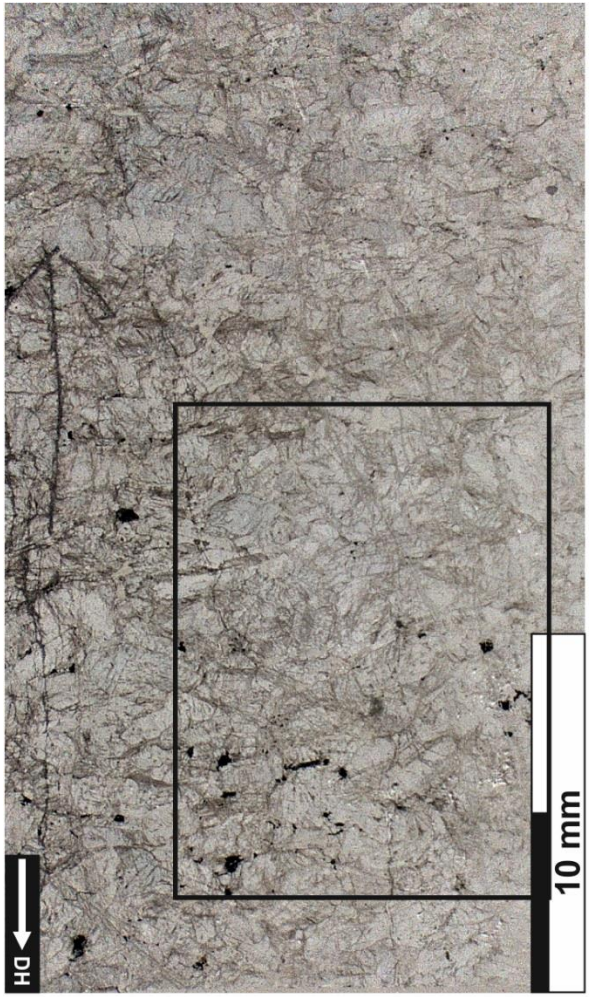
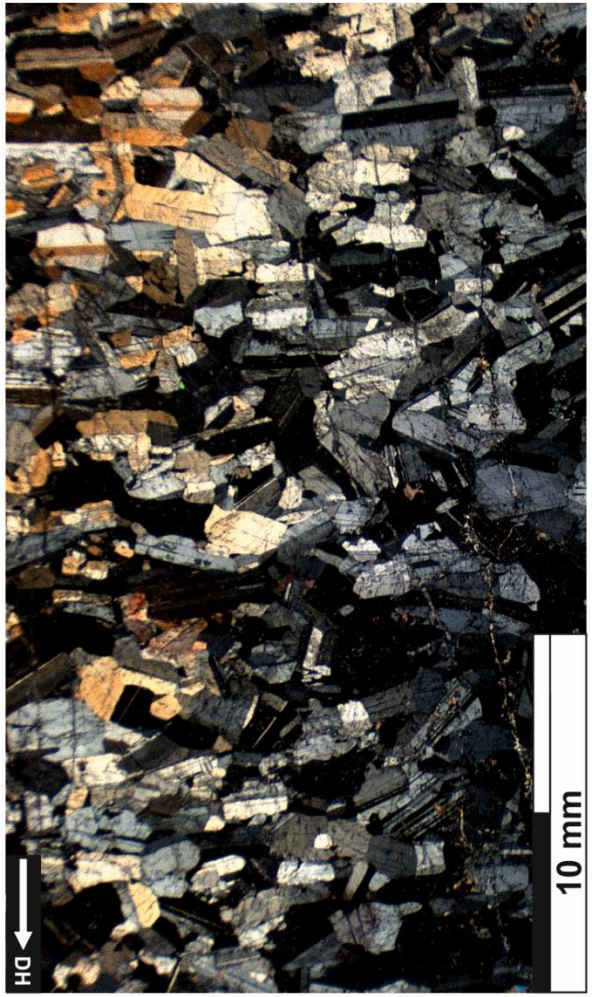
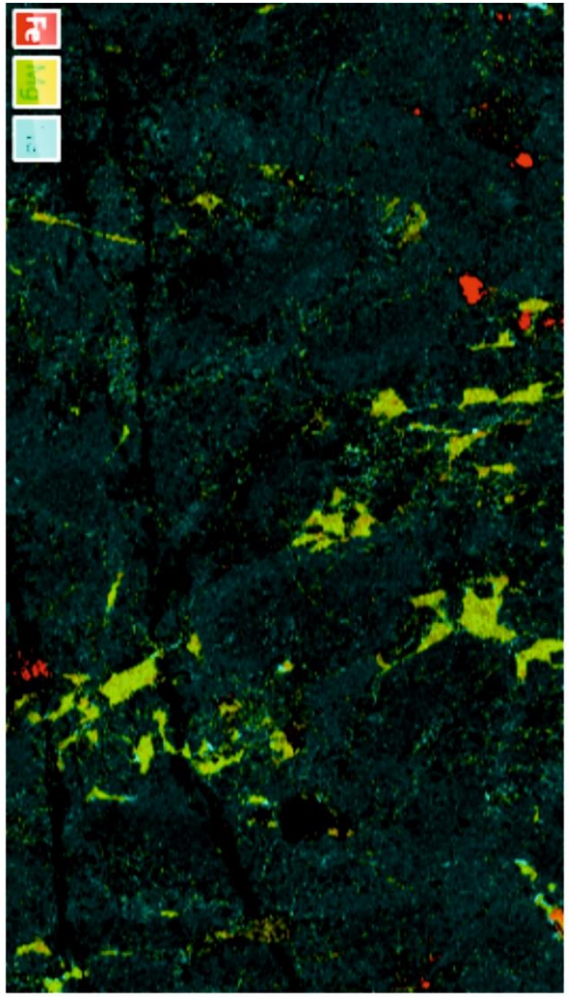
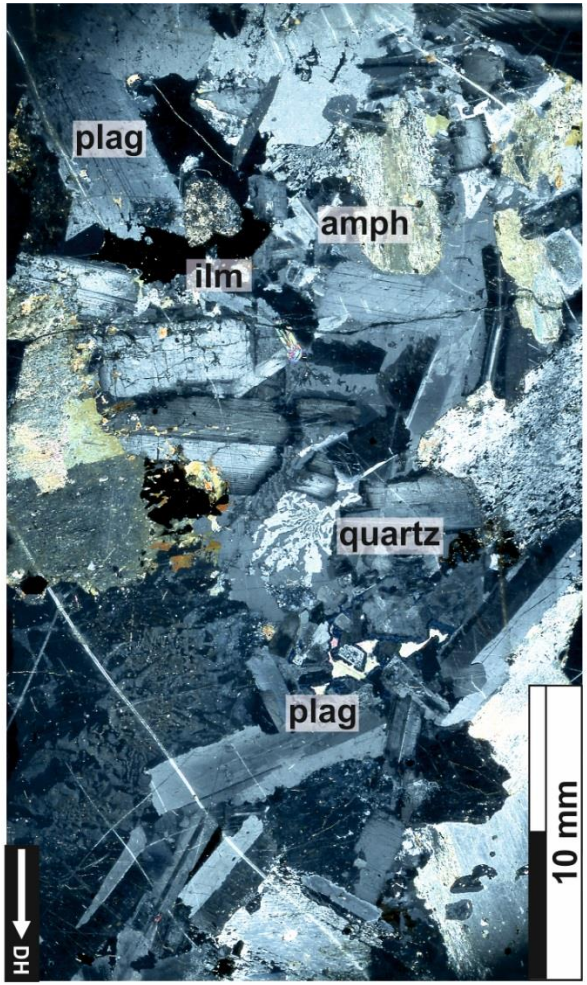
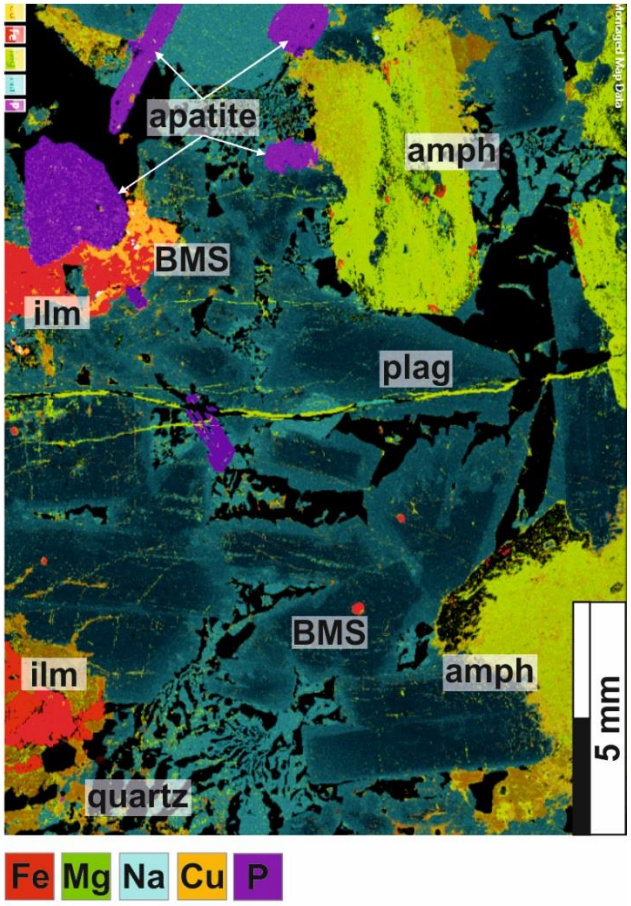




