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*Late Jurassic Sedimentation in the Boreal-Tethyan Seaway: climate modelling, geochemistry, and petrography of the Kimmeridge Clay Formation*

ELIZABETH FILIZ LINDSAY ATAR

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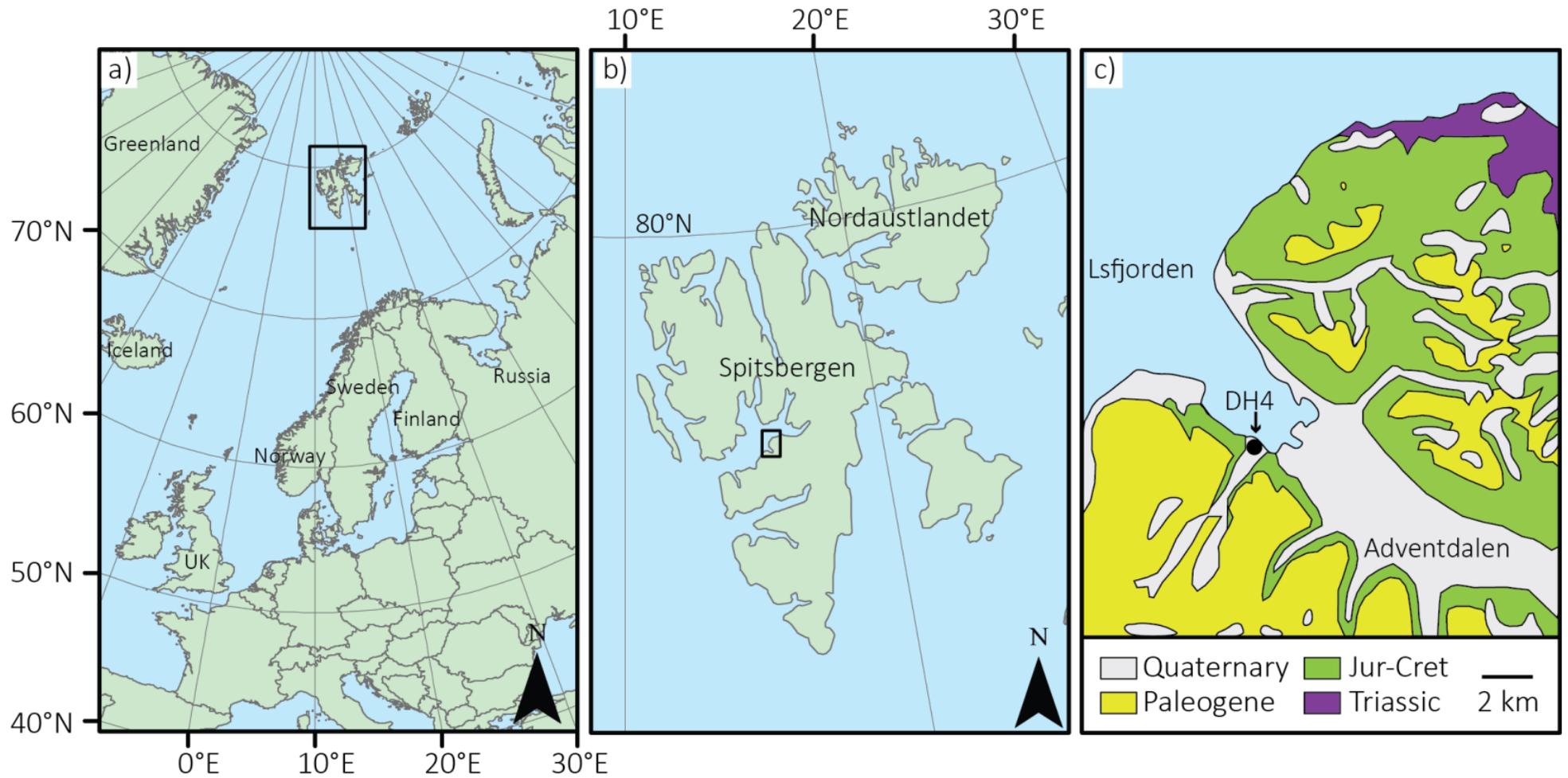
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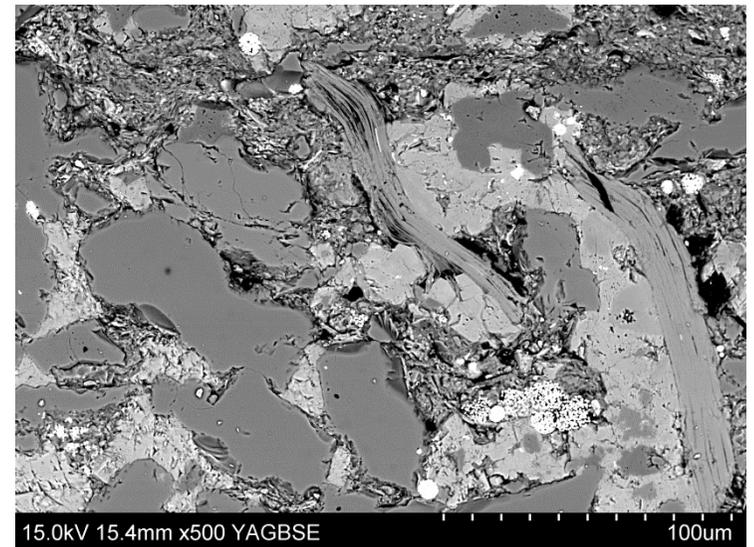
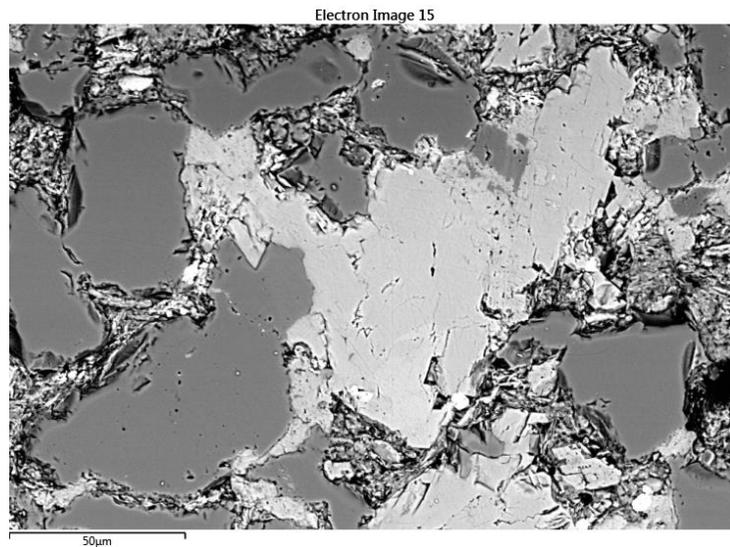
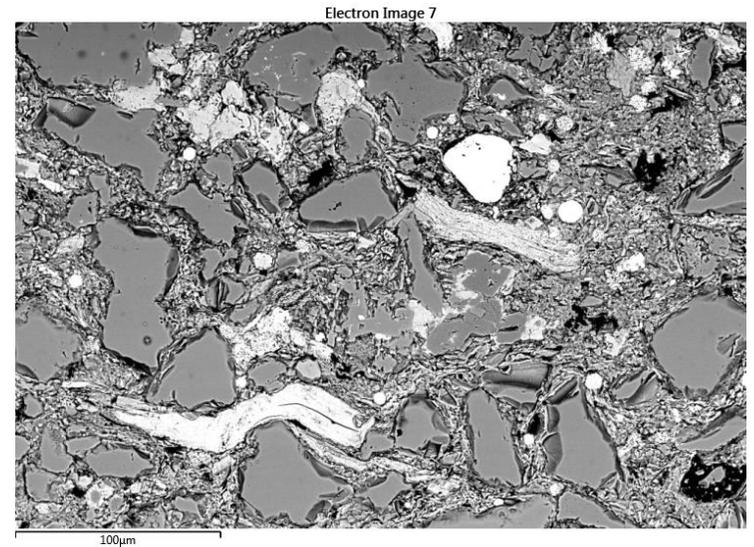
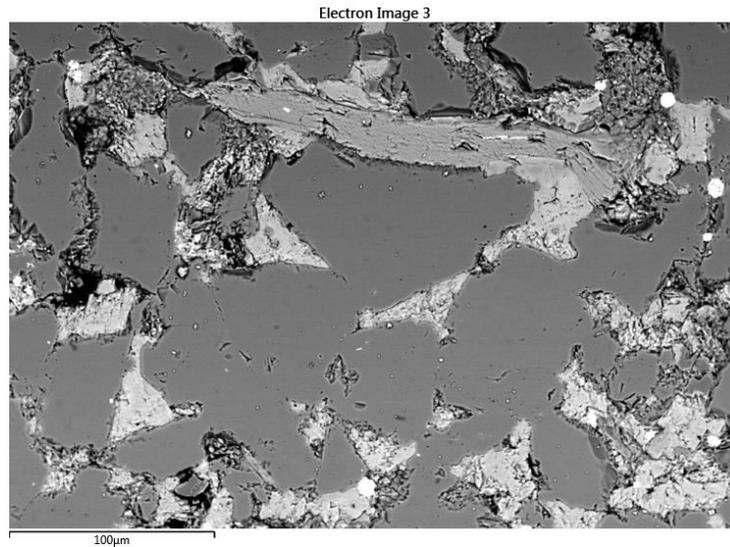
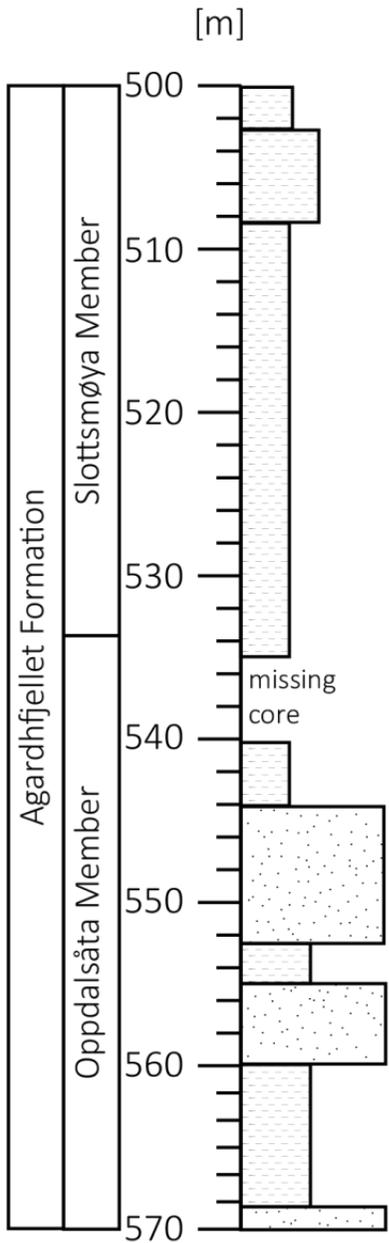
DH4 SEM



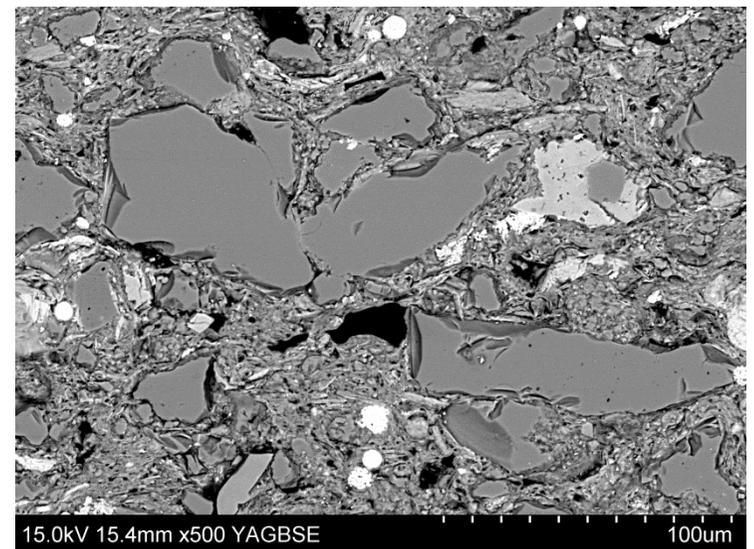
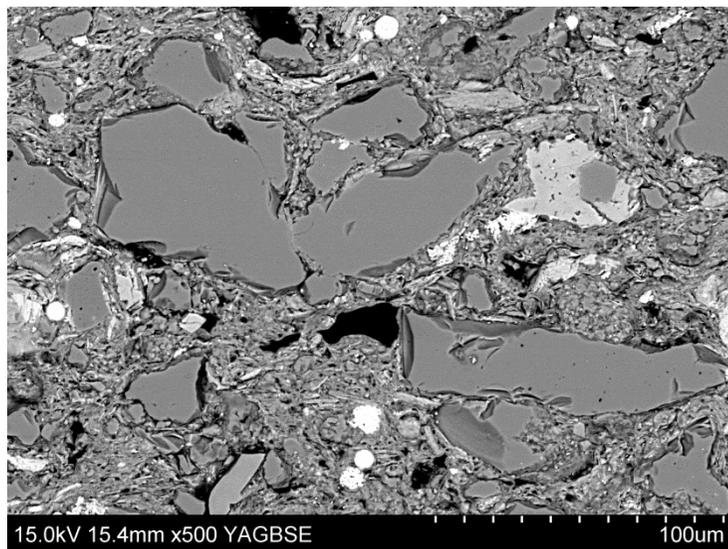
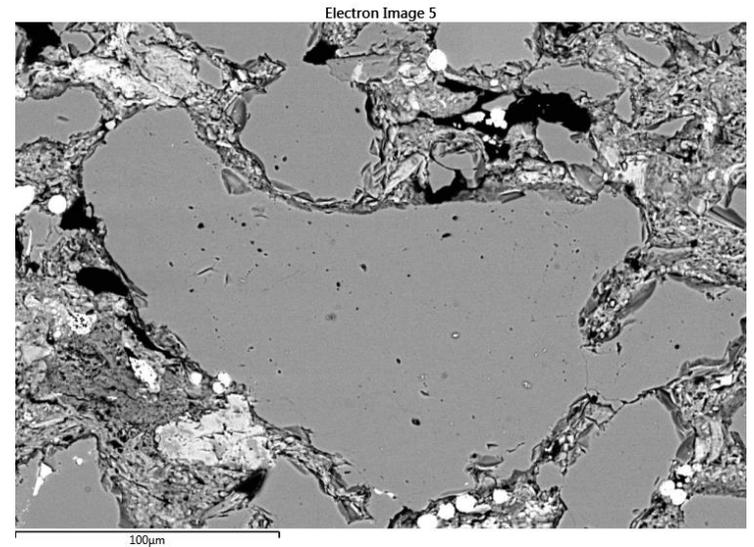
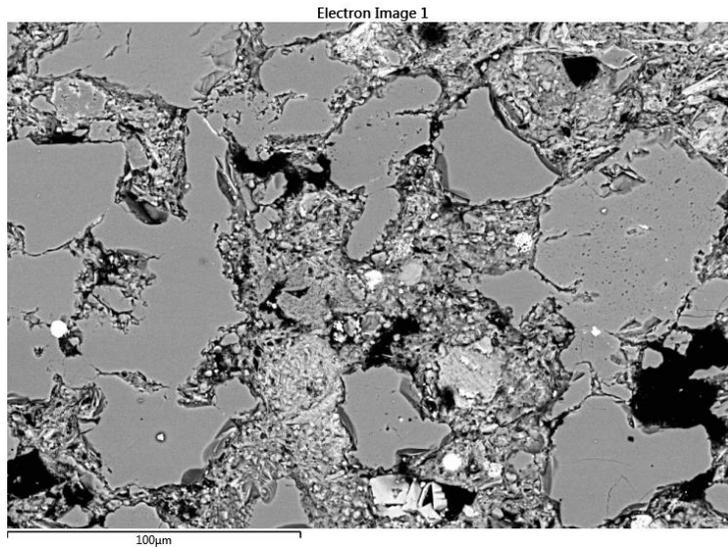
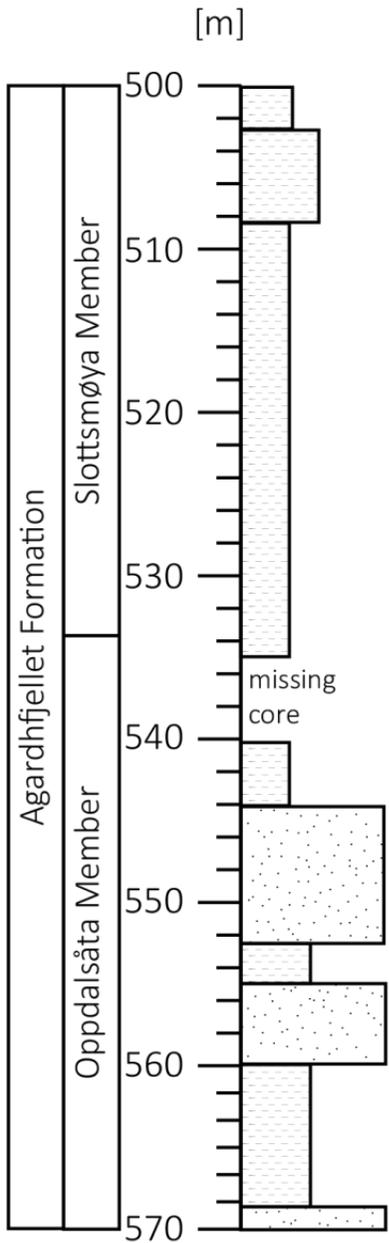
a) Map showing the position of the Svalbard Archipelago (black box) in the Arctic Circle. b) Location of the Adventdalen (black box) on Spitsbergen Island. c) Location of the DH4 well on an Adventdalen geological map. Redrawn after Koevoets et al. (2016)

Depth (mbs)	lithostratigraphic unit		Petrographic Description	
	Formation	Member	Facies	notes
<a href="#">504.52</a>	Agardhfjellet	Slottsmøya	mSs	
<a href="#">504.75</a>	Agardhfjellet	Slottsmøya	mSs	parallel lamination, erosional surface
<a href="#">507.00</a>	Agardhfjellet	Slottsmøya	mSs	lenticular fabric (mud and sand lenses)
<a href="#">512.25</a>	Agardhfjellet	Slottsmøya	sMs	peloidal lithic clasts
<a href="#">514.00</a>	Agardhfjellet	Slottsmøya	sMs	
<a href="#">515.25</a>	Agardhfjellet	Slottsmøya	mSs	
<a href="#">516.24</a>	Agardhfjellet	Slottsmøya	sMs	
<a href="#">518.50</a>	Agardhfjellet	Slottsmøya	mSs	lenticular fabric (mud and sand lenses)
<a href="#">519.25</a>	Agardhfjellet	Slottsmøya	mSs	discontinuous wavy non parallel lamina
<a href="#">522.75</a>	Agardhfjellet	Slottsmøya		wavy continuous parallel lamina
<a href="#">523.25</a>	Agardhfjellet	Slottsmøya	mSs	
<a href="#">526.25</a>	Agardhfjellet	Slottsmøya		
<a href="#">529.50</a>	Agardhfjellet	Slottsmøya	mSs	lenticular fabric (mud lenses)
<a href="#">530.50</a>	Agardhfjellet	Slottsmøya	mSs	parallel lamination
<a href="#">531.00</a>	Agardhfjellet	Slottsmøya	mSs	discontinuous, wavy, non-parallel lamina
<a href="#">535.75</a>	Agardhfjellet	Slottsmøya	mSs	
<a href="#">540.26</a>	Agardhfjellet	Oppdalsåta	mSs	
<a href="#">540.50</a>	Agardhfjellet	Oppdalsåta	mSs	
<a href="#">541.00</a>	Agardhfjellet	Oppdalsåta	cMs	small calcite veins
<a href="#">542.75</a>	Agardhfjellet	Oppdalsåta	cMs	occasional silt lenses
<a href="#">548.25</a>	Agardhfjellet	Oppdalsåta	mSs	discontinuous, wavy, non-parallel lamina
<a href="#">551.50</a>	Agardhfjellet	Oppdalsåta	mSs	discontinuous, wavy, non-parallel lamina
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<a href="#">552.75</a>	Agardhfjellet	Oppdalsåta	mSs	lenticular fabric (mud lenses)
<a href="#">553.24</a>	Agardhfjellet	Oppdalsåta	mSs	
<a href="#">553.75</a>	Agardhfjellet	Oppdalsåta	mSs	lamination
<a href="#">555.75</a>	Agardhfjellet	Oppdalsåta	mSs	lenticular fabric (silt lenses)
<a href="#">556.75</a>	Agardhfjellet	Oppdalsåta	Ss	discontinuous, wavy, non-parallel lamina
<a href="#">558.50</a>	Agardhfjellet	Oppdalsåta	mSs	
<a href="#">559.75</a>	Agardhfjellet	Oppdalsåta	Ss	mud lenses
<a href="#">561.05</a>	Agardhfjellet	Oppdalsåta	mSs	mud lenses
<a href="#">562.00</a>	Agardhfjellet	Oppdalsåta	mSs	discontinuous, wavy, non-parallel lamina
<a href="#">563.25</a>	Agardhfjellet	Oppdalsåta	mSs	discontinuous, wavy, non-parallel lamina

# DH4 504.52

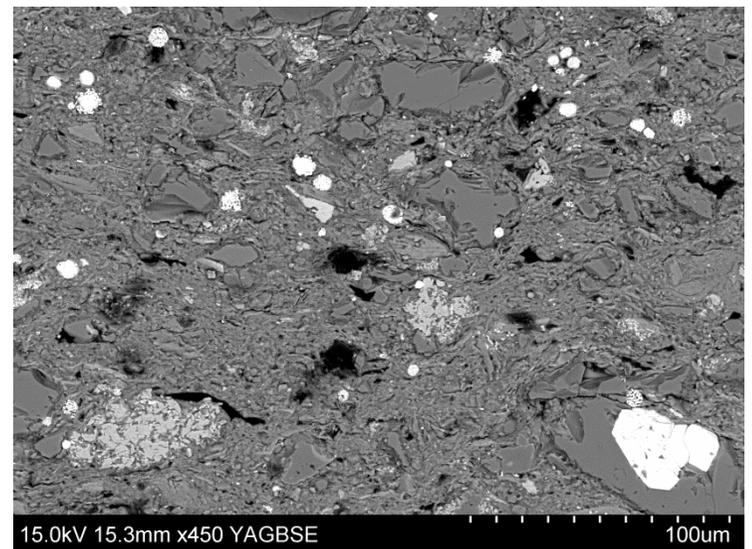
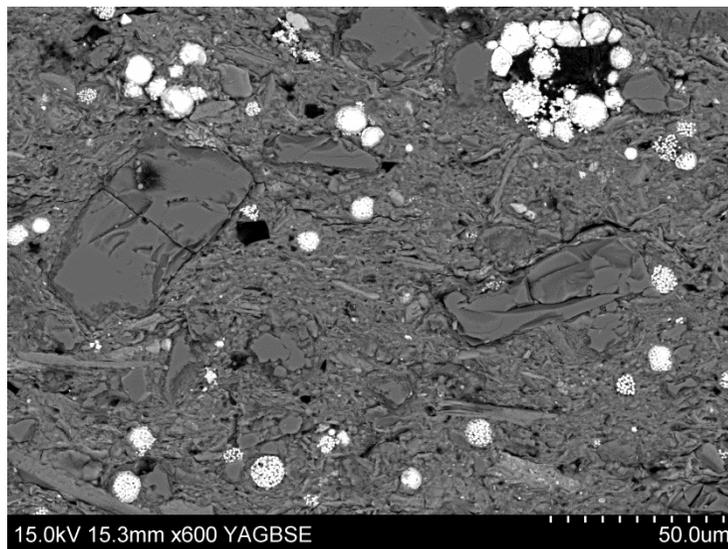
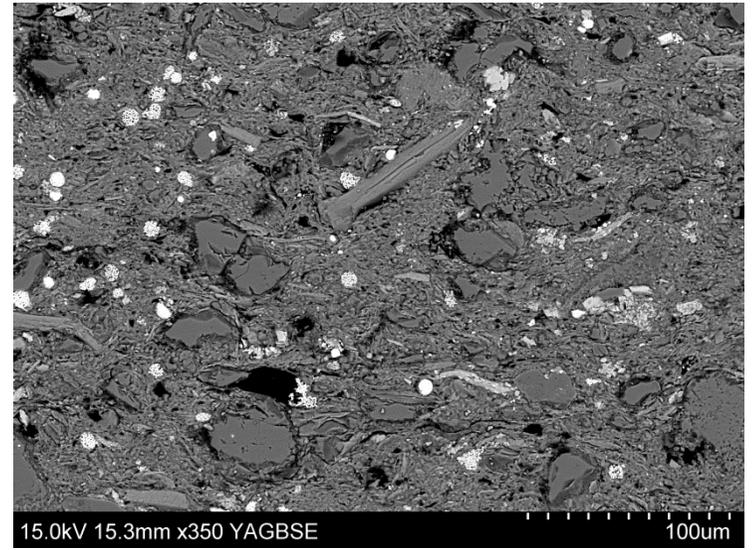
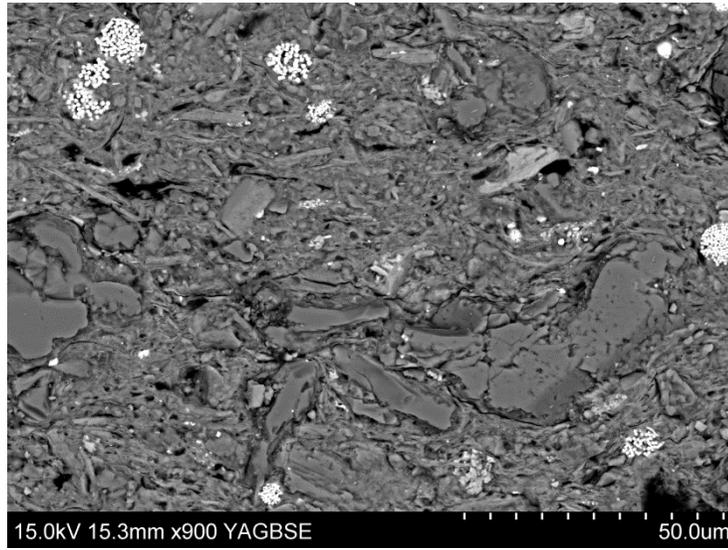
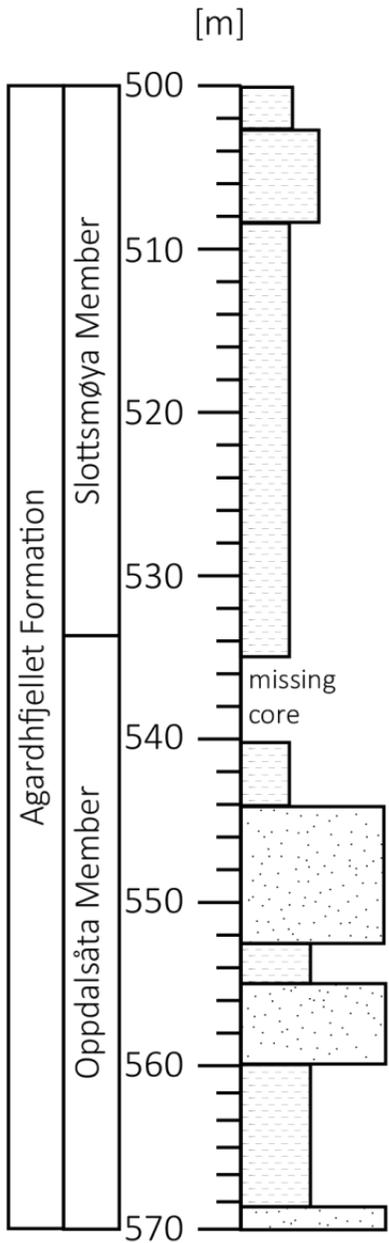


