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CHG-14

Chhattisgarh
(23)

Mobile Metal Ion
Soil Geochemistry Program

Jobtola Project

The Rajnandgaon District,
India

Report to

MIRA Explorations (p) Ltd
D-1 2251 Vasant Kunj, New Delhi 1100 70 , India.

and

Barfanisai Enterprises Ltd,
2108, 3463 Rue Ste Famille, Montréal QC. H2X 2K7, Canada

By MMI Technology

R.D.Birrell
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1 INTRODUCTION

Mira Explorations (p) Ltd completed an orientation MMI soil sampling program in the Rajnandgaon District, India during December, 2004. The company had granted land tenure in the form of a Reconnaissance Permit (RP) covering 480 sq Km. The orientation followed previous exploration work by Mira and involved research of historical data, soil studies and reconnaissance rock chip programs. The work identified a number of prospective areas considered prospective for Au, Ag Cu, Pb, Zn Ni and PGE mineralization.

The Jobtola project was initially identified as prospective for Au, Ag and PGE's. The results of the initial MMI program confirmed that the MMI technique was responsive and could define meaningful multi-element geochemical trends within the prime area of interest in the Jobtola project area. The results of the first program were reported in detail to Mira in

> *"Mobile Metal Ion Soil Geochemistry Program in The Rajnandgaon District, India. Report to MIRA Explorations (p) Ltd D-I 2251 Vasant Kunj, New Delhi 1100 70, India. and Barfansai Enterprises Ltd, 2108, 3463 Rue Ste Famille, Montréal QC. H2X 2R7, Canada, By MMI Technology, August 2005".*

As a consequence a broader geochemical sampling program to further assess the Jobtola area was planned and completed during 2005. This report briefly summarizes existing data and presents the results of the MMI Phase 2 survey.

2 PREVIOUS WORK

i. Geological Overview

An overview of the Mira tenement's location, infrastructure regional geological setting, and the RP area's geology, physiography, rock types and styles of mineralization are presented in:

> *"Research Report and Brief Information on Mira Explorations Private Limited, D-II 2251 Vasant Kunj, New Deli, India".*

The RP sits within the Bhandara Craton and forms part on a north-south trending belt of volcanic and volcaniclastic rocks called the Kotri Rift. Basement rocks consist of ferruginous shales and banded iron formation. This is overlain by volcanics consisting of meta-rhyolites, meta-basalts, acid pyroclastics with basic intercalculations and intrusions of basic volcanics and sub-volcanics. The basic rock complex is typically massive bodies and large dykes and frequently shows textural and compositional variations. Simultaneous eruptions of acid and basic volcanics from different centres interfinger with each other.

Within the area major N-S and NW-SE trending faults occur over many kilometres. Where these features intersect poly metallic mineralization has been reported and where smaller E-W trending faults occur major veins of quartz are reported. Also along these major shears stockworks have been identified.

Mineralization identified within the RP includes Au, Ag, Cu, Pb, Ni and PGE's. Stream sediment and rock chip samples by the Indian Geological survey and rock chip samples collected by Mira have reported significantly anomalous levels of Au, Ag, Cu, Pb, As, Ni and Pt/Pd.

ii Rock Chip Samples

A rock chip sample collected by Mira within the Jobtola project area reported the following responses: Pt – 131ppb, Pd – 12.7ppb and Au – 4ppb.

ii. Geology – Jobtola Project

The geology of the Jobtola area is typically represented by a package of ultramafic rocks that includes pyroxenite, gabbro, porphyritic gabbro, acid rocks that are typically porphyritic rhyoloites and to the east amphibolites occur. Silicified fault breccias and quartz veins can be mineralized. The geology generally strikes NNW-SSE and has EW faults, often filled with quartz.

iii. Jobtola MMI Orientation Results.

The area showed elevated Cu, Ag, Pd with low order Au coincident with the other elements. The soil sample responses indicated that the area may be prospective for Cu and possibly PGE mineralization. Although small, the orientation study reported anomalous responses that appeared typical for the geological setting and style of mineralization previously reported in the historic literature.

