

**REPORT ON THE MINERAL EXPLORATION
IN
THE WESTERN ERDENET AREA,
MONGOLIA
CONSOLIDATED REPORT**

MARCH 2004

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

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PREFACE

In response to the request of the Government of the Mongolia, the Japanese Government decided to conduct a Mineral Exploration Project in the Western Erdenet Area and entrusted the project to the Japan International Cooperation Agency (JICA) and the Metal Mining Agency of Japan (MMAJ, at present: Japan Oil, Gas and Metal National Corporation (JOGMEC)).

This project was carried out in three years from 2001 to 2003 and completed on schedule with the valuable collaboration of the relevant governmental agencies of the Mongolia, especially of Mineral Resources Authority of Mongolia (MRAM) and Geological Information Center (GIC).

This report is a summary of the survey results conducted during these three years.

We hope that this report will serve for the development of the mineral resources in Mongolia and contribute to the promotion of friendly relations between Japan and Mongolia.

We wish to express our deep appreciation to the officials concerned of the Government of Mongolia for their close cooperation extended to the team.

March 2004

Tadashi Izawa
Director
Japan International Cooperation Agency

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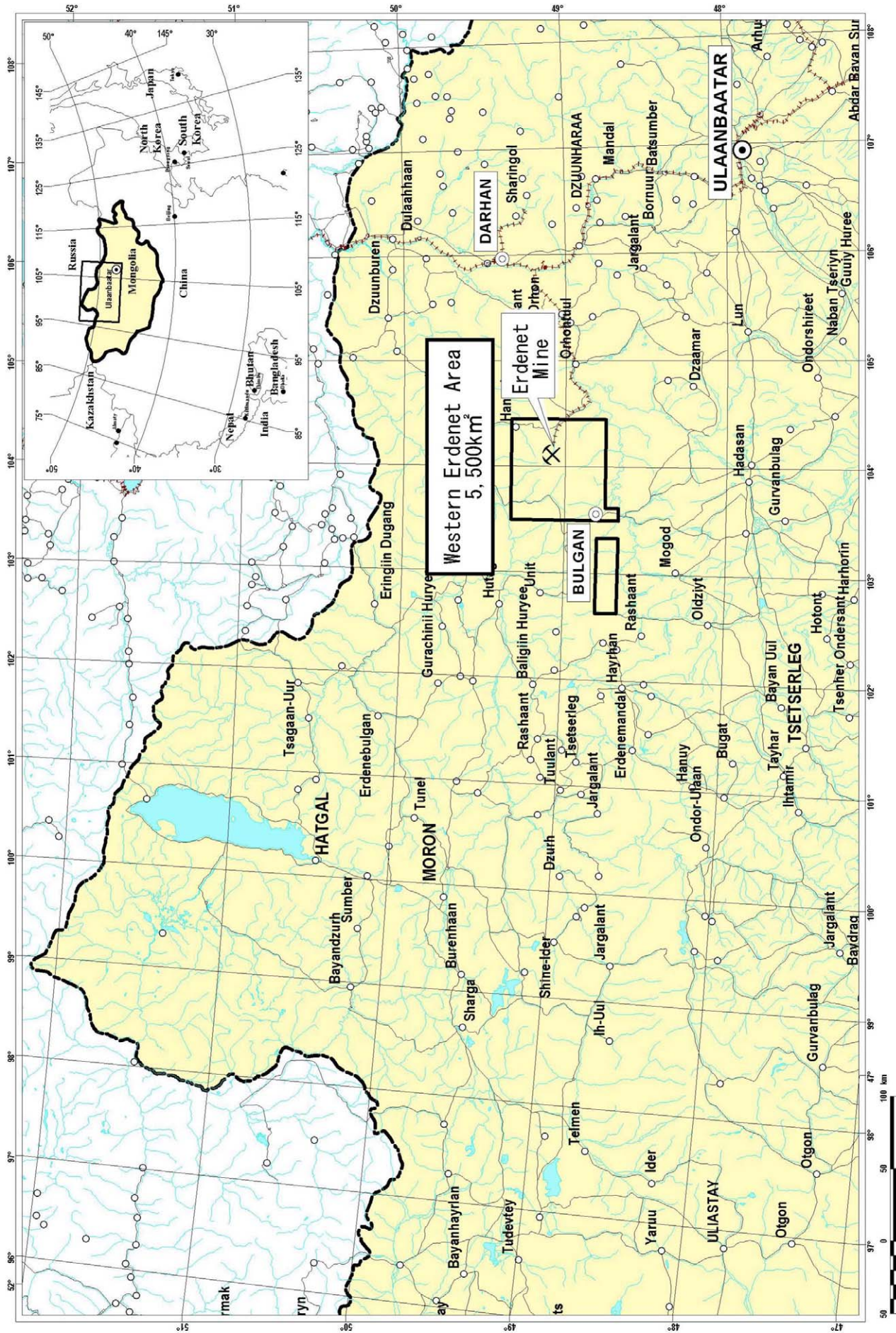


