

## TABLE-1

### Exploration done by Directorate of Geology and Mining, Assam:

#### 1. Coal Deposits:

S L. N O.	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	OCCURRENCE	CHEMICAL COMPOSITION / QUALITY	RESERVE (million tons)
1.	<b>MAKUM COAL FIELD</b>	Tinsukia	<p><b>Namdang Colliery</b> (27°16'00"N 95°51'00" E)</p> <p><b>Borgolai Colliery</b> (27°16'00"N 95°51'00" E)</p> <p><b>Ledo Colliery</b> (27°18'00"N 95°51'00" E)</p> <p><b>Tipong Colliery</b> (27°16'00"N 95°51'00" E)</p>	Can be approached by both rail and roadways. Railway line is linked with the Tinsukia junction.	<ul style="list-style-type: none"> <li>▶ 29 Km long and 4.6 Km wide area.</li> <li>▶ Coal bearing rocks belongs to the Tikak Parbat and Bargolai Formation.</li> </ul>	<p>Good quality with low ash and moisture. High sulphur</p> <p>Moisture : 2 - 9% Sulphur: 1 - 4% Fixed carbon: 42 - to 60% Volatile Matter: 38 – 51% Calorific Value: 5035 – 7950 Kcal. / Kg.</p>	<ul style="list-style-type: none"> <li>▶ Total Reserve: 316 Million tones.</li> <li>▶ Proved Reserve: 305 Million Tones..</li> </ul>
2.	<b>DILLI JEYPORE COALFIELD</b>	Partly in Dibrugarh district (Joypore Colliery) and partly in Sivsagar district (Dilli Colliery) separated	<p>Latitude: 27°50'00" to 27°8'30" N</p> <p>Longitude: 95°15'10" to 95°15'00" E</p>	The coalfield is connected by a 12 Km road with Namrup railway station. The coalfield can also be approached from Sivsagar via Sonari and from Dibrugarh via Naharkatia and Duliajan.	<ul style="list-style-type: none"> <li>▶ Area of 40 km. long and 0.50 km. Wide.</li> <li>▶ Four distinct geological horizons belonging to Tikak Parbat Formation exist in this area where thicker seams of coal occur towards the bottom.</li> <li>▶ About ten coal seams of various thickness ranging from 0.50m to 21m are located in the lower most horizon.</li> </ul>	<p>▶ Good with low ash but high moisture and high sulphur</p> <p>▶ Upper coal bearing horizon: Moisture : 3.7-6.7%; Ash: 5.4-24.9% Sulphur: 3.2-7.4%; Fixed carbon: 32.6 – 46.5% Volatile Matter: 32.5 – 45.5%; Calorific Value: 5035 – 6020 Kcal. / Kg</p> <p>Lower coal bearing horizon : Moisture : 4.2-6.4%; Ash: 2.1-28.7%</p>	<ul style="list-style-type: none"> <li>▶ Total Reserve is around 54 Million tones.</li> <li>▶ Proved Reserve is 32 Million Tones..</li> </ul>

