Mineral
Nano-Technology

I I C D INVESTMENTS L.L.C
INTERNATIONAL INVESTORS' CLUB IN DUBAI

SivEngineering

Within 10 years research, development and technological work has been carried out by the group of companies. In cooperation with specialists from different countries a new conceptual groundbreaking technology for the use of a new type of mineral raw materials has been developed, which is plentiful in many countries and such countries as China, Malaysia, India, Australia and others have multibillion deposits of solid carbonaceous mineral raw materials.

Our experts directed by our members of the Academy of Sciences and Doctor of Science from different countries have created a successful project of production from carbonaceous feed, gold, platinum, palladium, rare earth metals, rhenium, molybdenum, vanadium, nickel and uranium. Unique technologies have been invented and our company has more than 50 patents and related know-how. We've constructed pilot semi-industrial plants, laboratories in various areas of metals extraction.

For 10 years, thousands of scientists all around the world have worked in this direction, but not all have achieved such devastating results in science and technology for the extraction of gold, platinoids and other metals. Scientists working in our holding have confirmed the high content of the above mentioned metals in this raw material.

A large group of enthusiasts working in our holding achieved a grand breakthrough in science, technology and development solutions in this direction.

For 10 years, the financing of this colossal project, which is unparalleled, was carried out at the expense of private funds. The works took dozens of companies, institutions, development laboratories, plants and factories involved.

On the analogy of our project, the Australian company Aura Energy built a mining complex in Sweden with a capacity of 30 million tons per year, but the result of metal extraction is still very scarce and insufficient for this type of raw material. Although the extent of the enterprise is very grandiose. The shareholders of this process are the leaders in the field of investments, the largest global multinational corporations and financial institutions.

Our holding intends to undertake the construction of several mining enterprises simultaneously in such countries as China, Malaysia, Australia, Sweden, Russia, the USA, h.e. where huge deposits of this type of carbonaceous solid mineral raw materials are located.

Mineral Nano-Technology" is the initiator of the creation of the technological platform project "Implementation of innovative technology for diagnosing, enrichment and chemical and metallurgical processing of refractory and hard-to-diagnose ores in order to extract gold, platinoids, rhenium, uranium, vanadium, molybdenum and other metals", which is part of our joint technological platform "Development and commercialization of innovative and resource-saving technologies for the integrated development of solid mineral deposits and management of the formation of flows of natural and technogenic mineral raw materials, their deep processing to create products with high added value."

This project is strategically important for any company and state, as it will allow our company to gain a dominant role in the financial stock markets of the world as a reliable long-term supplier of platinoids, uranium and other metals in the world market.

At the moment, the amount of necessary funding will be 2-4 billion. The security at the first stage of this project can be crypto. assets in the amount of 1-2 billion. This cost is very underestimated, taking into account the involvement in the calculation of a small amount of polymetallic (shale) raw materials of large deposits. We can offer this concept of reserves calculation in a short time, using our discoveries and world protected patents and methods for determining mineral grades in the bowels of the earth using our breakthrough technologies. Today, not a single company in the world has these technologies, knowledge and discoveries!

Today, precious, rare and non-ferrous metals are the most tasty piece to play on the exchanges of different levels. In Sweden, the Australian company "Aura Energy" on an area of only 100 km2 of dictyonema shale, which is a continuation of the Baltic shale shield to the North, built a plant for processing these shales with a capacity of 30 million tons per year for the extraction of molybdenum, vanadium, nickel and other metals. They attracted the most advanced investors in the world, forming a queue of investors who want to get into this project.

Our company has been studying, searching and working on enrichment of a new type of mineral raw materials (shale) for 12 years. This type of raw material has never been used by any company in the world as a source of gold, platinum, rhenium, molybdenum, uranium, vanadium and other rare earth metals.

Preliminary forecast reserves of metals P1 on the area of occurrence of 900 sq. km. in the Leningrad region will be: for uranium 1,054 th kg, in money equivalent 57 970 $, platinum - 2 178 th kg, in money equivalent 62 726 400 000 $, palladium - 1,287 th kg, in money equivalent 69 024 384 $, vanadium -1 980 th kg, in money equivalent 51 480 000 $, molybdenum - 1 089 900 th kg, in money equivalent 27 247 500 000$, gold - 3 700 th kg, in money equivalent 176 179 200 000$, rhenium - 1 120 th kg, in money equivalent 5 600 000 000 $, rare earth metals - 131 000 th kg, in money equivalent 9 170 000 000 $. Total in world prices: 281 043 662 354 $.

