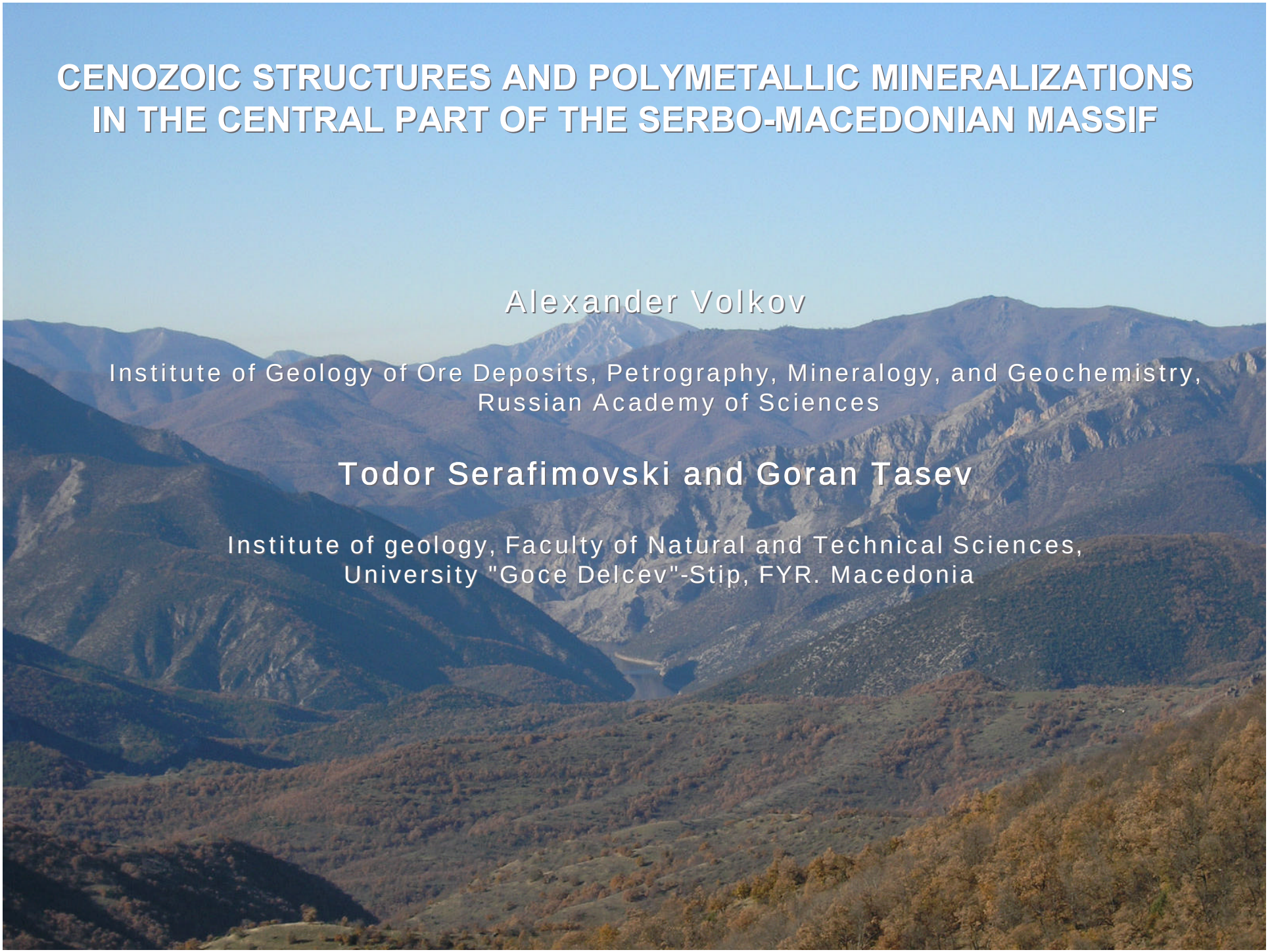

CENOZOIC STRUCTURES AND POLYMETALLIC MINERALIZATIONS IN THE CENTRAL PART OF THE SERBO-MACEDONIAN MASSIF

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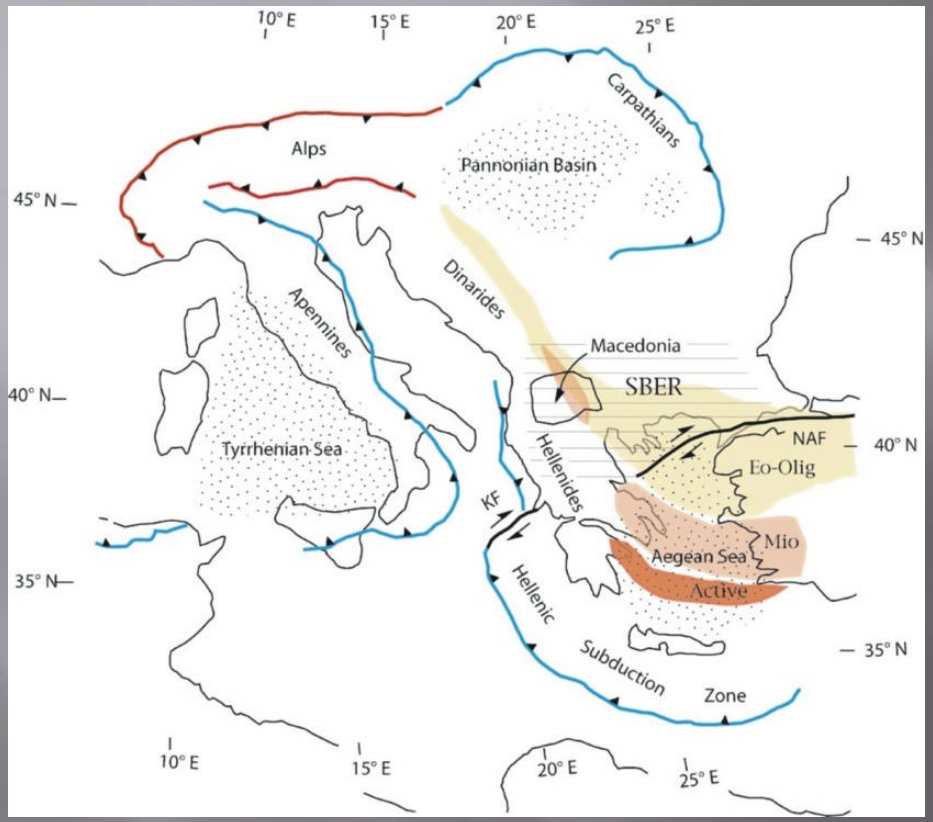
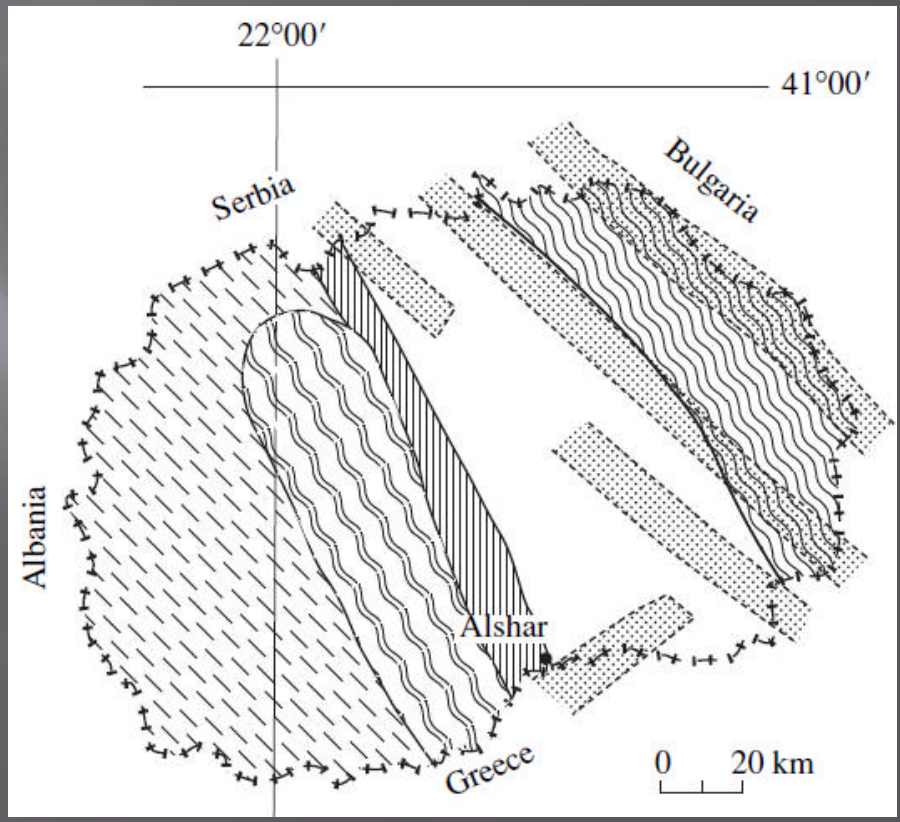
KEY QUESTIONS

