

# lithium in Egypt

By

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By reviewing the rocks containing this ore worldwide, we find that it has similar geological features to the desert and mountains of Egypt in each of the Sinai, the Eastern Desert, and the Western Desert.

Perhaps the first of these dry lakes that were discovered is in the northern outskirts of Lake Qarun. These dry salt lakes are considered lithium-rich media, according to some studies conducted there.

Some Research also indicates the presence of lithium in the bentonite clay spread in the Fayoum governorate, according to the following research:

[AM Amer - JOM, 2008 - Springer](#)

Abstract The processing of El-Fayoum montmorillonite-type clay deposits is attained through leaching with commercial sulfuric acid using a ball-mill-type autoclave. This process yields lithium sulfate, which can be used either for the production of lithium carbonate or to produce lithium metal. The effects of temperature, grain size, and sulfuric acid concentration and leaching on lithium recovery as well as the kinetics of the leaching process have been studied.....)

Accordingly, we hope that the Egyptian Geological Survey plans to conduct an ambitious exploration program for this large belt that extends through the sands of the Western Desert to monitor such lakes, dry salt marshes and rocks, and to detect the presence of lithium and other important minerals and salts such as potassium. .

International reports indicate that there are huge reserves of lithium associated with groundwater in dry Salt Lake areas, which also calls for exploration plans and

programs to include drilling exploratory wells and analyzing groundwater samples in these areas.

On the other hand, it is necessary to review approved analyzes of the quantities of salt that are exported abroad from the Siwa regions to ensure that they are free of lithium or any elements that may have a much greater economic return than ordinary salt.

While working on my HD thesis, rocks of mica schists rich in lithium were discovered associated with gold, lead and zinc in south Sinai.

Also, there are some indications of the presence of lithium in low-grade phosphate rocks in some areas of Sinai.

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In short, we have five main sectors that need to conduct an exploration program to assess the presence of lithium, namely:

- 1- Salt sabkhas and groundwater scattered in the Western Desert.
- 2- Mica-schist rocks in some areas of South Sinai.
- 3- Pegmatite rocks in the Eastern Desert and Sinai.
- 4- Kaolin rocks, especially bentonite, in Fayoum and other areas.
- 5- lithium in low-grade phosphate rocks in some areas of Sinai.