WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 3, Issue 1, Jan., 2022

GENERAL GEOPHYSICAL CHARACTERISTICS OF THE DEEP STRUCTURE OF CONCENTRIC STRUCTURES OF EASTERN UZBEKISTAN

To'rayev Shoxruhbek Baxtiyor o'g'li
Student of "Geology- Prospecting and Mining" Faculty of Tashkent State Technical University, Republic of Uzbekistan, Tashkent City
torayevshoxruhbek89@gmail.com

Baxriddinov Abdug'affor Xamit o'g'li
Student of "Geology- Prospecting and Mining" Faculty of Tashkent State Technical University, Republic of Uzbekistan, Tashkent City
baxriddinovabdugaffor68@gmail.com

Abstract

The relevance of the theme is determined by the development of the spatial distribution of earthquake hearth in different morphogenetic types of concentric structures (CS), and due to the need for studying the structure of the crust and upper mantle in the territory of Uzbekistan/ Our country is one of the high-seismic regions of Central Asia, characterize by complex geological sand tectonic structure. So far, the seismicity and seismic activity in Uzbekistan have been studied using the geological and geomorphologic, geophysical methods. On the basis of geological and geophysical results perfume seismic region planning and forecasting locations of earthquakes.
When studying the geological nature of ring structures, in addition to traditional geological materials are widely used geophysical research methods. Attracting geophysical materials to determine deep structural elements the areas under study seem to be important. In this case, it is important to establish the severity of ring structures in geophysical fields. The choice of the method of geophysical research and the shape of the resulting material.

Introduction

Currently, the study of the deep structure of the earth's crust is based on the complex seismological methods using extensive geological information. Others approach is to study the composition and structure of the earth's crust using magnetometric and by gravimetric methods. The basis for their interpretation is geological data and information about the physical properties of rocks. In the studied region by researchers the following structural and material boundaries of the sections are highlighted.

Mohorovich boundary (M). According to the results of research, this border in the region characterized by a fairly wide range of occurrence depths. Surface relief smooth, with an average vertical gradient - 1 km per 10 km lateral distance. The Mogoltau areas differ in the smallest depths of the M border, south-west part of Karamazar and the west of the Chatkal and Karanzhatau ranges (40-45 km). General the trend of the border sinking is noted from west to east with the northeastern the direction of the main structural forms of relief.

If we turn to the scheme of tectonic zoning of the Chatkalo-Kuraminsky region, it should be noted that the Angren structural-formational subzone differs insignificant depths of bedding are superficial. Pskem-Saidalash and Thalasso. The Ugam subzone has a northeastern horizon at depths of 45-55 km. Kassan, Namangan blocks of the earth's crust are distinguished by the greatest depths the occurrence of the M boundary (55-60 km), and is characterized by a complex relief. Conrad's surface. According to V.A. Chernovsky and S.O. Borisov considered horizon occurs at depths from 25 to 40 km. The general structural plan of the strike of the isohypsum has predominantly northwest direction and is characterized by very smooth relief forms. The smoothest, undisturbed tectonic and magmatic processes, is the western part of the Kuraminsky, Chatkal ridges and ridge Karzhantau.

Here, the vertical depths of occurrence are insignificant (about 1 km by 20 km horizontal strike). Such a calm picture in the relief is observed up to the zone Kubel-Arshan faults, where there is a sharp breakdown of the surface to depths of 35-37 km. [1]

The morphological described surface area is terraced ledge sloping gently from west to east. Further east one more ledge of the meridian direction is traced gently descending to the zone Charkasar-Kurmaniskiy and Aktashskiy faults. Along them, Konrad's surface breaks off down another 3-4 km. At the intersection of the Angren-Chatkal and Koksarek-Chavatinsky faults the considered terrace-like scarp is complicated by the elongated in the meridian direction depression structure where the relative subsidence of its central part reaches 2.5-3 km Surface of the diorite layer identified in the model of the deep structure of the earth's crust Chatkal-Kuramin region, characterized by a different-altitude relief, which is associated both with the processes of magmatism, and with the tectonic movements of the main stages revitalization. A distinctive feature of the relief of the diorite layer is morphologically distinguished zones of uplifts and zones of pronounced depression structures.

