

PAKISTAN

A Treasure Trove of Minerals



Mineral Potential at a Glance

- Pakistan, owing to its unique geological conditions, is endowed with huge mineral/ mining potential.
- Minerals available in all categories (metallic, non metallic, industrial and rare earth metals).
- It has world's **2nd largest coal reserves**, **7th largest copper reserved** and possesses sufficient reserves of gold, which are high in demand in the global market.
- Other important minerals include silver, marble, granite, chromite, lead, zinc, gem stones, dimension stones, uranium, phosphate, silica, sand, gypsum etc.

Metallic Minerals		
Type	Quantity (Million Tons)	Key
Iron	1,427	●
Copper	6,100	●
Gold / Silver	1656	●
Molybdenum	1.37	●
Lead Zinc	23.72	●
Chromite	2.52	●

Non Metallic Minerals		
Type	Quantity (Million Tons)	Key
Marble & Granite	3,200	■
Onyx	12	■
Coal	186,000	■

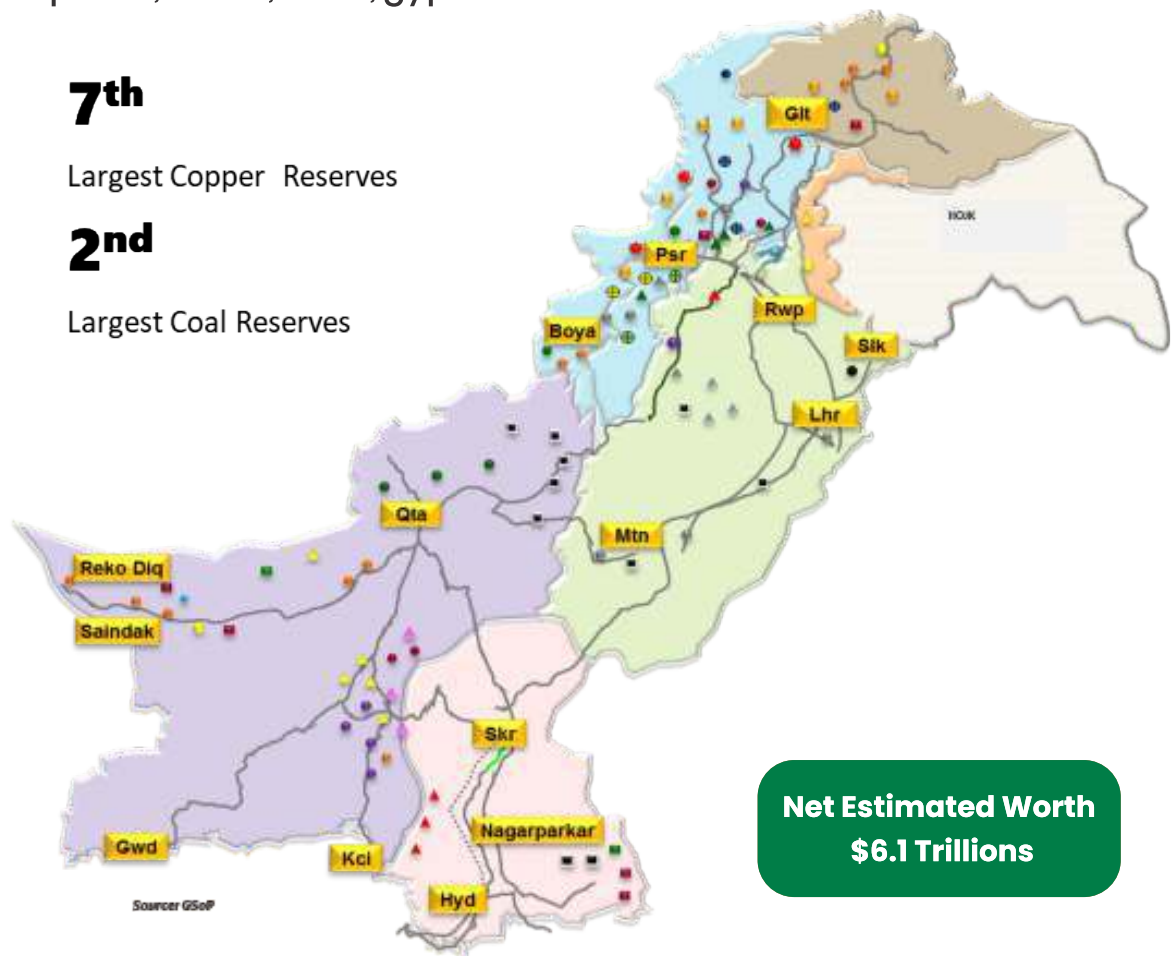
Industrial Minerals		
Type	Quantity (Million Tons)	Key
Barite	30	▲
Dolomite	Extensive	▲
Feldspar	Extensive	▲
Rock Salt	800	▲
Phosphate	22	▲
Silica Sand	557	▲
Gypsum	6,000	▲
Soap Stone	Extensive	▲

