

ANNOTATIONS

ABOUT COMMUNICATION OF PLIOTCHENIAN SEDIMENTATION WITH THE GEOLOGICAL STRUCTURE OF NORTHERN PRICASPIAN AND LOWER VOLGA BASIN

V.N. Staroverov

In clause influence on sedimentation regional and local geostructural elements is considered. It is established, that most essentially dependence sedimentation from the structural plan of territory was showed in an onboard zone of the Near-Caspian hollow. The local areas are revealed with is abnormal high capacities of pliotchenian sediments the adjournment, dated to the old vale of river Volga, an onboard zone of the Near-Caspian hollow and large interdome troughs in areas of development of hydrochloric tectonics.

NEW DATA ABOUT INTERGLACIAL MUCHKAPSKY LACUSTRINE DEPOSITS IN THE STRATOREGION OF POL'NOYE LAPINO, UPPER DON BASIN

G.A. Antsiferova

At ranges of stratotypical region of Pol'noye Lapino in Muchkapsky interglacial deposits shallow water lacustrine layers are studied. Their age is determined on a base of systematic composition of extinct Pliocene-Pleistocene diatoms. Expansion of knowledge about some species of extinct centric diatoms ecology is of interest.

NEW DATA ON THE STRATIGRAPHY OF VITIM TABLELAND PALEOZOIC. (WESTERN ZABAIKALIE)

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The paper contains some new data on the structure, composition and age of strata of Karaftit – Bagdarin structural formational zone (SFZ). At present there are different points of view concerning the stratigraphic sequence, age and structural position of SFZ strata. The scheme variant of the Bagdarin region stratigraphy is proposed on the basis of preliminary analysis of the data obtained during the field season in 2004.

EVOLUTION OF THE NATURE ENVIRONMENT AND MATERIAL CULTURE OF MIDDLE HO- PHERIE AT THE FINALY PALEOLITHIC – NEOLITHIC

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In result of later paleolithic, mesolithic and neolithic sites excavation in Middle Hoper basin were received a great

collection of quartzite tools and palinological data. Altered Final Paleolithic industries include big pyramidal cores, blades, scrapers, retouched burins, shatelperron, trapezoid and triangle. Boreal mesolithic sites have the standard tools without any points. Later mesolithic complex (later boreal – early atlantic) characterizes microblade technique with great deal of blade tools with minimum burins and some trapezoid. Neolithic sites (early atlantic – subboreal) have the analogical industry and different ceramic group.

MINERAL FORMS OF OCCURRENCES OF PLATINOIDS AND GOLD IN FERRUGINOUS QUARTZITES OF LEBEDYAN DEPOSIT OF KMA (CENTRAL RUSSIA)

N.M. Chernyshov, S.V. Petrov

For the first time in various types of ferruginous quartzites of one of the world's largest Lebedyan deposit of Kursk magnetic anomaly (KMA) in a gravitational concentrate of mineralogo-technological samples by electron microscopic investigations the minerals of platinum group elements are established: native ruthenium ($Ru_{0,64} Ir_{0,18} Os_{0,10} Pt_{0,06} Pd_{0,01} Rh_{0,01}$) and osmium ($Os_{0,77} Ir_{0,19} Ru_{0,03} Pt_{0,01}$); minerals of the series osmium, ruthenium, iridium (1. $Os_{0,34} Ru_{0,28} Ir_{0,26} Pt_{0,07} Rh_{0,02} Fe_{0,01} Ni_{0,01}$; 2. $Os_{0,41} Ir_{0,28} Ru_{0,22} Pt_{0,08} Rh_{0,01}$); ruthenium platinum, rhodium ($Ru_{0,38} Pt_{0,32} Rh_{0,13} Ir_{0,06} Os_{0,06} Fe_{0,04} Ni_{0,01}$); ruthenium, iridium, osmium, platinum ($Ru_{0,29} Ir_{0,28} Os_{0,19} Pt_{0,17} Fe_{0,05} Rh_{0,01}$); prassoit ($(Rh_{16,45} Pt_{0,61} Ru_{0,43} Ir_{17,49} S_{15,00})$); sperrylite (1. $(Pt_{1,01} Fe_{0,02})_{1,03} (As_{1,91} S_{0,09})_{2,00}$; 2. $(Pt_{1,01} Fe_{0,03})_{1,04} (As_{1,95} S_{0,05})_{2,00}$; 3. $(Pt_{0,92} Rh_{0,17} Pd_{0,02} Ru_{0,02})_{1,13} As_{2,00}$), associated with quantitatively prevailing high-standard (813-982) native gold ($Au_{0,70-0,96} Ag_{0,02-0,30}$), gold-silver alloy ($Au_{0,49} Ag_{0,50} Fe_{0,01}$), petzite – ($Ag_{3,09} Au_{1,03}$)_{4,12} $Te_{2,00}$; hessite – ($Ag_{1,99} Au_{0,03}$)_{2,02} ($Te_{0,96} Bi_{0,04}$); tsumoit – $Te_{0,51} Bi_{0,48} Au_{0,01}$; chalcopyrite. Significant concentrations of PGE and Au are revealed in sulfides (Pd=0,01-0,43 mass %, Pt=0,01-0,44 mass %; Au=0,02-0,51 mass %), bismuth telluride (Pt=1,28 mass %; Au=0,27 mass %), arsenopyrite (Pt=0,18 mass %).

