

4th National Conclave on Mines and Minerals

GR Preparation

By

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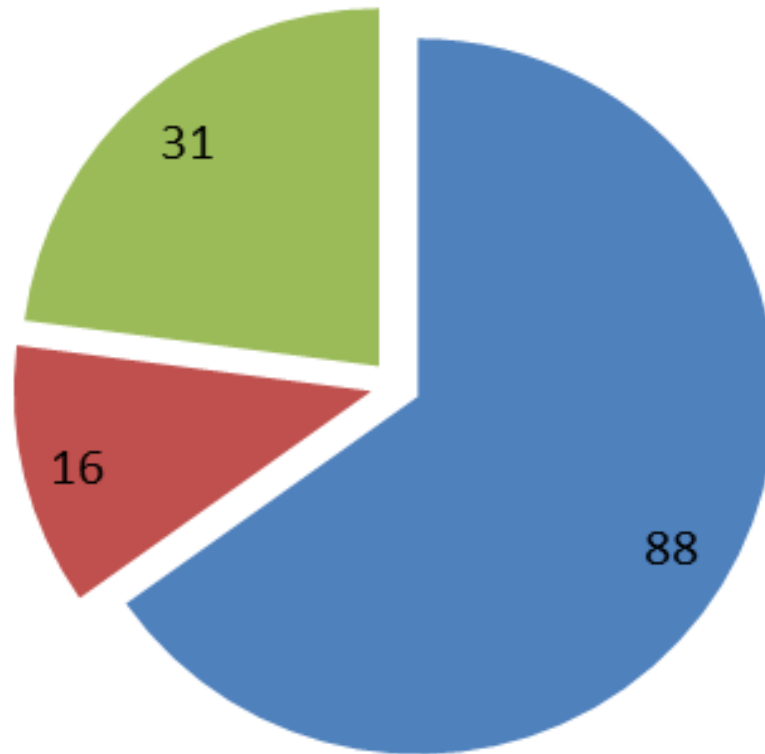


Steps followed in Mineral Exploration

- With the help of baseline geoscience data probable fertile areas are delineated for taking up G4 stage mineral investigation programmes.
- With the success of getting a prospect in G4 stage further investigations are taken up to develop the mineral blocks in G3 and G2 stages.
- GSI is giving its thrust to mineral exploration and development of blocks up to G3 and G2 stage exploration after amendment of MMDR Act and introduction of new auction rules for mineral blocks.



Resource Blocks handed over to State DGM's



■ On Amendment of MMDR Act ■ 2015-16 ■ 2016-17



MINERAL BLOCKS AUCTIONED (12 nos.)

Name of the Block	Commodity	Resource	Revenue (Rs. In crore)
Baghmara, Chhattishgarh	Gold ore	1.8 MT by GSI 0.9 MT by DGM	110.45
Pahardia, Jharkhand	Gold ore	1.162 MT	192
Parasi, Tamar block, Jharkhand	Gold ore	10,438.17 kg	655.7
Lasarda-Pacheri, Odisha	Manganese	11.16 MT	1367
Ghorabhurani-Sagasahi, Odisha	Iron ore	99.59 MT	11,328
Kalamang West (Northern Part), Odisha	Iron ore	92.85 MT	10,439
Hatupur block, M.P.	Diamondiferous conglomerate	0.604 MT	38
Gudipadu block, Andhra Pradesh	Limestone	26.66 MT	345
Yerragudi block, Andhra Pradesh	Limestone	9 MT	125.84
Nandavaram block, Andhra Pradesh	Limestone	1.6 MT	23.21
Tikari-Chiklar-Gauthan, Madhya Pradesh	Graphite	6.24 MT	1884.34
Guguldoh, Maharashtra	Manganese	0.440 MT	75.18



Potential Mineral Blocks developed by GSI can be considered for Auctioning process further

➤ **Iron Ore:**

- Bayyaram (70.53 mt), **Telangana**;
- Freehold areas in NMDC Block (8.2 mt), **Karnataka**;
- Jumka-Pathiriposhi Pahar (98.40 mt), **Gandhalpada South-East, Part A** (51.11 mt at 61.35% Fe(T) & 9.44 mt at 49.64% Fe(T)), **Mendhamaruni** (42.73 mt) and **Rengalaberha North-East Block** (23.87 mt) in **Odisha**

➤ **Manganese Ore:**

- **Ukwa Deposit** (16.23 mt) & **Western block of Ukwa** (2.60 mt) in **M.P.**;
- **Uchhabapalli, Babja and Thakurpalli Blocks** (1.57 mt), **Dungripalli, Dondapani and Rengali Blocks** (1.372 mt) & **Bolangir** (1.32 mt & 0.1665 mt at 20% & 28 % cut-off respectively) in **Odisha**



Potential Mineral Blocks developed by GSI can be considered for Auctioning process further

➤ Gold:

- Delwara Block (50.13 mt), Delwara west block (34.91 mt), East Central Block (11.48 mt), West block (1.33 mt), Khankariya Gara Block (1.19 mt) in Bhukia area; Timaran Mata West block (G2- 0.528 mt, G-3-2.8 mt), Timaran Mata East block (G2- 1.186 mt, G-3- 2.614 mt) in Banswara area; Dugocha and Baratalav Blocks (0.484 mt), Dugocha North Block (0.247 mt) in Udaipur area, Rajasthan.
- Ajjanahalli East Block (Block-A) (1.5116 mt), Ajjanahalli-D (1.38 mt), Ajjanahalli Block-G (0.70 mt), Ajjanahalli East Block (Block-C) (0.4 mt) & Ajjanahalli East Block (Block-B) (0.37 mt) in Tumkur area; C.K. Halli Block (2.37 mt), Kabuliyatkatti block and Kabuliyatkatti north block (0.25 mt), East of Kolar Gold Field (0.1 mt) in Karnataka.



