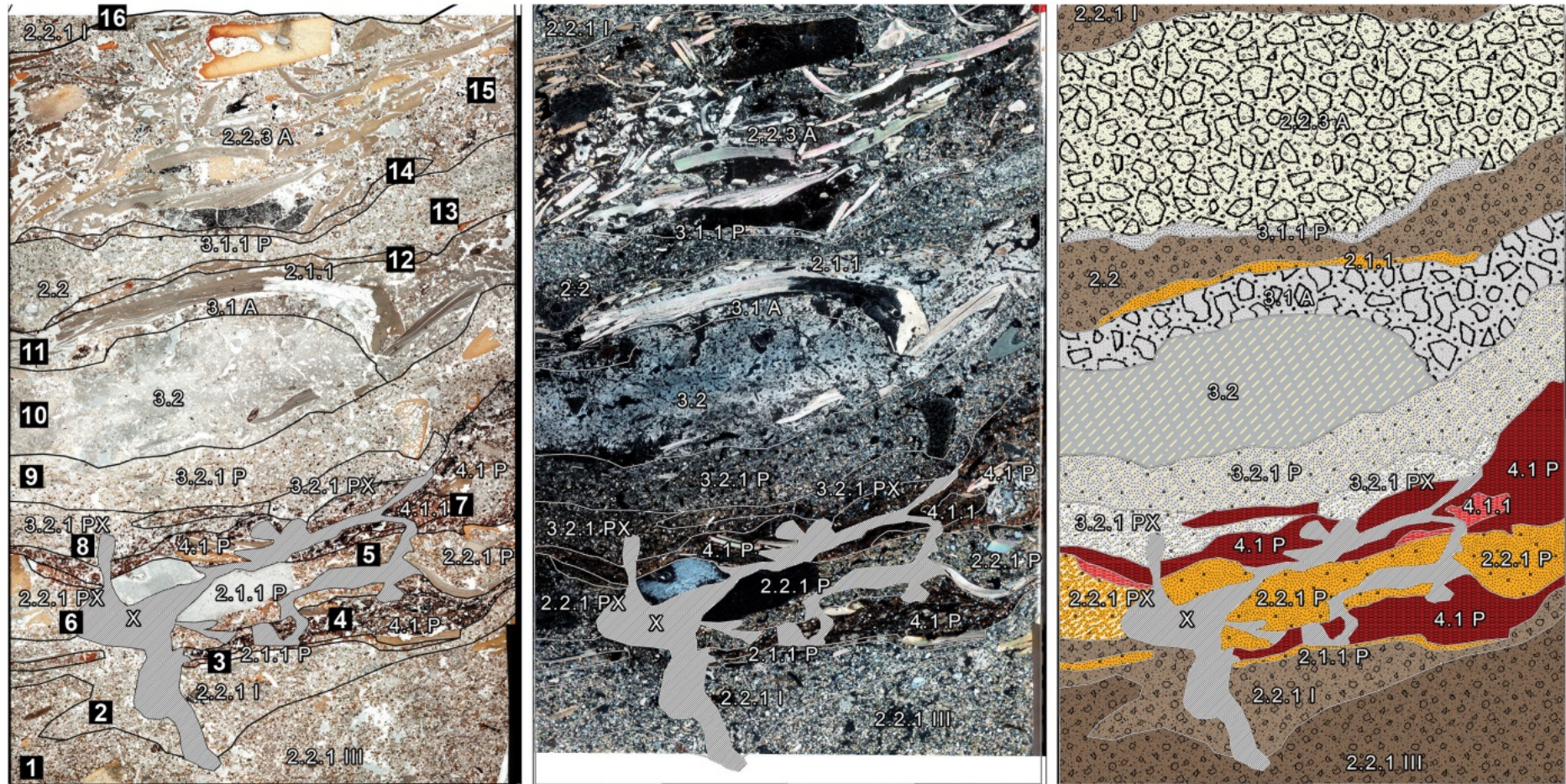


Content of this appendix: Figure A.1-A.14 and associated sub-figures.**APPENDIX A: LIST OF FIGURES**

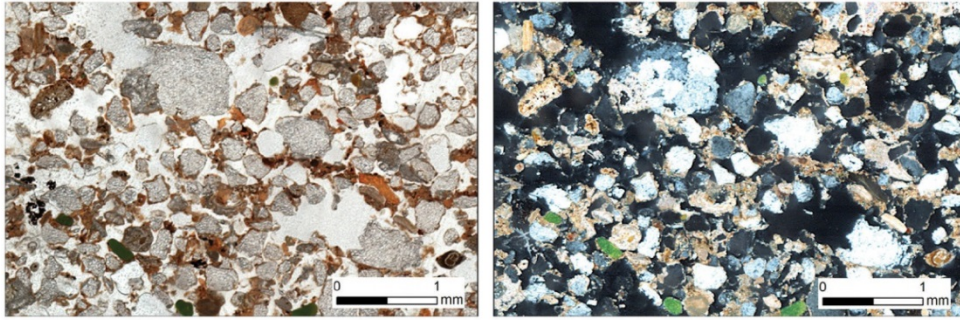
A.1.	BBC-10-05: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	2
A 1.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.1 (BBC-10-05).	3
A 1.2	Organic plant material in lower part of sample BBC-10-05 v2. (MF-units: 4 and 7 on fig. A1).	7
A 1.3	Location of reflectance measurements of plant tissues in the lower part of BBC-10-05_V2.	8
A 1.4	Overview of phosphatized material in sample BBC-10-05_V2 (thin section in the middle).	9
A.2.	BBC-10-03 AND 04: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	10
A 2.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.2 (BBC-10-03 and 04).	11
A.3.	BBC-13-10 AND 11: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	13
A 3.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.3 (BBC-13-10 and 11).	14
A 3.2	Fluorescent coarse fraction and micromass in M1 phase (BBC-13-10 and 11).	17
A.4.	BBC-13-14: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	18
A 4.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.4 (BBC-13-14).	19
A.5.	BBC-13-13: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	23
A 5.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.5 (BBC-13-13).	24
A.6.	BBC-13-16: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	26
A 6.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.6 (BBC-13-16).	27
A 6.2	Distribution of phosphorus (P) and calcium (Ca) in BBC-13-16.	30
A.7.	BBC-13-01: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	31
A 7.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.7 (BBC-13-16).	32
A.8.	BBC-00-17A: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	34
A 8.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.8 (BBC-13-17).	35
A.9.	BBC-00-17B-C: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	36
A 9.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.9 (BBC-00-17B-C).	37
A.10.	BBC-00-19: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	38
A 10.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.10 (BBC-00-19).	39
A.11.	BBC-00-25-M3: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	40
A 11.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.11 (BBC-00-25-M3).	41
A.12.	BBC-00-25-M2: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	42
A 12.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.12 (BBC-00-25-M2).	43
A 12.2	Phosphatized surface in BBC-0-25-M2 (2B).	46
A.13.	BBC-00-25-M1: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	47
A 13.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.13 (BBC-00-25-M1).	48
A.14.	BBC-00-18C (M2): THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	51
A 14.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.12 (BBC-00-18-M2).	52
A 14.2	Phosphatized matrix in BBC-00-18-C.	55
A 14.3	FTIR spectra of the phosphatized matrix in BBC-00-18-C.	56
A.15.	BBC-00-18A-B: THIN SECTION SCAN (XPL/PPL) AND MF-ANALYSIS. MF-UNITS (NUMBERS) INDICATED.	57
A 15.1	Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.15 (BBC-00-18-A-B).	58

TS ID: BBC_10_05_V2

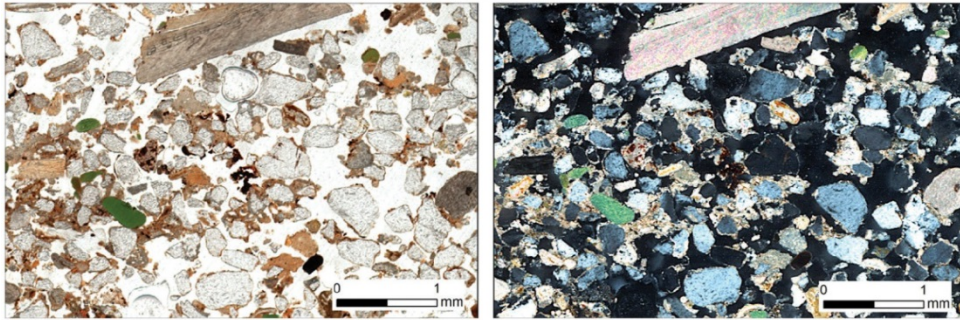


A.1. BBC-10-05: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

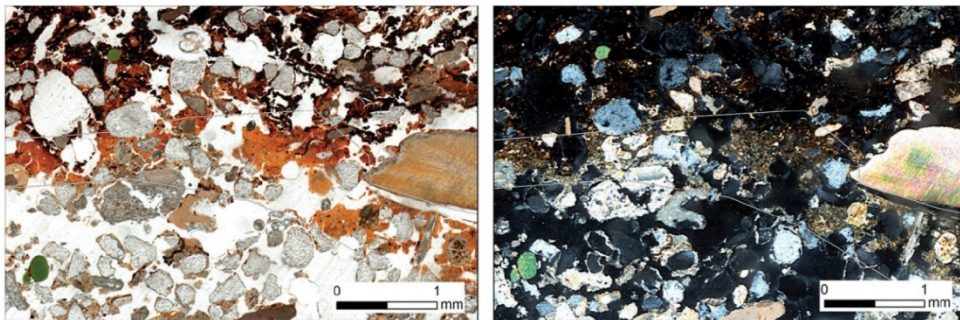
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



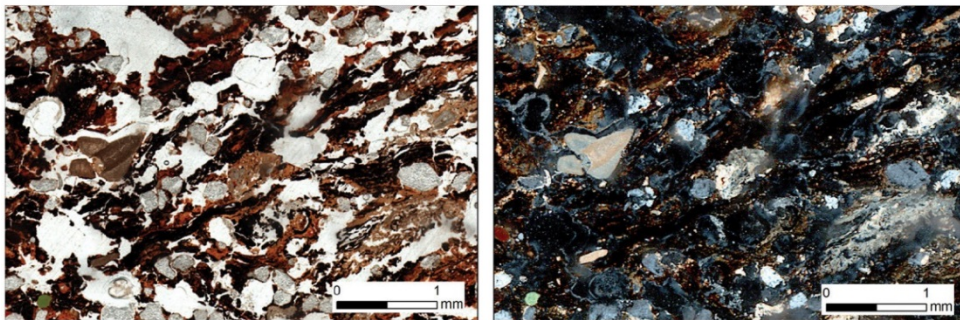
BBC_10_05_v2_MFU_01_MFT_2.1.1 III



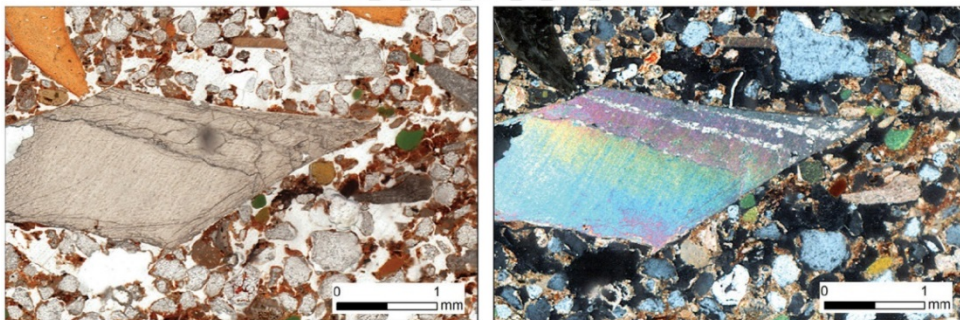
BBC_10_05_v2_MFU_02_MFT_2.1.1 I



BBC_10_05_v2_MFU_03_MFT_2.1.1 P



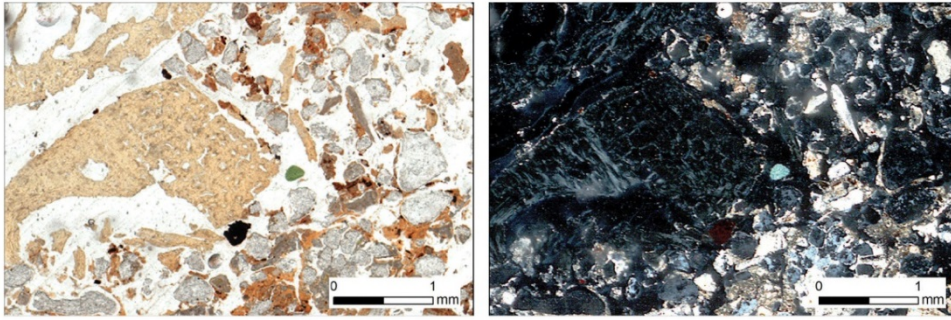
BBC_10_05_v2_MFU_04_MFT_4.1 P



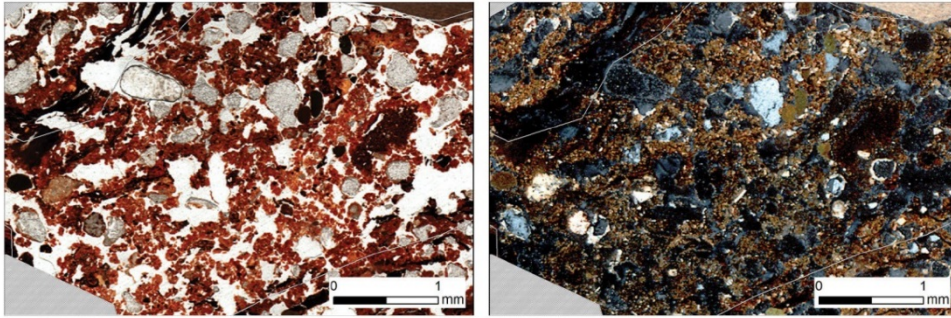
BBC_10_05_v2_MFU_05_MFT_2.2.1P

A 1.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.1 (BBC-10-05)

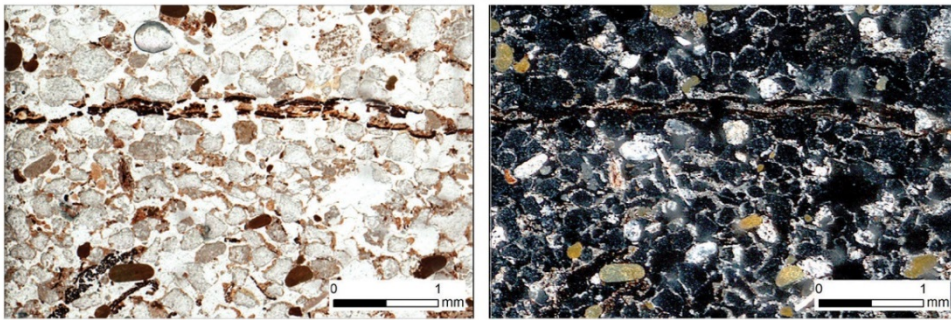
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



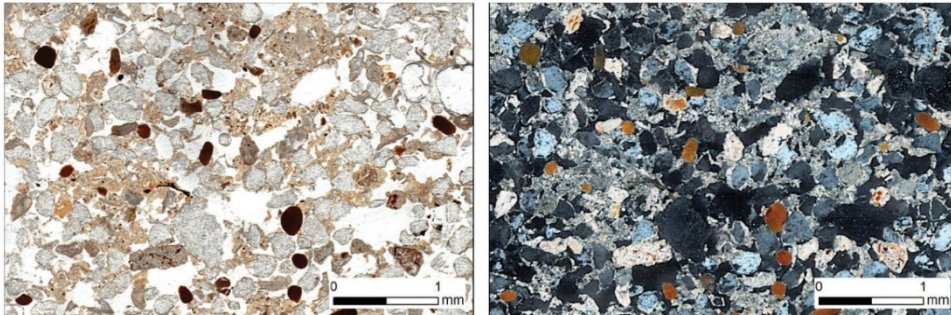
BBC_10_05_v2_MFU_06_MFT_2.2.1 PX



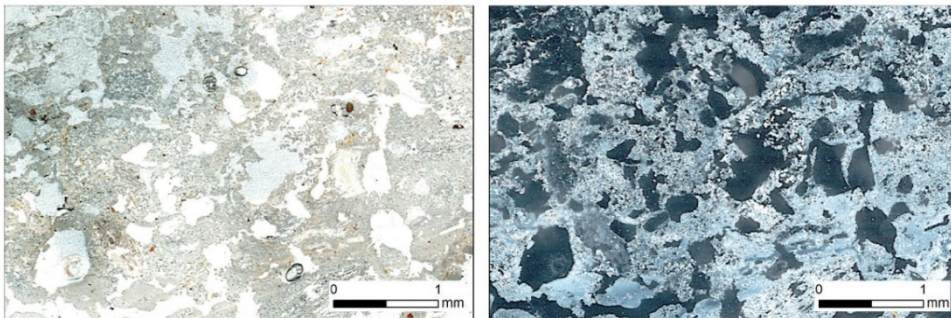
BBC_10_05_v2_MFU_07_MFT_4.1.1 PX



BBC_10_05_v2_MFU_08_MFT_3.2.1 PX



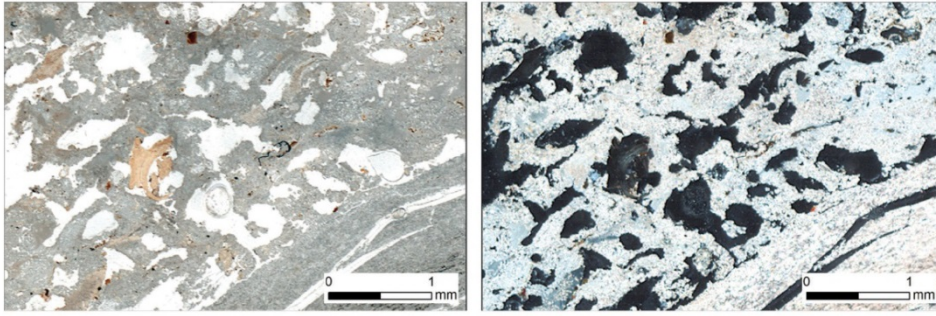
BBC_10_05_v2_MFU_09_MFT_3.2.1 P



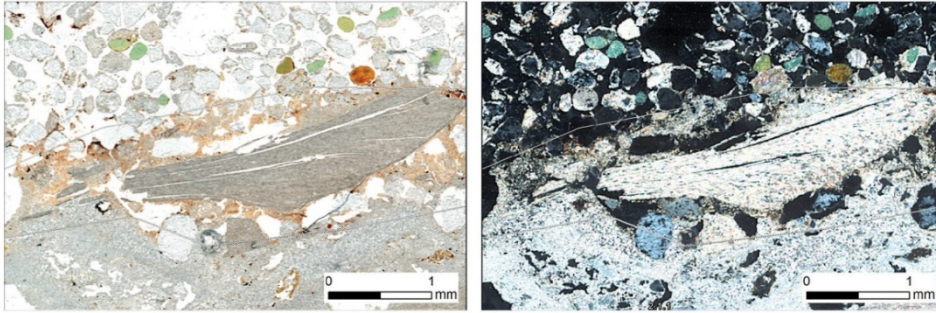
BBC_10_05_v2_MFU_10_MFT_3.2 P

A1.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.1 (BBC-10-05)

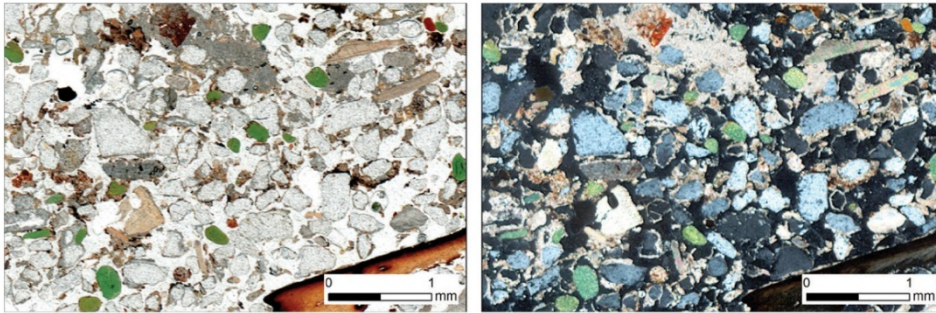
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



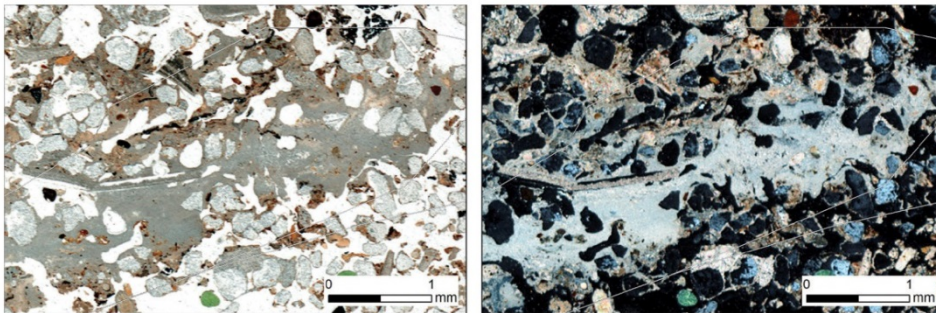
BBC_10_05_v2_MFU_11_MFT_3.1



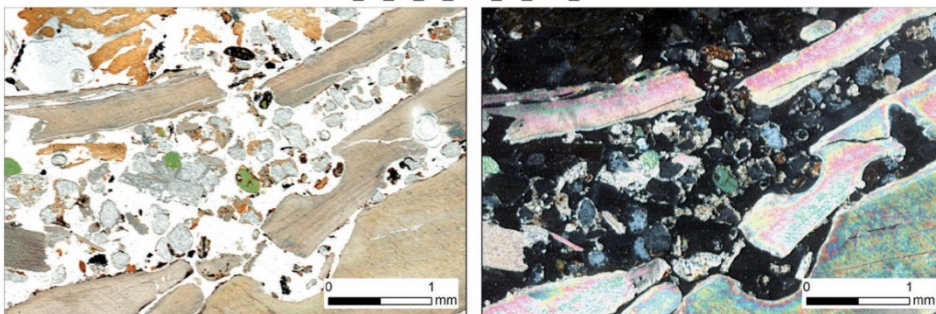
BBC_10_05_v2_MFU_12_MFT_2.1.1



BBC_10_05_v2_MFU_13_MFT_2.2



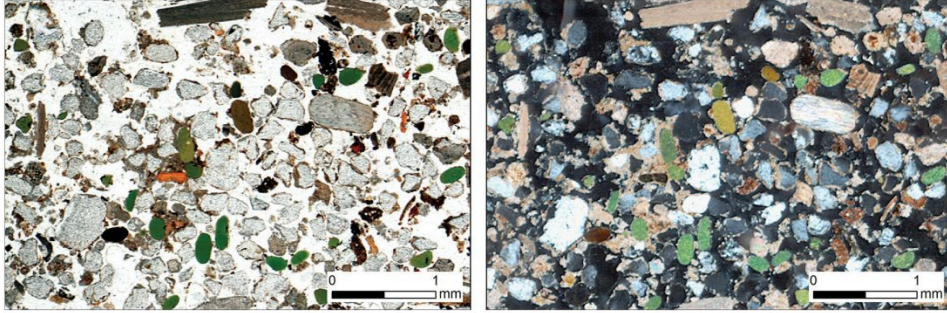
BBC_10_05_v2_MFU_14_MFT_3.1.1 P



BBC_10_05_v2_MFU_15_MFT_2.2.3

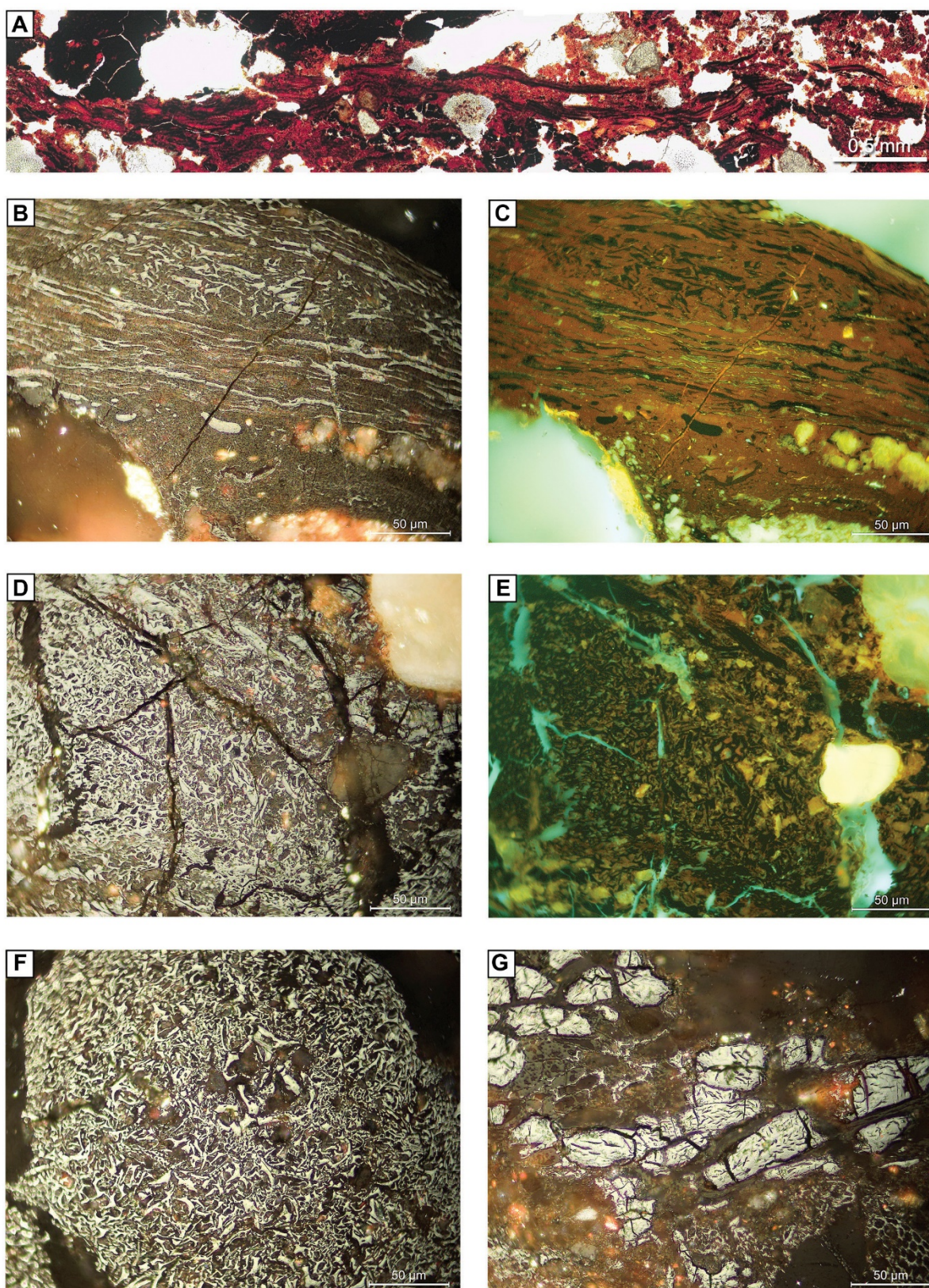
A1.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.1 (BBC-10-05)

APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



BBC_10_05_v2_MFU_16_MFT_2.2.1 I

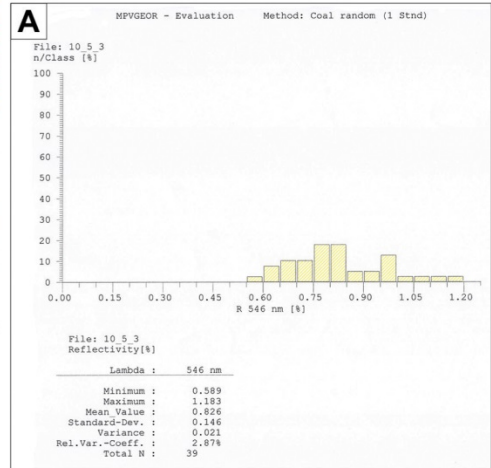
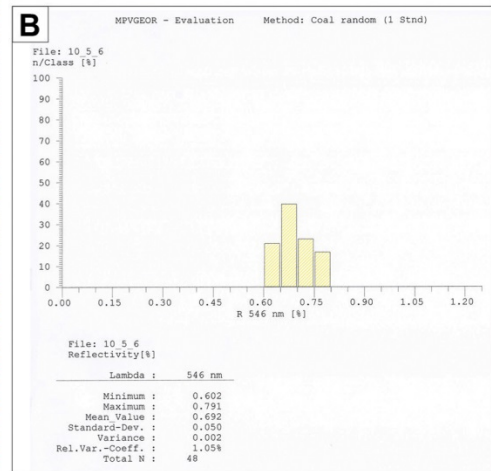
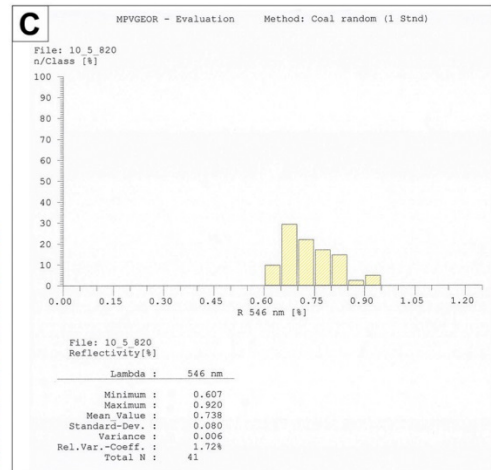
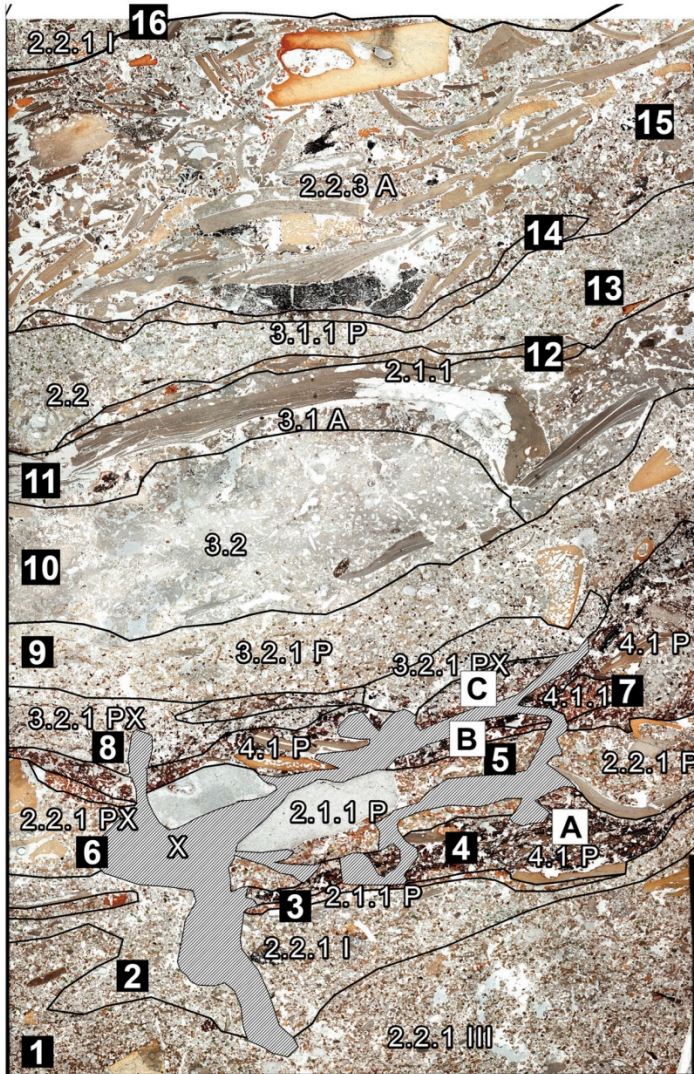
A1.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.1 (BBC-10-05)



A 1.2 Organic plant material in lower part of sample BBC-10-05 v2. (MF-units: 4 and 7 on fig. A1).

