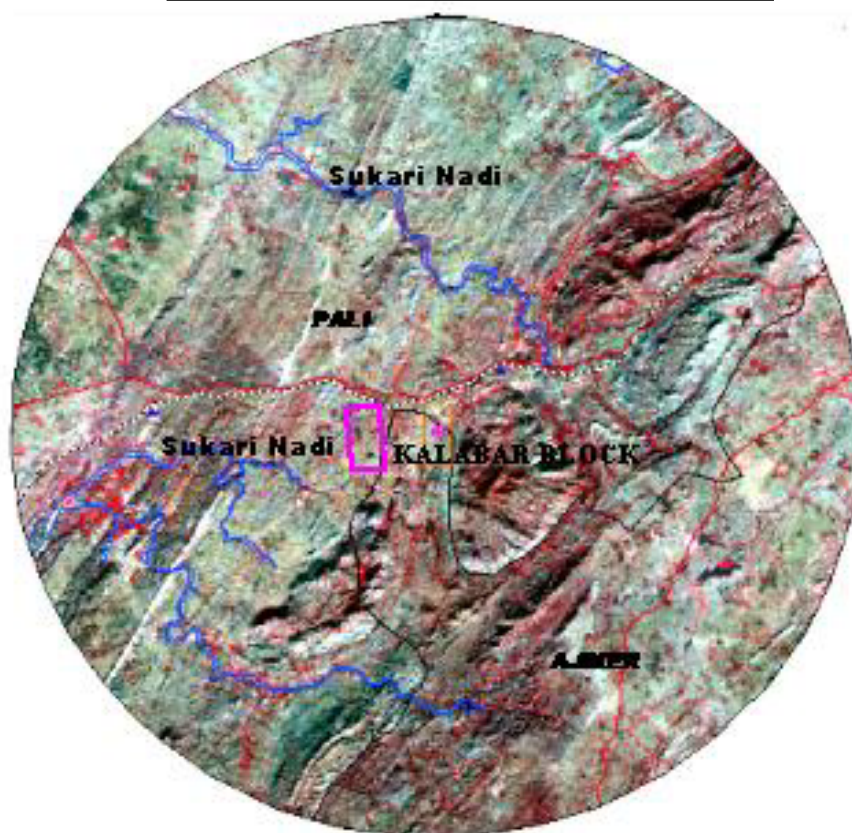


GEOLOGICAL REPORT ON EXPLORATION FOR ZINC ORE

KALABAR BLOCK

DISTRICTS: PALI & AJMER, RAJASTHAN

EXECUTIVE SUMMARY



FCCMAGE OF THE STUDY AREA



MINERAL EXPLORATION CORPORATION LIMITED

(A Government of India Enterprise)

CENTRAL ZONE

NAGPUR-440006

SEPTEMBER - 2005

GEOLOGICAL REPORT ON EXPLORATION FOR
COPPER, LEAD AND ZINC ORE,
KALABAR BLOCK,
DISTRICT: PALI & AJMER, RAJASTHAN.

EXECUTIVE SUMMARY

1.0 LOCATION

Kalabar Block is located 3 Km South West of Sendra having its Tehsil headquarter at Raipur, and District headquarters at Pali in the state of Rajasthan. The Block falls in Survey of India Topo Sheet No 45 J/4) and bounded by North Latitude 26°03` 22`` to 26° 04` 12`` and East Longitude 74° 10` 16`` to 74°10` 39``. The block is 17 Km from Beawar town and is easily accessible by road on Jaipur – Pali – Jodhpur highway. The nearest railway head is Sendra Railway station and can be reached by Delhi - Ahmadabad broad gauge section of the Western Railway.

2.0 GEOLOGY AND STRUCTURE

Mainly four rock types are exposed in the block. The order of abundance of these rocks is Amphibolites, Quartz Mica Schist (QMS), Chlorite Schist and Calc-granulites. All these rocks are traversed by sills and dykes of younger amphibolites, veins of pegmatite and quartz. The rock types show low to moderate amphibolite grade of regional metamorphism.