ABOUT THE GENESIS OF THE TYPE V DIAMONDS FROM THE LOMONOSOV DEPOSIT (ARCHANGELSK DIAMONDIFEROUS PROVINCE)

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The detailed mineralogical properties of the type V diamonds from the Lomonosov deposit (Archangelsk diamon-

diferous province) and its comparison with the placers type V diamonds are given in this article. Comparable diamonds have resemblances and distinctions. Investigations results have been discussed on the base of subduction hypothesis of the diamonds genesis. Both types have subduction genesis but they are connected with different seduction events. Validity of the diamonds Orlov's classification are discussed.

**TETRAFERRIBIOTITE – PRODUCT
OF THE CELADONITE THERMAL BREAKDOWN
(EXPERIMENTAL RESULTS)**

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Trioctahedral Al-free mica – tetraferribiotite was synthesized by thermal breakdown experiments of dioctahedral Al-free mica – celadonite at 3 kbar, 650 °C and 750 °C (NiNiO – buffer). The synthesized tetraferribiotite is very similar on composition to natural tetraferribiotite from BIF KMA.

**THE CHARACTERISTIC OF INDICATOR
MINERALS OF DIAMOND OF BASIN
OF RIVER SEIM (KURSK REGION)**

A.V. Chereshinskiy

In the article the facts expound about indicator minerals of magmatism diamondifevous. There are descriptions morphological of pyropes and chrome-spinellids and expound composition chemical their. Some perspective for prospecting pyropes and chrome-spinellids are detach.

**PECULIARITIES OF DISTRIBUTION OF DYKE
FORMATIONS IN DIFFERENT TYPES
OF SULFIDE PLATINIFEROUS COPPER-NICKEL
ORE-MAGMATIC SYSTEMS OF VCM
(CENTRAL RUSSIA)**

M.N. Chernyshova

On the basis of the analysis of quantitative distribution of dyke formations in six types of sulfide platiniferous copper-nickel OMS, varying in the degree of productivity and formed under different geodynamic regimes of the development of VCM, the quantitative role of dykes, as the major structural and material and ore-bearing component, greatly increases in the commercially significant deposits of Mamon, Elan and prospective Smorodino-Novogol types.

**PLACE AND ROLE OF DYKES IN THE GENERAL
MODEL OF THE FORMATION OF SULFIDE
PLATINOID-COPPER-NICKEL DEPOSITS
OF THE ELAN TYPE OF VCM
(THE CENTRAL RUSSIA)**

M.N. Chernyshova

On the basis of a comparative analysis of mineralogical, chemical and ore-geochemical features it is proved

that the dykes, accompanied by varying in scale sulfide platinoid-copper-nickel mineralization, belong to the Elan type of the ore-magmatic system (OMS). The interrelation of the dykes and mineralization of the Elan type of deposits, a long, polychronic process of the formation of this type of OMS is determined by the multiphase nature of the nickel-platiniferous complex. The generality of structural-material and ore-geochemical parameters of the ores in the intrusive-dyke rock association confirms the well-known model of the contaminated nature of the initial sulfide-bearing magmatic melt. Basic physical-chemical parameters of OMS and the position of the sulfide platinoid-copper-nickel ores associated with the dykes in the general model of petrogenesis and formation of the Elan type of the deposits are given.

Tab. 8; fig. 11; references 61 titles.

**NEW DATA ON THE GEOCHEMISTRY AND
MINERALOGY FOR THE PHOSPHATE ROCKS
DEPOSITS OF THE BLACK SOIL REGION
(POLPINSKOYE, UNECHSKOYE,
SHCHIGROVSKAYA GROUP)**

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The mineralogical and geochemical (sulfur and carbon isotope data) peculiarities of the phosphate rocks deposits of the Black Soil Region are considered. Phosphate rocks genetic types have been refined in detail by the application of the Polpinskoye deposit. The sedimentation environment parameters (pH, Eh) have been reconstructed on the base of precise methods.

**SPECIFICITI OF LITHOGEOCHEMICAL
METHODS OF SEARCHES OF GOLD
IN THE TROPICS**

E.N. Bozhko

The article is the result of geochemical search on the region with the incrustation of lateritic. The geochemical search was in the areas Banora (Republic of Guinea). The factual material of geochemical search show the positive results when we decide the questions of exploration of metallic mineral.

**RESOURCES, ALLOCATION
AND FORMATION OF BRICK CLAY DEPOSITS
IN MURMANSK REGION, NORTHWEST
OF RUSSIA**

V. Ya. Yevzerov

Data on the resources of brick clay in the region are given. It is shown that almost all deposits associate with glaciofluvial deltas and are confined to the western part of

the area, where dissecting deglaciation took place; turbidite streams played a main role in the formation of deposits.

