



Allegiance Metals Pty Limited

ACN 073 192 337 ABN 36 073 192 337

Avebury Mine ML3/2003

Proposed Mill and Tailings Dam Site

Sterilisation Program

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1 Introduction.

A mill and tailings dam site for the Avebury Nickel Project has been proposed for the NW of the Mine Lease (Figure 1). The proposed site occupies a flat swampy plain with low tea tree and eucalypt regrowth. Detailed site geotechnical investigations provided good exposure on access roads, test pits, geotechnical and water monitoring drill holes. In addition three exploration/sterilization diamond drill holes tested geophysical anomalies under the proposed site.

2 Work Completed.

Geological interpretation and rock chip geochemistry.

Surface rock chip sampling and outcrop mapping was completed over the area (Figure 2). The geology is dominated by a thick sequence of brown feldspar-lithic greywackes and siltstones. Minor basaltic volcanoclastics and lavas are present throughout the proposed site, becoming more prevalent in the east. A pyroxene-feldspar phyric gabbro intrudes the sediments and volcanics to the south of the mill site.

A serpentinised ultramafic is present immediately east of the proposed mill site. The northern contact of the ultramafics with the host greywackes is faulted.

Most bedding readings suggest the sequence strikes approximately east-west and dips north at 60 degrees. Facing evidence in drill core indicates the sequence is overturned and youngs to the south.

The greywacke locally contains 1-2% disseminated and vein pyrrhotite-pyrite mineralization.

Numerous rockchips were taken as part of a lease wide mapping project in 2000 (Figure 4). All samples were analysed for Ni, Cr, Cu, Pb, Zn and As. No anomalous samples were returned from the proposed mill site. Anomalous nickel >0.1% is associated with an intrusive gabbro/ultramafic complex to the north of the proposed mill site.

Twenty one test pits were dug on the proposed site. No significant mineralization was identified in these.

Drilling

Two prominent aeromagnetic highs and a magnetic low are located on or adjacent to the area (Figure 5). The Avebury mine is associated with a similar magnetic high in the south of the lease.

Three holes were drilled into the aeromagnetic anomalies. (Figure 5). Drill hole and test pit locations are displayed in Figures 1 and 2. Drill logs are located in Appendix 1.

Diamond drill hole P001 was collared just east of the proposed mill site and was targeted at the eastern aeromagnetic high. The hole intersected a large body of weakly mineralized serpentinised ultramafic from 155m to the end of hole at 250.5m. The intersection included:

	155 – 250.5	95.5m @ 0.2% Ni
Including	195-199	4.0m @ 0.4% Ni

Although uneconomic, this was a similar intersection to the low grade core of the Viking deposit and was considered worthy of further investigation. It is worth noting that the nickel analyses returned are typical of background nickel values for Tasmanian ultramafics (Brown, 1986).

A further drill hole P003 was collared 100m east of P001. It was designed to test beneath the proposed mill site for the western strike extension of the ultramafic body. The hole failed to intersect the ultramafic suggesting it is closed off near surface to the west, thus sterilizing the proposed mill site. The magnetic anomaly runs north-south to the east of the mill site and it is possible the ultramafic strikes north-south below surface in this area. This area warrants further investigation but any exploration will not effect the proposed mill site.

Drill hole P002 was designed to test the western prominent magnetic anomaly under the proposed tailings dam site (figure 5). The hole intersected hornfelsed greywackes containing 2-5% chlorite-magnetite veining which is considered to adequately explain the aeromagnetic high. No ultramafics or significant sulphide mineralization was present in the hole. The hole finished at a depth of 169m. No further drilling is recommended for this anomaly.

Four 20m water monitor bores and four 10m geotechnical bores provide additional near surface information (Figures 1, 2 and 5). None of these intersected ultramafics or significant sulphide mineralization. Water monitor bore MB004 intersected a pyrrhotitic black shale on the southern boundary of the proposed site. Rock chip sampling of this unit and drilling around the Avebury mine has demonstrated the black pyrrhotitic shale to be barren of significant metals.

3 Discussion.

Drilling of the aeromagnetic highs failed to identify significant mineralization within the proposed tailings dam and mill site. A serpentinised ultramafic with low level nickel mineralization is located just east of the mill site but this has little potential to host an economic deposit near surface. Further exploration to the

north and west of this area is warranted, however this will not effect the proposed mill and tailings dam site.

Geological mapping, rock chip geochemistry and logging of geotechnical holes and test pits failed to identify significant mineralization.

