

Natural zeolites in V4 countries – analysis of sales market and applications

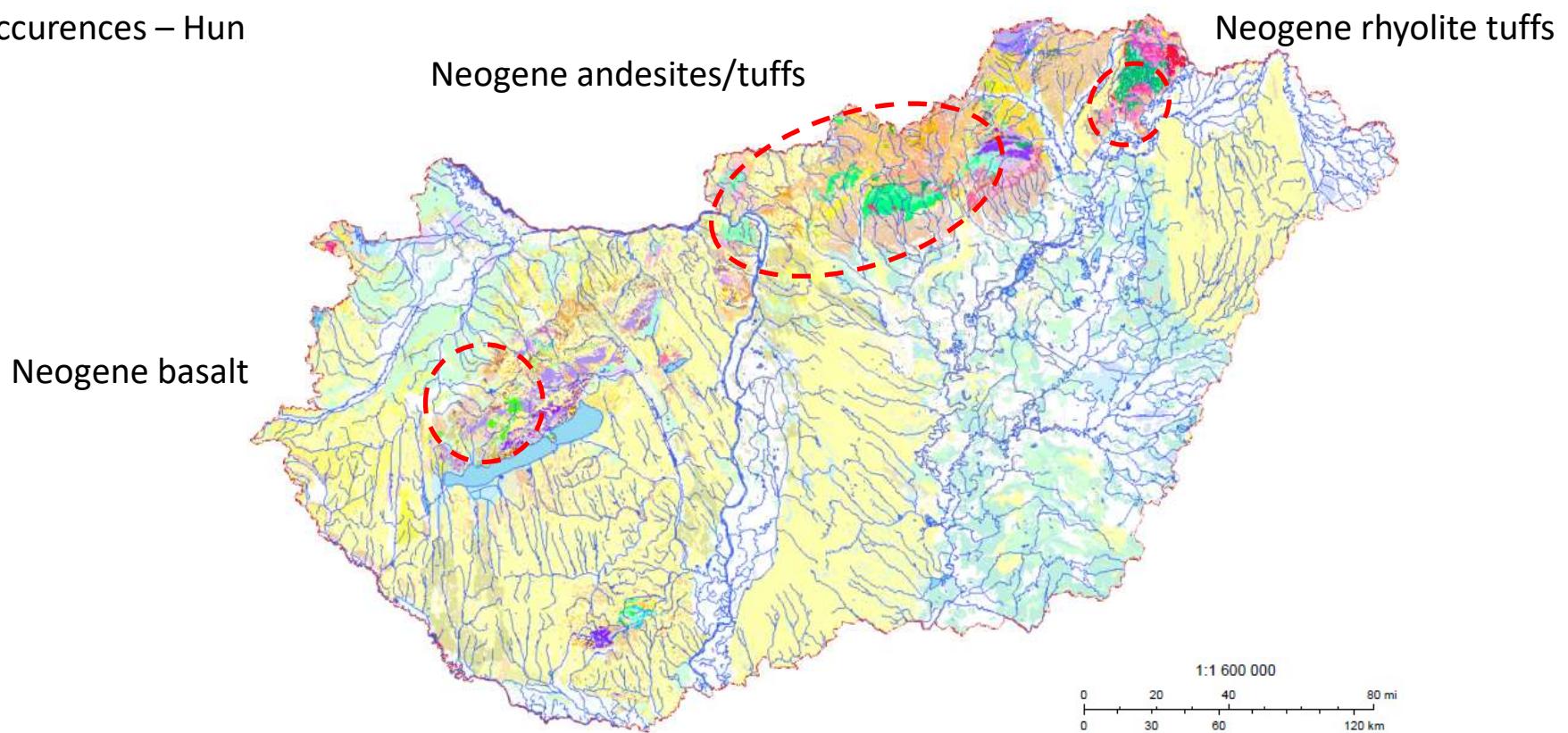
Zeolite deposits in Hungary

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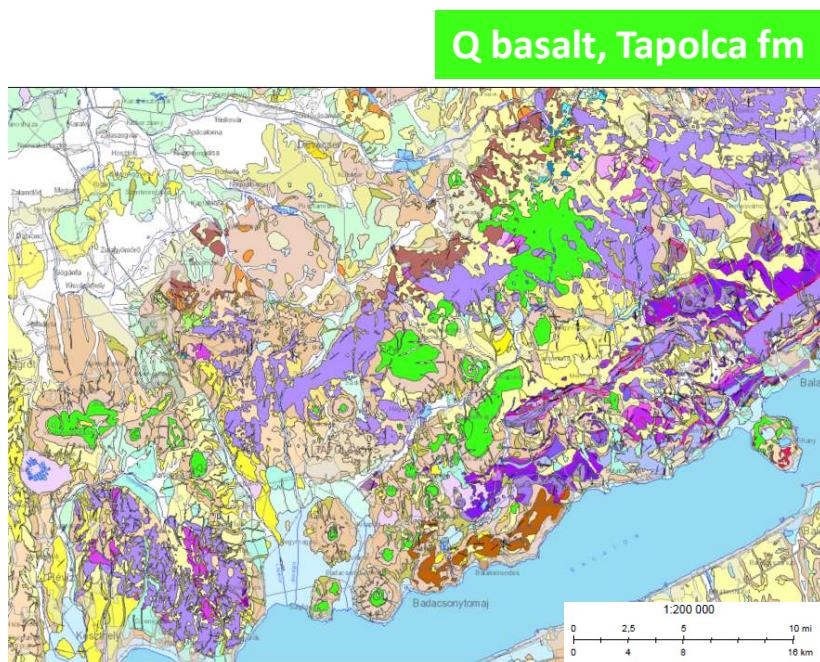
Zeolite deposits – Carpathian perspective

- Dej-tuff: dacitic, submarine redeposition and halimirolisys
- Hydrothermal rhyolite tuff zeolitisation