Fig.1 Location map of the project area in Mongolia

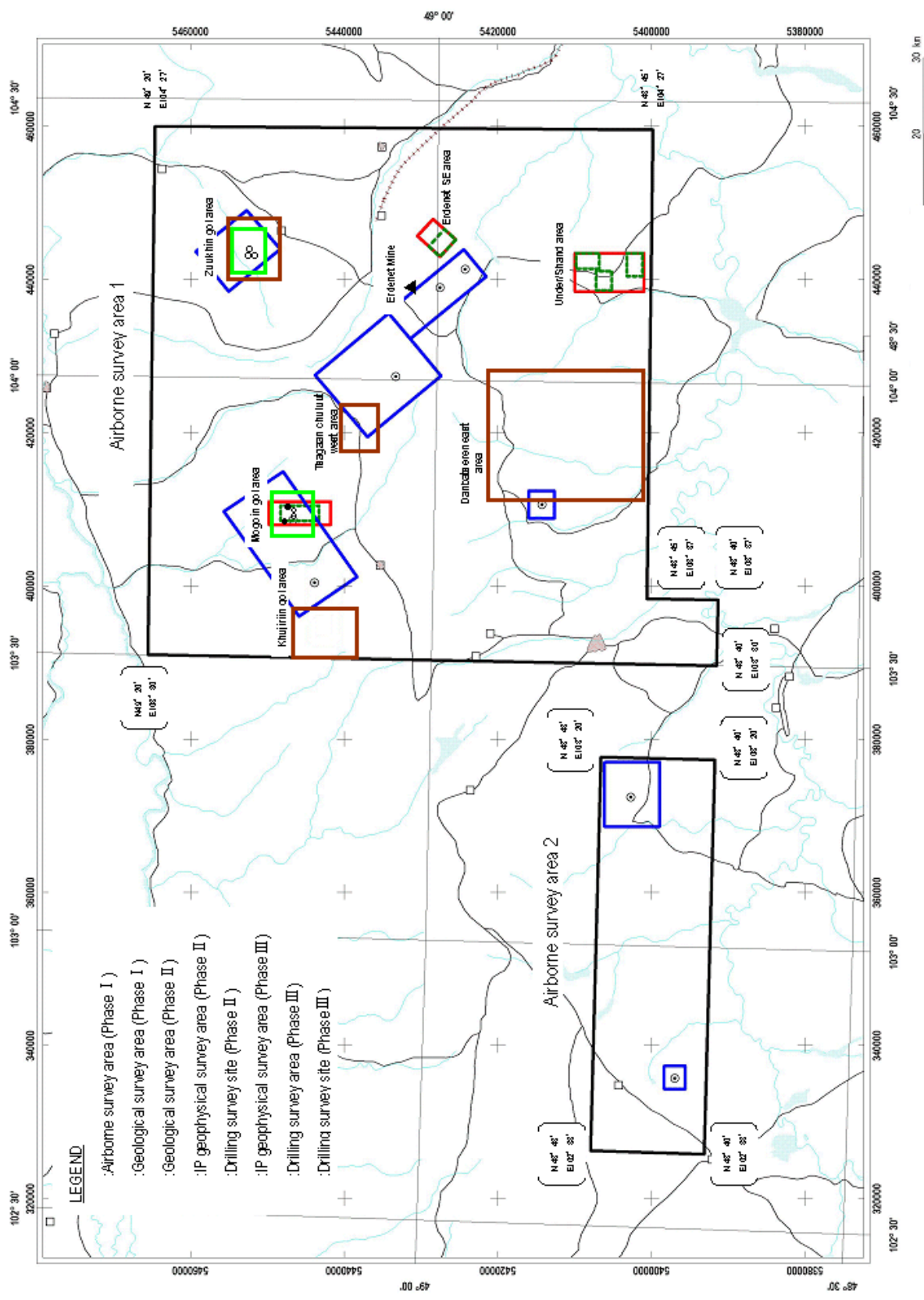


Fig. 2 Location map of the survey areas in the Western Erdenet area

Abstract

In accordance with the Scope of Work signed on 18th May 2001 between the Governments of Japan and Mongolia, a mineral exploration project was carried out in Western Erdenet area, Mongolia in order to discover new ore deposits in the survey area.

During three years, geological survey, geophysical survey (airborne magnetic survey and TDIP electric survey) and drilling survey have been conducted in the western Erdenet area consisting of 5,500km². The drilling survey conducted 2004.30m of total drilling length with 4 drill holes in the Mogoin gol area and 1504.55m of total drilling length with 3 drill holes in the Zuukhiin gol area.

Geological survey, geophysical survey and drilling survey were conducted in the Mogoin gol area, detecting a wide mineralized zone in the northern part of the area where a broad geophysical IP anomaly was extracted. The drilling survey conducted on the IP anomaly did not intersect any high grade copper grade even though alteration of high sulfidation system occurs in the porphyry type copper mineralization of the area. Even if porphyry copper deposits exist in the area, they would probably occur at much greater depth from ground and for this reason, no further mineral exploration work is recommended in this area.

In the Zuukhiin gol area, data compilation, geological survey and airborne magnetic survey were conducted in Phase I. The airborne magnetic survey detected low magnetic anomalies in the area and the geological survey detected similar alteration characteristics as the ones found in Erdenet ore deposits with geochemical anomalies related to the formation of copper mineralization. Ore assay in the mineralization zone indicated assay values from Cu 0.21% to Cu 0.46% and Zn 0.013% to Zn 0.019%, and rock analytical values with a maximum of Cu 11,740ppm

