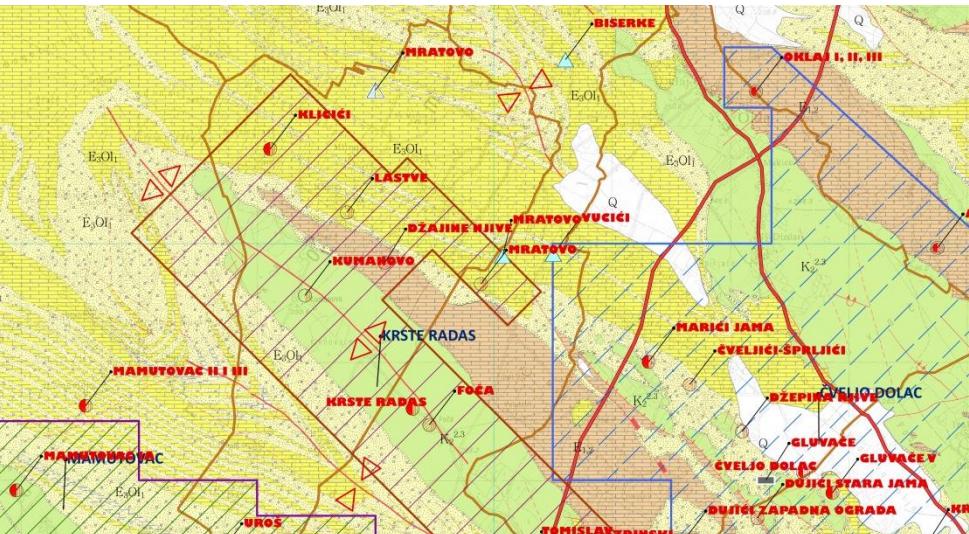


# 1st REEBAUX Workshop 2019

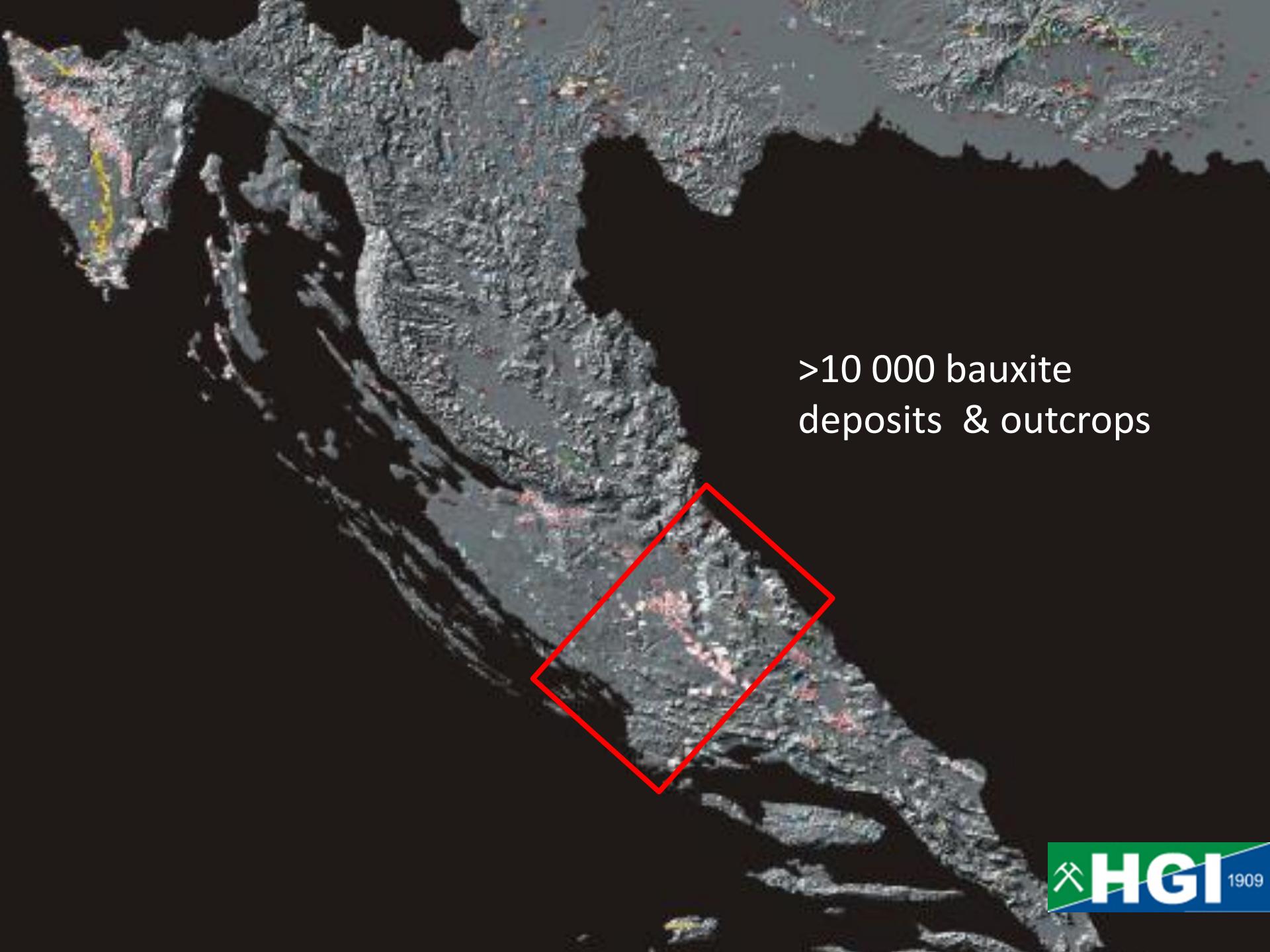


## Bauxite deposits of the Promina region (Šibenik-Knin County county, Dalmatia)

Slobodan Miko, Nikolina Ilijanić,  
Nikola Gzadavec, Željko Dedić, Boris Kruk

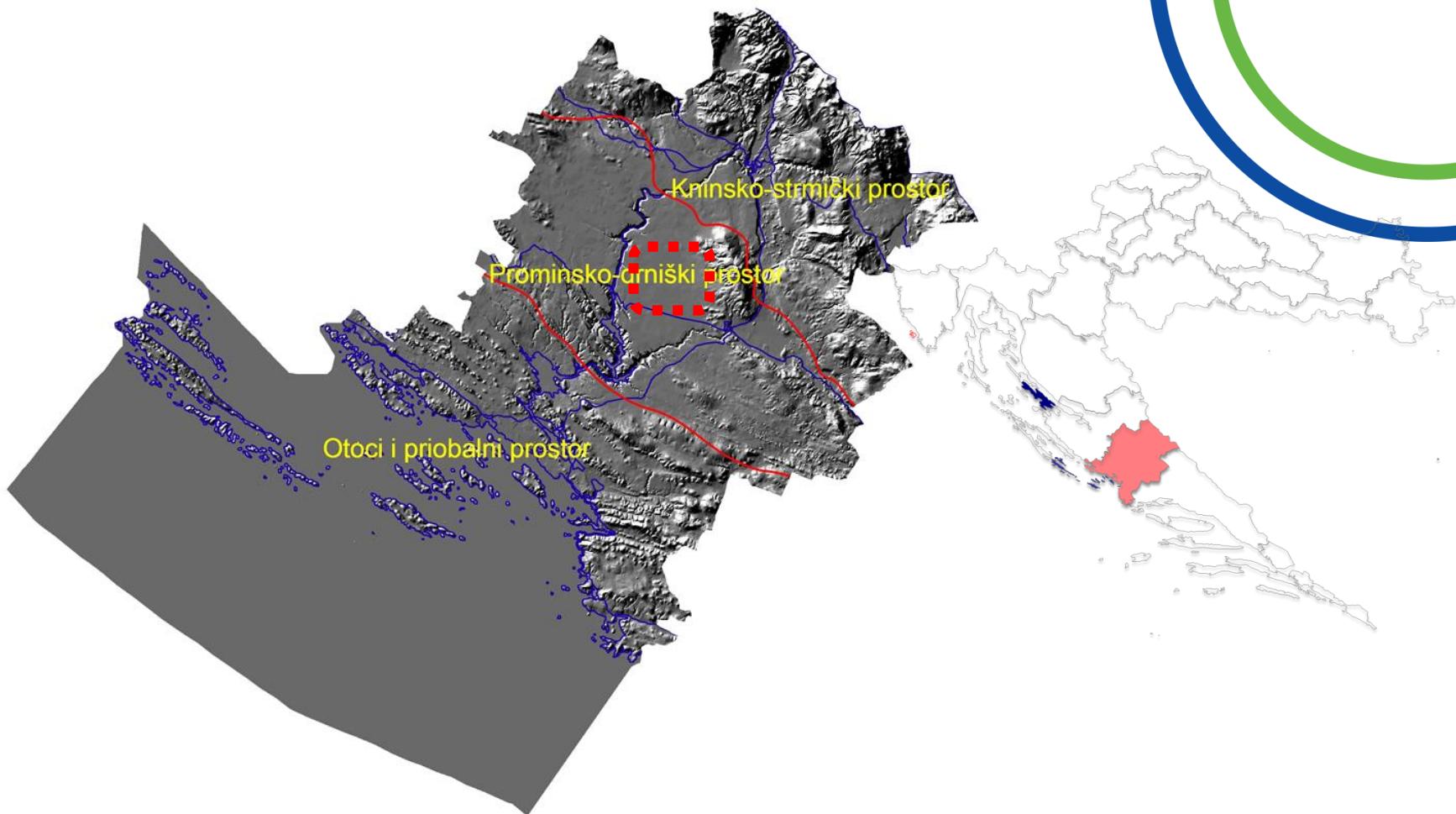


14<sup>th</sup> – 15<sup>th</sup> October, 2019



>10 000 bauxite  
deposits & outcrops

