

**GEOLOGICAL REPORT ON INTEGRATED EXPLORATION FOR
COPPER & GOLD
KURLU GHATEE, PIPARDHAR EAST & PIPARDHAR SOUTH BLOCKS
GIDORI-DHORLI AREA (STAGE-I), MALANJKHAND GRANITIDS
DISTRICT- BALAGHAT, MADHYA PRADESH**

EXECUTIVE SUMMARY



**MINERAL EXPLORATION CORPORATION LIMITED
(A Government of India Enterprise)**

**REGIONAL EXPLORATION CENTRE
HINGNA, NAGPUR-440028
SEPTEMBER-2001**

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1.0 LOCATION

The Gidori Dhorli Area covering Kurlu Ghatee, Pipardhar and Pipardhar South blocks are located about 30 km. South of Malanjkhanda Township in Baihar Tahsil, Distt. Balaghat, MP. Major part of the area falls under Survey of India Topo Sheet No. 64 C/13 and a small part of Pipardhar East block comes under 64 G/1. The area is bounded by Latitudes 21° 50' 00" to 21° 53' 20" Longitudes 80° 43' 30" to 80° 46' 45". The area falls under deep forest cover with rugged topography.

The three blocks of Gidori-Dhorli area have the following co-ordinates.

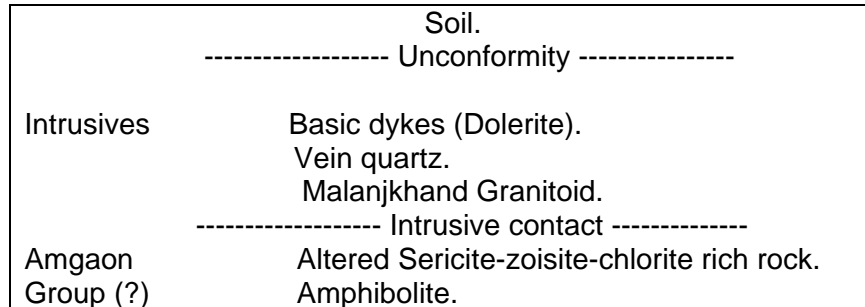
| Block | Area & dimension | Bounded by Co-ordinates |
|-----------------|------------------------------------|---|
| Kurlu Ghatee | 2.25 Sq.km. (1.60 km x 1.40 km) | Lat. 21° 51' 10" to 21° 53' 14" Long. 80° 43' 58" to 80° 44' 54" |
| Pipardhar East | 1.30 Sq.km. (1.60 km x 0.80 km) | Lat. 21° 51' 12" to 21° 51' 52" Long. 80° 44' 23" to 80° 45' 32" |
| Pipardhar South | 1.00 Sq.km. (1.20 km x 0.85 km) | Lat. 21° 50' 06" to 21° 51' 07" Long. 80° 43' 51" to 80° 44' 41" |

2.0 GEOLOGY AND STRUCTURE

Most of the area of Gidori-Dhorli area occupied by Malanjkhanda Granitoid. The older amphibolite and the highly altered sericite-zoisite-chlorite rich rock, occur in the southern part of the area, whereas younger intrusives of vein quartz and dolerite dykes occur prominently in the northern part of the area. The area is traversed by two sets of shear zones trending NS to NW-SE and EW to NNE-SSW respectively. The boundaries of the blocks viz. Kurlu Ghatee, Pipardhar East and Pipardhar South are demarcated based on these two sets of shear zones. These shear zones are represented by highly fractured

and mylonitised rocks. The emplacement of quartz veins appears to be mostly controlled by shears. In the southern part of the area intensive shearing and mylonitisation has resulted in alteration of the host rocks into sericite-zoisite-chlorite rich rock.

