

Mineral Resources of Pakistan:

TREASURE OF The EARTH:

WHAT ARE MINERAL/ HOW ARE MINERALS FORMED:

Minerals are inorganic substance made by nature .mineral resources are a country's natural recourses, and are obtained from under the surface of the earth, (though they may not far under.)

Some minerals are originally formed from hot magma, which contains the minerals, when the magma cools, crystals of minerals appear. Most minerals are formed underground when heat and pressure transform a form of the rock into another. Some minerals are formed when volcanic rocks are broken down by the action of water and wind.

MINERAL RESOURCES CAN BE CLASSIFIED INTO TWO TYPES:

1. There are two kinds of Minerals; Metallic & Non-Metallic Minerals. Metallic Minerals are made with metal compound or resemble a metal. Iron Ore, Silver, Gold, Copper, Antimony, Tin, Aluminum, Platinum, Uranium. Chromites Ore, Zinc/ Lead, Calcium, Magnesium, Arsenic, Graphite, Glass Sand, Tungsten.
2. Non-Metallic Minerals are Natural Gas, Coal, Copper, Sulphur, Rock Salt, Salt, Lime Stone, Chromate, Gem Stone, Gypsum, China Clays, Kaolin , Brine, Marble ,Potash, Silica Sand, Mica, Radioactive Minerals.

DIFFERENCE BETWEEN METALLIC & NON- METALLIC:

Non-Metallic Minerals are valuable but economically less valuable except power resources Oil, Gas , Coal Generally hard , tough and shining Soft, rough and may not shine Can change shape without breaks away when shape is changed Good thermal and electrical conductors Poor thermal and electrical conductors More reactive with water Less reactive with water

MINERAL RESOURCES OF PAKISTAN;

Pakistan is endowed with extensive geological potential. The country possesses extensive reserves of mineral deposits such as coal copper, gold, limestone etc. However, unlike other developing countries with good mineral endowment, we have not yet been able to promote growth and alleviate poverty by exploiting our natural resources to the maximum extent possible. Currently about 52 Minerals are under exploitation but on small scale. The major production is of coal and rock salt and other construction minerals. At this time, the mineral sector is mainly

concentrated in five principal minerals. Lime Stone, Coal, Gypsum, Sulphur, Crude Oil and Natural Gas. The current contribution of mineral sector to the GDP is about 0.5%.

MINERALS OF BALUCHISTAN:

Baluchistan is the richest province around 80 to 85% minerals present here. Rest of 10 to 15% is present in KPK, SINDH, and PUNJAB. At present Pakistan is producing 50 minerals; of these about 40 are being exploited in Baluchistan. Almost all the minerals now being mined in the province have been discovered by the Geological Survey of Pakistan. The significance of Copper resources of Pakistan is widely known because of huge investment made in development of Saindak copper deposit. Copper reserves are present in Saindak and Rekodiq in Baluchistan. Coal in Baluchistan about 217 million tons of coal are estimated. These Resources are distributed in Hamai, Duki, Mach- Abegum Pir Ismail Ziarat, BarKhan, and Chamalang. Total Natural Gas reserves in Pakistan are estimated at about 31 trillion cubic feet. In the Province of Baluchistan, the reserves are in Pirkok, Sui, Mazarani, and Golarchi. Sui Gas field is the largest field of Pakistan, which covers over 75 sq. miles.

MINERAL OF SINDH:

According to estimates prepared by the Geological Survey of Pakistan (GSP), Pakistan has total coal reserves of 185 billion tons, out of which 184 Million Tons Billion tons are in Sindh, one of the biggest good quality lignite deposit in the World. China Clay: In Sind it is found in Nagar Parkar, in Tharparkar District. It used in Cement, Paper, and Rubber filter. It contains 16-31% Clay. It is also known as Kaolin. Natural Oil: There are three renowned oil fields in Sindh which are briefly described in tabular form below.

MINERALS OF KPK:

The largest resources of Gypsum found in Pakistan are in Khyber Pakthunkhwa the reserves are mainly found in D.I khan and Kohat District. Chromate deposits of Baluchistan and Khyber Pakthunkhwa must be considered from a regional standpoint that could enable Pakistan to become a major exporter of chromites and ferrochrome. Limestone: Pakistan is bestowed with extensive deposits of suitable quality of limestone in the province of Khyber Pakthunkhwa and Northern Areas. The average annual production of limestone is 8697 Metric tons used mainly in the manufacture of cement. Road making, building construction and in the chemicals industries.

MINERAL IN PUNJAB:

Iron Ores in large deposits in Punjab. The major deposits are in KalaBagh Mianwali District. In Punjab coal is present in Salt Range and Markawal. The estimated deposits of coal in this region are 235 million tons. The quality is average in comparison with other provinces. Natural oil: All large and renowned oil fields are located in potwar region. In following table a brief description of Oil fields is given.

PROBLEMS IN MINERAL SECTOR:

- Large Capital.
- Foreign Investment.
- Modern Management.
- Technical Knowledge.
- Mining vs. Environment.
- Private Sector Investment.

1. Lack of Interest of the Foreign Investors: Although the FDI inflow in mining and quarrying sector in Pakistan has increased yet deteriorating law and order situation and security issues are proving to be major barriers against the inflow of FDI to especially in Baluchistan and Khyber Pakthunkhwa. There is lack of interest of the foreign investors in quarrying and mining sector due to unstable policies as well.
2. Understaffing of Regional Directorates: Regional directorate of Minerals and Mines is heavily understaffed. There is only one mine inspector to visit for a whole district and only one Assistant Director of License to look after the licenses issues in the whole region. Hence the officials are neither able to visit the mine sites nor are they able to impart important trainings on health and safety issues to the mineworkers.
3. Old Techniques: The mining carried in the country is still based upon the century old techniques where miners dig the coal from underneath thousands of feet (going as deep as 8000 ft.) and carry in sacks of almost 100 kg on their backs way up or in some instances to a station in between from where the haulage trolley carry it to the surface.
4. Lack of Technical knowledge Inaccessible mineral deposits institution mismanagement.
5. Lack of experts Low priority given to Mineral Extraction.