It is very unlikely that significant mineralization exists near surface below the proposed mill and Tailings dam site.

References

Brown, A B, 1986. Geology of the Dundas-Mt Lindsay-Mt Youngbuck Region. *Geological Survey Bulletin 62. Tasmania Department of Mines.*

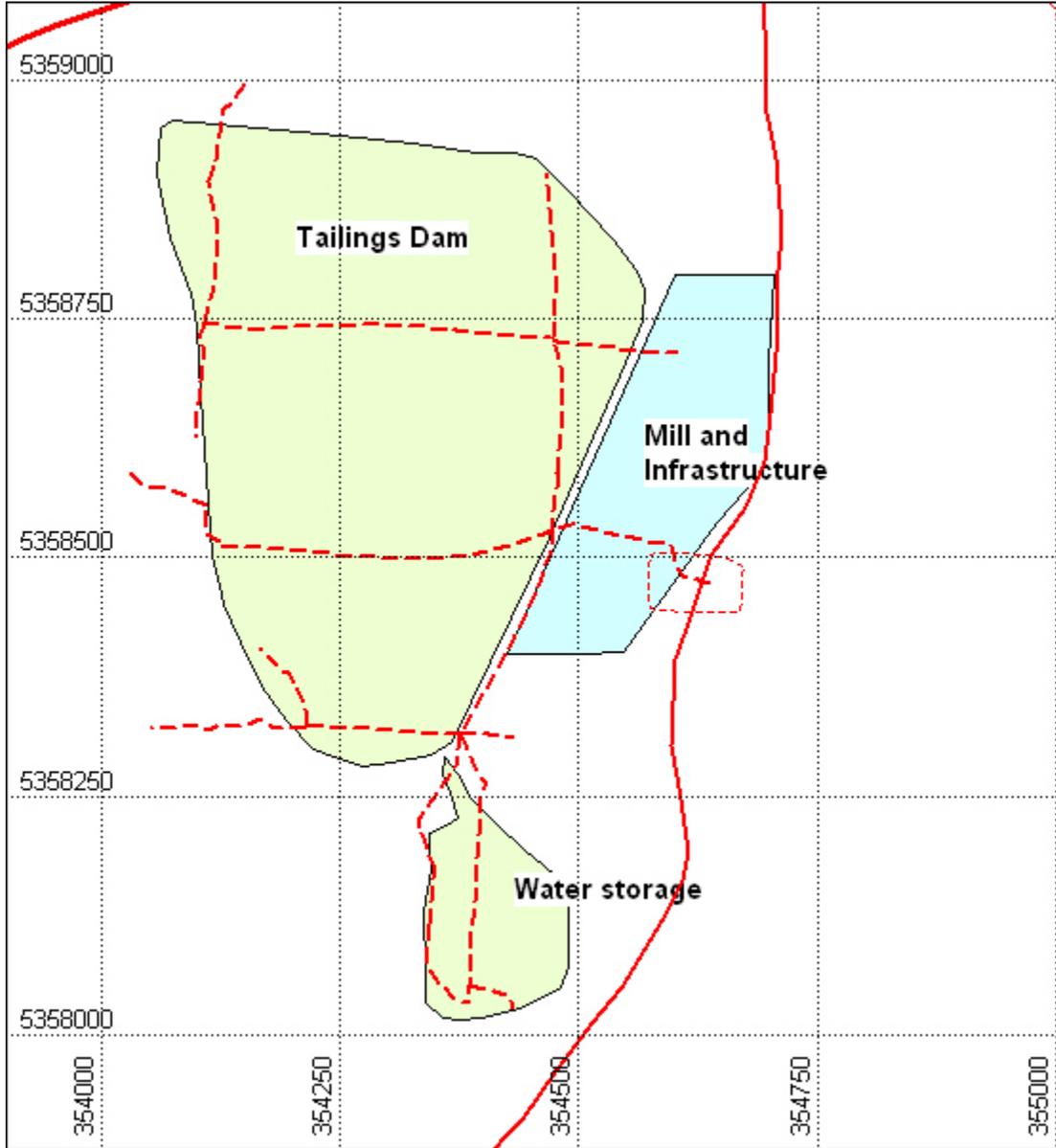


Figure 1. Avebury Mine proposed tailings dam and mill site location.