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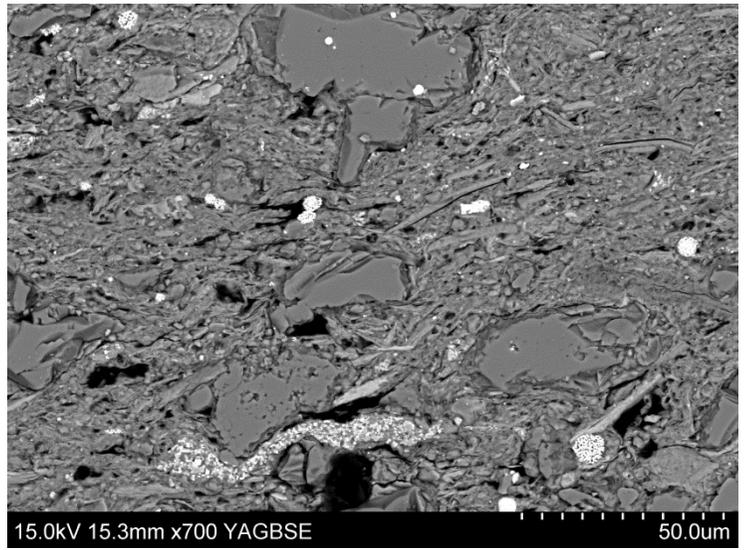
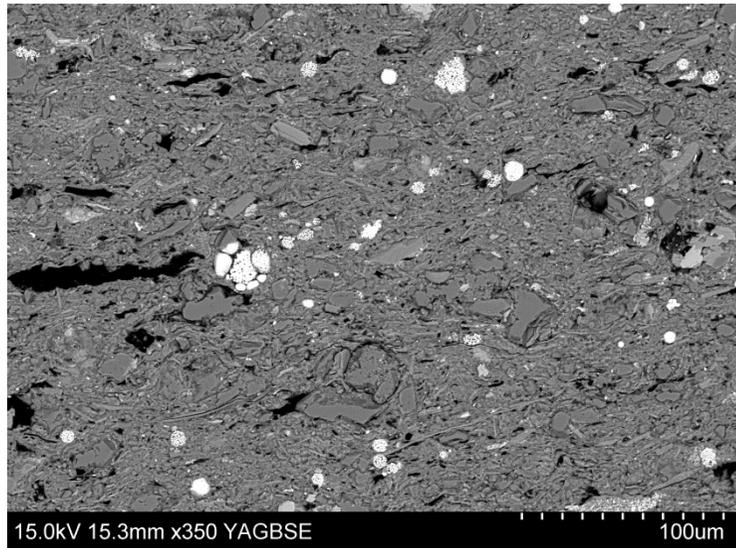
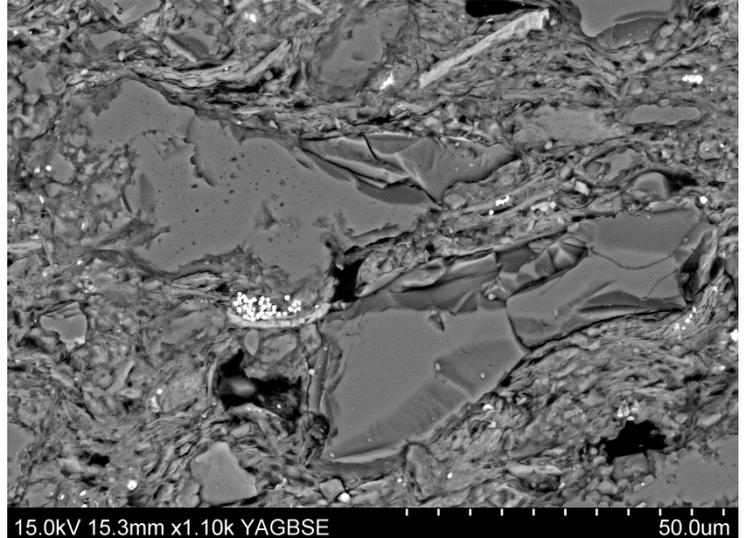
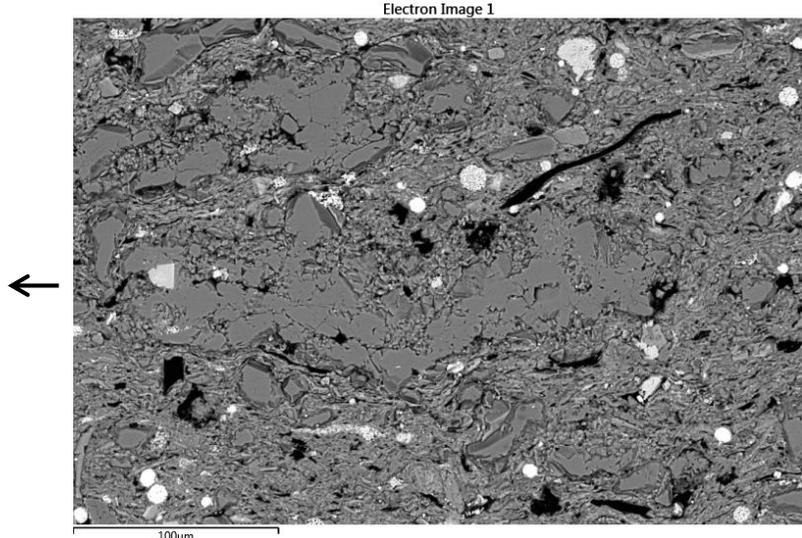
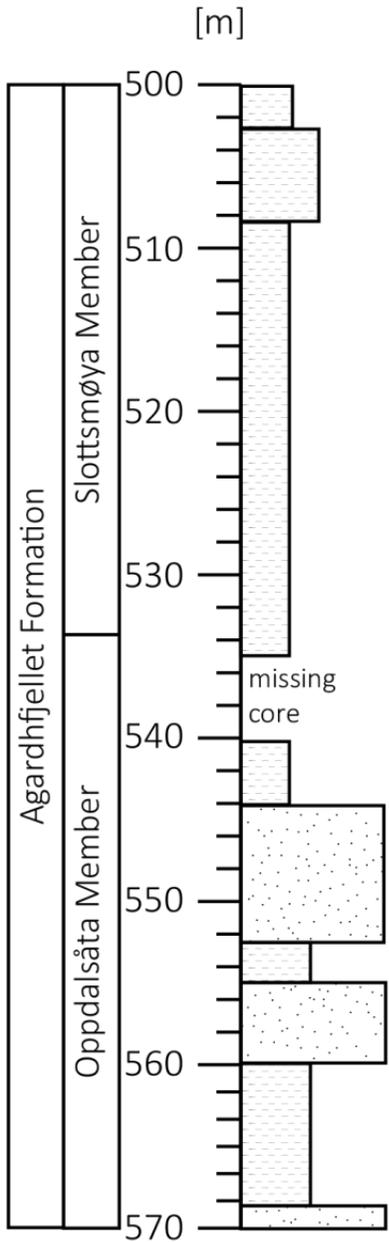
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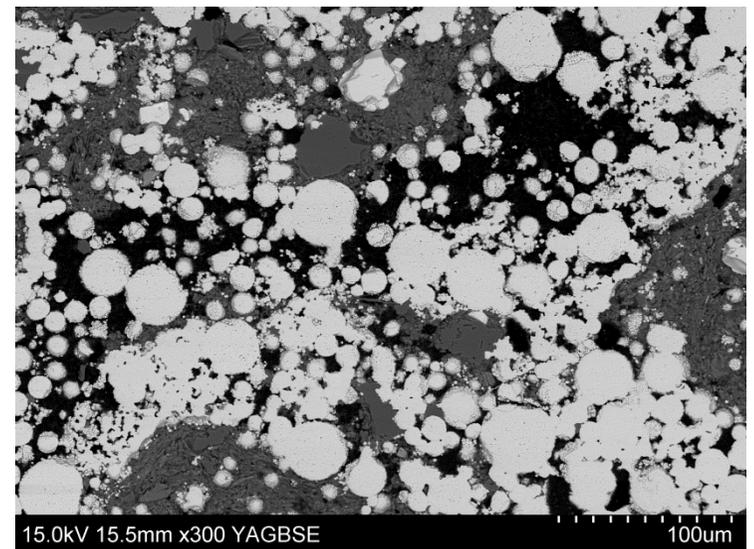
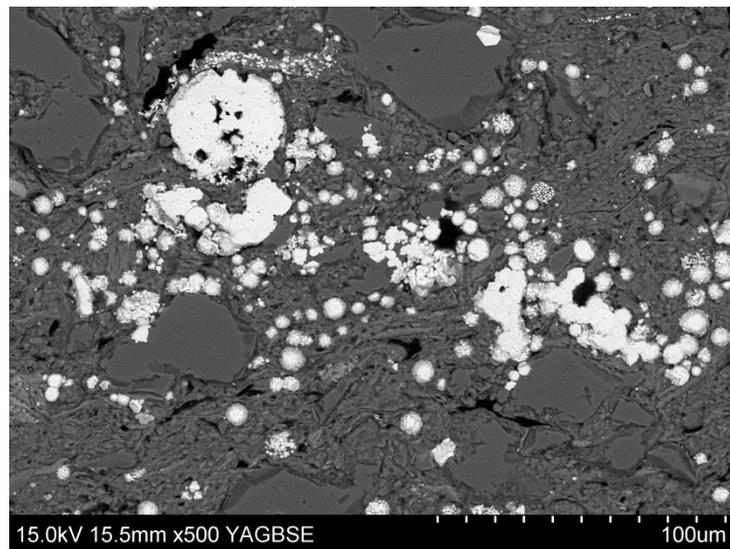
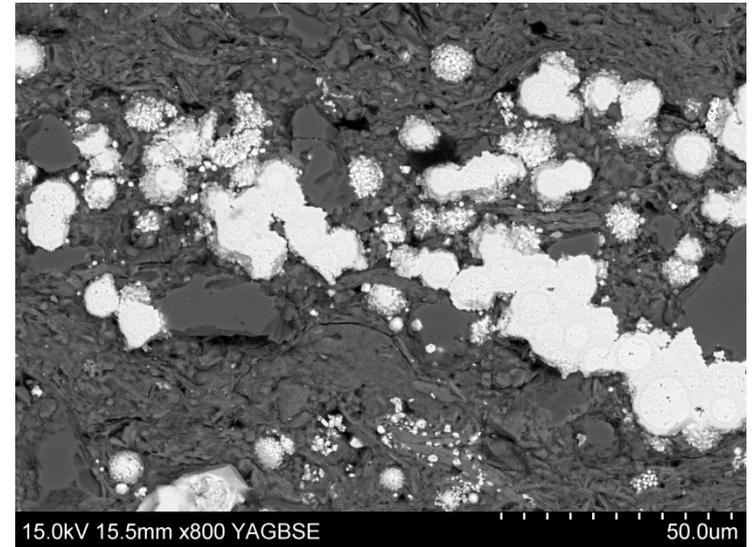
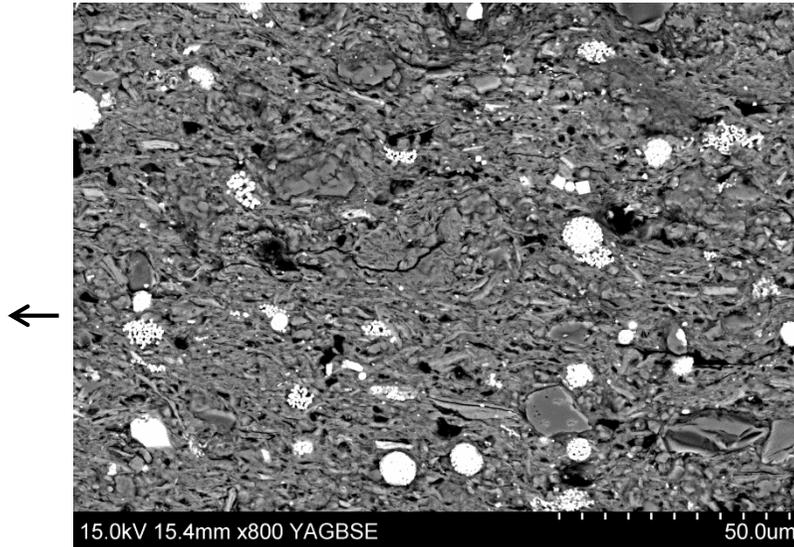
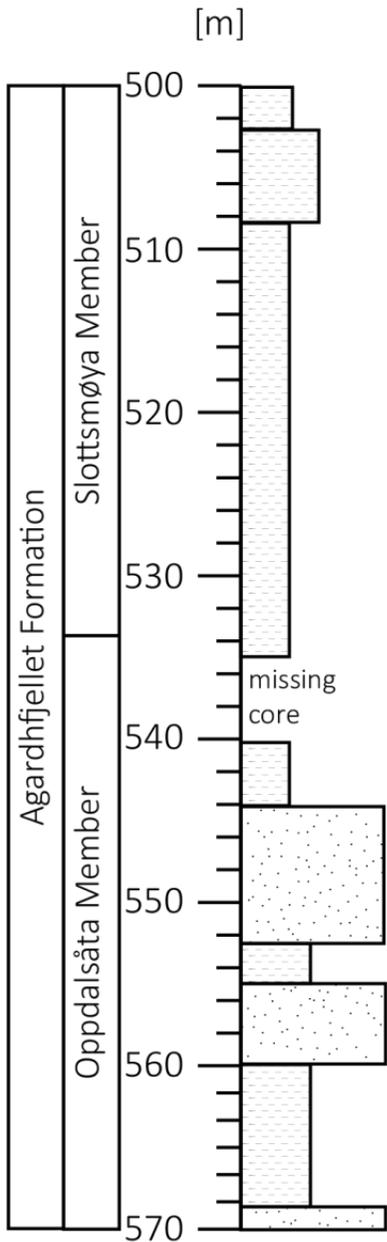


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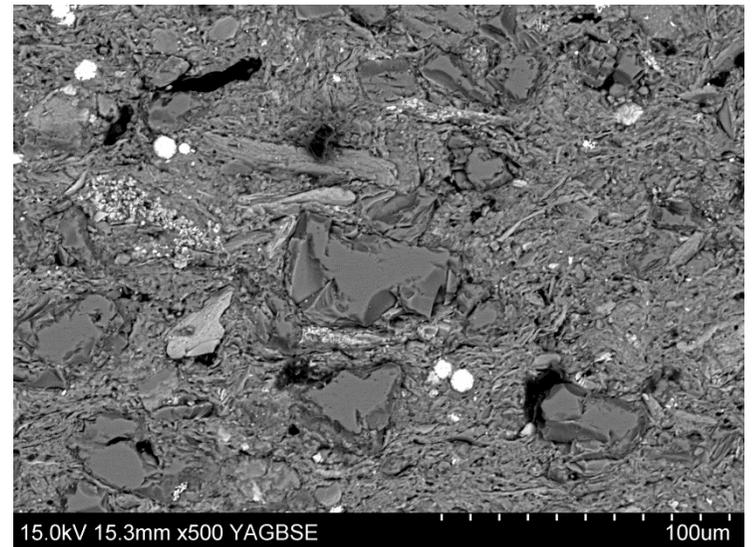
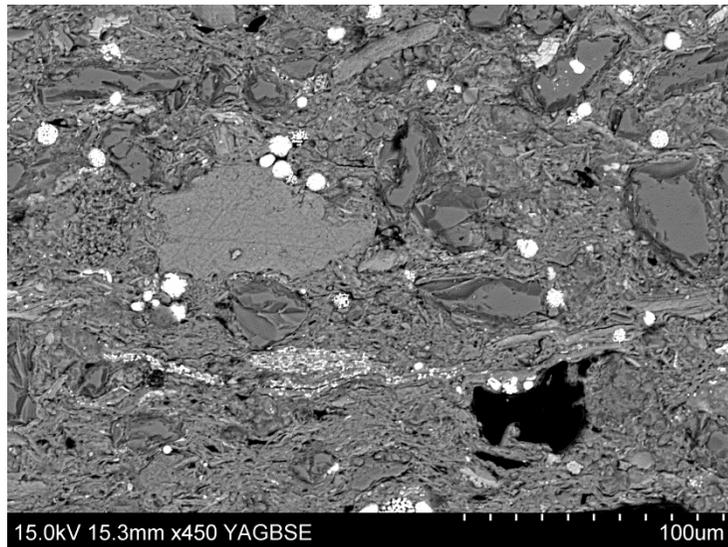
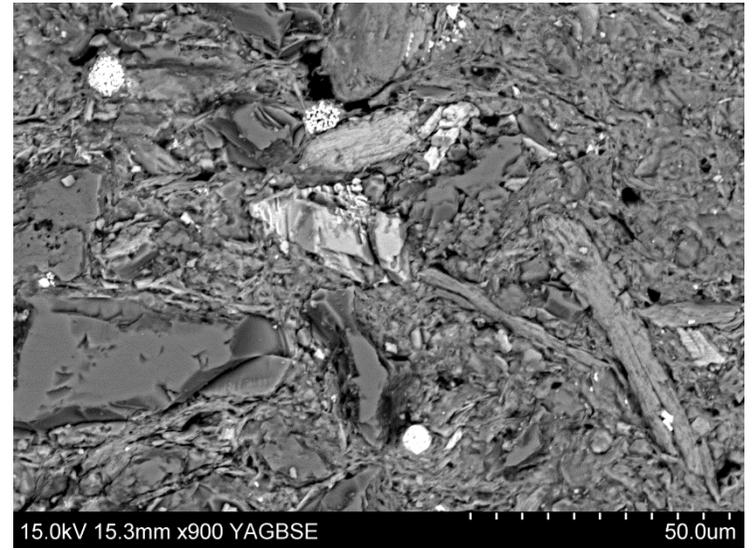
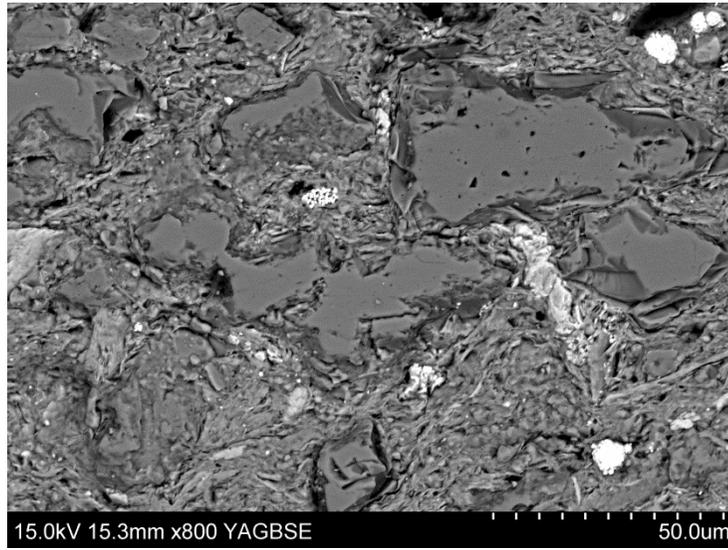
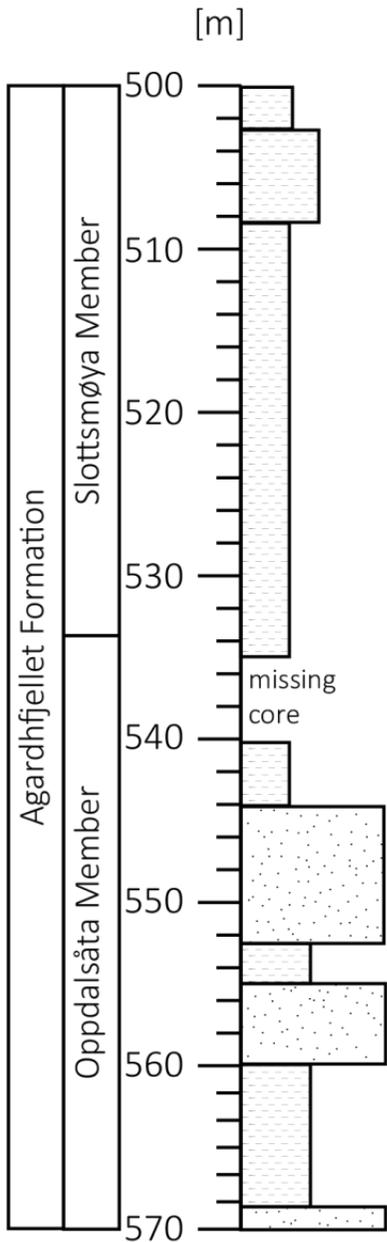


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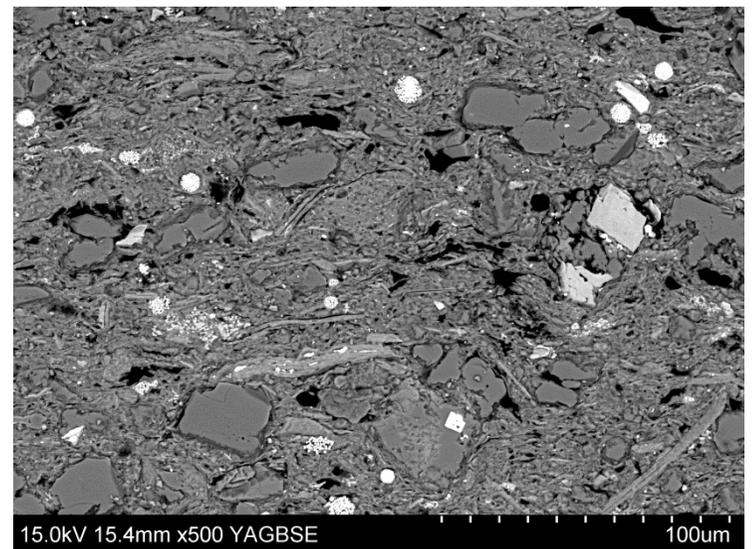
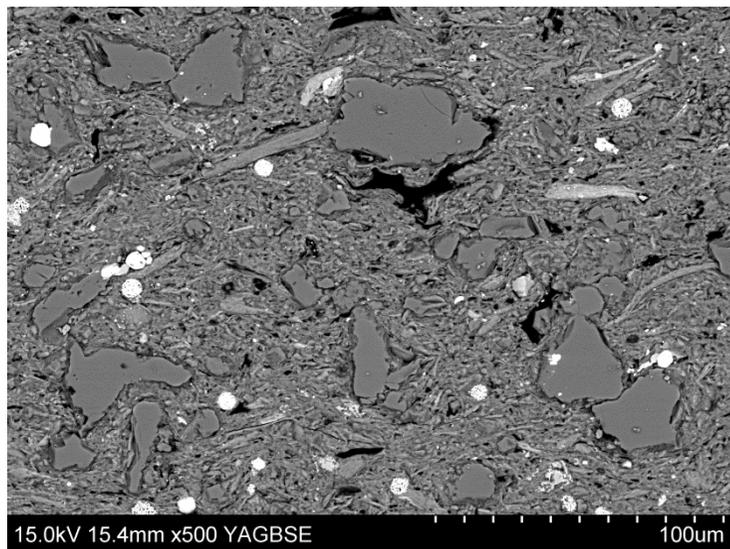
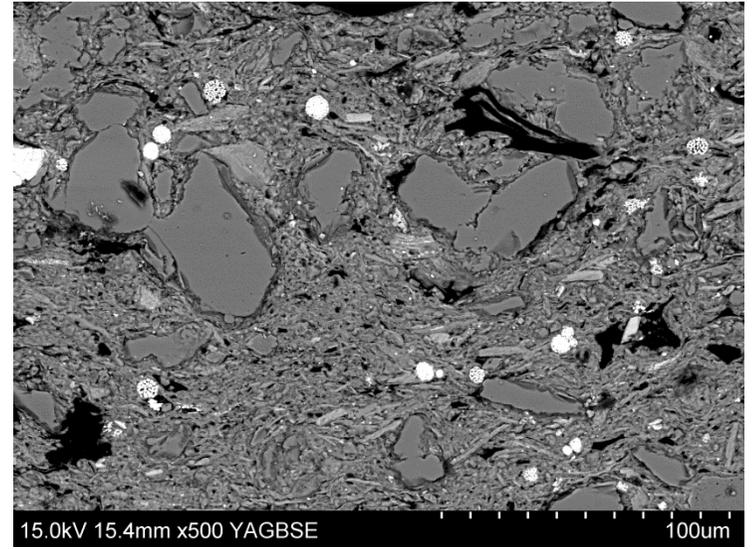
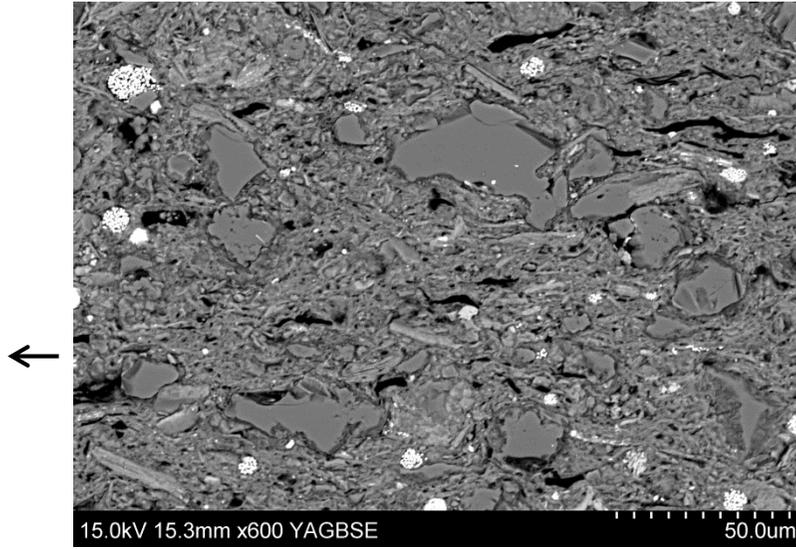
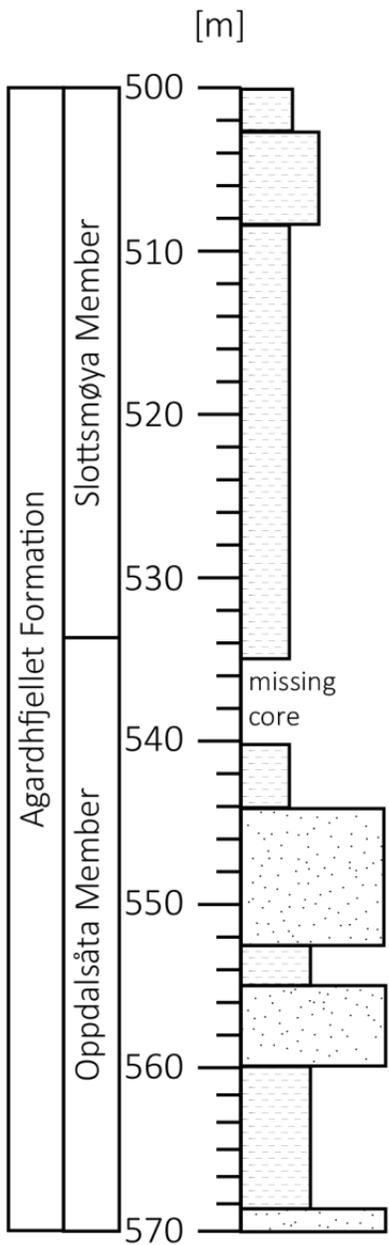
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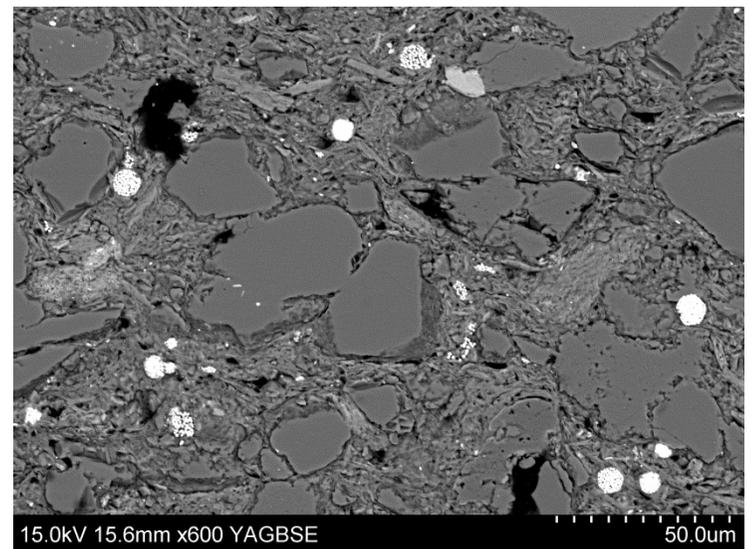
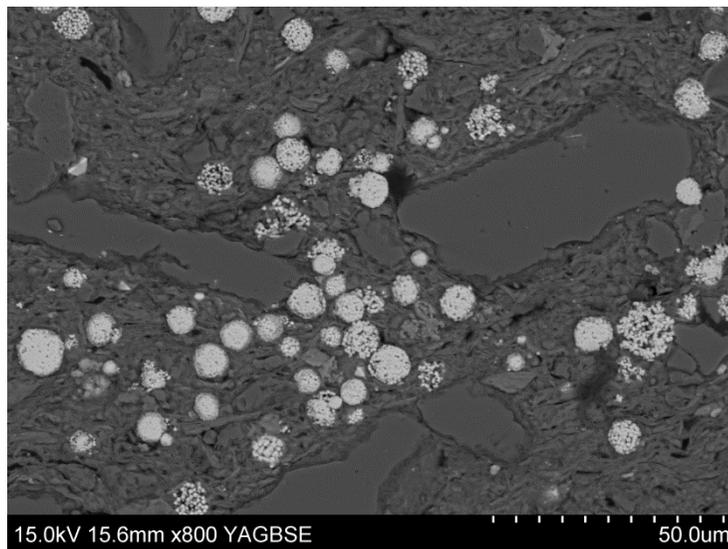
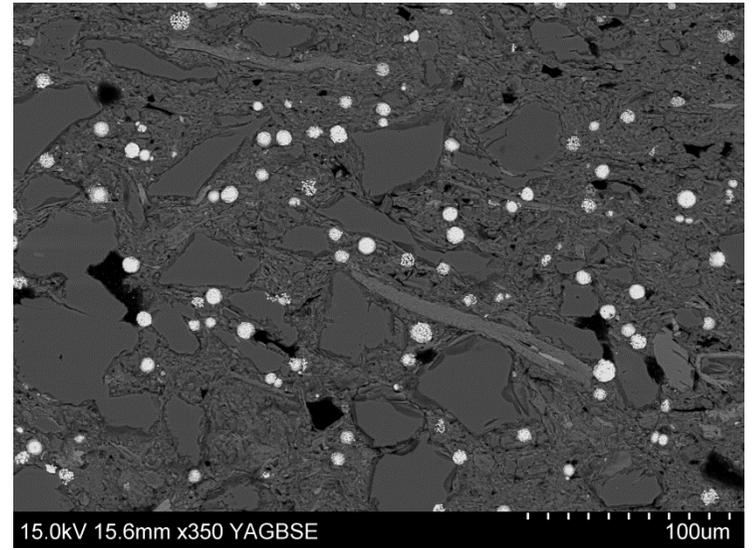
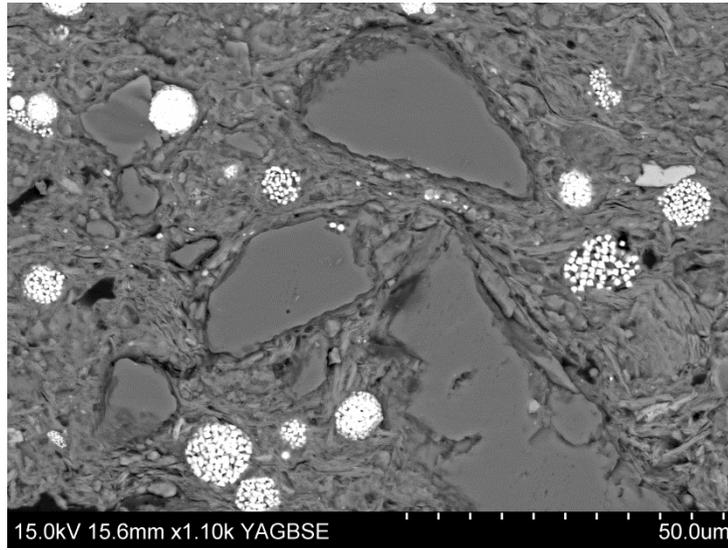
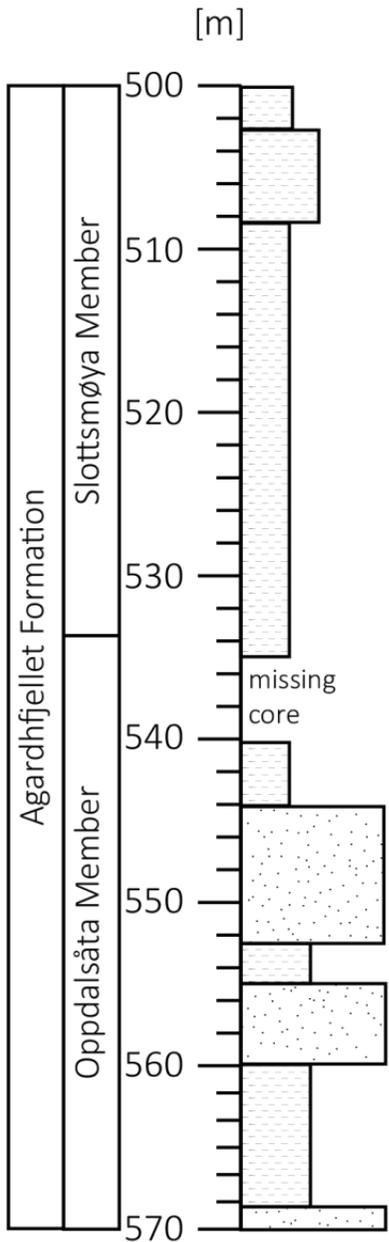