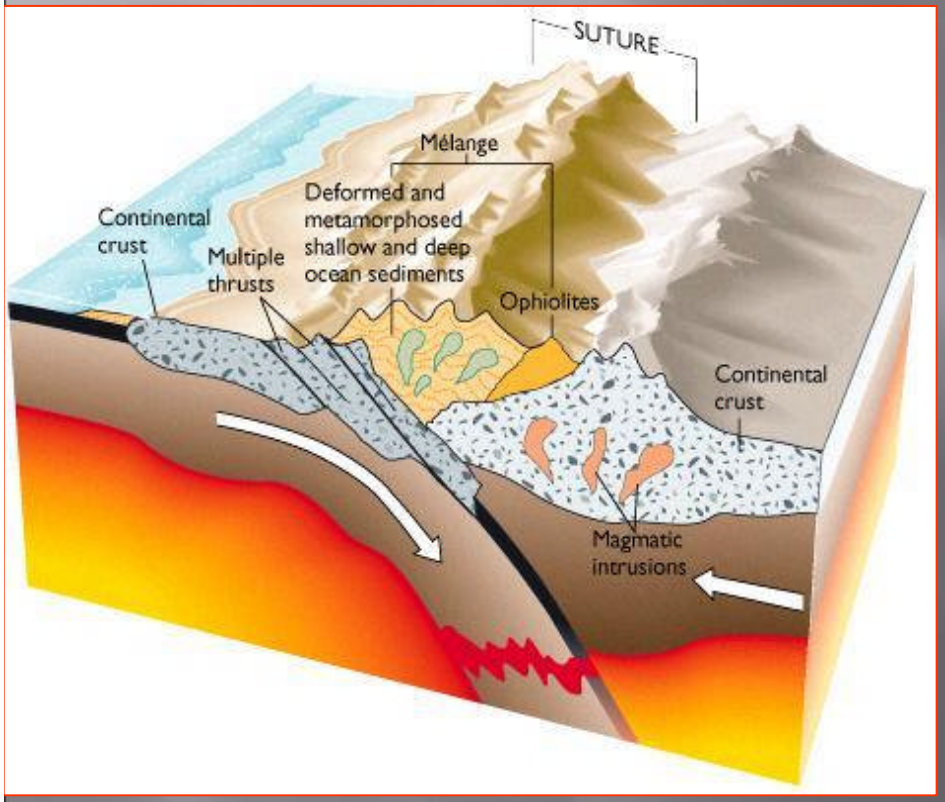
- INTRODUCTION
- REGIONAL GEODYNAMIC EVOLUTION OF THE CONSIDERATION AREA
- TYPES OF OROGENIC STRUCTURES
- METHODS OF MAP CONSTRUCTURE
- THE STRUCTURAL METALLOGENIC MAP OF F.Y.R. MACEDONIA
- CENOZOIC MORPHOSTRUCTURES AND POLIMETALLIC MINERALIZATION
- CONCLUSION