The initial exchange attractiveness of metals in the subsoil of the unexplored territory will be about 281 043 662 354 $, i.e. 10% of the total amount of reserves (according to world market practice).

Prospective work on the development of new subsoil areas can be planned for the next 10 years with a total capitalization of the mining company about 600-800 billion US dollars.

Dictyonema shale reference.

Area of dictyonema shale development in Russia is about 3000 sq km and extends a band of sub-latitudinal strike from the settlement of Kotly in the West to the Syas river in the East. The occurrence is monoclinal at small angles of incidence to the South. Their power varies from 0.05 to 6.5 m, generally increasing in the direction of the North-West. Diktyonema shales are mud-like, dark gray, wet, almost black, usually thin-layered, containing 10-20% kerogen.

In 1945-1947 within works of the nuclear project, the whole vast area of the Baltic basin of dictyonema shale was studied by drilling and single galleries. On the area of 11.2 thousand sq .km., stretching a narrow strip for 500 km from Paldiski (Estonia) to the river Syas in the Leningrad region, 14 deposits of poor uranium ores (Kotly, Koporye, Krasnoselskoye , etc.) were identified, for which the calculation of uranium reserves in category B and C1, as well as related elements - nickel, molybdenum, vanadium and sulfur in category C1 and C2 was performed. It is determined that the content of uranium in the ore is from 0.008 to 0.075%, the metal is associated with organic, phosphate and silicate matter and is only slightly represented by nasturane.

A technological scheme for obtaining high-quality uranium concentrate was developed and a mining and metallurgical plant was built in Estonia, which began experimental production of uranium ores. However, due to the discovery of large deposits of uranium with rich ores in the GDR and Czechoslovakia, these works were discontinued. Uranium deposits due to low metal content, economically unprofitable technology, as well as taking into account modern environmental requirements, were assessed as non-industrial.

In parallel, since 1958, massive (associated) searches for uranium were carried out during prospecting and exploration for phosphate raw materials, geological survey and hydrogeological works. Especially much information was obtained during the exploration for phosphates, as these works studied in Tosnenskaya Suite, lying below the dictyonema shale.

During the search, it was drilled 92 wells and surveyed 13 outputs of dictyonema shale. In addition, 10 sites with a total area of 734 sq. km. were used for detailed prospecting and exploration for phosphates, in which 861 wells were drilled. 679 wells are opened dictyonema slates. There is information about the uranium content in 172 wells of dictyonema shale.

In April 2007, in samples taken at the end of 2006 by "Sevzapgeologiya", from dictionem shale of pakerort horizon of the lower ordovician, LLC Mineral "Nano-Technology" were found abnormal content of platinum group metals:

platinum 0.39-1.64 g / t, palladium 0.17-1.45 and gold 0.22-0.67 g / t. Earlier, abnormal uranium content and elevated concentrations of vanadium, zinc, nickel, copper, molybdenum, lead was found in the shale.

As a result, a contract for geological exploration No. L/NT-10/04-07 dated 10.04.2007 was concluded with "Mineral Nano-Technology" LLC. The terms of reference were agreed with The regional Agency for subsoil use in the NW Federal district. The forecast resources for the category P3 of the Kotelsko-Krasnoselskaya territory with an area of 900 sq. km were estimated: for uranium-1054000t; for platinum – 2178 (8400)t; for palladium-1287 t; for gold - 2178 t; for copper - 460.35 thousand t; for nickel-400950 t; for molybdenum-1089900 t; for vanadium-1980000 t; for zinc - 693000 t.; for lead - 975000 t.; for the sum of rare earths-131000 t. ;for silver-22500 t.; for phosphorus-17162000 t. The discrepancy between the values of resources for platinum is due to the fact that the minimum calculations used the content of 0.5 g/t, with the actual 1.95 g/t.

Thus, the area of 900 sq. km. allocated from 3000 sq. km. of shale territories, as the most appropriate for priority use, contains the above resources of uranium, non-ferrous and precious metals.

