

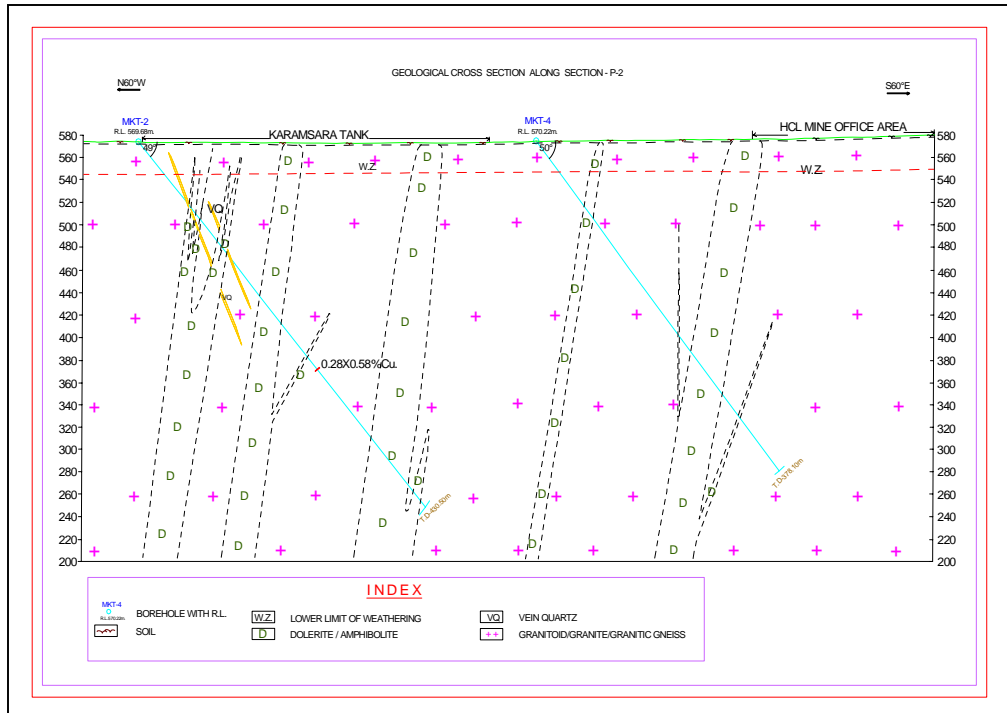
**GEOLOGICAL REPORT ON CONCEPTUAL EXPLORATION
FOR COPPER ORE**

WESTERN PART OF MALANJKHAND MINE

KARAMSARA TANK AREA, MALANJKHAND GRANITOID,

DISTRICT - BALAGHAT, MADHYA PRADESH

EXECUTIVE SUMMARY



**MINERAL EXPLORATION CORPORATION LIMITED
(A Government of India Enterprise)
SEMINARY HILLS, NAGPUR**

**CENTRAL ZONE
NAGPUR-440 006
AUGUST-2003**

GEOLOGICAL REPORT ON CONCEPTUAL EXPLORATION FOR COPPER ORE IN WESTERN PART OF MALANJKHAND MINE, KARAMSARA TANK AREA MALANJKHAND GRANITOID, DISTT. BALAGHAT, MADHYA PRADESH

EXECUTIVE SUMMARY

1.0 LOCATION

The block is situated about 2-3 kms to the west of the existing Malanjkhanda mine, in Baihar tahsil, distt. Balaghat, M.P. It lies between latitude $22^{\circ}00'59''$ – $22^{\circ}02'24''$ and longitude $80^{\circ}41'51''$ – $80^{\circ}42'38''$ and forms a part of Survey of India Toposheet No. 64 B/12.

2.0 GEOLOGY AND STRUCTURE

The special thematic mapping during 1991 & 1994 by Jaggi et al (GSI) has brought out the regional geological set-up. The oldest rock in the area belongs to Amgaon Group represented by amphibolites, migmatites with occasional aplite veins resting over unknown basement rocks. This is followed by Nandgaon Group represented by meta-volcanic suite of rocks. The next younger formations, comprising granitic rocks with variable composition, are known as Malanjkhanda granitoids. It is intruded by younger Darbaritola granite exhibiting aplitic texture and other linear bodies in the form of dykes comprising basic rock and vein quartz. These rocks are unconformably overlain by Chilpi group of rocks which comprises mainly of argillaceous metasediments. The Chilpi Group of rocks are overlain by Jamtola group represented by quartz veins, phyllites, mica schist, limestone, quartzite etc. All the above rocks have been intruded by younger intrusive rock. The youngest rock types are Deccan Traps

The western part of Malanjkhanda, Karamsara Tank area, is mostly soil covered. However small, scanty, detached exposures of dolerite, granitic rocks, laterites are noticed. The southern part is hilly terrain and comprises of younger Chilpi Group, which consist mainly of arkosic grit & conglomerate.

The succession as worked out from the geological mapping is as follows

Stratigraphic Sequence

| | |
|------------------------|---|
| Recent to sub recent | Laterite / Soil |
| Chilpi Group | Conglomerate, Arkosic grit |
| Unconformity | |
| Intrusive rocks | Metadolerite dykes Aplite Quartz vein |
| Malanjkhanda granitoid | Granitic rock with pseudo gneissosity |

3.0 MINERALISATION

The sulphide mineralisation as recorded in the borehole samples are very feeble and generally in the form of specks, disseminations, stringers, of pyrite, chalcopyrite in granitic rock. Molybdenite is also noticed at few places in borehole cores along fracture fillings. No surface manifestation of mineralisation has been noticed.