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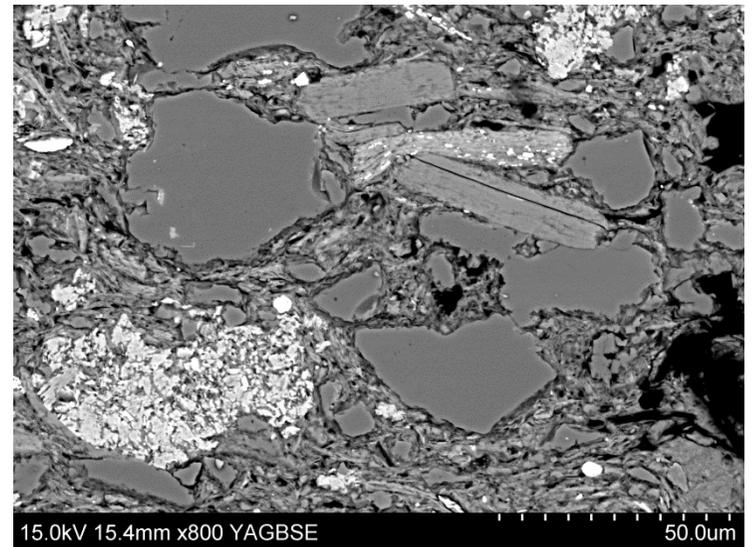
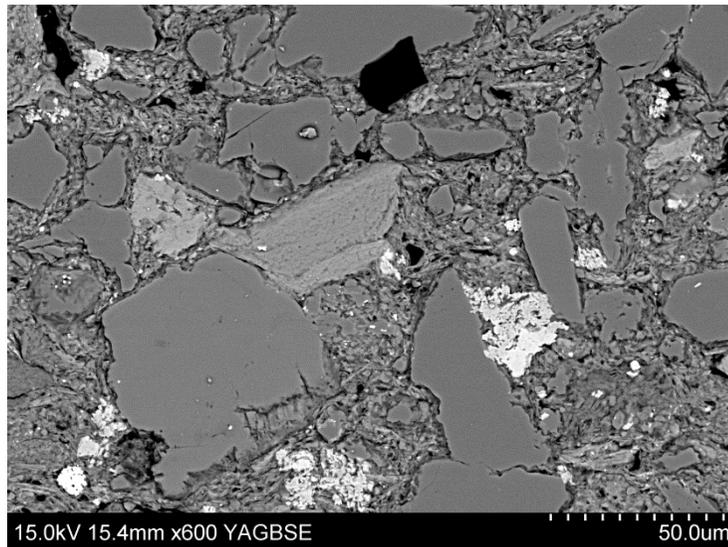
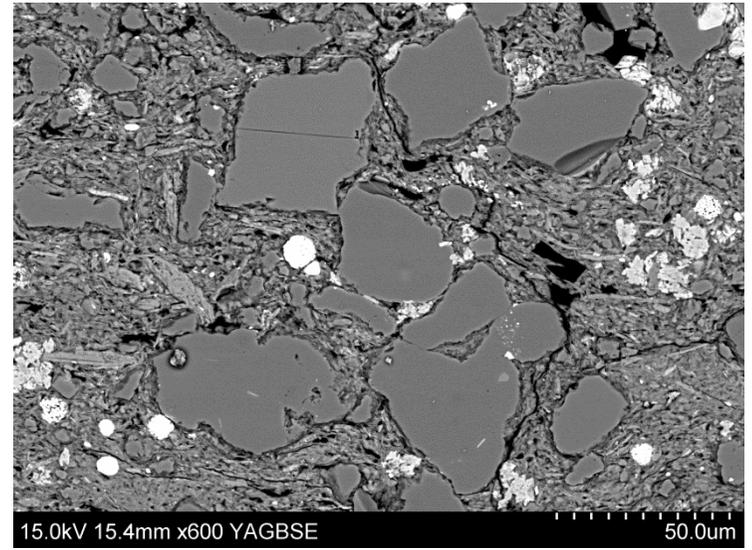
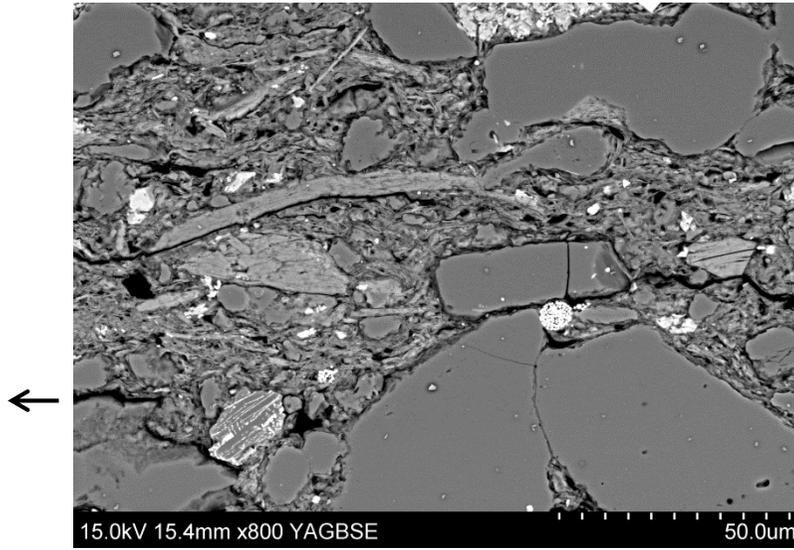
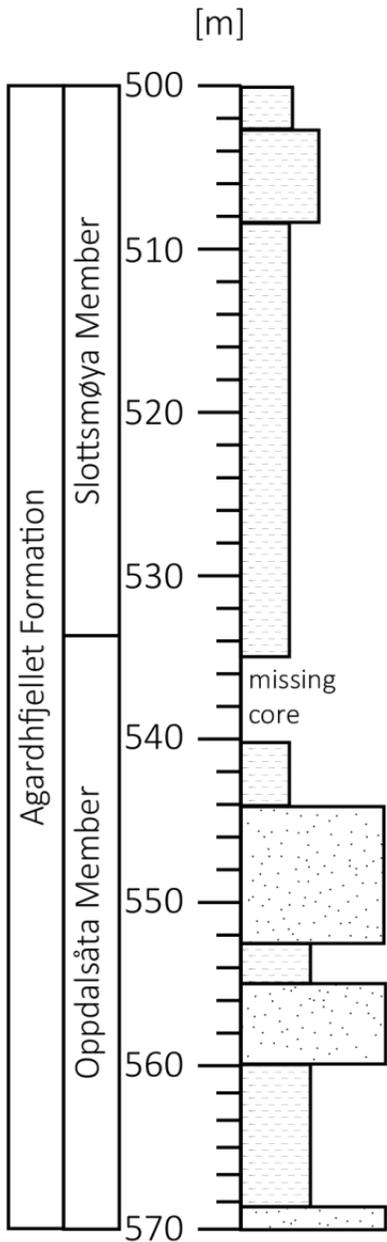