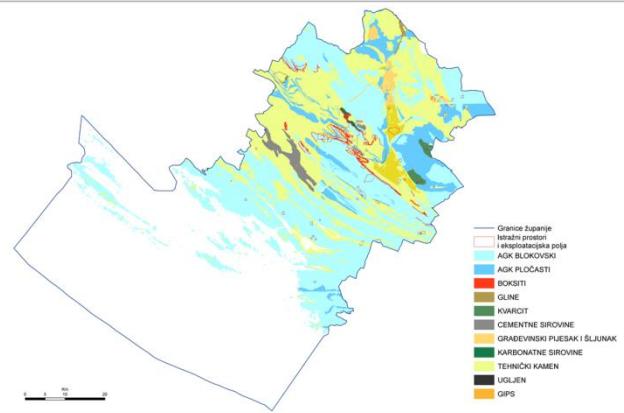
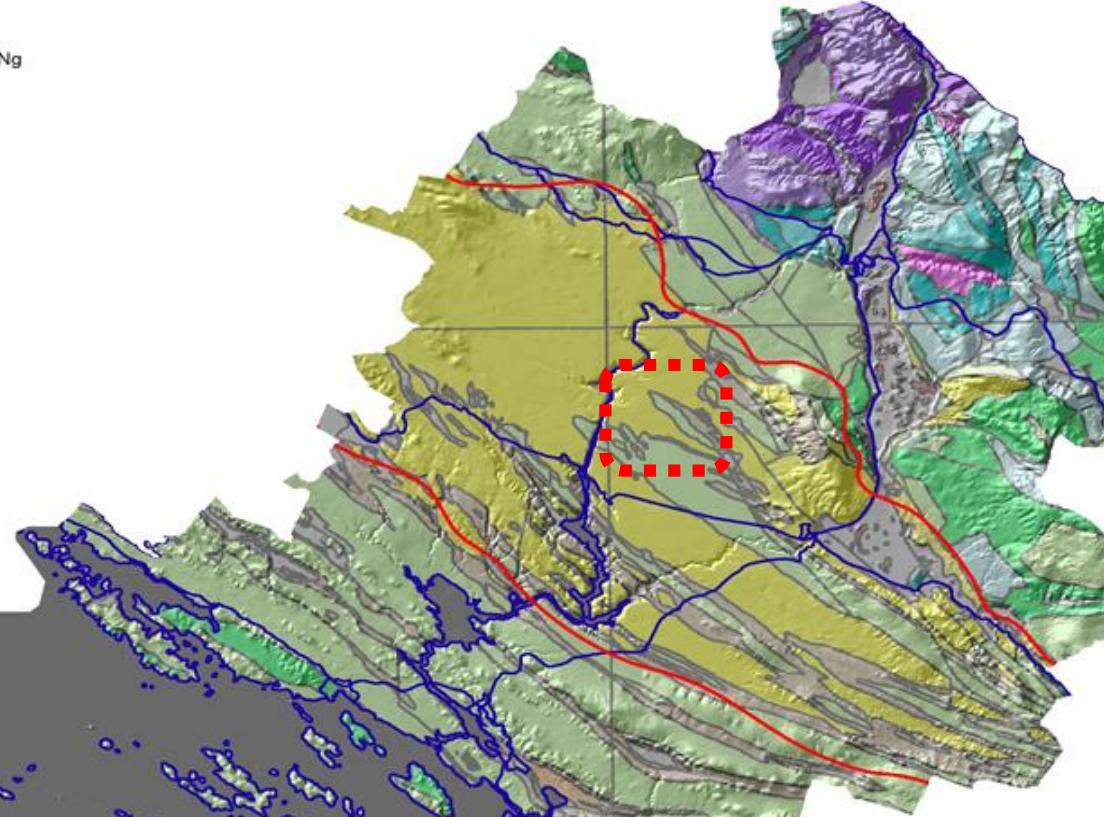
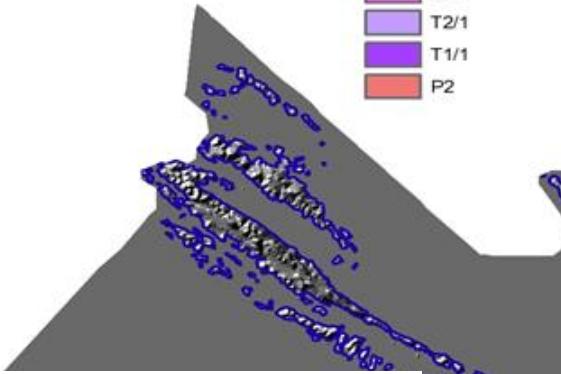
# Šibenik-Knin County



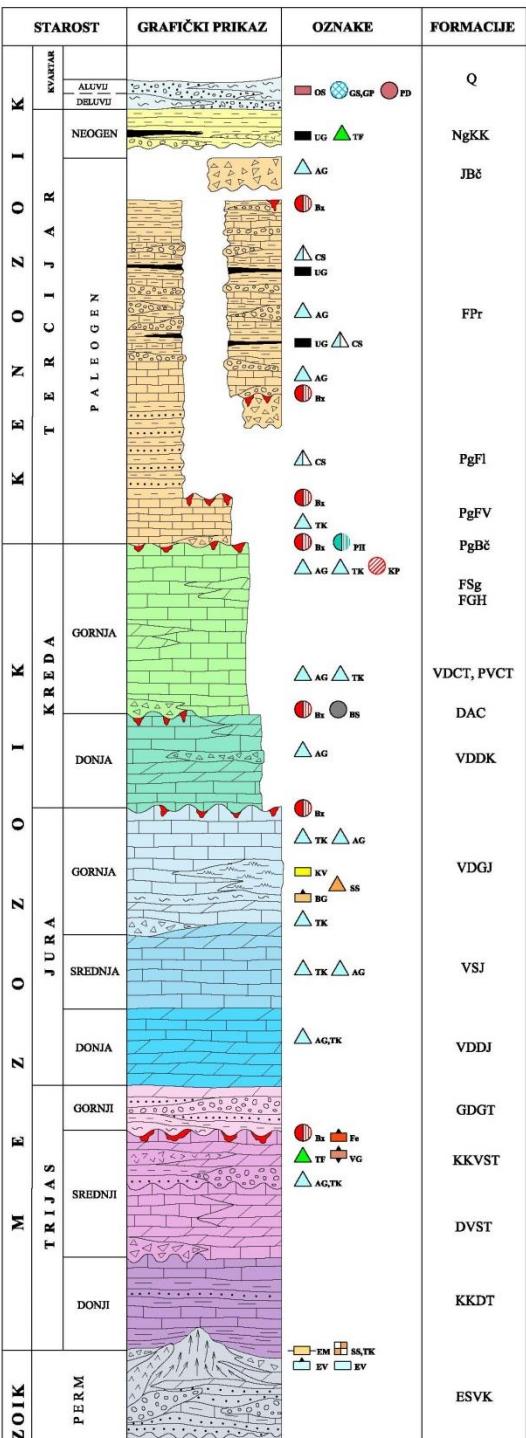
# Geology of Šibenik-Knin county

Legenda

- Q
- E3,Ol; Pg,Ng
- E3-OL
- E2
- Pc,E
- K2/2,3
- K1
- J3/2,3
- J2
- J1
- 2T3
- T2/1
- T1/1
- P2



M 1:100 000



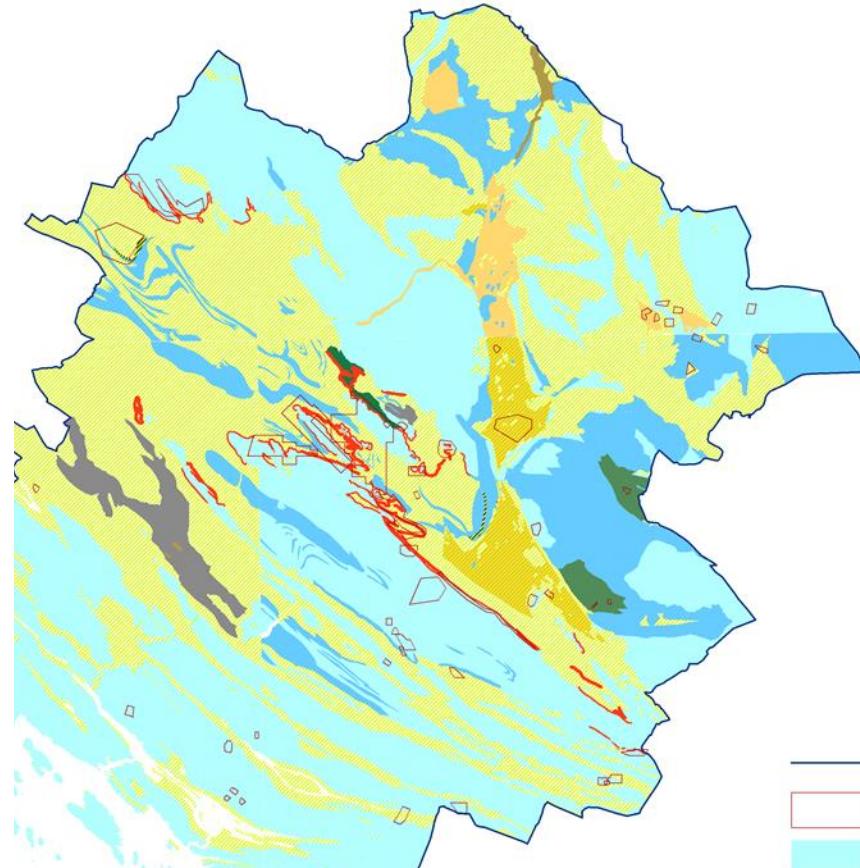
#### LEGENDA:

##### a) litološka

- [Symbol] - Pjesak i šljunak
- [Symbol] - Gлина
- [Symbol] - Boksitna ležišta i pojave
- [Symbol] - Tuf, tufit
- [Symbol] - Rožnac, kvarcit
- [Symbol] - Dolomit
- [Symbol] - Vapnenac
- [Symbol] - Laporoviti vapnenac, vapnenacki lapor
- [Symbol] - Lapor, lapor s uglejom
- [Symbol] - Pješčenjak
- [Symbol] - Konglomerat
- [Symbol] - Broča
- [Symbol] - Gips, anhidrit
- [Symbol] - Dijabaz (splitizirani)

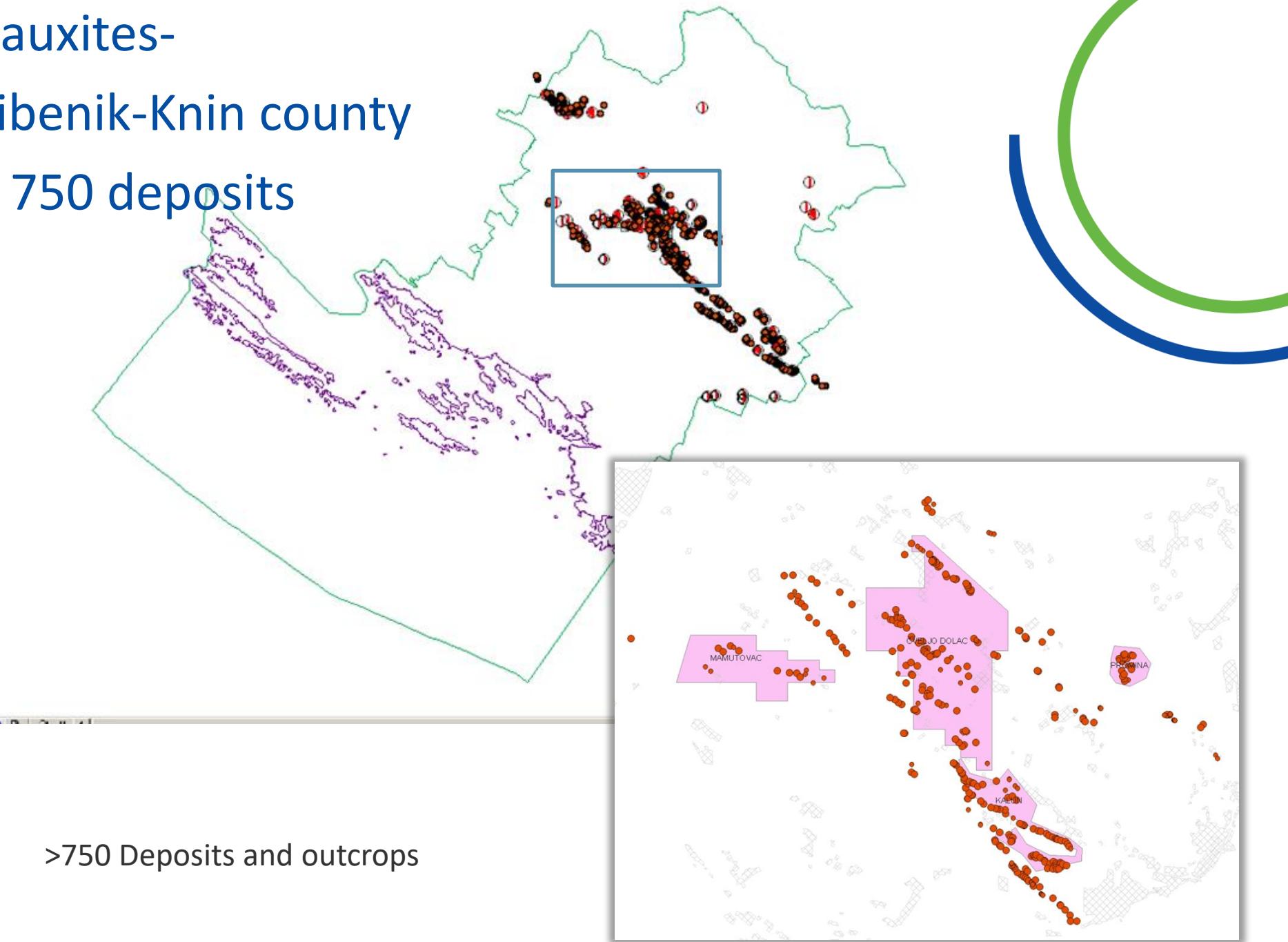
##### b) mineralnih sirovina

- [Symbol] os - Opekarska sirovinu
- [Symbol] GS,GP - Građevni šljunak i pjesak
- [Symbol] PD - Peloidi
- [Symbol] UG - Ugljen
- [Symbol] TF - Tuf, tufit
- [Symbol] AG - Arhitektonsko-građevni kamen
- [Symbol] Rx - Boksit
- [Symbol] CS - Sirovina za cement
- [Symbol] TK - Tehnicko-građevni kamen
- [Symbol] PI - Fosfor
- [Symbol] KP - Kvarcni pjesak
- [Symbol] BS - Bituminozna stijena
- [Symbol] KV - Kvarcna sirovina
- [Symbol] SS - Silikatna sirovina (eruptiv)
- [Symbol] BG - Bentonitska gлина
- [Symbol] Fe - Željezna ruda
- [Symbol] VG - Keramička i vatrostalna gлина
- [Symbol] EM - Eksplandirani materijal
- [Symbol] EV - Evaporit
- [Symbol] EV - Evaporitne pojave

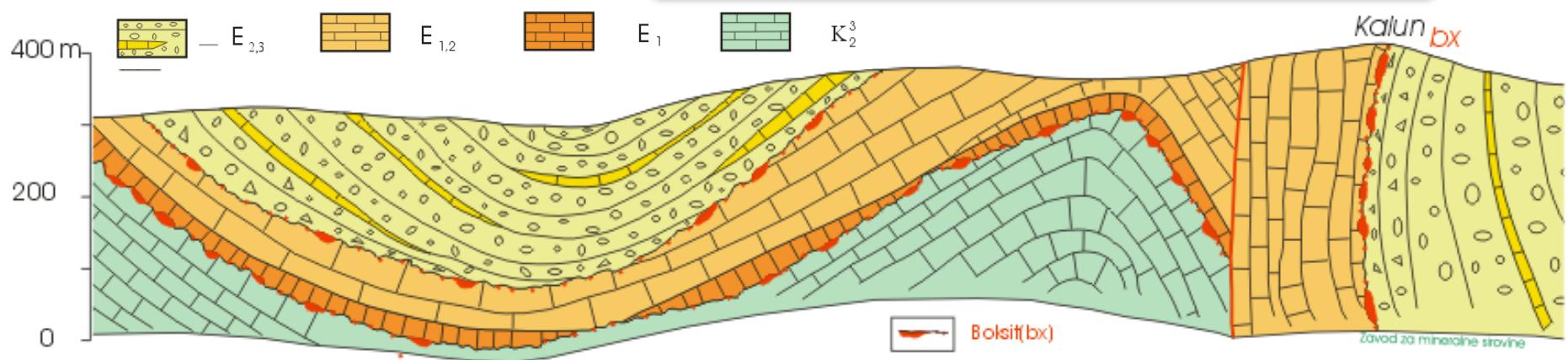
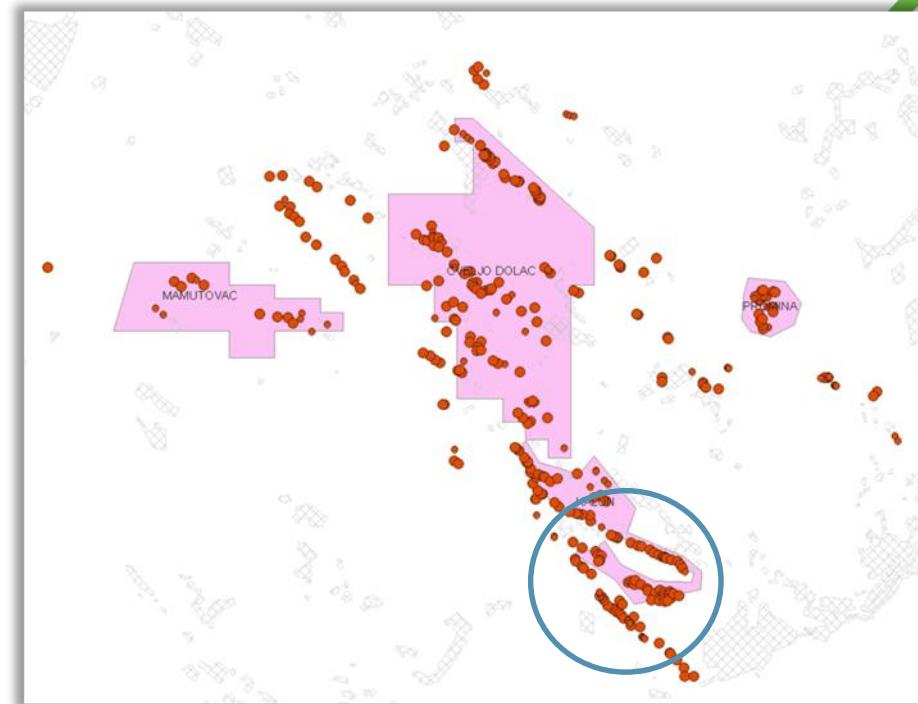