Zeolite occurrences – Hun



Zeolite enrichments – Hungary



mindat.org, Uzsa, Láz-hill occurrence

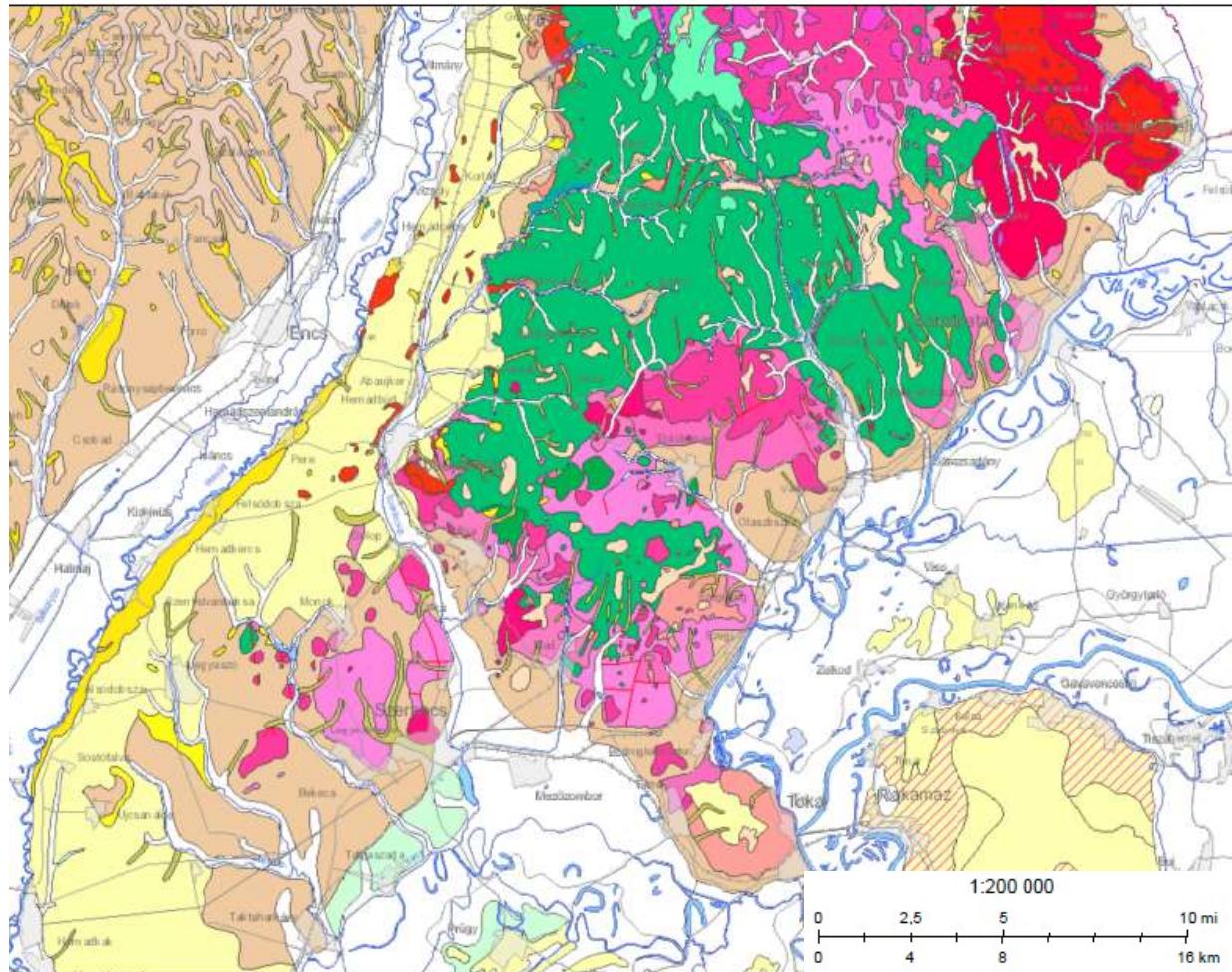
Filter Mineral List

Valid Species Origin type unlisted Al Ba C Ca Cl F Fe H K Mg Na O P S Si Ti

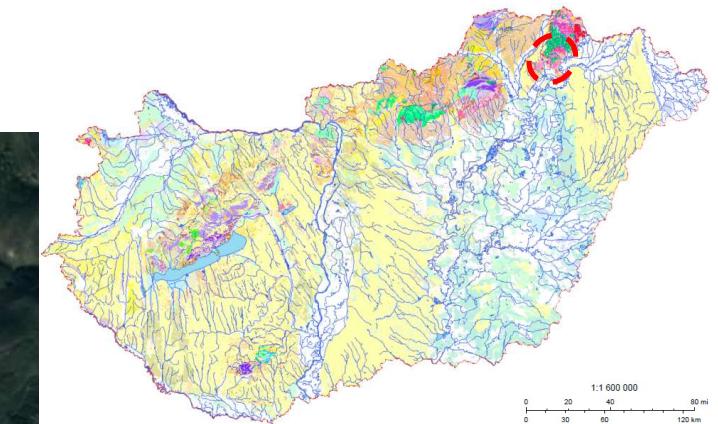
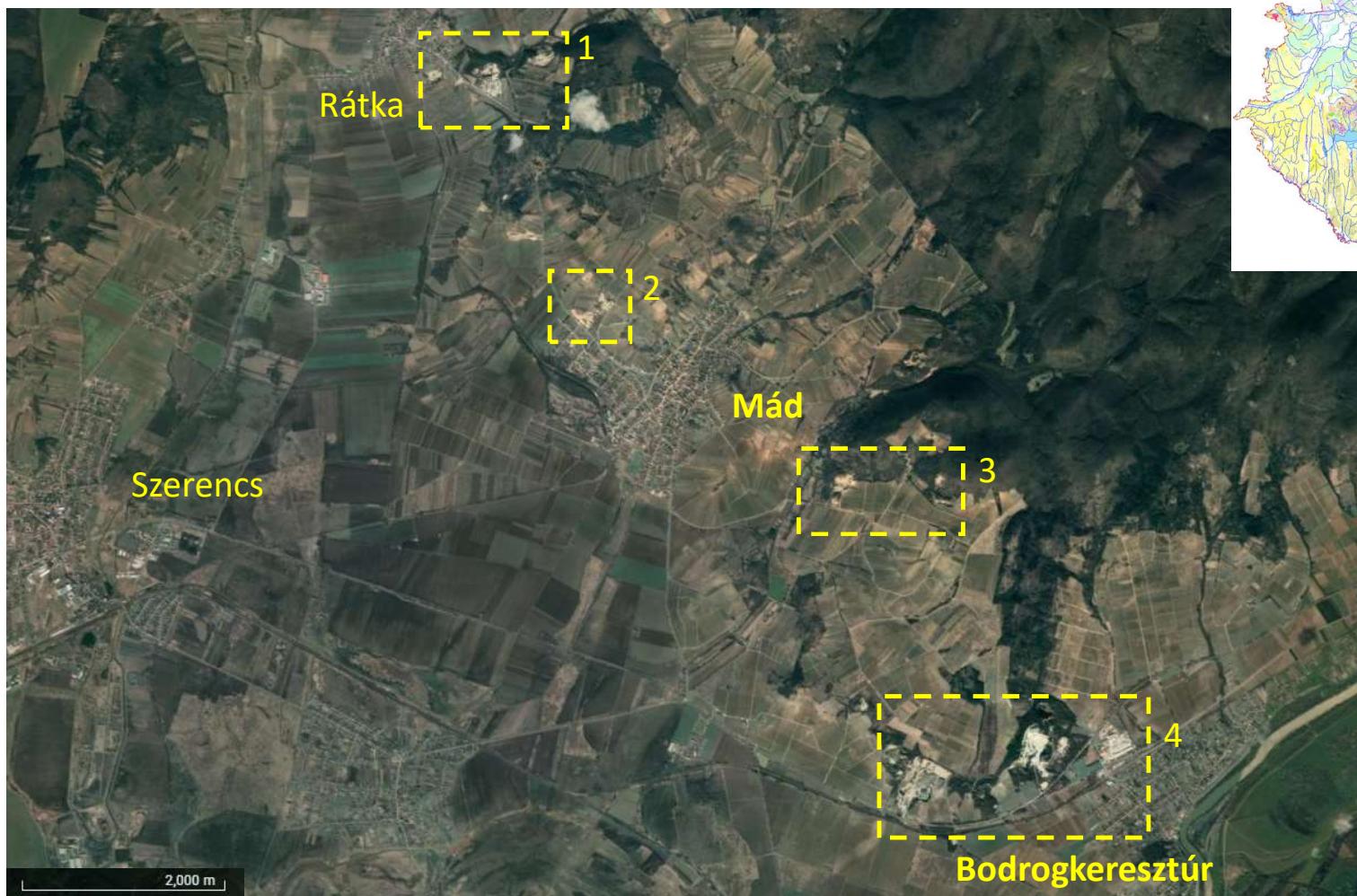
- Amesite
- Analcime
- Garronite-Ca
- Gonnardite
- Mesolite
- Natrolite
- Paranatrolite
- Phillipsite-Ca
- Tacharanite
- Thomsonite-Ca

