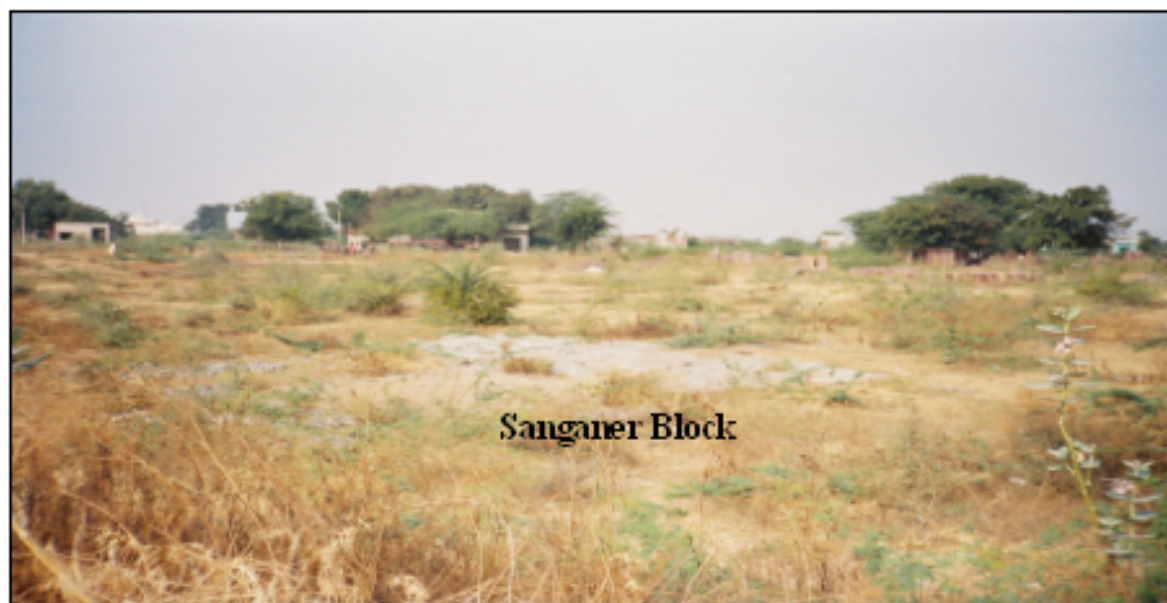


**GEOLOGICAL REPORT
ON EXPLORATION FOR COPPER**

SANGANER BLOCK

DISTRICT-BHILWARA, RAJASTHAN

EXECUTIVE SUMMARY



MINERAL EXPLORATION CORPORATION LIMITED

(A Government of India Enterprise)

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CENTRAL ZONE

NOVEMBER-2007

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SANGANER BLOCK
DISTRICT: BHILWARA, RAJASTHAN**

EXECUTIVE SUMMARY

1.0 LOCATION

Sanganer Block is located adjacent to the Sanganer village and 5 km NE of Bhilwara township (Latitude 25° 20' 12" to 25° 20' 37" and Longitude 74° 39' 55" to 74° 40' 03") the district headquarter, which is situated on Ajmer-Chittaurgarh broad gauge railway section of western railway. The state highway No.4 connecting Jiapur-Indore passes through Bhilwara. Vidya Niketan, and Suwana villages are in the South-Central & Eastern parts of the block and are about 3 & 5 km from Bhilwara, which are connected by all weather motorable road.

2.0 GEOLOGY AND STRUCTURE

Most of the explored area is covered with soil and the terrain is mostly gently undulation without much variations. The altitude in the area varies from 400 m to 418 m.

The copper, Lead and Zinc mineralised Sanganer-Suwana area is located in the East of Pur-Banera belt belong to the Bhilwara super group have been grouped under Mangalwar Complex, in which Suwana formation is a member.

Suwana formation is exposed in an elliptical shape with its acute bisector trending due NE-SW. The schistose rocks of 10 Sq. km tend to encompass a central gneissic dome in an elliptical ring is also gneissic at its center, best described as granitoid and migmatitic.

The Suwana formation has been classified on the basis of apparent succession and order of superposition of litho-units.

