NO.

REPORT ON THE MINERAL EXPLORATION IN THE ZACUALPAN AREA, THE UNITED MEXICAN STATES PHASE III

MARCH 2004

JAPAN INTERNATIONAL COOPERATION AGENCY
JAPAN OIL, GAS AND METALS NATIONAL CORPORATION

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Preface

The Japanese Government decided to conduct a mineral exploration program consisting of geological, geochemical and geophysical surveys in the Zacualpan area, in response to the request from the Government of the United Mexican States. The purpose of the program is to estimate its potential for mineral deposits. The Japanese Government entrusted the implementation of this plan to the Japan International Cooperation Agency (JICA) and JICA entrusted the enforcement of the program to the Metal Mining Agency of Japan (recently, Japan Oil, Gas and Metals National Corporation) due to the specialty of the program. MMAJ started the survey program in the fiscal year of 2001 and dispatched a two members survey team to Mexico from July 21 to November 14, 2003.

The field survey program in the area has completed as scheduled in cooperation with the Consejo de Recursos Minerales and the concerned Governmental organizations of Mexico.

Finally, We wish to express a deep appreciation for the cooperation of the concerned Governmental organizations of Mexico and Japan.

March, 2004

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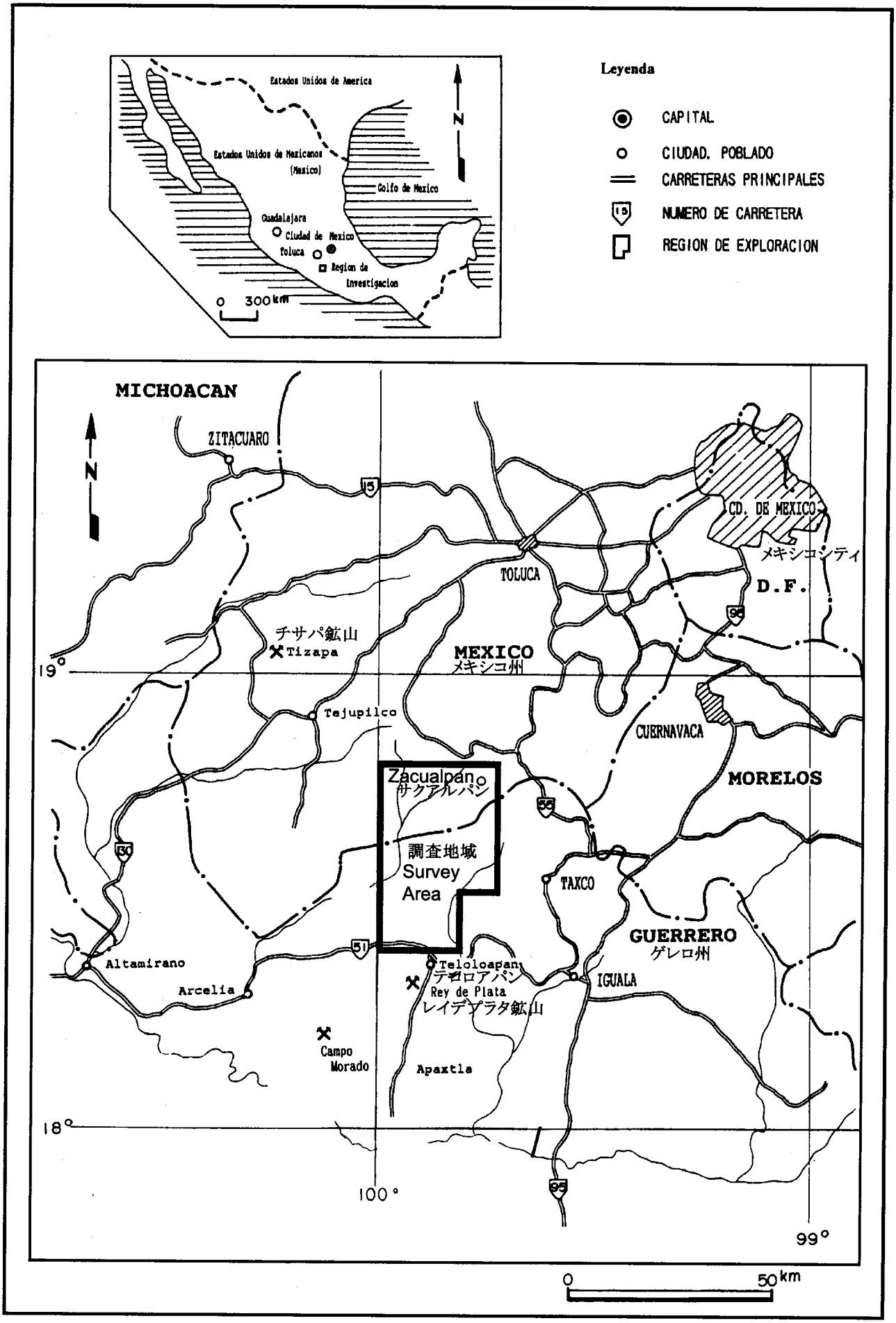