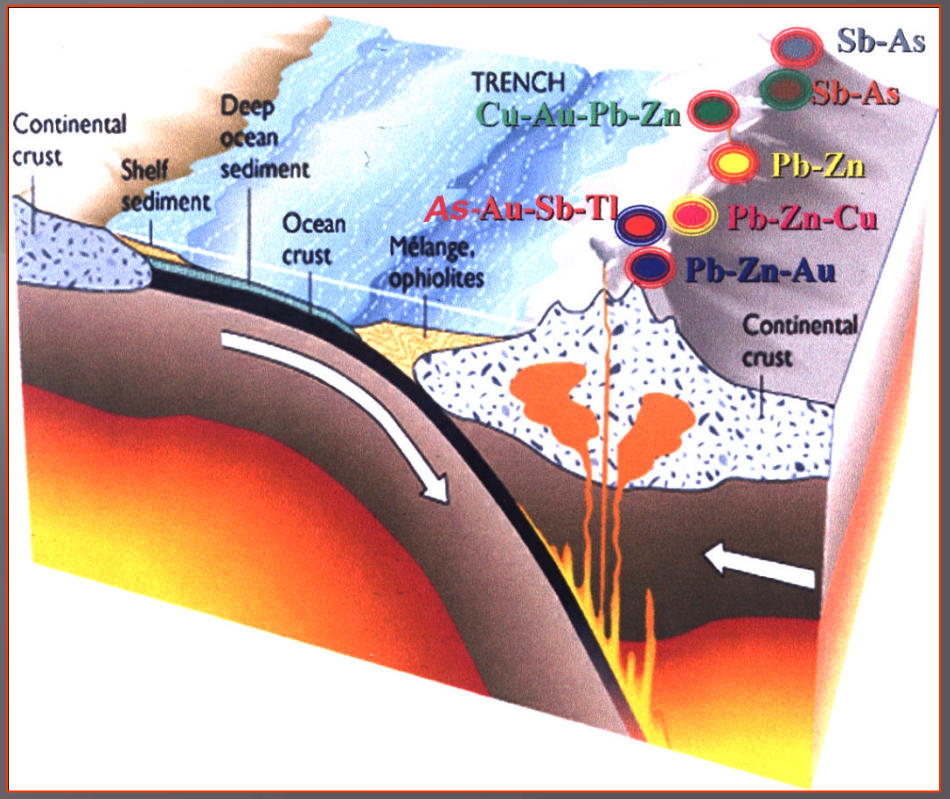
INTRODUCTION





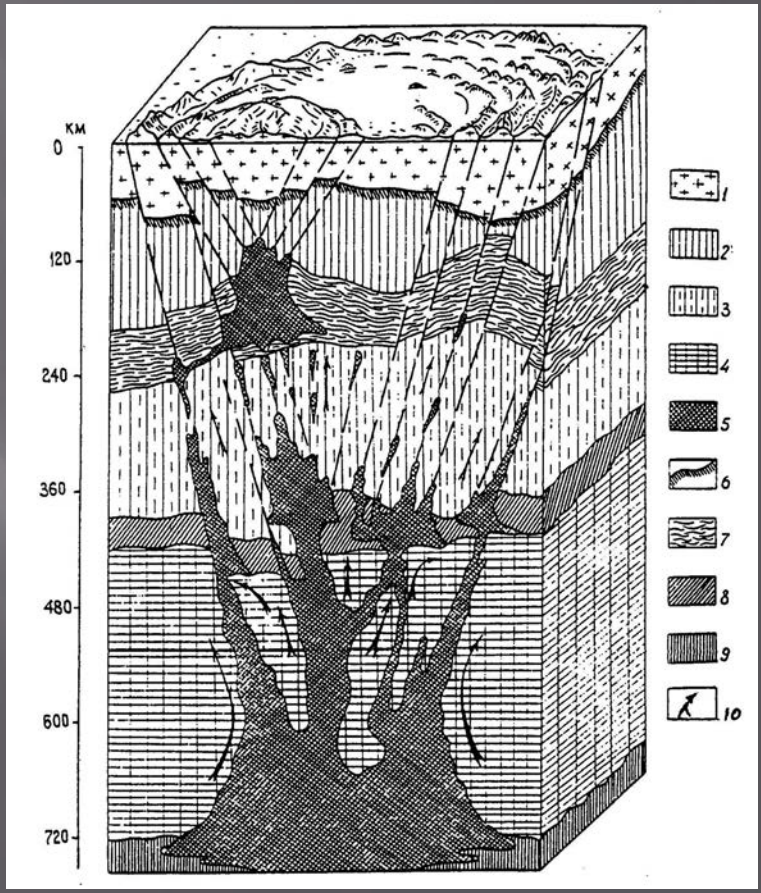
GEODINAMIC AND METALLOGENIC EVOLUTION OF THE CENTRAL BALCAN AREA





TYPES OF OROGENIC STRUCTURES IN THE MAP

- ARCH RAISING,
- DIFEREN TYPES OF RING STRUCTURE,
- "FROUGH" FAULTS



METHODS OF MAP CONSTRUCTURE

MORPHO-STRUCTURAL ANALYSIS

↓

INTERPRETATION OF SPACE PICTURES

↓

PALEORECONSTRUCTIONS

↓

INTERPRETATIONS GEOCHEMICAL, AND GEOPHYSICAL DATA

↓

SPECIAL METALLOGENIC ANALYSIS OF ORE COMPLEXES AND ORE ASSEMBLAGES

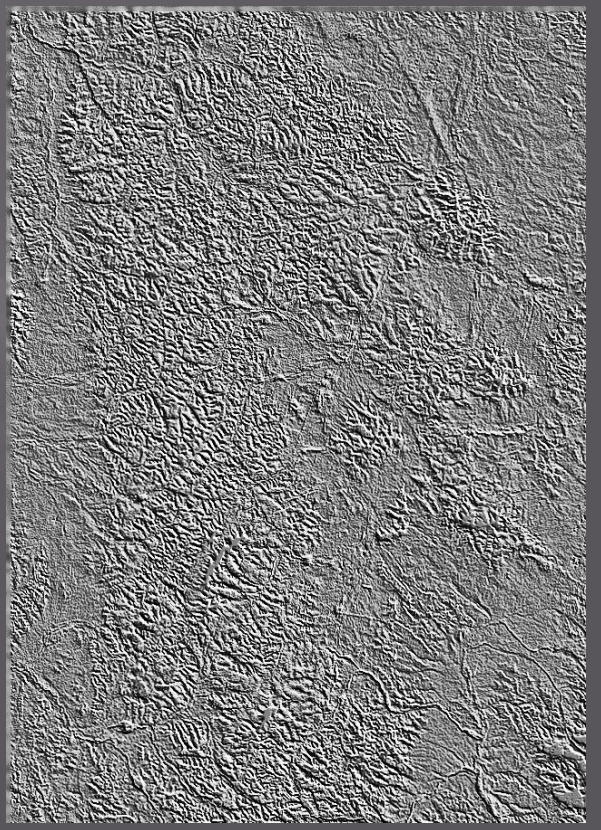
Examples of digital scanning of space pictures

