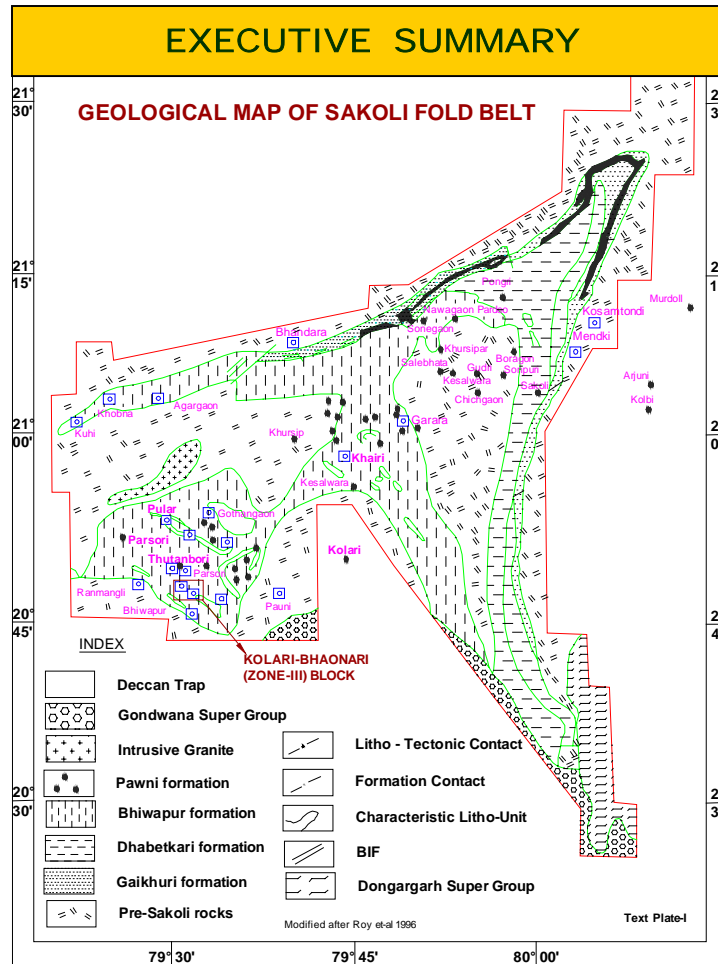


GEOLOGICAL REPORT ON DETAILED EXPLORATION FOR ZINC ORE

KOLARI-BHAONARI ZONE-III BLOCK

(Southern Part)

DISTRICT - NAGPUR, MAHARASHTRA



MINERAL EXPLORATION CORPORATION LIMITED
 (A Government of India Enterprise)
CENTRAL ZONE
NAGPUR
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GEOLOGICAL REPORT ON EXPLORATION FOR ZINC ORE KOLARI-BHAONARI BLOCK, ZONE-III (SOUTHERN PART) DISTRICT: NAGPUR, MAHARASHTRA

EXECUTIVE SUMMARY

1.0 LOCATION

The Kolari Bhaonari Zinc prospect is located in Bhiwapur Tahsil; district Nagpur, Maharashtra and falls under Survey of India Toposheet No. 55 P/5 & 55 P/9. The prospect is about 80 Km. from Nagpur. The nearest railhead is Bhiwapur, which is Tahsil head in the Nagpur district.

2.0 GEOLOGY AND STRUCTURE

Rocks of Kolari-Bhaonari Zinc prospect belong to Sakoli Super Group, forming a southwestern part of Sakoli Basin. The rock units in the area comprise of quartz-mica schist, metabasic rock (amphibolite), garnet quartz amphibolite rock, grey phyllite, quartz-tourmaline rock and vein quartz. They are exposed in 4 km long belt with NW-SE trend with steep dips towards northeast, out of which 2.10 km strike length, is covered in Zone-III.

The major part of the area is covered by soil with very scanty rock exposures. Rocks have suffered three phases of major folding deformation as revealed by surface and sub-surface data. These rock units represent series of antiformal and synformal structures with steep plunge sub parallel to strike. The general schistosity of litho units trend N 60°W – S 60°E with northeasterly steep dip (60-80°). Tight isoclinal folding is observed in the area and cross folding has given rise to culmination and depression of smaller order.

3.0 MINERALISATION

The surface manifestation of mineralisation is in the form of gossan showing box work and honeycomb structures. Surface indication of the mineralisation occurs in the North East part of the block and is represented by very few small exposures ferruginous garnetiferous rock (3C) white patches of zinc sulphide and blue malachite staining are also seen on outcrops. The gossans are, limonitic in nature and shows reddish brown to brownish colour. Sphalerite is the main sulphide mineral with minor chalcopyrite & galena. Pyrite & Pyrrhotite are rare. Zinc mineralisation is confined to banded-garnet-quartz amphibolite schist designated as 3A, 3B & 3C. Major zone (3C) has been proved over a cumulative strike length of 540 m and vertical depth of 250 m from surface range of width of this band vary from 3 to 35m with Zn% vary from 2.27 to 9.81.

