



CONFIDENTIAL
INFORMATION
FOR INVESTOR

Anadol deposit



Strategic Advantages of the Project



MARKET ENVIRONMENT

The rare-earth ores of the cerium group (cerium, neodymium, praseodymium, lanthanum) is a strategic raw material, Critical Minerals for most developed countries



Ce, La, Pr, Nd

They are used in high-tech processes for the production of magnets and batteries for modern cars, electric vehicles, turbine units in wind energy, etc.



ENVIRONMENTAL AND RADIOLOGICAL SAFETY

Unlike traditional REE deposits, non-radioactive ores (28-38 mcr /h)



PROFESSIONALISM

Exploration and modeling of the deposit is carried out by highly qualified specialists who have extensive experience both in Ukraine and abroad

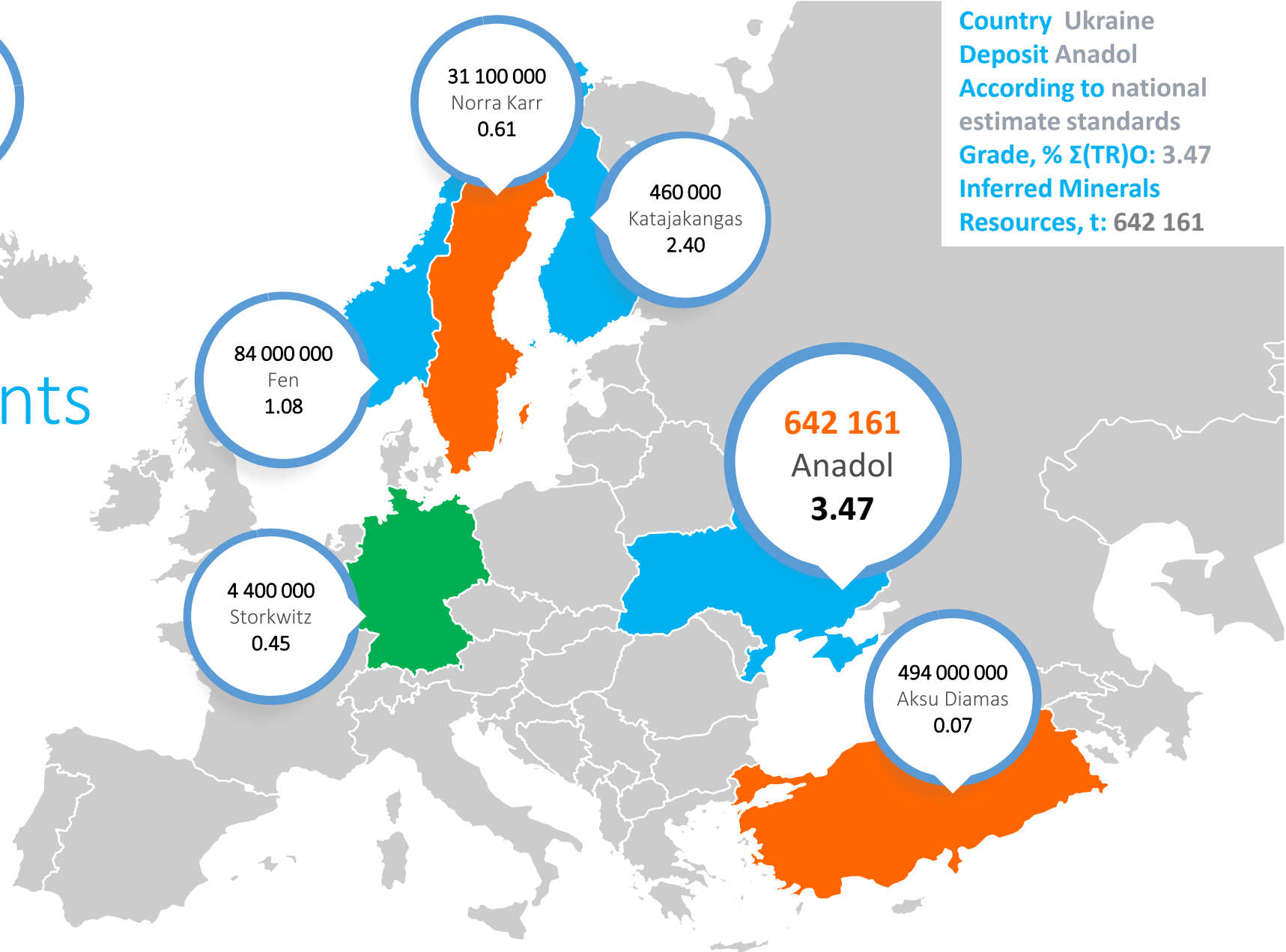


Resource map of rare earths elements of Europe



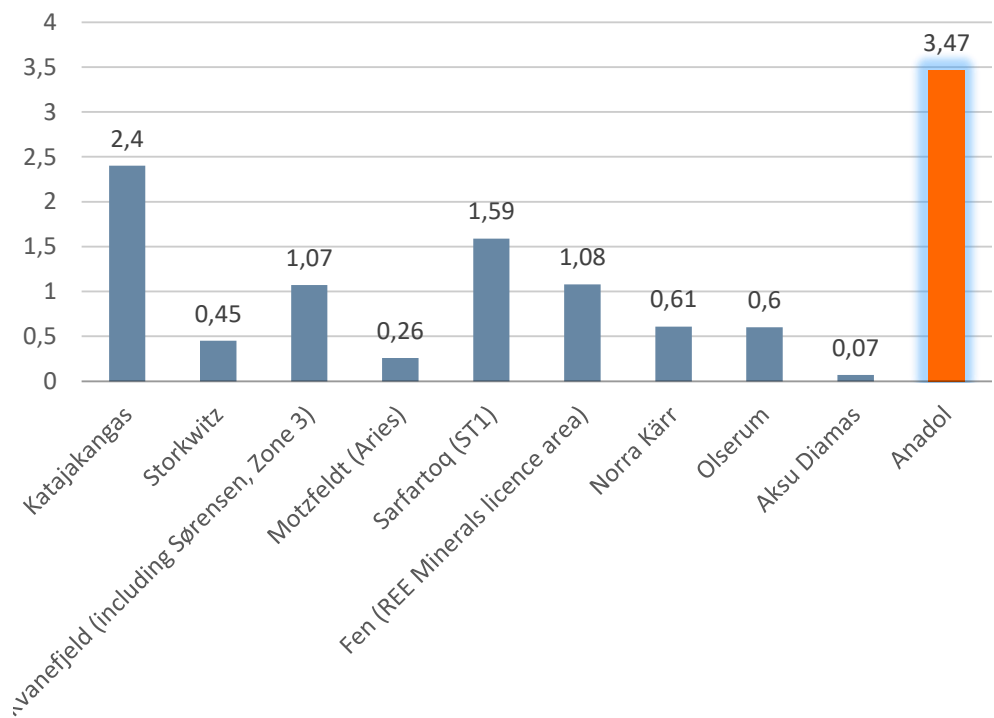
According to:

