A NOTE ON

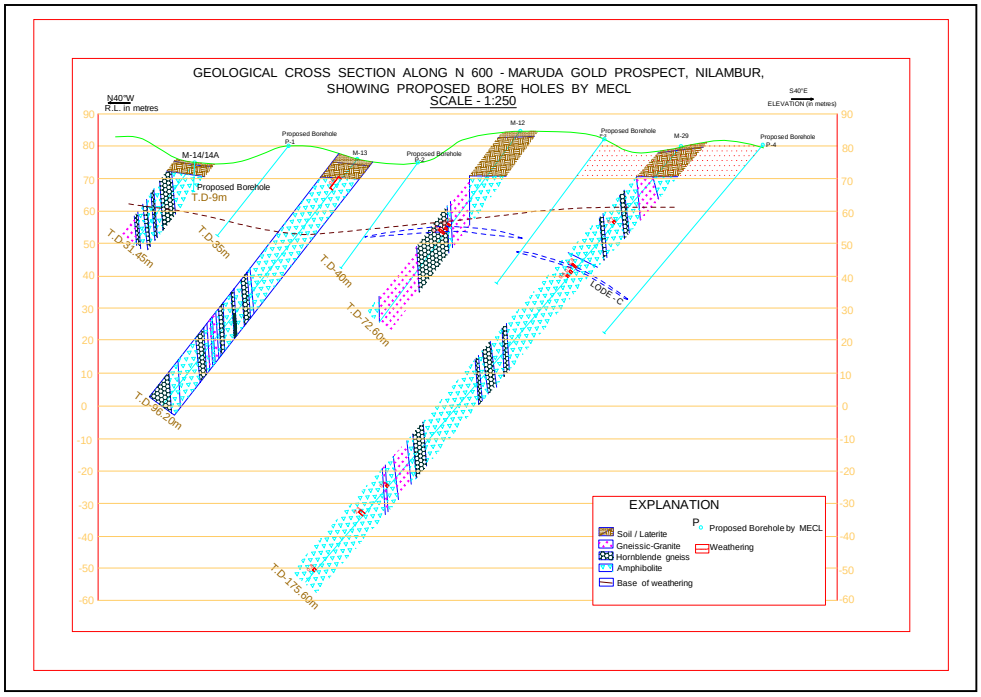
THE PRELIMINARY INVESTIGATION FOR GOLD

IN LATERITE ON CONCEPTUAL BASIS

KAPPIL AREA OF NILAMBUR

DISTRICT - MALLAPURAM, KERALA

EXECUTIVE SUMMARY



MINERAL EXPLORATION CORPORATION LIMITED

(A Government of India Enterprise)

SEMINARY HILLS, NAGPUR

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A NOTE ON THE
PRELIMINARY INVESTIGATION FOR GOLD IN LATERITE ON CONCEPTUAL BASIS IN KAPPIL AREA OF NILAMBUR DISTRICT- MALLAPURAM, KERALA

EXECUTIVE SUMMARY

1.0 LOCATION

The Kappil area of Nilambur is located in Mallapuram district of Kerala state. It is bounded by Latitude $11^{o}13'07"$ - $11^{o}15'00"$ N and Longitude $76^{o}12'20"$ - $76^{o}13'46"$ E falls in Survey of India Toposheet No. 58 A/4.

2.0 GEOLOGY AND STRUCTURE

In the major synform occupied by migmatites. The lower zones of laterite are argillaceous and mostly represented by lithomarge clays. The laterite and lithomarge from deep rooting along the zones of weakness viz shears. Structure of the area can be considered as the southern extension of the schist belts of southern part of the country.

The investigations carried out hitherto mostly aimed at finding the tenor gold in quartz veins. The strike in the northern part is NNE-SSW, dipping at steeper angle generally towards east and plunge is generally 30^{o} - 45^{o} southerly.

3.0 MINERALISATION

Mineralisation of gold is mostly in quartz veins and subsequently having secondary dispersion in the surrounding laterite in area.

The old workings appear to be present along the shear zones of synforms. Stringers / veinlets and siliceous bands present on the laterite surface seem to have attracted the attention of old miners by experience and the old workings had followed the plunge of the synforms. Some of the workings seem to have been driven horizontally along the lower levels of the laterites. The relict foliations and the lineations of iron concretions

in the laterites generally conform to local attitudes of foliation and plunge and hence may be useful in deciphering the shear zones in the laterite.

4.0 QUANTUM OF WORK DONE

MECL carried out the Preliminary studies of the area of occurrence of gold in phase-I, Shallow drilling in Kappil area and also regional shallow drilling in phase-II and Geochemical sampling by auger drilling in Kappil area in phase-III.

In phase-II detailed drilling involving of 384.75m in 29 shallow boreholes (MK-1 to MK-29) in I and 179.30m in 13 shallow boreholes (MR-1 to MR-13) was carried out.

The Phase-II work was followed by the third phase work of systematic collection of geochemical samples upto a depth of 1.50m (first 0.00-0.75, Second 0.75-1.50m.) at every 100mts grid interval covering an area of 1.98 sq. kms with 135 points by auger drilling of 203.00 mts. to study and identify the lateral distribution of gold in the laterite profile.

96 check samples, 31 duplicate samples, 244 channel samples from pit walls and 61 composite samples, 1 sample for platinum group of minerals were analysed. 3 samples for laboratory leaching studies by sodium cyanide solutions, 9 for petrological studies and 2 for ore beneficiation studies were also carried out by MECL. Based on the above data and earlier data of GSI, an exploration report was submitted by MECL.