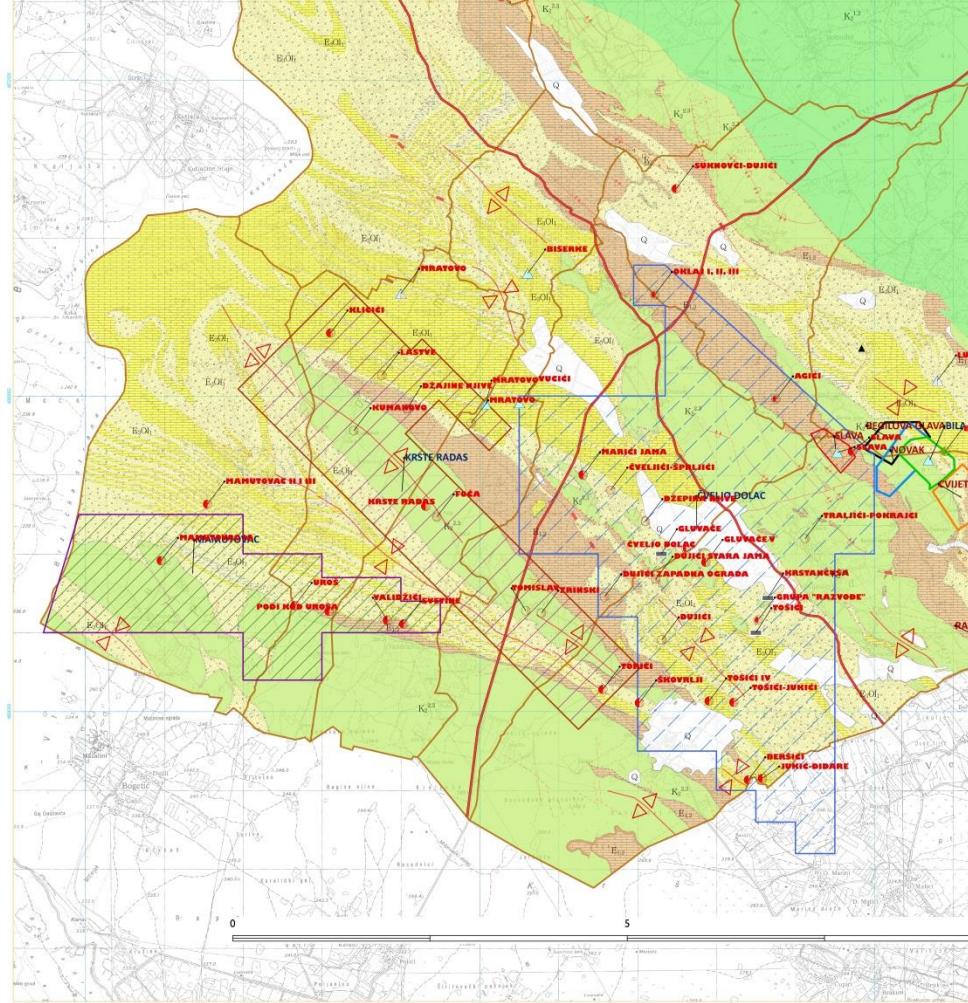
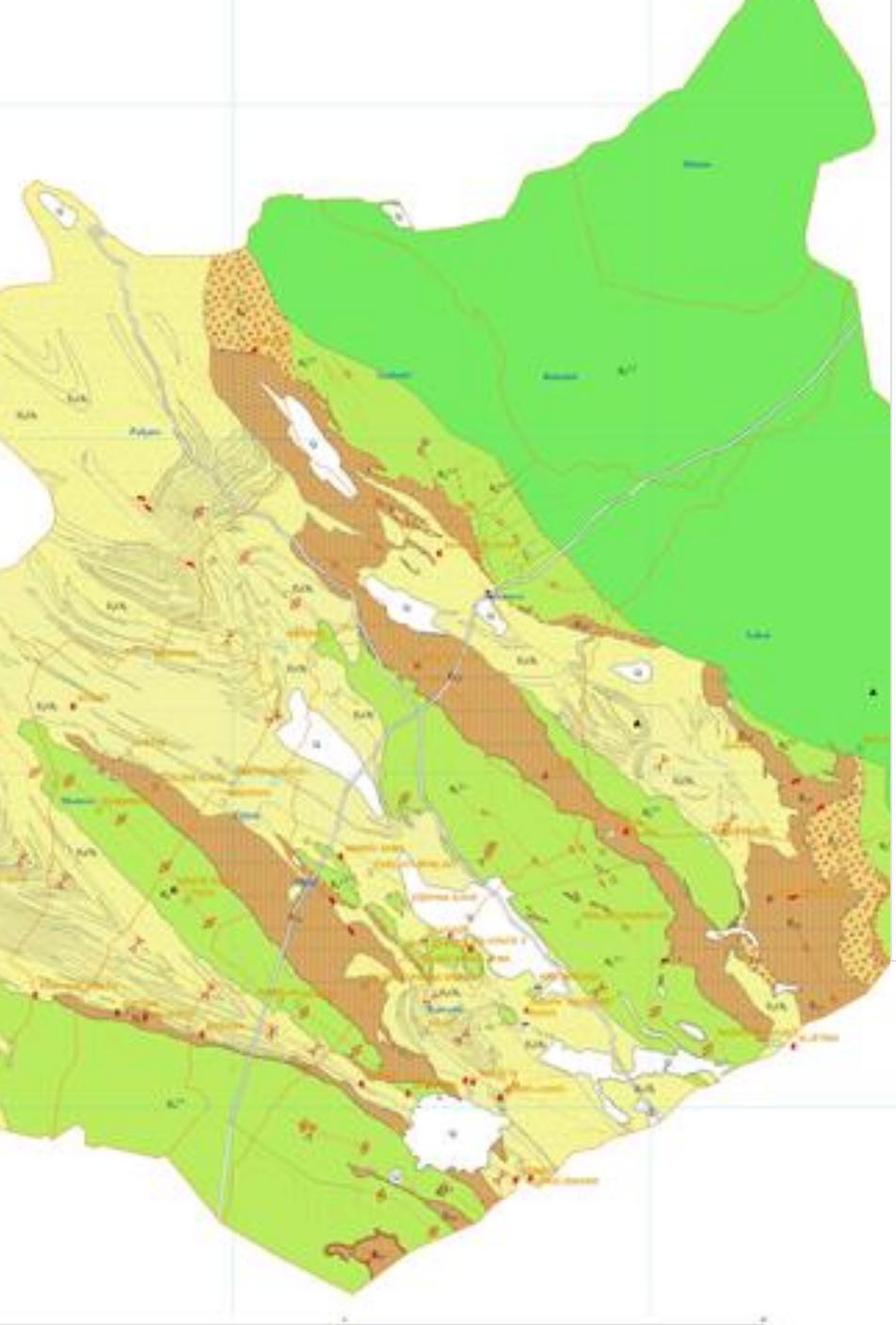
— Granice  
 □ Istražni p. i eksploatacija  
 ■ AGK BL  
 ■ AGK PL  
 ■ BOKSIT  
 ■ GLINE  
 ■ KVARCH  
 ■ CEMEN  
 ■ GRAĐEDE  
 ■ KARBON  
 ■ TEHNIČKE  
 ■ UGLJEM  
 ■ GIPS

