

**GOVERNMENT OF INDIA
MINES
LOK SABHA**

STARRED QUESTION NO:555
ANSWERED ON:04.05.2010
SURVEY OF MINERALS
Mahant Dr. Charan Das

Will the Minister of MINES be pleased to state:

- (a) whether surveys have been conducted for exploration of mineral resources/deposits in various parts of the country;
- (b) if so, the details of mineral reserves found, mineral-wise;
- (c) the name of the States including Chhattisgarh where gold and diamond reserves/deposits have been found, location-wise; and
- (d) the estimated quantum of minerals including gold and diamond reserves/deposits alongwith its value, State-wise?

Answer

THE MINISTER OF MINES AND MINISTER OF DEVELOPMENT OF NORTH EASTERN REGION (SHRI B.K. HANDIQUE)

(a) to (d) : A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN THE REPLY TO LOK SABHA STARRED QUESTION NO.555 REGARDING SURVEY OF MINERALS ASKED BY DR. CHARAN DAS MAHANT FOR ANSWER ON 4TH MAY, 2010

(a) & (b) : Yes, Madam. The data of reserves and resources of major minerals is at Annexure I. Details are published in the Indian Mineral Yearbook, 2008 of the Indian Bureau of Mines and are also available on the Ministry of Mines website (www.mines.nic.in)

(c) & (d) : Details of the mineral investigations including gold and diamond carried out by Geological Survey of India (GSI) are published in the form of mineral – specific Detailed Information Dossiers (DID) which are available on GSI's Portal (www.portal.gsi.gov.in). Results of mineral investigations of GSI for Gold and Diamond are given in Annexure II. Value of reserves/resources of the minerals are worked out only at feasibility stage prior to mining.

Annexure I

Annexure referred to in part (a) & (b) of Lok Sabha Starred Question No.555 due for answer on 4th May, 2010

Reserves/Resources of Minerals in India

Mineral	Unit	Total Reserves	Remaining Resources	Total Resources
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Andalusite	`000 tonnes	0	18450	18450
Antimony				
Ore	Tonne	0	10588	10588
Metal	Tonne	0	174	174
Apatite	Tonne	6145575	20719133	26864708
Asbestos	Tonne	6040544	15695817	21736361
Ball clay	Tonnes	32529793	46761403	79291196
Barytes	Tonnes	34312780	39890567	74203347
Bauxite	`000 tonnes	899384	2390432	3289817
Bentonite	Tonnes	25060508	505512898	530573406
Borax	Tonne	0	74204	74204
Calcite	Tonne	6742030	15831937	22573967
China clay	`000 tonnes	222121	2373540	2595661
Chromite	`000 tonnes	66128	146935	213063
Cobalt ore	Million tonnes	0	44.91	44.91
Copper				
Ore	`000 tonnes	369493	1024934	1394427
Metal	`000 tonnes	4383.97	7033.75	11417.72
Corundum	Tonne	605	83190	83795
Diamond	Carat	1205577	3376336	4581913
Diaspore	Tonne	3125032	2212361	5337393
Diatomite	`000 tonnes	634	2251	2885
Dolomite	`000 tonnes	985156	6547952	7533108
Dunite	`000 tonnes	128074	39855	167929
Felspar	Tonnes	38049836	52731827	90781663
Fireclay	`000 tonnes	59301	645462	704763
Fluorite	Tonne	9213831	10951838	20165669
Fuller's earth	Tonne	58200	256593879	256652079
Garnet	Tonnes	20975605	36680028	57655633
Gold				
Ore (primary)	Tonnes	19253951	371035286	390289237

Metal (primary) Tonne	85.12	405.69	490.81
Ore (placer) Tonne	0	26121000	26121000
Metal (placer) Tonne	0	5.86	5.86
Granite `000 cu m	1130024	36295977	37426001
Graphite `000 tonnes	10750	158025	168775
Gypsum `000 tonnes	68658	1168218	1236876
Iron ore			
Hematite `000 tonnes	7004168	7626219	14630387
Magnetite `000 tonnes	58503	10560978	10619481
Kyanite Tonne	1374191	101239031	102613222
Lead & zinc			
Ore `000 tonnes	1215754	396826	522580
Lead metal `000 tonnes	2590.55	4617	7207.25

