



Rapid gold resource drill results using detectORE™

Executive Summary

Resource drill outs with multiple rigs on site run the risk of flooding labs with samples, affecting turnaround times. Meanwhile management can be under intense pressure to drill out a deposit to determine its spatial extents (wingspan), grade and metallurgical characteristics. If a deposit contains nuggety, coarse or particulate gold then taking a representative sample becomes difficult and expensive. Many samples do not contain gold and time is expended getting these tested. Rapid, simple, effective on-site analysis of large samples using detectORE™ provides rapid feedback to the geologists chasing and defining the lodes. It reduces the wait at the offsite laboratory by only sending relevant samples necessary for building a resource.

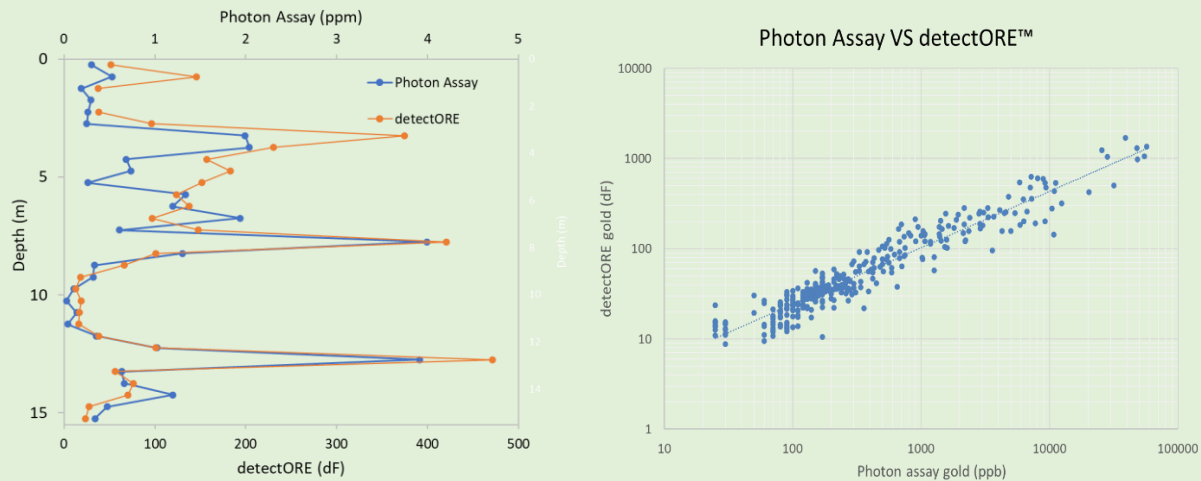
Problem

Resource drilling is an important step towards estimating how much gold a new discovery contains and therefore what the discovery is worth to a company ahead of any decision to mine. Time is of the essence at this stage and the exploration spend is often large on a flagship asset. Multiple rigs are often deployed to assist meeting tight corporate timelines. The industry standard analytical method used is fire assay which gives a total gold analysis on 25g or 50g of sample. Problems arise if the resource contains coarse or nuggety gold as 50g of sample may be unrepresentative. Inaccuracies introduced during the sampling procedure may have profound effects on the estimated contained gold and ultimately company decisions and corporate reputation.

“Fire assay uses small samples (tens of grams) that may be unrepresentative of the resource”

Background

Resource estimation often requires close spaced drilling and multiple samples to be taken. A typical deposit may require tens of thousands of analyses. The samples need collecting, sorting, shipping, preparing and analysing. This is time consuming and expensive. We were provided samples from a resource drill out that contained coarse gold. Samples from such deposits are notoriously difficult to accurately and precisely determine the gold content. Samples previously analysed using a non-destructive method called photon assay (PA) were compared with detectORE™ analyses. Both methods use large samples (500 g) to reduce the nugget effect.



Resource drilling samples compared for gold using detectORE™ and photon assay (PA).

Conclusion

The PA measured total gold for each sample while detectORE™ measured extractable gold only. Good agreement between the two methods was noted. Despite large and numerous samples being taken, highly variable data were recorded in sub-samples from the same sample intervals. The trial indicated that samples could be analysed on site by detectORE™ to pre-screen samples to send out for JORC compliant assays in a timely manner. Samples over a specific detectORE™ analytical threshold could be expedited for analysis by PA, potentially saving considerable costs and unclogging the sample queue at the laboratory.

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