The area is located in the central part of the Heron's NW syncline comprising of the older Barotiya and the younger Sendra complex. Heron (1953) considered Bar conglomerate as equivalent to basal Alwar and the beds of Barotiya Sequence together with Sendra complex equivalent to Ajabgarh Group of Delhi Super Group.

The primary structure observed in the block is the bedding (S_0) defined by colour banding in the Quartz Mica Schist and Calc-granulite. It is co-planar with the regional schistosity (S_1). The strike of the formation in the area is NNE-SSW with vertical to sub vertical dips mostly due SE

No major faults are observed in the block. Minor displacement of quartz veins and banding in amphibolite has been observed on surface exposures as well as in drill cores. Mineral lineation is parallel to foliation (S_1). Vertical, cross and horizontal joints are well developed in all the rock types in the block.

3.0 MINERALISATION

Surface indications of the mineralisation in the block are in the form of two oxidized zones i.e. the Western Massive Sulphide zone and the Eastern Massive Sulphide zone. The western zone in the northern part of the block is 300 m long and 12 to 30 m wide and is well developed with fully oxidized rock or gossan. The trend of the western zone is N 30° E – S 30° W dipping 85° SE. The eastern zone is 65 m long, 10 to 20 m wide striking N 55° E – S 55° W with 75° dip towards NW. The average depth of oxidation as intersected in the boreholes is 28 m. An old working “Tambakhan” located in the Western Massive Sulphide and “Lohakhan” located in the Eastern Massive Sulphide are filled with rock debris and the presence of slag heap.

The main host rock for mineralisation is Amphibolite & chlorite schist. The nature of mineralisation is in form of massive sulphides. The massive sulphides consist of pyrite, chalcopyrite, pyrrhotite and sphalerite. A broad metal zonation of Cu and Zn is noticed in Kalabar block. In western zone, Cu decreases with increase of Zn. Similarly copper increases with depth in both the zones (western and eastern). The control of mineralisation is litho structural.

4.0 QUANTUM OF WORK DONE

MECL has carried out detailed Geological Mapping & Topographical survey covering 0.80 Sq.km. area, 902 Mtrs of drilling in 6 boreholes, 125Nos of primary and check samples, 14 Nos of composite samples for (7 radicals i.e. Cu, Pb, Zn, Ni, Co, Mo & Cd) & 14 Nos of composite samples for Fire Assay for Au & Ag and 14 Nos composite samples for Hg & Se were also analysed. 14 Nos. of composite samples for Emission Spectroscopy (10 radicals) and 5 samples for XRD studies, Petrographic studies on 23 Nos.of samples and Minerographic studies on 20 Nos of samples and 21 Nos of specific gravity determination test were also carried out by MECL in the Block. One borehole core was subjected for Geotechnical studies and one bulk sample is studied for

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

5.0 ORE RESERVE ESTIMATION

The mineralised zone is hosted by Amphibolites and Chlorite schist striking NNE-SSW dipping 85° SE.

A 3% cut off for Zn values for the Massive sulphide zones have been taken for reserve estimation and the stringer sulphides zones less than 3% Zn value have been considered for reserve estimations.

The Western Massive Sulphide deposit has been considered for Ore Reserve estimation as this part of the deposit only was explored by MECL. In the Western Massive Sulphide Deposit a total of 0.59 million tonnes ore reserves of 6.61% Zn, 0.24% Cu with an average true thickness of 4.92 m has been estimated. For Western Massive Sulphide Deposit a total strike length of 450 m was considered between section lines S-4 to S-10. Half (25 m).