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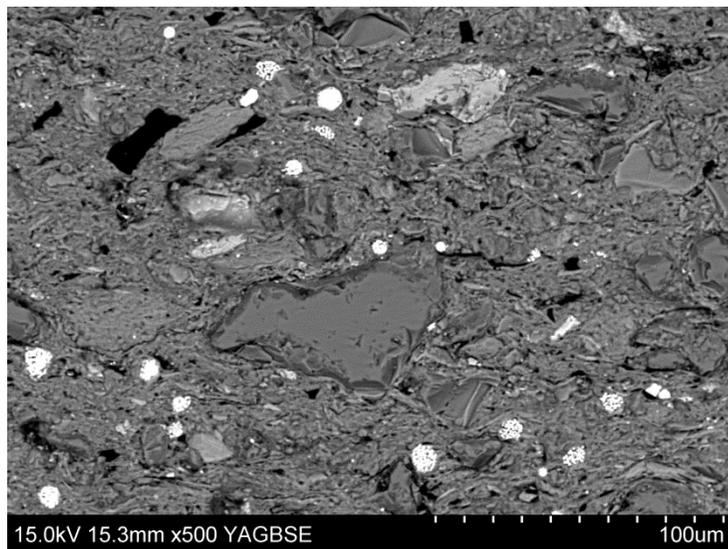
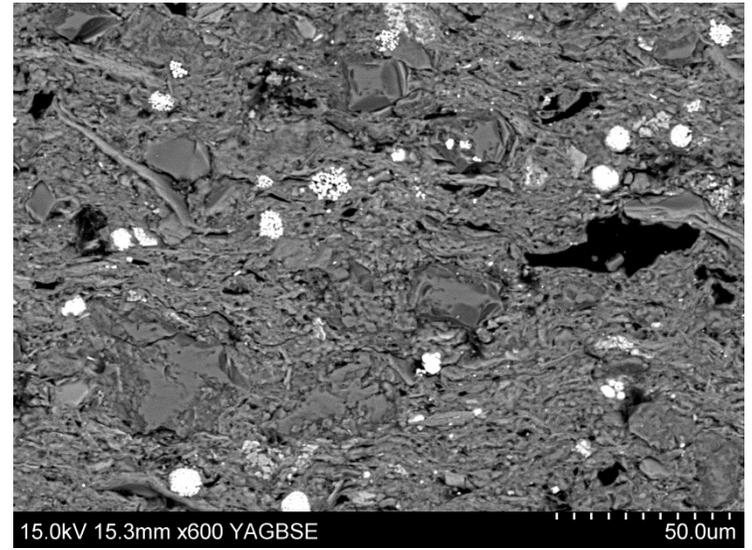
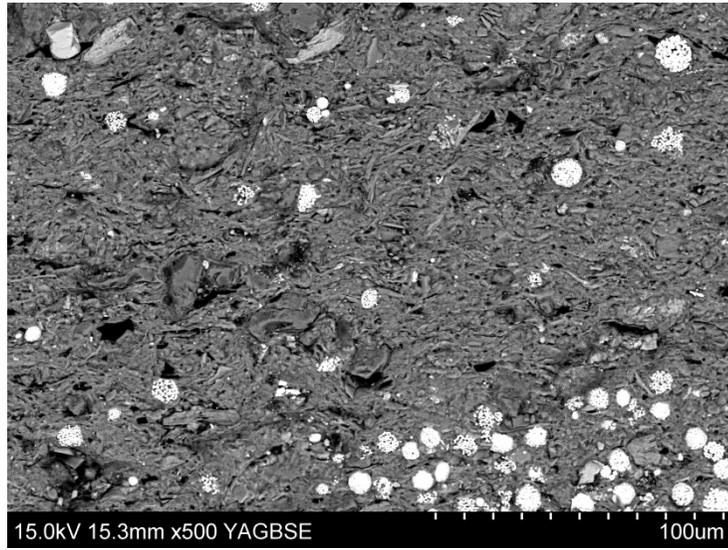
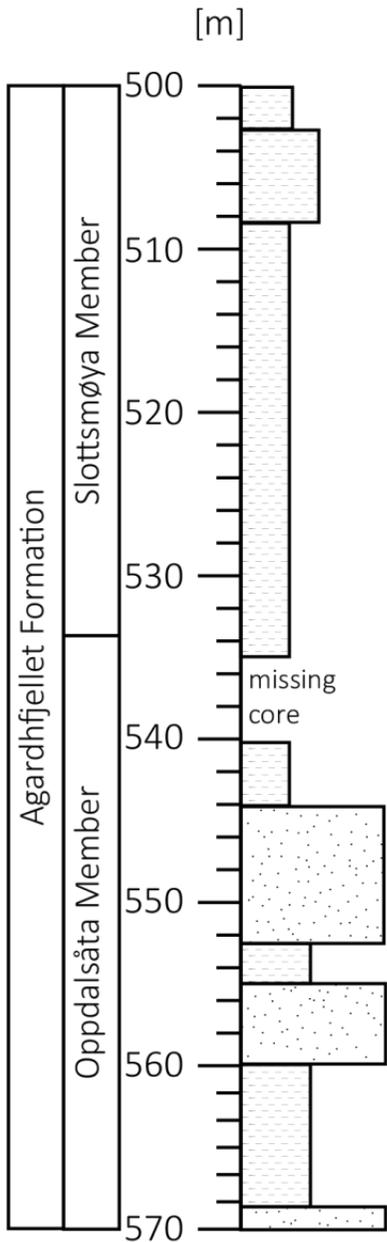
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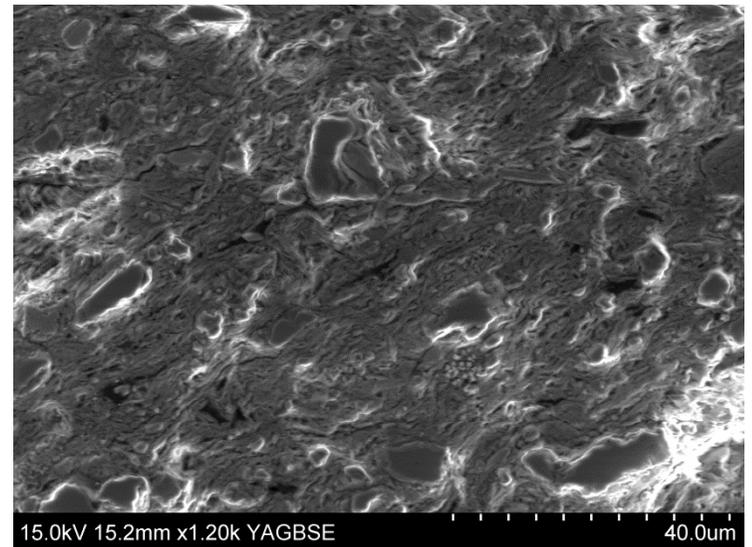
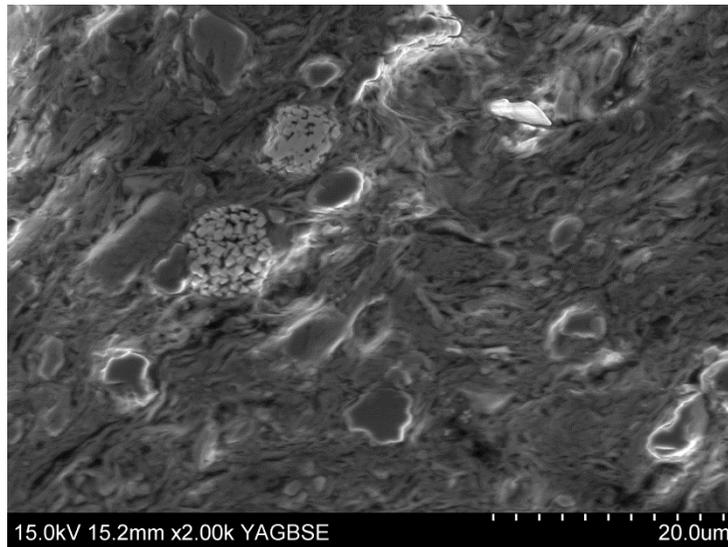
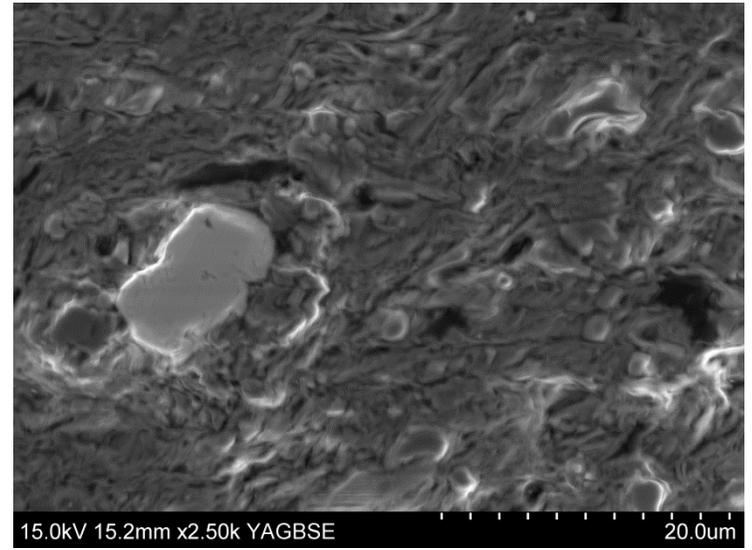
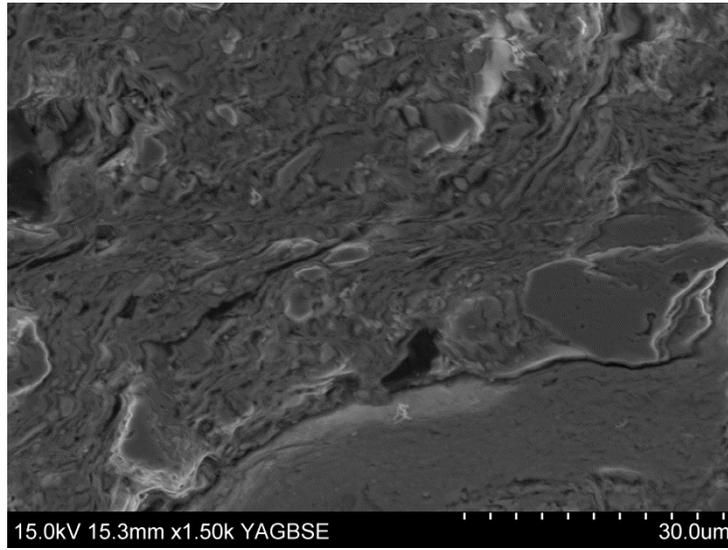
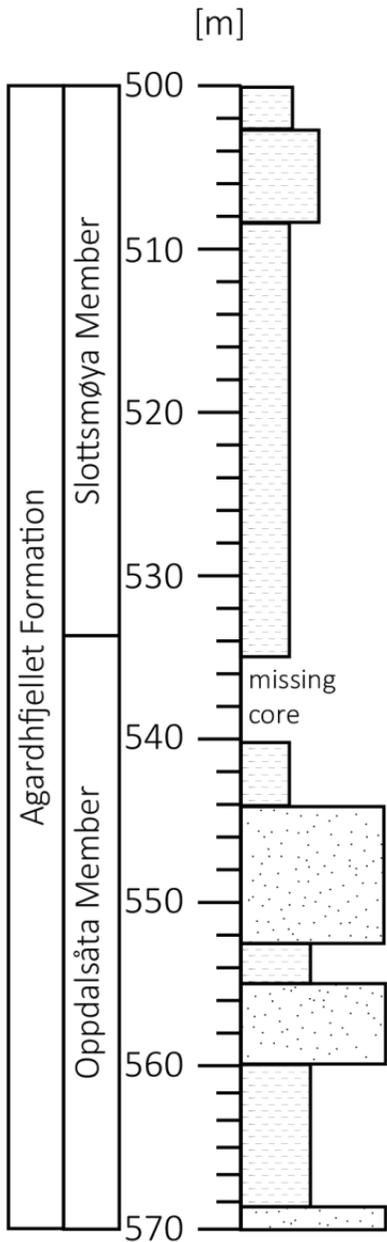
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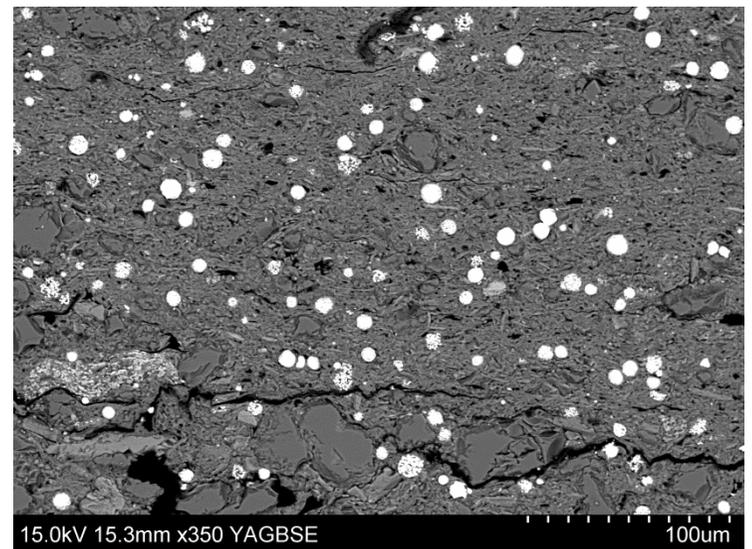
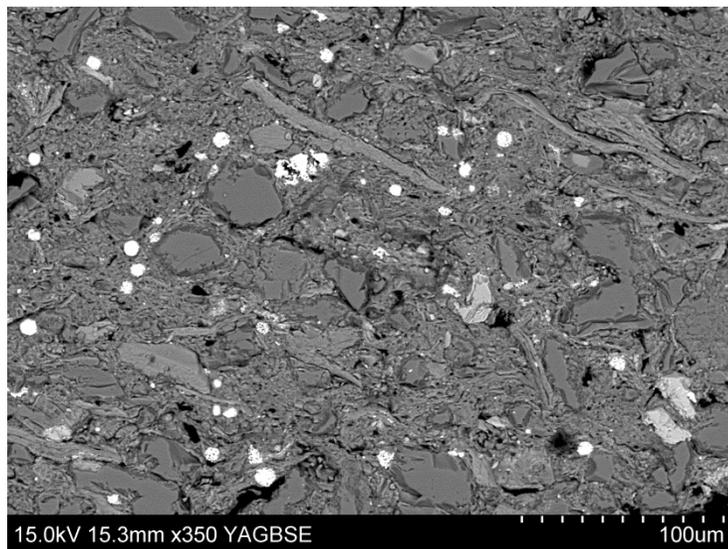
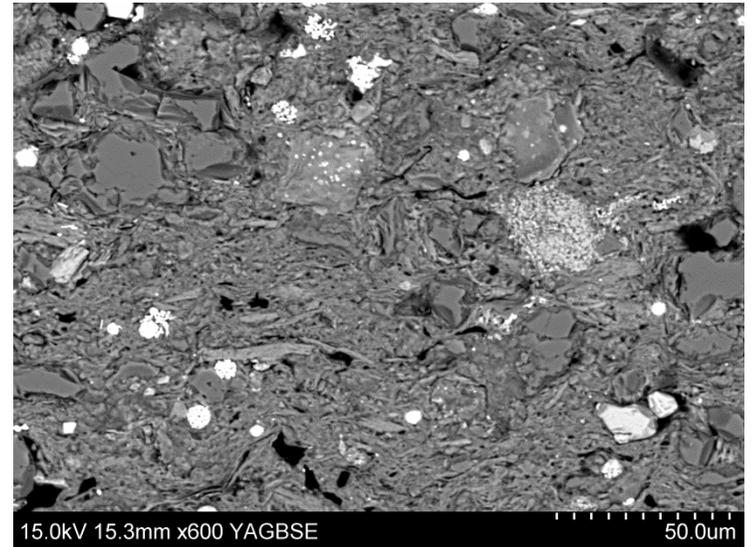
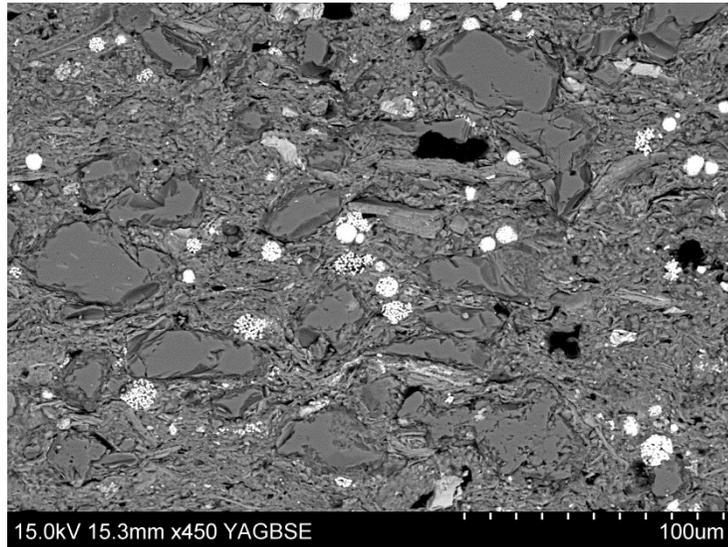
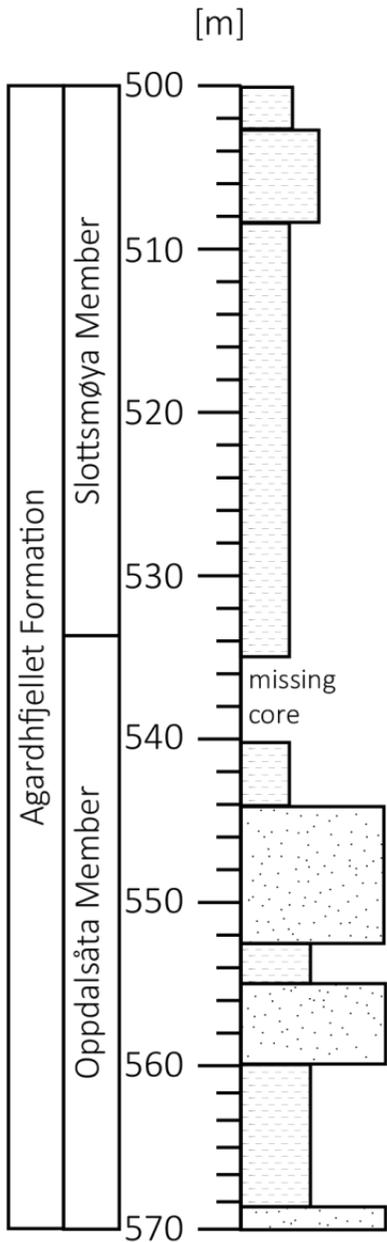
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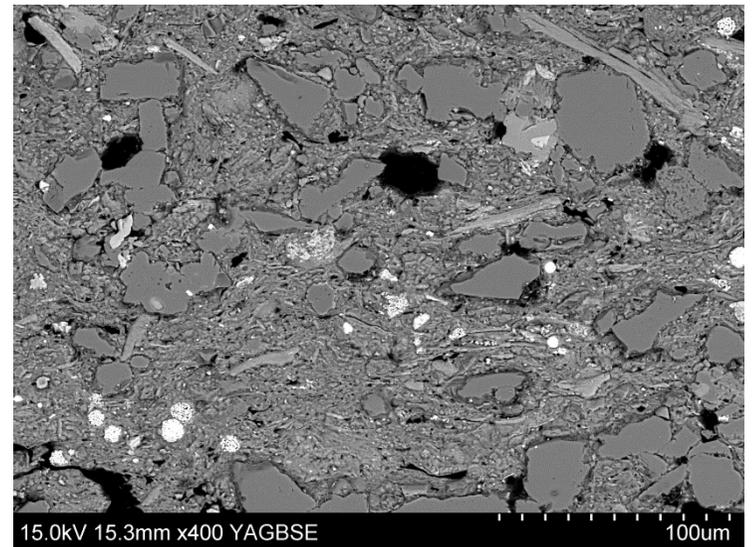
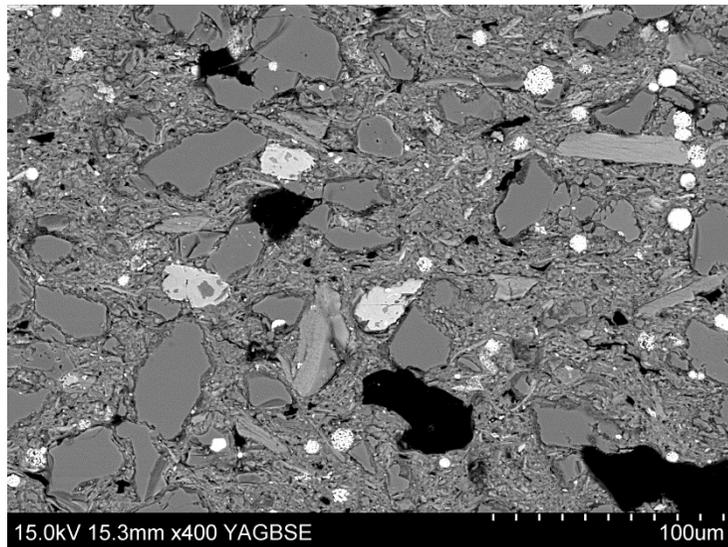
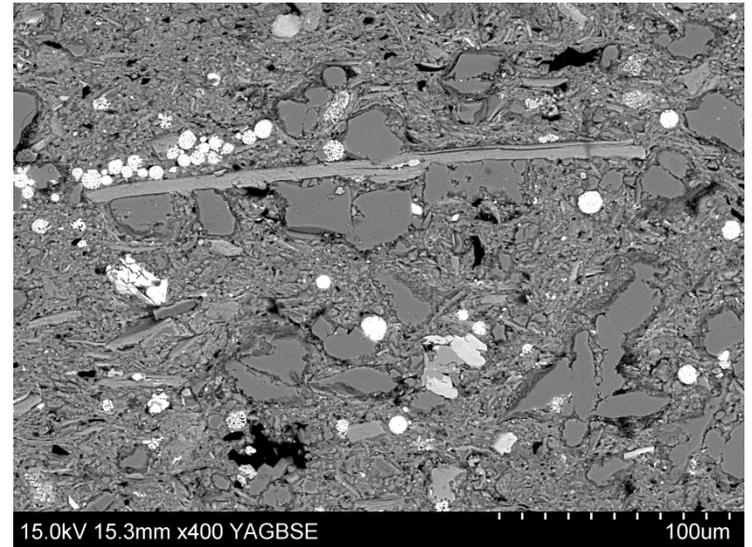
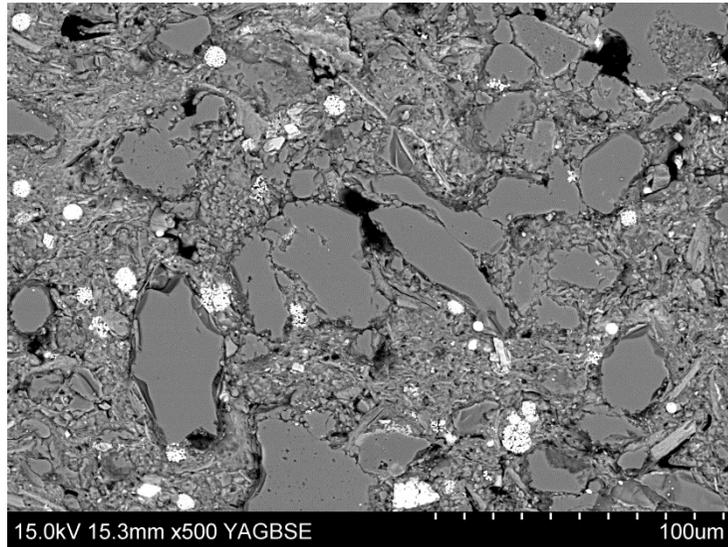
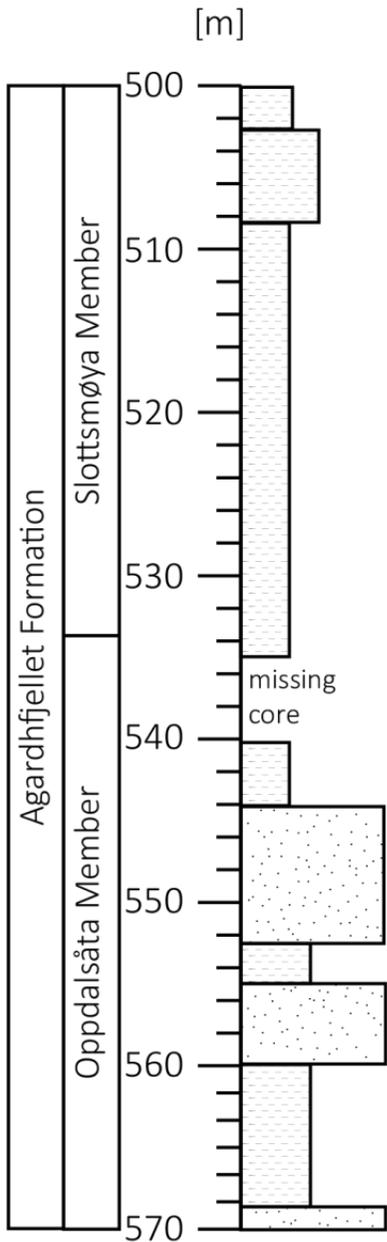
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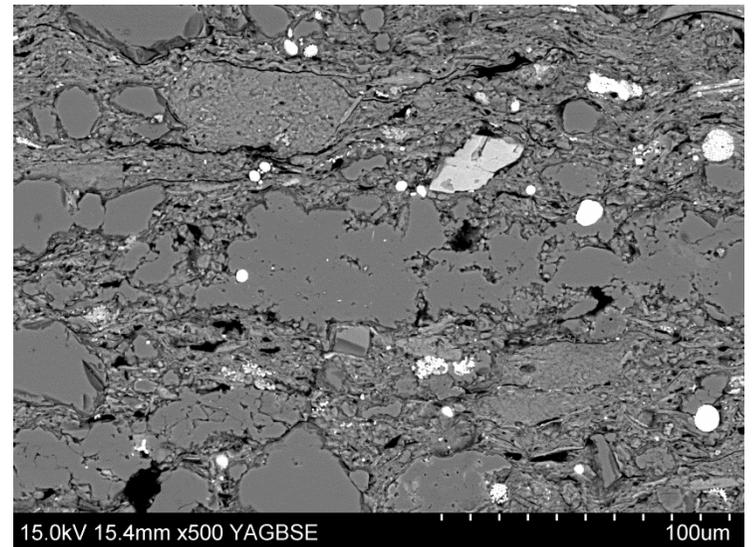
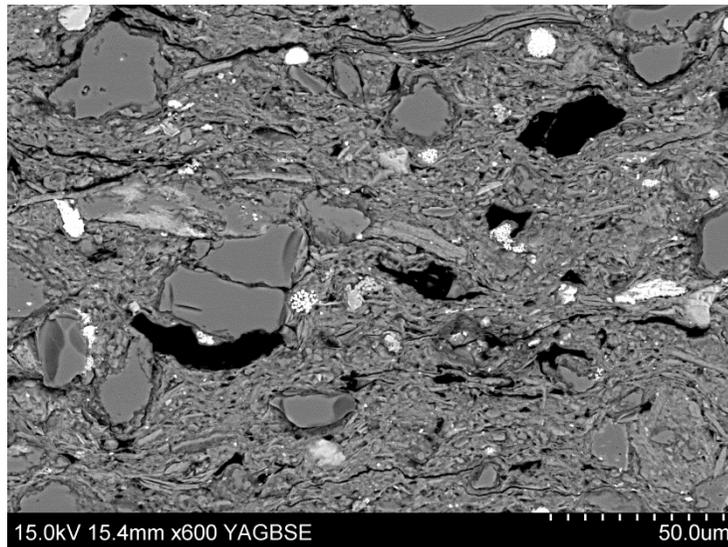
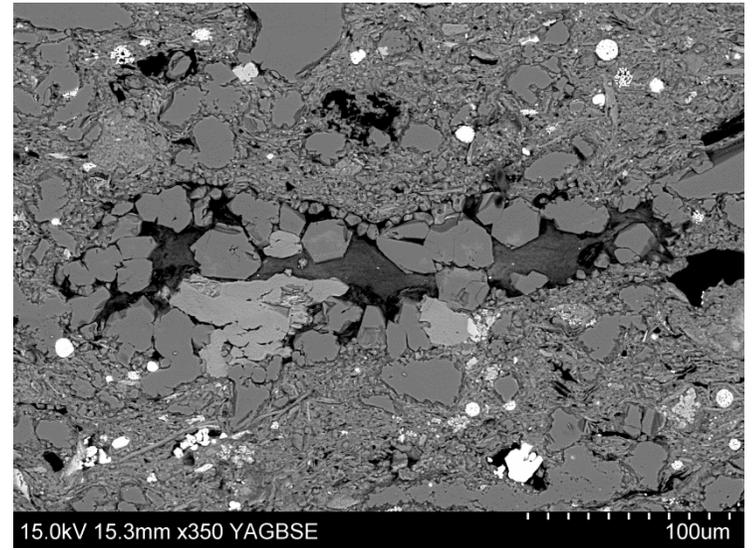
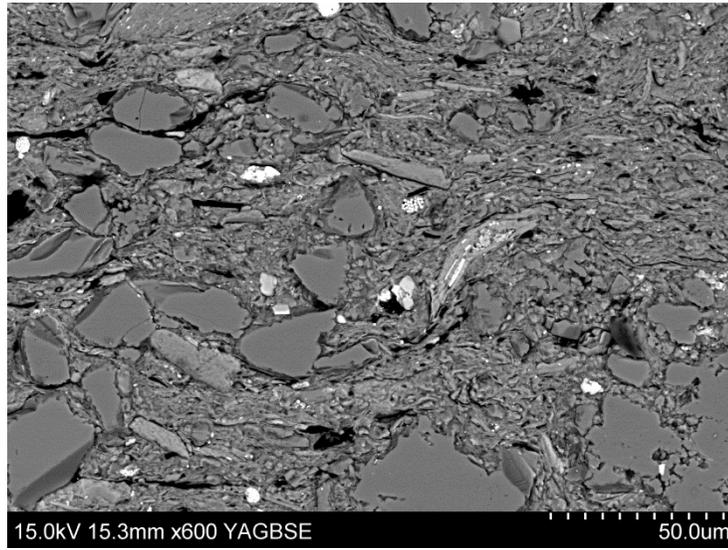
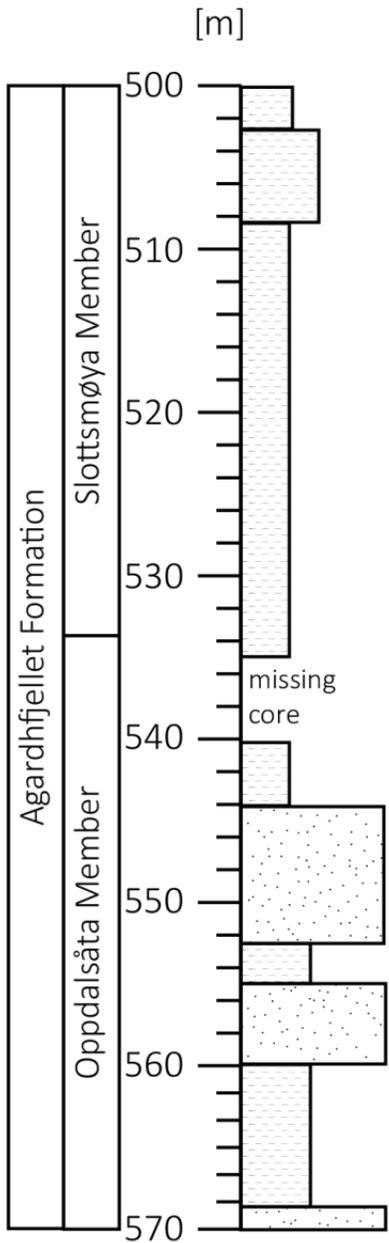
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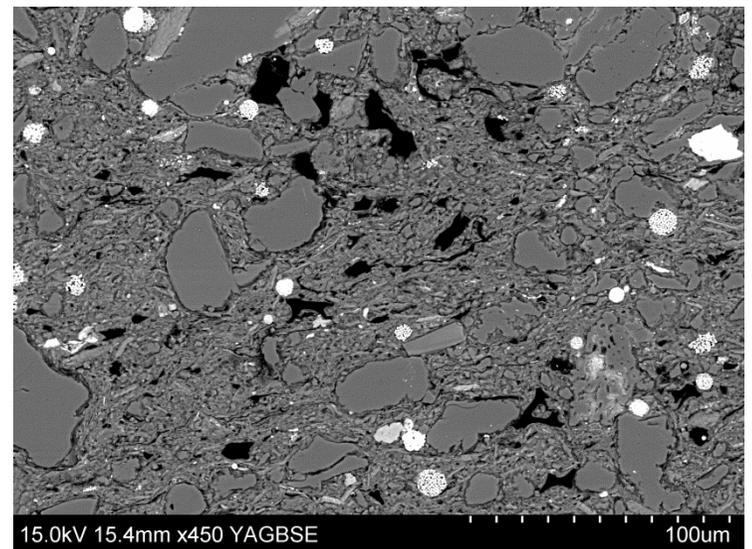
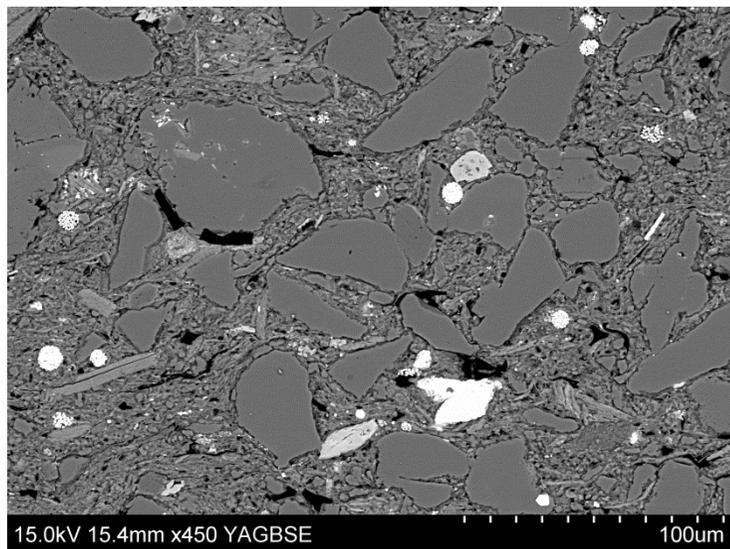
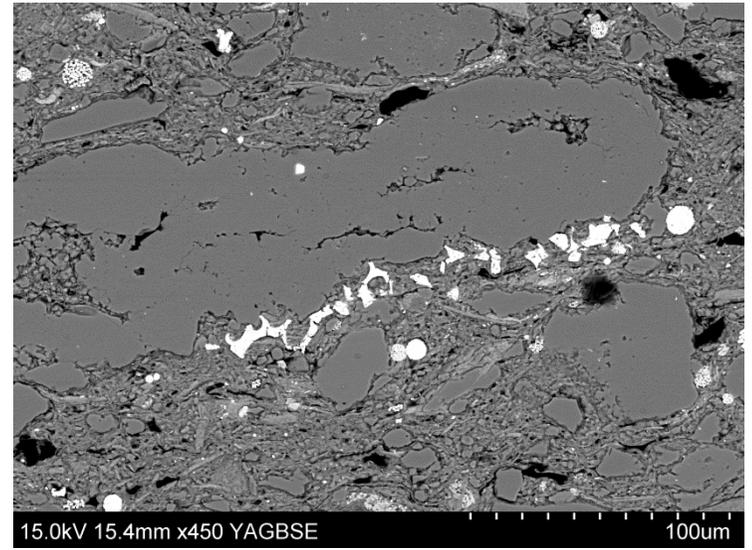
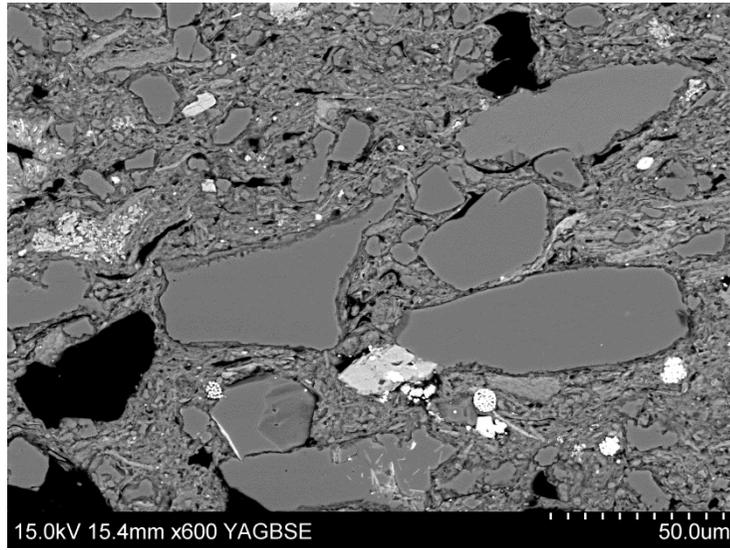
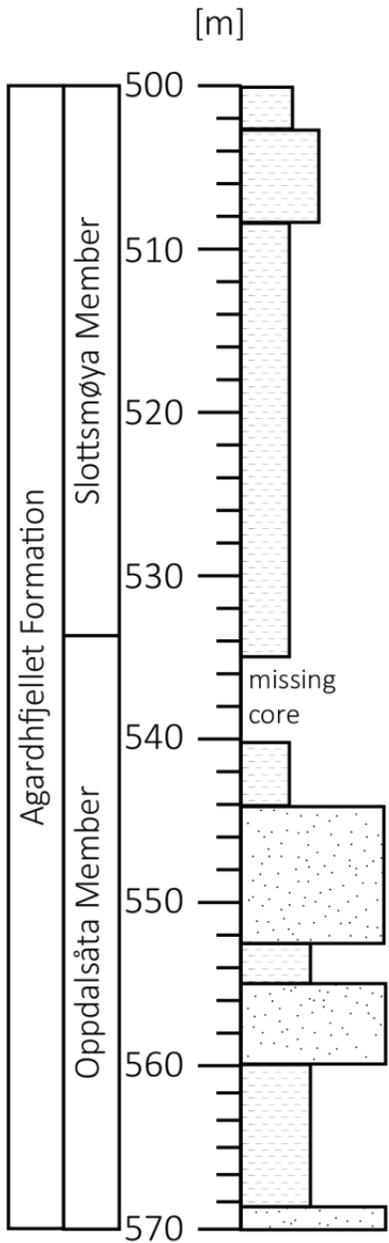
Thin section preparation: Durham University

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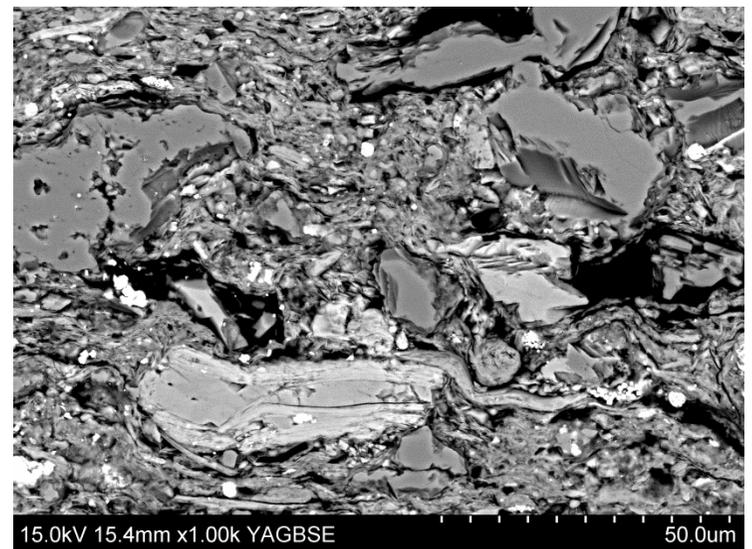
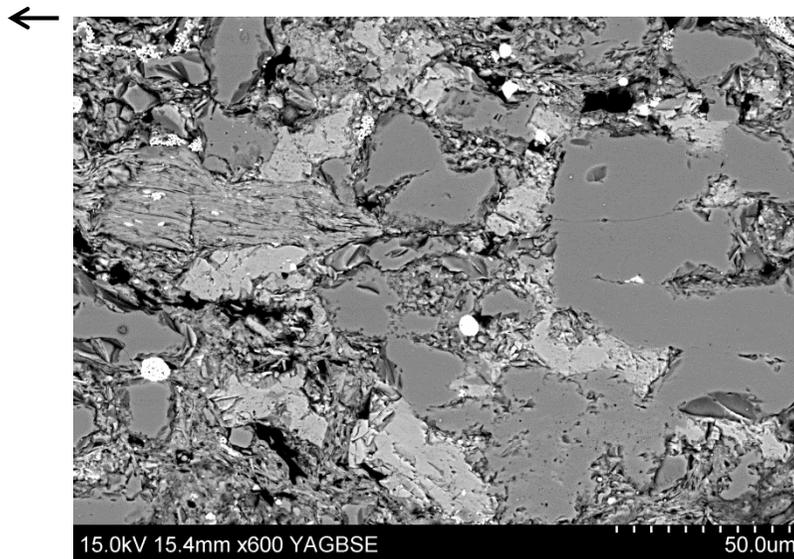
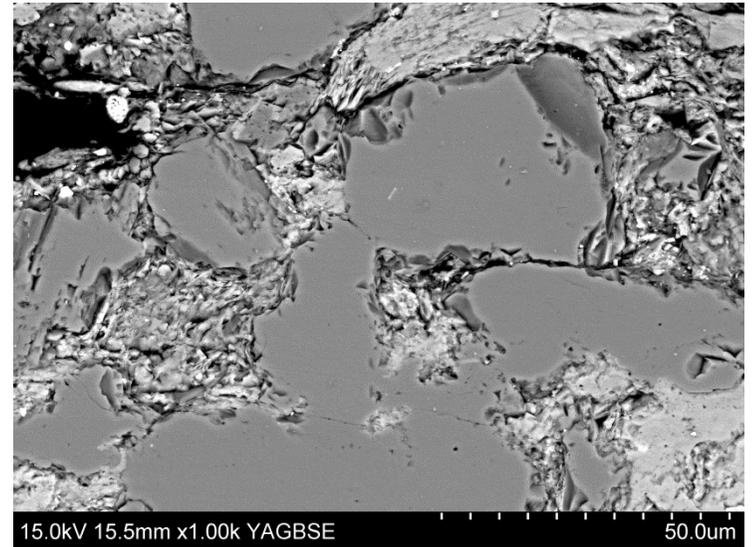
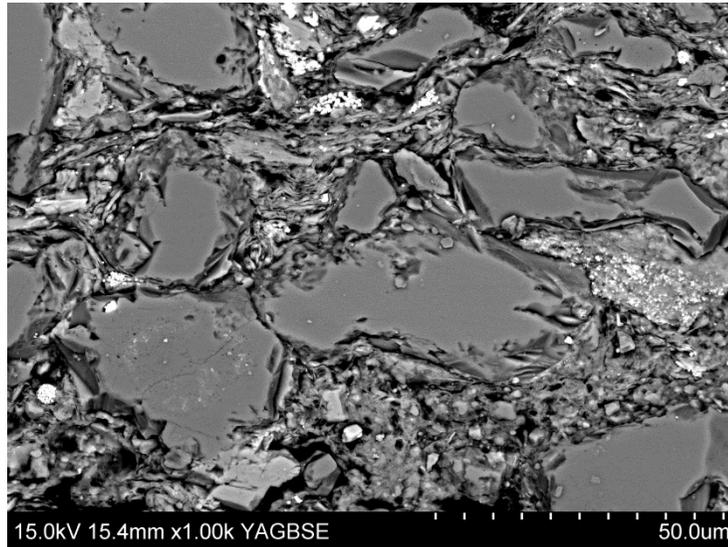
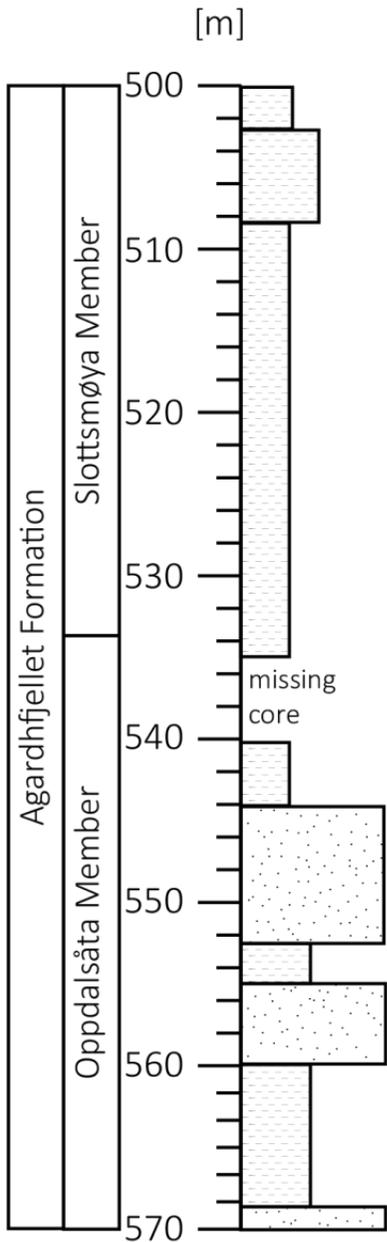


