

---

---

## ABSTRACTS

---

---

UDK 553

*A. D. Savko, L. T. Shevyrev*

### **HISTORICAL-MINERAGENIC ANALYSIS OF THE CONTINENTS GEOLOGICAL PAST. PAPER 1. RIPHEAN STAGE**

The comparison of the salient peculiarities of the Paleogeography and Neogen mineragenies are done. Authors envisage the problems of the endogenous and exogenous ore deposits distribution of Riphean upon the Earth continents. The areas of their concentration named «historical-mineragenic provinces» are characterized in more details. It is marked that these ones of endogenous provenance are located in contours of zones of dilatation (marked by fields of kimberlites and carbonates), zones of compression (ore accumulations associated with the granite magmatism). Riphean provinces with deposits of exogenous origin (uranium ones of the «unconformity type», copper-ferrous sandstones etc.) are drawn towards the periphery of cratons. The entire scroll of the Riphean deposits considered in the Voronezh state university science-and-research institute database is submitted in special ascription to figure one.

UDK 551.336(470.3)

*G. V. Kholmovoy*

### **NEW DATA ABOUT GLACIAL DYNAMICS FORMATIONS IN THE REGIONAL ZONE OF THE DON GLACIAL BLADE**

The new supervision describing dynamics of a regional zone of the Don congelation are brought: outlier Turonian chalk on northern suburb Seven-onions Semiluki; folded deformations Aptian clay in career Near Strelitz; blocks of sandstone and a granite in career at with. Podkletnoe perluvial origins; and also a huge cone mudflow carrying out at a Rossosh.

UDK 550.4: 551.3.051

*V. A. Shatrov, G. V. Voitzekhovsky*

### **MICROELEMENTS AS INDICATORS OF ENVIRONMENTS OF KURSK STRATA SERIES FORMATION (EXAMPLE OF KOROBKOVSKOJE DEPOSIT AT KURSK MAGNETIC ANOMALY)**

Basing on the distribution of lanthanoids and some other microelements in the sedimentary formations of Kursk strata series, there have been defined environments of sediment formation of Proterozoic iron-ore strata (facies conditions, depths of sedimentation basin, climate, iron source) with the example of the Korobkovskoye deposit at Kursk magnetic anomaly.

UDK 550.46 : 553.492 (47)

*V. I. Sirotnin, E. E. Belyavtseva*

### **ON THE CORRELATION BETWEEN JIGGED AND RUNNING HYDROLYSIS CORRELATION IN BAUXITE FORMATION (ON THE EXAMPLE OF KMA AND NORTH ONEGA PROVINCES)**

Correlation between jigged and running hydrolysis in bauxite formation is characterized on the example of KMA and North Onega provinces. Residual bauxite-laterites are mainly the result of jigged hydrolysis, and sedimentary ones – the result of running hydrolysis.

UDK 552.5:553.6.(470.322)

*A. E. Zvonarev*

### **MINERAGY OF THE APTIONS LAYER A LIPETSK REGION**

The characteristics of the lithological and facies of the Aptions layer a Lipetsk region is shown. The reconnaissance of the basic types of raw materials is connected with layer is indicated to wit: ceramic clays, glass, brick forming and constructional sands.

UDK 552.5 (470.32)

*D. A. Dmitriev*

### **LITHOLOGY AND SILICEOUS-CARBONATE ROCKS FORMATION FEATURES OF SANTONIAN STAGE (KURSK REGION)**

Rocks of santonian stage have a wide-spread occurrence in Kursk region and are characterized by variety of lithological composition. Distribution features of lithologies in areal extent and in section are associated with different contributions.

UDK 552.4 (470.21)

*K. A. Savko, I. P. Lebedev, Yu. N. Strik,*

*V. M. Holin, N. V. Holina*

### **THE FUNDAMENTAL PRINCIPLES CREATING OF THE PRECAMBRIAN METAMORPHIC MAP LEGEND FOR EAST EUROPEAN PLATFORM**

Fundamental principles of metamorphic map legend were worked out in the course of the project «To create the map of the Precambrian metamorphism for East European platform (scale 1:1000000) as scientific groundwork for the metamorphic deposits prognostication» of the Russian Agency of subsurface using. Three main metamorphic deposits factors are have been clearly reflected on the map plane by the proposed legend.

