

STATE REVIEWS



Indian Minerals Yearbook 2018

(Part- I)

57th Edition

STATE REVIEWS
(Assam)

(FINAL RELEASE)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

Indira Bhavan, Civil Lines,
NAGPUR – 440 001

PHONE/FAX NO. (0712) 2565471
PBX : (0712) 2562649, 2560544, 2560648
E-MAIL : cme@ibm.gov.in
Website: www.ibm.gov.in

November, 2019

STATE REVIEWS

ASSAM

Mineral Resources

Coal, petroleum & natural gas, limestone, fuller's earth, sillimanite and minor minerals are the chief mineral resources of the State. **Coal** occurs in Mikirs Hills, Dilli-Jeypore, Makum and Singrimari coalfields. Coal extracted from the State is friable and contains high sulphur. **Petroleum & natural gas** occurs in Digboi oilfields, Lakhimpur district and in Moran & 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 North 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 (haematite)** in Kokrajhar district; **iron ore (magnetite)** in Dhubri, Goalpara & Kokrajhar districts; **quartz/silica sand** in Nagaon district, and **sillimanite** in Karbi Anglong & Nagaon districts. The reserve / resources of minerals and coal are provided in Tables - 1 and 2.

Exploration & Development

GSI carried out exploration for iron ore & coal in Assam during 2017-18, the details of which are furnished in Table-3.

Table – 1: Reserves/Resources of Coal as on 1.4.2018 : Assam

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total	464.78	57.21	3.02	525.01
Singrimari	-	14.49	-	14.49
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, 2017-18.

Table – 2 : Reserves/Resources of Minerals as on 1.4.2015 : Assam

Mineral	Unit	Reserves				Remaining Resources					Total Resources (A+B)		
		Proved STD111	Probable		Total (A)	Feasibility STD211	Pre-feasibility		Indicated STD332	Inferred STD333		Reconnaissance STD334	Total (B)
			STD121	STD122			STD221	STD222					
China Clay#	'000 tonnes	-	-	-	-	131	-	392	-	3520	-	4043	4043
Fireclay#	'000 tonnes	-	-	-	-	-	-	-	-	3161	-	3161	3161
Fuller's earth##	tonne	-	-	-	-	-	-	-	-	18860000	-	18860000	18860000
Granite (Dim. stone)##	'000 cu m	-	-	-	-	-	-	-	800	583150	-	583950	583950
Iron Ore (Haematite)	'000 tonnes	-	-	-	-	-	-	-	8600	4000	-	12600	12600
Iron Ore (Magnetite)	'000 tonnes	-	-	-	-	-	-	-	-	15380	-	15380	15380
Limestone	'000 tonnes	25542	152546	-	178088	167902	21973	4257	154644	39859	901623	1290258	1468346
Quartz-silica sand#	'000 tonnes	-	-	-	-	-	-	-	-	1790	-	1790	1790
Sillimanite	tonne	-	-	-	-	-	-	-	850000	6700	3748000	4604700	4604700

STATE REVIEWS

Figures rounded off

Declared as Minor Mineral vide Gazette Notification dated 10.02.2015.

Minor Minerals before Gazette Notification dated 10.02.2015.

Note: The proved and indicated balance recoverable reserves of crude oil and natural gas as on 1.4.2016 are 160.79 million tonnes and 153.76 billion cu m, respectively.

STATE REVIEWS

Table – 3 : Details of Exploration Activities in Assam, 2017-18

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI							
Coal							
Dhubri	Tatipara- Arateragaon area	1:10000	2.73	1	301	-	Reconnaissance survey for Gondwana coal was taken up in this area at the border of Assam and Meghalaya. During study an area of 2.73 sq. km was mapped on 1:10000 scale and one borehole was drilled to a depth of 301 m. The borehole intersected 148 m thick alluvium that comprised loose sand, loose cobbles & pebbles of quartz, feldspars, quartzites and basic igneous rocks followed by tertiary sediments comprising of grey mudstone, carbonaceous mudstone, mottled mudstone and coaly horizons. Below the tertiary sediments, the basement occurs as weathered quartzo-feldspathic gneissic rocks at a depth of 287.00 m.
Iron ore							
Goalpara	Chandradinga area	-	-	-	-	-	Preliminary exploration for low grade iron ore was carried out in this area. Three distinct bands of BMQ-BHQ have been delineated in the study area. Two boreholes were intersected iron formation in the form of BMQ-BHQ and powdery iron ore from 0.0 m to 41 m and 0.0 m to 32 m, respectively. The iron formations have disseminated sulphide grains mainly pyrite, chalcopyrite, bornite and malachite. Iron formation is low grade in which total Fe in BMQ varies from 25 wt% to 46.82% and a few reach up to 59.40% in powdery iron ore (black ferruginous sand). The rocks belonging to mafic-ultramafic suite have been reported which consists of gabbro as the dominant lithounit along with peridotite, tremolite actinolite schist and pyroxenite. Peridotite shows cumulus texture in which intercumulus phase is pyroxene. A broad magnetic anomaly fluctuating in nature has been observed with values varying from 7804 nT to -4926 nT. Smooth magnetic anomaly, in increasing trend, has been observed towards north.
Chakrasila, Nandagiri and Bhumeswar	-	-	-	-	-	-	In Bongaigaon, Dhubri and Kokrajhar districts, a reconnaissance survey was carried out for iron ore in Chakrasila, Nandagiri and Bhumeswar areas. The study area comprised of granite gneisses, migmatites, Banded

