

**GEOLOGICAL REPORT ON EXPLORATION FOR LEAD & ZINC
LATION-KA-KHERA EAST BLOCK
DISTRICT - RAJSAMAND, RAJASTHAN**

EXECUTIVE SUMMARY



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CENTRAL ZONE
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GEOLOGICAL REPORT ON EXPLORATION FOR LEAD -ZINC ORE, LATION-KA-KHERA EAST BLOCK, DARIBA BETHUMBI-SURAWAS BELT DISTRICT: RAJSAMAND, RAJASTHAN.

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1.0 LOCATION

The Lation-Ka-Khera East block is situated close to Lathiyankheri village (25°01': 74°10'), in the Relmagra tehsil of Rajsamand district, Rajasthan and is connected to Relmagra by 4 km road. The block lies in Survey of India toposheet Nos 45K/4 and 45 L/1 and is bounded by Latitudes 25° 00' 25": 25° 01' 00" N and Longitudes 74° 08' 20": 74° 09' 08" E. The Dariba Lead-Zinc Mine of HZL is located 6 km south of the block. The nearest railhead, Fatehnagar, is located 25 km away from the block, on the Udaipur–Chittorgarh section of Western Railway.

2.0 GEOLOGY AND STRUCTURE

The Lation-Ka-Khera east block is located almost in the central part of Dariba-Bethumbi-Surawas polymetallic belt. This belt is known for hosting number of significant lead-zinc prospects. Generally the area comprises meta-volcano sediments of Rajpura-Dariba Group occurring as cover rock sequence in the gneisses of the Mangalwar Complex, a part of Bhilwara Super group of Archean/Lower Proterozoic age. The cover rocks comprise vein quartz, dolerite dyke, carbonaceous schist, interbanded schist and cherty quartzite, calc-silicate marble / dolomite, meta psammities with quartzite and amphibolite.

The meta-volcano sedimentary rocks form the crescent shaped Dariba-Bethumbi belt and have undergone three phases of deformation. The folds of first and second phase are coaxially folded with NNE-SSW fold axis and dipping 60° - 70° in easterly direction. They have resulted in tight to open asymmetric and overturned folds with thickening at the closure and thinning at limbs. The folds of third phase are superimposed over earlier folds giving rise to cross folds with WNW-ESE axis and forming resultant culmination and depression structures.

3.0 MINERALISATION

The mineralized zone is hosted by Calc.Silicate marble/dolomite and schist. Two zones viz. Hanging wall and Foot wall of this host rock have been intersected in the boreholes separated by barren parting of Calcareous mica schist.

The lead and zinc mineralisation occurs mainly in the form of galena and sphalerite in association with pyrrhotite and pyrite as disseminations, veins, stringers, and thin massive bands.

4.0 QUANTUM OF WORK DONE

MECL has carried out detailed Geological Mapping & topographical survey covering 0.917 Sq. Km area. 3235 Mtrs of drilling in 11 boreholes, 720 (658+62) number of primary and check samples, 75+75 Nos. Primary samples for Au & Ag (Fire assay method), 32 Nos of composite samples for (6 radicals i.e. Pb, Zn, Cu, Ni, Co & Cd) and Au & Ag. 32 Nos.of samples for Emission Spectroscopy and 20 Nos.of samples for XRD studies, Petrographic studies on 30 Nos.of samples and Minerographic studies on 40 Nos of samples and 50 Nos of specific gravity determination test along with Ore beneficiation study on one bulk sample were also carried out by IBM in the Block. Based on the above data and earlier data of GSI, an exploration report was submitted by MECL.

5.0 ORE RESERVE ESTIMATION

A total of 14.64 million tonnes in-situ geological reserve with average grade of 1.20% Pb, 4.42% Zn has been estimated. Ore also contain average 230 ppm Cd and 57 ppm Ag. Out of this, Probable category reserve estimated for both hanging wall and footwall is 5.64 million tonnes of 1.19% Pb and 4.55% Zn with 236 ppm Cd and 60 ppm Ag, over average true width of 9.87 m. Possible category of reserve estimated is 9.0 million tonnes of 1.2% Pb, 4.34% Zn and 225 ppm Cd, 55 ppm Ag.