		by the Dilli (Disang river.)				Sulphur: 1.7-5.1%; Fixed carbon: 32.9 – 54.9% Volatile Matter: 33.7 – 46.9%; Calorific Value: 5035 – 6020 Kcal. / Kg	
3.	<b>SARAIPUNG TARAJAN COAL DEPOSITS</b>	Tinsukia	Latitude: 27°15'00'' to 27°20'00'' N  Longitude: 95°25'00'' to 95°30'00'' E	5 Km SW of Bhadoi Panch Ali of Tinsukia district linked with Duliajan-Digboi road.	▶ Coal occurs intermittently along the strike length of 7 Km.	▶ Good workable coal. ▶ moisture 6.5% Ash.4.7% Fixed carbon: 44.8%	▶ Probable reserve estimated to be 0.5 Million Tones..
4.	<b>SHEELVETA</b>	Karbi Anglong	Latitude: 25°58'25'' to 26°00'30'' N  Longitude: 93°17'30'' to 93°18'35'' E	40 Km northwest of Diphu and 110 Km southeast of Nagaon on NH-36	▶ Two coal seams separated by carbonaceous shale. ▶ Average thickness of coal seam : 2.35m ▶ Area: 0.2 sq. Km..	▶ Good quality ▶ Moisture 10.8 to 16.3%. Fixed carbon: 22.0 to 28.4% ash content: 7 to 24.4%	▶ Proved Reserve :0.53 million tones
<b>S L. N O.</b>	<b>NAME OF THE DEPOSIT</b>	<b>DISTRICT</b>	<b>LOCATION</b>	<b>ACCESSIBILITY</b>	<b>OCCURRENCE</b>	<b>CHEMICAL COMPOSITION / QUALITY</b>	<b>RESERVE (million tons)</b>
5.	<b>KOILAJAN</b>	Karbi Anglong	Latitude: 25°58'38'' N Longitude: 93°33'30'' E	8 Km NW of Dilai on Manja-Sarihajan road.	▶ 1.8 m thick coal seam occurs within the Basal Sandstone Formation at Koliajan Nala covering an area of about 0.4 sq.km.	▶ Assay result: Moisture 8.82% to Ash : 8.24% Fixed Carbon : 32.16% Sulphur : 2% Volatile matter : 50.76% Calorific Value : 7940-8570 Kcal/kg  ▶ The coal may be used in domestic purpose as coke and also in brick, tea and cement industries.	Total possible reserve is estimated at 0.50 million tones.
6.	<b>GARAMPANI</b>	Dima-Hasao	Latitude: 25°30'30'' N Longitude: 93°57'02'' E	Near Timang Basti and can be approached from Umrongsho through a metalled road.	▶ The coal occurs in association with Barail Sandstone Formation of Jaintia Group of rocks covering an area of 2.5 sq.Km. Three coal seams associated with Basal Sandstone are exposed	▶ Assay result is as follows: Moisture: 5.9% Ash: 18.3% Fixed carbon: 39.6% Volatile matter : 36.5 – 47.5%	Total possible reserve (within the 2.5 sq.km. area) is estimated at 1.00 million tones.

					intermittently along both the banks of Kopili River. ▶ The thickness of coal seams varies from 0.30 m to 1.5 m.	Sulphur : 0.0 - 5.2% Calorific Value : 5790 - 7380 Kcal/kg	
7.	<b>KHOTA ARDA COAL DEPOSIT</b>	Dima-Hasao	Latitude: 25°41'00" N Longitude: 92°55'00" E	The deposit can be approached by Dayanamukh – Dihangi road and situated at 35 km. south of Lanka railway station and 93 km. away from the district HQ Haflong.	▶ Two nos. of coal seams separated by a thin band of carbonaceous shale are exposed within Kopili Formation at Phanglangsho nala over an area of about 1.5 sq. Km. The thickness of coal seams varies from 0.50 to 1.00 m.	▶ Assay result is as follows: Moisture: 10.6 -12.7% Ash: 3.8 – 24.8% Fixed carbon: 30.9 – 34.5% Volatile matter : 34.8 – 44.7%  ▶ The deposit is economically viable for open cast mining.	The reserve of coal is 0.167 million tones
8.	<b>DITHOR COAL DEPOSIT</b>	Dima-Hasao	Latitude: 25°26'40" N Longitude: 92°27'30" E	The deposit is located near Umrangsho and can be approached by 6 km. long forest road from Lanka – Garampani Road.	▶ A small band of upper Eocene coal occurs within Kopili Formation of Jaintia Group of rocks. The thickness of coal seams varies from 0.20 m to 0.85 m.	▶ The proximate analysis of the coal on air dried basis shows as follows: Moisture: 6.9 – 8.3 % Ash: 15.0 – 70.6 % Fixed carbon: 24.6 – 41.8 % Volatile matter : 32.9 – 40.7%	Indicated reserve of 0.52 million tones.