The tungsten mineralisation is in the form of scheelite and occurs as specks, veins and disseminations. It occurs mainly in amphibolite (meta-basic) and in banded garnet-quartz-amphibole schist associated with quartz laminae. Its occurrence can be best seen in the borehole cores using Ultra-violet lamp (U.V. Lamp). Two boreholes have intersected significant tungsten mineralisation having thickness MKB-2 (11.71m. X 0.11%W, 9.25m. X 0.167%W) and MKB-13 (29.00m. X 0.157%W).

4.0 QUANTUM OF WORK DONE

MECL has carried out detailed Geological Mapping & Topographical survey covering 2.0 Sq.km. area, 2264.05 Mtrs of drilling in 14 boreholes and 500m³ shallow trenching in the area. 942 number of primary and check samples for Zn, Cu, Pb & W, 12 Nos of composite samples for (3 radicals i.e. Zn, Cu & Pb) & Fire Assay for Au & Ag and 07 Nos composite samples for Ni, Co & W were also analysed. 12 Nos. of composite samples for Emission Spectroscopy (10 radicals) and for XRD studies, XRF studies for Tin analysis carried out. Petrographic studies on 50 Nos.of samples and Minerographic studies on 50 Nos of samples and 60 Nos of specific gravity determination test, one borehole Geotechnical studies and were also carried out by MECL in the Block. A bulk samples representing band 3C mineralized zone was prepared from the remaining half drill cores and sent to Indian Bureau of Mines Laboratory at Nagpur for ore characteristics. The flotation at a grind of 89% -200 mesh produced zinc concentrate assaying 42.42% zinc, 8.95% Fe (T) and 9.30% SiO₂ with recovery of 78.1% (Wt percent yield 11.5).

Based on the above data and earlier data of GSI, an exploration report was submitted by MECL.

6.0 ORE RESERVE ESTIMATION

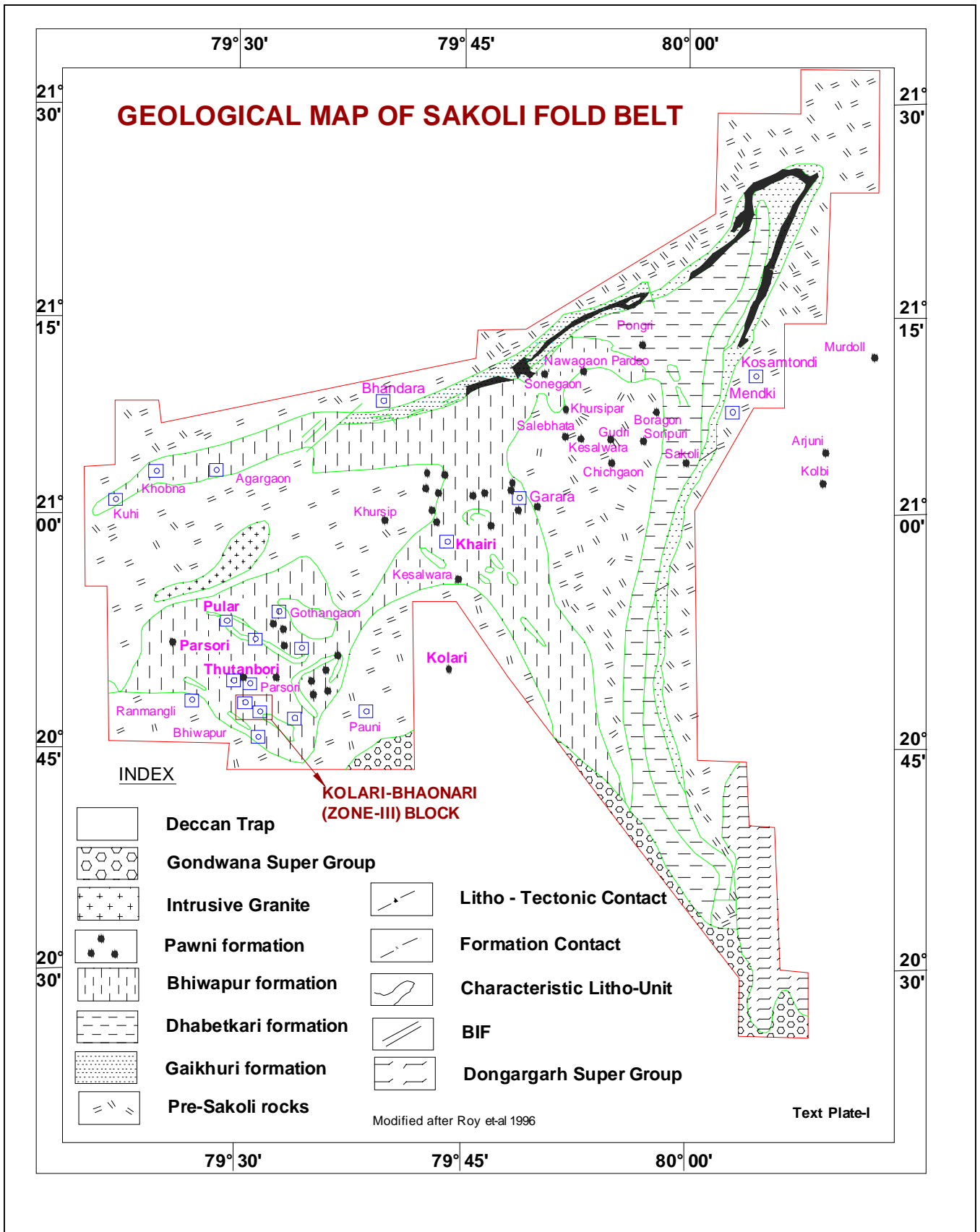
A total of 1.49 million tonnes of ore reserves with 7.49 % Zn have been estimated under probable category 1.65 million tonnes of ore reserves with 8.37% Zn have been estimated under possible category. Thus the total 3.14 million tonnes of reserves with 7.93% Zn have been estimated in the block, covering a strike length of 900m and vertical depth of 260m.

