PROSPECTS OF GEORGIA'S OIL FIELDS

Beridze N.V. and Macharadze M.G.

SUMMARY

The article reviews oil prospects of mountainous Kakheti, in particular, of the Vedzebi oil field. The possibility of the existence of an oil reservoir inLiass sediments and of Jurassiic oil collectors in younger sediments above the Liass ones, which could turn out to be large Georgian oil fields, is discussed. It is planned to conduct deep exploration drilling after carrying out 2D and 3D seismic work. According to the authors, industrial oil in Georgia "was, is and will be!"

Keywords: oil, oil field, prospects, exploration drilling.

GEORGIAN ENGINEERING NEWS, №2, 2017 pp. 129–133

Significance of component rocks of Trialeti mountain ridge north-east part and adjacent territory in monumental architecture

GELEISHVILI V., TKEMALADZE M.

SUMMARY

The article is about finding out analogues of authentic-natural materials, which were used for building, and facing of region important architectural monuments, to replace them while restoration. The identity of extracted materials (building, deposits, occurrences) is determined based on detailed analysis of their mineralogical-petrographical and physical-mechanical features. Considering to the spread of containing stratigraphical units and deposit-occurrences today's condition there is an opinion about perspectives of producing facing materials in the region.

Mountain Magazine 1 (38) 2017, p. 8

RESULTS OF REMOTE SENSING (UPPER SVANETI)

BLUASHVILI D., BENASHVILI K., JANASHVILI SH., MINDIASHVILI G.

SUMMARY

The work is innovating as in the study area and in Georgia in general remote sensing investigation of mineralization has been conducting for the first time and as a result the zones of hydrothermal alteration have been defined, for the first time have been also represented as single models of fault structures so one entire model clearly representing the structures with related gold mineralization occurrences. Aside from the structures have been defined geochemical anomalies and their distribution balos.

Mountain Magazine 1 (38) 2017, p. 4

Investigation of David-Gareji Barite-Gold - Polymetallic Deposit Silver-Barite Ore On Beneficiation Ability

ShekriladzeN; BagnaShvili.M; Chokhonelidze M; Talakhadze D;
Adeishvili N; Kavtelashvili O.

SUMMARY

The paper presents the rezults of investigation of the technological properties of DavidGareji deposit silver-barite ores: the material composition and texture and structural features of the ore have been studied. Due to the fine impregnation, the intergrowth of valued components and minerals of the waste rock, flotation has been chosen as the ore dressing method. The

technological scheme and reagent regime, which allows complex processing of the ore with sequential separation of two products – silver and barite concentrates, have been developed.

Mountain Magazine 1 (38) 2017, p.p. 80-83

STOSTONE GETTING OFCORROSION RESISTANCE CEMENT OF WELLS CEMENTING

KUNCHULIA T., KHITARISHVILI V., MAISURADZE A.

SUMMARY

The paper considered method to obtain corrosion resistance of cement stone. Cement stone is deemed corrosion resistance, if it put a long period (for one year) in the aggressive hydrochloric water, stone, strength will not decrease, but not increase the permeability. For cement stone high compressive strength and low permeability experimental studies, on the basis of which was picked up by the following composition effective deaning solution of cement (Portland cement –
46.8%, water – 46,8%, the polymer fiss (DF–12) – 3,6%, phenol – 2.8%), which created a sample of cement paste was placed in a 3% KCL the water has dissolved within one year, and then the special equipment were determined compressive strength and permeability of these samples. These characteristics when measuring almost have not changed. Thus obtained is cement stone corrosion resistance and the use of selected cement deaning solution enables high quality cement wellbore.

Mining journal. 1(38) 2017. Pp. 158-2017.

CONDITIONS CAUSING OF CORROSION AND ITS ERADICATION METHODS OF THE OIL AND GAS WELLS WITHDRAWAL

KUNCHULIA T., KHITARISHVILI V., MAISURADZE A.

SUMMARY

The work considers with the issues of producing corrosion on the surfaces of weapons and equipment on drilling of oil and gas wells. Here are the methods of prevention and elimination of corrosion. Creation of corrosion is related to the disintegration of organic supplements in the drilling solution caused by drilling wells with high temperature and bacterias. The strong corrosive processes are caused by electrochemical reactions, as well as the presence of oxygen, sulfur-hydrogen gas and carbon dioxide emulsion. To combat electrochemical corrosion it is necessary to consider metallic electrochemical activity, which is the main source of corrosion. Special salts and inhibitors are addedto fight the corrosion caused by exposure to gas. The use of all of these methods allows to be efficiently drained into the well and significantly increase the technical-economic Indicators of drilling.

Mining journal. 1(38) 2017.