In Phase III, geological survey and geophysical TDIP electric survey were conducted in the area detecting very high IP anomalies in the area. The drilling survey tracked the copper mineralization with molybdenite. The ore assay values estimated in MJME-Z1 drill hole ranged from less than Cu 0.005% to Cu 0.784% with an average of Cu 0.086%. The ore assay values of MJME-Z2 drill hole ranged from less than Cu 0.005 % to Cu 0.678% with an average of Cu 0.120%. The ore assay values of MJME-Z3 drill hole ranged from less than Cu 0.005 % to Cu 0.455% and average grade of Cu 0.039%. The ore assay grade results show an upward tendency toward MJME-Z2 drill hole. The homogeneous temperatures of fluid inclusion also indicate an upward tendency toward MJME-Z2 drill hole. Future exploration works in this area are needed to clarify the extension of copper mineralization toward southeast part by conducting detailed geophysical survey and drilling survey.

In the Khujiriin gol area, the geological survey area detected maximum ore assay values in the mineralized zone of Cu 11.13%, Pb 5.78%, Zn 2.64%, Mo 0.269%, Au 0.03g/t and Ag 221g/t. The

TDIP electric survey detected a very high resistivity zone trending east to west in an area where quartz vein with copper minerals of chalcopyrite, malachite and azurite were widely distributed. It is recommended to conduct more studies to search for promising mineralized zones in Khujiriin gol in order to assess this area for mineral potential.

In the Under/Shand area and other areas explored during this project for three years and a cooperation project between Czech-Slovakia and Mongolia in 1980's, geological and geophysical anomalies indicative of favorable zones for mineralization were not detected. No further exploration works can be recommended in these areas.

Based on the mineral exploration studies during these three years, the following recommendations are suggested:

(1) For the Zuukhiin gol area

Carry out more detailed analysis by firstly, conducting TDIP geophysical survey in the area; secondly, by selecting drilling sites based on the geophysical analysis; and thirdly, by clarifying the scale and ore assay grade of the copper mineralization from the results of the drilling survey.

(2) For the Khujiriin gol area

Make a preliminary mineral potential evaluation of the area by conducting detailed TDIP geophysical survey and detailed soil geochemical survey in the area.

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