## 2.Limestone Deposits:

SL. No.	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	OCCURRENCE	CHEMICAL COMPOSITION / QUALITY	RESERVE (million tons)
1.	<b>DILLAI PARBAT DEPOSIT</b>	Karbi Anglong	Latitude: 25°49'54" to 26°01'00" N  Longitude: 93°34'40" to 93°35'50" E	Connected by metalled road about 19 Km from Bokajan railway station.	▶ Dillai Parbat Deposit is divided into two blocks, viz., East block and North block.	▶ Cement grade ▶ Weighted average composition: CaO: 49.72% MgO: 1.04%.	Proved reserve: 32.41 million tones
2.	<b>SHEELVETA DEPOSIT</b>	Karbi Anglong	Latitude: 26°00'00" to 26°00'36" N  Longitude: 93°17'35" to 93°20'25" E	On NH 36. 122 Km from Nagaon and 37 Km from Diphu railway station.	▶ Small bands of cement grade limestone occur.	▶ Cement grade ▶ Weighted average composition is CaO: 45.0% MgO: 2.0 – 2.01%.	Probable reserve: 2 million tones.
3.	<b>KOILAJAN DEPOSIT</b>	Karbi Anglong	Latitude: 25°59'48" N  Longitude: 93°33'40" E	25 Km from Dimapur railway station.	▶ Small to medium bands of limestone occur.	▶ Cement grade ▶ Weighted average composition is CaO: 45.30% - 47.44%,	Proved reserve: 30 million tones

						Fe <sub>2</sub> O <sub>3</sub> :0.98-2.78%, Al <sub>2</sub> O <sub>3</sub> : 0.90-3.75%, MgO: 0.81 –1.59%.	
4.	<b>NEW UMRONGSHO DEPOSIT</b>	Dima-Hasao	Latitude: 25°31'00" to 25°33'00" N Longitude: 92°56'00" to 92°49'00" E	Near 18 Km post of Garampani -Lanka road.	▶ Two bands of limestone 30m and 50m thickness intervened by shale band.	▶ Cement grade ▶ Weighted average composition is CaO: 47.00% - 50.43%, Fe <sub>2</sub> O <sub>3</sub> :2.92-21.74%, MgO: 0.00 – 2.85%. Al <sub>2</sub> O <sub>3</sub> : 1.53-14.0%, SiO <sub>2</sub> :1.96-11.63%,L.O.I: 16.47-39.35%.	Proved reserve: 360 million tones
5.	<b>16<sup>TH</sup> KM BLOCK</b>	Dima-Hasao	Latitude: 25°32'22" to 25°34'30" N Longitude: 92°46'20" to 92°46'25" E	In Umrongsho. 6 Km from Umrongsho and 12 Km from Lanka	▶ Covers a total area of 1.07 sq.Km. where the total thickness of limestone is 80 m.	▶ Weighted average composition: CaO: 46.84% , SiO <sub>2</sub> : 1.96-11.63%, MgO: 2.1%, Fe <sub>2</sub> O <sub>3</sub> : 2.92-21.74%	Proved reserve: 44 million tones
6.	<b>JUIPAHAR DEPOSIT</b>	Dima-Hasao	Latitude: 25°32'20" to 25°34'40" N Longitude: 92°46'10" to 92°48'10" E	Near Umrongsho-Lanka road in between 22 Km post and 23 Km post.	▶ Occupies an area of about 6.5 sq. Km.	▶ Weighted average composition: CaO: 45 % MgO: 1.68 %.	Proved reserve: 184.00 million tones