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➤ **Gold:**

- Boksampalle South Block (1.94 mt) & Ramapuram Block (0.074 mt) in Andhra Pradesh.
- Gurhar Pahar area (7.29 mt), Imaliya Block (2.19 mt), Chakariya area (0.19835 mt) in Madhya Pradesh.
- Sonadehi Prospect (2.2 mt) in Chattisgarh.

➤ **Lead-Zinc:**

- North Sindesar ridge (South) Block (Probable-20.59 mt, Possible-7.11 mt) & Tikhi extension block (Zn- 4.14 mt, Cu- 1.02 mt) in Rajasthan.
- Banskappa-Pipariya block (Zn- 3.12 mt), Biskhan block (2.15 mt), Jangaldheri block (1.568 mt) in Madhya Pradesh.



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➤ **Copper:**

- Dokan block (55.70 mt Cu, 7.23 mt Ag), Dokan North block (34.68 mt), Baniwala ki Dhani (20.18 mt), Kundla Ki Dhani (6.81 mt Cu, 0.68 mt Ag), West of Nanagwas (20.40 mt), Toda-Ramliyas (7.86 mt), Khera main block (51.11 mt), Chitar-Kalabkalan (1.83 mt), Gangas and Chhatrikhera (0.40 mt) in Rajasthan.
- South of Gangutana (9.39 mt), North of Golwa (1.9 mt), South east of Golwa (1.71 mt) in Haryana.
- Thanewasna Copper Prospect (3.61 mt), Dubarpeth Karanji Block (1.34 mt) in Maharashtra.



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➤ **PGE:**

- Boula Block (18.75 mt) in Odisha.
- Solavanur and Karappadi blocks & Mallanayakkanpalaiyam Block (1.15 mt), T2 sector of Tasampalaiyam block (0.402 mt), T3 Sector of Tasampalaiyam Block (0.329 mt), T1 and T2 Sectors of Tasampalaiyam Block (0.105 mt), Chettiyampalaiyam Block (0.252 mt) in Tamil Nadu.
- Hanumalapura Block-A (0.84 mt) in Karnataka.

➤ **Bauxite:**

- Sijimal (244.8 mt), Maliparbat (23 mt), Kisanmali Plateau (18.84 mt) in Odisha.
- Saraipat around Dhoradih (10 mt), Dhuluapat Area (Deposit No. 25) (2.3 mt), in Jharkhand.



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➤ **Bauxite:**

- Katta Kalvi Kalambaiwadi Plateaux (16.13 mt), Kumbhawade Block (10.92 mt), Rajapur Laterite Capping (6.117 mt) in Maharashtra.
- Galikonda Blocks 1 & 2 (15.05 mt) in Andhra Pradesh.
- Chikkankod (2.94 mt) in Karnataka.
- Quilon (2.015 mt) in Kerala.
- Porbandar (16.36 mt) in Gujarat.
- Samri Block and Kudag Block (3.48 mt), Pakhritola south block (2.021 mt), Pakhritola north block (1.1 mt) in Chhattisgarh.



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➤ **Limestone:**

- Miniyun Ki Dhani Main Block (441.957 mt), Jiraj-Ka-Toba- Asu Tar Block (105.86 mt), Miniyun-Ki Dhani (East) Block (24.508 mt) in Rajasthan.
- Sheriyanj block (273 mt), Khodada-Khambaliya (123.3 mt) in Gujarat.
- CAK block (130.64 mt), Tadutla block (29.73 mt) in Andhra Pradesh.
- Uchchimedu Prospect (109.74 mt) in Tamil Nadu.
- Khairi Parsodi (144.67 mt), Jagmadwa- Hanaibandh - Mardkathera block (52.74 mt), Birutola-Nawapara-Sohagpur block (7.73 mt) in Chhattisgarh.
- Hoskoti and Salapur area of Belgaum (17.235 mt) in Karnataka.

➤ **Graphite:**

- Chinaagalikonda-Potavaram (0.4388 mt) in Andhra Pradesh.

➤ **Molybdenum:**

- Marudipatti Central and North Blocks (0.75 mt), Velampatti Central Block (0.336 mt) in Tamil Nadu.



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Introduction:

- Title of the block and objective of the investigation/exploration
- Details of the area includes Toposheet no., Location (Lat-Long: DGPS surveyed block corners), Accessibility, Physiography and drainage, Flora-Fauna, components of work carried out.

Property Description:

- Title of ownership of the mapped area/block
- Cadastral details of the area with land use
- Freehold/ Leasehold status
- Infrastructure and environment

Previous work

- Previous Geological work
- Data on nearby prospects, if any



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Geoscience Investigation:

- Regional Geology
- Large scale mapping (G4)/Detailed mapping (G3/G2) with detailed lithology, structural data, sampling and their interpretation.
- Geophysical investigation.

Technological Investigation:

- Surface sampling with the help of channel, trench and pits
- Drilling (following the guideline of MEMC rule) with Geophysical borehole logging



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Sampling:

- Surface samples with definite sample lengths
- Borehole core samples

Analytical Results:

- Analysis of all surface samples
- Analysis of borehole core samples
- Processing of analytical data



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Resource estimation:

- Detailed description of ore-zones
- Fixing of cut-off
- Parameters and method for resource estimation (for horizontal bodies- polygonal area method, for dipping bodies-cross sectional method, for steeply dipping bodies-cross sectional as well as L-V section method- help in estimation of resources)
- During estimation of Resource bulk density is preferred than specific gravity
- Categorisation of resource in UNFC code

Conclusion and Recommendation

Annexures:

- Maps, Borehole lithologs, Borehole sections, L-V section, Level plan, Analytical results etc.

Thank you