

Fig. II -2-8 Distribution Map of Geochemical Anomalies in the Murgul Area

## **Part**

### **Conclusion and Recommendation**

## Part III Conclusion and Recommendation

### Chapter 1 Conclusion

#### 1-1 Tunca Area

The Kızılkaya Formation, the ore horizon of the Cayeli Deposit, corresponded to the Alemağaç Formation, extends to the area. In the area, the phreatic explosion occurred on the flank of the dacite lava dome (Adcl) of the lower member of the Alemağaç Formation, then the volcanogenic massive sulphide mineralization occurred in the stage of the dacitic pyroclastic rocks (Atf) deposition. The purple dacite (green dacite) intruded ducircular the mineralization weaken, then some sulphide dissemination occurred in the dacitic pyroclastic rocks (Attf). Accordingly, it is presumed that the ore horizon ranges from the dacitic pyroclastic rocks (Atf) to below the reddish calcareous mudstone (Cms) of the lowest bed of the Çağlayan Formation.

The Alemağaç Formation is the lowest one in the area. It is overlain by gentle thick formations. The topography of the area is steep and rugged. It is thought that the possible target areas for prospecting are within several hundreds meters, maximum 1,000 meters, from the boundary with the Çağlayan Formation, considecircular economical conditions. The survey has revealed many volcanogenic massive sulphide mineralized zones and occurrences, however the grade of copper and zinc is low due to its principal constitution mineral, and the alteration zones are sporadic compared with that of the Murgul area. Regarding the Tunca Deposit, only a very weak occurrence has been confirmed in the drill hole MJTH-2. Therefore, it is thought that the main body of the ore deposit should be small-scale. The alteration mineral zone related with vein-type mineralization exists along the Hemsin River, but it is low grade, and no lateral and vertical change in the mineralization state is seen. Accordingly, it is judged that the potential for large-scale ore deposits is low in the economic sense.

#### 1-2 Murgul Area

The dacitic rocks of the lower member of the Murgul Formation, having undergone volcanogenic massive sulphide mineralization, are broadly distributed in the area. The knowledge obtained on the mineralization is as follows.

- The center part of the alteration zone related with mineralization consists of the quartz-kaolinite-sericite zone, and extends to the southwest to northeast or south-southwest to north-northeast through the Çakmakkaya Deposit to Kızılkaya.
- The strong alteration intensity zone, over 90 percent AI, extends through the Murgul Deposit swarm trending south-southwest to north-northeast.

- The mineral occurrences in the area align southwest to northeast in global view. In the northeast end of the alignment, the Upper Kokolet Occurrence containing barite ore is emplaced in the uppermost of the lower member of the Murgul Formation.

Above-mentioned knowledge indicates that the volcanogenic massive sulphide mineralization has been occurred along the northeast to southwest trending zone through the Murgul Deposit swarm. The ore horizon of the southwestern side of the Murgul Deposit swarm has been eroded out already. On the other hand, that of the northeastern side, i.e. the mountain block from the Ardiç district to the Kokolet district, is overlain by the basic volcanic rocks of the Ardiç Formation, and it is strongly expectable to discover new ore deposits underneath the overlying basic volcanic rocks.

## Chapter 2 Recommendation for Future

As the result of the survey program, the following conclusions have been obtained: 1) the potential for the economically important large-scale ore deposit is low in the Tunca area, 2) it is highly possible to expect unknown new volcanogenic sulphide ore deposits underneath the basic volcanic rocks in the mountain block in between the Ardiç section and Kokolet section in the Murgul area.

The followings are the recommendation for future exploration activity.

### [Tunca area]

The potential for economically important ore deposit is low in the area. However, the ore horizon of the Cayeli Deposit extends to the area. Therefore it is recommended to expand survey areas to the surrounding areas.

### [Murgul area]

It is recommended to perform a drilling survey program in the mountain block to the east of the Ardiç district.