STATE REVIEWS

Table – 3 (Concl'd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							Magnetite Quartzite (BMQ) and amphibolites which is further intruded by later pegmatite and quartz veins and surrounded with the loose yellowish gritty soil of quaternary Chappar Formation. In Lalmati block, BMQ occurs as discontinuous patches and extend for a cumulative strike length of 300 m with average lateral extension of 2-4 m and maximum depth extension of 10 m. BMQ in Shiljan block occurs as patchy boulders for a cumulative strike length of 200 m and depth continuity of 1-2 m. The rock composed of 30-35% magnetite, 20-25% hornblende and 40-50% quartz. Dark bands mainly composed of two generations of magnetite. Highest magnetic value recorded from Lalmati block is 1187 nT and Shiljan block is 557.3 nT.

Production

Petroleum (crude), natural gas (utilised), coal and limestone were the principal minerals produced in Assam in 2017-18

The value of minor minerals production was estimated at ` 31 crore for the year 2017-18.

There were 3 reporting mines in 2017-18 in Assam in case of MCDR minerals (Table-4).

**Table – 4: Mineral Production in Assam, 2015-16 to 2017-18
(Excluding Atomic Minerals)**

(Value in `000)										
Mineral	Unit	2015-16			2016-17			2017-18 (P)		
		No. of mines	Quantity	Value ^{\$}	No. of mines	Quantity	Value ^{\$}	No. of mines	Quantity	Value ^{\$\$}
All Minerals		3		544220	3		758449	3		775010
Coal	'000t		487	-	-	600	-	-	781	-
Natural Gas (ut.)	m cu m		3025	-	-	3128	-	-	3220	
Petroleum (crude)	'000t	-	4185	-	-	4203	-	-	4345	
Limestone	'000t	3	777	230415	3	1594	444644	3	1432	461205
Sulphur [#]	t	-	4312	-	-	6559	-	-	8051	-
Minor Minerals [@]		-	-	313805	-	-	313805	-	-	313805

Note : The number of mines excludes Petroleum (crude), Natural Gas (utilised) and minor minerals.

\$ Excludes the value of Petroleum (crude) & Natural Gas (ut.) \$\$ Excluding fuel minerals.

Recovered as by-product from oil refinery.

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

STATE REVIEWS

Mineral-based Industry

The present status of each mineral-based industry is not readily available. However, as per the

available information, the principal mineral-based industries in the organised sector in the State are furnished in Table - 5.

Table – 5 : Principal Mineral-based Industries in Assam

Industry/plant	Capacity ('000 tpy)
Asbestos Products	
Assam Roofing Ltd, Bonda, Distt Kamrup.	58
Cement	
Barak Valley Cements Ltd, Jhoom basti, Badarpurghat, Distt Karimganj.	330
Calcom Cement (Dalmia Subsidiary), Distt Nagaon.	1720
CCI Ltd, Bokajan, Distt Karbi Anglong.	200
Cement Manufacturing Co. Ltd, Chamata Pathar, P. O. Sonapur, Distt Kamrup (G).	1800
Purbanchal Cement, Vill. Sarutari, Distt Kamrup.	360
Fertilizer	
Assam State Fertilizer & Chemicals Ltd, Chandrapur, Distt Kamrup.	33 (SSP) 16.5 (H ₂ SO ₄)

(Contd)

Table – 5 (Concl'd)

Industry/plant	Capacity ('000 tpy)
Brahmaputra Valley Fertilizers Corpn. Ltd, Namrup (Namrup II & III), Distt Dibrugarh.	510 (Urea)
Progressive Fertichem Pvt. Ltd, Topatoli, Kamrup.	45 (SSP)
Iron & Steel	
Shri Ganapati Ispat Pvt Ltd, Tinsukia.	NA
Petroleum Refinery	
Indian Oil Corporation, Bongaigaon.	2350
Indian Oil Corporation, Moonmati, Guwahati.	1000
Indian Oil Corporation, Digboi.	650
NRL, Numaligarh, Golaghat.	3000

Note: Data, not readily available for fertilizer and cement industries on respective websites, is taken from Indian Fertilizer Scenario, FAI Statistics, and Survey of Cement Industry & Directory, respectively.