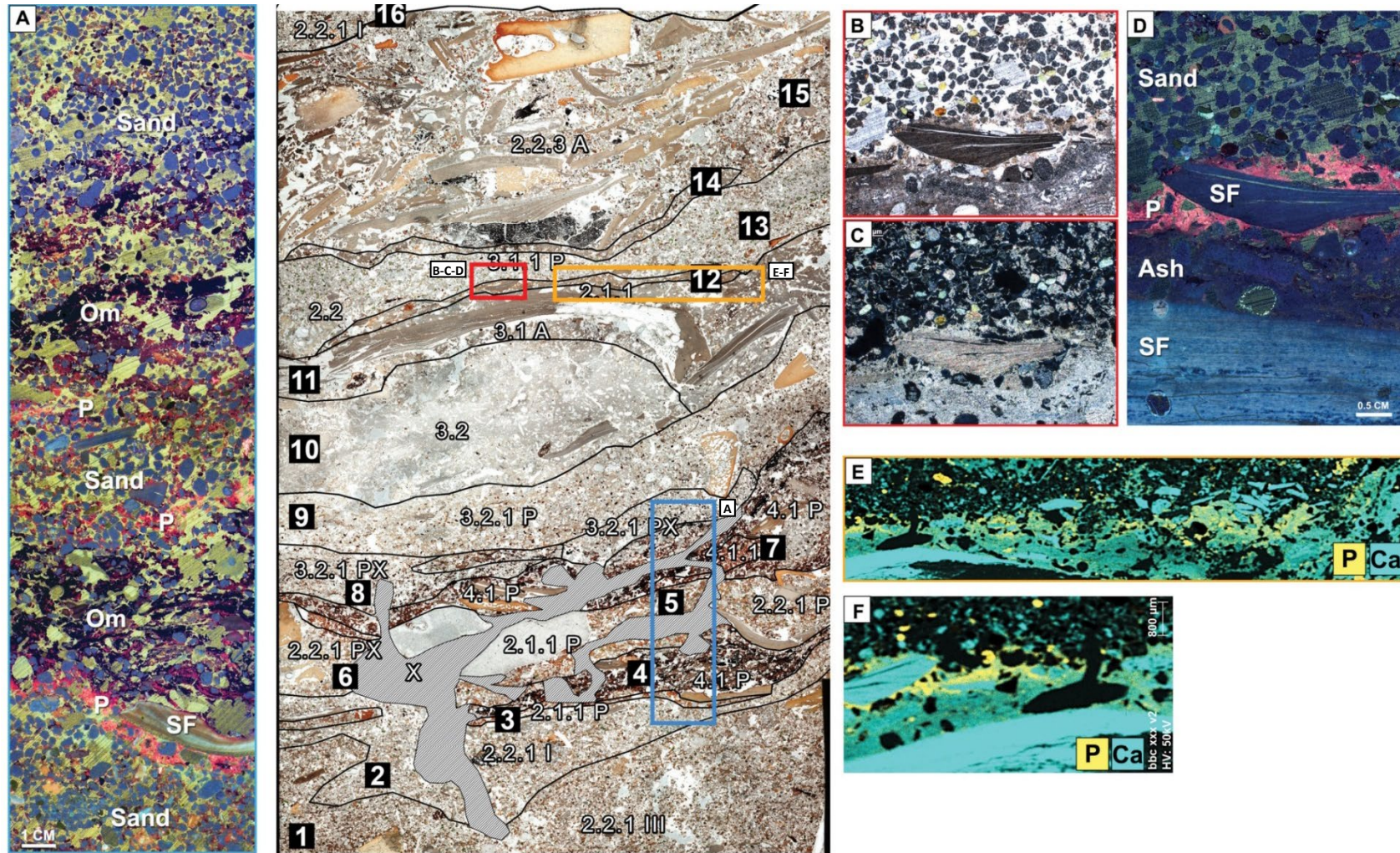
(A) Micro-laminated fibrous organic material, MFU 7, PPL; **(B, C)** Poor-preserved medium reflecting large tissue in phosphate matrix, MFU 4, RVLo / RLo; **(D, E)** Semifusinite with bogen structure in phosphate matrix, MFU 4, RVLo / RLo; **(F)** Shattered tissue showing bogen structure (fusinite), MFU 7 (RLo); **(G)** Typically strongly fissured high reflecting humic gels in cell cavities, MFU 7 (RLo).

TS ID: BBC_10_05_V2



A 1.3 Location of reflectance measurements of plant tissues in the lower part of BBC-10-05_V2.

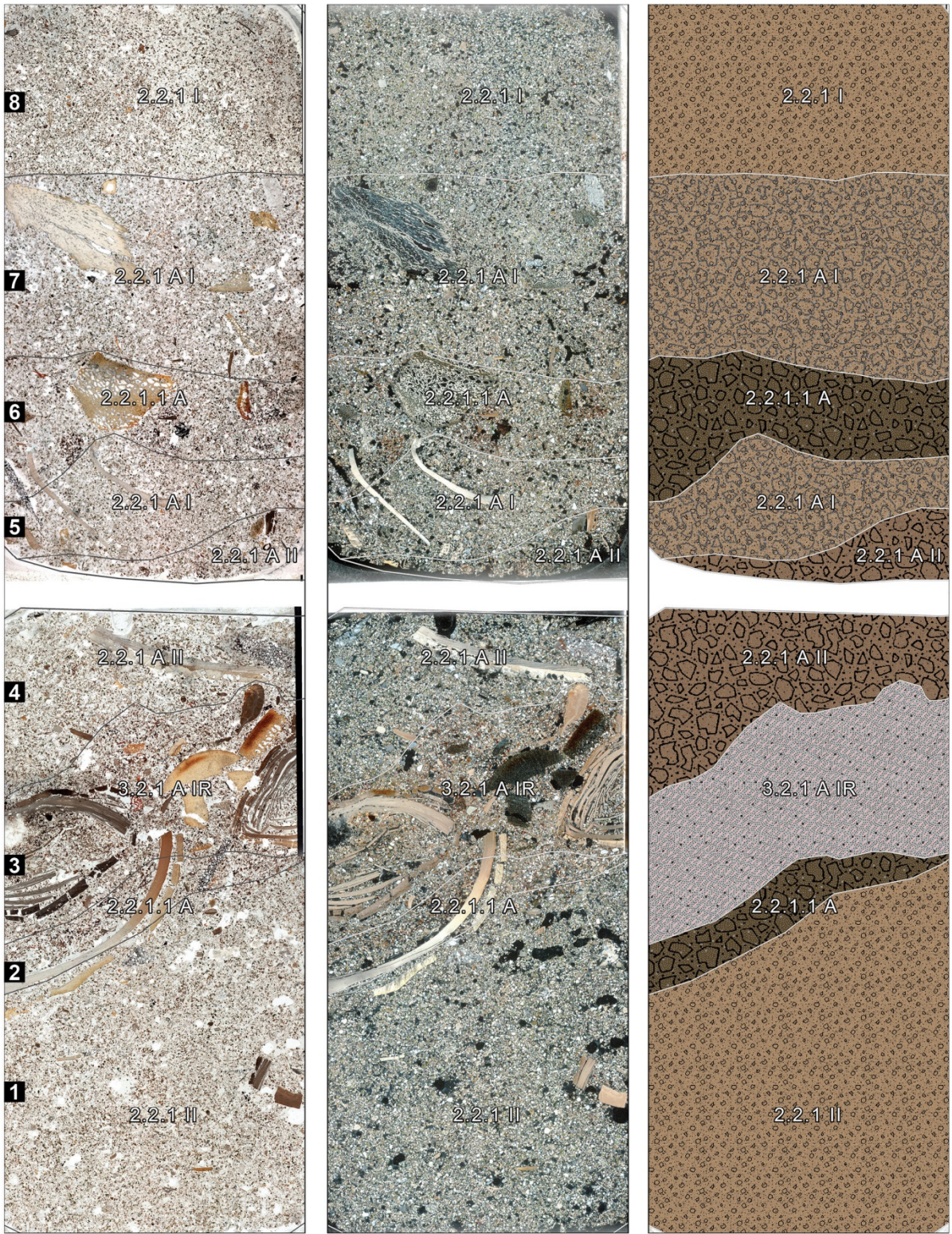
(A) The reflectance of the tissues from the MFU 4 range from 0.58 to 1.18 %Ro, but most tissues have reflectance between 0.60 and 0.90 %Ro. These tissues can be classified as low reflecting fusinite (semifusinite). In reflected white light the tissues are either middle grey (reflectance range of about 0.60 to 0.95 %Ro) or light grey (tissues with reflectance higher than 0.95 %Ro). The reflectance values indicate formation temperatures approximating 170°C to 350°C; **(B)** The reflectance of tissues in the lower part of MFU 7 range from 0.60 to 0.79 %Ro, corresponding to low reflecting fusinite (semifusinite) which indicates formation temperatures approximating 180°C to 240°C, **(C)** The reflectance of the tissues in the upper part of MFU 7 range from 0.60 to 0.92 %Ro, but most of tissues have reflectance between 0.60 and 0.80 %Ro (semifusinite). The reflectance values indicate formation temperatures approximating 180°C to 280°C



A 1.4 Overview of phosphatized material in sample BBC-10-05_V2 (thin section in the middle).

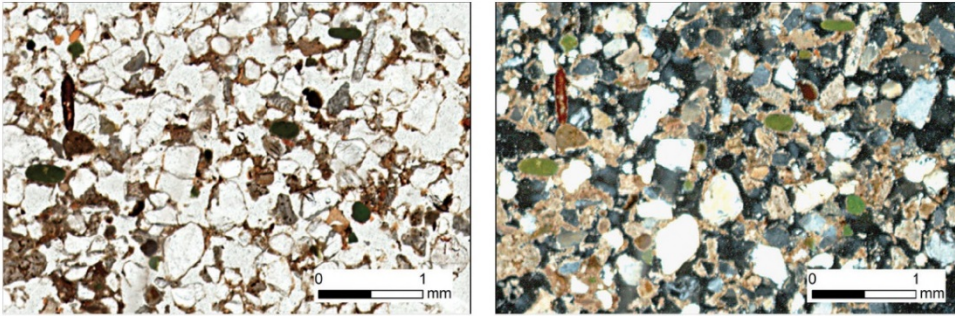
(A) Blue rectangle: Fluorescent light photomicrograph iron-stained, phosphatized surfaces (P); (B/C) Red rectangle: photomicrograph (PPL/XPL) showing a cemented hearth surface overlain by shellfish and aeolian sand; (D) Fluorescent light photomicrograph of the areas in B/C, showing microstratigraphic sequence of shellfish and ash at the bottom, phosphatized surface in the middle, and quartz-rich sand on top; (E/F) micro-XRF elemental maps showing the distribution of phosphorus (P) and calcium (CA).

TS ID: Top: BBC_10_03, Base: BBC_10_04

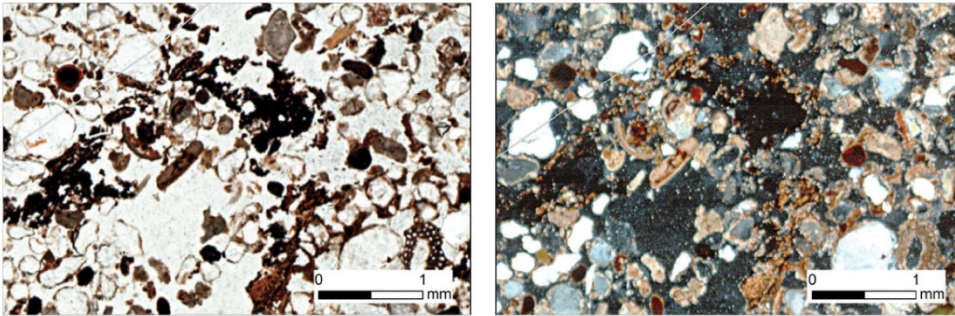


A.2. BBC-10-03 and 04: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

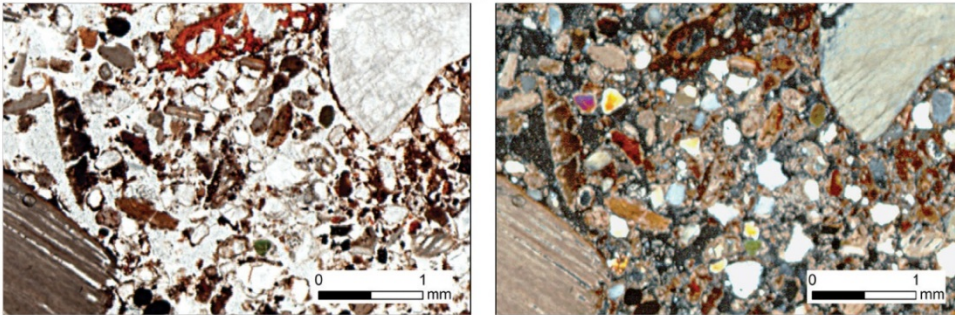
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



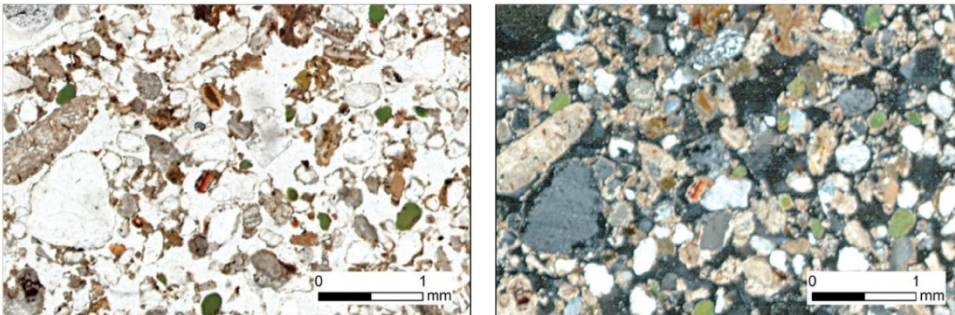
BBC_10_03_&_04_v2_MFU_02_MFT_2.2.1 II



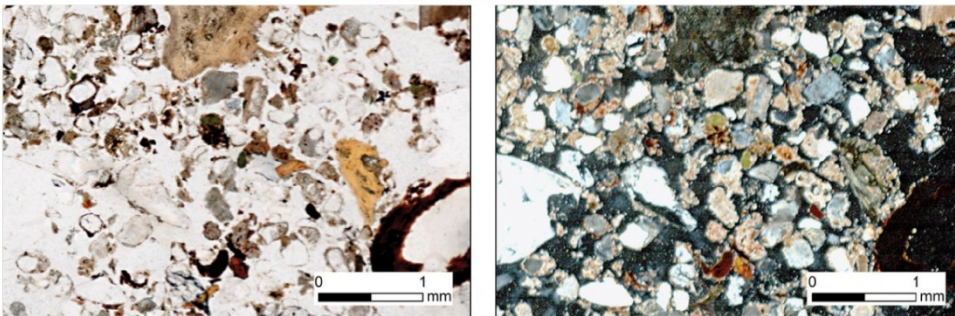
BBC_10_03_&_04_v2_MFU_03_MFT_2.2.1 A



BBC_10_03_&_04_v2_MFU_03_MFT_3.2.1 A IR



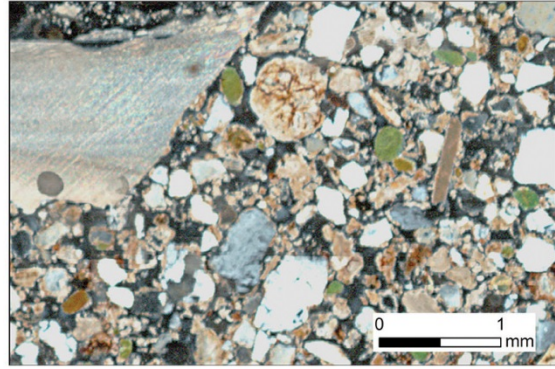
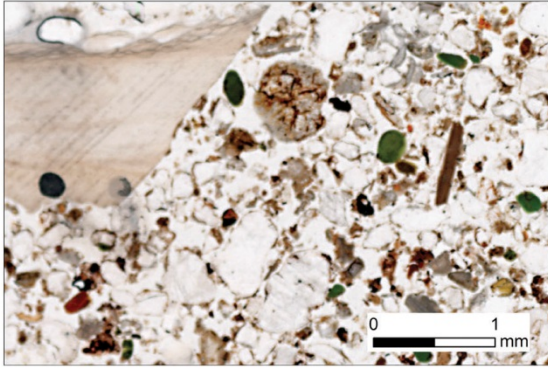
BBC_10_03_&_04_v2_MFU_04_MFT_2.2.1 A II



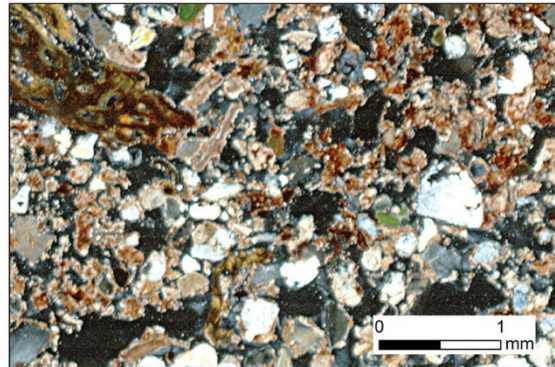
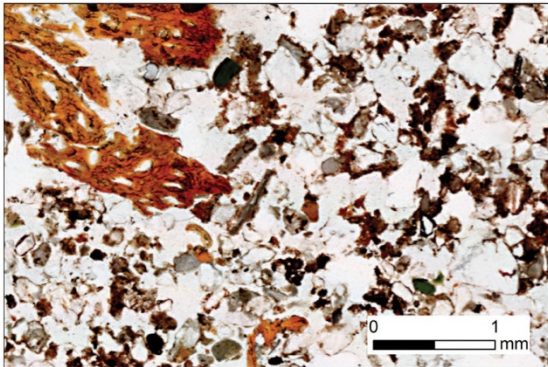
BBC_10_03_&_04_v2_MFU_05_MFT_2.2.1 A II

A 2.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.2 (BBC-10-03 and 04)

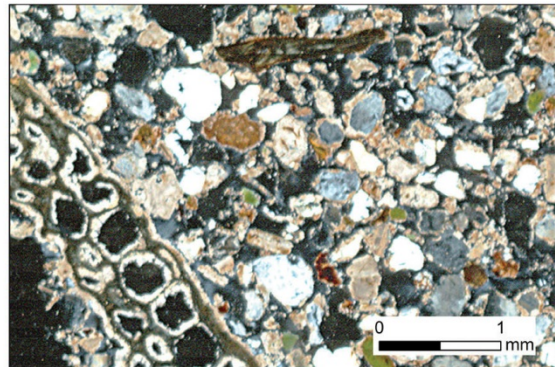
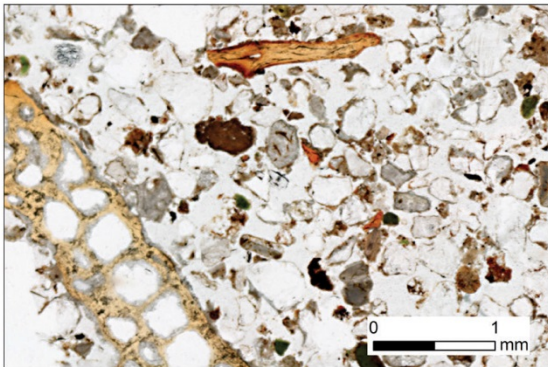
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



BBC_10_03_&_04_v2_MFU_06_MFT_2.2.1 I



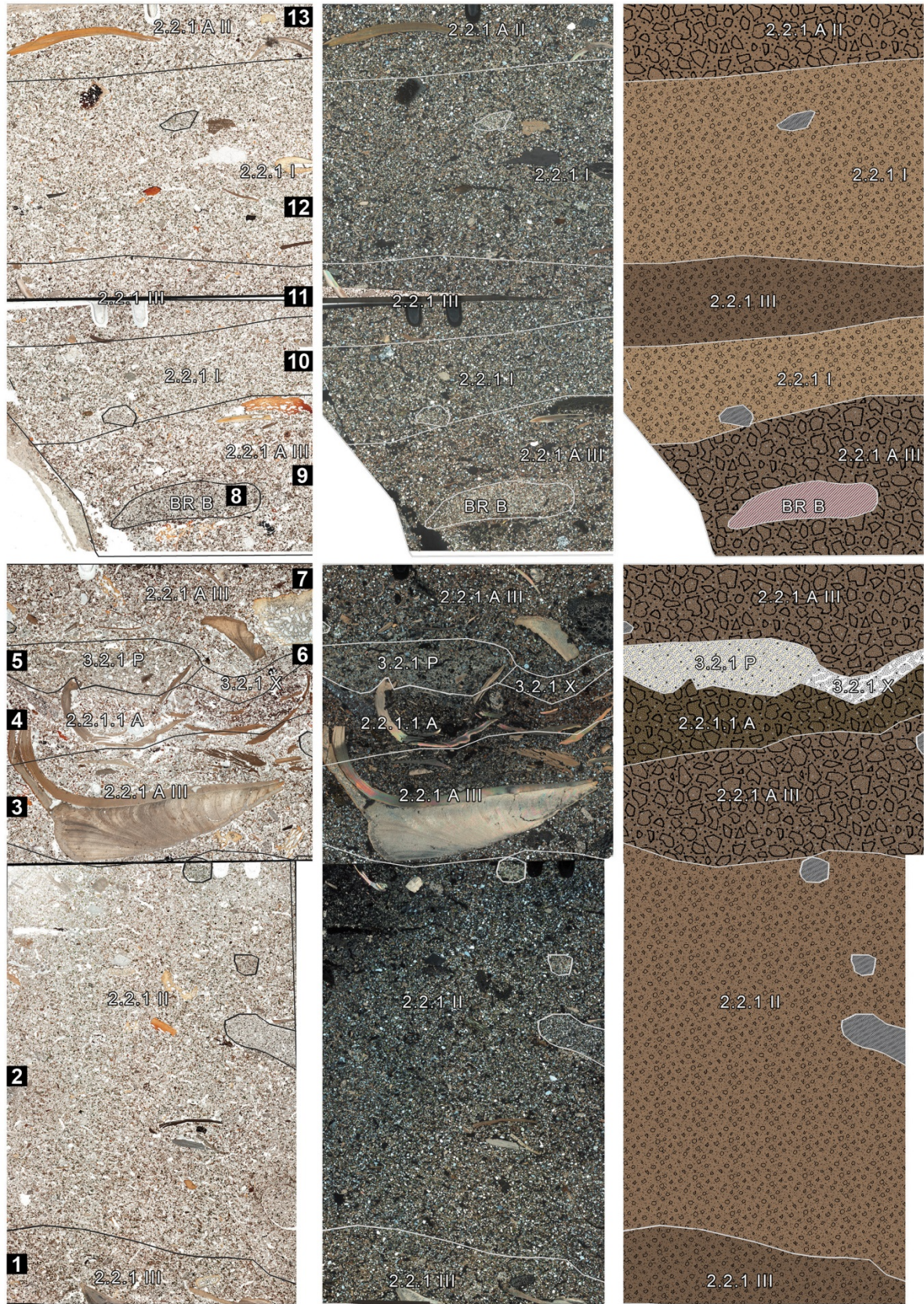
BBC_10_03_&_04_v2_MFU_07_MFT_2.2.1.1 A III



BBC_10_03_&_04_v2_MFU_08_MFT_2.2.1 A I

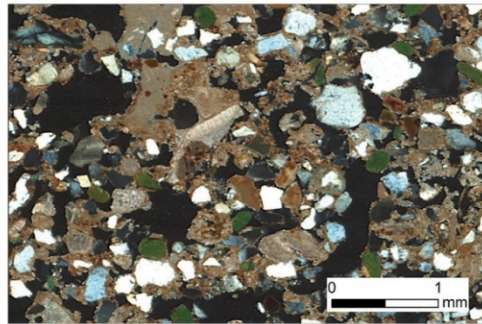
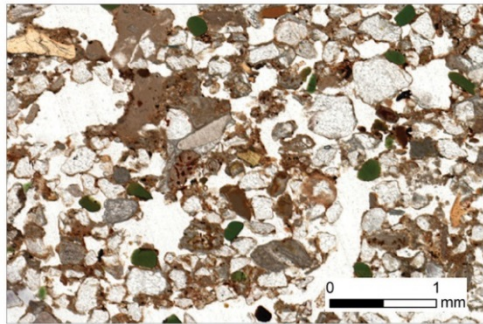
A2.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.2 (BBC-10-03 and 04)

TS ID: TOP: BBC_13_10_A and BBC_13_10_B, BASE: BBC_13_11_A and BBC_13_11_B

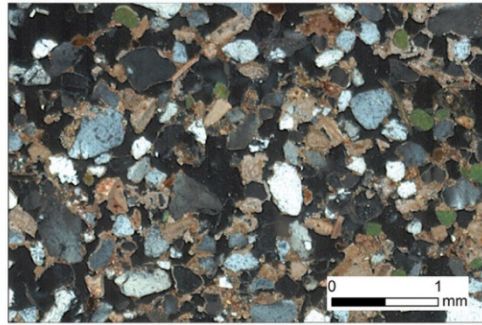
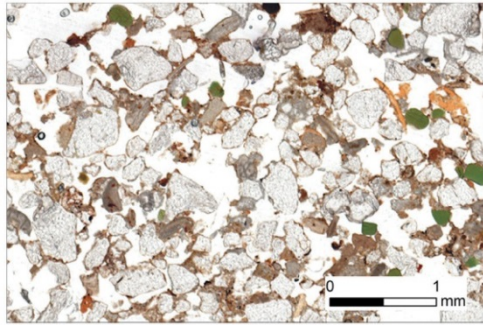


A.3. BBC-13-10 and 11: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

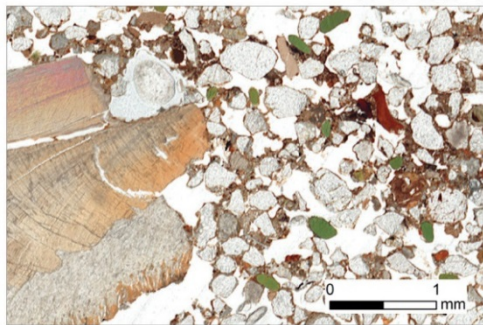
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



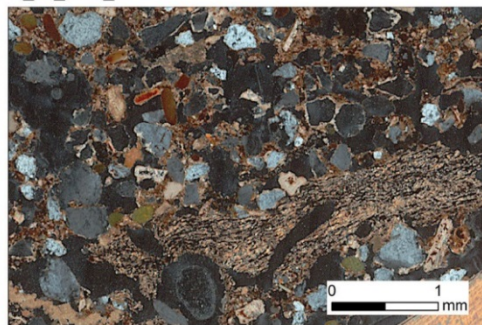
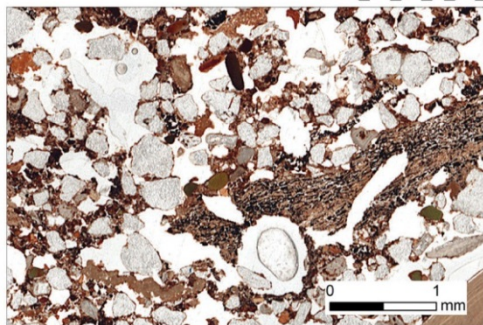
BBC_13_10_&_11_MFU_01_MFT_2.2.1 III



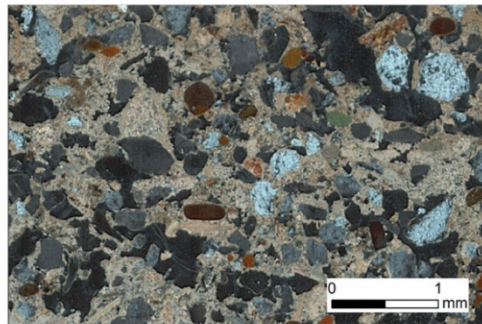
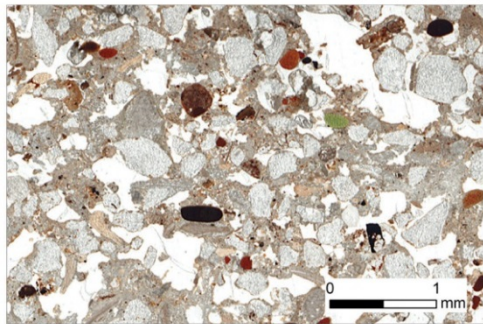
BBC_13_10_&_11_MFU_02_MFT_2.2.1 II



BBC_13_10_&_01_MFU_03_MFT_2.2.1 III



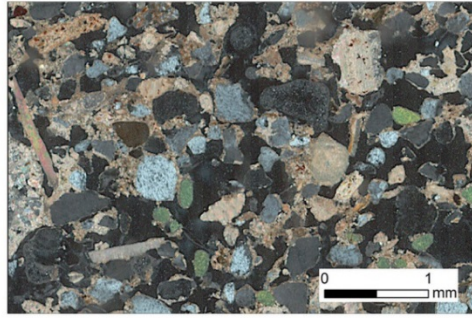
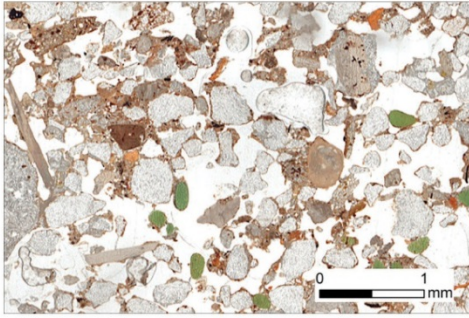
BBC_13_10_&_11_MFU_04_MFT_2.2.1.1 A



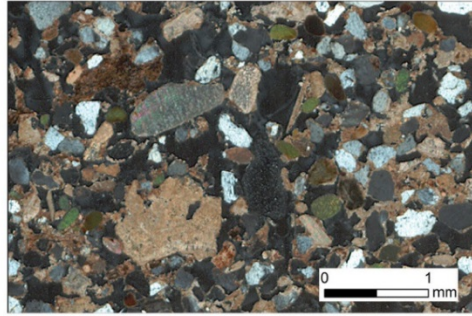
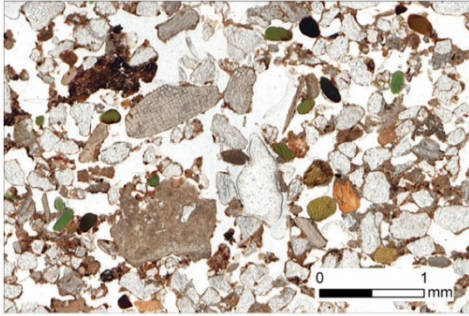
BBC_13_10_&_11_MFU_05_MFT_3.2.1 P

A 3.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.3 (BBC-13-10 and 11).