7th

Largest Copper Reserves

2nd

Largest Coal Reserves



**Net Estimated Worth
\$6.1 Trillions**

Reinvigoration of Mineral Sector

- The revival of Reko Diq Copper and Gold Project in Balochistan by Canada's Barrick Gold, speaks of **reinvigorated confidence of foreign investors** in Mining/Mineral Sector of Pakistan.
- Both the public and private sector are actively contributing towards mining industry.
- **Over 5000 mining sites are operative across the country** creating jobs for over 0.3 million workforce.
- **Government of Pakistan is also encouraging investors to establish mining/mineral related industry in special Economic Zones (SEZs)** to benefit from incentives including tax holidays.



Incentives Offered To Foreign Investors

Establishment of Special Investment Facilitation Council (SIFC)

- Focus on investment and privatization in **five areas**: Defense, Agriculture, Minerals, Information Technology & Telecommunication and Energy.
- Act as a '**Single Window**' for multi-domain cooperation in relevant fields, with focus on GCC countries.
- Prepare a long-term roadmap for growth, development, and investment in the relevant fields while **capitalizing on low-hanging fruit**.
- Improving the **ease of doing business** by overcoming systemic/bureaucratic hurdles and optimizing horizontal-vertical synergy – coordination between the federal and provincial levels.
- Coordinate **Pakistan Army's** assistance for the purposes mentioned above, as is being done in other countries, such as China, Indonesia, etc.

Foreign Investment Promotion & Protection Act, 2002

- Foreign Investment Protection Act protects the rights of investors and adjudicates various tax concessions and exemptions to investors, including the provision of **Export Processing Zone incentives and facilitation of investment**.
- Facilitates and encourages direct foreign investment in **high capital intensive industries** through guarantees assured by laws and regulatory measures.

Fiscal Incentives

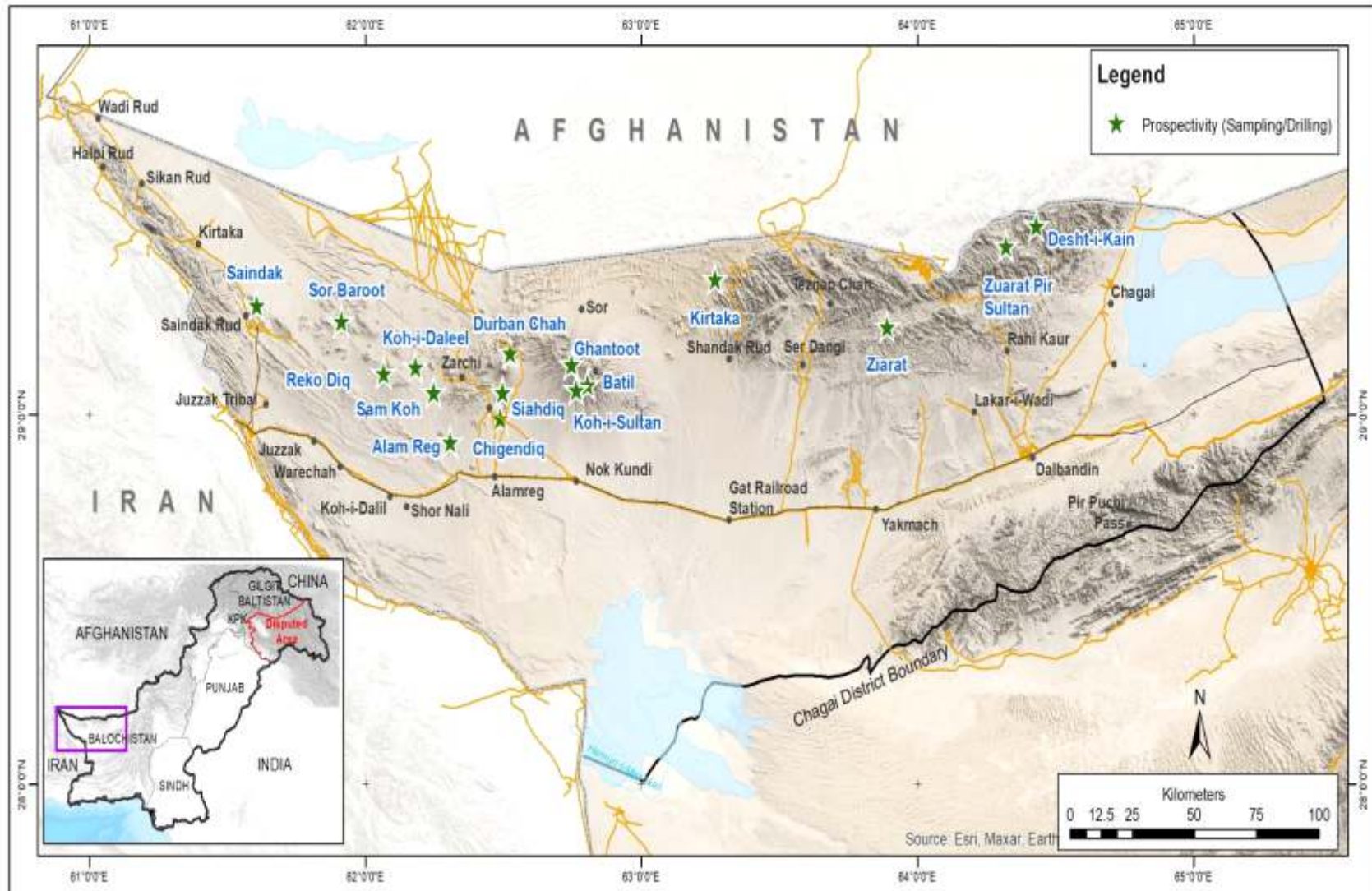
- JV with local mining entities on **attractive equity sharing**.
- Export Processing Zone incentives (as per economics of project and export potential).
- Concessional **Customs Duty & Sales Tax** on import of Machinery: Exploration/ Development (**case to case basis**).
- Protection from Expropriation.
- Repatriation of Capital & Profits allowed.



