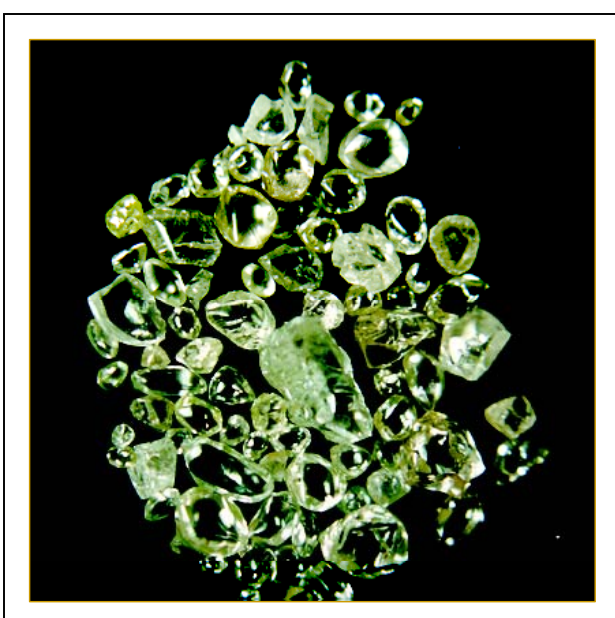


**GEOLOGICAL REPORT ON THE EXPLORATION FOR
DIAMONDIFEROUS – CONGLOMERATE
HATUPUR BLOCK**

(PHASE-I & PHASE-II)

PANNA DIAMOND FIELD, DISTRICT – PANNA, M.P.

EXECUTIVE SUMMARY



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

MARCH-1994

**JAIPUR AREA, JAIPUR
RAJASTHAN (INDIA)**

GEOLOGICAL REPORT ON THE EXPLORATION FOR DIAMONDIFEROUS – CONGLOMERATE, HATUPUR BLOCK (PANNA DIAMOND FIELD) DISTRICT – PANNA, M.P.

EXECUTIVE SUMMARY

1.0 LOCATION

Hatupur block is located 23 kms East of Panna Township District Panna, Madhya Pradesh on Panna-Paharikhera Road. Bhopal, the state capital is 425 kms south west of Hatupur block. The area is bounded by 24°48'N, 80°25'E Toposheet No.63 D/5.

2.0 GEOLOGY AND STRUCTURE

The lithounits of Hatupur block are a part of sedimentary sequence belonging to the Rewa group of the Vindhyan Super Group. The local geological sequence is as follows: -

GROUP / SUB GROUP	FORMATION
Recent / Sub Recent	Soil, Lateritic Gravel
-----Unconformity-----	
Rewa	Gahadra sandstone, Jhiri conglomerate in Jhiri shale, Itwa conglomerate in Itwa sandstone, Itwa sandstone Panna Shale

The formations in the area are gently dipping with dips of 2° – 3° towards southeast. The general trend of the formations in the area is ENE-WSW.

3.0 MINERALISATION

Two persistent bands of conglomerate have been identified inter bedded in the Jhiri Shale and the Itwa sandstone designated as Jhiri conglomerate and Itwa conglomerate respectively. Out of these two bands, the Jhiri conglomerate is very thin in nature; whereas Itwa conglomerate is well developed and extends all along the block. Thickness variation of the Itwa conglomerate is observed from 0.03m to 1.36m with an average thickness of 0.30m. However, average thickness of Itwa conglomerate at 0.20m and 0.40m cut-off is 0.39m and 0.60m, respectively.

4.0 QUANTUM OF WORK DONE

In the 1st-Phase of exploration, MECL has carried out detailed Geological Mapping & topographical survey covering 4.75Sq. Km area. 5124.90 mtrs of drilling in 82 boreholes, 1316.20m geophysical logging in 17 BHs. were carried out. 237 Nos. of samples subjected for sieve analysis. 128 samples from 54 BHs. i.e. 84 samples from Itwa conglomerate and 44 from Jhiri conglomerate were subjected for heavy mineral analysis. Petrographic studies on 11 Nos. of samples were carried out by MECL in the Block. Based on the above data and earlier data of GSI, an exploration report was submitted by MECL.

