**TRADEOFFS BETWEEN DYNAMIC MAPPING**

**WITH METAL MAPPER AND THE EM61**

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There is no perfect solution for dynamic geophysical mapping to generate cued targets for advanced geophysical classification. This presentation will consider the strengths and weaknesses of using the EM61 and Metal Mapper 2x2 (MM2x2) for dynamic mapping based on real world experience at production sites.

The EM61 was the industry standard for years. The EM61 is robust, rental units are readily available, and it is relatively straight forward to estimate production rates and schedule. The downside is that the EM61, with its 1 meter (m) by 0.5 m coil, is not capable of the same positional accuracy achievable with AGC sensors, often resulting in measurement quality objective (MQO) failure for seed positioning. Combating this requires multiple targets associated with each large anomaly that often creates additional work during the cued phase.

By contrast, using the MM2x2 for dynamic mapping produces smaller, more distinct anomalies due to the geometry consisting of multiple small receiver coils. However, the MM2x2 is less robust, closer to the ground, more expensive and less available than the EM61. The smaller transmitter coils relative to the EM61 also limit depth detection, which can be problematic on some sites.

In this presentation we compare production rates, seed detection offsets, real word field durability, and recollection and inconclusive rates once the dynamic targets are investigated in static mode.