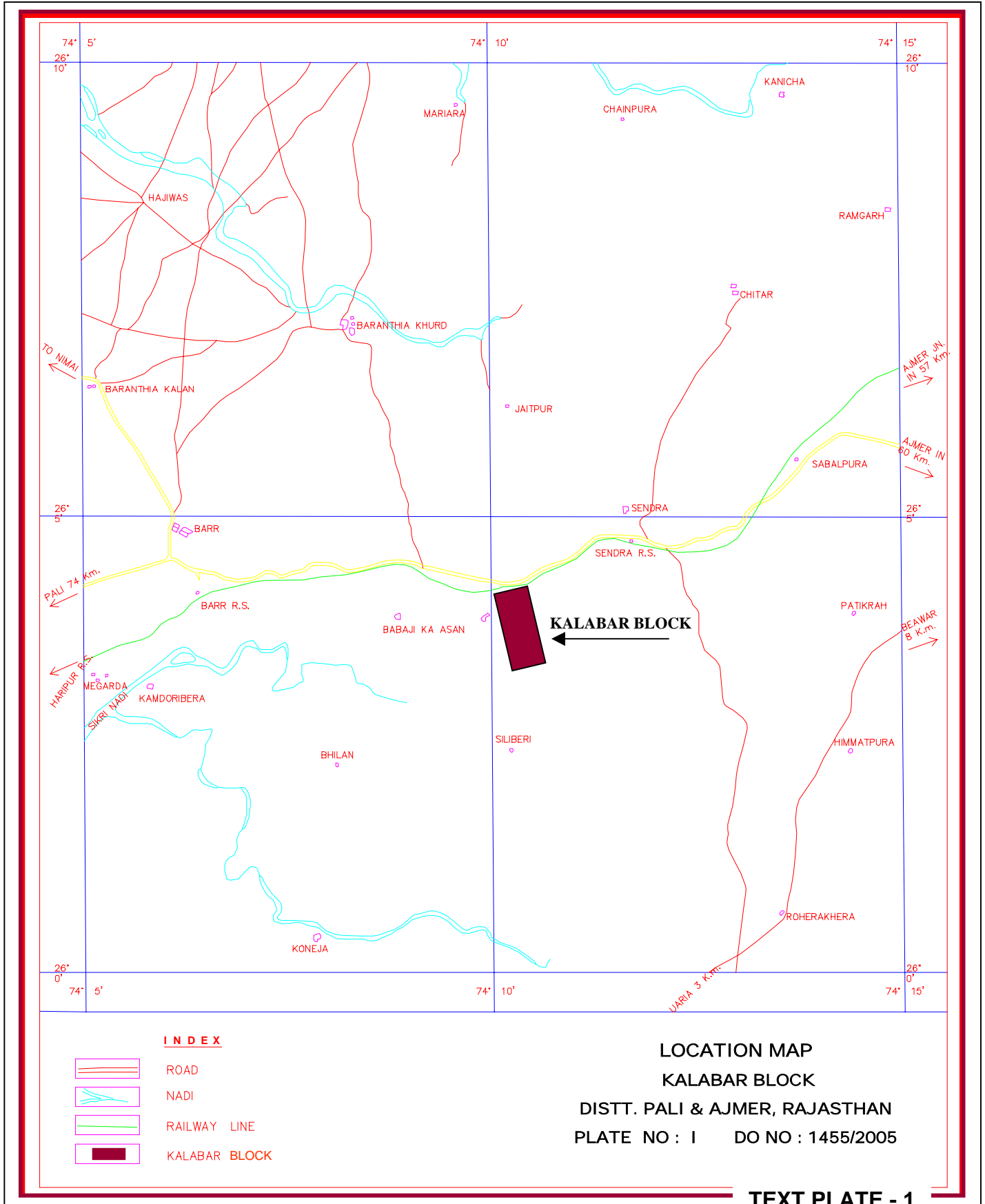
For Eastern Massive Sulphide Deposit the reserves estimated by GSI were considered. A total of 0.36 million tonnes of ore reserves with an average grade of 5.40% Zn, 0.60% Cu and 7.49 m of average true thickness are estimated. Reserves have been broadly confined to 150 m vertical column that is between +400 MRL and +250 MRL.

The Deposit has been classified as Category 'D' 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.