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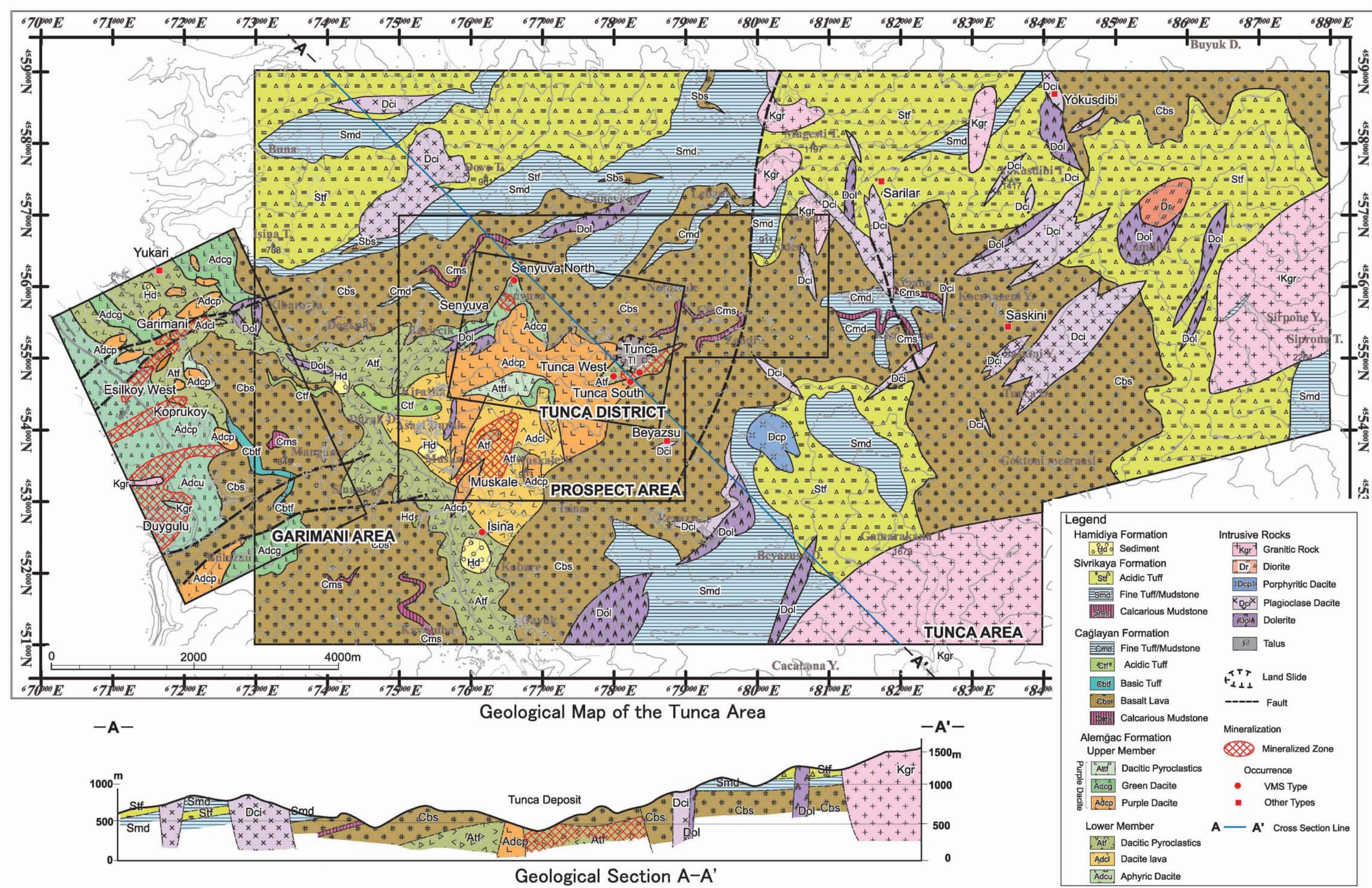
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