Investment Opportunities

Gold – Copper Blocks in District Chagai (Balochistan)

- District Chagai is located in magmatic arc system and is considered to be one of the **highly prospective areas for copper and gold deposits**.
- Copper blocks have been delineated based on surface geochemical sampling and numerous areas are available for investment/joint ventures.



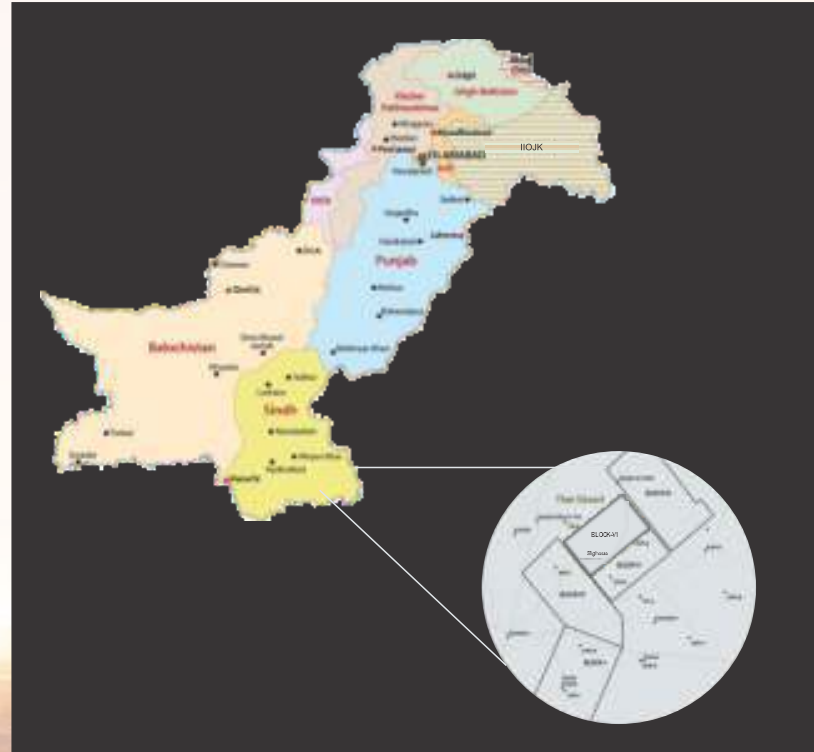
Chagai – Gwadar Mineral Corridor

- Located in a **geologically rich** region which is being **explored for various minerals**.
- The potential extraction of **copper and gold** from this region is of great interest for **both local and international mining companies**.
- Karachi port: connected via highway and railway.
- Multiple new infrastructure projects and mineral/metal processing facilities in pipeline:-
 - Railway connectivity and dual carriage road from Balochistan to Gwadar.
 - Development of **mineral export port** at Gwadar.
 - Establishment of **smelting & refining** (copper and gold) and metal processing industries.
 - Water Pipeline.