# Bauxites- Šibenik-Knin county > 750 deposits



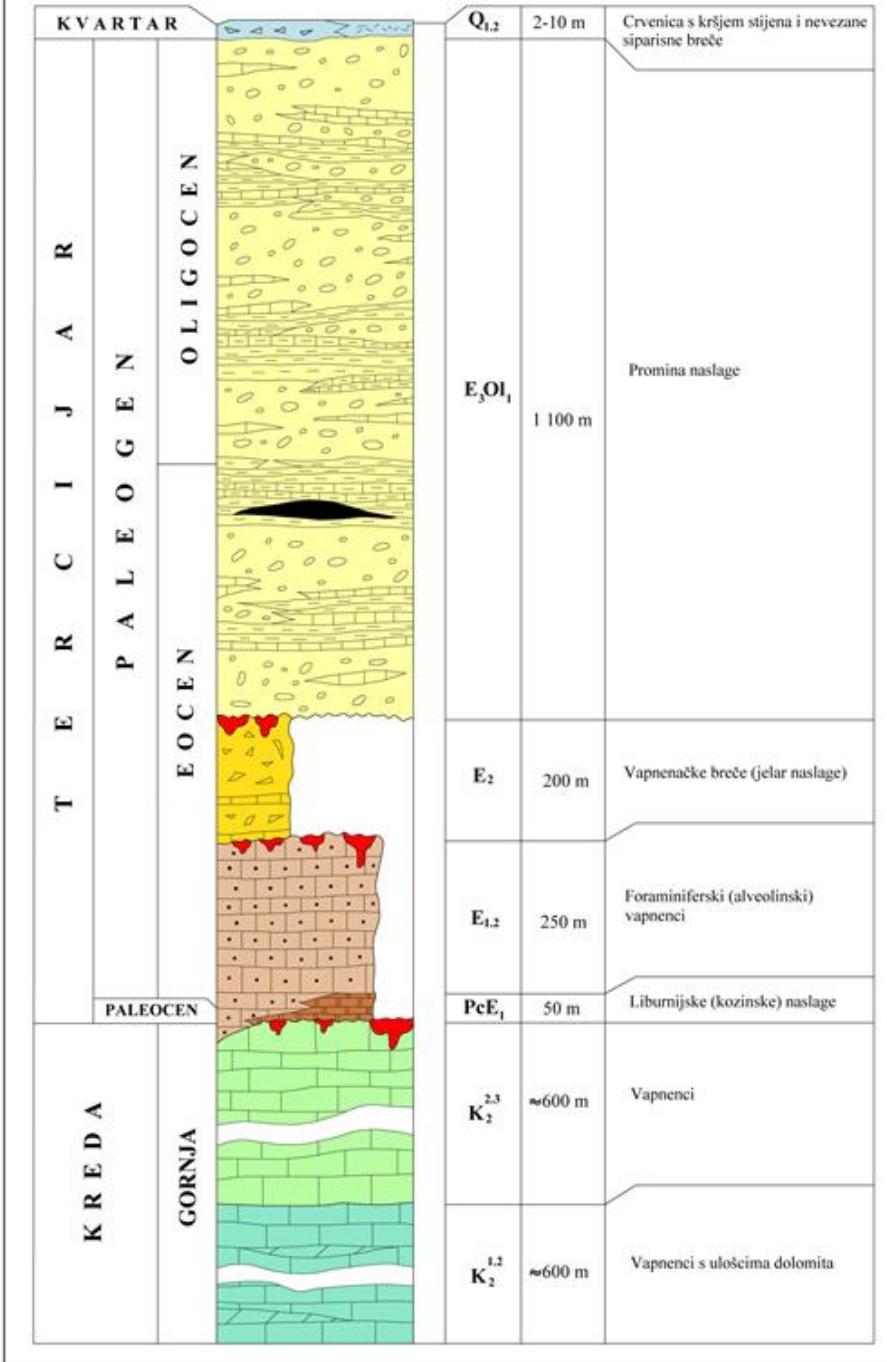
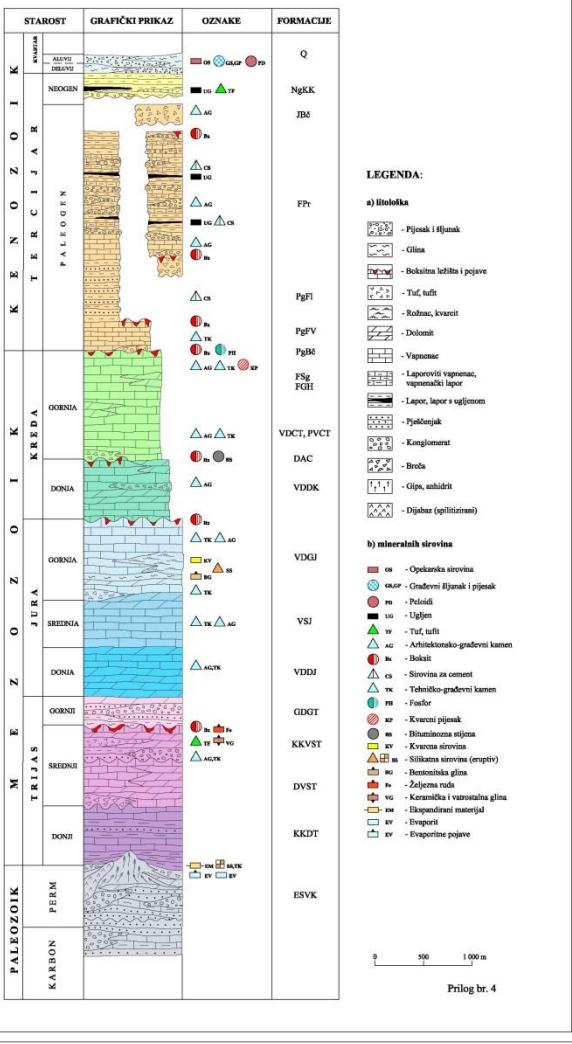
# Kalun deposit exploited at 400 m depth





Legend:	green shaded area	yellow shaded area	orange shaded area	grey shaded area	white area
Geological Units:	red dashed line	black dashed line	blue dashed line	purple dashed line	grey dashed line
Boundaries:	white line	black line	blue line	purple line	grey line
Labels:	green text	yellow text	orange text	grey text	black text
Paleogene:	E-OI: Pliocene eustatic + hyperconformal	A-OI: Pliocene eustatic + transgressive	A-OII: Pliocene eustatic + hyperconformal, breccia, reworking; regional deposit		
	N <sub>1</sub> : Vranaševac breccia				
	N <sub>2</sub> : Vranaševac breccia				
	E-II: Andine eustasy				
Sedimentary facies:	green	A <sub>1</sub> : Transient sea dolomite/dolomitic limestone			
	green	A <sub>2</sub> : Transient sea dolomite/calcarenous limestone			

## POJEDNOSTAVLJENI GEOLOŠKI STUP



# Explotation field „Čveljo dolac“

Reserves 1 966 234 t of bauxite

Al <sub>2</sub> O <sub>3</sub>	47,18 %
SiO <sub>2</sub>	4,55 %
TiO <sub>2</sub>	2,70 %
Fe <sub>2</sub> O <sub>3</sub>	22,05 %
CaO	0,40 %
Gub. žar.	23,10 %

„Marića jama“  
„Gluvače I“  
„Gluvače polje“  
„Jukići-Didare“  
„Gluvače V“

open pit mining  
open pit mining  
open pit mining  
open pit mining  
open pit mining

„Marići II“  
„Gluvače IV“  
„Gluvače V/I“  
„Gluvače VI“  
„Krstančuša III zapad“  
„Krstančuša draće“

underground mining,  
underground mining,  
underground mining,  
underground mining,  
underground mining,  
underground mining,

„Klepici-Tošići“  
„Klepici-Tošići I“  
„Klepici-Tošići II“  
„Klepici-Tošići III“  
„Lacići“

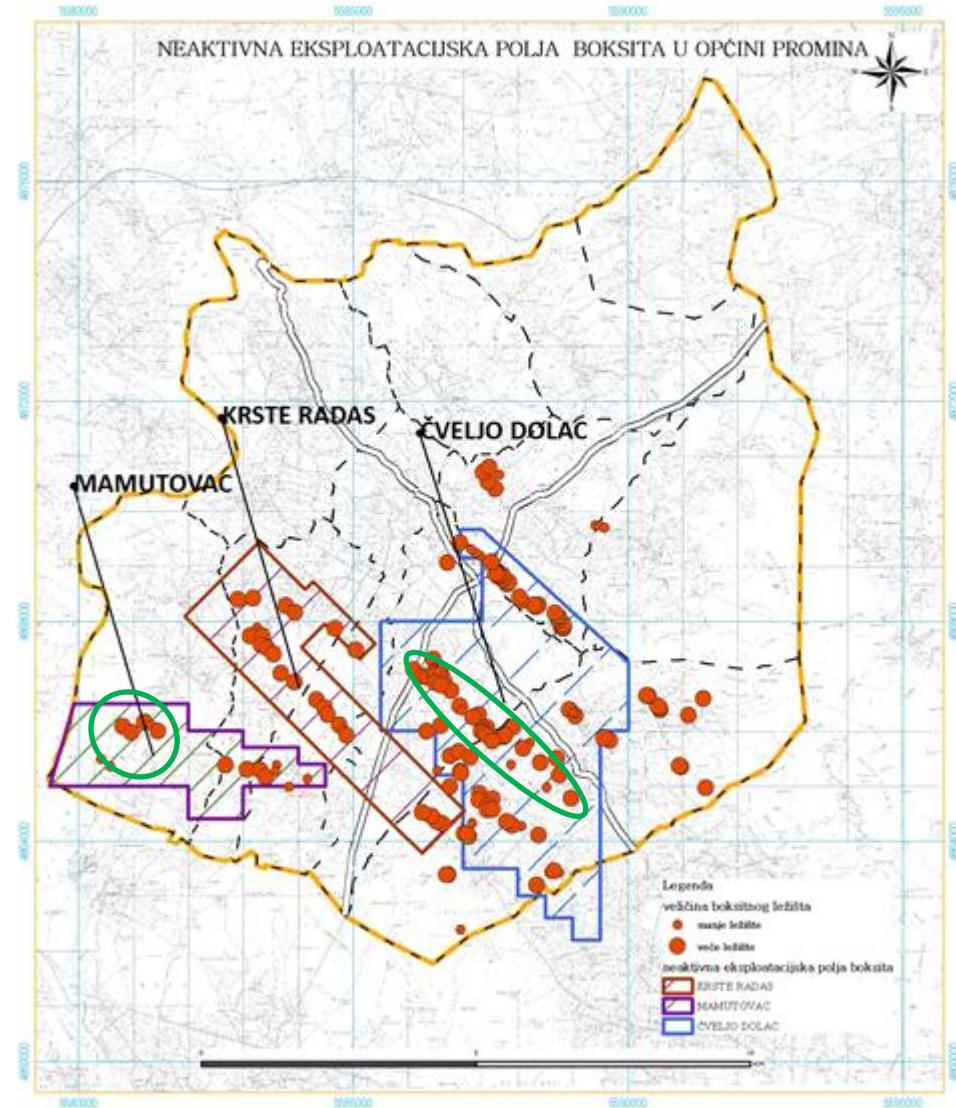
underground mining,  
underground mining,  
underground mining,  
underground mining,  
underground mining,

