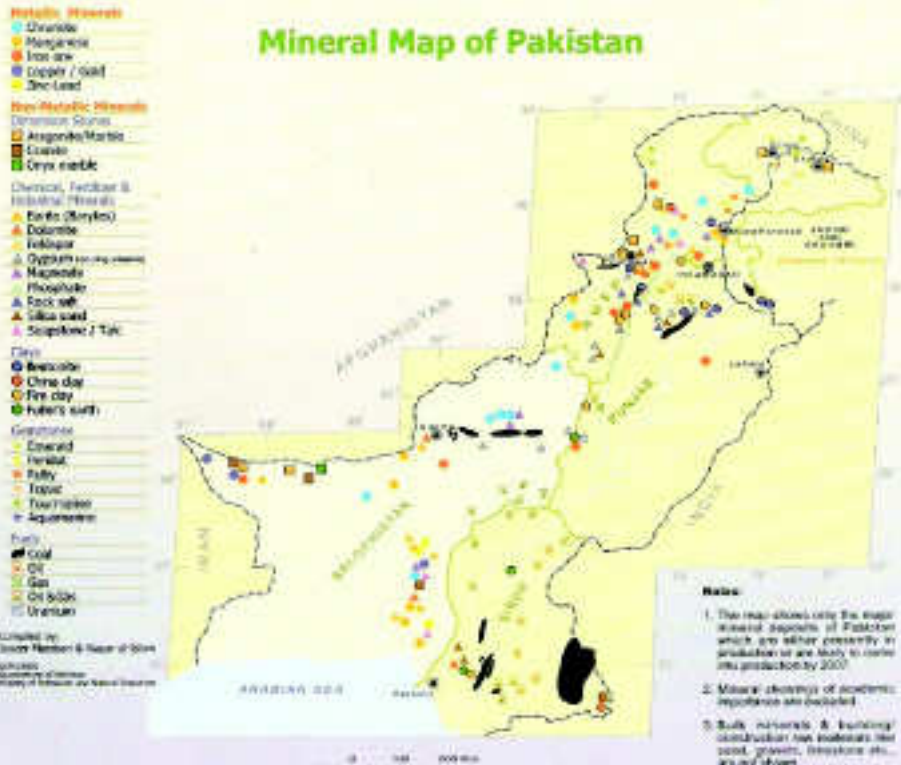




Mineral Map of Pakistan



Major & Important Mineral discovered by GSP

- ▲ Copper-Gold: Chagai (Saindak, Reko Diq)
- ▲ Iron ore: Kalat (Dilband); Chagai, Chitral, Nizampur, Chiniot, Kalabagh
- ▲ Lead-Zinc: Lasbela (Duddar); Khuzdar
- ▲ Barite: Khuzdar, Kalat, Hazara
- ▲ Onyx marble: Chagai
- ▲ Massive Sulphide: Lasbela (Soap Dhoro & Anna Dhoro, Ninro Dhoro)
- ▲ Chromite: Qila Saifullah (Muslimbagh); Khuzdar
- ▲ Fluorite: Kalat (Dilband); Khuzdar, Loralai
- ▲ Magnesite: Qila Saifullah (Nasai); Khuzdar, Lasbela, Hazara
- ▲ Dolomite: Mastung

- ▲ Manganese: Khuzdar & Lasbela
- ▲ Coal: Thar, Thatta, Loralai, Quetta, Bolan, Hangu & Cherat
- ▲ Uranium: D.G. Khan & Bagrian, Hazara
- ▲ Soapstone: Lasbela & Hazara
- ▲ Emerald: Swat
- ▲ Topaz: Mardan (Kadang)
- ▲ Aquamarine: Gilgit & Chitral
- ▲ Peridot: Kohistan
- ▲ Phosphate: Hazara
- ▲ Celestite: Dedu (Thano Bula Khan), Mianwali (Daud Khel)
- ▲ Fire Clay: Mianwali, Sargodha, Dadu, Thatta, Attock
- ▲ China Clay: Swat (Shahdheri); Hazara, Mohmand Agency
- ▲ Feldspar: Hazara & Swat



