

RESOLUTION

**Of the IInd International Mining & Geology Forum
“Gold of the North Pacific Rim” (September 3-5, 2011),
Dedicated to the 110th anniversary of Yu.A. Bilibin**

September 5, 2011

City of Magadan

Participants and organizers of the Forum – representatives of the Magadan Oblast Administration, the Russian Academy of Sciences, the Russian Geological Society, the Society of Economic Geologists (SEG), the International Association on the Genesis of Ore Deposits (IAGOD), Rosnedra, geological prospecting and mining enterprises in Russia and abroad (316 participants: 132 delegates, 49 Exhibit participants, and 135 guests, including 90 persons from Moscow, St. Petersburg, Syktyvkar, Petrozavodsk, Ulan-Ude, Yekaterinburg, Novosibirsk, Rostov, Krasnoyarsk, Irkutsk, Yakutsk, Blagoveshchensk, Khabarovsk, Vladivostok, Petropavlovsk-Kamchatsky as well as from Magadan and Magadan Oblast, Canada, the USA, Australia, New Zealand, Mongolia, Kazakhstan, and Uzbekistan), having comprehensively discussed problems of geology, mineralogy, geochemistry, and metallogeny of gold in the North Pacific Rim and neighboring territories in comparison with other regions of Northern Eurasia as well as problems of searching, evaluating, prospecting, and mining gold deposits, note the urgency of topics touched, discussions, and problems, and the increased necessity of regularly exchanging opinions on them. The Geology & Mining Exhibition, conducted as a part of the Forum agenda and participated by 21 enterprises and 2 banks, demonstrated companies' significant interest in Russian enterprises' opportunities to arrange extensive prospecting and mining. Simultaneously, the Exhibit exposed the necessity of wider publication of mining accomplishments.

The Forum notes: The innovative scenario of Russia development, proclaimed by the President and the Government of the Russian Federation, requires significant investments, both from the state and from subsoil users. Considerable starting funds for the innovative development can be obtained from advance expansion of geology, mining, and processing complexes in this country. The Far East of Russia is responsible for over a half of prospected reserves of hydrocarbons and coal as well as a large part of rare and non-ferrous metals, diamonds, and gold in Russia. Just in Magadan Oblast, during its 80-year history of gold-mining, its total outcome exceeded 3 thousand tons. Beside purely economic and social functions, the mineral complex of the region as a whole and Magadan Oblast in particular plays an important role in the governmental policy – namely, in strengthening Russia's territorial integrity, national security, and collaboration with Asia-Pacific countries.

Despite the changes that took place in the country and its margins, the mining industry managed to keep its staff and material potentials, which permitted to essentially increase its mineral base. In *Chukotka*, works are successfully conducted at the Karal'veyem orogenic deposit; the large Kupol gold and silver deposit, with an enterprise established, mines about 23 t gold annually; the Mayskoye deposit is being prepared for exploitation. In *Magadan Oblast*, such deposits as Julietta, Vetrenskiye, Sopka Kvarzevaya, and Birkachan are successfully worked; the Natalka gold deposit is being prepared for exploitation; survey is being conducted to expand the mineral base of the Dukat and Omchak ore districts. In *Kamchatka*, the Aginskoye gold and silver deposit is being explored. In *Khabarovsk Krai*, Mnogovershinnoye, Khakandja, and Yuryevskoye old and silver deposits are actively explored the Albazinskoye gold deposit has been put into exploration. In *Amur Oblast*, Pokrovskoye, Berezitovoye, and other gold deposits are being explored.

The increase in the mineral base was to a large extent promoted by complex geological research conducted by academic and industrial institutions and geological enterprises involved in surveying and prospecting all over the North-East of Russia. This research in the area resulted in producing and publishing extensive generalizations in geology, magmatism, and metallogeny, which have contributed to better understanding of conditions of precious metal commercial deposit localization and to mastering of surveying and prospecting methodology. An important role was played by joint international projects in tectonics and metallogeny of the Russian North-East, Alaska, and Canada, Mongolia and the neighboring areas of China; they allowed investors to believe in great perspectives of Russia's Far East. Russian and foreign companies have been actively collaborating in the matter of exploring the North Pacific. At the present, gold and silver deposits of the area have been successfully explored; placer works have stabilized. New mining enterprises are being constructed.

At the same time, Forum and Exhibition participants note that the transition to the early 1990s' new economic development in Russia had essentially embarrassed the development of gold mining, which has been the leading component of the Russian North-East's economy. Presently, in spite of the dramatic global economic situation, negative tendencies have been basically overcome due to the high gold price, and a certain rise in gold mining has been observed in the eastern regions of this country. However, there still have been some problems, including the following:

- status of gold as a currency metal
- weak investing attractiveness of new projects, compound deposits due to the lack of clear subsoil management legislation
- continuous exhaustion of the mineral base
- weak use of production, technological, and scientific potential in the region
- need in the basic additional geological, geophysical, and especially geochemical studies in the region to be conducted by the federal geological service
- traditional lagging in the infrastructure development for exploring and involving new areas in production
- existing difficulties in providing labor resources for the mineral complex due to the outflow of the economically active population.