Zemplén, Tokaj

	Baskó andesite fm
	Amadévári andesite fm
	Abaújszántó memb, rhy
	Kishuta memb, rhy
	Mikóháza memb, rhy
	Erdőbénye fm



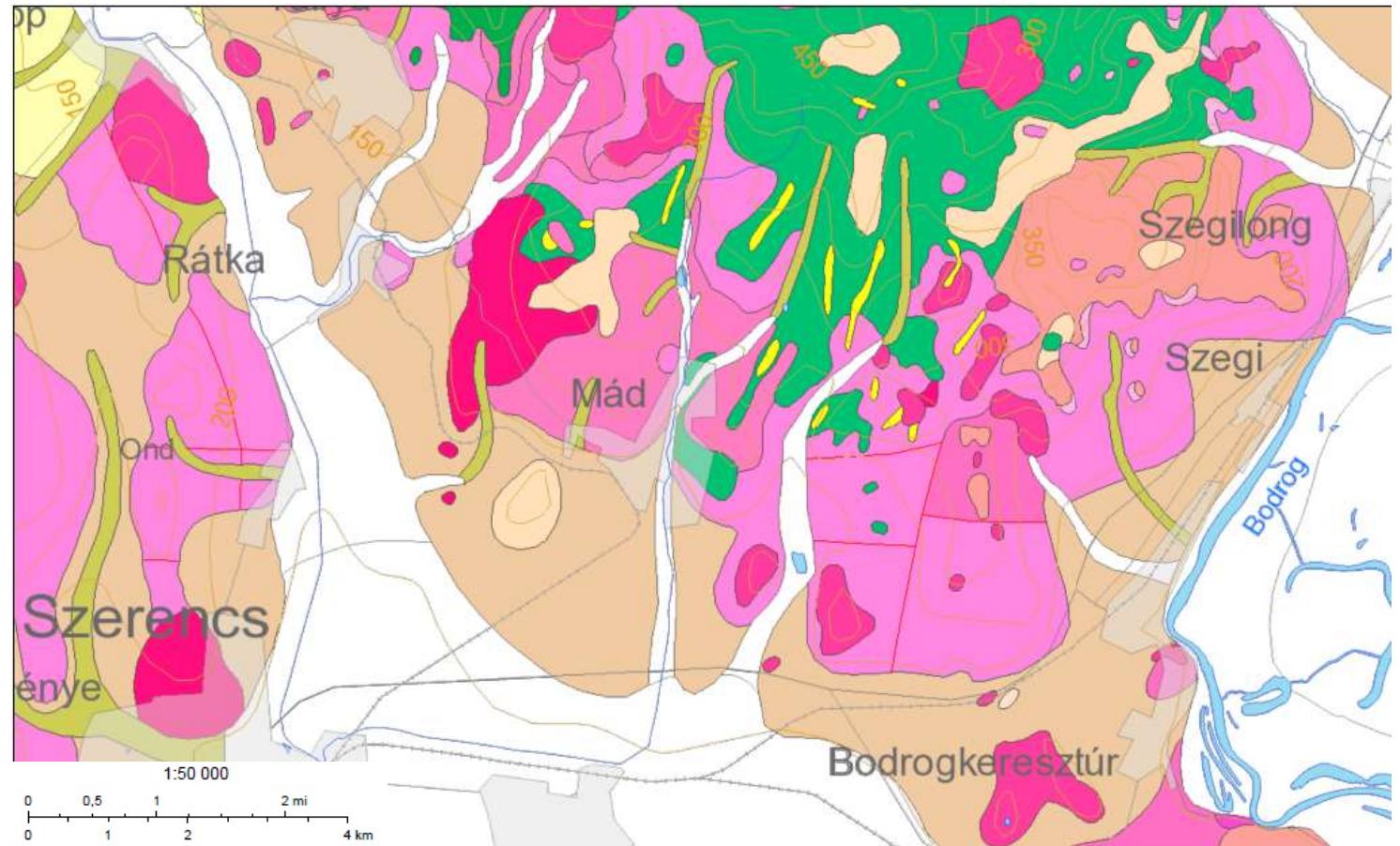
Zeolite deposits – Hungary



Mád basin - formations