Major Mineral Potentials of Balochistan

Dilband - Iron Ore Deposit

Discovered by GSP in 1996

Haemetitic Iron ore with > 40% Fe₂O₃

Reserves > 200 million tonnes. 10% of Dilband ore blended with imported ore will save millions of rupees in foreign exchange for the country. GSP has helped BME to drill evaluate the deposit for beneficiation, and exploitation. Mining has already been started and supply of iron ore to Pakistan Steel is in progress. The other iron deposits in Chagai are Pachin Koh, Chigen Dik & Chilghazi with total reserves more than 70 million tonnes.

Duddar, Gunga and Surmai - Lead Zinc±Barite Deposits

Discovered by GSP in 1980

All initial investigation completed by GSP. Duddar leased for 15 years to MRDL of China

Reserves = 28 million tonnes

Combined Lead Zinc Ore with 7% Zn & 3.2% Pb

Saindak - Copper Gold Deposit

Discovered by GSP in 1973

GSP initiated the work and in collaboration with RDC completed the prefeasibility study. Leased to MCC of China for 10 years. MCC will produce 20,000 tonnes of copper blister, >1.5 tonnes of gold annually.

Reserves > 400 million tonnes

Copper = 0.4% with 1.7 million tonnes

Gold = 0.30 - 0.48 g/ton

Reko Diq - Copper Gold Deposit

Discovered by GSP in 1978-79

One of the very promising copper gold deposits. Presently leased to TCC to develop the deposit, expected production within 2-4 years

Reserves > 940 millions tonnes

Copper = 0.64% with 50 million tonnes

Gold = 0.30 g/ton

Coal

Six major coal producing fields are in Balochistan. These are Khost-Shahrig-Harnai, Duki, Sor Range-Daghari, Pir Ismail Ziarat and Mach. The new coal field of Chamalang-Bahlol has better heating values as compared to other coals of Balochistan. Total coal resources >200 million tonnes.

Thar Coalfield - Sindh: One of the world's largest lignite deposits discovered by GSP in 1992, has more than 175 billion tonnes of coal resource. Prefeasibility study to utilize this coal for power generation is in progress.



GSP
GEOLOGICAL
SURVEY OF PAKISTAN

Geological Museum, Quetta:

The Geological Survey of Pakistan houses one of the oldest and largest geological museum in the country at its headquarters office Quetta. Various galleries of this museum offer the most comprehensive coverage of the scientific discoveries made by the department.

Exhibits related to GSP's researches are classified by each main theme of earth science. The treasure trove includes a collection of over 7, 650 priceless geological specimens including meteorites, rocks, minerals, gemstones, building & decorative stones and fossils put on display in its seven thematic galleries.

Museum often arranges special exhibitions and various events for dissemination of geologic information to the public and conducts geoscientific lectures for mass awareness. For popularizing the role of earth sciences in the service of society and educational purposes, there is no admission fee charged. It comes as a delightful surprise to interested visitors who find this Museum a vast storehouse of geological specimens put on exhibit for free use by researchers, and students from schools, colleges & universities. The GSP Museum is one of its kinds at the provincial metropolis and continuously gaining reputation as a centre of learning.

GSP Offers its Technical Services

Geoscience Advance Research Laboratories (GARL), Islamabad

GARL is the main research arm of the GSP and is one of its own kind in the region. It is equipped with the most modern and sophisticated research equipments, such as electronic micro probe analyzer, XRD, XRF spectrometer, ICPMS, atomic absorption spectrophotometers, DTA analyzer, image analyzer, spin magnetometer, sample and thin section preparation equipment and analytical services. Other specialist mineralogic services also include EPMA.

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