NO.

REPORT ON THE MINERAL EXPLORATION IN THE WESTERN ERDENET AREA, MONGOLIA Phase III

MARCH 2004

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

MPN
JR
04-074

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)).

JICA and MMAJ sent to Mongolia a survey team composed of 5 members from June 2003 to November 2003.

The team exchanged views with the officials concerned of the Government of Mongolia and conducted a field survey in the Western Erdenet area. After the team returned to Japan, further studies were made and the present report has been prepared. This report includes the survey results of geological survey, geophysical survey and drilling survey carried out during Phase III.

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

Hidejiro Ohsawa
President
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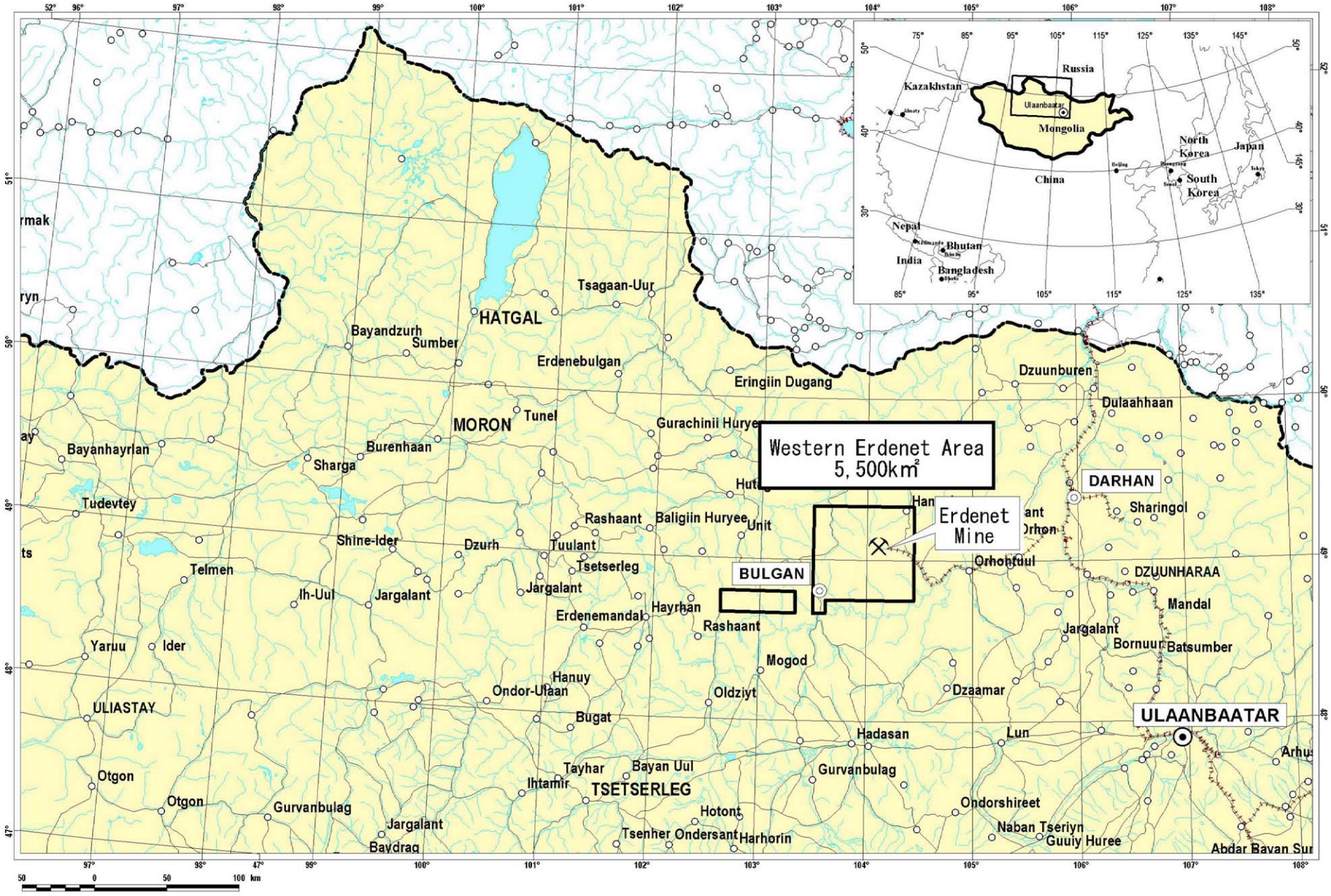