- national estimate standards
- JORC
- NI-43-101

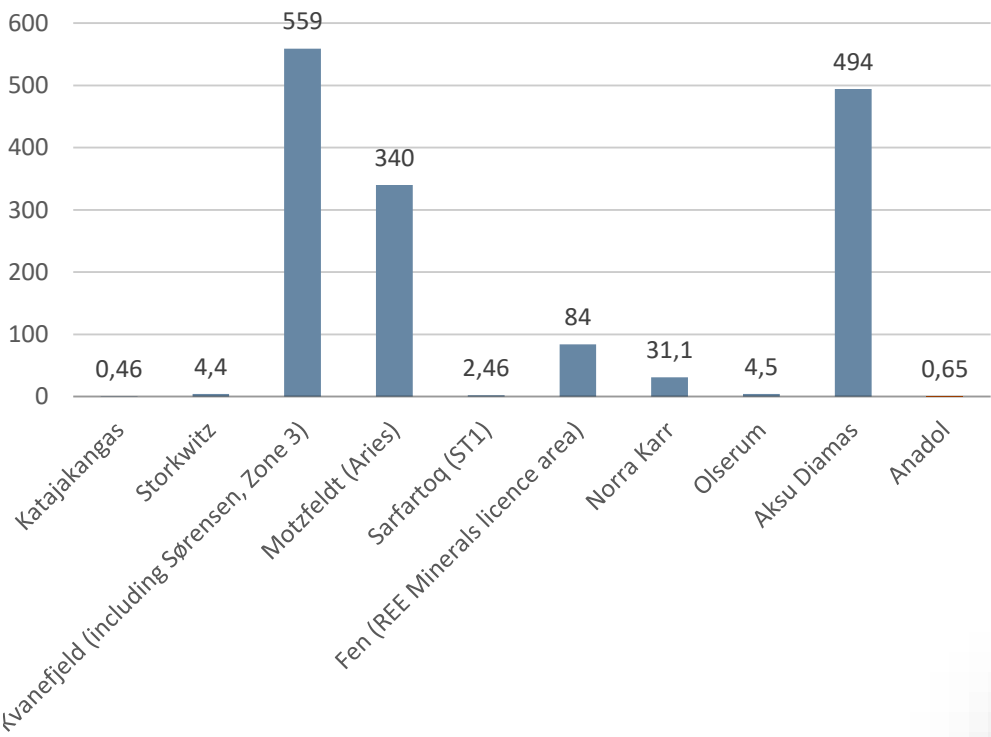


High grade of ΣTREO in ore of the Anadol deposit

Grade, % ΣTREO



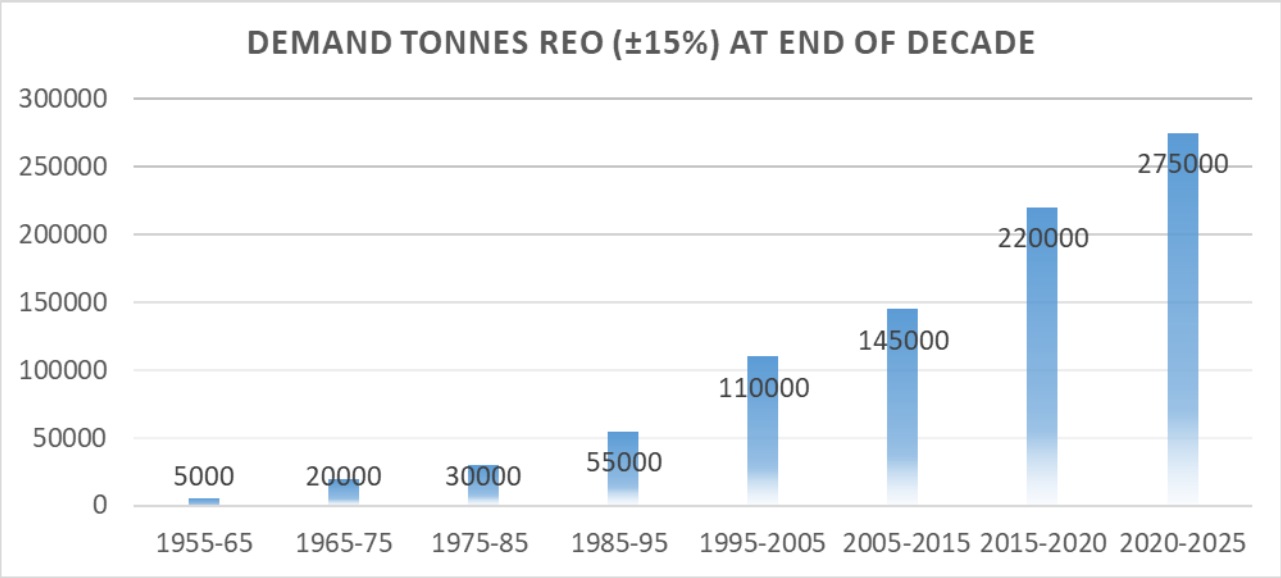
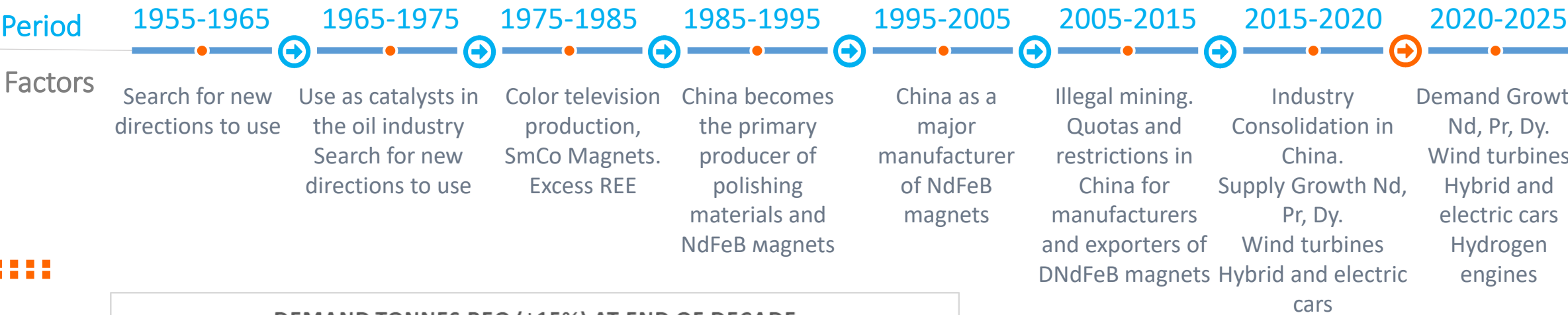
Inferred Resource, Mt