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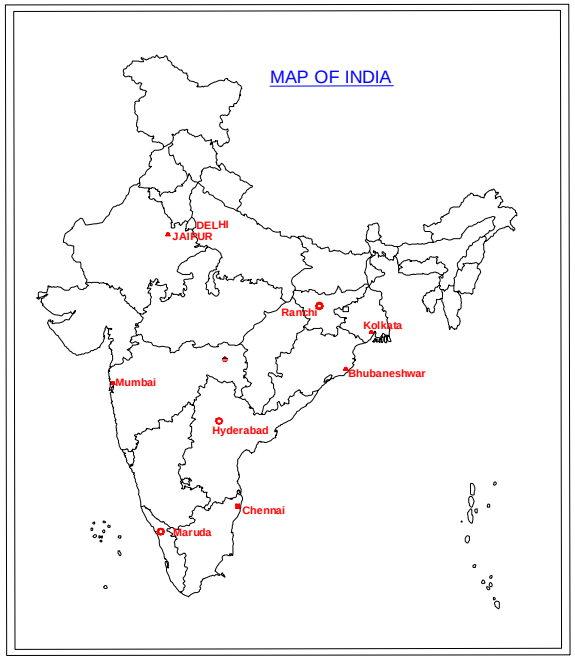
5.0 ORE RESERVE ESTIMATION

The analytical results of the borehole samples show zone-I covering an area of 0.016 sq.km. with average Au assay of 0.60 g/t, zone ‘H’ covering an area of 0.018 sq.km. with average Au assay of 0.40 g/t and Zone ‘F’ covering an area of 0.048 sq.km. with average Au assay 0.38 g/t. These areas are of some economic importance if can be dealt for the separation of Au as mass handled is of top laterite. Laterite in general is showing major heterogeneity as far as Au dispersion is concerned.

The Deposit has been classified as Category ‘D’ of UNFC 333.

The Total Cost of Exploration is Rs. 25.33 Lakhs.

LOCATION PLAN OF KAPPIL BLOCK



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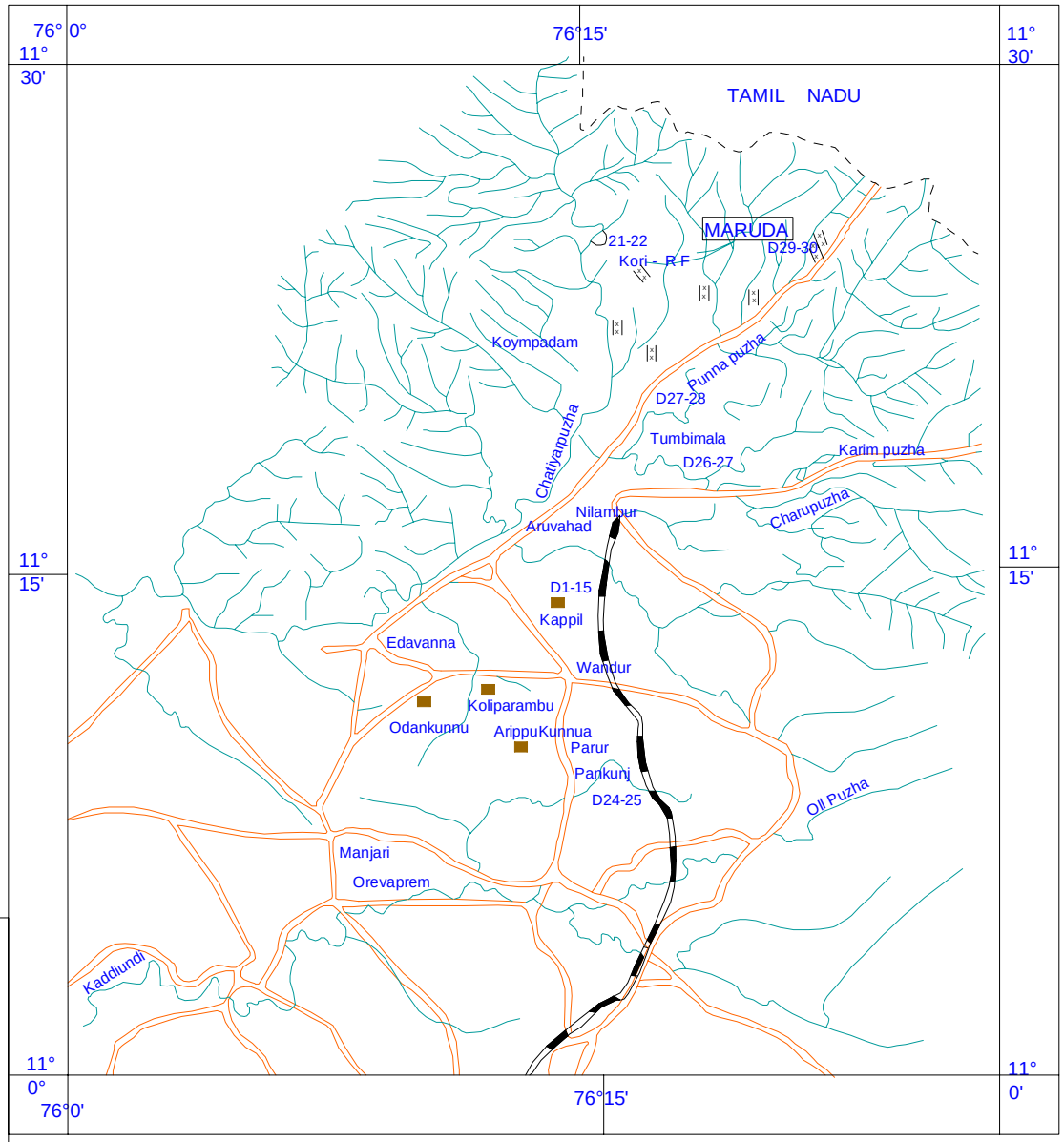

GEOLOGICAL CROSS SECTION