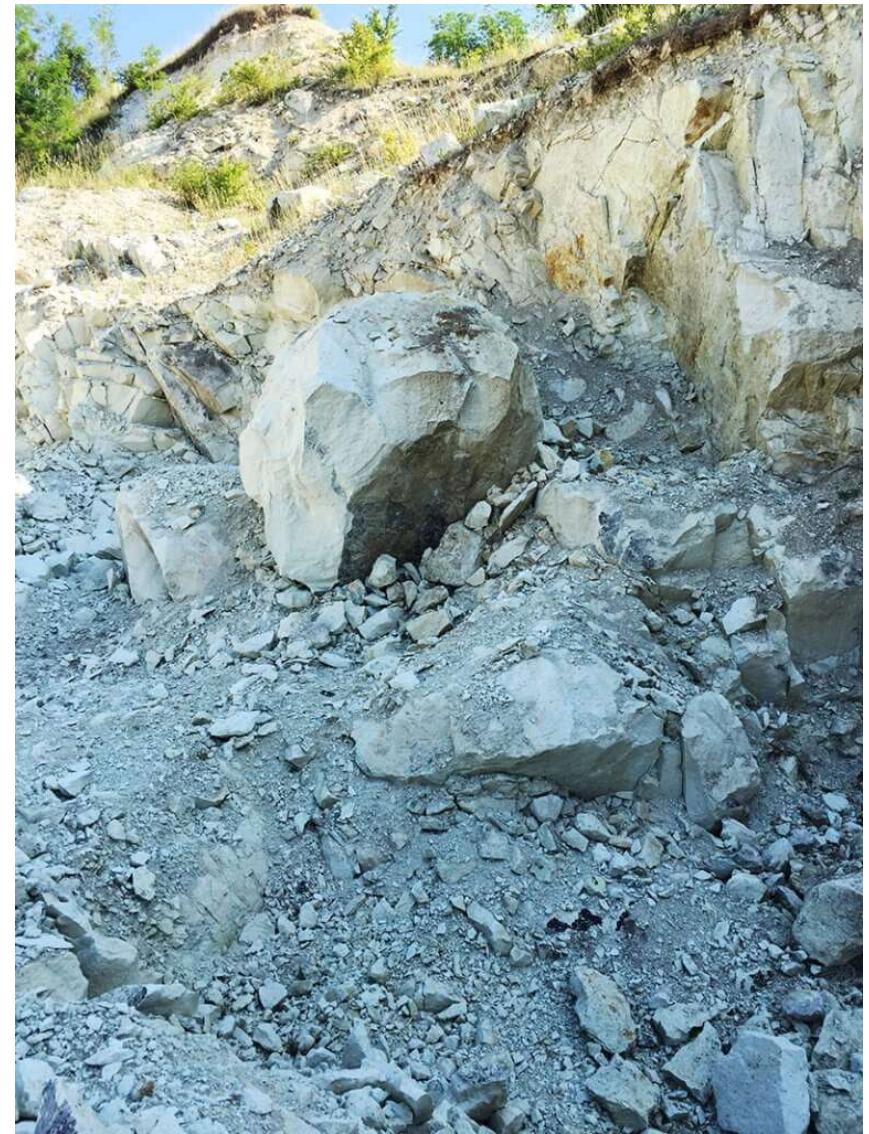
pumice rich rhyolite tuffs:

- silicified
- bentonite
- zeolitized

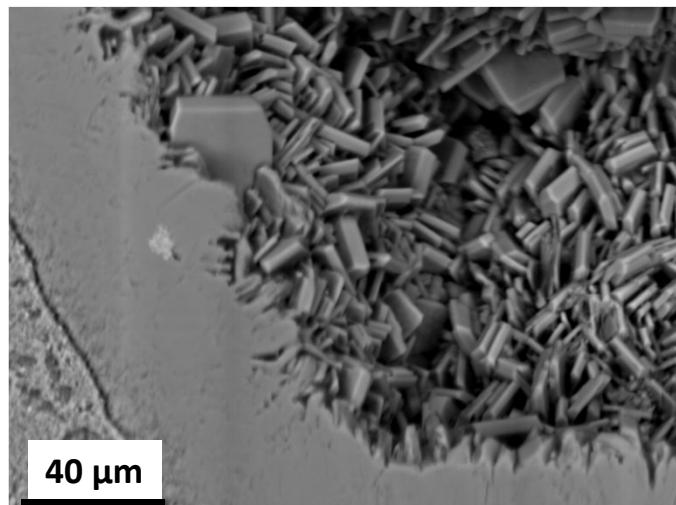
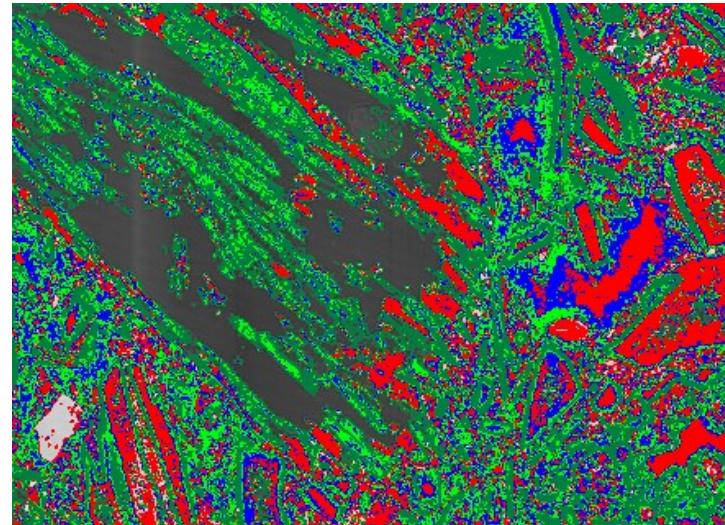
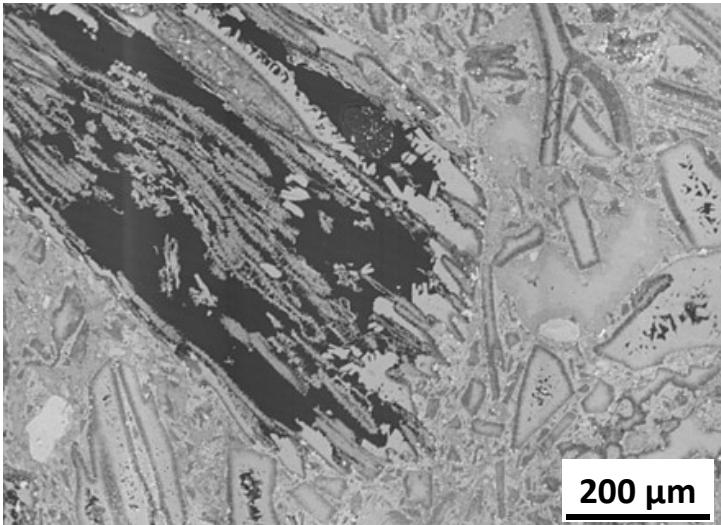