Comparison with the known deposits of Europe



Market Development Factors



The market for rare earth elements (REE) is expected to grow by an average of **8%** per year for the period **2020-2025**.



The license area location



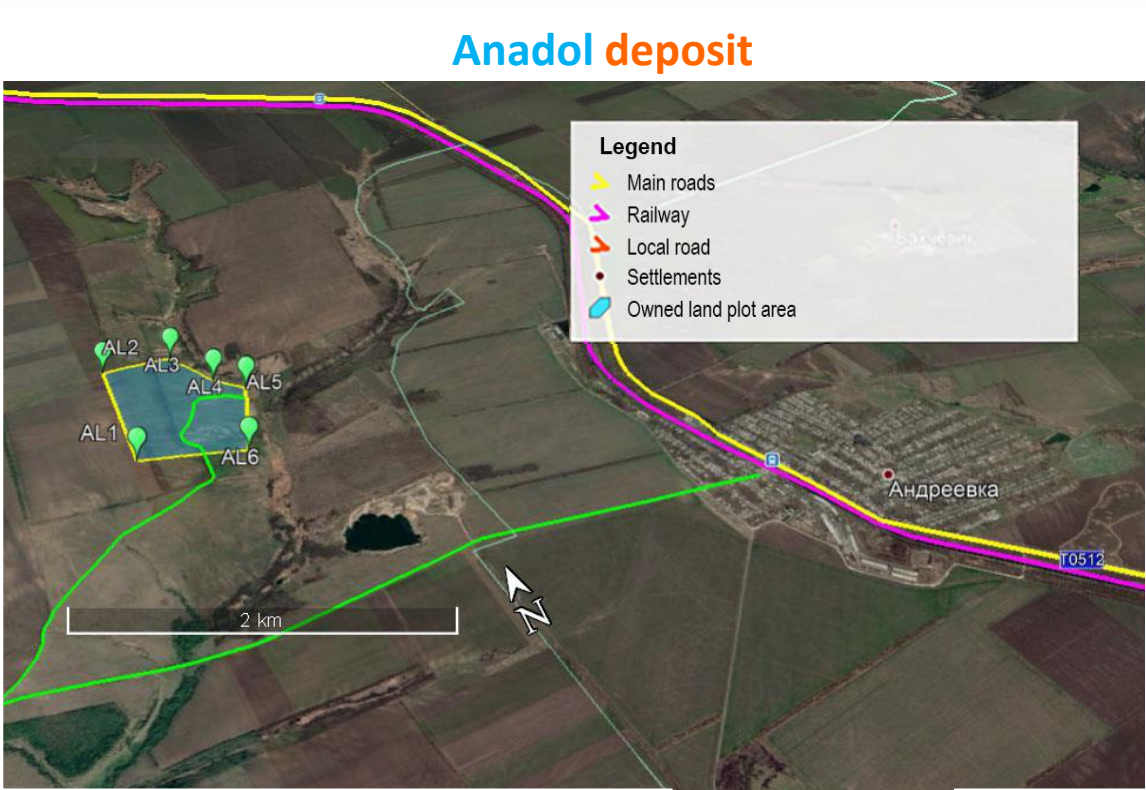
Location

The licensed area is located in Volnovaha district of Donetsk region,
2.5-3.0 km north-east of **Anadol** village

Licensed area – 16.2 ha
Owned land area – 34 ha

Infrastructure

The licensed area is located in an region with good transport infrastructure and near the railway



