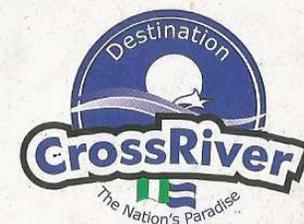


SOLID MINERALS & MANUFACTURING



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GEOLOGY OF CROSS RIVER STATE

Geologically, Cross River State can be subdivided into four units for ease of description. These are

- i. The Oban Massif
- ii. The Calabar Flank
- iii. The Mamfe Embayment
- iv. The Obudu Plateau

The Geology is dominated principally by the basement complex of the Obudu plateau of the northeast and the Oban massif, which extends from the central region to the south-eastern part. The sedimentary terrain comprises rocks of the lower Benue trough and the Calabar Flank. Unlike the basement areas, the sedimentary rocks have been extensively studied.

SOLID MINERAL STATUS

Cross River State also endowed with a varied range of solid minerals. They vary between the metallic and non-metallic: gem and precious, and are strewn across the entire State.

Nothing significant in terms of exploration, exploitation and processing has been done so far except in the cases of Lime Stone for cement manufacture and granite quarrying for constructions materials. However over 25 different mineral resources have been identified in Cross River State. Reliable information on quantity, quality, are yet to be made available to prospective investors.

Currently the mineral that is attracting the most of mining activities is baryte.

MANUFACTURING

PREAMBLE:

With its Seaport, Airport, and two Free Trade Zones, Cross River State is the manufacturers haven. There is large scale flour manufacturing, cement production, furniture making, pharmaceuticals, packaged snacks, fruit juices, marbles, electronics/electrical appliances.

VISION:

The vision of the Cross River State Government is to transform the State from a

purely agrarian state depending solely on produce to a manufacturer of finished and semi finished goods that will serve as raw materials to other industries.

AVAILABLE MINERALS (known)

Until more appropriate methods and technologies are applied to fully uncover the treasures beneath the earth in the State we can for now, point to some known occurrences and their locations: viz

OPPORTUNITIES:

With the abundant and relatively virgin resources in agriculture, forestry, tourism, solid minerals, good infrastructure, serene environment, security and so on in the State, there exists unmatched opportunities for manufacturing and extractive industries in these sectors.

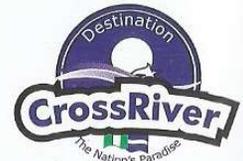
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AVAILABLE MINERALS

SN	MINERAL	LOCAL GOVERNMENT LOCATION AREA	LOCATION	USES	QUANTITY	REMARKS
1	Gold	Nsufan Etung Akamkpa	Nsufan Obanliku	As foreign exchange, jewellery, ornaments, production of coins (coinage as money)	Not yet determined	Occurs in ore deposits of sulphides
2	Uranium			Atomic energy, curative medicine, detection of flaws in metals, give yellow to brown colour	Not yet determined	-do-
3	Tin Ore (Cassiterite)			In Tin plating for food canning and decorative industries. Hardening of copper and lead in alloys, lining of cooking utensils, tin roofing, tubing alloys	-do-	-do-
4	Manganese			Dry batteries, glass industries, paints, dyes, pigments, fertilizer and metallurgical purposes	-do-	-do-
5	Titanium			Makes whitest of all paints, very high opacity, toilets artificial silk, coloured glass, pottery glaze, tinting artificial teeth, dyeing metallurgical purposes	-do-	-do-
6	Limestone	Calabar		Cement production, Hydrated lime, and production of fertilizer, asbestos, as industrial fillers, flux, and ceramics, in the iron and steel industry, as aggregates in the construction industry, in the pharmaceutical industry.	The mfamosing limestone has been quantified to be over 100 million tons. all other deposits are also in commercial quantities	Obubra deposit is 70% CaCO_3 CRS limestone ranks among the best in the world