Mád basin – industrial minerals: kaoline, bentonite, alunite, hydroquartzite

Mád zeolite deposits, petrology



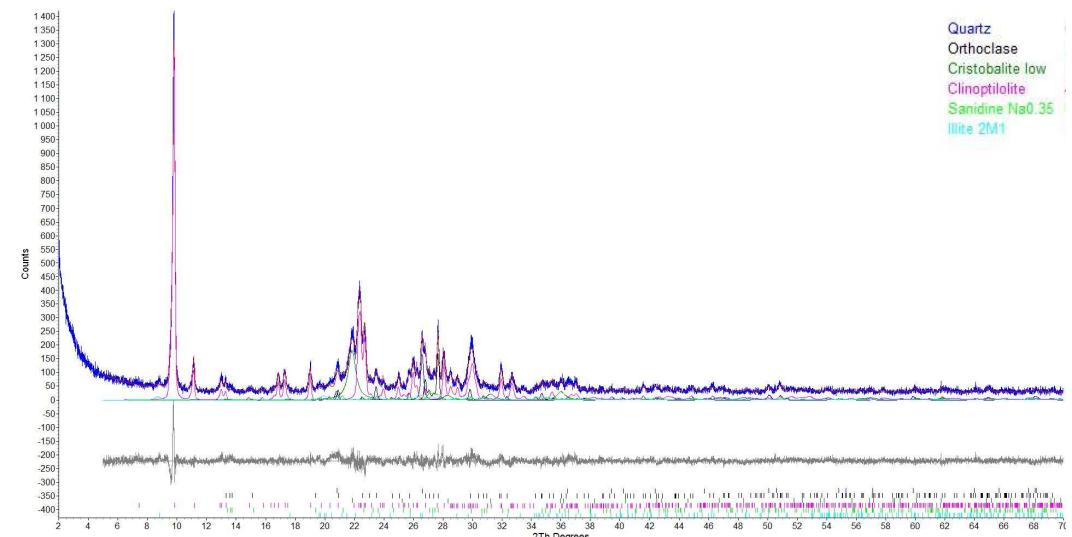
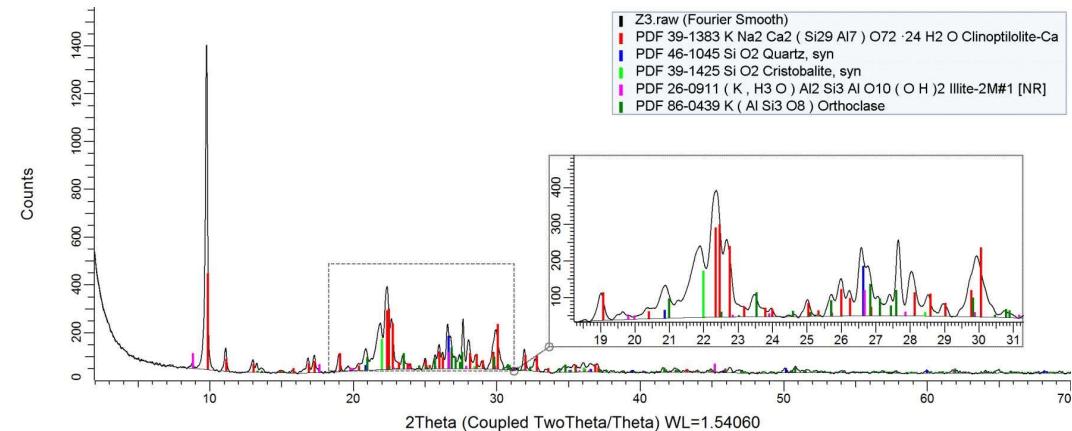
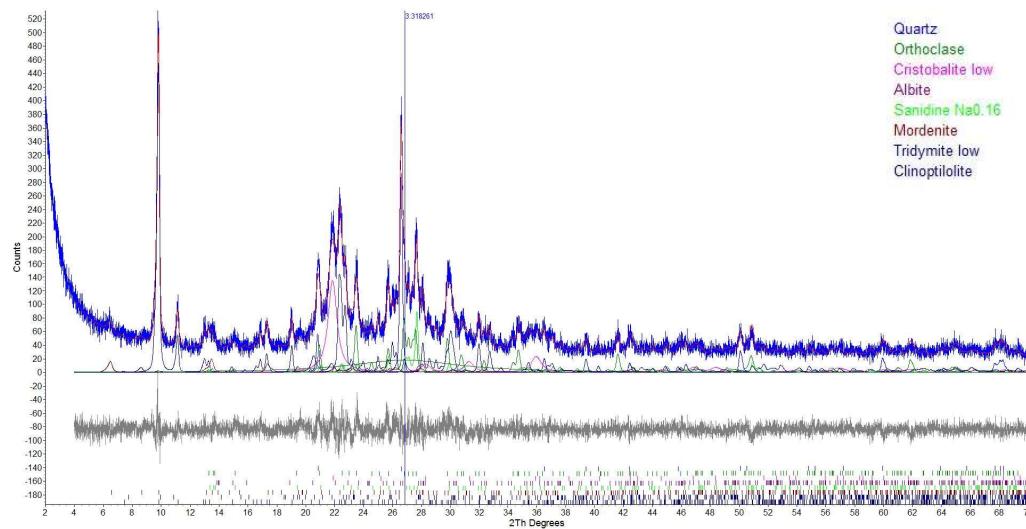
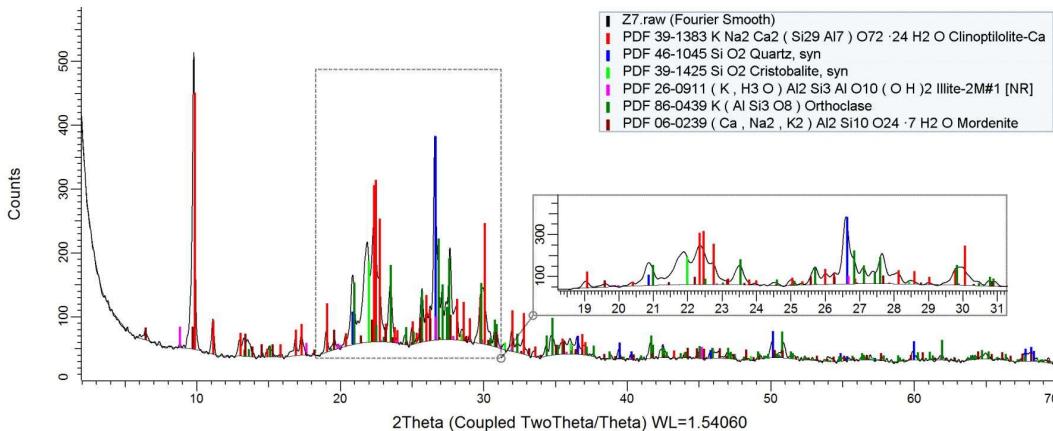
Mád zeolite deposits, mineralogy of 1st type



