

STATE REVIEWS



Indian Minerals Yearbook 2013 (Part- I)

52nd Edition

**STATE REVIEWS
(Assam)**

(FINAL RELEASE)

**GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES**

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ASSAM

Mineral Resources

Coal, petroleum & natural gas, limestone and minor minerals are the chief mineral resources of the State. **Coal** occurs in United Mikirs, North Cachar Hills, Sivasagar and Lakhimpur districts. Coal extracted from the State is friable and contains high sulphur. **Petroleum & natural gas** occurs in Digboi oilfields, Lakhimpur district and Moran and Rudrasagar oilfields in Sivasagar district located in Assam Arakan Fold Belt (AAFB), Upper Assam and Assam basins. **Limestone** occurs in Karbi Anglong, North Cachar Hills and Nagaon districts. Besides, **china clay** occurs in Karbi Anglong and Lakhimpur districts; **fireclay** in Dibrugarh, Karbi Anglong, North Cachar Hills and North Lakhimpur districts; **fuller's earth** in Nalbari district; **granite** in Goalpara, Kamrup and Karbi Anglong districts, **iron ore (hematite)** in Kokrajhar district; **iron ore (magnetite)** in Dhubri, Goalpara & Kokrajhar districts; **quartz/silica sand** in Nagaon district, and **sillimanite** in Karbi Anglong & Nagaon districts (Tables - 1 and 2).

Exploration & Development

GSI carried out exploration for coal in Sukchar-Singrimari block in Langrin coalfield (Table-3).

ONGC and OIL continued their seismic survey and drilling for exploration of petroleum & natural gas. A total of 35 wells with a meterage of 1,26,408 were drilled in the State by OIL.

Details of exploration activities conducted by OIL in respect of oil & natural gas during 2012-13 are furnished in Table - 4.

Significant discoveries of oil/gas struck by OIL in various districts of Assam during 2012-13 are given below:

i) NHK-600: This well is located in an isolated fault block in the eastern part of Zaloni structure of Hugrijan ML and was drilled to a depth of 3311m within Barail Arenaceous to probe the Upper Tipam prospect as primary target and Barail Third sand prospect as secondary target. The well has encountered a number of prospective sand ranges within Tipam and Girujan formations. On testing, the well produced gas from Tipam formation.

ii) Moran-116: The well, located in the Dimowkinar Structure within Moran ML was drilled down to a depth of 4280 m within Basement to probe the hydrocarbon prospects within Barail and Lakadong + Therria formations. The well has encountered a few prospective sand ranges within Lakadong + Therria formation and is currently producing oil from one of the tested sands.

iii) Balimara-2: This exploratory well lies in the Balimara structure and is located between Umatara and Jaipur structure within Borhat PEL. The well was drilled to a depth of 4408 m within Barail formation to probe the hydrocarbon prospects within Tipam and Barail formations. The well has encountered prospective sand ranges within these formations, producing oil from one of the tested Barail sand.

iv) East Khagorijan-1: The well, located in the East Khagorijan structure within Tinsukia ML was drilled to a depth of 3716 m within Basement to probe the hydrocarbon prospects within Lower Eocene-Paleocene Formations. The well has encountered a number of prospective sand ranges within these Formations and is currently producing oil from one of the tested Lakadong + Therria sands.

v) NHK-531: The well is located in the Lohali-Deohal structure within Hugrijan ML. The discovery was made from the new/unappraised Barail sand during workover operations producing gas during testing.

STATE REVIEWS

vi) Barekuri-12: This well, located in the eastern fault block of the West Barekuri structure within Dumduma ML was drilled to a depth of 4027 m within Basement to probe the hydrocarbon prospects within Lower Eocene-Paleocene formations. The well has encountered prospective sand ranges within the Narpuh and Lakadong + Therria Formations, producing oil from the latter on testing.

vii) NHK-581: The well is located in the Dhuliajan area within Hugrijan ML. The discovery was made from the new/unappraised Upper Tipam sand during workover operations producing gas during testing.