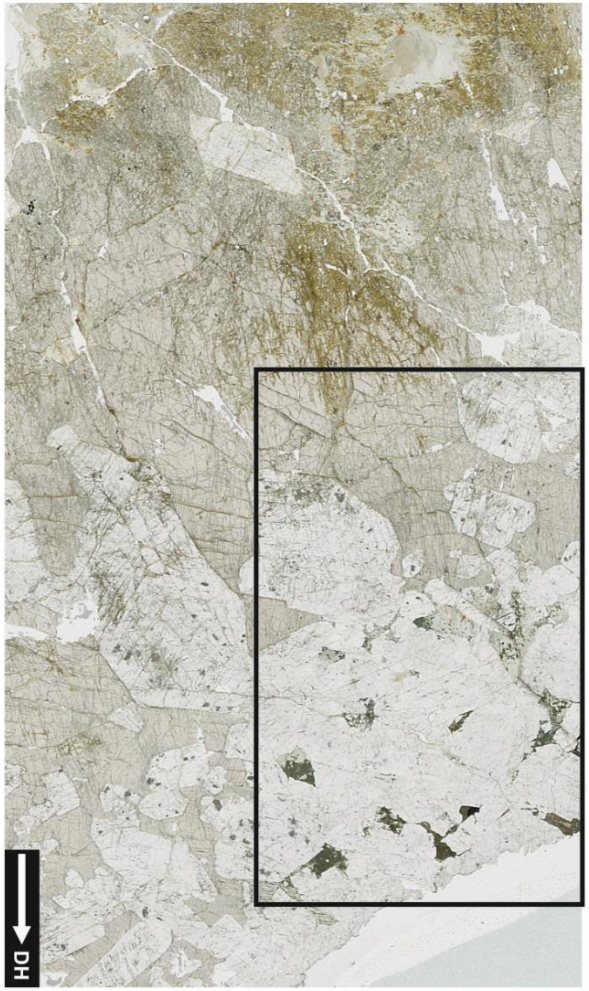


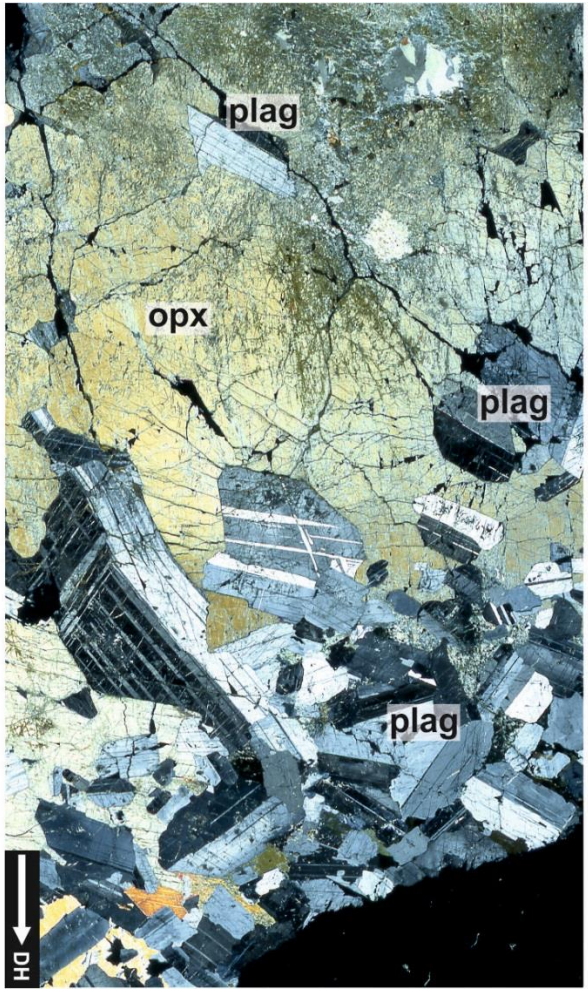
Troctolite Unit: VSF2- FT4208

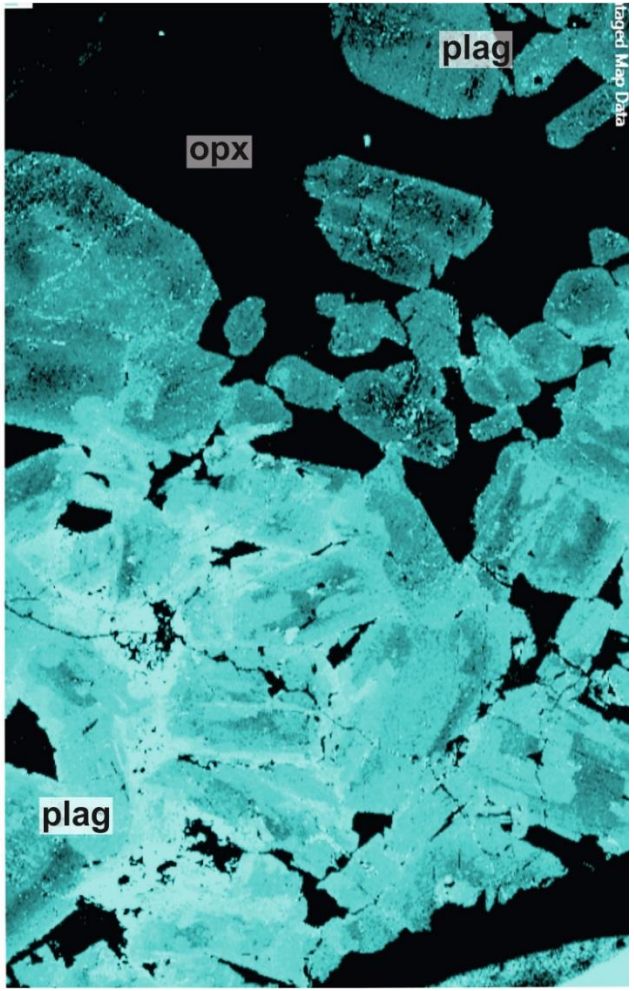




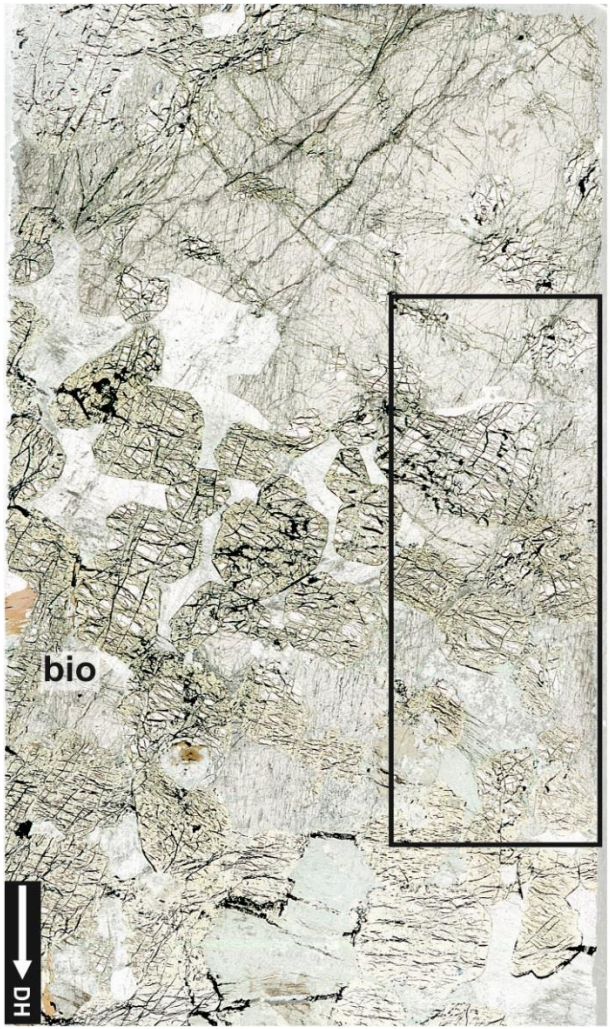
Troctolite Unit: VSF2- FT4209