4.0 QUANTUM OF WORK DONE

MECL has carried out detailed Geological Mapping & topographical survey covering 3.00 Sq. Km area. 1586.45 Mtrs of drilling in 4 boreholes, Primary sample analysis for 170 Nos. for Cu, 18 Nos. for Molybdenum, and 18 Nos. for Au by fire assay were analysed. 45 Nos. for Petrographic studies, 23 Nos of samples for Minerographic studies and 26 samples for specific gravity determination test has also been carried out. Based on the results of above data final geological report is prepared by MECL.

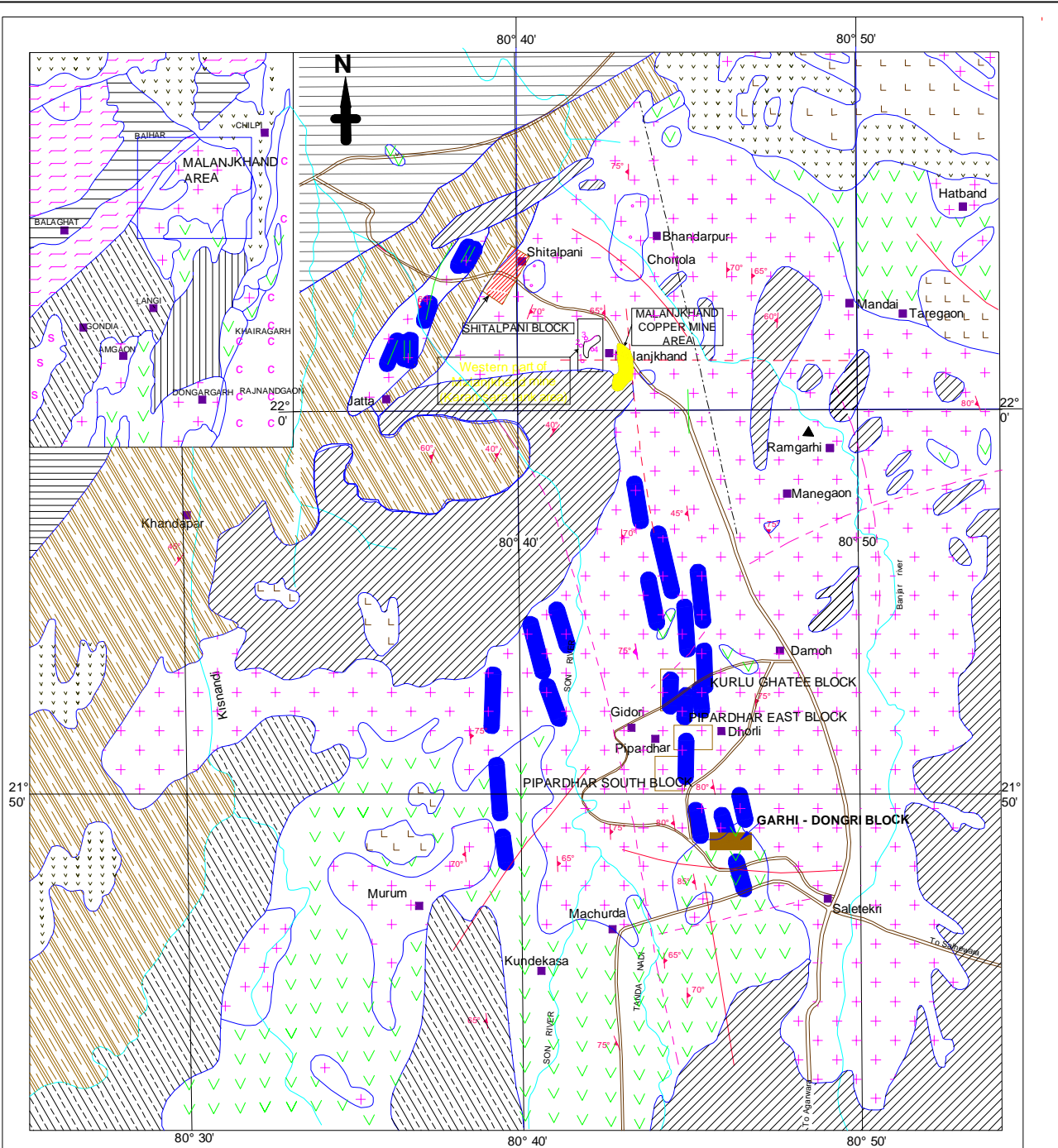
5.0 ORE RESERVE ESTIMATION

Few feeble sulphide mineralisations have been intersected at few places in the boreholes. As, no significant mineralized quartz veins have been intersected in the boreholes; the area does not appear to have any hidden copper lodes.

The Deposit has been classified as Category 'D' of UNFC 333.

The Total Cost of Exploration is Rs. 98.28 Lakhs.

REGIONAL GEOLOGICAL MAP OF MALANJKHAND AREA



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

| | |
|--------------------------------------|--|
| Tirodi gneisses | Laterite |
| Chhattisgah group | Deccan basalt |
| Khairagarh group | Chilpi metasediments |
| Sakoli group | Sausar schist |
| Quartz vein / basic dykes | Amgaon schist and gneisses |
| Porphyritic granitoids | Locality / mineralisation |
| Grey and pink Malanjkhand granitoids | Zone of intense tectonic and magmatic activity |
| Nandgaon volcanics | Lineament and foliation |

| | |
|--|--|
| MINERAL EXPLORATION CORPORATION LIMITED REGIONAL GEOLOGICAL MAP OF MALANJKHAND AREA WESTERN PART OF MALANJKHAND MINE MALANJKHAND GRANITOIDS, 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) |
| MEC/CZ/NGP/DO NO. 1629/2007 | PLATE NO.- I 1 |