On an area of 11,000 square kilometers in the Leningrad region lies dictyonema shale with reserves of about 70 billion tons.
With a natural density of 2.2 tons per cubic meter and an average reservoir capacity of 2 meters, one square kilometer of the dictyonema shale deposit contains 4.4 million tons of ore.

With a recoverable uranium content of 150 grams per ton, platinum-1.5 grams per ton, gold 0.5 grams per ton, palladium 0.5 grams per ton, one square kilometer will be extracted: 2200 tons of uranium, 6.6 tons of platinum, 2.2 tons of gold, 2.2 tons of palladium. In addition to these main components, 25.02 tons of silver, 511 tons of copper, 445.5 tons of nickel, 1221 tons of molybdenum, 2200 tons of vanadium, 770 tons of zinc and 145 tons of rare earths will be extracted from an area of 1 sq.km. Technical research has been conducted for more than 8 years.

The international practice of large-tonnage mining of mineral raw materials by open method assumes the following cost of production of one ton:
http://www.westernmine.com/westernmine/costmod.htm

Taking into account the fact that in the mobile complex of Thyssen-Krupp AG, mining operations will be combined with the technology of dissolution of useful components and separation of the mineral residue returned to the mining site, the cost of processing one ton of dictyonema shale can be estimated at a maximum of 30 dollars.

On the issue of development, there are no encumbrances from the state on all groups of metals (even uranium). The participation of the state is not

mandatory, but it is possible, to protect license agreements, but in the form of state corporation on the profile in the format shares.

The investor enters the project with a considered initial cost, calculated on the basis of technical, scientific, geological material, protected by intellectual property. Then there is a build-up of the project by expanding the sites within the studied boundaries-900 sq. km.

We present all our patents with references to the invention:

1. METHOD OF PROCESSING SULFIDE MINERALS AND CONCENTRATES.
The invention relates to hydrometallurgical technology and used for the extraction of non-ferrous, rare and noble metals from sulfide mineral raw materials and concentrates. The technical result of the invention is the creation of conditions for the most complete extraction of metals with the exception of the formation of elemental sulfur. The method includes the oxidation of the feedstock in the form of a pulp using oxidizing agents containing nitrogen oxides, and the regeneration of lower nitrogen oxides to higher oxidation.

2. METHOD OF EXTRACTION NONFERROUS, RARE AND NOBLE METALS FROM REFRACTORY MINERAL RAW MATERIALS.
The method consists in the treatment of a resistant carbonaceous mineral raw oxygen-containing oxidizer, followed by the extraction of noble metal compounds from the liquid phase. In this case, the treatment of persistent carbonaceous mineral raw oxygen-containing oxidant is carried out in the presence of reducing agents with donor-acceptor properties. These properties are expressed in the fact that at the first stage of chemical reactions, these reducing agents give their electrons to an oxygen-containing oxidizer and form a stronger oxidizer as a result than the initial one, in the form of short-lived radicals and intermediate oxidation products of donor-acceptor reducing agents, which are also oxidizers.

3. METHOD OF EXTRACTING NON-FERROUS, RARE, RADIOACTIVE AND PRECIOUS METALS FROM REFRACTORY MINERAL RAW MATERIALS.
The method includes processing of raw materials with a solution of donor-acceptor oxidizers and reducing agents. The pulp obtained after processing the raw material is dried to complete evaporation of water and subjected to firing in the presence of air or oxygen-enriched blast. Firing is carried out at a temperature sufficient for burning out carbon, but not causing the formation of insoluble salts. After cooling, the material obtained after firing is subjected to leaching to obtain technological solutions containing extracted metals.

4. METHOD OF ANALYSIS OF SOLIDS WITH A SOURCE OF GLOW DISCHARGE WITH HOLLOW CATHODE.
The method of analysis of solids, using an ion source of glow discharge with a hollow cathode, includes fixing the axis of the last rod containing the analyzed solid, for example, a mineral substance containing noble metals.

5. METHOD OF EXTRACTING RARE EARTH METALS FROM PHOSPHOGYPSUM.

A method of processing phosphogypsum includes leaching of rare earth metals - (REM) and phosphorus sulfuric acid solution to obtain a leaching solution and insoluble residue. Treatment of insoluble residue is a basic calcium compound to pH>5, the selection of REM concentrate from the leaching solution by crystallization, separation of REM concentrate from the mother liquor of the crystallization, the flow of the last stage leaching of REM and phosphorus.

