73rd with International participation
Geological Congress of Turkey
Geology and Geopolitics
May 24-28, 2021 MTA General Directorate Cultural Center/ANKARA

Analysis of geological and structural features of gold mineralizations of the Central Kyzylkum

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INTRODUCTION

All researchers note the special role of regional structures in the formation and placement of gold mineralization. In this process, both folding dislocations and discontinuous disturbances are of great importance. Discontinuous violations of various directions and their combinations - conjugation, intersection, control the formation of ore fields and deposits in the region. It should be noted that questions of studying the structures of the gold deposits of Central Kyzylkum and their systematics occupy an insignificant place in publications.

It should be noted that, despite the large-scale conduct of structural studies in the region, there is no single approach to assessing the ore-controlling role of the structures of the studied objects.

The structures of the Pre-Mesozoic formation of the Central Kyzyl Kum have sub-latitudinal stretches in the center and in the east, west-north-west in the west [4]. In general, these structures form a complex folded-thrust collision Late Paleozoic structure, consisting of a package of tectonic plates (covers), separated by thrust planes and directions of incidence, and often having independent stratigraphic sections in different plates.

RESULTS AND DISCUSSION

All deposits and manifestations of gold from the Bukantau mountains are located within extended intra-block crushing and crushing zones, usually sub-consonant with the enclosing strata. Thus, these zones play the role of ore-controlling structures and can be comparable with ore-bearing faults. In addition to crushing and crushing, the zones are characterized by small stocks and dikes of the formation of small bodies of variegated composition, often forming belts and bundles; sometimes an increased number of quartz veins and veins is noted [1, 2].

The analysis of ore-controlling factors in the Tamdytau mountains is logical to carry out on the example of the Muruntau deposit [3]. According to the prevailing idea, Muruntau is a large stockwork with a combination of shallow-lying sub-consonant and steeply dipping secant ore zones, which are unevenly distributed in the total volume, causing structural and morphological features of various deposits and bodies. Currently, a number of researchers, regardless of their genetic orientation, are of the opinion that the main feature of the Muruntau deposit is its confinement to the site of the intersection of the flexural bend of the tectonized variegated Besapan rocks with steeply falling faults of the sub-latitudinal and northeastern strike, where industrial mineralization crowns the Upper Paleozoic tectonic activity.

The main structural ore-controlling position of the Aristantau mountains is the intersection of the meridional Aristan-Kurukkuduksky structure and the submeridional Aristankuduksky structure with the sub-latitudinal Edum-Beshashchinsky crumple zone. According to geophysical data, the Aristantau gold deposit is mapped by the positive magnetic anomaly of the same name and is confined to the periphery of the Aristantau dome metamorphic structure.

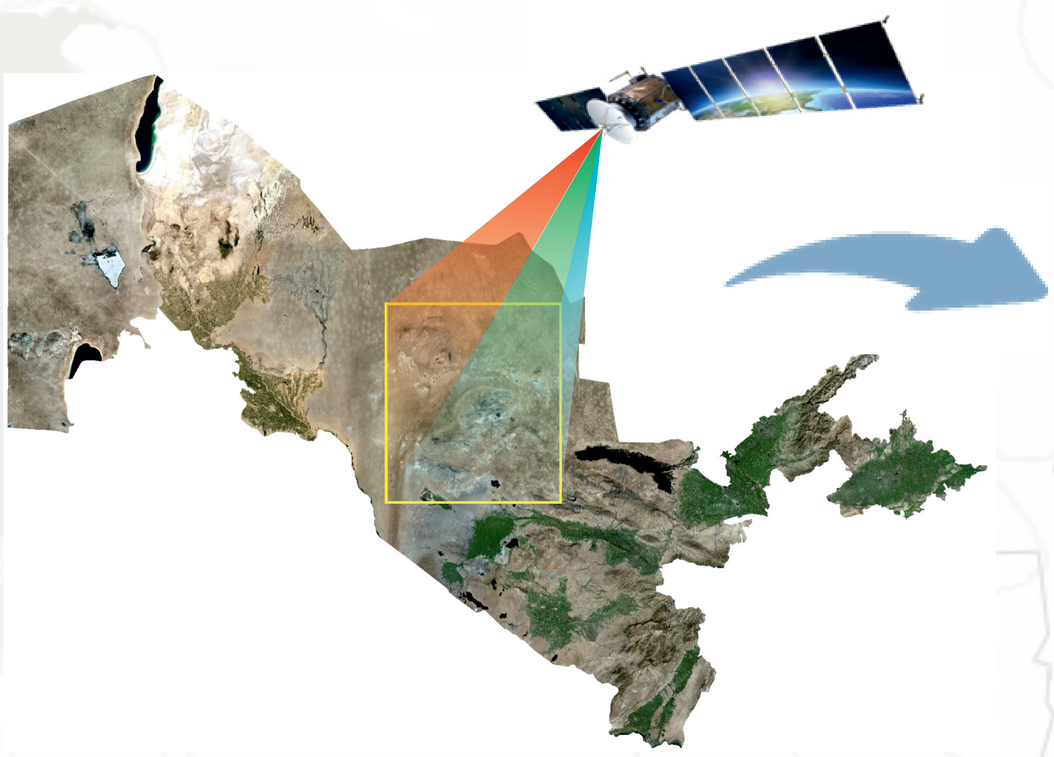
Potentially promising submeridional tectonic structures Aristankudukskaya, Akkazatskaya, Yambyskakskaya, to nodes which a latitudinal zones of intersection collapse Shariktinskoy and EDUM-Beshaschinskoy confined gold deposit Aristanatau and number of occurrences (Beshaschi, EDUM, stockwork, Yambyskak, Akkazat, Ayrak), clarified their position, and also the meridional Aristan-Kurukkuduksky structure, in which the Aristantau gold deposit is located and the ore occurrence of Kurukkuduk gold is timed.

