

Extracting geological information from complex drill hole data sets, rapidly and consistently

E. J. Hill¹

1.Senior Research Scientists, CSIRO, Kensington, WA 6151. Email: June.Hill@csiro.au

ABSTRACT

In areas which are under deep cover, the only source of detailed geological information for mineral exploration is from drill holes. Traditional manual geological logging of drill hole products has limited use due to the subjective nature of the interpretation. Even numerical data collected from down hole logging tools or from analysis of drill hole samples, must undergo manual interpretation at some point in order to extract geological meaning. This interpretation process is both time-consuming and often highly inconsistent due to the subjectivity of the interpretation process, which depends on the geologist's experience. In this talk I discuss how mathematical and machine learning tools can be used to assist in interpretation: to provide consistency and rapid analysis of drill hole data.

Mathematical and machine learning methods will be demystified by explaining them in terms of geological concepts, not mathematical equations.