ABOUT THE GROUNDWATER DRAINAGE SYSTEM IN THE TERRITORY OF THE TELAVI WINERY “MARANI”

M. Mardashova, U.Zviadadze, T. Dzadzamia

ABSTRACT

The problem considered in article has practical value especially concerning the provision of relevant conditions for the normal functioning of historical winery "Marani" in Telavi, regional center of Kakheti. The high level of ground waters and accordingly the dampness of pitchers make it rather difficult to make wine by traditional Kakhetian technology in the Page 10 of 23 pitchers. We studied the situation in detail and identified chemical indicators of ground water, the level of aggression, groundwater drainage scheme and based on this research

we developed appropriate groundwater drainage system for the preventing of negative influence of ground water.

Georgian Technical University's Works # 1 (503), p. 69-76, 2017

Determination of micro-organism's physiological groups causing bilogical corrosion in metal pipes of rehabilitative pipeline and in the soil of their placement (Digomi valley)

M. Mardashova, T. Dzadzamia, U. Zviadadze, Z. Kakulia, D. Chutkerashvili,L. Glonti

Abstract

There is studied of micro-organism in the different sections of the trench soil, correlation between the characteristic properties of microbes and physico-chemical composition of the soil. the role of selected bacteria and fungus in the development of corrosion processes in metal pipes, the their number impact on the degree of metals biodamages and on the flow processes of biocorrosion are installed.

Journal "Science and Technologies" Tbilisi, p. 45-54. 2017

Publishing House "Technical University"

THE UPDATED MONITORING OF ALAZANI ARTEZIAN BASIN'S GROUND FRESH WATER

N. Zautashvili, N. Kitiashvili, G. Gafrindashvili, N. Poporadze, Z. Bostashvili

Abstract

In the present work there is considered the restoration of the state network for monitoring fresh ground waters in Georgia, suspended in the 1990s, which is an important

preconditionforthe economic growth of the country, in terms of protecting natural resources and to maintain a healthy environment. Mining

Magazine # 1 (38). Tbilisi, pg. 4, 2017. Georgian Technical University

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PRELIMINARY ENGINEERING-GEOLOGICAL INVESTIGATION OF LANDSLIDE SITE LOCATED AT MOTOR ROAD SECTIONS KM4-KM14 AT KUTAISI-ALPANA-MAMISONI PASS

Abstract.

The article describes results of preliminary engineering-geological investigation of landslide sites located at the state motor road sections km4-km14 at Kutaisi (Choma)-Alpana-Mamisoni. Pass for rehabilitation project. Soils located along the motor road route were investigated and geodynamic situation was evaluated at the above mentioned landslide sites in order to assess the natural environmental and engineering-geological conditions of motor road section which shall be rehabilitated.

Mountain Magazine, 1 (38) p. 6, 2017

IMPROVEMENT OF RESTORATION-RECULTIVATION METHOD OF ERODED AREAS BY MEANS OF WATER ACCUMULATION

T.Jiqia

Summary

Considered in the article method provides carring out the following procedures. Filling by ground of free space till earth surface, singled out for recultivation area on the depth 35-45 cm, the surface will be covered by waterproof mixture with thickness 3.5-5 cm, produced from ecologically safe materials, excluded infiltration of irrigative water to the depth. After the waterproof layer will be covered by ground mass with the seed of necessary grass, then surface will be smooth out till the earth surface. The neogenic surface should be covered by 2 cm thickness mixture bringing to minimum the evaporation activity.

"Moambe" of the Georgian National Academy of Sciences. Tbilisi (2017)

THE METHODOLOGY OF THE RENEWED MONITORING OF FRESH GROUNDWATER IN GEORGIA BASED ON THE EXAMPLE OF A WELL IN THE VILLAGE OF VACHNADZIANI

N. Zautashvili, G. Gaprindashvili, N. Kitiashvili, N. Popforadze, Z. Bostashvili

Summary: The monitoring of fresh groundwater in Georgia was renewed in 2013. Based on the fact that the renewed hydrogeological monitoring makes it possible to obtain information on quantitative and qualitative characteristics of fresh groundwater on a continuous basis, and based on the research results it is possible to estimate physical-chemical characteristics of groundwater of the country and to estimate volume of resources, this issue is a matter of national importance. One of the wells included in the network of renewed state hydrogeological monitoring is located in village Vachnadziani, Gurjaani municipality, Kakheti region. In the work, using the example of this well, the methodology of the renewed

hydrogeological monitoring study and the results obtained for the indicated period are presented.

"The strength of the field of geology is a prerequisite for the revival of the economy" - International Scientific-Practical Conference on Modern Issues of Geology of Georgia.

