

Indicator Mineral Sample Processing

The Alberta Geological Survey (AGS) conducted a study to evaluate the presence of indicator minerals in glacial till and stream sediment samples from across Alberta. The study results will be available for download from the AGS website. Indicator minerals are found in glacial till and stream sediment and provide important clues about mineral deposits, such as diamonds, gold, various metals, and rare-earth elements. Evaluating indicator minerals from till and stream sediments aids in mineral exploration.

Hundreds of new and archived till and stream sediment samples were analyzed for mineral indicator grains. The archived samples from the Mineral Core Research Facility in Edmonton were collected across Alberta in the 1990s and were initially studied to evaluate kimberlite potential.

(Kimberlites are volcanic igneous rocks that may host diamonds.) Geologists collected the new samples from specific areas of interest where knowledge gaps exist.

Researchers and technicians at a qualified laboratory extracted the mineral indicator grains from the samples using a proven methodology that separates the grains based on their density. A process similar to gold panning was used to separate heavier indicator minerals from lighter material through repeated rounds of washing and sifting. Once separated, the extracted mineral indicator grains from the sample are counted. A high count of indicator grains may suggest a mineral deposit is present under the glacial till in the sample area.

Highlights

Indicator minerals are found in glacial till and stream sediment and provide important clues about mineral deposits, such as diamonds, gold, various metals, and rare-earth elements.

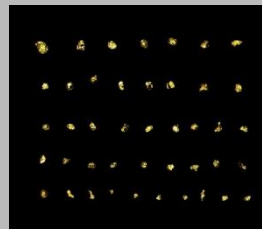
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100s
of samples
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A high count of indicator grains may suggest a mineral deposit is present under the glacial till in the sample area. Gold below.



Scan QR code for data.

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