UDK 552.333.5 (470.32)

*A. Yu. Al'bekov*

**PETROGRAPHY OF DOLERITE-PEGMATITES  
OF SMORODINSKY TROCTOLITE-  
GABBRODOLERITE COMPLEX (KMA)**

Petrographical characteristic of dolerite-pegmatites of smorodinsky troctolite-gabbrodolerite complex, which is widely propagated on territory of KMA megablock is produced. Rock minerals and accessories are described. Pressure parameters of dolerite-pegmatite's forming by amphibole geobarometer, which account for 0,9–2 kbar, that conforms to forming depth from 300 meters to 3–4 km are defined. Various mechanisms of schlieren and dolerite-pegmatite's formation layers are proposed.

UDK 553.491 (470.323)

*L. V. Gordeichenko*

**PETROCHEMISTRY LINES OF SIMILARITY  
OF THE BOLSHEMARTINOVSKY MASSIF  
AND NIZHNEMAMONSKY DEPOSIT (VCM)**

At the first time the characteristic in complex of mineralogy-petrographical and firstly petrochemistrical parameters of three different in composition rock associations making Bolshemartinovsky massif appertaining to mamonsky, shiryaevsky and kamensky intrusion types of dunit-peridotite-gabbro-norite formation (mamonsky complex) is given. These data are also improved by complex of special diagrams in system  $\text{SiO}_2$  /  $\text{MgO}$  etc.

UDK 552.2:553.4

*N. M. Chernyshov, M. N. Chernyshova*

**THE ORE-BEARING ROLE OF THE DYKES  
OF THE SULFIDE PLATINOID-COPPER-NICKEL  
ORE-MAGMATIC SYSTEM**

The evaluation of the role of dykes as the most important structural-material and ore-bearing components of the eading types of sulfide platinoid-copper-nickel OMS was carried out. Three groups of the dykes, differing in structural-petrologic properties and a place in the general evolution of the sulfide platinoid-copper-nickel ore formation were singled out: a) OMS incurrent canals (leaders) with the formation of independent petro-ore systems and deposits; b) tongues of intrusive OMS equivalents in enclosing rocks; c) intra-intrusive vein flakes of intercumulose melt and derivatives of new repeatedly incoming «fresh» portions of magma with the formation of independently crystallizing petro-ore systems. In aggregate these groups determine a high metallogenic potential of OMS.

UDK 504.57.054:622+66.081:549

*B. K. Bartenev, L. I. Belichinskaya,*

*A. V. Zhabin, N. A. Hodosova*

**THE EXPERIENCE OF THE STUDY SORPTION  
ABILITIES OF THE MINERAL FORMATION  
DEPENDING ON THEIR COMPOSITION**

It is studied sorption ability montmorillonite, clinoptilolite, palygorskit in respect of toxic component production surge – a formaldehyde. It is installed by that the most active sorbent is clinoptilolite.

UDK 553.481 + 470.324

*P. S. Boiko*

**STRUCTURALLY MATERIAL INDICATIONS  
OF TROICKY MASSIF'S BELONGING TO ELANSKY  
COMPLEX IN VIEW OF IT'S NICKEL-BEARING  
ESTIMATION (HOPERSKY BLOCK VKM)**

Troicky massif of Hopersky megablock shows considerable analogy with typical for elansky complex Elansky and Elkinsky plutons by mineralogically-petrographic and petrogeochemistrical indications, which are accompanied with sulphide-copper-nickel ores. The fact that the apopyroxenites, located on north-east of massif are uncomplemented to elansky-type orthopyroxenites is established and they are attributed to formation of earlier mamonsky ultramafic-mafic complex.

UDK 550.382

*A. A. Auzin*

**ABOUT GEOLOGICAL PRODUCTIVITY  
OF BOREHOLE GEOPHYSICIST  
BY INVESTIGATION OF DEPOSITS OF NICKEL  
ON THE VORONEZH CRYSTAL MASSIF  
(A part 2 – BOREHOLE GEOPHYSICS)**

The problems which caused by depletion a mineral base of Russia is roused the interest to nickel considered area in a southeast of Voronezh crystal massif (VCM). In the given situation the estimation of geological efficiency of geophysical prospecting for investigation of deposits of nickel ores on VCM is very urgency. This article is devoted to the analysis of productivity of borehole geophysics.