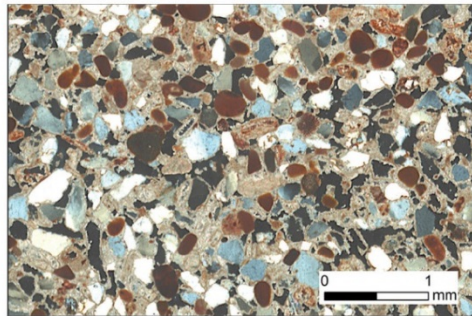
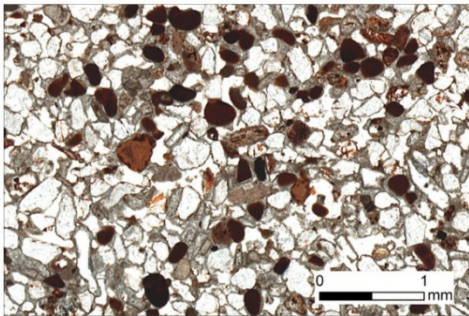
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



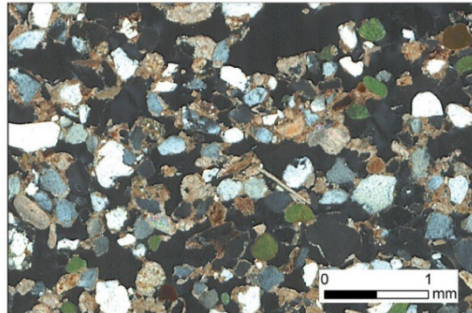
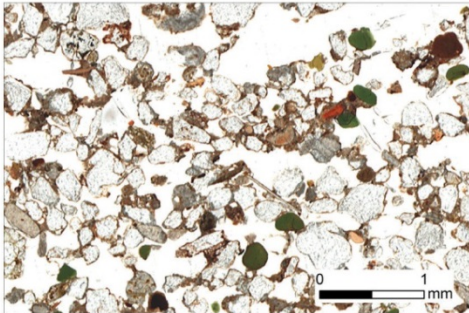
BBC_13_10_&_11_MFU_06_MFT_3.2.1 X



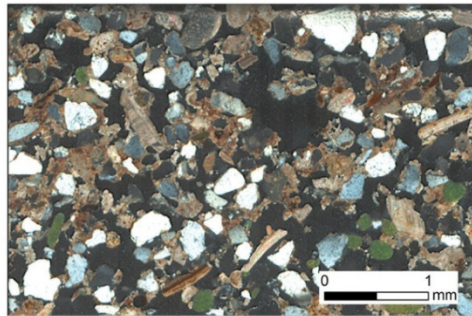
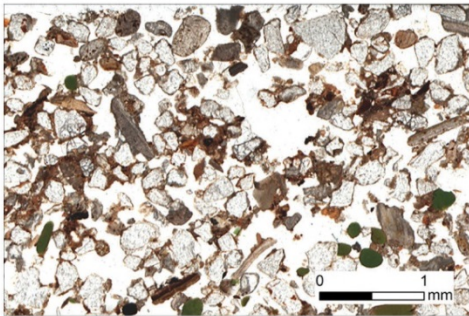
BBC_13_10_&_11_MFU_07_MFT_2.2.1 A III



BBC_13_10_&_11_MFU_09_MFT_BR B



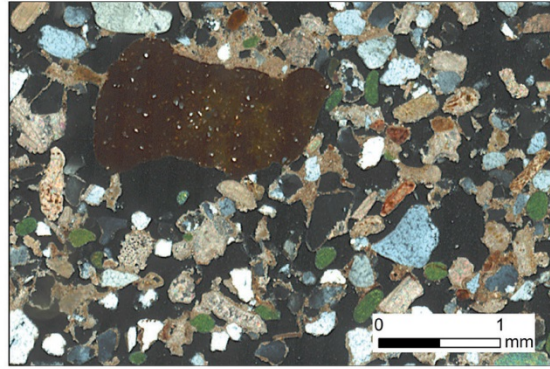
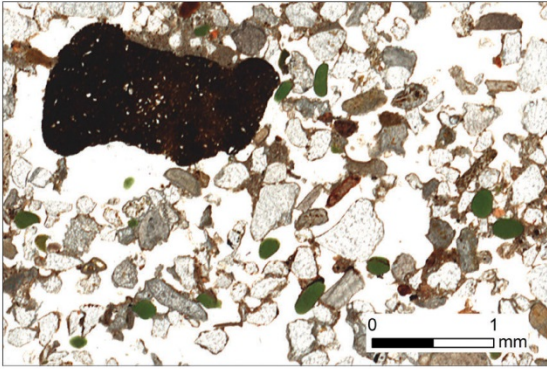
BBC_13_10_&_11_MFU_10_MFT_2.2.1 I



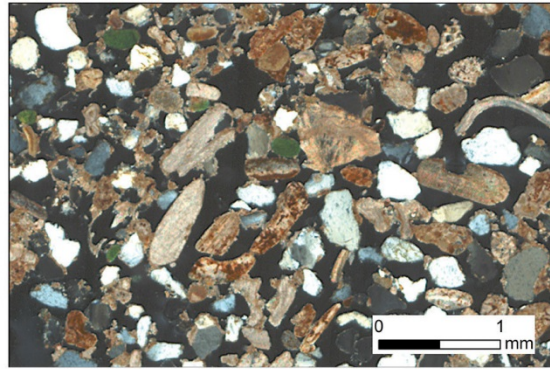
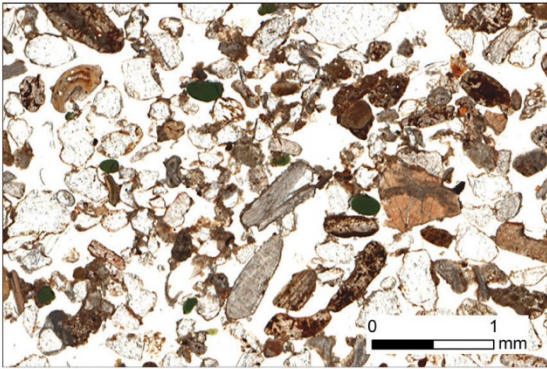
BBC_13_10_&_11_MFU_11_MFT_2.2.1 III

A 3.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.3 (BBC-13-10 and 11).

APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL

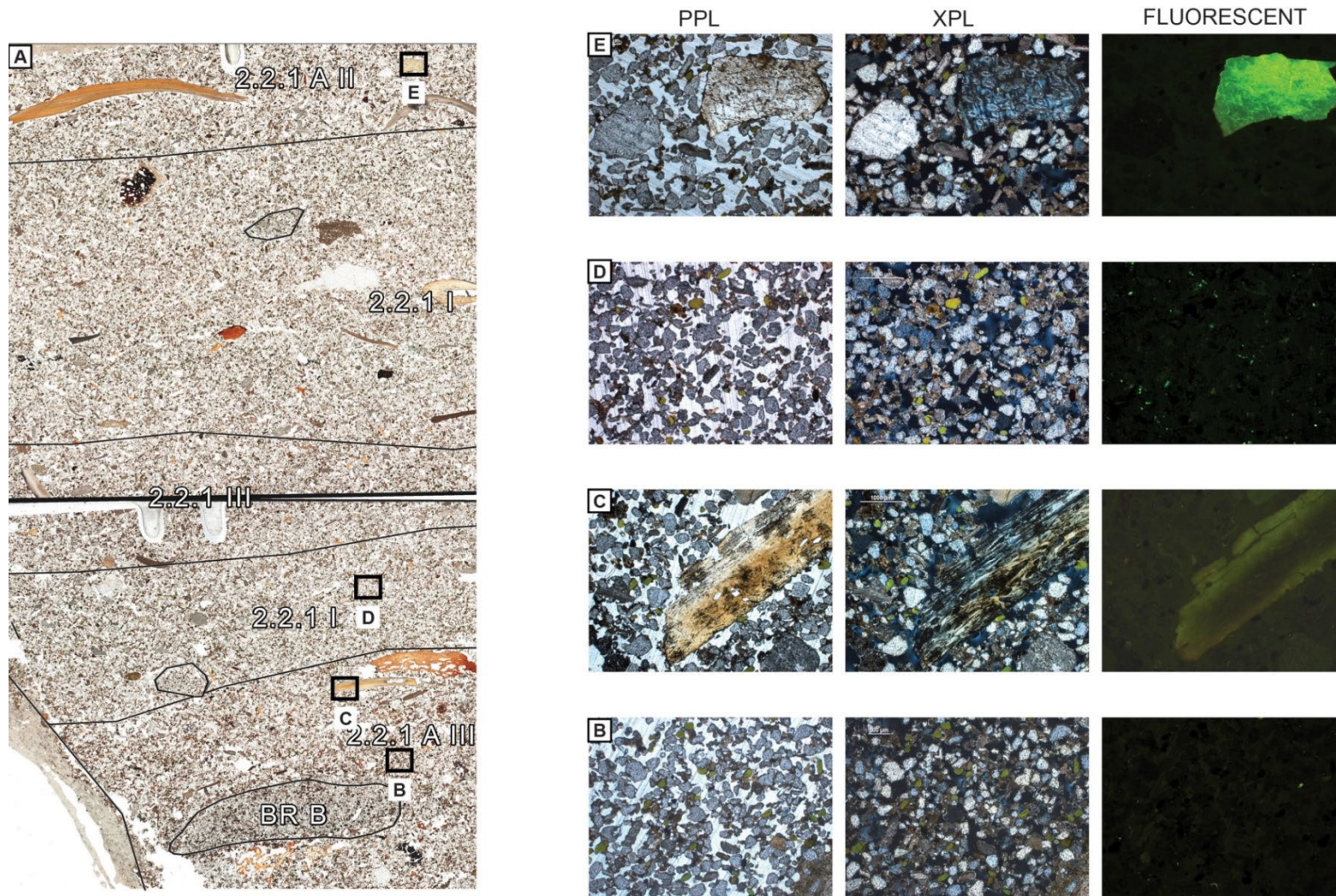


BBC_13_10_&_11_MFU_12_MFT_2.2.1 I



BBC_13_10_&_11_MFU_13_MFT_2.2.1 A II

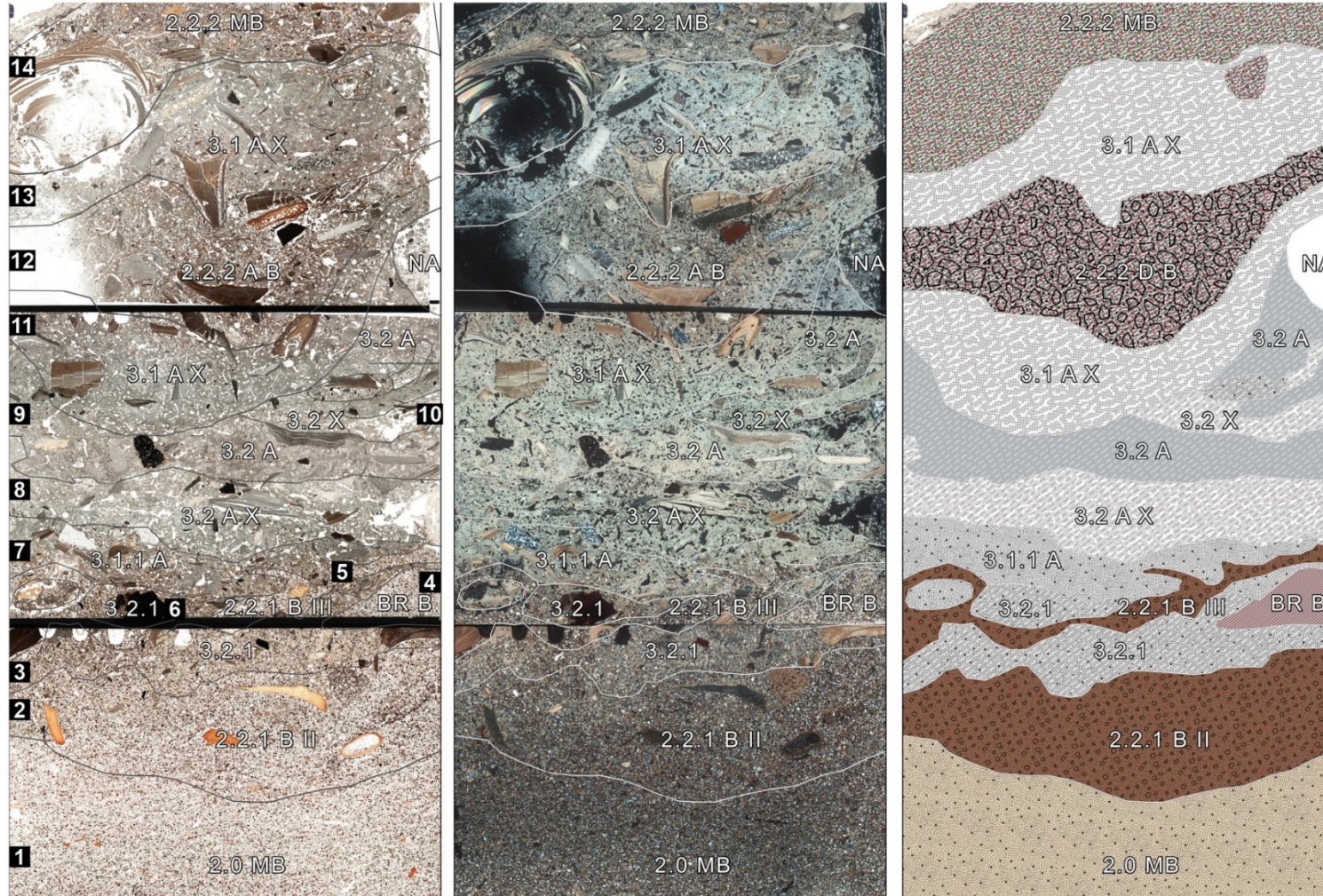
A 3.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.3 (BBC-13-10 and 11).



A 3.2 Fluorescent coarse fraction and micromass in M1 phase (BBC-13-10 and 11).

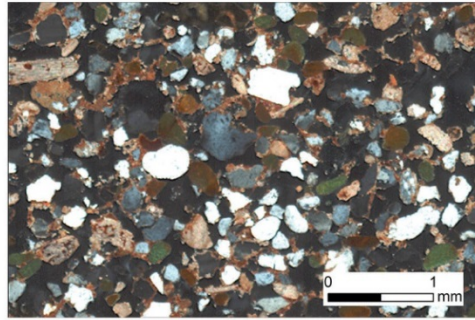
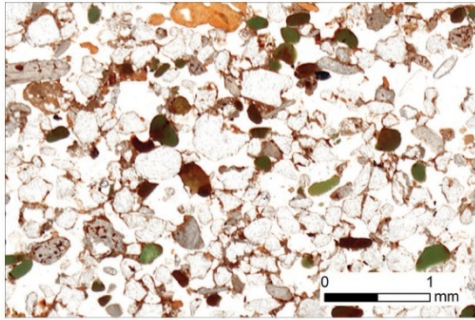
(A) Thin section scan of BBC-13-10 and 11 (PPL). Note that while the microfacies rich in anthropogenic coarse fraction (B,C and E) contains no fluorescent micromass, but occasional fluorescent bone fragments, microfacies (D) dominated by reworked, quartz-rich sand contains a higher content of fluorescent micromass.

TS ID: TOP: BBC_13_14_A, Middle: BBC_13_14_B, Base: BBC_13_14_C

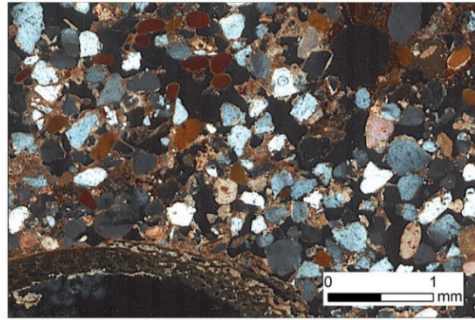
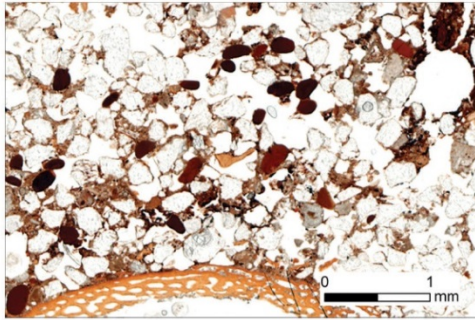


A.4. BBC-13-14: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

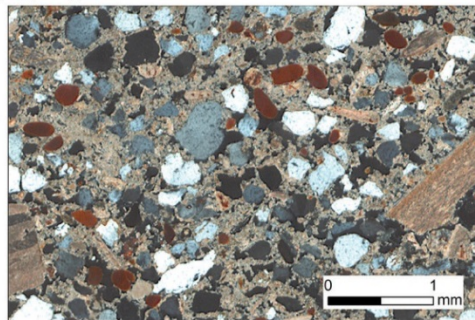
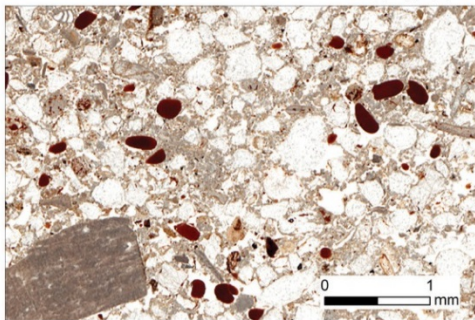
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



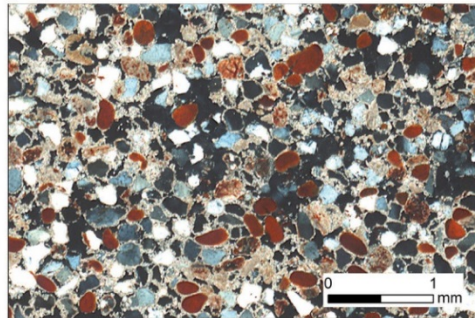
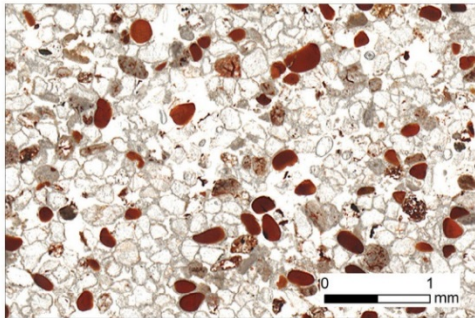
BBC_13_14_MFU_01_MFT_2.0 MB



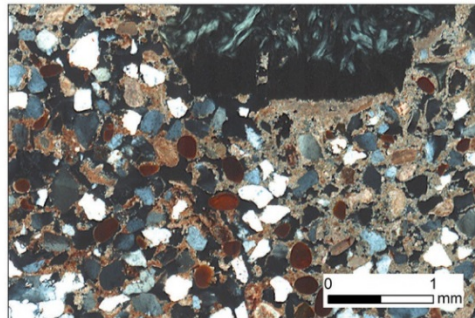
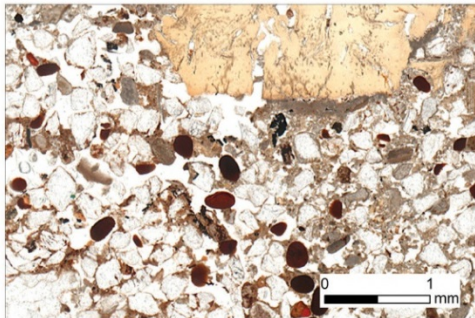
BBC_13_14_MFU_02_MFT_2.2.1 B II



BBC_13_14_MFU_03_MFT_3.2.1



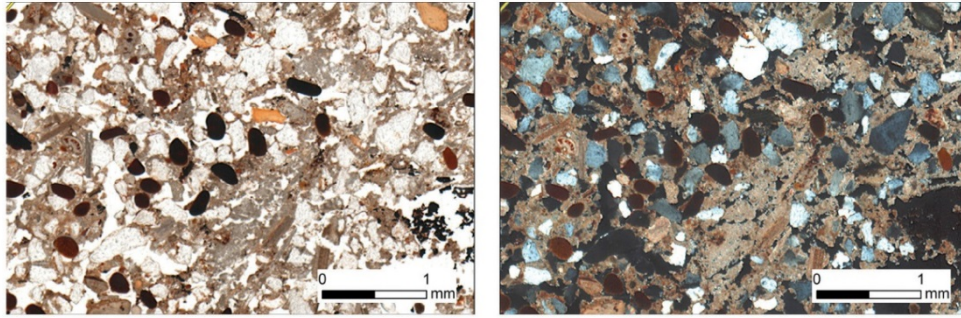
BBC_13_14_MFU_04_MFT_BR B



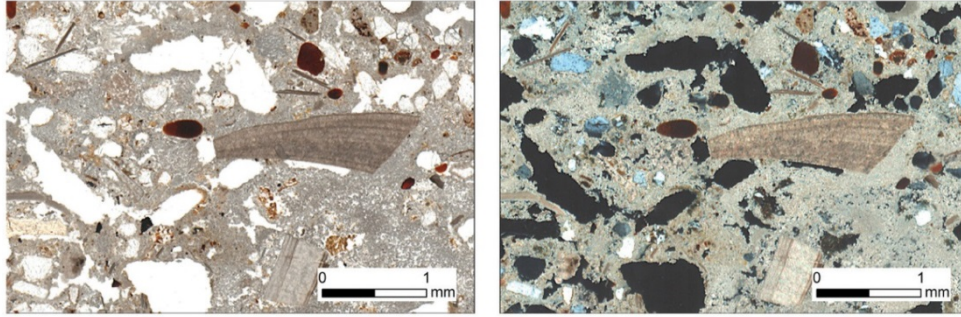
BBC_13_14_MFU_05_MFT_2.2.1 B III

A 4.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.4 (BBC-13-14).

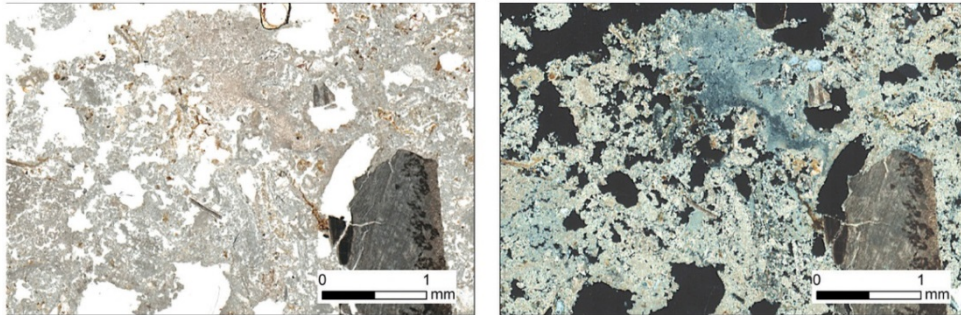
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



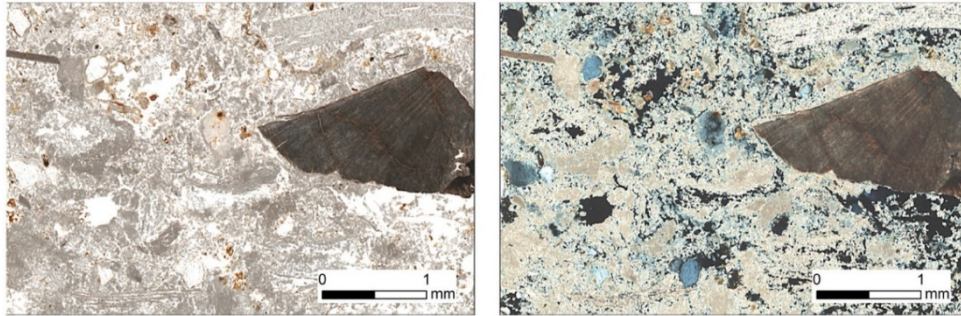
BBC_13_14_MFU_06_MFT_3.2.1



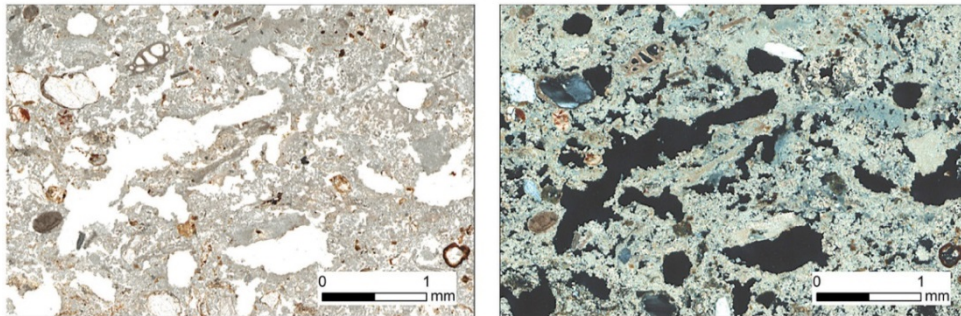
BBC_13_14_MFU_07_MFT_3.1.1 A



BBC_13_14_MFU_08_MFT_3.2 A X



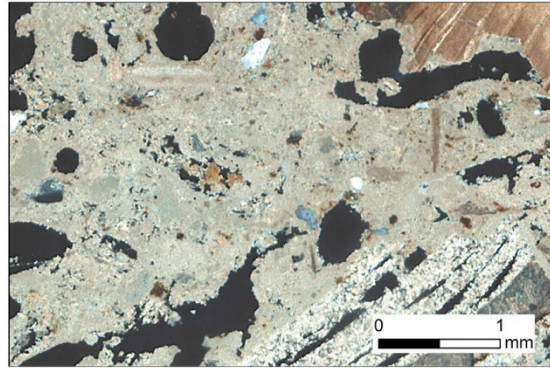
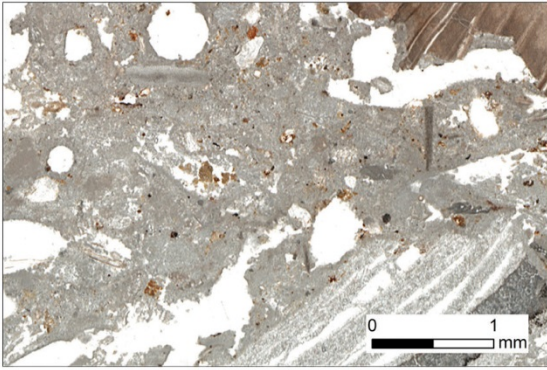
BBC_13_14_MFU_09_MFT_3.2 A



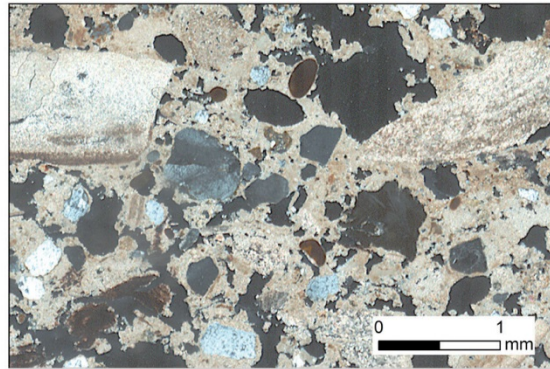
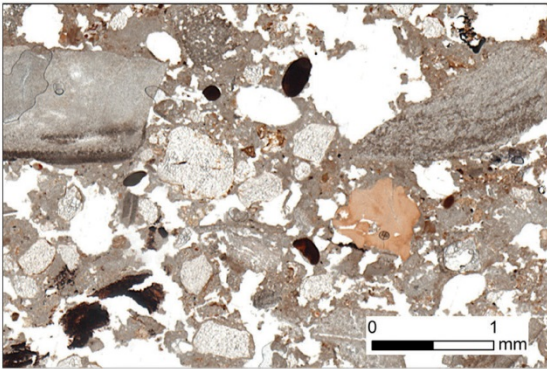
BBC_13_14_MFU_10_MFT_3.2 X

A 4.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.4 (BBC-13-14).

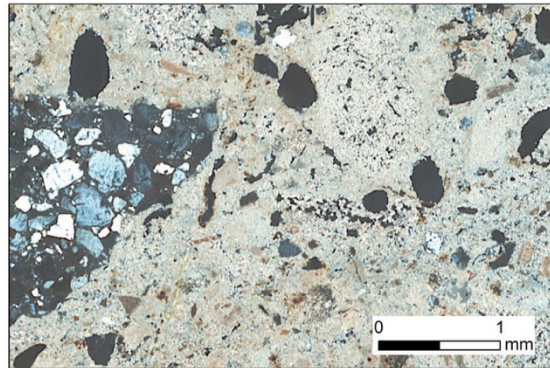
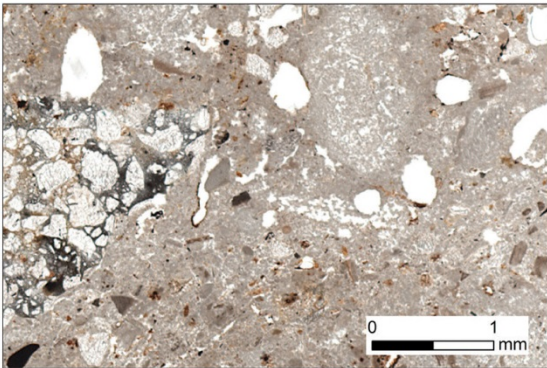
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



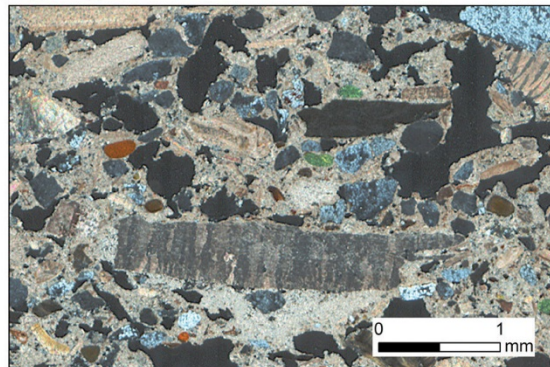
BBC_13_14_MFU_11_MFT_3.1 A X



BBC_13_14_MFU_12_MFT_2.2.2 A B

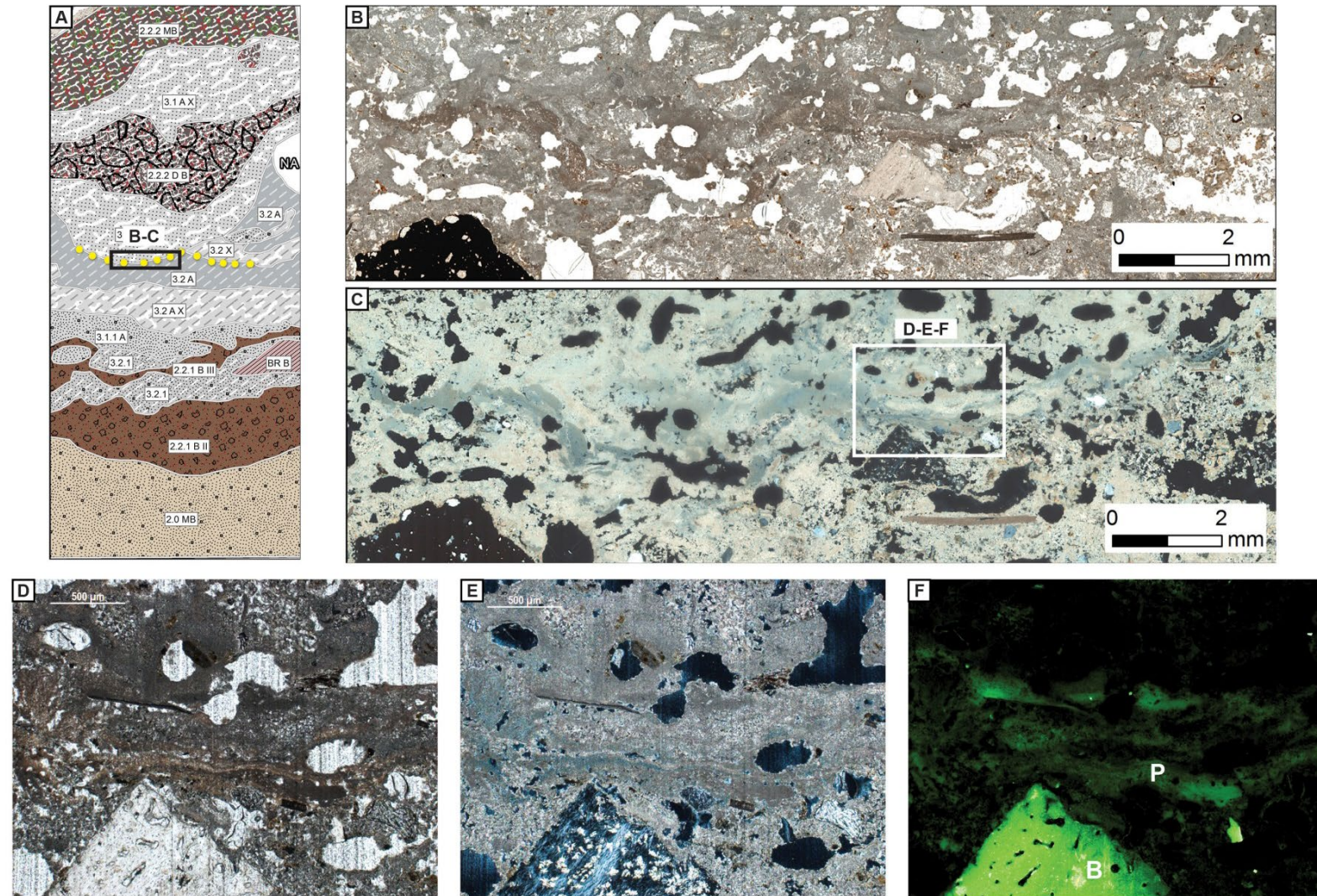


BBC_13_14_MFU_13_MFT_3.1 A X



BBC_13_14_MFU_14_MFT_2.2.2 MB

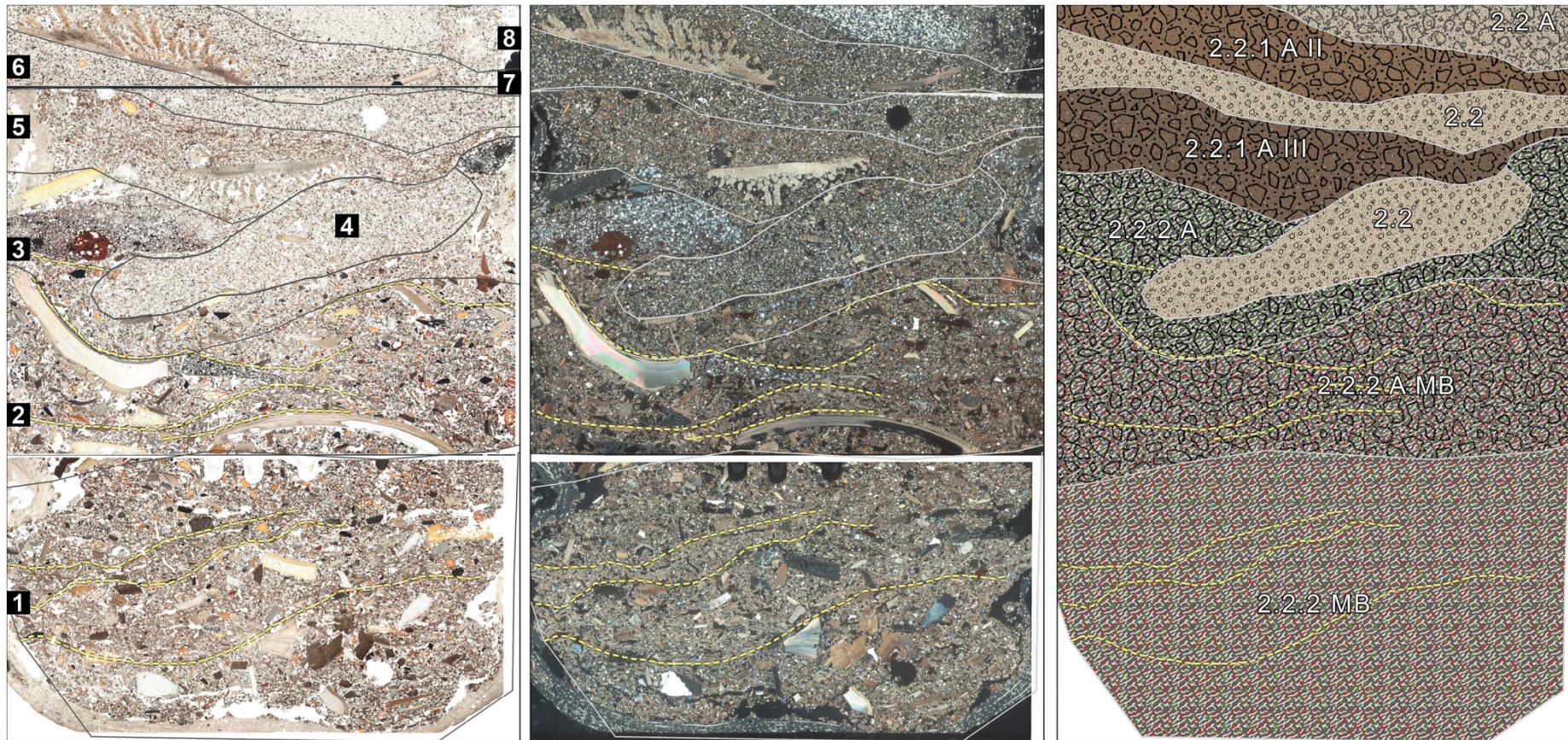
A 4.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.4 (BBC-13-14).