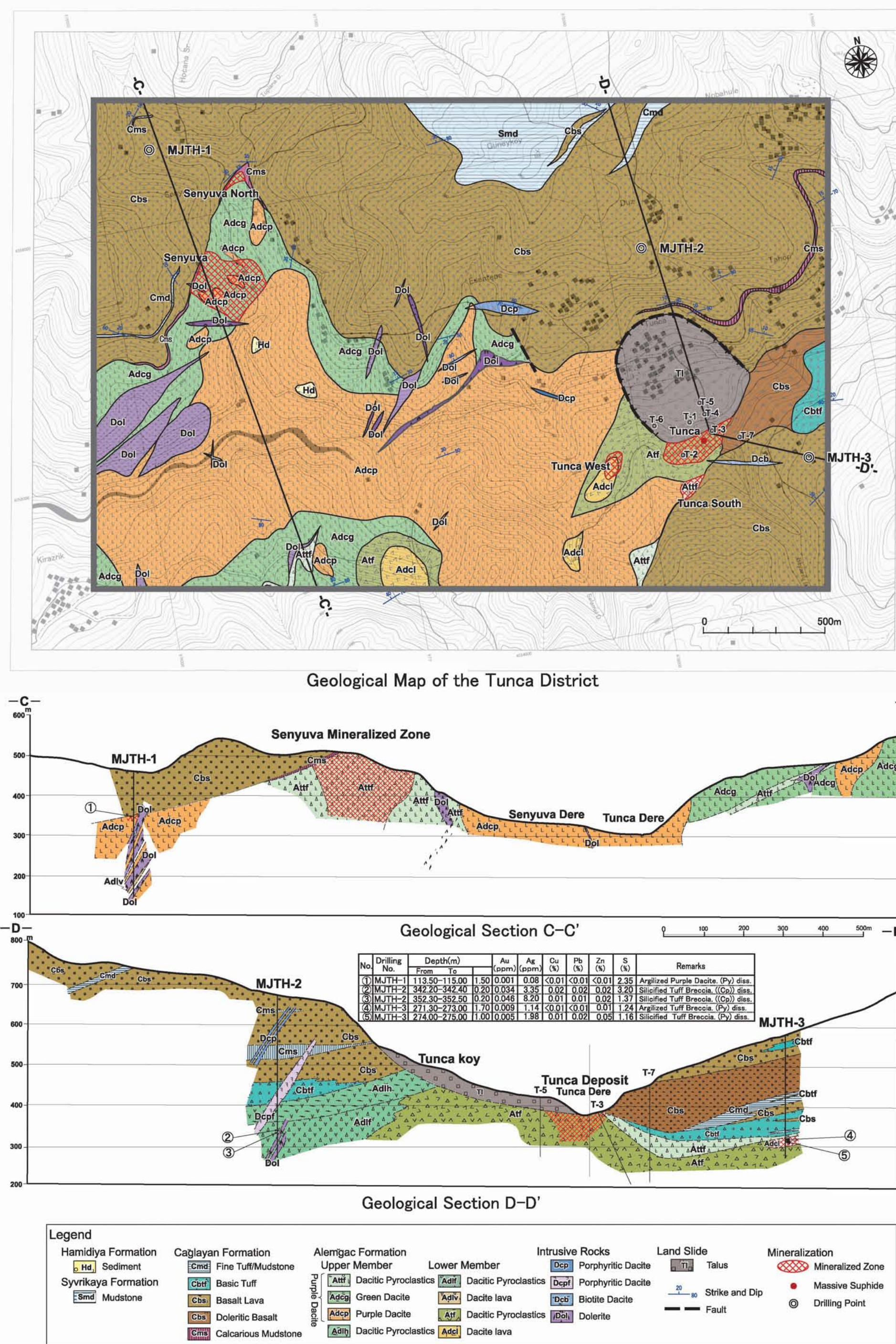
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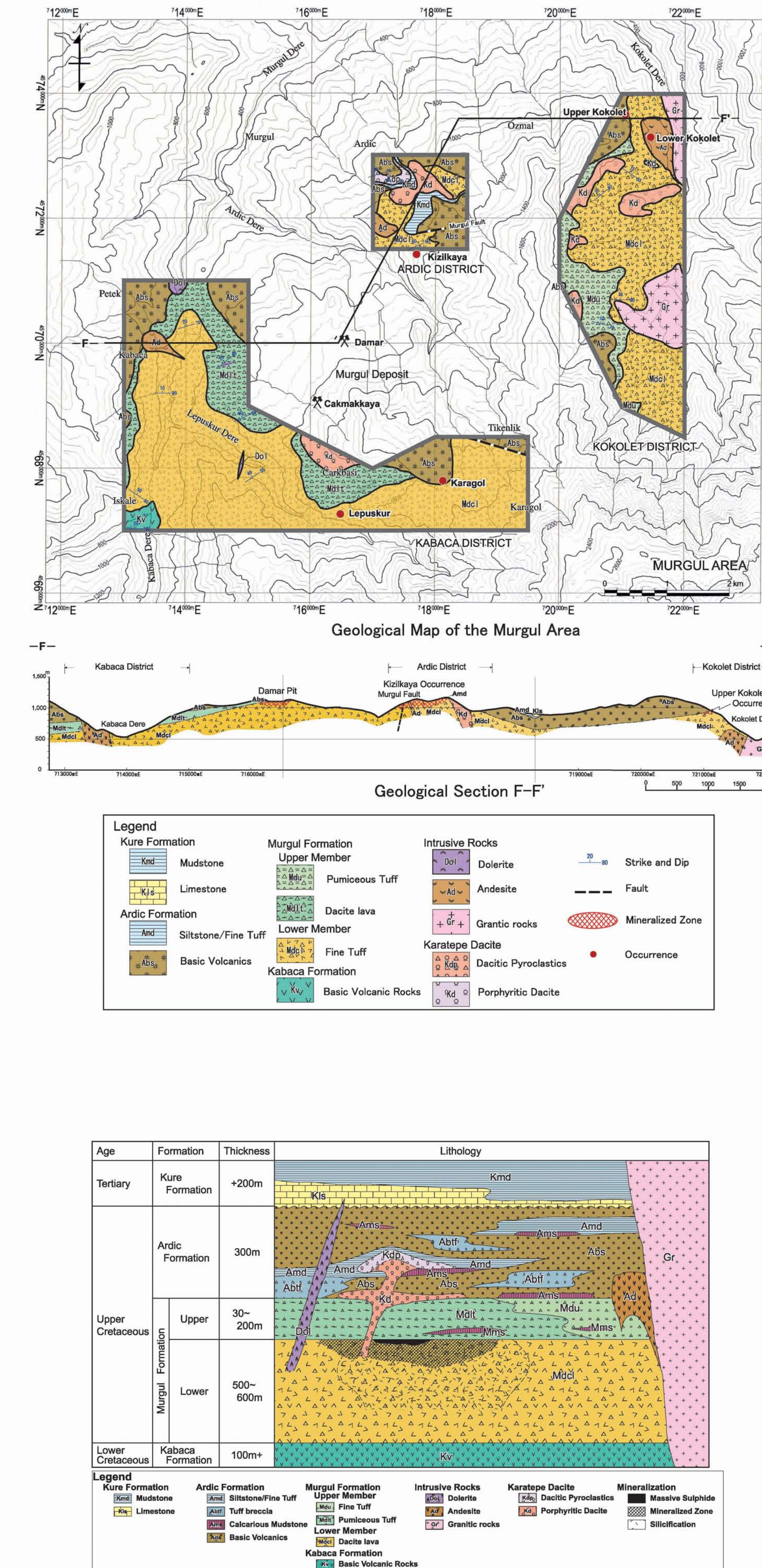
### Tunca Area (Geology)