THE CHARACTERISTIC OF THE PERSPECTIVE AREAS OF GLASS SAND OF THE SOUTHEAST OF THE MOSCOW AREA

S.A. Shirshov

In clause the review of the market of the glass industry of Russia is resulted. Sites perspective on glass sand within the limits of the Moscow area are briefly characterized. The southeast part (sheets N-37-III, N-37-IV), perspective for a gain of resources for being there Open Society "Ramenskiy GOK" is most in detail considered.

ARTIFICIAL LITHIFICATION OF VISCOPLASTIC INDUSTRIAL WASTES OF GEOELECTROCHEMICAL METHOD

V.Yu. Shigaev

Method of lithification of viscoplastic industrial waste has been proposed. On the strength of experimental research the dependence of stabilization of waste upon the power of current, time of its passing and composition of coagulants has been revealed.

MATHEMATICAL MODELING OF THE INTERACTION OF MONOCHROMATIC WAVE WITH THE PLAIN LAYER FOR THE PURPOSE OF DETERMINATION OF ITS MATERIAL CONDUCTIVITY

E.P. Kochura, A.V. Skripkin, S.V. Sobolev

In order to determine the conductivity of the plain layer, the interaction of the plain monochromatic electromagnetic wave with it is considered. The equation relating conductivity, the wave frequency, thickness of the layer and the ratio of the electric field amplitudes on its boundaries is obtained. In two limiting cases this equation permits to determine the conductivity of the layer in explicit form.

ON THE DEVELOPMENT OF STATIONARY WAVE PROCESSES IN SOME STRUCTURES OF THE EARTH CRUST

V.I. Dubianskiy

The role of the stationary wave processes of the natural elastic field of the Earth in the origin of specific structures in the Earth crust is justified. The basic structure of stationary wave field of the local source is considered. The examples of different scale natural objects from ore and diamond regions confirm the stipulated role of wave process in its origin.

ABOUT INDIVISIBLE BIRTH CERTIFICATE OF COMPLEX ECOLOGICAL- GEOLOGICAL AREA

O.V. Bazarsky, I.I. Kosinova

There are principal significant of complex ecological-ecological area. We are propose new notion-ecological kvant in force. There is a basis of integrals model, defining a minimum concretion of unhealthy elements. Mathematical model is elaborate. She is a basis of integrals estimation by ecological-ecological natural and technological systems.

TECHNOGENETIC INFLUENCE OF THE MINING ENTERPRISES TO THE ENVIRONMENT (BASHKIR COPPER-SULPHURIC GROUP OF ENTERPRISES AS AN EXAMPLE)

L.N. Belan

Ecological and geochemical condition of the territory that is under the long techno genetic influence of the Bashkir copper-sulphuric group of enterprises was considered in the paper. It was underlined that ecological and geochemical condition of the environment depends from the techno genetic influence of the mining enterprise.

Techno genetic geochemical anomalies in soils, ground deposits, surface- and underground waters are forming in immediate proximity to the tfe mining enterprise. Concentration of the chemical elements in these anomalies is dozens and hundreds times the background maintenances and limit permissible rates.

GEOECOLOGY OF NOVOVORONEZH MORTAR SAND DEPOSIT

V.L. Bocharov, L.N. Strogonova

In this article we considered Novovoronezh deposit of mortar sand wich is a charge base of AOOT «Donatomstroy» that executes construction work at APS «Novovoronezhskaya-2», house-building objects and new construction base. The object under concideration is situated 7 km southwards from Novovoronezh town and 6 km northwards west Anoshkino village in Ostrogozhsk region of Voronezh district. Planning deposit flanked to the functioning sand-pit eastwards and lies at Lisky region lands. It is marked a natural conditions of the region and different factors influencing to deposit exploitation and effect of the deposit on natural environment.

TECHNOLOGICAL DECISIONS AUTOMATION OF HYDROGEOCHEMICAL RESEARCHES

V.N. Kvachey, A.Ya. Smirnova

Are considered such aspects of estimated hydrogeochemical works as examination of reports researches wa-

ter and calculation on their basis of missing parameters, revealing of dynamic tendencies changes a chemical compound waters, definition of background values, ways of automation these researches.

**ECOLOGO-GEOLOGICAL MONITORING
OF THE BIG OIL RESERVOIR «KRASNOYE
ZNAMYA» (VORONEZH) AS THE NATURAL-
TECHNICAL ECOSYSTEM**

Yu.M. Zinyukov

The optimization of natural-technical ecosystems (NTES) monitoring is linked to development and introduc-

tion of new models designing techniques of being investigated systems that represents complex objects of a natural-technical origin. In given clause the original technique of organization and conducting NTES monitoring, developed by the author is examined on the basis of structural modeling of complex natural-technical interactions. These principles were realized in practice when NTES «oil storage “Krasnoye Znamya” – geological environment» monitoring was organized. The offered technique is based on a target direction of the control, forecast and management of a NTES condition.