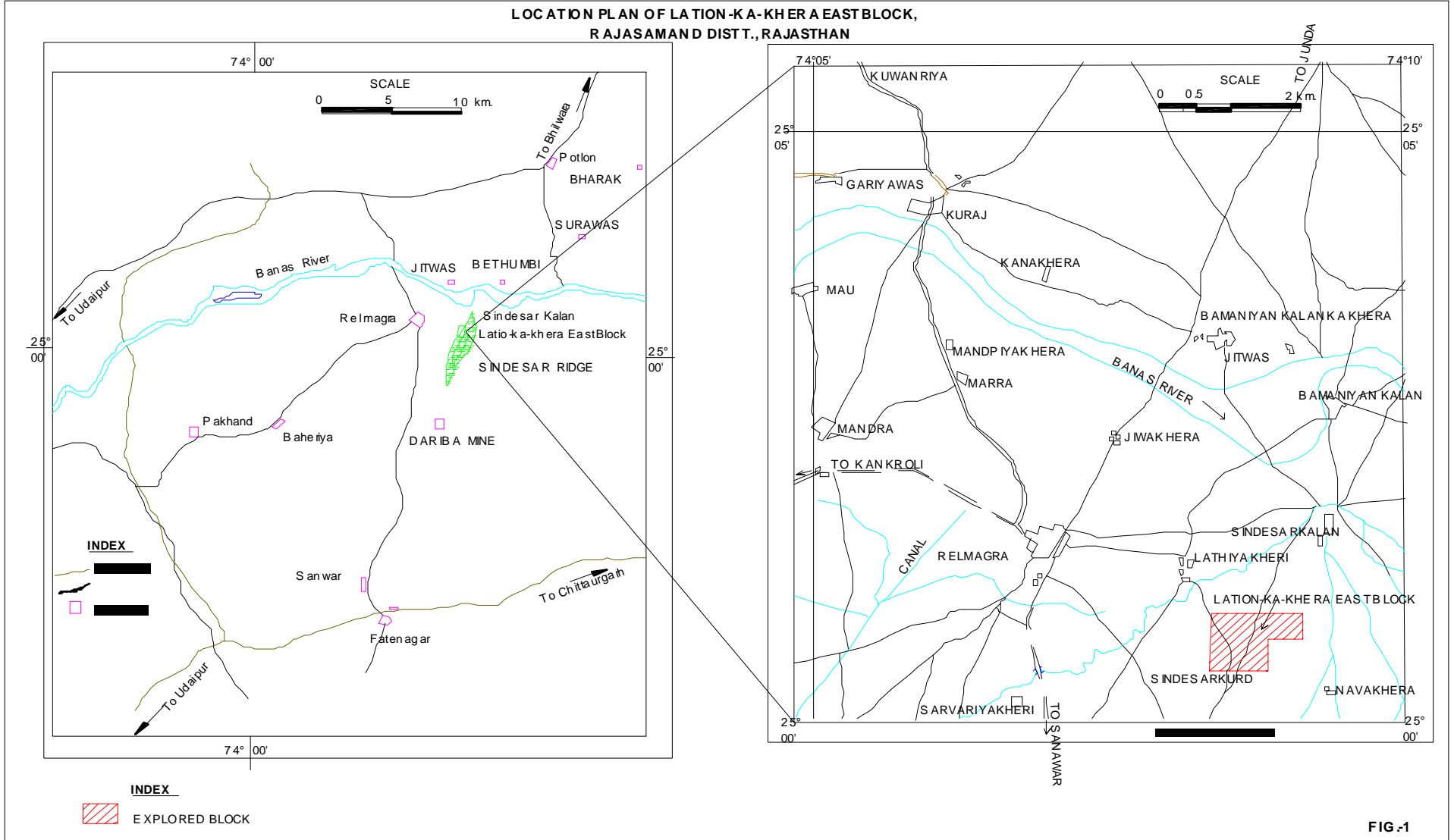
Reserves have been broadly confined between + 400 m. RL to – 32 m. RL. (432m vertical depth)