### Tunca District (Geology)



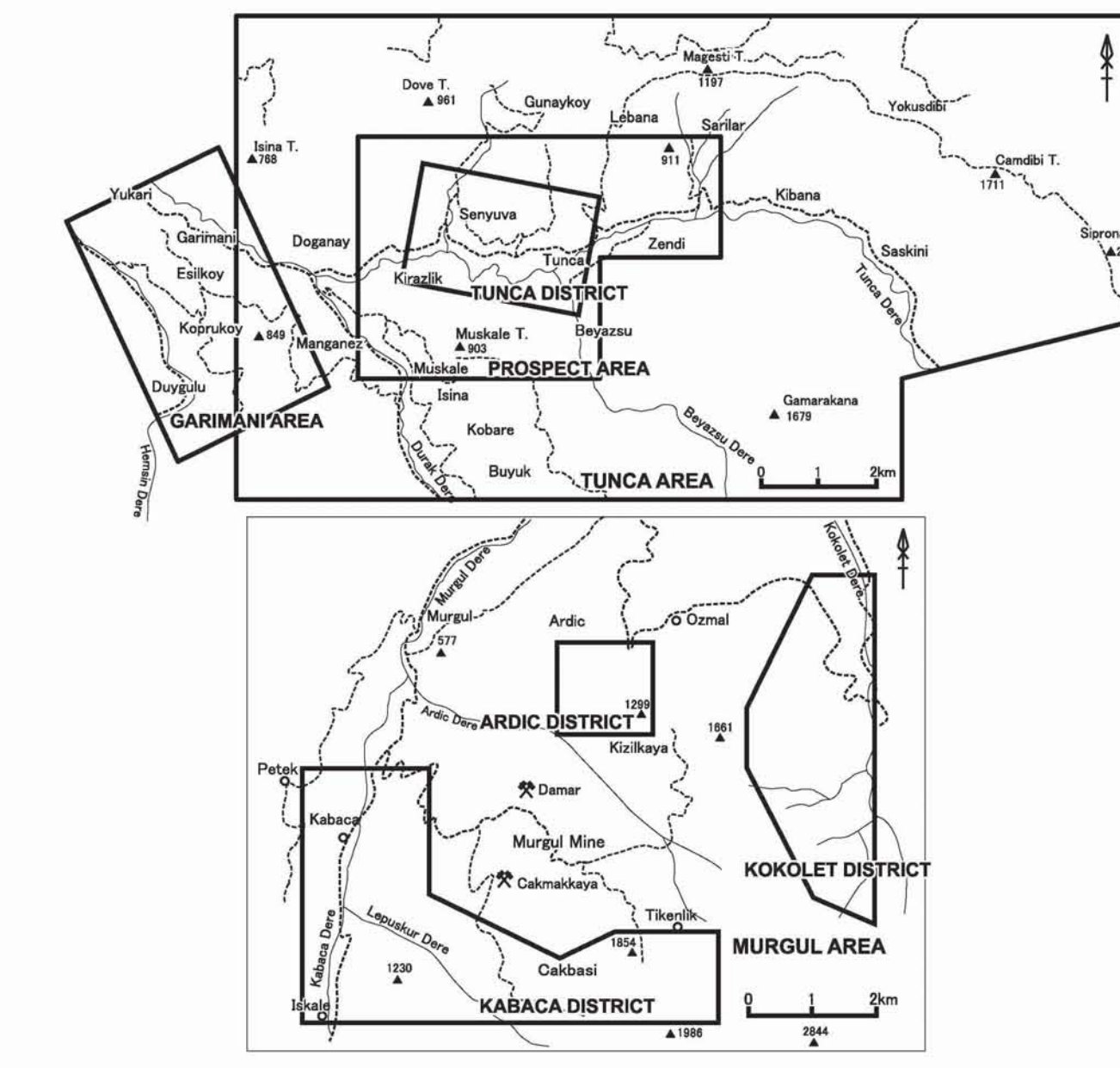
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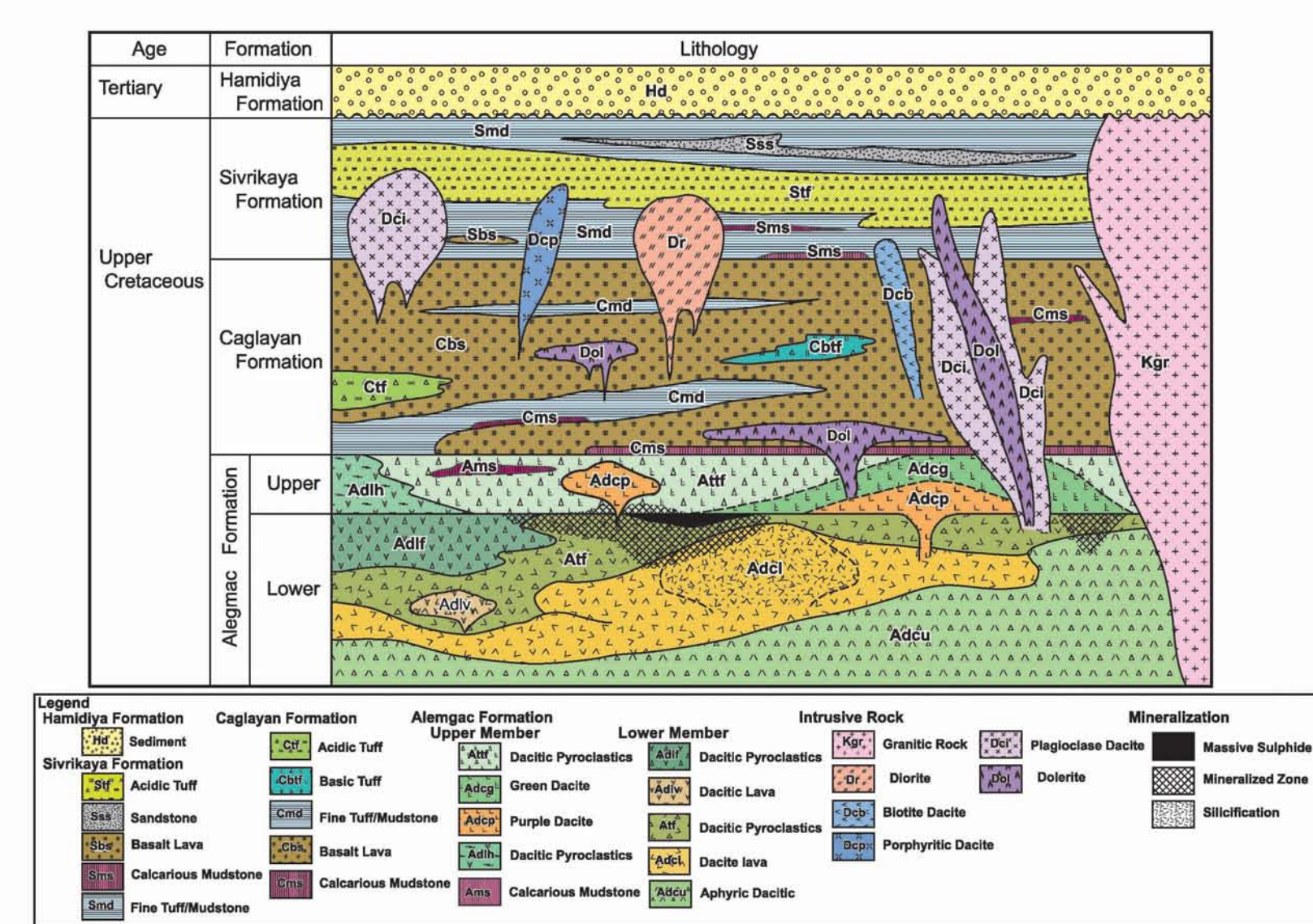