A 4.2 Phosphatized surfaces or zones within a multi-stacked hearth feature (BBC-13-14).

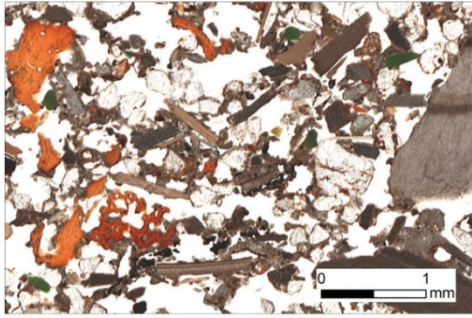
(A) Dotted yellow line indicates the distribution of phosphatized ash concentrations. Note that it follows the boundary between two different ash-rich microfacies; **(B/C)** Photomicrograph mosaic (PPL/XPL) of the yellow dotted line in A; **(D,E,F)** Close-up photomicrographs (XPL, PPL and Fluorescent) showing the micro-laminated phosphatized (P) ash and bone fragment (B).

TS ID: Top: BBC_13_13_A (cut), Middle: BBC_13_13_B, Base: BBC_13_13_C

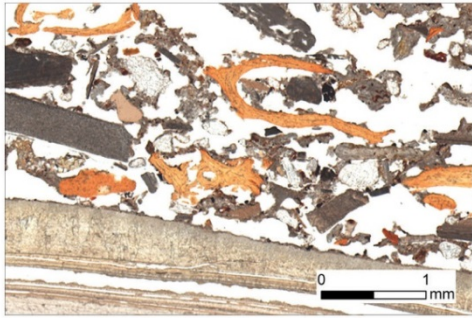
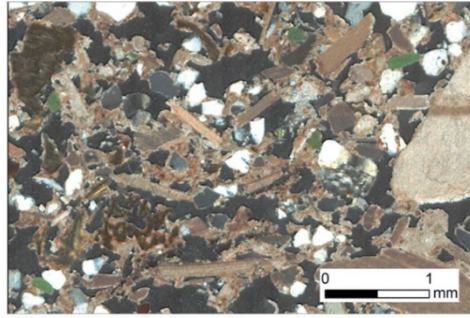


A.5. **BBC-13-13:** Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

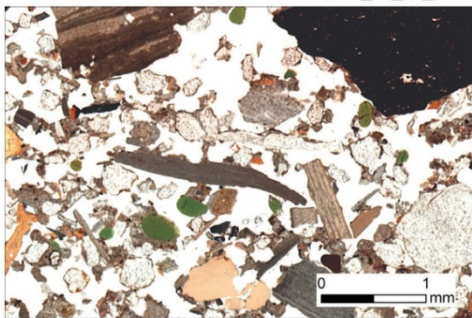
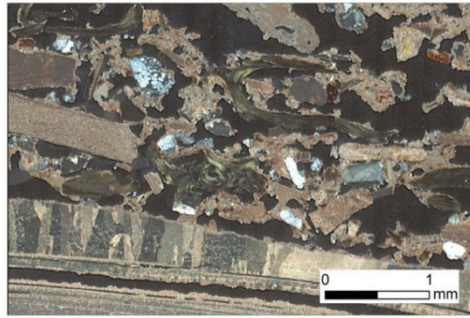
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



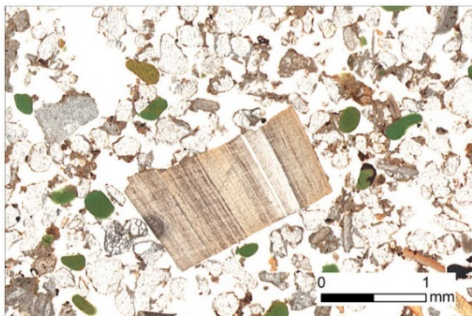
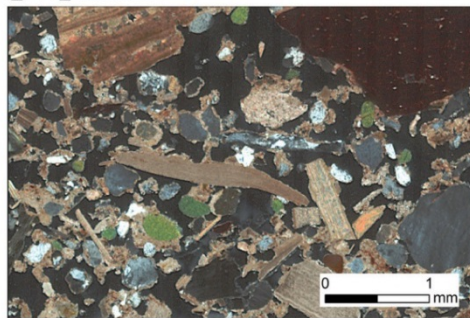
BBC_13_13_MFU_01_MFT_2.2.2 MB



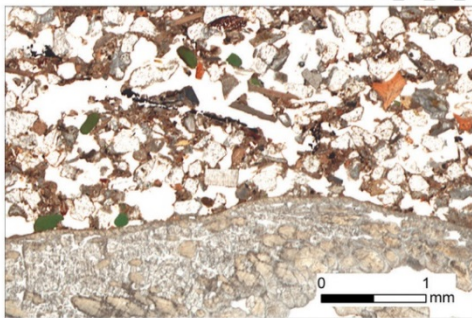
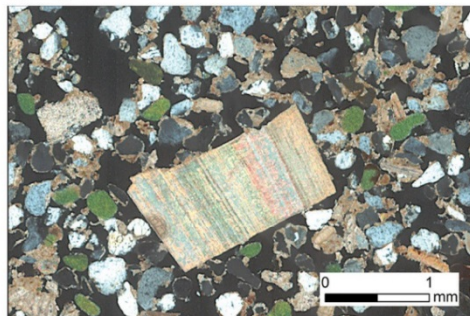
BBC_13_13_MFU_02_MFT_2.2.2 A MB



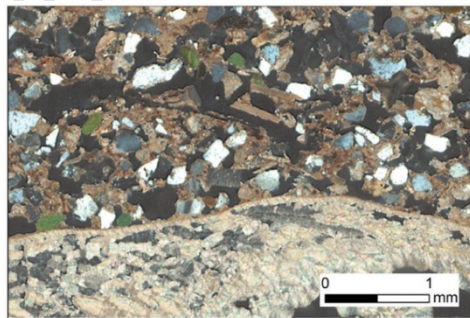
BBC_13_13_MFU_02_MFT_2.2.2 A UB



BBC_13_13_MFU_04_MFT_2.2

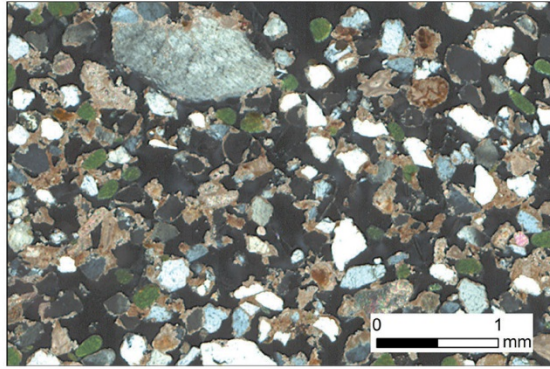
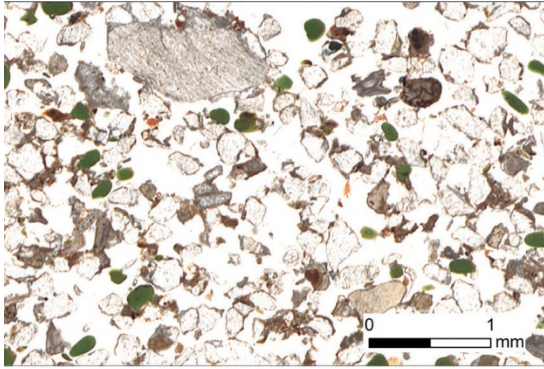


BBC_13_13_MFU_05_MFT_2.2.1 A III

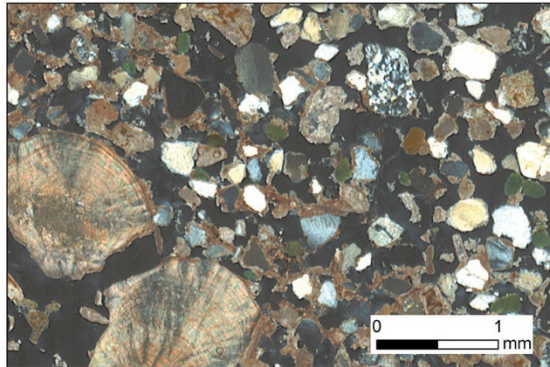
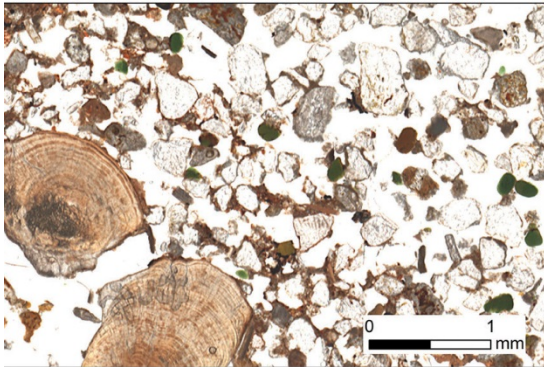


A 5.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.5 (BBC-13-13).

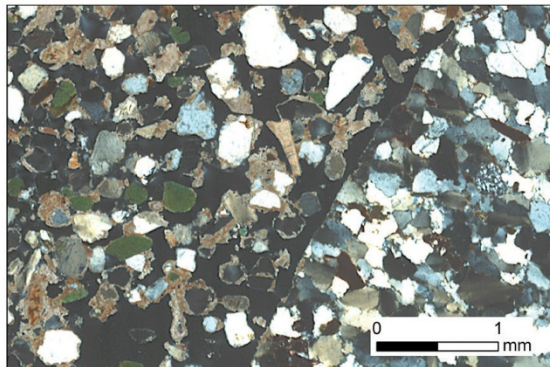
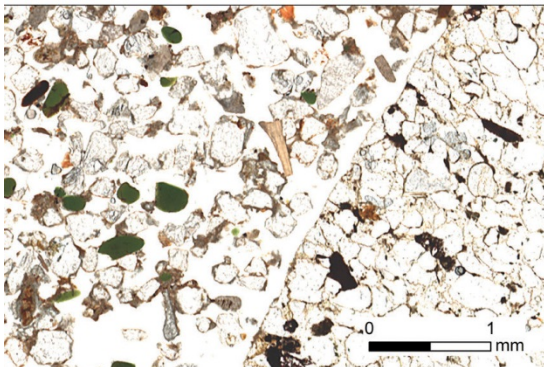
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



BBC_13_13_MFU_06_MFT_2.2



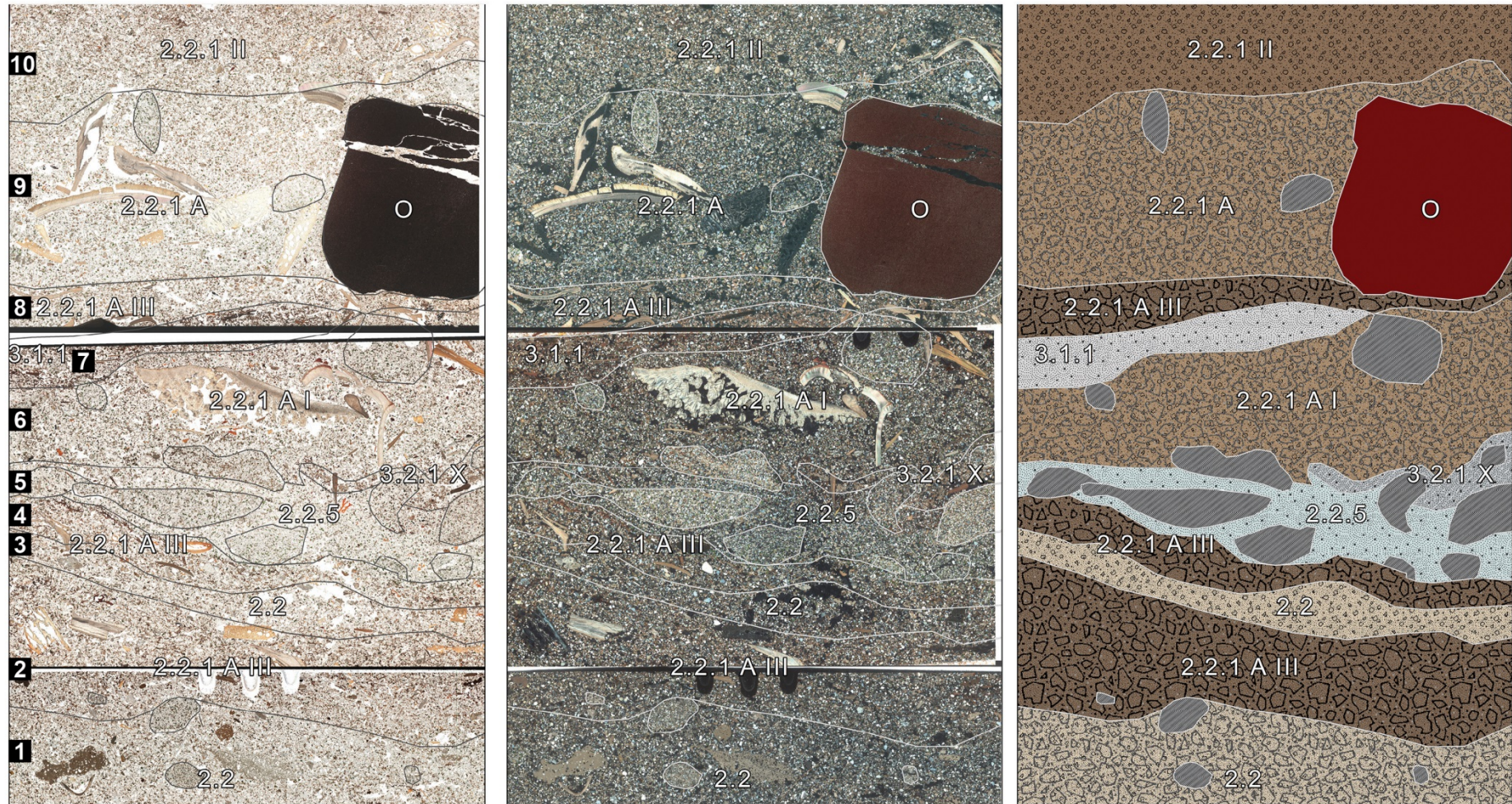
BBC_13_13_MFU_7_MFT_2.2.1 A II



BBC_13_13_MFU_08_MFT_2.2 A

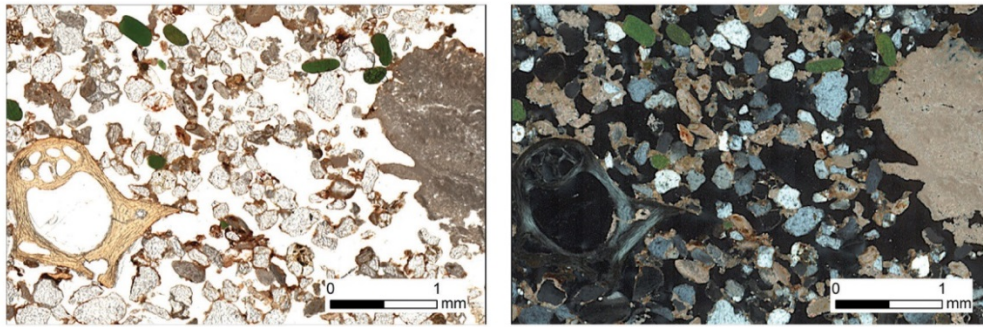
A 5.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.5 (BBC-13-13).

TS ID: TOP: BBC_13_16_A, Middle: BBC_13_16_B, Base: BBC_13_16_C (cut)

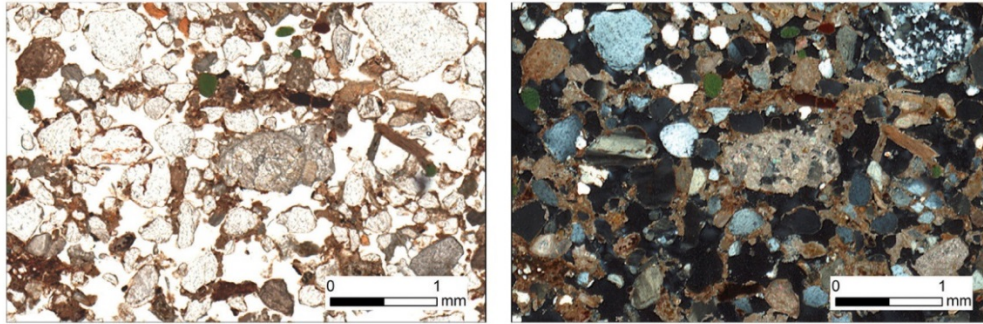


A.6. BBC-13-16: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

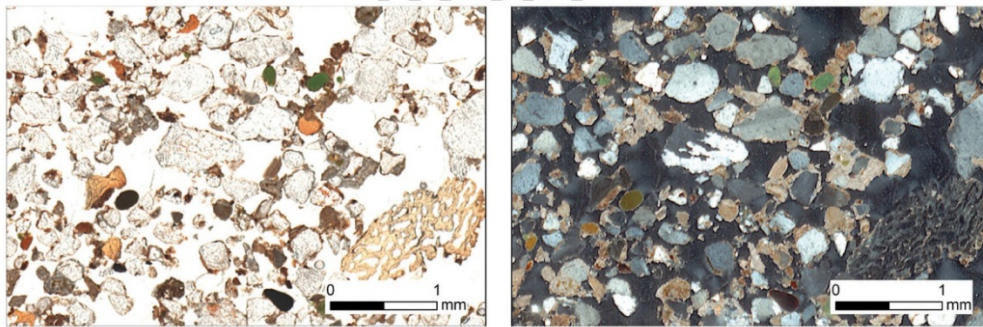
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



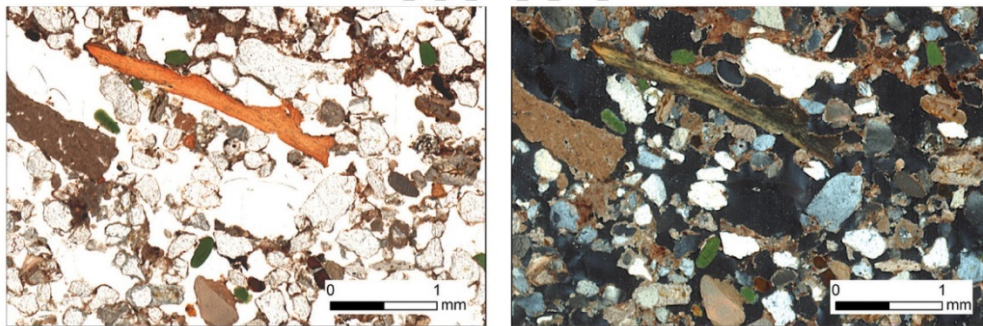
BBC_13_16_MFU_01_MFT_2.2



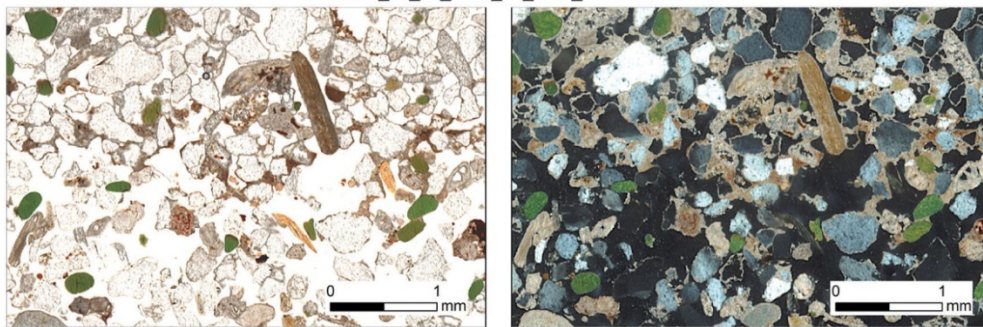
BBC_13_16_MFU_02_MFT_2.2.1 A III



BBC_13_16_MFU_03_MFT_2.2



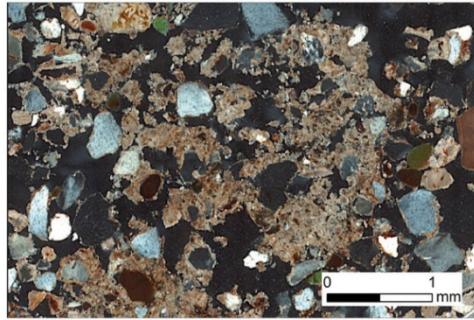
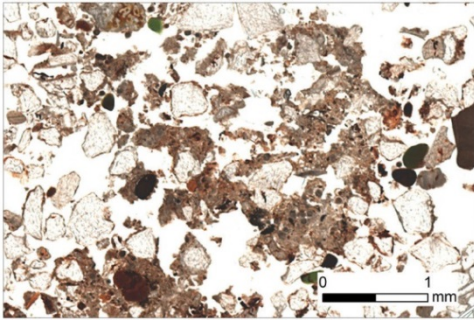
BBC_13_16_MFU_04_MFT_2.2.1 A III



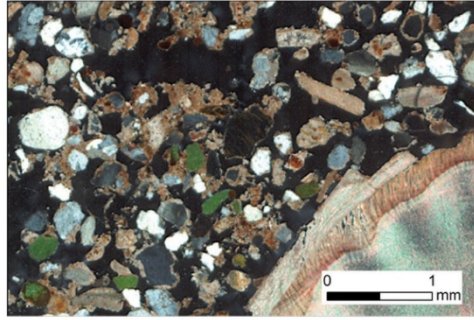
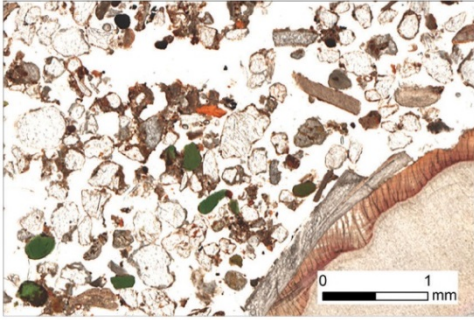
BBC_13_16_MFU_05_MFT_2.2.5

A 6.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.6 (BBC-13-16).

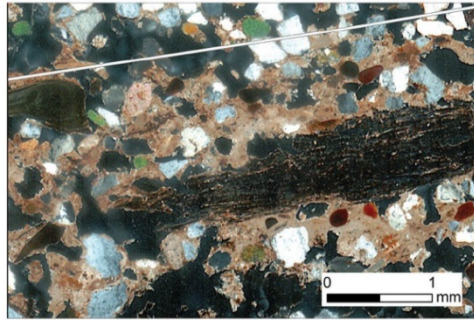
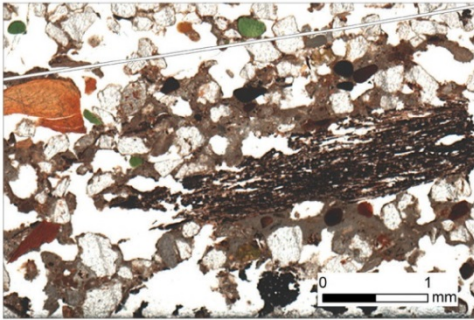
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



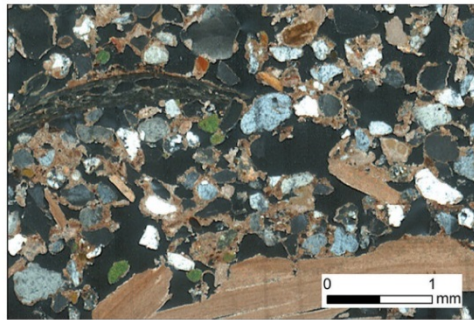
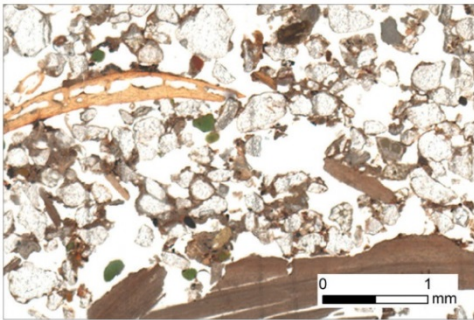
BBC_13_16_MFU_06_MFT_3.2.1 X



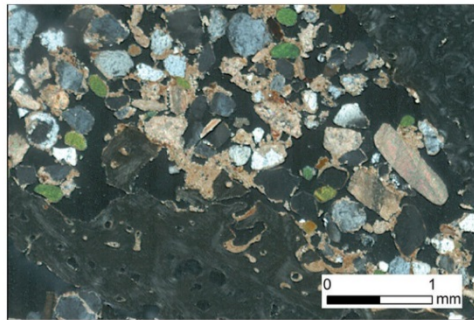
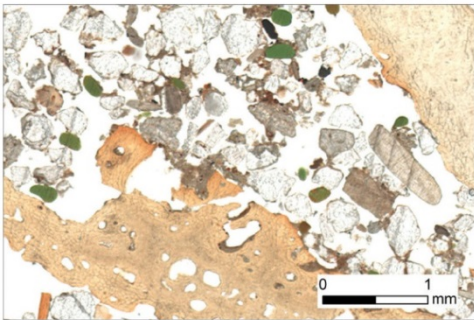
BBC_13_16_MFU_07_MFT_2.2. A I



BBC_13_16_MFU_08_MFT_3.1.1

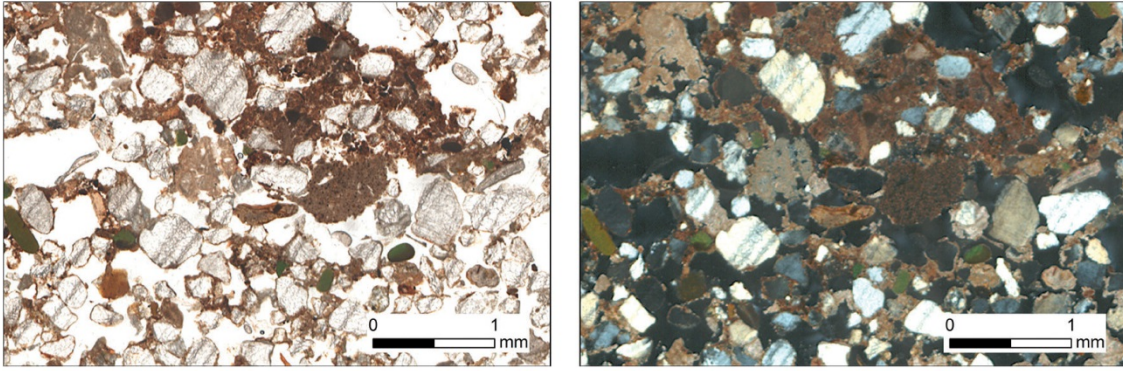


BBC_13_16_MFU_09_MFT_2.2.1 A III



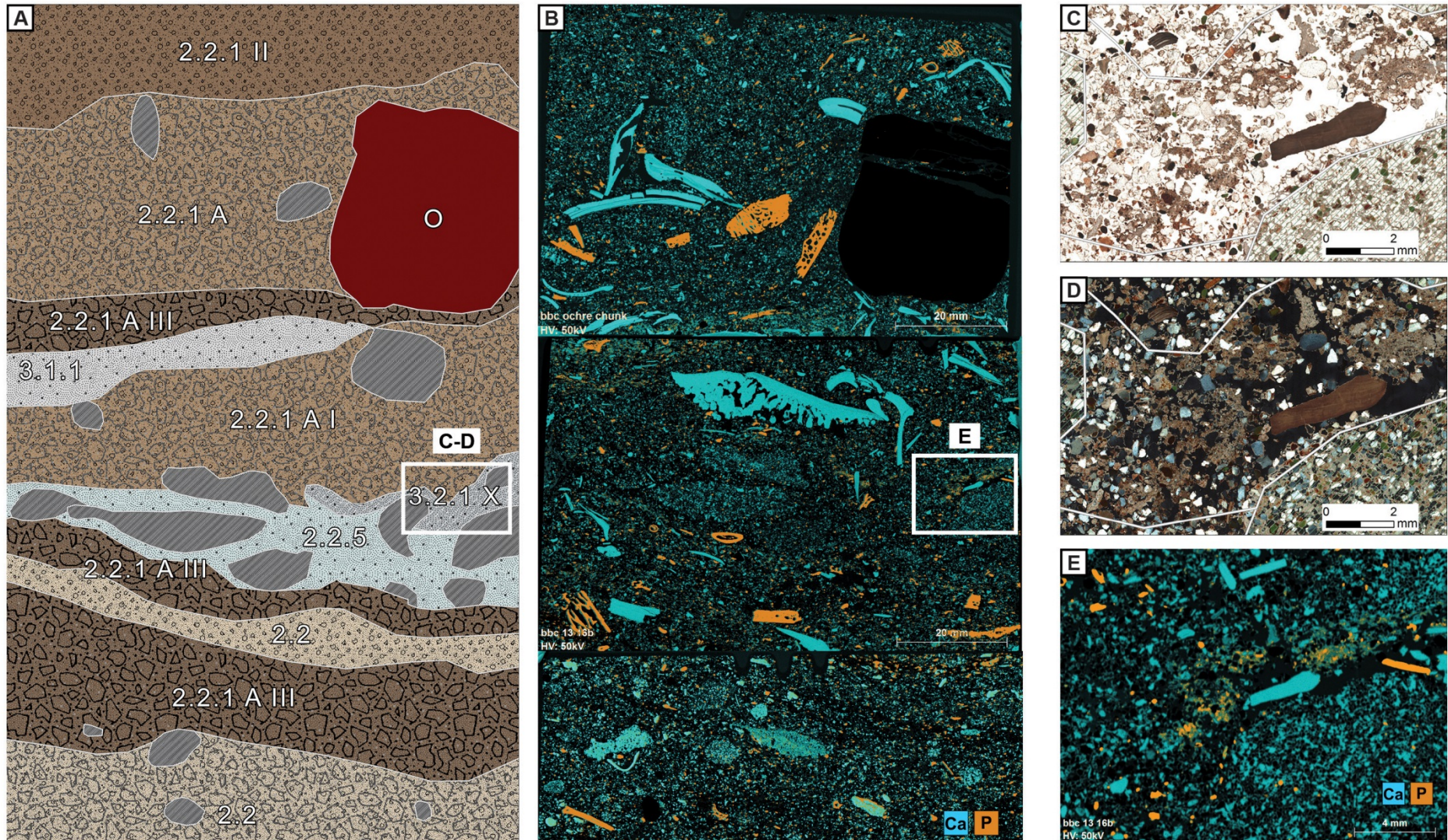
BBC_13_16_MFU_10_MFT_2.2.1 A

A 6.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.6 (BBC-13-16).