Fig.1 Location Map of Zacualpan Area

Summary

The present survey was conducted, with the aim of discovering volcanic massive sulfide deposits of economic value and technical exchange with counterpart agencies, through the investigation and evaluation of geology and mineralization in the Zacualpan area of the United Mexican States.

A survey of two boreholes in the Santiago Salinas district, a detailed geological survey and a survey of two boreholes in the Capire district, a detailed geological survey and a survey of two boreholes in the La Campana district were conducted and existing data was collected and analyzed. All of these districts are situated in the Aurora area selected on the basis of the results of the second phase survey.

According to the survey, the geology of the Aurora area consists of lower volcanic rocks, sedimentary rocks, upper volcanic rocks, andesitic intrusive rocks, of the Villa Ayala Formation and the Pachivia Formation. The lower volcanic rocks of the Villa Ayala Formation consist of lower andesitic volcanic rocks and upper dacitic tuff. Sedimentary rocks are mainly composed of calcareous slate and accompanied by limestone and tuff. The survey also revealed that the upper volcanic rocks consist of andesitic volcanic rocks and dacitic tuff.

The drilling survey in the Santiago Salinas district discovered a massive or disseminated pyritic layer, which may be an extension of mineralization zones observed on the outcrops, but did not show the mineralization of Pb or Zn.

In the Capire district, the Capire deposit and Aurora 1 deposit occur in the sedimentary rocks, and a pyritic dissemination zone and thin layer were recognized at the boundary between the lower volcanic rocks and the sedimentary rocks near the Tlanilpa mineral showing. Geochemical anomalies were extracted near the Aurora 1 deposit, in the western part to the northwestern part of the Capire deposit, and in the east of the Tlanilpa mineral showing. On the basis of the results obtained, boring surveys (MJZC-6 and MJZC-7) were conducted in the east of the Tlanilpa mineral showing. In MJZC-7, interbeds of pyritic layer, tuff, and slate corresponding to an extension of the Tlanilpa mineral showing were intersected over about 10 m, but an ore body of economic value was not discovered.

In the La Campana district, the Manto Rico deposit and the La Campana mineral showing occur in sedimentary rocks, and an alteration zone accompanied by a remarkable pyritic dissemination was recognized in foliated tuff (lower volcanic rocks) in the western part to the northern part of the district. The geochemical survey extracted geochemical anomalies in the southern part of the Manto Rico deposit, in the eastern part of the Otates village, in the western part to the eastern part of the La Campana mineral showing. On the basis of this result, drilling surveys (MJZC-8 and MJZC-9) were carried out in the eastern and western parts of the La Campana mineral showing. At MJZC-8, a mineralization zone of a several-centimeter thin layer mainly composed of Pb-Zn was captured in some places to the depth of 80 to 120 m. The analysis showed 0.268%/Cu, 1.69%/Pb, 3.94%/Zn, and 1,920 ppm/Ba at the depth of 83.7 m and 176 ppb/Au, 47.5 ppm/Ag, 0.231%/Cu,1.28%/Pb,and 1.33%/Zn at the depth of 115.7m to 116.0 m.

The collection and analysis of existing data showed that there is a 1.2 million tons of ore body having an average grade of Ag: 73 g/t and Zn: 1.13% in an underground shallow place between the Aurora 1 deposit and the Capire deposit. It was also clarified that a small-scale mineralization zone mainly composed of Pb-Zn was captured in the sedimentary rocks of the Villa Ayala Formation of each district.

From the above results, large ore bodies were unlikely to have been formed because small-scale mineralization zones are widely distributed and development of hydrothermal systems are spread out in this area. It was concluded that there is little possibility of the formation of massive sulfide ore bodies of a high economic value.

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