### 3. Granite Deposits:

SL . No .	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	CHEMICAL COMPOSITION / QUALITY	RESERVE (million tons)
1.	<b>MAHAMAYA</b>	Karbi Anglong	Latitude: 26°12'95" N Longitude: 93°04'00" E	Situated near Dokmoka beside NH 36 and 92 Km away from Diphu.	▶ Pink Granite. ▶ Massive, hard and fractured in nature.	Proved reserve: 30 million cubic meter.
2.	<b>CENTRE BAZAR</b>	Karbi Anglong	Latitude: 26°17'15" N Longitude: 93°09'30" to 93°10'04" E	Located beside NH 36 60 Km. away from Diphu.	▶ Pink Granite. ▶ Massive, hard and fractured in nature.	Estimated reserve: 13 million Cubic meter.
3.	<b>BELLUGHAT</b>	Karbi Anglong	Latitude: 26°35'00" to 26°35'10" N Longitude: 93°45'00"	14 km. away from Dokomoka along NH 36.	▶ Light colourd, coarse to medium grained, massive and gray granite.	Estimated reserve: 2 million Cubic meter.

			to 93°10'01" E			
4.	<b>SILONIJAN</b>	Karbi Anglong	Latitude: 26°19'25" to 26°20'20" N Longitude: 93°44'00" to 93°45'00" E	The area is connected by an all weather road stretching west of proper Silonijan along NH 39.	▶ Massive, dark pink, coarse and fractured with hypidiomorphic texture and located is an isolated pocket.	Detail estimate is yet to be done.
5.	<b>BORJURI</b>	Karbi Anglong	Latitude: 26°03'30" N Longitude: 93°03'25" E	The area is connected by a fair weather road of 3 km stretching from Kathiatoli – Salna road and situated at a distance of 20 km from Nagaon and about 180 km from the district H.Q. Diphu.	▶ Black in colour, hard, massive, fine grained and well fractured.	Detail estimate is yet to be done.
6.	<b>DUDHKURI HILL</b>	Kamrup	Latitude: 26°00'10" N Longitude: 91°16'15" E	Nearby Boko and about 55 km west of Guwahati along NH 37.	▶ Light Pink. ▶ Hard and massive in nature.	Detail estimate is yet to be done.
7.	<b>AGCHIA HILL</b>	Kamrup	Latitude: 26°00'80" N Longitude: 91°17'00" E	Situated at a distance of 50 km west of Guwahati along NH 37.	▶ Pink Granite. ▶ Hard and massive in nature	Detail estimate is yet to be done.
8.	<b>DAMAL-SAPLENGKATA</b>	Goalpara	Latitude: 26°00'24" to 26°02'12" N Longitude: 90°29'40" to 90°31'13" E	8 km south of Agia.	▶ Greenish black. ▶ Hard and massive in nature.	Detail estimate is yet to be done.
9.	<b>KAKIRA</b>	Goalpara	Latitude: 26°03'00" to 26°04'14" N Longitude: 90°34'35" to 90°34'58" E	3 km away from Balbola an about 17 km from Goalpara town.	▶ Greenish black ▶ Hard, massive granite.	Probable Reserve: 300 million cubic meter.
<b>Sl. No.</b>	<b>NAME OF THE DEPOSIT</b>	<b>DISTRICT</b>	<b>LOCATION</b>	<b>ACCESSIBILITY</b>	<b>CHEMICAL COMPOSITION / QUALITY</b>	<b>RESERVE (million tons)</b>
10.	<b>KHUTAMARI</b>	Goalpara	Latitude: 26°31'27" to 26°31'40" N Longitude: 90°30'50" to 90°31'00" E	14 km SW of Goalpara and 6 km away from Pancharatna	▶ Black Granite. ▶ Hard, massive granite.	Probable Reserve: 0.70 Million cubic meter.
11	<b>PAGLATEK</b>	Goalpara	Latitude: 26°10'48" to 26°11'20" N	16 Km southwest of Goalpara and 8 km Away from Pancharatna	▶ Black Granite. ▶ Hard, massive granite.	Estimated Reserve: 0.80 million cubic meter.