The Deposit has been classified as Category 'C' of UNFC 332.

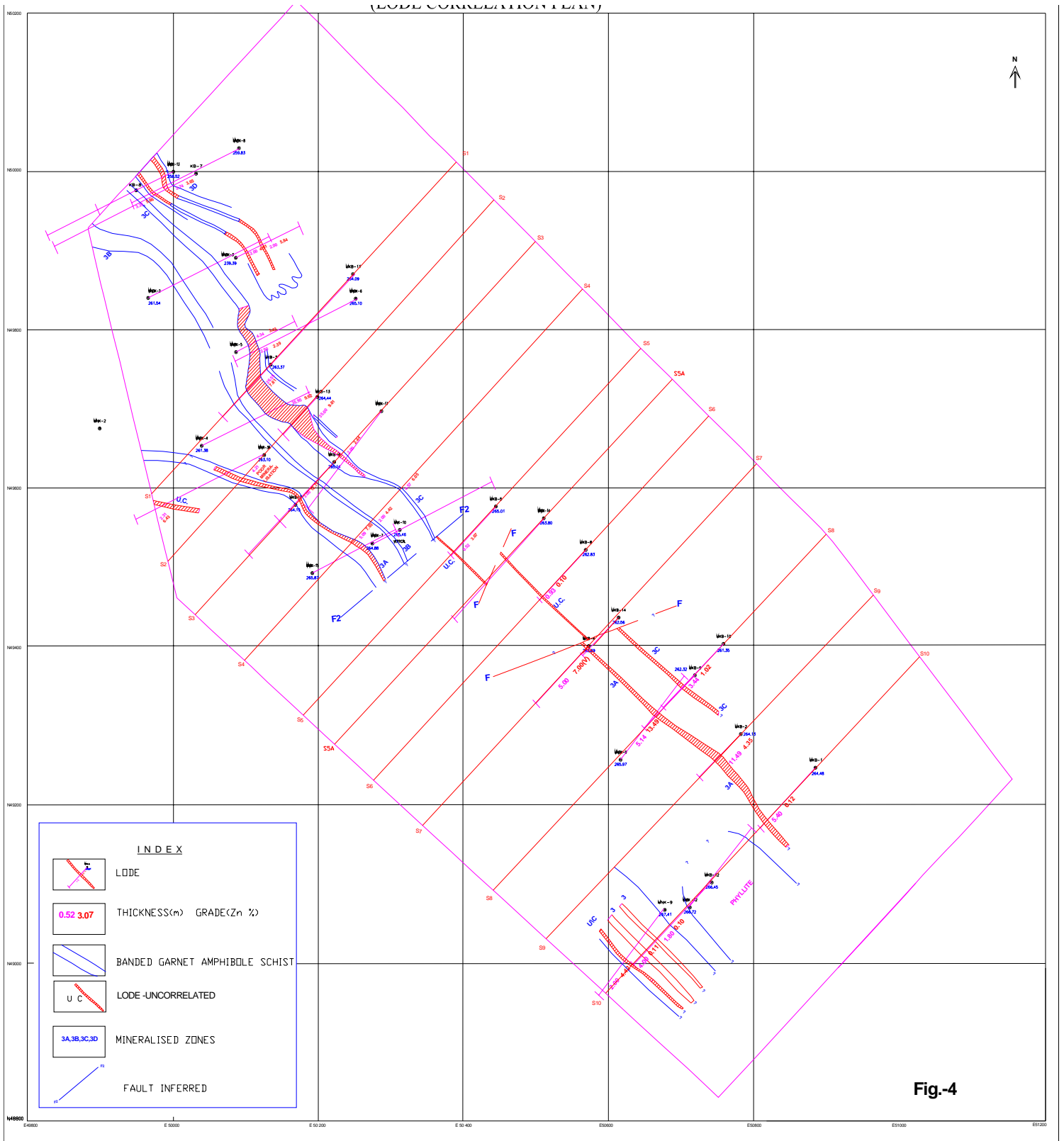
The studies on the baseline data of Environmental studies covering land use / land cover pattern studies have been carried out in the block.

The Total Cost of Exploration is Rs. 135.02 Lakhs.

GEOLOGICAL MAP OF SAKOLI FOLD BELT



LEVEL PLAN AT 170 mRL



GEOLOGICAL CROSS SECTION