STRATIGRAPHIC SUCCESSION OF SUWANA FORMATION

Kothari Member	Quartz-Biotite Schist/Gneiss & Amphibolites and Calcareous interbands.

Vaidyaniketan Member	<ul style="list-style-type: none"> -Quartz-Magnetite gneiss & Amphibolite with Lead-zinc mineralisation, strongly magnetic -Quartz-Muscovite-Biotite Schist with or without Garnet -Anthophyllite gneiss with Magnetite and copper sulphide mineralisation -Massive Calc Silicate rocks
----- Unconformity (?) -----	
Sanganer Member	Muscovite gneiss/schist basement at the core of the elliptical structure (After GSI)

The structural configuration of the area is that of a doubly plunging antiform with its axis trending in N45° to 50°E and S45° to 50°W and at moderate plunge 15° to 30°. The bedding in general has NNE-SSW strike and low dip between 15° to 30°.

The most wide spread secondary planar structure of the area is the foliation developed in the schists and gneiss of Suwana formation.

3.0 MINERALISATION

The sulphide mineralisation in the Sanganer block is mostly of copper bearing with some Pb & Zn lodes at shallow horizons. The copper mineralisation in this area is in the form of finely disseminated and veins of Chalcopyrite associated with Pyrite and Pyrrhotite and occurs along the foliation planes. The sulphide mineralisation in this area appears to be strata-bound. The Lead & Zinc mineralisation is associated with calc-silicate and magnetite gneiss, where as copper mineralisation is found in Anthophyllite-Magnetite-Quartz gneiss and Quartz-mica schist. The width of lodes intersected in 17 boreholes (MS-1 to 17) varies 2.50 m (MS-17) to 45.76 m (MS-11) and thickness of Lead & Zinc lodes vary from 2.00 m (MS-7) to 7.20 m (MS-3). The copper mineralisation shows pinches and swell nature along strike and dip direction.

4.0 QUANTUM OF WORK DONE

MECL has carried out detailed Geological Mapping & Topographical survey covering 5.0Sq.km. area, 2604.30Mtrs of drilling in 15 boreholes, 752 Nos of primary and check samples For Cu, Pb & Zn, 60 Nos of composite samples for (6 radicals i.e. Cu, Pb, Zn, Ni, Co & Cd) & Fire Assay for Au & Ag. 20 Nos. of composite samples for Emission

Spectroscopy (10 radicals) and for 10 samples for XRD studies, Petrographic studies on 30 Nos. of samples and Minerographic studies on 30 Nos of samples and 30 Nos of specific gravity determination test were also carried out by MECL in the Block. Geo-technical Studies on drill core samples of one borehole for physico-mechanical studies sent to VNIT, Nagpur. and Beneficiation studies on bulk sample of borehole core was also studied. Based on the above data and earlier data of GSI, an exploration report was submitted by MECL.

5.0 ORE RESERVE ESTIMATION

The mineralized zones have been identified on 0.20% and 0.50% cu cut-ff at 2.00 m minimum stopping width.

The reserve estimation has been done by the Cross Section Method.

Total 15 Nos. of lodes have been identified in the block namely 1A, 1B, 2A, 2B, 2C, 3A, 3B, 3C, 4A, 4B, 4C, 5A, 5B, 5C & L-1.

The reserves at 0.50% Cu cut-off, section-wise and category-wise have also been estimated which comes to be total 2.04 m.t. with 0.68% Cu. Out of which 1.05 m.t. with 0.68% Cu are under Probable Category and 0.99 m.t. with 0.67% Cu are under Possible Category at 2.00 m MSW.

The reserves estimated in the block are 17.21 m.t. of Cu with 0.32% Cu and 2.54 m.t. of Pb + Zn with 1.82% TMC (Pb+Zn). Hence the total reserves are 19.75 mt with 2.14 % TMC (Pb+Zn+Cu).

The reserves at 0.50% Cu cut-off, section-wise and category-wise have also been estimated which comes to be total 2.04 m.t. with 0.68% Cu. Out of which 1.05 m.t. with 0.68% Cu are under Probable Category and 0.99 m.t. with 0.67% Cu is under Possible Category at 2.00 m MSW.

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.