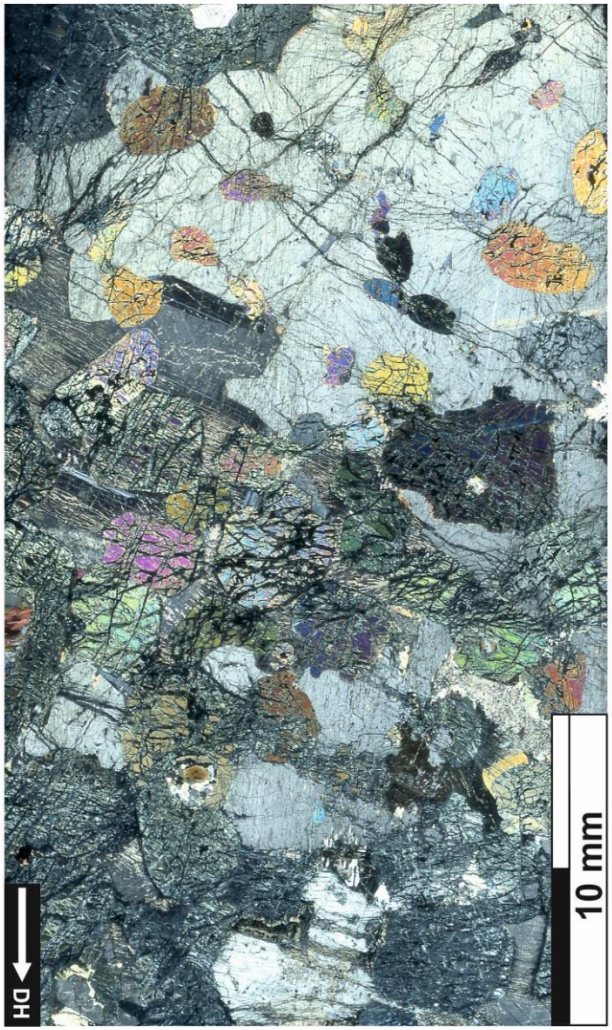


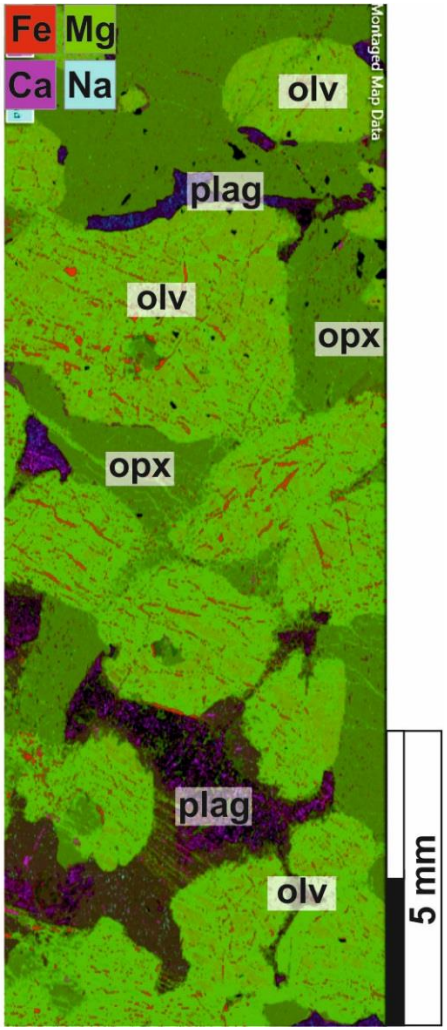




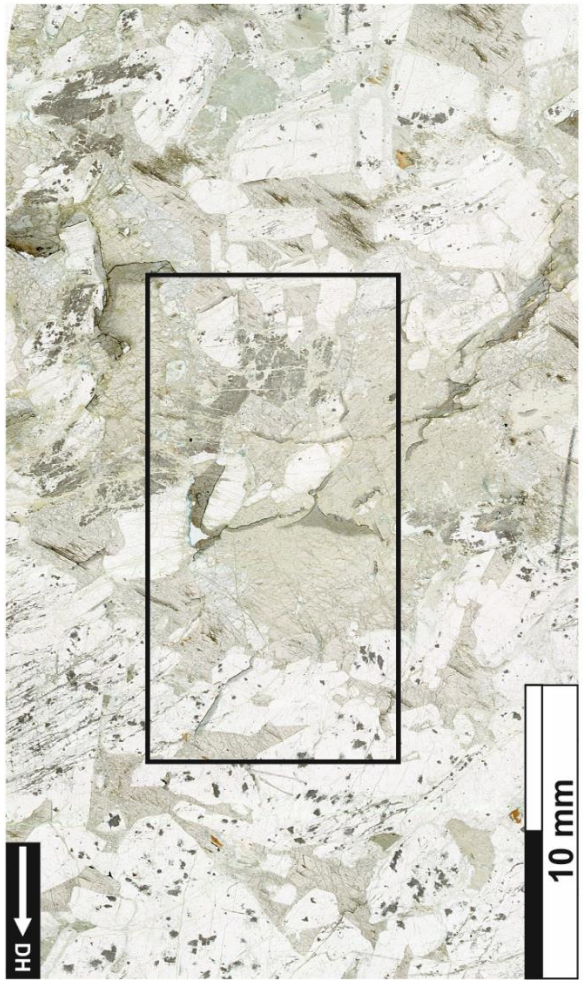
Troctolite Unit: VSF2- FT1128

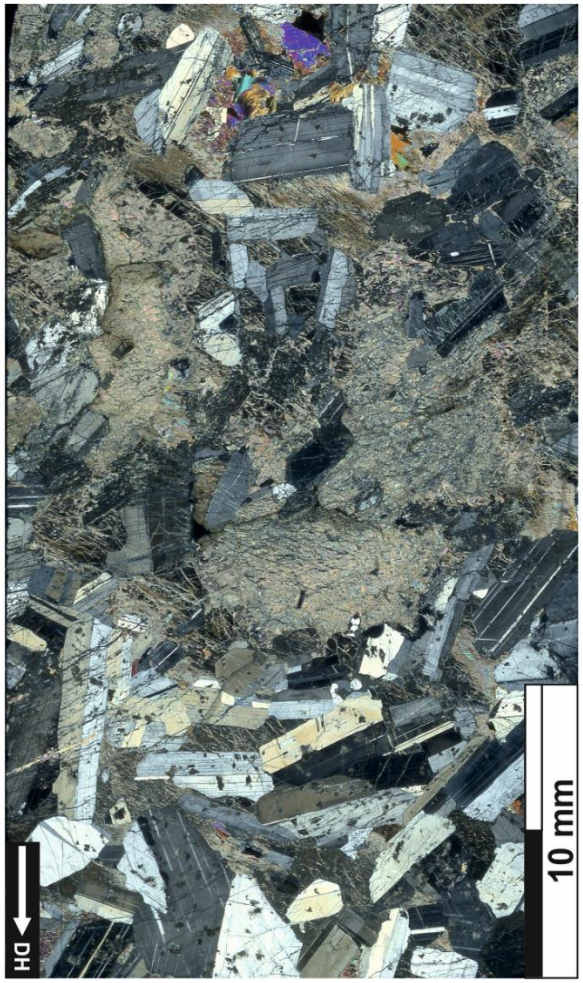