6. METHOD OF EXTRACTING RARE EARTH METALS FROM PHOSPHOGYPSUM.

The invention is aimed at simplifying the technology of phosphogypsum processing, reducing the duration of leaching and sorption of rare earth metals of cation exchange processes (REM), improving the efficiency of sorption and desorption, and the quality of the concentrate while ensuring a rational degree of extraction of REM from phosphogypsum.

7. THE ION SOURCE OF GLOW DISCHARGE WITH INCREASED APERTURE.

The invention is aimed at increasing the aperture of the ion source of the glow discharge by reducing the diffusion losses of ions in the discharge chamber. The source of the glow discharge contains placed with a gap and coaxial cylindrical hollow anode having a shaped bottom part and a hollow cathode disposed in the cavity of the anode side of its open end, together forming a discharge chamber, the output of which is axial hole for pulling and pumping ions formed in the bottom portion of the hollow anode, a sample holder, mounted on the axis of the hollow cathode and the channel for the input of inert gas in the hollow cathode.

8. METHOD OF ANALYSIS OF SOLIDS USING ION-SOURCE GLOW DISCHARGE WITH HOLLOW CATHODE.

The invention consists in the fact that in a prototype method for the analysis of solids by means of an ion source of a glow discharge with a hollow cathode comprising placing a rod containing the analyte on its axis in the latter, the substance is subjected to preliminary homogenization using ultra-thin dispersion for 10-20 minutes in order to ensure a uniform distribution of the analyzed elements in the substance, and it is formed in a recess at the top of the rod, which is made of metal.

9. METHOD OF OXIDATION (PROCESSING) SULFIDE RAW MATERIAL.
10. Kazakhstan (186SZ)
11. Uzbekistan (IAP O3612)
12. Russia (2331675)
13. Australia (2003275744)
14. Canada (2.522.336)
15. United Kingdom (DB 2415192)
16. United States (7.682.419 B2)

17. South Africa (8250)
18. India (0065)
19. METHOD OF EXTRACTION NONFERROUS, RARE AND NOBLE METALS FROM REFRACTORY MINERAL RAW MATERIALS.
20. Kazakhstan (18634)
21. Uzbekistan (IAPO3546)
22. Russia (2312908)
23. Australia (2003269743)
24. Canada (2.521.110)
25. United Kingdom (GB 2414740)
26. South Africa (7894)
27. USA (8.913.415.BI)
28. India (FG 345.2)
29. METHOD OF EXTRACTING NON-FERROUS, RARE, RADIOACTIVE AND PRECIOUS METALS FROM REFRACTORY MINERAL RAW MATERIALS.
30. Kazakhstan (18634)
31. Uzbekistan (IAPO3546)
32. Russia (2312908)
33. Australia (2003269743)
34. Canada (2.521.110)
35. United Kingdom (GB 2414740)
36. South Africa (7894)
37. USA (8.913.415.BI)
38. India (FG 345.2)
39. METHOD OF EXTRACTING PRECIOUS ORES AND CONCENTRATES.
40. Russia(2415955)
41. Kazakhstan(009655)
42.Uzbekistan (13788)
43. METHOD OF GOLD EXTRACTION FROM GRAPHITE ORES BY APPLYING THIOUREA

For the first time, a more promising method of using thiourea for concentrating gold instead of the cyanides commonly used in gold mining is proposed. It is established that during the process of thiocarbamide leaching of graphite rocks there is no loss of gold and thiocarbamide as a result of adsorption from graphite.

44. HYDROFLUORIC METHOD OF EXTRACTING PRECIOUS METALS.

As an alternative, the method of hydrofluoride extraction of noble metals is considered. Their distribution in the processes of flotation and fluorination of the flotation chamber product is studied. It was found that in these conditions it is possible to concentrate 20 times more gold. The use of hydrodifluoride processing techniques in the opening of gold-containing graphite-bearing rocks allows not only to concentrate gold, but also to allocate the associated useful components (ammonium hexafluorosilicate, etc.). This will contribute to the most complete

extraction of useful components and the creation of resource-saving technology for processing of solid mineral raw materials of this type.

