

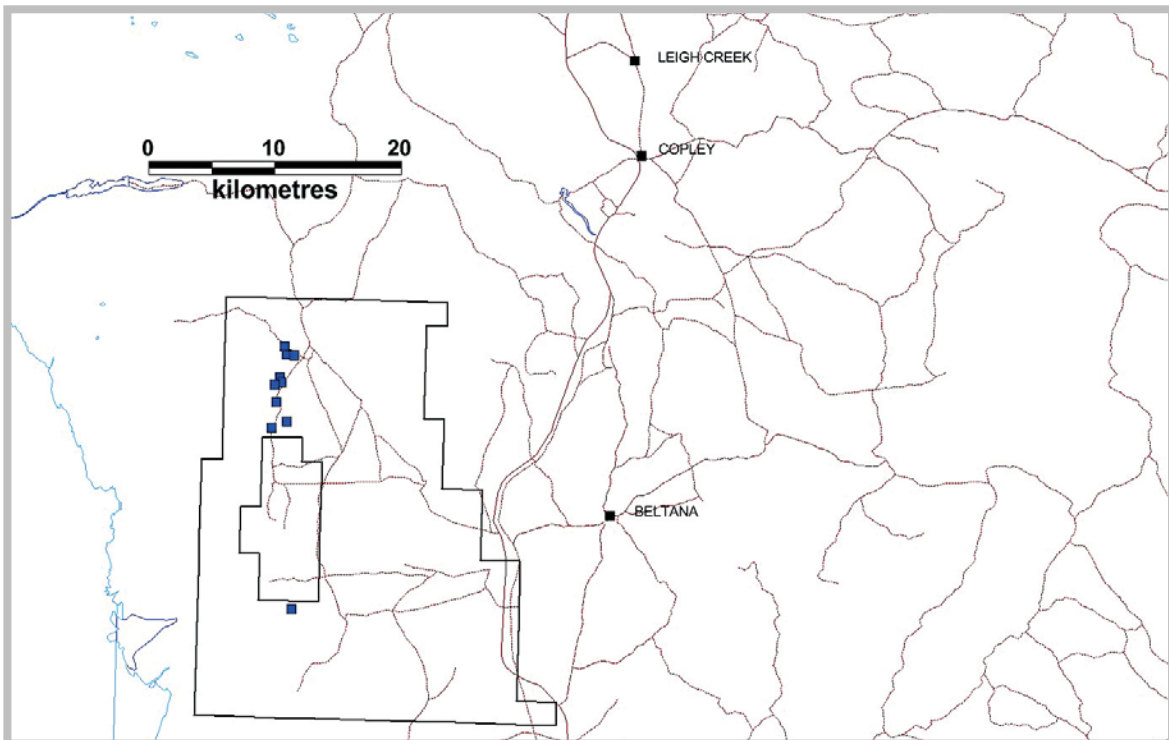
# Barite

## Mount James Barite

The Mount James barite deposits occur on EL 4869 (below) held by Archer Energy and Resources Pty Ltd (a wholly owned subsidiary company of Archer Exploration Ltd). The tenement is located 25 km South West of Leigh Creek, South Australia and approximately 70km by road to the outcrops.

Barite is a naturally-occurring barium sulphate ( $BaSO_4$ ) and is the predominant barium mineral used for industrial

purposes. Barite is primarily used in oil and gas well drilling where its high specific gravity (drilling standard based on an SG of 4.1 or 4.2), its chemical and physical inertness, relative softness and very low solubility make it ideal as a weighting agent to suppress high formation pressures and prevent blowouts. Mount James' location close to the Cooper Basin (which is a major oil and gas producing basin) presents an opportunity for Archer to provide crushed and bagged barite for local domestic consumption.



EL 4869 with barite outcrops shown as blue squares.



Looking North from a costean within north end of historic ML (Mount James) showing shallow east-dipping, strataform barite unit.



Line of barite unit in the Mount James area.

### Previous Exploration

The ground has been systematically explored since the early 1960's for coal and for base metal deposits, with no success.

Mapping by Comalco (ENV03205) identified barite outcrops at several sites in the Mount James area.

The barite veins were mapped and sampled on a local grid by Comalco, but were only assayed for base metals.

No systematic exploration for barite has been reported, although an expired barite Mining Lease (ML 4852) is reported by the Department of State Development (DSD) in the Mt James area. No information regarding ML 4852 can

be found, though ground inspections reveal little work was ever performed by the holder. It is thought that the ML was located over part of the historically mapped barite veins at Mount James.

### Archer Exploration (2014 to current)

In late 2014 Archer sampled some of the barite occurrences on EL 4869 with the reported BaSO<sub>4</sub>% shown below.

Seven duplicate samples were taken for the purpose of establishing the density of the barite. The results for the seven samples range from 4.01 to 4.51 and provide an average of 4.2.

