Introduction

The Sakatti discovery is one of the Anglo American Exploration Group’s ‘Decade of Discovery’ successes and shows a number of the traits that made the Group successful.

Sakatti is located in northern Finland, within the eastern part of the Central Lapland Greenstone Belt (CLGB). The CLGB is a parallel greenstone belt of strikingly similar age and lithologies to the Pechenga - Imandra-Varzuga Greenstone Belt (P-IVGB) of the Kola Peninsula.

Geology

Mineralisation at Sakatti is magmatic, predominantly ultramafic hosted and consists of disseminated, vein, semi massive and massive sulphides. Mineralisation is zoned and fractionalised. The eastern copper dominant zone contains Platinum (Pt) > Palladium (Pd), and is typified by DDH 08MOS8007 with 62.70m @ 0.51%Cu, 0.23%Ni, 0.44g/tPt, 0.22g/tPd, 0.13g/tAu. In the central part of the deposit massive and semi massive Cpy veins inject into the disseminated mineralised body. To the west and at depth a mixture of disseminated Cpy mineralisation associated with primary massive Po, Pn and Cpy sulphides e.g. DDH11MOS8049, 26.50m @ 3.69%Cu, 4.16%Ni, 0.18%Co, 1.10g/tPt, 1.27g/tPd, 0.24g/tAu, within a mineralised intercept of 237.40m. Pt – Pd ratios in this area change to become more 1:1 in the massive sulphides. The massive sulphide forms a coherent body (of varying thickness) and has been intersected in all the DDH’s drilled in the western portion of the Sakatti main body.

Exploration & Discovery

Sakatti was discovered utilising conventional exploration methods and by not being restricted by fixed geological models on nickel sulphide deposit formation. Initial target generation by Jim Coppard & Brian Williams highlighted a number of priority targets of which Sakatti was picked as target number 8. These targets were followed up by ground geophysical methods and soil geochemistry. With new information gained from each target surveyed the exploration methodology was changed and an effective system developed. Base of Till (B.O.T) geochemistry proved to be the effective geochemical tool. A coherent combined Ni-Cu-PGE geochemical anomaly was detected on a three line profile over the eastern portion of the Sakatti target co-incident with the irregular magnetic anomaly.

Initial drill testing started in 2006 when three diamond drill holes were drilled at the eastern edge of the magnetic anomaly. DDH 06MOS08003 returned short intervals of Cu-PGE 7.90m @ 0.45%Cu, 0.04%Ni, 0.12g/tPt, 0.42g/tPd, 0.27g/tAu. A year-end review of the 2006 field program by internal and external nickel commodity experts severely downgraded the Sakatti target and all worked ceased. An exploration review within the Finland office highlighted once again the potential of Sakatti and a detailed B.O.T grid was undertaken and returned highly significant coherent Ni, Cu PGE anomalies. The second drill phase commenced winter 2008 when the first
important disseminated and minor vein related mineralisation were intersected – DDH 08MOS08007.

The official discovery DDH at Sakatti was DDH 09MOS08013 which returned 150.80m @ 1.01%Cu, 0.23%Ni, 0.43 g/tPt, 0.24 g/tPd, 0.29g/tAu.

Persistence, continually reviewing data, open mindedness, technical focus, hunter-pack teams and true support from senior management (Owen Bavinton & Graham Brown) were critical factors in the Sakatti discovery.