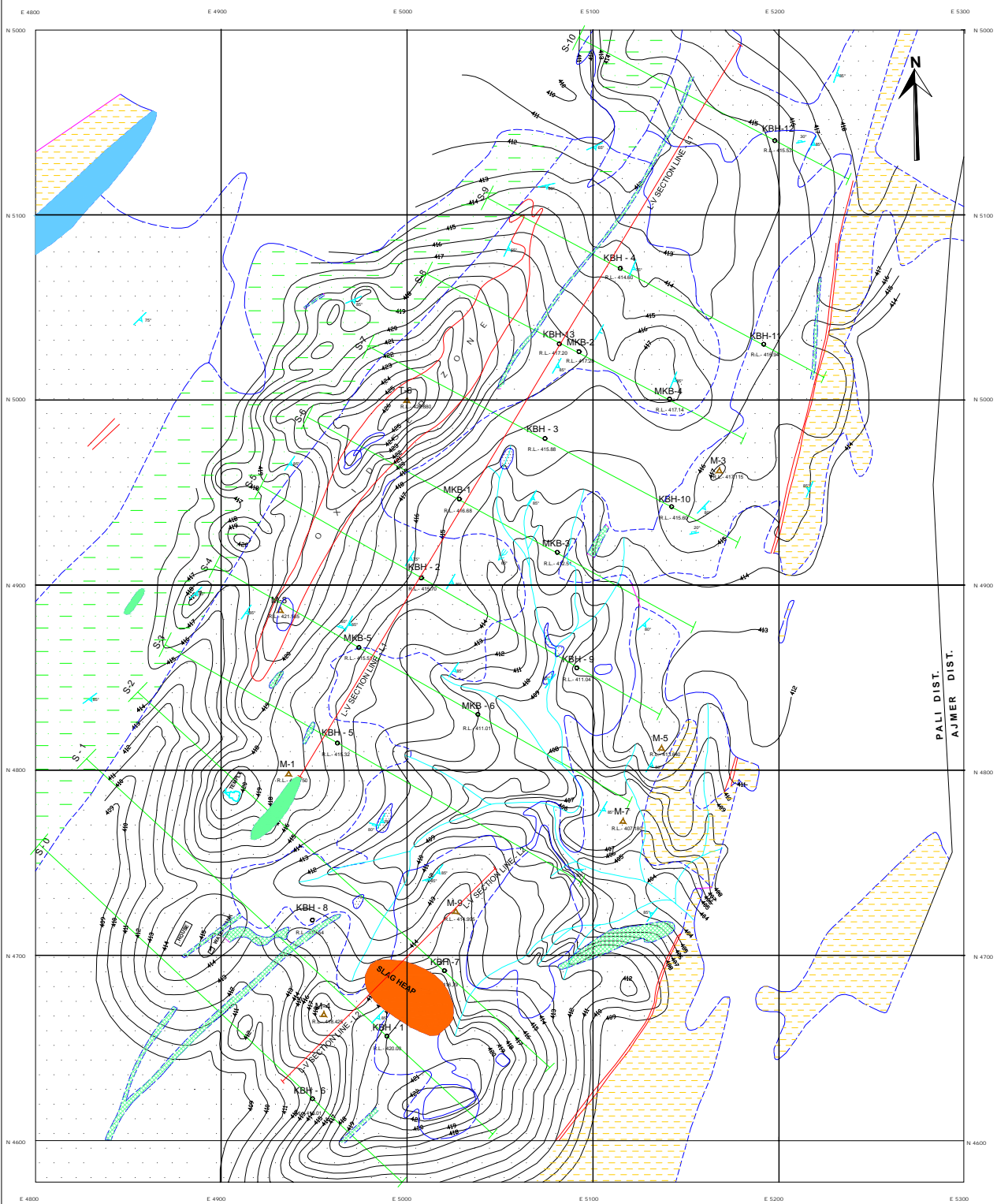
The Total Cost of Exploration is Rs. 64.82 Lakhs.

