

Introduction

This report is the seventh in a series of progress reports to Aberfoyle Resources on the Ph.D study of the Hellyer - Que River Volcano - Sedimentary succession. This report deals mainly with the footwall units found in exploration holes to the north and south of the Que River deposit. These holes, Hat-5 (9313.8 N), and Hat-7 (5777.98 N, I-zone), contain a mix of both massive and brecciated units, covering the bulk of the different facies types within the footwall sequence of the Que - Hellyer Volcanics.

Field Work

This work was a result of a field trip carried out during October in which several holes, including Hat-5 and Hat-7 were logged. A few days were also spent during this trip to photograph exposures of the Pillow Lava Sequence (adit) and Hangingwall Volcaniclastic Sequence (450 L).

Lower Basalt

Introduction: A moderately thick sequence of what appeared to be basaltic lava occurs within Hat-5 (256.7 - 420.1 metres)(Fig. 1). This unit of massive to pillowed lavas and peperitic breccias is texturally very similar to the Pillow Lava Sequence or Hellyer Basalt. These basaltic volcanics lie below units identified as footwall andesites and above the Animal Creek Greywacke and as such are part of the 'Lower Basalt'.

The contact of the Lower Basalt unit with the underlying Animal Creek Greywacke is fairly sharp. The contact is marked by extensive development of carbonate, both within veins and as an alteration product, along with chlorite, of the basalt. The basalt is intensely fractured and vesiculation increases from a few percent to 7-10% within the last 50 centimetres before the contact. The top contact of the unit with the andesitic lavas and breccias is also sharp with the upper most lava of the Lower Basalt showing signs of chilling and abundant sedimentary inclusions. The unit immediately overlying the Lower Basalt is a primary fragmental/volcaniclastic unit which is strongly altered to sericite bearing assemblages.

This Lower Basalt unit has a limited, patchy distribution and appears to be thickest around the Que River mine area. This patchy distribution may reflect the units style of emplacement or the original sea floor topography.