Geology

Geological map

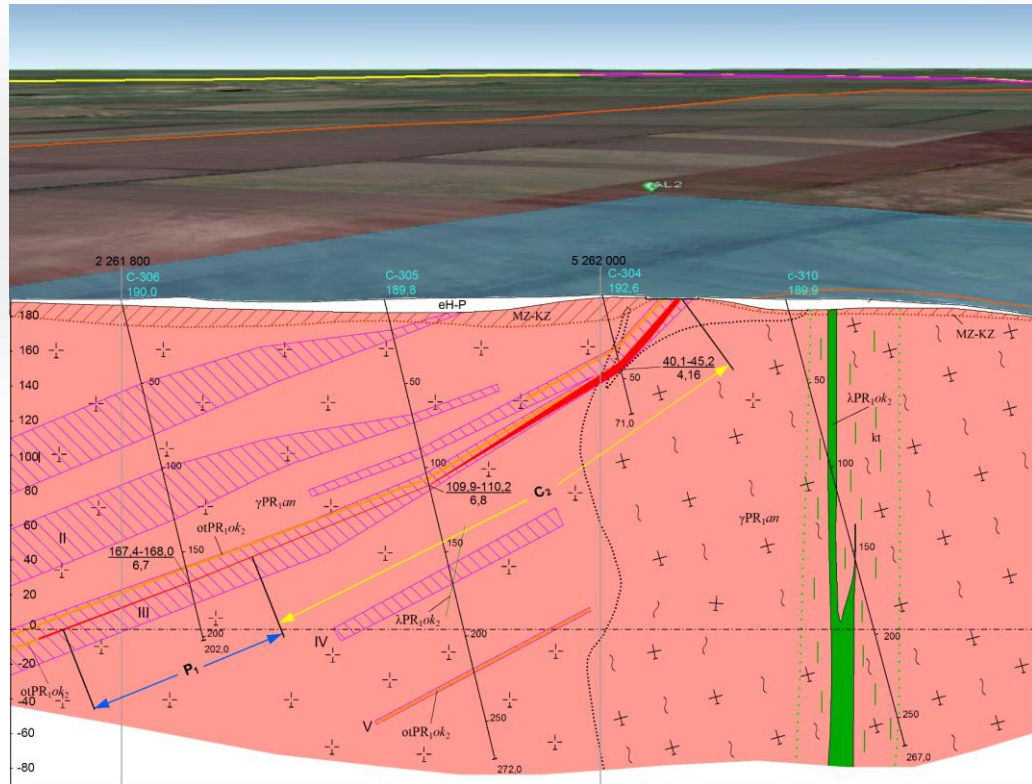


Geological characteristics

- Anadol deposit is structurally confined to granitoid rock massif within the Priazovsky block of the Ukrainian Shield.
- **Metallogenically (Ce, La, Pr, Nd)**, the Anadol ore field is confined to the northeastern flank of the Krivorozh-Pavlovsk metallogenic zone.
- Granitoids and migmatites of the Anadol complex with numerous xenoliths of the Tokmak complex and Temryuk formation rocks are widespread within the Anadol deposit.
- An ore body is vein dike of substantially orthite composition is traced near the milonitization zone.

Scope of Previous Exploration Activities

Geological section



Anadol rare earth deposit was discovered and studied during deep geological mapping of 1: 50 000.

1987 reconnaissance traverse along the Tavla Bay tributaries of and by secondary aureoles over a 200 × 10 m network

660 samples

7 trenches 297 m

3 profiles of incline and vertical holes (13 holes with a total volume of 1 712 m)

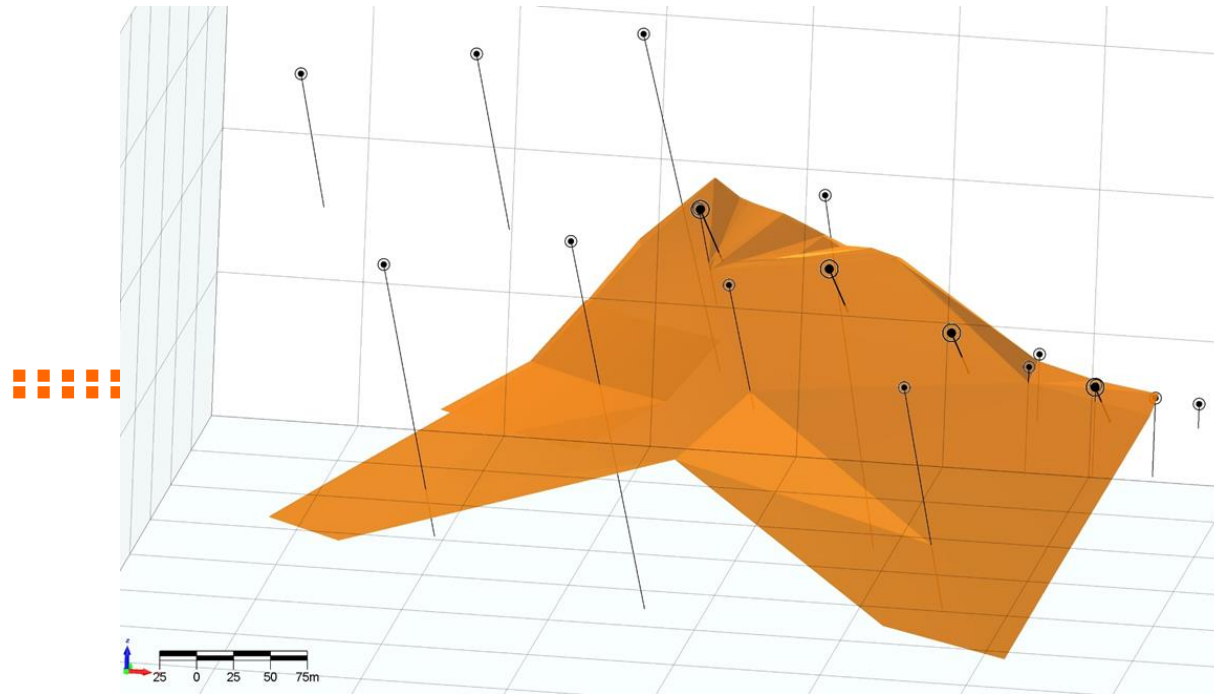
2002-2005 16 sections of the ore body on the surface (extension 615 m);

the ore body was studied by three profiles of drill holes at a depth with three and two sections to the dip of 470 m.