Thar Coalfield Blocks

- The Thar Coalfield is located 380 kilometers east of Karachi.
- It covers an area of 9,100 square kilometers, with a total lignite resource in excess of **175 billion tonnes** (estimated to be one of the largest coal deposits in the world).
- A portion of coal resources have been divided in **12 coal blocks** out of which three blocks have been allocated to local and international companies for mining, power generation and gasification.
- Two mining projects are in commercial production.
- Remaining blocks are available for investment.



Coal Gasification

- Indigenous gas resources for manufacturing fertilizer are depleting rapidly and imports of LNG or urea are not feasible.
- Coal gasification offers viable alternatives for urea manufacturing and other chemical extraction.
- The fertilizer manufacturing association comprising 7 companies are interested in conversion of Thar coal for gasification and urea production.
- A prefeasibility study for gasification and extraction of chemicals and petroleum products has been conducted.
- The study reveals that Thar Coal is suitable for gasification offering tremendous investment potential.



Barite-Lead-Zinc Khuzdar

- The Lasbela-Khuzdar belt holds immense potential for sustainable quantities of Lead-Zinc and Barite, with estimates reaching upto hundreds of thousands of tons.
- Mining in the **Duddar area** is underway since 2015 and a feasibility study has been completed in the **Gunga area** with estimates of 69 million tones of Barite-Lead-Zinc.
- There is immense potential in the adjoining areas of these projects.
- Exploration licence covering an area of 200sq Km is available for potential investment / joint venture.



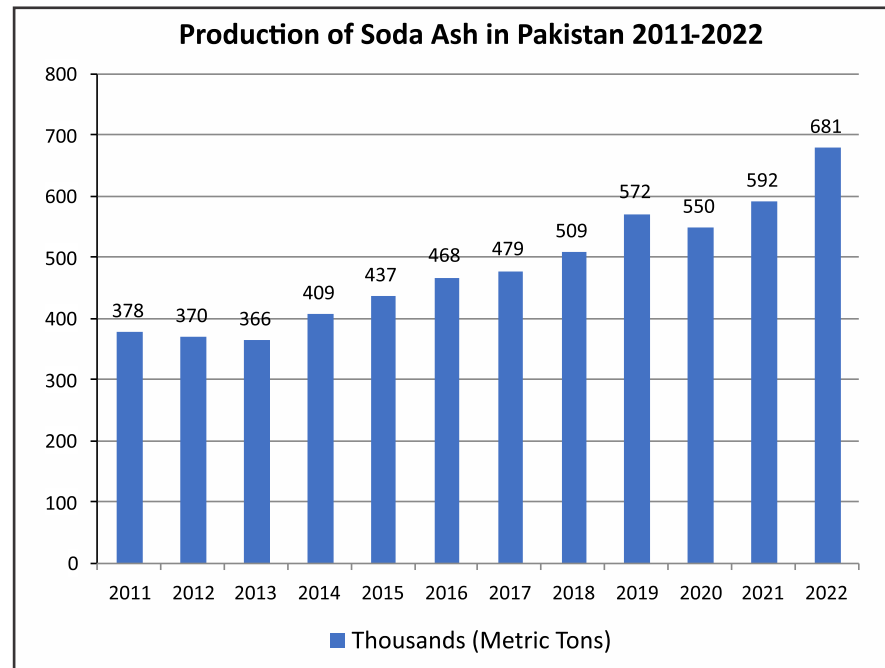
Chiniot Iron Ore

- Chiniot holds one of the largest Iron Ore deposits of Pakistan.
- NI 43101 Complaint Resource Report of Project is completed. Project Details are as under:-
 - Iron Ore Resource of ~205million Tons @ 27% TFE is available.
 - Mine Capacity Planned : 4.5million tons per annum.
 - Estimated investment cost USD 1.3 Billion.
 - Expected IRR >20%.
- The project site is connected with Rail line, Motorway, Highways, and adjacent to Special Economics Zone.



Soda Ash Plant

- Soda ash and caustic soda production has doubled in Pakistan since 2012.
- The market of these products is expected to grow at 6% CAGR to upto 65MT in 2026.
- Two sites of Kalabagah and Jatta - Bahadurwal have combined resource of 20 billions of industrial salt which used is manufacture of Soda Ash.
- The sites also offer accessibility to western part of CPEC, Afghanistan and onwards to Central Asia.
- Payback period is expected to be two years with a expected IRR of upto 50%.



