

L.No:2108/ CRD/Report/8/2025

Dated the 21<sup>st</sup> August,2025

From:  
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To  
Shrikanta Sharma,HoD(Exploration)  
Exploration Division,  
Mineral Exploration and Consultancy  
Limited,  
Dr.Babasaheb Ambedkar Bhavan,  
Seminary Hills,Nagpur  
Maharashtra  
PIN code:440 006  
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Sub: Submission of peer reviewed geological report on Preliminary Exploration(G-3) for Iron-PGE and associated minerals in Chitrangi Block (5.00sq.km),District:Singrauli,Madhya Pradesh.

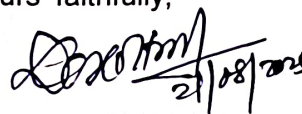
Ref. Your Office L. No. MECL / EXPL / FILE / NMET / P.R / 2025-26 / 380 Date: 13/08/2025

Sir,

With reference to the letter cited above, I am enclosing herewith "Geological Report on Preliminary Exploration(G-3) for Iron-PGE and associated minerals in Chitrangi Block (5.00sq.km),District:Singrauli,Madhya Pradesh" with necessary comments, corrections and suggestions in pencil markings on the body of the Report along with a Note on peer review of the said Report for your kind perusal and further improvement of the Report at your end. It is requested to upload the Final Report in proper format of NMET.

Thanking you,

Yours' faithfully,



(CHITTARANJAN DASH)  
Director(Retired), GSI

Encl: As stated above

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Dated the 21<sup>st</sup> August, 2025

Copy for information to:

The DS & HoD, NMET, Ministry of Mines,F-114, Shastri Bhawan, New Delhi, PIN-110001, E-mail:nmet-mines@ gov.in

(CHITTARANJAN DASH)  
Director(Retired), GSI

**A NOTE ON THE PEER REVIEW OF "THE GEOLOGICAL REPORT ON PRELIMINARY EXPLORATION (G-3) FOR IRON AND ASSOCIATED MINERALS IN CHITRANGI BLOCK, DISTRICT:SINGRAULI, MADHYA PRADESH."**

The draft report entitled " Geological report on Preliminary Exploration(G3) for Iron and associated minerals in Chitrangi block, District:Singrauli Madhya Pradesh" is a compilation of the efforts on the geological data, geochemical data and geophysical data generated in the field followed by laboratory inputs from petrology, chemical and geodata laboratories. The author i.e geoscientists and supervisory officer(s) are gracefully thanked for this commendable job. However, a few modifications are suggested to enhance the quality of the report vis-à-vis a sought after "Block" for further stages of exploration.

I thank the DS and HoD, NMET and HoD(Exploration),MECL in assigning me the job for peer review of the Report. The following points are to be considered to make the report of a hard and sincere work more lucid and user- friendly.

1. The report lacks some components such as work pertaining to geophysical survey, drilling, topographic contours superimposed on Detailed Map, trial excavation in form of pits and trenches, check sample analyses data and geological cross sections etc.
2. The exploration was carried out over BIF with a few promising iron ore minerals, such as hematite,magnetite and goethite-limonite, rich bands alternate with jasper,quartzite and / or chert with variable thickness. Comparatively thick iron ore bands are to be traced for economic viability.
3. As folding results in multiple exposures and repetition (page-22) of same BIF band, a geological cross section may be attempted to elucidate the view as interpreted geological map does not show any such repetition on plan not any structural data to explain such repetition.
4. S-planes corresponding to phases of folding may be defined and described with field and laboratory studies and plotted on map.
- 5.It may be better to give a local stratigraphy of the area mapped followed by description of litho units.
6. It is usually described as BHQ with occasional mention as BMQ, BMJ or as BHC. The oreband is feebly magnetic. But to say that magnetite is the primary iron mineral phase later martitised and oxidised to hematite, a few photomicrographs of pseudomorph of hematite after magnetite or intergranular relationship is required.
7. Photomicrographs of same portion under plane polarised light and cross- nichol( cross polarised light) may be given in side by side.Same procedure may be adopted for section study in transmitted and reflected light.

*Devi*  
21/08/2023

8. The mafic dyke (dolerite) contains biotite. Petrography study may be revisited to ascertain the nomenclature. Carbonatised basalt or dyke was used instead of carbonated rock. Calcite is reported as disseminations. The primary phase of carbonatite are to be identified. The mafic and ultramafic plutons may be thoroughly sampled for PGE giving due emphasis on local differentiation. Ideas may be kept open for identifying Magnesite and REE.

9. The values of Silica wt% and P wt% are interchanged in table placed in the running text. It may be corrected.

10. Minor corrections are suggested in the body of the report including placing the scale (linear), part of SOI sheet no at the top of map etc. These may be attended to.

It is also requested to upload the Final Report in proper format as per guide lines of NMET.

  
(CHITTARANJAN DASH)

Director(Retired), GSI

Date 21.08.2025