sometimes Ca-dominant,
but always mixed cation

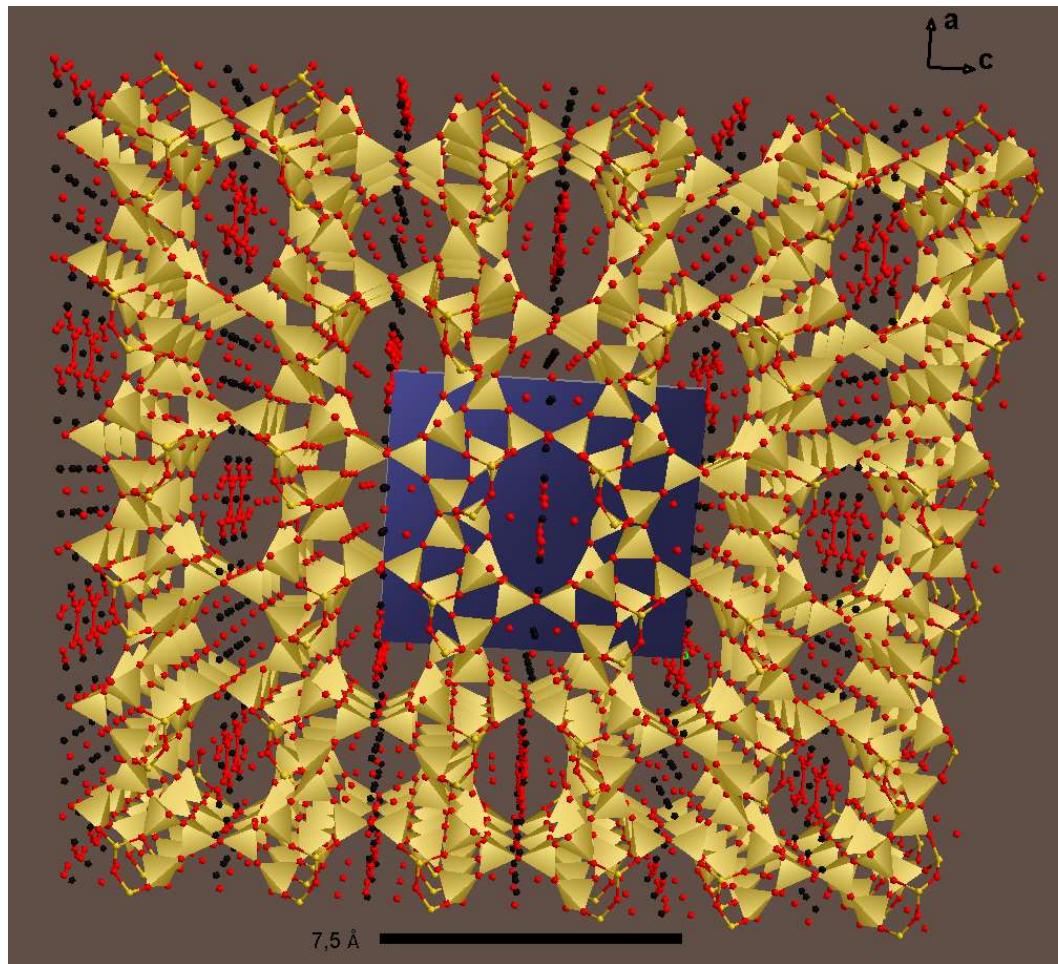
Courtesy of Josab Ltd

Mád zeolite deposits, mineralogy of 1st type

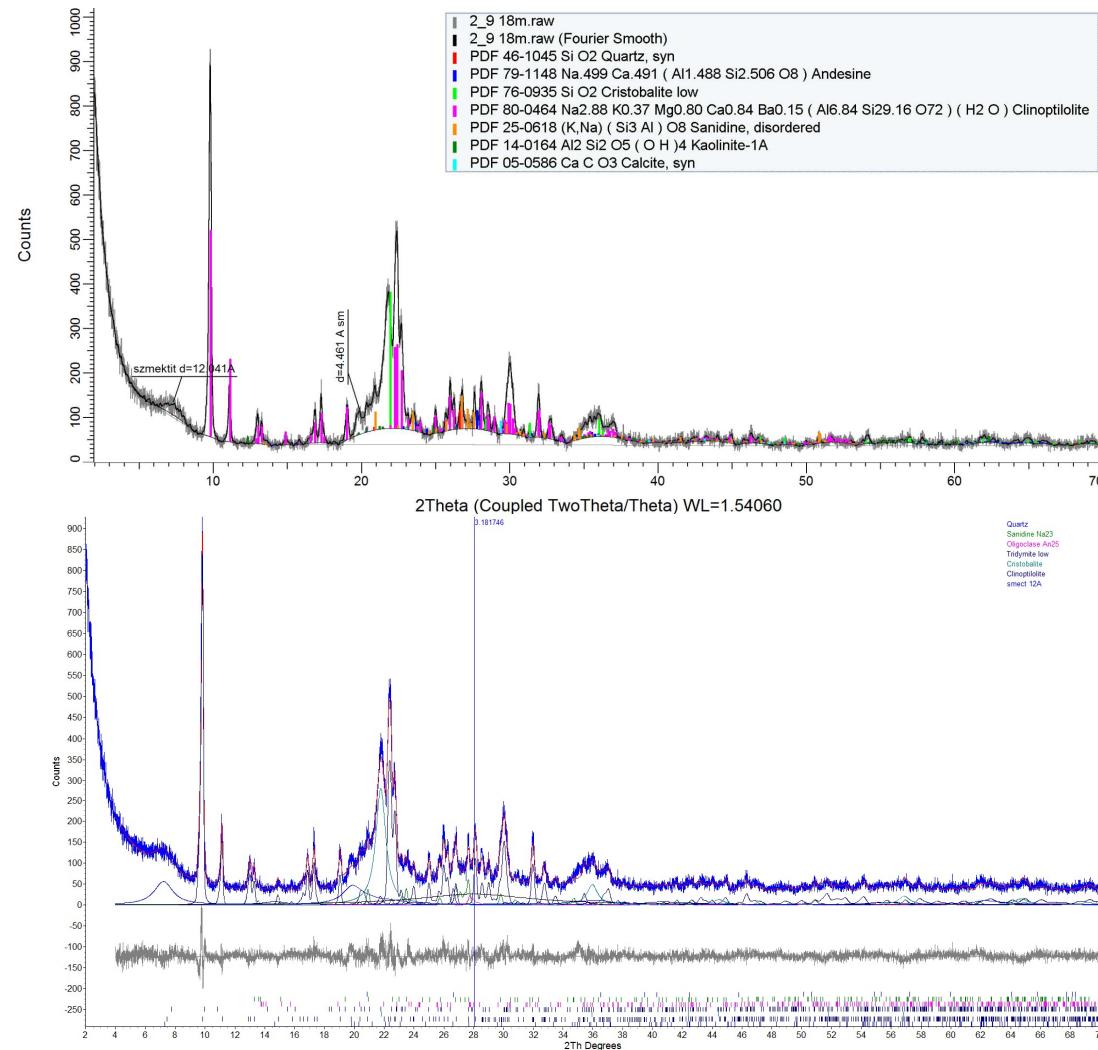
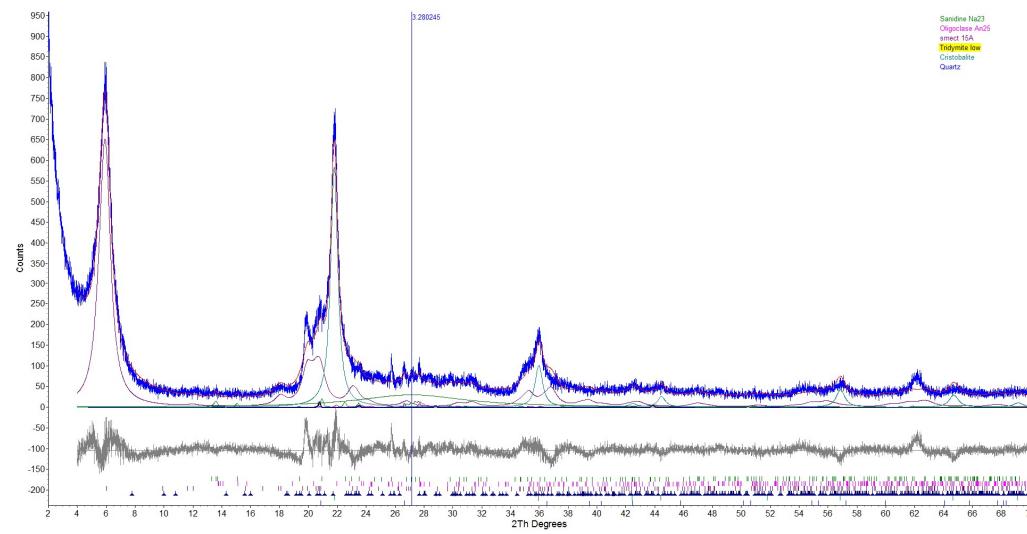
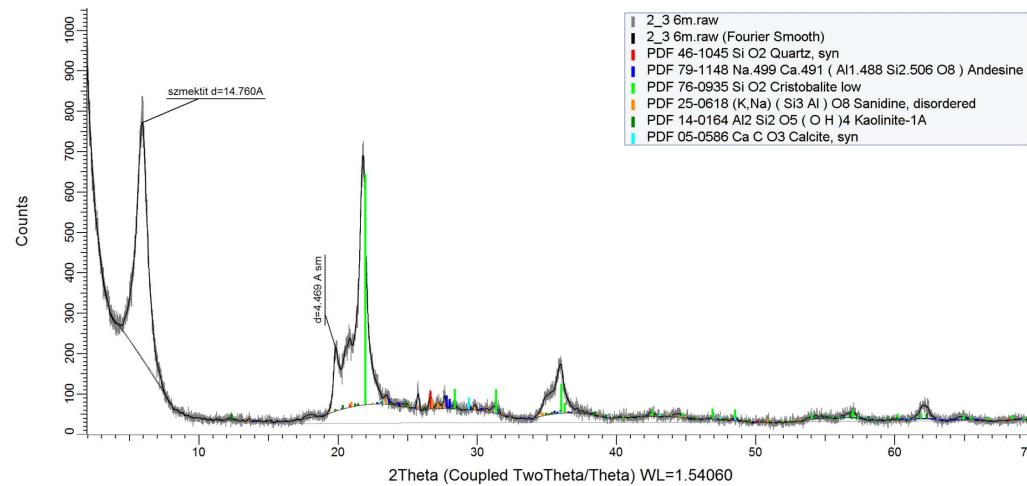