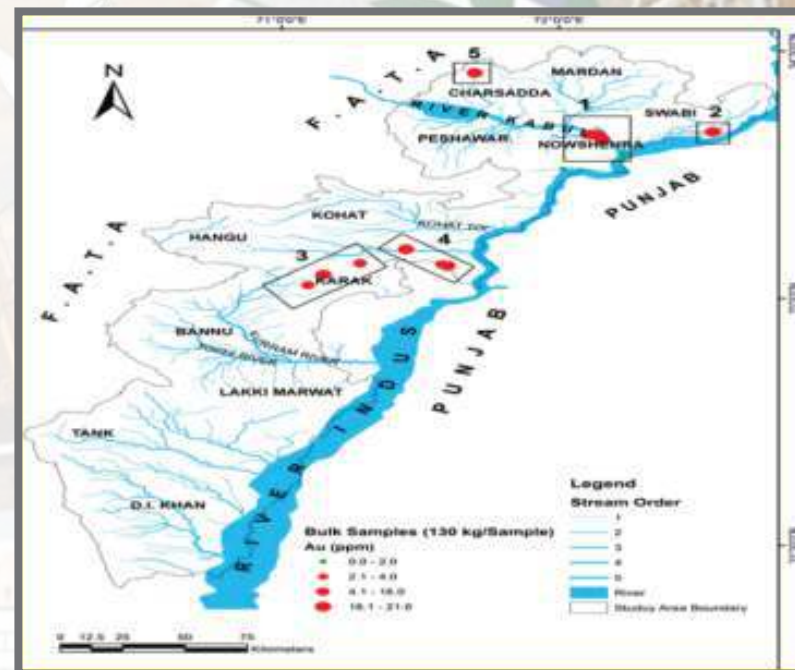
Pink Rock Slat Processing Plant

- The global pink Himalayan salt market size reached \$ 226.2 Million in 2022 and expected to reach \$ 265.7 Million by 2028.
- Estimated Pink Rock Salt reserves of Pakistan are over 10 billions tons.
- There is a high potential for setting up a state of the art rock salt, upgradation & packing facility, at Khewra/Warcha or Kalabagh.
- The idea involves use of raw rock salt from mines in KalaBagh / Warcha / Khewra and setting up a processing unit.
- PMDC and USA Company, Miracle Saltworks Collective Inc (MSCI) has signed JV in Aug 2023. Details are :-
 - MSCI will invest \$200 Million.
 - Production is estimated 150,000 tons of finished product wef 2025 onwards.



Metallic Minerals in Khyber Pakhtunkhwa

- The Province is characterized by diverse geological formations, indicating the potential for a wide range of metallic minerals.
- Government of Khyber Pakhtunkhwa, has completed first pass stream sediments sampling of northern part over an area of 40,000 sq Km.
- The geo-chemical data of Chitral has been interpreted into 14 suits of anomalies of metals in coincidence with known metallic-mineral occurrences along geological belts.
- On the basis of geological data ten blocks have been delineated for base metals and five blocks for gemstones in district Chitral.
- Detailed reports of geochemical study and others preliminary information are available.
- Potential areas are available for Exploration licence/ Mining lease.



Metallic Minerals in Gilgit Baltistan

- Gilgit-Baltistan's diverse geological formations indicates potential for wide range of metallic minerals.
- A systematic stream-sediments geochemical exploration coverage of north Pakistan was undertaken in-collaboration with Australia-Pakistan Gold Exploration & Mineral Analysis Project.
- Total number of 4,208 stream sediment samples were collected.
- Chemical analysis of both panned concentrate and -80 mesh samples exhibited significant potential for metallic minerals.
- There are indications of gold mineralization in several other areas, presenting opportunities for exploration and development.
- Preliminary reconnaissance study is available for further prospecting and exploration work.



Pink Granite in Nagarparkar (Sindh)

- Granite is one of the emerging industries of Pakistan. According to estimates, Pakistan has over 297 billion tones of granite reserves.
- Globally, the natural stone industry is growing rapidly by 9%.
- More than 100 types of colours and varieties of granite are available in Pakistan. Major estimated resources in Nagarparkar (Sindh) includes:-
 - **Grey Granites: 12 billion tons.**
 - **Pink Granites: 4 billion tons.**
 - **Adamellite: 240 million tons.**
- Nagarparkar located in Sindh province comprises of clusters of hillocks surrounded by sand covered plains. The hillocks predominantly consist of 8 to 10 varieties of pink and grey granites.
- Geological mapping, mineralogical, geochemical, geo-technical and mining study has been conducted by the mines department.