Mineral	Unit	Total Reserves	Remaining Resources	Total Resources
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Zinc metal `000 tonnes	11092.89	13167	24259.68
Lead & zinc metals `000 tonnes	0	118.45	118.45
Limestone Million tonnes	12715	162630	175345
Magnesite `000 tonnes	76133	261749	337882
Marble `000 tonnes	4700	1787938	1792638
Mica kg	68569843	325285576	393855419
Manganese ore `000 tonnes	138151	240418	378569
Molybdenum			
Ore Tonne	1500000	17786732	19286732
Contained MoS2 Tonne	1050	11590	12640
Nickel ore `000 tonnes	0	188710	188710
Ochre Tonnes	47867858	45573436	93441294
Perlite `000 tonnes	504	1385	1889
Phosphorite Tonnes	52723492	252585084	305308576
Platinum group of metals			
Tonne	0	15	15
Potash Million tonnes	0	21815	21815
Pyrite `000 tonnes	56726	1617675	1674401
Pyrophyllite Tonnes	19489617	14205319	33694936
Quartz/silica sand `000 tonnes	771508	2466703	3238211
Quartzite `000 tonnes	98544	1046413	1144957
Rock salt `000 tonnes	13530	0	13530
Ruby kg	1925.10	3345.64	5270.74
Sapphire kg	0	450	450
Sillimanite Tonnes	11423994	62915875	74339869
Silver			
Ore Tonnes	115912738	128720729	244633467
Metal Tonne	6058.33	4154.29	10212.62
Sulphur `000 tonnes	0	210	210
Talc/steatite /soapstone `000 tonnes	115526	196810	312335
Tin			
Ore Tonne	249497	86302812	86552310
Metal Tonne	134.08	101103.02	101237.1
Titanium minerals			
Ilmenite Tonnes	21181587	308360096	329541683
Rutile Tonne	2005554	11800695	13806249
Leucoxene Tonne	669397	343943	1013340
Anatase Tonne	0	3345000	3345000
Titaniferrous magnetite			
Tungsten			
Ore Tonnes	0	87387464	87387464
Contained WO3 Tonne	0	142094.35	142094.35
Vanadium			
Ore Tonne	6318663	18529225	24847888
Metal Tonne	10769.78	54620.49	65390.27
Vermiculite Tonne	1763630	674631	2438261
Wollastonite Tonne	8533311	11708312	20241623
Zircon Tonne	3705912	569748	4275660

Figures rounded off.

Source: Indian Minerals Year Book, 2008.

Annexure II

Annexure referred to in part (c) & (d) of Lok Sabha Starred Question No.555 due for answer on 4th May, 2010

Mineral investigation of Gold by GSI from 1997-98 to 2008-09

1997-1998 0.70 million tonnes of gold ore with of 7.20 g/t Au was estimated in Dona East Block, Kurnool district, Andhra Pradesh.
0.63 million tonnes of gold ore with of 3.54 g/t Au was estimated in Chikkanahalli South Block, Karnataka.
0.125 million tonnes of gold ore with of 2.60 g/t Au was assessed in Marupar-Kitari area, Maharashtra.

1998-1999 7.0 million tonnes of gold ore with 2.0 g/t Au in Bhukia (E) block, Banswara district, Rajasthan.
0.20 million tonnes of gold ore with 6.0 g/t Au in Timaran Mata (E) block, Banswara dist., Rajasthan.
0.050 million tonnes of gold ore averaging 11.70 g/t Au in Puttumala and Kottathara blocks, Attapadi valley, Kerala.
0.20 million tonnes of ore with 2.0 g/t Au 100 g/t Ag and 1.2% Cu in Imaliya block, Jabalpur district, Madhya Pradesh.
0.895 million tonnes of ore with 2.05 g/t Au in Parsori West block, Sakoli belt, Maharashtra.
0.057 million tonnes of ore with average grade of 1.84 g/t Au Bhimsain-Killa Pahar area, Maharashtra.
3.06 million tonnes (recategorised) of gold ore with average grade of 1.92 g/t Au over 18.67m width in Dona East Block, Kurnool district, Andhra Pradesh.

1999-2000: 4.86 million tonnes of gold ore with 1.90 g/t Au down to a depth of 180m. in Dona East Block, Kurnool district, Andhra Pradesh
0.09 million tonne of gold ore with 2.96 g/t Au in Bhukia East block, Banswara district, Rajasthan.
3.27 million tonnes of ore with grade of 1.04 g/t Au Gurhar Pahar block, Sidhi district, Madhya Pradesh.
0.024 million tonne of ore with grade of 13.36 g/t Au Kottathara block, Attapady valley, Palakkad district, Kerala.

2000-2001: 0.22 million tonnes of ore with grade of 2.88 g/t Au at 0.5g/t cut off in Dugocha main block, Udaipur district, Rajasthan

2002-2003: 0.132 million tonnes ore with 2.09g/t Au in Dugocha North block and 0.216 million tonnes with 3.05 g/t Au in Dugocha Central Block. Udaipur district, Rajasthan.
1.113million tonnes of ore containing 1.16 to 6.28 g/t Au in Dona South Block and 0.098 m.t of ore averaging 3.85 g/t Au in Dona North Block, Kurnool district, Andhra Pradesh.
0.273 million tonnes of ore with 1.89 g/t Au in Bhukia East Central block, Banswara district, Rajasthan.
0.704 million tonnes of ore containing 1.88 g/t Au in Delwara block, Banswara district, Rajasthan.
A resource of 0.8 million tonnes with 1 g/t Au and 1% Cu in Dhanibasri area, Dausa district, Rajasthan.