Despite some incentives, the problem of reprocessing technogenic placers has not been constructively solved. Insufficiently solved are issues of ore processing technology considering environmental protection.

The Forum believes that the elimination of negative reasons and problem solutions is based on developing new approaches in mining in the North-East of Russia, including:

- transition to project group realization (e.g., exploring the Yana-Kolyma Province)
- more actively implementing of governmental-private partnership, especially in solving infrastructure problems
- creating of the competitive servicing market
- considerably reviewing the federal investment structure towards reproducing the mineral base
- structurally reforming the mining industry in order to raise НЕДРОПОЛЬЗОВАНИЕ efficiency through implementing innovative methods and techniques in practical deposit prospecting and mining
- restoring mandatory deductions to federal and regional funds of the mineral base reproduction as the basic source of investing in programs of geological surveying and prospecting

- returning to the two-key practice for small and medium-size gold deposit
- development of normative acts promoting the attraction of investments for developing small and medium-size mining and servicing companies
- increasing the role of academic science in solving problems of mining innovative development
- developing methodological basics for evaluating and exploring small primary gold deposits
- considering solving problems of exploring complex and deeply laid placers, including problems of underground development as well as searching for bed-rock sources in the known ore-placer areas and studying placer ledges for exposing ore objects promising research
- implementation of promising methods and methodologies of gold ore concentration, including thiourea leaching, dry ore disintegration and separation techniques, hydraulic ore disintegration by hydroblow, etc.

The Forum recommends to:

Federal power authorities - to solve the problem of legalizing the status of gold as freely circulating market good; to make amendments to the existing law "On Mineral Wealth..."; to develop a new statute on subsoil use licensure, implying simplified geological prospecting license issuing on the account of the internal funds for a wider use of geological prospecting (junior) companies in studying and evaluating mineral deposits;

Governmental agencies (Ministry of Natural Resources of the Russian Federation, Rosnedra, Ministry of Economic Development, Ministry of Industries) and the Russian Academy of Sciences - to make an addition to the Long-term Program of Developing the Mineral Complex ... Until The Year 2020 including the general federal strategy of developing Russia's geology and mining industry, which implies the interrelated development of the geological science, regional studies on the territory of the Russian Federation, geological prospecting, mining, and processing sectors as well as the accompanying infrastructure. Considering the scales of problems, such a strategy should comprise no less than a 30-year period. In accordance with the strategy developed, the mining, land-use, and water-use legislation should be amended to optimize solving the strategy tasks. The MNR attention should be drawn to the necessity to monitor complex technogenic resources.

It is necessary to increase geological prospecting to evaluate promising objects, including the ones sponsored by the federal budget; to solicit the MNR for a simplified pattern of involving technogenic gold placers in commercial exploration; to continue implementing heap leaching at ore deposits and technogenic placers as well as other technologies of ore processing; at promising large objects, to recommend technological research as early as on the prospecting stage; to simplify the order of endorsement for conducting geological prospecting and mining; to lower project expertise tariffs.

To develop the balanced policy of attracting and training personnel for the geology and mining complex.

Subjects of the Far Eastern Federal District - to consider the issue of developing investment passports of territories and making a database on the gold mineral resource complex objects attractive for investments in order to make regions more attractive for investors.

Russian academic and industrial geology and mining science - to pay more attention to developing promising methods and methodologies for studying gold ore deposits, aiming in researching fundamental metallization processes and exposing prospecting and evaluating signs of various gold

metallization types; to analyze the geological situation in marginal volcanic belts in the Russian part of the northern segment of the Pacific Rim in order to expose territories potentially containing highly sulfided deposits, which, according to the world practice, represent the most promising type of gold metallization of the eastern half of the Pacific ore belt; to offer more widely innovative technological patterns aiming in decreasing costs of both geological survey and prospecting and raising gold mining efficiency.

To develop approaches to concordant development of mining and infrastructure projects in order to harmonize the region complex development; to consider the opportunity of establishing the single information space uniting data on geology, metallogeny, and infrastructural characteristics of the region and its parts, and aiming in supporting investment decision making to strengthen the information component of fundamental research in geology and mining through increasing the volume of research publications in academic journals.

To consider reasonable the continuation of fundamental and applied research, technological and ecological problems of exploring technogenic wastes of placer works.

Industrial geological enterprises and private companies - to continue strengthening geological prospecting to evaluate promising objects in the North-East of Russia on the account of internal funds and attracting large-scale investments; to more actively involve research institutions on the stages of preliminary search and evaluation works as well as while surveying, evaluating, and prospecting; to more widely implement innovative developments of the geological and mining science.

Educational institutions - to strengthen work on preparing specialists in geology and mining; to expand preparation through arranging student field trips to developed mining areas, organizing topical schools in such areas involving Russian and foreign experts in lecturing, arranging student conferences, etc.

The Forum participants highlight that the unique natural resources of the North-East of Russia require complex, large-scale approaches for exploration in all of its areas.