2019 RM MININGS performed a preliminary geological and economic assessment and approved the reserves in the State Commission for Reserves of Ukraine

Reserves and resources

Ore body model

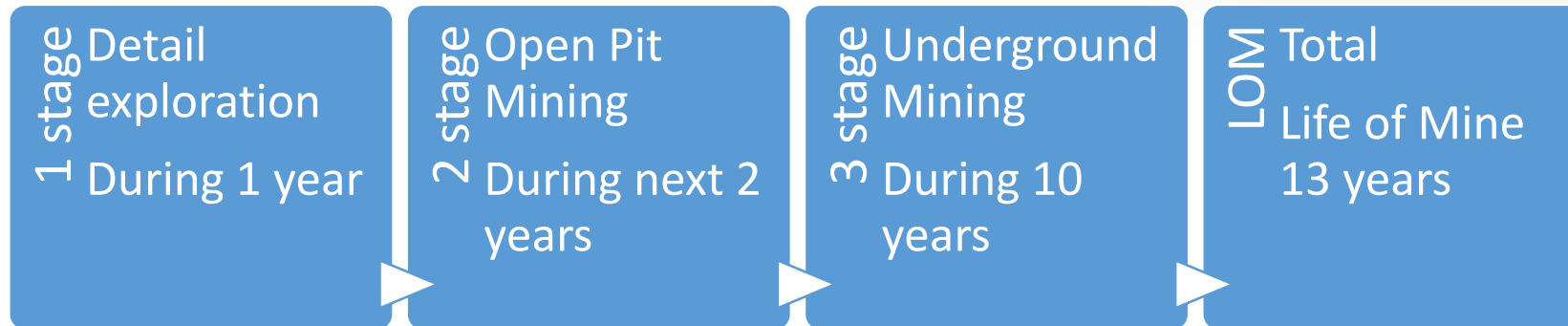
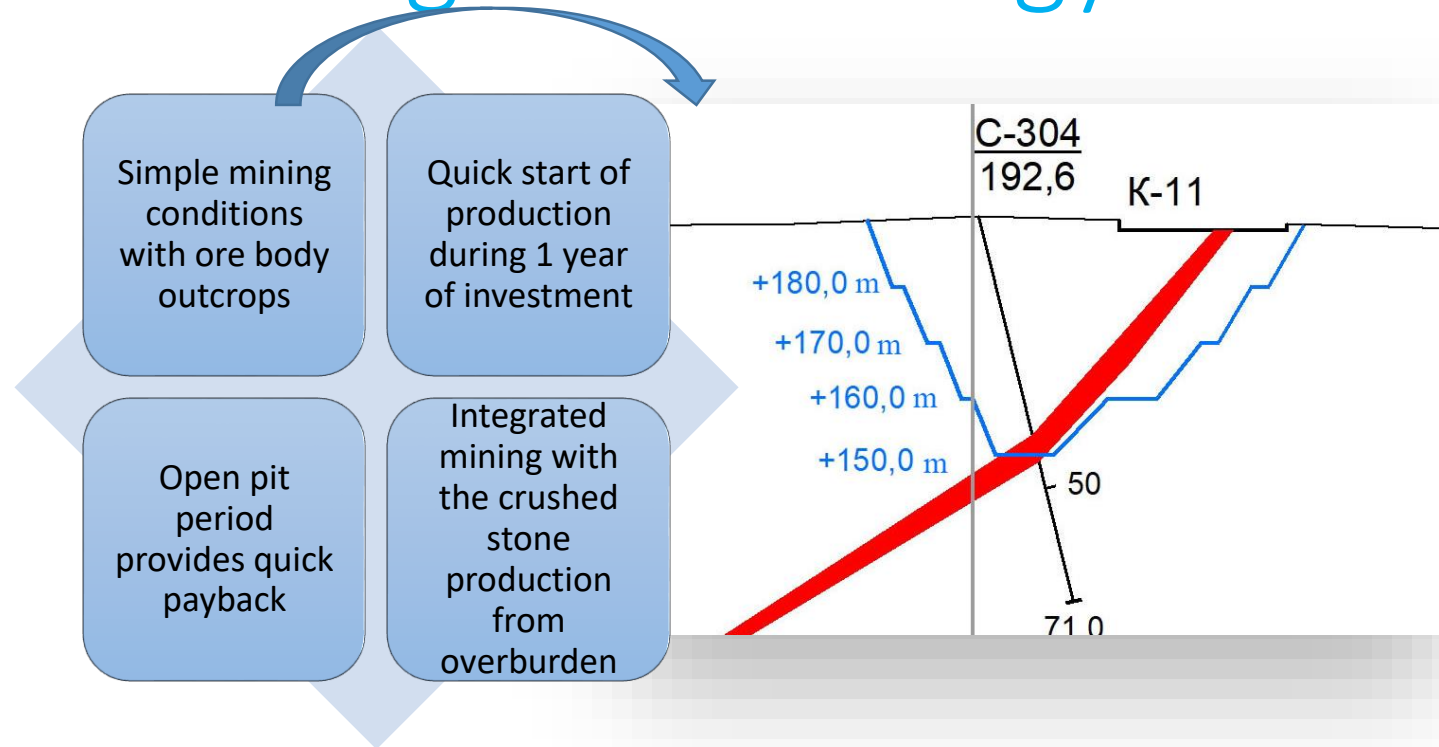


Composition $\Sigma(\text{TR})\text{O}$ - La_2O_3 – 22.4%,
 Ce_2O_3 – 50.02%, Pr_2O_3 – 4.22%,
 Nd_2O_3 – 20.05%.