UDK 550.34/551. 242.51(470.415)

*V. I. Dubjansky*

**THE WAVE MECHANISM OF THE EARTH'S CRUST STRUCTURIZATION BY EXAMPLE OF PROFILE THROUGH THE VOLGA-URAL OIL AND GAS PROVINCE**

In article the basic kinematical features of the standing wave fields formed by a local source and flat reflecting border are analyzed. The seismic section of an earth's crust received as a result of detailed CDP research on a structure «TATSEIS-2003» is described. This section contains images of listric breaks which inclination varies with abrupt up to flat. These and other structural elements could be formed owing to standing wave fields of the Earth. The fields can influence mobilization and concentration of hydrocarbons.

UDK 550.831

*Yu. V. Antonov, S. I. Kogteva*

**ESSENCE WITH ANOMALY POWER TO GRAVITY OF THE SOUTH-EAST PART VORONEZH CRYSTALLINE ARRAY (SHEET M-37)**

In article is analysed morphology anomaly power to gravity on territory of the south-east part Voronezh crystalline massif. Stands out meridian-width system anomaly, which is conditioned fanerozooy activation geological processes.

UDK 550.372 + 551.24

*A. K. Rybin, A. D. Kostuk*

**ABOUT CORRELATION BETWEEN MODERN DEFORMATION FIELD AND DEEP GEOELECTRIC STRUCTURE OF THE CENTRAL TIEN SHAN ACCORDING TO GPS AND MTS DATA**

The paper examines deformations of the Earth's crust of the Central Tien Shan using the method of calculation of the two-dimensional deformation field according to the results of observations by means of the Global Positioning System (GPS). Presented and discussed are the new data on geoelectric structure of the regional lithosphere obtained on the base of the quantitative interpretation of the results of detailed magnetotelluric soundings along the Naryn profile that cuts the Tien Shan orogen along the 76°E meridian. The obtained deformation field and the parameters of deep geoelectric cross-section of the Central Tien Shan along the profile were jointly analyzed. In the northern part of the profile we received the correlation coefficient 0.84 between the values of 2D deformation on the surface and the integral conductivity of the lithosphere in the depths interval 10-60 km. This correlation shows that deformation observed on the Earth's surface using GPS carries information about horizontal structure of the plastic flow of substance in the lower crust of the region.

UDK 550.34.094

*A. I. Tregub, R. A. Orlov*

**STADING SEISMIC NOIS IN THE COMPLEX OF METHODS OF INVESTIGATION ANCIENT PLATFORMS TECTONICS (ON THE EXAMPLE OF VCM TERRITORY)**

In article the results of investigation of seismic noise of Voronezh Crystalline Massif territory are presented. The relation between seismic noise and elements of new tectonic are ascertained.

UDK 556.3.626(470.32)

*V. L. Bocharov*

**LANDSCAPE-ECOLOGICAL CONDITIONS AND HYDROGEOCHEMISTRY OF AVERAGE DON POOL. Article 1. THE ENVIRONMENT AND WATER RESOURCES**

Environment possesses a main role in maintenance of a life and activity of the person. Last decades the role of the technogenic factor in transformation of a surrounding environment owing to what the increasing value gets technogenic-natural ecosystem has amplified. In article on an example of pool of Average Don (Verkhnamonsky area of the Voronezh area) landscape-ecological conditions and features of a chemical compound natural (underground and superficial) waters, and also character and an orientation of their technogenic transformation are considered.

UDK 504.1:005.334

*I. I. Kosinova, N. R. Kustova*

**THE THEORY AND METHODOLOGY OF GEOECOLOGICAL RISKS**

The analysis, estimation and management of ecological risks become the important factors of interaction of a society and the nature, however many basic positions of this area of knowledge remain under discussion. In work the review of modern views on a problem of an estimation of ecological risks both in foreign and in the domestic scientific literature is presented. The special attention is given techniques of studying of geoeological conditions in large city agglomerations (on an example of Voronezh). The basic accent is made on the new scientific direction which is based on the theory of risk for health, connected with an environment condition in cities. Earlier conducted researches about pollution of an environment by compounds of nitrogen within territory of Voronezh are analysed from the point of view of the complex approach to an estimation of geoeological risks.

UDK 556.332.632

*A. Ya. Smirnova, E. N. Kislyakova*

**GEOECOLOGICAL PROBLEMS OF VORONEZH RESERVOIR**

The problems of Voronezh reservoir pollution with heavy metals and oil products are considered. The sources of their entering water are pointed out. The dominating role of sewage and inflow of stream waters in the reservoir pollution is considered.