TYPES OF LINIAMENTS SYSTEMS

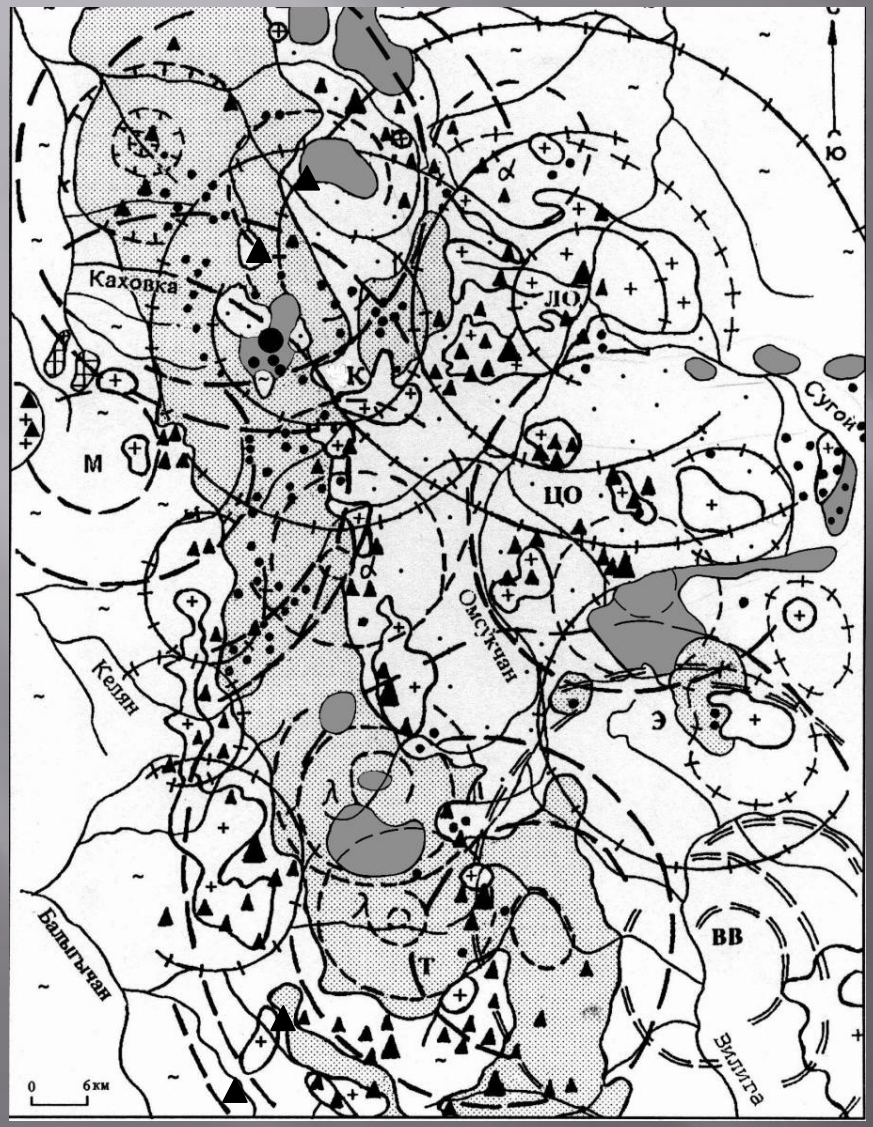
Arc and ring

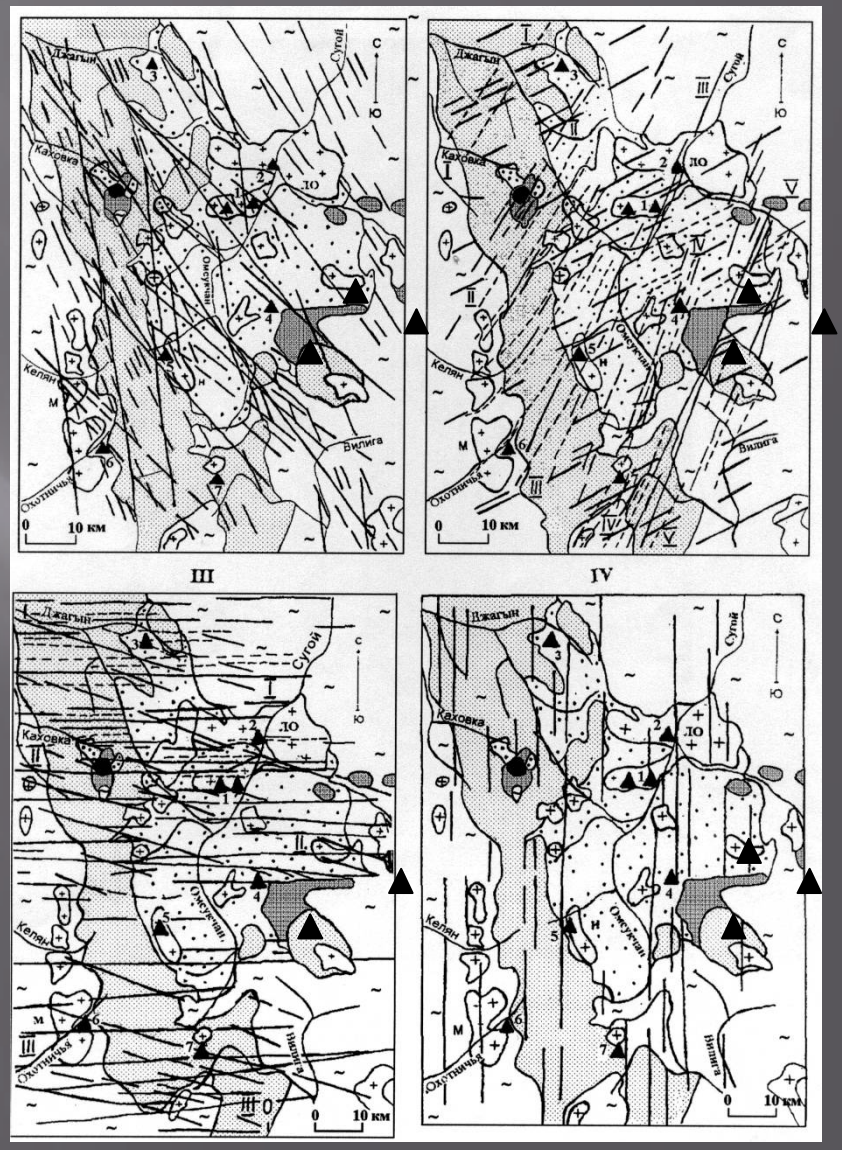
N & NW

N & NE



Results of interpretation:





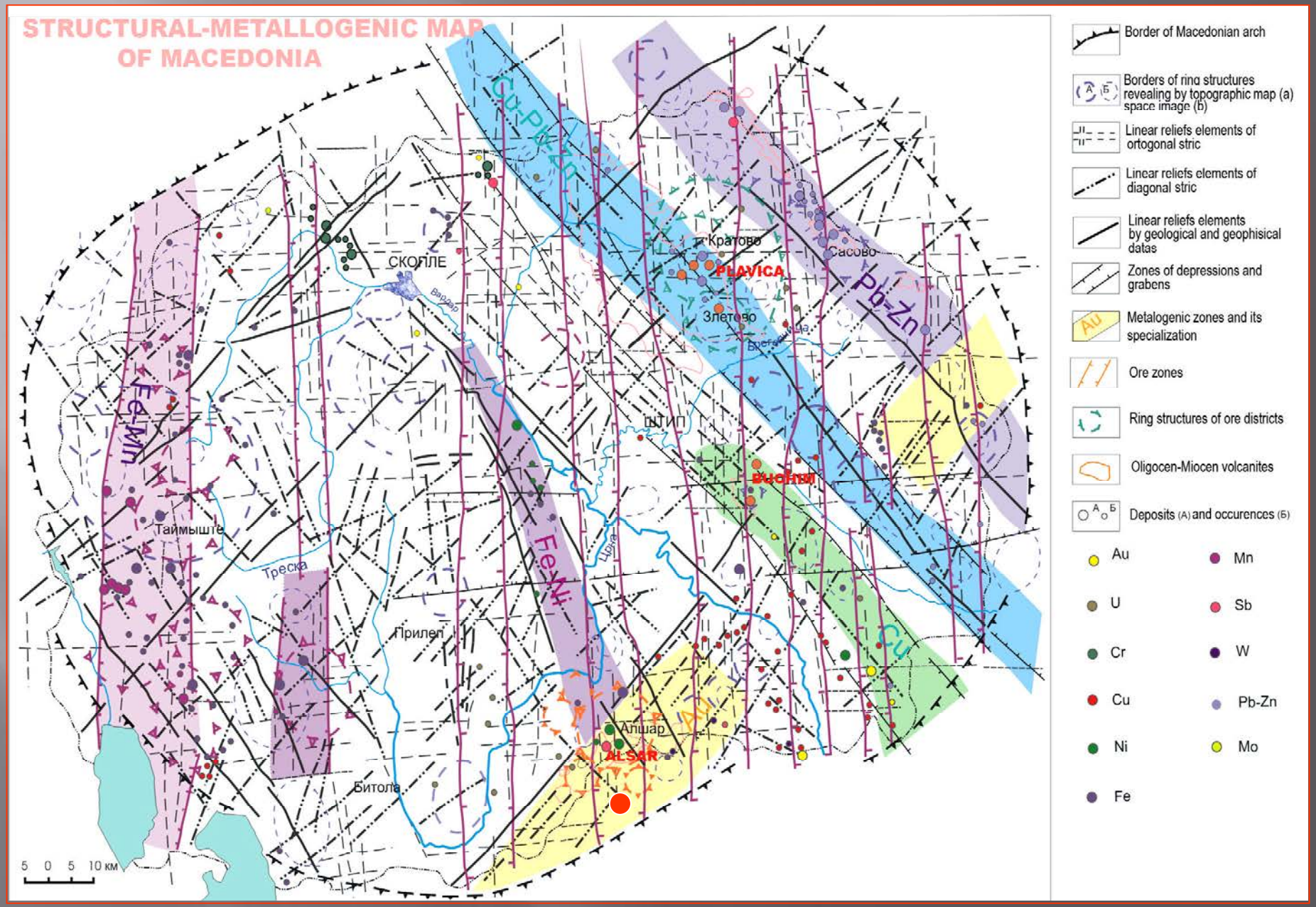
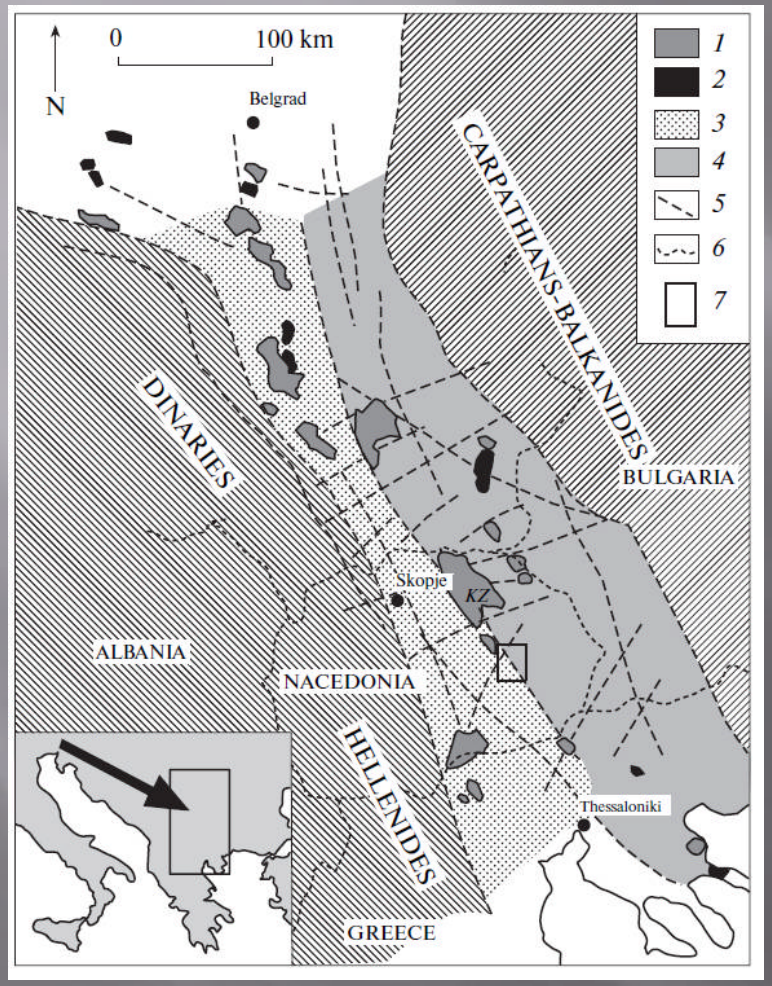