- Reserves and resources of rare-earth ores – **642 161 tons**,
including reserves of 635221 tons, resources – 6940 tons
- The average thickness of the ore body is 1.7 m;
- The average grade of rare earth oxides in reserves and resources $\Sigma(\text{TR})\text{O}$ are 3.47% (with the cut-off grade of the total amount of rare earths – 0.3%);
- Resources of crush stones – **21 485 020 m³**

Resources and reserves have a sufficient degree of geological study to begin production

Mining Methodology

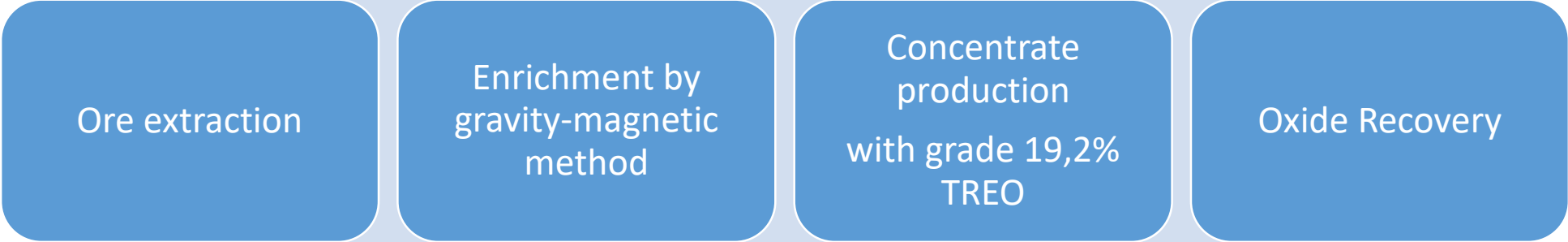


Exploration can be carried out
at the same time with mining



Commodity Production

Annual Productivity	ore	50 000 t
	crush stones	4 566 100 t
Concentration ratio		12.4%
Concentrate Production		6.67 k t per year



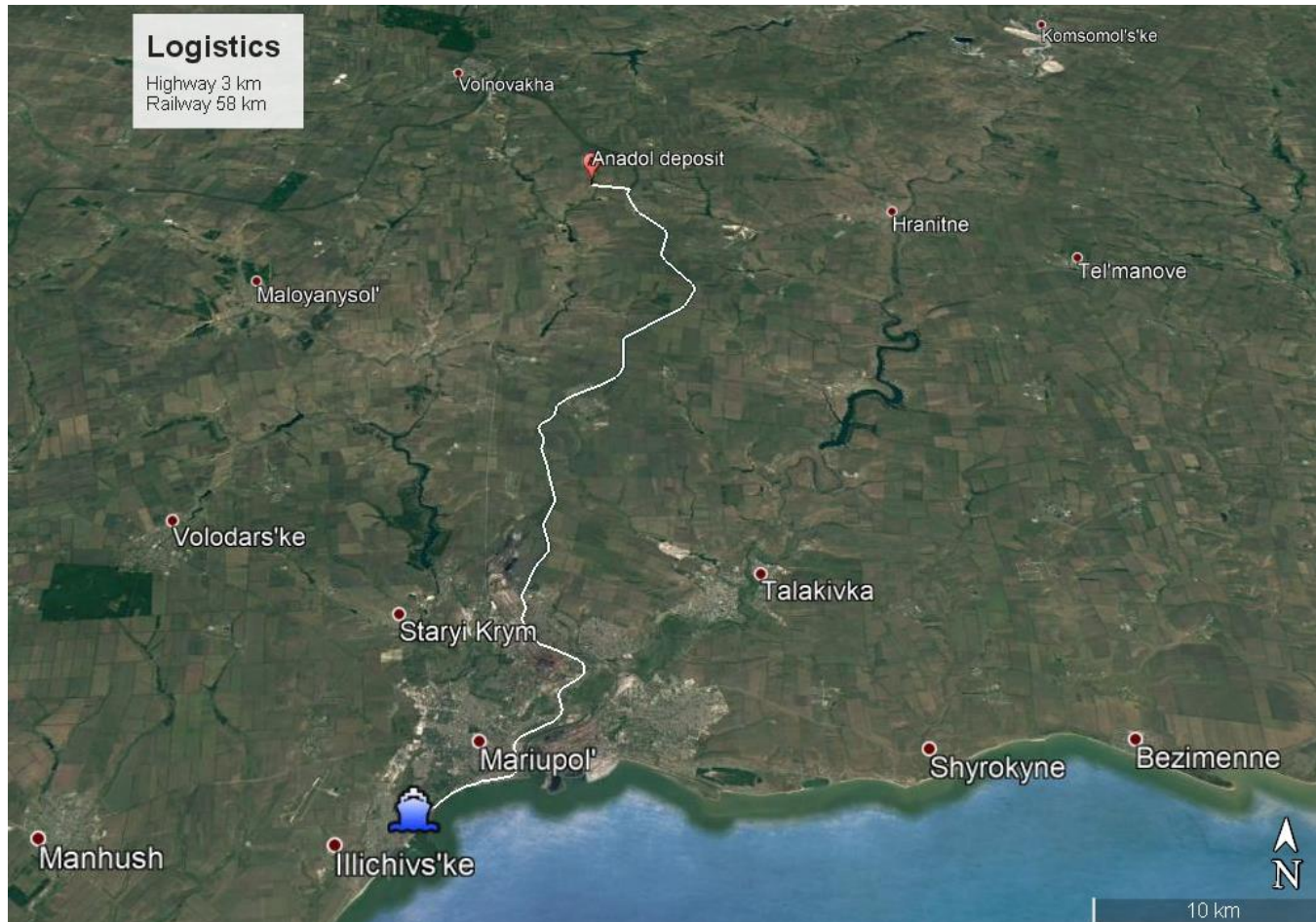
laboratory tests to confirm ore quality carried out in 2019 by SGS Laboratory 

Preliminary oxide recovery capability assessed by Anzaplan



Logistics

Railway to the port



- The place of sale of our commodity products is the Mariupol port.
- The distance between the **Anadol** deposit and the port of **Mariupol** is 47 km.
- The most optimal way of delivery consists of 3 km by motor transport and 58 km by railway

Life of Mine (LOM) Forecast

Price and Concentrate Net Revenue

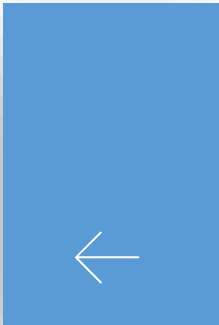


Prices (according to report of "Global Rare Earth Industry Assocation" REIA	\$/t
La	2500
Ce	2250
Pr	80000
Nd	55000
Sm	1764
Eu	80000
Yb	430000
Y	3500
Other REE	13900



