

Peer Review Report of the investigation titled “Geological Report on Preliminary Exploration (G-3) for Glauconitic Sandstone in Jhari Block (Area 5.1 sq km) , Tehsil – Majhgawan, District - Satna , Madhya Pradesh” .

The Preliminary Exploration (G-3) for Glauconitic Sandstone in Jhari Block (Area 5.1 sq km) , Satna District, Madhya Pradesh has been carried out by MECL as per UNFC (G- 3) norms to establish the potential of Glauconitic Sandstone deposit in the area. The potash rich glauconitic sandstone and shale horizons of Vindhyan Super Group are suitable target area for such exploration activity and the work has been carried out satisfactorily.

The Executive summary summarises entire work carried out during the exploration in brief but incorporating all the details in the beginning. The marginal comments suggested may please be attended to further improve the quality.

The executive summary in Hindi is not provided. The same may please be included.

The objectives, basis for taking up exploration and details of area, quantum of work vis a vis achievements, physiography and environment, infrastructure etc. are discussed in the initial chapters. The work carried out fully satisfies the aims and objectives of the exploration.

The geological details including the regional and local geological setup, litho-stratigraphy and the structure have been discussed in the successive chapters. Many of the references quoted in the text needs to be incorporated in the chapter on References. Besides, marginal comments may please be attended.

The details of present exploration work including topographic survey, geological mapping, lithological details and structure are nicely dealt in the relevant chapters. This is followed by drilling details such as its technique, drill core logging and the limitations. All the boreholes are vertical and shallow (20-42 m depth).

This follows details of core sampling and various procedures adopted for sample preparation. As per standard practice the core samples have been prepared and submitted for chemical analysis of K_2O , SiO_2 , Al_2O_3 and Fe_2O_3 . Check samples have been analysed at a reputed laboratory to check the reliability of analytical values. Besides, half of the core samples generated, in course of the exploration, has been properly stored for future reference. Based on the analytical results the zones recorded have been correlated properly.

ANNEXURE-XIIA/2

Reporting of resources has been discussed in all the details including basic assumptions, bulk density determination and methodology used viz. Cross-section(principal method) and polygon (check method) methods. The five boreholes (MJHR-01- 05) drilled during the present exploration (at 800×800 m interval) and a previously drilled borehole (MPSW-09) drilled in adjoining block has been correlated for resource calculation. Marginal comments and suggestions may be incorporated. Please check Text Figure 20.1 where in geological cross section along S2-S2' is not drawn. The same may please be included.

Based on the exploration work carried out in Jhari block, a total net in situ Inferred Resource (333) of 104.20 million tonnes with average grade of 6.04 % K_2O and net in situ Reconnaissance Resource (334) 25.85 million tonnes and a cumulative net in situ Resource (333+334) of 130.05 million tonnes with average grade of 6.06% of K_2O have been calculated by cross section method. A total of 144.25 million tonnes of net in situ Reconnaissance Resources (334 category) with average grade of 6.07 % of K_2O has been estimated by the Polygonal method. Since the Polygonal method used to check the resources indicates 10.35% higher resources as compared to the resources calculated by cross section method (principal method), the reliability and accuracy of the calculated resource is established.

All the marginal comments and suggestions may be incorporated.

Thus, the “Geological Report on Preliminary Exploration (G-3) for Glauconitic Sandstone in Jhari Block (Area 5.1 sq km) , Tehsil – Majhgawan, District – Satna , Madhya Pradesh” has been carried out as per the standard procedure and methodology and the data received by sub-surface drilling and the analytical data received have been nicely evaluated as per the norms.

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