Thin section preparation: Durham University

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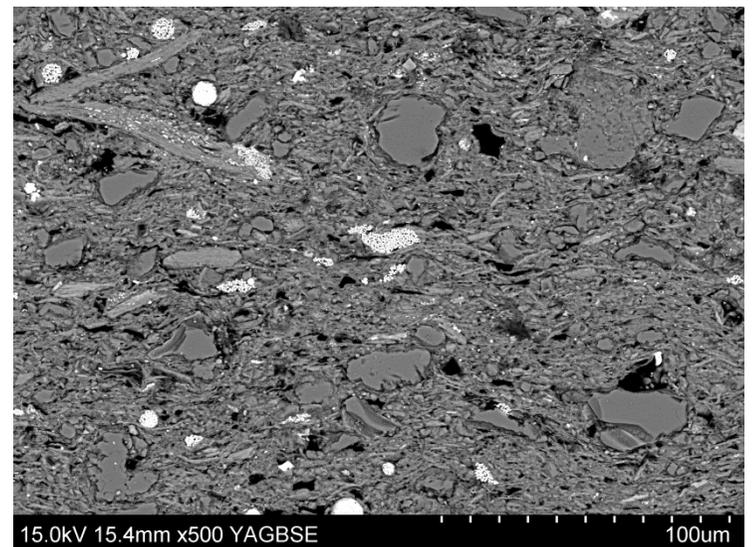
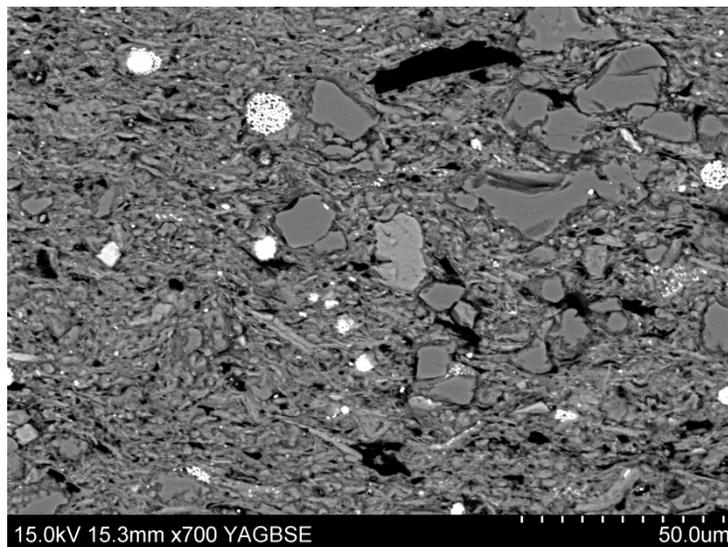
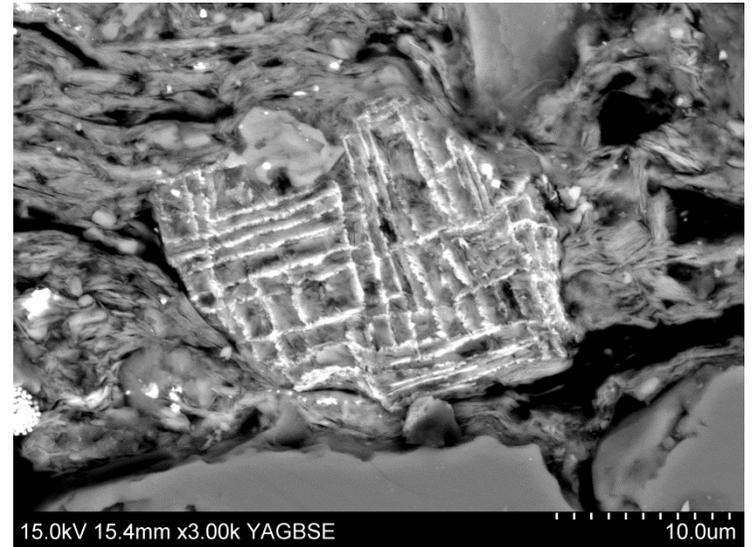
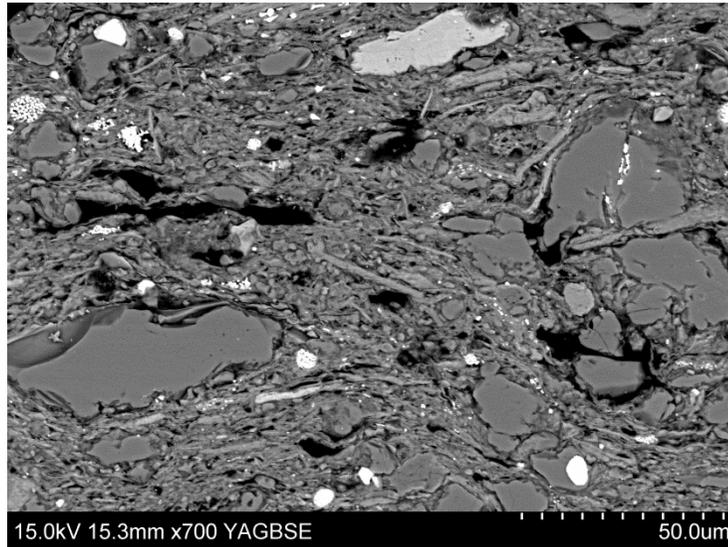
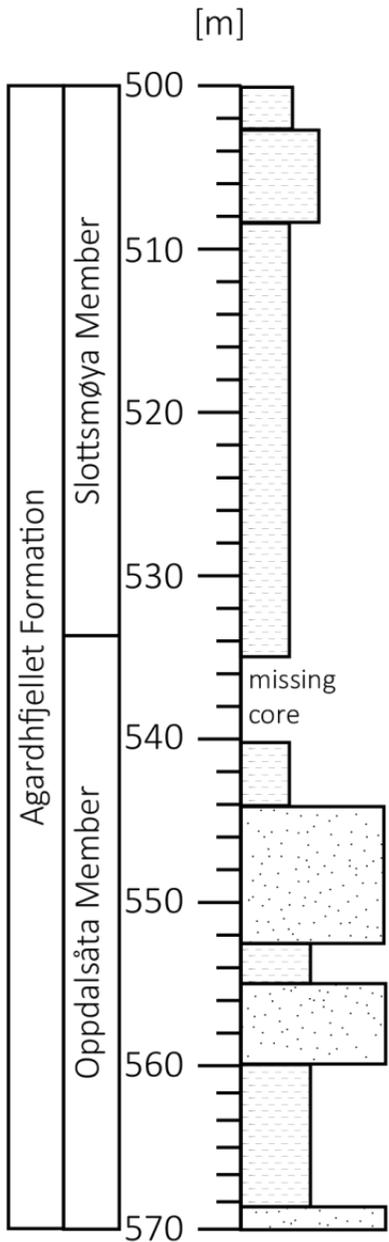


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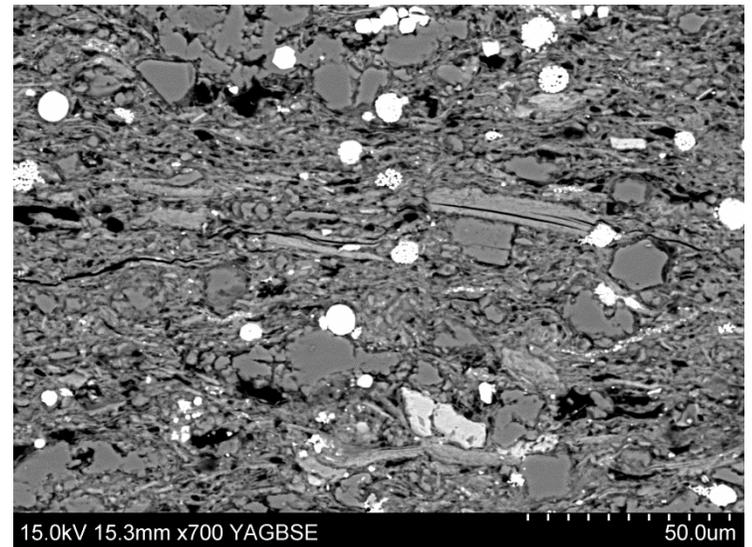
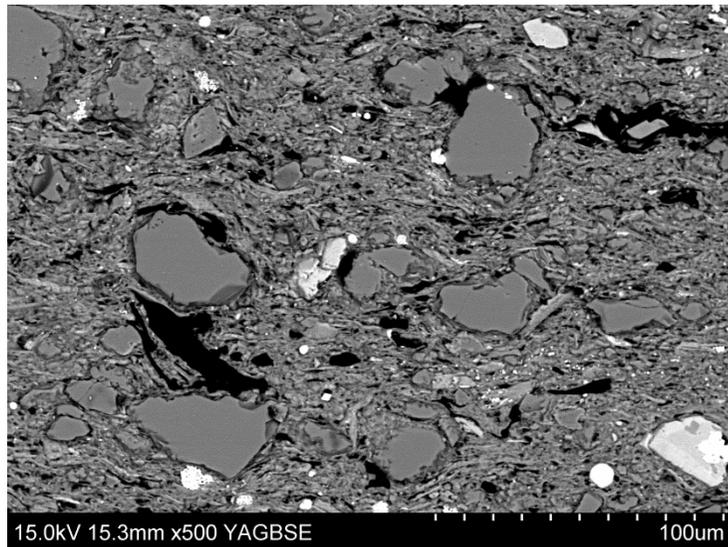
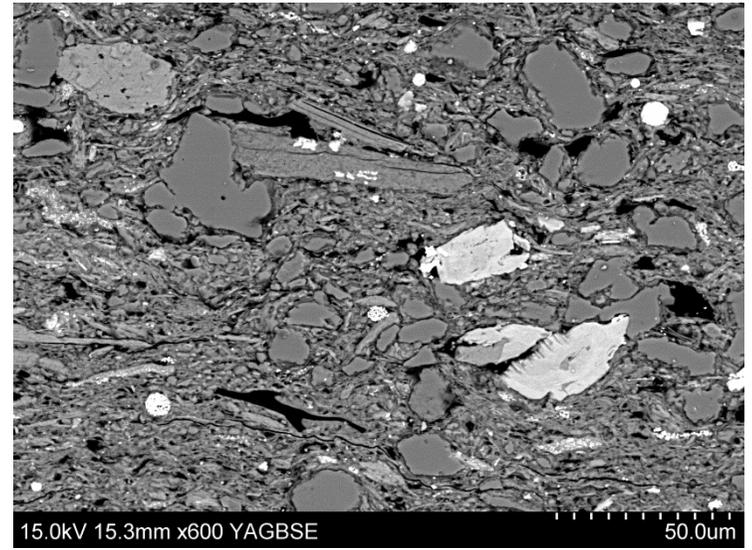
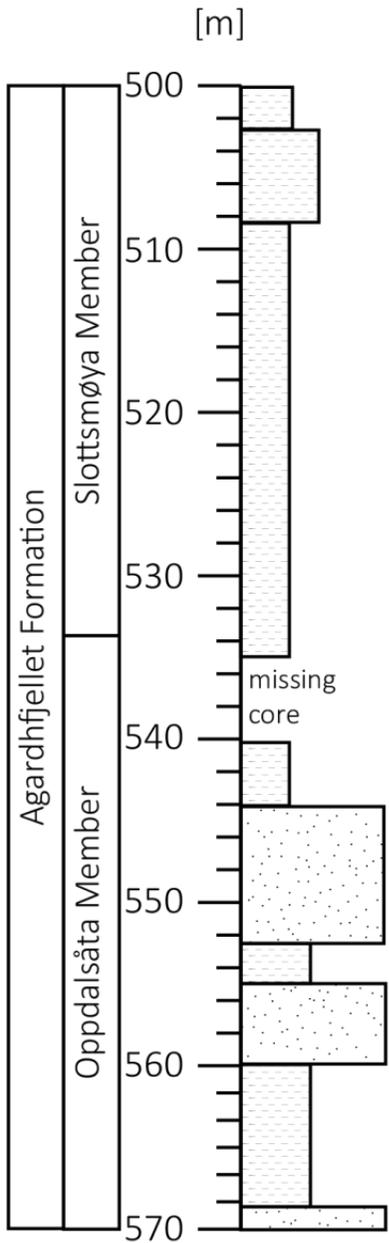


Thin section preparation: Durham University

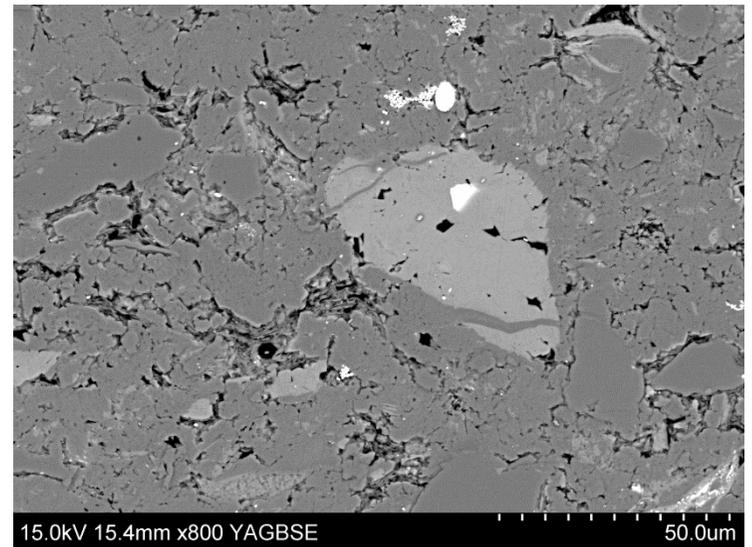
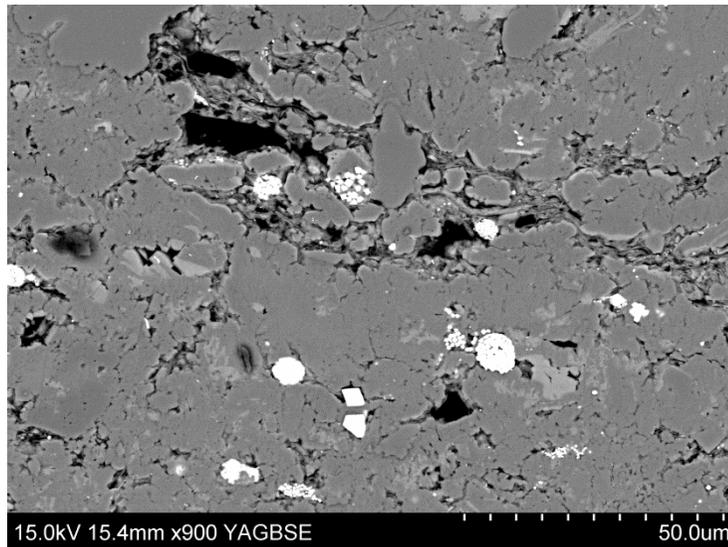
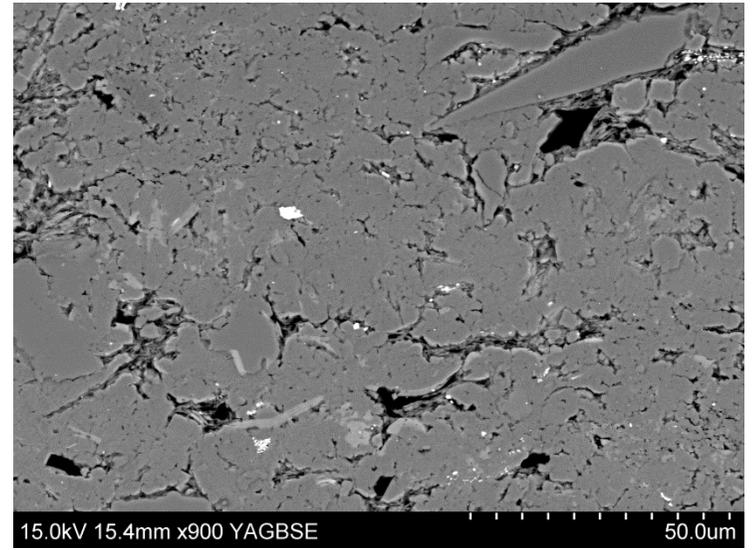
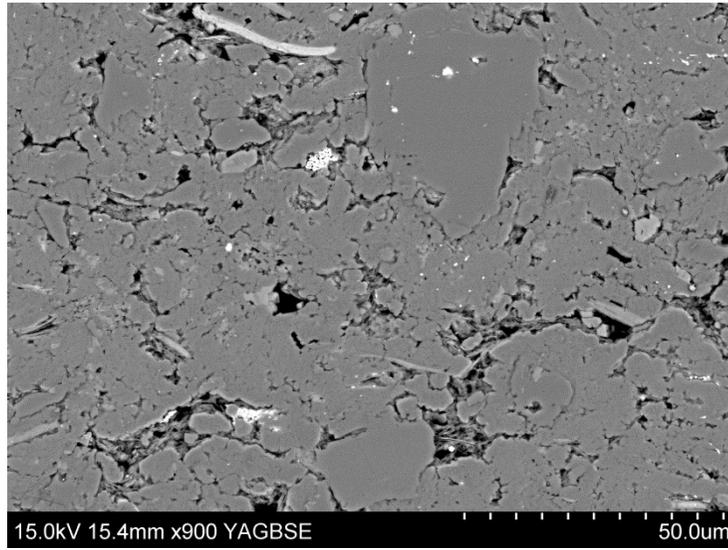
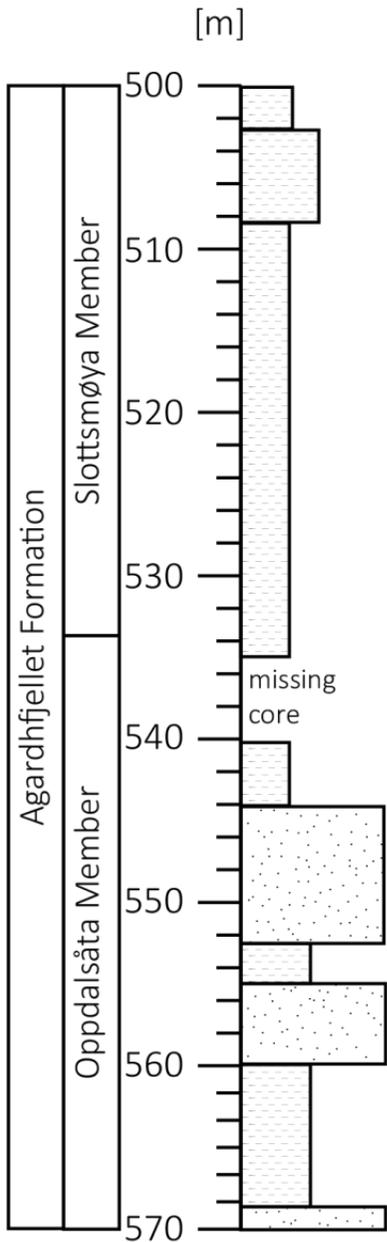
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# DH4 540.50

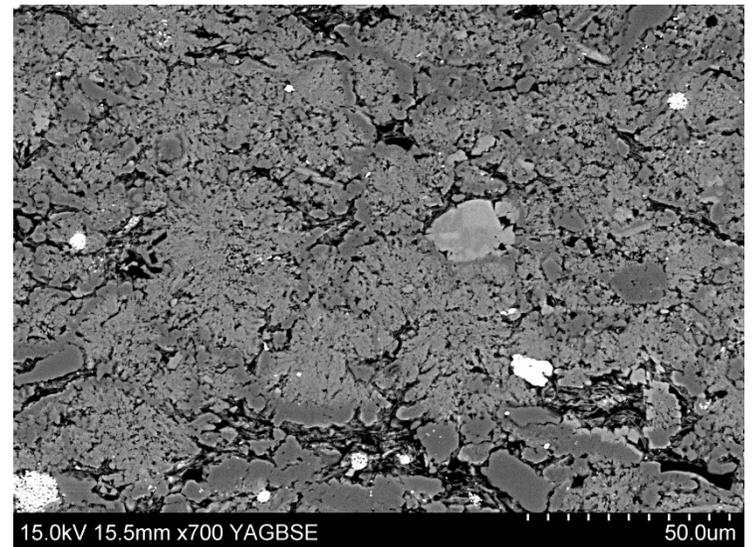
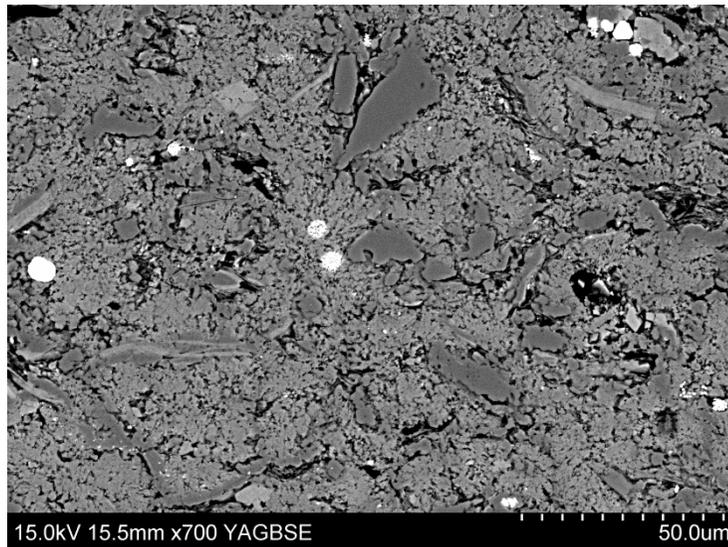
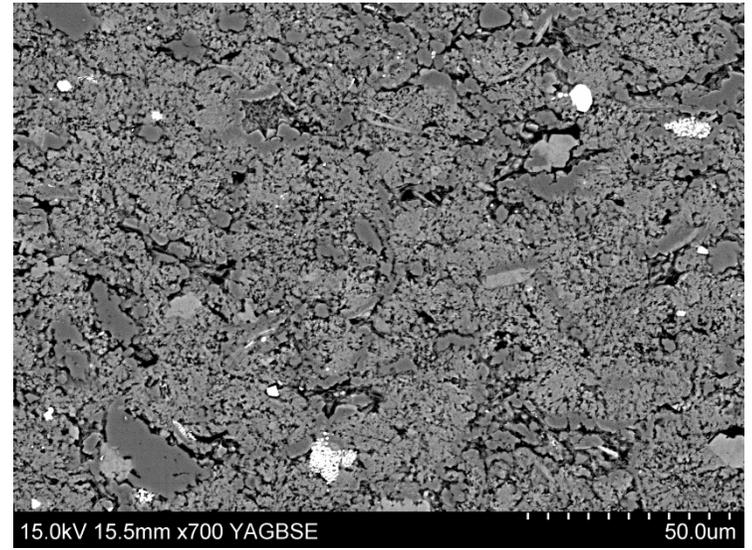
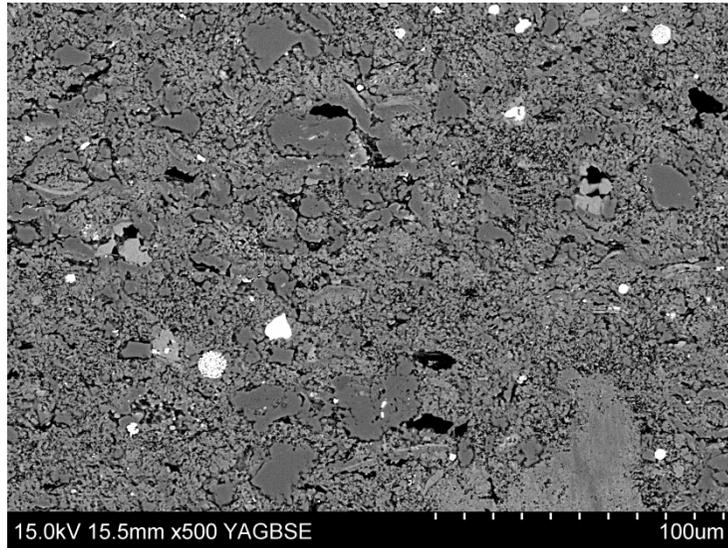
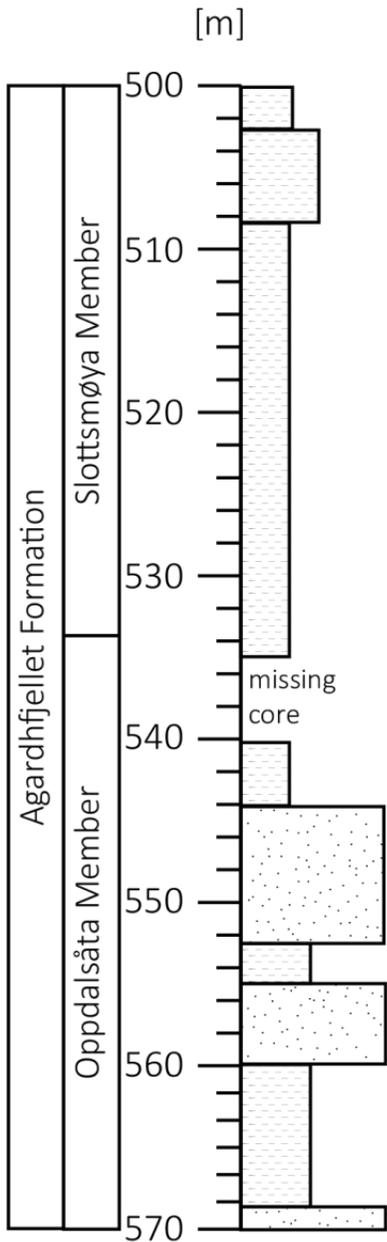