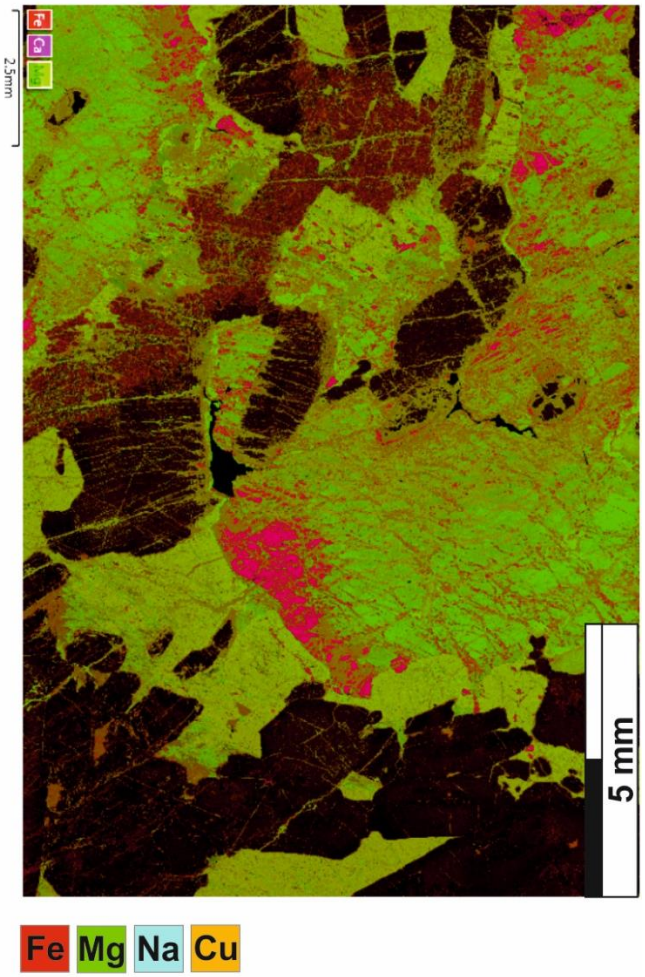




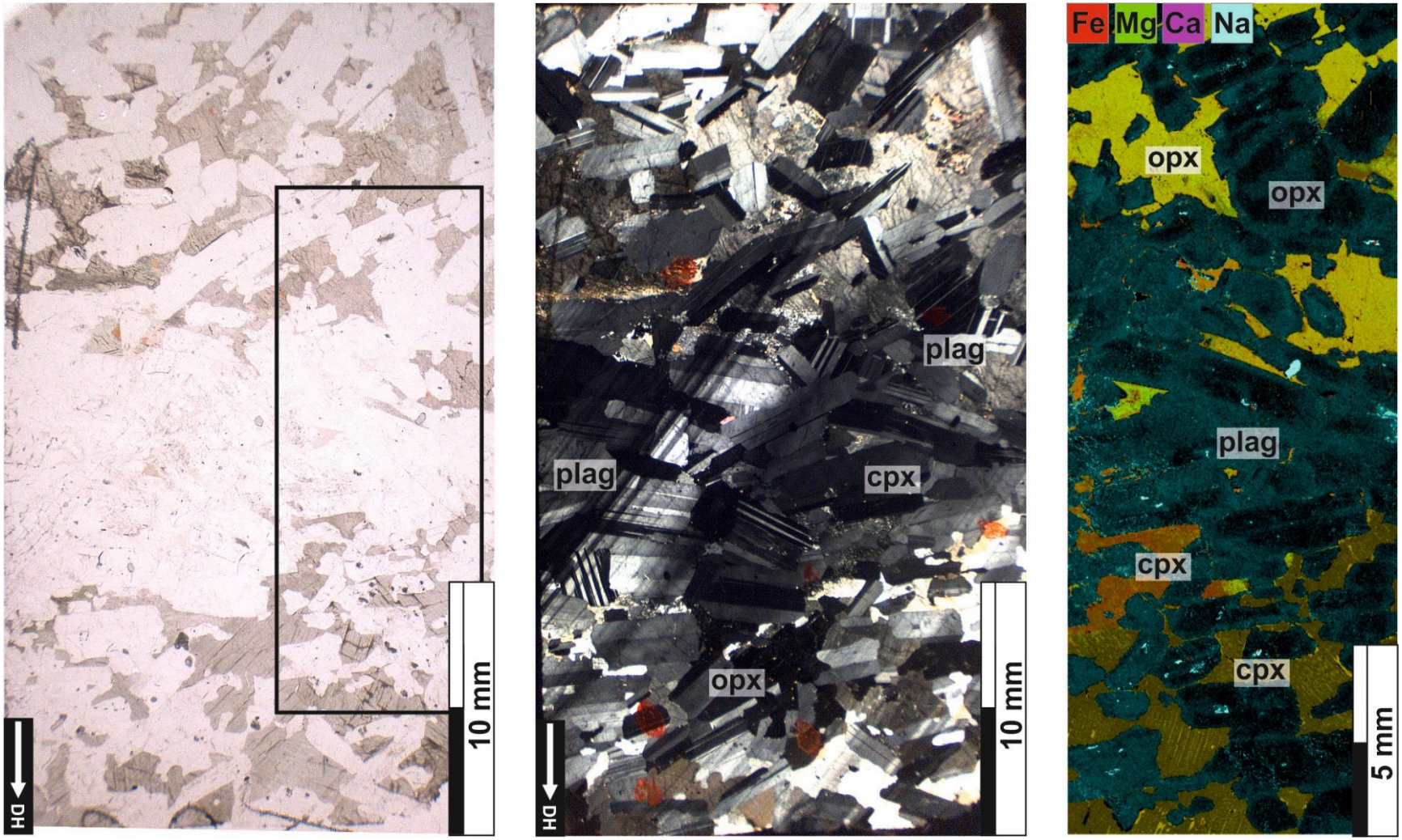
Troctolite Unit: VSF2- FT1131



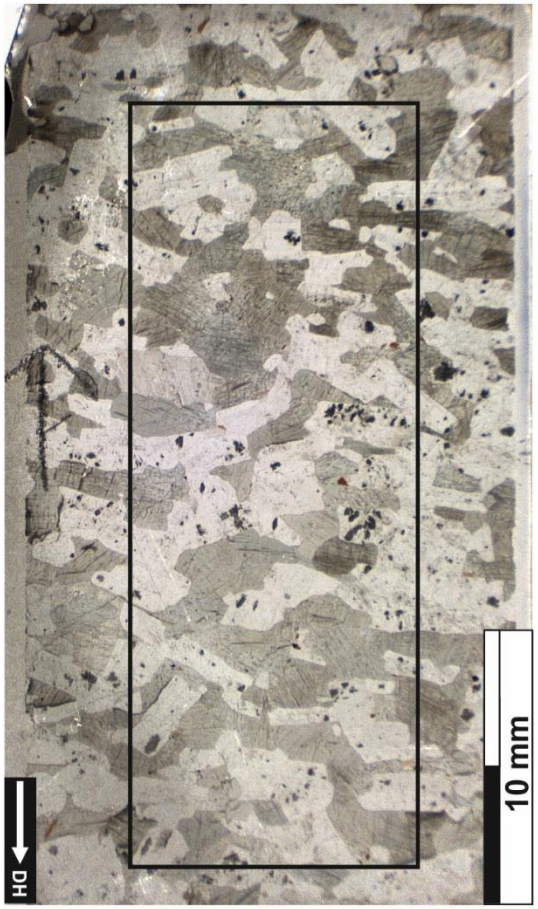


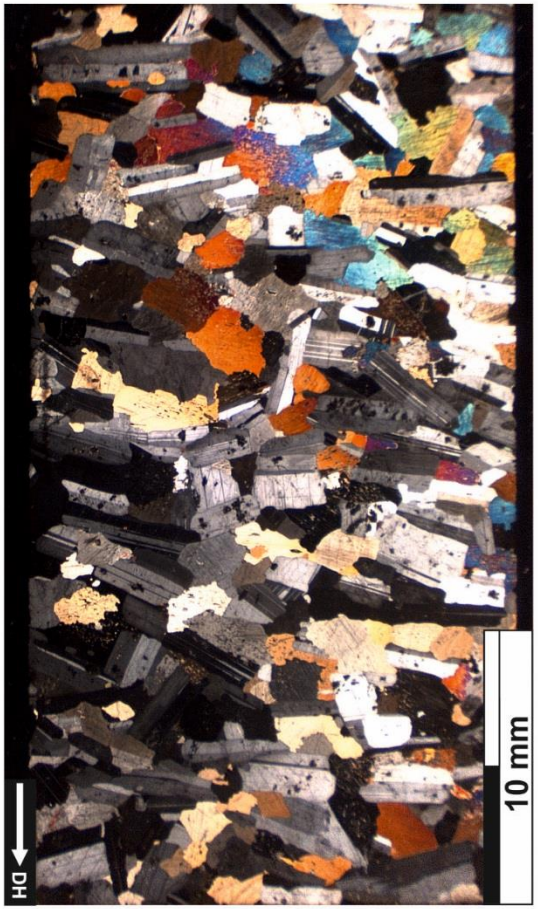


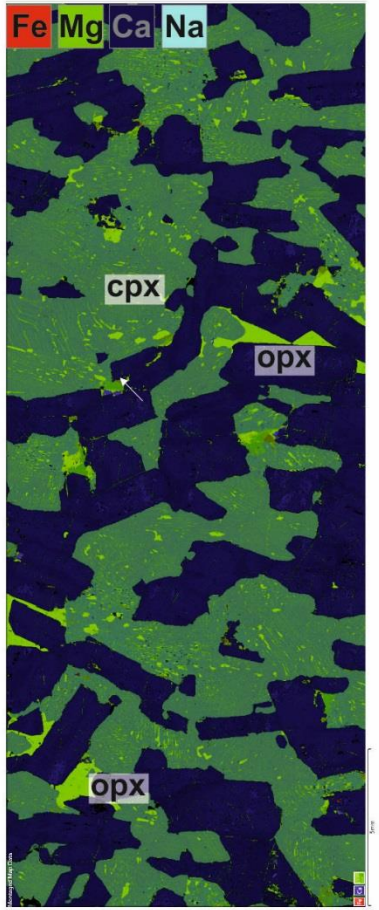