Realized Revenues	Annual \$M	LOM \$M
Gross Revenue La	0,73	9,30
Gross Revenue Ce	1,47	18,69
Gross Revenue Pr	4,41	56,06
Gross Revenue Nd	14,74	187,21
Gross Revenue Sm	0,04	0,48
Gross Revenue Eu	0,21	2,66
Gross Revenue Yb	0,56	7,14
Gross Revenue Y	0,00	0,04
Gross Revenue Other REE	0,15	1,94

TC/RC Terms		Annual	LOM
Payable	%	95	95
T/C	\$/t Conc	45,00	45
R/C	\$/t Conc	25,00	25
freight	\$/t Conc	7,50	7,50
Concentrate Freight	\$M	0.05	0.64
Treatment Charge	\$M	0.30	3.86
Refining Charge	\$M	0.17	2.14
Marketing Charge	\$M	1.00	12.84
Total Concentrate Net Revenue REE	\$M	20.80	267.13
Crush Stones price	\$/t	3.5	3.5
Revenue of Crush Stones	\$M	15.8	203.03
Total Concentrate Net Revenue	\$M	36.61	470.16

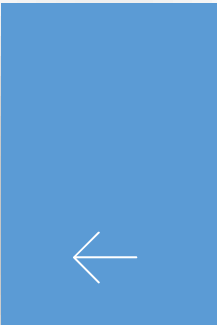
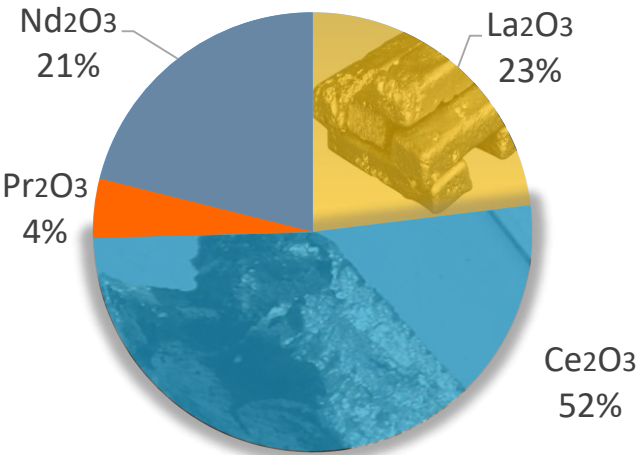


Main project aspects

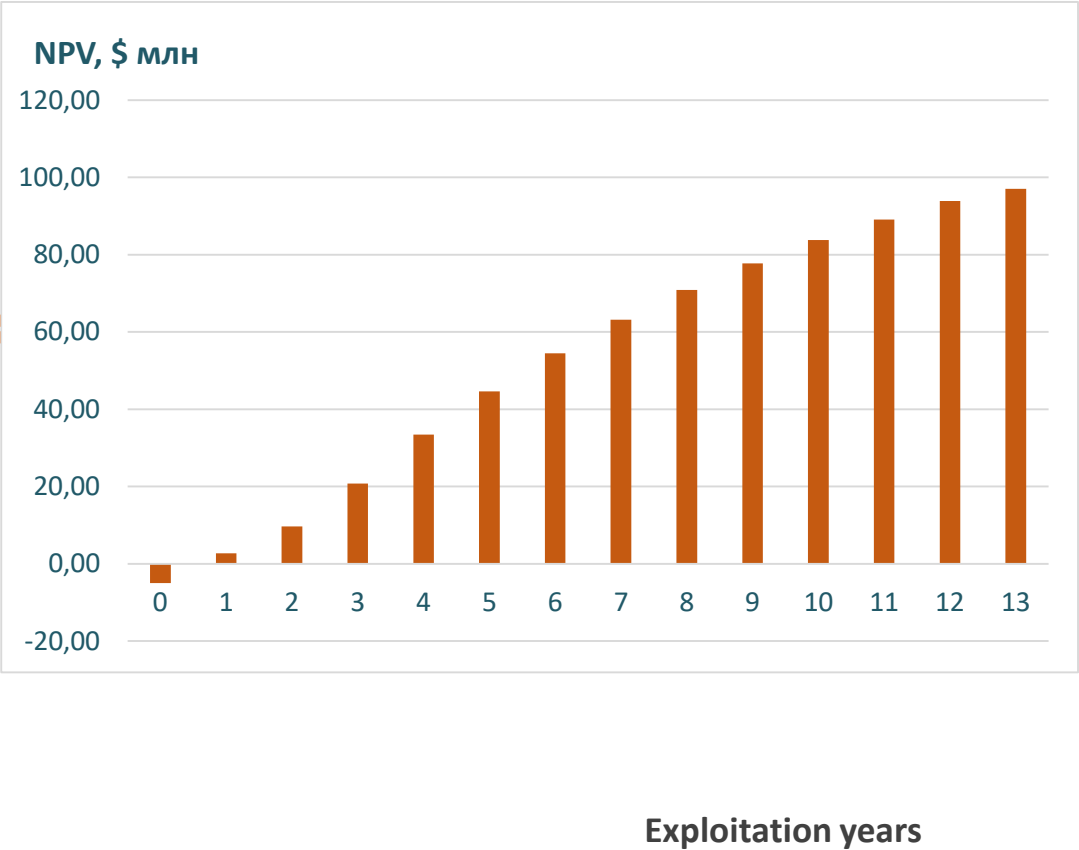


Main aspects of reserves life		
Ore Reserves and Mineral Resources,	'000 t	642.16
Ore Reserves Mineral Resources		635.22
		6.94
Annual Productivity,	'000 t	50.00
LOM,year		13
Concentration output,	%	12.4
Concentrate output,	'000 t /year	6.67
Reserves of Crush Stones	m³	21 485 020
Annual Crush Stones Productivity	t	4 566 100

REE distribution of the total
Σ(Tr)O



Economic efficiency



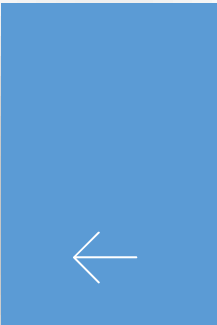
Pre-tax profit, million \$
Income tax, million \$
After-tax profit , million \$
Cash flow, million \$

