Part Details of the Survey

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Chapter 1 Collection and Analysis of Previous Data

1-1 Survey Method

We collected and analyzed existing documents stored in COREMI before and during the start of the field geological survey. We also observed the cores stored in the Zacualpan town office on the spot to make an analysis of the geological structure and mineralization of the survey area.

1-2 Survey Result

1 Collected Data

The collected and evaluated data are listed below. Figure 2-1-1 shows location of previous surveys.

- 1) Final report (summary)
- 2) Geological report
- 3) Airborne Geophysics (Dighem)

Total Field Magnetics, Calculated Vertical Gradient Magnetics

- Apparent Resistivity 7,200 Hz
- Apparent Resistivity 56,000 Hz

Radiometric Total Count, Radiometrics Potassium Counts, Radiometrics Uranium

- Counts, Radiometrics Thorium Counts
- 4) Induced Polarization Survey

Contours of Apparent Resistivity (Level,N=F(21))

Contours of Apparent Chargeability (Level, N=F(21))

- I. P. Survey Cross-Sections
- 5) Soil Geochemistry Contour Maps(Cu, Pb, Zn, As, Sb, Cd, Ba, Ag, Mo)
- 6) Topographic maps (1/10000, 1/2500)
- 7) Geochemical dada

2 Analysis Result

Drilling surveys concentrated in an area covering the Capire and Aurora 1

deposit. Apparently the total number of boreholes was 70 or more and the total drilling depth exceeded 10,000 m. As a result, we recognized the mineralization zone shown in Fig. 2-1-2. According to the final report, its ore reserves are 1.2 mt and average grade is 73 g/t of Ag and 1.13% of Zn. The ore bodies, which contain mainly Pb and Zn, mostly occur in sedimentary rock, intercalated with acidic tuff layers, several tens of meters below the surface of the earth. We observed the cores intersected black ore parts and recognized the ores consisting of fine-grained galena and sphalerite and containing a small amount of pyrite, chalcopyrite, gypsum, occurred in black slate and calcareous slate.

The IP survey was conducted over a wide area including this ore body. The IP survey area indicated on the map covers a part of the east of the La Campana district and the majority of the Capire district but does not cover the Santiago Salinas district. The interpretation map was prepared with 21-point filter. A low resistivity and a high chargeability are observed in the sedimentary rocks distribution area and continue to the northern part of the Capire district and La Campana district.

The profile (traverse line) of the Capire district covers the southern end of the Capire district in the present survey. The investigation must have focused on shallow depths between Capire and Aurora (where many boreholes concentrate), which constitute a prospect. The potential mineralization zone was indicated as an anomaly area of 20 mV or more. A very small anomaly area was detected in the Aurora 2 deposit, too (Fig. 2-1-3.)

The airborne electromagnetic survey covers the entire area of the Mamatla mine claim. As a result, since each map reflects well the distribution of the layers, the continuity of the sedimentary rocks of the Villa Ayala Formation and the boundary between the sedimentary rocks of Tejupilco schist and its upper volcanic rock can be read from the maps. They are in good agreement with the previous survey results and very useful to prepare a regional map.

The result maps of the soil geochemical exploration have covered a part of the east of the La Campana district, the majority of the Capire district, and the northeastern end of the Santiago Salinas district. Each element has a high anomaly value in the sedimentary rocks where existing deposits are distributed and particularly an anomaly area is formed near Capire.

1-3 Summary

1) The drilling location with description of geology, mineralization and assay are obtained. Massive sulfide type mineralization occurred sporadically in the area.

2) IP survey result shows distribution pattern of chargeability and resistivity in shallow revel. A low resistivity and a high chargeability reflect the sedimentary rocks distribution but there is no availability for deep level. The potential mineralization zone was indicated as an anomaly area of 20 mV or more.

3) The data of airborne geophysics are available to understand regional geology and structure.



(F):Santiago Salinas area







>25MILLIVOLTS / VOLT

A_____A' section for Fig.2-1-2



>20MILLIVOLTS / VOLT

Fig.2-1-3 IP Anomaly map of Capire-Aurora2 (modified after Valerie Gold report, 1997) - 31 -