LOCATION MAP OF KALABAR BLOCK



TEXT PLATE - 1

TOPOGRAPHICAL & GEOLOGICAL MAP



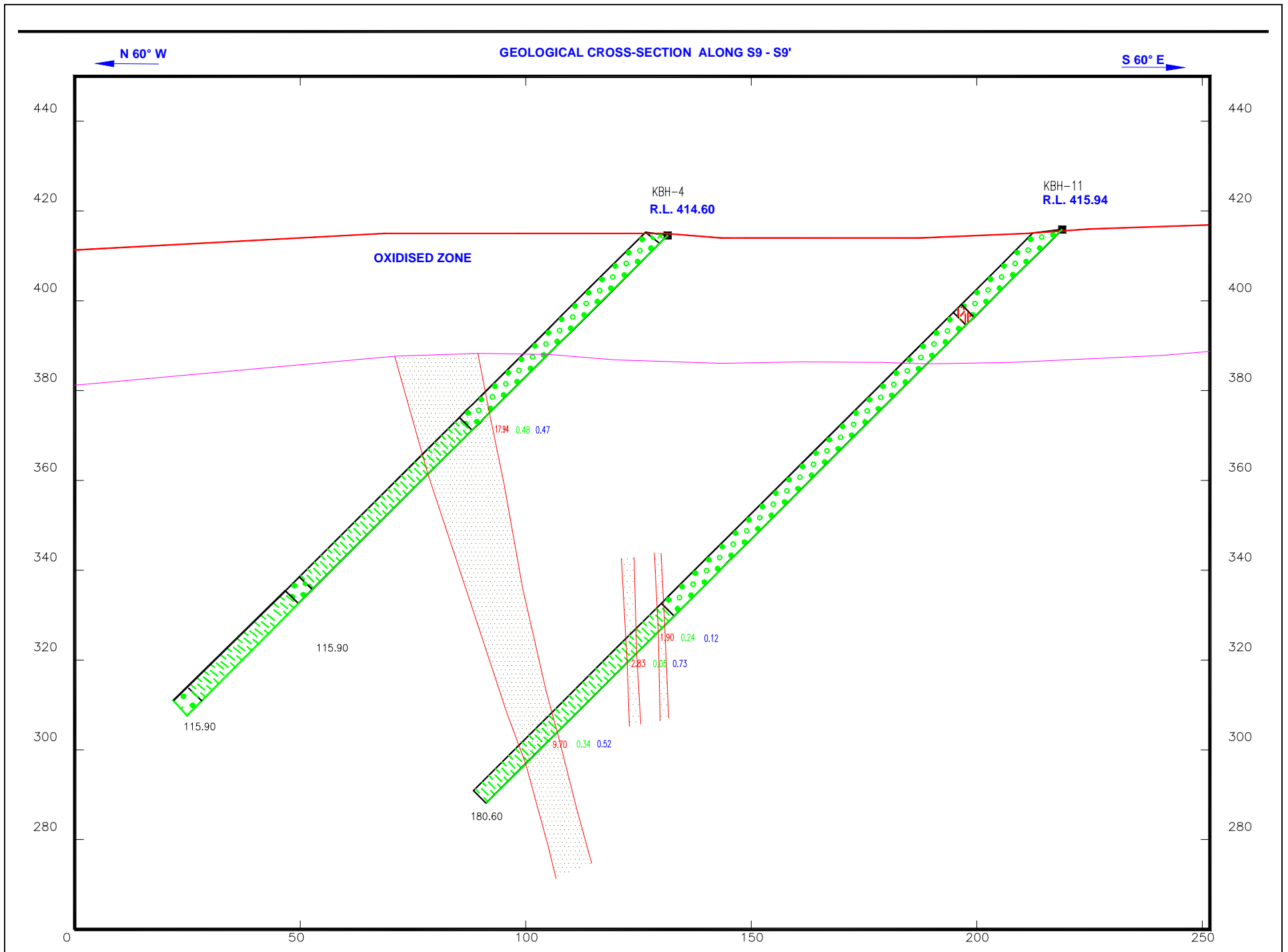
PALI DIST.
AJMER DIST.