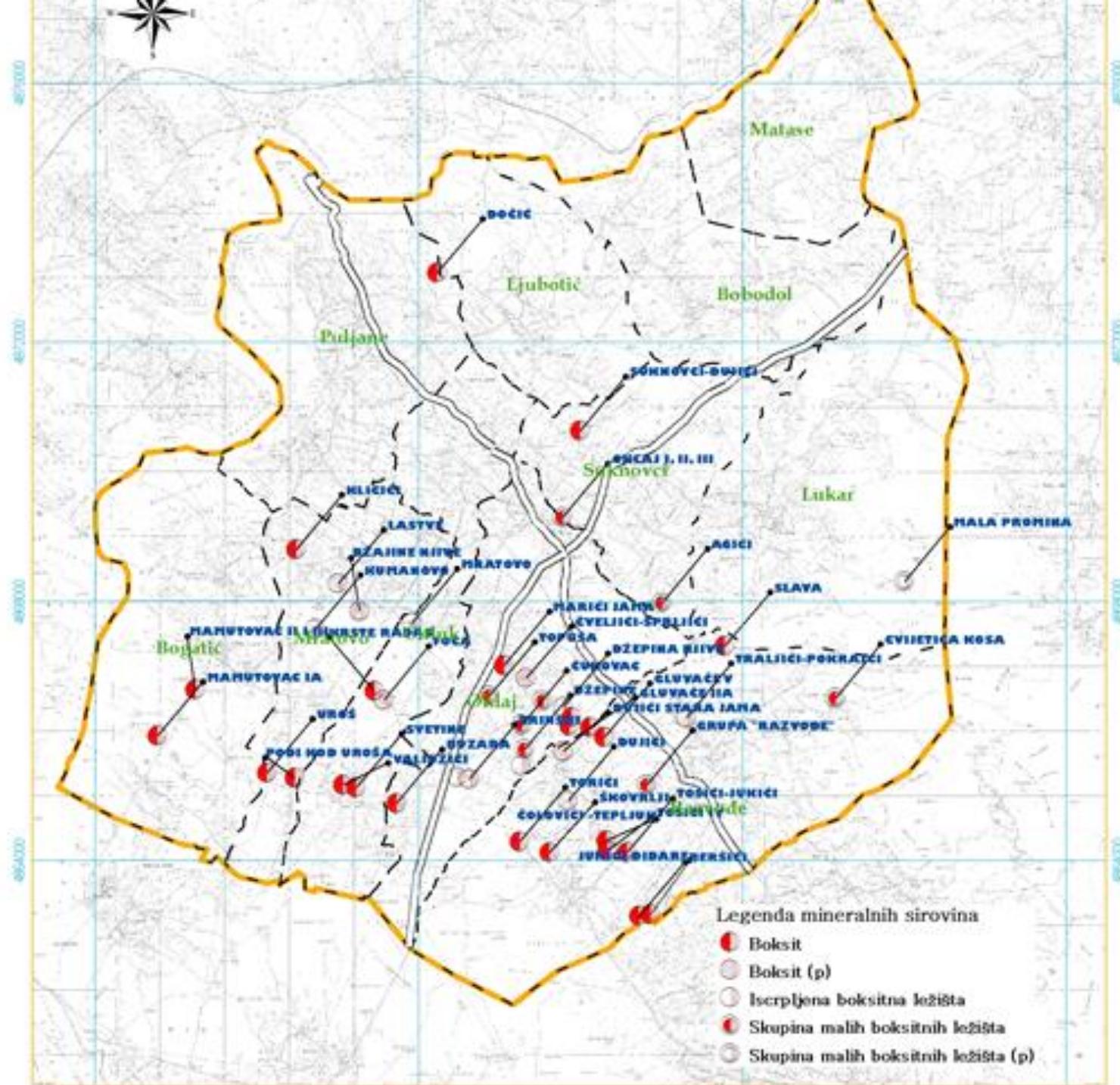
„Dražice“  
„Dujići – istok“  
„Dujići – Tošići“  
„Tošići – Jukići“

underground mining,  
underground mining,  
underground mining,  
underground mining,

„Jukići“  
„Jukići II“  
„Jukići IIIa“  
„Razvođe polje“  
„Pokrajci“

underground mining,  
underground mining,  
underground mining,  
underground mining,  
underground mining

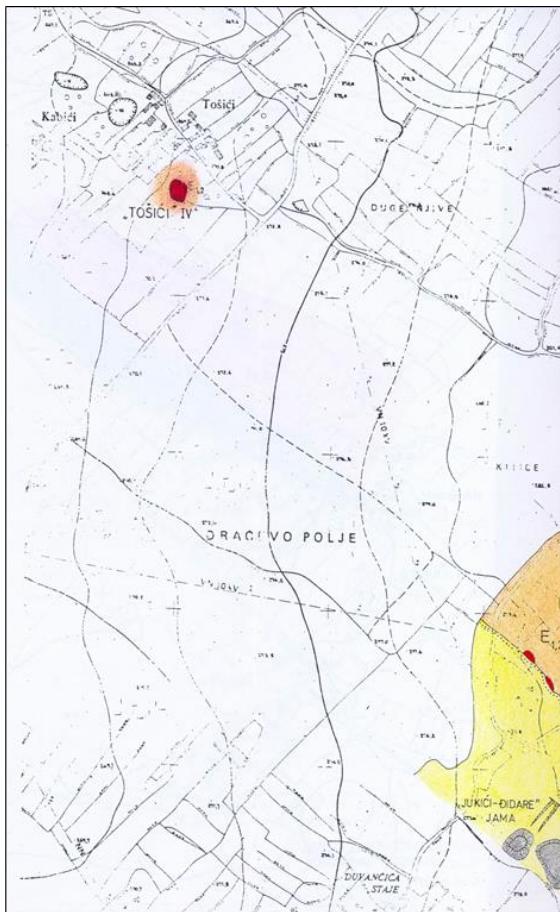
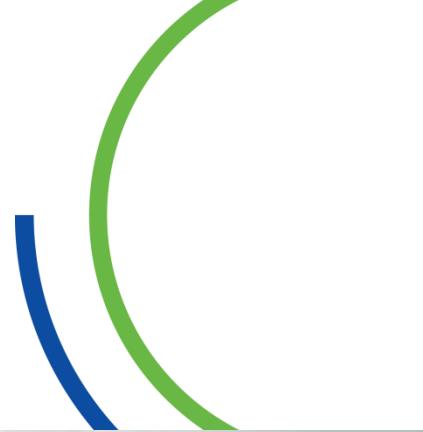




#### Legenda mineralnih sirovina

- Boksit
- Boksit (p)
- Iscrpljena boksitna ležista
- Skupina malih boksitnih ležista
- Skupina malih boksitnih ležista (p)

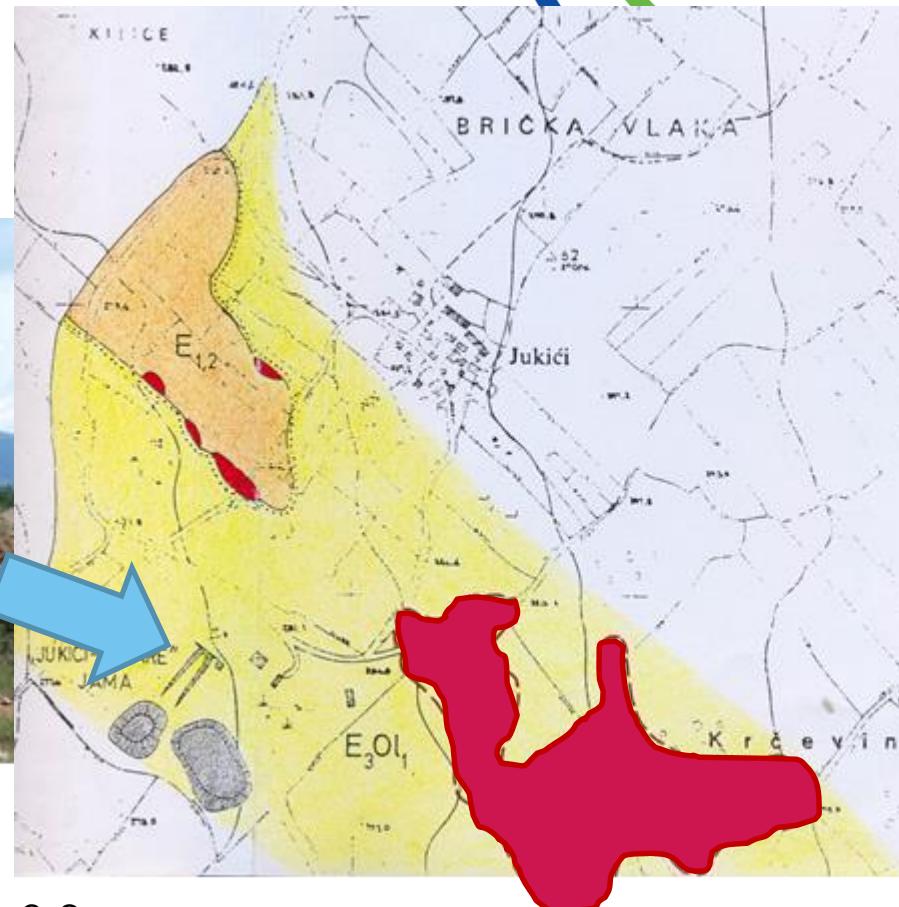
# Tošići IV



Al<sub>2</sub>O<sub>3</sub> SiO<sub>2</sub> TiO<sub>2</sub> Fe<sub>2</sub>O<sub>3</sub> G.ž. CaO  
40,6 17,4 2,5 17,8 21,0 0,7%