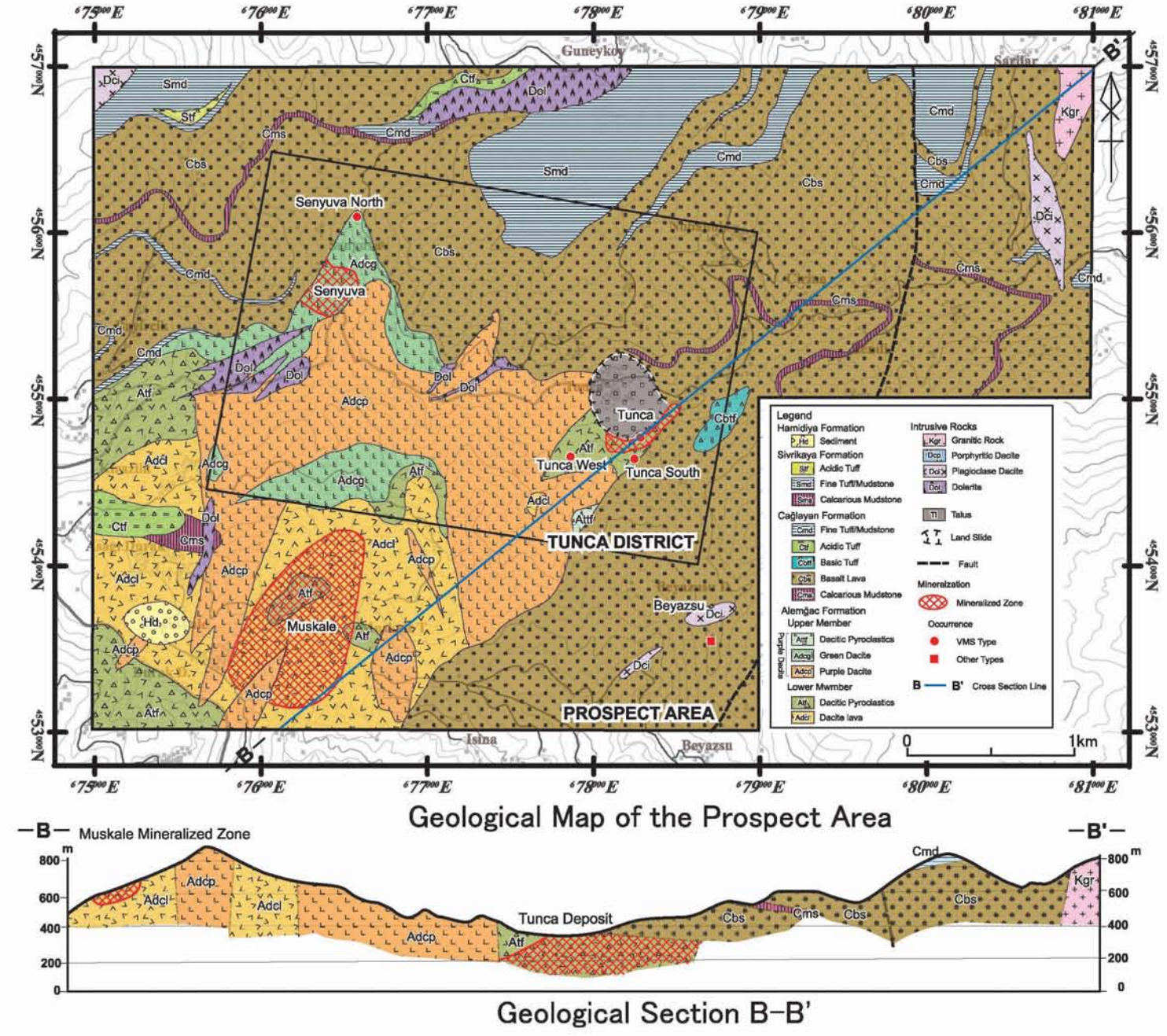
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Integrated Interpretation Map