In general, they have an isometric shape. So in the Chatkal structural the formation zone is distinguished by a large depression in the relief of the diorite layer with a diameter of 80-90 km with a depth of 14-16 km from the surface of the averaged

surface relief periphery, up to 30-32 km in the central part of the structure. Thus, the height difference is about 15 km. Average gradient of relief marks -1 km at 5 km distance horizontally.The maximum gradient of the height difference takes place in the peripheral parts. Depressions, while the central areas represent a flattened bottom surface structures. The area of the Angren depression on the map of the diorite layer is "Accumulation" of isometric structures of positive and negative landforms.

Considering that the average depth of the top of the diorite layer is 16-18 km, then the relative elevation of structures of positive landforms reaches 6-8 km, while as negative, they sink to depths of 10-12 km. The most difficult to build the relief of the diorite layer has the Kuraminskaya structural-formational zone, as more magmonically saturated and tectonically processed. Basalt layer. Average thickness of the basalt layer in the region the ubiquitous distribution is 16-18 km. The layer does not possess, in contrast to the overlying sharply dissected power and areas of constrictions and swellings. Kuraminskaya zone is the area where the earth's crust has the highest basalt layer thickness in region (18-20 km). The areas of blow-ups have an isometric shape in plan, where the maximum the thickness of the diorite layer is 20-22 km.

In the Chatkal zone, the power variation range is 12-16 km. Moreover, in the zone itself also has structures with an increased thickness of up to 17 km, stretching in the latitudinal direction, and isometric areas of lower values. Granite layer in the region has a ubiquitous distribution, the average thickness of which is about 16-18 km to 28-30 km The smallest values of power have blocks of the Kuramin zone from 8 to 12 km. It is interesting to note that the distribution zones of ring structures coincide with both zones of low values of the thickness of the granite layer, and with areas of maximum gradients of its change. Relief of the Early Proterozoic crustal base. [2] Based on known geologist-geophysical materials, V.A. Chernovsky and S.O. Vorisov made a surface map of the pre-Riphean crystalline base the territory of the Chatkal-Kuramin region on a scale of 1: 200000. According to their data the crystalline basement in the region under consideration lies at depths from 2 to 10-12 km.

Some of their outcrops are exposed on the surface within the Kassanskaya specific their outcrops are exposed on the surface within the Kassan and in the southwestern part Chatkal ridge. They are marked on the map as the most submerged areas (up to 8-10 km) the relief of the surface of the undisturbed crystalline basement, and the area, that passed the stage of magmatic replacement of granite granite - diarite and diorite compositions.

Chirchik has the form of an elongated block of crystalline basement and morphologically looks like the bottom of a graben-like structure, lowered relatively

boards for 8-10 km. In Karzhantau and in the Chatkal ridge, it occurs at a depth of up to 2 km from the level geoid.

The above materials show the effectiveness of geophysical methods in the study of the deep structure of the earth's crust, in particular it seems to be very important when studying the depth of laying, tectonic activity and other parameters concentric structures.

Literature

1. Kats Ya.G., Kozlov V.V. and other Ring structures of the Earth: Myth or reality. M. "Science", 1989 p. 111.
2. Yunusova OM Ring structures of the Fergana depression - indicators of possible earthquake foci. Ryazan. 1990
3. Ergashev Sh.E. Shultz S.S. Concentric structures of KyzylKum, their time formation and history of their development. Tashkent. 1990 C.8.
4. www. geologiya. Ru
5. Date K.J. An introduction to database systems. - M .: Williams, 2006.
6. Kapralov E.G., Koshkarev A.V., Tikunov V.S. Geoinformatics. the history of their development – M . **:** Academy, 2006.