

GROUND FLOOR EM: A NEW ADAPTATION

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Geotech has been working on new methods for exploring for higher conductive targets such as Nickel and VMS. One method which is early in its development is an adaptation of the Ground Floor EM concept proposed by Vale in 2015

Since 2004 Vale had been experimenting with the idea of using surface based EM receiver equipment in conjunction with an airborne transmitter, known as Groundfloor EM and described by Bengert (2015) using a case-history from Melville Peninsula, Nunavut, Canada.

Groundfloor EM was the term given to an electromagnetic surveying method that uses receiving equipment on the surface with an airborne transmitter. This technique has several significant advantages that cannot be achieved with an airborne receiver. Given the large transmitter-receiver separation, it is possible with Groundfloor EM to compute the received primary field from the airborne loop with sufficient accuracy to allow non-decaying anomalies to be observed in the system on-time. This allows the detection and discrimination of the kinds of extremely high conductivity targets that are commonly encountered in nickel sulfide exploration.

Groundfloor EM can be used in conjunction with a traditional airborne EM survey with only a minor increase in effort. This increases the confidence in the airborne data, and reduces the need for surface follow-up. This can be of great benefit to projects where surface geophysics is hampered by topographic, logistic, or land access issues

The new adaptation proposed for Groundfloor utilizes a lower frequency signal generated from the airborne transmitter and will be showcased using field results.