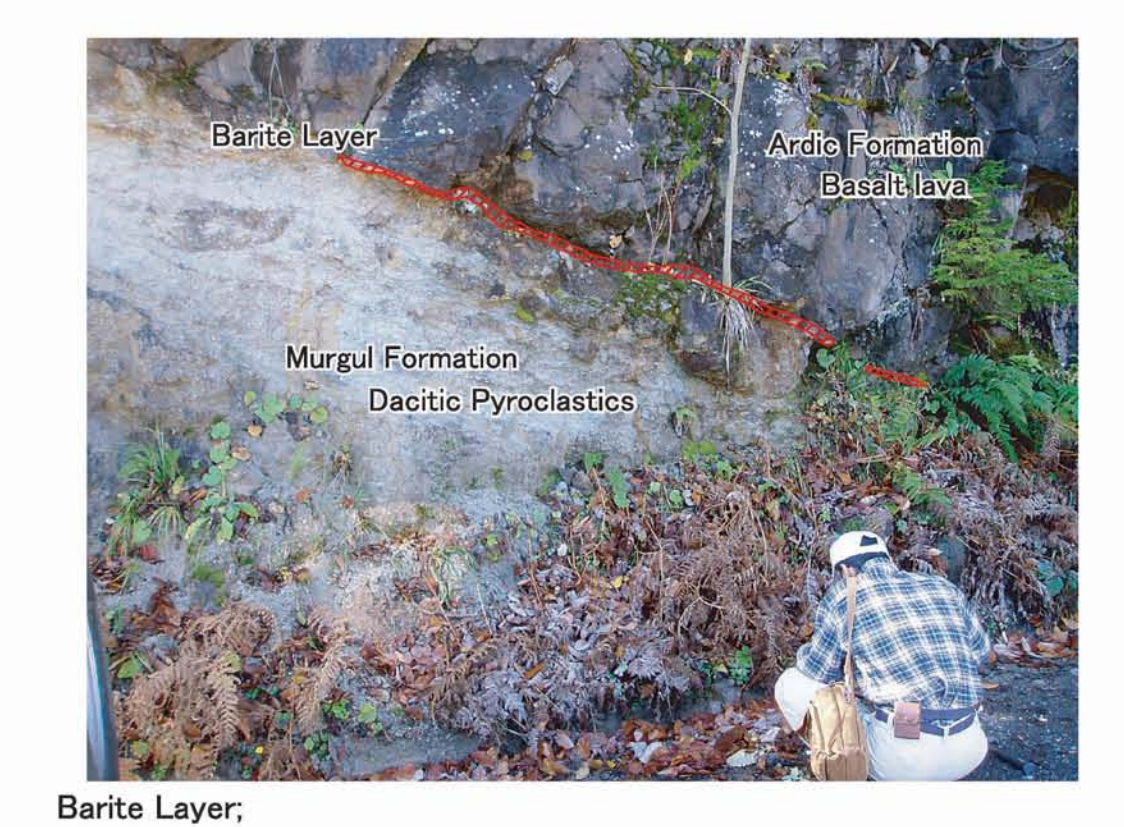
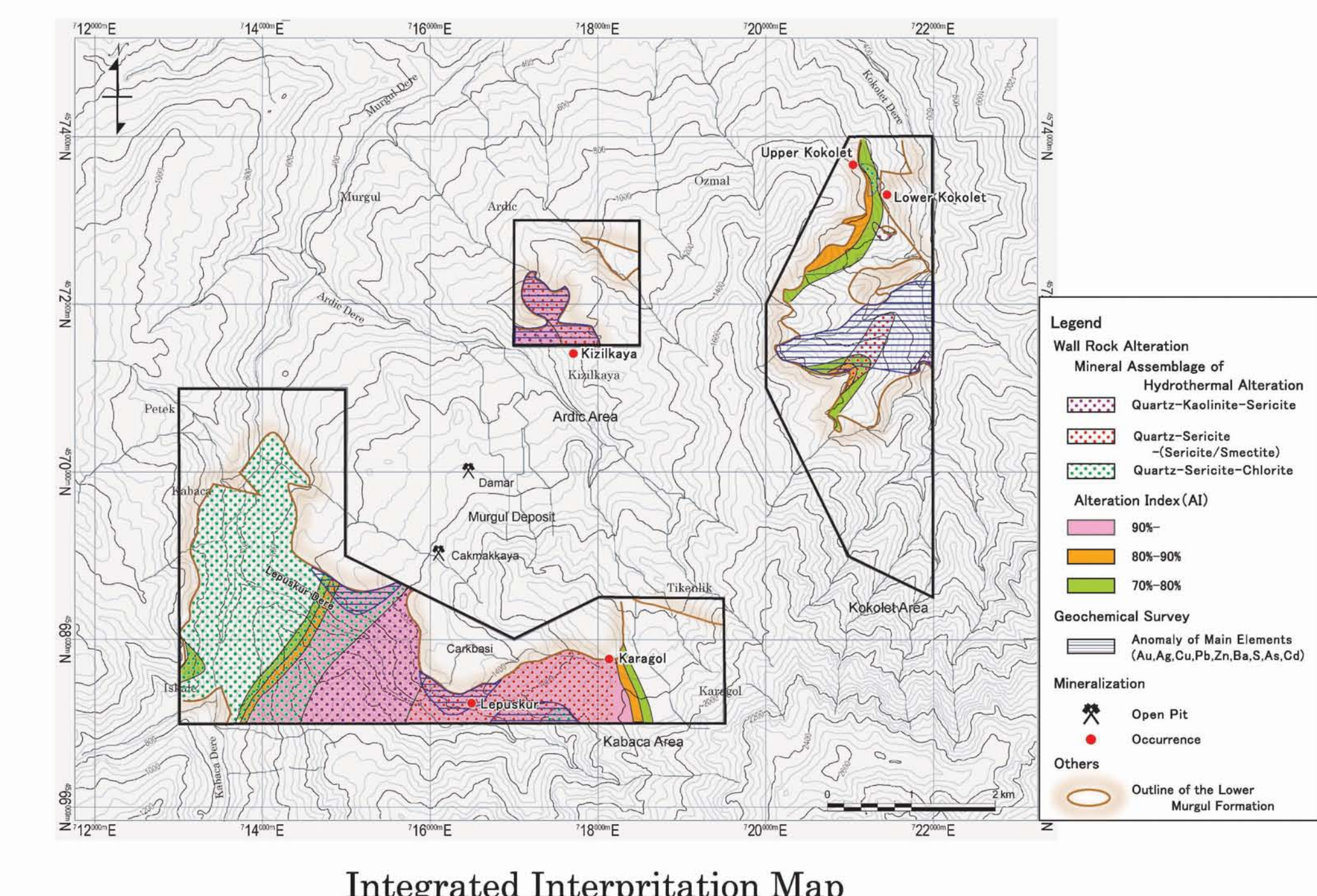