INDEX			
MKB-2	Borehole Drilled by MEC	[Symbol]	Soil
KBH-3	Borehole drilled by GSI	[Symbol]	Quartz Mica Schist
R. L. - 415.60	Reduced Level	[Symbol]	Amphibolite
S-5	Section line	[Symbol]	Chlorite Schist
[Symbol]	Old Working	[Symbol]	Epidone Amphibolite
[Symbol]	Slag Heap	[Symbol]	Dolomite dyke
[Symbol]	Lithology	[Symbol]	Calc Silicate Rock
M/S	Triangulation Survey Station with R.L. MECL	[Symbol]	Contour with value
A.L. 41340	Quartz Vein	[Symbol]	
[Symbol]	Building	[Symbol]	
[Symbol]	Well	[Symbol]	
[Symbol]	Mass Field	[Symbol]	
[Symbol]	Contour Interval - 1.00 mtrs.	[Symbol]	

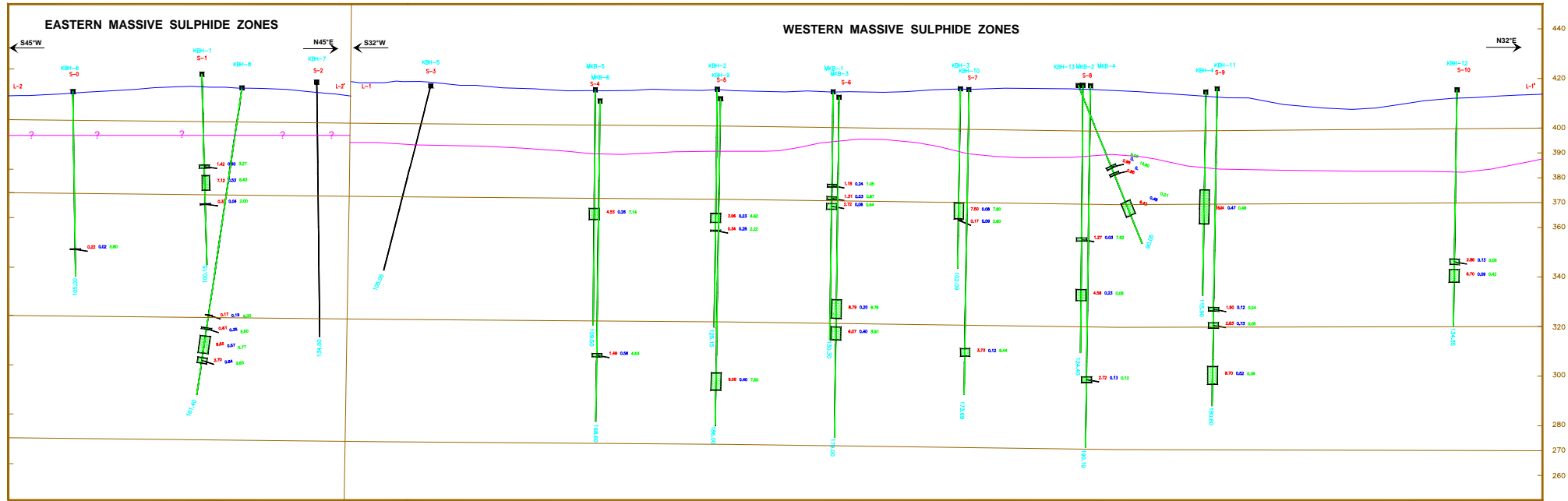
MINERAL EXPLORATION CORPORATION LIMITED
TOPOGRAPHICAL & GEOLOGICAL MAP
KALABAR ZINC DEPOSIT
DISTRICT - PALI & AJMER, RAJASTHAN

TEXT PLATE - 2

GEOLOGICAL CROSS SECTION



LONGITUDINAL VERTICAL SECTION



INDEX

- KBH - 9 Borehole drilled by GSI
- MKB - 6 Borehole drilled by MECL
- S-6 Setion Line Number
- KBH - 9 Mineralised Zone
- True Thickness (m.) Cu (%) Zn (%)

MINERAL EXPLORATION CORPORATION LIMITED	
LONGITUDINAL VERTICAL PROJECTION	
SHOWING LIMITS OF ORE-BODY	
KALABAR ZINC DEPOSIT	
DISTRICT : PALI & AJMER	STATE : RAJASTHAN

LEVEL PLAN AT 370 mRL