DH4 541.00



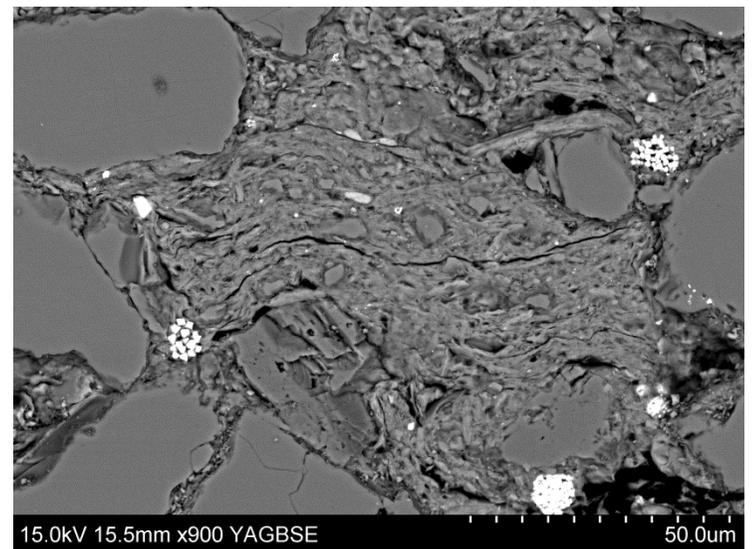
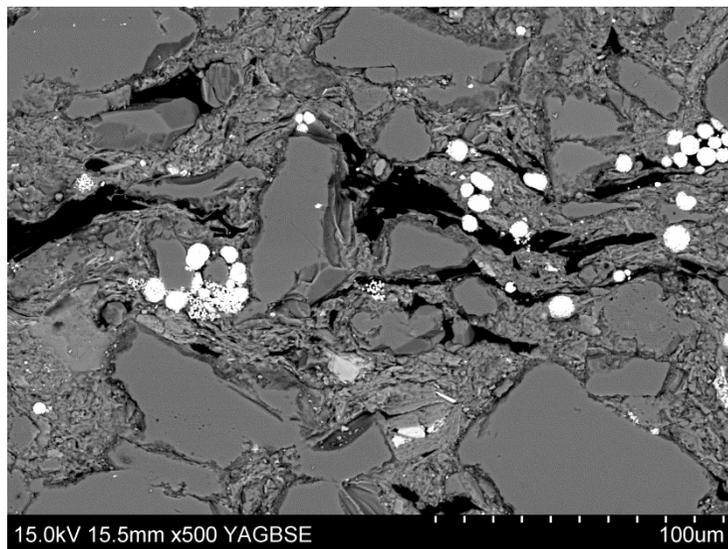
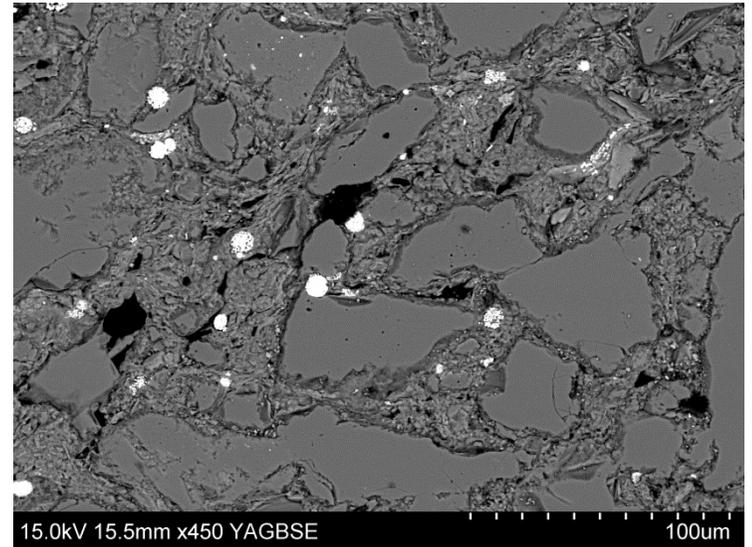
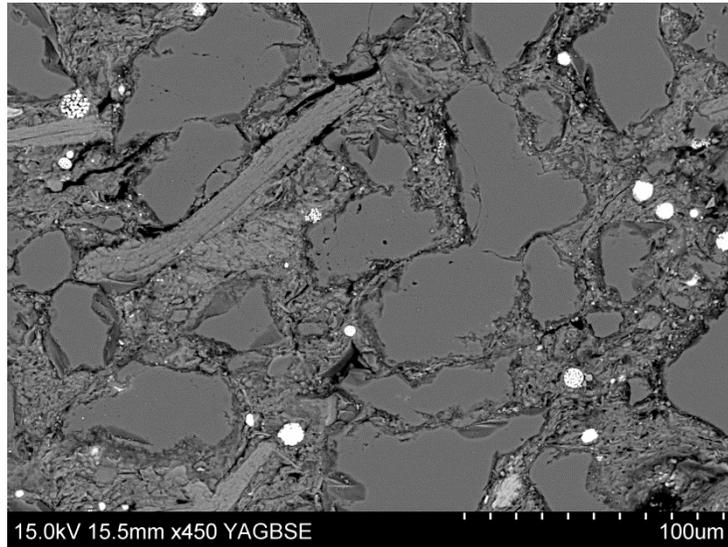
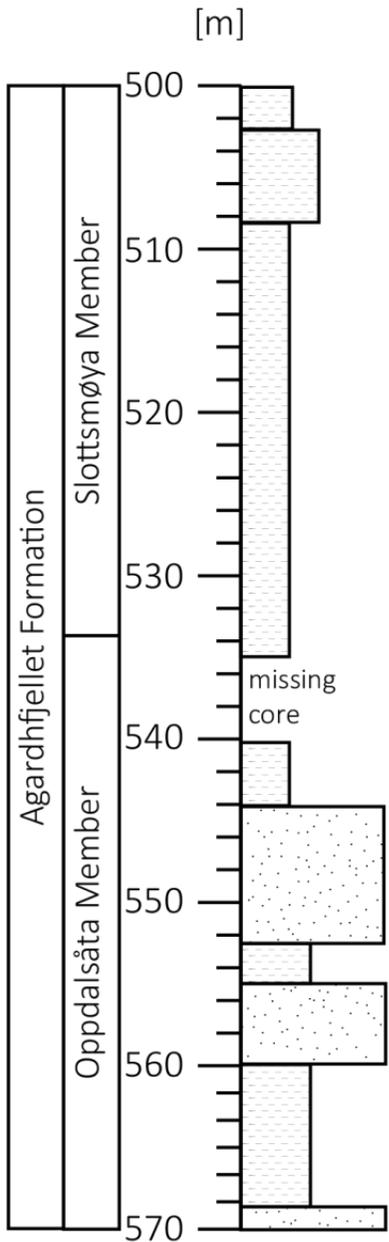
Thin section preparation: Durham University

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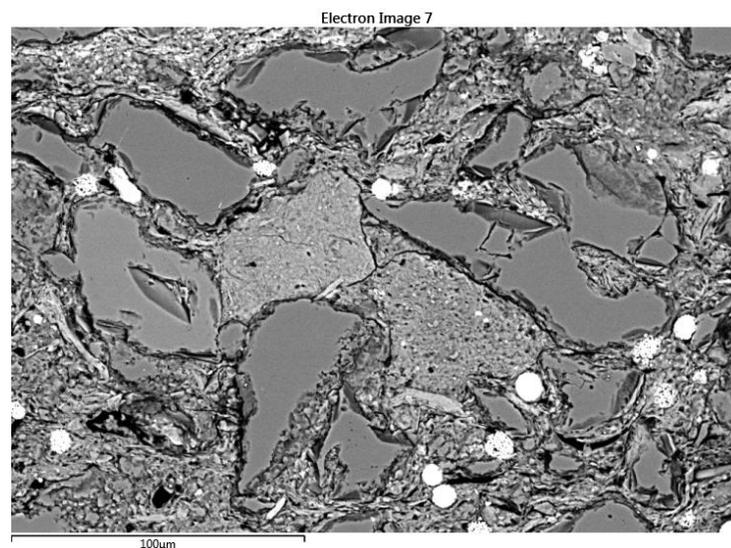
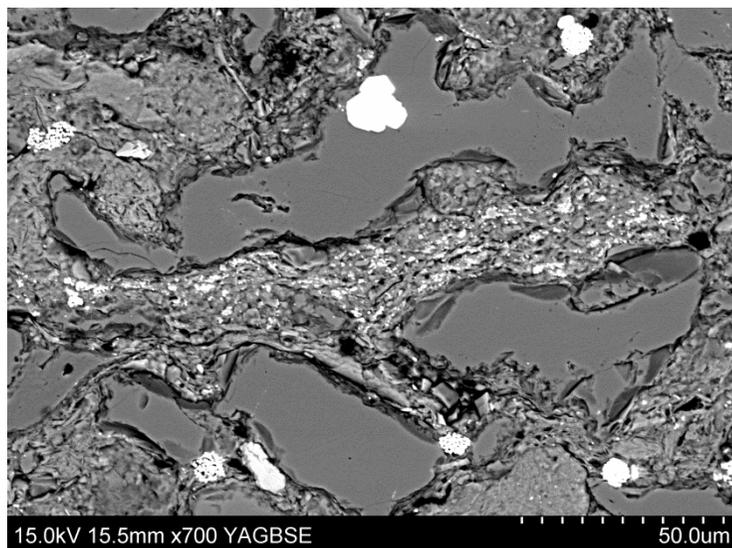
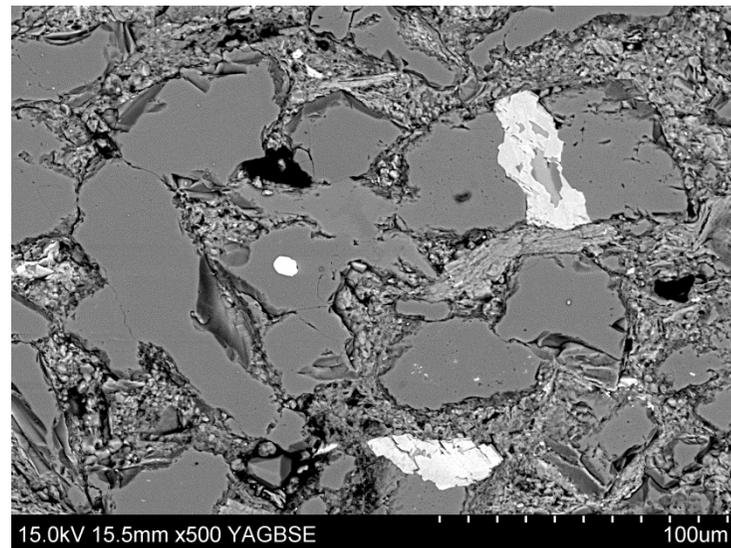
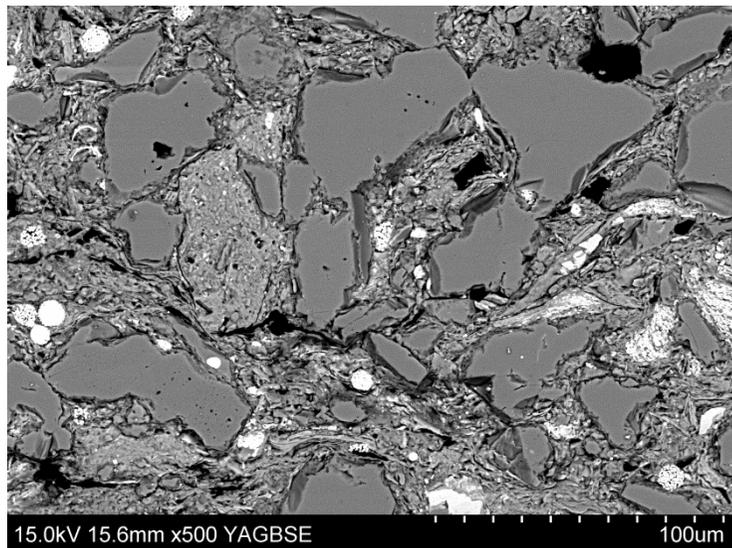
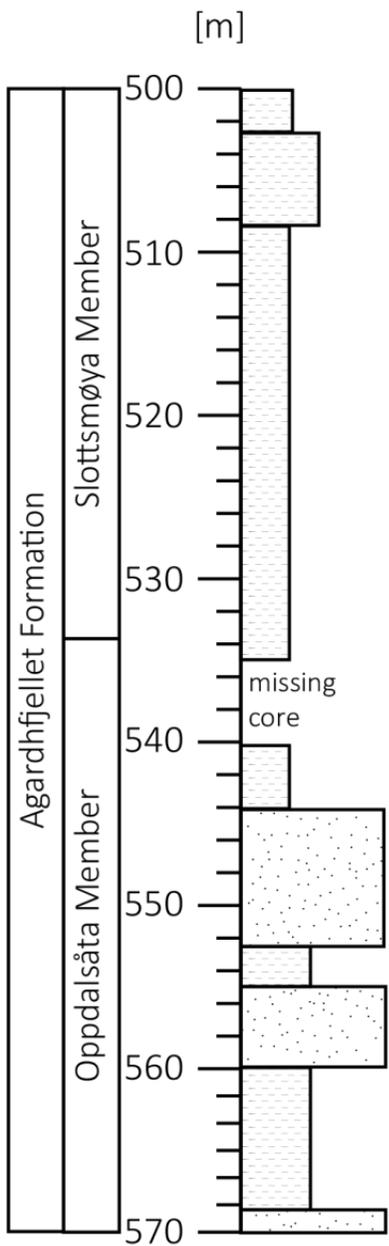


Thin section preparation: Durham University

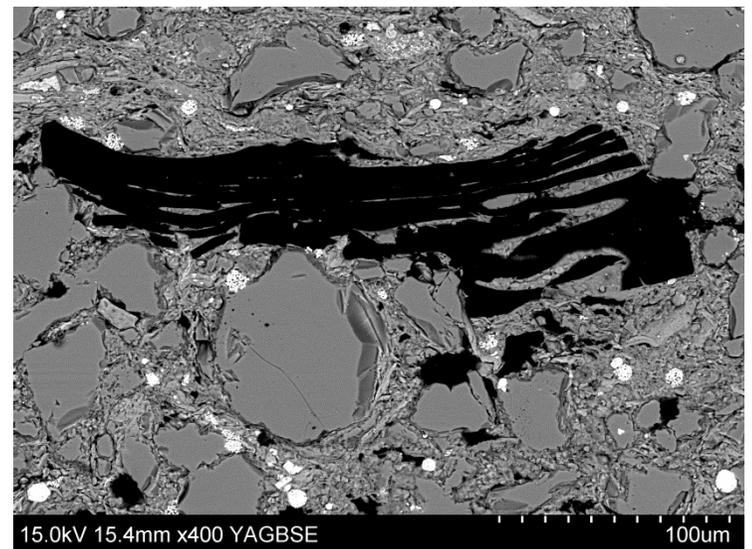
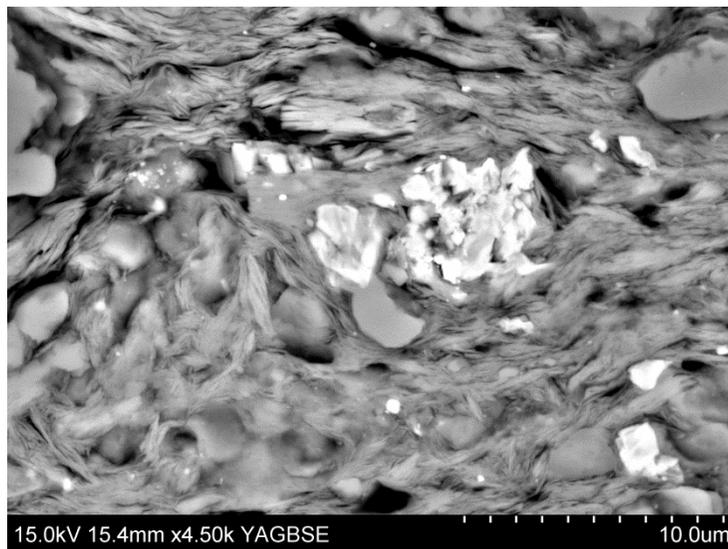
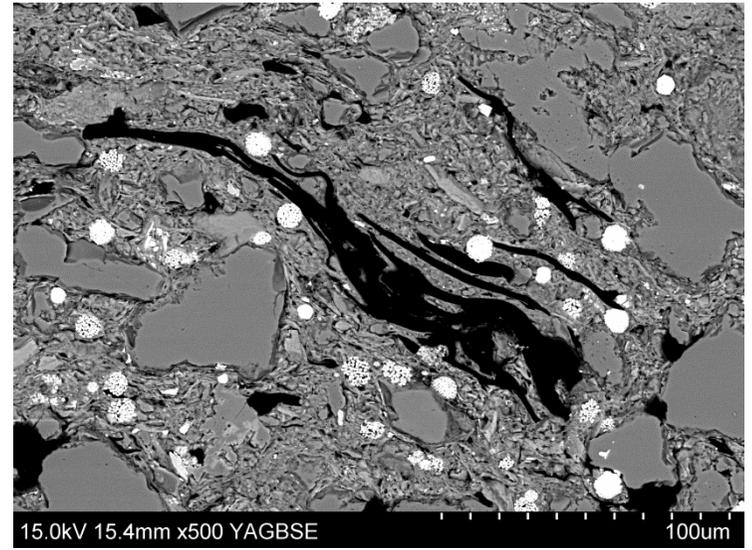
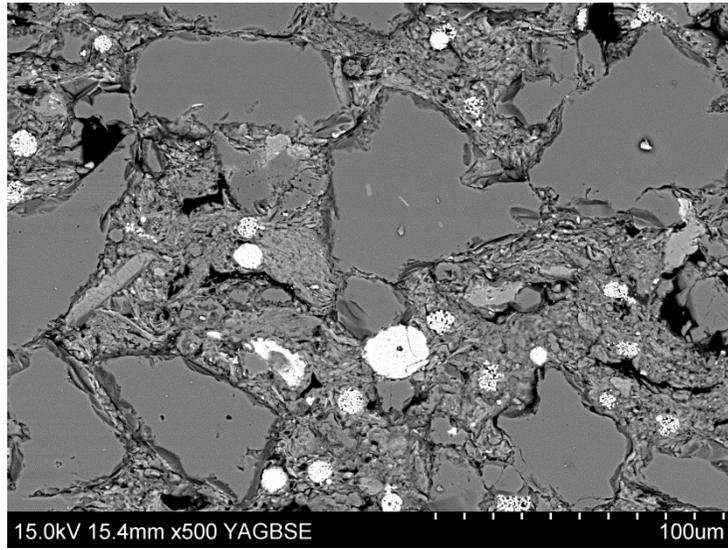
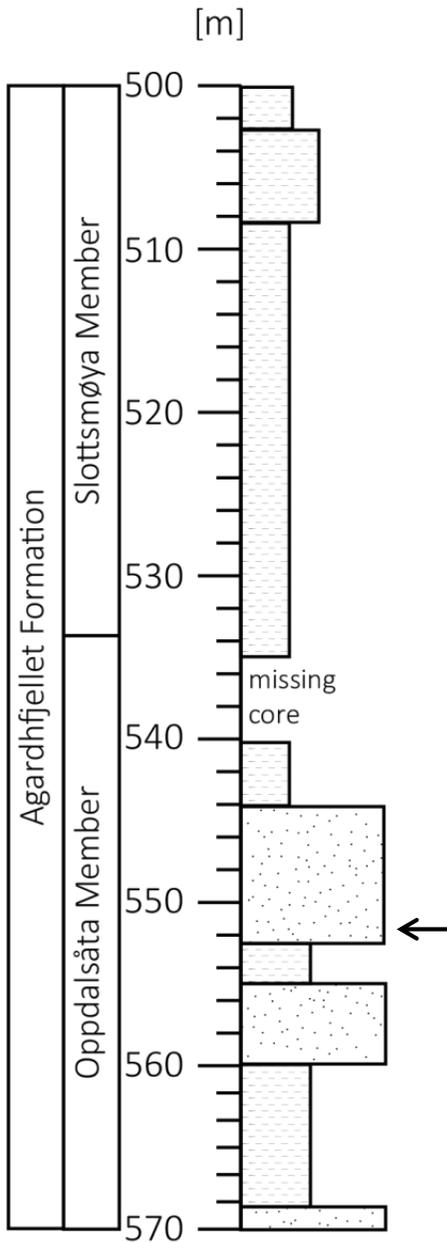
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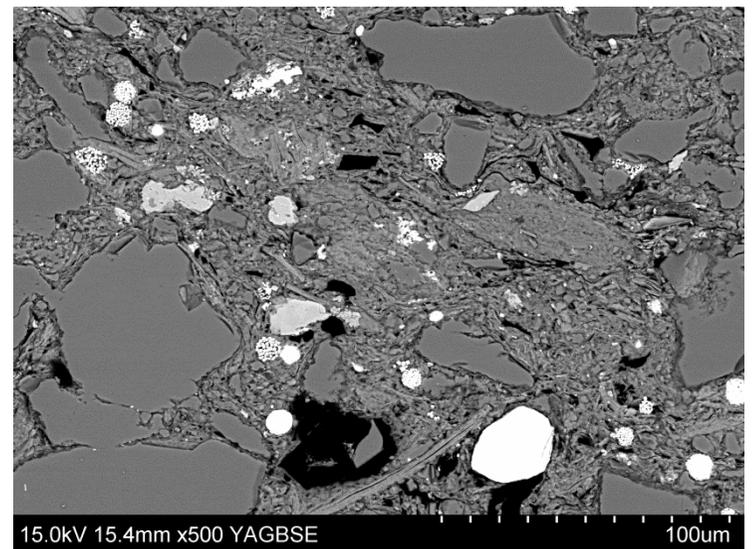
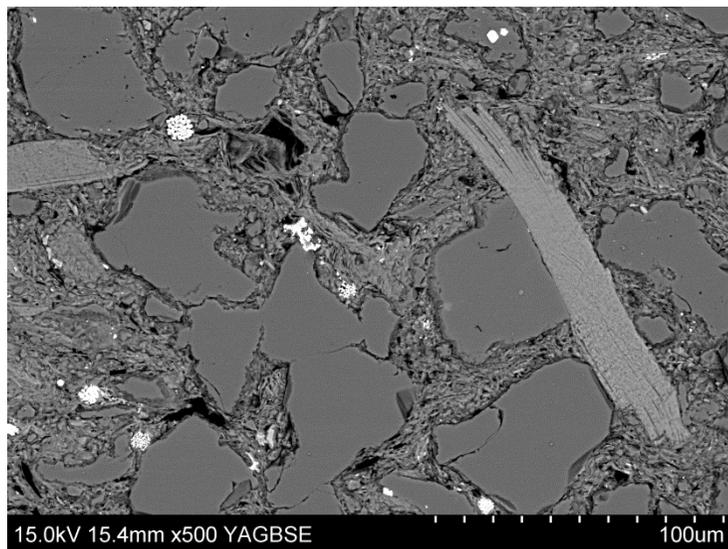
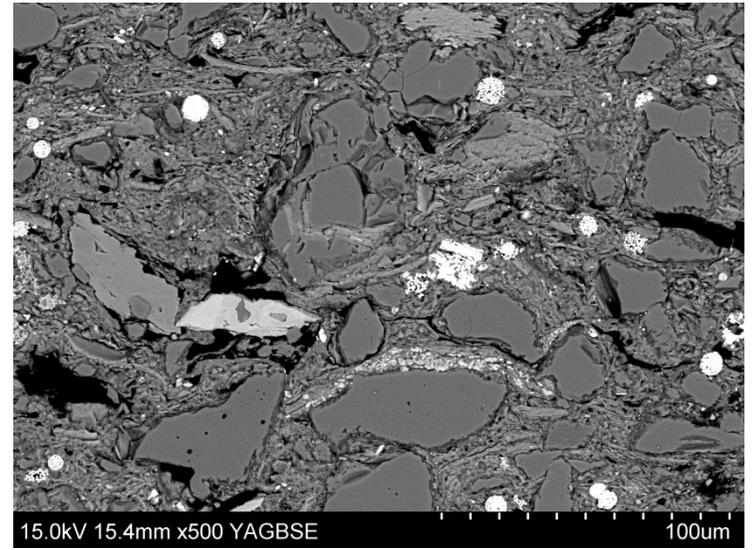
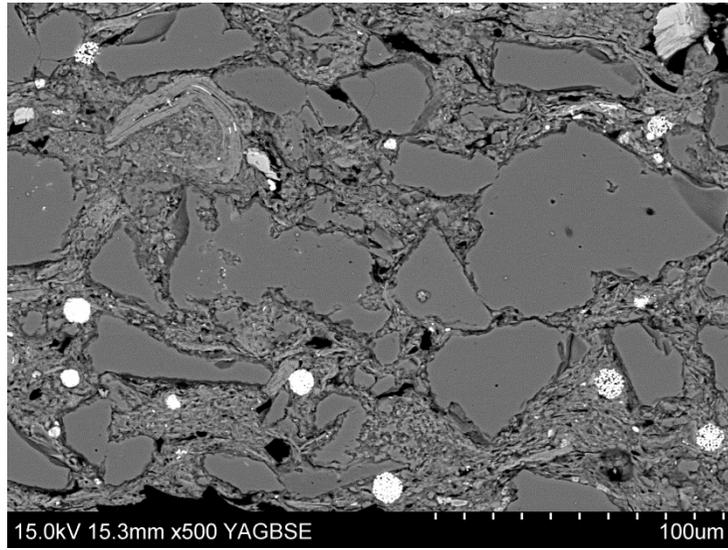
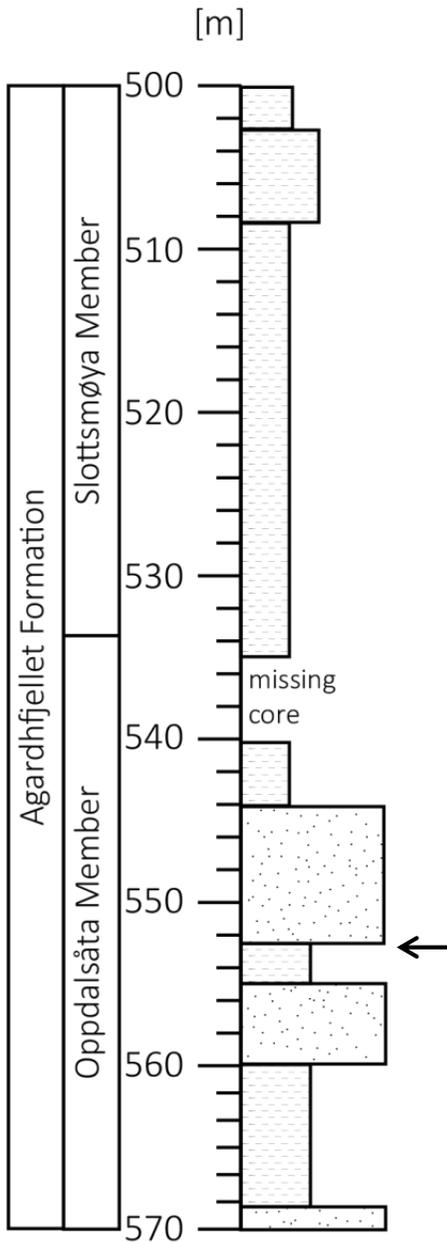