Fig.1 Location map of the project area in Mongolia

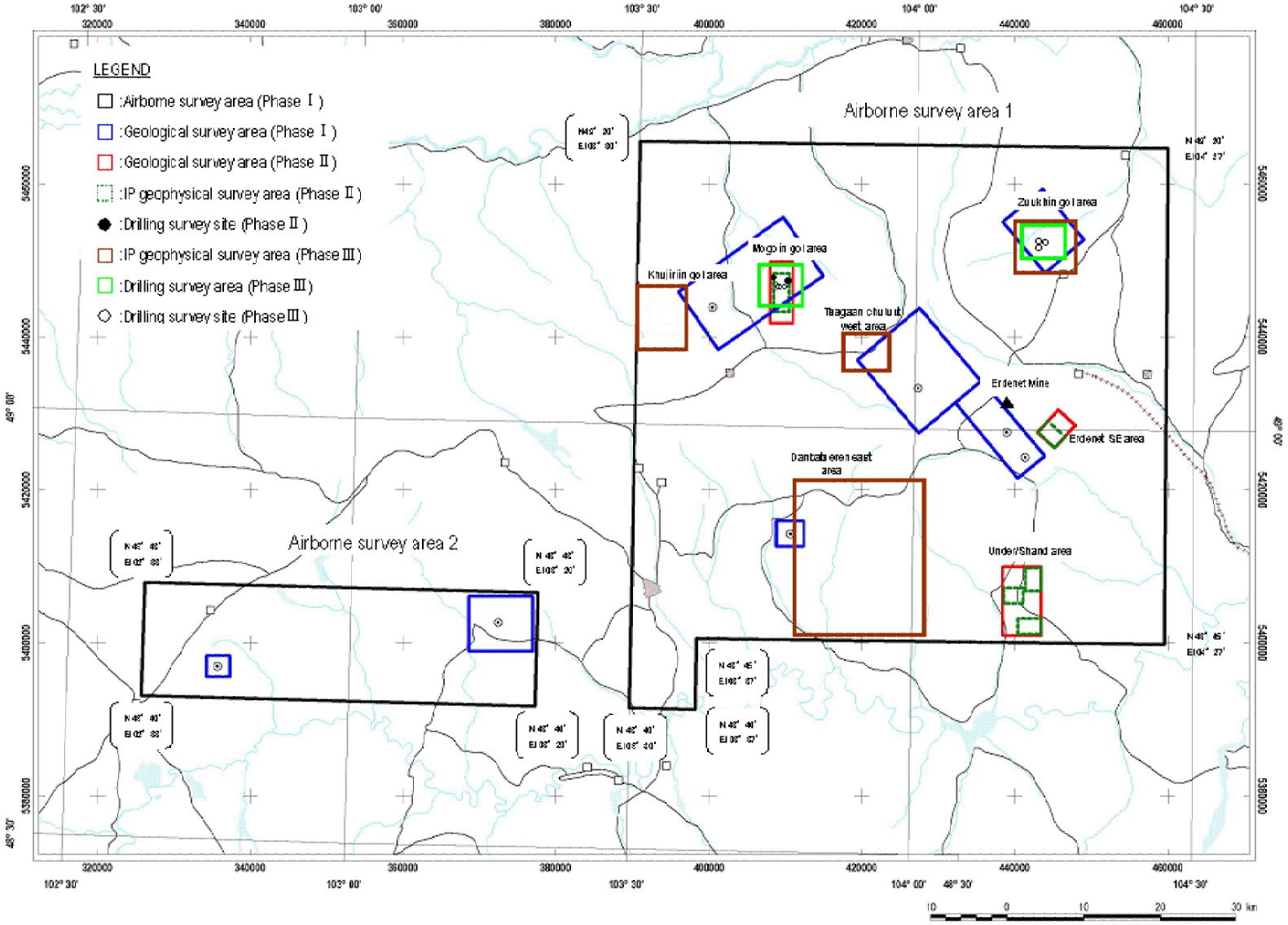

Fig. 2 Location map of the survey areas in the Western Erdenet area

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.