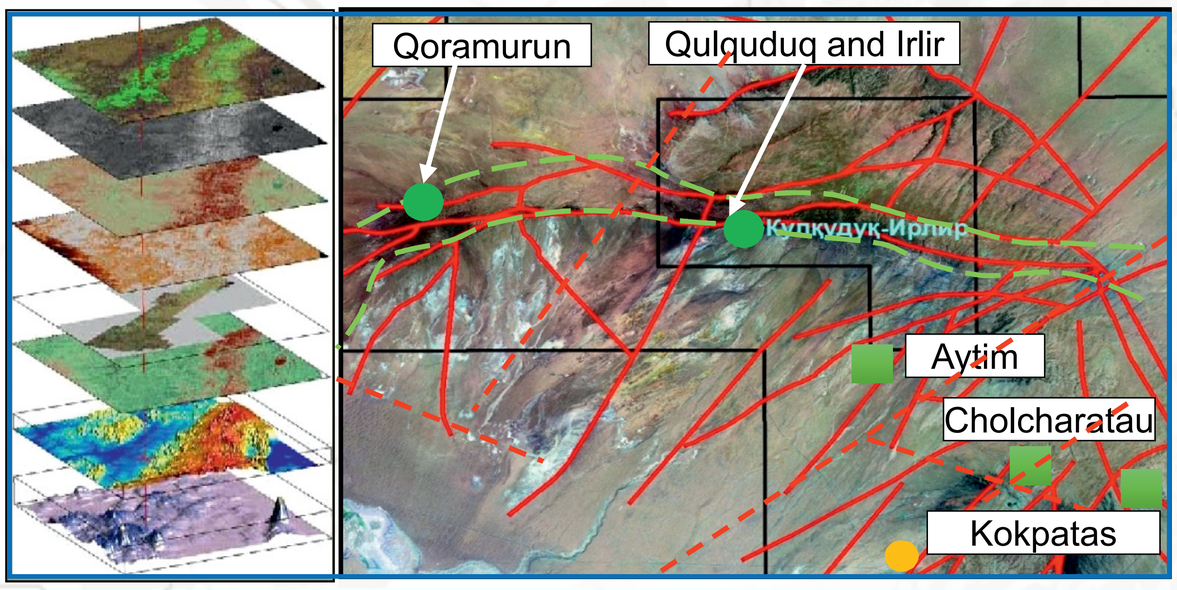
The manifestations of gold in the Aristantau ore field are of the gold-sulfide-quartz or gold-polysulfide-quartz types. The Amantaytau group of deposits is closest to them in terms of mineralogical and geochemical characteristics.

CONCLUSION

The main ore screening (and possibly ore supplying) structure of Auminzatau, Beltau, Daugiztau, Dzhitymtau of the area is the Karatau-Dzhitymtau thrust zone, fault distributions and contacts of competent layers are ore distributing.

In relation to explosive faults, deposits have the following structural positions: fault discharge zone; secant faults; deep faults; interfacing faults with a crushing zone; zone of intersection of deep faults; zones of longitudinal faults and the zone of close (layered) faults, the zone of collapse. A statistical analysis of these data shows that Tamdytau gold ore objects are characterized by three structural positions: in secant faults; at the fault interface with the collapse zone; in zones of intersection of faults.





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