

Self-Contained Note on establishment of a “Data Processing, Interpretation and Integration Centre (DPIIC)” at GSI, RSAS, Bangalore

The need for analyzing the available baseline and exploration data, particularly, high resolution aero-geophysical data generated through NAGMP for exploration targeting using latest data science technologies was felt in recent times. Accordingly, it was decided that GSI, RSAS will prepare a proposal for implementation of a data processing center at Bangalore with state-of-art technology.

At the beginning, global leaders in this field were contacted and the following agencies responded by making presentations on the current data analysis and exploration targeting practices that are followed globally namely, 1. Halliburton, 2. Intrepid Geophysics-Samit, 3. IDPeX in partnership with Reid Geophysics, UK & 4. Accenture. The presentations were attended by scientists from GSI, DGH and MoM. The main objective of DPIIC will be to store the data, analyze the available aero-geophysical data, interpret the data, integrate with other geoscience data and build appropriate 2D & 3D models for finding new areas of exploration for internal and external stakeholders. Following are the objectives of the project:

- Mineral Targeting project generation in Brownfield and Greenfield areas
- Geophysical data interpretation and modelling (2D and 3D, forward, inverse etc.)
- R&D in geology and mineral targeting by application of integration geoscience, mineral systems, AI/ ML/ DL applications, collaborations with industry, academics, government etc.
- Inventory of mineral exploration areas and their linkage with geological, geophysical and geochemical signatures (Mineral Belt Integration Atlas series)
- Technical consultation with the stakeholders through suitable time slots in the data center.

Based on the presentations an Expression of Interest (EoI) document was prepared and submitted after incorporating the suggestions from the IT, CHQ, Kolkata and others for establishment of a “Data Processing, Interpretation and Integration Centre (DPIIC)” at GSI, RSAS, Bangalore with the vision statement “*Excelling in geophysical data processing through the adoption of integrative geoscience approach for exploration decision-making*” to the Ministry of Mines on 04.03.2024 after obtaining approval of the DG, GSI.

Meanwhile, a team of officers from Ministry of Mines and GSI visited National Data Repository (NDR), Directorate General of Hydrocarbons (DGH), Delhi and took clue of upgradation process of National Data Repository 2.0 and engagement of a PMU as many features of proposed DPIIC and NDR were similar in nature. During interaction with DGH, details of the activities of NDR 2.0 were discussed and it was conveyed that Digital India Corporation (DIC), a section 8 not-for-profit GoI company under MeitY has been engaged on nomination basis by DGH as the PMU. GSI prepared a comparative report of various functional requirements between NDR and the proposed DPIIC as per the directions given by M/o Mines. It is found that there is close similarity between NDR 2.0 of DGH and the proposed DPIIC. M/o Mines, vide letter dated 07.05.2024 directed GSI to engage a professional PMU for 'finalization of technical specification, floating of NIT and selection of agency' to establish the advanced geoscience data interpretation center i.e.,

DPIIC with the application of latest solutions, advanced computing, engaging suitable expertise etc.

Since, GSI lacks proper IT manpower and no such implementation of the comparable national significance like DPIIC has been undertaken earlier, it is felt that it will be prudent to engage a Govt. of India company i.e. DIC who is assisting DGH in similar implementation as Project Management Unit (PMU) so as to interest of GSI is served in a proper manner.

With the above backdrop, as per GFR, Rule 194 (iv), regarding engaging DIC as PMU on nomination basis the justification is, DIC has been setup & promoted by Ministry of Electronics and Information Technology (MeitY), Govt. of India as a not for profit (Section 8 of the Companies Act, 2013) Company. The Company now leads & guides in realizing the vision, objectives and goals of the Digital India program. It provides the strategic support to Ministries/ Departments of Centre/ States to carry forward the mission of Digital India by way of capacity building for e-Governance projects, promoting best practices, encouraging Public-Private Partnerships (PPP), nurturing innovations and technologies in various domains. Currently, DIC has been engaged as PMU by DGH for upgrading NDR to NDR 2.0. The functionalities of NDR and the proposed DPIIC are comparable.

Current Proposal
Phase 1 (Duration 24 months) - EoI, RFP, Vendor selection and DPIIC implementation
Resources: A. EoI & RFP (12 months): [Project Coordinator – 1, Consultant – 2, Subject Matter Expert – 1] B. On Boarding and Deployment (DPIIC implementation) (12 months): [Project Coordinator – 1, Technical Support – 1, Cloud Manager – 2, Subject Matter Expert – 2]
Cost: Rs. 3,45,11,400.00
Total cost with GST 18%: Rs. 4,07,23,452.00

The approval for engaging DIC as PMU has been obtained from Secretary, Ministry of Mines dated 29th Aug 2024 vide letter no. M.I-26/4/2024 - Mines I (copy attached)

As per the above, the following proposal is submitted to the TCC, NMET for approval.

1. To engage Digital India Corporation (DIC) as PMU, a section 8 not-for-profit GoI company under MeitY on nomination basis for executing Phase – I project for establishing ‘Data Processing Interpretation and Integration Centre’ in a period of 24 months at GSI, Bengaluru. Phase-1 (24 months) – EoI, RFP, Vendor selection and DPIIC implementation.
2. If approved, to accord financial sanction of Rs. 4,07,23,452.00 (including 18% GST) as per the proposal attached.