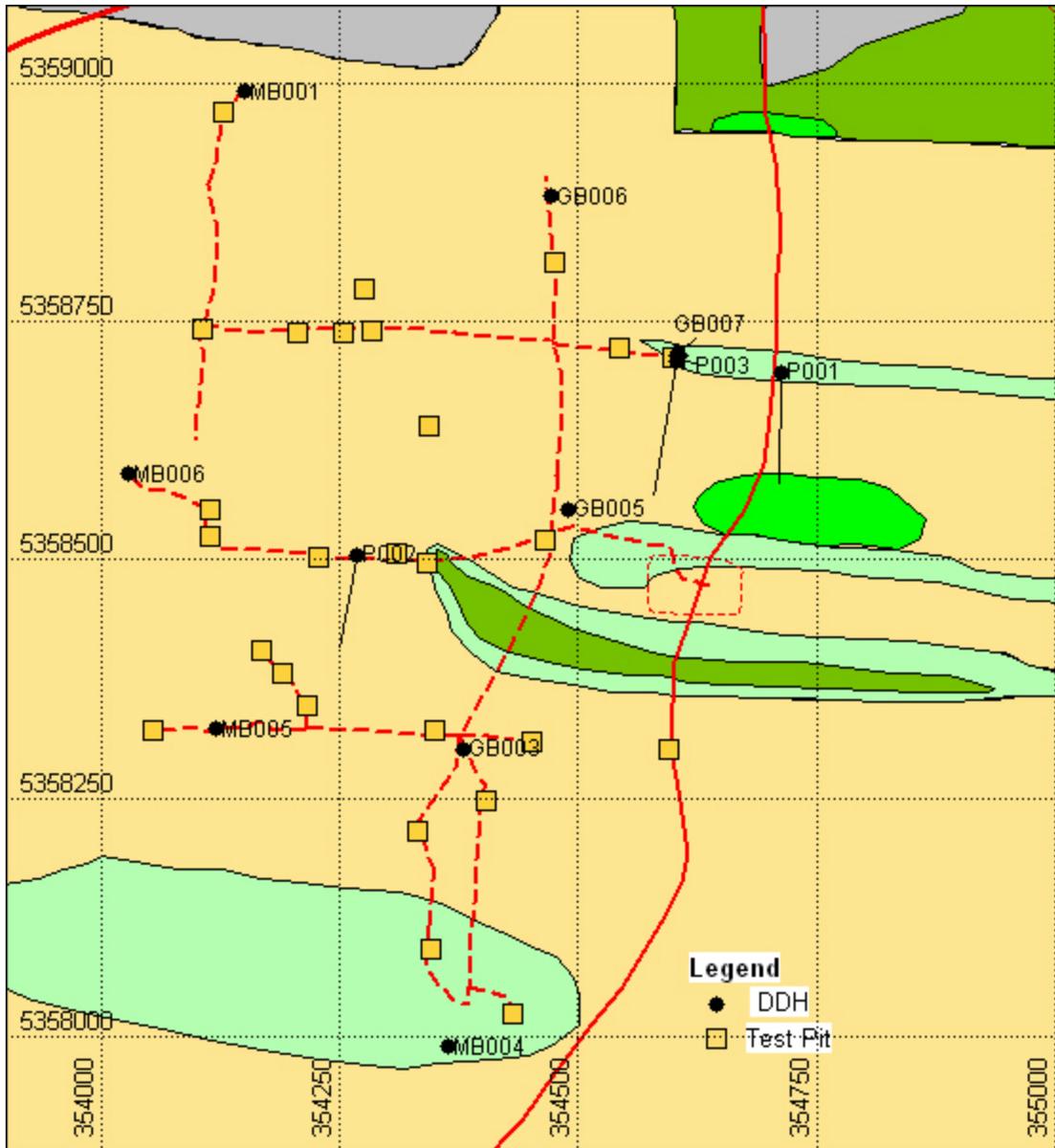


Figure 2. Geological Interpretation, drill hole, test pit locations and access roads for the Avebury Mine site Proposed Mill and Tailings dam site. (Legend is located in Figure 3).