2004-05: A resource of 3.22 million tonnes of gold ore with 2.36 g/t Au in Bhukia East Block, Rajasthan
A resource of 3.6 million tonnes of gold ore with 2.30g/t Au in Timran Mata East Block, Rajasthan.

A resource of 11.207 million tonnes of gold ore with 2.10g/t Au in Bhukia, East Central Block, Rajasthan.
A resource of 12.896 million tonnes gold ore with 1.65 g/t gold in Delwara Block, Rajasthan.
A resource of 1.33 million tonnes of gold ore with 2.22 g/t Au in Bhukia West Block, Rajasthan.
A resource of 3.33 million tonnes with 1.5g/t Au in Timran Mata West Block, Rajasthan.
A resource of 1.46 million tonnes gold ore with 1.83 g/t in Bhukia North Central Block, Rajasthan.
A resource of 2.59 million tonnes with 1.5g/t in Bhukia South Central Block, Rajasthan.
A resource of 2.4 million tonnes gold ore with 1.56g/t Au in Dhani Basri, Dausa district, Rajasthan.
A resource of 0.4 million tonnes of gold ore with 3.1g/t Au in Parasi area, Ranchi district, Jharkhand.

A resource of 0.25 million tonne of gold ore with 3.85g/t Au in Pahardia block, West Singhbhum district, Jharkhand.

2005-06: A resource of 1.11 million tonne gold ore with an average grade of 2.24 g/t gold in Parasi, Ranchi district, Jharkhand.
A resource of 0.33 million tonne gold ore with an average grade of 3.65 g/t gold in Pahardia, West Singhbhum district, Jharkhand.
A resource of 0.293 million tonne gold ore with an average grade of 2.00 g/t gold in Ajjanahalli East Block, Tumkur district, Karnataka.

2006-07: A tentative resource of gold ore of about 0.10 million tonnes with a grade of 1.65 g/t Au has been estimated from Ajjanahalli central sector, Karnataka.
In Ajjanahalli East block (North sector) a resource of 0.38 million tonnes of gold ore with grade of 1.70 g/t Au has been estimated, Karnataka.
In Delwara West Block, Bhukia gold belt, Banswara district, Rajasthan a gold ore resource of 4.78 million tonnes with 1.32 g/t gold has been estimated
In Delwara block, Bhukia gold belt, Banswara district, Rajasthan a resource of 1.30 million tonnes of gold ore with 1.5g/t gold has been augmented.
In Khankariya Gara block, Bhukia gold belt, Banswara district, Rajasthan a resource of 1.24 million tonnes of gold ore with 0.96 g/t Au has been estimated.
In Dugocha Main (Central) block and Dugocha North block, Udaipur district, Rajasthan, an additional resource of 0.16 million tonnes of gold ore was estimated

2007-08:
A resource of 5.36 million tonnes gold ore was estimated in Delwara West block, Rajasthan. with 2.09g/t gold.
A resource of 0.09 million tonne of mineralisation was estimated with average grade of 0.93 g/t of gold in Chhattisgarh, Baghmara block, Sonakhan area, Raipur district.

2008-09:
A resource of 22.97 million tonnes of gold ore with 1.81g/t gold has been estimated in Delwara West block, Bhukia area, Banswara district, Rajasthan.
A resource of 0.053 million tonnes gold ore with average grade of 3.03g/t gold has been estimated in Soanapahari area, Sonbhadra district, Uttar Pradesh.
A resource of 2.28million tonnes gold ore with average grade of 0.699g/t gold has been estimated in Sonadehi gold prospect in Chhattisgarh.
Total metal content in the gold ore resource estimated during the period 2006-07 to 2008-09 has been calculated as 65182 Kg and the value of it tentatively calculated as Rupees 11,000 crore.

Diamondiferous Kimberlites

GSI carries out regional exploration for locating the KCR (Kimberlite Clan Rocks) bodies, which is the host rock for diamond and also for assessing the its diamondiferous nature in different parts of the country. GSI does not carry out the resource assessment of diamond. As on 1.4.2005 all India resources of Diamond are placed at 4.58 million carats of which reserve is 1.20 million carats and remaining resources are 3.38 million carats (As per IBM Year Book). The diamondiferous kimberlite pipes found in the country are at:

Andhra Pradesh

So far 64 kimberlite pipes have been identified of which 18 are reported to be diamondiferous. The diamondiferous kimberlites are located in Wajrakarur area.

Madhya Pradesh

So far 2 kimberlite pipes have been identified which are diamondiferous. The diamond bearing kimberlite pipes are from Panna area.

Chhattisgarh

So far 9 kimberlite pipes have been identified of which four are diamondiferous. The diamondiferous kimberlites are from Mainpur area.