In the 2nd Phase of exploration i.e. in Block-II and C, MECL has carried out Topographical surveying in 1.31sq.km area with drivage and cross-cutting of 98m, exploratory pitting 120.15m Excavation of 6140.50cu.m in 15 pits, backfilling of 2415.00 cu.m. Beneficiation test and classification of diamonds is carried out on 723.683 tonnes of conglomerate sample. Based on the above data and earlier data of GSI, an exploration report was submitted by MECL. Based on the above data and earlier data of GSI, an exploration report was submitted by MECL.

5.0 ORE RESERVE ESTIMATION

Reserves have been computed by measuring area on Isopach map. A total of 1.59 million tonnes of probable category reserves for Itwa conglomerate in Block I & II at 0.20m cut off with an average thickness of 0.39m within an area of 1.87 sq.km have been established.

A combined reserves of 4.39 MT "Proved" and "Probable Category" with an average thickness of 0.46 mts. covering an area of 4.25 sq.km. in MECL and adjoining GSI blocks have also been computed for Itwa conglomerate.

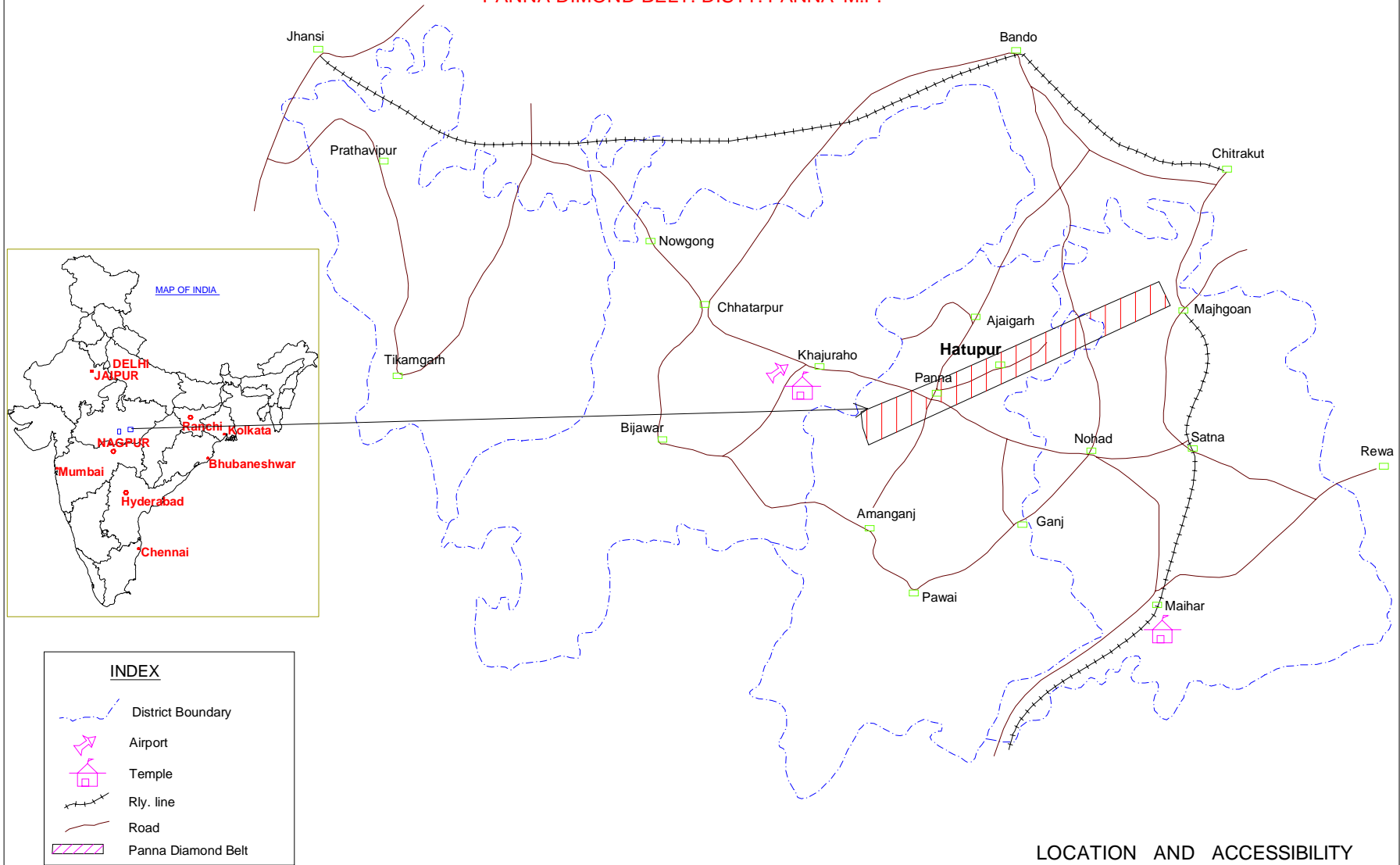
In Phase-II exploration the reserves have been computed by measuring area on Isopach map. A total of 1.34 million tones of 'proved' category reserves for undiluted Itwa conglomerate (in block II and 'C') at 0.20 m cut off with an average thickness of 0.46 m within an area of 1.31 Sq. Km have been established. Reserves have been computed by measuring area on Isopach map.