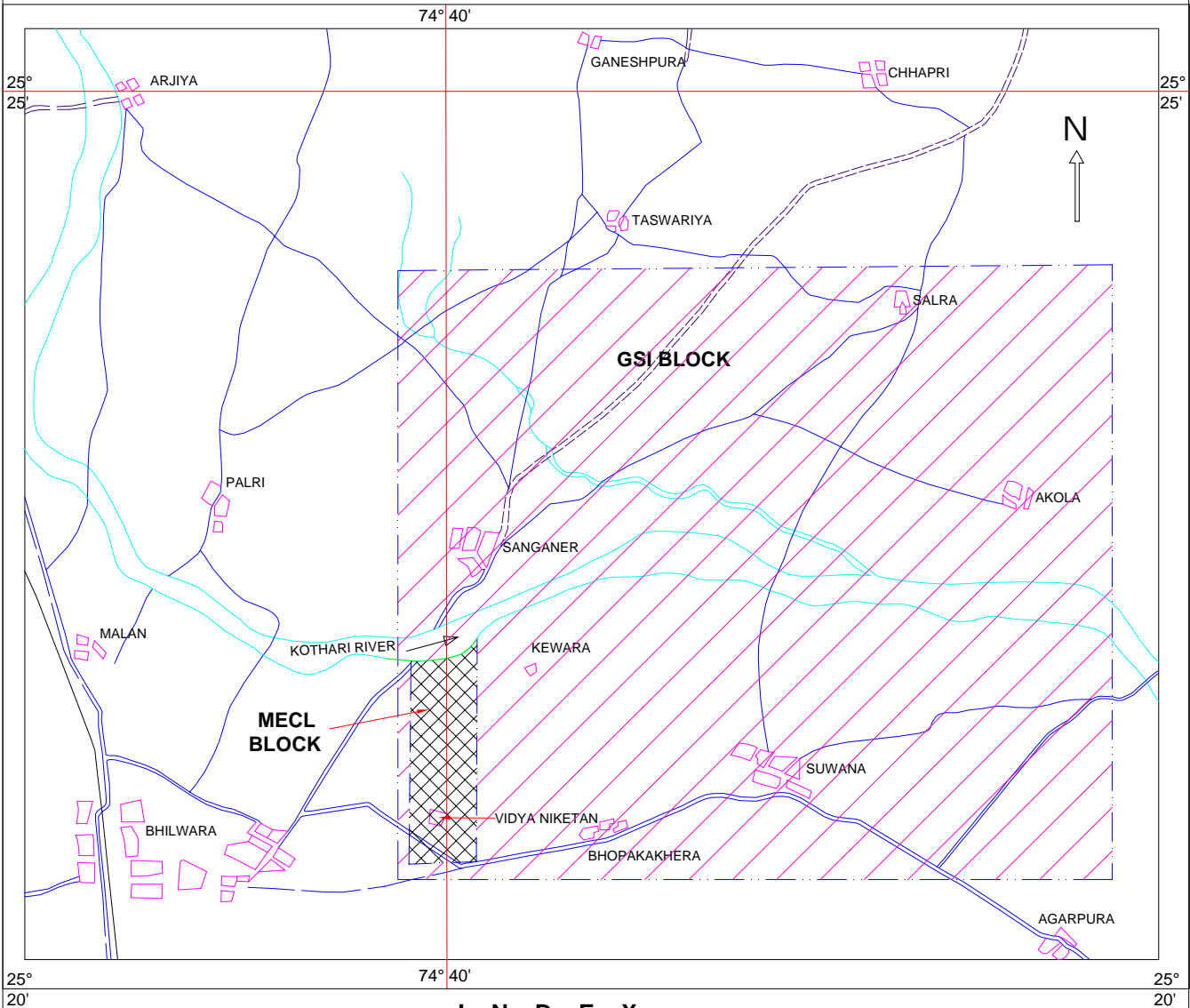
The Total Cost of Exploration is Rs. 224.29 Lakhs.