Troctolite Unit: VSF2- JD21 (not true mapped) (orange marking on cross polar slide are pen marks for LA-ICP-MS)

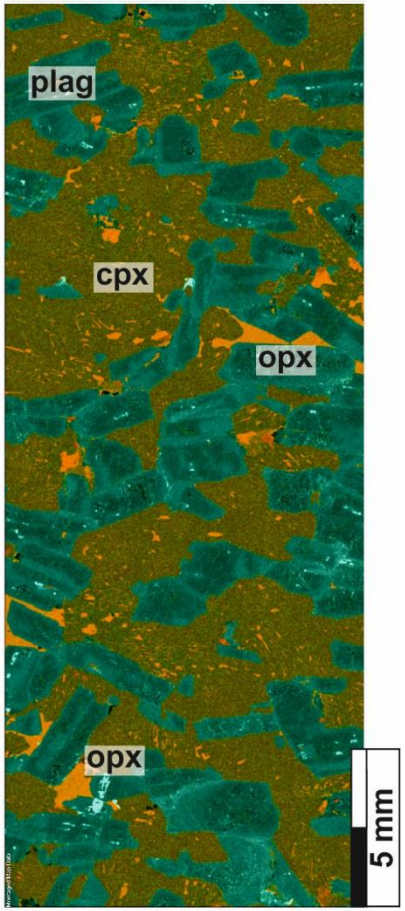


Troctolite Unit: VSF2- JD20 (second map not true mapped)