DH4 552.00



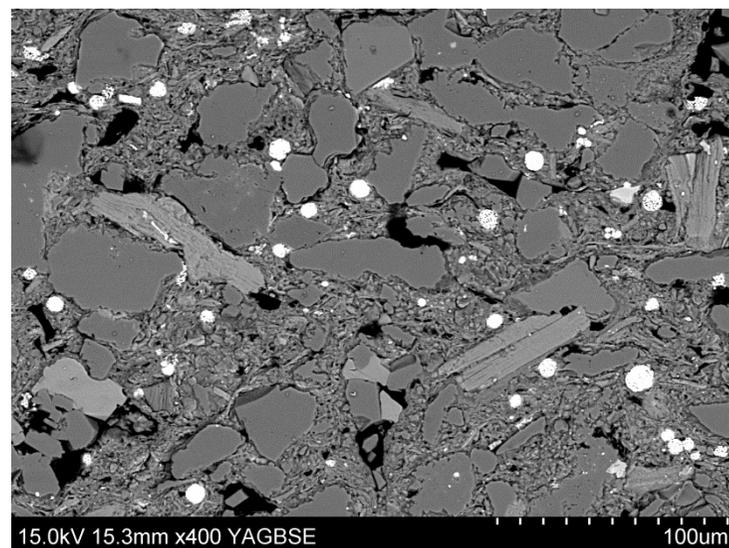
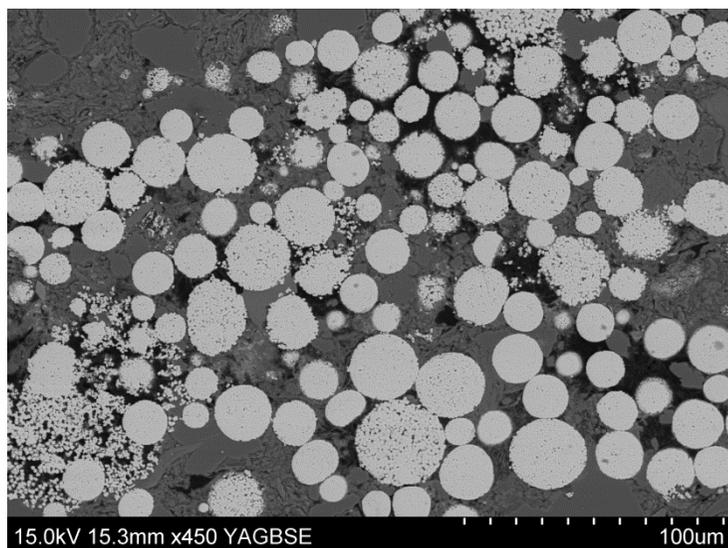
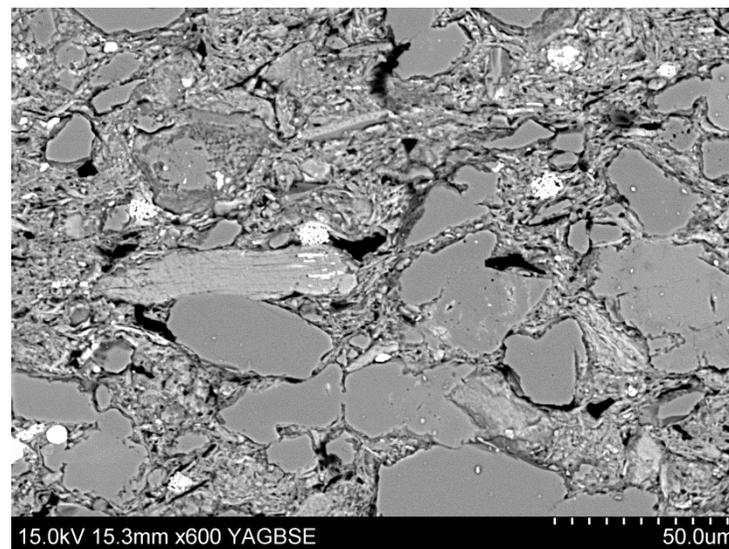
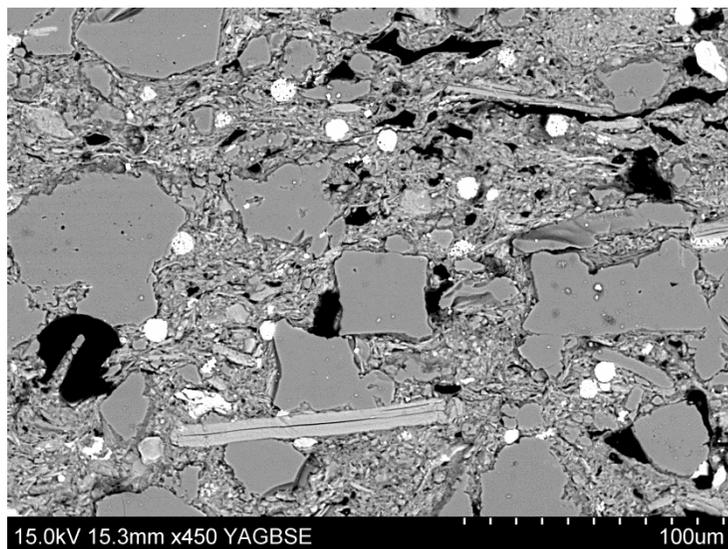
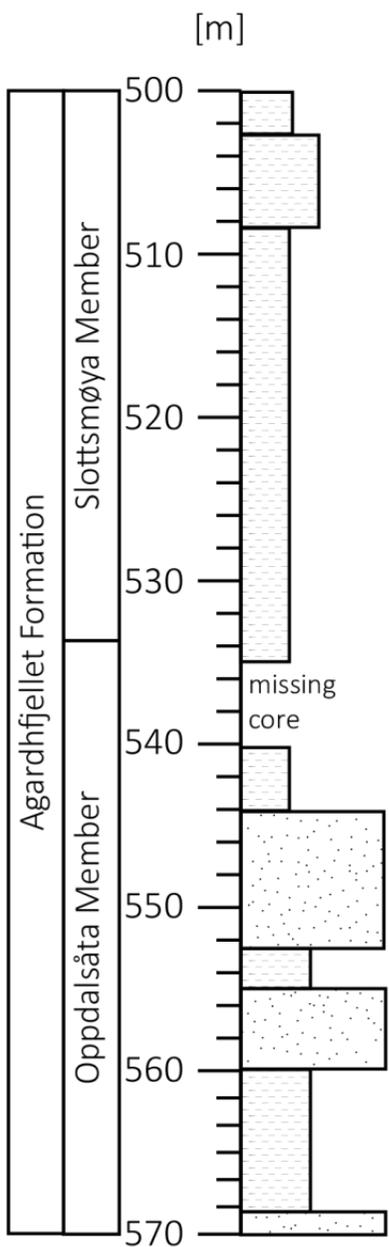
Thin section preparation: Durham University

DH4 552.75

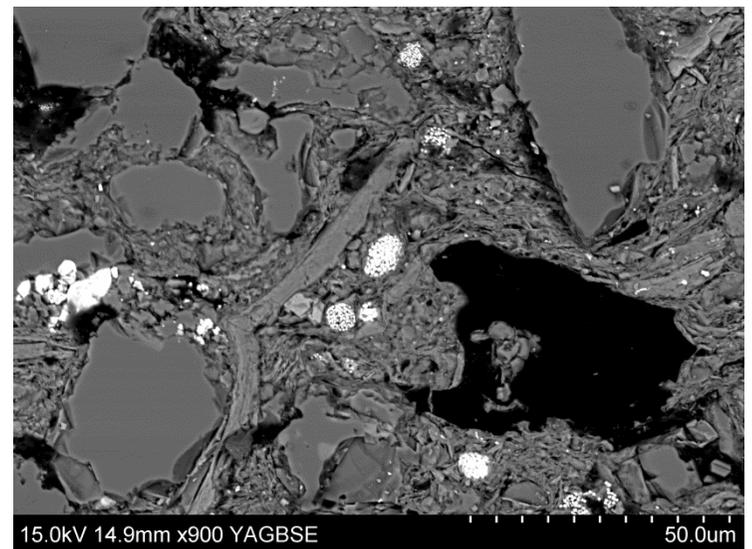
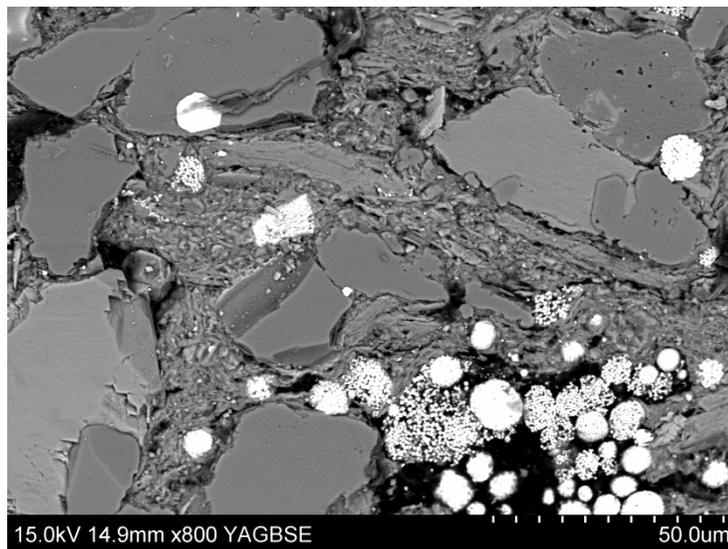
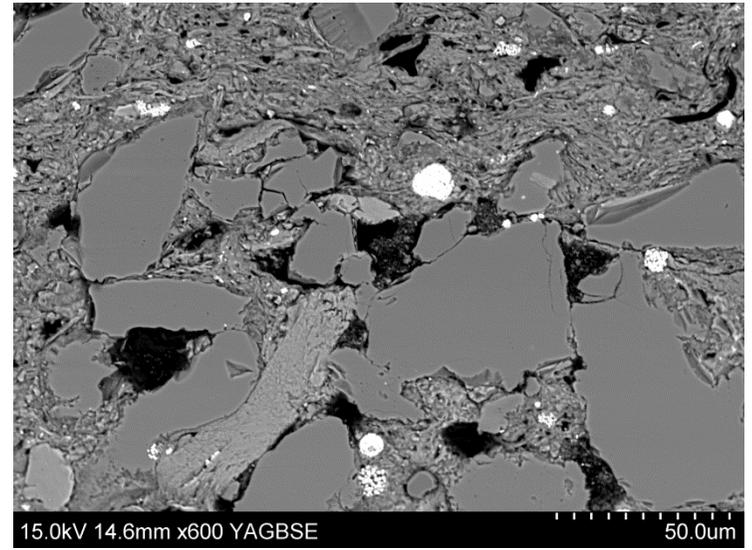
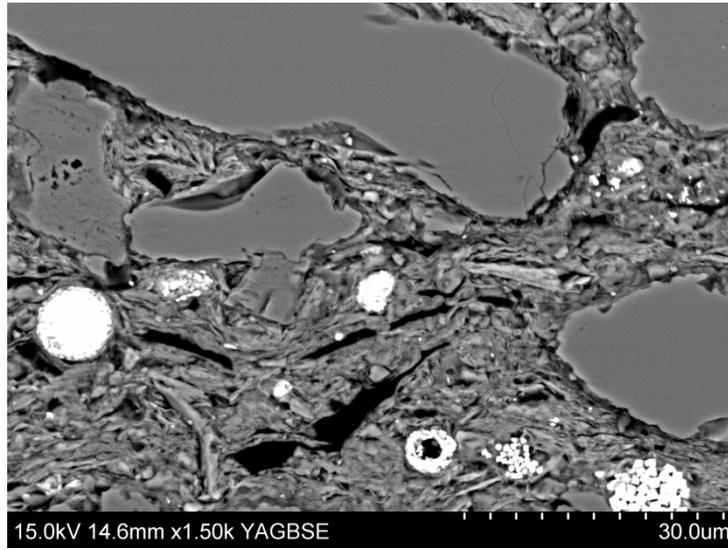
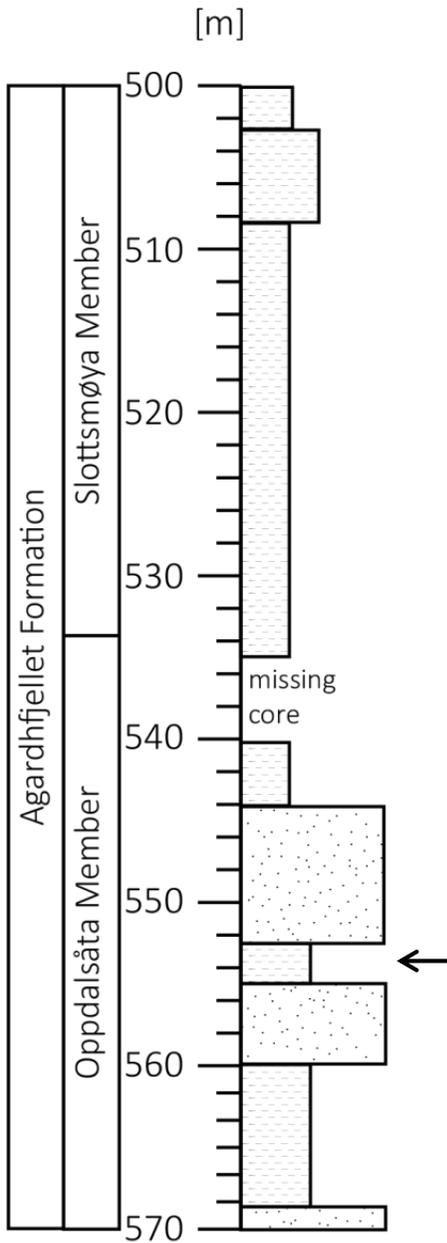


Thin section preparation: Durham University

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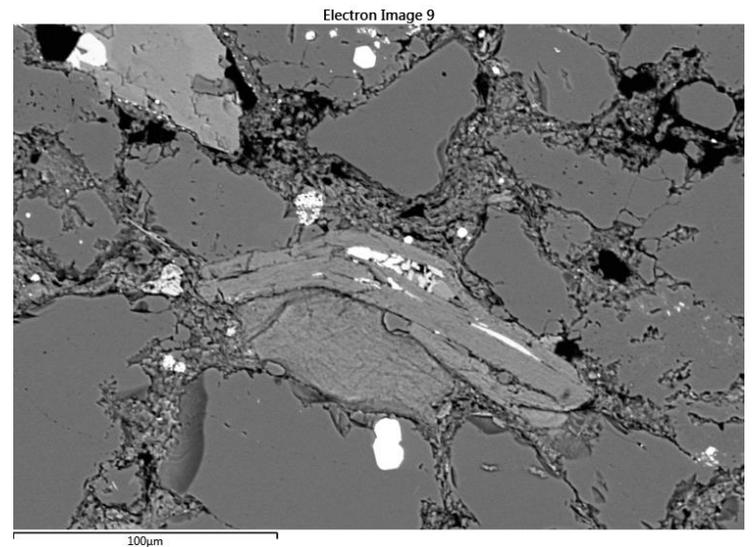
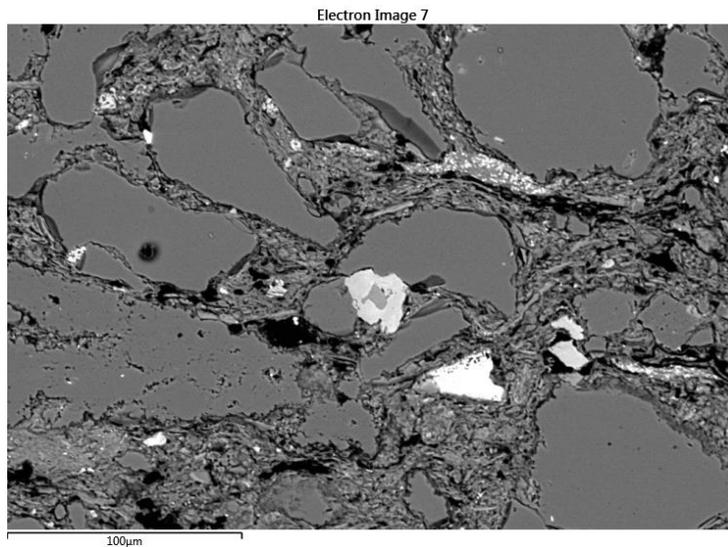
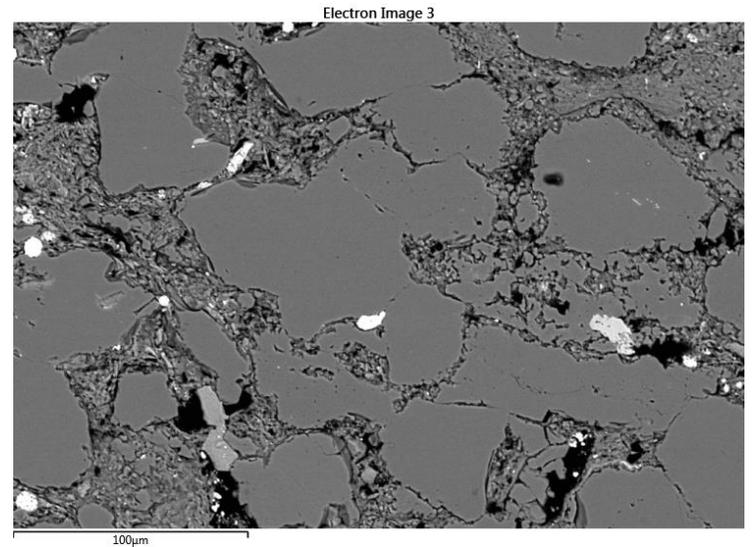
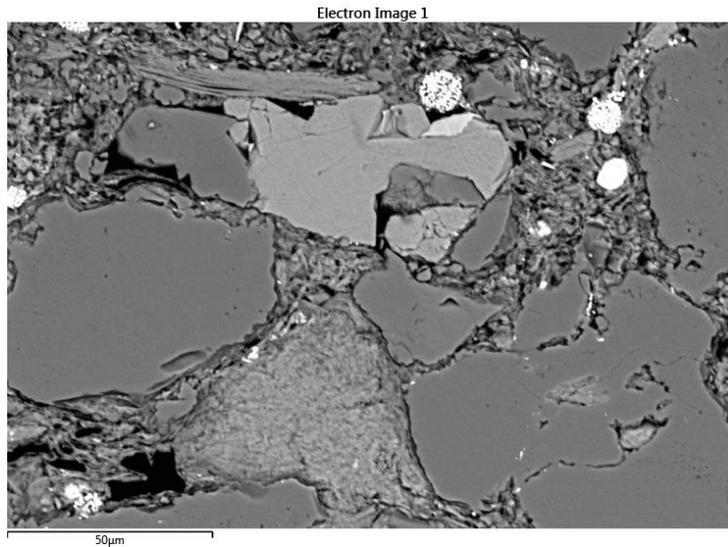
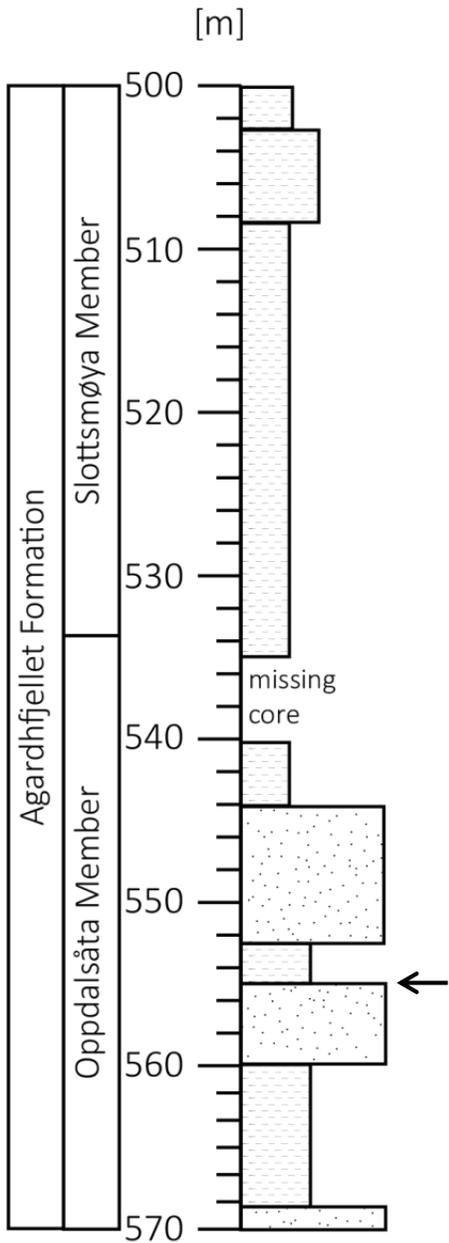


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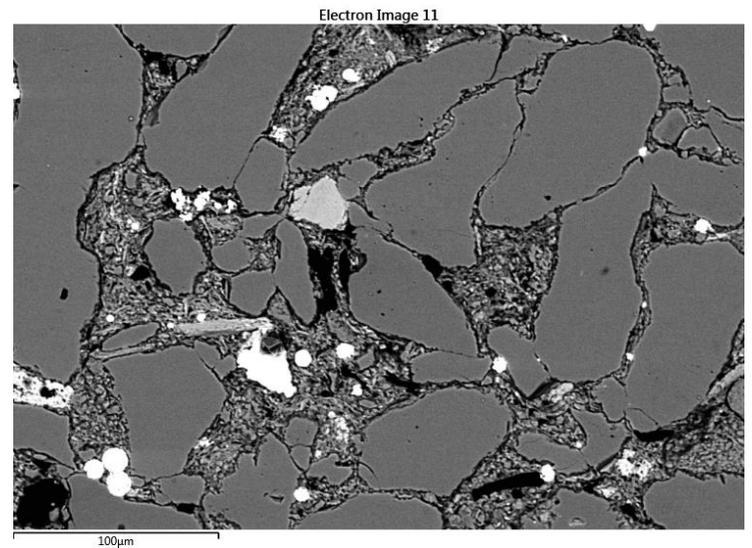
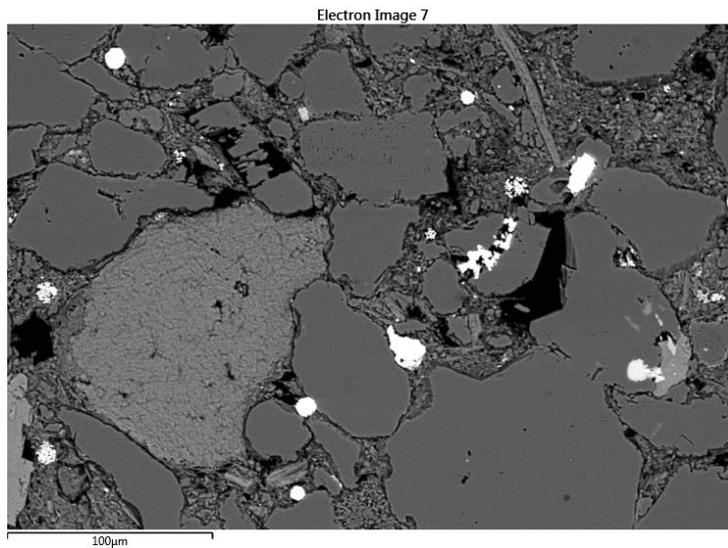
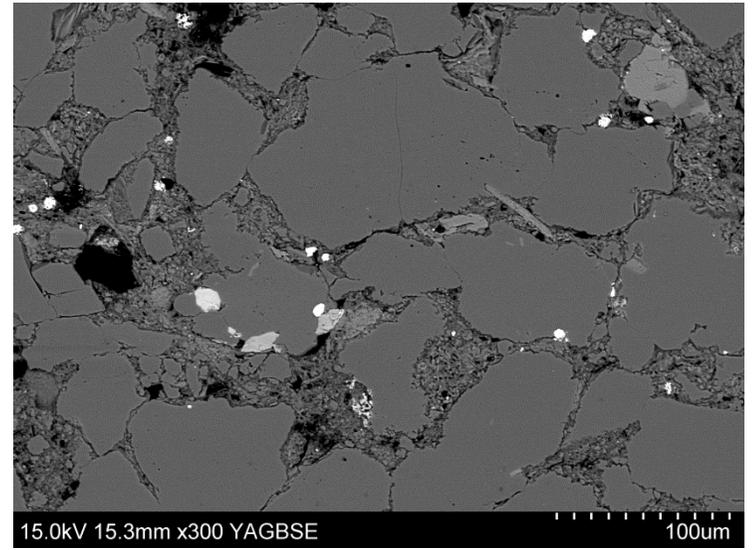
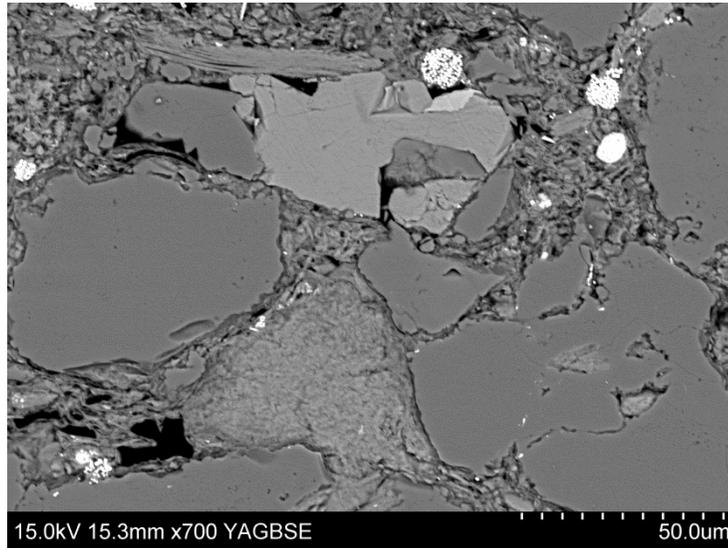
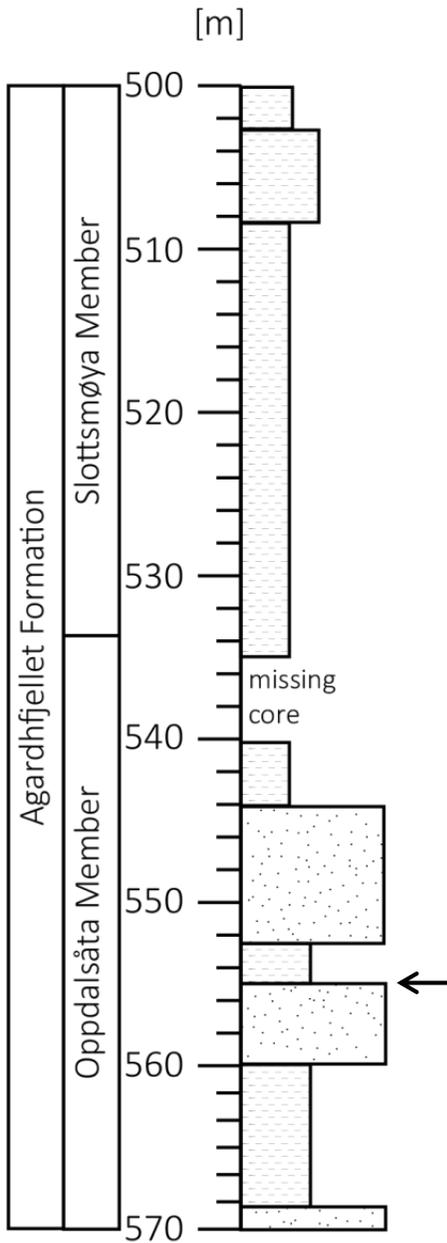