viii) Singhibil-1: This well, located in the Singhibil structure within Hugrijan ML was drilled to a depth of 4102 m within Basement to probe the hydrocarbon prospects within Tipam, Barail and Lower Eocene-Paleocene Formations. The well has encountered few prospective sand ranges within Barail and Lakadong + Therria Formations, producing gas during initial production testing from the latter.

ix) NHK-141: The well located in the Naharkatiya area within Naharkatiya extension ML has discovered gas on testing the new/unappraised Upper Tipam sand during workover operations.

x) Punam-1: The well located in the Punam Structure in NELP VI Block RJ-ONN-2004/2 & Baghewala PML was drilled to a depth of 1297 m within Basement. The well has encountered one heavy oil bearing sand within the Jodhpur formation which has been tested, and another prospective sand range within the HEG sand.

xi) TVW-2: The well located in the Tavriwala Structure of Baghewala PML was drilled to a depth

of 1200 m within Basement and encountered one heavy oil bearing sand within the Jodhpur formation which has been tested.

Production

The value of mineral production in 2012-13 in Assam at ₹11,644 crore decreased marginally as compared to that in the previous year. Assam ranks ninth in mineral production and contributed about 4% to the total value of production in the country during 2012-13. Petroleum (crude) was the principal mineral produced in the state, contributing 76% of the value of mineral production followed by natural gas (utilised) 21% and rest was accrued from coal, limestone & minor minerals in 2012-13. (Table-5).

Assam was the second largest producer of natural gas (utilised) and fourth largest producer of petroleum (crude) accounting for about 7% and 13% respectively in the total production of respective mineral items in the country. During 2012-13, output of limestone saw 19% increase as compared to the previous year. The production of natural gas (utilised) and coal increased marginally, while that of petroleum (crude) decreased by 3% and sulphur by 25% during the year under review.

The production value of minor minerals was estimated at ₹31 crore for the year 2012-13.

The number of reporting mines in 2012-13 was as against 10 in the previous year.

The index of mineral production in Assam (base 2004-05 =100) was 106.2 in 2012-13 as compared to 109.2 in the previous year.

Mineral-based Industry

The principal large and medium-scale mineral-based industries in the organised sector in the State are given in Table - 6.

Table – 1 : Reserves/Resources of Minerals as on 1.4.2010 : Assam

Mineral	Unit	Proved		Probable		Feasibility		Pre-feasibility		Measured		Indicated	Inferred	Reconnaissance	Total	Total
		STD111	STD111	STD121	STD122	STD211	STD221	STD221	STD222	STD331	STD332					
China Clay	000 tonnes	-	-	-	-	-	-	131	-	392	-	-	3520	-	4043	4043
Fireclay	000 tonnes	-	-	-	-	-	-	-	-	-	-	-	3161	-	3161	3161
Fuller's earth tonne		-	-	-	-	-	-	-	-	-	-	-	18860000	-	18860000	18860000
Granite (Dimen. stone)	000 cum	-	-	-	-	-	-	-	-	-	800	-	583150	-	583950	583950
Iron Ore (Hematite)	000 tonnes	-	-	-	-	-	-	-	-	-	8600	-	4000	-	12600	12600
Iron Ore (Magnetite)	000 tonnes	-	-	-	-	-	-	-	-	-	-	-	15380	-	15380	15380
Limestone	000 tonnes	183788	152562	-	336350	10902	9828	4257	154644	34200	897161	-	1110992	-	1447342	1447342
Quartz-silica sand	000 tonnes	-	-	-	-	-	-	-	-	-	-	-	1790	-	1790	1790
Sillimanite	tonne	-	-	-	-	-	-	-	-	850000	6700	3748000	4604700	-	4604700	4604700

Figures rounded off.

The proved and indicated balance recoverable reserves of crude oil and natural gas as on 1.4.2013 are 178.07 million tonnes and 181.77 billion cu m, respectively. The figures include those of Nagaland, Tripura and Arunachal Pradesh.

