

**GOVERNMENT OF INDIA  
MINISTRY OF MINES**

**LOK SABHA  
UNSTARRED QUESTION NO.1326  
TO BE ANSWERED ON THE 2<sup>nd</sup> May, 2016  
GOLD MINES**

**1326. SHRI NAGAR RODMAN  
DR. VIRENDRA KUMAR**

Will the Minister of **MINES** be pleased to state:

- (a) the details of the gold exploration activities carried out and gold reserves found by the various agencies including the Geological Survey of India in the country during each of the last three years, State/UT-wise; and
- (b) whether the Government proposes to use the latest technology for exploration and extraction of the gold in the country and if so, the details thereof?

**A N S W E R**

**MINISTER OF STATE FOR MINES & STEEL (SHRI VISHNU DEO SAI)**

(a): A number of exploration agencies like GSI, MECL, State DGM, State/Central Undertakings and private sector companies are engaged in the exploration of gold deposits in the country. GSI has been carrying out mineral exploration for gold as per its annual Field Season Program.

During the FS. 2013-14, GSI took up 19 gold exploration items spread in the states of Rajasthan, Bihar, Jharkhand, Uttar Pradesh, Madhya Pradesh, Karnataka, Kerala and Andhra Pradesh, and established a total of 5.895 million tonnes resources of gold ore from Rajasthan and Karnataka. During FS. 2014-15, GSI took up 24 gold exploration items in the states of Rajasthan, Bihar, Jharkhand, Odisha, Madhya Pradesh, Maharashtra, Karnataka and Kerala and established a total of 1.807 million tonnes resources of gold ore from Rajasthan and Jharkhand. In FS. 2015-16, GSI took up 22 items on gold exploration spread in the states of Rajasthan, Jharkhand, Uttar Pradesh, Madhya Pradesh, Maharashtra, Karnataka, Andhra Pradesh and Arunachal Pradesh. However, resource establishment of these explorations is yet to be carried out.

The state-wise break up where gold resource has been estimated by GSI in the last three years is given blow:

Sl. No.	Field Season	State	Area Details	Resource
1	2013-14	Karnataka	Ajjanahalli block-E, Tumkur District	Inferred mineral resources (333) of <b>0.36 million tonne</b> with average grade of 0.90g/t to 1.31g/t
			Ajjanahalli block-C, Tumkur District	Inferred mineral resources (333) of <b>0.43 million tonnes</b> with average grade of 0.88g/t to 0.90g/t have been estimated.
2		Rajasthan	In Jagpura area, Banswara District	Inferred mineral resource (333) of <b>5.105 million tonnes</b> of gold ore with average grade of 1.78 g/t,
3		Jharkhand	Sindauri-Ghyanshyampur area, Ranchi District	Inferred mineral resource (333) of <b>0.767 million tonnes</b> with average grade of 0.81 g/t of gold ore

4	2014-15	Rajasthan	Mundiawas Block, Alwar District	Inferred mineral resource (333) of <b>0.09 million tonnes</b> of gold ore with average grade of 0.76 g/t of gold
5			Khera Main Block, Alwar District	Inferred minerarresource (333) of <b>0.37 million tonnes</b> of gold ore with average grade of 0.59 g/t of gold
6			Khera SE block, Alwar District,	Inferred mineral resource (333) of <b>0.15 million tonnes</b> of gold ore with average grade of 0.70 g/t of gold
7			Gundelpara West Block Banswara District,	Inferred mineral resource (333) of <b>0.43 million tonnes</b> of gold ore with average grade of 0.32 ppm gold

The gold exploration carried out and gold reserves/resources established by MECL in the country during the last 3 years is given below:

Year	State	Block/District	Activity
2013-14	NIL	NIL	NIL
2014-15	Jharkhand	Pahardia, West Singhbhum district,	Gold ore resource of 1.16 million tonnes has been estimated in the block with 2.12 g/t of gold at 0.5 g/t cut off grade.
		Parasi (East), Ranchi,	Gold ore resource of 2.07 m.t. has been estimated in the block with 1.26 g/t of Au at 0.5 g/t Au Cut-off grade.
2015-16	Jharkhand	Parasi (West ), Ranchi,	Gold ore resource of 0.365 million tonnes has been estimated in the block with 1.644 g/t Au at 0.50 g/t Au cut off grade.

(b): Yes. GSI and MECL are using latest technology for gold exploration. In this regard, GSI has adopted integrated approach involving geochemical mapping, geophysical mapping, thematic mapping and different 2D/3D modelling for exploration. Equipment with state-of-the-art technology are procured to facilitate the exploration activities and to identify the deep seated/ concealed mineral deposits. The officers engaged in exploration programmes are trained by the domain experts in GSI and abroad and are apprised with the latest exploration techniques.

GSI has upgraded its chemical laboratories by inducting state-of-the-art equipment like, Inductively coupled plasma mass spectrometry (ICPMS), Double Beam Atomic Absorption spectroscopy (AAS) with Vapour Generation Assembly (VGA) & Auto sampler, X-ray Fluorescence (XRF), Pulverizers. It has also procured geophysical survey equipments like gravimeter, magnetometer, Differential Global Positioning System (DGPS) machines, etc. Advancement in analytical capabilities has been achieved by induction of sophisticated instruments like Scanning Electron Microscope, electron probe micro-analyzer, Isotope-ratio mass spectrometry (IRMS), and laser ablation-multi-collector- inductively coupled plasma mass spectrometry (LA-MC-ICPMS). Further, GSI has inducted the state-of-the-art Heliborne Geophysical Survey System and the Oceanographic Research Vessel, Samudra Ratnakar and upgraded its Twin Otter Aerial Survey System for various surveys and exploration.

MECL also uses advanced techniques and instruments for survey, drilling, geophysical survey and mineral analysis. It has acquired advanced DGPS, Total Stations, high tech hydrostatic drills, latest Geophysical Loggers, magnetometers, gravimeters etc.