45. PLASMA-CHEMICAL METHOD OF EXTRACTION USEFUL COMPONENTS.
The first data on the formation of dispersed particles of predominantly rare-earth composition were obtained by using the plasmochemical method of action on graphite substance.

46. THE ARTIFICIAL SYNTHESIS OF CARBON NANOTUBES.
The possibilities of using graphite as a starting material for the manufacture of carbon nanotubes of fullerenes in electrolytes by the action of arc discharges have been studied. It seems that the obtained information can serve as the basis for the future technological scheme of production of nanostructured materials.

Russia (2331675) METHOD OF OXIDATION (PROCESSING) SULFIDE RAW MATERIAL.
Russia (2312908) METHOD OF EXTRACTION NONFERROUS, RARE AND PRECIOUS METALS FROM REFRACTORY MINERAL RAW MATERIALS.
Russia (2415955) METHOD OF EXTRACTING PRECIOUS ORES AND CONCENTRATES.
Russia (2415953) METHOD OF EXTRACTING NON-FERROUS, RARE, RADIOACTIVE AND PRECIOUS METALS FROM REFRACTORY MINERAL RAW MATERIALS.
Russia (2331675) METHOD OF ANALYSIS OF SOLIDS USING ION-SOURCE GLOW DISCHARGE WITH HOLLOW CATHODE.
Russia (2449576) METHOD OF EXTRACTING RARE EARTH METALS FROM PHOSPHOGYPSUM.
Russia (2312908) METHOD OF EXTRACTING RARE EARTH METALS FROM PHOSPHOGYPSUM.

BALTIC SHALE SHIELD

EXAMPLE: (analogue of the Leningrad shale deposit)

The Australian mining company Aura energy, chooses the highest partners from financial investors at the competition for participation in the project. Ore is typical with ours, but extraction from our is much higher and metal group is larger because of the analytical determination and extraction technology. In our case, the depth of occurrence is less than in Sweden, the technical conditions are much more attractive, the depth of occurrence of shale is on average 6-12 m.

In February 2019, Aura energy presented an important doctrine by testing the economic viability of its giant Haggan, a uranium deposit in central Sweden, with excellent preliminary research results. These results allowed to prepare for

the construction of the plant with preliminary capital costs of $ 300 million - $ 2 billion before full commissioning.

In May 2019, Aura energy completed an update of the preliminary study, which more accurately reflects the market price of uranium oxide. This put the project in the top five for current and planned uranium mining operations with NPV of almost $ 1.9 billion $ (on uranium at a price of $ 65).

The audit of the preliminary studies of the financial model prepared by the independent consultants of RMDSTEM confirms that Haggan is a financially reliable project, one of the lowest-cost uranium leaching technology adopted worldwide.

Key points of the preliminary study:

Net present value (NPV) of $ 1.85 US.

**** Operating costs: - US $ 13 U 3 0 8 when nickel and molybdenum are considered as by-products - US $ 26 U 3 0 8***

**** Internal rate of return (IRR) 49%***

**** Payback period is 4.2 years (17% of the project)***

**** Preparation for production $ 537, $ 18 million per annum***

**** Annual production of 7.8 million pounds (3538 tons) of uranium, 14800000 pounds of nickel and 4.3 million pounds of molybdenum***

**** Initial ore volume > 741 000 000 tons.***

**** Nominal ore production of 30 million tons per year, with ore reserves for 25 years. The low cost of mining - 0.75:1***

**** The use of low-risk biotechnology heap leaching is widely used in the copper industry in Chile.***

Today, the mining and processing plant with a capacity of 30 million tons was launched and began work on the mixed technology of heap bacterial leaching.

TOP 20 SHAREHOLDERS	UNIT	%	NAME
1	11334501	6,72	UBS PTY LTD
2	6887478	4,08	SERVICES PTY LTD
3	6548574	3,88	National nominees of the society