			Longitude: 90°31'25" to 90°31'36" E			➤ Detail work is yet to be done.
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#### **4. CHINA CLAY DEPOSITS:**

SL. No.	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	OCCURRENCE	CHEMICAL COMPOSITION / QUALITY	RESERVE (million tons)
1.	UPPER DEOPANI	Karbi Anglong	Latitude: 26°14'27" to 26°14'39" N  Longitude: 93°45'54" to 93°46'59" E	7.5 Km west of Safapani, Safapani is 24 Km from Bokajan railway station.	<ul style="list-style-type: none"> <li>▶ Two good deposits at 500 m apart.</li> <li>▶ Both slacking &amp; non-slacking varieties present.</li> <li>▶ Block-I: area = 0.4 sq. Km.</li> <li>▶ Block-II: area = 0.043 sq. Km.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Good quality.</li> <li>▶ White Grey.</li> <li>▶ Soft.</li> <li>▶ Block – I : 38.8% clay.</li> <li>▶ Block – II : 84% clay</li> <li>▶ The clay of block – I is suitable for white – wares only after blending with plastic clay whereas the clay of Block – II is suitable for ceramic ware manufacturing.</li> </ul>	Proved reserve: 0.74 million tones.
2.	SHEELVETA	Karbi Anglong	Latitude: 26°08'00" N Longitude: 93°18'00" E	Well connected by metal road to NH 36.	▶ Covers 0.25 Sq.Km.	<ul style="list-style-type: none"> <li>▶ Color is white to dull white.</li> <li>▶ Clay content: 27%.</li> </ul>	Total reserve: 0.06 million tones.
3.	SILONIJAN	Karbi Anglong	Latitude: 26°17'45" to 26°22'15" N  Longitude: 93°46'18" to 93°52'06" E	8 Km from NH-39 near Silonijan.	<ul style="list-style-type: none"> <li>▶ Covers an area of 5 sq. Km.</li> <li>▶ Thickness ranges from 3–6 m.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Color is white to dull white.</li> <li>▶ Slacking in nature.</li> <li>▶ Can be used in ceramic ware after washing.</li> </ul>	Probable reserve: 0.2 million tones.tonnes.

## 5.Iron ore Deposits:

SL. No.	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	OCCURRENCE	CHEMICAL COMPOSITION / QUALITY	RESERVE (million tons)
1.	CHANDARDINGA	Dhubri	Latitude: 26°20'25" N Longitude: 93°03'55" E	Located on the north bank of river Brahmaputra and is about 2 km away from Salkocha Inspection Bunglow on NH 31.	▶ Three bands are found with thicknesses of 49.85 m, 16m, and 53 m.	▶ Made up of variable proportions of hematite and magnetite. ▶ The average composition is – Fe <sub>2</sub> O <sub>3</sub> =42%, P <sub>2</sub> O <sub>5</sub> = 0.35%, SiO <sub>2</sub> = 4.28% Al <sub>2</sub> O <sub>3</sub> = 0.60%, CaO = 0.08%, MgO = 0.48% S = 0.10%	Total reserve 10.0 Million tons.
2.	LEN GUPARA	Goalpara	Latitude: 26°03'55" N Longitude: 93°28'50" E	15 km away from Goalpara along NH - 37	▶ Occurs mainly on the hilltop forming a prominent ridge in the area. ▶ Two bands are found with a thickness of 10 m and 20 m respectively.	▶ The average composition is – Fe <sub>2</sub> O <sub>3</sub> =48.39-68.47%, FeO = 4.28-4.31% Al <sub>2</sub> O <sub>3</sub> = 0.16 – 4.01%, SiO <sub>2</sub> = 23.52 – 37.50%, TiO <sub>2</sub> = trace to 1.68%, CaO = trace to 0.46%, MgO = trace to 0.41% P <sub>2</sub> O <sub>5</sub> = trace to 6.20%,	Inferred reserve 7.25 Million tons.
3.	KUMRI	Goalpara	Latitude: 26°25'00" N Longitude: 93°32'44" E	6 km west of Pancharatna.	▶ Exposed legally at western side of the hill. ▶ Two bands are found with a thickness ranging from 10 m to 16 m.	▶ The average composition is – Fe <sub>2</sub> O <sub>3</sub> =22.79-47.32%, FeO = 11.71-26.79% Al <sub>2</sub> O <sub>3</sub> = 0.56 – 5.02%, SiO <sub>2</sub> = 29.00 – 37.92%, TiO <sub>2</sub> = trace to 0.04%, MgO = trace to 0.29% - 3.33%, P <sub>2</sub> O <sub>5</sub> = 0.66 – 3.66%,	Inferred reserve 1.64 Million tons.