BBC_13_16_MFU_11_MFT_2.2.1 II

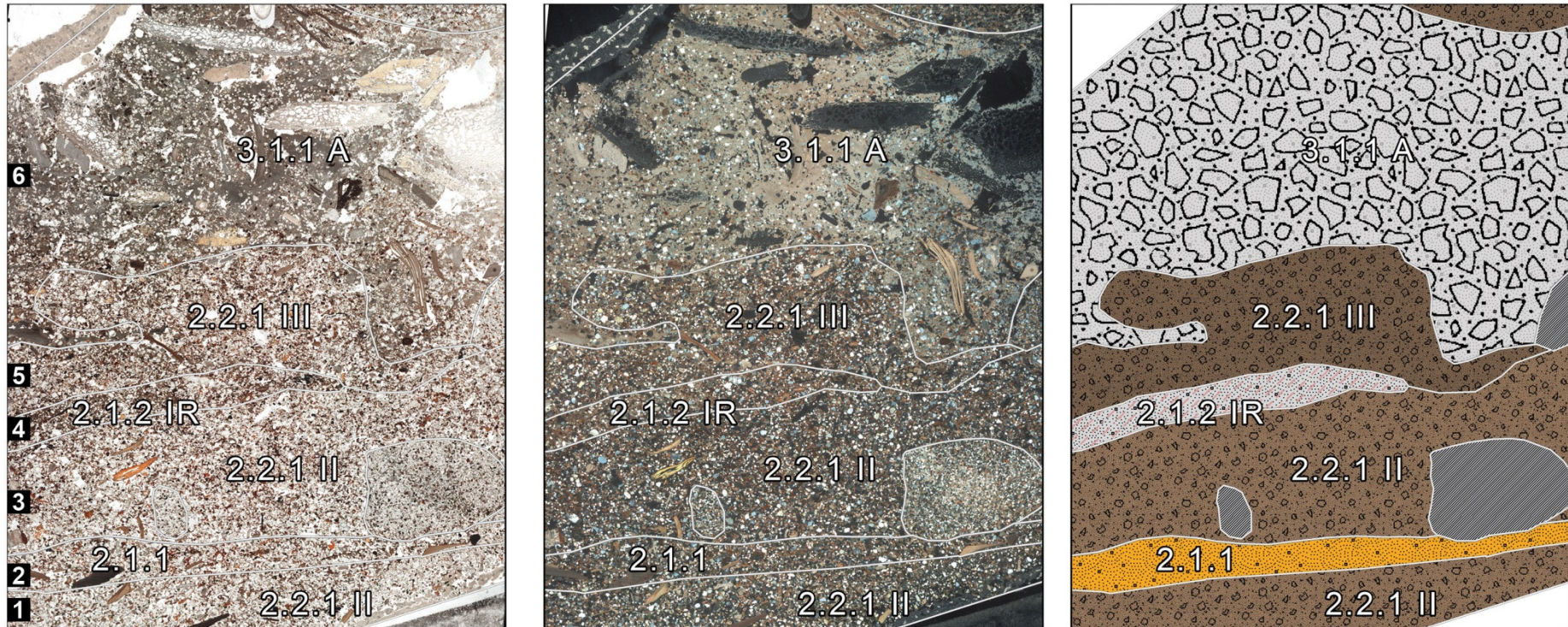
A 6.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.6 (BBC-13-16).



A 6.2 Distribution of phosphorus (P) and calcium (Ca) in BBC-13-16.

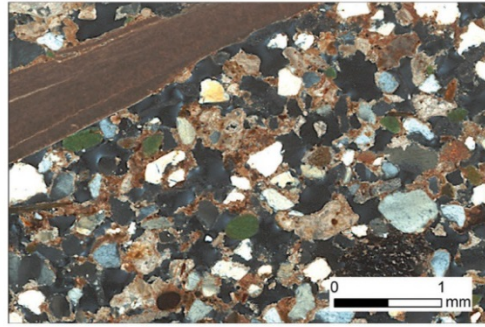
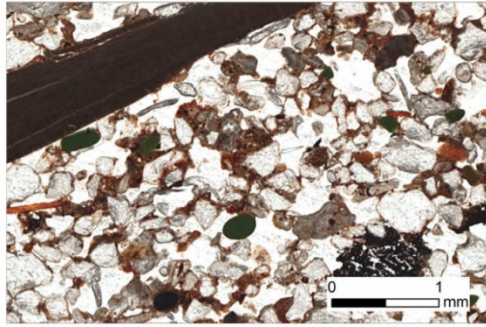
(A) Microfacies in BBC-13-16; **(B)** micro-XRF elemental maps showing the distribution of phosphorus (P) and calcium (CA); **(C,D,E)** Close-up of the white rectangles on A and B (XPL, PPL and elemental mapping of P and Ca).

TS ID: BBC_13_01

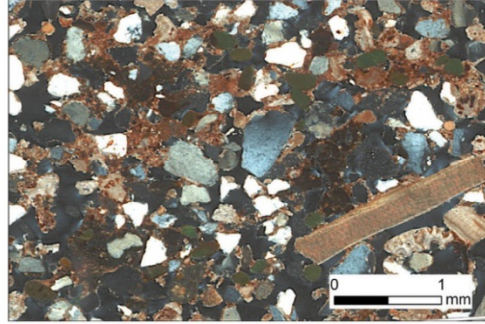
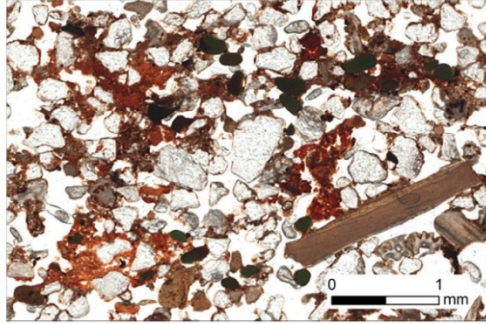


A.7. BBC-13-01: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

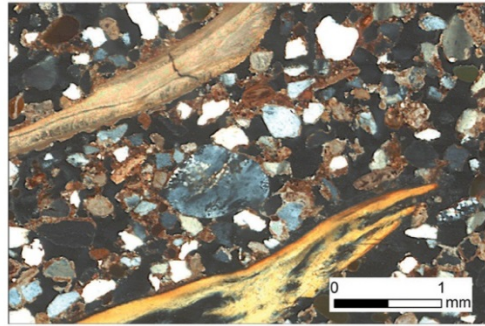
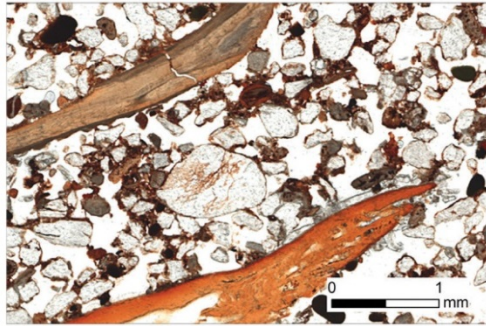
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



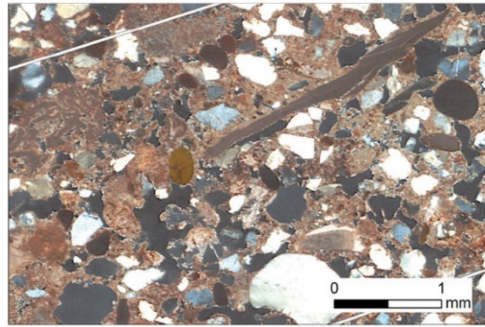
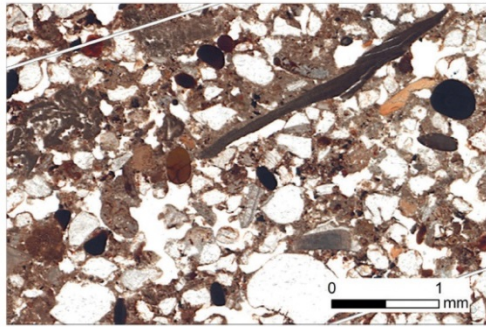
BBC_13_01_MFU_01_MFT_2.2.1 II



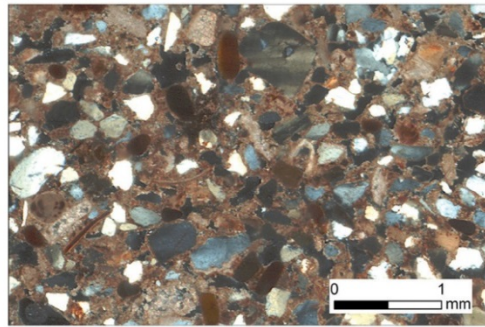
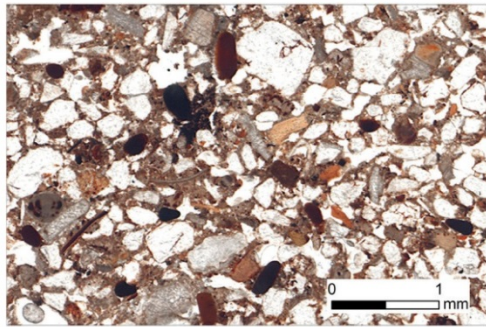
BBC_13_01_MFU_02_MFT_2.2.1 IR P



BBC_13_01_MFU_03_MFT_2.2.1 I

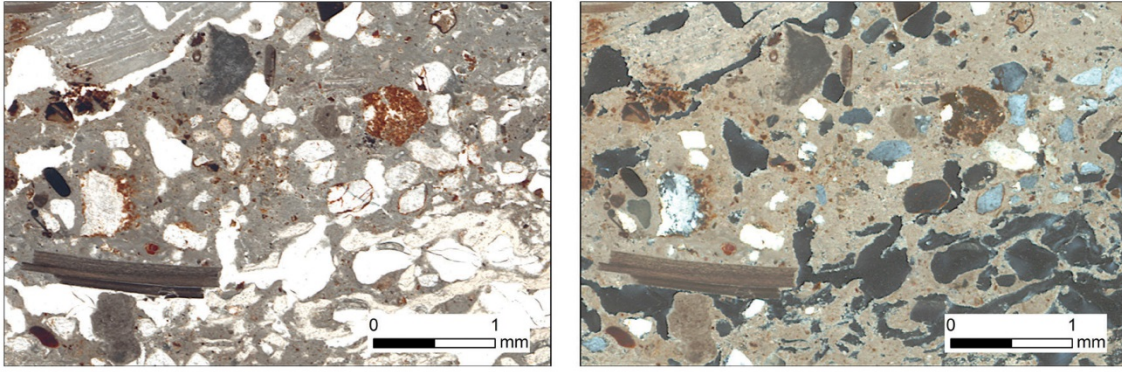


BBC_13_01_MFU_04_MFT_3.2.1 IR



BBC_13_01_MFU_05_MFT_2.1.1 III

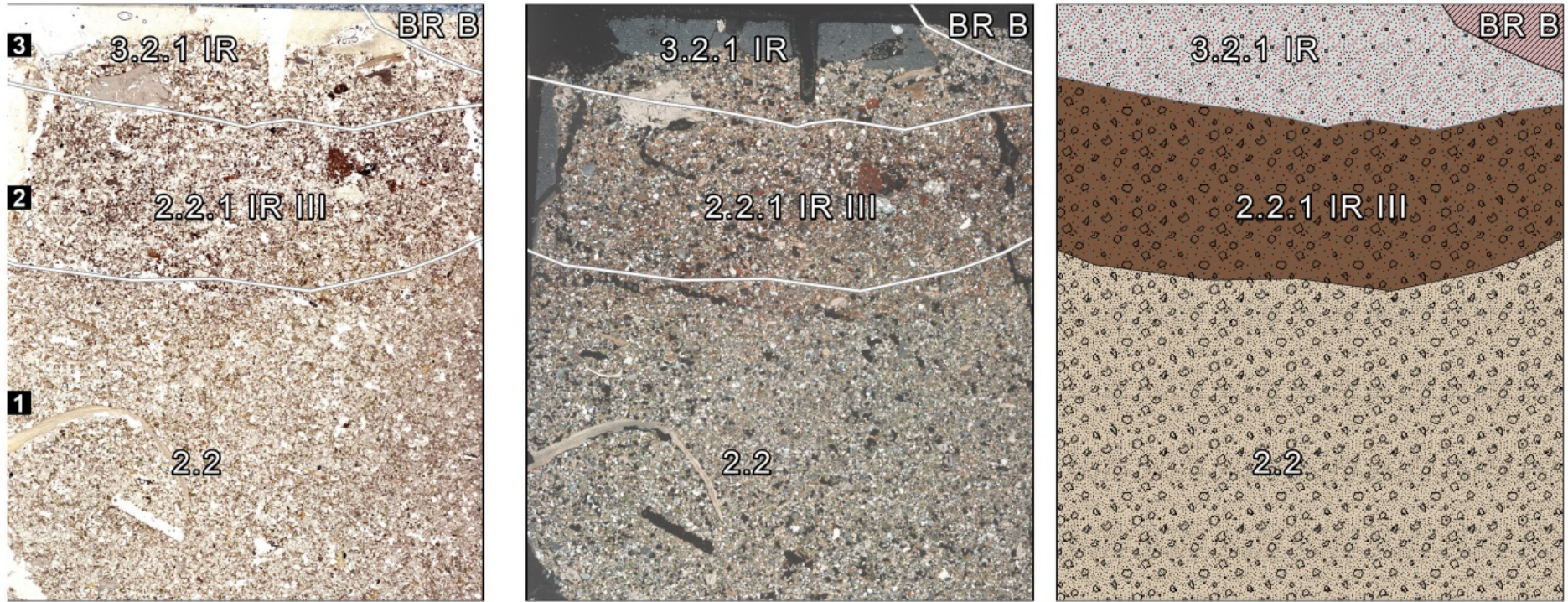
A 7.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.7 (BBC-13-16).



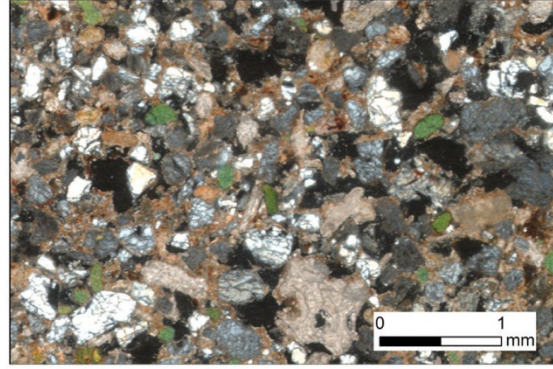
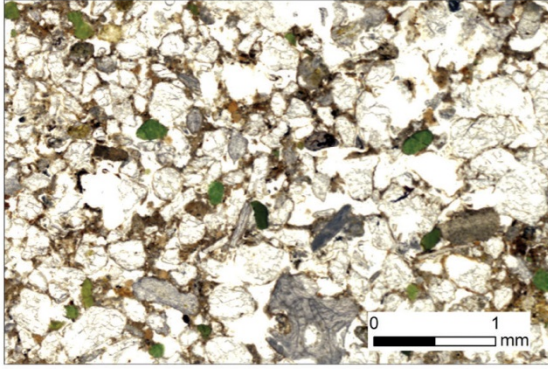
BBC_13_01_MFU_06_MFT_3.1.1 A

A 7.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.7 (BBC-13-01).

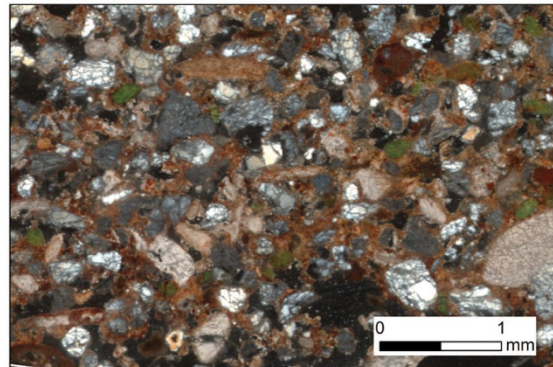
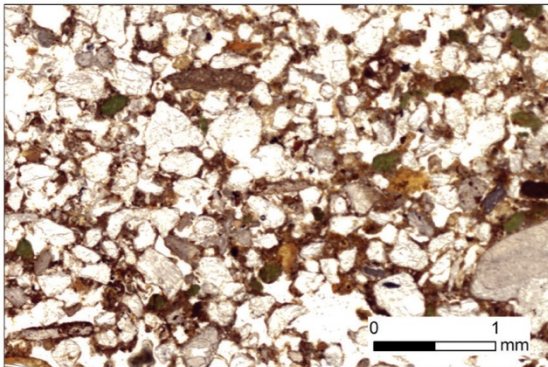
TS ID: BBC_00_17 A



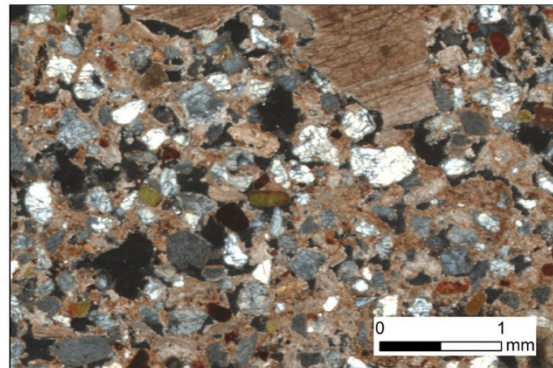
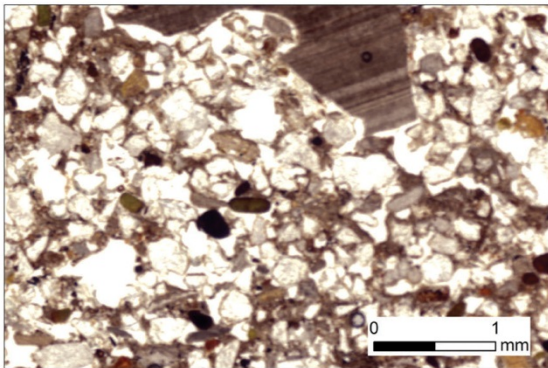
A.8. BBC-00-17A: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.



BBC_00_17_M1_MFU_01_MFT_2.2



BBC_00_17_M1_MFU_02_MFT_2.2.1 III IR



BBC_00_17_M1_MFU_03_MFT_3.2.1 IR

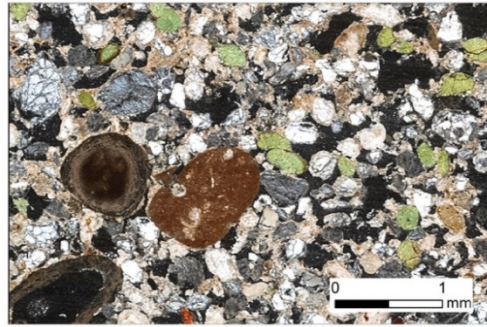
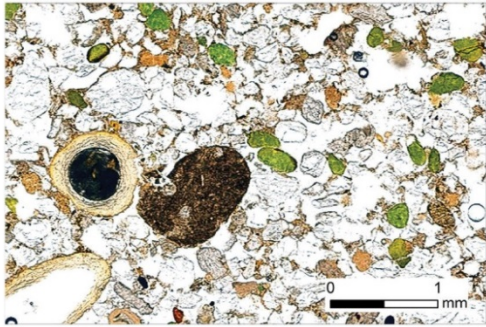
A 8.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.8 (BBC-13-17).

TS ID: Top: BBC_00_17 A (Cut), Middle: BBC_00_17 B, Base: BBC_00_17 C (cut)

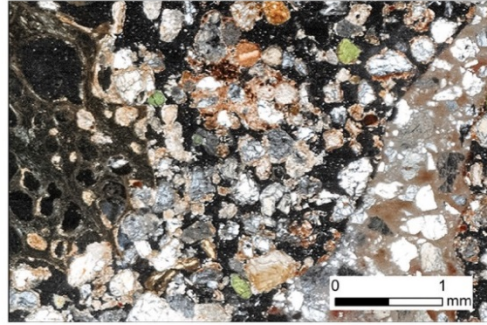
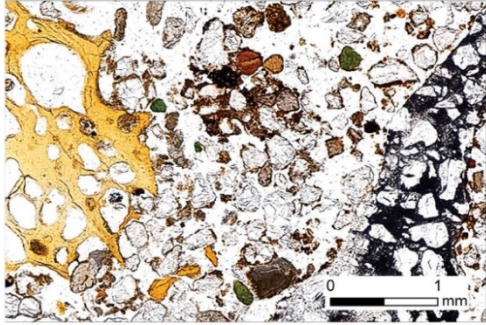


A.9. **BBC-00-17B-C:** Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

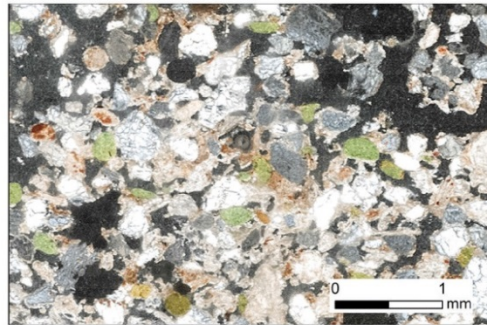
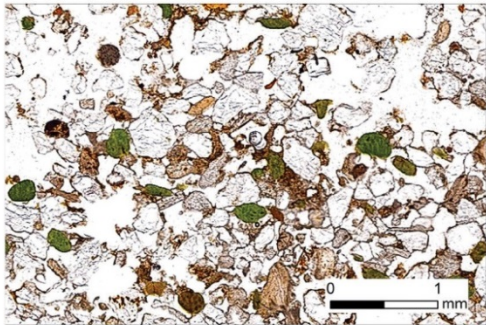
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



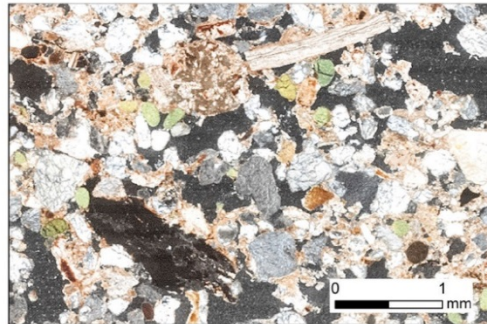
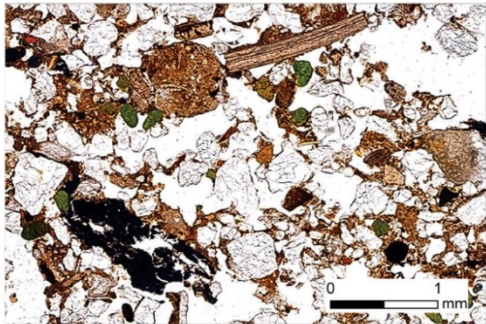
BBC_00_17_M2_MFU_01_MFT_2.2.1 I



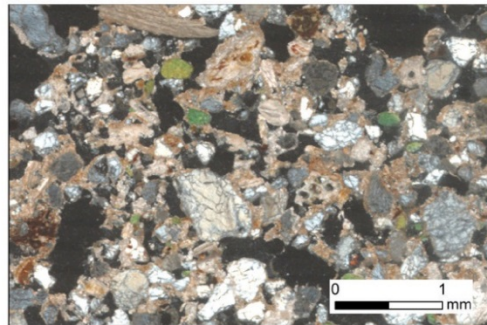
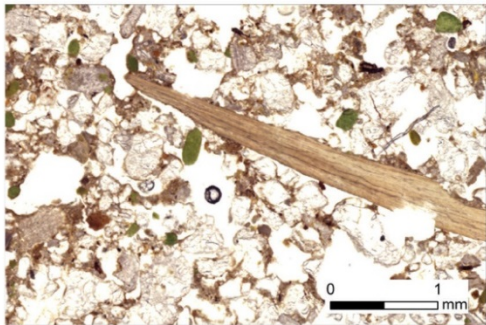
BBC_00_17_M2_MFU_02_MFT_2.2.1 A II



BBC_00_17_M2_MFU_03_MFT_2.5.5_2.2.1



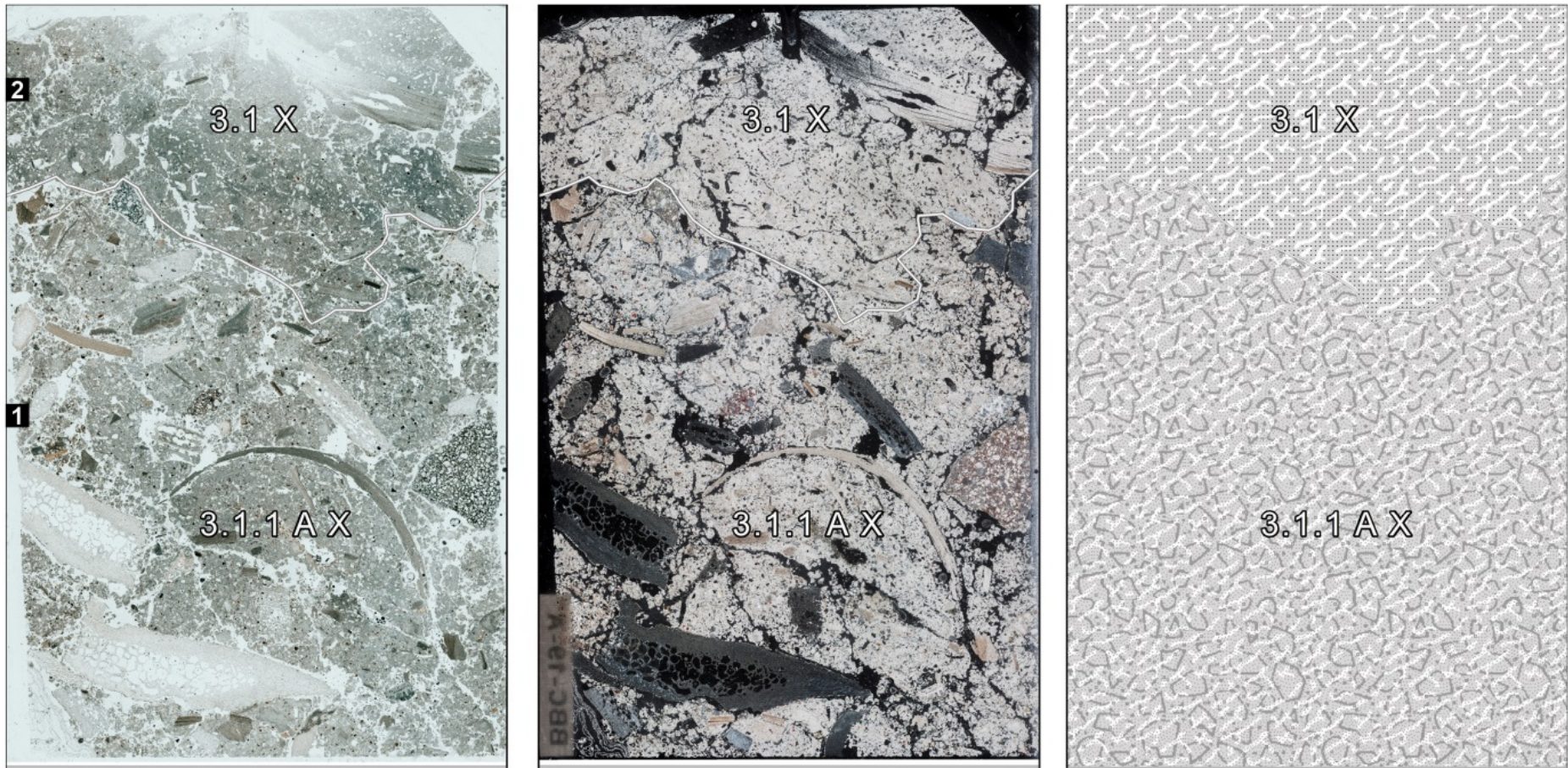
BBC_00_17_M2_MFU_04_MFT_2.2.1 A III



BBC_00_17_M2_MFU_05_MFT_2.2

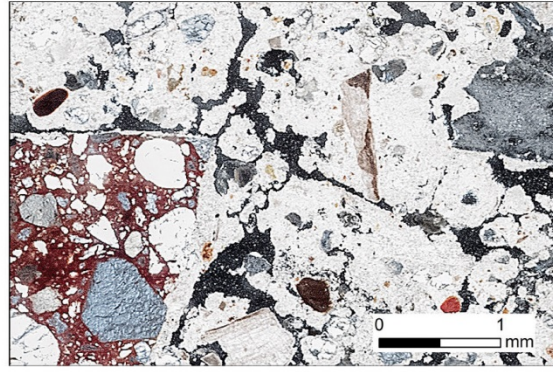
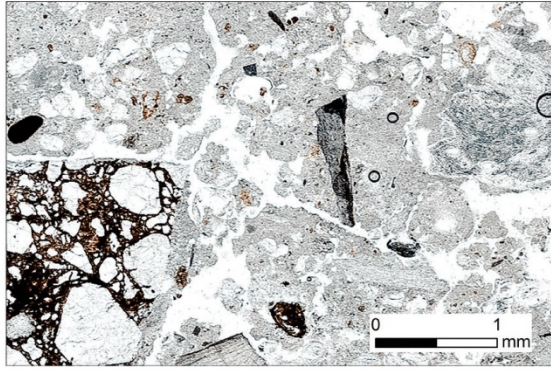
A 9.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.9 (BBC-00-17B-C).

