

## CHAPTER 4 SUMMARY OF THE EXPLORATION RESULTS

### 4-1 Correlation Between Geochemical Anomaly and Mineralization

In the Zuukhiin gol area, granodiorite including oxide copper as malachite and azurite was found at outcrops of quartz veins in the surrounding area of rhyolite intrusion. According to soil geochemistry results, high copper anomalous zone of more than 100ppm in copper contents extends from east to west in the area where the granite is distributed. Consequently, it is considered that copper mineralization was due to epigenetic mineralization after emplacement of granitic rock. Spotted oxide copper minerals existed within green colored and altered andesite. The copper grade resulted in Cu 1.48%.

In the Khujiriin gol area, quartz veins including copper minerals as chalcopryrite, malachite and azurite exist in the area where medium grained granite is widely distributed in the central part of the area. The existing geological data indicated that copper mineralization elongating east to west had been existed in the area. Quartz vein zone (strike: N80° E to EW; dip: 80° N to 90° ) elongated east to west indicates the presence of copper mineralization (more than Cu 0.1%). Soil geochemical anomaly also indicated the presence of copper mineralization.

In other areas, promising rock geochemical and soil geochemical anomalies were never detected.

### 4-2 Correlation Between Geophysical Anomaly and Mineralizations

In the Zuukhiin gol area, TDIP geophysical survey was conducted in an area where high soil geochemical anomalous zone of more than Cu 100ppm was distributed. IP anomaly zone consisting of low resistivity and high chargeability was detected in the soil geochemical anomalous zone. Low resistivity zone of less than 850  $\Omega$ m and high chargeability zone of more than 30mV/V were confirmed in the deeper part from the surface. The scale of this zone is more than 4.0km  $\times$  2.0km, large, wide and extended at depths. In the area, copper minerals as malachite are widely distributed on the surface within 4km from east to west and 2km from north to south. In the area, phyllic alteration zone consisting of chlorite-sericite is distributed in the central part while propylite alteration zone consisting of chlorite alteration is distributed outside of the phyllic alteration zone.

In the Khujiriin gol area, TDIP geophysical survey was conducted in an area where quartz veins zone with more than Cu 0.1% were developed in the central part of the area and where soil geochemical anomalous zone was detected. The TDIP survey detected a low resistivity zone with more than 1.200  $\Omega$ m and weak high chargeability zone with approximately 10mV/V. Quartz veins with copper mineralizations are developed in the area.

In other areas, high IP anomalies were not detected.

#### **4-3 Preliminary Evaluation of Mineral Potential of the Area**

According to the results of geological and geophysical surveys, high potential areas for copper mineralization are as follows:

- 1) In the Zuukhiin gol area, porphyry copper mineralization has probably occurred in the area where high geochemical anomalous zone and IP geophysical anomaly of low resistivity and high chargeability were detected.
  - 2) In the Khujiriin gol area, poly-metallic quartz vein mineralization is likely to have occurred in places where quartz veins of more than Cu 0.1% are developed and where IP geophysical anomaly of high resistivity and weak high chargeability was detected.
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