This project started in 2001 with duration of three years. The present report describes the survey results of the third year (Phase III). During this phase, geological survey, geophysical survey (TDIP electric survey method) and drilling survey were conducted within the project area that covered an extension of 5, 500 km^2.

In Phase III survey, the geological survey was conducted in the Khujiriin gol area, the Khujiriin gol north area, the Zuukhiin gol area, the Danbatseren east area and the Tsagaan chuluut west area selected by the airborne survey results of Phase I survey. The geophysical survey (TDIP method) was conducted in the Khujiriin gol area, the Zuukhiin gol area, the Danbatseren east area and the Tsagaan chuluut west area selected by the results of the geological survey in this Phase. The drilling survey was conducted in the Mogoin gol area and the Zuukhiin gol area. Two drill holes were conducted in the Mogoin gol area, i.e., the drill holes MJME-M3 and MJME-M4 that were drilled with lengths of 501.00m and 501.30m, respectively. Three drill holes MJME-Z1, MJME-Z2 and MJME-Z3 were drilled in the Zuukhiin gol area with lengths of 502.10m, 502.10m and 502.00m, respectively.

The survey results can be summarized as follows:

In the Mogoin gol area, the results of drilling survey inferred that the geology consists of silicified alkaline volcanic rocks of late Permian, andesite dykes and quaternary deposits. Alteration minerals related to mineralization show high sulfidation system related to porphyry copper molybdenum ore deposits. Silicified tuff with quantities of pyrite continues down to 500m in depth. The drilled holes could not detect copper mineralization. Ore assay results of drill cores indicate a maximum copper grade of Cu 0,660% with averages between Cu 0.006% to Cu 0.009%. It is expected that copper mineralization occurs in the deeper part of the exploration area. However, it is recommended that no further exploration work should be conducted in this area.

In the Zuukhiin area, a geochemical anomaly of more than Cu 200ppm was detected in the central area in places where the geophysical survey of TDIP method was conducted. The geophysical results indicated high IP anomalies spreading 4 km from east to west and 2 km from north to south. Due to these results, a big scale mineralization was expected in the area. The drilling survey indicated by the ore assay results that mineralization within granodiorite presents a maximum grade of Cu 0.784% with average values of Cu 0.036% (496.30m in core length of MMAJ-Z3) and Cu 0.120% (494.65m in

core length of MMAJ-Z4). The core assay grade results of drill hole MJME-Z2 evidence a high tendency of ore mineral distribution in the southwestern part of the drill holes MJME-Z1 and MJME-Z3. Fluid inclusion studies in quartz veins indicated also the high tendency estimated in drill hole MJME-Z2. The geophysical survey results indicated that the high chargeability zone is in agreement with the zone of high sulfur contents detected in the drill holes. Future exploration works in this area should be able to clarify the extension of copper mineralization toward southeast part by conducting detailed geophysical survey and drilling survey.

In the Khujiriin gol area, medium-grained granite is widely distributed. Oxide copper minerals occur in the central, eastern and southeastern parts of the area. Copper contents of more than 0.1% of copper were detected in rock chemical analysis in quartz veins trending east to west at the southern part of the area. Soil chemical studies detected anomaly zones related to copper mineralization. TDIP geophysical survey detected a high resistivity zone that is prominent in the eastern part of the area where the resistivity structure changes widely from east to west. High chargeability zone extends towards deeper part, but with low intensity. IP anomaly showing large-scale porphyry copper type mineralization was not detected in the area. Quartz veins with chalcopyrite, malachite and azurite were found trending approximately east to west on the survey line-B at the UTM location (E396463, N5442025).

From the present results, appraisal of the Khujiriin gol area for mineral potential can not yet be made. However, there exists the possibility that polymetallic quartz vein type mineralization has occurred in the area. To further explore this area, it is recommended to evaluate the extension of the mineralization toward western side by using soil geochemical survey and TDIP geophysical survey.

No further exploration works can be recommended in other areas where the geological and geophysical anomalies did not detect any mineralization.

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 soil geochemical survey in the area.

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PART II SURVEY RESULTS