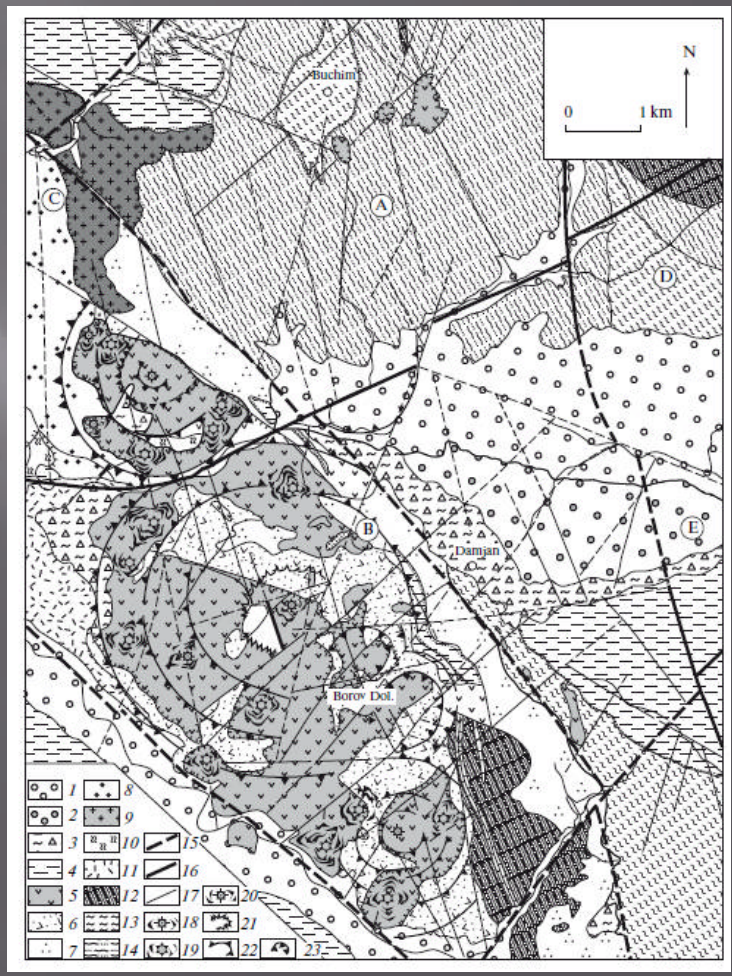