UDK 551.89

*S. P. Kazmin, I. A. Volkov*

**DYNAMICS OF GEOLOGICAL PROCESSES  
NORTHERN EURASIA IN LATE DRIAS  
AND EARLY HOLOCEN**

On the basis of long-term geological researches authors prove the geological environment of time of a global cold snap late drias and the subsequent warming of the beginning Holocen. Three are characterized various caused natural conditions: a cold phase with an establishment of a long-term frozen ground, a phase of sharp warming, degradation of a long-term frozen ground and a phase of a plentiful drain in conditions of a warm climate.

UDK 551.782 (571.66)

*V. V. Truhachev*

**THE HIDROTHERMAL CHANGED ROCKS  
OF THE OZERNOVSKY ORE FIELD  
(THE CENTRAL KAMCHATKA)**

Within the Central Kamchatka there are deposits and displays of the gold representing qualitative raw materials. Gold ore it is dated for certain types of hidrothermal changed rocks which characteristic is resulted in the present work with application of various methods of researches

UDK 661.68

*A. P. Poddubniy, A. G. Tchigarev*

**NEW KIND OF MINERAL RAW MATERIALS –  
«CARBOSIL»**

Employees of research-and-production firm «Geos» investigate an aeration bark on marl -cretaceous breeds santonic circle. During studying of mineral substance its useful properties have been defined. «Carbosil» – the commercial name of a product.

UDK 551.763(571.122)

*I. A. Kosyrev*

**THE SEDIMENTOLOGIST CHARACTERISTIC  
OF LAYER-COLLECTOR AC-3 OF FROLOVSKY  
RETINUE (K1) THE NORTH MOIMSKY AREA  
OF THE SOUTH MOIMSKY DEPOSIT, HUNTS-  
MANSIJSKY OF AUTONOMOUS REGION  
(HMAR), THE TYUMEN REGION**

Are considered argillite from Frolovsky adjournment of the North Moimsky site of the South Moimsky deposit, are studied by precision methods, influence pushing out processes on oil and gas generation, also influence katagenesis transformations on structure of clay minerals is considered.

UDK 553.411.071 (571.66)

*A. V. Truhachev*

**FORMATION AND LAWS OF DISTRIBUTION  
OF ORE GOLD OF THE OZERNOVSKY ORE  
FIELD WITHIN THE SITE «HOMUT»  
(THE CENTRAL KAMCHATKA).**

Geochemical and mineral types of ores of a site «Homut» are accurately established. The sequence of formation of gold's generations is defined and its sorts are separated. Connection of mineral associations with different displays on fineness of this precious metal is established. Stages allocation of ore minerals and genetic features of formation of mineral associations of rocks of the given site are defined.

UDK 551.352.3(470.324)

*V. A. Zhabin, E. V. Zolototrubova*

**GLAUCONITE OF ALB-SEMAN  
DEPOSITS OF THE NORTHERN PART  
VORONEZH ANTECLISE AREA**

Chemical and mineral composition of glauconites, their properties as well as their genesis from the viewpoint of depitization are considered. It is noticed that chemical and mineral structures of glauconites depends not only from the facies environments of sedimentary deposits, but from the ratio of calcium and potassium in the sediments, the effect of living organisms on a sediment. The choice of object of research is caused by a good knowledge concerning such sediments, importance of studying glauconites, as nonconventional minerals.

UDK 550. 4:552.578.2 (571.122)

*A. M. Raspopov*

**LITHOLOGY AND OIL-BEARING PROMISING OF  
JURASSIC COLLECTORS OF WEST SIBERIAN  
OIL&GAS BASIN ON EXAMPLE BY LAYER IOB1  
OF SAMOTLOR DEPOSIT**

Few last years in West Siberian oil'n'gas area startup using deposits which base productivity associated with Jurassic layers. At the same time, beginning geological researching sandstones of Jurassic bottom layers, because these layers may be so promise. In these conditions, we interesting to research IO<sub>1</sub> layers group, therefore, take an accumulation geological and geophysical data, especially lithological structure and basement hydrocarbon saturation of perspective layers. This article about specs IOB<sub>1</sub> layer looking for a geological and mud-logging data interpretation. Well unit was situated at eastern slope side of Nizhnevartovsk's Arch by Samotlor domical vault.