Courtesy of Josab Ltd

Mád zeolite deposits, mineralogy of 1st type



Mád zeolite deposits, mineralogy of 1st type

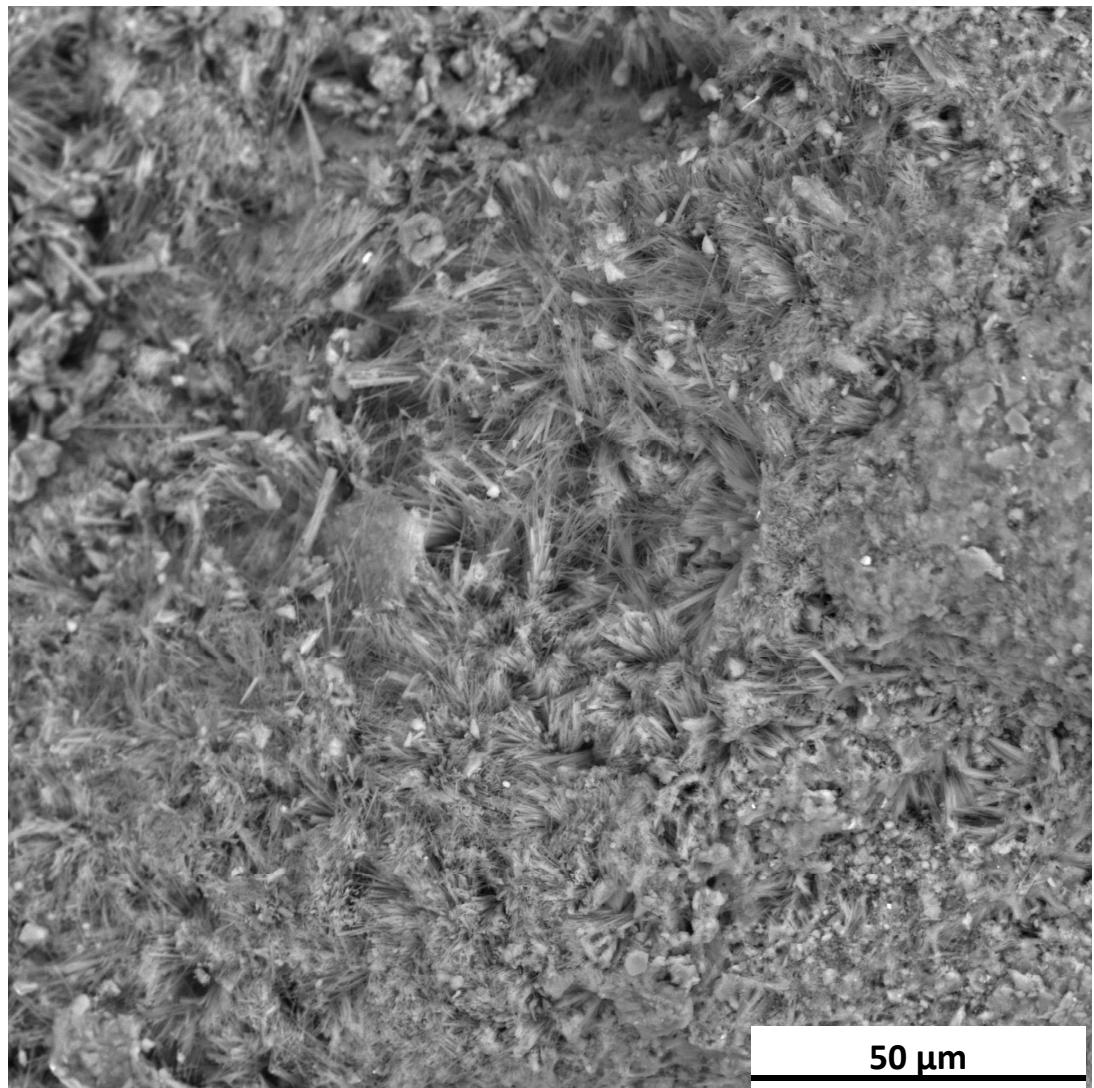
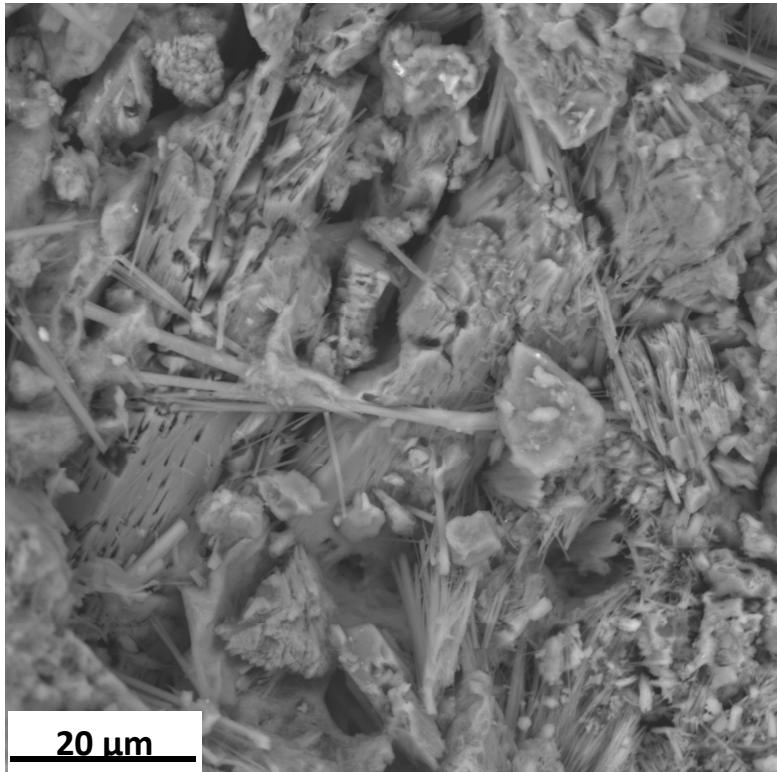