STRUCTURAL-METALLOGENIC MAP OF MACEDONIA
Cu-Pb-Zn
Pb-Zn
Fe-Mn
Fe-Ni
Au
Cu
Скопје
Кратово
Сасово
PLAVICA
Злетово
Виница
Таймиште
Прилеп
Битола
Алшар
ALSAR
Треска
Вардар
5 0 5 10 км
Border of Macedonian arch
Borders of ring structures revealing by topographic map (a) space image (b)
Linear reliefs elements of ortogonal stric
Linear reliefs elements of diagonal stric
Linear reliefs elements by geological and geophisical datas
Zones of depressions and grabens
Metalogenic zones and its specialization
Ore zones
Ring structures of ore districts
Oligocen-Miocen volcanites
Deposits (А) and occurences (Б)
Au
Mn
U
Sb
Cr
W
Cu
Pb-Zn
Ni
Mo
Fe

Table 1. Porphyry copper deposits and occurrences of the Republic of Macedonia (FYROM) and Greece

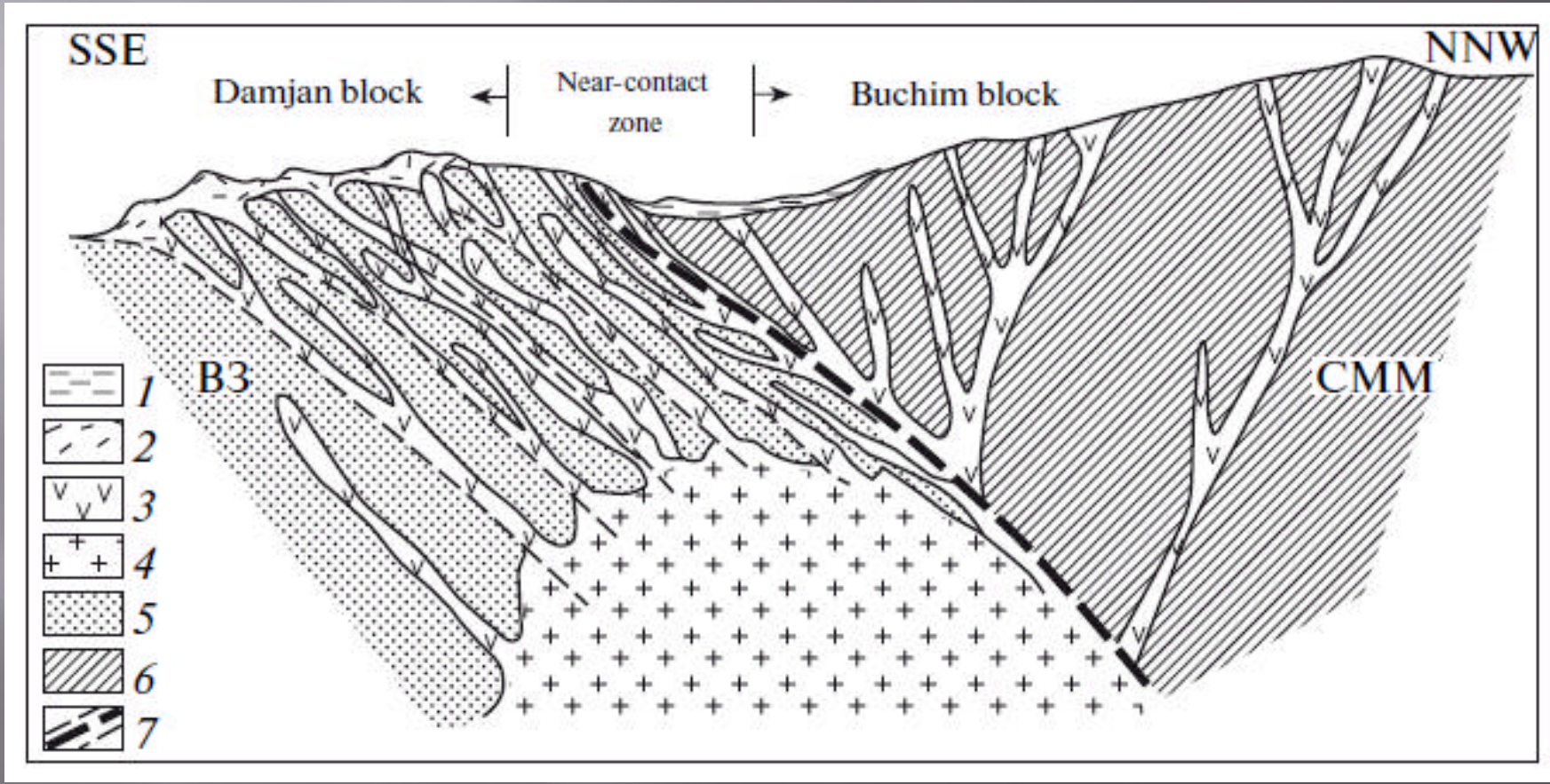
Deposit	Host rock	Age, Ma	Horizontal projection, km^2	Vertical range, m	Ore grade
Kiseljak	Andesite	12–23	0.24	300–500	0.3 % Cu 0.3 g/t Au 1.0 g/t Ag 23 g/t Mo 4-10% pyrite
Buchim	Gneiss and andesite	25–28	0.25	250	0.3 % Cu 0.5 g/t Au 1.1 g/t Ag 13 g/t Mo l–4% pyrite Traces: Pd, Se, Te
Borov Dol	Andesite	24–28	0.15	300	0.3 % Cu 0.28 g/t Au 1.50 g/t Ag 24 g/t Mo 2 % pyrite
Vathi	Rhyodacite	30	0.1	500	0.3 % Cu 0.15 g/t Au 0.35 g/t Ag 20 g/t Mo
Pondokeraséa	Rhyodacite and granosyenite	32	0.12	500	0.3 % Cu 0.3 g/t Au 0.35 g/t Ag 20 g/t Mo
Scouries	Granodiorite porphyry	29.6	0.02	700	0.5 % Cu 0.7 g/t Au 2.5 g/t Ag Traces: Pd,Te,Pt
Kadica	Quartz latite and slate	27.5	0.12	300	0.2 % Cu 0.2 g/t Au 0.35 g/t Ag 20 g/t Mo
Ilovica	Quartz latite and biotite granite	?	1.0	300	0.5 % Cu 0.3–1.0 g/t Au 0.5 g/t Ag 50 g/t Mo