Georgian Mineral Society, Georgian Technical University. Tbilisi, Georgia, 1-2 June, 2017

Groundwater Obstacles related to building foundations in Tbilisi

M. Mardashova, N. Popforadze

Abstact

We discuss the process that takes place when the foundation of the buildings is interacted with groundwater. It is well known that the rock properties are drastically different whether they are dry or in contact with water. Many worldwide building practices have approved that the big majority of buildings that have undergone deformation is caused by the permanent contact of the rock with groundwater. There are many preventive measures that could help constructors avoid building deformation, settling etc.

"The strength of the field of geology is a prerequisite for the revival of the economy" - International Scientific-Practical Conference on Modern Issues of Geology of Georgia. Georgian Mineral Society, Georgian Technical University. Tbilisi, Georgia, 1-2 June, 2017.

FULFILMENT OF TECHNICAL SUPERVISION AT THE MINING ENTERPRISES OF GEORGIA

FULFILMENT OF TECHNICAL SUPERVISION AT THE MINING ENTERPRISES OF GEORGIA

A. BEZHANISHVILI, N. ARUDASHVILI, A. GOCHOLEISHVILI

Abstact

In the thesis of II International scientific – technical internet-conference, organized by Krivoi Rog (Ukraine) National University are considered the problems, dealing with technical inspection of mining enterprises in Georgia. These duties during the last 20 years were executed by Georgian State Inspection for technical supervision, but since 2010-by technical and building Agency. In 2012 Georgian Parliament was approved the law ,,Code of product safety and free circulation'', in conformity of which technical inspection after the accreditation can execute private inspection body.

In 2016 was established LTD ,,Techinspectguarantee'', which realizes the technical inspection of Georgian mine enterprises. During the last 10 years with our assistance was elaborated the normative documents – safety rules for mine enterprises of Georgia and then on their base – technical regulations and standards. These are the main normative-legislative documents for technical inspection execution at Georgian mine enterprises.

One of the important mine enterprise in Georgia is LTD ,,Georgian manganese'' with 9 mines. Here are some main violations, registered by LTD ,, Techinspectguarantee'' during the last one year: violation of entirety of concrete support in workings; violation of ventilation regime; decreasing of cross section of working; some electro equipment without grounding etc. The main reasons of such violations was analised. Herewith the level of technical safety in Chiatura mines during the last time is considerably improved.

Spatial Analysis Used in Baseline Study for the Preparation of Management Plan of Kazbegi Protected Areas

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Abstract

Collected data were separated in three generalized subsystem: environment (its main elements: air, land and water) as an Abiotic subsystems; flora and fauna, as the elements of a Biotic subsystem and Cultural environment, as a third subsystem, with its historical-cultural heritage and existing infrastructure. Interpretation and evaluation of the data were made for each component (Abiotic, Biotic and Cultural) through the use of criteria of significance and description of constraints (limiting factors) which were elaborated under the project SPPA/CS/2015-5/RE1. In parallel with the studies, the structure of GIS geodatabase for the protected area was created, which consists of both base map features – GIS layers, and thematic part. The base map scale is 1:25k, the scale of thematic maps is 1:50k. Based on the study results, the recommendations were developed: on the issues of the protected area category relevance, internal zoning, use of natural resources, biodiversity protection and monitoring. These recommendations will assist in the management plan preparation process, in order to accurately define the objectives of protected area and to properly design the work of the management and staff of the protected area.

Science Publishing Group, Earth Sciences, Volume 6, Issue 5-1, October 2017, Pages: 93-110
http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=161&paperId=10025349

Statistical Data about Severe and Fatal Injuries in Work Places

Nana Razmadze, Nino Ratiani

Summary

Severe and fatal accidents statistics in the world as well as in Georgia are analyzed in the article. The role and goals of International Labour Organization have been defined in order to create decent and safe working conditions. Quantitative data of severe and fatal accidents is shown in the tables and diagrams according to the geographical zones. Occupational diseases statistics in Georgia during the recent years have also been discussed.

GTU, Collection of Scientific Works, Tbilisi. No. 3 (505). 2017

Methods for assessing sustainability in the tunnel environment

Ir. Gujabidze, Z. Lebanidze, A. Gocholeishvil

Summary

The paper refers to methods for the assessment of rock stability surrounding mine workings, its development history and considers the theoretical basics of each method. The article represents detailed description of the most used rock mass classification systems in developed countries, including Rock Quality Designation – RQD, Wickham Rock Structure Rating RSR, Bieniawski Rock Mass Rating – RMR, Rock Mass Quality – Q or NGI, developed at the Norvegian Geotechnical Institute (NGI) as well as the modified system of Laubscher Mining Rock Mass Rating – MRMR. Based on the conducted study it's concluded that using the

RQD, RMR, NGI-Q and MRMR rating systems makes possible the assessment of the stability of the rock mass surrounding road tunnels and mine workings as well.

Georgian Technical University, Works No. 1 (503), pp. 94-102, 2017.