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

The Total Cost of Exploration is Rs. 336.32 Lakhs.

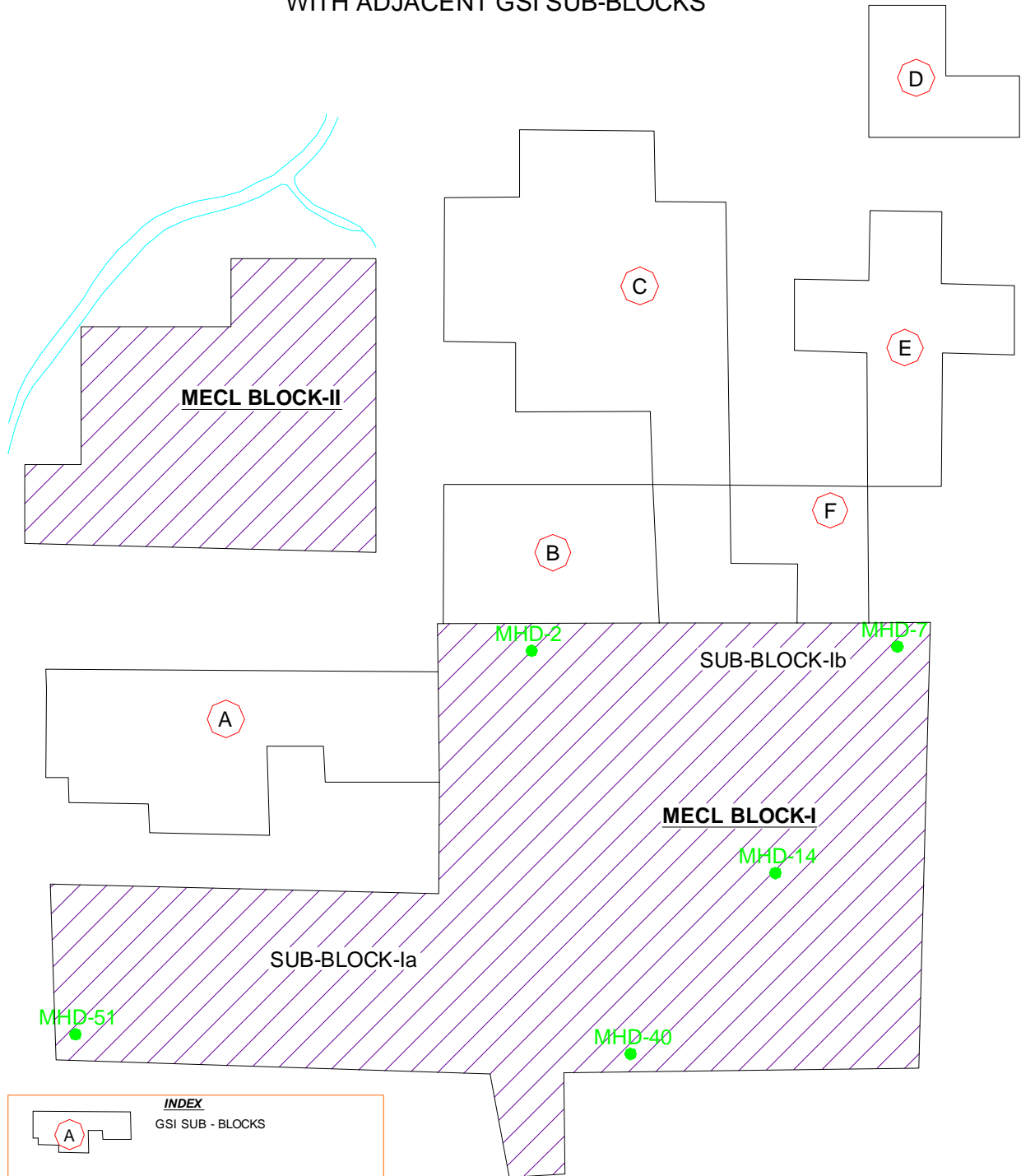
LOCATION MAP OF HATUPUR BLOCK

LOCATION MAP OF HATUPUR BLOCK (BLOCK-II&C)
 PANNA DIMOND BELT. DISTT. PANNA M.P.



LOCATION OF SUB - BLOCKS

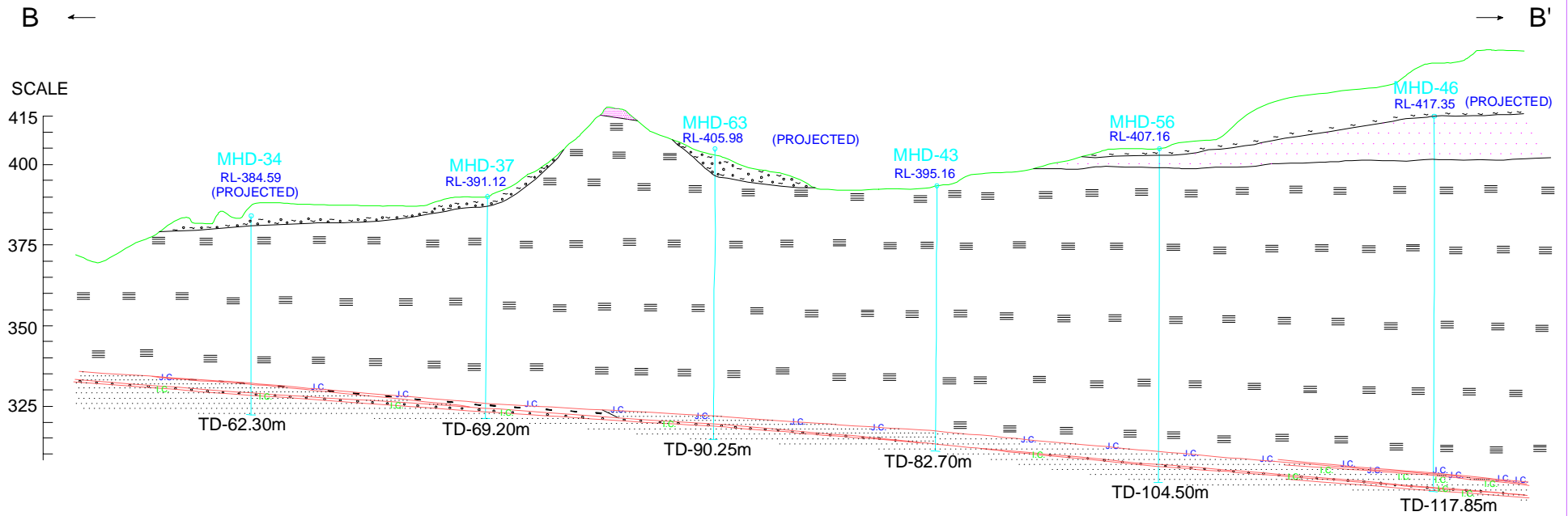
PLAN SHOWING MECL SUB-BLOCKS
WITH ADJACENT GSI SUB-BLOCKS










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	GSI SUB - BLOCKS
	MECL SUB - BLOCKS
	RIVER
	BOREHOLE DRILLED BY MECL

GEOLOGICAL SECTION ALONG A-A' & B-B'

GEOLOGICAL SECTION - HATUPUR EXTENTION BLOCK



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- | | | |
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| MHD-46
RL-417.35
Borehole drilled by M.E.C.L. |  | Jhiri Conglomerate |
|  |  | Itwa Conglomerate |
|  |  | Itwa Sandstone |
|  |  | Jhiri Shale |