TS ID: BBC_00_19

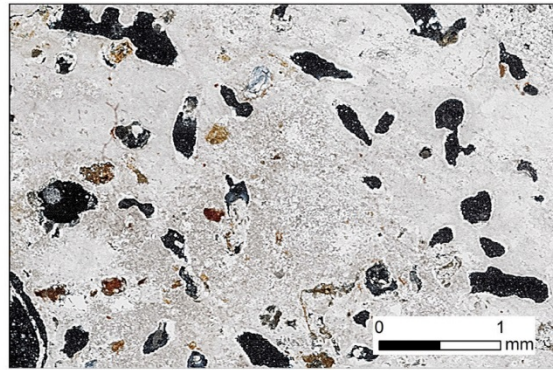
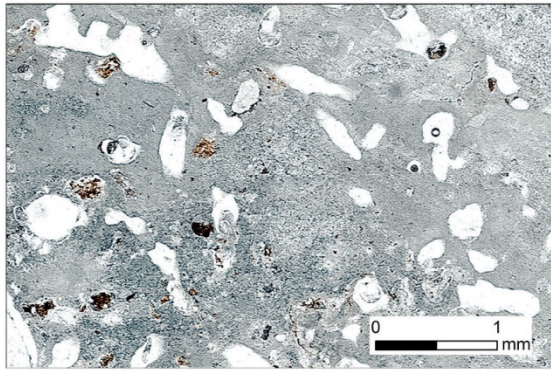


A.10. BBC-00-19: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



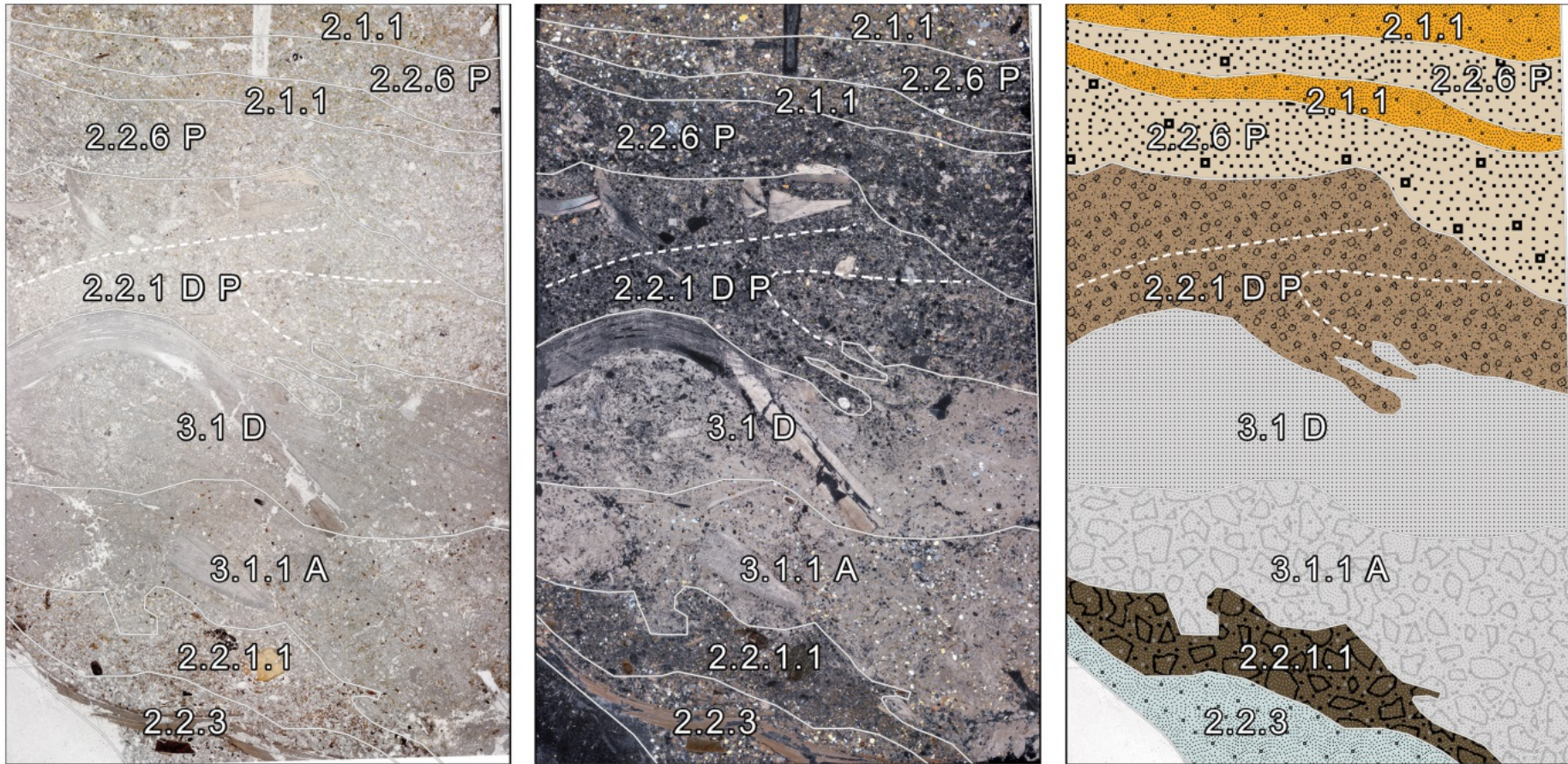
BBC_00_19_MFU_01_MFT_3.1.1 A X



BBC_00_19_MFU_02_MFT_3.1.1 X

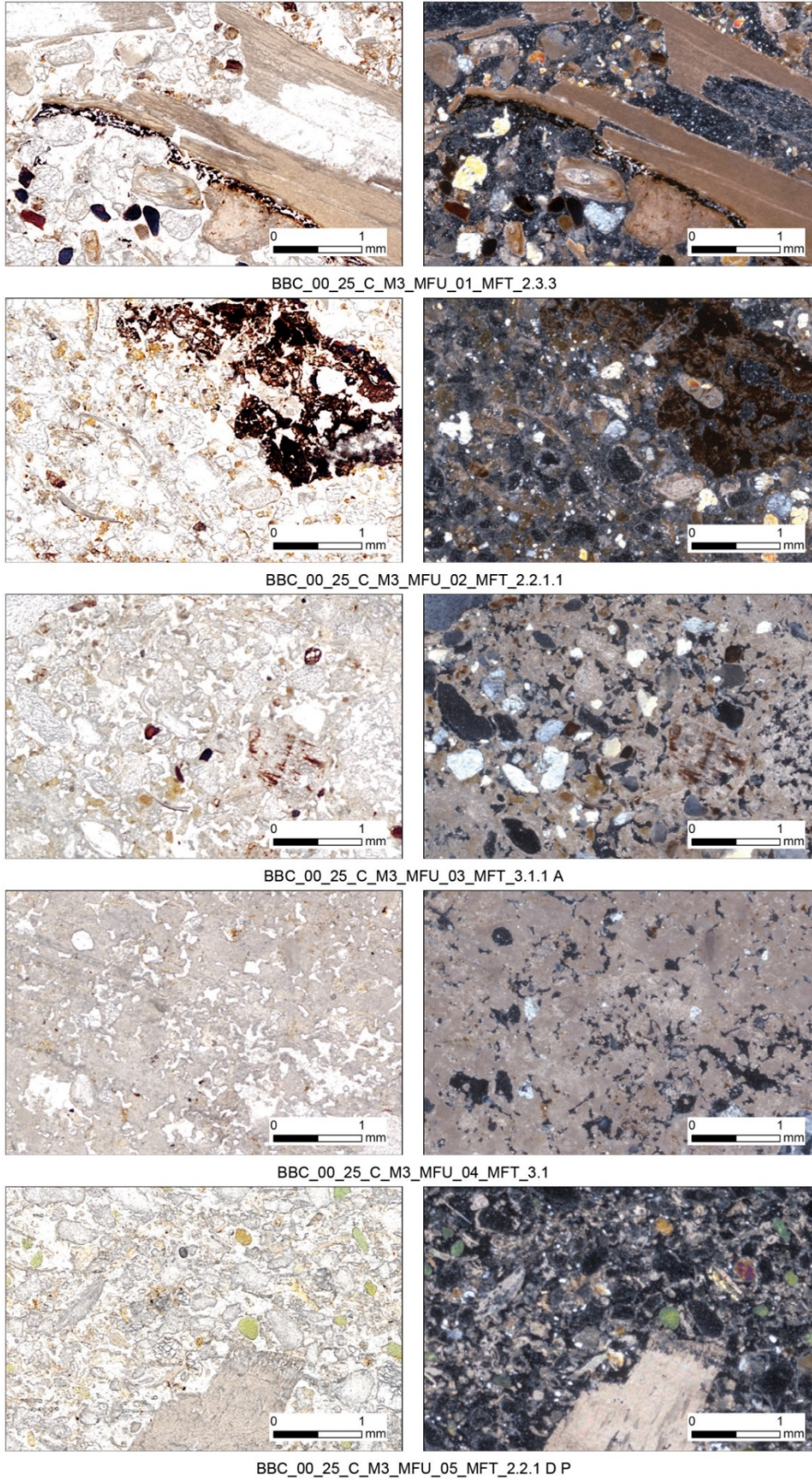
A 10.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.10 (BBC-00-19).

TS ID: Top: BBC_00_25-3_v2



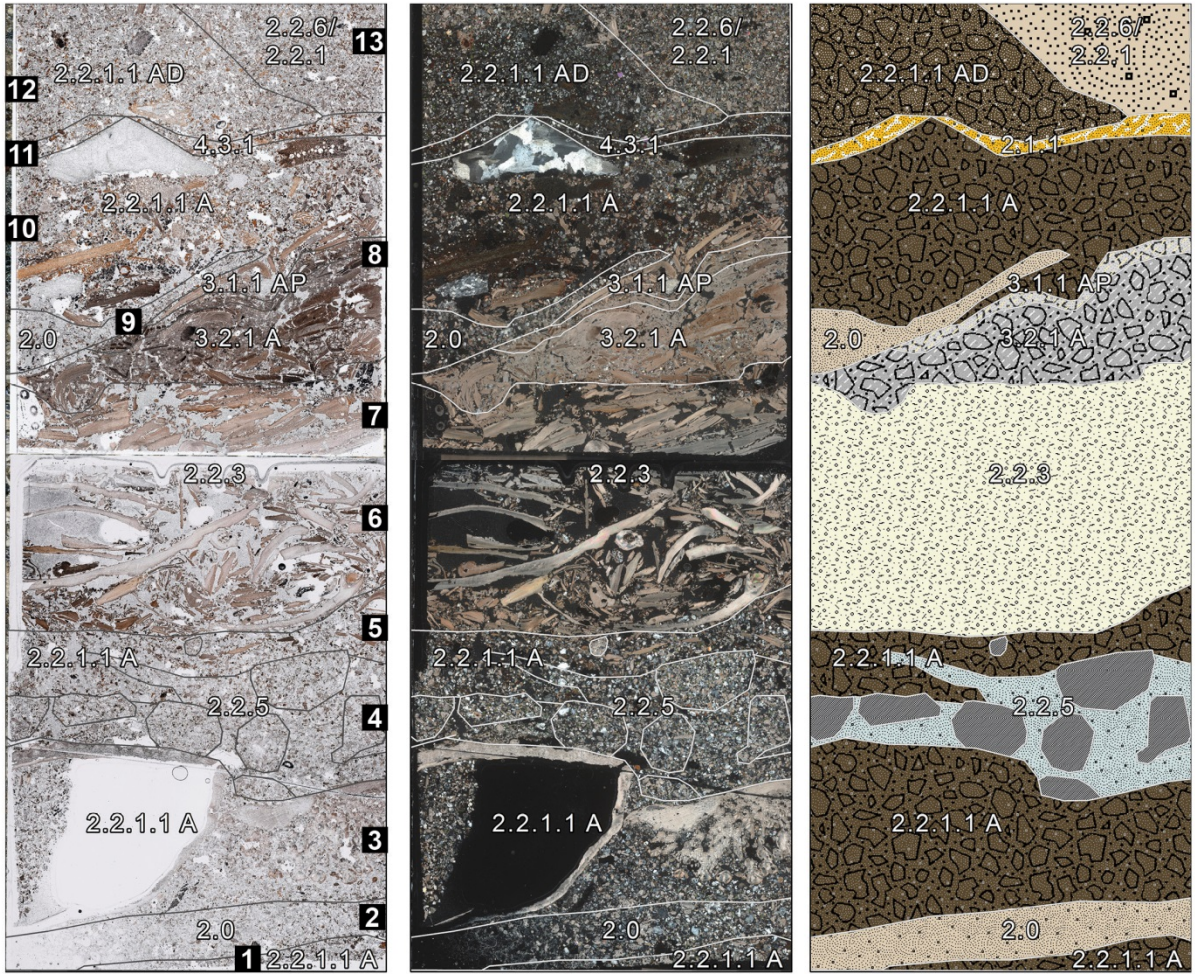
A.11. BBC-00-25-M3: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



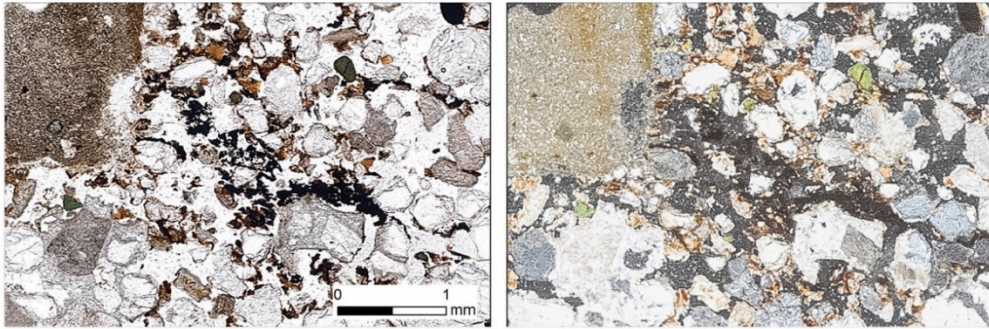
A 11.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.11 (BBC-00-25-M3).

TS ID: Top: BBC_00_25-2-B, Base: BBC_00_25-2-C

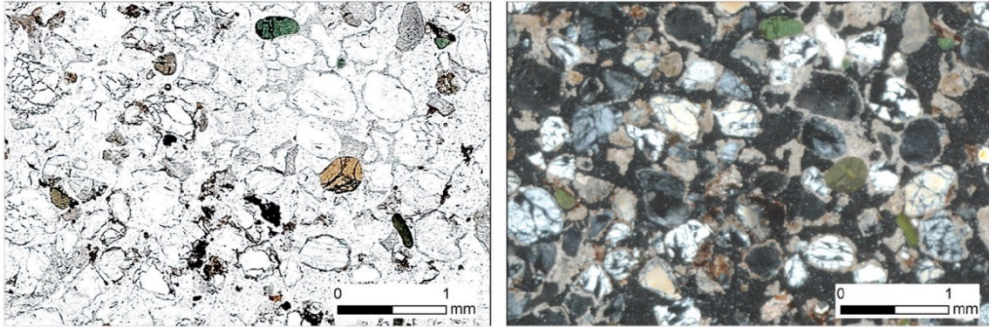


A.12. BBC-00-25-M2: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

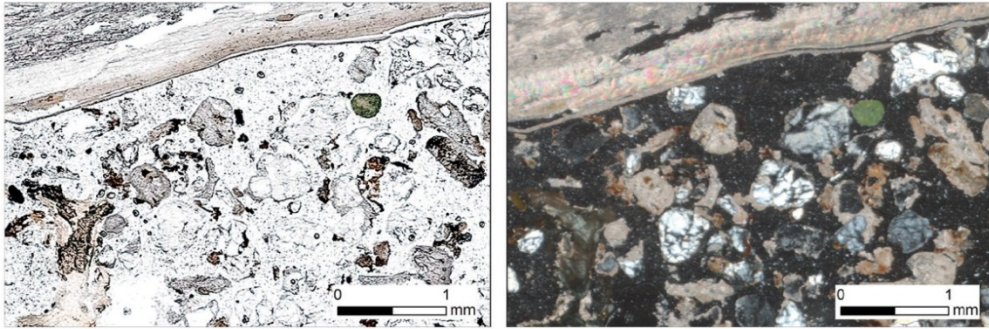
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



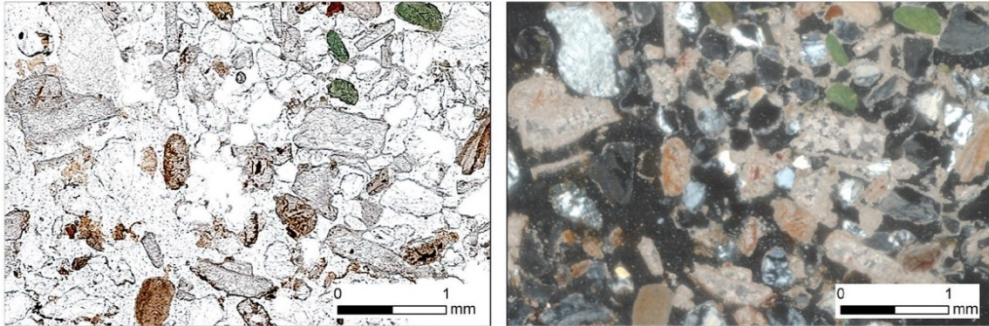
BBC_00_25_M2_MFU_01_MFT_2.2.1.1 A



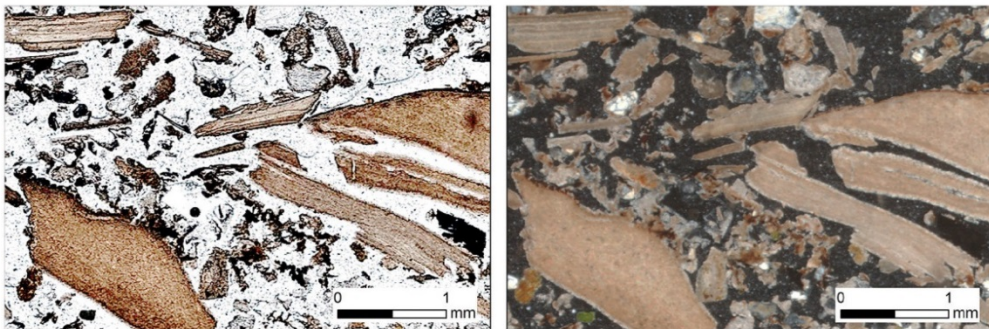
BBC_00_25_M2_MFU_02_MFT_2.0



BBC_00_25_M2_MFU_03_MFT_2.2.1.1 A



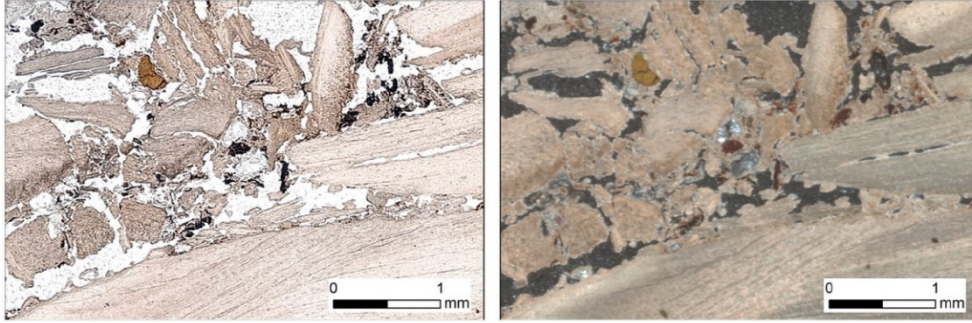
BBC_00_25_M2_MFU_04_MFT_2.5.5



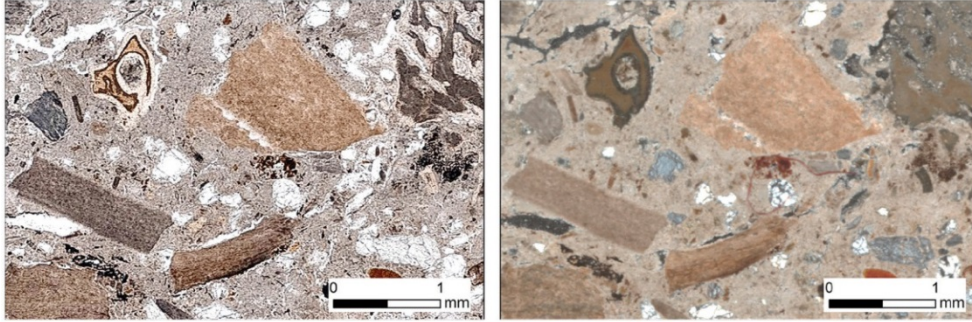
BBC_00_25_M2_MFU_05_MFT_2.2.1.1 A

A 12.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.12 (BBC-00-25-M2).

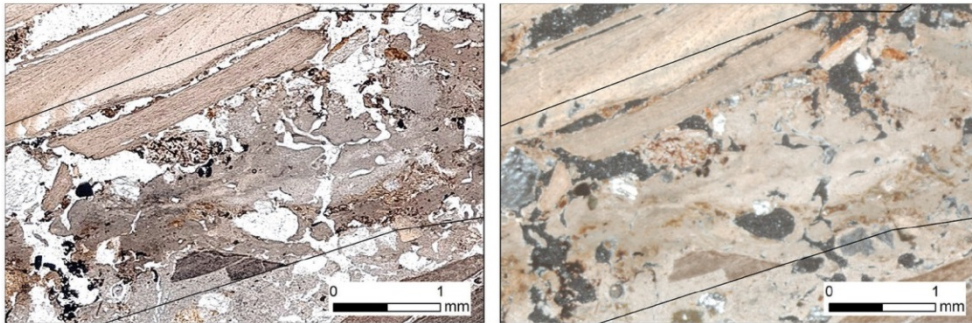
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



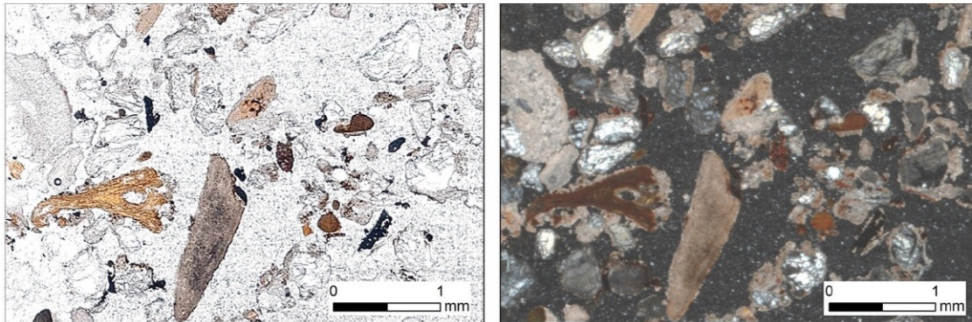
BBC_00_25_M2_MFU_06_MFT_2.2.3



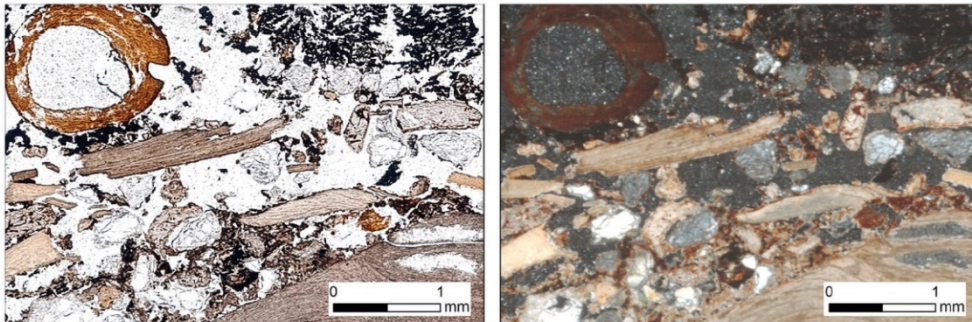
BBC_00_25_M2_MFU_07_MFT_3.2.1 A



BBC_00_25_M2_MFU_08_MFT_3.1.1 AP



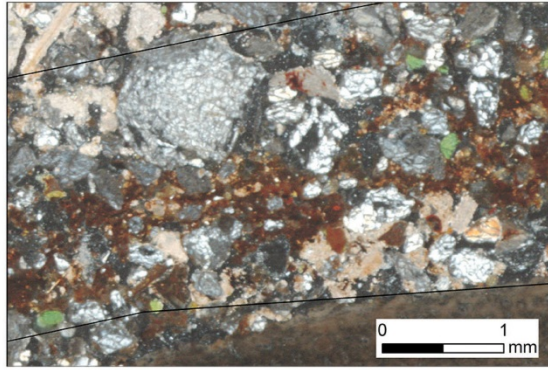
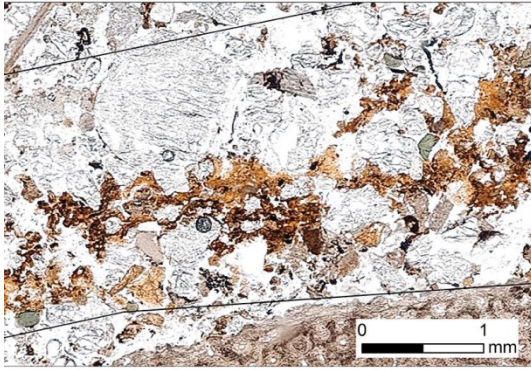
BBC_00_25_M2_MFU_09_MFT_2.0



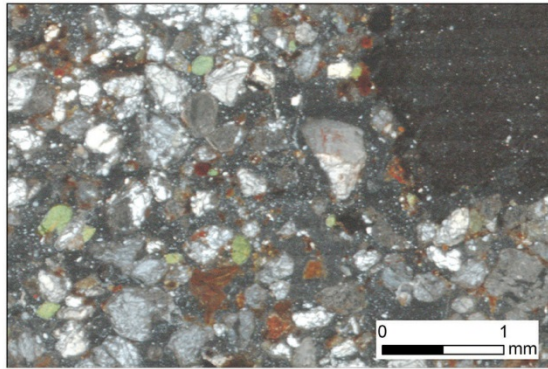
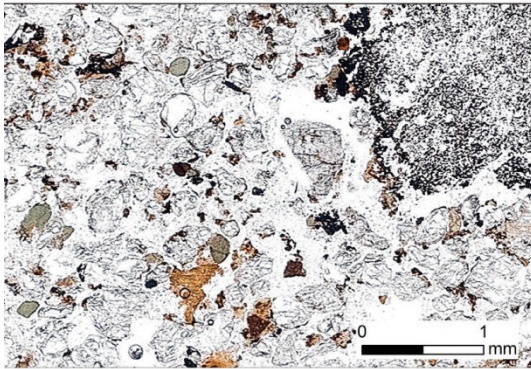
BBC_00_25_M2_MFU_10_MFT_2.2.1.1 A

A 12.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.12 (BBC-00-25-M2).

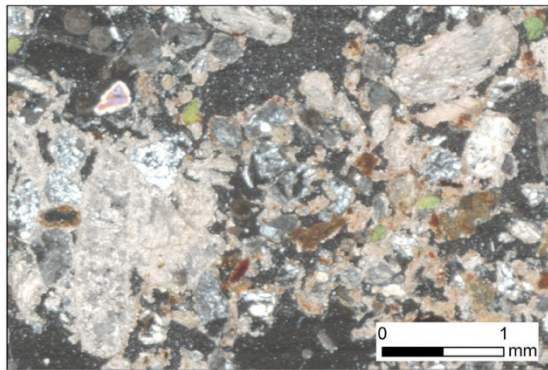
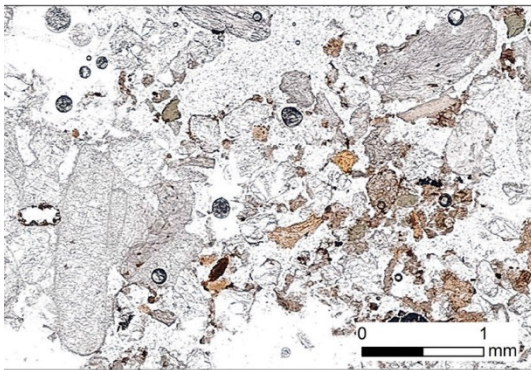
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



BBC_00_25_M2_MFU_11_MFT_2.1.1

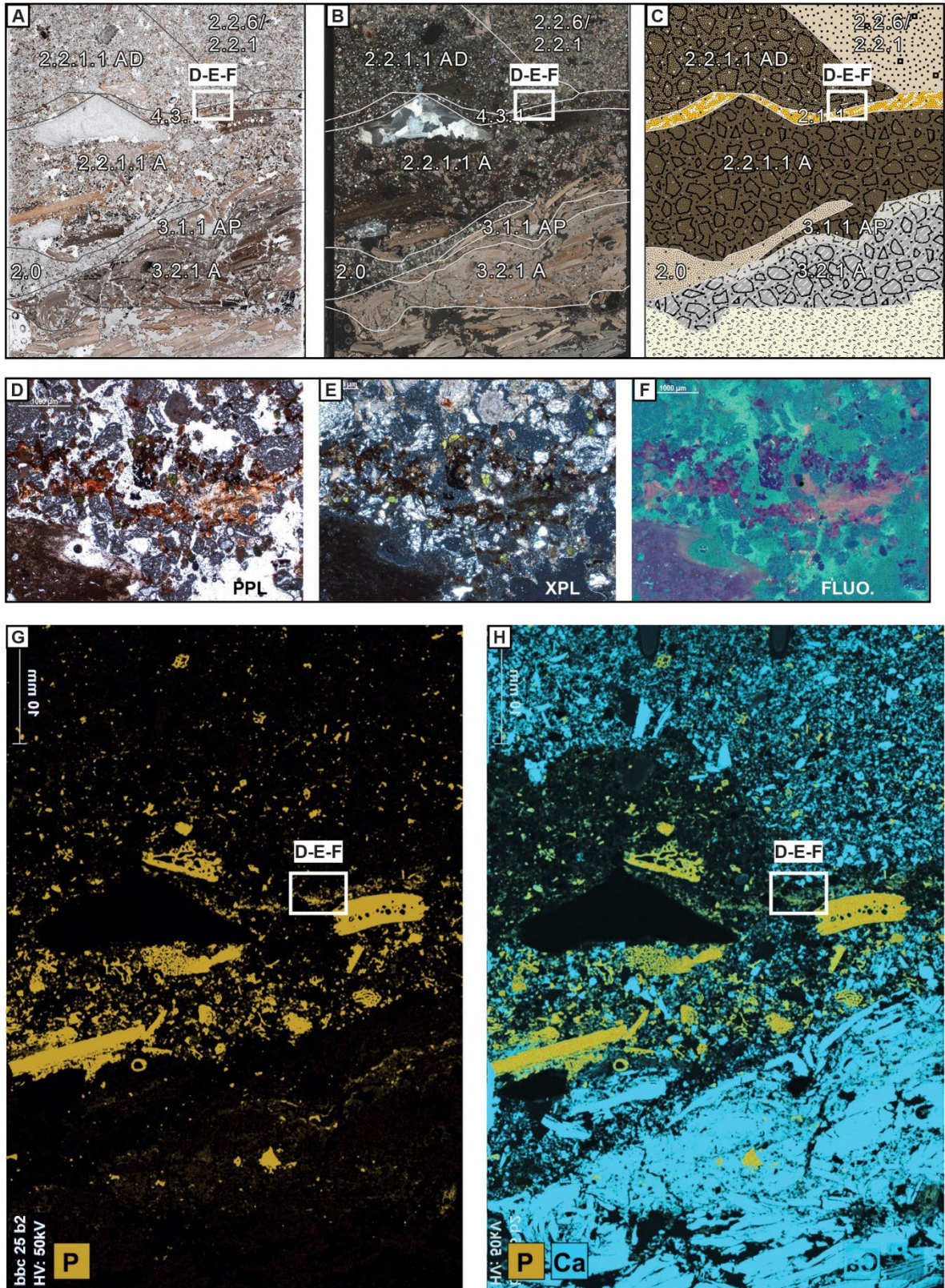


BBC_00_25_M2_MFU_12_MFT_2.2.1.1 AD



BBC_00_25_M2_MFU_13_MFT_2.2.6_2.2.1

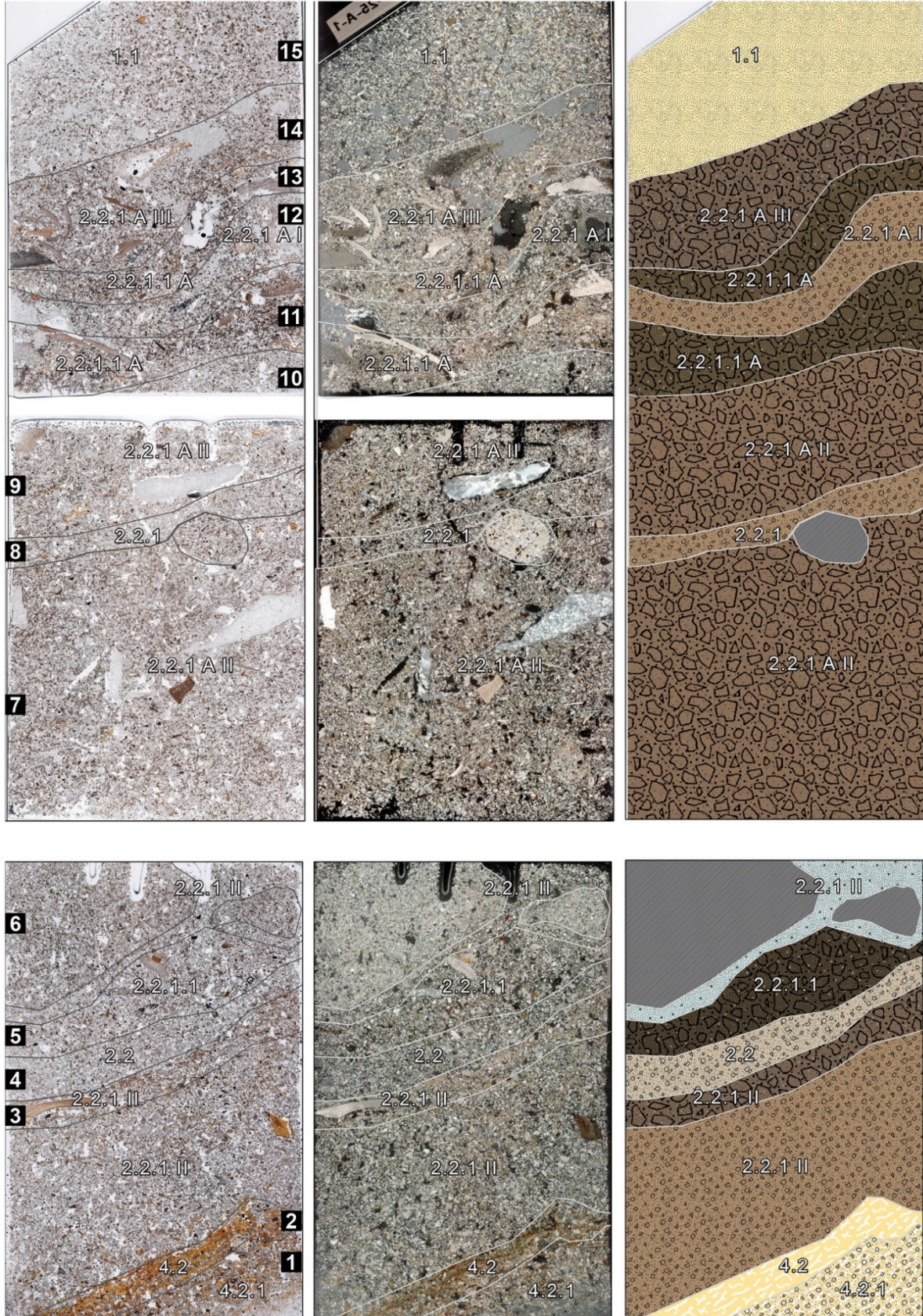
A 12.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.12 (BBC-00-25-M2).