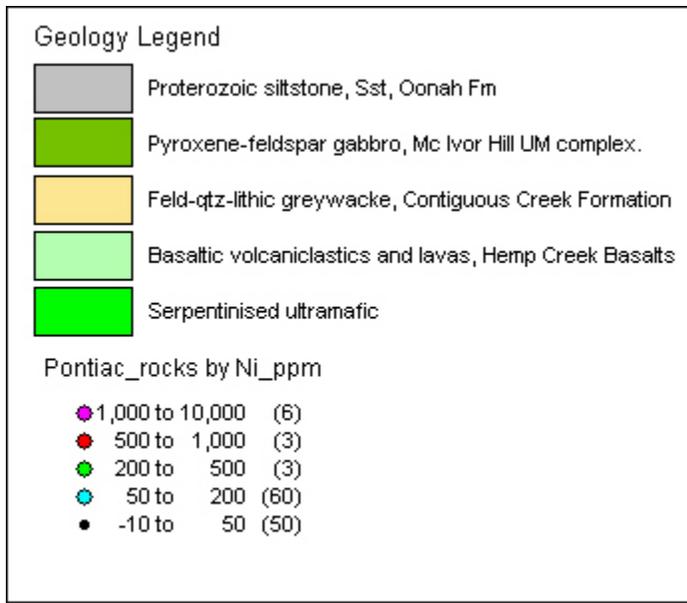


Figure 3. Legend for Figures 2 and 4.

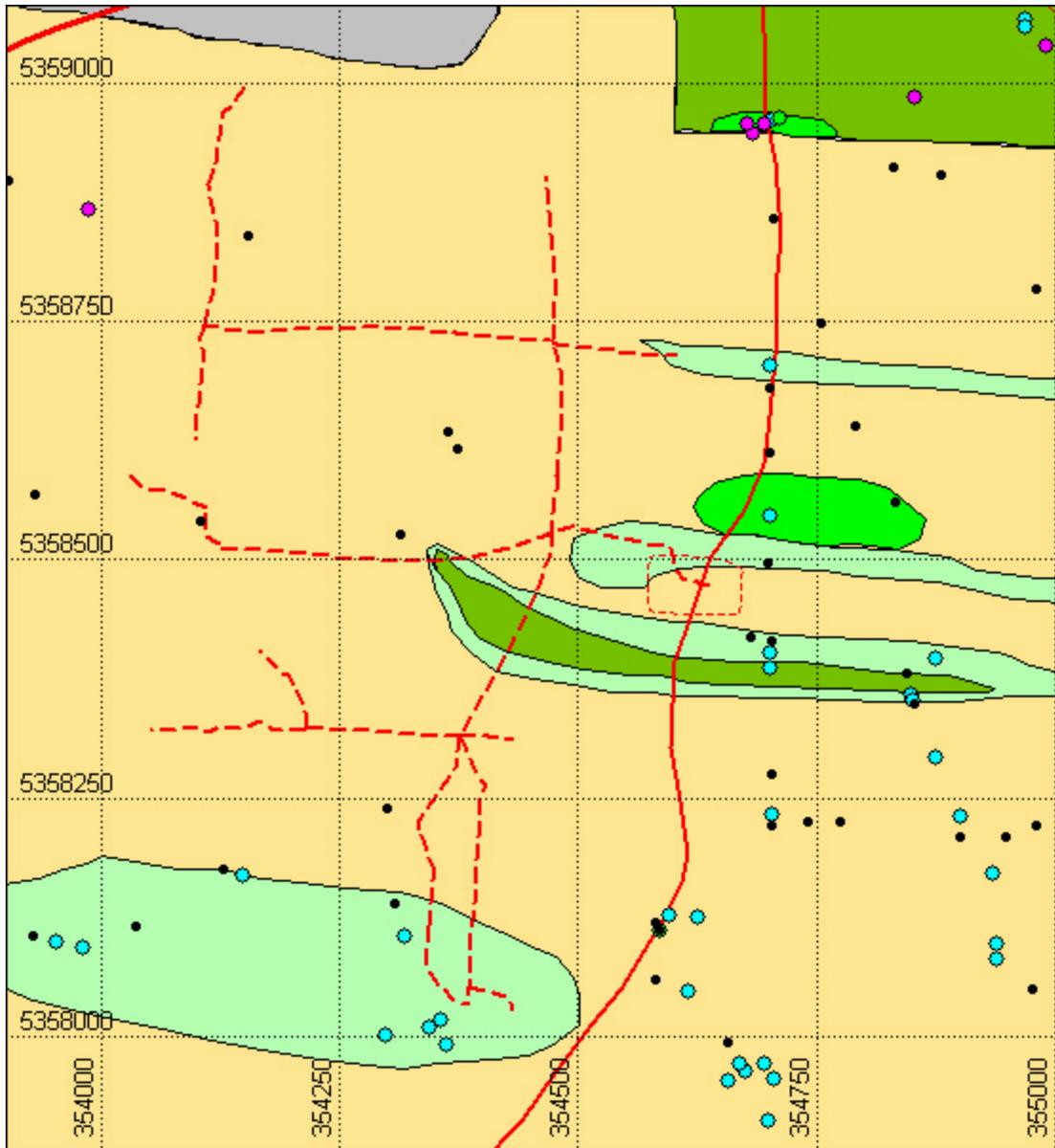


Figure 4. Geological Interpretation, rock chip geochemistry and access roads for the Avebury Mine proposed mill and tailings dam site. (Legend is located in Figure 2).