Buchim–Borov Dol ore district





Geological modeling section

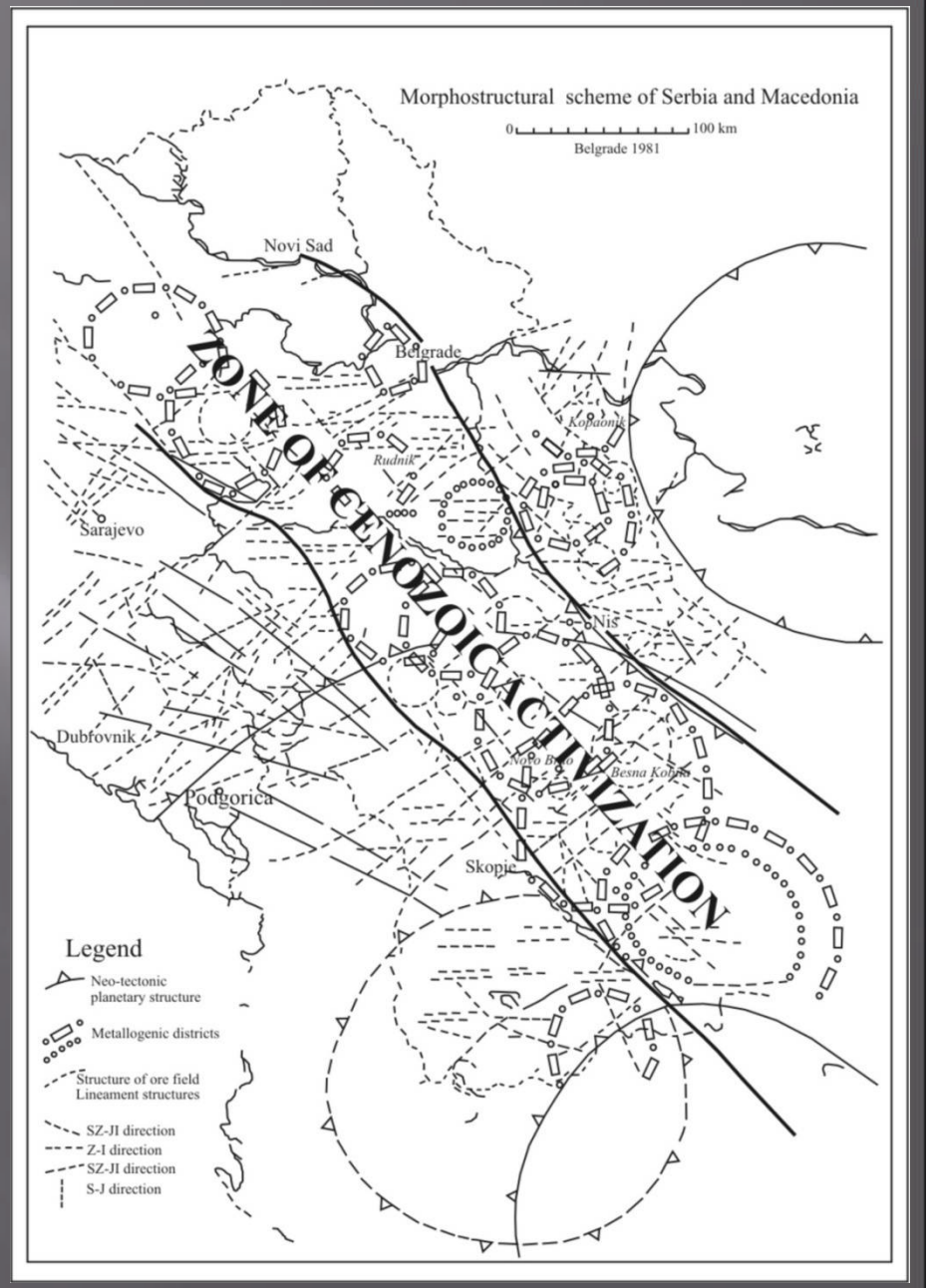


CONCLUSION

Thus, on structural-metallogenic map the structures actively influencing formation of mineralization of various ore complexes that answers tasks of geological studying of potentials mining districts and forecasting of new deposits.

Overlapping of contours of arch raisings, intrusive-dome structures and "through" zones of breaks with metallogenic information allows to make forecasting and estimation of territory for prospecting of new deposits of the area.

Based on presenting set of regional geological and tectonic studies can be used for earthquakes forecasting.




Thank for your attention