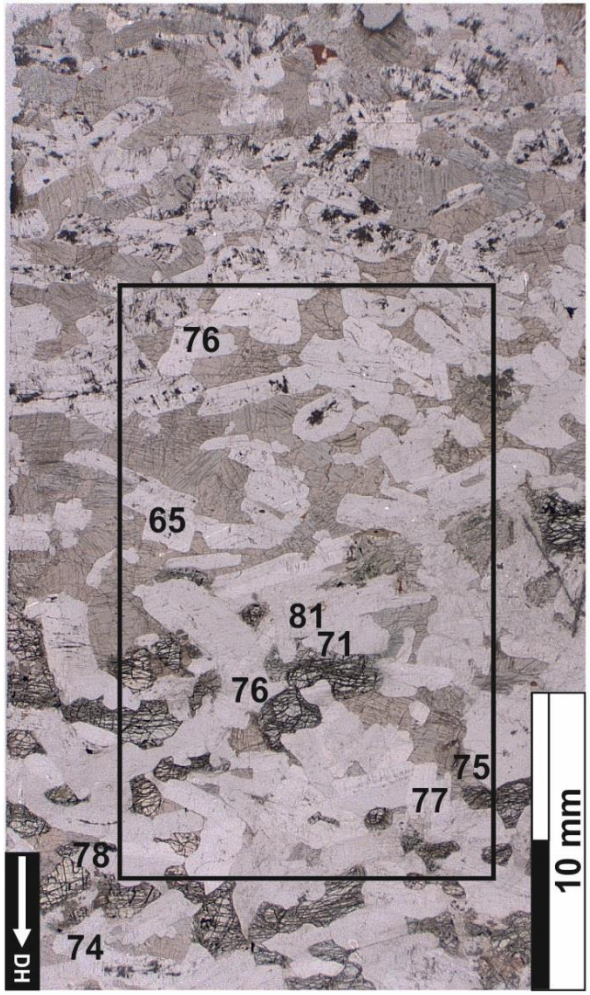


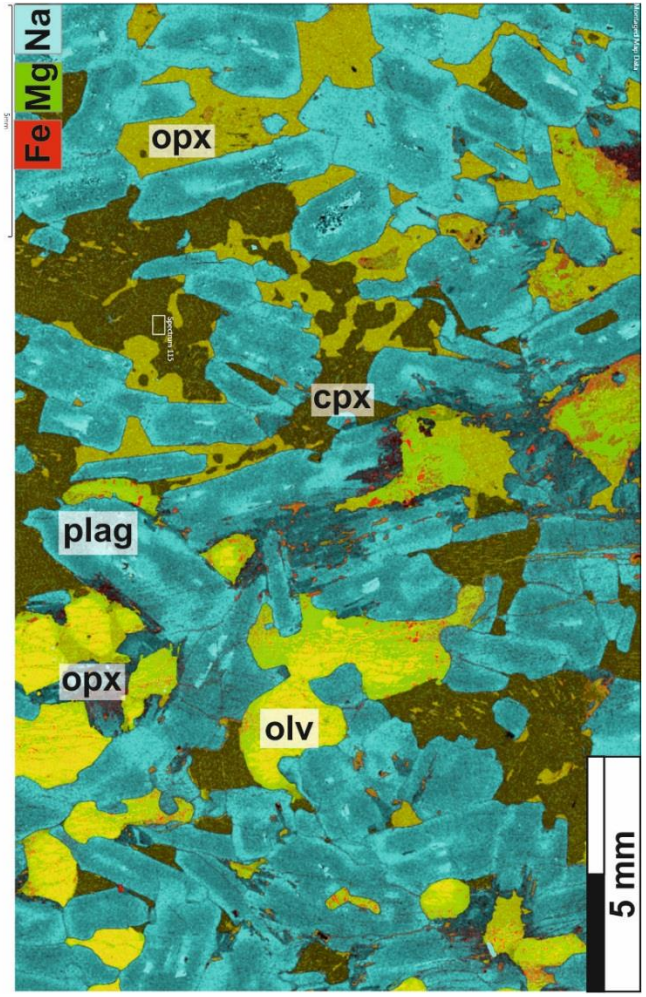




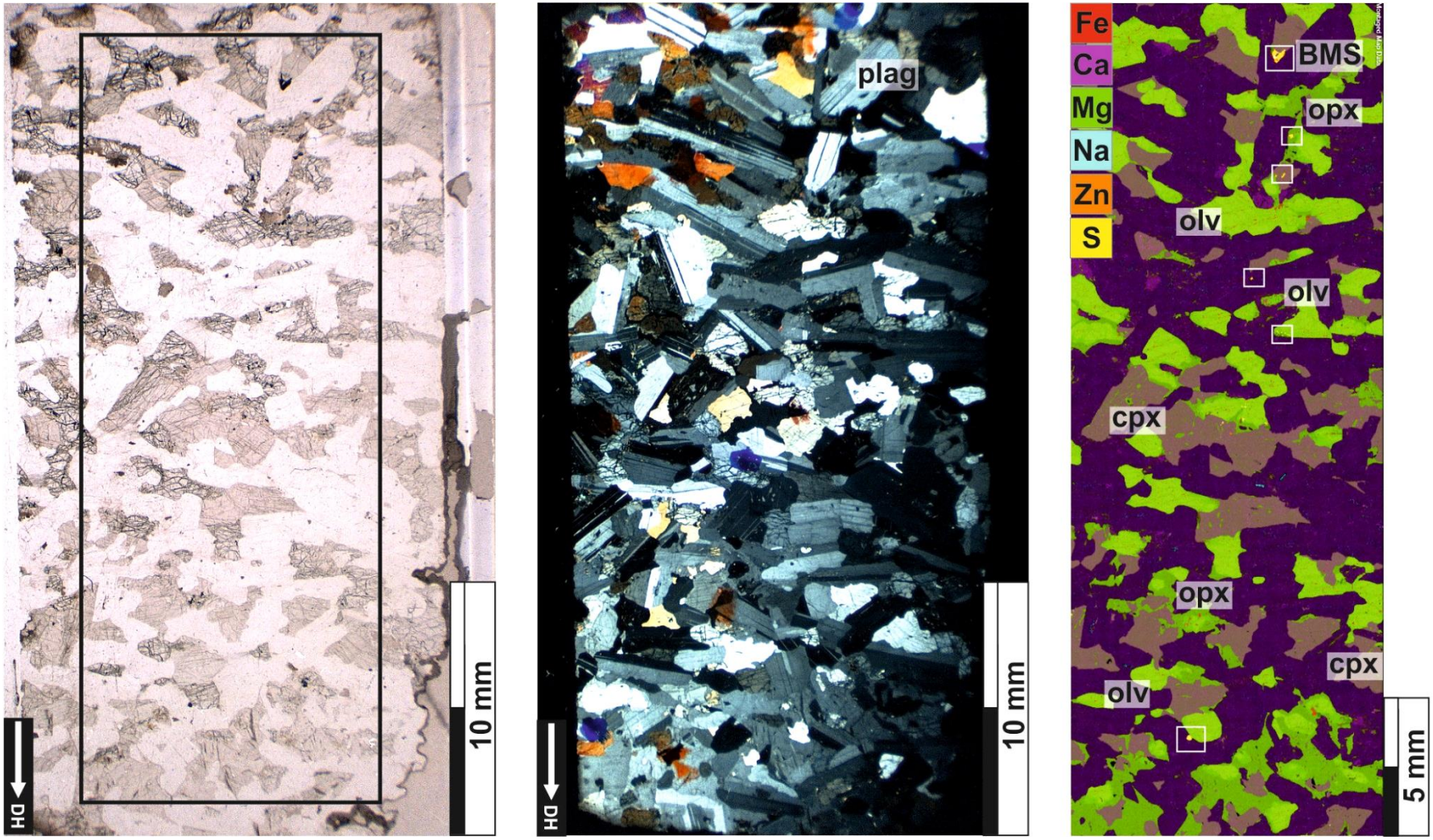


Troctolite Unit: VSF2- FT1143 (not true mapped)