## 6. Glass sand Deposits:

SL. NO.	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	OCCURRENCE	CHEMICAL COMPOSITION / QUALITY	RESERVE (million tons)
1.	JIAJURI	Nagaon	Latitude: 26°18'00" to 26°19'00"N Longitude: 92°52'55" to 92°54'15" E	3 km southeast of Chapanala, 12 km from Samuguri railway station and 25 km from Nagaon town via NH – 37.	Covers an area of 2.9 Sq.km. However, detailed investigation of the deposit covered an area of 0.552 sq. km.	<ul style="list-style-type: none"> <li>▶ More or less friable felspathic in nature and occasionally variegated in colour due to the presence of ferruginous matters.</li> <li>▶ The average composition is – SiO<sub>2</sub> = 91.21 - 98.93% Al<sub>2</sub>O<sub>3</sub> = 0.63 – 5.08%, Fe<sub>2</sub>O<sub>3</sub> = 0.08 – 0.54 %. TiO<sub>2</sub> = trace to 0.21%,</li> </ul>	Total reserve of glass sand 80.0 Million tons.

## 7.Fuller's earth Deposits:

(An aluminum poor montmorillonite clay)

SL. NO.	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	OCCURRENCE	RESERVE (million tons)
1.	SUBANKHATA AND BHUTANKHUTI	Baksa	Latitude: 26°47'48" to 26°50'00"N Longitude: 91°25'00" to 91°27'46" E	Subankhata is connected with Nalbari by 50km long road via Dhamdhama. Bhutankhuti is just 5 km west of Subankhata.	<ul style="list-style-type: none"> <li>▶ Scattered deposits occur along the bank of Pagladiya River .</li> <li>▶ The shale bands are interbedded with sandstones and thickness ranges from 13 to 40 m.</li> </ul>	Total inferred reserve is 13 million tons.



## 8. Silliminate Deposits:

SL. No.	NAME OF THE DEPOSIT	DISTRICT	LOCATION	ACCESSIBILITY	OCCURRENCE	CHEMICAL COMPOSITION / QUALITY	RESERVE (million tons)
1.	CHIPILANGSHO	Karbi Anglong	Latitude: 26°12'00" to 26°13'00"N Longitude: 93°12'00" to 93°13'00" E	9 Km away from Phuloni on NH 36	▶ Occurs either in association with gneissic group of rocks or with the Quartz – mica schists of Sillong group of rocks.	▶ Good quality quartz – silliminate schist having about 70% recoverable sillimanite content. ▶ The Al <sub>2</sub> O <sub>3</sub> content in the massive sillimanite ranges from 53.00% to 58.90%, while in quartz – sillimanite schist it range from 30.00% to 40.00% (approx .). The assay results after beneficiation of quartz – sillimanite schist are : The average composition is – Al <sub>2</sub> O <sub>3</sub> =55.16%, Fe <sub>2</sub> O <sub>3</sub> =1.38 % MgO = 0.30%, NaO <sub>2</sub> = 0.15% SiO <sub>2</sub> = 38.18% CaO = 0.85% TiO <sub>2</sub> = 1.05% K <sub>2</sub> O = 0.28% L.O.I.= 2.61%	Proved reserve 0.8 million tons