Thin section preparation: Durham University

# DH4 555.75

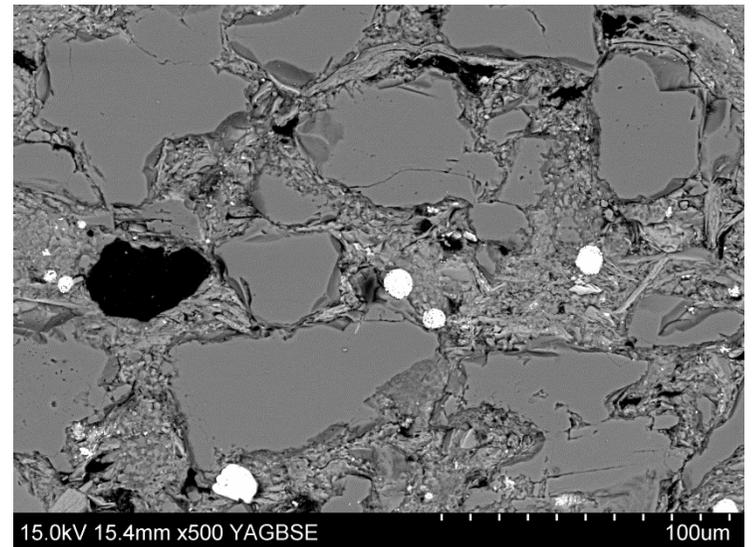
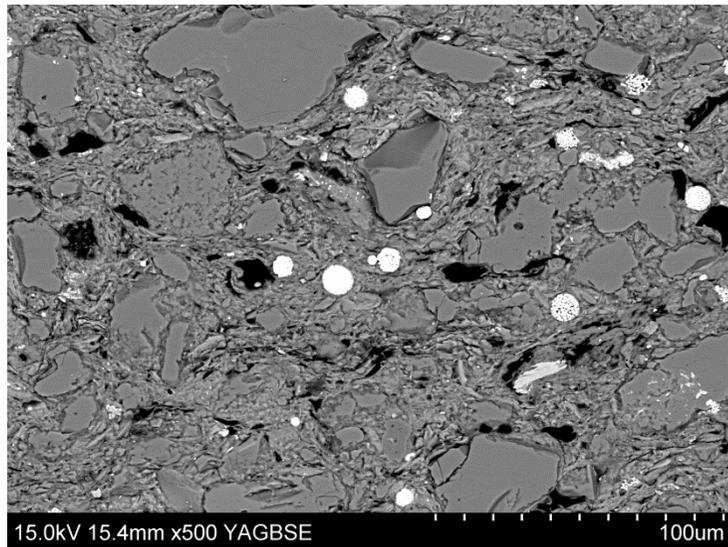
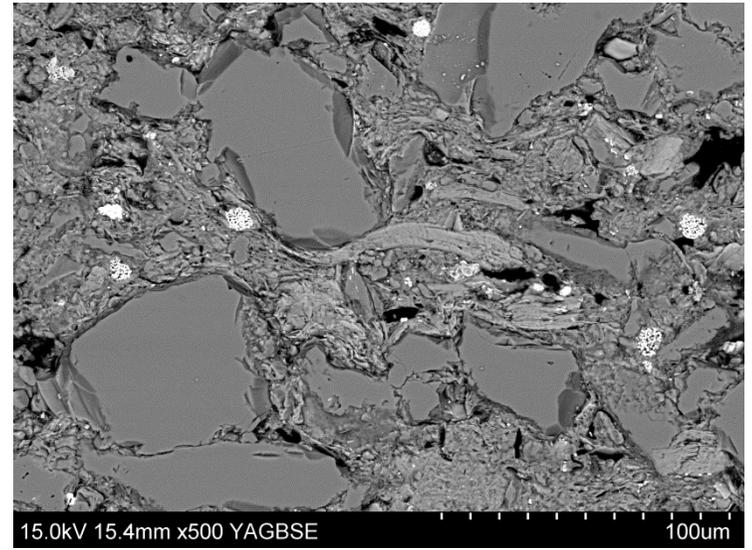
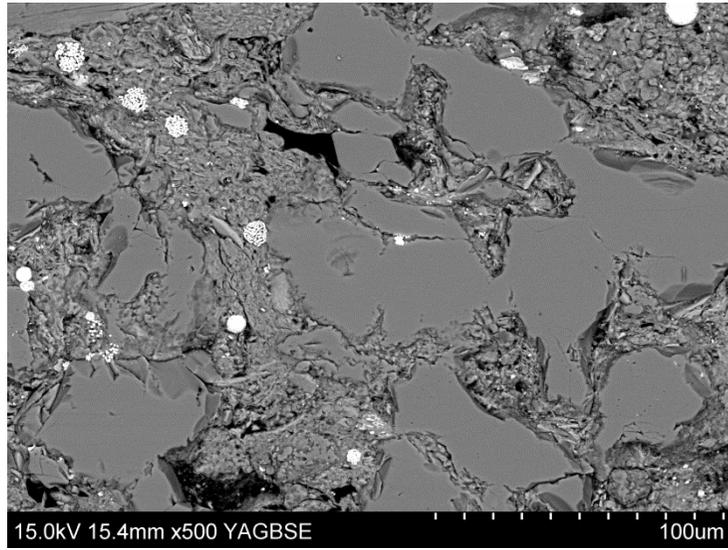
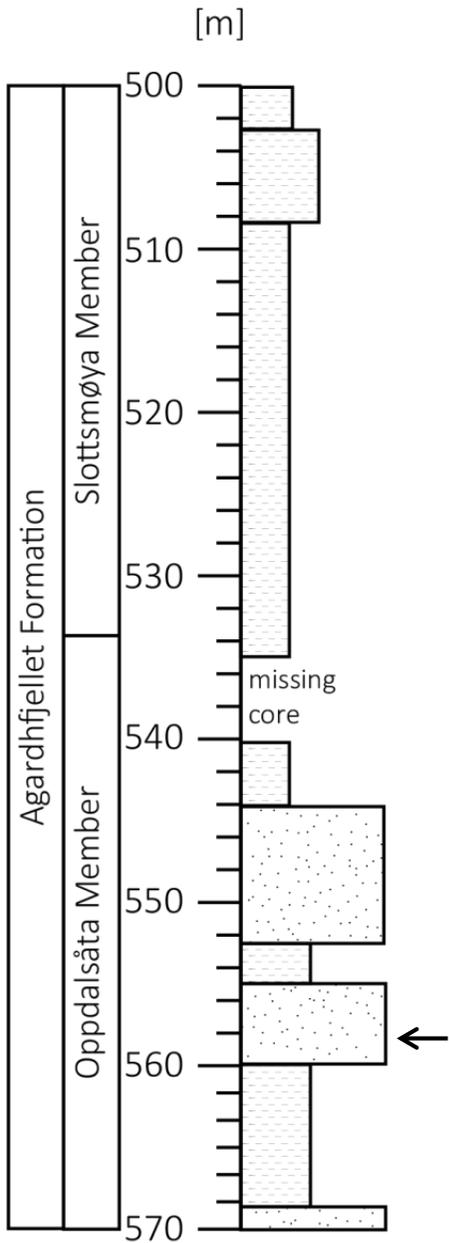


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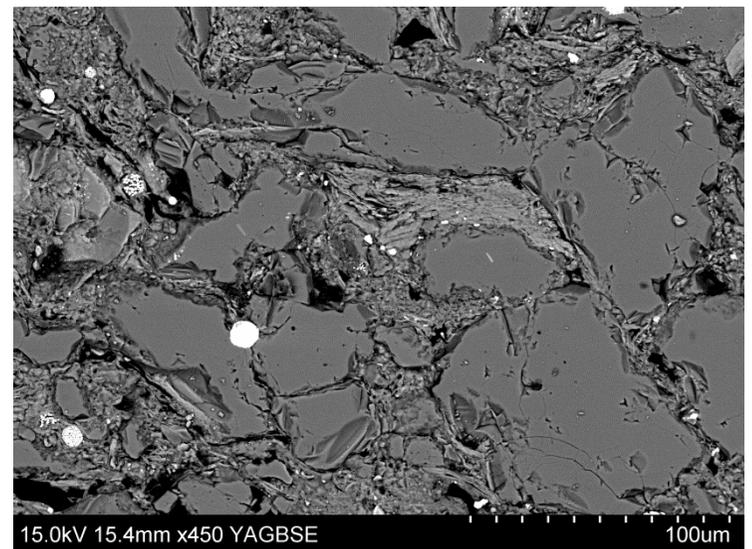
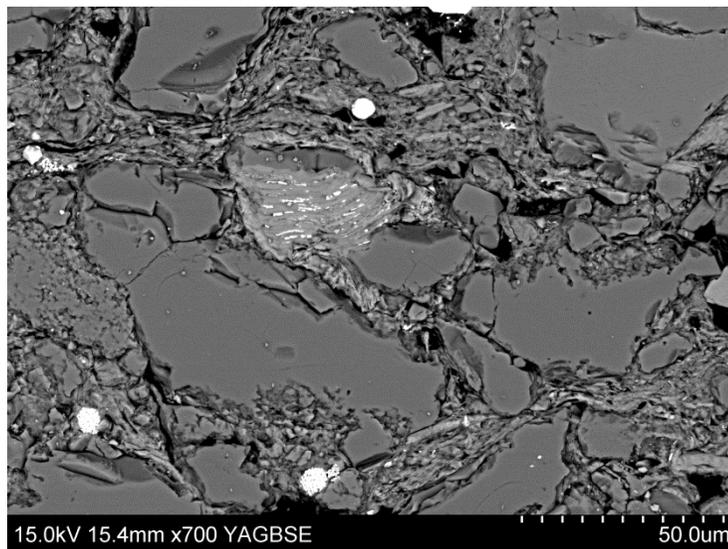
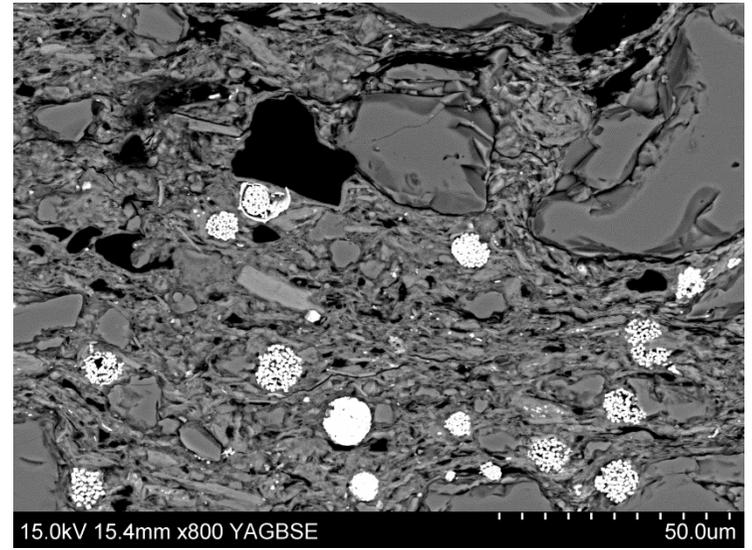
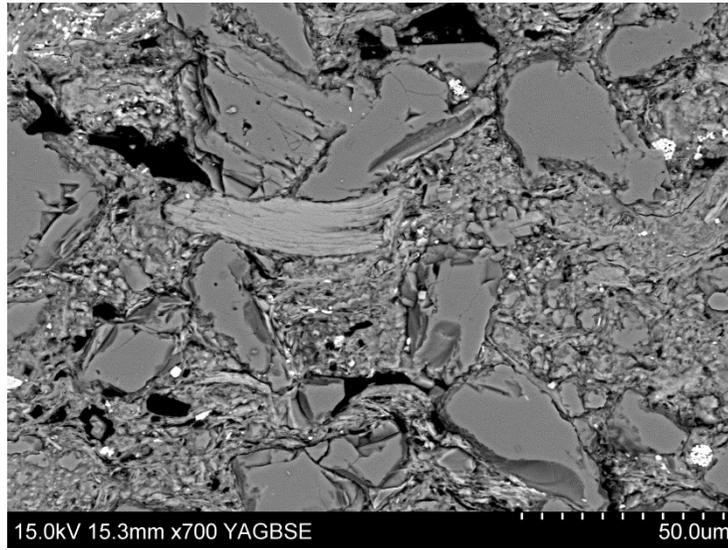
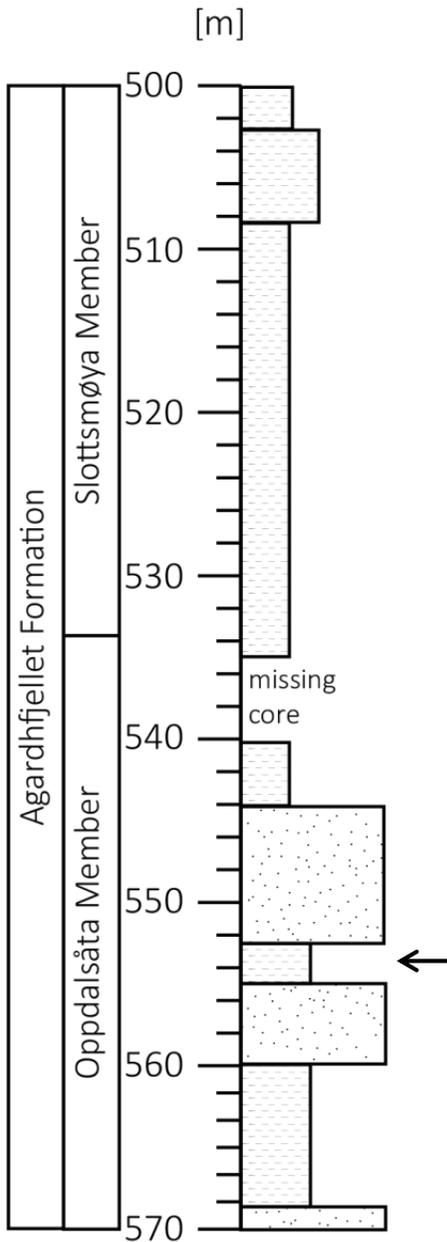


Thin section preparation: Durham University

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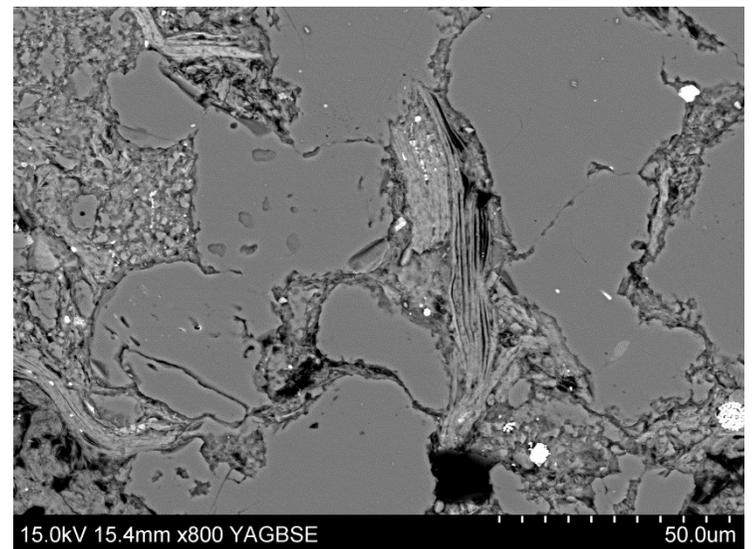
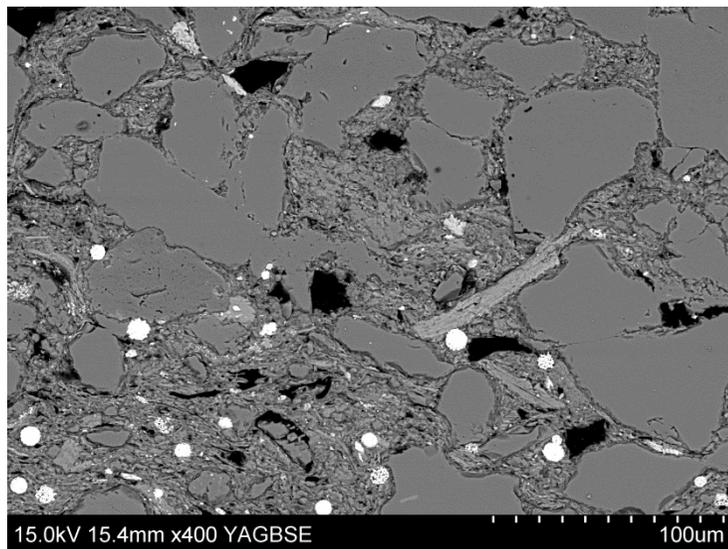
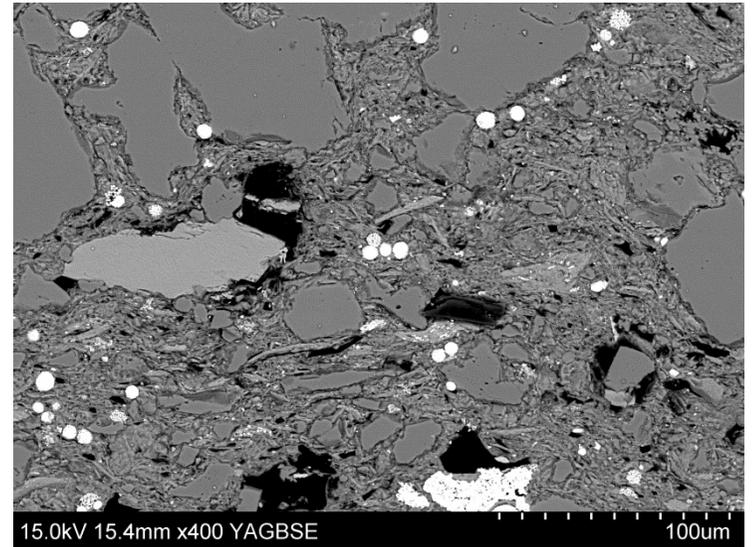
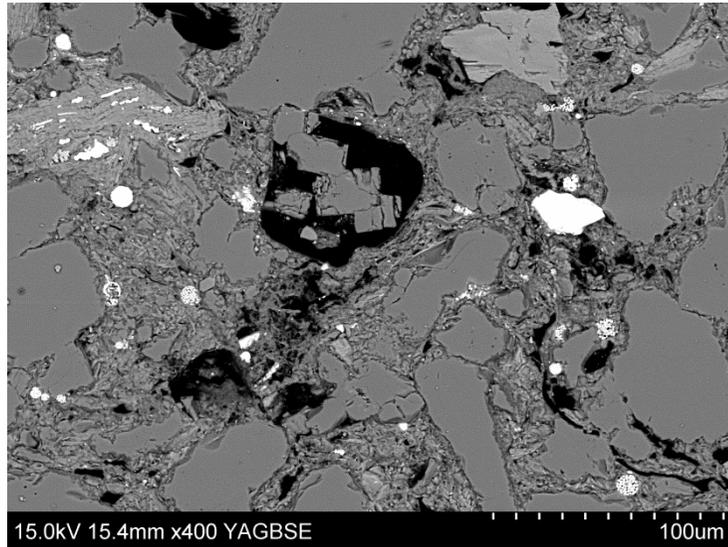
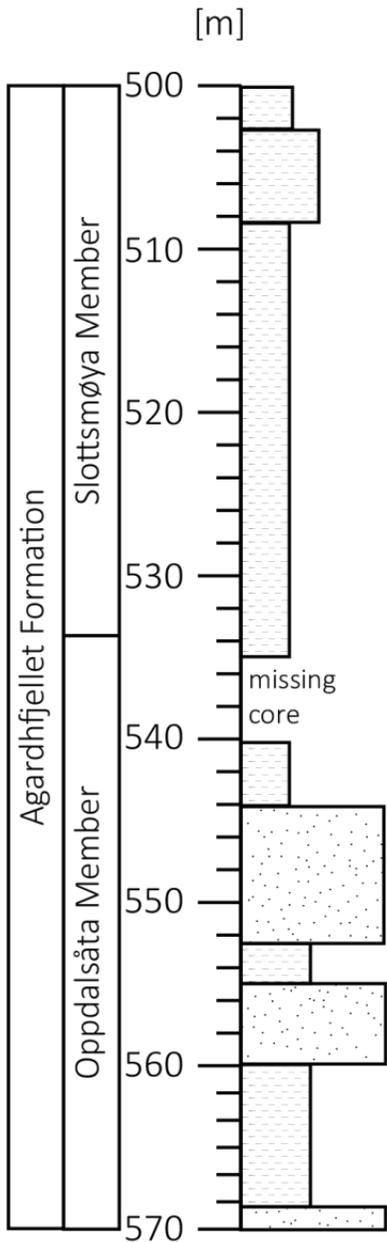


DH4 559.75

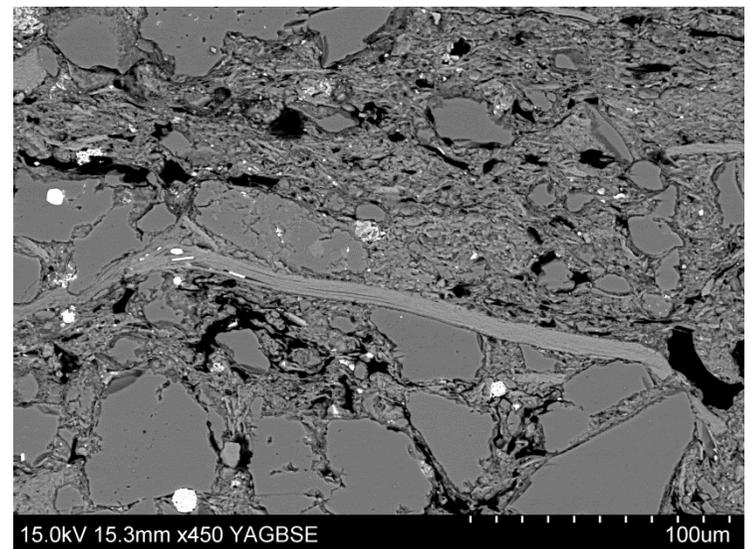
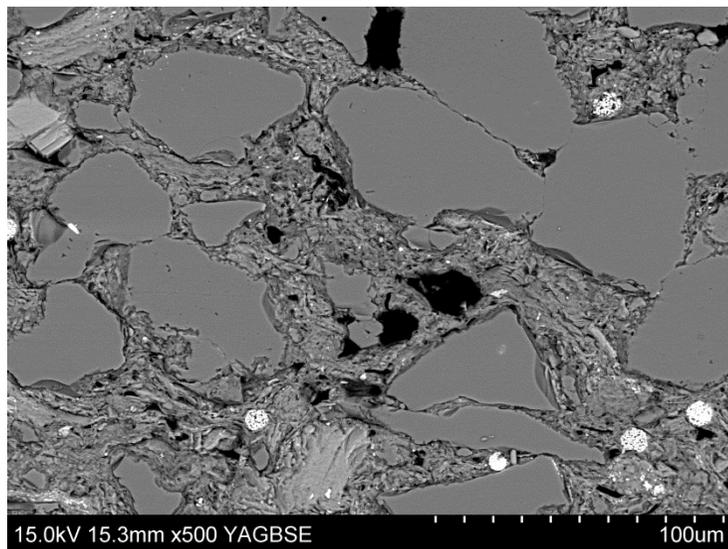
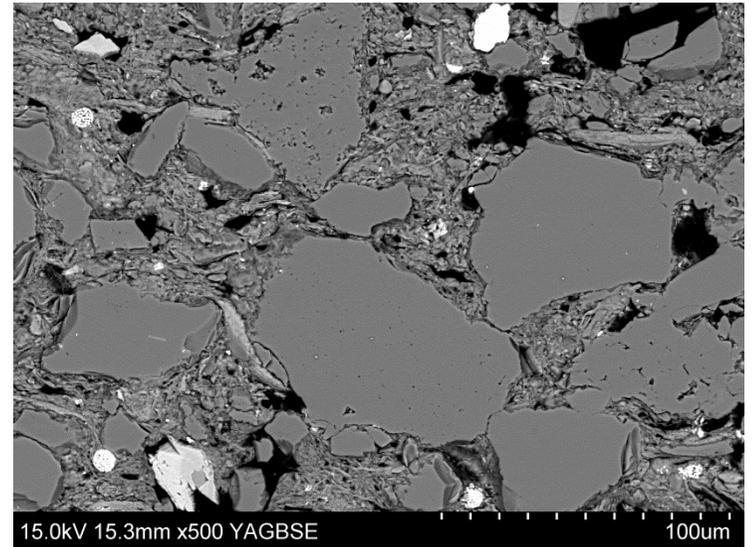
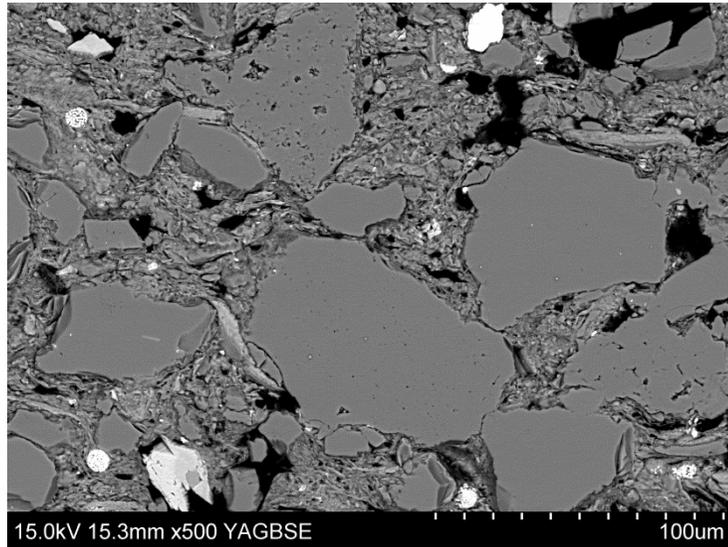
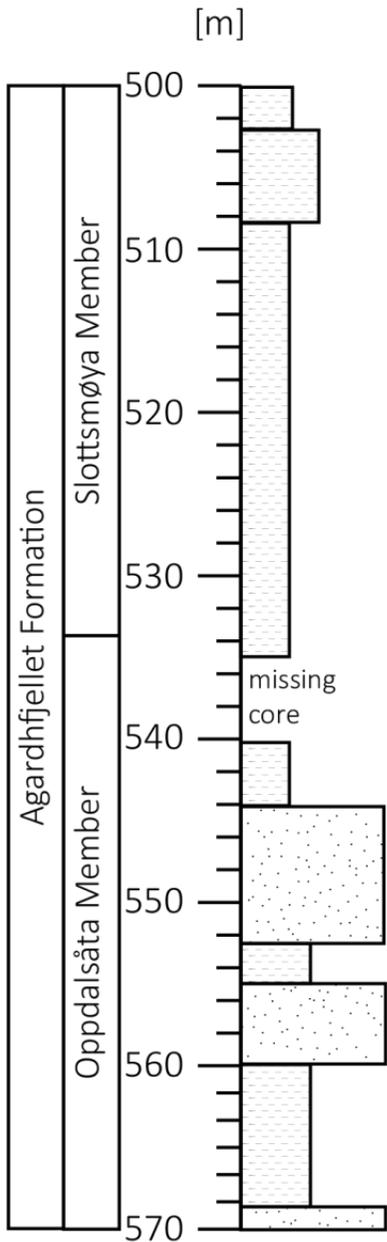


Thin section preparation: Durham University

# DH4 561.05



DH4 562.00



Thin section preparation: Durham University

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