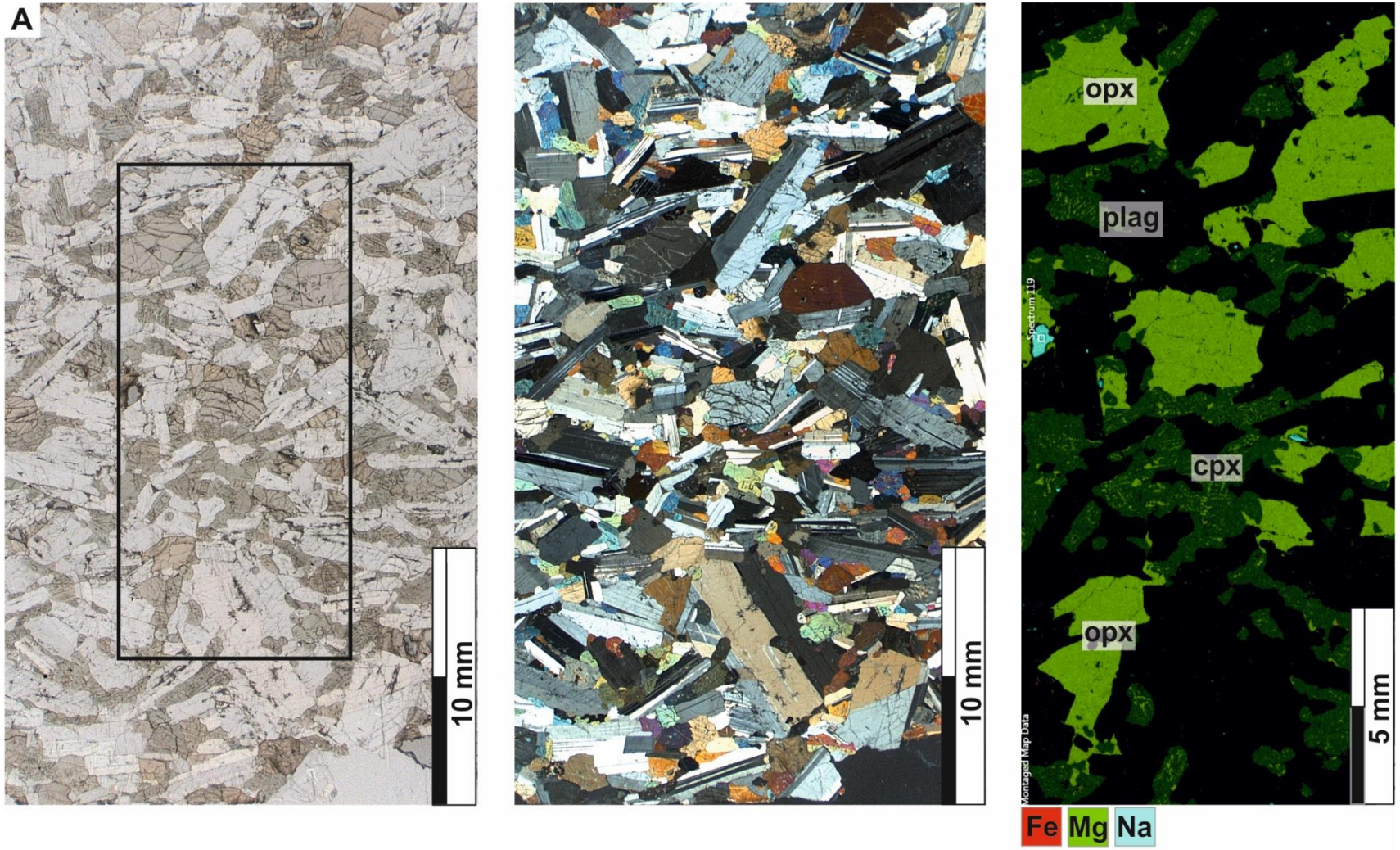




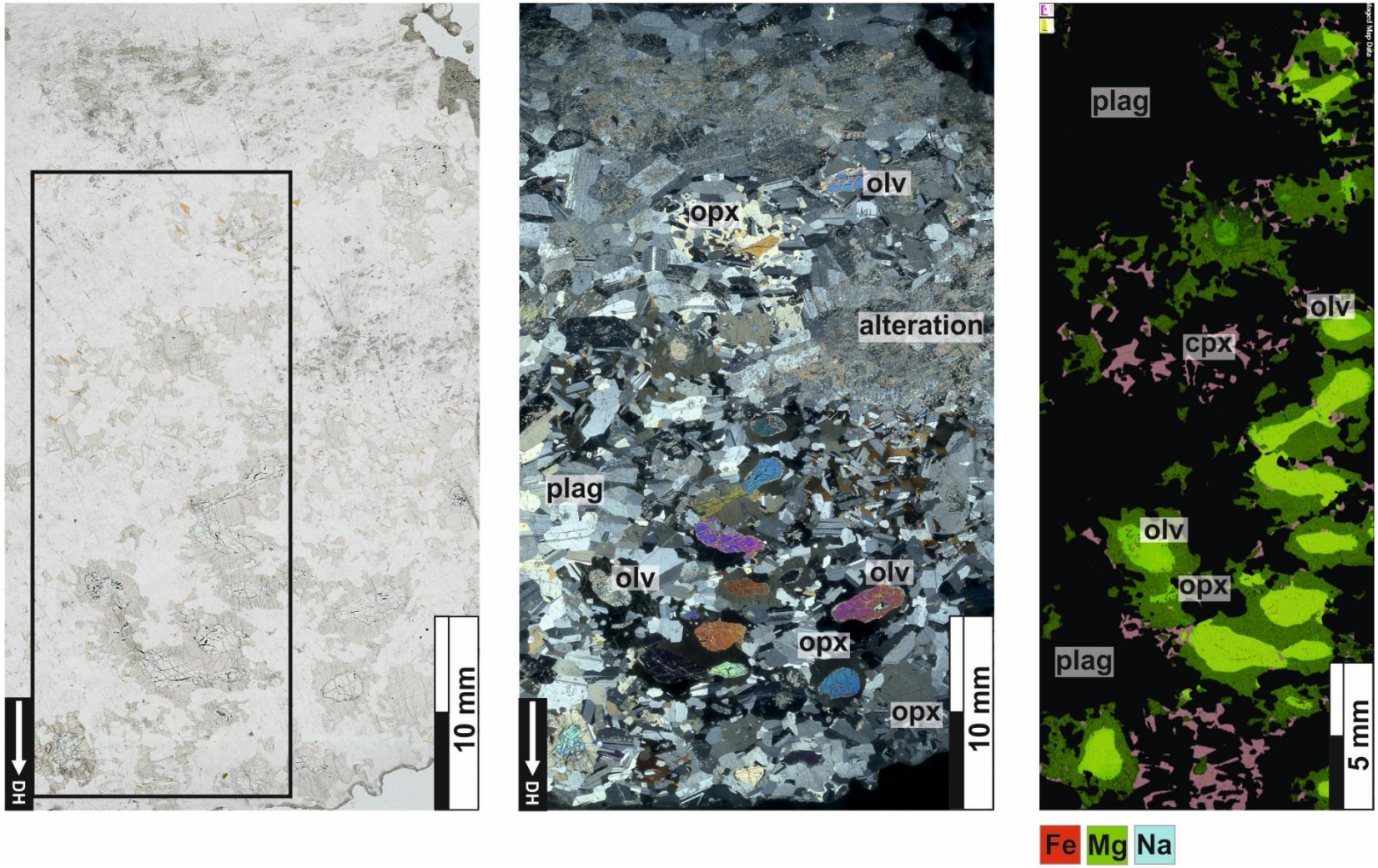
Troctolite Unit: VSF2- JD25 (blue markings are pen, LA-ICP-MS)