STATE REVIEWS

STATE REVIEWS

Table – 2: Reserves/Resources of Coal as on 1.4.2013 : Assam

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total	464.78	45.51	3.02	513.31
Singrimari	-	2.79	-	2.79
Makum	432.09	20.70	-	452.79
Dilli-Jeypore	32.00	22.02	-	54.02
Mikir Hills	0.69	-	3.02	3.71

*Source: Coal Directory of India, 2012-13.***Table – 3 : Details of Exploration Activities in Assam, 2012-13**

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI Coal (Singrimari coalfield) Dhubri	Sukchar- Singrimari block,	1: 10,000	2.0	3	1387.60	-	Prospecting stage (G-3) exploration taken up during FS 2010-12 in this area was continued to explore the behaviour and the extension of the Gondwana coal bands and to establish the coal resource potentiality of the area. Three Karharbari coal seams, varying in thickness from 0.50 m to 1.25 m were intersected between 161.90 m and 181.75 m depths in borehole BH-3. The work is in progress.

Table – 4 : Exploration of Petroleum & Natural Gas in Assam during 2012-13

Agency	Drilling					
	Seismic Survey		Exploratory		Development	
	2D(GLKM)	3D(SQKM)	Wells	Meterage	Wells	Meterage
OIL	223.77*	304.52*	-	-	-	-

* Including Arunachal Pradesh.

STATE REVIEWS

**Table – 5 : Mineral Production in Assam, 2010-11 to 2012-13
(Excluding Atomic Minerals)**

(Value in ₹'000)

Mineral	Unit	2010-11			2011-12			2012-13 (P)		
		No. of mines	Quantity	Value	No. of mines	Quantity	Value	No. of mines	Quantity	Value
All Minerals		11		107740059	10		116554943	8		116437224
Coal	'000t	7	1101	4072600	7	602	3988000	6	605	3591200
Natural Gas (utilised)	m cu m	-	2680	17154680	-	2905	20896589	-	2910	24066072
Petroleum(crude)	'000t	-	4721	86196867	-	5025	91293964	-	4863	88388784
Limestone	'000t	4	350	82772	3	248	62585	2	296	77363
Sulphur#	t	-	3328	-	-	4968	-	-	3706	-
Minor Minerals@		-	-	233140	-	-	313805	-	-	313805

Note: The number of mines excludes petroleum (crude), natural gas (utilised) and minor minerals.

Recovered as by-product from oil refinery.

@ Figures for earlier years have been repeated as estimates because of non-receipt of data.

Table – 6 : Principal Mineral-based Industries in Assam

Industry/plant	Capacity (‘000 tpy)
Asbestos Products	
Assam Roofing Ltd, Bonda, Dist. Kamrup.	58.4
Cement	
Barak Valley Cements Ltd, Badarpurghat, Dist. Karimganj.	460 (TPD)
CCI Ltd, Bokajan, Dist. Karbi. Anglong.	198
Poneharatna Cement Pvt Ltd, Borera Titabor, Dist. Jorhat.	81
Mahashakti Cement, Bymihat, Dist. Kamrup.	66
R. J. Cement Industries, Jabrakowa, Dist. Nawgaon.	60
River Valley Cement Corpn., Laxmi Nagar, Dist. Kamrup.	54

(Contd.)

STATE REVIEWS

Table – 6 : (Concl.)

Industry/plant	Capacity (‘000 tpy)
Sri Balaji Cement Pvt Ltd, Charingiagaon, Dist. Jorhat RCL Cement Pvt Ltd, Umrangshu.	30
Ceramic	
Rum Rum Tiles	NA
Rongtheang, Diphu, Dist. Karbi, Anglong.	NA
Fertilizer	
Assam State Fertilizer & Chemicals Ltd, Chandrapur, Dist. Kamrup.	33.00 (SSP)
Brahmaputra Valley Fertilizers Corpn. Ltd, Namrup, Dist. Dibrugarh.	16.50 (H ₂ SO ₄) 510 (Urea)
Iron & Steel	
Shri Ganapati Ispat Pvt Ltd, Tinsukia	NA
Petroleum Refinery	
BRPL, Bongaigaon	2350
Indian Oil Corporation, Moonmati, Guwahati.	1000
Indian Oil Corporation, Digboi.	650
NRL, Numaligarh, Golaghat.	3000