A 12.2 Phosphatized surface in BBC-0-25-M2 (2B).

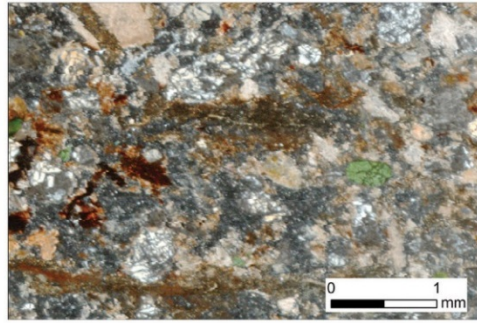
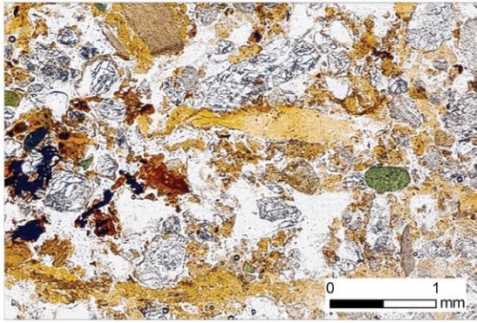
(A/B) Thin Section scan (PPL/XPL) of BBC-0-25-M2 (2B); (C) Microfacies classification; (D,E,F) Close-up of the white rectangle in A, B,C (XPL, PPL; Fluorescent); (G) micro-XRF elemental maps showing the distribution of phosphorus (P);(H) micro-XRF elemental maps showing the distribution of phosphorus (P) and calcium (C).

TS ID: Top: BBC_00_25-1-A, Middle: Top: BBC_00_25-1-B; Base: BBC_00_25-1-C

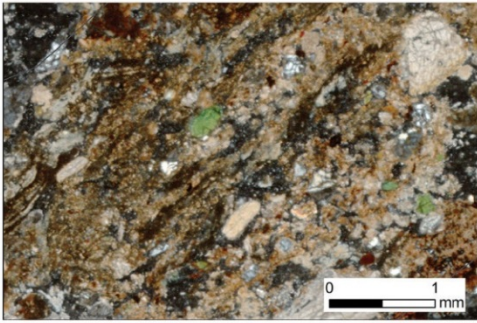
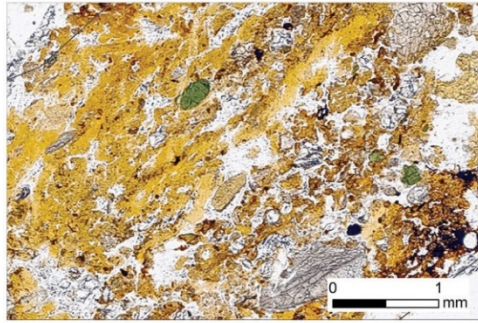


A.13. **BBC-00-25-M1**: Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

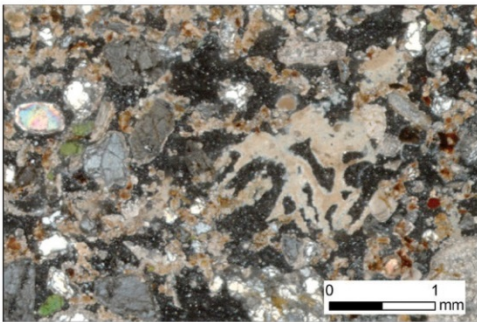
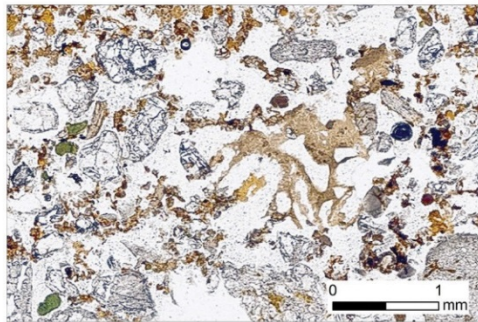
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



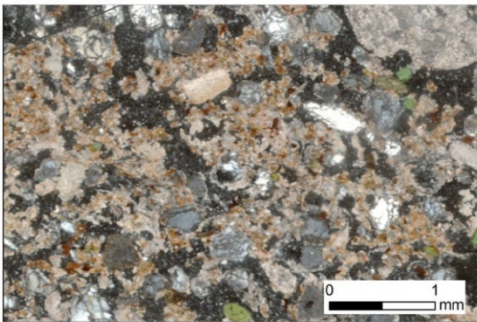
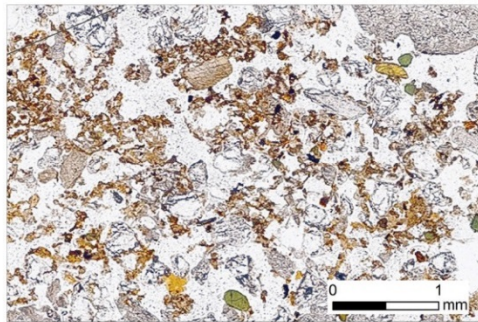
BBC_00_25_M1_MFU_01_MFT_4.2.1



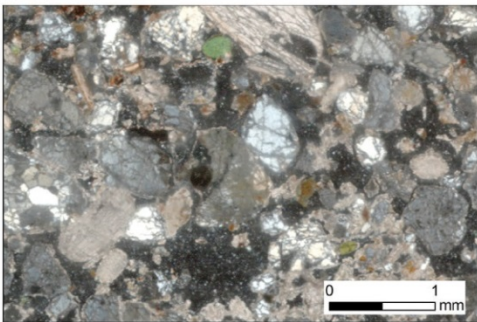
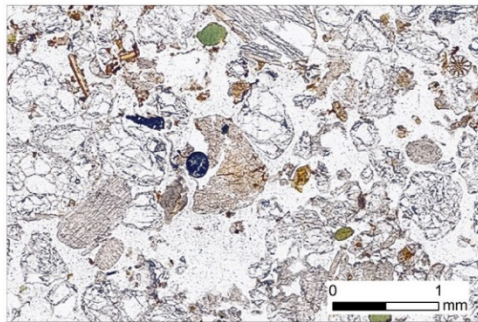
BBC_00_25_M1_MFU_02_MFT_4.2



BBC_00_25_M1_MFU_03_MFT_2.2.1 II



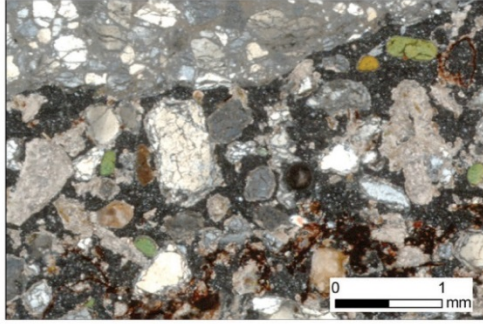
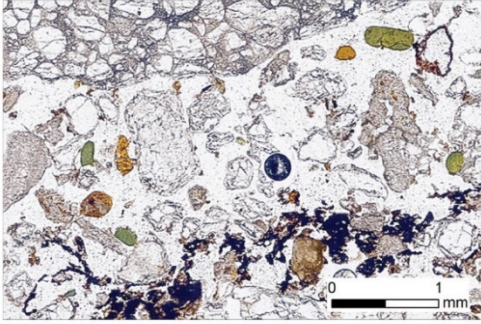
BBC_00_25_M1_MFU_04_MFT_2.2.1 A III



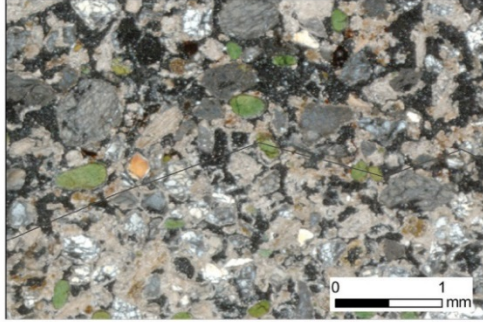
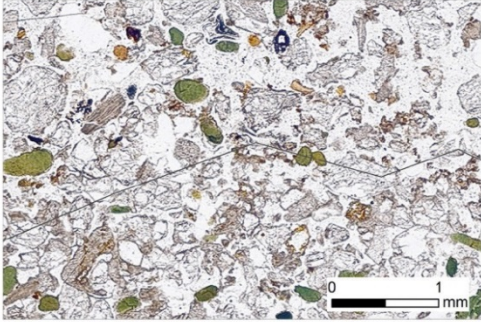
BBC_00_25_M1_MFU_05_MFT_2.2

A 13.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.13 (BBC-00-25-M1).

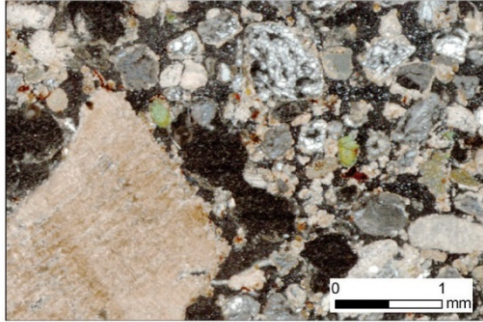
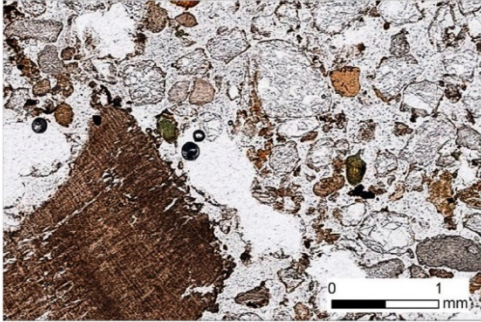
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



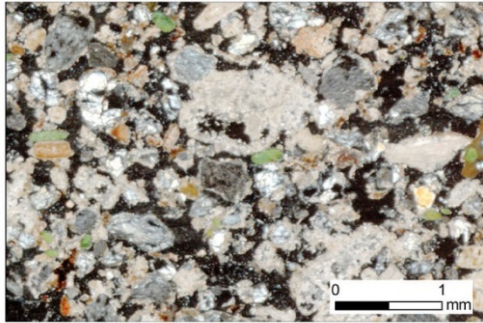
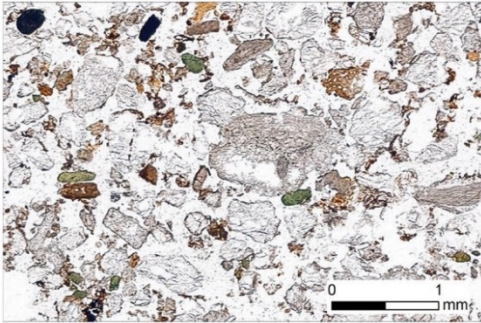
BBC_00_25_M1_MFU_06_MFT_2.2.1.1



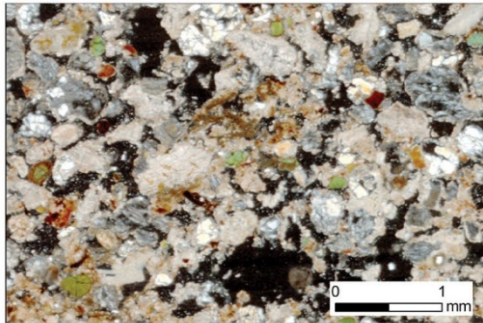
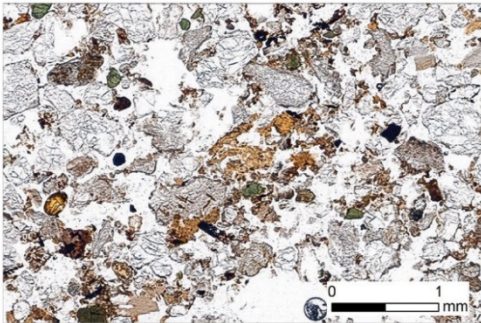
BBC_00_25_M1_MFU_07_MFT_2.2.5



BBC_00_25_M1_MFU_08_MFT_2.2.1 A II



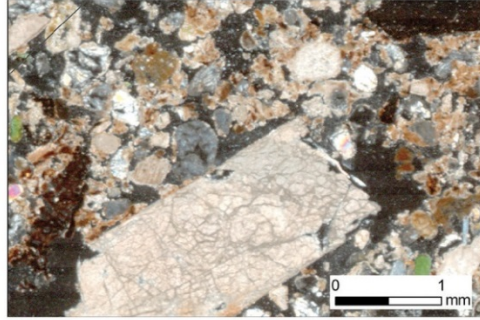
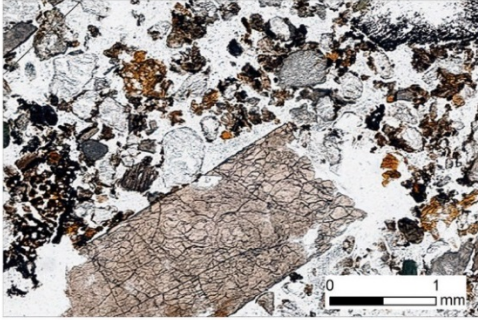
BBC_00_25_M1_MFU_09_MFT_2.2.1 I



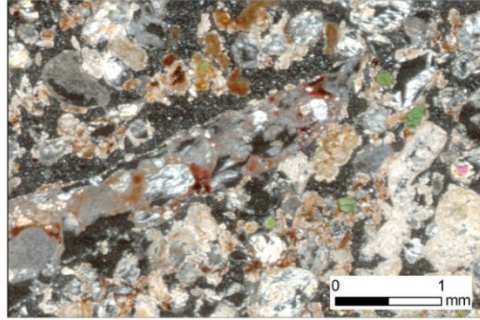
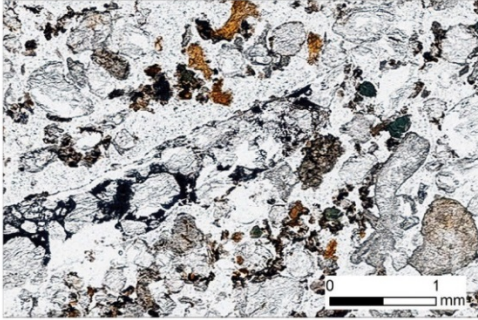
BBC_00_25_M1_MFU_10_MFT_2.2.1 A II

A 13.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.13 (BBC-00-25-M1).

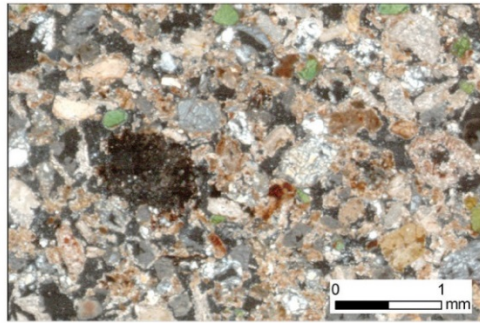
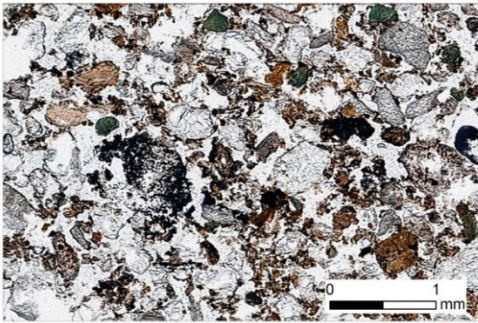
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



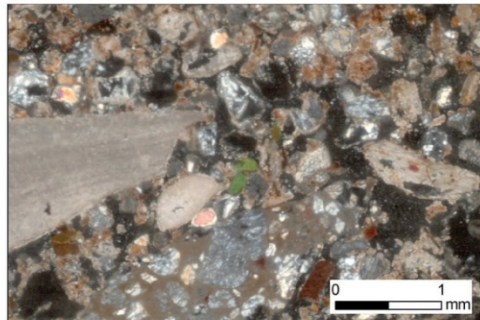
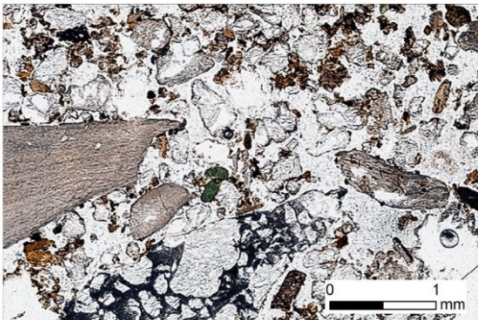
BBC_00_25_M1_MFU_11_MFT_2.2.1.1



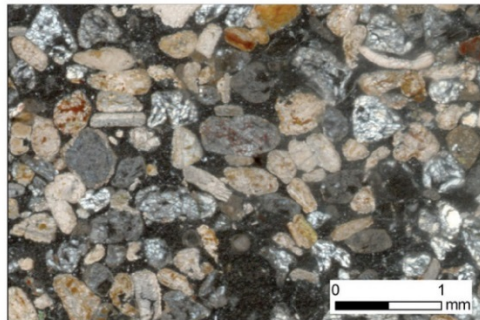
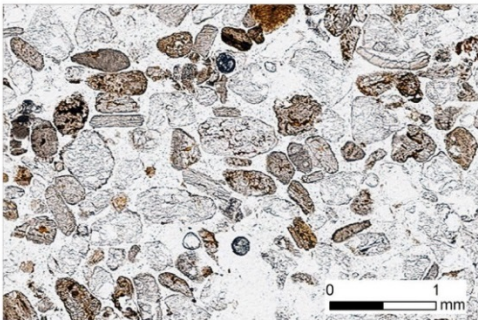
BBC_00_25_M1_MFU_12_MFT_2.2.1 A I



BBC_00_25_M1_MFU_13_MFT_2.2.1.1 A



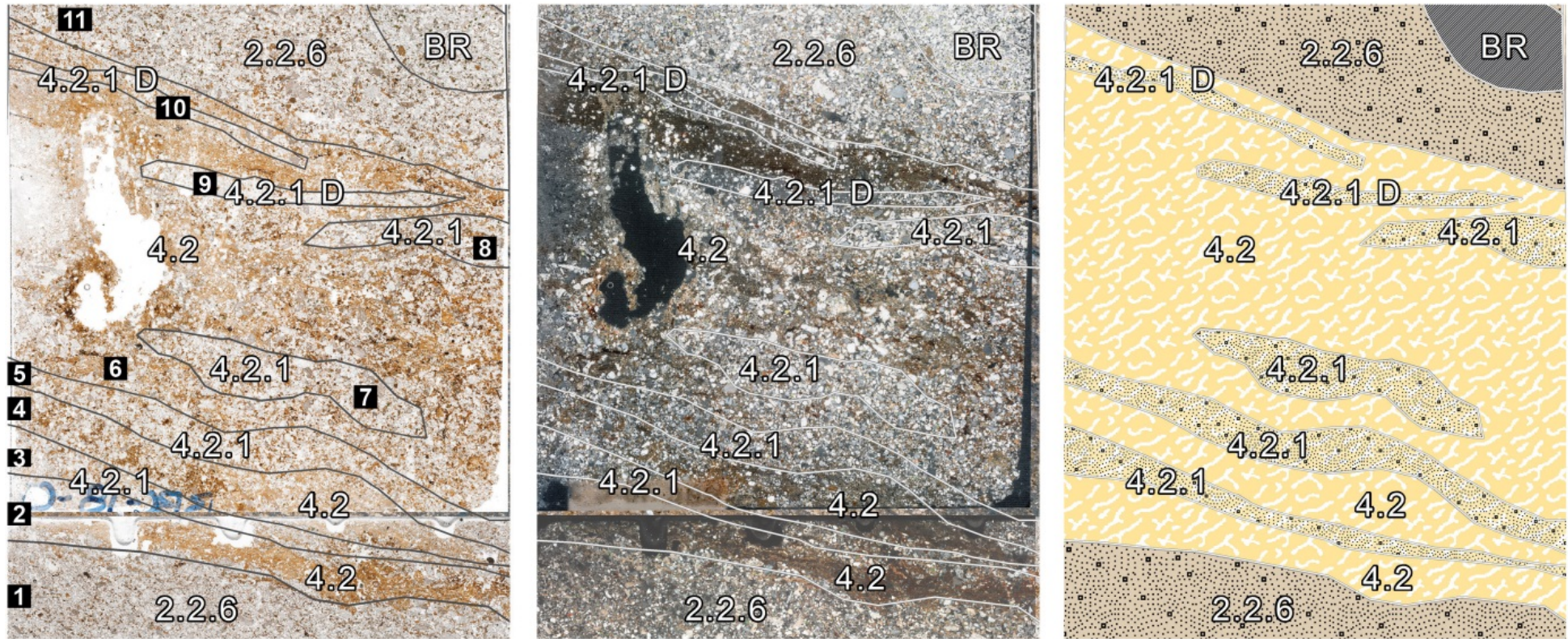
BBC_00_25_M1_MFU_14_MFT_2.2.1 A III



BBC_00_25_M1_MFU_15_MFT_1.1

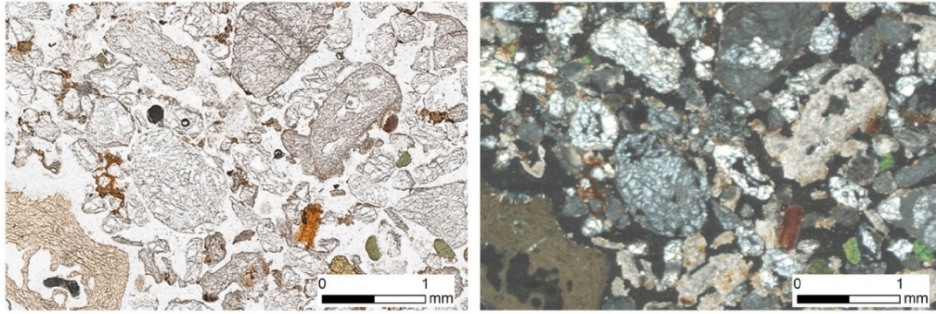
A 13.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.13 (BBC-00-25-M1).

TS ID: Top: BBC_00_18C, Base: BBC_00_18 D (cut)

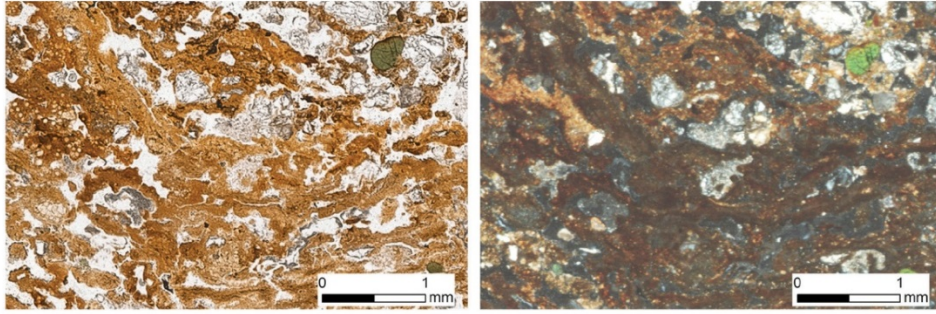


A.14. BBC-00-18C (M2): Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

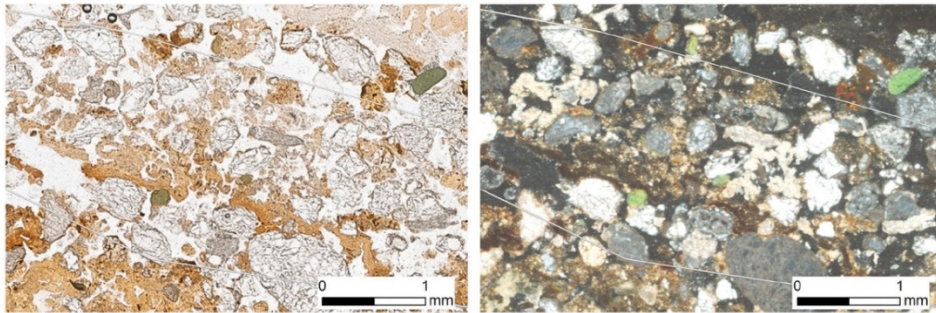
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



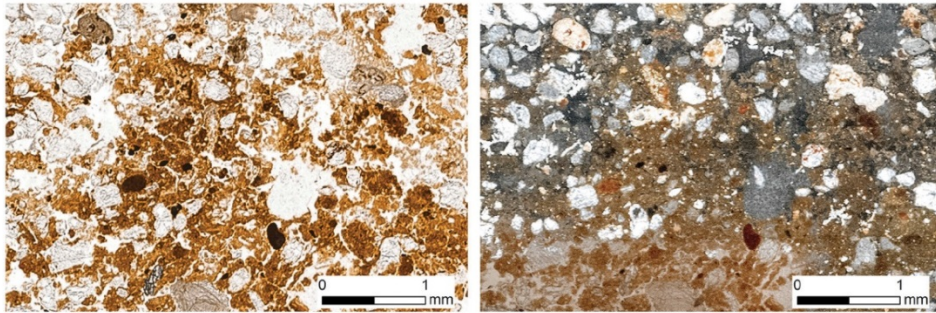
BBC_00_18_M2_MFU_01_MFT_2.2.6



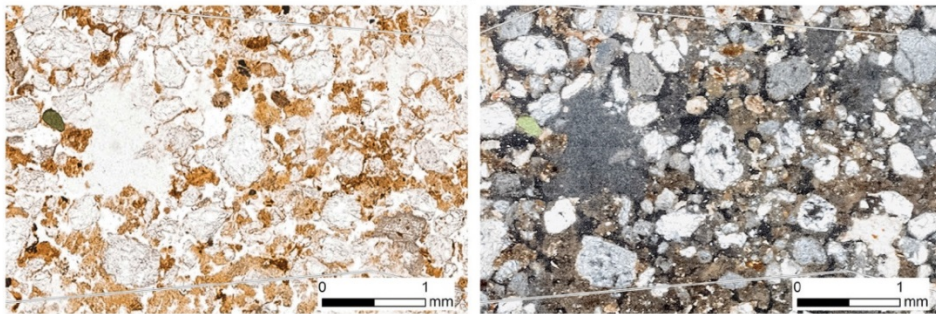
BBC_00_18_M2_MFU_02_MFT_4.2



BBC_00_18_M2_MFU_03_MFT_4.2.1



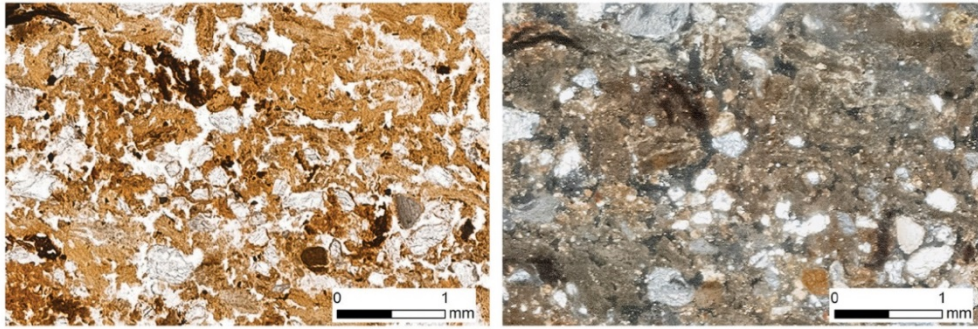
BBC_00_18_M2_MFU_04_MFT_4.2



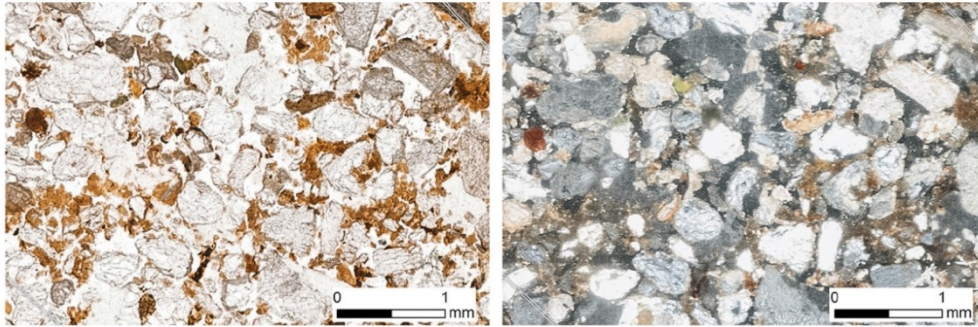
BBC_00_18_M2_MFU_05_MFT_4.2.1

A 14.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.12 (BBC-00-18-M2).