# Jukići-Đidare

- Reserves 167 650 t
- underground exploitaion
- Hanging wall „Promina“ conglomerates



$\text{Al}_2\text{O}_3$   
48,16

$\text{SiO}_2$   
2,97

$\text{TiO}_2$   
2,83

$\text{Fe}_2\text{O}_3$   
19,56

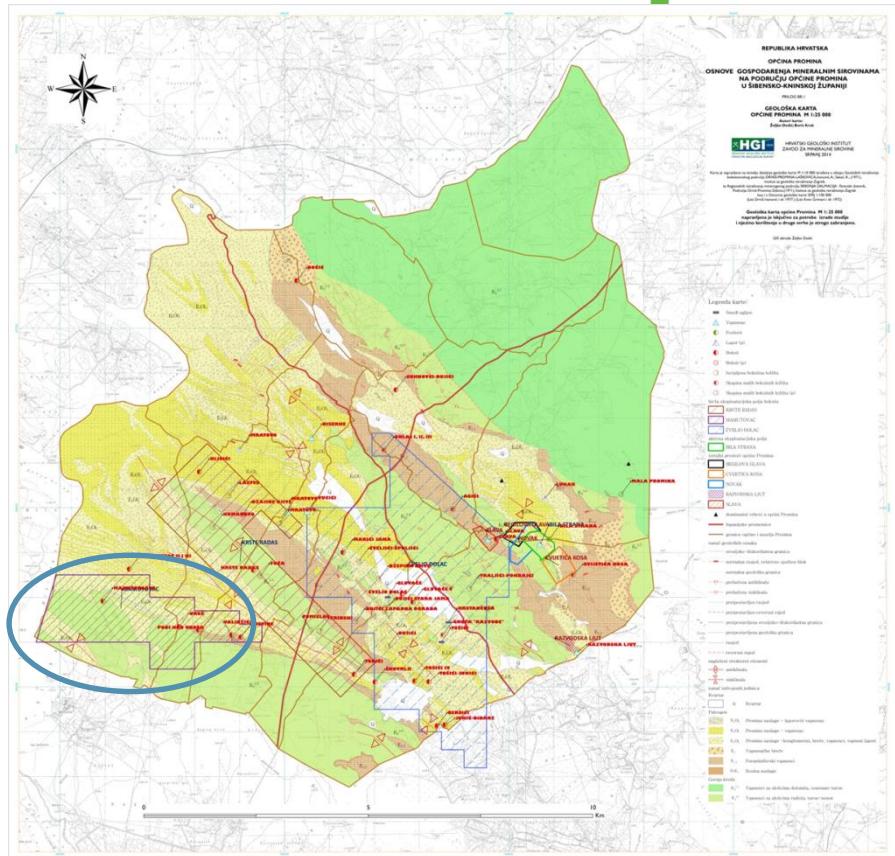
Gub. žar.  
26,14

$\text{CaO}$   
0,34

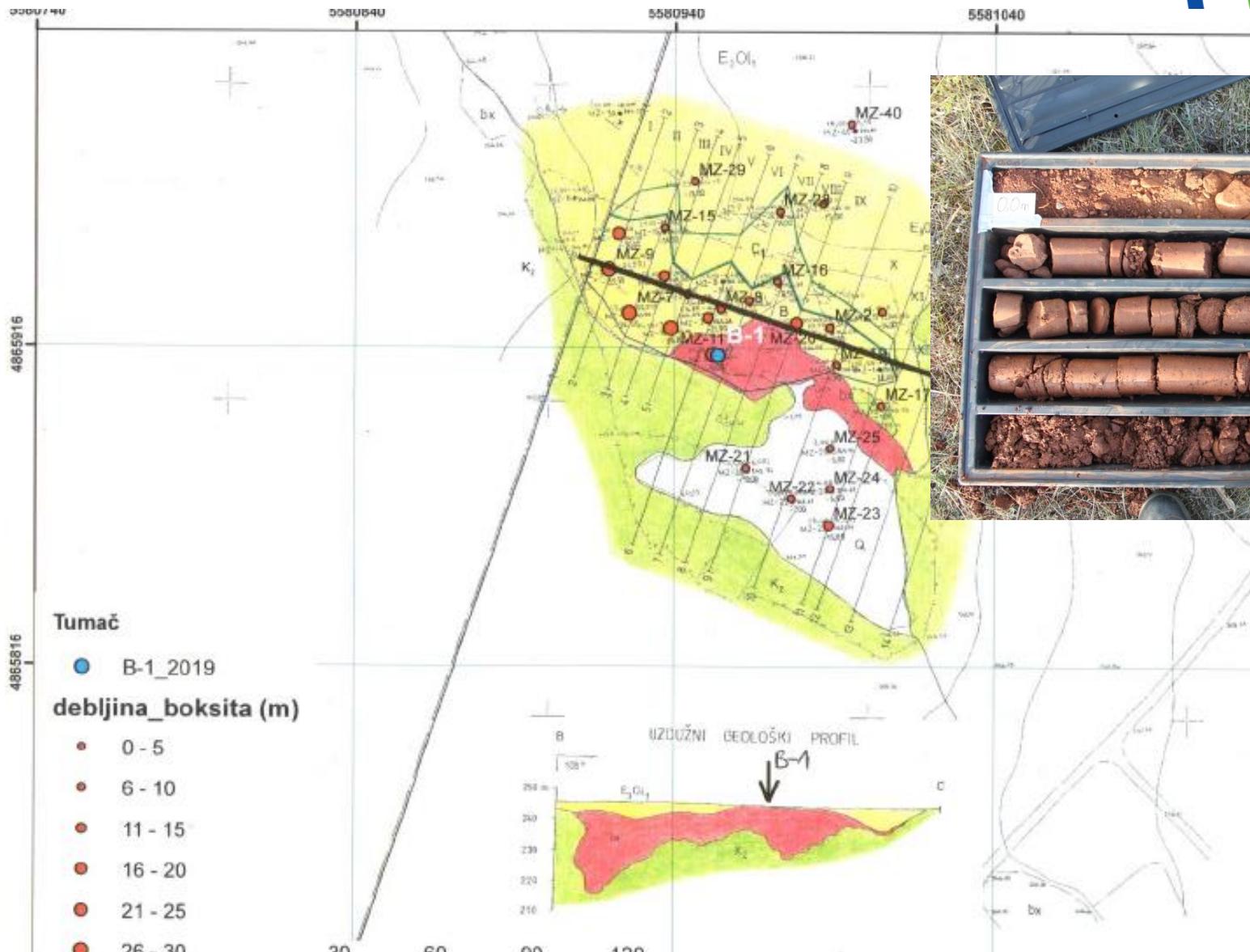
# Mamutovac deposit

- Reserves 290 918 t
- Upper Eocene age
- Lower Cretaceous footwall

$\text{Al}_2\text{O}_3$	43,56 %
$\text{SiO}_2$	17,34 %
$\text{TiO}_2$	2,39 %
$\text{Fe}_2\text{O}_3$	18,31 %
LOI	16,17 %