The stratigraphic sequence in the Gidori Dhorli area is given below:



3.0 MINERALISATION

The quartz veins are the main host rock for mineralisation in the area. This host rock is present in the area in sufficient proportion and do contain some sulphides in the form of specks, small stringers limonite/malachite encrustations. The Gidori-Dhorli area is traversed by a number of quartz veins of various dimensions. A total of 35 main quartz veins have been mapped in the three blocks of Gidori-Dhorli area. These quartz veins are surrounded by a number of small and thin vein quartz outcrops. The largest quartz vein OC-3 located in the central part of Pipardhar East block measures 330 m x 32 m. The quartz veins show mineralisation in the form of malachite stains, specks of chalcopyrite and pyrite and at places azurite. Limonitisation and limonite filled cavities are seen in most of the quartz veins. The general trend of quartz vein is N-S to NW-SE dipping sub vertically (70°) towards east.

4.0 QUANTUM OF WORK DONE

MECL has carried out detailed Geological Mapping & topographical survey covering 2.00 Sq. Km area,

A total of 600 Nos. of trench and chip samples from 3 blocks drawn mostly from quartz veins, but also from other rock types, analysed for Cu% does not show any significant results as most of the samples analysed have <0.03 % Cu. Only 16 samples (3%) show higher values of 0.03 to 2.37% Cu. The isolated value of 2.37% Cu was obtained from sample drawn from OC-4 (Pipardhar East Block). The remaining 15 values are below 0.2 % Cu. Out of the above 600 samples, 80 samples analysed for gold indicate Au only

in traces or below detection level (<0.1 g/t) in almost all the samples. Same is the case with silver analysis, out of 30 samples analysed only 6 samples indicate 1 to 2 g/t Ag. Thus the results obtained by trench & chip sampling indicates near absence of copper and gold mineralisation at the surface in the area.

The 50 soil samples analysed for gold from Pipardhar South block also do not show any promising anomaly as only 3 samples show 0.1 to 0.2 g/t Au, rest all are less than detection level (<0.1 g/t).

In Pipardhar East 2.70 Lkm of IP survey, 117 stations of SP, 117 stations of magnetic survey and VES sounding of 8 Nos, whereas in Kurlu Ghatee area, 4.40 Lkm of IP survey, 170 stations of SP, 170 stations of magnetic survey and VES sounding of 7 Nos has been conducted under geophysical exploration programme.