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

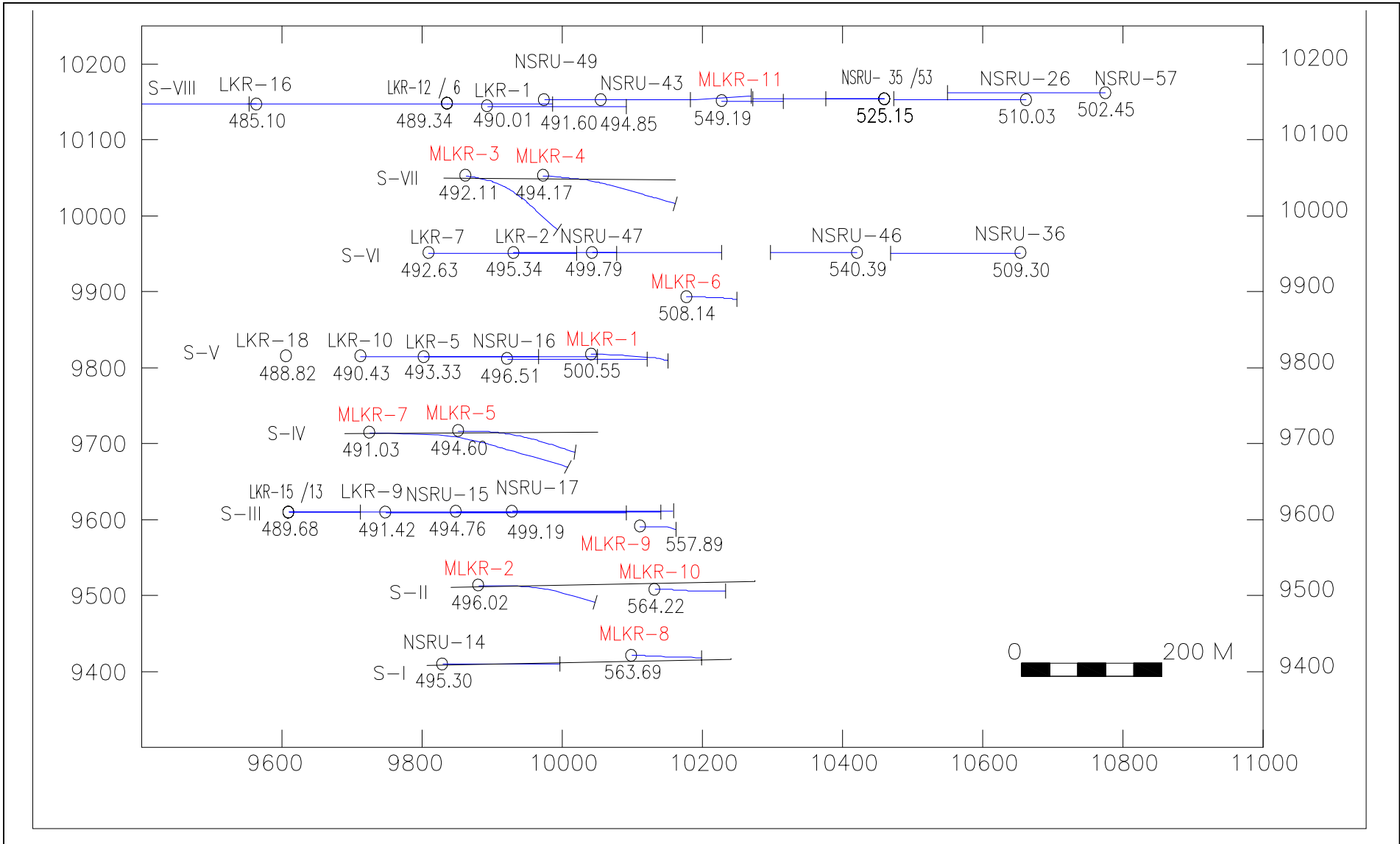
The studies on the baseline data of Environmental studies covering land use / land cover pattern studies have been carried out in the block.

The Total Cost of Exploration is Rs. 179.92 Lakhs.

LOCATION PLAN OF LATION-KA-KHERA EAST BLOCK



Plan Projection of Boreholes



Geological Cross Section

