

GEOSCIENTIFIC MAP SET OF KOSOVO AT A SCALE OF 1 : 200,000

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Abstract

At the moment, Beak Consultants GmbH is setting up a map set of geoscientific map of Kosovo at a scale of 1 : 200,000. Some of the maps are already completed (Map of Minerals, Hydrogeological Map), some are close to completion (Morpho-Orographical Structures, Satellite Imagery Map, Map of Mineral and Thermal Water), some need further discussion (Tectonic Map) and some are still in compilation process (Geological Map, Metallogenic/Minerogenic Map, Soil Map). After completion, the map set will form an important basis for the economic development of the Territory as it provides a basis for investors, for state institutions and for geoscientific surveys and users in order to get a first overview of the resources and the potential of Kosovo.

DIGITAL GEOLOGICAL MAP OF KOSOVO AT A SCALE OF 1 : 100,000 (DGM 100) – MAP COMPILATION AND SOME GEOLOGICAL ASPECTS

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Abstract

Beak Consultants GmbH compiled 15 digital geological map sheets for the whole territory of Kosovo at a scale of 1 : 100,000 (DGM 100). The geological and spatial information of created maps is based on the digitalisation of the geological maps of former Yugoslavia 1 : 100,000 (GM 100), which have been printed between 1970 and 1984. Since these maps do not correspond to today's status of knowledge, it was necessary to update them to international standards – resulting in the compilation of the DGM 100. The project has been divided into two stages: During the first, the creation of the map concept, the unified legend and the compilation of test pilot map sheets was carried out. In the second step, all map sheets were compiled, based on the tested methodology, and finally linked to the GEO-Database Kosovo as Digital Geological Map. During the compilation of the map sheets, two main difficulties had to be managed: the first difficulty was to combine and unify the different map legends of the original maps to a new unified legend and to apply this created legend to the digital map representation process; the second difficulty originated from sheet border inconsistencies, which had to be eliminated. The final geological maps are the most

important base maps for all future geoscientific maps of Kosovo, for instance maps of raw materials, water supply, geological engineering, soils etc. Furthermore, the maps provide necessary information to local administration and help for territorial planning processes and particularly for the development of Kosovo.

KOSOVO QUARRY PLAN – REVIEW, EVALUATION AND FUTURE DEMAND FOR CONSTRUCTION RAW MATERIALS IN KOSOVO

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Abstract

The Kosovo Quarry Plan contains an inventory of the complete surface-mineability construction mineral potential of over 80% of the Kosovo territory, an inventory of the existing exploitation sites, an estimate of the minerals demand for the next 10 years and recommendations for further development. During the collection and verification of the available geological and economic-geological data and the additional capture of data in the field, 904 construction mineral deposits and occurrences have been captured. In addition, data on 390 exploitation sites was captured. As result of the data capture, 1,165 non-blocked construction mineral deposits / occurrences have been delineated. On this captured data, the newly developed land-wide uniform evaluation procedure for deposit mineability and deposit protection value was applied. Based on the evaluation results it can be said that Kosovo disposes of excellent potentials for the development of an extensive construction mineral industry by, for instance, quality silicate and carbonate aggregates, volcanic rocks, gravels, sands, and clays. Among all delineated deposits and occurrences, 189 are of highest mineability value. With this information, the Kosovo Quarry Plan is an excellent tool for outlining potential mining sites and protection of deposits in the frame of spatial plans and mining industry development plans. The estimates on the future demand of construction raw material in Kosovo show that the demand for silicate and carbonate hard rocks as well as for clay will be covered by many times. In contrast, gravel and sand will have to be substituted by silicate and carbonate hard rocks by the end of the next decade.

GEO-DATABASE KOSOVO (GDK) – DEVELOPMENT AND IMPLEMENTATION OF A GEOSCIENTIFIC INFORMATION SYSTEM

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Abstract

The GEO-Database Kosovo (GDK) has been developed for the Independent Commission for Mines and Minerals (ICMM) by Beak Consultants GmbH between 2003 and 2006. The GDK is a multi user application, created in client-server architecture. The current version 2.0 of the GDK features three main components: database, front-end application and geographic information system (GIS). The database has been developed using Microsoft SQL Server 2000. It contains 18 main tables, 66 detail tables, 47 link tables, 142 reference tables and 18 control tables and features 76 views and 15 user-defined functions. All data inside the database can be viewed and changed using the front-end application. This has been programmed in Microsoft Visual BASIC.NET 1.1 as well as ESRI MapObjects 2.3a and ComponentOneStudio.NET 2004. The application features 22 data modules which are organised into 7 logical groups covering mining data (applications and licences / exploitation sites / processing plants / blasting permits / explosives register), environment data (contaminated sites), economic geology data (deposits and occurrences / Kosovo quarry plan), geology data (borehole / samples and analytics / geological fieldwork / map legends), metadata (reports / documents), business data (persons and companies / parcels) and administration data. For viewing the spatial data linked to the thematic data inside the database, the application also features an internal GIS viewer. The actual GIS component of the GDK features a map document that allows the data viewing, manipulation and printing using ESRI ArcMap 8.3 and ArcSDE 8.3. It includes 10 thematic layers, 2 topographical layers, 5 geoscientific layers and several background layers (topography, aerial and satellite imagery).