Mád zeolite deposits, mineralogy of 2nd type

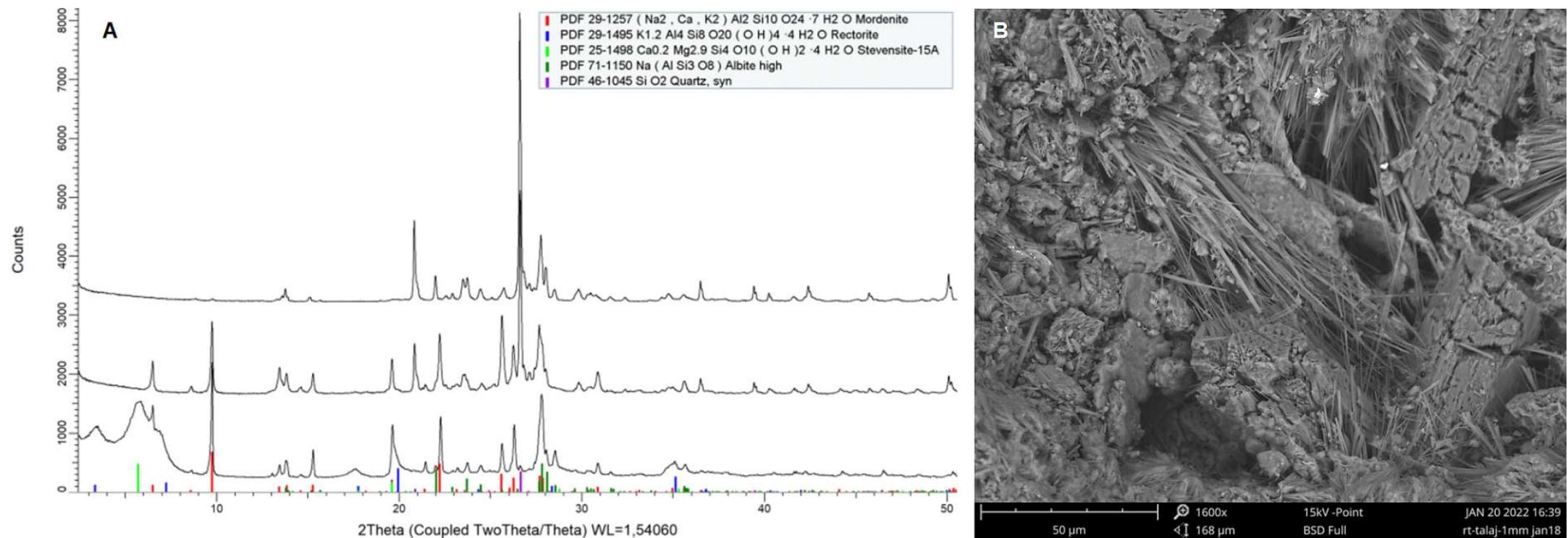


Colas-Északkő Ltd

Mád zeolite deposits, mineralogy of 2nd type



Mád zeolite deposits, mineralogy of 2nd type

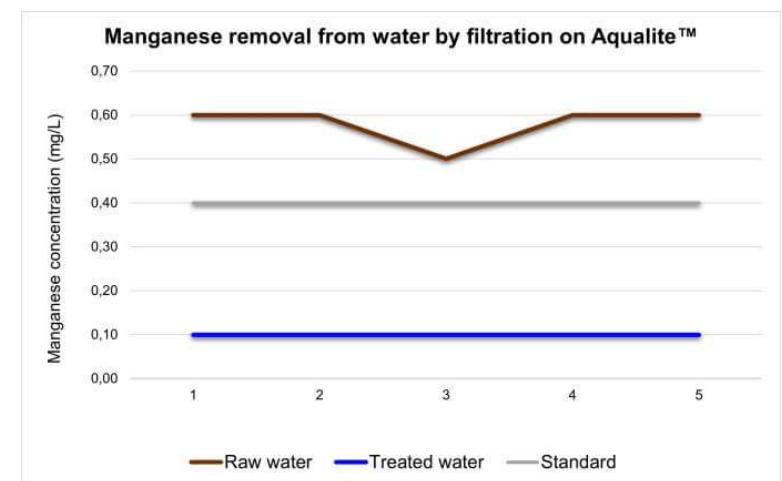


Mád zeolite deposits, geochemistry

	LOI	SiO₂	Al₂O₃	MgO	CaO	Na₂O	K₂O	Fe₂O₃	MnO	TiO₂	P₂O₅
1	6.5	72.8	11.3	0.74	1.74	0.24	4.49	1.21	0.005	0.082	0.009
2	7.5	71.1	11.1	0.93	2.01	0.37	3.72	1.31	0.007	0.086	0.009
3	6.8	72.6	11.0	0.82	2.00	0.24	3.89	1.26	0.007	0.083	0.008
4	6.2	73.8	11.9	0.75	1.77	0.19	4.29	1.30	0.013	0.086	0.009
5	6.6	72.5	11.5	0.68	1.88	0.13	4.32	1.26	0.011	0.082	0.010
6	6.0	72.5	11.3	0.70	1.78	0.29	4.58	1.22	0.019	0.090	0.009

Mád zeolite deposits, mining and processing

- Geoprodut
- Josab Hungary



Thank you for your attention