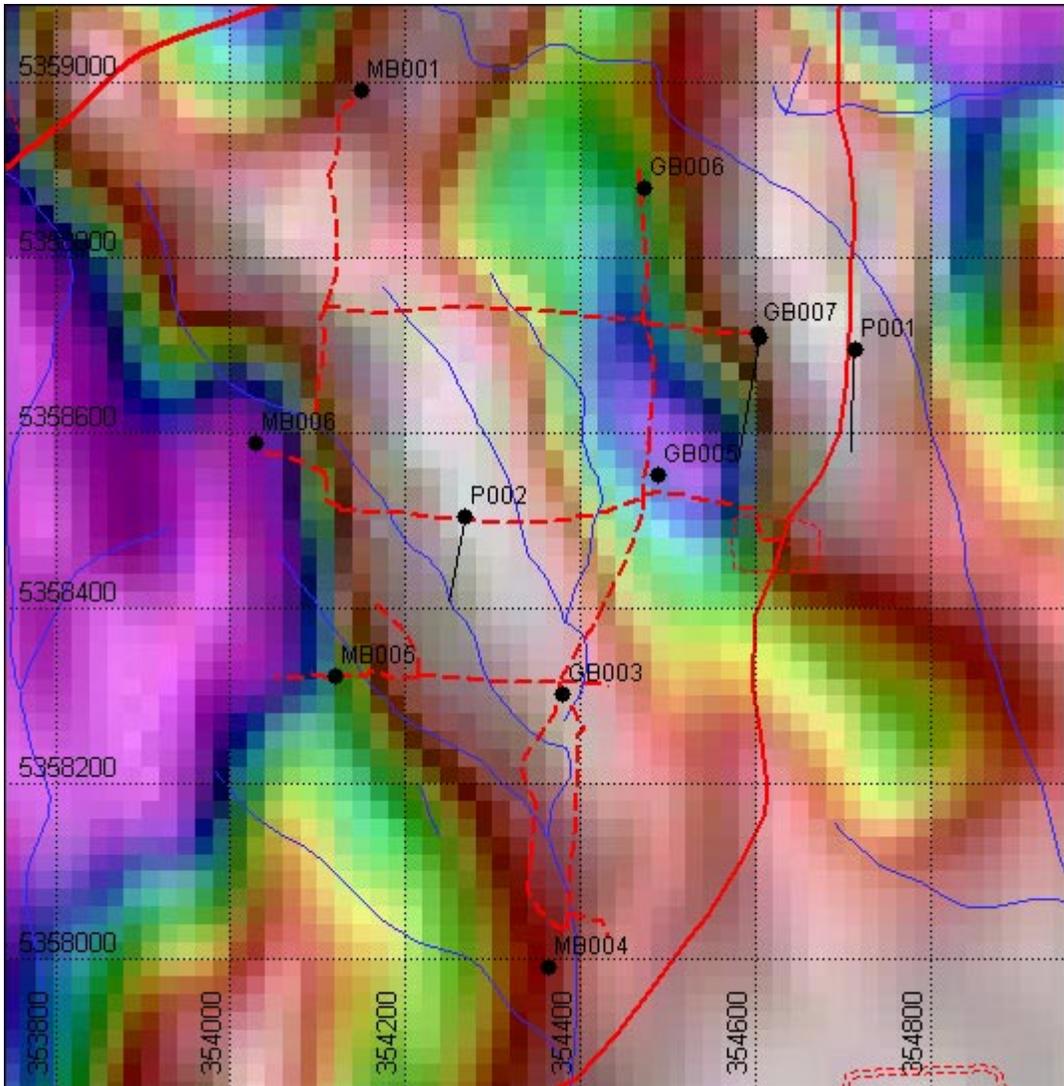


Figure 5. Total magnetic intensity aeromagnetic image, drill hole location and access roads to the proposed mill and tailings dam.

Appendix 1

Drill Logs

P001

P002

P003