Annual value for concentrate productivity 6 670 t/year	value LOM
21.6	278.6
3.9	49.6
17.6	228.9
20.5	266.4

Net cash flow, million \$
NPV, million \$
PBP - payback period, years

Net Profit Margin
Profitability index – PI
IRR %

LOM
260.5
97.03
2
119.5
4.3
199



Cost-effectiveness of the project

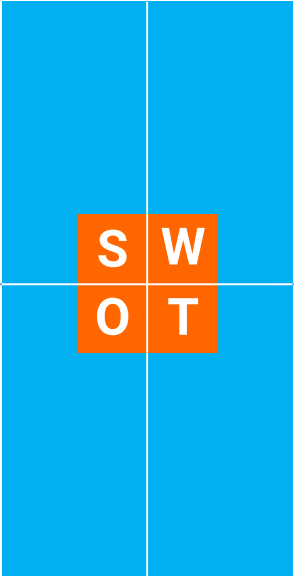


STRENGTHS

- High quality raw materials and concentrate REE 01
- Mining and technological solutions are environmentally friendly 02
- Non-radioactive ores 03
- Quick access to the maximum productivity 04

OPPORTUNITIES

- High liquid commodity REE 01
- Rising raw material prices and consumption 02
- Integrated field development 03

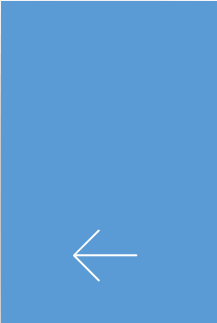


WEAKNESSES

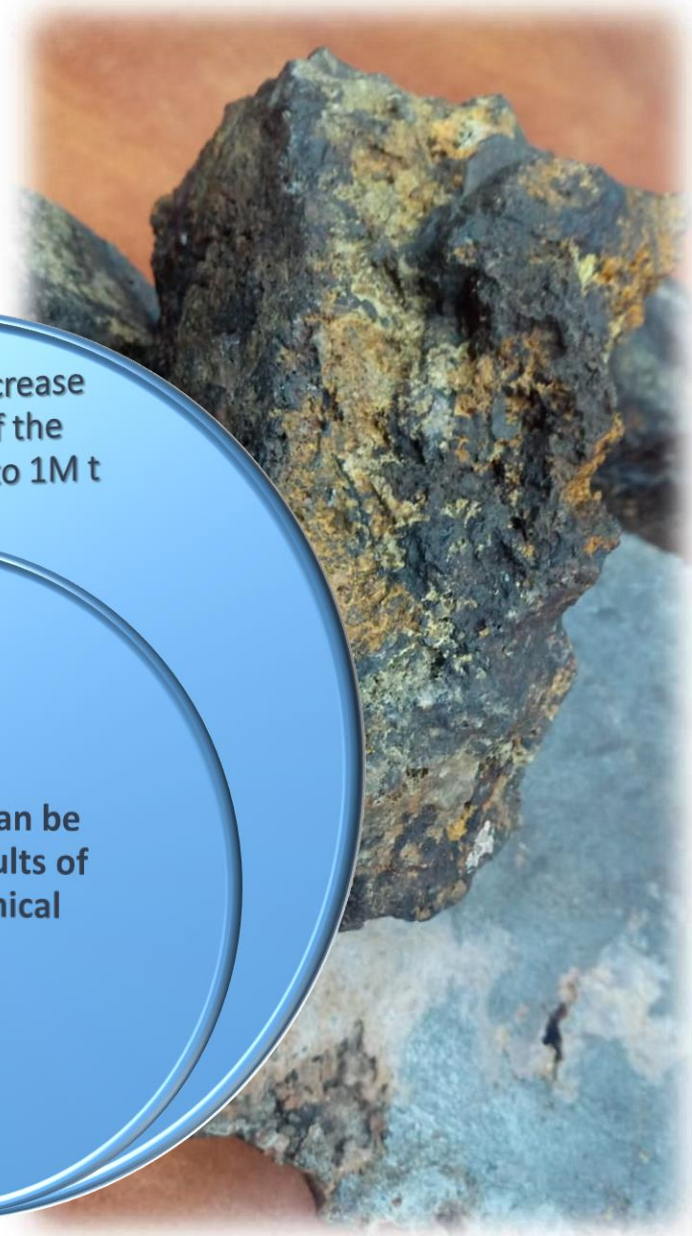
- 01 Refinement of enrichment technology
- 02 Possibility of changing the ore quality
- 03 Need for further geological exploration

THREATS

- 01 Fluctuation of the hryvnia exchange rate
- 02 Rising energy, materials and service prices
- 03 Fluctuation in world market mineral prices



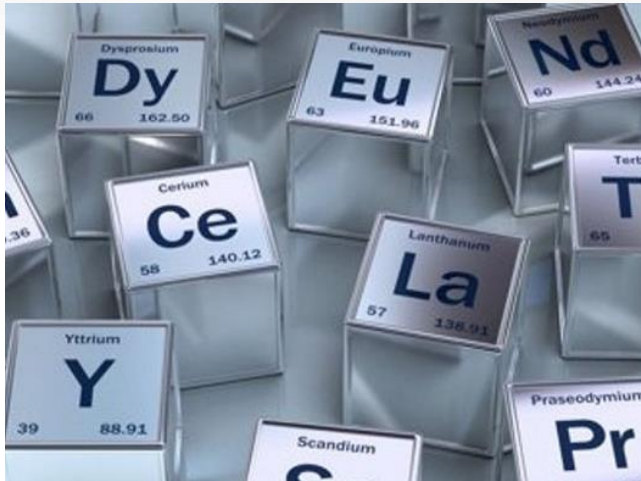
Resources expansion



Exploration can increase
resources base of the
deposit at least up to 1M t
of ore

New ore bodies can be
discovered by results of
surface geochemical
testing

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