

## News and Highlights

### China Has Discovered Super-Large Big Flake Graphite Ores

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The Geological Mineral Exploration Institute No. 8 in Inner Mongolia, China has recently discovered a new super-large big flake graphite ore deposit named the Chahanmuhulu graphite deposit. A total of eleven graphite orebodies were delineated in the deposit, with orebodies No. III and IV being dominant. The orebodies extend 85–1630 m along the strike, and have an oblique depth of 563 m (Fig. 1). Those graphite flakes greater than 100 mesh account for 99.8% in the graphite ores. The proven graphite resources of this deposit amount to 0.13 billion tons, and the recoverable reserves are 7.03 million tons, at an average grade of 5.45%. This graphite deposit with



Fig. 1. Photo showing surface veins of graphite ores.

such a high grade and such a large scale is rare in the world.

The 2013 report of the United States Geological Survey suggests that there are few proven big flake graphite deposits in the world, with their global reserves less than 5 million tons. Among these, the main graphite-producing areas in Madagascar only have reserves of 0.94 million tons. It is worth mentioning that the graphite reserves of the newly discovered Chinese deposit are equivalent to all seven Madagascan big flake graphite deposits.

Ore dressing is easy to conduct on the graphite ores in the Chahanmuhulu deposit, and all can be open-pit mined. In addition, this deposit has convenient transportation, and thus has a huge development value. At present, the Inner Mongolian deposit has entered the design phase, with a planned annual production of 0.16 million tons of graphite flotation concentrates and a service life of 28 years. The mine will produce expandable graphite, flexible graphite, spherical graphite, cathode materials for lithium ion batteries, fluorinated graphite and nuclear graphite.

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