BLOCK LOCATION MAP OF SANGANER COPPER DEPOSIT

BHILWARA DISTRICT, RAJASTHAN

R.F. 1:50,000

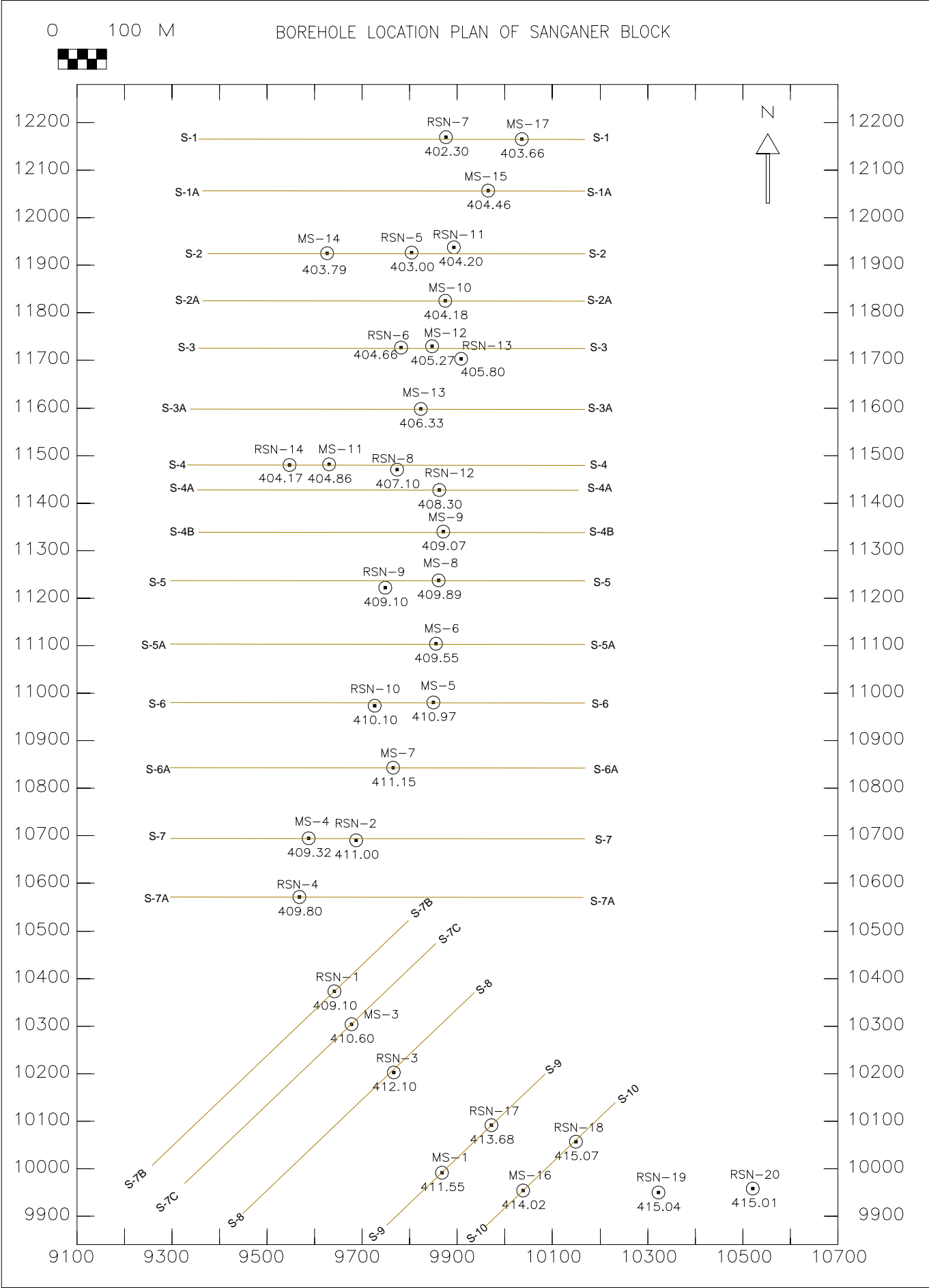
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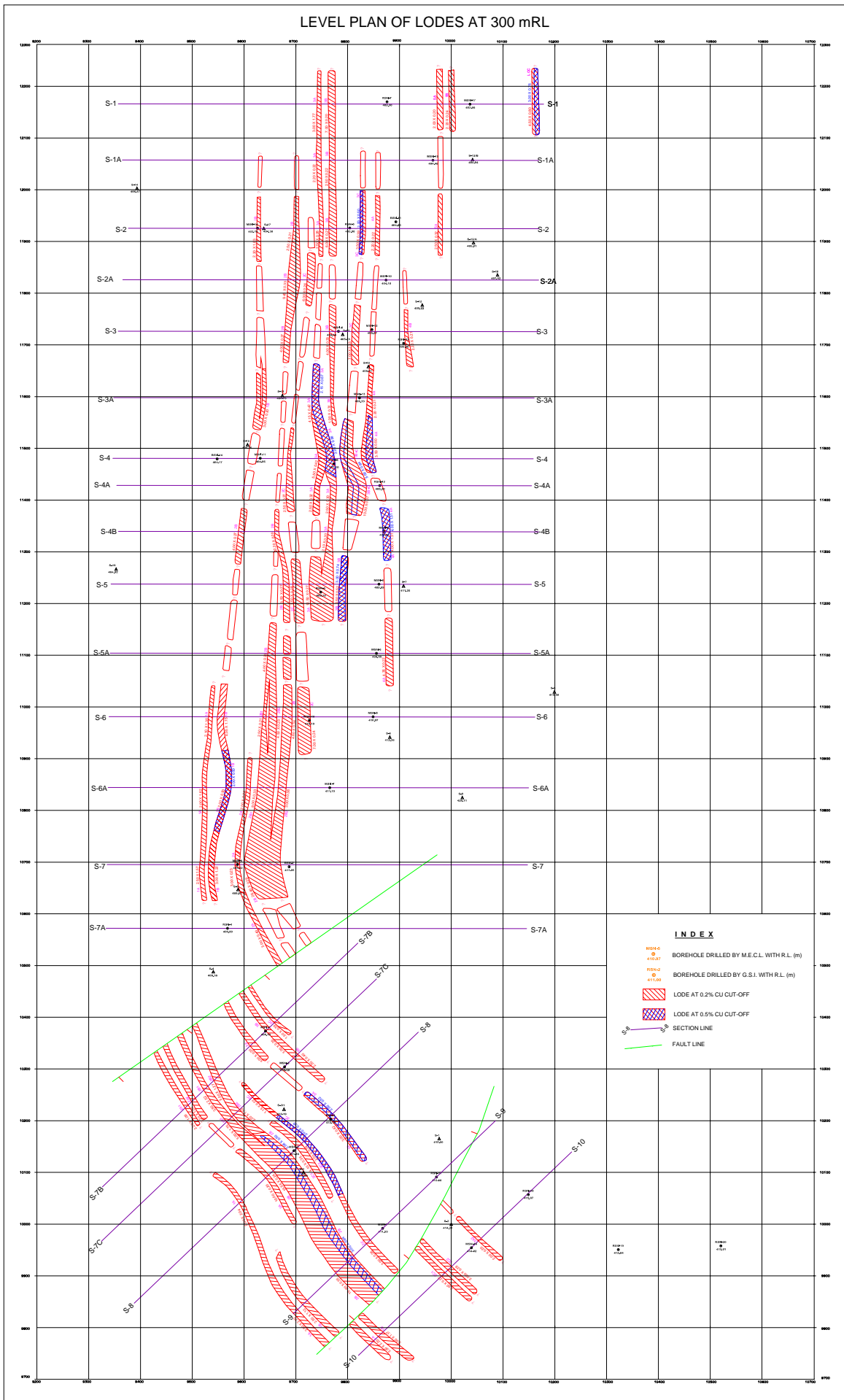
- | | | | |
|---|-------------------|---|-----------------------|
|  | TOWN / VILLAGE |  | RAILWAY LINE |
|  | ROAD / CART TRACK |  | AREA EXPLORED BY GSI |
|  | RIVER / STREAM |  | AREA EXPLORED BY MECL |

BOREHOLE LOCATION PLAN



LEVEL PLAN AT 300 mRL

LEVEL PLAN OF LODES AT 300 mRL



GEOLOGICAL CROSS SECTION

R.F. - 1:1000