4	4800000	2,85	ASHABIA Petit, OOO ASHABIA the Superfund
5	4795000	2,84	DRAKE RESOURCES LIMITED
6	4603834	2,73	YARANDI INVESTMENTS PTY LTD GRIFFITH FAMILY NO 2
7	3780722	2,24	Mr. Mike buck
8	3500000	2,07	PASADENA Pty Limited
9	3238892	1,92	HSBC (Australia) companies
10	3162554	1,87	STOP PTI limited
11	2833334	1,68	SUVALE PTY LTD
12	2778334	1,65	SAM BRAVE PTI LTD SUN
13	2535756	1,5	JP MORGAN Australia Limited
14	2472945	1,47	Ms. Jenny Lee
15	2333334	1,38	DRAKE RESOURCES LIMITED
16	1992372	1,18	Mrs. Jo-Ann Weber.
17	1760000	1,04	RAMP Pty Limited
18	1633334	0,97	DEWCLAW PETIT, OOO
19	1450000	0,86	CRX PTY Limited
20	1400000	0,83	MIDWAY SECURITIES PTY LTD, MIDWAY FAMILY

http://auraenergy.com.au/projects-australia.html

The gold standard is 20 years away.

Russian scientists have found deposits underfoot.

The economic nightmare of the novel “the Hyperboloid of engineer Garin” can become a reality. The gold standard, that currency market experts talk about, may die without ever being revived. And all thanks to the discovery of Russian scientists.

To put it simply, Russian scientists from the Far Eastern Geological Institute, the Institute of chemistry, the Institute of tectonics and geophysics and the Institute of mining of the Feb RAS under the leadership of academician Alexander Hanchuk managed to discover a new type of deposits of precious metals "organometallic nanoclusters of gold and platinoids in the composition of graphite". Such deposits are widespread in the world and, more importantly, are located in habitable, well-developed infrastructure places.

And the weights are gold!

Graphite deposits have long been known and previously seemed to be well studied. Geologists "caught" in them traces of gold and other precious metals-in small quantities. But traces of gold in different rocks are not so rare as is commonly thought — the question is, what is the concentration and ease of extraction.

Native gold deposits (for example, black shale) are valuable because the whole process of gold mining consists, in essence, in cleaning the available gold from the accompanying rocks. The chemical method of gold extraction is already more expensive and laborious, industrial gold mining is justified here only at a high concentration of gold. In the graphite deposits, so far only minor traces of gold and platinoids have been found. At the same time, they are in a state associated with graphite, that is, chemical extraction technologies are required. Not profitable.

Everything changed when Hanchuk's group tested graphite deposits not by traditional chemical method, "test tube", but by means of ion mass spectrometry and neutron activation analysis. The ion mass spectrometer, in particular, helped to see "hidden" in graphite nanoforms of gold and platinoids. In traditional chemical analysis, they were not determined, since gold did not stand out from the graphite "fusion".

What did it do? A complete change in the idea of the concentration of noble metals in graphite deposits. Thus, Hanchuk's group studied rock samples from long-known

graphite deposits in Primorye, Khabarovsk Krai and the Jewish Autonomous region. Moreover, in Primorye, the deposit has been known since the 50s, its development can be carried out in an open way — that is, without expensive mining operations.

Conventional chemical analysis of the samples gave a concentration of gold 3.7 g per ton, and spectrographic - up to 17.8 g / t. platinum: 0.04-3.56 g / t “in vitro” and up to 18.55 g / t — on the spectrometer. Palladium, the most valuable catalyst and additive that improves the properties of metal alloys, was found in concentrations up to 18.55 g / t instead of 0.02-0.55 g / t in the traditional method of analysis. That is, precious metals were many times more than previously thought.

However, is such a concentration of gold and platinoids sufficient for the deposit to be of practical interest? Academician Vitaly Filonyuk, a specialist in gold deposits, Professor of the Irkutsk state technical University and the Institute of subsoil use, makes such comparisons. The minimum concentration of gold in Russia is at the Kuranakh group of deposits (Aldansky district of southern Yakutia): 1.5 g/t. The operation of the field began 30 years ago with 5-7 g/t, 130 tons of gold were produced. The maximum concentration of gold - at the new field “Kupol” (Chukotka), the spent field “Kubaka " (Magadan region) - up to 20 g / t and more. That is the studied deposits are in the group with a concentration above average.

Eldorado underfoot

Gold is practically lying under our feet: the studied graphite deposits are widespread all over the world — there are large deposits, for example, in the Leningrad region, in the United States, in Europe... until now, it just never occurred to anyone to test them for gold with innovative methods, Hanchuk admits. Now that a virtually new form of precious metal ores has been discovered, such research will be ubiquitous. And Far Eastern scientists have no doubt that gold and platinoids will be found in comparable concentrations: the type of deposits is the same.