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SN	MINERAL	LOCAL GOVERNMENT LOCATION AREA	LOCATION	USES	QUANTITY	REMARKS
7	Salt	Yala		Table salt, in the food industry as a seasoning for food, in the chemical industry to produce sodium and chlorine products for the manufacture of paper, plastics, pesticides, cleaning fluids and anti freeze and other automotive fluids as a de-icer when mixed with ice to reduce the melting point of ice. It is often spread on roads and highways to melt snow and ice. About 20% of salt in Pharmaceuticals, caustic soda	Covers length 40km & width 112.8km at Gabu/Chimoga but detail quantitative analysis is required	Details studies recommender
8	Coal			Primary source of heat and powder, automobile power generation/locomotion	-do-	-do-
9	Mica	Biase		As insulators against heat and electrical conduction in electrical electronic industry, in vacuum tube capacitors and communication devices, in dry ground roofing. jolt cement and paint Wear ground paint, rubber and wall paper	-do-	-do-
10	Kaolin	Obanliku		Moulding, China ware, coating, printing papers, fillers in rubber, paints, used in white ware pottery, refractories,, chalk	-do-	-do-
11	Crude oil			Refined for petrol, gas, engine oil, grease, kerosene etc	In commercial quantity	-do-
12	Galena (lead zinc)			Used in metallic industries, electrical cable covering, storage battery, solder pipe, Ammunition bearing metals, pigment in paint and ceramic industries	-do-	-do-

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SN	MINERAL	LOCAL GOVERNMENT LOCATION AREA	LOCATION	USES	QUANTITY	REMARKS
13	Feldspar	Yakkur, Biase		Used in ceramics for making potteries, enamels for household utensils, tiles, porcelain, sanitary ware, ingredient in scouring soaps, abrasives, roofing materials and false teeth	-do-	-do-
14	Quartz	Biase		Used for jewellery and for windows in deep sea diving vessels	-do-	-do-
15	Baryte			As a weighting agent in drilling mud, filler in paints, plastics, papers, for dressing poor quality calico	-do-	-do-
16	Diamond			Precious stone, jewellery ornament and foreign exchange	-do-	-do-
17	Graphite	Obanliku		Production of pencils, foundry facings, electrodes, dry battery, glazing powder, pipe cement, crucibles, lubricants, paints, dynamo brushes, stone polish. It is used to build tanks that store strong acids since it cannot dissolve easily.	-do-	-do-
18	Pyrite (false Gold)			Can be used instead of flints in fire arms	-do-	-do-
19	Talc Schist			Filler in paints and rubbers, in plasters, foundry facings and lubricants, paper and textiles, crayons and soap making, pharmaceutical, toilet (Talcum) powder		
20	Rutile			Pigments, Titanium metal and water proofing agents	-do-	-do-

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SN	MINERAL	LOCAL GOVERNMENT LOCATION AREA	LOCATION	USES	QUANTITY	REMARKS
21	Tourmaline			In the study of polarized light crystals in radio transmitters, production of jewellery. Since it becomes electrically charged when subjected to charges in heat or pressure, it is used in various kinds of electrical instruments	-do-	-do-
22	Amethyst	Obubra		Use in jewellery production	-do-	-do-
23	Spring water			Source of good table water	-do-	-do-
24	Granite	Akamkpa		For Road Construction and building	-do-	-do-
25	Bentonite			As an efficient materials for drilling mud (because of the gel-like suspension it forms in water). As bleaching clay in oil refining, filtering, clarifying and decolorizing, as filtering agent for clarifying wine, beer and treating waste water. As ingredients in cosmetics, Animal feeds and pharmaceuticals. As soil conditioners, carrier of insecticide/pesticides coating for seeds and mineral additive in agriculture. As coating on some types of computer papers and on non-carbon required multiple copy papers. As cracking catalyst, beading agents, fillers and as dissociating agents in petroleum refining and chemical industries. As additive to ceramic raw materials to increase plasticity and enhance the strength. As fire retarding materials. As foundry sand bond in iron and steel foundries. As water impedance, where it prevents seepage loss from reservoirs irrigation ditches and waste disposal ponds		

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SN	MINERAL	LOCAL GOVERNMENT LOCATION AREA	LOCATION	USES	QUANTITY	REMARKS
26	Clay	Obanliku Ogoja Akpabuyo Obubra Calabar Municipality Calabar South	Bendigie, Bukumaya Ishibori Idundu and Qua Town Ogurude, Ovunum and Iyमितet. The Apiapum, Ofumbongha-one clay are highly siliceous Ikot Omin, Ikot Ansa, Essien Town and Okuanibang Ekondo, Anantiga River Bank and Uwanse Creek			Detail Studies required
27	Iron Ore (Hematite)			As an alloy with manganese, nickel etc in high quality Steel production, metallurgical uses in homes, farms, cities, machines, automobiles, trains and ships	Not yet determined	-do-
28	Mica (Muscovite)			For electrical insulation in condensers, tubes, radio, socket fuses, filler in rubber, plastic wall papers, paints, lubricants, roofing materials	-do-	-do-
29	Sharp sand			In the construction industry for building of houses, roads etc		
30	Tantalite	Akamkpa	Akwa Ibami			Intensively being mined





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