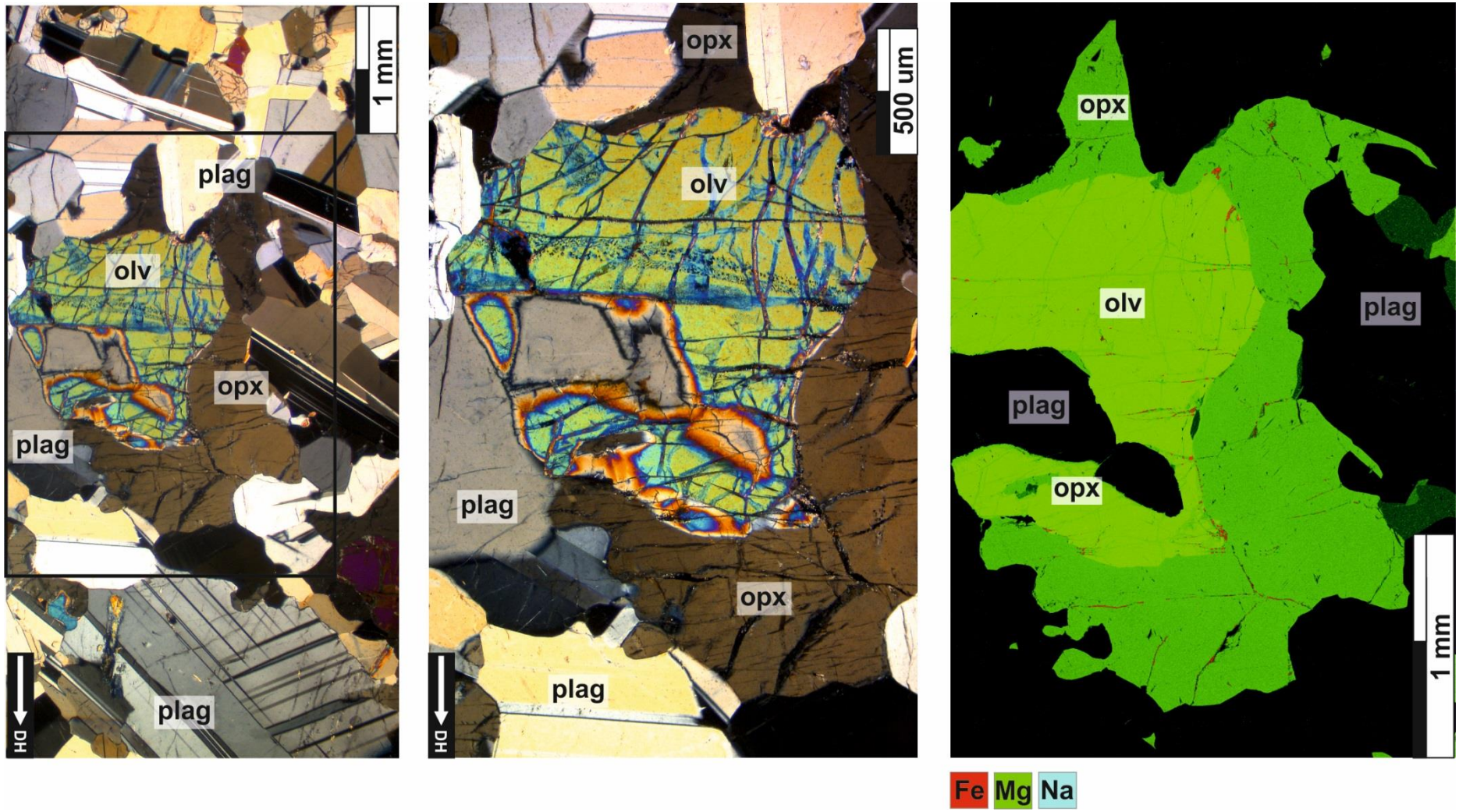
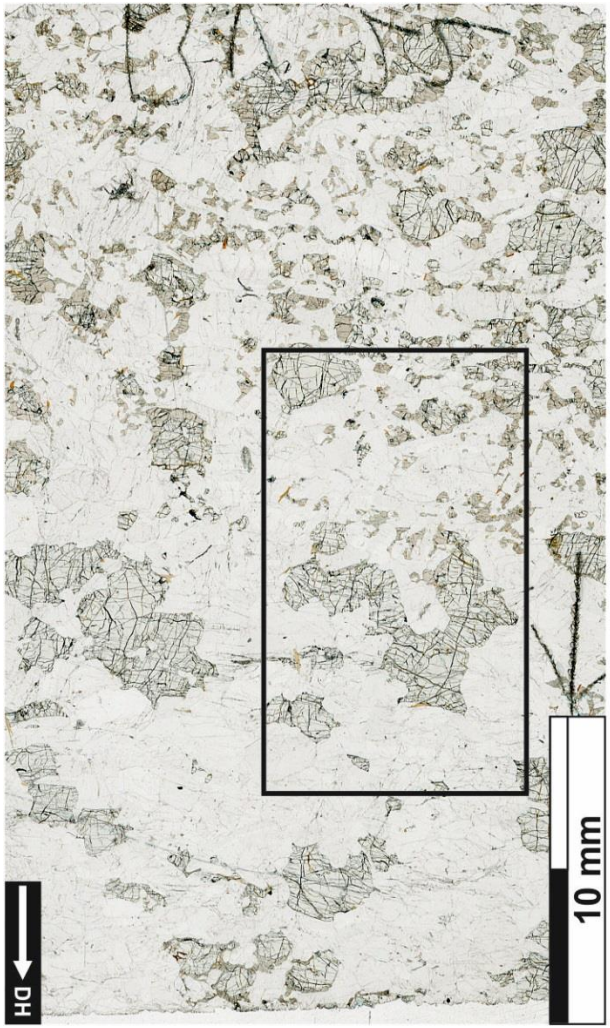
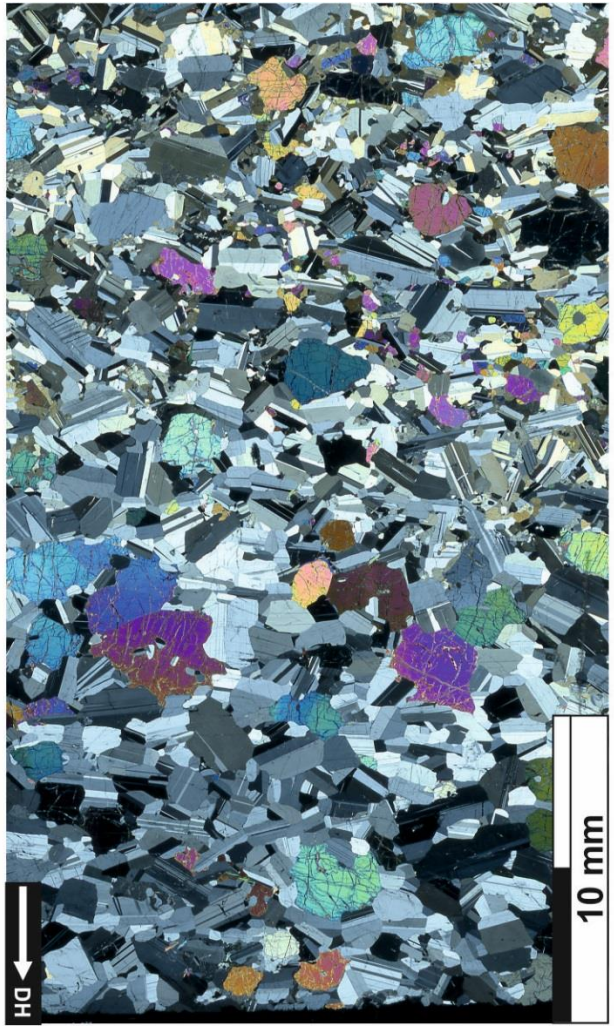
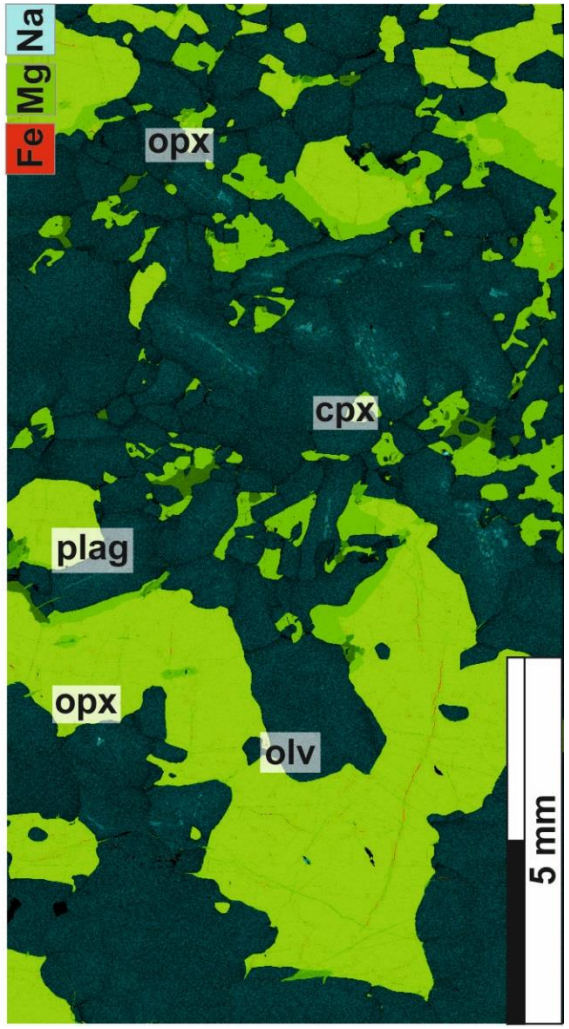
Main Zone- BK015



Troctolite Unit: BV1- BV07B



Troctolite Unit: BV1- BV22 zoom



Troctolite Unit: BV1-BV22 overall (not true mapped)