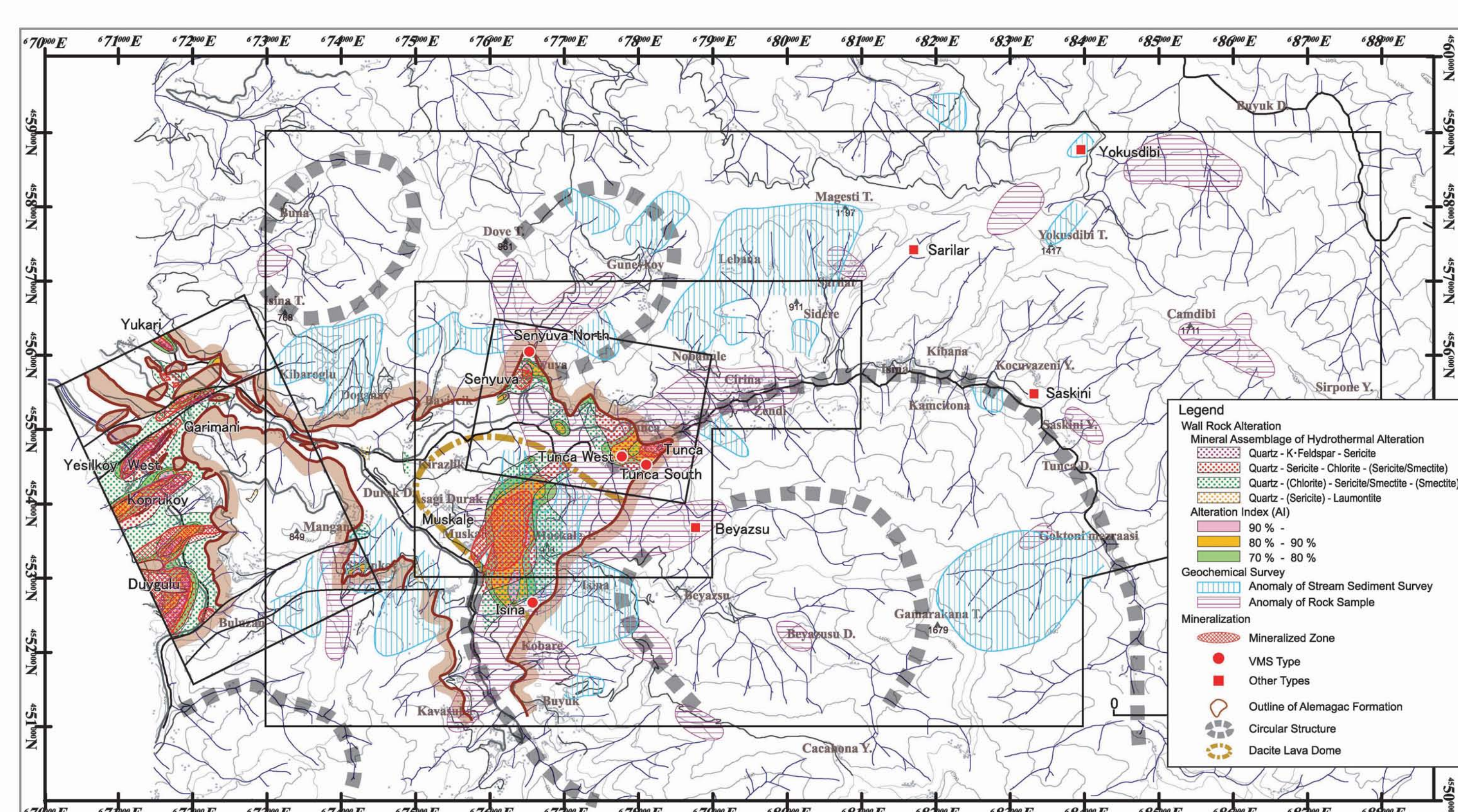
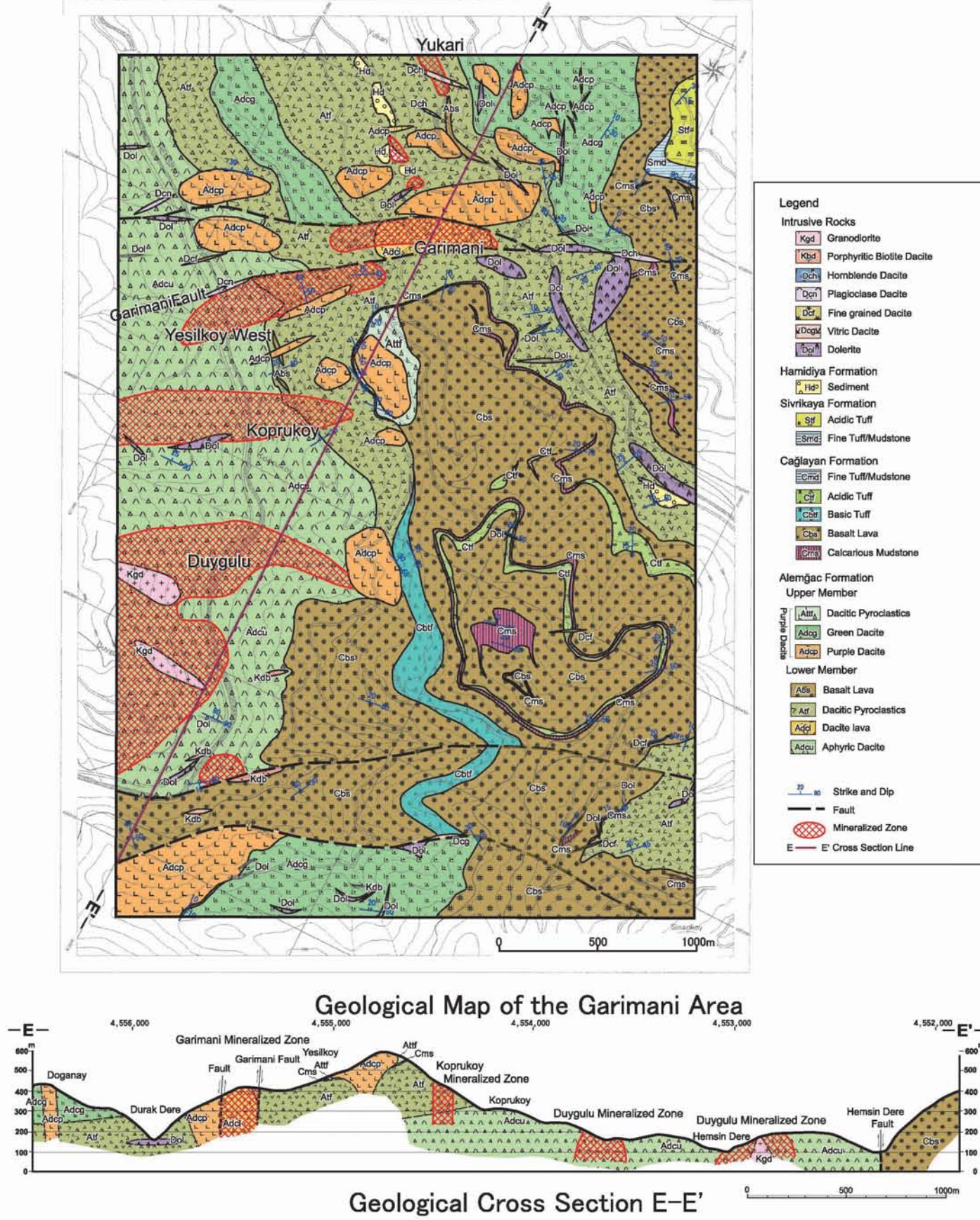
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### Prospect Area (Geology)



### Garimani Area (Geology)



Upper Kocoket Occurrence