3 MMI PHASE 2 GEOCHEMICAL PROGRAM

The second phase of MMI soil sampling was designed to expand the geochemical survey to the north, south and east of the MMI orientation line and identify any polymetallic geochemical patterns within the Jobtola project area. The follow up soil program collected 145 soil samples using a grid of 50m line spacing and sample collection at each 50m. The data sets from each of the surveys were compared and found to be compatible and this report incorporates the existing data from both surveys integrated into a single data set, the details of which are given in Folio 1 at the rear of this report.

4 RESULTS

All analytical data for the MMI extractions, and each sample's metric grid coordinates are listed in Folio 1. A review of the field check and duplicate program, along with a review of the standard samples inserted by MMI, showed that the analytical performance for the work was well within the desired parameters for this type of survey.

5 DATA PRESENTATION

Contoured geochemical maps for Cu, Pb, Au, Ag and Pd are shown in Folio 2.

6 DISCUSSION AND RECOMMENDATIONS

Single element and coincident multi element anomalies and trends have been defined. A summary of the geochemical plans is presented in Figure 1 below and the following comments can be made:

1. A distinct NW-SE Cu trend runs through the centre of the sample grid with very high multi sample Cu responses (greater than 2000ppb) that remain open to the north,

2. Elevated Cu zones have coincident anomalous Ag levels and these occur within a Ag and low order Au response that is also coincident with the Cu trend; like Cu both the Au/Ag trends remain open to the north,

3. Silver and Au responses also identify a NE-SW linear trend that terminates at the intersection with the Cu trend in the central section of the grid,

4. A low order but discrete Au anomaly has some coincident Ag responses in the central south of the grid,

5. Lead levels are elevated and show three anomalous patterns:

   a. it forms a linear trend adjacent to the NW-SE Cu trend in the north east section of the sampling grid,
   b. it mirrors the NE-SW Au and Ag trend, and
   c. there is an anomaly on the eastern boundary of the grid,

6. Palladium is coincident with the Pb patterns and trends.

7. The geochemical survey shows a very distinct variation in response by all elements between the eastern (elevated element responses) and western (very low responses) sections of the grid; this may be reflecting either geology or regolith influences and needs to be assessed in the field.

The geochemical trends and anomalies are cohesive and multi-element associations occur across and along the survey lines. The size and character of the Cu responses, particularly levels above 2000ppb, are thought to be significant. The Cu trend may be either a specific rock unit or a structure acting as a fluid pathway for mineralizing solutions. This structural imprint is well documented at a regional scale and elsewhere is known to host polymetallic mineralization. The coincident Ag with weaker Au trends that are coincident with the Cu responses may also indicate a structural setting rather than a lithological influence. Field mapping would help clarify this.

The NE-SW trend with Ag, Au, Pb with weaker Pd responses appears to be structurally controlled, and further field mapping is required.

The Au anomaly in the central section of the grid is extremely low order but it occurs at the intersection of the NW-SE Cu trend with the NE—SW multi element trend. This area also requires field investigation.

Care is required when interpreting the elevated Pb and Pd levels. The large Pb/Pd anomaly on the eastern boundary of the grid may be reflecting an acid lithology, possibly an intrusive. While there is no reference to granites on the geological map the specific area should be checked. The NW-SE Pb/Pd trends are in fact adjacent to the main Cu trend but they are coincident with the NE-SW Ag/Au trend. This may be suggesting both structural and lithological controls are influencing the geochemical patterns detected by the survey.

Recommendations

Further work is recommended to assess the potential for Cu, Pb, Au Ag and PGE mineralization in the Jobtola area. This requires:

1. detailed geological mapping to develop a model for the area,
2. field assessment of the Cu anomaly which is considered significant and remains open to the north of the existing grid; this anomaly may warrant further sampling to the north,
3. field checking of the Pb-Pd anomalies, in conjunction with mapping and further soil sampling to the east if warranted, especially if the source of the Pb and Pd can be related to a major structural trend intruded by an intrusive plug,
4. assessment of the Au, ± Ag, anomaly, in conjunction with the geological mapping,
5. rock chip sampling where possible to identify prospective mineralized units and structures,
6. if possible a stream sediment sampling survey to allow a cost effective and more rapid assessment of the area.