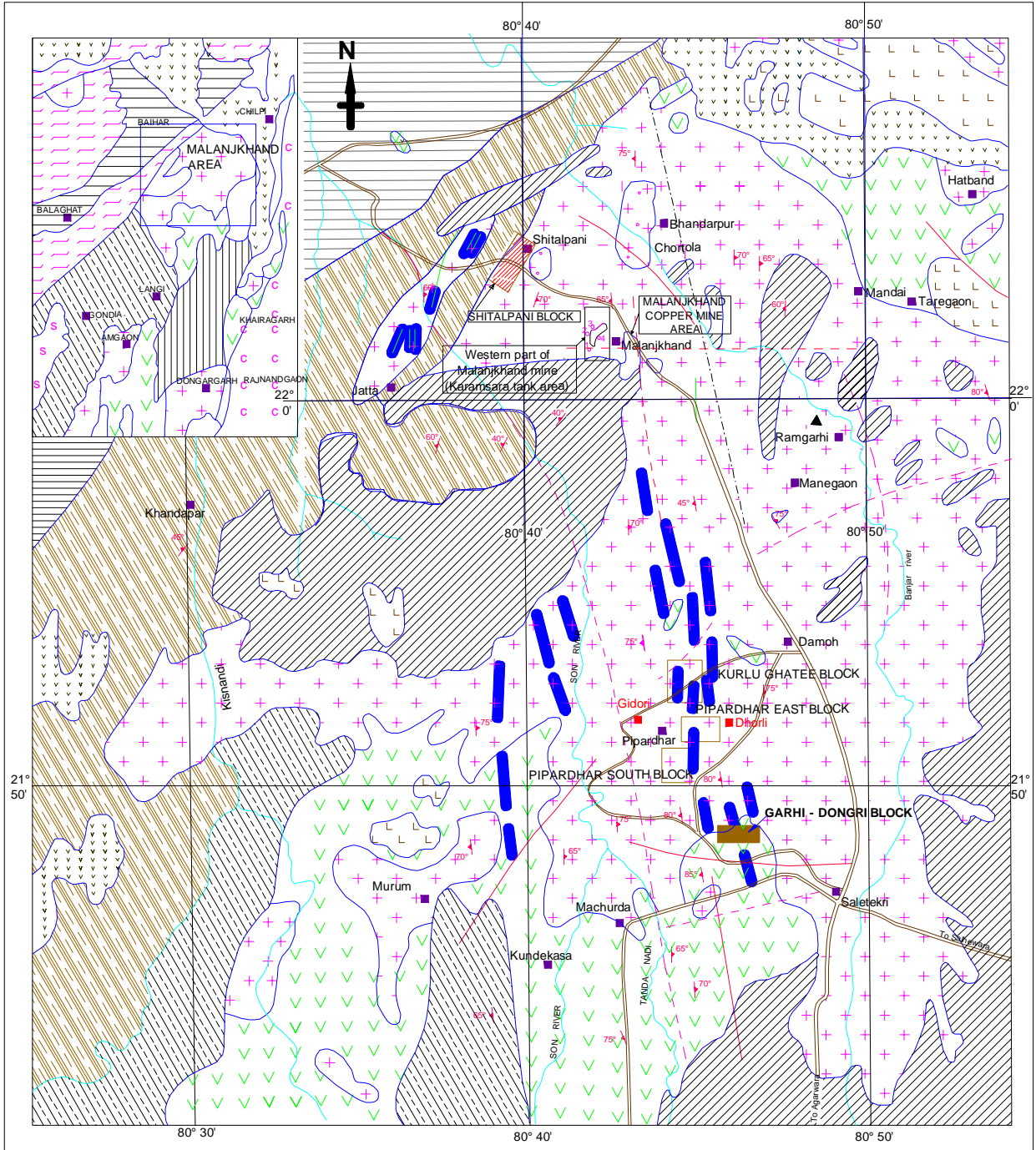
5.0 ORE RESERVE ESTIMATION

Synthesis of total data generated by HCL and MECL in the form of surface geological mapping, surveying, trenching, outcrop and trench sampling, Geological survey (2 blocks by HCL and 1 by MECL) and geophysical survey, do not indicate presence of any significant copper or gold mineralisation at or near surface, in any of the blocks, though some spot values do indicate localized occurrences of significance.

The deposit has been classified as Category “D” of UNFC 333

The total cost of Exploration is Rs. 49.24 Lakhs

REGIONAL GEOLOGY & LOCATION MAP OF GIDORI DHORLI



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(After Pal & Bhargava 1987, Journal Geol. Soc. of India, Vol 56 No. 4, Oct' 2000.)

- | | |
|---|--|
| <ul style="list-style-type: none"> Tirodi gneisses Chhattisgah group Khairagarh group Sakoli group Quartz vein / basic dykes Porphyritic granitoids Grey and pink Malanjkhand granitoids Nandgaon volcanics | <ul style="list-style-type: none"> Laterite Deccan basalt Chilpi metasediments Sausar schist Amgaon schist and gneisses Locality / mineralisation Zone of intense tectonic and magmatic activity Lineament and foliation |
|---|--|

| | | |
|---|--|---|
| MINERAL EXPLORATION CORPORATION LIMITED | | |
| REGIONAL GEOLOGICAL MAP OF MALANJKHAND AREA | | |
| GIDORI - DHORLI BLOCK MALANJKHAND GRANITOID, DISTT. : BALAGHAT, M.P. | | |
| 0 5 Km. | | |
| Processed at : I. T. Centre, M.E.C.L. | TRACED BY : P.S. VAIDYA, T.A (SDM) R.J. KAMBLE, T.A (SDM) | |
| ME/CZ/NGP/DC No. 1829/2007 | PLATE NO. - I | 1 |