However, extraction technologies such nanoinclusions of precious metals from graphite are being developed. According to Alexander Hanchuk, before the beginning of industrial development will take twenty years. And the technology will likely be more expensive than traditional, and platinum group metals are extracted from graphite is heavier than gold.

But, Hanchuk notes, the reduction in price will be due to the fact that the fields themselves are available in areas with developed infrastructure, and production is possible by surface means. Vitaly Filonyuk is skeptical about the results of the work of far Eastern scientists, believes that there is not enough data for far-reaching conclusions, but agrees that in 20 years industrial production is possible.

“Load the gold barrels”

However, the fact that for scientists — an interesting scientific fact and a reason for discussion, for the world economy-just a knife in the back. That's for you to judge. Today, when the weakness of the dollar became apparent to the whole world, everyone — from economists to currency speculators like George Soros, from the World Bank to the governments of different countries-started talking about the need for a new world currency. And increasingly, the scales are tilted to the need to return the gold standard. After all, the idea of flexible mutual changes in the exchange rates of world currencies was undermined by the issue policy of the United States: who will now guarantee that the new world currency will not be devalued by the policy of the issuing government?

Gold in this sense is much more stable-the total reserves of gold in Central banks around the world as of July 2008 were estimated at 29822,6 tons (20% of all assets). However, there is much more gold in private ownership-for example, India annually imports 700-800 tons of gold, and the total private reserves in this country, where gold jewelry is a traditional wedding gift, are estimated at 15-20 thousand tons. But still there is not much gold in the world. And most importantly-the volume of its production has so far been stable.

In total, over the past 6,000 years, mankind has produced approximately 145,000 tons of gold. And until 1848, less than 10,000 tons were extracted from the subsoil — more than 90% of the extracted gold falls on the last century and a half. It was the increase in gold production due to new technologies that contributed to the fall in the popularity of gold. However, all, even advanced methods of gold mining, could not overcome the limitations of proven gold reserves. According to the Office of Geology and minerals of the United States, the volume of proven world reserves of gold, the production of which is possible and economically feasible, is only 47 thousand tons. At the same time for several decades the world gold production is about 2.5 thousand tons of gold per year.

This figure is adjusted only in the direction of decrease: old gold deposits dry up, and new almost do not appear.

And now imagine the prospect of increasing the volume of world gold reserves several times. Yes, this gold will hit the market not earlier than in 20 years. But the value of a market asset is determined not only by the current situation, but also by the prospects of preserving its usefulness and rarity. How much gold will Central banks, commercial banks and ordinary citizens store today if they know that in 20 years there will be many times more of this precious metal? And, accordingly, can we expect that with such a prospect, gold will continue to rise in price?

In general, while the scientists themselves are passionate about the research of new samples from various fields of the country, economists will have to take into account

the fact that the gold standard, the introduction of which has been so much talked about recently, as they say in the anecdote, “ku-ku”. I wonder how long it will take the world markets to realize this fact?

Mineral Nano-Technology

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Today, precious, rare and non-ferrous metals are the most tasty piece to play on the exchanges of different levels. In Sweden, the Australian company "Aura Energy" on an area of only 100 km2 of dictyonema shale, which is a continuation of the Baltic shale shield to the North, built a plant for processing these shales with a capacity of 30 million tons per year for the extraction of molybdenum, vanadium, nickel and other metals. They attracted the most advanced investors in the world, forming a queue of investors who want to get into this project.

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uranium	1,054 th kg
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palladium	1,287 th kg
vanadium	1 980 th kg
molybdenum	1 089 900 th kg
gold	3 700 th kg
rhenium	1 120 th kg
rare-earth (without europium oxide)	131 000 th kg

Total: 600 billion US dollars.

Scientists of the Company have developed a technique that allows to reliably determine the "invisible" gold, platinoids and other metals in any type of mineral raw materials, including carbonaceous. In addition to the method of analytical determination, the Company has technological solutions that allow the extraction of metals from carbonaceous and mineral raw materials.

All discoveries and inventions are protected by international patents. The company, conducting the work, has 50 international inventions patented in developed countries.

Prospective work on the development of new subsoil areas can be planned for the next 10 years with a total capitalization of the mining company about 600-800 billion US dollars.