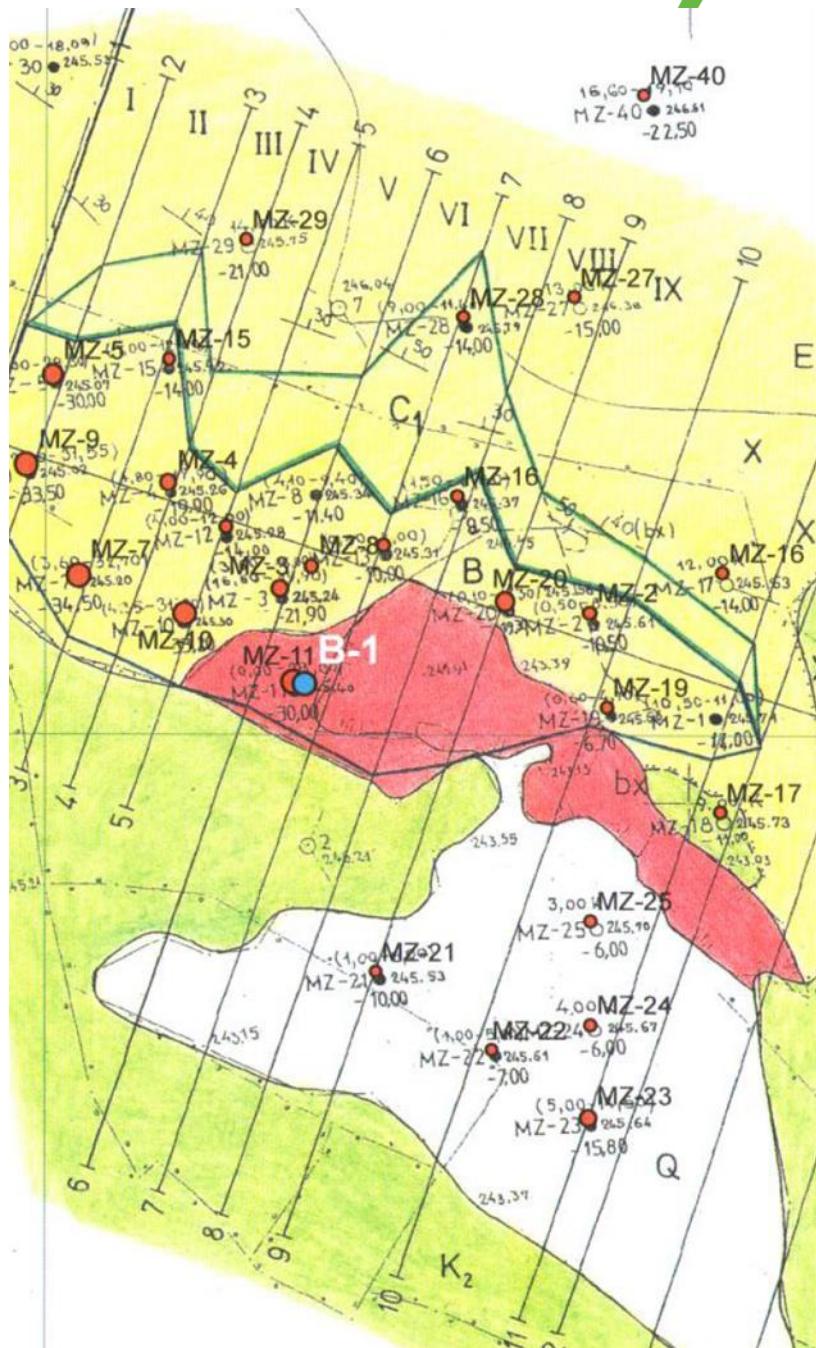


# Mamutovac deposit

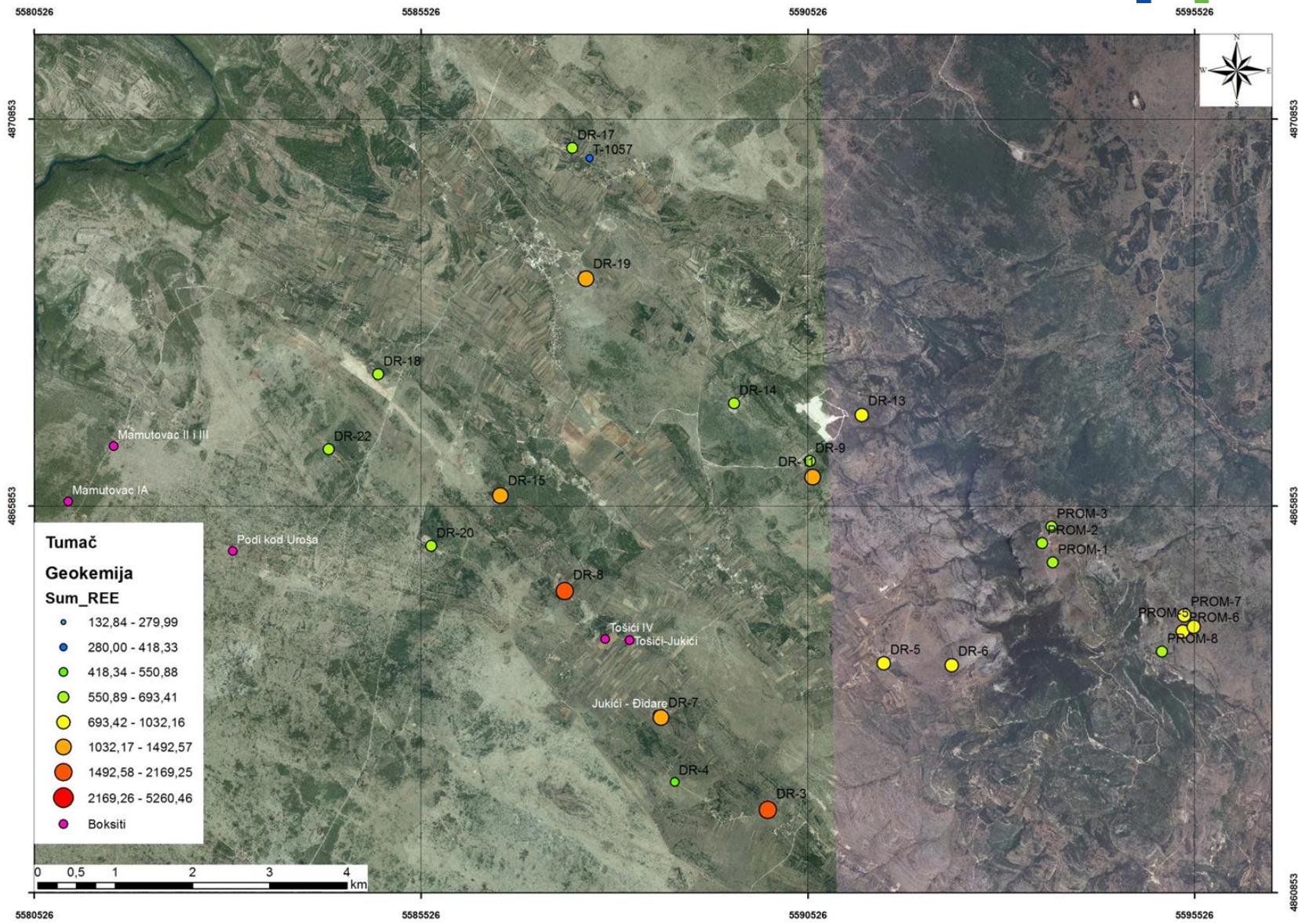


# Mamutovac deposit

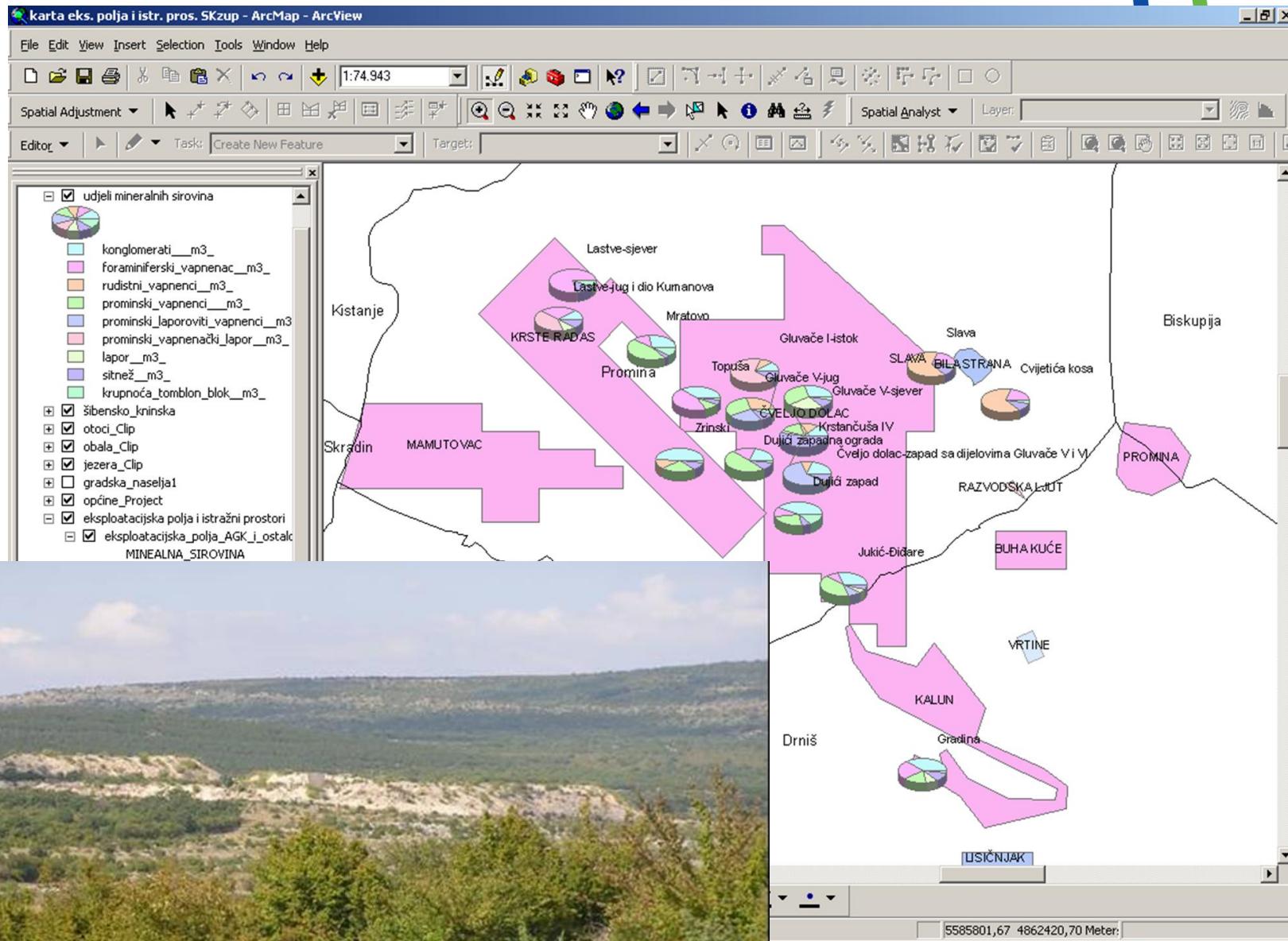
- 25 m core



# REE in bauxites of Promina



# Rock „waste” deposits from bauxite mining





EIT RawMaterials is supported by the EIT,  
a body of the European Union