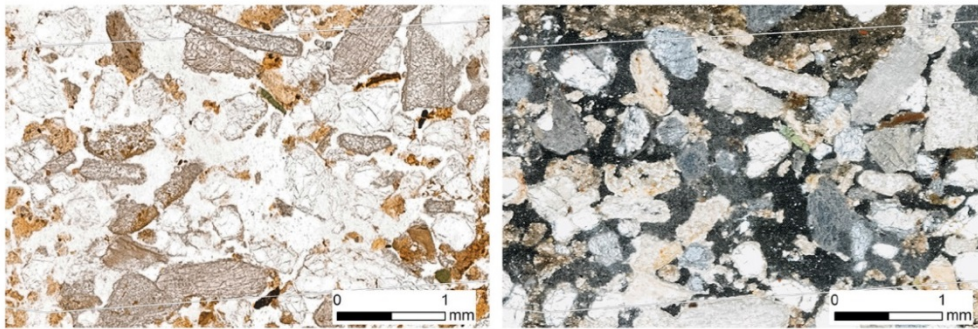
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



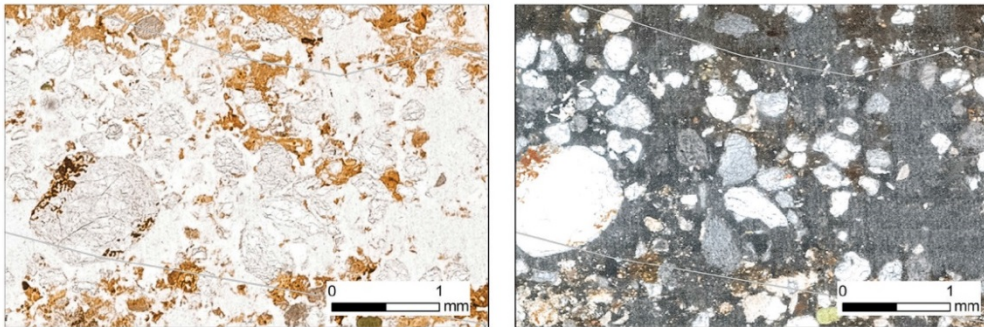
BBC_00_18_M2_MFU_06_MFT_4.2



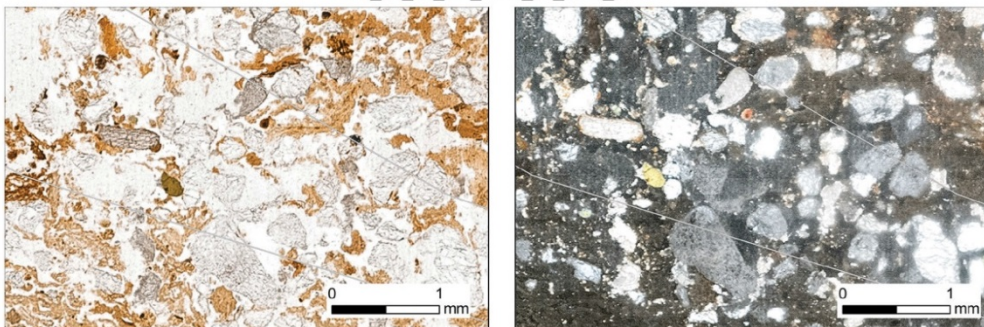
BBC_00_18_M2_MFU_07_MFT_4.2.1



BBC_00_18_M2_MFU_08_MFT_4.2.1

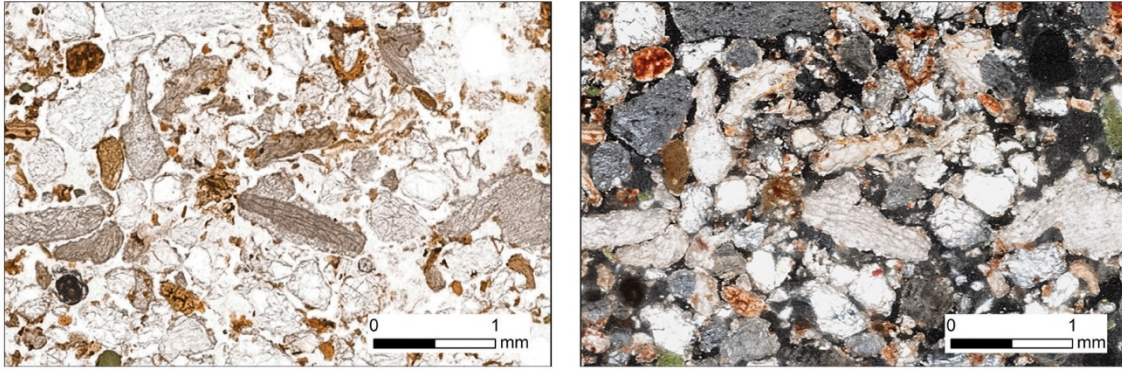


BBC_00_18_M2_MFU_09_MFT_4.2.1 D



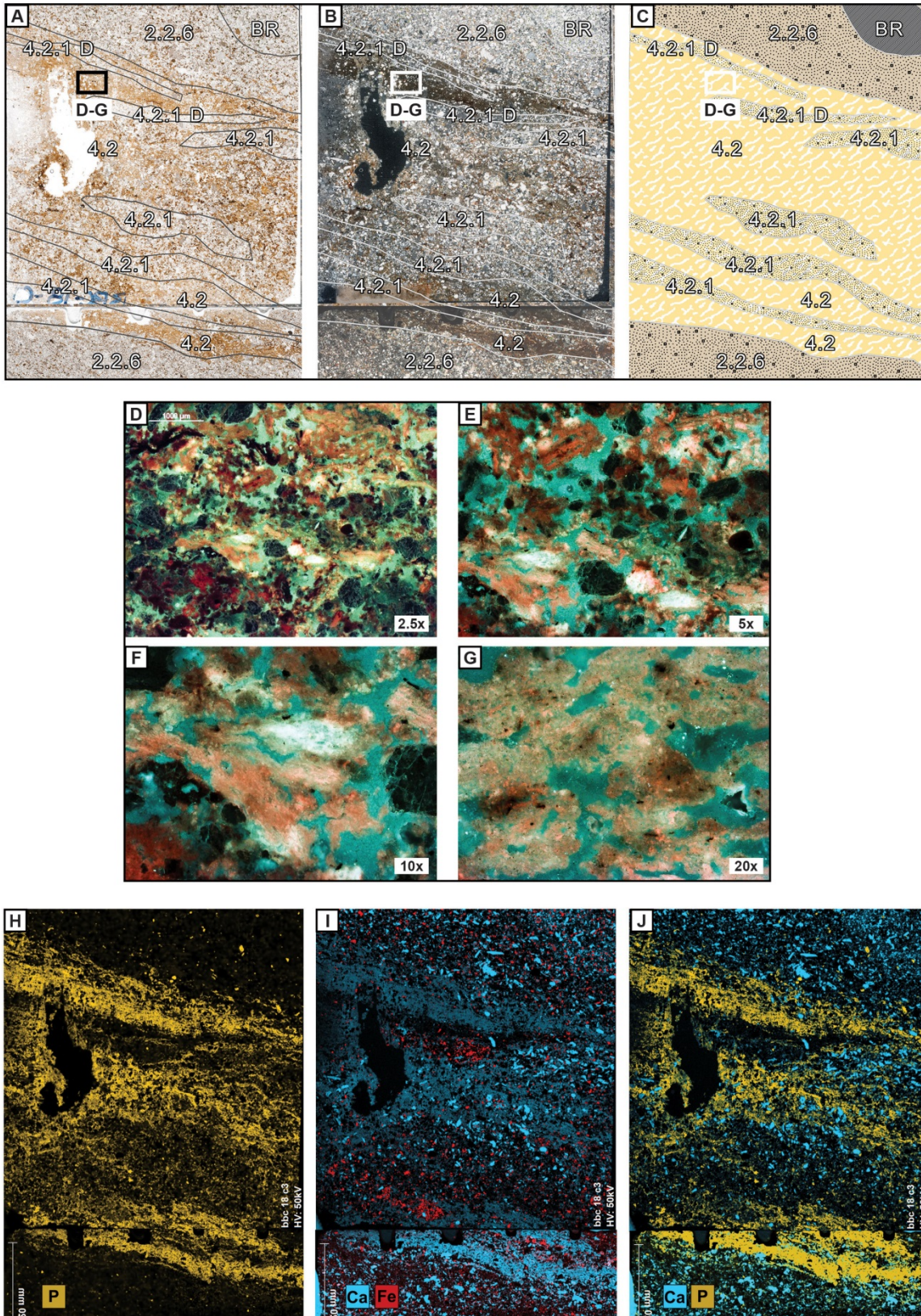
BBC_00_18_M2_MFU_10_MFT_4.2.1 D

A 14.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.14 (BBC-00-18-C).



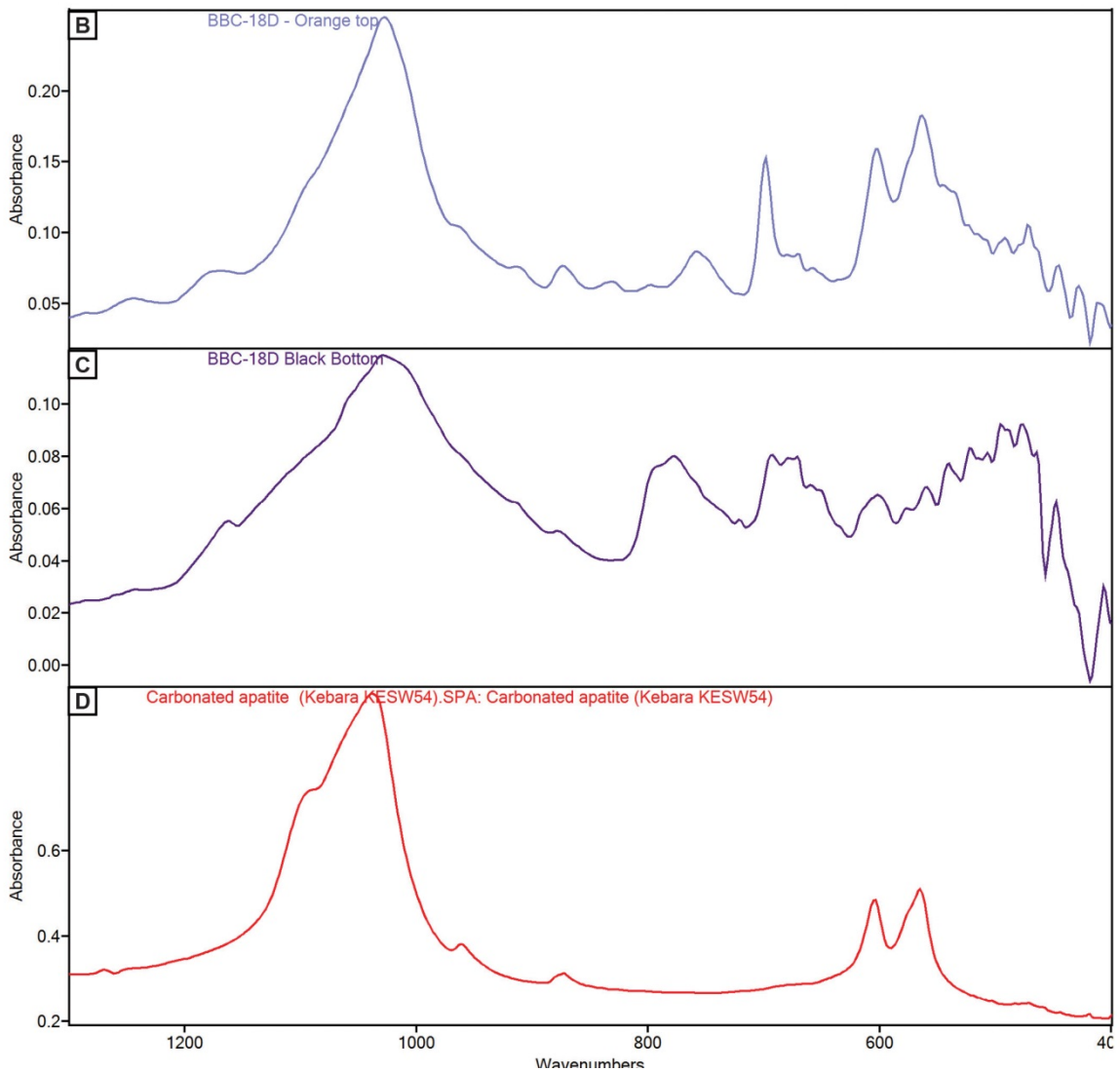
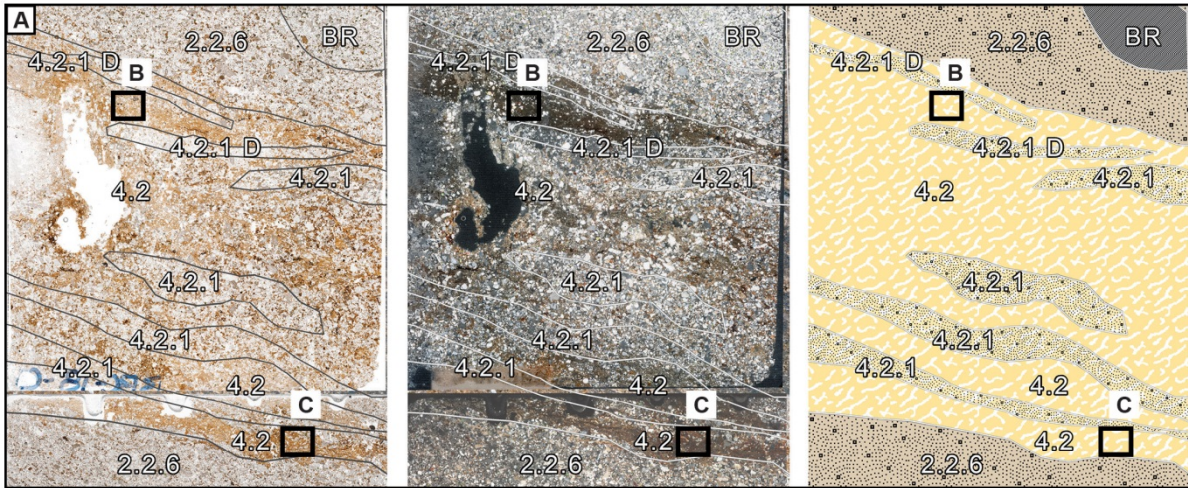
BBC_00_18_M2_MFU_11_MFT_2.2.6

A 14.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.14 (BBC-00-18-C).



A 14.2 Phosphatized matrix in BBC-00-18-C.

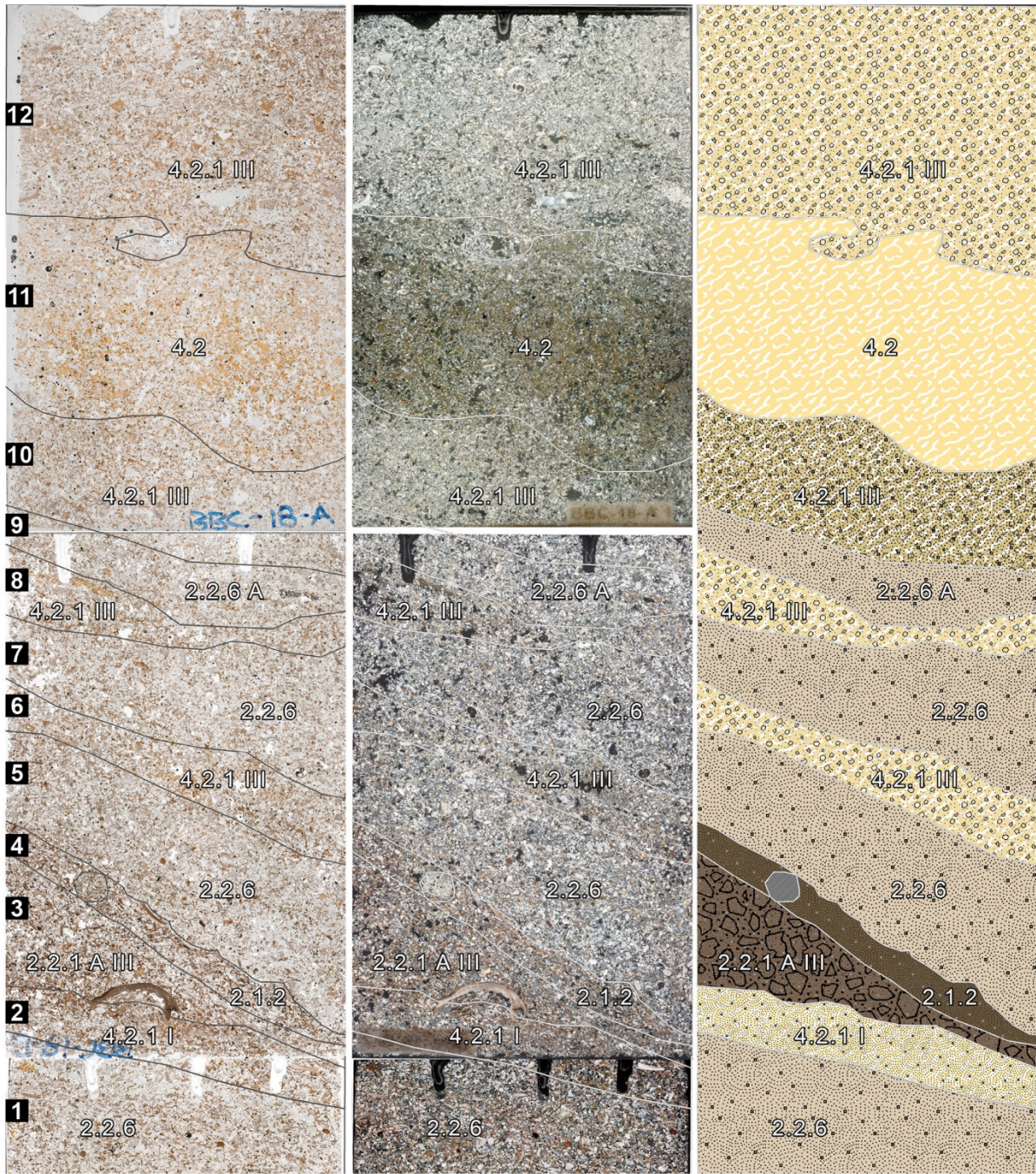
(A/B) Thin section scans (PPL/XPL) of BBC-00-18-C; (C) Microfacies classification; (D,E,F,G) Close-up fluorescent photomicrographs of the areas indicated with white rectangle in A, B,C); (H, I, J) micro-XRF elemental maps showing the distribution of phosphorus (P), calcium (Ca) and iron (Fe).



A 14.3 FTIR spectra of the phosphatized matrix in BBC-00-18-C.

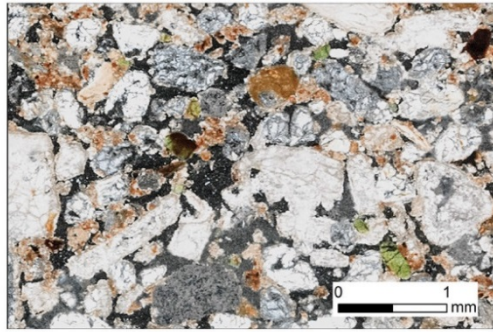
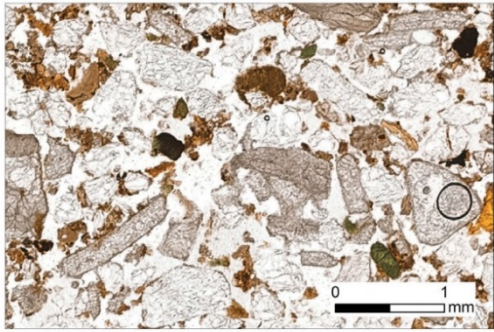
(A) Thin section scans (PPL/XPL) and Microfacies classification; (B/C) micro-FTIR measurements on the black rectangles in A; Peaks in spectra B is indicative of carbonated hydroxyapatite, while Spectra C is more dominated by Quartz peaks ; (D) Reference carbonated apatite spectra from Kebara Cave, Israel (from Kimmel Center for Archaeological Science Infrared Standards Library, Weizmann Institute of Science, Transmission measurements on KBr pellets).

TS ID: Top: BBC_00_18A, Middle: BBC_00_18 B, Base: BBC_00_18 C (cut)

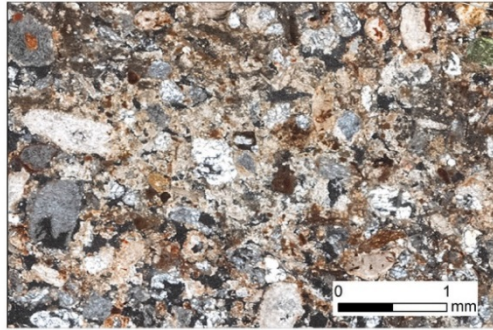
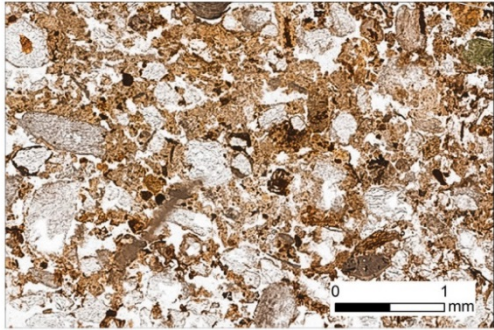


A.15. **BBC-00-18A-B:** Thin section scan (XPL/PPL) and MF-analysis. MF-units (numbers) indicated.

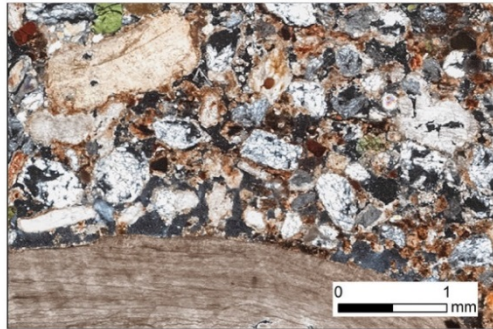
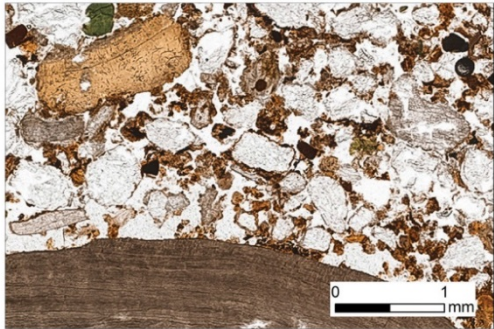
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



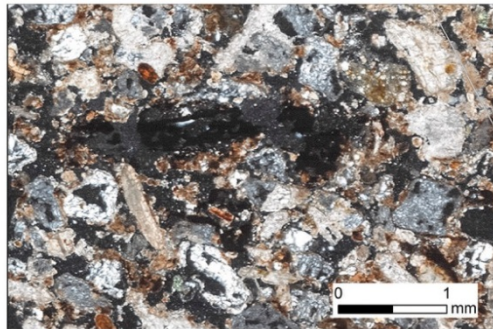
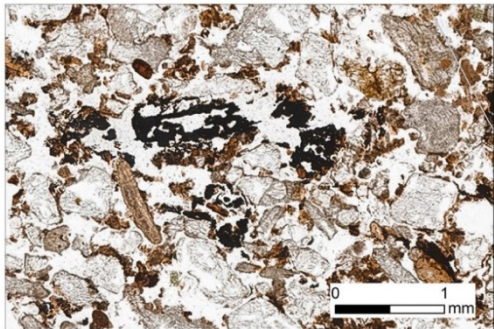
BBC_00_18_MFU_01_MFT_2.2.6



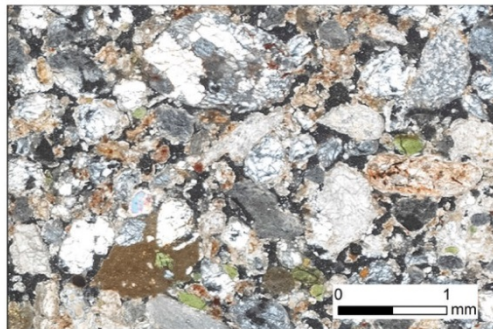
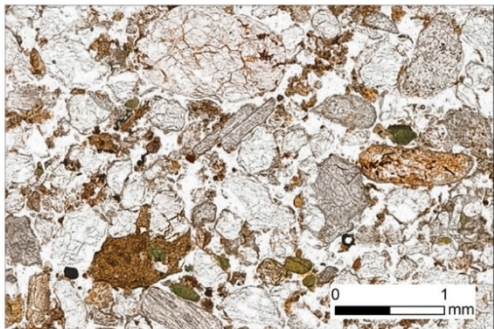
BBC_00_18_MFU_02_MFT_4.2.1 I



BBC_00_18_MFU_03_MFT_2.2.1 III



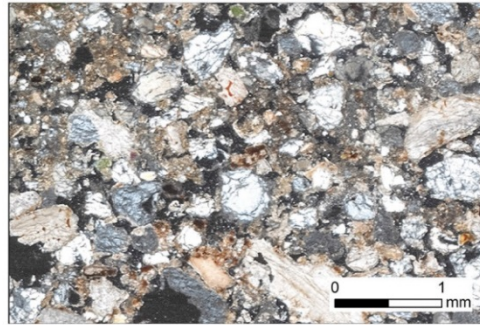
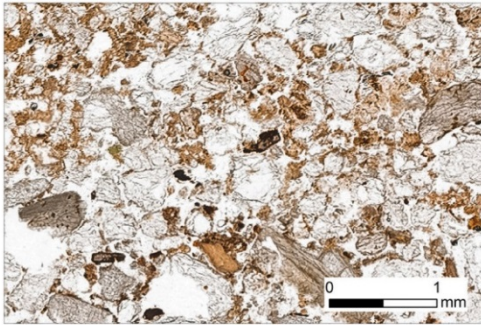
BBC_00_18_MFU_04_MFT_2.1.2



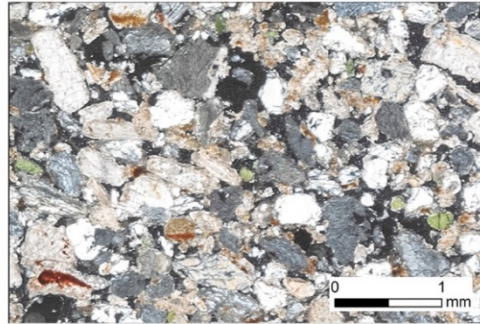
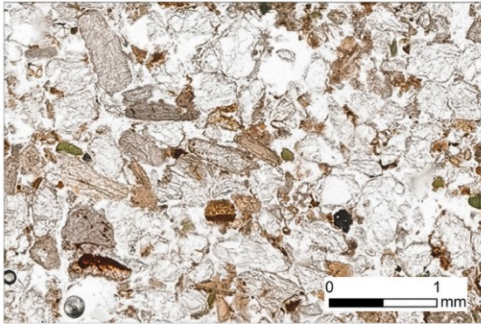
BBC_00_18_MFU_06_MFT_2.2.6

A 15.1 Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.15 (BBC-00-18-A-B).

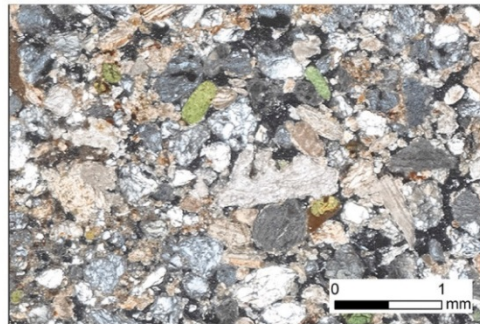
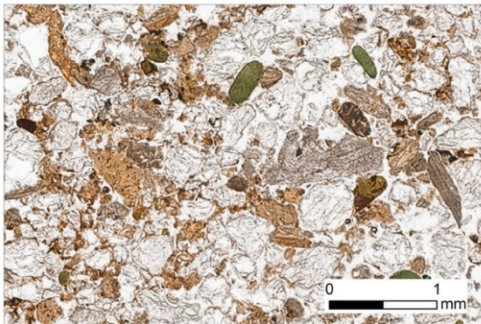
APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



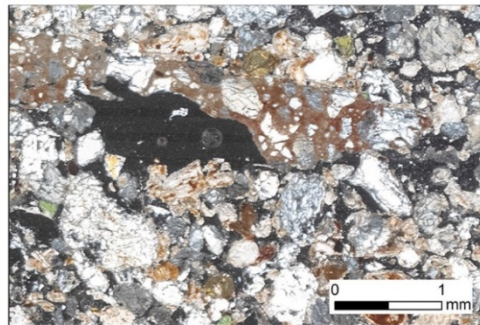
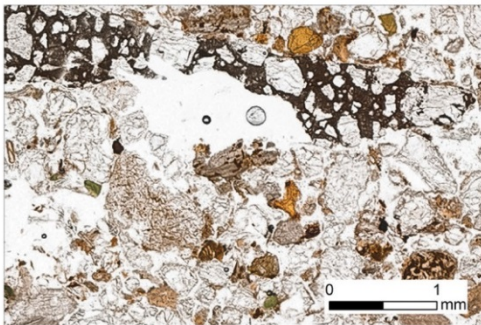
BBC_00_18_MFU_05_MFT_4.2.1 III



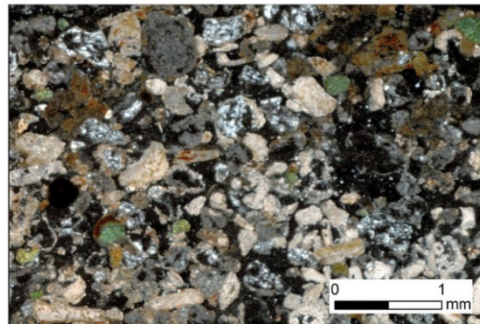
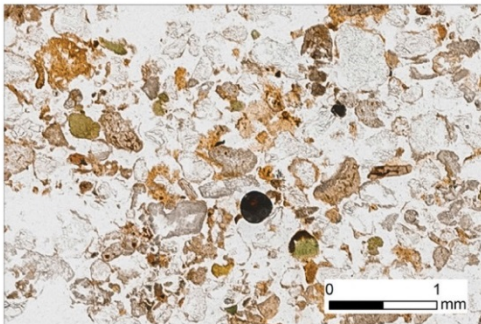
BBC_00_18_MFU_07_MFT_2.2.6



BBC_00_18_MFU_08_MFT_4.2.1 III



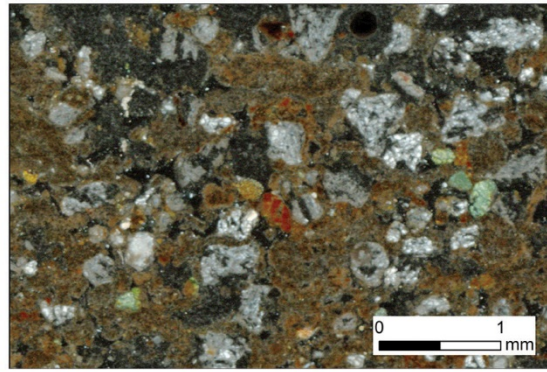
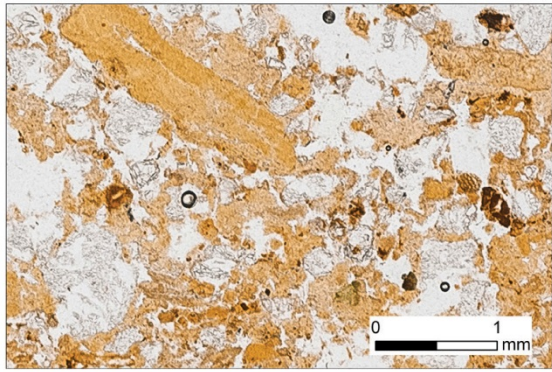
BBC_00_18_MFU_09_MFT_2.2.6 A



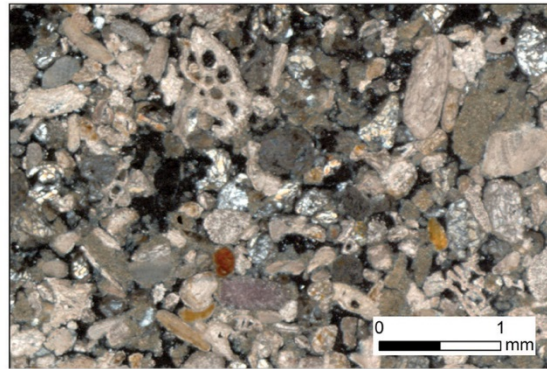
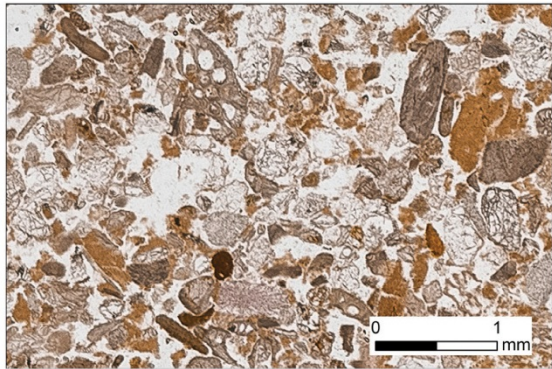
BBC_00_18_MFU_10_MFT_4.2.1 III

A 15.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.15 (BBC-00-18-A-B).

APPENDIX A - SUPPLEMENTARY ONLINE MATERIAL



BBC_00_18_MFU_11_MFT_4.2.1 I



BBC_00_18_MFU_12_MFT_4.2.1 III

A 15.1 (continue) Photomicrographs (XPL/PPL) of each MF-unit indicated on Fig. A.15 (BBC-00-18-A-B).